RADIO REPORT

FCC 47 CFR Part 15C
Digital transmission systems operating within the 902 – 928 MHz band

Report Reference No	G0M-2002-8859-TFC247DT-V02
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	DAkkS - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A-2 DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	Kamstrup A/S
Address	Industrivej 28 8660 Skanderborg DENMARK
Test Specification	47 CFR Part 15C
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Ultrasonic water meter
Model(s)	KWM2220
Additional Model(s)	None
Brand Name(s)	Kamstrup
Hardware Version(s)	Unit: 6201-210-04, rev. 00; RF PCB BOM: 55501823, rev. C1; Flow PCB BOM: 55501813, rev. B3
Software Version(s)	RF: 50981336, rev. N1; Meter: 50981595, rev. 00
FCC-ID	OUY-KWMX220
IC	n/a
Test Result	**PASSED**

Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
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	2020-05-28	
Report:		
Compiled by	Toralf Jahn	
Tested by (+ signature) (Responsible for Test)	Toralf Jahn	 .....
Approved by (+ signature) (Head of Lab)	Christian Weber	 .....
Date of Issue	2020-07-28	
Total number of pages	177	
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:		

ADDITIONAL VARIANTS

Additional Variants (not tested and not evaluated variants)		
Not-tested Variant	**Description**	
1	Product Type Description	Ultrasonic water meter
	Model name	KWM2220
	Brand name	Kamstrup
	Hardware Version	Unit: 6201-210-01, rev. 00 RF PCB BOM: 55501823, rev. C1 Flow PCB BOM: 55501813, rev. B3
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
2	Product Type Description	Ultrasonic water meter
	Model name	KWM2220
	Brand name	Kamstrup
	Hardware Version	Unit: 6201-210-02, rev. 00 RF PCB BOM: 55501823, rev. C1 Flow PCB BOM: 55501813, rev. B3
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
3	Product Type Description	Ultrasonic water meter
	Model name	KWM2220
	Brand name	Kamstrup
	Hardware Version	Unit: 6201-210-03, rev. 00 RF PCB BOM: 55501823, rev. C1 Flow PCB BOM: 55501813, rev. B3
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
4	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-205-01, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
5	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-02, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
6	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-03, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00

7	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-04, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
8	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-06, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
9	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-07, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
10	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-05, rev. RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
11	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6202-103-08, rev. RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
12	Product Type Description	Ultrasonic water meter
	Model name	KWM3220
	Brand name	Kamstrup
	Hardware Version	Unit: 6201-204-01, rev. 00 RF PCB BOM: 55501823, rev.C1 Flow PCB BOM: 55501523, rev B1
	Software Version	RF: 50981336, rev. N1 Meter: 50981595, rev. 00
Comment: Those named additional variants above have not been tested. Those additional variants of the series have been declared by the manufacturer. The test report explicitly states that those variants were neither tested nor assessed nor evaluated.		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2020-06-30	Initial Release	
02	2020-07-28	Replaced document: G0M-2002-8859-TFC247DT-V01 Replaced by: G0M-2002-8859-TFC247DT-V02 Reason: Antenna 1 model changed	T.Jahn

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V_{NOM}	Nominal supply voltage

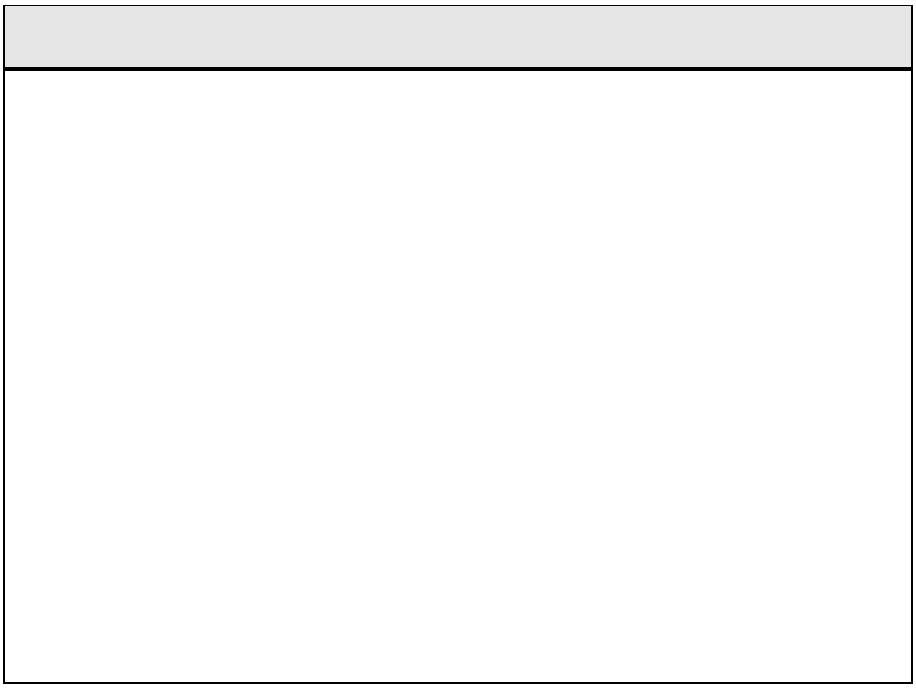
REPORT INDEX

1 Equipment (Test Item) Under Test

Description	Ultrasonic water meter	
Model	KWM2220	
Additional Model(s)	None	
Brand Name(s)	Kamstrup	
Serial Number(s)	KAM21142842/20 (conducted sample ID 29577) KAM21142842/20 (radiated sample ID 29575)	
Hardware Version(s)	Unit: 6201-210-04, rev. 00; RF PCB BOM: 55501823, rev. C1; Flow PCB BOM: 55501813, rev. B3	
Software Version(s)	RF: 50981336, rev. N1; Meter: 50981595, rev. 00	
PMN	n/a	
HVIN	n/a	
FVIN	n/a	
HMN	n/a	
FCC-ID	OUY-KWMX220	
IC	n/a	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	902.0 - 928.0 MHz	
Radio technology	Digital Modulation	
Modulation	2-FSK	
Number of antenna ports	1	
Antenna 1	Type	external, helix antenna
	Model	30261216 A1
	Manufacturer	Kamstrup A/S
	Gain	-1.7 dBi
Antenna 2	Type	external, wall antenna 2 meters cable length
	Model	6699490
	Manufacturer	Kamstrup A/S
	Gain	-1.6 dBi
Antenna 3	Type	external, pit antenna (small) 0.6 meters cable length
	Model	6697916
	Manufacturer	Kamstrup A/S
	Gain	1.2 dBi
Antenna 4	Type	external, pit antenna 2 meters cable length
	Model	6697902
	Manufacturer	Kamstrup A/S
	Gain	2.2 dBi
Supply Voltage	V_{NOM}	3.66 VDC (lithium battery)
Operating Temperature	T_{NOM}	25 °C
AC/DC-Adaptor	Model	none
	Vendor	none
	Input	none
	Output	none
Manufacturer	Kamstrup A/S Industrivej 28 8660 Skanderborg DENMARK	

1.1 Photos – Equipment External

1.2 Photos – Equipment Internal



1.3 Photos – Test Setup

1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Optical readout head	Kamstrup	14071	Programming interface
AE	Laboratory power supply	KORAD	KD6005P	The EUT battery does not last to perform the tests. Therefore an external power supply was necessary.
CBL	Auxillary cable			To connect EUT and power supply.
SFT	Device Control Tool	Kamstrup	ver. 0.05	Tool for controlling RF modules and meters
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.5 Test mode duty cycle

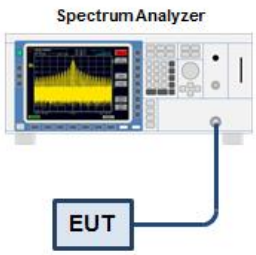
1.5.1 Information

Test Information	
Measurement Method	ANSI C63.10 11.6

1.5.2 Requirements

Requirements	
Duty cycle	Duty cycle correction
≥ 98 %	No correction required
< 98 %	Correction required (10 x Log_{10}(1/DC)

1.5.3 Setup

Test Setup


1.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

1.5.5 Procedure

Test Procedure
1. EUT set to test mode 2. Span is set to zero span 3. Detector set to peak 4. Sweep time is set long enough to capture at least 5 bursts 5. Envelope peak value of emission spectrum is selected 6. The maximum burst duration T_{ON} is measured using two markers set to the start and the end of the longest burst 7. The minimum idle duration T_{OFF} is measured using two markers set to the start and the end of the shortest idle period 8. The duty cycle is calculated by DC = T_{ON} / (T_{ON} + T_{OFF}) 9. The duty cycle correction is calculated by DC = 10 x Log_{10}(T_{ON} / (T_{ON} + T_{OFF}))

1.5.6 Results

Duty Cycle Results		
Mode	Duty Cycle	Correction Factor [dB]
Transmit	100%	0

1.6 Test Modes

Mode	Description
Transmit	Mode = Transmit Modulation = 2-FSK Duty cycle = 100 %
Comment:	

1.7 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx / Rx	1	912.5
F2	Tx / Rx	2	915.0
F3	Tx / Rx	3	918.5

1.8 Sample emission level calculation

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

Reading:

This is the reading obtained on the spectrum analyzer in 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/m) = 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/m	= 47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	**Requirement**	**Reference Method**	**Result**	**Remarks**
ISED RSS-Gen, Issue 5 (section 6.6)	Occupied Bandwidth	ANSI C63.10-2013	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	PASS	
FCC § 15.247(b)(1) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	PASS	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	PASS	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	N/R	No direct or indirect connection to AC mains
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.10-2013	N/T	
Comment:				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied bandwidth

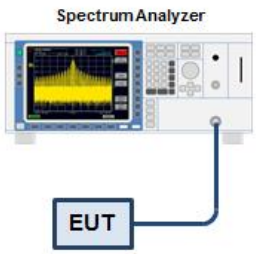
3.1.1 Information

Test Information	
Reference	ISED RSS-Gen, Issue 5 (section 6.6)
Measurement Method	ANSI C63.10 6.9.3
Operator	Toralf Jahn
Date	2020-06-03

3.1.2 Limits

Limits
None (Informational only)

3.1.3 Setup

Test Setup


3.1.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

3.1.5 Procedure

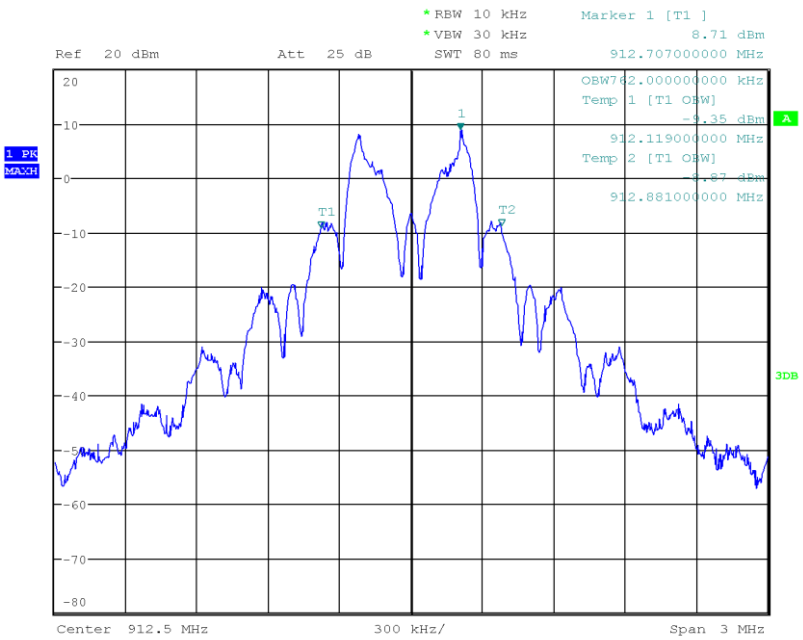
Test Procedure
1. EUT transmitter is activated in test mode under normal conditions 2. The spectrum analyzer is set to peak detection and maximum hold with a span twice the emission spectrum 3. The resolution bandwidth is set to the range of 1 % to 5 % of the occupied bandwidth 4. The occupied bandwidth is measured with the build-in analyzer function

3.1.6 Results

Test Results		
Mode	Frequency [MHz]	Bandwidth [MHz]
Transmit	912.5	0.762
Transmit	915.0	0.759
Transmit	918.5	0.759

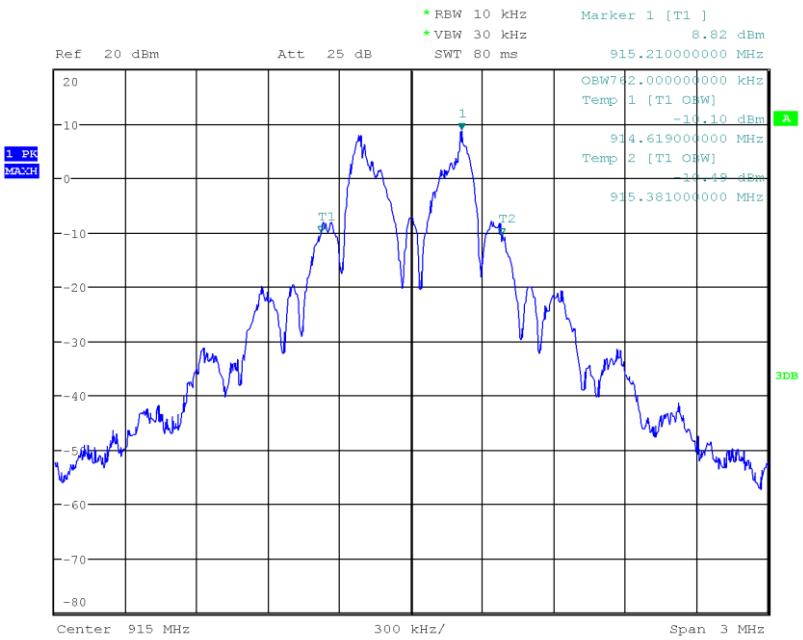
Occupied Bandwidth

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.9.3
Operational Mode:	2-FSK, Channel: 912.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Occupied Bandwidth [MHz]:	0.762



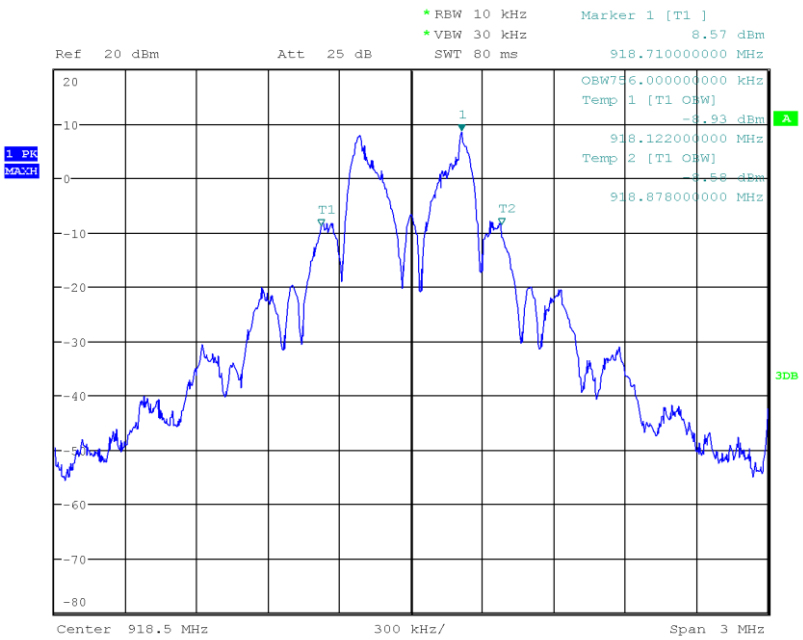
Occupied Bandwidth

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.9.3
Operational Mode:	2-FSK, Channel: 915.0 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Occupied Bandwidth [MHz]:	0.759



Occupied Bandwidth

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.9.3
Operational Mode:	2-FSK, Channel: 918.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Occupied Bandwidth [MHz]:	0.759



3.2 Test Conditions and Results - 6 dB bandwidth

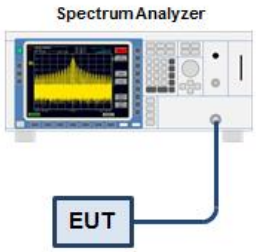
3.2.1 Information

Test Information	
Reference	FCC § 15.247(a)(2); ISED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.8
Operator	Toralf Jahn
Date	2020-06-03

3.2.2 Limits

Limits
≥ 500kHz

3.2.3 Setup

Test Setup


3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

3.2.5 Procedure

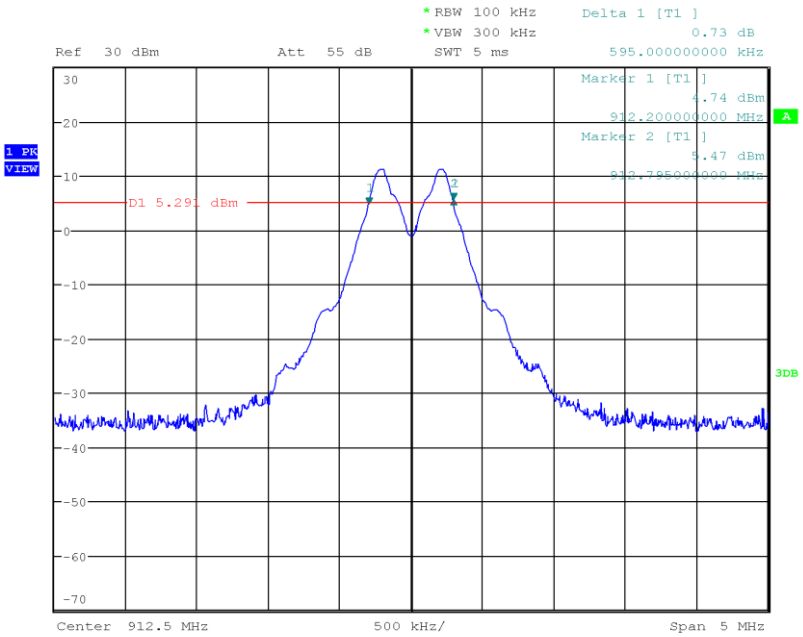
Test Procedure
1. EUT set to test mode 2. Span set to at least twice the emission spectrum 3. Detector set to peak and max hold and RBW is set to 100 kHz 4. Envelope peak value of emission spectrum is selected 5. Marker on envelope of spectrum is set to level of -6 dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -6 dB to the right of the peak 7. 6 dB Bandwidth is determined by marker frequency separation

3.2.6 Results

Test Results				
Mode	Frequency [MHz]	Bandwidth [kHz]	Limit [kHz]	Verdict
Transmit	912.5	595	500	PASS
Transmit	915.0	595	500	PASS
Transmit	918.5	595	500	PASS

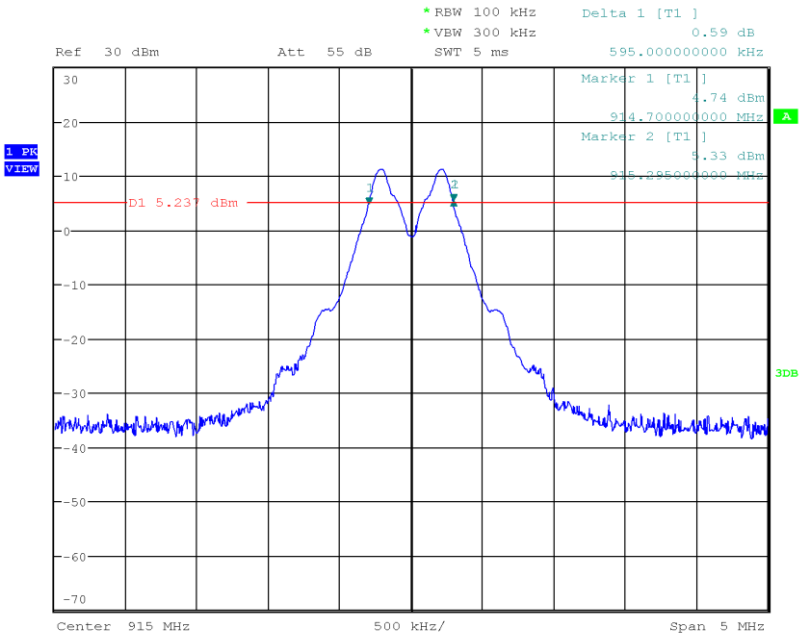
DTS (6 dB) Bandwidth

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.8.1 Option 1
Operational Mode:	2-FSK, Channel: 912.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Lower Frequency [MHz]:	912.200
Upper Frequency [MHz]:	912.795
6 dB Bandwidth [kHz]:	595



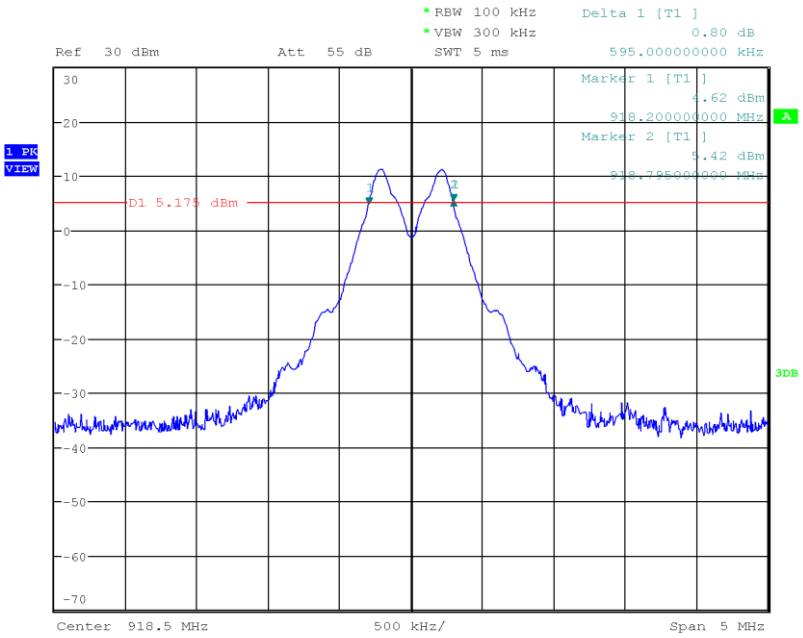
DTS (6 dB) Bandwidth

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.8.1 Option 1
Operational Mode:	2-FSK, Channel: 915.0 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Lower Frequency [MHz]:	914.700
Upper Frequency [MHz]:	915.295
6 dB Bandwidth [kHz]:	595



DTS (6 dB) Bandwidth

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.8.1 Option 1
Operational Mode:	2-FSK, Channel: 918.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Lower Frequency [MHz]:	918.200
Upper Frequency [MHz]:	918.795
6 dB Bandwidth [kHz]:	595



3.3 Test Conditions and Results - Maximum peak conducted output power

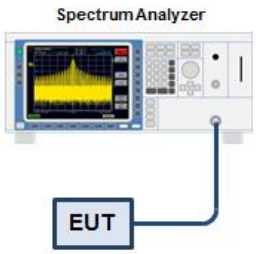
3.3.1 Information

Test Information	
Reference	FCC § 15.247(b)(1); ISED RSS-247, Issue 2 (section 5.4)
Measurement Method	ANSI C63.10 11.9.1
Operator	Toralf Jahn
Date	2020-06-03

3.3.2 Limits

Limits
1 W (30 dBm)
The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.3 Setup

Test Setup


3.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

3.3.5 Procedure

Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Analyzer resolution bandwidth is set ≥ DTS bandwidth 3. Detector set to peak and max hold 4. Sweep time is set to auto 5. After the trace has stabilized a marker is set to peak of envelope

3.3.6 Results

Test Results				
Channel [MHz]	Power [dBm]	Power [W]	Limit [W]	Verdict
912.5	13.104	0.0204	1.0	PASS
915.0	13.121	0.0205	1.0	PASS
918.5	13.105	0.0204	1.0	PASS

3.4 Test Conditions and Results - Power spectral density

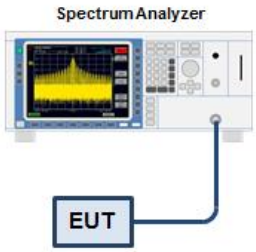
3.4.1 Information

Test Information	
Reference	FCC § 15.247(e); ISED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.10.2, 14.3.2
Operator	Toralf Jahn
Date	2020-06-03

3.4.2 Limits

Limits
8 dBm / 3 kHz

3.4.3 Setup

Test Setup


3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

3.4.5 Procedure

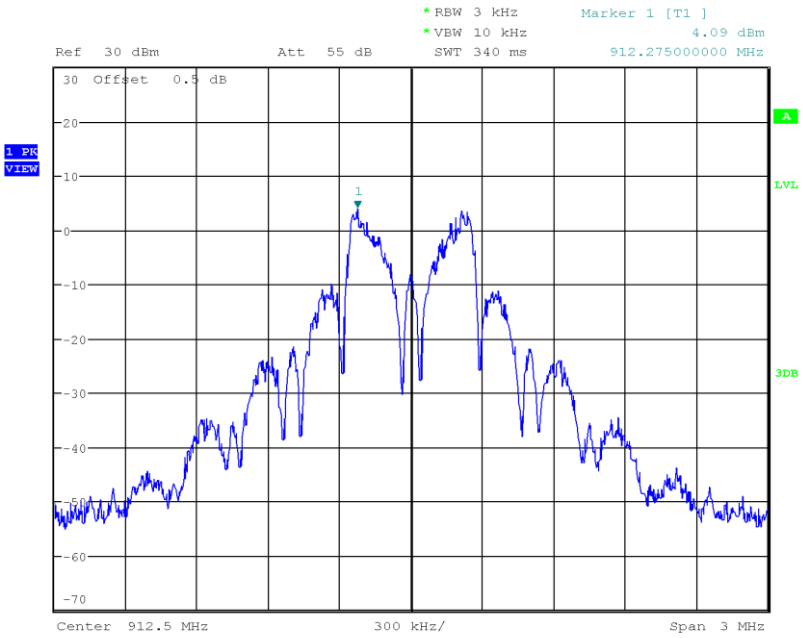
Test Procedure
1. EUT set to test mode 2. The analyzer is set to DTS channel center frequency with a span of 1.5 times the DTS bandwidth 3. The RBW is set to 100 kHz with VBW ≥ RBW and the detector is set to peak with max hold 4. After the trace has stabilized a marker is set to the envelope maximum 5. If the power spectral density is above the limit the RBW is reduced (not lower than 3 kHz) and the measurement is repeated 6. If the EUT has more than one transmit chain the procedure is repeated for each transmit chain

3.4.6 Results

Test Results			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
912.5	4.091	8.0	PASS
915.0	5.160	8.0	PASS
918.5	3.744	8.0	PASS
RBW = 3 kHz			

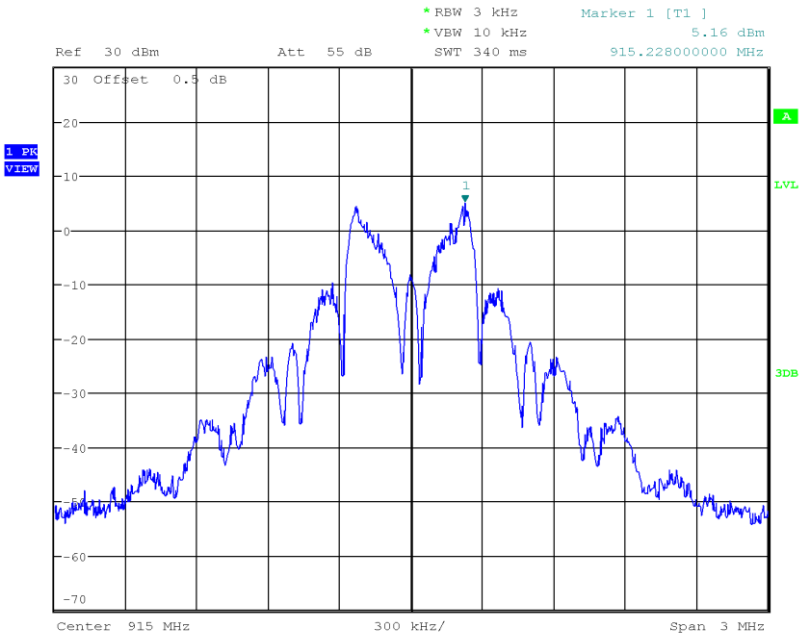
Peak Power Spectral Density

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.10.2
Operational Mode:	2-FSK, Channel: 912.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Peak Frequency [MHz]:	912.275
Spectral Density [dBm/RBW]:	4.091
Resolution Bandwidth [kHz]:	3 kHz



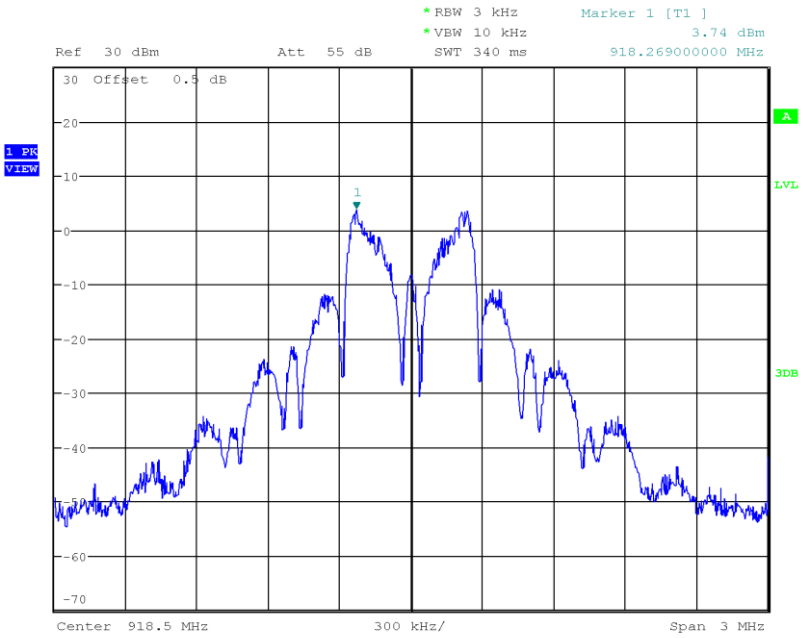
Peak Power Spectral Density

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.10.2
Operational Mode:	2-FSK, Channel: 915.0 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Peak Frequency [MHz]:	915.228
Spectral Density [dBm/RBW]:	5.160
Resolution Bandwidth [kHz]:	3 kHz



Peak Power Spectral Density

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.10.2
Operational Mode:	2-FSK, Channel: 918.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Peak Frequency [MHz]:	918.269
Spectral Density [dBm/RBW]:	3.744
Resolution Bandwidth [kHz]:	3 kHz



3.5 Test Conditions and Results - Band-edge compliance

3.5.1 Information

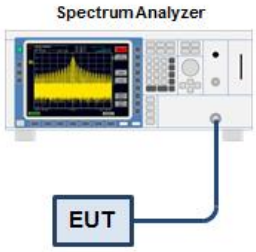
Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Method	ANSI C63.10 11.13
Operator	Toralf Jahn
Date	2020-06-03

3.5.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.5.3 Setup

Test Setup



3.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

3.5.5 Procedure

Test Procedure

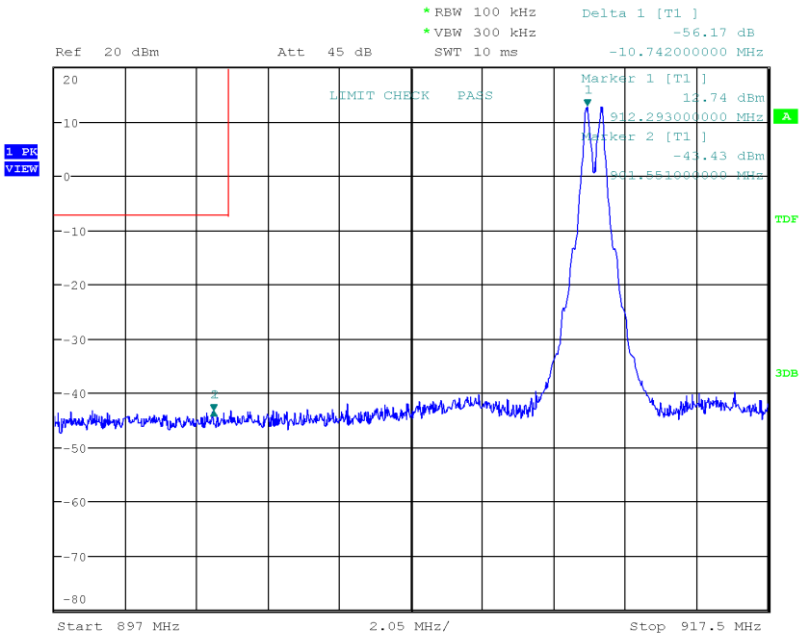
1. EUT set to test mode (Communication tester is used if needed)
2. Span set around lower band edge and detector is set to peak and max hold
3. Resolution bandwidth is set to 100 kHz
4. Markers are set to peak emission levels within frequency band and outside frequency band
5. Band edge attenuation is determined from level difference

3.5.6 Results

Test Results				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
Transmit	912.5	-56.17	-20	PASS
Transmit	918.5	-54.98	-20	PASS

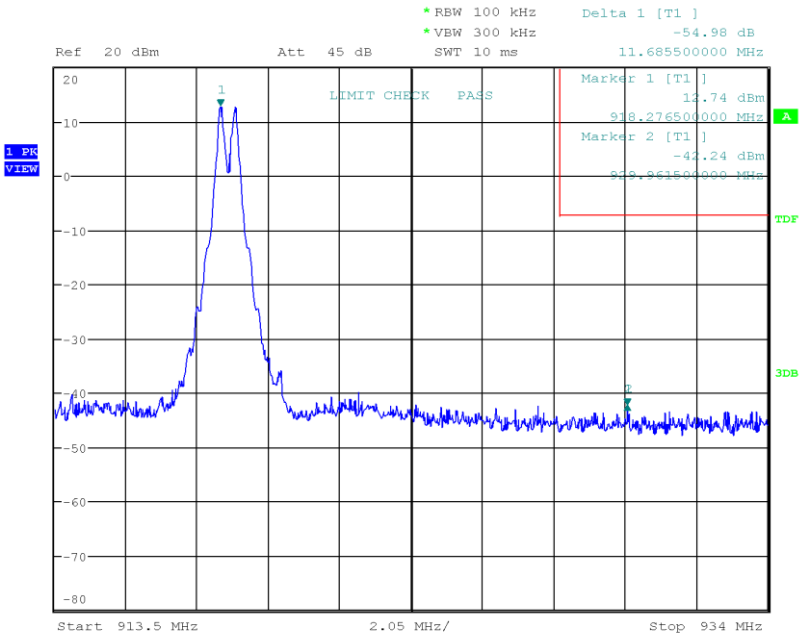
Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.10
Operational Mode:	single frequency, Channel: 912.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Band-edge	Lower
In-band Frequency [MHz]:	912.293
Max. in-band Level [dBm/100 kHz]:	12.741
Out-of-band Frequency [MHz]:	901.551
Max. out-of-band Level [dBm/100 kHz]:	-43.429
Attenuation [dB]:	-56.17



Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.10
Operational Mode:	single frequency, Channel: 918.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Band-edge	Upper
In-band Frequency [MHz]:	918.277
Max. in-band Level [dBm/100 kHz]:	12.742
Out-of-band Frequency [MHz]:	929.962
Max. out-of-band Level [dBm/100 kHz]:	-42.238
Attenuation [dB]:	-54.98



Date: 3.JUN.2020 10:56:58

3.6 Test Conditions and Results - Conducted spurious emissions

3.6.1 Information

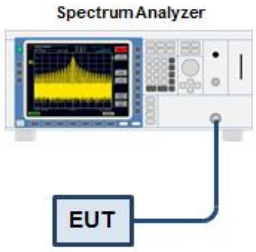
Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Method	ANSI C63.10 11.11
Operator	Toralf Jahn
Date	2020-06-03

3.6.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.6.3 Setup

Test Setup



3.6.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2019-12	2020-12

3.6.5 Procedure

Test Procedure

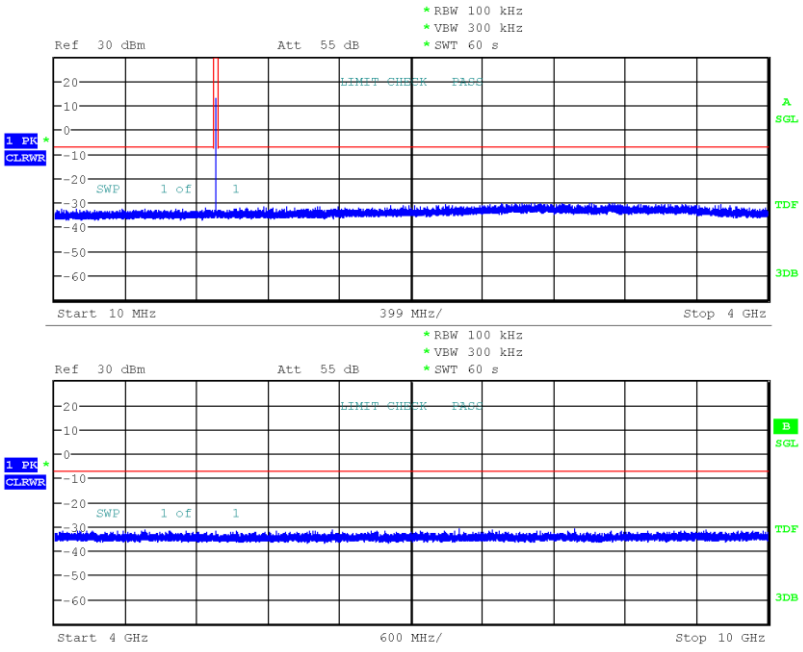
1. EUT set to test mode (Communication tester is used if needed)
2. Span set around lower band edge and detector is set to peak and max hold
3. Resolution bandwidth is set to 100 kHz
4. Markers are set to peak emission levels within frequency band and outside frequency band
5. Band edge attenuation is determined from level difference

3.6.6 Results

Test Results		
Mode	Channel [MHz]	Verdict
Transmit	912.5	PASS
Transmit	915.0	PASS
Transmit	918.5	PASS

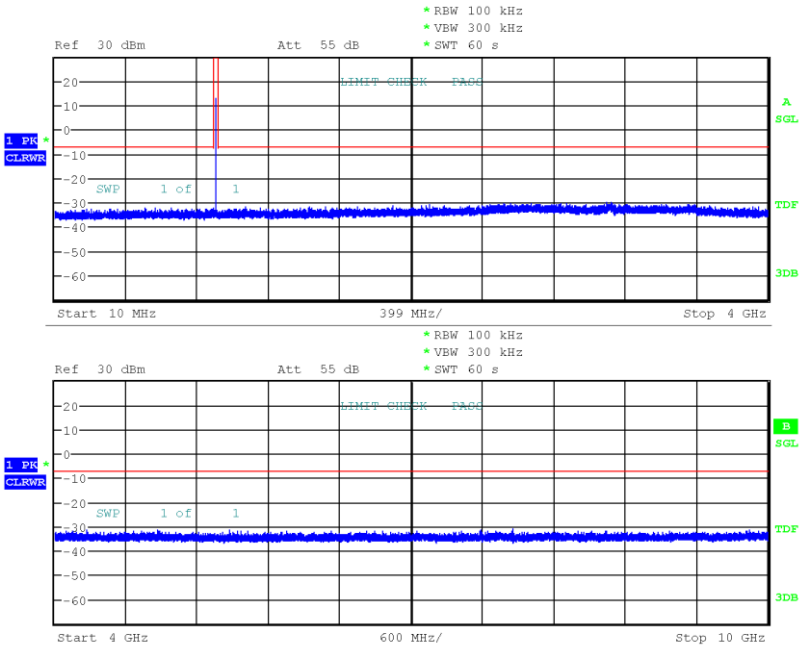
Conducted Spurious Emissions

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.11
Operational Mode:	2-FSK, Channel: 912.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Max. in-band Frequency [MHz]:	912.3
Max. in-band Level [dBm/100 kHz]:	12.8
Out-of-band Limit [dBm/100 kHz]:	-7.2



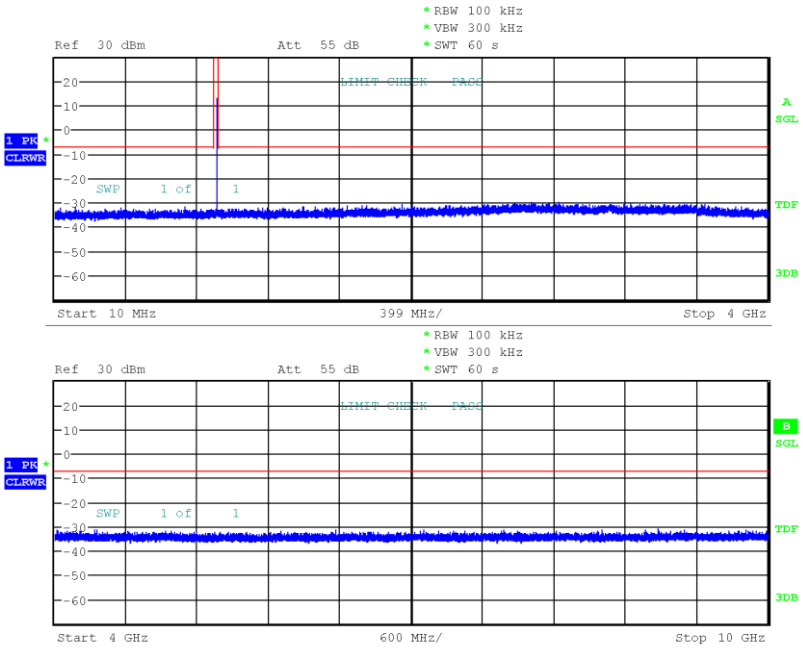
Conducted Spurious Emissions

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.11
Operational Mode:	2-FSK, Channel: 915.0 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Max. in-band Frequency [MHz]:	914.8
Max. in-band Level [dBm/100 kHz]:	12.8
Out-of-band Limit [dBm/100 kHz]:	-7.2



Conducted Spurious Emissions

Project Number:	G0M-2002-8859
Applicant:	Kamstrup A/S
Model Description:	Ultrasonic water meter
Model:	KWM2220
Test Sample ID:	29577
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.11
Operational Mode:	2-FSK, Channel: 918.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Toralf Jahn
Test Site:	Eurofins Product Service GmbH
Test Date:	2020-06-03
Max. in-band Frequency [MHz]:	918.3
Max. in-band Level [dBm/100 kHz]:	12.7
Out-of-band Limit [dBm/100 kHz]:	-7.3



3.7 Test Conditions and Results - Transmitter radiated emissions

3.7.1 Information

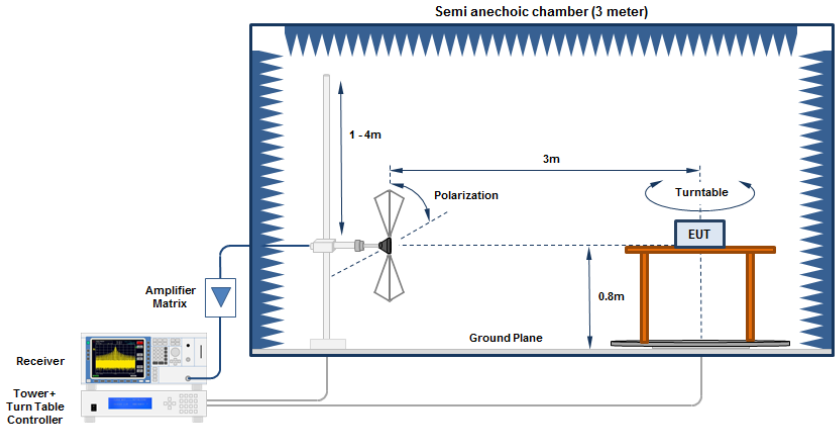
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISED RSS-Gen, Issue 5 (section 6.13)
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Toralf Jahn
Date	2020-06-03

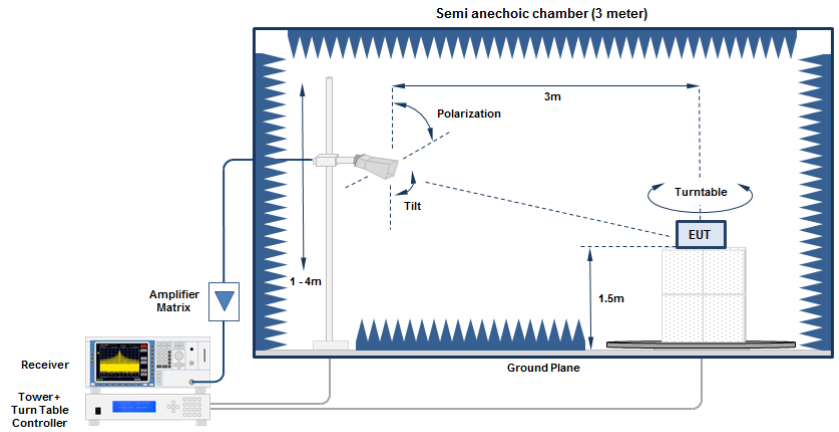
3.7.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [µV/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.7.3 Setup

Test Setup 30 - 1000 MHz



Test Setup > 1 GHz


3.7.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2016.1.10

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
EMI Test Receiver	R&S	ESR7	EF00943	2019-10	2020-10
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Spectrum analyzer	R&S	FSU26	EF01003	2019-07	2020-07
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10

3.7.5 Procedure

Test Procedure 30 - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.7.6 Results

Test Results helix antenna						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
912.5	1024	38.32	pk	hor	74.00	-35.68
912.5	1048	44.80	pk	ver	74.00	-29.20
912.5	1827	33.54	pk	hor	74.00	-40.46
912.5	1827	38.81	pk	ver	74.00	-35.19
912.5	2413	30.05	pk	hor	74.00	-43.95
912.5	2740	35.00	pk	hor	74.00	-39.00
912.5	2740	36.25	pk	ver	74.00	-37.75
912.5	3649	34.81	pk	hor	74.00	-39.19
915.0	1000	38.00	pk	hor	74.00	-36.00
915.0	1034	45.90	pk	ver	74.00	-28.10
915.0	1827	35.06	pk	hor	74.00	-38.94
915.0	1832	40.86	pk	ver	74.00	-33.14
915.0	2745	34.37	pk	hor	74.00	-39.63
915.0	2745	36.33	pk	ver	74.00	-37.67
915.0	3659	34.56	pk	hor	74.00	-39.44
918.5	1024	38.51	pk	hor	74.00	-35.49
918.5	1034	45.30	pk	ver	74.00	-28.70
918.5	1837	34.42	pk	hor	74.00	-39.58
918.5	1837	39.83	pk	ver	74.00	-34.17
918.5	2755	33.89	pk	hor	74.00	-40.11
918.5	2755	35.35	pk	ver	74.00	-38.65
918.5	3673	34.61	pk	hor	74.00	-39.39

Test Results wall antenna						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
912.5	257.6	35.00	qpk	hor	46.00	-11.01
912.5	407.6	33.20	qpk	ver	46.00	-12.83
915.0	257.78	35.20	qpk	hor	46.00	-10.78
915.0	407.36	33.00	qpk	ver	46.00	-13.04
918.5	258.14	35.50	qpk	hor	46.00	-10.52
918.5	407.66	33.20	qpk	ver	46.00	-12.85
912.5	1072	40.61	pk	hor	74.00	-33.39
912.5	1072	42.05	pk	ver	74.00	-31.95
912.5	1827	43.77	pk	hor	74.00	-30.23
912.5	1827	42.83	pk	ver	74.00	-31.17
912.5	2740	32.85	pk	hor	74.00	-41.15
912.5	2740	36.00	pk	ver	74.00	-38.00
915.0	1072	40.78	pk	hor	74.00	-33.22
915.0	1163	43.19	pk	ver	74.00	-30.81
915.0	1827	43.91	pk	hor	74.00	-30.09
915.0	1827	41.90	pk	ver	74.00	-32.10
915.0	2745	33.49	pk	hor	74.00	-40.51
915.0	2745	36.96	pk	ver	74.00	-37.04
918.5	1082	42.48	pk	hor	74.00	-31.52
918.5	1168	44.37	pk	ver	74.00	-29.63
918.5	1837	43.57	pk	hor	74.00	-30.43
918.5	1837	42.72	pk	ver	74.00	-31.28
918.5	2755	34.16	pk	hor	74.00	-39.84
918.5	2755	35.06	pk	ver	74.00	-38.94

Test Results pit antenna 6697916						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
912.5	404.54	42.40	pk	hor	46.00	-03.55
912.5	404.54	36.70	qpk	hor	46.00	-09.28
915.0	406.52	42.50	pk	hor	46.00	-03.48
915.0	406.52	36.90	qpk	hor	46.00	-09.13
918.5	406.88	41.30	pk	hor	46.00	-04.69
918.5	406.88	37.00	qpk	hor	46.00	-09.04
912.5	1000	41.31	pk	hor	74.00	-32.69
912.5	1005	42.44	pk	ver	74.00	-31.56
912.5	1827	41.51	pk	hor	74.00	-32.49
912.5	1827	42.57	pk	ver	74.00	-31.43
912.5	2740	33.49	pk	hor	74.00	-40.51
912.5	2740	35.31	pk	ver	74.00	-38.69
915.0	1000	43.39	pk	ver	74.00	-30.61
915.0	1005	41.84	pk	hor	74.00	-32.16
915.0	1832	42.31	pk	hor	74.00	-31.69
915.0	1832	42.64	pk	ver	74.00	-31.36
915.0	2745	33.74	pk	hor	74.00	-40.26
915.0	2745	36.12	pk	ver	74.00	-37.88
915.0	5237	36.59	pk	hor	74.00	-37.41
918.5	1000	42.37	pk	ver	74.00	-31.63
918.5	1173	40.98	pk	hor	74.00	-33.02
918.5	1837	41.17	pk	hor	74.00	-32.83
918.5	1837	41.78	pk	ver	74.00	-32.22
918.5	2755	36.22	pk	ver	74.00	-37.78

Test Results pit antenna 6697902						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
912.5	334.64	34.00	pk	hor	46.00	-11.95
912.5	608.96	37.60	pk	ver	46.00	-08.41
912.5	608.96	31.70	qpk	ver	46.00	-14.28
915.0	335.06	34.50	pk	hor	46.00	-11.55
915.0	609.08	37.70	pk	ver	46.00	-08.27
915.0	609.08	31.70	qpk	ver	46.00	-14.28
918.5	335.3	34.80	pk	hor	46.00	-11.19
918.5	608.6	38.50	pk	ver	46.00	-07.49
918.5	608.6	32.40	qpk	ver	46.00	-13.61
912.5	1087	40.45	pk	hor	74.00	-33.55
912.5	1087	42.76	pk	ver	74.00	-31.24
912.5	1827	43.58	pk	hor	74.00	-30.42
912.5	1827	42.81	pk	ver	74.00	-31.19
912.5	2740	35.52	pk	hor	74.00	-38.48
912.5	2740	35.20	pk	ver	74.00	-38.80
915.0	1139	41.22	pk	ver	74.00	-32.78
915.0	1173	39.73	pk	hor	74.00	-34.27
915.0	1827	42.17	pk	hor	74.00	-31.83
915.0	1832	43.60	pk	ver	74.00	-30.40
915.0	2745	35.33	pk	hor	74.00	-38.67
915.0	2745	35.18	pk	ver	74.00	-38.82
918.5	1058	40.25	pk	hor	74.00	-33.75
918.5	1139	42.00	pk	ver	74.00	-32.00
918.5	1837	41.88	pk	hor	74.00	-32.12
918.5	1837	43.98	pk	ver	74.00	-30.02
918.5	2755	34.97	pk	hor	74.00	-39.03
918.5	2755	35.96	pk	ver	74.00	-38.04

