

FCC Test Report

Product Name : WIFI Gateway

Trade Name : BOSCH

Model No. : 8738714760 (WIFI Dongle UART 3.3V)

FCC ID. : RTG8738714765

Applicant: BOSCH TERMOTECNOLOGIA S.A.

Address : EN 16 - Km 3.7 3800-533 Cacia Aveiro Portugal

Date of Receipt : Aug. 21, 2017

Issued Date : May 16, 2019

Report No. : 1780393R-RFUSP02V00

Report Version : V2.0





The test results relate only to the samples tested.

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Test Report Certification

Issued Date: May 16, 2019

Report No.: 1780393R-RFUSP02V00



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Applicant : BOSCH TERMOTECNOLOGIA S.A.

Address : EN 16 - Km 3.7 3800-533 Cacia Aveiro Portugal

Manufacturer : BOSCH TERMOTECNOLOGIA S.A.
Model No. : 8738714760 (WIFI Dongle UART 3.3V)

FCC ID. : RTG8738714765

EUT Voltage : DC 3.3V
Testing Voltage : DC 3.3V
Trade Name : BOSCH

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2017

ANSI C63.10: 2013

Laboratory Name : Hsin Chu Laboratory

Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township,

Hsinchu County 310, Taiwan, R.O.C.

TEL: +886-3-582-8001 / FAX: +886-3-582-8958

Test Result : Complied

Documented By :

(Demi Chang / Senior Engineering Adm. Specialist)

Tested By :

(Elwin Lin / Assistant Engineer)

Approved By :

(Roy Wang / Director)



Revision History

Report No.	Version	Description	Issued Date
1780393R-RFUSP02V00	V2.0	Initial issue of report	May 16, 2019



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1. General Information

1.1. EUT Description

Product Name	WIFI Gateway						
Trade Name	BOSCH	BOSCH					
Model No.	8738714760 (WIFI Dongle U	JART 3.3V)					
Frequency Range/	IEEE 802.11b/g 2412~2462MHz / 11 Channels						
Channel Number	IEEE 802.11n (20MHz)						
Type of Modulation	IEEE 802.11b Direct Sequence Spread Spectrum						
	IEEE 802.11g/n Orthogonal Frequency Division Multiplexing						
Data Speed	IEEE 802.11b	1, 2, 5.5, 11Mbps					
	IEEE 802.11g 6, 9, 12,18, 24, 36, 48,54Mbps						
	EEE 802.11n Support a subset of the combination of GI, MCS						
		0~MCS 7 and bandwidth defined in 802.11n					

Antenna Information	
Antenna Type	Integral Antenna
Antenna Gain	1.9dBi



ANT-TX / RX & Bandwidth

ANT-TX / RX	TX	RX
Mode/ Channel Bandwidth	20MHz	20MHz
IEEE802.11b	✓	✓
IEEE802.11g	✓	✓
IEEE802.11n	✓	✓



IEEE 802.11n

				Ncbps Ndb		BPS	Data Rate(Mi		te(Mb/s)	Mb/s)		
MCS	Modulation	n R	NBPSCS				400411	800r	ns GI	400r	400ns GI	
Index				20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0	
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0	
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0	
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0	
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0	
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0	
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0	
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0	
Note 1	Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 1 – MCS parameters for TX Antenna number = 1

Symbol	Explanation			
R	Code rate			
N _{BPSC}	Number of coded bits per single carrier			
N _{CBPS}	Number of coded bits per symbol			
N _{DBPS}	Number of data bits per symbol			
GI	guard interval			



IEEE 802.11b/g & IEEE 802.11n (20MHz)

Working Frequency of Each Channel									
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency		
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz		
005	2432 MHz	006	2437 MHz	007	2442 MHz	800	2447 MHz		
009	2452 MHz	010	2457 MHz	011	2462 MHz				

- 1. This device is a WIFI Gateway including 2.4GHz b/g/n (1x1) transmitting and receiving function.
- 2. Regards to the frequency band operation; the lowest middle and highest frequency of channel were selected to perform the test, and then shown on this report.



1.2. Test Mode

DEKRA has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

Final Test Mode	
Mode 1: Transmit	

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11n(20MHz)	6	0	N/A
Peak Power Output	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
RF antenna conducted	11b/g	1/ 6/ 11	0	Complies
test	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission Band	11b/g	1/ 6/ 11	0	Complies
Edge	11n(20MHz)	1/ 6/ 11	0	Complies
DTS Bandwidth	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Occupied Bandwidth	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Power Density	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies

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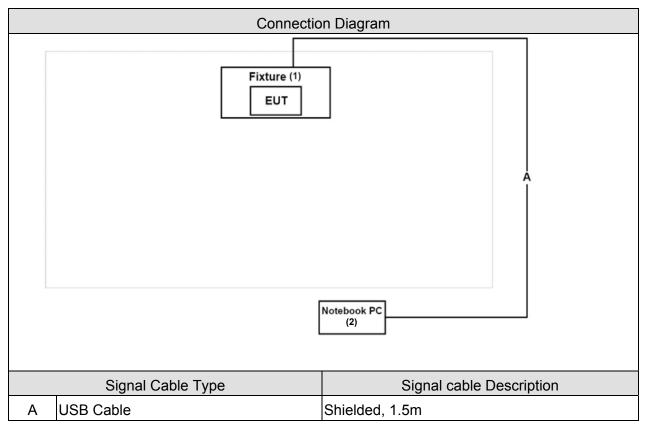


1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Fixture	BOSCH			-	
2	Notebook PC	Lenovo	B590	WB15330077	DoC	Non-Shielded, 1.8m,
						one ferrite core bonded

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the test program "Radio Tool GUI".
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.



1.6. **Test Facility**

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	EOO DADT 45 O 45 007	15 - 35	20°C	
Humidity (%RH)	FCC PART 15 C 15.207 Conducted Emission	25 - 75	50%RH	
Barometric pressure (mbar)	Conducted Emission	860 - 1060	950-1000	
Temperature (°C)	EOO DADT 45 O 45 047	15 - 35	25°C	
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	45%RH	3
Barometric pressure (mbar)	Peak Power Output	860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	25°C	
Humidity (%RH)	Radiated Emission	25 - 75	65%RH	2
Barometric pressure (mbar)	Radiated Emission	860 - 1060	950-1000	
Temperature (°C)	FOO DADT 45 O 45 047	15 - 35	25°C	
Humidity (%RH)	FCC PART 15 C 15.247 RF antenna conducted test	25 - 75	45%RH	3
Barometric pressure (mbar)	RF antenna conducted test	860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	25°C	
Humidity (%RH)	Band Edge	25 - 75	48%RH	2
Barometric pressure (mbar)	Band Edge	860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	25°C	
Humidity (%RH)	DTS Bandwidth	25 - 75	45%RH	3
Barometric pressure (mbar)	D13 Balluwidili	860 - 1060	950-1000	
Temperature (°C)	FOO DADT 45 O 45 047	15 - 35	25°C	
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	45%RH	3
Barometric pressure (mbar)	Occupied Bandwidth	860 - 1060	950-1000	
Temperature (°C)	EOO DADT 45 O 45 047	15 - 35	25°C	
Humidity (%RH)	FCC PART 15 C 15.247 Power Density	25 - 75	45%RH	3
Barometric pressure (mbar)	1 Ower Density	860 - 1060	950-1000	

Note: Test site information refers to Laboratory Information.

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

http://www.dekra.com.tw/english/about/certificates.aspx?bval=5

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index en.aspx

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

- 1 No. 75-2, 3rd Lin, WangYe Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan (R.O.C.) TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail: info.tw@dekra.com
- 2 No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail: info.tw@dekra.com
- 3 No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan
- TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail: info.tw@dekra.com



2. Conducted Emission

2.1. Test Equipment

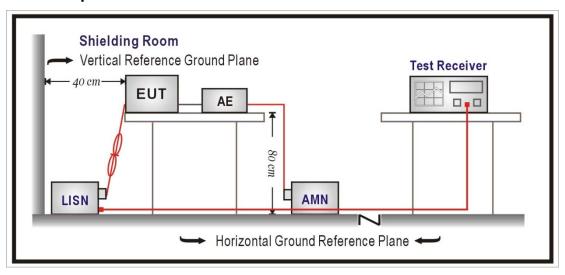
The following test equipments are used during the test:

Conducted Emission / SR2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2017/02/06	2018/02/05
Test Receiver	R&S	ESCS 30	836858/022	2017/04/12	2018/04/11
LISN	R&S	ENV216	100092	2017/07/31	2018/07/30

Note: All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)					
Frequency (MHz)	QP	AV			
0.15 - 0.50	66 - 56	56 - 46			
0.50 - 5.0	56	46			
5.0 - 30	60	50			

Remark: In the above table, the tighter limit applies at the band edges.

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2.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2017

2.6. Uncertainty

The measurement uncertainty is defined as \pm 2.26 dB.

2.7. Test Result

The device voltage is DC, Do not need test this time.



3. Peak Power Output

3.1. Test Equipment

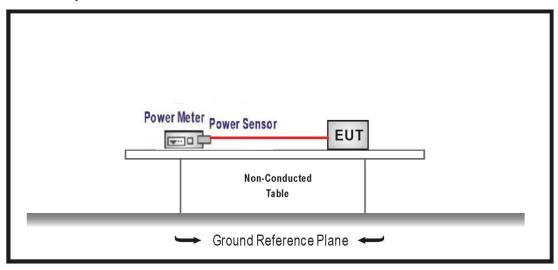
The following test equipments are used during the test:

Peak Power Output / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Power Meter	Agilent	N1911A	MY45101353	2016/09/30	2017/09/29
Power Sensor	Agilent	N1921A	MY45241670	2016/09/29	2017/09/28
USB Power Sensor	Keysight	U2021XA	MY54070005	N/A	N/A

Note: All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure of KDB558074 measurement to FCC 47CFR 15.247 requirements.



3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

3.6. Uncertainty

The measurement uncertainty is defined as \pm 1.27 dB.

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3.7. Test Result

Product	WIFI Gateway		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/26	Test Site	SR10-H

IEEE 802.11b (ANT 0)						
Channel No.	Frequency	Measure Level	Limit			
Channel No.	(MHz)	(dBm)	(dBm)			
1	2412	17.020	≦30			
6	2437	16.760	≦30			
11	2462	16.500	≦30			

The worst emission of data rate is 1Mbps

	Peak Power Output (dBm)						
Channel	hannel Frequency Data Rate (Mbps)					Required	
No	(MHz)	1	1 2 5.5 11				
1	2412	17.020				≦30	
6	2437	16.760	16.530	16.370	16.010	≦30	
11	2462	16.500				≦30	

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Product	WIFI Gateway			
Test Item	Peak Power Output			
Test Mode	Mode 1: Transmit			
Date of Test	2017/09/26	Test Site	SR10-H	

IEEE 802.11g (ANT 0)			
Channal Na	Frequency	Measure Level	Limit
Channel No.	(MHz)	(dBm)	(dBm)
1	2412	18.210	≦30
6	2437	18.710	≦30
11	2462	18.640	≦30

The worst emission of data rate is 6Mbps

	Peak Power Output (dBm)								
Channel	Channel Frequency Data Rate (Mbps)					Required			
No	(MHz)	6	12	18	24	36	48	54	Limit
1	2412	18.210							≦30
6	2437	18.710	18.520	18.440	18.300	18.050	17.850	17.660	≦30
11	2462	18.640	-	-	-	-		-	≦30



Product	WIFI Gateway		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/26	Test Site	SR10-H

IEEE 802.11n 20 (ANT 0)						
Channal Na	Frequency	Measure Level	Limit			
Channel No.	(MHz)	(dBm)	(dBm)			
1	2412	18.220	≦30			
6	2437	18.640	≦30			
11	2462	18.470	≦30			

The worst emission of data rate is MCS0

	Peak Power Output (dBm)									
Channel	Frequency		Data Rate (Mbps)				Required			
No	(MHz)	0	0 1 2 3 4 5 6 7 Limit				Limit			
1	2412	18.220	8.220 \(\leq 30 \)							
6	2437	18.640	8.640 18.390 18.210 17.940 17.860 17.700 17.580 17.450 ≤30							
11	2462	18.470								≦30

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4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

Radiated Emission / CB2-H

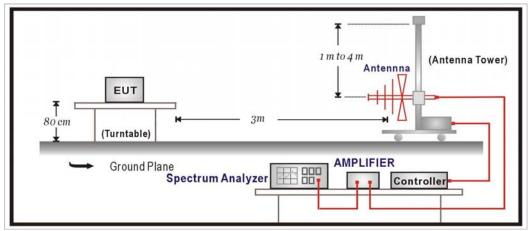
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2016/11/28	2017/11/27
Signal & Spectrum	R&S	FSV40	101049	2017/01/23	2018/01/22
Analyzer					
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2017/02/15	2018/02/14
Pre-Amplifier	RF Bay Inc.	LNA-1330	12162511	2017/03/09	2018/03/08
Pre-Amplifier	EMCI	EMCI 1830I	980366	2017/01/23	2018/01/22
Pre-Amplifier	MITEQ	JS44-45-8P	2014754	2016/12/26	2017/12/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

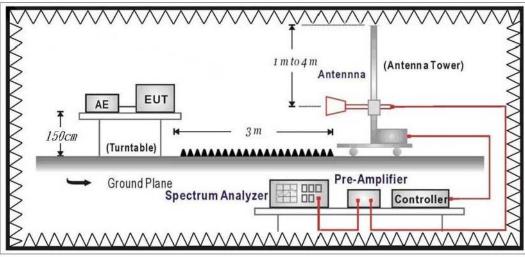


4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency (MHz)	dBuV/m	dBuV/m	
30-88	100	40	
88-216	150	43.5	
216-960	200	46	
Above 960	500	54	

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

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4.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 1.5 meter above ground(under 1GHz) or 1.5 meter above ground (above 1GHz). The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

4.6. Uncertainty

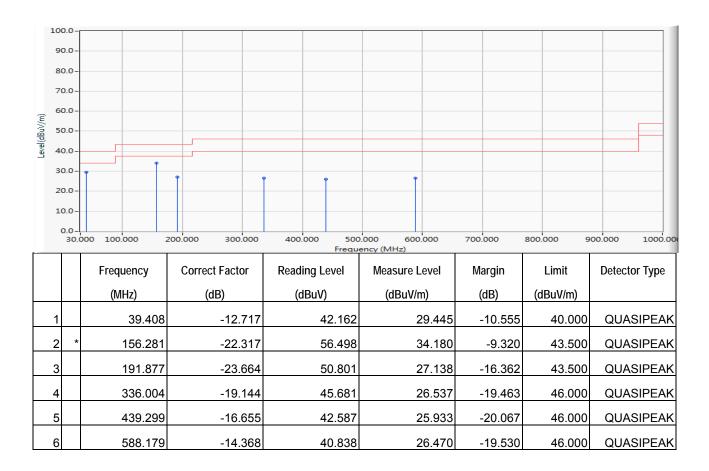
The measurement uncertainty 30MHz~1GHz as ±3.43dB 1GHz~26.5Ghz as ±3.65dB



