

Annex 1: Measurement diagrams to Test Report 18-1-0097201T24a-C01-A1



Number of pages:	49	Date of Report:	2021-Sep-08
Testing company:	CETECOM GmbH Im Teelbruch 116 45219 Essen Germany Tel. + 49 (0) 20 54 / 95 19-0 Fax: + 49 (0) 20 54 / 95 19-150	Applicant:	Actia Nordic AB
Test Object / Tested Device(s):	103360002, Telematic Device		
Listing FCC ID:	2AGKK103360002	ISED:	20839-103360002
Testing has been carried out in accordance with:	Title 47 CFR, Chapter I FCC Regulations, Subchapter A Subpart C: §15.247 (DTS) , RSS-247, Issue 2 (DTS) RSS-Gen., Issue 5 Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		

1 Measurement diagrams

1.1 Conducted

External Antenna

Mode	Channel	f _c [MHz]	Max conducted Power [dBm]	Internal loss (dBm)	Max RMS Power [dBm]	Temperature [°C]	Result
b-mode [1 Mbps]	1	2412	12.4	0.31	12.71	23	PASS
b-mode [1 Mbps]	6	2437	12.5	0.31	12.81	23	PASS
b-mode [1 Mbps]	11	2462	11.4	0.31	11.71	23	PASS
g-mode [6 Mbps]	1	2412	12.6	0.31	12.91	23	PASS
g-mode [6 Mbps]	6	2437	12.7	0.31	13.01	23	PASS
g-mode [6 Mbps]	11	2462	11.5	0.31	11.81	23	PASS
n-mode [MCS0]	1	2412	12.3	0.31	12.61	23	PASS
n-mode [MCS0]	6	2437	12.5	0.31	12.81	23	PASS
n-mode [MCS0]	11	2462	11.5	0.31	11.81	23	PASS

Internal Antenna

Mode	Channel	f _c [MHz]	Max conducted Power [dBm]	Internal loss (dBm)	Max RMS Power [dBm]	Temperature [°C]	Result
b-mode [1 Mbps]	1	2412	11.9	0.31	12.21	23	PASS
b-mode [1 Mbps]	6	2437	12.7	0.31	13.01	23	PASS
b-mode [1 Mbps]	11	2462	11.4	0.31	11.71	23	PASS
g-mode [6 Mbps]	1	2412	11.9	0.31	12.21	23	PASS
g-mode [6 Mbps]	6	2437	12.5	0.31	12.81	23	PASS
g-mode [6 Mbps]	11	2462	11.4	0.31	11.71	23	PASS
n-mode [MCS0]	1	2412	11.9	0.31	12.21	23	PASS
n-mode [MCS0]	6	2437	12.5	0.31	12.81	23	PASS
n-mode [MCS0]	11	2462	11.4	0.31	11.71	23	PASS

1.2 Radiated

1.2.1 External Antenna

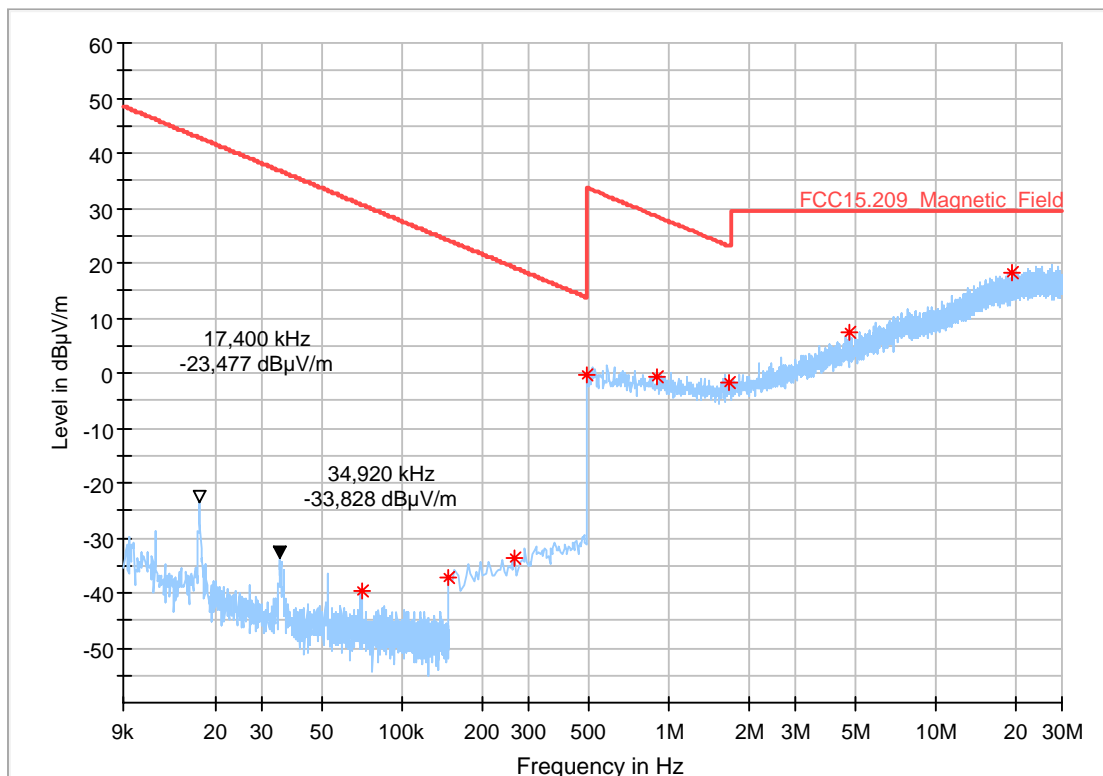
2.01a_g-mode_ch6_Laying

Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 5
Operator:	mkh
Operating Mode:	g-mode 6 Mbit ch6 External antenna laying
Environmental Conditions:	Humidity : 44 %rH; Temperature: 22° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB
	Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.070760	-39.70	30.60	70.30	---	---	V	215.0	-60.5	09:33:29 - 20.01.2020
0.150000	-37.36	24.08	61.44	---	---	H	215.0	-60.6	09:33:32 - 20.01.2020
0.266000	-33.58	19.10	52.69	---	---	V	125.0	-56.2	09:33:35 - 20.01.2020
0.494000	-0.32	33.73	34.05	---	---	H	215.0	-20.7	09:33:41 - 20.01.2020
0.910000	-0.70	28.44	29.14	---	---	H	305.0	-20.7	09:33:43 - 20.01.2020
1.690000	-1.88	23.08	24.96	---	---	V	305.0	-20.0	09:33:45 - 20.01.2020
4.750000	7.30	29.54	22.24	---	---	V	125.0	-11.4	09:33:53 - 20.01.2020
19.610000	18.10	29.54	11.45	---	---	V	305.0	0.8	09:33:48 - 20.01.2020

2.01b_g-mode_ch6

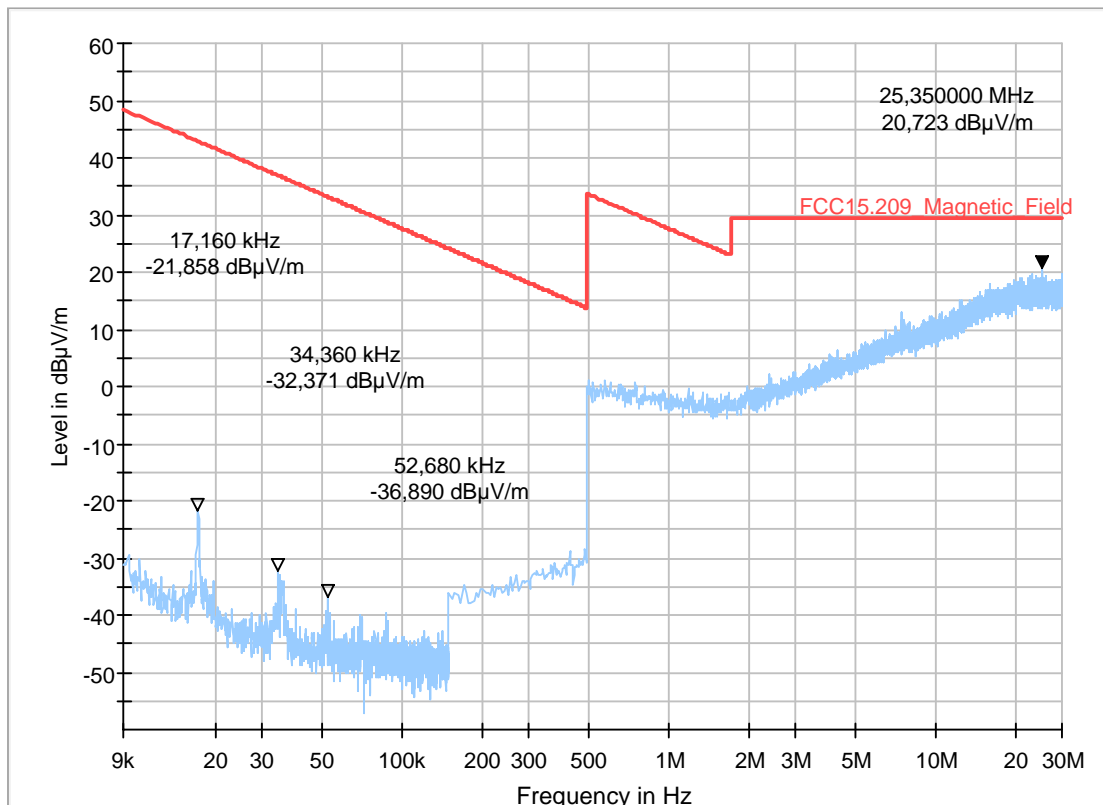
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.10
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 5
Operator:	TFra
Operating Mode:	g-mode 6 Mbit ch6 standing
Environmental Conditions:	Humidity : 40 %rH; Temperature: 20° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



3.01a_g-mode_ch6

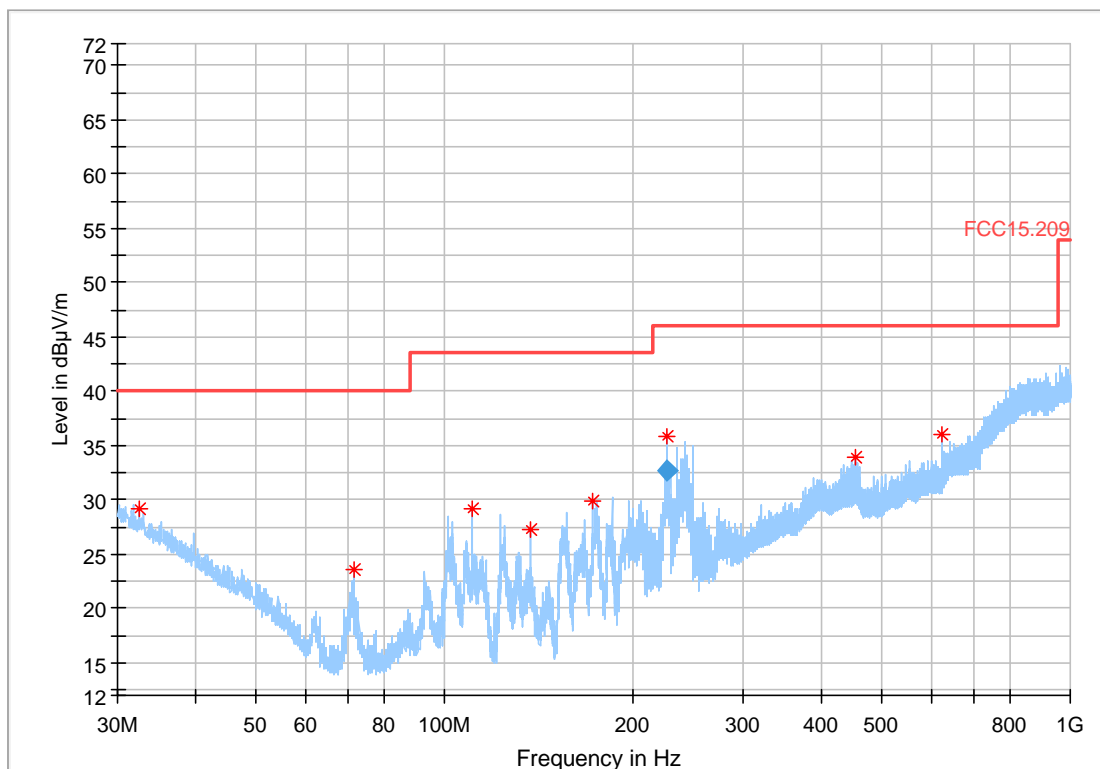
Common Information

Test description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209; RSS-Gen: Issue 5
Operator:	mkh
Operating Mode:	g-mode 6Mbit ch6 laying
Environmental Conditions:	Humidity : 40 %rH; Temperature: 20° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
227.340000	32.73	46.00	13.27	120.000	131.0	H	2.0	12.7

Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
32.480000	29.18	40.00	10.82	---	---	182.0	H	180.0	20.4
71.480000	23.64	40.00	16.36	---	---	182.0	H	180.0	6.6
111.120000	29.23	43.50	14.27	---	---	182.0	H	90.0	8.2
137.280000	27.26	43.50	16.24	---	---	182.0	H	90.0	9.4
173.160000	29.98	43.50	13.52	---	---	182.0	H	270.0	10.4
227.340000	35.78	46.00	10.22	---	---	131.0	H	3.0	12.8
453.000000	33.98	46.00	12.02	---	---	105.0	H	180.0	19.5
625.000000	36.06	46.00	9.95	---	---	182.0	V	180.0	22.2

3.01b_b-mode_ch6

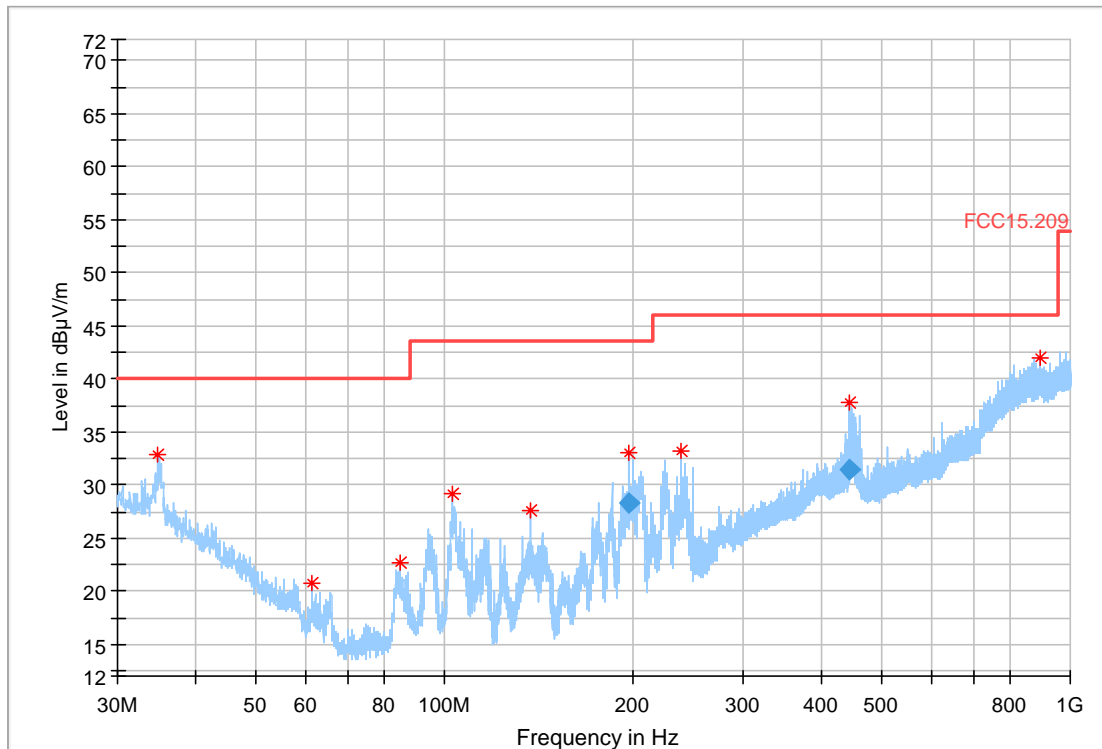
Common Information

Test description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209; RSS-Gen: Issue 5
Operator:	mkh
Operating Mode:	g-mode 6Mbit ch6 standing
Environmental Conditions:	Humidity : 40 %rH; Temperature: 20° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
197.052000	28.34	43.50	15.16	120.000	142.0	H	168.0	11.4
445.240000	31.42	46.00	14.58	120.000	211.0	H	175.0	19.4

Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
34.880000	32.93	40.00	7.07	---	---	182.0	H	270.0	19.3
61.400000	20.82	40.00	19.18	---	---	182.0	V	270.0	8.3
85.040000	22.74	40.00	17.26	---	---	105.0	V	270.0	7.8
102.800000	29.25	43.50	14.25	---	---	105.0	V	270.0	8.1
137.280000	27.60	43.50	15.90	---	---	105.0	V	180.0	9.4
197.052000	33.04	43.50	10.46	---	---	142.0	H	169.0	11.4
238.120000	33.31	46.00	12.69	---	---	105.0	H	180.0	13.1
445.240000	37.80	46.00	8.20	---	---	211.0	H	176.0	19.4
894.400000	41.99	46.00	4.02	---	---	182.0	H	180.0	26.9

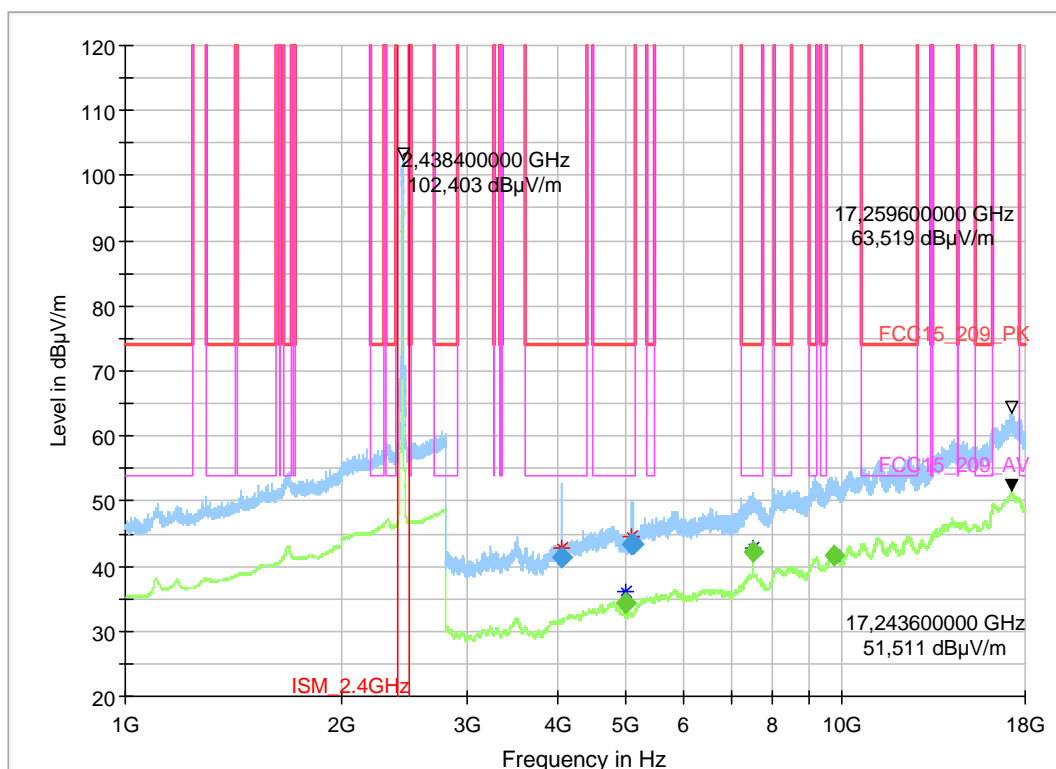
4.01a_g-mode_ch6

Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
 Antenna polarisation: horizontal/vertical
 Operating Mode: g-mode | 6Mbit| ch6 | External antennal| laying|
 Operator: LKu
 Verdict: Passed

EUT Information

PMT number: 18-1-00972S20
 Manufacturer: ACTIA Nordic AB
 Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin	Meas. Time (ms)	Bandwidth	Height	Pol	Azimuth	Elevation
4054.800000	41.37	---	74.00	32.63	100.0	1000.000	155.0	H	167.0	0.0
4999.200000	---	34.45	54.00	19.55	100.0	1000.000	155.0	V	123.0	0.0
5071.600000	43.50	---	74.00	30.50	100.0	1000.000	155.0	H	201.0	0.0
5102.400000	43.48	---	74.00	30.52	100.0	1000.000	155.0	H	148.0	0.0
7499.200000	---	42.19	54.00	11.81	100.0	1000.000	155.0	V	226.0	0.0
9748.000000	---	41.69	150.00	108.31	100.0	1000.000	155.0	H	221.0	0.0

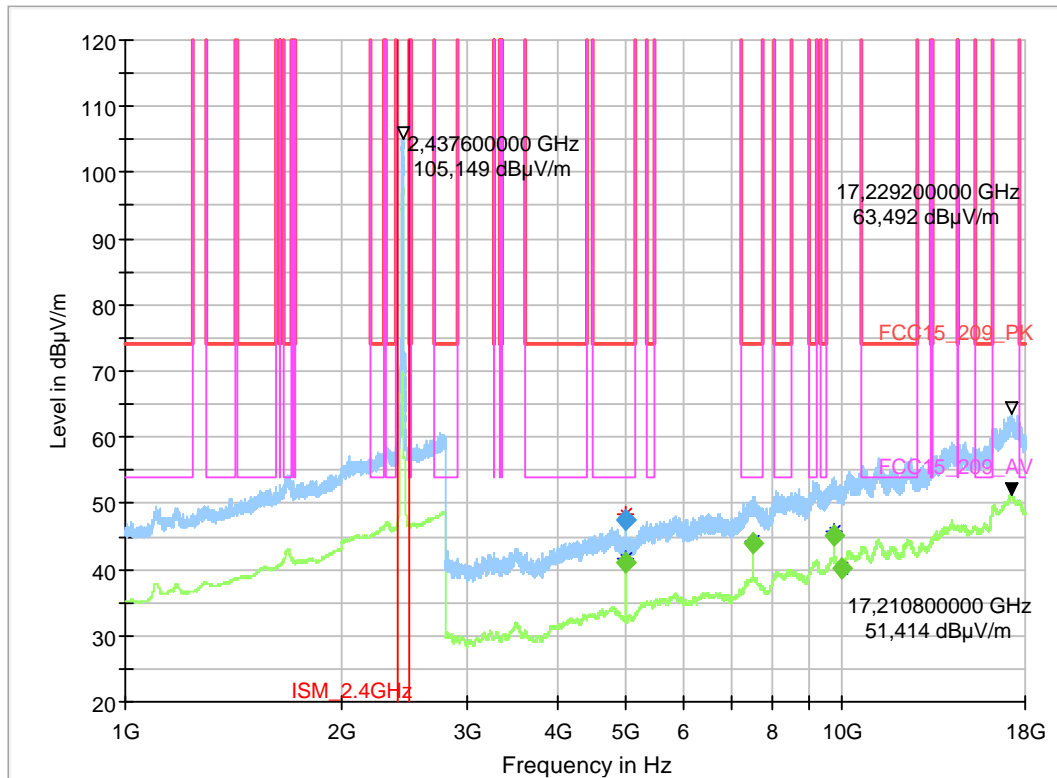
4.01b_g-mode_ch6

Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
 Antenna polarisation: horizontal/vertical
 Operating Mode: g-mode | 6Mbit| ch6 | External antenna| standing|
 Operator: LKu
 Verdict: Passed

EUT Information

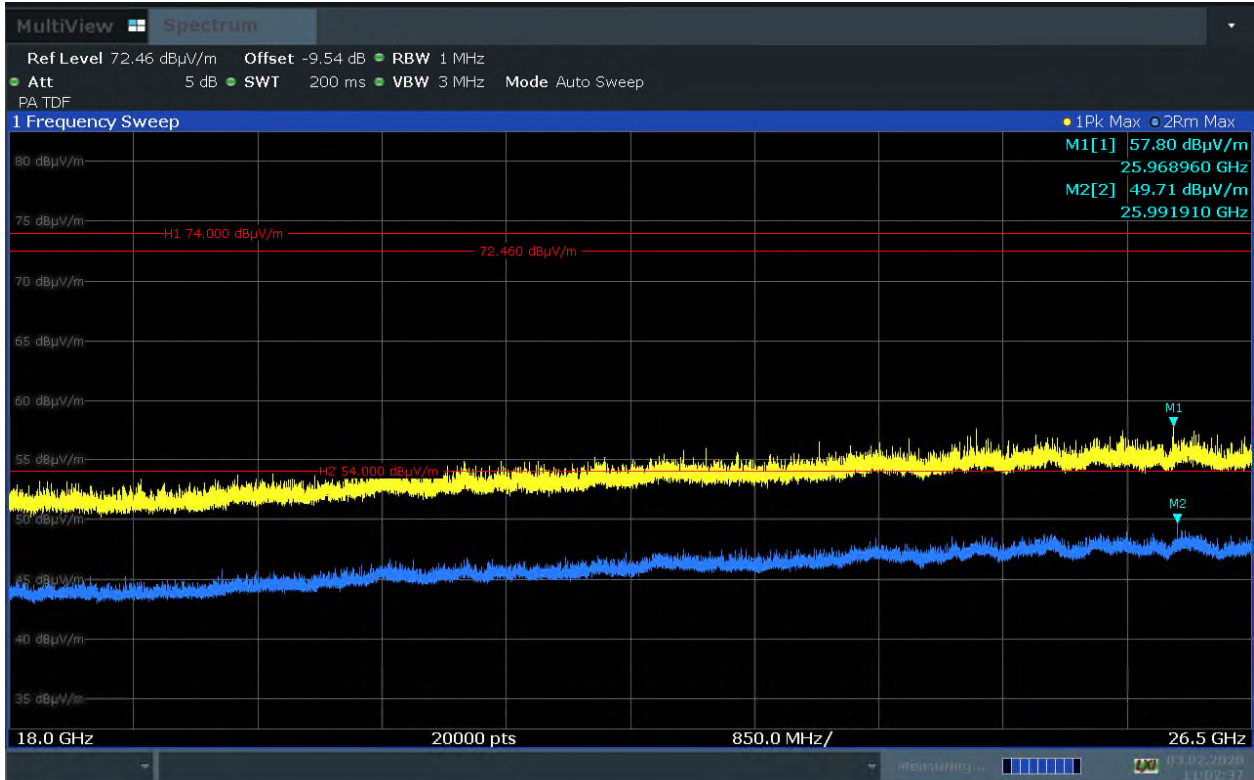
PMT number: 18-1-00972S20
 Manufacturer: ACTIA Nordic AB
 Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margi n	Meas. Time (ms)	Bandwidt h	Heigh t	Pol	Azimut h	Elevatio n
4999.600000	---	41.12	54.00	12.88	100.0	1000.000	155.0	H	4.0	0.0
4999.600000	47.35	---	74.00	26.65	100.0	1000.000	155.0	H	4.0	0.0
7499.200000	---	44.07	54.00	9.93	100.0	1000.000	155.0	H	29.0	0.0
9748.000000	---	45.27	150.00	104.73	100.0	1000.000	155.0	H	348.0	0.0
9998.800000	---	40.11	150.00	109.89	100.0	1000.000	155.0	V	46.0	0.0

4.11a_g-mode_ch6



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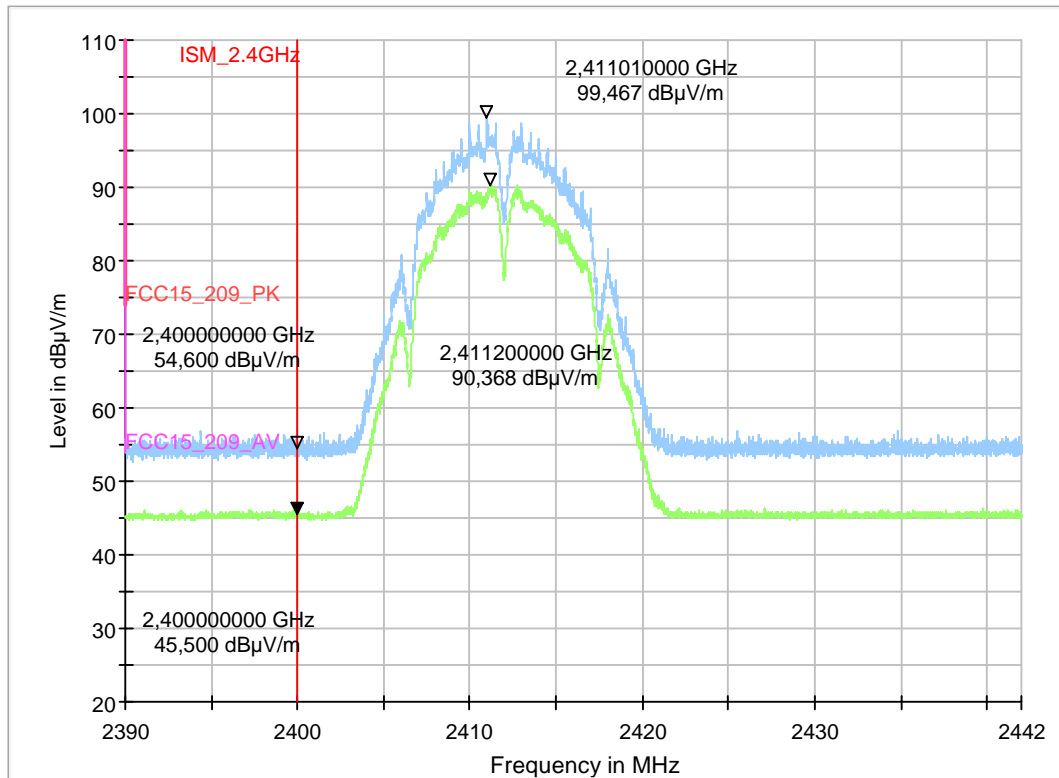
9.01a_b-mode_ch01

Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch01 External antenna laying
Operator:	LKu
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB
	Full Spectrum



