

FCC TEST REPORT

FCC 47 CFR Part 15C Industry Canada RSS-247

Digital transmission systems operating within the 2400 - 2483.5 MHz band

Report Reference No.: G0M-1601-5302-TFC247WF-V02

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: lesswire GmbH

Address: Rudower Chaussee 30

12489 Berlin GERMANY

Test specification:

Standard: 47 CFR Part 15C

RSS-247, Issue 1, 2015-05 RSS-Gen, Issue 4, 2014-11

ANSI C63.10:2013 ANSI C63.4:2014

Test scope.....: partial Radio compliance test

Equipment under test (EUT):

Product description WLAN-LTE-Router

Model No. CCU5
Additional Model(s) None
Brand Name(s) None
Hardware version C/BWIA3

Firmware / Software version 1.0.119

FCC-ID: 2AHHACCU5 IC: N/A

Test result Passed



Possible test case verdicts:			
- neither assessed nor tested		N/N	
- required by standard but not appl. to to	est object:	N/A	
- required by standard but not tested	:	N/T	
- not required by standard for the test o	bject:	N/R	
- test object does meet the requirement	t:	P (Pass)	
- test object does not meet the requirem	nent:	F (Fail)	
Testing:			
Test Lab Temperature	:	20 – 23 °C	
Test Lab Humidity	:	32 – 38 %	
Date of receipt of test item	:	2016-01-06	
Date (s) of performance of tests	1	2016-01-20 - 201	6-02-01
Compiled by:	Burkhard Pudel	I	
Tested by (+ signature)	Burkhard Pudel	l	3. Pudell
Approved by (+ signature): (Head of Lab)	Christian Webe	r	C. bebor

General remarks:

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

Date of issue 2016-03-24

Total number of pages 171

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
01	2016-03-08	Initial Release	
02	2016-03-24	Hard- and Software Version corrected	C. Weber



REPORT INDEX

1	EQUIPMENT (TEST ITEM) DESCRIPTION	5
1.1	Photos – Equipment External	7
1.2	Photos – Equipment internal	10
1.3	Photos – Test setup	12
1.4	Supporting Equipment Used During Testing	13
1.5	Test Modes	14
1.6	Test Equipment Used During Testing	15
1.7	Sample emission level calculation	16
2	RESULT SUMMARY	17
3	TEST CONDITIONS AND RESULTS	18
3.1	Test Conditions and Results – Occupied Bandwidth	18
3.3	Test Conditions and Results – Transmitter radiated emissions	31
3.4	Test Conditions and Results – Receiver radiated emissions	35
	NEX A Transmitter radiated spurious emissions NEX B Receiver radiated spurious emissions	37 160



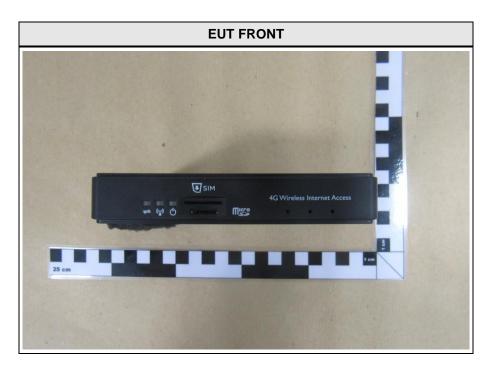
1 Equipment (Test item) Description

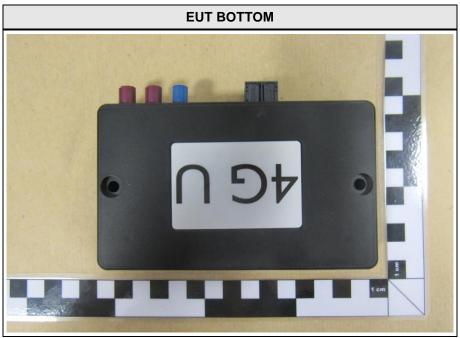
Description	WLAN-LTE-Rou	ter					
Model	CCU5						
Additional Model(s)	None	None					
Brand Name(s)	None	None					
Serial number	None	None					
Hardware version	C/BWIA3	C/BWIA3					
Software / Firmware version	1.0.119						
FCC-ID	2AHHACCU5						
IC	N/A						
Equipment type	End product						
Radio type	Transceiver						
Radio technology	IEEE 802.11 b/g	J/n					
Operating frequency range	2412 - 2462 MH	z					
Assigned frequency band	2400 - 2483.5 MHz						
	F _{LOW20}	2412 MHz F _{LOW40} 2422 MHz					
Main test frequencies	F _{MID20}	2437 MHz	F _{MID40}	2437 MHz			
	F _{HIGH20}	F _{HIGH20} 2462 MHz F _{HIGH40} 2452 MHz					
Spreading	CCK, DSSS, OF	DM					
Modulations	BPSK, QPSK, 16-QAM, 64-QAM						
Number of channels	11						
Channel spacing	5 MHz						
Number of antennas	1						
	Туре	WLAN Module)				
	Model	ELLA-W131-0	0A				
	Manufacturer	u-blox					
Radio module	HW Version	00A-00					
	SW Version	14.44.35.p213	-M2614486				
	FCC-ID	PV7-WIBEAR	11n-SF1				
	IC	7738A-WB11N	NSF1				
	Туре	integrated					
Antenna	Model	7488910245					
Antellia	Manufacturer	Würth					
	Gain	+3.0 dBi (manufacturer declaration)					
	lesswire GmbH						
Manufacturer	Rudower Chaus	see 30					
	12489 Berlin						
	GERMANY						

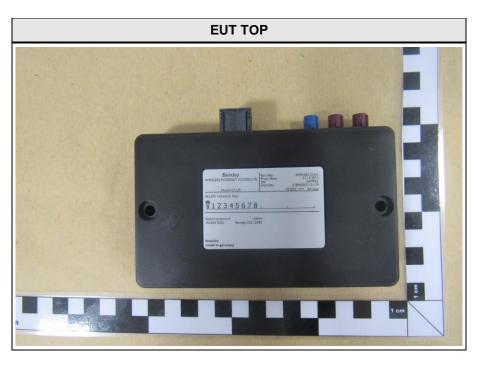
	V _{NOM}	12.0 VDC
Power supply	V _{MIN}	N/A
	V _{MAX}	N/A
	Model	N/A
AC/DC-Adaptor	Vendor	N/A
ACIDG-Adaptor	Input	N/A
	Output	N/A

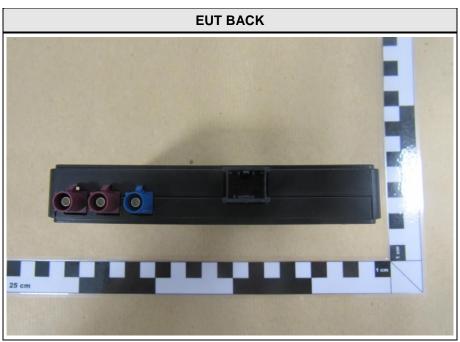


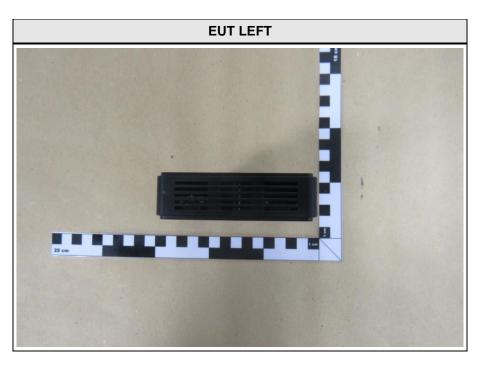
1.1 Photos – Equipment External

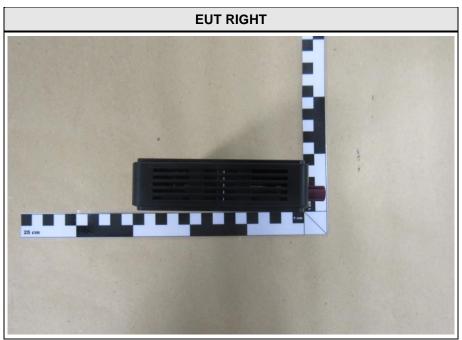






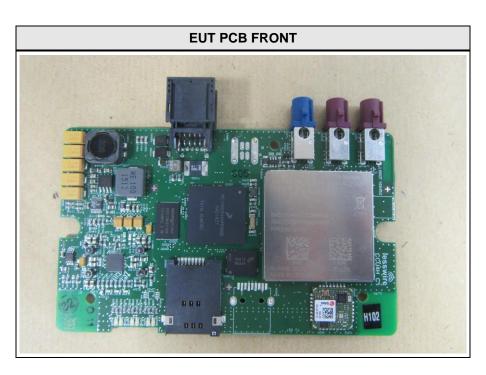


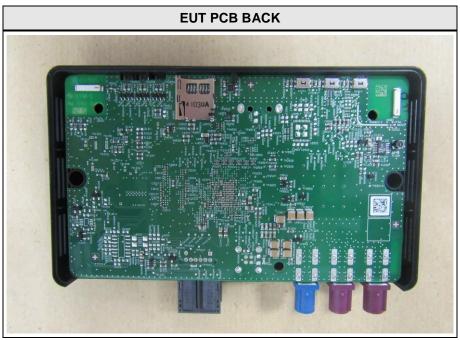


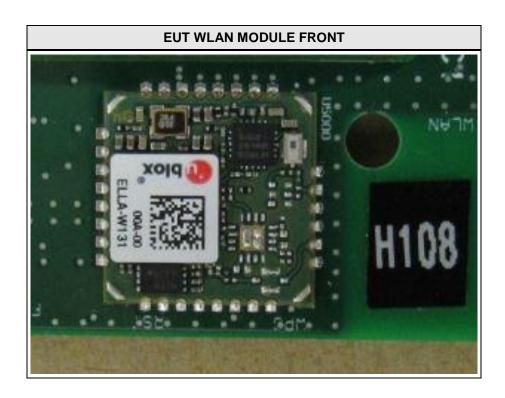




1.2 Photos – Equipment internal

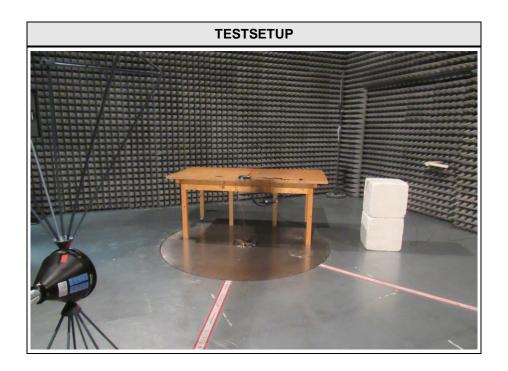








1.3 Photos – Test setup





1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments			
none							
*Note: Use the following abbreviations:							
AE : Auxiliary/Associated Equipment, or							
SIM : Simulator (Not Subjected to Test)							
CABL : 0	CABL: Connecting cables						



1.5 Test Modes

Mode #		Description
	General conditions:	EUT powered by laboratory power supply.
DSSS	Radio conditions:	Mode = standalone transmit Spreading = DSSS Modulation = BPSK Data rate = 1 Mbps Bandwidth = 20 MHz Duty cycle = 100 % Power level = 13 dBm (Test mode setting)
	General conditions:	EUT powered by laboratory power supply.
HT20	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK Data rate = MCS0 Bandwidth = 20 MHz Duty cycle = 100 % Power level = 13 dBm (Test mode setting)
	General conditions:	EUT powered by laboratory power supply.
HT40	Radio conditions:	Mode = standalone transmit Spreading = OFDM Modulation = BPSK Data rate = MCS0 Bandwidth = 40 MHz Duty cycle = 100 % Power level = 13 dBm (Test mode setting)
	General conditions: EUT powered by laboratory power supply.	
Receive	Radio conditions:	Mode = standalone receive Spreading = DSSS / OFDM



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 2015-02 2016-02						

Radiated spurious emissions						
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-	
Spectrum Analyzer	R&S	FSIQ26	EF00242	2015-04	2016-04	
Spectrum Analyzer	R&S	FSEK30	EF00168	2016-01	2017-01	
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	2015-10	2018-10	

AC powerline conducted emissions						
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
AMN R&S ESH2-Z5 EF00182 2014-11 2016-11						
EMI Test Receiver	R&S	ESCS 30	EF00295	2015-10	2016-10	



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 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:

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

Limit (dB μ V/m) = 20*log (μ 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 dB μ V + 26 dB = 47.5 dB μ V/m : 47.5 dB μ V/m - 57.0 dB μ V/m = -9.5 dB



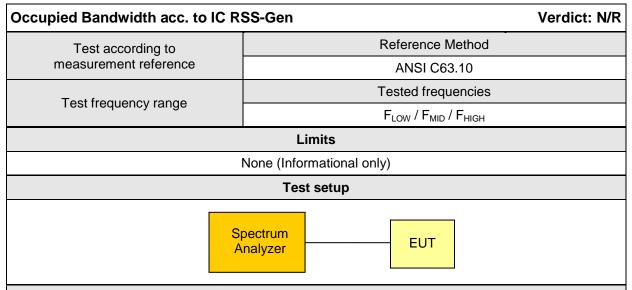
2 Result Summary

FCC 47 CFR Part 15C, IC RSS-247						
Product Specific Standard Section	Requirement – Test	Reference Method	Result	Remarks		
RSS-Gen 6.6	Occupied Bandwidth	ANSI C63.10	N/R	Informational only		
FCC § 15.247(a)(2) IC RSS-247 § 5.2	6dB Bandwidth	ANSI C63.10	N/R			
FCC § 15.247(b)(3) IC RSS-247 § 5.4	Maximum peak conducted power	ANSI C63.10	N/R			
FCC § 15.247(e) IC RSS-247 § 5.2	Power spectral density	ANSI C63.10	N/R			
47 CFR 15.207 IC RSS-247 § 3.1	AC power line conducted emissions	ANSI C63.4	N/R	battery only		
FCC § 15.247(d) IC RSS-247 § 5.5	Band edge compliance	ANSI C63.10	N/R			
FCC § 15.247(d) IC RSS-247 § 5.5	Conducted spurious emissions	ANSI C63.10	N/R			
FCC § 15.247(d) FCC § 15.209 IC RSS-247 § 5.5	Transmitter radiated spurious emissions	ANSI C63.10	PASS			
IC RSS-247 § 3.1	Receiver radiated spurious emissions	ANSI C63.10	PASS			
Remarks:	<u>'</u>					



3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied Bandwidth



Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span set to at least twice the emission spectrum
- 3. Resolution bandwidth set to 1 % of span
- 4. Occupied Bandwidth (99 %) measurement with spectrum analyzer built in measurement function

Test results										
Channel	Frequency [MHz]	Mode	Occupied Bandwidth [MHz]							
F _{LOW20}	2412	DSSS	13.527							
F _{MID20}	2437	DSSS	13.587							
F _{HIGH20}	2462	DSSS	13.587							
F _{LOW20}	2412	OFDM	16.954							
F _{MID20}	2437	OFDM	16.954							
F _{HIGH20}	2462	OFDM	16.834							
F _{LOW20}	2412	HT20	18.096							
F _{MID20}	2437	HT20	18.096							
F _{HIGH20}	2462	HT20	18.096							
F _{LOW40}	2422	HT40	36.773							
F _{MID40}	2437	HT40	36.773							
F _{HIGH40}	2452	HT40	36.773							
Comments:										



Occupied Bandwidth - DSSS FLOW

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

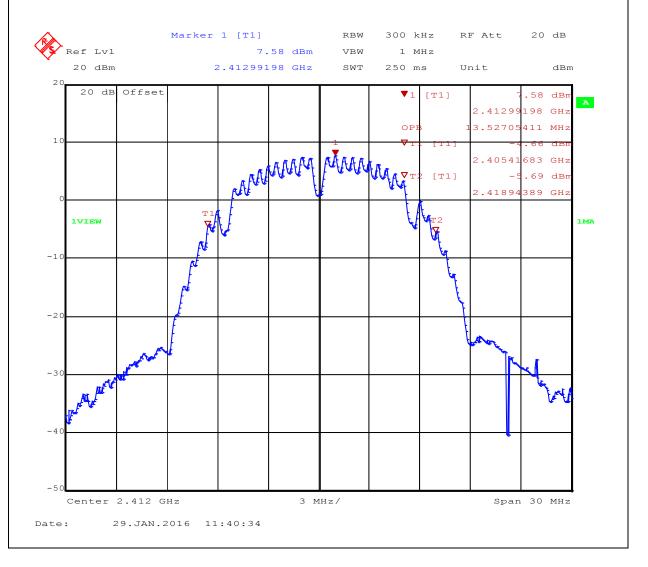
Mode: Tx, IEEE 802.11b, 2412 MHz, DSSS 1Mbps

Test Date: 2016-01-29

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 13.527 MHz





Occupied Bandwidth - DSSS F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

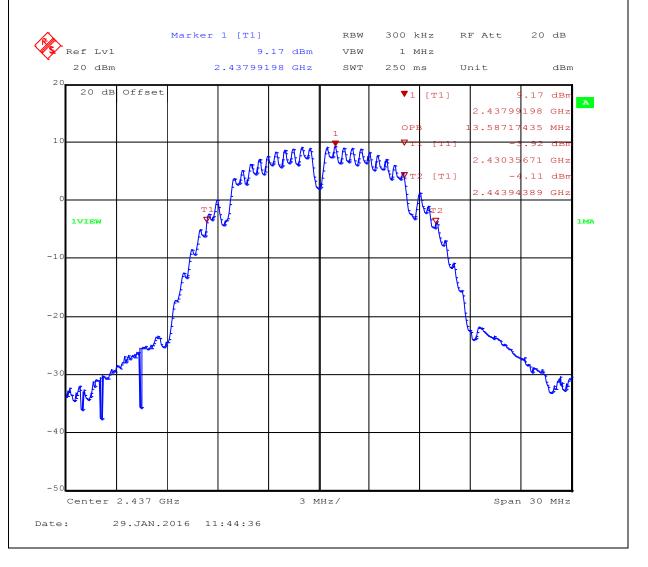
Mode: Tx, IEEE 802.11b, 2437 MHz, DSSS 1Mbps

Test Date: 2016-01-29

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 13.587 MHz





Occupied Bandwidth - DSSS FHIGH

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

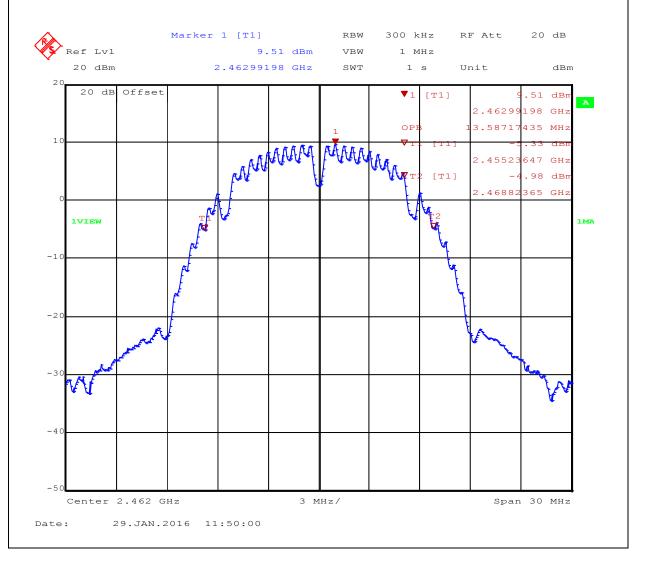
Mode: Tx, IEEE 802.11b, 2462 MHz, DSSS 1Mbps

