







ISO/IEC17025Accredited Lab.

Report No: FCC 1411167 File reference No: 2014-12-08

Applicant: Wolflink Software Technology Co., Ltd

Product: Smart Router

Model No: WL0722

Trademark: Wolflink

Test Standards: FCC Part 15 Subpart C, Paragraph 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4,FCC Part 15 Subpart C,

Paragraph 15.247 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: December 08, 2014

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

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Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

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Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: Wolflink Software Technology Co., Ltd

Address: 8th Floor, Zhongdian Information Building, Haidian District, Bejing, China

Telephone: (86)10-56282185 Fax: (86)10-82800116

1.3 Description of EUT

Product: Smart Router

Manufacturer: Wolflink Software Technology Co., Ltd

Address: 8th Floor, Zhongdian Information Building, Haidian District, Bejing, China

Brand Name: Wolflink
Additional Brand Name: N/A
Model Number: WL0722

Additional Model Number: N/A

Type of Modulation IEEE 802.11b : DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20/HT40) : OFDM(64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20) : 2412-2462MHz;

IEEE 802.11n HT40: 2422MHz-2452MHz

Channel Spacing IEEE 802.11b/g/n (HT20/HT40): 5MHz

Antenna: Two dipole antennas used. MIMO Technology use for all frequency bands.

Antenna Gain: Maximum 2.0dBi for each antenna. Air Data Rate IEEE 802.11b: 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20: 300,150, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps IEEE 802.11n HT40: 300,150, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps

Frequency Selection By software

The report refers only to the sample tested and does not apply to the bulk.

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Power Supply:

JHD-AP012U-050200AB Input: 100-240V, 50/60Hz, 0.35A; Output: 5V, 2000mA

Channel Number

IEEE 802.11b/g/n (HT20): 11 Channels

IEEE 802.11n HT40: 7 Channels

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2014-11-19 to 2014-12-05

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

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2.0	0 Test Equipments							
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date			
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2014-08-22	2015-08-21			
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2014-08-22	2015-08-21			
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2014-08-22	2015-08-21			
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2014-08-22	2015-08-21			
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2014-08-22	2015-08-21			
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2014-08-22	2015-08-21			
System Controller	CT	SC100	-					
Printer	EPSON	РНОТО ЕХЗ	CFNH234850					
Computer	IBM	8434	1S8434KCE99BLXL O*	-	-			
Loop Antenna	EMCO	6502	00042960	2014-08-22	2015-08-21			
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2014-08-22	2015-08-21			
3m OATS			N/A	2014-08-22	2015-08-21			
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2014-08-22	2015-08-21			
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2014-08-22	2015-08-21			
Power meter	Anritsu	ML2487A	6K00003613	2014-08-22	2015-08-21			
Power sensor	Anritsu	MA2491A	32263	2014-08-22	2015-08-21			
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2014-08-22	2015-08-21			
LISN	AFJ	LS16C	10010947251	2014-08-22	2015-08-21			
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2014-08-22	2015-08-21			
9*6*6 Anechoic			N/A	2014-08-22	2015-08-21			
EMI Test Receiver	RS	ESCS30	100139	2014-08-22	2015-08-21			
LISN	AFJ	LS16C	10010947251	2014-08-22	2015-08-21			
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2014-08-22	2015-08-21			

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2.1 **Auxiliary Equipment**

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Name	Model No.	Serial No.	Manufacturer	Cable	FCC ID/DOC
PC	E43L		LENOVO		FCC ID
Passive Earphone					
Mouse	V-3100		ETPC		DOC

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3. DESCRIPTION OF TEST MODES

IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 11Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 6Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: 65Mbps data rate (worst case) were chosen for full testing

IEEE 802.11n HT40

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Mid	2437
High	2452

IEEE 802.11n HT40 mode: 65Mbps data rate (worst case) was chosen for full testing.

The worst-case data rates are determined according to the description above, based on the investigations by measuring the PSD and average power across all the data rates, bandwidths, modulations and spatial stream modes.

Note: EUT Test With 100% Duty cycle.

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3.0 Technical Details

3.1 Summary of test results

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107 & 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.247(a)(2) Limit	Spectrum bandwidth of a Orthogonal Frequency Division Multiplex System Limit: 6dB bandwidth>500kHz	PASS	Complies
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power Limit: max. 30dBm	PASS	Complies
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	PASS	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band Radiation Limit: 20dB less than peak value of fundamental frequency Restricted band limit: Table 15.209	PASS	Complies

3.2 Test Standards

FCC Part 15 Subpart & Subpart C, Paragraph 15.247

4.0 EUT Modification

No modification by Shenzhen Timeway Technology Consulting Co., Ltd

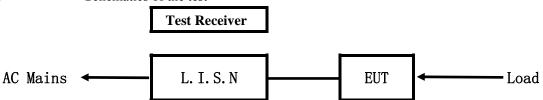
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5. Power Line Conducted Emission Test

5.1 Schematics of the test

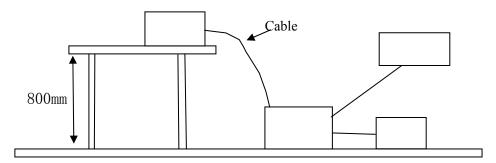


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4-2003.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2003. All interface ports were connected to the

appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	Model	FCC	
Smart Router	Wolflink Software Technology Co., Ltd	WL0722	2ADMV-WL0722	

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B. Internal Device

Device	Manufacturer	Model	Rating

C. Peripherals

Device	Manufacturer	Model	Rating

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2003.

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207 and 15.107 and RSS-210

	<u> </u>							
Frequency (MHz)		Class A Lim	its (dB µ V)	Class B Limits (dB μ V)				
		Quasi-peak Level Average Level		Quasi-peak Level	Average Level			
0.15 ~	0.50	79.0	66.0	66.0~56.0*	56.0~46.0*			
0.50 ~	5.00	73.0	60.0	56.0	46.0			
5.00 ~	30.00	73.0	60.0	60.0	50.0			

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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A: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

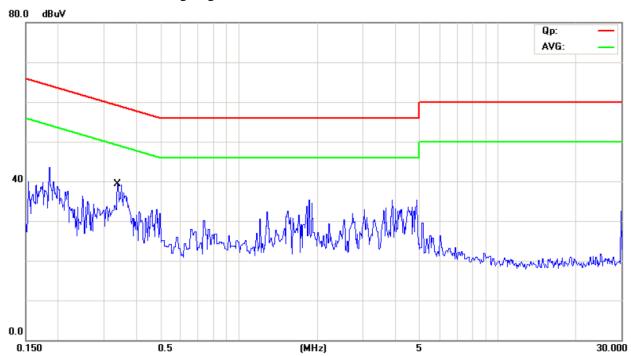
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: WIFI MIMO Keeping TX mode

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



No. M	lk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *		0.3395	12.80	11.20	24.00	59.22	-35.22	QP	
2		0.3395	-9.10	11.20	2.10	49.22	-47.12	AVG	

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B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

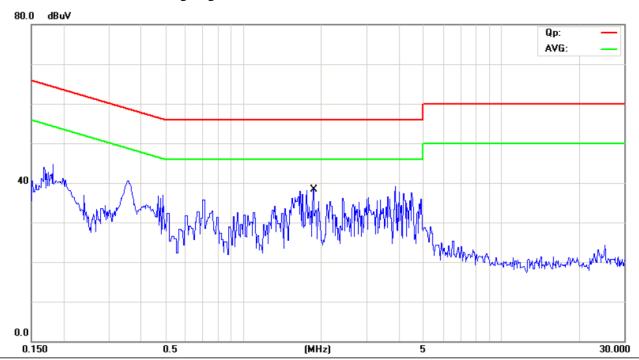
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: WIFI MIMO Keeping TX mode

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBu∀	dBuV	dB	Detector	Comment
1	*	1.8616	11.40	12.24	23.64	56.00	-32.36	QP	
2		1.8616	-10.30	12.24	1.94	46.00	-44.06	AVG	

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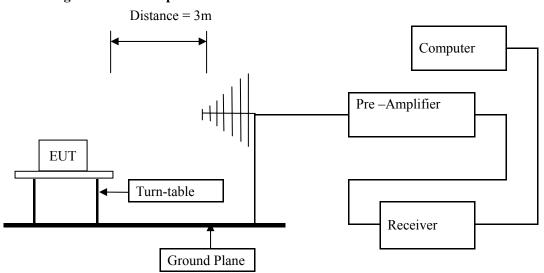
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6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.4 –2003. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2003.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=3MHz and RMS detector. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization: Vertical polarization and Horizontal polarization.

Block diagram of Test setup



- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.

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6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209 and 15.109 and RSS-210

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: WIFI MIMO Keeping TX mode

Results: Pass

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
237.440	30.30	Н	46.00
531.680	37.52	Н	46.00
435.000	33.70	Н	46.00
483.360	36.04	V	46.00
212.520	24.68	V	43.50
531.680	36.76	V	46.00

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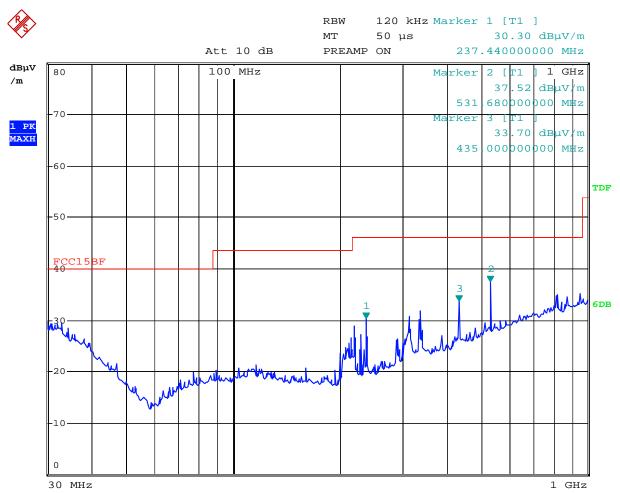
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Test Figure:

Η



Date: 19.NOV.2014 15:57:35

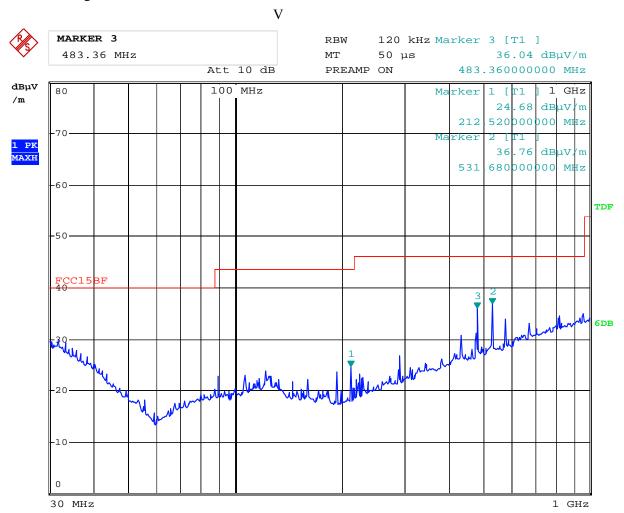
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Test Figure:



Date: 19.NOV.2014 16:03:10

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Operation Mode: WIFI MIMO Keeping TX mode under CH01 for 11g at 6Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4824.00	47.28 (PK)	Н	74(Peak)/ 54(AV)
4824.00	48.32 (PK)	V	74(Peak)/ 54(AV)
7236.00	1	H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16884		H/V	74(Peak)/ 54(AV)
19296	-	H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps

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Operation Mode: WIFI MIMO Keeping TX mode under CH06 for 11g at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4874.00	45.65 (PK)	Н	74(Peak)/ 54(AV)
4874.00	48.70 (PK)	V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00	-	H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496	-	H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370	-	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6 Mbps

Operation Mode: WIFI MIMO Keeping TX mode under CH11 for 11g at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
4924	48.08 (PK)	Н	74(Peak)/ 54(AV)
4924	48.14 (PK)	V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696		H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24650		H/V	74(Peak)/ 54(AV)

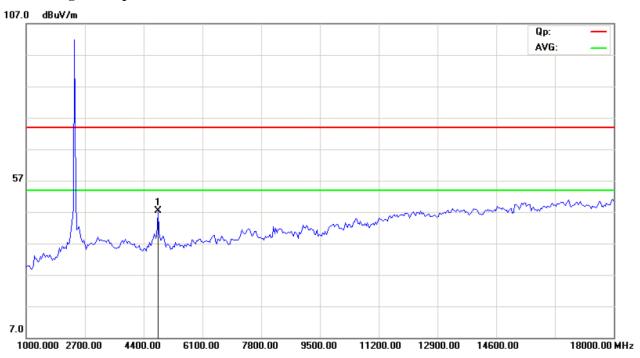
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode at 6 Mbps

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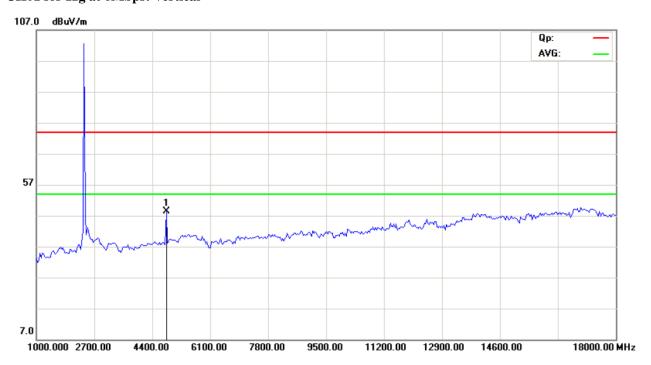


Please refer to the following test plots for details:

CH01 for 11g at 6Mbps: Horizontal



CH01 for 11g at 6Mbps: Vertical



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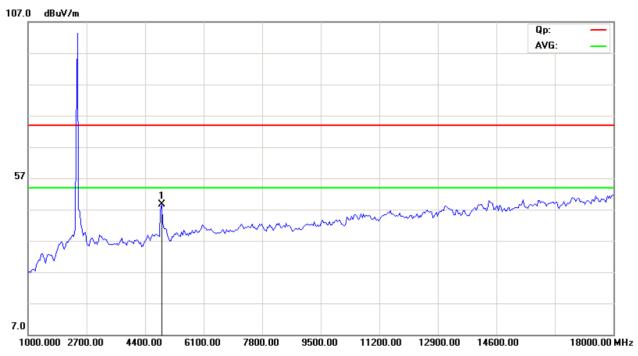
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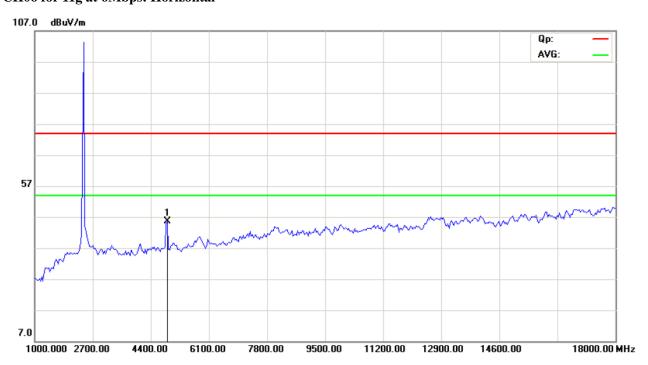
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CH06 for 11g at 6Mbps: Vertical



CH06 for 11g at 6Mbps: Horizontal



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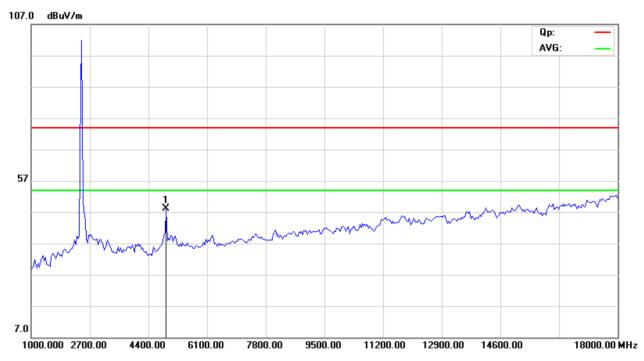
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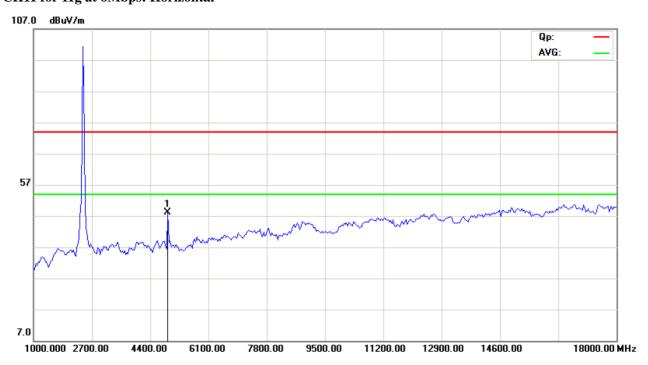
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CH11 for 11g at 6Mbps: Vertical



