



<b>FCC TEST REPORT</b> <b>FCC 47 CFR Part 15C</b> <b>Industry Canada RSS-210</b> <b>Intentional radiator operating within the 2400 – 2483.5 MHz band</b>	
<b>Report Reference No.</b>	G0M-1308-3097-TFC249DT-V01
<b>Testing Laboratory</b>	Eurofins Product Service GmbH
<b>Address</b>	Storkower Str. 38c 15526 Reichenwalde Germany
<b>Accreditation</b>	  A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A
<b>Applicant's name</b>	inmotiotec GmbH
<b>Address</b>	Oberregauer Straße 48 4844 Regau AUSTRIA
<b>Test specification:</b>	
<b>Standard</b>	47 CFR Part 15C RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 3, 2010-12 ANSI C63.4:2009
<b>Equipment under test (EUT):</b>	
Product description	Basisstation
Model No.	LPM Basisstation Ser.1
Additional Model(s)	None
Brand Name(s)	None
Hardware version	H2.3
Firmware / Software version	fcc0
	FCC-ID: 2AATD-PREMIUMBSV23 IC: N/A
<b>Test result</b>	<b>Passed</b>

Test Report No.: G0M-1308-3097-TFC249DT-V01

Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

**Possible test case verdicts:**

- neither assessed nor tested .....: N/N
- required by standard but not appl. to test object.....: N/A
- required by standard but not tested.....: N/T
- not required by standard for the test object .....: N/R
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

**Testing:**

Test Lab Temperature.....: 20 – 23 °C

Test Lab Humidity .....: 32 – 38 %

Date of receipt of test item .....: 2014-11-20

Date (s) of performance of tests .....: 2014-11-20 + 2014-11-21

Compiled by .....: Wilfried Treffke

Tested by (+ signature).....: Wilfried Treffke *W. Treffke*

(Responsible for Test)

Approved by (+ signature) .....: Christian Weber *C. Weber*

Date of issue .....: 2014-12-04

Total number of pages .....: 46

**General remarks:**

**The test results presented in this report relate only to the object tested.**

**The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.**

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

**Additional comments:**

Full Test was performed on LPM Basisstation Ser.1 with ant.1 (Planar Antenna SPA 5600/65/12/0/V) as worst case configuration.

Partial tests was carried out on the Variant LPM Basisstation Ser.1 with ant.2 (SWA-2459/360/4/45/V) and ant3 (XW-5XO-FP7)

---

## Version History

Version	Issue Date	Remarks	Revised by
01	2014-12-04	Initial Release	

---

## REPORT INDEX

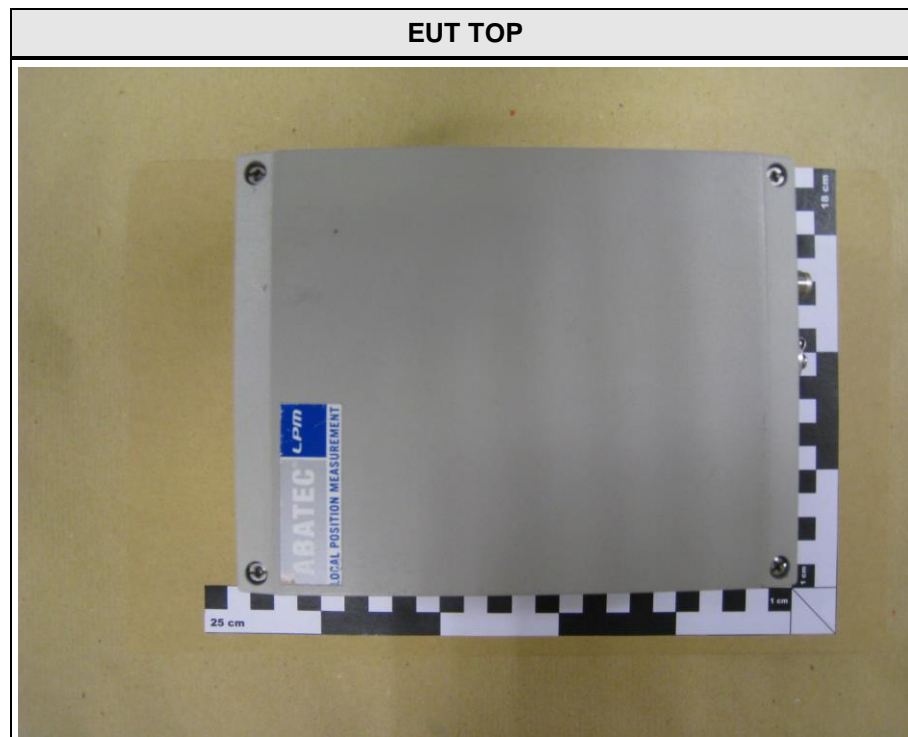
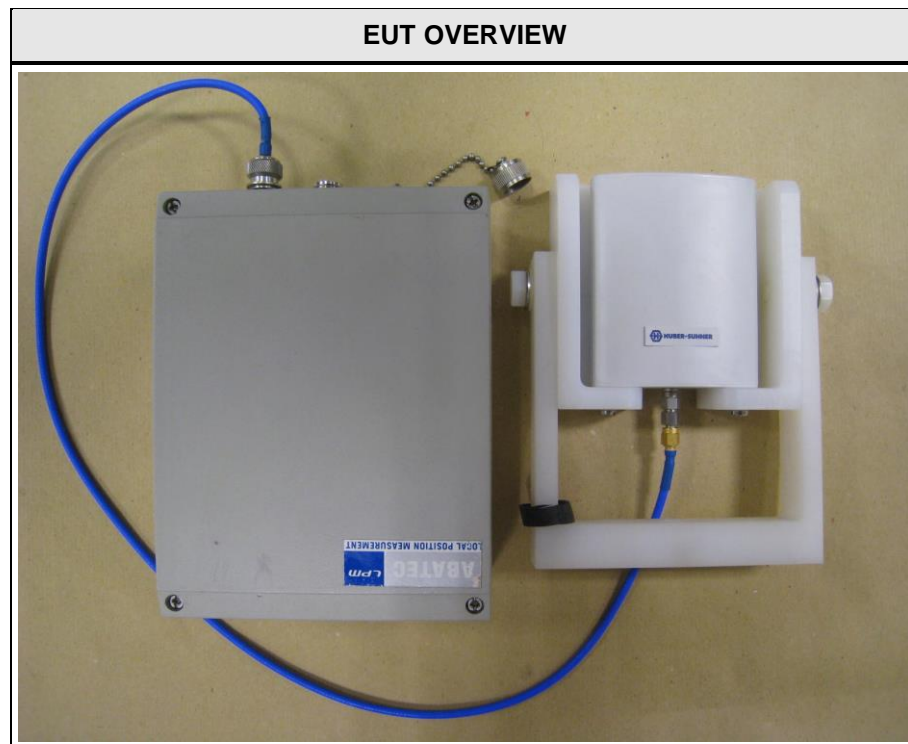
<b>1</b>	<b>EQUIPMENT (TEST ITEM) DESCRIPTION:</b>	<b>5</b>
1.1	Photos – Equipment External	7
1.2	Photos – Equipment internal	11
1.3	Photos – Test setup	13
1.4	Supporting Equipment Used During Testing	14
1.5	Test Modes	15
1.6	Test Equipment Used During Testing	16
1.7	Sample emission level calculation	17
<b>2</b>	<b>RESULT SUMMARY</b>	<b>18</b>
<b>3</b>	<b>TEST CONDITIONS AND RESULTS</b>	<b>19</b>
3.1	Test Conditions and Results – Fundamental field strength emissions	19
3.2	Test Conditions and Results – Emissions radiated outside the specified frequency band	21
3.4	Test Conditions and Results – AC power line conducted emissions	24
ANNEX A	Fundamental field strength emissions	27
ANNEX B	Transmitter radiated spurious emissions	33

## 1 Equipment (Test item) Description:

Description	Basisstation	
Model	LPM Basisstation Ser.1	
Additional Model(s)	None	
Brand Name(s)	None	
Serial number	None	
Hardware version	H2.3	
Software / Firmware version	fcc0	
FCC-ID	2AATD-PREMIUMBSV23	
IC	N/A	
Equipment type	End product	
Radio type	Transceiver	
Radio technology	custom	
Operating frequency range	5738.633 MHz	
Assigned frequency band	5725 - 5875 MHz	
Frequency range	F <sub>MID</sub>	5738.633 MHz
Spreading	None	
Modulations	2-FSK	
Number of channels	1	
Channel spacing	None	
Number of antennas	1	
Antenna 1	Type	external dedicated
	Model	Planar Antenna SPA 5600/65/12/0/V
	Manufacturer	HUBER & SUHNER
	Gain	11.5 dBi
Antenna 2	Type	external dedicated
	Model	OMNI-S Antenna SWA-2459/360/4/45/V
	Manufacturer	HUBER & SUHNER
	Gain	4.0 dBi
Antenna 3	Type	external dedicated
	Model	Flat Panel Antenna XW-5XO-FP7
	Manufacturer	Luxul
	Gain	-7.0 dBi (Circular)
Manufacturer	Abatec Group AG Oberregauerstraße 48 4844 Regau Austria	

<b>Power supply</b>	V <sub>NOM</sub>	120 VAC
	V <sub>MIN</sub>	N/A
	V <sub>MIN</sub>	N/A
<b>AC/DC-Adaptor</b>	Model	N/A
	Vendor	N/A
	Input	N/A
	Output	N/A

## 1.1 Photos – Equipment External





### EUT LABEL



### EUT CONNECTORS

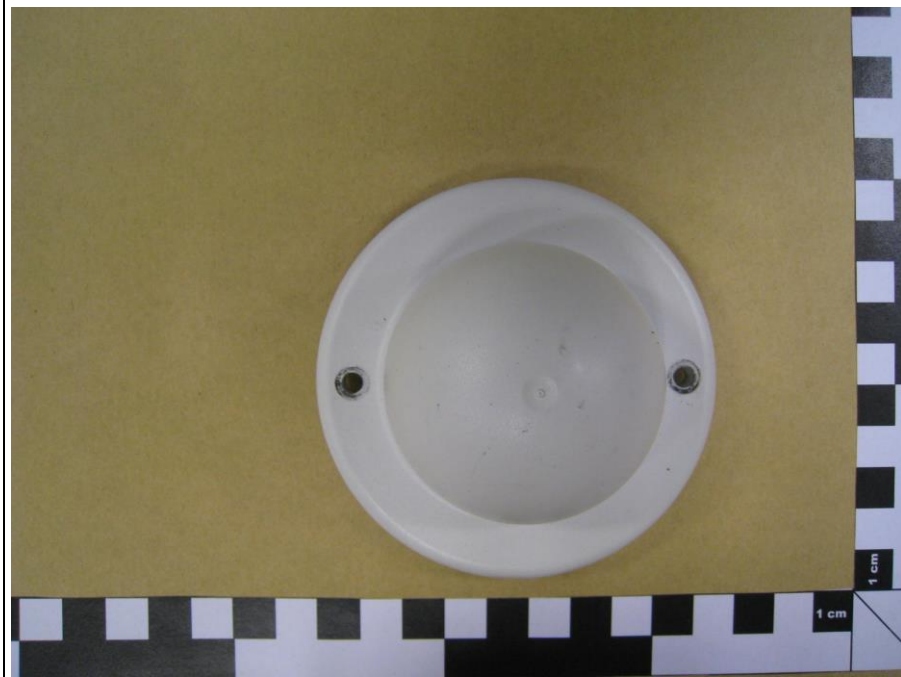




ANTENNA1 TOP



ANTENNA2 TOP



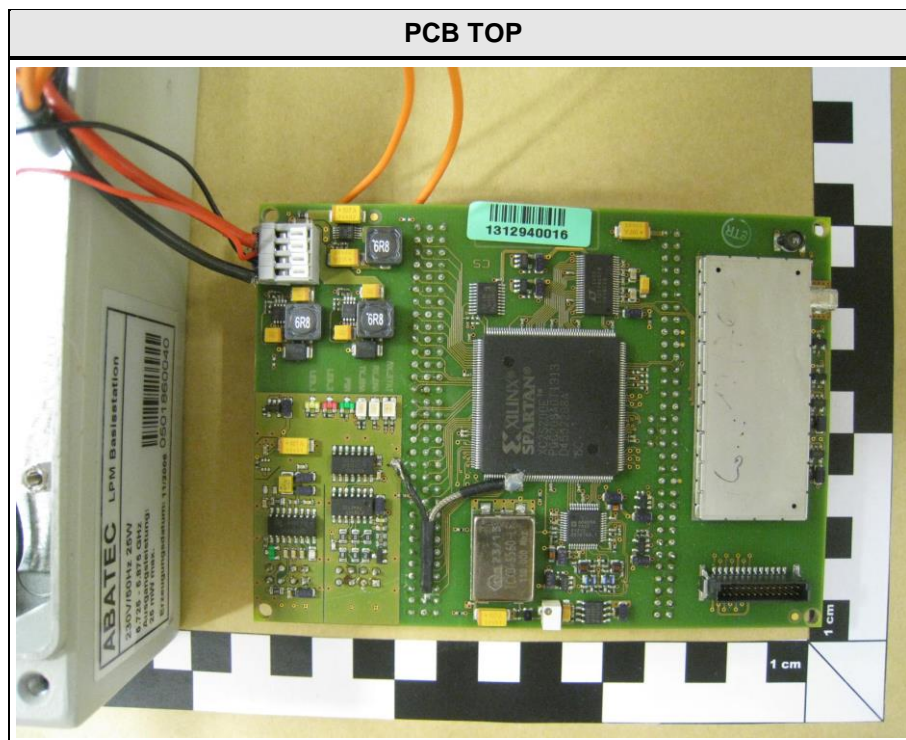
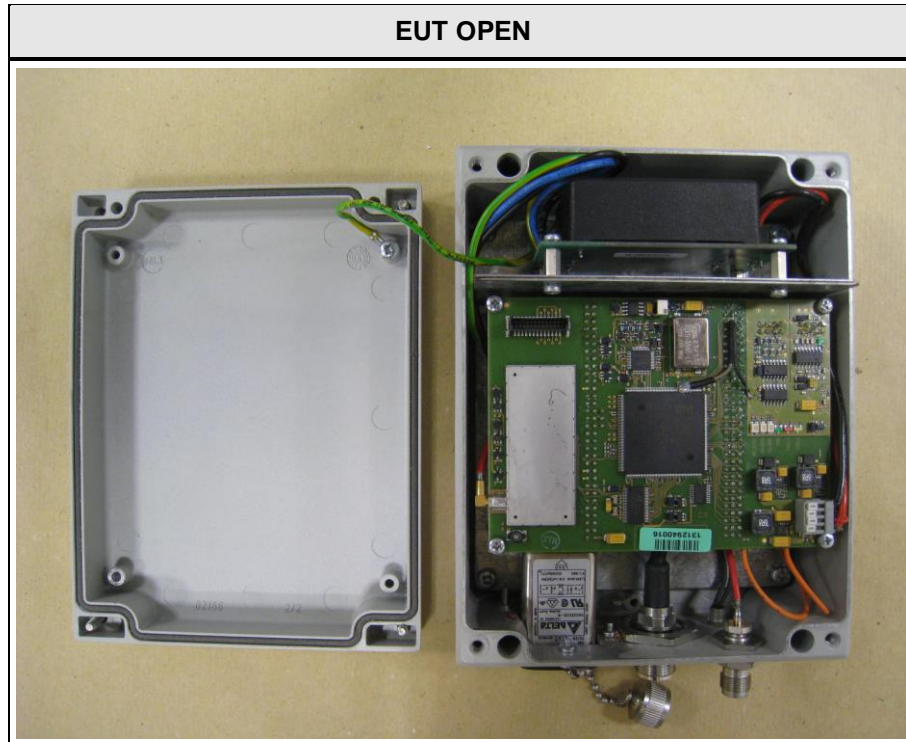
ANTENNA3 TOP



