

APPLICATION FOR CERTIFICATION  
On Behalf of

ALTAI TECHNOLOGIES LIMITED

A8-Ei Super WiFi Base Station

Model Number: WA8011E

FCC ID: UCC-WA8011E

Prepared for : ALTAI TECHNOLOGIES LIMITED  
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Report Number : ACS-F10353  
Date of Test : Nov.23~Dec.24, 2010  
Date of Report : Dec.28, 2010

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## TEST REPORT CERTIFICATION

Applicant : ALTAI TECHNOLOGIES LIMITED  
 Manufacturer : ALTAI TECHNOLOGIES LIMITED  
 EUT Description : A8-Ei Super WiFi Base Station  
 (A) MODEL NO. : WA8011E  
 (B) SERIAL NO. : N/A  
 (C) FCC ID : UCC-WA8011E  
 (D)POWER SUPPLY : DC 48V From Adapter though POE or AC 120V/60Hz  
 (E) TEST VOLTAGE : DC 48V From Adapter though POE and AC 120V/60Hz

Tested to company with:

FCC Rules and Regulations Part 15 Subpart C 2008

Test Procedure Used:

ANSI C63.10:2009

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both radiated and conducted emissions.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : Nov.23~Dec.24, 2010 Report of date: Dec.28, 2010

Prepared by : Vicky Huang Reviewer by : Jamy Yu  
 Vicky Huang / Assistant Jamy Yu / Supervisor



Approved & Authorized Signer : Ken Lu / Manager

## 1. SUMMARY OF STANDARDS AND RESULTS

### 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Power Line Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.10: 2009	PASS
Radiated Emission Test	FCC Part 15: 15.209 ANSI C63.10: 2009	PASS
Band Edge Compliance Test	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Conducted spurious emissions test	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
6dB Bandwidth Test	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Output Power Test	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Power Spectral Density Test	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

Product Name	: A8-Ei Super WiFi Base Station
Model Number	: WA8011E
Power Supply	: DC 48V From Adapter though POE and AC 120V/60Hz Note: According exploratory test, this two power supply methods only influence power line conducted emissions and radiated emissions from 30MHz to 1GHz, So only these two items were performed with two power supply methods, all other RF test items were only performed with power supply from POE.
FCC ID	: UCC-WA8011E
Operation Frequency	: IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g :2412MHz—2462MHz IEEE 802.11a: 5745MHz—5825MHz
Channel Number	: IEEE 802.11b: 11 Channels IEEE 802.11g: 11 Channels IEEE 802.11a : 5Channels
Modulation Technology	: IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g:OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK)
Antenna Assembly Gain	2.4GHz:Built-in Antenna, 19dBi gain(Max) Antenna System:Sectorized System as SAS under 15.247 (c) (2)(i)and(ii) 5GHz: External Panel Antenna, 18dBi gain(Max)
Applicant	: ALTAI TECHNOLOGIES LIMITED Unit209, 2/F, Lakeside 2, 10 Science Park West Avenue, HK Science Park, Shatin, Hong Kong, China
Manufacturer	: ALTAI TECHNOLOGIES LIMITED Unit209, 2/F, Lakeside 2, 10 Science Park West Avenue, HK Science Park, Shatin, Hong Kong, China
Power Adapter	: Manufacturer: CFNCON Electronics Co., Ltd. M/N: TR60A-POE-L
Date of Test	: Nov.23~Dec.24, 2010
Date of Receipt	: Nov.22, 2010
Sample Type	: Prototype production

## 2.2. Test information

The test software “art.exe” was used to control EUT work in Continuous TX mode, and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information			
Mode	data rate (Mbps)(see Note)	Channel	Frequency (MHz)
IEEE 802.11b	11	1	2412
	11	6	2437
	11	11	2462
IEEE 802.11g	54	1	2412
	54	6	2437
	54	11	2462
IEEE 802.11a	54	149	5745
	54	157	5785
	54	165	5825

Note1: According exploratory test and product specification EUT will have maximum output power in those data rate, so those data rate were used for all test.  
 Note2: For IEEE802.11b/g mode, this device have 8 group antenna connectors, but not used synchronous. According output power test and radiated emissions exploratory test the antenna connector 1 will have maximum output power and radiated emissions. So all the final tests were performed with antenna connector 1.

## 2.3. Tested Supporting System Details

### 2.3.1. Notebook

M/N : PP09S  
 S/N : N/A  
 Manufacturer : DELL  
 Power Adaptor : Manufacturer: DELL,  
 M/N: LA65NS1-00  
 Cable: Unshielded, Detachable, 4.0m  
 (Bond one ferrite core)

## 2.4. Test Facility

### Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Mar.31, 2009 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Dec. 30, 2009 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2009  Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2010

## 2.5. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.64 dB (9kHz to 150kHz)
	3.22 dB(150kHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	4.20 dB (Polarize: V)
	4.66 dB (Polarize: H)
Uncertainty for Radiated Spurious Emission test in RF chamber	2.70 dB(Bilog antenna 30M~1000MHz)
	2.27 dB(Horn antenna 1000M~12750MHz)
Uncertainty for Conduction Spurious emission test	2.12 dB
Uncertainty for Output power test	0.97 dB
Uncertainty for Power density test	2.21 dB
Uncertainty for Temperature and humidity test	2%
	1°C
Uncertainty for Frequency range test	1x10 <sup>-9</sup>
Uncertainty for Bandwidth test	1x10 <sup>-9</sup>
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.3°C
	2%



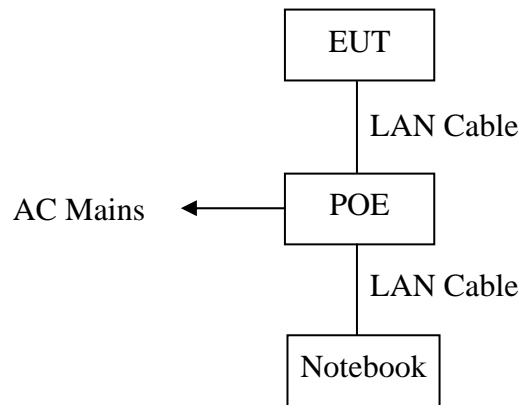
### 3. POWER LINE CONDUCTED EMISSION TEST

#### 3.1. Test Equipments

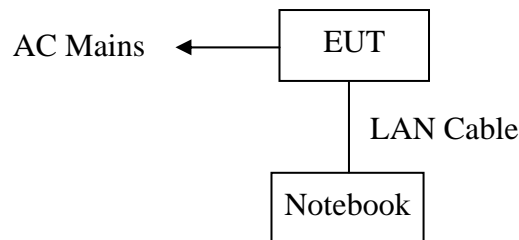
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Nov.05, 10	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Mar.30, 10	1 Year
3.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 10	1 Year
4.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 10	1Year
5.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 10	1 Year
6.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 10	1 Year

#### 3.2. Block Diagram of Test Setup

##### 3.2.1. Block diagram of connection between the EUT and simulators (Power supply by POE)



##### (Power supply from AC)



(EUT: A8-Ei Super WiFi Base Station)

#### 3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

### 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

#### 3.4.1. A8-Ei Super WiFi Base Station (EUT)

Model Number : WA8011E  
Serial Number : N/A.

### 3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turned on the power of all equipment.

3.5.3. Notebook run test software to control EUT work in Tx mode

### 3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2009 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

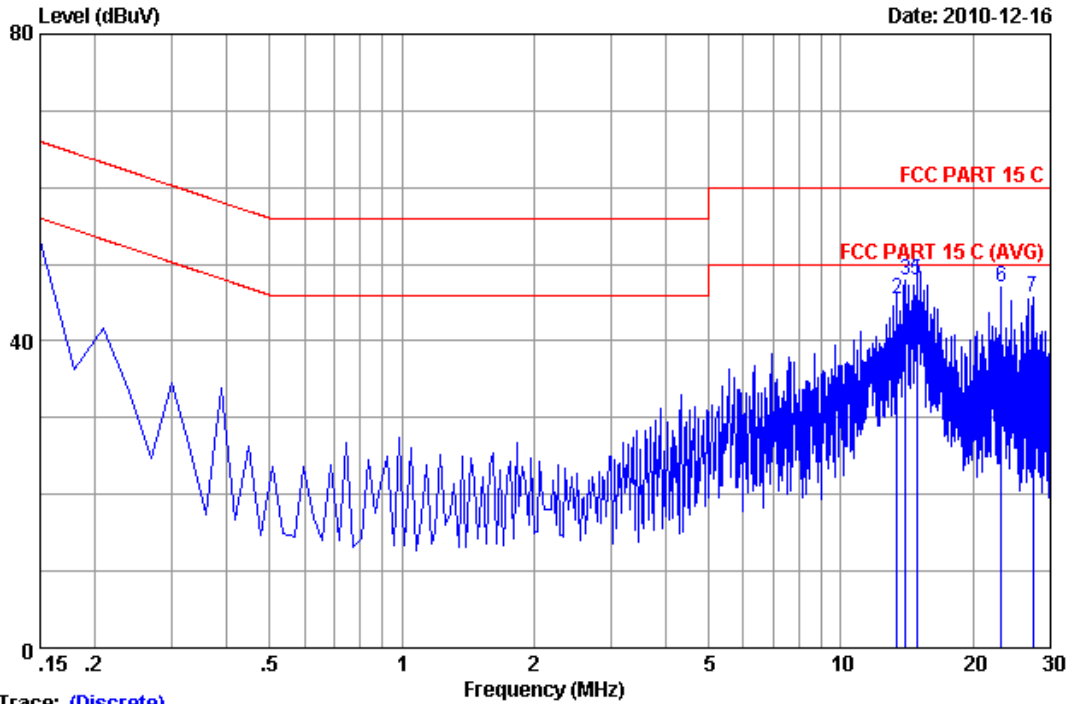
The test result are reported on Section 3.7.,

### 3.7. Power Line Conducted Emission Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)

Power supply from POE:

Data: 13 File: D:\DATA\2010 REPORT\A\ALTA\ACS10QH242.EM6 (16) Date: 2010-12-16



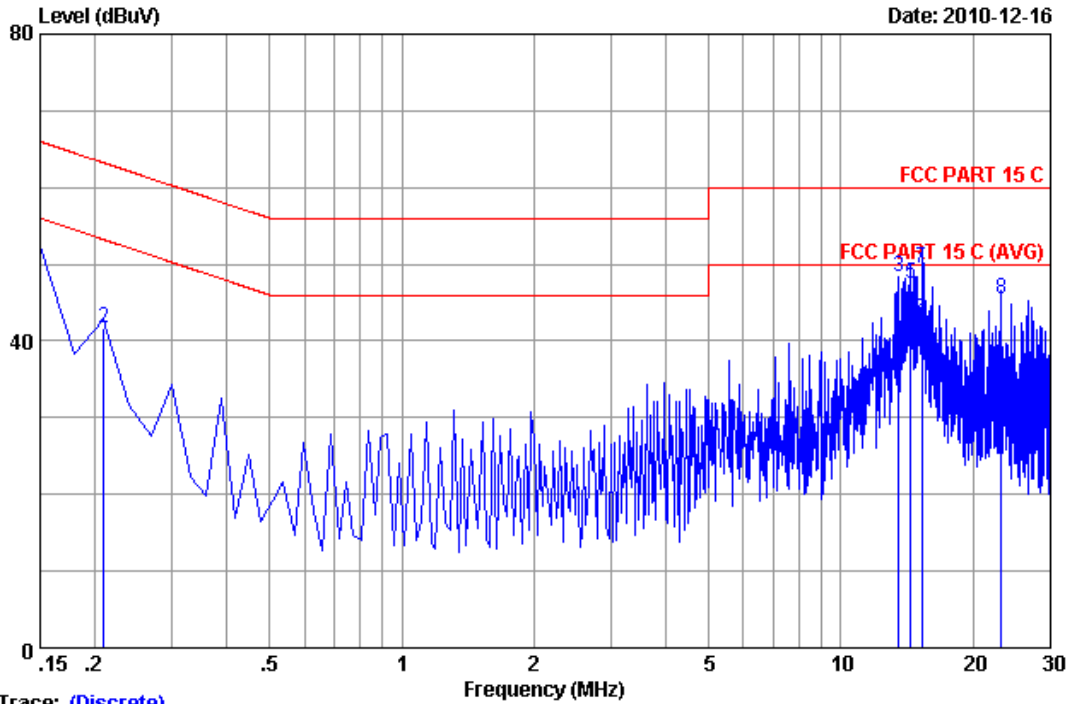
Trace: (Discrete)  
 Site no :1#conduction Data No :13  
 Dis./Ant. \*\*: 2010 ESH2-25 LINE  
 Limit :FCC PART 15 C  
 Env./Ins. :29.5\*C/55% Engineer :Sunny-lu  
 EUT :A8-Ei Super WiFi Base Station  
 Power Rating :DC 48V From Adapter input AC 120V/60Hz  
 Test Mode :Tx Mode  
 M/N :WA8011E  
 Memo :POE

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV)	Limits (dBUV)	Margin (dB)	Remark
1	0.15000	0.23	9.88	41.84	51.95	66.00	14.05	QP
2	13.433	0.49	10.02	34.93	45.44	60.00	14.56	QP
3	14.030	0.50	10.03	37.37	47.90	60.00	12.10	QP
4	14.896	0.51	10.03	31.20	41.74	50.00	8.26	Average
5	14.896	0.51	10.03	37.40	47.94	60.00	12.06	QP
6	23.135	0.78	10.11	36.10	46.99	60.00	13.01	QP
7	27.343	0.98	10.15	34.65	45.78	60.00	14.22	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Data: 14 File: D:\DATA\2010 REPORT\ALTA\ACS10QH242.EM6 (16)