CH11 for 11g at 6Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: WIFI MIMO Keeping TX mode under CH01 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4824.00	45.82 (PK)	Н	74(Peak)/ 54(AV)
4824.00	46.59 (PK)	V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120	-	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps

Operation Mode: WIFI MIMO Keeping TX mode under CH06 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
4874.00	46.01 (PK)	Н	74(Peak)/ 54(AV)
4874.00	48.08 (PK)	V	74(Peak)/ 54(AV)
7311.00	1	H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933	-	H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps

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Operation Mode: WIFI MIMO Keeping TX mode under CH11 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4924	48.79 (PK)	Н	74(Peak)/ 54(AV)
4924	48.63 (PK)	V	74(Peak)/ 54(AV)
7368	1	H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696	-	H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

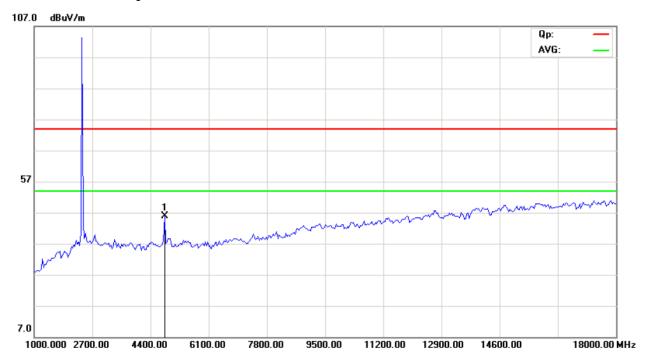
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 11Mbps

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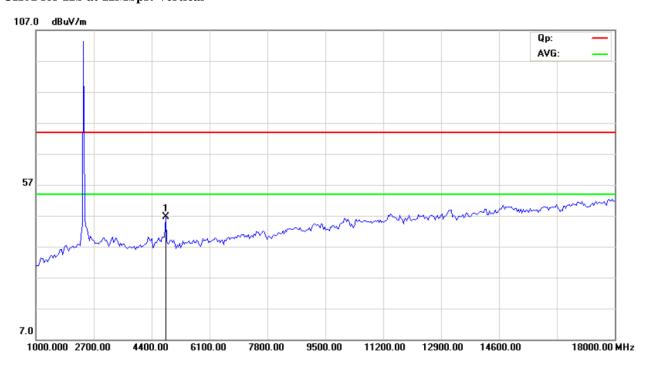


Please refer to the following test plots for details:

CH01 for 11b at 11Mbps: Horizontal



CH01 for 11b at 11Mbps: Vertical



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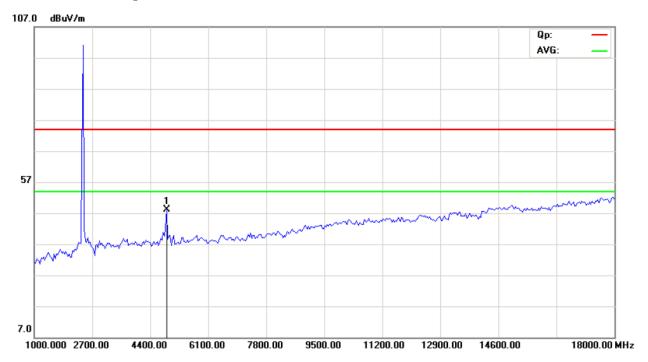
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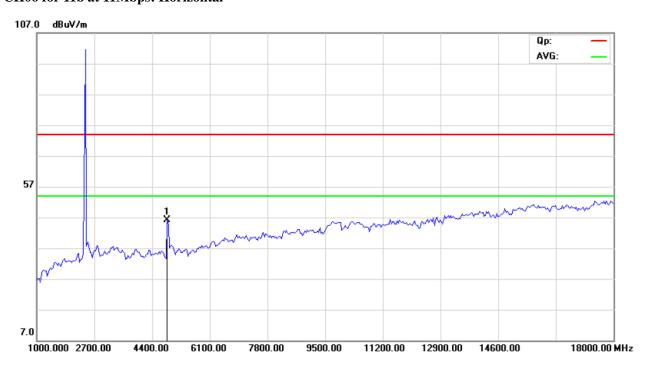
Date: 2014-12-08



CH06 for 11b at 11Mbps: Vertical



CH06 for 11b at 11Mbps: Horizontal



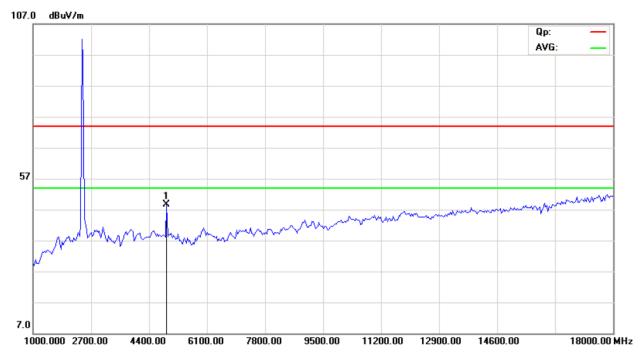
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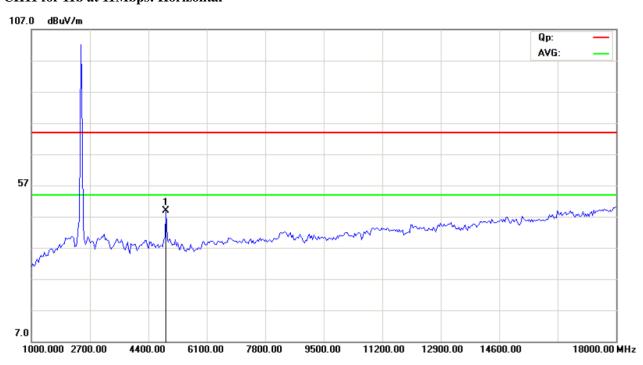
Date: 2014-12-08



CH11 for 11b at 11Mbps: Vertical



CH11 for 11b at 11Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: WIFI MIMO Keeping TX mode under CH01 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
4824.00	48.35 (PK)	Н	74(Peak)/ 54(AV)
4824.00	48.09 (PK)	V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120	-	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

Operation Mode: WIFI MIMO Keeping TX mode under CH06 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \) V/m)
4874.00	45.54 (PK)	Н	74(Peak)/ 54(AV)
4874.00	47.69 (PK)	V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

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Operation Mode: WIFI MIMO Keeping TX mode under CH11 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4924	47.69 (PK)	Н	74(Peak)/ 54(AV)
4924	47.14 (PK)	V	74(Peak)/ 54(AV)
7368	1	H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696	-	H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24650		H/V	74(Peak)/ 54(AV)

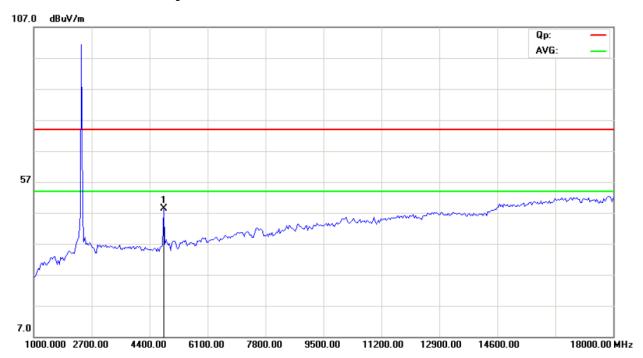
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

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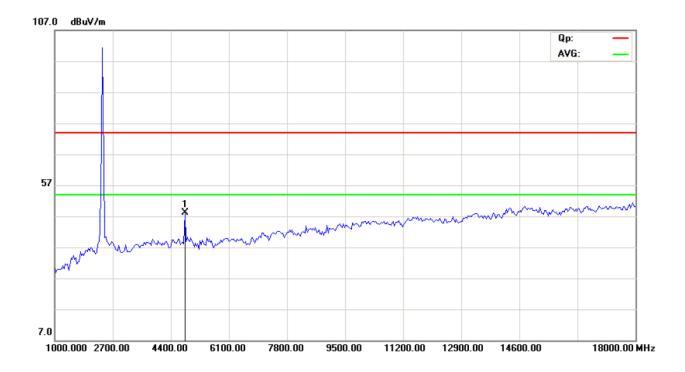


Please refer to the following test plots for details:

CH01 for 11n HT20 at 65Mbps: Horizontal



CH01 for 11n HT20 at 65Mbps: Vertical



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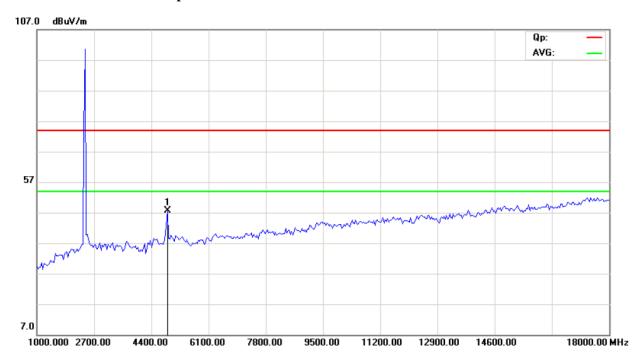
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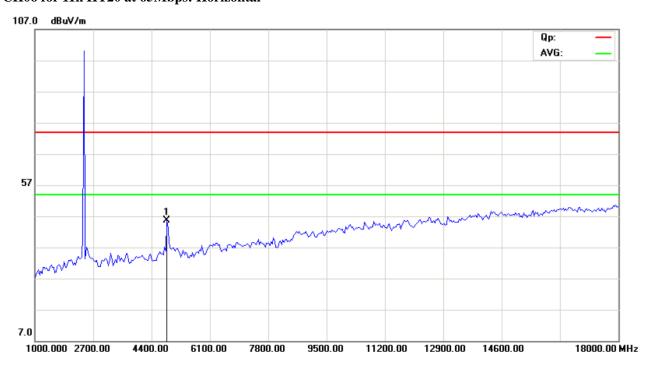
Date: 2014-12-08



CH06 for 11n HT20 at 65Mbps: Vertical



CH06 for 11n HT20 at 65Mbps: Horizontal



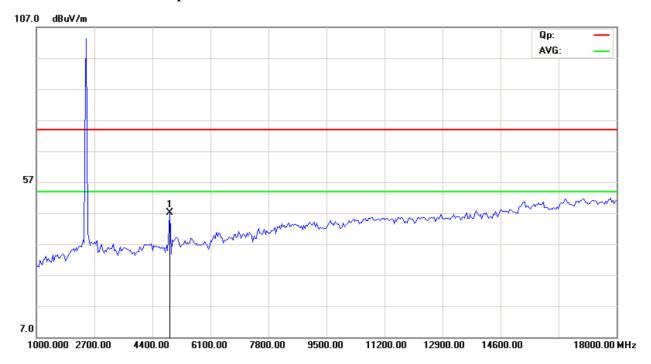
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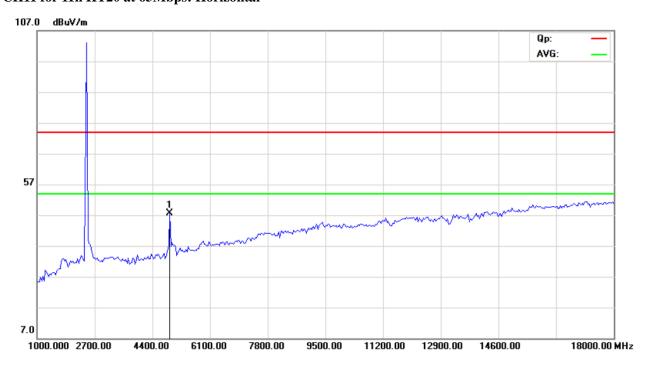
Date: 2014-12-08



CH11 for 11n HT20 at 65Mbps: Vertical



CH11 for 11n HT20 at 65Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: Transmitting under CH03 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4844.00	48.01 (PK)	Н	74(Peak)/ 54(AV)
4844.00	47.77 (PK)	V	74(Peak)/ 54(AV)
7266.00		H/V	74(Peak)/ 54(AV)
9688.00		H/V	74(Peak)/ 54(AV)
12110		H/V	74(Peak)/ 54(AV)
14532		H/V	74(Peak)/ 54(AV)
16954		H/V	74(Peak)/ 54(AV)
19376		H/V	74(Peak)/ 54(AV)
21798		H/V	74(Peak)/ 54(AV)
24220		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT40) mode 65Mbps

Operation Mode: Transmitting under CH06 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
4874.00	47.16 (PK)	Н	74(Peak)/ 54(AV)
4874.00	47.53 (PK)	V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622	-	H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT40) mode 65Mbps

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Operation Mode: Transmitting under CH9 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
4904	45.32 (PK)	Н	74(Peak)/ 54(AV)
4904	46.08 (PK)	V	74(Peak)/ 54(AV)
7356	-	H/V	74(Peak)/ 54(AV)
9808		H/V	74(Peak)/ 54(AV)
12260		H/V	74(Peak)/ 54(AV)
14712		H/V	74(Peak)/ 54(AV)
17164		H/V	74(Peak)/ 54(AV)
19616		H/V	74(Peak)/ 54(AV)
22068		H/V	74(Peak)/ 54(AV)
24520		H/V	74(Peak)/ 54(AV)

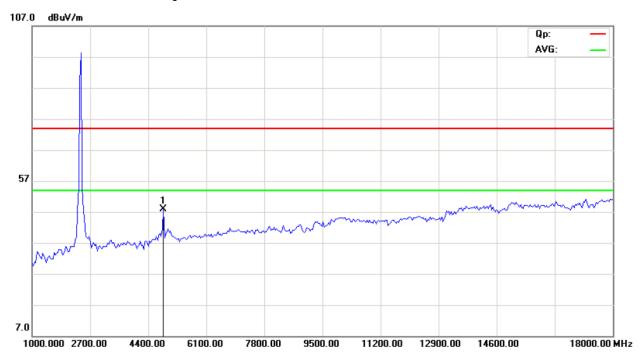
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT40) mode 65Mbps

Date: 2014-12-08

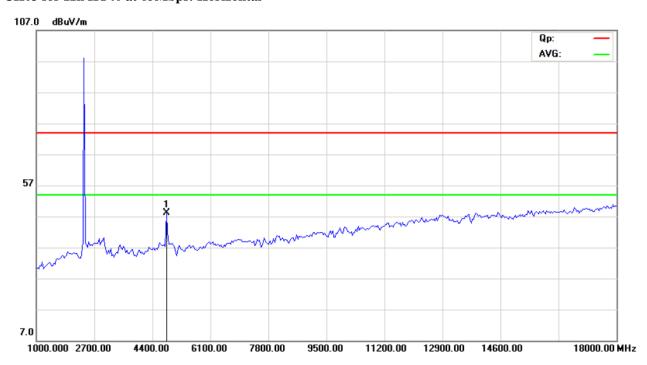


Please refer to the following test plots for details:

CH03 for 11n HT40 at 65Mbps: Vertical



CH03 for 11n HT40 at 65Mbps: Horizontal



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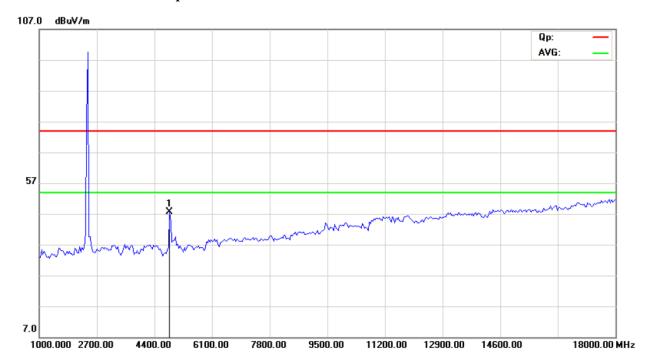
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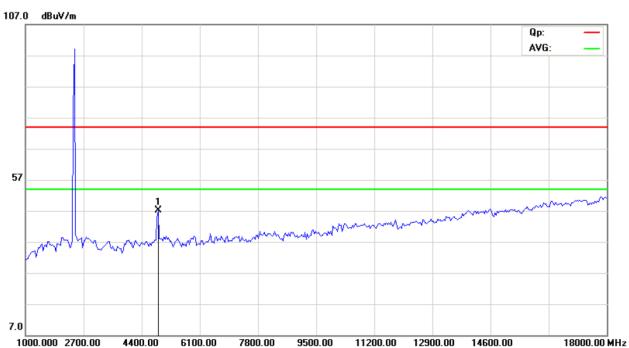
Date: 2014-12-08