ANTENNA3 BOTTOM

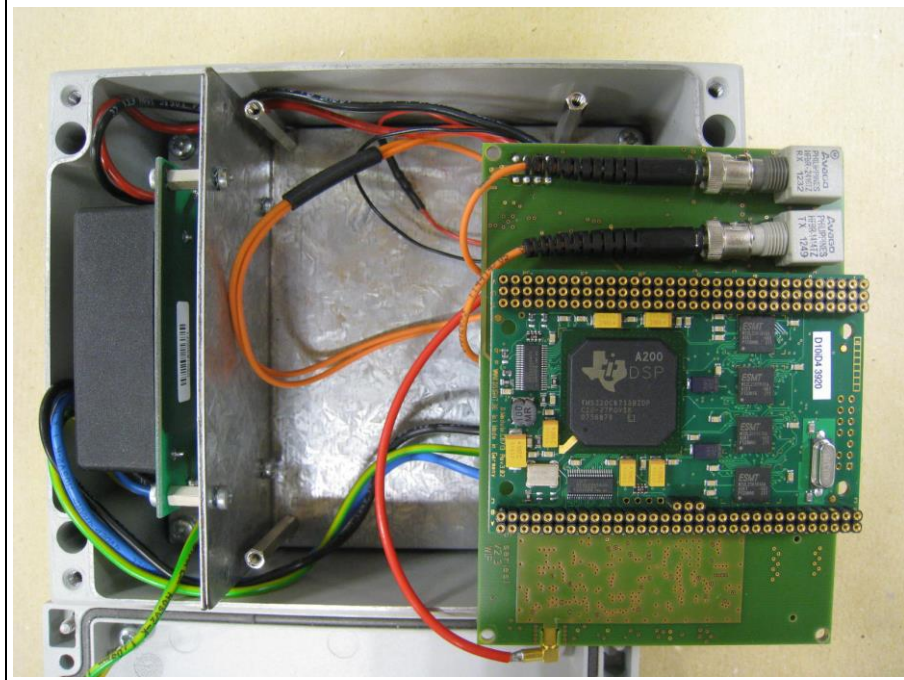


## 1.2 Photos – Equipment internal

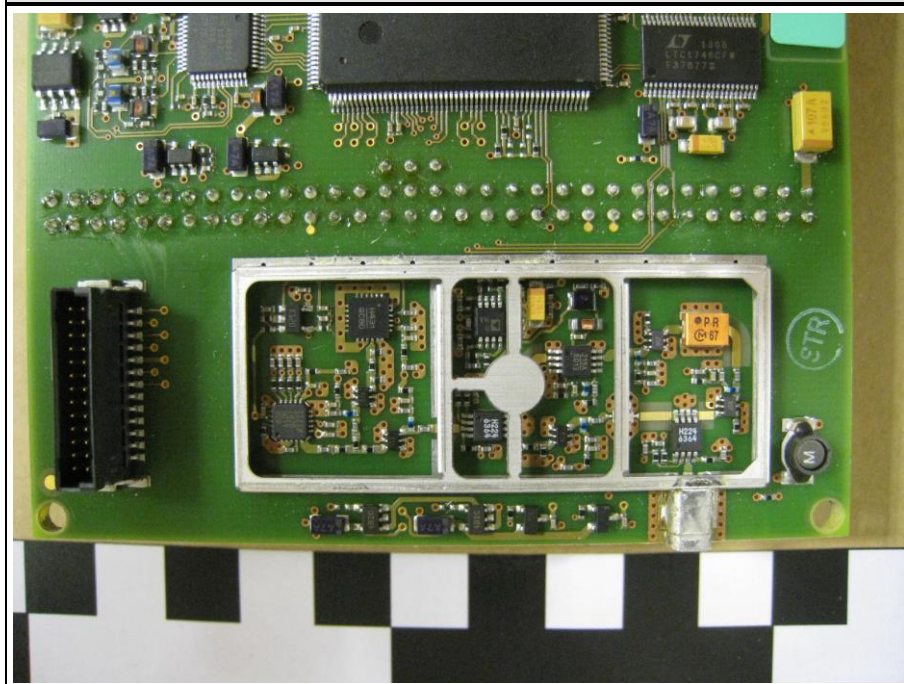




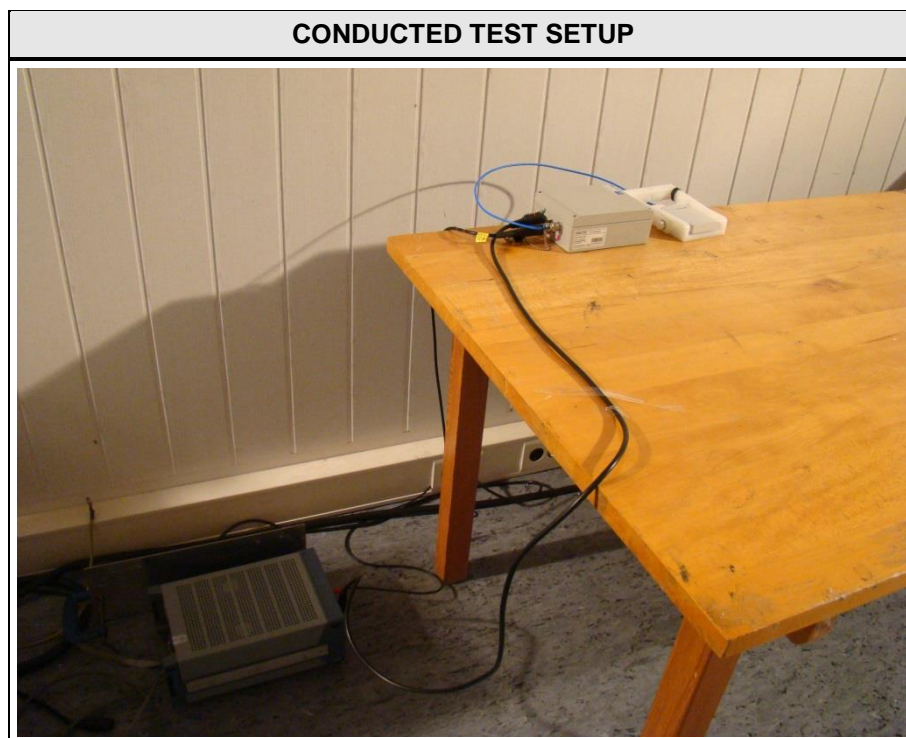
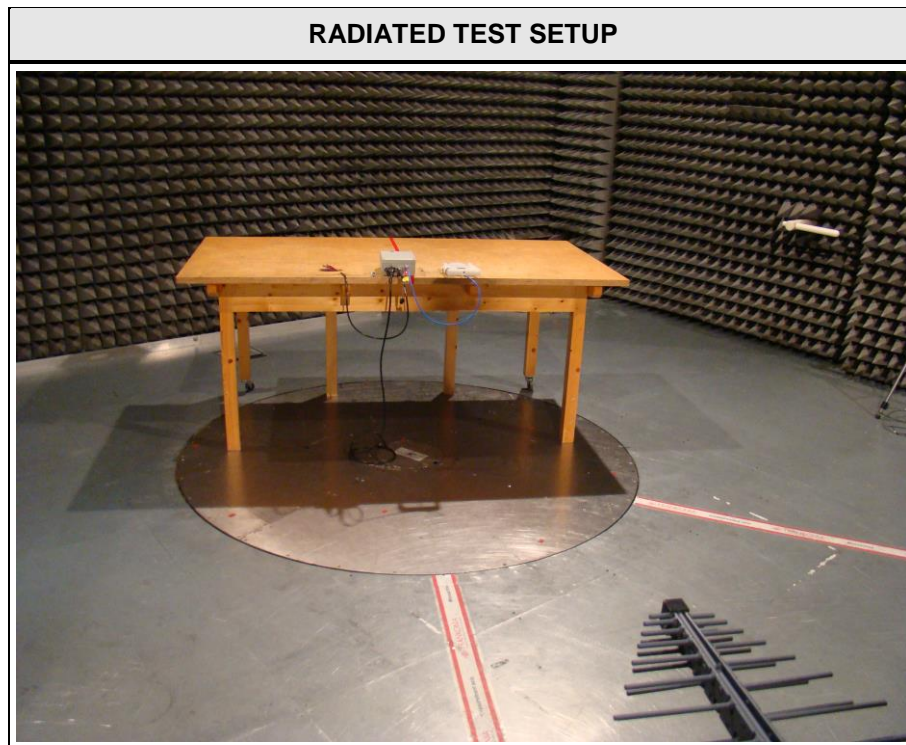
PCB BOTTOM



PCB RF-PART



### 1.3 Photos – Test setup



#### 1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
None				
<p><b>*Note:</b> Use the following abbreviations:</p> <p>AE : Auxiliary/Associated Equipment, or</p> <p>SIM : Simulator (Not Subjected to Test)</p> <p>CABL : Connecting cables</p>				

## 1.5 Test Modes

Mode #	Description	
Single	General conditions:	EUT powered by fully charged battery
	Radio conditions:	Mode = standalone transmit Modulation = 2-FSK Power level = Maximum



## 1.6 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2014.1.15

Occupied Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Field strength emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-
Spectrum Analyzer	R&S	FSIQ26	EF00242	2014-03	2015-03
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD Antenna	R&S	HL 223	EF00187	2014-03	2017-03
LPD Antenna	R&S	HL 025	EF00327	2013-02	2016-02

AC powerline conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH3-Z5	EF00036	2012-11	2014-11
EMI Test Receiver	R&S	ESCS 30	EF00295	2014-10	2015-10

## 1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dB $\mu$ V. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dB $\mu$ V/m). The FCC limits are given in units of  $\mu$ V/m. The following formula is used to convert the units of  $\mu$ V/m to dB $\mu$ V/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 * \log (\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

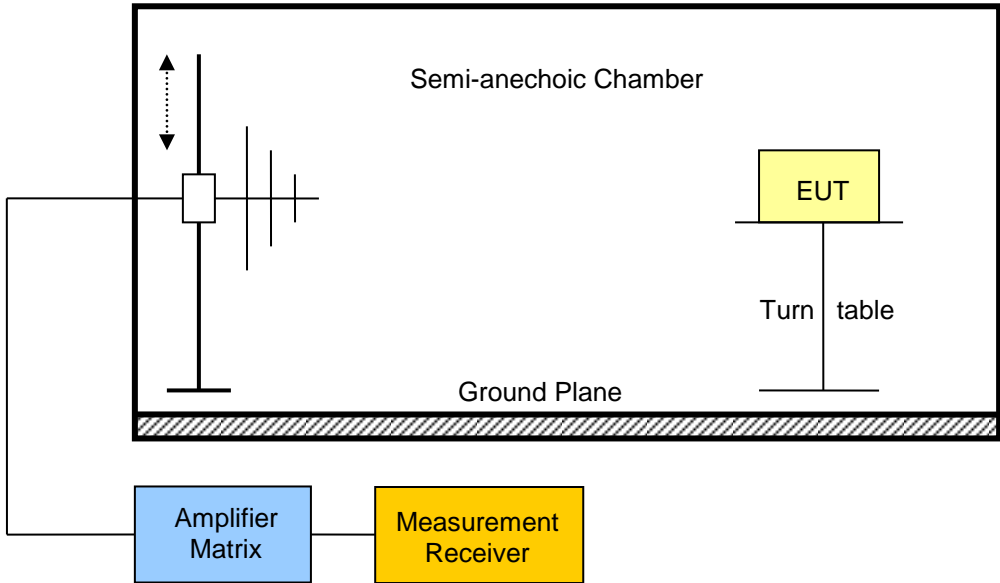
$$\begin{array}{rclcl} \text{Reading} & + & \text{AF} & = & \text{Net Reading} & : & \text{Net reading - FCC limit} & = & \text{Margin} \\ 21.5 \text{ dB}\mu\text{V} & + & 26 \text{ dB} & = & 47.5 \text{ dB}\mu\text{V/m} & : & 47.5 \text{ dB}\mu\text{V/m} - 57.0 \text{ dB}\mu\text{V/m} & = & -9.5 \text{ dB} \end{array}$$

