Produkte
Products

Prüfbericht - Nr.: *Test Report No.:*	**17013556 001**
Seite 1 von 118 *Page 1 of 118*	

Auftraggeber: *Client:*	**Shenzhen Full-Join Technology Co., Ltd.** **9/F, No.1, Xinrui Road, Hourui Xixiang Town, Baoan District, Shenzhen, Guangdong 518102, P.R. China**
Gegenstand der Prüfung: *Test item:*	**WiFi Internet Radio**
Bezeichnung: *Identification:*	**PPS-FM**
Serien-Nr.: *Serial No.:*	**n.a.**
Wareneingangs-Nr.: *Receipt No.:*	**163053971**
Eingangsdatum: *Date of receipt:*	**2009-08-25**
Prüfort: *Testing location:*	**TÜV Rheinland (Guangdong) Ltd.** **EMC Laboratory** **Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China** **FCC Registration No.: 833845** **Test site Industry Canada No.: 2932C-1**
Prüfgrundlage: *Test specification:*	**FCC CFR47 Part 15: Subpart C Section 15.247** **FCC CFR47 Part 15: Subpart C Section 15.207** **FCC CFR47 Part 15: Subpart C Section 15.209** **FCC CFR47 Part 15: Subpart B Section 15.107** **FCC CFR47 Part 15: Subpart B Section 15.109**
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (Shenzhen) Co., Ltd.**

geprüft/ *tested by:*

2009-10-12	Winnie Hou/ Project Engineer	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

kontrolliert/ *reviewed by:*

2009-10-20	Sam Lin/ Technical Certifier	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other Aspects:*

Abkürzungen:				*Abbreviations:*			
	P(ass)	=	*entspricht Prüfgrundlage*		*P(ass)*	=	*passed*
	F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*
	N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*
	N/T	=	*nicht getestet*		*N/T*	=	*not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Passed

5.1.2 PEAK OUTPUT POWER
RESULT: Passed

5.1.3 6DB BANDWIDTH
RESULT: Passed

5.1.4 100KHZ BANDWIDTH OF FREQUENCY BAND EDGE
RESULT: Passed

5.1.5 POWER SPECTRAL DENSITY
RESULT: Passed

5.1.6 SPURIOUS EMISSION
RESULT: Passed

5.1.7 RADIATED EMISSIONS
RESULT: Passed

5.1.8 CONDUCTED EMISSIONS
RESULT: Passed

Contents

1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd.
EMC Laboratory

Guangzhou Auto Market,
Yuan Gang Section of Guangshan Road,
Guangzhou, P.R. China

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious emission and Radiated emission				
EMI Test Receiver	Rohde & Schwarz	ESCI-3	100216	2010-11-26
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2010-08-24
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	209	2010-11-07
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100111	2010-12-10
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	2010-08-18
Pre-amplifier	MITEQ	AFS42-00101800-25-S-42	1101599	2010-07-31
Standard Gain Horn Antenna	EMCO	3160-09	21642	N/A
Pre-amplifier	MITEQ	AFS33-18002650-30-8P-44	1108282	2010-07-31
3m Anechoic Chamber	Albatross Project GmbH	N/A	N/A	2010-04-16
Radio Test Suite				
EMI Test Receiver	Rohde & Schwarz	ESCI	100178	2010-09-27
Receiver	R&S	ESCI	100178	2010-09-27
Conducted Emission				
EMI Test Receiver	Rohde & Schwarz	ESCS30	100316	2010-03-27
Artificial Mains Network	Rohde & Schwarz	ESH2-Z5	100114	2010-03-27

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are ±3dB.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Guangdong) Ltd. test facility located at Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is WiFi internet and FM radio. By building broadband internet connection and wireless access point via a router, the EUT can access to broadcasting radio station. Wireless lan uses 2.4GHz frequency band, which are specified by IEEE 802.11 clause 18 (802.11b) and 19 (802.11g).
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	WiFi Internet Radio
Type Designation:	PPS-FM
FCC ID	XT8PPS-FM

Table 3: Technical Specification of WiFi module (802.11b/g)

Item	**Description**	
	IEEE 802.11b	**IEEE 802.11g**
Operating Frequency band	2400 – 2483.5 MHz	
Channel Number	11	
Channel Bandwidth (MHz)	20	
Modulation	DSSS	OFDM
Data Rate (Mbps)	1/2/5.5/11	6/9/12/18/24/36/48/54
Antenna	Integrated Antenna	
Antenna Gain (dBi)	1.5	

Table 4: Technical Specification of Carrier Frequency

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400 – 2483.5 MHz	1	2412 MHz	7	2442 MHz
	2	2417 MHz	8	2447 MHz
	3	2422 MHz	9	2452 MHz
	4	2427 MHz	10	2457 MHz
	5	2432 MHz	11	2462 MHz
	6	2437 MHz		

3.3 Independent Operation Modes

The basic operation modes are:

A. Wi-Fi internet radio
   1. Transmitting
      a. Low channel
      b. Middle channel
      c. High channel
   2. Receiving
   3. Standby

B. FM radio
   1. Receiving at 88MHz
   2. Receiving at 98MHz
   3. Receiving at 108MHz

C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Technical Description
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.4: 2003.

4.3 Special Accessories and Auxiliary Equipment

Table 5: Interfaces and Cables

Description	Specification	Length
Earphone port	3 cores, shielded	--
USB port	5 cores, shielded	--

Table 6: Test Auxiliary Equipments

Description	Manufacturer	Model	Serial No.
AC/DC Adaptor	Shenzhen Huoniu Technology Co.,Ltd.	HNB050100E	090600199
Notebook	DELL	PP10L	CN-0H1908-48643-55A-4599

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

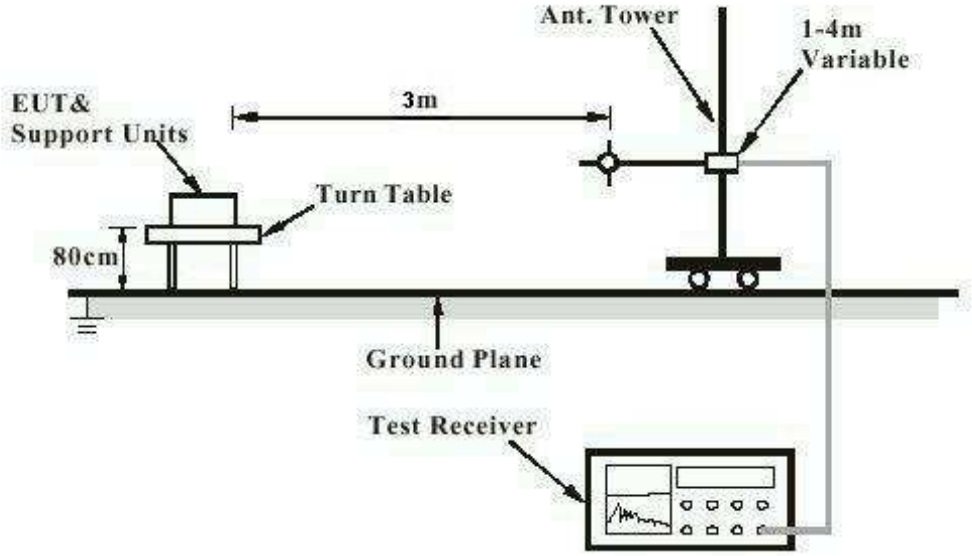


Diagram of Measurement Equipment Configuration for Conduction Measurement

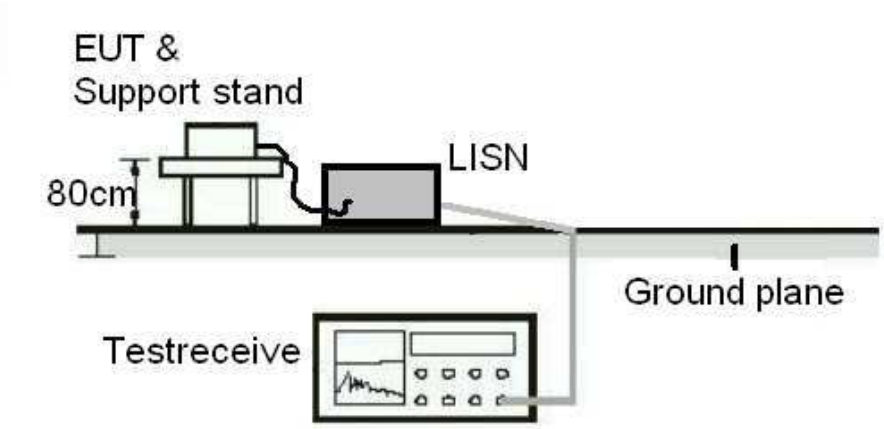
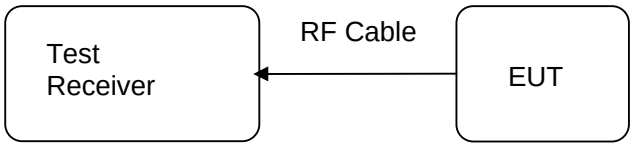


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test date	:	2009-09-30
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 1.5dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT: **Passed**

Test date	:	2009-09-30
Test standard	:	FCC Part 15.247(b)(1)
Basic standard	:	ANSI C63.4: 2003
Limit	:	1 Watt
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1
Ambient temperature	:	22℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Table 7: Test result of Peak Output Power, 802.11b 1Mbps

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2412	15.67	0.037	1
Middle Channel	2442	13.74	0.024	1
High Channel	2462	12.50	0.018	1

Table 8: Test result of Peak Output Power, 802.11b 5.5Mbps

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2412	16.80	0.048	1
Middle Channel	2442	15.13	0.033	1
High Channel	2462	14.04	0.027	1

Table 9: Test result of Peak Output Power, 802.11b 11Mbps

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2412	16.39	0.043	1
Middle Channel	2442	14.79	0.030	1
High Channel	2462	13.97	0.025	1

Table 10: Test result of Peak Output Power, 802.11g 6Mbps

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2412	21.05	0.127	1
Middle Channel	2442	19.48	0.089	1
High Channel	2462	18.53	0.071	1

Table 11: Test result of Peak Output Power, 802.11g 24Mbps

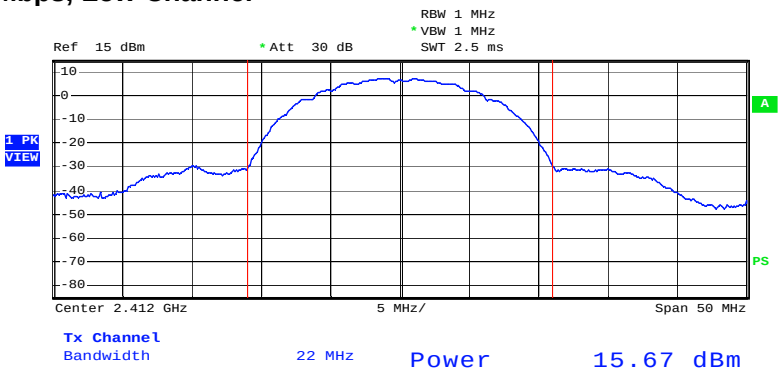
Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2412	20.36	0.109	1
Middle Channel	2442	18.45	0.070	1
High Channel	2462	17.20	0.052	1

Table 12: Test result of Peak Output Power, 802.11g 54Mbps

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2412	19.92	0.098	1
Middle Channel	2442	18.36	0.069	1
High Channel	2462	17.20	0.052	1

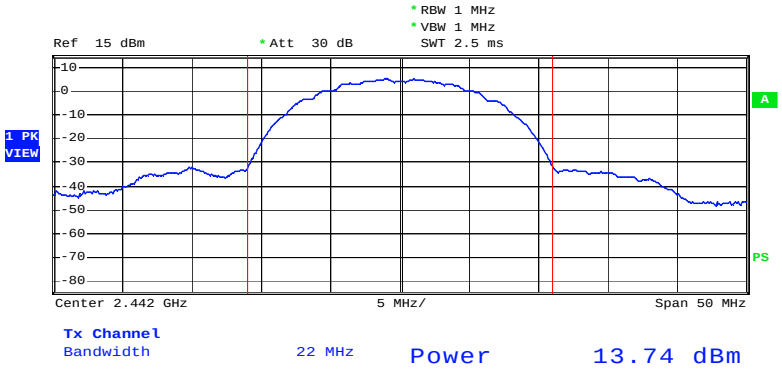
Test Plot of Peak Output Power

802.11b 1Mbps, Low Channel



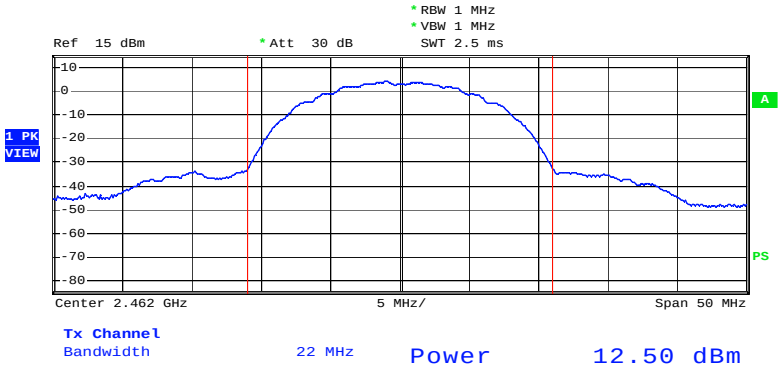
Date: 18.SEP.2009 19:11:40

802.11b 1Mbps, Middle Channel



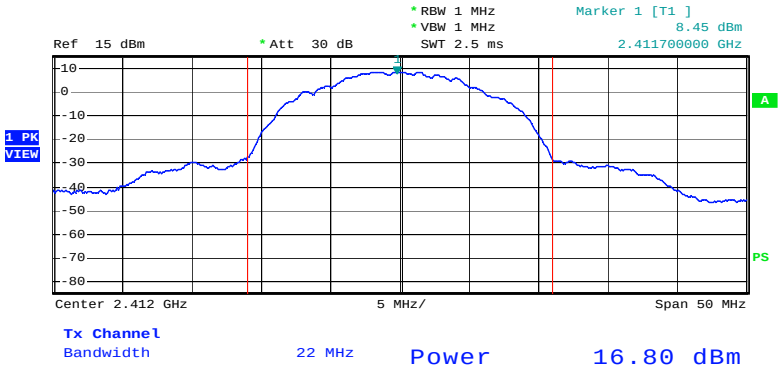
Date: 18.SEP.2009 19:26:49

802.11b 1Mbps, High Channel



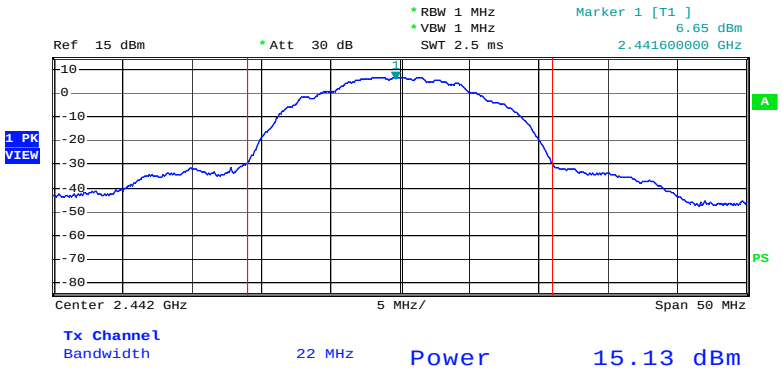
Date: 18.SEP.2009 19:27:30

802.11b 5.5Mbps, Low Channel



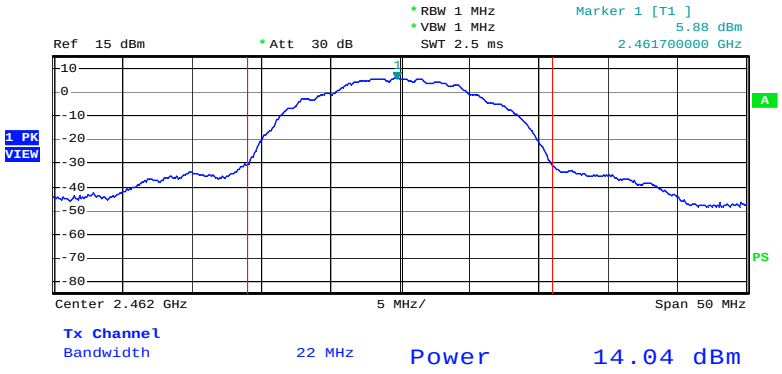
Date: 30.SEP.2009 11:50:57

802.11b 5.5Mbps, Middle Channel



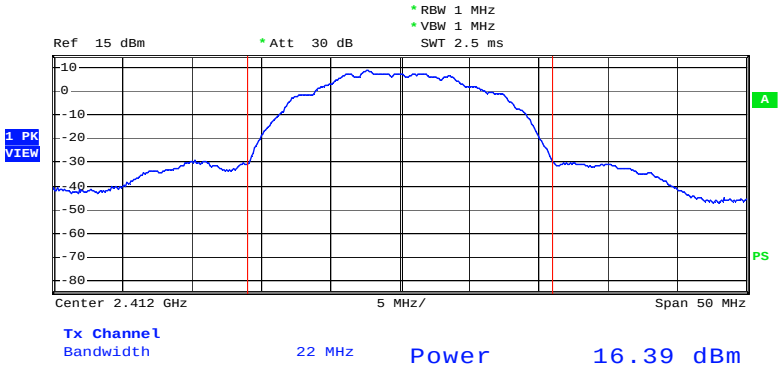
Date: 30.SEP.2009 12:03:10

802.11b 5.5Mbps, High Channel



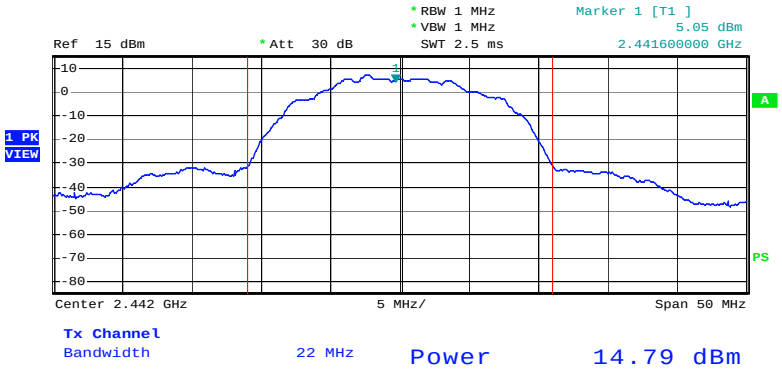
Date: 30.SEP.2009 13:47:12

802.11b 11Mbps, Low Channel



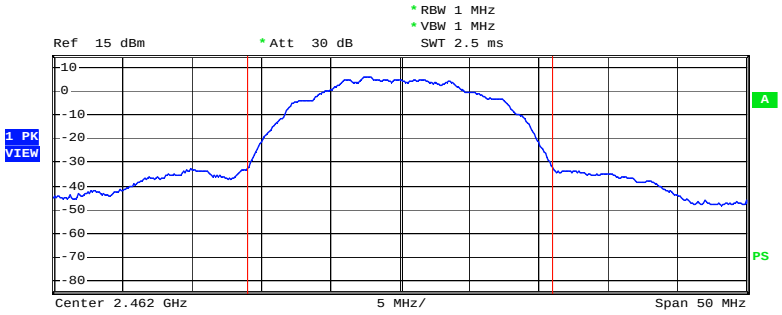
Date: 30.SEP.2009 12:19:16

802.11b 11Mbps, Middle Channel



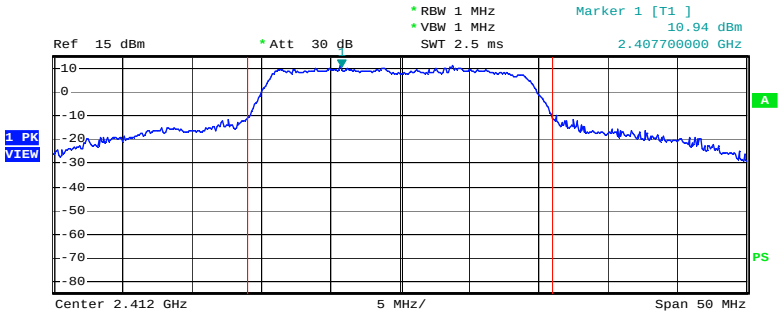
Date: 30.SEP.2009 12:05:46

802.11b 11Mbps, High Channel



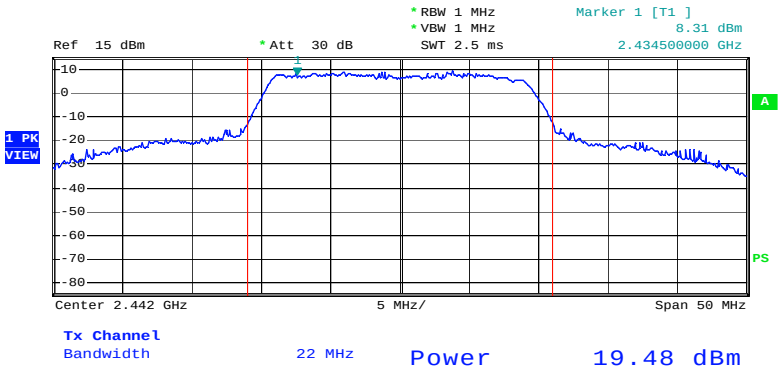
Date: 30.SEP.2009 12:22:40

802.11g 6Mbps, Low Channel



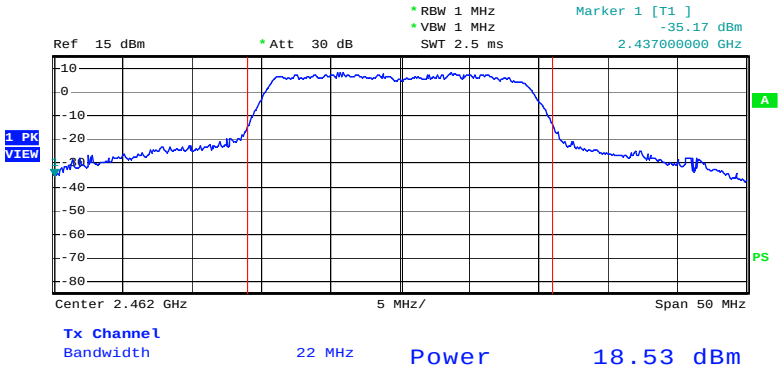
Date: 30.SEP.2009 12:33:08

802.11g 6Mbps, Middle Channel



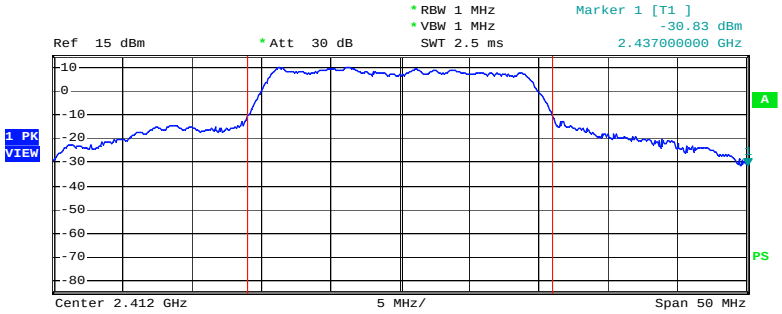
Date: 30.SEP.2009 12:44:47

802.11g 6Mbps, High Channel



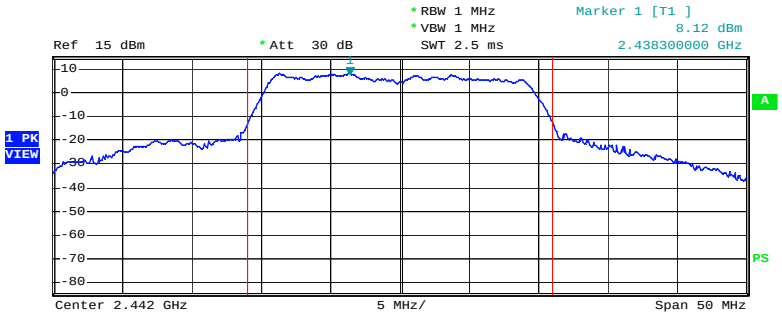
Date: 30.SEP.2009 12:45:58

802.11g 24Mbps, Low Channel



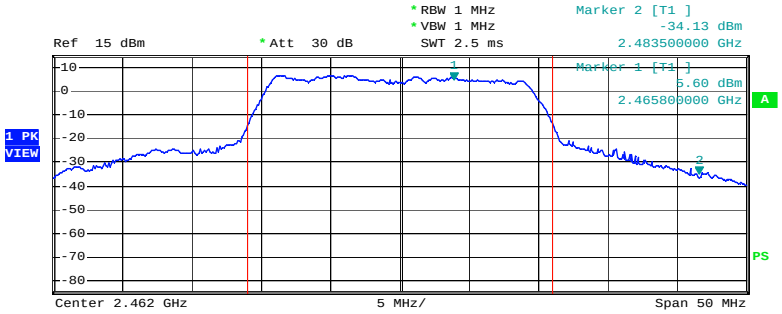
Date: 30.SEP.2009 13:12:04

802.11g 24Mbps, Middle Channel



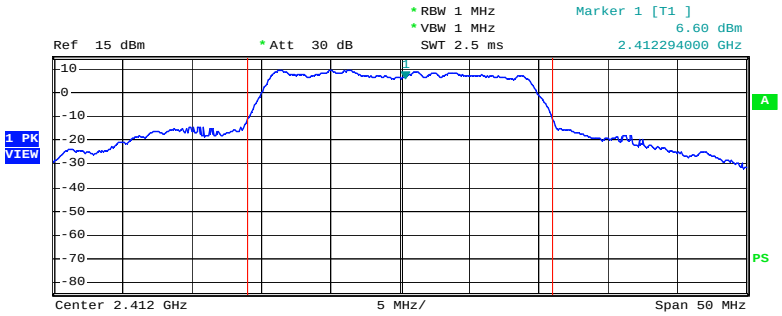
Date: 30.SEP.2009 13:06:16

802.11g 24Mbps, High Channel



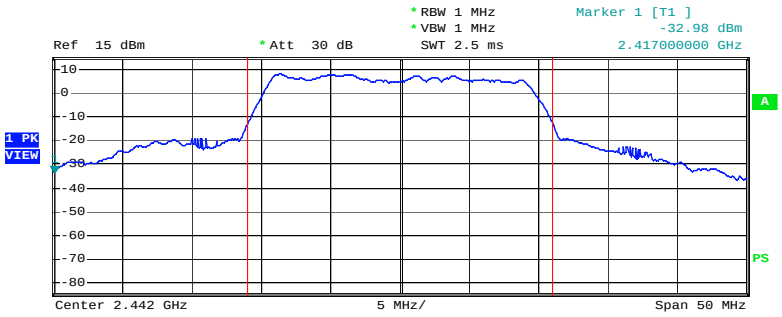
Date: 30.SEP.2009 12:53:34

802.11g 54Mbps, Low Channel



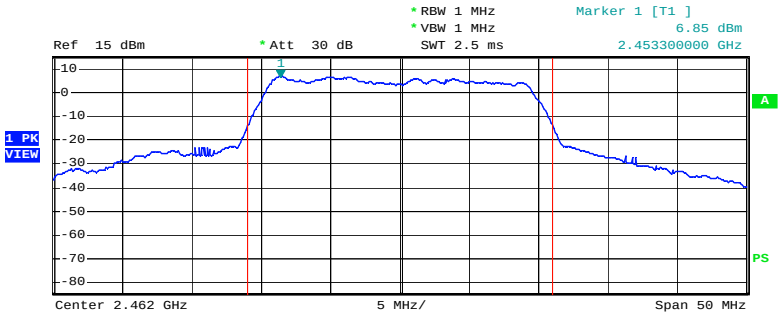
Date: 30.SEP.2009 13:30:45

802.11g 54Mbps, Middle Channel



Date: 30.SEP.2009 13:31:57

802.11g 54Mbps, High Channel



Date: 30.SEP.2009 13:42:15

5.1.3 6dB Bandwidth

RESULT: **Passed**

Date of testing	:	2009-09-30
Test standard	:	FCC Part 15.247(a)(1)
Basic standard	:	ANSI C63.4: 2003
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1
Ambient temperature	:	22℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Table 13: Test result of 6dB Bandwidth, 802.11b 1Mbps

