

Test report for

47 CFR Part 15 Subpart C

RSS-247, RSS-Gen



Product name : Dräger Bluetooth module 9x11
Applicant : Dräger Safety AG & Co. KGaA
FCC ID : X6O-BT01
IC : 5895F-BT01

Test report No. : P000401885 001 Ver 2.0

Laboratory information

Accreditation

Kiwa Nederland B.V. complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:2017. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L248 and is granted by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

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Documentation

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Testing Location

Test Site	Kiwa Nederland B.V.
Test Site location	Wilmersdorf 50 7327 AC Apeldoorn The Netherlands Tel. +31 88998 3393
Test Site FCC	NL0001
CABID	NL0001

Revision History

Version	Date	Remarks	By
v0.5	01-08-2024	First draft	PvW
v1.0	09-09-2024	Initial release	PvW
V2.0	10-01-2025	Updated 30-250 MHz plots	PvW

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Summary of Test results

FCC	ISED	Description	Section in report	Verdict
15.247(d) 15.209 (a)	RSS-Gen 8.9	Radiated spurious emissions	3.1	Pass
15.205 (a)	RSS Gen 8.10	Spurious emissions in the restricted bands	3.1	Pass
15.247 (b)	RSS-247 5.4 (d)	RF output power	3.2	Pass

Decision rule: Pass/Fail decisions are based on measurement results without taking into account measurement uncertainty.

1 General Description

1.1 Applicant

Client name:	Dräger Safety AG & Co. KGaA
Address	Revalstr. 1 23560 Lübeck Germany
Telephone:	+49 (0)4501 882 1623
E-mail:	Lutz.rueffert@draeger.com
Contact name:	Lutz Rüffert

1.2 Manufacturer

Manufacturer name:	Dräger Safety AG & Co. KGaA
Address:	Revalstr. 1 23560 Lübeck Germany
Telephone:	+49 (0)4501 882 1623
E-mail:	Lutz.rueffert@draeger.com
Contact name:	Lutz Rüffert

1.3 Tested Equipment Under Test (EUT)

Product name:	Dräger Bluetooth Module 9x11
Brand name:	Dräger Safety
FCC ID:	X6O-BT01
IC:	5895F-BT01
Product description:	Bluetooth Low Energy module
Variant model(s):	--
Batch and/or serial No.	RL3713475-02
Software version:	V3.4.99-ncs1-1
Hardware version:	3711863-02
Date of receipt:	17-07-2024
Tests started:	26-07-2024
Testing ended:	10-01-2025

1.3.1 Auxiliary items

AUX1

Product name:	Batteries for EUT
Product type:	2x 1.5V battery
Remarks:	Connects to EUT

1.4 Product specifications of Equipment under test

Tx Frequency:	BLE: 2400 – 2483.5 MHz
Rx frequency:	BLE: 2400 – 2483.5 MHz
Occupied channel width:	2 MHz
Antenna type:	Chip antenna
Antenna gain:	-2 dBi
Type of modulation:	GFSK
Emission designator	1M07F1D (1Mbps) 2M05F1D (2Mbps)

Disclaimer: The operating frequency bands are declared by the applicant

1.5 Environmental conditions

Normal test conditions:

Temperature (*) : +15°C to +35°C
Relative humidity(*) : 20 % to 75 %

1.6 Measurement standards

- ANSI C63.10:2013
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02

1.7 Applicable standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.209
- FCC Part 15 Subpart C §15.247
- RSS-Gen Issue 5
- RSS-247 Issue 3

1.8 Observation and remarks

This is a retest of a previously tested and certified product. The product has been tested again for FCC part 15C because of a firmware update of the RF module.

The original test reports are:

201100701 004

201100701 005

201100701 006

The original certificate is no. 202181030/AA/00

1.9 Modifications to the EUT (Equipment Under Test)

None.

1.10 Conclusions

The sample of the product showed **NO NON-COMPLIANCES** to the specifications stated in paragraph 1.7 of this report.

The results of the test as stated in this report, are exclusively applicable to the product items as identified in this report. Kiwa Nederland B.V. accepts no responsibility for any properties of product items in this test report, which are not supported by the tests as specified in paragraph 1.7 "*Applicable standards*".

All tests are performed by:

Name : P. van Wanrooij, BASc

Review of test methods and report by:

Name : ing. R. van Barneveld

The above conclusions have been verified by the following signatory:

Date : 13-01-2025

Name : ing. R. van Barneveld

Function : Test Engineer

Signature :

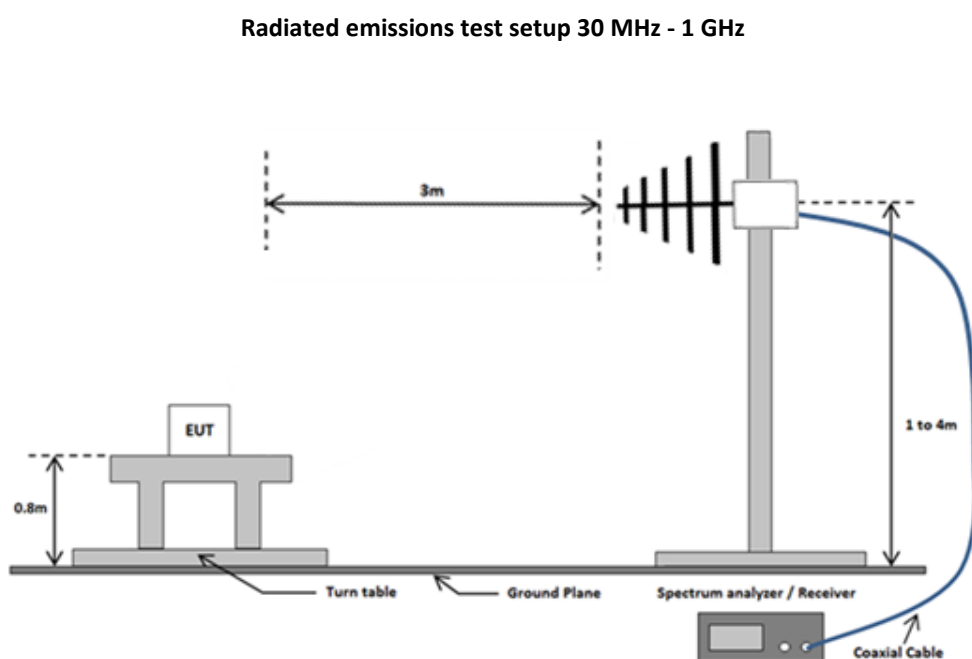
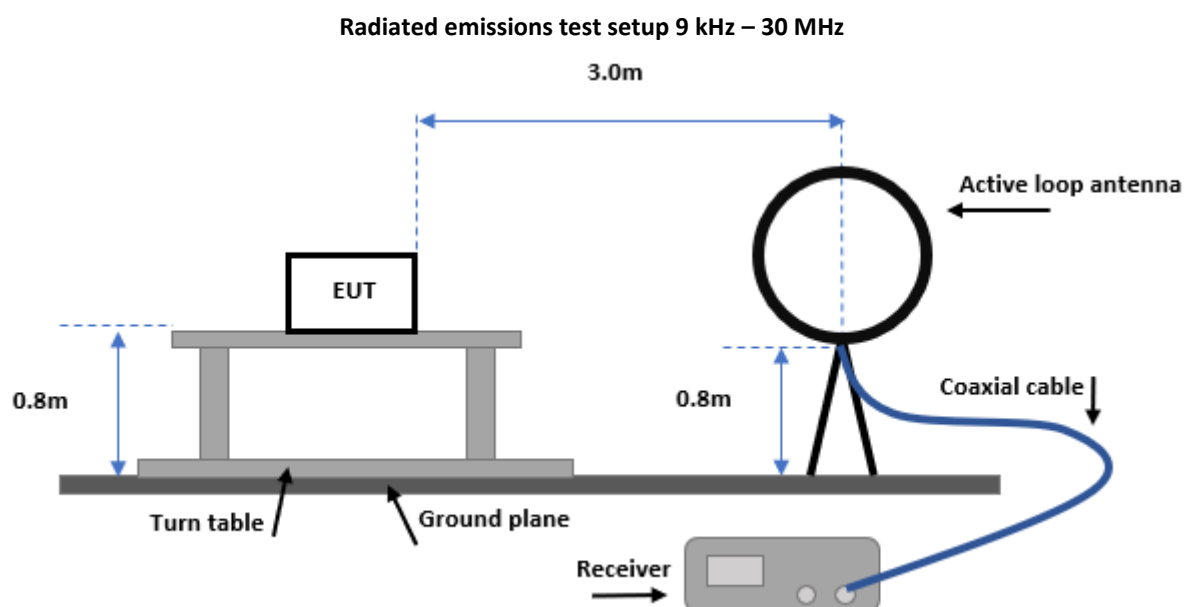
A handwritten signature in blue ink, consisting of a stylized 'R' followed by several horizontal strokes.

2 Test configuration of the Equipment Under Test

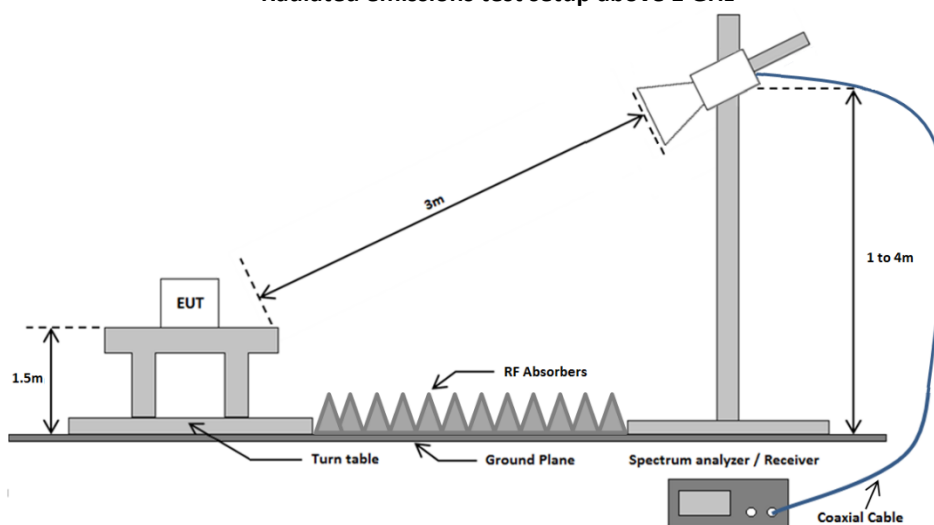
2.1 Test mode

The manufacturer provided test mode commands to set the EUT in continuous transmit mode for all required frequencies.

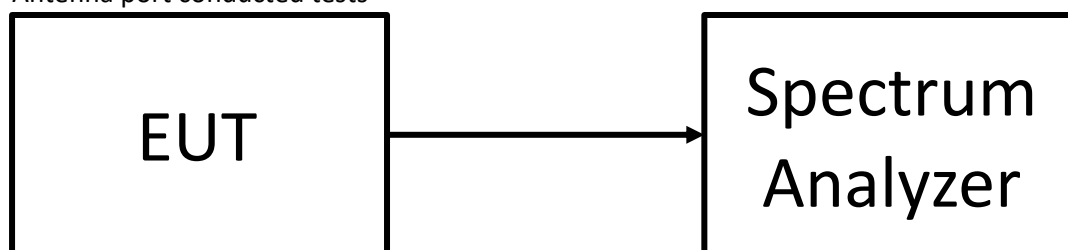
2.2 Test setups



Radiated emissions test setup above 1 GHz



Antenna port conducted tests



2.3 Equipment used in the test configuration

Equipment list for measurements done on 26/07/2024

Description	Manufacturer	Model	ID	Cal. Done date	Cal. due date	Used at Par.
EMI Receiver	Rohde & Schwarz	ESR7	114870	09-2022	09-2024	3.1; 3.2
Spectrum Analyzer	Rohde & Schwarz	FSV3044	114923	10-2023	10-2025	3.1
3.0 GHz HPF	Wainwright	WHK3.0/18G-10EF	114682	09-2021	09-2024	3.1
Biconical antenna + 6dB attenuator	EMCO	3146	107818	06-2022	06-2025	3.1
Logperiodic antenna	EMCO	3147	114385	02-2021	02-2026	3.1
Horn antenna	EMCO	3115	114607	01-2021	01-2025	3.1
Horn antenna	FLANN-MICROWAVE	20240-25	114518	NA*	NA*	3.1
Preamplifier 1-18 GHz	µComp Nordic	MCNA-40-0010800-25-10P	114771	08-2024	08-2025	3.1
Preamplifier 18-40 GHz	Schwarzbeck	BBV-9721	115026	06-2024	06-2025	3.1
Semi-Anechoic Chamber	ETS Lindgren	SAR	114624	03-2023	03-2026	3.1
Test software	Raditeq	Radimation Version 2023.2.3	--	--	--	3.1

*Note: Standard gain horn antennas do not need calibration

NA= Not Applicable

Equipment list for measurements done on 10-01-2025

Description	Manufacturer	Model	ID	Cal. Done date	Cal. due date	Used at Par.
EMI Receiver	Rohde & Schwarz	ESR7	114605	11-2024	11-2025	3.1
Spectrum Analyzer	Rohde & Schwarz	FSV3044	114923	10-2023	10-2025	3.1
Biconical antenna + 6dB attenuator	Schwarzbeck	VHA 9130	114436	11-2024	11-2027	3.1
Semi-Anechoic Chamber	ETS Lindgren	SAR	114624	03-2023	03-2026	3.1
Test software	Raditeq	Radimation Version 2023.2.3	--	--	--	3.1, 3.6
LISN /Two line V-network	Rohde & Schwarz	ENV 216	114379	11-2023	11-2025	3.6

2.4 Sample calculations

All formulas for data conversions and conversion factors are reported in chapter 4 of this test report.

