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 Akkreditierungsnummer

STS 024

Schweizerischer Prüfstellendienst
 Service suisse d'essai
 Swiss testing service



Report:	Electromagnetic compatibility and Radio spectrum Matters		Report no:	13-MO-0152.12
Product name:	Roger MyLink		Mandate no:	13-MO-0152
Serial no:	Proto 3	Model number:	---	
Customer:	Phonak Communications AG Länggasse 17 CH-3280 Murten Switzerland		Date of test:	January 29, 2013 April 17-22, 2013

Standards		Result
47 CFR, Part 15	(Subpart C, Intentional radiator: §§ 15.207/209/249)	Pass
47 CFR, Part 2	(General rules and regulations : §§ 2.201, 2.202)	Pass
Industry Canada	RSS-Gen, General Requirements and Information for the Certification of Radio Apparatus	Pass
	RSS-210, Licence-exempt Radio Apparatus: Category I Equipment	Pass

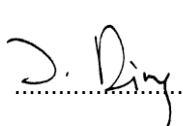
Test performed by
 Mr B. Itzcovich
 EMC test engineer



Report prepared by
 Mr B. Itzcovich
 EMC test engineer



Report controlled and approved by
 Mr J. Ding
 EMC test engineer



Rossens, May 20th, 2013

(Issue Date)

REV20130422

Main language : English

The present document results from tests on one specimen and does not prejudice to the conformity of all the manufactured products.

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Foreword

According to Phonak Communications AG, the D-Receiver radio module is implemented directly on the Roger MyLink electronic board. The occupied bandwidth measurements (§ 7.4) performed on the D-Receiver radio module without housing, fitted with temporary antenna connector and power supply connector, have been taken from the montena report n° 13-MO-0051.12.

1. Summary of test results (FCC / Canada)

§	Test Type	Result
7	Emission	CFR 47 Part 15 Sub C Industry Canada
-	Conducted emission CFR 47 § 15.207 RSS-Gen Table 4	Not applicable ¹
7.1	Radiated emission – Carrier CFR 47 § 15.249 RSS-210 § A2.9	Pass
7.2 7.3	Radiated emission – transmit mode CFR 47 § 15.209 RSS-Gen Table 5	Pass
7.2 7.3	Radiated emission – receive mode CFR 47 § 15.109 RSS-Gen Table2	Pass
7	Emission	CFR 47 Part 2 Sub C
7.4	Designation of emission FCC 47 §2.201 FCC 47 §2.202	2M00FXD

1. Powered with : 3.7VDC battery. Only applicable in charging mode.

2. Applied standards

47 CFR Part 2	Code of Federal Regulations - Title 47 - Telecommunication, Part 2 – Frequency allocations and radio treaty matters; General rules and regulations
47 CFR Part 15 Subpart C	Code of Federal Regulations - Title 47 - Telecommunication, Part 15, Subpart C: "Intentional Radiators"
RSS-Gen issue 3, December 2010	Spectrum Management and Telecommunications - Radio Standards Specification General Requirements and Information for the Certification of Radio Apparatus
RSS-210 issue 8, December 2010	Spectrum Management and Telecommunications - Radio Standards Specification Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

3. Abbreviations

Electromagnetic compatibility and radio spectrum matters:

AC	Alternating current
AFA	Adaptive Frequency Agility
AM	Amplitude Modulation
AV	Average
BW	Bandwidth
CDN	Coupling Decoupling Network
CW	Continuous Wave
d(t)	Relative voltage change characteristic
DAA	Detect And Avoid spectrum access technique
dB	Decibel
dB _i	gain in decibels relative to an isotropic antenna
DC	Direct current
DL	Downlink
d _{max}	Maximum relative voltage change
DSSS	Direct Sequence Spread Spectrum
e.i.r.p.	equivalent isotropic radiated power
EMC	ElectroMagnetic Compatibility
ERC	European Radiocommunication Committee
ESD	Electro Static Discharge
EUT	Equipment under Test
FHSS	Frequency Hopping Spread Spectrum
GBSAR	Ground Based Synthetic Aperture Radar
GRP	Ground reference plane
GTEM	Gigahertz Transverse ElectroMagnetic cell
ICNIRP	International Commission on Non-Ionizing Radiation Protection
ISM	Industrial Scientific Medical (frequency band)
ITU-R	International Telecommunications Union, Radio Sector
ITU-T	International Telecommunications Union, Telecommunications Sector
L1,L2,L3	Phase
LBT	Listen Before Talk
LISN	Line impedance substitution network
MDS	Absorbing measuring clamp
MU	Master Unit
N	Neutral
NNB	Line impedance substitution network
NRI	National Radio Interfaces
PE	Protective earth
PK	Peak
Plt	Long-term flicker indicator
PM	Pulse Modulation
Pst	Short-term flicker Indicator
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
RFID	Radio Frequency Identification
RU	Remote Unit
SCU	System Control Unit
SF-CW	Step Frequency Continuous Wave (spread spectrum)
SND/ND	Signal + Noise + Distortion divided by Noise + Distortion
SRD	Short Range Device
TEM	Transverse ElectroMagnetic cell
TETRA	Terrestrial Trunked Radio
Tx	Transmitter
UL	Uplink
UWB	Ultra Wide Band
VSWR	Voltage Standing Wave Ratio

General vocabulary: <http://www.electropedia.com>

4. Client

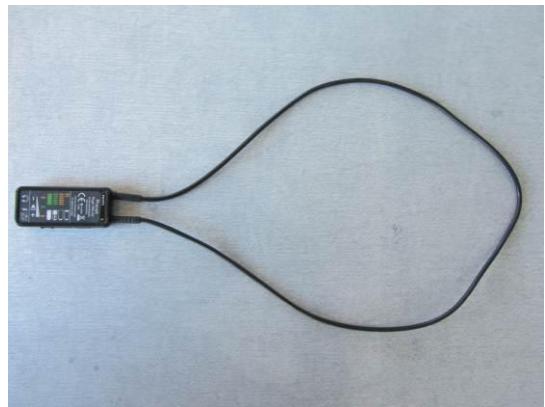
Client name and address	<i>Phonak Communications AG Länggasse 17 CH-3280 Murten Switzerland</i>
Contact Person	<i>Mr François Marquis</i>
Telephone	<i>+41 26 672 96 42</i>
Fax	<i>+41 26 672 93 80</i>
E-mail	<i>Francois.Marquis@phonak.com</i>
Mandate no	<i>13-MO-0152</i>

5. Equipment under test

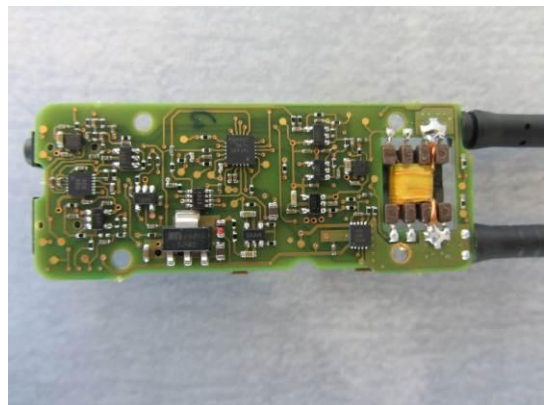
5.1 Identification

Manufacturer name and address	<i>Phonak Communications AG Länggasse 17 CH-3280 Murten Switzerland</i>
Production country	<i>Vietnam</i>
Brand name	<i>Phonak</i>
Product name	<i>Roger MyLink</i>
Product description	<i>2.4 GHz transceiver</i>
Model number	<i>- - -</i>
Serial no	<i>Proto 3</i>
Software version	<i>Test Software AQS SVN8875</i>
Highest frequency	<i>2.48 GHz</i>
Supply	<i>Battery: U = 3.7 VDC (Lithium polymer) / I = 10 mA</i>
Dimension	<i>~ 65 mm x 30 mm x 12 mm (l x w x h)</i>
Weight	<i>~ 45 g</i>
Technical documentation	<i>None. The equipment is completely identified by the above-mentioned information. Phonak Communications AG assures the traceability of the documentation and is responsible for the product identification.</i>

5.2 Pictures of the EUT



Roger MyLink (bottom view)



D-Receiver's radio module implemented inside of the Roger MyLink (top & bottom view)



D-Receiver's radio module with temporary antenna & supply connectors (for § 7.4 test)

5.3 Classification

CFR 47 Part 15	☐ Unintentional radiator (Subpart B) ☐ Class A digital device ☐ Class B digital device ☐ The highest frequency of the internal sources of the EUT is less than 108 MHz (measurement shall be made up to 1 GHz). ☐ The highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz (measurement shall be made up to 2 GHz). ☐ The highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz (measurement shall be made up to 5 GHz). ☐ The highest frequency of the internal sources of the EUT is above 1 GHz (measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is lower). ☒ Intentional radiator (Subpart C) ☒ The highest fundamental frequency of the EUT is less than 10 GHz (measurement shall be made up to the tenth harmonic or 40 GHz, whichever is lower). ☐ The highest fundamental frequency of the EUT is between 10 GHz and 30 GHz (measurement shall be made up to the fifth harmonic or 100 GHz, whichever is lower). ☐ The highest fundamental frequency of the EUT is above 30 GHz (measurement shall be made up to the fifth harmonic or 200 GHz, whichever is lower).
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5.4 Ports

Port	Cable			Remark
	Max. length	Type	Screen	
DC In	1m	2-wires	No	Connected to external AC/DC adapter
Audio Out	1m	3-wires	Yes	---

6. Test conditions

6.1 Climatic conditions, location and date

Location:	Date:	Temp	Pressure [QFF]:	Rel. humidity:
montena emc sa 1728 Rossens Switzerland	January 29, 2013 April 17-22, 2013	20-24 °C	1000 – 1040 hPa	35-50 %

6.2 Test facility and methodology

The alternate test site (ferrite chamber) is accepted by FCC (Reg. No. 90808).
 Conducted and radiated measurements are performed according to the ANSI C63.4 (2003) procedure.
 The open area test site is accepted by Industry Canada (Site number 3625A-1).

6.3 Attendant persons

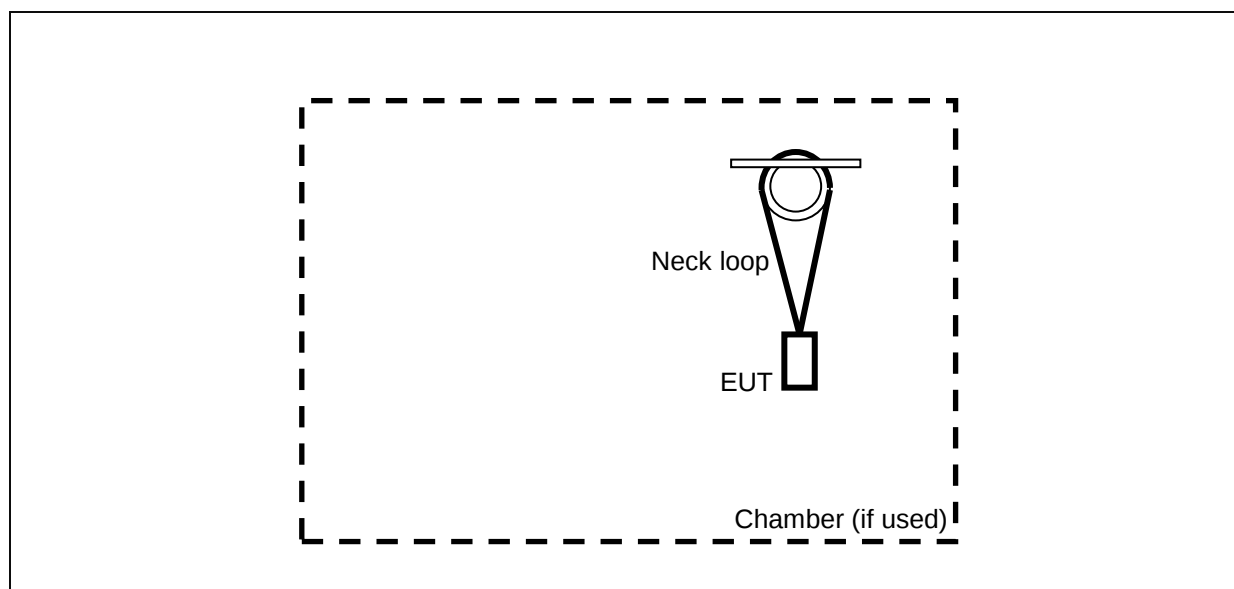
Test Engineer(s):

Mr B. Itzcovich
 EMC test engineer

Other(s):

Name	Company
Mr Martin Brügger (partially)	Nanotronic GmbH

6.4 Test configuration



6.5 Operating conditions

If not stated otherwise in § 7 :

- *Power supply: 3.7VDC battery*
- *Transceiver frequency: 2.44 GHz*
- *Emission power: maximum level (modulated)*

6.6 Auxiliary equipment

The following pieces of equipment are used for the monitoring of the EUT or are necessary for the EUT but they are not part of the EUT.