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit
Low Channel	2412	12.2	500kHz
Mid Channel	2441	12.2	500kHz
High Channel	2462	12.2	500kHz

Table 14: Test result of 6dB Bandwidth, 802.11b 5.5Mbps

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit
Low Channel	2412	11.3	500kHz
Mid Channel	2441	12.5	500kHz
High Channel	2462	11.3	500kHz

Table 15: Test result of 6dB Bandwidth, 802.11b 11Mbps

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit
Low Channel	2412	11.3	500kHz
Mid Channel	2441	12.4	500kHz
High Channel	2462	11.3	500kHz

Table 16: Test result of 6dB Bandwidth, 802.11g 6Mbps

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit
Low Channel	2412	16.3	500kHz
Mid Channel	2441	15.4	500kHz
High Channel	2462	16.2	500kHz

Table 17: Test result of 6dB Bandwidth, 802.11g 24Mbps

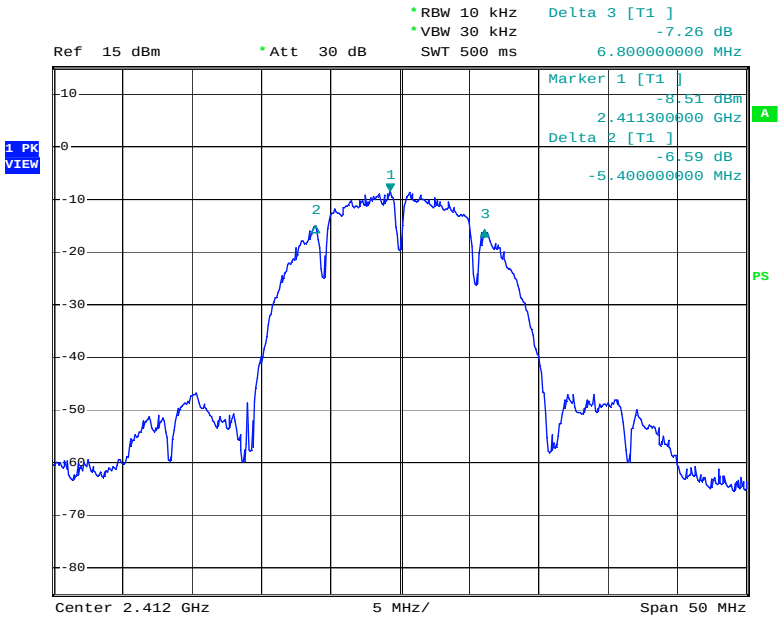
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit
Low Channel	2412	15.2	500kHz
Mid Channel	2441	16.3	500kHz
High Channel	2462	15.6	500kHz

Table 18: Test result of 6dB Bandwidth, 802.11g 54Mbps

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit
Low Channel	2412	16.1	500kHz
Mid Channel	2441	15.3	500kHz
High Channel	2462	15.3	500kHz

