

Annex 1: Measurement diagrams to
Partial TEST REPORT
No.: 16-1-0120001T01a

According to:
FCC Regulations
Part 15.247
Part 15.205
Part 15.209

ISED-Regulations
RSS-247, Issue 2
RSS-Gen, Issue 5

for
Actia Nordic AB

VCM

FCC: 2AGKKVCM
ISED: 20839-VCM
PMN=VCM
HVIN= VCM
FVIN=IP21



Laboratory Accreditation and Listings
<div style="text-align: center;"><p>Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04</p></div> <p>Accredited EMC-Test Laboratory</p>
accredited according to DIN EN ISO/IEC 17025
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Laboratory Accreditation and Listings

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1. Conducted measurements

1.1. RF-Peak Power measurements on antenna port

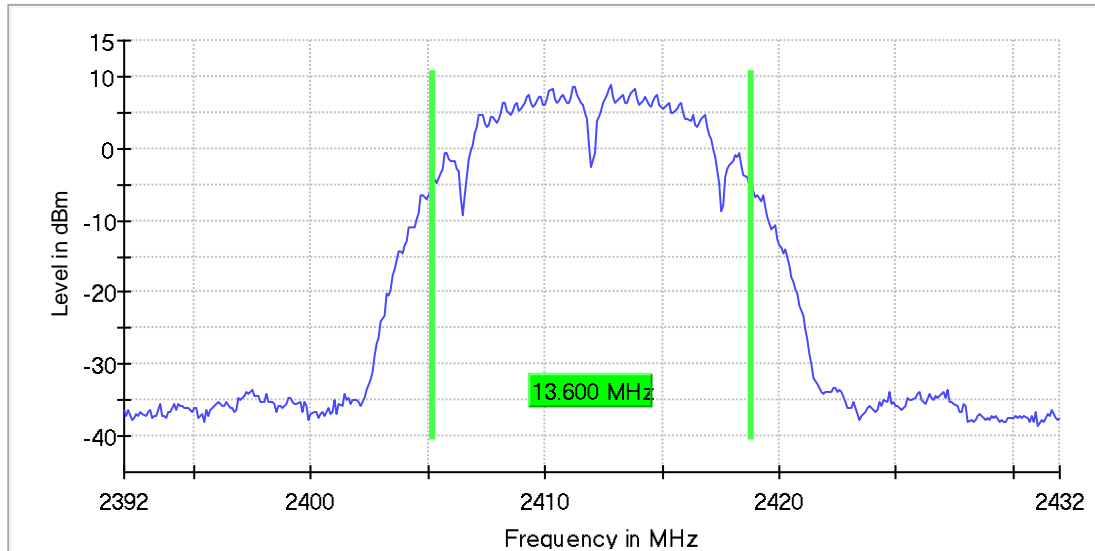
b-mode		Channel no. / [dBm]			Max-Value / [dBm]
Data rate	Modulation	1	6	11	
1MBit		17,80	17,43	17,85	17,99
2Mbit		17,77	17,99	17,67	
5.5Mbit		17,01	16,78	17,15	
11MBit		17,85	17,81	17,58	
g-Mode		Channel no. / [dBm]			Max-Value / [dBm]
Data rate	Modulation	1	6	11	
6Mbit		15,6	16,13	16,9	16,90
9Mbit		15,45	16,52	16,76	
12Mbit		15,38	16,01	16,77	
18Mbit		15,21	16,13	15,9	
24Mbit		15,36	16,05	15,62	
36Mbit		15,26	15,55	16,41	
48Mbit		15,35	16,15	16,4	
54Mbit		15,42	15,81	16,01	
n-Mode HT20 (1 spatial stream: 1SS)		Channel no. / [dBm]			Max-Value / [dBm]
Data rate	Modulation	1	6	11	
MCS0 - 6.5Mbps	BPSK	15,6	16,27	16,86	17,04
MCS1 - 13Mbps	QPSK	16,07	16,65	16,85	
MCS2 - 19.5Mbps	QPSK	15,95	16,49	16,7	
MCS3 - 26Mbps	QAM16	15,9	16,5	16,7	
MCS4 - 39Mbps	QAM16	15,95	16,69	16,86	
MCS5 - 52Mbps	QAM64	16,05	16,38	17,04	
MCS6 - 58.5Mbps	QAM64	15,38	16,36	16,68	
MCS7 - 65Mbps	QAM64	15,85	16,43	16,65	

1.2. Conducted 99% occupied bandwidth

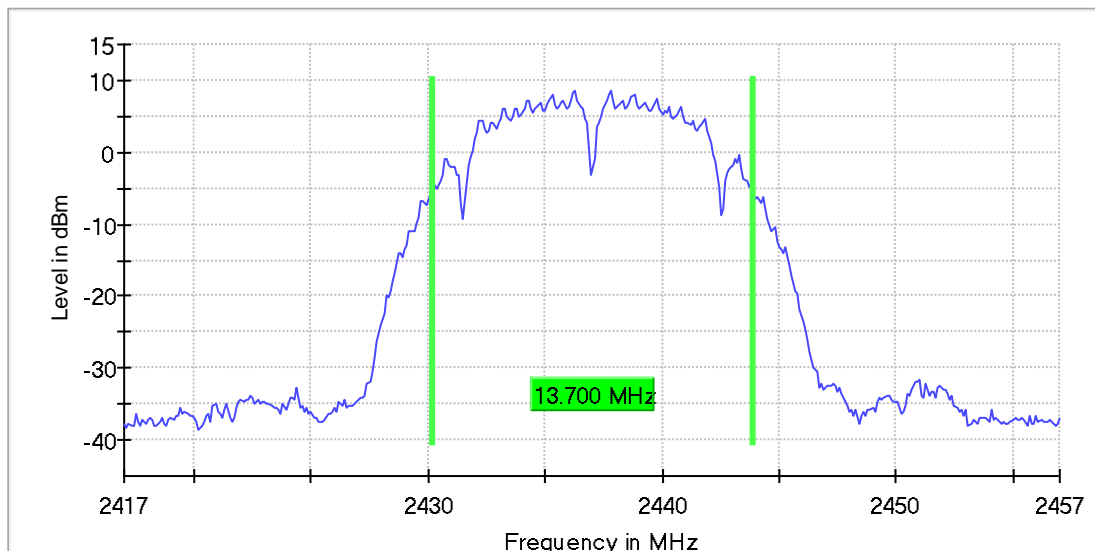
2.4GHz	2412	2437	2462
b	13,6	13,7	13,8
g	16,60	16,7	16,6
n	17,8	17,9	17,9

1.2.1. b Mode 2Mbit

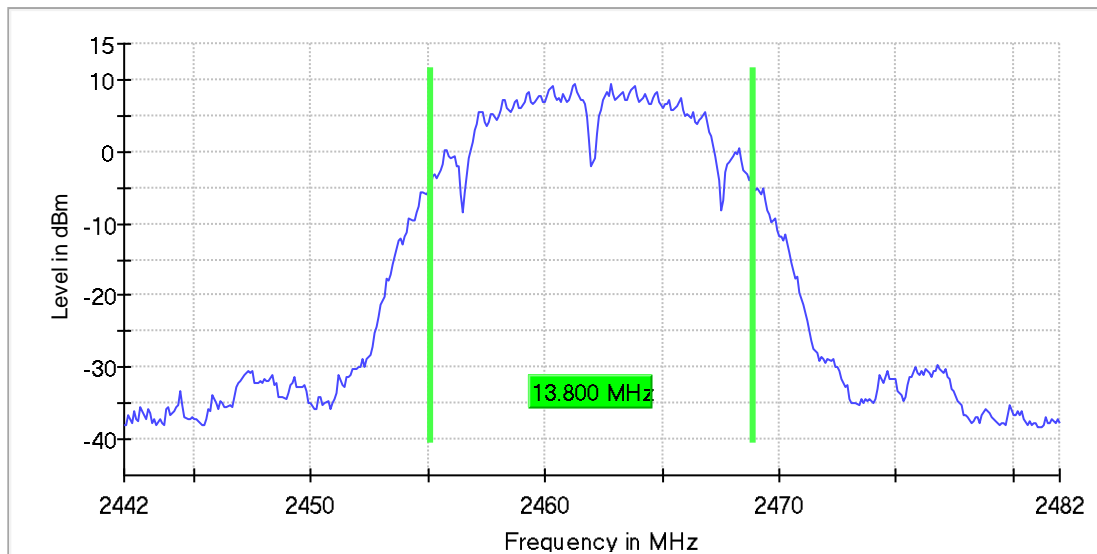
DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	1	8.8	13.6	2405.200000	2418.800000



DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	6	8.6	13.7	2430.200000	2443.900000

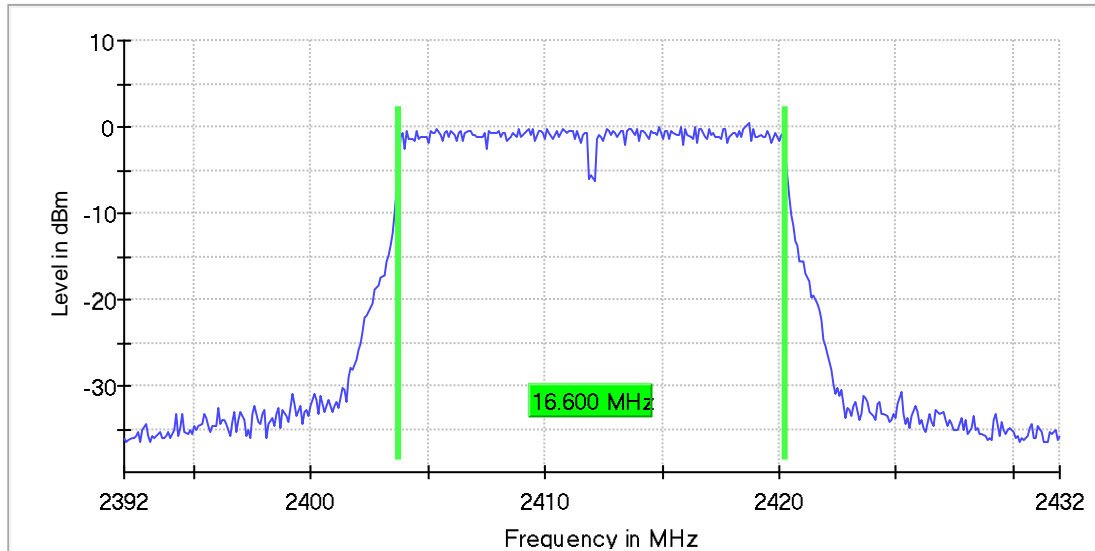


DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	11	9.5	13.8	2455.100000	2468.900000

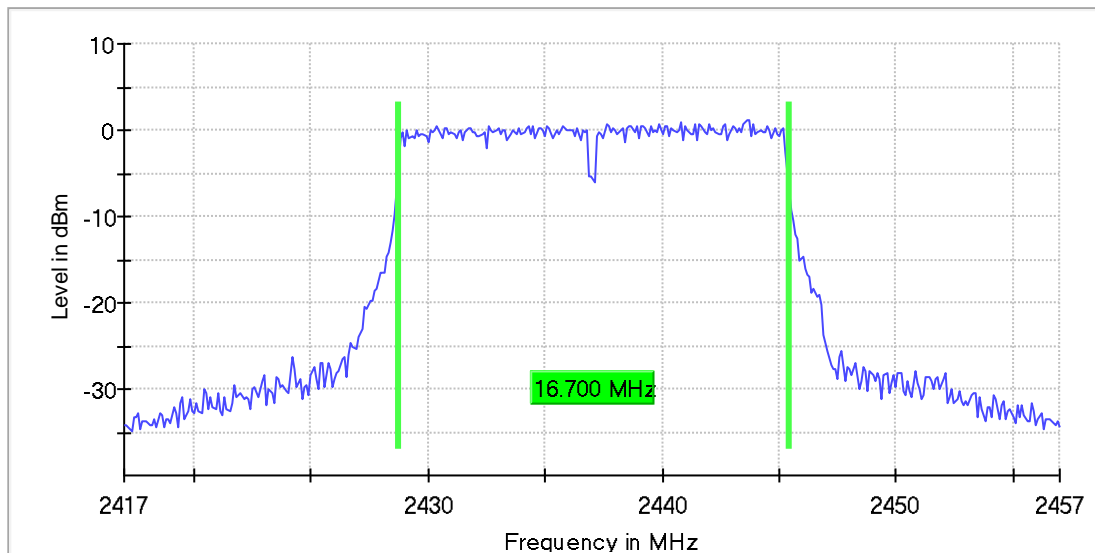


1.2.2. g Mode 6Mbit

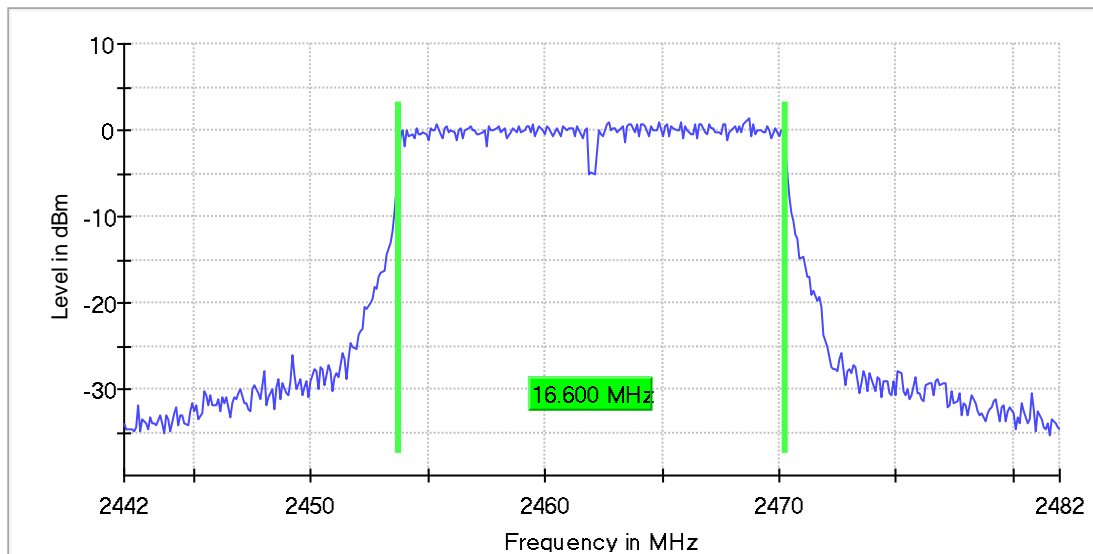
DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	1	0.4	16.6	2403.700000	2420.300000



DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	6	1.2	16.7	2428.700000	2445.400000