None

7. Emission tests

7.1 Carrier - Radiated emission

Test site: ☐ anechoic chamber (ferrites) ☐ open test site
☒ anechoic chamber (foam) ☐

Meas. distance: ☐ 1 m ☒ 3 m ☐ 10 m ☐ 30 m

Meas. uncertainty: ± 4.7 dB

Position of EUT: 1.5 m (height above floor of equipment under test)

Measuring method: The carrier radiated by the equipment is measured using a spectrum analyser and a wide band antenna. The antenna is placed at the same height as the EUT successively with horizontal and vertical polarisations. The turning table is operated through 360° during the measurements. The recordings are carried out taking into account the maximum value of all the disturbances appearing while the apparatus is under test. The peak values are recorded continuously on the graph. The values exceeding a limit are remeasured manually using a receiver.

Test set-up:



Remarks: Limit values expressed in dB μ V/m and transformed to a measuring distance of 1m (factor used = 20 dB/decade) if necessary
 e.g.: for $f = 2.43\text{GHz}$ the limit is 50mV/m at 3m (average detector);

$$20 \log \left(\frac{50 \frac{\text{mV}}{\text{m}}}{1 \frac{\mu\text{V}}{\text{m}}} \right) = 94 \frac{\text{dB}\mu\text{V}}{\text{m}} \text{ at } 3\text{m}$$

Test equipment:

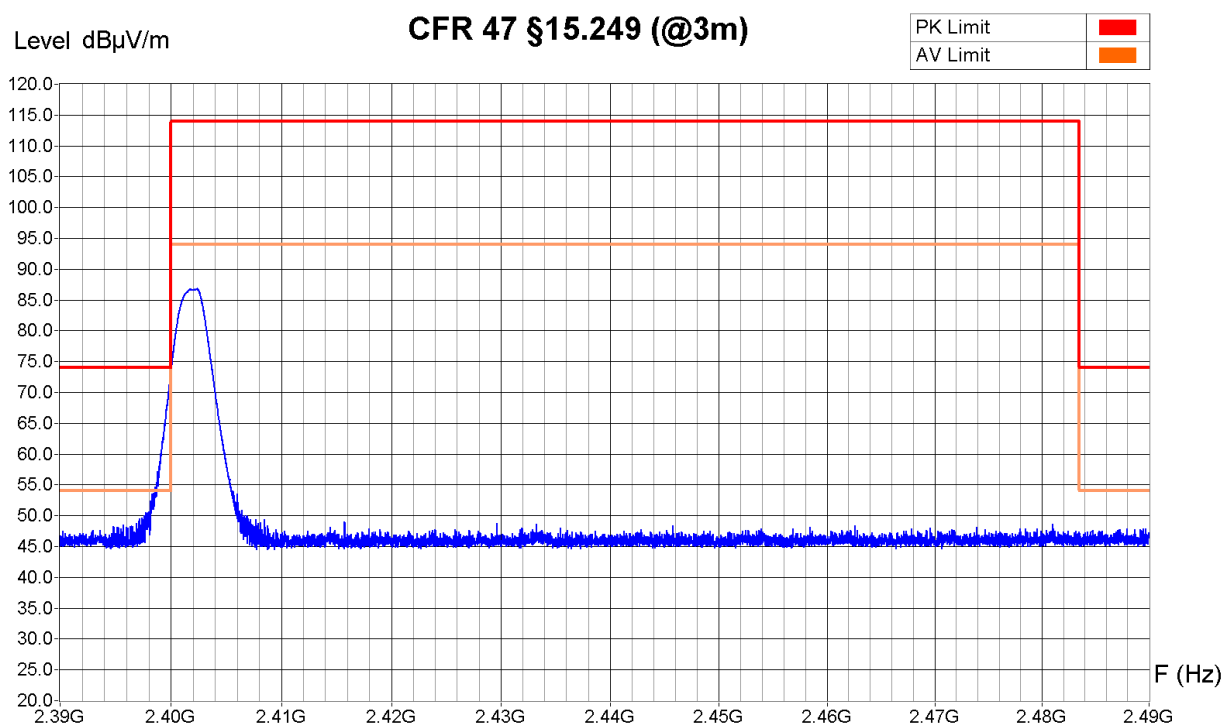
Spectrum analyser	☐ 88-14	☐ 02-06	☐ 03-45	☐ 05-39	☒ 07-53	☐ 10-70
Receiver	☐ 94-35	☐ 04-29	☐ 10-70			
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☐ 05-59	☐ 05-62	☐ 05-87
Antenna (horn)	☒ 90-24	☐ 98-12	☐ 98-13	☐ 07-31		☒ 11-29
Cables	☒ 06-00	☐ 06-01				

Result: ☒ pass ☐ fail ☐ not applicable ☐ partly tested

Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0° - 360° (0° is worst case : front side)
 Antenna Height : 1m - 2.5m (1.6m is worst case)



Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.402 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Peak detector sweep, ST = 40 s (8001 pts)
 Cage 06-00

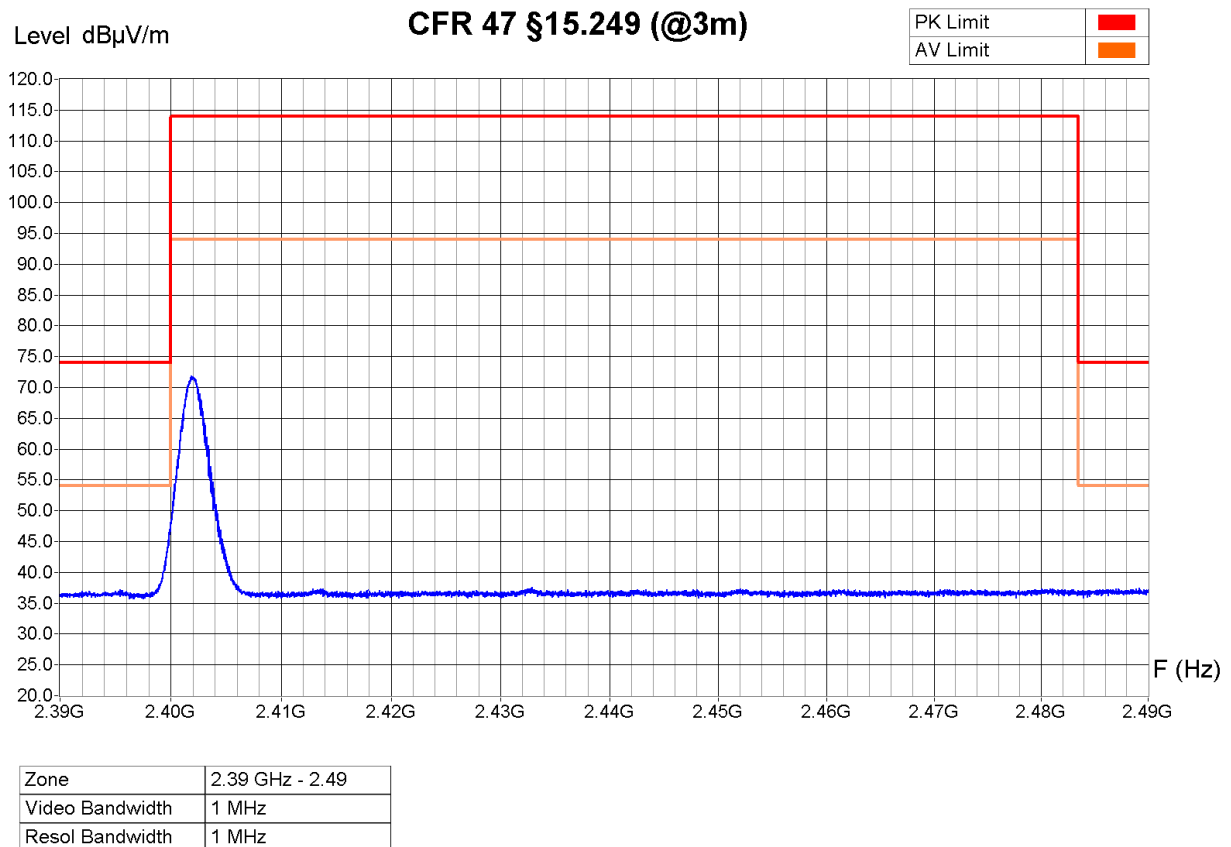


Zone	2.39 GHz - 2.49
Video Bandwidth	1 MHz
Resol Bandwidth	1 MHz

Operator: B. Itzcovich
 Date/Time: 19.04.2013 11:17
 Filename:
 05_carrier_TX2402_V.png/.txt

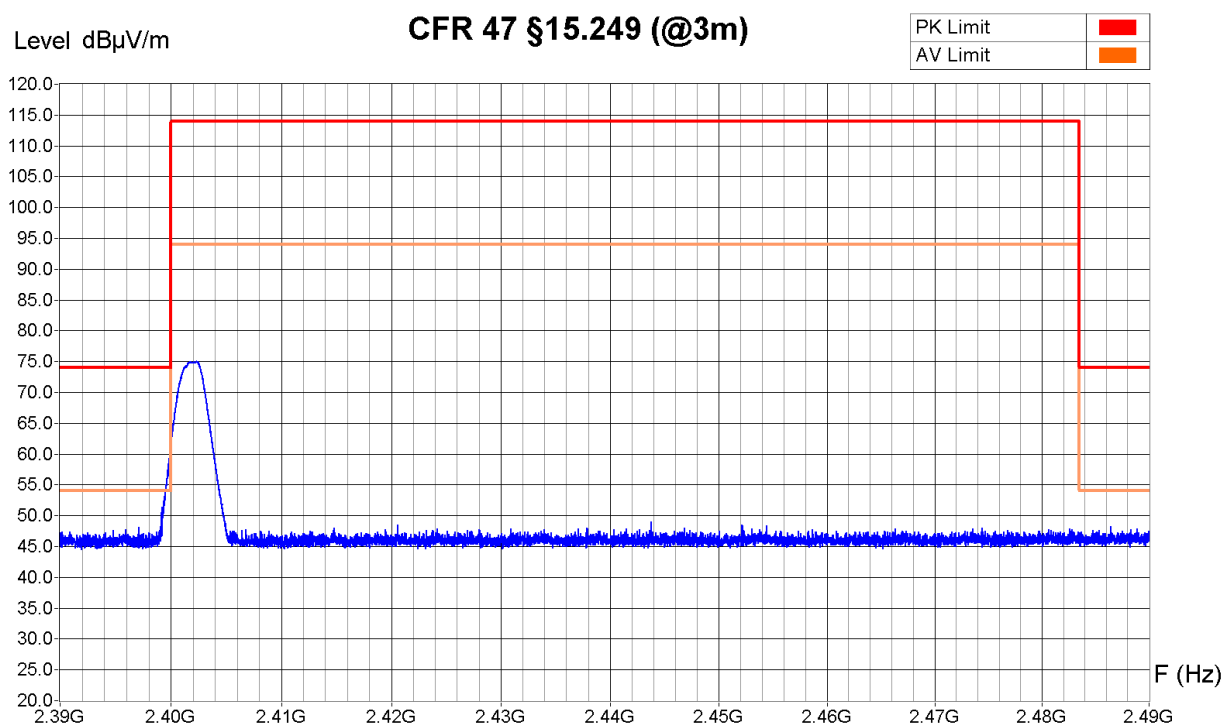
Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0° - 360° (0° is worst case : front side)
 Antenna Height : 1m - 2.5m (1.6m is worst case)

 Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.402 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Average RMS detector sweep, ST = 40 s (8001 pts)
 Cage 06-00



Operator: B. Itzcovich
 Date/Time: 19.04.2013 11:28
 Filename:
 06_carrier_TX2402_V_AVG.png/
 .txt