CH06 for 11n HT40 at 65Mbps: Vertical



CH06 for 11n HT40 at 65Mbps: Horizontal



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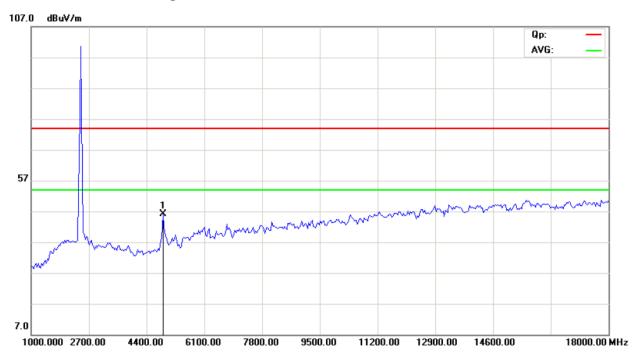
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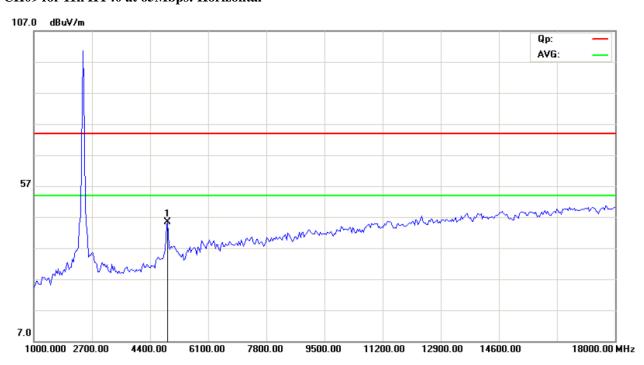
Date: 2014-12-08



CH09 for 11n HT40 at 65Mbps: Vertical



CH09 for 11n HT40 at 65Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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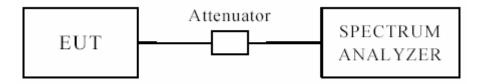
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

7.3 Test Procedure

- 1. Set resolution bandwidth (RBW) = 100 kHz
- 2. Set the video bandwidth (VBW) \geq 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.4 Test Result

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Antenna A

6dB Occupied Bandwidth

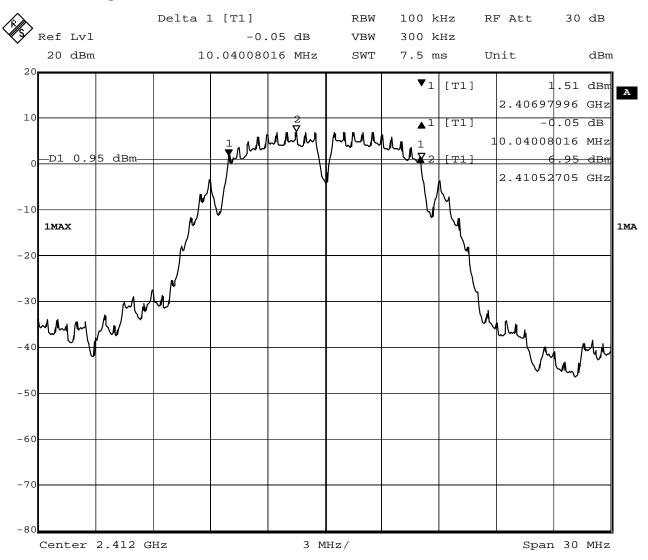
EUT		Smart Router			Model		WL0722			
Mode		8	Input Voltage			AC120V				
Temperature		24 deg. C,			Humidity		56% RH			
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail		
1		2412		10.04		0.5		Pass		
6	2437		1	10.04			0.5	Pass		
11		2462 1		10.04		0.5		Pass		
1		2412 11 10		10	10.16 0		0.5	Pass		
6		2437	11	10	10.16		.16		0.5	Pass
11		2462	11	10	.16		0.5	Pass		

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1. 802.11b at 1Mbps of CH01



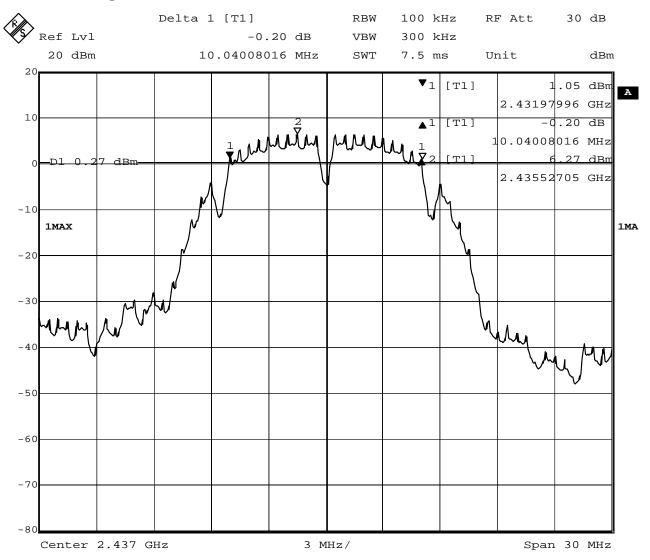
Date: 3.DEC.2014 11:17:25

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2. 802.11b at 1Mbps of CH06



Date: 3.DEC.2014 11:40:28

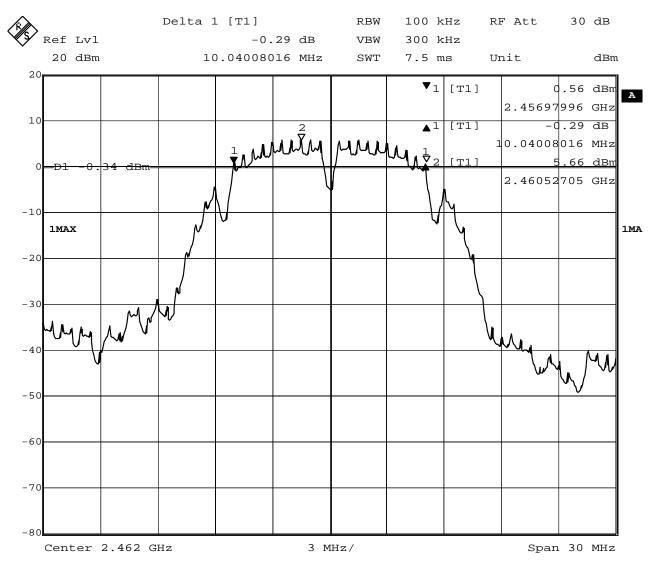
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3. 802.11b at 1Mbps of CH11



Date: 3.DEC.2014 11:45:00

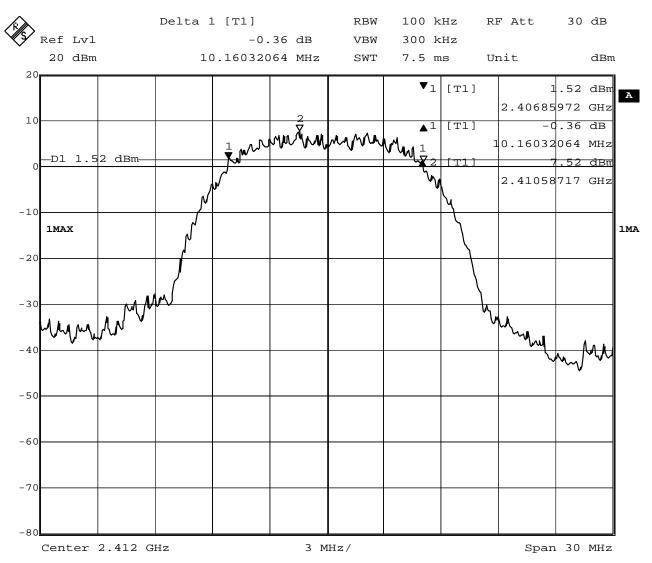
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4. 802.11b at 11Mbps of CH01



Date: 3.DEC.2014 11:25:40

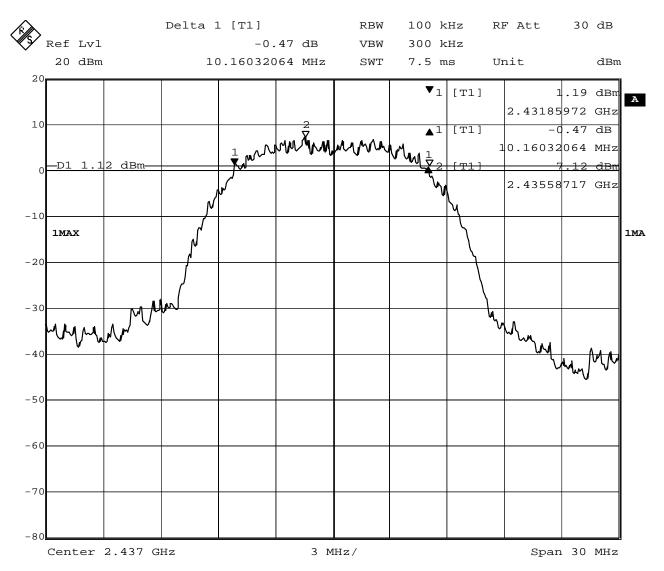
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5. 802.11b at 11Mbps of CH06



Date: 3.DEC.2014 11:36:36

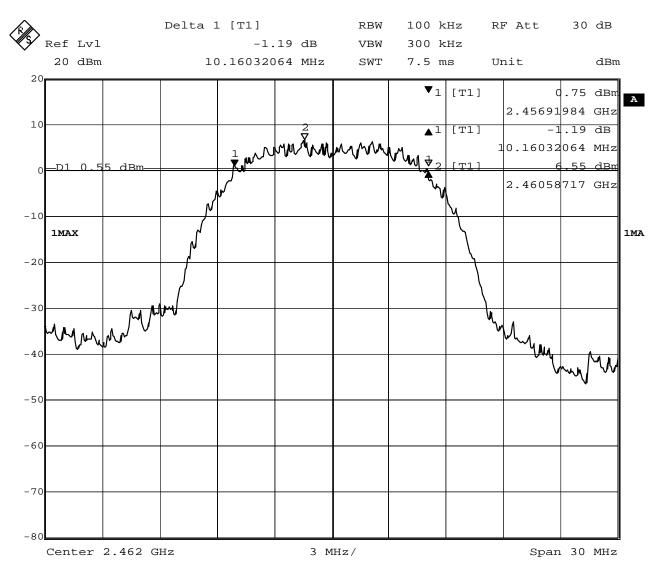
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6. 802.11b at 11Mbps of CH11



Date: 3.DEC.2014 11:48:26

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Date: 2014-12-08



Antenna A

6dB Occupied Bandwidth

EUT		Smart Router			Model		WL0722		
Mode		802.11g			Input Voltage			AC120V	
Temperature		24 deg. C,			Humidity			56% RH	
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail	
1		2412		16.41		0.5		Pass	
6		2437		16.41		0.5		Pass	
11		2462	6	16	.41		0.5	Pass	

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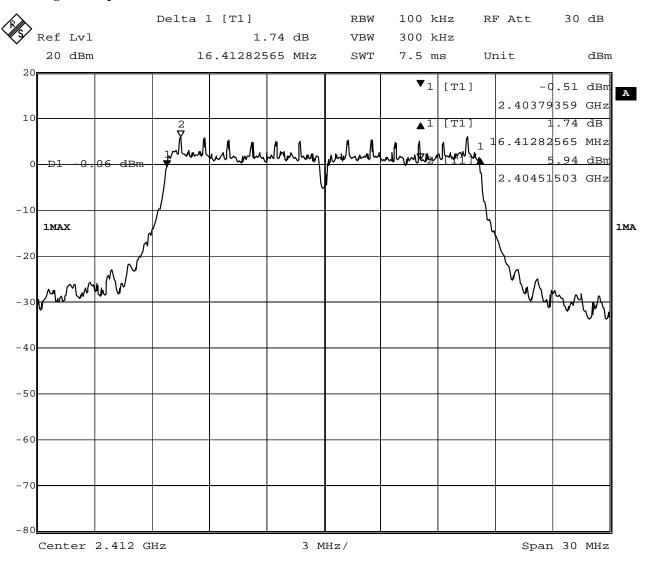
Report No: FCC1411167

Date: 2014-12-08



Test Plots:

1. 802.11g at 6Mbps of CH01



Date: 3.DEC.2014 11:22:40

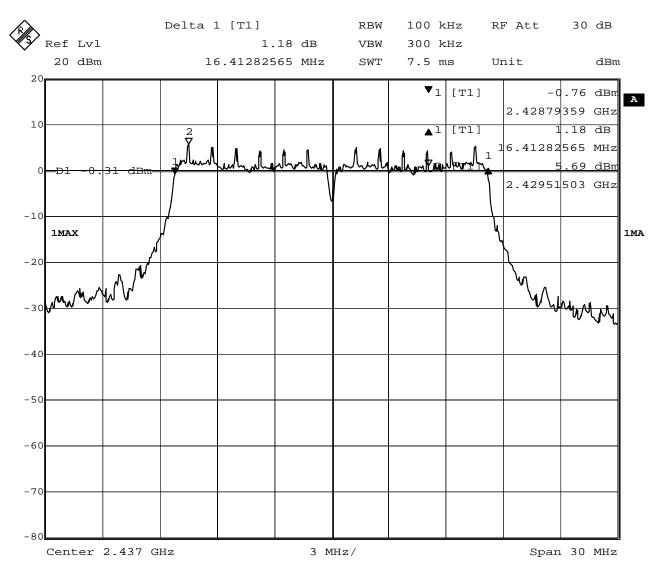
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2. 802.11g at 6Mbps of CH06



Date: 3.DEC.2014 11:34:06

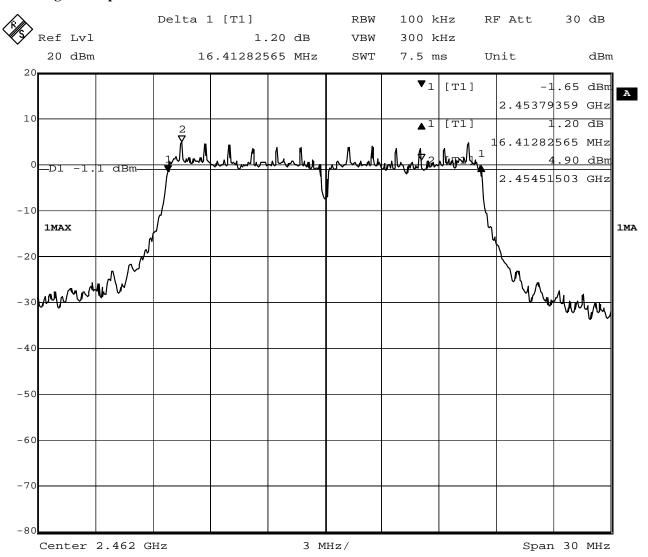
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3. 802.11g at 6Mbps of CH11



Date: 3.DEC.2014 11:50:39

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Antenna A

6dB Occupied Bandwidth

EUT		Smart Router			Model		WL0722			
Mode		802.11n HT20/HT40			Input Voltage		AC120V			
Temperati	Temperature		deg. C,		Humidity		56% RH			
Channel				ndwidth Hz)	Minimum Limit (MHz)		Pass/ Fail			
1		2412		17.56		0.5		Pass		
6	2437		65	17.56			0.5	Pass		
11		2462 65		17	17.56		0.5	Pass		
3	2422 65 36		36.37		0.5	Pass				
6		2437	65	36	36.40		40		0.5	Pass
9		2452	65	36	.33		0.5	Pass		

