

RADIO REPORT FCC 47 CFR Part 15C ISED Canada RSS-247 Digital transmission systems operating within the 902.0 MHz - 928.0 MHz band	
Report Reference No	G0M-2311-2314-TFC247DT-V03
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 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 RSS-247, Issue 3, 2023-08 RSS-Gen, Issue 5, Amendment 2, 2021-02
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Ultrasonic water meter
Model(s)	KWM4220
Additional Model(s)	None
Brand Name(s)	Kamstrup
Hardware Version(s)	Type number: 02E02G1FR8UB Assembly: 6202-006-06 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
Software Version(s)	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
FCC ID	OUY-KWM4220
IC	22376-KWM4220
Test Result	PASSED

Test Report No.: G0M-2311-2314-TFC247DT-V03

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

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 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	2024-01-09	
Report:		
Compiled by	Md Abu Bakar Siddique	
Tested by (+ signature) (Responsible for Test)	Md Abu Bakar Siddique	
Approved by (+ signature) (Test Lab Engineer)	Wilfried Treffke	
Date of Issue	2024-06-25	
Total number of pages	74	
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:		
None		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2024-05-06	Initial Release	--
02	2024-06-17	Replaced document: G0M-2311-2314-TFC247DT-V01 Replaced by: G0M-2311-2314-TFC247DT-V02 Changes: Page 8: Change of antenna gain	St. Liebich
03	2024-06-25	Replaced document: G0M-2311-2314-TFC247DT-V02 Replaced by: G0M-2311-2314-TFC247DT-V03 Changes: Update results	St. Liebich

ADDITIONAL VARIANTS

Additional Variants (not tested and not evaluated variants)		
Not-tested Variant	Description	
1	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1FR8FM Assembly: 6202-006-06 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1FR8FM
	FVIN	50981336
	HMN	N/A
2	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1GA8UB Assembly: 6202-006-07 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1GA8UB
	FVIN	50981336
	HMN	N/A
3	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1GA8FM Assembly: 6202-006-07 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1GA8FM
	FVIN	50981336
	HMN	N/A
4	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1GJ8UB Assembly: 6202-006-08

Test Report No.: G0M-2311-2314-TFC247DT-V03

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

		RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1GJ8UB
	FVIN	50981336
	HMN	N/A
5	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1GJ8FM Assembly: 6202-006-08 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1GJ8FM
	FVIN	50981336
	HMN	N/A
6	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1GS8UB Assembly: 6202-006-09 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1GS8UB
	FVIN	50981336
	HMN	N/A
7	Product Type Description	Ultrasonic water meter
	Model name	KWM4220
	Brand name	Kamstrup
	Hardware Version	Type number: 02E02G1GS8FM Assembly: 6202-006-09 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3
	Software Version	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A
	PMN	KWM4220
	HVIN	02E02G1GS8FM
	FVIN	50981336
	HMN	N/A

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.....	8
1.1	Photos – Equipment External	9
1.2	Photos – Equipment Internal	12
1.3	Support Equipment.....	15
1.4	Test Modes	16
1.5	Test Frequencies.....	17
1.6	Sample emission level calculation.....	18
2	Result Summary.....	19
3	Test Conditions and Results.....	20
3.1	Test Conditions and Results - Transmitter radiated emissions	20
3.2	Test Conditions and Results - Receiver radiated emissions	35
ANNEX A	Transmitter spurious emissions	45
ANNEX B	Receiver spurious emissions	63

1 Equipment (Test Item) Under Test

Description	Ultrasonic water meter		
Model	KWM4220		
Additional Model(s)	None		
Brand Name(s)	Kamstrup		
Sample Identification	EUT #	Sample-ID	Serial Number
	EUT 1	47281	10000168/22
Hardware Version(s)	Type number: 02E02G1FR8UB Assembly: 6202-006-06 RF PCB BOM: 55502066, rev. C4 Flow PCB BOM: 55502116, rev. B3		
Software Version(s)	RF: 50981789 rev. C Meter: 50981812 rev. E Flow: 50981829 rev. A		
PMN	KWM4220		
HVIN	02E02G1FR8UB		
FVIN	50981336		
HMN	N/A		
FCC ID	OUY-KWM4220		
IC	22376-KWM4220		
Equipment type	End Product		
2-Radio type	Transceiver		
Assigned frequency bands	902.0 MHz - 928.0 MHz		
Radio technology	Digital Modulation		
Modulation	2-FSK		
Number of antenna ports	1		
Antenna 1 (Helix)	Type	External	
	Model	30261216 B1	
	Manufacturer	Kamstrup	
	Gain	-2 dBi	
Antenna 2 (Wall)	Type	External	
	Model	6699490	
	Manufacturer	Kamstrup	
	Gain	-1 dBi	
Antenna 3 (Pit)	Type	External	
	Model	6697916	
	Manufacturer	Kamstrup	
	Gain	-2 dBi	
Supply Voltage	V _{NOM}	3.66 VDC	
Operating Temperature	T _{NOM}	25 °C	
Battery supply	Yes		
AC/DC-Adaptor	None		
Manufacturer	Kamstrup A/S Industrivej 28 8660 Skanderborg DENMARK		

1.3 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Power supply	Statron	2224.7	The EUT battery does not last to perform the tests. Therefore an external power supply was necessary.
AE	Optical readout head	Kamstrup	6699-099	For Programming the EUT
CBL	Auxillary cable	--	--	To connect EUT and power supply.
SFT	Device Control Tool	Kamstrup	ver. 0.15	Tool for controlling RF modules and meters
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment: --				

1.4 Test Modes

Mode	Description
Unmodulated CW	Mode = Transmit Modulation = None
Receive	Mode = Receive

1.5 Test Frequencies

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

1.6 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 dB μ V. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

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

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

Net:

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

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.

Field strength limit:

This is the FCC Class B radiated emission limit (in units of dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/m:

$$\text{Field strength limit (dB}\mu\text{V/m)} = 20 \cdot \log (\mu\text{V/m})$$

Example only for radiated field strength:

Reading + AF	= Net Reading	:	Net reading	- Field strength limit	= Margin
+21.5 dB μ V	+ 26 dB/m	:	47.5 dB μ V/m	- 57.0 dB μ V/m	= -9.5

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
ISED RSS-Gen, Issue 5 A2 (section 6.7)	Occupied Bandwidth	ANSI C63.10-2013	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247, Issue 3 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	N/T	Note 1
FCC § 15.247(b) ISED RSS-247, Issue 3 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	N/T	Note 1
FCC § 15.247(e) ISED RSS-247, Issue 3 (section 5.2)	Power spectral density	ANSI C63.10-2013	N/T	Note 1
FCC § 15.207 ISED RSS-247, Issue 3 (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 3 (section 5.5)	Band edge compliance	ANSI C63.10-2013	N/T	Note 1
FCC § 15.247(d) ISED RSS-247, Issue 3 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	N/T	Note 1
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 A2 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	--
ISED RSS-247, Issue 3 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.4-2014	PASS	--
Note 1: A class II permissive change for the already existing FCC-ID: OUY-KWM4220 /IC: 22376-KWM4220				

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 - Transmitter radiated emissions

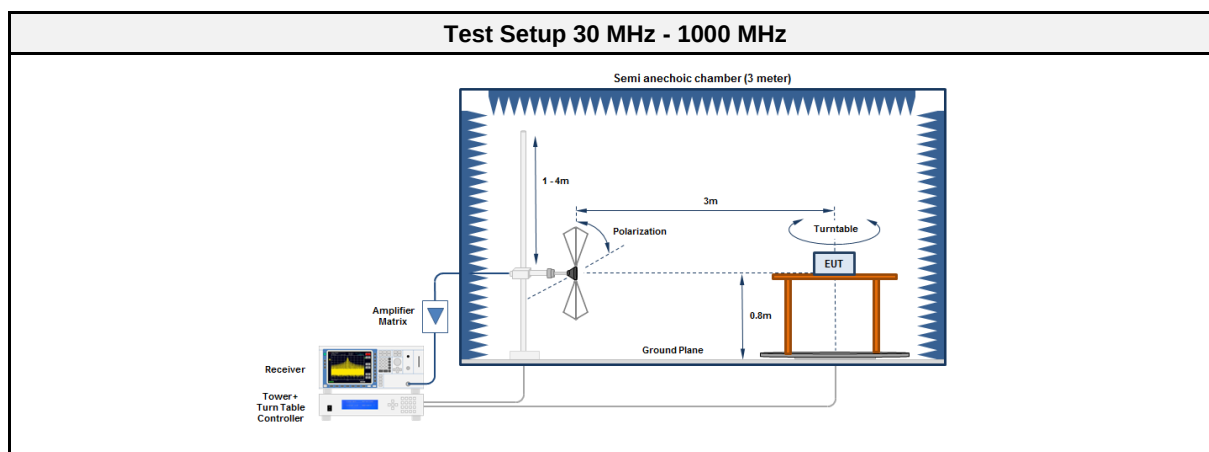
3.1.1 Information

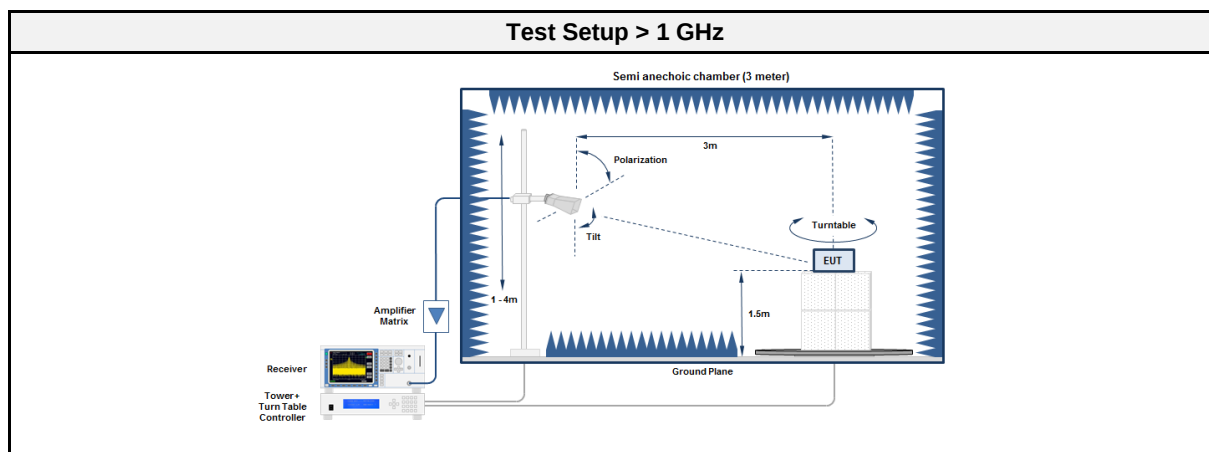
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 A2 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Md Abu Bakar Siddique, Ehsan Sohrabi
Date	2024-01-11

3.1.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [$\mu\text{V/m}$]	Measurement distance [m]
0.009 - 0.09	Average	2400/F[kHz]	300
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300
0.110 - 0.490	Average	2400/F[kHz]	300
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30
1.705 - 30.0	Quasi-Peak	30	30
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

3.1.3 Setup





3.1.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2022-11	2025-11
Measurement Receiver	R&S	ESU8	EF00379	2023-08	2024-08
Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2025-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC2	EF01616	2023-12	2024-22
Spectrum analyzer	R&S	FSW43	EF00896	2023-08	2024-08
Antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2024-03
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03

3.1.5 Procedure

Test Procedure 30 MHz - 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	

3.1.6 Results

Test Results – Helix antenna						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
912.5	405.1635	39.60	pk	ver	46.00	-06.35
912.5	405.1635	31.30	qpk	ver	46.00	-14.65
912.5	1021.3	41.78	pk	ver	74.00	-32.22
912.5	1021.3	30.98	avg	ver	54.00	-23.02
912.5	2737.5	38.58	pk	ver	74.00	-35.42
912.5	2737.5	35.13	avg	ver	54.00	-18.87
918.5	407.8957	40.30	pk	ver	46.00	-05.66
918.5	407.8957	31.60	qpk	ver	46.00	-14.41
918.5	1041.5	42.91	pk	ver	74.00	-31.09
918.5	1041.5	31.70	avg	ver	54.00	-22.30
918.5	2755.5	40.83	pk	hor	74.00	-33.17
918.5	2755.5	37.21	avg	hor	54.00	-16.79

Test Results – Pit antenna						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
912.5	269.6618	39.10	pk	hor	46.00	-06.88
912.5	269.6618	34.00	qpk	hor	46.00	-12.01
912.5	406.9184	39.20	pk	ver	46.00	-06.84
912.5	406.9184	32.80	qpk	ver	46.00	-13.23
912.5	952.5064	47.70	pk	ver	95.00	-47.33
912.5	992.5192	45.40	pk	ver	54.00	-08.63
912.5	992.5192	42.30	qpk	ver	54.00	-11.73
912.5	1172	46.58	pk	hor	74.00	-27.42
912.5	1172	36.49	avg	hor	54.00	-17.51
912.5	2737.6	43.47	pk	ver	74.00	-30.53
912.5	2737.6	41.34	avg	ver	54.00	-12.66
918.5	264.8754	38.90	pk	hor	46.00	-07.07
918.5	264.8754	33.60	qpk	hor	46.00	-12.40
918.5	398.5003	38.60	pk	hor	95.00	-56.42
918.5	398.5003	36.00	qpk	hor	95.00	-59.01
918.5	620.562	39.80	pk	hor	95.00	-55.23
918.5	620.562	32.30	qpk	hor	95.00	-62.74
918.5	958.5088	47.90	pk	ver	95.00	-47.05
918.5	1170.8	47.86	pk	hor	74.00	-26.14
918.5	1170.8	35.32	avg	hor	54.00	-18.68
918.5	2755.5	43.85	pk	ver	74.00	-30.15
918.5	2755.5	42.16	avg	ver	54.00	-11.84

Test Results – Wall antenna						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
912.5	611.3893	40.20	pk	ver	46.00	-05.77
912.5	611.3893	31.70	qpk	ver	46.00	-14.35
912.5	872.4973	48.70	pk	ver	95.00	-46.32
912.5	952.5064	50.30	pk	ver	95.00	-44.66
912.5	1046.9	46.64	pk	ver	74.00	-27.36
912.5	1046.9	36.48	avg	ver	54.00	-17.52
912.5	1179.5	46.49	pk	ver	74.00	-27.51
912.5	1179.5	35.39	avg	ver	54.00	-18.61
912.5	2755.4	41.85	pk	ver	74.00	-32.15
912.5	2755.4	39.56	avg	ver	54.00	-14.44
918.5	958.4872	49.60	pk	ver	95.00	-45.40
918.5	1172.9	47.35	pk	ver	74.00	-26.65
918.5	1172.9	35.22	avg	ver	54.00	-18.78
918.5	2755.4	41.99	pk	ver	74.00	-32.01
918.5	2755.4	39.68	avg	ver	54.00	-14.32