Date: 2010-12-16



Trace: (Discrete)

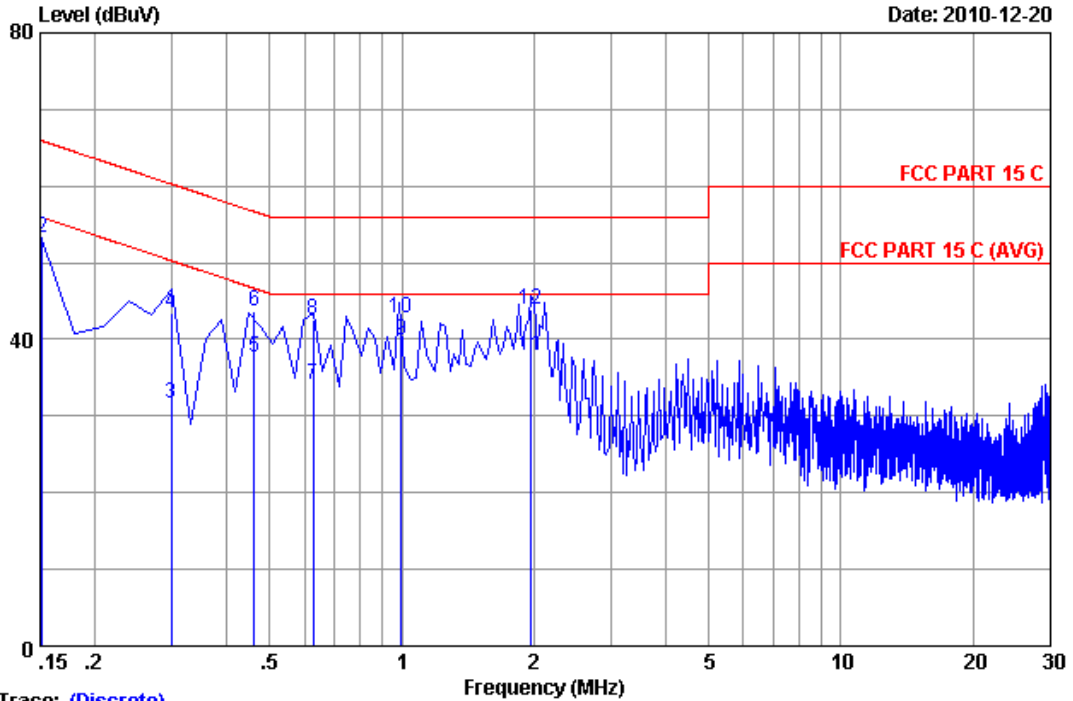
Site no :1#conduction Data No :14  
 Dis./Ant. :\*\* 2010 ESH2-Z5 NEUTRAL  
 Limit :FCC PART 15 C  
 Env./Ins. :29.5\*C/55% Engineer :Sunny-lu  
 EUT :A8-Ei Super WiFi Base Station  
 Power Rating :DC 48V From Adapter input AC 120V/60Hz  
 Test Mode :Tx Mode  
 M/N :WA8011E  
 Memo :POE

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.21	9.88	41.22	51.31	66.00	14.69	QP
2	0.20970	0.21	9.88	31.59	41.68	63.22	21.54	QP
3	13.553	0.55	10.02	37.69	48.26	60.00	11.74	QP
4	14.388	0.57	10.03	30.20	40.80	50.00	9.20	Average
5	14.388	0.57	10.03	36.90	47.50	60.00	12.50	QP
6	15.284	0.59	10.03	32.24	42.86	50.00	7.14	Average
7	15.284	0.59	10.03	38.80	49.42	60.00	10.58	QP
8	23.135	0.97	10.11	34.42	45.50	60.00	14.50	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

AC main power supply:

Data: 15 File: D:\DATA\2010 REPORT\WALTA\ACS10QH242.EM6 (16) Date: 2010-12-20

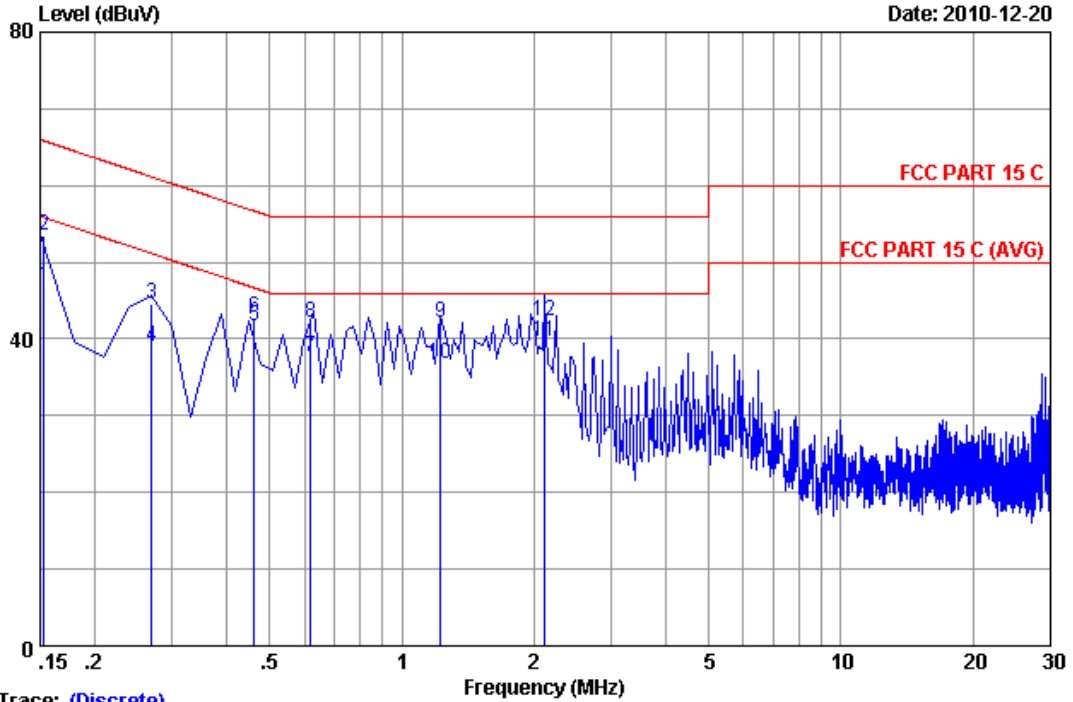


Trace: (Discrete)  
 Site no :1#conduction Data No :15  
 Dis./Ant. :\*\* 2011 ESH2-Z5 LINE  
 Limit :FCC PART 15 C  
 Env./Ins. :29.5°C/55% Engineer :Sunny-lu  
 EUT :AG-Ei Super WiFi Base Station  
 Power Rating :AC 120V/60Hz  
 Test Mode :Tx Mode  
 M/N :WA8011E  
 Memo :AC Main

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15200	0.17	9.88	37.10	47.15	55.89	8.74	Average
2	0.15200	0.17	9.88	43.30	53.35	65.89	12.54	QP
3	0.29900	0.18	9.88	21.60	31.66	50.27	18.61	Average
4	0.29900	0.18	9.88	33.40	43.46	60.27	16.81	QP
5	0.46200	0.19	9.88	27.60	37.67	46.66	8.99	Average
6	0.46200	0.19	9.88	33.60	43.67	56.66	12.99	QP
7	0.62760	0.19	9.88	24.12	34.19	46.00	11.81	Average
8	0.62760	0.19	9.88	32.41	42.48	56.00	13.52	QP
9	0.99500	0.23	9.89	29.70	39.82	46.00	6.18	Average
10	0.99500	0.23	9.89	32.70	42.82	56.00	13.18	QP
11	1.970	0.31	9.90	27.70	37.91	46.00	8.09	Average
12	1.970	0.31	9.90	33.60	43.81	56.00	12.19	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Data: 16 File: D:\DATA\2010 REPORT\A\ALTA\ACS10QH242.EM6 (16) Date: 2010-12-20



Trace: (Discrete)

Site no :1#conduction Data No :16  
 Dis./Ant. :\*\* 2011 ESH2-Z5 NEUTRAL  
 Limit :FCC PART 15 C  
 Env./Ins. :29.5°C/55% Engineer :Sunny-lu  
 EUT :A8-Ei Super WiFi Base Station  
 Power Rating :AC 120V/60Hz  
 Test Mode :Tx Mode  
 M/N :WA8011E  
 Memo :AC Main

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15300	0.21	9.88	36.70	46.79	55.84	9.05	Average
2	0.15300	0.21	9.88	43.50	53.59	65.84	12.25	QP
3	0.26940	0.21	9.88	34.56	44.65	61.14	16.49	Normal
4	0.26940	0.21	9.88	28.84	38.93	61.14	22.21	QP
5	0.46200	0.22	9.88	31.60	41.70	46.66	4.96	Average
6	0.46200	0.22	9.88	32.60	42.70	56.66	13.96	QP
7	0.61900	0.23	9.88	27.50	37.61	46.00	8.39	Average
8	0.61900	0.23	9.88	32.10	42.21	56.00	13.79	QP
9	1.225	0.25	9.89	31.94	42.08	56.00	13.92	Normal
10	1.225	0.25	9.89	26.74	36.88	56.00	19.12	QP
11	2.110	0.27	9.91	29.40	39.58	46.00	6.42	Average
12	2.110	0.27	9.91	32.20	42.38	56.00	13.62	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## 4. RADIATED EMISSION TEST

### 4.1. Test Equipment

Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.06,10	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Oct.26, 10	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 10	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 10	1 Year

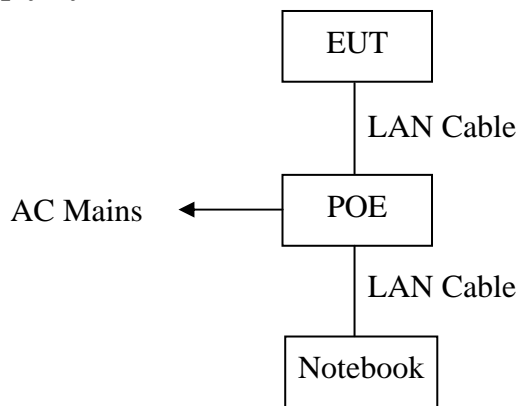
Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E7405A	MY45116588	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060088	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.08, 10	1 Year

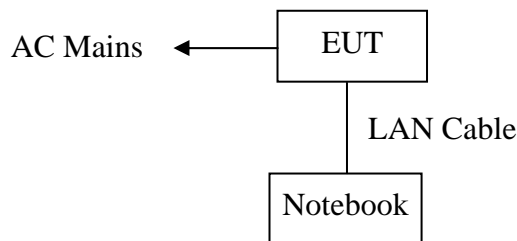
### 4.2. Block Diagram of Test Setup

4.2.1. Block diagram of connection between the EUT and simulators

(Power supply by POE)

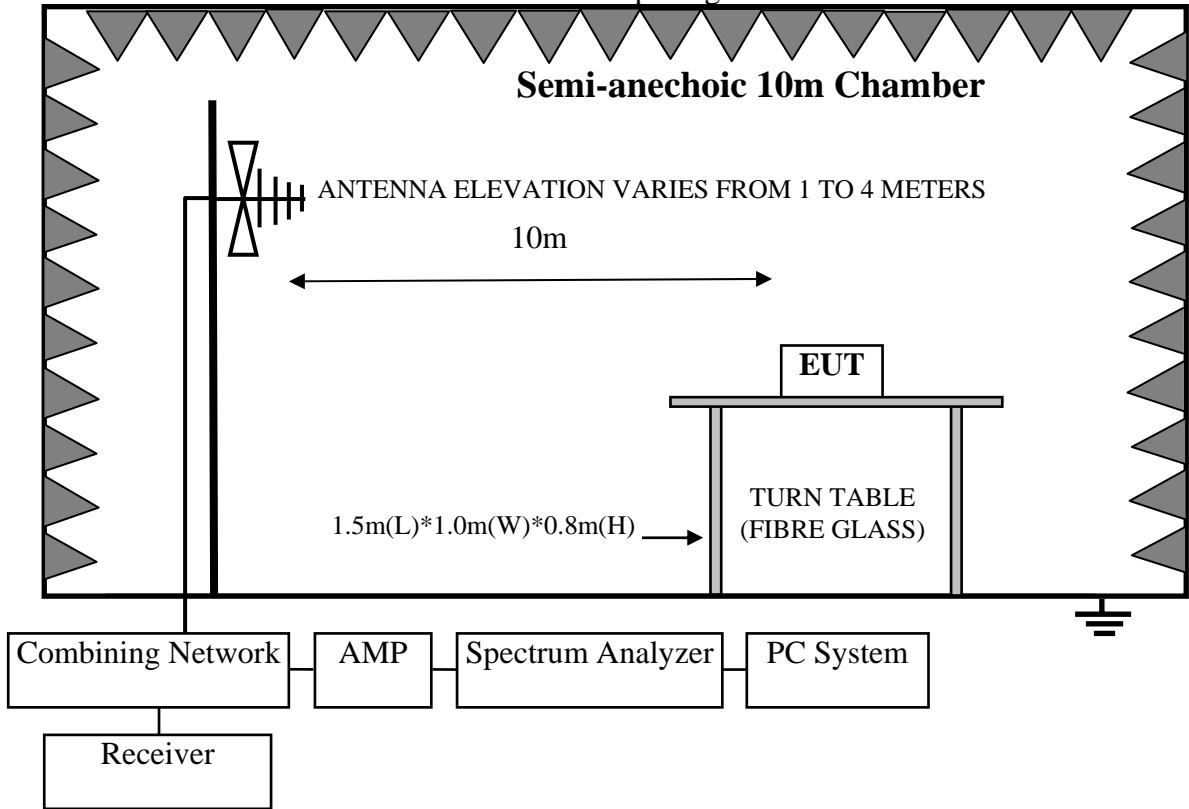


(Power supply from AC)