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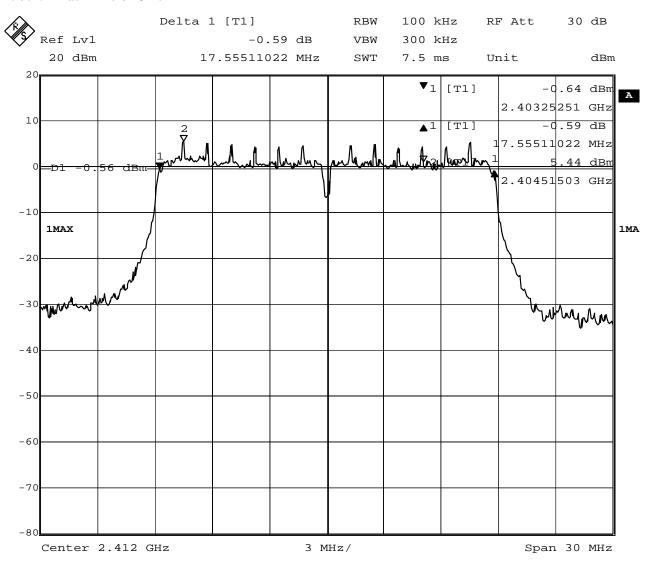
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Test Plots:

1. 802.11n at HT20 of CH01



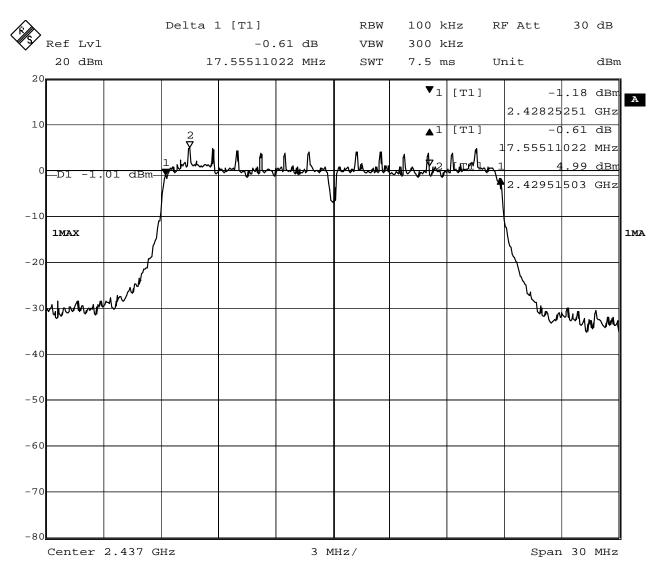
Date: 3.DEC.2014 11:28:11

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2. 802.11n at HT20 of CH06



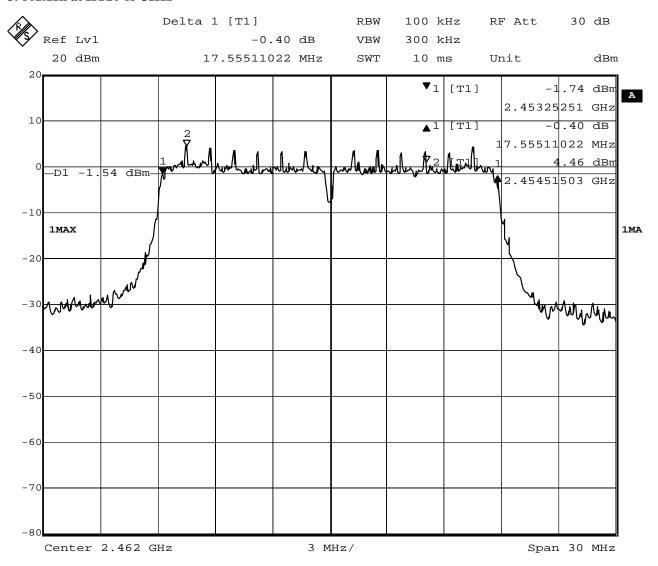
Date: 3.DEC.2014 11:30:59

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3. 802.11n at HT20 of CH11



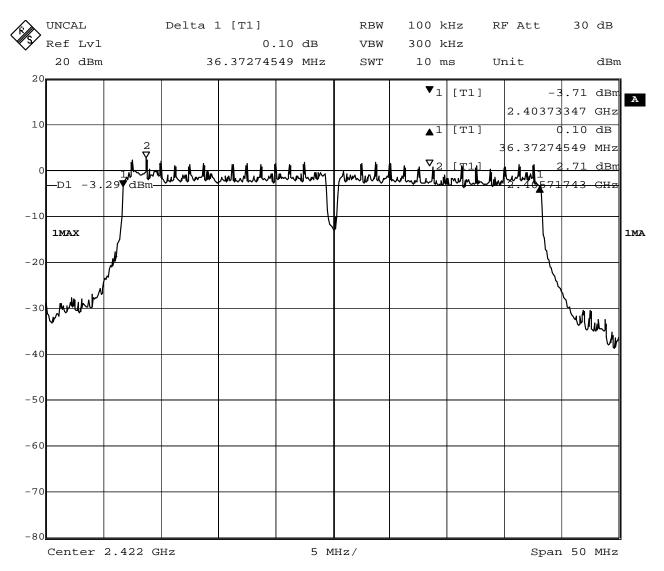
Date: 3.DEC.2014 16:14:36

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4. 802.11n at HT40 of CH03



Date: 3.DEC.2014 16:18:43

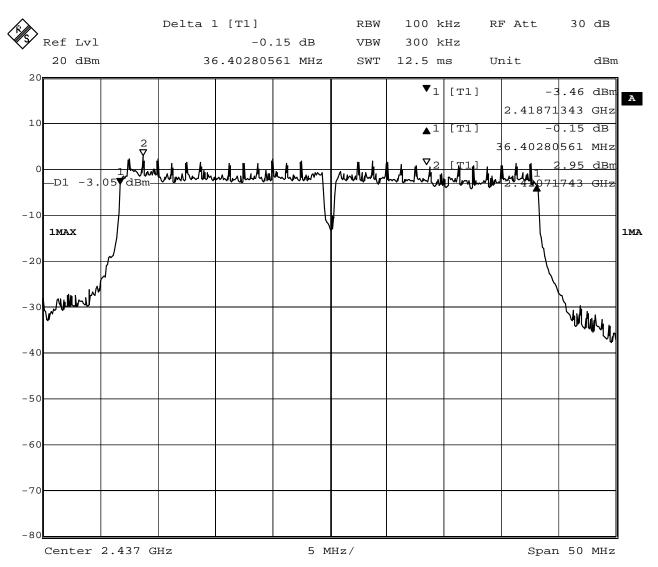
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5. 802.11n at HT40 of CH06



Date: 3.DEC.2014 11:57:01

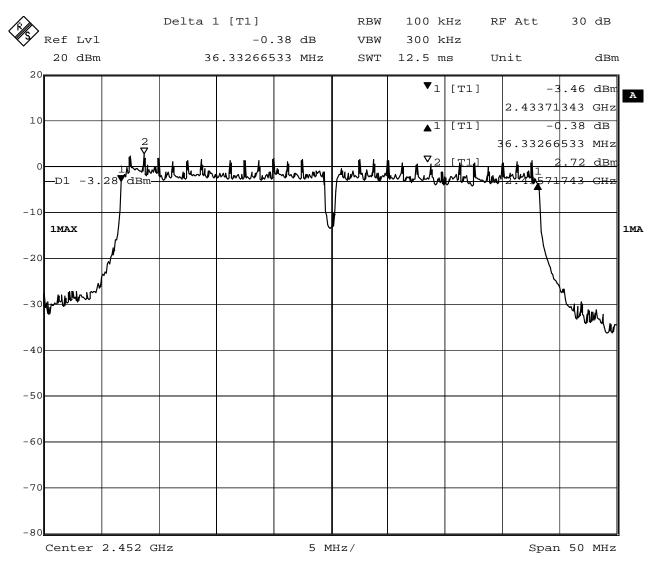
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6. 802.11n at HT40 of CH09



Date: 3.DEC.2014 11:59:46

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Antenna B

6dB Occupied Bandwidth

EUT		Smart Router			Model		WL0722	
Mode		8	Input Voltage			AC120V		
Temperature		24 deg. C,			Humidity		56% RH	
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1	2412		1	10.04		0.5		Pass
6	2437		1	10.04			0.5	Pass
11	2462		1	10.04			0.5	Pass
1	2412		11	10.04		0.5		Pass
6		2437 11 10		10.16		0.5	Pass	
11		2462 11 10		.16		0.5	Pass	

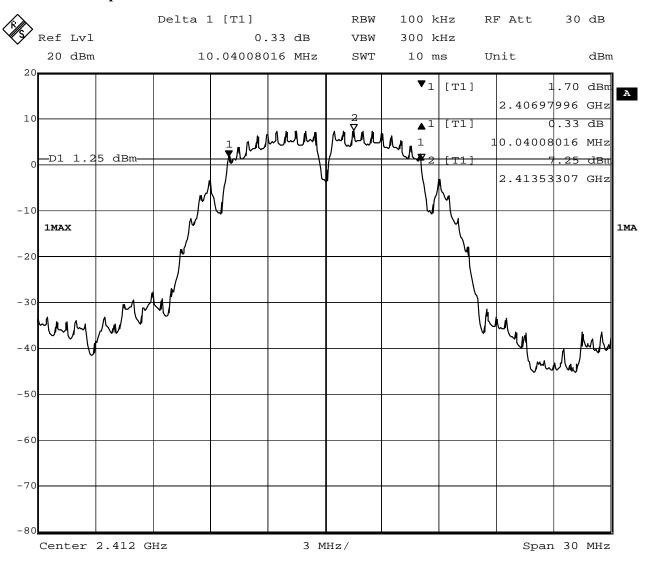
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1. 802.11b at 1Mbps of CH01



Date: 3.DEC.2014 16:40:37

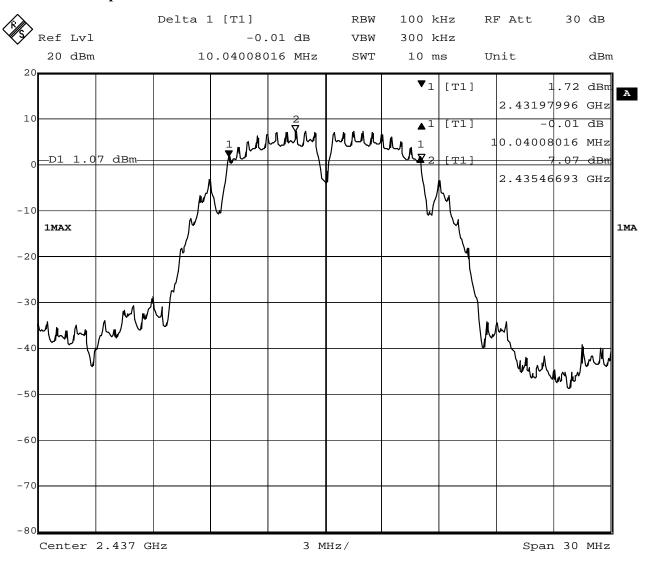
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2. 802.11b at 1Mbps of CH06



Date: 3.DEC.2014 16:52:50

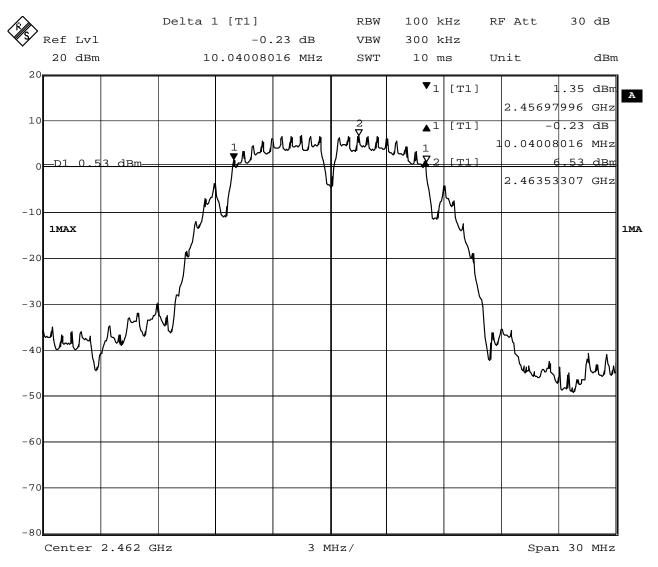
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3. 802.11b at 1Mbps of CH11



Date: 3.DEC.2014 16:54:44

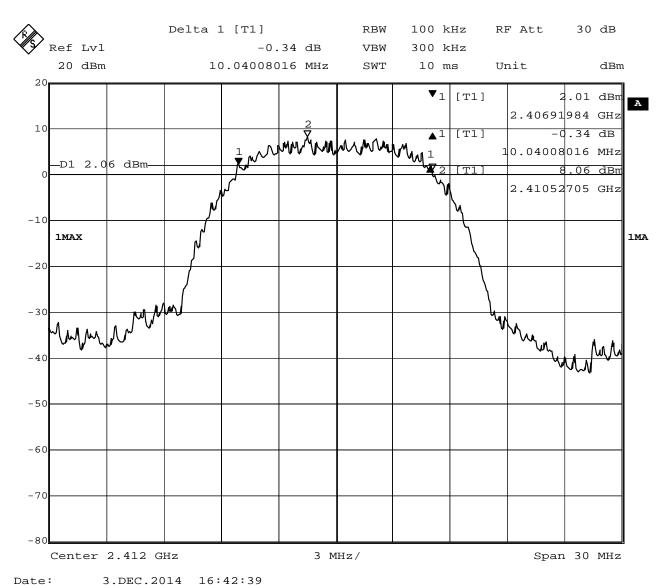
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4. 802.11b at 11Mbps of CH01



Date: 3.DEC.2014 16:42:39

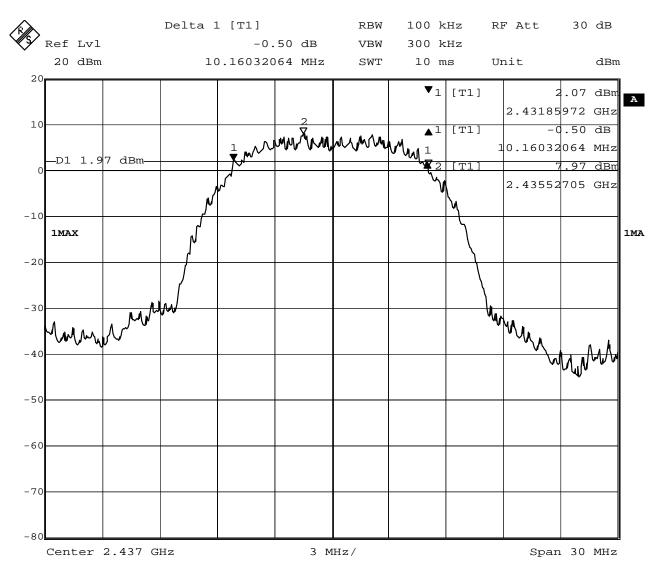
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5. 802.11b at 11Mbps of CH06



Date: 3.DEC.2014 16:51:32

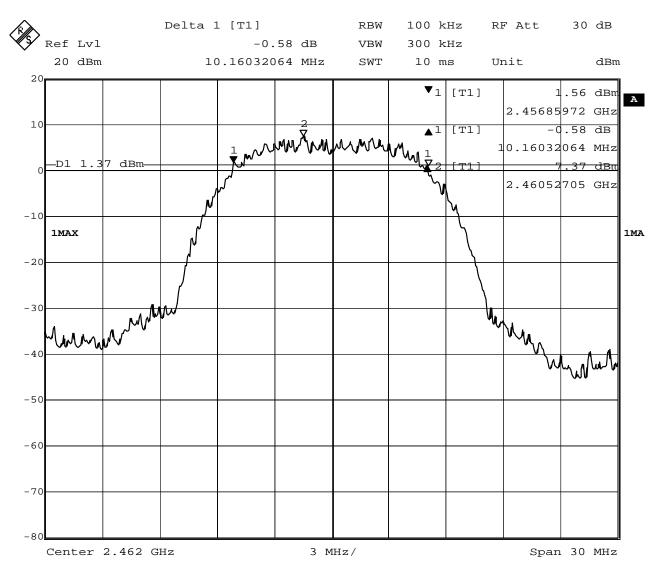
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6. 802.11b at 11Mbps of CH11