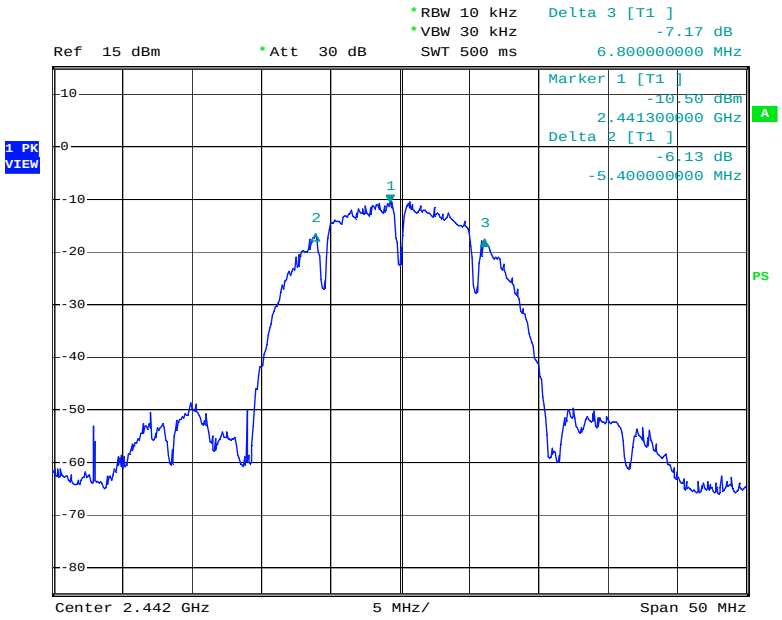
Test Plot of 6dB Bandwidth

802.11b 1Mbps, Low Channel



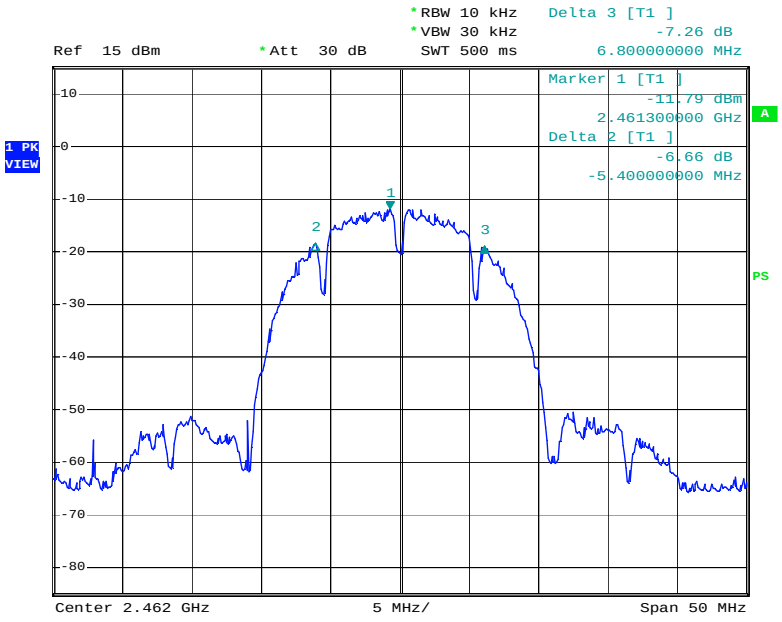
Date: 18.SEP.2009 19:17:03

802.11b 1Mbps, Middle Channel



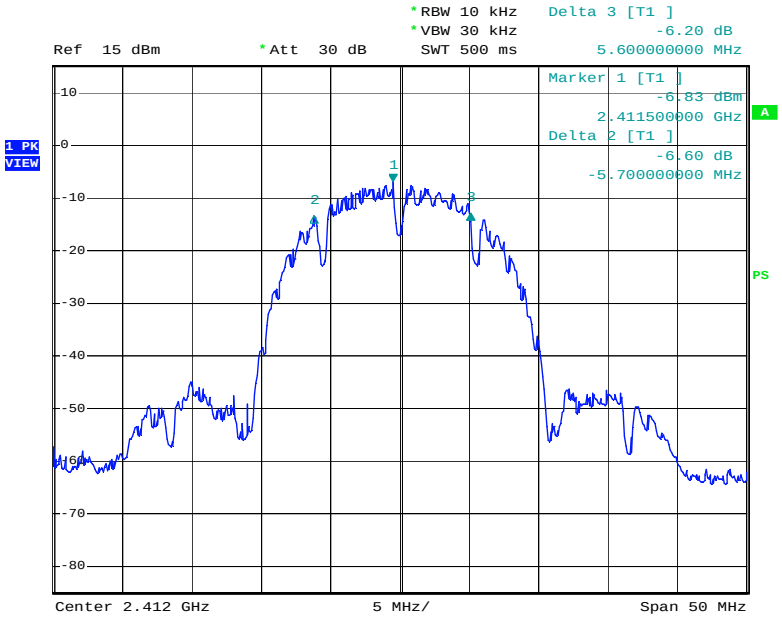
Date: 18.SEP.2009 19:25:49

802.11b 1Mbps, High Channel



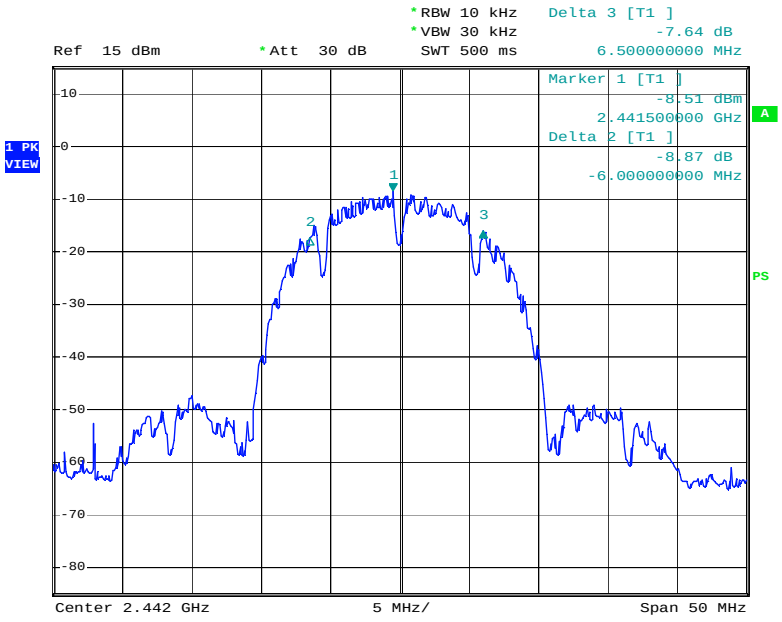
Date: 18.SEP.2009 19:28:32

802.11b 5.5Mbps, Low Channel



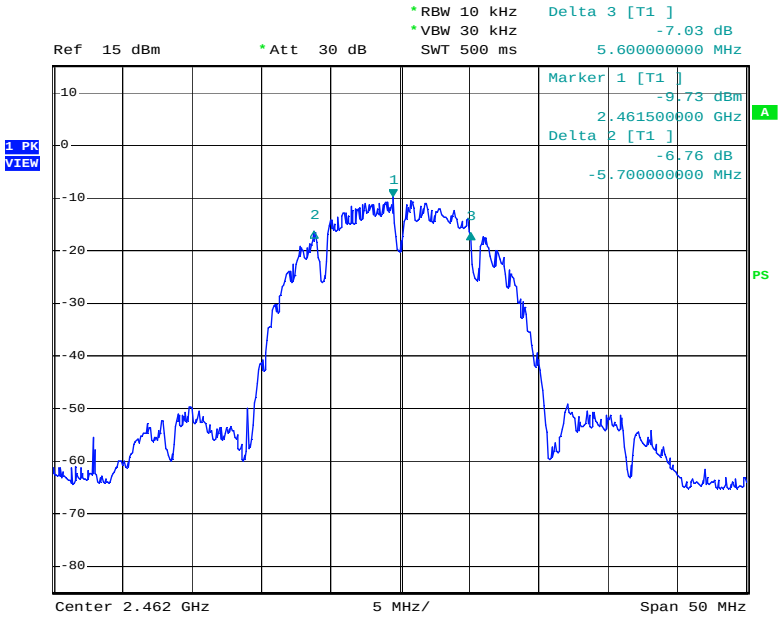
Date: 30.SEP.2009 11:53:07

802.11b 5.5Mbps, Middle Channel



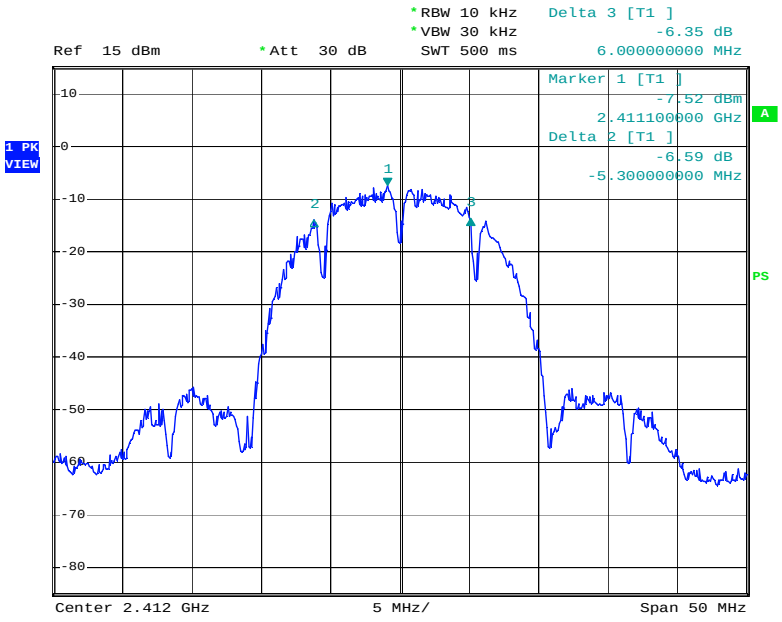
Date: 30.SEP.2009 12:01:36

802.11b 5.5Mbps, High Channel



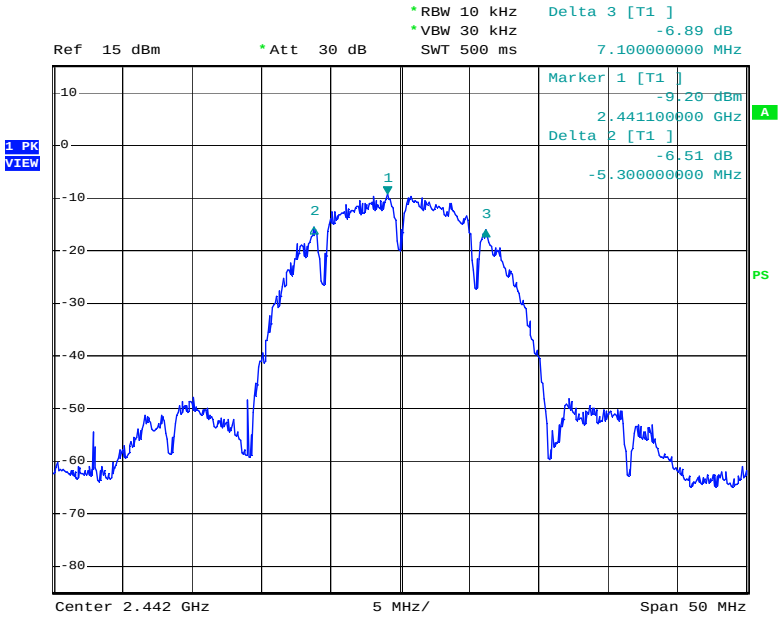
Date: 30.SEP.2009 13:48:57

802.11b 11Mbps, Low Channel



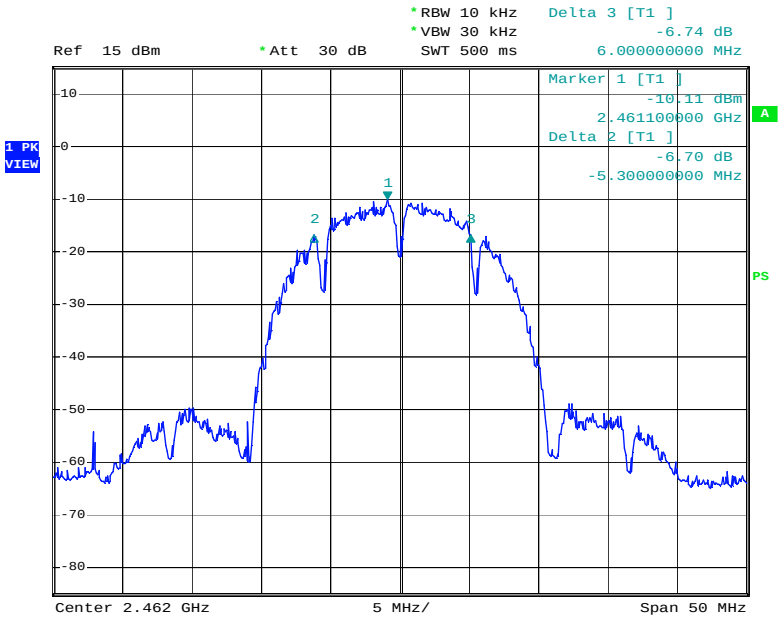
Date: 30.SEP.2009 12:18:29

802.11b 11Mbps, Middle Channel



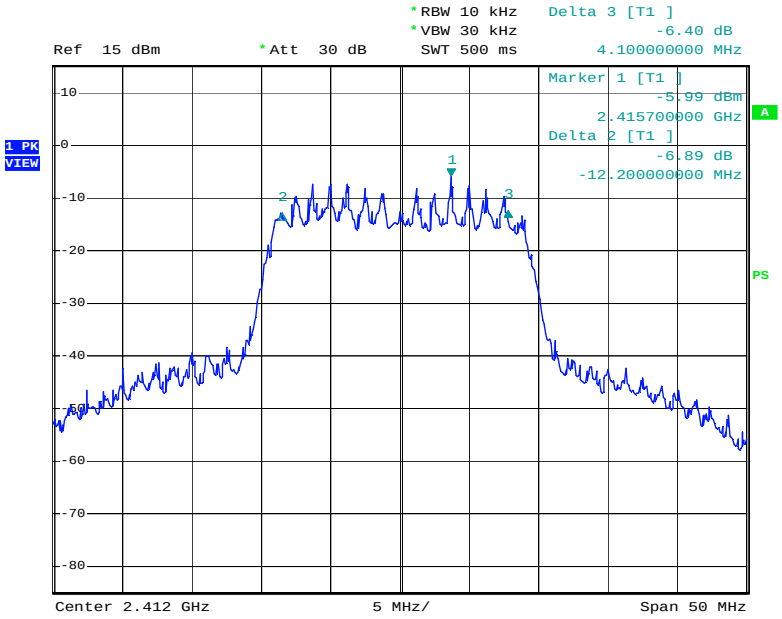
Date: 30.SEP.2009 12:07:52

802.11b 11Mbps, High Channel



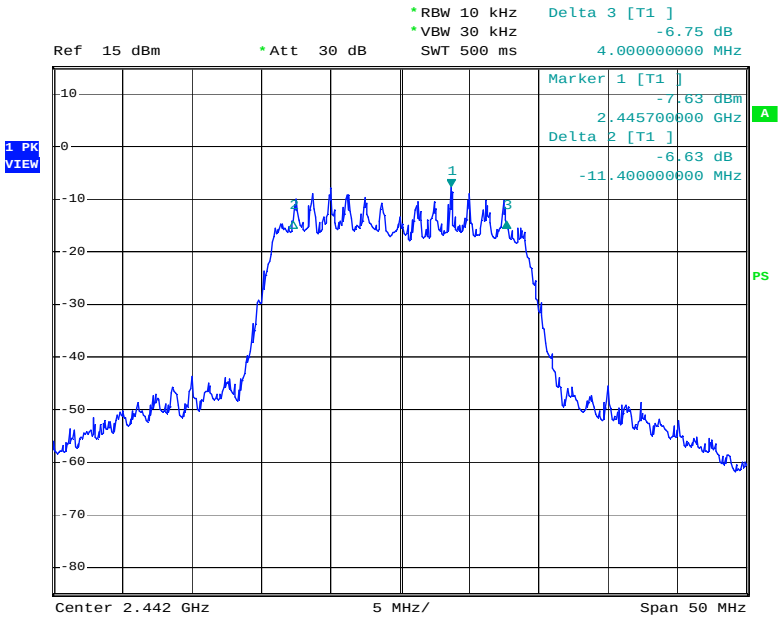
Date: 30.SEP.2009 12:24:11

802.11g 6Mbps, Low Channel



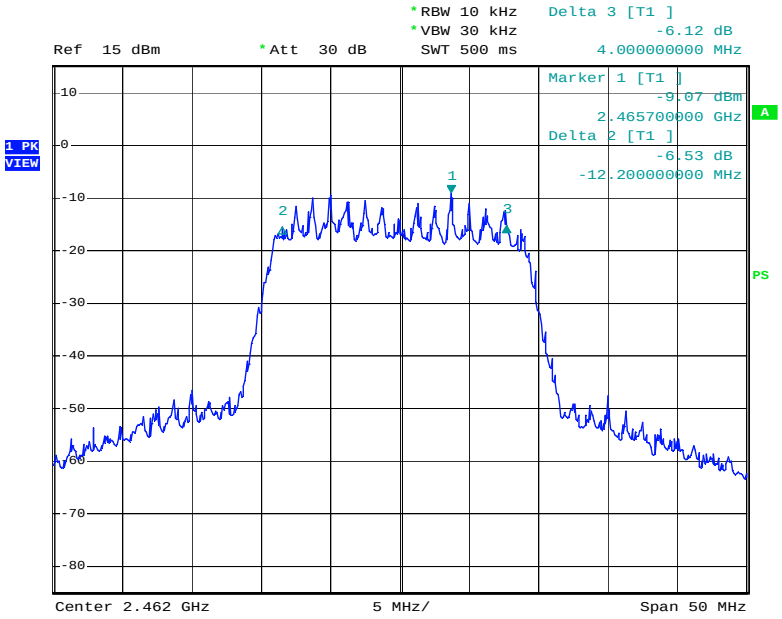
Date: 30.SEP.2009 12:35:17

802.11g 6Mbps, Middle Channel



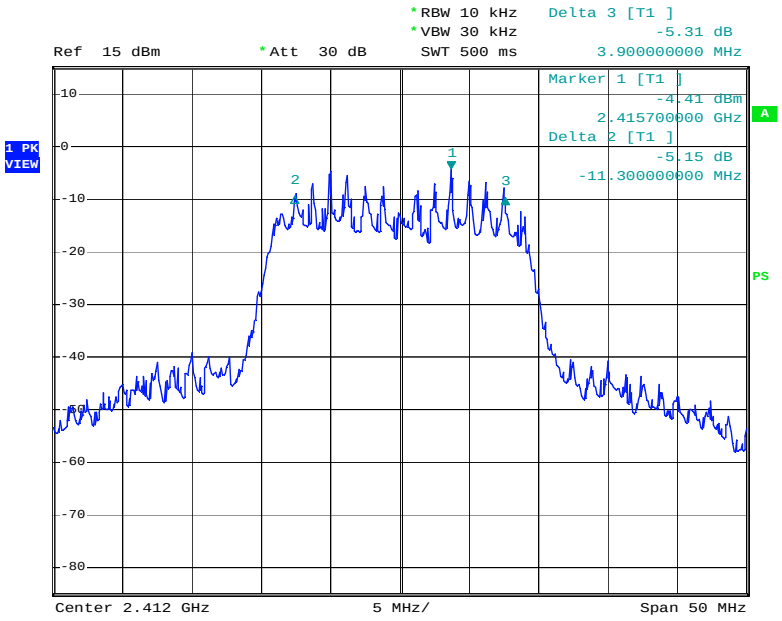
Date: 30.SEP.2009 12:43:57

802.11g 6Mbps, High Channel



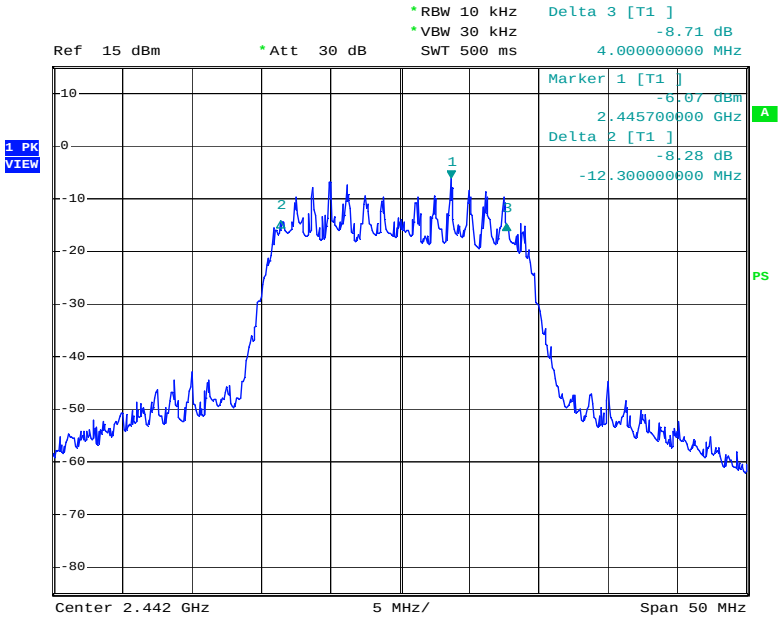
Date: 30.SEP.2009 12:47:20

802.11g 24Mbps, Low Channel



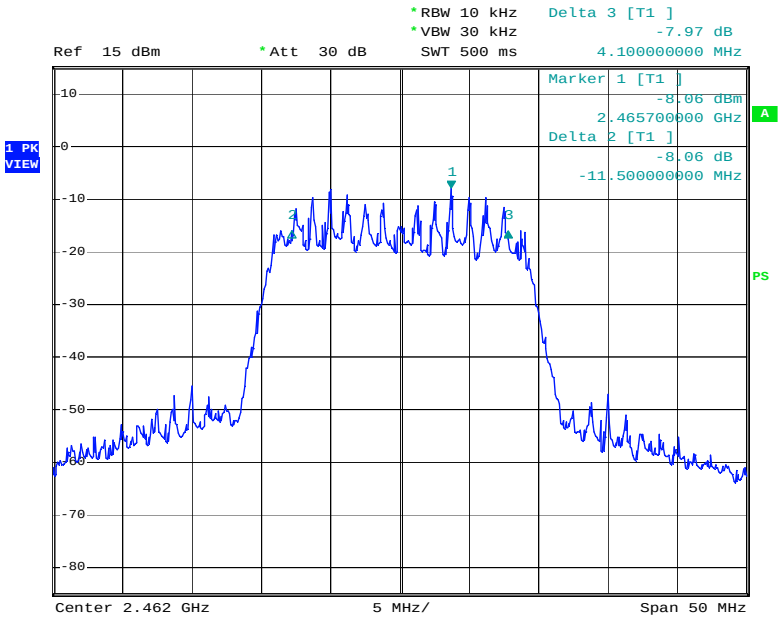
Date: 30.SEP.2009 13:13:19

802.11g 24Mbps, Middle Channel



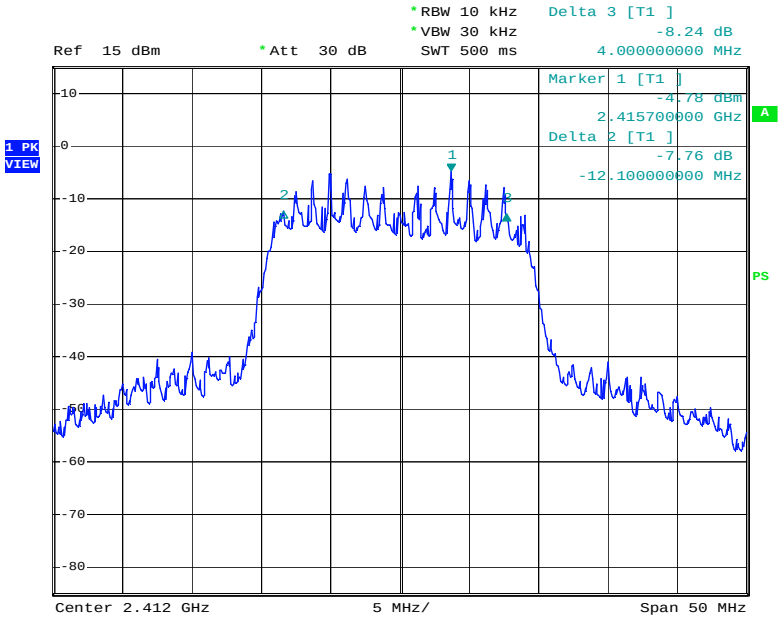
Date: 30.SEP.2009 13:05:04

802.11g 24Mbps, High Channel



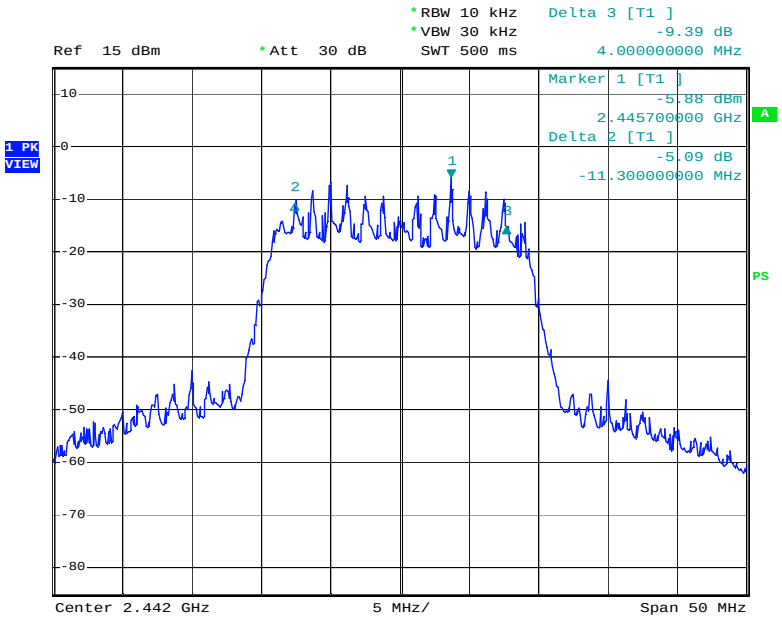
Date: 30.SEP.2009 12:55:14

802.11g 54Mbps, Low Channel



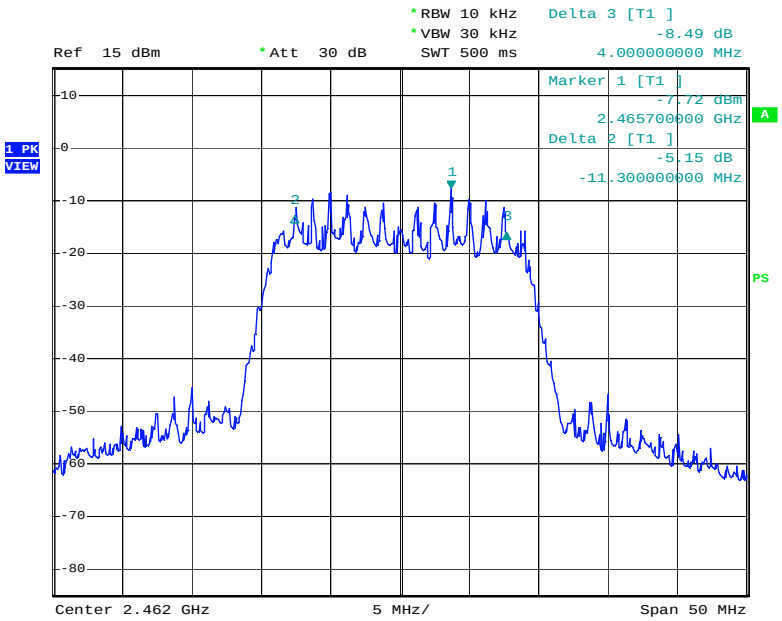
Date: 30.SEP.2009 13:26:04

802.11g 54Mbps, Middle Channel



Date: 30.SEP.2009 13:33:18

802.11g 54Mbps, High Channel



Date: 30.SEP.2009 13:40:39

5.1.4 100kHz Bandwidth of Frequency Band Edge

RESULT: **Passed**

Date of testing	:	2009-09-30
Test standard	:	FCC part 15.247(d)
Basic standard	:	ANSI C63.4: 2003
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

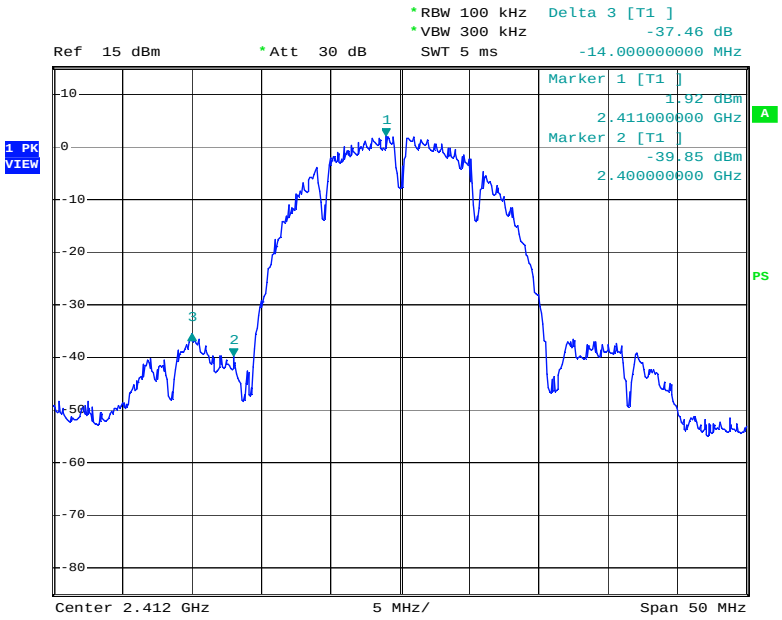
Test setup

Test Channel	:	Low/ High
Operation mode	:	A.1
Ambient temperature	:	22℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achived as well.

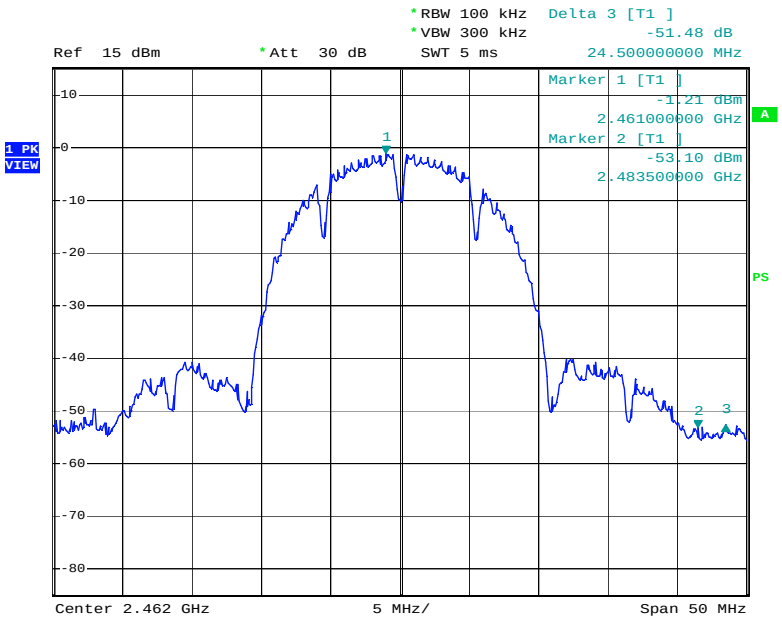
Test Plot of 100kHz Bandwidth of Frequency Band Edge