## 2 Result Summary

FCC 47 CFR Part 15C, IC RSS-210				
Product Specific Standard Section	Requirement – Test	Reference Method	Result	Remarks
RSS-Gen 4.6.1	Occupied Bandwidth	RSS-Gen 4.6.1	N/R	Informational only
FCC 15.249(a),(c),(e) IC RSS-210 A2.9(a)	Fundamental field strength emissions	ANSI C63.4	PASS	
FCC 15.249(a),(c),(d),(e) IC RSS-210 A2.9(a),(b)	Emission radiated outside the specified frequency band	ANSI C63.4	PASS	
IC RSS-210 Section 2.3 IC RSS-Gen 4.10 6.1	Receiver radiated spurious emissions	ANSI C63.4	N/R	
FCC § 15.207 IC RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	PASS	
Remarks:				

### 3 Test Conditions and Results

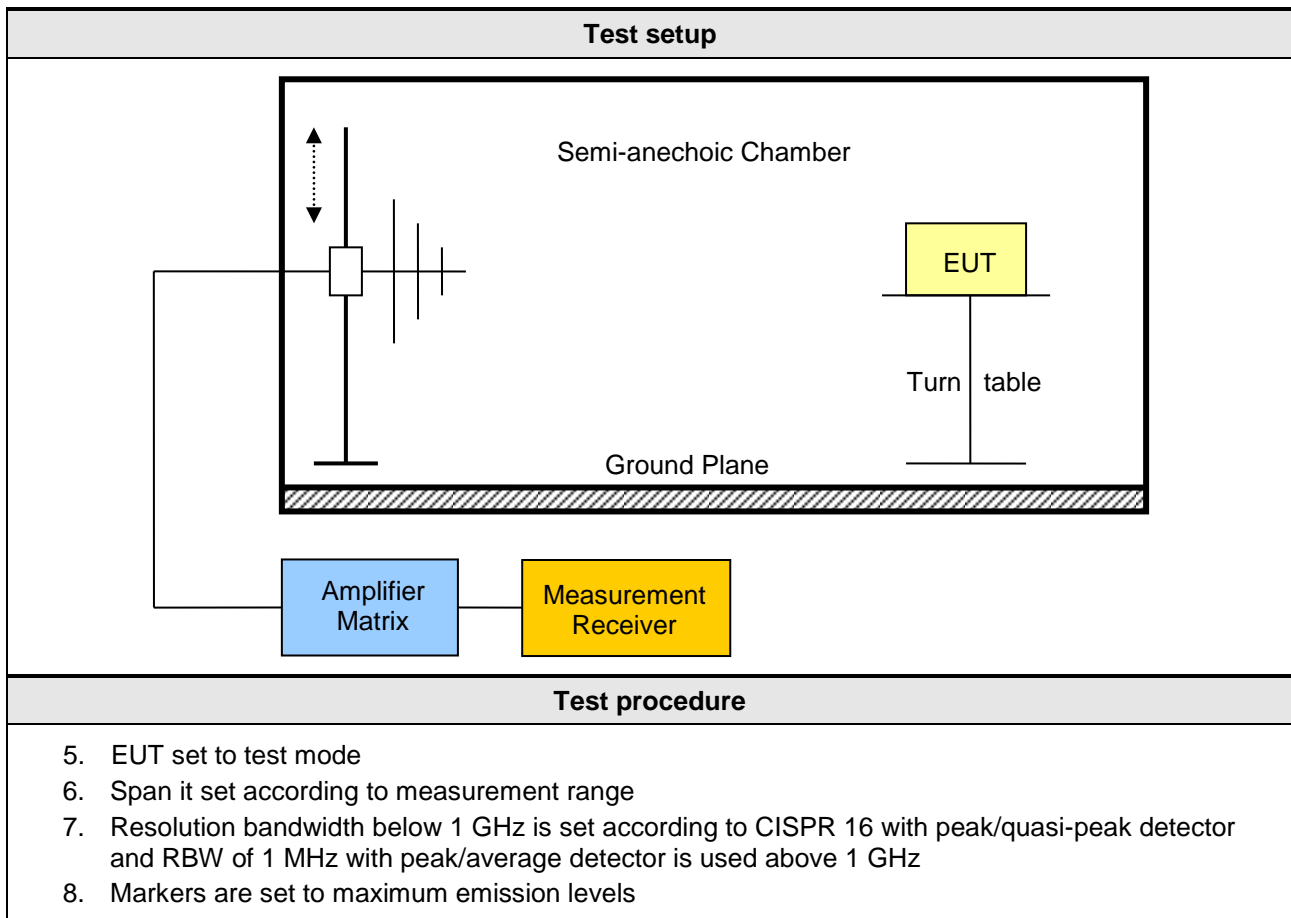
#### 3.1 Test Conditions and Results – Fundamental field strength emissions

Field strength emissions acc. FCC 47 CFR 15.249 / IC RSS-210				Verdict: PASS
Test according referenced standards	Reference Method			
	FCC 15.249(a),(c),(e) / IC RSS-210 A2.9(a)			
Test according to measurement reference	Reference Method			
	ANSI C63.4			
Test frequency range	Tested frequencies			
	F <sub>MID</sub>			
EUT test mode	Single			
Limits				
Frequency range [MHz]	Detector	Limit [mV/m]	Limit [dBµV/m]	Limit Distance [m]
902 – 928	Quasi-Peak	50	94	3
2400 – 2483.5	Average	50	94	3
5725 - 5875	Average	50	94	3
FCC 15.249(e) : for frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.				
Below 1GHz a CISPR quasi-peak detector is used.				
Test setup				
<div></div>				

Test procedure								
<ol style="list-style-type: none"> <li>1. EUT set to test mode</li> <li>2. Span it set according to measurement range</li> <li>3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz</li> <li>4. Markers are set to maximum emission levels</li> </ol>								
Test results								
Channel / Antenna	Frequency [MHz]	Emission [MHz]	Level [dBμV/m]	Detector	Pol.	Limit [dBμV/m]	Limit distance [m]*	Margin [dB]
F <sub>MID</sub> / Ant.1	5738.633	5738	92.26	avg	ver	94.00	3	-01.74
F <sub>MID</sub> / Ant.1	5738.633	5738	76.66	avg	hor	94.00	3	-17.34
F <sub>MID</sub> / Ant.2	5738.633	5738	83.15	avg	ver	94.00	3	-10.85
F <sub>MID</sub> / Ant.2	5738.633	5738	84.46	avg	hor	94.00	3	-09.54
F <sub>MID</sub> / Ant.3	5738.633	5738	87.08	avg	ver	94.00	3	-06.92
F <sub>MID</sub> / Ant.3	5738.633	5738	88.69	avg	hor	94.00	3	-05.31
Comments: * Physical distance between EUT and measurement antenna.								

### 3.2 Test Conditions and Results – Emissions radiated outside the specified frequency band

Radiated out-of-band band emissions acc. FCC 47 CFR 15.249 / IC RSS-210				Verdict: PASS
Test according referenced standards		Reference Method		
		FCC 15.249(a),(c),(d),(e) / IC RSS-210 A2.9(a),(b)		
Test according to measurement reference		Reference Method		
		ANSI C63.4		
Test frequency range		Tested frequencies		
		30 MHz – 10 <sup>th</sup> hamonic		
EUT test mode		Single		
Limits - Harmonics				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
902 – 928	Quasi-Peak	500	54	3
2400 – 2483.5	Average	500	54	3
5725 - 5875	Average	500	54	3
Limits - General				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
FCC 15.249(e) : for frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.				
Except the higher order harmonics, emission radiated outside the specified frequency band shall be attenuated by at least 50 dB below the level of the fundamental or to the general field strength limits listed in 15.209 / RSS-Gen, whichever is less stringent.				





Test results								
Channel	Frequency [MHz]	Emission [MHz]	Level [dBμV/m]	Detector	Pol.	Limit [dBμV/m]	Limit distance [m]*	Margin [dB]
F <sub>MID</sub>	5738.633	249.6	27.75	pk	hor	46.00	3	-18.25
F <sub>MID</sub>	5738.633	336	27.08	pk	ver	46.00	3	-18.92
F <sub>MID</sub>	5738.633	699.2	33.25	pk	hor	46.00	3	-12.75
F <sub>MID</sub>	5738.633	699.2	34.17	pk	ver	46.00	3	-11.83
F <sub>MID</sub>	5738.633	769.6	33.92	pk	hor	46.00	3	-12.08
F <sub>MID</sub>	5738.633	769.6	31.70	pk	ver	46.00	3	-14.30
F <sub>MID</sub>	5738.633	899.2	38.04	pk	hor	46.00	3	-07.96
F <sub>MID</sub>	5738.633	899.2	37.09	pk	ver	46.00	3	-08.91
F <sub>MID</sub>	5738.633	948.8	33.39	pk	hor	46.00	3	-12.61
F <sub>MID</sub>	5738.633	948.8	29.34	pk	ver	46.00	3	-16.66
F <sub>MID</sub>	5738.633	1297	47.64	pk	hor	74.00	3	-26.36
F <sub>MID</sub>	5738.633	5722	56.62	pk	hor	74.00	3	-17.38
F <sub>MID</sub>	5738.633	5722	72.75	pk	ver	74.00	3	-01.25
F <sub>MID</sub>	5738.633	5725	51.15	pk	hor	74.00	3	-22.85
F <sub>MID</sub>	5738.633	5725	31.56	avg	hor	54.00	3	-22.44
F <sub>MID</sub>	5738.633	5725	58.96	pk	ver	74.00	3	-15.04
F <sub>MID</sub>	5738.633	5725	31.64	avg	ver	54.00	3	-22.36
F <sub>MID</sub>	5738.633	11472	48.95	pk	hor	74.00	1	-25.05
F <sub>MID</sub>	5738.633	11488	51.26	pk	ver	74.00	1	-22.74
F <sub>MID</sub>	5738.633	17508	45.60	pk	hor	74.00	1	-28.40
Comments: * Physical distance between EUT and measurement antenna.								

### 3.4 Test Conditions and Results – AC power line conducted emissions

Power line conducted emissions acc. FCC 47 CFR 15.207 / IC RSS-Gen				Verdict: PASS	
Test according referenced standards		Reference Method			
		ANSI C63.4			
Fully configured sample scanned over the following frequency range		Frequency range			
		0.15 MHz to 30 MHz			
Points of Application		Application Interface			
AC Mains		LISN			
EUT test mode		AC-Powerline			
Limits and results					
Frequency [MHz]	Quasi-Peak [dBµV]	Result	Average [dBµV]	Result	
0.15 to 5	66 to 56*	PASS	56 to 46*	PASS	
0.5 to 5	56	PASS	46	PASS	
5 to 30	60	PASS	50	PASS	
Comments:					
* Limit decreases linearly with the logarithm of the frequency.					

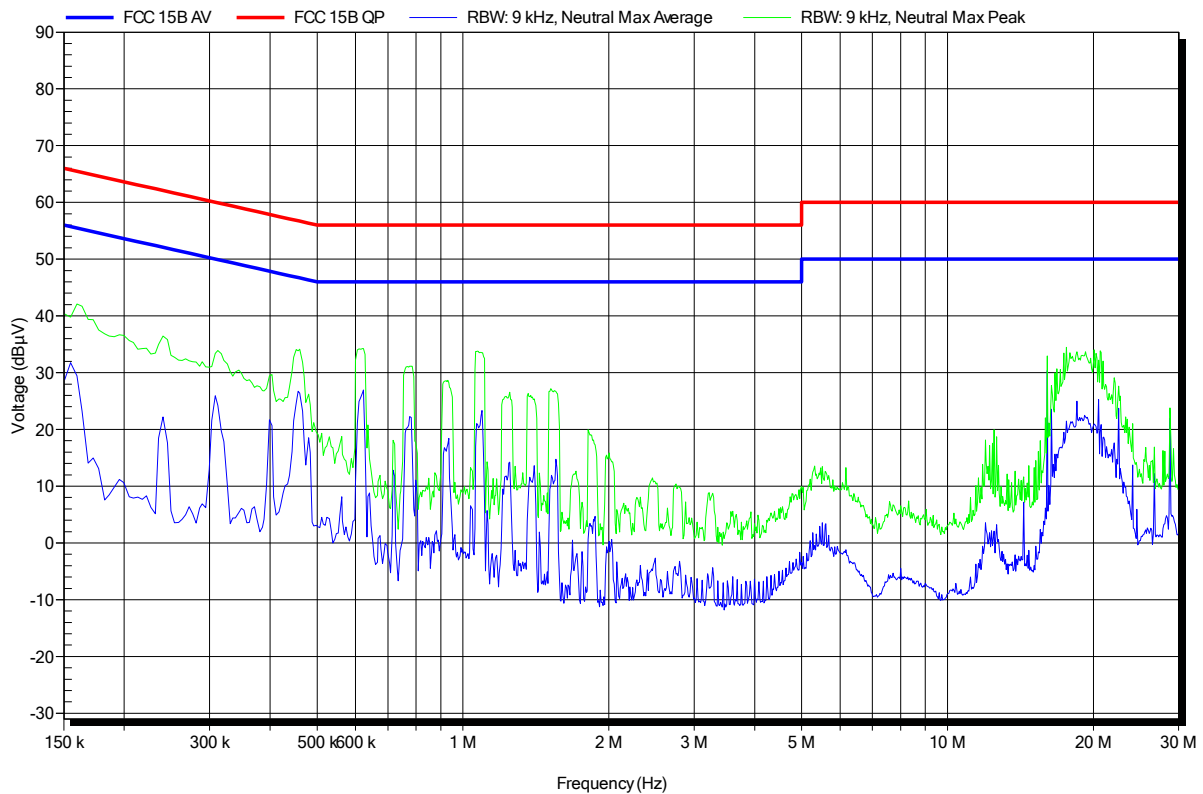
## Conducted Emissions

### EMI voltage test in the ac-mains according to FCC 15B

Project number: G0M-1308-3097

Manufacturer: inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Pflug  
 Test Conditions: Tnom: 24°C, Unom: 120VAC  
 LISN: ESH2-Z5 N  
 Mode: TX  
 Test Date: 2014-11-21  
 Note:

Index 5



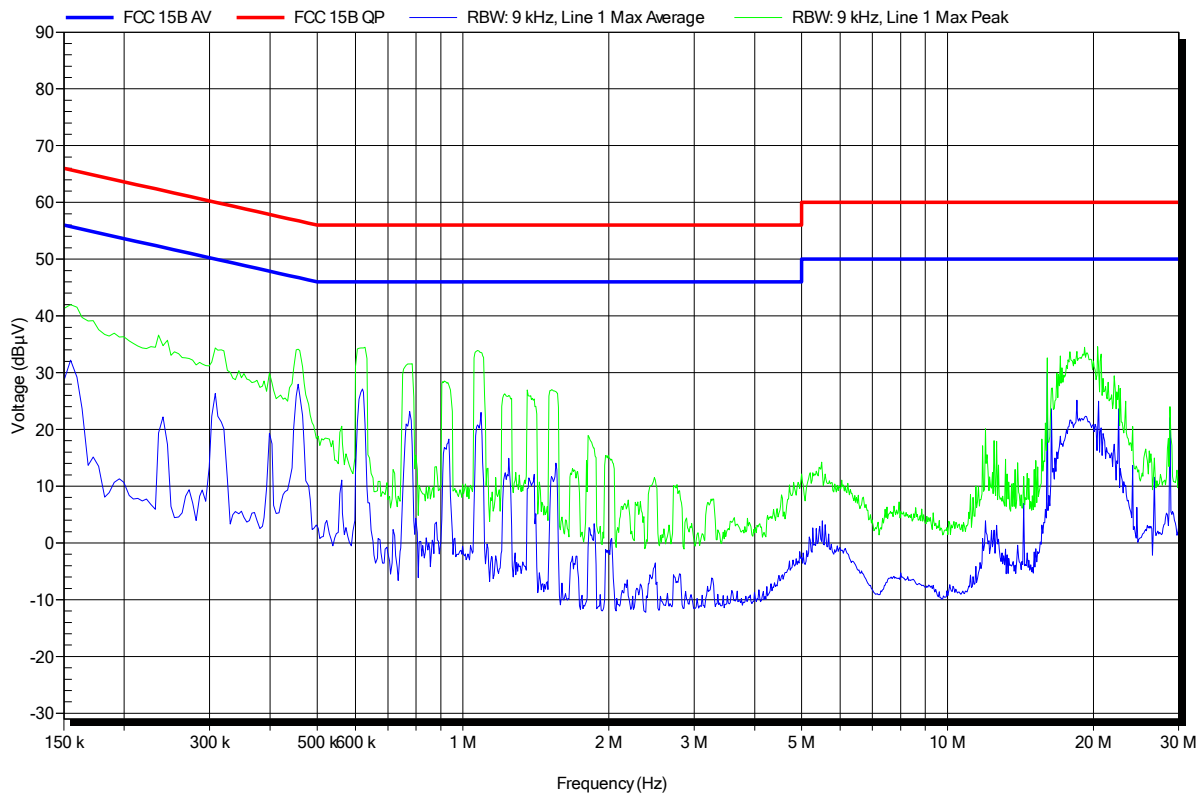
### Conducted Emissions

#### EMI voltage test in the ac-mains according to FCC 15B

Project number: G0M-1308-3097

Manufacturer: inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: ee  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Pflug  
 Test Conditions: Tnom: 24°C, Unom: 120VAC  
 LISN: ESH2-Z5 L  
 Mode: TX  
 Test Date: 2014-11-21  
 Note:

Index 6



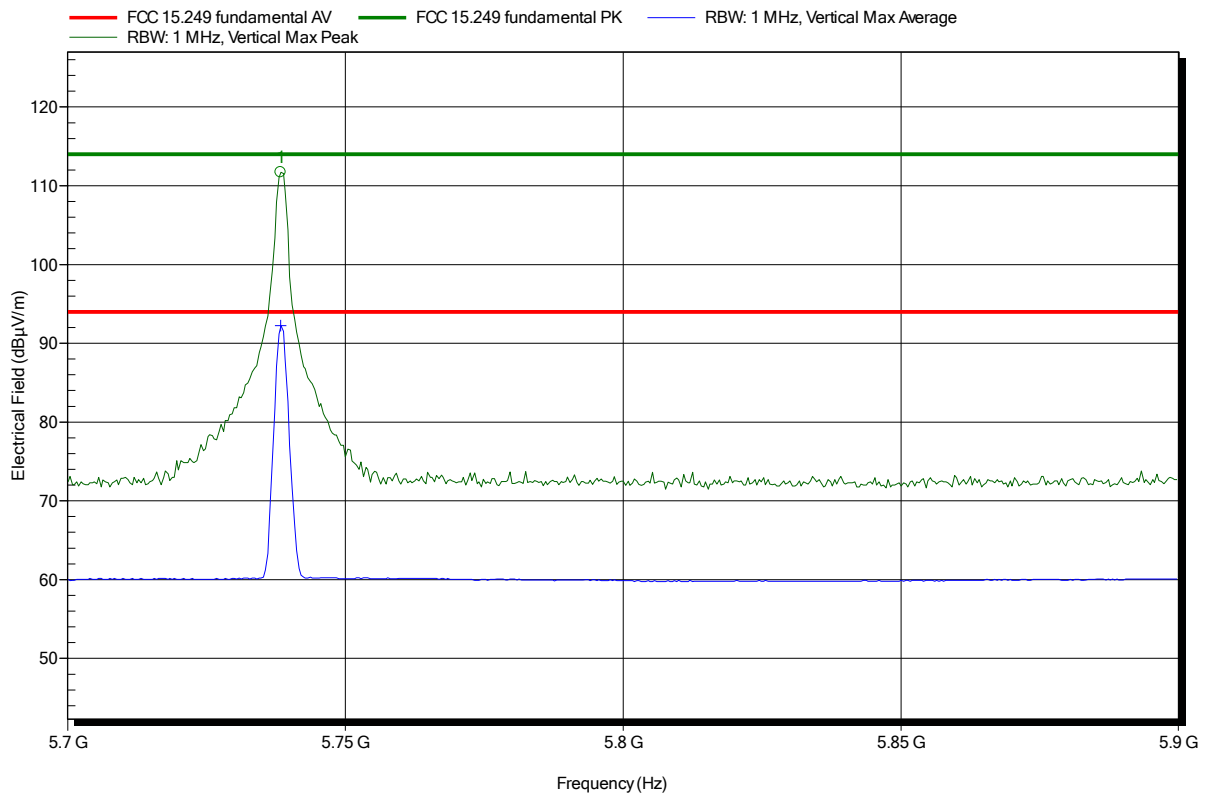
## ANNEX A Fundamental field strength emissions

### Fundamental field strength emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 69



Test Report No.: G0M-1308-3097-TFC249DT-V01

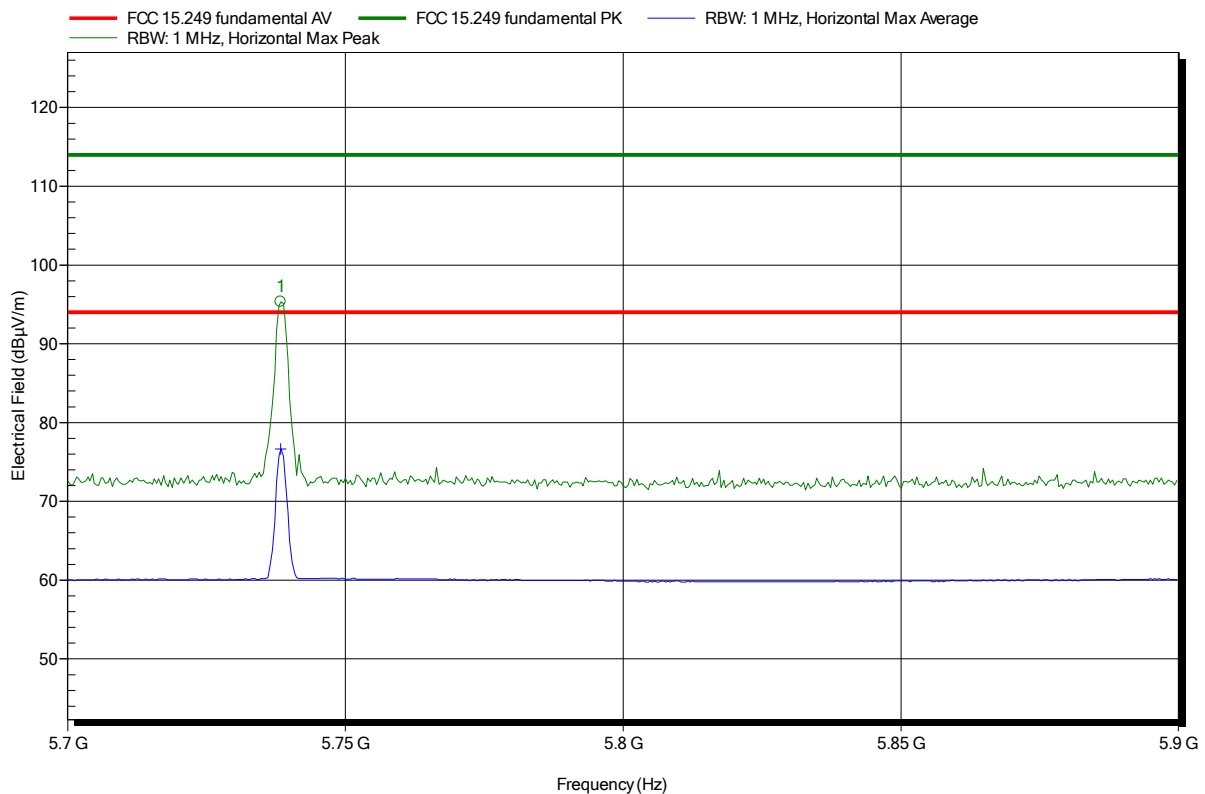
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Fundamental field strength emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Horizontal  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 70



Frequency 5.738 GHz	Peak 95.36 dBµV/m	Peak Limit 114 dBµV/m	Peak Difference -18.64 dB	Peak Status Pass
Frequency 5.738 GHz	Average 76.66 dBµV/m	Average Limit 94 dBµV/m	Average Difference -17.34 dB	Average Status Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

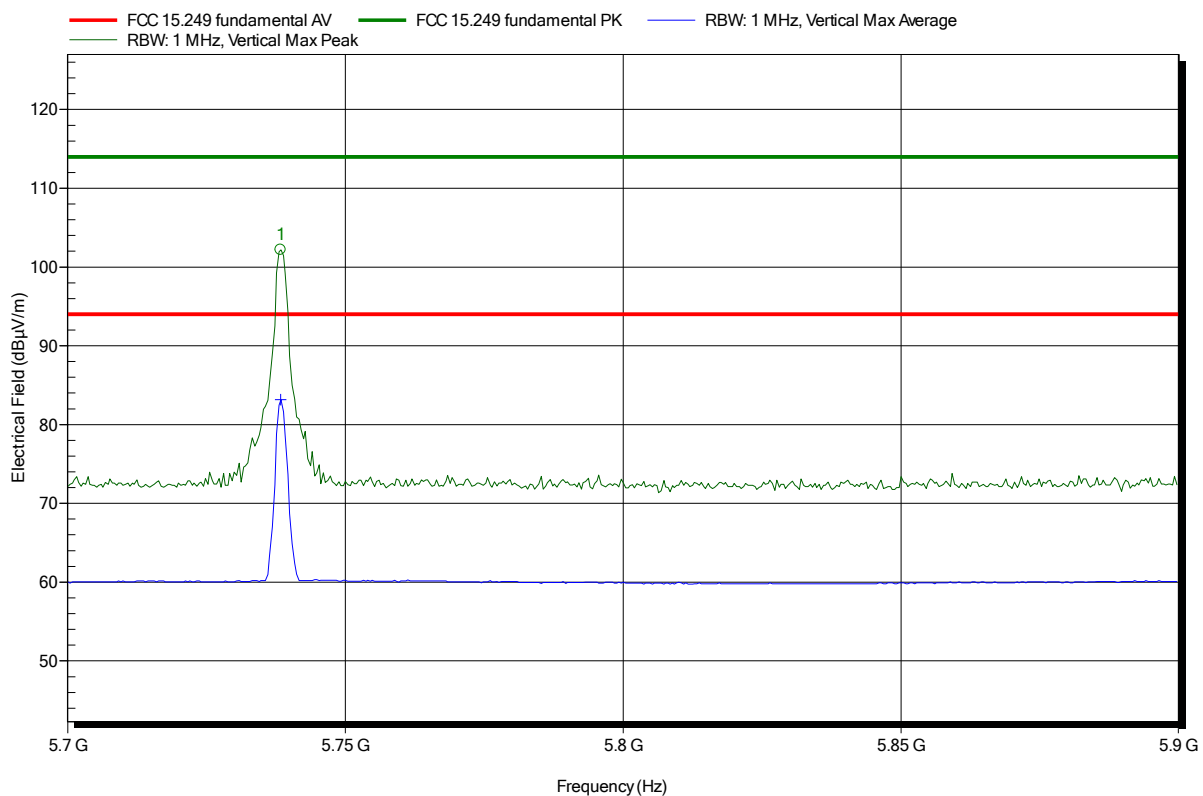
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Fundamental field strength emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SWA -2459/360/4/45/V  
 Test Date: 2014-11-20  
 Note:

Index 78



Frequency 5.738 GHz	Peak 102.19 dBµV/m	Peak Limit 114 dBµV/m	Peak Difference -11.81 dB	Peak Status Pass
Frequency 5.738 GHz	Average 83.15 dBµV/m	Average Limit 94 dBµV/m	Average Difference -10.85 dB	Average Status Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