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0° - 360° (315° is worst case : front-left)
 Antenna Height : 1m - 2.5m (1.2m is worst case)
 Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.02 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Peak detector sweep, ST = 40 s (8001 pts)
 Cage 06-00



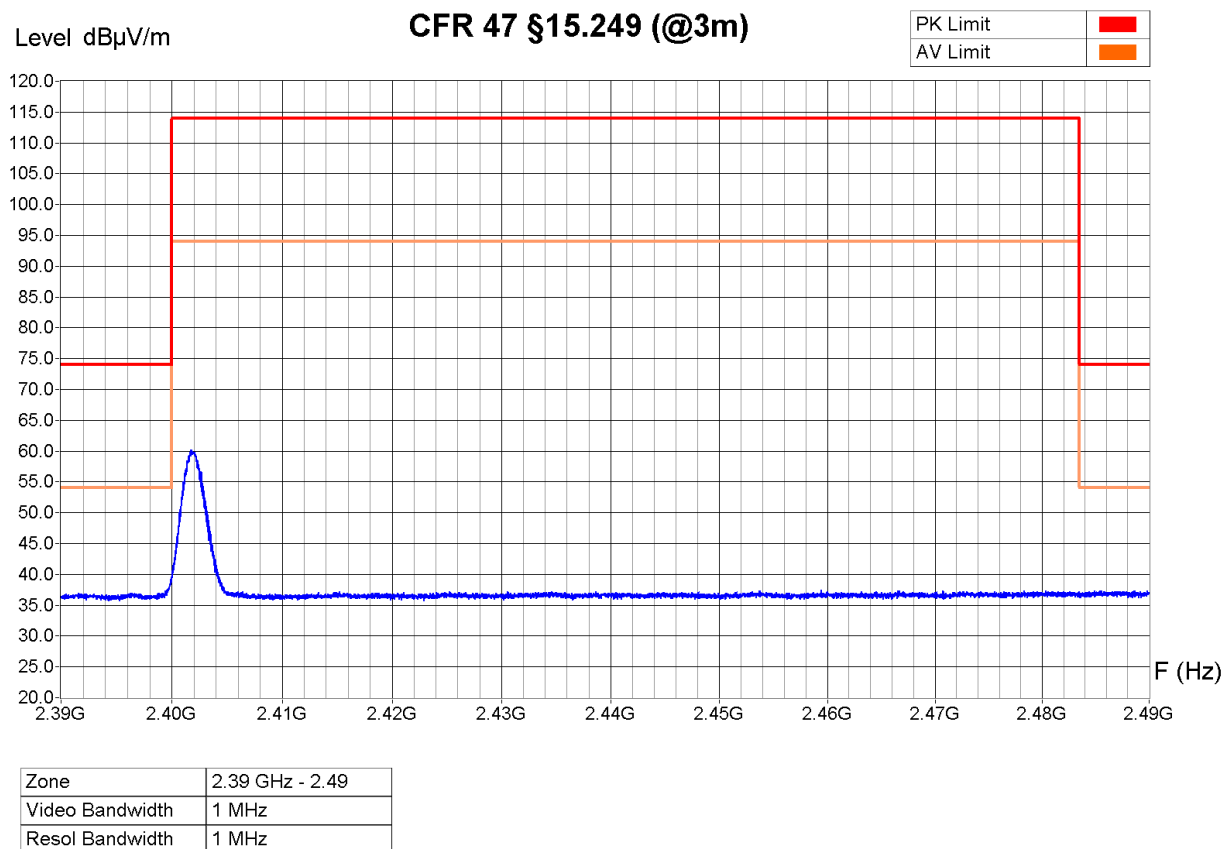
Zone	2.39 GHz - 2.49
Video Bandwidth	1 MHz
Resol Bandwidth	1 MHz

Operator: B. Itzcovich
 Date/Time: 19.04.2013 12:18
 Filename:
 07_carrier_TX2402_H.png/.txt

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0° - 360° (315° is worst case : front-left)
 Antenna Height : 1m - 2.5m (1.2m is worst case)



Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.02 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Average RMS detector sweep, ST = 40 s (8001 pts)
 Cage 06-00

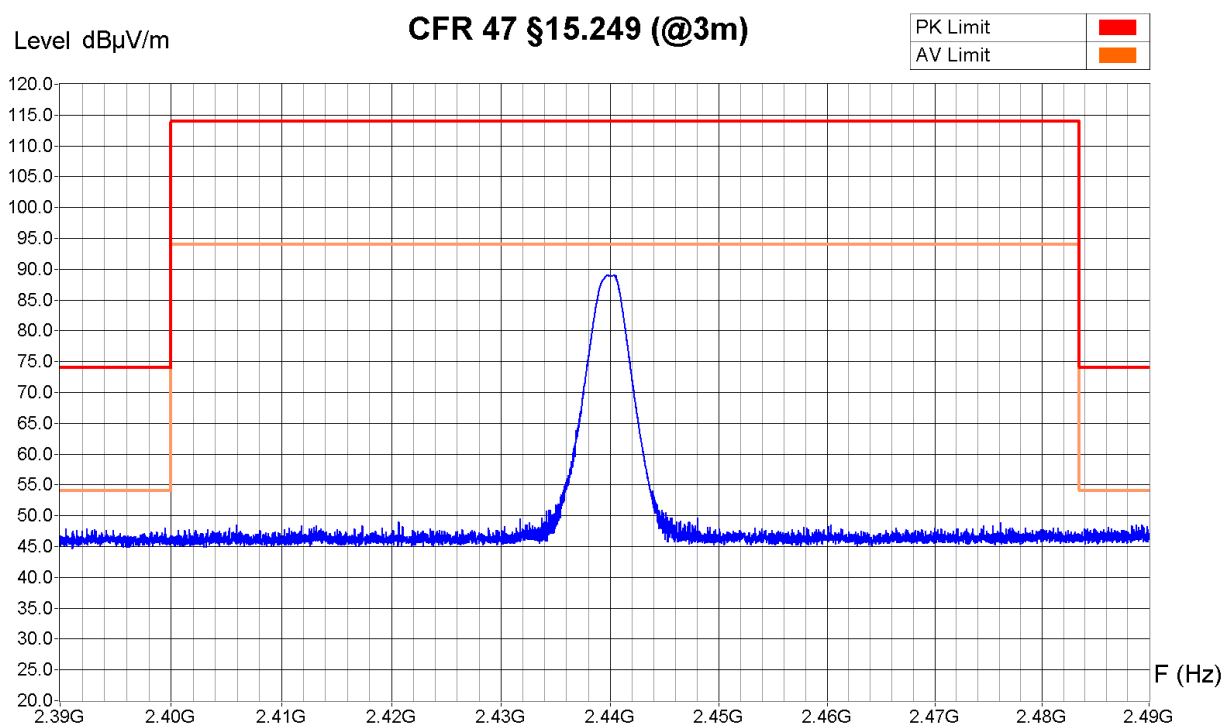


Operator: B. Itzcovich
 Date/Time: 19.04.2013 12:20
 Filename:
 08_carrier_TX2402_H_AVG.png/
 .txt

Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0° - 360° (0° is worst case : front side)
 Antenna Height : 1m - 2.5m (1.6m is worst case)



Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.440 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Peak detector sweep, ST = 40 s (8001 pts)
 Cage 06-00



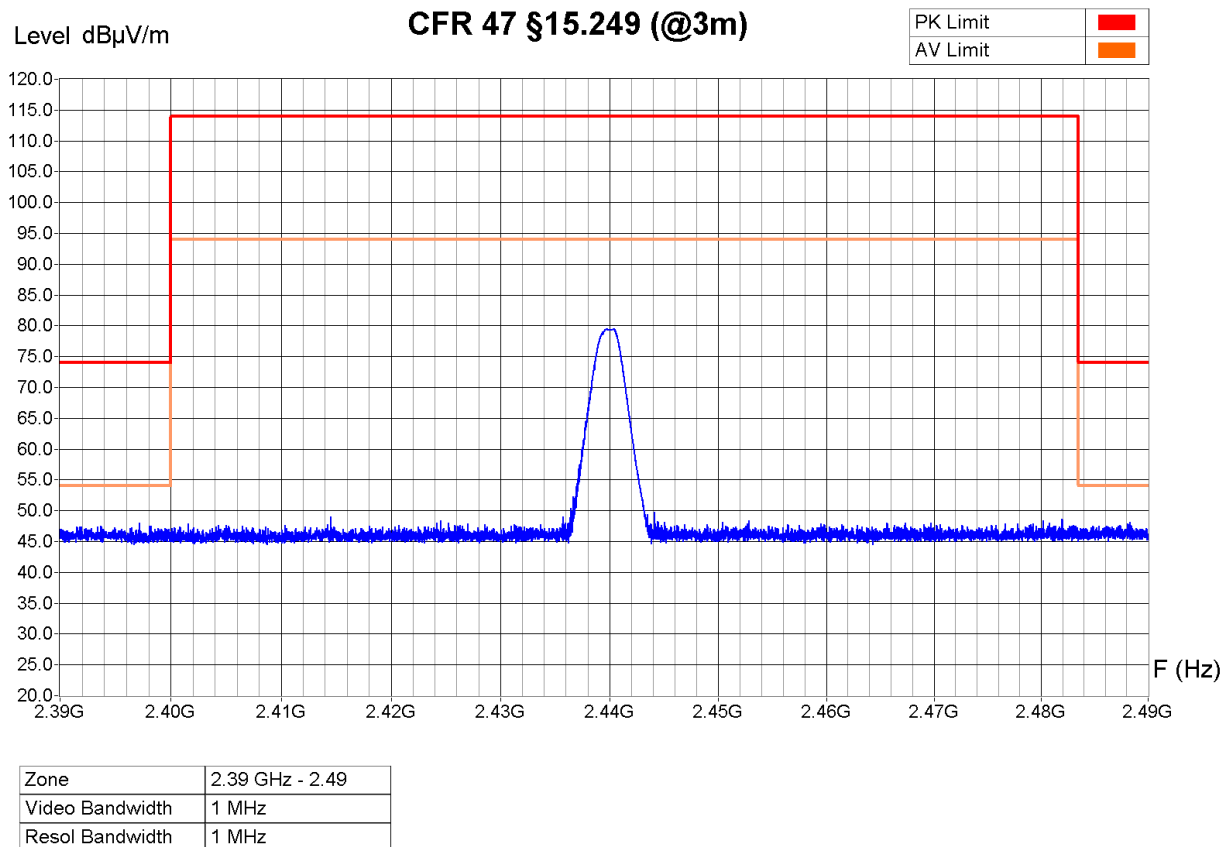
Zone	2.39 GHz - 2.49
Video Bandwidth	1 MHz
Resol Bandwidth	1 MHz

Operator: B. Itzcovich
 Date/Time: 19.04.2013 11:42
 Filename:
 09_carrier_TX2440_V.png/.txt

Measurement Type : Radiated Field
Polarisation : Horizontal
Table Angle : 0° - 360° (315° is worst case : front-left)
Antenna Height : 1m - 2.5m (1.2m is worst case)



Equipment Under Test : Roger Mylink
Set-Up : See photos
Operating Conditions : TX 2.440 GHz (Ton = 0.184 ms, T = 5.00 ms)
Remarks : Carrier
Peak detector sweep, ST = 40 s (8001 pts)
Cage 06-00