802.11b 1Mbps, Low Channel



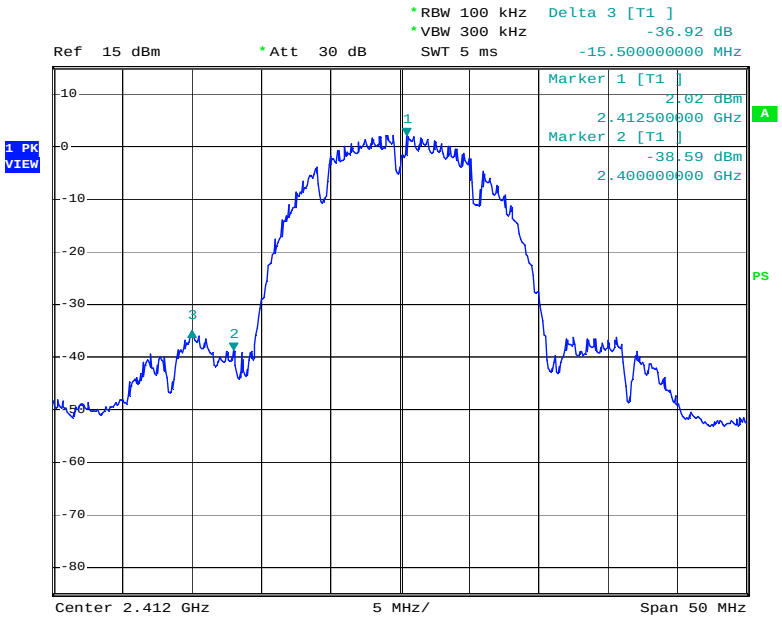
Date: 18.SEP.2009 19:13:16

802.11b 1Mbps, High Channel



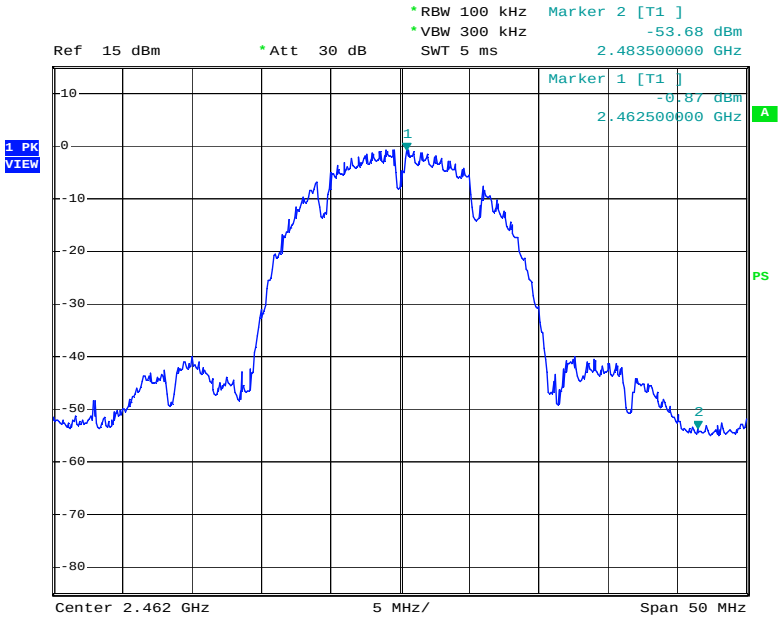
Date: 18.SEP.2009 19:29:46

802.11b 5.5Mbps, Low Channel



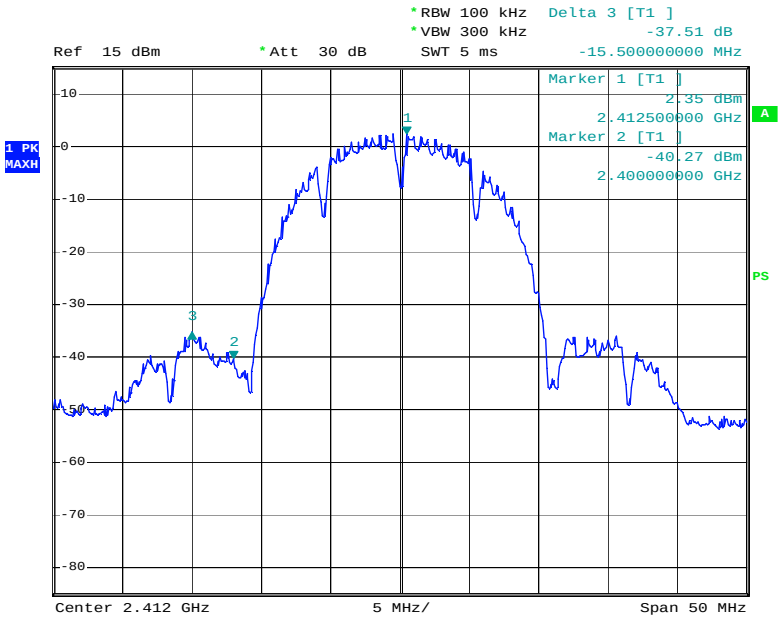
Date: 30.SEP.2009 11:49:57

802.11b 5.5Mbps, High Channel



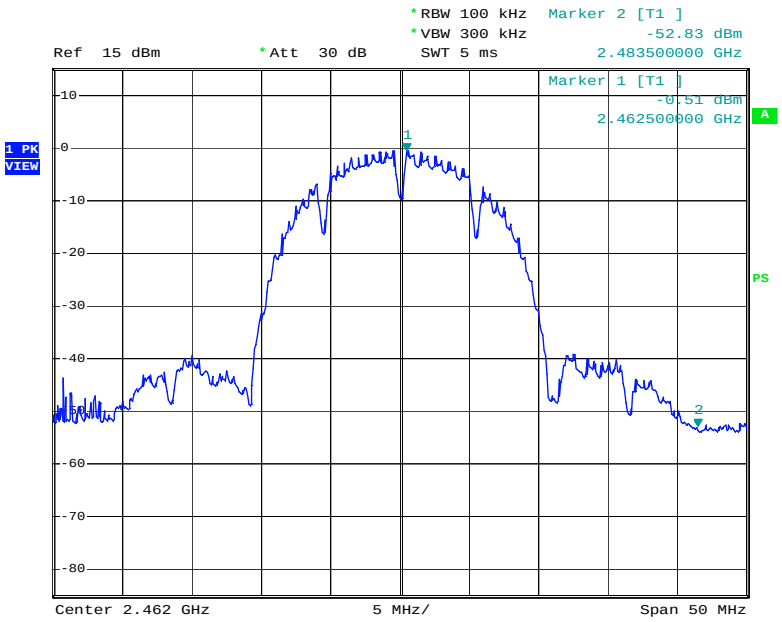
Date: 30.SEP.2009 11:47:43

802.11b 11Mbps, Low Channel



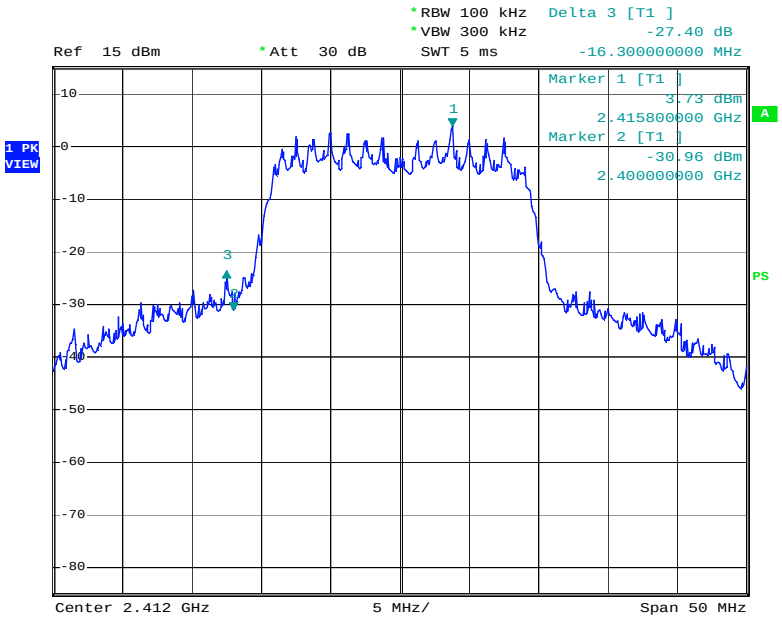
Date: 30.SEP.2009 12:30:47

802.11b 11Mbps, High Channel



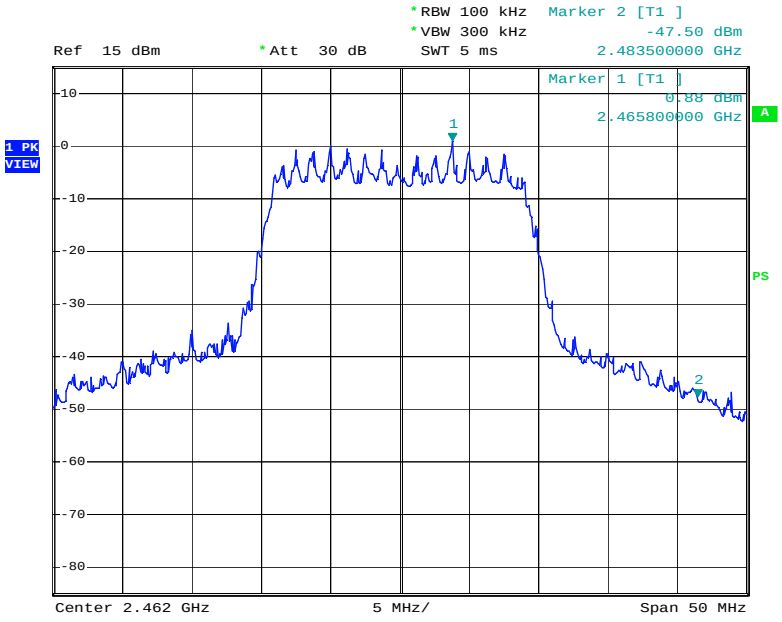
Date: 30.SEP.2009 12:29:27

802.11g 6Mbps, Low Channel



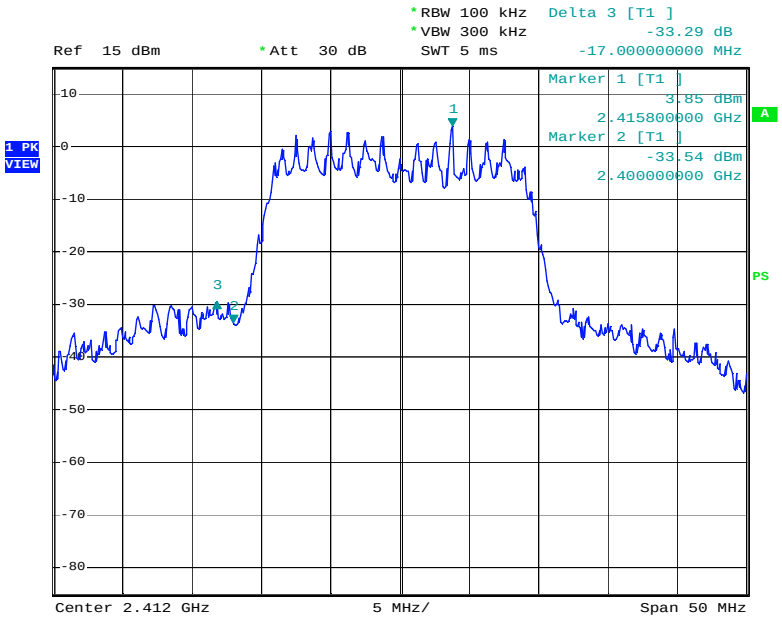
Date: 30.SEP.2009 12:32:06

802.11g 6Mbps, High Channel



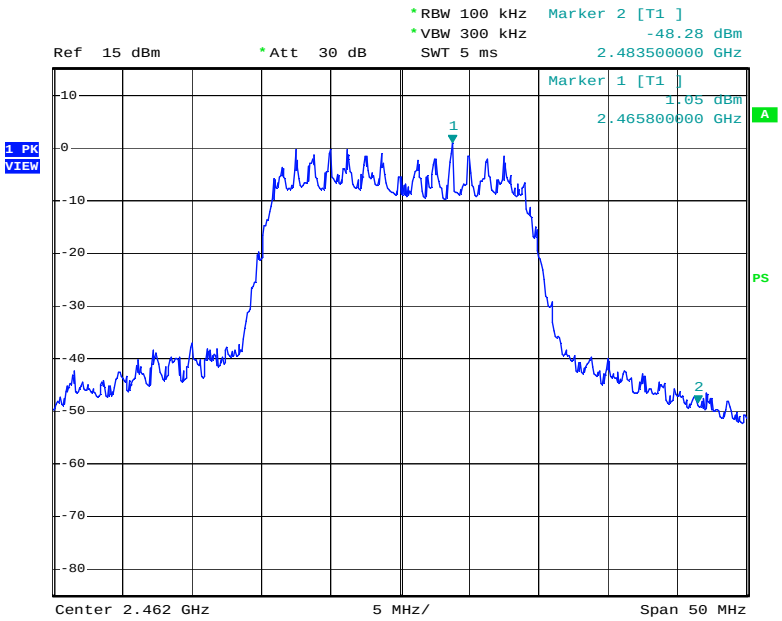
Date: 30.SEP.2009 12:51:25

802.11g 24Mbps, Low Channel



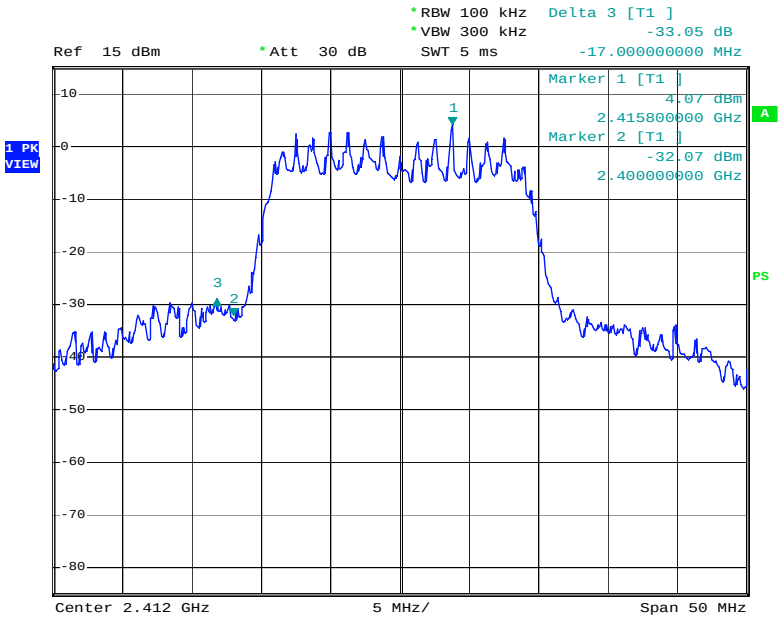
Date: 30.SEP.2009 13:23:15

802.11g 24Mbps, High Channel



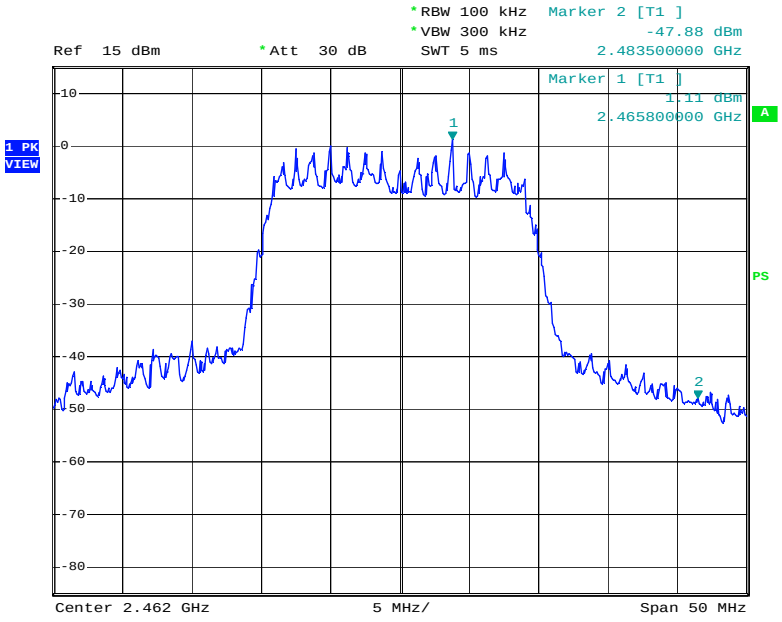
Date: 30.SEP.2009 12:52:40

802.11g 54Mbps, Low Channel



Date: 30.SEP.2009 13:24:24

802.11g 54Mbps, High Channel



Date: 30.SEP.2009 13:41:33

5.1.5 Power Spectral Density

RESULT: **Passed**

Date of testing	:	2009-09-30
Test standard	:	FCC part 15.247(e)
Basic standard	:	ANSI C63.4: 2003
Limits	:	8.0 dBm (in any 3kHz band)
Kind of test site		Shield room

Test Setup

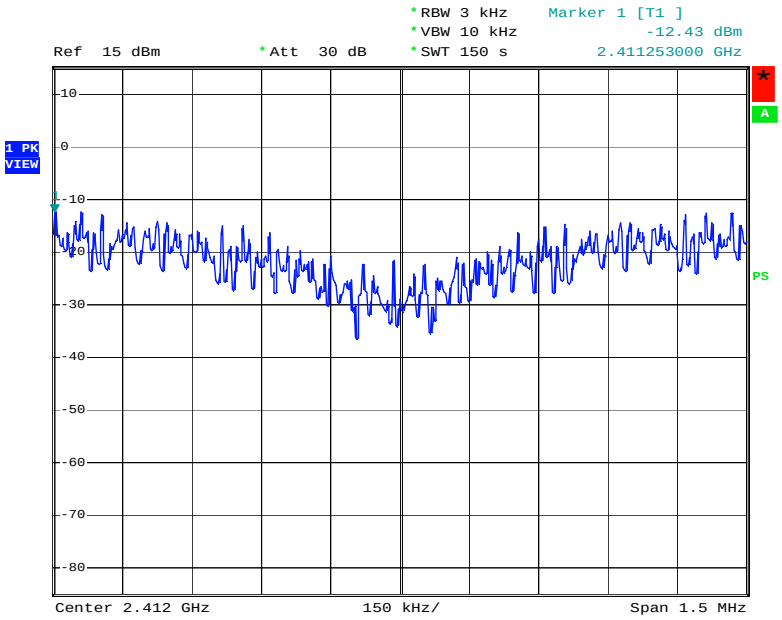
Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1
Ambient temperature	:	22℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Table 19: Test result of power spectral density

Maximum e.i.r.p. spectral density			
Low Channel (dBm/3kHz)	Middle Channel (dBm/3kHz)	High Channel (dBm/3kHz)	Limit (dBm/3kHz)
802.11b 1Mbps			
-12.43	-14.17	-15.42	8
802.11b 5.5Mbps			
-12.21	-13.85	-15.05	8
802.11g 11Mbps			
-11.87	-13.54	-14.70	8
802.11g 6Mbps			
-15.60	-17.17	-18.36	8
802.11g 24Mbps			
-15.63	-17.44	-18.63	8
802.11g 54Mbps			
-15.86	-17.45	-18.53	8