4.7. Test Result

30MHz-1GHz Spurious

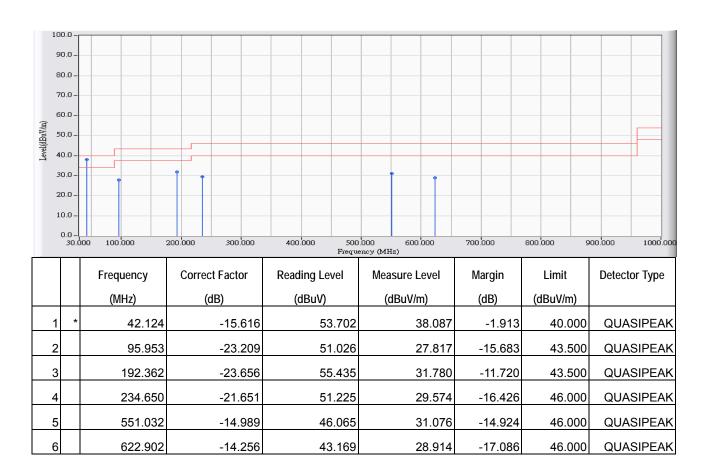
Site : CB2-H	Time : 2017/09/10
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB2_FCC_EFS_S2_30M-1GHz_1116 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2437MHz



- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe: CB2_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	Power : DC 3.3V
EUT : WIFI Gateway	Note: 802.11n(20M) 2437MHz

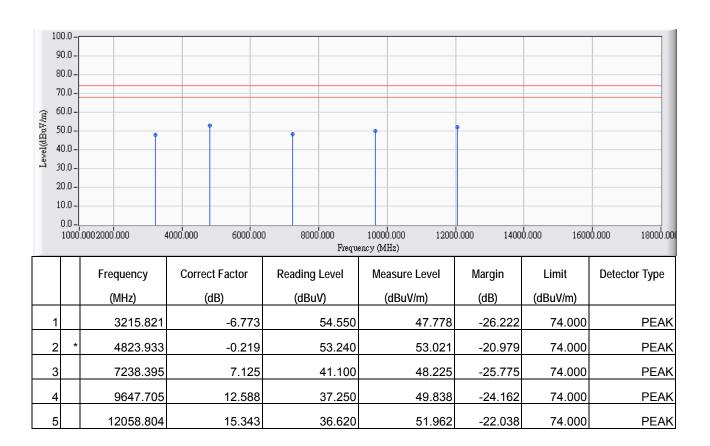


- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Above 1GHz Spurious

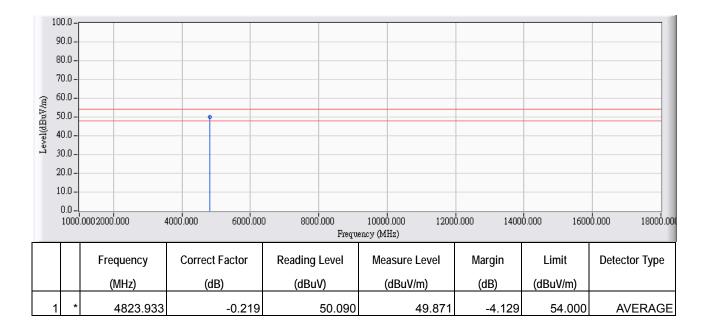
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



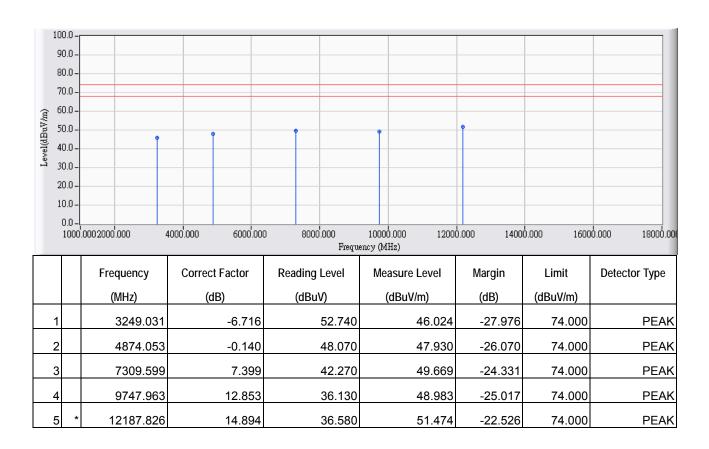
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



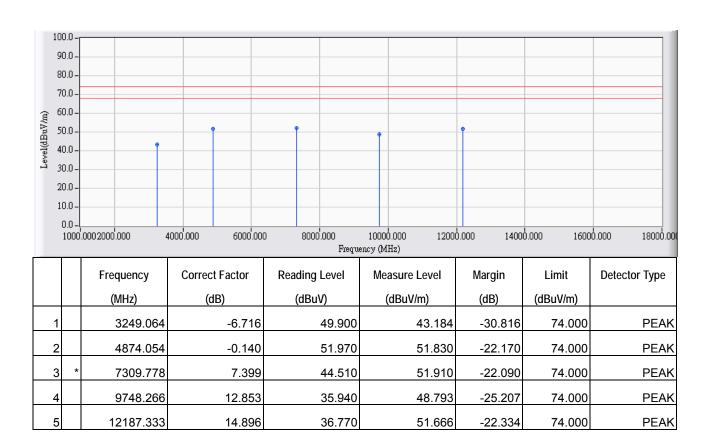
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note: 802.11b_2437MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



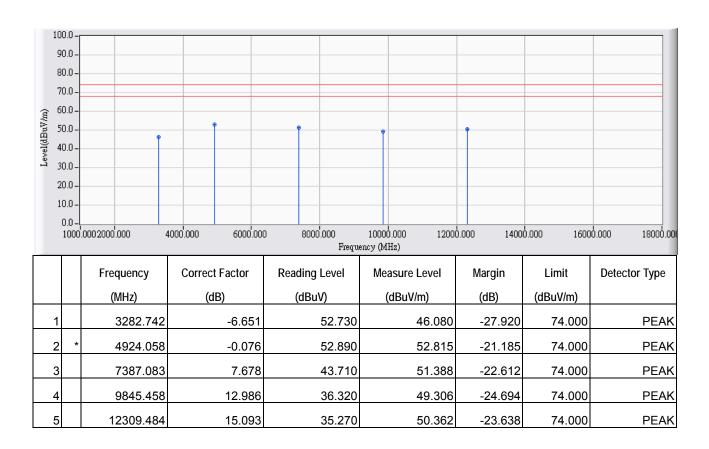
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11b_2437MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



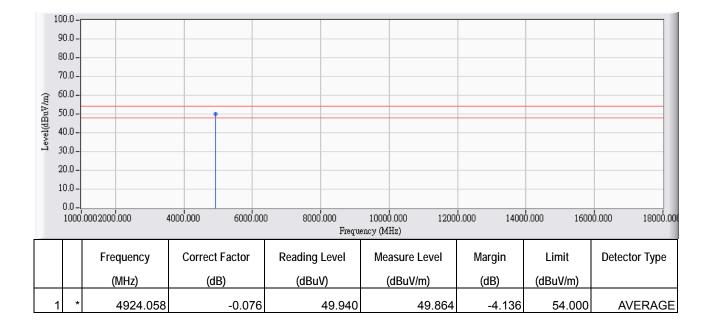
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



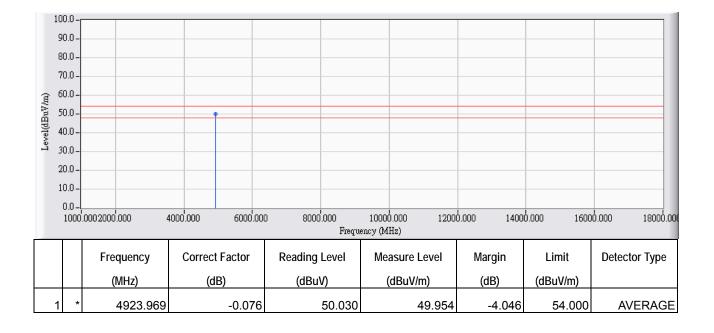
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
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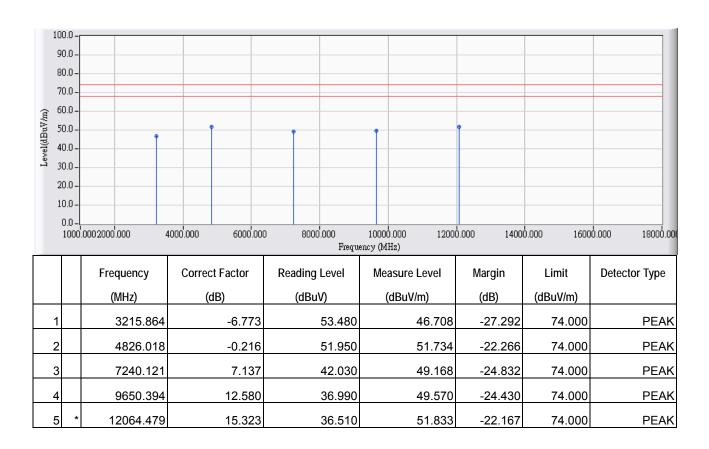
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2412MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2412MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
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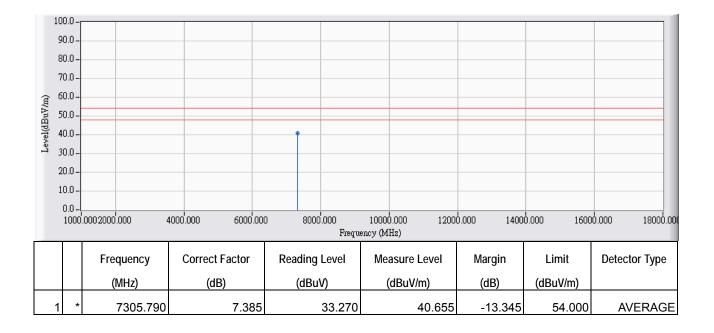
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note: 802.11g_2437MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



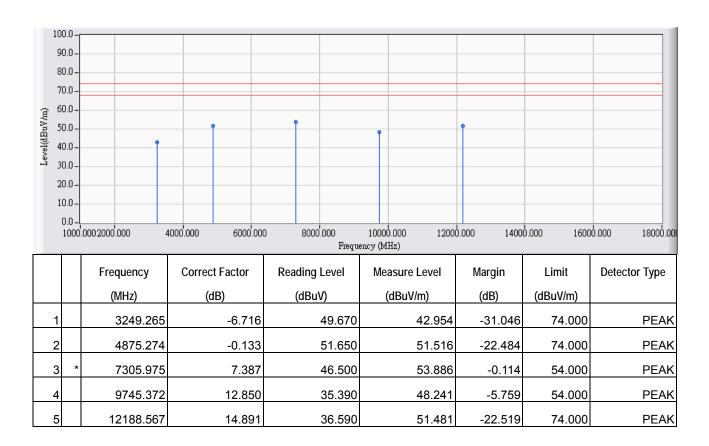
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
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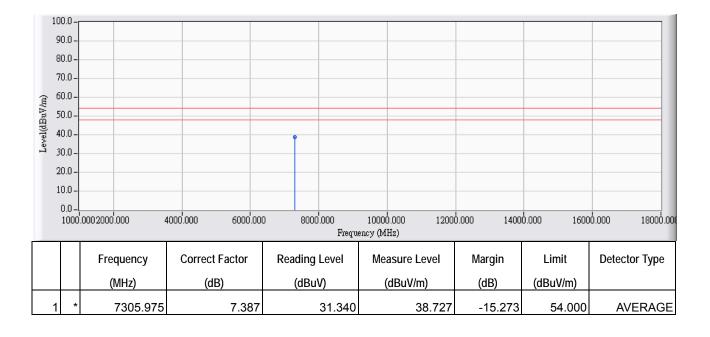
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
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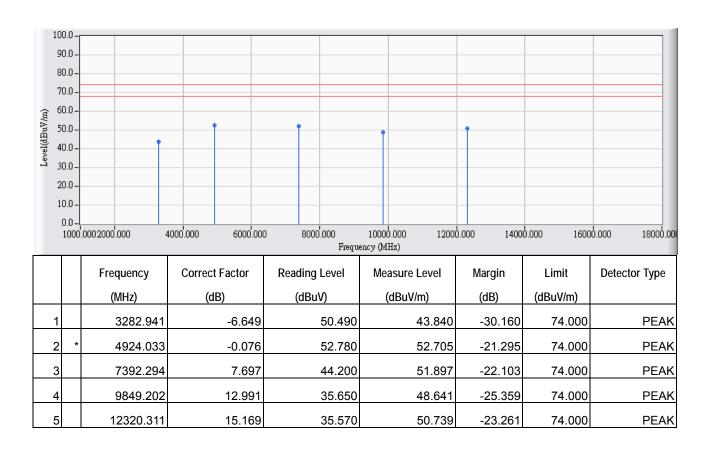
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
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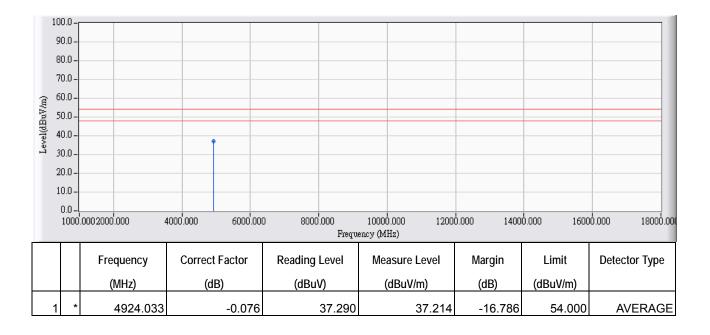
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
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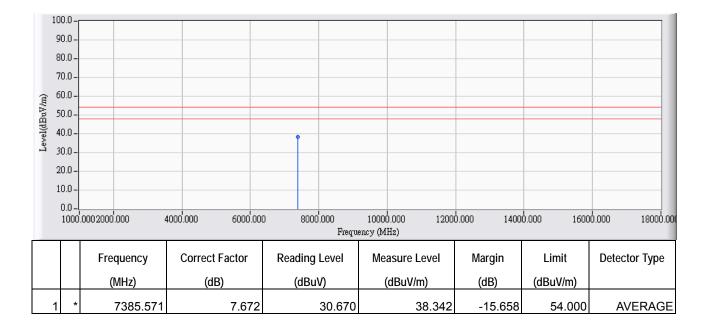
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
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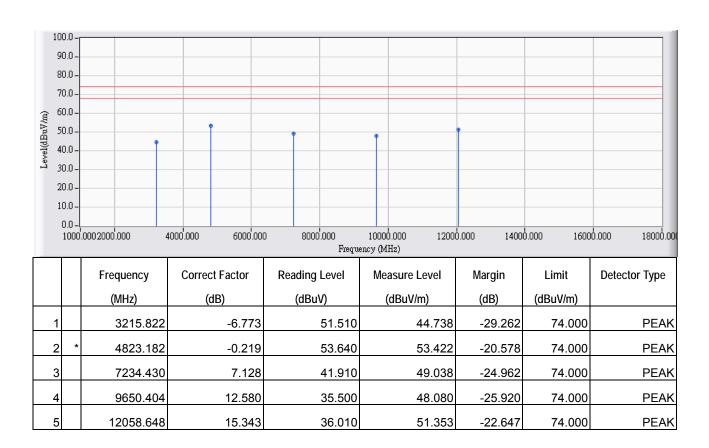
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
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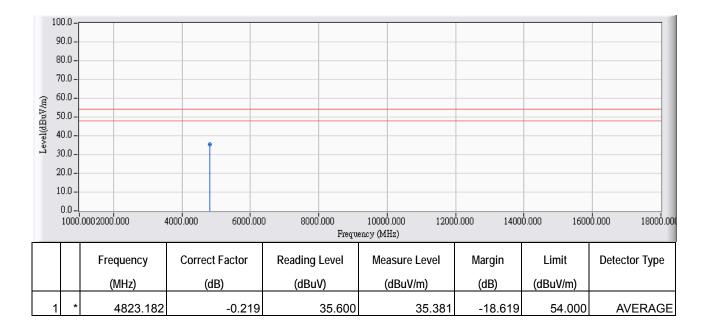
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
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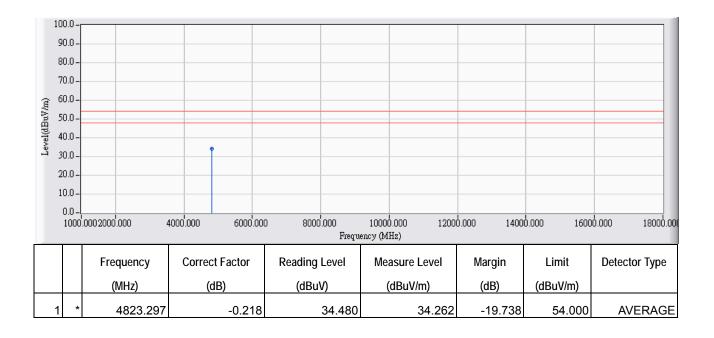
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
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Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
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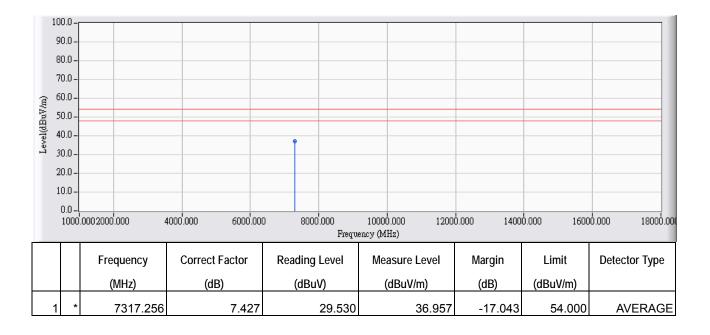
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2437MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
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Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2437MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
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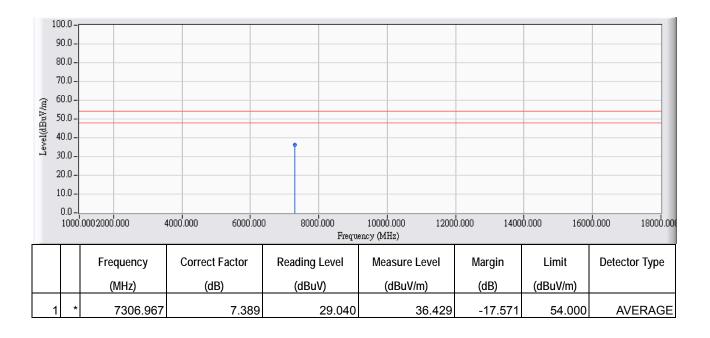
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2437MHz