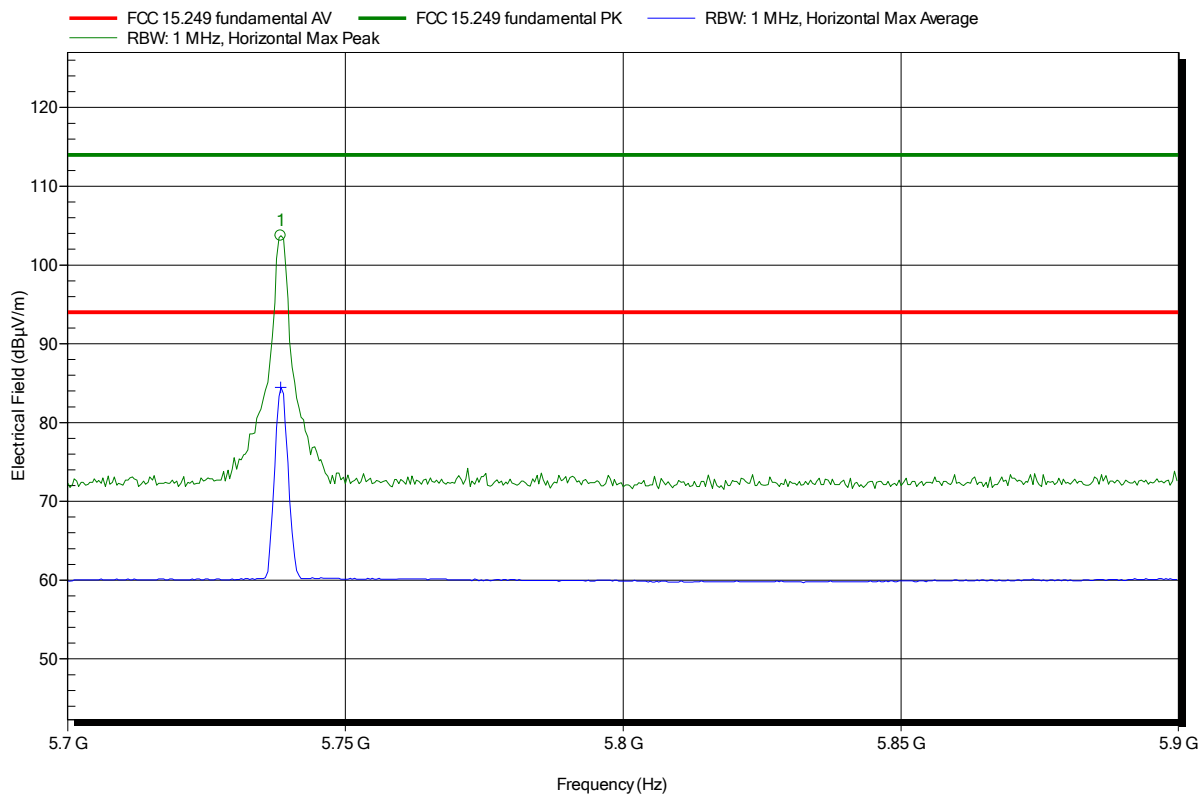


## Fundamental field strength emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Horizontal  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SWA -2459/360/4/45/V  
 Test Date: 2014-11-20  
 Note:

Index 80



Frequency 5.738 GHz	Peak 103.74 dBµV/m	Peak Limit 114 dBµV/m	Peak Difference -10.26 dB	Peak Status Pass
Frequency 5.738 GHz	Average 84.46 dBµV/m	Average Limit 94 dBµV/m	Average Difference -9.54 dB	Average Status Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

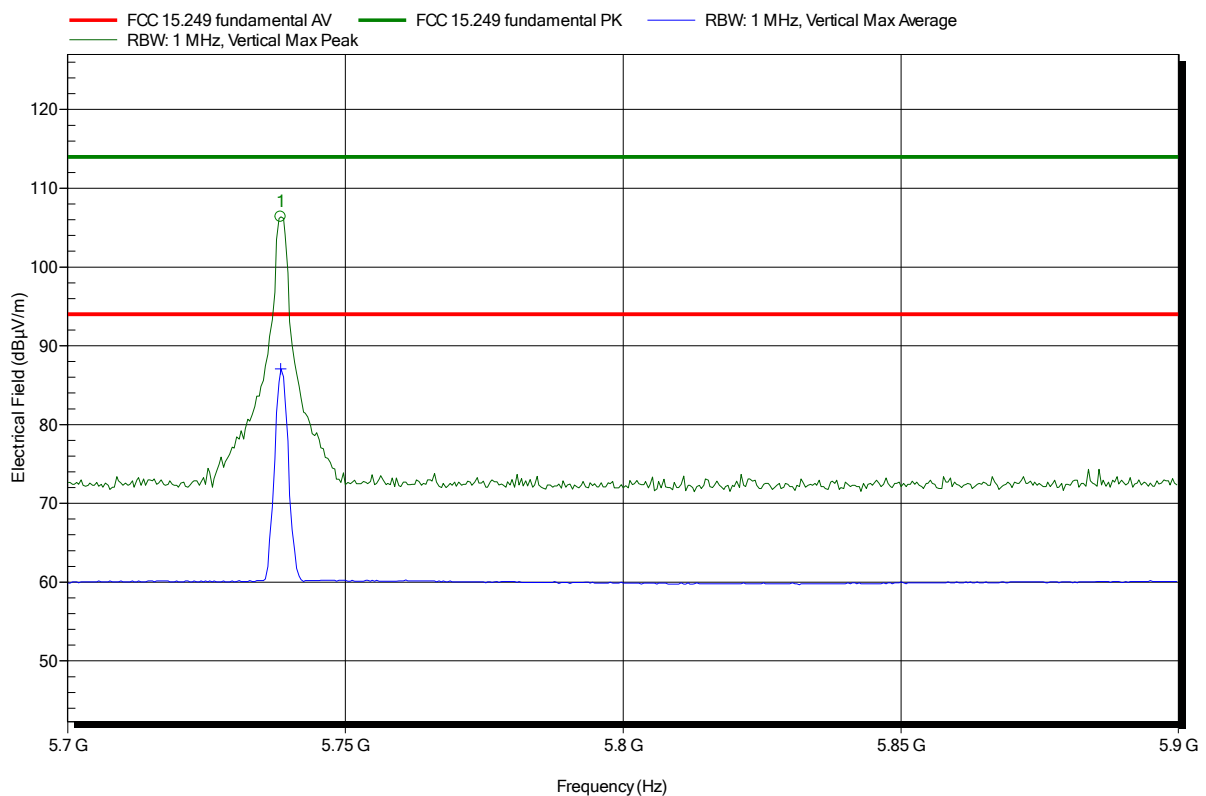
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Fundamental field strength emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: XW-5XO-FP7  
 Test Date: 2014-11-20  
 Note:

Index 81



Frequency 5.738 GHz	Peak 106.39 dBµV/m	Peak Limit 114 dBµV/m	Peak Difference -7.61 dB	Peak Status Pass
Frequency 5.738 GHz	Average 87.08 dBµV/m	Average Limit 94 dBµV/m	Average Difference -6.92 dB	Average Status Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

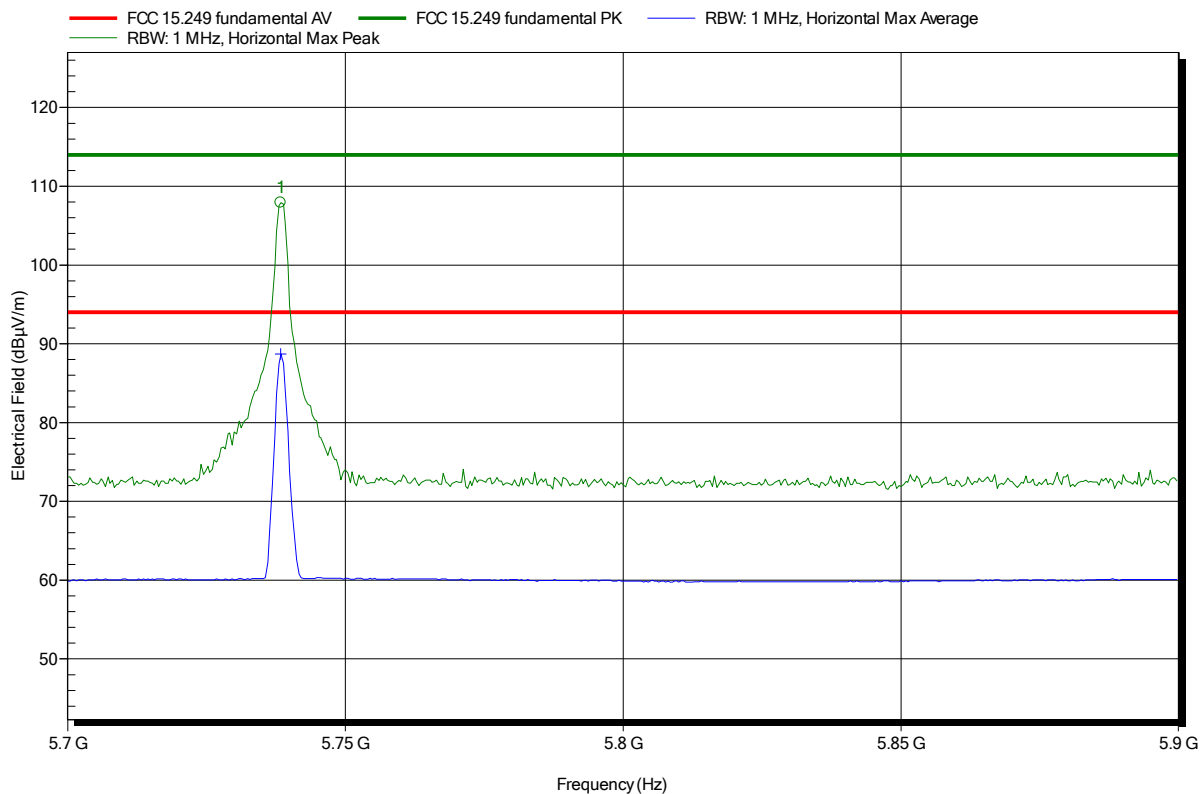
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Fundamental field strength emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
EUT Name: Basisstation  
Model: LPM Basisstation Ser.1  
Test Site: Eurofins Product Service GmbH  
Operator: Mr. Treffke  
Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
Antenna: Schwarzbeck BBHA 9120D, Horizontal  
Measurement distance: 3 m  
Mode: TX; FSK-Trigger, ant: XW-5XO-FP7  
Test Date: 2014-11-20  
Note:

Index 82



Frequency 5.738 GHz	Peak 107.94 dBμV/m	Peak Limit 114 dBμV/m	Peak Difference -6.06 dB	Peak Status Pass
Frequency 5.738 GHz	Average 88.69 dBμV/m	Average Limit 94 dBμV/m	Average Difference -5.31 dB	Average Status Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

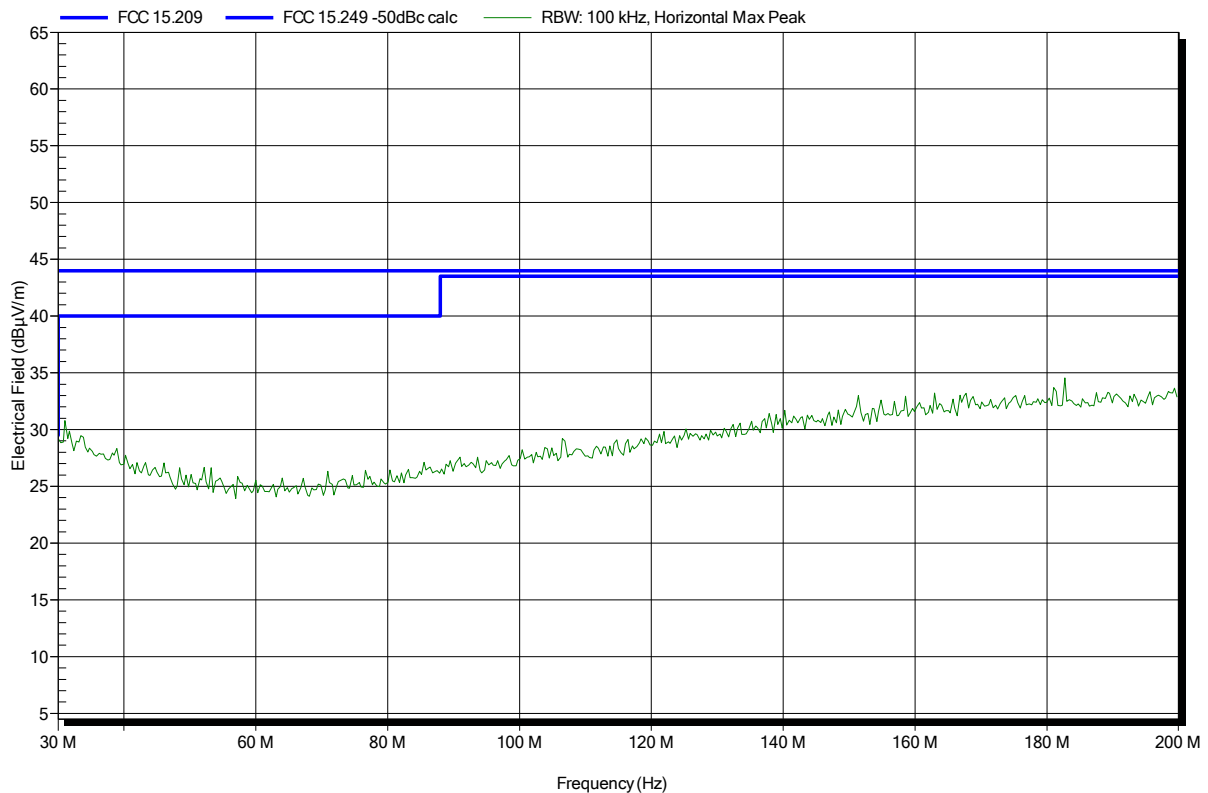
## ANNEX B Transmitter radiated spurious emissions

### Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant:	Inmotiotec GmbH
EUT Name:	Basisstation
Model:	LPM Basisstation Ser.1
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 V AC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.
Test Date:	2014-11-20
Note:	

Index 73

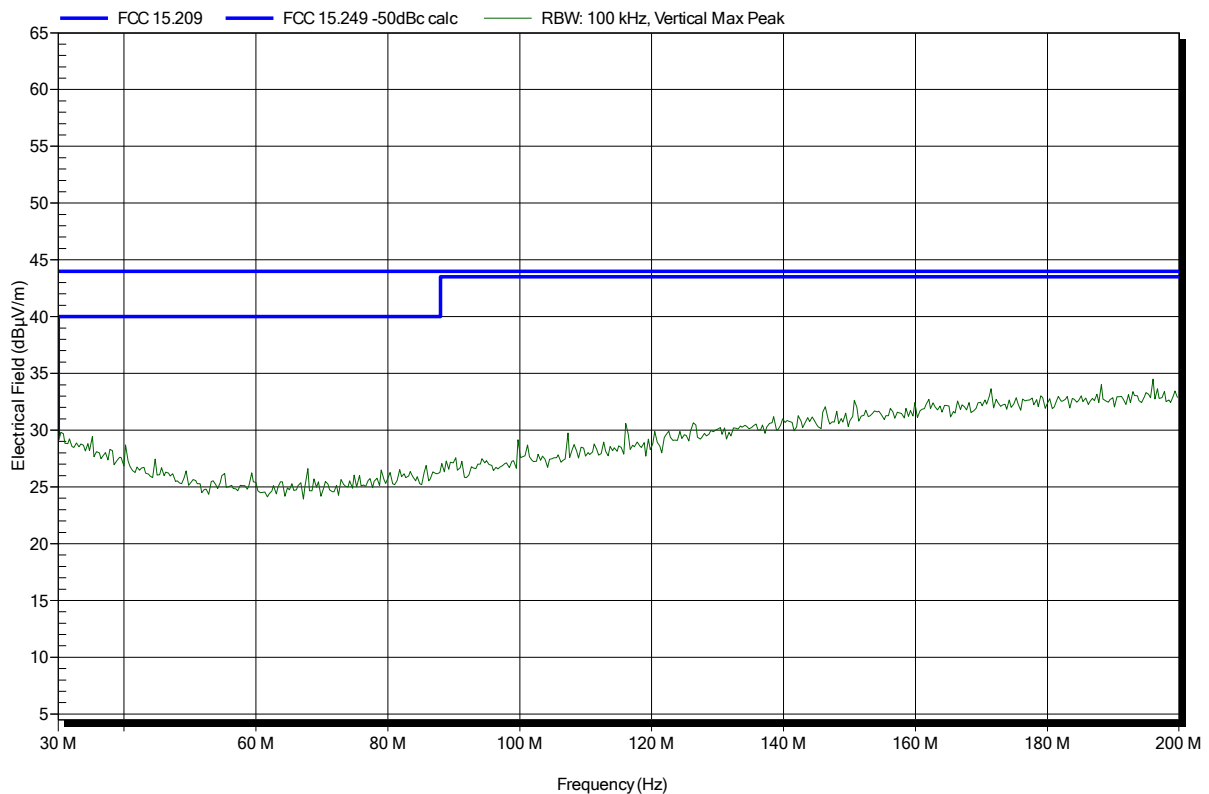


## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Rohde & Schwarz HK 116, Vertical  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 74

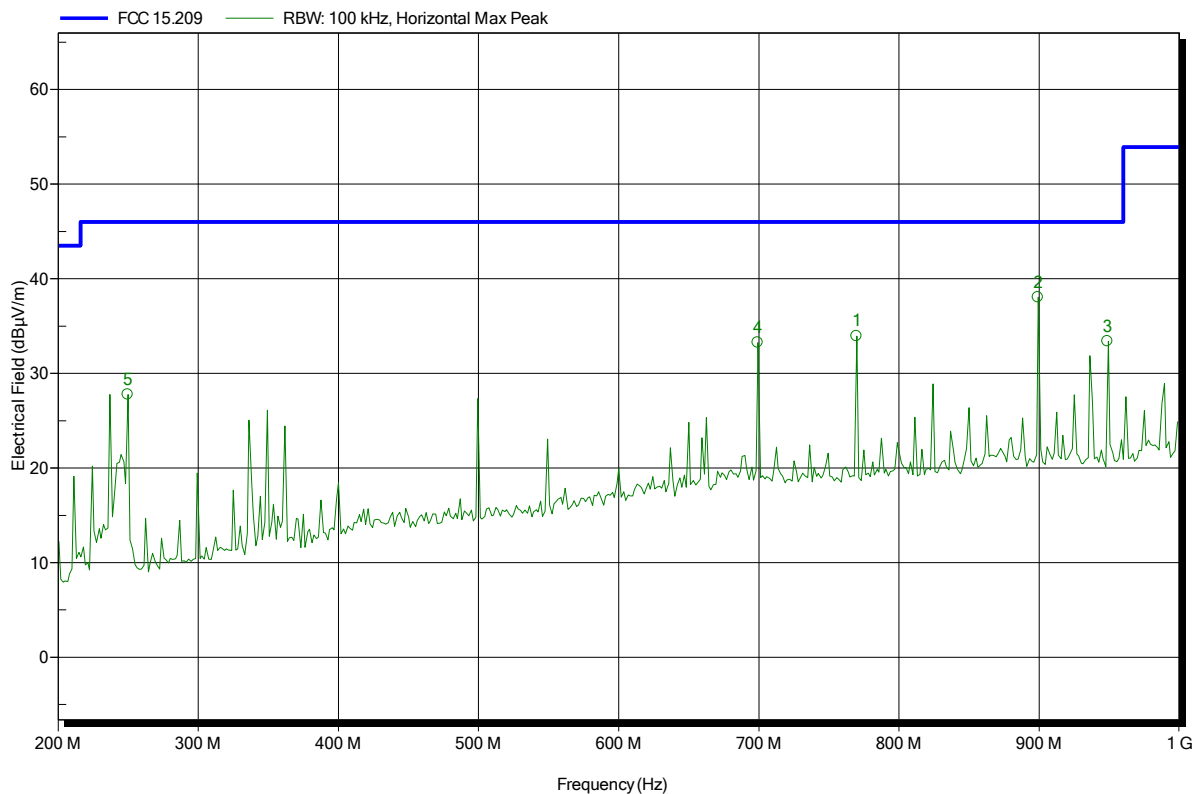


## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
EUT Name: Basisstation  
Model: LPM Basisstation Ser.1  
Test Site: Eurofins Product Service GmbH  
Operator: Mr. Treffke  
Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
Antenna: Rohde & Schwarz HL 223, Horizontal  
Measurement distance: 3 m  
Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
Test Date: 2014-11-20  
Note:

Index 71



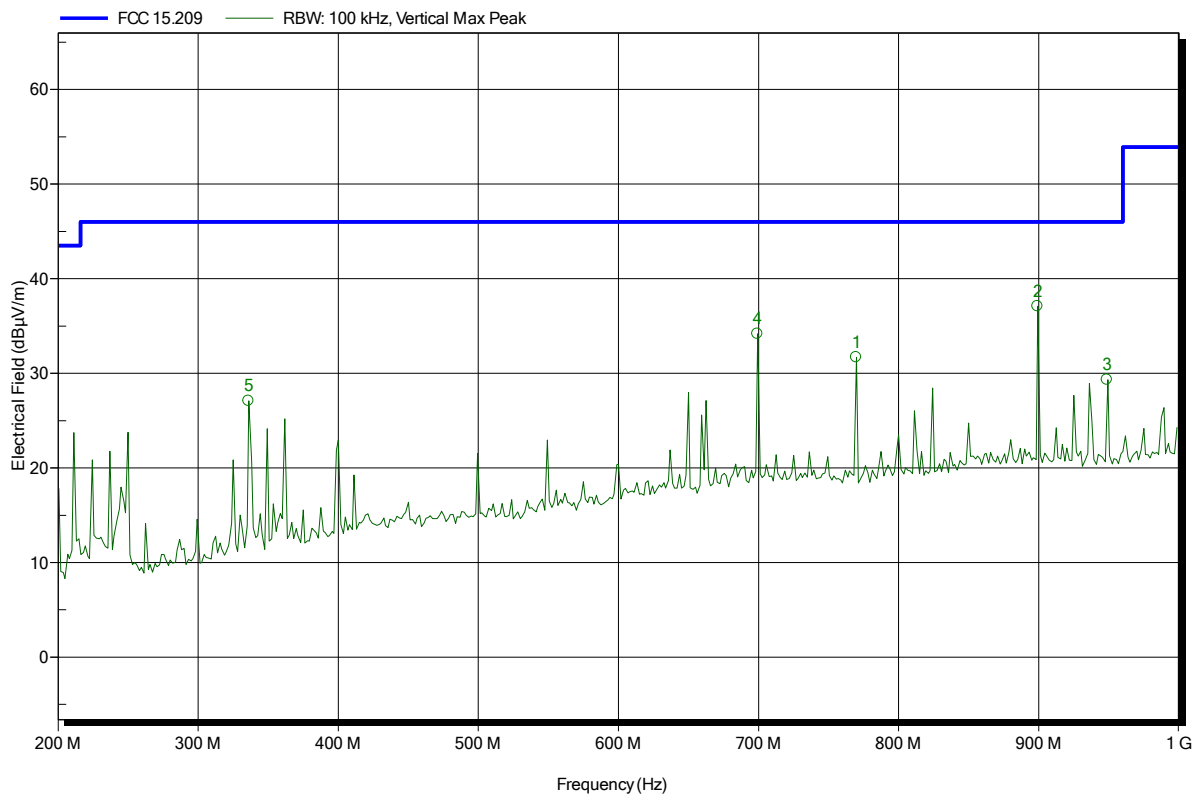
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
249.6 MHz	27.75 dBµV/m	46 dBµV/m	-18.25 dB	Pass
699.2 MHz	33.25 dBµV/m	46 dBµV/m	-12.75 dB	Pass
769.6 MHz	33.92 dBµV/m	46 dBµV/m	-12.08 dB	Pass
899.2 MHz	38.04 dBµV/m	46 dBµV/m	-7.96 dB	Pass
948.8 MHz	33.39 dBµV/m	46 dBµV/m	-12.61 dB	Pass

## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
EUT Name: Basisstation  
Model: LPM Basisstation Ser.1  
Test Site: Eurofins Product Service GmbH  
Operator: Mr. Treffke  
Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
Antenna: Rohde & Schwarz HL 223, Vertical  
Measurement distance: 3 m  
Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
Test Date: 2014-11-20  
Note:

Index 72



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
336 MHz	27.08 dBµV/m	46 dBµV/m	-18.92 dB	Pass
699.2 MHz	34.17 dBµV/m	46 dBµV/m	-11.83 dB	Pass
769.6 MHz	31.7 dBµV/m	46 dBµV/m	-14.3 dB	Pass
899.2 MHz	37.09 dBµV/m	46 dBµV/m	-8.91 dB	Pass
948.8 MHz	29.34 dBµV/m	46 dBµV/m	-16.66 dB	Pass

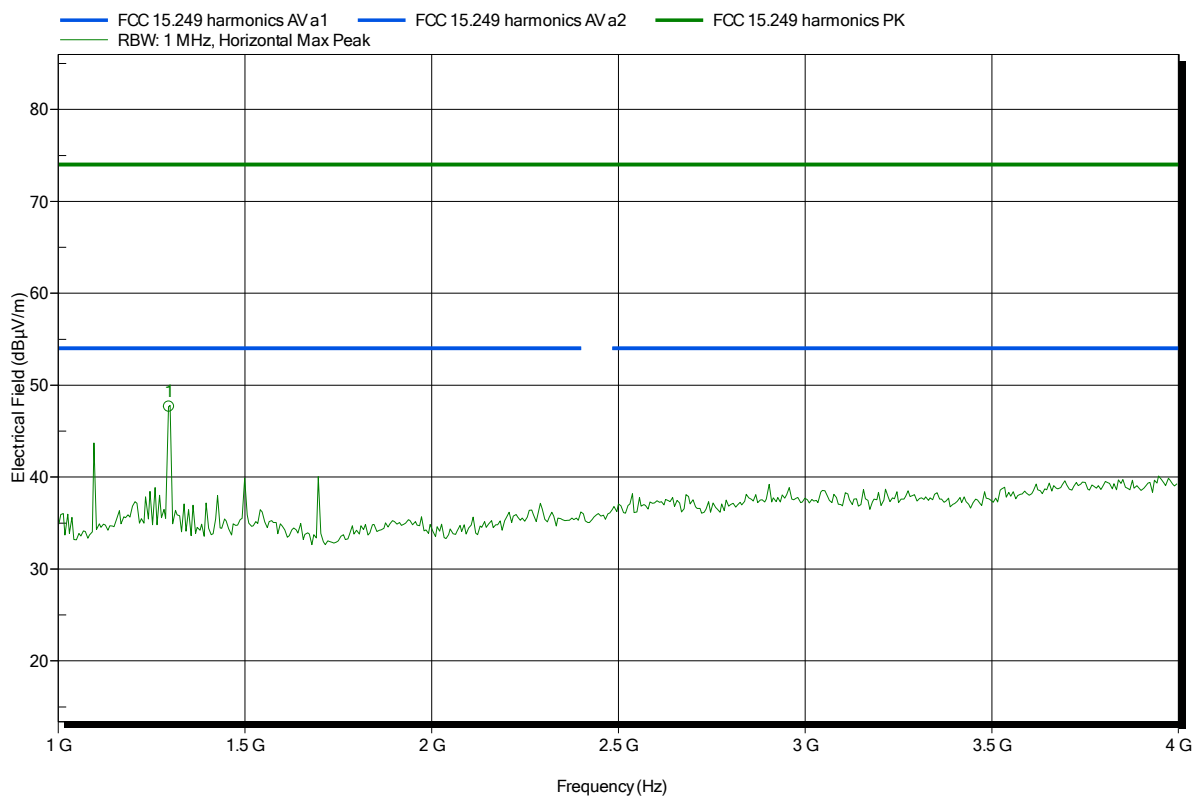


## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Horizontal  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 75