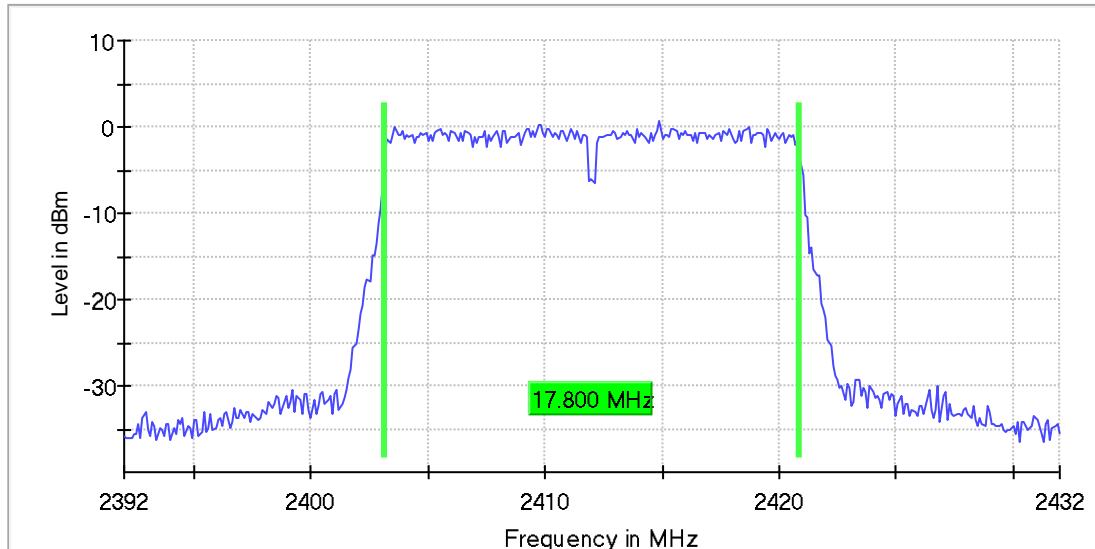


DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	11	1.3	16.6	2453.700000	2470.300000

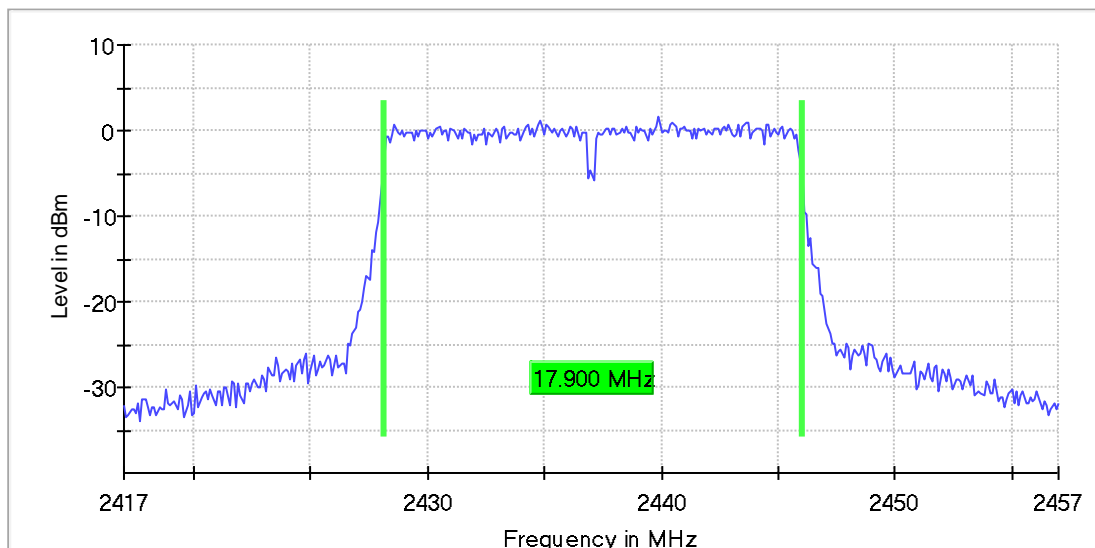


1.2.3. n Mode MCS0

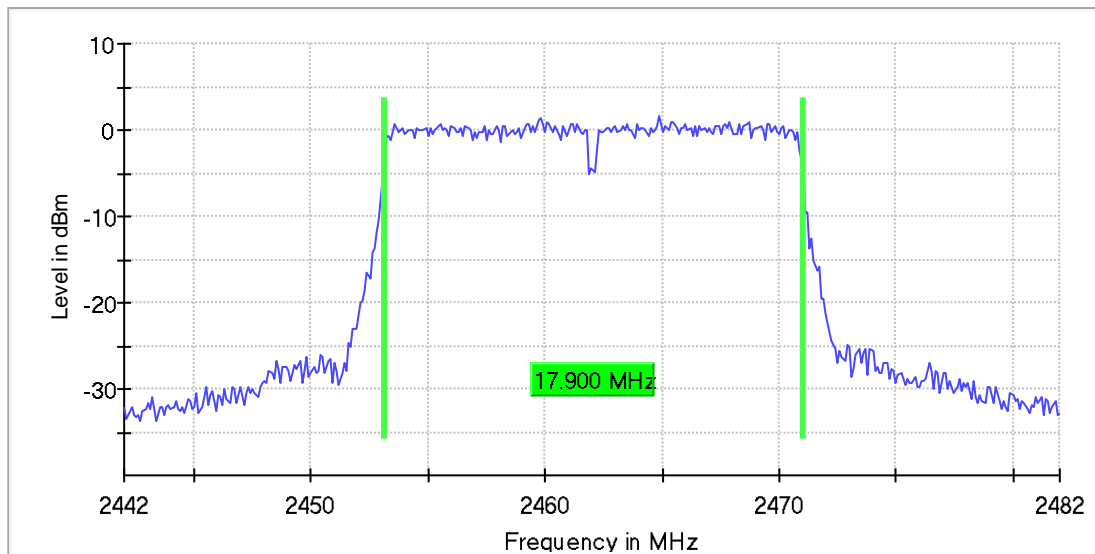
DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	1	0.7	17.8	2403.100000	2420.900000



DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	6	1.6	17.9	2428.100000	2446.000000



DUT Frequency (MHz)	Channel	Max Level (dBm)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	11	1.7	17.9	2453.100000	2471.000000



2. Radiated field strength measurements

2.1. Magnetic field strength measurements in the range 9 kHz to 30 MHz

2.01a_b Mode_2Mbit_CH1_BW_20MHz__laying

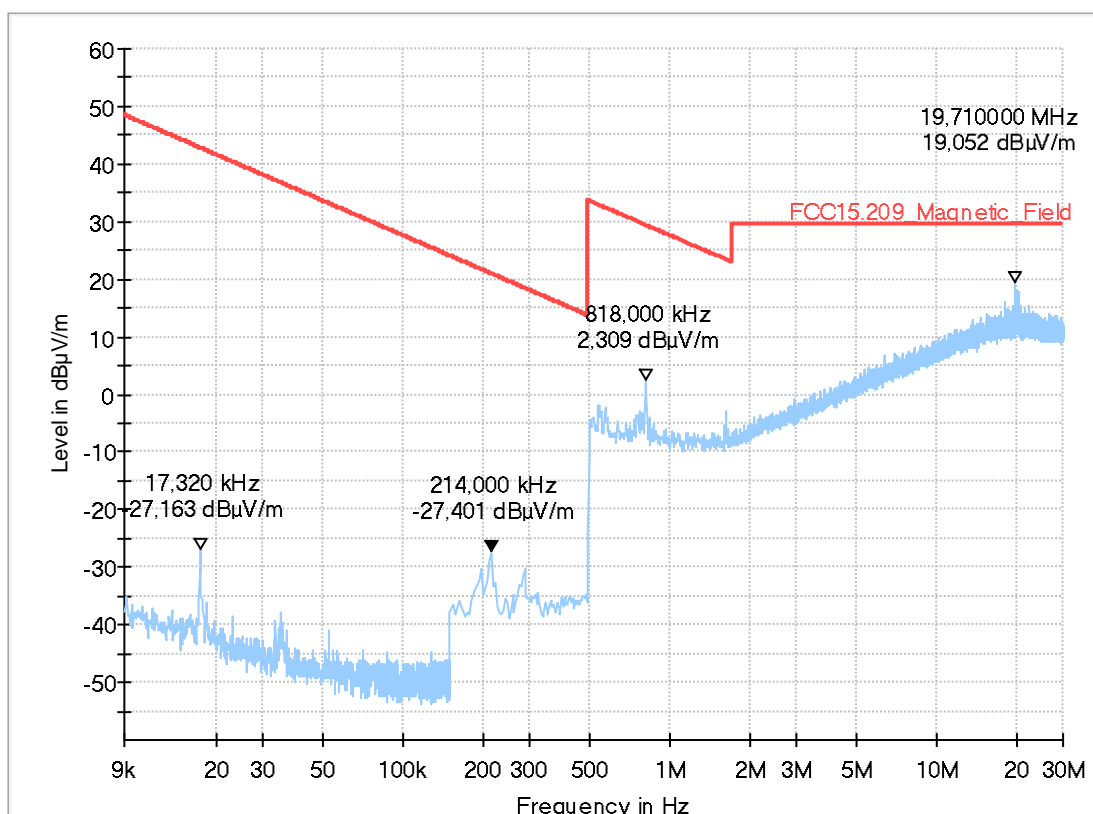
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating mode:	WLAN_TX_b Mode_2Mbit_CH1_BW_20MHz_ Antenna
Operating Conditions:	Humidity: 42%rH; Temperature: 22°C
Operator Name:	KMo
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.01b_b Mode_2Mbit_CH1_BW_20MHz_ _standing

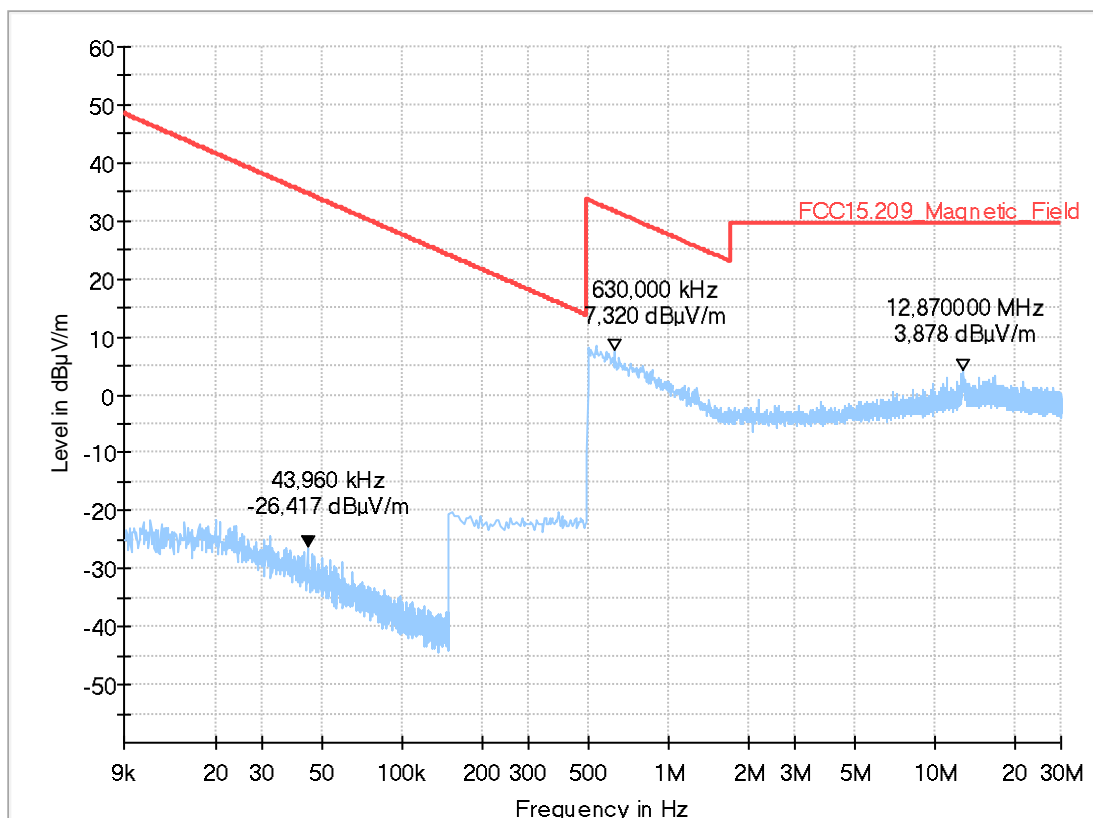
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating mode:	WLAN_TX_b Mode_2Mbit_CH1_BW_20MHz_ Antenna
Operating Conditions:	Humidity: 42%rH; Temperature: 22°C
Operator Name:	MBe
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.02a_g Mode_6Mbit_CH6_BW_20MHz_laying

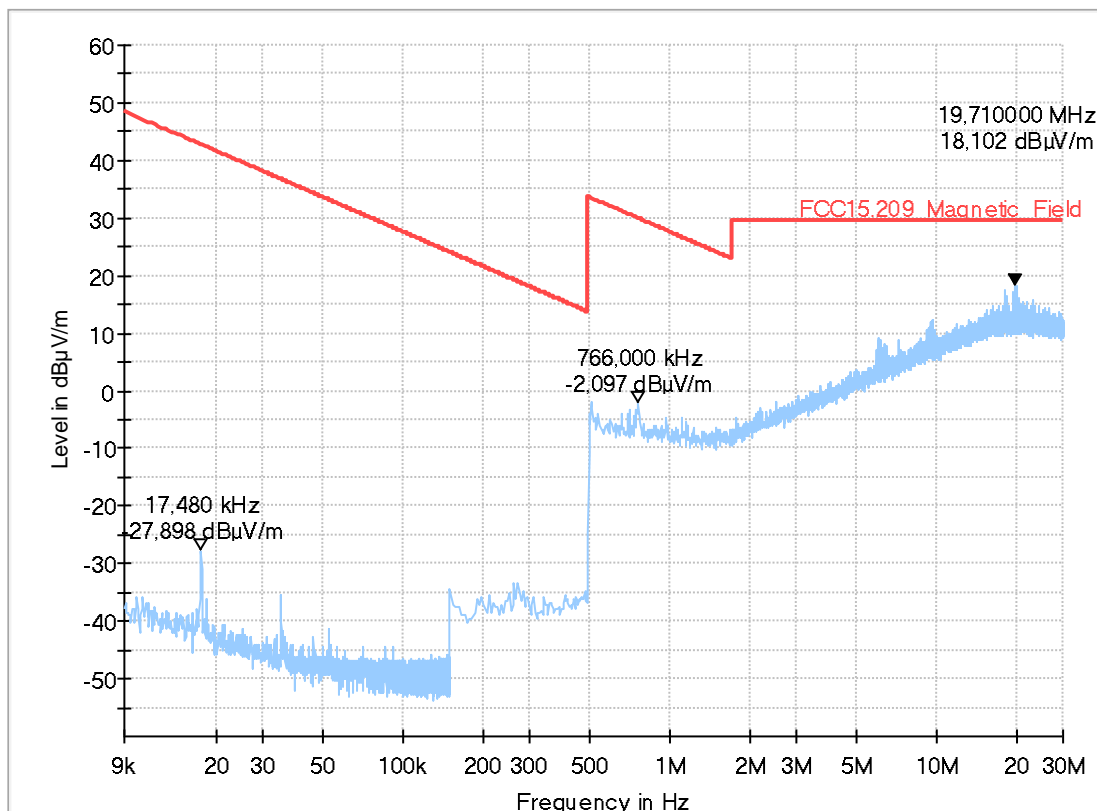
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating mode:	WLAN_TX_g Mode_6Mbit_CH6_BW_20MHz_ Antenna
Operating Conditions:	Humidity: 42%RH; Temperature: 22°C
Operator Name:	KMo
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.02b_g Mode_6Mbit_CH6_BW_20MHz_standing|