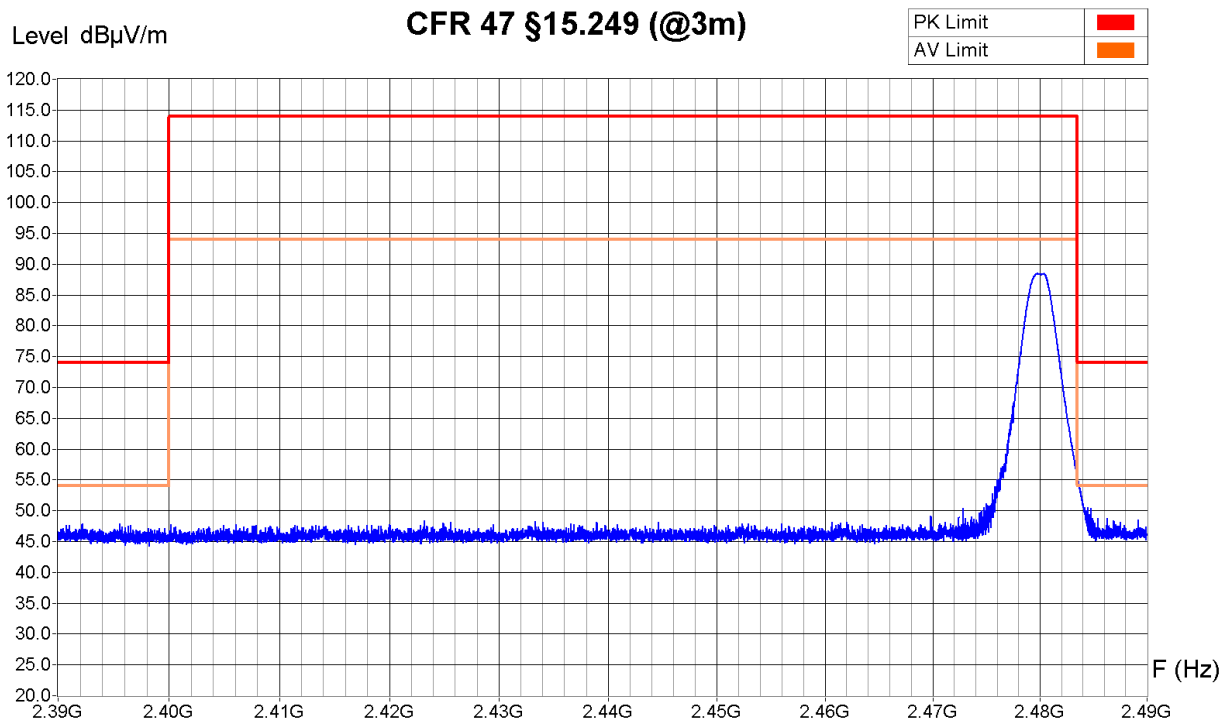


Operator: B. Itzcovich
Date/Time: 19.04.2013 12:15
Filename:
10_carrier_TX2440_H.png/.txt

Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0° - 360° (0° is worst case : front side)
 Antenna Height : 1m - 2.5m (1.6m is worst case)



Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.480 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Peak detector sweep, ST = 40 s (8001 pts)
 Cage 06-00

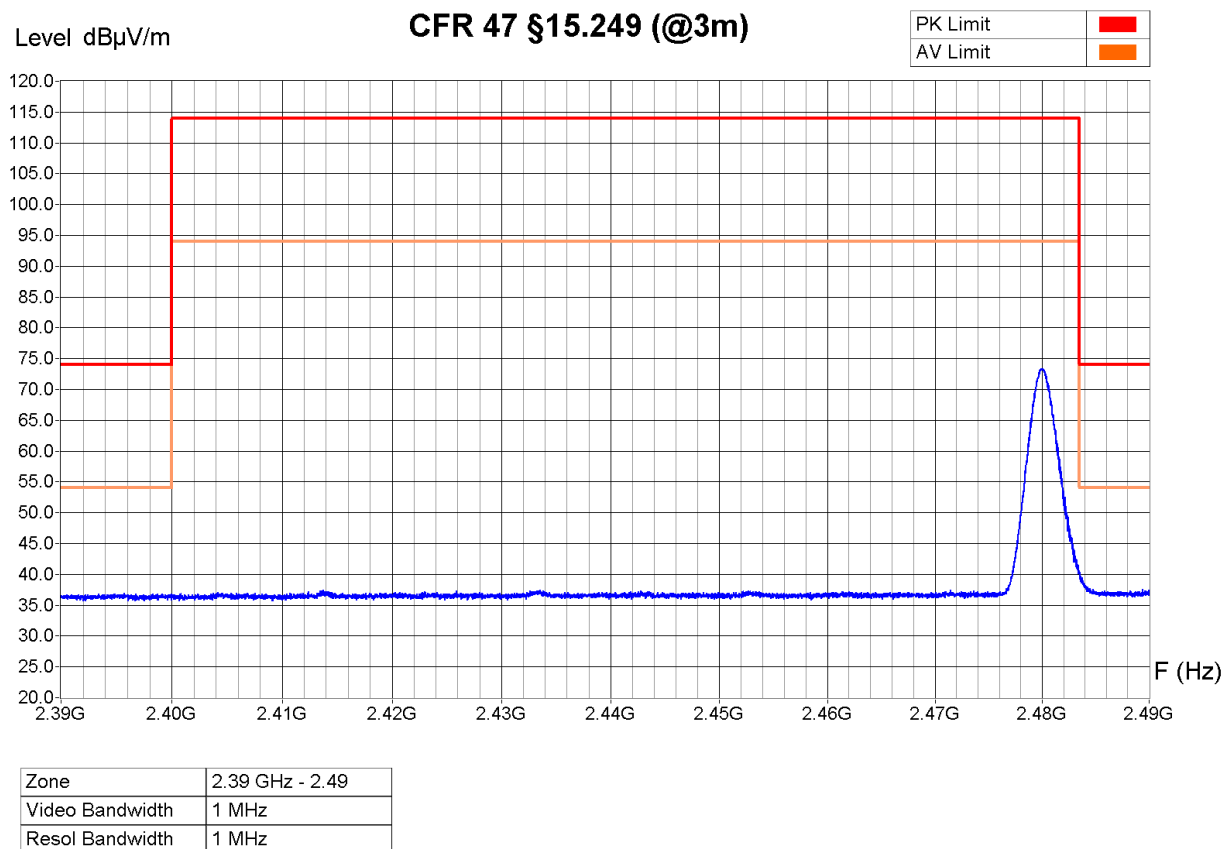


Zone	2.39 GHz - 2.49
Video Bandwidth	1 MHz
Resol Bandwidth	1 MHz

Operator: B. Itzcovich
 Date/Time: 19.04.2013 11:46
 Filename:
 11_carrier_TX2480_V.png/.txt

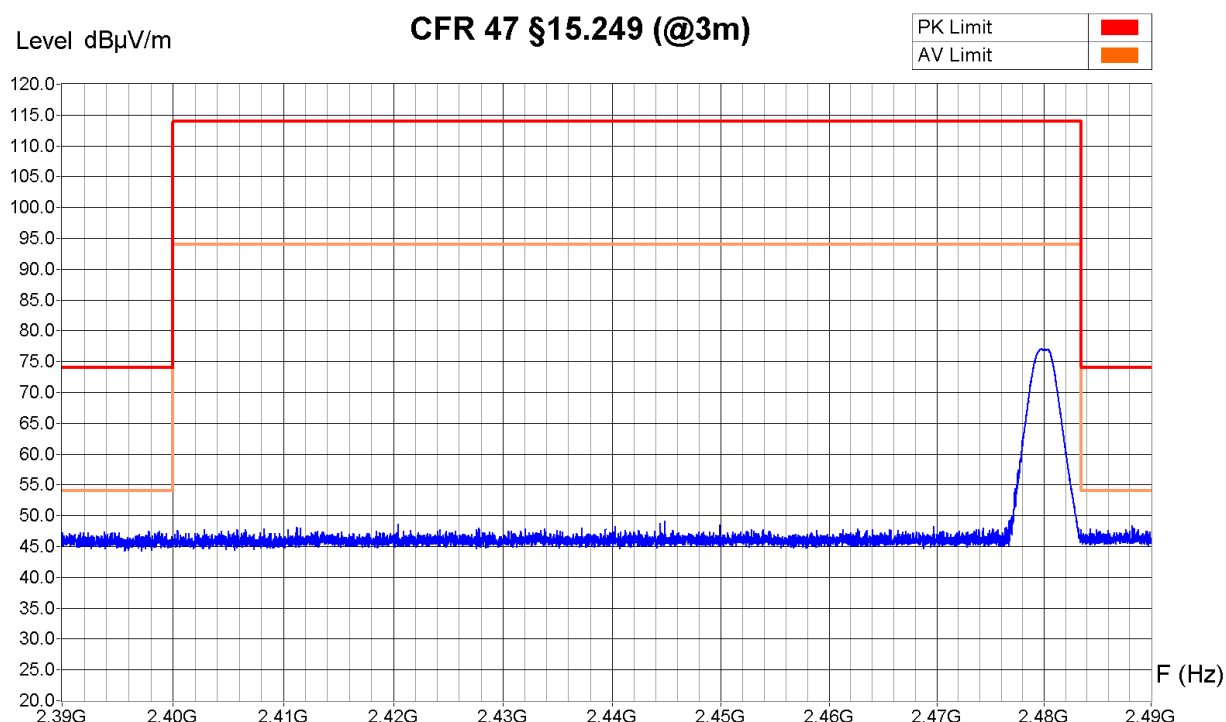
Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0° - 360° (0° is worst case : front side)
 Antenna Height : 1m - 2.5m (1.6m is worst case)

 Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.480 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Average RMS detector sweep, ST = 40 s (8001 pts)
 Cage 06-00



Operator: B. Itzcovich
 Date/Time: 19.04.2013 11:48
 Filename:
 12_carrier_TX2480_V_AVG.png/
 .txt

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0° - 360° (315° is worst case : front-left)
 Antenna Height : 1m - 2.5m (1.2m is worst case)
 Equipment Under Test : Roger Mylink
 Set-Up : See photos
 Operating Conditions : TX 2.480 GHz (Ton = 0.184 ms, T = 5.00 ms)
 Remarks : Carrier
 Peak detector sweep, ST = 40 s (8001 pts)
 Cage 06-00



Zone	2.39 GHz - 2.49
Video Bandwidth	1 MHz
Resol Bandwidth	1 MHz

Operator: B. Itzcovich
 Date/Time: 19.04.2013 12:03
 Filename:
 13_carrier_TX2480_H.png/.txt

7.2 Radiated electromagnetic field (30 MHz to 1 GHz)

Test site: ☒ anechoic chamber (ferrites) ☐ anechoic chamber (foam)
☐ semi-anechoic chamber (hybrid) ☐ laboratory

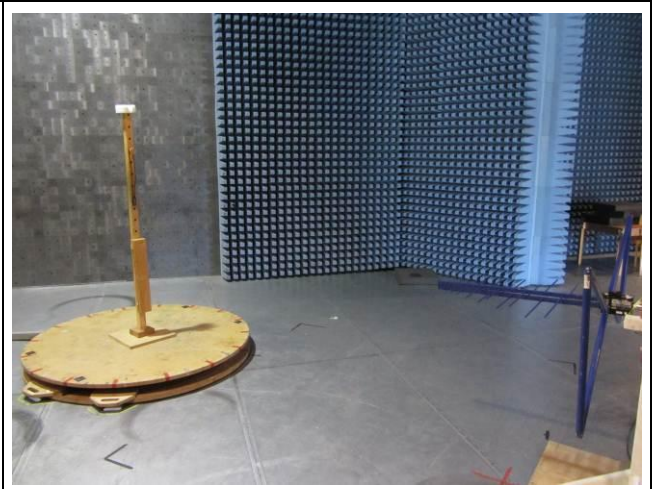
Distance: ☒ 3 m ☐ 10 m ☐ 30m

Position of EUT: 1.5 m (height of the equipment under test above floor)

Meas. uncertainty: ± 4.6 dB

Measuring method: The electromagnetic disturbance radiated by the equipment is measured using a spectrum analyser and a wide band antenna. The antenna is moved from 1 to 4 m in height successively with horizontal and vertical polarisations. The turning table is operated through 360° during the measurements. The recordings are carried out taking into account the maximum value of all the disturbances appearing while the apparatus is under test. The peak values are recorded continuously on the graph. The values exceeding a limit are remeasured manually using a receiver.