3 Test results

3.1 Radiated spurious emissions

3.1.1 Limit

15.209(a)

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance(m)
0.009 – 0.490	2400/F(kHz)	$20 \cdot \{\log[2400] - \log[F(\text{kHz})]\}$	300*
0.490 – 1.705	24000/F(kHz)	$20 \cdot \{\log[24000] - \log[F(\text{kHz})]\}$	30*
1.705 – 13.11 14.01 – 30.0	30	29.5	30*
30 -88	100	40	3
88 - 216	150	43,5	3
216-960	200	46	3
Above 960	500	54	3

*Note: Measured values in the plots 9 kHz to 30 MHz corrected to 30m or 300m limit distance according to the method described in ANSI C63.10-2013, clause 6.4

3.1.2 Measurement instruments

The measurement instruments are listed in chapter 2.3 of this report.

3.1.3 Test setup

The test setup is as shown in chapter 2.2 of this report.

3.1.4 Test procedure

9 kHz – 30 MHz: According to ANSI C63.10-2013, section 6.4

30 MHz to 26.5 GHz: According to ANSI C63.10-2013, section 6.5 and 6.6

9 kHz to 30 MHz: IRN 441 – Method 10

30 MHz to 1 GHz: IRN 441 – Method 1

1 GHz to 18 GHz: IRN 441– Method 2

18 to 26 GHz: IRN 441– Method 3

In case of handheld and/or body-worn equipment, the EUT's orientation (X, Y, Z) was varied in order to ensure that maximum emission amplitudes were attained. In all other cases the associated cabling and the EUT orientation was varied for maximum emissions.

The spectrum was examined from 0.009 MHz to 10 times X GHz, not more than the 10th harmonic of the highest intentional generated frequency (X GHz). Final radiated emission measurements were made at 3m distance.

The 6 highest emission amplitudes relative to the appropriate limit were recorded in this report. Field strength values of radiated emissions at frequencies not listed in the tables are more than 20 dB below the applicable limit.

3.1.5 Measurement Uncertainty

Frequency range	Polarization	Uncertainty
9 kHz – 30 MHz	--	±1.6 dB
30 – 200 MHz	Horizontal	±4.5 dB
	Vertical	±5.4 dB
200 -1000 MHz	Horizontal	±3.6 dB
	Vertical	±4.6 dB
1 – 18 GHz	Horizontal	±5.7 dB
	Vertical	±5.7 dB
18 – 26.5 GHz	Horizontal	±4.9 dB
	Vertical	±4.9 dB

3.1.6 Test results

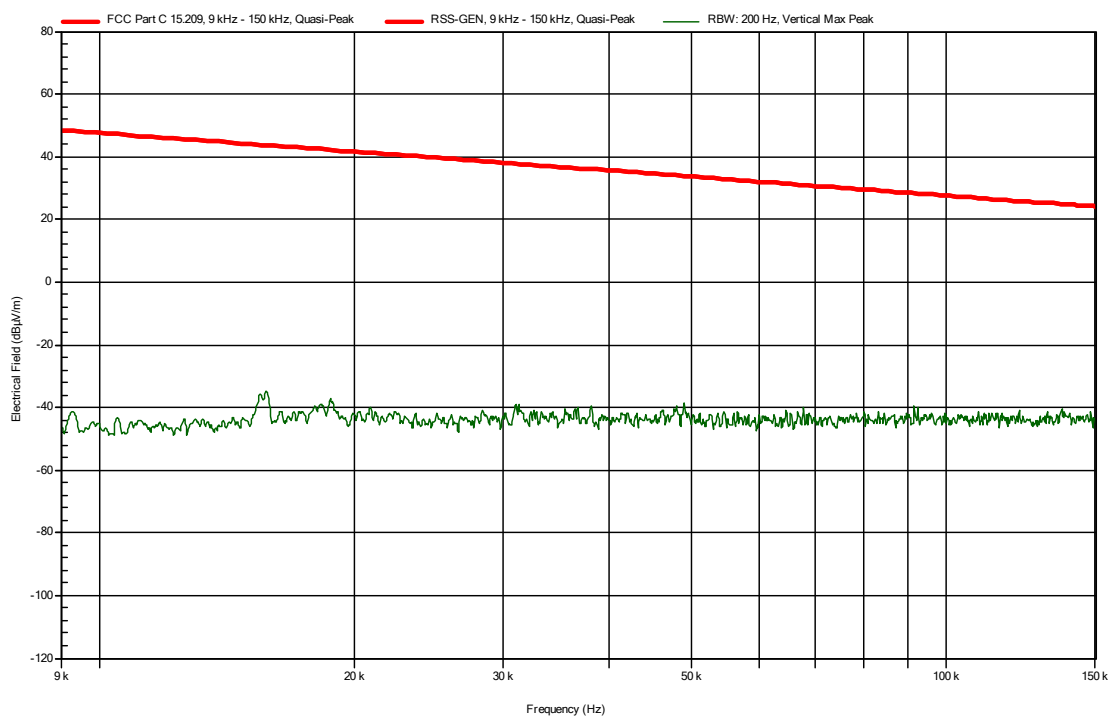
Frequency	Peak	Quasi-Peak	Quasi-Peak Limit	Height	Polarization	Status	Channel
958,563 MHz	45,2 dB μ V/m	31,9 dB μ V/m	46 dB μ V/m	2 m	Vertical	Pass	Low
896,875 MHz	43,9 dB μ V/m	30,8 dB μ V/m	46 dB μ V/m	1 m	Vertical	Pass	Mid
70,272 MHz	15,6 dB μ V/m	3,7 dB μ V/m	40 dB μ V/m	1,5 m	Vertical	Pass	Low
67,435 MHz	14,5 dB μ V/m	3,6 dB μ V/m	40 dB μ V/m	3 m	Vertical	Pass	Low
61,431 MHz	16,7 dB μ V/m	4,6 dB μ V/m	40 dB μ V/m	2 m	Horizontal	Pass	Low
100,062 MHz	18,9 dB μ V/m	7,5 dB μ V/m	43,5 dB μ V/m	1 m	Horizontal	Pass	Low
63,468 MHz	22,8 dB μ V/m	4,2 dB μ V/m	40 dB μ V/m	1 m	Horizontal	Pass	Low
103,508 MHz	28,8 dB μ V/m	7,8 dB μ V/m	43,5 dB μ V/m	1 m	Horizontal	Pass	Low
60,168 MHz	33,1 dB μ V/m	4,7 dB μ V/m	40 dB μ V/m	1 m	Vertical	Pass	Mid
68,28 MHz	28,2 dB μ V/m	3,6 dB μ V/m	40 dB μ V/m	1,5 m	Vertical	Pass	Mid
71,388 MHz	28,5 dB μ V/m	4,7 dB μ V/m	40 dB μ V/m	1,5 m	Vertical	Pass	Mid
76,97 MHz	26,8 dB μ V/m	3,7 dB μ V/m	40 dB μ V/m	1,5 m	Vertical	Pass	Mid
134,253 MHz	29,6 dB μ V/m	12 dB μ V/m	43,5 dB μ V/m	2,5 m	Horizontal	Pass	Mid
63,495 MHz	22,8 dB μ V/m	4 dB μ V/m	40 dB μ V/m	2 m	Horizontal	Pass	Mid
55,575 MHz	31,4 dB μ V/m	5,7 dB μ V/m	40 dB μ V/m	1 m	Vertical	Pass	High
55,218 MHz	29,9 dB μ V/m	5,9 dB μ V/m	40 dB μ V/m	1 m	Vertical	Pass	High
78,373 MHz	25,6 dB μ V/m	3,4 dB μ V/m	40 dB μ V/m	1 m	Vertical	Pass	High
66,19 MHz	23,6 dB μ V/m	3,7 dB μ V/m	40 dB μ V/m	3 m	Vertical	Pass	High
106,065 MHz	30,5 dB μ V/m	8,3 dB μ V/m	43,5 dB μ V/m	1,5 m	Horizontal	Pass	High
106,038 MHz	23,9 dB μ V/m	8,3 dB μ V/m	43,5 dB μ V/m	1,5 m	Horizontal	Pass	High
161,423 MHz	29 dB μ V/m	13,2 dB μ V/m	43,5 dB μ V/m	2,5 m	Horizontal	Pass	High

Note: all the measured peaks in the 30-250 MHz range are generated by the turntable which is part of the test site, they are not generated by the EUT.

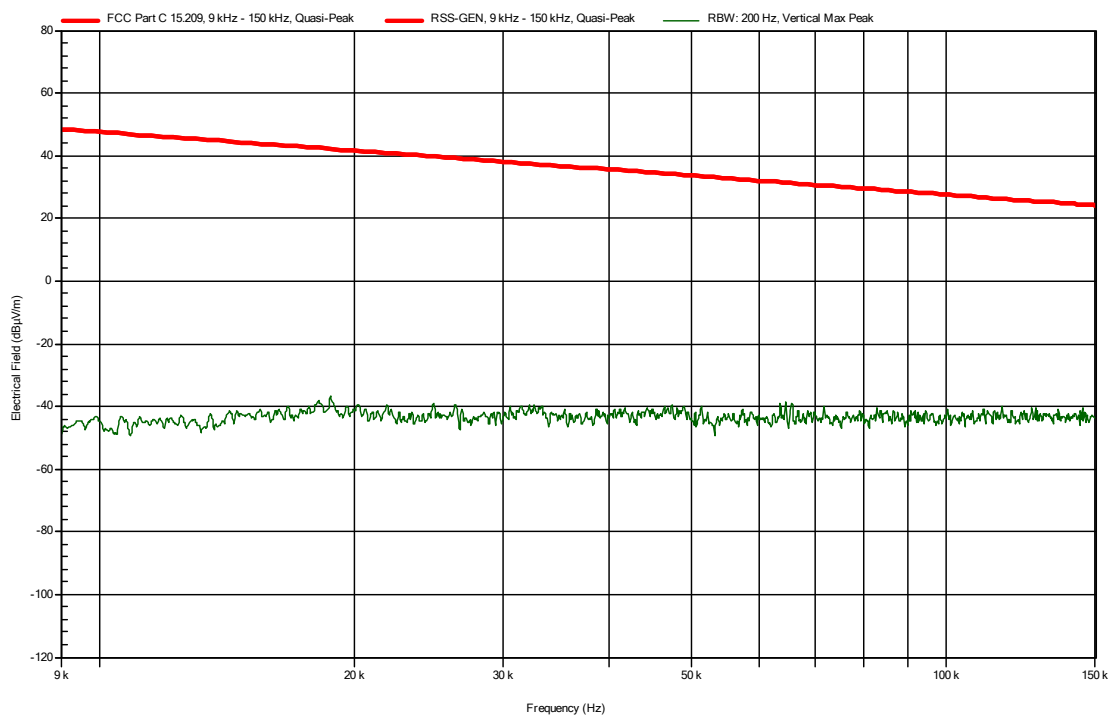
Frequency	Average	Average Limit	Peak	Peak Limit	Height	Polarization	Status	Channel
7,205 GHz	43,6 dB μ V/m	54 dB μ V/m	54,3 dB μ V/m	74 dB μ V/m	2,7 m	Vertical	Pass	Low
7,313 GHz	43,7 dB μ V/m	54 dB μ V/m	55,1 dB μ V/m	74 dB μ V/m	3,5 m	Vertical	Pass	Mid

The results of the radiated emission tests are depicted in the tables above. A selection of plots is provided on the next pages