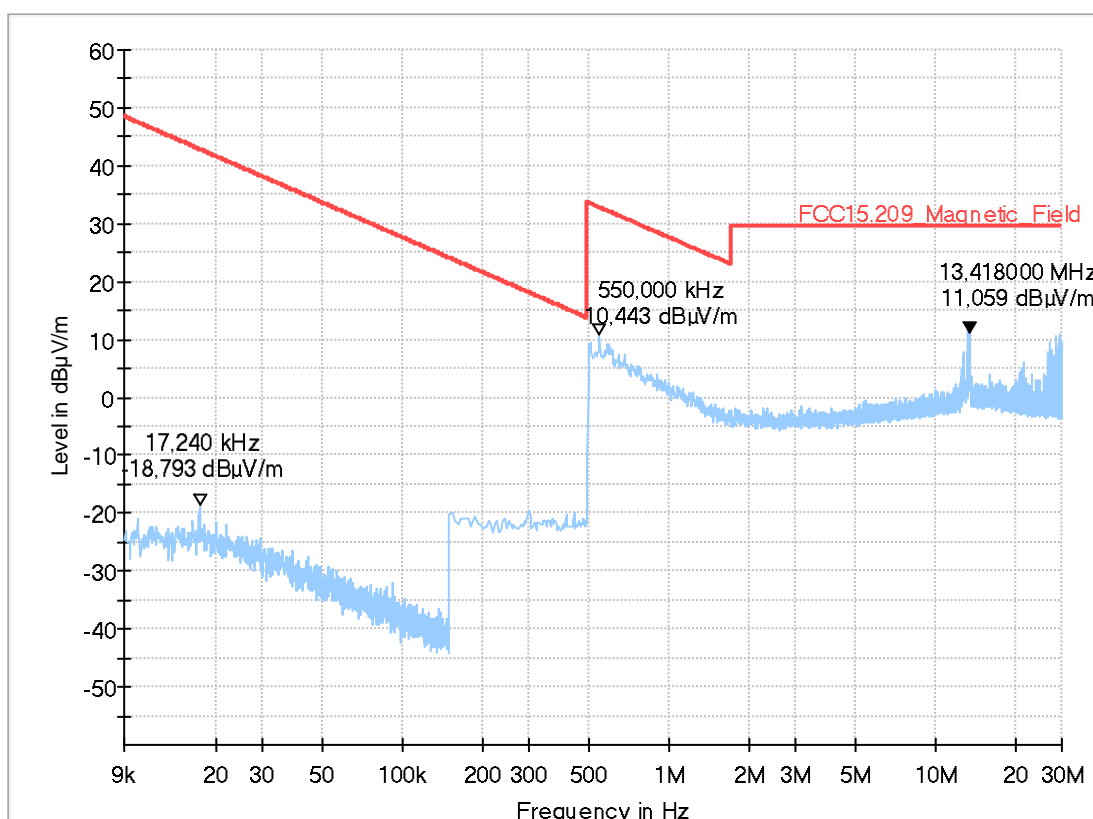
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating mode:	WLAN_TX_g Mode_6Mbit_CH6_BW_20MHz_ Antenna
Operating Conditions:	Humidity: 42%RH; Temperature: 22°C
Operator Name:	MBe
Power during tests:	12V DC
Comment:	standing

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.03a_n Mode_MCS5_CH11_BW_20MHz_laying

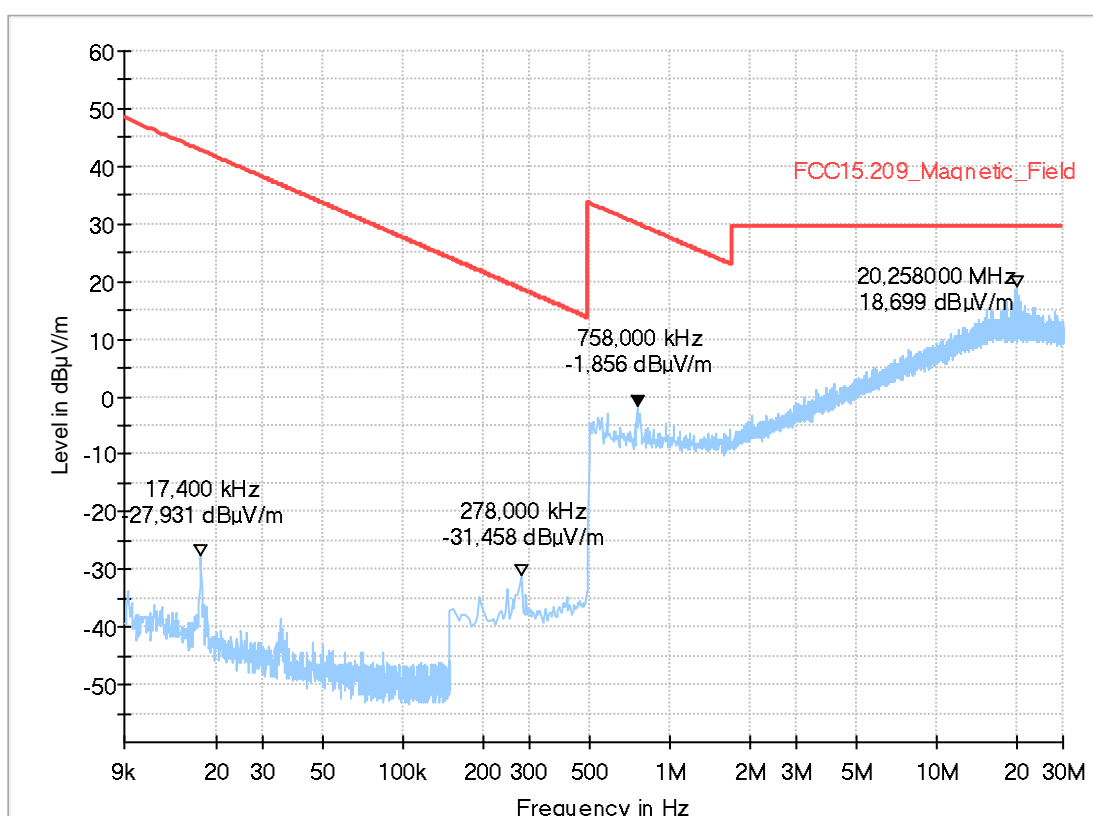
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating mode:	WLAN_TX_n Mode_MCS5_CH11_BW_20MHz_ Antenna
Operating Conditions:	Humidity: 42%rH; Temperature: 22°C
Operator Name:	KMo
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.03b_n Mode_MCS5_CH11_BW_20MHz_standing||

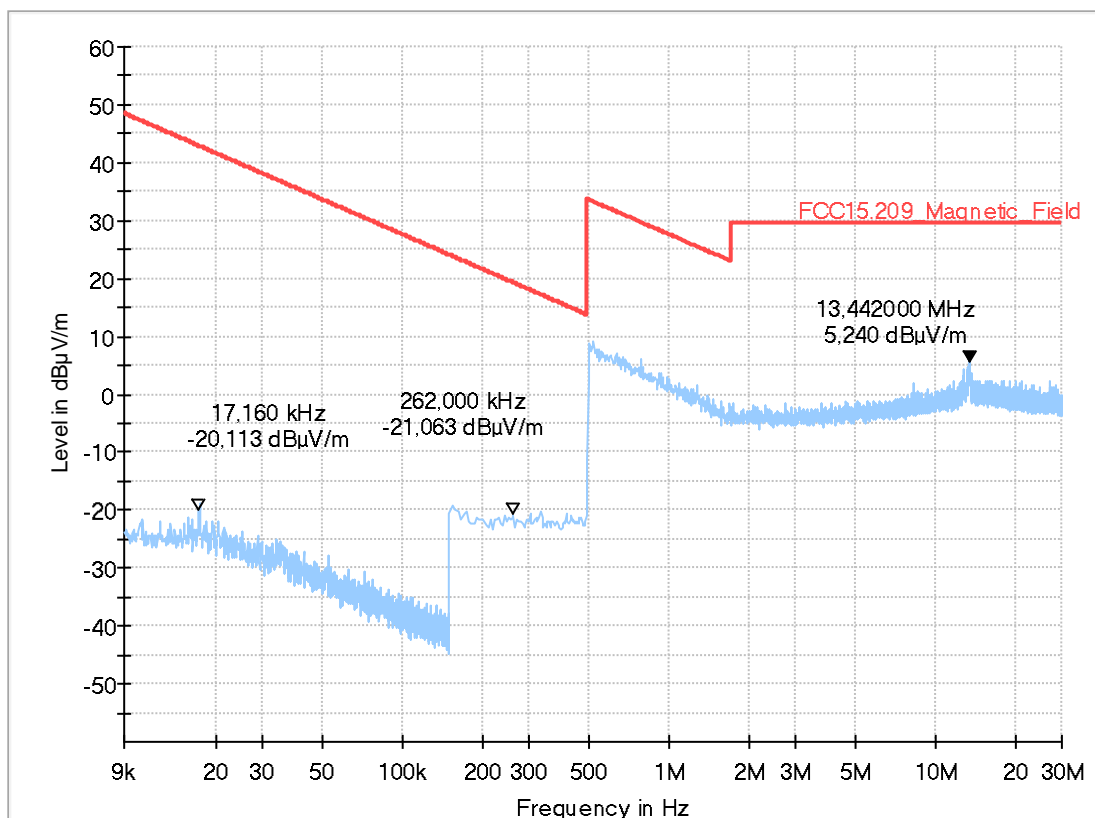
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating mode:	WLAN_TX_n Mode_MCS5_CH11_BW_20MHz_ Antenna
Operating Conditions:	Humidity: 42%rH; Temperature: 22°C
Operator Name:	MBe
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.2. Field strength measurements 30MHz <f <1GHz

3.01a_b Mode_2Mbit_CH1_BW_20MHz_hor

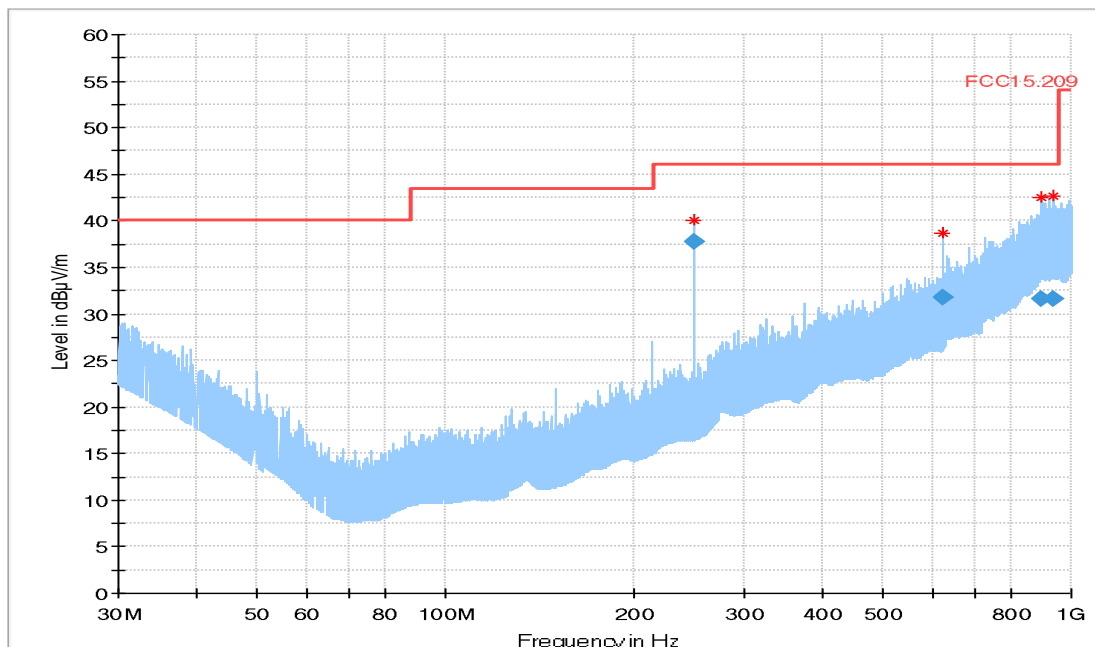
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Operator:	KMo
Operating conditions:	WLAN_TX_b Mode_2Mbit_CH1_BW_20MHz_ Antenna
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
249.980000	37.70	46.00	8.30	1000.0	120.000	113.0	H	113.0	0.0	13.0
624.950000	31.83	46.00	14.17	1000.0	120.000	230.0	V	183.0	0.0	22.2
892.570000	31.62	46.00	14.38	1000.0	120.000	167.0	V	27.0	0.0	26.7
934.610000	31.62	46.00	14.38	1000.0	120.000	238.0	V	216.0	0.0	26.9

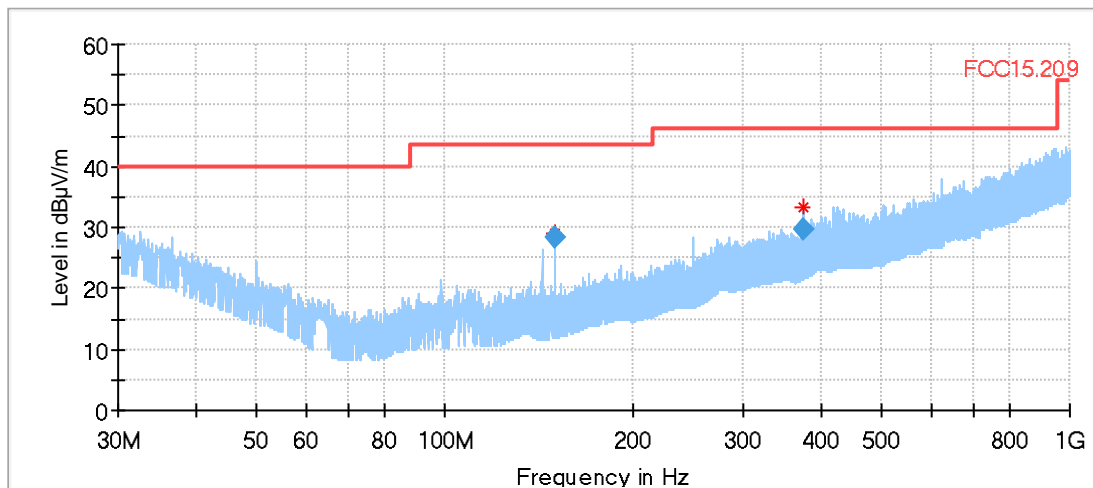
3.01b _b Mode_2Mbit_CH1_BW_20MHz_ver

Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Operator:	MBe
Operating conditions:	WLAN_TX_b Mode_2Mbit_CH1_BW_20MHz_ Antenna
Power during tests:	12V DC
Comment:	Standing

