

Annex 1: Measurement diagrams to
PARTIAL T E S T R E P O R T
No.: 17-1-0221001T24a

According to:

FCC Regulations

Part 15.205
Part 15.209
Part 15.407

ISED-Regulations

RSS-Gen, Issue 4
RSS-247, Issue 2

for

Actia Nordic AB

Telematic Device
ACU11-06

FCC ID: 2AGKKACU11-06H2
ISED: 20839-ACU1106H2

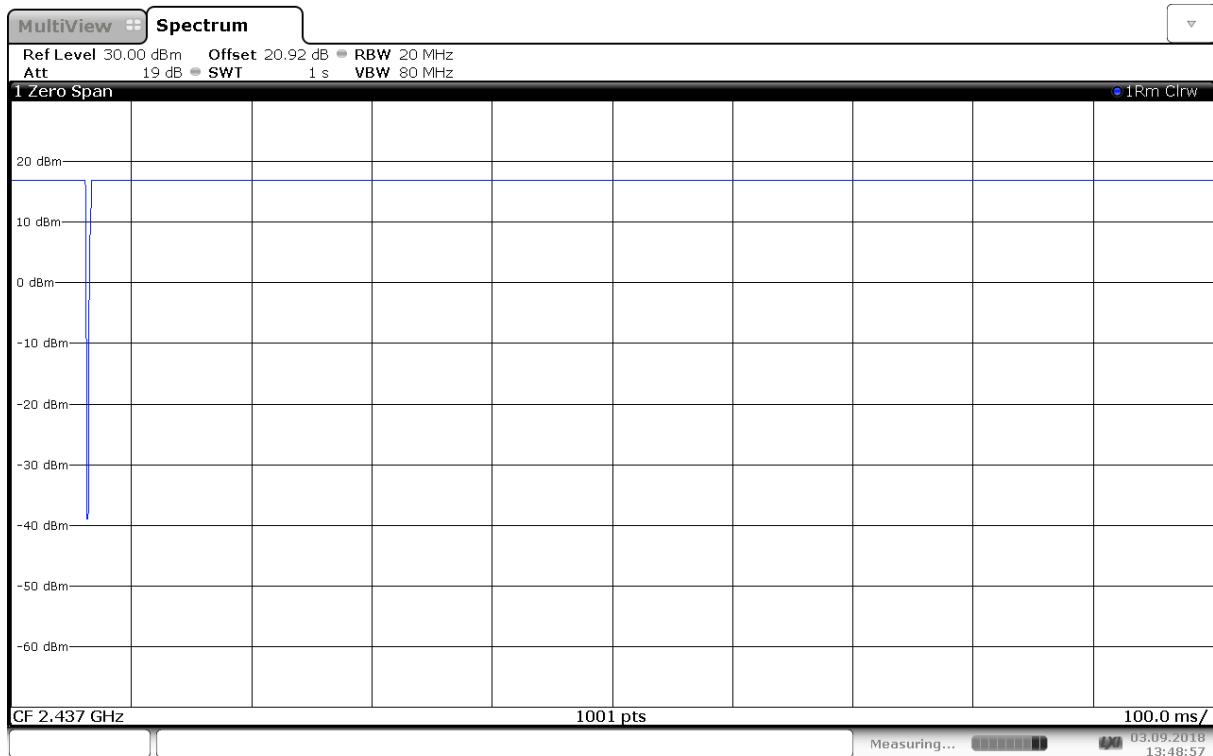
Laboratory Accreditation and Listings		
  Deutsche Akkreditierungsstelle D-PL-12047-01-01 Accredited EMC-Test Laboratory	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-4452, C-20009, T-20006, G-20013
 AUTHORIZED RF LABORATORY	 Authorized™ Test Lab Lab Code: 20011130-00	 MRA US-EU 0003
accredited according to DIN EN ISO/IEC 17025		
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com		
Laboratory Accreditation and Listings		

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1. Measurement diagrams

1.1. Duty Cycle



13:48:57 03.09.2018

1.2. Conducted FCC Peak output power

Mode	Band	CH	Frequency	BW	PWR Setting	Peak Power
a	UNII-1	36	5180	20	13	13,1
a	UNII-2A	64	5320	20	13	12,87
a	UNII-2C	140	5700	20	13	11,34
a	UNII-3	165	5825	20	13	9,45

Mode	Band	CH	Frequency	BW	PWR Setting	Peak Power
n	UNII-1	40	5200	20	13	13,51
n	UNII-2A	52	5260	20	13	13,5
n	UNII-2C	100	5500	20	13	12,85
n	UNII-3	157	5785	20	13	9,66

Mode	Band	CH	Frequency	BW	PWR Setting	Peak Power
VHT40	UNII-1	38	5190	40	13	13,16
VHT40	UNII-2A	54	5270	40	13	13,15
VHT40	UNII-2C	102	5510	40	13	12,11
VHT40	UNII-3	151	4755	40	13	8,68
VHT40	UNII-4	159	5795	40	13	8,97

Mode	Band	CH	Frequency	BW	PWR Setting	Peak Power
VHT40	U-NII-1	36	5180	20	10	10,36
VHT40	U-NII-2A	52	5260	20	10	10,82
VHT40	U-NII-1	38	5190	40	10	10,64
VHT40	U-NII-2A	54	5270	40	10	11,13

1.3. Radiated magnetic field measurements below 30 MHz

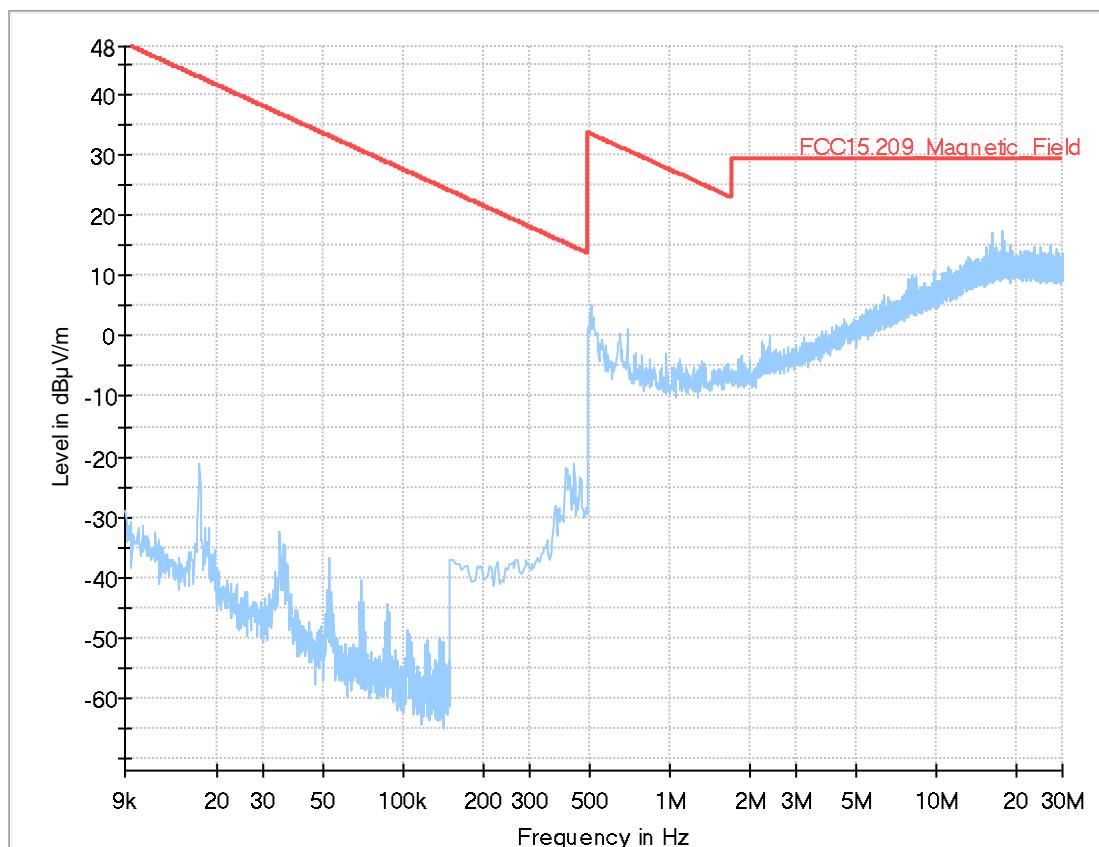
2.01a_a-mode_6-Mbit_CH36_PWR13-standing

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: LKu
Power during tests: 13.8 V DC
Comment 1: a-mode | 6-Mbit | channel 36(5180) | Power 13 | standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



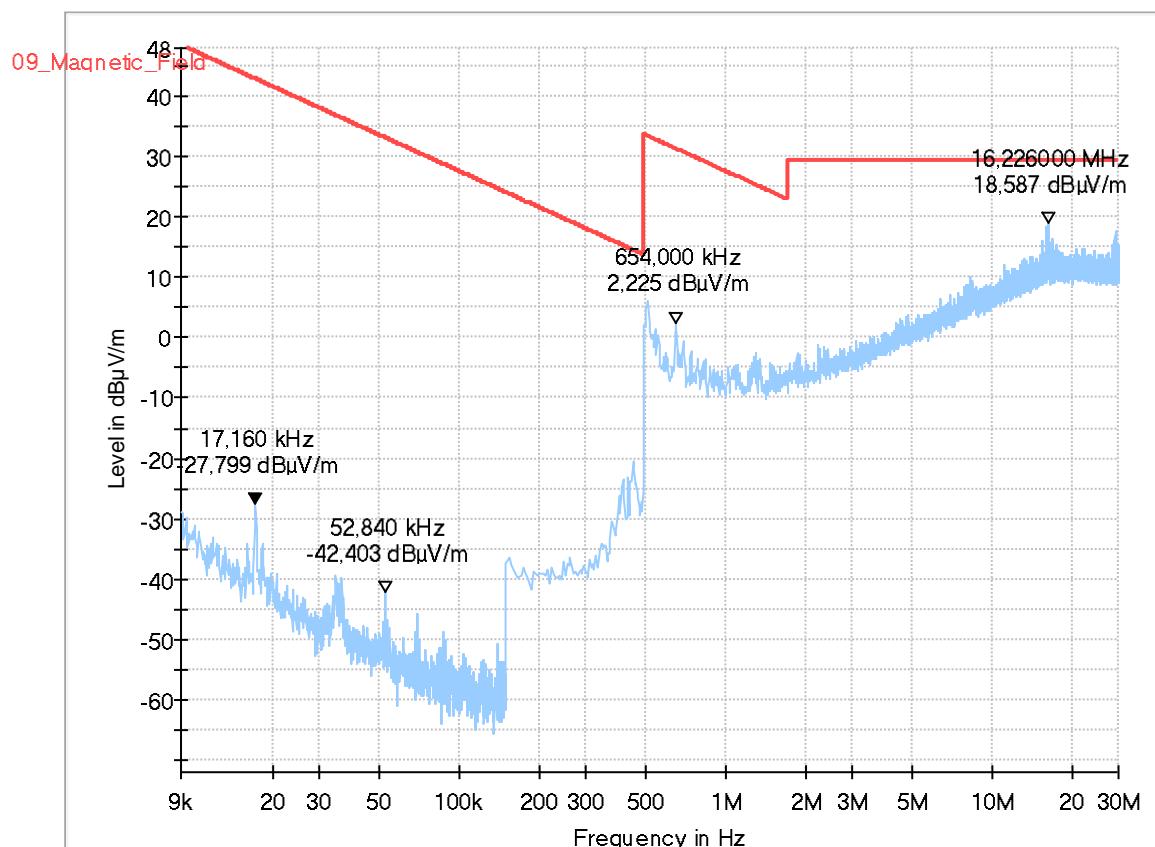
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Common Information

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: MBE
Power during tests: 13.8 V DC
Comment 1: amode|6-Mbit|channel 36[5180]|Power 13|laying

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



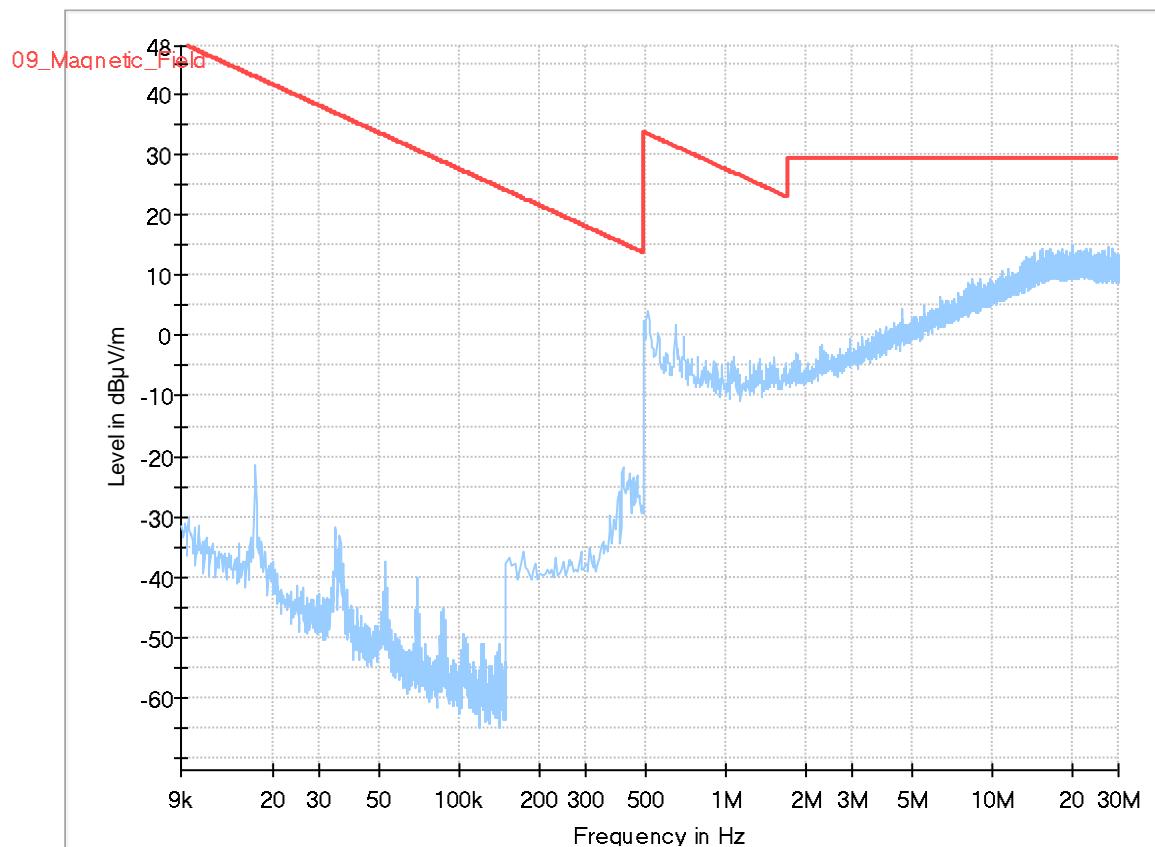
2.02a_n-mode_MCS0_CH100_PWR13_Standing

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: LKu
Power during tests: 13.8 V DC
Comment 1: n-mode | MCS0 | BW20 | channel 100(5500) | Power 13 | standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACUII-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



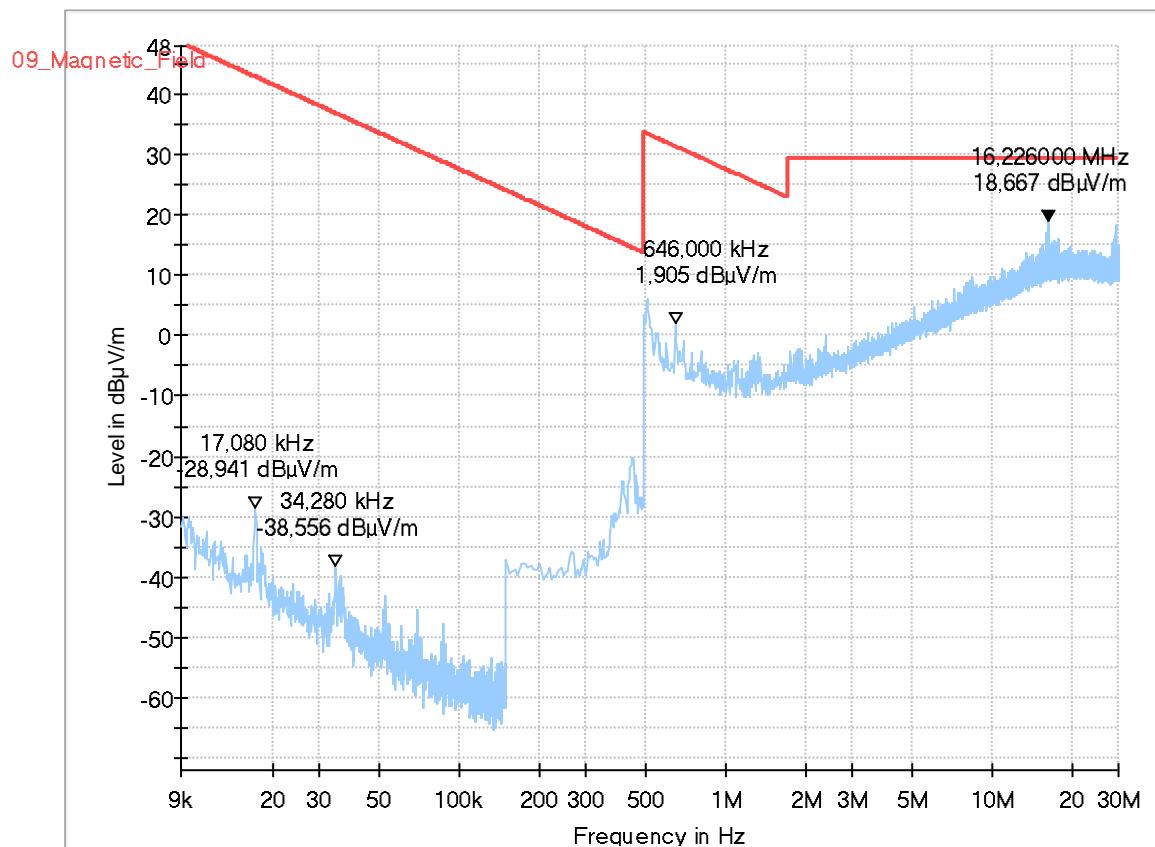
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Common Information

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: MBE
Power during tests: 13.8 V DC
Comment 1: amode|6-Mbit|channel 36[5180]|Power 13|laying

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



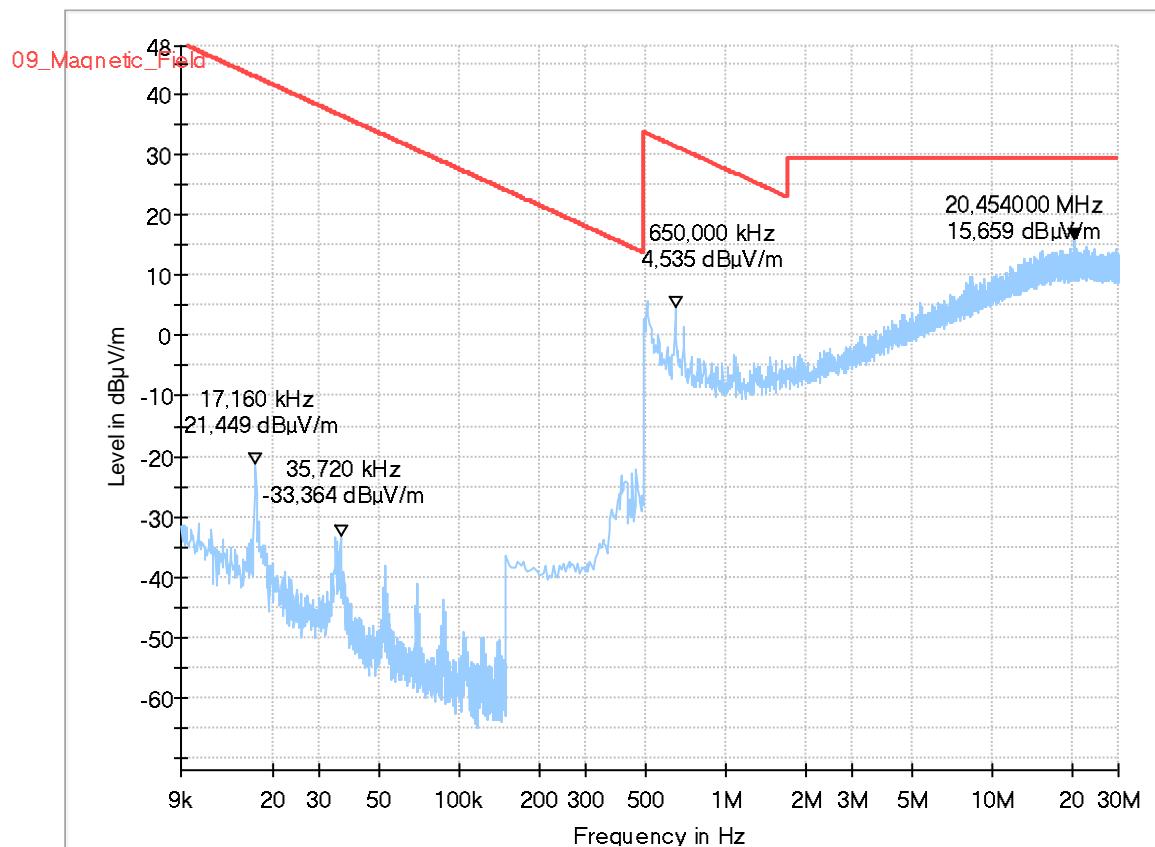
2.03a_ac-mode_MCS0_CH157_PWR8-standing

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: MBE
Power during tests: 13.8 V DC
Comment 1: ac-mode|MCS0|BW20|channel 157(5785)|Power 8|standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



2.03b_ac-mode_MCS0_CH157_PWR8-laying

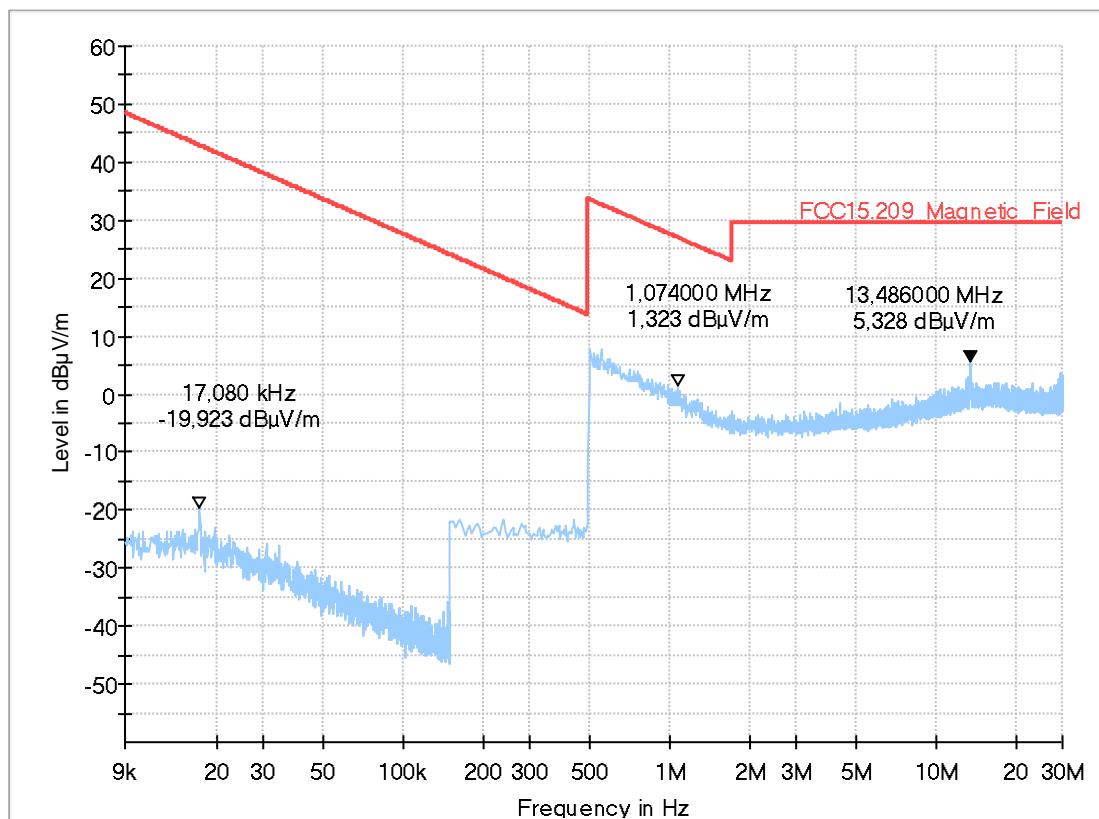
Common Information

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: MBe
Power during tests: 13.8 V DC
Comment 1: ac-mode|MCS0|BW20|channel 157(5785)|Power 8|laying

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACUII-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