ANNEX A Transmitter spurious emissions

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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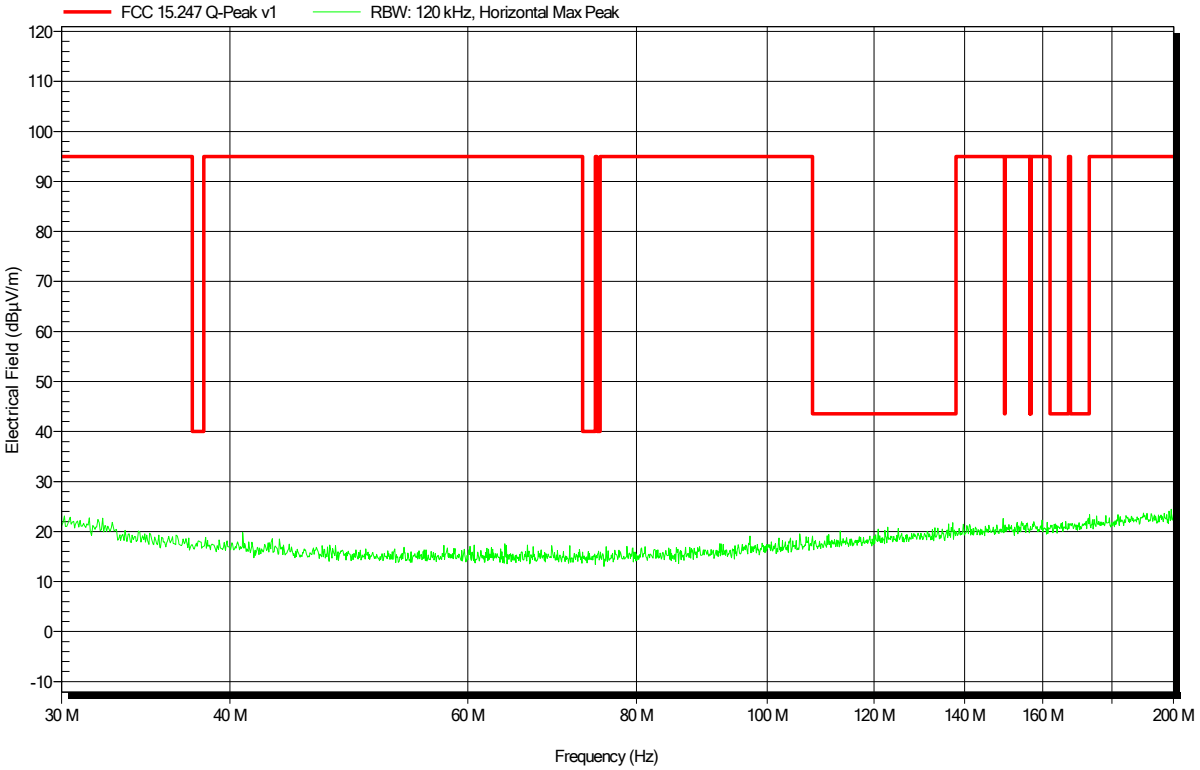

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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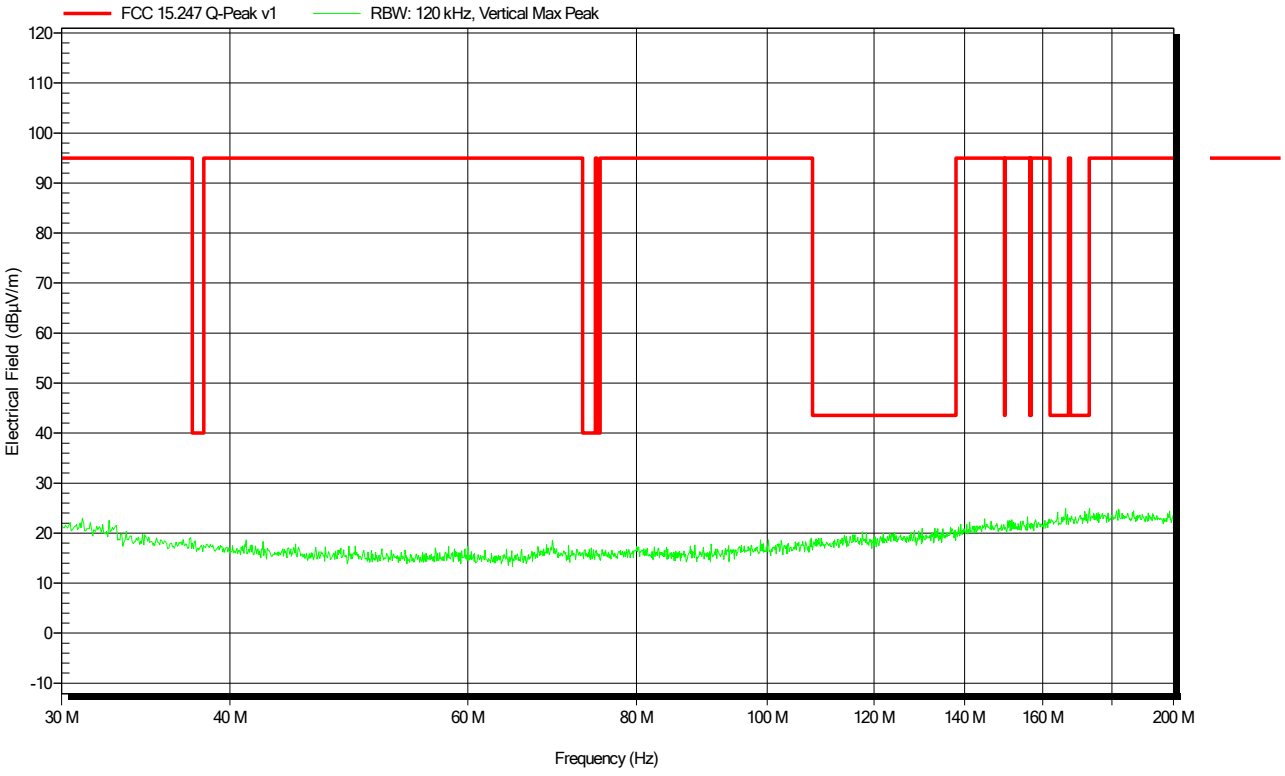

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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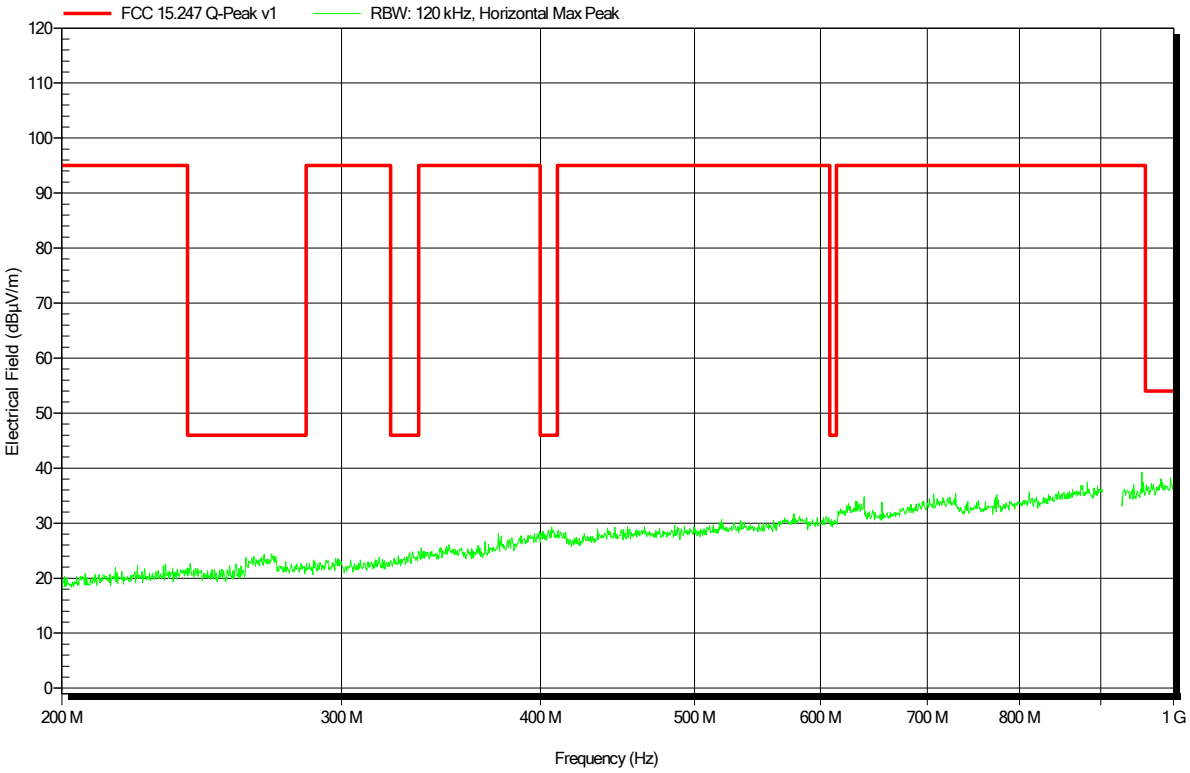

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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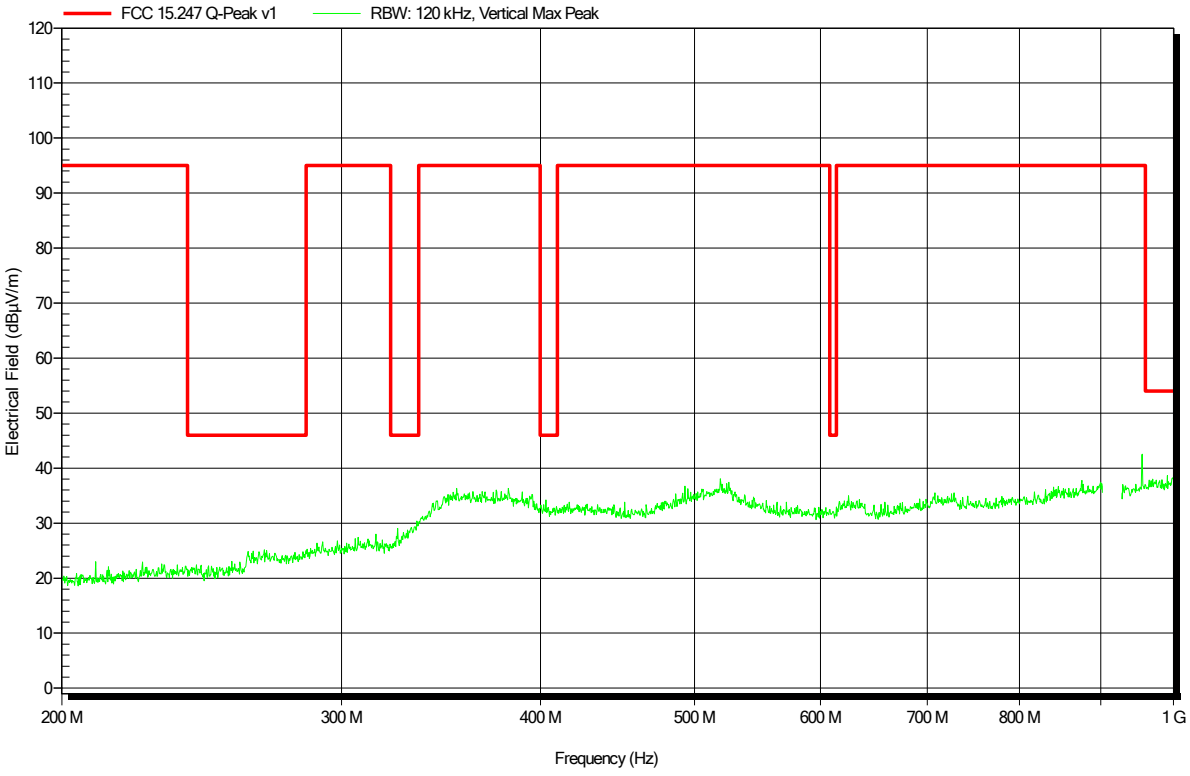

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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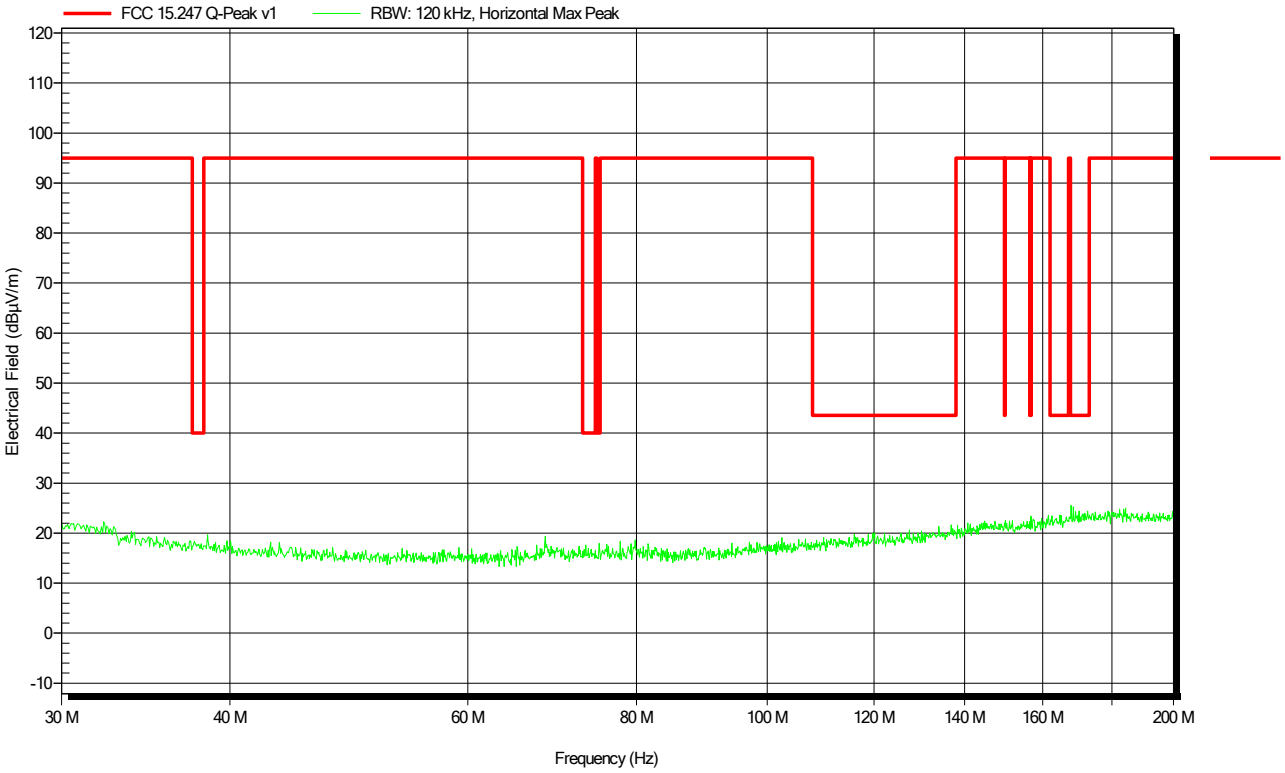

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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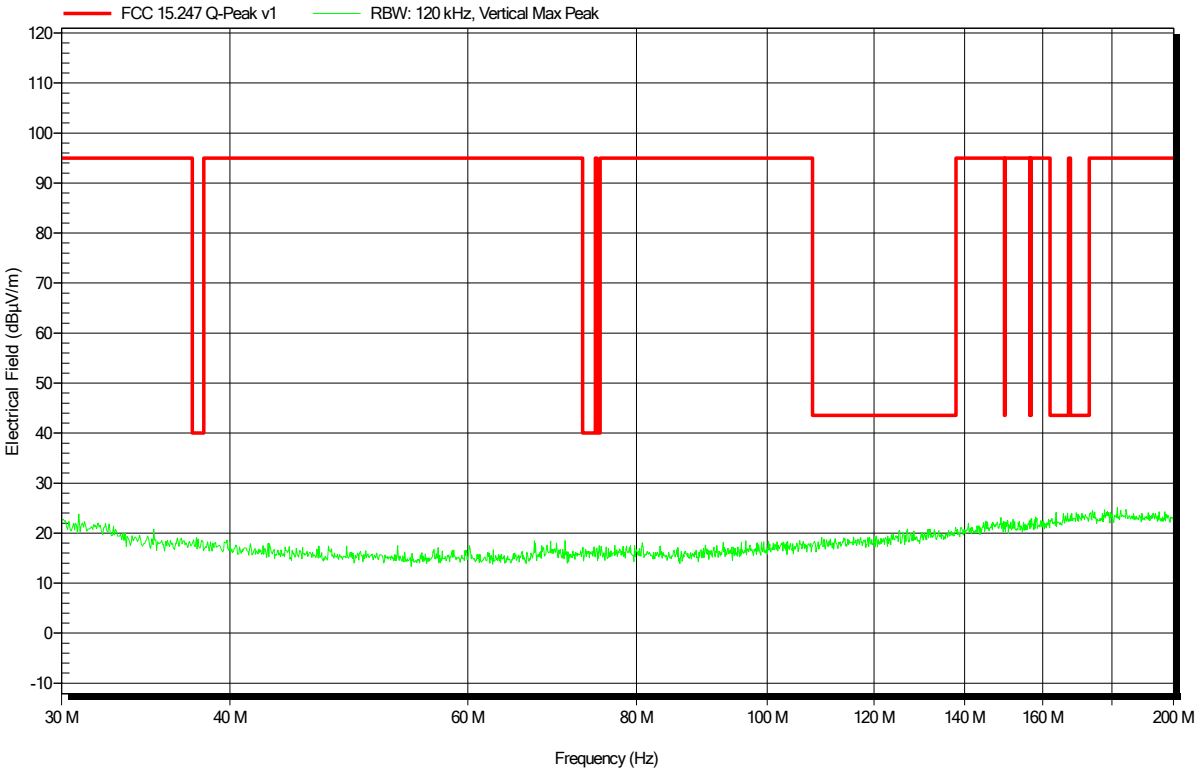

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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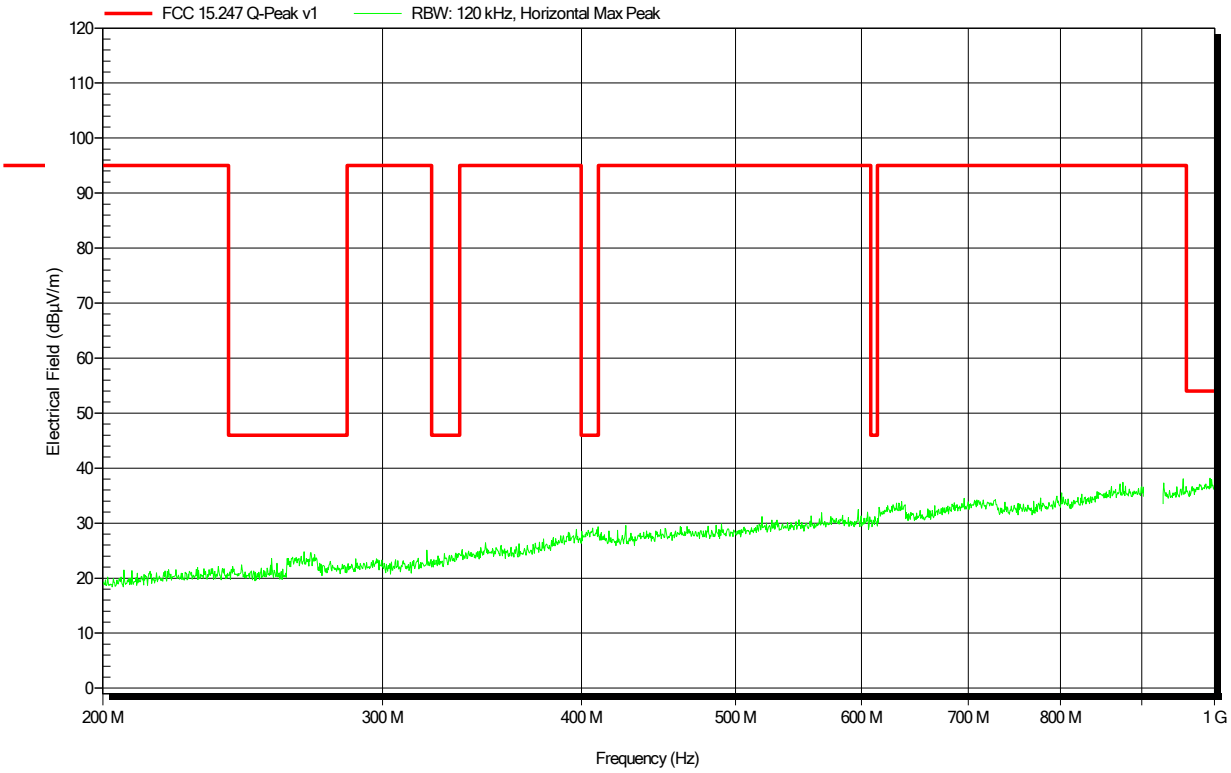

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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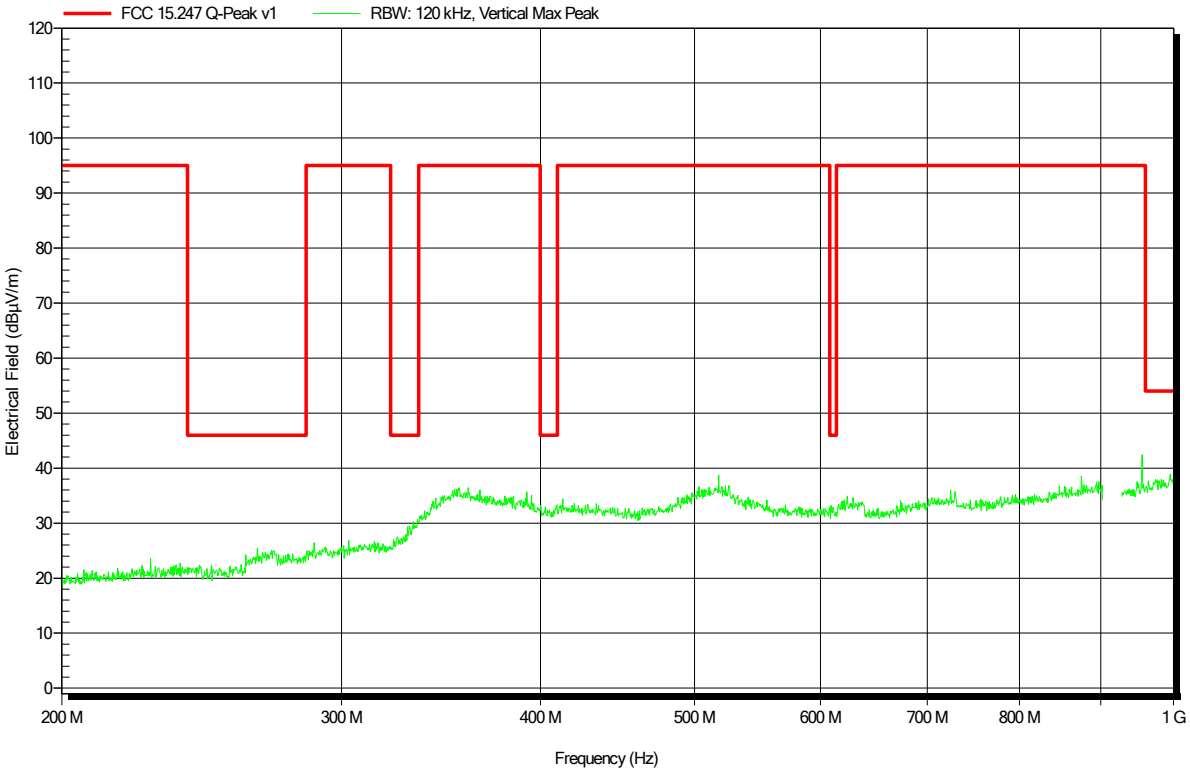

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-05
Note:	

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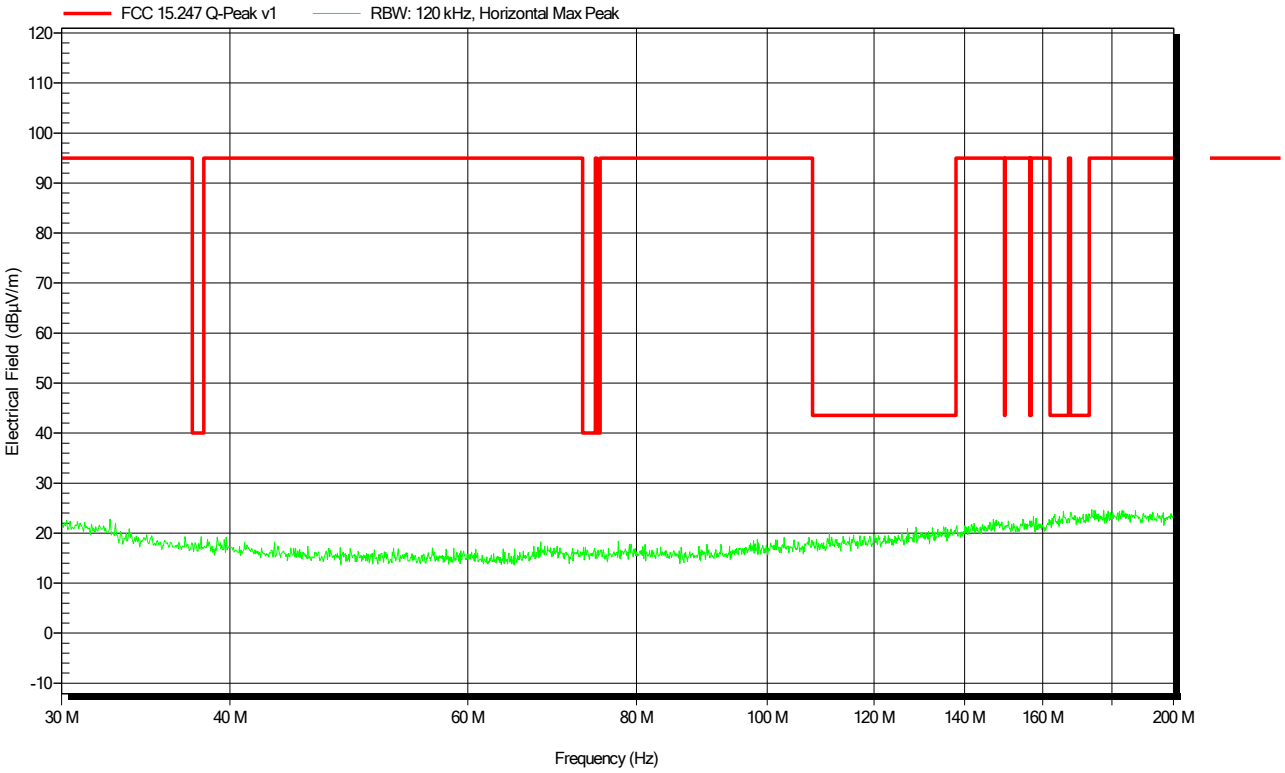

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-05
Note:	

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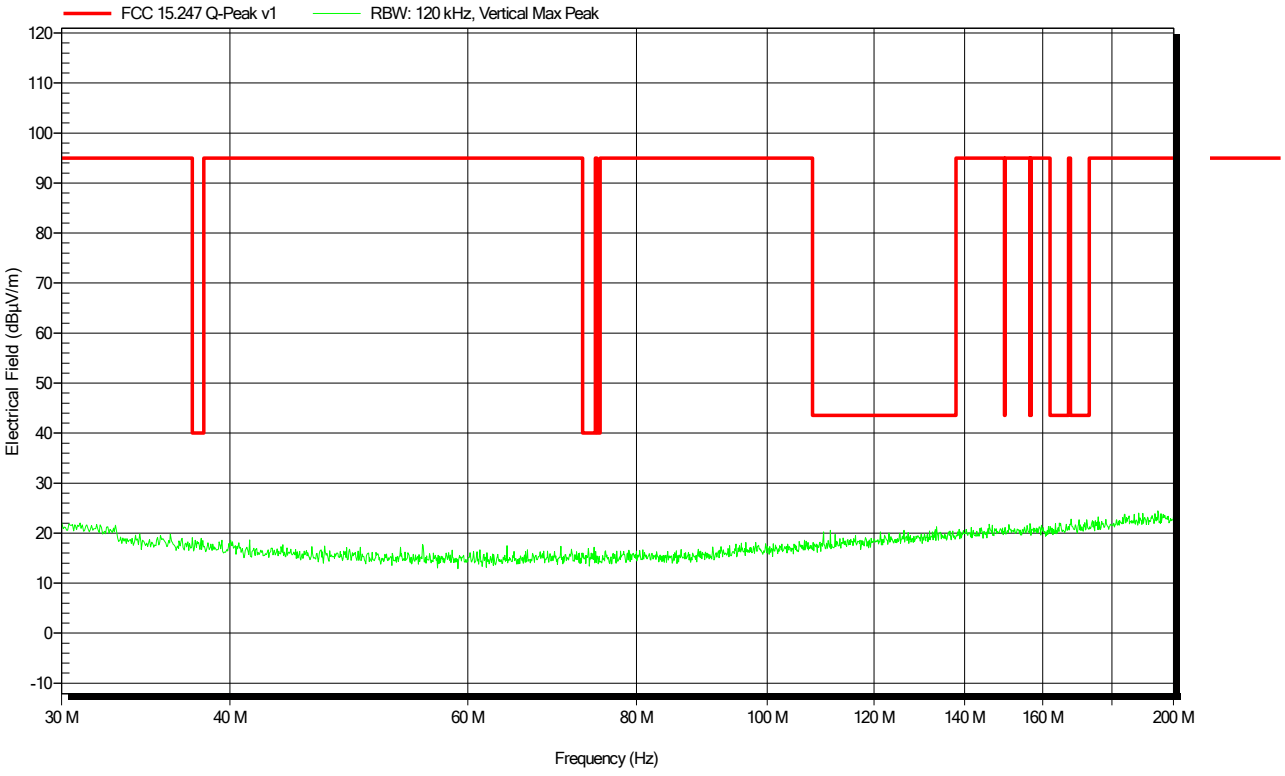

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-05
Note:	

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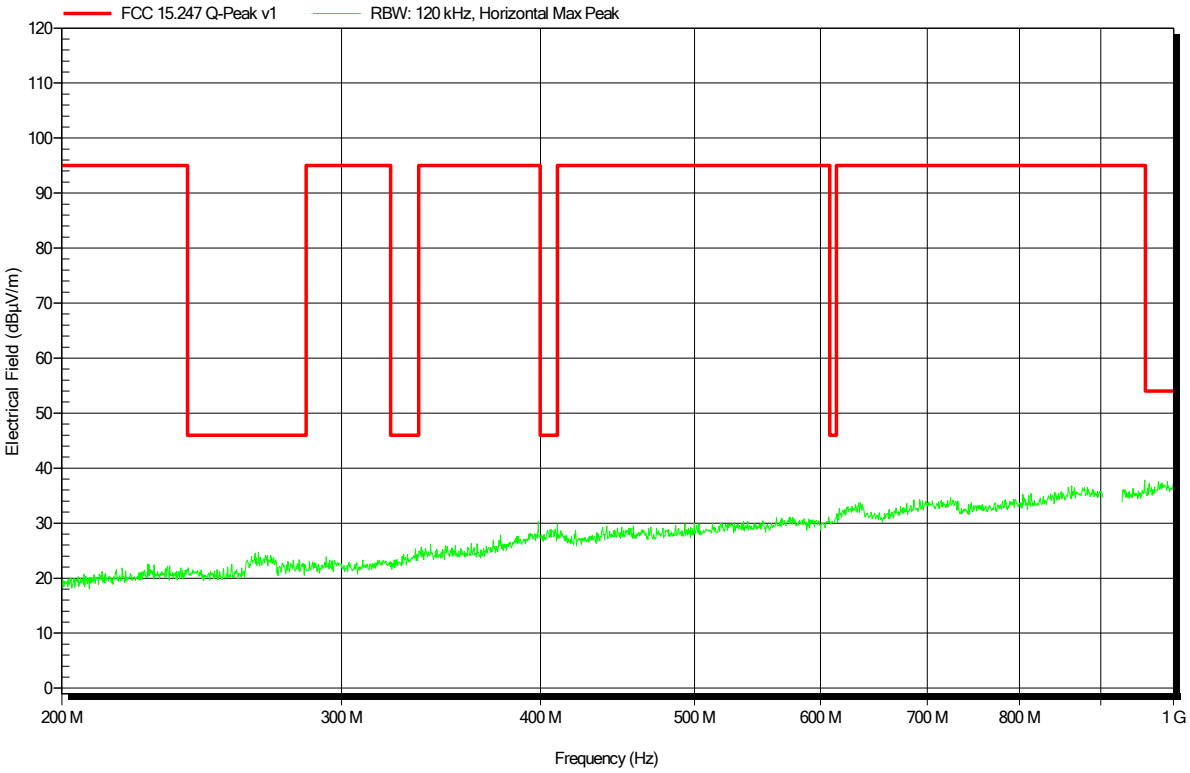

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-05
Note:	

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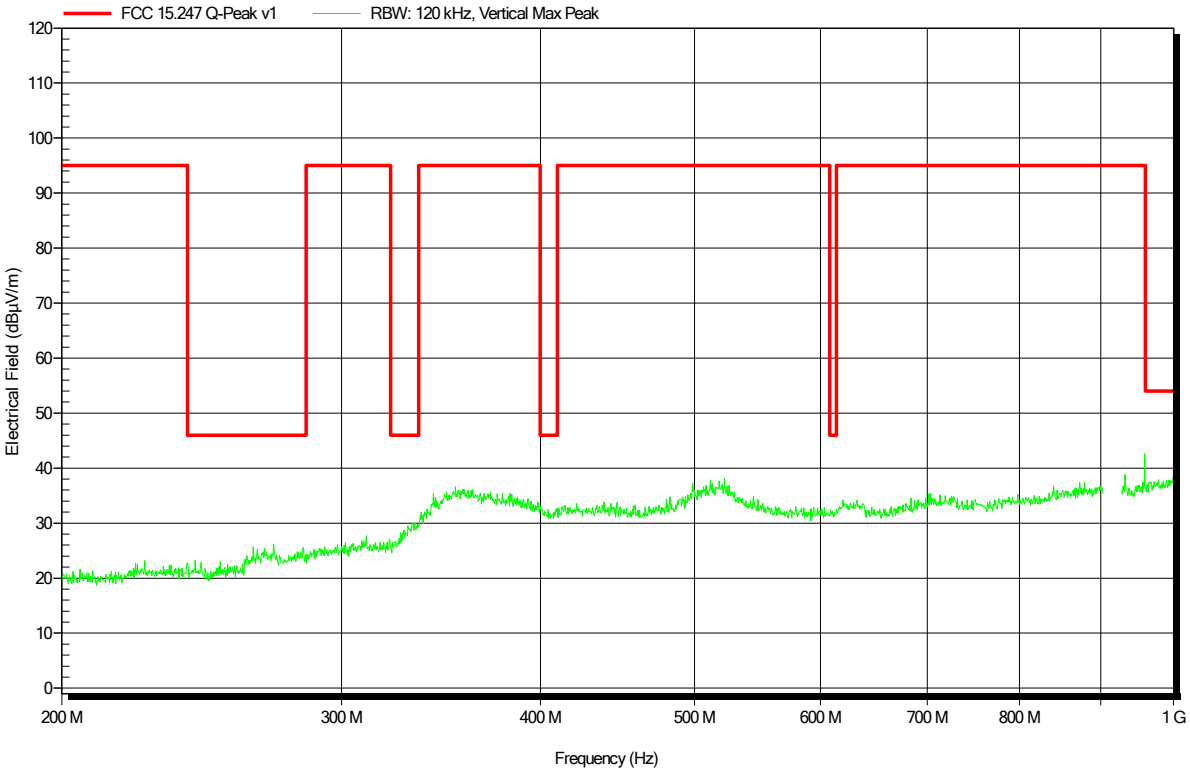

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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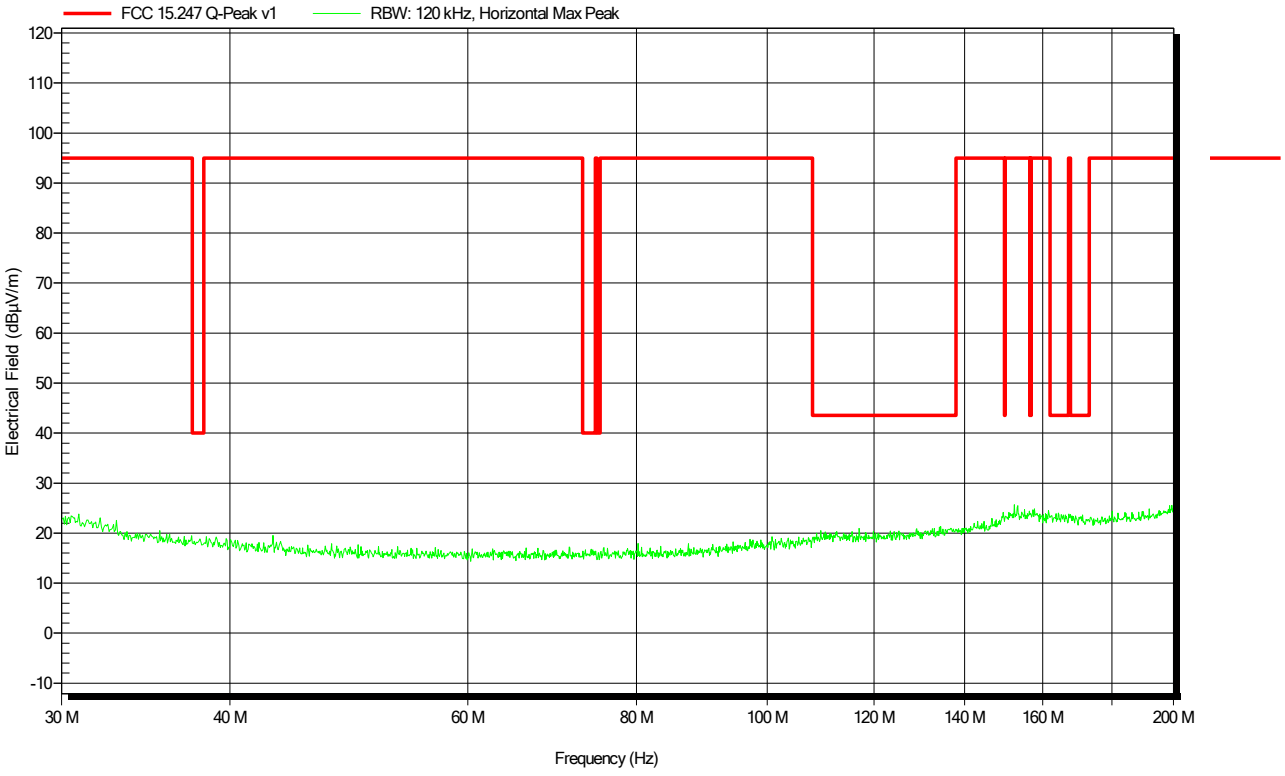

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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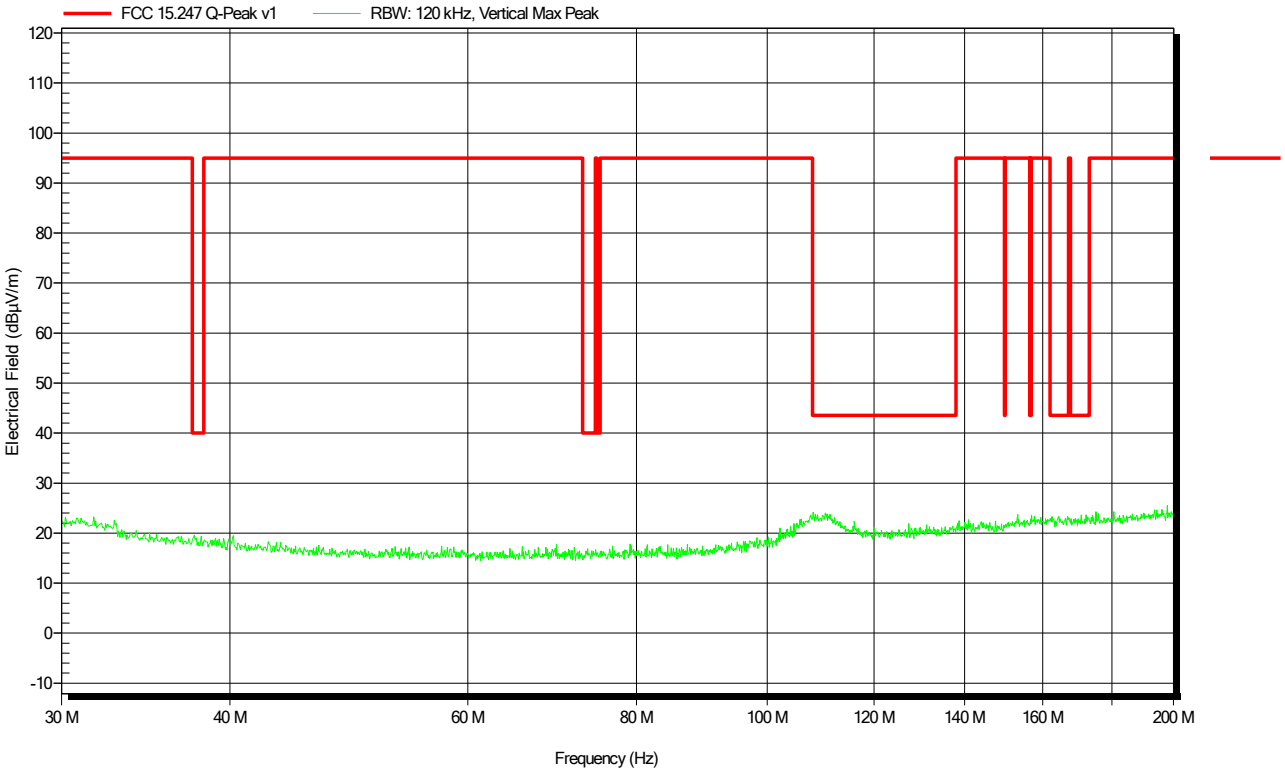

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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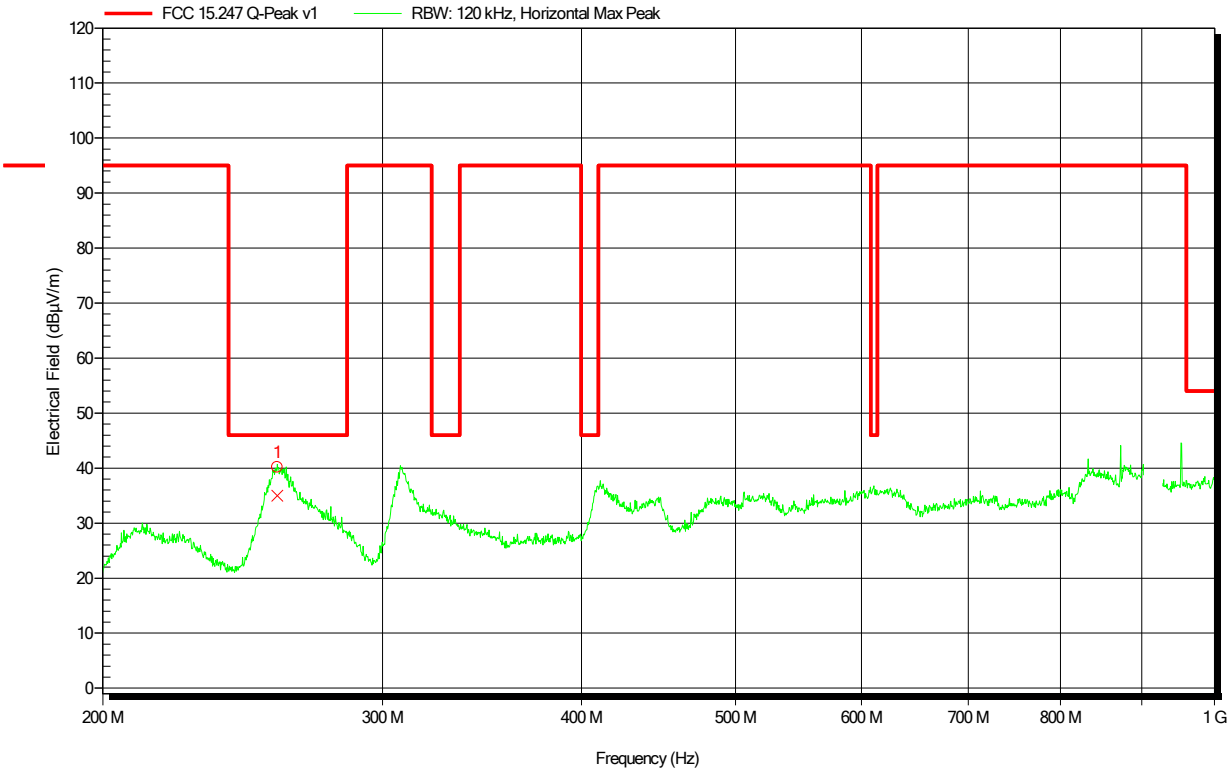

Frequency	Peak	Peak Limit	Peak Difference	Status
257.6 MHz	40.1 dBµV/m	46 dBµV/m	-5.85 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
257.6 MHz	35 dBµV/m	46 dBµV/m	-11.01 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-05
Note:	

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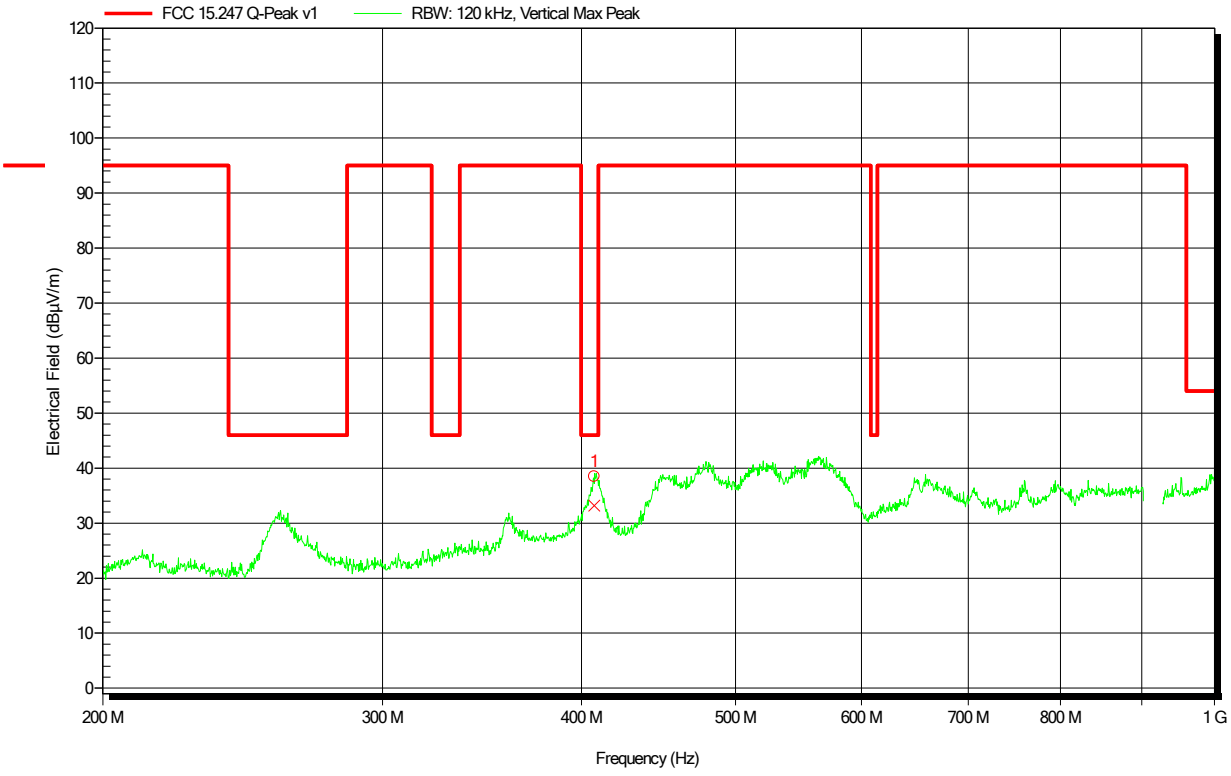

Frequency	Peak	Peak Limit	Peak Difference	Status
407.6 MHz	38.4 dBµV/m	46 dBµV/m	-7.56 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
407.6 MHz	33.2 dBµV/m	46 dBµV/m	-12.83 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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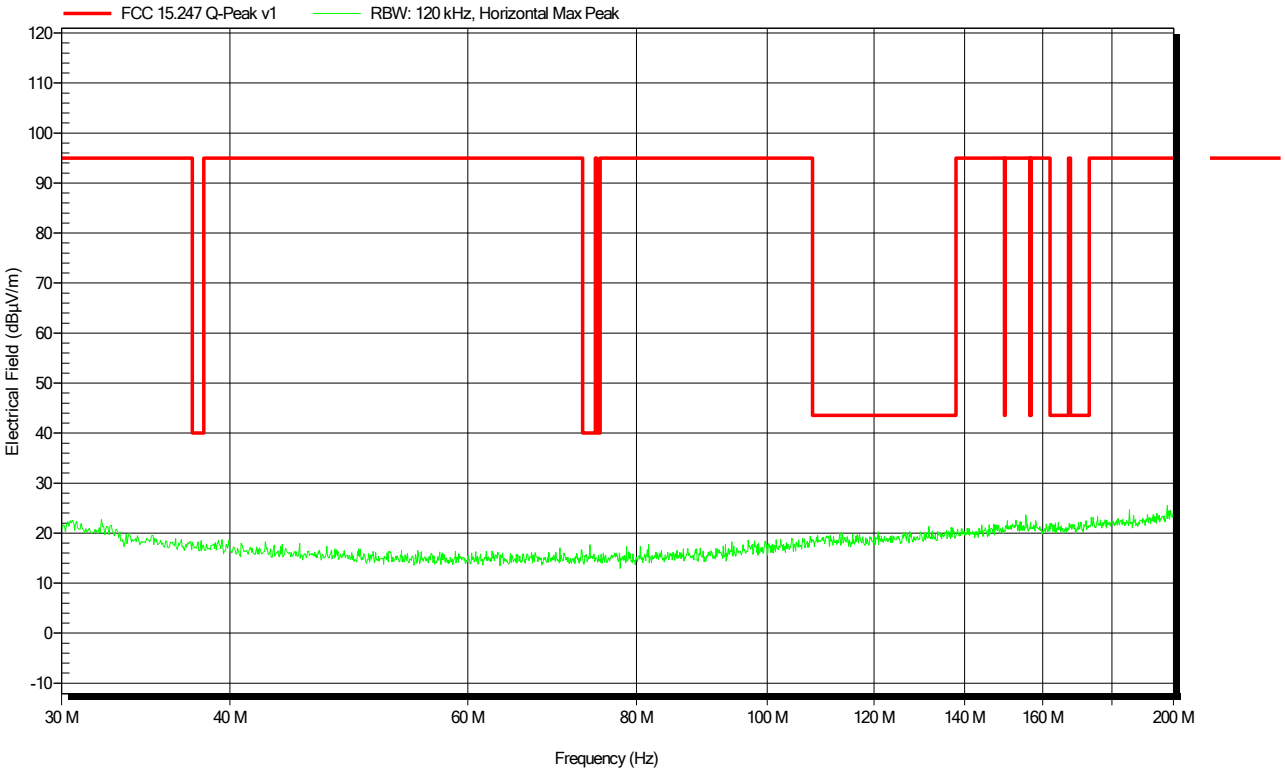