9.01b_b-mode_ch01

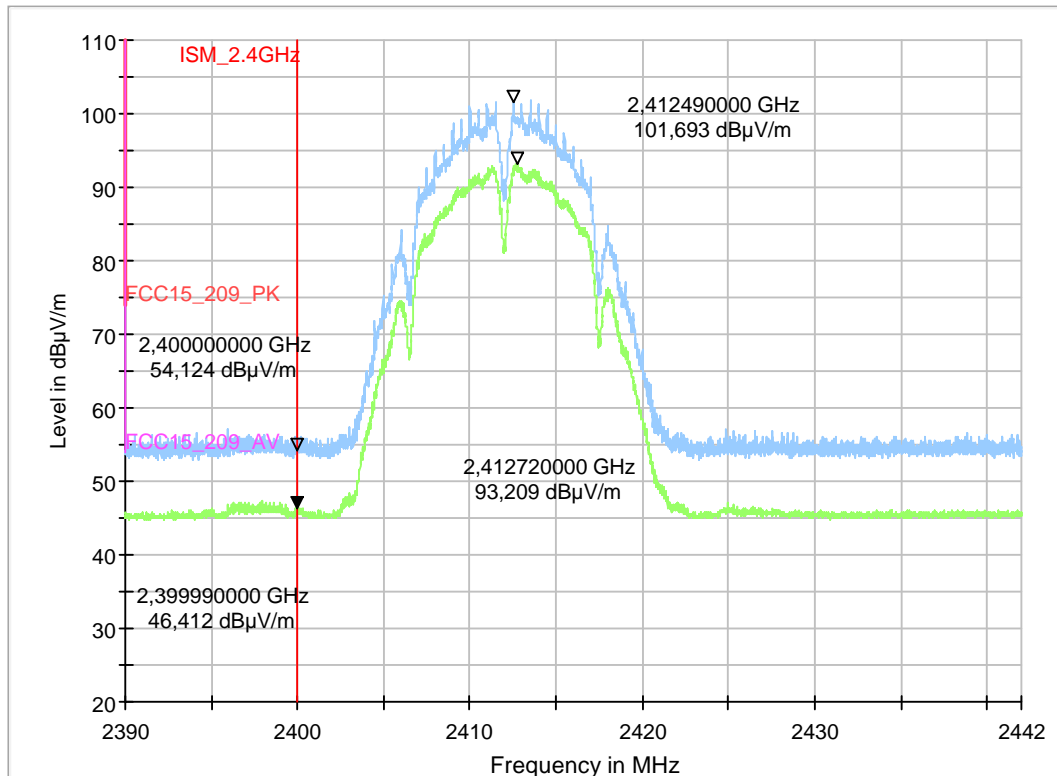
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch01 External antenna Standing .
Operator:	LKu
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.02a_b-mode_ch11

Common Information

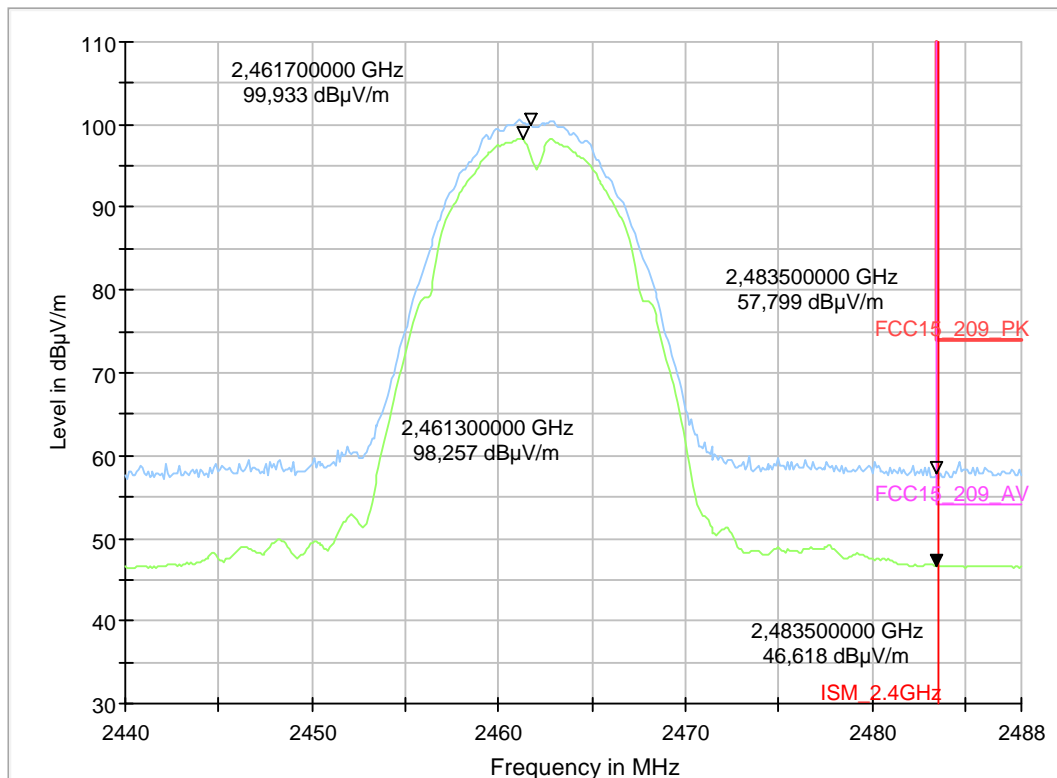
Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch11 External antenna laying .
Operator:	LKu
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB
Product:	Telematic device
Model:	FCC radiated

HW version:	H1
SW version:	1
Serial number:	AN103350102B160
Power Supply:	13.9 V DC

Full Spectrum



9.02b_b-mode_ch11

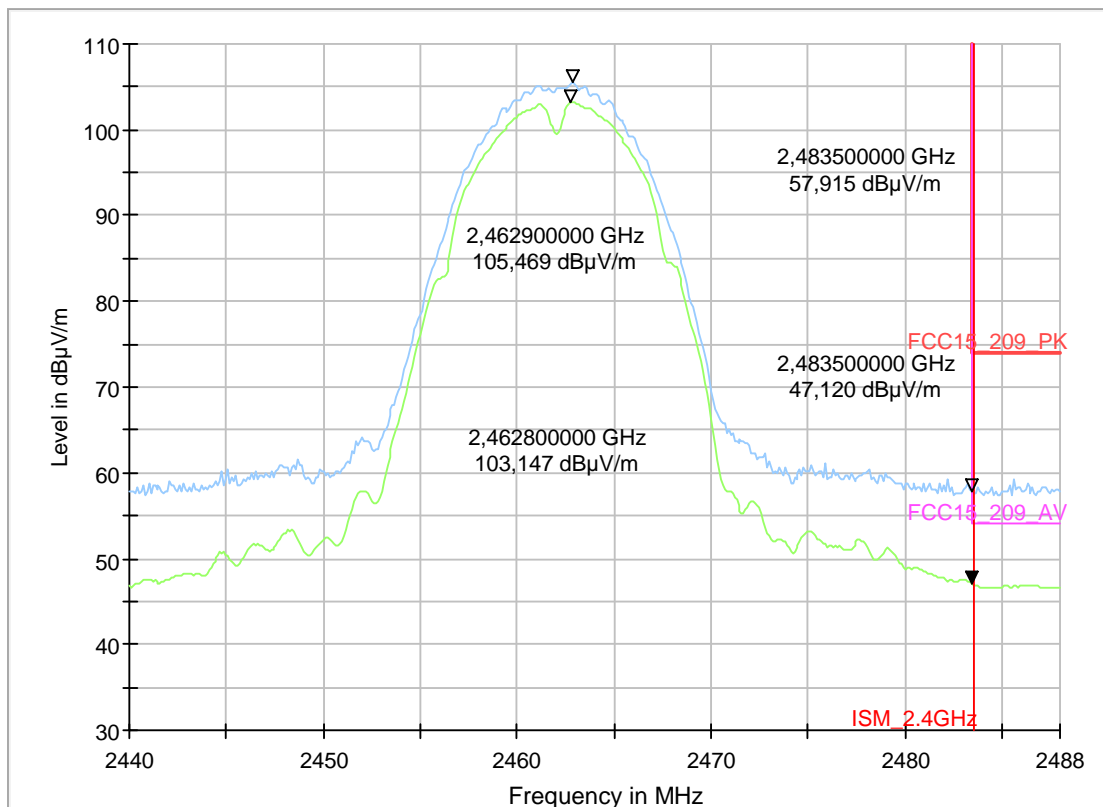
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch11 External antenna Standing .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



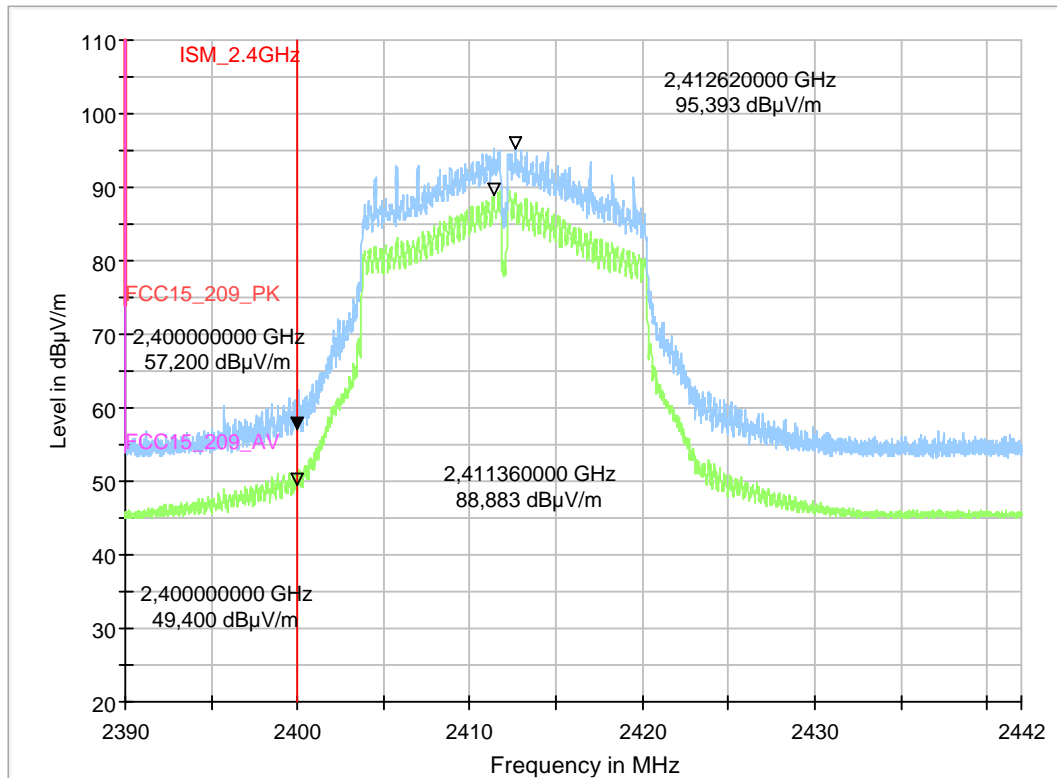
9.03a_g-mode_ch01

Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch01 External antenna laying .
Operator:	LKu
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB
	Full Spectrum



9.03b_g-mode_ch01

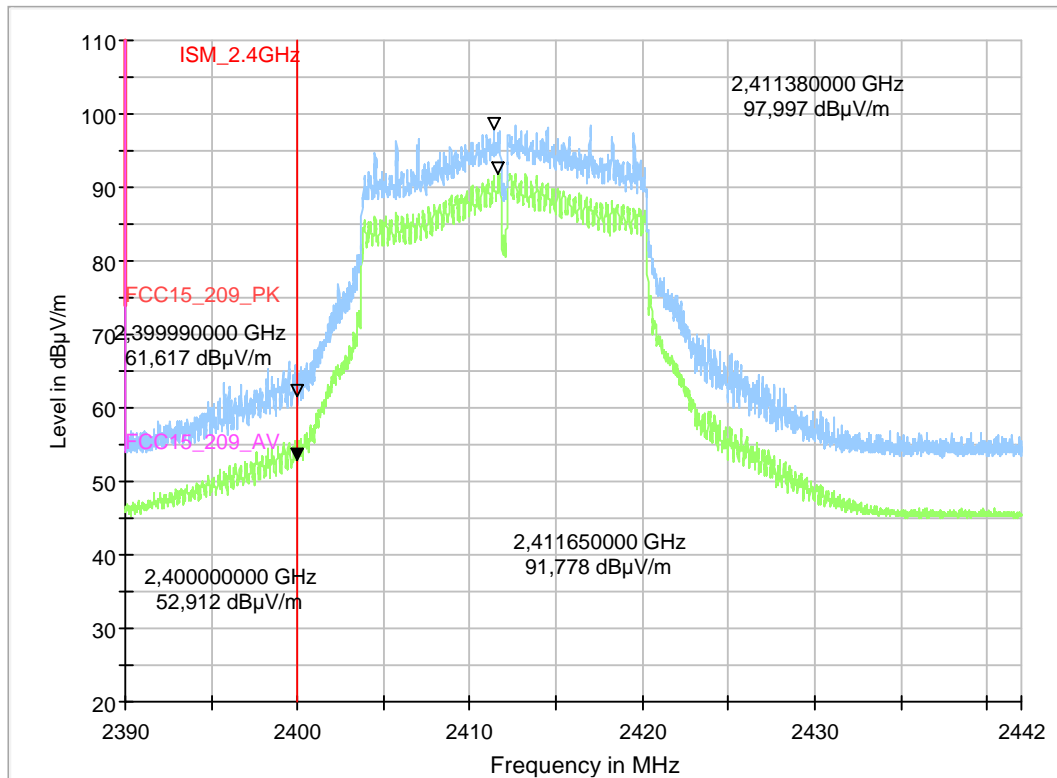
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch01 External antenna Standing .
Operator:	LKu
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.04a_g-mode_ch11

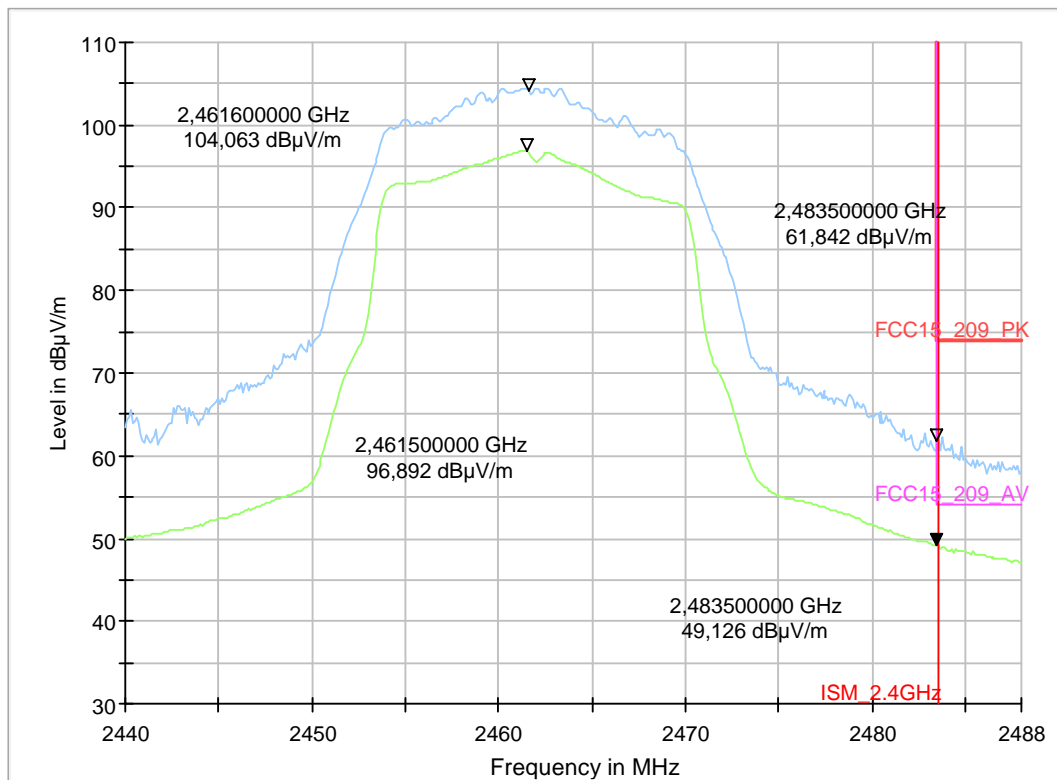
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch11 External antenna laying .
Operator:	LKu
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.04b_g-mode_ch11