3.2 Test Conditions and Results - Receiver radiated emissions

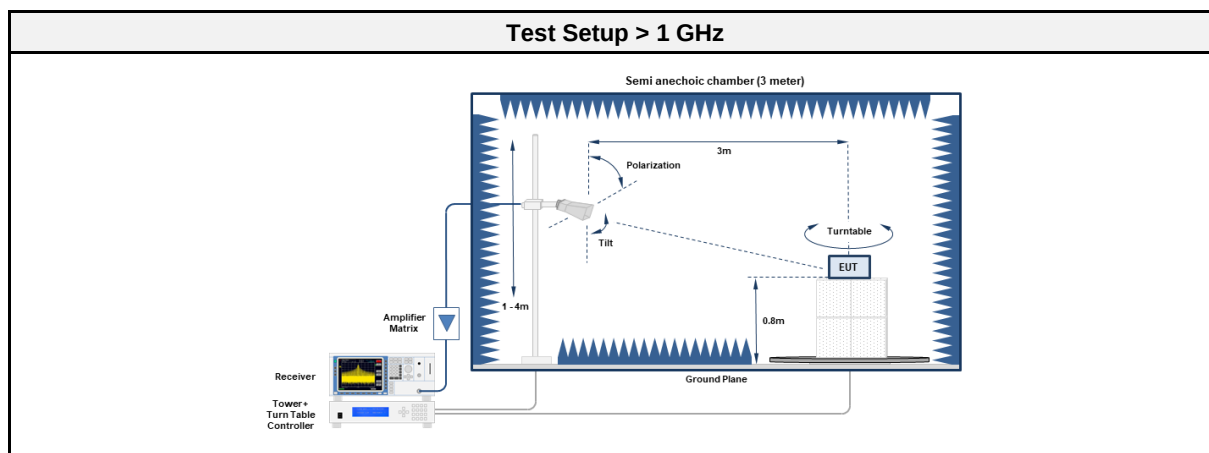
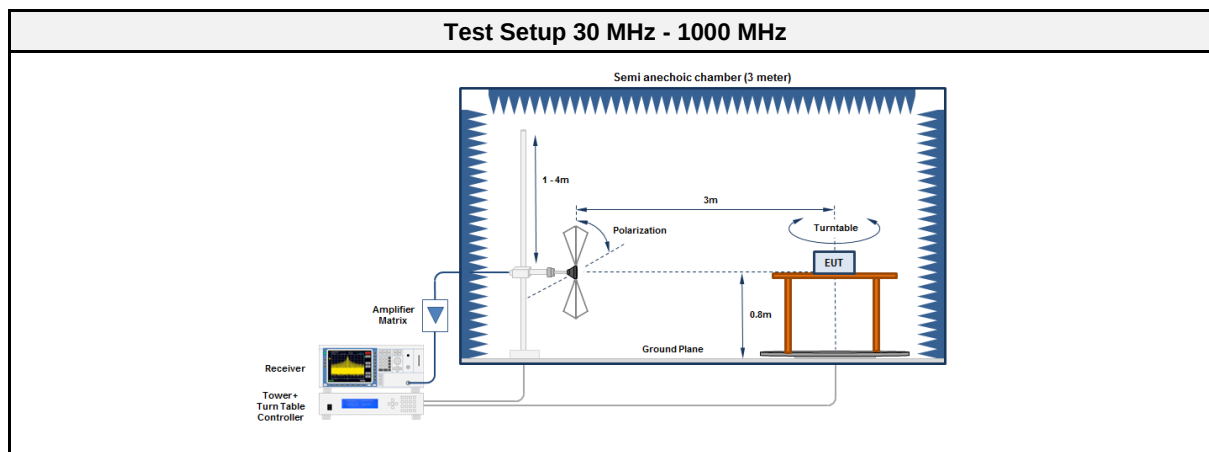
3.2.1 Information

Test Information	
Reference	ISED RSS-247, Issue 3 (section 3.1)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.4-2014 8.1-8.3
Operator	Md Abu Bakar Siddique, Ehsan Sohrabi
Date	2024-01-11

3.2.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [$\mu\text{V/m}$]	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

3.2.3 Setup



3.2.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2022-11	2025-11
Measurement Receiver	R&S	ESU8	EF00379	2023-08	2024-08
Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2025-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC2	EF01616	2023-12	2024-22
Spectrum analyzer	R&S	FSW43	EF00896	2023-08	2024-08
Antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2024-03
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03

3.2.5 Procedure

Test Procedure	
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT is 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	

3.2.6 Results

Test Results—Helix antenna						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
No significant spurious emission was observed						

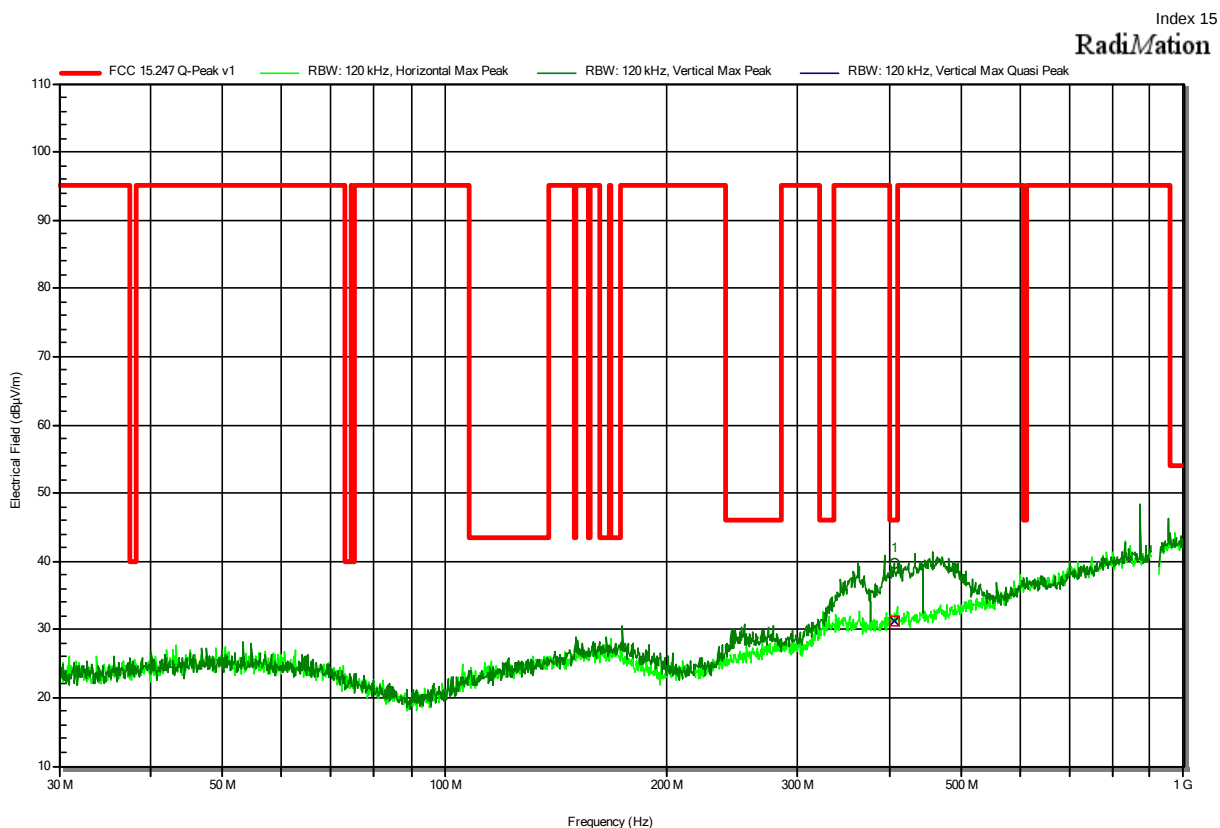
Test Results—Pit antenna						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
No significant spurious emission was observed						

Test Results—Wall antenna						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
912.5	945.499	40.40	pk	ver	46.00	-05.61
912.5	945.499	33.60	qpk	ver	46.00	-12.43
918.5	954.5199	40.60	pk	ver	46.00	-05.36
918.5	954.5199	33.90	qpk	ver	46.00	-12.11

ANNEX A Transmitter spurious emissions

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; Helix Antenna 30261216, 912.5 MHz
 Test Date: 2024-01-10



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
405.1635 MHz	39.6 dBµV/m	46 dBµV/m	-6.35 dB	Pass	Vertical
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
405.1635 MHz	31.3 dBµV/m	46 dBµV/m	-14.65 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

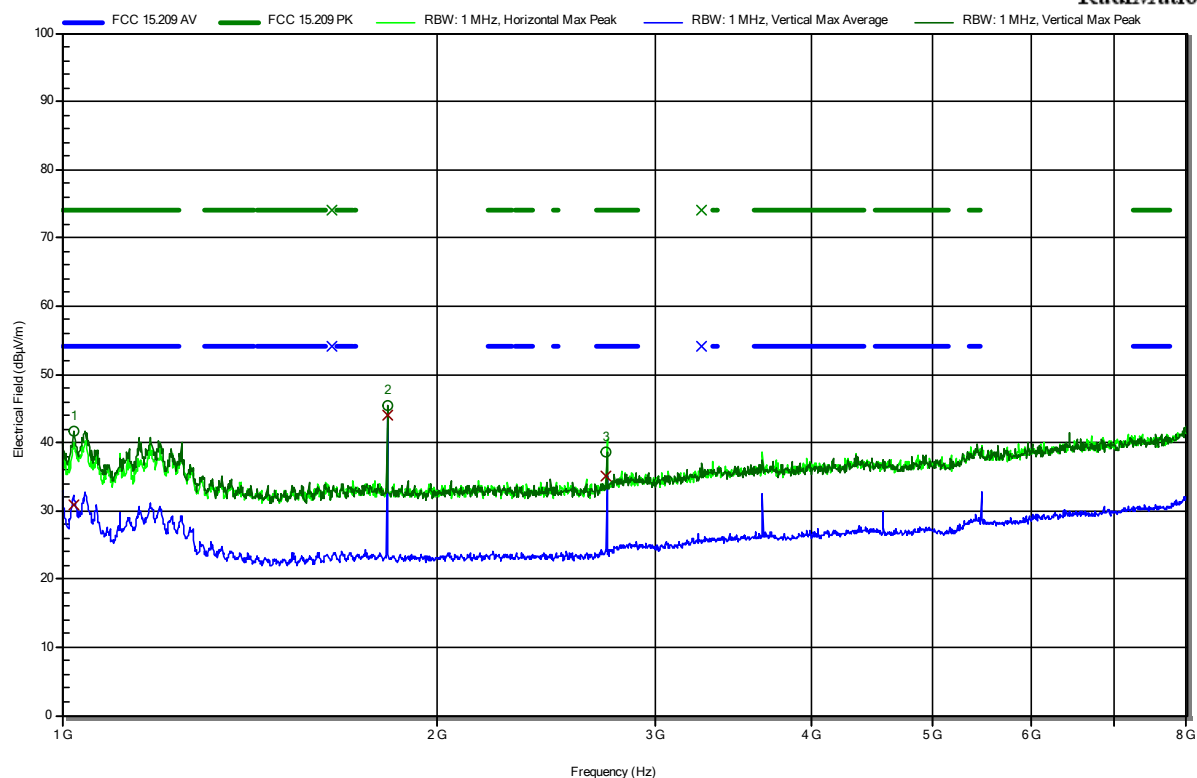
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; Helix Antenna 30261216, 912.5 MHz
 Test Date: 2024-01-12

Index 27

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.0213 GHz	41.78 dBµV/m	74 dBµV/m	-32.22 dB	Pass	Vertical
2.7375 GHz	38.58 dBµV/m	74 dBµV/m	-35.42 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.0213 GHz	30.98 dBµV/m	54 dBµV/m	-23.02 dB	Pass	Vertical
2.7375 GHz	35.13 dBµV/m	54 dBµV/m	-18.87 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

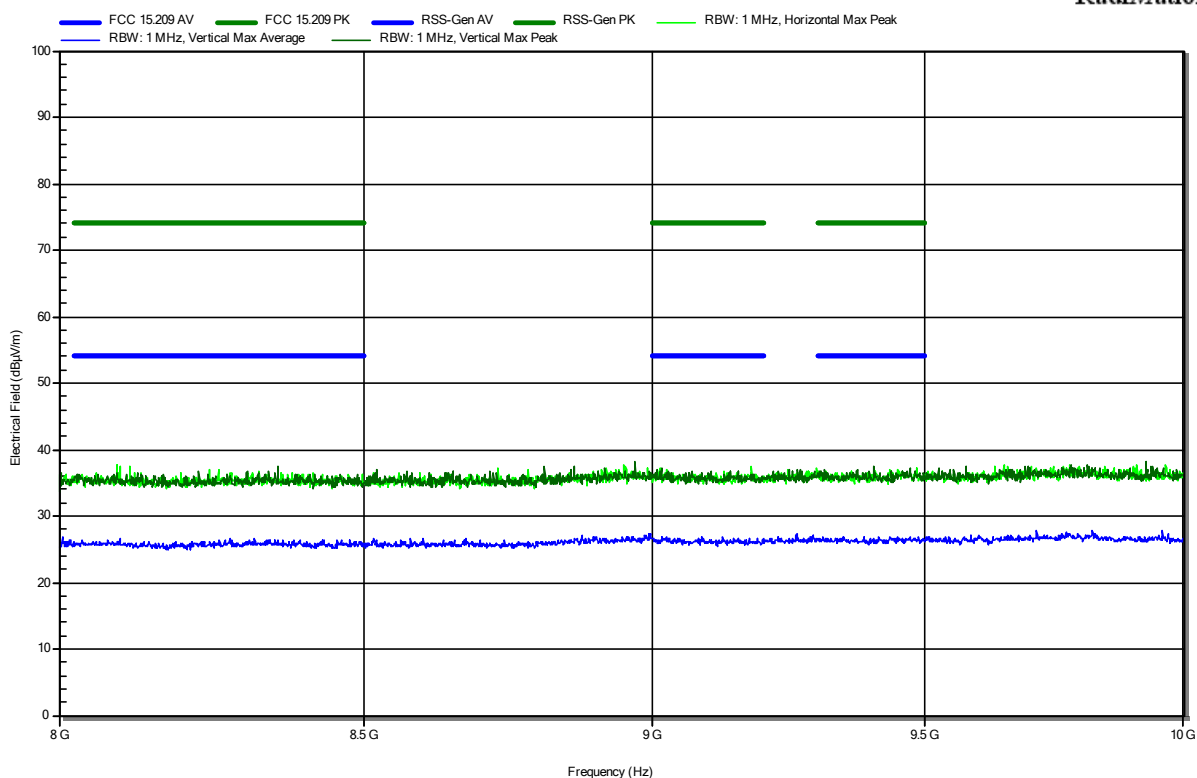
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; Helix Antenna 30261216, 912.5 MHz
 Test Date: 2024-01-12