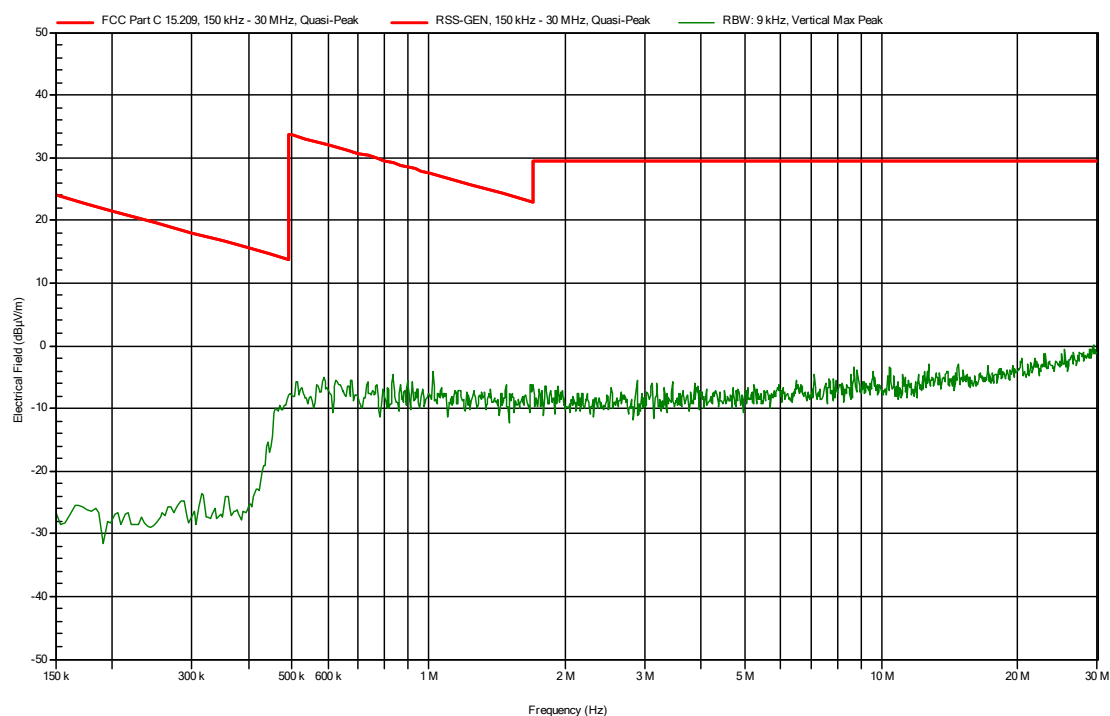
3.1.7 Plots of the Radiated Spurious Emissions Measurement



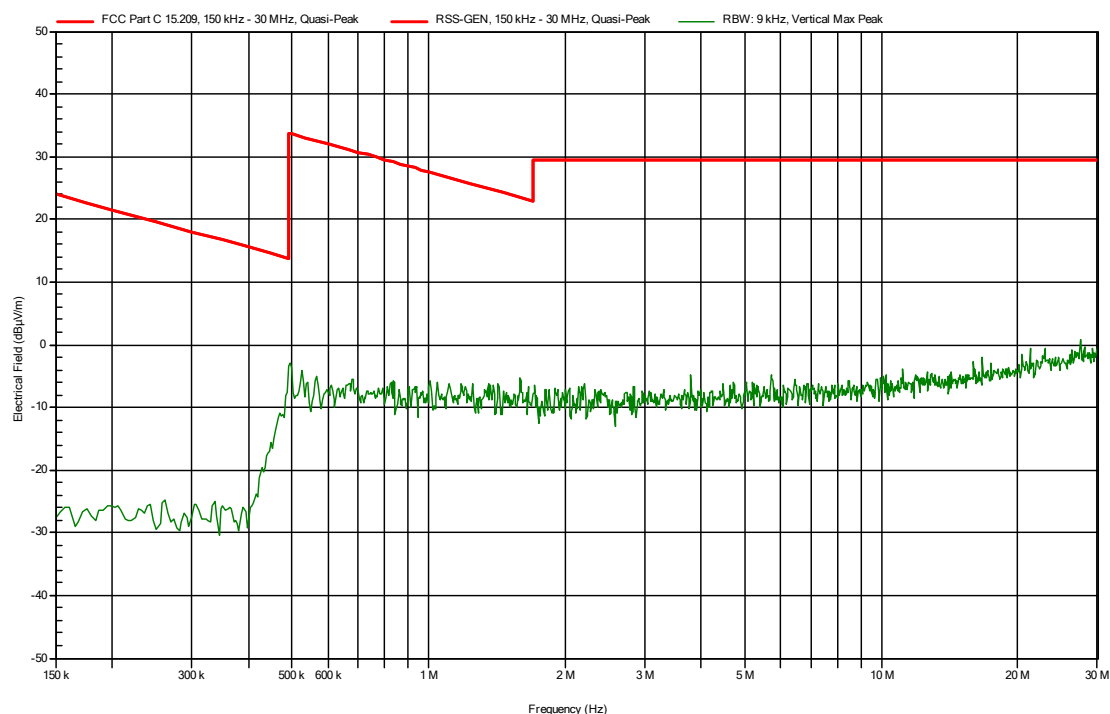
Plot 1a: radiated emissions of the EUT, Antenna perpendicular, in the range 9 – 150KHz (pre-scan peak values shown)



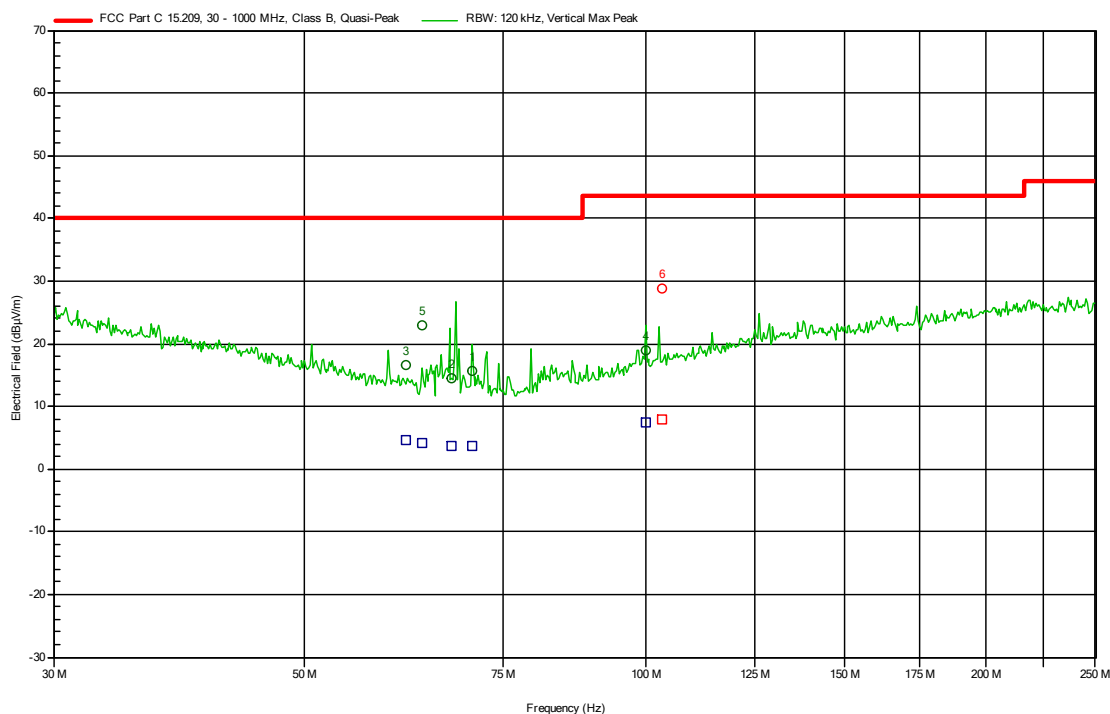
Plot 1b: radiated emissions of the EUT, Antenna parallel, in the range 9 – 150KHz (pre-scan peak values shown)



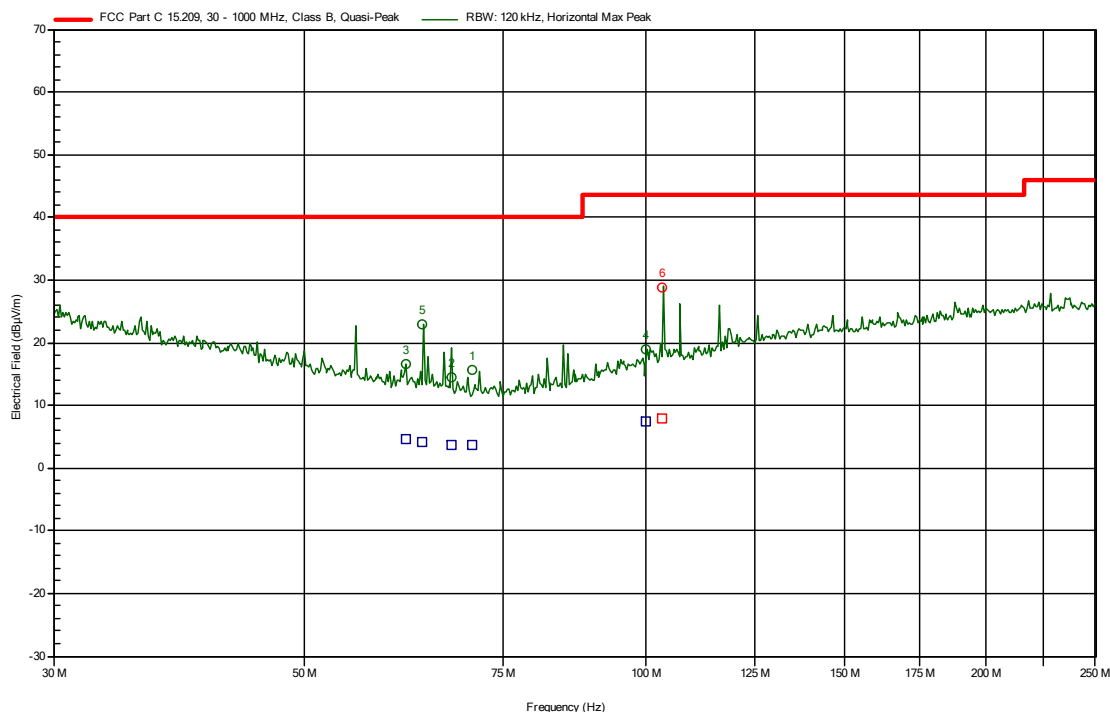
Plot 2a: radiated emissions of the EUT, Antenna perpendicular, in the range 150KHz-30 MHz (pre-scan peak values shown)



Plot 2b: radiated emissions of the EUT, Antenna parallel, in the range 150KHz-30 MHz (pre-scan peak values shown)

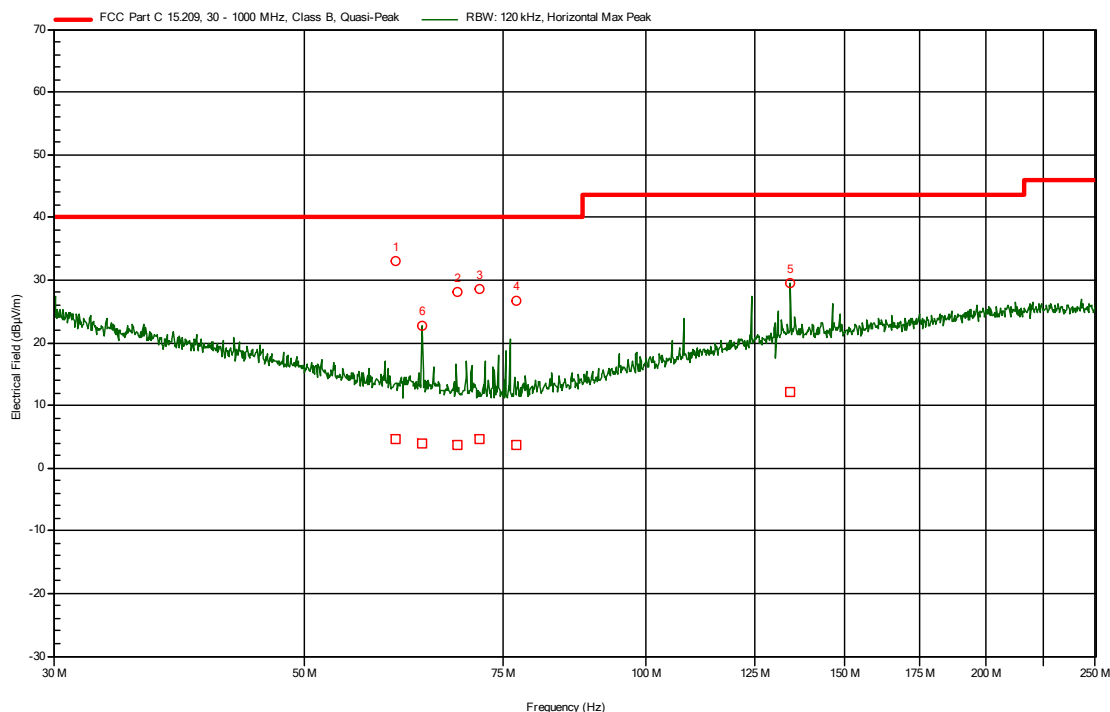
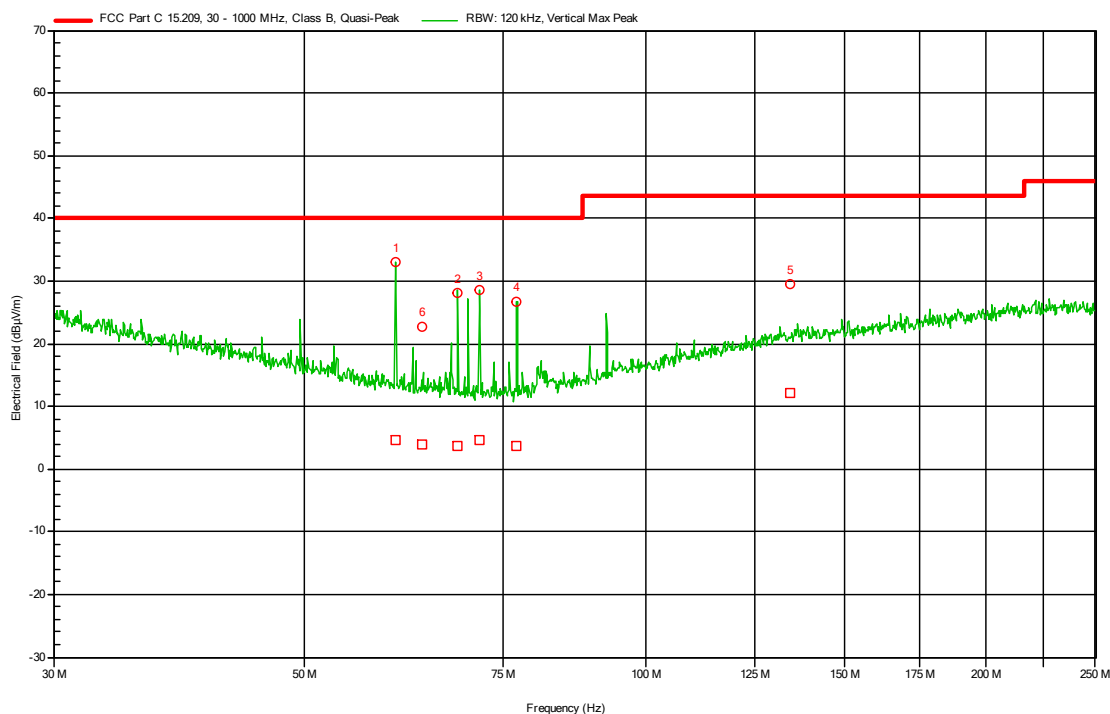