Test Date: 2016-01-29

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 13.587 MHz





Occupied Bandwidth - OFDM FLOW

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

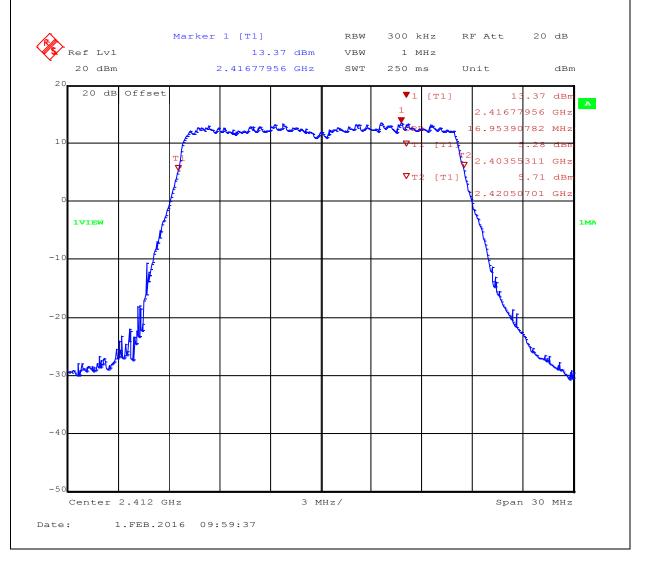
Mode: Tx, IEEE 802.11g, 2412 MHz, OFDM 6Mbps

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 16.954 MHz





Occupied Bandwidth - OFDM F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

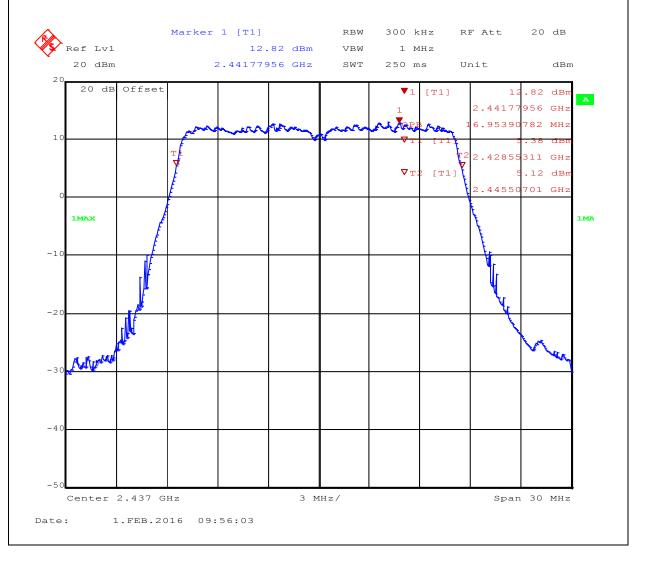
Mode: Tx, IEEE 802.11g, 2437 MHz, OFDM 6Mbps

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 16.954 MHz





Occupied Bandwidth - OFDM F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

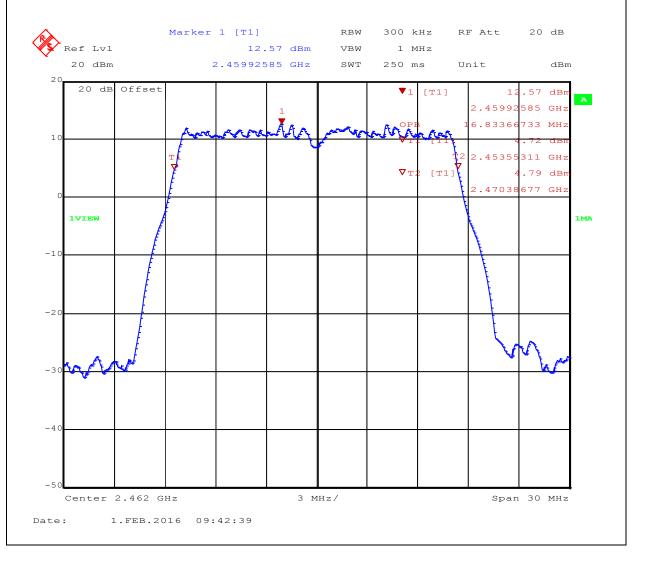
Mode: Tx, IEEE 802.11g, 2462 MHz, OFDM 6Mbps

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 16.834 MHz





Occupied Bandwidth - HT20 F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

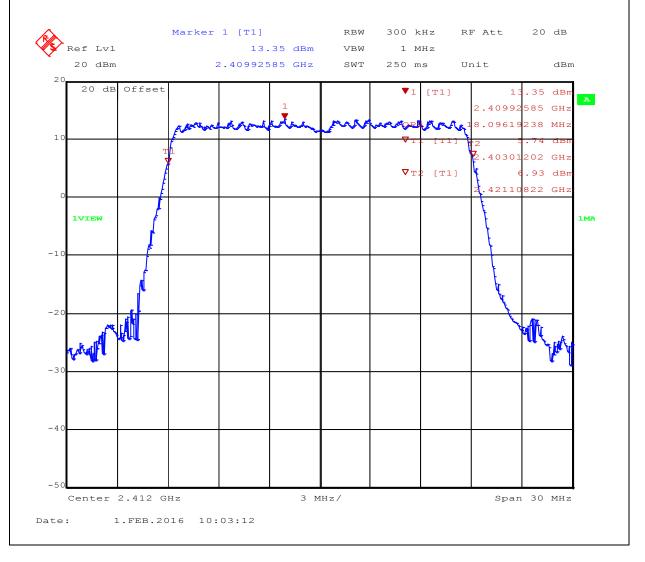
Mode: Tx, IEEE 802.11n, 2412 MHz, OFDM HT20 MCS0

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 18.096 MHz





Occupied Bandwidth - HT20 F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

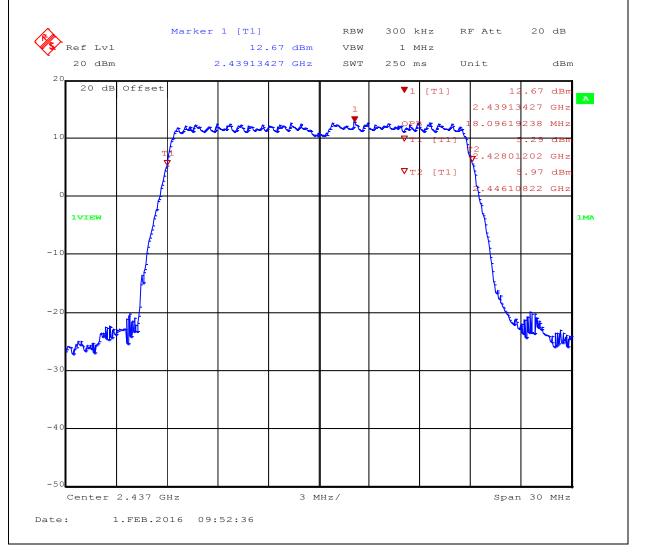
Mode: Tx, IEEE 802.11n, 2437 MHz, OFDM HT20 MCS0

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 18.096 MHz





Occupied Bandwidth - HT20 F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

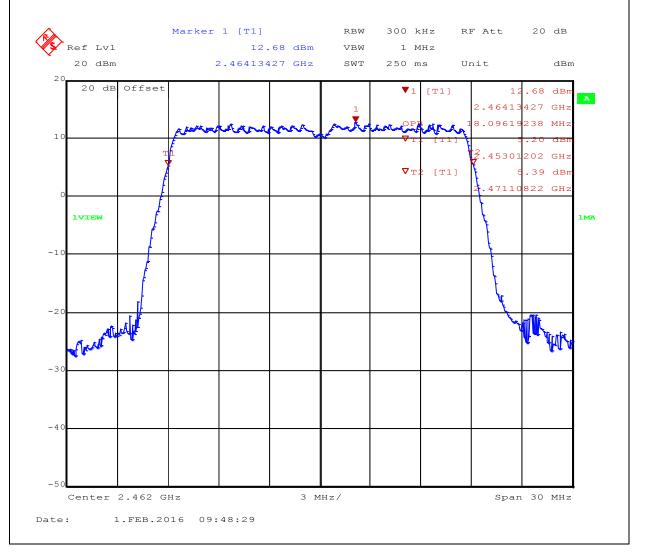
Mode: Tx, IEEE 802.11n, 2462 MHz, OFDM HT20 MCS0

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 18.096 MHz





Occupied Bandwidth - HT40 F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

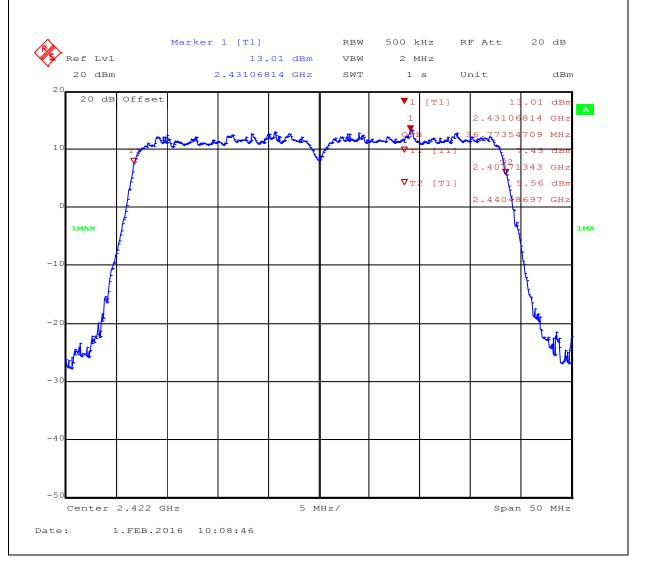
Mode: Tx, IEEE 802.11n, 2422 MHz, OFDM HT40 MCS0

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 36.773 MHz





Occupied Bandwidth - HT40 F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

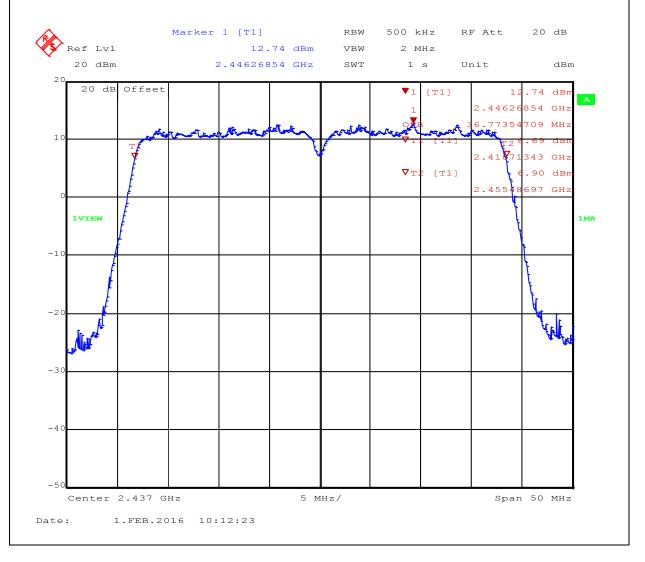
Mode: Tx, IEEE 802.11n, 2437 MHz, OFDM HT40 MCS0

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 36.773 MHz





Occupied Bandwidth - HT40 F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Burkhard Pudell Test Conditions: Tnom / Vnom

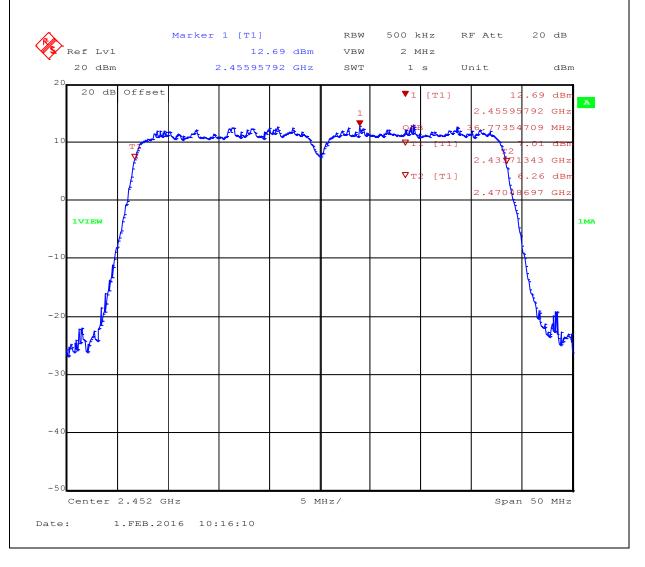
Mode: Tx, IEEE 802.11n, 2452 MHz, OFDM HT40 MCS0

Test Date: 2016-02-01

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: OBW= 36.773 MHz

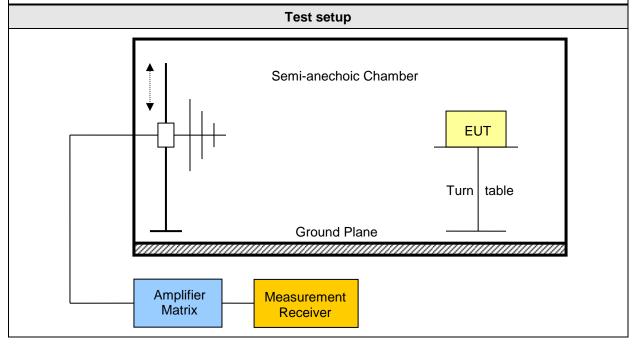




3.3 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated er FCC 47 CFR 15.247 / IC		to		Verdict: PASS		
Test according refe	renced	Reference Method				
standards		FCC 15.2	47(d) / IC R	SS-247 5.5		
Test according	to	Re	ference Me	thod		
measurement refe	rence		ANSI C63.1	10		
Toot from your ro	Tes	sted freque	ncies			
Test frequency ra	ange	30 MHz – 10 th Harmonic				
		Limits				
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		

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)). When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.





Product Service

Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span it set according to measurement range
- 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
- 4. Markers are set to peak emission levels within restricted bands

Test results DSSS											
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]		
F_{LOW}	2412	1 Mbps	2389	54.71	pk	hor	74.00	3	-19.29		
F_{LOW}	2412	1 Mbps	2389	38.30	RMS	hor	54.00	3	-15.70		
F _{LOW}	2412	1 Mbps	2390	55.16	pk	hor	74.00	3	-18.84		
F _{LOW}	2412	1 Mbps	2390	40.32	RMS	hor	54.00	3	-13.68		
F _{MID}	2437	no significant spurious emission									
F _{HIGH}	2462		r	no significar	nt spurio	us em	ission				

Test results HT20											
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]		
F_{LOW}	2412	MCS0	2387	54.34	pk	hor	74.00	3	-19.66		
F _{LOW}	2412	MCS0	2387	33.65	RMS	hor	54.00	3	-20.35		
F _{LOW}	2412	MCS0	2389	58.07	pk	hor	74.00	3	-15.93		
F _{LOW}	2412	MCS0	2389	35.34	RMS	hor	54.00	3	-18.66		
F _{LOW}	2412	MCS0	2389	59.56	pk	hor	74.00	3	-14.44		
F _{LOW}	2412	MCS0	2389	35.34	RMS	hor	54.00	3	-18.66		
F _{LOW}	2412	MCS0	2390	55.96	pk	hor	74.00	3	-18.04		
F _{LOW}	2412	MCS0	2390	37.31	RMS	hor	54.00	3	-16.69		
F _{MID}	2437		r	no significar	nt spurio	us em	ission				
F _{HIGH}	2462	MCS0	2484	54.88	pk	ver	74.00	3	-19.12		
F _{HIGH}	2462	MCS0	2484	33.22	RMS	ver	54.00	3	-20.78		
F _{HIGH}	2462	MCS0	2484	55.79	pk	ver	74.00	3	-18.21		
F _{HIGH}	2462	MCS0	2484	33.22	RMS	ver	54.00	3	-20.78		
F _{HIGH}	2462	MCS0	2484	55.36	pk	ver	74.00	3	-18.64		
F _{HIGH}	2462	MCS0	2484	33.22	RMS	ver	54.00	3	-20.78		
F _{HIGH}	2462	MCS0	2484	69.84	pk	hor	74.00	3	-04.16		
F _{HIGH}	2462	MCS0	2484	46.93	RMS	hor	54.00	3	-07.07		
F _{HIGH}	2462	MCS0	2484	71.79	pk	hor	74.00	3	-02.21		
F _{HIGH}	2462	MCS0	2484	46.93	RMS	hor	54.00	3	-07.07		
F _{HIGH}	2462	MCS0	2484	71.72	pk	hor	74.00	3	-02.28		



Product Service

F _{HIGH}	2462	MCS0	2484	46.93	RMS	hor	54.00	3	-07.07
F _{HIGH}	2462	MCS0	2484	69.62	pk	hor	74.00	3	-04.38
F _{HIGH}	2462	MCS0	2484	46.93	RMS	hor	54.00	3	-07.07
F _{HIGH}	2462	MCS0	2485	56.53	pk	ver	74.00	3	-17.47
F _{HIGH}	2462	MCS0	2485	35.07	RMS	ver	54.00	3	-18.93
F _{HIGH}	2462	MCS0	2485	53.11	pk	ver	74.00	3	-20.89
F _{HIGH}	2462	MCS0	2485	35.07	RMS	ver	54.00	3	-18.93
F _{HIGH}	2462	MCS0	2485	69.66	pk	hor	74.00	3	-04.34
F _{HIGH}	2462	MCS0	2485	45.79	RMS	hor	54.00	3	-08.21
			Test r	esults HT4	10				
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F _{LOW}	2412	MCS0	2379	55.38	pk	hor	74.00	3	-18.62
F _{LOW}	2412	MCS0	2379	35.20	RMS	hor	54.00	3	-18.80
F _{LOW}	2412	MCS0	2381	58.99	pk	hor	74.00	3	-15.01
F _{LOW}	2412	MCS0	2381	36.31	RMS	hor	54.00	3	-17.69
F _{LOW}	2412	MCS0	2383	58.00	pk	hor	74.00	3	-16.00
F _{LOW}	2412	MCS0	2383	34.27	RMS	hor	54.00	3	-19.73
F _{LOW}	2412	MCS0	2386	60.10	pk	hor	74.00	3	-13.90
F _{LOW}	2412	MCS0	2386	38.13	RMS	hor	54.00	3	-15.87
F _{LOW}	2412	MCS0	2390	54.95	pk	ver	74.00	3	-19.05
F _{LOW}	2412	MCS0	2390	36.04	RMS	ver	54.00	3	-17.96
F _{LOW}	2412	MCS0	2390	59.49	pk	hor	74.00	3	-14.51
F _{LOW}	2412	MCS0	2390	39.02	RMS	hor	54.00	3	-14.98
F _{MID}	2437	MCS0	2484	60.03	pk	hor	74.00	3	-13.97
F _{MID}	2437	MCS0	2484	62.88	pk	hor	74.00	3	-11.12
F _{HIGH}	2462	MCS0	2485	61.32	pk	ver	74.00	3	-12.68
F _{HIGH}	2462	MCS0	2485	42.27	RMS	ver	54.00	3	-11.73
F _{HIGH}	2462	MCS0	2485	71.76	pk	hor	74.00	3	-02.24
F _{HIGH}	2462	MCS0	2485	48.04	RMS	hor	54.00	3	-05.96
F _{HIGH}	2462	MCS0	2486	71.95	pk	hor	74.00	3	-02.05
F _{HIGH}	2462	MCS0	2486	47.80	RMS	hor	54.00	3	-06.20
F _{HIGH}	2462	MCS0	2487	62.22	pk	ver	74.00	3	-11.78
F _{HIGH}	2462	MCS0	2487	41.42	RMS	ver	54.00	3	-12.58
F _{HIGH}	2462	MCS0	2488	71.47	pk	hor	74.00	3	-02.53
F _{HIGH}	2462	MCS0	2488	46.63	RMS	hor	54.00	3	-07.37
F _{HIGH}	2462	MCS0	2489	62.05	pk	ver	74.00	3	-11.95



Product Service

F _{HIGH}	2462	MCS0	2489	40.61	RMS	ver	54.00	3	-13.39
F _{HIGH}	2462	MCS0	2489	71.07	pk	hor	74.00	3	-02.93
F _{HIGH}	2462	MCS0	2489	46.65	RMS	hor	54.00	3	-07.35
F _{HIGH}	2462	MCS0	2491	70.72	pk	hor	74.00	3	-03.28
F _{HIGH}	2462	MCS0	2491	46.24	RMS	hor	54.00	3	-07.76
F _{HIGH}	2462	MCS0	2493	57.36	pk	ver	74.00	3	-16.64
F _{HIGH}	2462	MCS0	2493	35.67	RMS	ver	54.00	3	-18.33
F _{HIGH}	2462	MCS0	2495	70.96	pk	hor	74.00	3	-03.04
F _{HIGH}	2462	MCS0	2495	44.95	RMS	hor	54.00	3	-09.05
F _{HIGH}	2462	MCS0	2497	58.13	pk	ver	74.00	3	-15.87
F _{HIGH}	2462	MCS0	2497	33.42	RMS	ver	54.00	3	-20.58
	Com	ments: * Physi	cal distance b	etween EU	Γ and me	asuren	nent antenna	a.	•



3.4 Test Conditions and Results - Receiver radiated emissions

eceiver radiated emis	sions acc. t	to IC	C RSS-247			Verdict: PASS	
Test according refere	enced	Reference Method					
standards				IC RSS-247 3.			
Test according to				Reference Metho	od		
measurement refer	ence			ANSI C63.10			
Test frequency rai	200			Tested frequenci	es		
rest frequency fai	ige		3	0 MHz – 5 th Harm	onic	;	
EUT test mode				Receive			
	-		Limits				
Frequency range [MHz]	Detector		Limit [µV/m]	Limit [dBµV/m	1]	Limit Distance [m]	
30 – 88	Quasi-Pea	k	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	> 1000 Average		500	54		3	
			Test setup				
*] 	,	Semi-anechoic Ch	Turn	JT tab	lle	
	nplifier latrix	M	leasurement Receiver				



Test procedure

- 1. EUT set to receive mode (Communication tester is used if needed)
- 2. Span it set according to measurement range
- 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
- 4. Markers are set to peak emission levels

Test results											
Channel	Frequency [MHz]	Emission [MHz]	Emission Level [dbµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dBµV/m]				
F _{MID}	2437	790.4	28.48	pk	hor	46.00	-17.52 dB				
F _{MID}	2437	6976	51.62	pk	hor	53.98	-2.36 dB				
F _{MID}	2437	17748	49.97	pk	hor	53.98	-4.01 dB				
F _{MID}	2437	17856	50.37	pk	ver	53.98	-3.61 dB				

Comments:
* Physical distance between EUT and measurement antenna.

