

Annex 1: Measurement diagrams to TEST REPORT No.: 16-1-0219301T13a

According to:
FCC Regulations
Part 15.247

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

for

Actia Nordic

TEM4G
FCC-ID: 2AGKKTEM4G
ISED ID: 20839-TEM4G
PMN: TEM4G
HVIN: TEM4G
FVIN: 13







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-20013, C-20009, T-20006, G-20013
 AUTHORIZED RF LABORATORY	 Lab Code: 20011130-00	 MRA US-EU 0003
accredited according to DIN EN ISO/IEC 17025		
<p align="center"> 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 </p>		
Laboratory Accreditation and Listings		



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1. Radiated Field Strength Measurements

1.1. Radiated Field Strength Emissions – 9 kHz to 30 MHz

Diagram No. 2.01_TX_bMode_1Mbit_PWR17_standing

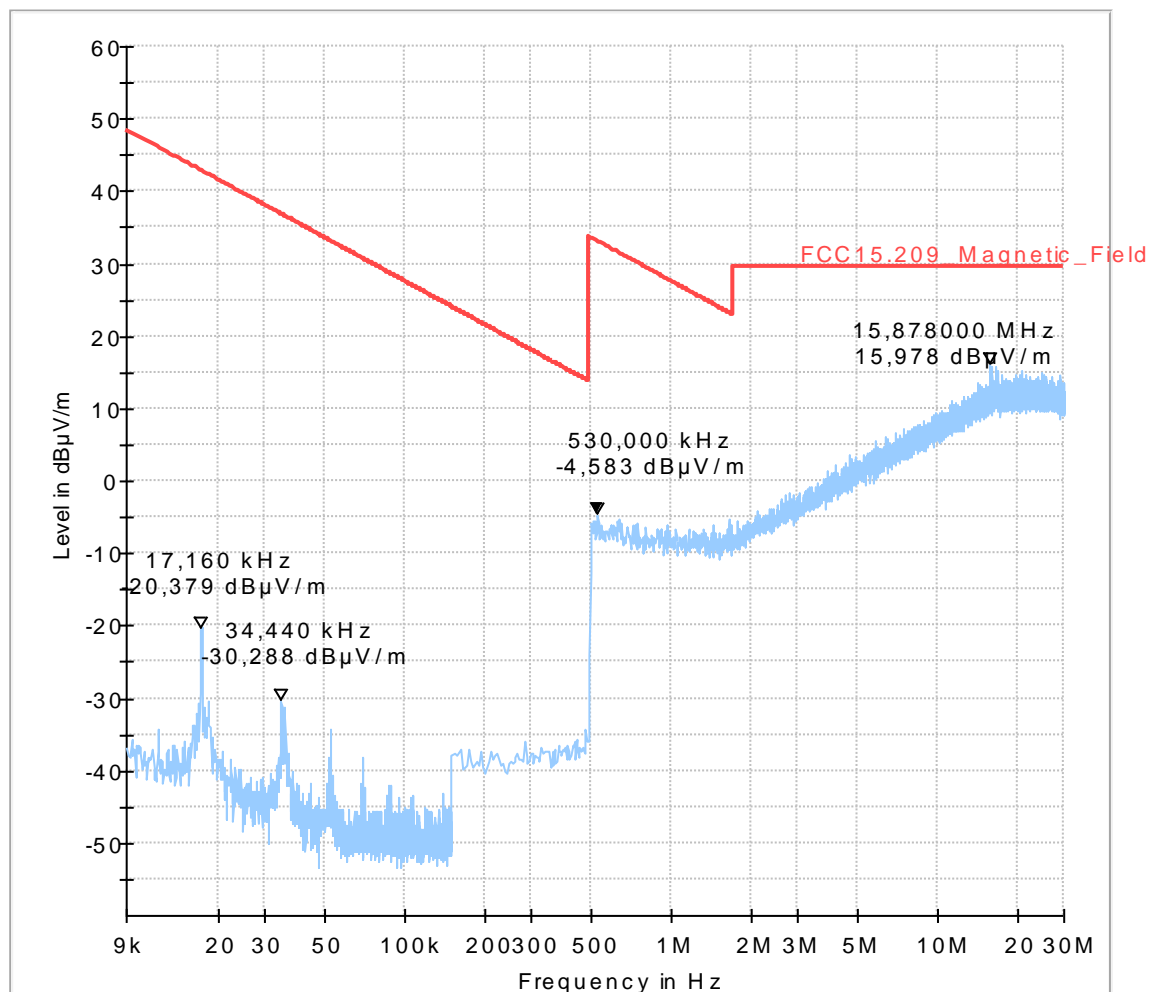
Date: 25.05.2017	Page 1 of 5
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
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
Operator:	MBe
Operating conditions:	TX-on
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



2.02_TX_gMode_12Mbit_PWR15_standing

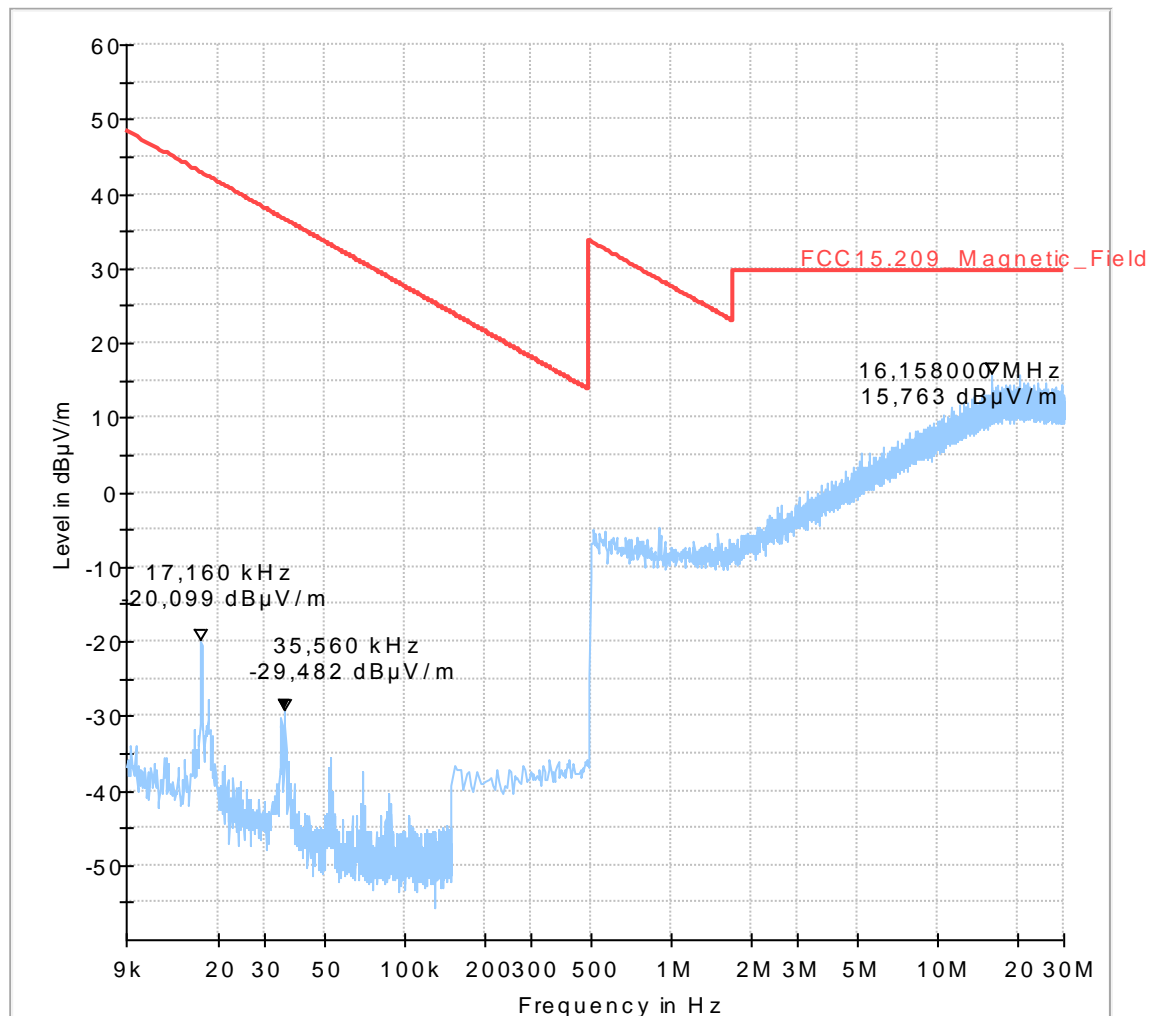
Common Information

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
Operator:	RI
Operating conditions:	TX-on
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



2.03_TX_nMode_MCS2_PWR15_standing

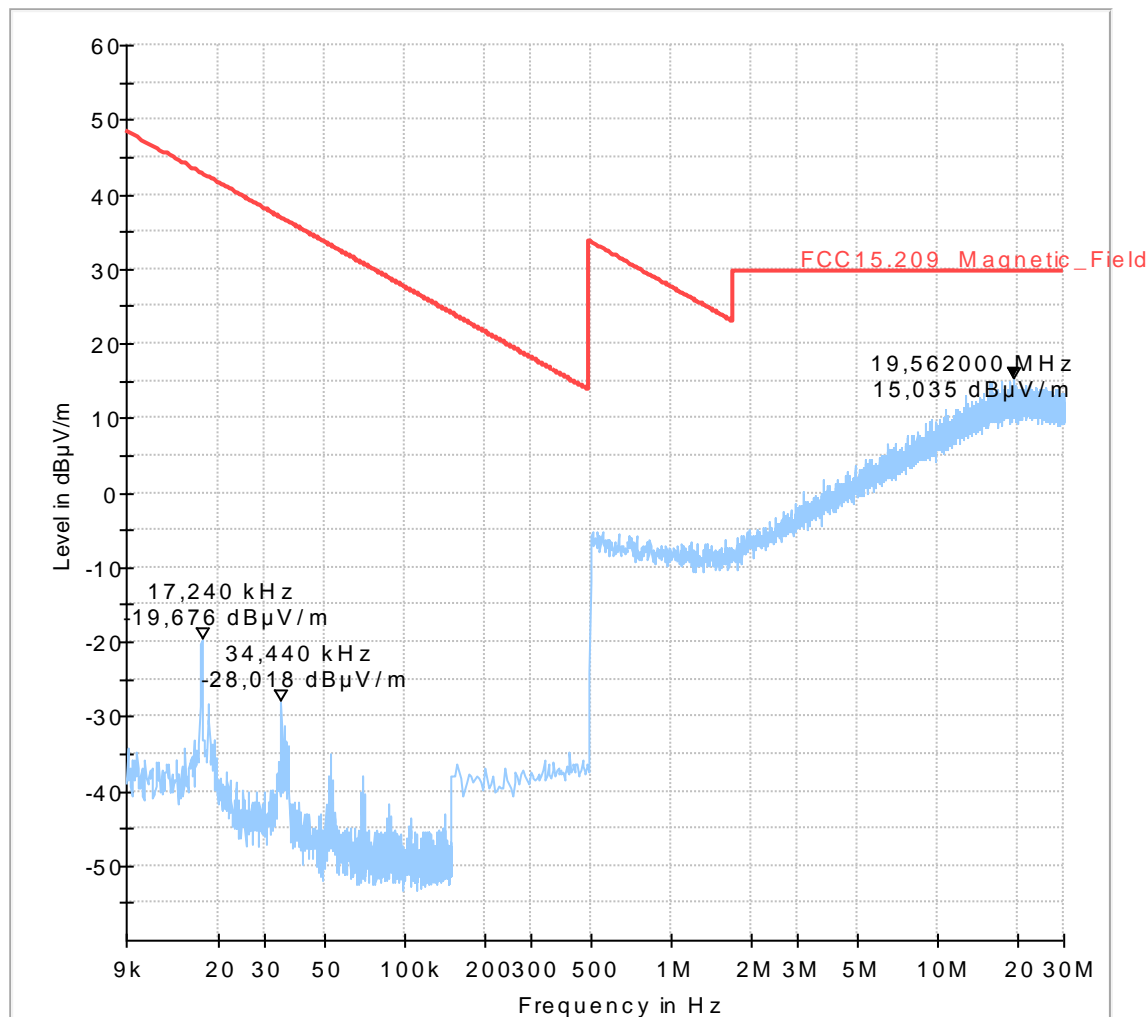
Common Information

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
Operator:	RIs
Operating conditions:	TX-on
Power during tests:	12V DC

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.2.. Radiated Field Strength Emissions – 30 MHz to 1 GHz