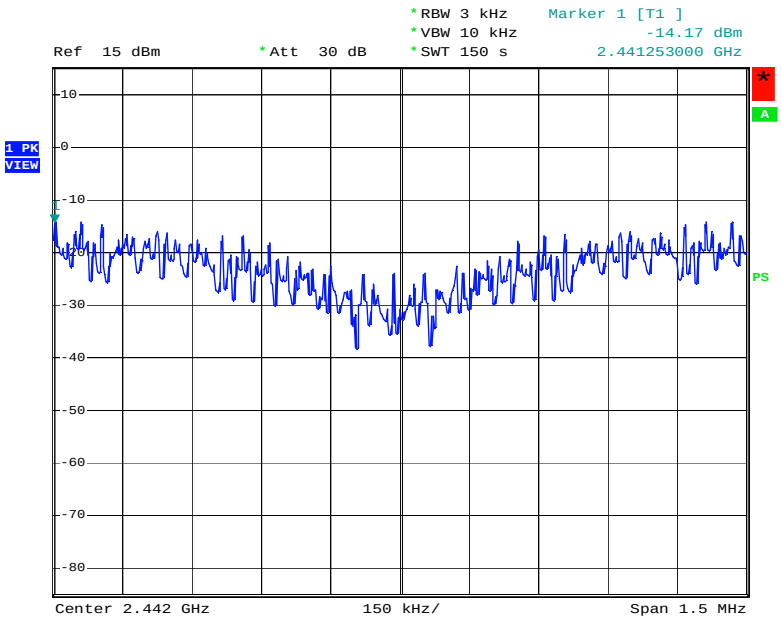
Test Plot of Power Spectral Density

802.11b 1Mbps, Low Channel



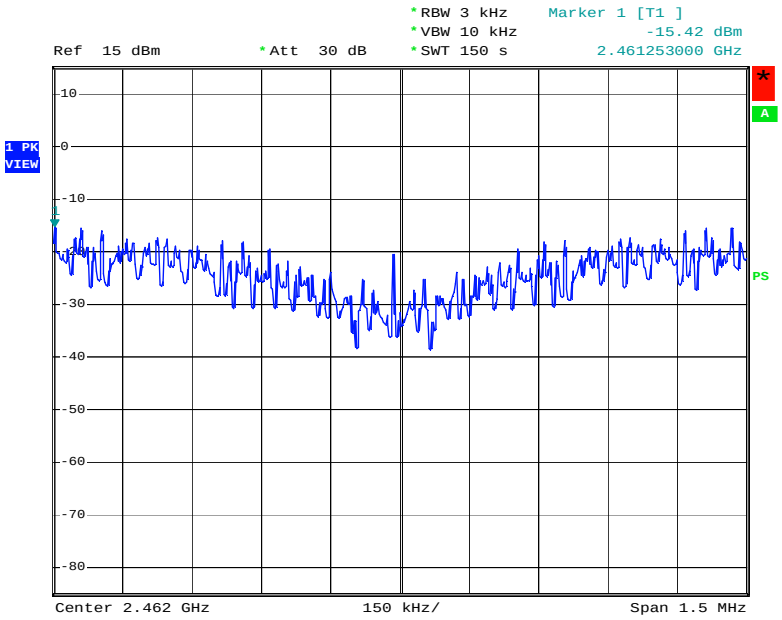
Date: 18.SEP.2009 19:20:58

802.11b 1Mbps, Middle Channel



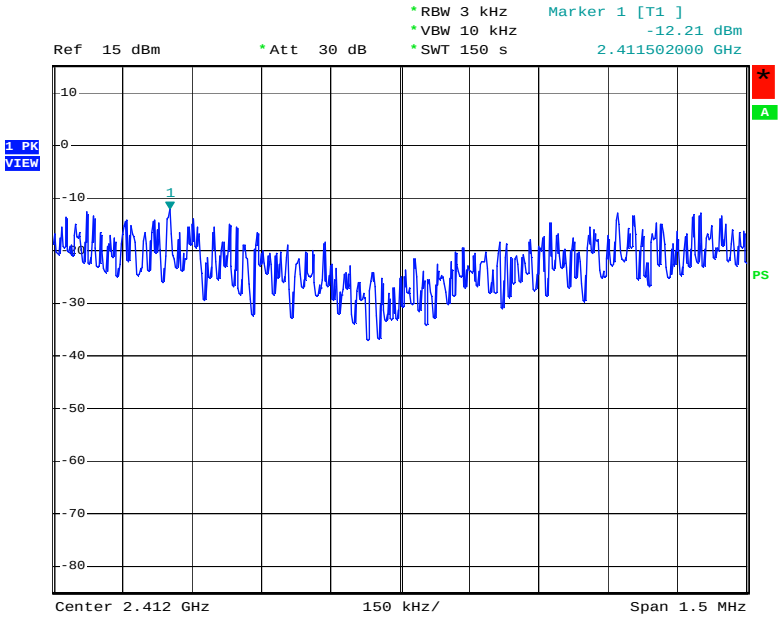
Date: 18.SEP.2009 19:24:25

802.11b 1Mbps, High Channel



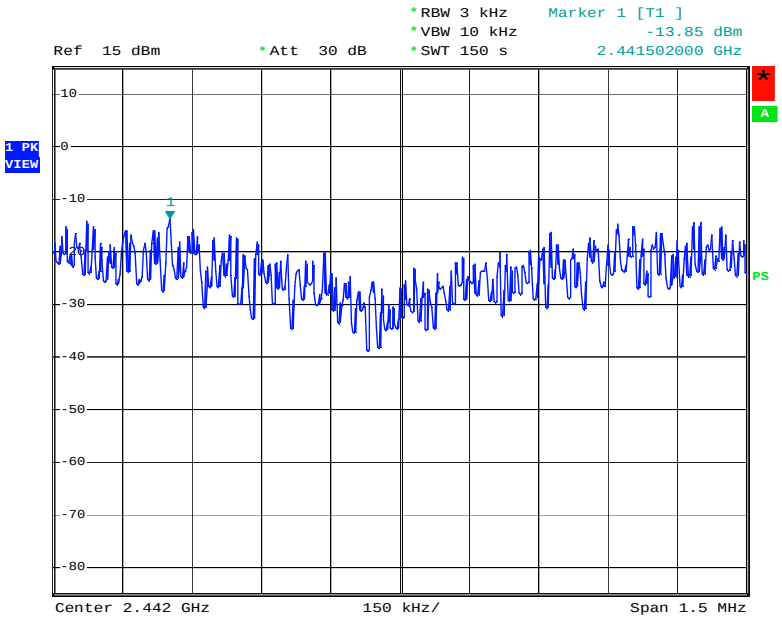
Date: 18.SEP.2009 19:34:26

802.11b 5.5Mbps, Low Channel



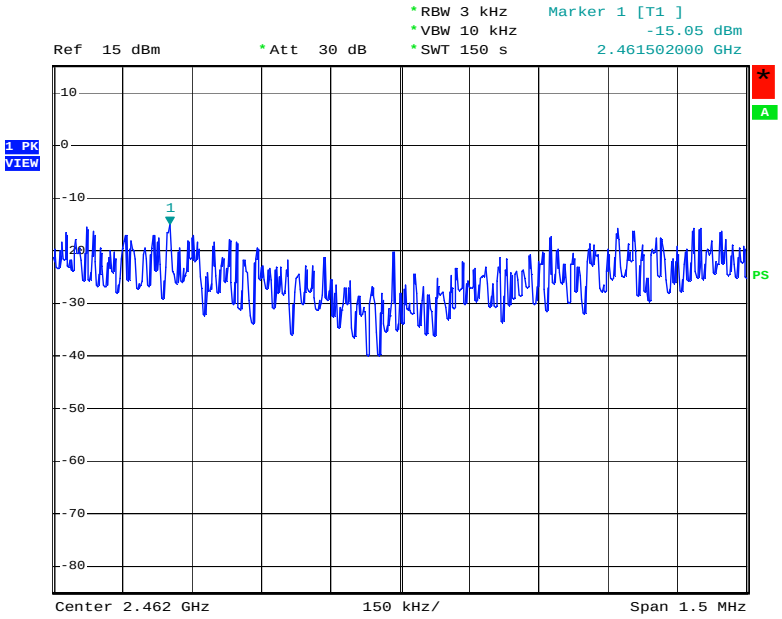
Date: 30.SEP.2009 11:56:34

802.11b 5.5Mbps, Middle Channel



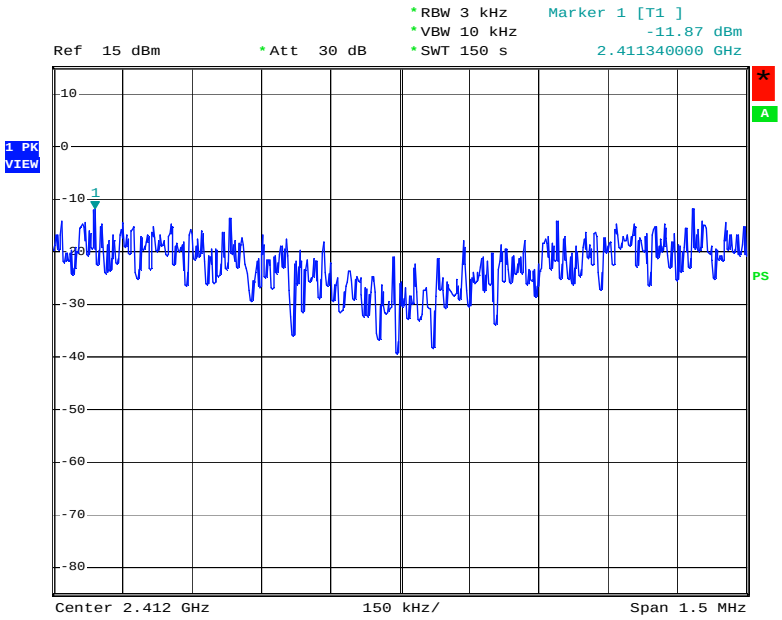
Date: 30.SEP.2009 13:53:11

802.11b 5.5Mbps, High Channel



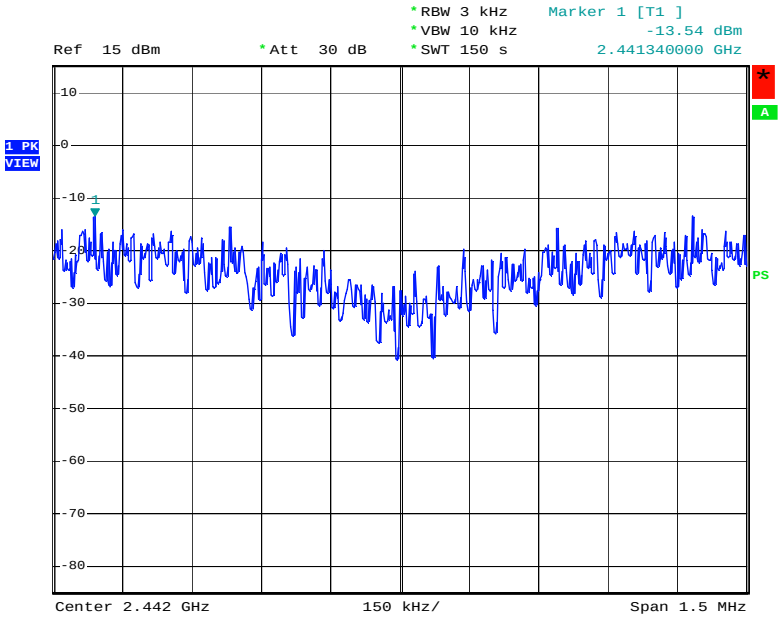
Date: 30.SEP.2009 11:43:34

802.11b 11Mbps, Low Channel



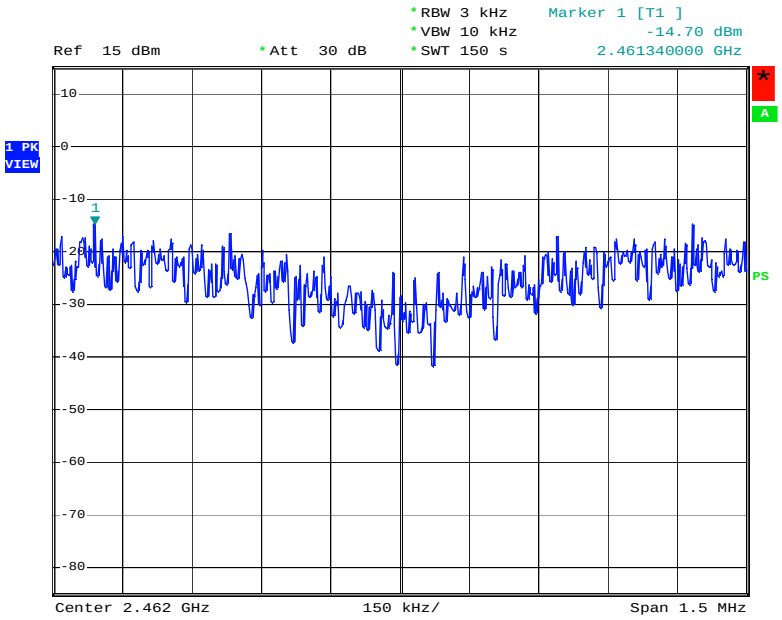
Date: 30.SEP.2009 12:16:34

802.11b 11Mbps, Middle Channel



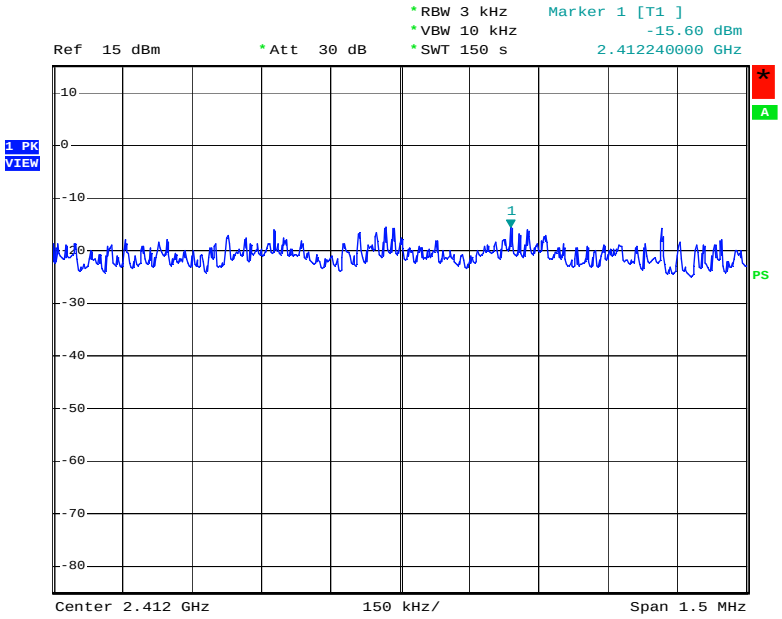
Date: 30.SEP.2009 12:13:31

802.11b 11Mbps, High Channel



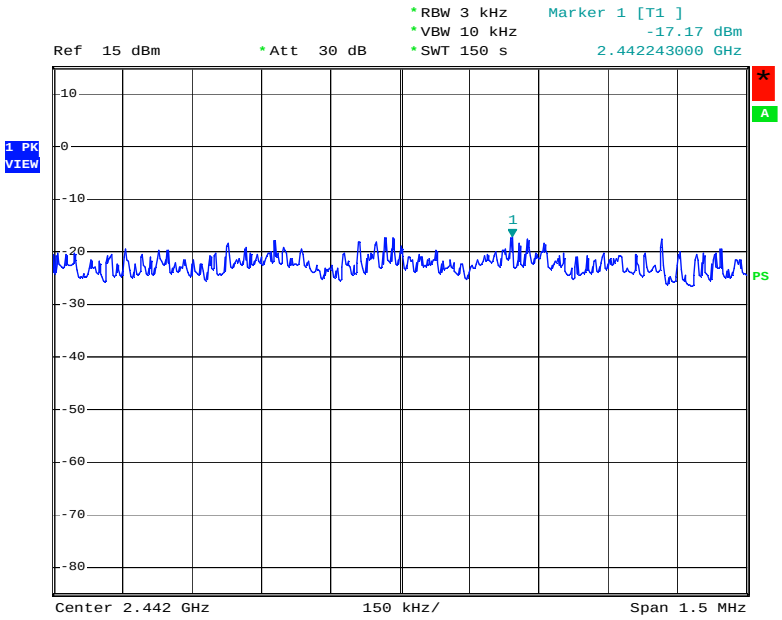
Date: 30.SEP.2009 12:27:21

802.11g 6Mbps, Low Channel



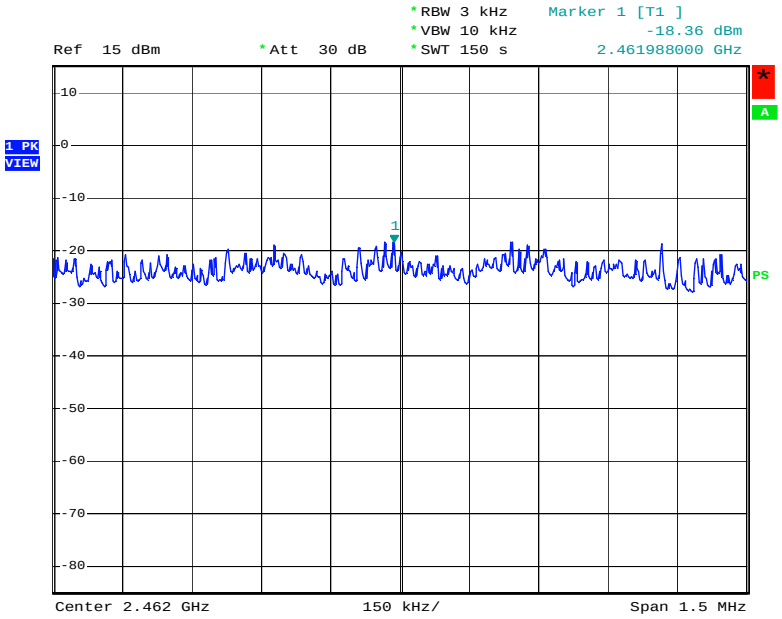
Date: 30.SEP.2009 12:38:43

802.11g 6Mbps, Middle Channel



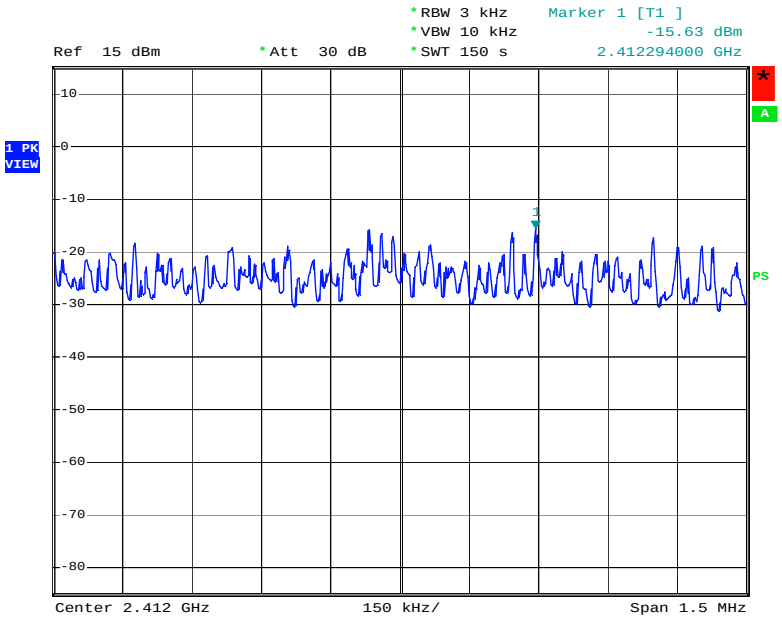
Date: 30.SEP.2009 12:42:41

802.11g 6Mbps, High Channel



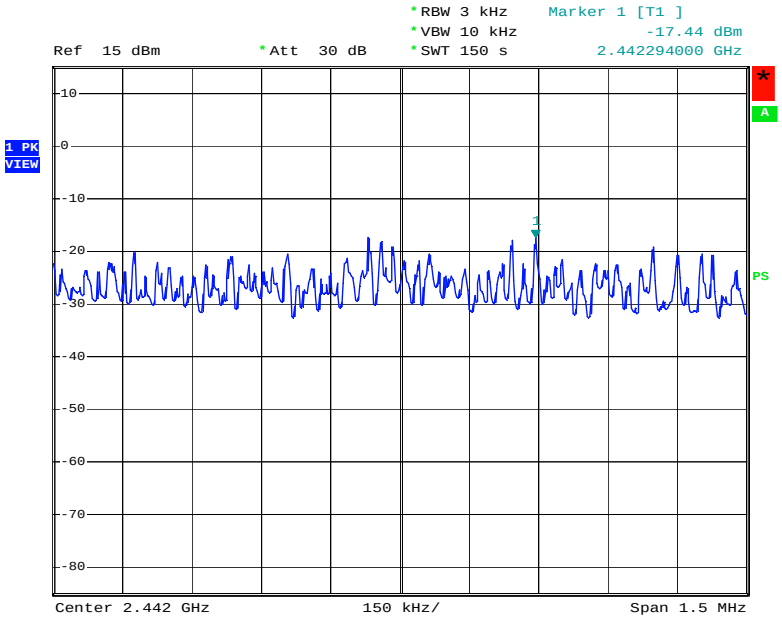
Date: 30.SEP.2009 12:50:29

802.11g 24Mbps, Low Channel



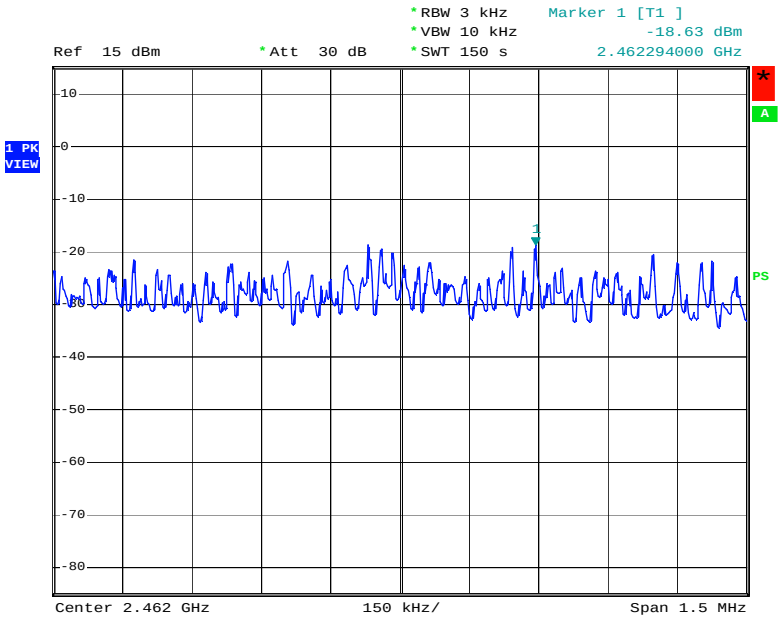
Date: 30.SEP.2009 13:22:16

802.11g 24Mbps, Middle Channel



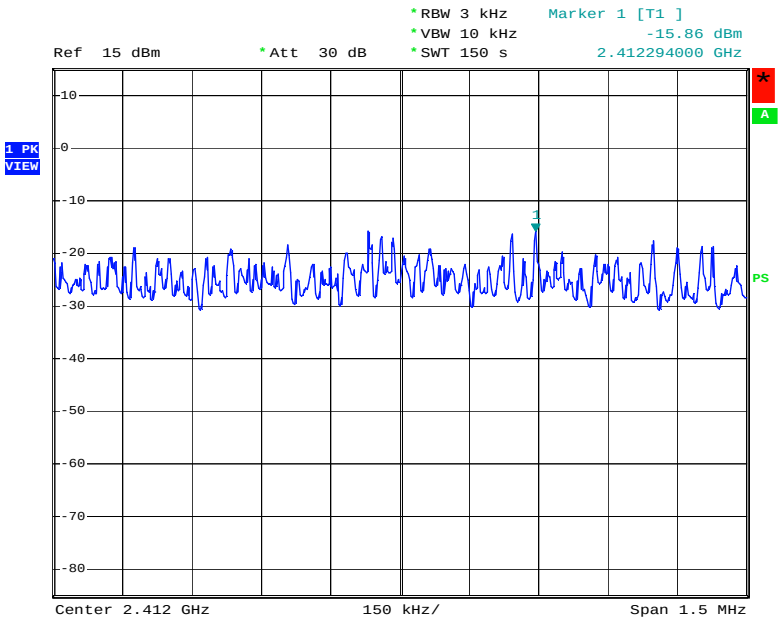
Date: 30.SEP.2009 13:01:52

802.11g 24Mbps, High Channel



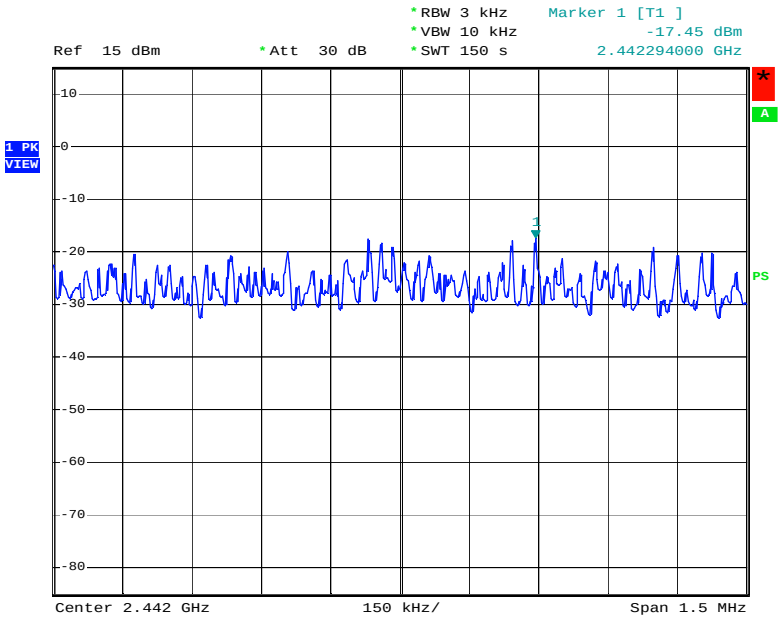
Date: 30.SEP.2009 12:58:28

802.11g 54Mbps, Low Channel



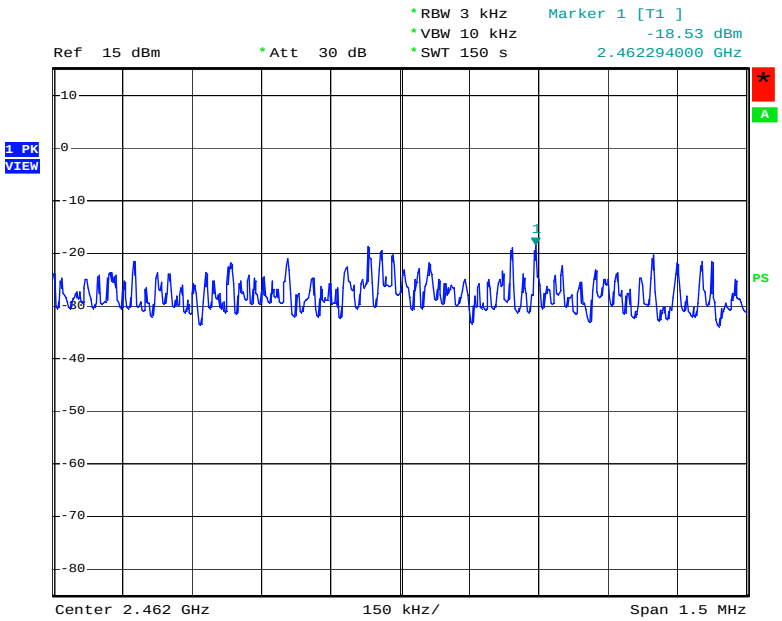
Date: 30.SEP.2009 13:29:23

802.11g 54Mbps, Middle Channel



Date: 30.SEP.2009 13:36:20

802.11g 54Mbps, High Channel



Date: 30.SEP.2009 13:39:28

5.1.6 Spurious Emission

RESULT: **Passed**

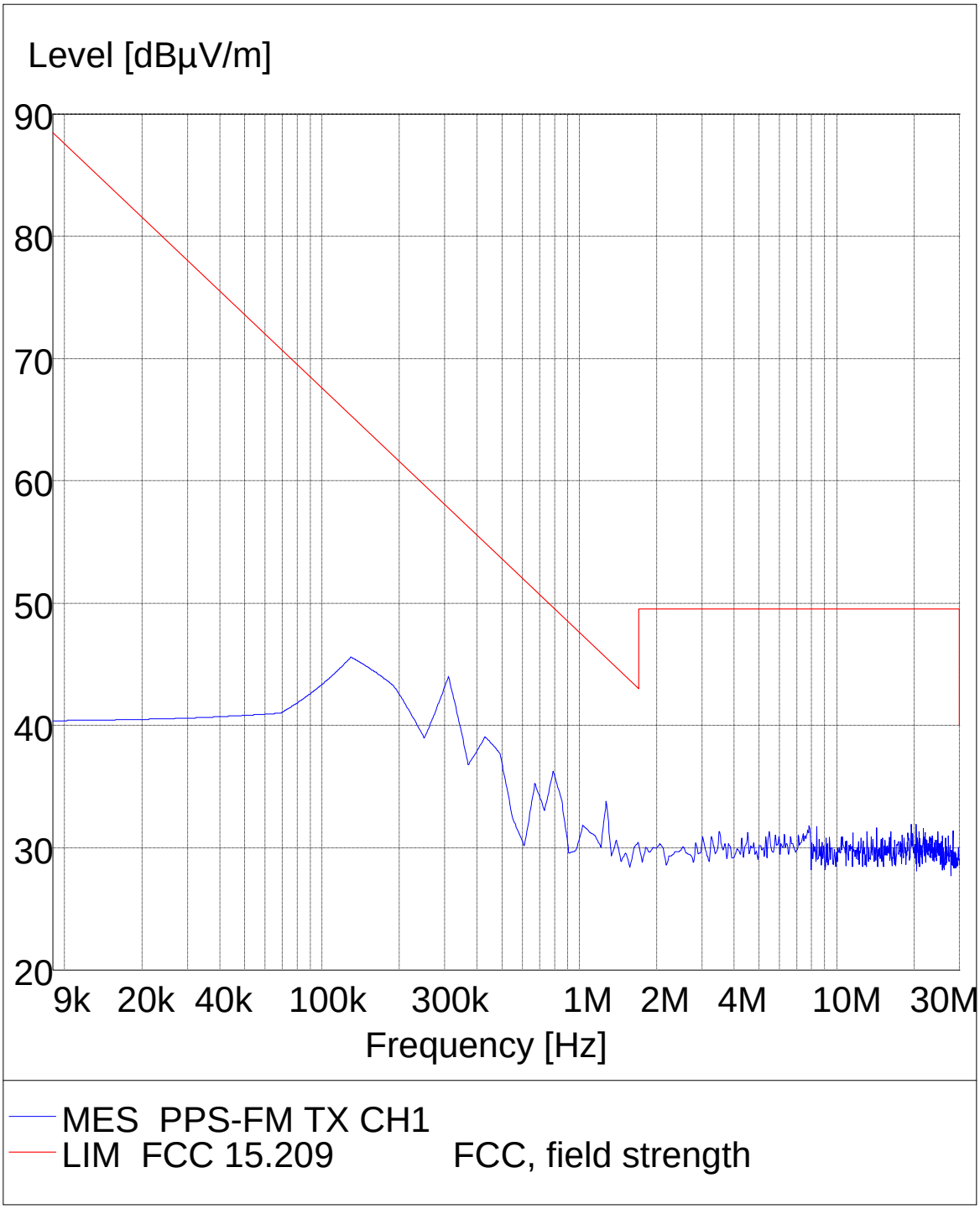
Date of testing	:	2009-09-25
Test standard	:	FCC part 15.209(a), 15.205(b)
Basic standard	:	ANSI C63.4: 2003
Limits	:	Refer to FCC part 15.209(a) In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Test was performed on all test modes, only the data of worst case was shown.
Refer to following test curves.

Test Plot of Spurious emission of A.1.a – (9kHz – 30MHz)



Test Plot of Spurious emission of A.1.a – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

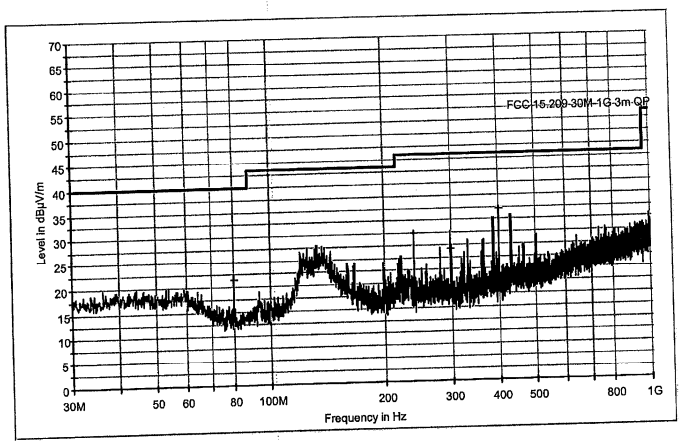
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.a
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	21.5	10.4	18.5	40.0	H
240.000000	30.1	13.4	15.9	46.0	H
298.000000	26.8	14.9	19.2	46.0	H
401.300000	34.5	17.3	11.5	46.0	H

Date: 9/24/2009 - Time: 4:42:56 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: WLC 2009 9 25 Checked

Test Plot of Spurious emission of A.1.a – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

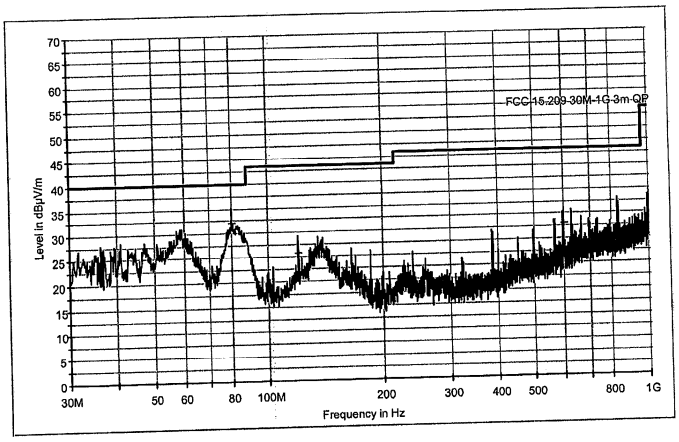
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.a
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	32.1	10.4	7.9	40.0	V
120.000000	25.7	13.6	17.8	43.5	V
598.600000	30.5	21.5	15.5	46.0	V
828.800000	29.1	24.8	16.9	46.0	V

Date: 9/24/2009 - Time: 4:46:20 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.a – Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

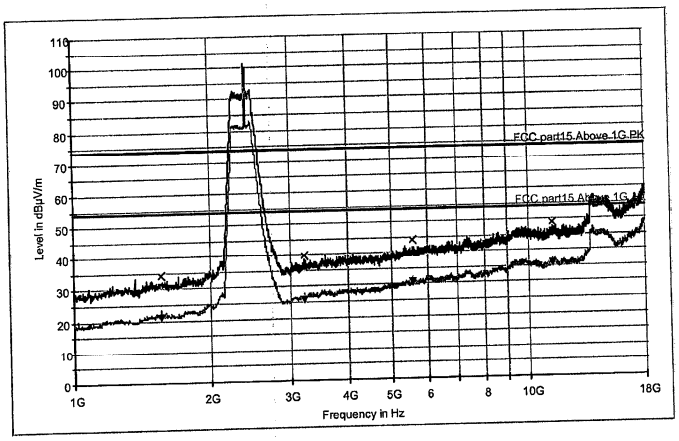
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.a
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/24/2009 - Time: 7:23:30 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	34.0	40.0	74.0	H	-14.1
3219.000000	39.6	34.4	74.0	H	-8.9
5560.000000	44.1	29.9	74.0	H	-3.9
11254.500000	49.0	25.0	74.0	H	5.6

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	21.0	33.0	54.0	H	-14.1
3219.000000	25.9	28.1	54.0	H	-8.9
5560.000000	30.6	23.4	54.0	H	-3.9
11254.500000	35.6	18.4	54.0	H	5.6

Date: 9/24/2009 - Time: 7:23:30 PM

Tested by: DW 2009.9.25 Checked

Reviewed by:

Test Plot of Spurious emission of A.1.a – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

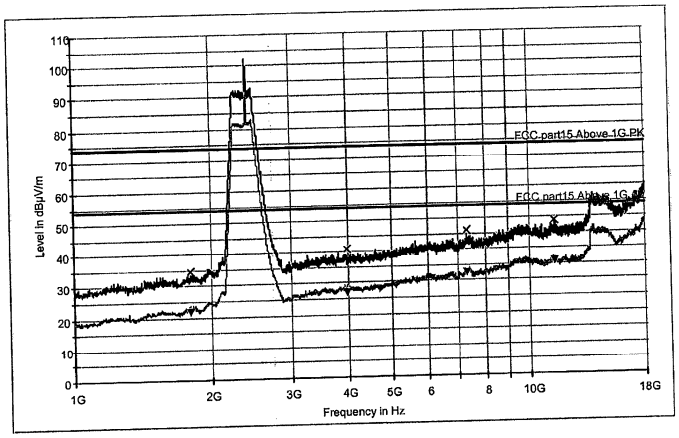
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.a
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/24/2009 - Time: 7:28:37 PM

Tested by: DW 2009 9 25 Checked

Reviewed by:

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1799.000000	34.7	39.3	74.0	V	-13.1
3983.000000	40.7	33.3	74.0	V	-6.9
7307.000000	45.9	28.1	74.0	V	0.4
11391.000000	49.0	25.0	74.0	V	5.6

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1799.000000	21.7	32.3	54.0	V	-13.1
3983.000000	27.0	27.0	54.0	V	-6.9
7307.000000	32.5	21.5	54.0	V	0.4
11391.000000	35.8	18.2	54.0	V	5.6

Date: 9/24/2009 - Time: 7:28:37 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.a – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

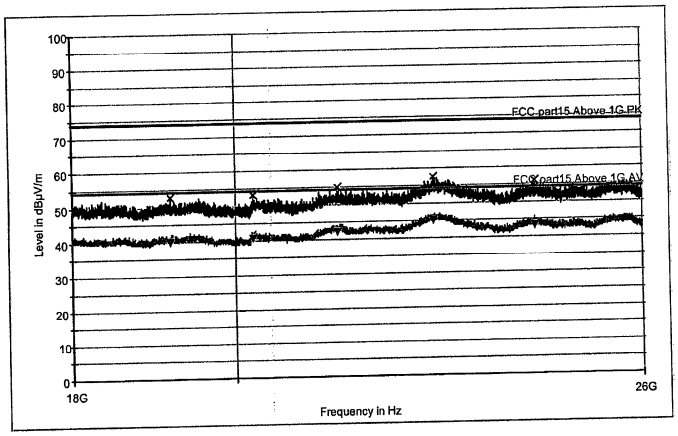
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.a
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 8:31:19 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB μV/m)	Corr. (dB)	Margin (dB)	Limit (dB μV/m)	Polarity
19181.000000	52.8	6.4	21.2	74.0	H
20224.000000	53.1	6.1	20.9	74.0	H
21372.000000	54.9	7.6	19.1	74.0	H
22731.000000	57.6	10.5	16.4	74.0	H
24255.000000	56.1	7.6	17.9	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dB μV/m)	Corr. (dB)	Margin (dB)	Limit (dB μV/m)	Polarity
19181.000000	40.1	6.4	13.9	54.0	H
20224.000000	40.9	6.1	13.1	54.0	H
21372.000000	42.3	7.6	11.7	54.0	H
22731.000000	45.0	10.5	9.0	54.0	H
24255.000000	43.4	7.6	10.6	54.0	H

Date: 9/24/2009 - Time: 8:31:19 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.a – Vertical (18GHz – 26GHz)

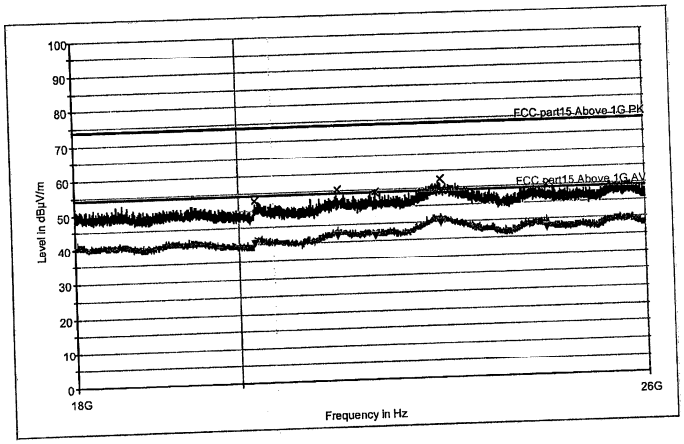
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.a
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1	
Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 8:51:08 PM

Tested by: DW 2009.9.25 Checked Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
20215.000000	52.6	6.1	21.4	74.0	V
21338.000000	55.4	7.5	18.6	74.0	V
21852.000000	54.3	7.9	19.7	74.0	V
22785.000000	57.3	10.3	16.7	74.0	V
24396.000000	55.0	7.7	19.0	74.0	V