Plot 3a: radiated emissions of the EUT, Antenna vertical, in the range 30 – 250 MHz
(pre-scan peak values shown)
Low channel

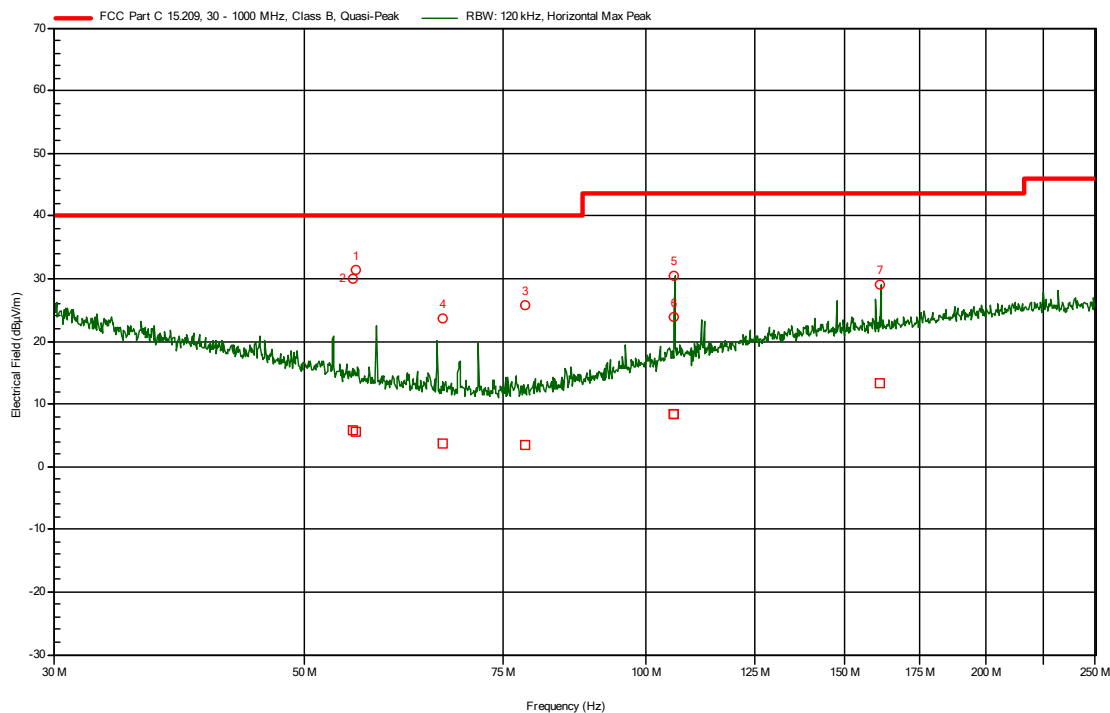
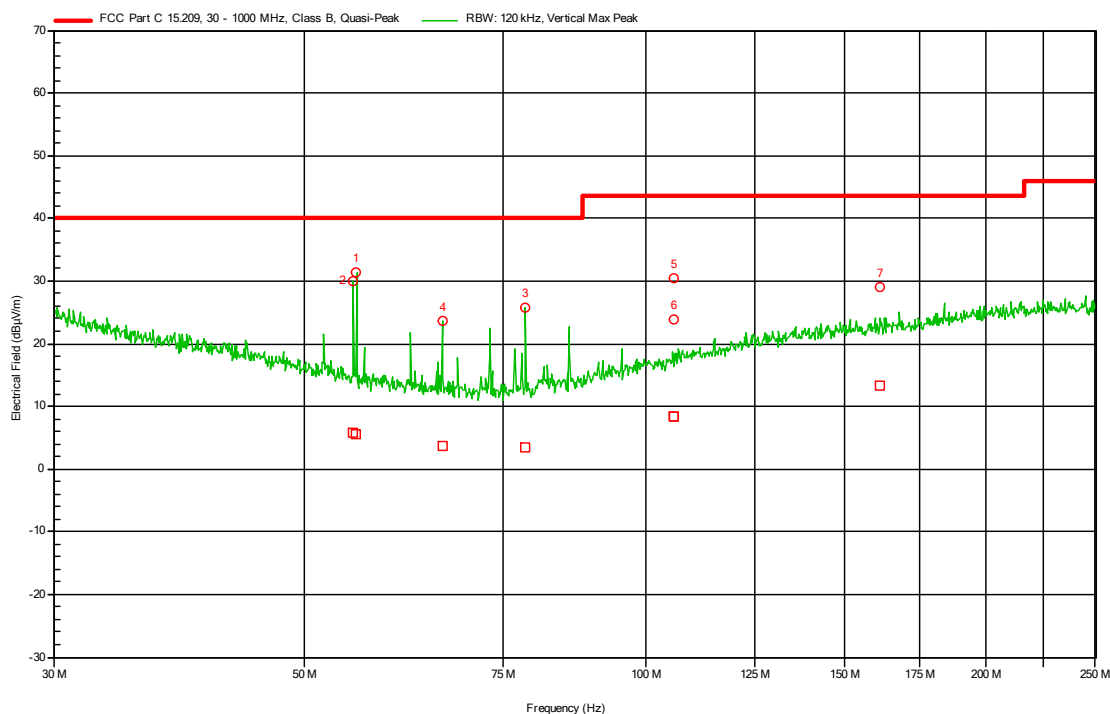


Plot 3b: radiated emissions of the EUT, Antenna horizontal, in the range 30 – 250 MHz
(pre-scan peak values shown)
Low channel

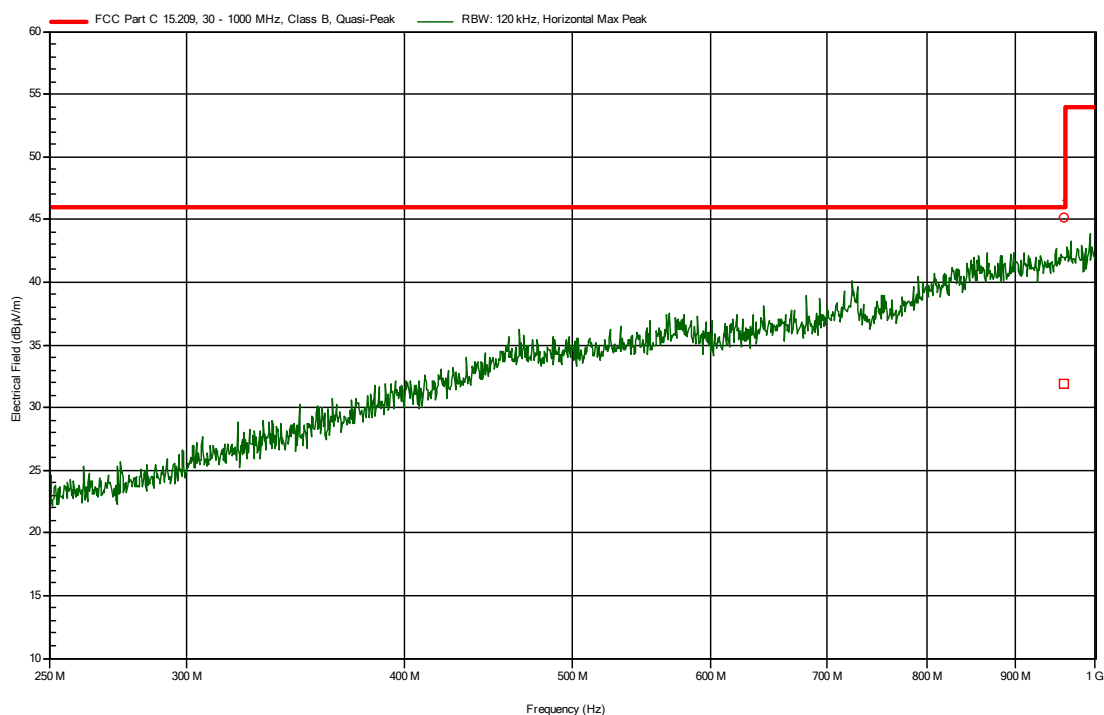
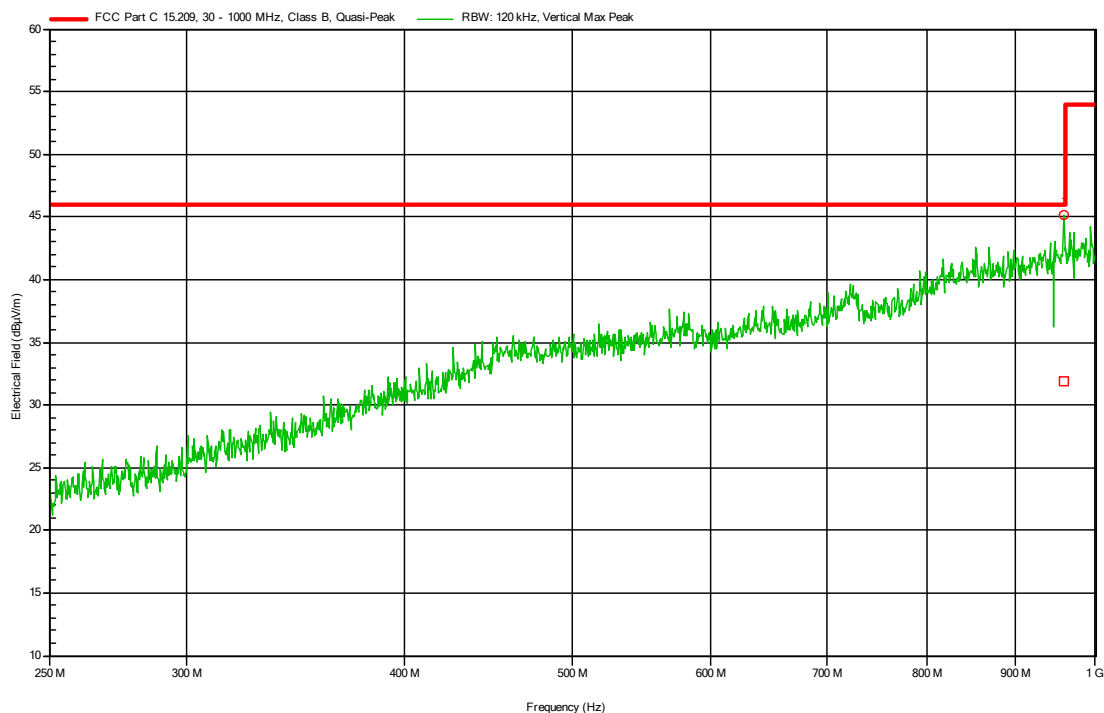
Note: all the measured peaks in the 30-250 MHz range are generated by the turntable which is part of the test site, they are not generated by the EUT.