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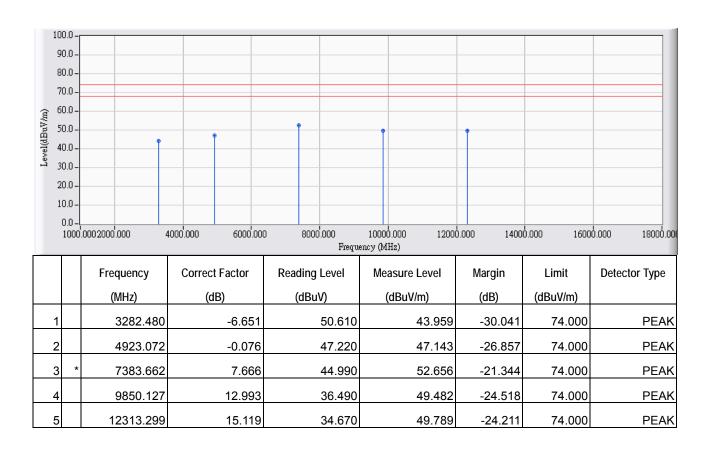
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2437MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
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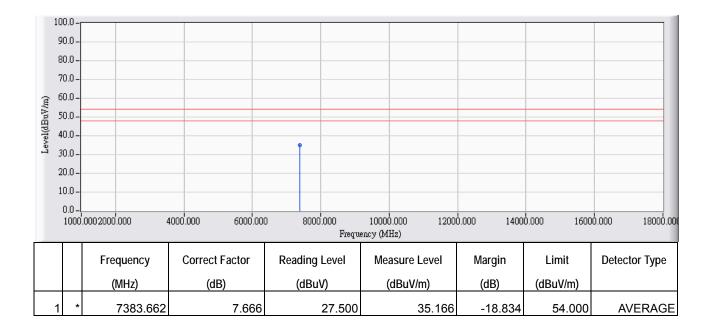
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2462MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



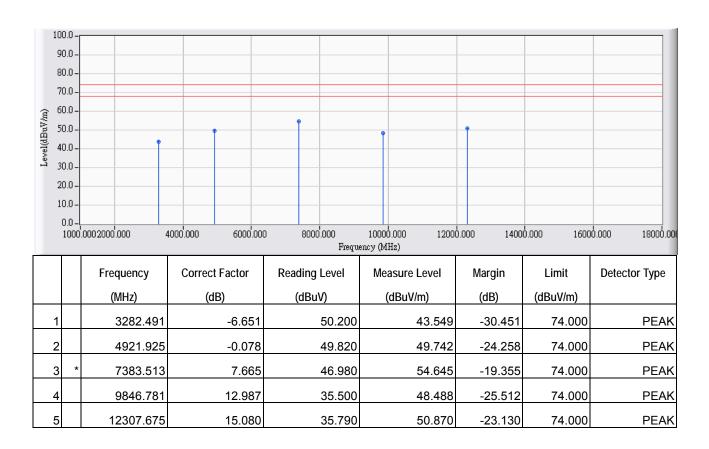
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



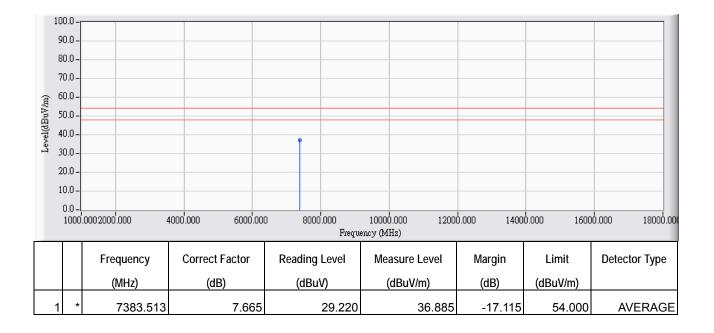
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2462MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz-25GHz were not included is because their levels are lower than 20dB from limit.



5. RF antenna conducted test

5.1. Test Equipment

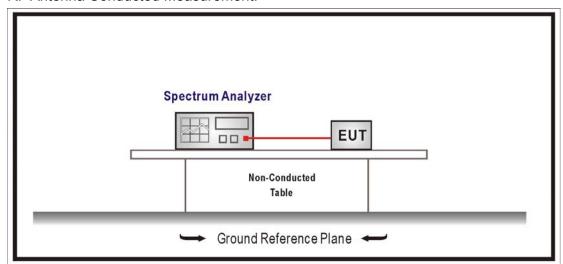
The following test equipments are used during the test:

RF antenna conducted test / SR10-H					
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum	R&S	FSV40	101049	2017/01/23	2018/01/22
Analyzer					
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Antenna Conducted Measurement:





5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

5.6. Uncertainty

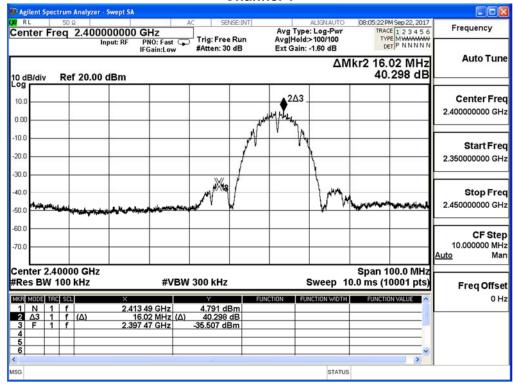
Conducted is defined as ± 1.27dB



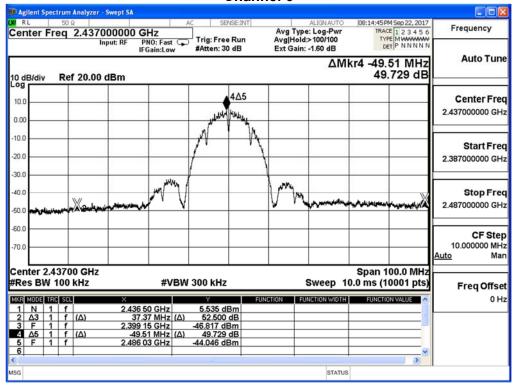
5.7. Test Result

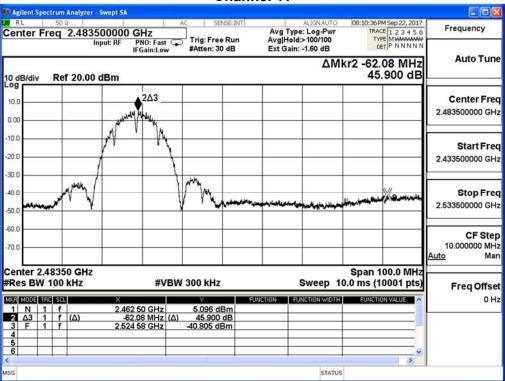
Product	WIFI Gateway			
Test Item	RF antenna conducted test			
Test Mode	Mode 1: Transmit			
Date of Test	2017/09/26	Test Site	SR10-H	

IEEE 802.11b (ANT 0)				
Channel	Frequency	Measure Level	Limit	Dooult
Channel	(MHz)	(dBc)	(dBc)	Result
1	2412	40.298	≧20	Pass
6	2437	46.646	≧20	Pass
11	2462	45.900	≥20	Pass





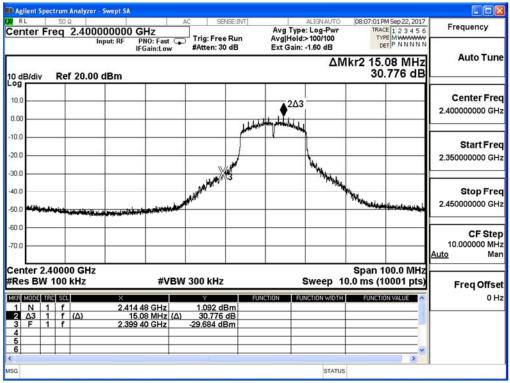




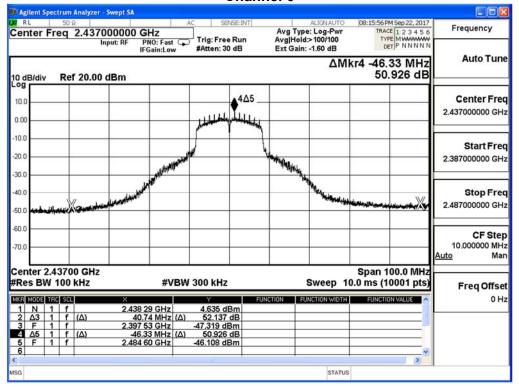


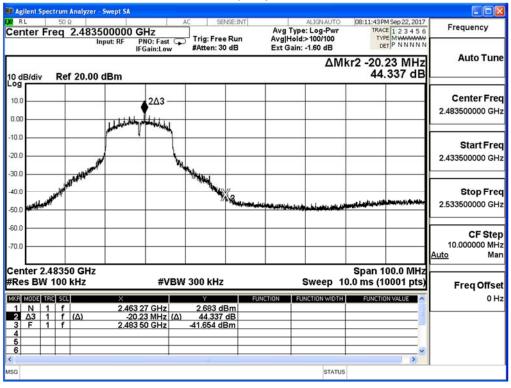
Product	WIFI Gateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/26	Test Site	SR10-H

IEEE 802.11g (ANT 0)				
Channel	Frequency	Measure Level	Limit	Dogult
Channel	(MHz)	(dBc)	(dBc)	Result
1	2412	30.776	≧20	Pass
6	2437	42.947	≧20	Pass
11	2462	42.199	≧20	Pass





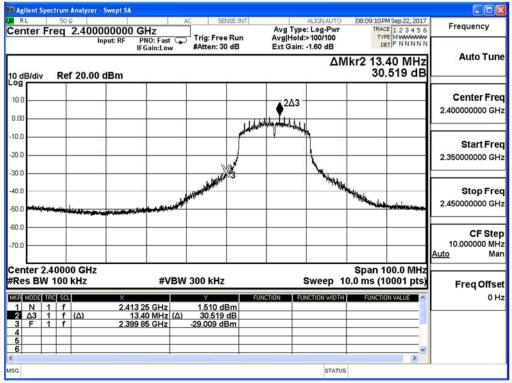




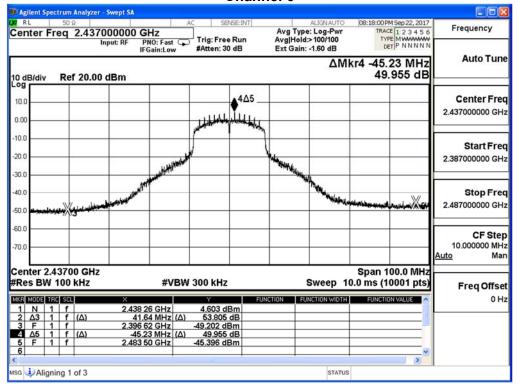


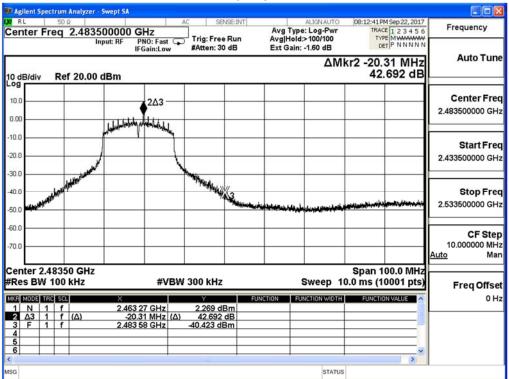
Product	WIFI Gateway				
Test Item	RF antenna conducted test	RF antenna conducted test			
Test Mode	Mode 1: Transmit	Mode 1: Transmit			
Date of Test	2017/09/26	Test Site	SR10-H		