^{**} Emission level corresponds to ambient noise floor



ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC part 15 Subpart C § 15.247, IC RSS-247, I1

Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

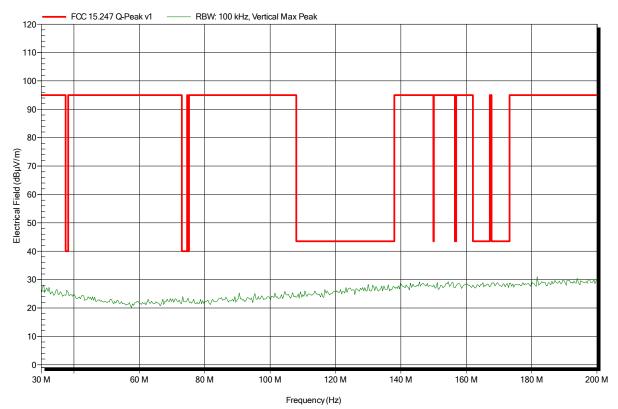
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

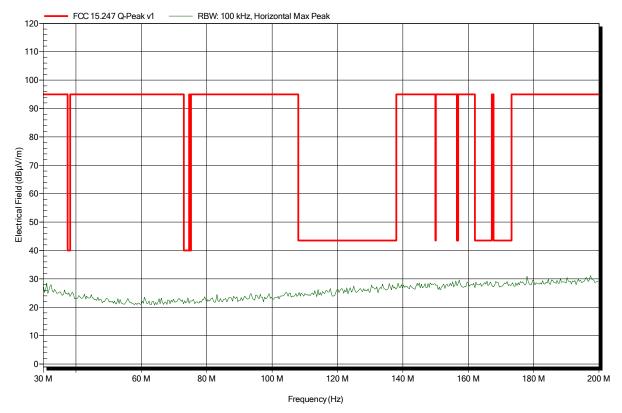
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

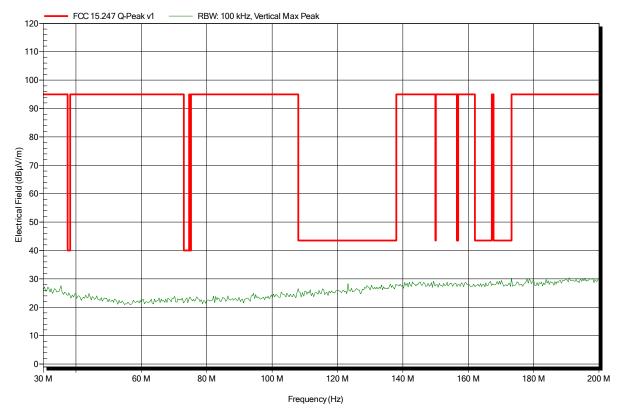
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

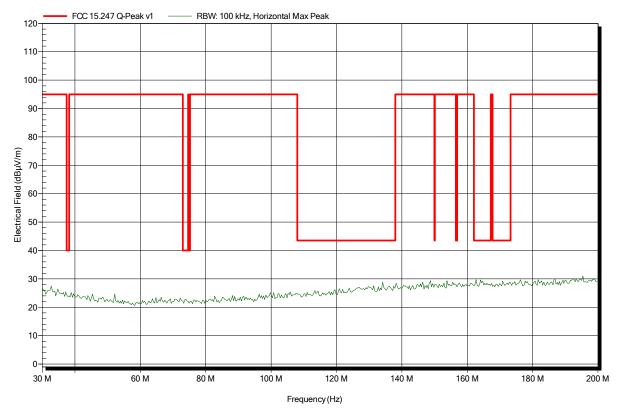
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

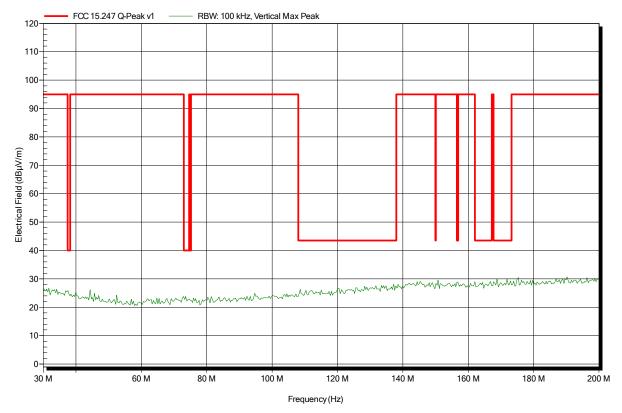
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

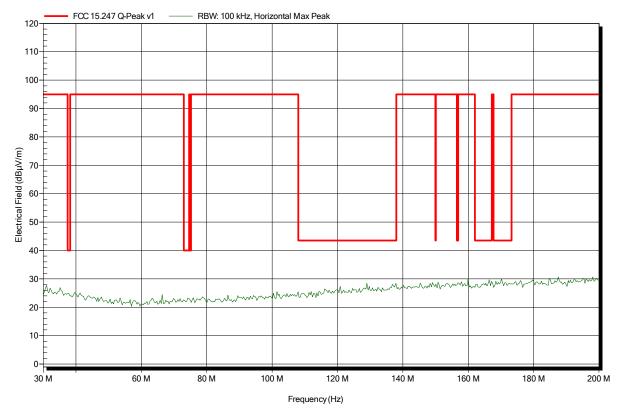
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

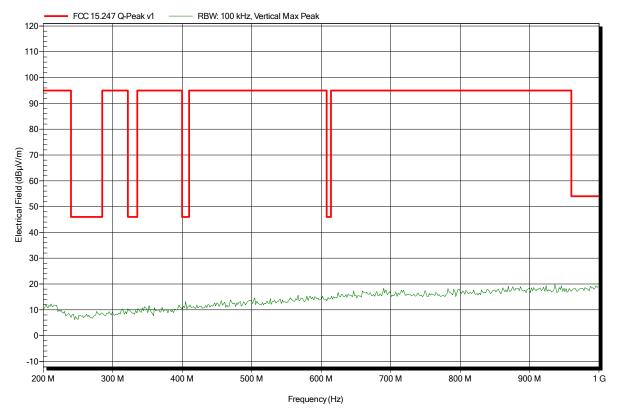
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

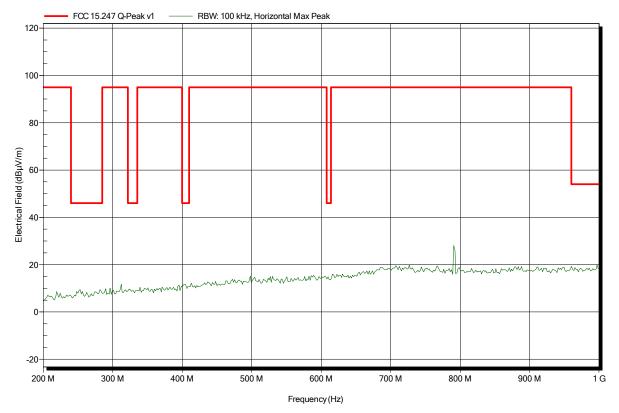
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

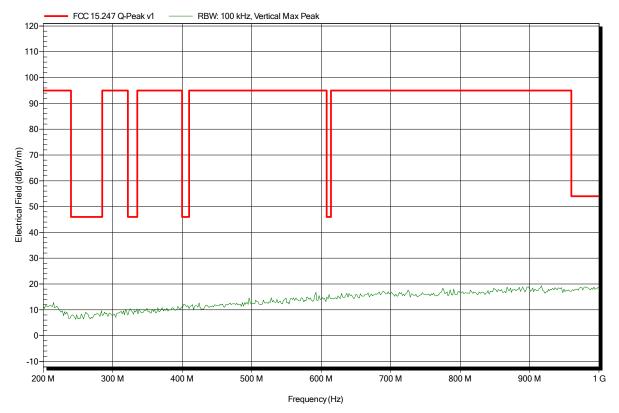
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

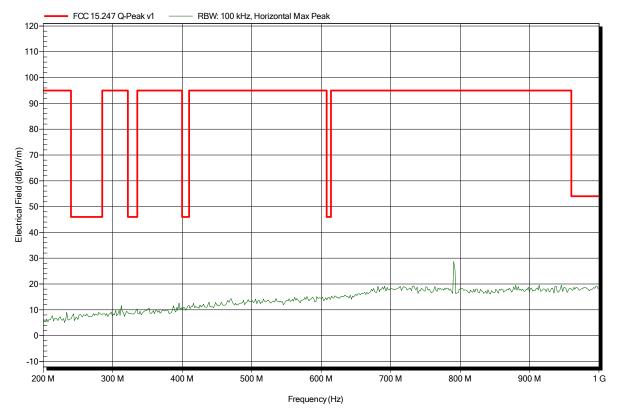
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

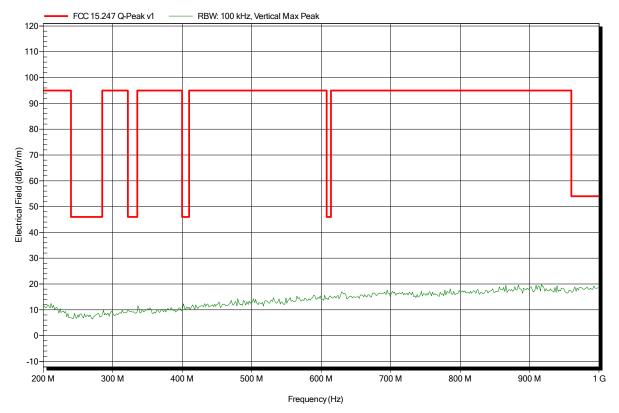
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

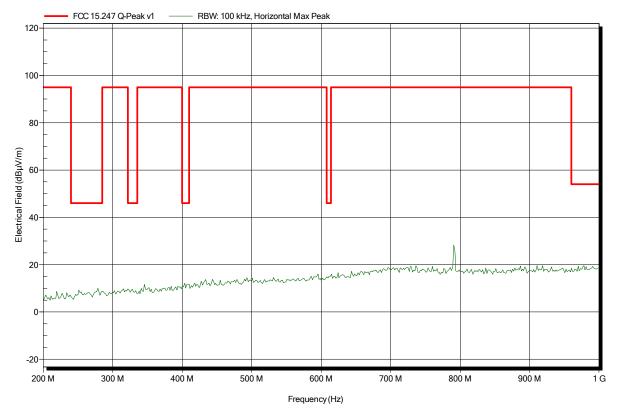
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

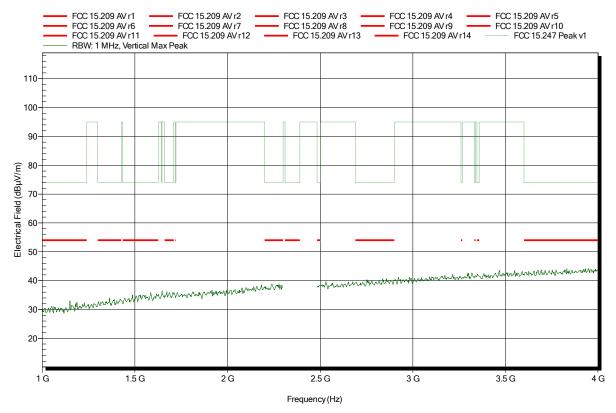
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

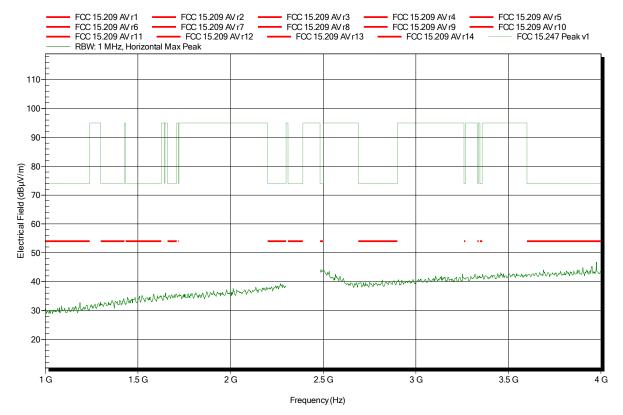
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

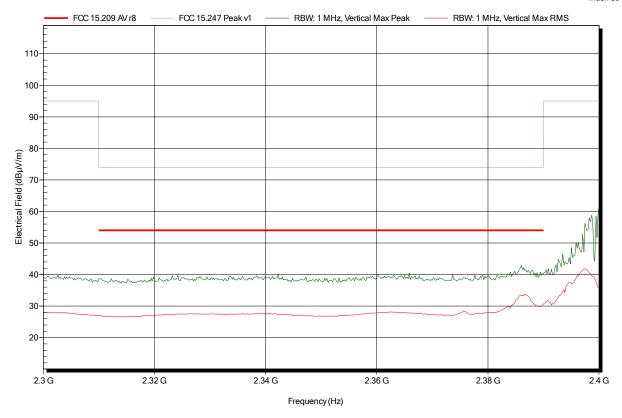
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20

Note: EUT horizontal; lower bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

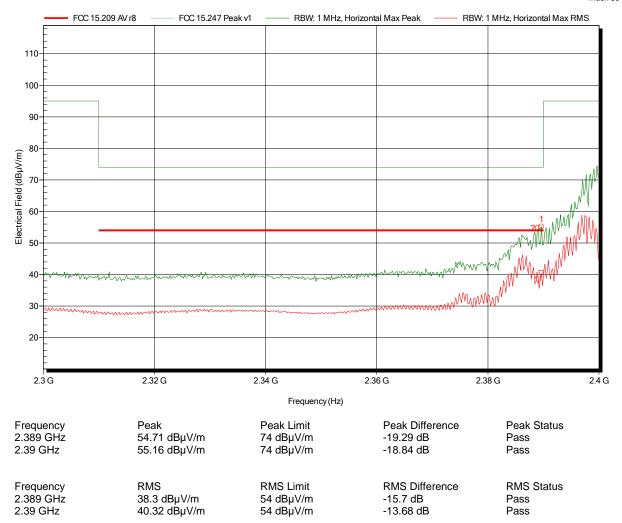
Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20

Note: EUT horizontal; lower bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

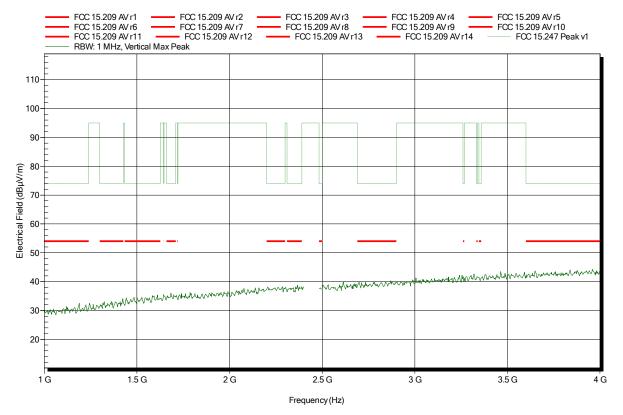
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

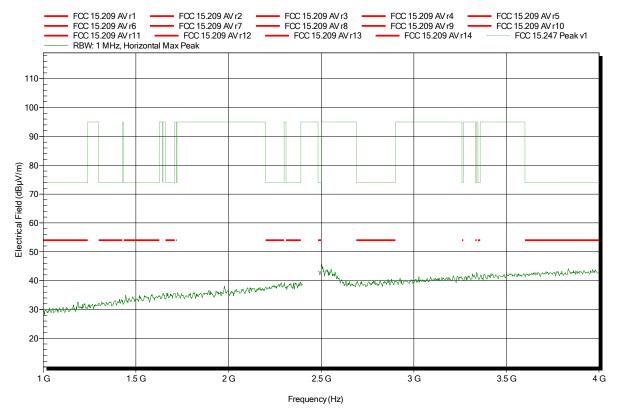
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

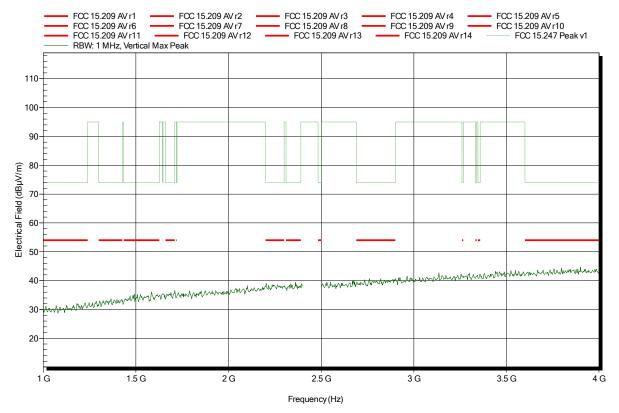
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

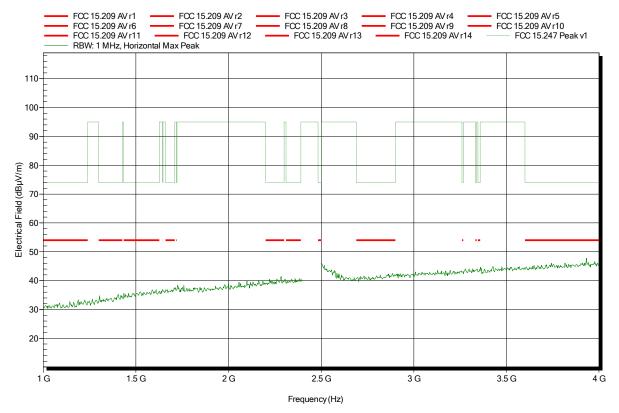
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

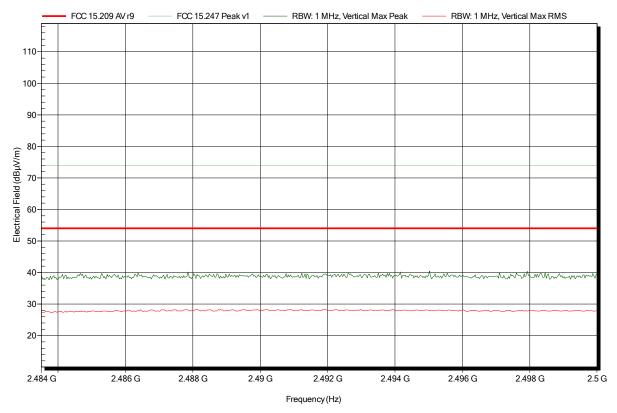
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-28