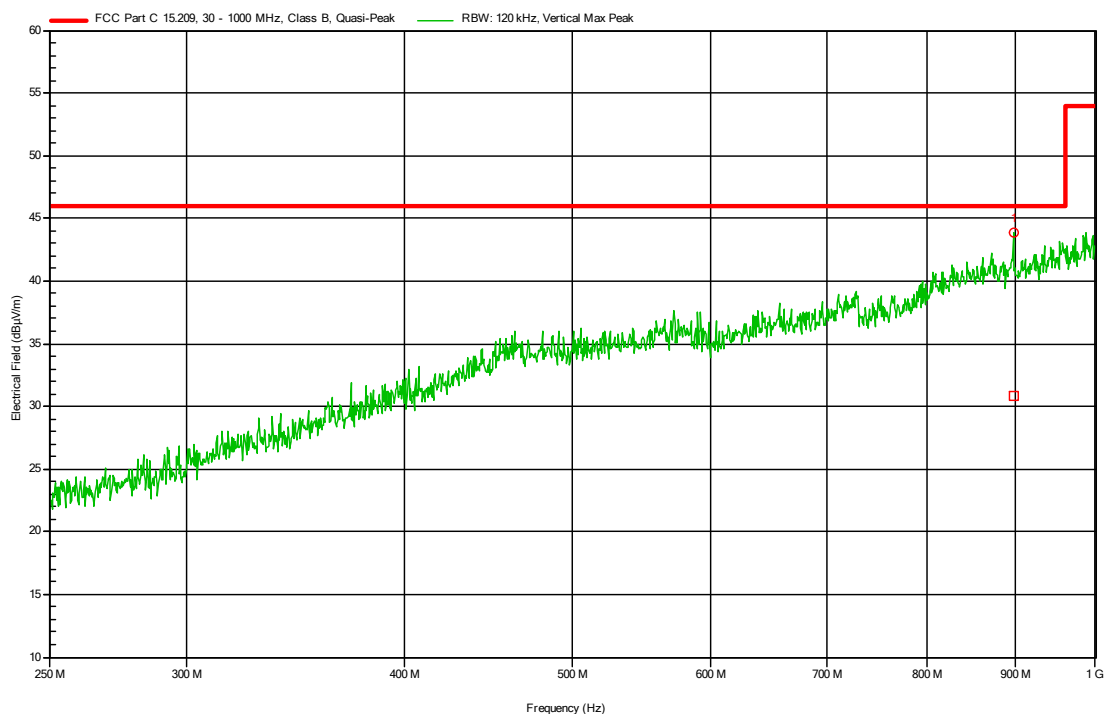


Note: all the measured peaks in the 30-250 MHz range are generated by the turntable which is part of the test site, they are not generated by the EUT.

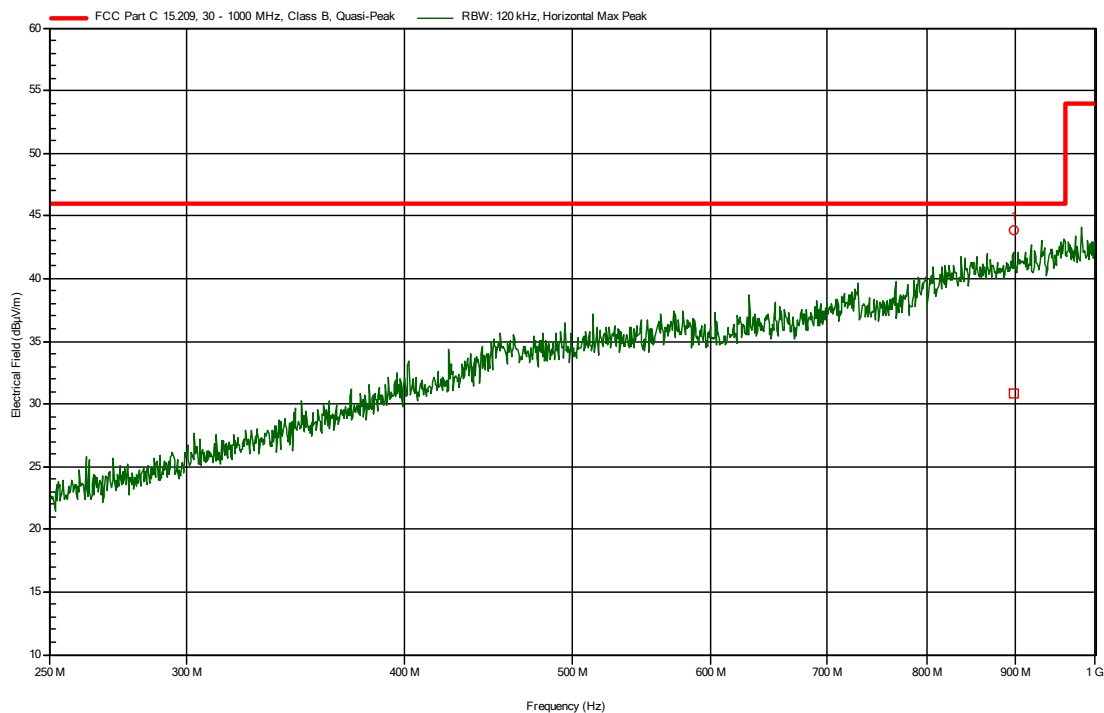


Note: all the measured peaks in the 30-250 MHz range are generated by the turntable which is part of the test site, they are not generated by the EUT.

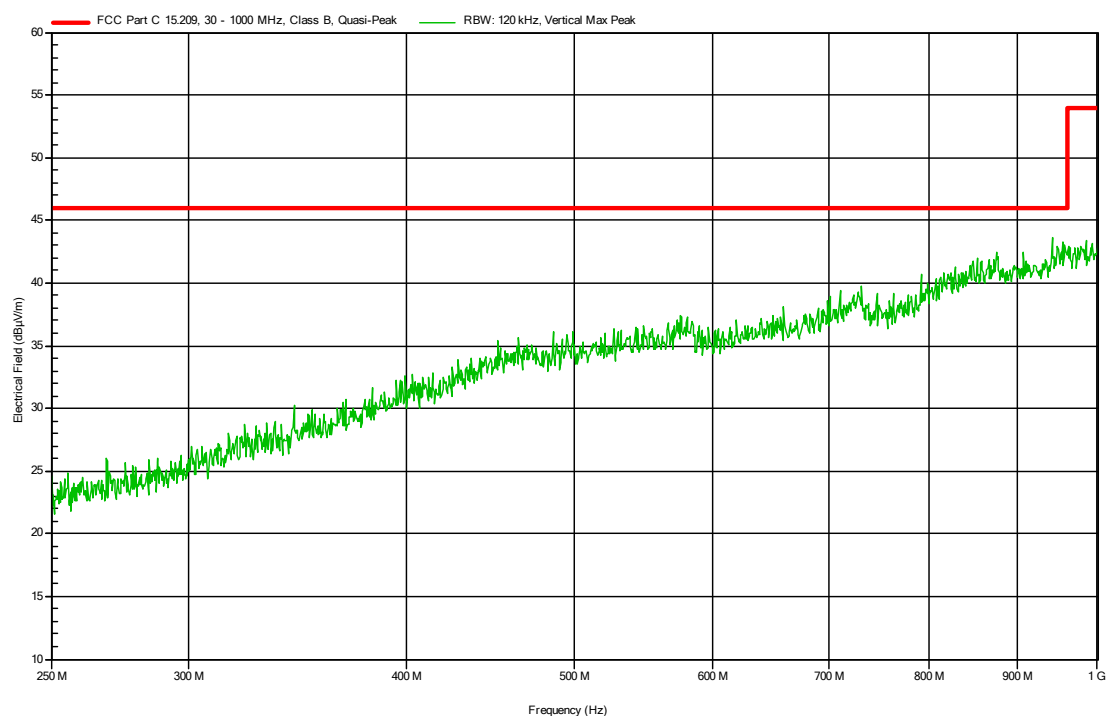




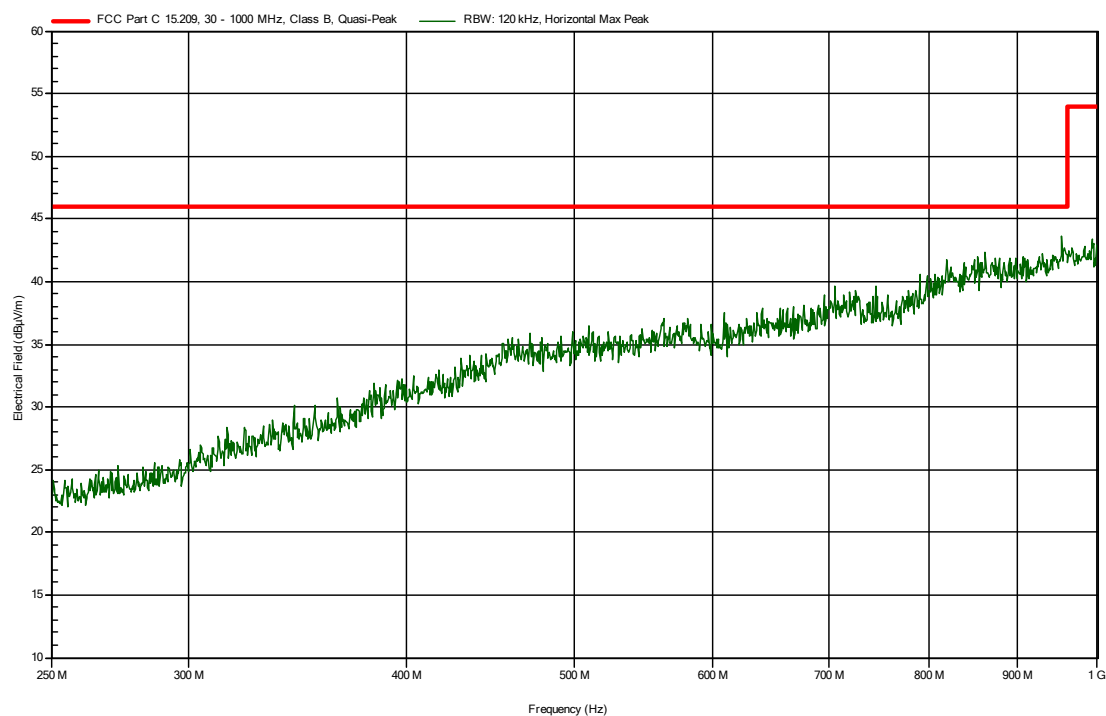
Plot 4c: radiated emissions of the EUT, Antenna vertical, in the range 250-1000 MHz
(pre-scan peak values shown)
Middle channel



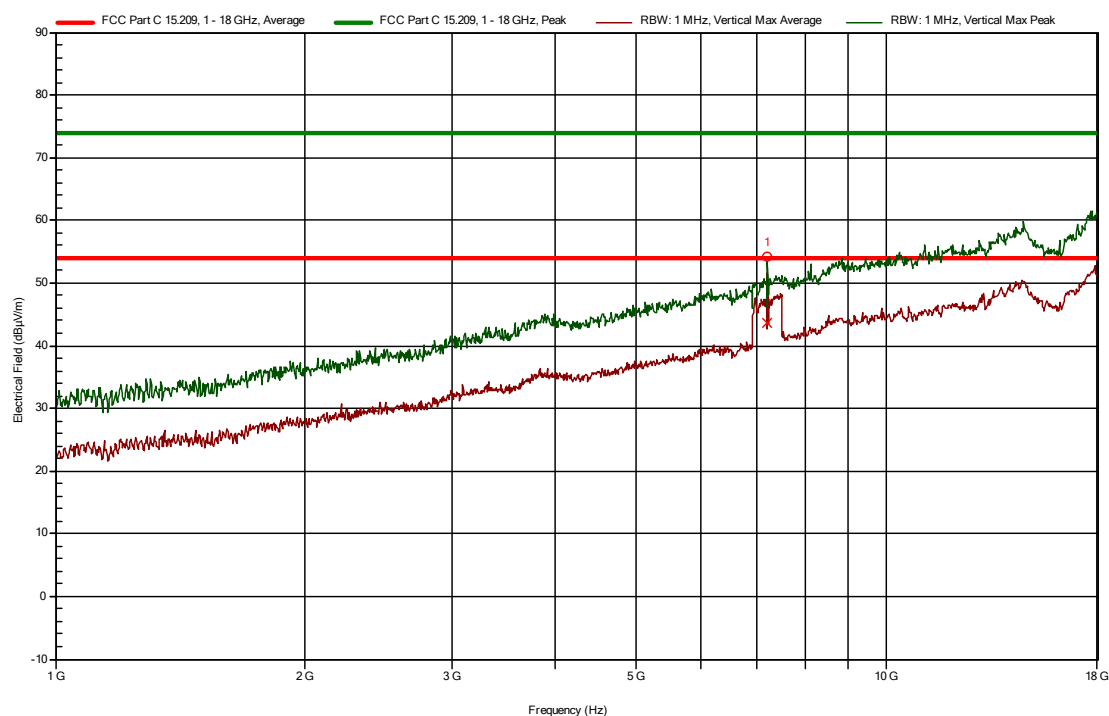
Plot 4d: radiated emissions of the EUT, Antenna horizontal, in the range 250-1000 MHz
(pre-scan peak values shown)
Middle channel



