

EMC TEST REPORT

FCC 47 CFR Part 15B
Industry Canada ICES-003

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M-1607-5772-EF0115B-V01

Testing Laboratory : Eurofins Product Service GmbH

Address : Storkower Str. 38c
15526 Reichenwalde
Germany

Accreditation :



A2LA Accredited Testing Laboratory, Certificate No.: 1983.01
FCC Filed Test Laboratory, Reg.-No.: 96970
IC OATS Filing assigned code: 3470A

Applicant's name : FALCOM GmbH

Address : Gewerbering 6
98704 Langewiesen
GERMANY

Test specification:

Standard..... : 47 CFR Part 15 Subpart B
ICES-003, Issue 6:2016
ANSI C63.4:2014

Equipment under test (EUT):

Product description UMTS/GSM/GPS-Device

Model No. FOX3-KMD

Additional Models None

Hardware version O_102_Rev02b

Firmware / Software version 3.0.4

FCC-ID: QIXFOX3-KMD

ISED-ID: 5383A-FOX3KMD

Test result Passed

Test Report No.: G0M-1607-5772-EF0115B-V01

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

Possible test case verdicts:

- not applicable to test object: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing:

Date of receipt of test item: 2016-11-21

Date (s) of performance of tests: 2017-02-22 - 2017-03-31

Compiled by: Matthias Handrik

Tested by (+ signature).....: Matthias Handrik

Approved by (+ signature): Jens Marquardt
Deputy Head of Lab

Date of issue: 2017-04-07

Total number of pages: 32



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:

Version History

Version	Issue Date	Remarks	Revised by
V01	2017-04-07	Initial Release	

REPORT INDEX

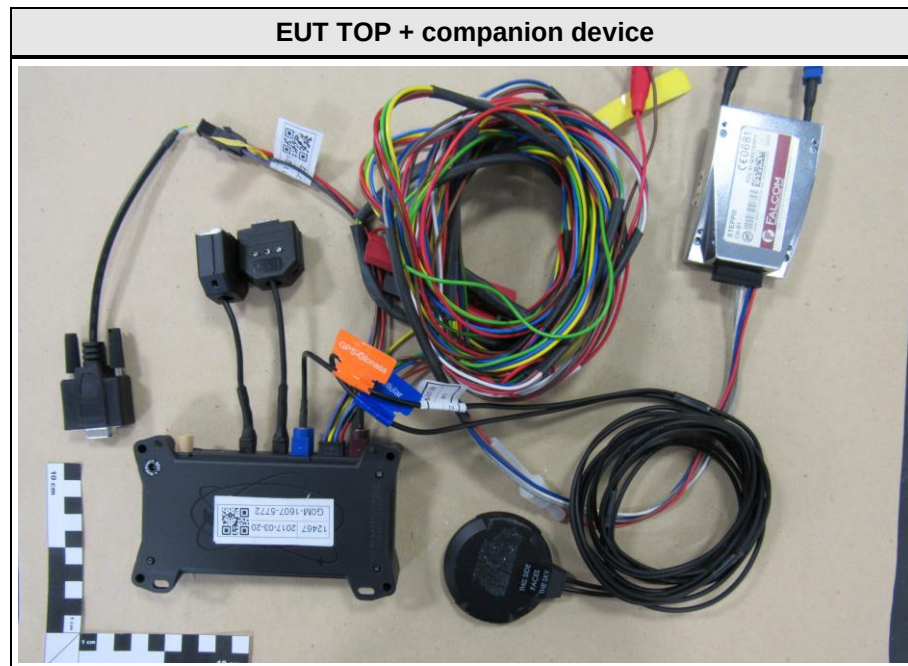
1	EQUIPMENT (TEST ITEM) DESCRIPTION	5
1.1	Photos – Equipment external	7
1.2	Photos – Equipment internal	8
1.3	Photos – Test setup	9
1.4	Supporting Equipment Used During Testing	10
1.5	Input / Output Ports	10
1.6	Operating Modes and Configurations	11
1.7	Test Equipment Used During Testing	12
1.8	Sample emission level calculation	13
2	RESULT SUMMARY	14
3	TEST CONDITIONS AND RESULTS	15
3.1	Test Conditions and Results – Radiated emissions	15

1 Equipment (Test item) Description

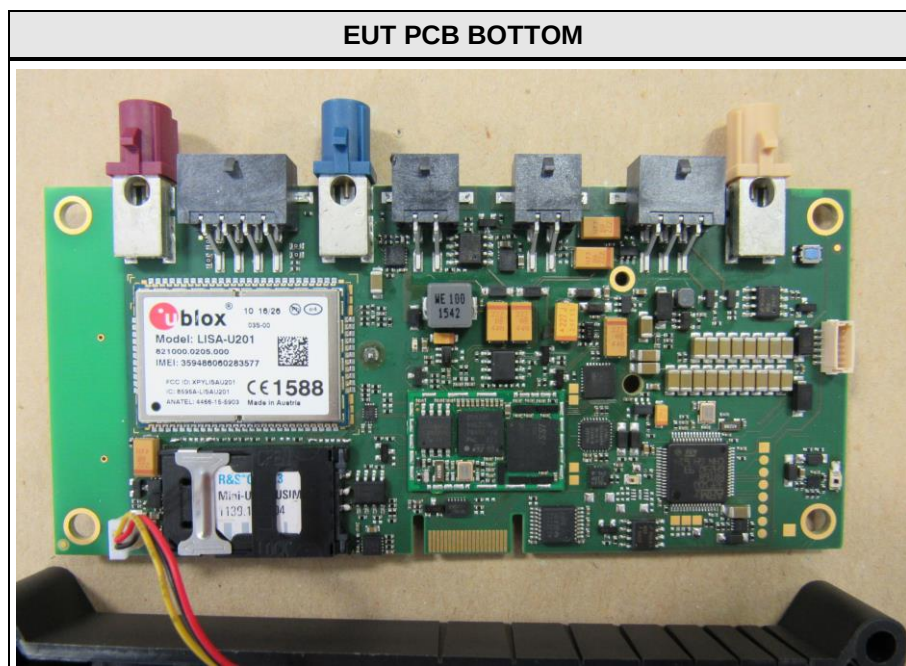
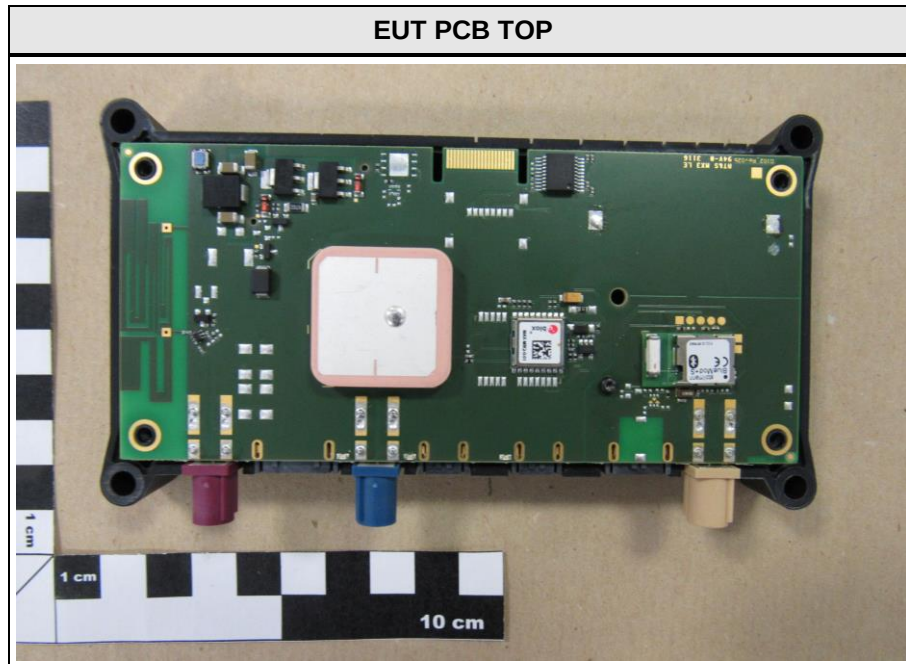
Description	UMTS/GSM/GPS-Device	
Model	FOX3-KMD	
Additional Models	None	
Serial number	None	
Hardware version	O_102_Rev02b	
Software / Firmware version	3.0.4	
Contains FCC-ID	N/A	
Contains IC	N/A	
Power supply	12V DC	
AC/DC-Adaptor	None	
Radio module I	Type	GSM/UMTS modul
	Model	LISA-U201
	Manufacturer	uBlox
	HW Version	214001
	SW Version	03S(23.41)
	FCC-ID	YPYLISAU201
	IC	8595A-LISAU201
	IMEI	35948606.028357.707
Radio module II	Type	GPS modul
	Model	MAX-M8C
	Manufacturer	uBlox
	HW Version	unspecified
	SW Version	3.01
	FCC-ID	unspecified
	IC	unspecified