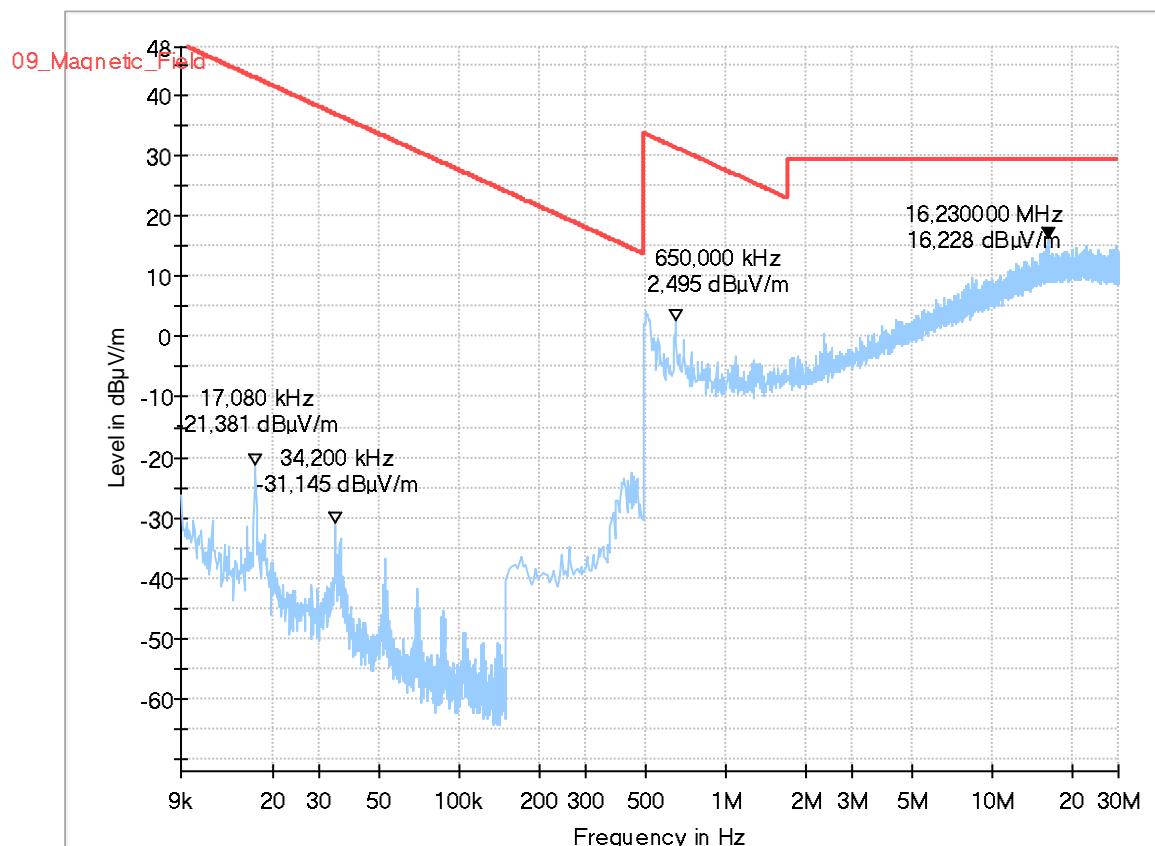
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Common Information

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: MBe
Power during tests: 13.8 V DC
Comment 1: n-mode|MCS0|BW40|channel 38(5190)|Power 13|standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



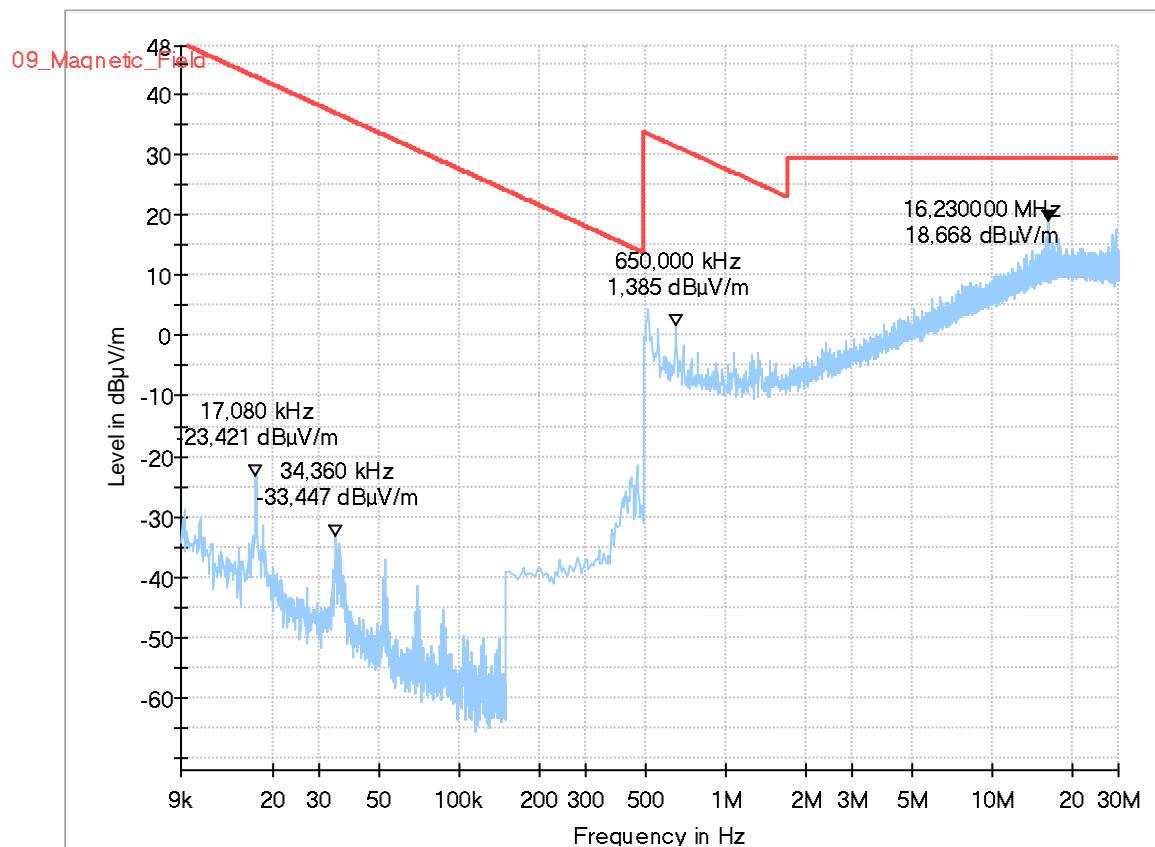
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Common Information

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: EMC.V9.25.00
Distance correction: used accord. table, pls. see test report
Technical Data: Please see page 2 for detailed data of measurement setup
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operating conditions: Humidity: 42%RH; Temperature: 21°C
Operator: MBE
Power during tests: 13.8 V DC
Comment 1: n-mode|MCS0|BW40|channel 38(5190)|Power 13|laying

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC



1.4. Radiated electric field measurement 30 MHz to 1 GHz

3.01a_a-mode_6-Mbit_CH36_PWR17-standing

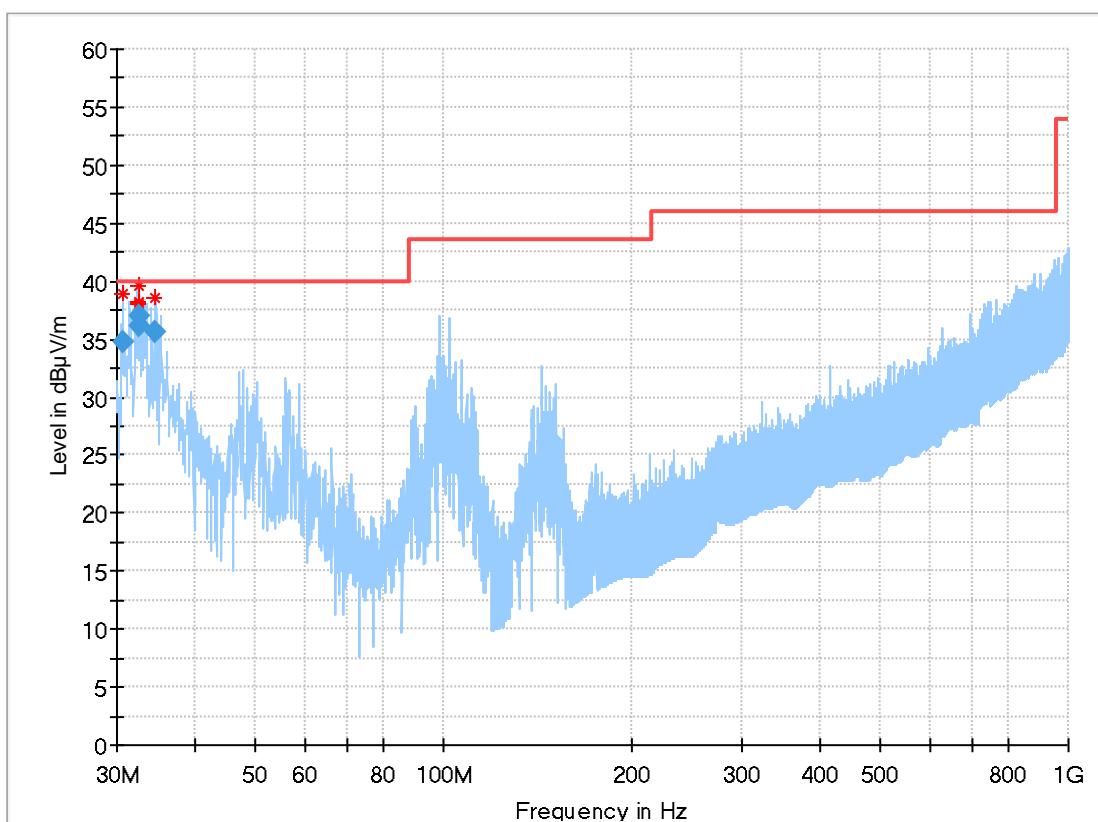
Common Information

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 15.109 Class B; RSS-Gen. Issue 4
Operating conditions: Humidity: 48%RH; Temperature: 20°C
Operator DLE
Operating Mode amode|6-Mbit|channel 36[5180]|Power 13|standing
Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



Frequen cy (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimut h (deg)	Corr . (dB)
30.61000	34.82	40.00	120.000	145.0	H	183.0	21.3
32.59000	37.04	40.00	120.000	169.0	H	175.0	20.4
32.60000	36.16	40.00	120.000	125.0	H	175.0	20.4
34.62000	35.62	40.00	120.000	114.0	H	211.0	19.4

3.01b_a-mode_6-Mbit_CH36_PWR13_laying

Common Information

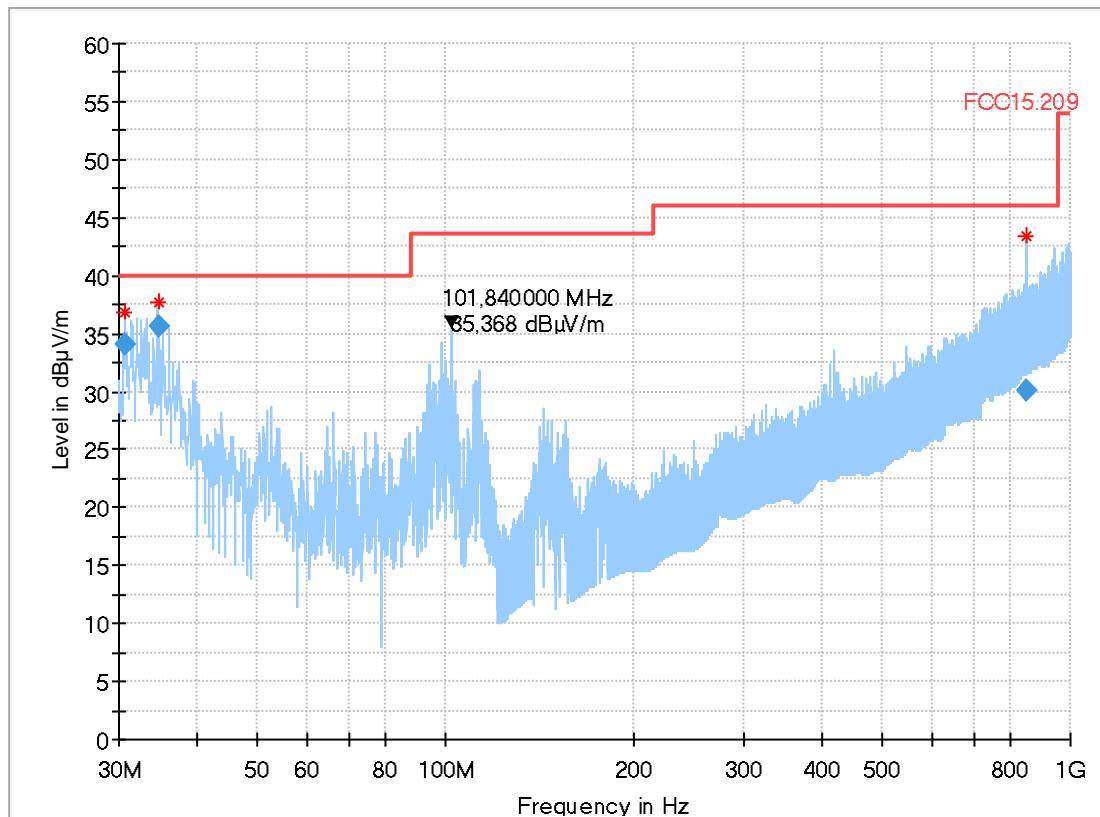
Test description: Electric Field Strength Measurement
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware: EMC32 V9.25.0
Test specification.: FCC 15.209; RSS-Gen: Issue 3

Operator: LKu
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Operating Mode: a-mode | 6-Mbit | channel 36 (5180) | Power 13 | laying
Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
30.640000	34.13	40.00	5.87	1000.0	120.000	153.0	H	98.0	21.2
34.668000	35.60	40.00	4.40	1000.0	120.000	117.0	H	297.0	19.3
850.436000	30.10	46.00	15.90	1000.0	120.000	340.0	H	256.0	25.7

3.02a_n-mode_MCS0_CH100_PWR13_Standing

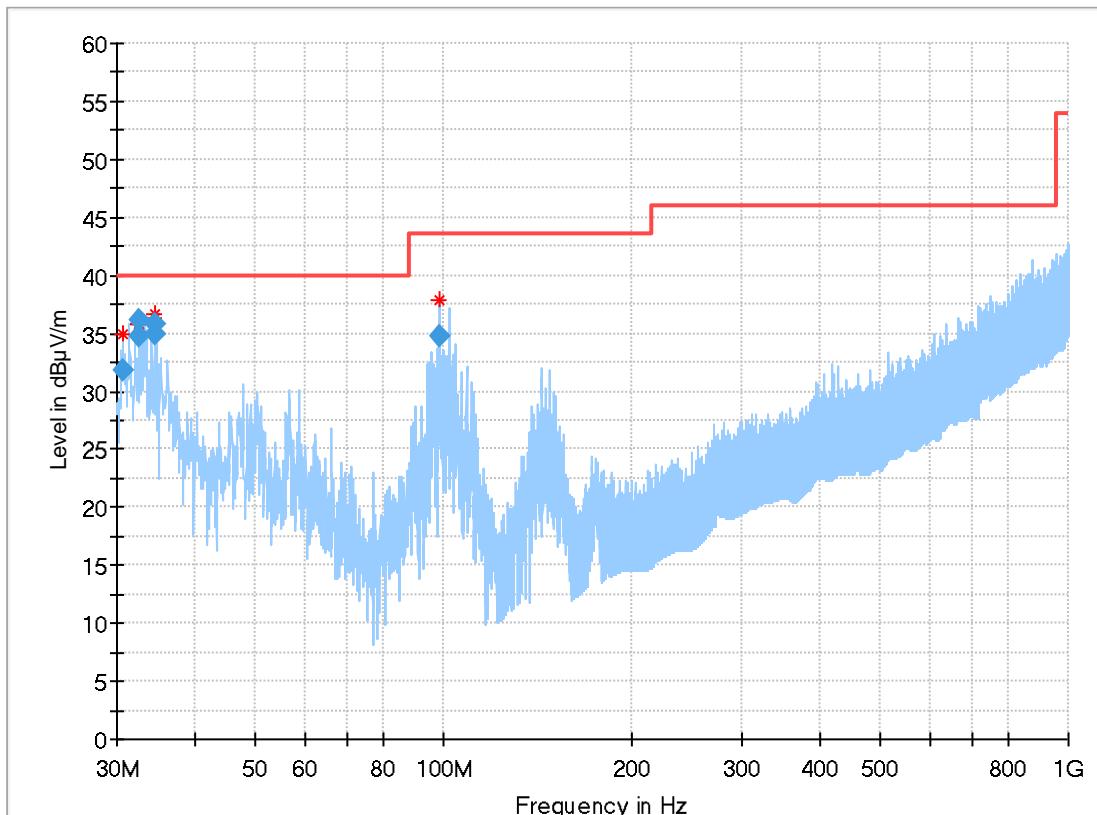
Common Information

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 15.109 Class B; RSS-Gen. Issue 4
Operating conditions: Humidity: 48%RH; Temperature: 20°C
Operator: DLe
Operating Mode n-mode|MCS0|BW20|channel 100[5500]|Power 13|standing
Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.64000	31.87	40.00	120.000	144.0	V	171.0	21.2
32.57000	34.79	40.00	120.000	192.0	H	195.0	20.4
32.60000	36.14	40.00	120.000	125.0	H	185.0	20.4
34.63000	34.90	40.00	120.000	256.0	H	214.0	19.4
34.64000	35.81	40.00	120.000	217.0	H	200.0	19.4
98.49000	34.81	43.50	120.000	114.0	V	202.0	8.1

3.02b_n-mode_MCS0_CH100_PWR13_Laying

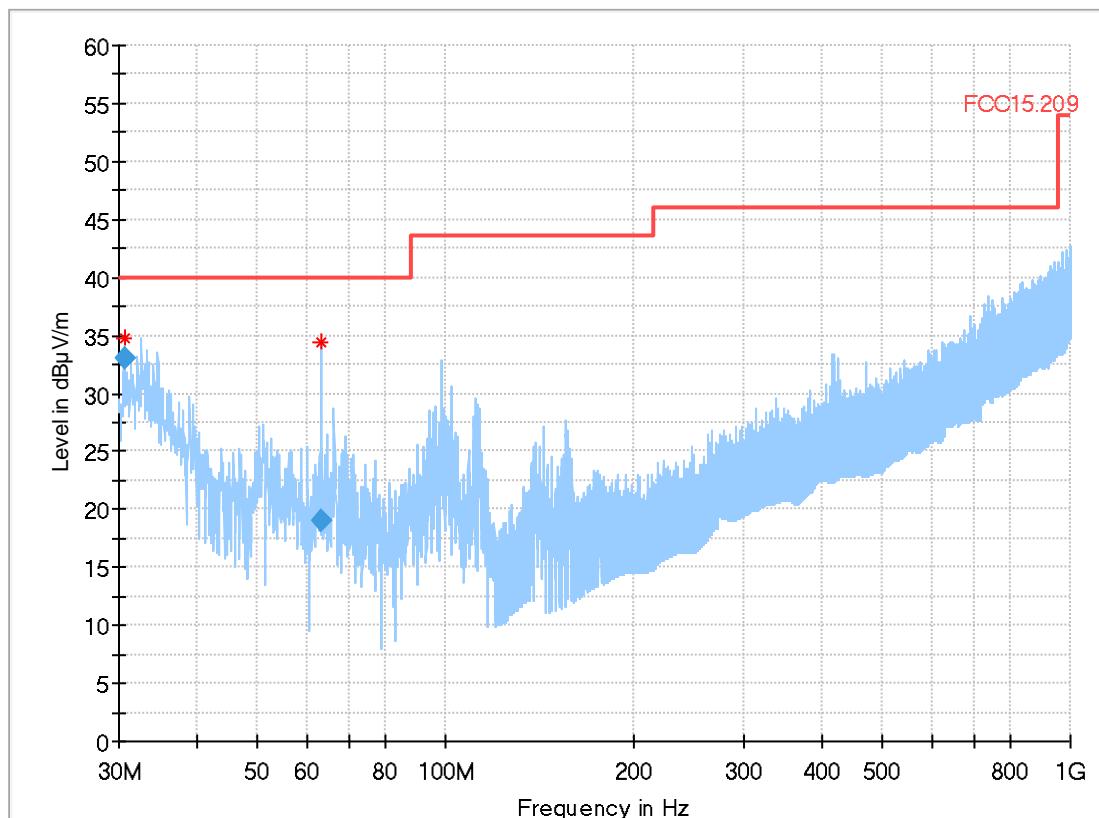
Common Information

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
 Operator: LKu
 Operating conditions: Humidity: 48%rH; Temperature: 20°C
 Operating Mode: n-mode | MCS0 | BW20 | channel 100 (5500) | Power 13 | laying
 Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACUII-06 EU
 HW: H2
 SW: 14
 Serial Nr.: 30207090
 Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth h (kHz)	Height (cm)	POL	Azimuth h (deg)	Corr. (dB)
30.640000	32.99	40.00	7.01	1000.0	120.000	120.0	H	163.0	21.2
63.340000	19.10	40.00	20.90	1000.0	120.000	360.0	V	130.0	7.8

3.03a_ac-mode_MCS0_CH157_PWR8-standing

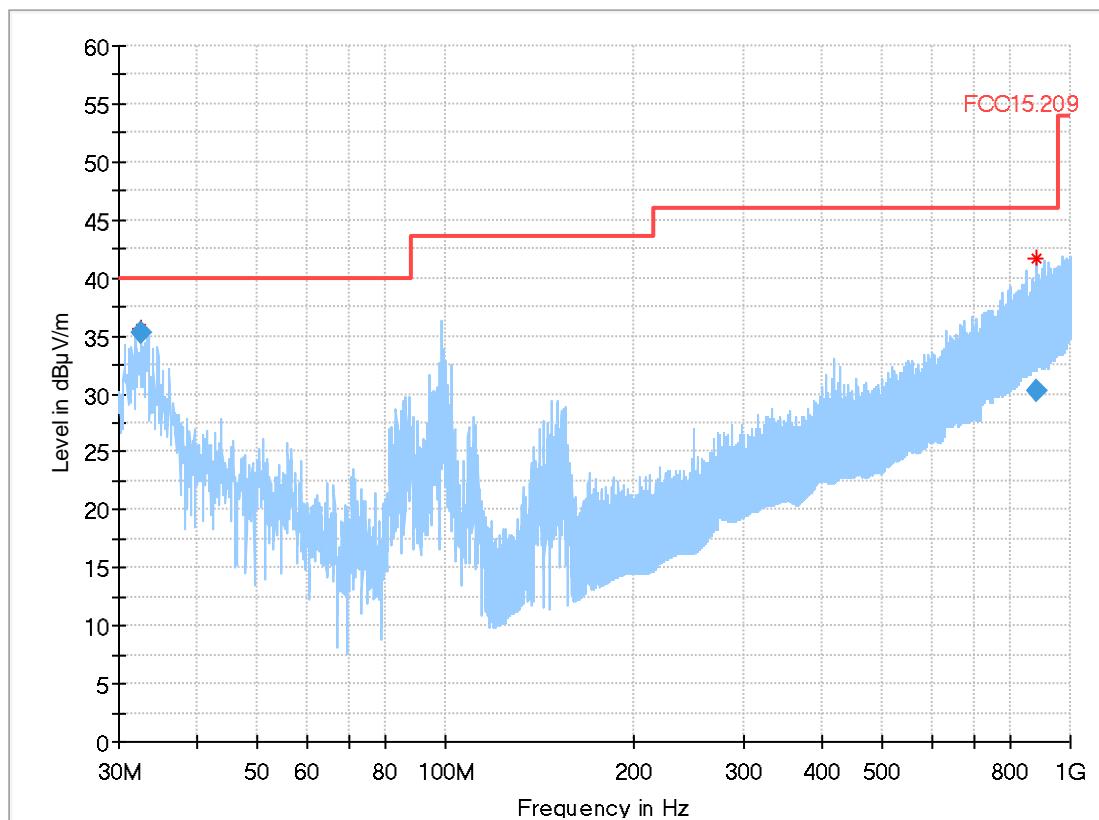
Common Information

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
Operator: LKu
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Operating Mode: n-mode | MCS0 | BW20 | channel 157(5785) | Power 8 | standing
Comment 1: Power: 13.85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
32.592000	35.32	40.00	4.68	1000.0	120.000	117.0	H	195.0	20.4
883.056000	30.19	46.00	15.81	1000.0	120.000	142.0	V	328.0	26.3

3.03b_ac-mode_MCS0_CH157_PWR8-Laying

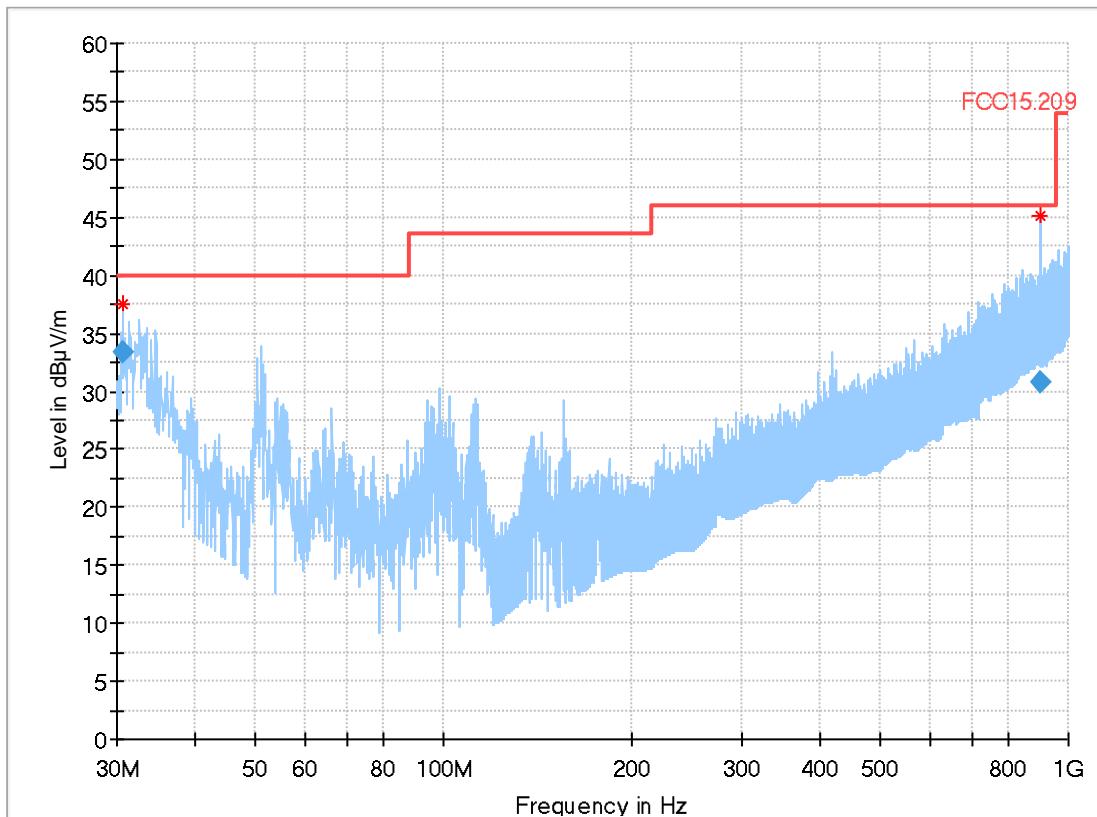
Common Information

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
Operator: LKu
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Operating Mode: ac-mode | MCS0 | BW20 | channel 157(5785) | Power 8 | laying
Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
30.640000	33.35	40.00	6.65	1000.0	120.000	150.0	H	123.0	21.2
902.440000	30.73	46.00	15.27	1000.0	120.000	254.0	H	353.0	27.0