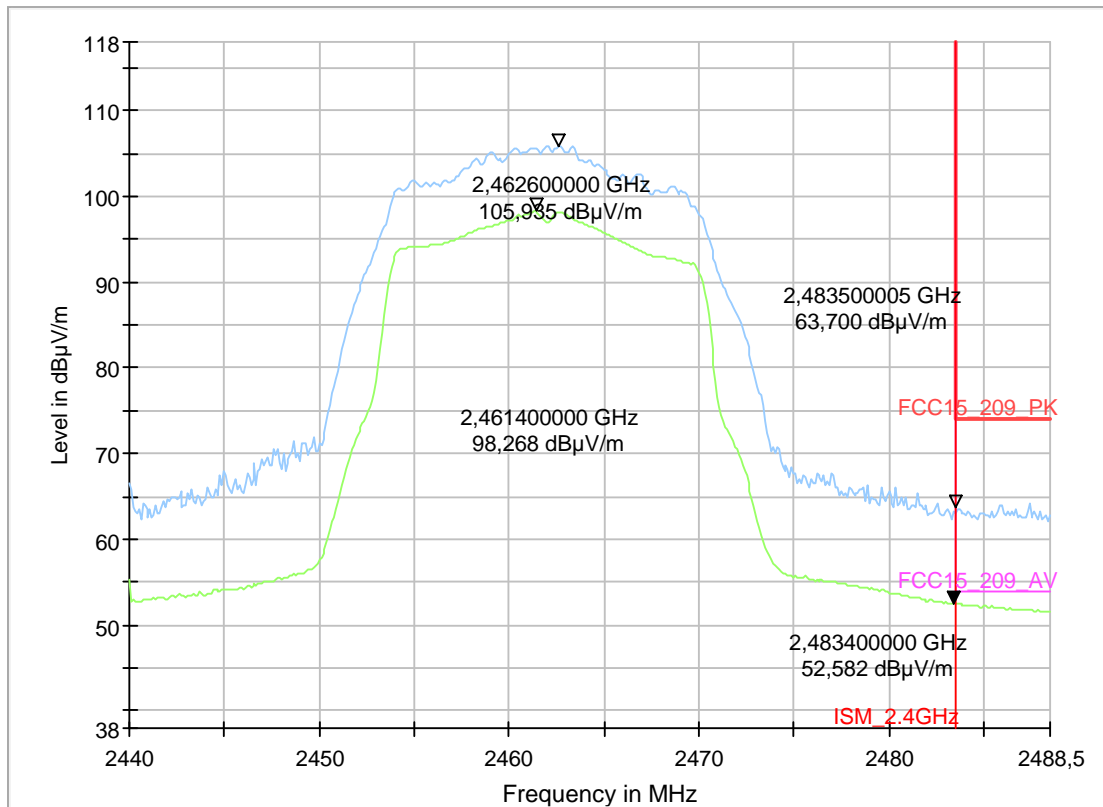
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch11 External antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.05a_n-mode_ch01

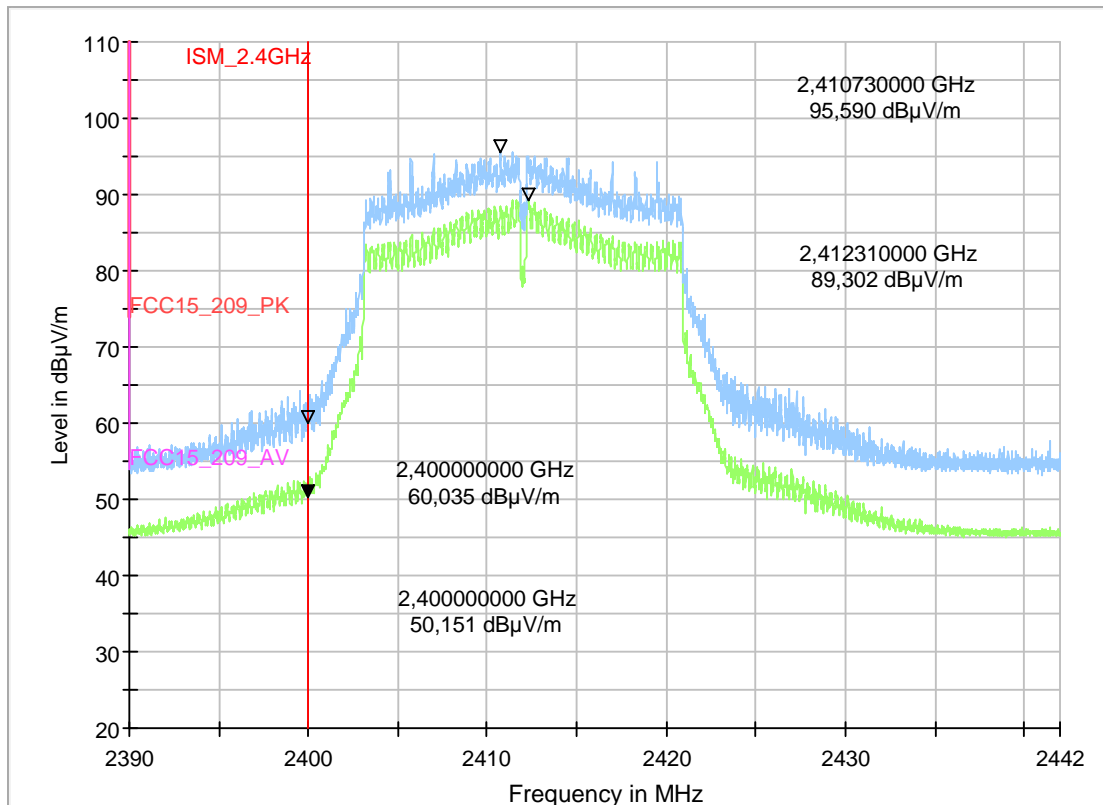
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch01 External antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.05b_n-mode_ch01

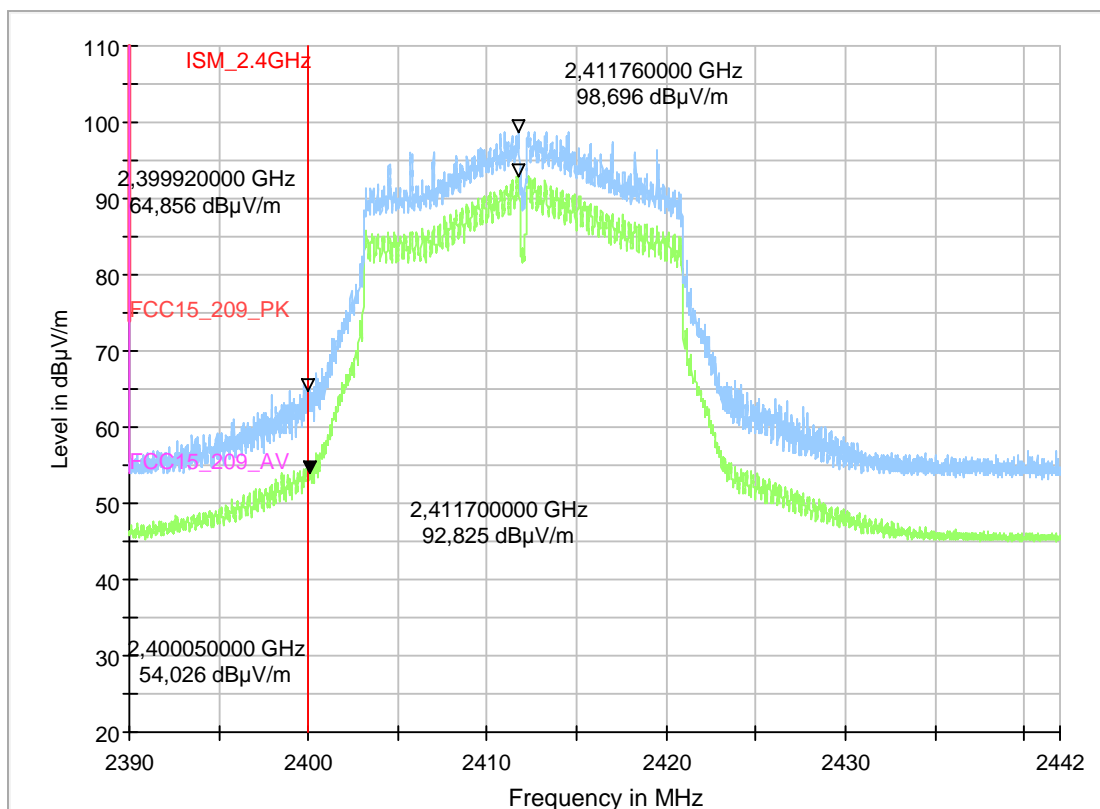
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch01 External antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.06a_n-mode_ch11

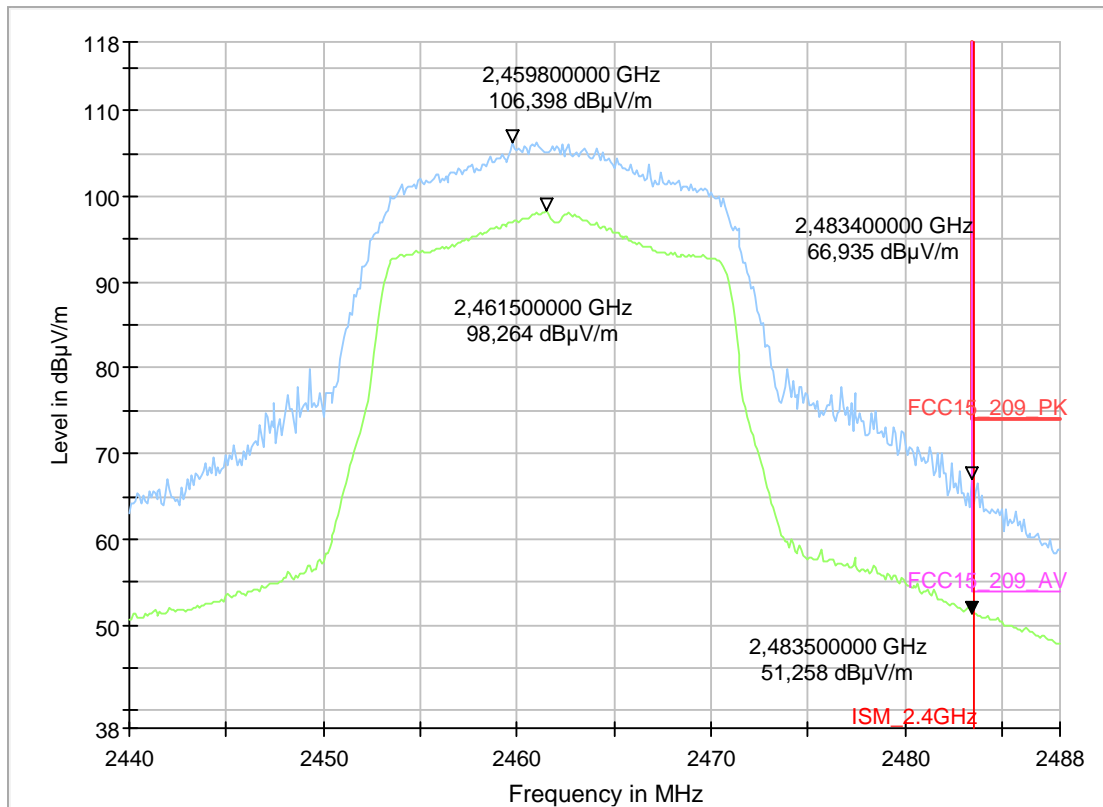
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch11 External antenna laying .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.06b_n-mode_ch11

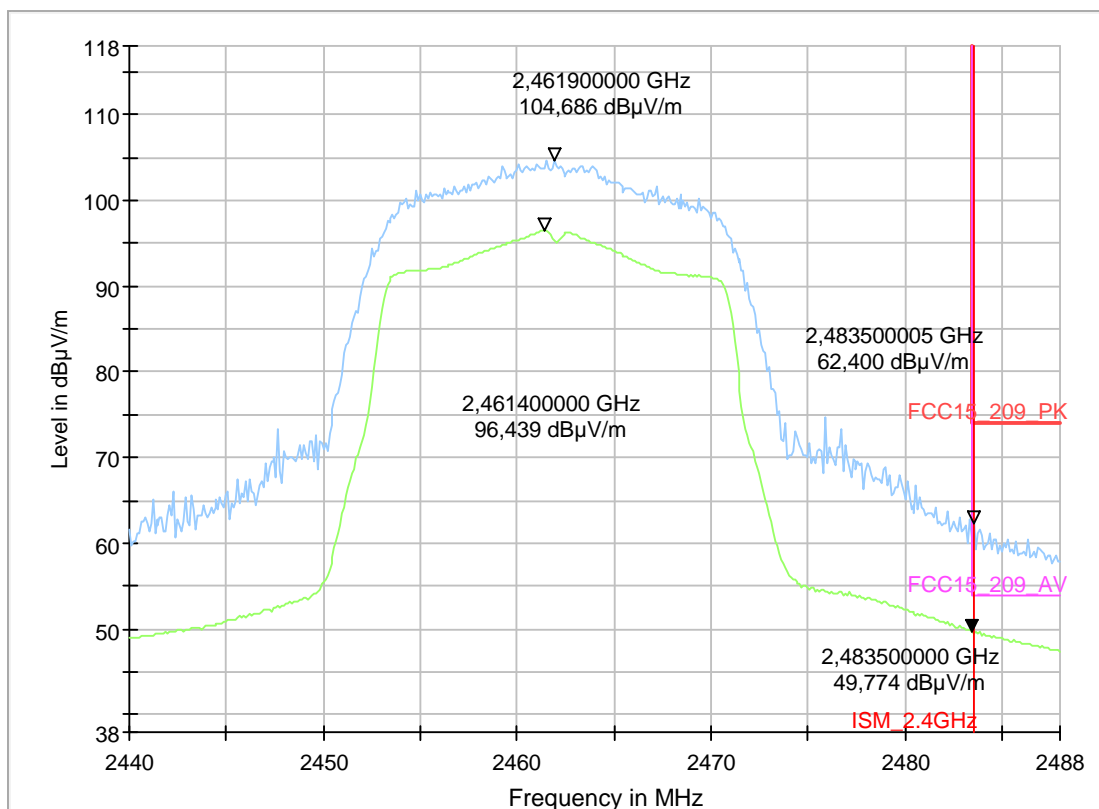
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch11 External antenna standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