IEEE 802.11n_20M (ANT 0)							
Channel	Frequency	Measure Level	Limit	Result			
Chamilei	(MHz)	(dBc)	(dBc)				
1	1 2412		≧20	Pass			
6	2437	46.820	≧20	Pass			
11	2462	41.739	≧20	Pass			





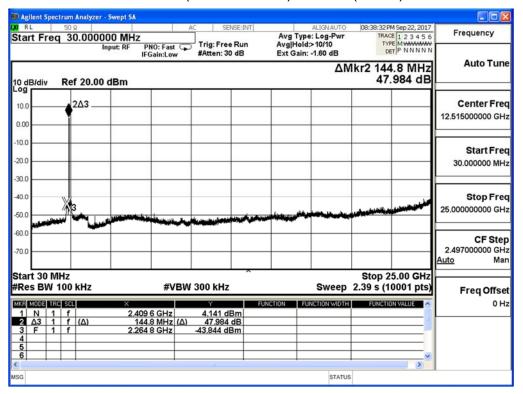




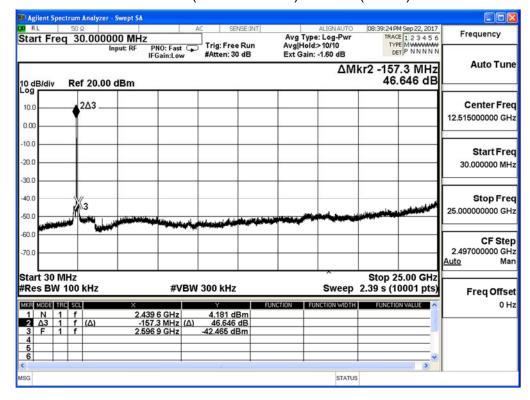


Product	WIFI Gateway				
Test Item	RF antenna conducted test				
Test Mode	Mode 1: Transmit				
Date of Test	2017/09/26	Test Site	SR10-H		

2412MHz (30MHz-25GHz)-802.11b (ANT 0)

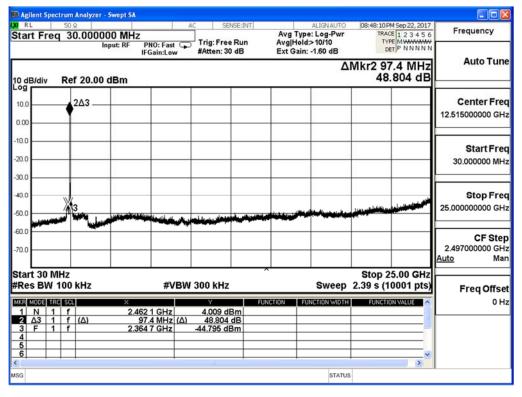


2437MHz (30MHz-25GHz)-802.11b (ANT 0)



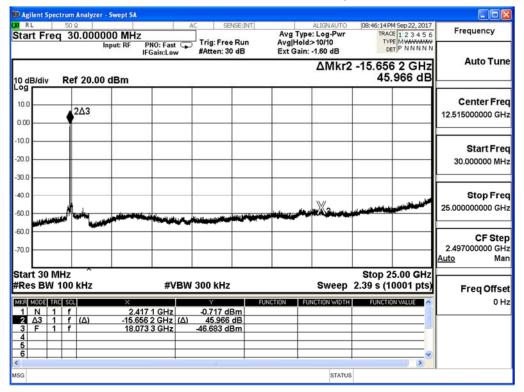


2462MHz (30MHz-25GHz)-802.11b (ANT 0)

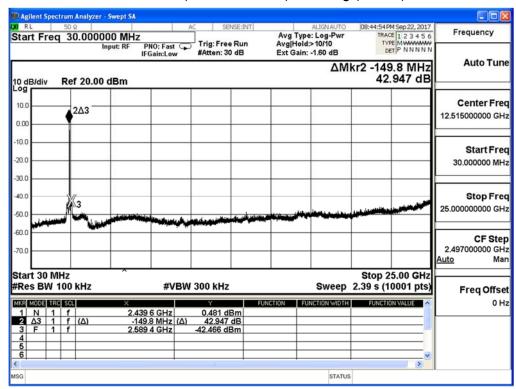




2412MHz (30MHz-25GHz)-802.11g (ANT 0)

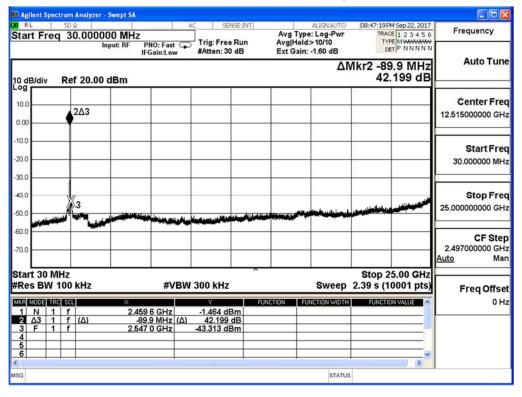


2437MHz (30MHz-25GHz)-802.11 g (ANT 0)



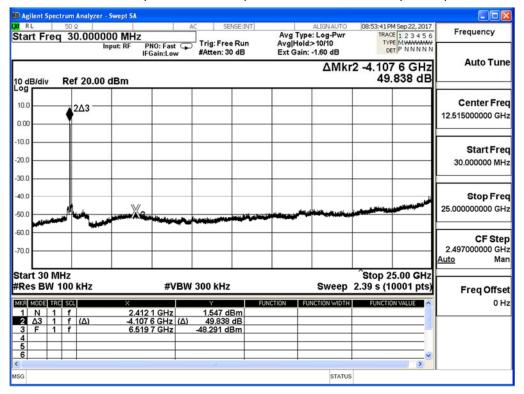


2462MHz (30MHz-25GHz)-802.11g (ANT 0)

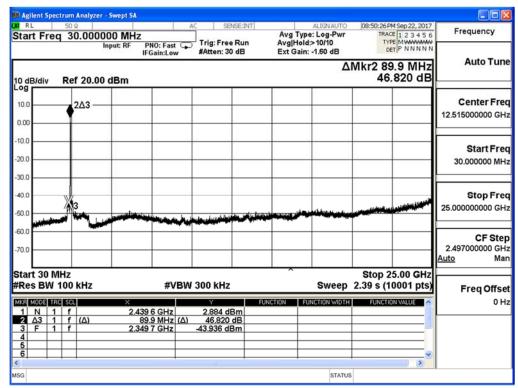




2412MHz (30MHz-25GHz)- IEEE802.11n 20MHz (ANT 0)

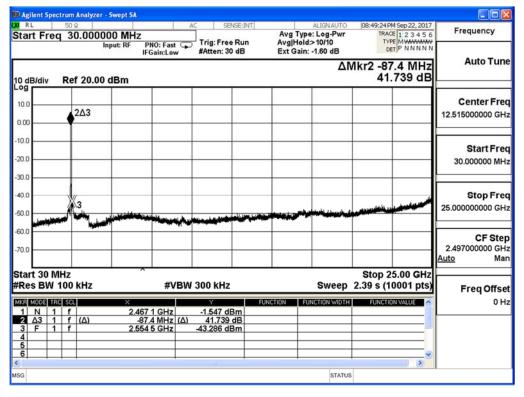


2437MHz (30MHz-25GHz)- IEEE802.11n 20MHz (ANT 0)





2462MHz (30MHz-25GHz)- IEEE802.11n 20MHz (ANT 0)





6. Band Edge

6.1. Test Equipment

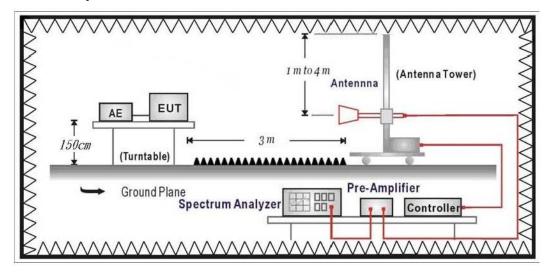
The following test equipments are used during the test:

Band Edge / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2016/11/28	2017/11/27
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/23	2018/01/22
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2017/02/15	2018/02/14
Pre-Amplifier	RF Bay Inc.	LNA-1330	12162511	2017/03/09	2018/03/08
Pre-Amplifier	EMCI	EMCI 1830I	980366	2017/01/23	2018/01/22
Pre-Amplifier	MITEQ	JS44-45-8P	2014754	2016/12/26	2017/12/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup



Report No: 1780393R-RFUSP02V00



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

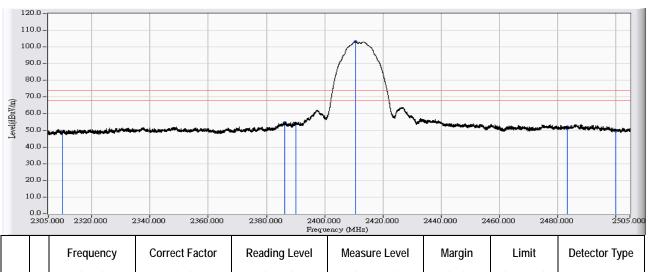
6.6. Uncertainty

The measurement uncertainty ± 3.9 dB above 1GHz



6.7. Test Result

Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz

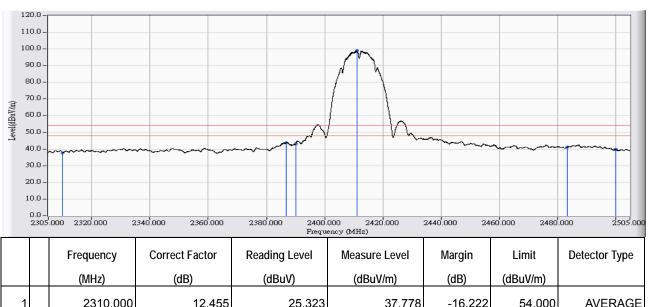


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	36.648	49.103	-24.897	74.000	PEAK
2		2386.352	13.094	41.704	54.797	-19.203	74.000	PEAK
3		2390.000	13.127	40.975	54.103	-19.897	74.000	PEAK
4	*	2410.669	13.174	89.986	103.160	29.160	74.000	PEAK
5		2483.500	13.725	38.488	52.213	-21.787	74.000	PEAK
6		2500.000	13.617	35.895	49.512	-24.488	74.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz

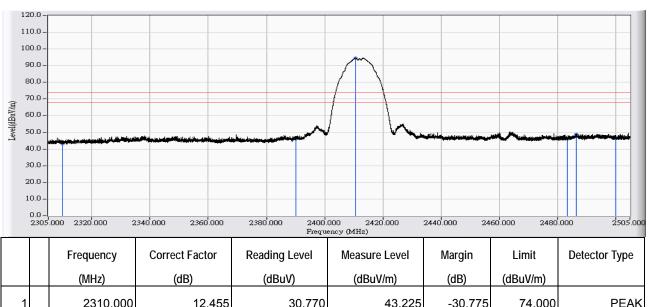


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	25.323	37.778	-16.222	54.000	AVERAGE
2		2386.692	13.096	30.663	43.760	-10.240	54.000	AVERAGE
3		2390.000	13.127	30.044	43.172	-10.828	54.000	AVERAGE
4	*	2411.149	13.174	85.926	99.101	45.101	54.000	AVERAGE
5		2483.500	13.725	27.296	41.021	-12.979	54.000	AVERAGE
6		2500.000	13.617	26.178	39.795	-14.205	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz

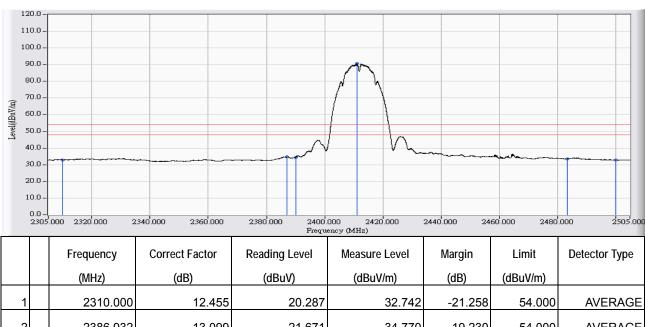


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	30.770	43.225	-30.775	74.000	PEAK
2		2390.000	13.127	32.979	46.107	-27.893	74.000	PEAK
3	*	2410.649	13.174	81.368	94.542	20.542	74.000	PEAK
4		2483.500	13.725	32.746	46.471	-27.529	74.000	PEAK
5		2486.522	13.719	35.115	48.835	-25.165	74.000	PEAK
6		2500.000	13.617	33.394	47.011	-26.989	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2412MHz

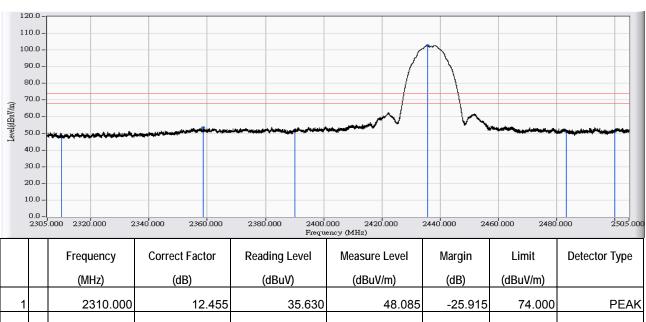


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	20.287	32.742	-21.258	54.000	AVERAGE
2		2386.932	13.099	21.671	34.770	-19.230	54.000	AVERAGE
3		2390.000	13.127	21.389	34.517	-19.483	54.000	AVERAGE
4	*	2411.109	13.174	77.499	90.674	36.674	54.000	AVERAGE
5		2483.500	13.725	19.875	33.600	-20.400	54.000	AVERAGE
6		2500.000	13.617	19.254	32.871	-21.129	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2437MHz