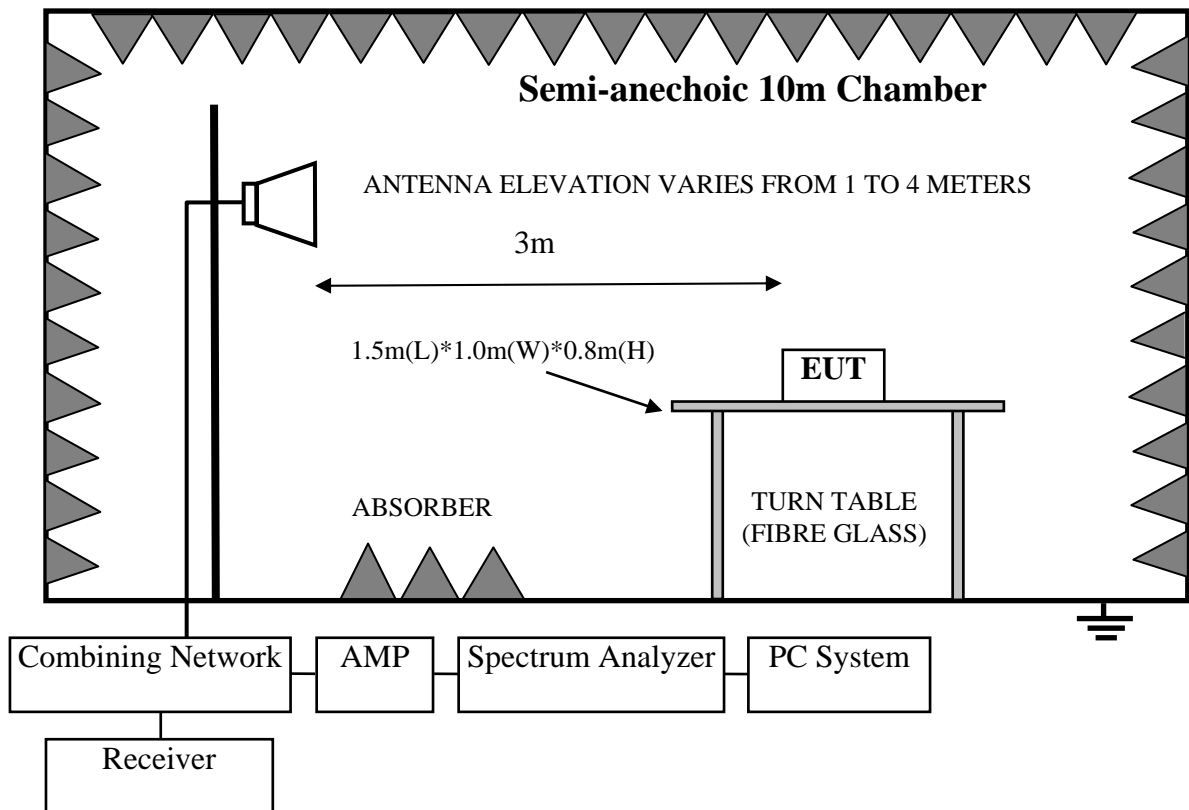


(EUT: A8-Ei Super WiFi Base Station )

4.2.2. In Anechoic Chamber Test Setup Diagram for 30MHz~1000MHz



4.2.3. For frequency above 1GHz





### 4.3.Radiated Emission Limit

#### 4.3.1. 15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

- Remark :
- (1) Emission level  $\text{dB}\mu\text{V} = 20 \log$  Emission level  $\mu\text{V}/\text{m}$
  - (2) The smaller limit shall apply at the cross point between two frequency bands.
  - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

#### 4.3.2. 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

### 4.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 4.4.1. A8-Ei Super WiFi Base Station (EUT)

Model Number : WA8011E  
Serial Number : N/A

#### 4.5. Operating Condition of EUT

4.5.1. Setup the EUT and simulator as shown as Section 4.2.

4.5.2. Turned on the power of all equipment.

4.5.3. Notebook run test software to control EUT work in Tx mode

#### 4.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10th harmonic (25GHz for 2.4GHz band and 40GHz for 5GHz band) are checked. and no any emissions were found from 18GHz to 40 GHz, So the radiated emissions from 18GHz to 40GHz were not record.

#### 4.7. Radiated Emission Test Results

**PASS.**

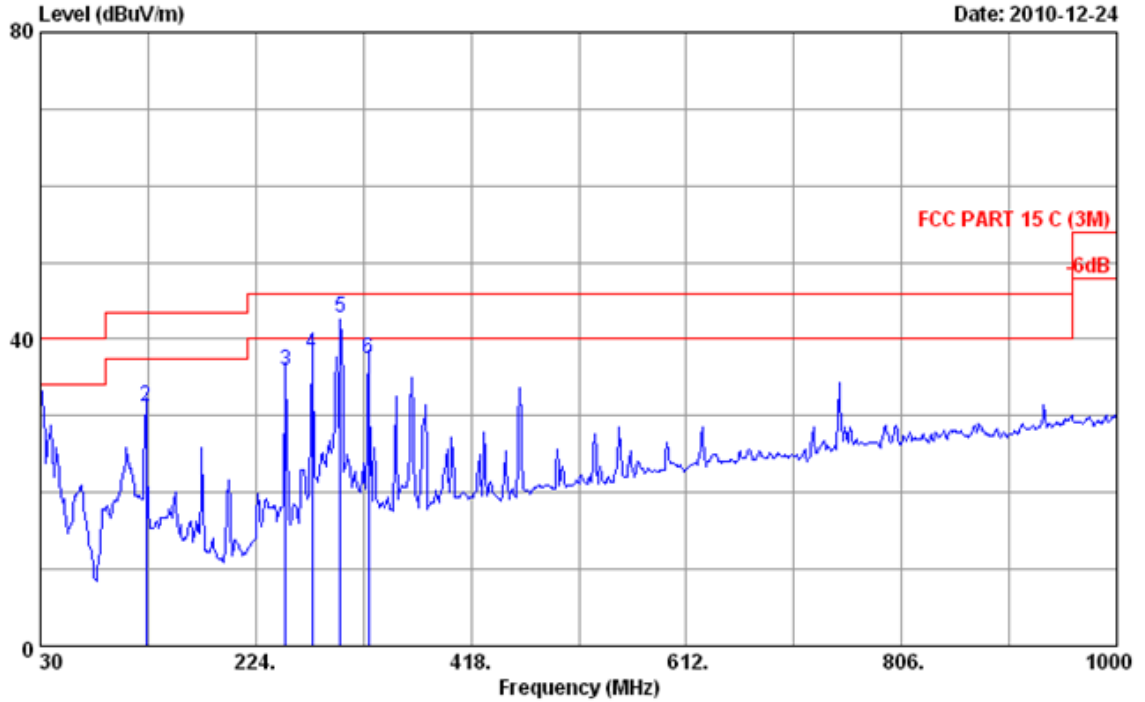
All the emissions from 30MHz to 40 GHz were comply with 15.209 limits.

**Frequency: 30MHz~1GHz**

Data: 16

File: E:\2010 Report Data\A\Altai\ACS10QH242.EM6 (18)

Date: 2010-12-24



Site no. : 3m chamber  
 Dis. / Ant. : 3m 2010 CBL6111C  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 24°C/56%  
 EUT : A8-Ei Super WiFi Base Station  
 Power Rating : AC 120V/60Hz  
 Test Mode : Tx Mode  
 M/N : WA8011E  
 AC Main

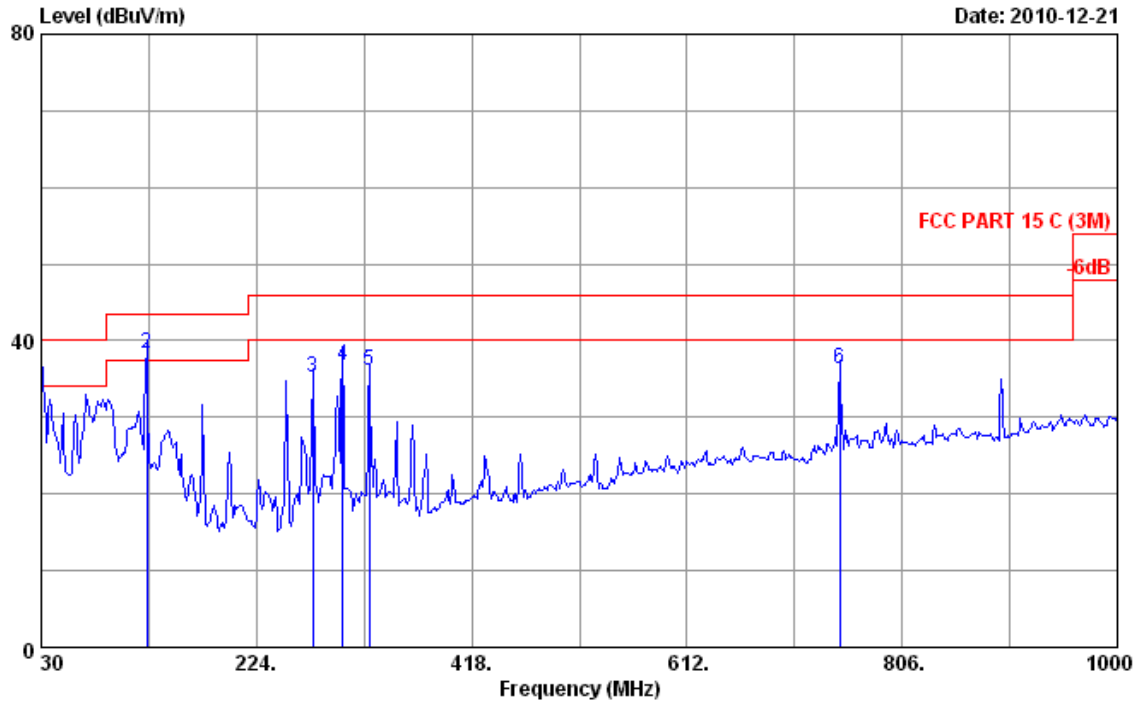
Data no. : 16  
 Ant. pol. : HORIZONTAL  
 Engineer : sunny-lu

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	11.83	32.44	40.00	7.56	QP
2	125.060	12.10	1.13	18.06	31.29	43.50	12.21	QP
3	251.160	12.90	2.18	20.86	35.94	46.00	10.06	QP
4	274.440	13.22	2.32	22.55	38.09	46.00	7.91	QP
5	300.040	13.70	2.48	26.60	42.78	46.00	3.22	QP
6	325.850	14.32	2.59	20.62	37.53	46.00	8.47	QP

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

Data: 15 File: E:\2010 Report Data\A\Altai\ACS10QH242.EM6 (18)

Date: 2010-12-21



Site no. : 3m chamber Data no. : 15  
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 24°C/56% Engineer : sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power Rating : AC 120V/60Hz  
 Test Mode : Tx Mode  
 M/N : WA8011E  
 AC Main

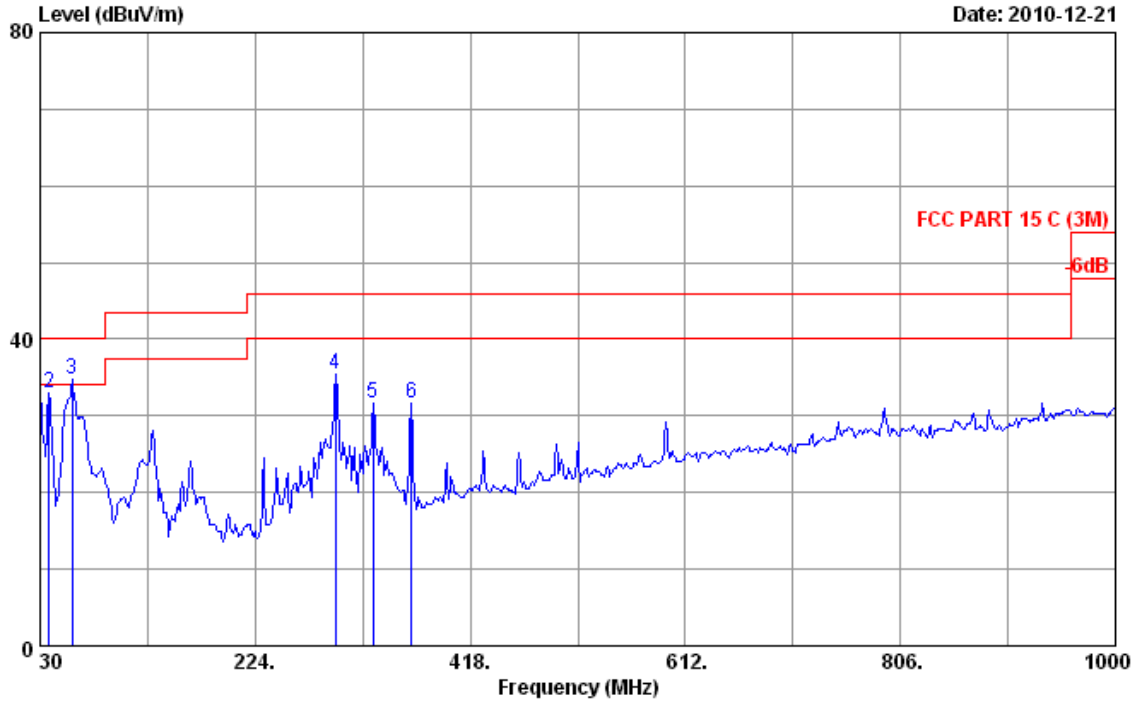
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	17.00	37.61	40.00	2.39	QP
2	125.000	12.10	1.13	25.20	38.43	43.50	5.07	QP
3	274.440	13.22	2.32	19.69	35.23	46.00	10.77	QP
4	301.600	13.75	2.49	20.51	36.75	46.00	9.25	QP
5	325.850	14.32	2.59	19.08	35.99	46.00	10.01	QP
6	749.740	22.00	4.70	9.71	36.41	46.00	9.59	QP