Index 33

RadiMation

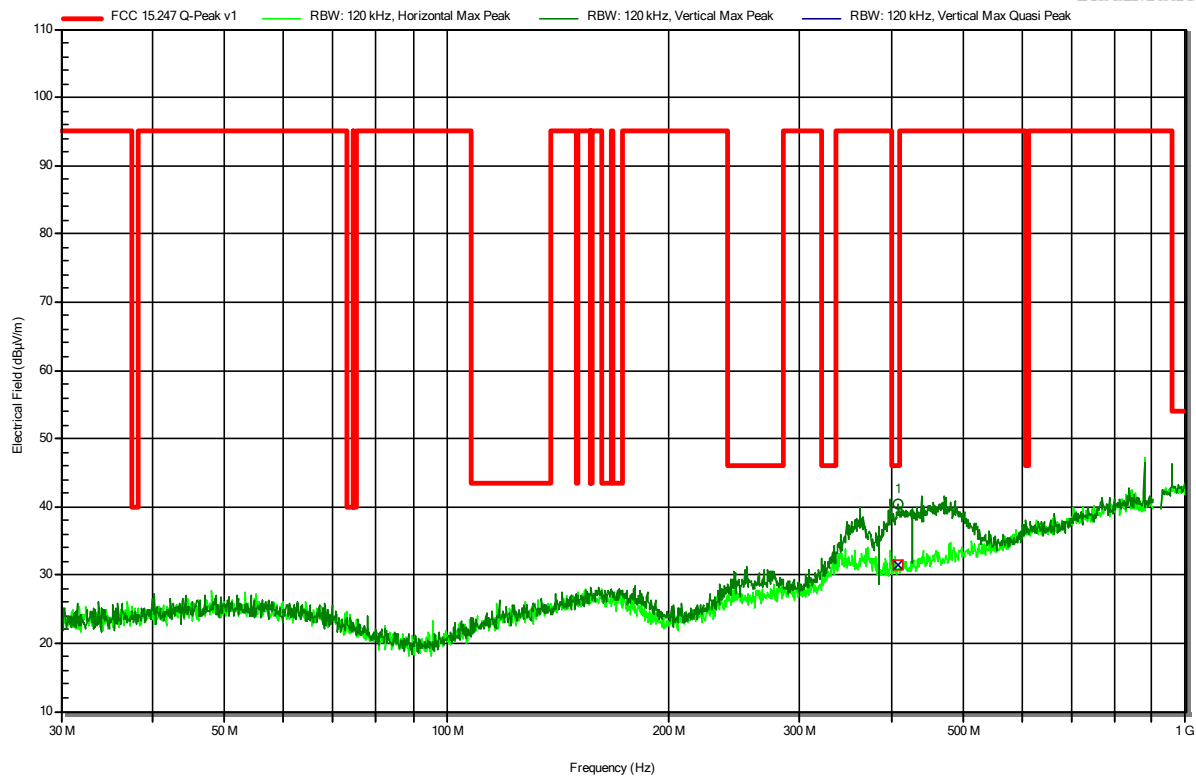


Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; Helix Antenna 30261216, 918.5 MHz
 Test Date: 2024-01-10

Index 16

RadiMation



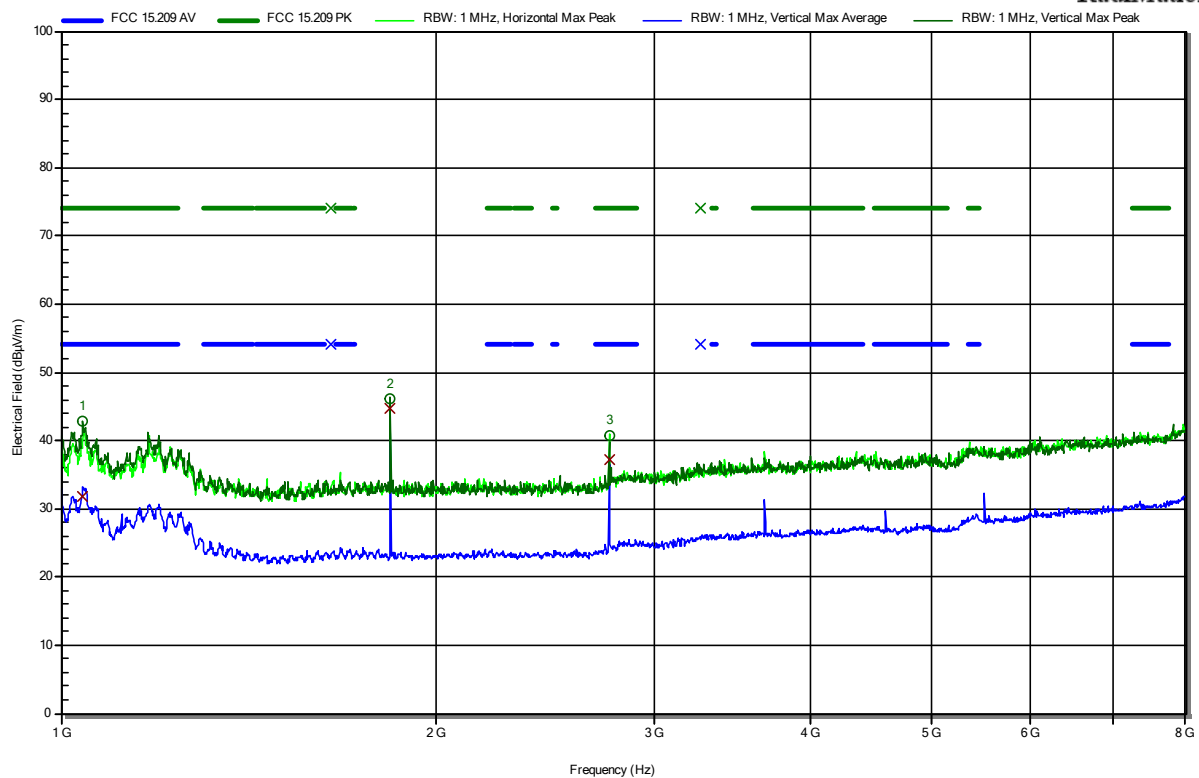
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
407.8957 MHz	40.3 dBµV/m	46 dBµV/m	-5.66 dB	Pass	Vertical
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
407.8957 MHz	31.6 dBµV/m	46 dBµV/m	-14.41 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; Helix Antenna 30261216, 918.5 MHz
 Test Date: 2024-01-12

Index 28

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.0415 GHz	42.91 dBμV/m	74 dBμV/m	-31.09 dB	Pass	Vertical
2.7555 GHz	40.83 dBμV/m	74 dBμV/m	-33.17 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.0415 GHz	31.7 dBμV/m	54 dBμV/m	-22.3 dB	Pass	Vertical
2.7555 GHz	37.21 dBμV/m	54 dBμV/m	-16.79 dB	Pass	Horizontal

Test Report No.: G0M-2311-2314-TFC247DT-V03

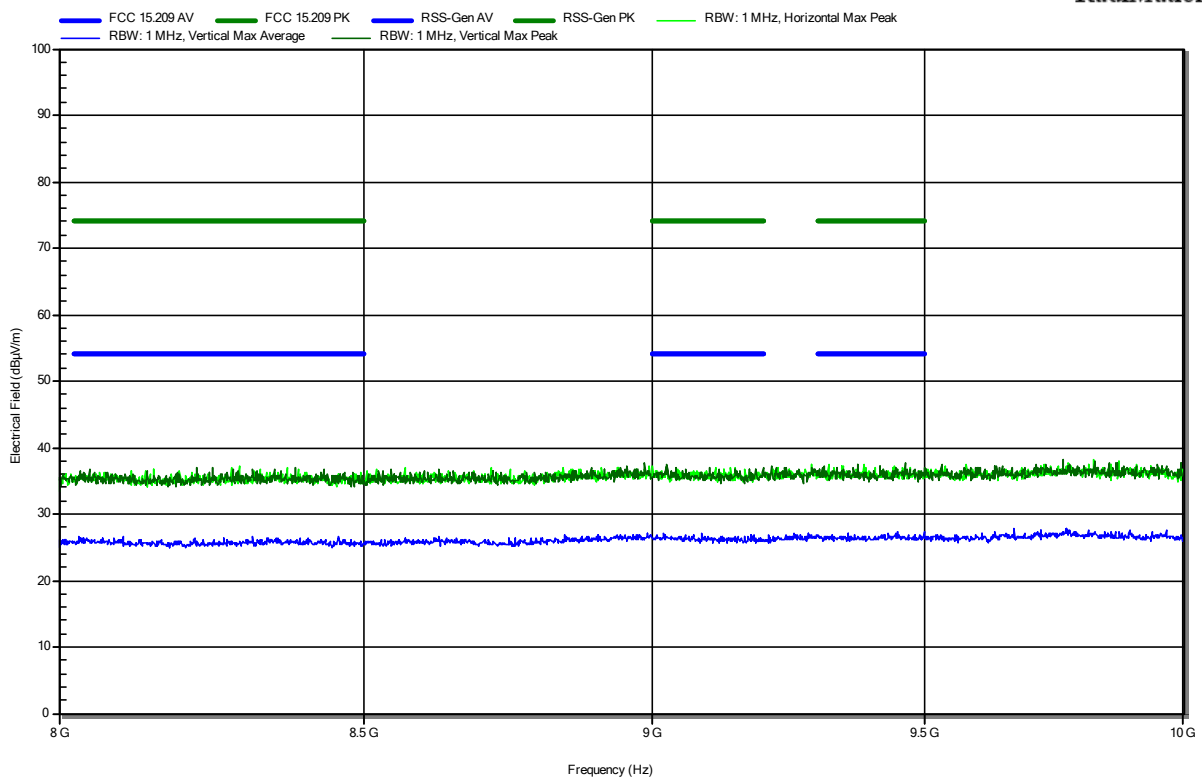
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; Helix Antenna 30261216, 918.5 MHz
 Test Date: 2024-01-12

Index 34

RadiMation

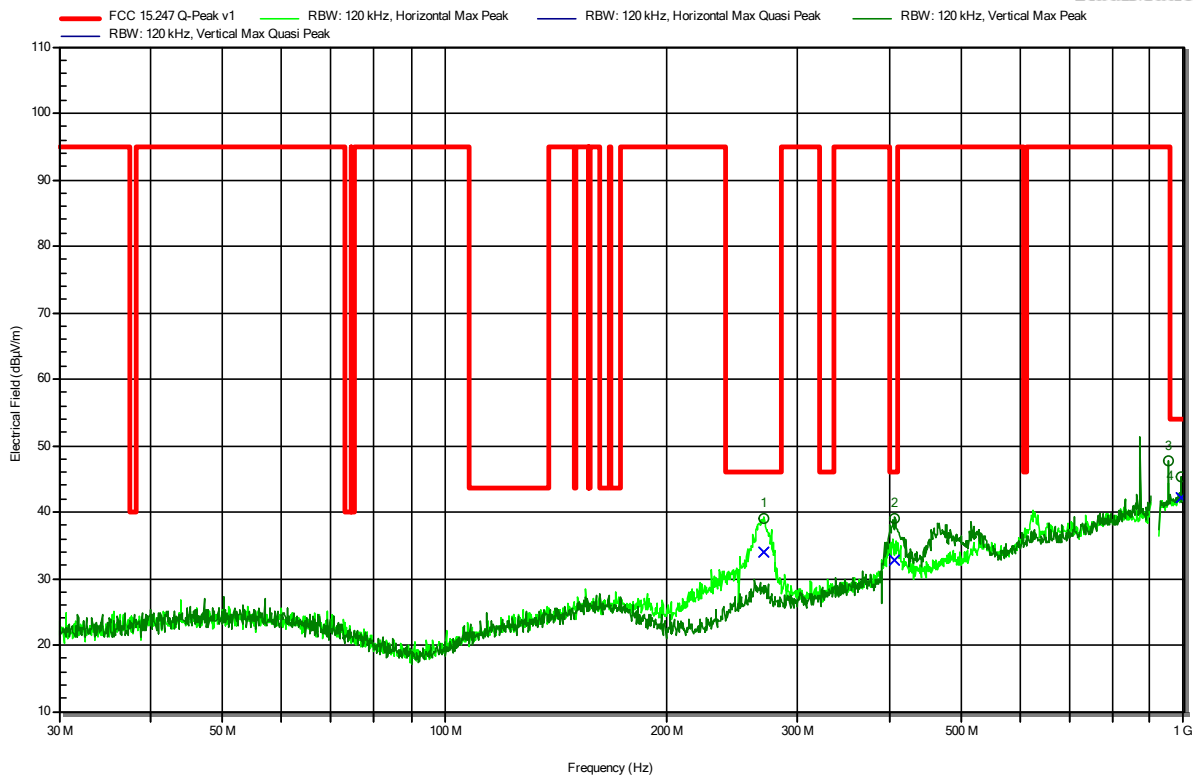


Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; Pit Antenna 6697916, 912.5 MHz
 Test Date: 2024-01-11

Index 24

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
269.6618 MHz	39.1 dBµV/m	46 dBµV/m	-6.88 dB	Pass	Horizontal
406.9184 MHz	39.2 dBµV/m	46 dBµV/m	-6.84 dB	Pass	Vertical
952.5064 MHz	47.7 dBµV/m	95 dBµV/m	-47.33 dB	Pass	Vertical
992.5192 MHz	45.4 dBµV/m	54 dBµV/m	-8.63 dB	Pass	Vertical

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
269.6618 MHz	34 dBµV/m	46 dBµV/m	-12.01 dB	Pass	Horizontal
406.9184 MHz	32.8 dBµV/m	46 dBµV/m	-13.23 dB	Pass	Vertical
992.5192 MHz	42.3 dBµV/m	54 dBµV/m	-11.73 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

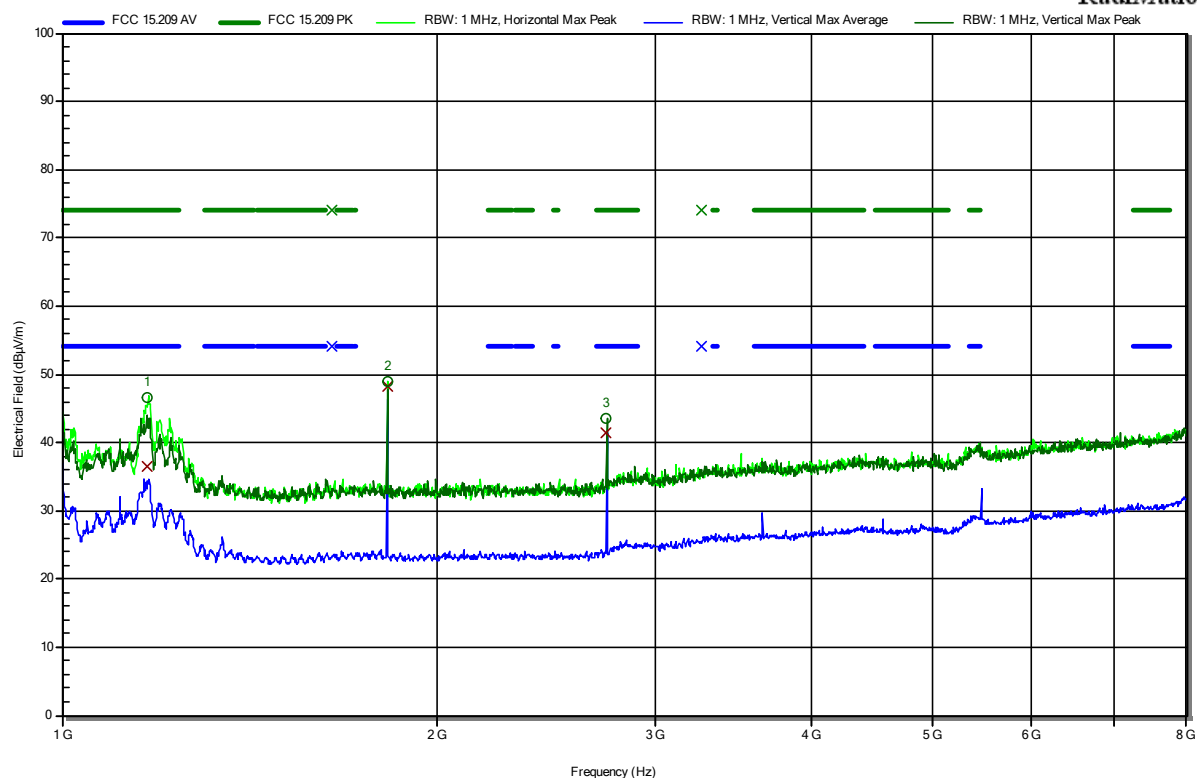
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24.5 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; Pit Antenna 6697916, 912.5 MHz
 Test Date: 2024-01-12