Test set-up:



Remarks:

- Max. power
- Special communication test mode
- modulated

Test equipment:

Spectrum analyser	☐ 88-14	☐ 02-06	☐ 03-45	☐ 05-39	☐ 07-53	☒ 10-70
Receiver	☐ 94-35	☐ 04-29	☒ 10-70			
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☒ 05-59	☐ 05-62	☐ 05-87
Antenna, (biconical)	☐ 82-02	☐ 87-05	☐ 87-16	☐ 91-05	☐ 94-37	
Antenna, (log-per)	☐ 88-20	☐ 90-30	☐ 91-35	☐ 94-64		
Antenna, (bilog)	☒ 94-03	☐ 05-38				
Antenna, (horn)	☐ 90-24	☐ 98-12	☐ 98-13	☐ 07-31		
Cables	☐ 06-00	☒ 06-01				

Result: ☒ pass ☐ fail ☐ not applicable ☐ partly tested

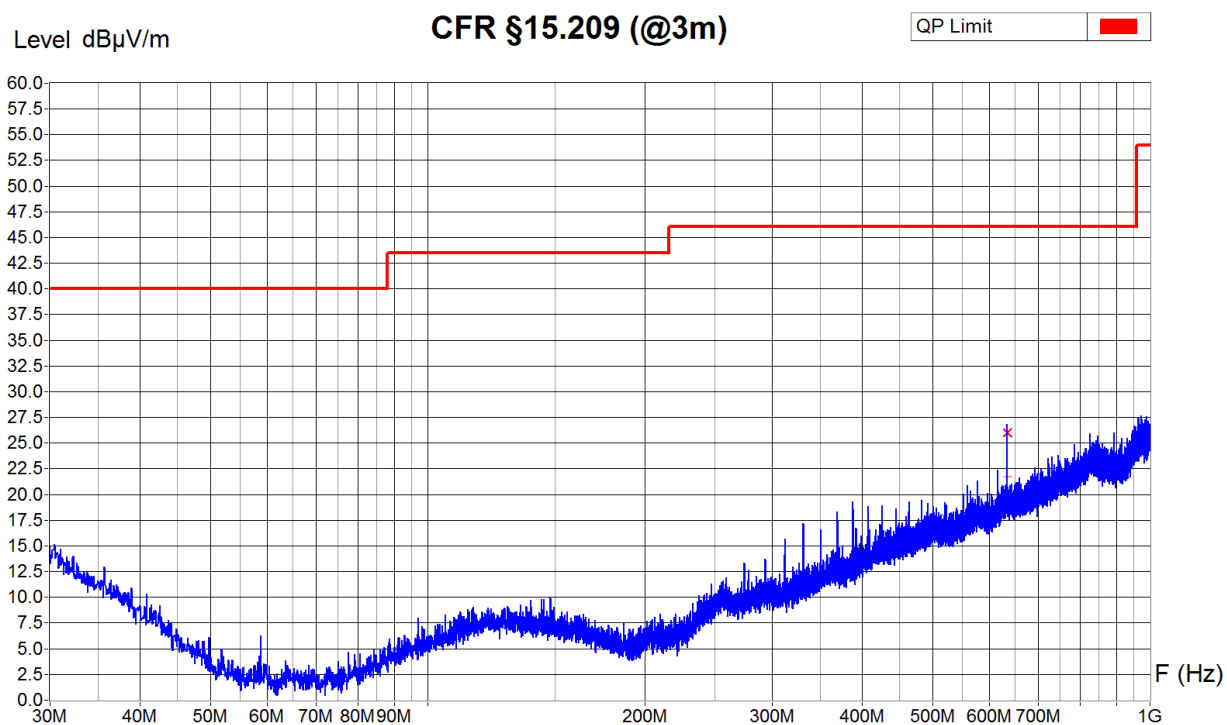
7.2.1 Transmit mode

Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0 - 360°
 Antenna Height : 1 - 4m



Equipment Under Test : Roger MyLink
 Set-Up : See photos
 Operating Conditions : TX 2.440 GHz
 Remarks :

Cage 06-01



Zone	25 MHz - 1 GHz
Video Bandwidth	300 KHz
Resol Bandwidth	100 KHz

Receiver Measures

Frequency	Peak	QuasiPeak (x)	Average (+)
634.73 MHz	28.8 dBμV/m	26.0 dBμV/m	21.7 dBμV/m

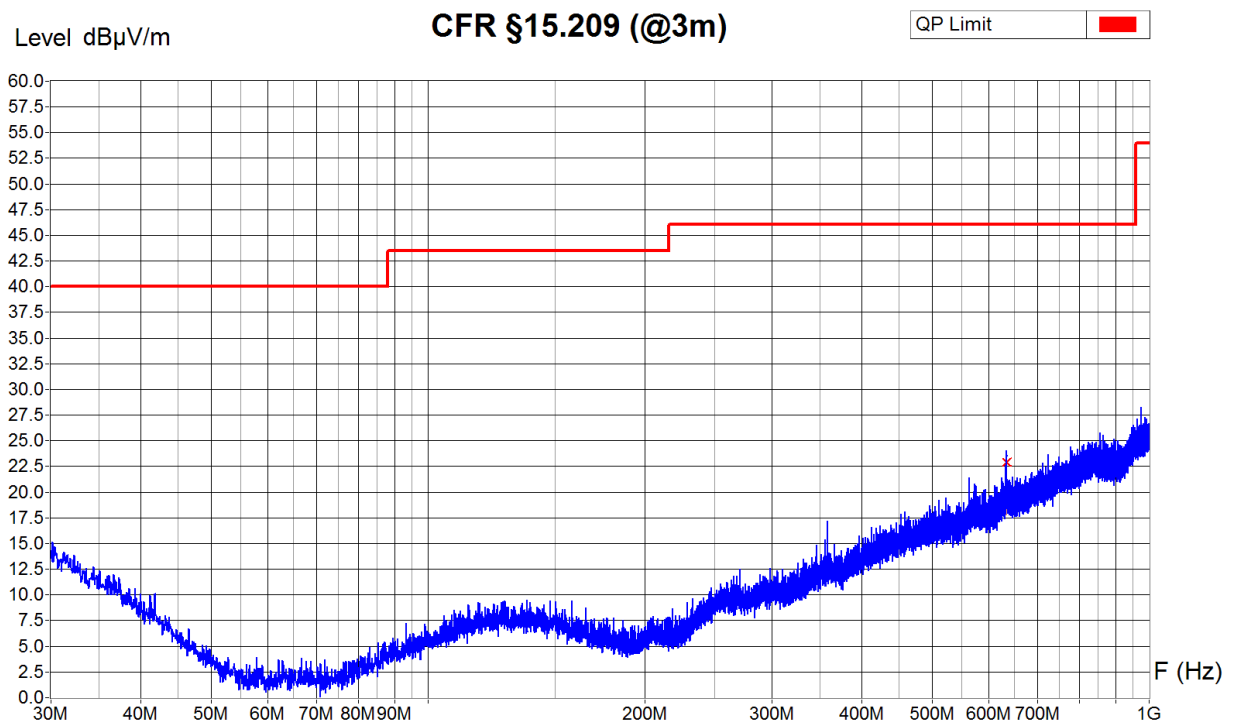
Operator: B. Itzcovich
 Date/Time: 17.04.2013 10:45
 Filename:
 01_RE_30M-
 1G_TX2440_V_FCC.png/.txt

Measurement Type : Radiated Field
Polarisation : Horizontal
Table Angle : 0 - 360°
Antenna Height : 1 - 4m



Equipment Under Test : Roger MyLink
Set-Up : See photos
Operating Conditions : TX 2.440 GHz
Remarks :

Cage 06-01



Zone	25 MHz - 1 GHz
Video Bandwidth	300 KHz
Resol Bandwidth	100 KHz

Receiver Measures

Frequency	Peak	QuasiPeak (x)	Average (+)
634.50 MHz	26.5 dB μ V/m	22.9 dB μ V/m	18.2 dB μ V/m

Operator: B. Itzcovich
Date/Time: 17.04.2013 11:00
Filename:
02_RE_30M-
1G_TX2440_H_FCC.png/.txt

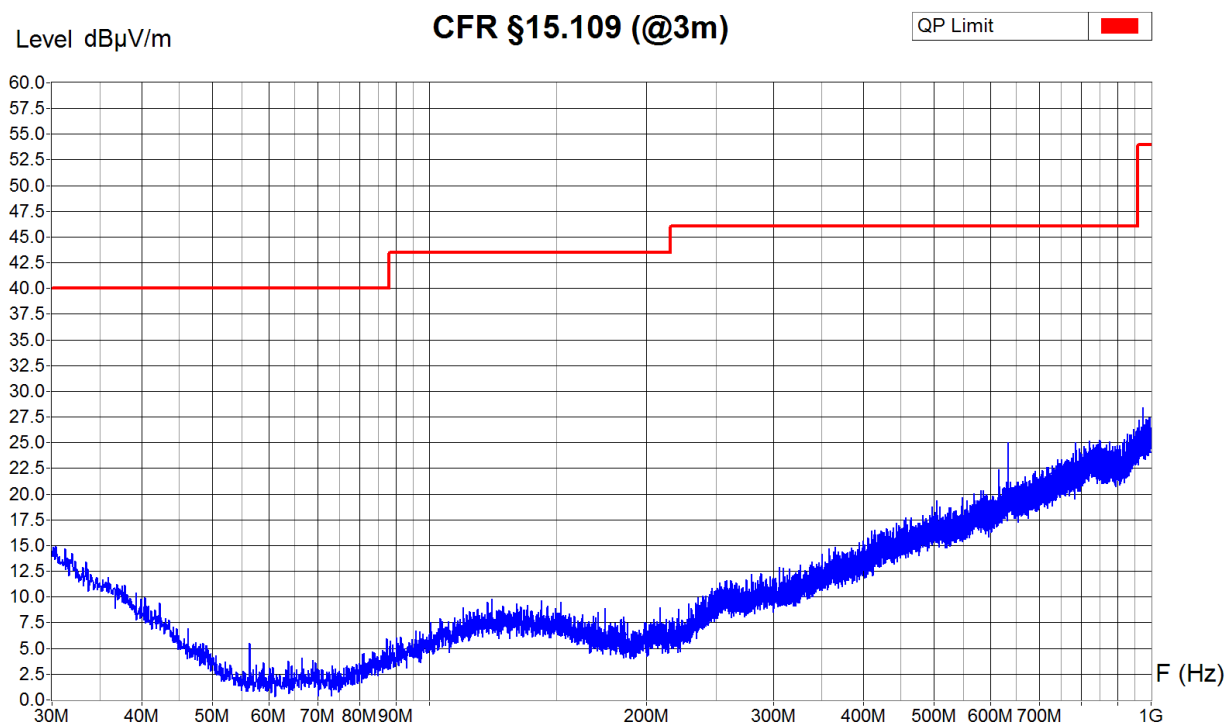
7.2.2 Receive mode

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0 - 360°
 Antenna Height : 1 - 4m



Equipment Under Test : Roger MyLink
 Set-Up : See photos
 Operating Conditions : RX 2.440 GHz
 Remarks :

Cage 06-01



Zone	25 MHz - 1 GHz
Video Bandwidth	300 KHz
Resol Bandwidth	100 KHz

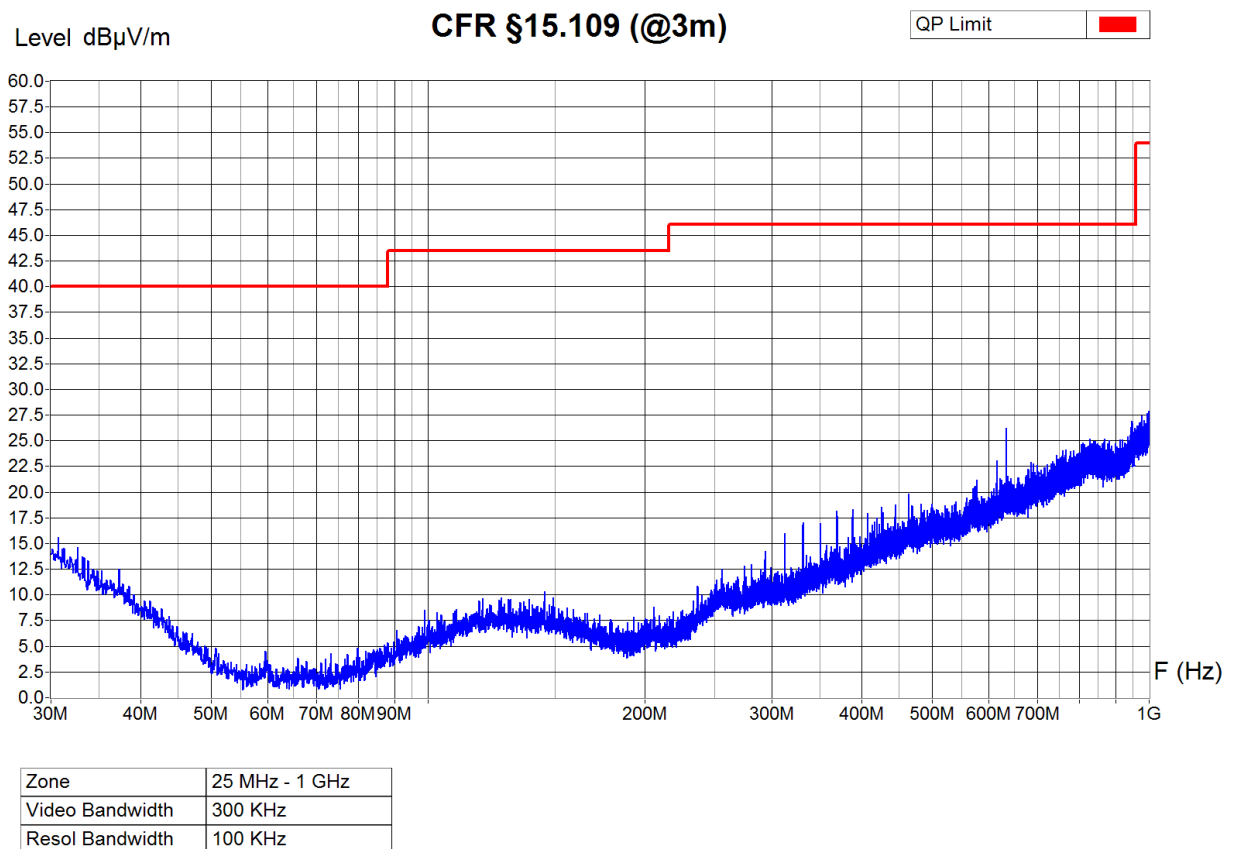
Operator: B. Itzcovich
 Date/Time: 17.04.2013 11:14
 Filename:
 03_RE_30M-
 1G_RX2440_H_FCC.png/.txt