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

Data: 18

File: E:\2010 Report Data\A\Altai\ACS10QH242.EM6 (18)

Date: 2010-12-21



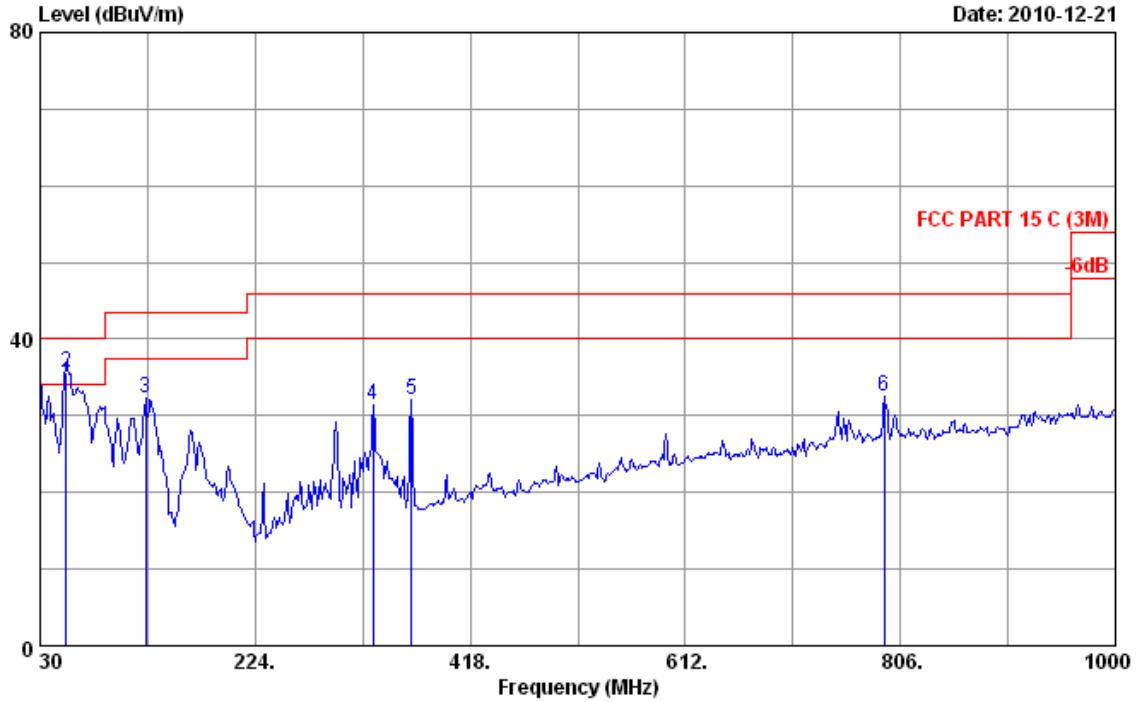
Site no. : 3m chamber Data no. : 18  
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 24°C/56% Engineer : sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power Rating : DC 48V From Adapter Input AC 120V/60Hz  
 Test Mode : Tx Mode  
 M/N : WA8011E  
 AC POE

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	12.28	32.89	40.00	7.11	QP
2	37.760	15.58	0.67	16.66	32.91	40.00	7.09	QP
3	59.100	6.22	0.84	27.76	34.82	40.00	5.18	QP
4	296.750	13.70	2.46	19.20	35.36	46.00	10.64	QP
5	330.700	14.44	2.61	14.52	31.57	46.00	14.43	QP
6	364.650	15.55	2.76	13.39	31.70	46.00	14.30	QP

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

Data: 17 File: E:\2010 Report Data\A\Altai\ACS100H242.EM6 (18)

Date: 2010-12-21



Site no. : 3m chamber Data no. : 17  
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 24°C/56% Engineer : sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power Rating : DC 48V From Adapter Input AC 120V/60Hz  
 Test Mode : Tx Mode  
 M/N : WA8011E  
 AC POE

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	14.14	34.75	40.00	5.25	QP
2	53.450	7.98	0.80	26.80	35.58	40.00	4.42	QP
3	125.060	12.10	1.13	19.10	32.33	43.50	11.17	QP
4	330.700	14.44	2.61	14.29	31.34	46.00	14.66	QP
5	364.650	15.55	2.76	13.80	32.11	46.00	13.89	QP
6	791.450	22.09	4.87	5.57	32.53	46.00	13.47	QP

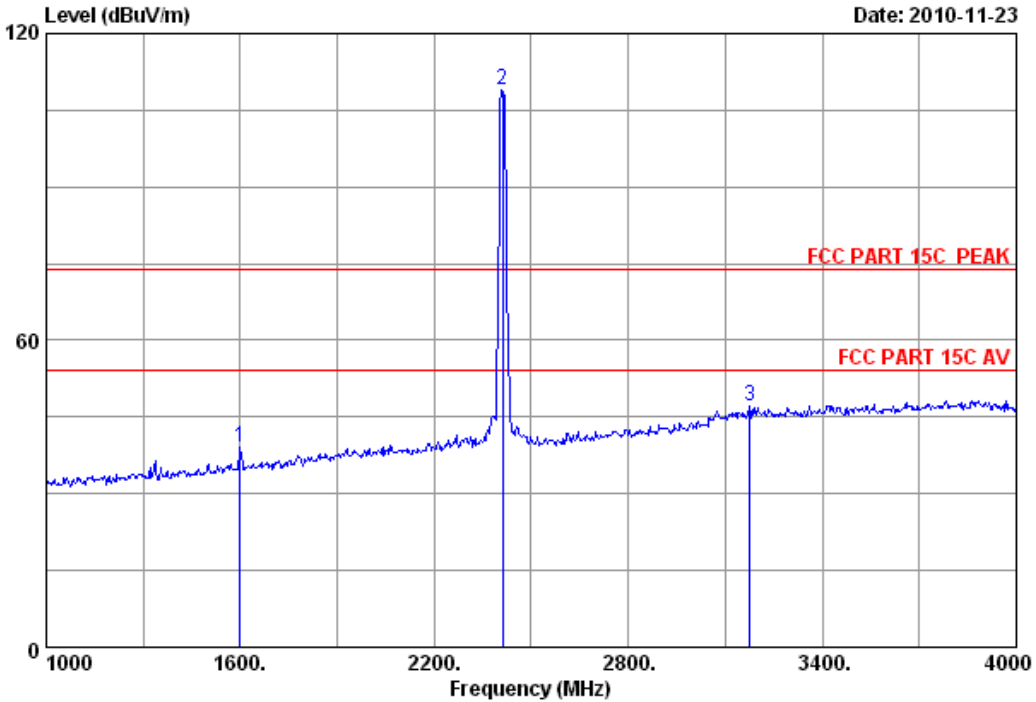
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

**Frequency: 1GHz~18GHz**

Data: 2

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



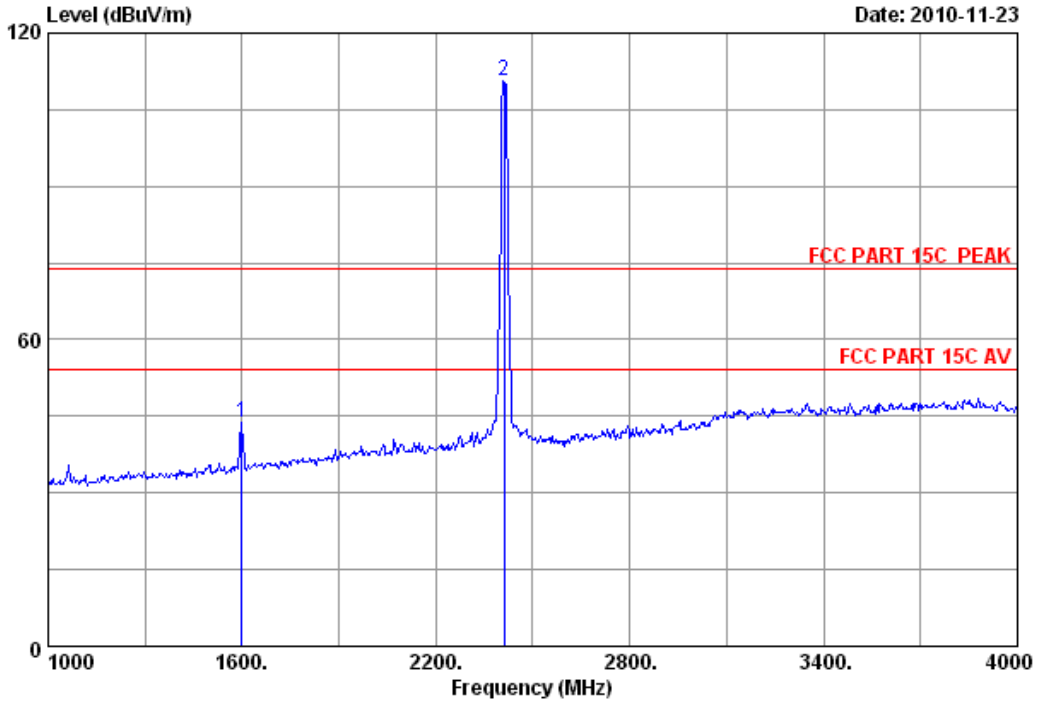
Site no. : RF Chamber Data no. : 2  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Cable Factor (dB/m)	Amp. loss (dB)	Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	43.21	39.14	74.00	34.86	Peak
2	2412.000	29.45	7.43	36.62	108.57	108.83	74.00	-34.83	Peak
3	3175.000	32.45	8.74	36.33	42.17	47.03	74.00	26.97	Peak

Remarks:

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

Data: 1 File: E:\2010 report data\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23



Site no. : RF Chamber Data no. : 1  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	47.85	43.78	74.00	30.22	Peak
2	2412.000	29.45	7.43	36.62	110.26	110.52	74.00	-36.52	Peak

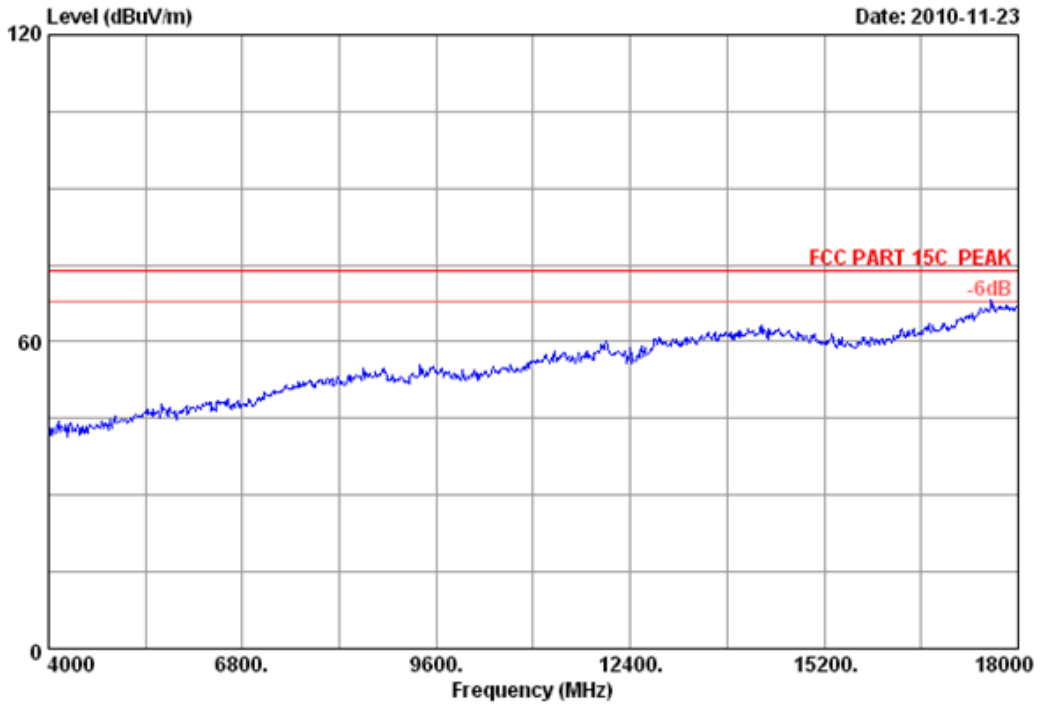
Remarks:

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



Data: 5 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23

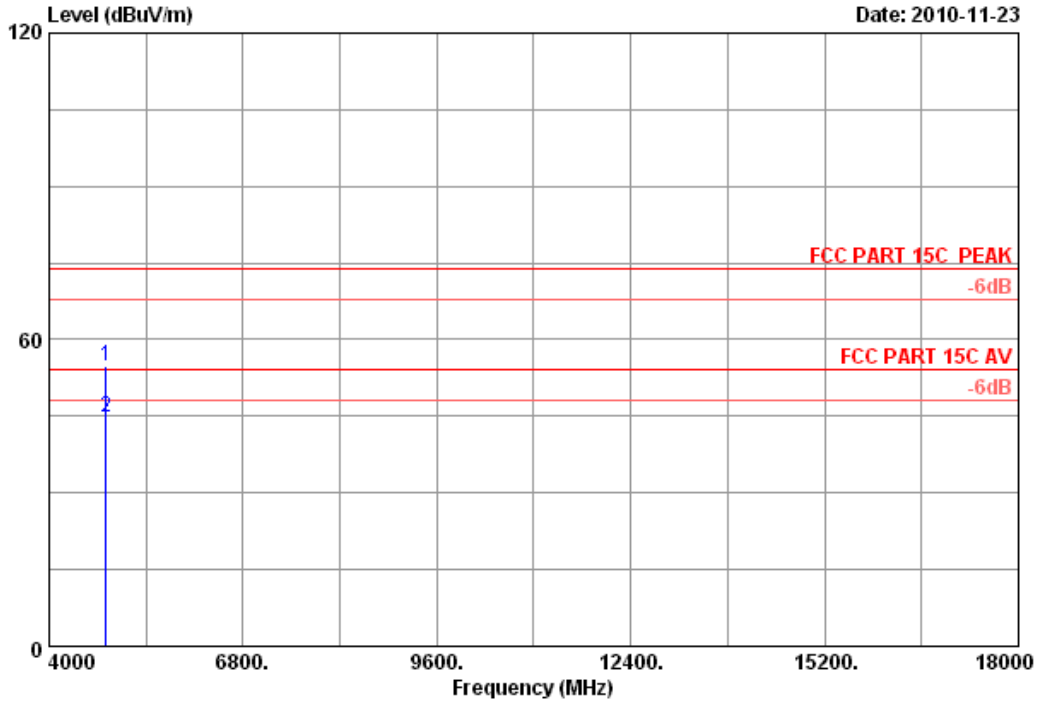


Site no. : RF Chamber Data no. : 5  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11b CH1 2412MHz Tx  
WA8011E

Data: 6

File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 6  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

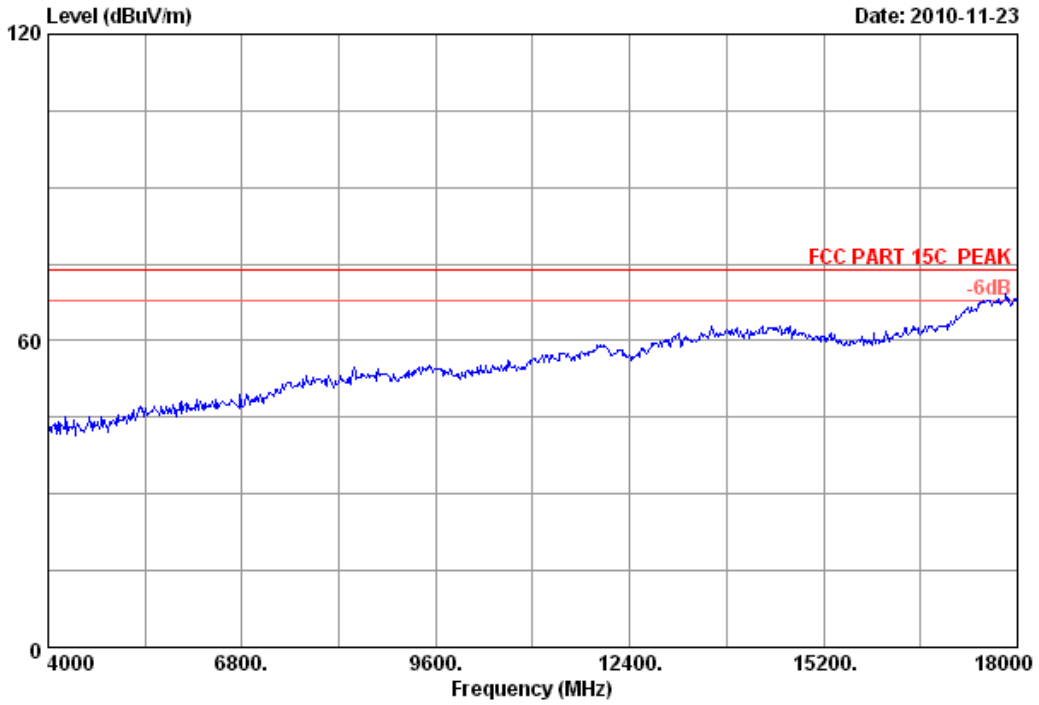
	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	44.97	54.85	74.00	19.15	Peak
2	4824.000	34.32	10.64	35.08	34.87	44.75	54.00	9.25	Average

Remarks:

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

Data: 3 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

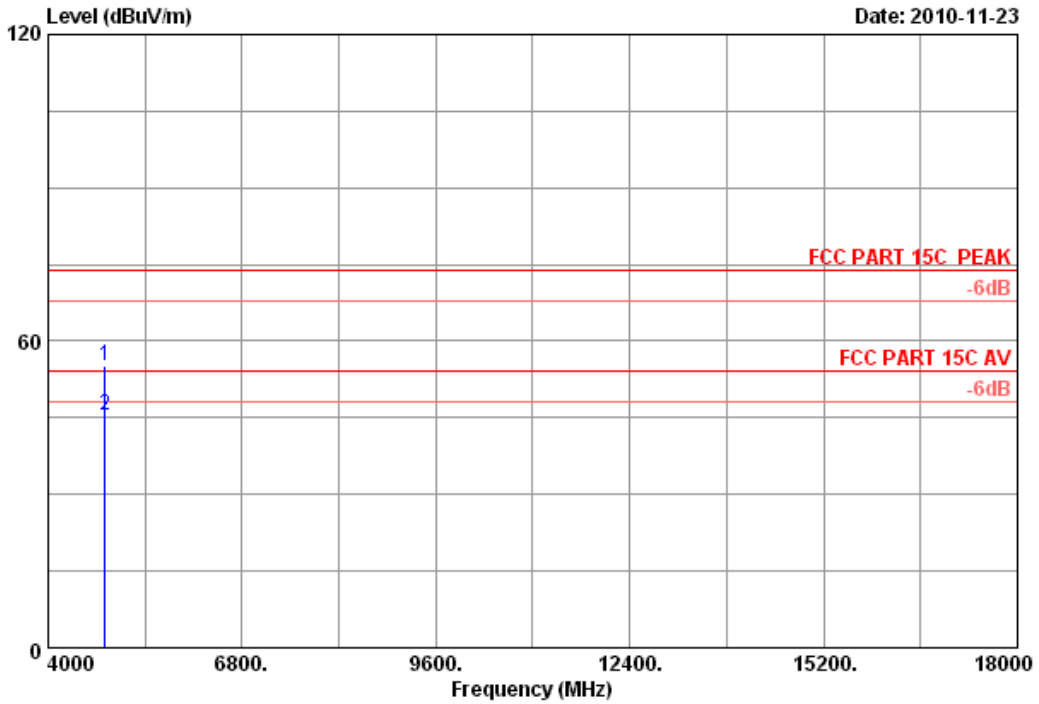
Date: 2010-11-23



Site no. : RF Chamber Data no. : 3  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11b CH1 2412MHz Tx  
WA8011E

Data: 4 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23

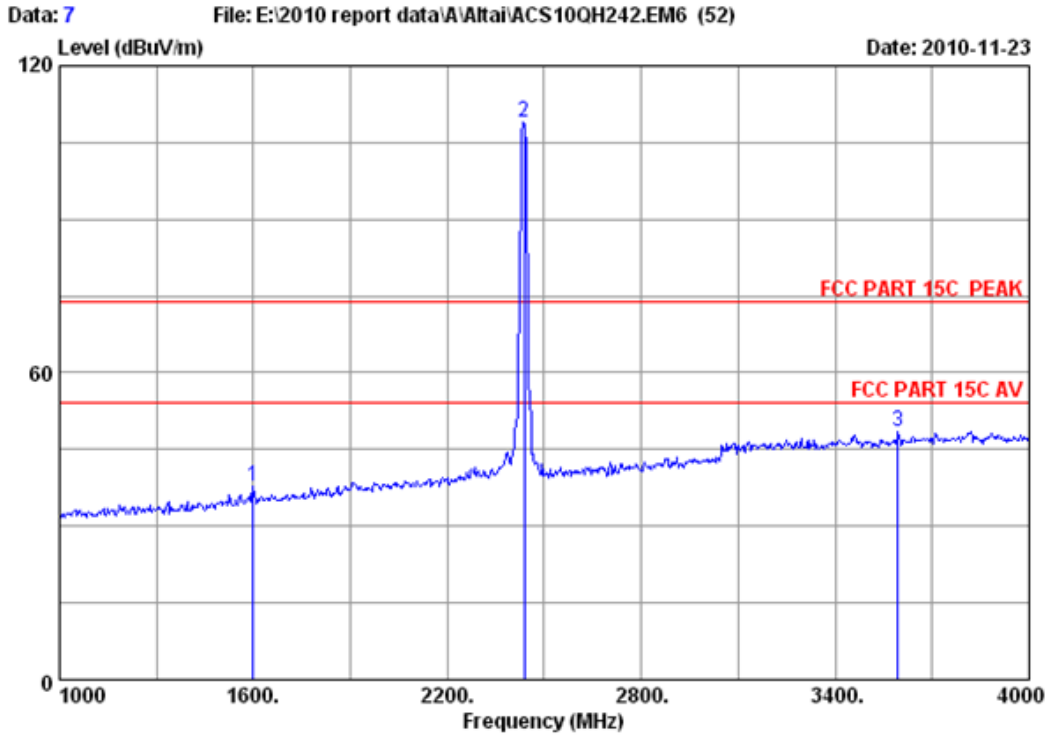


Site no. : RF Chamber Data no. : 4  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	45.27	55.15	74.00	18.85	Peak
2	4824.000	34.32	10.64	35.08	35.70	45.58	54.00	8.42	Average

Remarks:

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

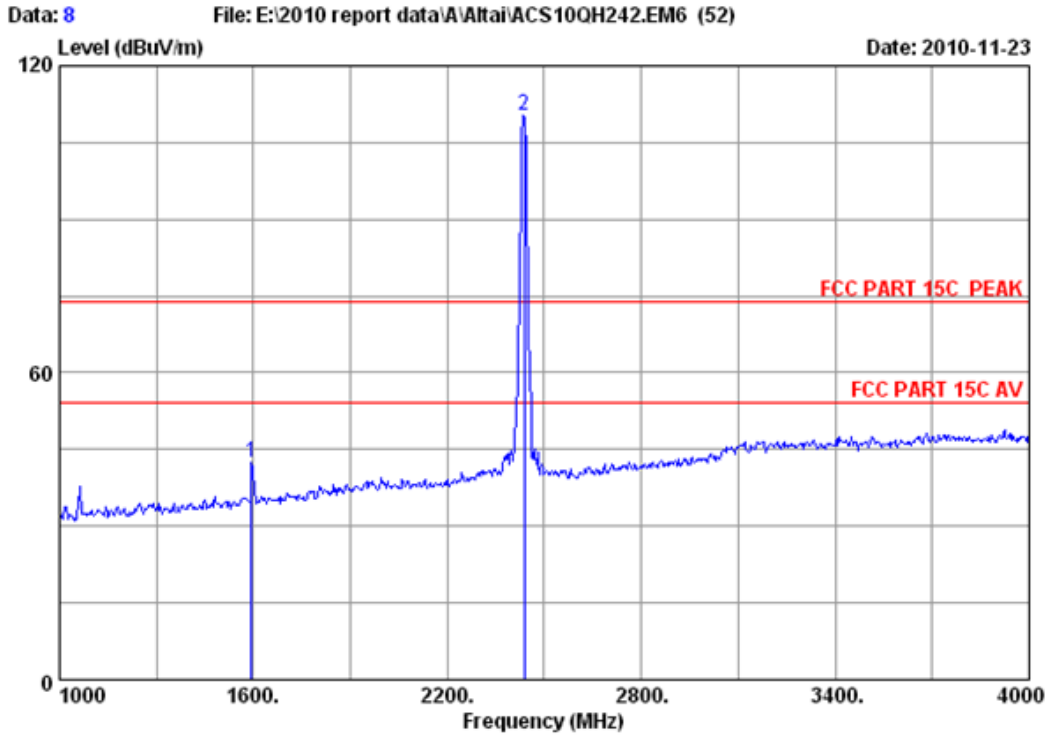


Site no. : RF Chamber Data no. : 7  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH6 2437MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	41.95	37.88	74.00	36.12	Peak
2	2437.000	29.47	7.46	36.61	108.52	108.84	74.00	-34.84	Peak
3	3595.000	33.44	9.22	35.92	41.77	48.51	74.00	25.49	Peak