1.2.2 Internal Antenna

2.02a_b-mode_ch6

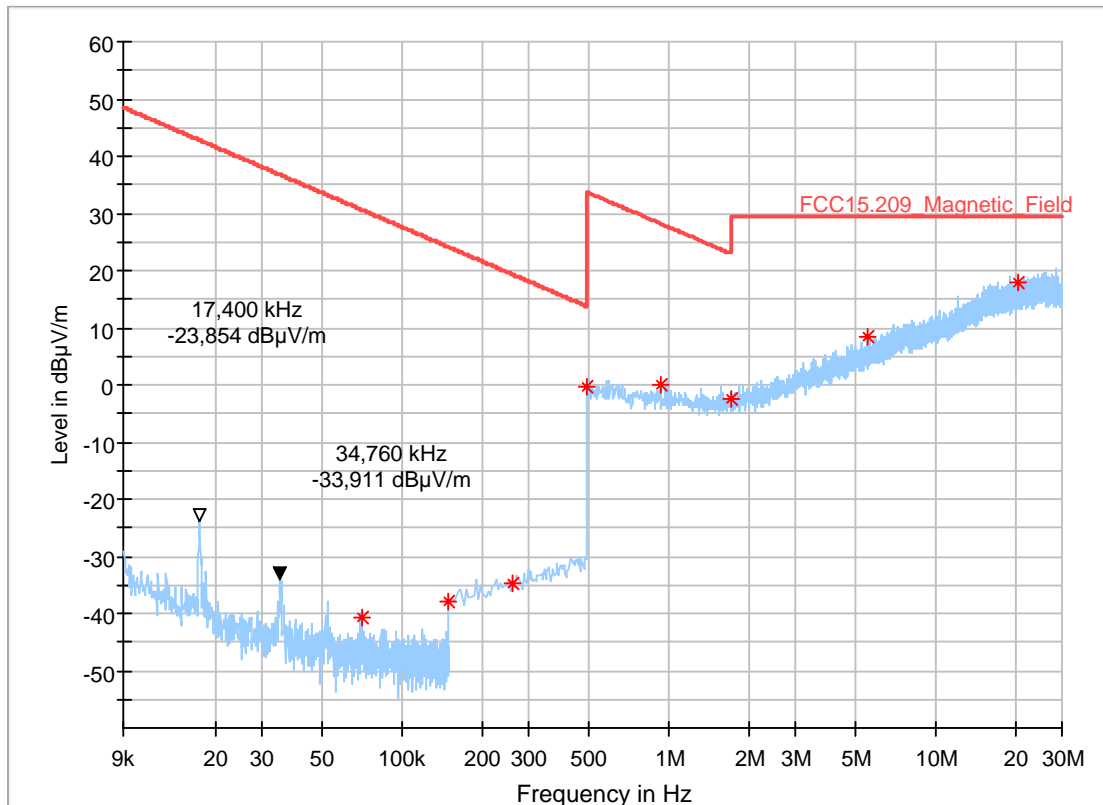
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 5
Operator:	mkh
Environmental Conditions:	Humidity : 44 %rH; Temperature: 22° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margi n (dB)	Meas. Time (ms)	Bandwidt h (kHz)	Pol	Azimut h (deg)	Corr. (dB)	Comment
0.070680	-40.86	30.61	71.47	---	---	V	215.0	-60.5	09:39:39 - 20.01.2020
0.150000	-38.05	24.08	62.13	---	---	V	215.0	-60.6	09:39:43 - 20.01.2020
0.262000	-34.60	19.24	53.84	---	---	V	305.0	-56.4	09:39:44 - 20.01.2020
0.494000	-0.26	33.73	33.99	---	---	V	35.0	-20.7	09:39:48 - 20.01.2020
0.938000	0.00	28.18	28.18	---	---	H	305.0	-20.7	09:39:58 - 20.01.2020
1.710000	-2.57	29.54	32.11	---	---	V	215.0	-19.9	09:39:51 - 20.01.2020
5.598000	8.50	29.54	21.04	---	---	H	215.0	-10.0	09:39:54 - 20.01.2020
20.626000	17.80	29.54	11.74	---	---	H	35.0	1.1	09:39:56 - 20.01.2020

2.02b_b-mode_ch6

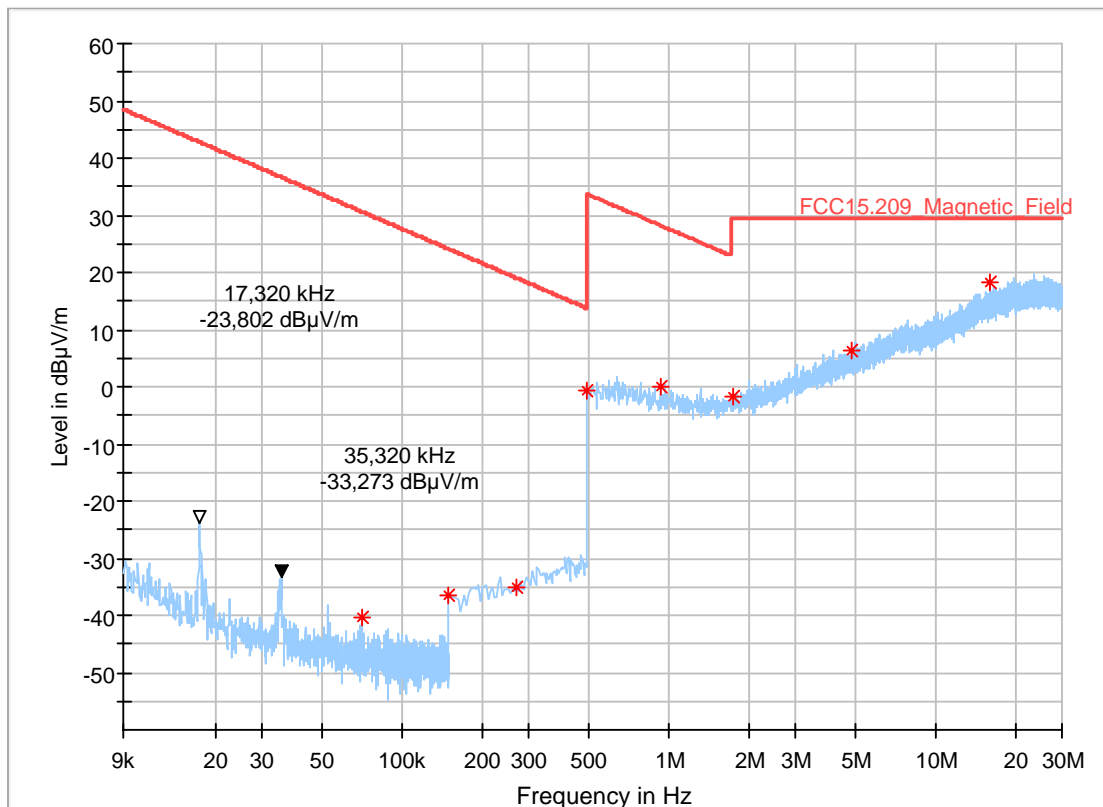
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 5
Operator:	mkh
Environmental Conditions:	Humidity : 44 %rH; Temperature: 22° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.070760	-40.29	30.60	70.90	---	---	H	305.0	-60.5	09:41:48 - 20.01.2020
0.150000	-36.58	24.08	60.66	---	---	V	305.0	-60.6	09:41:50 - 20.01.2020
0.270000	-34.91	18.98	53.89	---	---	V	35.0	-56.1	09:41:52 - 20.01.2020
0.494000	-0.64	33.73	34.37	---	---	V	35.0	-20.7	09:41:54 - 20.01.2020
0.934000	-0.09	28.21	28.30	---	---	H	125.0	-20.7	09:42:04 - 20.01.2020
1.742000	-1.64	29.54	31.18	---	---	H	305.0	-19.8	09:41:57 - 20.01.2020
4.878000	6.29	29.54	23.25	---	---	H	215.0	-11.1	09:41:59 - 20.01.2020
16.138000	18.07	29.54	11.47	---	---	V	125.0	-0.1	09:42:01 - 20.01.2020

3.02a_b-mode_ch6

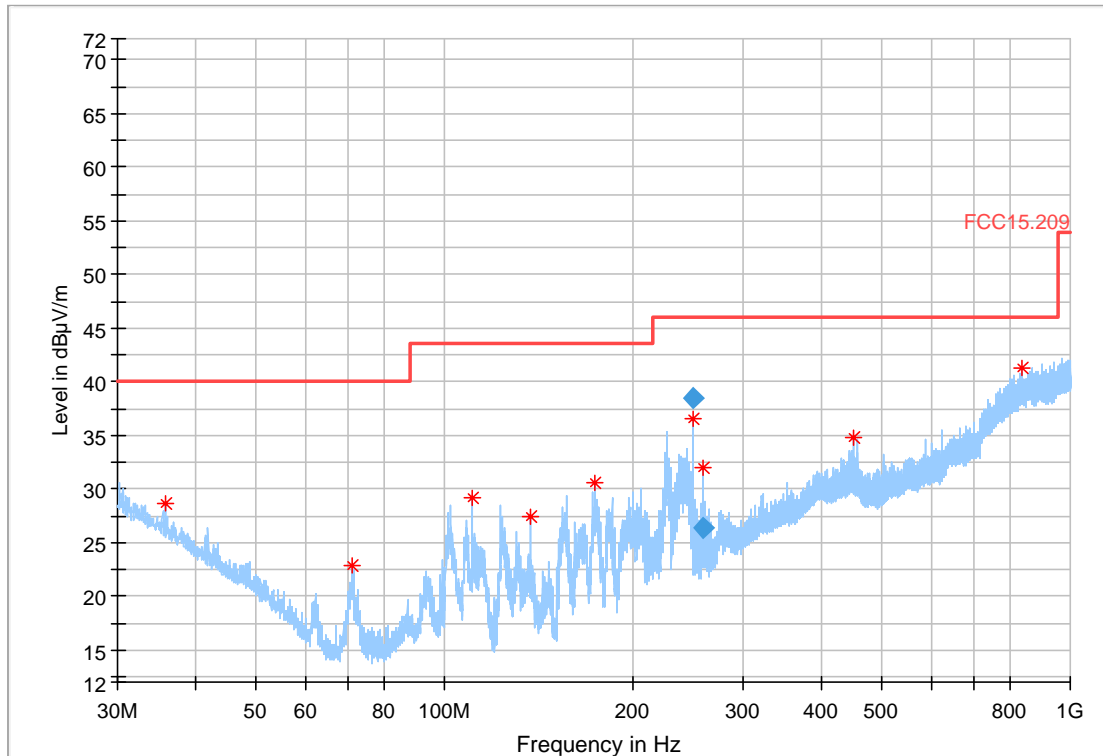
Common Information

Test description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209; RSS-Gen: Issue 5
Operator:	mkh
Environmental Conditions:	Humidity : 40 %rH; Temperature: 20° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
249.996000	38.43	46.00	7.57	120.000	109.0	H	250.0	13.0
259.216000	26.36	46.00	19.64	120.000	121.0	H	249.0	13.6

Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
35.760000	28.67	40.00	11.33	---	---	105.0	V	270.0	18.9
71.160000	22.79	40.00	17.21	---	---	182.0	H	180.0	6.6
111.120000	29.15	43.50	14.35	---	---	182.0	H	90.0	8.2
137.280000	27.46	43.50	16.04	---	---	182.0	H	90.0	9.4
174.440000	30.56	43.50	12.94	---	---	182.0	H	270.0	10.4
249.996000	36.54	46.00	9.46	---	---	109.0	H	251.0	13.0
259.216000	31.97	46.00	14.03	---	---	121.0	H	250.0	13.6
449.960000	34.87	46.00	11.13	---	---	182.0	H	180.0	19.3
839.160000	41.32	46.00	4.68	---	---	105.0	H	180.0	26.1

3.02b_b-mode_ch6

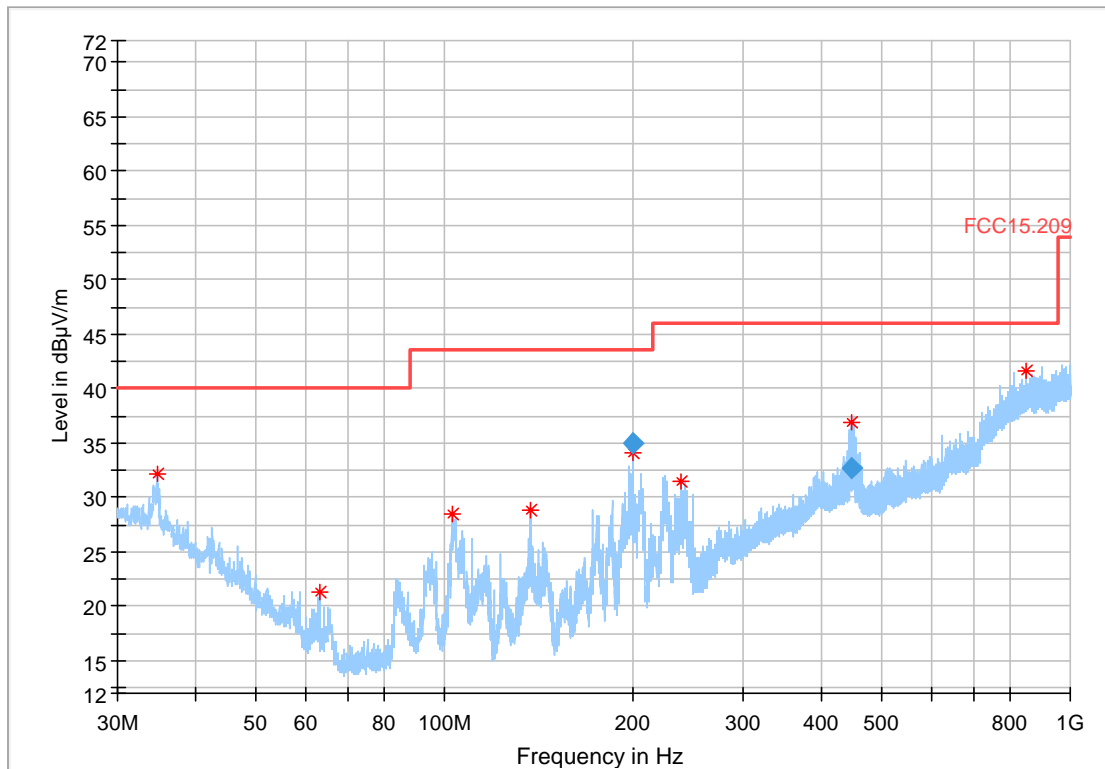
Common Information

Test description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209; RSS-Gen: Issue 5
Operator:	mkh
Environmental Conditions:	Humidity : 40 %rH; Temperature: 20° C
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
199.976000	34.90	43.50	8.60	120.000	161.0	H	174.0	11.3
446.388000	32.74	46.00	13.26	120.000	199.0	H	183.0	19.3

Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margi n (dB)	Meas. Time (ms)	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimut h (deg)	Corr. (dB)
34.680000	32.18	40.00	7.82	---	---	105.0	H	180.0	19.3
63.000000	21.26	40.00	18.74	---	---	182.0	V	180.0	7.9
102.800000	28.48	43.50	15.02	---	---	105.0	V	180.0	8.1
137.280000	28.77	43.50	14.73	---	---	182.0	H	180.0	9.4
199.976000	34.12	43.50	9.38	---	---	161.0	H	175.0	11.3
238.160000	31.50	46.00	14.50	---	---	105.0	H	180.0	13.1
446.388000	36.98	46.00	9.02	---	---	199.0	H	184.0	19.3
852.800000	41.62	46.00	4.38	---	---	182.0	V	180.0	26.3