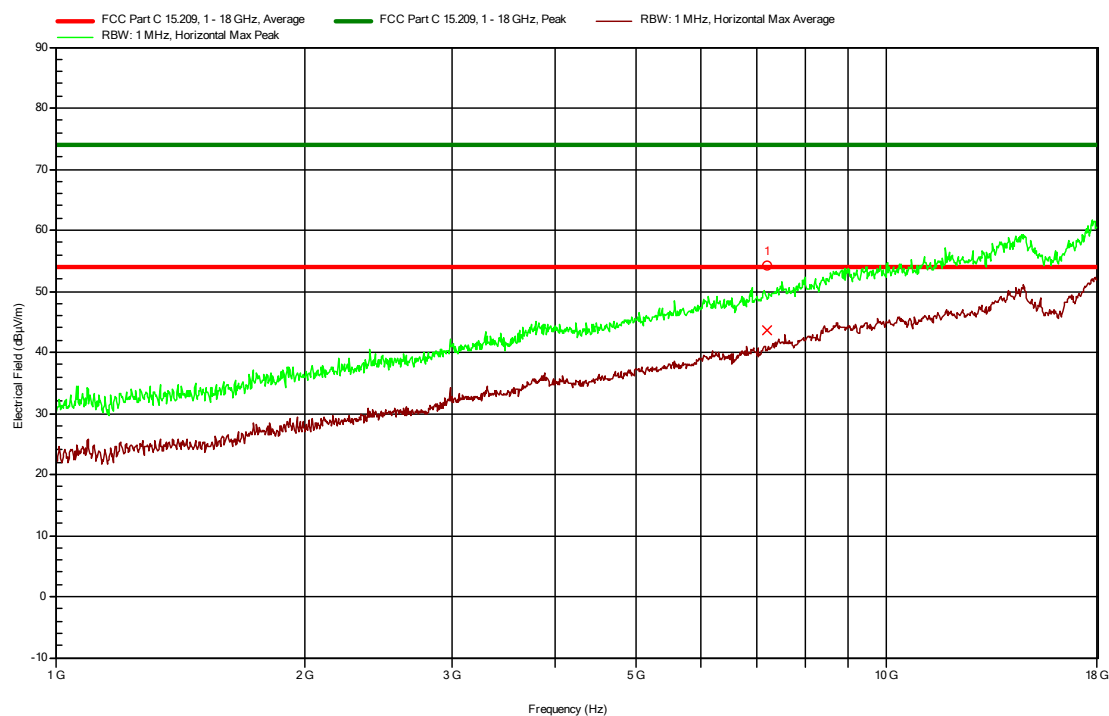
Plot 4e: radiated emissions of the EUT, Antenna vertical, in the range 250-1000 MHz
(pre-scan peak values shown)
High channel



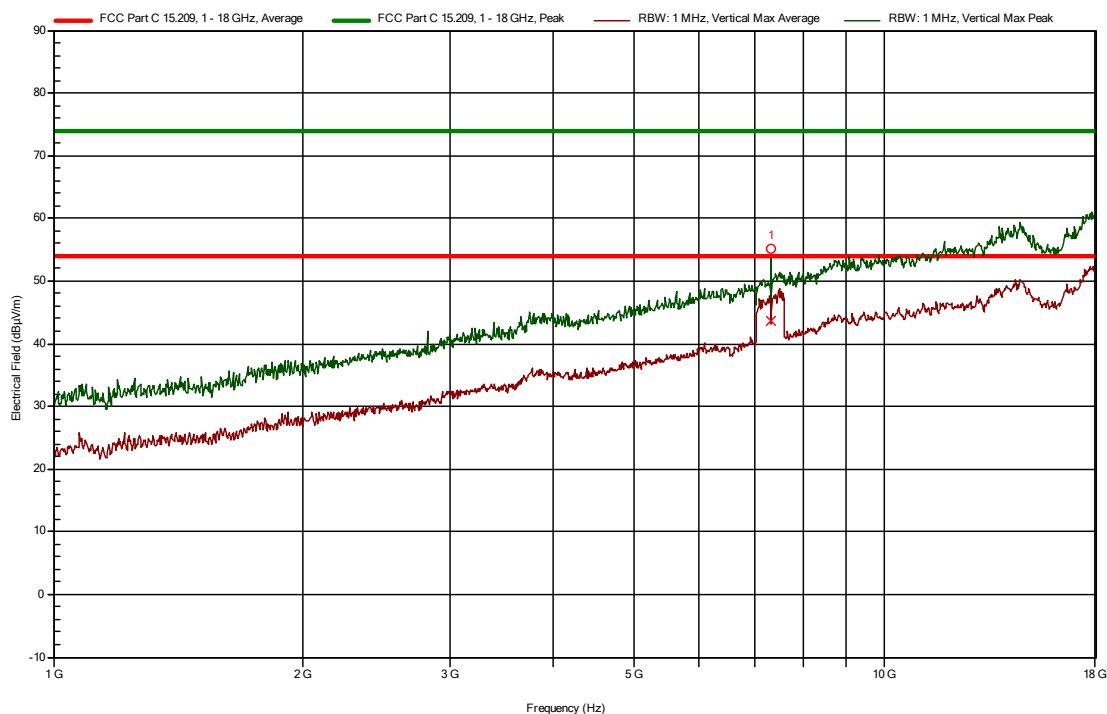
Plot 4f: radiated emissions of the EUT, Antenna horizontal, in the range 250-1000 MHz
(pre-scan peak values shown)
High channel



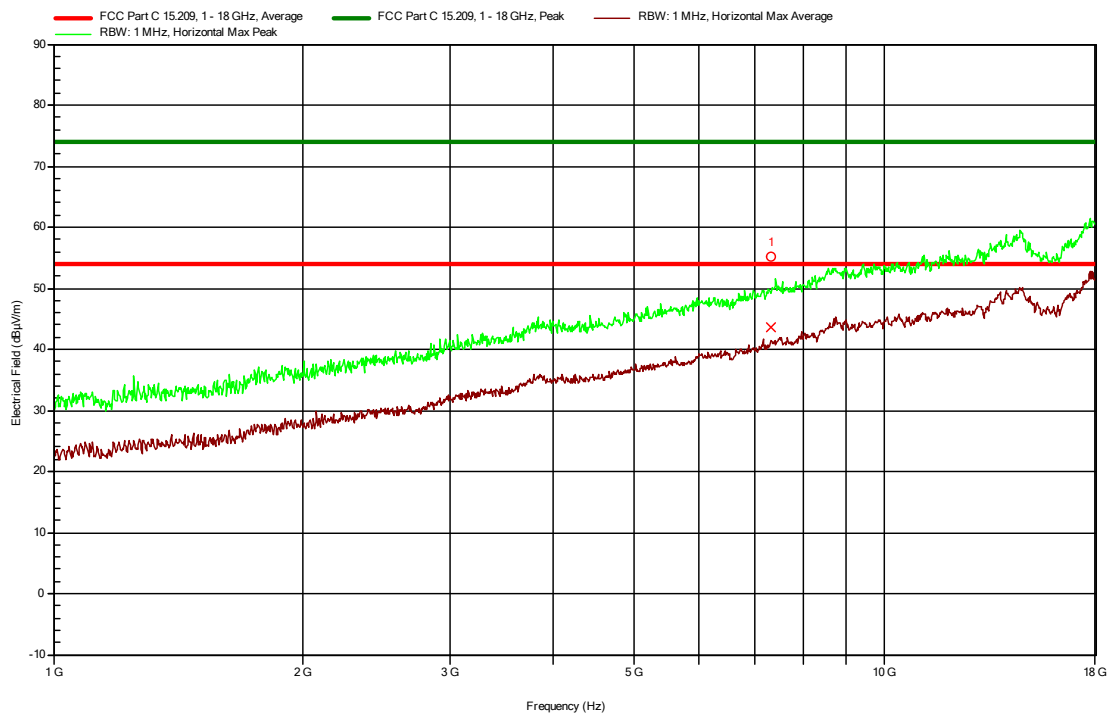
Plot 5a: radiated emissions of the EUT, Antenna vertical, in the range 1 – 18 GHz
(peak and average values shown)
Low channel



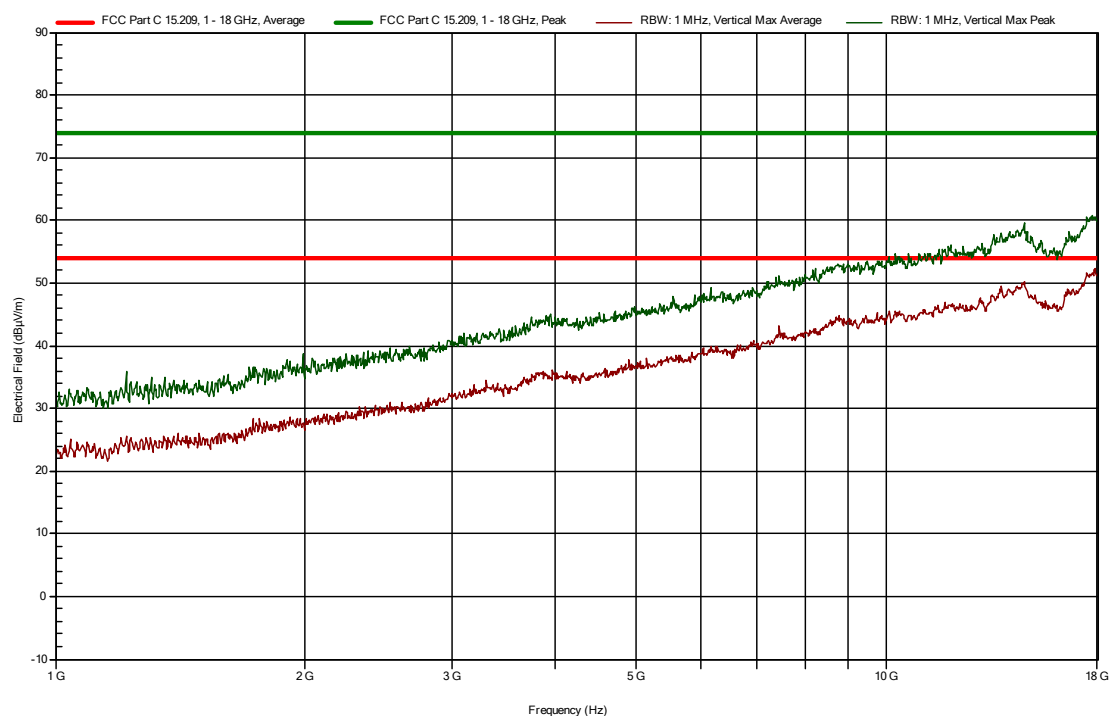
Plot 5b: radiated emissions of the EUT, Antenna horizontal, in the range 1 – 18 GHz
(peak and average values shown)
Low channel



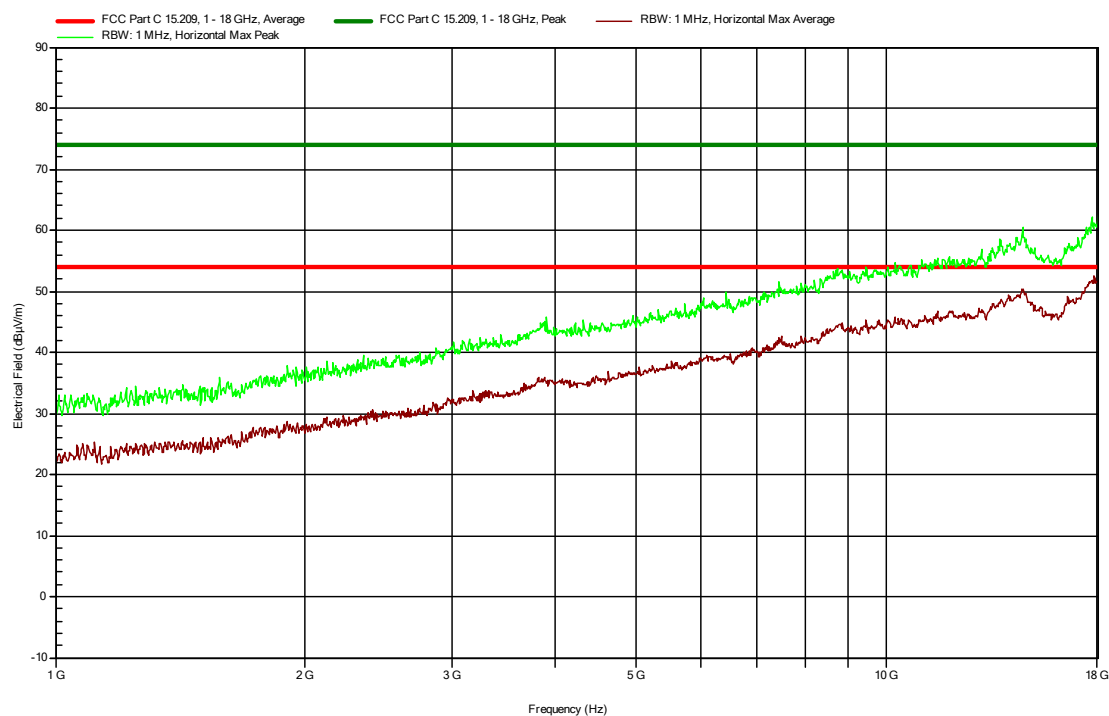
Plot 5c: radiated emissions of the EUT, Antenna vertical, in the range 1 – 18 GHz
(peak and average values shown)
Middle channel