Measurement Type : Radiated Field
Polarisation : Vertical
Table Angle : 0 - 360°
Antenna Height : 1 - 4m



Equipment Under Test : Roger MyLink
Set-Up : See photos
Operating Conditions : RX 2.440 GHz
Remarks :

Cage 06-01



Operator: B. Itzcovich
Date/Time: 17.04.2013 11:26
Filename:
04_RE_30M-
1G_RX2440_V_FCC.png/.txt

7.3 Radiated electromagnetic field (1 GHz to 26.5 GHz)

Test site: ☐ anechoic chamber (ferrites) ☒ anechoic chamber (foam)
☐ semi-anechoic chamber (hybrid) ☐ laboratory

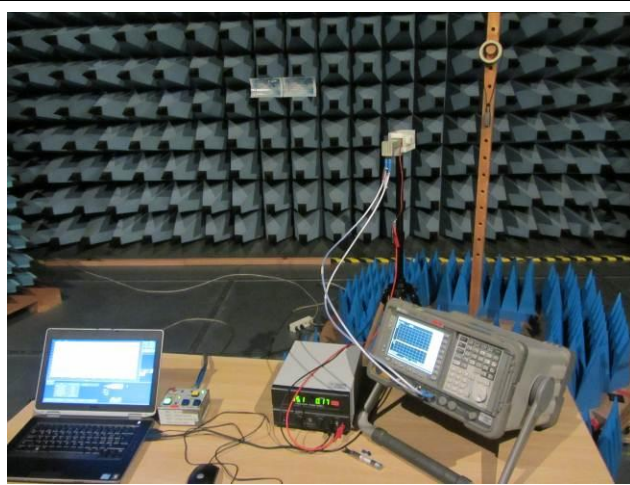
Distance: ☒ 1 m ☐ 3 m ☐ 10 m ☐ 30m

Position of EUT: 1.5 m (height of the equipment under test above floor)

Meas. uncertainty: ± 4.7 dB

Measuring method: The electromagnetic disturbance radiated by the equipment is measured using a spectrum analyser and a wide band antenna. The turning table is operated through 360° during the measurements. The recordings are carried out taking into account the maximum value of all the disturbances appearing while the apparatus is under test. The peak values are recorded continuously on the graph. The values exceeding a limit are remeasured manually using a receiver.

Test set-up:



Remarks:

- Max. power
- Special communication test mode
- Modulated

Harmonics #2, #3 and #4 have been measured with a longer sweep time (4 - 8s) and are below the limits

Test equipment:

Spectrum analyser	☐ 88-14	☐ 94-24	☒ 02-06	☐ 03-45	☐ 05-39	☐ 07-53	☐ 10-70
Receiver	☐ 94-35	☐ 04-29	☐ 10-70				
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☐ 05-59	☐ 05-62	☐ 05-87	☒ 11-29
Antenna (horn)	☒ 90-24	☐ 98-10	☐ 98-12	☐ 07-31			
Antenna with mixer	☒ 98-12	☐ 98-13					
Cables	☒ 11-61	☒ 10-75	☒ 10-81	☒ 11-62			
Power supply	☐ 99-04	☐ 99-07	☒ 06-62				

Result: ☒ pass ☐ fail ☐ not applicable ☐ partly tested

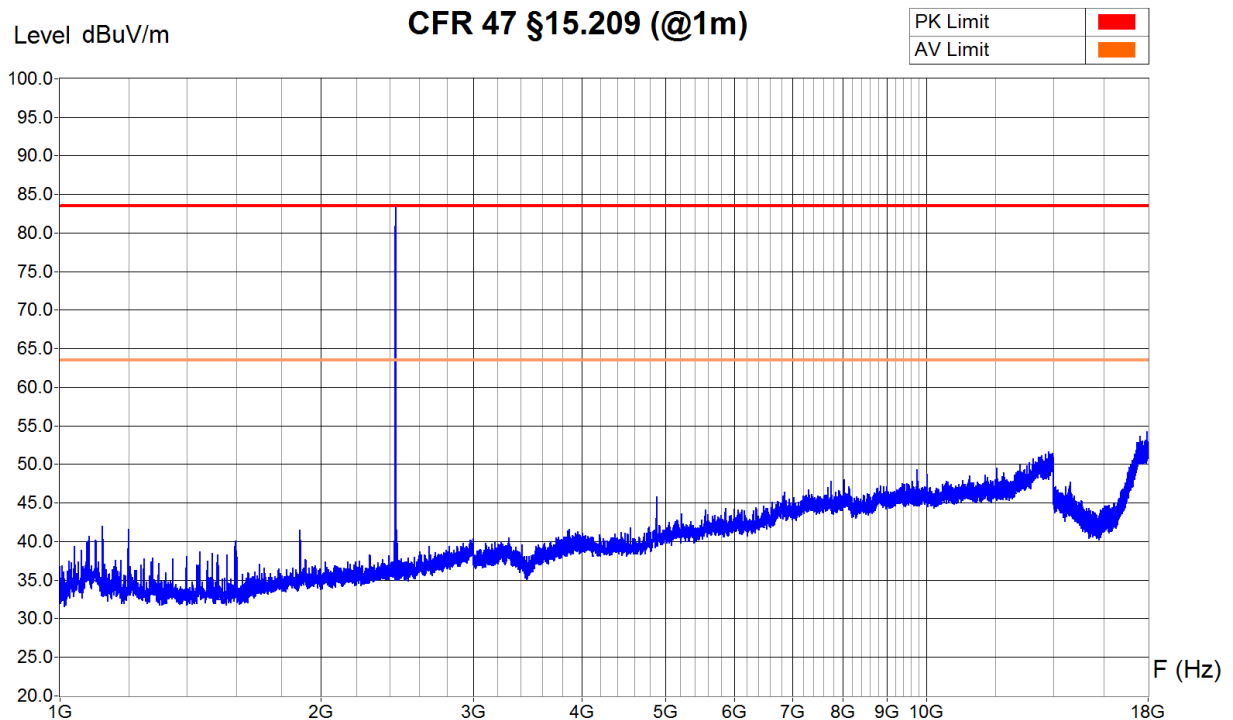
7.3.1 Transmit mode

Measurement Type : Radiated Field
Polarisation : Horizontal
Table Angle : 0° - 360°
Antenna Height : 1m - 2m



Equipment Under Test : Roger MyLink
Set-Up : See photos
Operating Conditions : TX 2.440 GHz
Remarks :

Cage 06-00



Zone	1 GHz - 4 GHz	4 GHz - 14 GHz	14 GHz - 18 GHz
Video Bandwidth	1 MHz	1 MHz	300 KHz
Resol Bandwidth	1 MHz	1 MHz	300 KHz

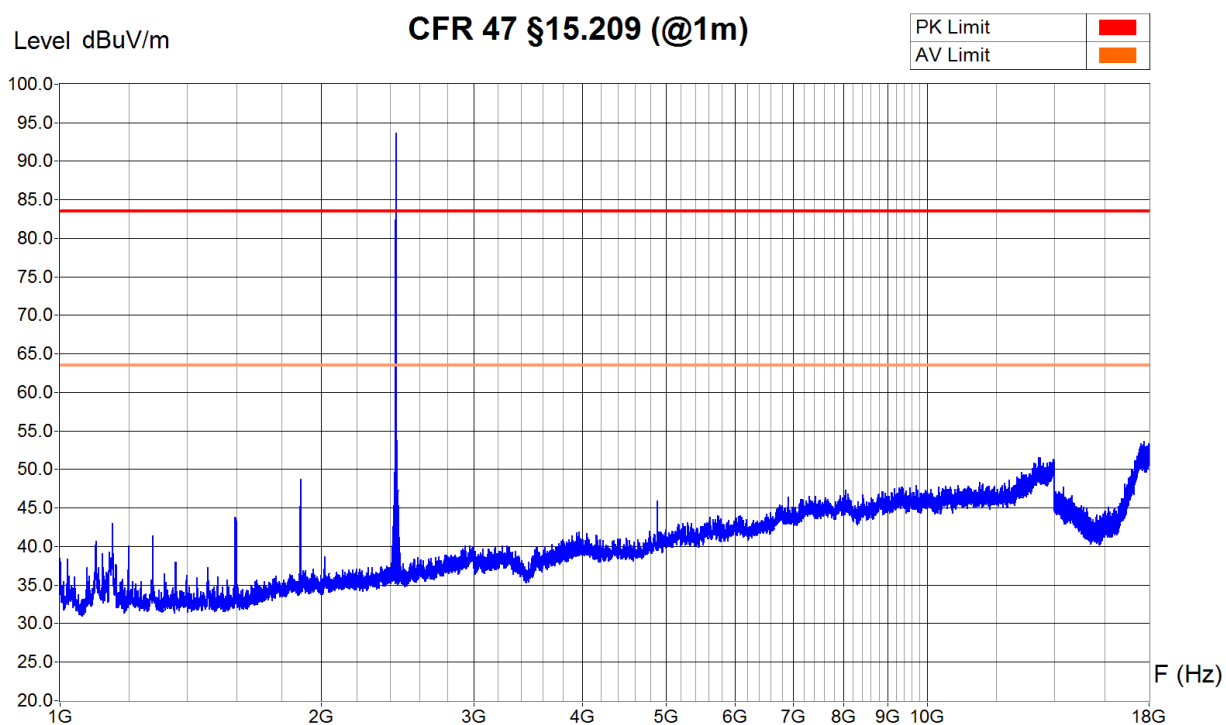
Operator: B. Itzcovich
Date/Time: 19.04.2013 16:03
Filename:
21_RE_1G-18G_TX_H_FCC.png/
.txt

Measurement Type : Radiated Field
Polarisation : Vertical
Table Angle : 0° - 360°
Antenna Height : 1m - 2m



Equipment Under Test : Roger MyLink
Set-Up : See photos
Operating Conditions : TX 2.440 GHz
Remarks :

Cage 06-00



Zone	1 GHz - 4 GHz	4 GHz - 14 GHz	14 GHz - 18 GHz
Video Bandwidth	1 MHz	1 MHz	300 KHz
Resol Bandwidth	1 MHz	1 MHz	300 KHz