Index 25

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.172 GHz	46.58 dBµV/m	74 dBµV/m	-27.42 dB	Pass	Horizontal
2.7376 GHz	43.47 dBµV/m	74 dBµV/m	-30.53 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.172 GHz	36.49 dBµV/m	54 dBµV/m	-17.51 dB	Pass	Horizontal
2.7376 GHz	41.34 dBµV/m	54 dBµV/m	-12.66 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

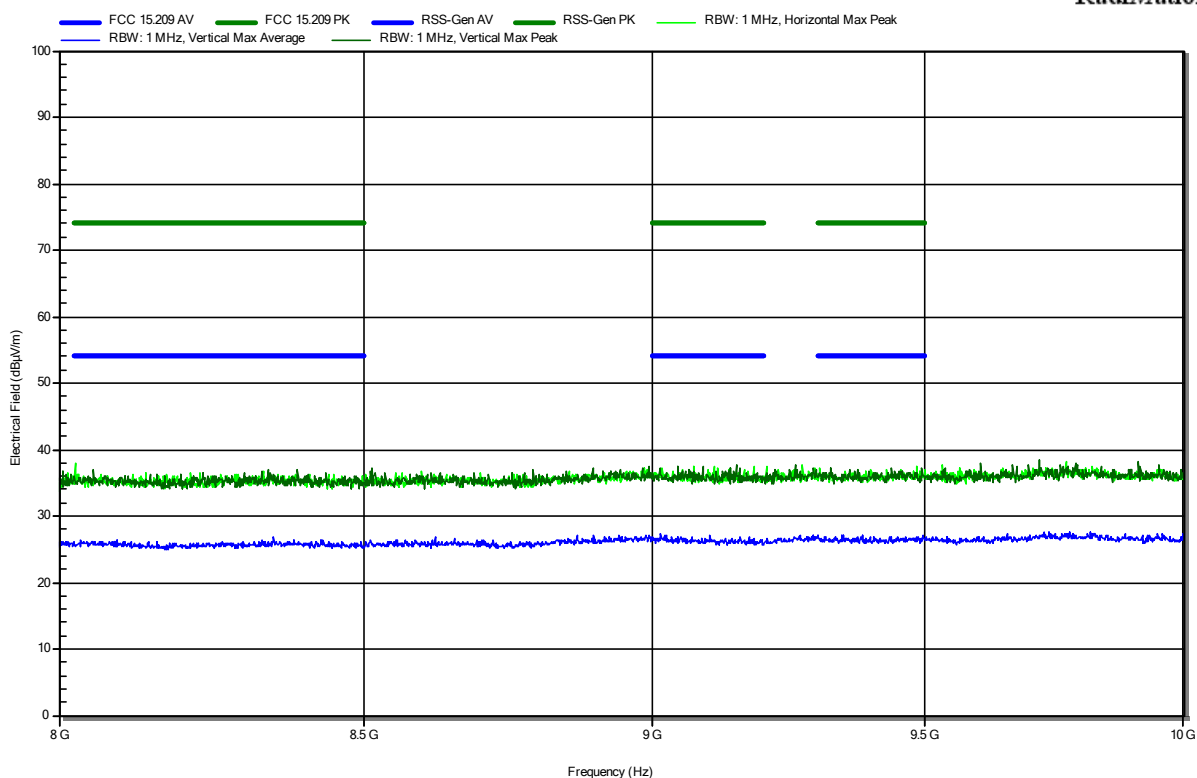
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; Pit Antenna 6697916, 912.5 MHz
 Test Date: 2024-01-12

Index 36

RadiMation

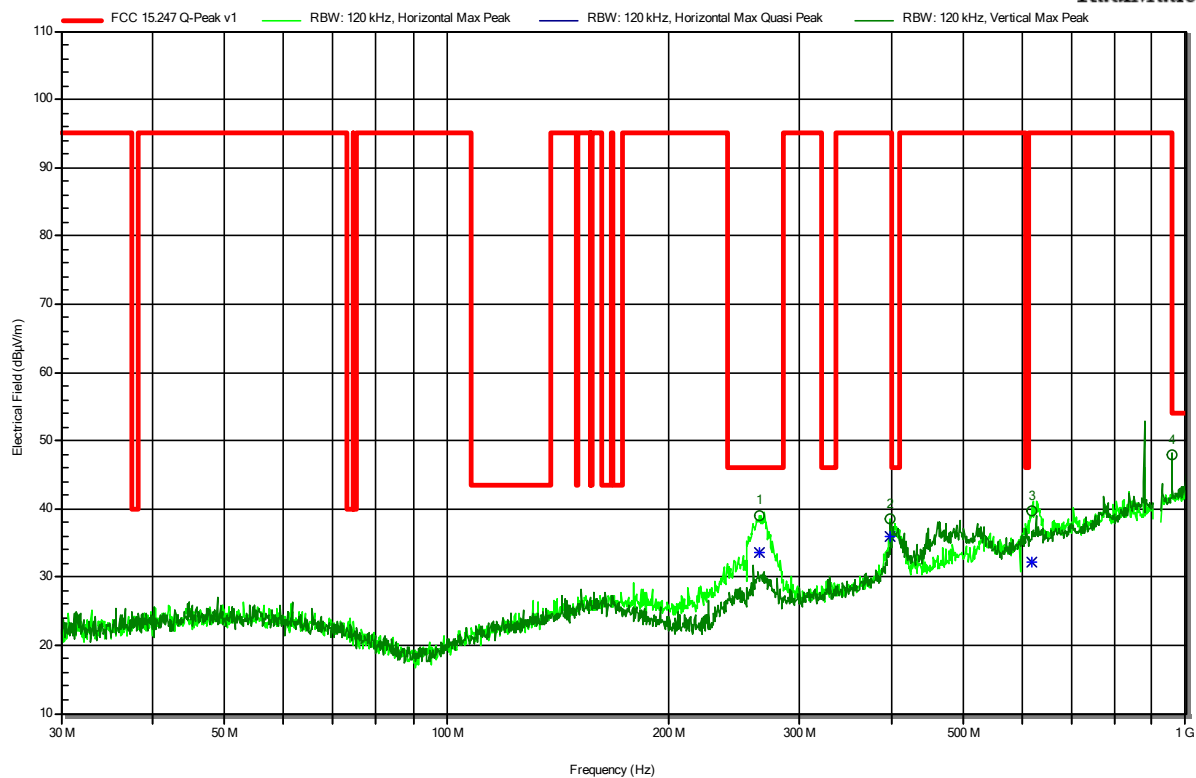


Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; Pit Antenna 6697916, 918.5 MHz
 Test Date: 2024-01-11

Index 23

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
264.8754 MHz	38.9 dBμV/m	46 dBμV/m	-7.07 dB	Pass	Horizontal
398.5003 MHz	38.6 dBμV/m	95 dBμV/m	-56.42 dB	Pass	Horizontal
620.562 MHz	39.8 dBμV/m	95 dBμV/m	-55.23 dB	Pass	Horizontal
958.5088 MHz	47.9 dBμV/m	95 dBμV/m	-47.05 dB	Pass	Vertical

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
264.8754 MHz	33.6 dBμV/m	46 dBμV/m	-12.4 dB	Pass	Horizontal
398.5003 MHz	36 dBμV/m	95 dBμV/m	-59.01 dB	Pass	Horizontal
620.562 MHz	32.3 dBμV/m	95 dBμV/m	-62.74 dB	Pass	Horizontal

Test Report No.: G0M-2311-2314-TFC247DT-V03

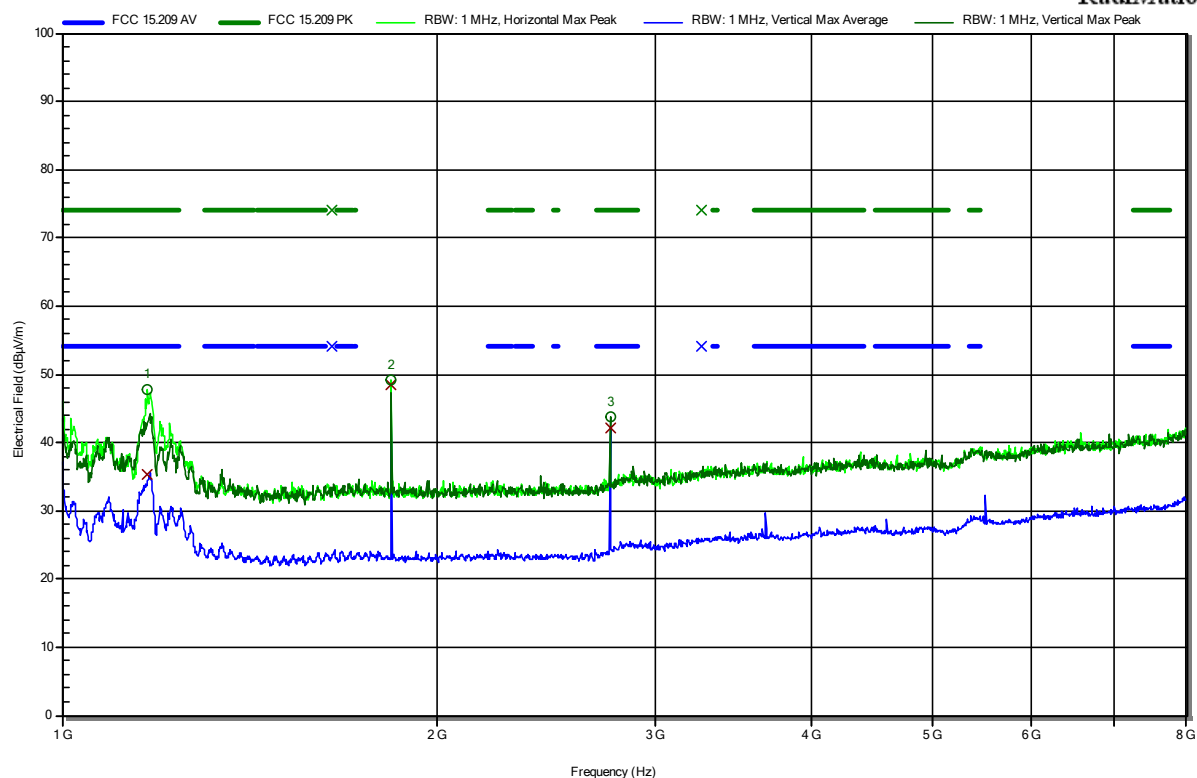
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24.5 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; Pit Antenna 6697916, 918.5 MHz
 Test Date: 2024-01-12

Index 26

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.1708 GHz	47.86 dBµV/m	74 dBµV/m	-26.14 dB	Pass	Horizontal
2.7555 GHz	43.85 dBµV/m	74 dBµV/m	-30.15 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.1708 GHz	35.32 dBµV/m	54 dBµV/m	-18.68 dB	Pass	Horizontal
2.7555 GHz	42.16 dBµV/m	54 dBµV/m	-11.84 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

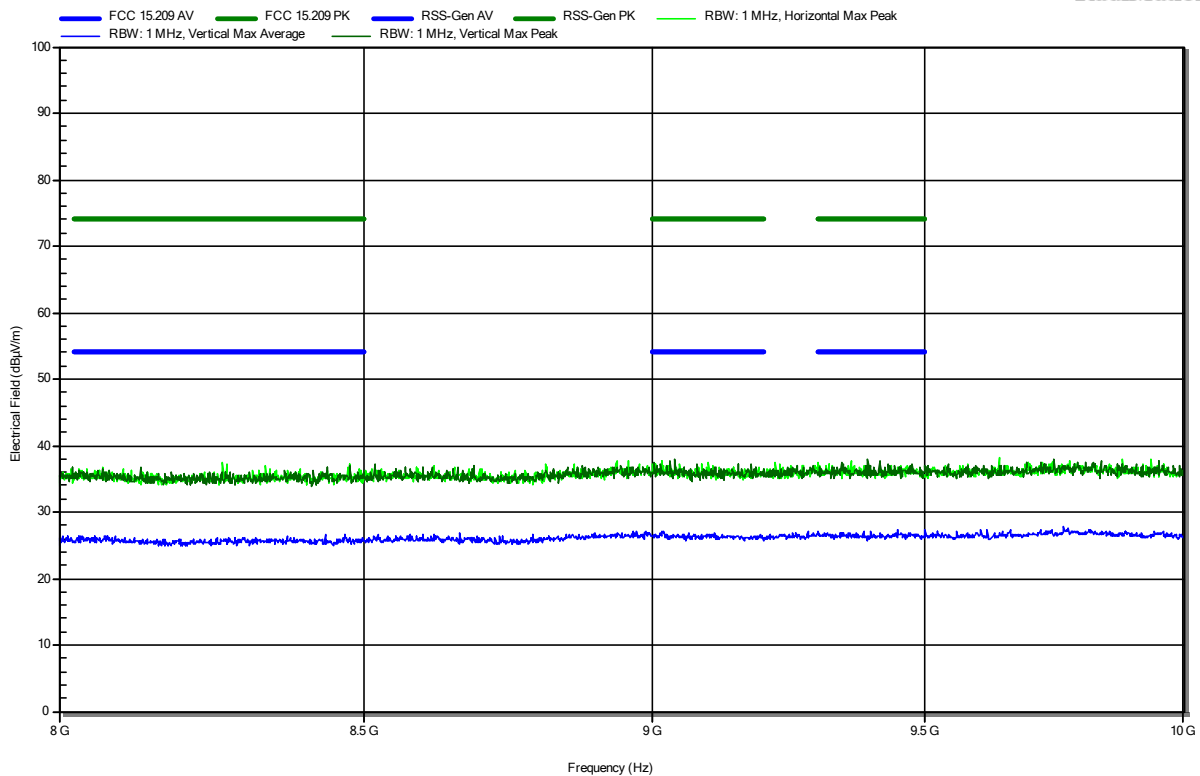
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; Pit Antenna 6697916, 918.5 MHz
 Test Date: 2024-01-12