3.01_TX_b_mode_1Mbit_PWR_17_standing

Common Information

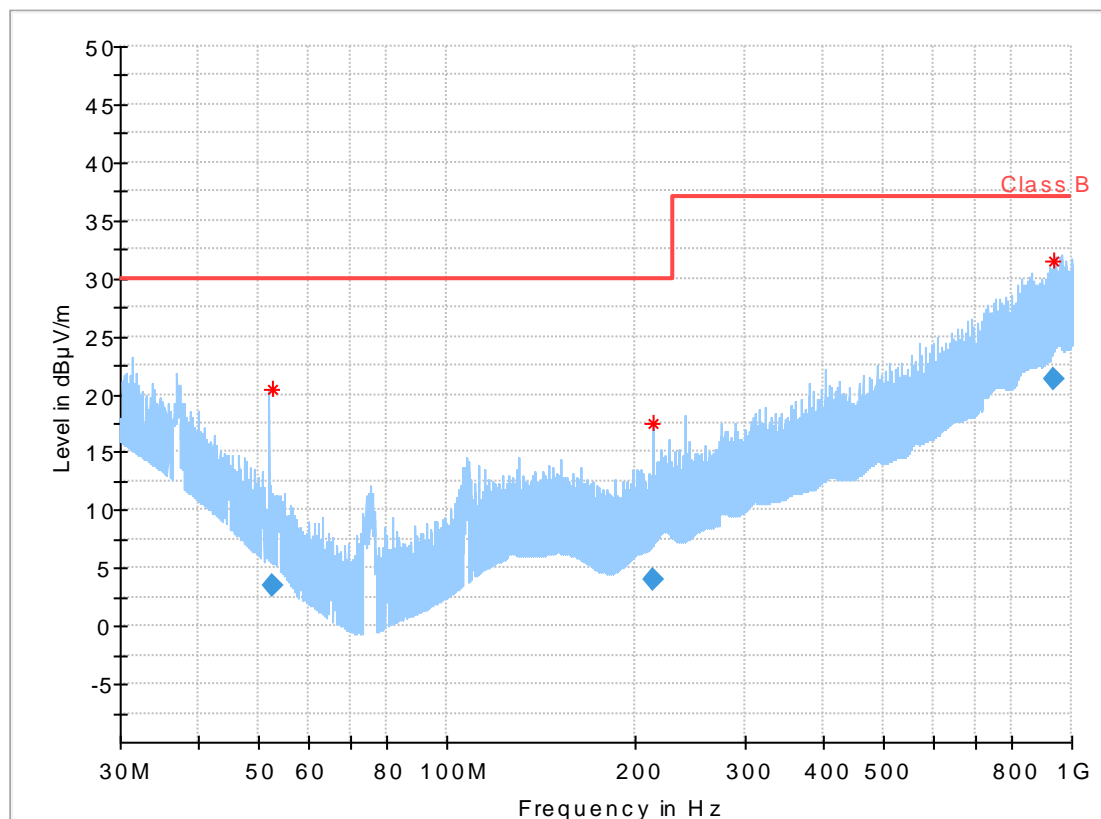
Test Description:	Electric Fieldstrength Measurement below 1GHz
Test Site & Location:	Semi Anechoic Room (SAR); CETECOM GmbH Essen
Test Specification:	EN 55022 Class B
Operating Mode:	TX b Mode , 1Mbit 17PWR
Environmental conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mbe

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



3.02_TX_b_mode_1Mbit_PWR_17_laying

Common Information

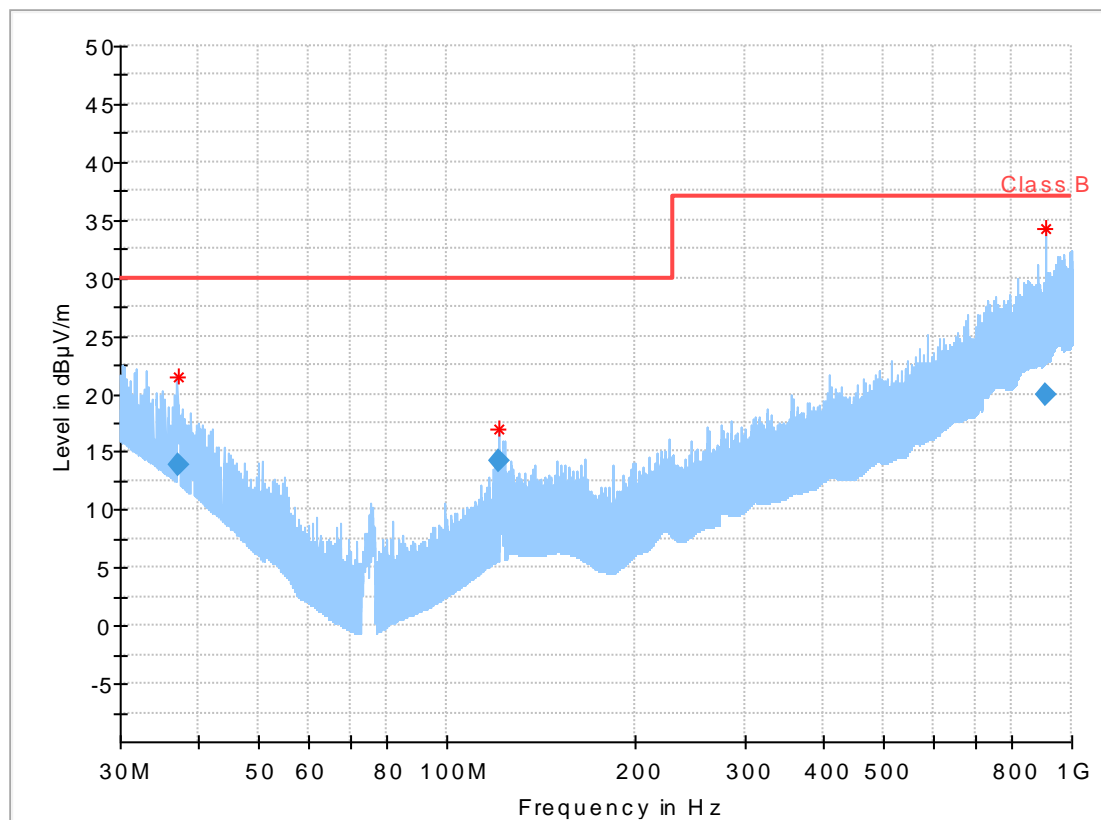
Test Description:	Electric Fieldstrength Measurement below 1GHz
Test Site & Location:	Semi Anechoic Room (SAR); CETECOM GmbH Essen
Test Specification:	EN 55022 Class B
Operating Mode:	TX b Mode , 1Mbit 17PWR
Measured side(s):	front, right, rear, left
Distance correction:	via transducer factor -10.46 dB
Environmental conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mbe

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
37.030000	13.83	30.00	16.17	15000.0	120.000	134.0	V	236.0	0.0	11.0
121.050000	14.28	30.00	15.72	15000.0	120.000	282.0	H	39.0	0.0	2.9
909.240000	19.87	37.00	17.13	15000.0	120.000	319.0	V	345.0	0.0	15.6

3.03_TX_g_mode_12Mbit_PWR_15_standing

Common Information

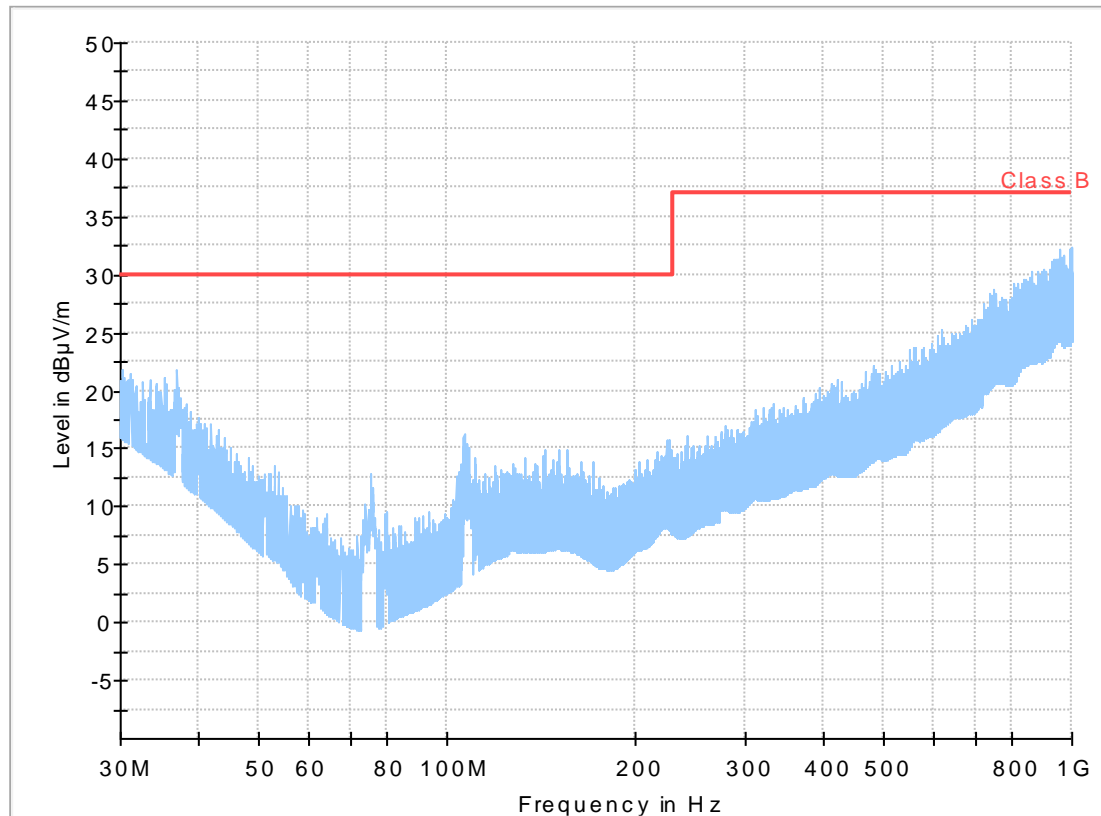
Test Description:	Electric Fieldstrength Measurement below 1GHz
Test Site & Location:	Semi Anechoic Room (SAR); CETECOM GmbH Essen
Test Specification:	EN 55022 Class B
Operating Mode:	TX g Mode , 12Mbit 15PWR
Environmental conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mbe

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



3.04_TX_g_mode_12Mbit_PWR_15_laying

Common Information

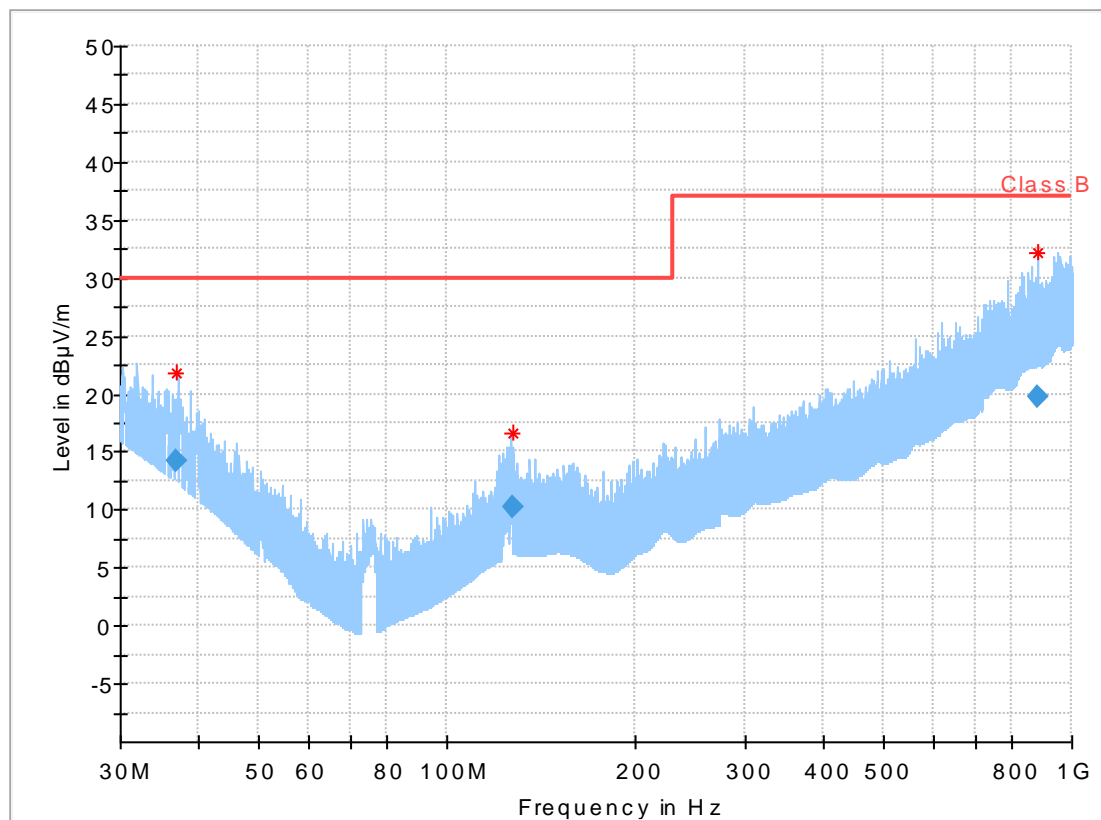
Test Description:	Electric Fieldstrength Measurement below 1GHz
Test Site & Location:	Semi Anechoic Room (SAR); CETECOM GmbH Essen
Test Specification:	EN 55022 Class B
Operating Mode:	TX g Mode , 12Mbit 15PWR
Measured side(s):	front, right, rear, left
Distance correction:	via transducer factor -10.46 dB
Environmental conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mbe

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
37.010000	14.20	30.00	15.80	15000.0	120.000	129.0	V	145.0	0.0	11.0
127.430000	10.23	30.00	19.77	15000.0	120.000	249.0	H	25.0	0.0	3.1
880.070000	19.70	37.00	17.30	15000.0	120.000	282.0	H	351.0	0.0	15.6