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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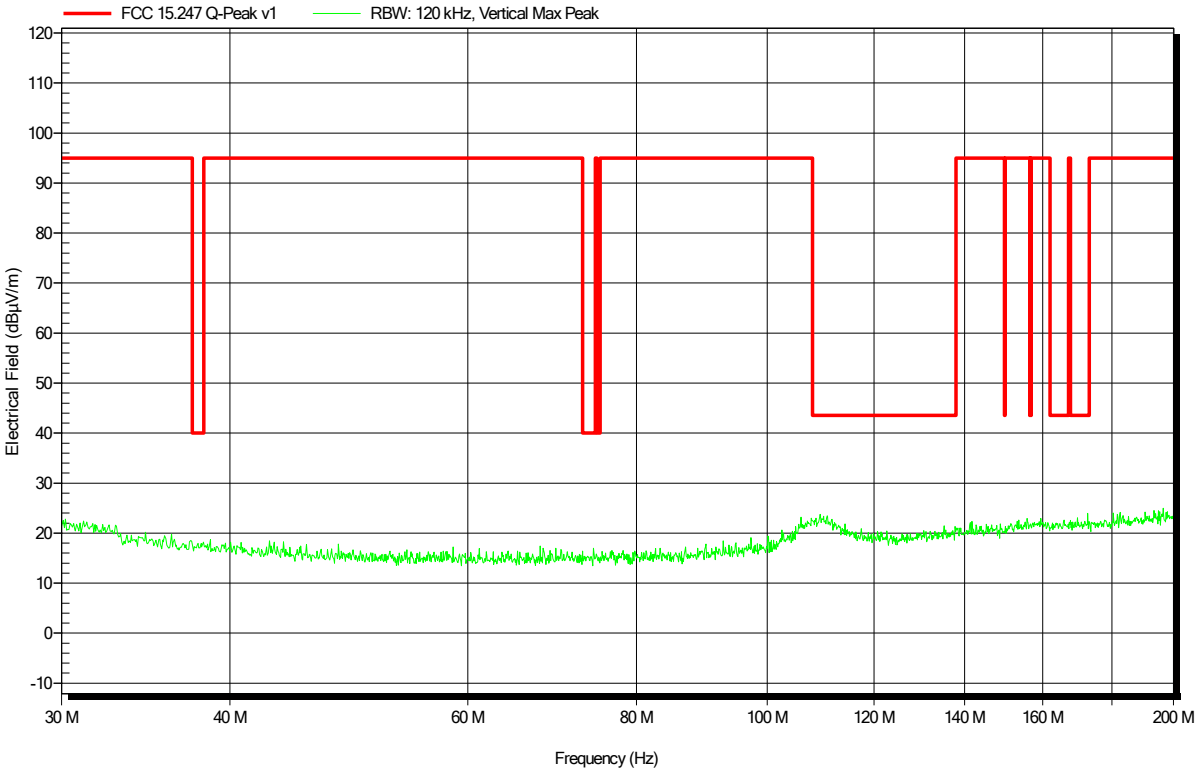

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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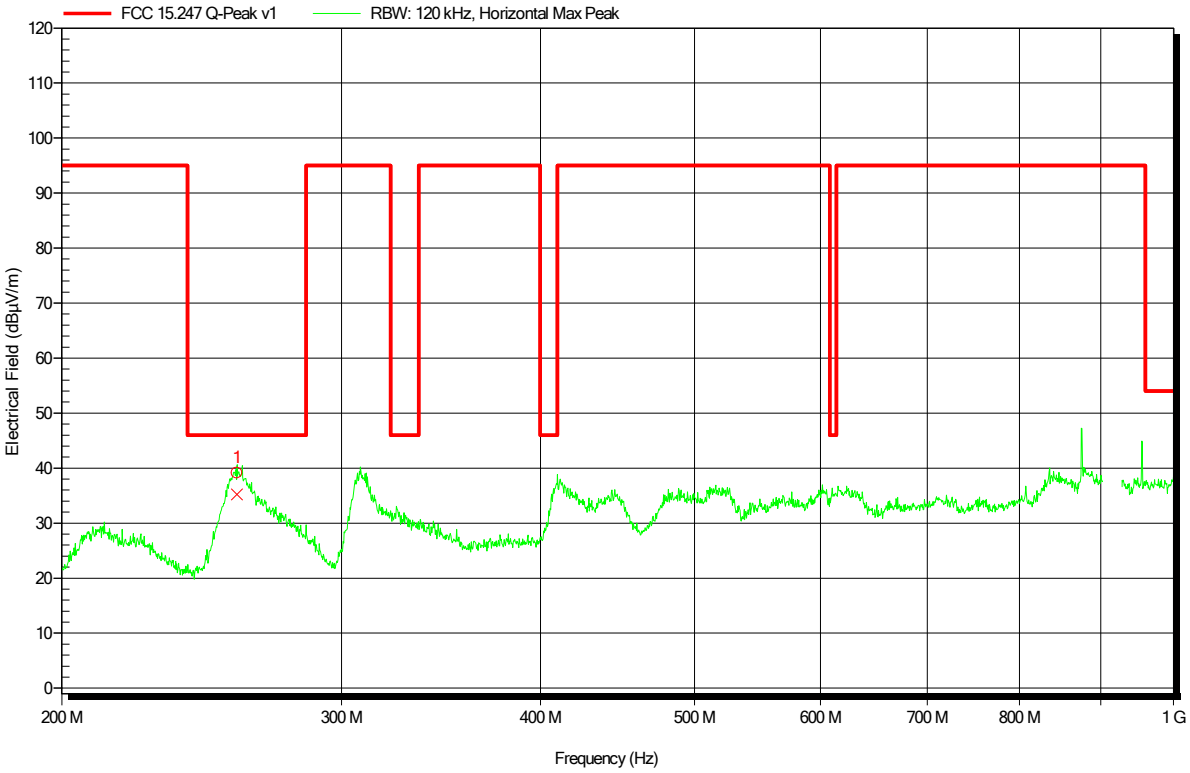

Frequency	Peak	Peak Limit	Peak Difference	Status
257.78 MHz	39.1 dBµV/m	46 dBµV/m	-6.86 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
257.78 MHz	35.2 dBµV/m	46 dBµV/m	-10.78 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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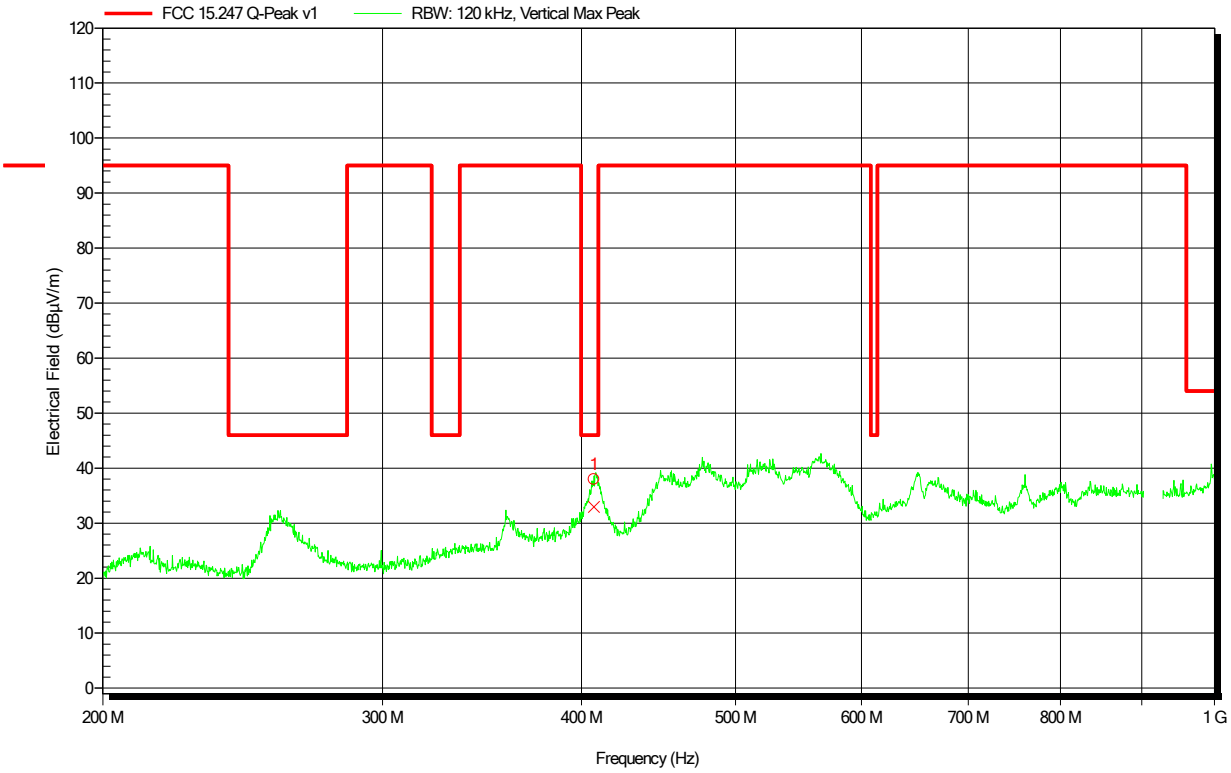

Frequency	Peak	Peak Limit	Peak Difference	Status
407.36 MHz	38 dBµV/m	46 dBµV/m	-8.04 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
407.36 MHz	33 dBµV/m	46 dBµV/m	-13.04 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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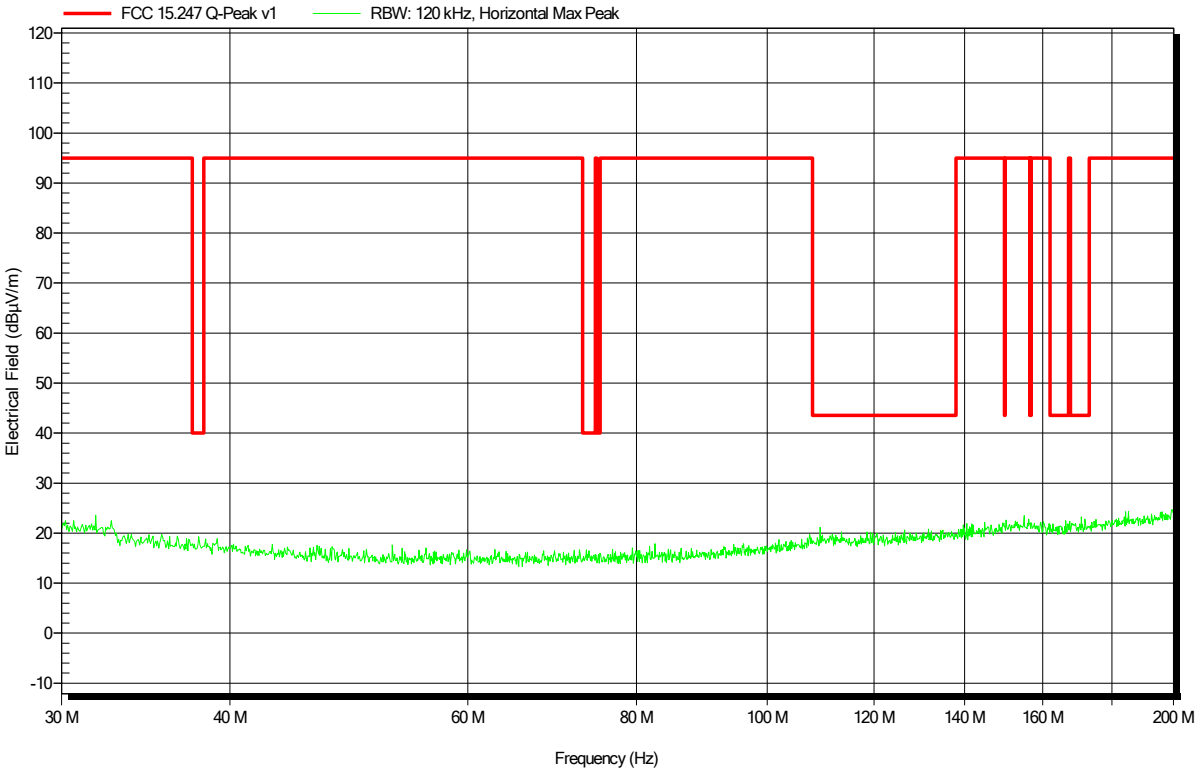

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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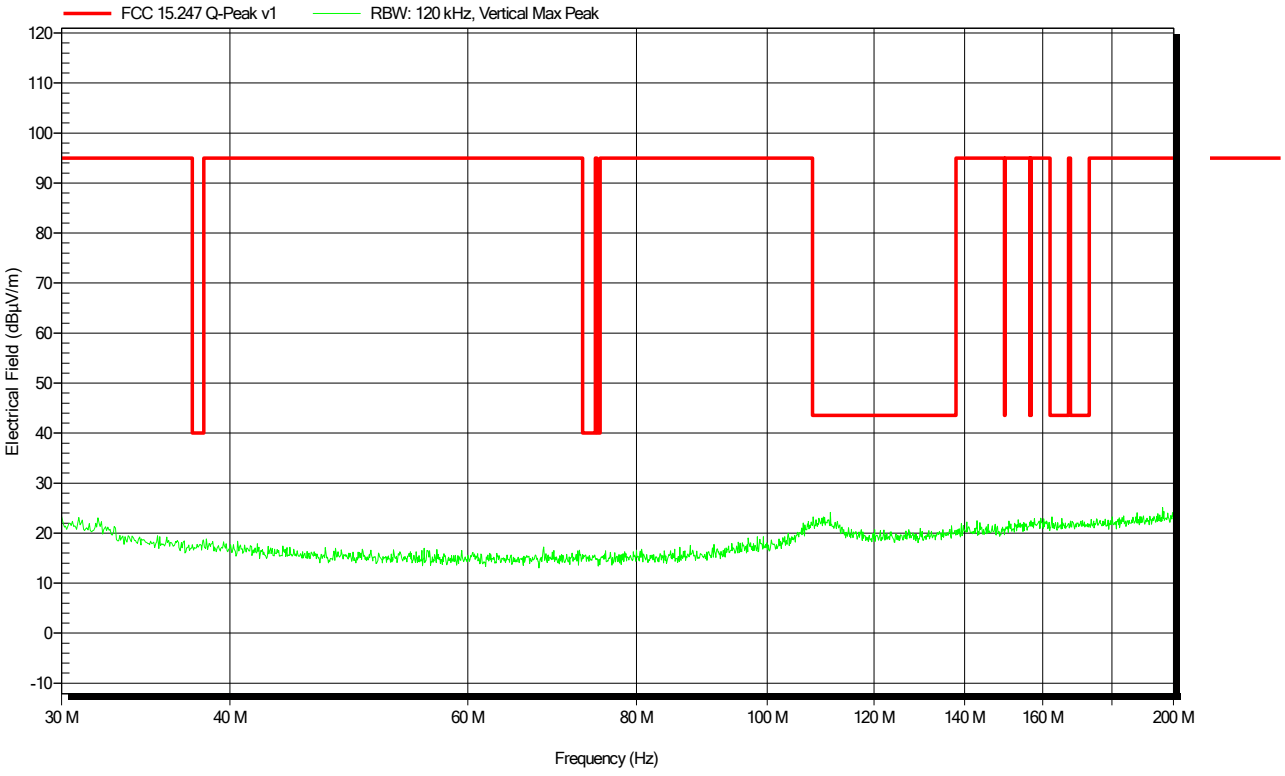

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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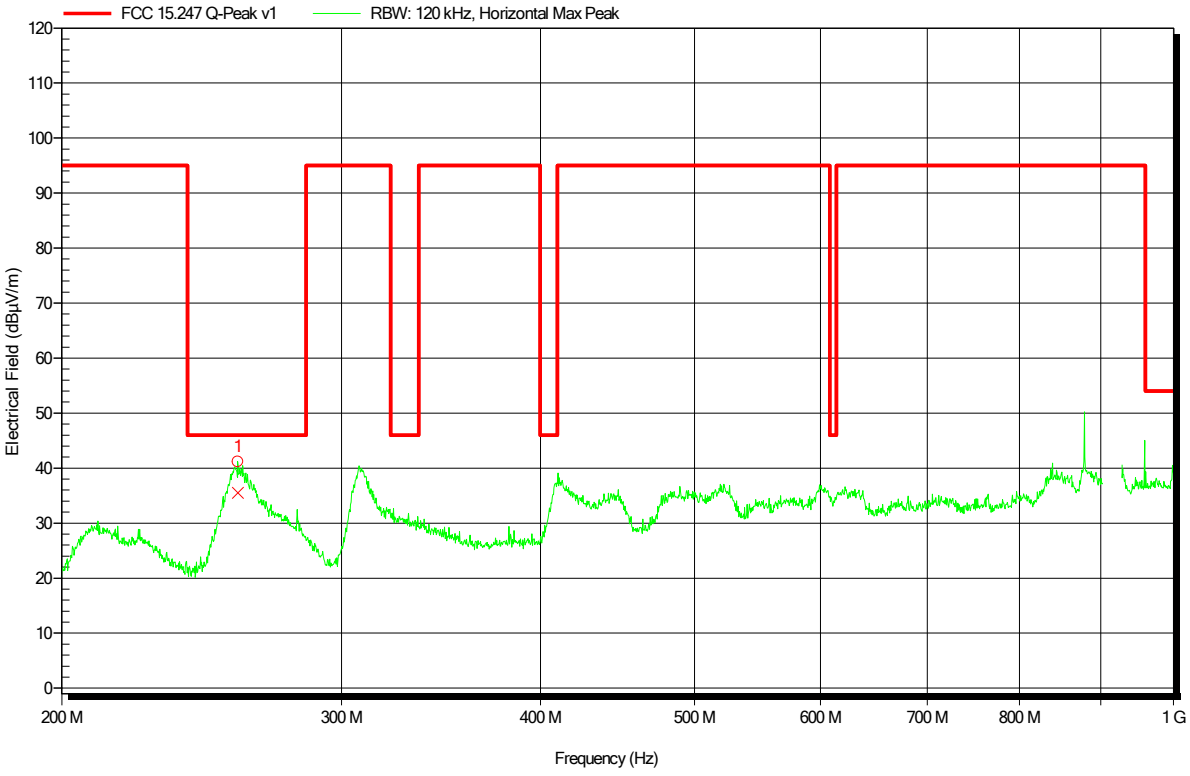

Frequency	Peak	Peak Limit	Peak Difference	Status
258.14 MHz	41.1 dBµV/m	46 dBµV/m	-4.86 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
258.14 MHz	35.5 dBµV/m	46 dBµV/m	-10.52 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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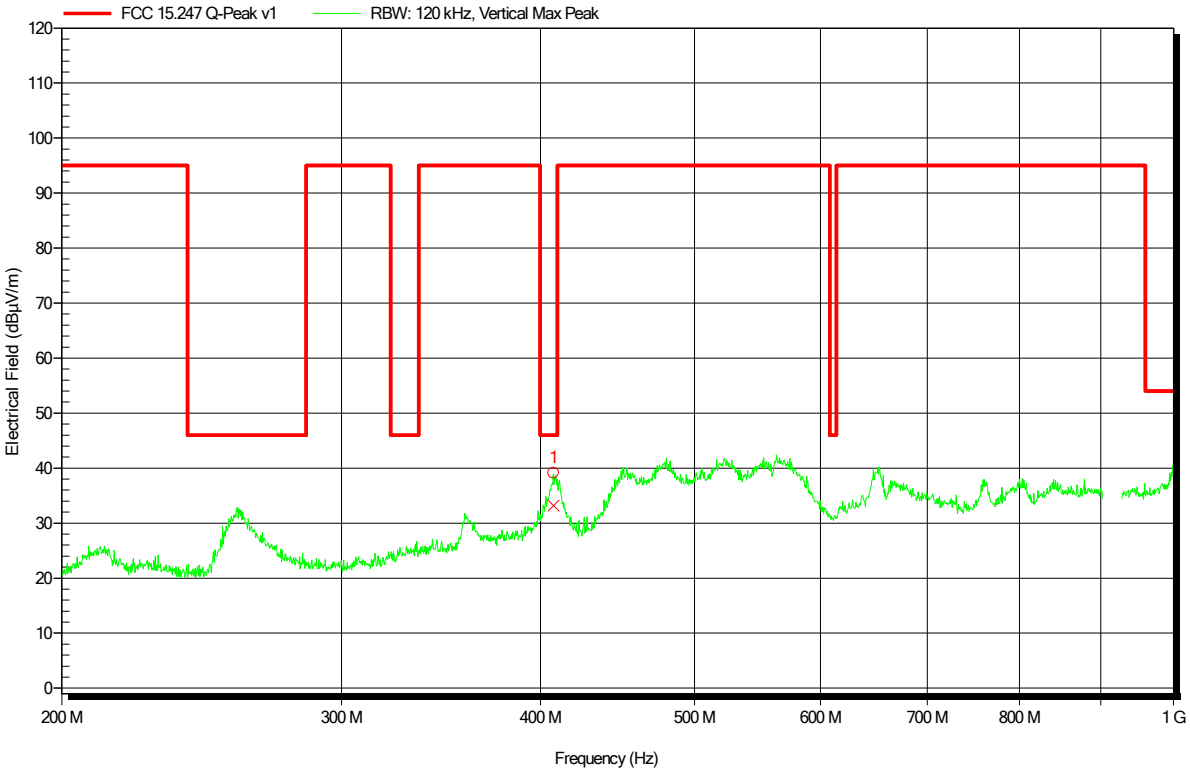

Frequency	Peak	Peak Limit	Peak Difference	Status
407.66 MHz	39.1 dBµV/m	46 dBµV/m	-6.88 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
407.66 MHz	33.2 dBµV/m	46 dBµV/m	-12.85 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-05
Note:	

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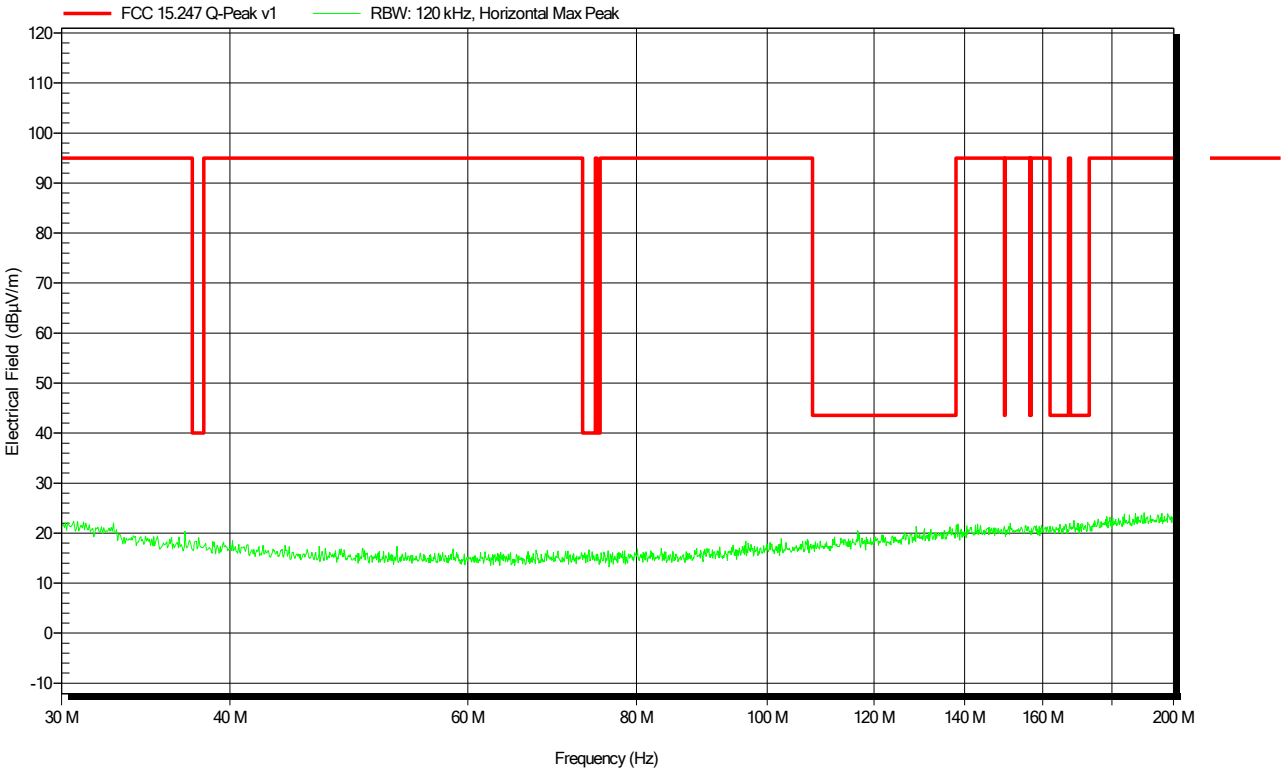

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-05
Note:	

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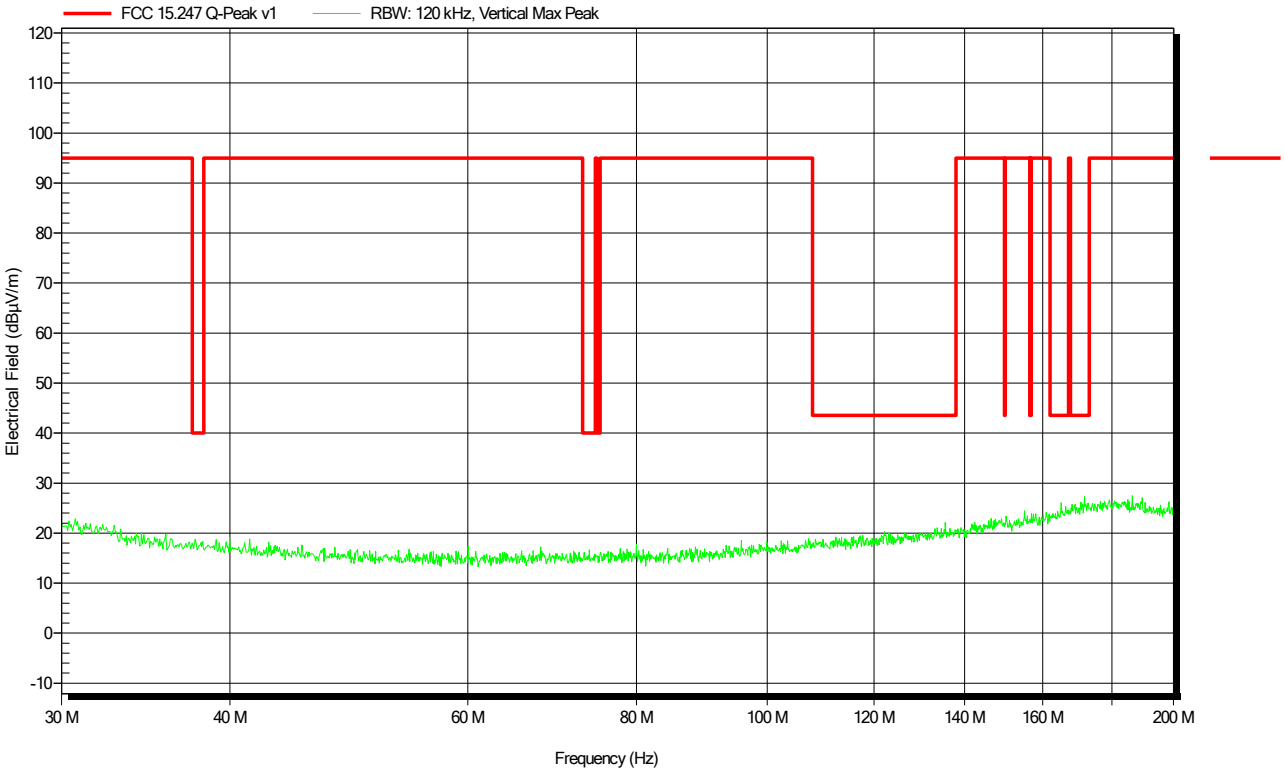

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-05
Note:	

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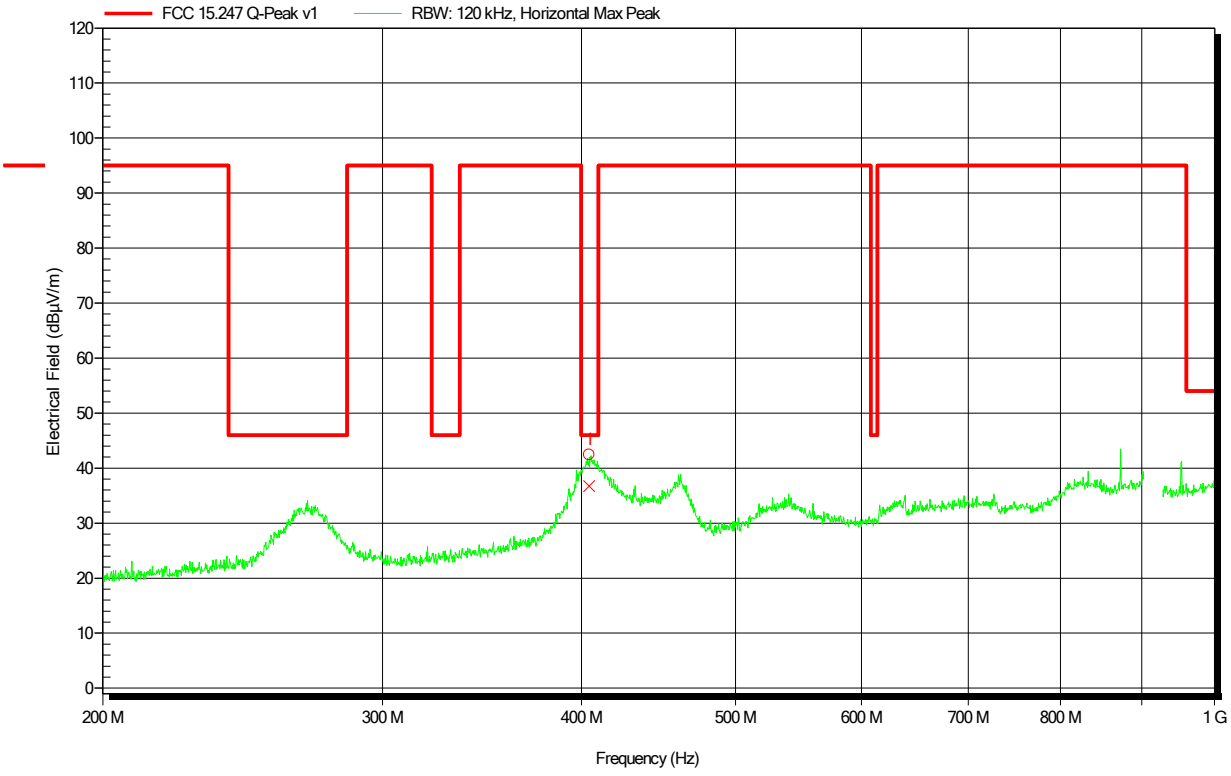

Frequency	Peak	Peak Limit	Peak Difference	Status
404.54 MHz	42.4 dBµV/m	46 dBµV/m	-3.55 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
404.54 MHz	36.7 dBµV/m	46 dBµV/m	-9.28 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-05
Note:	

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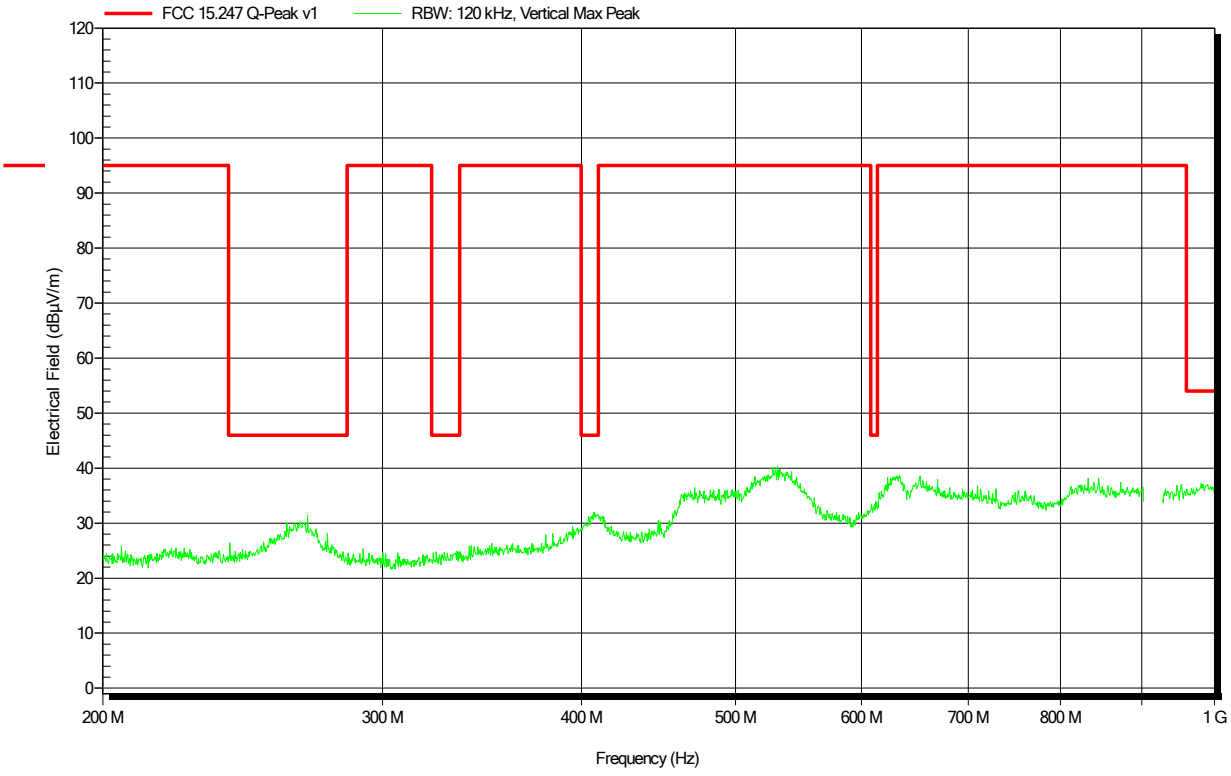

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-05
Note:	

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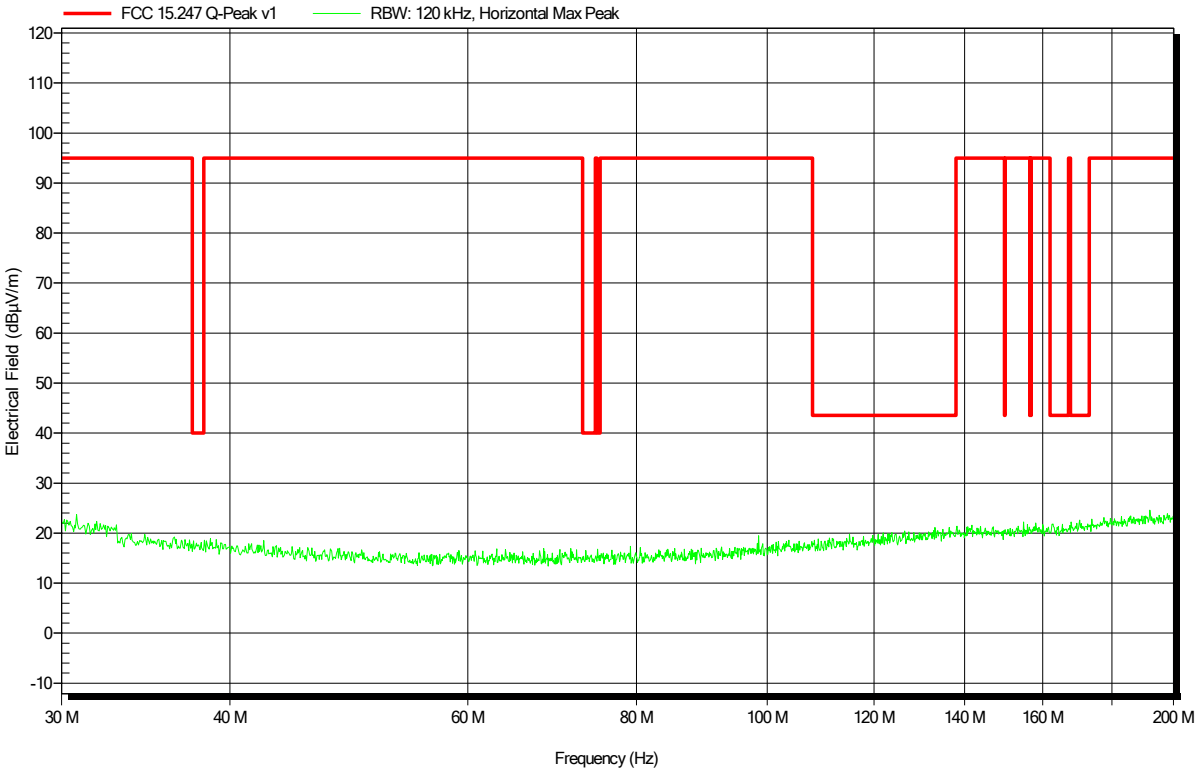

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-05
Note:	

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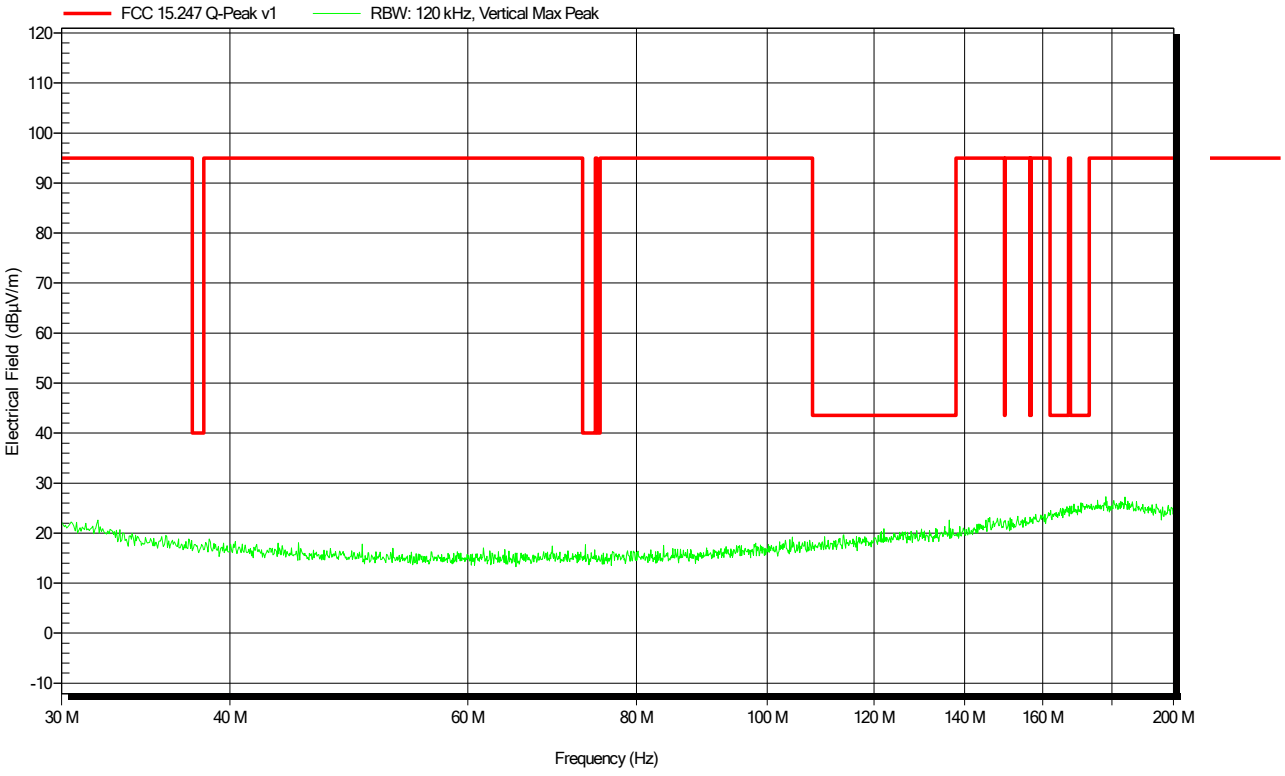

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-05
Note:	

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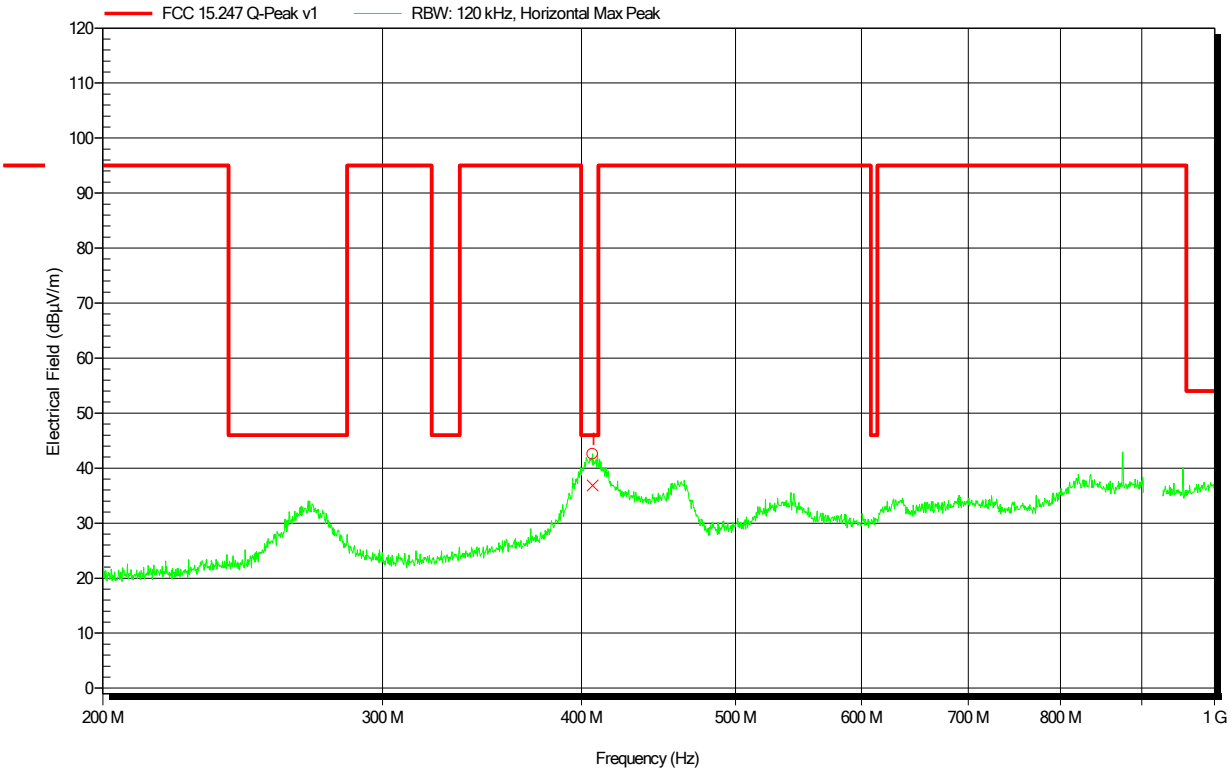

Frequency	Peak	Peak Limit	Peak Difference	Status
406.52 MHz	42.5 dBµV/m	46 dBµV/m	-3.48 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
406.52 MHz	36.9 dBµV/m	46 dBµV/m	-9.13 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-05
Note:	

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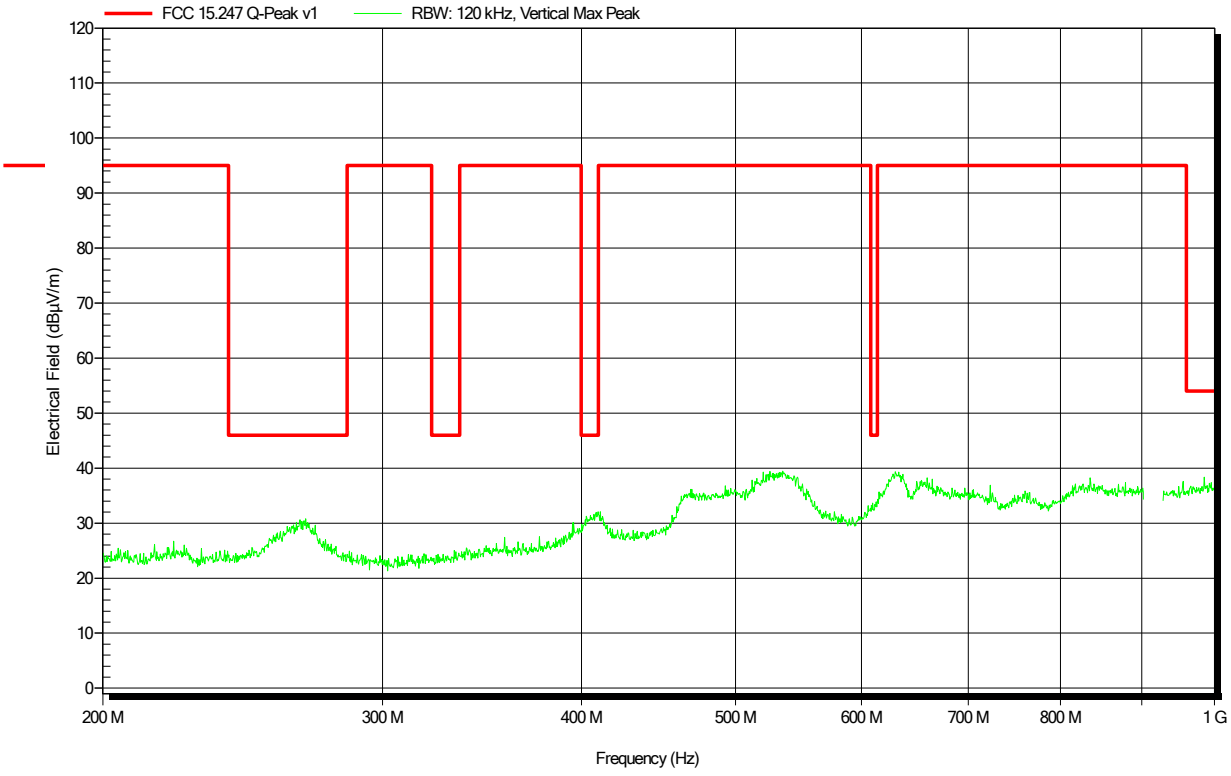

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-05
Note:	

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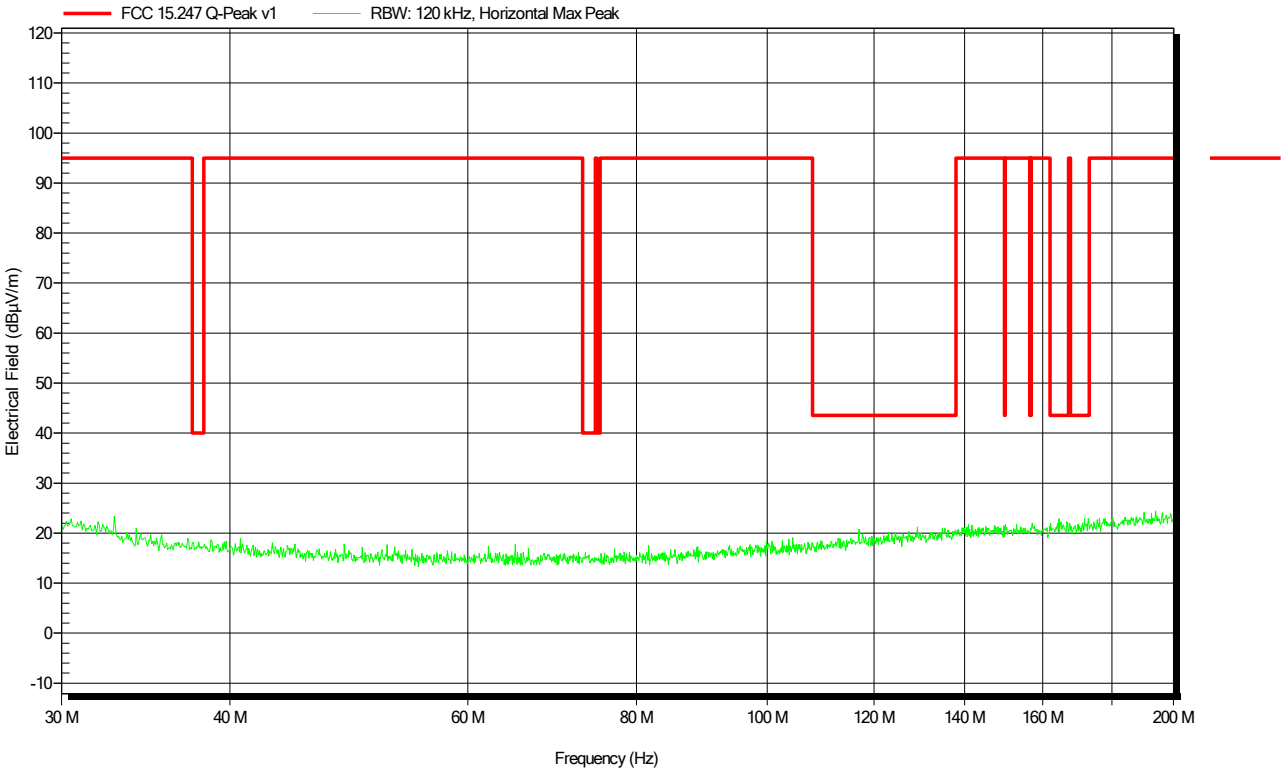

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-05
Note:	

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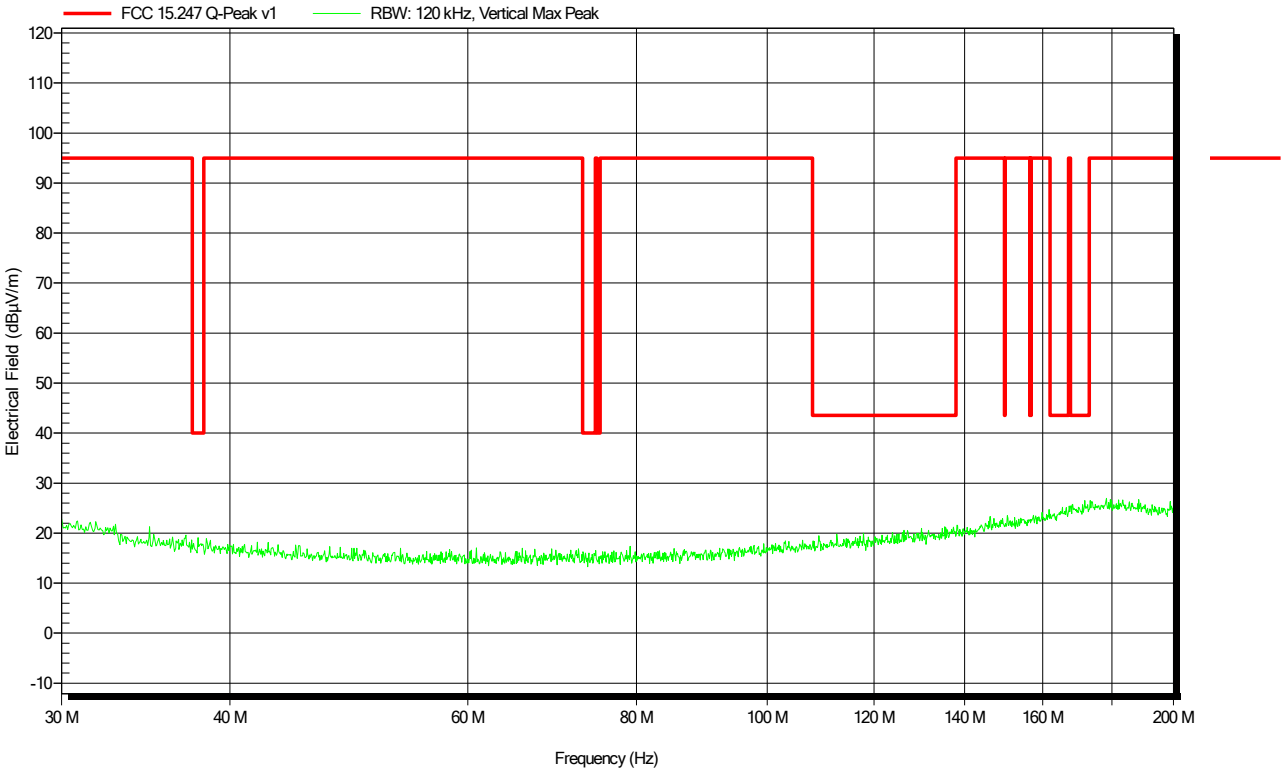