Limit and Margin AV

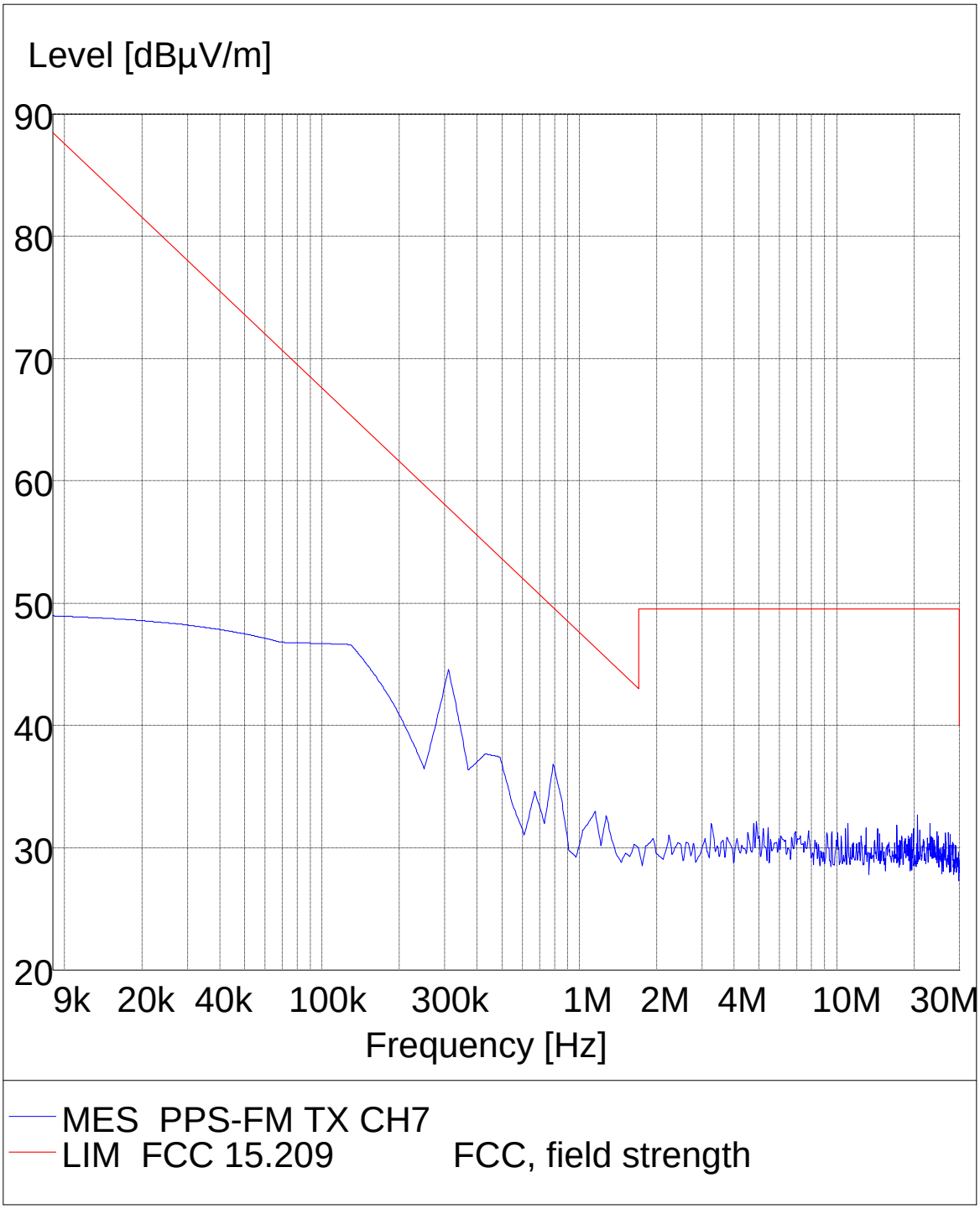
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
20215.000000	40.4	6.1	13.6	54.0	V
21338.000000	41.9	7.5	12.1	54.0	V
21852.000000	41.6	7.9	12.4	54.0	V
22785.000000	44.9	10.3	9.1	54.0	V
24396.000000	42.5	7.7	11.5	54.0	V

Date: 9/24/2009 - Time: 8:51:08 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: 2009.9.25 Checked

Test Plot of Spurious emission of A.1.b – (9kHz – 30MHz)



Test Plot of Spurious emission of A.1.b – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

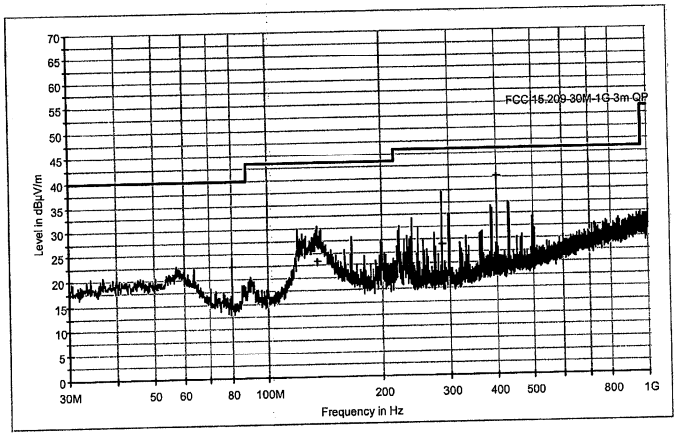
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.b
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	22.4	10.4	17.6	40.0	H
134.500000	23.2	14.5	20.3	43.5	H
288.000000	26.5	14.7	19.5	46.0	H
401.400000	40.1	17.3	5.9	46.0	H

Date: 9/24/2009 - Time: 4:54:56 PM

Tested by: DW 2009.9.25

Reviewed by: WLC 2009.9.25

Test Plot of Spurious emission of A.1.b – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

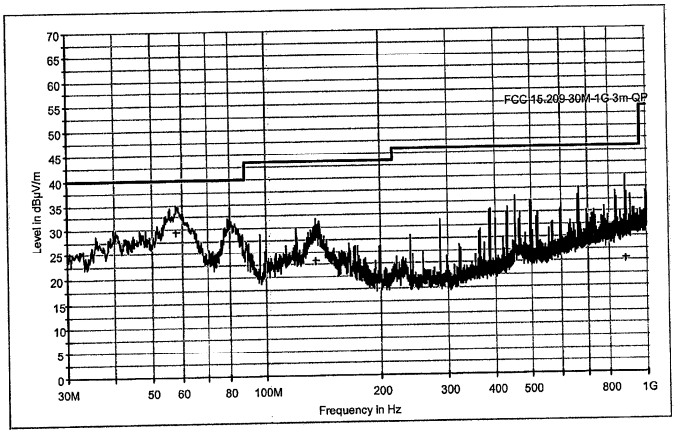
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.b
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	Quasi-Peak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
58.000000	29.6	13.8	10.4	40.0	V
135.000000	23.1	14.6	20.4	43.5	V
664.200000	26.5	22.8	19.5	46.0	V
882.550000	22.9	25.4	23.1	46.0	V

Date: 9/24/2009 - Time: 4:51:17 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: 2009.9.25 Checked

Test Plot of Spurious emission of A.1.b –Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

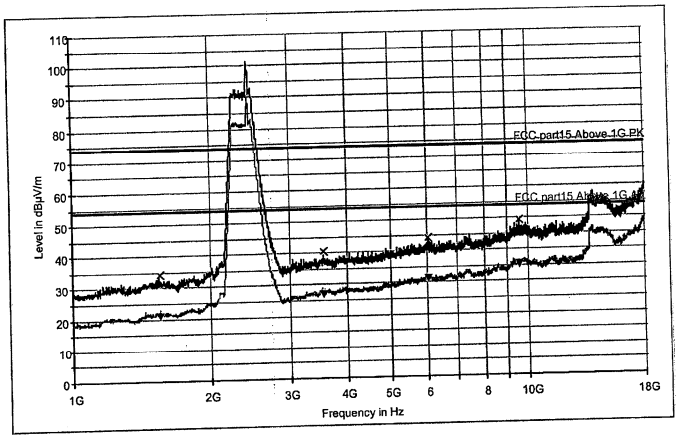
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.b
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/24/2009 - Time: 7:16:21 PM

Tested by: DW 2009 9 25 Checked Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	34.3	39.7	74.0	H	-14.1
3550.000000	40.5	33.5	74.0	H	-7.3
6030.000000	44.2	29.8	74.0	H	-3.1
9561.000000	49.1	24.9	74.0	H	5.3

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	21.0	33.0	54.0	H	-14.1
3550.000000	27.2	26.8	54.0	H	-7.3
6030.000000	31.2	22.8	54.0	H	-3.1
9561.000000	35.3	18.7	54.0	H	5.3

Date: 9/24/2009 - Time: 7:16:21 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.b –Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

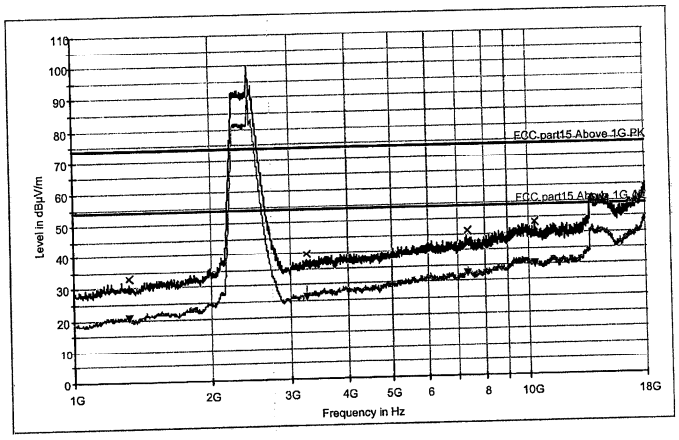
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.b
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/24/2009 - Time: 7:09:54 PM

Tested by: DW 2009 9 25 Checked Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB μV/m)	Margin (dB)	Limit (dB μV/m)	Polarity	Corr. (dB)
1320.000000	33.1	40.9	74.0	V	-15.2
3248.000000	39.6	34.4	74.0	V	-8.5
7358.000000	46.3	27.7	74.0	V	0.5
10361.000000	48.4	25.6	74.0	V	5.2

Limit and Margin AV

Frequency (MHz)	Average (dB μV/m)	Margin (dB)	Limit (dB μV/m)	Polarity	Corr. (dB)
1320.000000	20.5	33.5	54.0	V	-15.2
3248.000000	26.2	27.8	54.0	V	-8.5
7358.000000	32.8	21.2	54.0	V	0.5
10361.000000	35.1	18.9	54.0	V	5.2

Date: 9/24/2009 - Time: 7:09:54 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.b – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

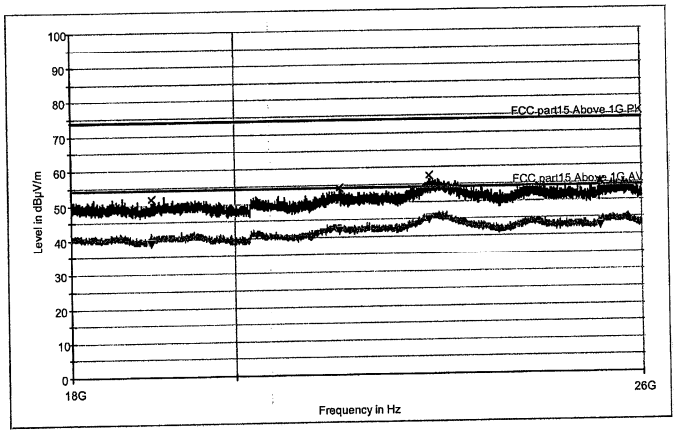
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.b
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 8:42:59 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
18944.000000	51.5	6.1	22.5	74.0	H
21407.000000	54.2	7.6	19.8	74.0	H
22680.000000	57.5	10.5	16.5	74.0	H
25322.000000	55.4	8.8	18.6	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
18944.000000	39.0	6.1	15.0	54.0	H
21407.000000	42.0	7.6	12.0	54.0	H
22680.000000	44.6	10.5	9.4	54.0	H
25322.000000	42.8	8.8	11.2	54.0	H

Date: 9/24/2009 - Time: 8:42:59 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.b – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

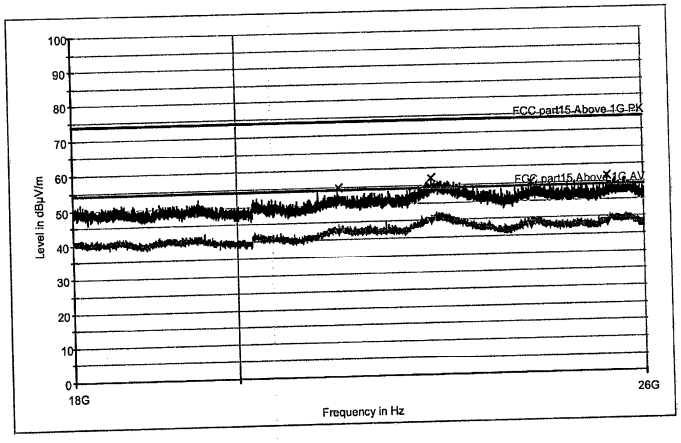
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.b
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 8:39:14 PM

Tested by: 2009.9.25 Checked

Reviewed by: 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
21359.000000	54.7	7.5	19.3	74.0	V
22681.000000	56.9	10.5	17.1	74.0	V
24179.000000	55.3	7.6	18.7	74.0	V
25392.000000	56.6	8.9	17.4	74.0	V

Limit and Margin AV

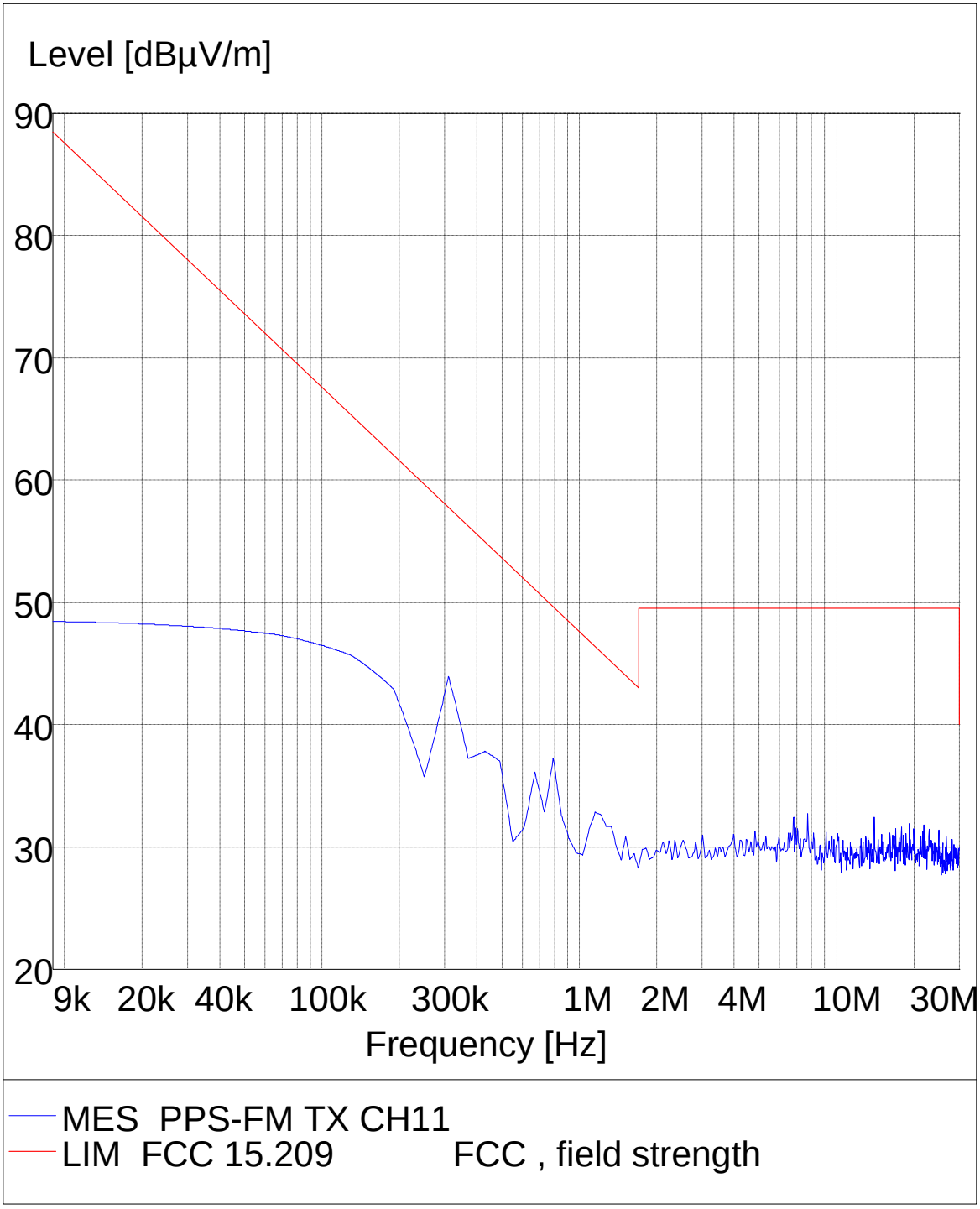
Frequency (MHz)	Average (dBµV/m)	Corr (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
21359.000000	42.1	7.5	11.9	54.0	V
22681.000000	44.7	10.5	9.3	54.0	V
24179.000000	43.1	7.6	10.9	54.0	V
25392.000000	43.4	8.9	10.6	54.0	V

Date: 9/24/2009 - Time: 8:39:14 PM

Tested by: Checked

Reviewed by: Checked

Test Plot of Spurious emission of A.1.c – (9kHz – 30MHz)



Test Plot of Spurious emission of A.1.c – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

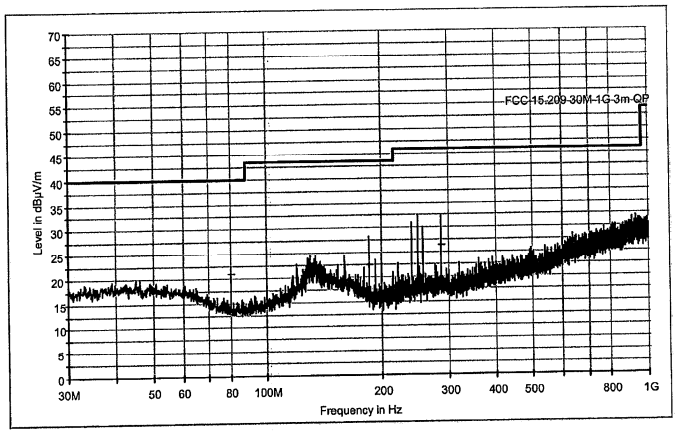
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.c
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	21.0	10.4	19.0	40.0	H
185.500000	22.4	12.7	21.1	43.5	H
249.550000	25.1	13.5	20.9	46.0	H
288.000000	26.5	14.7	19.5	46.0	H

Date: 9/24/2009 - Time: 5:02:33 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: 2009.9.25

Test Plot of Spurious emission of A.1.c – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

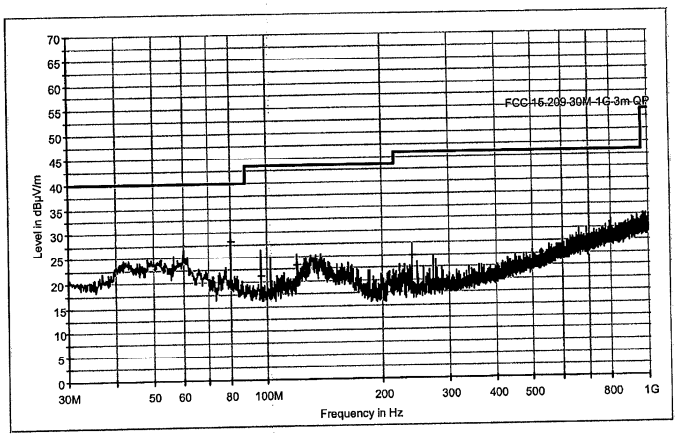
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.c
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	28.3	10.4	11.7	40.0	V
96.000000	21.3	11.0	22.2	43.5	V
120.000000	23.3	13.6	20.2	43.5	V
240.000000	25.1	13.4	20.9	46.0	V

Date: 9/24/2009 - Time: 5:08:58 PM Tested by: D W 2009 9 25 Checked Reviewed:

Test Plot of Spurious emission of A.1.c – Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

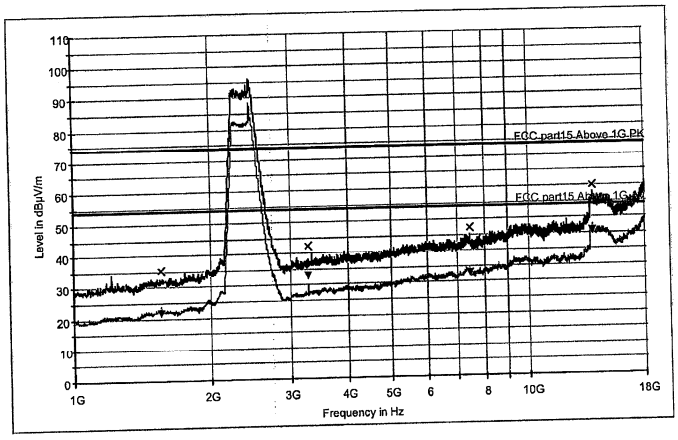
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.c
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/24/2009 - Time: 5:58:49 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	35.2	38.8	74.0	H	-14.1
3282.500000	42.3	31.7	74.0	H	-8.2
7430.000000	47.1	26.9	74.0	H	0.9
13816.500000	59.8	14.2	74.0	H	9.3

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	22.0	32.0	54.0	H	-14.1
3282.500000	33.1	20.9	54.0	H	-8.2
7430.000000	32.9	21.1	54.0	H	0.9
13816.500000	45.8	8.2	54.0	H	9.3

Date: 9/24/2009 - Time: 5:58:49 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.c – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

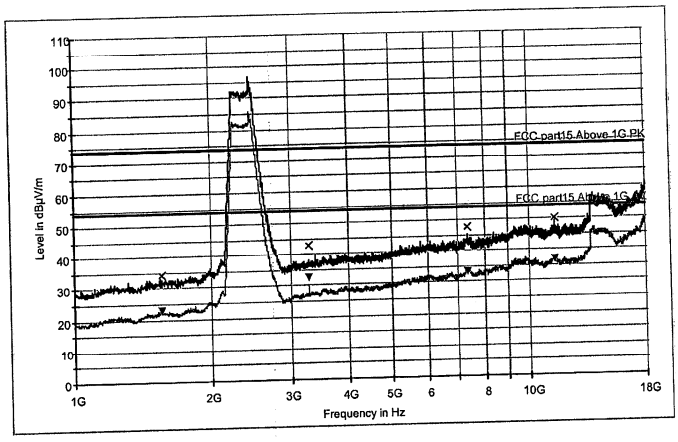
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.c
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/24/2009 - Time: 6:59:03 PM

Tested by: DY 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	Max Peak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	34.1	39.9	74.0	V	-14.1
3282.500000	42.8	31.2	74.0	V	-8.2
7331.000000	47.8	26.2	74.0	V	0.5
11338.000000	50.2	23.8	74.0	V	5.3

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
1559.000000	23.1	30.9	54.0	V	-14.1
3282.500000	32.7	21.3	54.0	V	-8.2
7331.000000	33.4	20.6	54.0	V	0.5
11338.000000	36.9	17.1	54.0	V	5.3

Date: 9/24/2009 - Time: 6:59:03 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.c – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

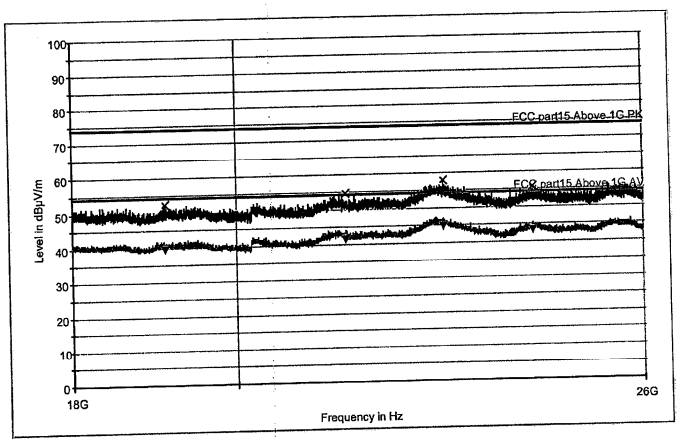
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.c
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 8:47:32 PM

Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
19100.000000	52.2	6.3	21.8	74.0	H
21466.000000	54.5	7.5	19.5	74.0	H
22851.000000	57.7	10.1	16.3	74.0	H
24229.000000	55.7	7.6	18.3	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
19100.000000	39.6	6.3	14.4	54.0	H
21466.000000	41.7	7.5	12.3	54.0	H
22851.000000	44.8	10.1	9.2	54.0	H
24229.000000	43.3	7.6	10.7	54.0	H

Date: 9/24/2009 - Time: 8:47:32 PM

Tested by: _____

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.1.c – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

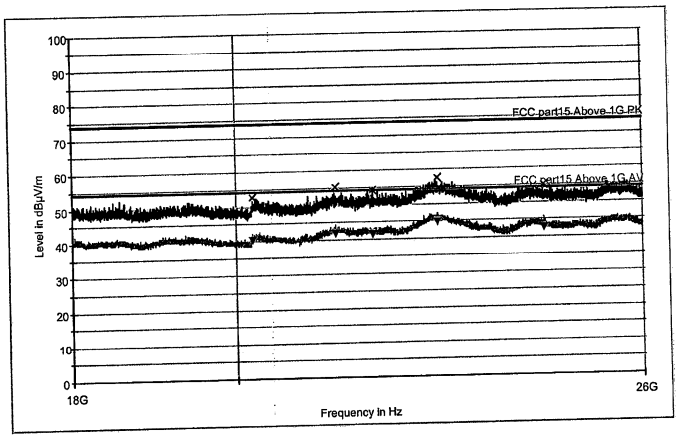
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.1.c
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Limit and Margin PK