Date: 3.DEC.2014 16:57:20

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Antenna B

6dB Occupied Bandwidth

EUT		Smart Router			Model		WL0722		
Mode		802.11g			Input Voltage			AC120V	
Temperature		24 deg. C,			Humidity			56% RH	
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail	
1		2412		16.41		0.5		Pass	
6		2437		16.41		0.5		Pass	
11		2462	6	16	.41		0.5	Pass	

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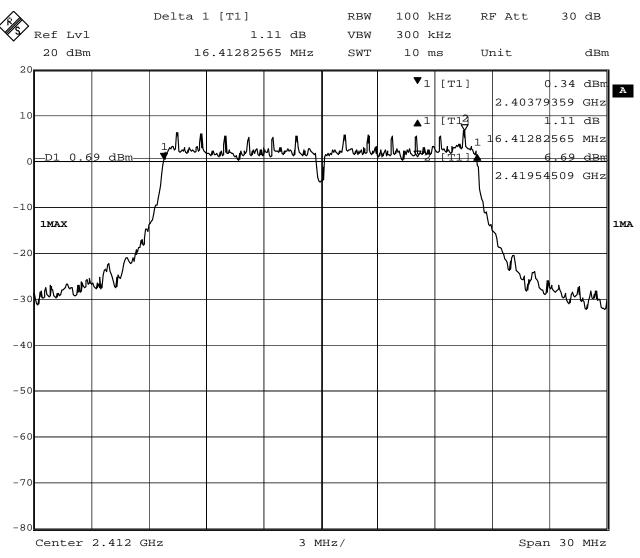
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Date: 2014-12-08



Test Plots:

1. 802.11g at 6Mbps of CH01



Date: 3.DEC.2014 16:44:22

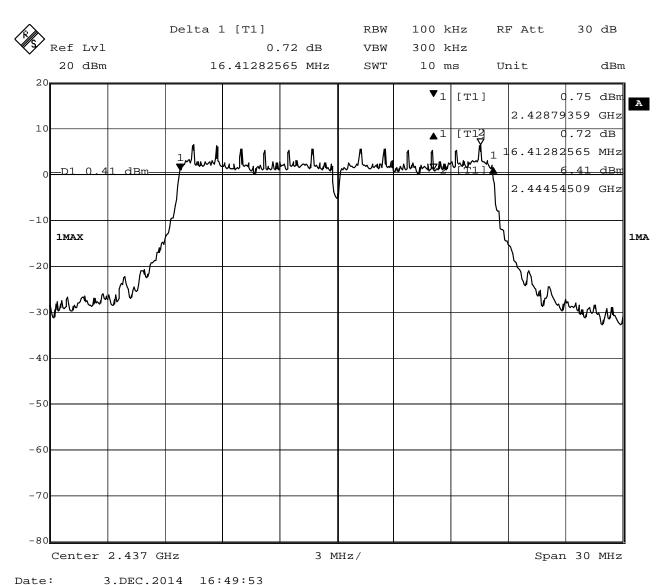
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2. 802.11g at 6Mbps of CH06



Date: 3.DEC.2014 16:49:53

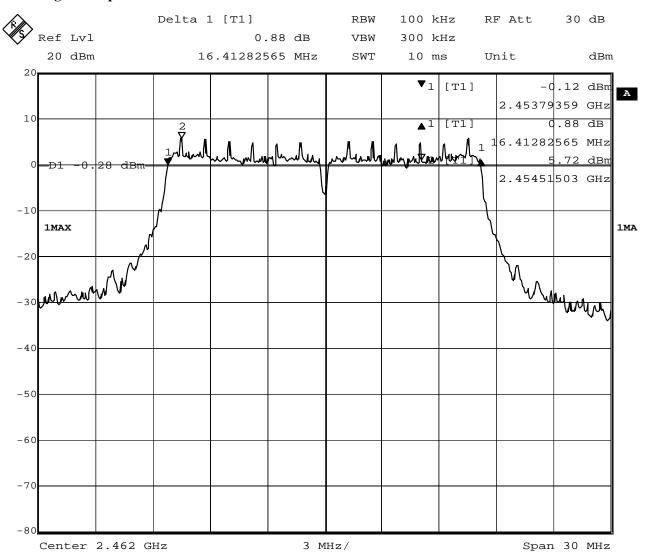
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3. 802.11g at 6Mbps of CH11



Date: 3.DEC.2014 16:59:19

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Antenna B

6dB Occupied Bandwidth

EUT		Smart Router			Model		WL0722	
Mode		802.11n HT20/HT40			Input Voltage		AC120V	
Temperati	Temperature		deg. C,		Humidity		56% RH	
Channel		1 3		ndwidth Hz)	Minimum Limit (MHz)		Pass/ Fail	
1		2412		17.56		0.5		Pass
6	2437		65	17.56			0.5	Pass
11		2462 65		17.56			0.5	Pass
3		2422 65 3		36	36.37		0.5	Pass
6		2437	65	36	40		0.5	Pass
9		2452	65	36	.33		0.5	Pass

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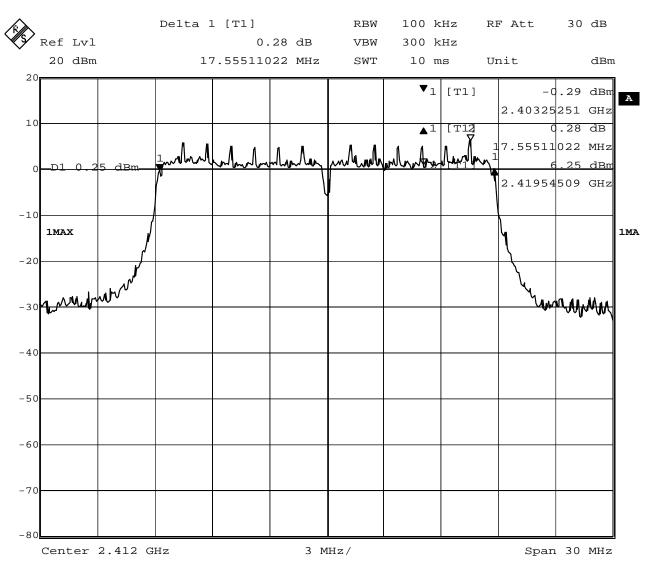
Report No: FCC1411167

Date: 2014-12-08



Test Plots:

1. 802.11n at HT20 of CH01



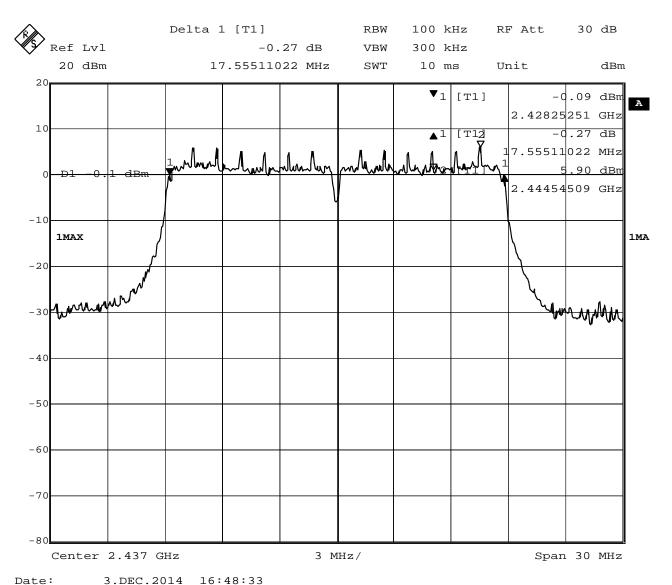
Date: 3.DEC.2014 16:46:11

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2. 802.11n at HT20 of CH06



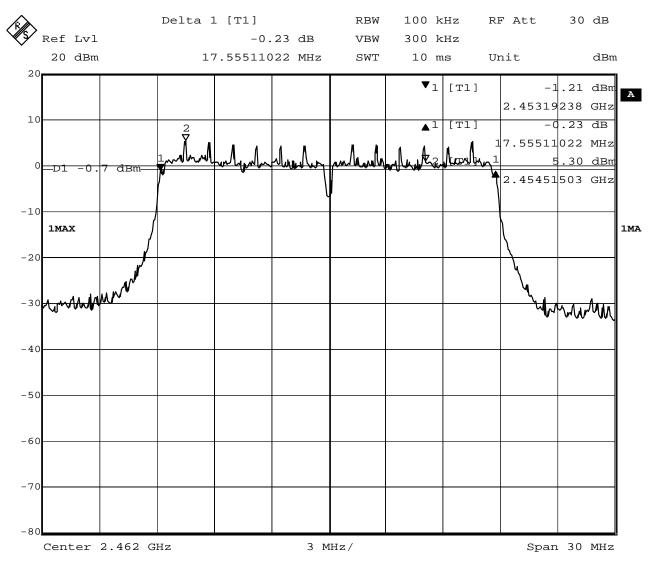
Date: 3.DEC.2014 16:48:33

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3. 802.11n at HT20 of CH11



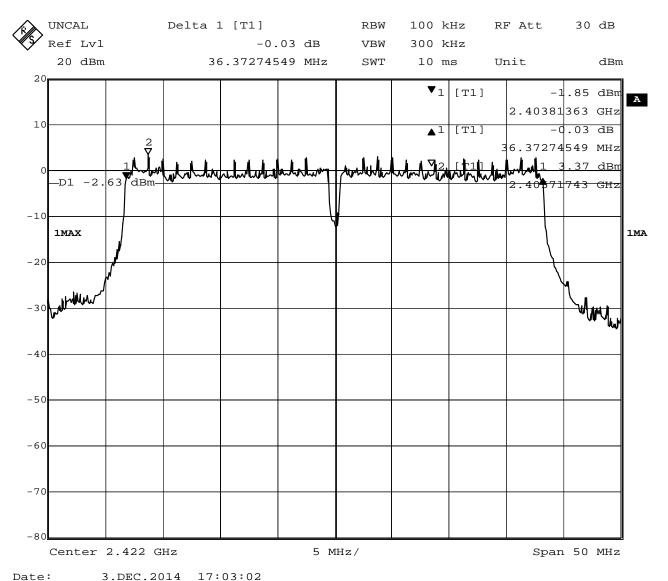
Date: 3.DEC.2014 17:00:31

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4. 802.11n at HT40 of CH03



Date: 3.DEC.2014 17:03:02

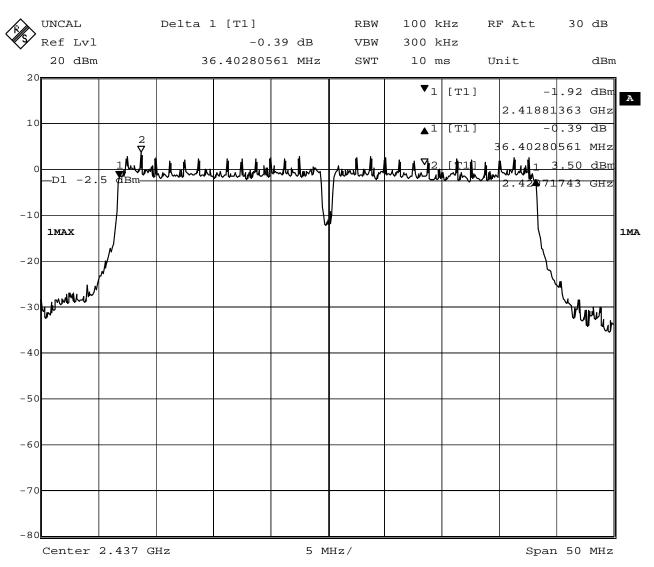
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5. 802.11n at HT40 of CH06



Date: 3.DEC.2014 17:05:42

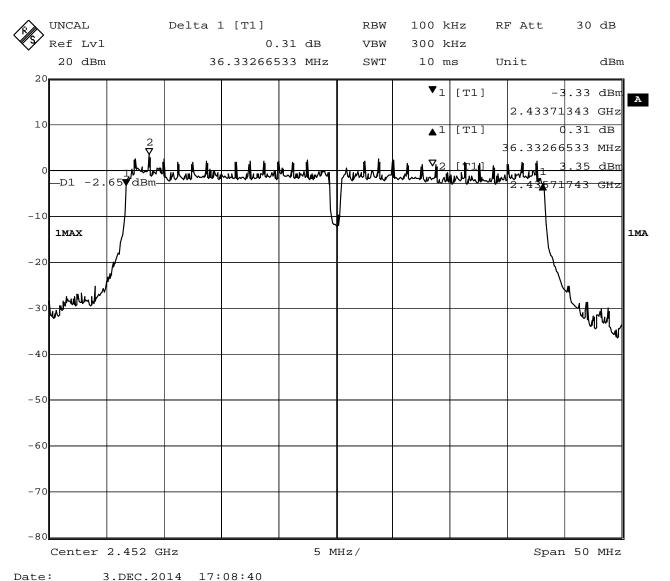
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6. 802.11n at HT40 of CH09



Date: 3.DEC.2014 17:08:40

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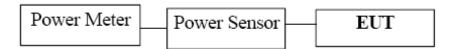
Date: 2014-12-08



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8. Maximum Peak Output Power

8.1 Test Setup



8.2 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: the peak power was measured

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8.4Test Results

EU	Т	S	mart Router	Model		WL0722	
Mod	de		802.11b	Input Voltage	AC120V		
Temper	ature		24 deg. C,	Humidity		56% RH	
Channel	Frequer	ncy	Antenna	Peak Power	Total Power	Limit	Pass/ Fail
	(MHz		Port	Output (dBm)	(dBm)	(dBm)	
1	2412		A	22.48	25.758	30	Pass
			В	23.00			
6	2437		A	22.19	25.624	30	Pass
			В	23.00			
11	2462		A	21.62	25.032	30	Pass
			В	22.39			

Note: 1. At finial test to get the worst-case emission at 11Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow: Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

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EU	T	Smart Router		Model	WL0722		
Mod	de		802.11g	Input Voltage	AC120V		
Temper	rature		24 deg. C,	Humidity		56% RH	
Channel	Frequer	ncy	Antenna	Peak Power	Total Power	Limit	Pass/ Fail
	(MHz	:)	Port	Output (dBm)	(dBm)	(dBm)	
1	2412		A	24.39	27.963	30	Pass
			В	25.45			
6	2437		A	23.80	27.311	30	Pass
			В	24.75			
11	2462		A	23.30	26.685	30	Pass
			В	24.02			

Note: 1. At finial test to get the worst-case emission at 6Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EU	T	Smart Router		Model		WL0722		
Mod	Mode 802.11n (HT20)		2.11n (HT20)	Input Voltage		AC120V		
Temper	rature		24 deg. C,	Humidity	56% RH			
Channel	Frequer	ncy	Antenna	Peak Power	Total Power	Limit	Pass/ Fail	
	(MHz	()	Port	Output (dBm)	(dBm)	(dBm)		
1	2412		A	23.85	27.039	30	Pass	
			В	24.50				
6	2437		A	23.25	26.823	30	Pass	
			В	24.31				
11	2462		A	22.67	26.220	30	Pass	
			В	23.69				

Note: 1. At finial test to get the worst-case emission at 65Mbps 11n HT20 for CH01, CH06 and CH11

- The result basic equation calculation as follow:
 Peak Power Output = Peak Power Reading + Cable loss + Attenuator
- 3. The worse case was recorded

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EU	T	Smart Router		Model		WL0722		
Mod	de	80	2.11n (HT40)	Input Voltage		AC120V		
Temper	rature		24 deg. C,	Humidity		56% RH		
Channel	Frequer	ncy	Antenna	Peak Power	Total Power	Limit	Pass/ Fail	
	(MHz	:)	Port	Output (dBm)	(dBm)	(dBm)		
3	2422		A	23.93	27.359	30	Pass	
			В	24.73				
6	2437	i	A	23.64	27.179	30	Pass	
			В	24.64				
9	2452		A	23.54	26.871	30	Pass	
			В	24.16				

Note: 1. At finial test to get the worst-case emission at 65Mbps 11n HT40 for CH01, CH04 and CH07

2. The result basic equation calculation as follow: Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

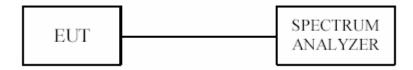
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9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

- 1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2. Set the RBW = 10 kHz.
- 3. Set the VBW \geq 30 kHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = \max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be ≤ 8 dBm.