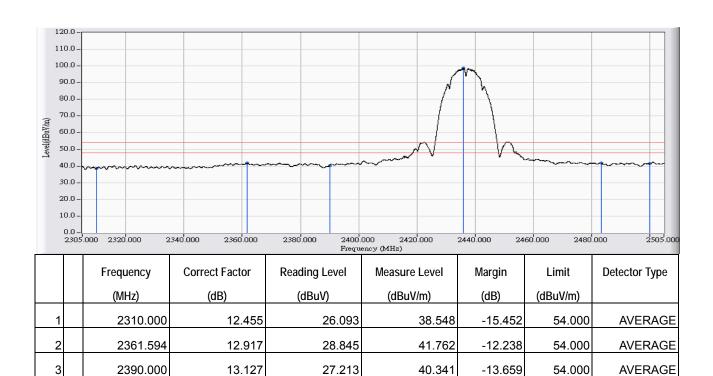


	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	2310.000	12.455	35.630	48.085	-25.915	74.000	PEAK
2	2358.715	12.898	40.646	53.545	-20.455	74.000	PEAK
3	2390.000	13.127	38.828	51.956	-22.044	74.000	PEAK
4	* 2435.787	13.344	89.432	102.775	28.775	74.000	PEAK
5	2483.500	13.725	37.535	51.260	-22.740	74.000	PEAK
6	2500.000	13.617	37.602	51.219	-22.781	74.000	PEAK
	3	1 2310.000 2 2358.715 3 2390.000 4 * 2435.787 5 2483.500	1 2310.000 12.455 2 2358.715 12.898 3 2390.000 13.127 4 * 2435.787 13.344 5 2483.500 13.725	1 2310.000 12.455 35.630 2 2358.715 12.898 40.646 3 2390.000 13.127 38.828 4 * 2435.787 13.344 89.432 5 2483.500 13.725 37.535	1 2310.000 12.455 35.630 48.085 2 2358.715 12.898 40.646 53.545 3 2390.000 13.127 38.828 51.956 4 * 2435.787 13.344 89.432 102.775 5 2483.500 13.725 37.535 51.260	1 2310.000 12.455 35.630 48.085 -25.915 2 2358.715 12.898 40.646 53.545 -20.455 3 2390.000 13.127 38.828 51.956 -22.044 4 * 2435.787 13.344 89.432 102.775 28.775 5 2483.500 13.725 37.535 51.260 -22.740	1 2310.000 12.455 35.630 48.085 -25.915 74.000 2 2358.715 12.898 40.646 53.545 -20.455 74.000 3 2390.000 13.127 38.828 51.956 -22.044 74.000 4 * 2435.787 13.344 89.432 102.775 28.775 74.000 5 2483.500 13.725 37.535 51.260 -22.740 74.000

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note: 802.11b_2437MHz



4

5

6

2436.127

2483.500

2500.000

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

85.425

27.980

27.979

98.772

41.705

41.596

44.772

-12.295

-12.404

54.000

54.000

54.000

AVERAGE

AVERAGE

AVERAGE

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

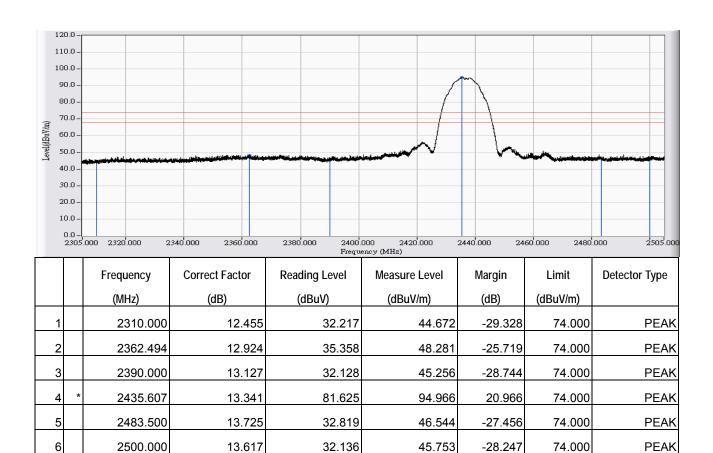
13.347

13.725

13.617



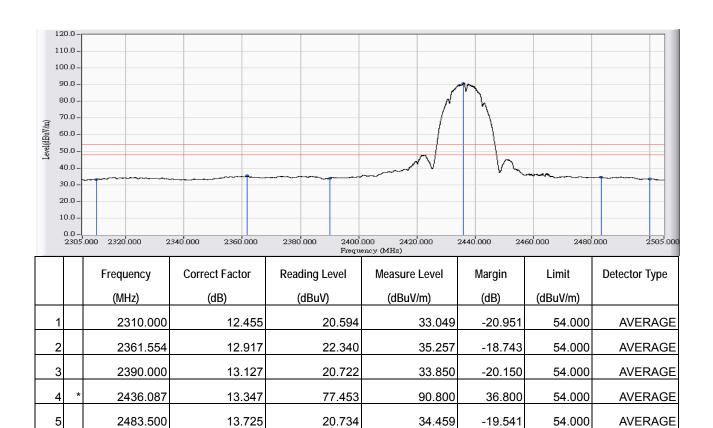
Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11b_2437MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11b_2437MHz



6

2500.000

 All readings above 1GHz are performed with peak and/or average measurements as necessary.

19.706

33.323

-20.677

54.000

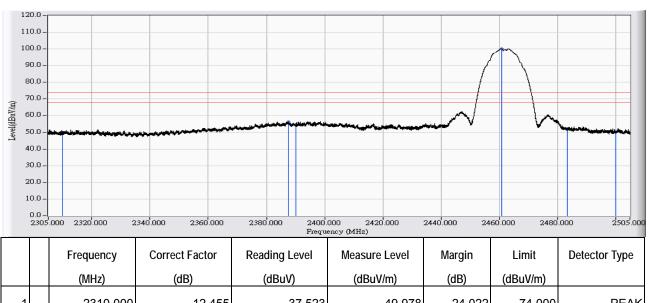
AVERAGE

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

13.617



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz

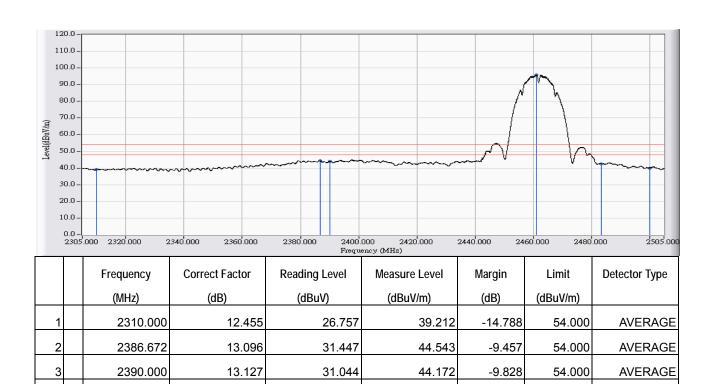


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	37.523	49.978	-24.022	74.000	PEAK
2		2387.492	13.104	43.268	56.372	-17.628	74.000	PEAK
3		2390.000	13.127	41.475	54.603	-19.397	74.000	PEAK
4	*	2460.804	13.518	86.630	100.148	26.148	74.000	PEAK
5		2483.500	13.725	38.153	51.878	-22.122	74.000	PEAK
6		2500.000	13.617	36.453	50.070	-23.930	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



4

5

6

2461.084

2483.500

2500.000

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

82.472

28.831

26.374

95.989

42.556

39.991

41.989

-11.444

-14.009

54.000

54.000

54.000

AVERAGE

AVERAGE

AVERAGE

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

13.517

13.725

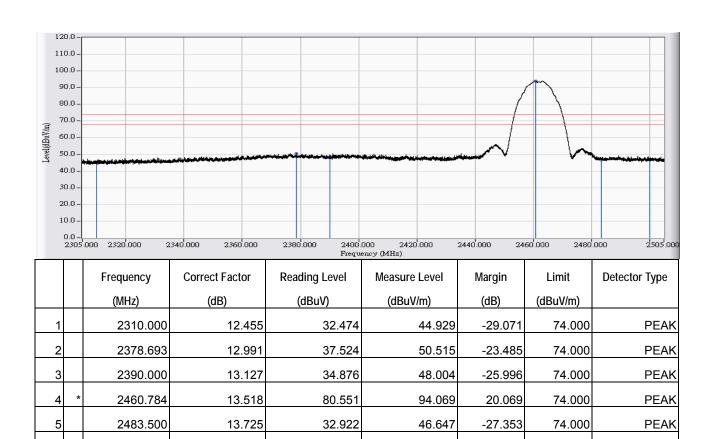
13.617



74.000

PEAK

Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



Note:

6

2500.000

 All readings above 1GHz are performed with peak and/or average measurements as necessary.

33.295

46.912

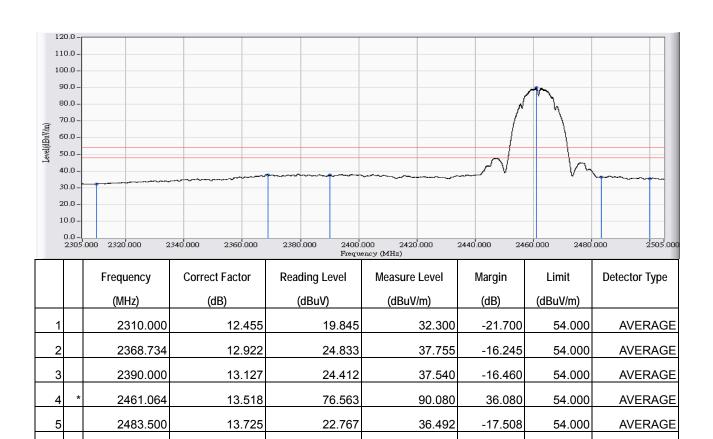
-27.088

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

13.617



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11b_2462MHz



6

2500.000

 All readings above 1GHz are performed with peak and/or average measurements as necessary.

21.753

35.370

-18.630

54.000

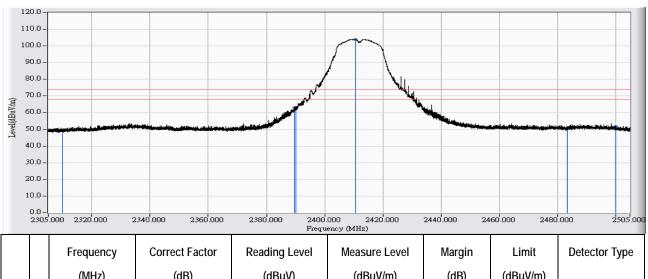
AVERAGE

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

13.617



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2412MHz

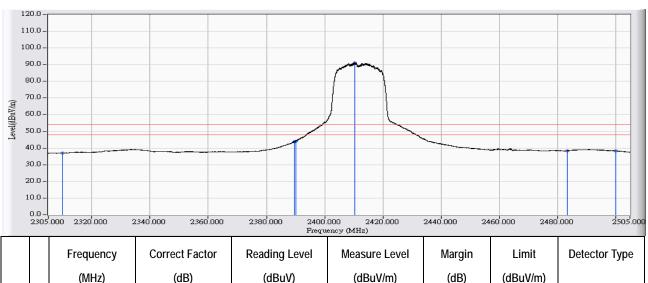


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	36.886	49.341	-24.659	74.000	PEAK
2		2389.671	13.125	49.923	63.048	-10.952	74.000	PEAK
3		2390.000	13.127	49.392	62.520	-11.480	74.000	PEAK
4	*	2410.709	13.175	90.870	104.044	30.044	74.000	PEAK
5		2483.500	13.725	36.953	50.678	-23.322	74.000	PEAK
6		2500.000	13.617	38.023	51.640	-22.360	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2412MHz

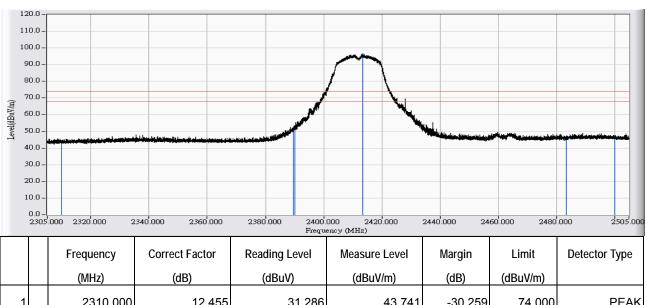


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	24.532	36.987	-17.013	54.000	AVERAGE
2		2389.491	13.123	30.640	43.763	-10.237	54.000	AVERAGE
3		2390.000	13.127	31.058	44.186	-9.814	54.000	AVERAGE
4	*	2410.409	13.173	77.949	91.123	37.123	54.000	AVERAGE
5		2483.500	13.725	24.705	38.430	-15.570	54.000	AVERAGE
6		2500.000	13.617	24.646	38.263	-15.737	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2412MHz

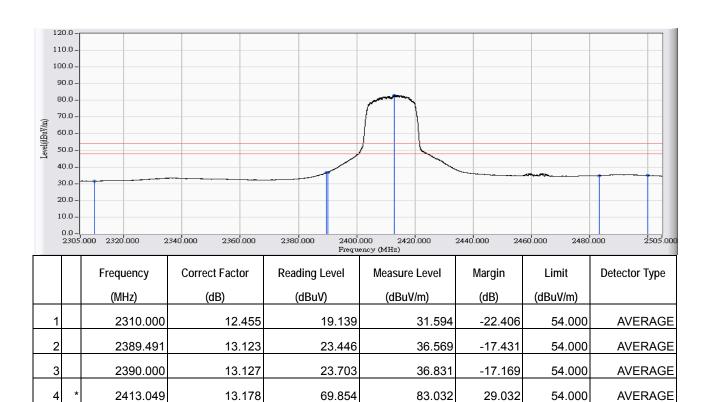


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	31.286	43.741	-30.259	74.000	PEAK
2		2389.491	13.123	38.345	51.468	-22.532	74.000	PEAK
3		2390.000	13.127	39.161	52.289	-21.711	74.000	PEAK
4	*	2413.409	13.178	82.807	95.985	21.985	74.000	PEAK
5		2483.500	13.725	32.203	45.928	-28.072	74.000	PEAK
6		2500.000	13.617	33.086	46.703	-27.297	74.000	