Frequency (MHz)	Max Peak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
20215.000000	52.6	6.1	21.4	74.0	V
21338.000000	55.4	7.5	18.6	74.0	V
21852.000000	54.3	7.9	19.7	74.0	V
22785.000000	57.3	10.3	16.7	74.0	V
24396.000000	55.0	7.7	19.0	74.0	V

Date: 9/24/2009 - Time: 8:51:08 PM Tested by: _____ Reviewed by: _____

WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

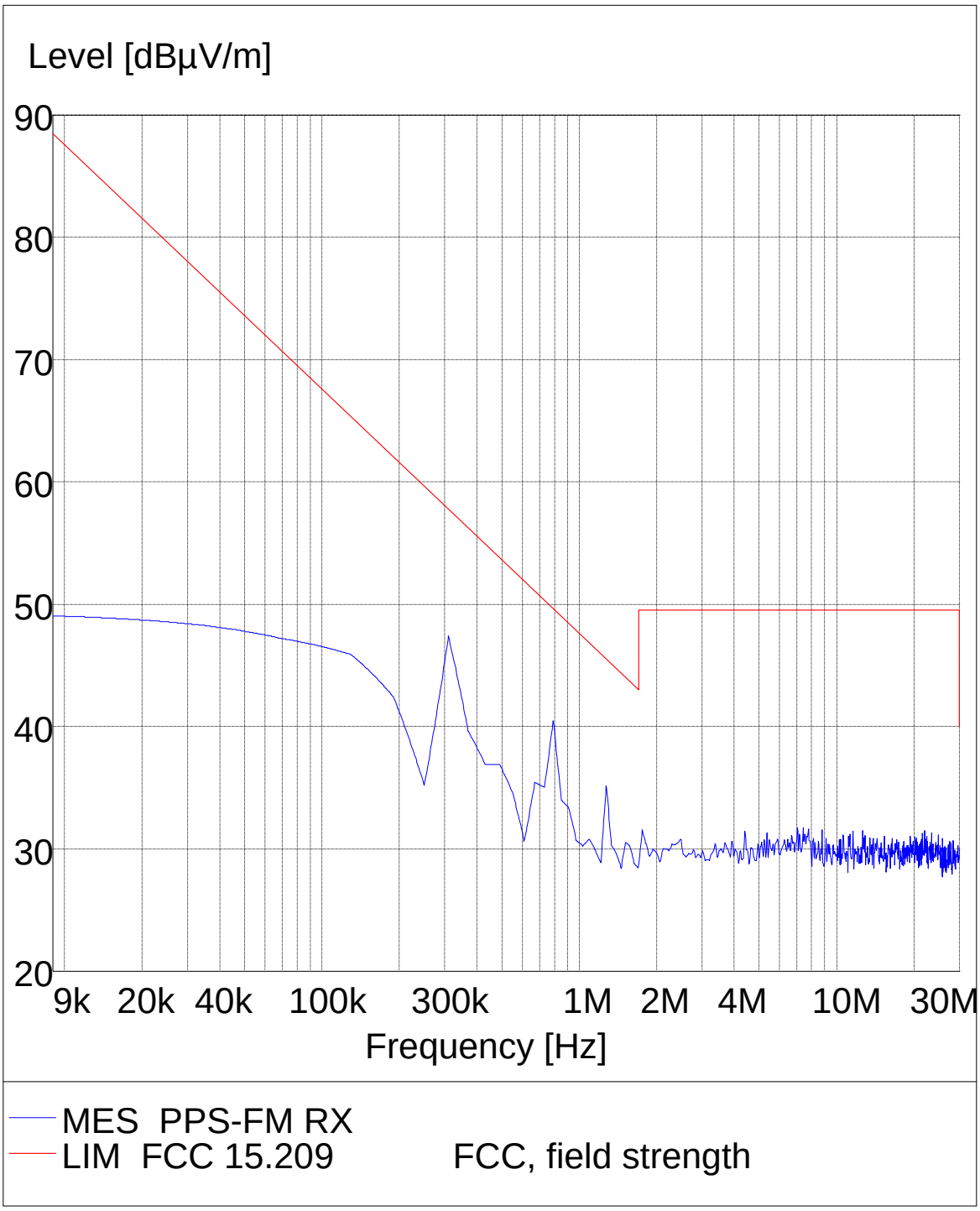
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
20215.000000	40.4	6.1	13.6	54.0	V
21338.000000	41.9	7.5	12.1	54.0	V
21852.000000	41.6	7.9	12.4	54.0	V
22785.000000	44.9	10.3	9.1	54.0	V
24396.000000	42.5	7.7	11.5	54.0	V

Date: 9/24/2009 - Time: 8:51:08 PM

Tested by: _____

Reviewed by: _____ WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.2 – (9kHz – 30MHz)



Test Plot of Spurious emission of A.2 – Horizontal (30MHz – 1GHz)

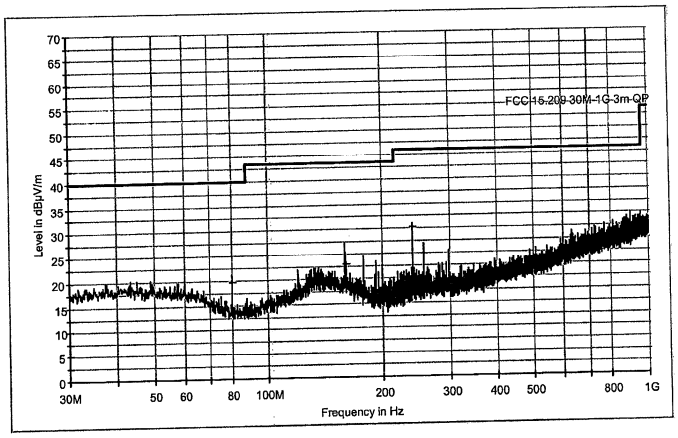
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.2
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1	
Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	Quasi Peak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	19.7	10.4	20.3	40.0	H
160.000000	23.0	15.6	20.5	43.5	H
240.000000	30.3	13.4	15.7	46.0	H
256.000000	25.0	13.7	21.0	46.0	H

Date: 9/24/2009 - Time: 5:23:51 PM

Tested by: DW 2009.9.25 Checked Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.2 – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

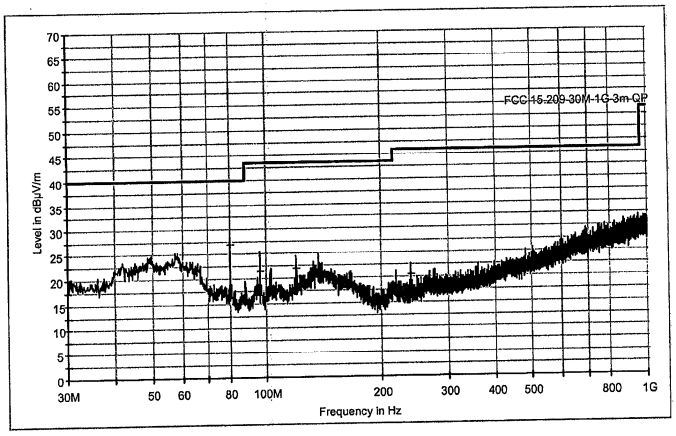
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.2
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
80.000000	27.0	10.4	13.0	40.0	V
96.000000	21.6	11.0	21.9	43.5	V
120.000000	21.9	13.6	21.6	43.5	V
240.000000	20.4	13.4	25.6	46.0	V

Date: 9/24/2009 - Time: 5:20:21 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.2 – Horizontal (1GHz – 18GHz)

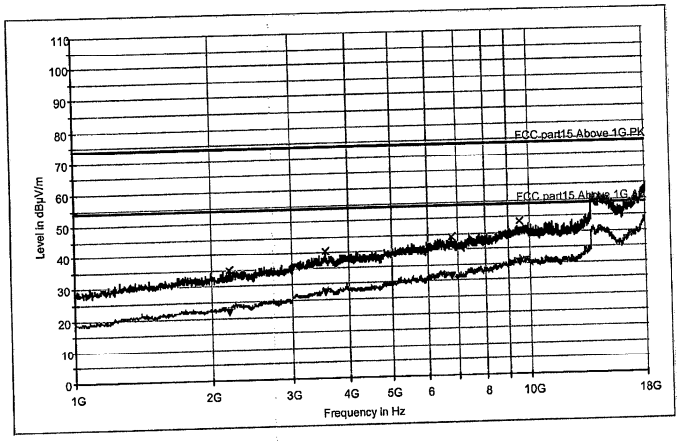
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.2
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1	
Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/25/2009 - Time: 2:38:23 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
2181.500000	35.1	38.9	74.0	H	-12.4
3562.000000	40.4	33.6	74.0	H	-7.7
6782.000000	44.2	29.8	74.0	H	-1.1
9542.500000	48.5	25.5	74.0	H	4.8

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
2181.500000	22.0	32.0	54.0	H	-12.4
3562.000000	27.2	26.8	54.0	H	-7.7
6782.000000	31.2	22.8	54.0	H	-1.1
9542.500000	35.4	18.6	54.0	H	4.8

Date: 9/25/2009 - Time: 2:38:23 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.2 – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

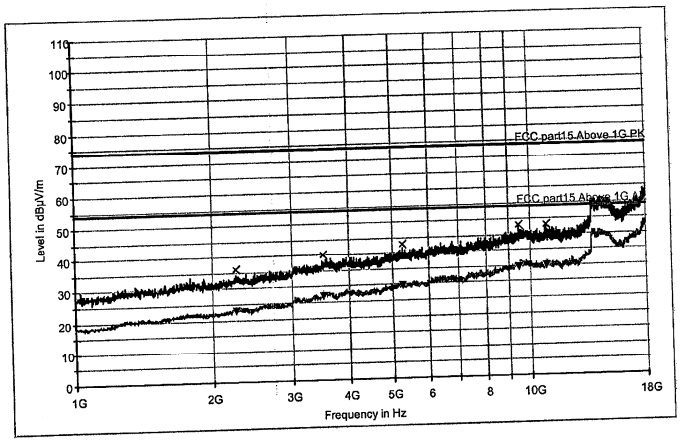
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.2
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 9/25/2009 - Time: 2:42:09 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
2253.500000	36.3	37.7	74.0	V	-11.5
3514.000000	40.1	33.9	74.0	V	-7.8
5269.000000	42.8	31.2	74.0	V	-5.2
9468.000000	47.9	26.1	74.0	V	4.2
10887.500000	48.0	26.0	74.0	V	5.2

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Margin (dB)	Limit (dBµV/m)	Polarity	Corr. (dB)
2253.500000	23.0	31.0	54.0	V	-11.5
3514.000000	26.9	27.1	54.0	V	-7.8
5269.000000	29.6	24.4	54.0	V	-5.2
9468.000000	34.6	19.4	54.0	V	4.2
10887.500000	35.1	18.9	54.0	V	5.2

Date: 9/25/2009 - Time: 2:42:09 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: WLC 2009 9.25 Checked

Test Plot of Spurious emission of A.2 – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

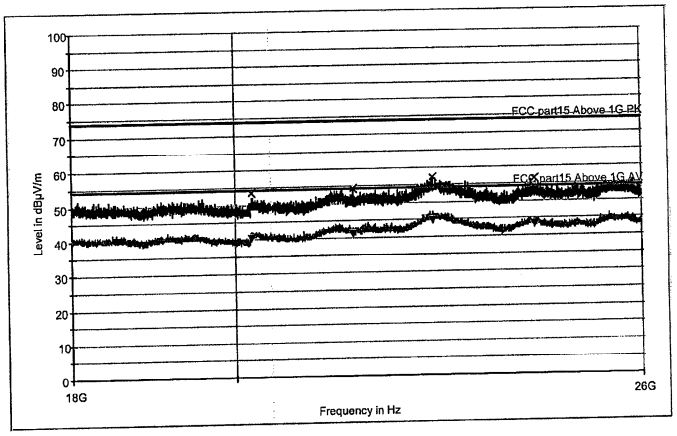
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.2
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 9:04:53 PM

Tested by: DW 2009 9 25 Tested

Reviewed by: WLC 2009.9.25 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
20217.000000	53.6	6.1	20.4	74.0	H
21582.000000	54.0	7.3	20.0	74.0	H
22735.000000	57.2	10.4	16.8	74.0	H
24263.000000	56.2	7.6	17.8	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
20217.000000	40.4	6.1	13.6	54.0	H
21582.000000	41.1	7.3	12.9	54.0	H
22735.000000	44.9	10.4	9.1	54.0	H
24263.000000	43.1	7.6	10.9	54.0	H

Date: 9/24/2009 - Time: 9:04:53 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Spurious emission of A.2 – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

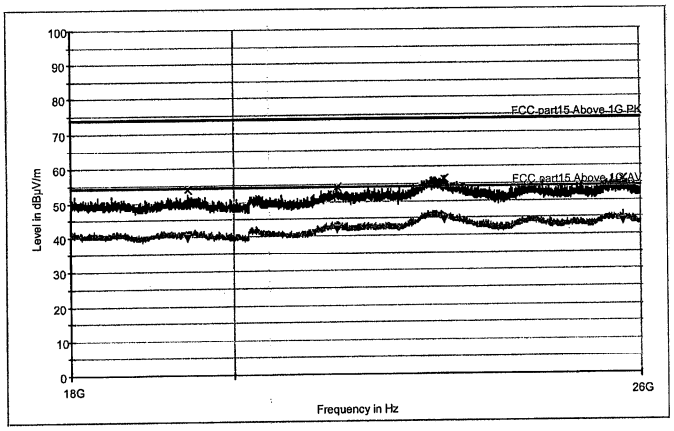
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Spurious Emission
Operation Mode:	A.2
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	Build-in Battery
Receipt No.:	163053971 item 200
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 9/24/2009 - Time: 9:00:09 PM

Tested by: DW 2009 9 25 Checked

Reviewed by: 2009.9.25

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
19411.000000	53.6	6.4	20.4	74.0	V
21378.000000	54.1	7.6	19.9	74.0	V
22918.000000	56.4	9.8	17.6	74.0	V
25710.000000	55.9	8.5	18.1	74.0	V

Limit and Margin AV

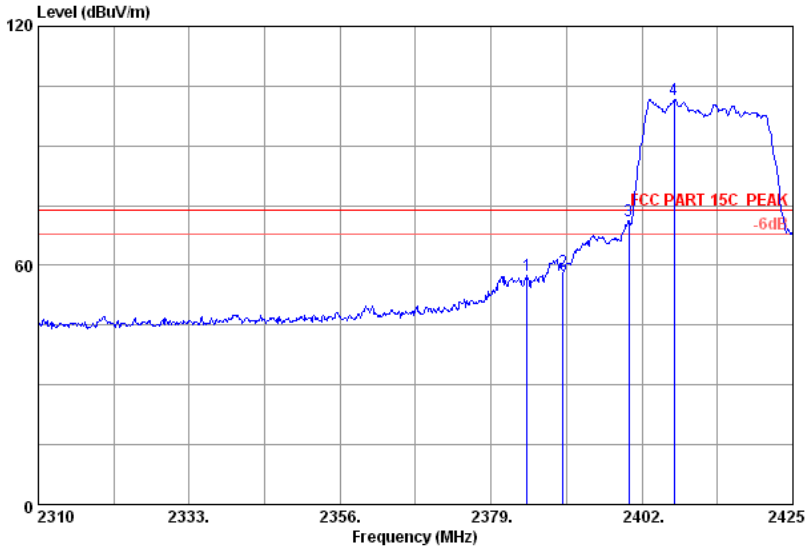
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
19411.000000	39.9	6.4	14.1	54.0	V
21378.000000	41.9	7.6	12.1	54.0	V
22918.000000	44.5	9.8	9.5	54.0	V
25710.000000	43.7	8.5	10.3	54.0	V

Date: 9/24/2009 - Time: 9:00:09 PM

Tested by: DW 2009.9.25 Checked

Reviewed by: WLC 2009.9.25 Checked

Test Plot of Radiated emissions in restricted bands, Horizontal, PK Value, Mode A.1.a



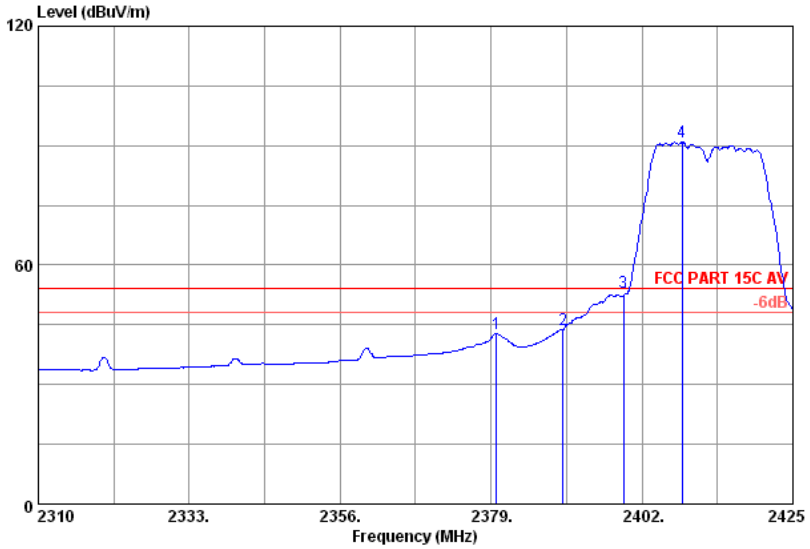
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C PEAK
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 7
Ant. pol. : HORIZONTAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2384.520	28.43	8.41	36.00	56.50	57.34	74.00	16.66	Peak
2	2390.000	28.46	8.41	36.09	57.83	58.61	74.00	15.39	Peak
3	2400.000	28.46	8.60	36.09	70.13	71.10	74.00	2.90	Peak
4	2406.945	28.48	8.60	35.95	100.62	101.75	74.00	-27.75	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Horizontal, AV Value, Mode A.1.a



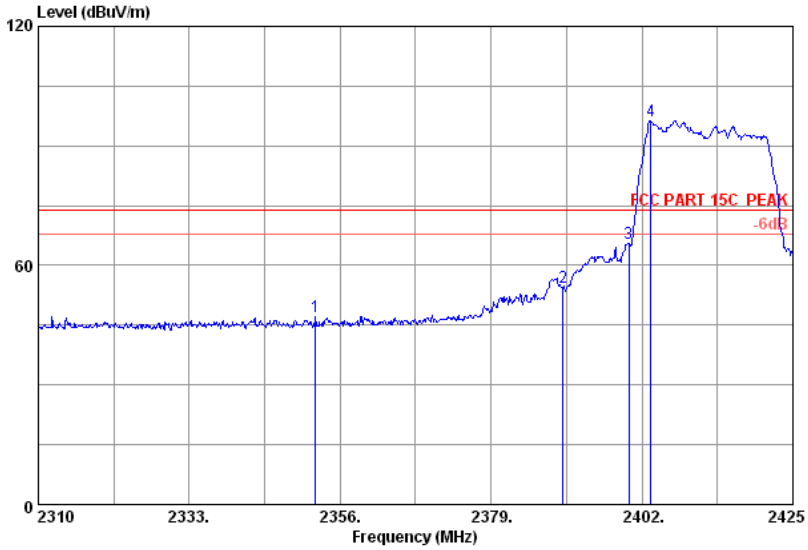
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C AV
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 8
Ant. pol. : HORIZONTAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2379.805	28.43	8.41	36.00	41.90	42.74	54.00	11.26	Average
2	2390.000	28.46	8.41	36.09	43.17	43.95	54.00	10.05	Average
3	2400.000	28.46	8.60	36.09	50.47	51.44	54.00	2.56	Average
4	2408.095	28.48	8.60	35.95	89.71	90.84	54.00	-36.84	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Vertical, PK Value, Mode A.1.a



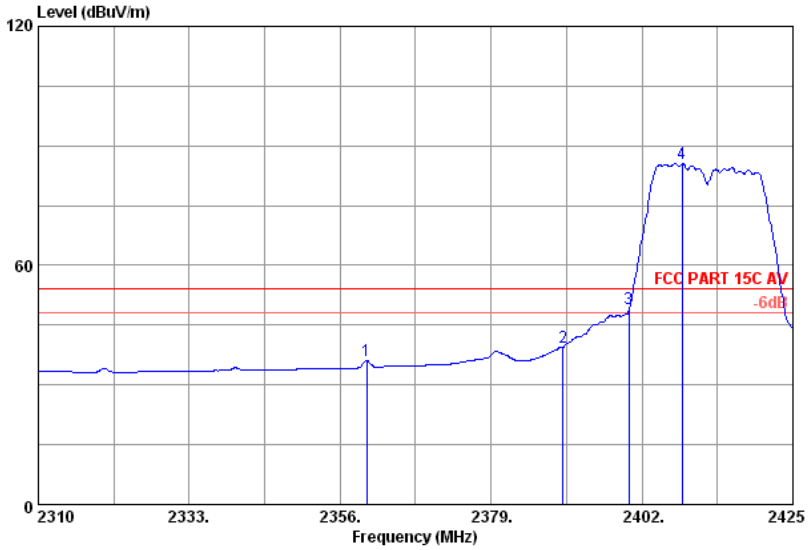
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C PEAK
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 5
Ant. pol. : VERTICAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2352.205	28.41	8.57	35.91	46.16	47.23	74.00	26.77	Peak
2	2390.000	28.46	8.41	36.09	53.82	54.60	74.00	19.40	Peak
3	2400.000	28.46	8.60	36.09	64.64	65.61	74.00	8.39	Peak
4	2403.380	28.48	8.60	35.95	95.26	96.39	74.00	-22.39	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Vertical, AV Value, Mode A.1.a



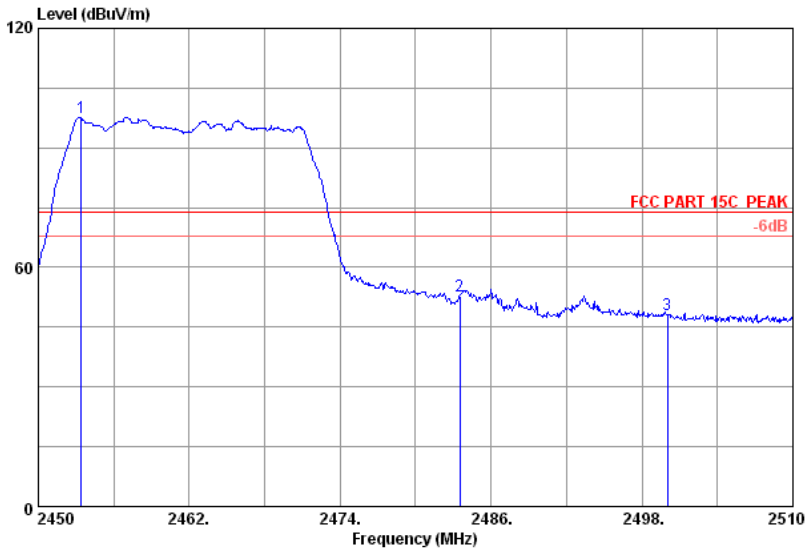
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C AV
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 6
Ant. pol. : VERTICAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2360.025	28.41	8.44	35.91	35.13	36.07	54.00	17.93	Average
2	2390.000	28.46	8.41	36.09	38.75	39.53	54.00	14.47	Average
3	2400.000	28.46	8.60	36.09	48.02	48.99	54.00	5.01	Average
4	2408.095	28.48	8.60	35.95	84.32	85.45	54.00	-31.45	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Horizontal, PK Value, Mode A.1.c



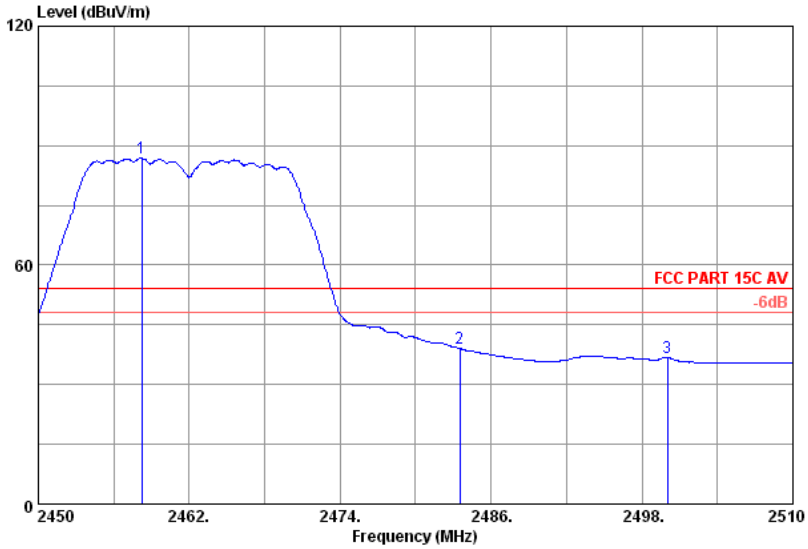
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C PEAK
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 1
Ant. pol. : HORIZONTAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2453.420	28.53	8.48	36.06	96.75	97.70	74.00	-23.70	Peak
2	2483.500	28.58	8.94	35.97	51.33	52.88	74.00	21.12	Peak
3	2500.000	28.60	8.89	36.00	46.51	48.00	74.00	26.00	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Horizontal, AV Value, Mode A.1.c