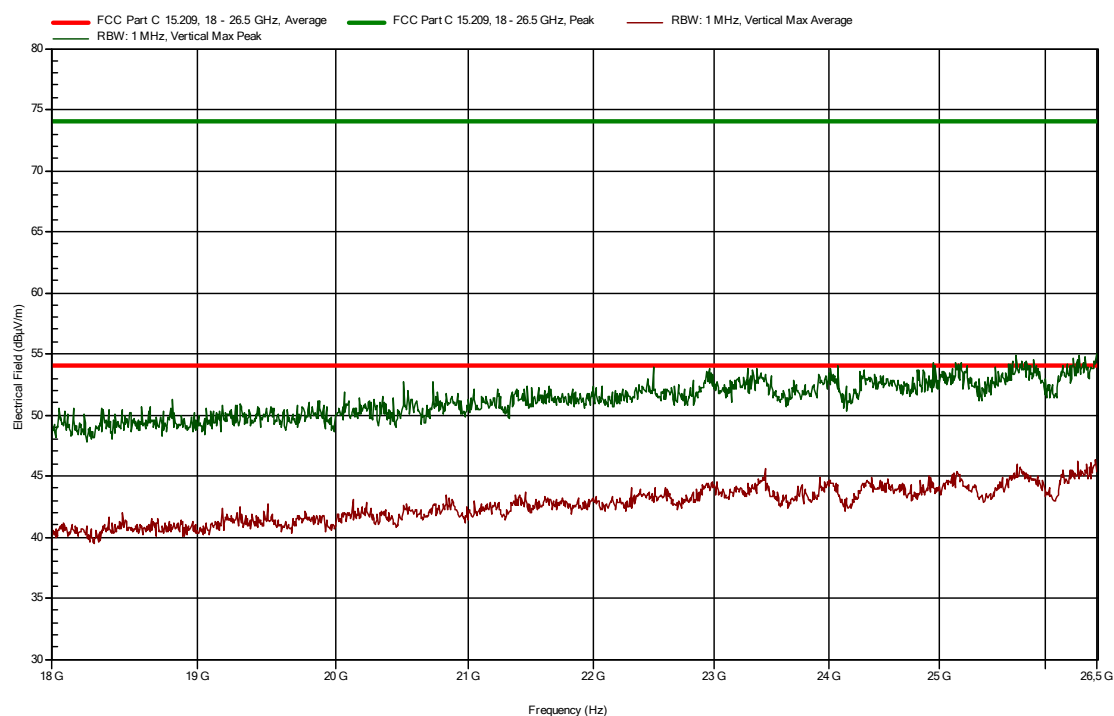
Plot 5d: radiated emissions of the EUT, Antenna horizontal, in the range 1 – 18 GHz
(peak and average values shown)
Middle channel



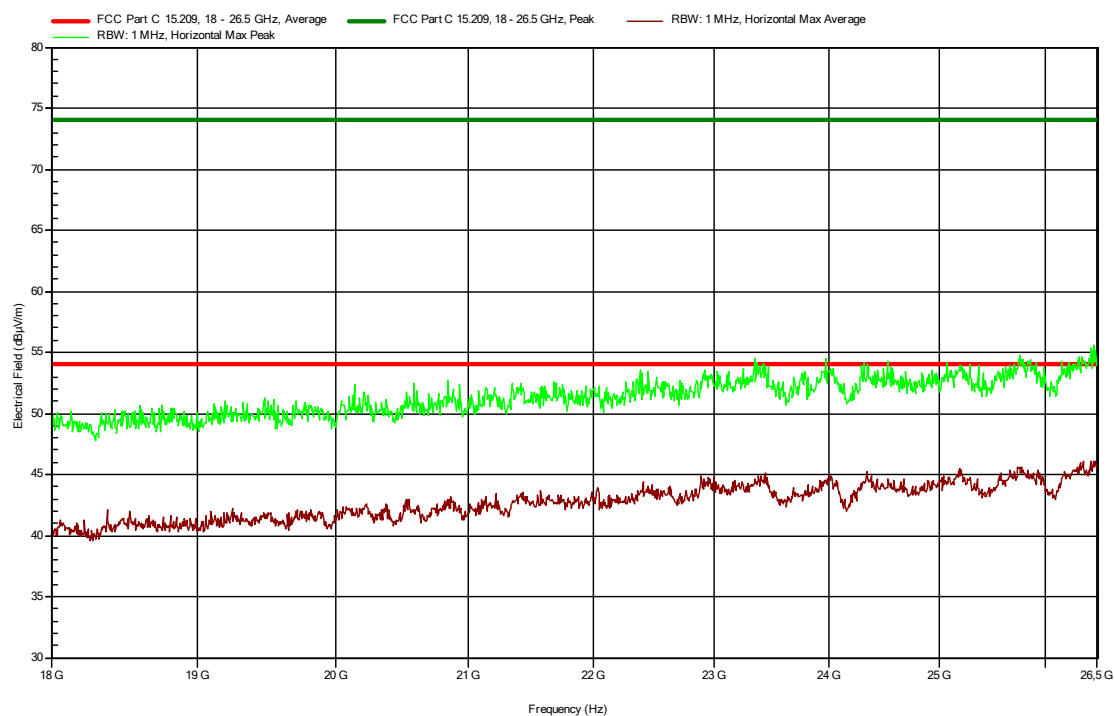
Plot 5e: radiated emissions of the EUT, Antenna vertical, in the range 1 – 18 GHz
(peak and average values shown)
High channel



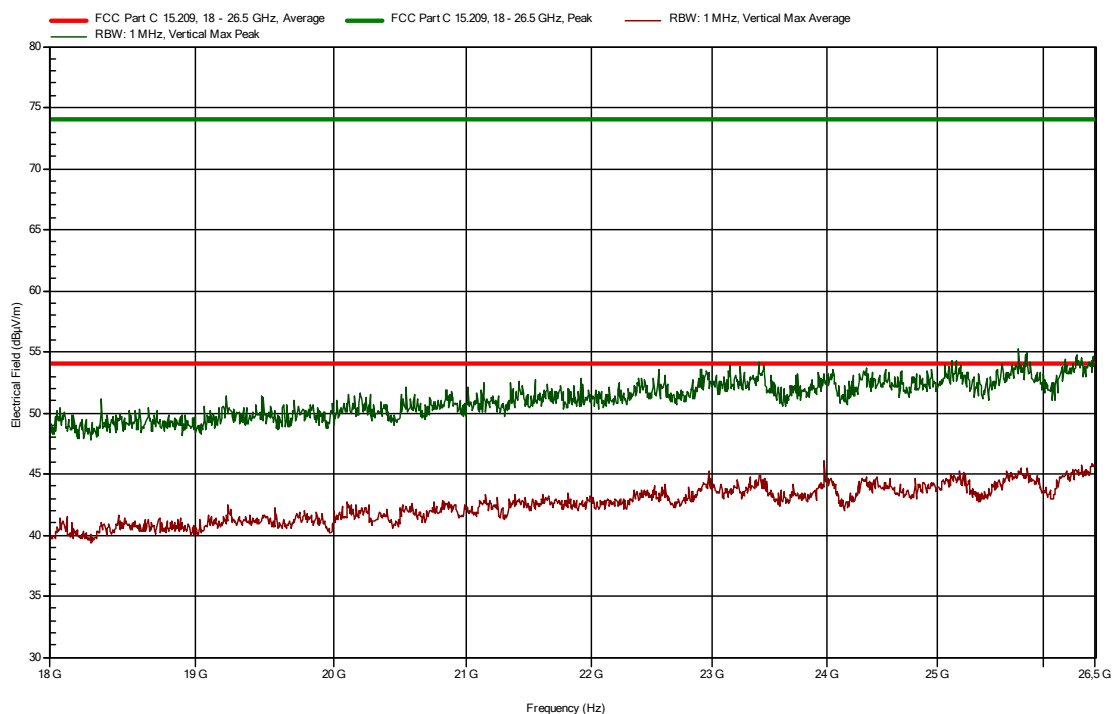
Plot 5f: radiated emissions of the EUT, Antenna horizontal, in the range 1 – 18 GHz
(peak and average values shown)
High channel



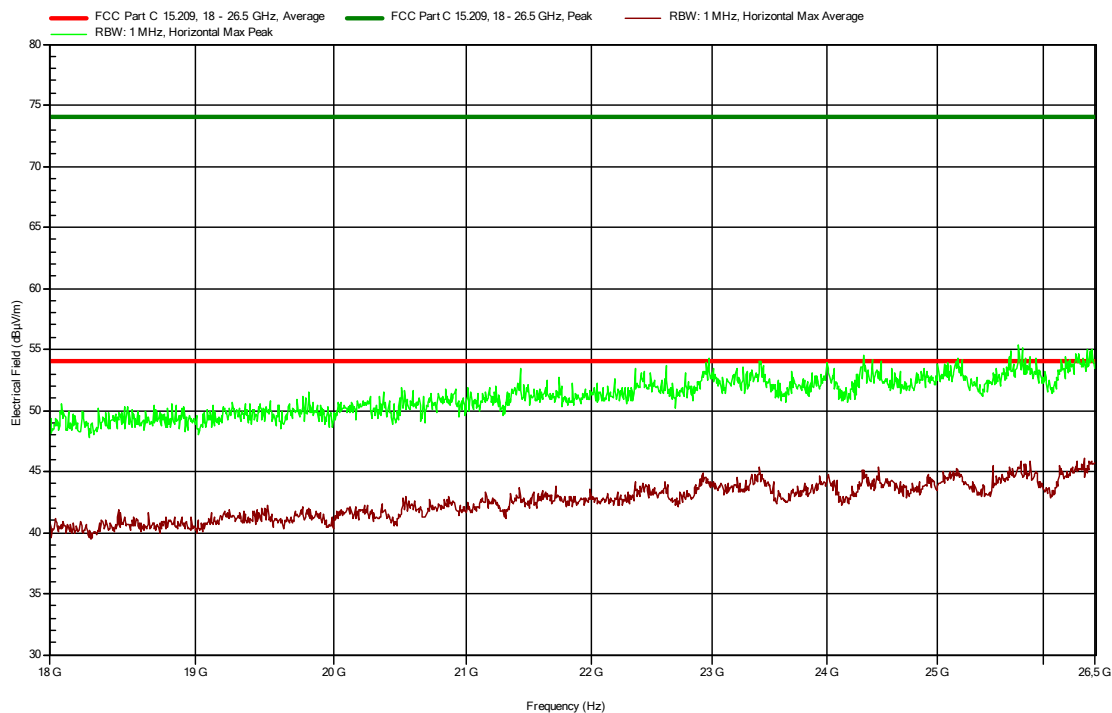
Plot 6a: radiated emissions of the EUT, Antenna vertical, in the range 18 – 26 GHz
(peak and average values shown)
Low channel