3.05_TX_n_mode_MCS2_PWR_15_staying

Common Information

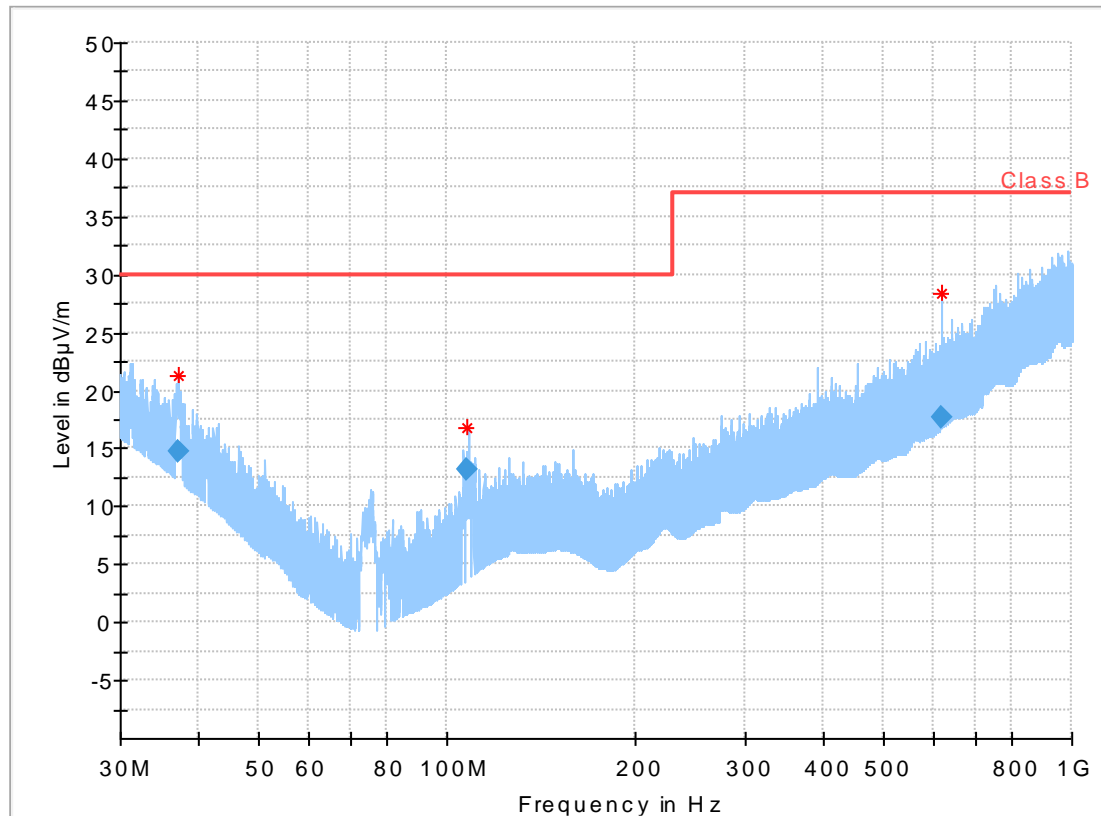
Test Description:	Electric Fieldstrength Measurement below 1GHz
Test Site & Location:	Semi Anechoic Room (SAR); CETECOM GmbH Essen
Test Specification:	EN 55022 Class B
Operating Mode:	TX n Mode , MCS2 15PWR
Environmental conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mbe

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

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)	Corr. (dB)
37.070000	14.78	30.00	15.22	15000.	120.000	113.0	V	218.0	0.0	11.0
107.630000	13.23	30.00	16.77	15000.	120.000	249.0	H	119.0	0.0	1.4
617.120000	17.65	37.00	19.35	15000.	120.000	125.0	H	38.0	0.0	12.2

3.06_TX_n_mode_MCS2_PWR_15_laying

Common Information

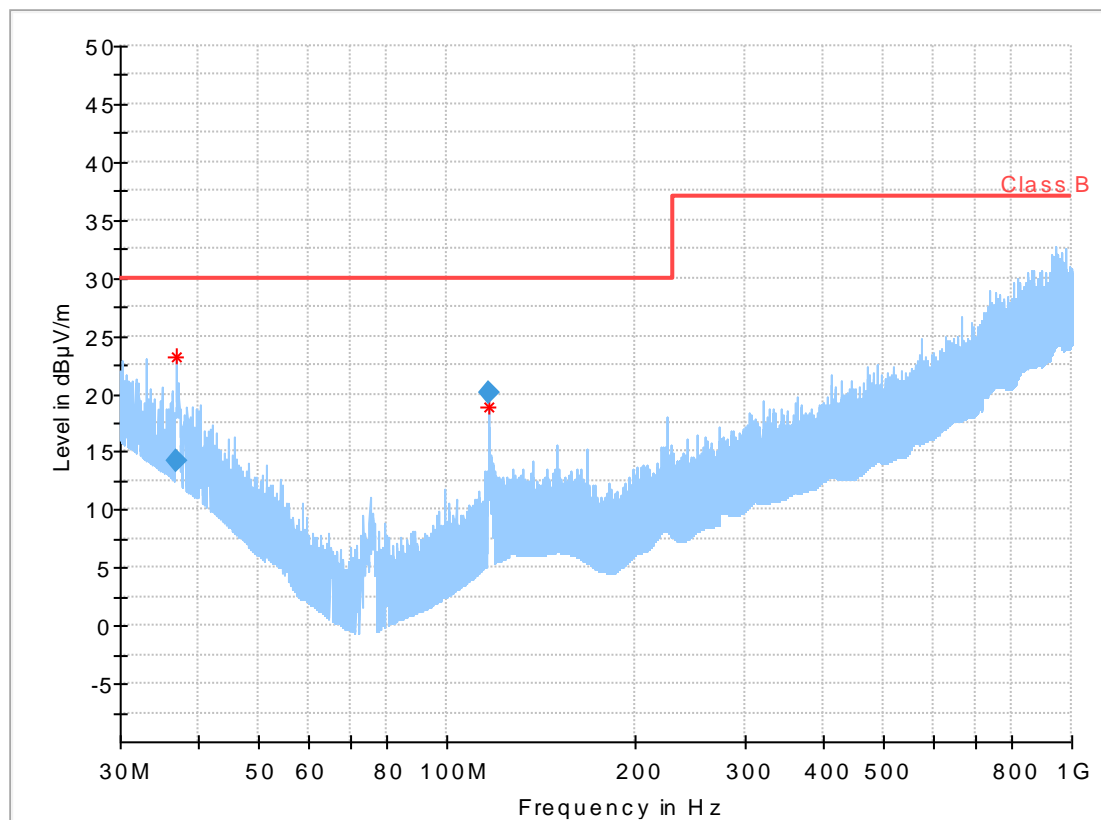
Test Description:	Electric Fieldstrength Measurement below 1GHz
Test Site & Location:	Semi Anechoic Room (SAR); CETECOM GmbH Essen
Test Specification:	EN 55022 Class B
Operating Mode:	TX n Mode , MCS2 15PWR
Measured side(s):	front, right, rear, left
Distance correction:	via transducer factor -10.46 dB
Environmental conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mbe

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090051
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
37.000000	14.18	30.00	15.82	15000.0	120.000	121.0	V	40.0	0.0	11.0
116.930000	20.14	30.00	9.86	15000.0	120.000	257.0	H	123.0	0.0	2.6

1.3.Radiated Field Strength Emissions – 1 GHz to 18 GHz

4.01_TX_b_Mode_1Mbit_PWR_17_standing

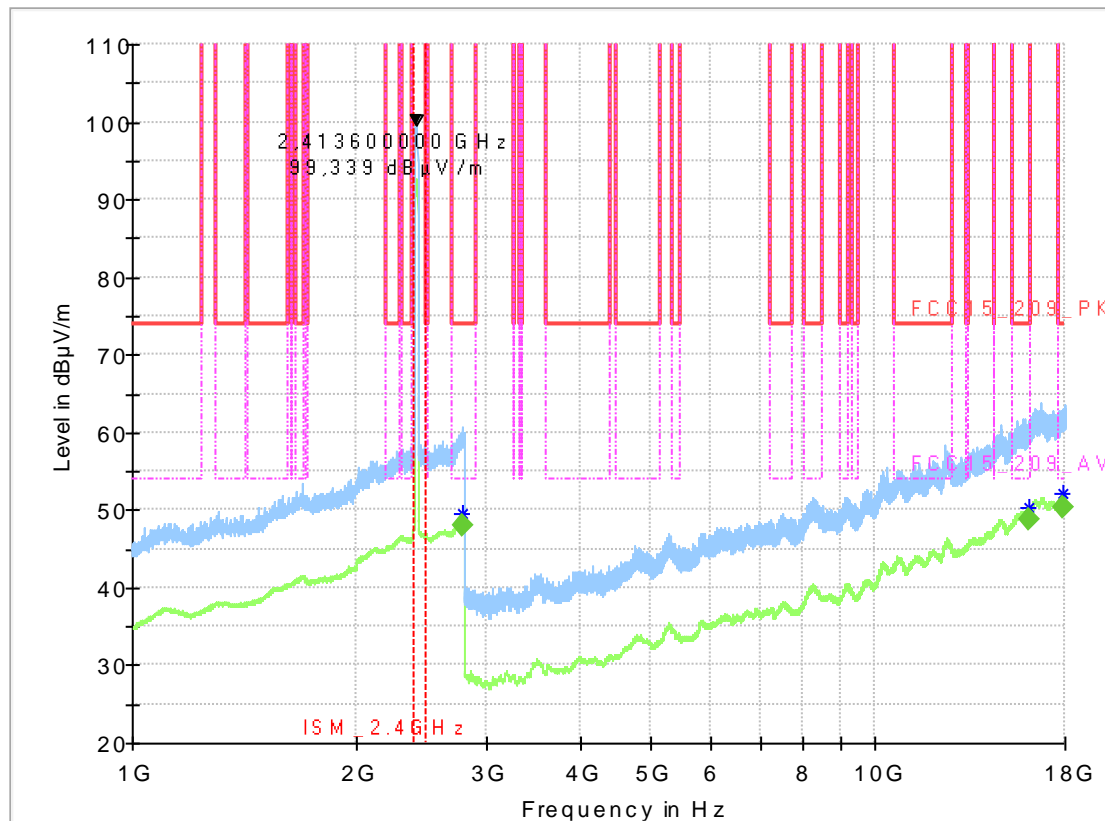
Common Information

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 b-Mode
Operator Name:	SRa
Comment:	Channel no. 1
Comment2:	Modulation Type: DSSS Data Rate: 1MBit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
2789.690000	---	47.99	54.00	6.01	100.0	1000.000	155.0	H	60.0
16135.330000	---	48.66	54.00	5.34	100.0	1000.000	155.0	V	99.0
17936.970000	---	50.32	54.00	3.68	100.0	1000.000	155.0	H	279.0

(continuation of the "Final_Result" table from column 15 ...)

Frequency (MHz)	Elevation (deg)	Correction (dB)	Comment
2789.690000	0.0	38.0	20:27:30 - 24.05.2017
16135.330000	0.0	24.6	20:49:45 - 24.05.2017
17936.970000	0.0	26.3	20:47:37 - 24.05.2017

4.02_TX_b_Mode_1Mbit_PWR_17_laying

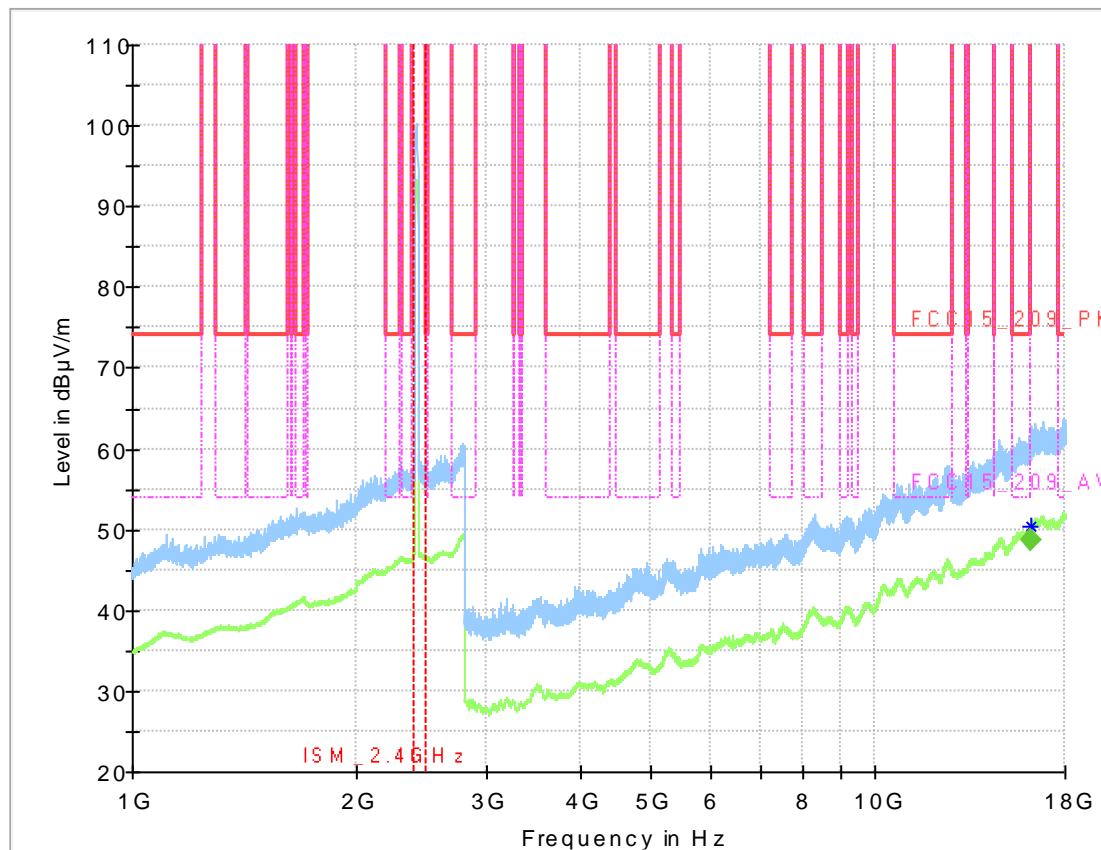
Common Information

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 b-Mode
Operator Name:	SRa
Comment:	Channel no. 1
Comment2:	Modulation Type: DSSS Data Rate: 1MBit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-



Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margi n (dB)	Meas. Time (ms)	Bandwidth (kHz)	Heigh t (cm)	Pol	Azimut h (deg)
16160.250000	---	48.64	54.00	5.36	100.0	1000.000	155.0	V	168.0

(continuation of the "Final_Result" table from column 15 ...)