3.04a_n-mode_BW40_MCS0_CH38_PWR13-standing

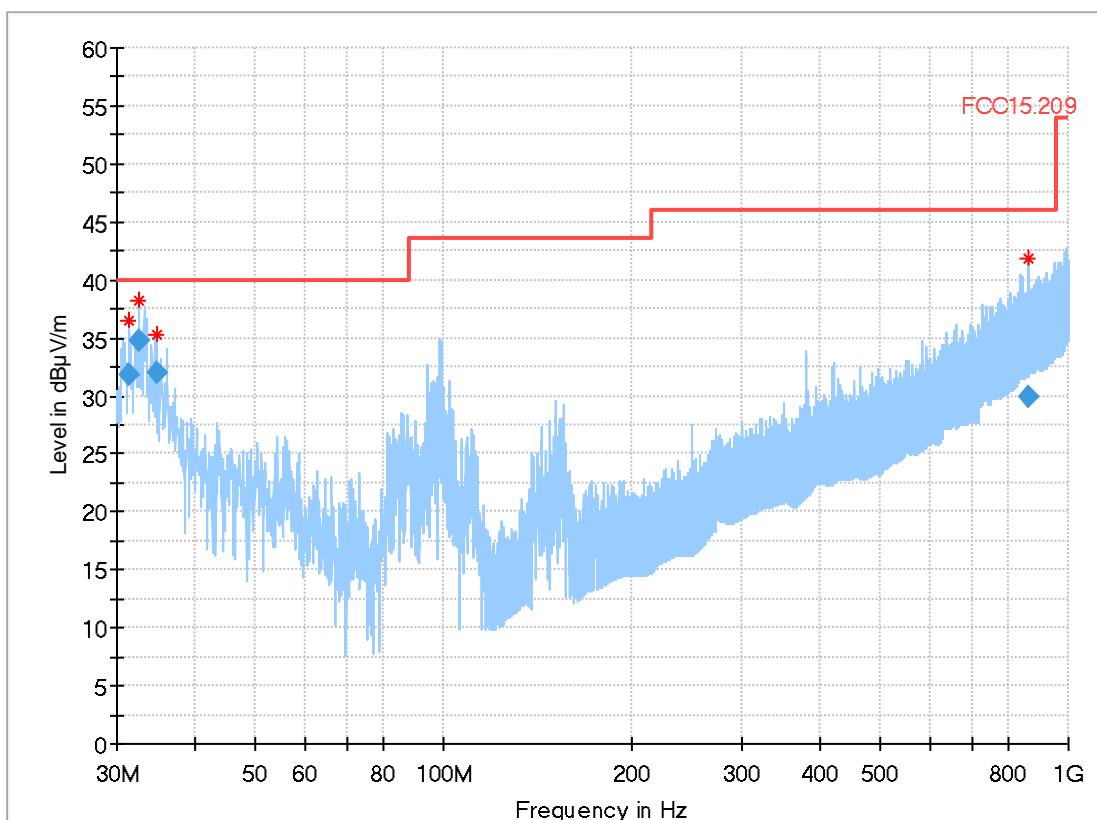
Common Information

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
Operator: LKu
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Operating Mode: n-mode | MCS0 | BW40 | channel 38(5190) | Power 13 | standing
Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
31.432000	31.80	40.00	8.20	1000.0	120.000	241.0	H	246.0	20.9
32.592000	34.68	40.00	5.32	1000.0	120.000	128.0	H	146.0	20.4
34.668000	31.97	40.00	8.03	1000.0	120.000	134.0	H	159.0	19.3
863.132000	29.83	46.00	16.17	1000.0	120.000	351.0	H	173.0	25.9

3.04b_n-mode_BW_40_MCS0_CH38_PWR13-Laying

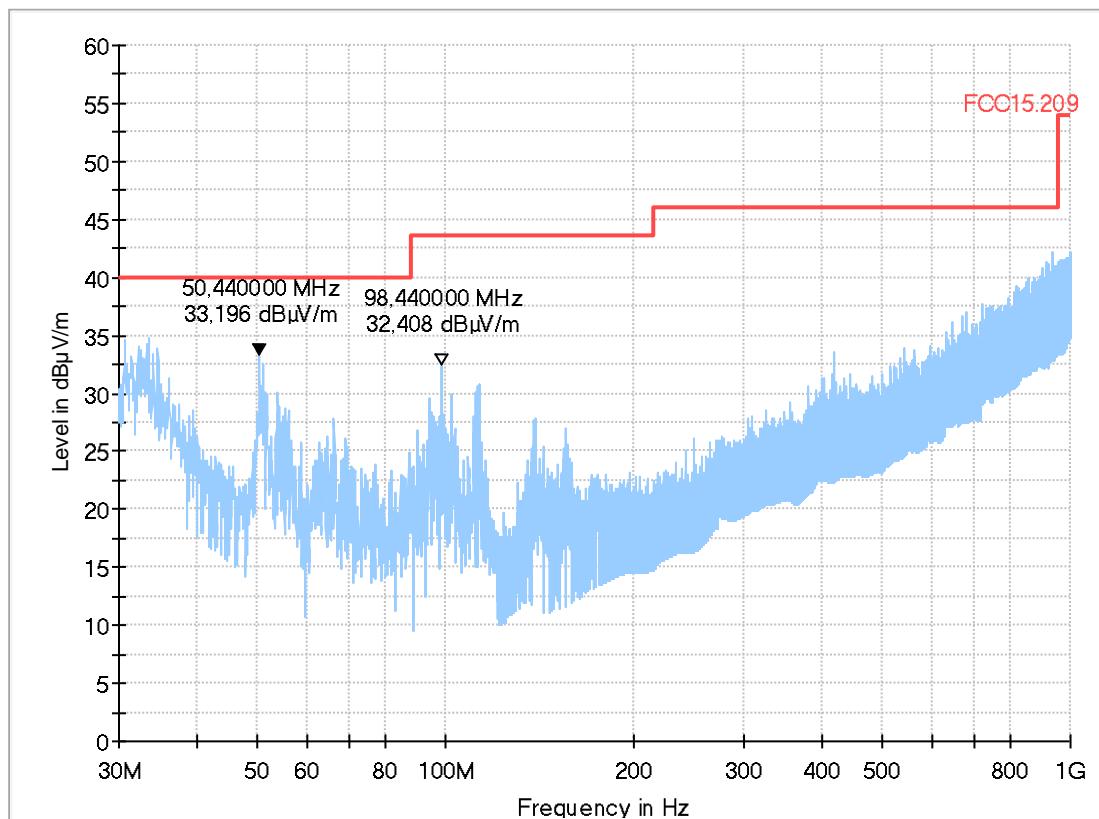
Common Information

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
Operator: LKu
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Operating Mode: n-mode | MCS0 | BW40 | channel 38(5190) | Power 13 | laying
Comment 1: Power: 13,85V DC

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



1.5. Radiated electric field measurement from 1 GHz – 7 GHz

4.01a_a-mode_6-Mbit_CH36_PWR13-standing

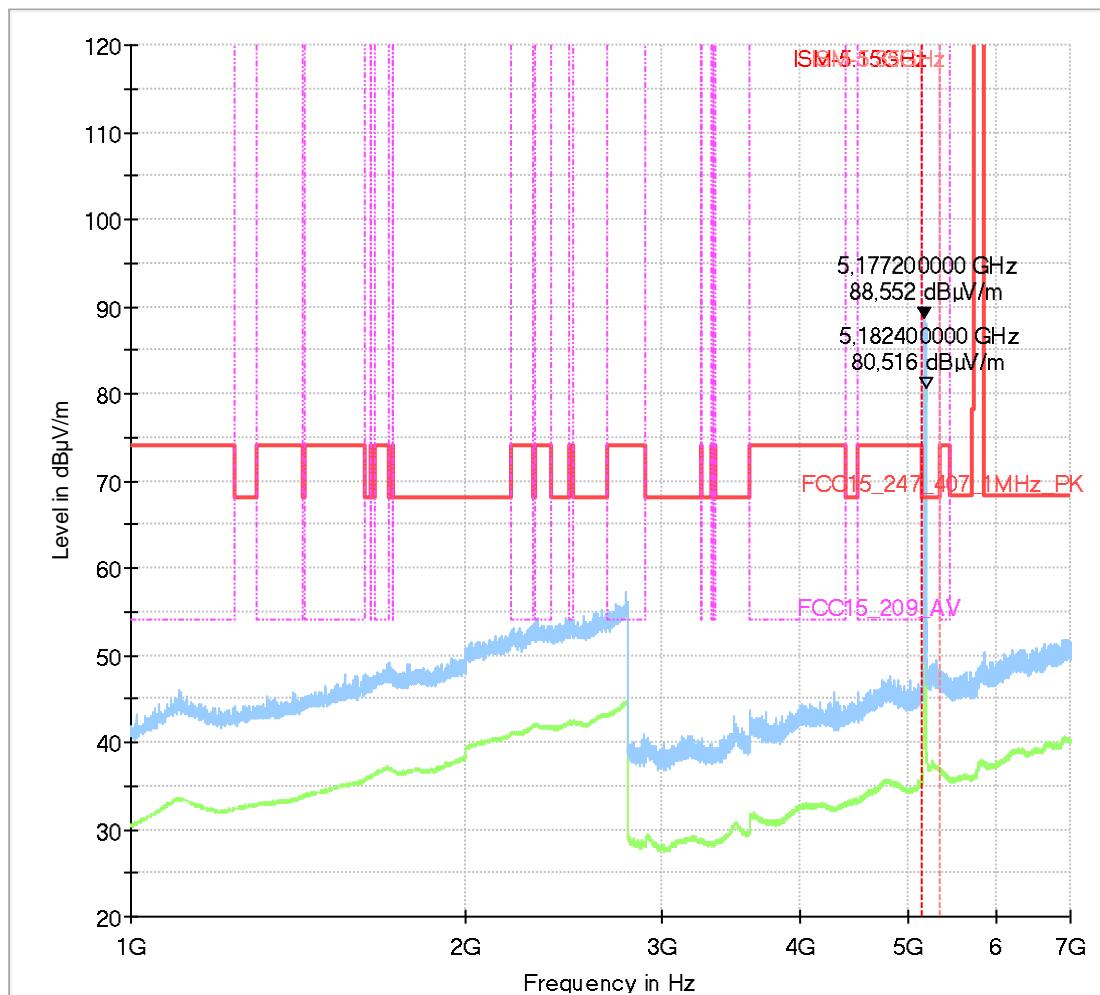
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: #Ver
Operation mode: amode|6-Mbit|channel 36[5180]|Power 13|
Operator Name: SLO
Comment: DUT is Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.01b_a-mode_6-Mbit_CH36_PWR13_laying

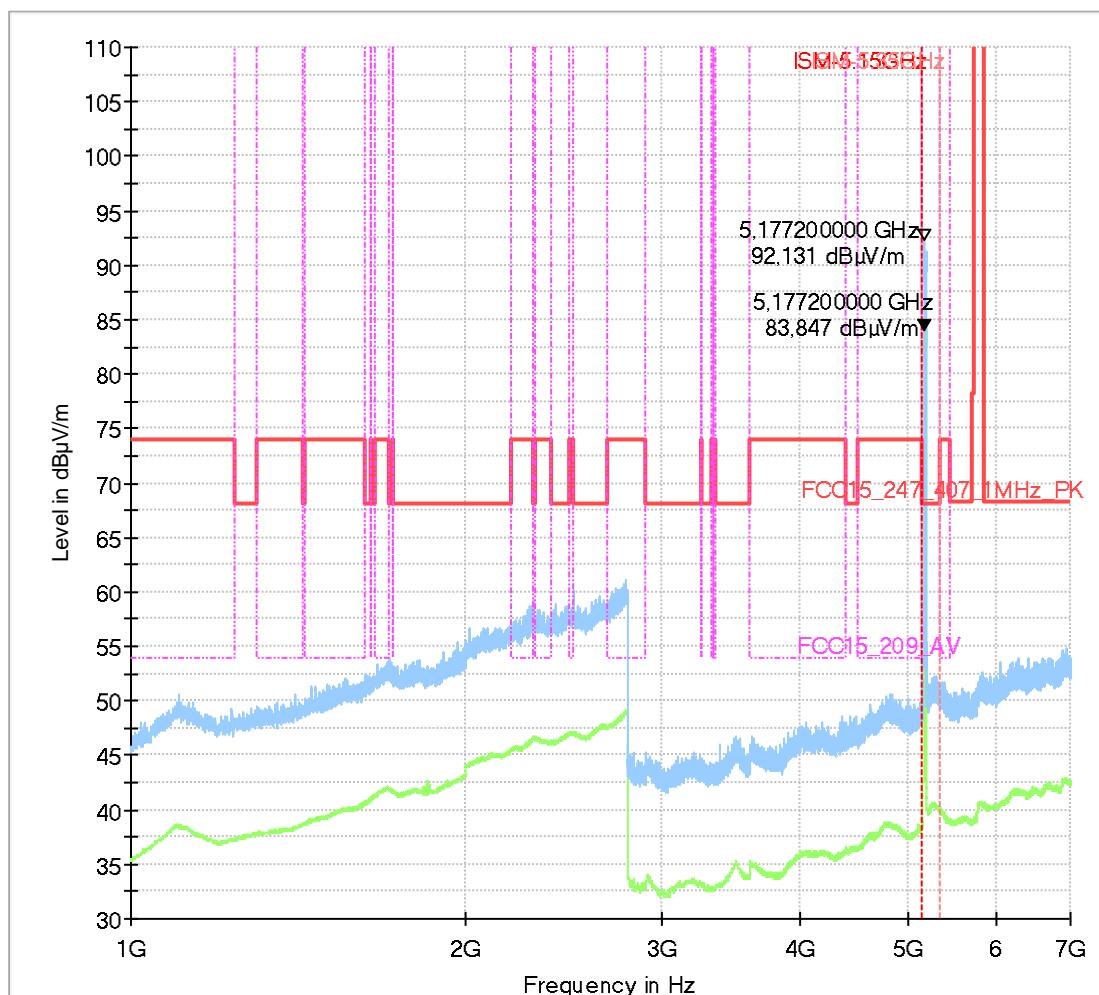
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: EMC32 V9.26.0
Operation mode: TX, continuous
Operator Name: FKa
Comment: amode|6-Mbit|channel 36[5180]|Power 13|

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.02a_n-mode_MCS0_CH100_PWR13_Standing

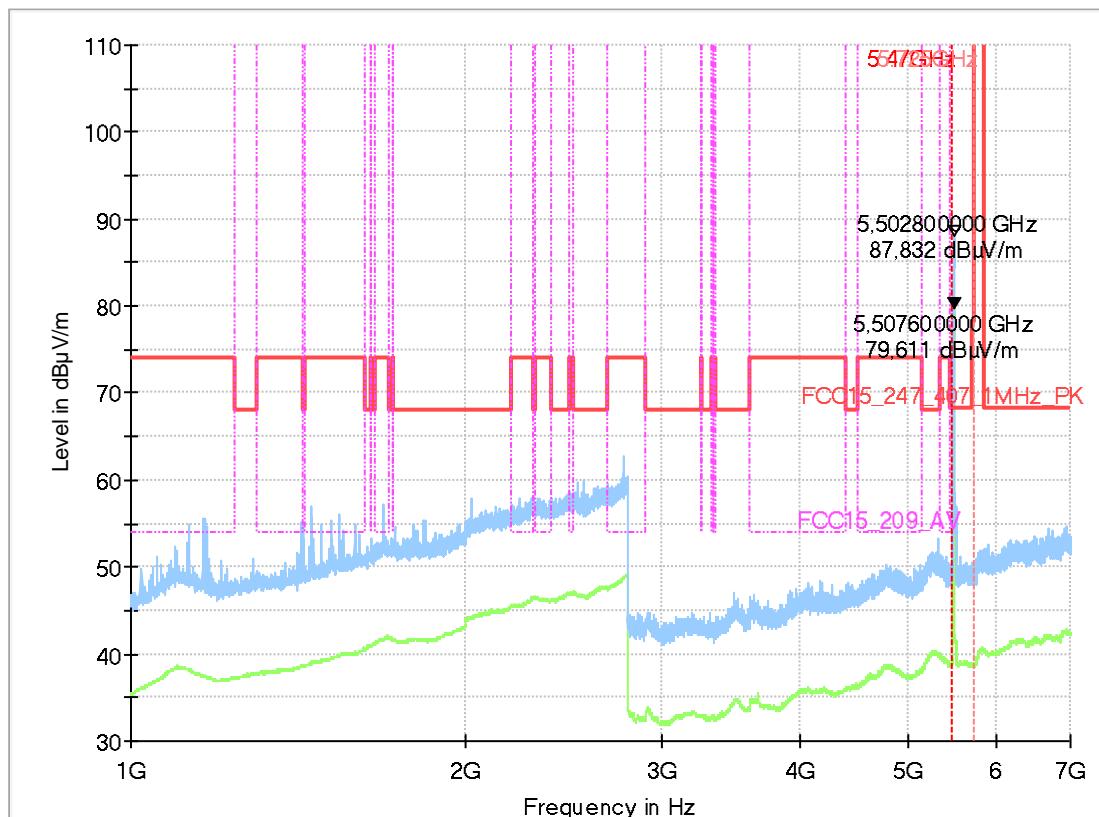
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: #Ver
Operation mode: n-mode|MCS0|BW20|channel 100[5500]|Power 13|
Operator Name: DLe

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.02b_n-mode_MCS0_CH100_PWR13_Laying

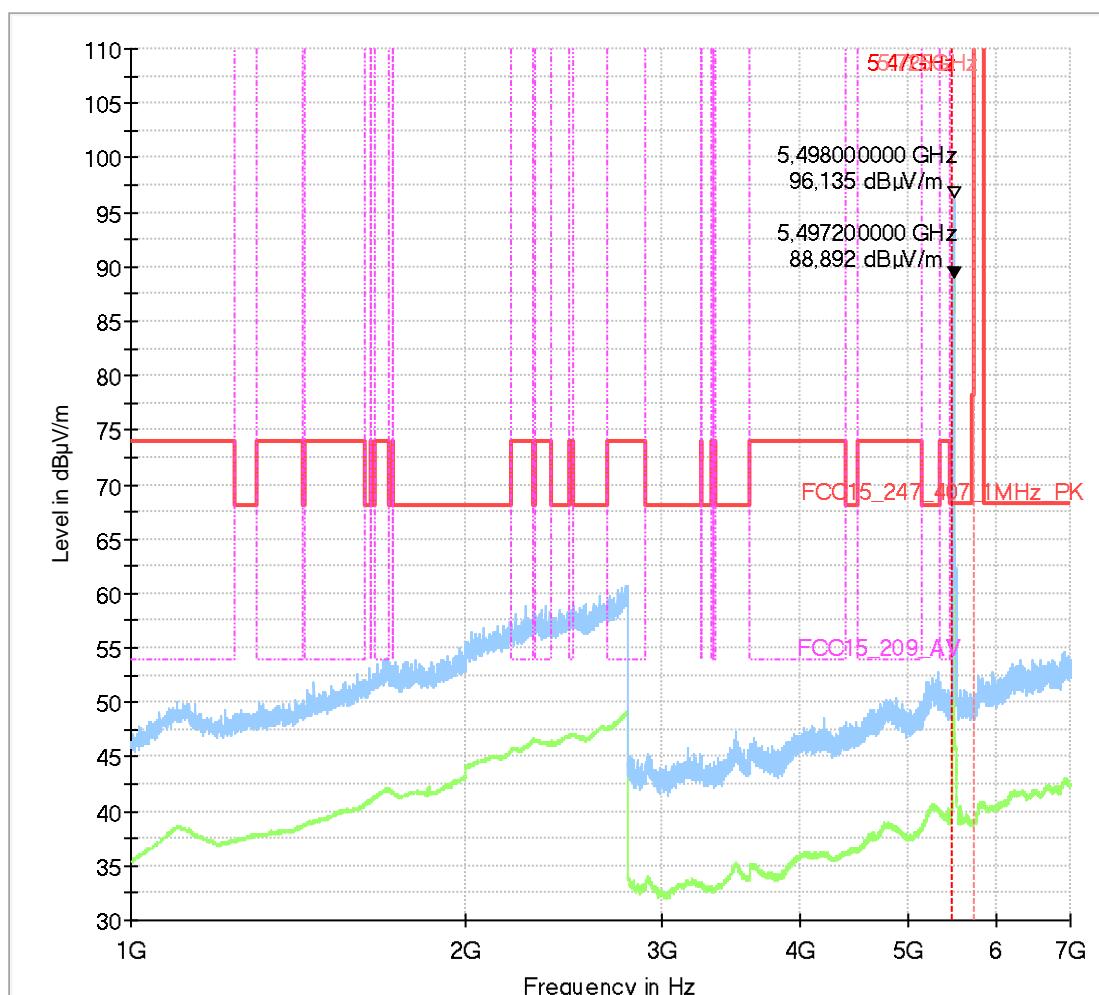
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: EMC32 V9.26.0
Operation mode: TX, continuous
Operator Name: FKA
Comment: n-mode|MCS0|BW20|channel 100[5500]|Power 13|

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.03a_ac-mode_MCS0_CH157_PWR8-standing

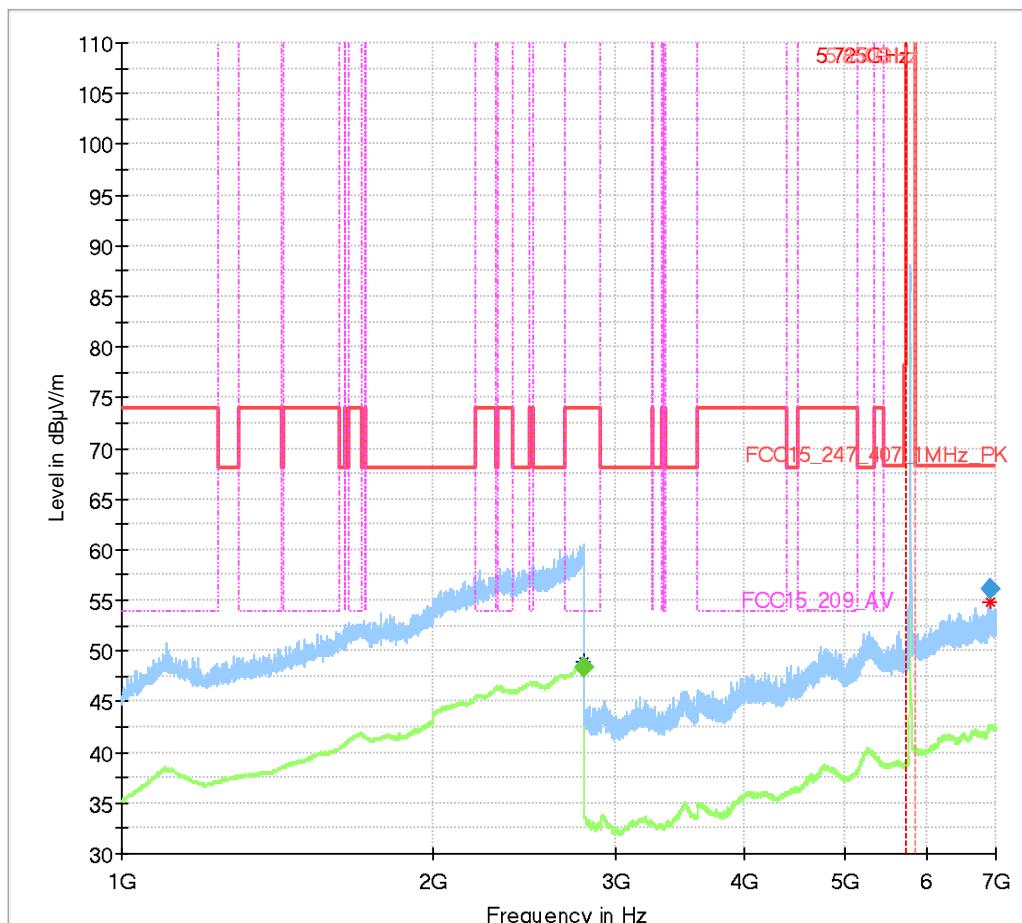
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.407&15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical
 Software Version: #Ver
 Operation mode: TX, continuous
 Operator Name: TFr
 Comment: EUT Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACU11-06 EU
 HW: H2
 Serial Nr.: 30207090
 Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	MaxPeak (dB μ V/m)	RMS (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol
2796.000000	---	48.48	54.00	5.52	100.0	1000.000	155.0	V
6912.350000	56.20	---	68.20	12.00	100.0	1000.000	155.0	H