Index 35

RadiMation

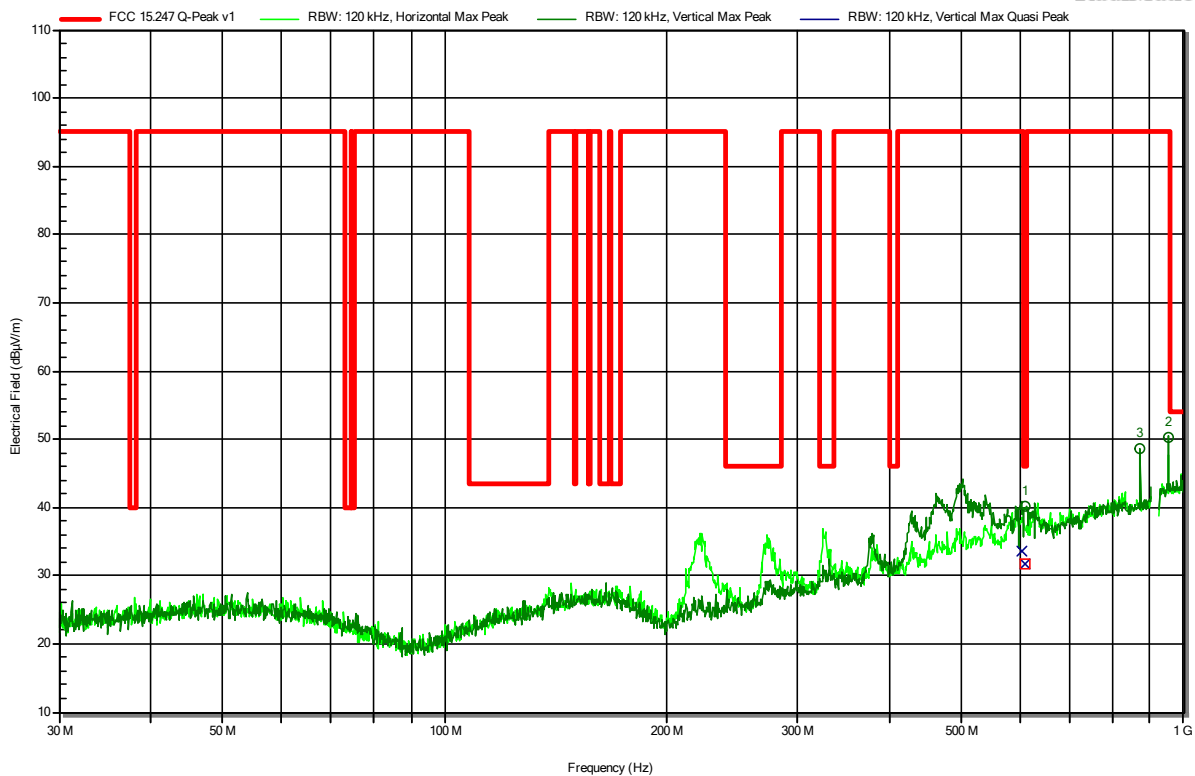


Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; Wall Antenna 6699490, 912.5 MHz
 Test Date: 2024-01-10

Index 13

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
611.3893 MHz	40.2 dBμV/m	46 dBμV/m	-5.77 dB	Pass	Vertical
872.4973 MHz	48.7 dBμV/m	95 dBμV/m	-46.32 dB	Pass	Vertical
952.5064 MHz	50.3 dBμV/m	95 dBμV/m	-44.66 dB	Pass	Vertical

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
611.3893 MHz	31.7 dBμV/m	46 dBμV/m	-14.35 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

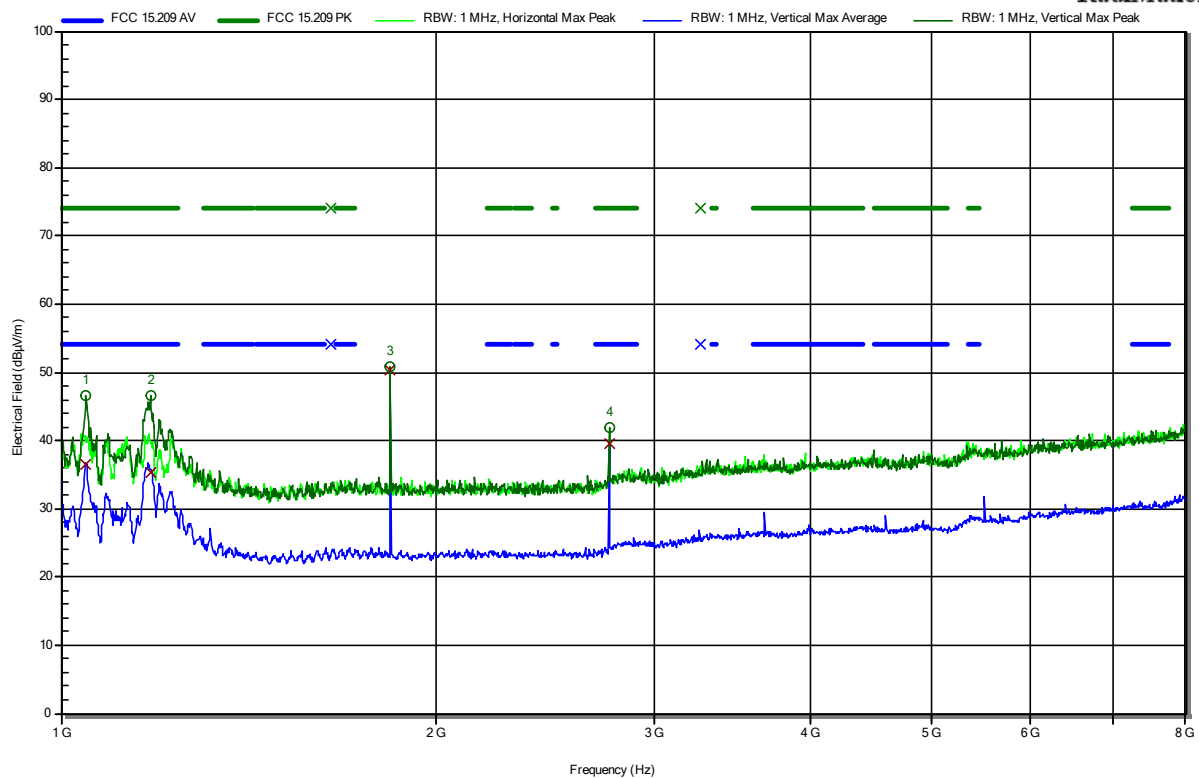
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; Wall Antenna 6699490, 912.5 MHz
 Test Date: 2024-01-12

Index 29

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.0469 GHz	46.64 dBµV/m	74 dBµV/m	-27.36 dB	Pass	Vertical
1.1795 GHz	46.49 dBµV/m	74 dBµV/m	-27.51 dB	Pass	Vertical
2.7554 GHz	41.85 dBµV/m	74 dBµV/m	-32.15 dB	Pass	Vertical

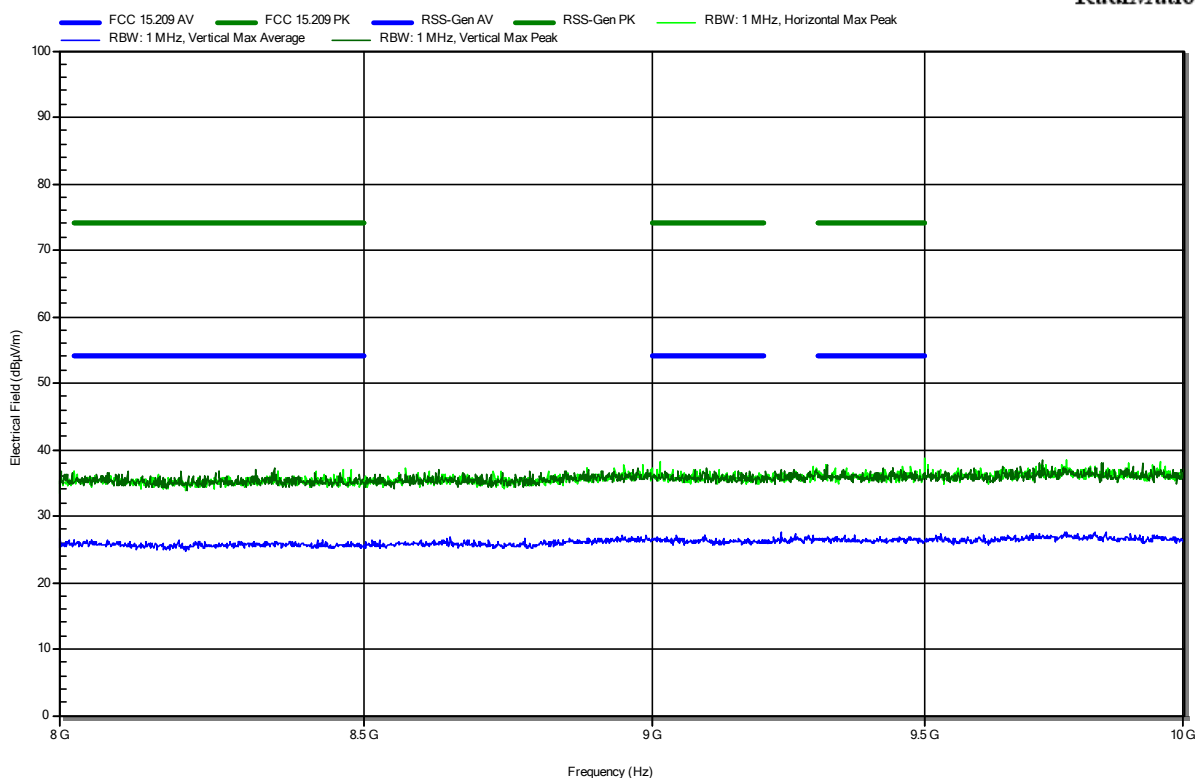
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.0469 GHz	36.48 dBµV/m	54 dBµV/m	-17.52 dB	Pass	Vertical
1.1795 GHz	35.39 dBµV/m	54 dBµV/m	-18.61 dB	Pass	Vertical
2.7554 GHz	39.56 dBµV/m	54 dBµV/m	-14.44 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; Wall Antenna 6699490, 912.5 MHz
 Test Date: 2024-01-12

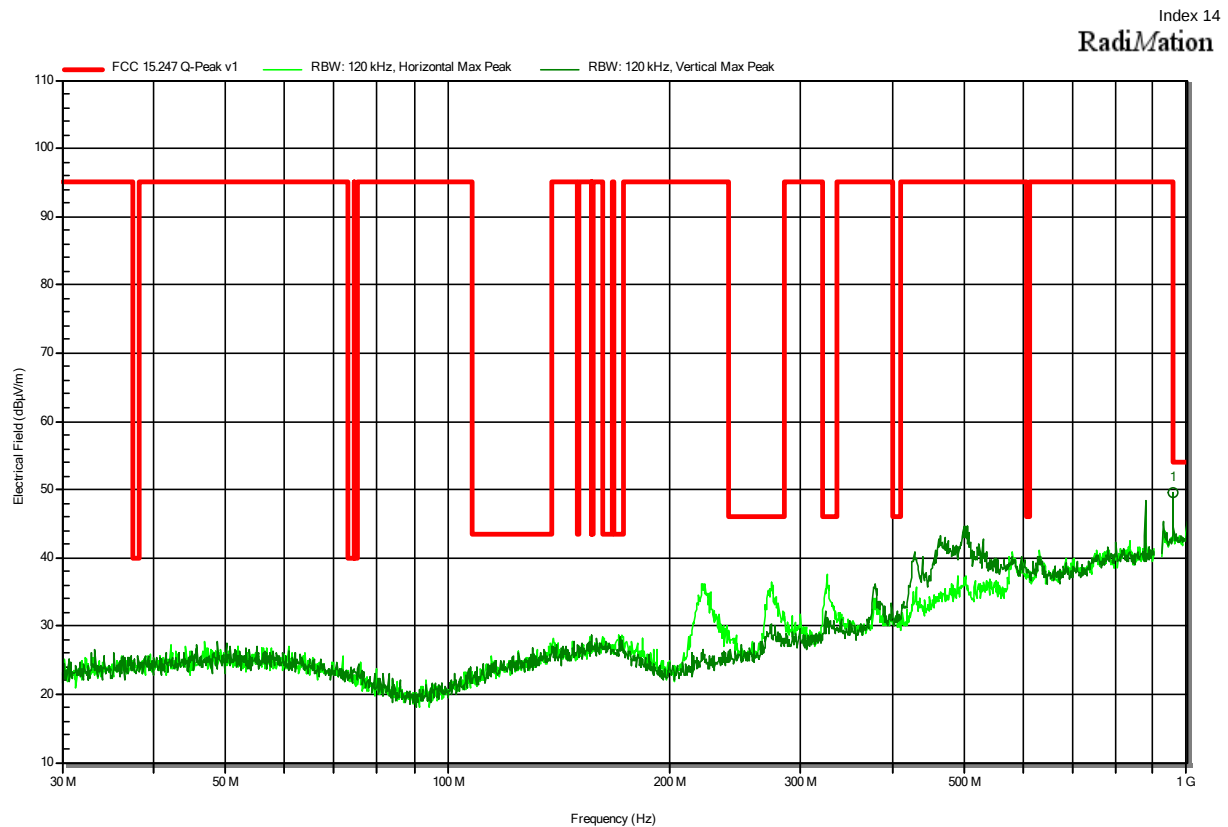
Index 32

RadiMation



Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; Wall Antenna 6699490, 918.5 MHz
 Test Date: 2024-01-10