Frequency (MHz)	Elevatio n (deg)	Corr . (dB)	Comment
16160.250000	0.0	24.7	18:03:54 - 24.05.2017

4.03_TX_g_Mode_12Mbit_PWR_15_standing

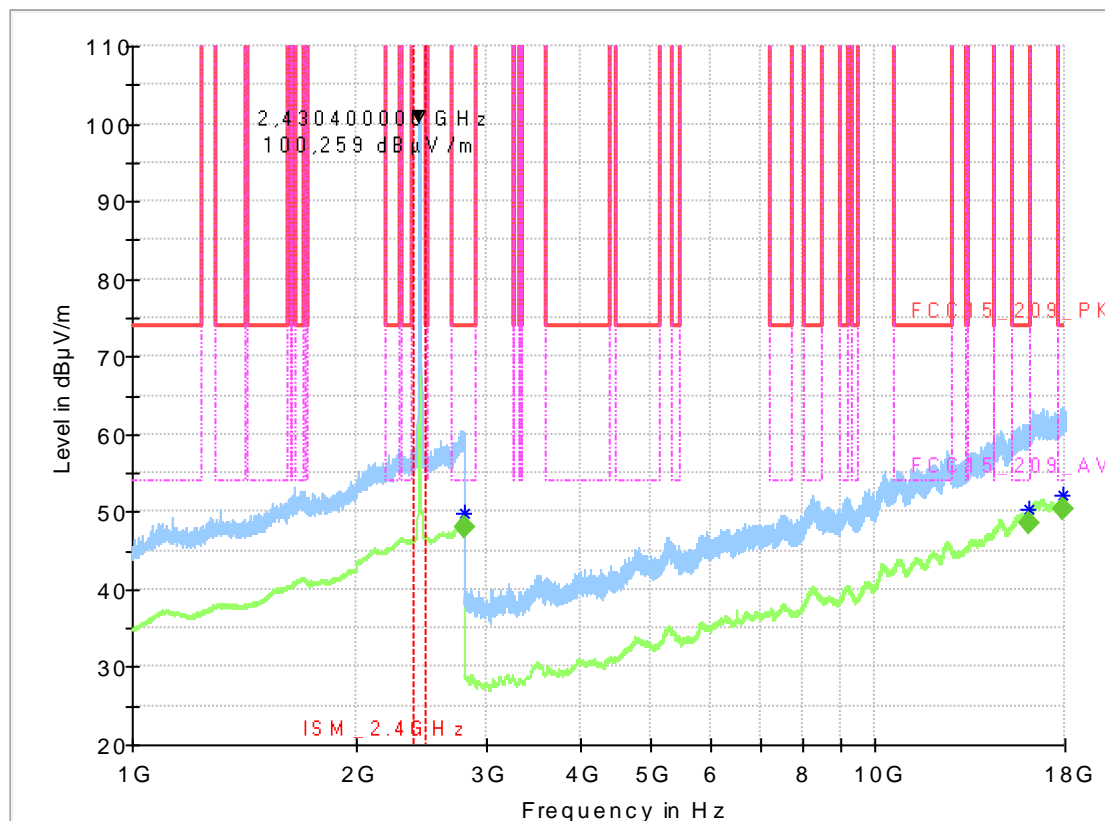
Common Information

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 g-Mode
Operator Name:	SRa
Comment:	Channel no. 6
Comment2:	Modulation Type: OFDM Data Rate: 12Mbit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
2796.890000	---	48.10	54.00	5.90	100.0	1000.000	155.0	V	190.0
16136.890000	---	48.65	54.00	5.35	100.0	1000.000	155.0	H	26.0
17928.170000	---	50.36	54.00	3.64	100.0	1000.000	155.0	V	274.0

(continuation of the "Final_Result" table from column 15 ...)

Frequency (MHz)	Elevation (deg)	Correction (dB)	Comment
2796.890000	0.0	38.1	21:07:09 - 24.05.2017
16136.890000	0.0	24.7	21:26:39 - 24.05.2017
17928.170000	0.0	26.3	21:29:00 - 24.05.2017

4.04_TX_g_Mode_12Mbit_PWR_15_laying

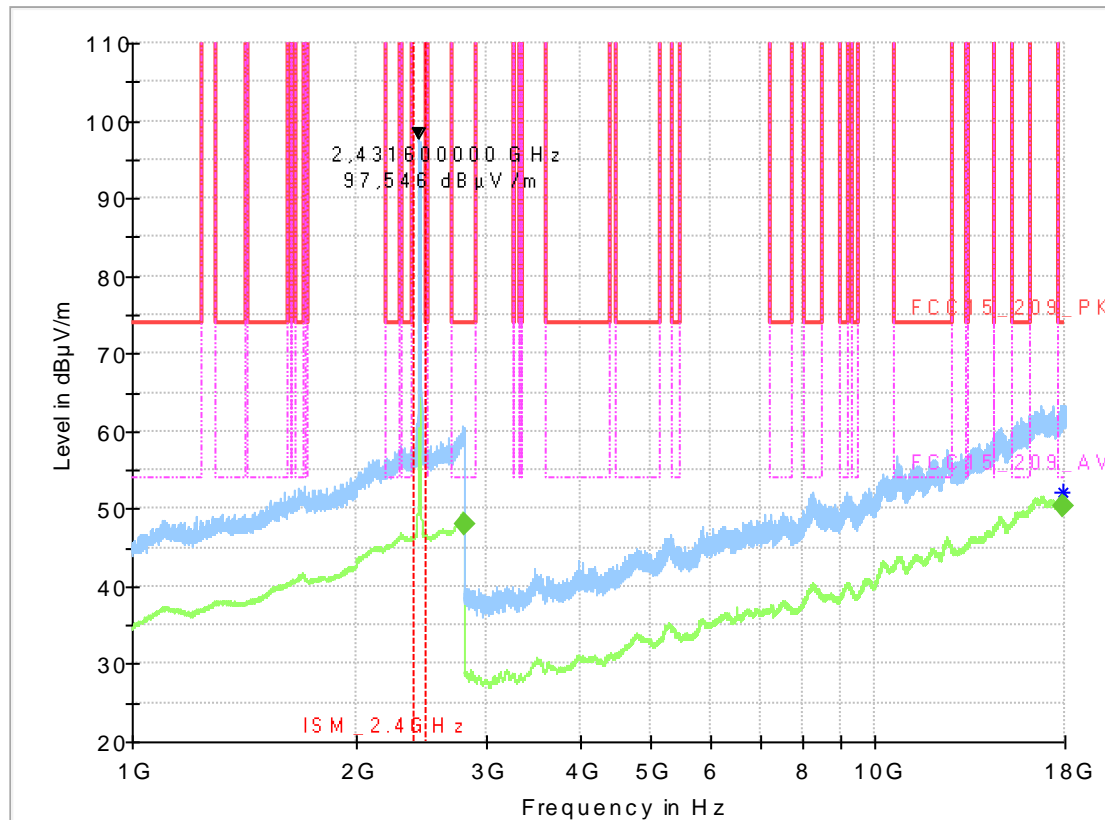
Common Information

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 g-Mode
Operator Name:	SRa
Comment:	Channel no. 6
Comment2:	Modulation Type: OFDM Data Rate: 12MBit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margi n (dB)	Meas. Time (ms)	Bandwidth (kHz)	Heigh t (cm)	Pol	Azimut h (deg)
2798.210000	---	48.07	54.00	5.93	100.0	1000.000	155.0	V	225.0
17928.290000	---	50.35	54.00	3.65	100.0	1000.000	155.0	V	241.0

(continuation of the "Final_Result" table from column 15 ...)

Frequency (MHz)	Elevatio n (deg)	Corr . (dB)	Comment
2798.210000	0.0	38.1	18:27:39 - 24.05.2017
17928.290000	0.0	26.3	18:46:33 - 24.05.2017

4.05_TX_n_Mode_MCS2_PWR_15_standing

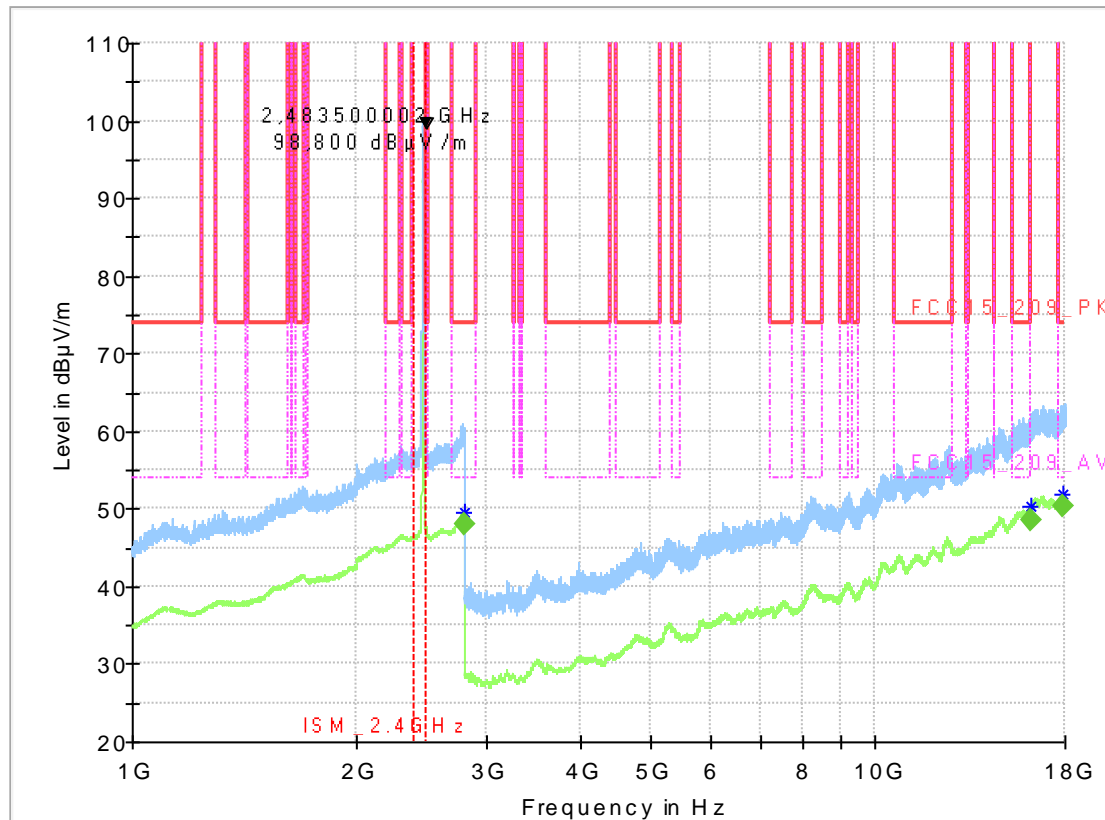
Common Information

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 n-Mode
Operator Name:	SRa
Comment:	Channel no. 11
Comment2:	Modulation Type: HT20 Data Rate: MCS2

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
2795.690000	---	48.06	54.00	5.94	100.0	1000.000	155.0	V	46.0
16149.290000	---	48.64	54.00	5.36	100.0	1000.000	155.0	H	130.0
17922.250000	---	50.34	54.00	3.66	100.0	1000.000	155.0	V	243.0

(continuation of the "Final_Result" table from column 15 ...)

Frequency (MHz)	Elevation (deg)	Correction (dB)	Comment
2795.690000	0.0	38.1	21:54:20 - 24.05.2017
16149.290000	0.0	24.7	22:12:38 - 24.05.2017
17922.250000	0.0	26.3	22:14:48 - 24.05.2017

4.06_TX_n_Mode_MCS2_PWR_15_laying

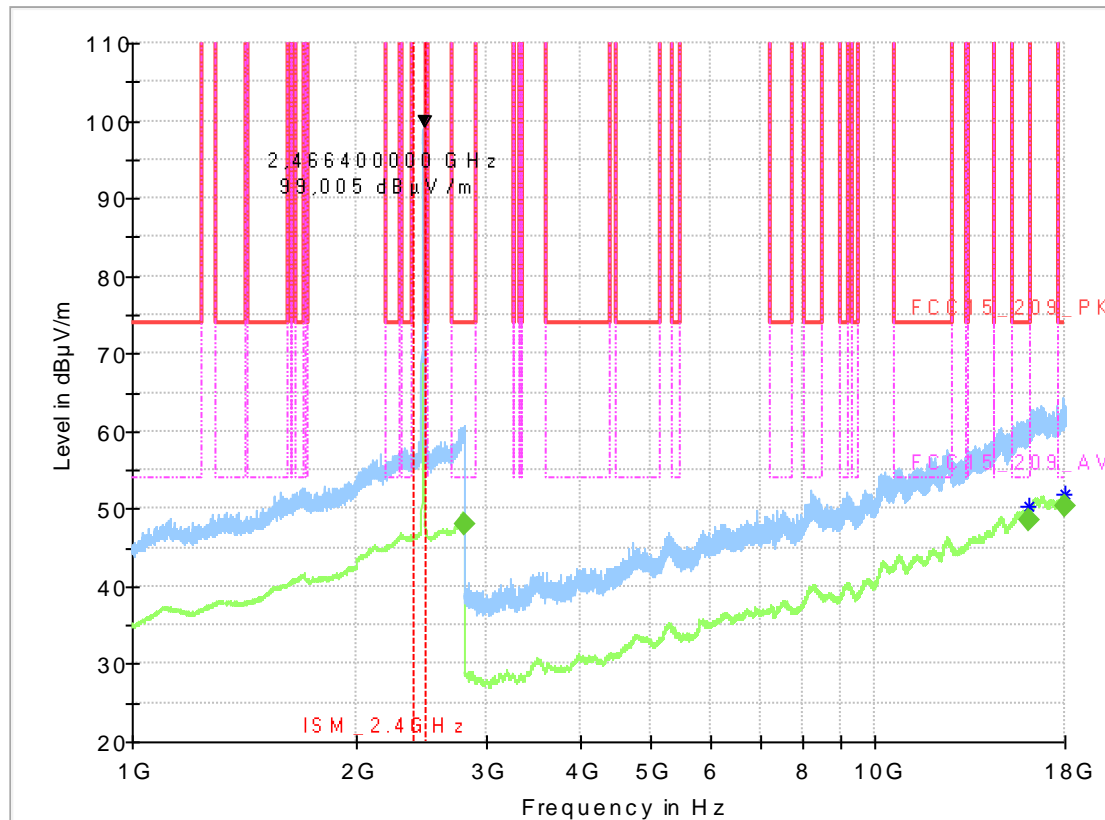
Common Information

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 n-Mode
Operator Name:	SRa
Comment:	Channel no. 11
Comment2:	Modulation Type: HT20 Data Rate: MCS2

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

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)
2795.410000	---	48.06	54.00	5.94	100.0	1000.000	155.0	H	102.0
16139.850000	---	48.63	54.00	5.37	100.0	1000.000	155.0	H	93.0
17949.290000	---	50.33	54.00	3.67	100.0	1000.000	155.0	V	303.0

(continuation of the "Final_Result" table from column 15 ...)