4.03b_ac-mode_MCS0_CH157_PWR8-Laying

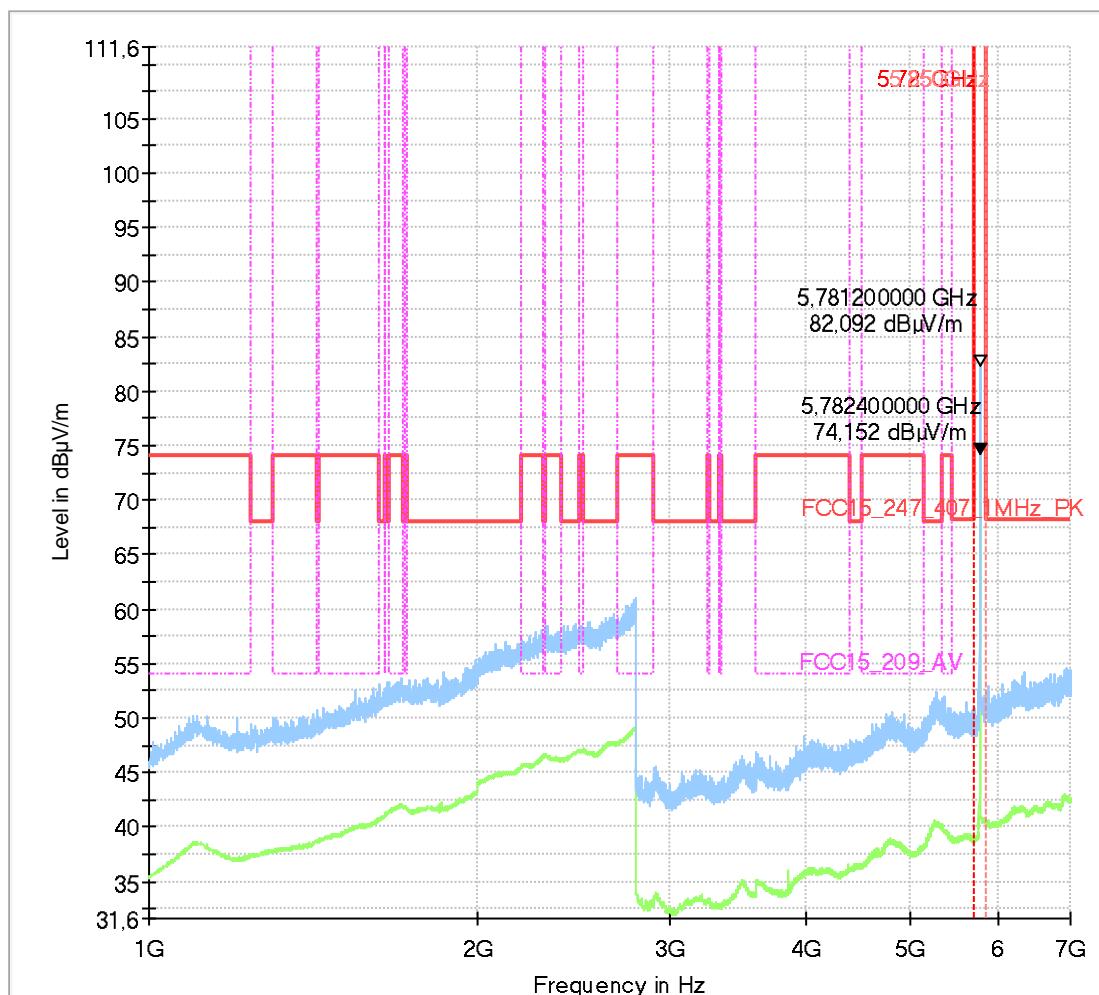
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: EMC32 V9.26.0
Operation mode: TX, continuous
Operator Name: FKa
Comment: ac-mode|MCS0|BW20|channel 157(5785)|Power 8|

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.04a_n-mode_BW40_MCS0_CH38_PWR13-standing

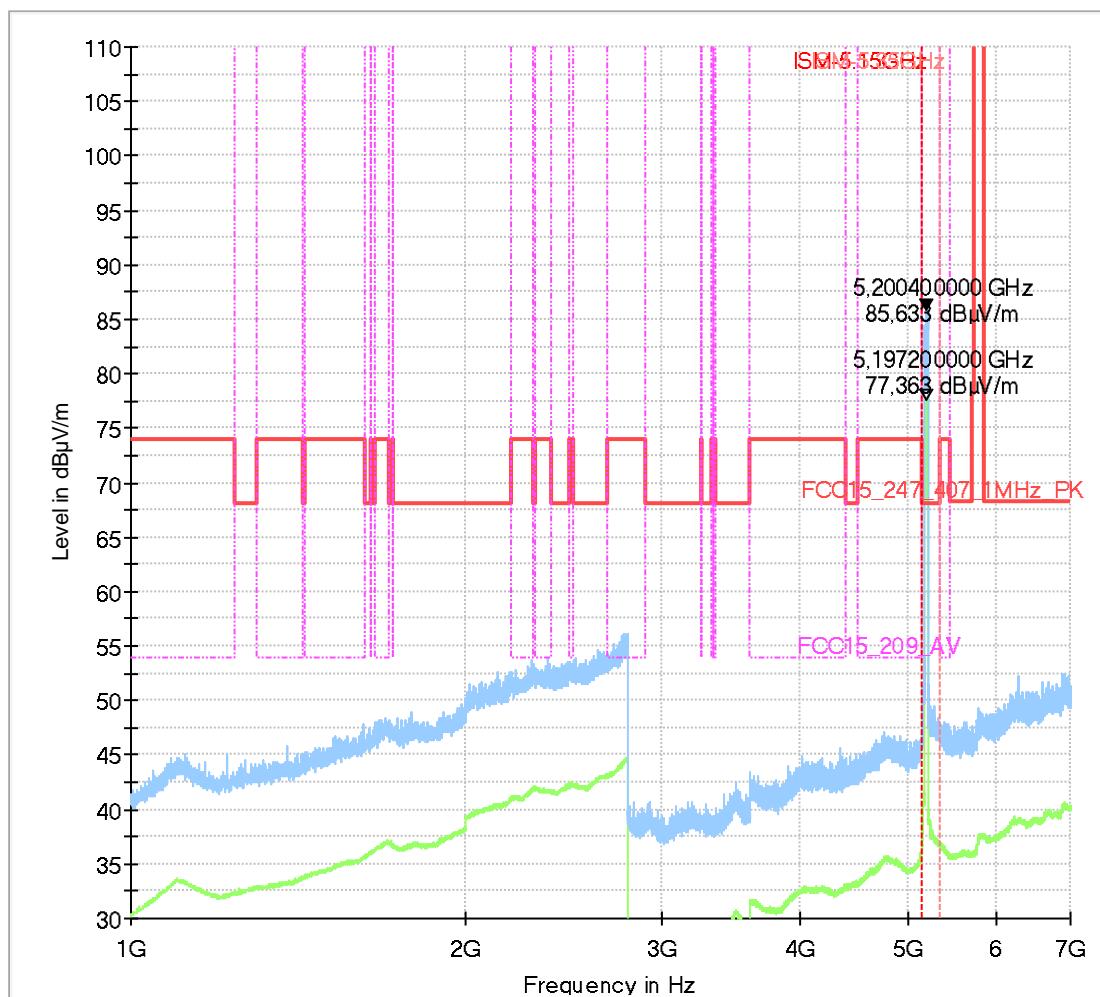
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: #Ver
Operation mode: n-mode|MCS0|BW40|channel 38(5190)|Power 13|
Operator Name: SLo
Comment: DUT is Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.04b_n-mode_BW_40_MCS0_CH38_PWR13-Laying

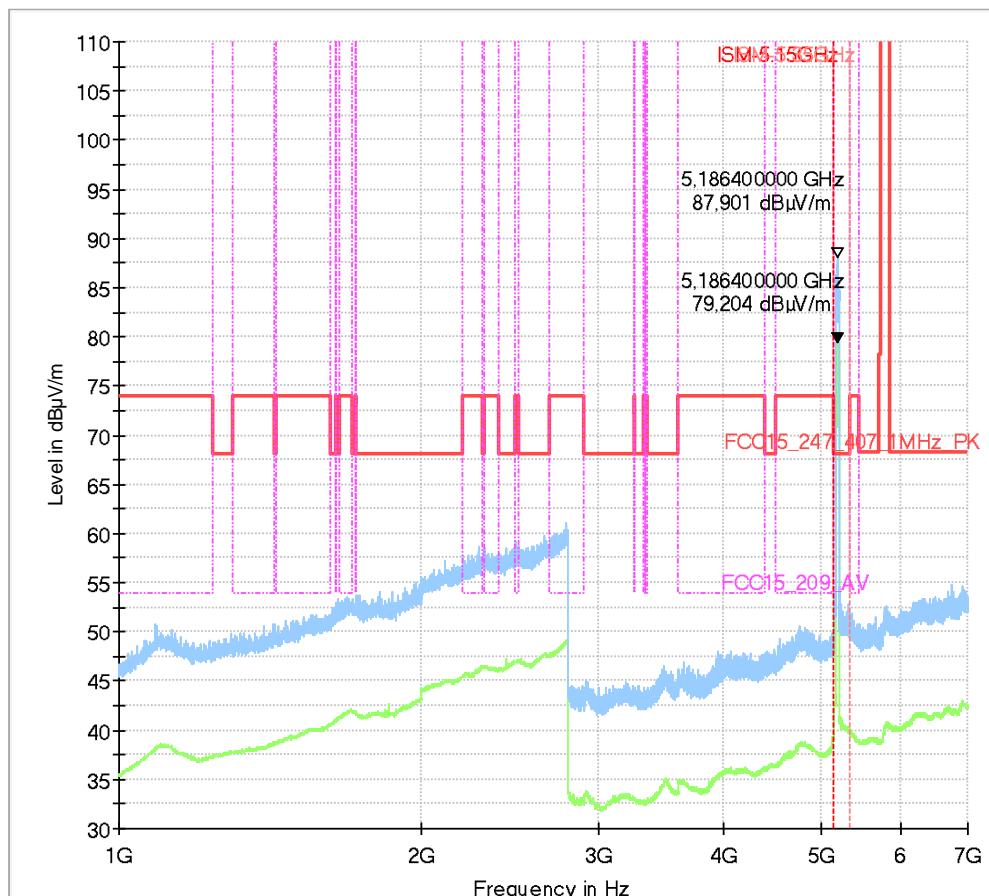
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: EMC32 V9.26.0
Operation mode: TX, continuous
Operator Name: FKa
Comment: n-mode|MCS0|BW40|channel 38(5190)|Power 13|

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



1.6. Radiated electric field measurement from 7 GHz – 18 GHz

4.11a_a-mode_6-Mbit_CH36_PWR13-standing

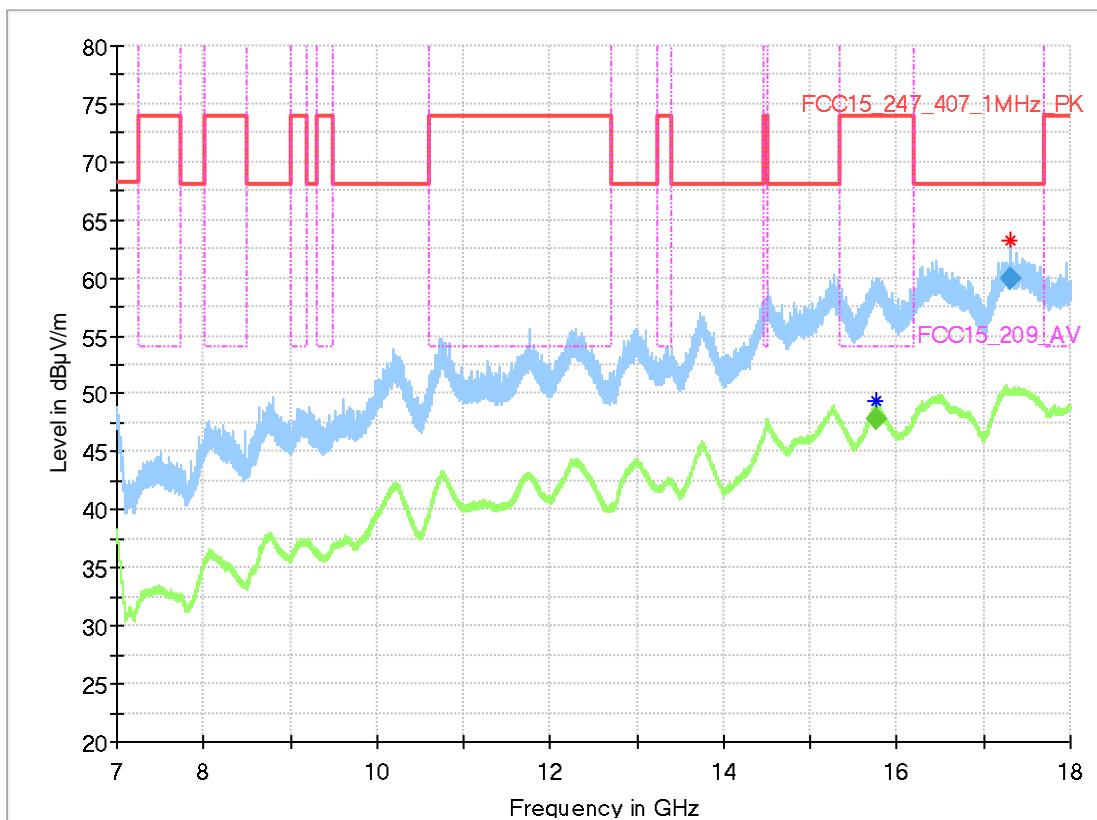
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.407&15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical
 Software Version: #Ver
 Operation mode: amode|6-Mbit|channel 36[5180]|Power 13|
 Operator Name: Klv
 Comment: DUT is Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACU11-06 EU
 HW: H2
 Serial Nr.: 30207090
 Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	MaxPeak (dBμV/m)	RMS (dBμV/m)	Limit (dBμV/m)	MARGIN (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
15749.800000	---	47.87	54.00	6.13	100.0	1000.000	155.0	H	63.0
17306.200000	60.00	---	68.00	8.00	100.0	1000.000	155.0	H	292.0

4.12a_n-mode_MCS0_CH100_PWR13_standing

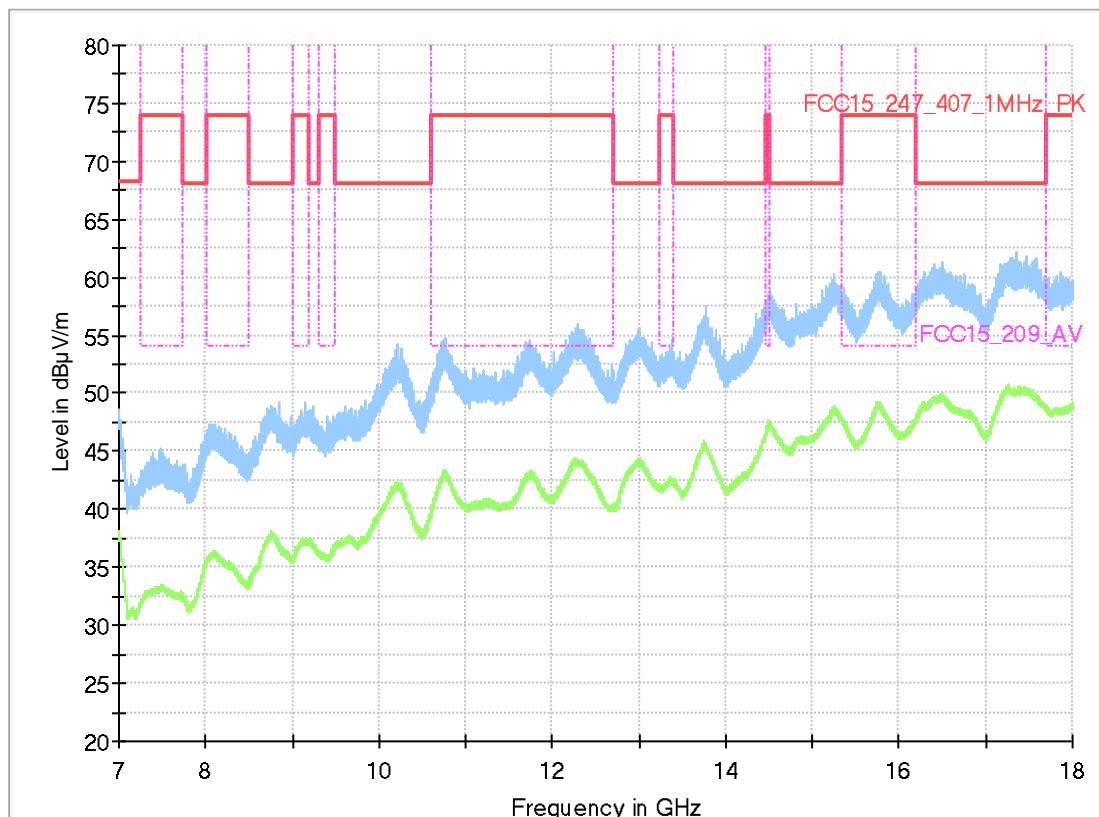
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: #Ver
Operation mode: n-mode|MCS0|BW20|channel 100[5500]|Power 13|
Operator Name: Klv
Comment: DUT is Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.12b_n-mode_MCS0_CH100_PWR13_laying

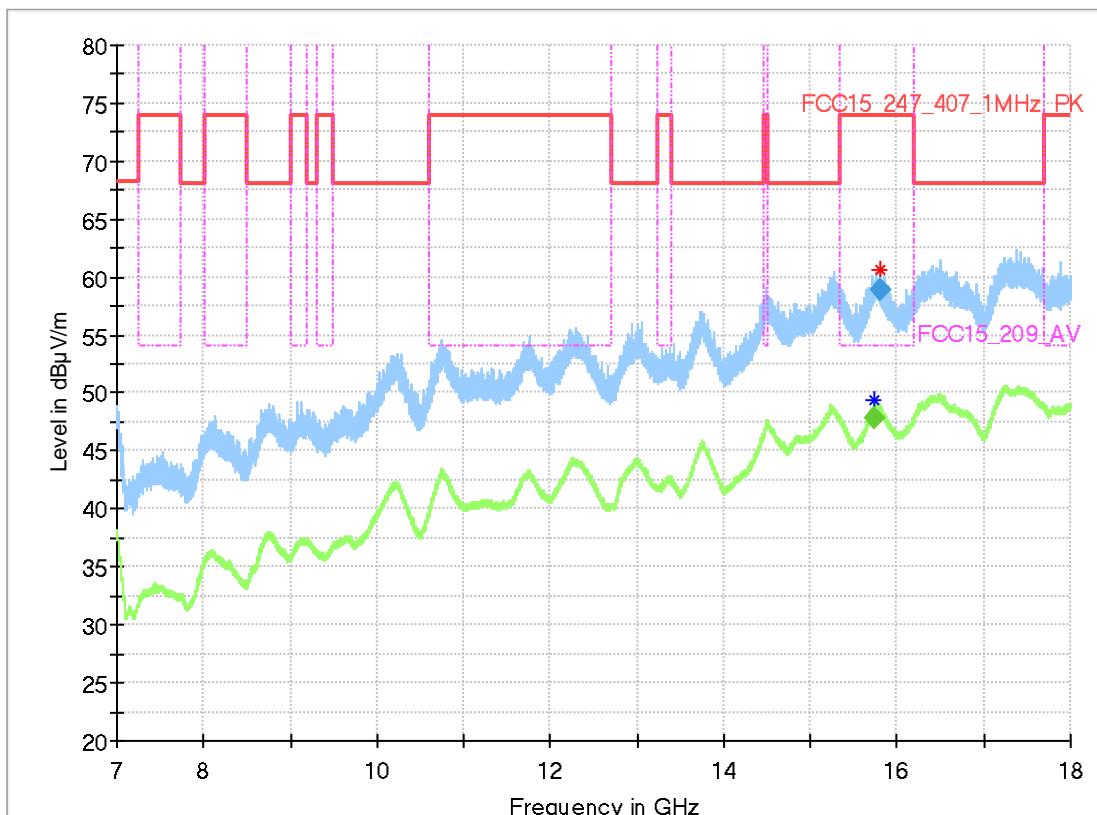
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.407&15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical
 Software Version: #Ver
 Operation mode: n-mode|MCS0|BW20|channel 100[5500]|Power 13|
 Operator Name: SLo
 Comment: DUT is Laying

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACU11-06 EU
 HW: H2
 SW: 14
 Serial Nr.: 30207090
 Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	MaxPeak (dBμV/m)	RMS (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
15746.200000	---	47.78	54.00	6.22	1000.000	155.0	H	312.0	0.0	24.4
15798.600000	58.88	---	74.00	15.12	1000.000	155.0	V	-10.0	0.0	24.1

4.13a_ac-mode_MCS0_CH157_PWR8-standing

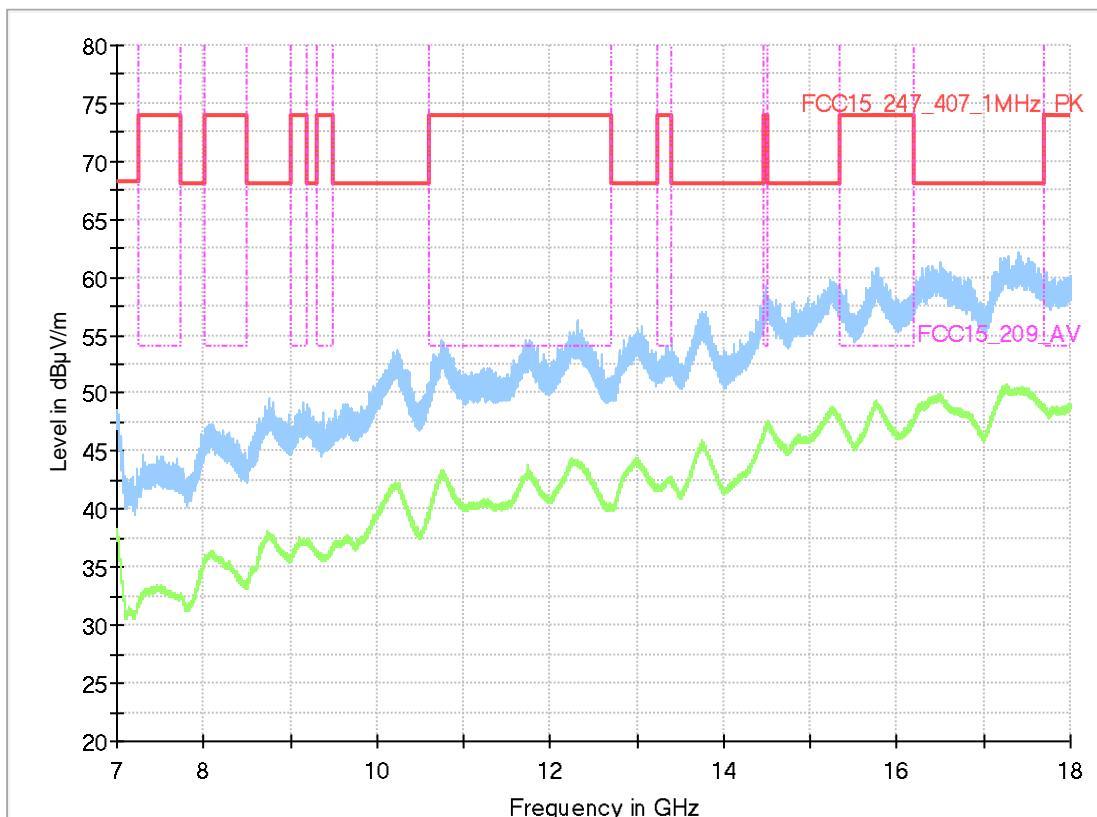
Common Information

Test Description: Radiated field strength emission in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.407&15.209 Intentional Radiator
Antenna polarisation: horizontal/vertical
Software Version: #Ver
Operation mode: ac-mode|MCS0|BW20|channel 157(5785)|Power 8|
Operator Name: SLo
Comment: DUT is Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
Product: Telematic device
EUT Model: ACU11-06 EU
HW: H2
SW: 14
Serial Nr.: 30207090
Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
Power Supply: 13,8VDC