Remarks:

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



Site no. : RF Chamber Data no. : 8  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH6 2437MHz Tx  
 WA8011E

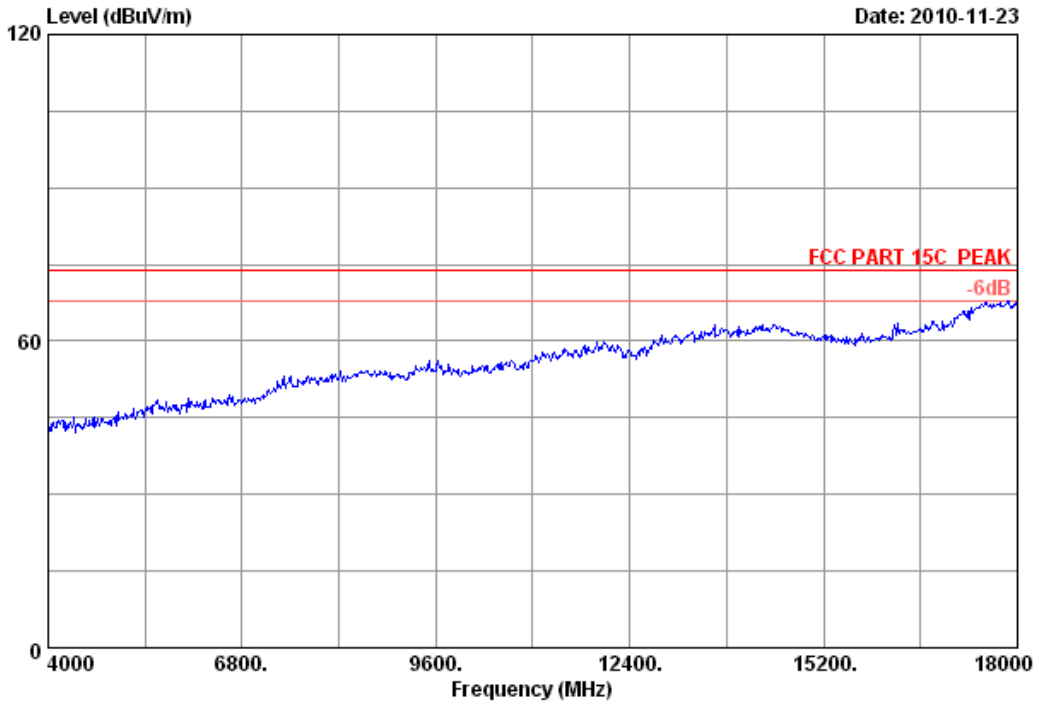
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1594.000	26.96	5.88	36.95	46.65	42.54	74.00	31.46	Peak
2	2437.000	29.47	7.46	36.61	109.86	110.18	74.00	-36.18	Peak

Remarks:

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

Data: 11 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

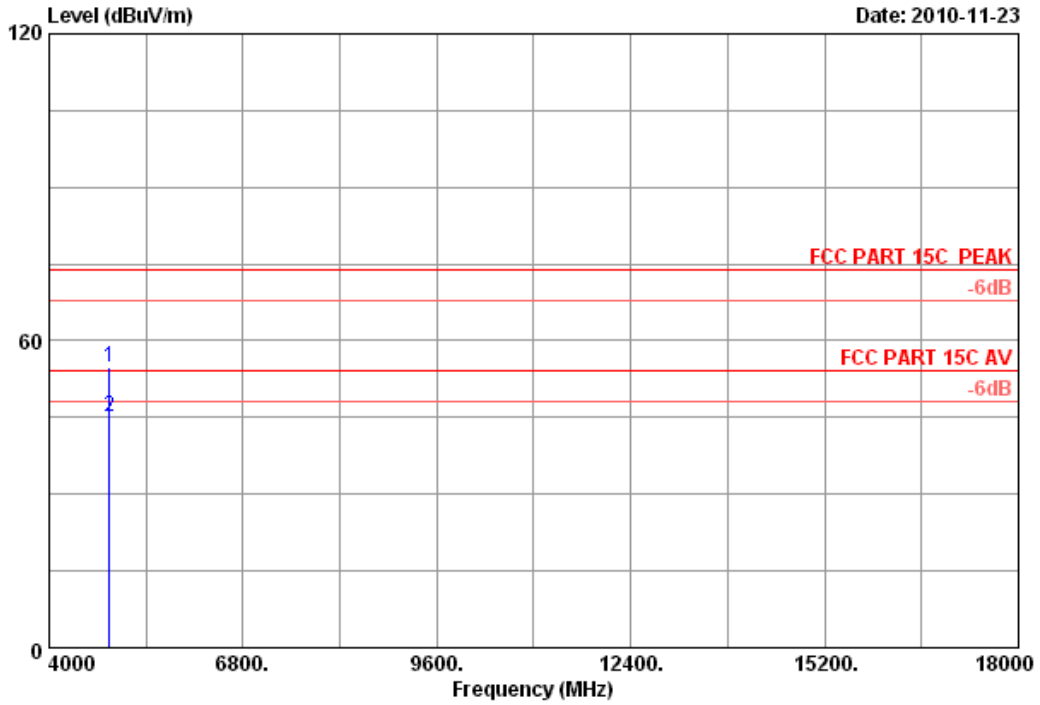
Date: 2010-11-23



Site no. : RF Chamber Data no. : 11  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH6 2437MHz Tx  
 WA8011E

Data: 12 File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 12  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH6 2437MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	44.63	54.70	74.00	19.30	Peak
2	4874.000	34.41	10.69	35.03	34.99	45.06	54.00	8.94	Average

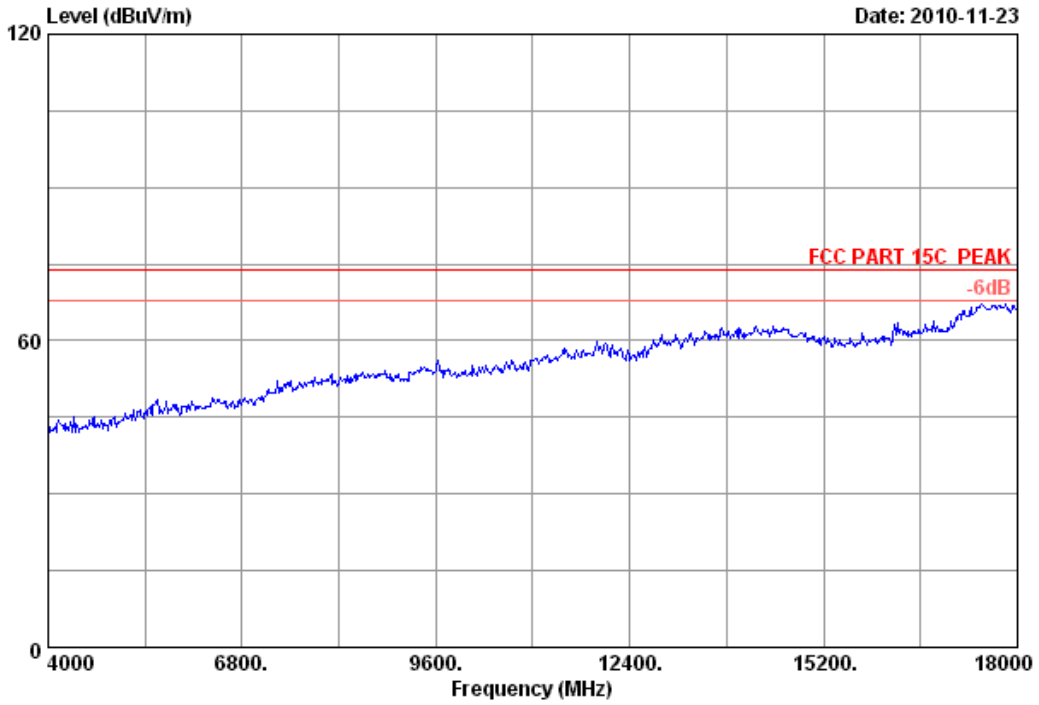
Remarks:

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



Data: 9 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

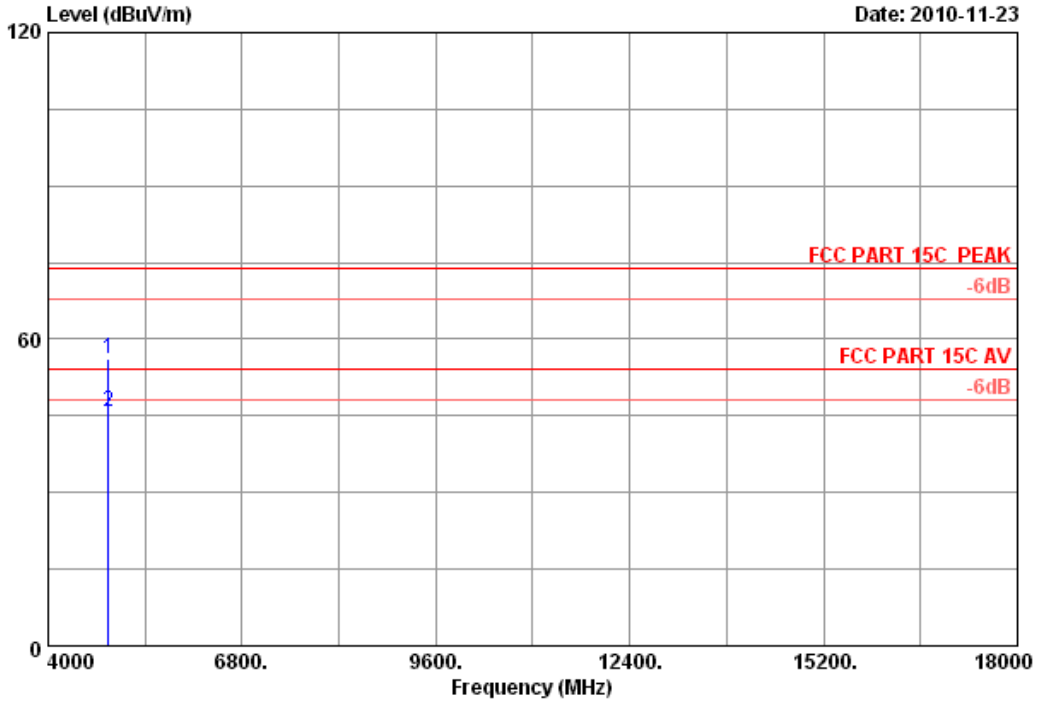
Date: 2010-11-23



Site no. : RF Chamber Data no. : 9  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11b CH6 2437MHz Tx  
WA8011E

Data: 10 File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



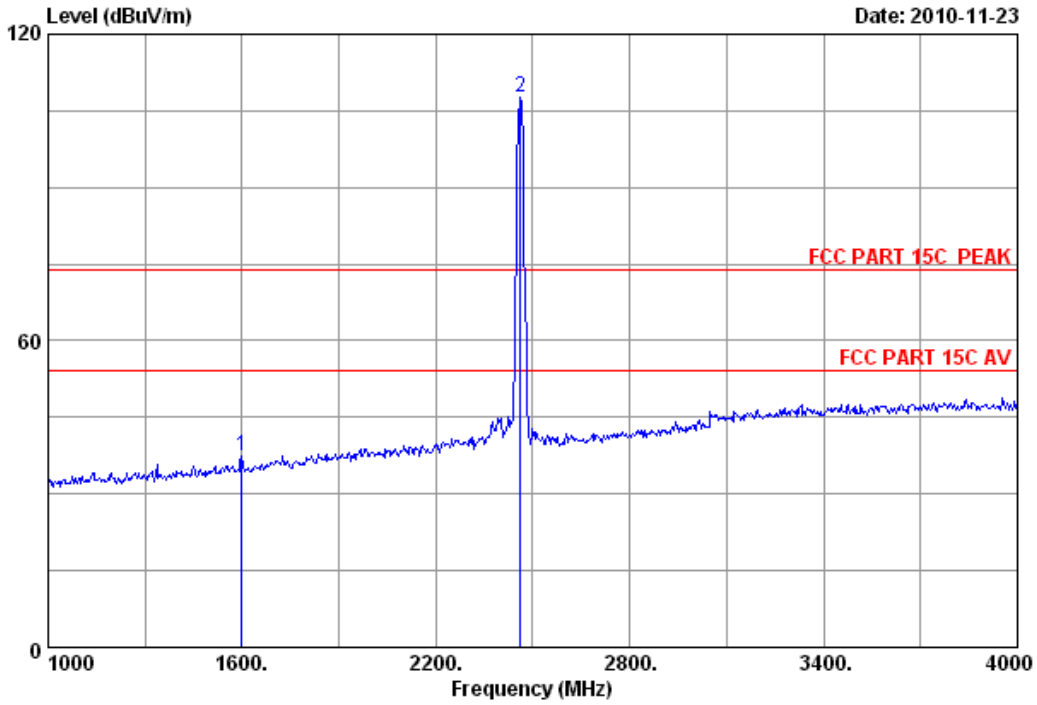
Site no. : RF Chamber Data no. : 10  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH6 2437MHz Tx  
 WA8011E