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2412MHz



5

6

2483.500

2500.000

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

21.119

21.408

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

13.725

13.617

6. The average measurement was not performed when the peak measured data under the limit of average detection.

34.844

35.025

-19.156

-18.975

54.000

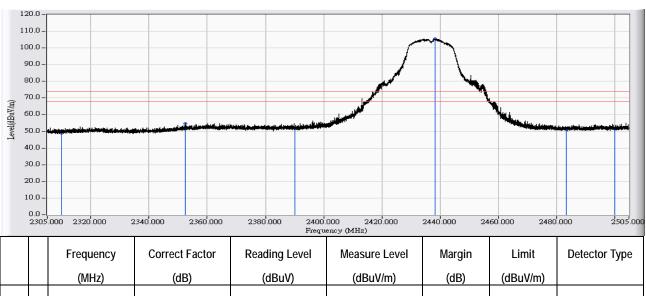
54.000

AVERAGE

AVERAGE



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz

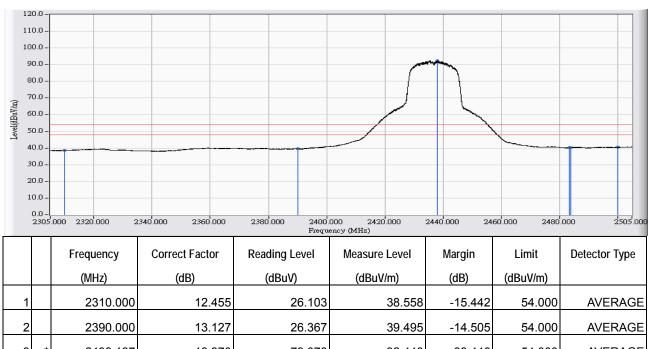


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	36.579	49.034	-24.966	74.000	PEAK
2		2352.315	12.807	41.901	54.709	-19.291	74.000	PEAK
3		2390.000	13.127	39.104	52.232	-21.768	74.000	PEAK
4	*	2438.227	13.371	92.119	105.489	31.489	74.000	PEAK
5		2483.500	13.725	37.484	51.209	-22.791	74.000	PEAK
6		2500.000	13.617	37.785	51.402	-22.598	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz

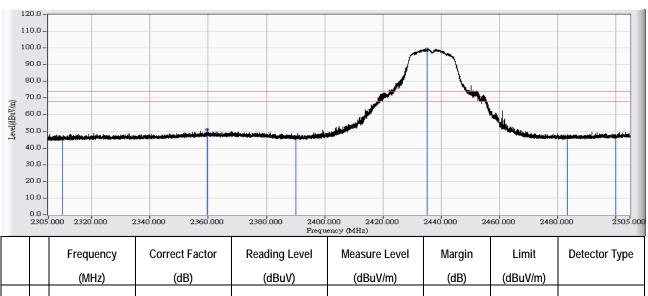


		(IVIHZ)	(aB)	(aBuv)	(aBuv/m)	(aB)	(aBuv/m)	
1		2310.000	12.455	26.103	38.558	-15.442	54.000	AVERAGE
2		2390.000	13.127	26.367	39.495	-14.505	54.000	AVERAGE
3	*	2438.187	13.370	79.078	92.448	38.448	54.000	AVERAGE
4		2483.500	13.725	26.561	40.286	-13.714	54.000	AVERAGE
5		2483.882	13.728	26.528	40.255	-13.745	54.000	AVERAGE
6		2500.000	13.617	26.796	40.413	-13.587	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz

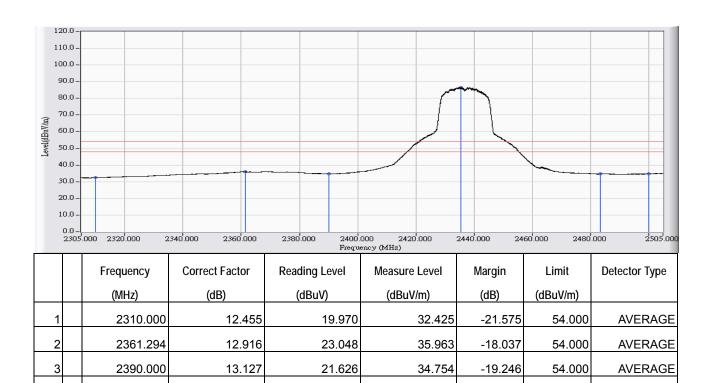


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	32.596	45.051	-28.949	74.000	PEAK
2		2359.514	12.904	38.163	51.067	-22.933	74.000	PEAK
3		2390.000	13.127	32.983	46.111	-27.889	74.000	PEAK
4	*	2435.207	13.337	85.992	99.329	25.329	74.000	PEAK
5		2483.500	13.725	33.380	47.105	-26.895	74.000	PEAK
6		2500.000	13.617	33.144	46.761	-27.239	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2437MHz



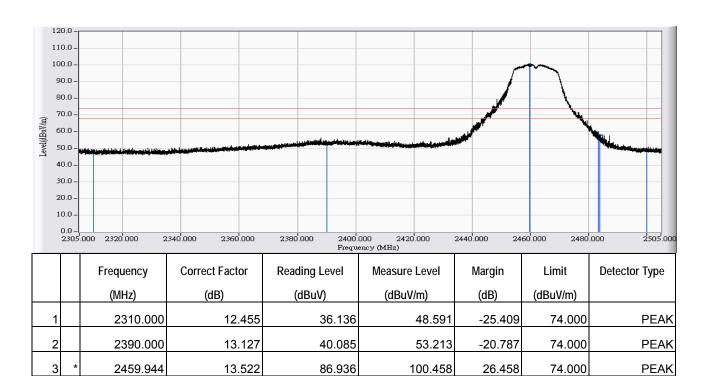
2435.567 13.341 73.226 86.567 32.567 54.000 **AVERAGE** 4 2483.500 20.964 -19.311 54.000 5 13.725 34.689 **AVERAGE** 2500.000 -19.291 6 13.617 21.092 34.709 54.000 **AVERAGE**

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



PEAK

Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz



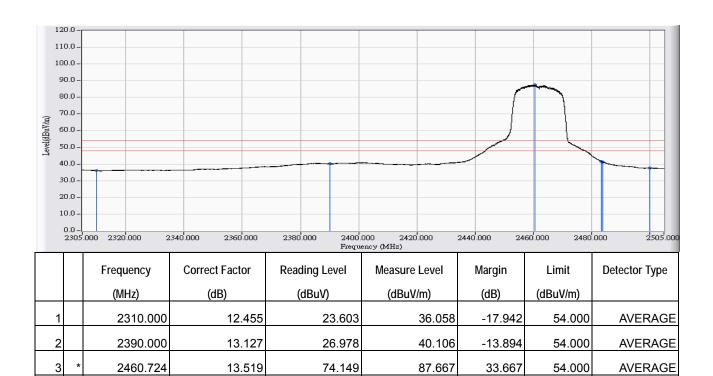
2483.500 43<u>.451</u> PEAK 13.725 57.176 -16.824 74.000 4 2483.882 74.000 5 13.728 44.148 57.875 -16.125 **PEAK** 2500.000 74.000 6 13.617 35.968 49.585 -24.415 PEAK

100.458

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz



4

5

6

2483.500

2483.882

2500.000

 All readings above 1GHz are performed with peak and/or average measurements as necessary.

27<u>.835</u>

27.550

23.952

41.560

41.277

37.569

-12.440

-12.723

-16.431

54.000

54.000

54.000

AVERAGE

AVERAGE

AVERAGE

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

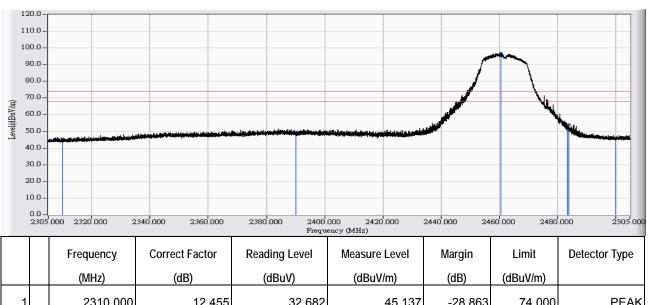
13.725

13.728

13.617



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz

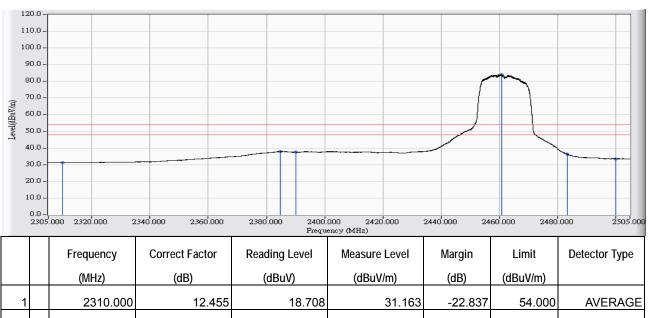


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	32.682	45.137	-28.863	74.000	PEAK
2		2390.000	13.127	35.480	48.608	-25.392	74.000	PEAK
3	*	2460.584	13.519	83.211	96.730	22.730	74.000	PEAK
4		2483.500	13.725	38.449	52.174	-21.826	74.000	PEAK
5		2483.982	13.728	40.237	53.965	-20.035	74.000	PEAK
6		2500.000	13.617	32.286	45.903	-28.097	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11g_2462MHz

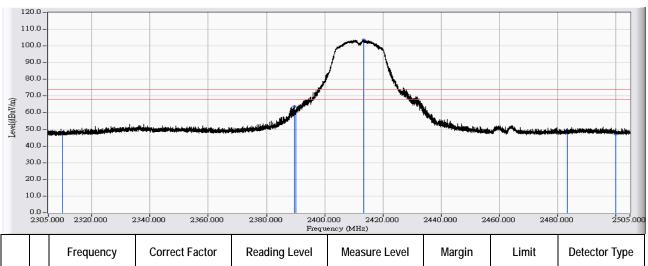


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	18.708	31.163	-22.837	54.000	AVERAGE
2		2384.632	13.072	24.731	37.803	-16.197	54.000	AVERAGE
3		2390.000	13.127	24.381	37.509	-16.491	54.000	AVERAGE
4	*	2460.824	13.518	70.588	84.106	30.106	54.000	AVERAGE
5		2483.500	13.725	22.547	36.272	-17.728	54.000	AVERAGE
6		2500.000	13.617	19.961	33.578	-20.422	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz

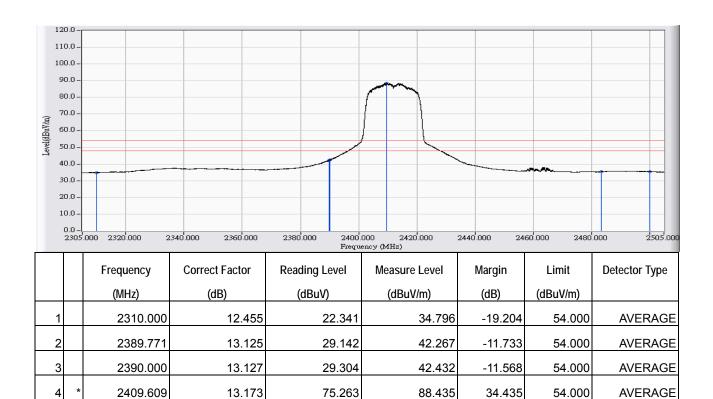


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	35.179	47.634	-26.366	74.000	PEAK
2		2389.631	13.125	50.615	63.739	-10.261	74.000	PEAK
3		2390.000	13.127	47.376	60.504	-13.496	74.000	PEAK
4	*	2413.569	13.178	90.288	103.467	29.467	74.000	PEAK
5		2483.500	13.725	35.603	49.328	-24.672	74.000	PEAK
6		2500.000	13.617	33.638	47.255	-26.745	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2412MHz



4

5

6

2483.500

2500.000

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

21.746

21.917

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

13.725

13.617

6. The average measurement was not performed when the peak measured data under the limit of average detection.

<u>-18.5</u>29

-18.466

35.471

35.534

54.000

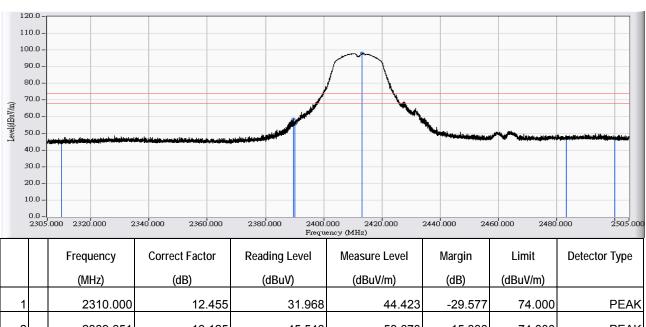
54.000

AVERAGE

AVERAGE



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz

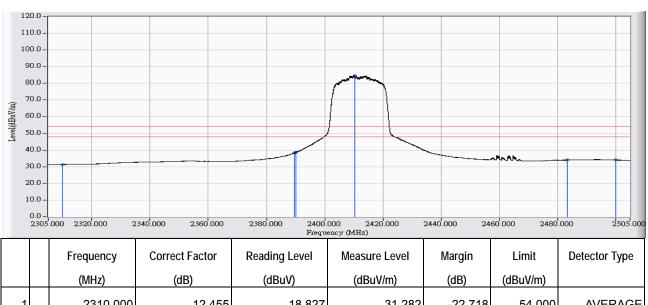


			Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
			(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
	1		2310.000	12.455	31.968	44.423	-29.577	74.000	PEAK
	2		2389.651	13.125	45.546	58.670	-15.330	74.000	PEAK
Ī	3		2390.000	13.127	42.584	55.712	-18.288	74.000	PEAK
Ī	4	*	2413.189	13.178	84.911	98.089	24.089	74.000	PEAK
Ī	5		2483.500	13.725	33.388	47.113	-26.887	74.000	PEAK
	6		2500.000	13.617	33.505	47.122	-26.878	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2412MHz

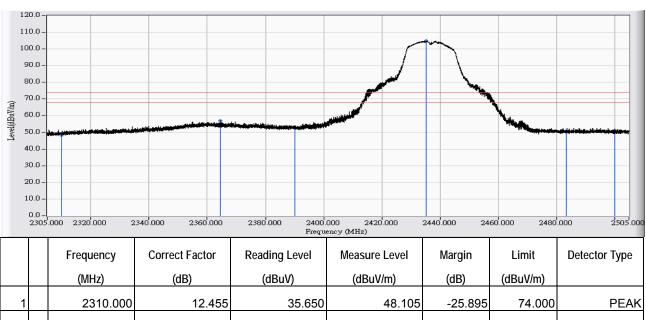


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	18.827	31.282	-22.718	54.000	AVERAGE
2		2389.691	13.125	25.176	38.301	-15.699	54.000	AVERAGE
3		2390.000	13.127	25.364	38.492	-15.508	54.000	AVERAGE
4	*	2410.349	13.173	71.501	84.675	30.675	54.000	AVERAGE
5		2483.500	13.725	20.257	33.982	-20.018	54.000	AVERAGE
6		2500.000	13.617	20.369	33.986	-20.014	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2437MHz