Note: EUT horizontal; higher bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

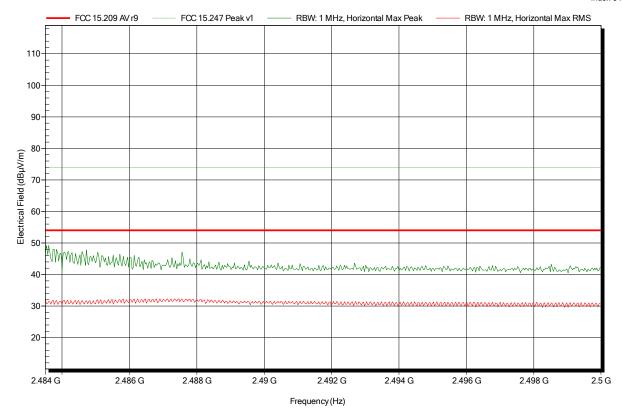
Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-28

Note: EUT horizontal; higher bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

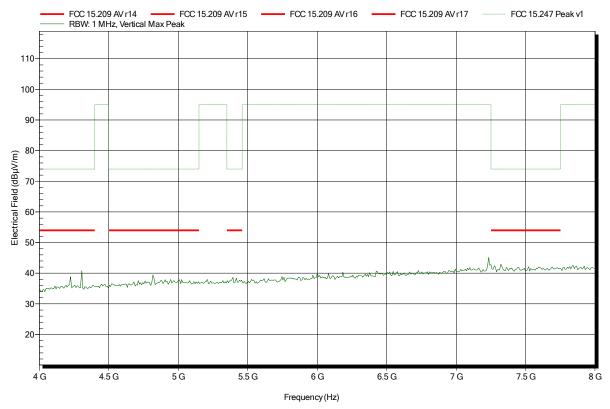
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

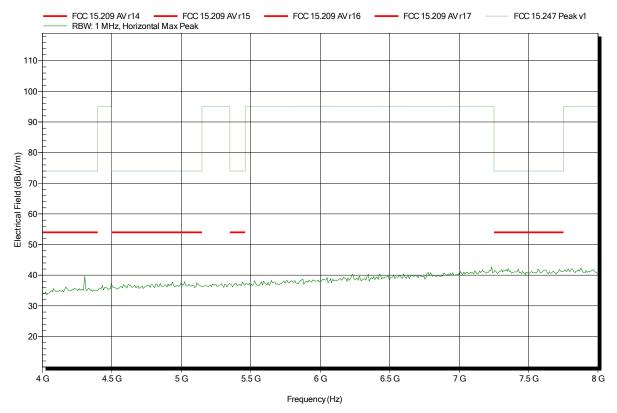
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

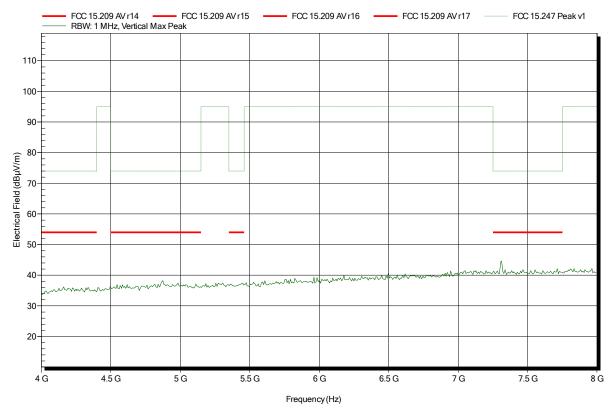
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

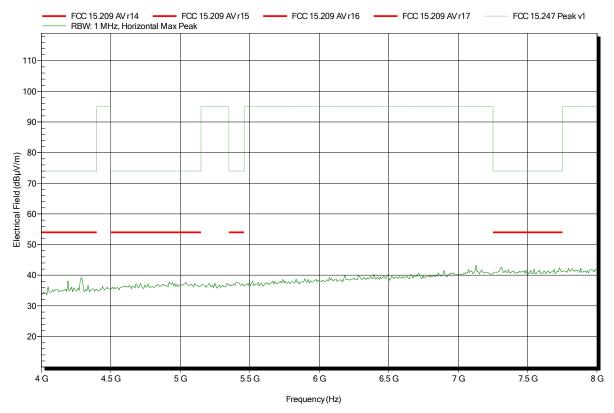
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

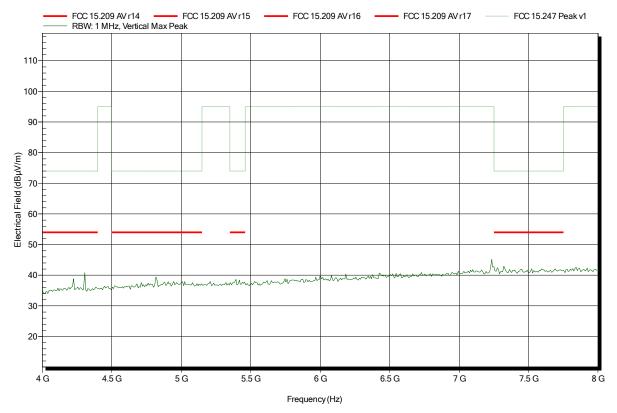
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

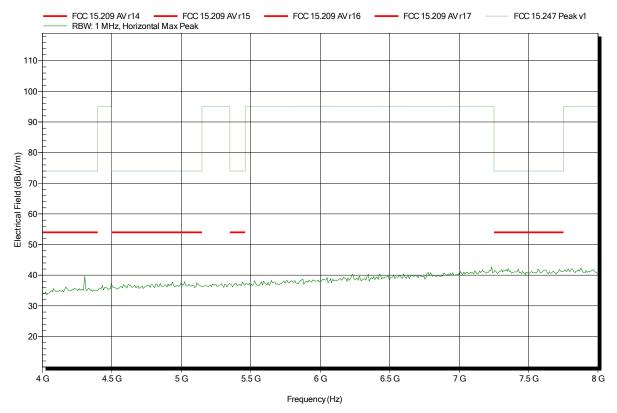
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

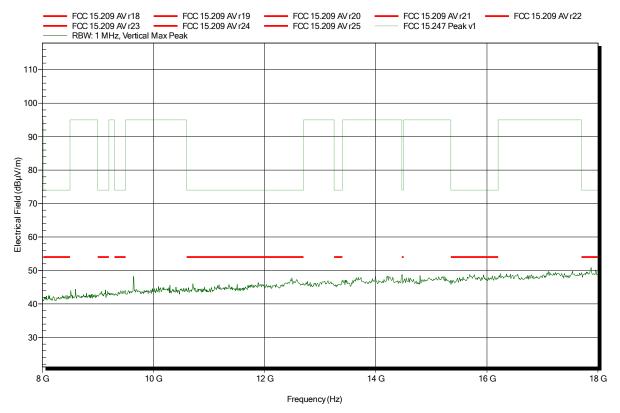
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

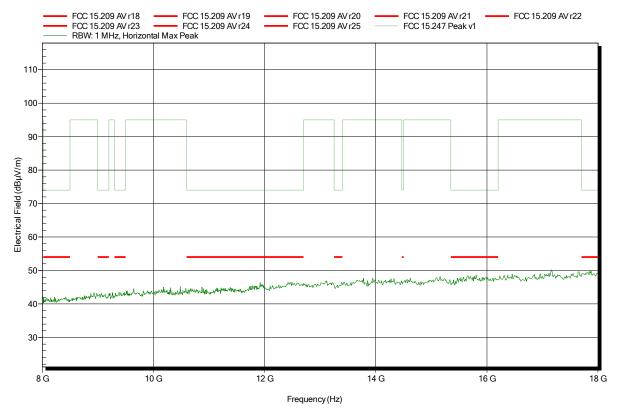
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

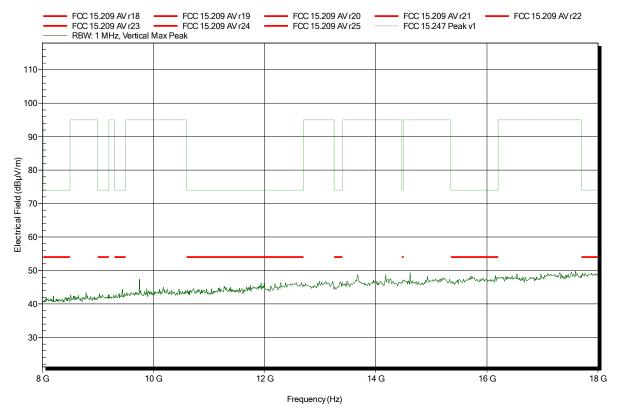
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

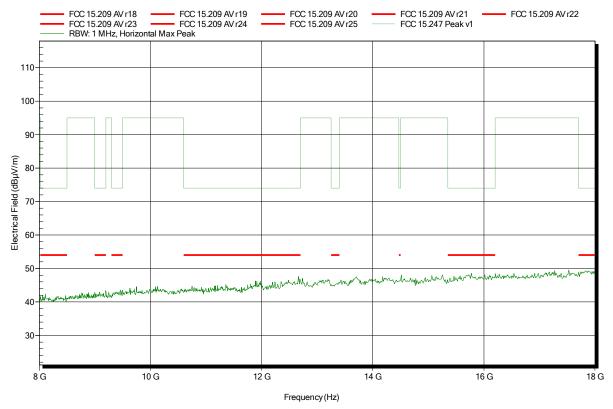
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

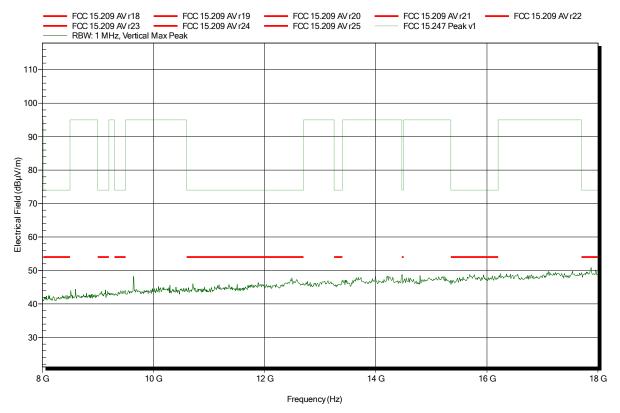
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

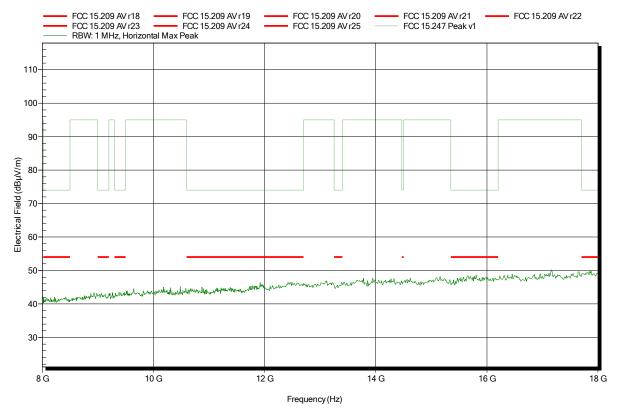
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

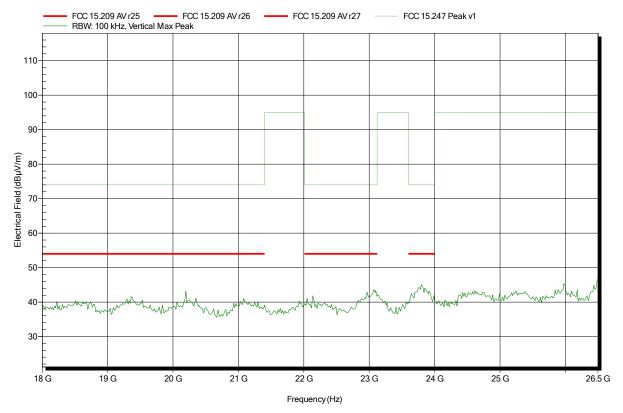
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

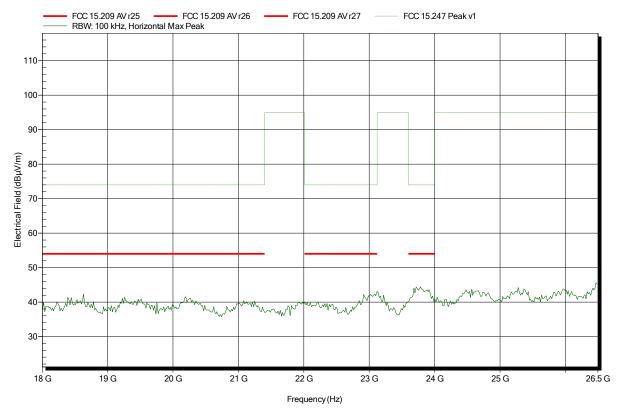
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

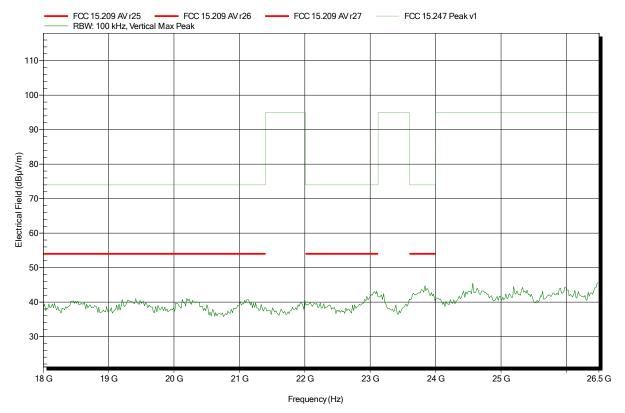
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

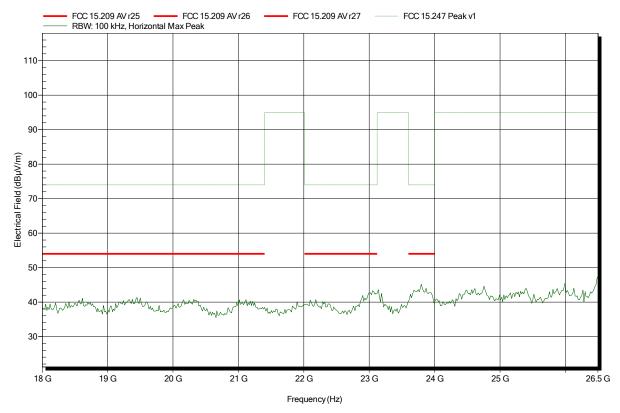
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

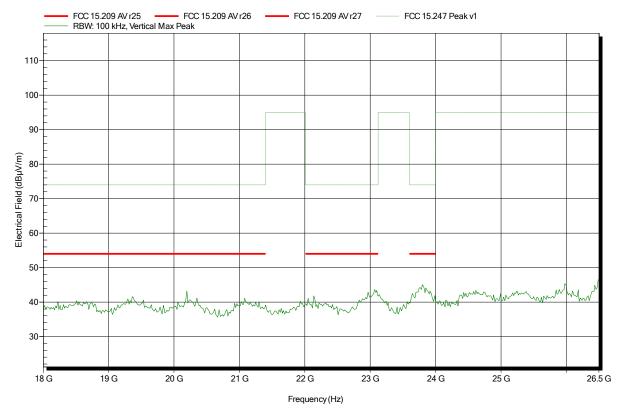
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

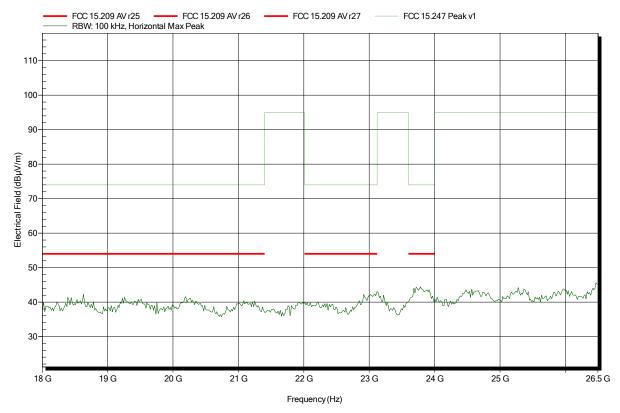
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; DSSS 1Mbps

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

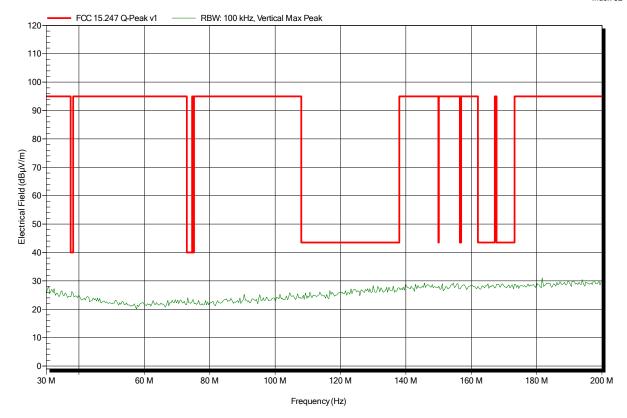
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

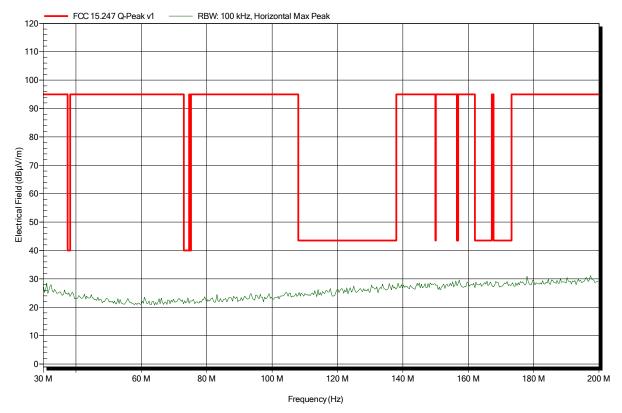
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

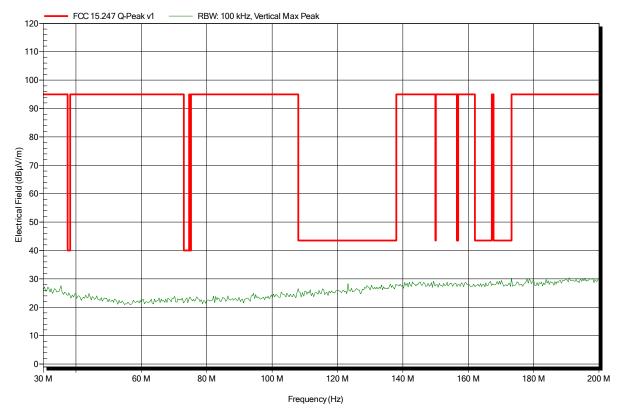
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

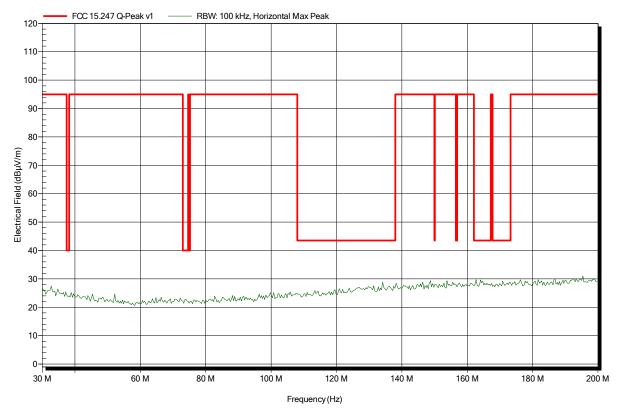
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