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.297 GHz	47.64 dBµV/m	74 dBµV/m	-26.36 dB	Pass

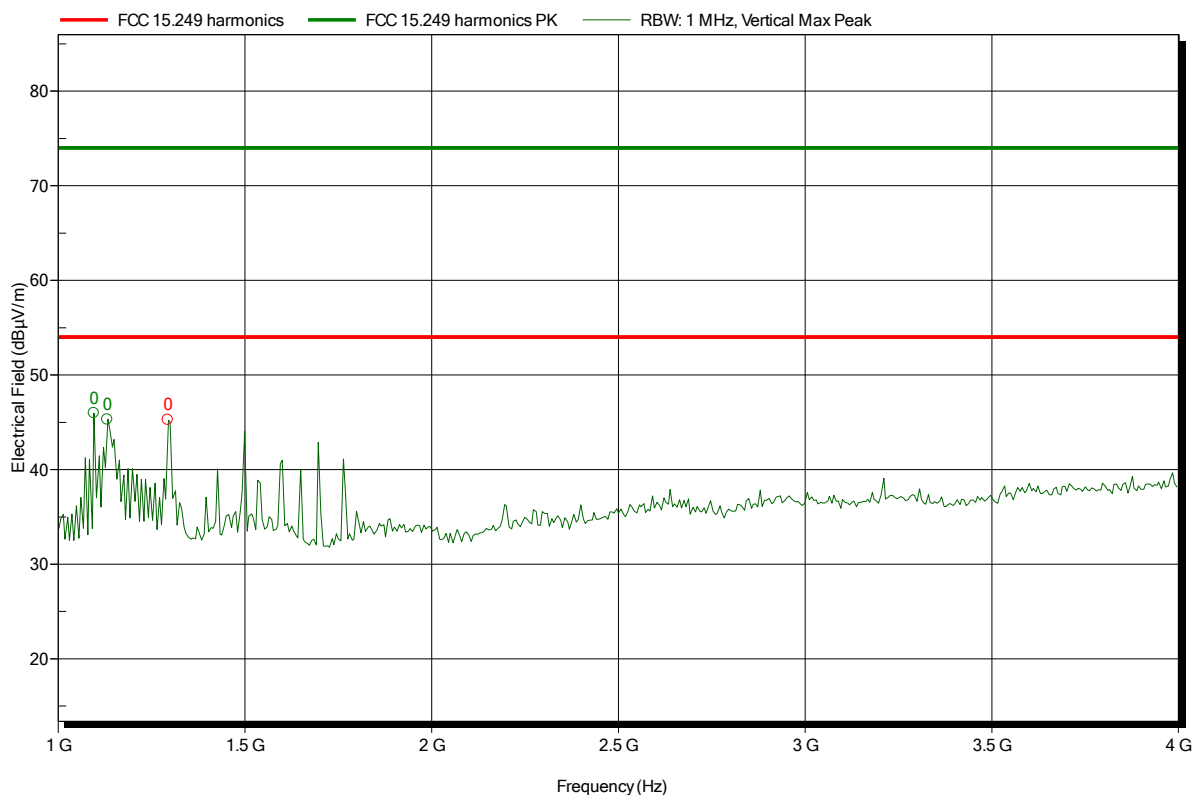
Test Report No.: G0M-1308-3097-TFC249DT-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 78



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.096 GHz	45.28 dBµV/m	74 dBµV/m	-28.72 dB	Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

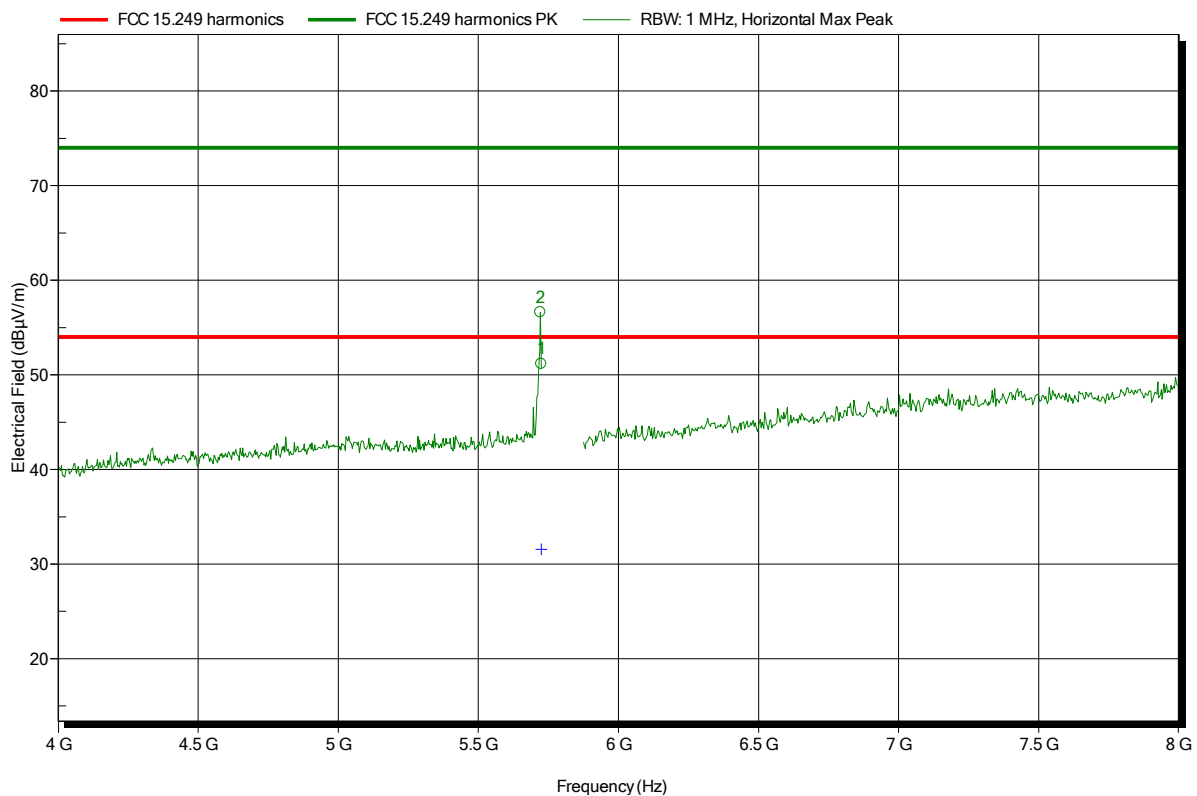
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Horizontal  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 76



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
5.722 GHz	56.62 dBµV/m	74 dBµV/m	-17.38 dB	Pass
5.725 GHz	51.15 dBµV/m	74 dBµV/m	-22.85 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
5.725 GHz	31.56 dBµV/m	54 dBµV/m	-22.44 dB	Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

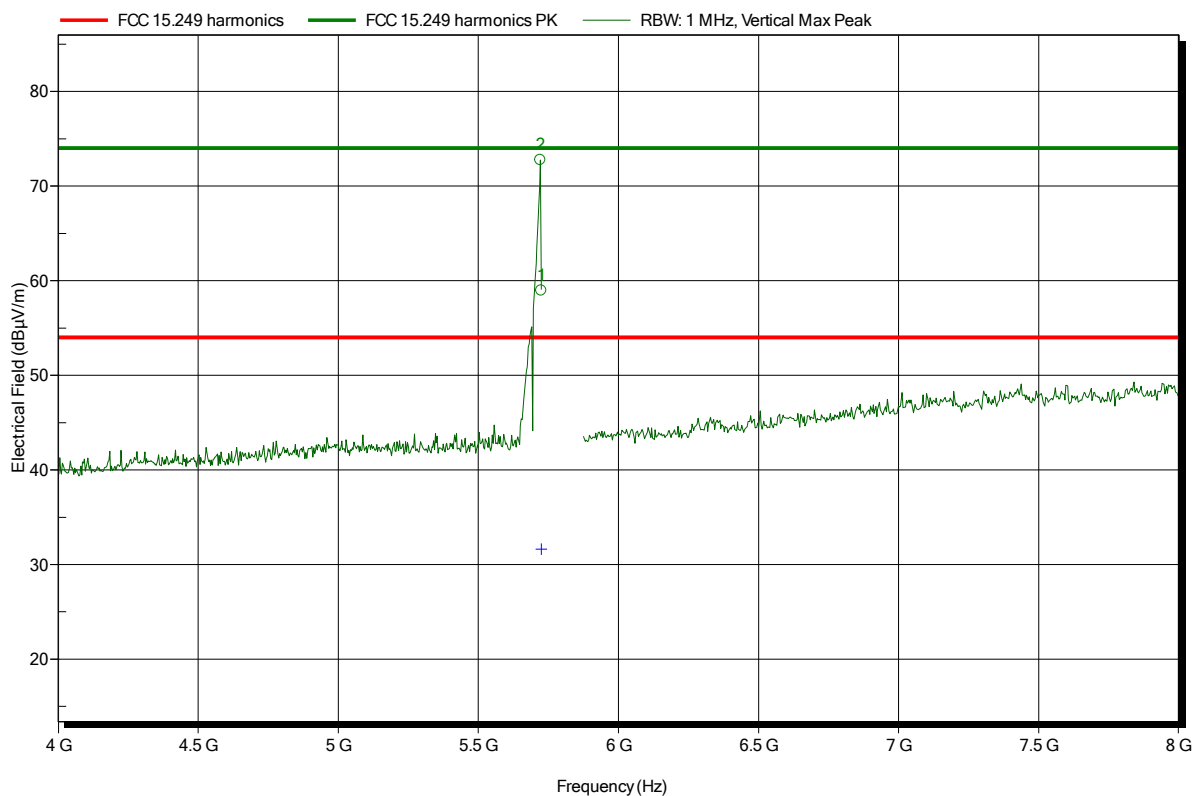
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement distance: 3 m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 77



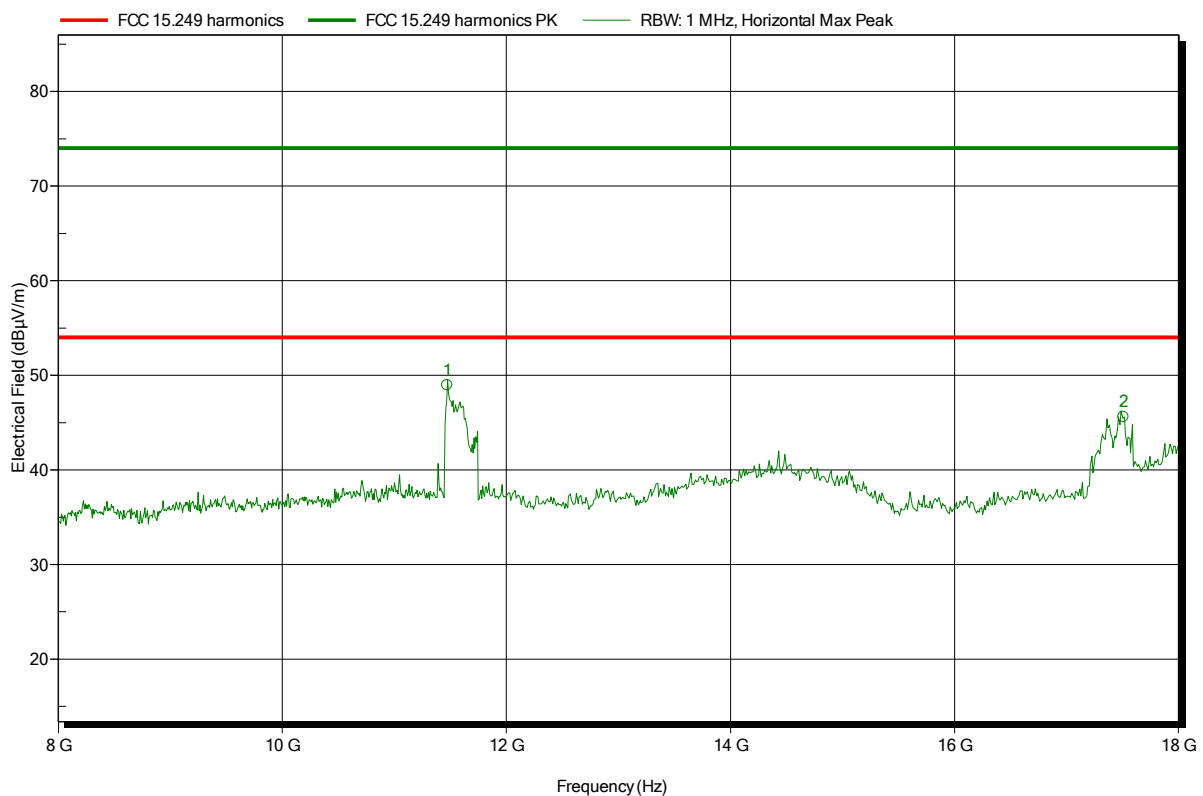
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
5.722 GHz	72.75 dBμV/m	74 dBμV/m	-1.25 dB	Pass
5.725 GHz	58.96 dBμV/m	74 dBμV/m	-15.04 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
5.725 GHz	31.64 dBμV/m	54 dBμV/m	-22.36 dB	Pass

## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Horizontal  
 Measurement distance: 1 m converted to 3m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 85



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
11.472 GHz	48.95 dBµV/m	74 dBµV/m	-25.05 dB	Pass
17.508 GHz	45.6 dBµV/m	74 dBµV/m	-28.4 dB	Pass