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
150.000000	28.41	43.50	15.09	1000.0	120.000	105.0	V	40.0	0.0	8.6
374.970000	29.53	46.00	16.47	1000.0	120.000	105.0	H	162.0	0.0	17.0

3.02a_g Mode_6Mbit_CH6_BW_20MHz_hor

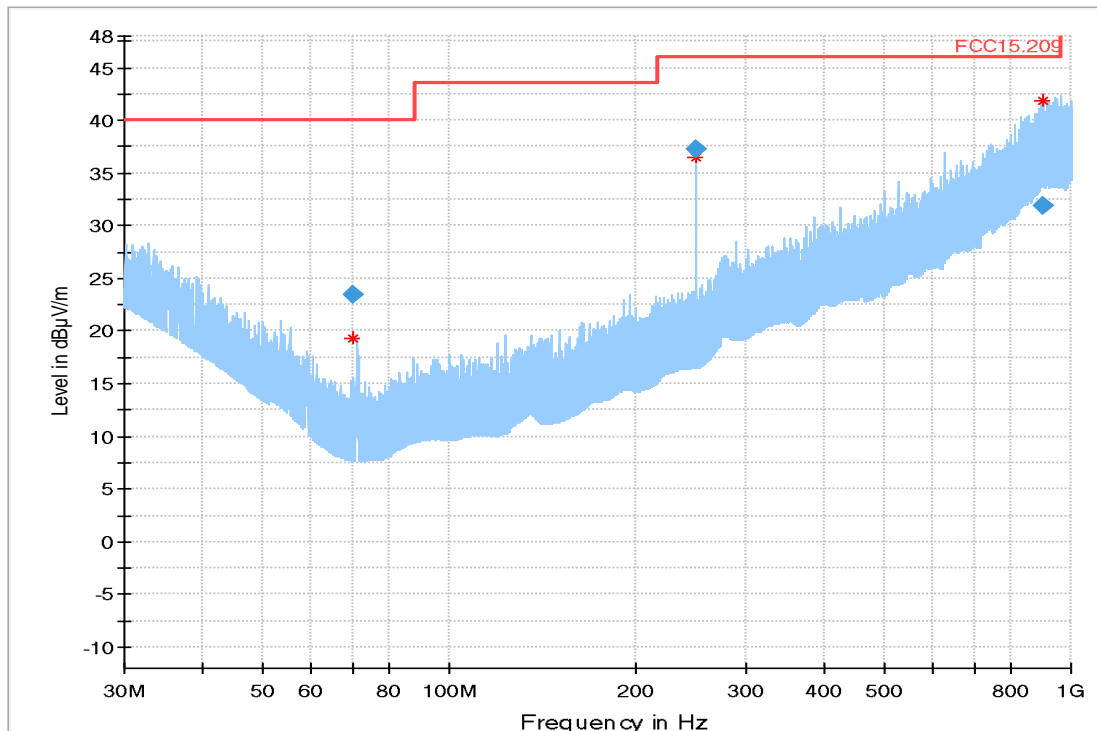
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operatingmode:	WLAN_TX_g Mode_6Mbit_CH6_BW_20MHz_ Antenna
Operator:	KMo
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
70.220000	23.49	40.00	16.51	1000.0	120.000	291.0	H	359.0	6.6
249.990000	37.32	46.00	8.68	1000.0	120.000	123.0	H	117.0	13.0
900.430000	31.90	46.00	14.10	1000.0	120.000	219.0	V	271.0	26.7

3.02b_g Mode_6Mbit_CH6_BW_20MHz_ver

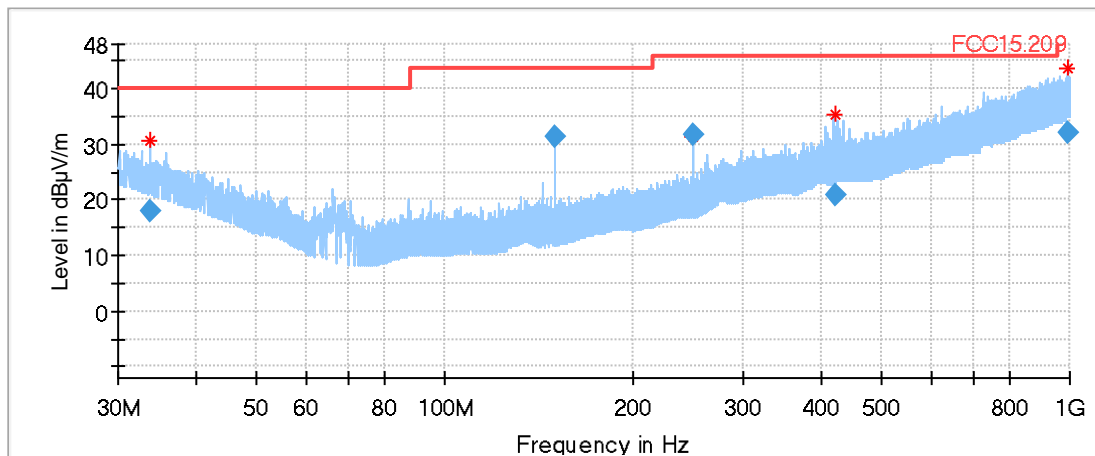
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	WLAN_TX_g Mode_6Mbit_CH6_BW_20MHz_Antenna
Operator:	HEI
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.730000	18.09	40.00	21.91	1000.0	120.000	316.0	V	189.0	19.8
149.990000	31.54	43.50	11.96	1000.0	120.000	194.0	H	229.0	8.6
249.980000	31.88	46.00	14.12	1000.0	120.000	162.0	H	192.0	13.0
420.190000	20.85	46.00	25.15	1000.0	120.000	213.0	V	48.0	18.8
994.920000	32.24	54.00	21.76	1000.0	120.000	262.0	H	322.0	27.8

3.03a_n Mode_MCS5_CH11_BW_20MHz_hor

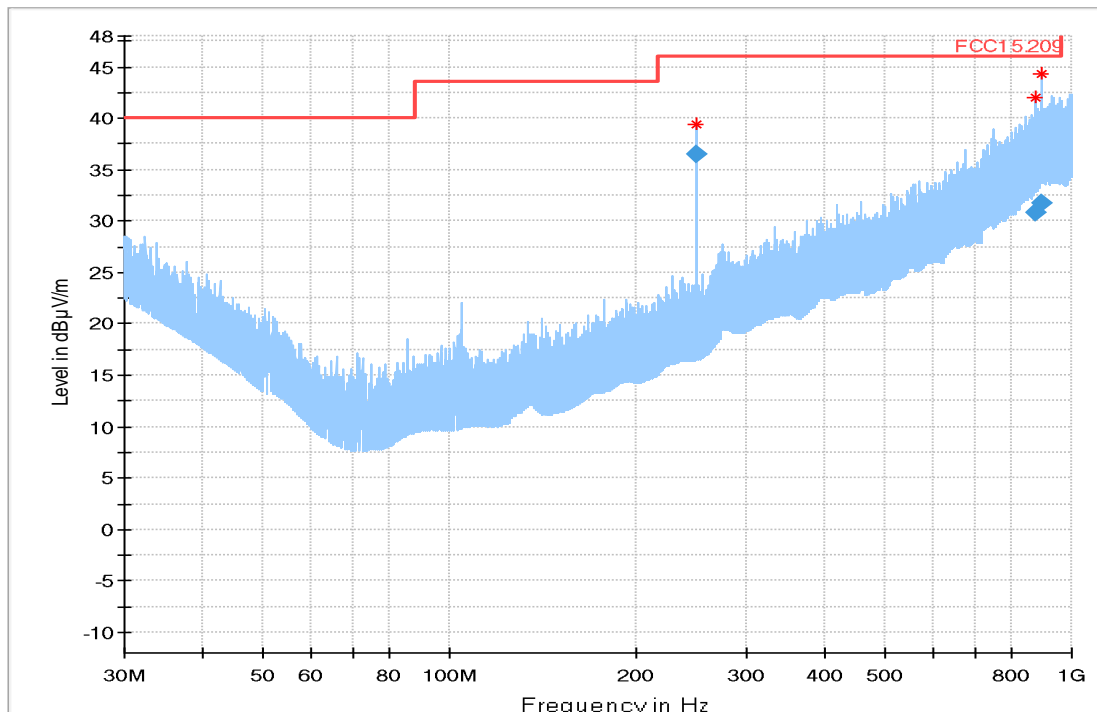
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operatingmode:	WLAN_TX_n Mode_MCS5_CH11_BW_20MHz_Antenna
Operator:	KMo
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
249.980000	36.46	46.00	9.54	1000.0	120.000	105.0	H	117.0	13.0
874.560000	30.79	46.00	15.21	1000.0	120.000	109.0	V	61.0	26.2
893.310000	31.77	46.00	14.23	1000.0	120.000	200.0	V	167.0	26.8

3.03b. n Mode_MCS5_CH11_BW_20MHz_ver

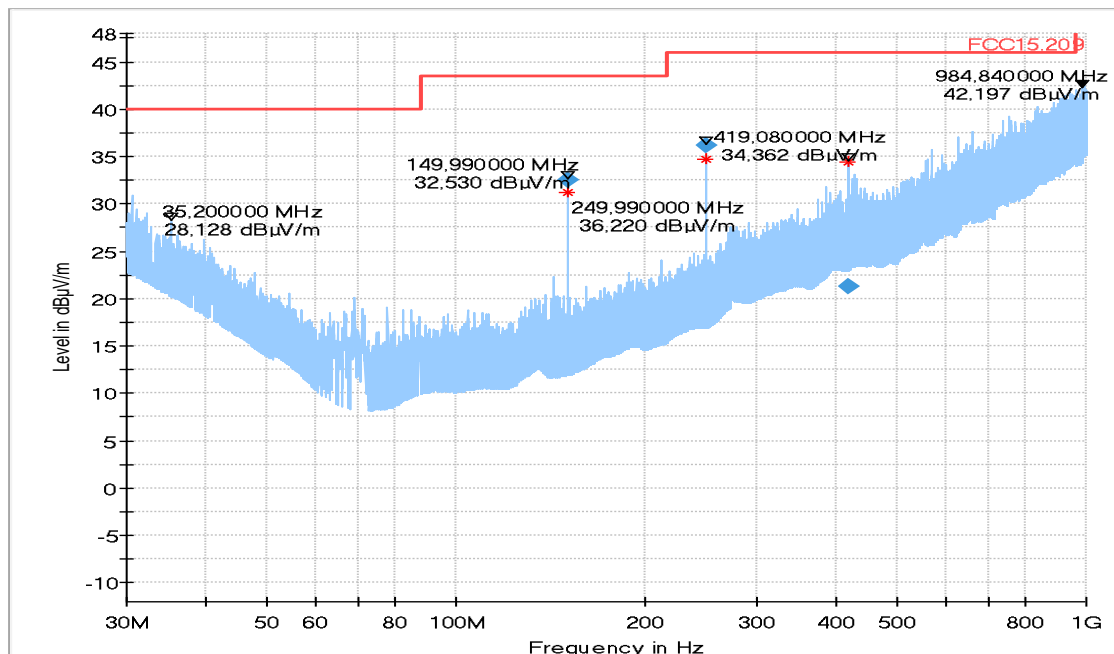
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	WLAN_TX_n Mode_MCS5_CH11_BW_20MHz_
Operator:	HEI
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
149.990000	32.53	43.50	10.97	1000.0	120.000	205.0	H	227.0	8.6
249.990000	36.22	46.00	9.78	1000.0	120.000	153.0	H	220.0	13.0
419.750000	21.23	46.00	24.77	1000.0	120.000	360.0	V	344.0	18.8

2.3. Field strength measurements 1GHz < f < 18GHz

4.01a_TX_bmode_2Mbit_CH01_hor_

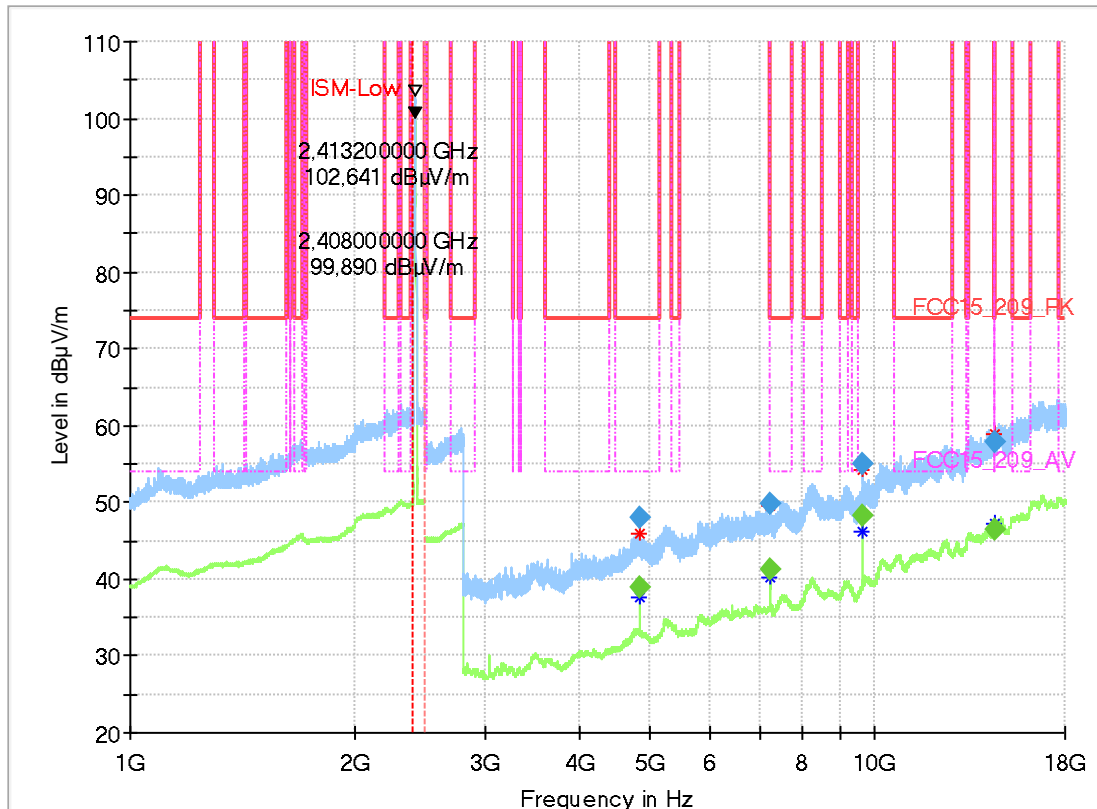
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11b-mode,BW 20 MHz channel 1; Data rate 2Mbit Power 18 dBm
Operator Name:	KMo

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4823.960000	47.96	---	74.00	26.04	100.0	1000.000	155.0	H	105.0	4.8
4823.960000	---	39.05	54.00	14.95	100.0	1000.000	155.0	H	107.0	4.8
7234.640000	49.75	---	150.00	100.25	100.0	1000.000	155.0	H	253.0	10.8
7236.720000	---	41.37	150.00	108.63	100.0	1000.000	155.0	H	144.0	10.8
9647.960000	---	48.21	150.00	101.79	100.0	1000.000	155.0	H	128.0	14.2
9647.960000	55.07	---	150.00	94.93	100.0	1000.000	155.0	H	128.0	14.2
14471.880000	57.84	---	74.00	16.16	100.0	1000.000	155.0	H	90.0	22.2
14472.080000	---	46.44	54.00	7.56	100.0	1000.000	155.0	V	188.0	22.2