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-05
Note:	

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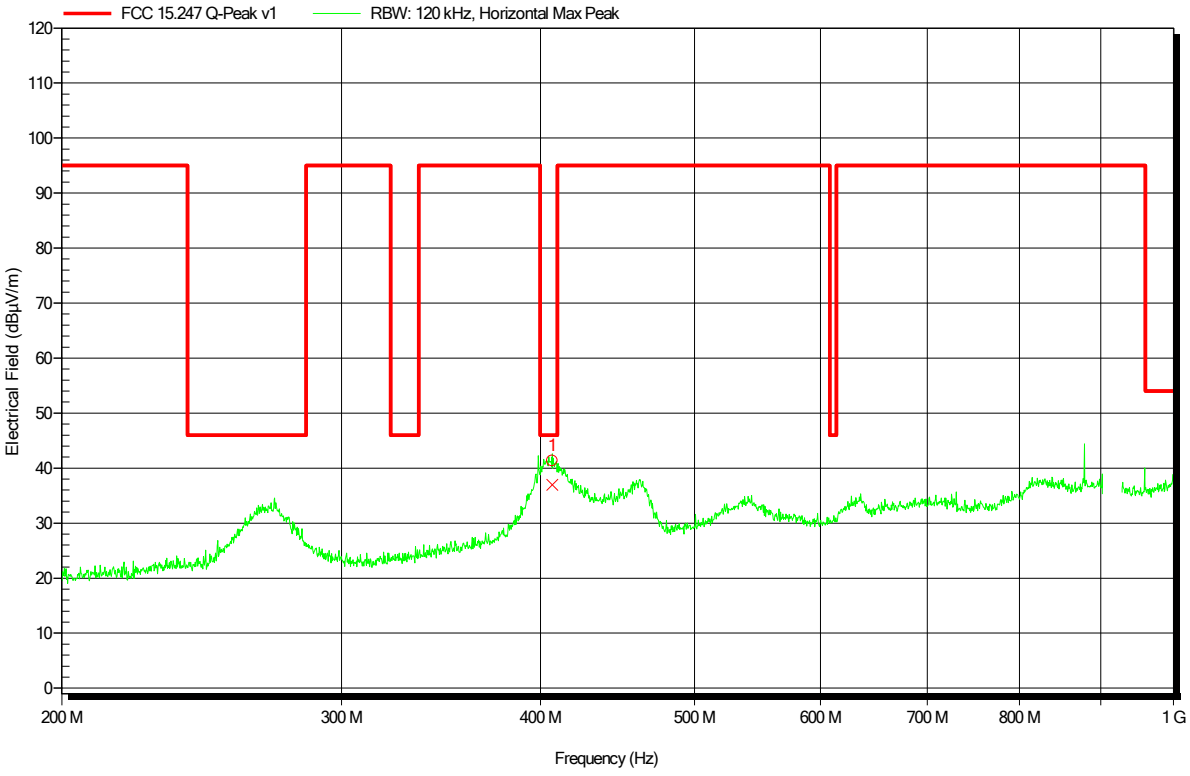

Frequency	Peak	Peak Limit	Peak Difference	Status
406.88 MHz	41.3 dBµV/m	46 dBµV/m	-4.69 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
406.88 MHz	37 dBµV/m	46 dBµV/m	-9.04 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-05
Note:	

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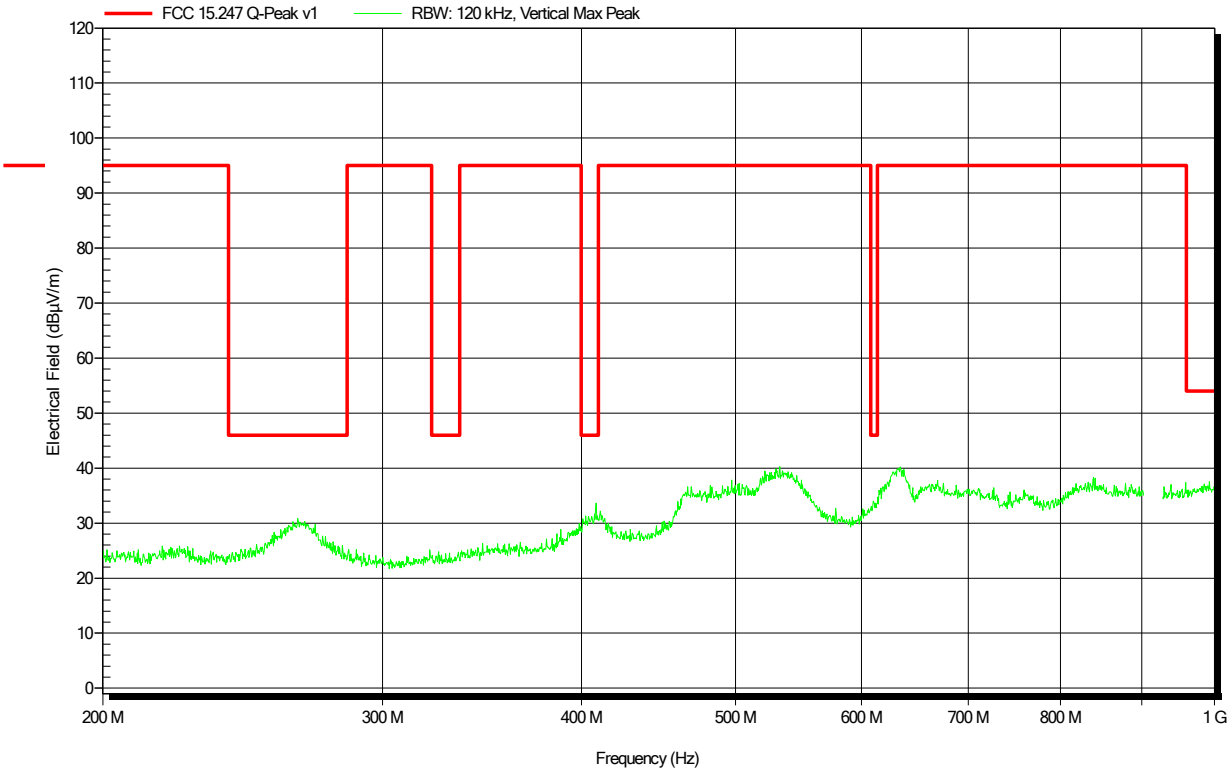

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-05
Note:	

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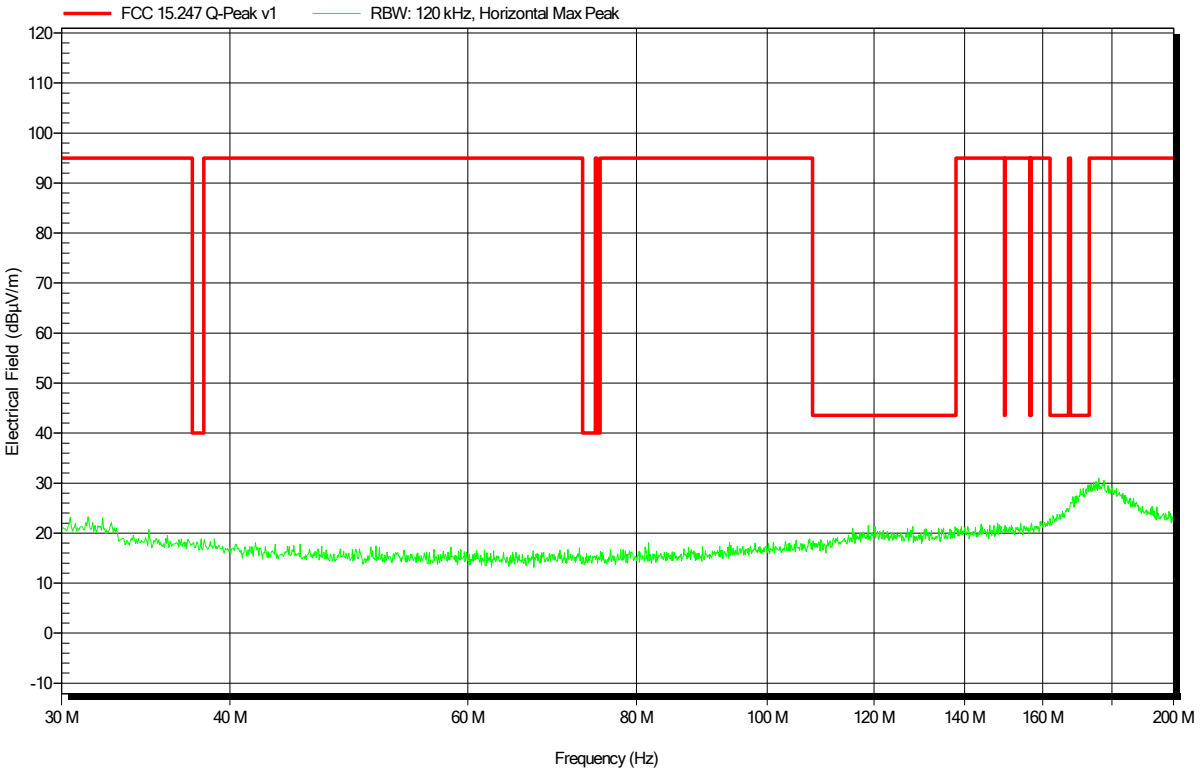

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-05
Note:	

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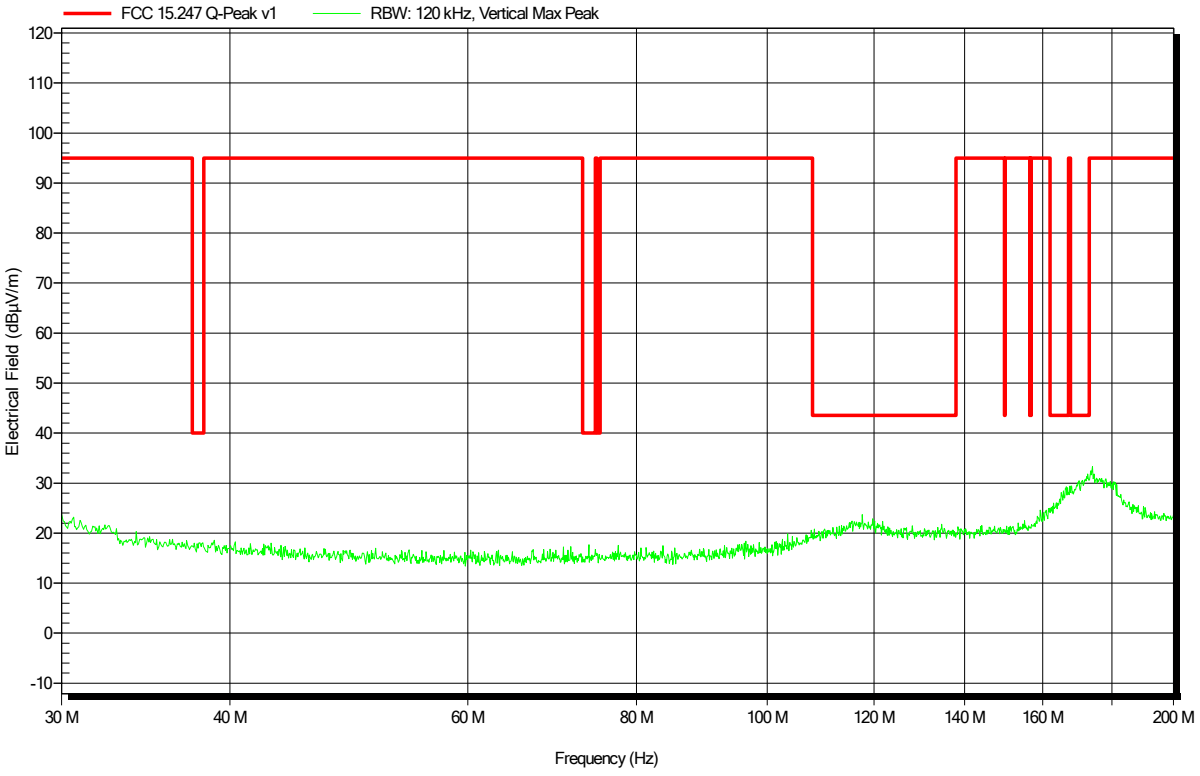

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-05
Note:	

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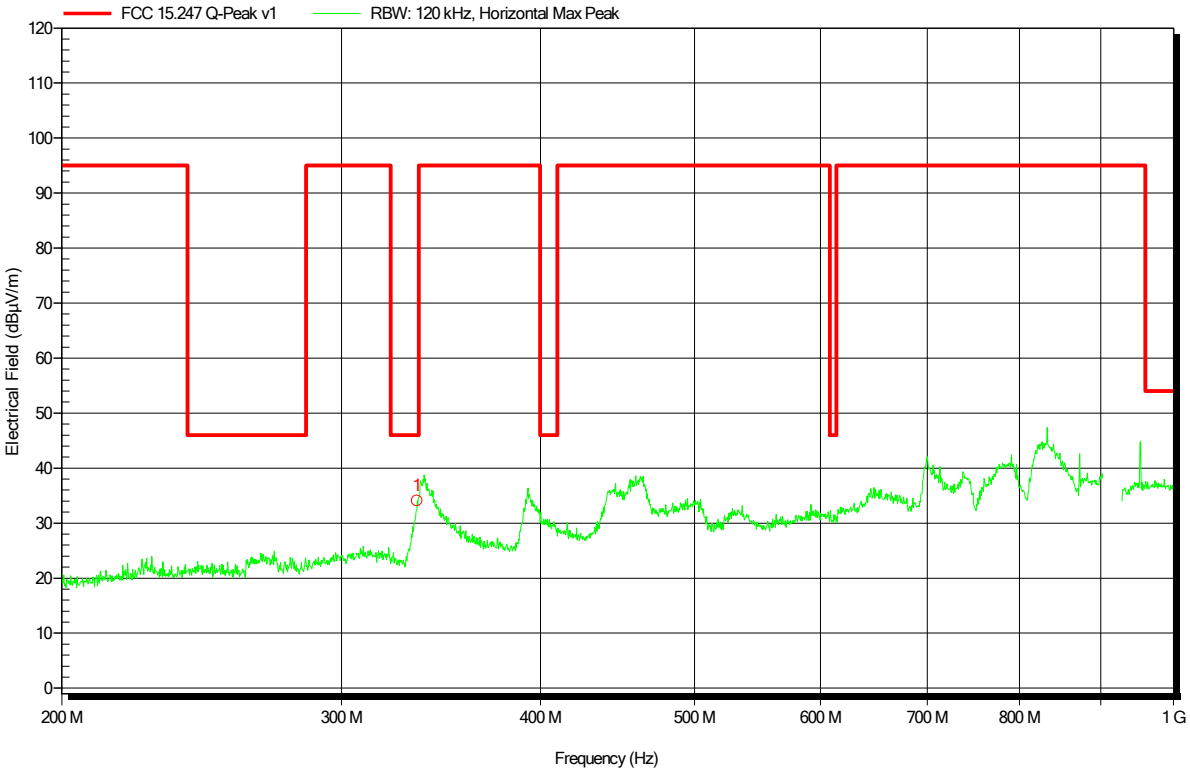

Frequency	Peak	Peak Limit	Peak Difference	Status
334.64 MHz	34 dBµV/m	46 dBµV/m	-11.95 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-05
Note:	

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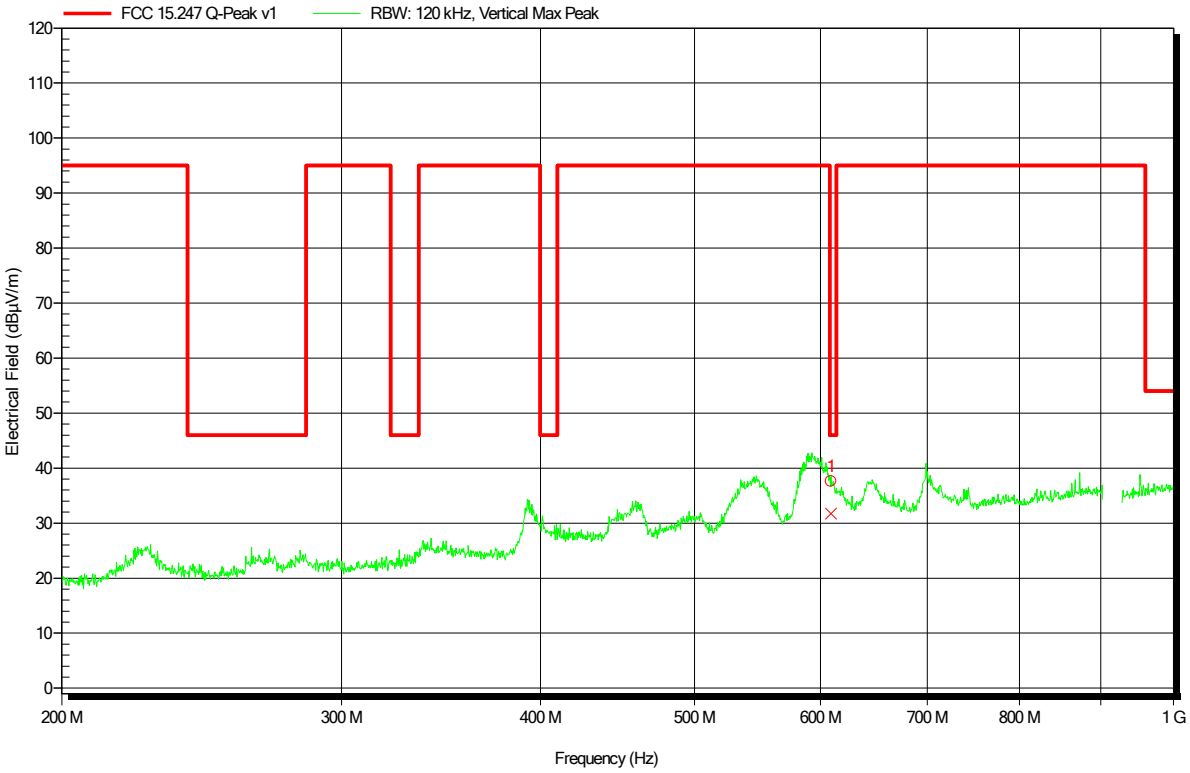

Frequency	Peak	Peak Limit	Peak Difference	Status
608.96 MHz	37.6 dBµV/m	46 dBµV/m	-8.41 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
608.96 MHz	31.7 dBµV/m	46 dBµV/m	-14.28 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-05
Note:	

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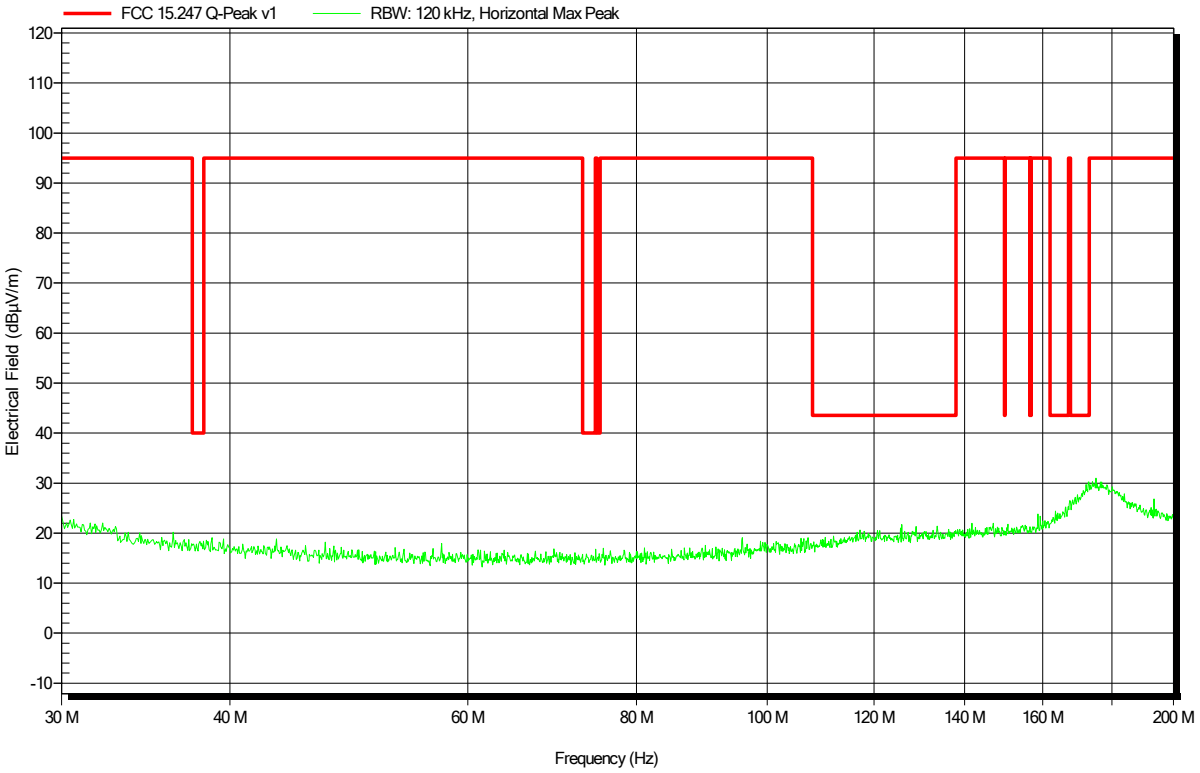

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-05
Note:	

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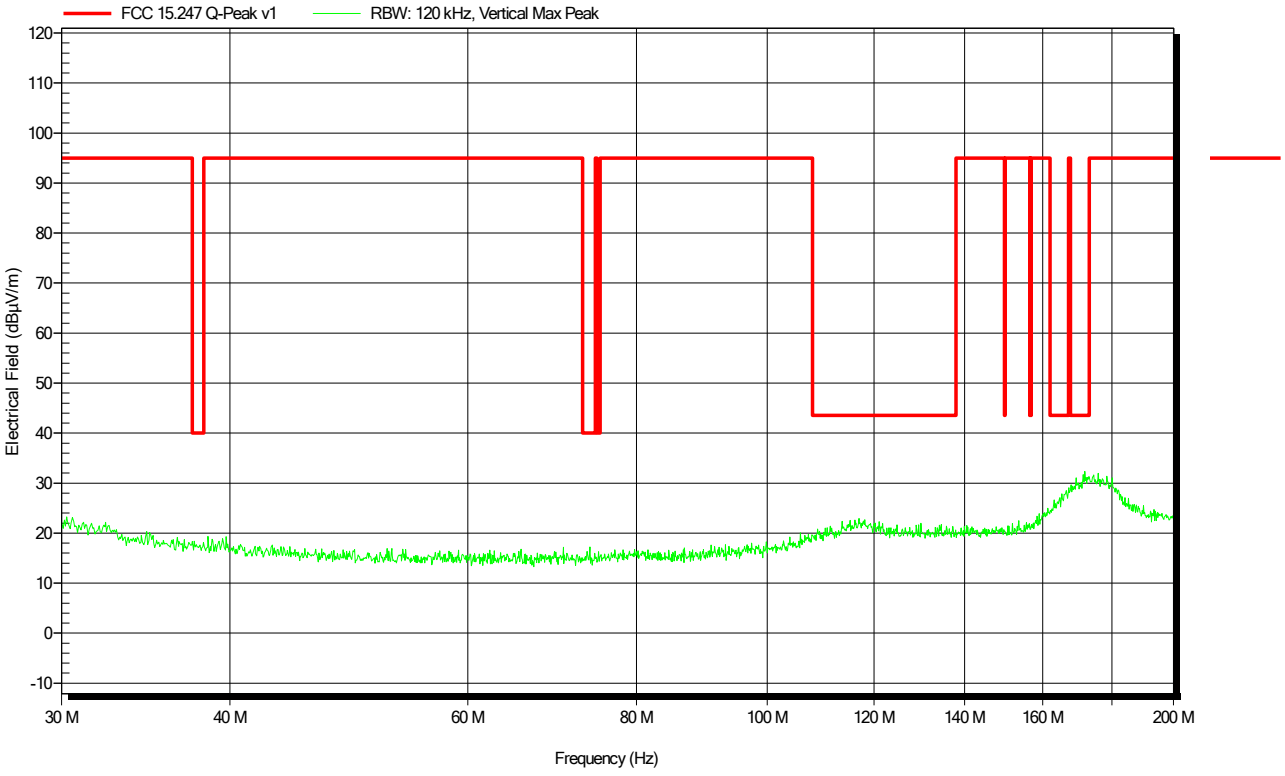

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-05
Note:	

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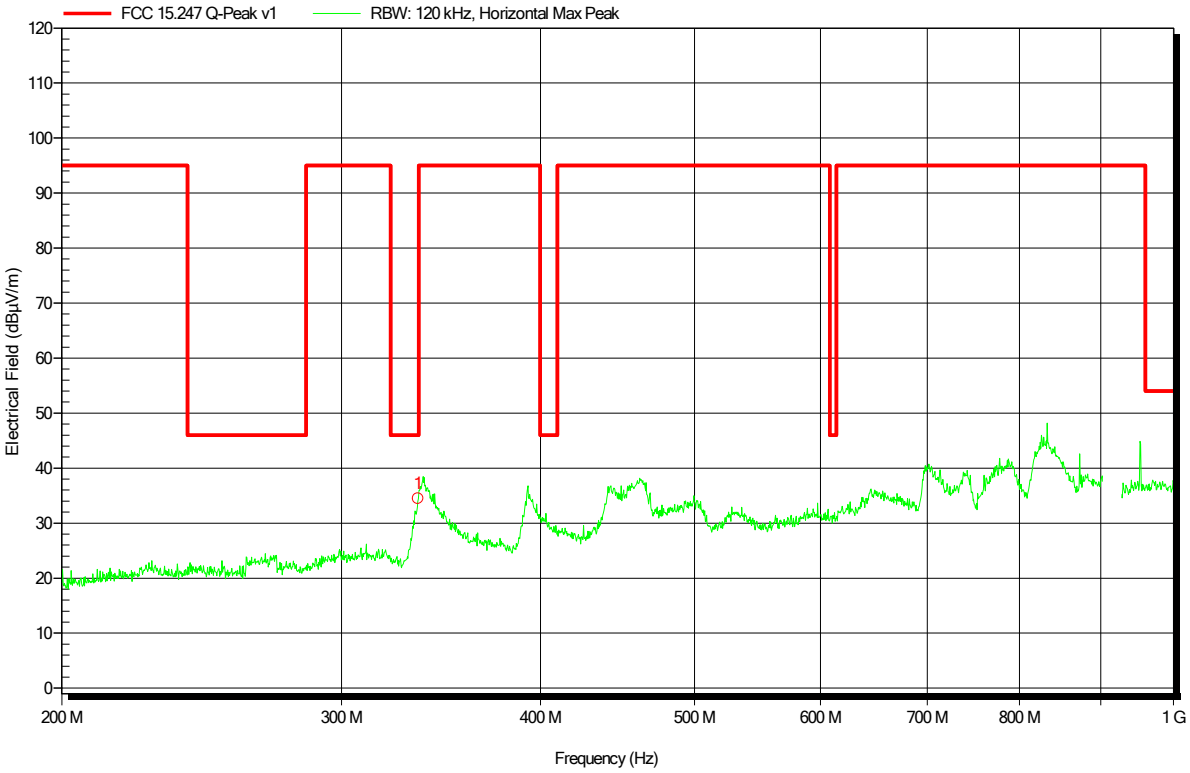

Frequency	Peak	Peak Limit	Peak Difference	Status
335.06 MHz	34.5 dBµV/m	46 dBµV/m	-11.55 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-05
Note:	

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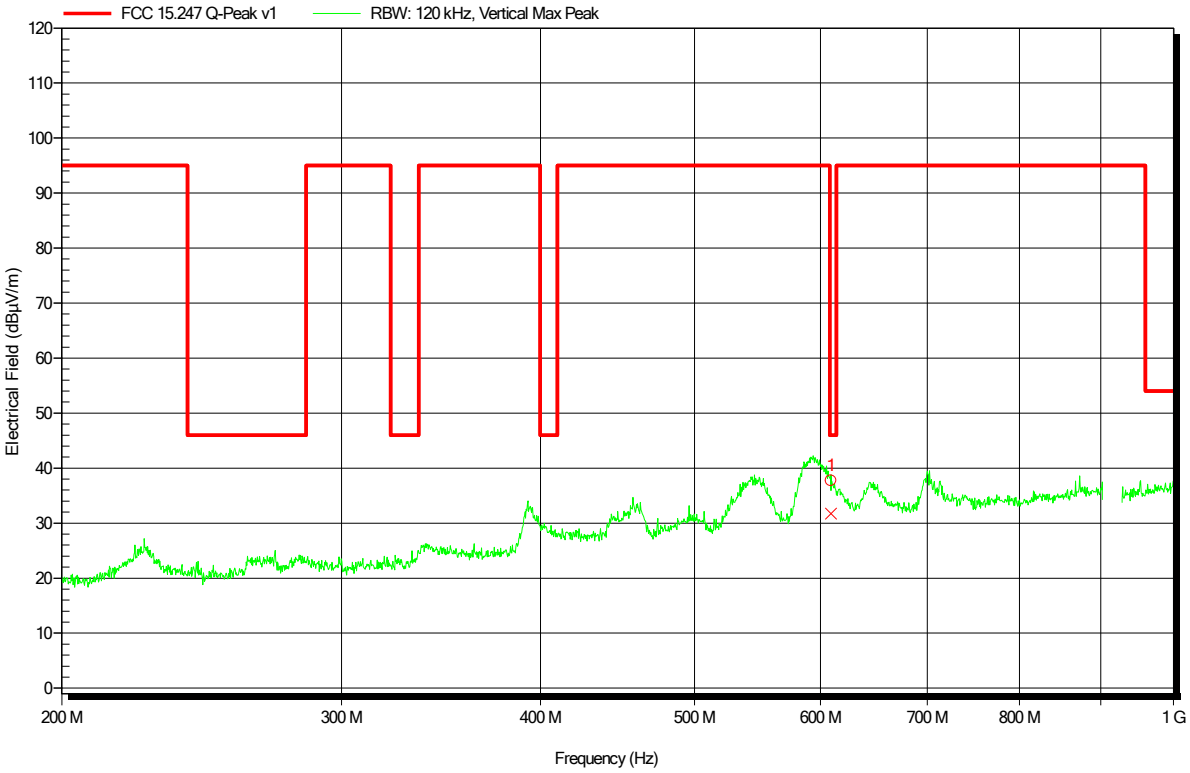

Frequency	Peak	Peak Limit	Peak Difference	Status
609.08 MHz	37.7 dBµV/m	46 dBµV/m	-8.27 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
609.08 MHz	31.7 dBµV/m	46 dBµV/m	-14.28 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-05
Note:	

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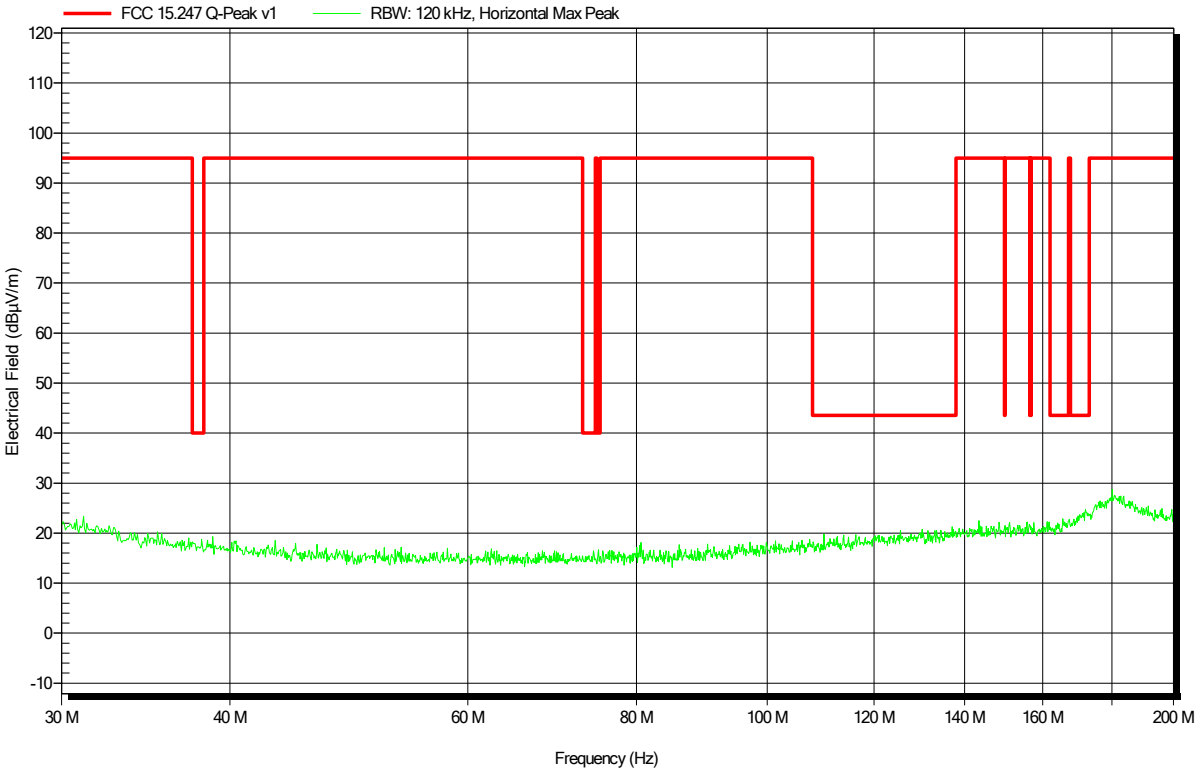

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-05
Note:	

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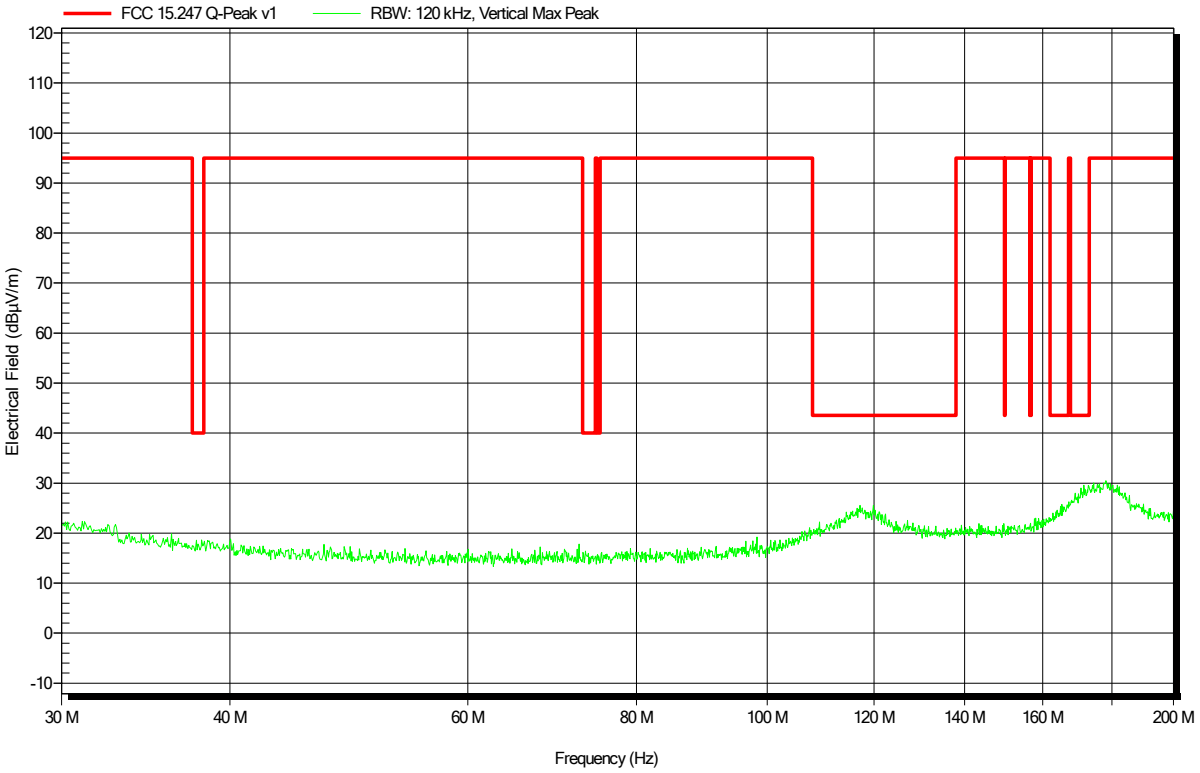

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-05
Note:	

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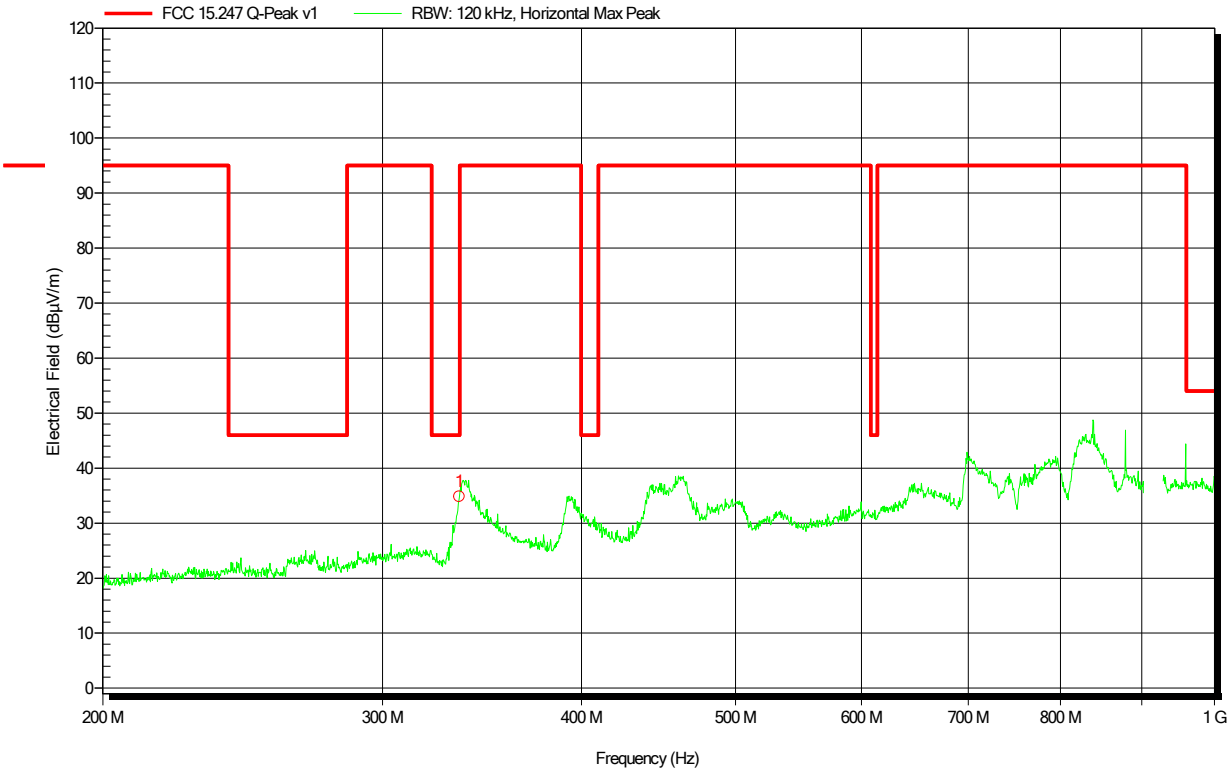

Frequency	Peak	Peak Limit	Peak Difference	Status
335.3 MHz	34.8 dBµV/m	46 dBµV/m	-11.19 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-05
Note:	

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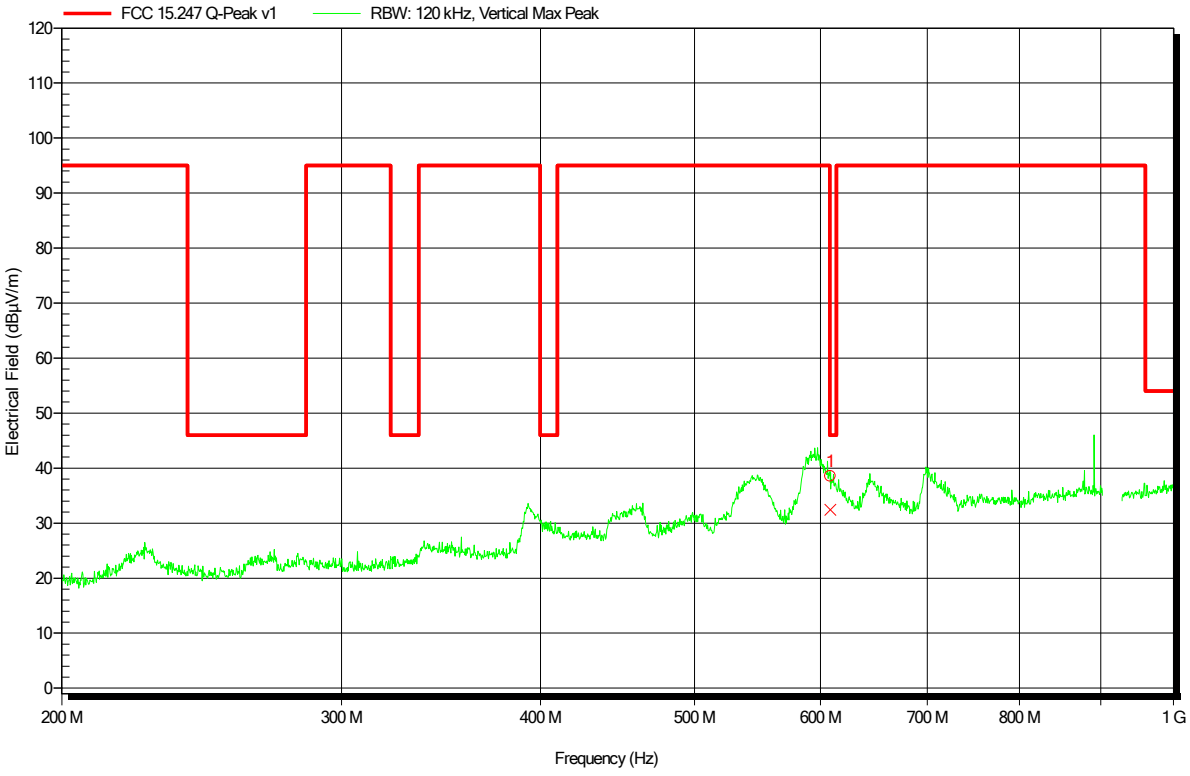

Frequency	Peak	Peak Limit	Peak Difference	Status
608.6 MHz	38.5 dBµV/m	46 dBµV/m	-7.49 dB	Pass

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
608.6 MHz	32.4 dBµV/m	46 dBµV/m	-13.61 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-03
Note:	

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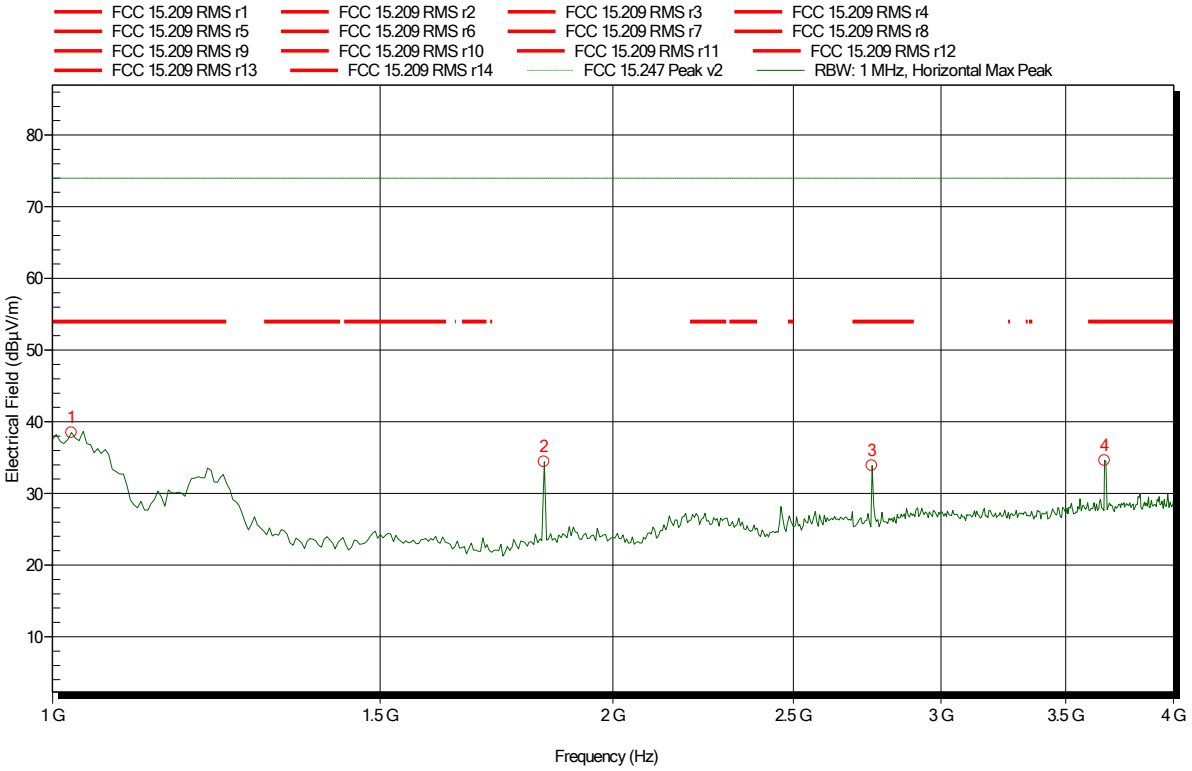

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.024 GHz	38.51 dBµV/m	74 dBµV/m	-35.49 dB	Pass
1.837 GHz	34.42 dBµV/m	74 dBµV/m	-39.58 dB	Pass
2.755 GHz	33.89 dBµV/m	74 dBµV/m	-40.11 dB	Pass
3.673 GHz	34.61 dBµV/m	74 dBµV/m	-39.39 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-03
Note:	

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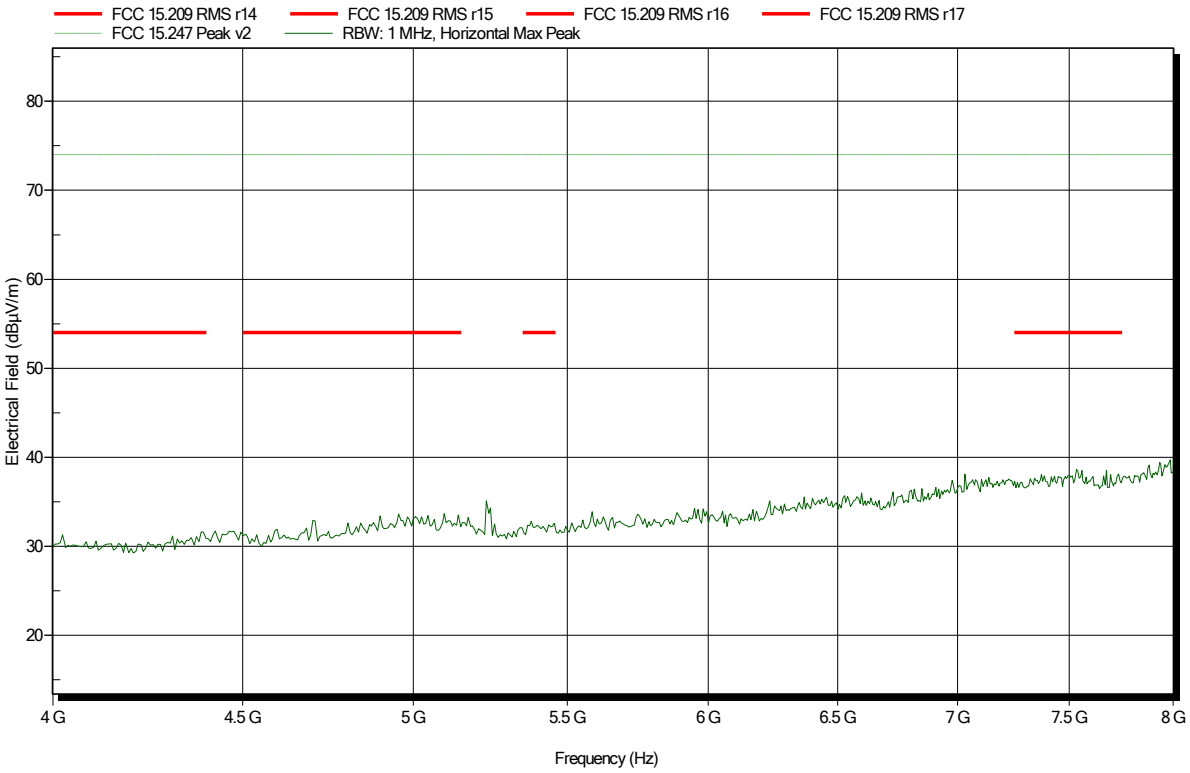

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-03
Note:	

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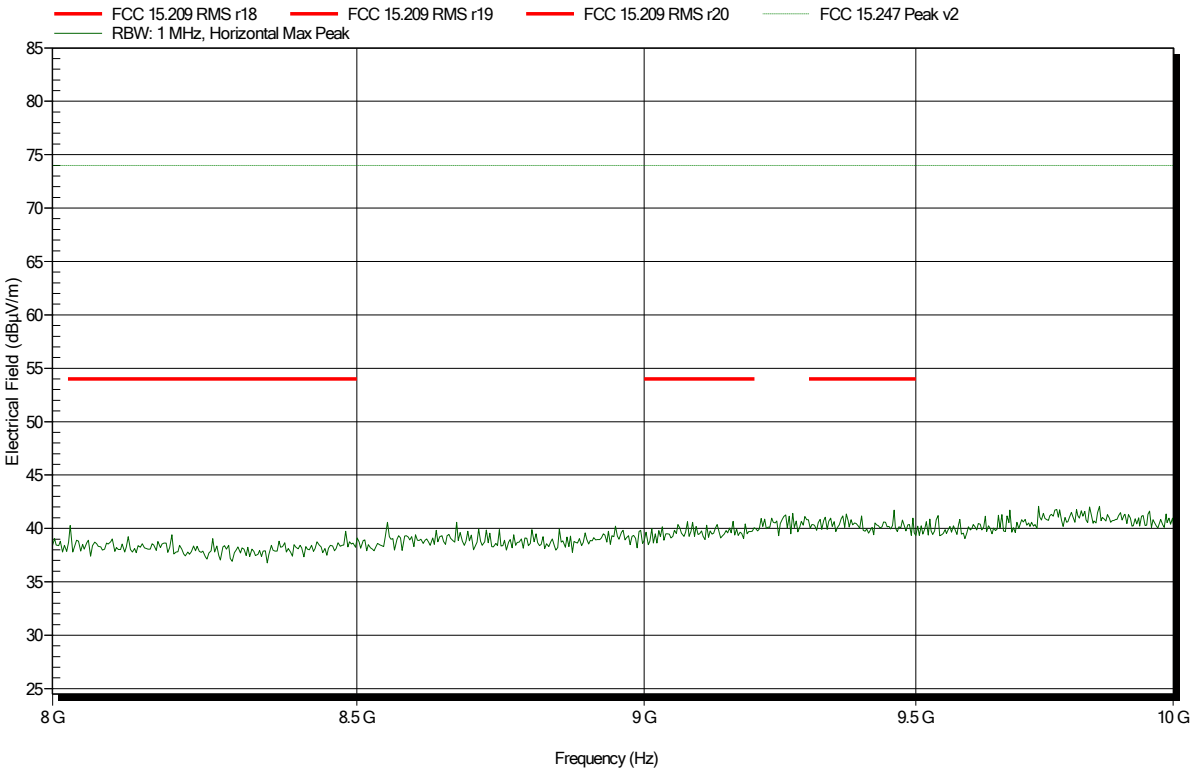