Frequency (MHz)	Elevation (deg)	Correction (dB)	Comment
2795.410000	0.0	38.1	19:07:05 - 24.05.2017
16139.850000	0.0	24.7	19:26:35 - 24.05.2017
17949.290000	0.0	26.3	19:28:45 - 24.05.2017

1.4.Radiated Field Strength Emissions – 18 GHz to 26 GHz

4.01a_TX_b_Mode_1Mbit_PWR_17_standing

Common Information

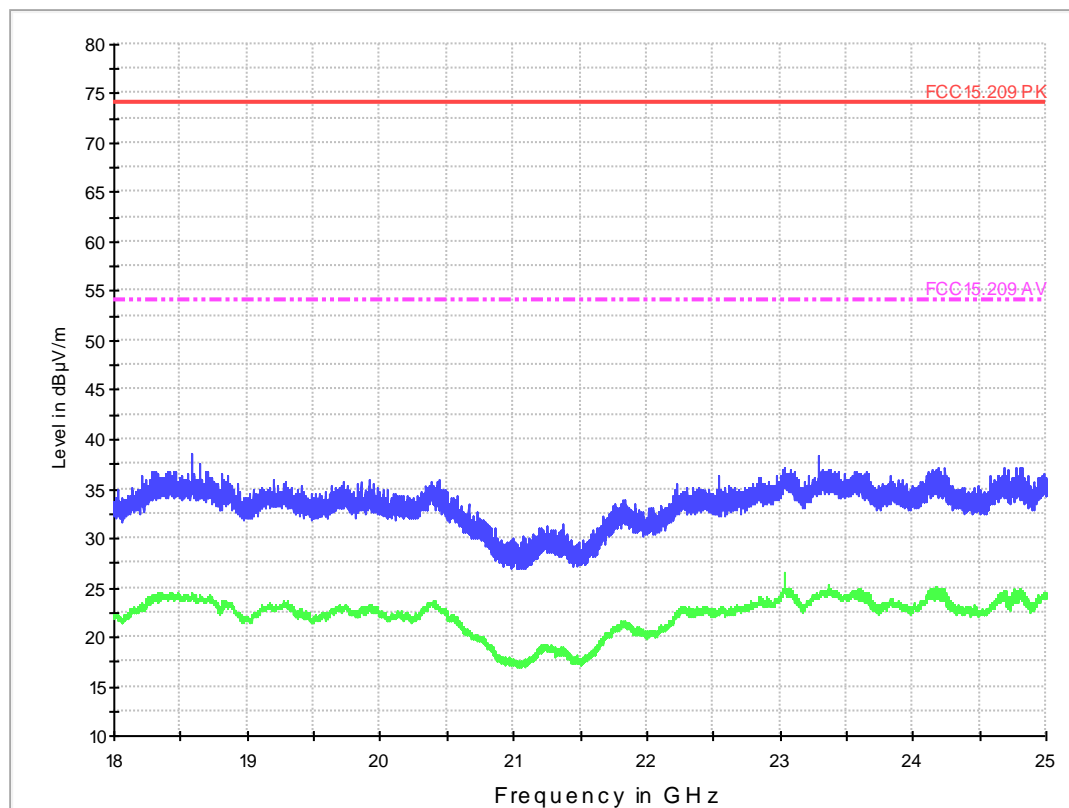
Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

EMI Scan_18_25GHz_Pre



4.02a_TX_b_Mode_1Mbit_PWR_17_Laying

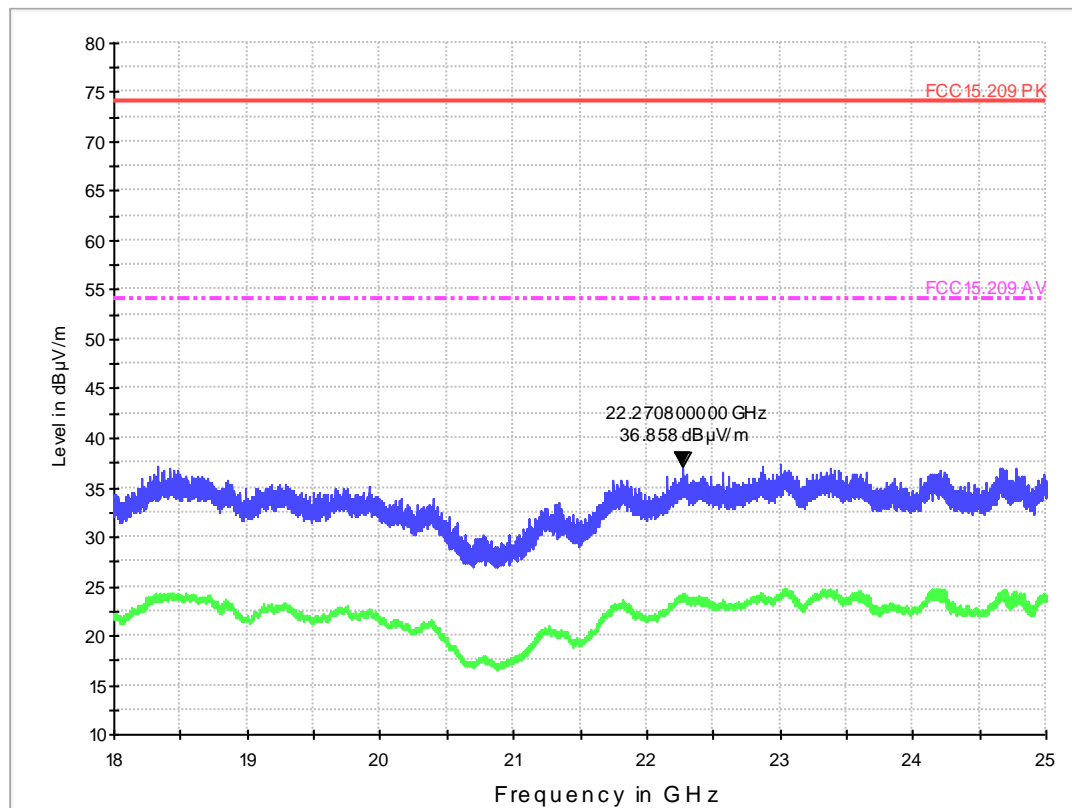
Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

EMI Scan_18_25GHz_Pre



4.03a_TX_g_Mode_12Mbit_PWR_15_standing

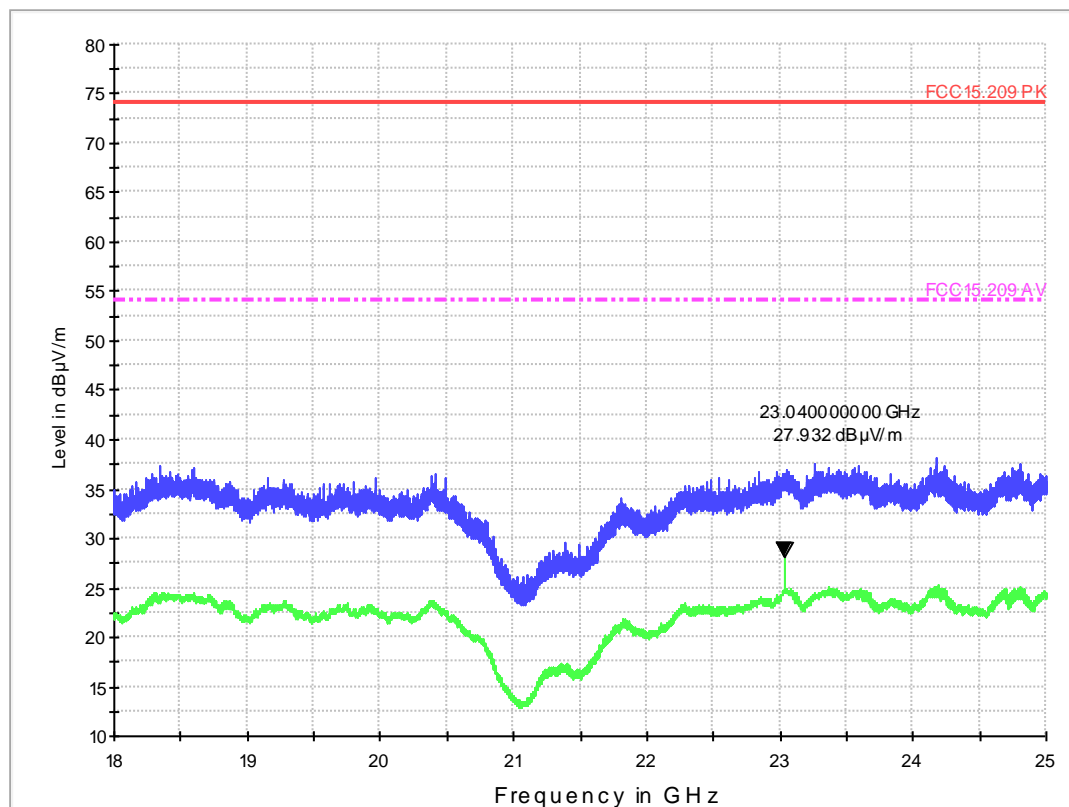
Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

EMI Scan_18_25GHz_Pre



4.04a_TX_g_Mode_12Mbit_PWR_15_Laying

Common Information

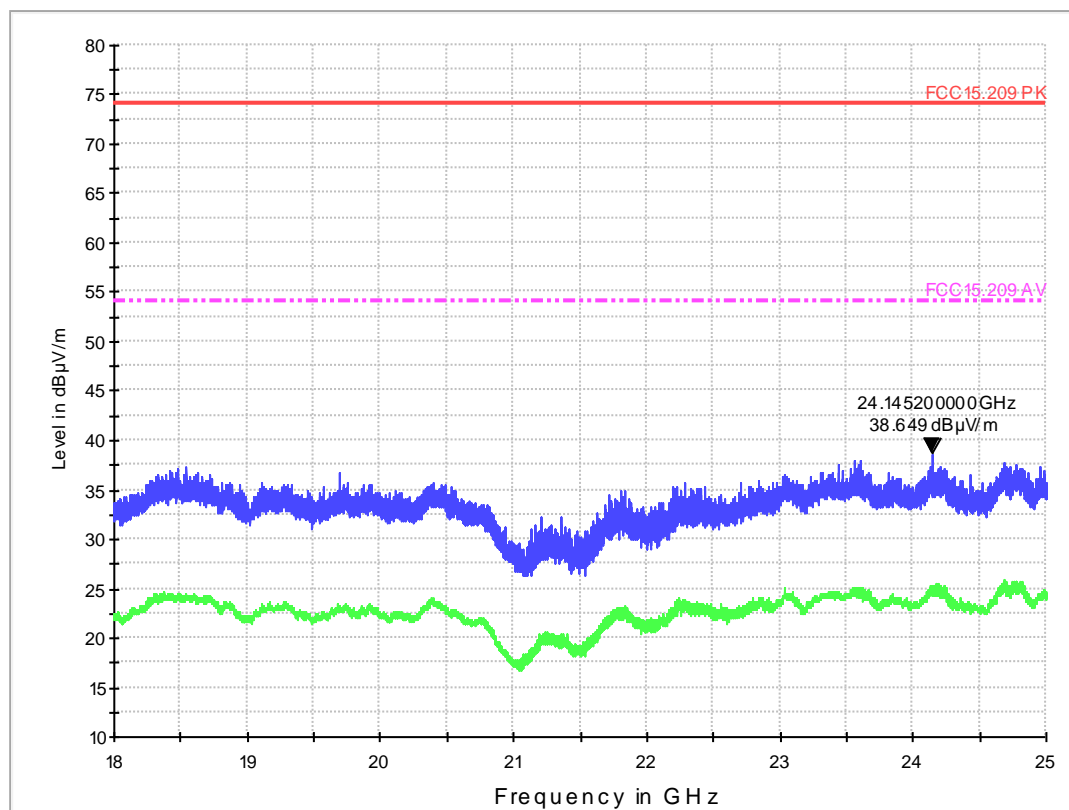
Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

EMI Scan_18_25GHz_Pre



4.05a_TX_n_Mode_MCS2_PWR_15_standing

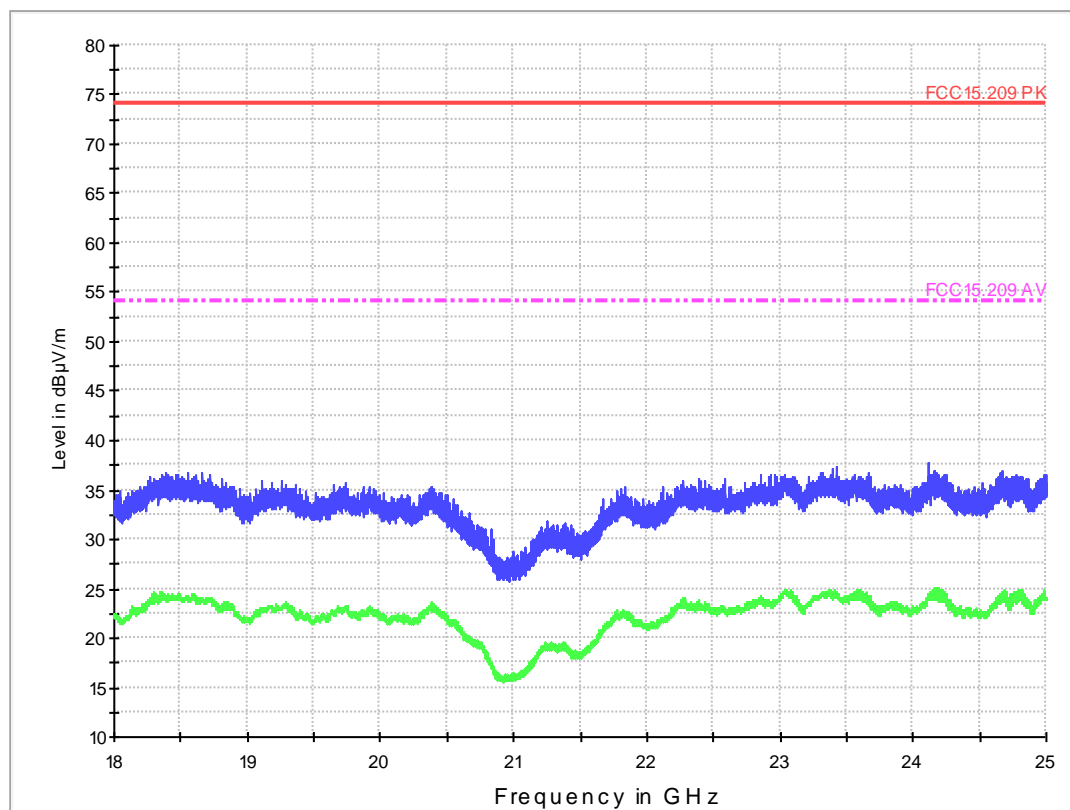
Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
<hr/>	
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