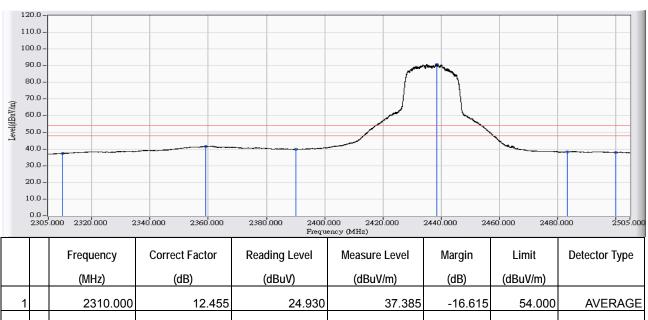


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	35.650	48.105	-25.895	74.000	PEAK
2	2	2364.374	12.936	43.975	56.910	-17.090	74.000	PEAK
3	3	2390.000	13.127	39.490	52.618	-21.382	74.000	PEAK
4	*	2435.287	13.338	91.535	104.873	30.873	74.000	PEAK
5	5	2483.500	13.725	36.983	50.708	-23.292	74.000	PEAK
6	6	2500.000	13.617	36.529	50.146	-23.854	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2437MHz

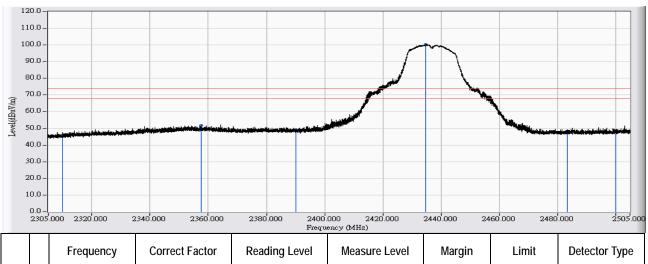


	Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	2310.000	12.455	24.930	37.385	-16.615	54.000	AVERAGE
2	2358.975	12.900	28.549	41.449	-12.551	54.000	AVERAGE
3	2390.000	13.127	26.771	39.899	-14.101	54.000	AVERAGE
4 *	2438.587	13.374	77.300	90.674	36.674	54.000	AVERAGE
5	2483.500	13.725	24.606	38.331	-15.669	54.000	AVERAGE
6	2500.000	13.617	24.360	37.977	-16.023	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2437MHz

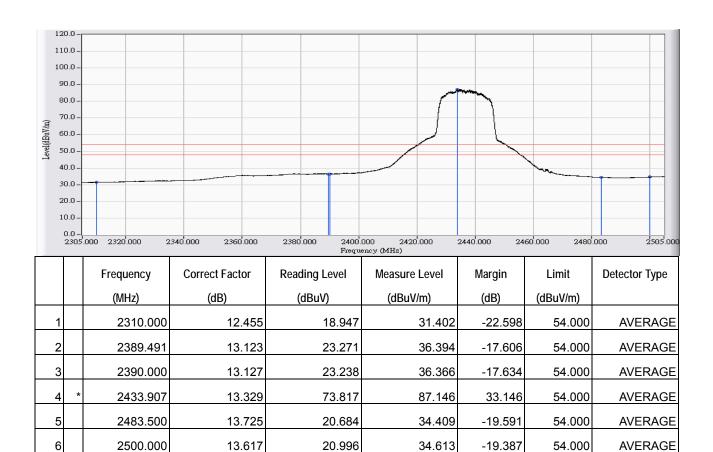


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	33.070	45.525	-28.475	74.000	PEAK
2		2357.675	12.890	39.044	51.933	-22.067	74.000	PEAK
3		2390.000	13.127	35.653	48.781	-25.219	74.000	PEAK
4	*	2434.827	13.334	87.070	100.404	26.404	74.000	PEAK
5		2483.500	13.725	33.708	47.433	-26.567	74.000	PEAK
6		2500.000	13.617	34.233	47.850	-26.150	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note: 802.11n(20M)_2437MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



74.000

74.000

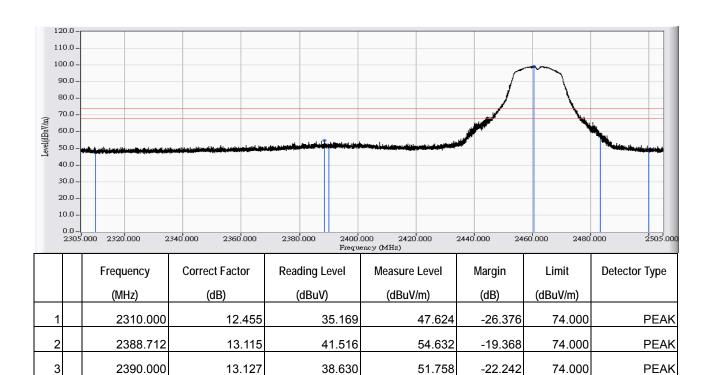
74.000

PEAK

PEAK

PEAK

Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2462MHz



Note:

4

5

6

2460.544

2483.500

2500.000

 All readings above 1GHz are performed with peak and/or average measurements as necessary.

85.685

43.756

35.849

99.204

57.481

49.466

25.204

-16.519

-24.534

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.

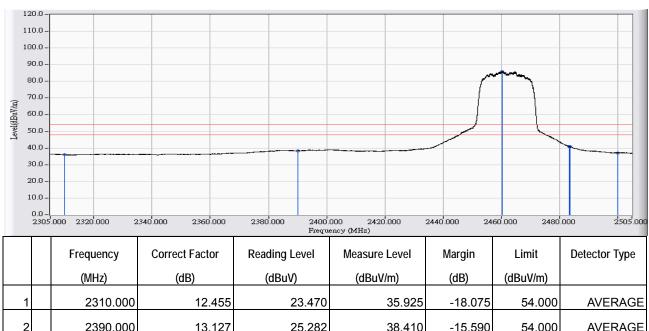
13.519

13.725

13.617



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
HORIZONTAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2462MHz

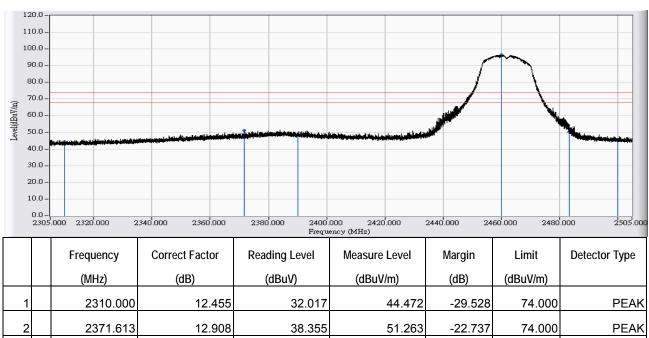


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	23.470	35.925	-18.075	54.000	AVERAGE
2		2390.000	13.127	25.282	38.410	-15.590	54.000	AVERAGE
3	*	2460.504	13.520	72.455	85.974	31.974	54.000	AVERAGE
4		2483.500	13.725	27.267	40.992	-13.008	54.000	AVERAGE
5		2483.602	13.725	27.097	40.823	-13.177	54.000	AVERAGE
6		2500.000	13.617	23.536	37.153	-16.847	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2462MHz

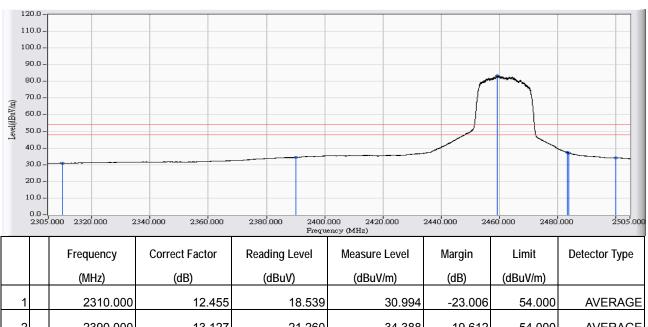


		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	12.455	32.017	44.472	-29.528	74.000	PEAK
2		2371.613	12.908	38.355	51.263	-22.737	74.000	PEAK
3		2390.000	13.127	35.123	48.251	-25.749	74.000	PEAK
4	*	2460.144	13.522	82.889	96.410	22.410	74.000	PEAK
5		2483.500	13.725	36.518	50.243	-23.757	74.000	PEAK
6		2500.000	13.617	31.536	45.153	-28.847	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB2-H	Time : 2017/09/10
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB2_FCC_EFS_B091_1-18GHz_3M_0117 -	Power : DC 3.3V
VERTICAL	
EUT : WIFI Gateway	Note : 802.11n(20M)_2462MHz



	Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	2310.000	12.455	18.539	30.994	-23.006	54.000	AVERAGE
2	2390.000	13.127	21.260	34.388	-19.612	54.000	AVERAGE
3	* 2459.325	13.525	69.820	83.344	29.344	54.000	AVERAGE
4	2483.500	13.725	23.562	37.287	-16.713	54.000	AVERAGE
5	2483.862	13.728	23.384	37.111	-16.889	54.000	AVERAGE
6	2500.000	13.617	20.383	34.000	-20.000	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



7. DTS Bandwidth

7.1. Test Equipment

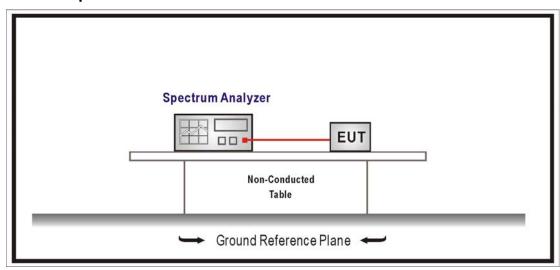
The following test equipments are used during the test:

DTS Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.10:2013; tested procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100KHz, Set the VBW≥3xRBW, Sweep Time=Auto, Set Peak Detector.



7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

7.6. Uncertainty

The measurement uncertainty is defined as $\pm 150 \text{Hz}$

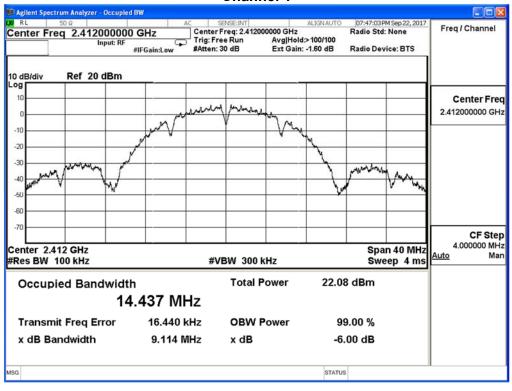
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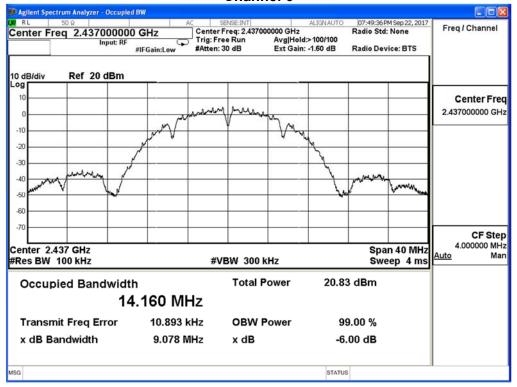
7.7. Test Result

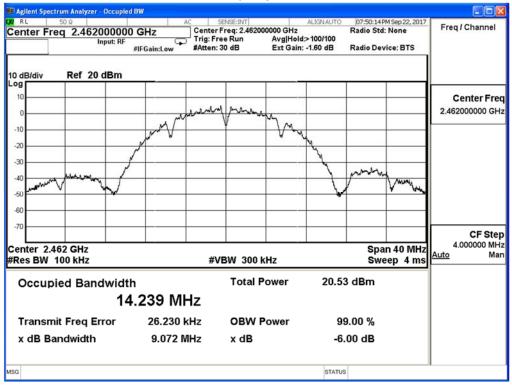
Product	WIFI Gateway		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/22	Test Site	SR10-H

802.11b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	9.114	≧0.5	Pass
6	2437	9.078	≧0.5	Pass
11	2462	9.072	≧0.5	Pass





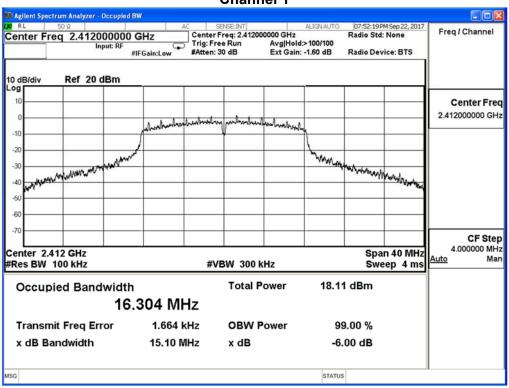




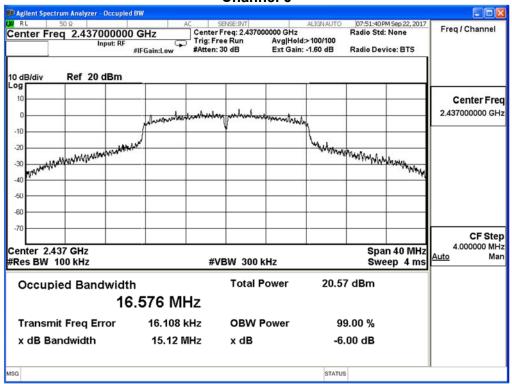


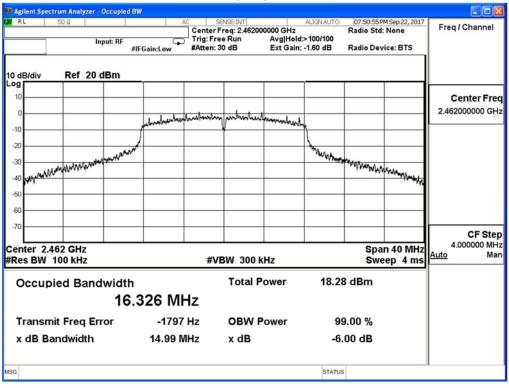
Product	WIFI Gateway		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/22	Test Site	SR10-H

802.11g (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	15.100	≧0.5	Pass
6	2437	15.120	≧0.5	Pass
11	2462	14.990	≧0.5	Pass





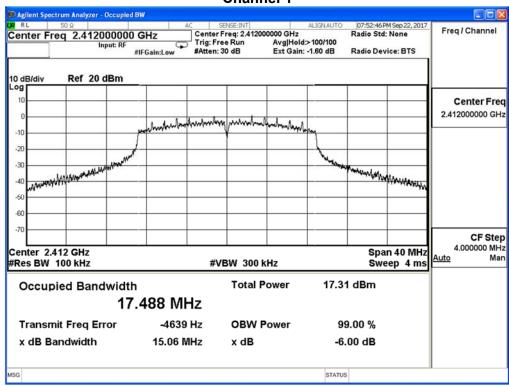




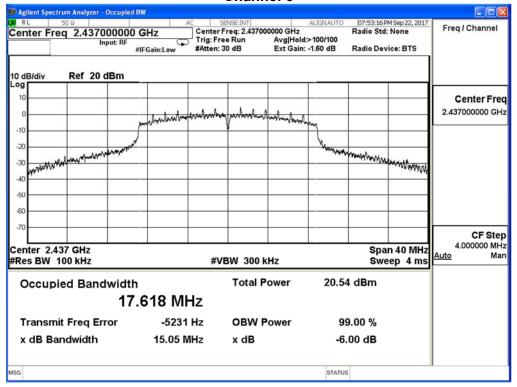


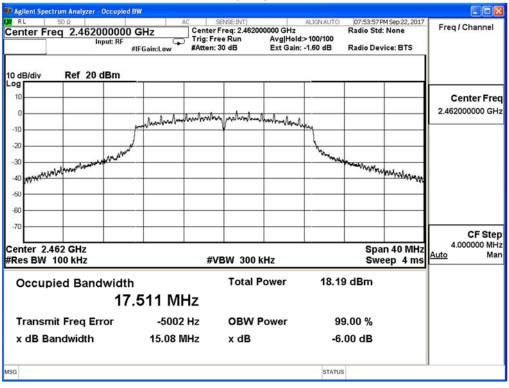
D 1 1	NAMES O 4		
Product	WIFI Gateway		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/22	Test Site	SR10-H

IEEE 802.11n_20M (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	15.060	≧0.5	Pass
6	2437	15.050	≧0.5	Pass
11	2462	15.080	≧0.5	Pass











8. Occupied Bandwidth

8.1. Test Equipment

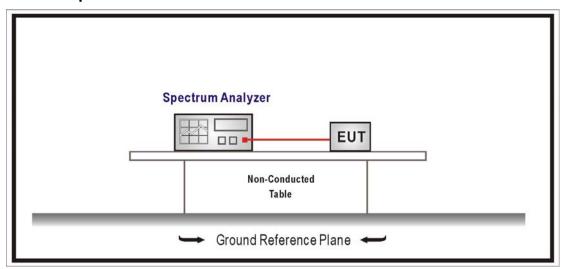
The following test equipments are used during the test:

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup



8.3. Test Procedures

The EUT was setup according to ANSI C63.10:2013; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the OBW, Set the VBW ≥ 3xRBW, Sweep Time=Auto.