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-03
Note:	

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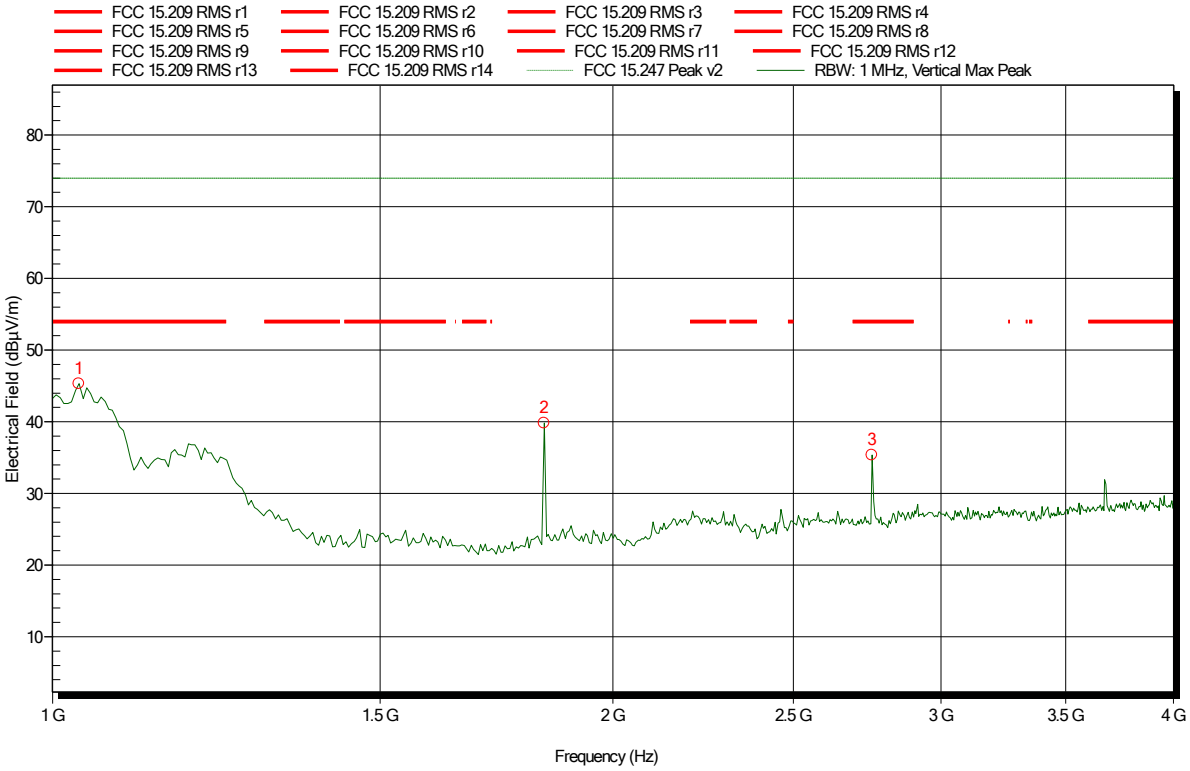

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.034 GHz	45.3 dBµV/m	74 dBµV/m	-28.7 dB	Pass
1.837 GHz	39.83 dBµV/m	74 dBµV/m	-34.17 dB	Pass
2.755 GHz	35.35 dBµV/m	74 dBµV/m	-38.65 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-03
Note:	

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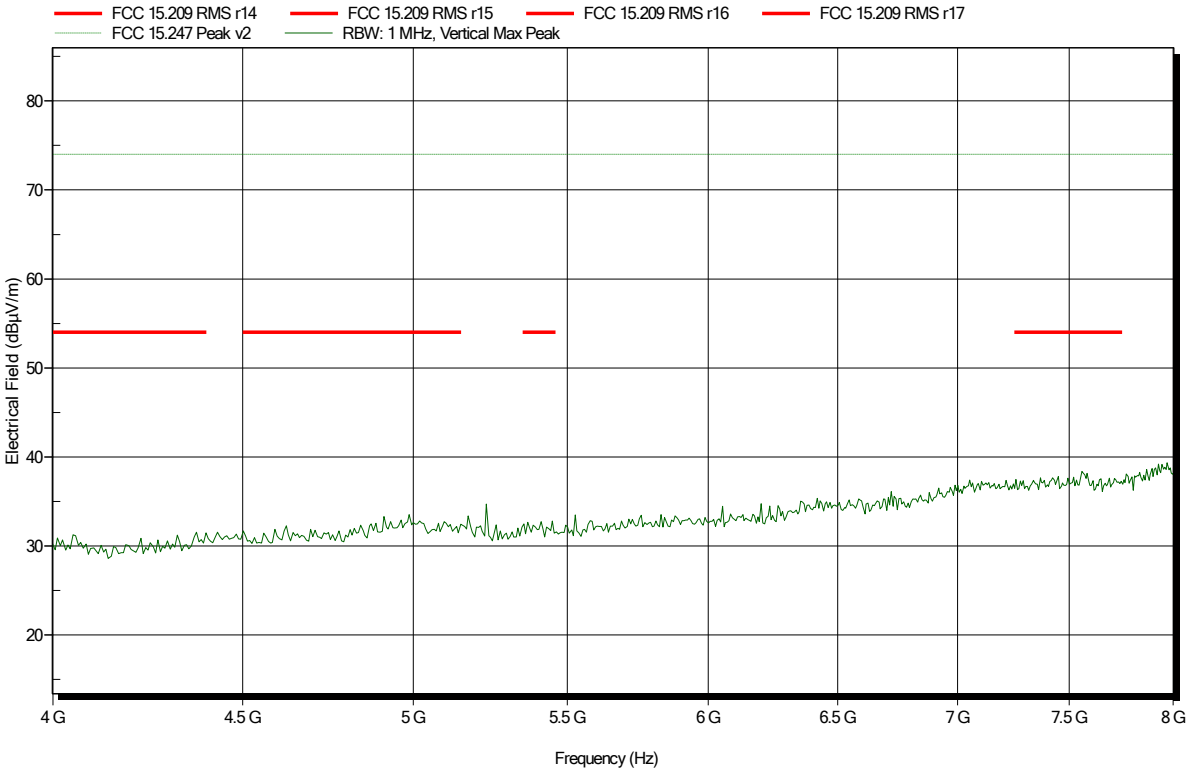

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel High
Test Date:	2020-06-03
Note:	

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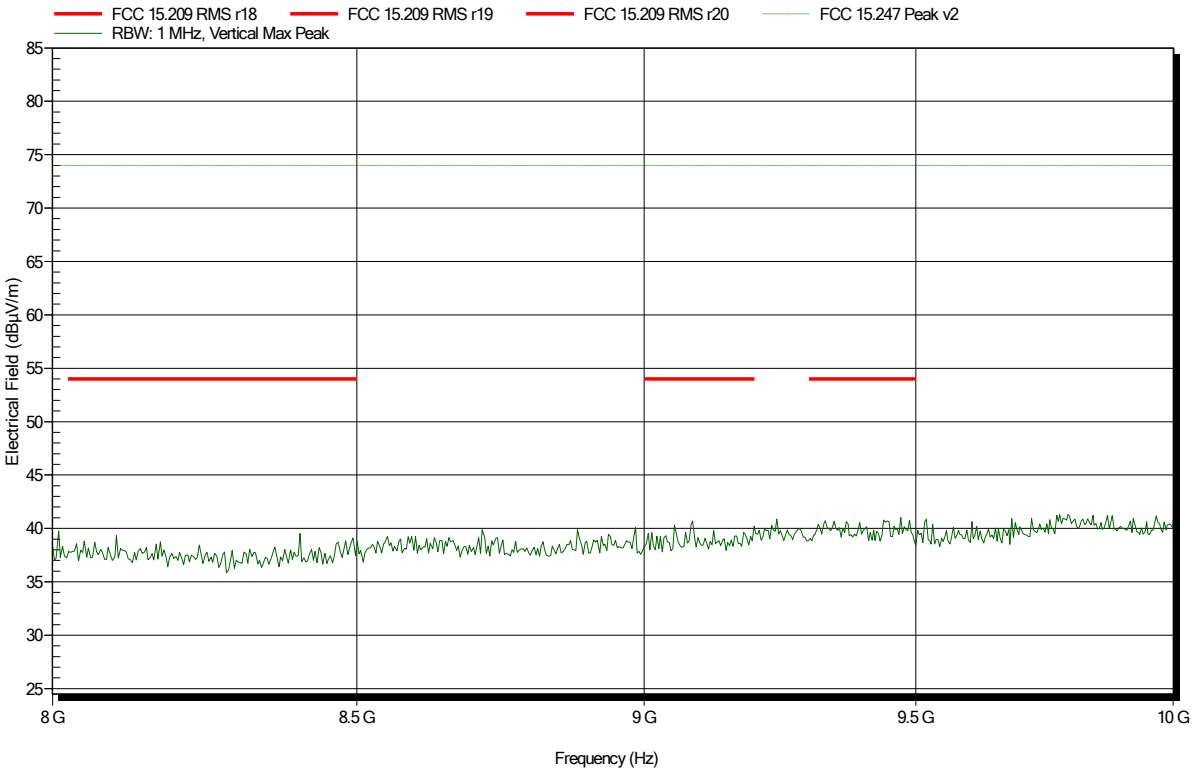

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-02
Note:	

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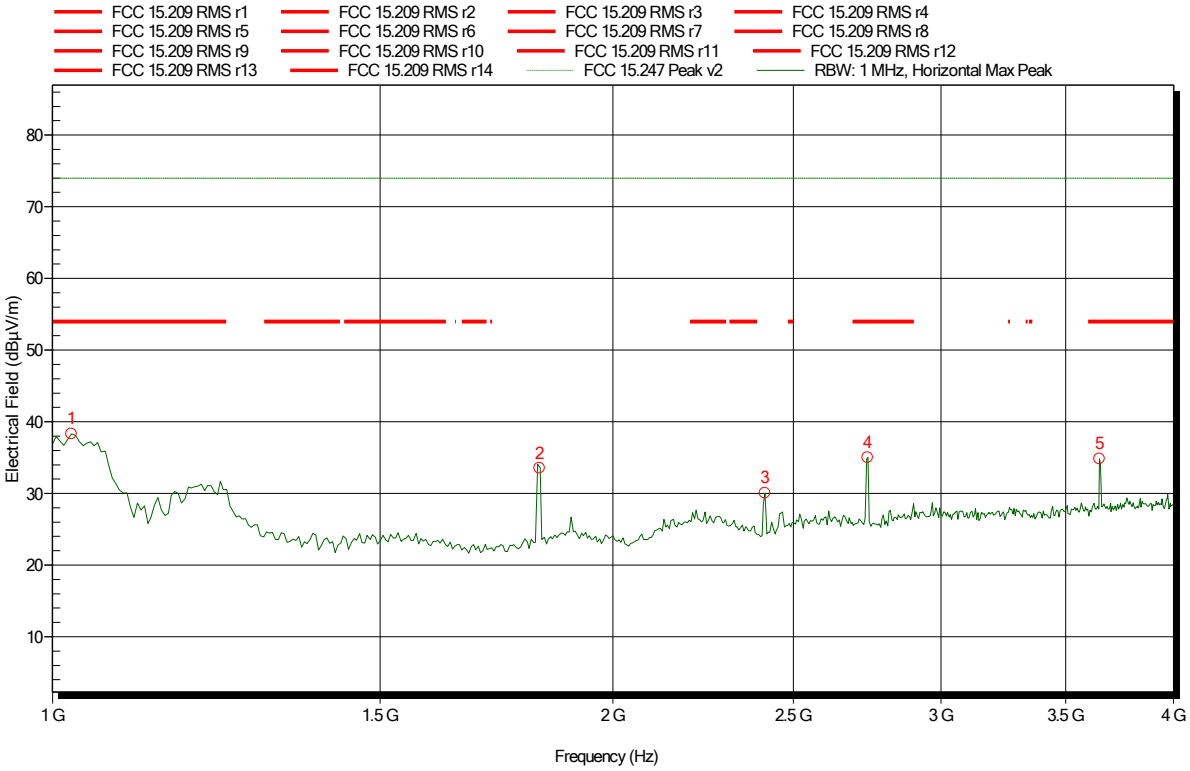

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.024 GHz	38.32 dBµV/m	74 dBµV/m	-35.68 dB	Pass
1.827 GHz	33.54 dBµV/m	74 dBµV/m	-40.46 dB	Pass
2.413 GHz	30.05 dBµV/m	74 dBµV/m	-43.95 dB	Pass
2.74 GHz	35 dBµV/m	74 dBµV/m	-39 dB	Pass
3.649 GHz	34.81 dBµV/m	74 dBµV/m	-39.19 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-02
Note:	

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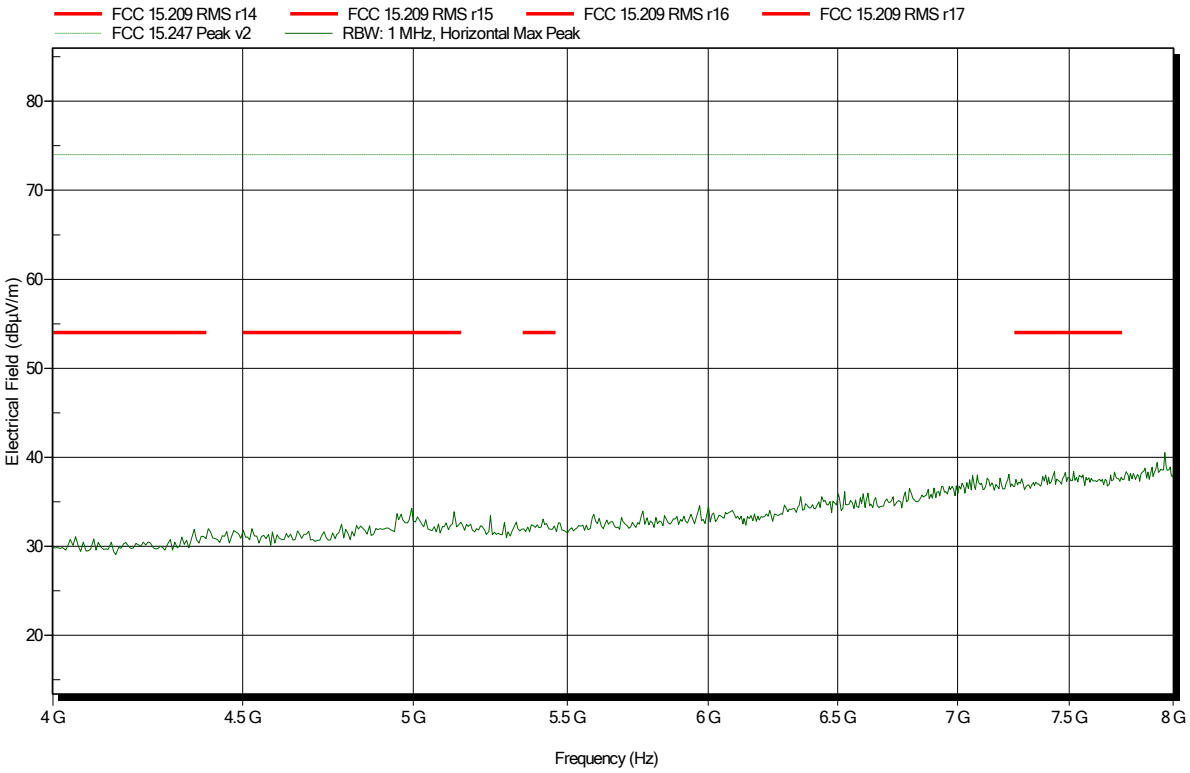

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-02
Note:	

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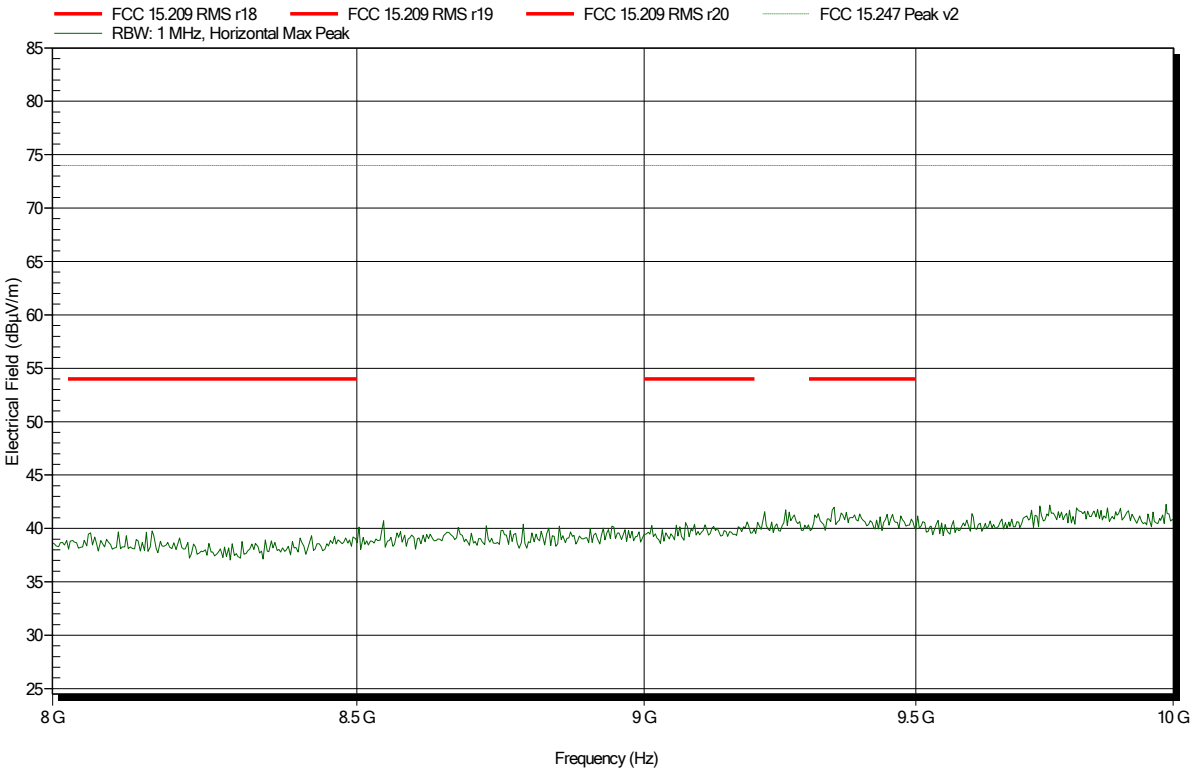

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-02
Note:	

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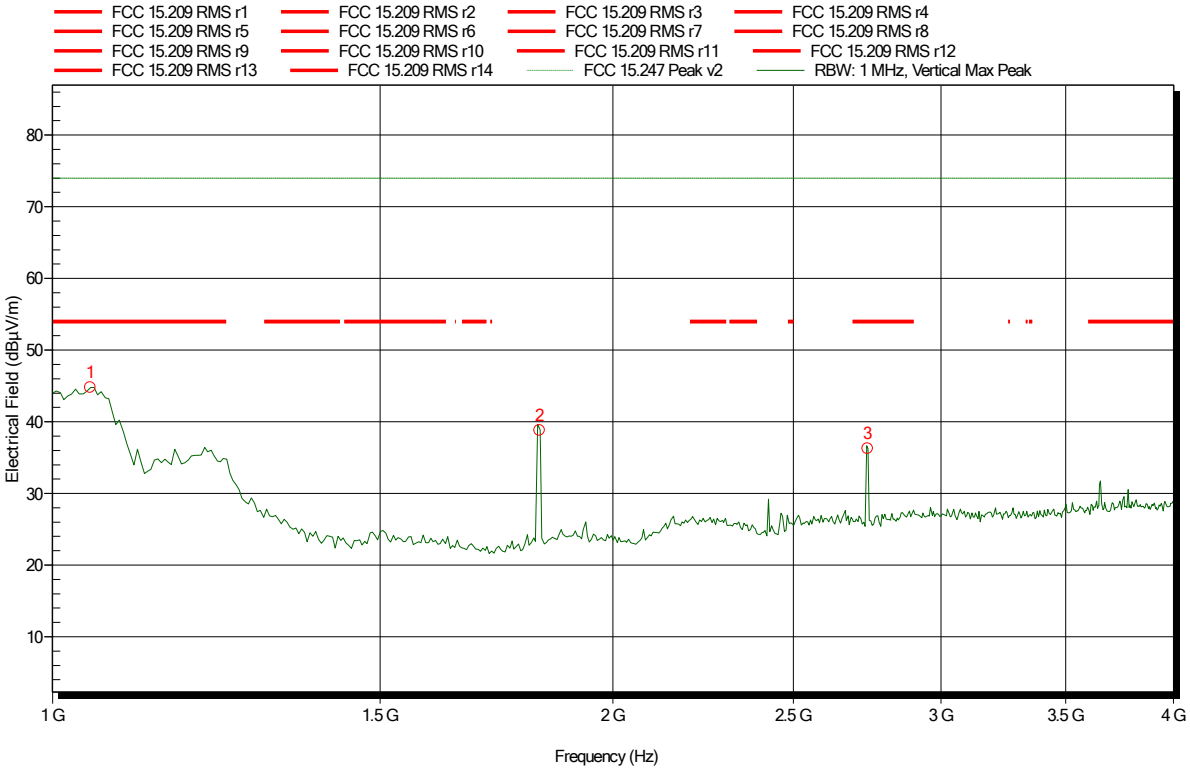

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.048 GHz	44.8 dBµV/m	74 dBµV/m	-29.2 dB	Pass
1.827 GHz	38.81 dBµV/m	74 dBµV/m	-35.19 dB	Pass
2.74 GHz	36.25 dBµV/m	74 dBµV/m	-37.75 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-02
Note:	

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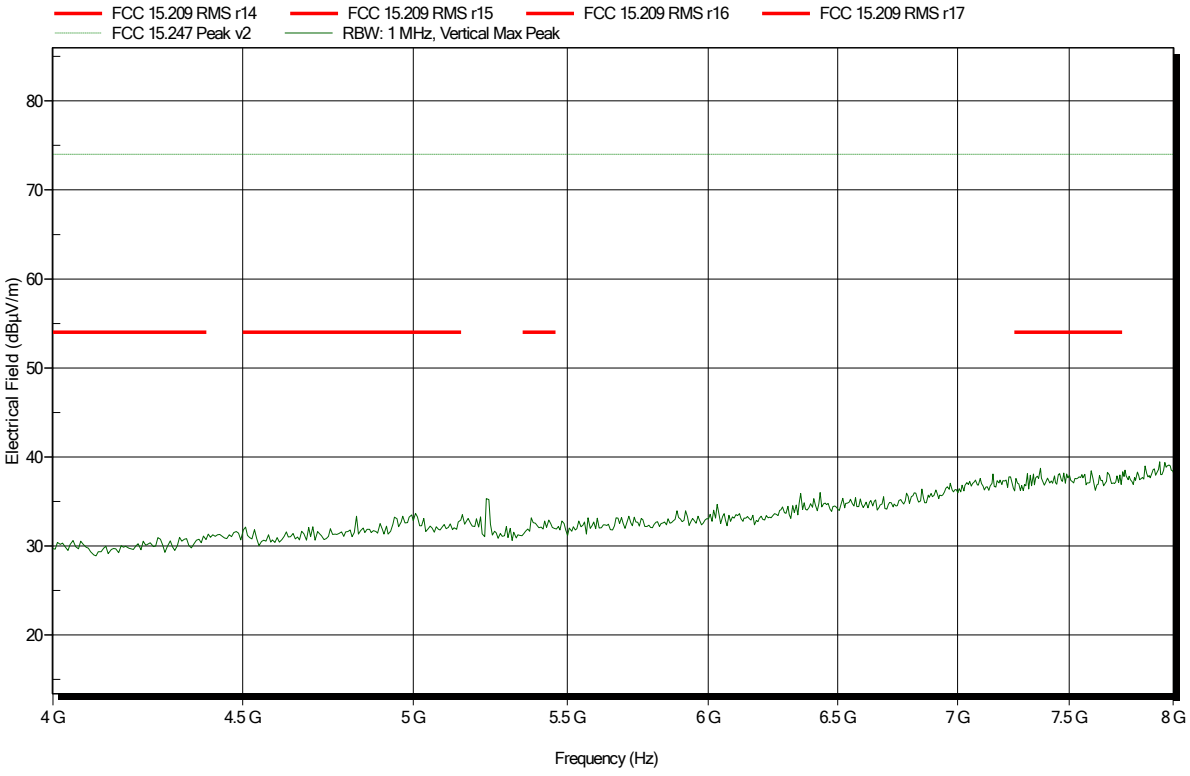

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Low
Test Date:	2020-06-02
Note:	

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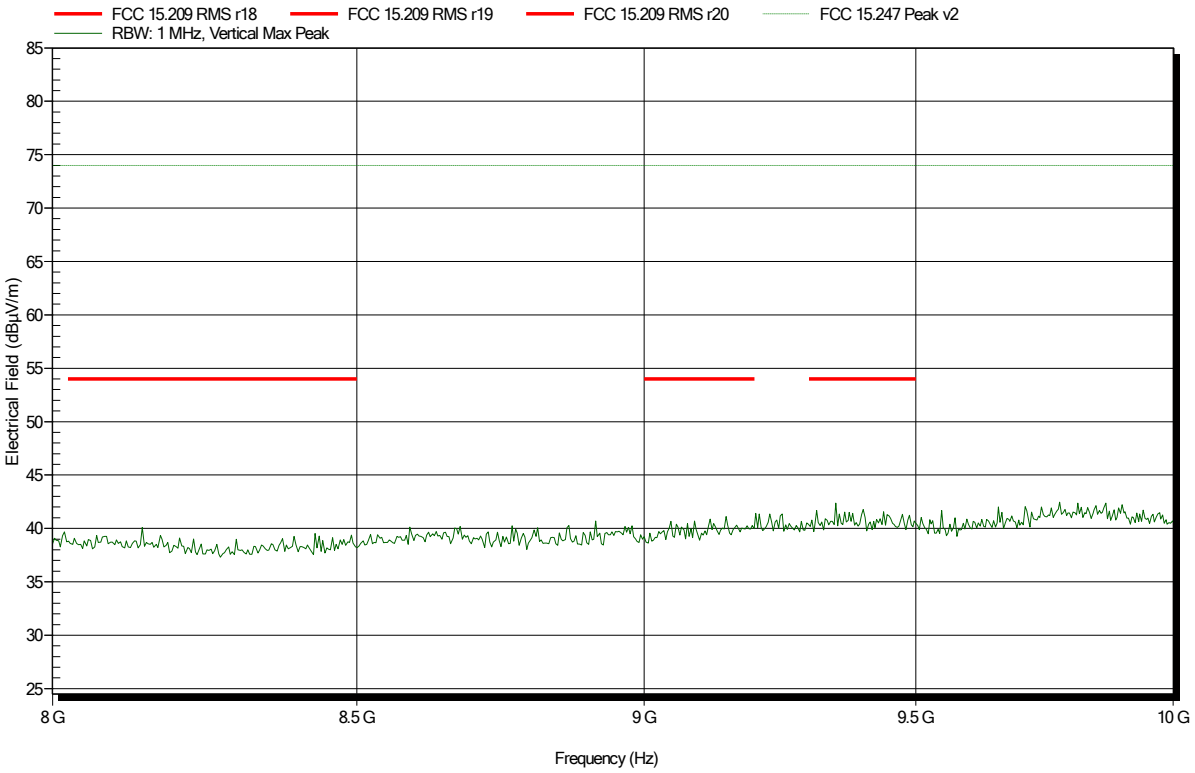

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-03
Note:	

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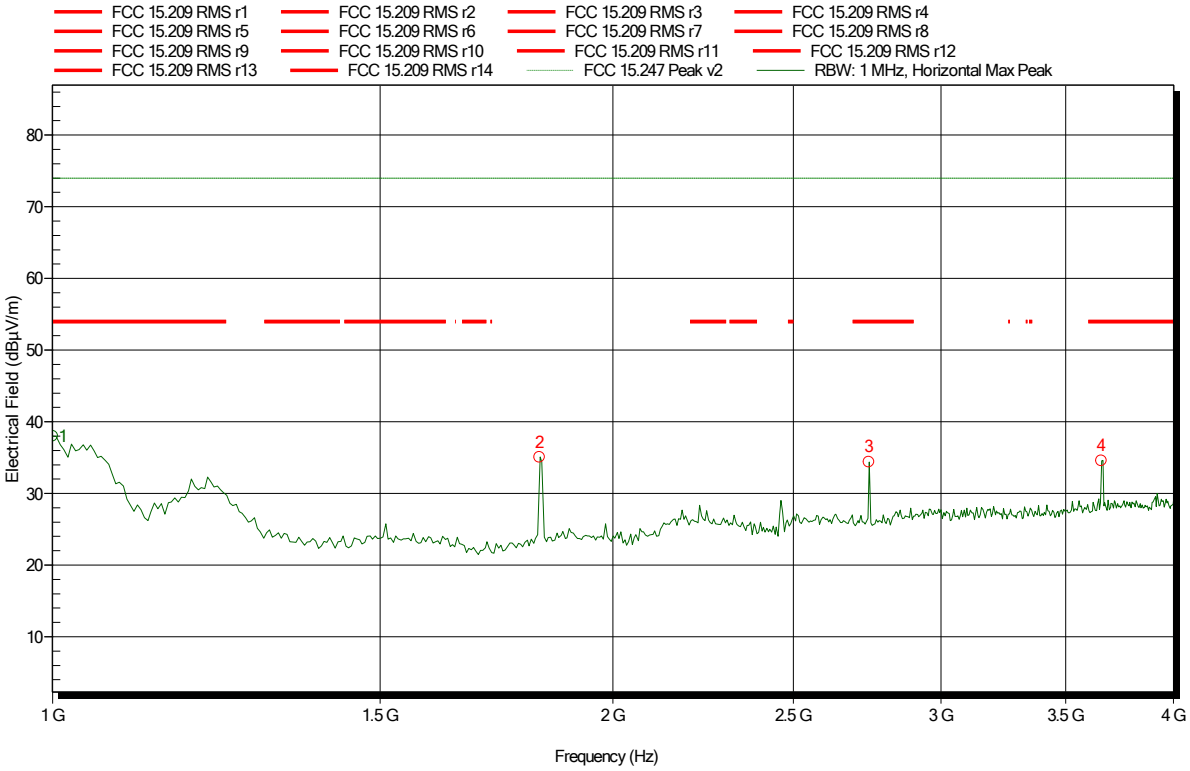

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1 GHz	38 dBµV/m	74 dBµV/m	-36 dB	Pass
1.827 GHz	35.06 dBµV/m	74 dBµV/m	-38.94 dB	Pass
2.745 GHz	34.37 dBµV/m	74 dBµV/m	-39.63 dB	Pass
3.659 GHz	34.56 dBµV/m	74 dBµV/m	-39.44 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-03
Note:	

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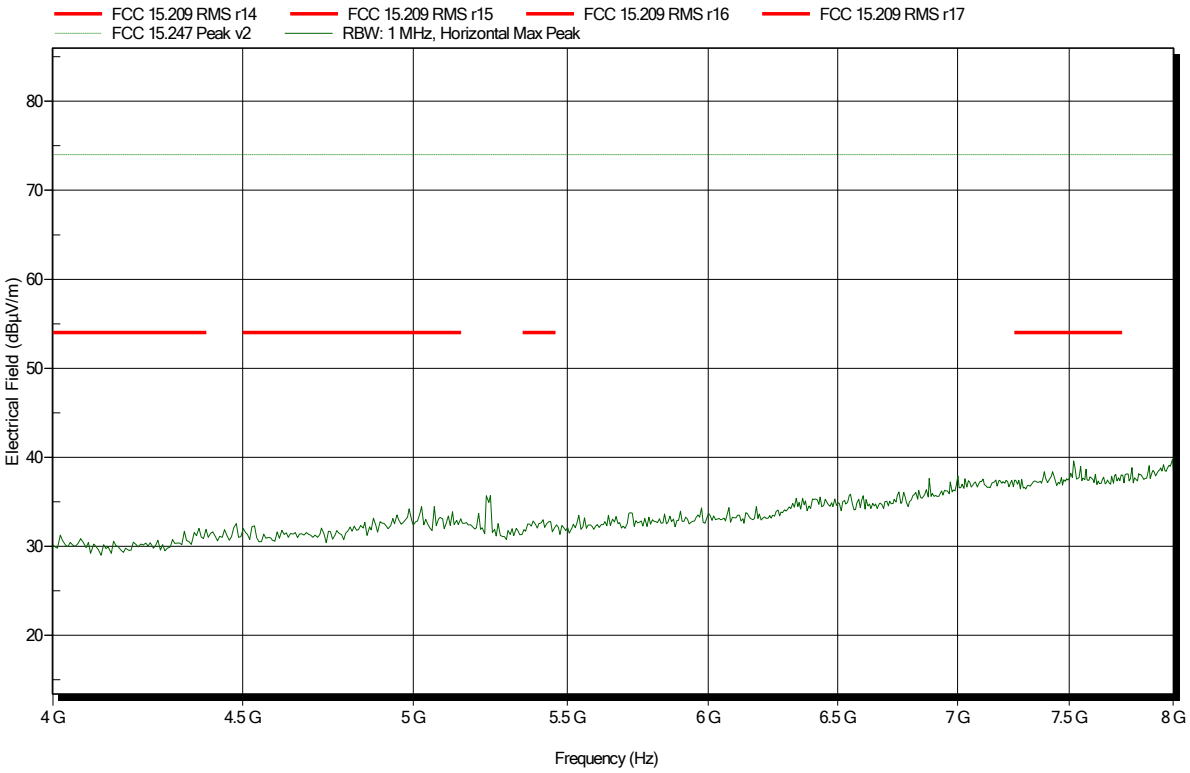

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-03
Note:	

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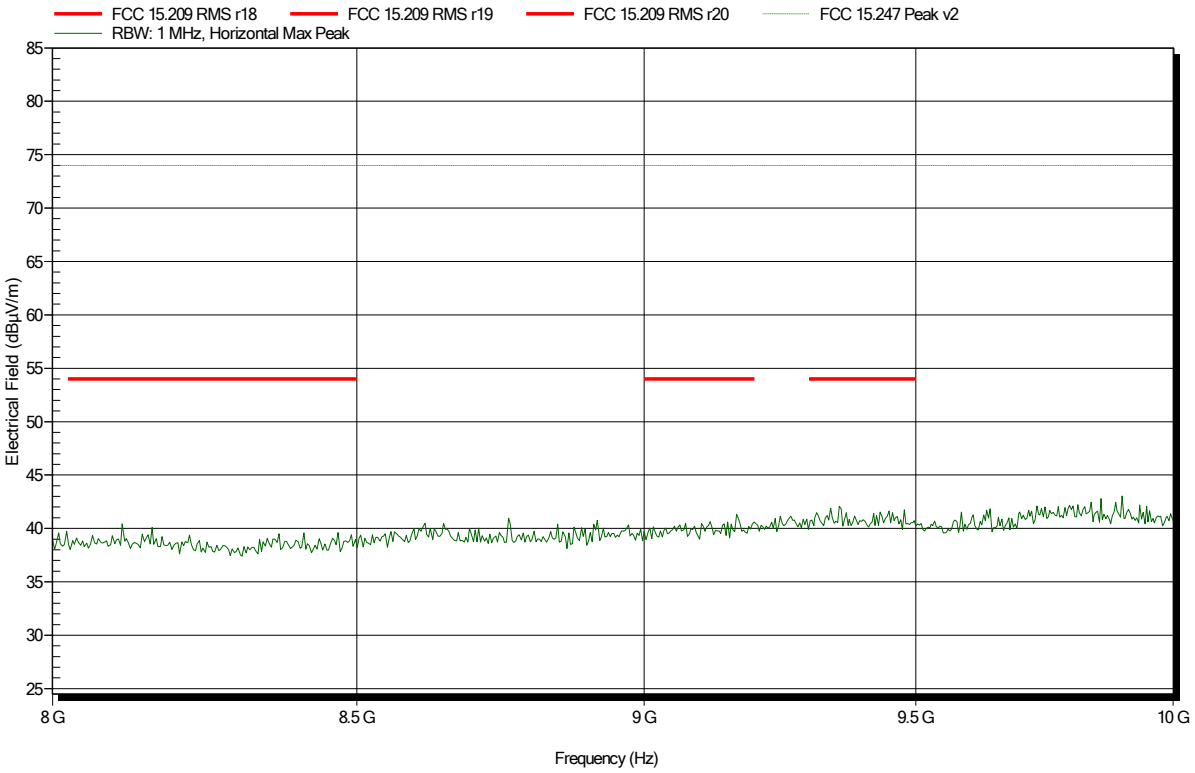

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-03
Note:	

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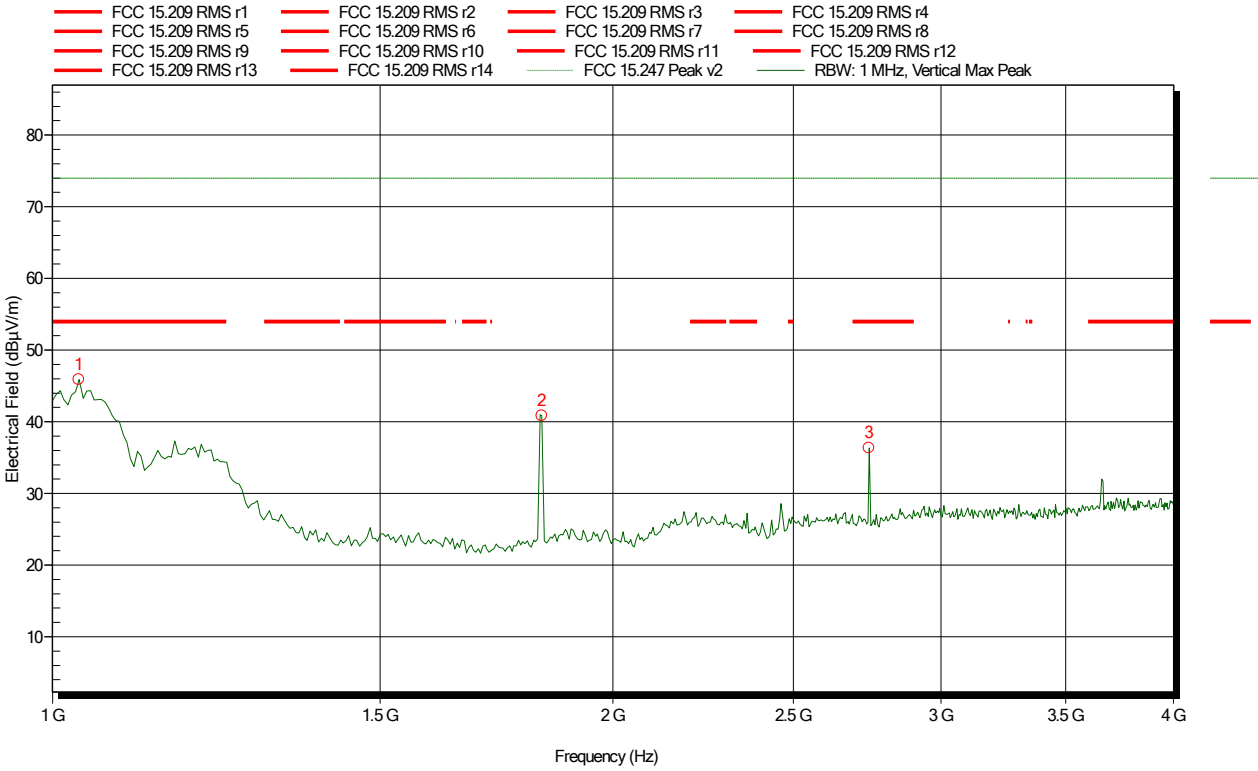

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.034 GHz	45.9 dBµV/m	74 dBµV/m	-28.1 dB	Pass
1.832 GHz	40.86 dBµV/m	74 dBµV/m	-33.14 dB	Pass
2.745 GHz	36.33 dBµV/m	74 dBµV/m	-37.67 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-03
Note:	

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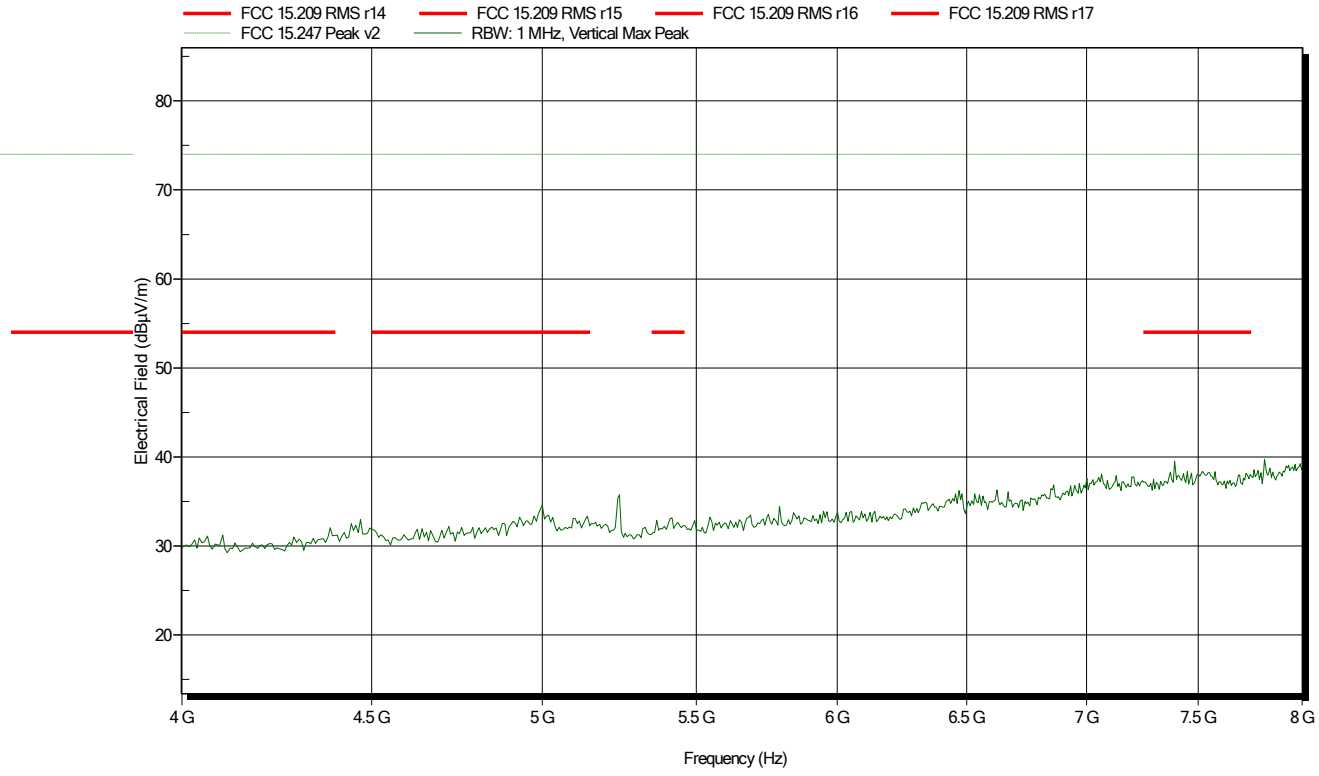

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Helix Antenna, Channel Mid
Test Date:	2020-06-03
Note:	

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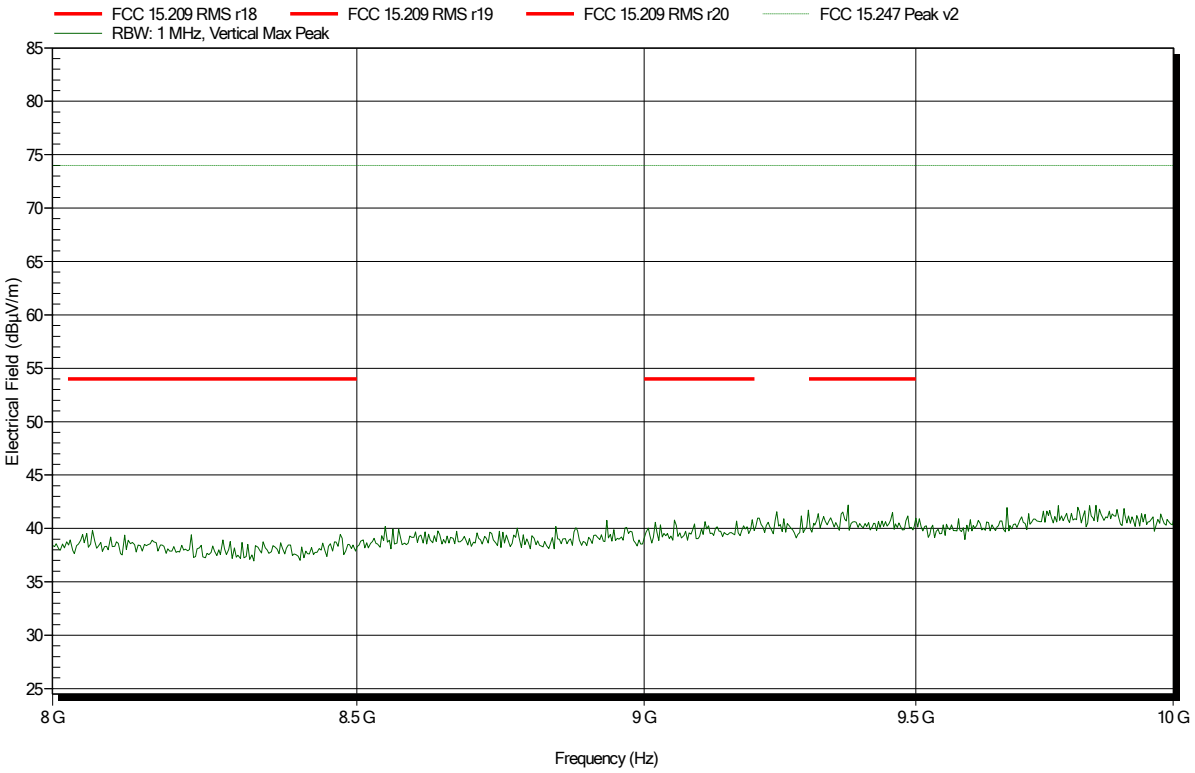

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-04
Note:	

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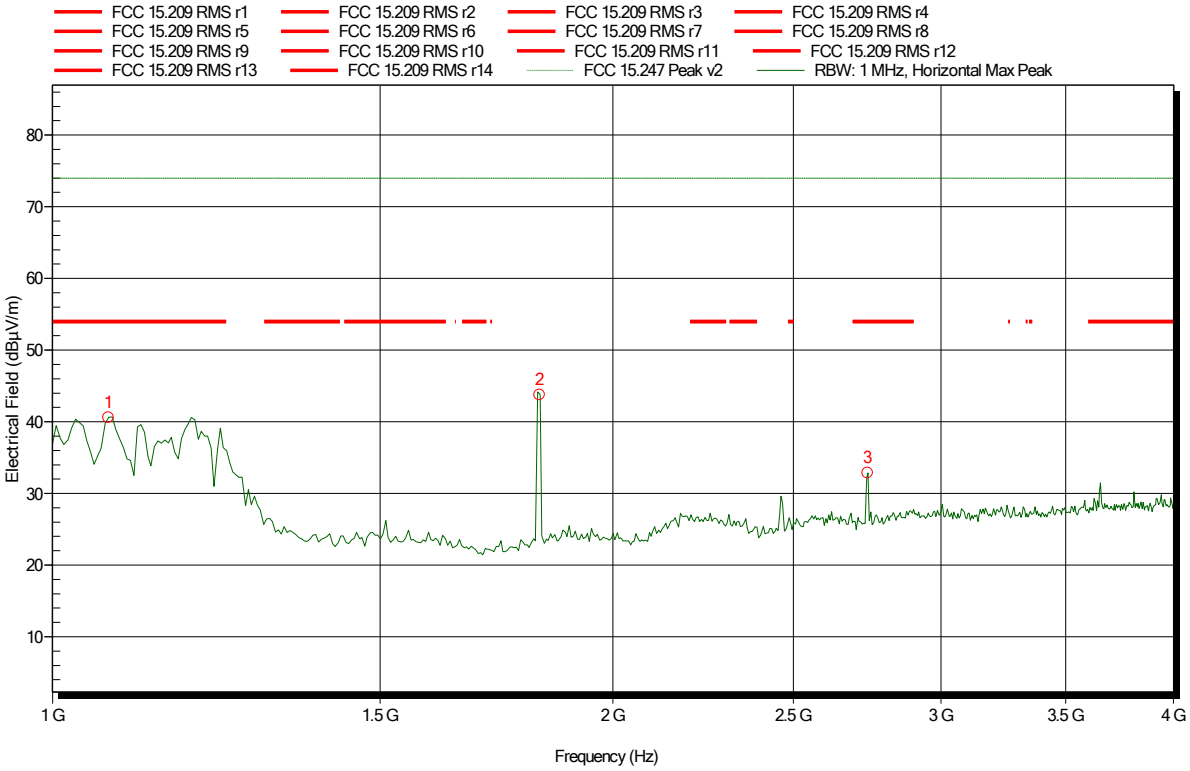

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.072 GHz	40.61 dBµV/m	74 dBµV/m	-33.39 dB	Pass
1.827 GHz	43.77 dBµV/m	74 dBµV/m	-30.23 dB	Pass
2.74 GHz	32.85 dBµV/m	74 dBµV/m	-41.15 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-04
Note:	

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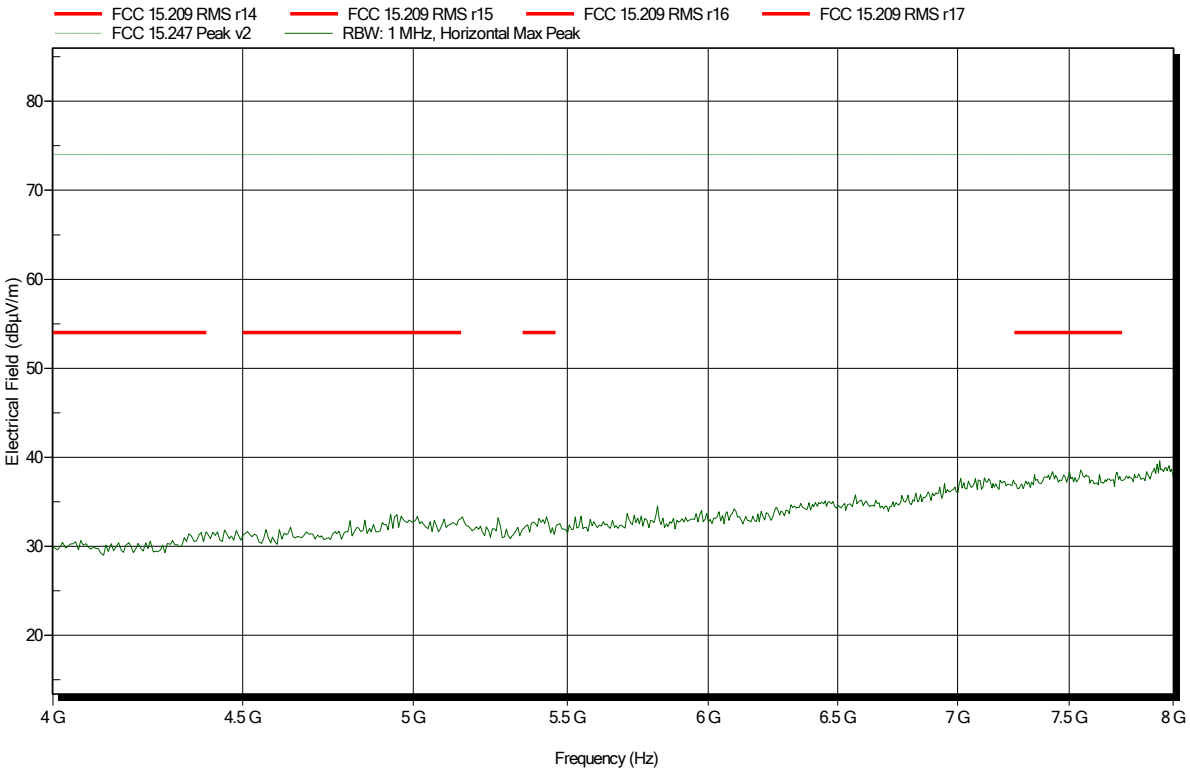