Radio module II	Type	Bluetooth Low Energy
	Model	BlueMod+S
	Manufacturer	Stollmann / Telit
	HW Version	V1
	SW Version	V1
	FCC-ID	RFRMS
	IC	unspecified
Manufacturer	FALCOM GmbH Gewerbering 6 98704 Langewiesen GERMANY	
Highest emission frequency	> 1000 MHz (up to 5th Harm)	
Device classification	Class B	
Equipment type	Tabletop	
Number of tested samples	1	

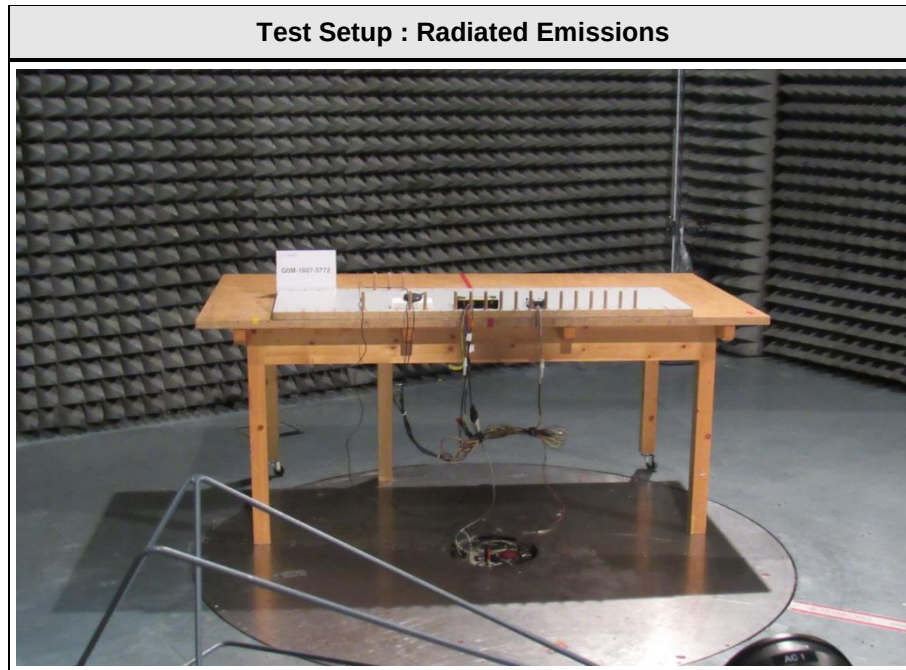
1.1 Photos – Equipment external



1.2 Photos – Equipment internal



1.3 Photos – Test setup



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
SIM	Communication tester	Rohde & Schwarz	CMU 200	
AE	Smartphone	Samsung	Galaxy A3	
AE	Laptop	DELL	Latitude E6420	S/N.: FX9K6R1
AE	Software	Falcom	Falcom Workbench 2.1.3.0-RC7	
AE	CAN	Falcom	StepIII	
*Note: Use the following abbreviations: AE : Auxiliary/Associated Equipment, or SIM : Simulator (Not Subjected to Test) CABL : Connecting cables				

1.5 Input / Output Ports

Port #	Name	Type*	Max. Cable Length	Cable Shielded	Comments
1	Harness	DC / I/O	2m	unspecified	
*Note: Use the following abbreviations: AC : AC power port DC : DC power port N/E : Non electrical I/O : Signal input or output port TP : Telecommunication port					

1.6 Operating Modes and Configurations

Mode #	Description
1	GSM 850 GPRS 2 slot, Gamma: 3; Bluetooth Low Energy connection to Smartphone; GPS receive local position
2	UMTS FDD II / V, RMC 12.2kbps, TPC: ALL 1; Bluetooth Low Energy connection to Smartphone; GPS receive local position

Configuration #	EUT Configuration
Radiated emission	EUT placed inside the measurement chamber and powered up. Active serial RS232 connection to Laptop (outside the measurement chamber). Active GSM or UMTS connection to CMU (outside the measurement chamber). The Smartphone for the Bluetooth Low Energy connection is placed in the corner of the measurement chamber, via APP "BLE Scanner" check the RSSI Data. The GPS Data and the CAN Data is visualized via software on Laptop

1.7 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2016.1.10

Radiated emissions – 3m Chamber					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	EF00012	2016-05	2019-05
LPD-Antenne	R&S	HL 223	EF00187	2016-05	2019-05
Horn antenna	Schwarzbeck	BBHA 9120D	EF00018	2016-09	2019-09
MXE EMI Receiver	Keysight Technologies	N9038A-526/WXP	EF01070	2016-08	2017-08
RF Cable			-	System Cal.	System Cal
RF Cable			-	System Cal.	System Cal

1.8 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 dBμV. 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 dBμV/m). The FCC limits are given in units of μV/m. The following formula is used to convert the units of μV/m to dBμV/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:

Reading	+	AF	=	Net Reading	:	Net reading - FCC limit	=	Margin
21.5 dBμV	+	26 dB	=	47.5 dBμV/m	:	47.5 dBμV/m - 57.0 dBμV/m	=	-9.5 dB

2 Result Summary

FCC 47 CFR Part 15B, Industry Canada ICES-003				
Product Specific Standard	Requirement – Test	Reference Method	Result	Remarks
47 CFR 15.109 ICES-003 Item 6.2	Radiated emissions	ANSI C 63.4	PASS	
47 CFR 15.107 ICES-003 Item 6.1	AC power line conducted emissions	ANSI C63.4	N/A	
Remarks:				

3 Test Conditions and Results

3.1 Test Conditions and Results – Radiated emissions

Radiated emissions acc. FCC 47 CFR 15.109 / ICES-003				Verdict: PASS		
Laboratory Parameters:		Required prior to the test		During the test		
Ambient Temperature		15 to 35 °C		23°C		
Relative Humidity		30 to 60 %		39%		
Test according referenced standards		Reference Method				
		ANSI C63.4				
Sample is tested with respect to the requirements of the equipment class		Equipment class				
		Class B				
Test frequency range determined from highest emission frequency		Highest emission frequency				
		> 1000 MHz (up to 5th Harm)				
Fully configured sample scanned over the following frequency range		Frequency range				
		30 MHz to 13 GHz				
Operating mode		1/2				
Configuration		1/2				
Limits and results Class B						
Frequency [MHz]	Quasi-Peak [dBµV/m]	Result	Average [dBµV/m]	Result	Peak [dBµV/m]	Result
30 – 88	40	PASS	-		-	-
88 – 216	43.5	PASS	-		-	-
216 – 960	46	PASS	-		-	-
960 – 1000	54	PASS	-		-	-
> 1000	-	-	54	PASS	74	PASS
Comments:						

Test Procedure:

The test site is in accordance with ANSI C63-4:2014 requirements and is listed by FCC.
The measurement procedure is as follows:

Exploratory measurement:

- The EUT was placed on a non-conductive table at a height of 0.8m.
- The EUT and support equipment, if needed, were set up to simulate typical usage.
- Cables, of type and length specified by the manufacturer, were connected to at least one port of each type and were terminated by a device or simulating load of actual usage.
- The antenna was placed at a distance of 3 or 10 m.
- The received signal was monitored at the measurement receiver.
 - Cables not bundled were manipulated within the range of likely arrangements to produce the highest emission amplitude
 - To maximize the suspected emissions the EUT is rotated 360 degrees. If the signal exceeds the previous amplitude, go back to the corresponding azimuth and manipulate the cables again for maximizing the emissions if possible.
 - Move the antenna from 1 to 4m to maximize the suspected highest amplitude signal.
- This procedure has to be performed in both antenna polarizations, horizontal and vertical.
- The arrangement of the equipment with the maximum emission level is shown on the setup picture at item 1.3.

Final measurement:

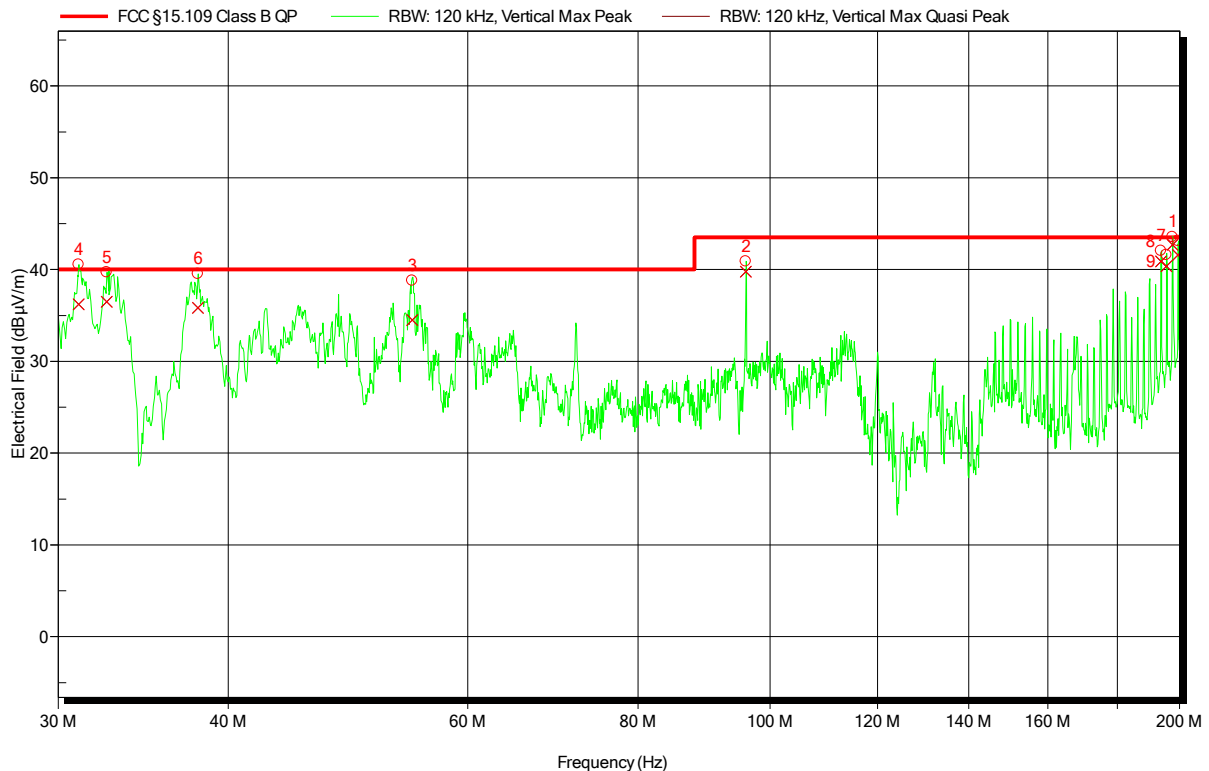
- The EUT was placed on a 0.8 m non-conductive table at a 3 m distance from the receive antenna. The antenna output was connected to the measurement receiver
- A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was used for the frequency range from 200 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast
- The EUT and cable arrangement were based on the exploratory measurement results
- Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded.
- The test data of the worst-case conditions were recorded and shown on the next pages.

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
EUT Name: UMTS/GSM/GPS-Device
Model: FOX3-KMD
Test Site: Eurofins Product Service GmbH
Operator: Mr. Handrik
Test Conditions: Tnom: 22°C, Unom: 12V DC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3m
Mode: Mode# 2
Test Date: 2017-03-31
Note:

Index 36



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	197.574 MHz	42.69 dBµV/m	43.52 dBµV/m	-0.84 dB	Pass	0 Degree	1 m
2	96.024 MHz	39.76 dBµV/m	43.52 dBµV/m	-3.76 dB	Pass	0 Degree	1 m
3	54.62 MHz	34.5 dBµV/m	40 dBµV/m	-5.5 dB	Pass	0 Degree	1 m
4	31.057 MHz	36.22 dBµV/m	40 dBµV/m	-3.78 dB	Pass	0 Degree	1 m
5	32.576 MHz	36.48 dBµV/m	40 dBµV/m	-3.52 dB	Pass	0 Degree	1 m
6	37.999 MHz	35.84 dBµV/m	40 dBµV/m	-4.16 dB	Pass	0 Degree	1 m
7	195.616 MHz	40.36 dBµV/m	43.52 dBµV/m	-3.17 dB	Pass	0 Degree	1 m
8	199.418 MHz	41.58 dBµV/m	43.52 dBµV/m	-1.95 dB	Pass	0 Degree	1 m
9	193.781 MHz	40.88 dBµV/m	43.52 dBµV/m	-2.64 dB	Pass	0 Degree	1 m

Test Report No.: G0M-1607-5772-EF0115B-V01

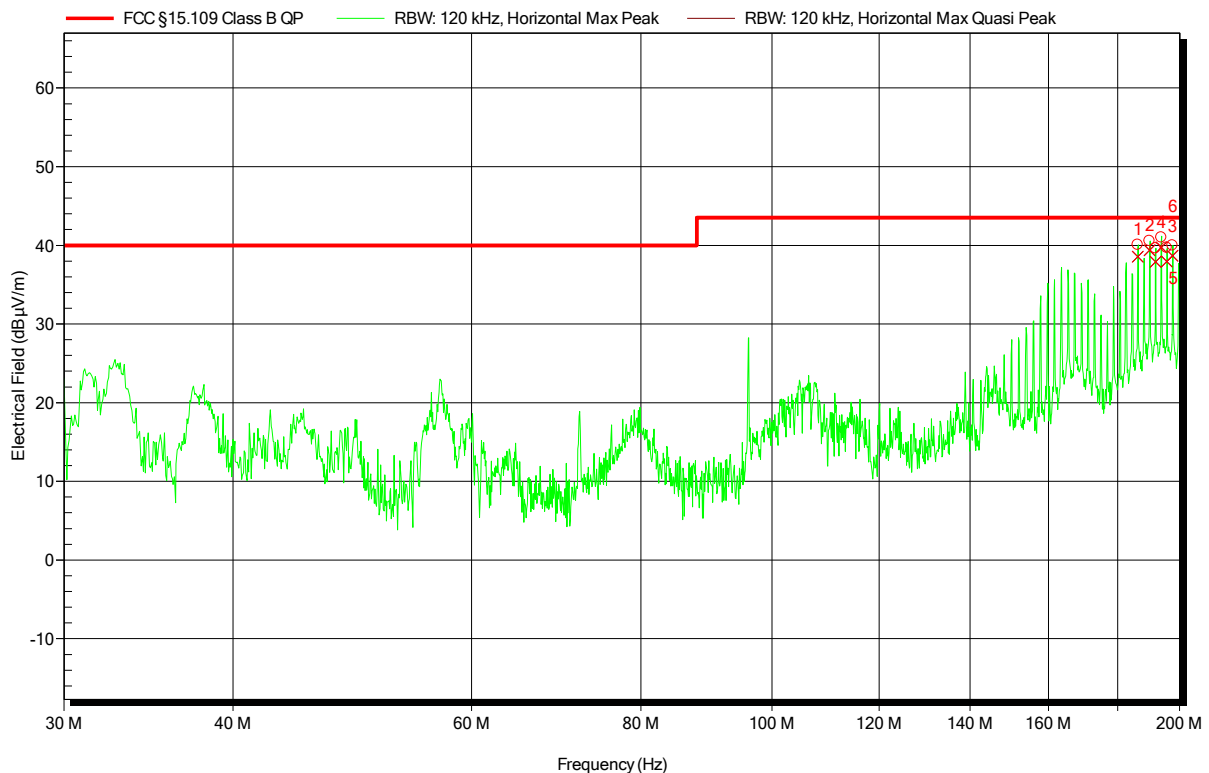
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: Mode# 2
 Test Date: 2017-03-31
 Note: 180°, 1.83m

Index 37



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	186.261 MHz	38.57 dBµV/m	43.52 dBµV/m	-4.96 dB	Pass	0 Degree	1 m
2	190.044 MHz	39.37 dBµV/m	43.52 dBµV/m	-4.15 dB	Pass	0 Degree	1 m
3	191.947 MHz	37.91 dBµV/m	43.52 dBµV/m	-5.62 dB	Pass	0 Degree	1 m
4	193.827 MHz	39.72 dBµV/m	43.52 dBµV/m	-3.8 dB	Pass	0 Degree	1 m
5	195.7 MHz	37.95 dBµV/m	43.52 dBµV/m	-5.57 dB	Pass	0 Degree	1 m
6	197.586 MHz	38.67 dBµV/m	43.52 dBµV/m	-4.85 dB	Pass	0 Degree	1 m

Test Report No.: G0M-1607-5772-EF0115B-V01

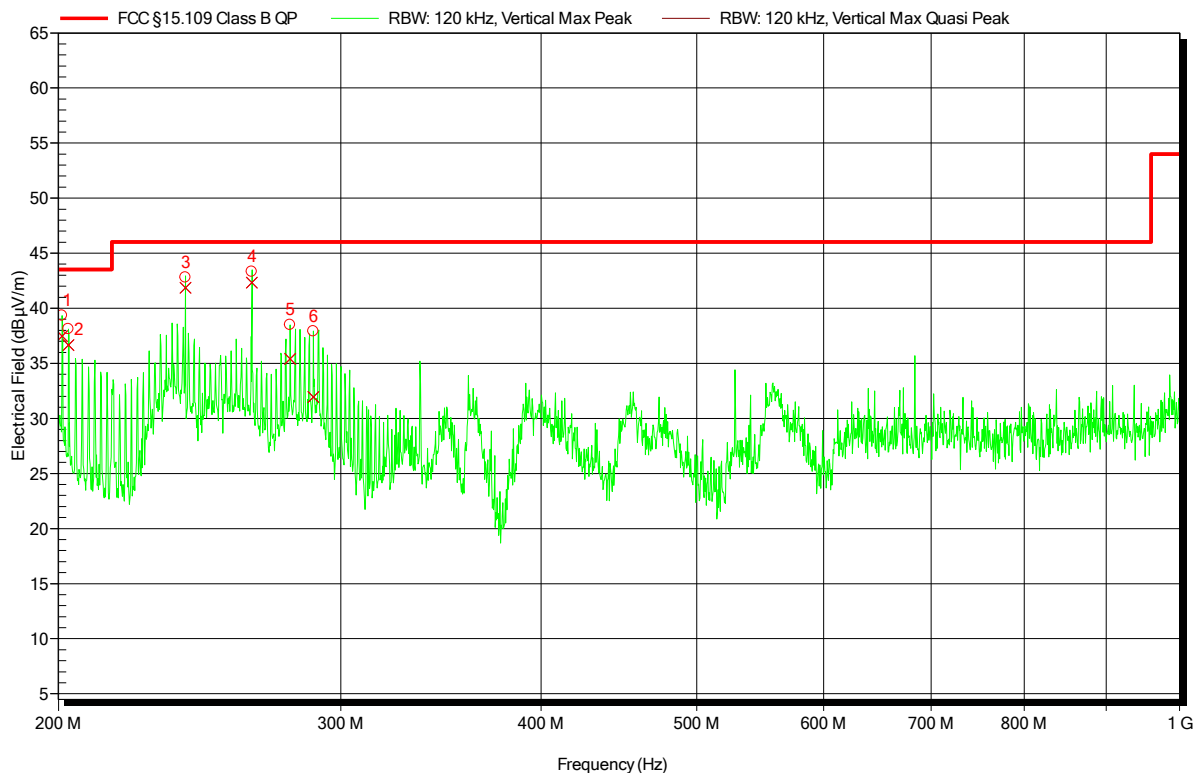
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: Mode# 2
 Test Date: 2017-03-31
 Note: 180°; 1m