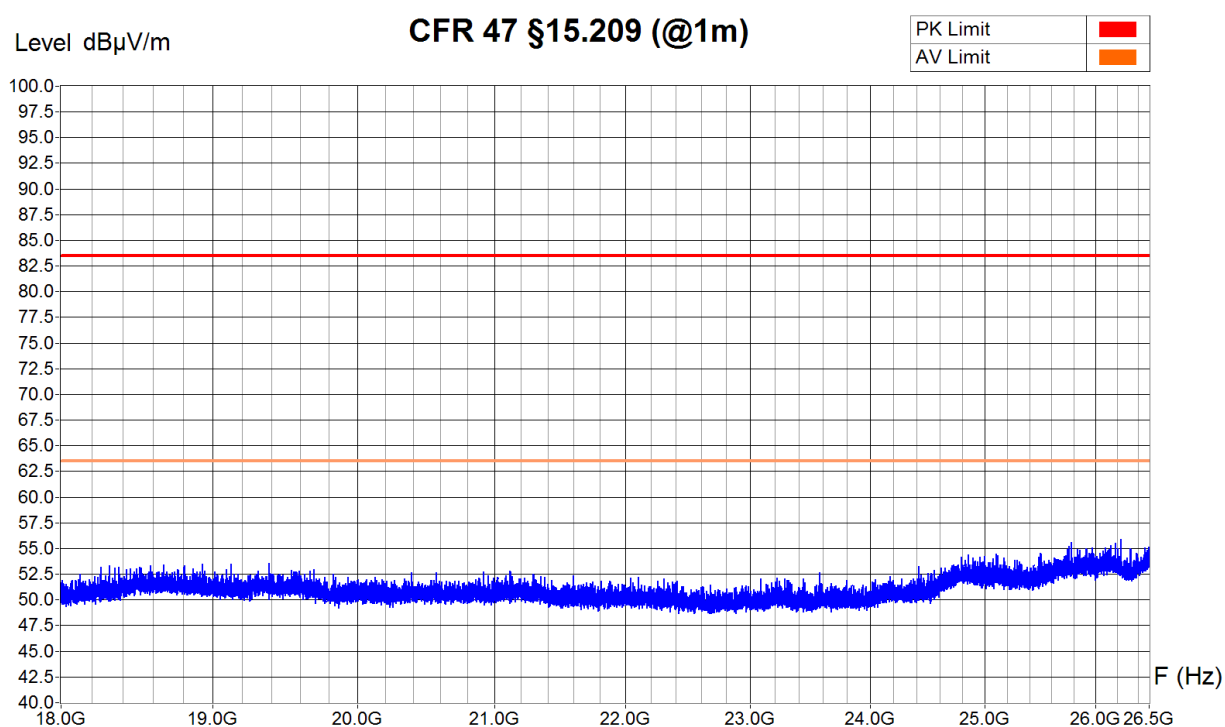
Operator: B. Itzcovich
Date/Time: 19.04.2013 16:23
Filename:
22_RE_1G-18G_TX_V_FCC.png/
.txt

Measurement Type : Radiated Field
Polarisation : Vertical
Table Angle : 0° - 360°
Antenna Height : 1.5 m



Equipment Under Test : Roger MyLink
Set-Up : See photos
Operating Conditions : TX 2.440 GHz
Remarks :

Cage 06-00



Zone	18 GHz - 22 GHz	22 GHz - 26.50 GHz
Video Bandwidth	1 MHz	1 MHz
Resol Bandwidth	1 MHz	1 MHz

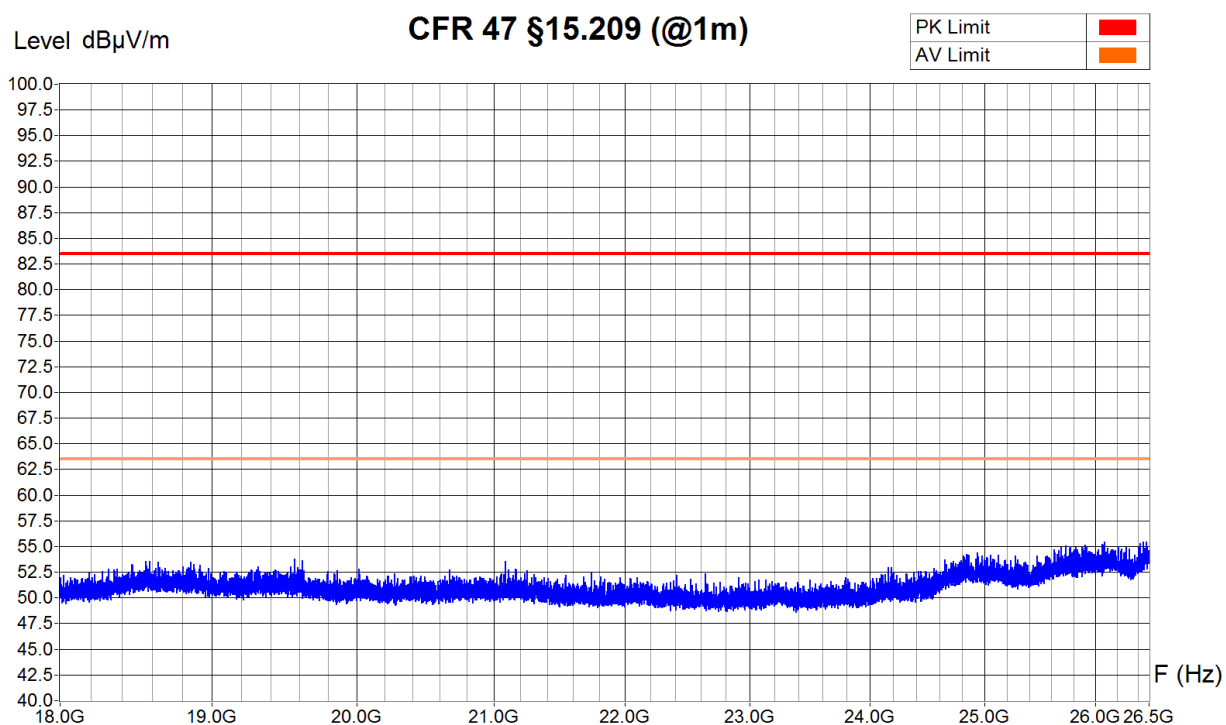
Operator: B. Itzcovich
Date/Time: 22.04.2013 11:02
Filename:
25_RE_18G-
26G5_TX_V_FCC.png/.txt

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0° - 360°
 Antenna Height : 1.5 m



Equipment Under Test : Roger MyLink
 Set-Up : See photos
 Operating Conditions : TX 2.440 GHz

Remarks :
 Cage 06-00



Zone	18 GHz - 22 GHz	22 GHz - 26.50 GHz
Video Bandwidth	1 MHz	1 MHz
Resol Bandwidth	1 MHz	1 MHz

Operator: B. Itzcovich
 Date/Time: 22.04.2013 11:24
 Filename:
 26_RE_18G-
 26G5_TX_H_FCC.png/.txt

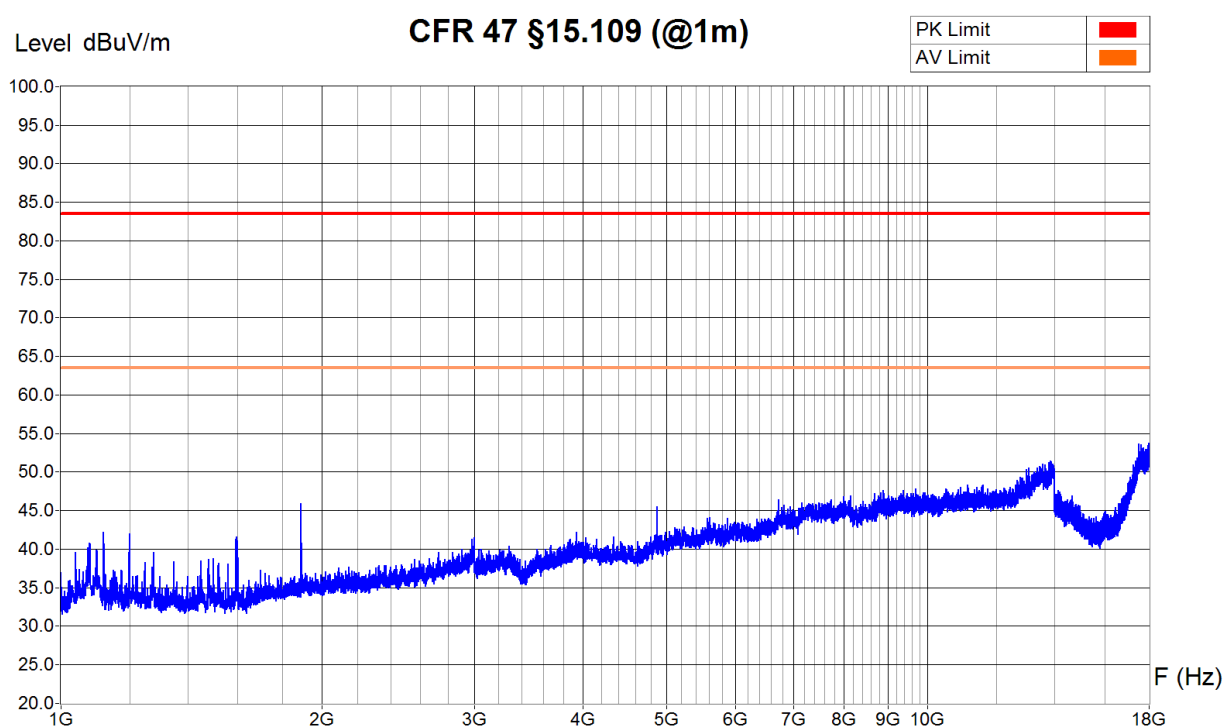
7.3.2 Receive mode

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0° - 360°
 Antenna Height : 1m - 2m



Equipment Under Test : Roger MyLink
 Set-Up : See photos
 Operating Conditions : RX 2.440 GHz
 Remarks :

Cage 06-00



Zone	1 GHz - 4 GHz	4 GHz - 14 GHz	14 GHz - 18 GHz
Video Bandwidth	1 MHz	1 MHz	300 KHz
Resol Bandwidth	1 MHz	1 MHz	300 KHz

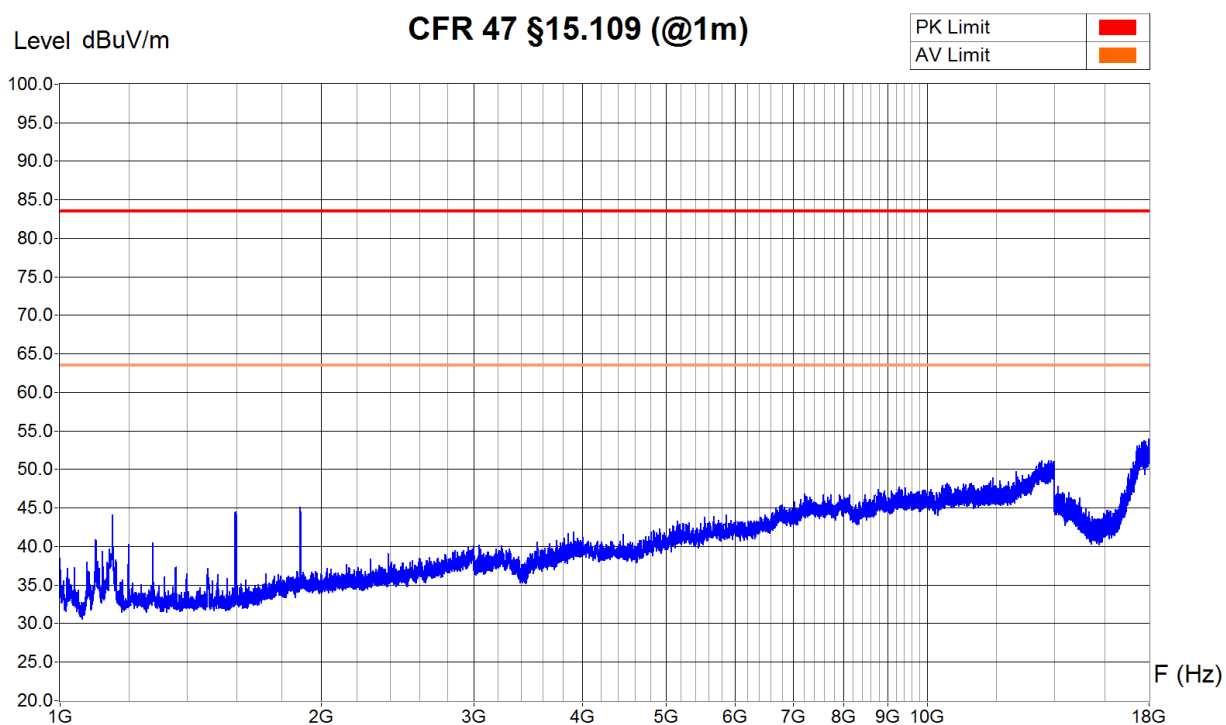
Operator: B. Itzcovich
 Date/Time: 19.04.2013 16:13
 Filename:
 23_RE_1G-18G_RX_H_FCC.png/
 .txt