4.02a_b-mode_ch06

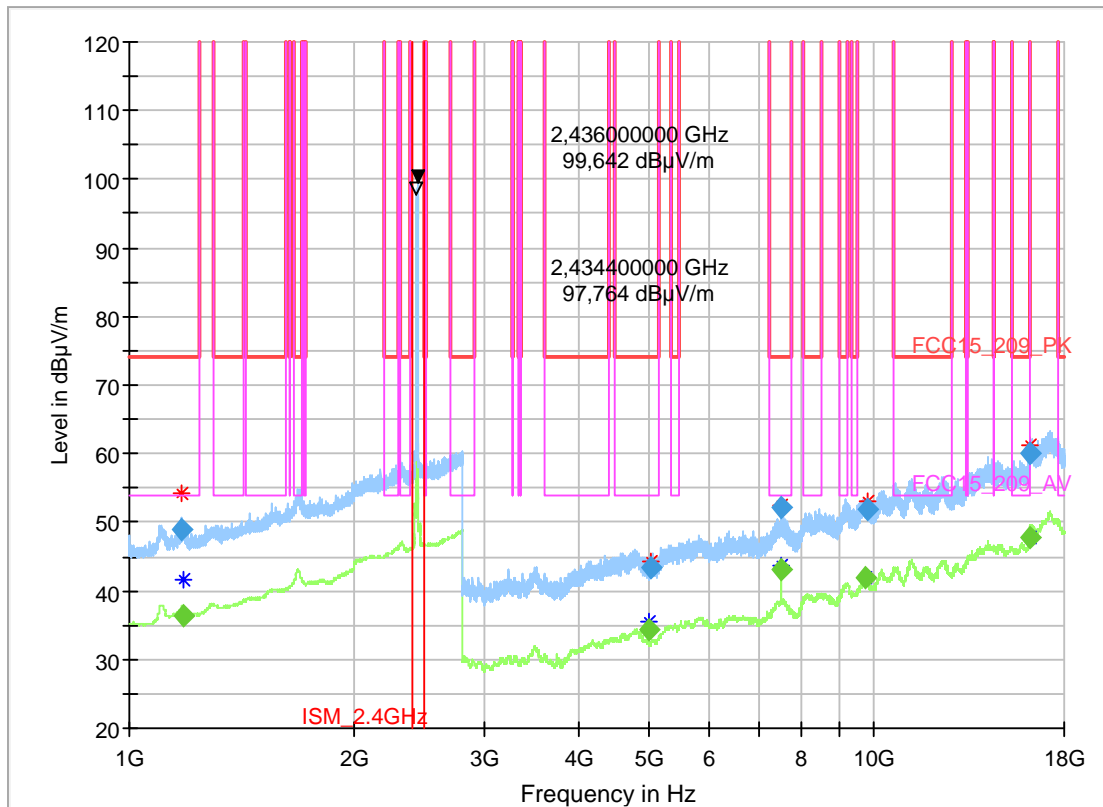
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch6 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum





Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin	Meas. Time (ms)	Bandwidth	Height	Pol	Azimuth	Elevation	Corr. (dB/m)
1178.000000	48.91	---	74.00	25.09	100.0	1000.000	155.0	V	24.0	0.0	29
1180.400000	---	36.50	54.00	17.50	100.0	1000.000	155.0	H	218.0	0.0	29
4999.200000	---	34.35	54.00	19.65	100.0	1000.000	155.0	V	131.0	0.0	5
5018.000000	43.41	---	74.00	30.59	100.0	1000.000	155.0	V	225.0	0.0	5
7499.200000	---	42.98	54.00	11.02	100.0	1000.000	155.0	V	234.0	0.0	13
7499.200000	52.19	---	74.00	21.81	100.0	1000.000	155.0	V	234.0	0.0	13
9748.000000	---	41.92	150.00	108.09	100.0	1000.000	155.0	V	228.0	0.0	17
9799.600000	51.80	---	150.00	98.20	100.0	1000.000	155.0	V	181.0	0.0	17
16237.200000	---	47.67	150.00	102.33	100.0	1000.000	155.0	V	355.0	0.0	28
16246.000000	60.08	---	150.00	89.92	100.0	1000.000	155.0	H	180.0	0.0	28

4.02b_b-mode_ch06

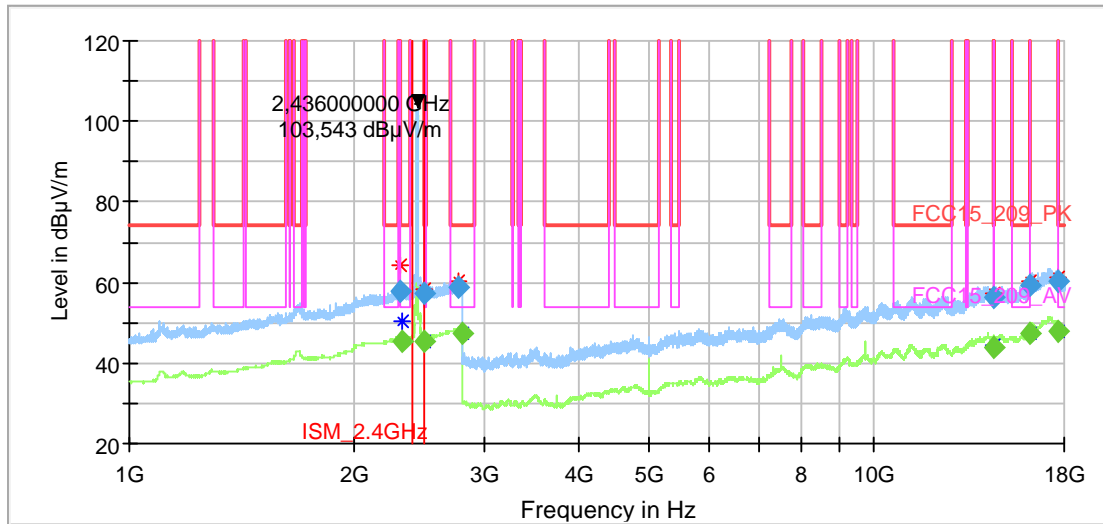
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
 Antenna polarisation: horizontal/vertical
 Operating Mode: b-mode | 1Mbit| ch6 | Internal antenna| standing| .
 Operator: TFra
 Verdict: Passed

EUT Information

PMT number: 18-1-00972S20
 Manufacturer: ACTIA Nordic AB

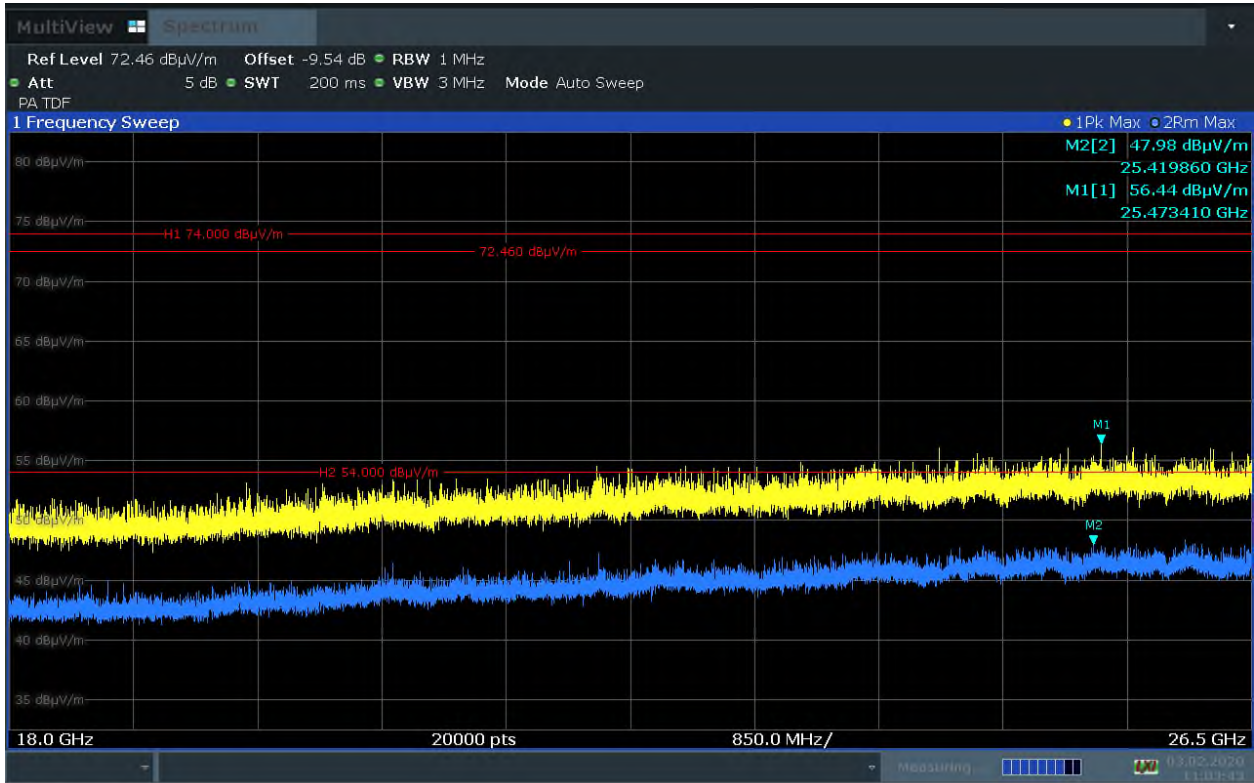
Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margi n	Meas. Time (ms)	Bandwidt h	Heigh t	Pol	Azimet h	Corr. (dB/m)
2313.200000	57.74	---	74.00	16.26	100.0	1000.000	155.0	V	166.0	37
2321.200000	---	45.55	54.00	8.45	100.0	1000.000	155.0	V	295.0	37
2484.000000	---	45.47	54.00	8.53	100.0	1000.000	155.0	V	26.0	36
2486.400000	57.40	---	74.00	16.60	100.0	1000.000	155.0	V	57.0	36
2758.400000	59.04	---	74.00	14.96	100.0	1000.000	155.0	H	205.0	39
2792.800000	---	47.30	54.00	6.70	100.0	1000.000	155.0	V	100.0	39
14478.000000	56.11	---	74.00	17.89	100.0	1000.000	155.0	H	298.0	24
14491.200000	---	44.09	54.00	9.91	100.0	1000.000	155.0	H	237.0	24
16198.000000	---	47.26	54.00	6.74	100.0	1000.000	155.0	V	109.0	28
16198.800000	59.22	---	74.00	14.78	100.0	1000.000	155.0	H	174.0	28
17702.800000	60.34	---	74.00	13.66	100.0	1000.000	155.0	V	180.0	29
17704.800000	---	48.04	54.00	5.96	100.0	1000.000	155.0	V	202.0	29

4.12a_b-mode_ch06



11:03:43 03.02.2020

9.11a_b-mode_ch01

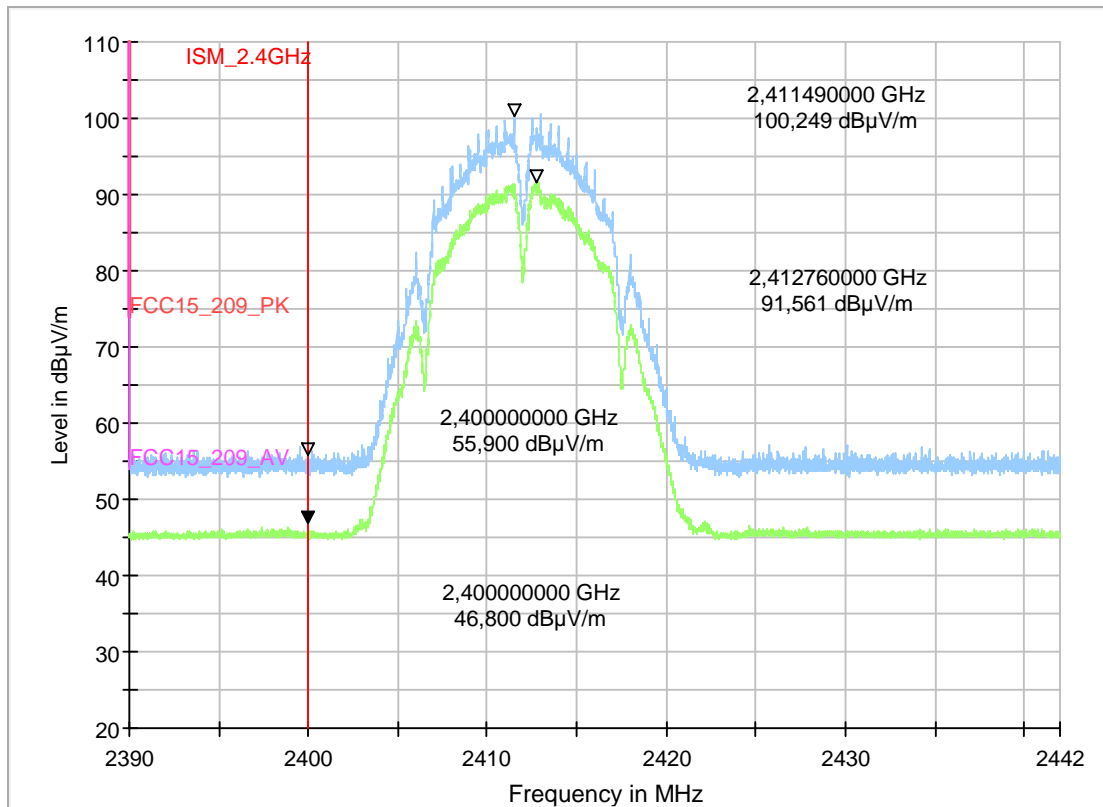
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch01 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.11b_b-mode_ch01