EMI Scan_18_25GHz_Pre



4.06a_TX_n_Mode_MCS2_PWR_15_laying

Common Information

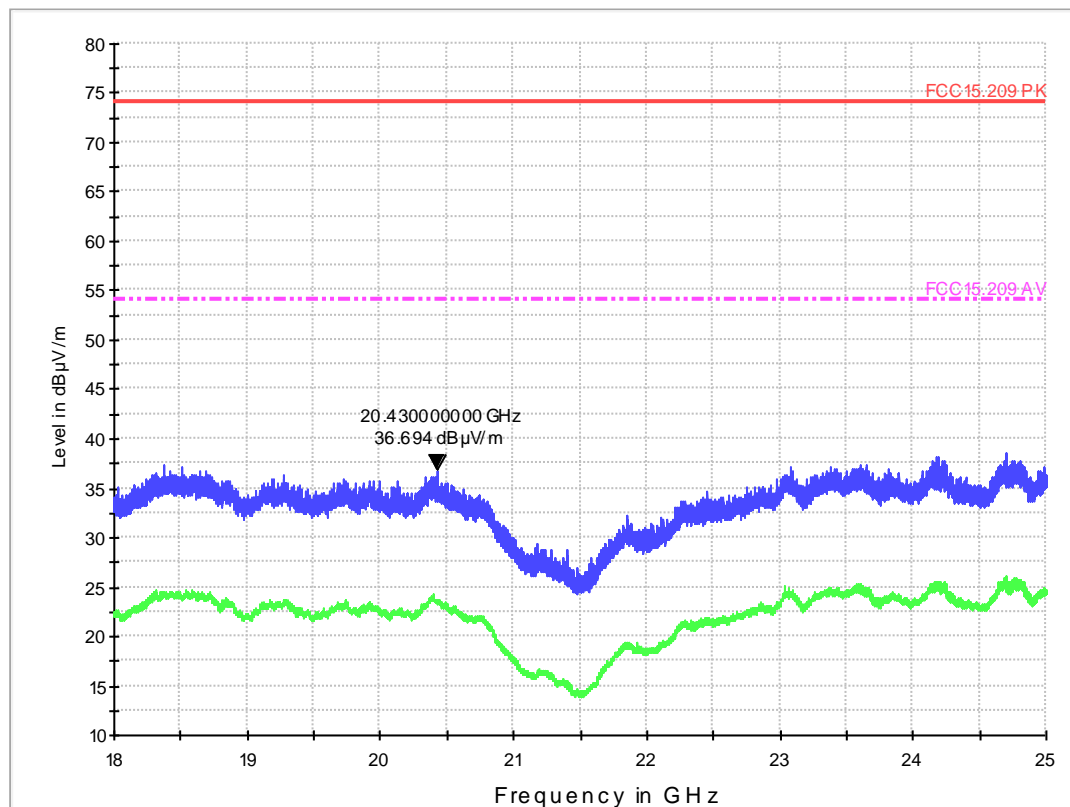
Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFR

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

EMI Scan_18_25GHz_Pre



2. Radiated Band EDGE Measurements

Diagram No.: 9.01_BE_Low_b-Mode_1_Mbit_PWR_17_laying

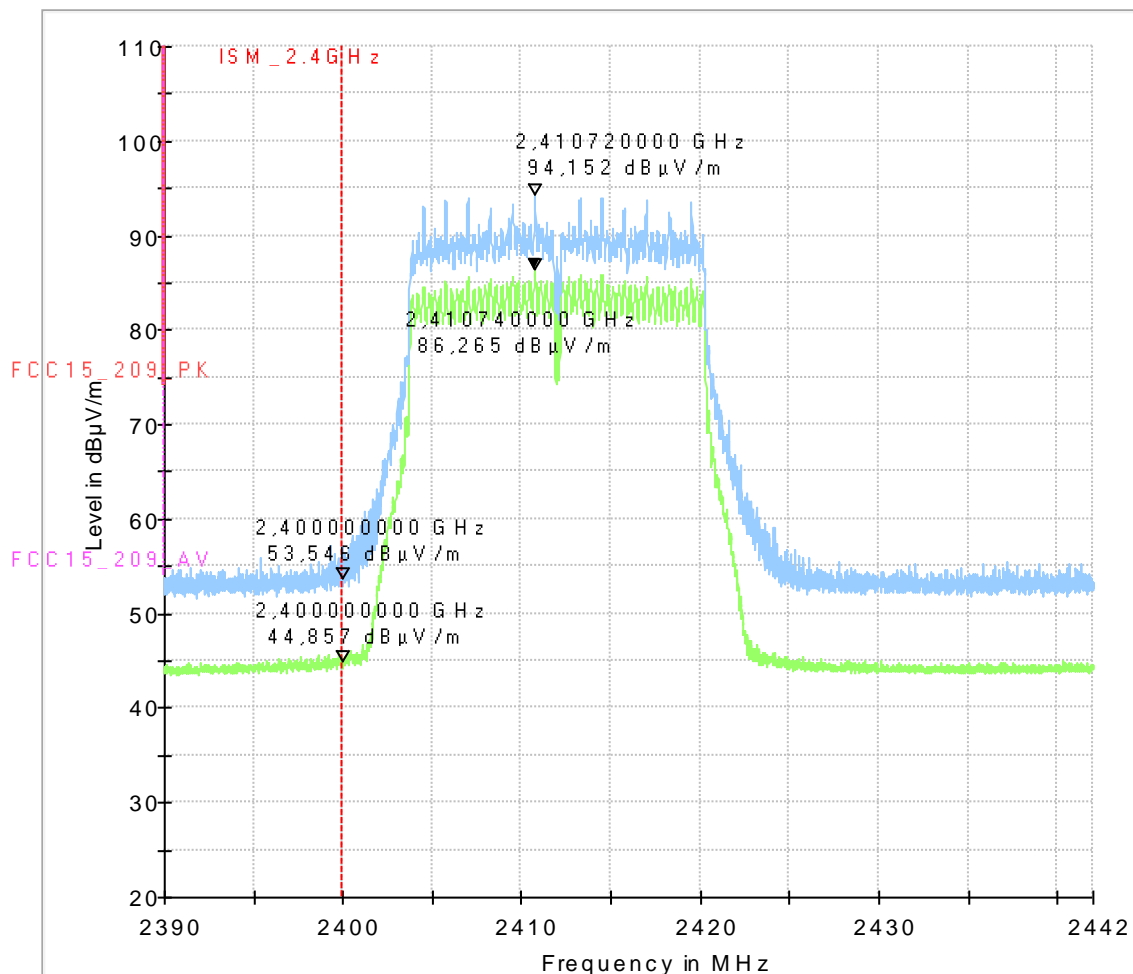
Common Information

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:	HEI
Comment:	Channel no. low
Comment2:	Modulation Type: DSSS Data Rate: 1Mbit PWR_Level: 17

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum



9.02_BE_Low_TX_b-Mode_1_Mbit_PWR_17_standing

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 b-Mode
Operator Name:	SRa
Comment:	Channel no. 1 low
Comment2:	Modulation Type: DSSS Data Rate: 1MBit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

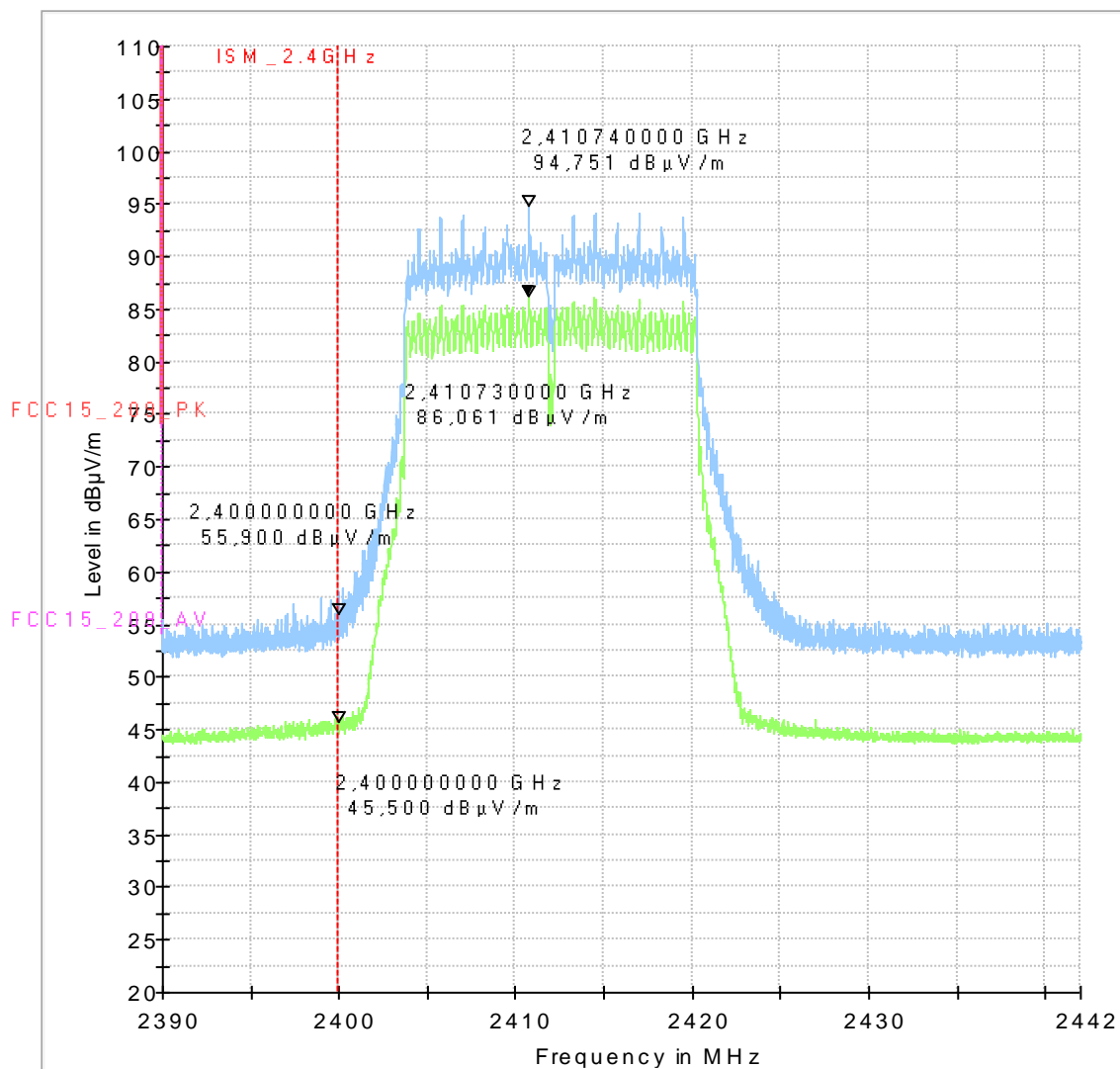


Diagram No.: 9.03_BE_high_b-Mode_1_Mbit_PWR_17_laying

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:	HEI
Comment:	Channel no. high
Comment2:	Modulation Type: DSSS Data Rate: 1 Mbit PWR_Level:17