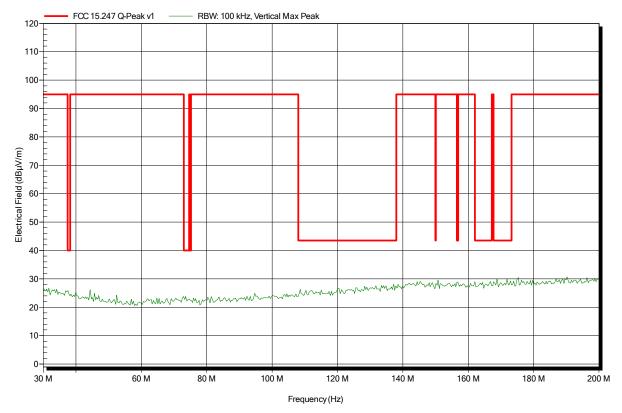
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

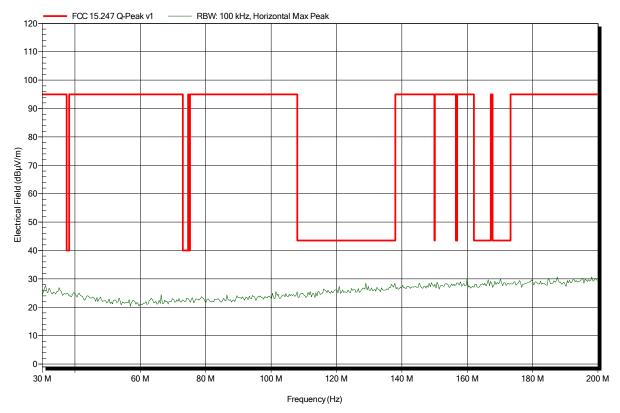
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

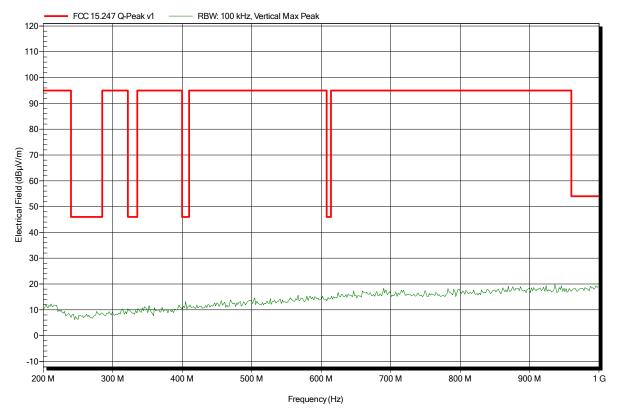
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

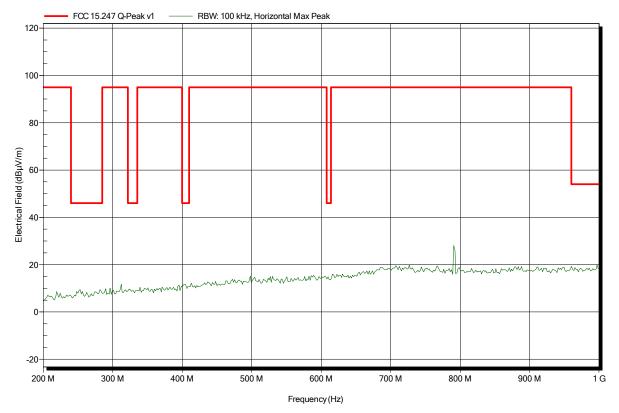
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

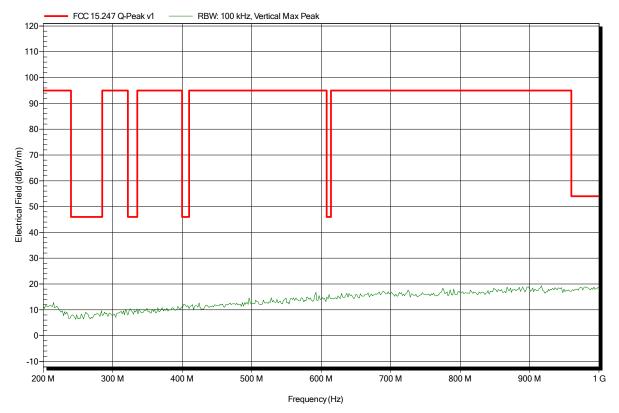
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

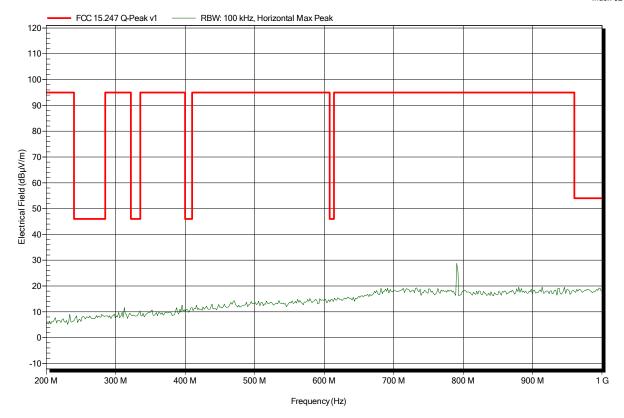
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

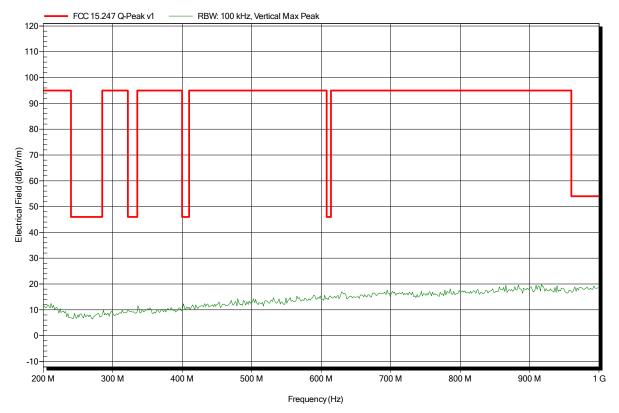
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

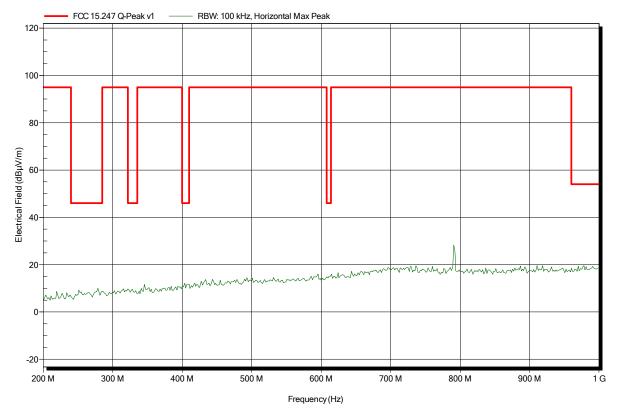
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

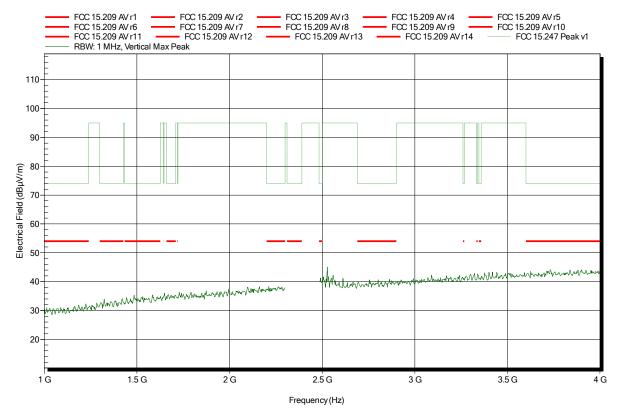
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

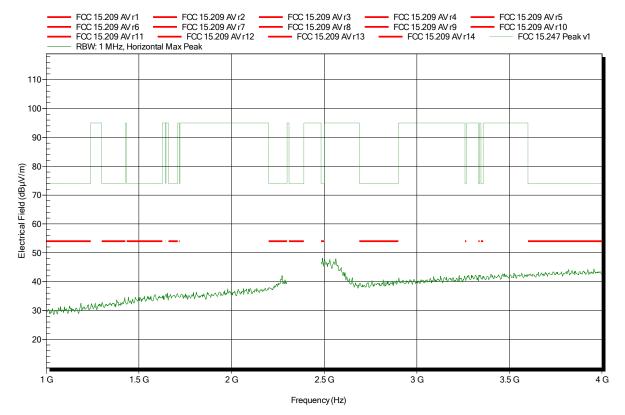
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

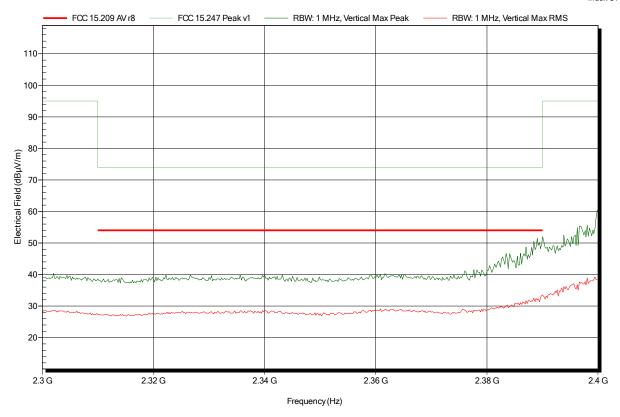
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; lower bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

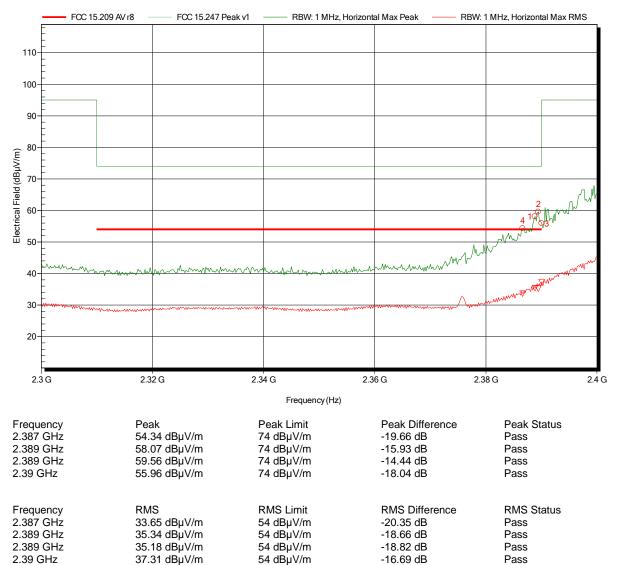
Measurement distance: 3 m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; lower bandedge

ndex 82





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

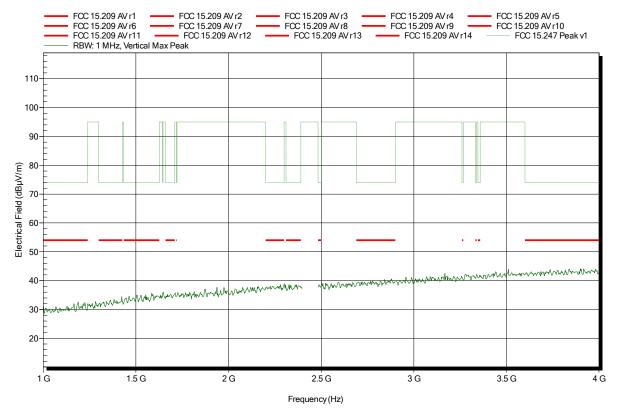
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

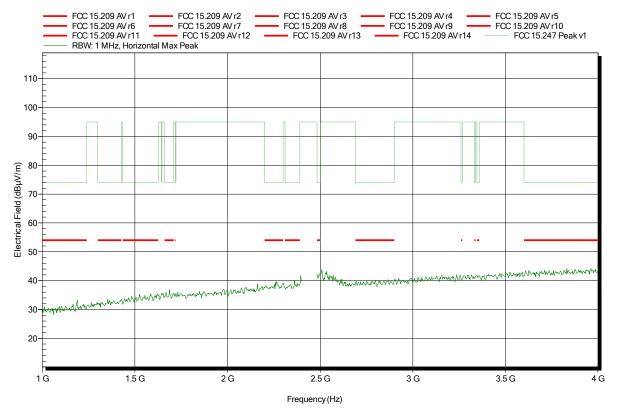
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

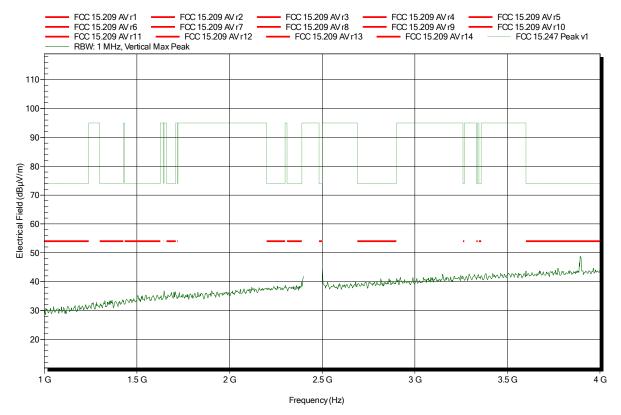
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

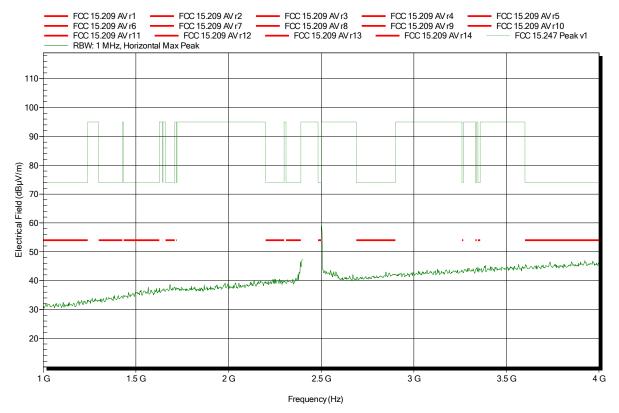
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

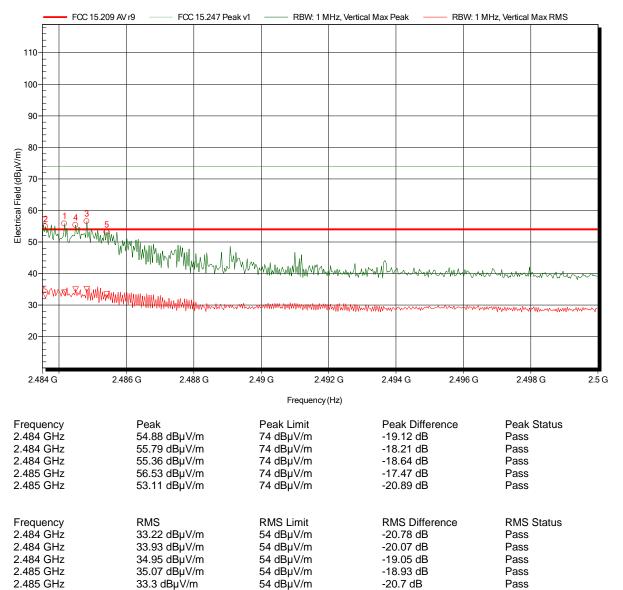
Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; higher bandedge

Index 88



Test Report No.: G0M-1601-5302-TFC247WF-V02



Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

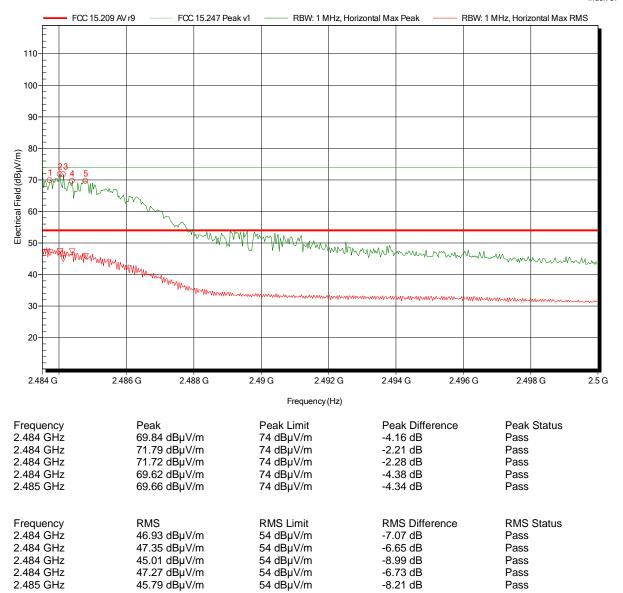
Measurement distance: 3 m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; higher bandedge

ndex 87



Test Report No.: G0M-1601-5302-TFC247WF-V02



Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

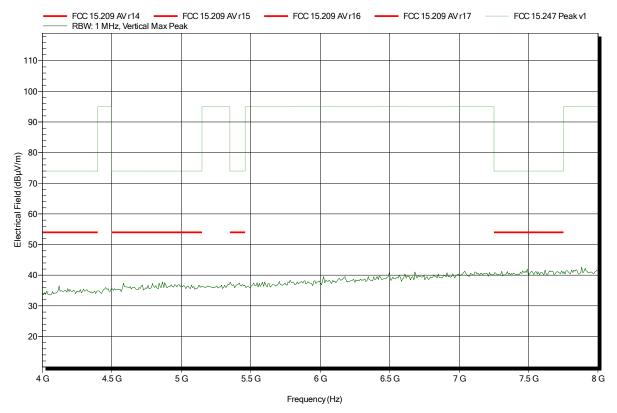
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

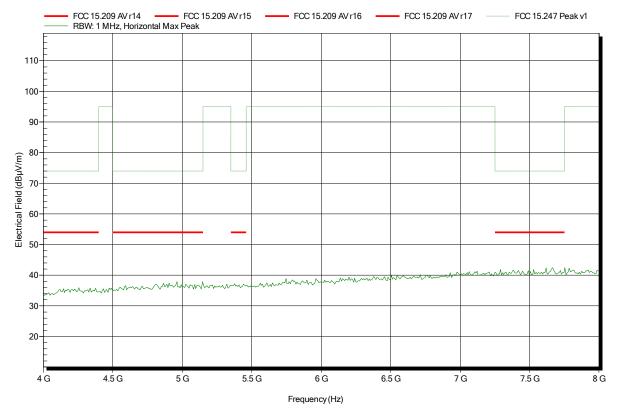
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

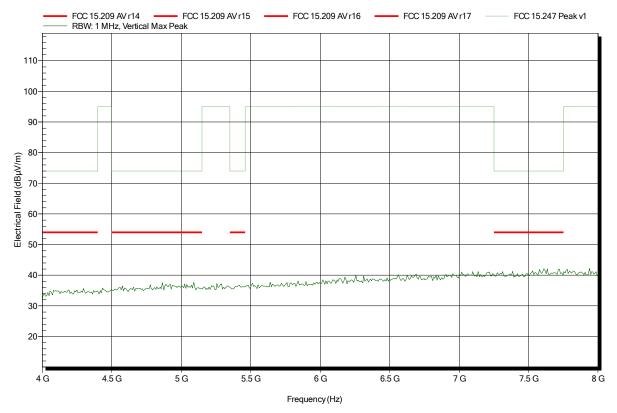
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

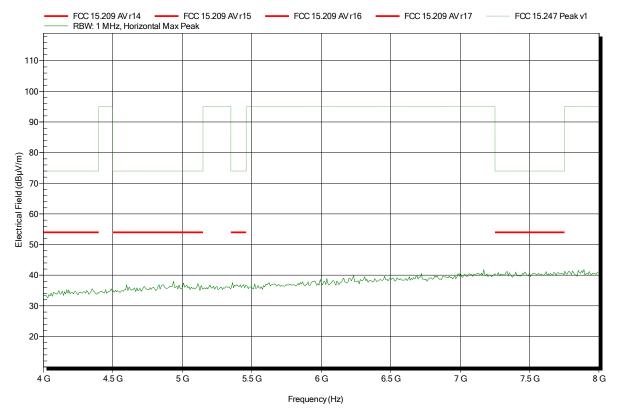
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