4.01b_TX_bmode_2Mbit_CH01_ver

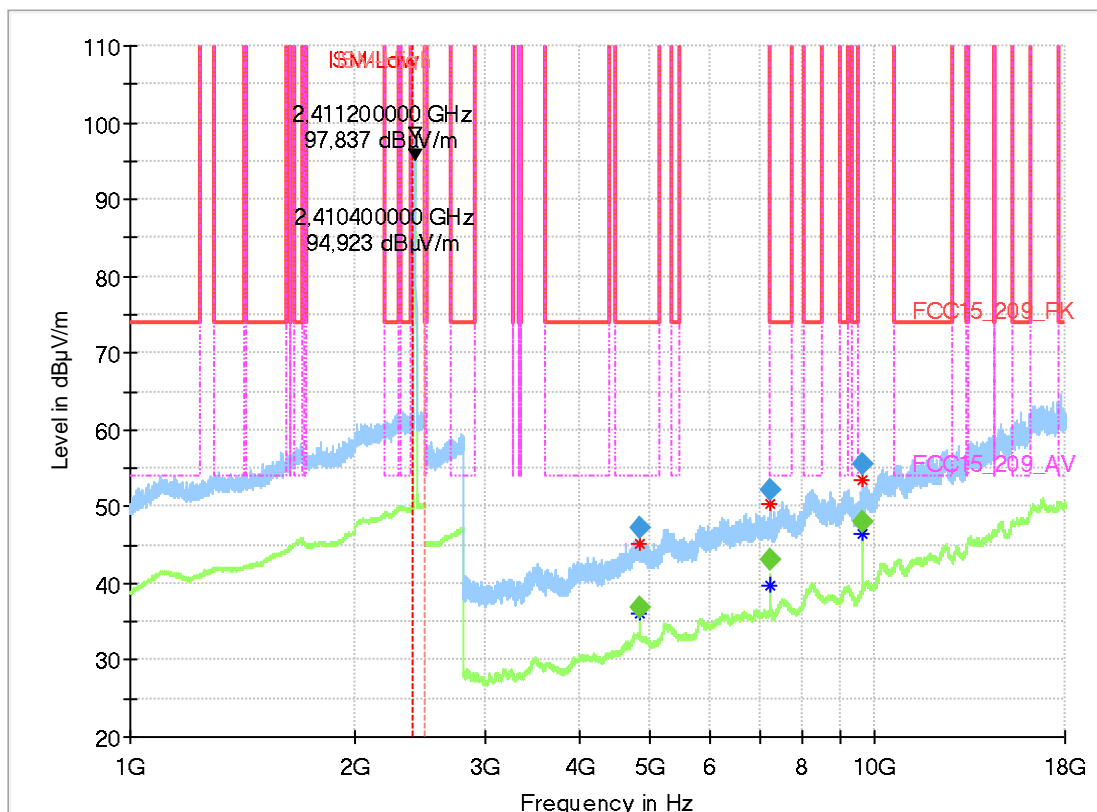
Common Information

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 4
Antenna polarisation:	vertical
Operation mode:	WLAN 802.11b-mode,BW 20 MHz channel 1; Data rate 2Mbit Power 18 dBm
Operator Name:	KMo

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4823.960000	47.15	---	74.00	26.85	100.0	1000.000	155.0	V	82.0	4.8
4824.000000	---	36.79	54.00	17.21	100.0	1000.000	155.0	V	81.0	4.8
7233.400000	---	43.00	150.00	107.00	100.0	1000.000	155.0	V	126.0	10.8
7238.200000	52.19	---	150.00	97.81	100.0	1000.000	155.0	V	125.0	10.8
9647.960000	---	48.11	150.00	101.89	100.0	1000.000	155.0	V	144.0	14.2
9647.960000	55.47	---	150.00	94.53	100.0	1000.000	155.0	V	144.0	14.2

4.02a_TX_gmode_6Mbit_CH06_hor

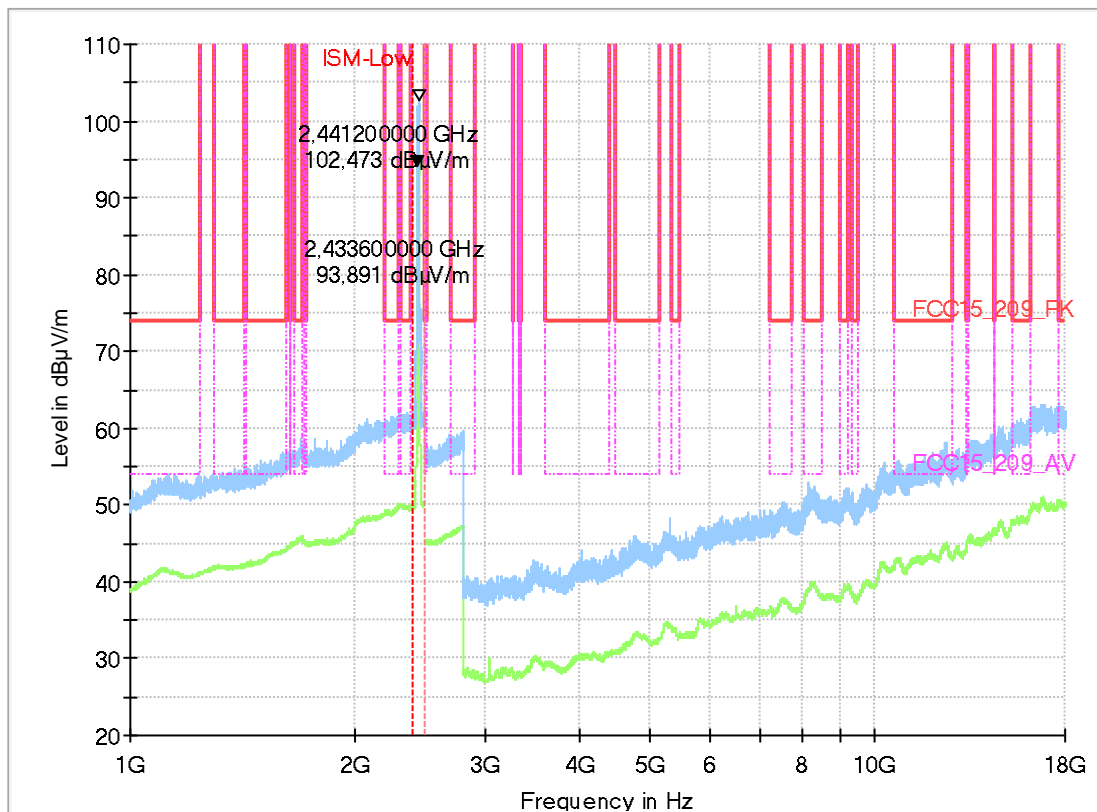
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11g-mode,BW 20 MHz channel 6; Data rate 6Mbit Power 15 dBm
Operator Name:	KMo
Rmarks:	no kipp, EUT Standing

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



4.02b_TX_gmode_6Mbit_CH06_ver

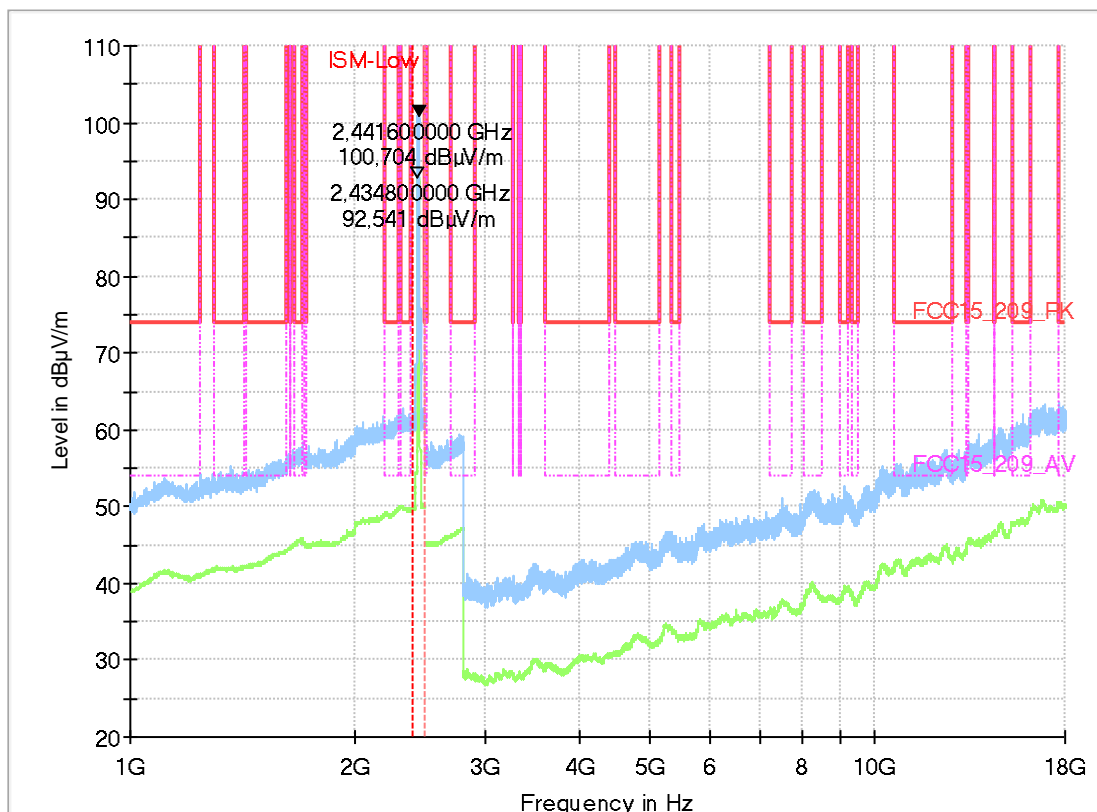
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11g-mode,BW 20 MHz channel 6; Data rate 6Mbit Power 15 dBm
Operator Name:	KMo

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



4.03a_TX_nmode_MCS5_CH11_hor

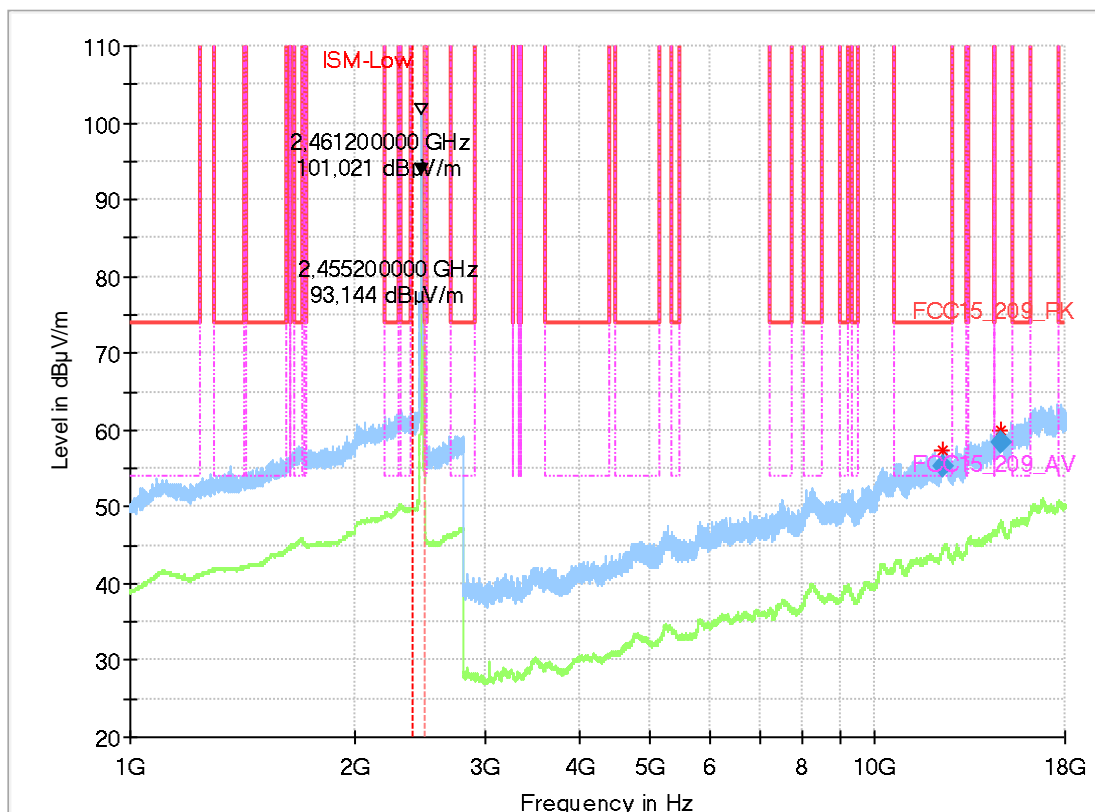
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11n-mode,BW 20 MHz channel 11; Data rate MCS5 Power 15 dBm
Operator Name:	KMo
Remarks:	no kipp, EUT Standing

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



4.03b_TX_nmode_MCS5_CH11_ver

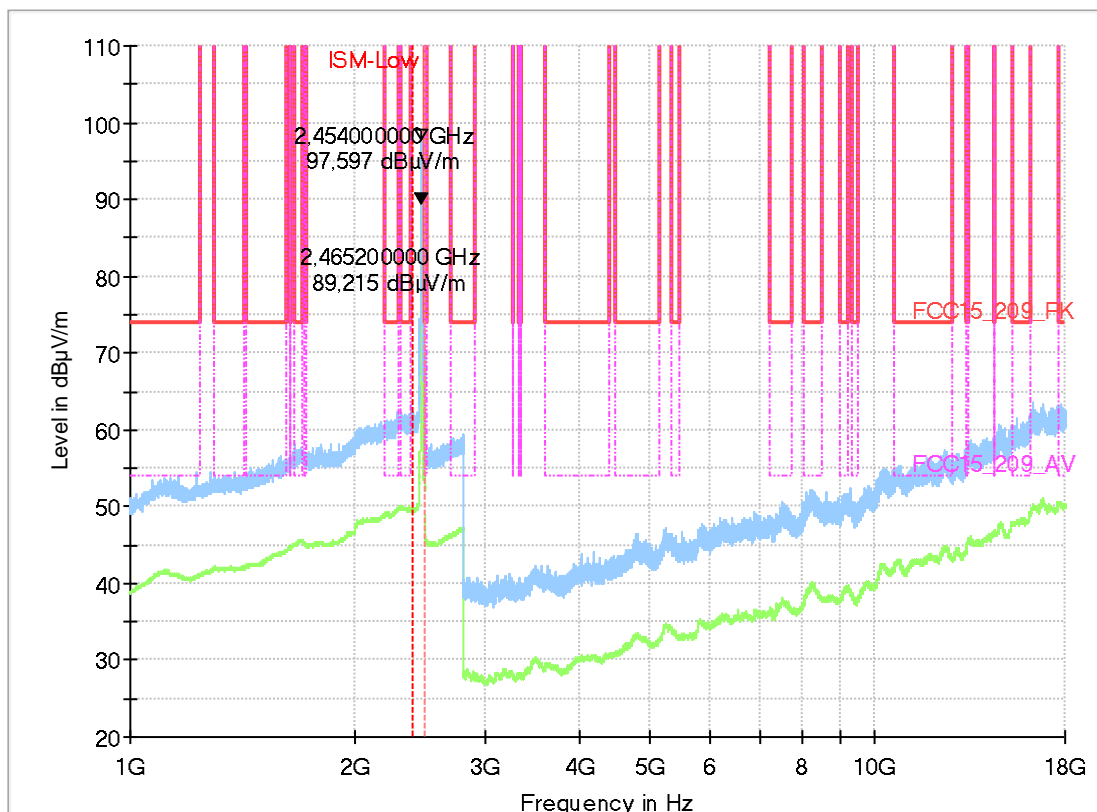
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11n-mode,BW 20 MHz channel 11; Data rate MCS5 Power 15 dBm
Operator Name:	KMo