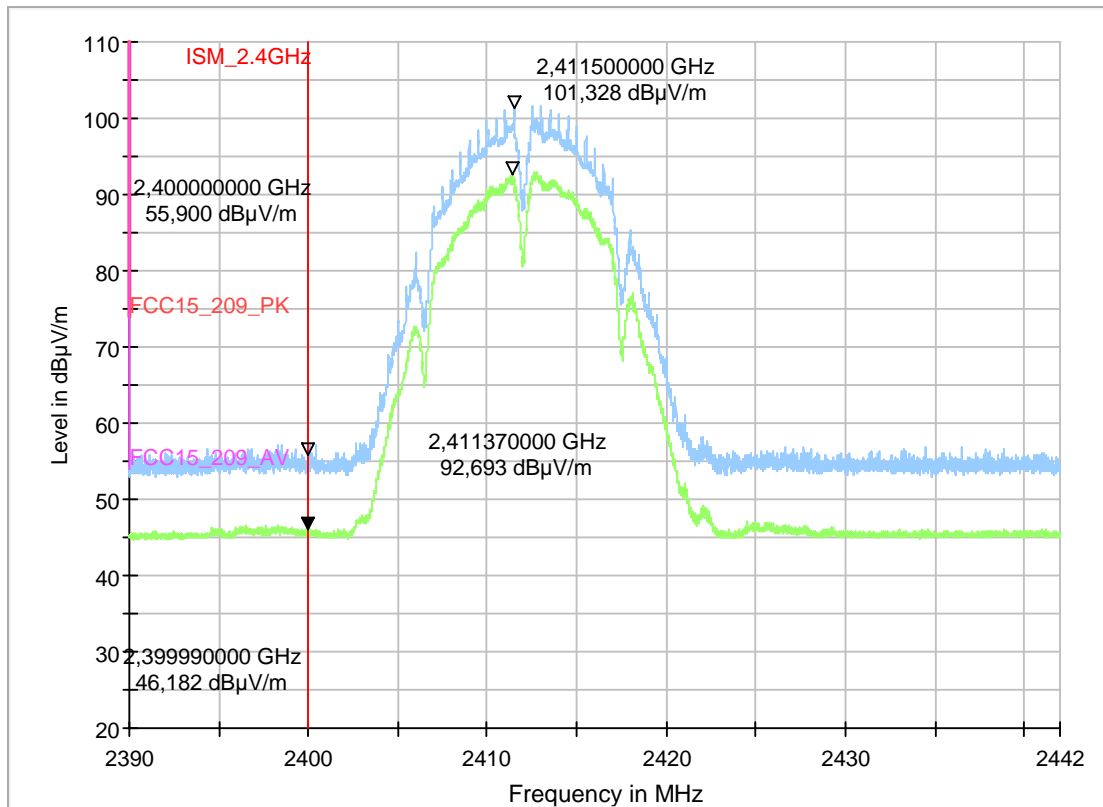
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch01 Internal antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.12a_b-mode_ch11

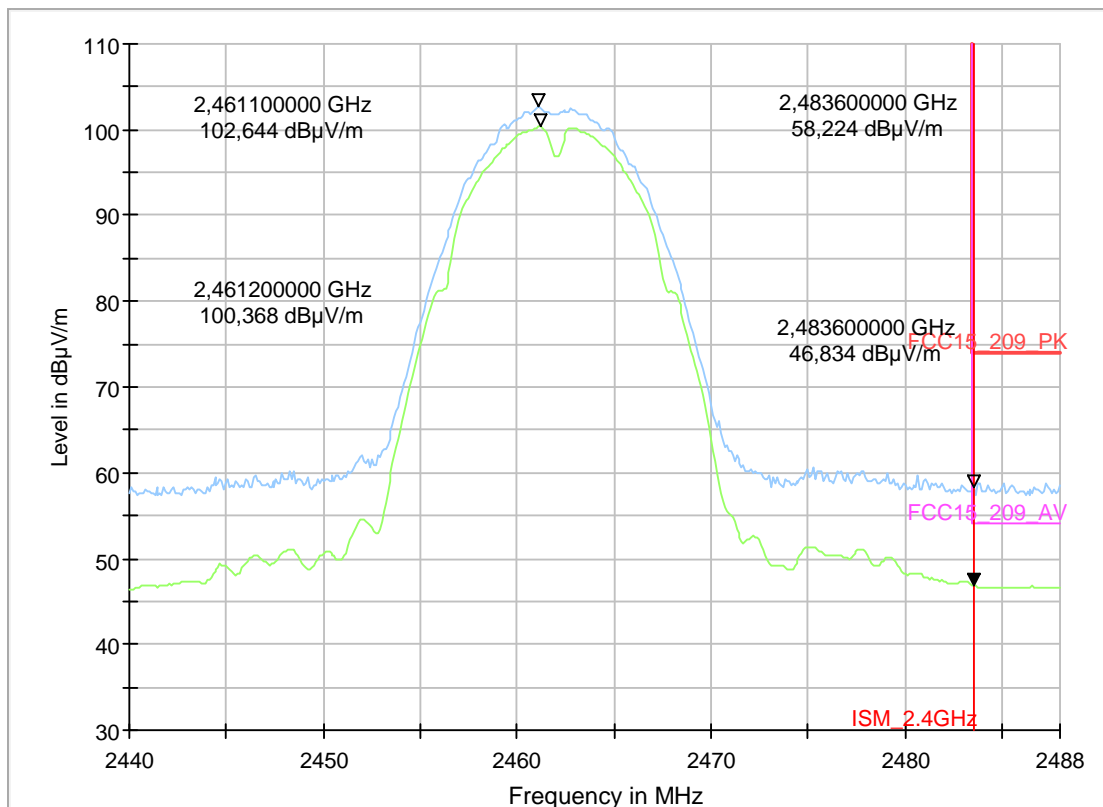
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch11 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.12b_b-mode_ch11

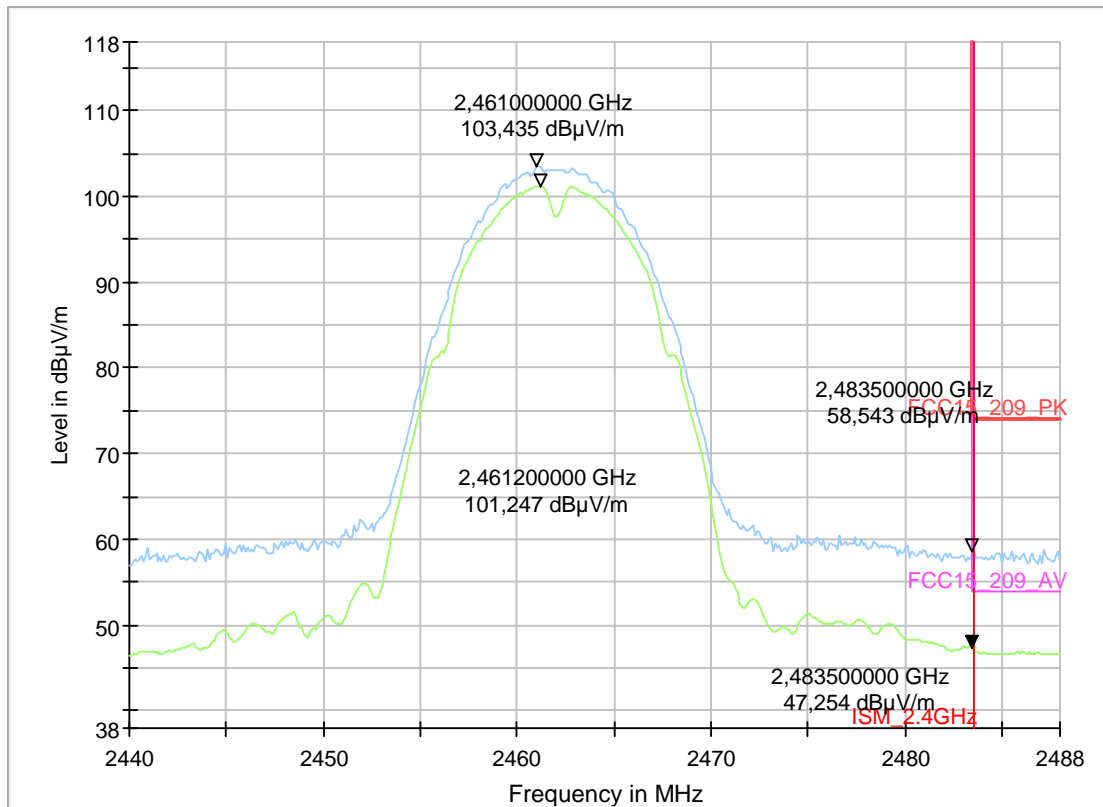
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	b-mode 1Mbit ch11 Internal antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.13a_g-mode_ch01

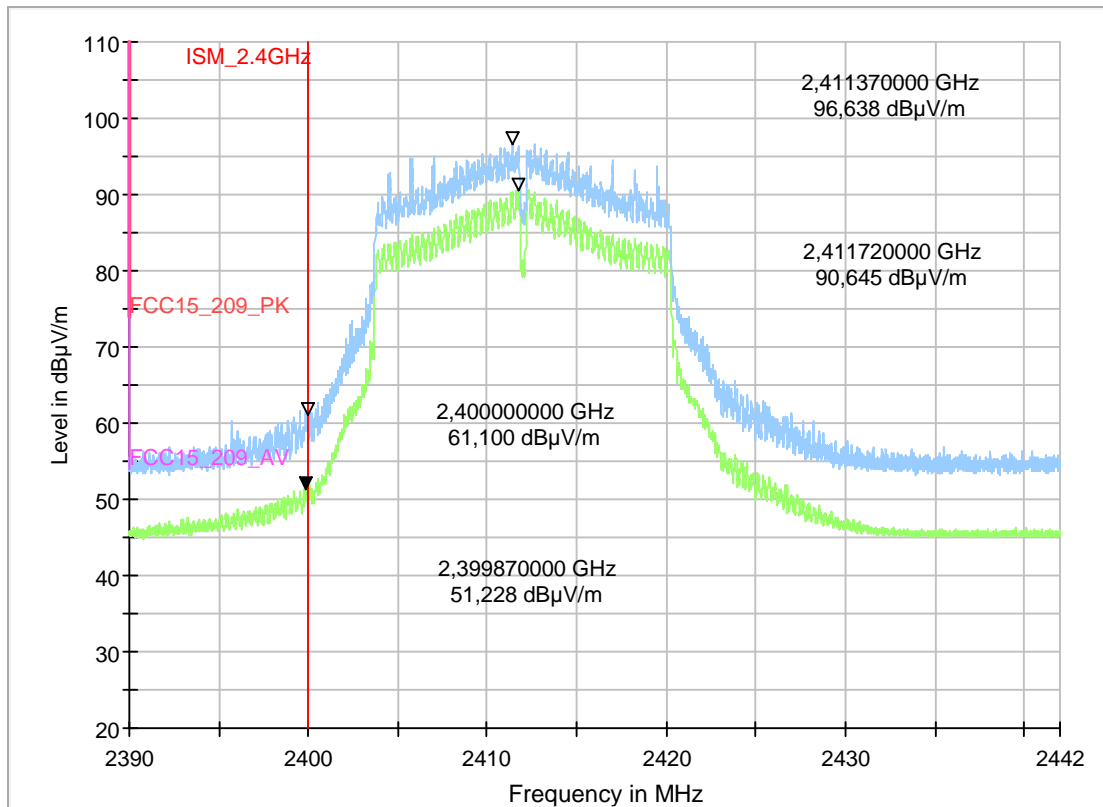
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch01 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.13b_g-mode_ch01

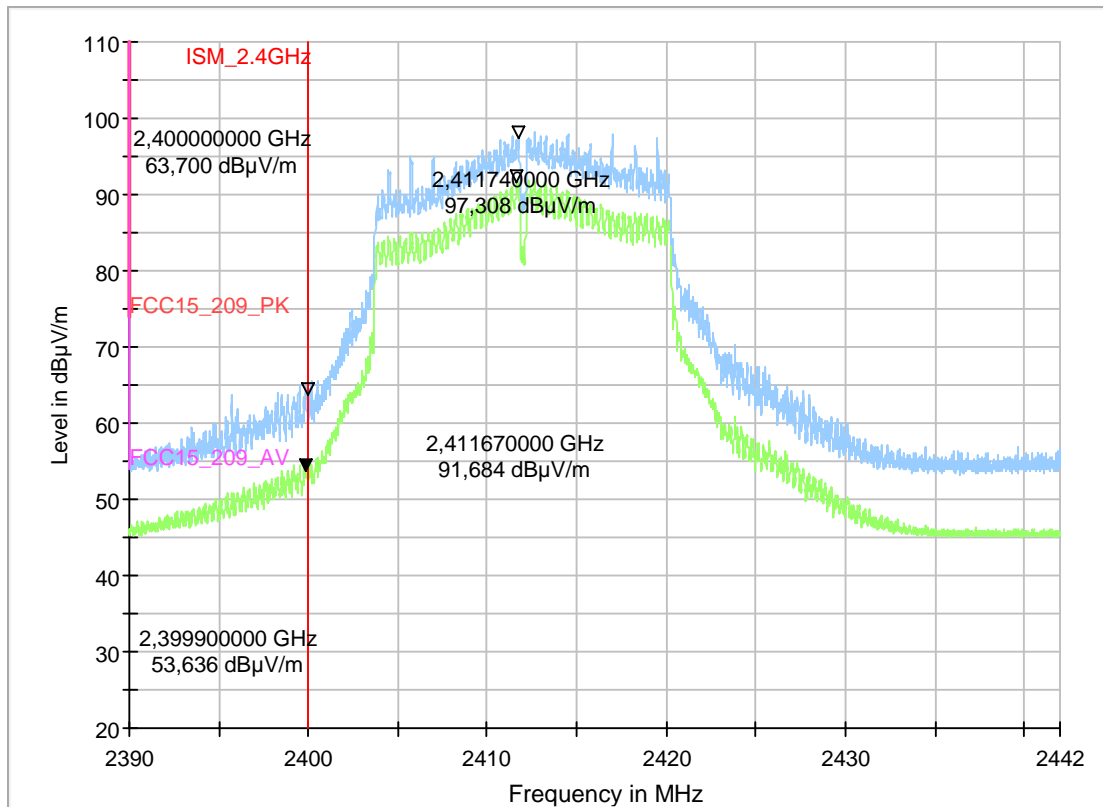
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch01 Internal antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.14a_g-mode_ch11

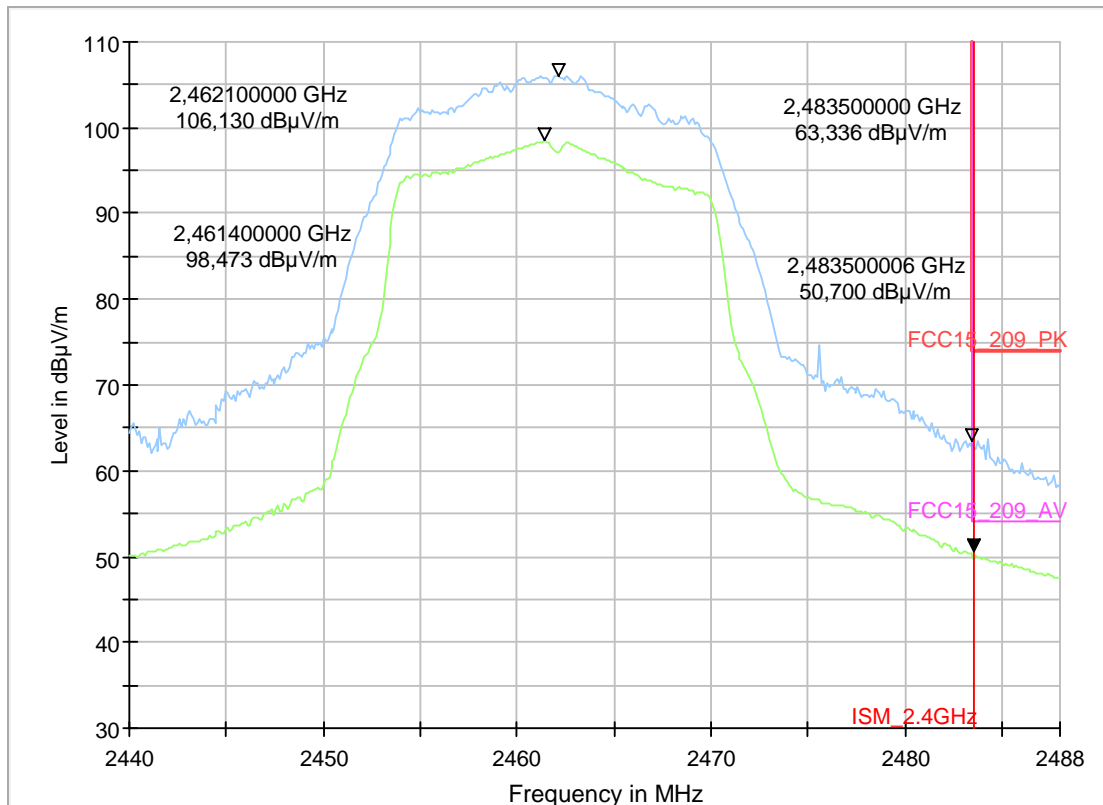
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch11 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.14b_g-mode_ch11