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-04
Note:	

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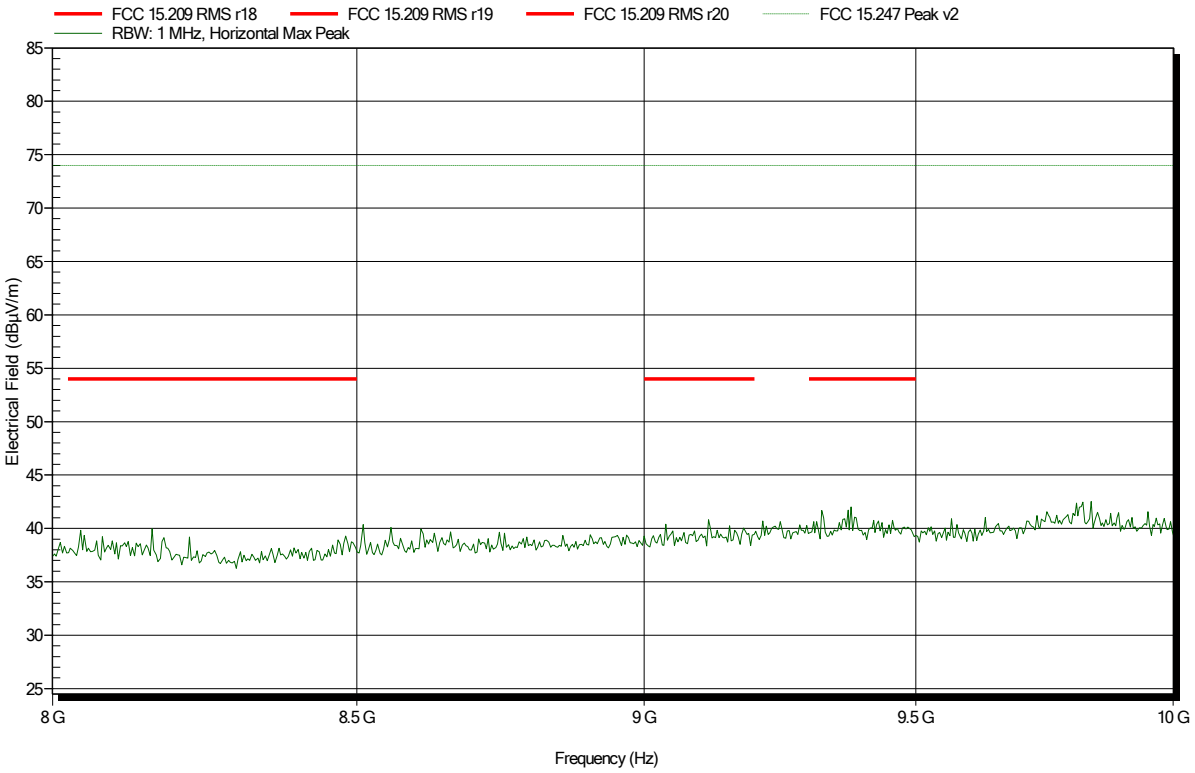

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-04
Note:	

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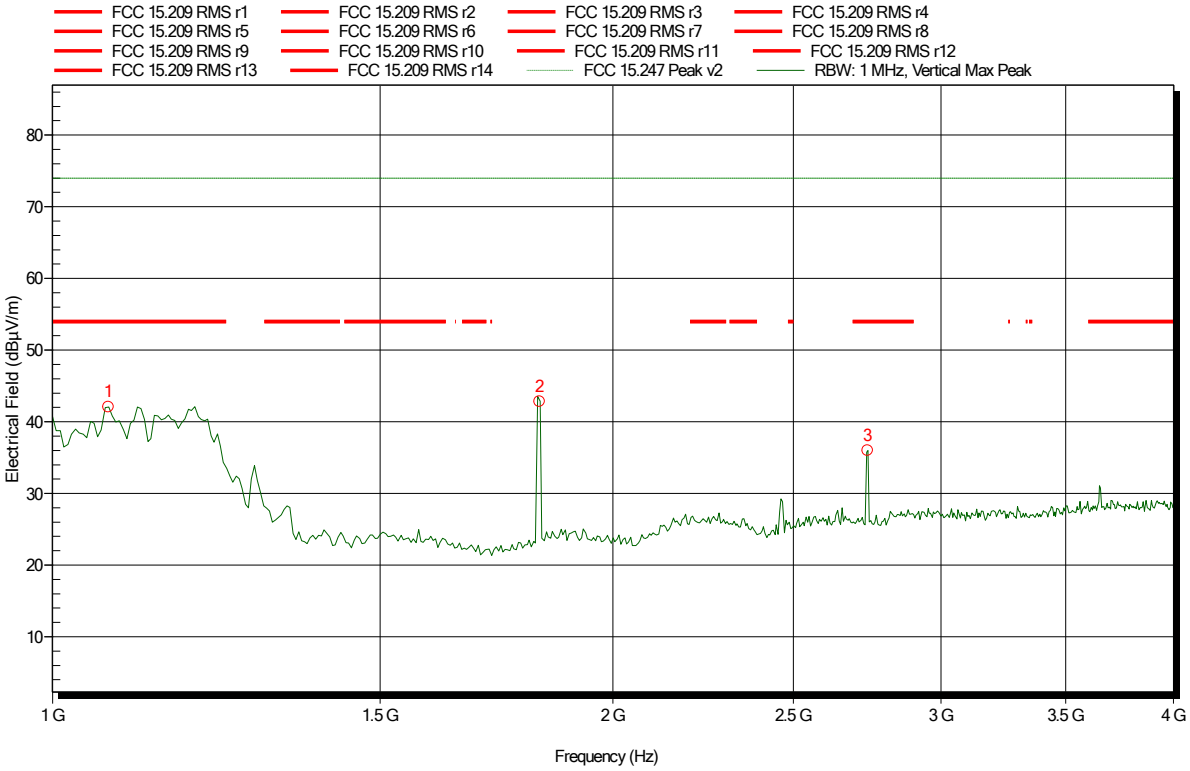

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.072 GHz	42.05 dBµV/m	74 dBµV/m	-31.95 dB	Pass
1.827 GHz	42.83 dBµV/m	74 dBµV/m	-31.17 dB	Pass
2.74 GHz	36 dBµV/m	74 dBµV/m	-38 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-04
Note:	

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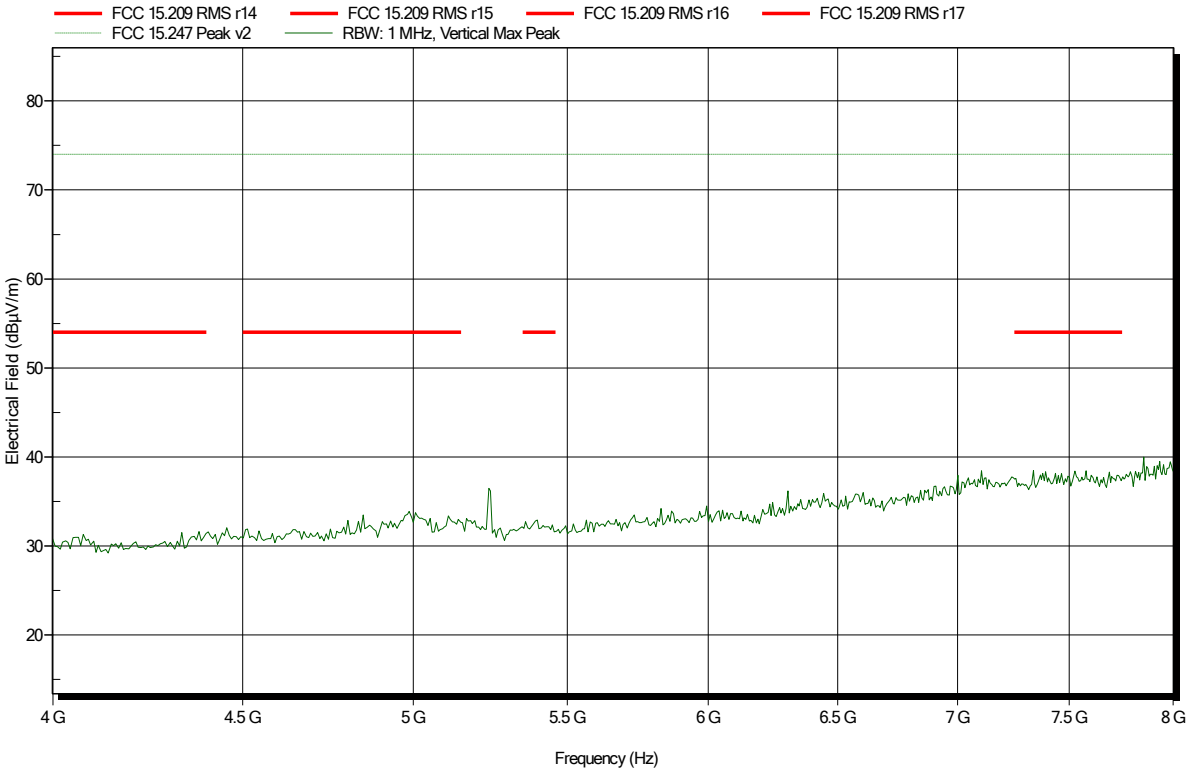

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Low
Test Date:	2020-06-04
Note:	

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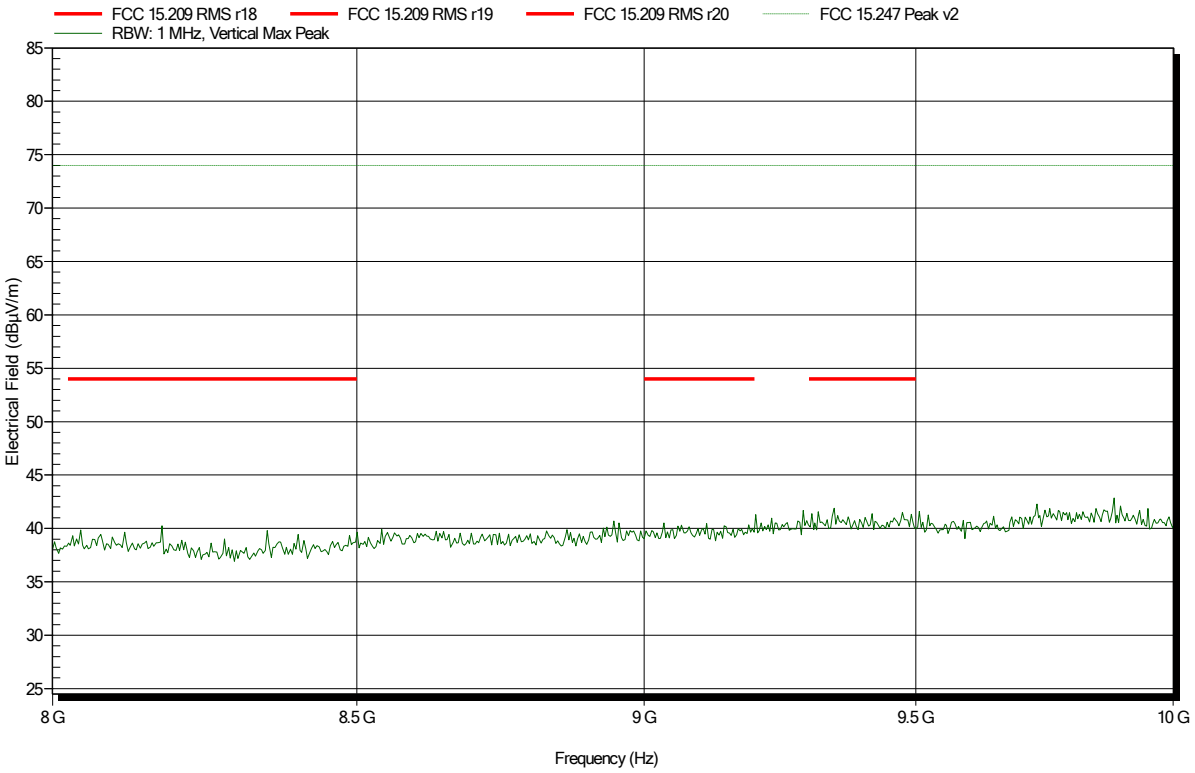

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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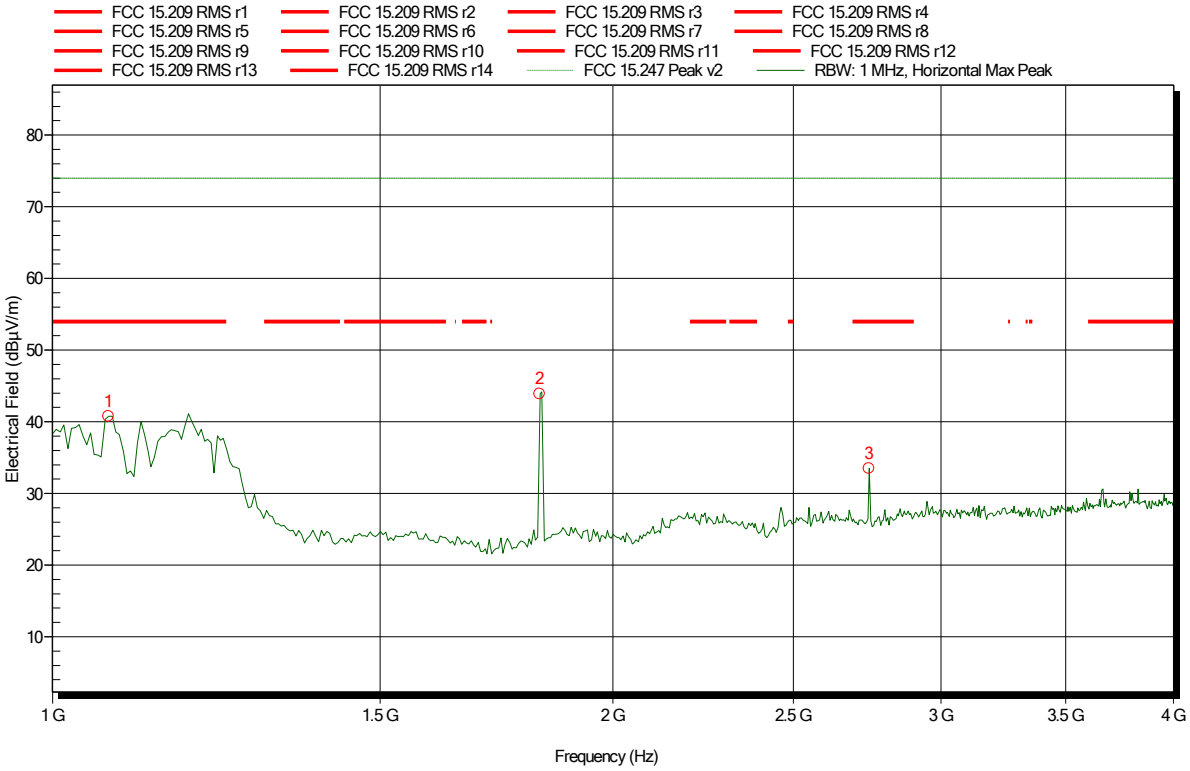

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.072 GHz	40.78 dBµV/m	74 dBµV/m	-33.22 dB	Pass
1.827 GHz	43.91 dBµV/m	74 dBµV/m	-30.09 dB	Pass
2.745 GHz	33.49 dBµV/m	74 dBµV/m	-40.51 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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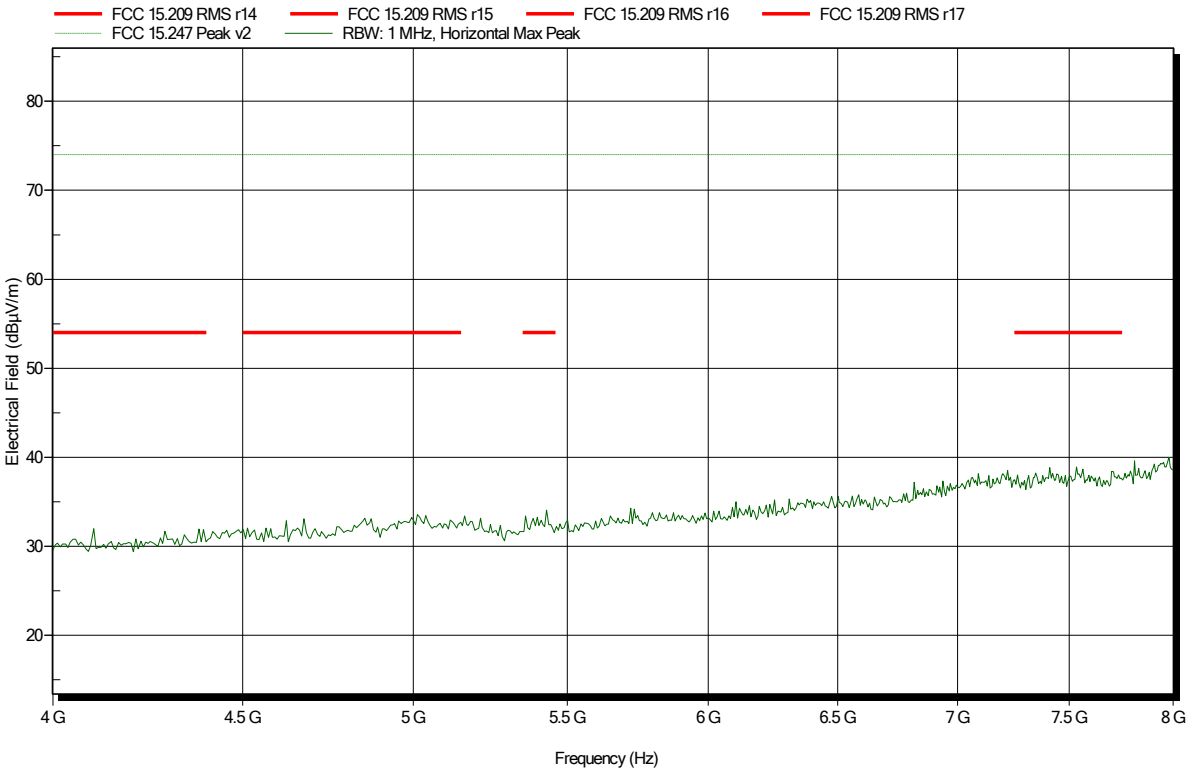

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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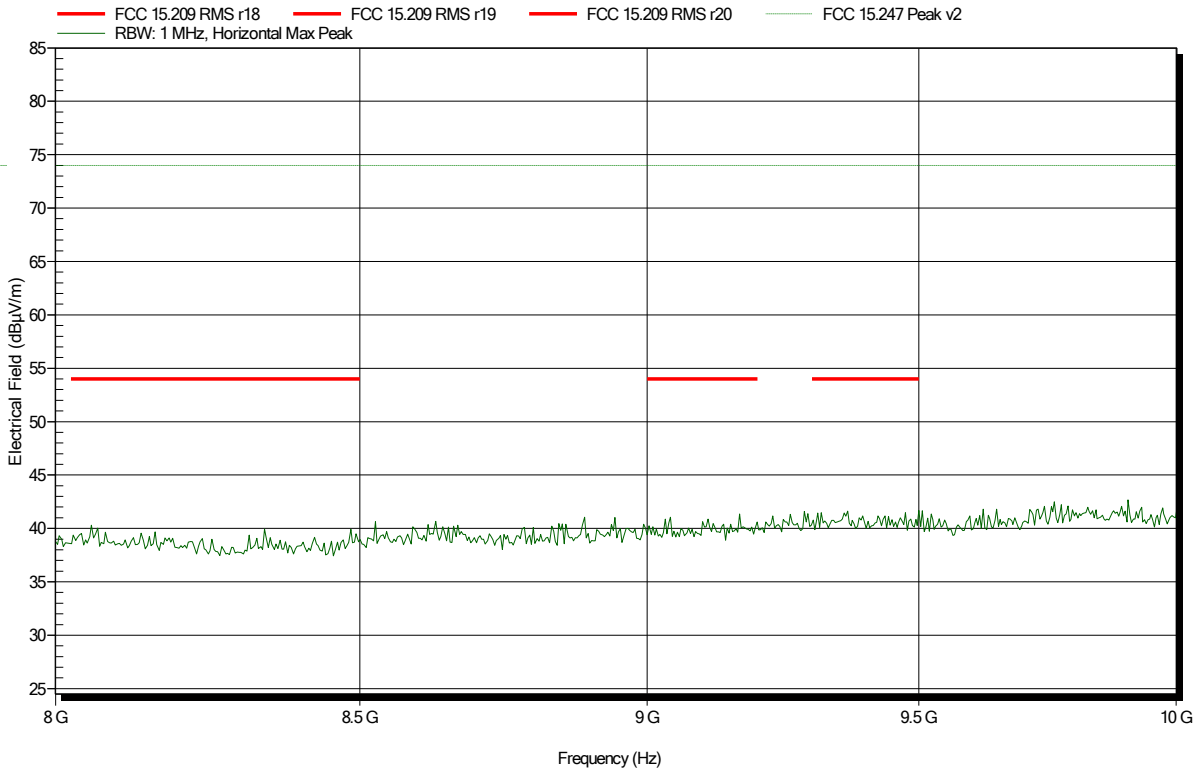

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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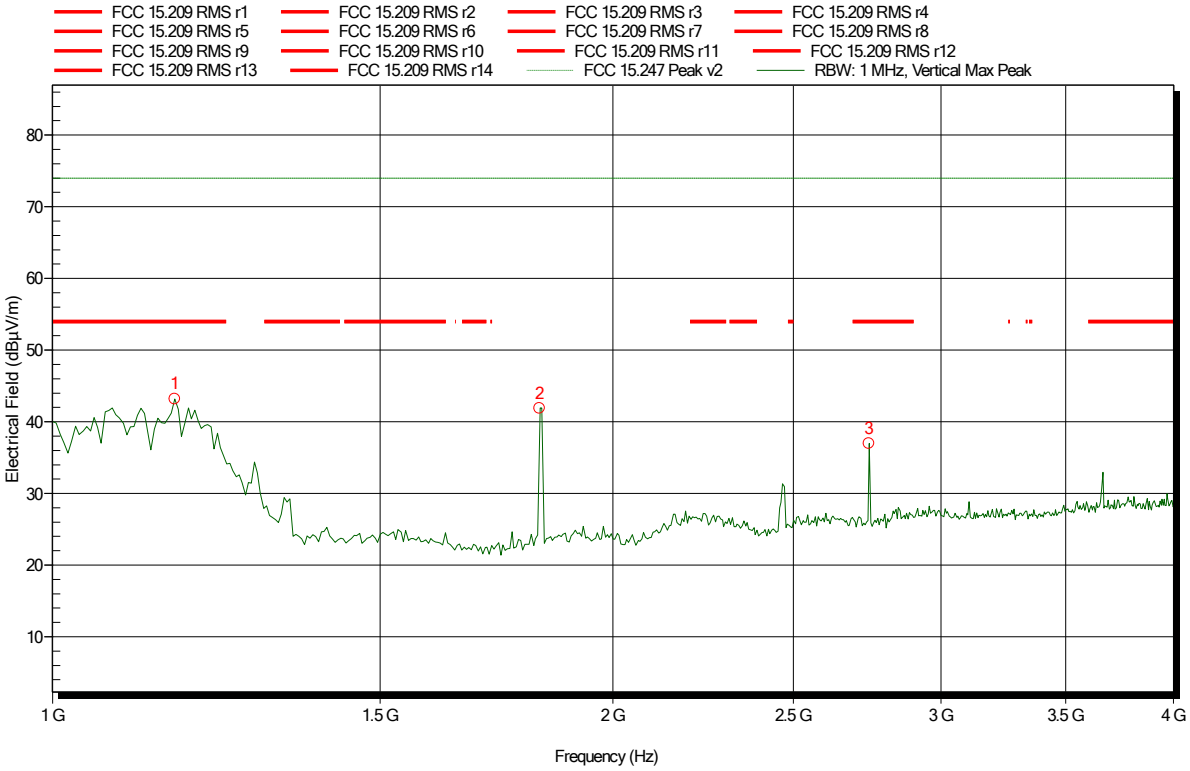

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.163 GHz	43.19 dBµV/m	74 dBµV/m	-30.81 dB	Pass
1.827 GHz	41.9 dBµV/m	74 dBµV/m	-32.1 dB	Pass
2.745 GHz	36.96 dBµV/m	74 dBµV/m	-37.04 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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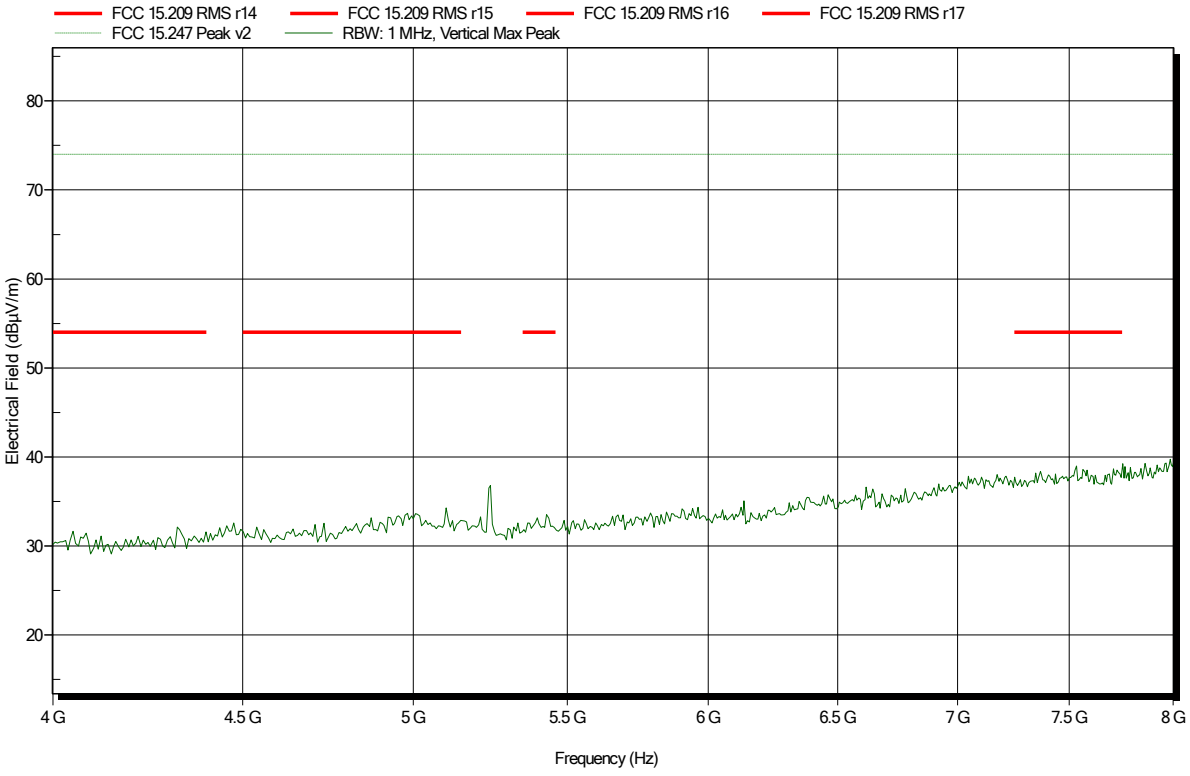

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel Mid
Test Date:	2020-06-05
Note:	

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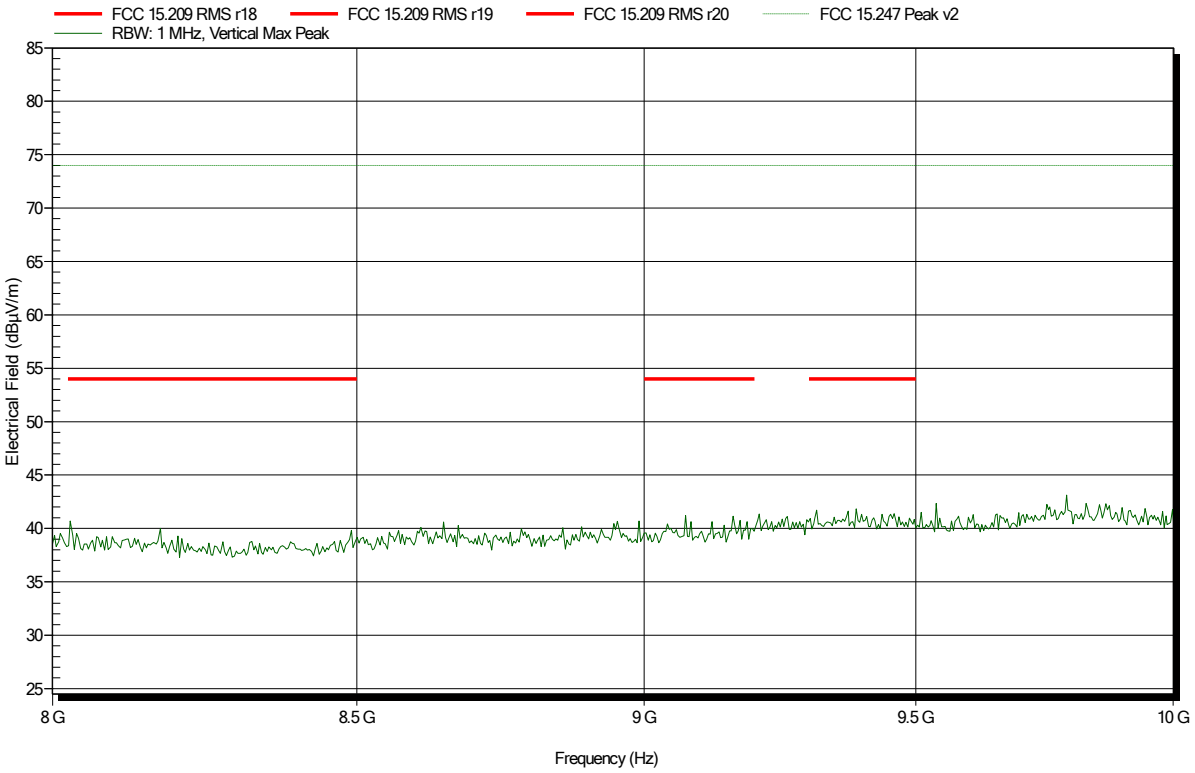

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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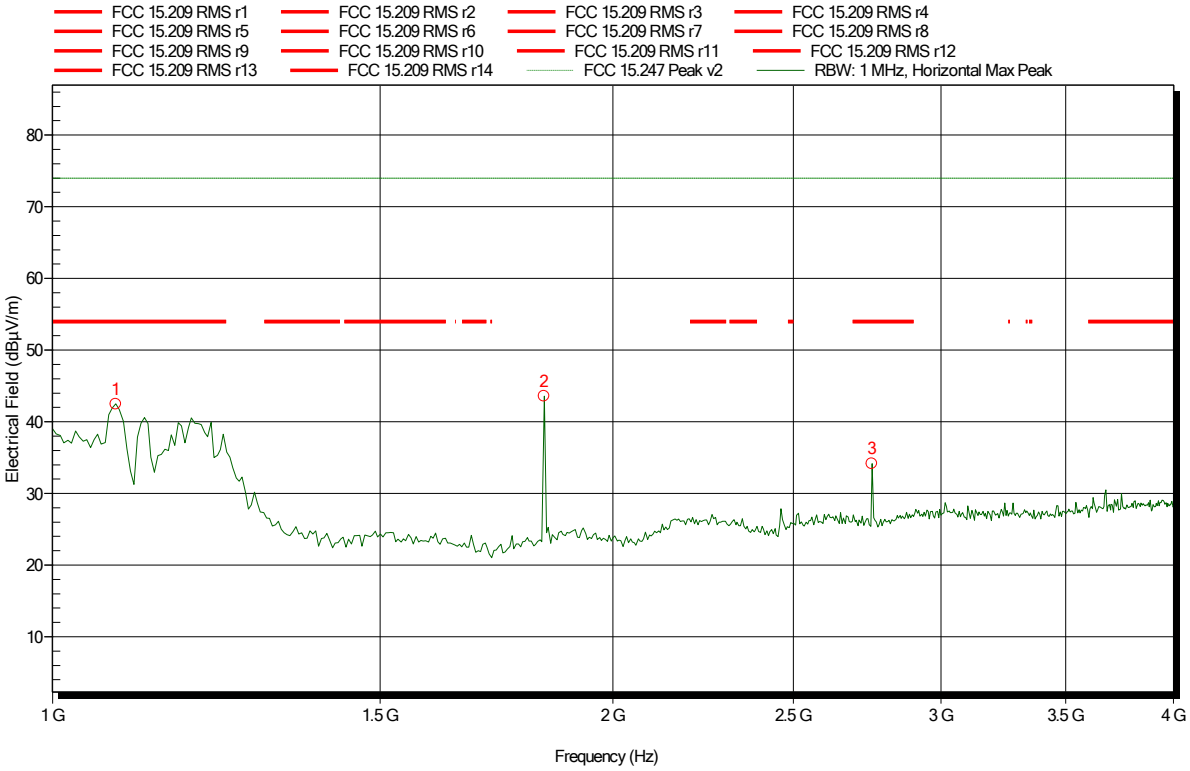

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.082 GHz	42.48 dBµV/m	74 dBµV/m	-31.52 dB	Pass
1.837 GHz	43.57 dBµV/m	74 dBµV/m	-30.43 dB	Pass
2.755 GHz	34.16 dBµV/m	74 dBµV/m	-39.84 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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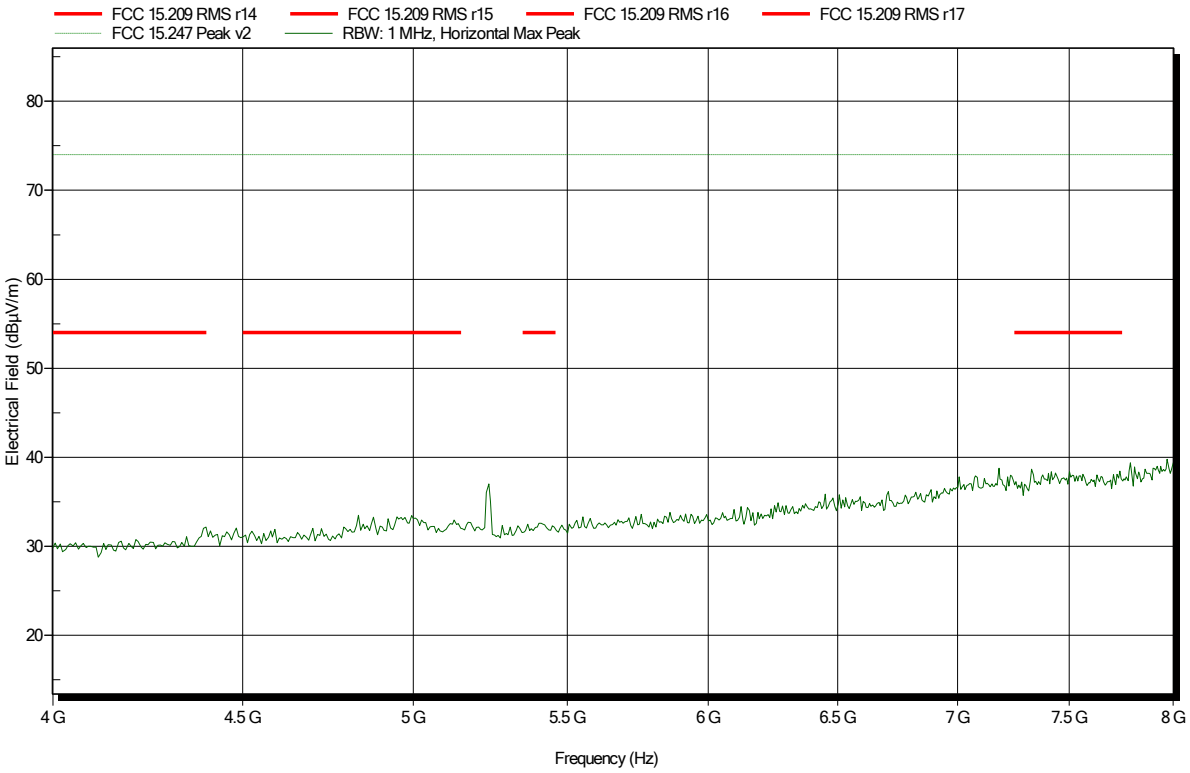

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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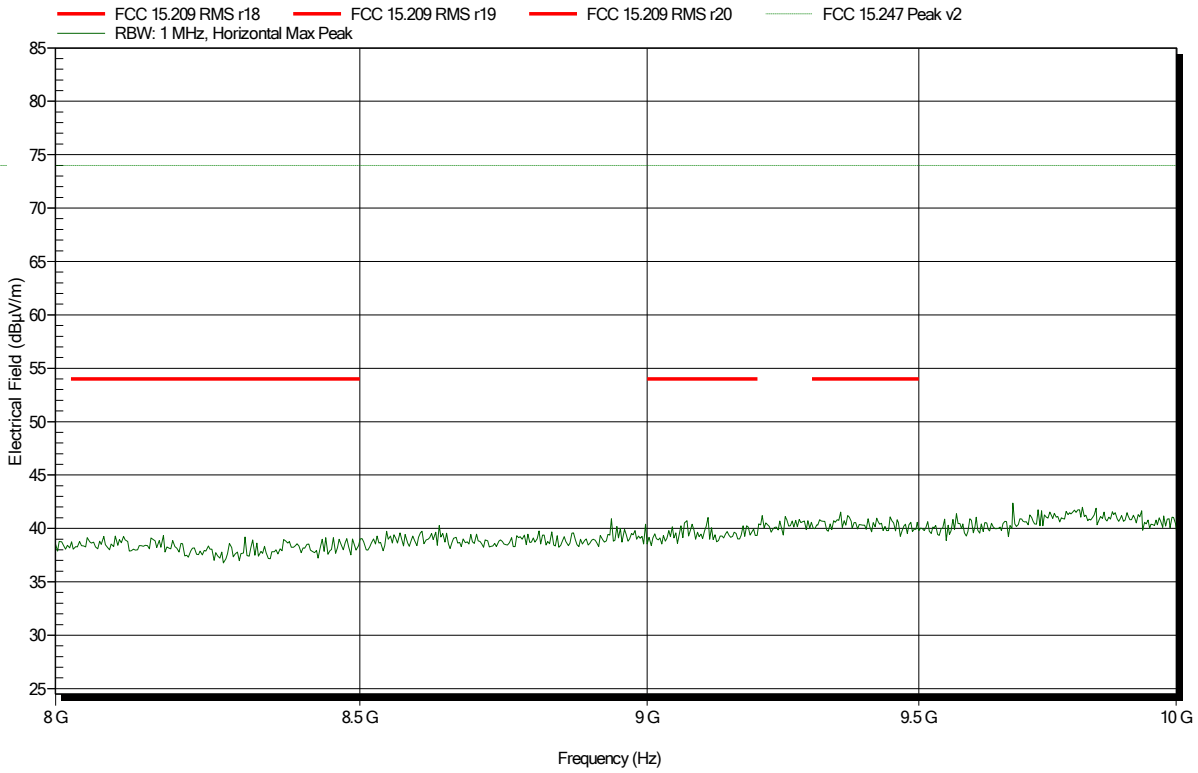

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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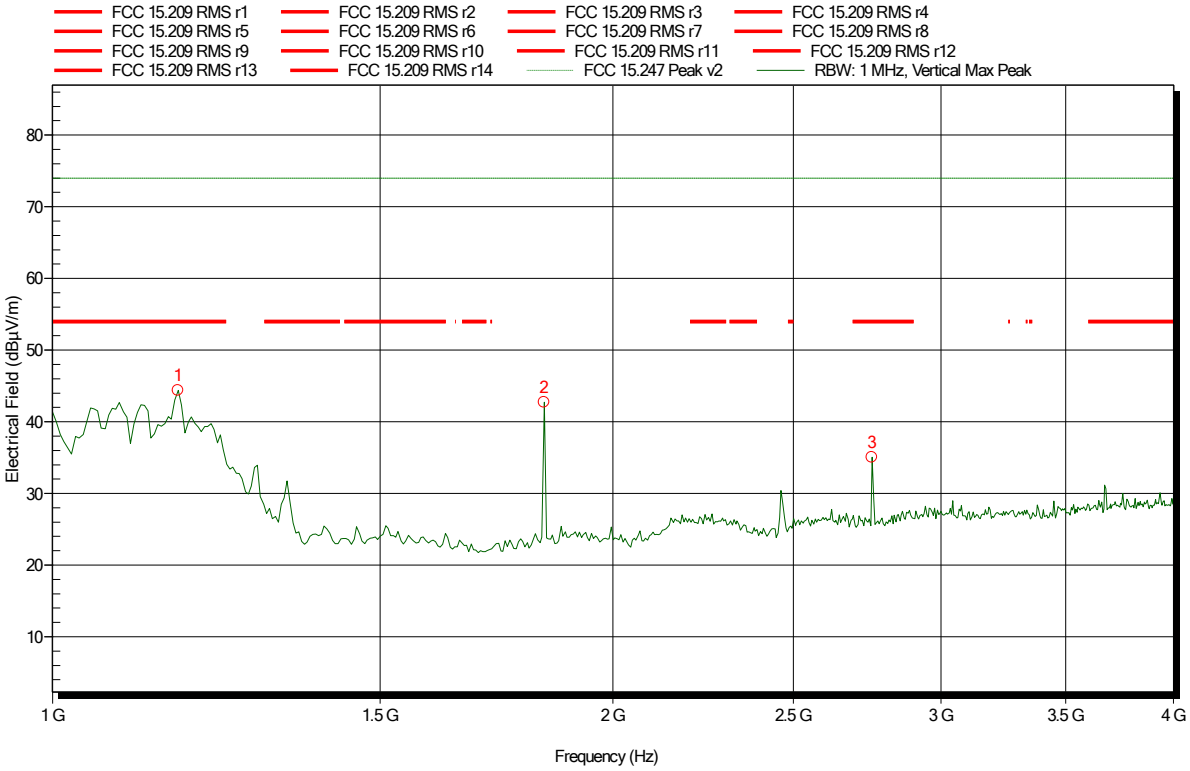

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.168 GHz	44.37 dBµV/m	74 dBµV/m	-29.63 dB	Pass
1.837 GHz	42.72 dBµV/m	74 dBµV/m	-31.28 dB	Pass
2.755 GHz	35.06 dBµV/m	74 dBµV/m	-38.94 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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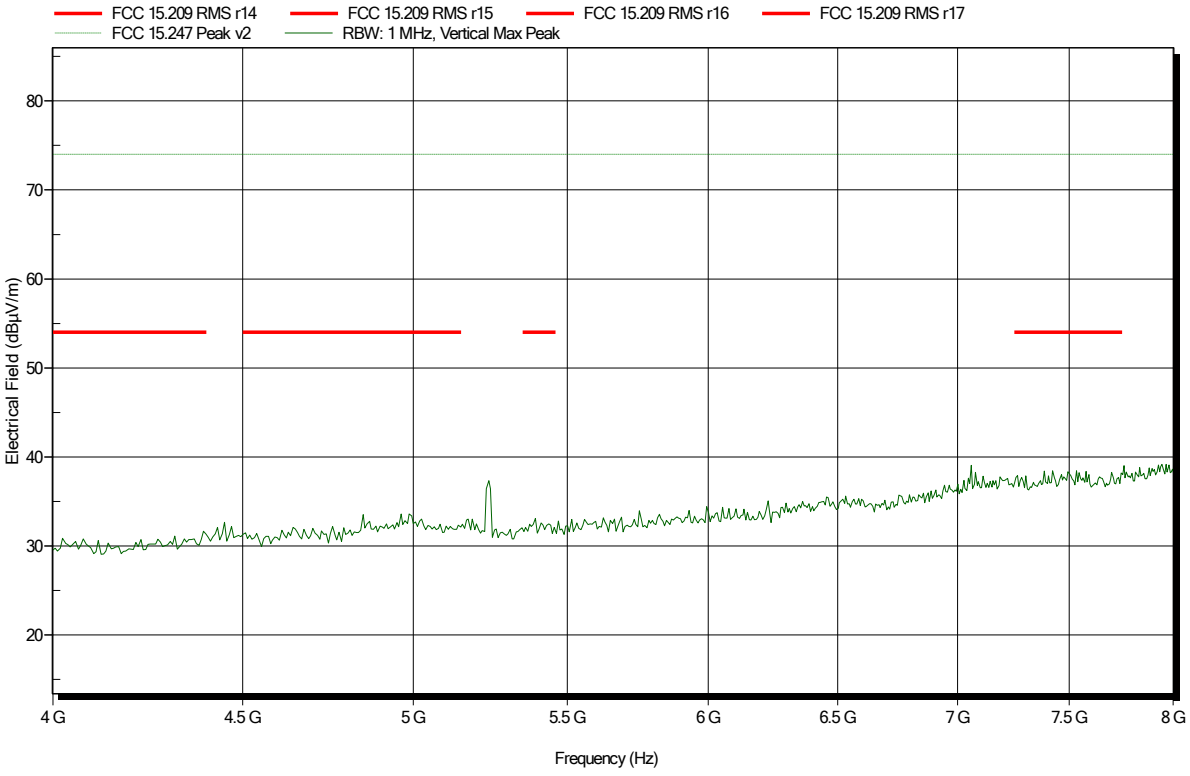

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Wall Antenna, Channel High
Test Date:	2020-06-05
Note:	

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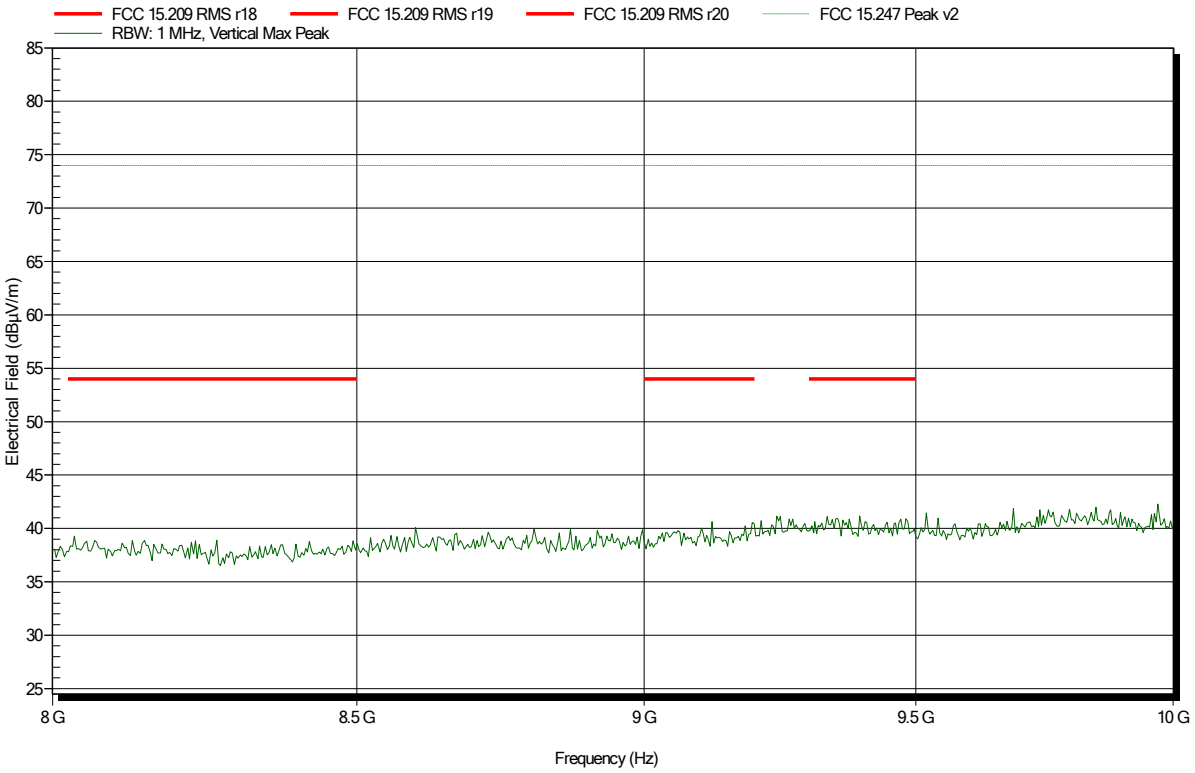

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-04
Note:	

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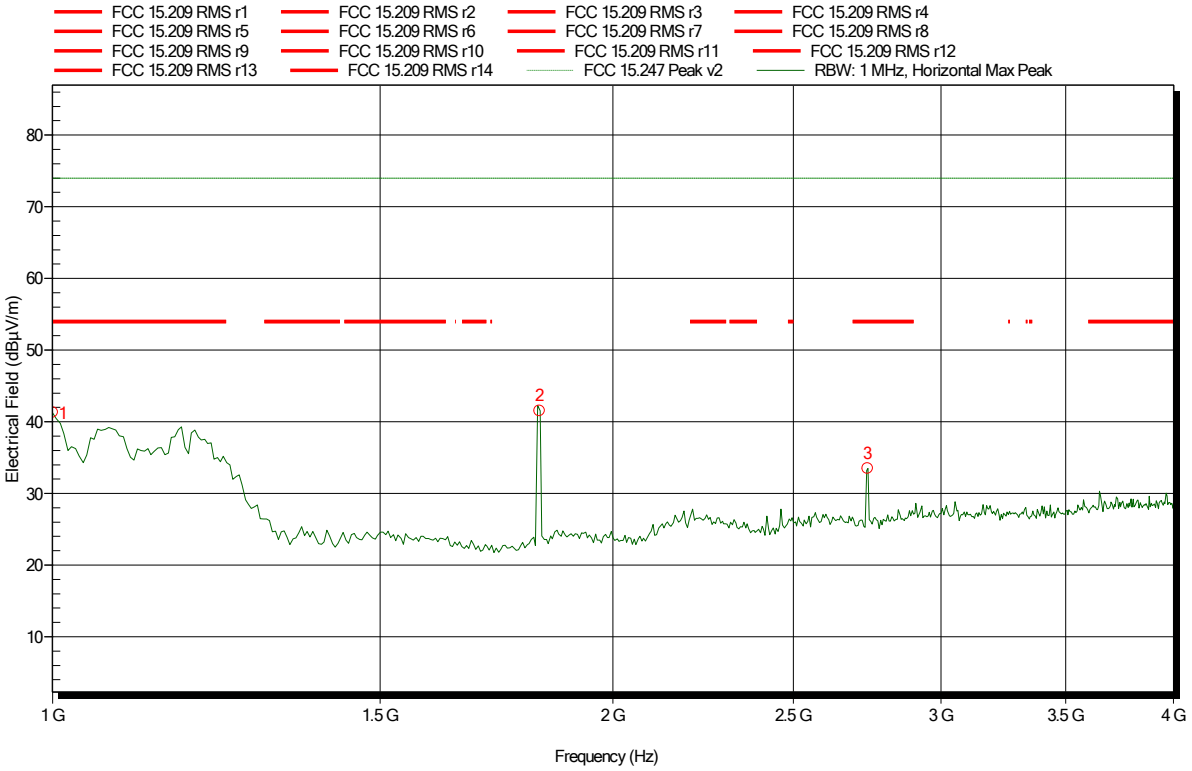

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1 GHz	41.31 dBµV/m	74 dBµV/m	-32.69 dB	Pass
1.827 GHz	41.51 dBµV/m	74 dBµV/m	-32.49 dB	Pass
2.74 GHz	33.49 dBµV/m	74 dBµV/m	-40.51 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-04
Note:	