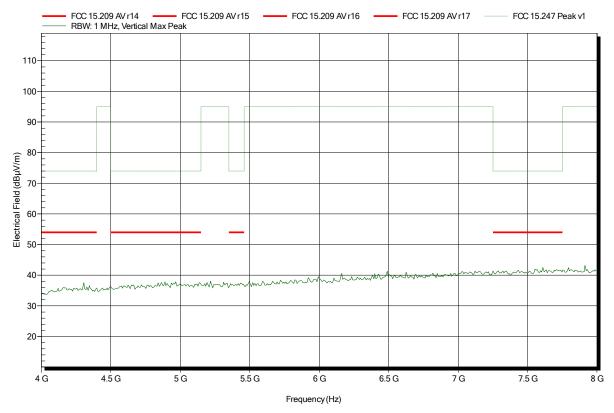
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

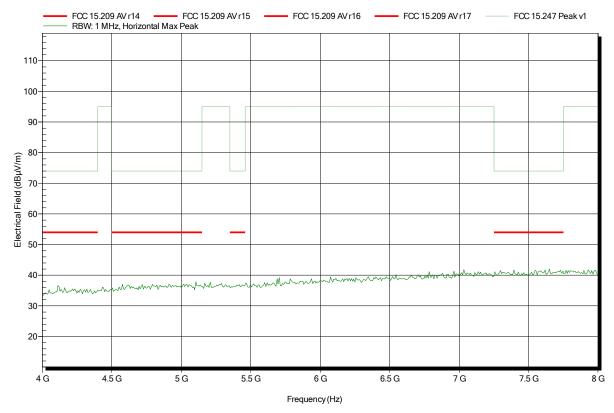
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

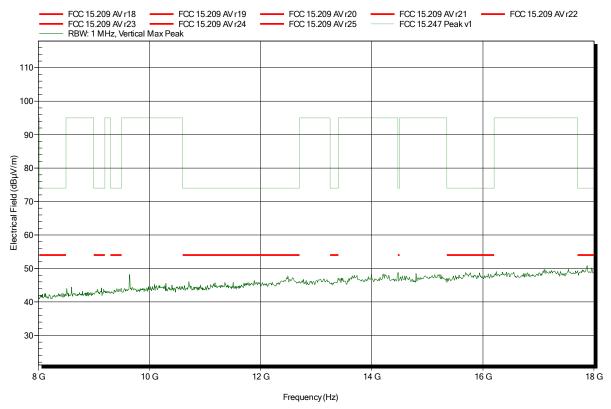
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

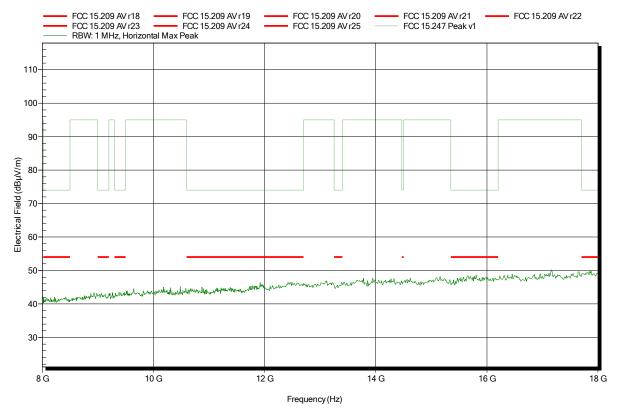
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

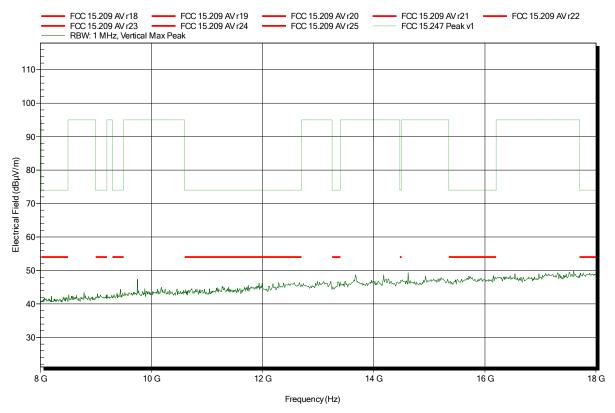
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

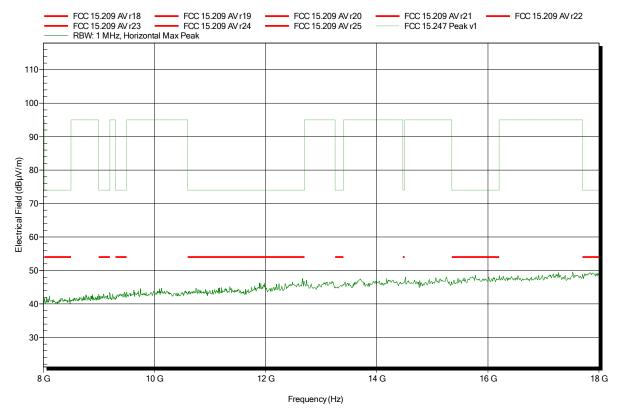
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

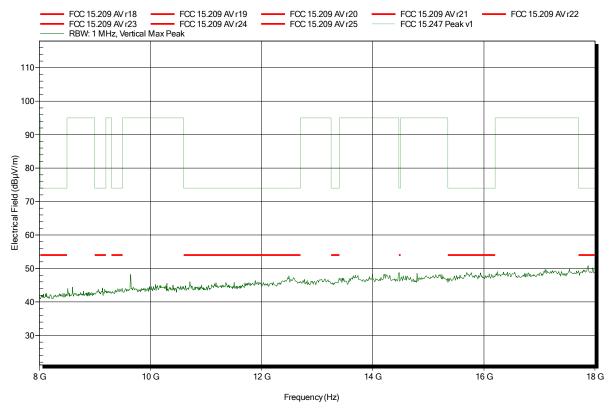
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

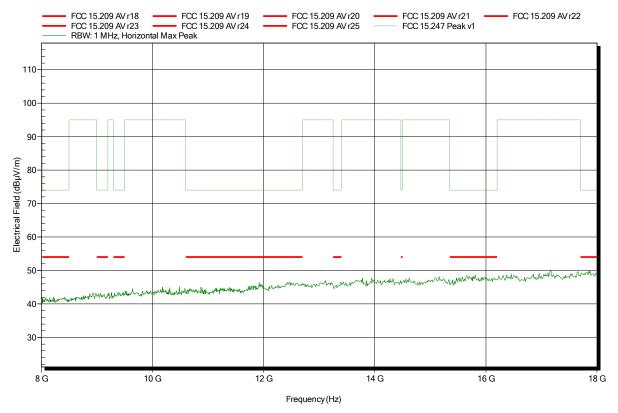
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

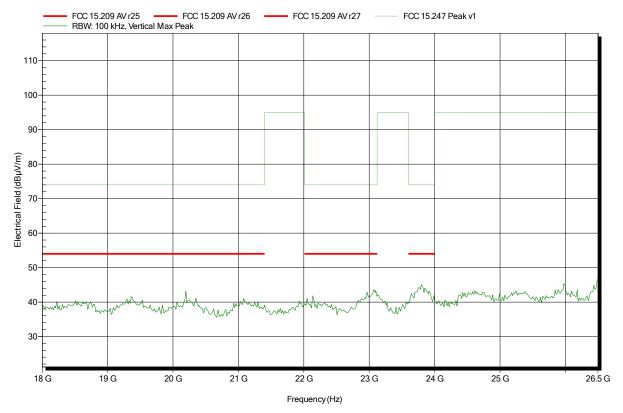
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

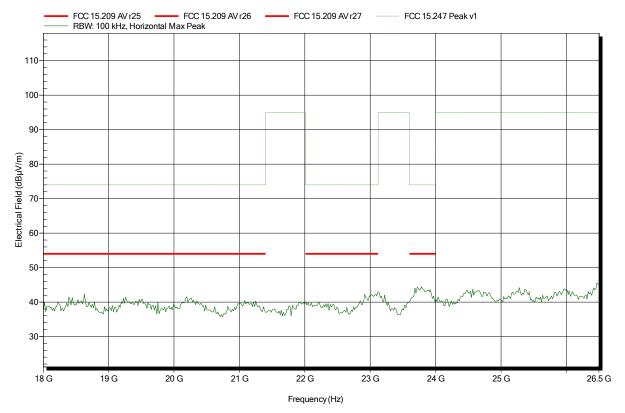
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 1; 2412 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

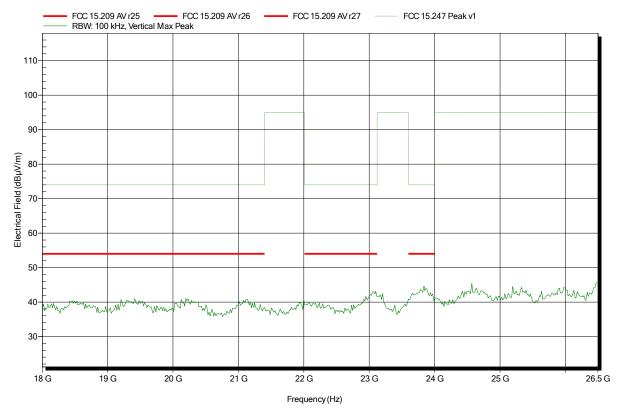
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

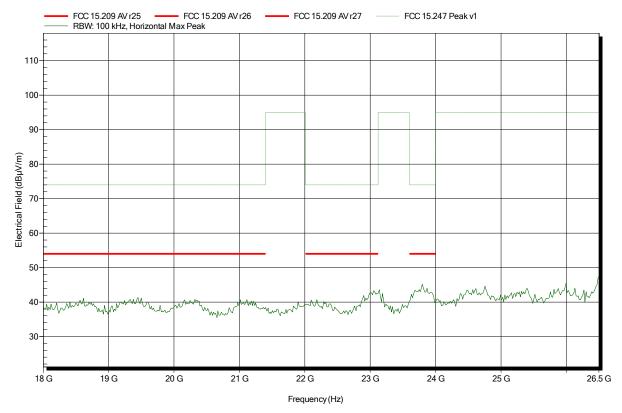
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

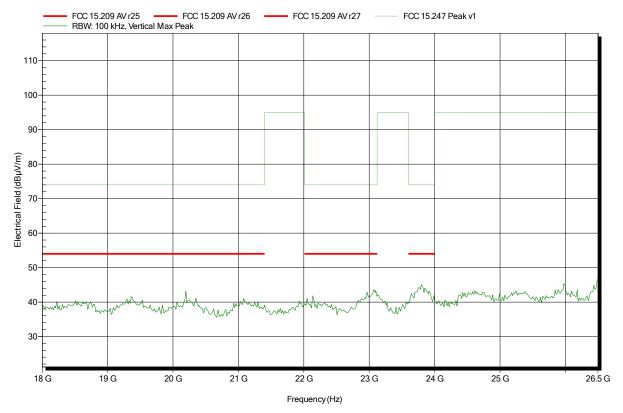
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

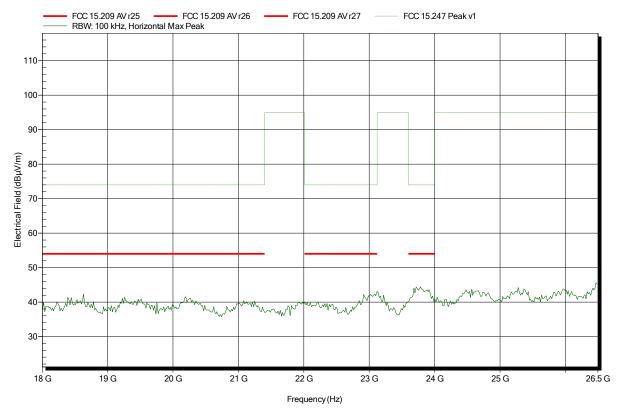
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 11; 2462 MHz; TX-Testmode; HT20 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

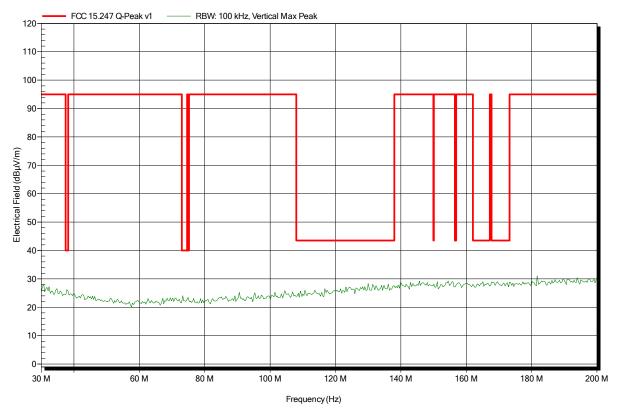
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

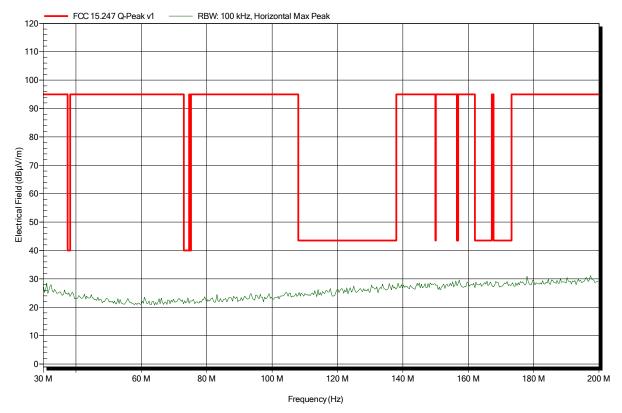
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

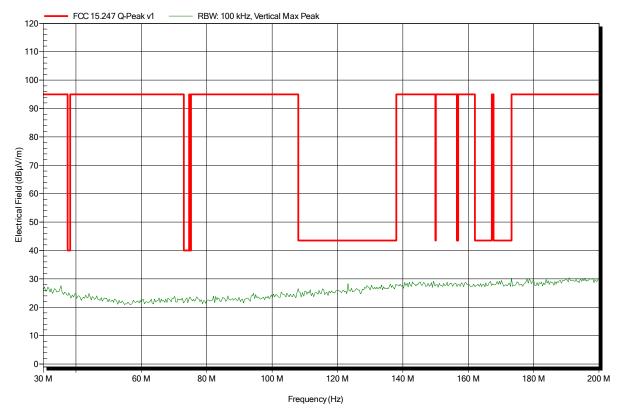
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

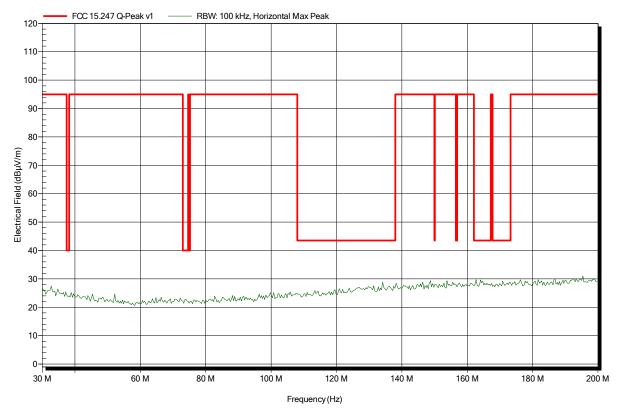
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

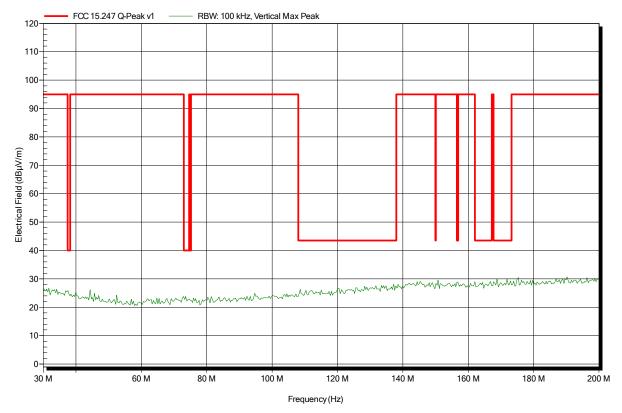
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

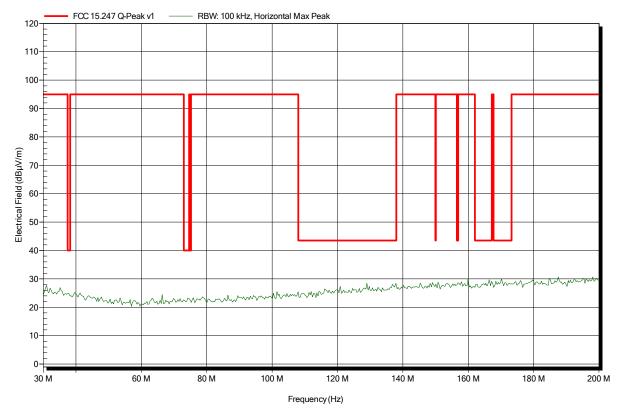
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

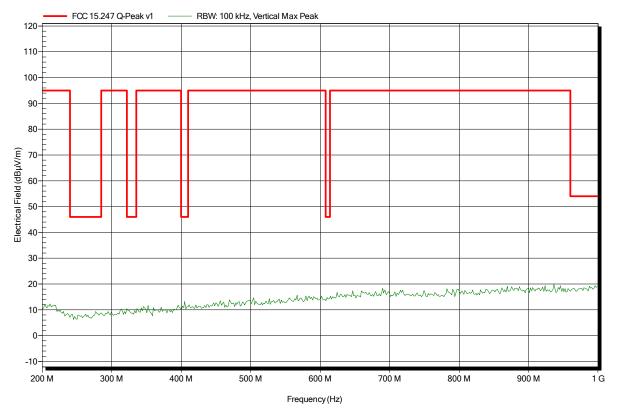
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

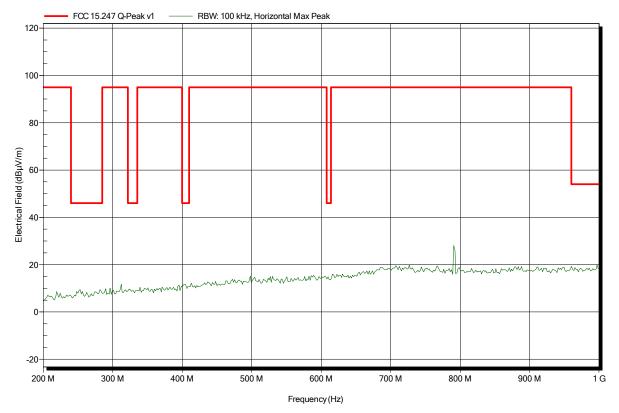
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

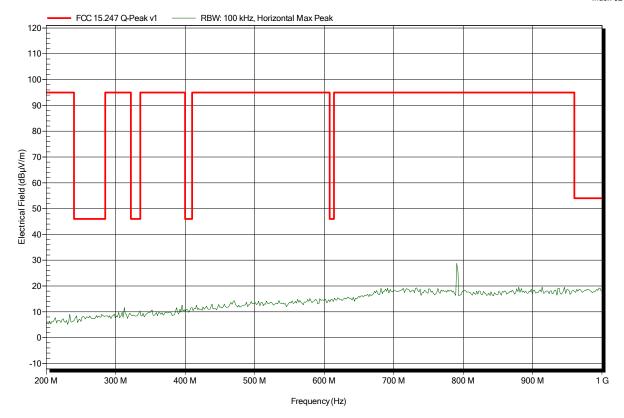
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

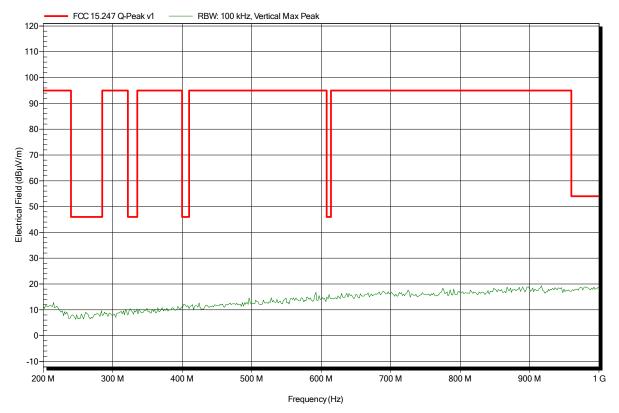
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