Test Report No.: G0M-1308-3097-TFC249DT-V01

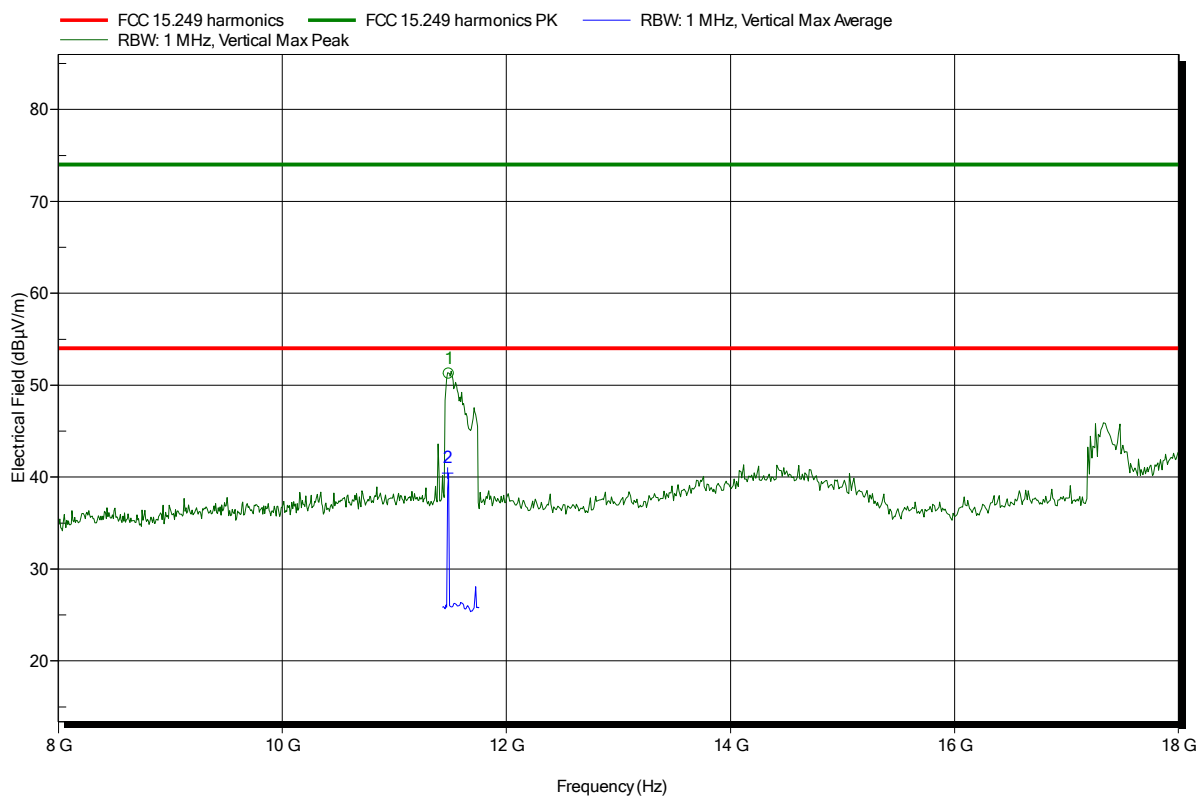
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement distance: 1 m converted to 3m  
 Mode: TX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 86



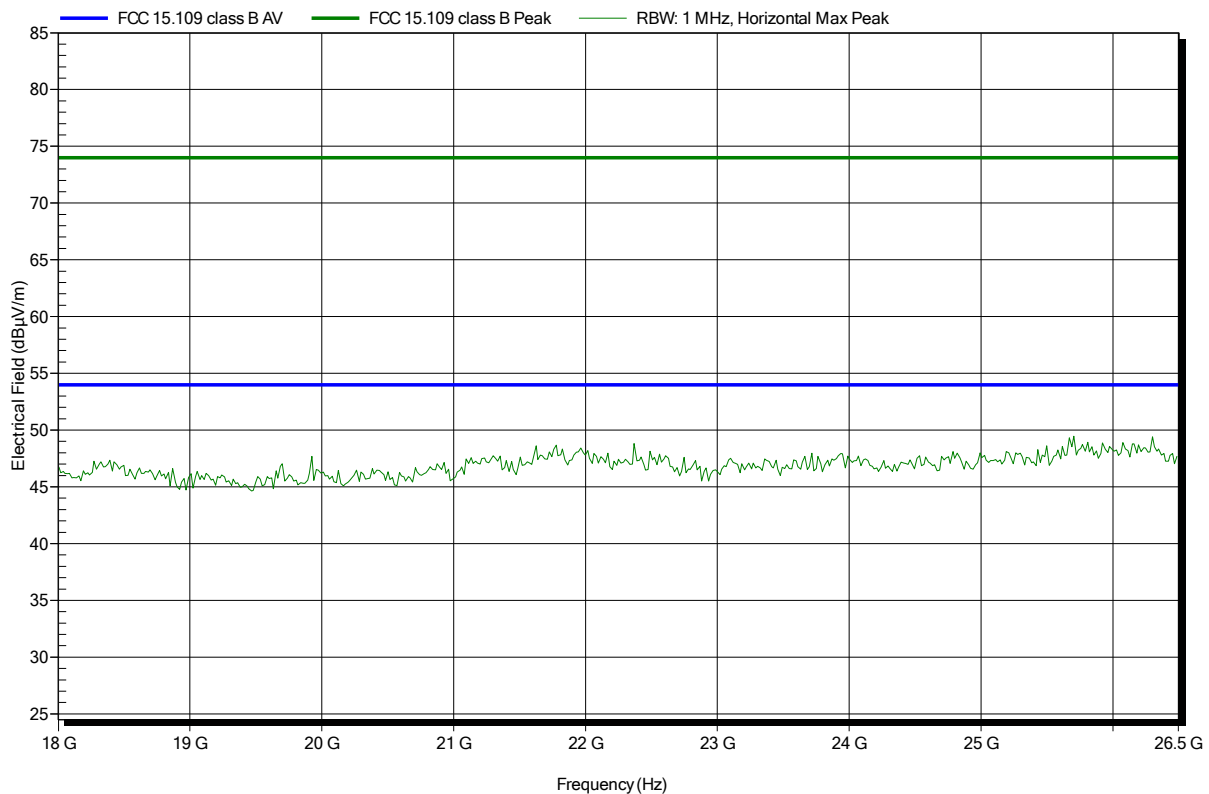
Frequency 11.488 GHz	Peak 51.26 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -22.74 dB	Peak Status Pass
Frequency 11.477 GHz	Average 40.45 dBµV/m	Average Limit 54 dBµV/m	Average Difference -13.55 dB	Average Status Pass

**Spurious emissions according to FCC 15.249**

Project number: G0M-1308-3097

Applicant:	Inmotiotec GmbH
EUT Name:	Basisstation
Model:	LPM Basisstation Ser.1
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Treffke
Test Conditions:	Tnom: 25°C, Vnom: 120 V AC
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	RX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.
Test Date:	2014-11-20
Note:	

Index 87



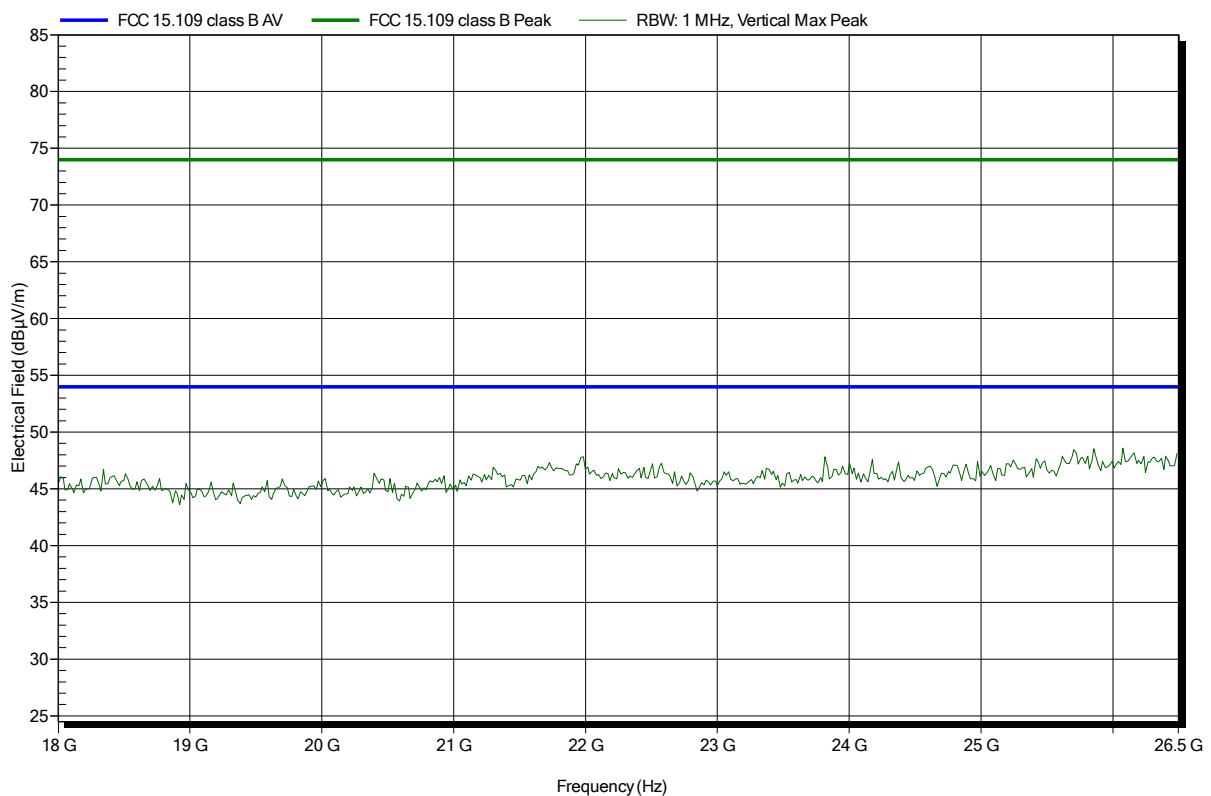


## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: Rohde & Schwarz HL 025, Vertical  
 Measurement distance: 1 m converted to 3m  
 Mode: RX; FSK-Trigger, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 88



Test Report No.: G0M-1308-3097-TFC249DT-V01

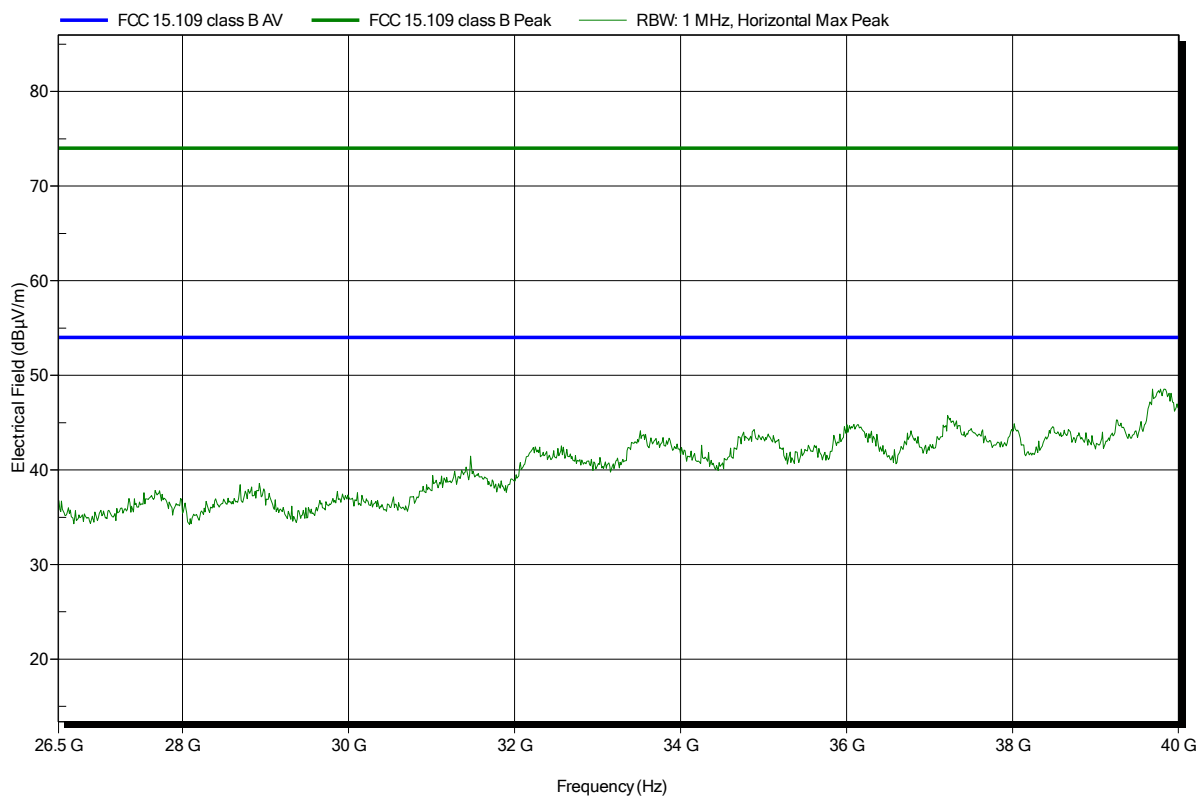
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: 22240-25, Horizontal  
 Measurement distance: 1 m converted to 3m  
 Mode: RX; FSK-Triggr, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 89



## Spurious emissions according to FCC 15.249

Project number: G0M-1308-3097

Applicant: Inmotiotec GmbH  
 EUT Name: Basisstation  
 Model: LPM Basisstation Ser.1  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Treffke  
 Test Conditions: Tnom: 25°C, Vnom: 120 V AC  
 Antenna: 22240-25, Vertical  
 Measurement distance: 1 m converted to 3m  
 Mode: TX; FSK-Triggrer, ant: H&S SPA 5600/65/12/0/V with 3dB Att.  
 Test Date: 2014-11-20  
 Note:

Index 90