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

Full Spectrum



2.4. Field strength measurements 18GHz <f <25GHz

4.01c_TX_bmode_2Mbit_CH01_

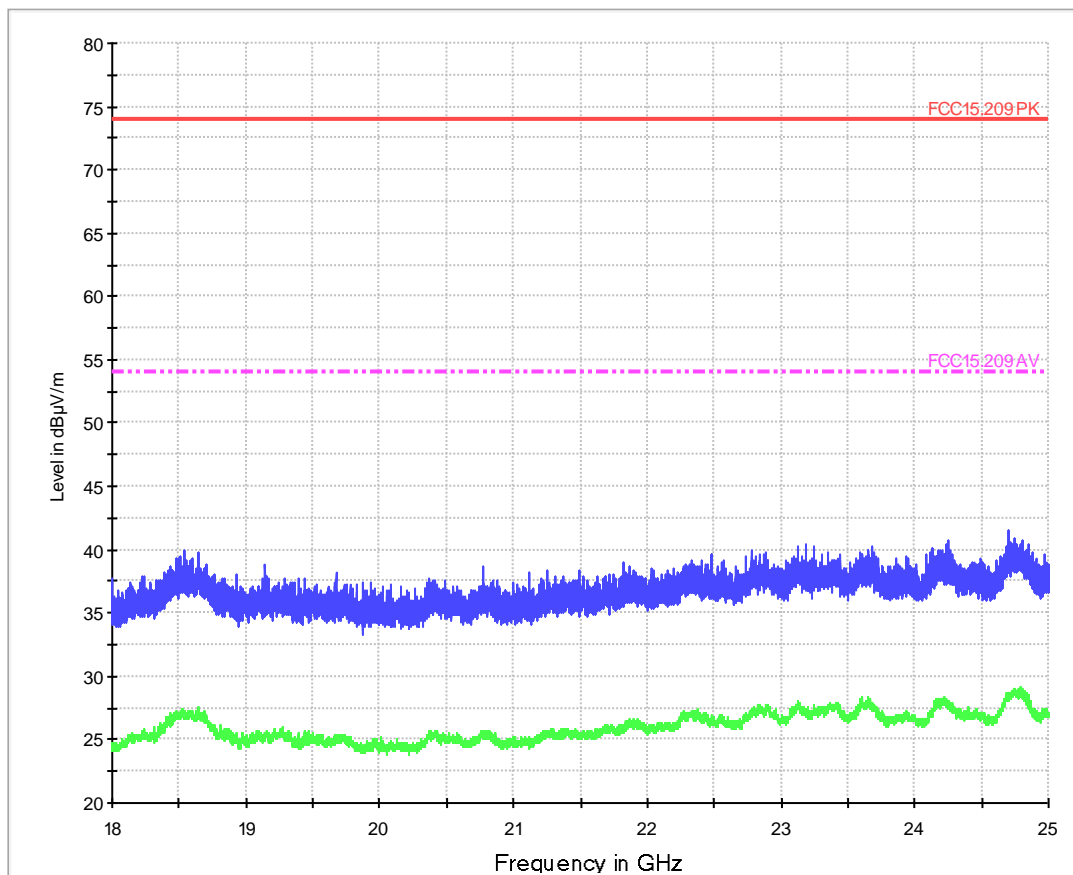
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11b-mode,BW 20 MHz channel 1; Data rate 2Mbit
Operator Name:	TFR
Rmarks:	no kipp, EUT Standing

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

EMI Scan_18_25GHz_Pre



4.02c_TX_gmode_6Mbit_CH06

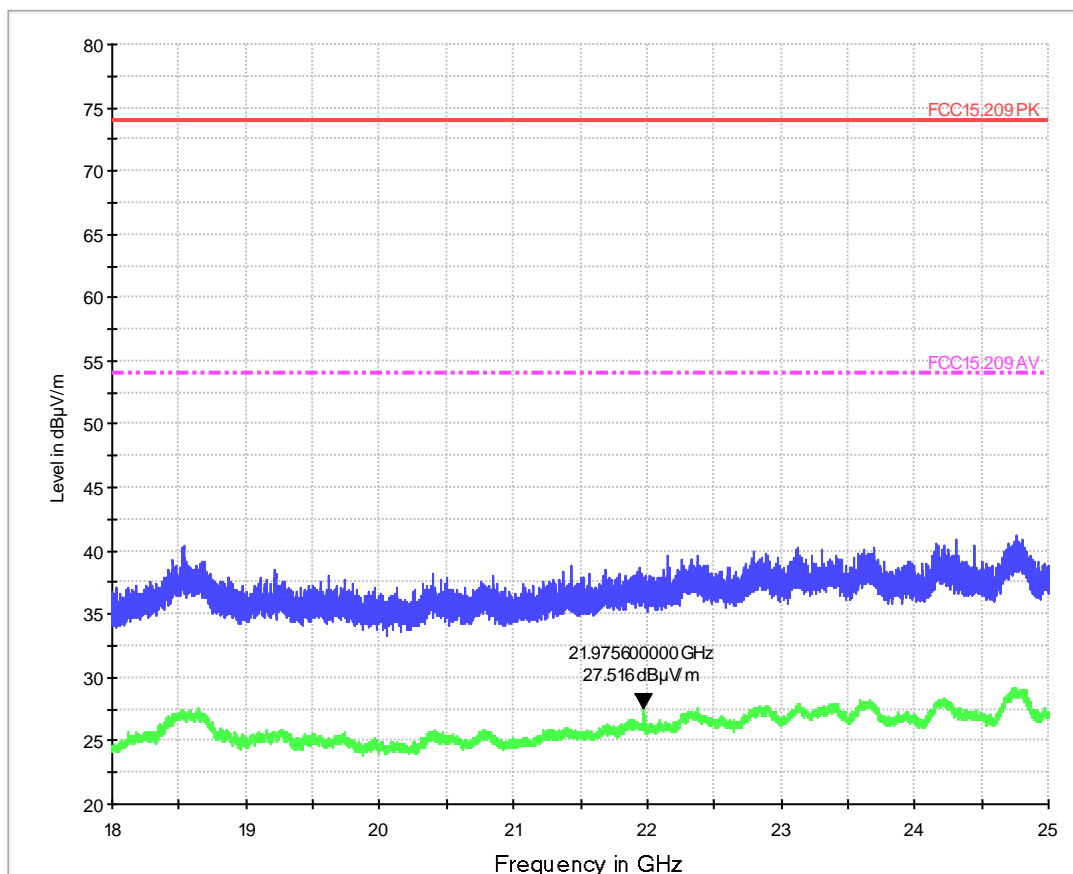
Common Information

Test Description:	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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11b-mode,BW 20 MHz channel 6; Data rate 6Mbit
Operator Name:	TFR
Remarks:	Horizontal/vertical EUT position,

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

EMI Scan_18_25GHz_Pre



4.03c_TX_nmode_MCS5_CH11_

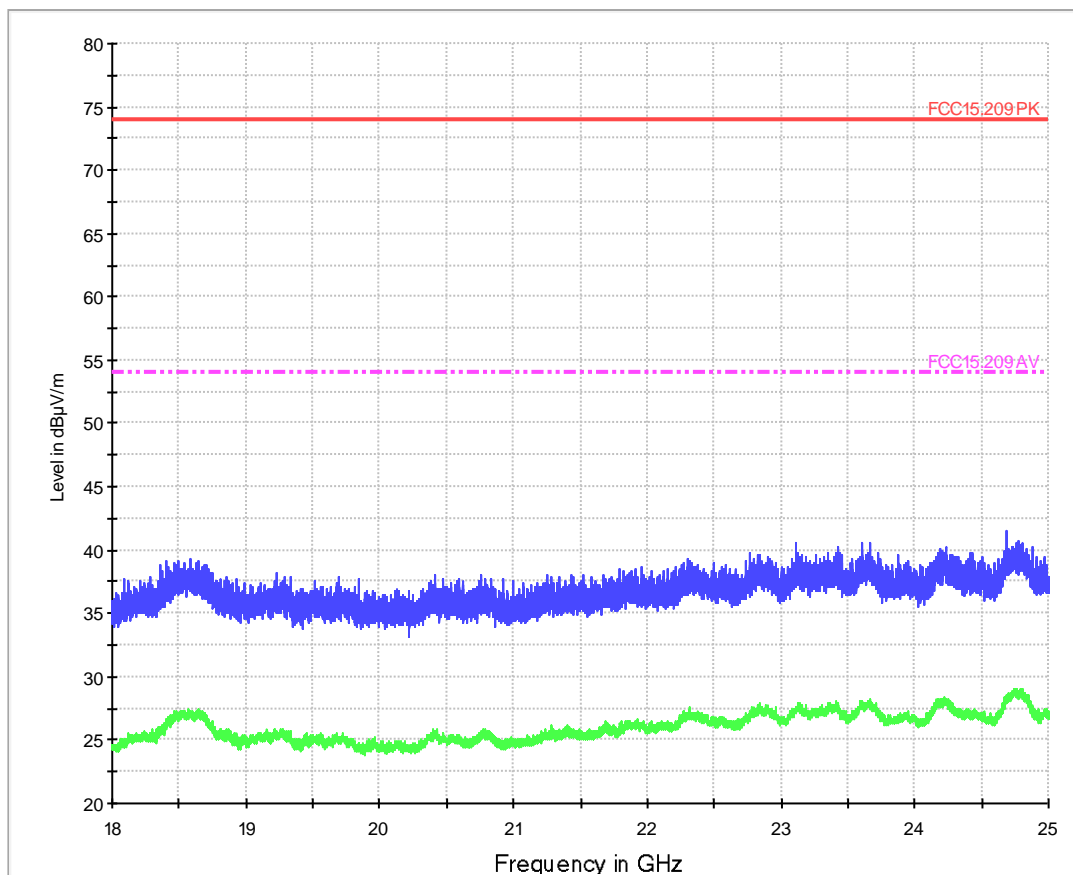
Common Information

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	WLAN 802.11n-mode,BW 20 MHz channel 11; Data rate MCS5 Power 15 dBm
Operator Name:	TFR
Remarks:	Horizontal/vertical EUT position,

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

EMI Scan_18_25GHz_Pre



3. Radiated band-edge measurements accord. §15.209 & §15.205 (§15.247)

3.1. Channel 1 (left band edge)

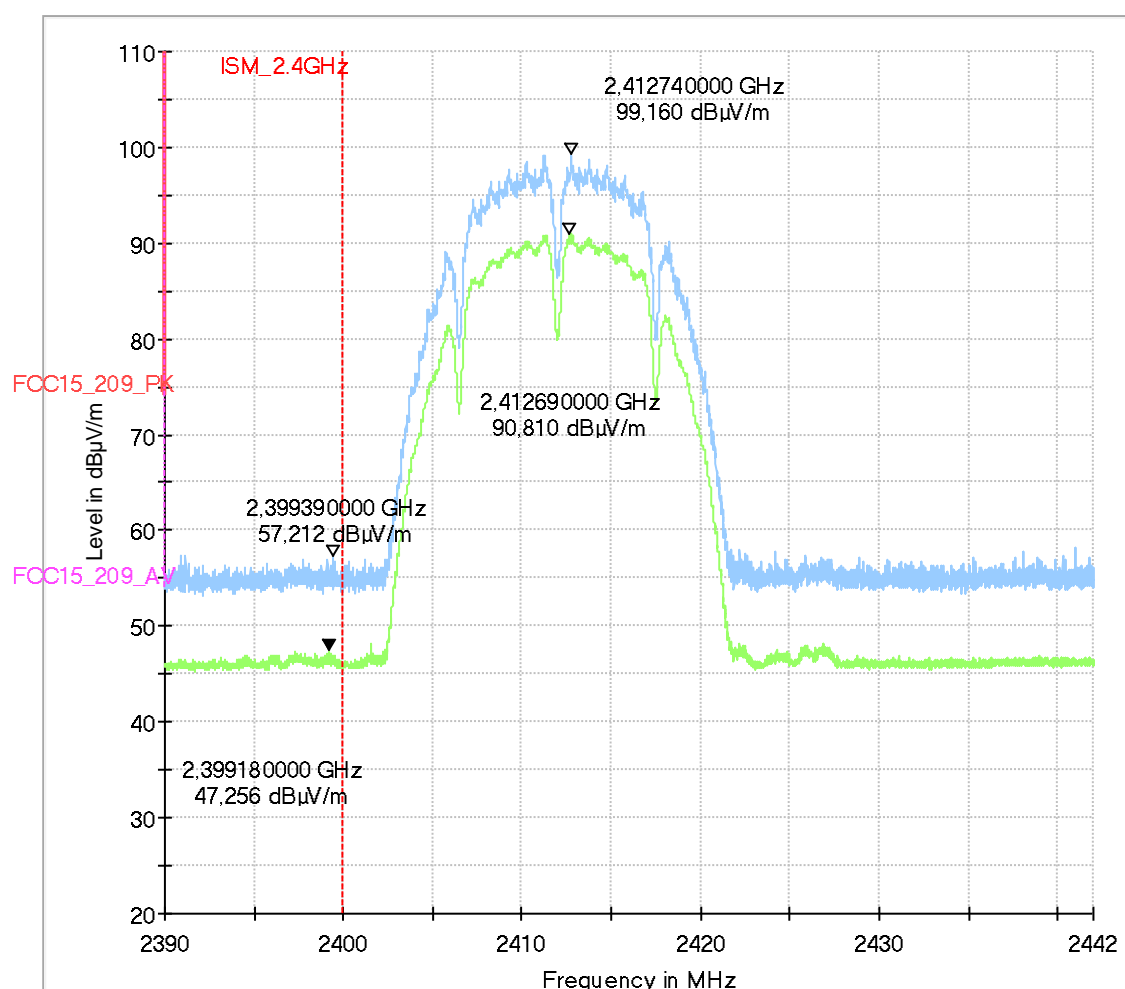
9.01a_b_Mode_2Mbit_CH1_BW_20MHz__Antenna_HOR_18dBm

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Klv
Comment:	Channel 1. low
Comment2:	Modulation Type: b Mode Data Rate: 2Mbit Power 18dbm