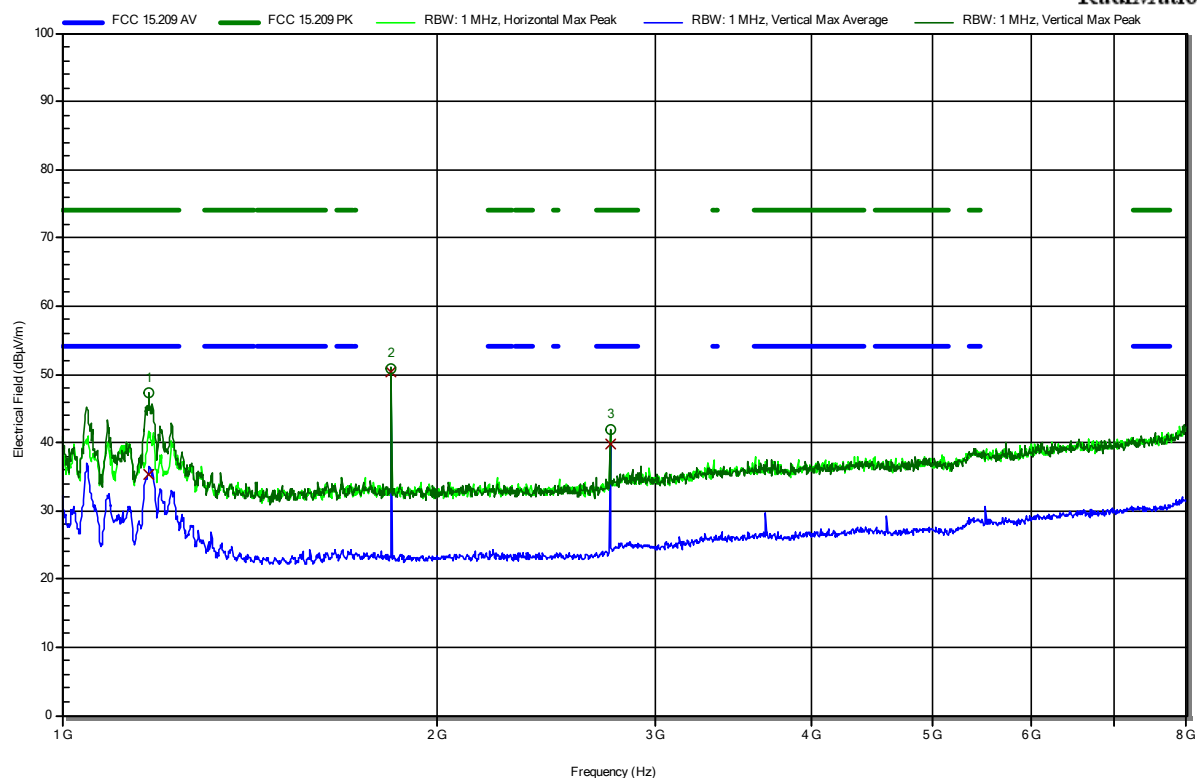
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
958.4872 MHz	49.6 dBµV/m	95 dBµV/m	-45.4 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; Wall Antenna 6699490, 918.5 MHz
 Test Date: 2024-01-12

Index 30

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.1729 GHz	47.35 dBµV/m	74 dBµV/m	-26.65 dB	Pass	Vertical
2.7554 GHz	41.99 dBµV/m	74 dBµV/m	-32.01 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.1729 GHz	35.22 dBµV/m	54 dBµV/m	-18.78 dB	Pass	Vertical
2.7554 GHz	39.68 dBµV/m	54 dBµV/m	-14.32 dB	Pass	Vertical

Test Report No.: G0M-2311-2314-TFC247DT-V03

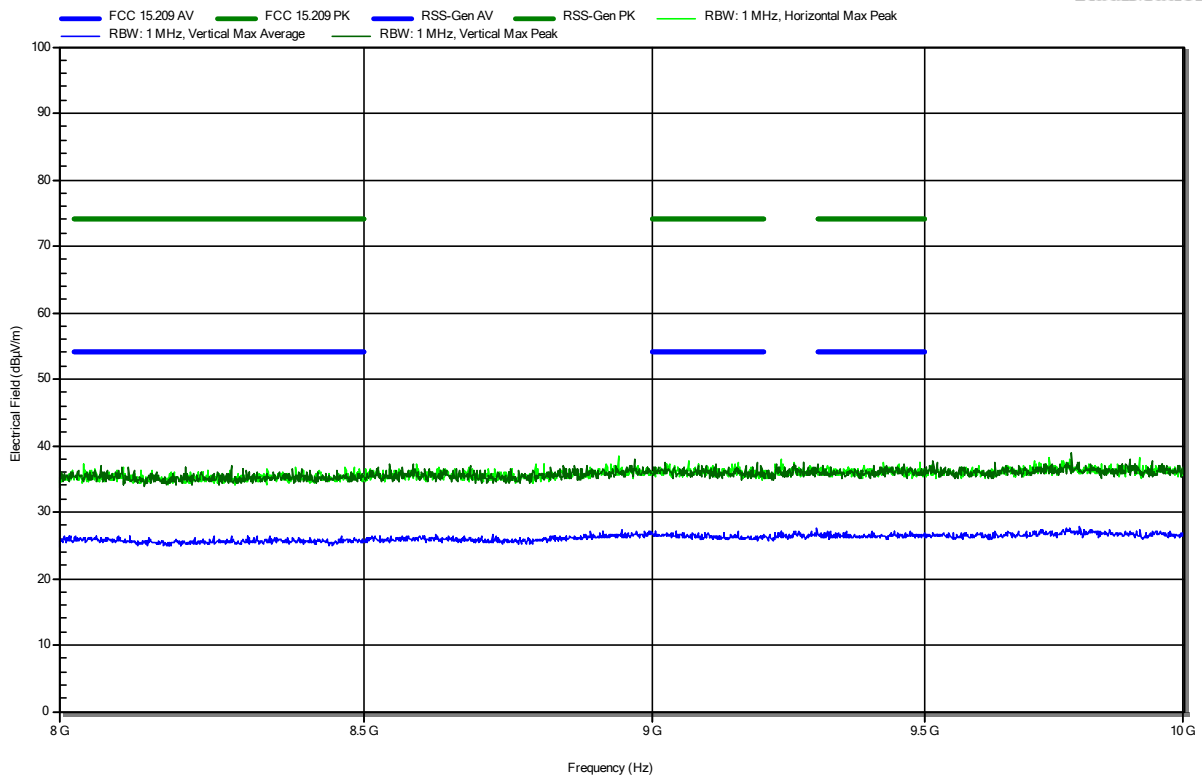
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; Wall Antenna 6699490, 918.5 MHz
 Test Date: 2024-01-12

Index 31

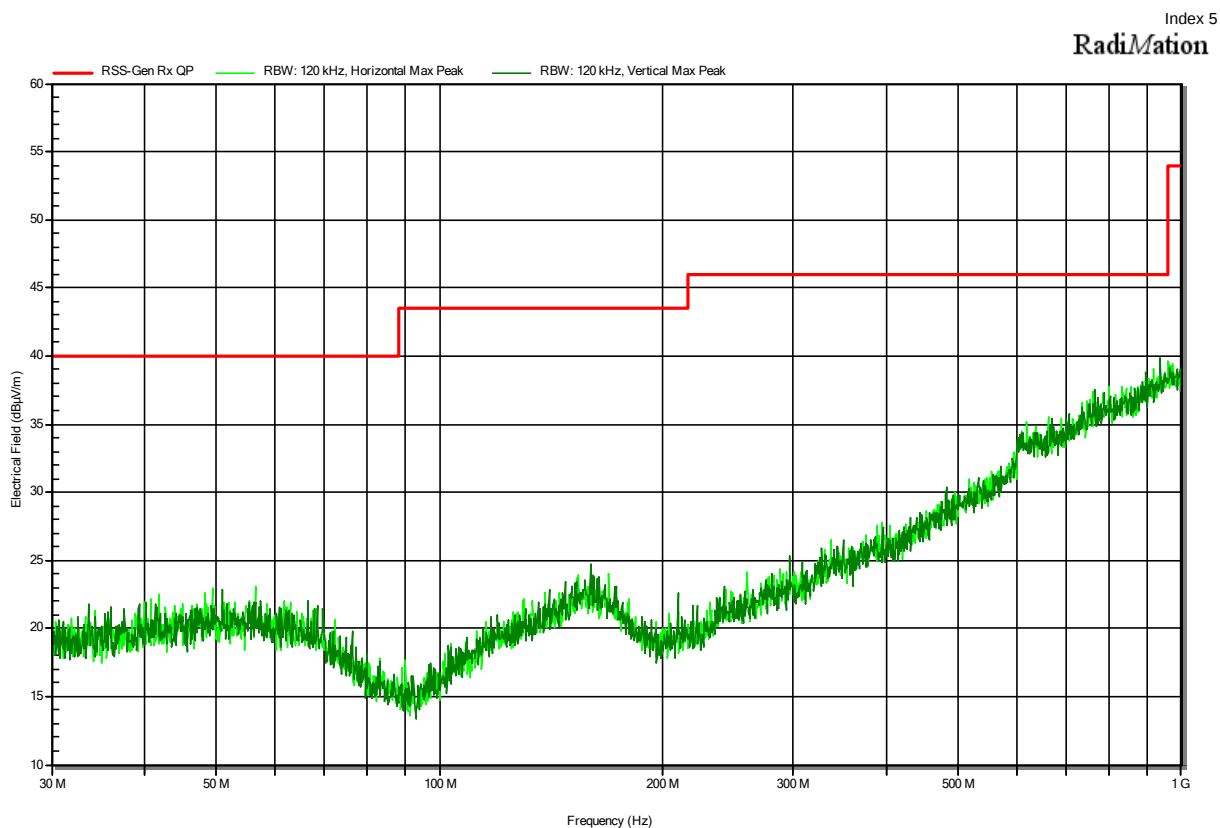
RadiMation



ANNEX B Receiver spurious emissions

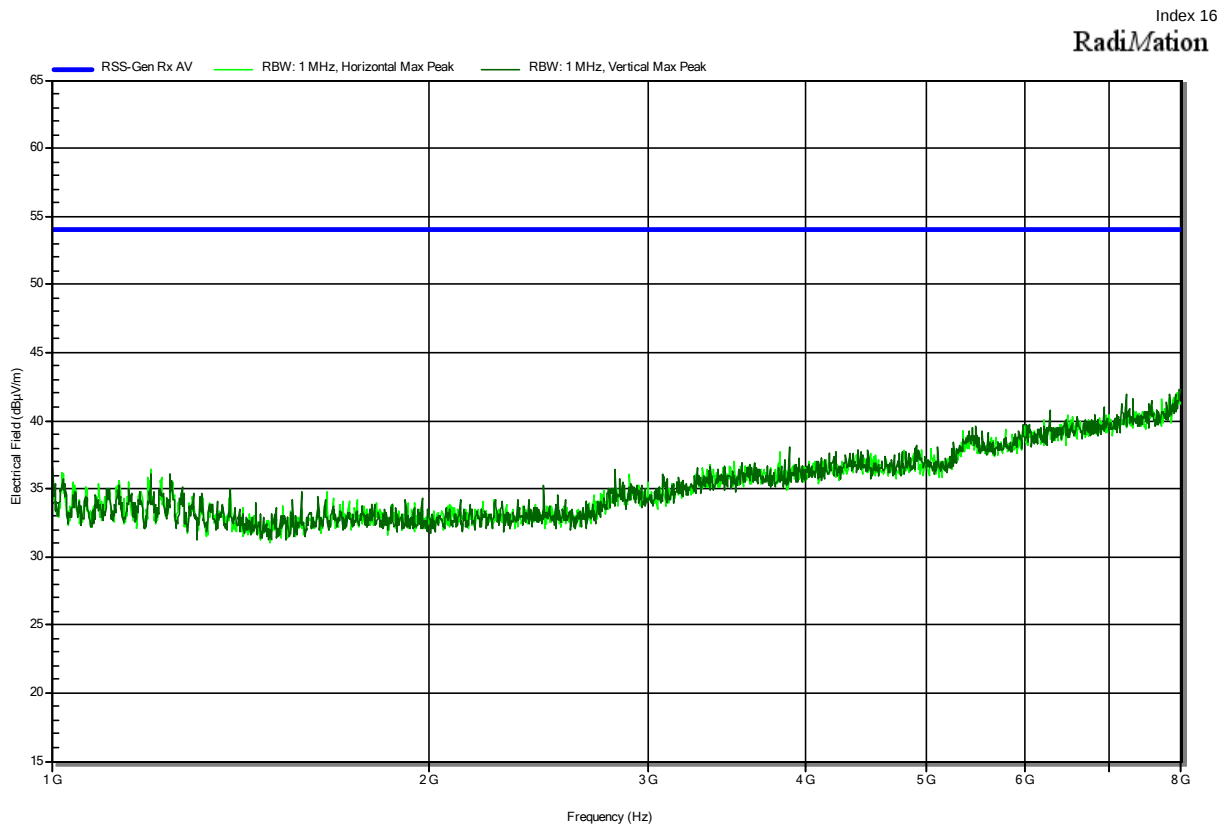
Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; Helix Antenna 30261216, 912.5 MHz
 Test Date: 2024-01-10



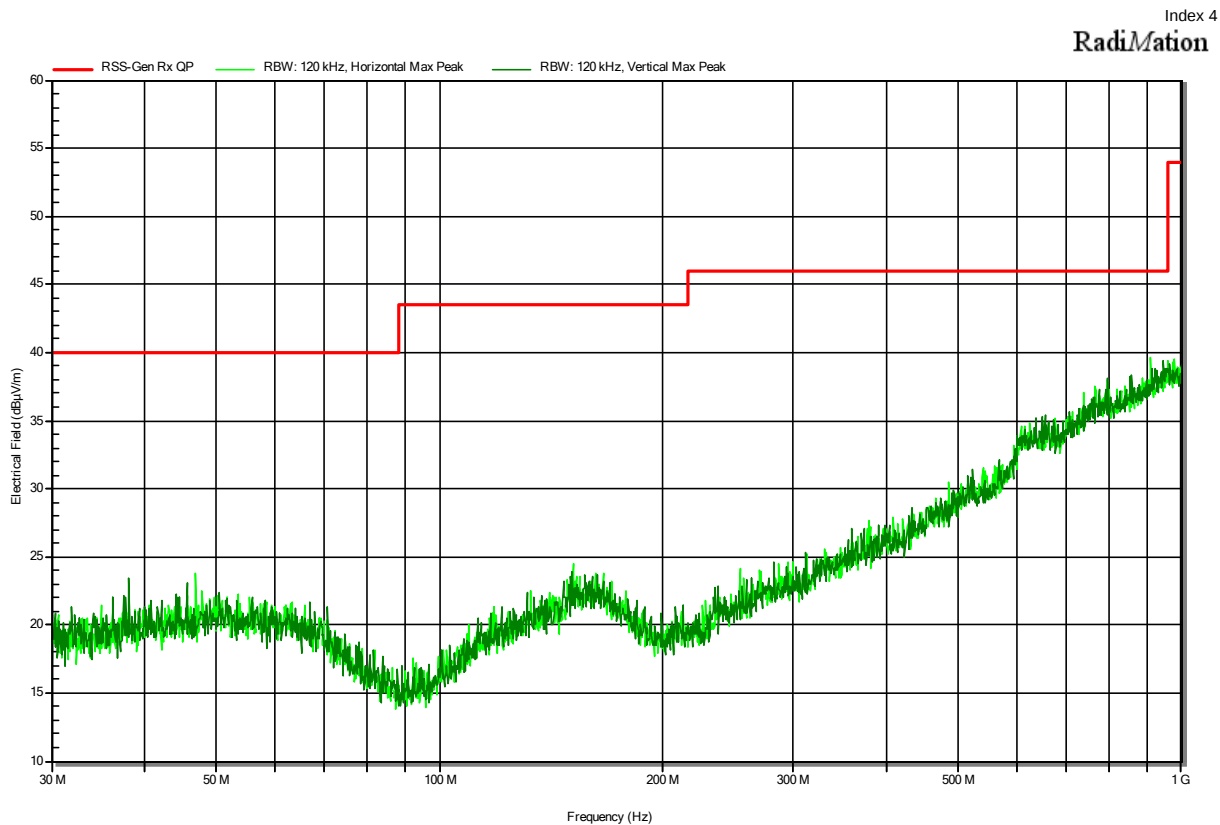
Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; Helix Antenna 30261216, 912.5 MHz
 Test Date: 2024-01-12