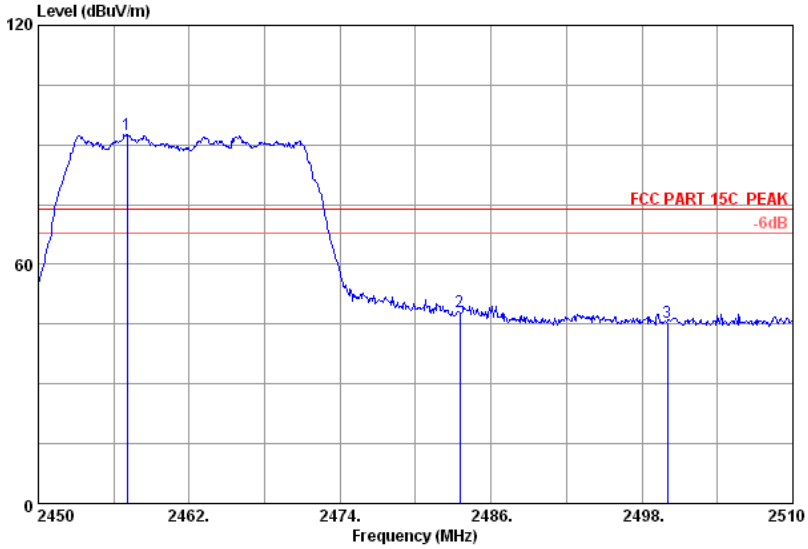
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C AV
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 2
Ant. pol. : HORIZONTAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2458.220	28.55	8.48	36.02	85.79	86.80	54.00	-32.80	Average
2	2483.500	28.58	8.94	35.97	37.50	39.05	54.00	14.95	Average
3	2500.000	28.60	8.89	36.00	35.31	36.80	54.00	17.20	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Vertical, PK Value, Mode A.1.c



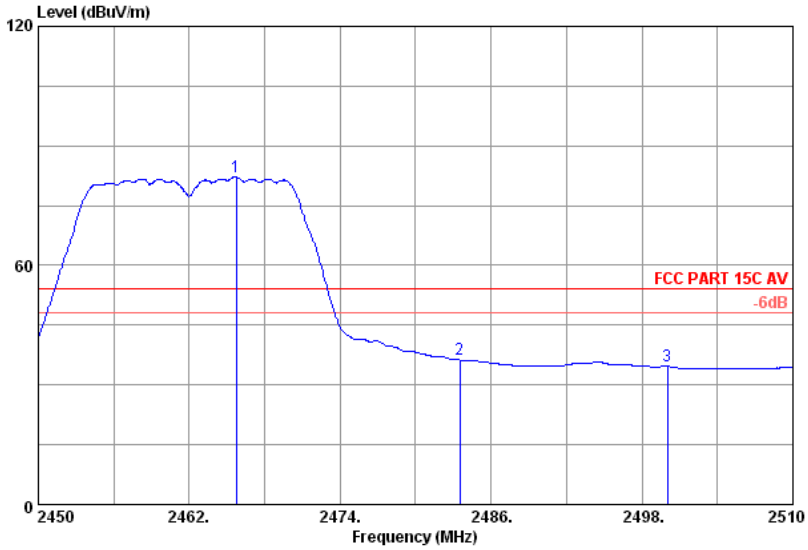
Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C PEAK
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 3
Ant. pol. : VERTICAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.080	28.55	8.48	36.02	91.63	92.64	74.00	-18.64	Peak
2	2483.500	28.58	8.94	35.97	46.44	47.99	74.00	26.01	Peak
3	2500.000	28.60	8.89	36.00	43.96	45.45	74.00	28.55	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Plot of Radiated emissions in restricted bands, Vertical, AV Value, Mode A.1.c



Site no. : 3m Chamber
Dis. : 3m
Limit : FCC PART 15C AV
Env. / Ins. : 25*C/60%
EUT : WIFI Internet Radio
Power : DC 3.7V
Test mode : TX High
M/N : PPS-FM

Data no. : 4
Ant. pol. : VERTICAL

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.720	28.55	8.76	36.02	80.83	82.12	54.00	-28.12	Average
2	2483.500	28.58	8.94	35.97	34.73	36.28	54.00	17.72	Average
3	2500.000	28.60	8.89	36.00	33.21	34.70	54.00	19.30	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5.1.7 Radiated emissions

RESULT: **Passed**

Date of testing	:	2009-09-23
Test standard	:	FCC Part 15.109
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	30 – 1000MHz
Limits	:	FCC Part 15.109(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Input Voltage	:	AC 230V (via AC/DC Adaptor)
Operation Mode	:	B
Earthing	:	Not Connected
Ambient temperature	:	25℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

For details refer to following test curves.

Test Plot of Radiated emissions, Mode B.1, Horizontal

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

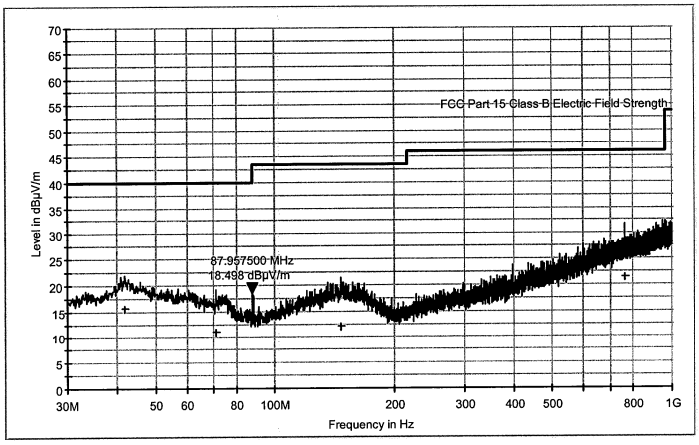
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	B+C, 88 MHz
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	120V / 60Hz
Receipt No.:	163053971 item 100
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
41.900000	15.6	14.7	24.4	40.0	H
71.100000	11.2	11.6	28.8	40.0	H
146.400000	12.1	15.4	31.4	43.5	H
761.200000	21.5	24.2	24.5	46.0	H

Date: 9/23/2009 - Time: 8:15:54 PM Tested by: Reviewed by:

Test Plot of Radiated emissions, Mode B.1, Vertical

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

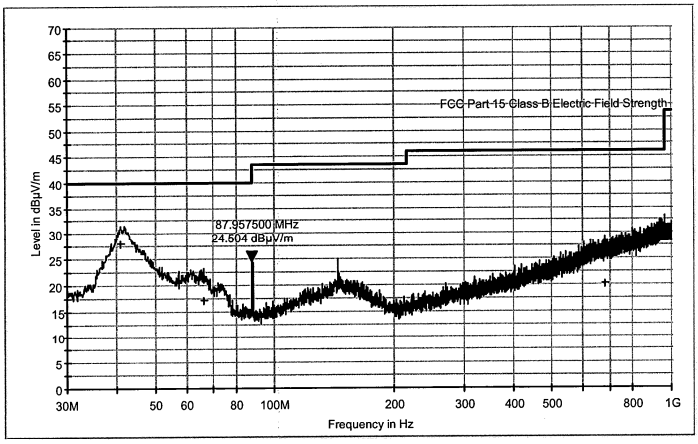
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	B+C, 88 MHz
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	120V / 60Hz
Receipt No.:	163053971 item 100
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
40.900000	28.0	14.7	12.0	40.0	V
66.100000	17.1	12.5	22.9	40.0	V
144.700000	19.9	15.3	23.6	43.5	V
679.100000	20.3	22.9	25.7	46.0	V

Date: 9/23/2009 - Time: 8:22:49 PM Tested by: Reviewed by:

Test Plot of Radiated emissions, Mode B.2, Horizontal

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

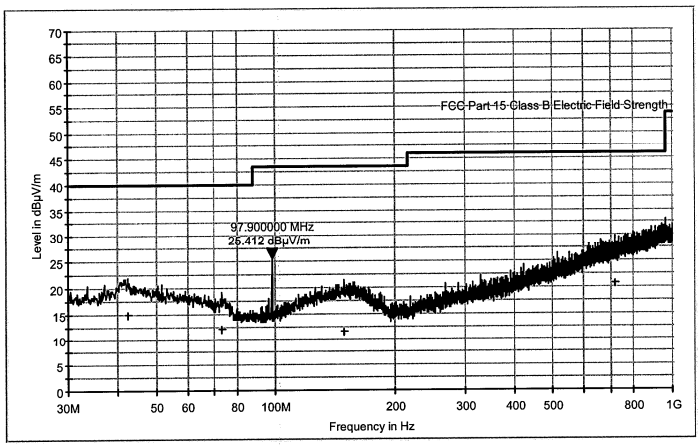
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	B+C, 98 MHz
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	120V / 60Hz
Receipt No.:	163053971 item 100
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
42.500000	15.0	14.6	25.0	40.0	H
73.400000	12.0	11.3	28.0	40.0	H
149.400000	11.7	15.6	31.8	43.5	H
715.700000	20.8	23.4	25.2	46.0	H

Date: 9/23/2009 - Time: 8:11:57 PM Tested by: _____ Reviewed by: _____

Test Plot of Radiated emissions, Mode B.2, Vertical

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

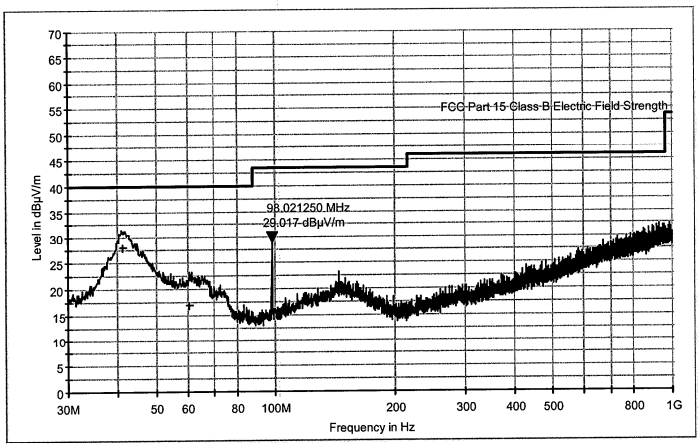
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	B+C, 98 MHz
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	120V / 60Hz
Receipt No.:	163053971 item 100
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
41.100000	28.0	14.7	12.0	40.0	V
60.500000	16.9	13.6	23.1	40.0	V
144.700000	19.3	15.3	24.2	43.5	V

Date: 9/23/2009 - Time: 8:08:05 PM

Tested by: DW 2009.9.24 Checked

Reviewed by:

Test Plot of Radiated emissions, Mode B.3, Horizontal

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

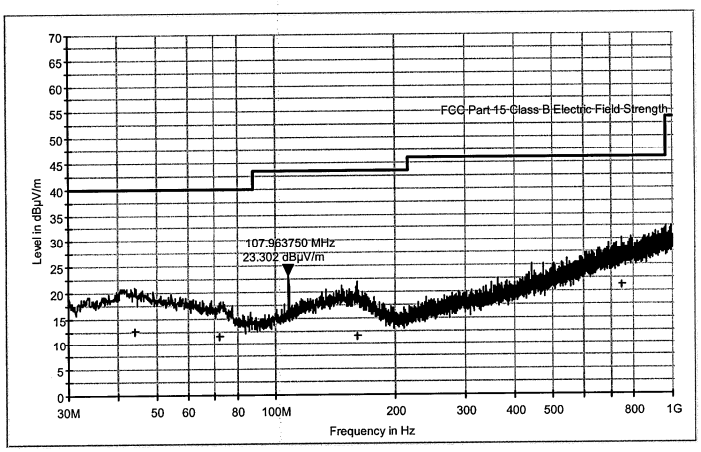
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	B+C, 108 MHz
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	120V / 60Hz
Receipt No.:	163053971 item 100
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
44.000000	12.7	14.5	27.3	40.0	H
72.200000	11.6	11.4	28.4	40.0	H
160.200000	11.6	15.6	31.9	43.5	H
746.100000	21.3	24.0	24.7	46.0	H

Date: 9/23/2009 - Time: 7:58:53 PM Tested by: Reviewed by:

Test Plot of Radiated emissions, Mode B.3, Vertical

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

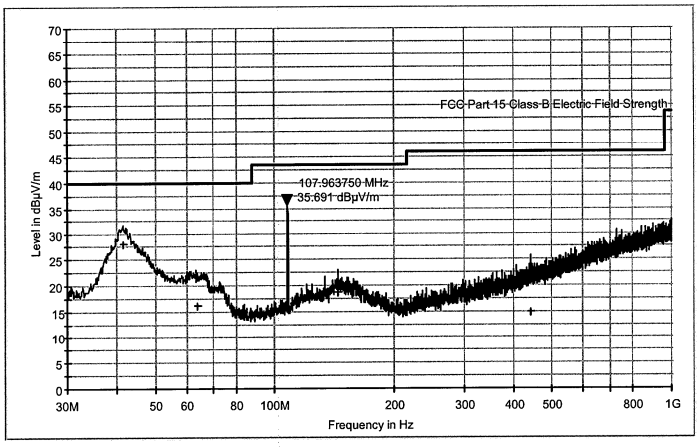
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	B+C, 108 MHz
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage / Freq. :	120V / 60Hz
Receipt No.:	163053971 item 100
Report No.	17013555 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
41.400000	27.9	14.7	12.1	40.0	V
63.800000	16.3	13.0	23.7	40.0	V
144.700000	18.6	15.3	24.9	43.5	V
442.200000	14.9	18.6	31.1	46.0	V

Date: 9/23/2009 - Time: 8:03:45 PM Tested by: Reviewed by:

5.1.8 Conducted emissions

RESULT: **Passed**

Date of testing	:	2009-09-23
Test standard	:	FCC Part 15.207(a) FCC Part 15.107(a)
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207(a) FCC Part 15.107(a)
Kind of test site	:	Shield room

Test setup

Input Voltage (of PC)	:	AC 230V (via AC/DC Adaptor)
Operation Mode	:	B
Earthing	:	Not Connected
Ambient temperature	:	25℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Refer to following test graph.

Test Plot of Conducted emissions

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

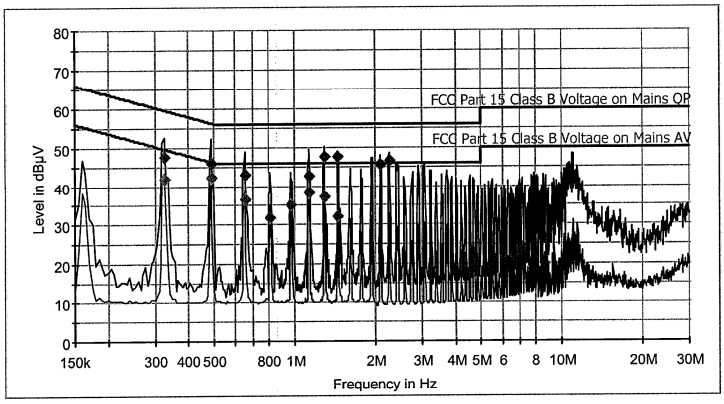
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Full-join
Test Item:	WiFi Internet Radio
Identification:	PPS- FM
Test Standard:	FCC Part 15
Test Detail:	Conducted Emission
Operation Mode:	B+C
Climate Condition:	25℃; 50%RH; 101kPa.
Test Voltage/ Freq.:	120V/ 60Hz
Port / Line:	AC Mains
Receipt No.:	163053971 item 100
Report No.:	17013555 001
Result:	Pass
Comment:	

Hardware Setup:	1phase LISN ESH3-Z5 to ESCS30
Level Unit:	dB μ V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCS 30



9/24/2009, 9:19:48 AM

Tested by: DW 2009.9.24 Checked

Reviewed by: WLC 2009.9.24 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.325000	47.4	1000.000	9.000	L1
0.485000	45.7	1000.000	9.000	L1
0.650000	42.9	1000.000	9.000	L1
1.135000	42.5	1000.000	9.000	L1
1.290000	47.7	1000.000	9.000	N
1.455000	47.6	1000.000	9.000	N
2.097600	45.6	1000.000	9.000	N
2.262890	46.6	1000.000	9.000	N

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.325000	10.0	12.2	59.6	
0.485000	10.1	10.5	56.3	
0.650000	10.0	13.1	56.0	
1.135000	10.1	13.6	56.0	
1.290000	10.1	8.3	56.0	
1.455000	10.1	8.4	56.0	
2.097600	10.1	10.4	56.0	
2.262890	10.2	9.4	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.325000	41.9	1000.000	9.000	N
0.485000	42.1	1000.000	9.000	N
0.650000	36.5	1000.000	9.000	N
0.810000	31.9	1000.000	9.000	N
0.970000	35.1	1000.000	9.000	N
1.130000	38.2	1000.000	9.000	N
1.290000	37.3	1000.000	9.000	N
1.450000	32.1	1000.000	9.000	N

(continuation of the "Final Measurement Detector 2" table from column 6 ...)

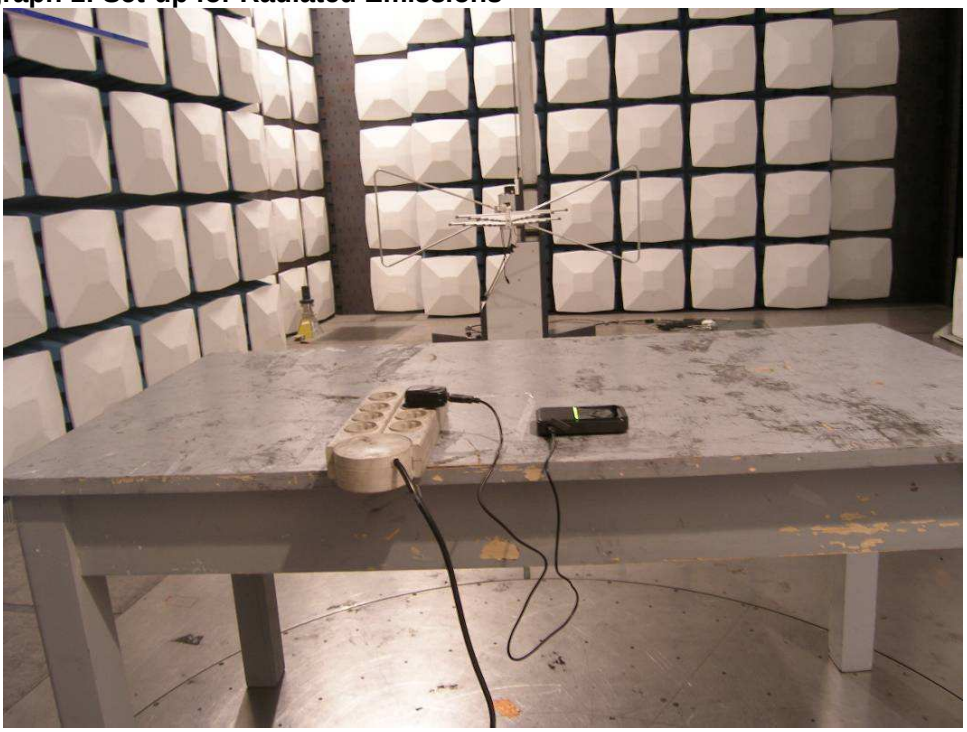
Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.325000	10.0	7.7	49.6	
0.485000	10.1	4.2	46.3	
0.650000	10.0	9.5	46.0	
0.810000	10.1	14.1	46.0	
0.970000	10.1	10.9	46.0	
1.130000	10.1	7.8	46.0	
1.290000	10.1	8.7	46.0	
1.450000	10.1	13.9	46.0	

9/24/2009, 9:19:48 AM

Tested by: _____ Reviewed by: _____

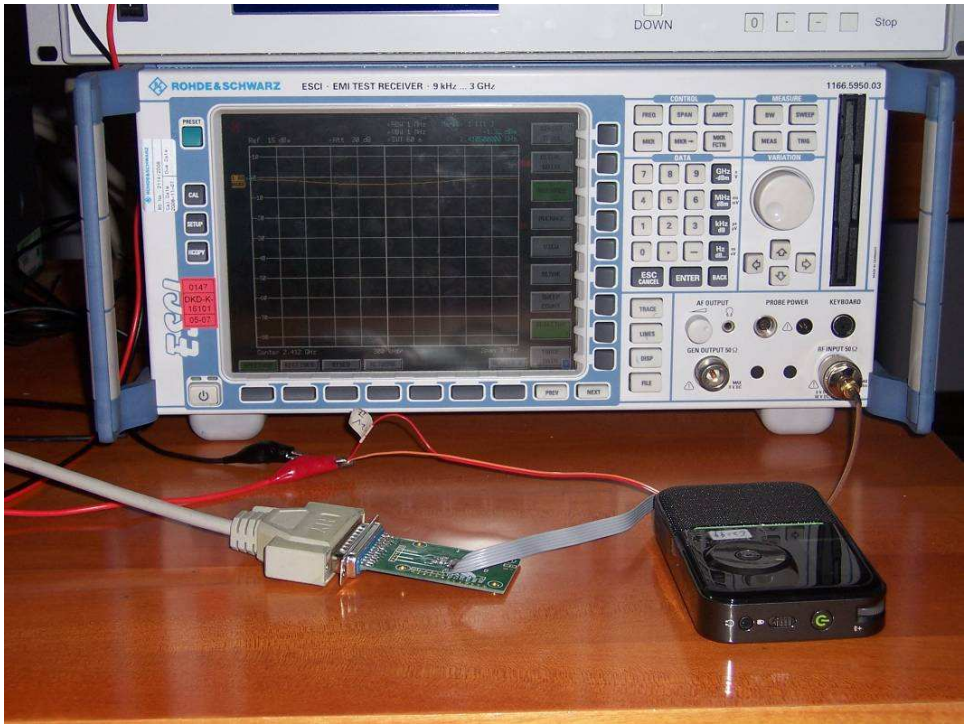
6. Photographs of the Test Set-Up

Photograph 1: Set-up for Radiated Emissions

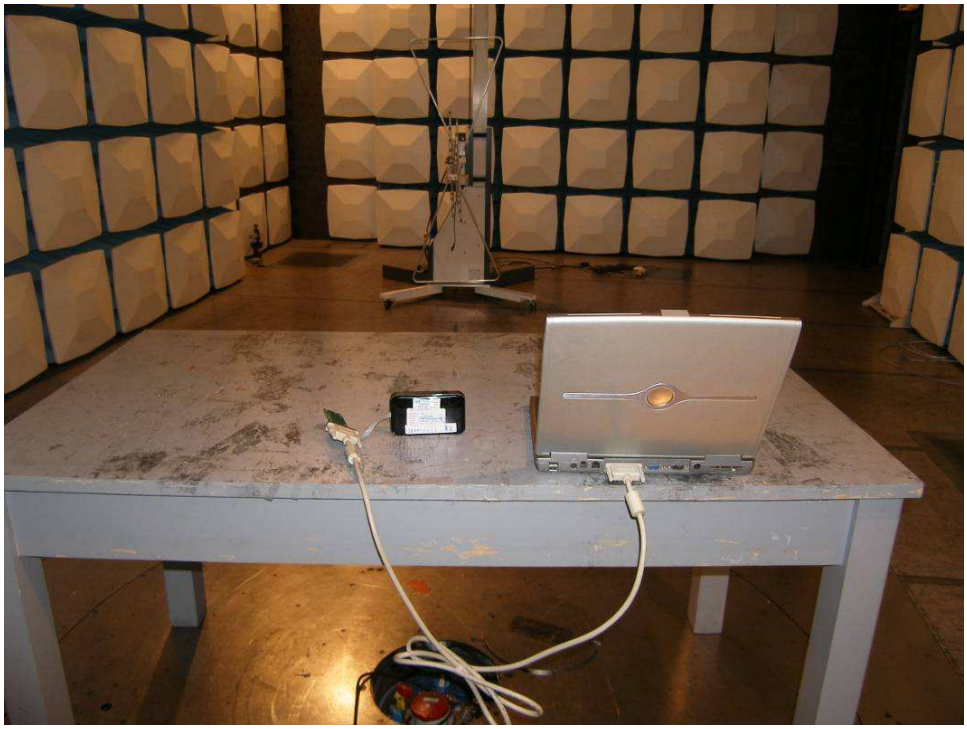


Photograph 2: Set-up for Conducted Emissions

Photograph 3: Set-up for Transmitter test



Photograph 4: Set-up for Spurious Emissions (30MHz-1GHz)



Photograph 5: Set-up for Spurious Emissions (1GHz-18GHz)

Photograph 6: Set-up for Spurious Emissions (18GHz-26GHz)

7. List of Tables

8. List of Photographs