Full Spectrum



4.13b_ac-mode_MCS0_CH157_PWR8-laying

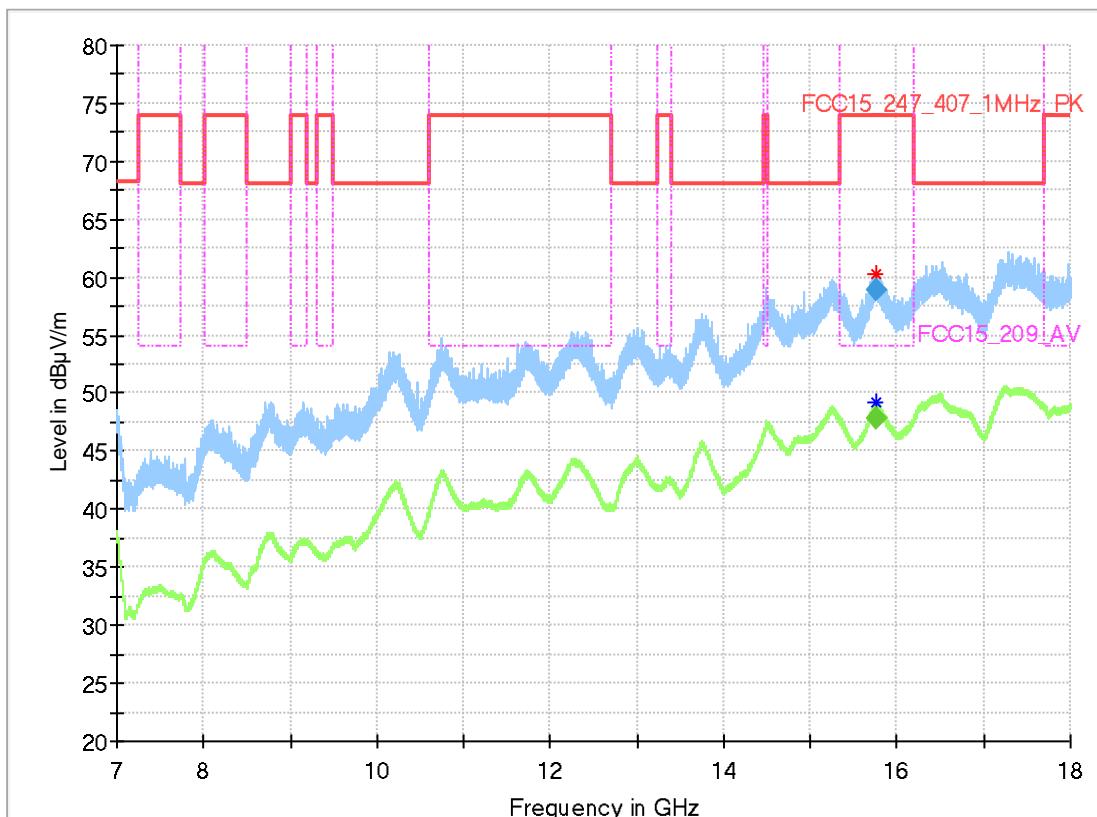
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.407&15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical
 Software Version: #Ver
 Operation mode: ac-mode|MCS0|BW20|channel 157(5785)|Power 8|
 Operator Name: SLo
 Comment: DUT is Laying

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACU11-06 EU
 HW: H2
 SW: 14
 Serial Nr.: 30207090
 Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	MaxPeak (dBμV/m)	RMS (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
15748.200000	---	47.84	54.00	6.16	1000.000	155.0	V	140.0	0.0	24.5
15759.800000	58.87	---	74.00	15.13	1000.000	155.0	H	270.0	0.0	24.4

4.14a_n-mode_BW40_MCS0_CH38_PWR13-standing

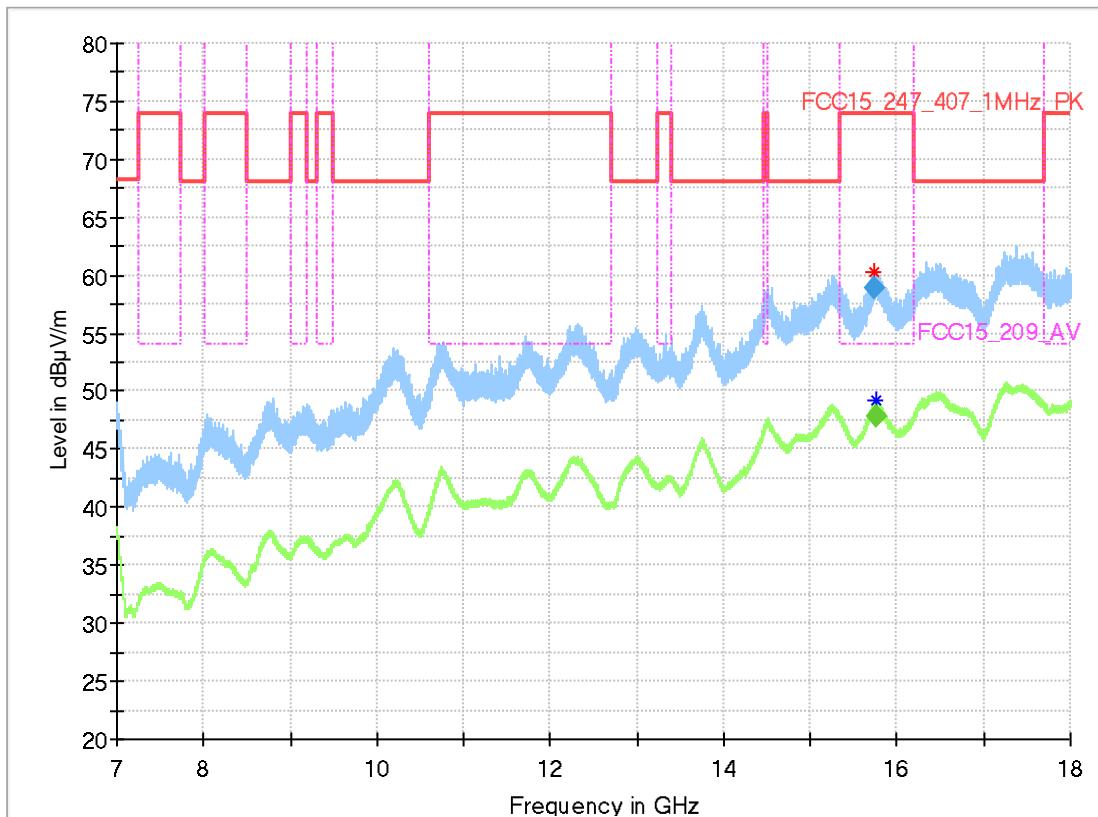
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.407&15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical
 Software Version: #Ver
 Operation mode: n-mode|MCS0|BW40|channel 38(5190)|Power 13|
 Operator Name: SLo
 Comment: DUT is Standing

EUT Information

Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACU11-06 EU
 HW: H2
 SW: 14
 Serial Nr.: 30207090
 Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



Frequency (MHz)	MaxPeak (dB μ V/m)	RMS (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
15737.800000	58.84	---	74.00	15.16	1000.000	155.0	V	321.0	0.0	24.3
15747.800000	---	47.83	54.00	6.17	1000.000	155.0	V	217.0	0.0	24.5

4.14b_n-mode_BW_40_MCS0_CH38_PWR13-laying

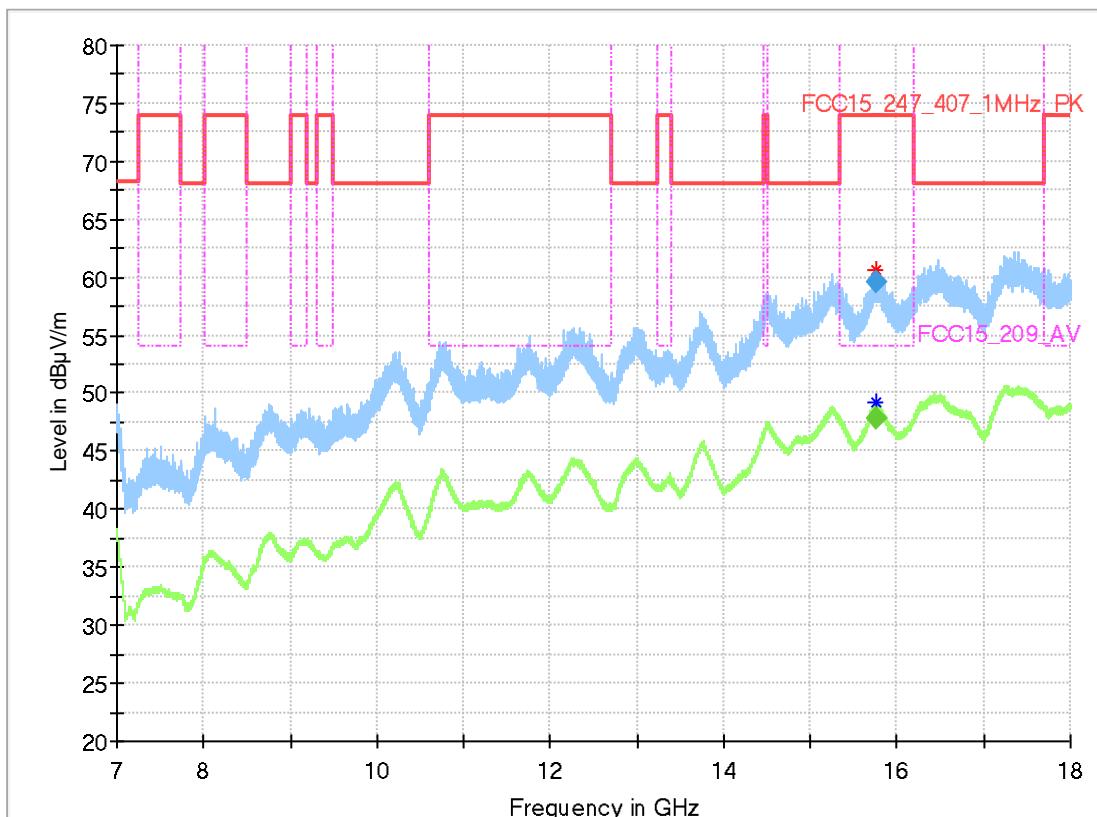
Common Information

Test Description: Radiated field strength emission in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.407&15.209 Intentional Radiator
 Antenna polarisation: horizontal/vertical
 Software Version: #Ver
 Operation mode: n-mode|MCS0|BW40|channel 38(5190)|Power 13|
 Operator Name: SLo
 Comment: DUT is Laying

EUT Information

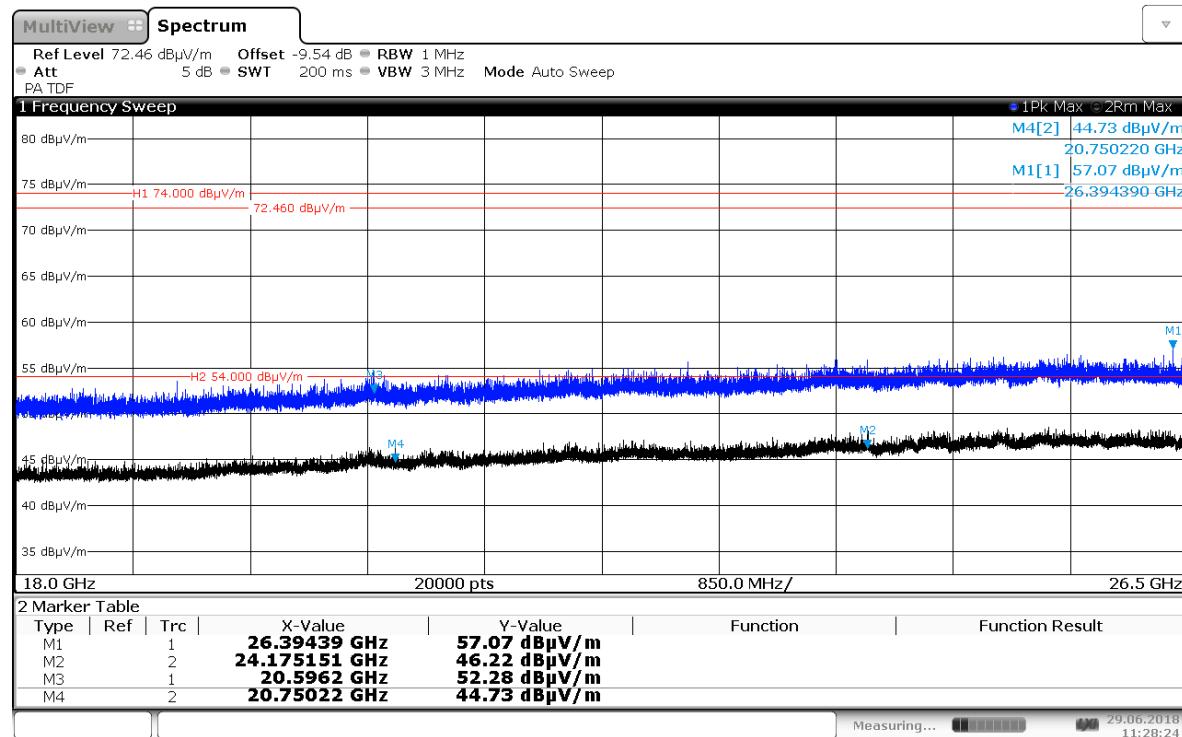
Manufacturer: ACTIA Nordic AS Sollentuna
 Product: Telematic device
 EUT Model: ACU11-06 EU
 HW: H2
 SW: 14
 Serial Nr.: 30207090
 Connected Connected Interfaces: Mic + speaker + Antenna with ground plan + main wiring + antenna cable
 Power Supply: 13,8VDC

Full Spectrum



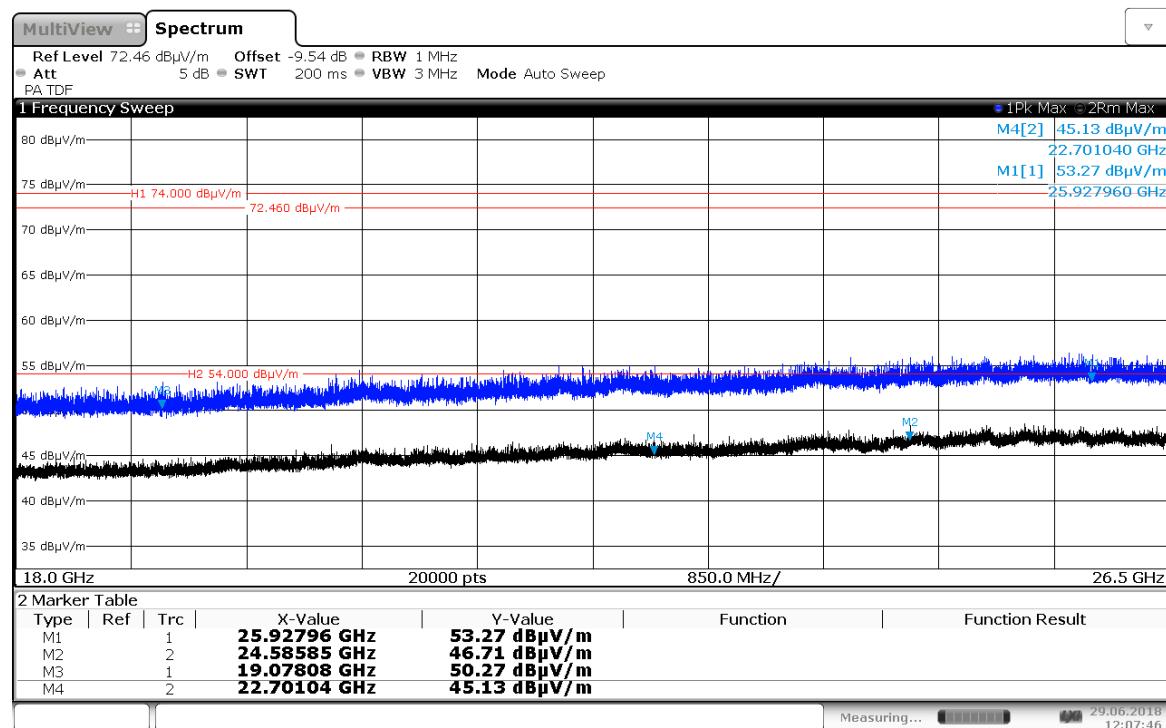
Frequency (MHz)	MaxPeak (dBμV/m)	RMS (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
15755.800000	59.58	---	74.00	14.42	1000.000	155.0	V	166.0	0.0	24.5
15763.000000	---	47.79	54.00	6.21	1000.000	155.0	V	54.0	0.0	24.4

1.7. Radiated electric field measurement from 18 GHz – 26,5 GHz



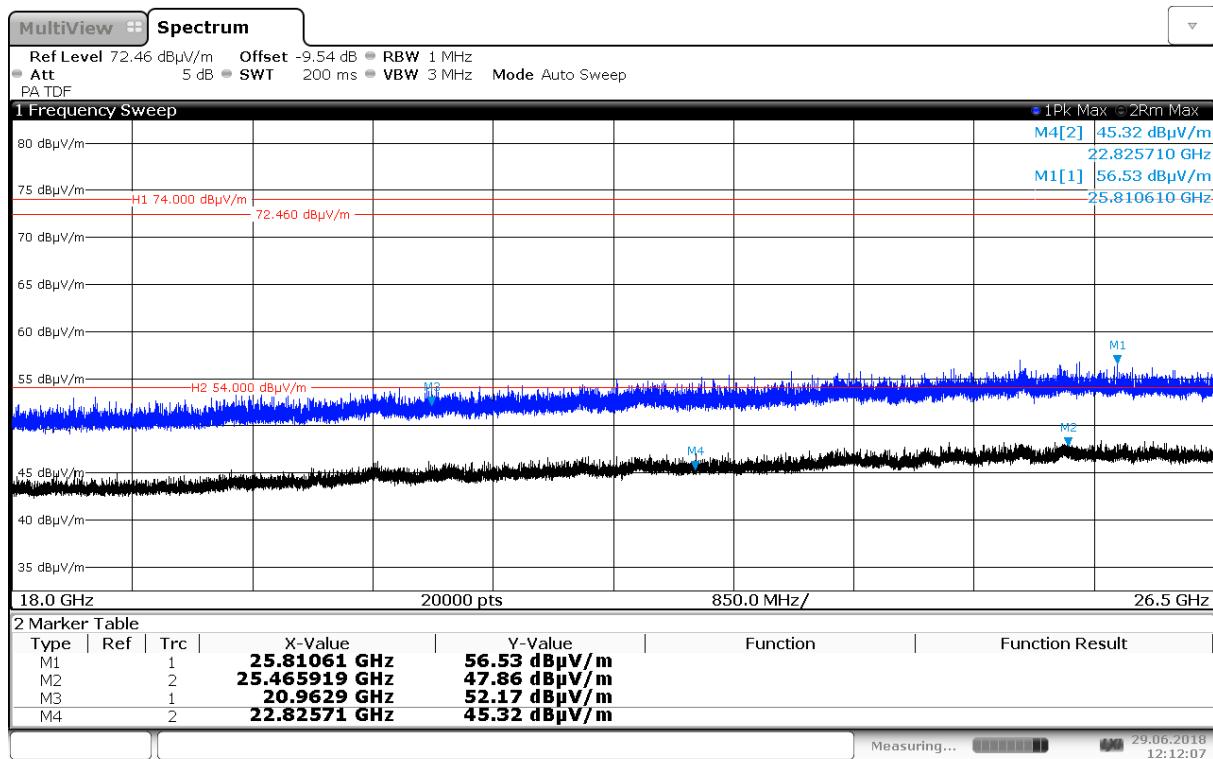
11:28:24 29.06.2018

4.21_a-mode_6-Mbit_CH36_PWR13-standing

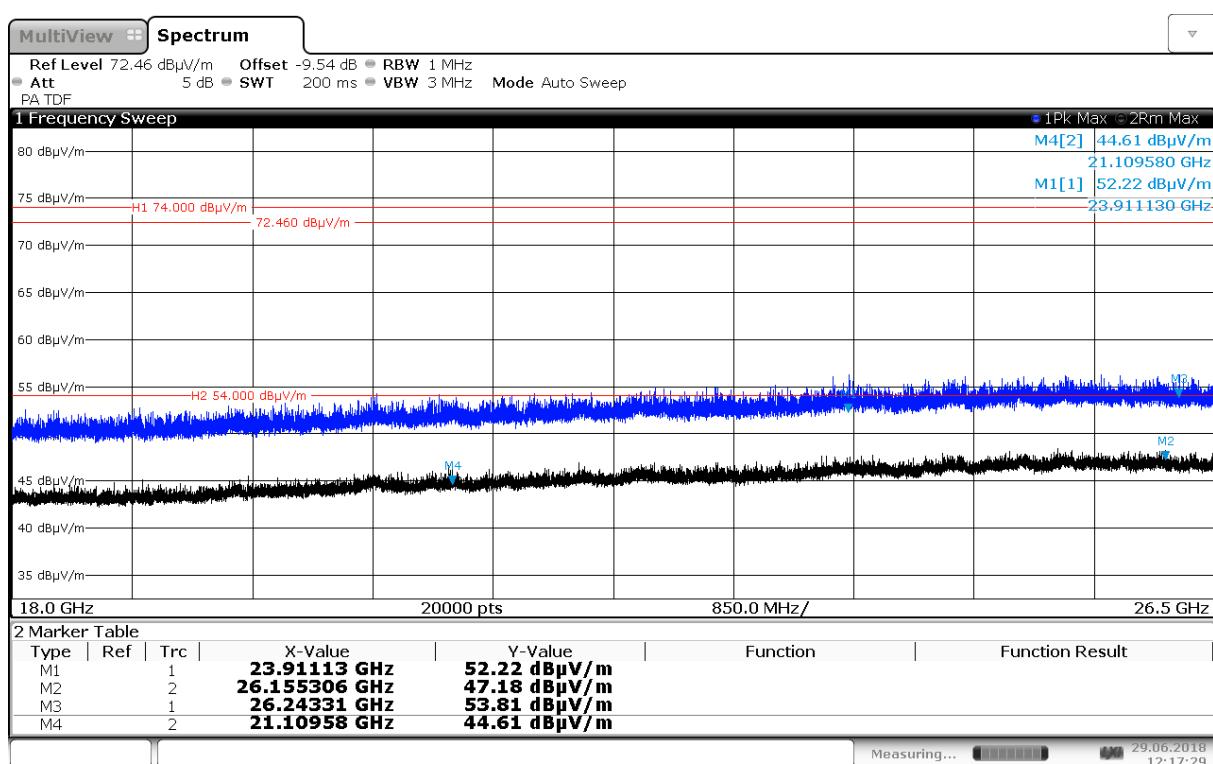


12:07:47 29.06.2018

4.22_n-mode_MCS0_CH100_PWR13_Standing



4.23_ac-mode_MCS0_CH157_PWR8-standing

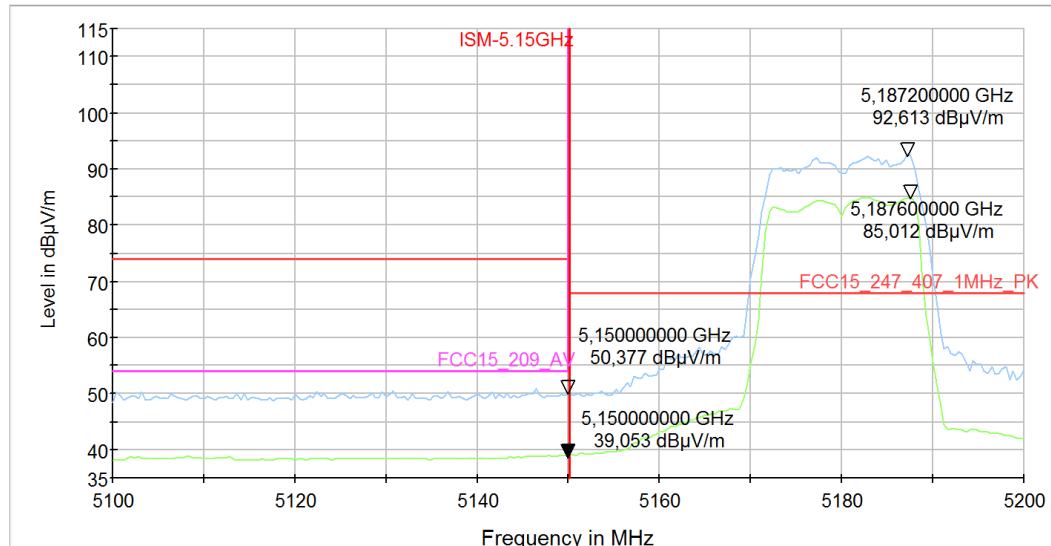


12:17:29 29.06.2018

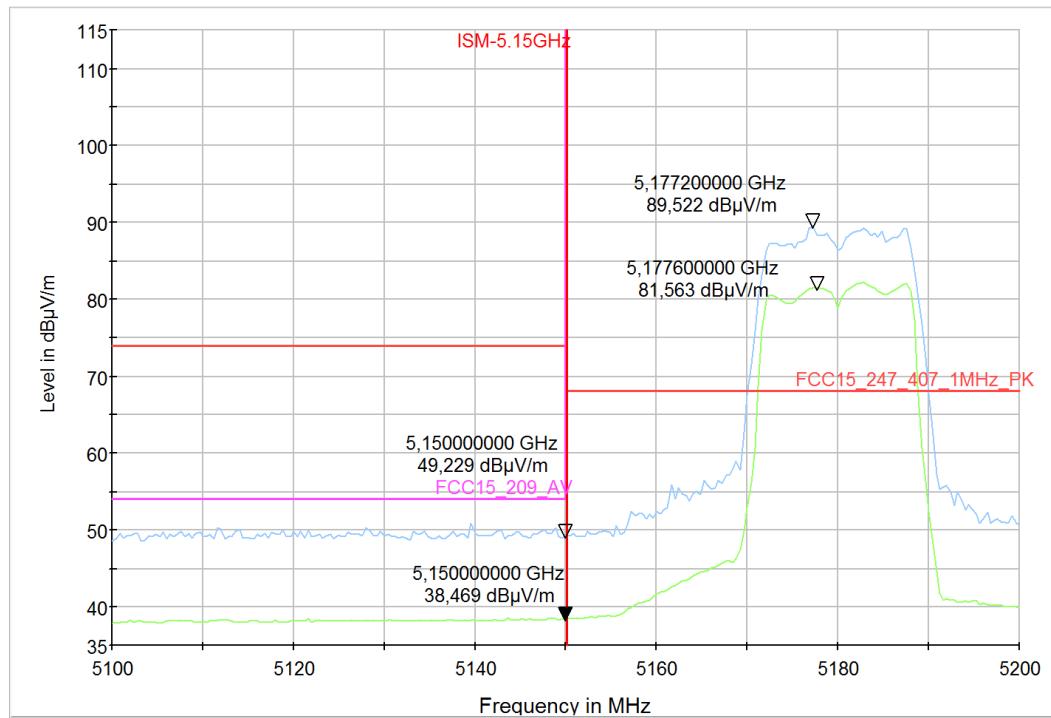
4.24_n-mode_BW40_MCS0_CH38_PWR13-standing