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



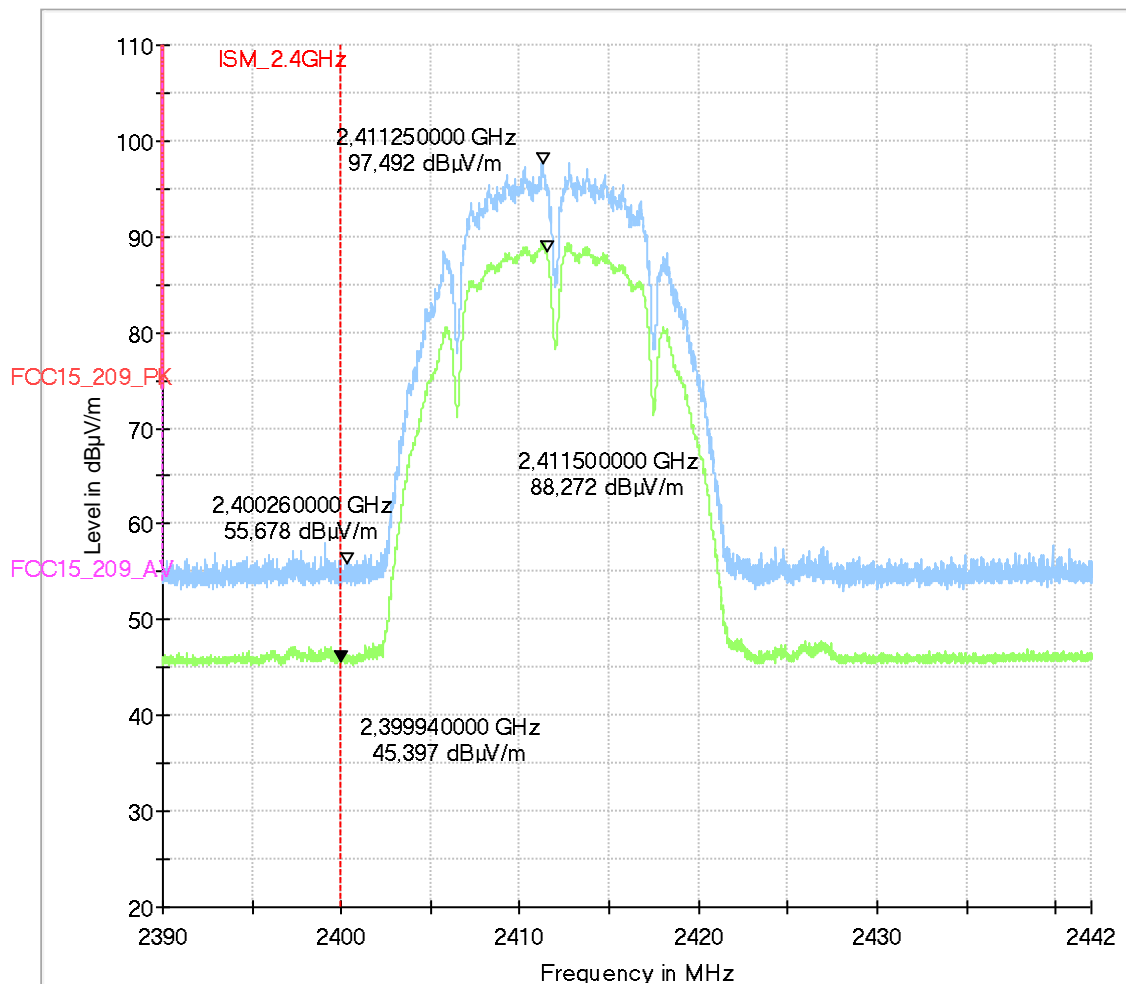
9.01b_b_Mode_2Mbit_CH1_BW_20MHz_Antenna_VER_18dBm

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	KIv
Comment:	Channel 1. low
Comment2:	Modulation Type: b Mode Data Rate: 2Mbit Power 18dbm

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



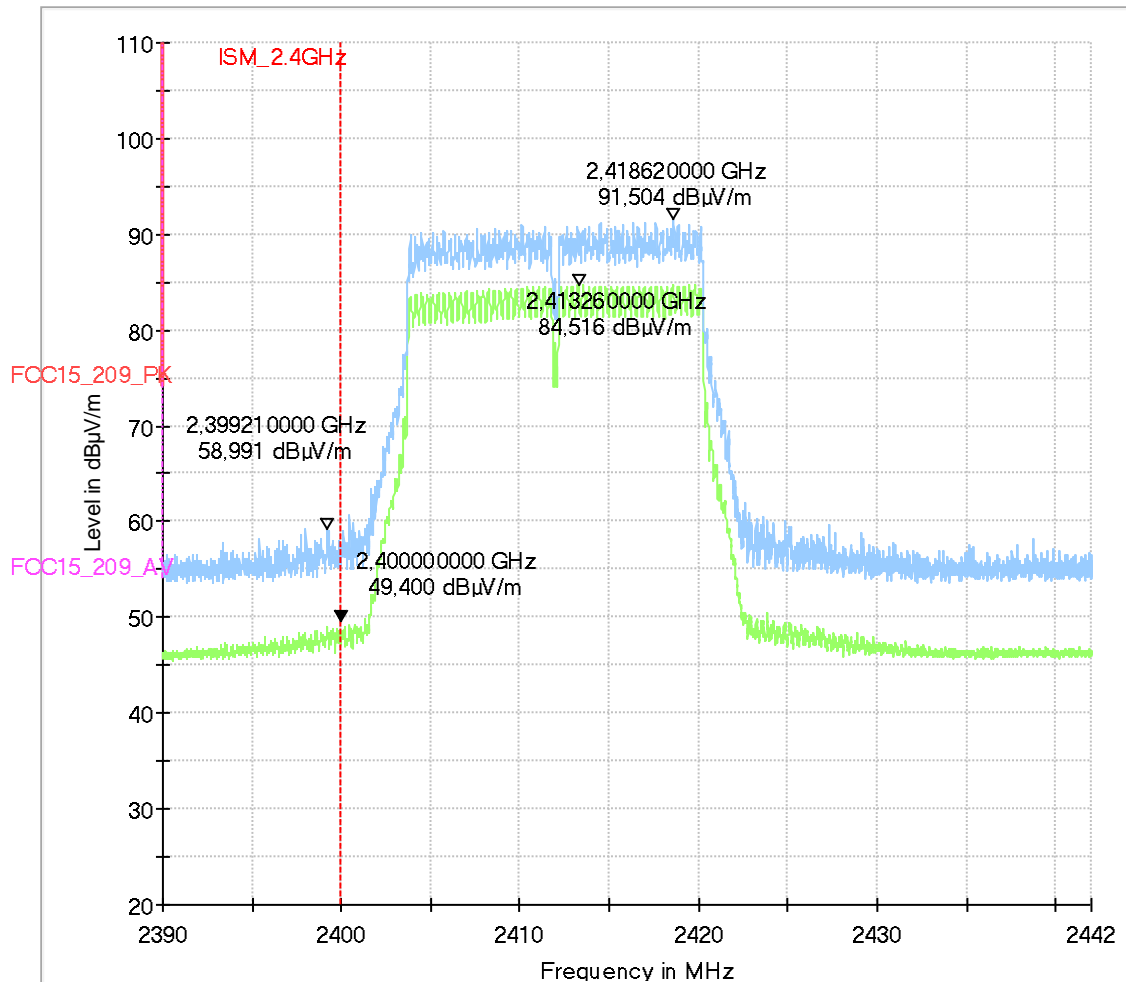
9.02a_g_Mode_6Mbit_CH1_BW_20MHz_Antenna_HOR_

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	KIv
Comment:	Channel 1. low
Comment2:	Modulation Type: g Mode Data Rate: 6Mbit Power

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



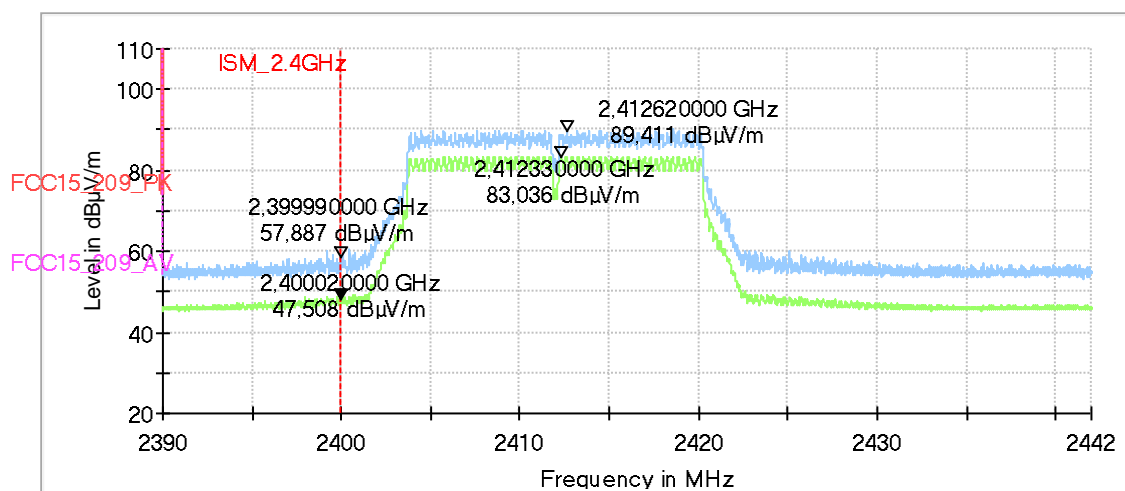
9.02b_g_Mode_6Mbit_CH1_BW_20MHz_Antenna_VER_

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	KIv
Comment:	Channel 1. low
Comment2:	Modulation Type: g Mode Data Rate: 6Mbit Power

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



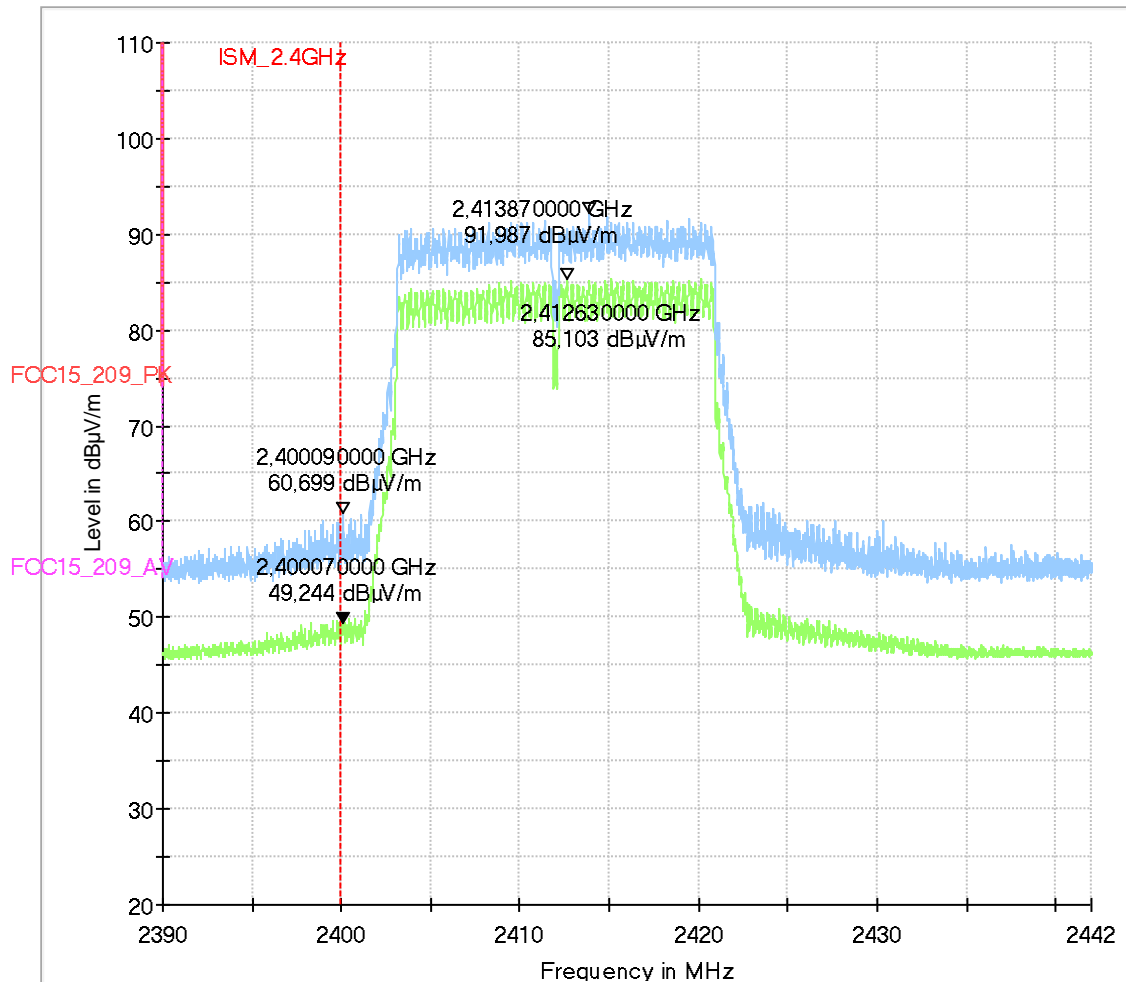
9.03a_n_Mode_MCS5_CH1_BW_20MHz_Antenna_HOR_

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	KIv
Comment:	Channel 1. low
Comment2:	Modulation Type: n_Mode_MCS5 Power