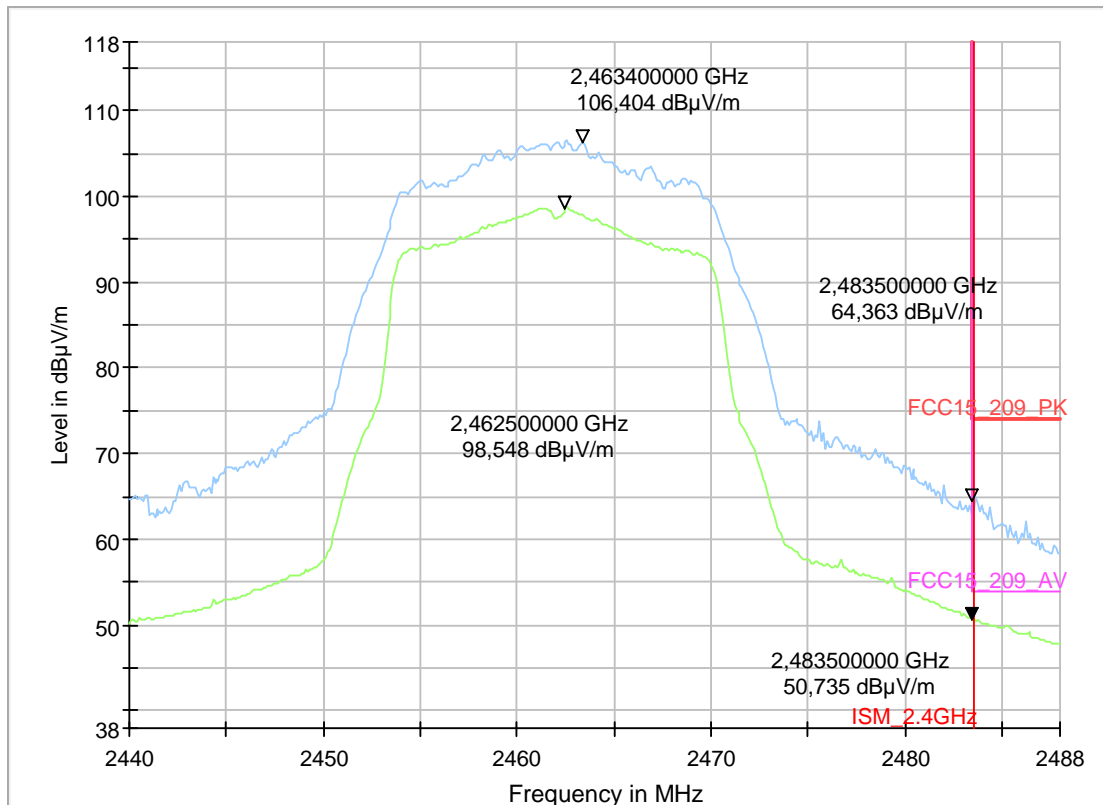
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	g-mode 6Mbit ch11 Internal antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.15a_n-mode_ch01

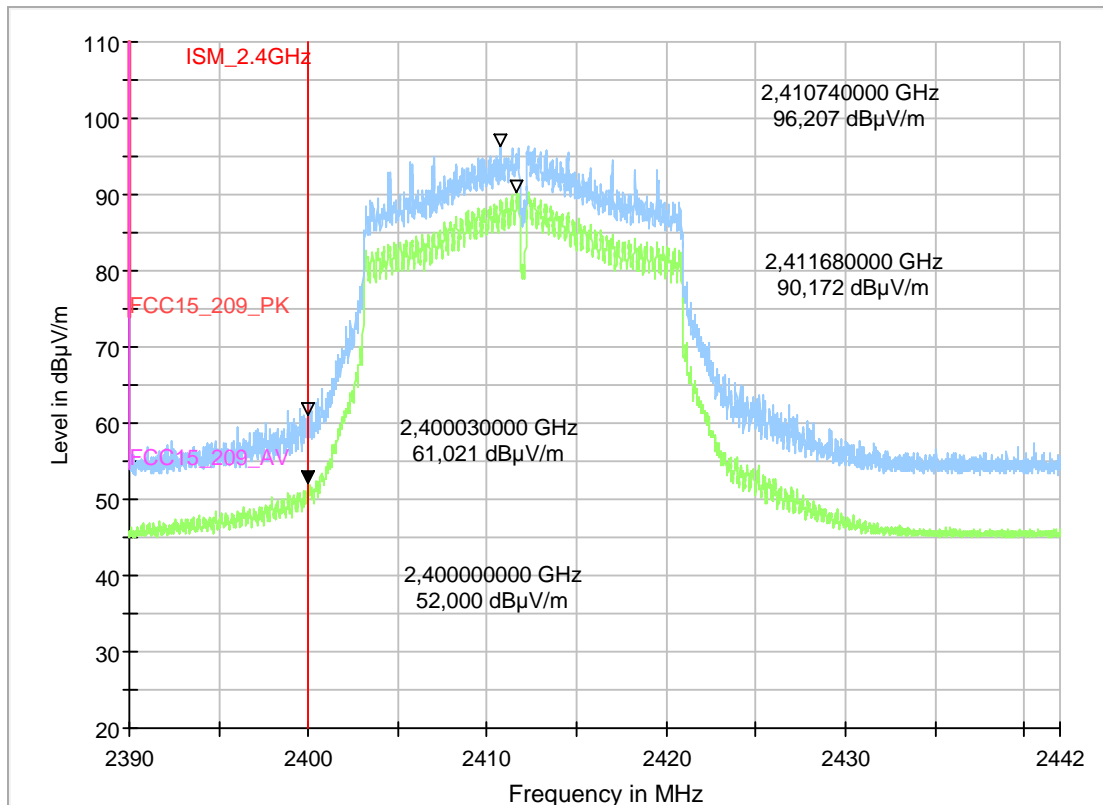
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch01 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.15b_n-mode_ch01

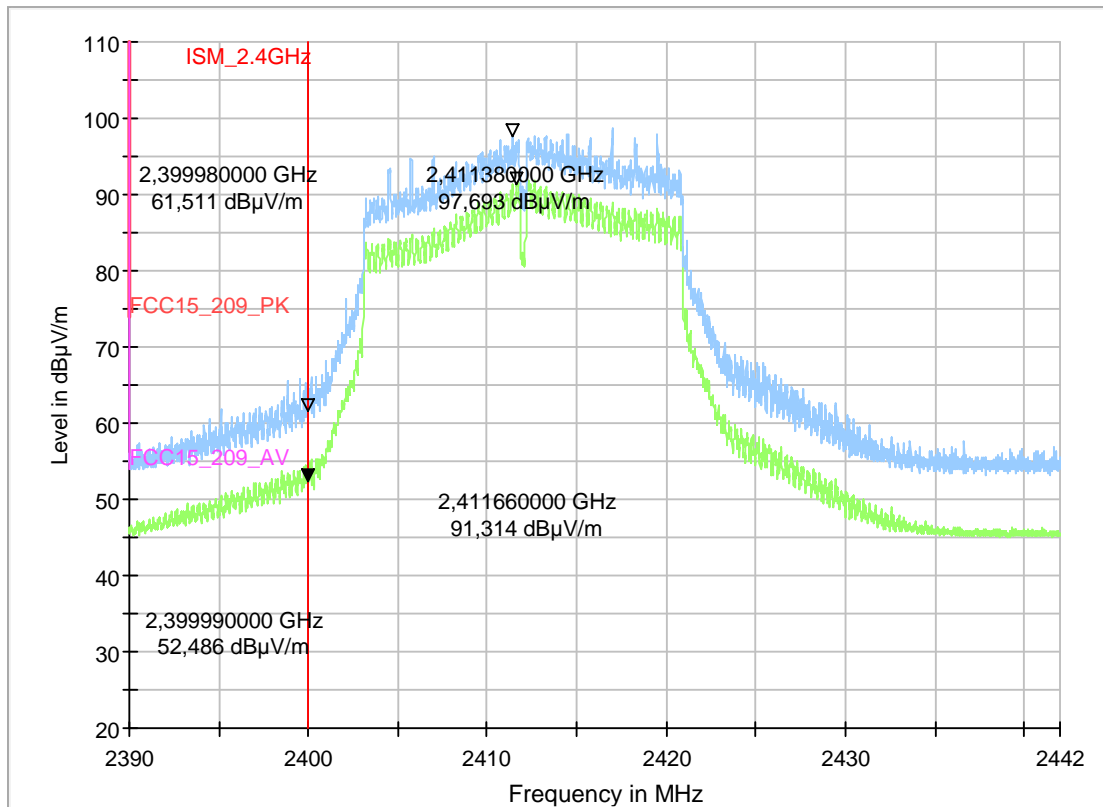
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch01 Internal antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.16a_n-mode_ch11

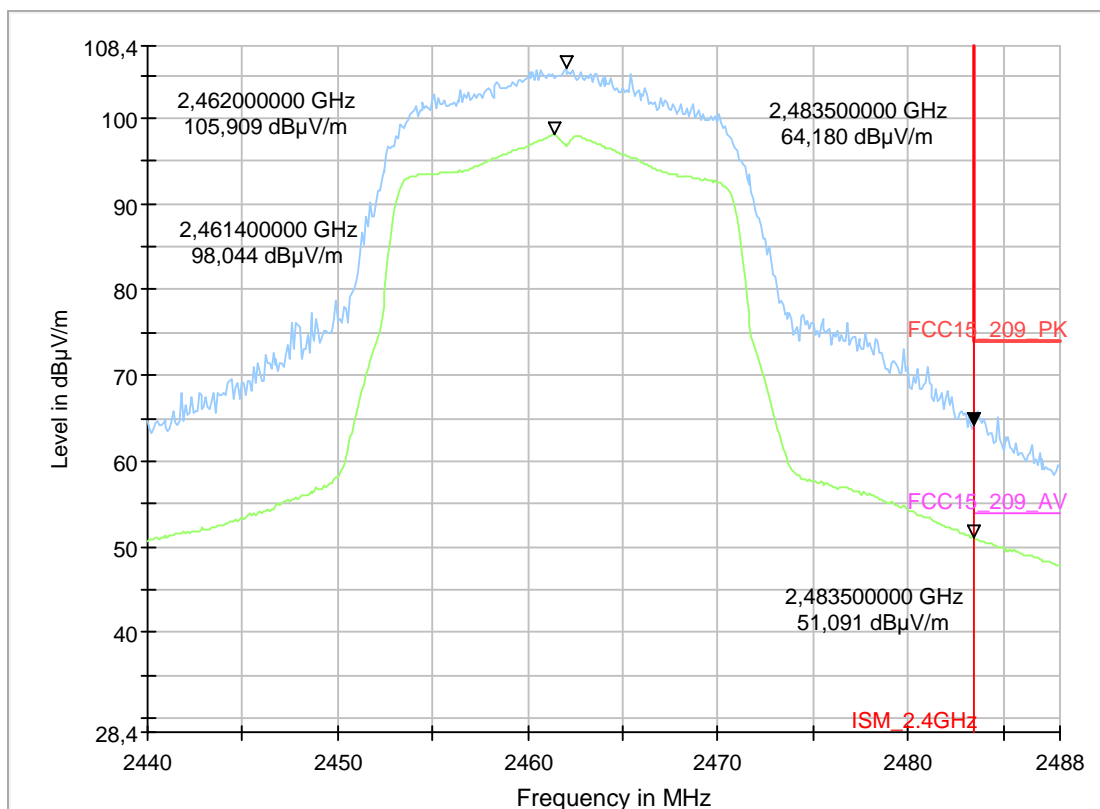
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch11 Internal antenna laying .
Operator:	TFra
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



9.16b_n-mode_ch11

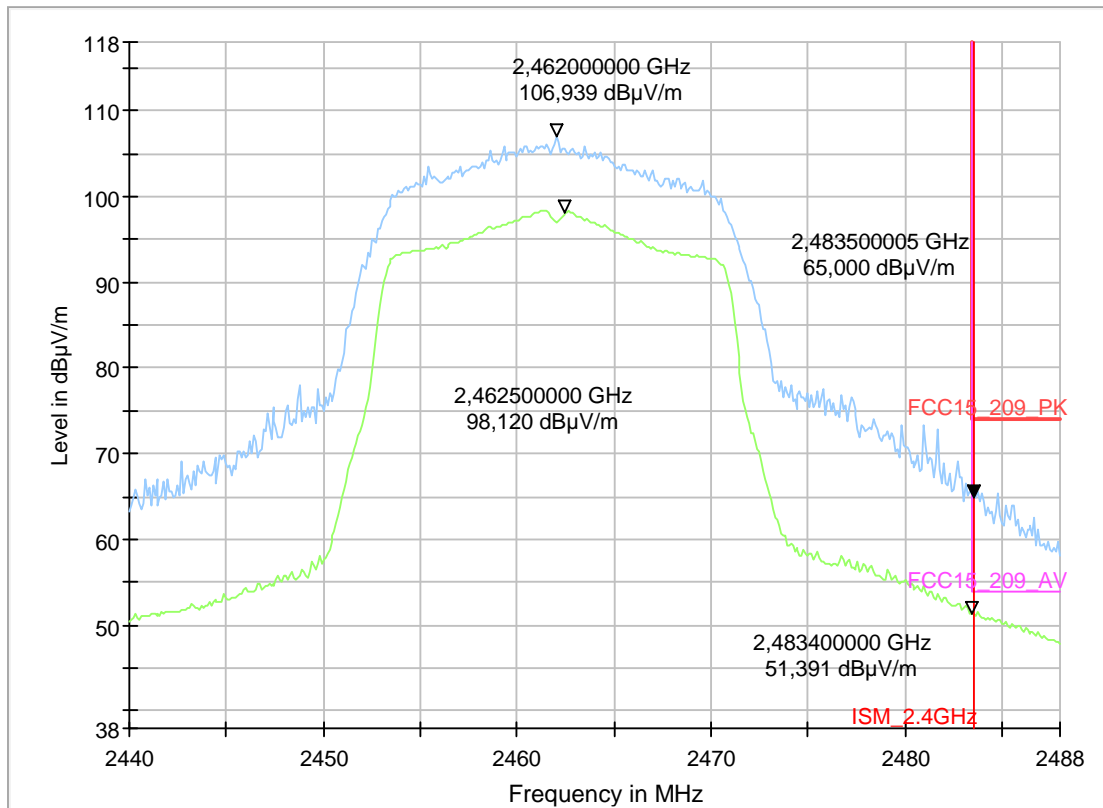
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	n-mode HT20 MCS0 ch11 Internal antenna Standing .
Operator:	mkh
Verdict:	Passed

EUT Information

PMT number:	18-1-00972S20
Manufacturer:	ACTIA Nordic AB

Full Spectrum



End Of Annex 1