1.8. Band edge compliance

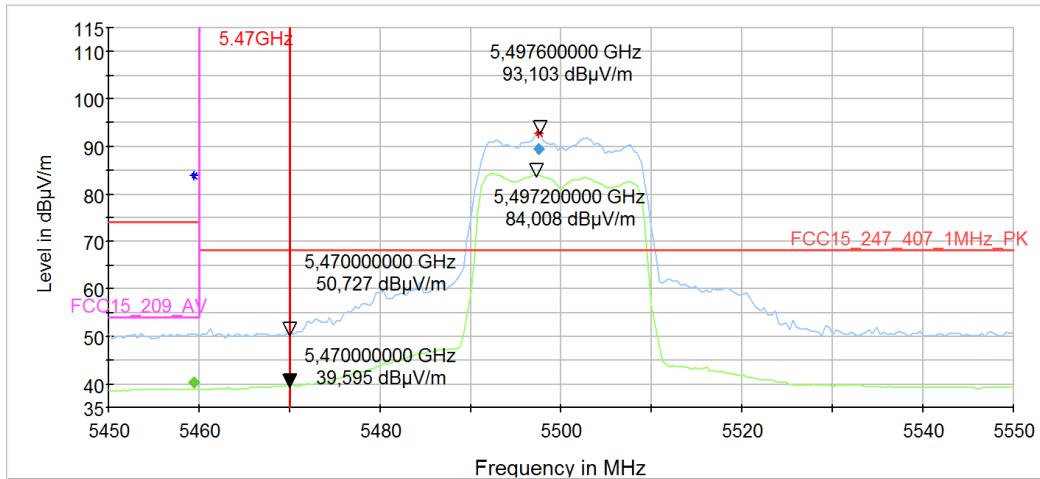
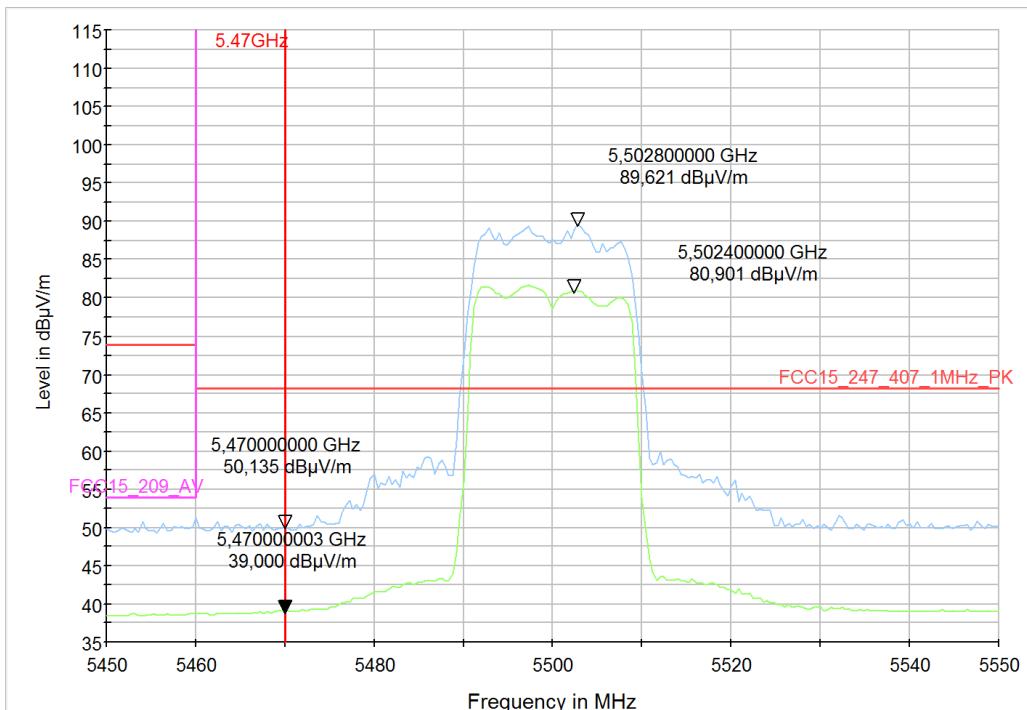
1.8.1. Low Bandedge 20MHz

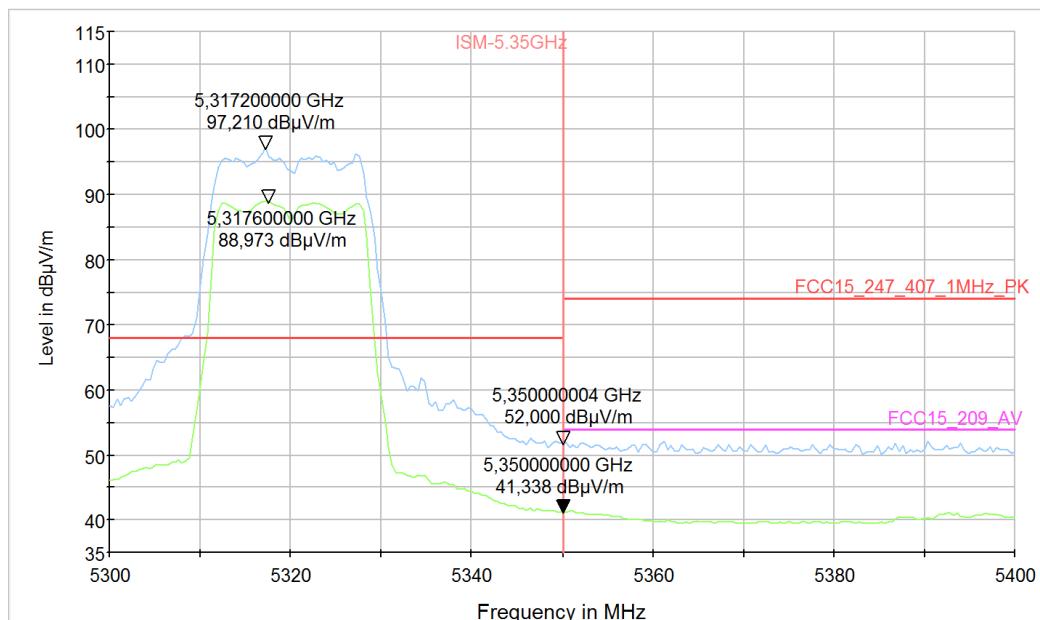
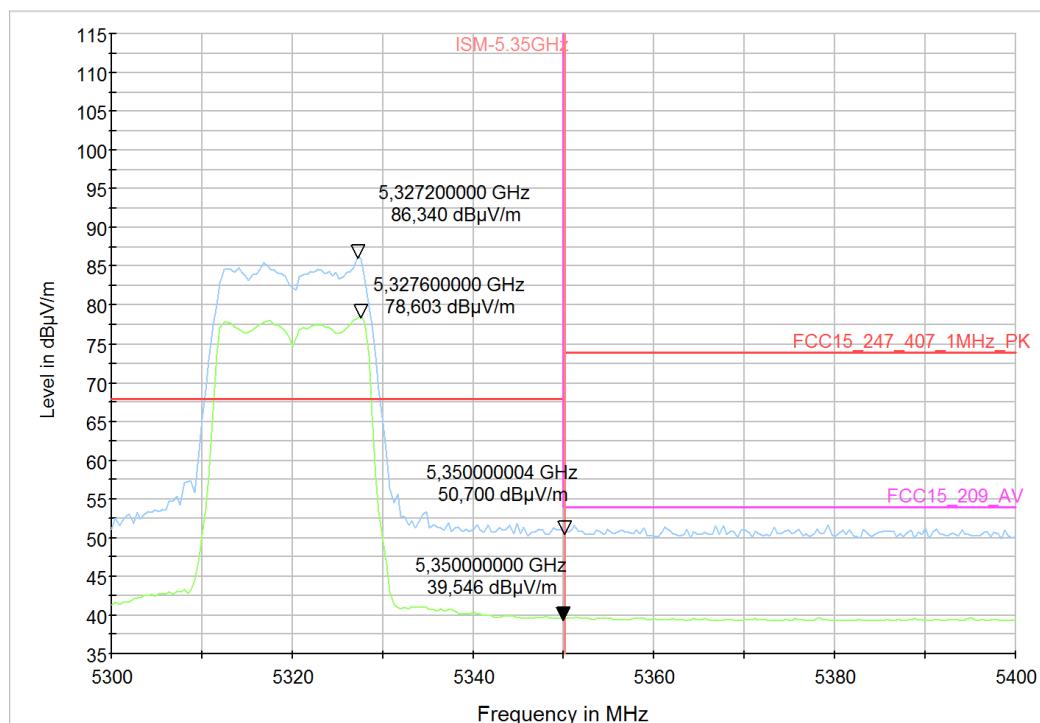


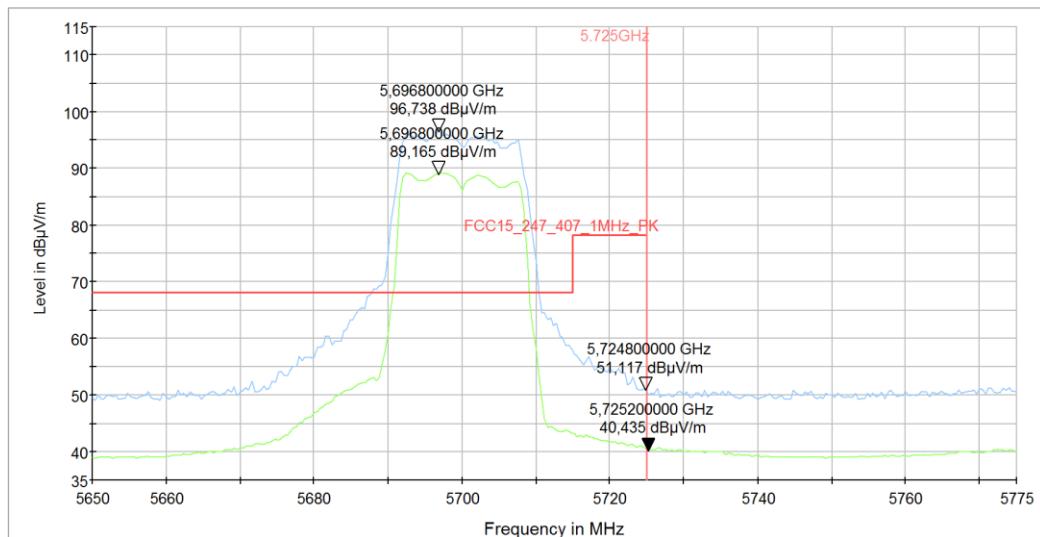
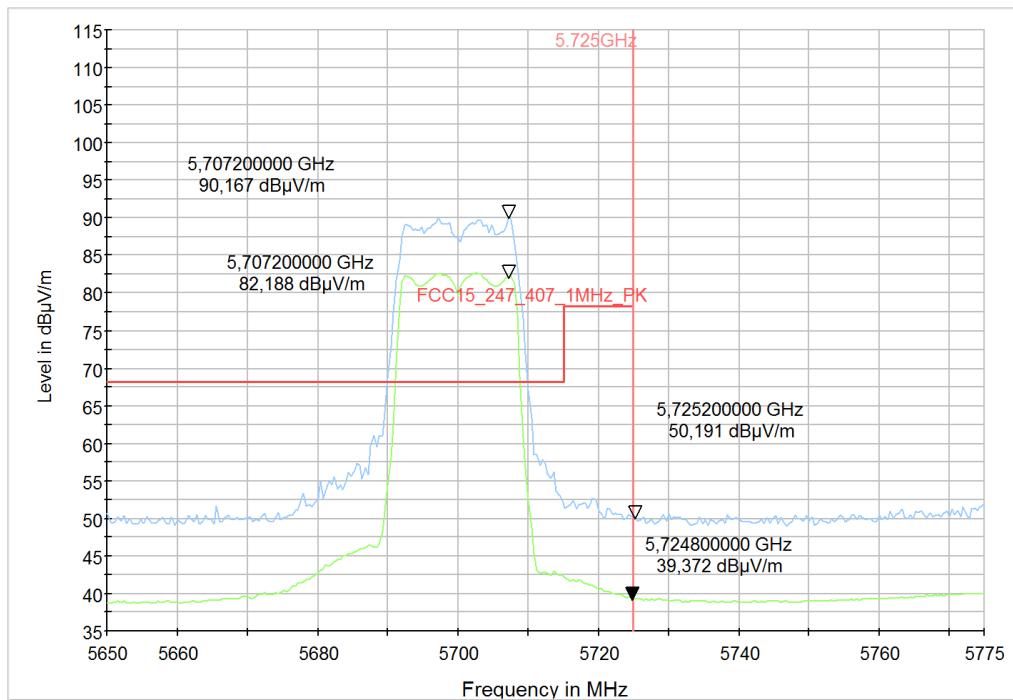
9.01a_BE_Low_ch36_Bw20MHz_6Mbit_13dBm_Standing



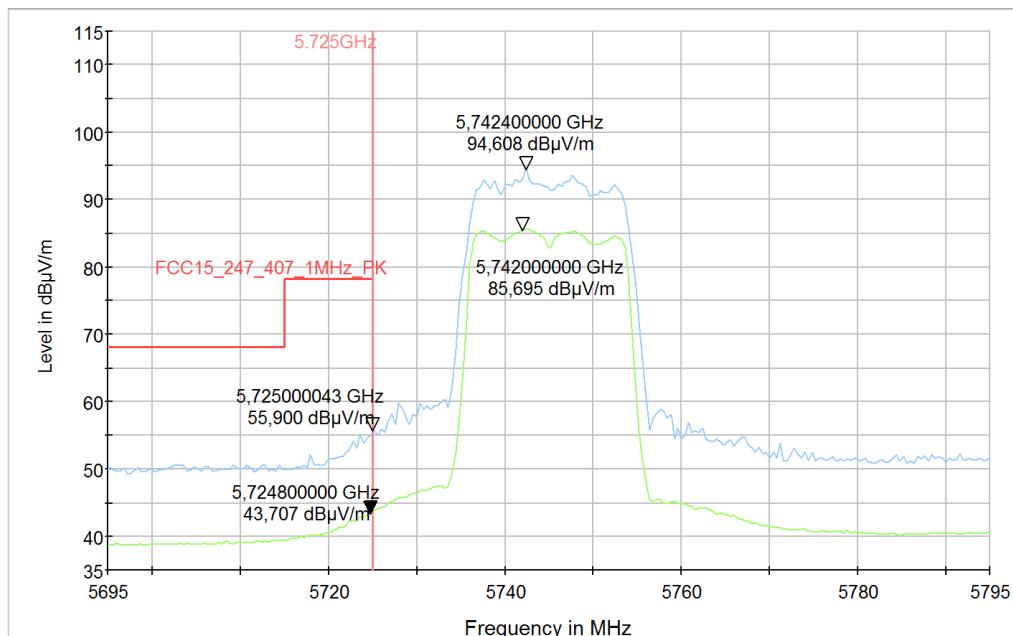
9.01b_BE_Low_ch36_Bw20MHz_6Mbit_13dBm_Laying

**9.07a_BE_Low_ch100_Bw20MHz_MCS0_13dBm_Standing****9.07b_BE_Low_ch100_Bw20MHz_MCS0_13dBm_Laying**

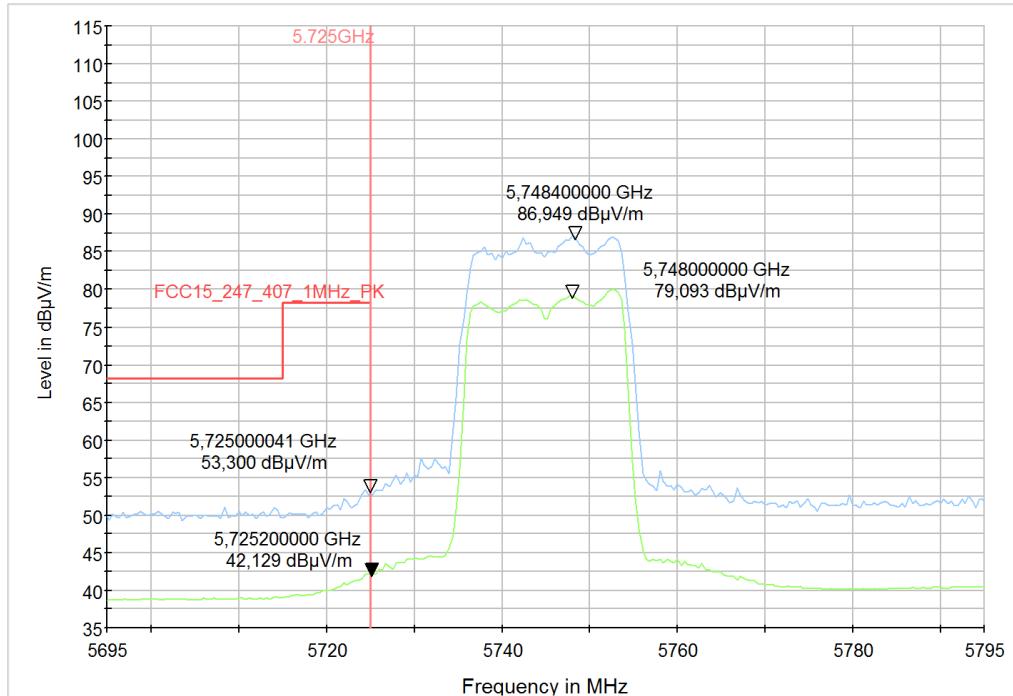
1.8.2. High Bandedge 20MHz**9.05a_BE_High_ch64_Bw20MHz_6Mbit_13dBm_Standing****9.05b_BE_High_ch64_Bw20MHz_6Mbit_13dBm_Laying**

**9.08a_BE_High_ch140_Bw20MHz_6Mbit_13dBm_Standing****9.08b_BE_High_ch140_Bw20MHz_6Mbit_13dBm_Laying**

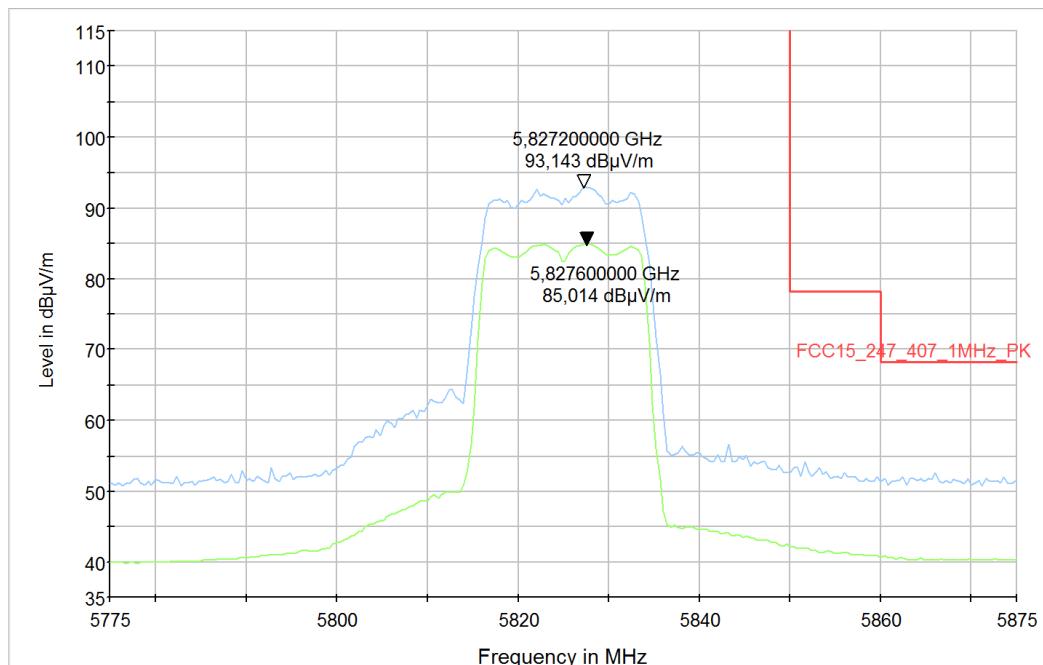
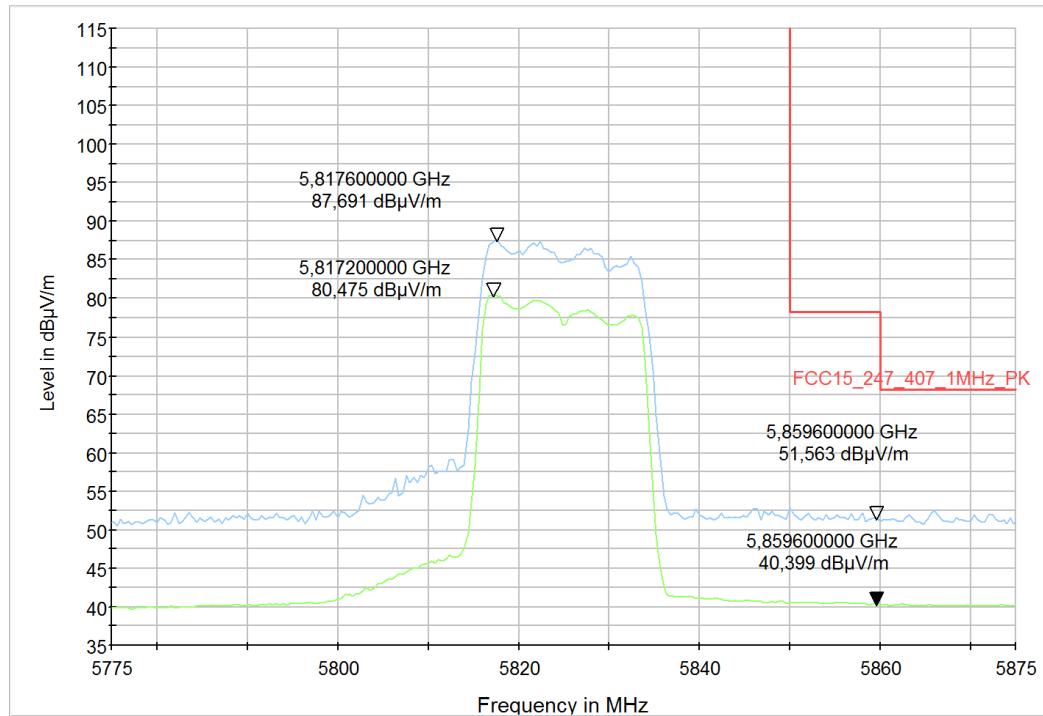
1.8.3. U-NII-3 Bandedge 20MHz



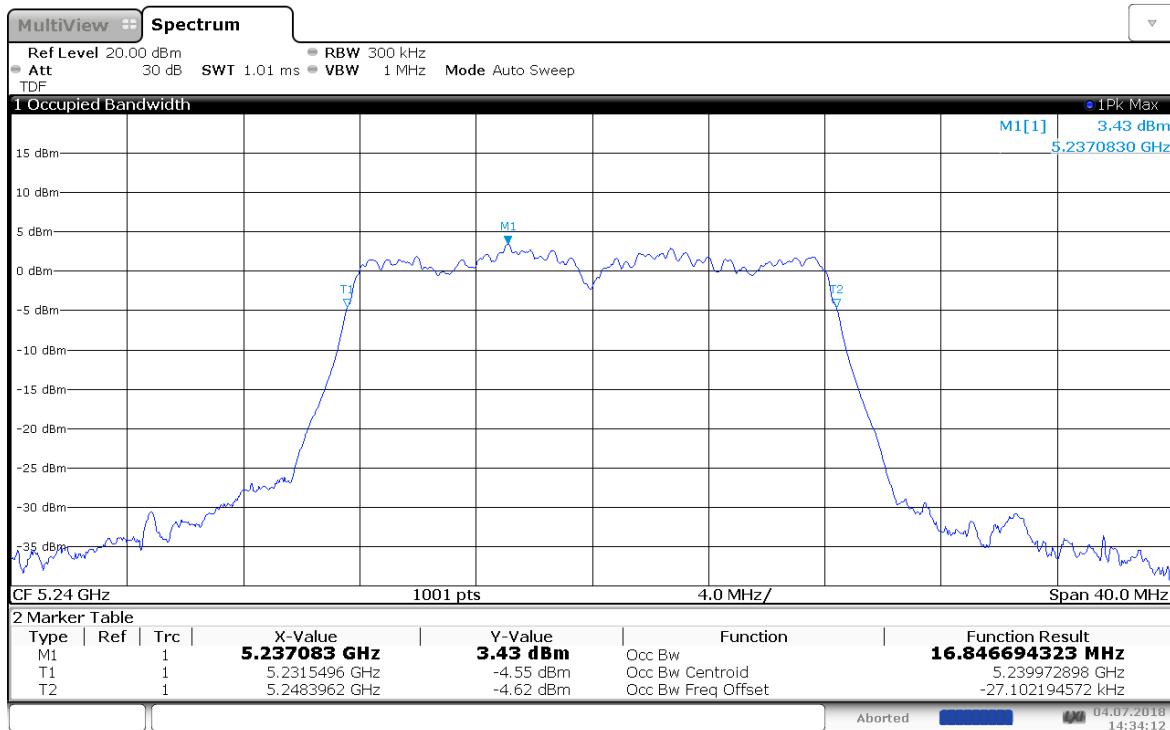
9.09a_BE_Low_ch149_Bw20MHz_MCS0_13dBm_Standing