Index 47



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	201.141 MHz	37.48 dBµV/m	43.52 dBµV/m	-6.04 dB	Pass	0 Degree	1 m
2	203.002 MHz	36.65 dBµV/m	43.52 dBµV/m	-6.87 dB	Pass	0 Degree	1 m
3	240.078 MHz	41.86 dBµV/m	46.02 dBµV/m	-4.16 dB	Pass	0 Degree	1 m
4	264.089 MHz	42.32 dBµV/m	46.02 dBµV/m	-3.7 dB	Pass	0 Degree	1 m
5	278.955 MHz	35.39 dBµV/m	46.02 dBµV/m	-10.63 dB	Pass	0 Degree	1 m
6	288.442 MHz	31.94 dBµV/m	46.02 dBµV/m	-14.08 dB	Pass	0 Degree	1 m

Test Report No.: G0M-1607-5772-EF0115B-V01

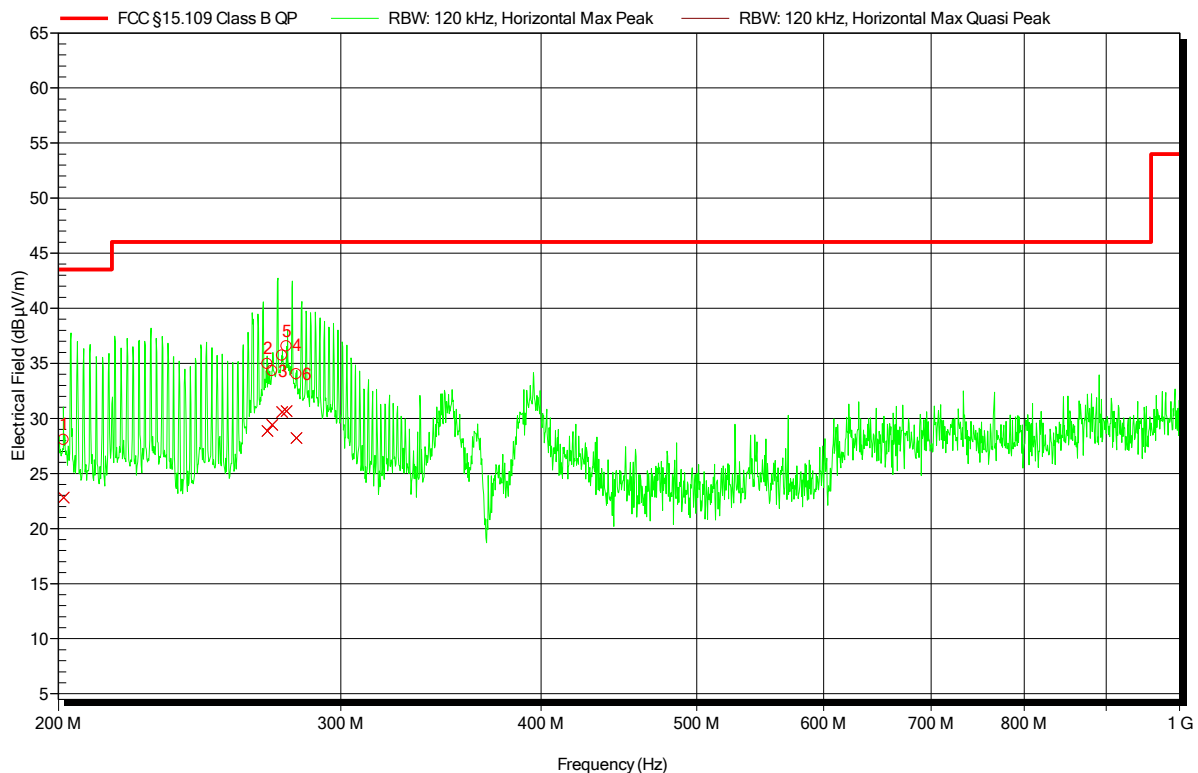
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m
 Mode: Mode# 2
 Test Date: 2017-03-31
 Note:

Index 46



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	201.621 MHz	22.81 dBµV/m	43.52 dBµV/m	-20.71 dB	Pass	0 Degree	1 m
2	270.105 MHz	28.85 dBµV/m	46.02 dBµV/m	-17.17 dB	Pass	0 Degree	1 m
3	271.93 MHz	29.41 dBµV/m	46.02 dBµV/m	-16.61 dB	Pass	0 Degree	1 m
4	275.785 MHz	30.57 dBµV/m	46.02 dBµV/m	-15.45 dB	Pass	0 Degree	1 m
5	277.634 MHz	30.65 dBµV/m	46.02 dBµV/m	-15.37 dB	Pass	0 Degree	1 m
6	281.597 MHz	28.22 dBµV/m	46.02 dBµV/m	-17.8 dB	Pass	0 Degree	1 m

Test Report No.: G0M-1607-5772-EF0115B-V01

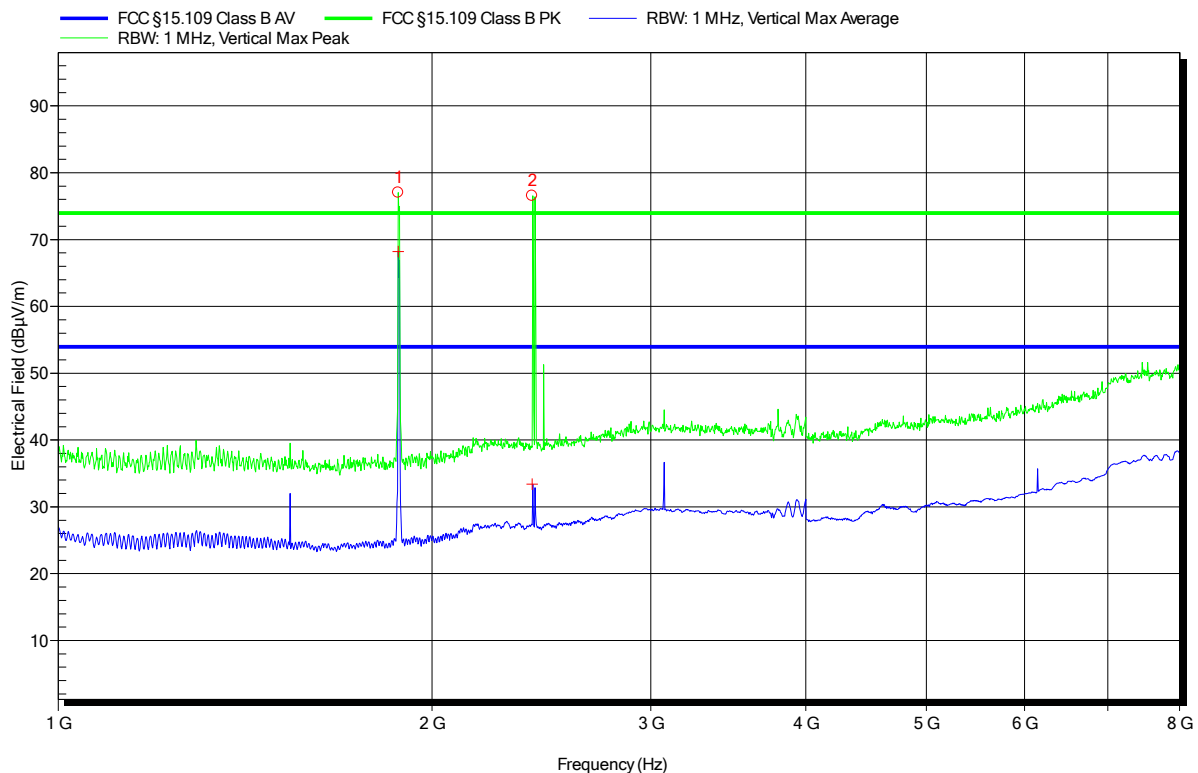
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: Mode# 2
 Test Date: 2017-03-31
 Note:

Index 49



Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	1.879 GHz	Carrier UMTS					
2	2.409 GHz	Carrier BT					

Test Report No.: G0M-1607-5772-EF0115B-V01

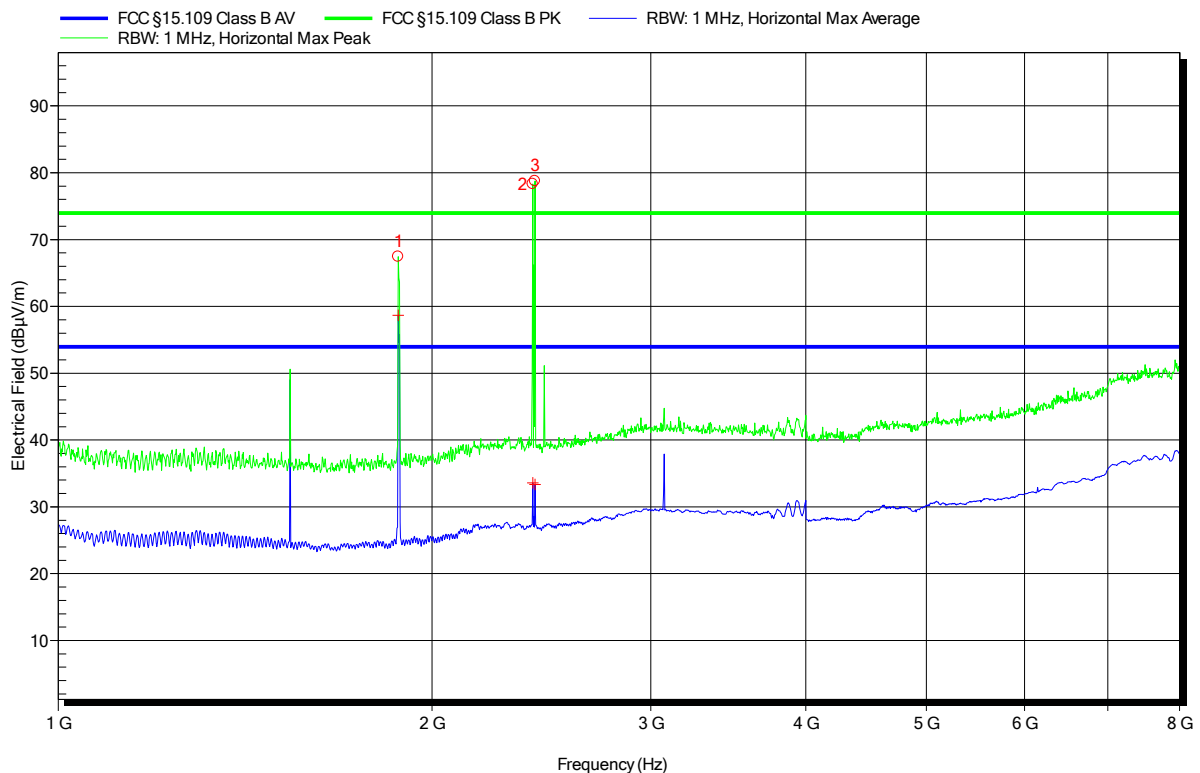
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance:
 Mode: Mode# 2
 Test Date: 2017-03-31
 Note:

Index 50



Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	1.879 GHz	Carrier UMTS					
2	2.411 GHz	Carrier BT					
3	2.421 GHz	Carrier BT					

Test Report No.: G0M-1607-5772-EF0115B-V01

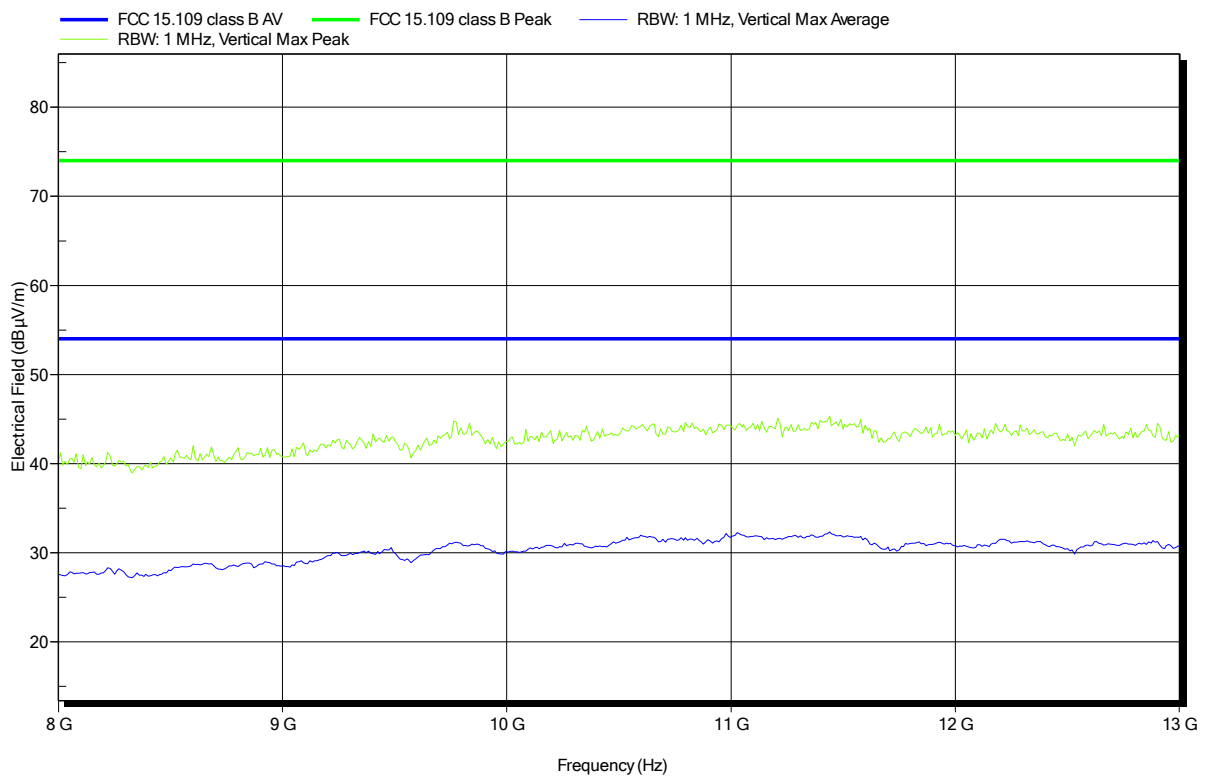
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Vnom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: Mode# 2
 Test Date: 2017-04-05
 Note:

Index 56

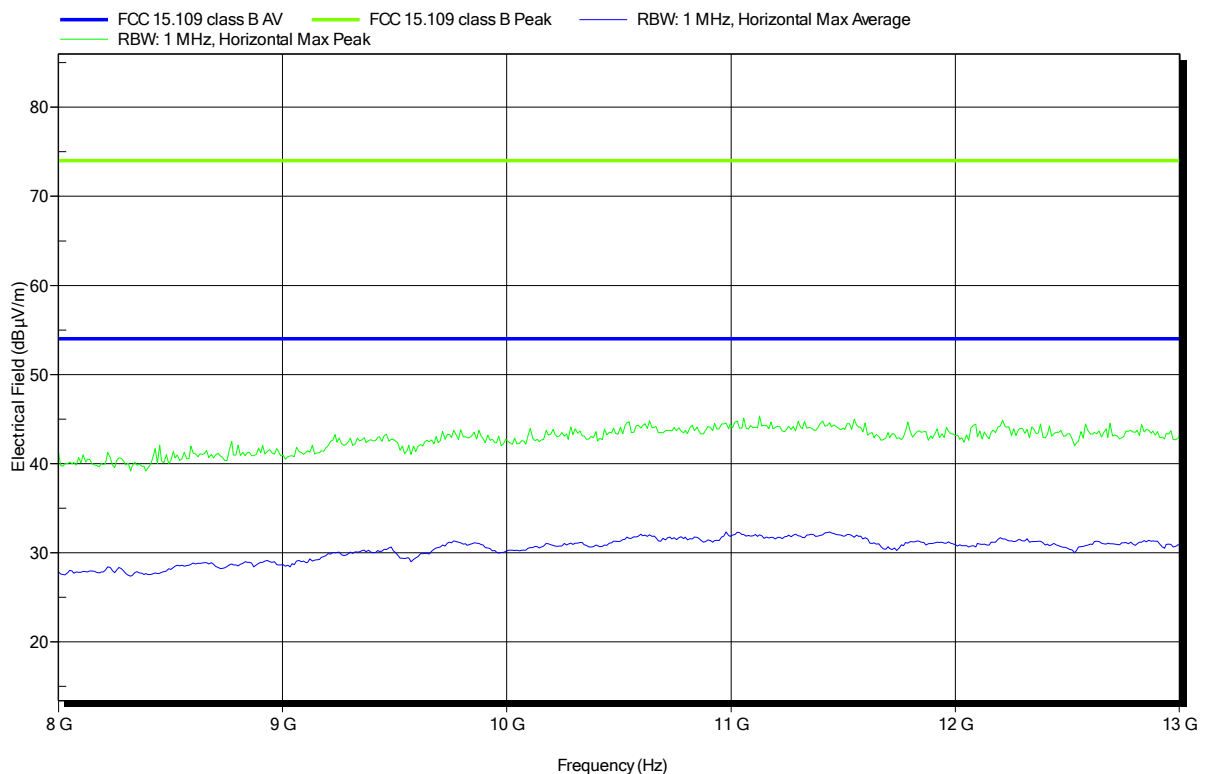


Spurious emissions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Vnom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: Mode# 2
 Test Date: 2017-04-05
 Note:

Index 55

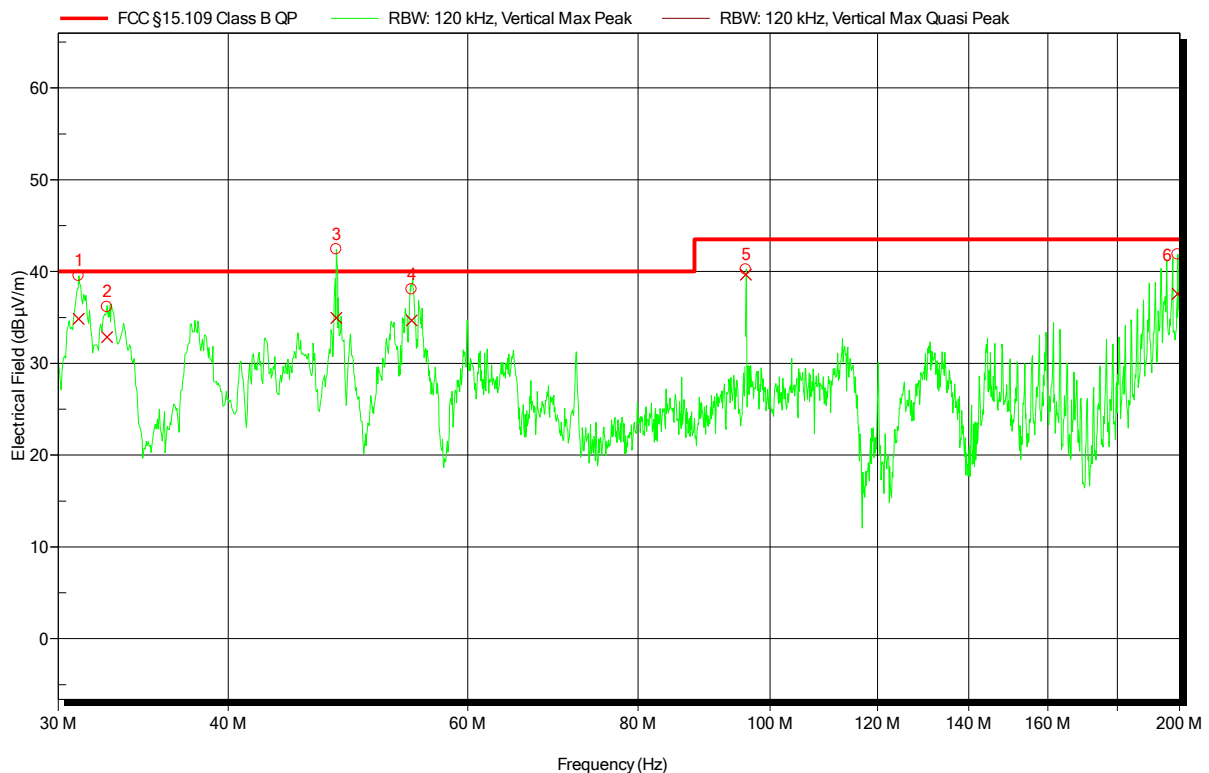


Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m
 Mode: Mode# 1
 Test Date: 2017-03-31
 Note:

Index 43



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	31.057 MHz	34.86 dBµV/m	40 dBµV/m	-5.14 dB	Pass	130 Degree	1 m
2	32.582 MHz	32.85 dBµV/m	40 dBµV/m	-7.15 dB	Pass	130 Degree	1 m
3	48.027 MHz	34.96 dBµV/m	40 dBµV/m	-5.04 dB	Pass	130 Degree	1 m
4	54.56 MHz	34.68 dBµV/m	40 dBµV/m	-5.32 dB	Pass	130 Degree	1 m
5	96.03 MHz	39.66 dBµV/m	43.52 dBµV/m	-3.86 dB	Pass	130 Degree	1 m
6	199.308 MHz	37.59 dBµV/m	43.52 dBµV/m	-5.94 dB	Pass	130 Degree	1 m

Test Report No.: G0M-1607-5772-EF0115B-V01

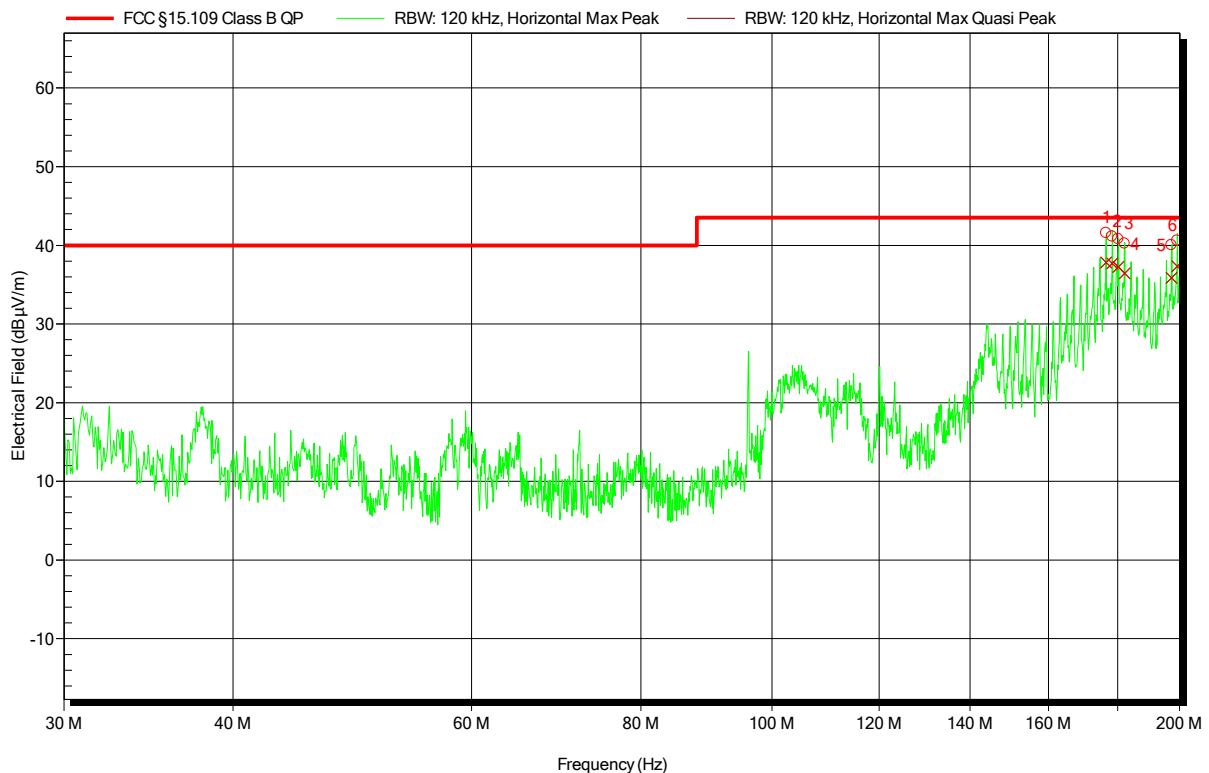
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m
 Mode: Mode# 1
 Test Date: 2017-03-31
 Note:

Index 38



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	176.46 MHz	37.81 dBµV/m	43.52 dBµV/m	-5.71 dB	Pass	270 Degree	1.8 m
2	178.303 MHz	37.71 dBµV/m	43.52 dBµV/m	-5.82 dB	Pass	270 Degree	1.8 m
3	180.195 MHz	37.23 dBµV/m	43.52 dBµV/m	-6.29 dB	Pass	270 Degree	1.8 m
4	182.11 MHz	36.45 dBµV/m	43.52 dBµV/m	-7.07 dB	Pass	270 Degree	1.8 m
5	197.285 MHz	35.85 dBµV/m	43.52 dBµV/m	-7.67 dB	Pass	270 Degree	1.8 m
6	199.158 MHz	37.32 dBµV/m	43.52 dBµV/m	-6.2 dB	Pass	270 Degree	1.8 m