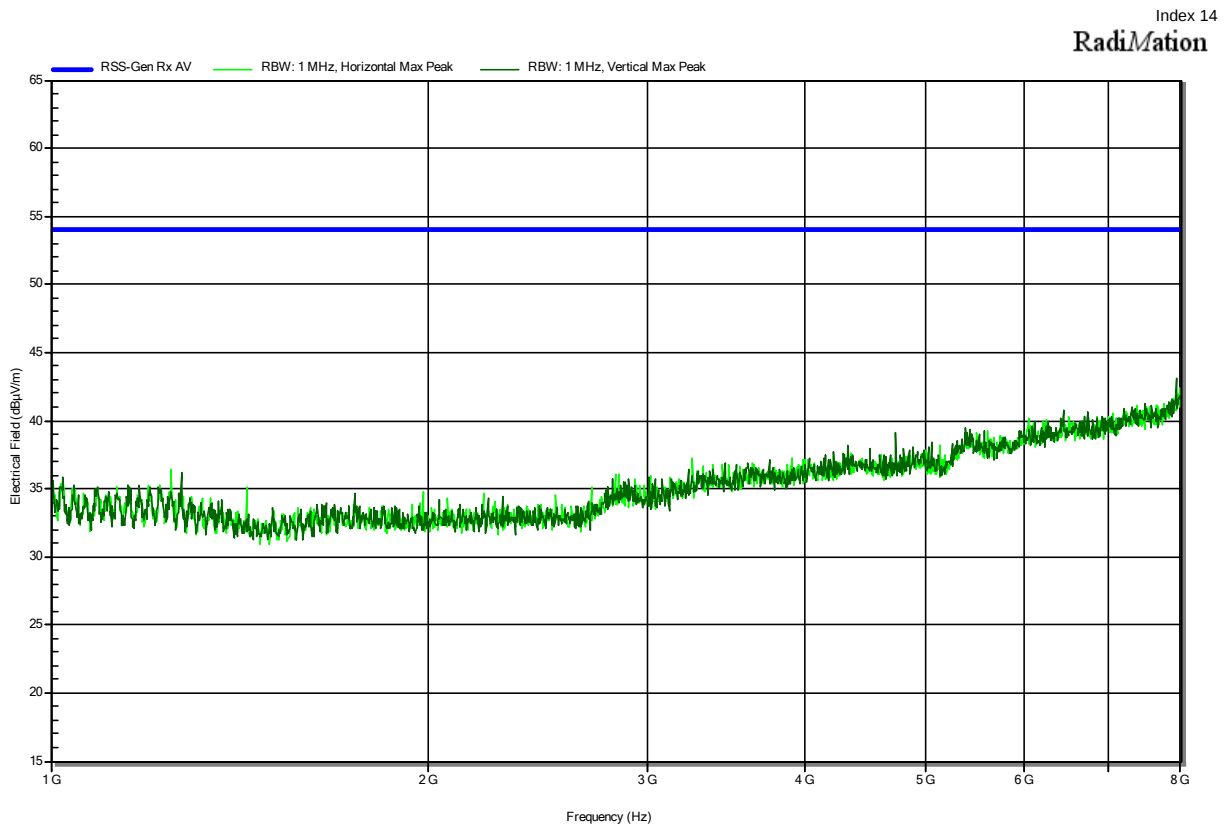
Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; Helix Antenna 30261216, 918.5 MHz
 Test Date: 2024-01-10



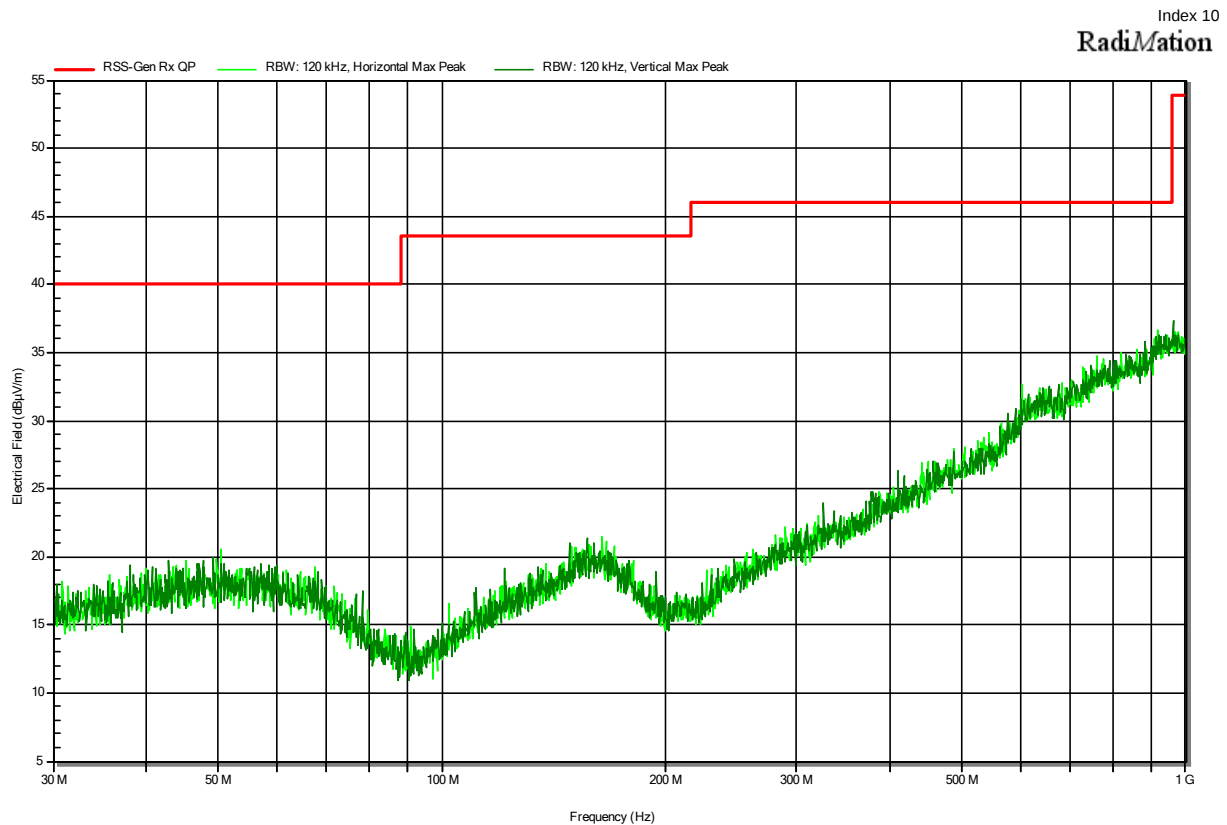
Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; Helix Antenna 30261216, 918.5 MHz
 Test Date: 2024-01-12



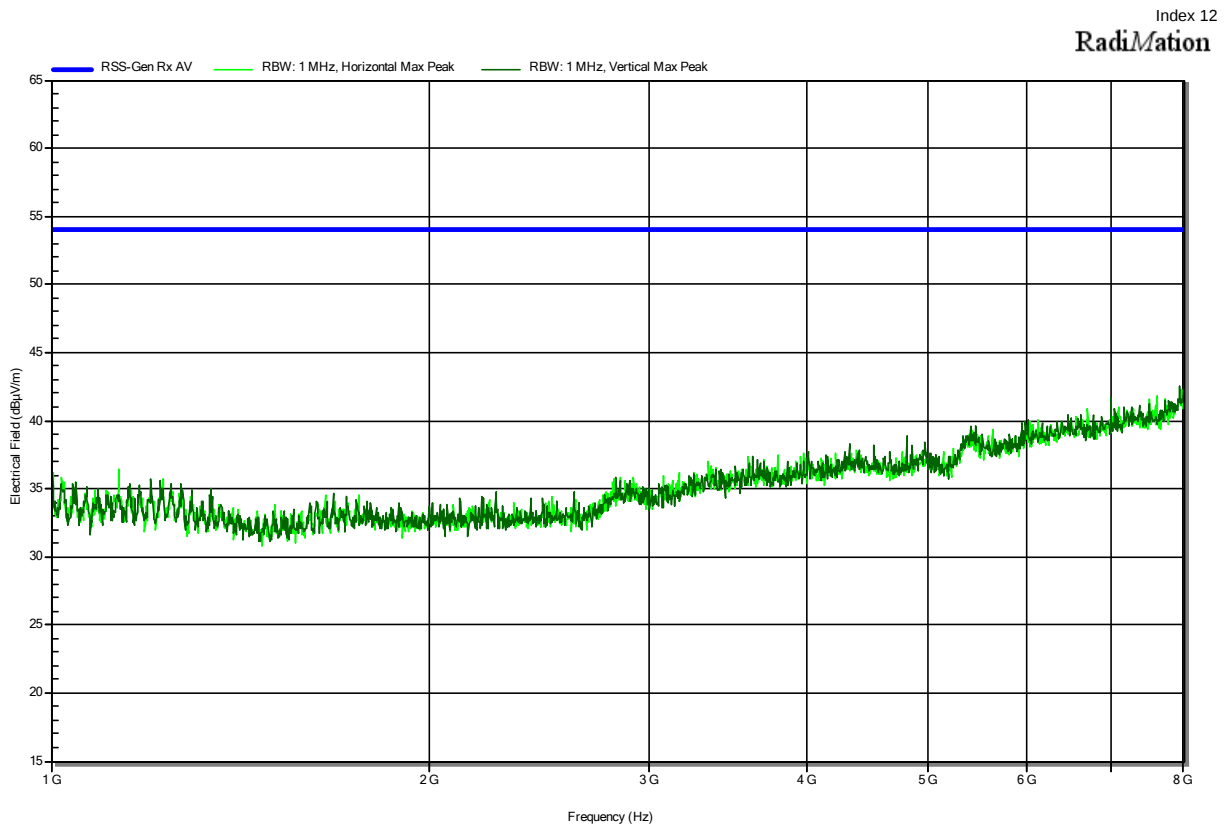
Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; Pit Antenna 6697916, 912.5 MHz
 Test Date: 2024-01-11



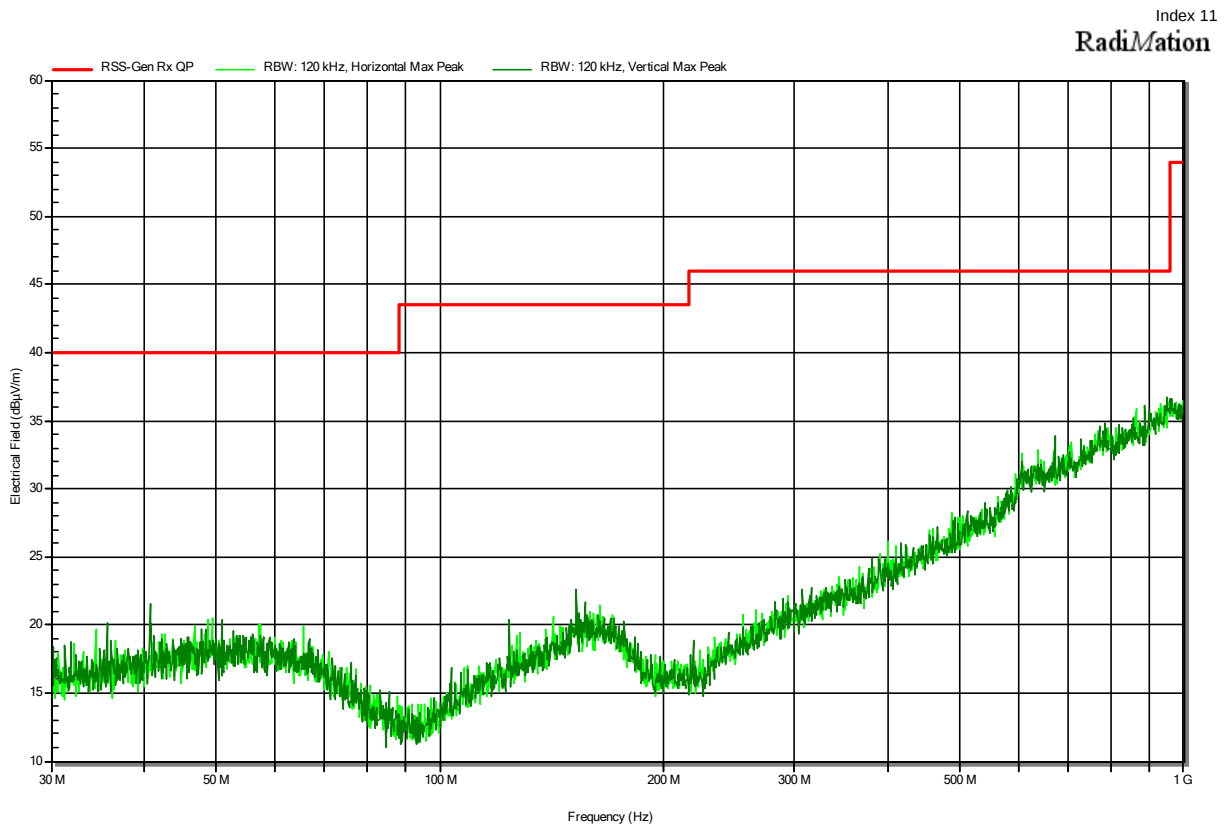
Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; Pit Antenna 6697916, 912.5 MHz
 Test Date: 2024-01-12



Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; Pit Antenna 6697916, 918.5 MHz
 Test Date: 2024-01-11

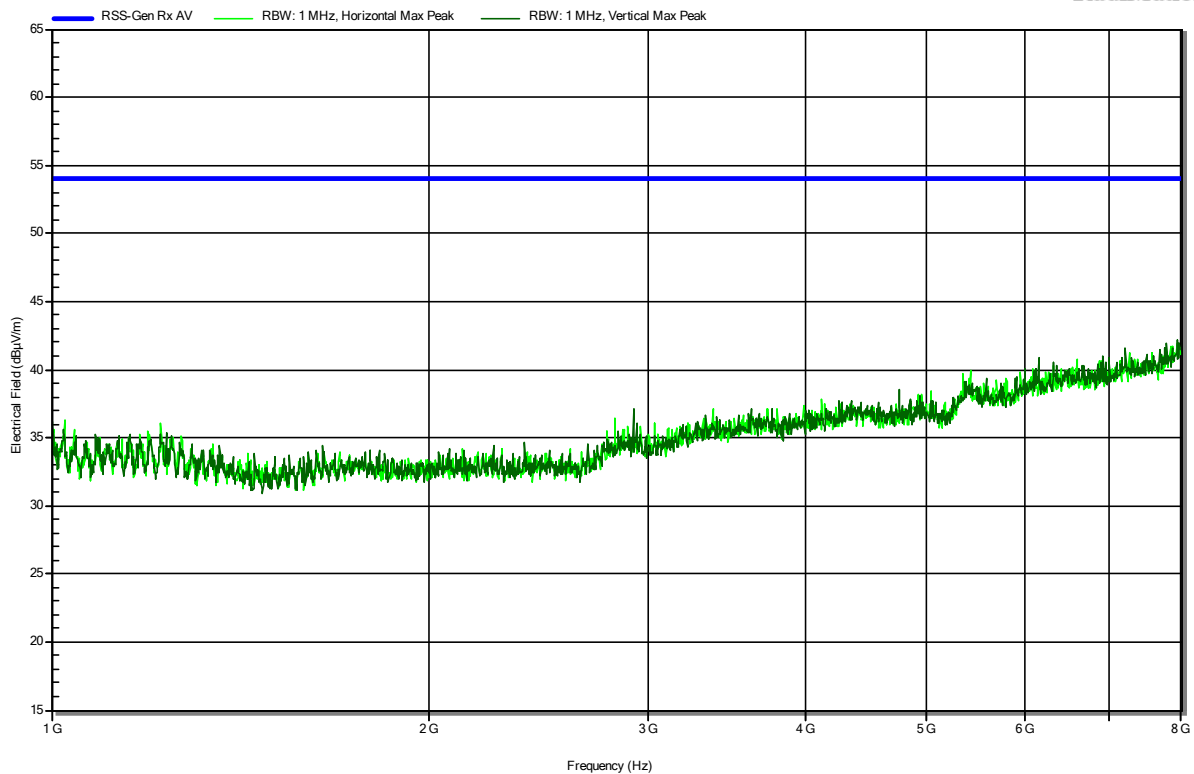


Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; Pit Antenna 6697916, 918.5 MHz
 Test Date: 2024-01-12