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	45.98	56.05	74.00	17.95	Peak
2	4874.000	34.41	10.69	35.03	35.84	45.91	54.00	8.09	Average

Remarks:

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

Data: 13 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23



Site no. : RF Chamber Data no. : 13  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	41.48	37.41	74.00	36.59	Peak
2	2462.000	29.48	7.54	36.61	107.14	107.55	74.00	-33.55	Peak

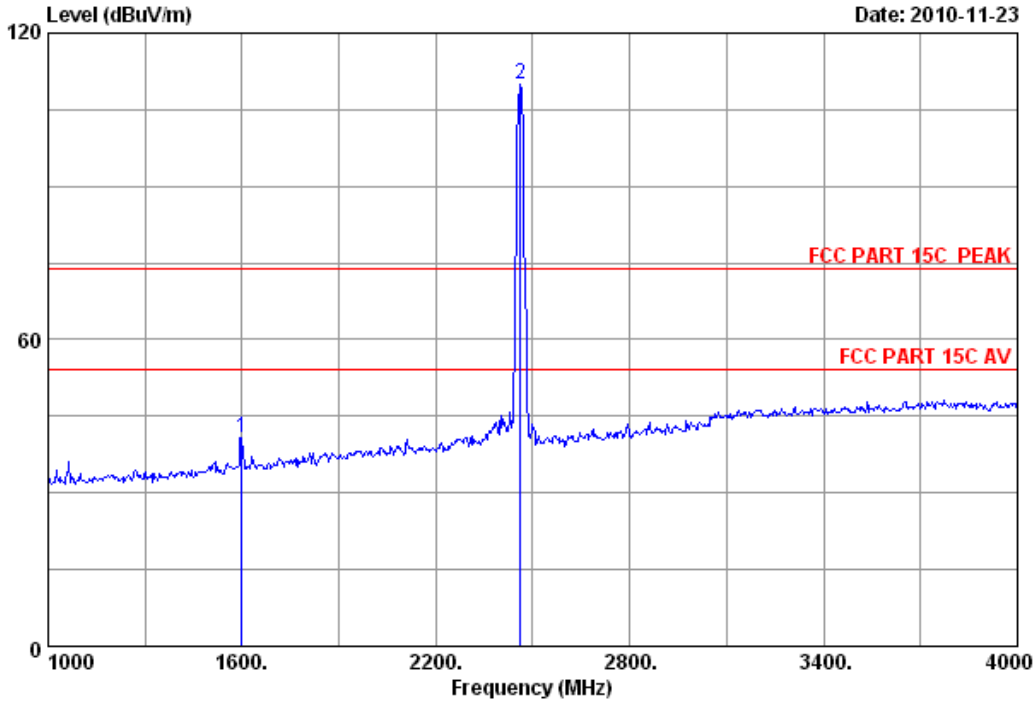
Remarks:

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

Data: 14

File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 14  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	44.80	40.73	74.00	33.27	Peak
2	2462.000	29.48	7.54	36.61	109.54	109.95	74.00	-35.95	Peak

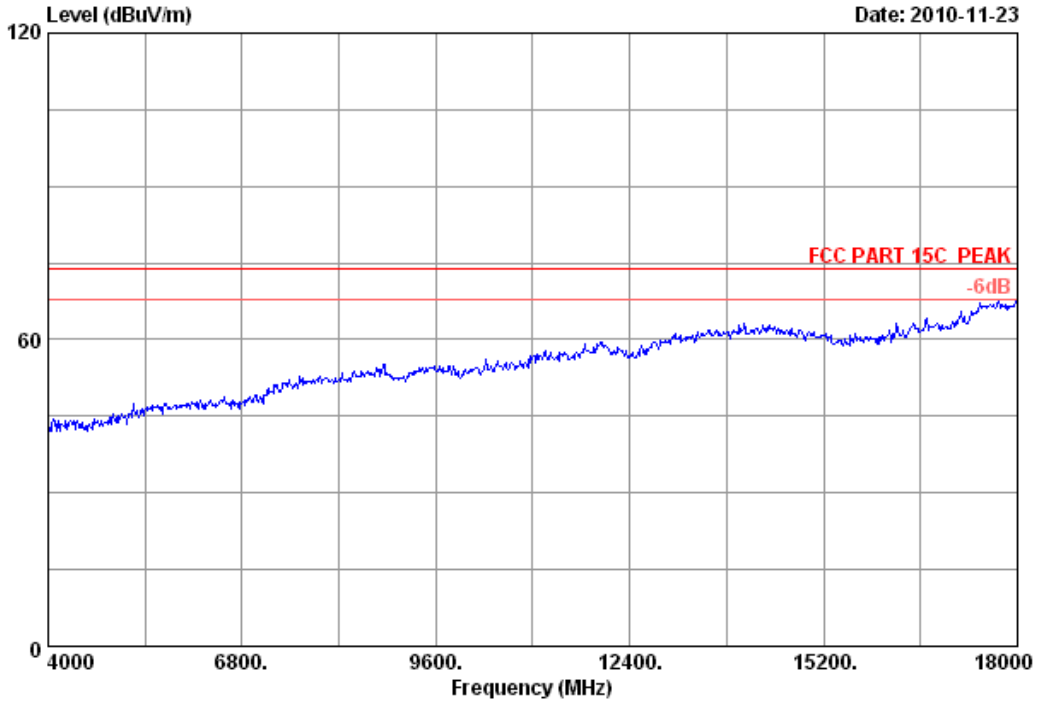
Remarks:

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

Data: 15

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23

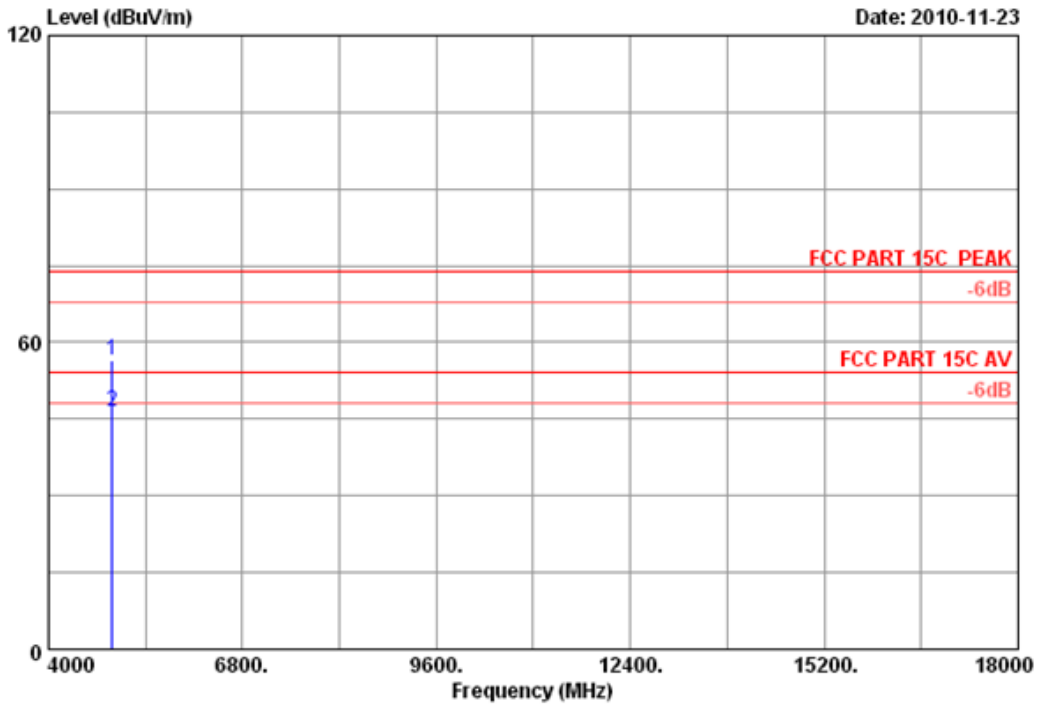


Site no. : RF Chamber Data no. : 15  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

Data: 16

File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 16  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

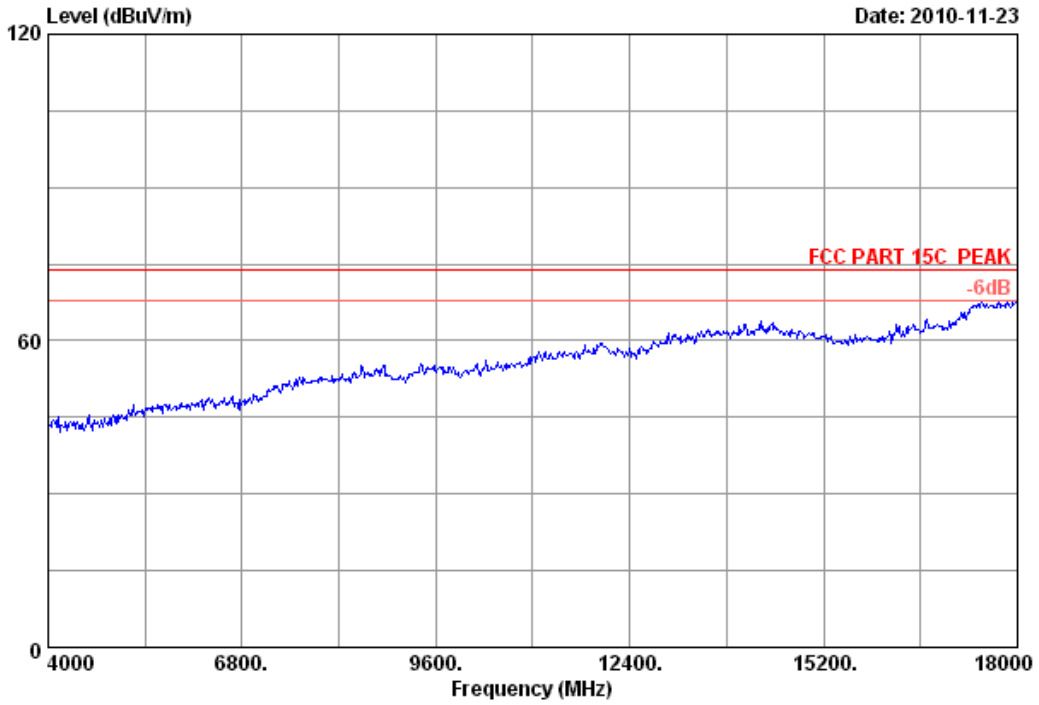
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	34.49	10.76	34.98	46.26	56.53	74.00	17.47	Peak
2	4924.000	34.49	10.76	34.98	36.18	46.45	54.00	7.55	Average

Remarks:

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

Data: 17 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

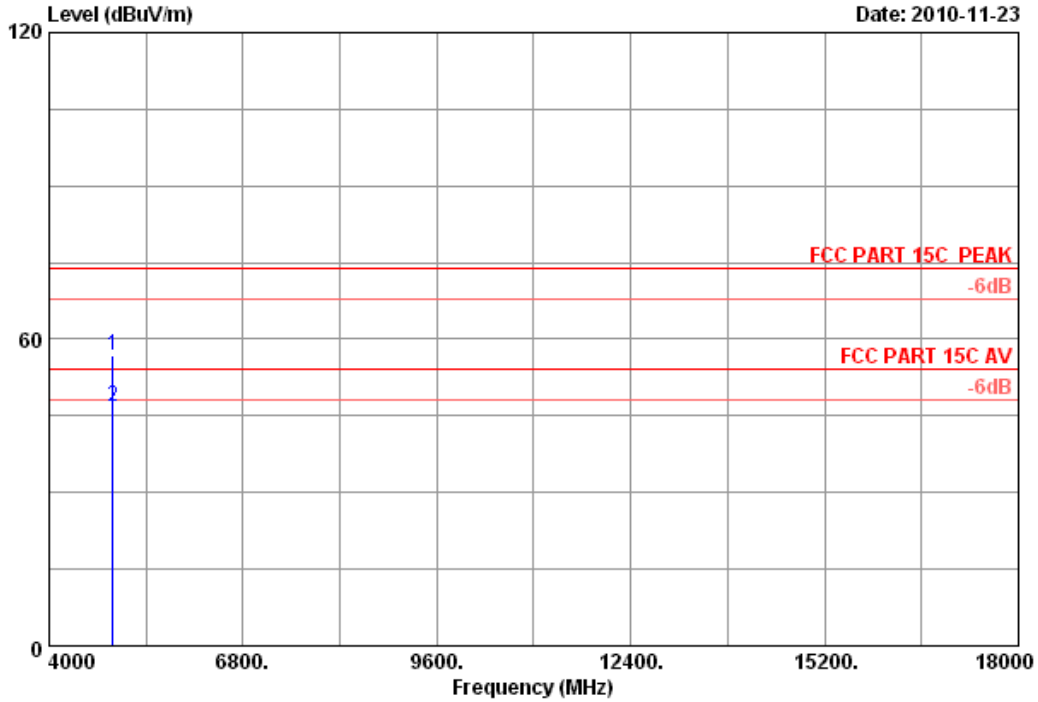
Date: 2010-11-23



Site no. : RF Chamber Data no. : 17  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

Data: 18 File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 18  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