Test Report No.: G0M-1607-5772-EF0115B-V01

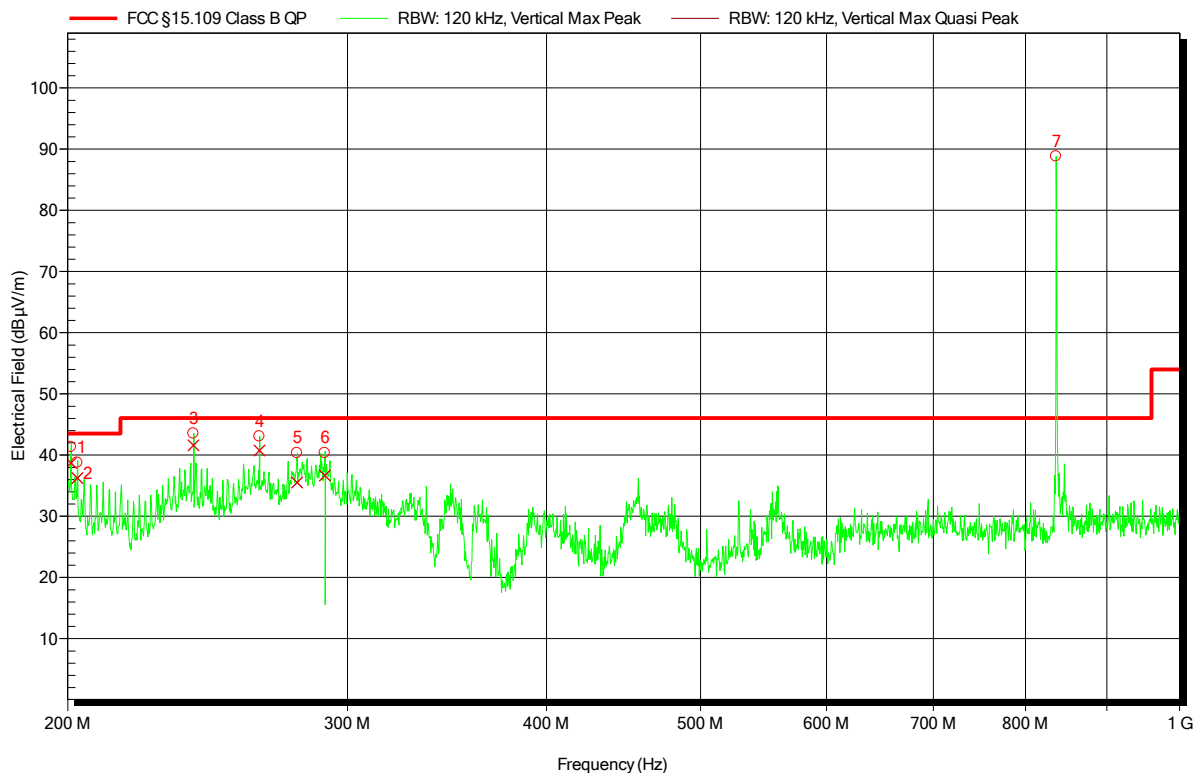
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m
 Mode: Mode# 1
 Test Date: 2017-03-31
 Note:

Index 44



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	201.075 MHz	38.73 dBµV/m	43.52 dBµV/m	-4.79 dB	Pass	180 Degree	1 m
2	202.972 MHz	36.23 dBµV/m	43.52 dBµV/m	-7.29 dB	Pass	180 Degree	1 m
3	240.084 MHz	41.61 dBµV/m	46.02 dBµV/m	-4.41 dB	Pass	180 Degree	1 m
4	264.095 MHz	40.78 dBµV/m	46.02 dBµV/m	-5.24 dB	Pass	180 Degree	1 m
5	278.883 MHz	35.54 dBµV/m	46.02 dBµV/m	-10.48 dB	Pass	180 Degree	1 m
6	290.273 MHz	36.66 dBµV/m	46.02 dBµV/m	-9.36 dB	Pass	180 Degree	1 m
7	836.145 MHz	Carrier GSM				180 Degree	1 m

Test Report No.: G0M-1607-5772-EF0115B-V01

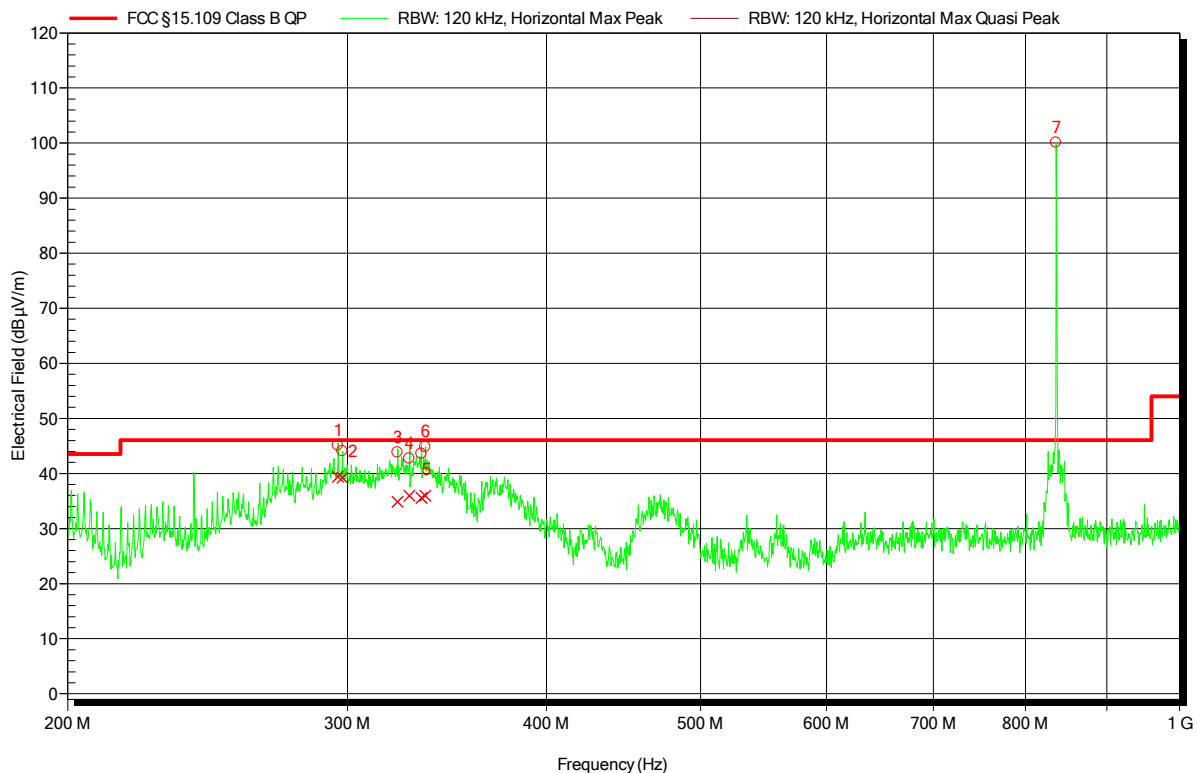
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
EUT Name: UMTS/GSM/GPS-Device
Model: FOX3-KMD
Test Site: Eurofins Product Service GmbH
Operator: Mr. Handrik
Test Conditions: Tnom: 22°C, Unom: 12V DC
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3m
Mode: Mode# 1
Test Date: 2017-03-31
Note: 1.40m; 50°

Index 45



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	295.905 MHz	39.38 dBµV/m	46.02 dBµV/m	-6.64 dB	Pass	50 Degree	1.4 m
2	297.814 MHz	39.25 dBµV/m	46.02 dBµV/m	-6.77 dB	Pass	50 Degree	1.4 m
3	322.504 MHz	34.84 dBµV/m	46.02 dBµV/m	-11.18 dB	Pass	50 Degree	1.4 m
4	328.13 MHz	35.97 dBµV/m	46.02 dBµV/m	-10.05 dB	Pass	50 Degree	1.4 m
5	333.864 MHz	35.58 dBµV/m	46.02 dBµV/m	-10.44 dB	Pass	50 Degree	1.4 m
6	335.707 MHz	36 dBµV/m	46.02 dBµV/m	-10.02 dB	Pass	50 Degree	1.4 m
7	836.145 MHz	Carrier GSM				50 Degree	1.4 m