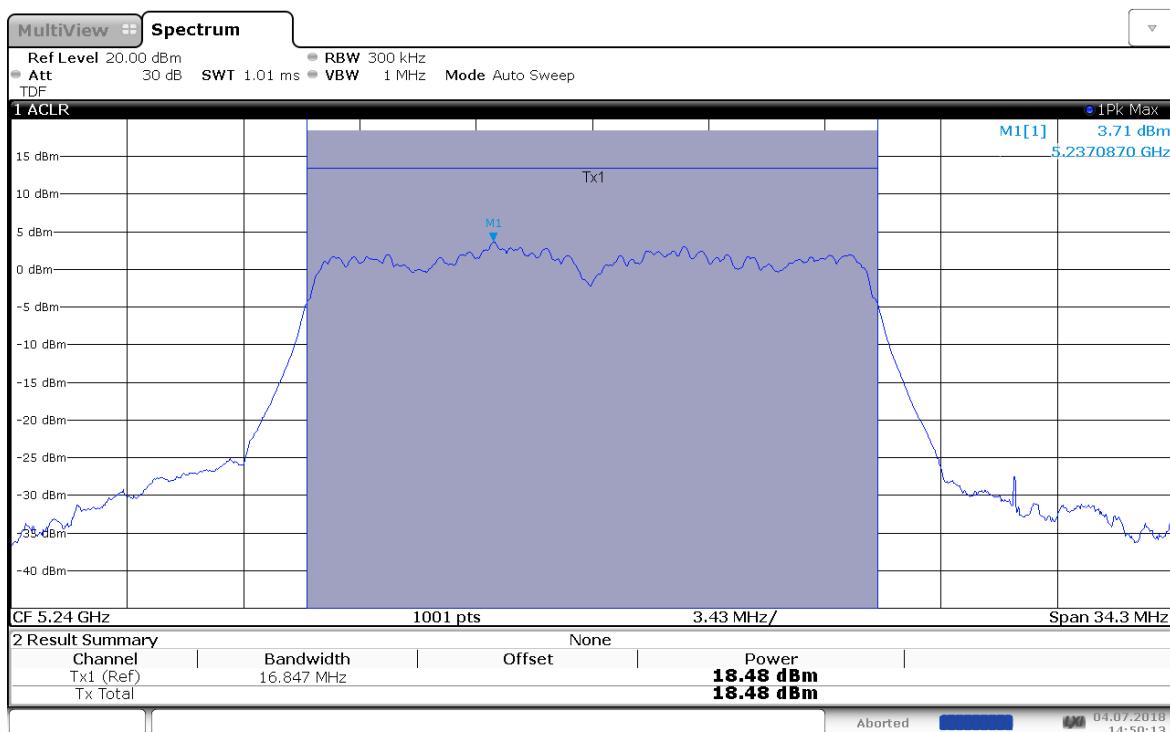
9.09b_BE_Low_ch149_Bw20MHz_MCS0_13dBm_Laying

**9.11a_BE_High_ch165_Bw20MHz_MSC0_13dBm_Standing****9.11b_BE_High_ch165_Bw20MHz_MSC0_13dBm_Laying**

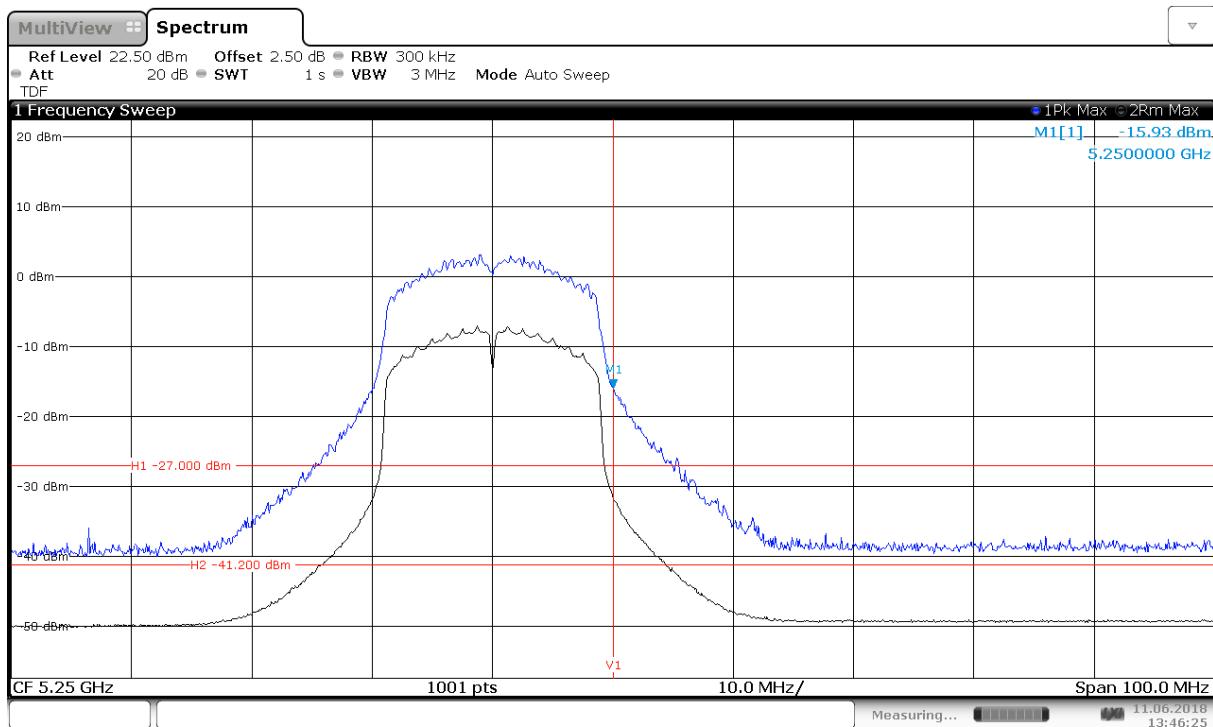
1.8.4. HT20 Canada RSS-247 requirement



35.01_OBW_BW_20_ch48_6MBit_PWR_13dBm

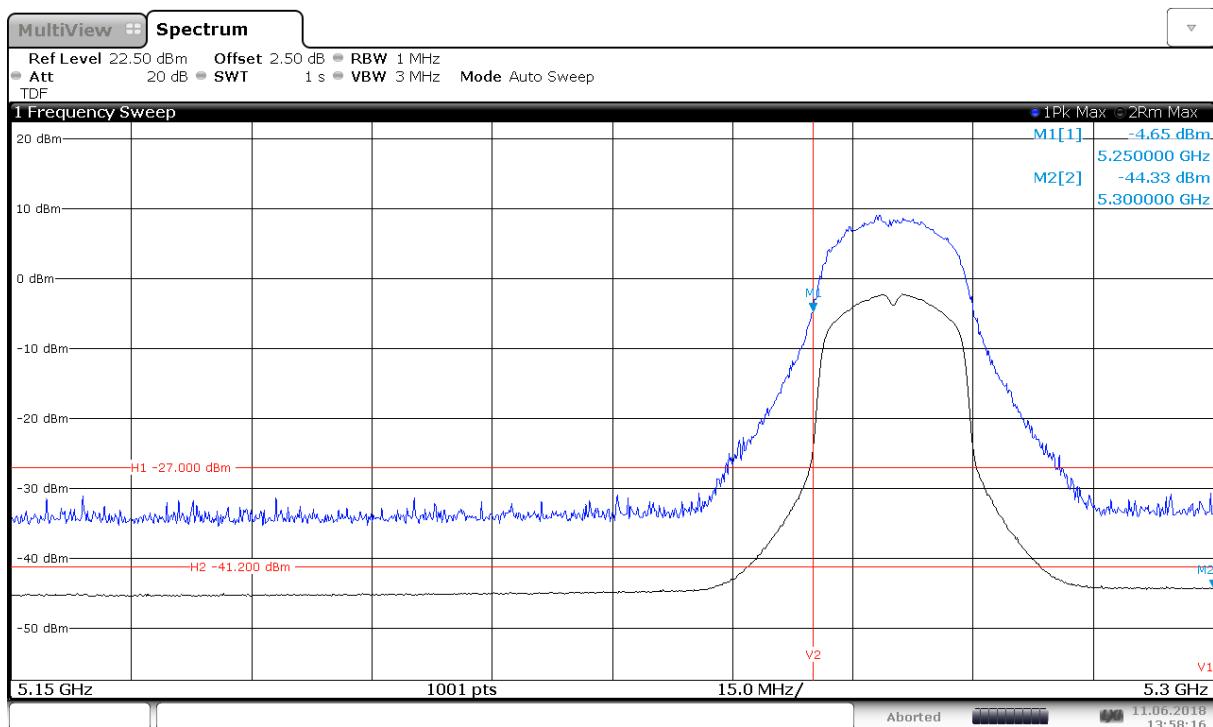


30.01_CH_PWR_Ch48_BW_20_6Mbit_PWR_13dBm



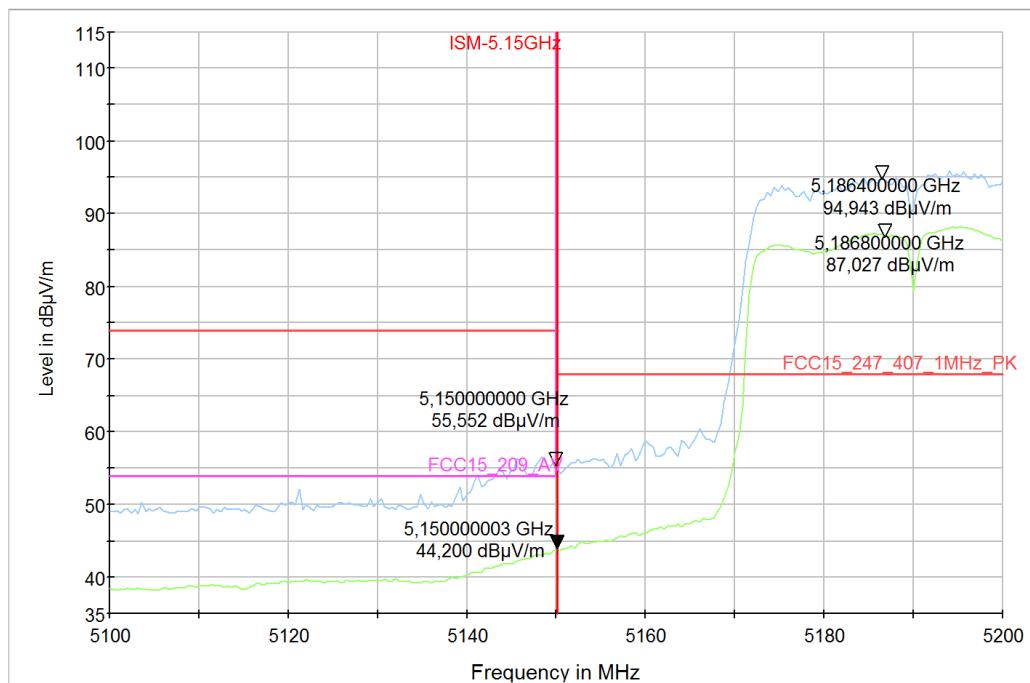
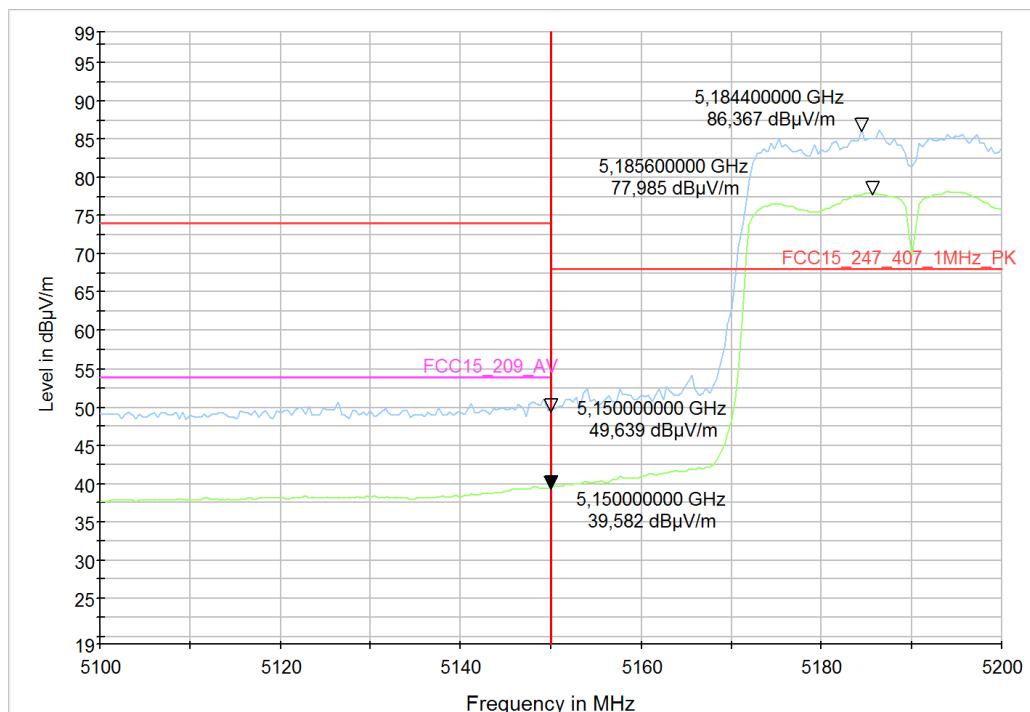
13:46:26 11.06.2018

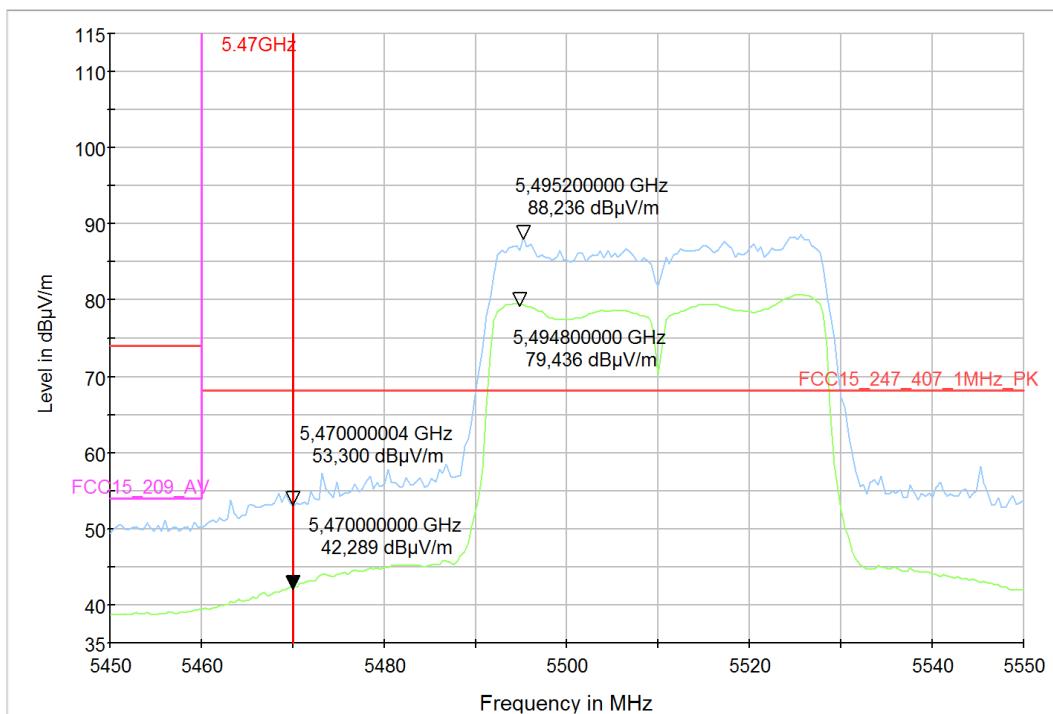
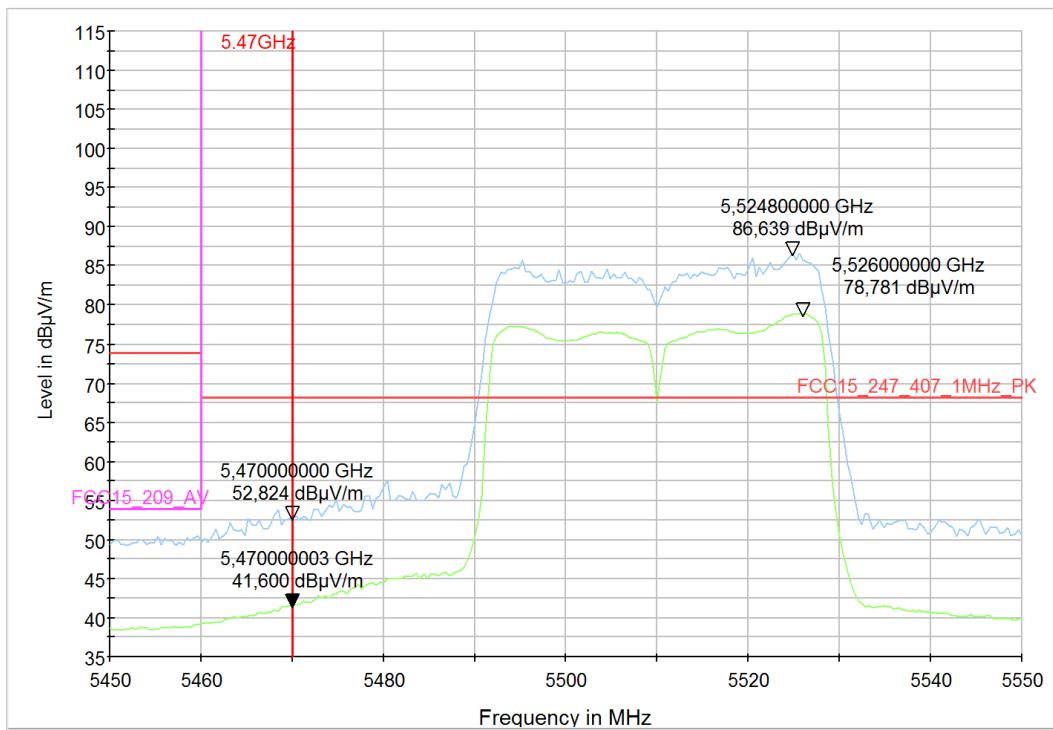
37.07_BE_high_Kanada_Ch48_6Mbit_PWR_13_dBm



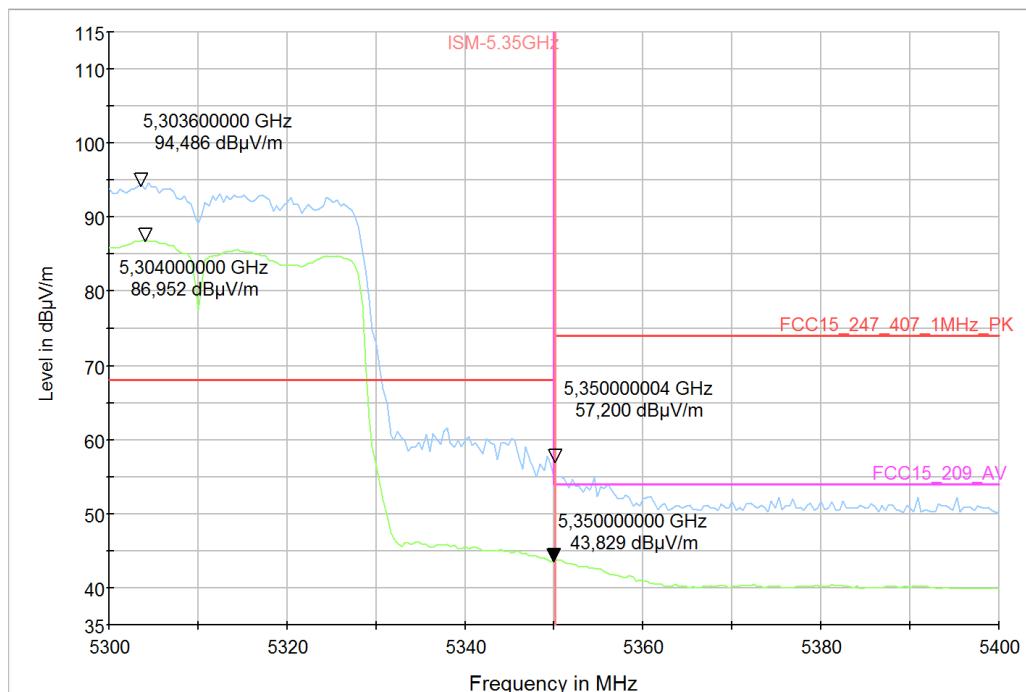
13:58:17 11.06.2018

37.08_BE_low_Ch52_6Mbit_PWR_13_dBm

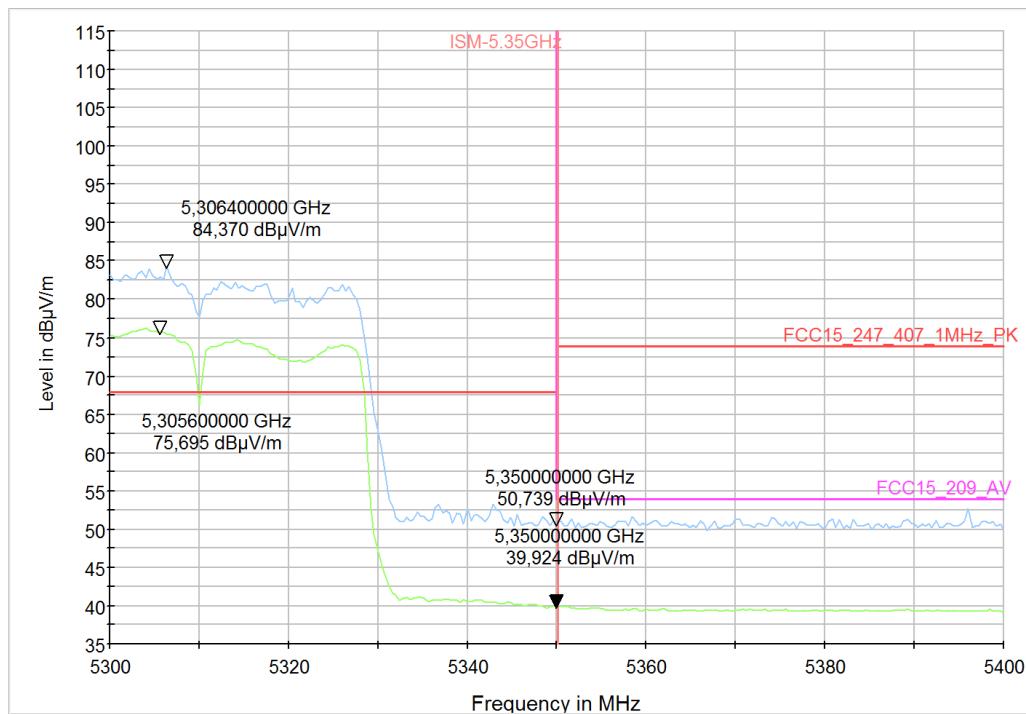
1.8.5. Low Bandedge 40MHz**9.13a_BE_Low_ch38_Bw40MHz_MCS0_13dBm_Standing****9.13b_BE_Low_ch38_Bw40MHz_MCS0_13dBm_Laying**