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9.4Test Result

EUT		Smart Router		Model		WL0722	
Mode		802.11b 11Mbps		Input Voltage	AC120V		
Temperat	ure	24 d	eg. C,	Humidity	56% RH		
Channel	Fre	quency	Power	10 log(N _{ANT})	Final Power	Limit	Pass/ Fail
	(1	MHz)	Spectral	dB	Spectral	(dBm)	
			Density		Density		
			(dBm)		(dBm)		
1	2	2412	-2.45	3.01	0.56	8	Pass
6	2	2437	-2.65	3.01	0.36	8	Pass
11	2	2462	-3.27	3.01	-0.26	8	Pass

EUT		Smart Router		Model		WL0722	
Mode	;	802.11b 1Mbps		Input Voltage	AC120V		
Temperat	ture	24 d	eg. C,	Humidity	56% RH		
Channel	Fre	quency	Power	10 log(N _{ANT})	Final Power	Limit	Pass/ Fail
	(1	MHz)	Spectral	dB	Spectral	(dBm)	
			Density		Density		
			(dBm)		(dBm)		
1	2	2412	-4.54	3.01	-1.53	8	Pass
6	2	2437	-4.79	3.01	-1.78	8	Pass
11	2	2462	-5.38	3.01	-2.37	8	Pass

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EUT		Smart Router		Model	WL0722		
Mode		802.118	g 6Mbps	Input Voltage	AC120V		
Temperat	ure	24 d	eg. C,	Humidity	56% RH		
Channel	Fre	quency	Power	10 log(N _{ANT})	Final Power	Limit	Pass/ Fail
	(1	MHz)	Spectral	dB	Spectral	(dBm)	
			Density		Density		
			(dBm)		(dBm)		
1	2	2412	-4.49	3.01	-1.48	8	Pass
6	2	2437	-5.13	3.01	-2.12	8	Pass
11	2	2462	-5.47	3.01	-2.46	8	Pass

EUT		Smart Router		Model		WL0722	
Mode		802.11	n HT20	Input Voltage	AC120V		
		65N	Лbps				
Temperat	erature 24 de		eg. C,	Humidity	56% RH		
Channel	Fre	quency	Power	10 log(N _{ANT})	Final Power	Limit	Pass/ Fail
	(N	MHz)	Spectral	dB	Spectral	(dBm)	
			Density		Density		
			(dBm)		(dBm)		
1	2	2412	-4.75	3.01	-1.74	8	Pass
6	2	2437	-4.49	3.01	-1.48	8	Pass
11	2	2462	-5.34	3.01	-2.33	8	Pass

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EUT		Smart Router			Model		WL0722	
Mode		802.11n HT20			Input Voltage	AC120V		
		65N	Лbps					
Temperat	ture 24 deg		eg. C,		Humidity	56% RH		
Channel	Fre	quency	Power		$10 \log(N_{ANT})$	Final Power	Limit	Pass/ Fail
	(N	MHz)	Spectral	l	dB	Spectral	(dBm)	
			Density			Density		
			(dBm)			(dBm)		
3	2	2422	-7.10		3.01	-4.09	8	Pass
6	2	2437	-7.47		3.01	-4.46	8	Pass
9	2	2452	-6.87		3.01	-3.86	8	Pass

Note: 1. Test method According to KDB558074 and KDB662911 E) 2) c)

2. Antenna port A and B were tested. Only the worse case was recorded

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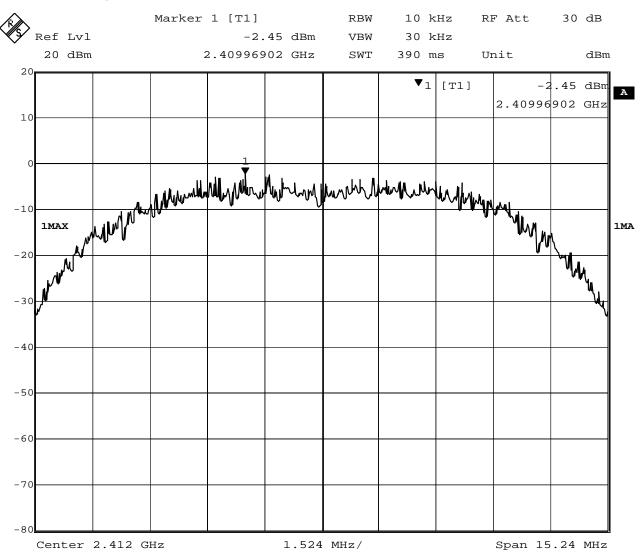
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9.5 Photo of Power Spectral Density Measurement

1.802.11b at 11Mbps of CH01



Date: 3.DEC.2014 15:22:51

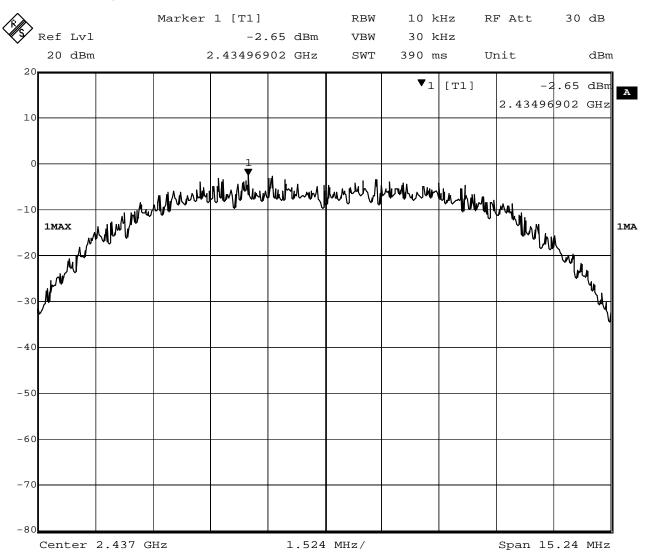
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2. 802.11b at 11Mbps at CH06



Date: 3.DEC.2014 15:22:06

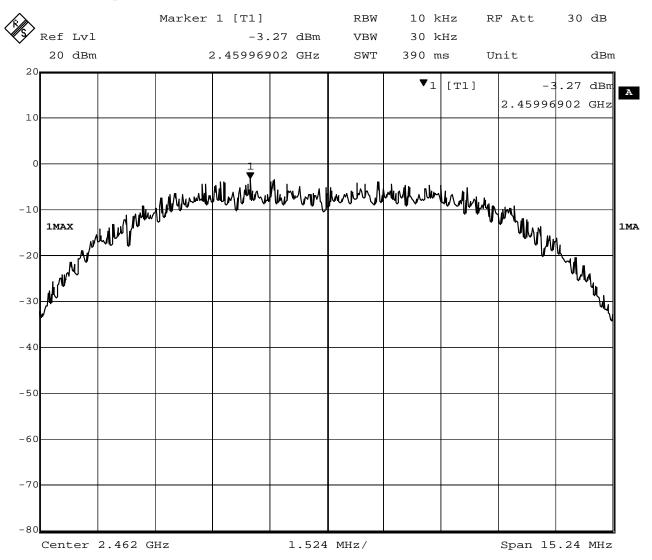
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3. 802.11b at 11Mbps of CH11



Date: 3.DEC.2014 15:21:40

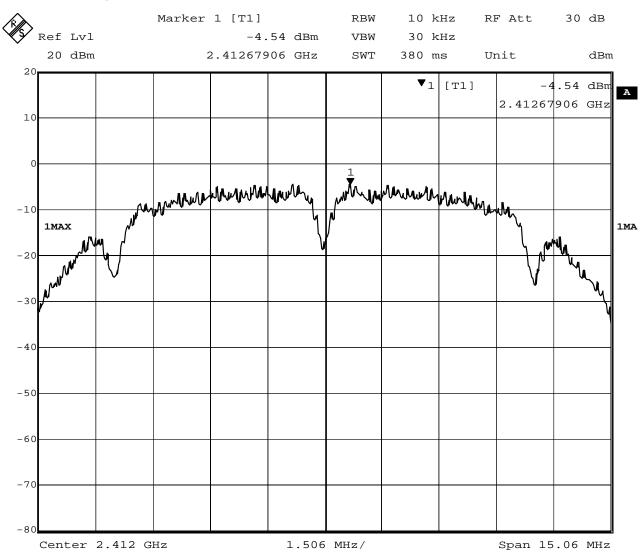
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4. 802.11b at 1Mbps of CH1



Date: 3.DEC.2014 15:17:49

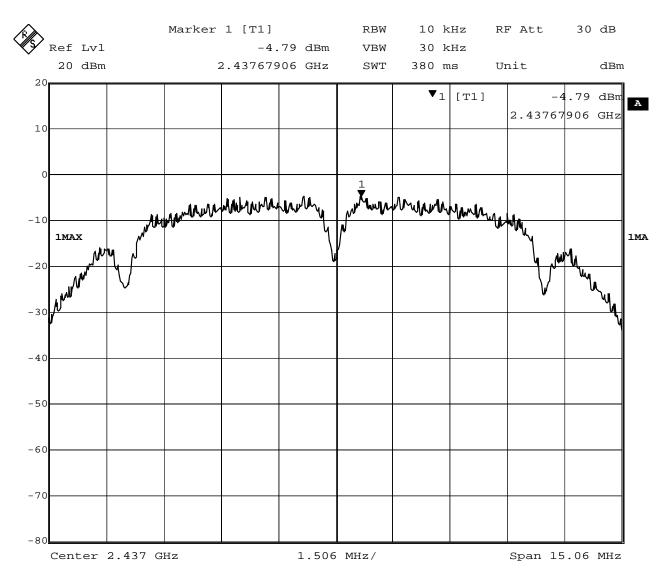
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5. 802.11b at 1Mbps of CH6



Date: 3.DEC.2014 15:17:15

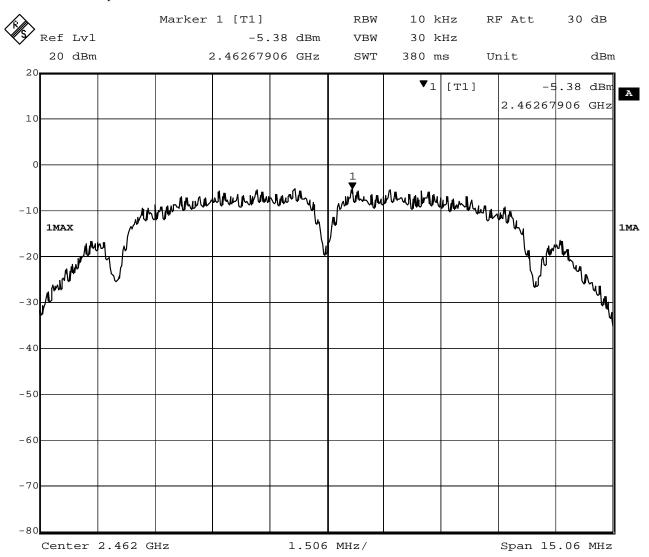
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6. 802.11b at 1Mbps of CH11



Date: 3.DEC.2014 15:16:41

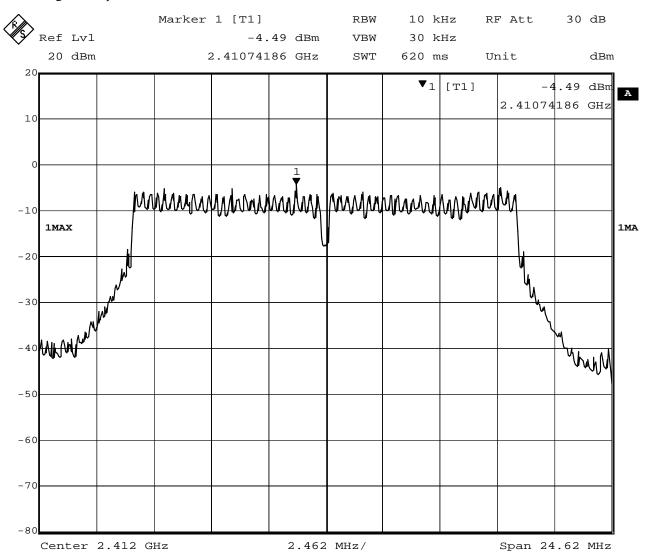
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7. 802.11g at 6Mbps of CH1



Date: 3.DEC.2014 15:18:50

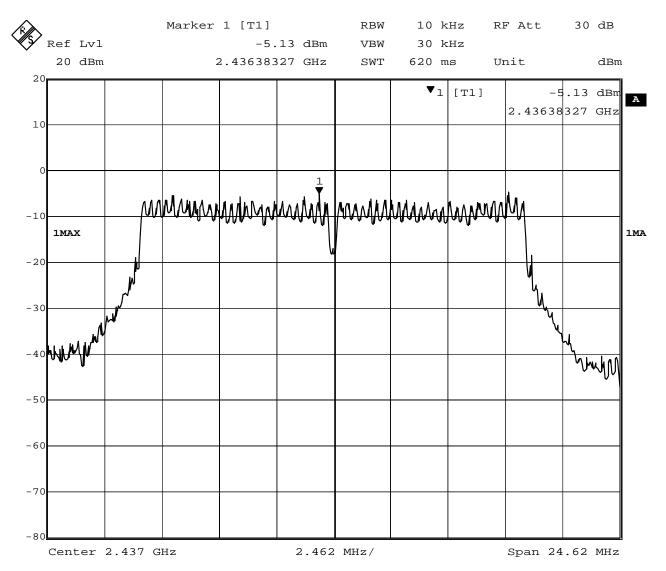
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8. 802.11g at 6 Mbps of CH6



Date: 3.DEC.2014 15:19:27

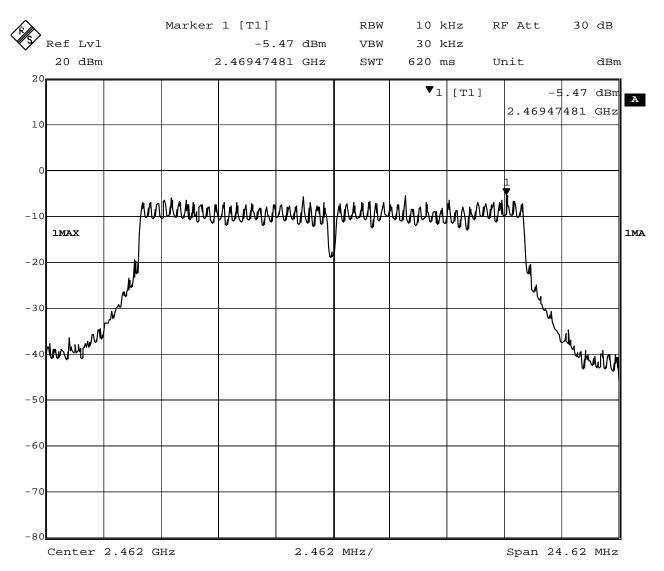
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9. 802.11g at 6 Mbps of CH11



Date: 3.DEC.2014 15:20:27

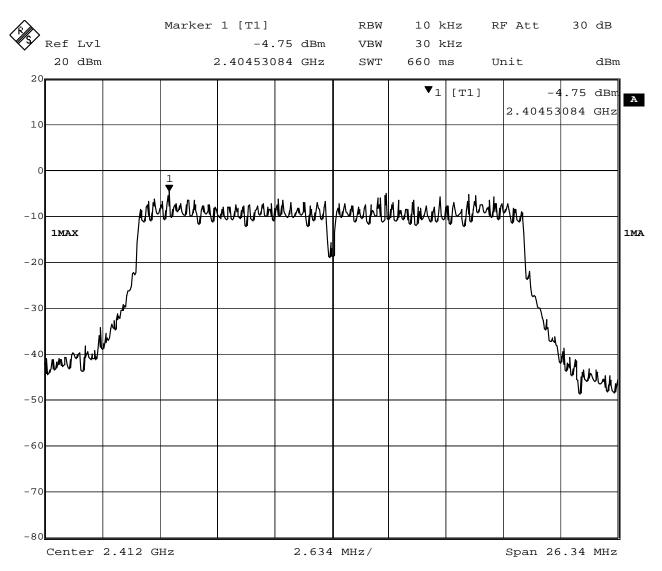
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10. 802.11n at HT20 of CH01