Test Report No.: G0M-1607-5772-EF0115B-V01

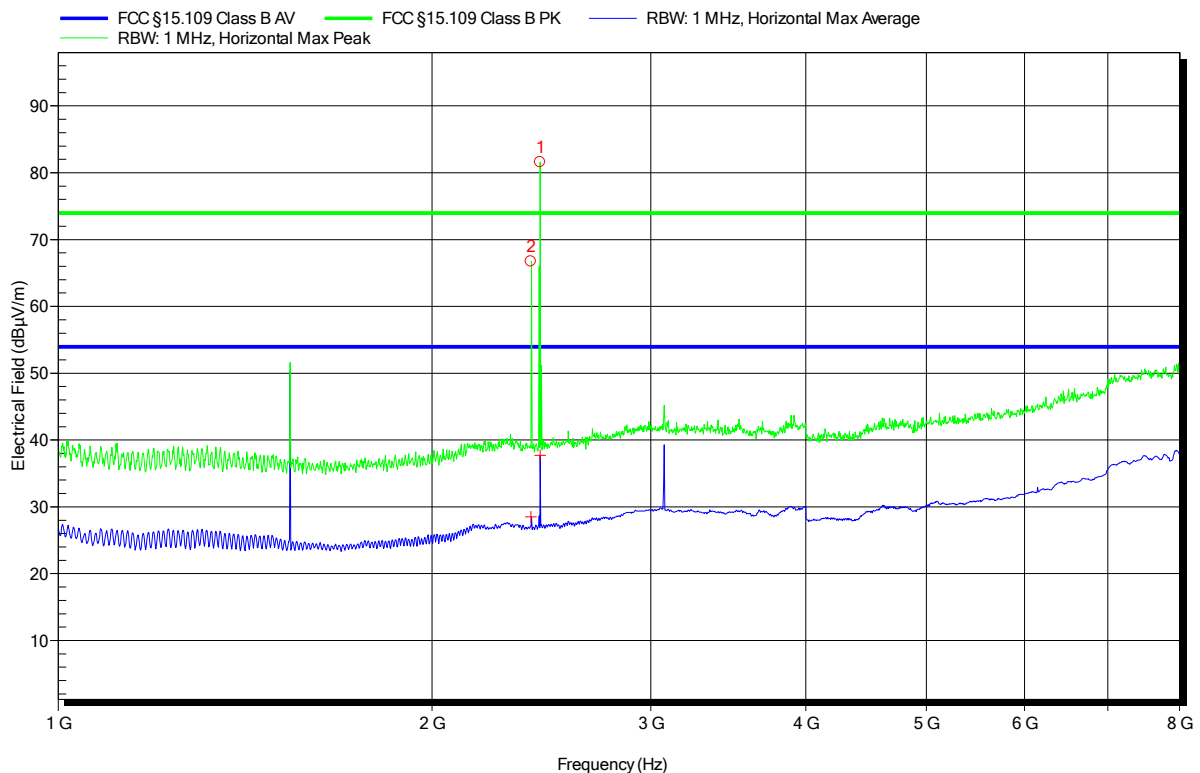
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3m
 Mode: Mode# 1
 Test Date: 2017-03-31
 Note:

Index 51



Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	2.444 GHz	Carrier BT					
2	2.403 GHz	Carrier BT					

Test Report No.: G0M-1607-5772-EF0115B-V01

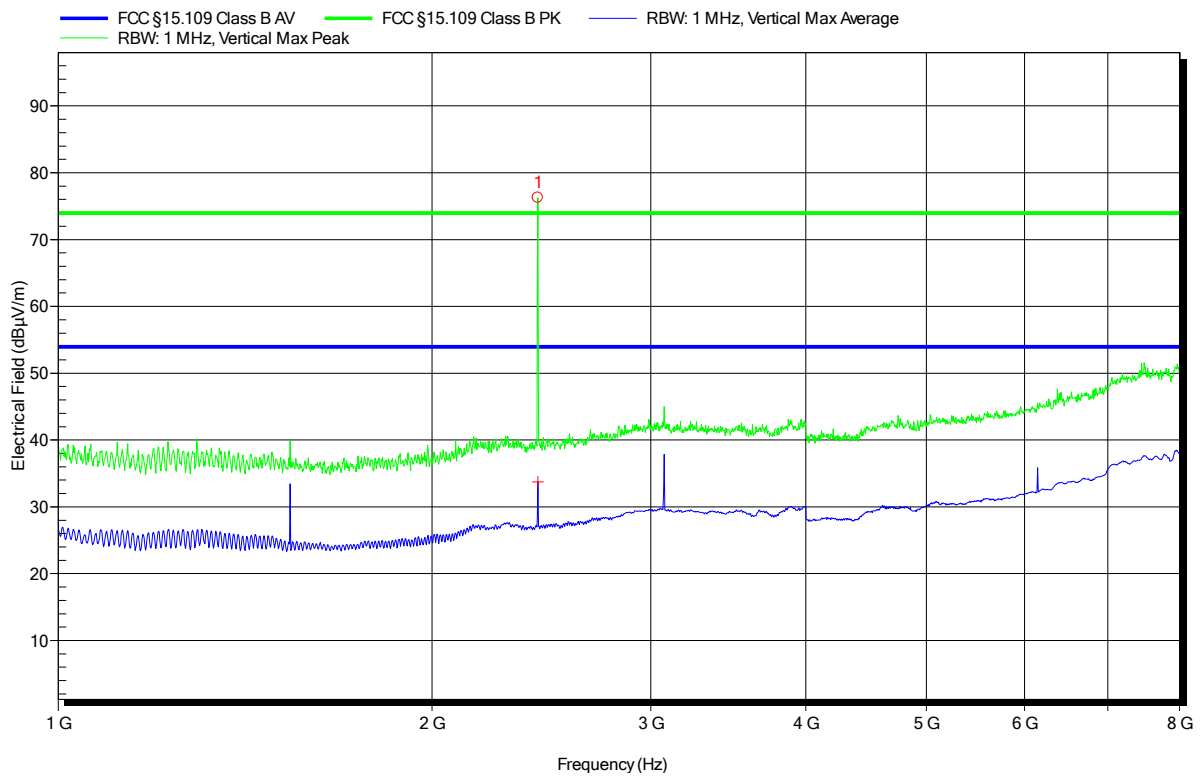
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated emissions under normal conditions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Unom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3m
 Mode: Mode# 1
 Test Date: 2017-03-31
 Note:

Index 52



Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	2.434 GHz	Carrier BT					

Test Report No.: G0M-1607-5772-EF0115B-V01

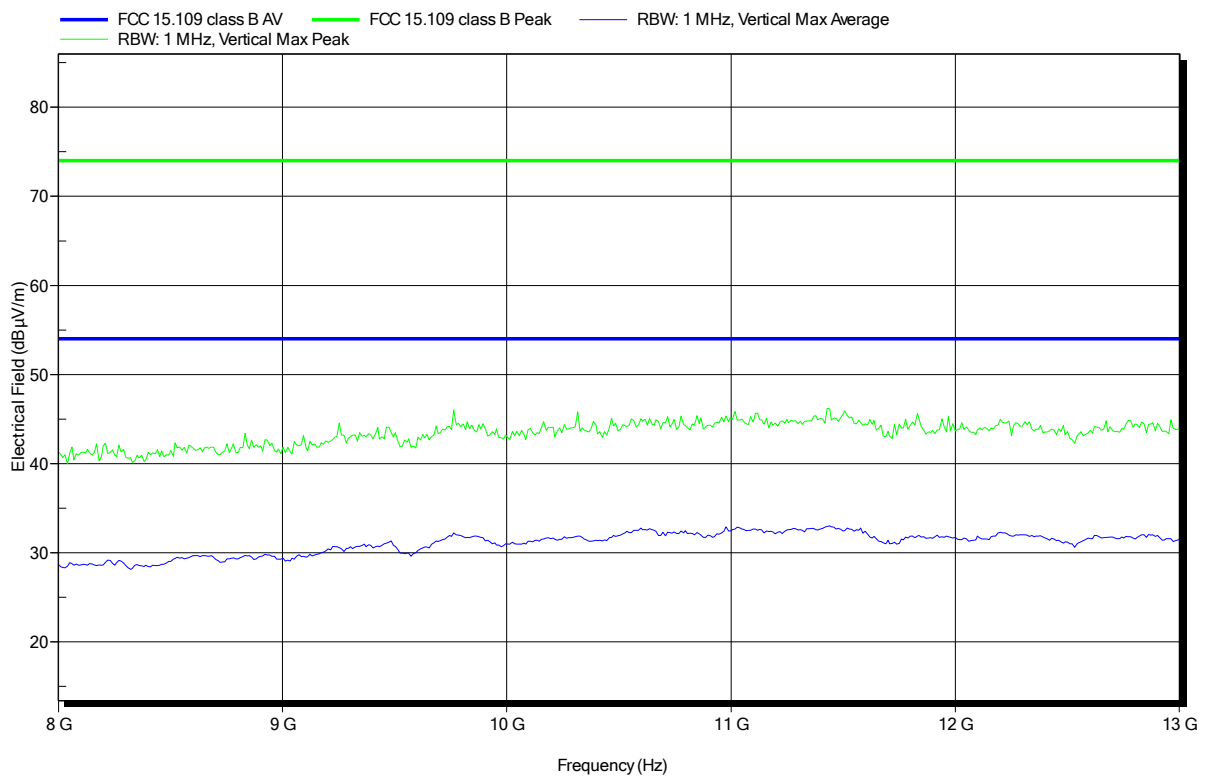
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Vnom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: Mode# 1
 Test Date: 2017-04-05
 Note:

Index 53



Spurious emissions according to FCC 15B

Project number: G0M-1607-5772

Applicant: FALCOM GmbH
 EUT Name: UMTS/GSM/GPS-Device
 Model: FOX3-KMD
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Handrik
 Test Conditions: Tnom: 22°C, Vnom: 12V DC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: Mode# 1
 Test Date: 2017-04-05
 Note:

Index 54