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

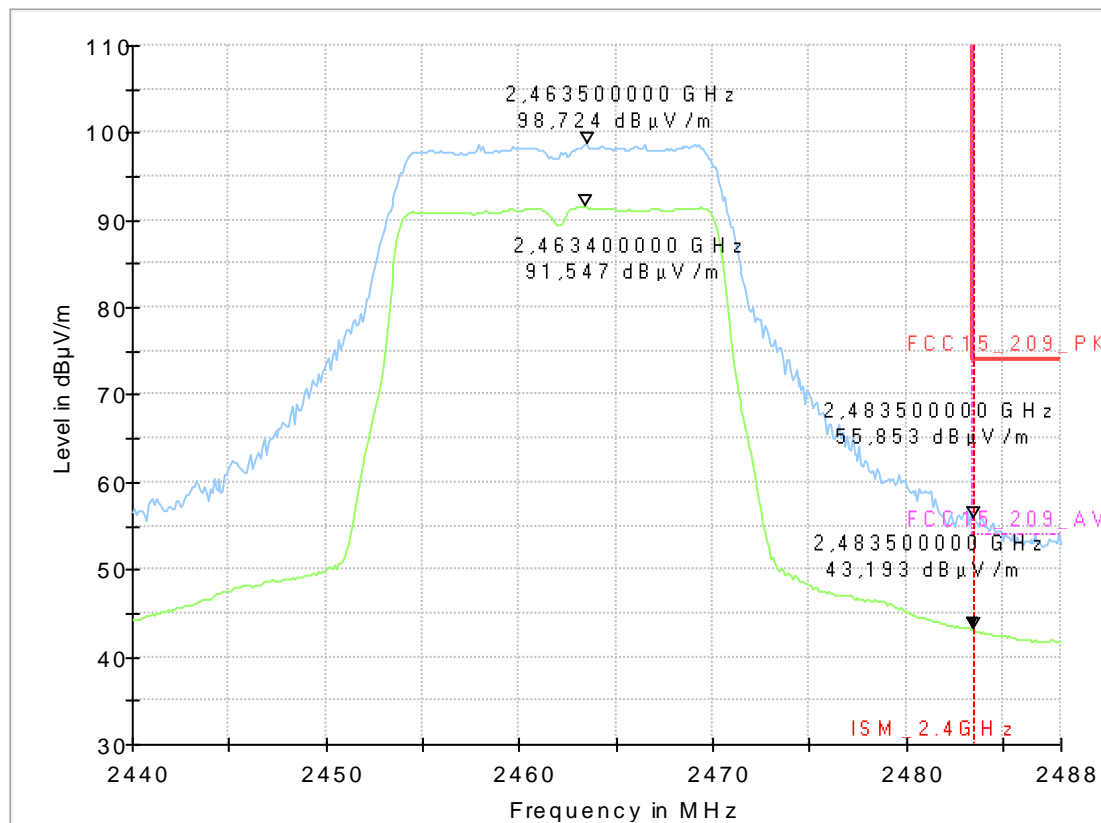


Diagram No.: 9.04_BE_High_TX_b_Mode_1_Mbit_PWR_17_standing

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: xxx Data Rate: yyy

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE

EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

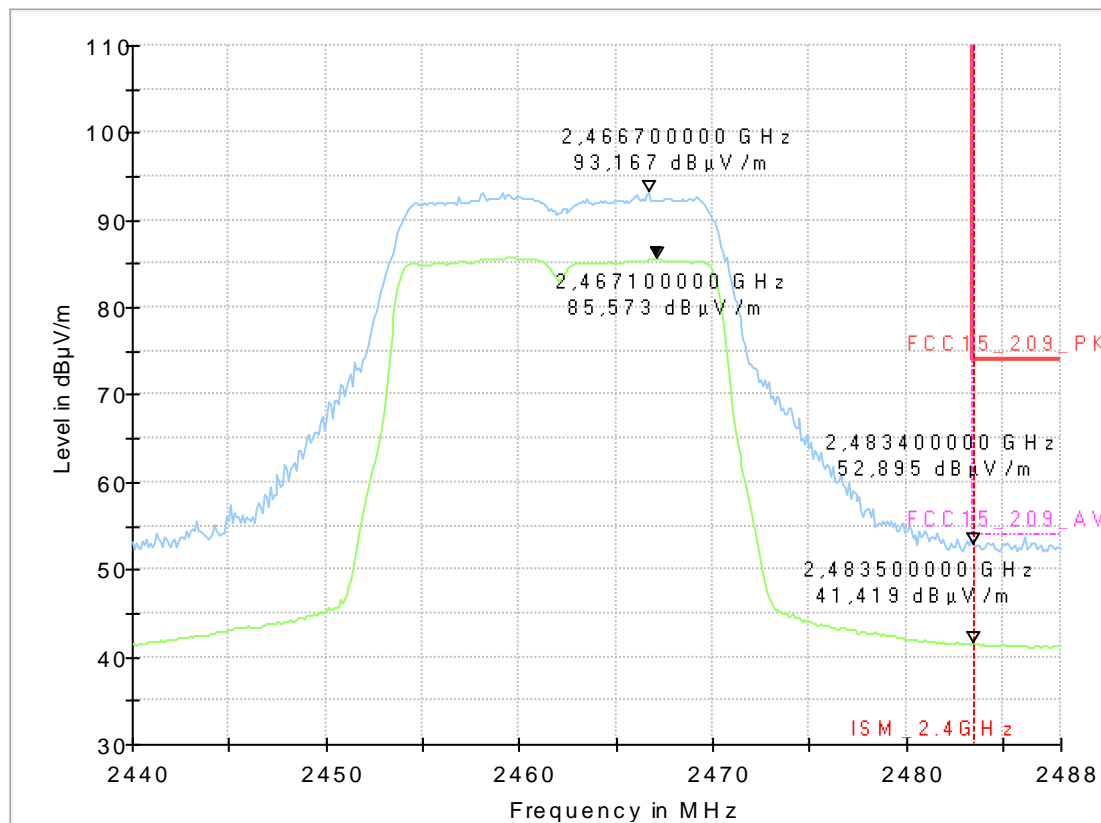


Diagram No.: 9.05_BE_Low_g-Mode_12_Mbit_PWR_15_laying

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 g-Mode
Operator Name:	SRa
Comment:	Channel no.1 low
Comment2:	Modulation Type: OFDM Data Rate: 12MBit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

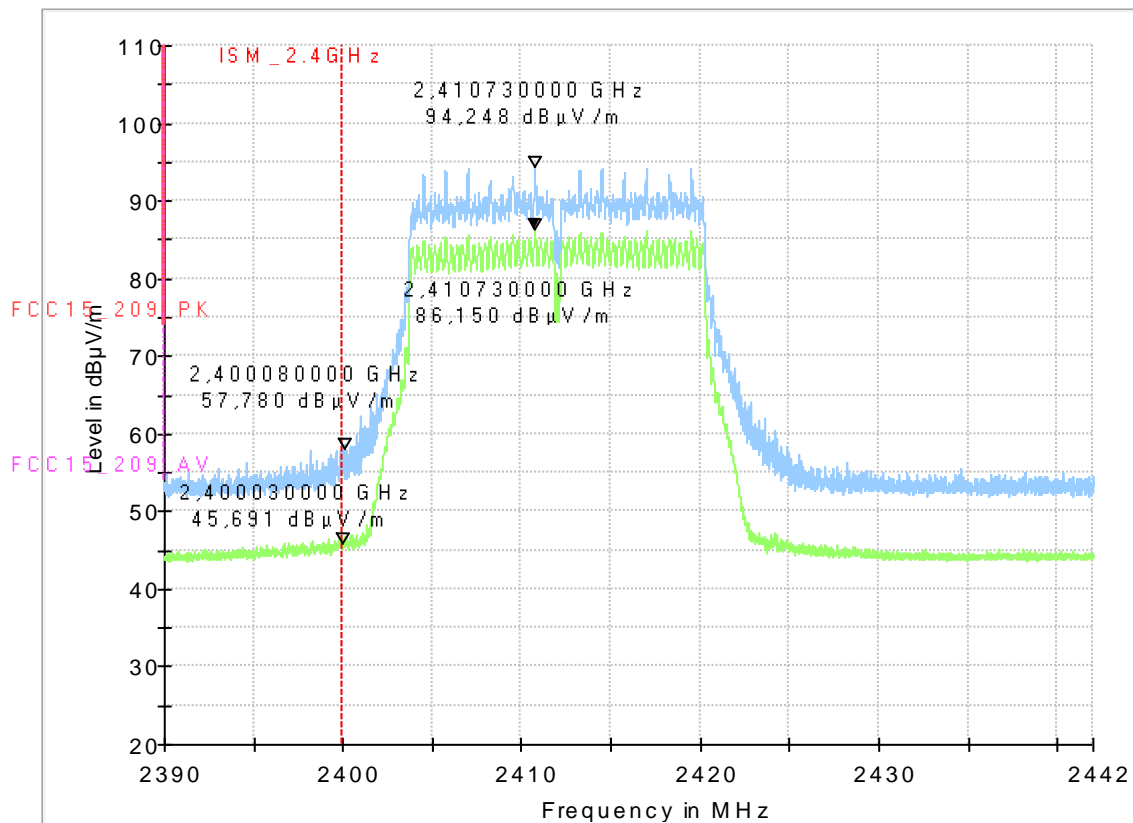


Diagram No.: 9.06_BE_Low_g-Mode_12_Mbit_PWR_15_standing

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 g-Mode
Operator Name:	Klv
Comment:	Channel no. 1
Comment2:	Modulation Type: g-mode Data Rate: 12 Mbit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

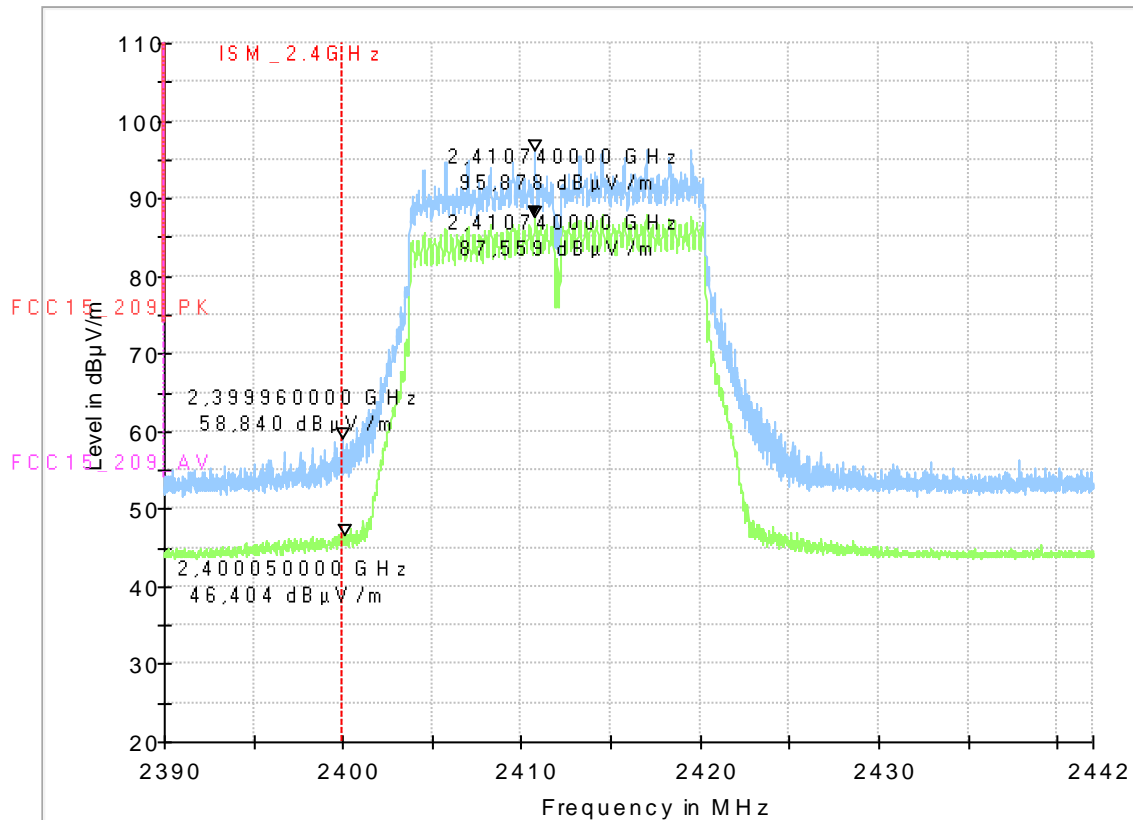


Diagram No.: 9.07_BE_High_g-Mode_12_Mbit_PWR_15_laying

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 g-Mode
Operator Name:	SRa
Comment:	Channel no.11 lhigh
Comment2:	Modulation Type: OFDM Data Rate: 12MBit

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

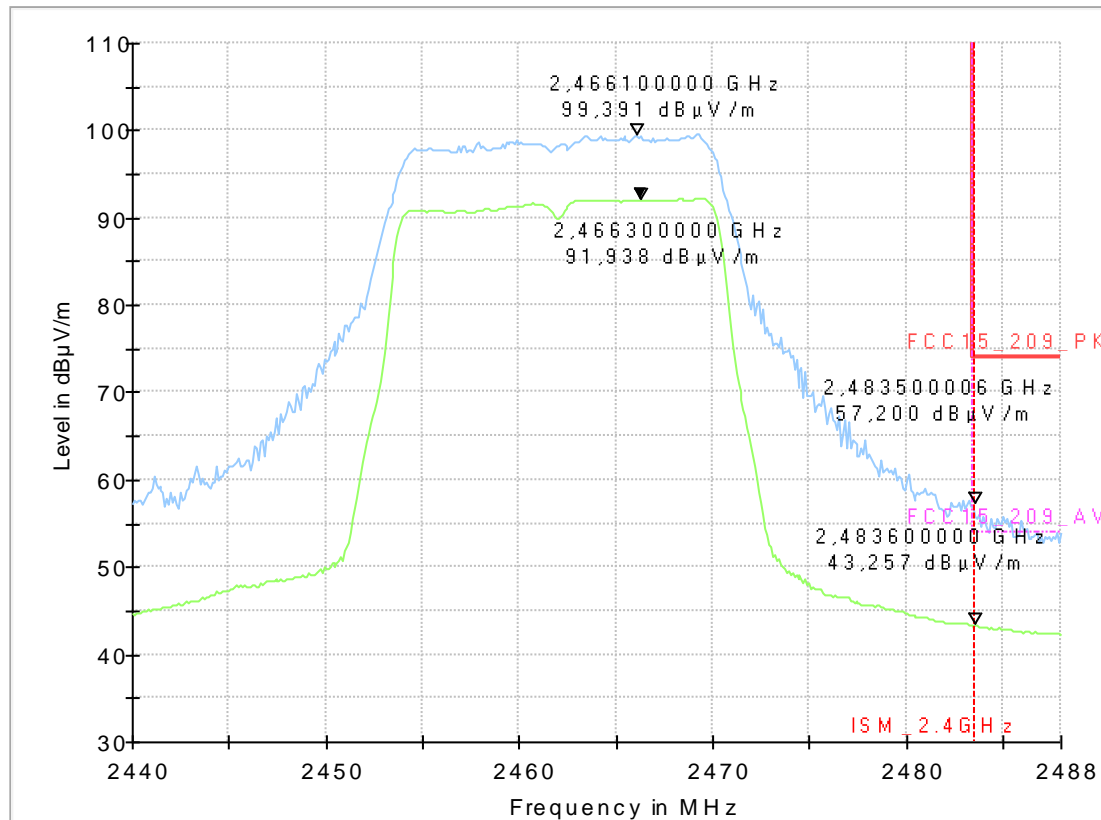


Diagram No.: 9.08_BE_High_TX_g-Mode_12_Mbit_PWR_15_standing

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:	SRa
Comment:	Channel no. 11
Comment2:	Modulation Type: OFDM Data Rate: 12MBit
Serial No.:	20071090051
SW	1.1.012