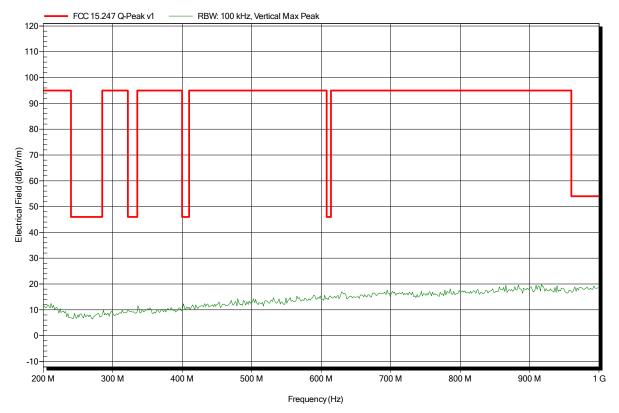
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

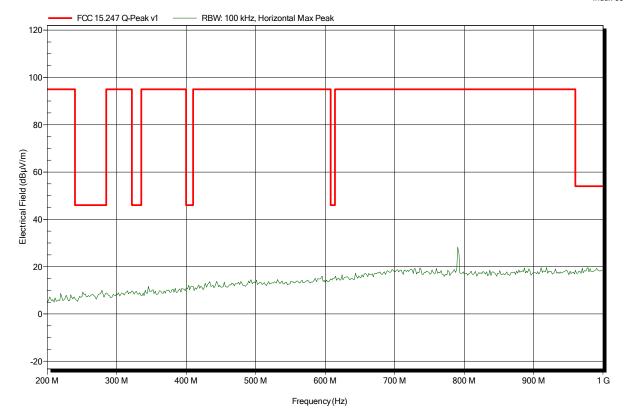
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

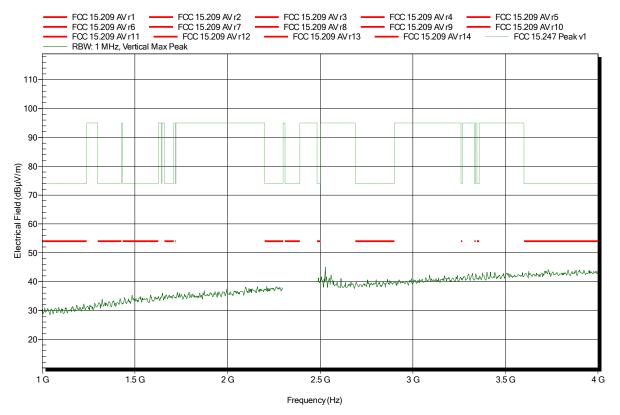
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

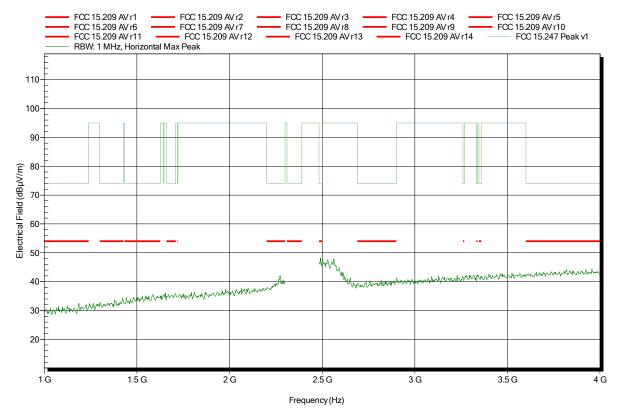
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

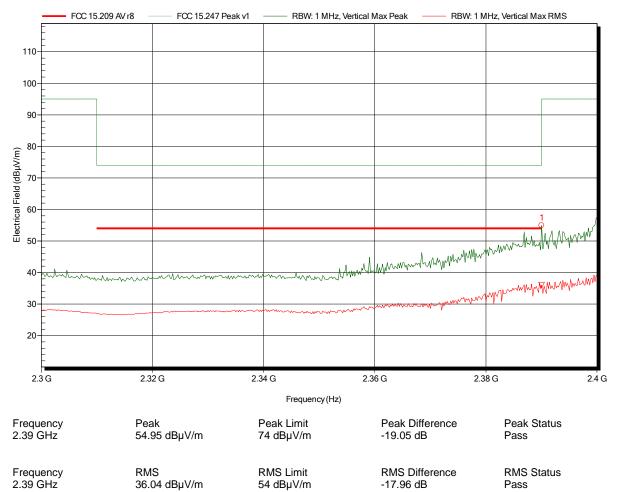
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; lower bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

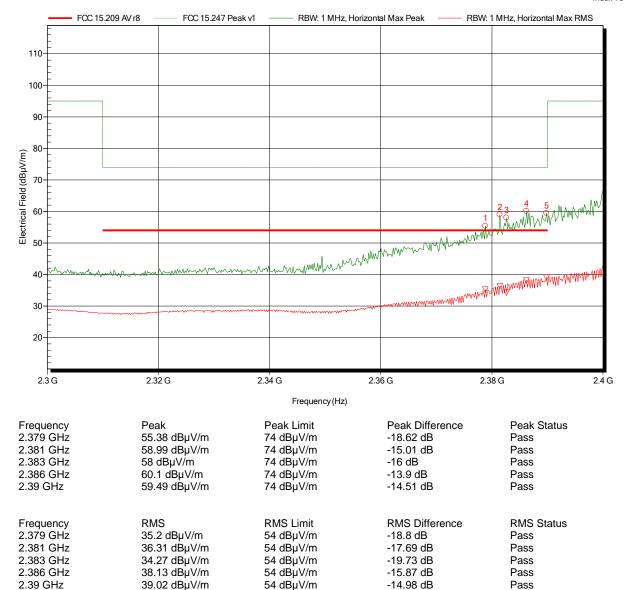
Measurement distance: 3 m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; lower bandedge

ndex 76





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

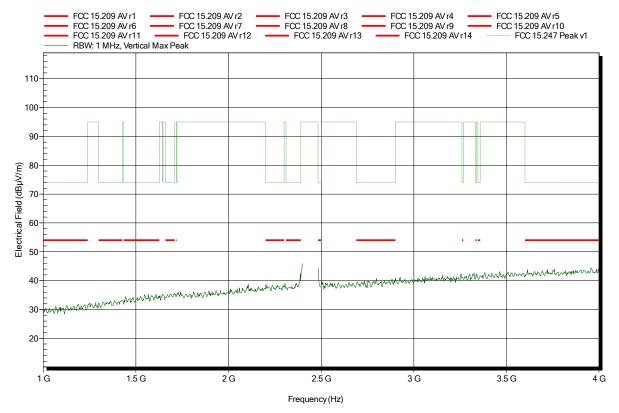
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

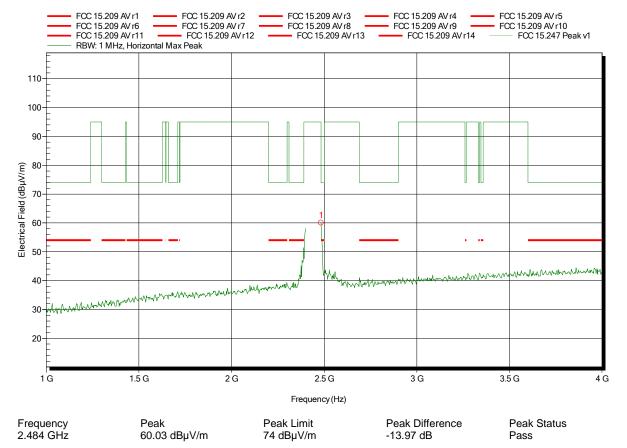
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

lesswire GmbH Applicant:

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

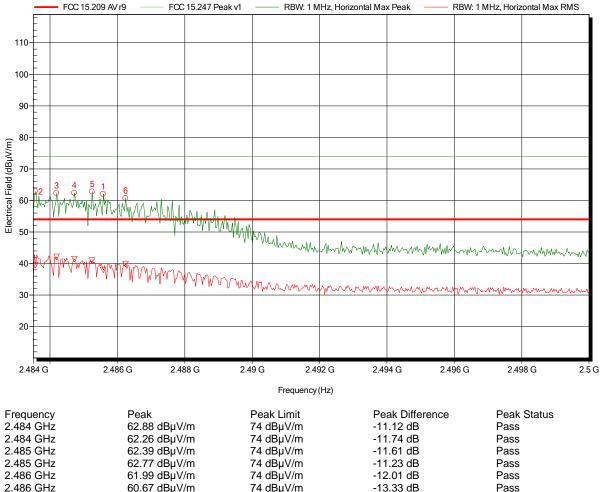
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance:

TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0 Mode:

2016-01-28 Test Date: **EUT** horizontal Note:



Peak	Peak Limit	Peak Difference	Peak Status
62.88 dBµV/m	74 dBµV/m	-11.12 dB	Pass
62.26 dBµV/m	74 dBµV/m	-11.74 dB	Pass
62.39 dBµV/m	74 dBµV/m	-11.61 dB	Pass
62.77 dBµV/m	74 dBµV/m	-11.23 dB	Pass
61.99 dBµV/m	74 dBµV/m	-12.01 dB	Pass
60.67 dBµV/m	74 dBµV/m	-13.33 dB	Pass
	62.88 dBμV/m 62.26 dBμV/m 62.39 dBμV/m 62.77 dBμV/m 61.99 dBμV/m	62.88 dBμV/m 74 dBμV/m 62.26 dBμV/m 74 dBμV/m 62.39 dBμV/m 74 dBμV/m 62.77 dBμV/m 74 dBμV/m 61.99 dBμV/m 74 dBμV/m	62.88 dBµV/m 74 dBµV/m -11.12 dB 62.26 dBµV/m 74 dBµV/m -11.74 dB 62.39 dBµV/m 74 dBµV/m -11.61 dB 62.77 dBµV/m 74 dBµV/m -11.23 dB 61.99 dBµV/m 74 dBµV/m -12.01 dB

Frequency **RMS** 2.484 GHz 39.45 dBµV/m 2.484 GHz 42.1 dBµV/m 2.485 GHz 41.42 dBµV/m 2.485 GHz 40.94 dBµV/m 2.486 GHz 37.96 dBµV/m 2.486 GHz $39.85~dB\mu V/m$

Test Report No.: G0M-1601-5302-TFC247WF-V02





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

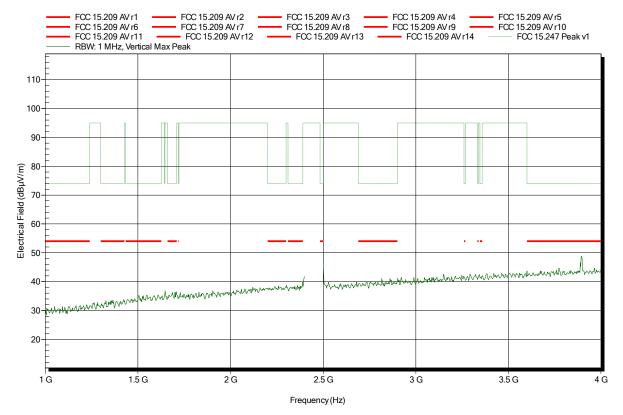
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

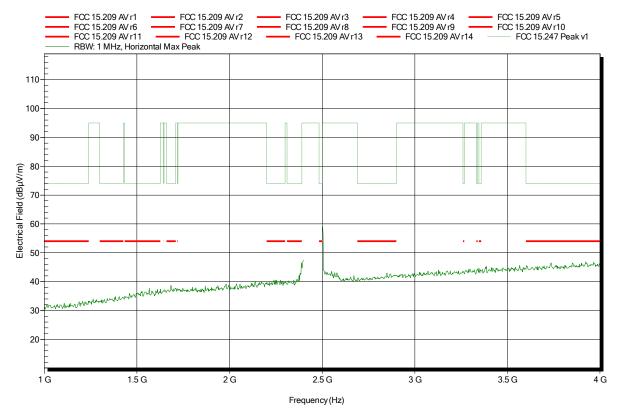
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

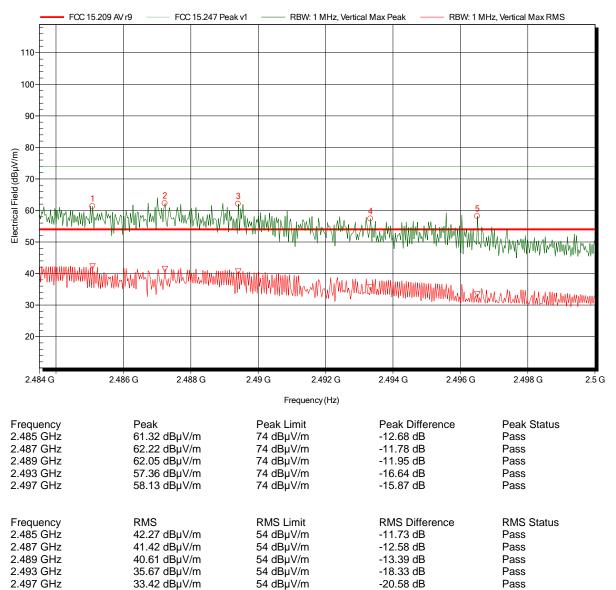
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 n

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; higher bandedge





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

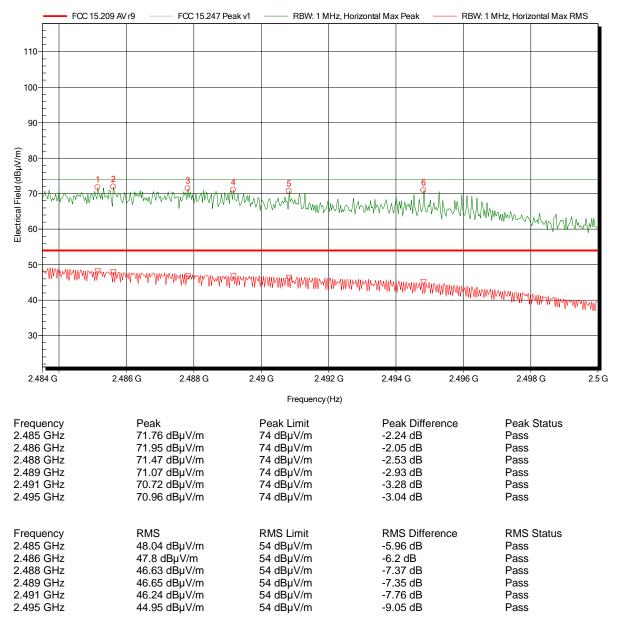
Measurement distance: 3 m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28

Note: EUT horizontal; higher bandedge

Index 67



Test Report No.: G0M-1601-5302-TFC247WF-V02





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

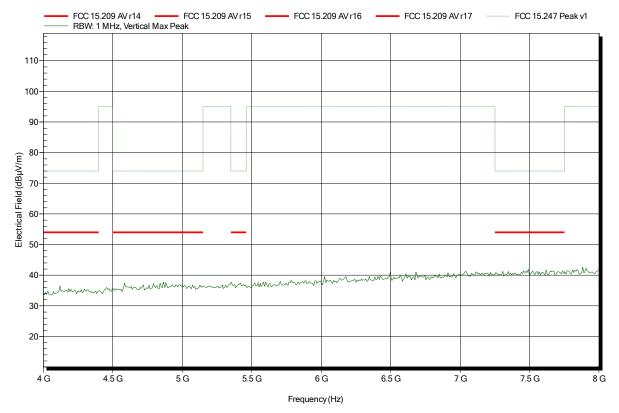
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

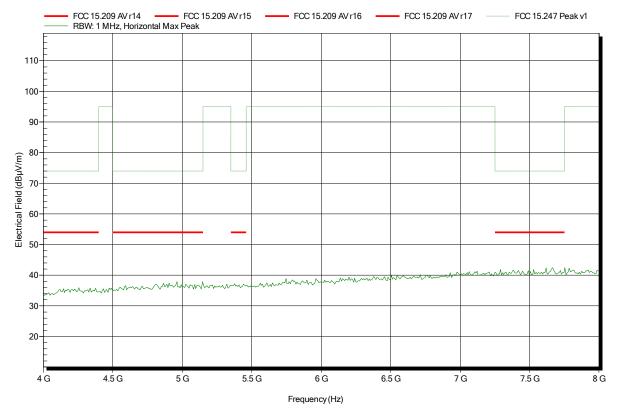
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

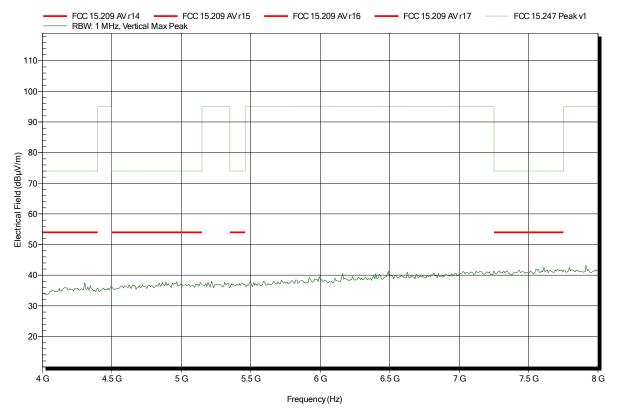
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

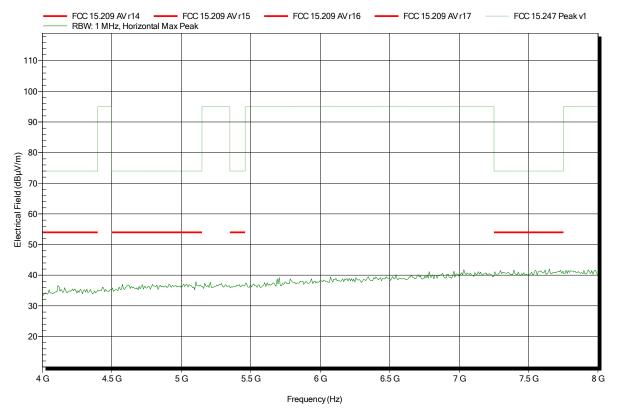
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

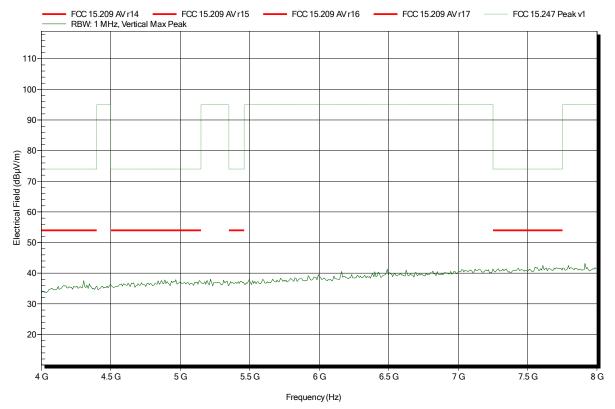
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

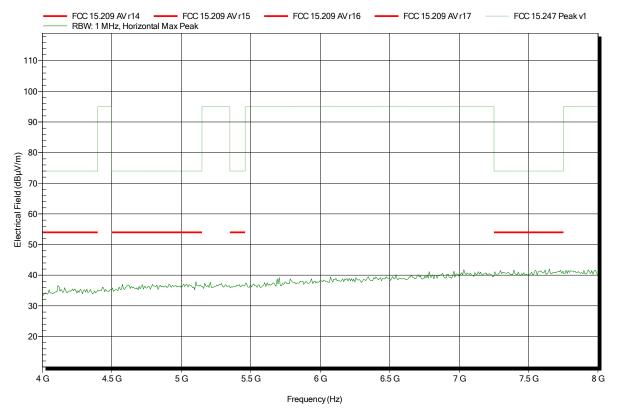
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-28
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

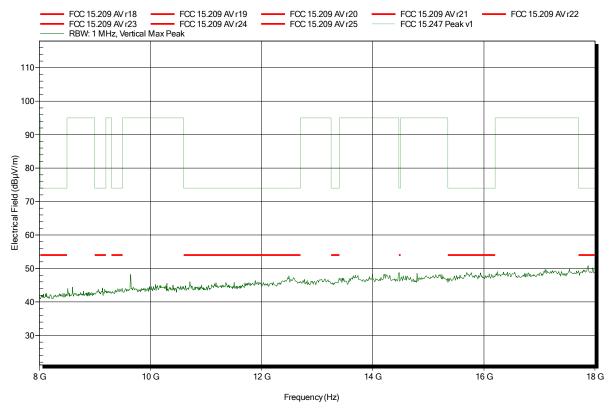
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