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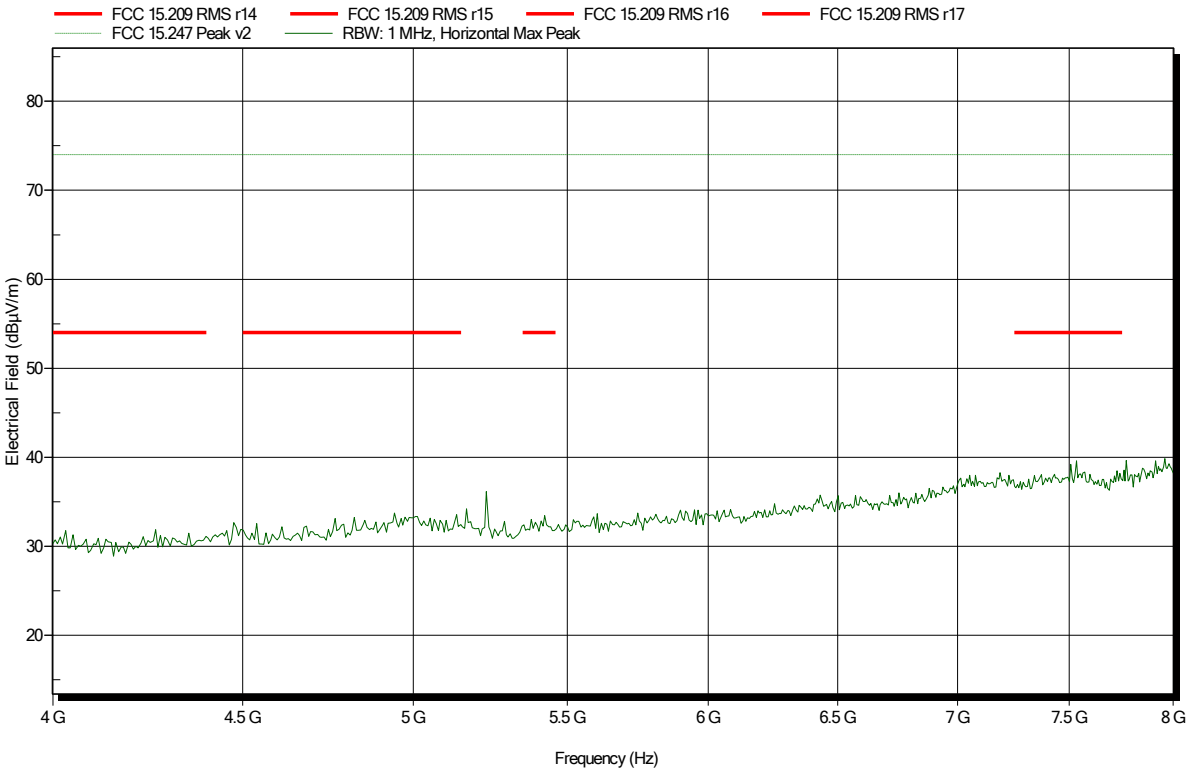

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-04
Note:	

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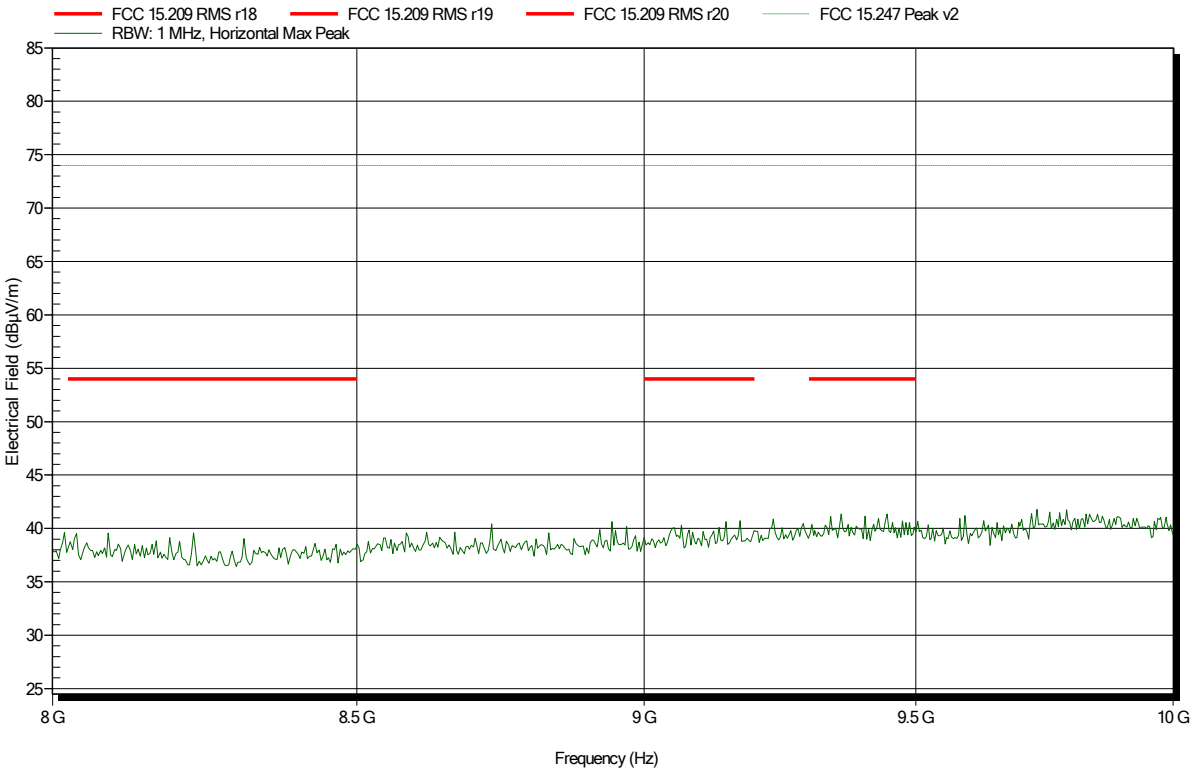

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-04
Note:	

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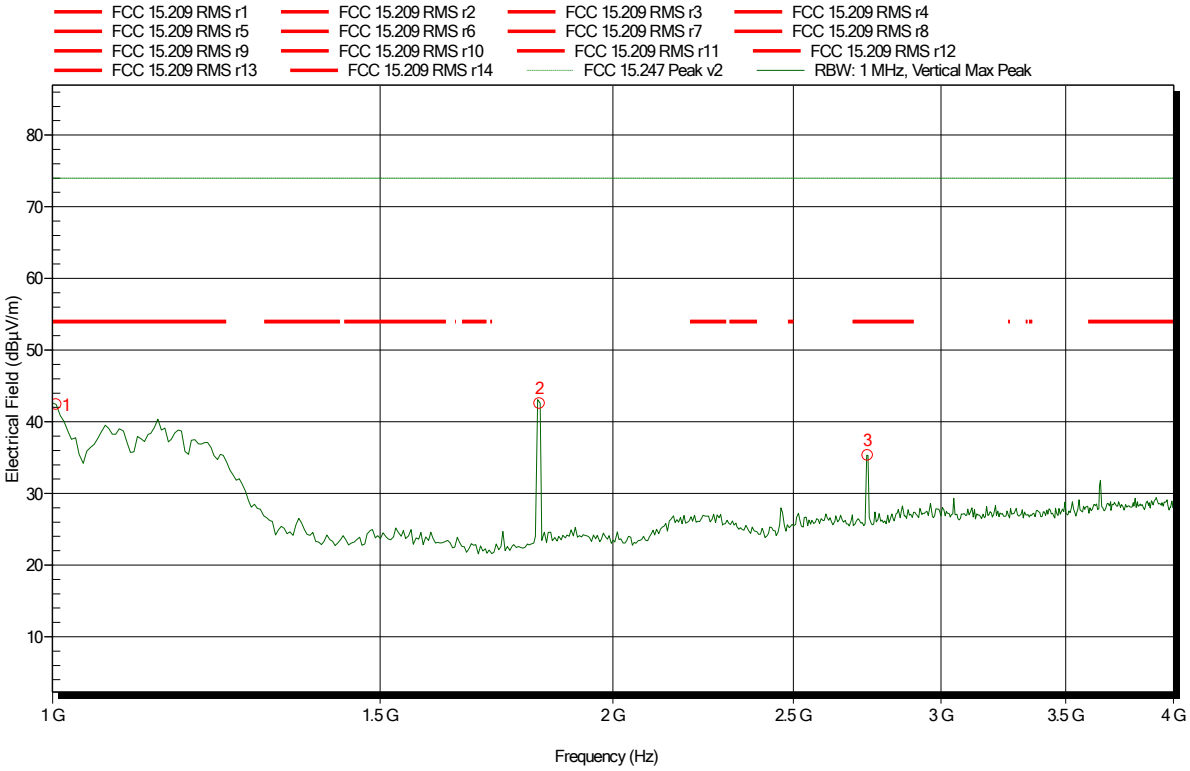

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.005 GHz	42.44 dBµV/m	74 dBµV/m	-31.56 dB	Pass
1.827 GHz	42.57 dBµV/m	74 dBµV/m	-31.43 dB	Pass
2.74 GHz	35.31 dBµV/m	74 dBµV/m	-38.69 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-04
Note:	

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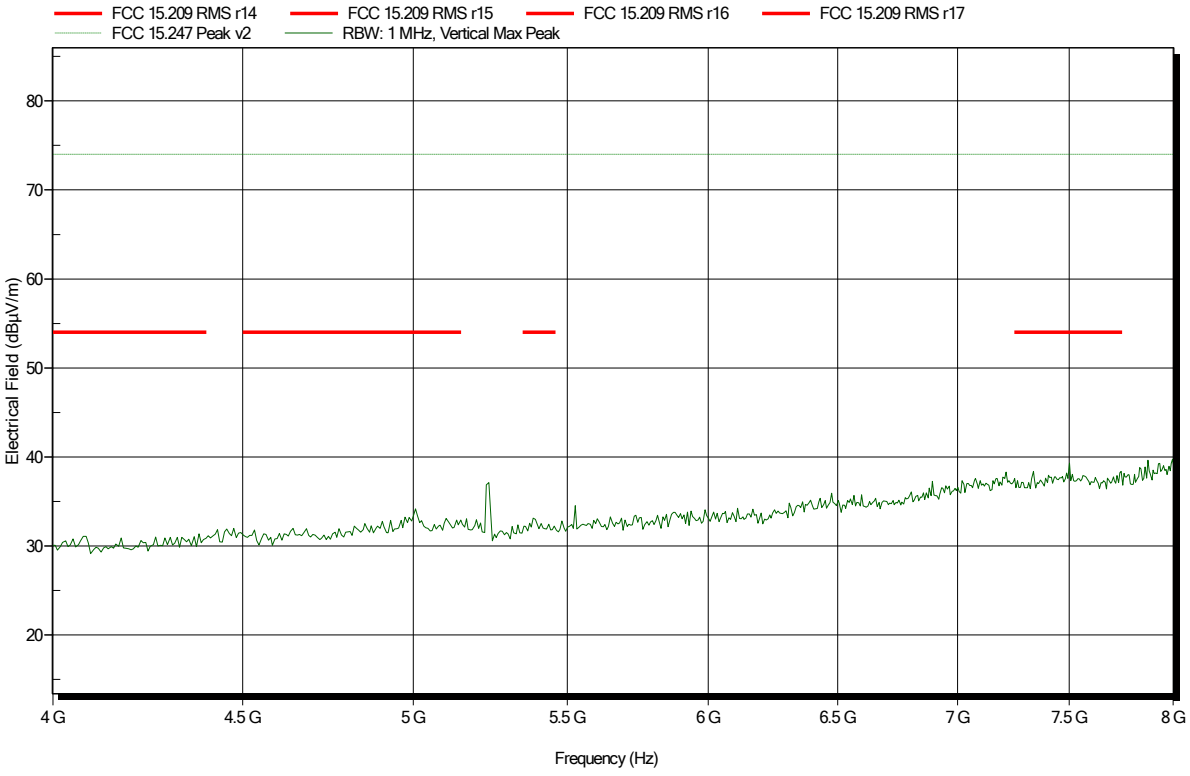

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Low
Test Date:	2020-06-04
Note:	

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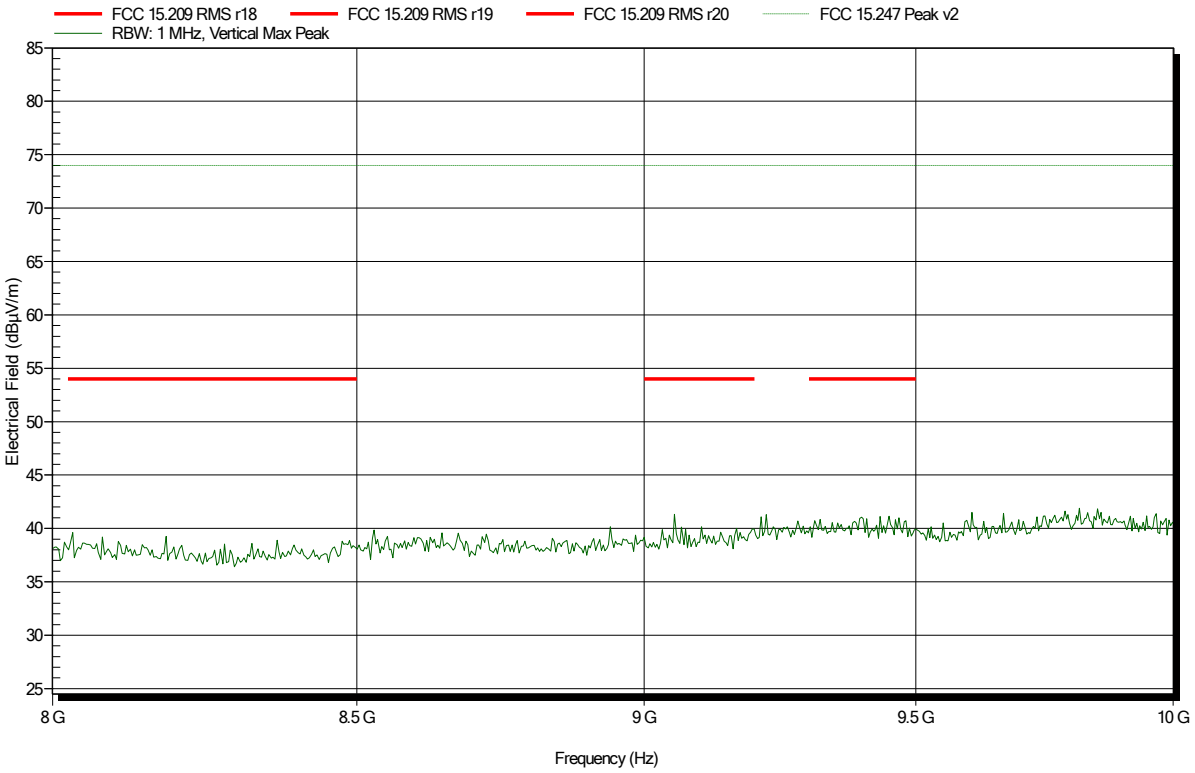

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-04
Note:	

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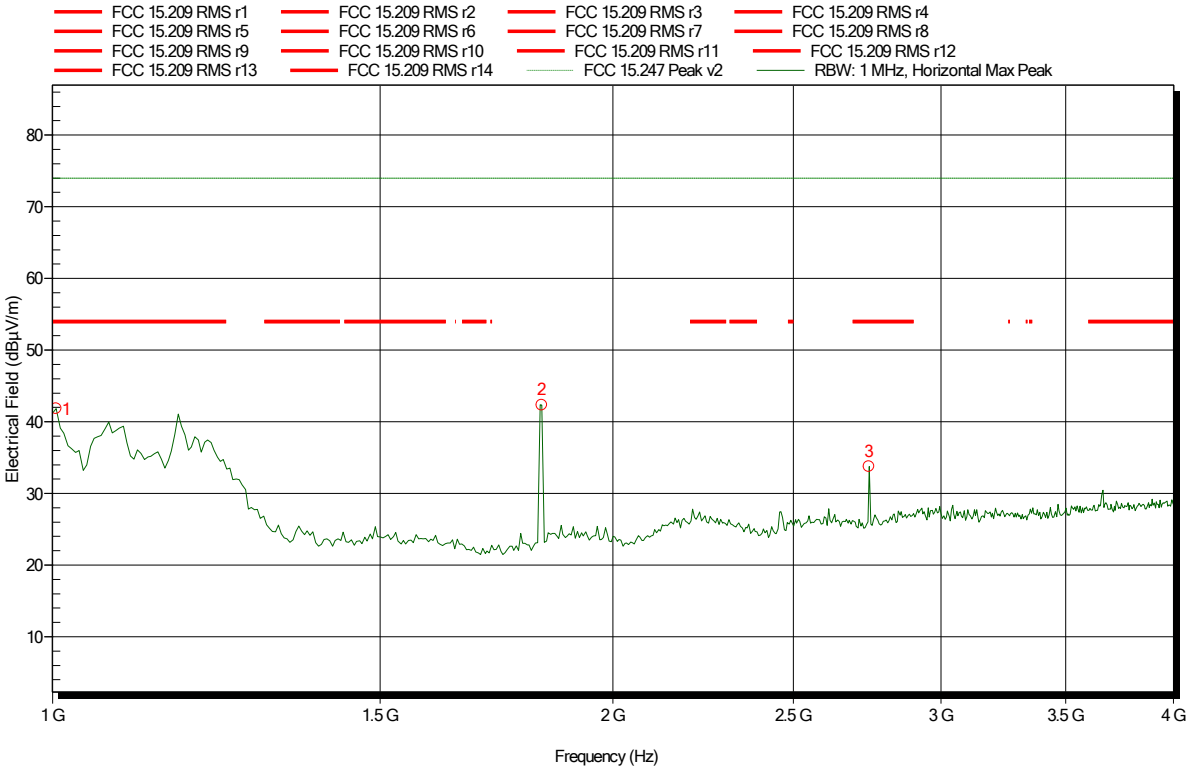

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.005 GHz	41.84 dBµV/m	74 dBµV/m	-32.16 dB	Pass
1.832 GHz	42.31 dBµV/m	74 dBµV/m	-31.69 dB	Pass
2.745 GHz	33.74 dBµV/m	74 dBµV/m	-40.26 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-04
Note:	

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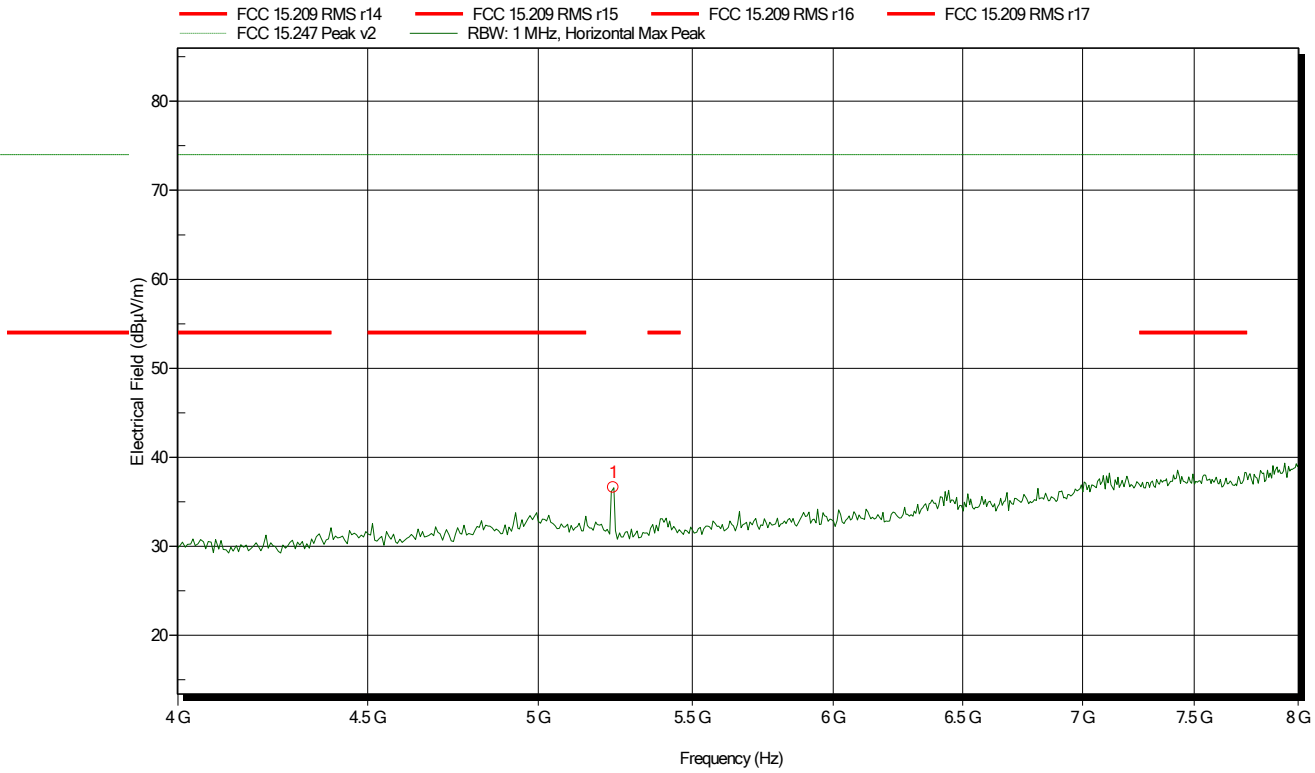

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
5.237 GHz	36.59 dBµV/m	74 dBµV/m	-37.41 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-04
Note:	

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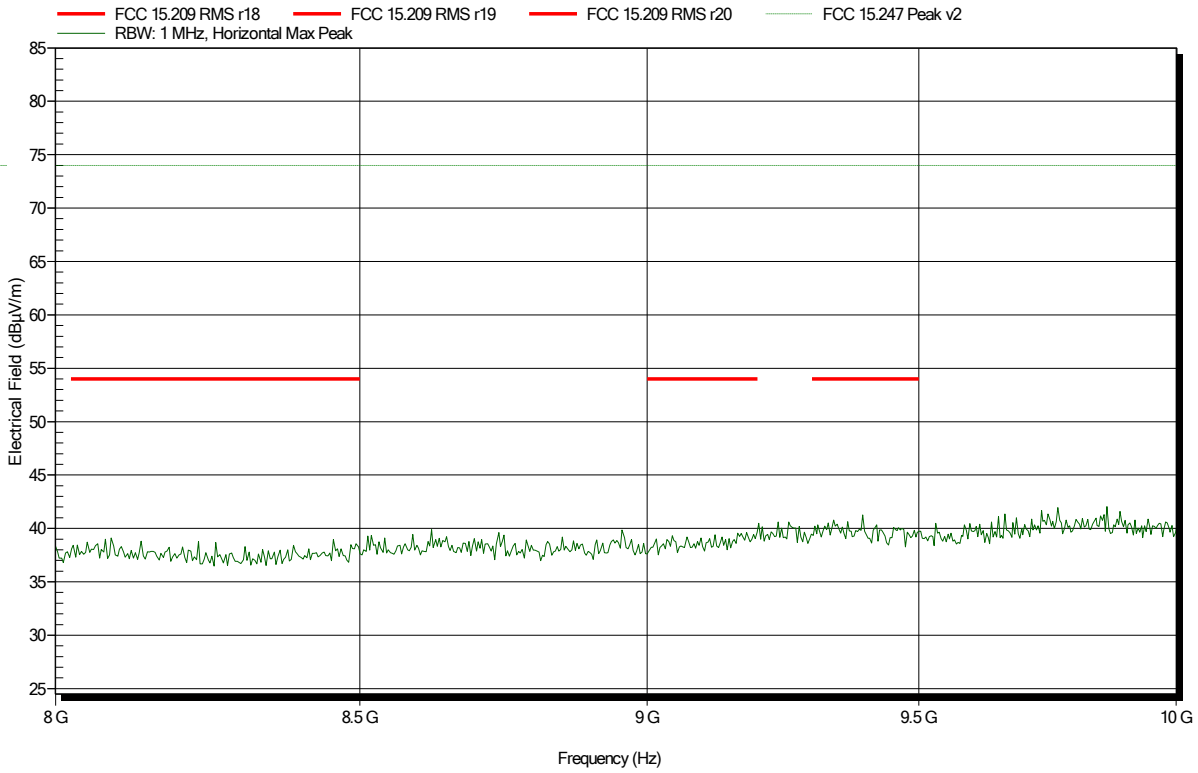

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-04
Note:	

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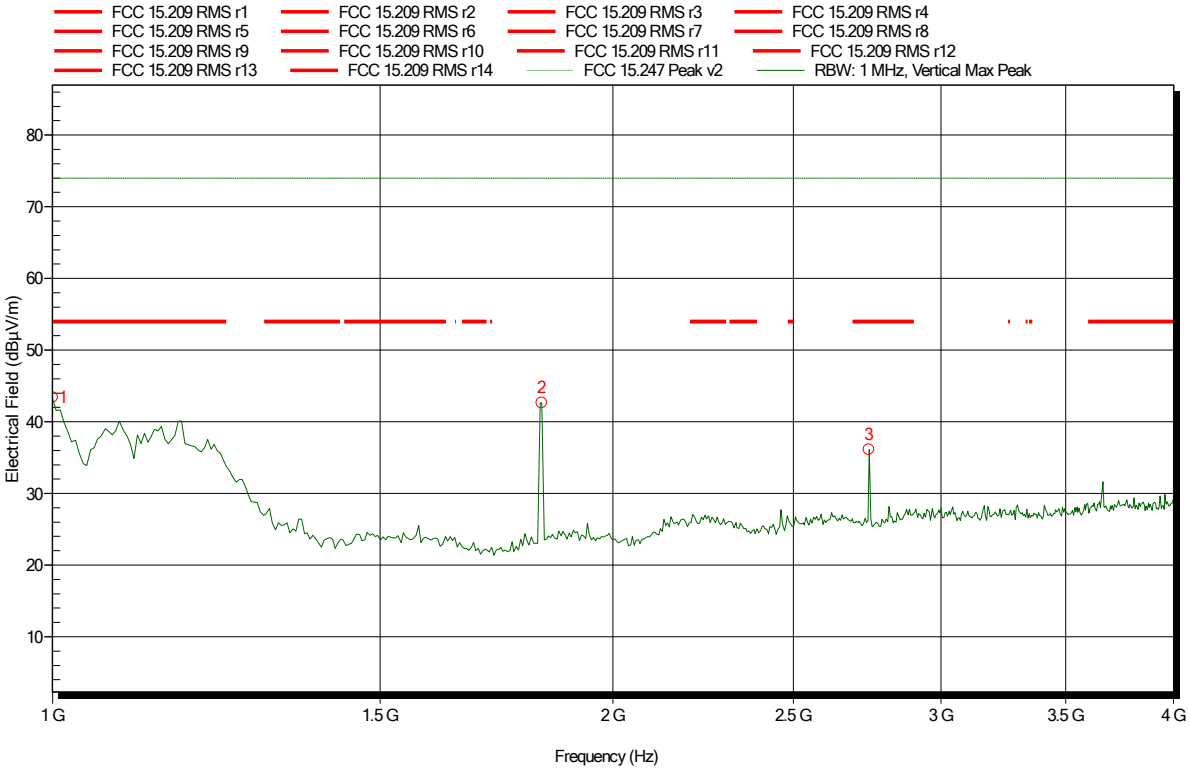

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1 GHz	43.39 dBµV/m	74 dBµV/m	-30.61 dB	Pass
1.832 GHz	42.64 dBµV/m	74 dBµV/m	-31.36 dB	Pass
2.745 GHz	36.12 dBµV/m	74 dBµV/m	-37.88 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-04
Note:	

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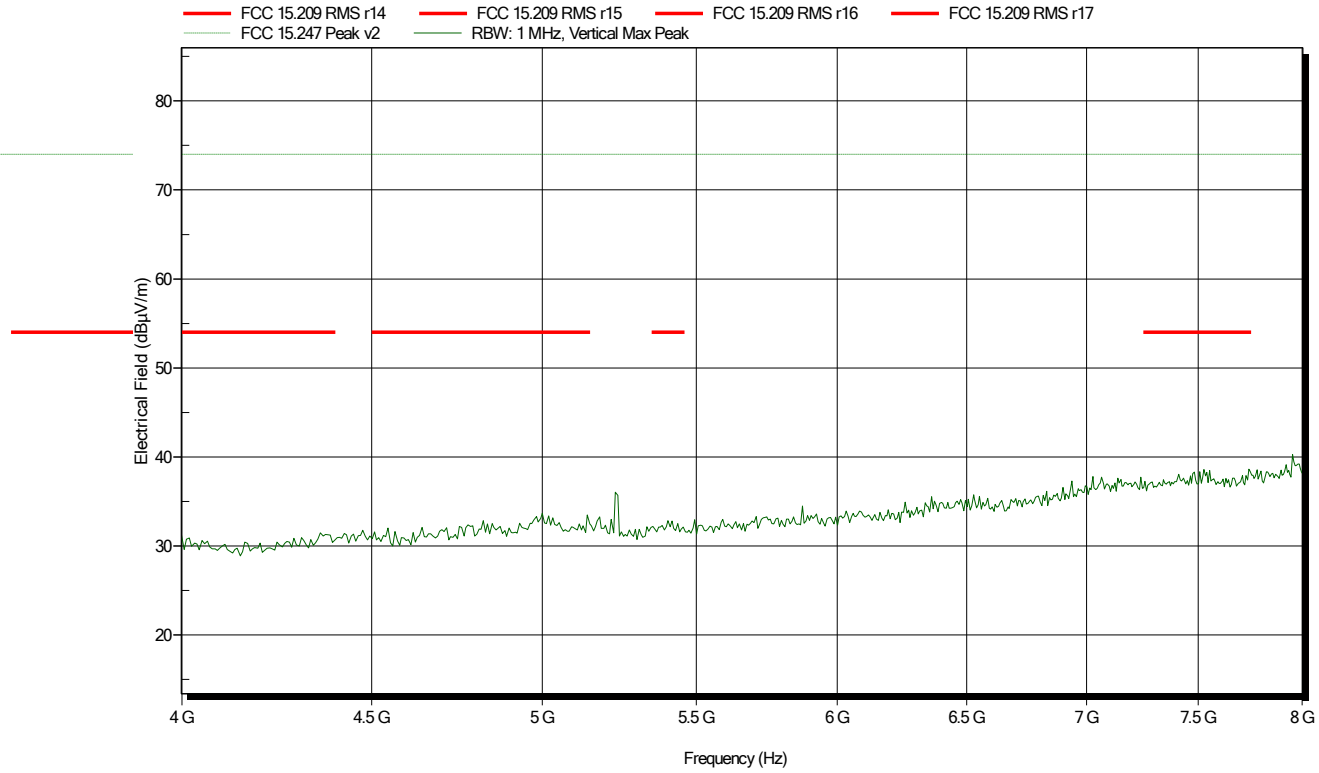

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel Mid
Test Date:	2020-06-04
Note:	

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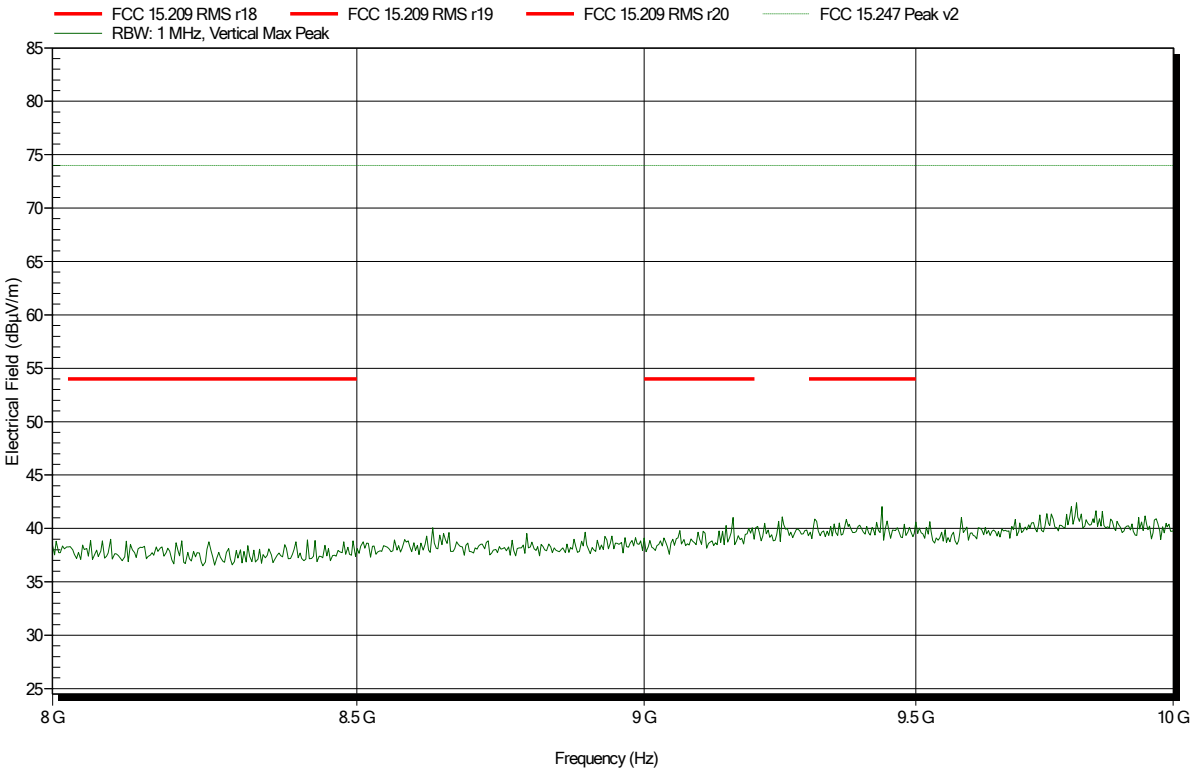

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-04
Note:	

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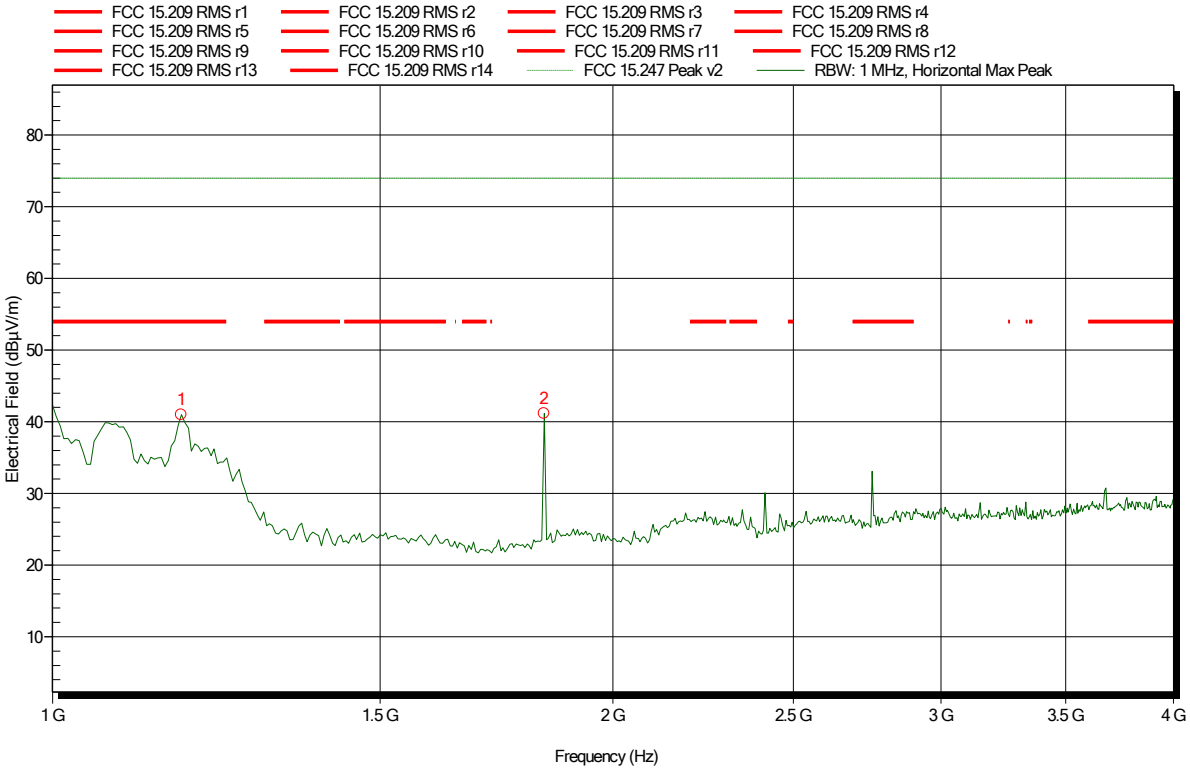

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.173 GHz	40.98 dBµV/m	74 dBµV/m	-33.02 dB	Pass
1.837 GHz	41.17 dBµV/m	74 dBµV/m	-32.83 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-04
Note:	

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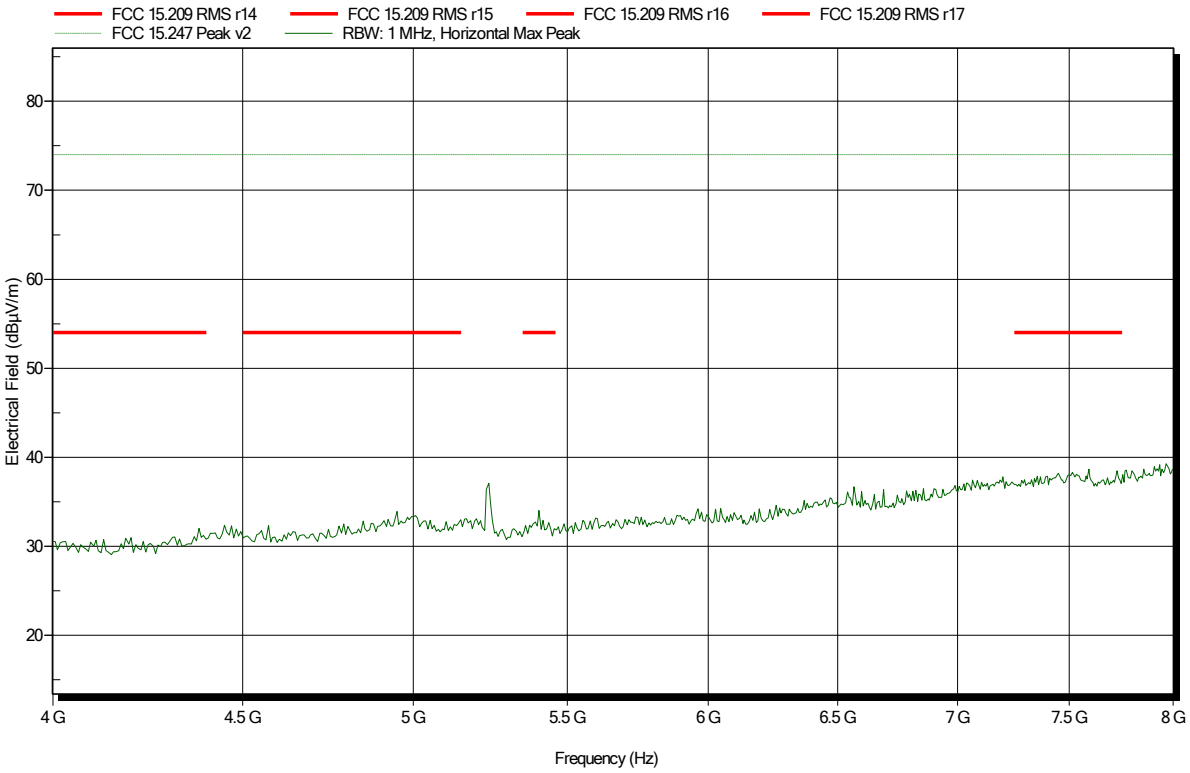

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-04
Note:	

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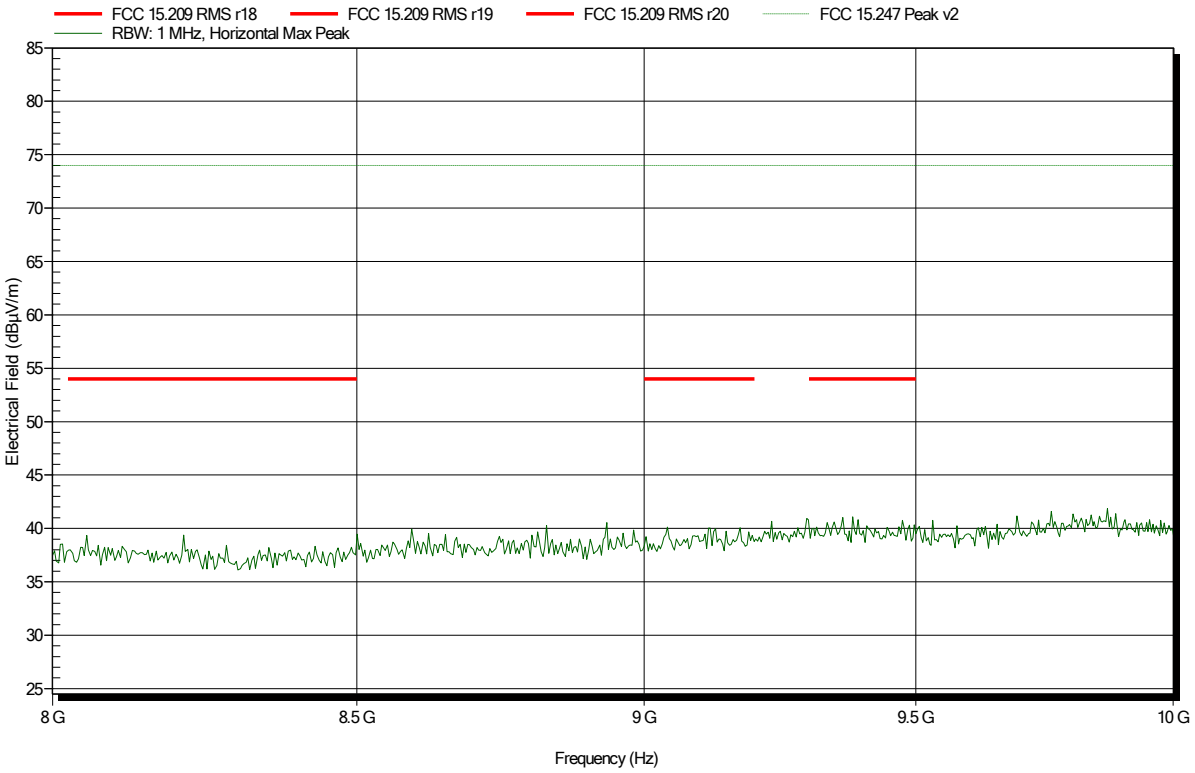

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-04
Note:	

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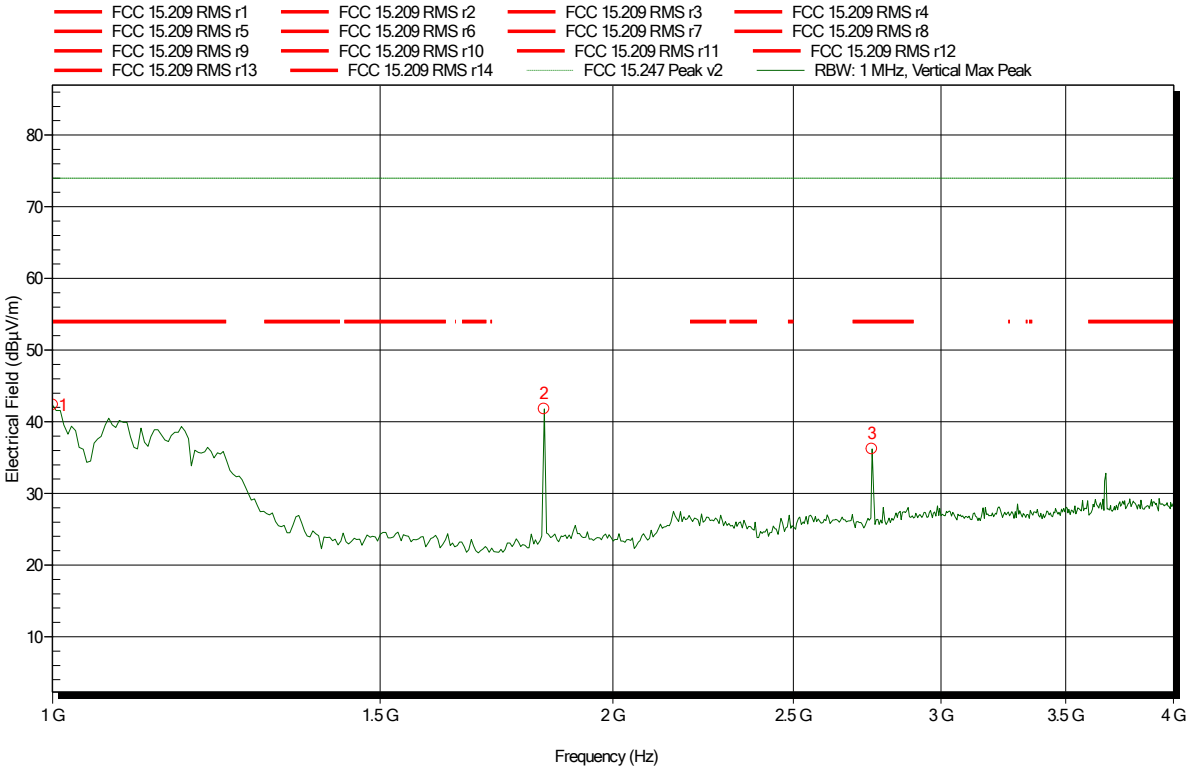

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1 GHz	42.37 dBµV/m	74 dBµV/m	-31.63 dB	Pass
1.837 GHz	41.78 dBµV/m	74 dBµV/m	-32.22 dB	Pass
2.755 GHz	36.22 dBµV/m	74 dBµV/m	-37.78 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-04
Note:	

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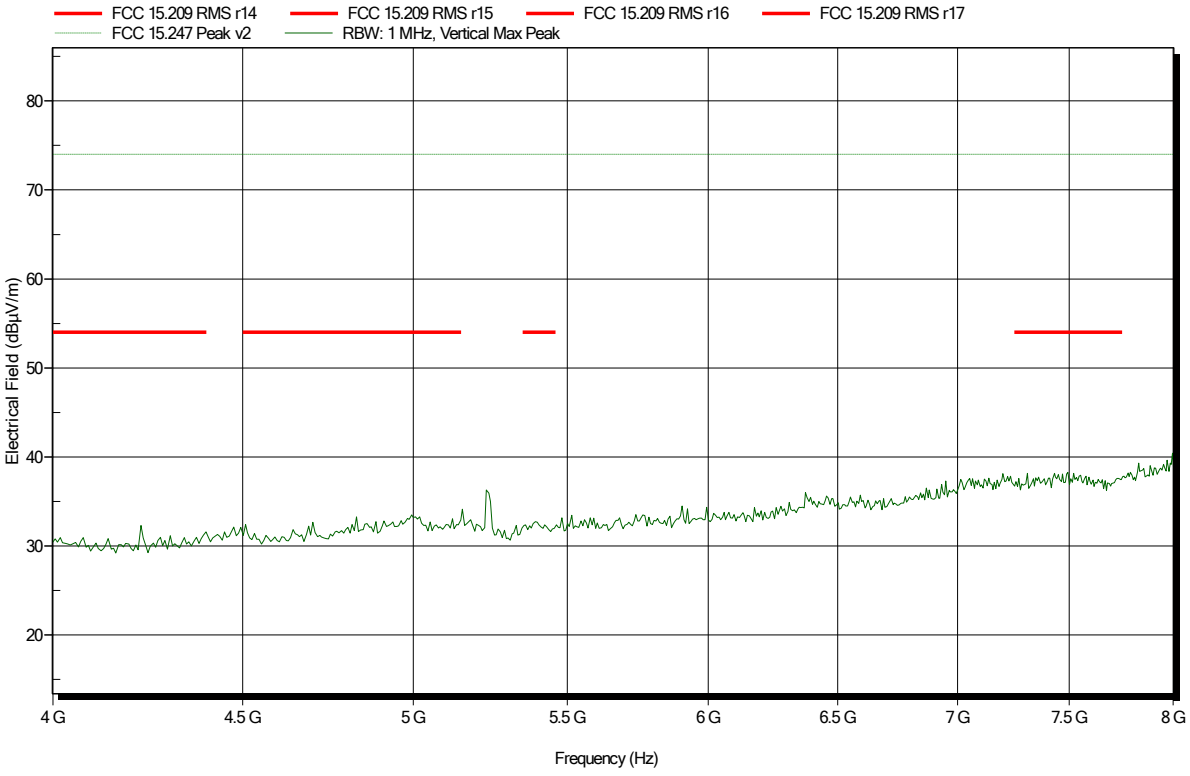

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697916 (Small), Channel High
Test Date:	2020-06-04
Note:	

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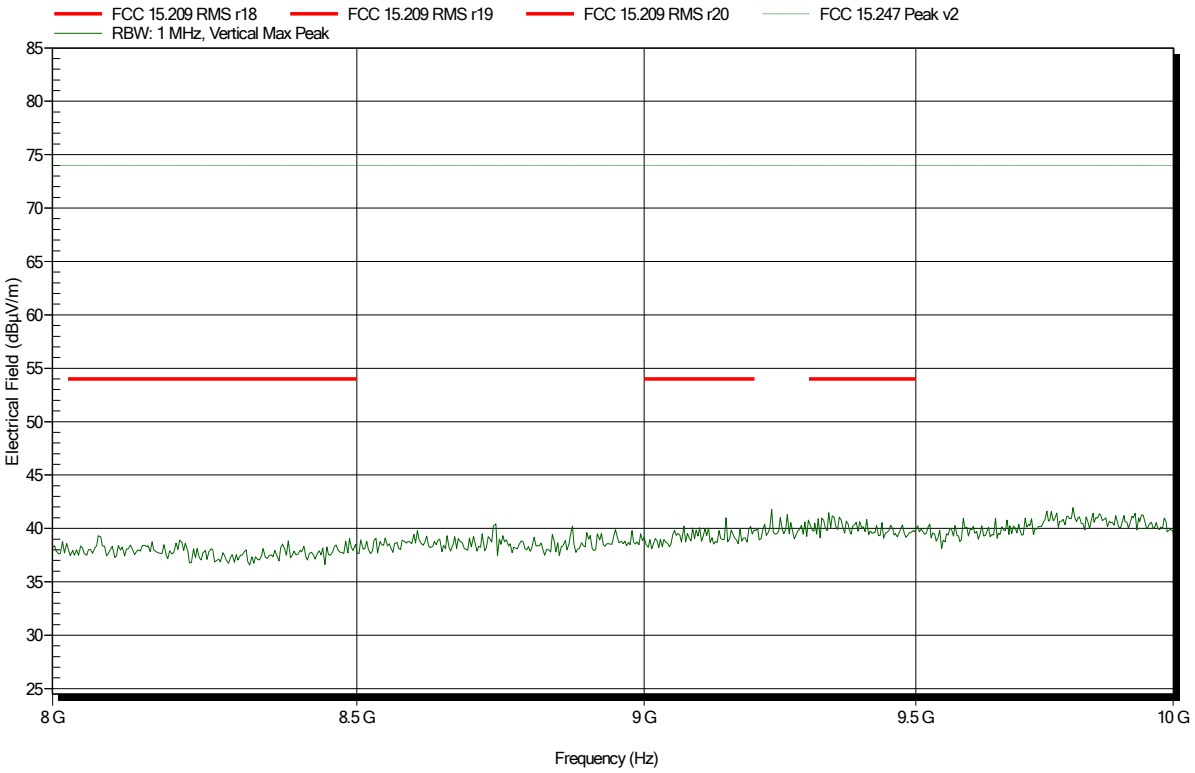

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-04
Note:	