**9.19a_BE_Low_ch102_Bw40MHz_MCS0_13dBm_Standing****9.19b_BE_Low_ch102_Bw40MHz_6Mbit_13dBm_Laying**

1.8.6. High Bandedge 40MHz

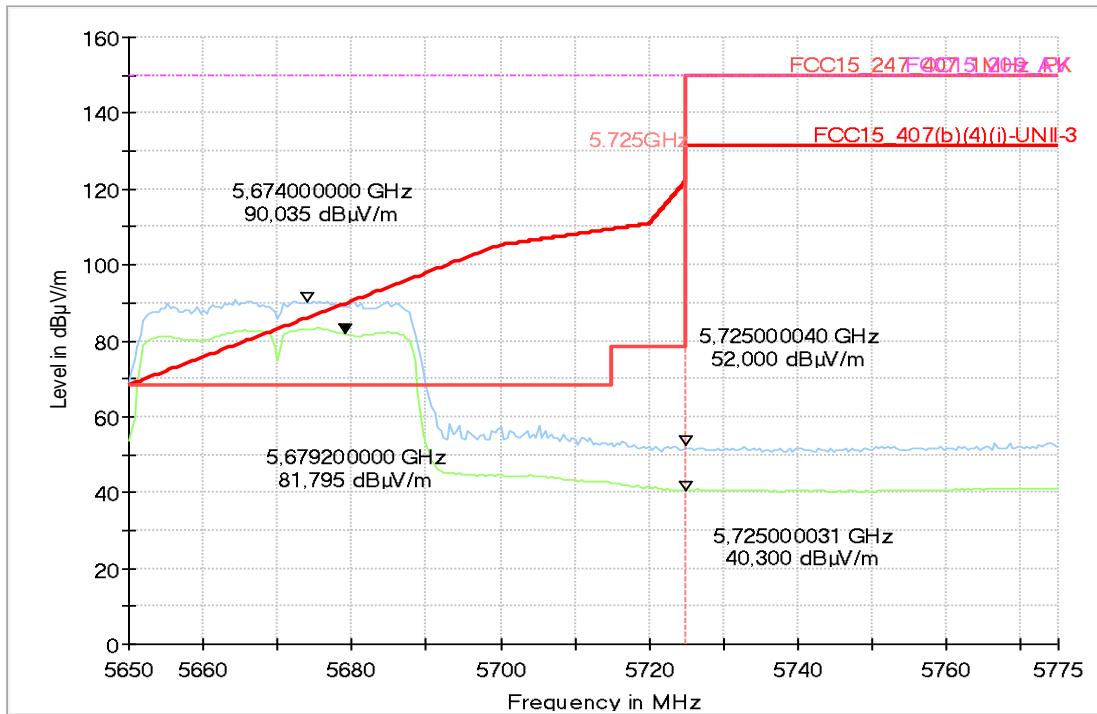


9.17a_BE_High_ch62_Bw40MHz_MCS0_13dBm_Standing



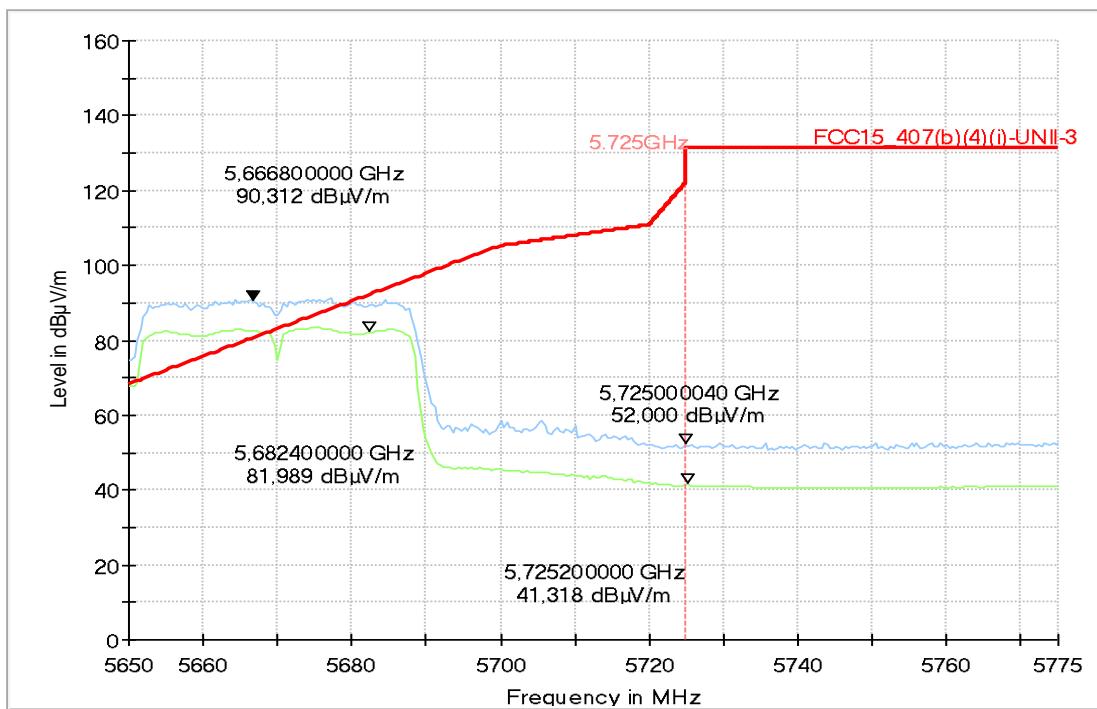
9.17b_BE_High_ch62_Bw40MHz_6Mbit_13dBm_Laying

Full Spectrum



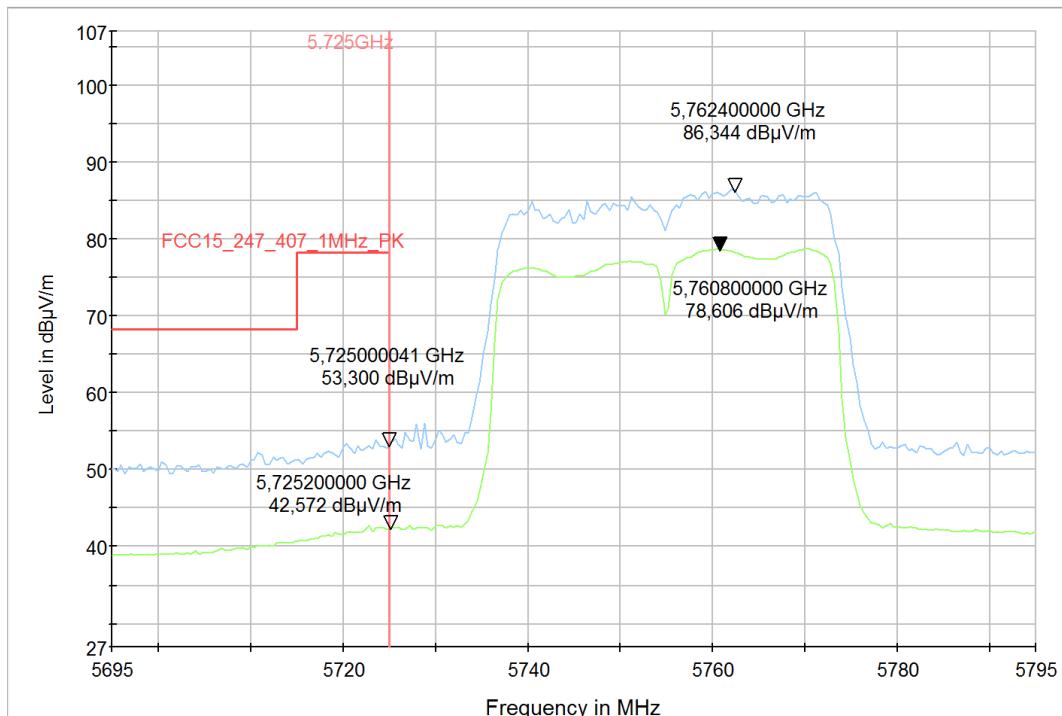
9.20a_BE_High_ch134_Bw40MHz_MCS0_13dBm_Laying

Full Spectrum

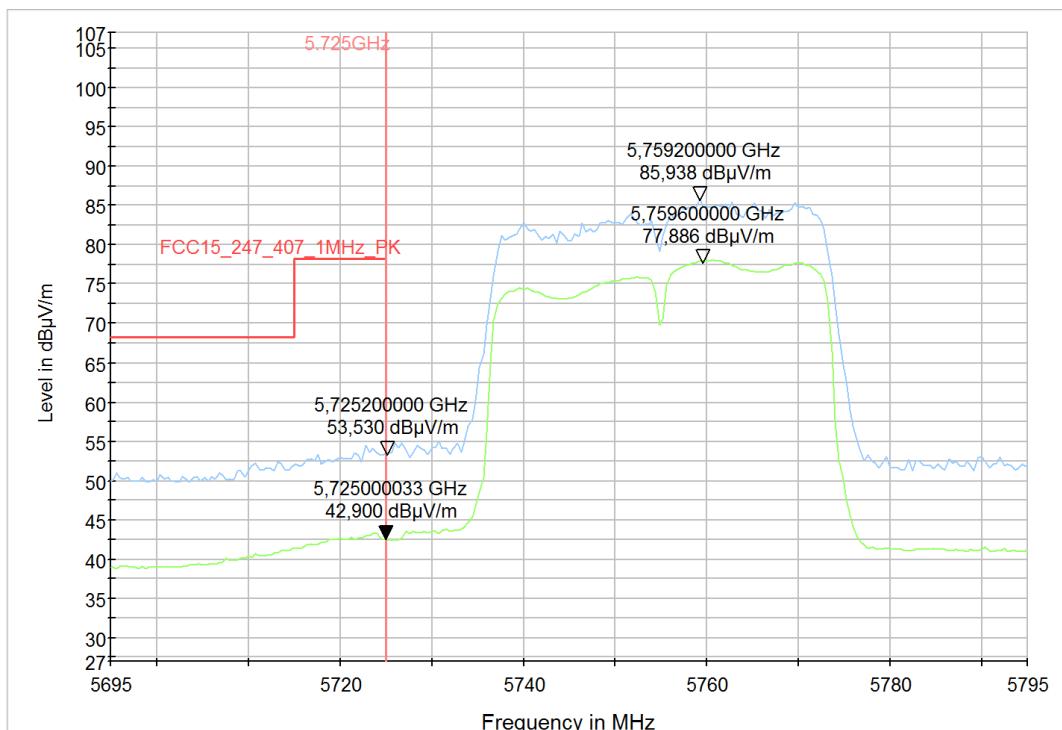


9.20b_BE_High_ch134_Bw40MHz_MCS0_13dBm_Standing

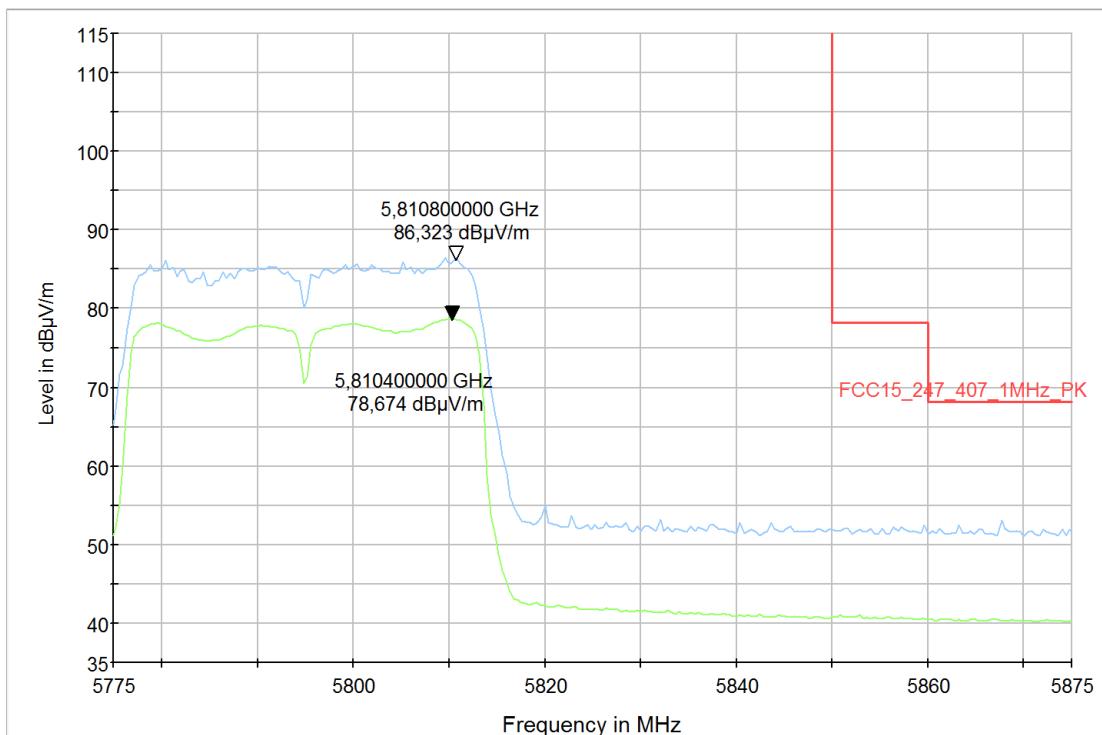
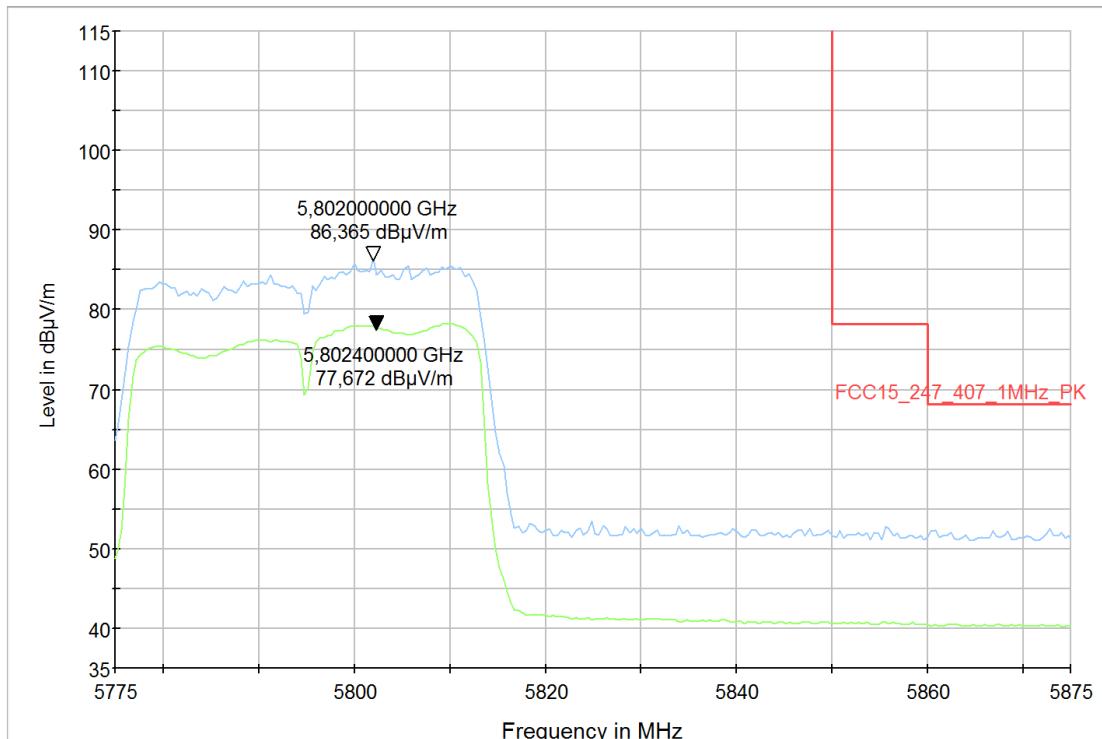
1.8.7. U-NII-3 Bandedge 40MHz



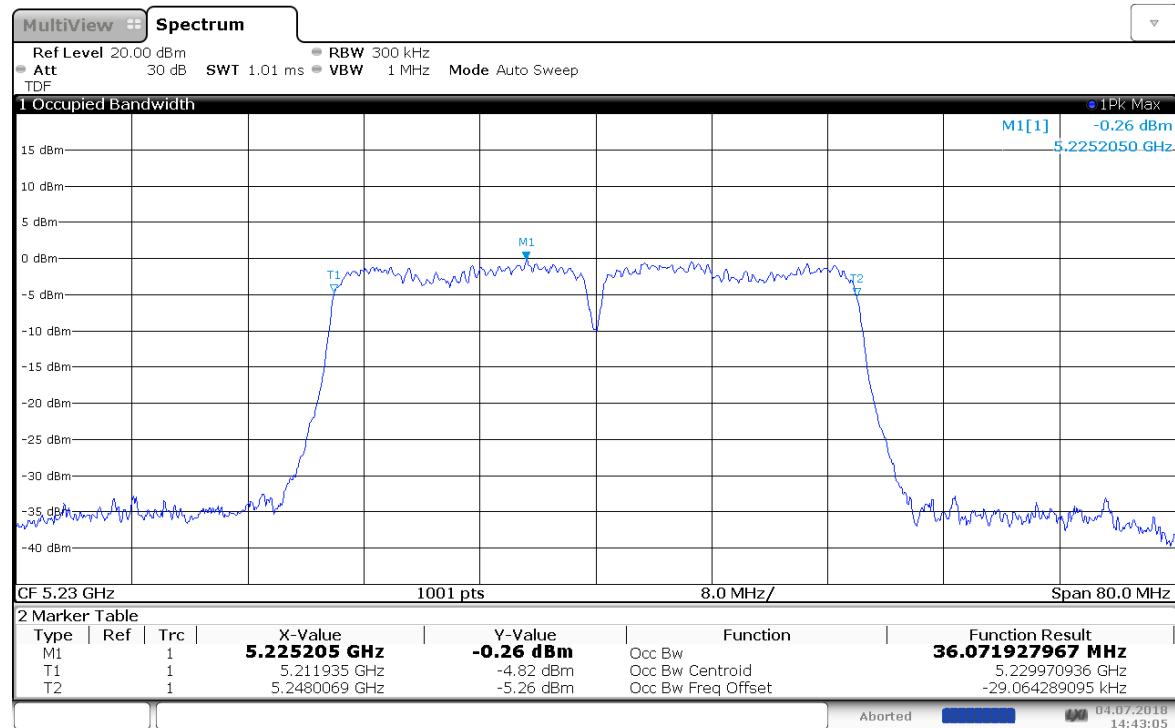
9.22a_BE_Low_ch151_Bw40MHz_MCS0_13dBm_Standing



9.22b_BE_Low_ch151_Bw40MHz_6Mbit_13dBm_Laying

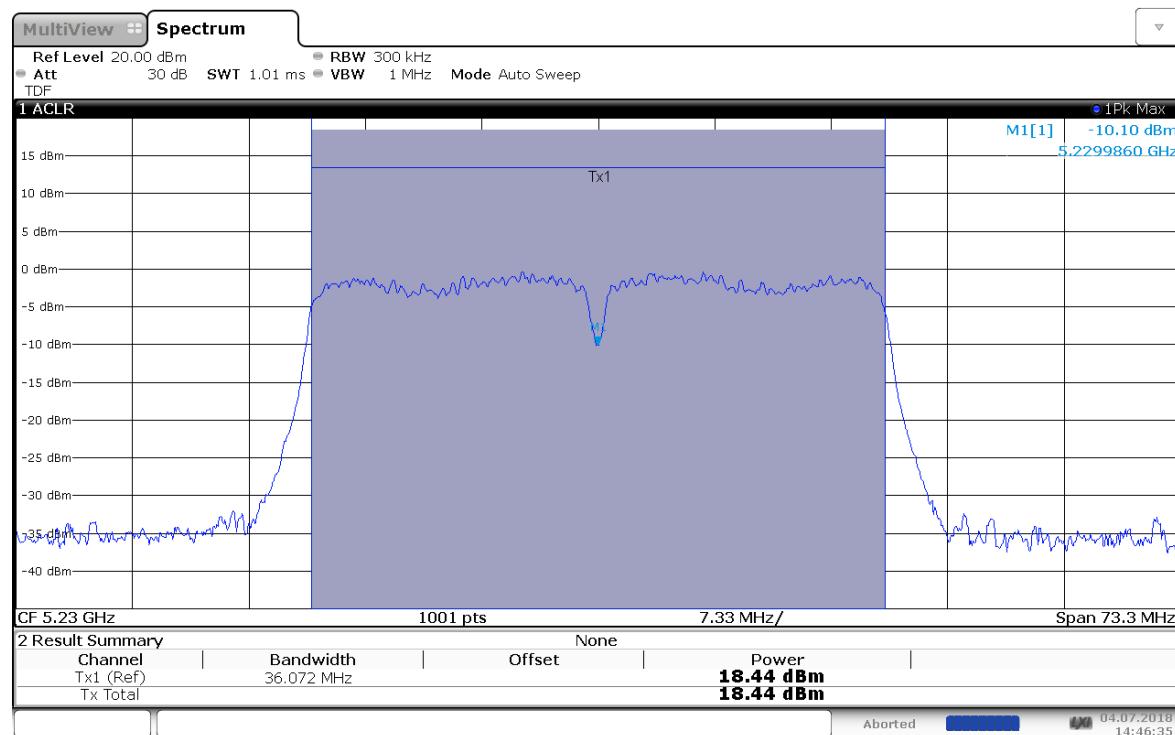
**9.24a_BE_High_ch159_Bw40MHz_MCS0_13dBm_Standing****9.24b_BE_High_ch159_Bw40MHz_MCS0_13dBm_Laying**

1.8.8. HT40 Canada RSS-247 requirement



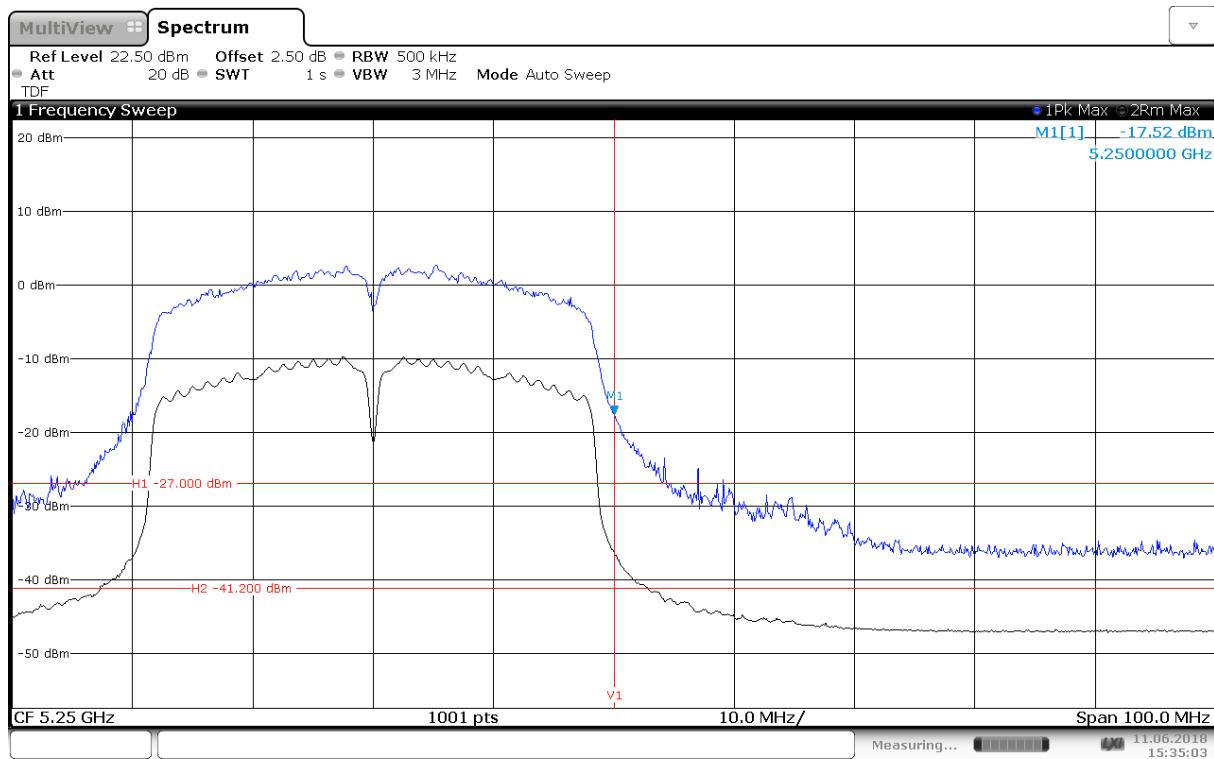
14:43:05 04.07.2018

35.03_OBW_BW40_Ch46_MCS0_PWR_13dBm

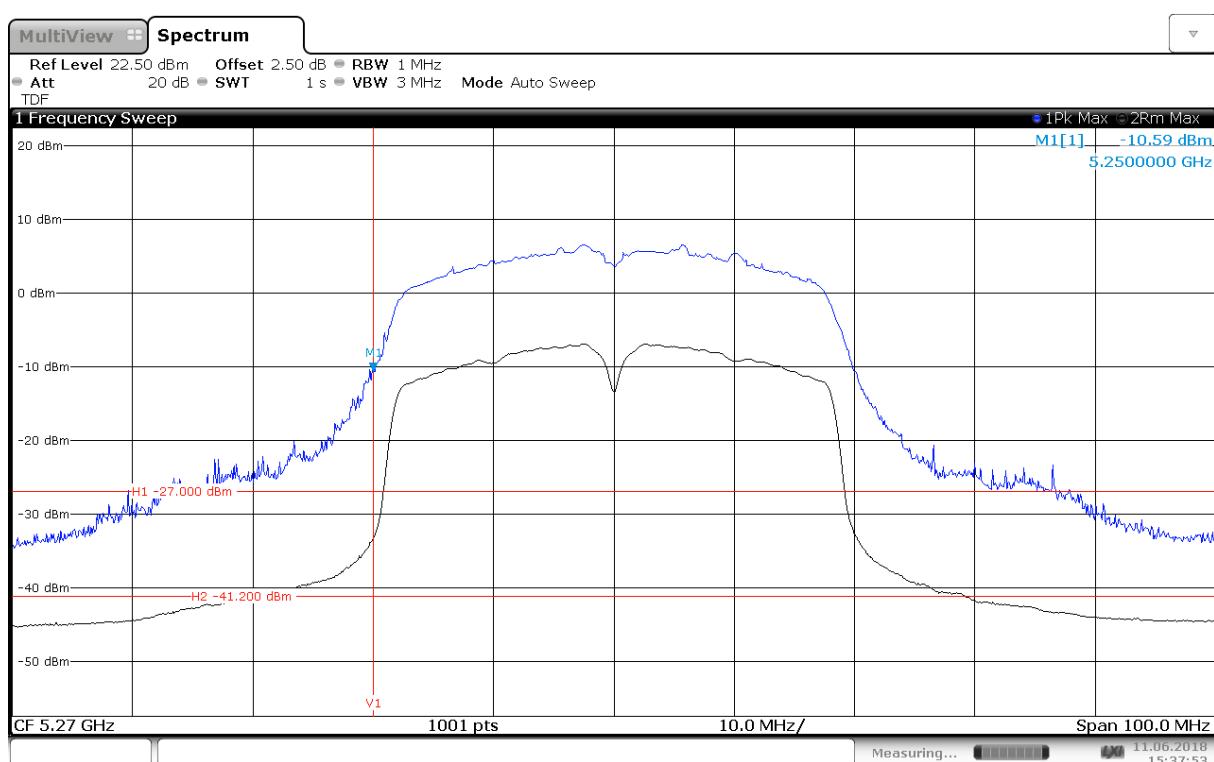


14:46:35 04.07.2018

30.03_CH_PWR_Ch46_BW_40_MCS0_PWR_13dBm



37.17_BE_high_Ch46_6MBit_PWR_13_dBm



37.18_BE_low_Ch54_6MBit_PWR_13_dBm