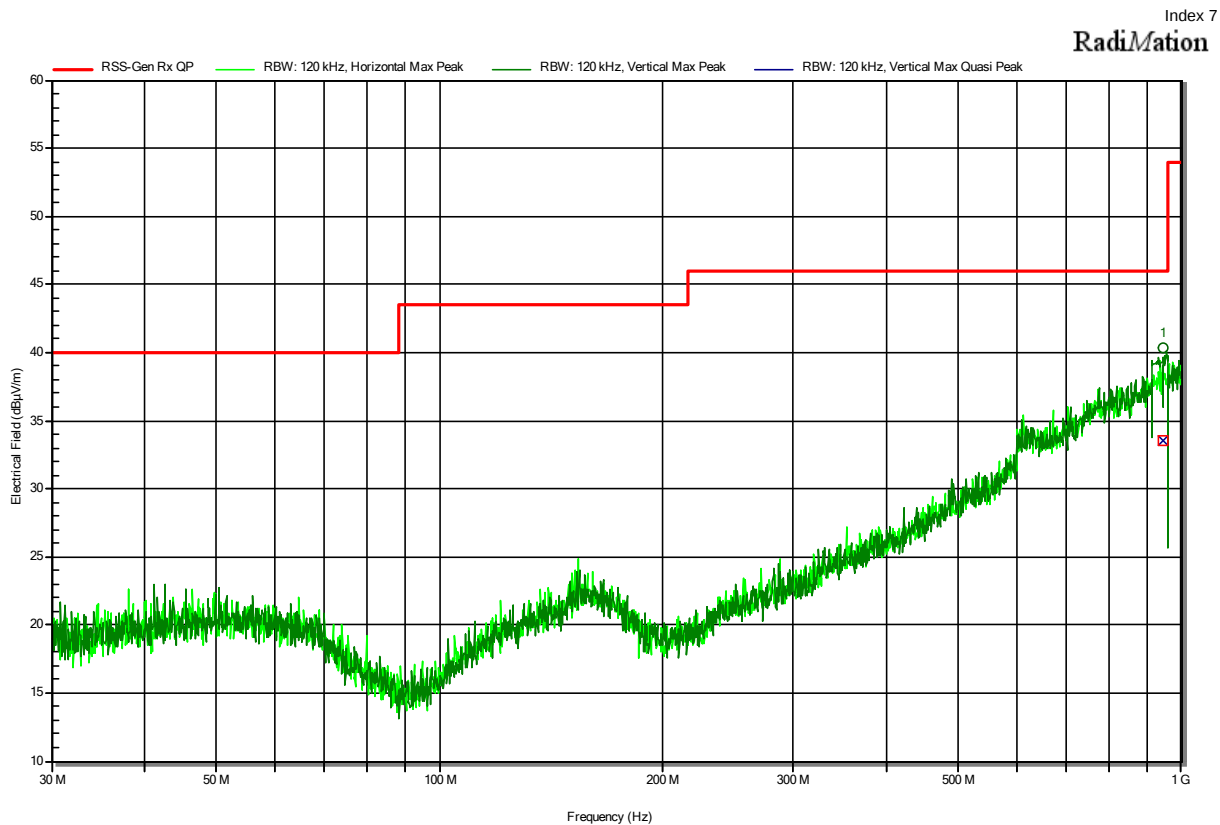
Index 13

RadiMation



Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

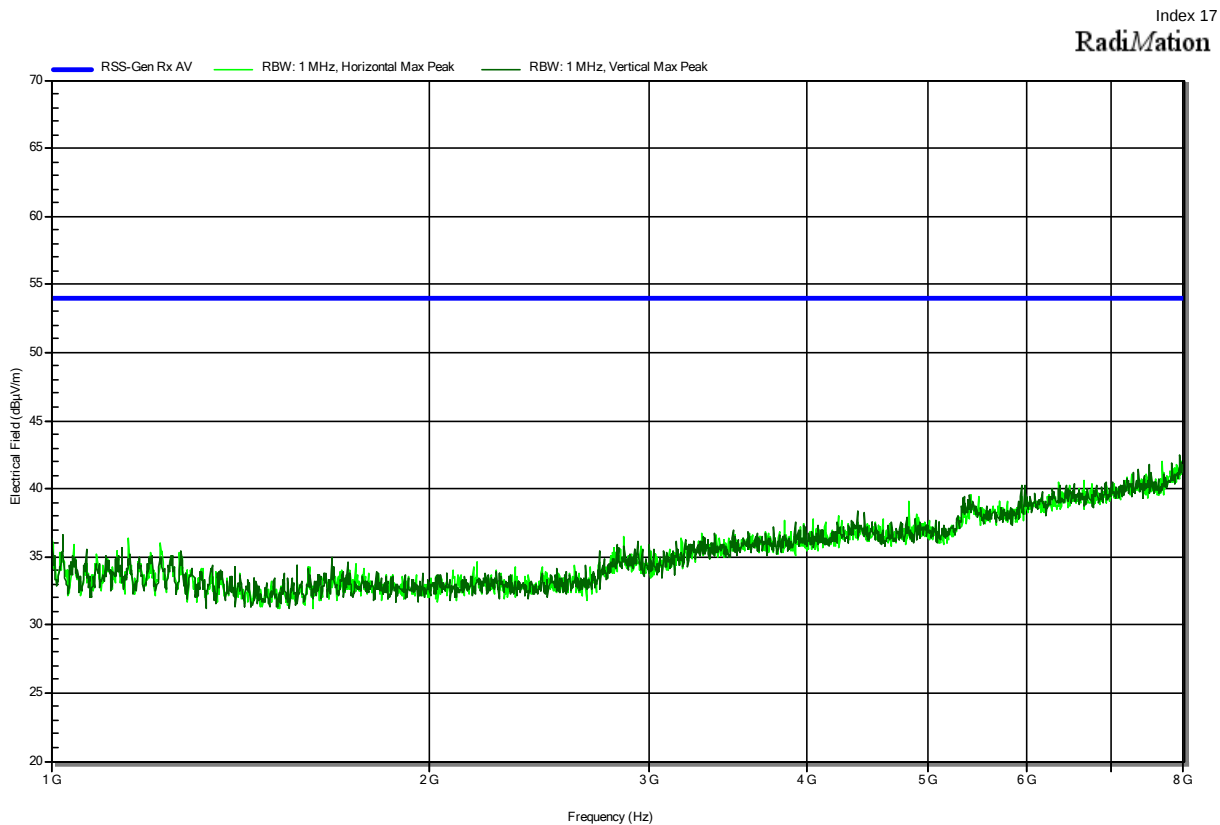
Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; Wall Antenna 6699490, 912.5 MHz
 Test Date: 2024-01-10



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
945.499 MHz	40.4 dBµV/m	46 dBµV/m	-5.61 dB	Pass	Vertical
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
945.499 MHz	33.6 dBµV/m	46 dBµV/m	-12.43 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; Wall Antenna 6699490, 912.5 MHz
 Test Date: 2024-01-12

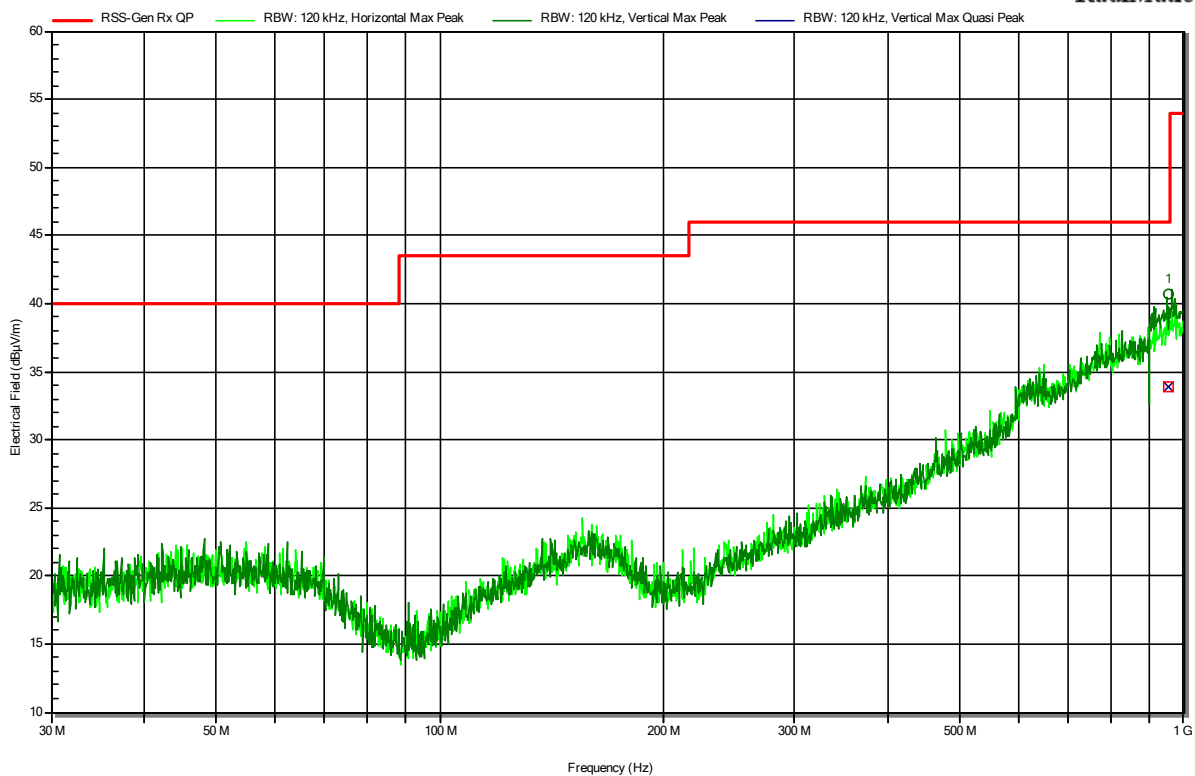


Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Sohrabi
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; Wall Antenna 6699490, 918.5 MHz
 Test Date: 2024-01-10

Index 8

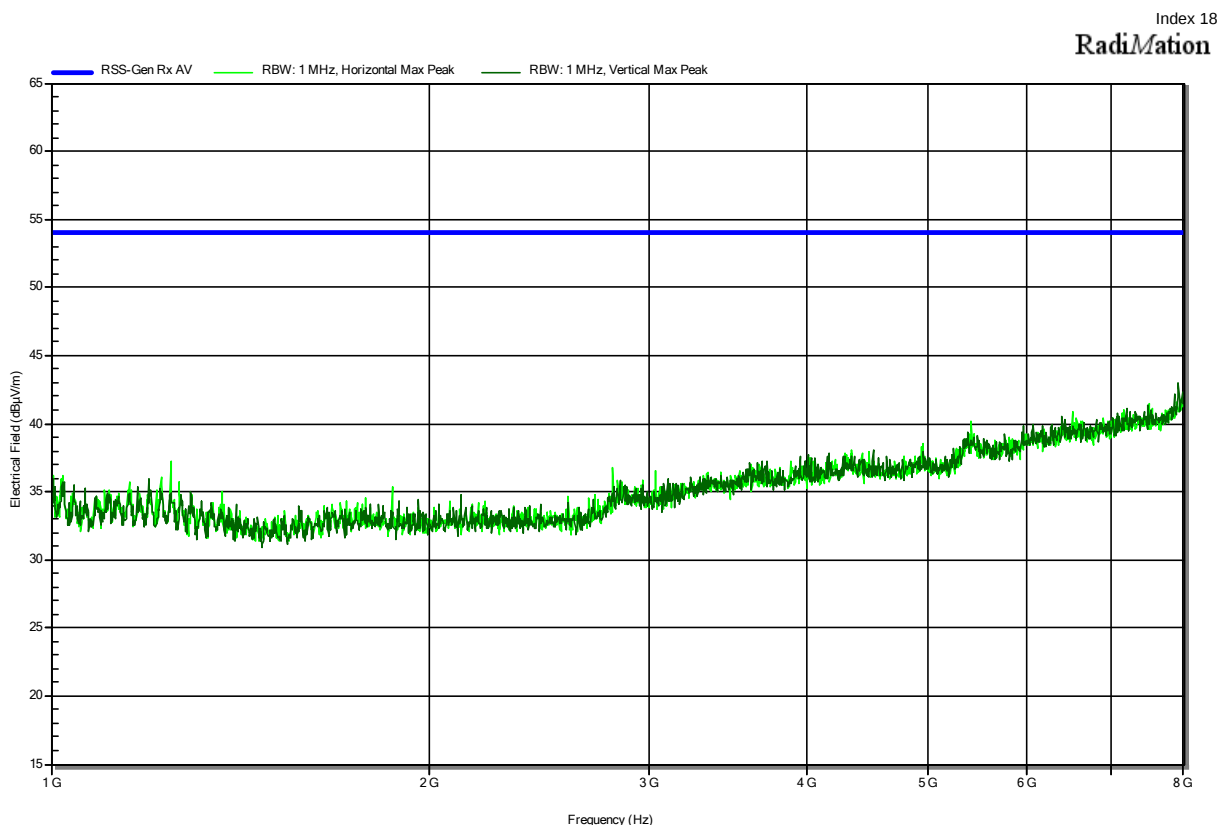
RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
954.5199 MHz	40.6 dBμV/m	46 dBμV/m	-5.36 dB	Pass	Vertical
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
954.5199 MHz	33.9 dBμV/m	46 dBμV/m	-12.11 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247, RSS-247 Issue 3

Project Number: G0M-2311-2314
 Applicant: Kamstrup A/S
 Model Description: Ultrasonic water meter
 Model: KWM4220
 Test Sample ID: 47281
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.6 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; Wall Antenna 6699490, 918.5 MHz
 Test Date: 2024-01-12



===== End of Test Report=====