8.4. Limits

NA

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

8.6. Uncertainty

The measurement uncertainty is defined as ±150Hz

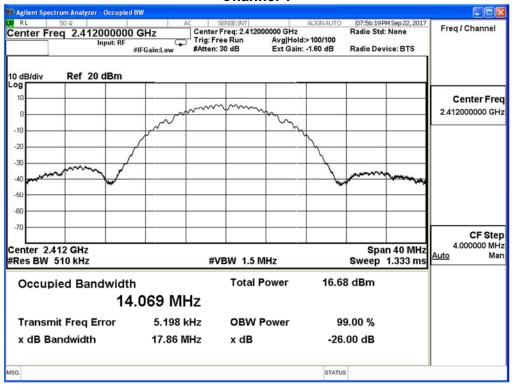
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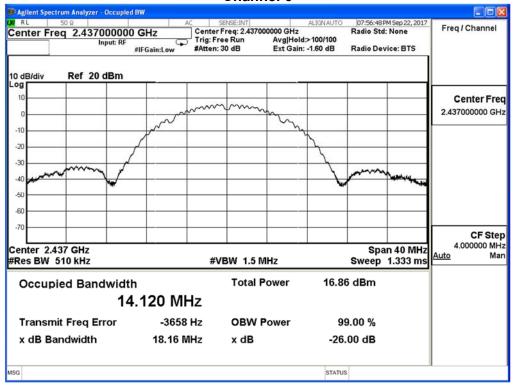
8.7. Test Result

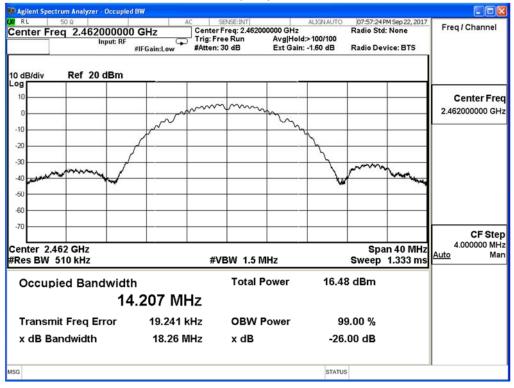
Product	WIFI Gateway		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/22	Test Site	SR10-H

802.11b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	14.069		Pass
6	2437	14.120		Pass
11	2462	14.207		Pass





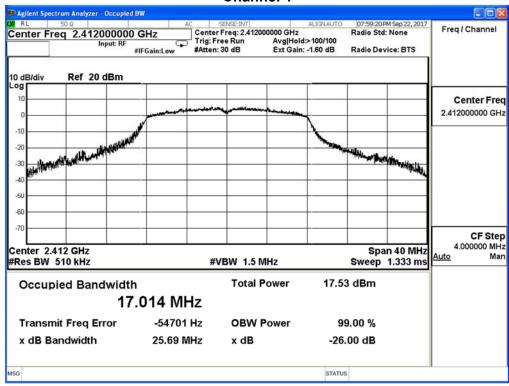




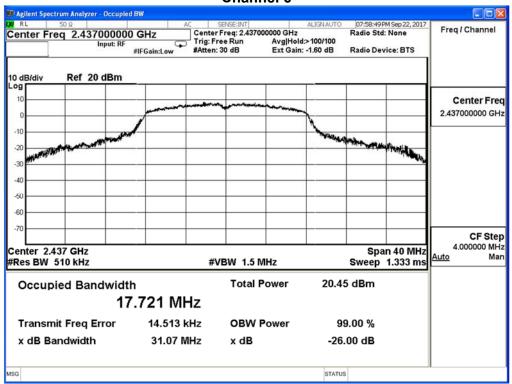


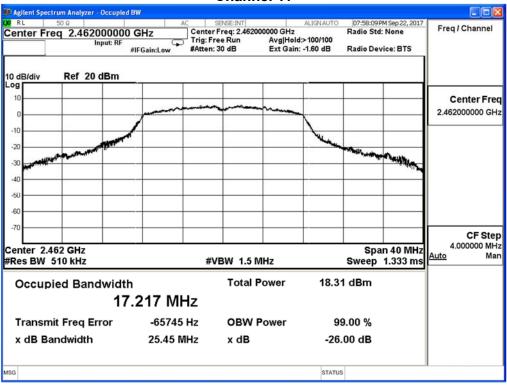
Product	WIFI Gateway		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/22	Test Site	SR10-H

802.11g (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	17.014		Pass
6	2437	17.721		Pass
11	2462	17.217		Pass





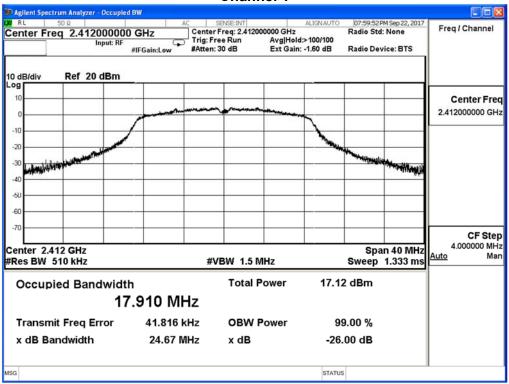




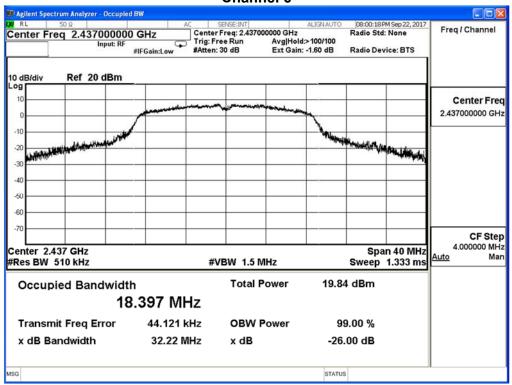


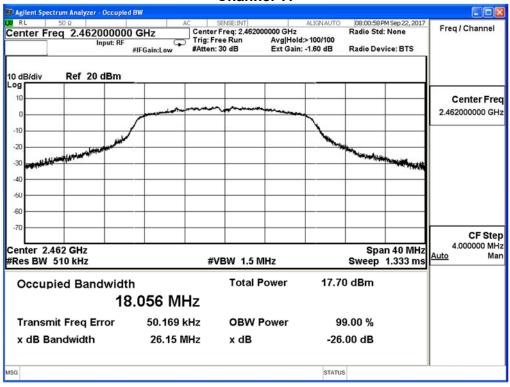
Product	WIFI Gateway		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/22	Test Site	SR10-H

IEEE802.11n 20MHz (ANT 0)					
Channel No. Frequency Measure Limit Result					
1	2412	17.910		Pass	
6	2437	18.397		Pass	
11	2462	18.056		Pass	











9. Power Density

9.1. Test Equipment

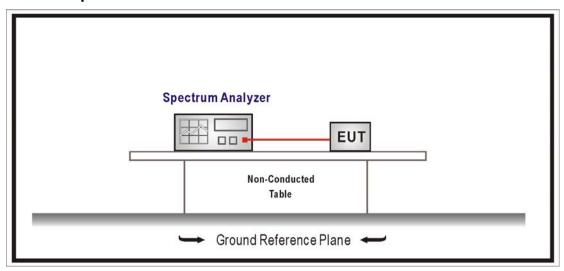
The following test equipment is used during the test:

Power Density / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum	R&S	FSV40	101049	2017/01/23	2018/01/22
Analyzer					
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

9.2. Test Setup



9.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

9.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set 3KHz ≤RBW≤100 kHz, Set VBW≥3xRBW, Sweep time=Auto, Set Peak detector.



9.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2017

9.6. Uncertainty

The measurement uncertainty is defined as ±1.27dB.

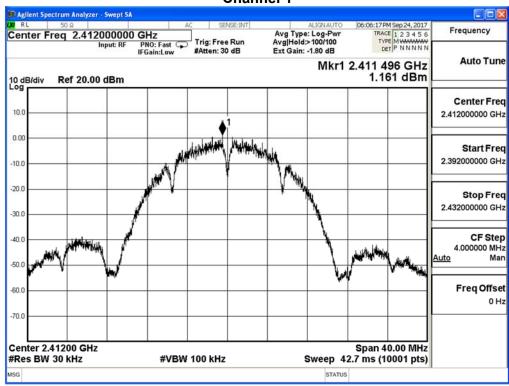
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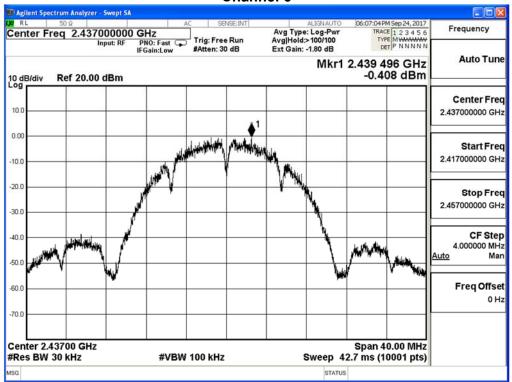
9.7. Test Result

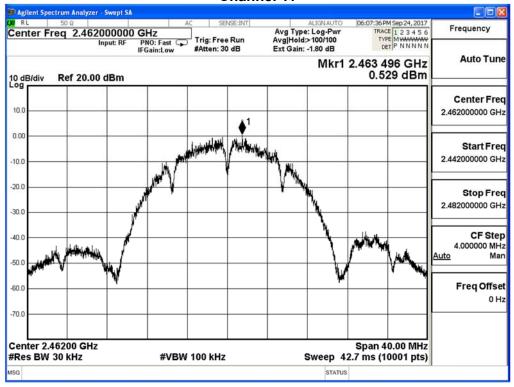
Product	WIFI Gateway		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/24	Test Site	SR10-H

IEEE 802.11b (ANT 0)					
Channel No.	Frequency (MHz)	Measure Level (dBm/3kHz)	Limit (dBm/3kHz)	Result	
1	2412	1.161	8.00	Pass	
6	2437	-0.408	8.00	Pass	
11	2462	0.529	8.00	Pass	





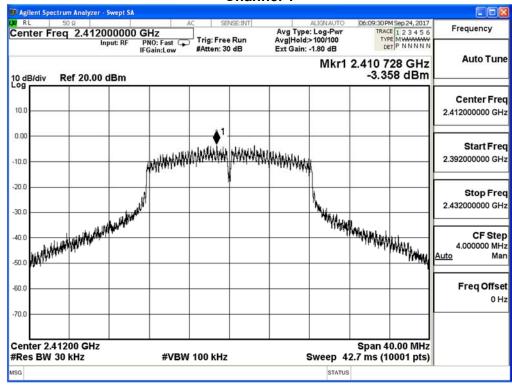




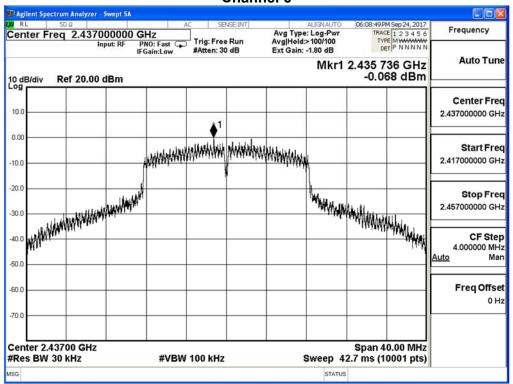


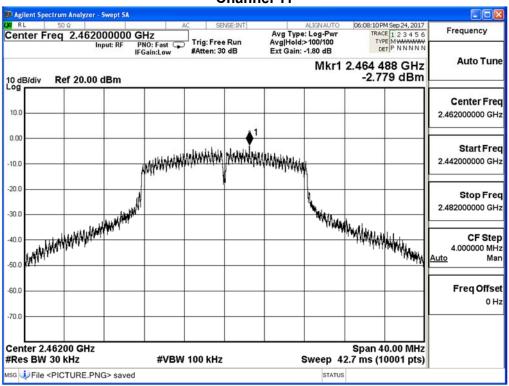
Product	WIFI Gateway		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/24	Test Site	SR10-H

IEEE 802.11g (ANT 0)					
Channal Na	Frequency	Measure Level	Limit	Decult	
Channel No.	(MHz)	(dBm/3kHz)	(dBm/3kHz)	Result	
1	2412	-3.358	8.00	Pass	
6	2437	-0.068	8.00	Pass	
11	2462	-2.779	8.00	Pass	











Product	WIFI Gateway		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2017/09/24	Test Site	SR10-H

IEEE802.11n 20MHz (ANT 0)					
Channel No.	Frequency	Measure Level	Limit	Result	
Channel No.	(MHz)	(dBm/3kHz)	(dBm/3kHz)	Result	
1	2412	-4.012	8.00	Pass	
6	2437	-1.008	8.00	Pass	
11	2462	-3.426	8.00	Pass	