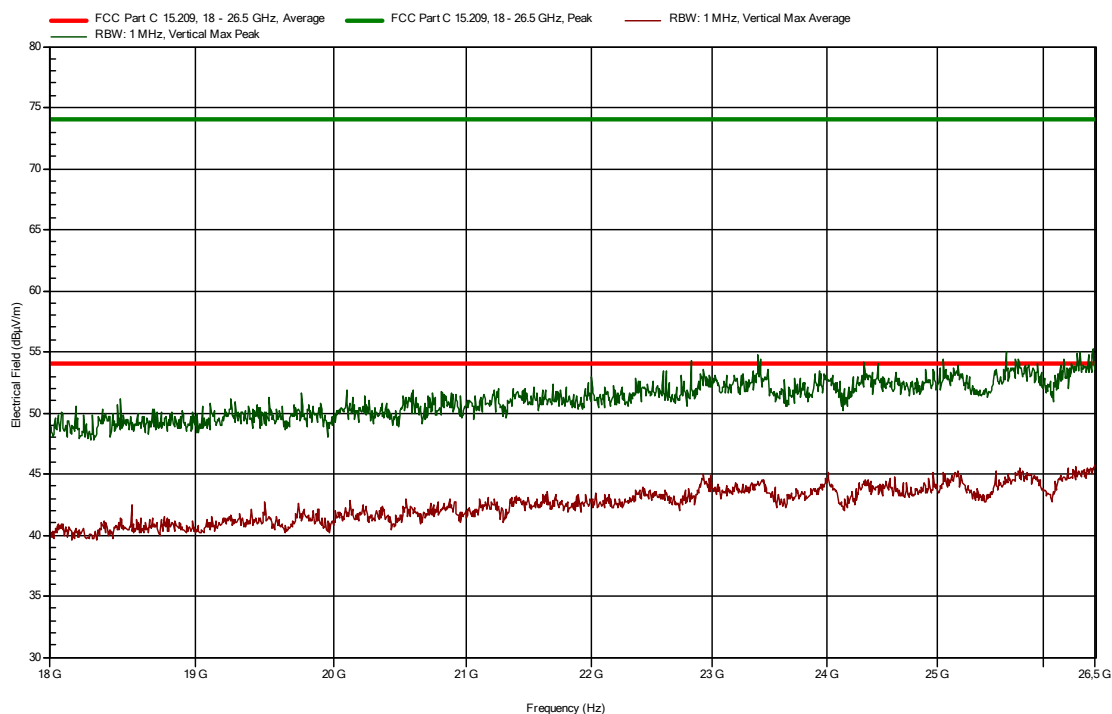
Plot 6b: radiated emissions of the EUT, Antenna horizontal, in the range 18 – 26GHz
(peak and average values shown)
Low channel



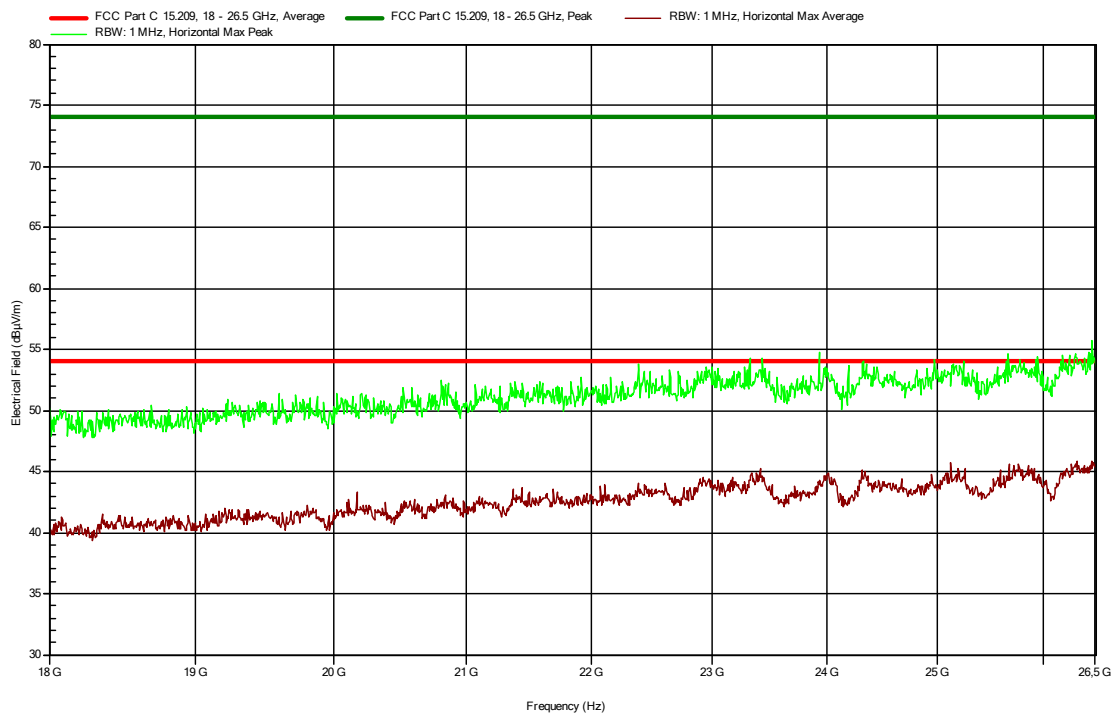
Plot 6c: radiated emissions of the EUT, Antenna vertical, in the range 18 – 26GHz
(peak and average values shown)
Middle channel



Plot 6d: radiated emissions of the EUT, Antenna horizontal, in the range 18 – 26GHz
(peak and average values shown)
Middle channel



Plot 6e: radiated emissions of the EUT, Antenna vertical, in the range 18 – 26GHz
(peak and average values shown)
High channel



Plot 6f: radiated emissions of the EUT, Antenna horizontal, in the range 18 – 26 GHz
(peak and average values shown)
High channel

3.2 Output Power Measurement

3.2.1 Limit

FCC: For systems using digital modulation in the 2400-2483.5 MHz, the limit for the peak output power is 1W (30 dBm). If transmitting antenna of directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point to point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

RSS: For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W. The e.i.r.p. shall not exceed 4W

3.2.2 Measurement instruments

The measurement instruments are listed in chapter 2.3 of this report.

3.2.3 Test setup

The test setup is as shown in chapter 2.2 of this report.

3.2.4 Test procedure

The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02.

IRN 402 - RF power (W) - Method 12

3.2.5 Test results of Output Power Measurement

Technology Std.	Channel	Frequency (MHz)	Data rate	Peak output power conducted (dBm)	Peak output power conducted (W)	Peak output power EIRP (W)
Bluetooth Low Energy	0	2402	1 Mbps	3.67	0.0023	0.0015
	18	2440	1 Mbps	4.36	0.0027	0.0017
	39	2480	1 Mbps	3.54	0.0023	0.0014
Uncertainty	±0.71 dB					

Technology Std.	Channel	Frequency (MHz)	Data rate	Peak output power conducted (dBm)	Peak output power conducted (W)	Peak output power EIRP (W)
Bluetooth Low Energy	0	2402	2 Mbps	3.54	0.0023	0.0014
	18	2440	2 Mbps	4.10	0.0026	0.0016
	39	2480	2 Mbps	3.46	0.0022	0.0014
Uncertainty	±0.71 dB					

Technology Std.	Channel	Frequency (MHz)	Data rate	Peak output power conducted (dBm)	Peak output power conducted (W)	Peak output power EIRP (W)
Bluetooth Low Energy	0	2402	125 kbps	3.52	0.0022	0.0014
	18	2440	125 kbps	4.07	0.0026	0.0016
	39	2480	125 kbps	3.40	0.0022	0.0014
Uncertainty	±0.71 dB					

4 Sample calculations

All formulas for data conversions and conversion factors are reported in this chapter.

Conducted emission Measurement:

$$U_{\text{lisn}} (\text{dB}\mu\text{V}) = U (\text{dB}\mu\text{V}) + \text{Corr. (dB)}$$

Where:

U = Measuring receiver voltage

LISN insertion loss = Voltage division factor of LISN

Corr. = sum of single correction factors of used LISN, cables and pulse limiter.

Linear interpolation will be used for frequencies in between the values in the table.

Frequency (MHz)	Voltage division LISN (db)	Cable loss (dB)	Corr. (dB)
	114379 SN: 230000813 Rohde & Schwarz ENV 216	TE 11134	
0,15	9.7	0.02	9.72
0,2	9.68	0.03	9.71
0,3	9.68	0.03	9.71
0,5	9.69	0.08	9.77
0,7	9.69	0.25	9.94
0,8	9.69	0.25	9.94
1	9.68	0.11	9.79
2	9.7	0.15	9.85
3	9.71	0.21	9.92
5	9.72	0.21	9.93
7	9.76	0.25	10.01
8	9.77	0.25	10.02
10	9.77	0.29	10.06
15	9.84	0.34	10.18
20	9.88	0.37	10.25
25	9.97	0.43	10.4
30	10.08	0.45	10.53

Magnetic field strength measurement:

$$H \left[dB \left(\mu \frac{A}{m} \right) \right] = V[dB(\mu V)] + L_c[dB] + AF^H \left[\frac{dB}{\Omega m} \right]$$

Where:

H is the magnetic field strength (to be compared to the limit)

V is the voltage level measured by the receiver or spectrum analyzer

L_c is the cable loss

AF^H is the magnetic antenna factor

Frequency (MHz)	AF (dB/Ωm)	CL (dB)	Corr. (dB)
	114515 EMCO 6505 S/N:9112-2710	SAR cable	
0,009	-32,35	0,7	-31,65
0,01	-33,16	0,05	-33,11
0,02	-37,56	0,07	-37,49
0,03	-39,29	0,1	-39,19
0,04	-40,11	0,1	-40,01
0,1	-41,27	0,1	-41,17
0,2	-41,48	0,1	-41,38
0,5	-41,58	0,1	-41,48
1	-41,62	0,2	-41,42
3	-41,6	0,2	-41,4
5	-41,65	0,3	-41,35
10	-42,11	0,6	-41,51
15	-42,88	0,9	-41,98
20	-43,78	1	-42,78
25	-44,85	0,7	-44,15
27	-45,36	1,2	-44,16
30	-46,25	1	-45,25

Field Strength Measurement:

$$E \text{ (dB}\mu\text{V/m)} = U \text{ (dB}\mu\text{V)} + AF \text{ (dB/m)} + \text{Corr. (dB)}$$

Where:

E = Electric field strength

U = Measuring receiver voltage

AF = Antenna factor

CL = Cable loss

Corr. = sum of single correction factors of used cable and amplifier (if applicable).

Linear interpolation will be used for frequencies in between the values in the table.

Tables shows an extract of the values.

Frequency (MHz)	AF (dB/m) ID: 114436 VHA 9103 + BBA 9106 SN: 9856	Cable loss (dB) Id: SAR cable	Corr. (dB)
30	18.6	0.68	19.28
100	10.4	1.15	11.55
150	14.8	1.41	16.21
200	16.0	1.63	17.63
250	16.9	1.93	18.83

Frequency (MHz)	Gain (dBi) ID: 114385 EMCO LPDA SN: 9856	Cable loss (dB) Id: SAR cable	Corr. (dB)
250	11.8	1.93	13.73
300	13	2.12	15.12
350	15.6	2.2	17.8
400	17.1	2.29	19.39
450	17.3	2.53	19.83
500	17.7	2.67	20.37
550	18.4	2.9	21.3
600	19.2	3.02	22.22
650	19.7	3.09	22.79
700	20.3	3.22	23.52
750	21.4	3.56	24.96
800	22	3.69	25.69
900	22.1	3.81	25.91
950	22.6	3.91	26.51
1000	22.5	4.3	26.8

Frequency (MHz)	AF (dB/m)	Gain (dB)	Cable loss (dB)	Corr. (dB)
	Kiwa ID: 114607 Emco 3115 SN: 9412-4377	Kiwa ID: 114693 Miteq JS4-18004000-30-8P-A1	TE 01315	
1000	23,6	40,4	2,0	66
1500	25,1	40,5	2,4	68
2000	27,1	40,5	2,7	70,3
2500	28,6	40,7	3,2	72,5
3000	30,5	40,7	3,2	74,4
3500	31,2	40,7	3,4	75,3
4000	32,7	40,9	4,9	78,5
4500	32,4	40,9	4,4	77,7
5000	33,2	40,7	4,6	78,5
5500	34,0	40,5	4,5	79
6000	34,6	40,0	5,2	79,8
6500	34,3	39,4	5,9	79,6
7000	35,2	38,6	5,7	79,5
7500	36,4	39,2	5,9	81,5
8000	37,0	38,9	6,3	82,2
8500	37,5	38,4	6,4	82,3
9000	38,1	37,4	6,5	82
9500	37,8	37,0	7,1	81,9
10000	38,2	36,5	7,3	82
10500	38,1	36,7	7,6	82,4
11000	38,3	36,9	8,3	83,5
11500	38,5	37,6	8,1	84,2
12000	39,1	38,3	8,4	85,8
12500	38,7	38,5	8,3	85,5
13000	39,2	38,9	9,2	87,3
13500	40,5	40,2	8,3	89
14000	41,1	40,0	8,2	89,3
14500	41,4	40,1	8,2	89,7
15000	40,2	41,4	8,3	89,9
15500	37,9	41,4	8,6	87,9
16000	37,5	42,8	9,2	89,5
16500	38,6	42,3	8,8	89,7
17000	41,1	43,1	9,4	93,6
17500	42,7	43,2	9,4	95,3
18000	44,0	44,2	9,8	98

Frequency (MHz)	AF (dB/m)	Gain (dB)	Cable loss (dB)	Corr. (dB)
	Kiwa ID: 114518 Flann 20240-25 SN: 163703	Kiwa ID: 114693 Miteq JS4-18004000-30-8P-A1	TE 01315	
18000	31,3	26,2	9,8	67,3
19000	31,5	26,1	9,6	67,2
20000	31,7	25,9	11	68,6
21000	31,9	24,3	10,7	66,9
22000	32,1	18,3	10,5	60,9
23000	32,2	18,9	10,8	61,9
24000	32,3	23,6	11,4	67,3
25000	32,4	24,5	11,6	68,5
26000	32,5	25,3	11,7	69,5

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