Measurement Type : Radiated Field
 Polarisation : Vertical
 Table Angle : 0° - 360°
 Antenna Height : 1m - 2m



Equipment Under Test : Roger MyLink
 Set-Up : See photos
 Operating Conditions : RX 2.440 GHz
 Remarks :

Cage 06-00



Zone	1 GHz - 4 GHz	4 GHz - 14 GHz	14 GHz - 18 GHz
Video Bandwidth	1 MHz	1 MHz	300 KHz
Resol Bandwidth	1 MHz	1 MHz	300 KHz

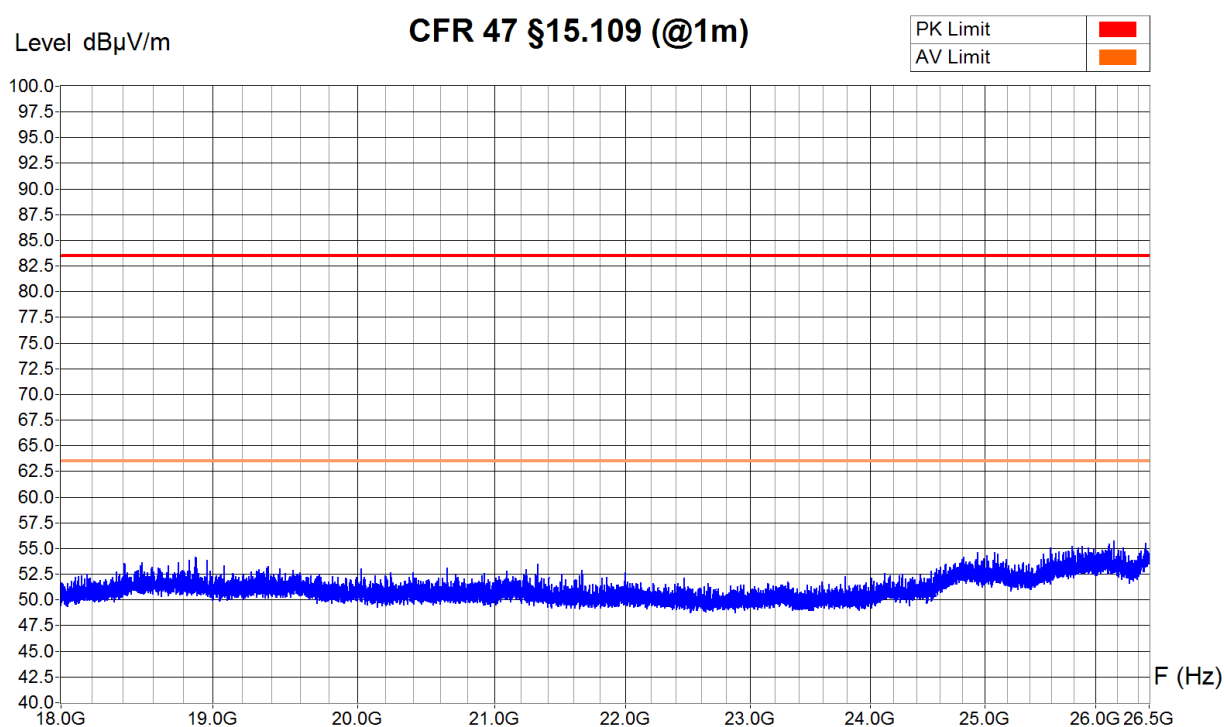
Operator: B. Itzcovich
 Date/Time: 19.04.2013 16:35
 Filename:
 24_RE_1G-18G_RX_V_FCC.png/
 .txt

Measurement Type : Radiated Field
Polarisation : Vertical
Table Angle : 0° - 360°
Antenna Height : 1.5 m



Equipment Under Test : Roger MyLink
Set-Up : See photos
Operating Conditions : RX 2.440 GHz
Remarks :

Cage 06-00



Zone	18 GHz - 22 GHz	22 GHz - 26.50 GHz
Video Bandwidth	1 MHz	1 MHz
Resol Bandwidth	1 MHz	1 MHz

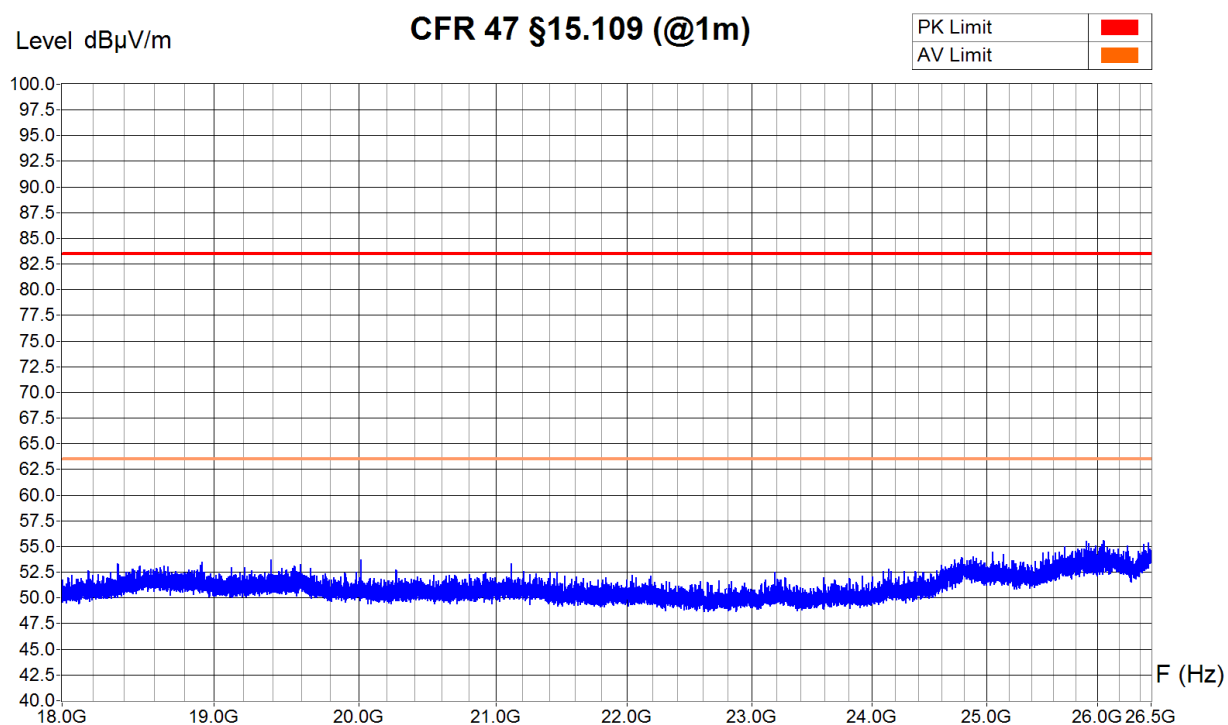
Operator: B. Itzcovich
Date/Time: 22.04.2013 11:12
Filename:
27_RE_18G-
26G5_RX_V_FCC.png/.txt

Measurement Type : Radiated Field
 Polarisation : Horizontal
 Table Angle : 0° - 360°
 Antenna Height : 1.5 m



Equipment Under Test : Roger MyLink
 Set-Up : See photos
 Operating Conditions : RX 2.440 GHz
 Remarks :

Cage 06-00



Zone	18 GHz - 22 GHz	22 GHz - 26.50 GHz
Video Bandwidth	1 MHz	1 MHz
Resol Bandwidth	1 MHz	1 MHz

Operator: B. Itzcovich
 Date/Time: 22.04.2013 11:19
 Filename:
 28_RE_18G-
 26G5_RX_H_FCC.png/.txt

7.4 Designation of emission

Standard: United States: 47 CFR "Code of Federal Regulations" – Telecommunication
☒ FCC Part 2, Subpart C: Emission: §2.201 and §2.202

Introduction: A system of designating emission, modulation and transmission characteristics shall be employed.

(a) Emissions are designated according to their classification and their necessary bandwidth.

(b) A minimum of three symbols are used to describe the basic characteristics of radio waves.

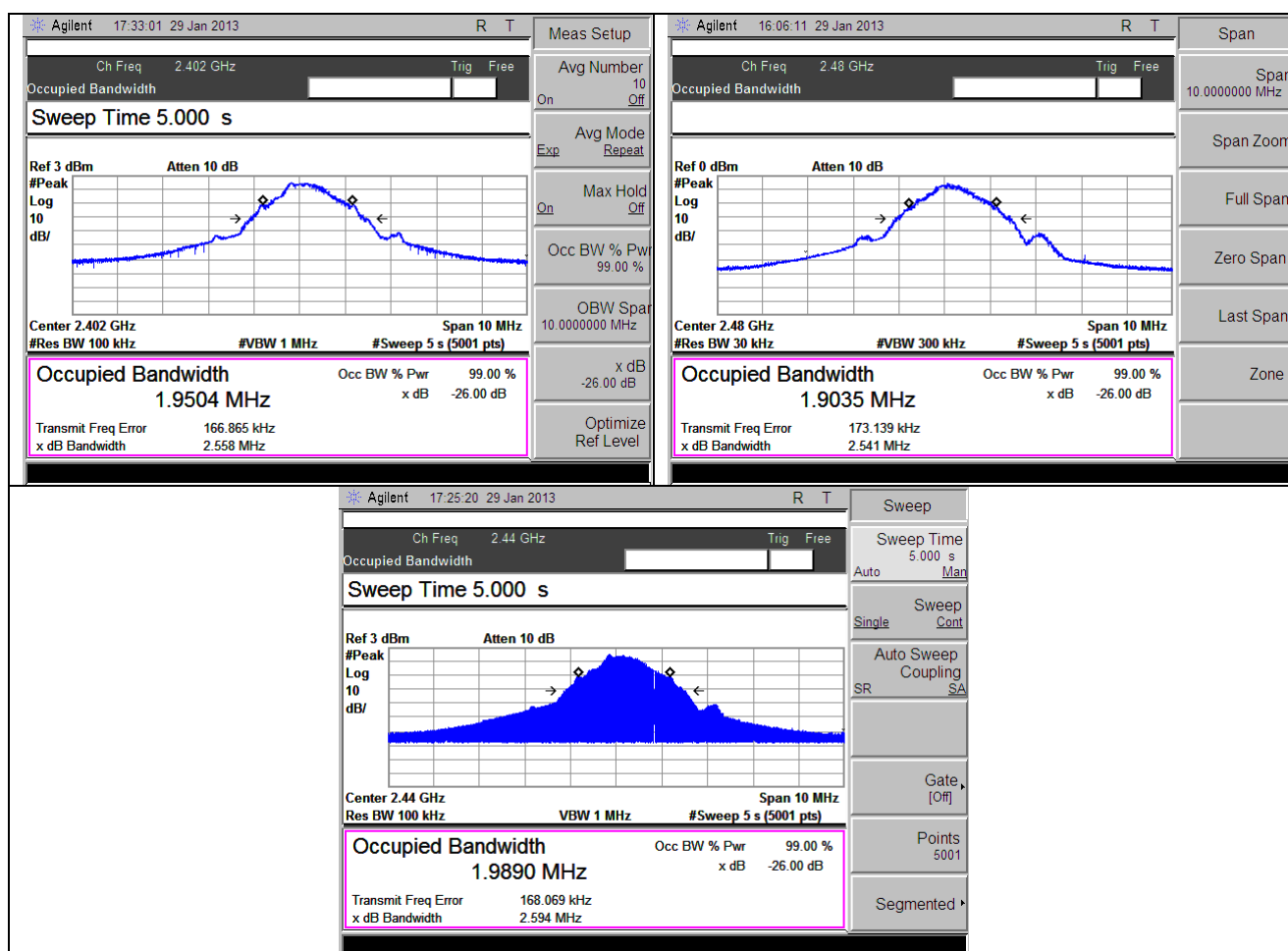
(c) Four symbols are used to describe the necessary bandwidth.

Necessary bandwidth: For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information at the rate and with the quality required for the system employed, under specified conditions.

$B_n = 1.99$ MHz (occupied bandwidth)

Basic characteristics: FXD F : frequency modulation
 X : Cases not otherwise covered
 D : data transmission

Designation of emission: 2M00FXD



Place and date of test:
 Operator:

Rossens, January 29, 2013
 B. Itzcovich