Date: 3.DEC.2014 15:12:58

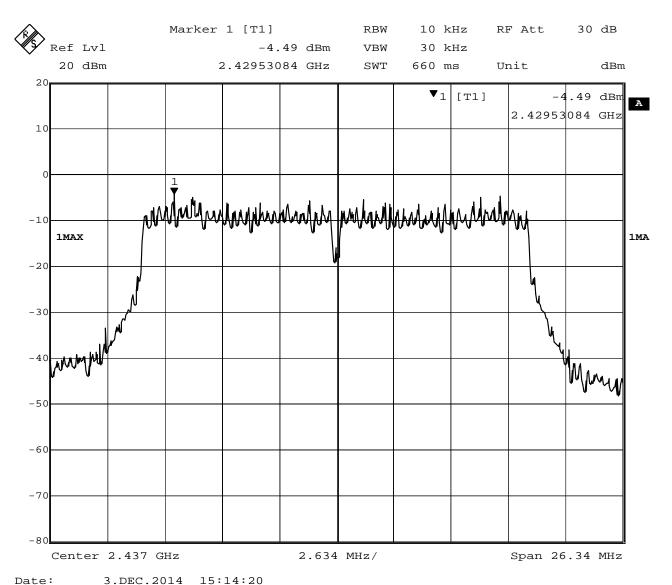
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11. 802.11n at HT20 of CH06



Date: 3.DEC.2014 15:14:20

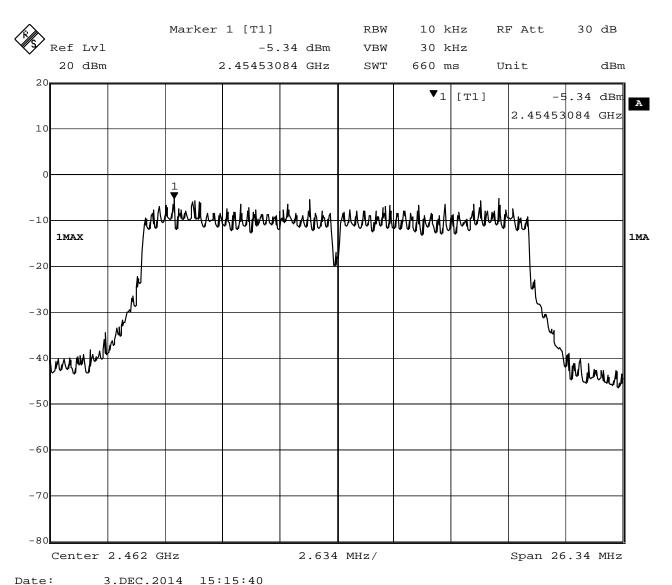
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12. 802.11n at HT20 of CH11



Date: 3.DEC.2014 15:15:40

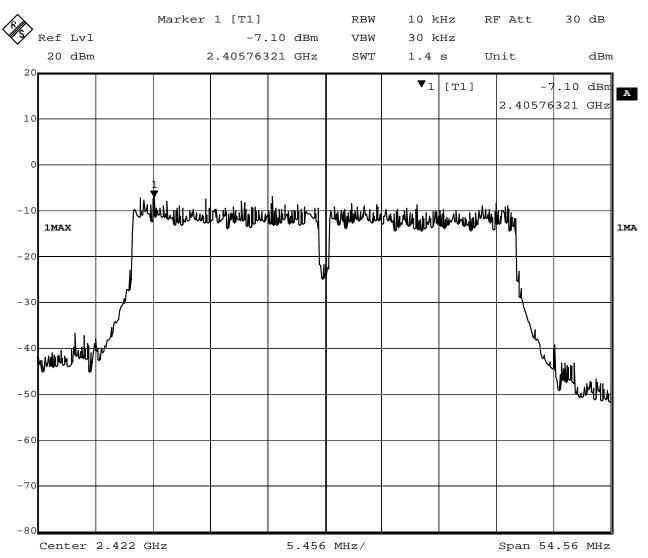
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13. 802.11n at HT40 of CH03



Date: 3.DEC.2014 15:11:26

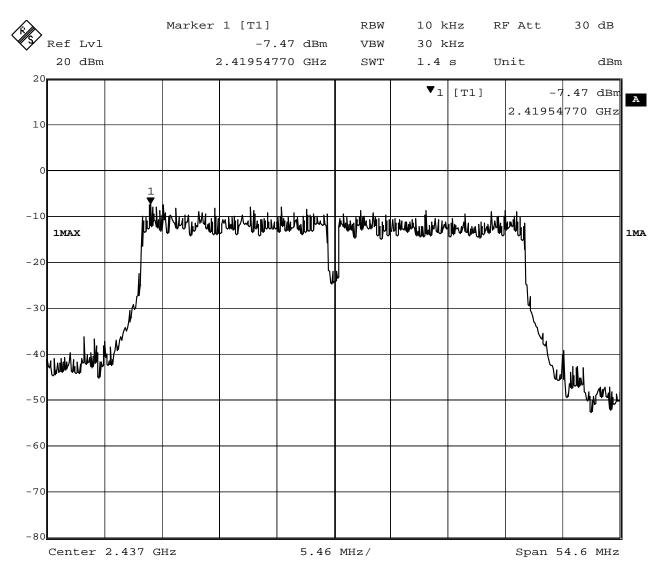
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14. 802.11n at HT40 of CH06



Date: 3.DEC.2014 15:10:07

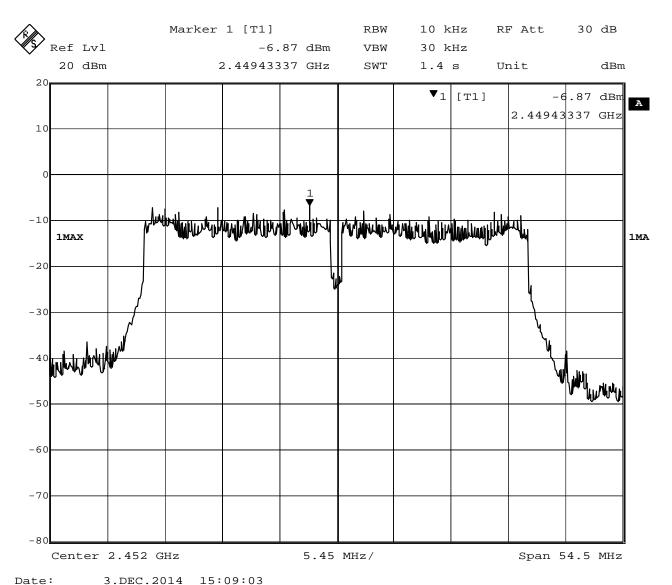
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15. 802.11n at HT40 of CH09



Jate: 3.DEC.2014 15:09:03

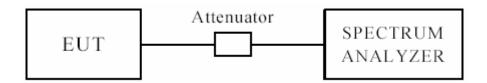
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10 Out of Band Measurement

10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of Radiated emission test. (Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=3MHz and RMS detector)

For bandage test, the spectrum set as follows: RBW=100 kHz, VBW=300 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

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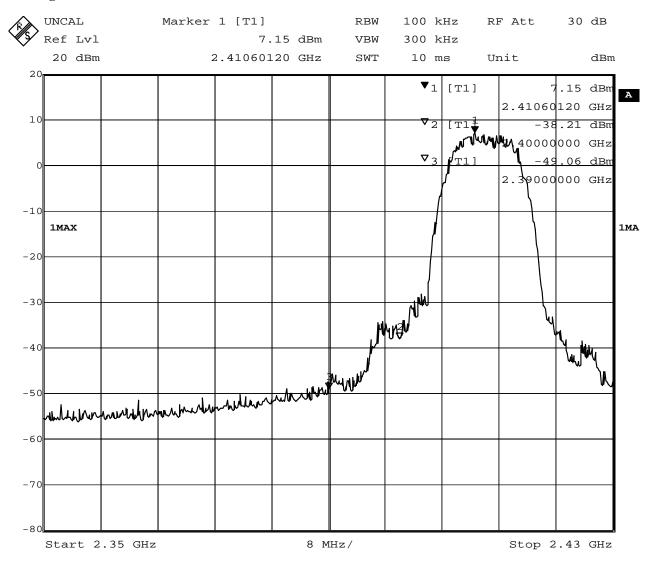
Antenna A

For 802.11b mode CH01 at 11Mbps

10.4 Band-edge band Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:24:30

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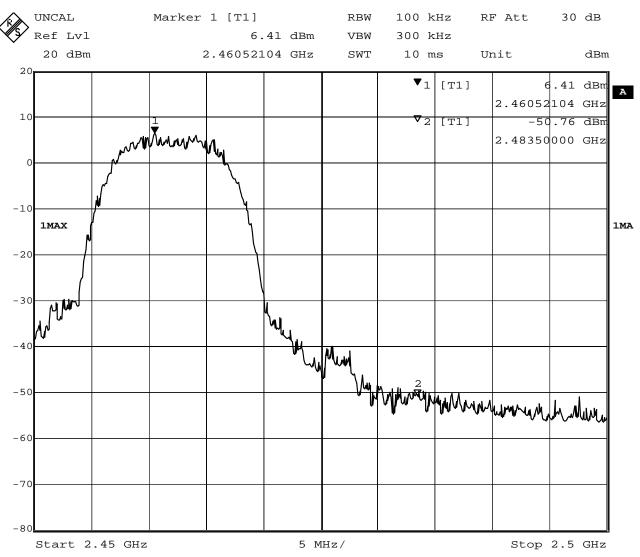


CH11 at 11Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:32:37

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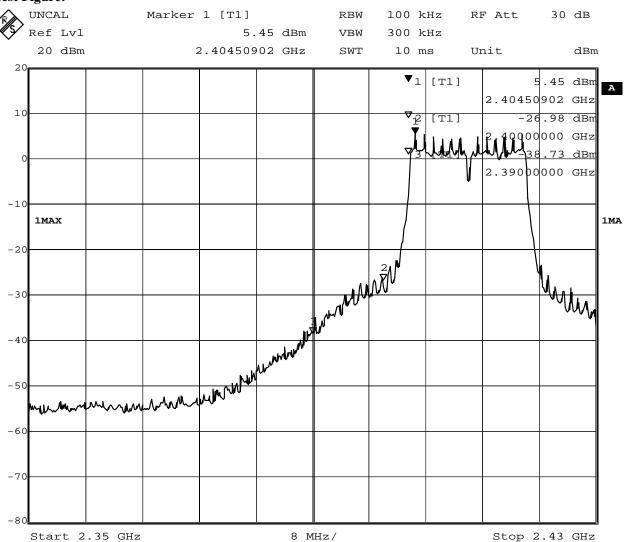
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:25:38

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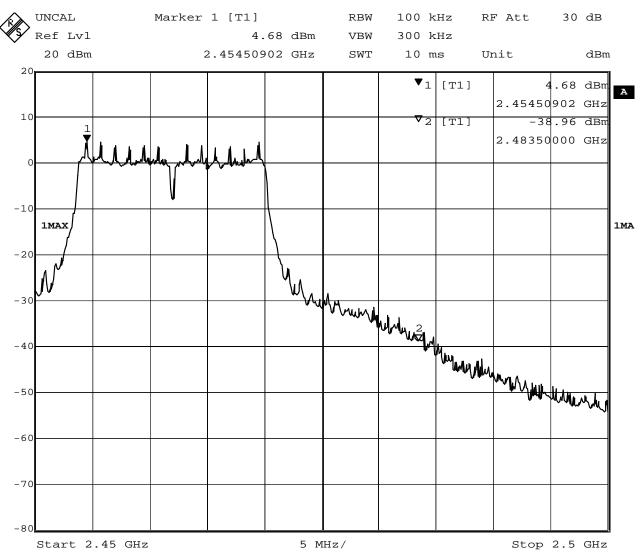


CH11 at 6Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:32:06

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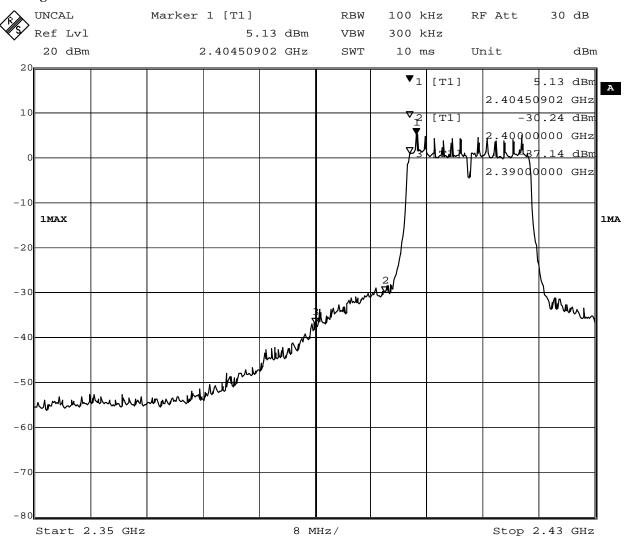
For 802.11n (HT20) mode

CH01 at 65Mbps

10.4 Band-edge Measurement

	<u> </u>		
EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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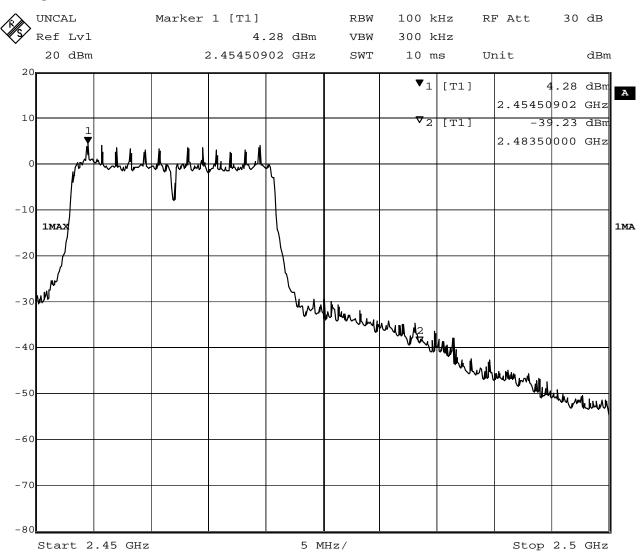


CH11 at 65Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode Keeping Transmitting		Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:30:33

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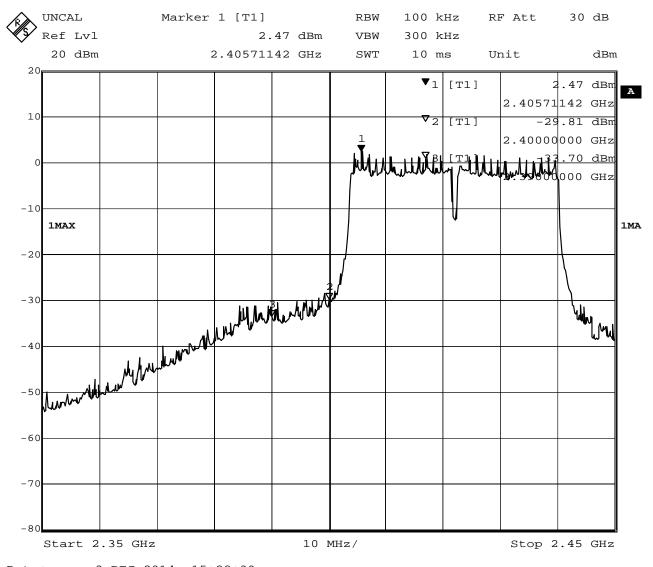
For 802.11n (HT40) mode

CH03 at 65Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:28:39

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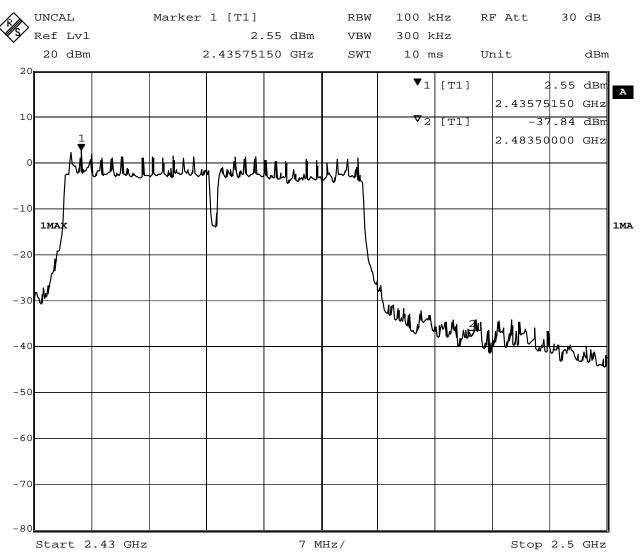