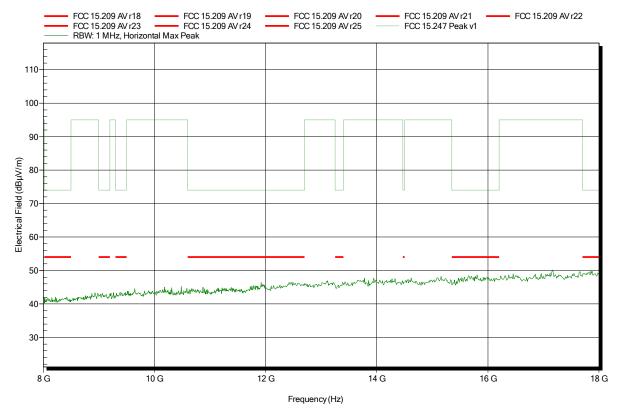
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

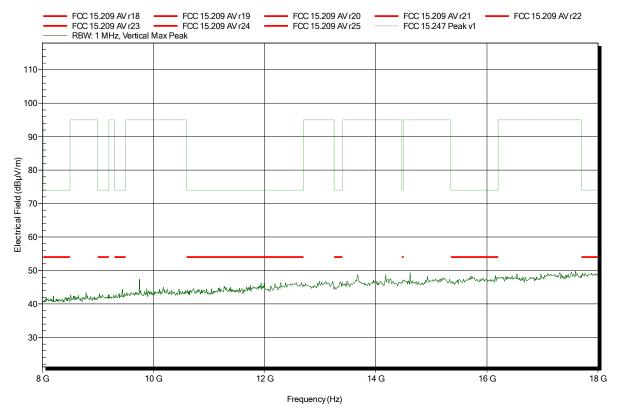
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

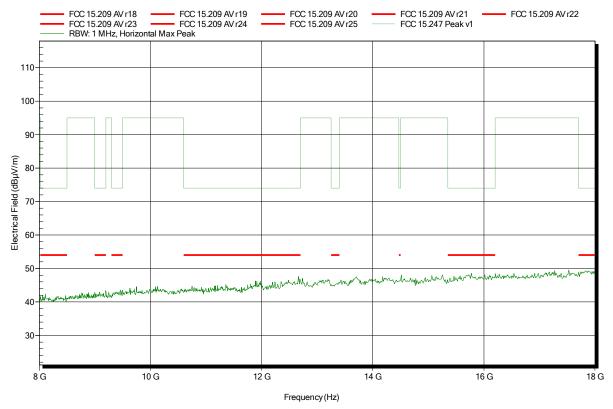
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

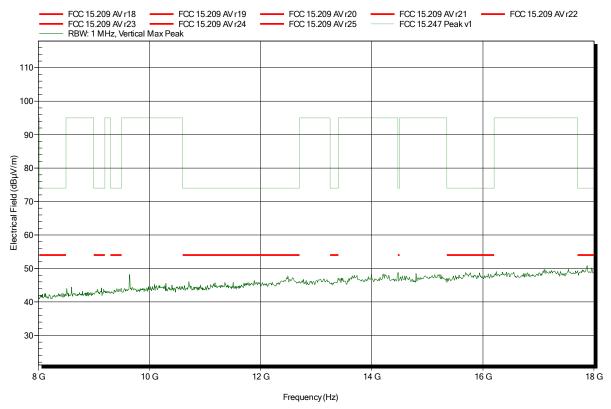
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

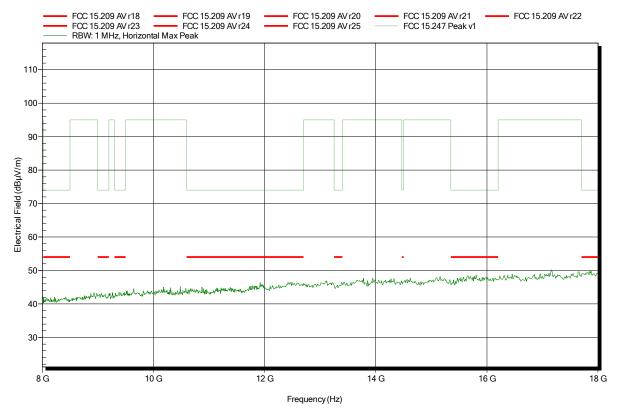
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

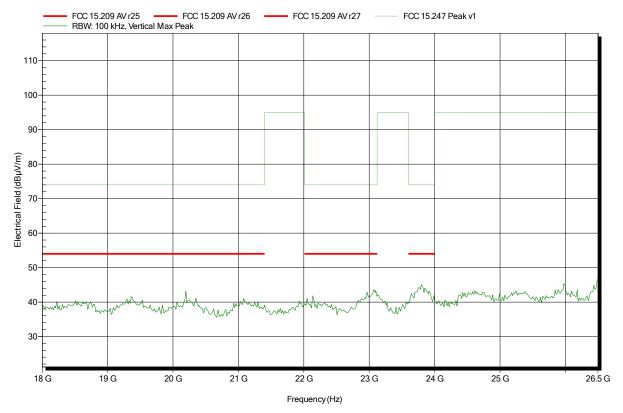
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

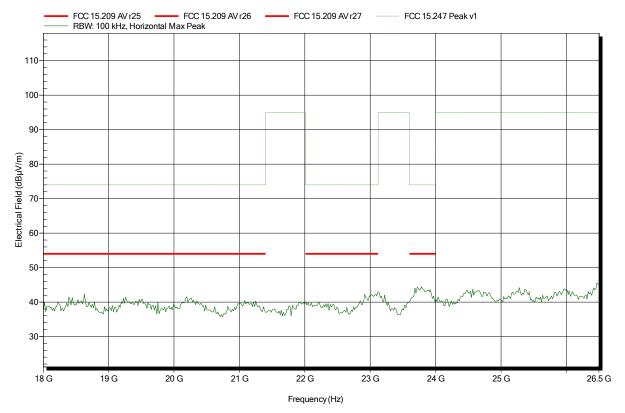
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 3; 2422 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

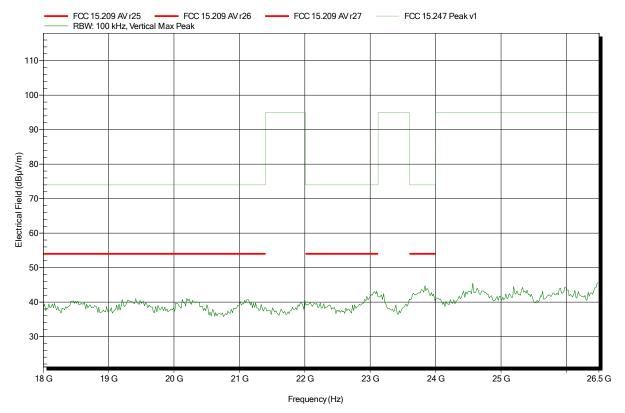
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

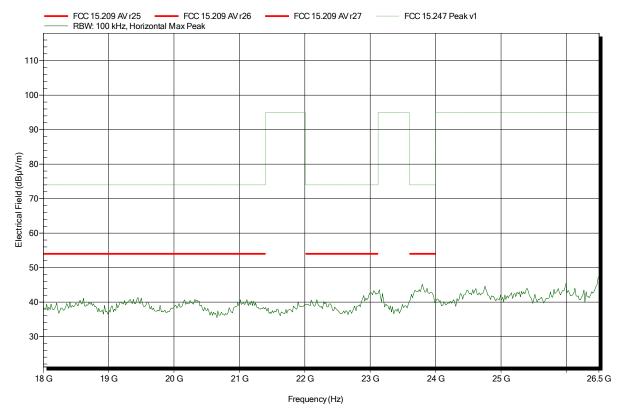
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 6; 2437 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

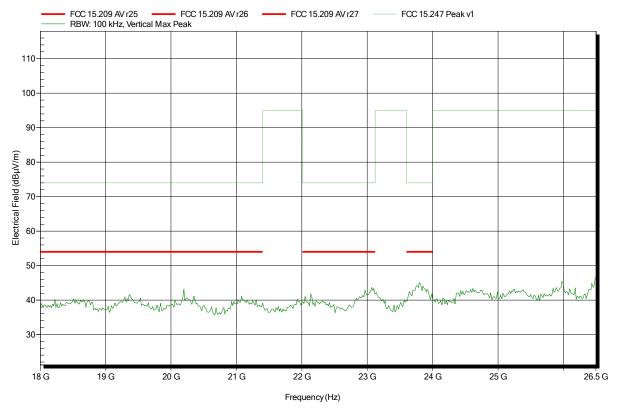
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20
Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

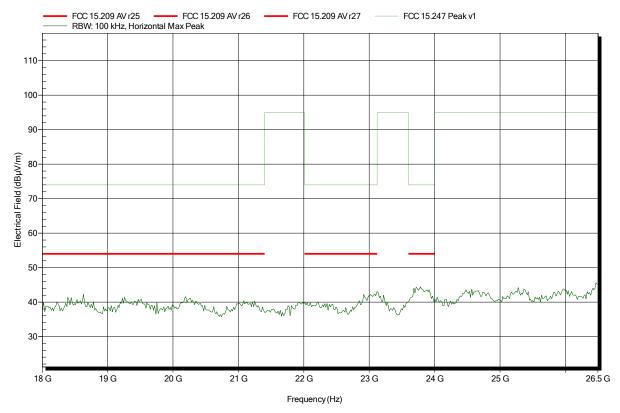
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; WLAN; CH: 9; 2452 MHz; TX-Testmode; HT40 MCS0

Test Date: 2016-01-20 Note: EUT horizontal





ANNEX B Receiver radiated spurious emissions

Spurious emissions according to IC RSS-247, I1

Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

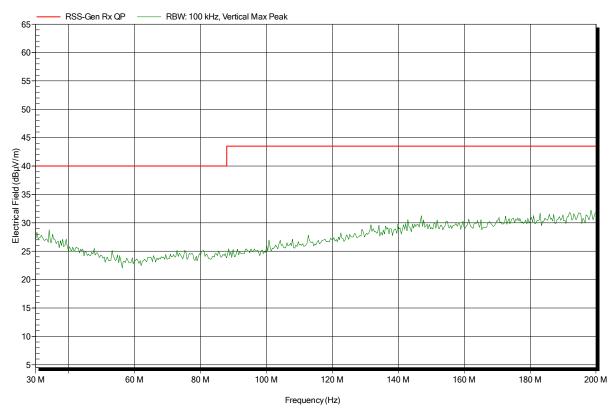
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

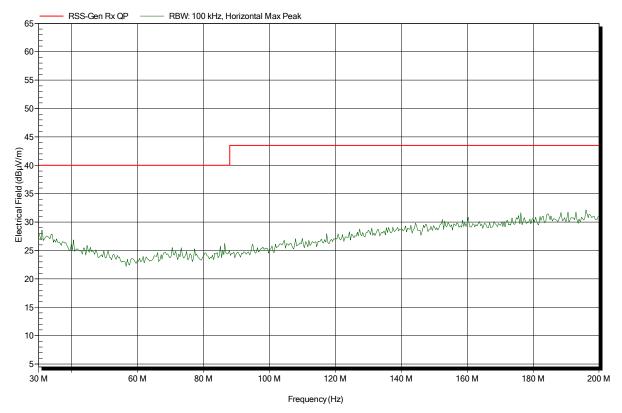
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

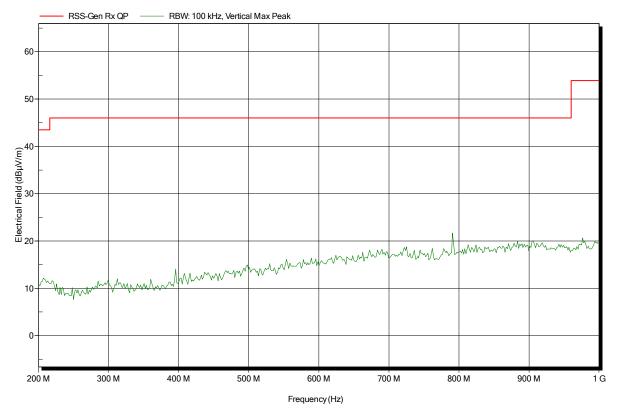
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

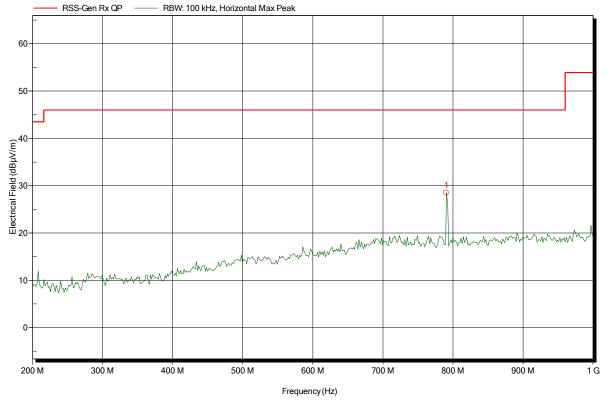
Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal

Index 19



Frequency 790.4 MHz Peak 28.48 dBµV/m Peak Limit 46 dBµV/m Peak Difference -17.52 dB Status Pass



Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

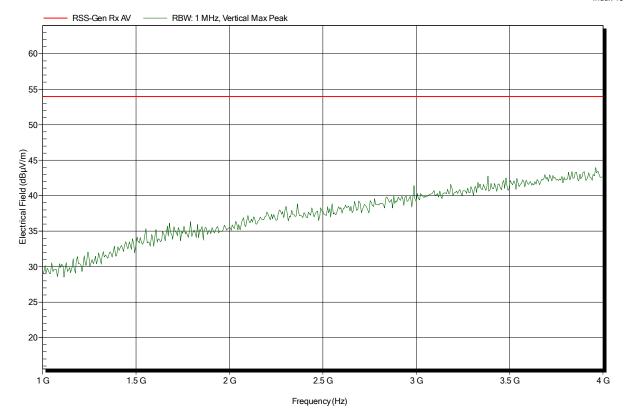
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

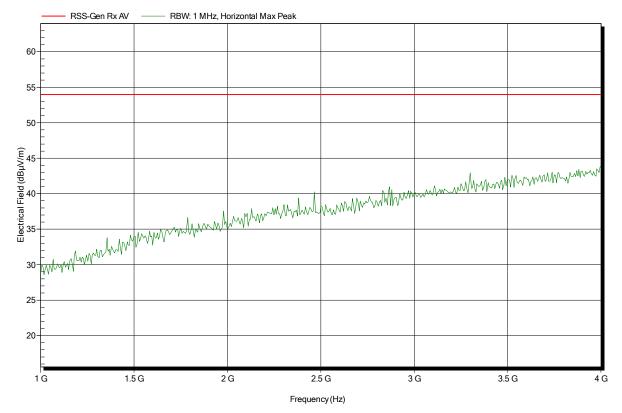
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

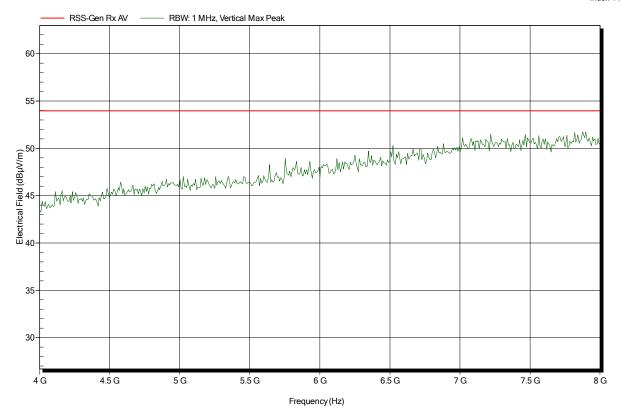
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

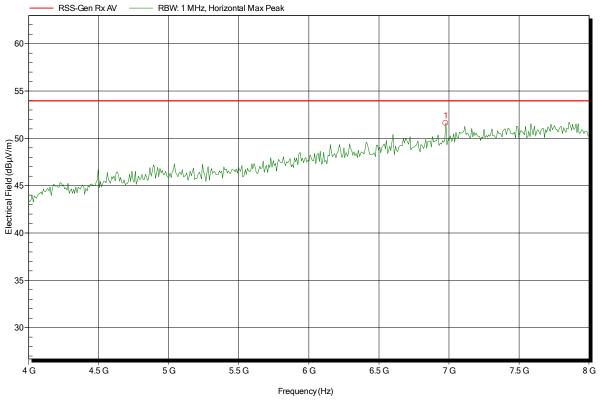
Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 3 m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal

Index 17



Frequency 6.976 GHz Peak 51.62 dBµV/m Peak Limit 53.98 dBµV/m Peak Difference -2.36 dB Peak Status Pass



Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

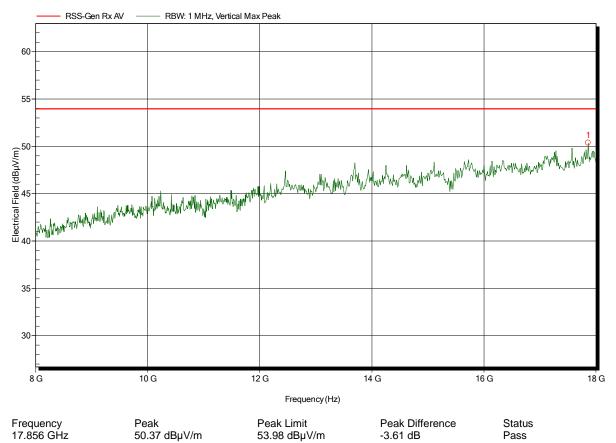
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

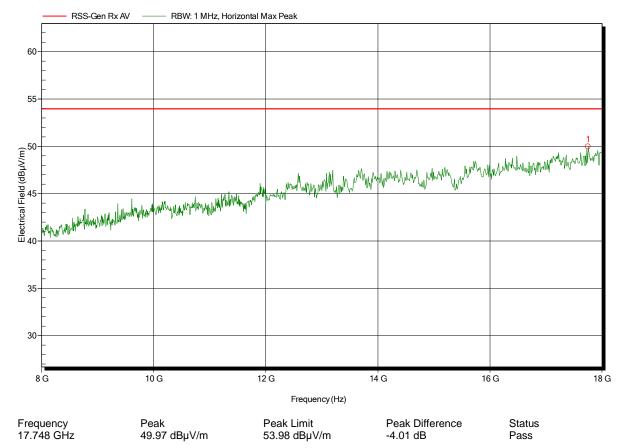
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

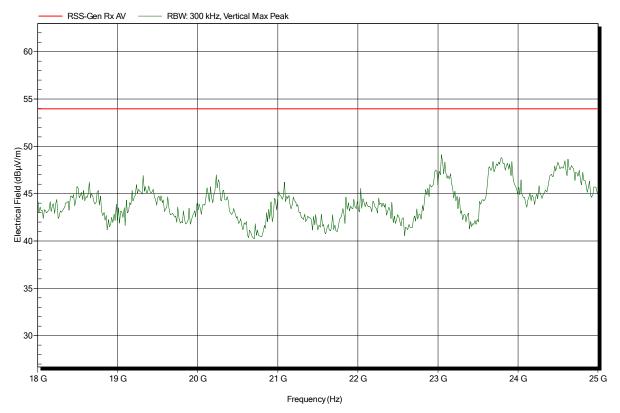
Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal





Project number: G0M-1601-5302

Applicant: lesswire GmbH

EUT Name: 2G/3G/4G WLAN Hotspot

Model: CCU5.3.1 (BWIA3)

Test Site: Eurofins Product Service GmbH

Operator: Mr. Pudell

Test Conditions: Tnom: 24°C, Vnom: 12.0 V DC (car powered)

Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: RX; WLAN; CH: 6; 2437 MHz; RX-Testmode; ANT integral

Test Date: 2016-01-21 Note: EUT horizontal