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

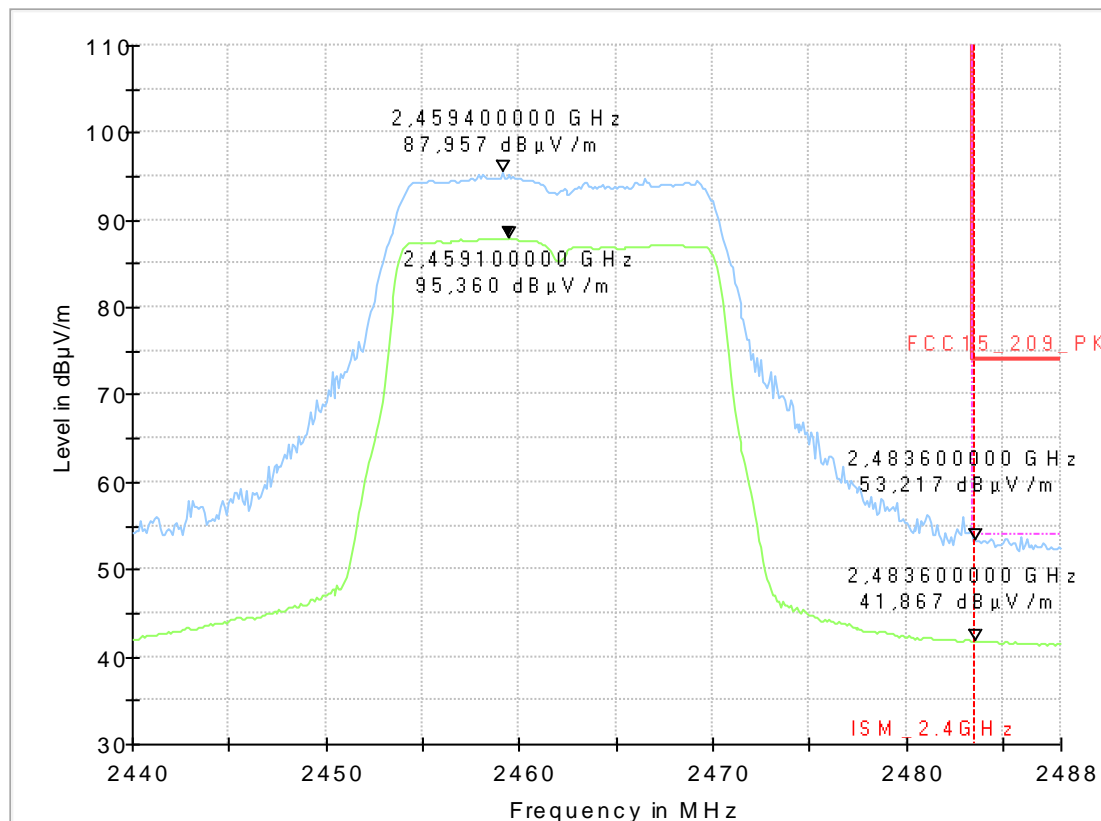


Diagram No.: 9.09_BE_Low_TX_n-Mode_MCS2_PWR_15_laying

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 n-Mode
Operator Name:	SRa
Comment:	Channel no.1 low
Comment2:	Modulation Type: HT20 Data Rate: MCS2

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

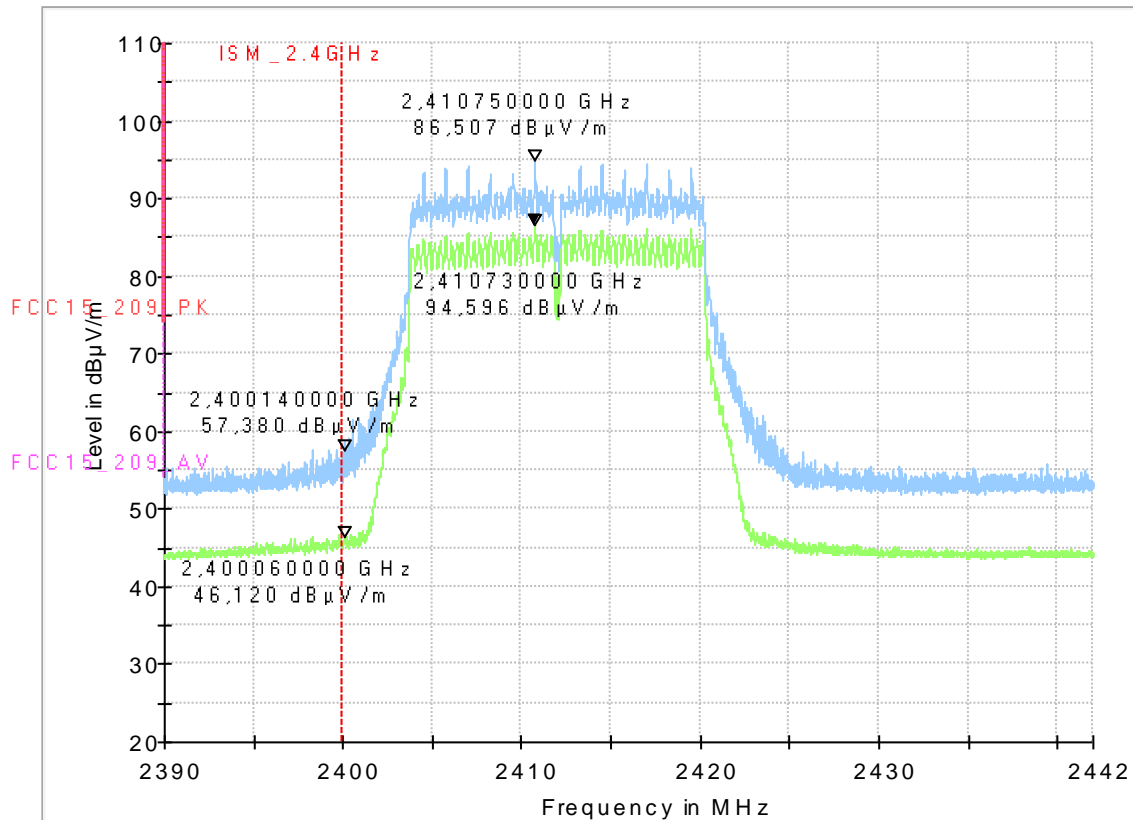


Diagram No.: 9.10_BE_Low_TX_n-Mode_MCS2_PWR_15_standing

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 n-Mode
Operator Name:	Klv
Comment:	Channel no. 1
Comment2:	Modulation Type: n-mode Data Rate: MCS2

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

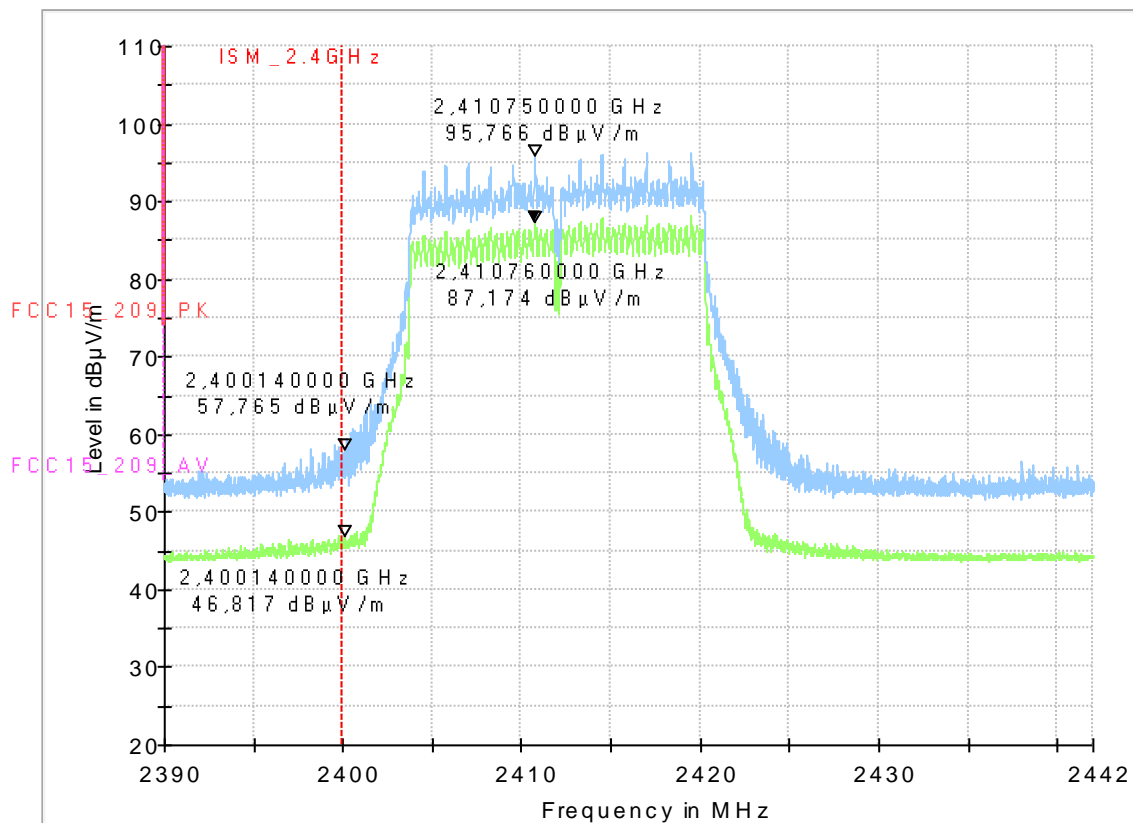


Diagram No.: 9.11_BE_High_TX_n-Mode_MCS2_PWR_15_laying

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 n-Mode
Operator Name:	SRa
Comment:	Channel no. 11 high
Comment2:	Modulation Type: HT20 Data Rate: MCS2

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

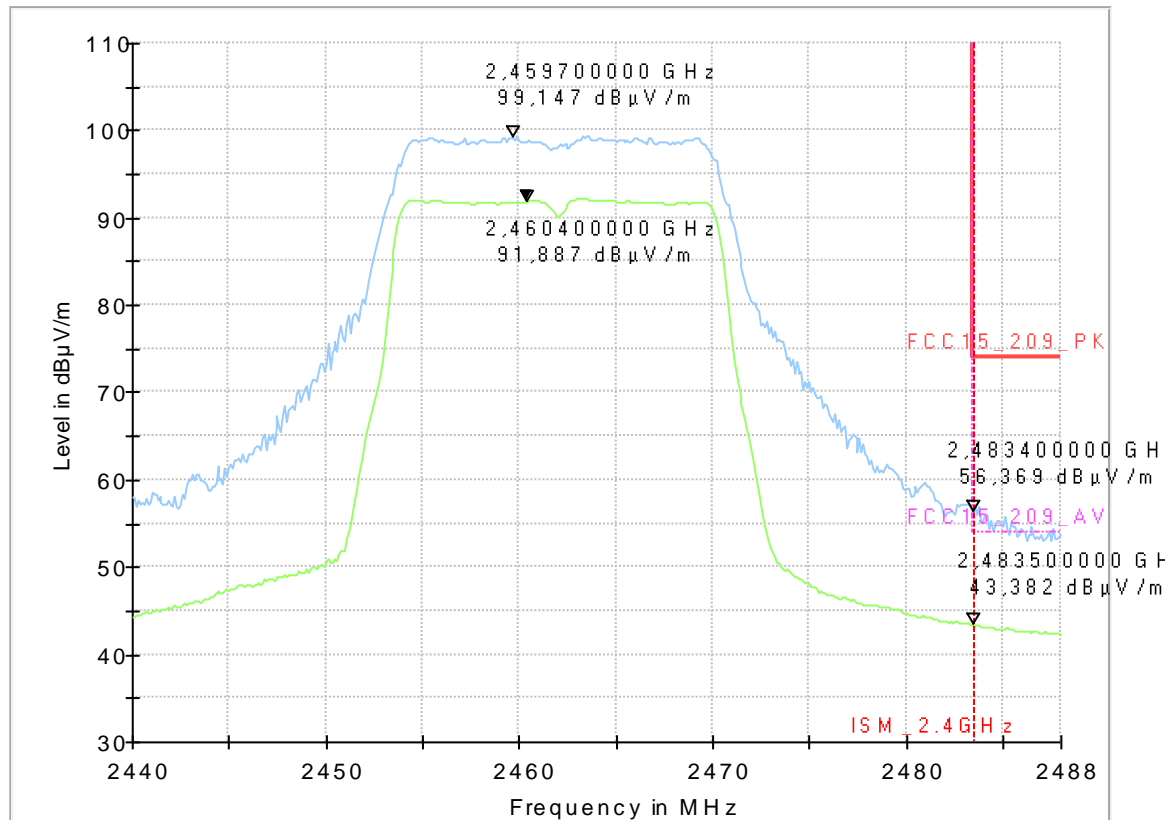


Diagram No.: 9.12_BE_High_TX_n-Mode_MCS2_PWR_15_standing

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:	SRa
Comment:	Channel no. 11
Comment2:	Modulation Type: HT20 Data Rate: MCS2
Serial No.:	20071090051
SW	1.1.012

EUT Information

Manufacturer:	ACTIA NORDIC AB
Model:	TEM4G
Type:	TELEMATICS MODULE
EUT:	TELEMATICS MODULE
Serial number:	20071090035
HW:	H1
Power Supply:	12VDC
Comments:	-

Full Spectrum