CH09 at 65Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 15:29:34

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The following test figures for Antenna B

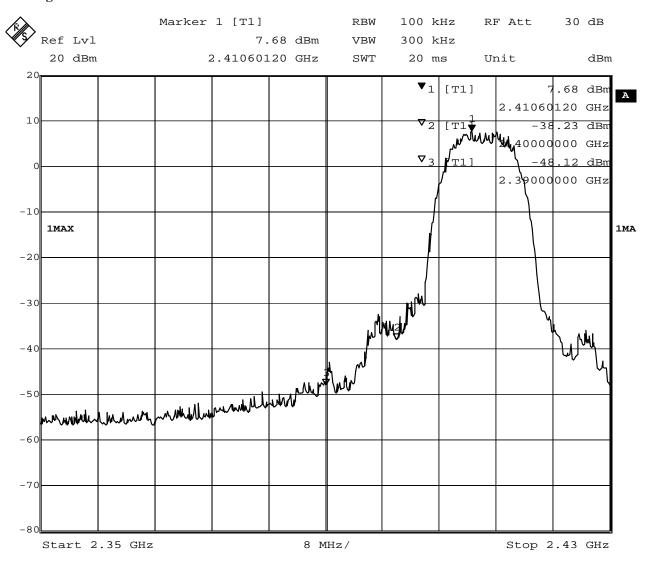
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge band Measurement

	0		
EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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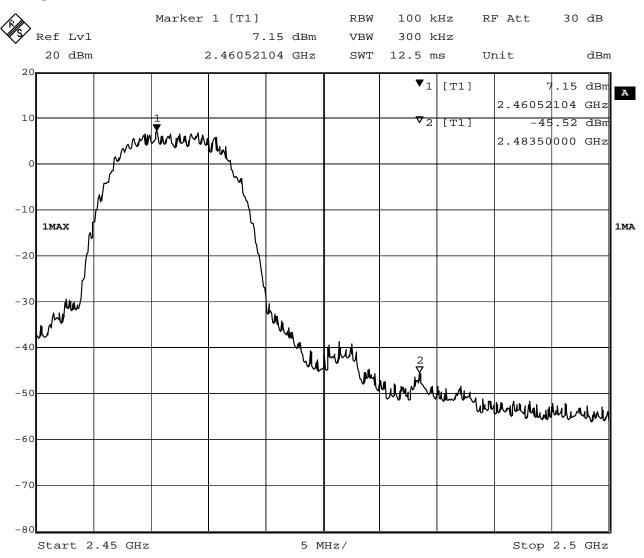


CH11 at 11Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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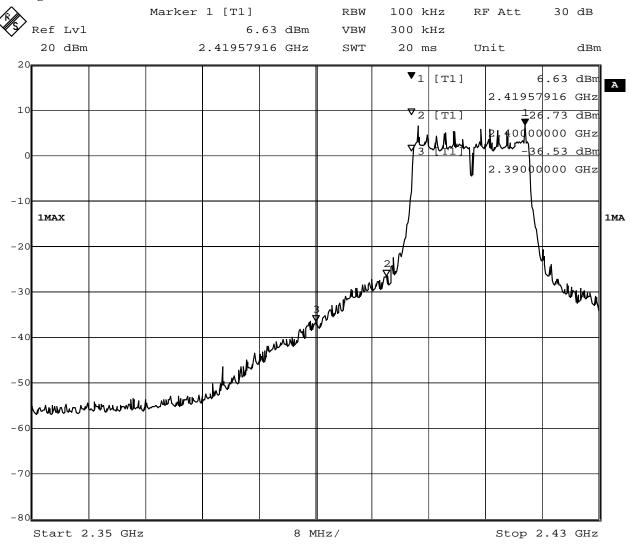
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 18:04:48

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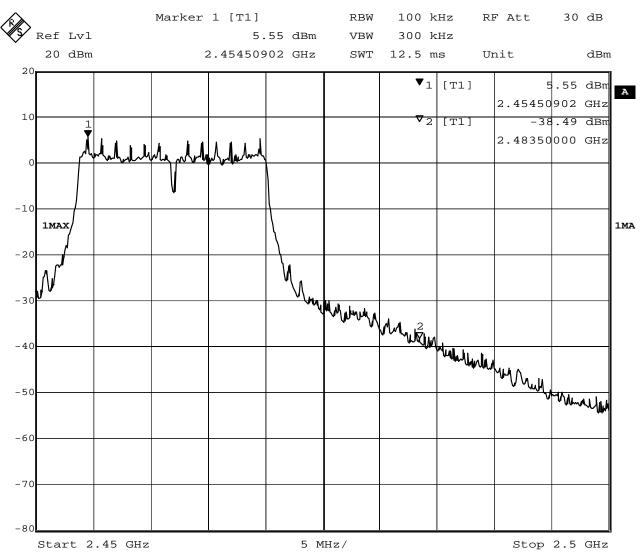


CH11 at 6Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 18:07:18

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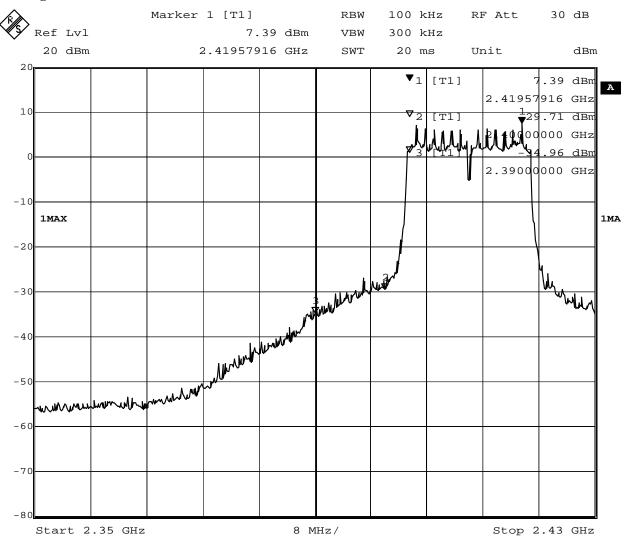
For 802.11n (HT20) mode

CH01 at 65Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 3.DEC.2014 18:04:24

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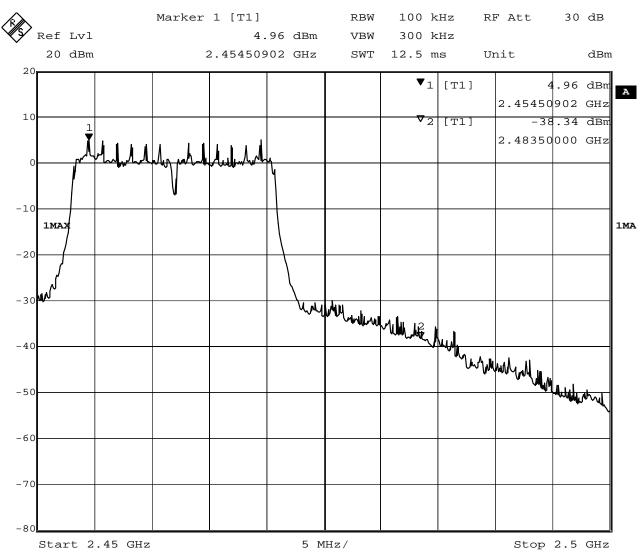


CH11 at 65Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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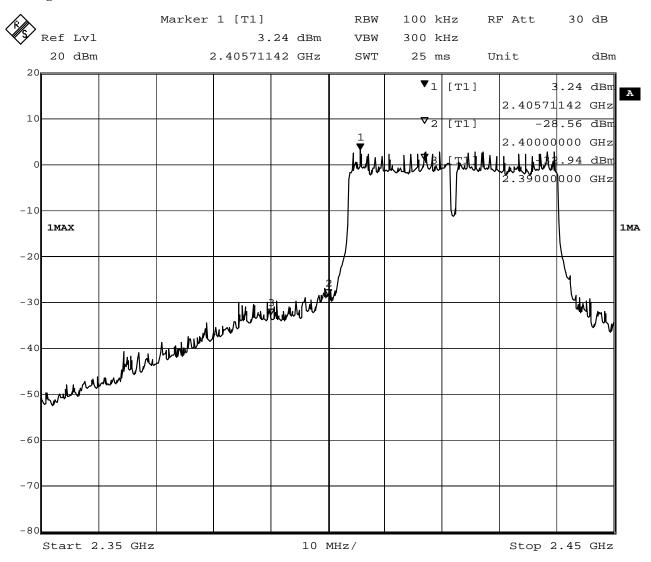
For 802.11n (HT40) mode

CH03 at 65Mbps

10.4 Band-edge band Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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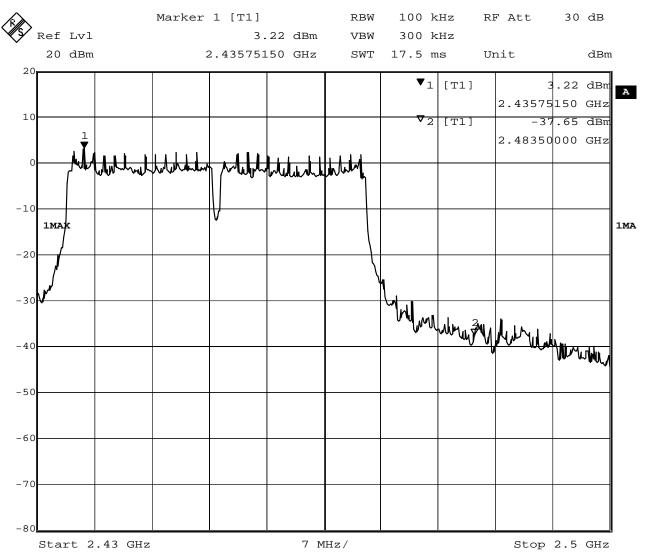


CH09 at 65Mbps

10.4 Band-edge Measurement

EUT	Smart Router	Model	WL0722
Mode	Keeping Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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802.11b 11Mbps

Restricted band Measurement

Product:	Smart Router		Test Mode:	Low Channel
Mode	WIFI MIMO	Keeping TX mode	Input Voltage	AC120V
Temperature	24	4 deg. C,	Humidity	56% RH
Test Result:		Pass	Detector	PK
2400MHz	PK (dBµV/m)	66.16(H)/68.04(V)	T ::4	74(dBµV/m)
	AV (dBμV/m)	47.80(H)/ 49.38(V)	Limit	$54(dB\mu V/m)$
2396.831MHz	PK (dBμV/m)	63.53 (H)/ 68.18(V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	45.07(H)/ 48.52(V)	Lillit	$54(dB\mu V/m)$
2390MHz	PK (dBµV/m)	55.68 (H)/53.10 (V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	37.45(H)/33.41(V)	Lillit	54(dBµV/m)

802.11b 11Mbps

12.4 Restricted band Measurement

EUT	Smart Router		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	44.57(H)/ 46.56(V)	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

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802.11g 6Mbps

Restricted band Measurement

EUT	Smart Router		Test Mode:	Low Channel
Mode	WIFI MIMO Keeping TX mode		Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	65.33(H)/67.20(V)	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	46.70(H)/ 48.47(V)	Limit	$54(dB\mu V/m)$
2390MHz	PK (dBµV/m)	58.18(H)/59.36 (V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	41.74(H)/ 40.65(V)	Lillit	$54(dB\mu V/m)$

802.11g 6Mbps

Restricted band Measurement

EUT	Smart Router		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	48.75(H)/ 51.06(V)	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

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802.11n HT20 65Mbps

Restricted band Measurement

EUT	Smart Router		Test Mode:	Low Channel
Mode	WIFI MIMO Keeping TX mode		Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	67.39(H)/65.85 (V)	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	47.06(H)/ 46.96(V)	Limit	$54(dB\mu V/m)$
2390MHz	PK (dBµV/m)	54.79(H)/ 50.38 (V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	35.35(H)/(V)	LIIIII	$54(dB\mu V/m)$

802.11n HT20 65Mbps

12.4 Restricted band Measurement

EUT	Smart Router		Test Mode:	High Channel
Mode	Keeping	g Transmitting	Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	46.28(H)/ 50.99(V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)			$54(dB\mu V/m)$

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802.11n HT40 65Mbps

Restricted band Measurement

EUT	Smart Router		Test Mode:	Low Channel
Mode	WIFI MIMO Keeping TX mode		Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	68.54(H)/68.07 (V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	49.47(H)/ 48.73(V)		$54(dB\mu V/m)$
2390MHz	PK (dBμV/m)	66.05(H)/65.87 (V)	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	46.34(H)/ 45.38(V)		54(dBμV/m)

802.11n HT40 65Mbps

12.4 Restricted band Measurement

EUT	Smart Router		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	AC120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBμV/m)	66.80(H)/68.87 (V)	Limit	74(dBμV/m)
	AV ($dB\mu V/m$)	47.85(H)/49.39(V)		$54(dB\mu V/m)$
2485.691MHz	PK (dBμV/m)	69.86(V)	Limit	74(dBμV/m)
	AV (dBμV/m)	51.72(V)		$54(dB\mu V/m)$
2489.058MHz	PK (dBμV/m)	63.50(H)/66.95(V)	Limit	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)	46.32(H)/ 48.13(V)		54(dBµV/m)

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11.0 Antenna Requirement

11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Antenna Connected construction

Two Dipole antennas used. The maximum Gain of each antenna is 2.0 dBi for each one. The directional antenna gain is 2+10log2=5.01dBi

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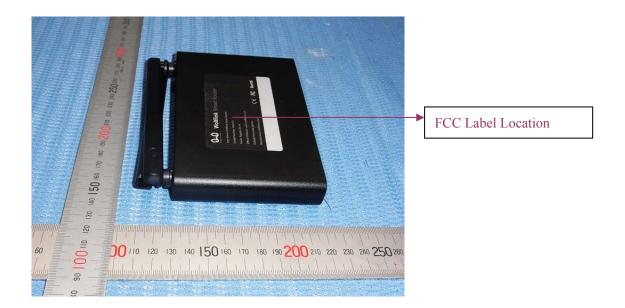
12.0 FCC Label

FCC ID: 2ADMV-WL0722

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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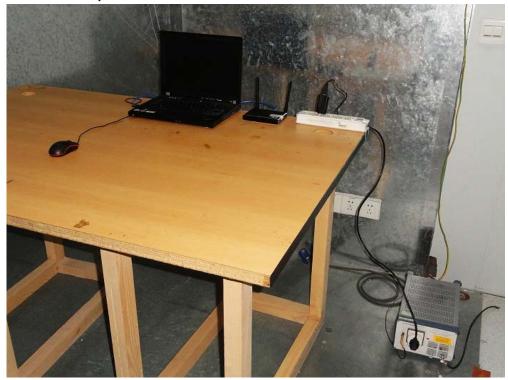
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13.0 Photo of testing

Conducted Emission Test Setup:



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Radiated Emission Test Setup:





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Photo for the EUT





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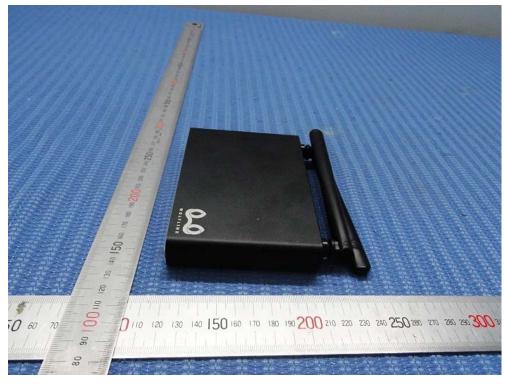
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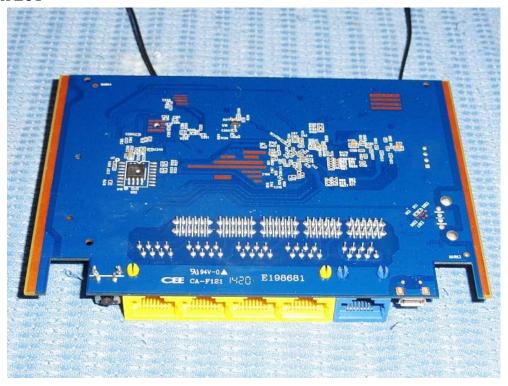
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End of the report