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



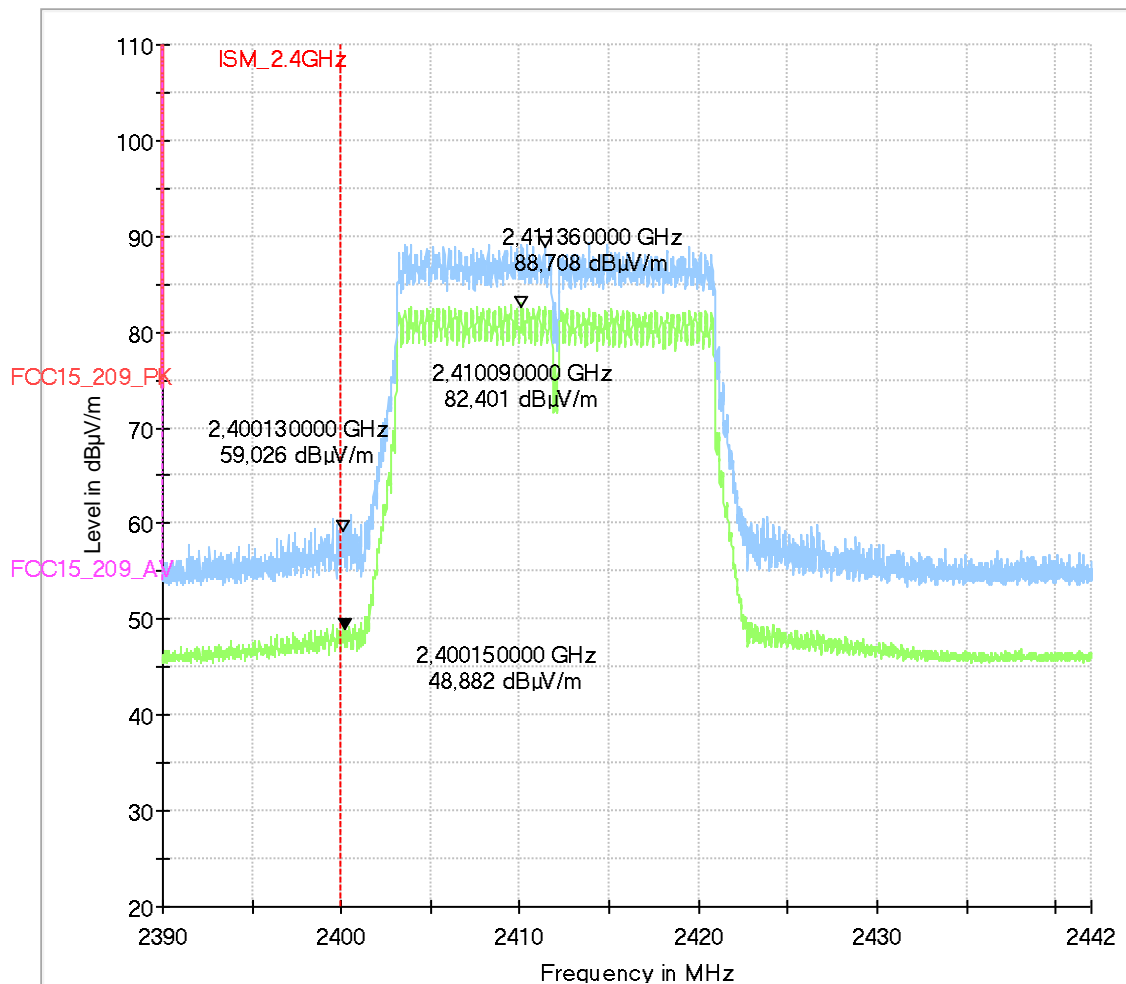
9.03b_n_Mode_MCS5_CH1_BW_20MHz_Antenna_VER

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	KIv
Comment:	Channel 1. low
Comment2:	Modulation Type: n-mode Data Rate: MCS0

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



3.2. Channel 11 (right band edge)

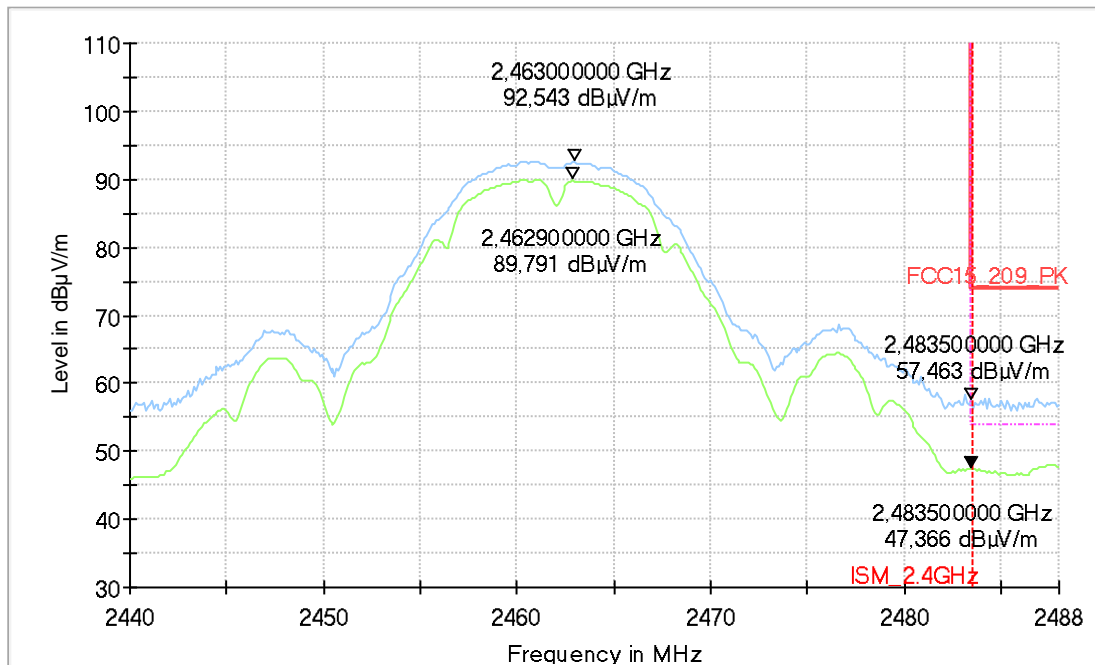
9.04a_BE_bMode_2Mbit_Ch11_Ant_horizontal

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. high
Comment2:	Modulation Type: b-Mode Data Rate: 2Mbit

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



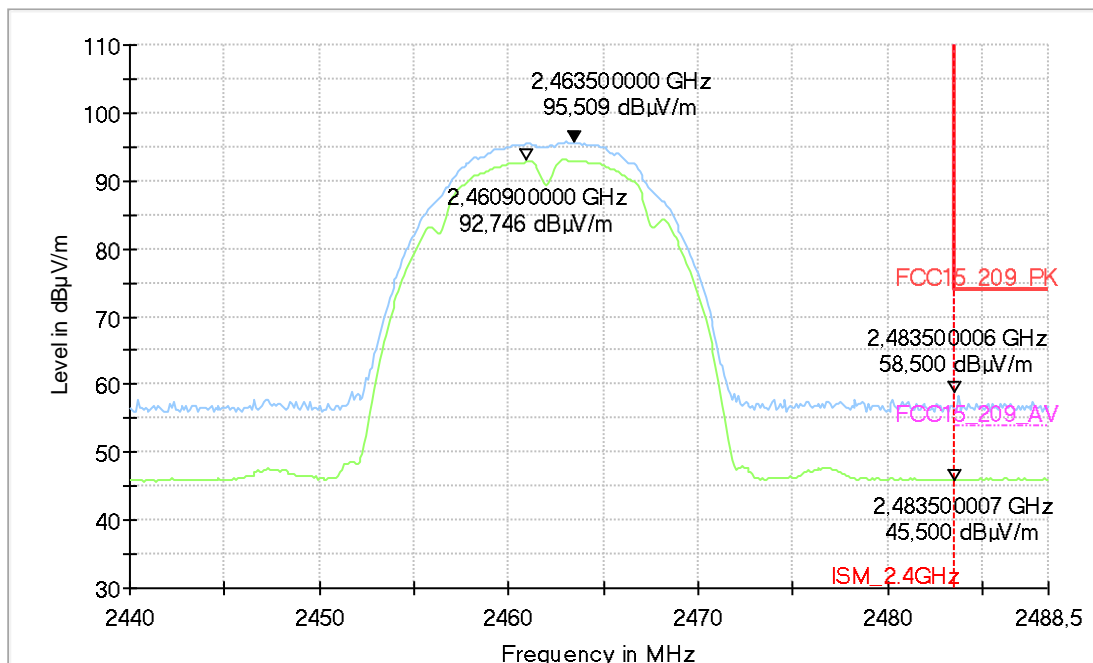
9.04b_BE_bMode_2Mbit_Ch11_Ant_vertical

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. high
Comment2:	Modulation Type: b-mode Data Rate: 2Mbit

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



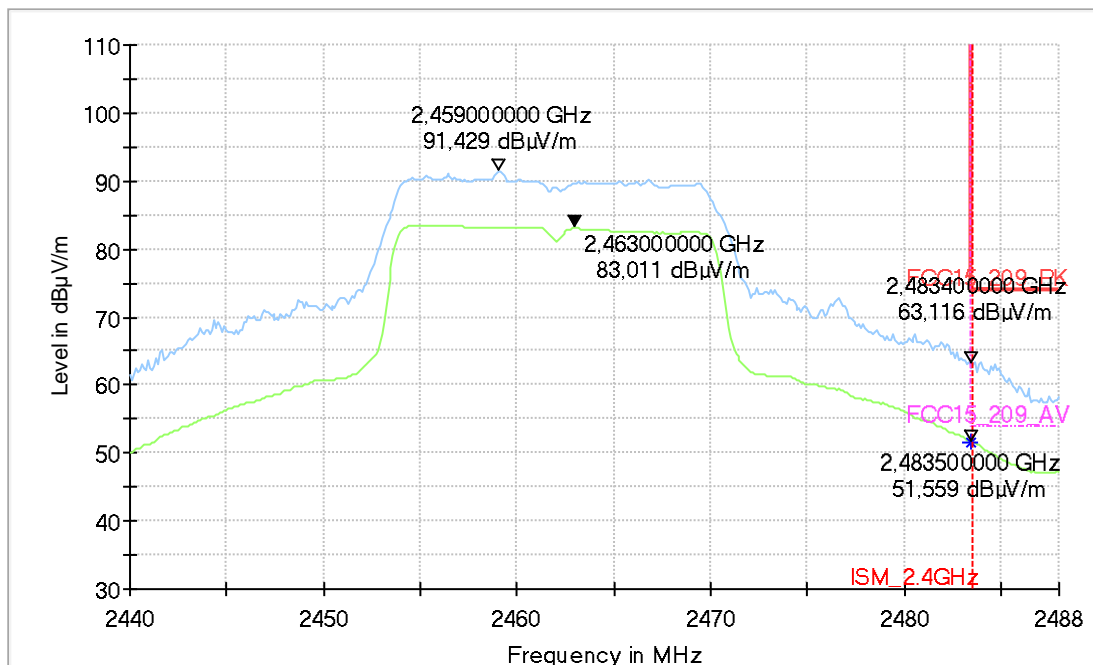
9.05a_BE_gMode_6Mbit_Ch11_Ant_vertical

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. high
Comment2:	Modulation Type: g-Mode Data Rate: 6Mbit

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



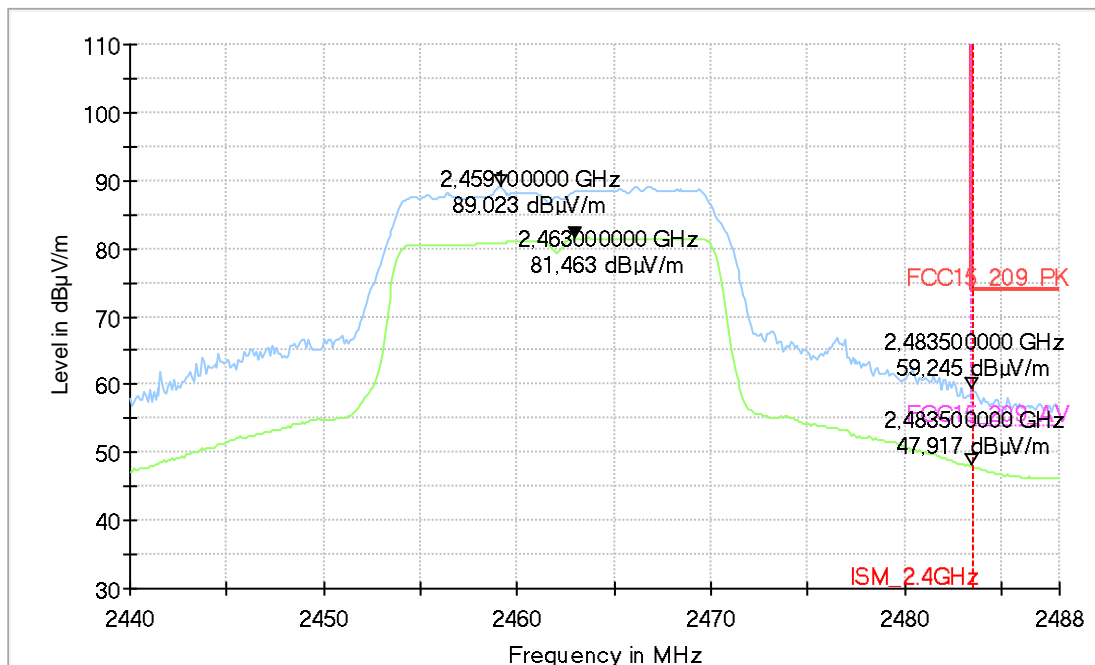
9.05b_BE_gMode_6MBit_Ch11_Ant_horizontal

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. low/high
Comment2:	Modulation Type: g-Mode Data Rate: 6Mbit

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



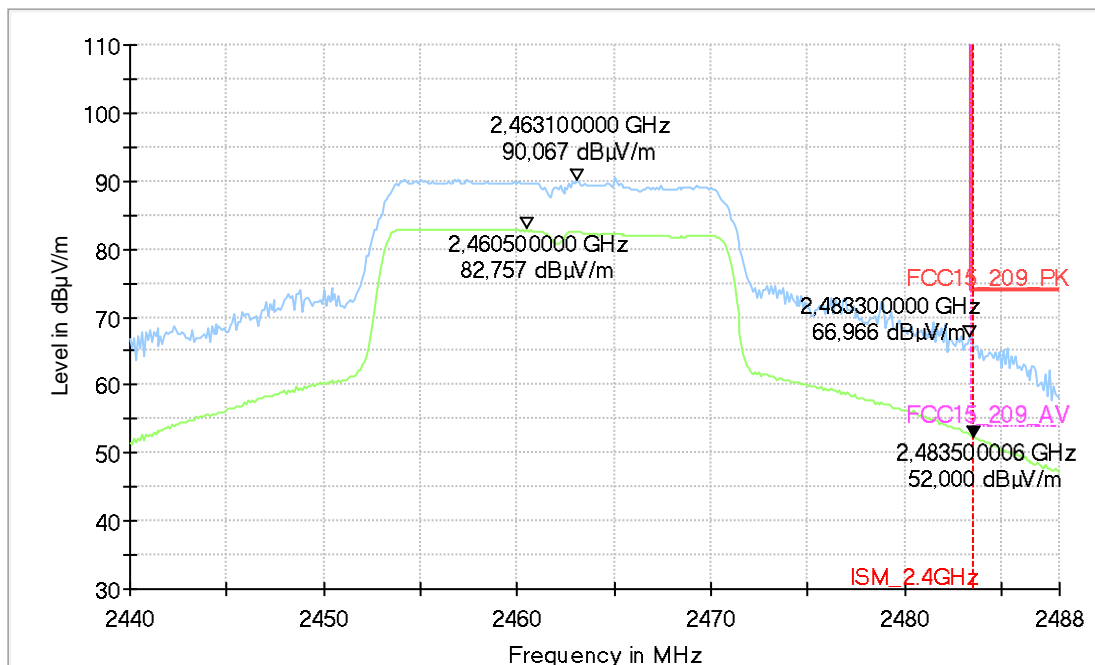
9.06a_BE_nMode_MCS5_Ch11_Ant_vertical

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. high
Comment2:	Modulation Type: n-Mode Data Rate: MCS5

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC



9.07b_BE_nMode_MCS5_Ch11_Ant_horizontal

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 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. high
Comment2:	Modulation Type: n-Mode Data Rate: MCS5

EUT Information

Manufacturer:	ACTIA Nordic AB
Model:	VCM
HW version:	31444563
SW version:	tbd1
Serial number:	10093027
Power Supply:	12VDC