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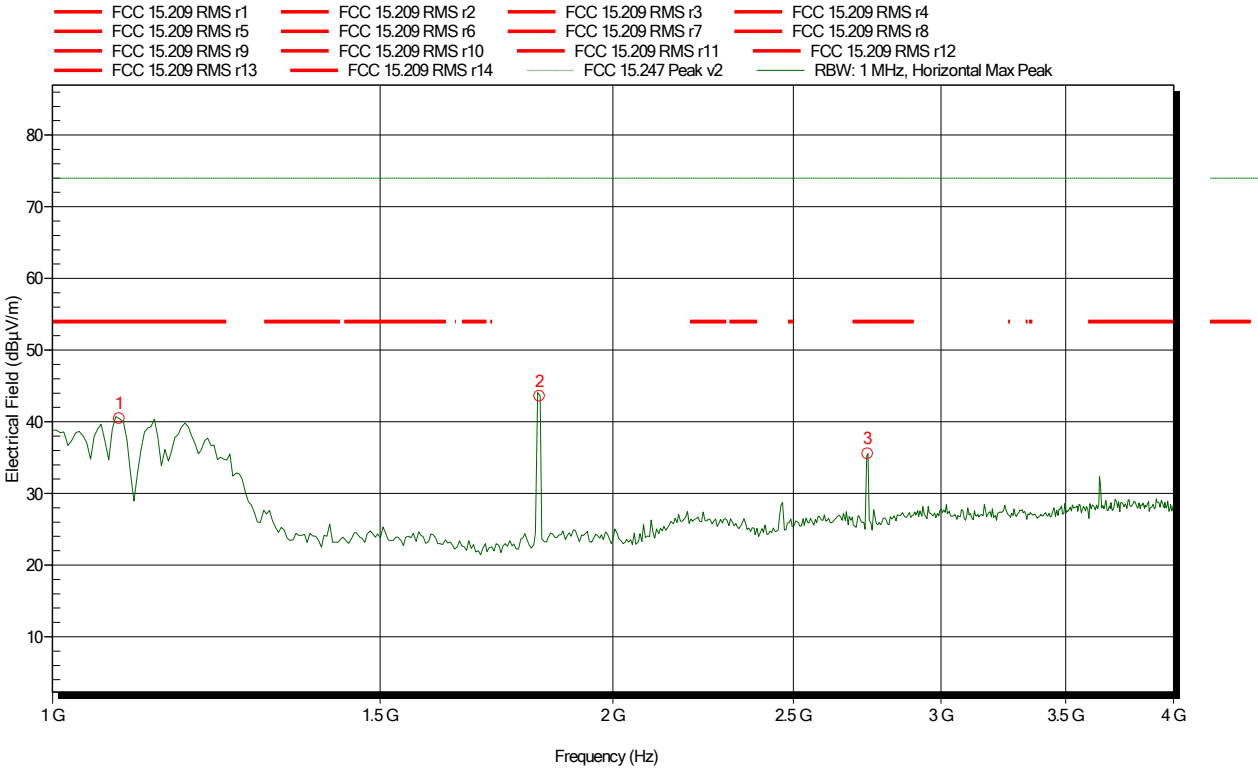

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.087 GHz	40.45 dBµV/m	74 dBµV/m	-33.55 dB	Pass
1.827 GHz	43.58 dBµV/m	74 dBµV/m	-30.42 dB	Pass
2.74 GHz	35.52 dBµV/m	74 dBµV/m	-38.48 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-04
Note:	

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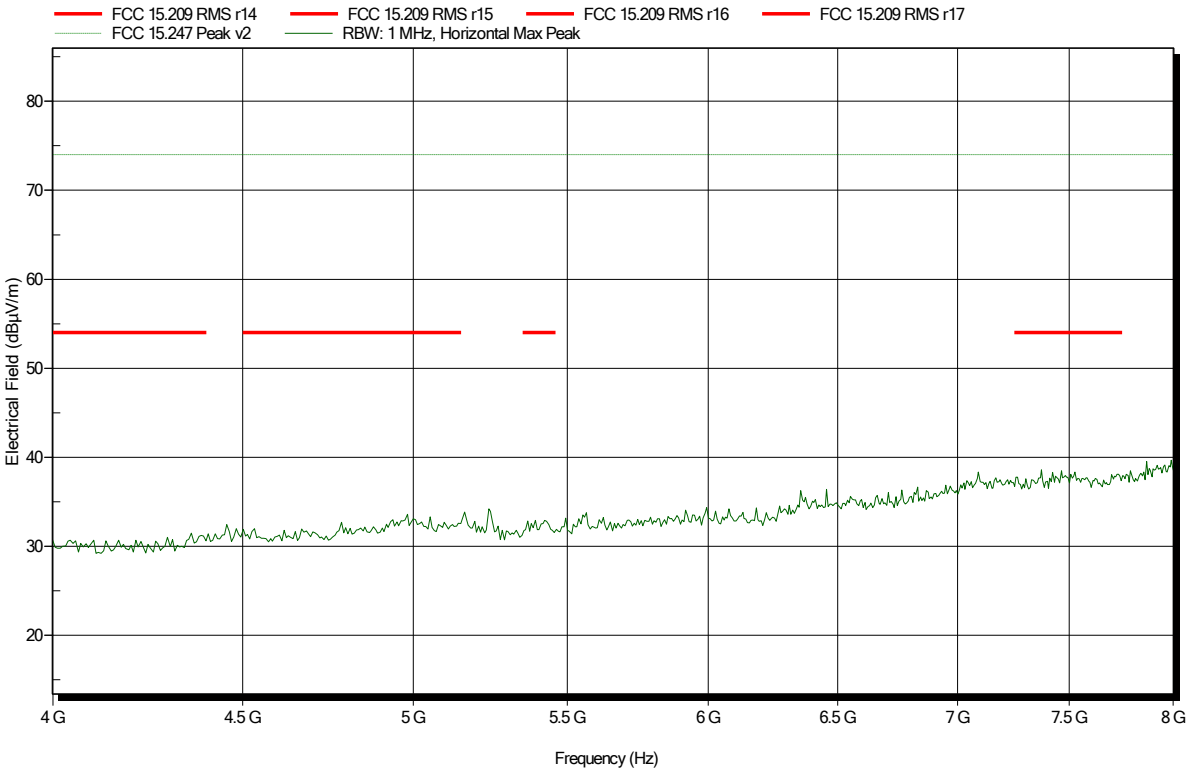

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-04
Note:	

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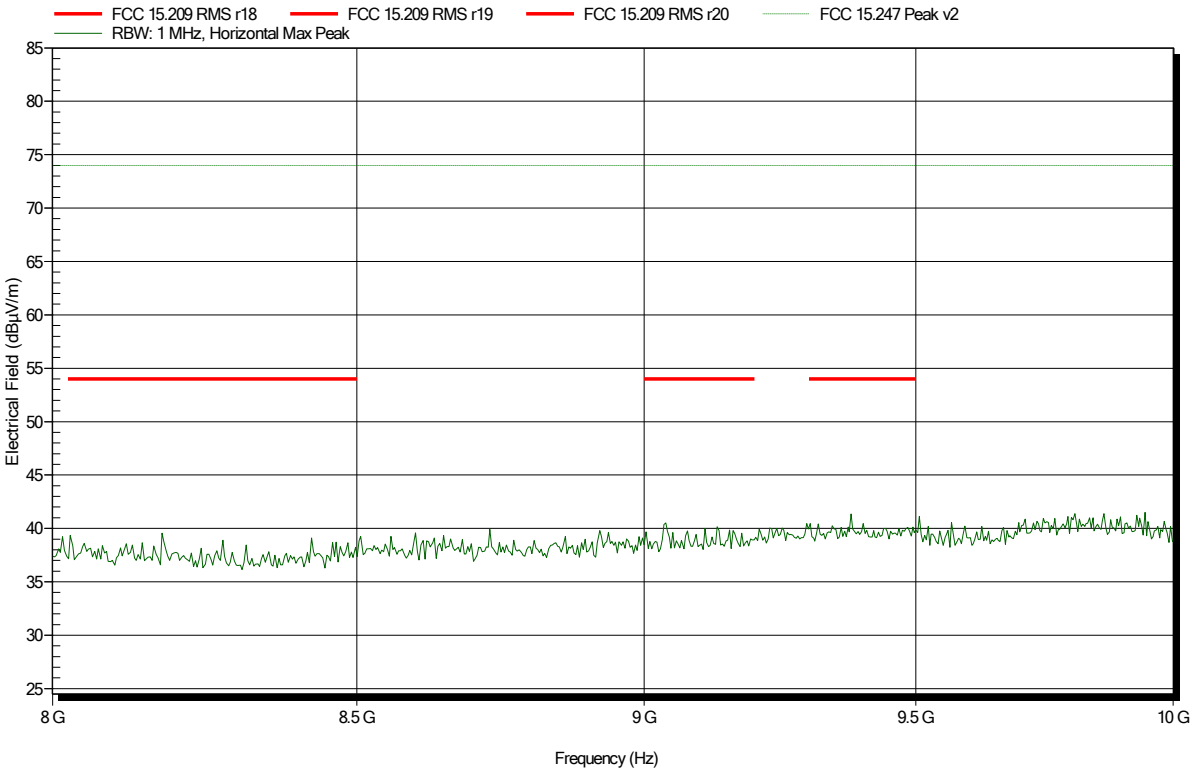

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-04
Note:	

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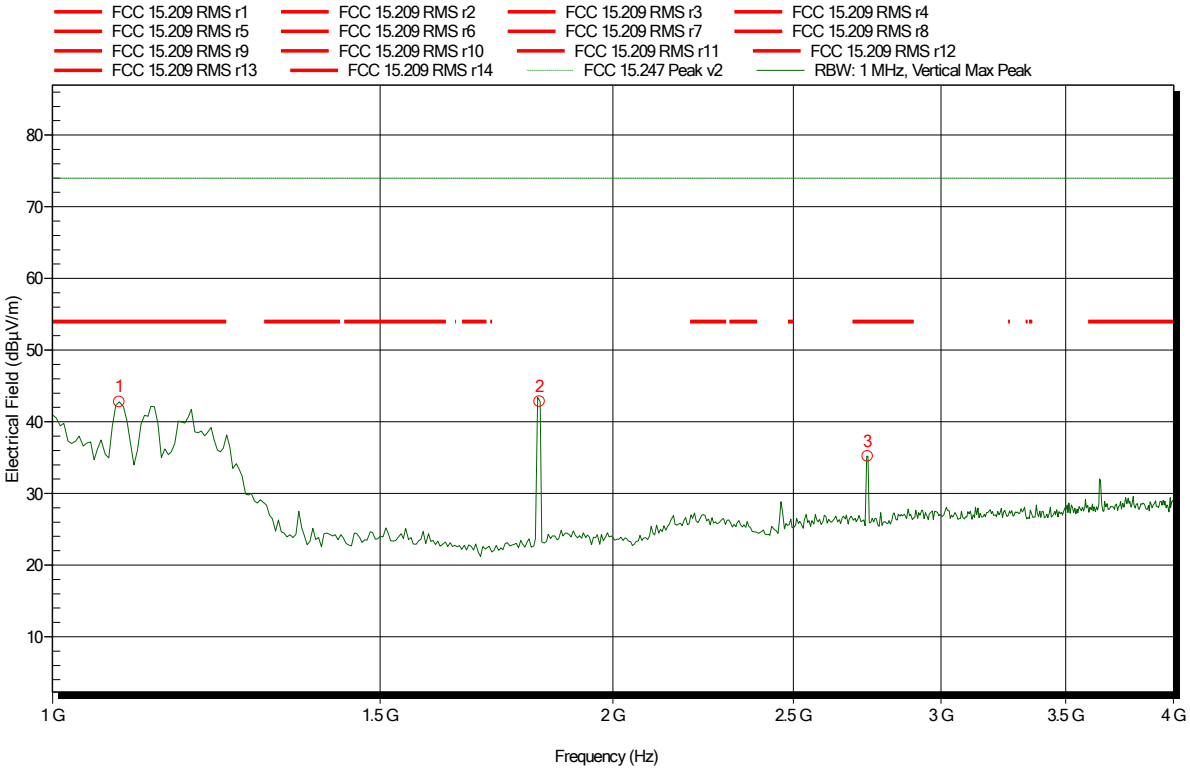

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.087 GHz	42.76 dBµV/m	74 dBµV/m	-31.24 dB	Pass
1.827 GHz	42.81 dBµV/m	74 dBµV/m	-31.19 dB	Pass
2.74 GHz	35.2 dBµV/m	74 dBµV/m	-38.8 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-04
Note:	

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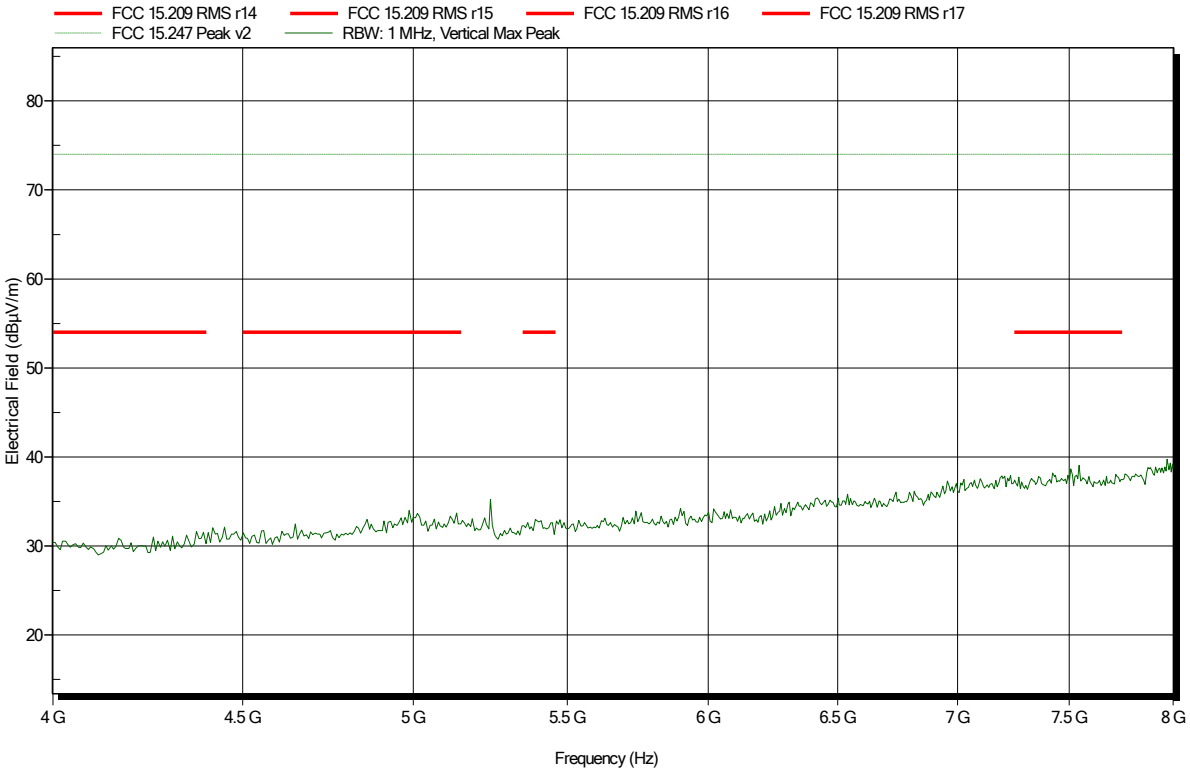

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Low
Test Date:	2020-06-04
Note:	

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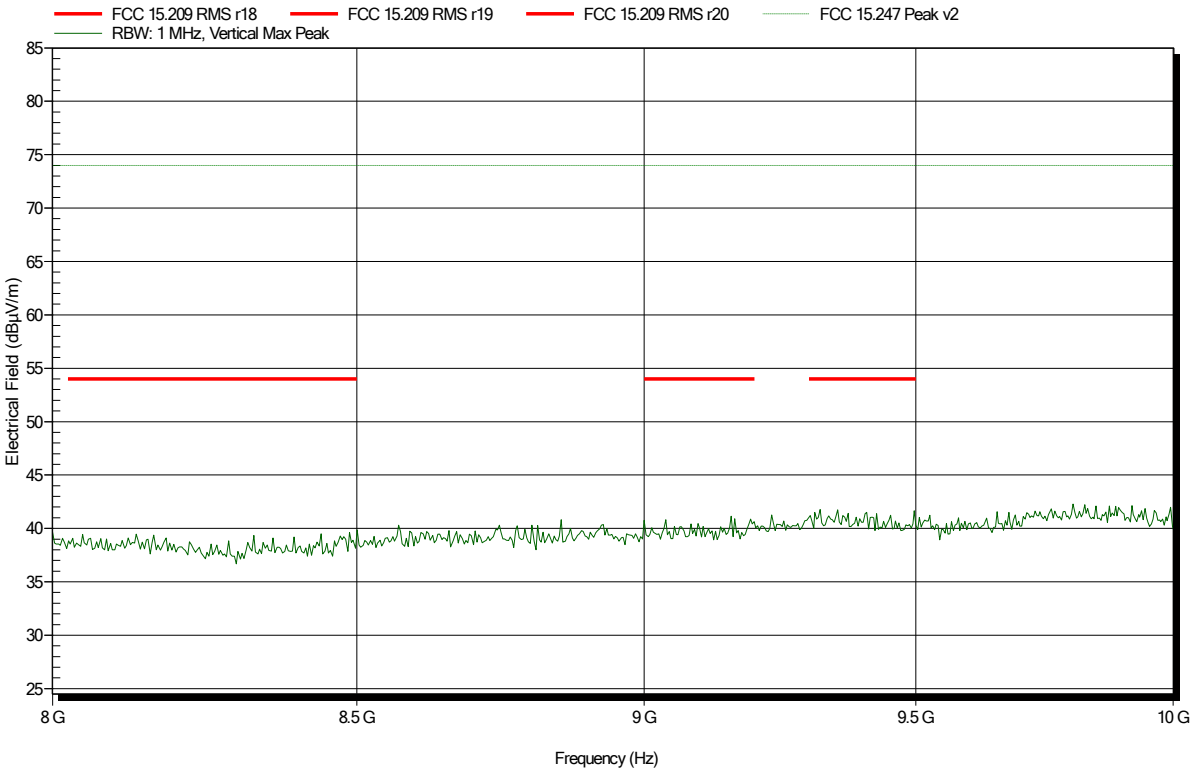

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-04
Note:	

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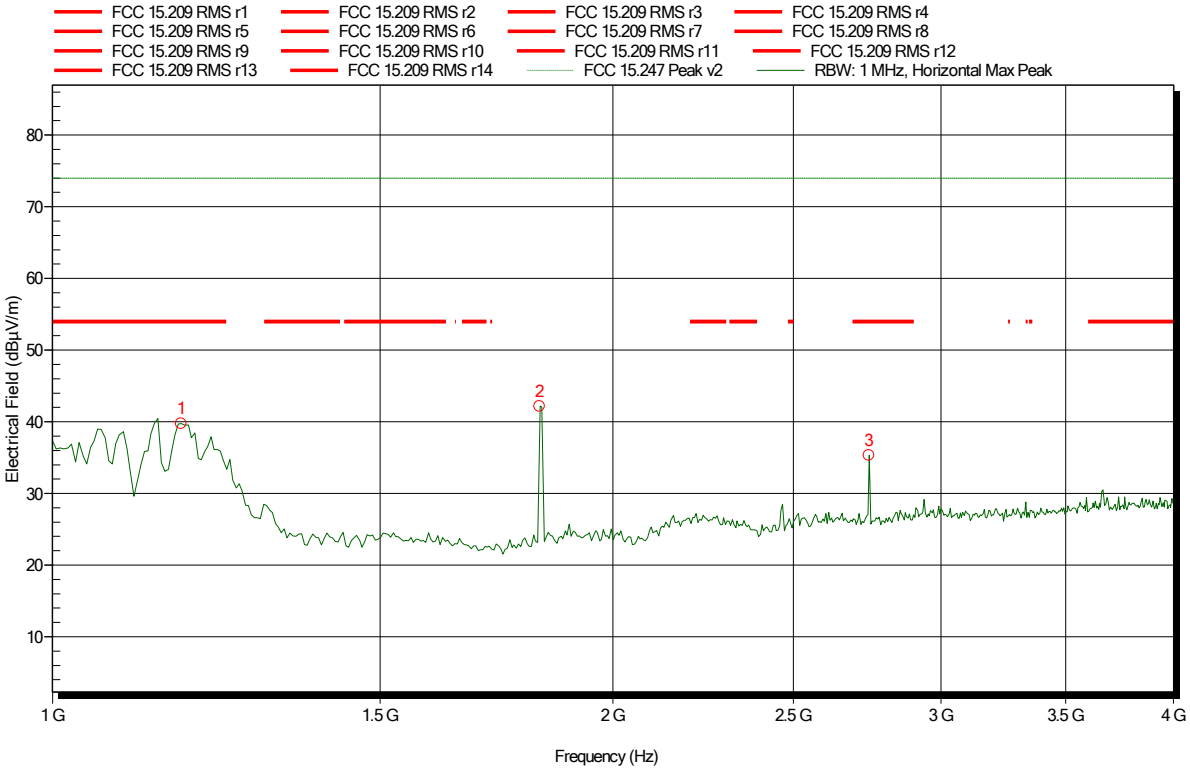

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.173 GHz	39.73 dBµV/m	74 dBµV/m	-34.27 dB	Pass
1.827 GHz	42.17 dBµV/m	74 dBµV/m	-31.83 dB	Pass
2.745 GHz	35.33 dBµV/m	74 dBµV/m	-38.67 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-04
Note:	

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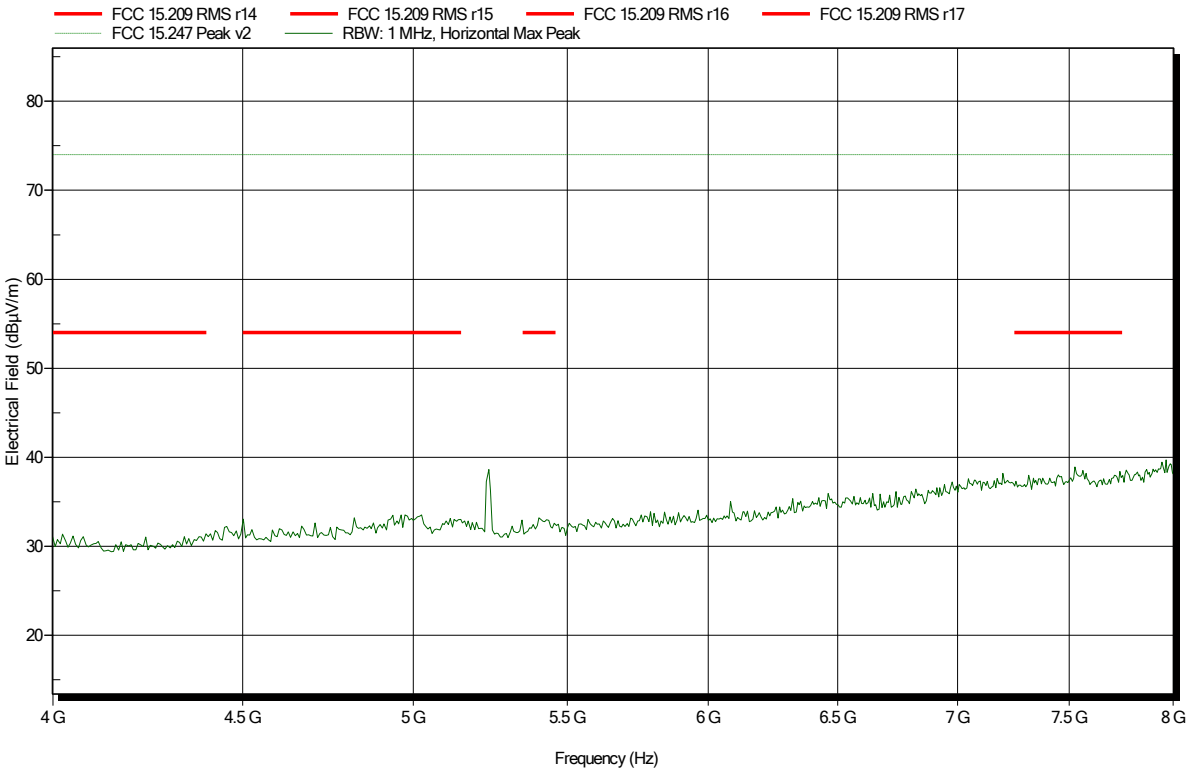

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-04
Note:	

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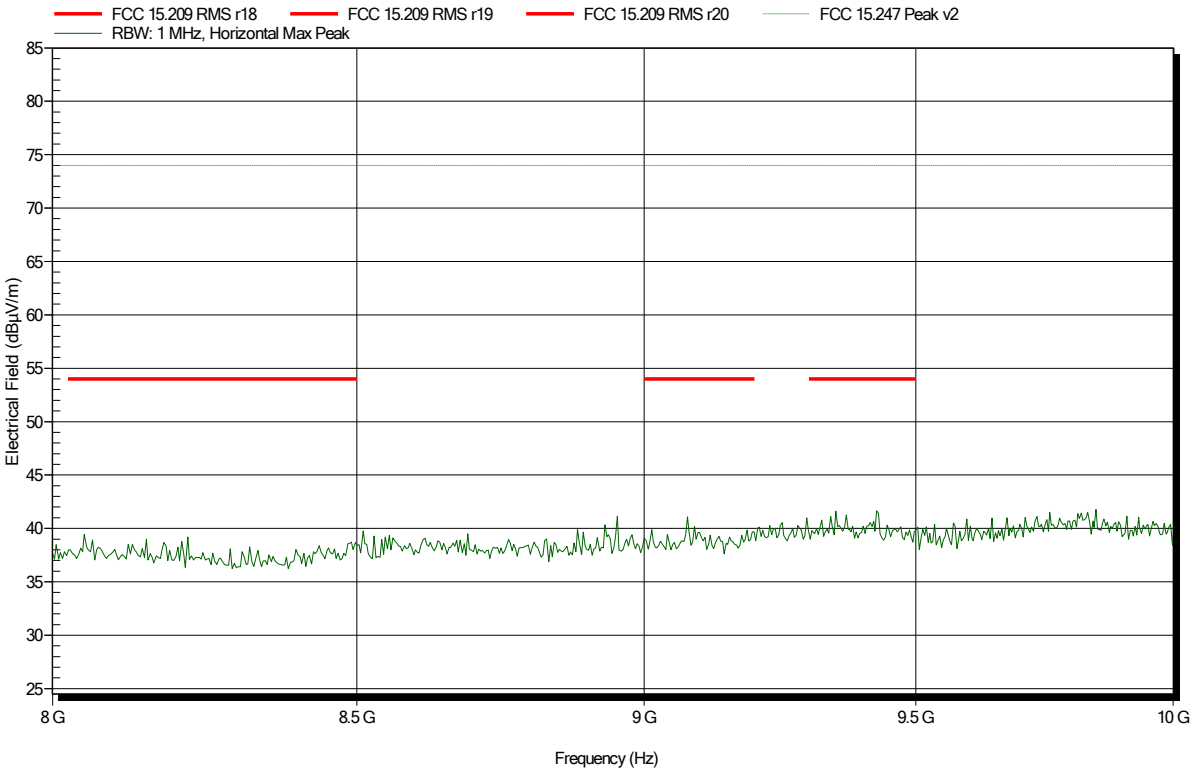

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-04
Note:	

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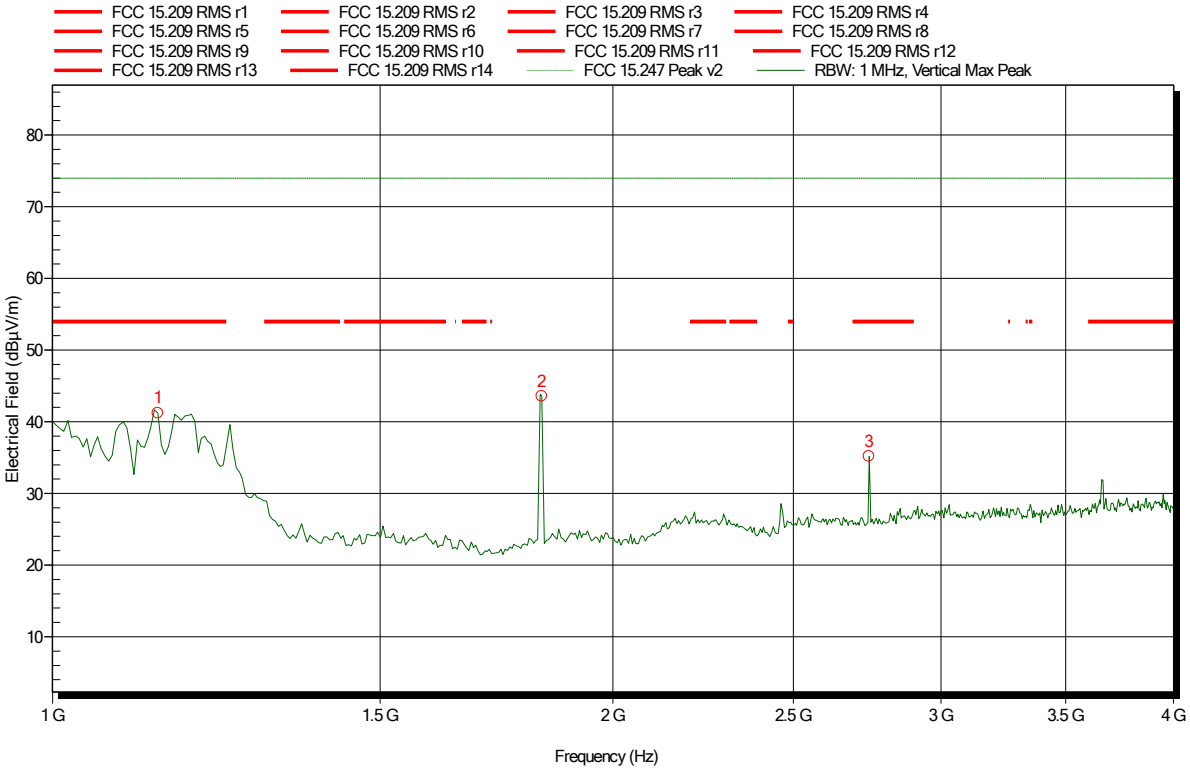

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.139 GHz	41.22 dBµV/m	74 dBµV/m	-32.78 dB	Pass
1.832 GHz	43.6 dBµV/m	74 dBµV/m	-30.4 dB	Pass
2.745 GHz	35.18 dBµV/m	74 dBµV/m	-38.82 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-04
Note:	

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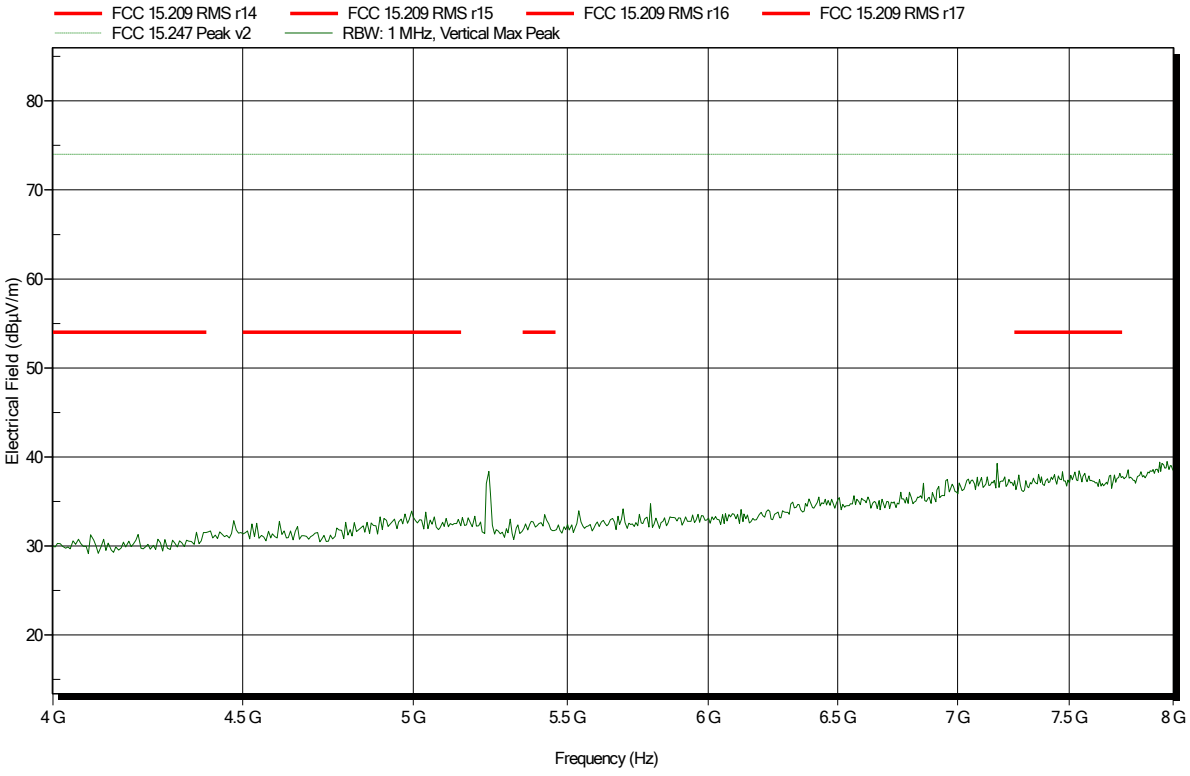

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel Mid
Test Date:	2020-06-04
Note:	

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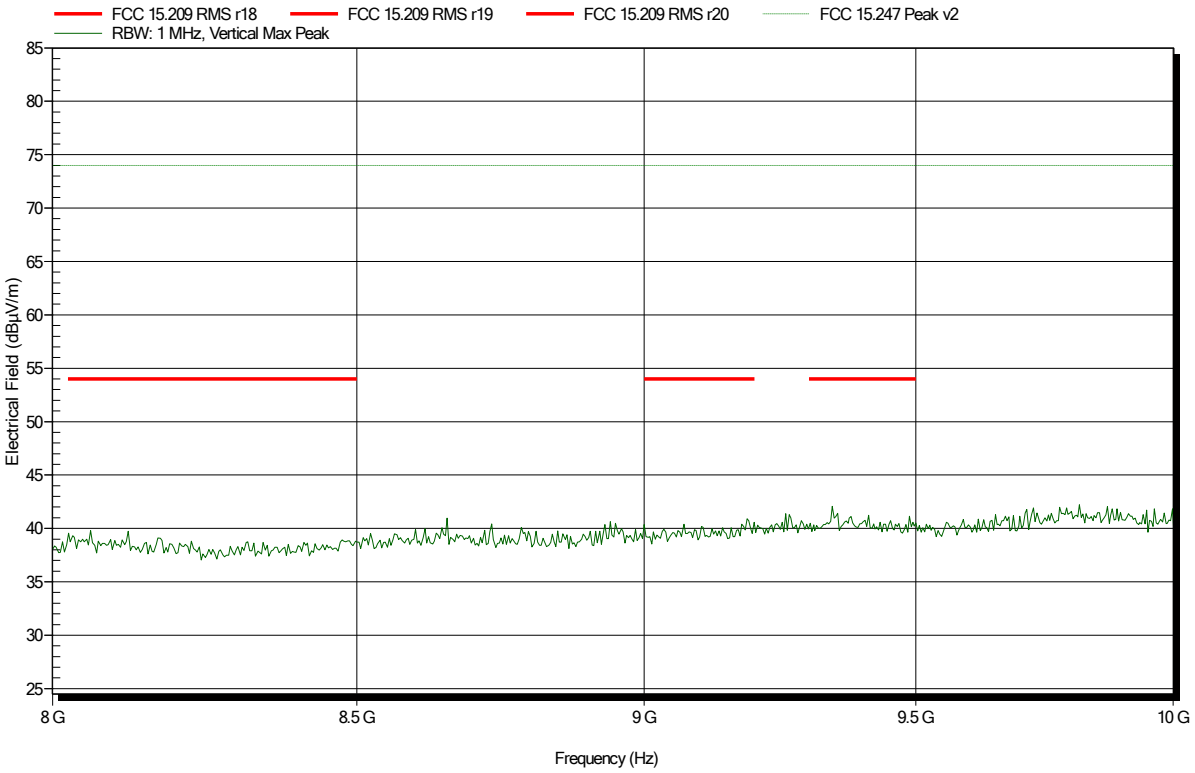

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-04
Note:	

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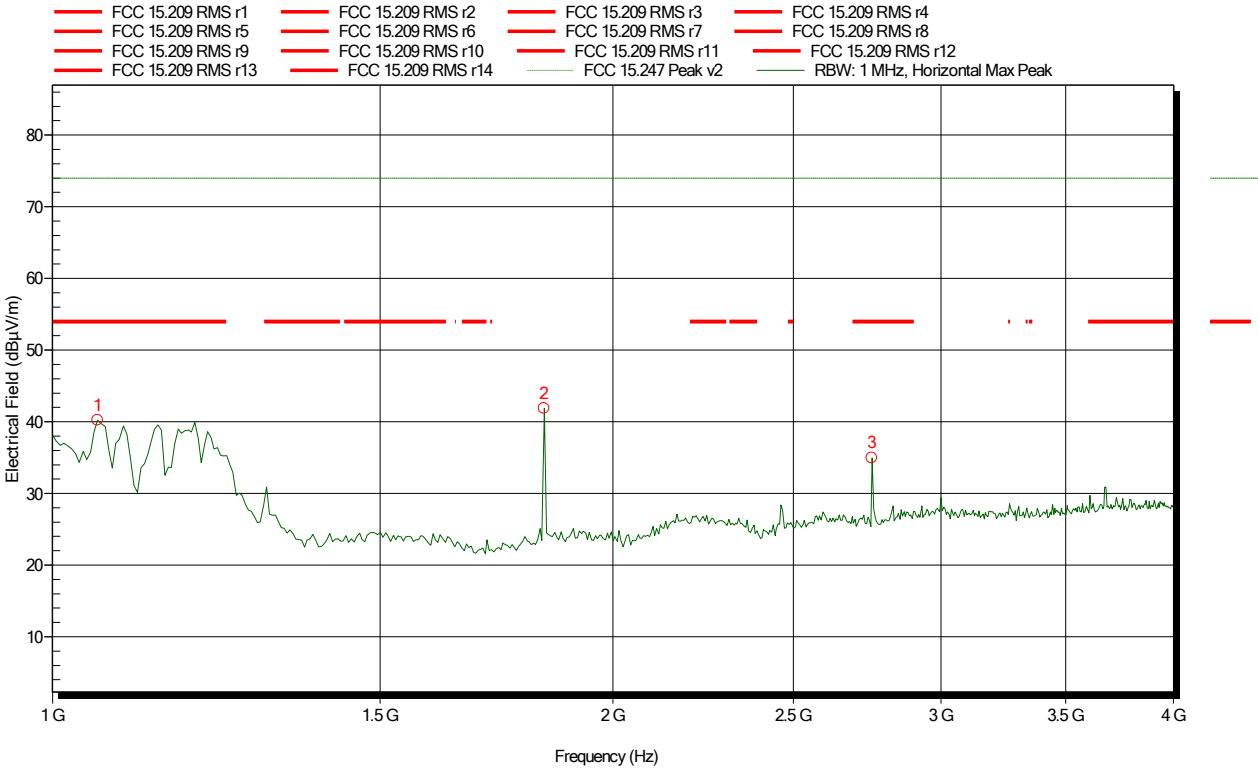

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.058 GHz	40.25 dBµV/m	74 dBµV/m	-33.75 dB	Pass
1.837 GHz	41.88 dBµV/m	74 dBµV/m	-32.12 dB	Pass
2.755 GHz	34.97 dBµV/m	74 dBµV/m	-39.03 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-04
Note:	

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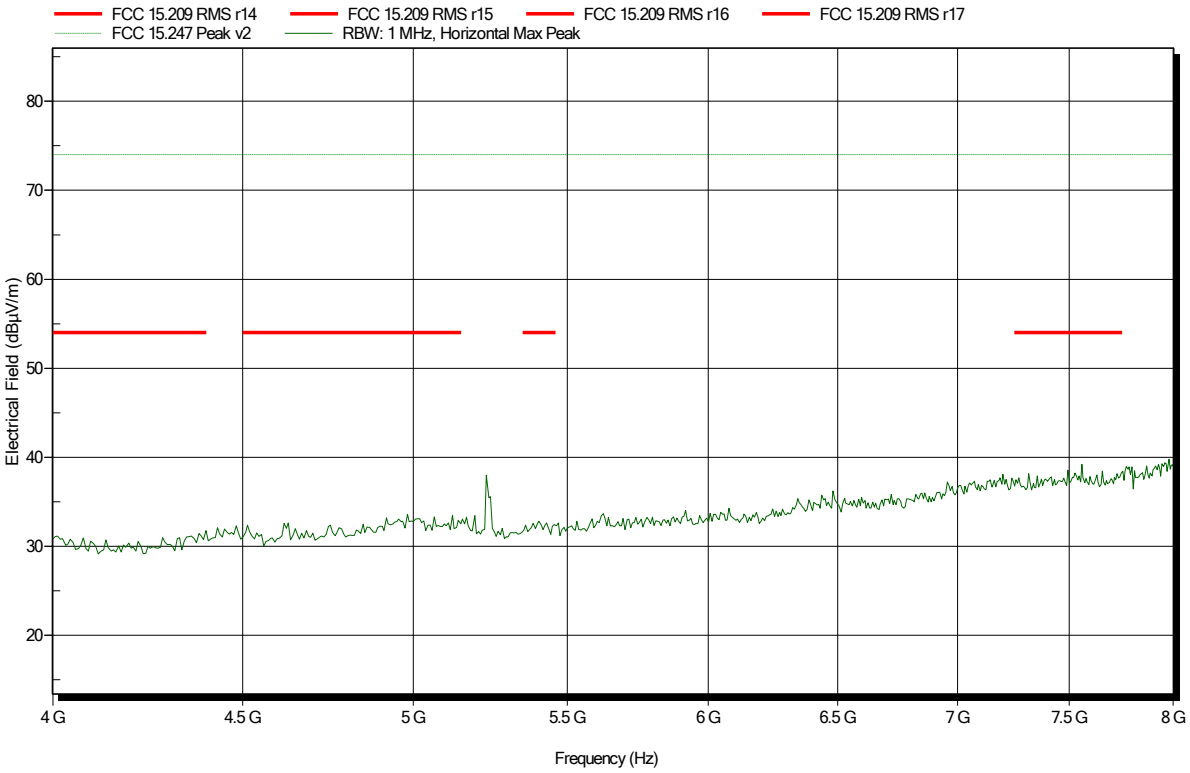

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-04
Note:	

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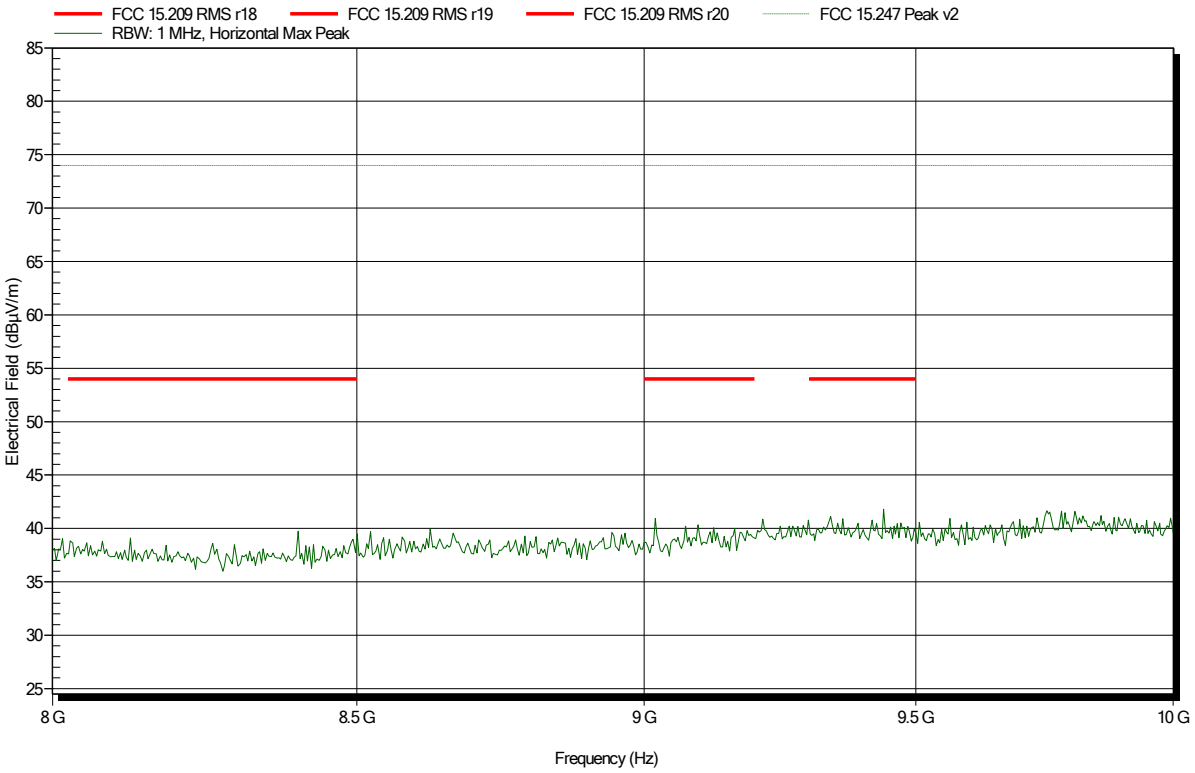

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-04
Note:	

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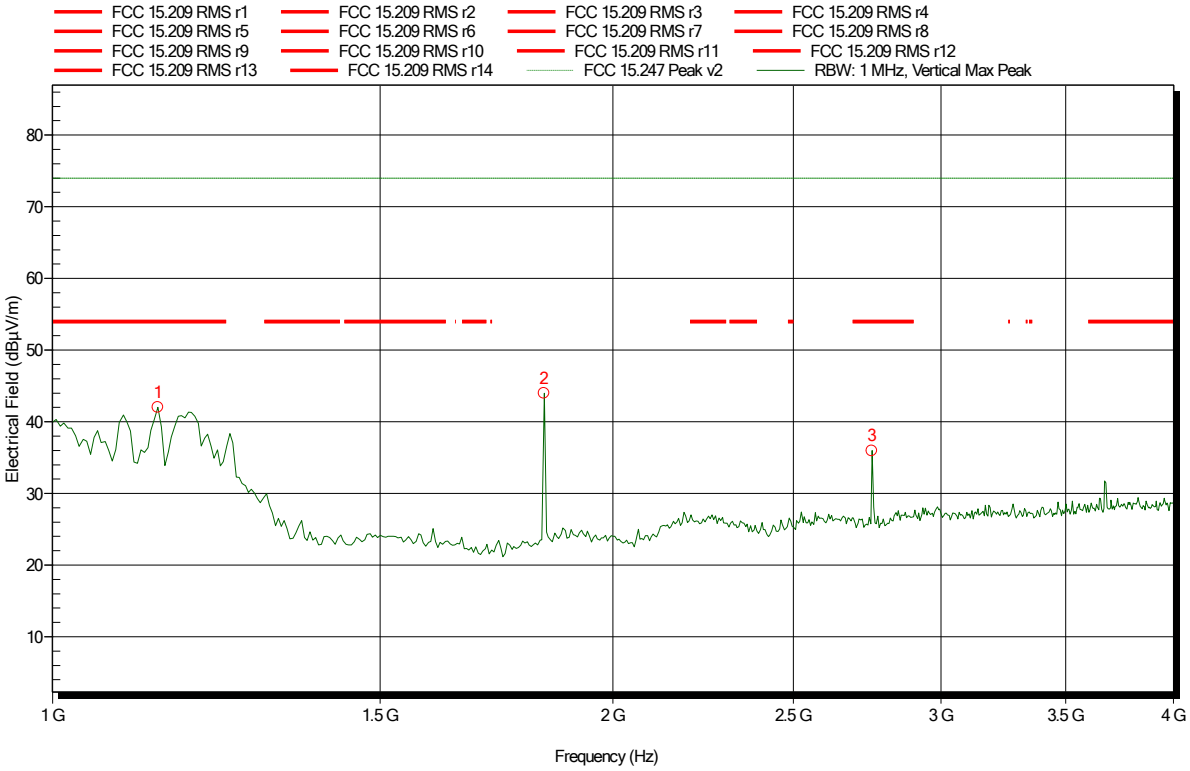

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.139 GHz	42 dBµV/m	74 dBµV/m	-32 dB	Pass
1.837 GHz	43.98 dBµV/m	74 dBµV/m	-30.02 dB	Pass
2.755 GHz	35.96 dBµV/m	74 dBµV/m	-38.04 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Measurement software:	RadiMation, version 2016.1.10
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m, converted to 3 m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-04
Note:	

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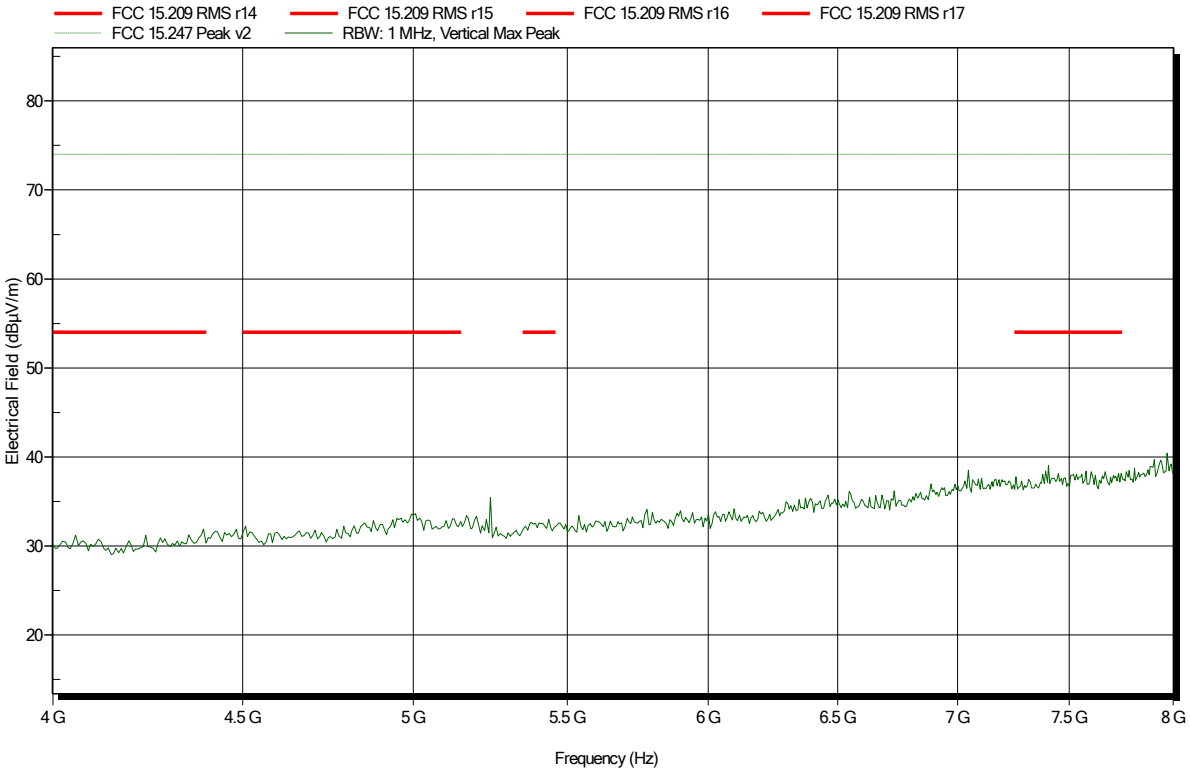

Spurious emissions according to FCC 47 e-CFR §15.247

Project number:	G0M-2002-8859
Applicant:	Kamstrup A/S
EUT Name:	Ultrasonic water meter
Model:	KWM2220
Test Site:	Eurofins Product Service GmbH
Operator:	Toralf Jahn
Test Conditions:	Tnom: 24°C, Vnom: 3.6 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; Pit Antenna 6697902, Channel High
Test Date:	2020-06-04
Note:	

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