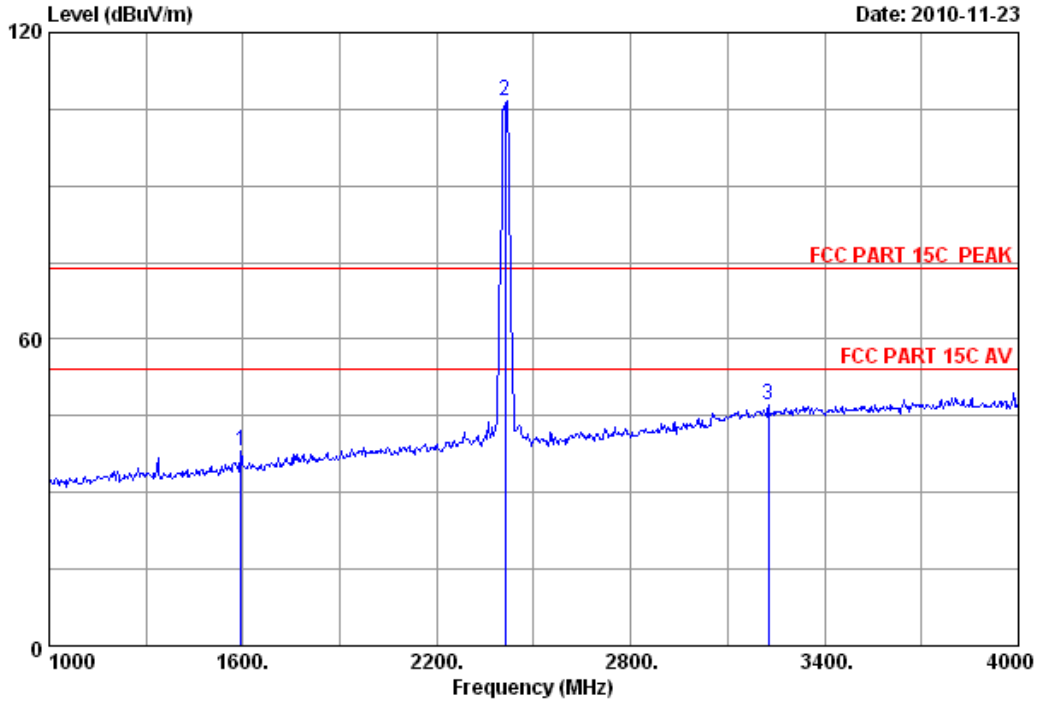
	Ant.	Cable	Amp.	Emission					
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	4924.000	34.49	10.76	34.98	46.53	56.80	74.00	17.20	Peak
2	4924.000	34.49	10.76	34.98	36.42	46.69	54.00	7.31	Average

Remarks:

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



Data: 20 File: E:\2010 report data\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23



Site no. : RF Chamber Data no. : 20  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

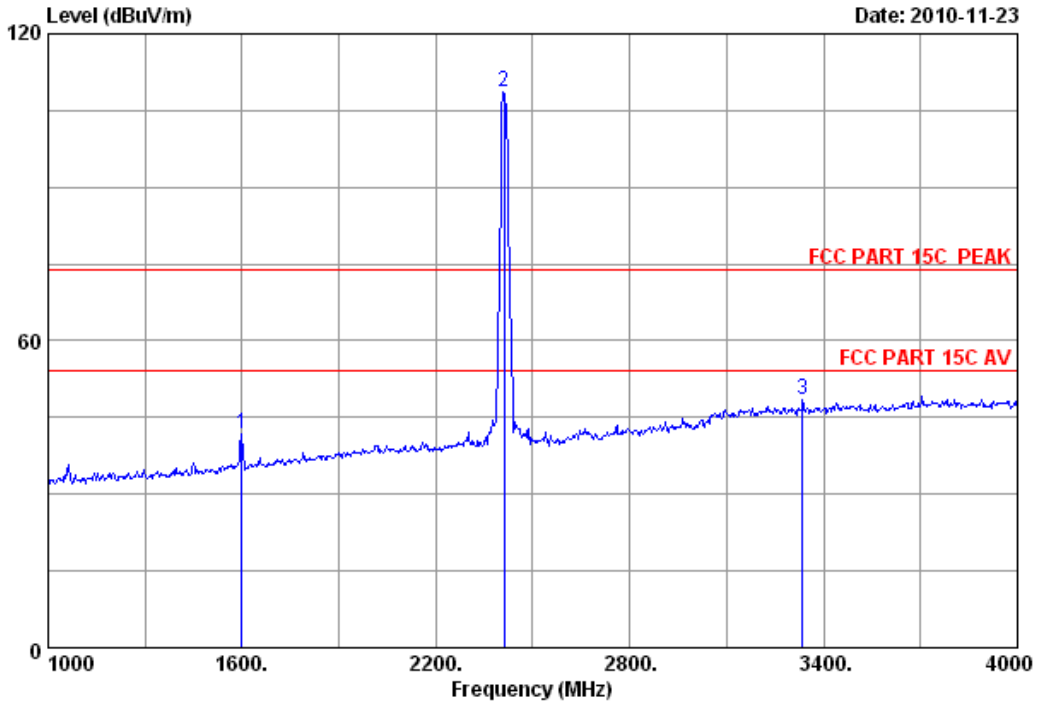
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1594.000	26.96	5.88	36.95	42.31	38.20	74.00	35.80	Peak
2	2412.000	29.45	7.43	36.62	106.39	106.65	74.00	-32.65	Peak
3	3226.000	32.58	8.81	36.28	42.09	47.20	74.00	26.80	Peak

Remarks:

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

Data: 19 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 19  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

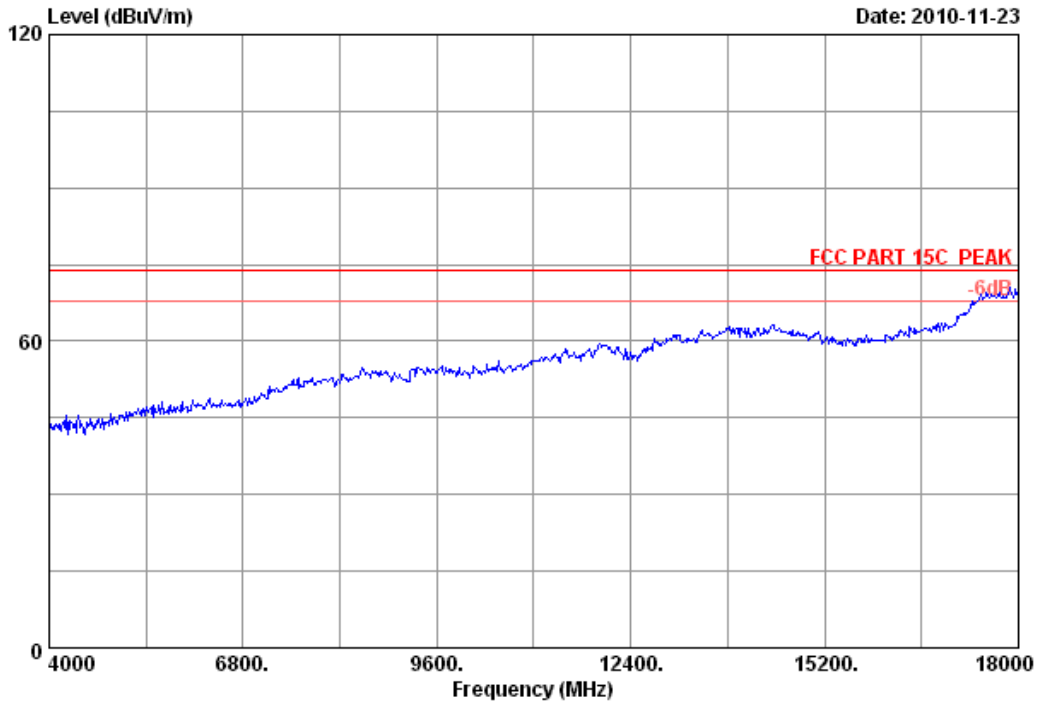
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	45.72	41.65	74.00	32.35	Peak
2	2412.000	29.45	7.43	36.62	108.51	108.77	74.00	-34.77	Peak
3	3334.000	32.85	8.93	36.15	42.81	48.44	74.00	25.56	Peak

Remarks:

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

Data: 23 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

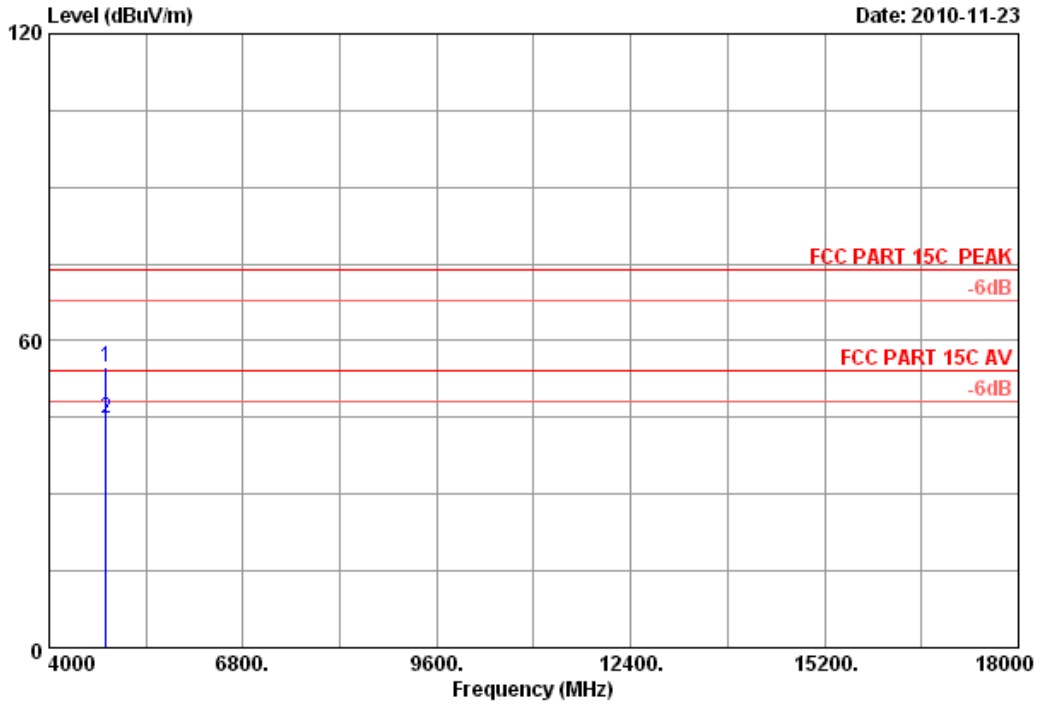
Date: 2010-11-23



Site no. : RF Chamber Data no. : 23  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11g CH1 2412MHz Tx  
WA8011E

Data: 24 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



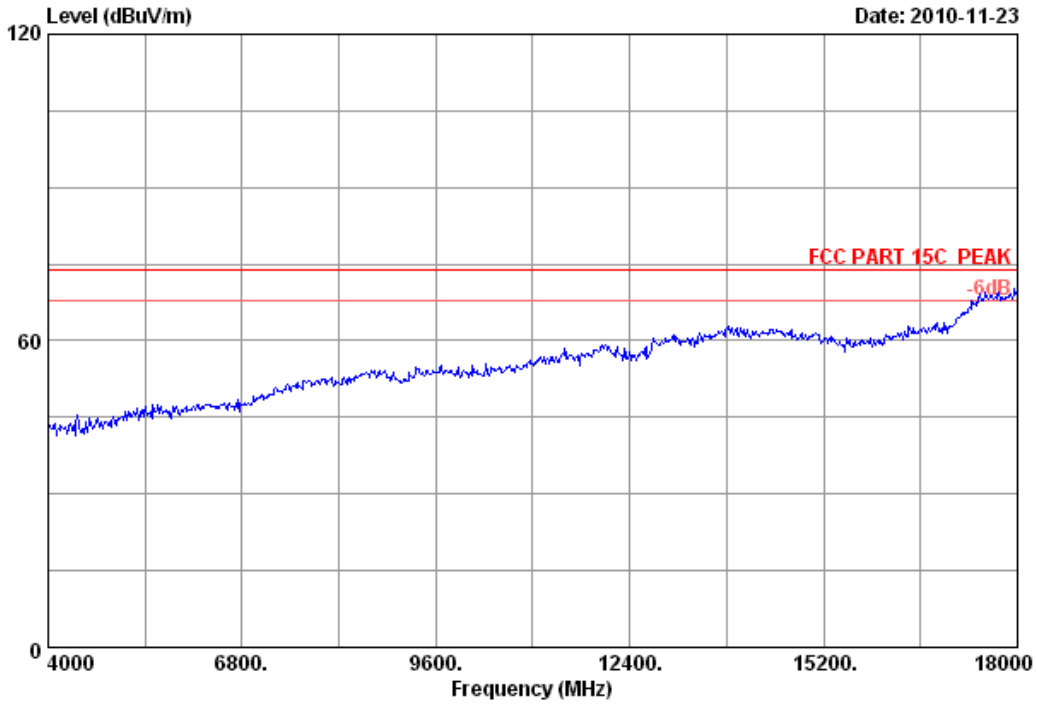
Site no. : RF Chamber Data no. : 24  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	44.97	54.85	74.00	19.15	Peak
2	4824.000	34.32	10.64	35.08	34.88	44.76	54.00	9.24	Average

Remarks:

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

Data: 21 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23

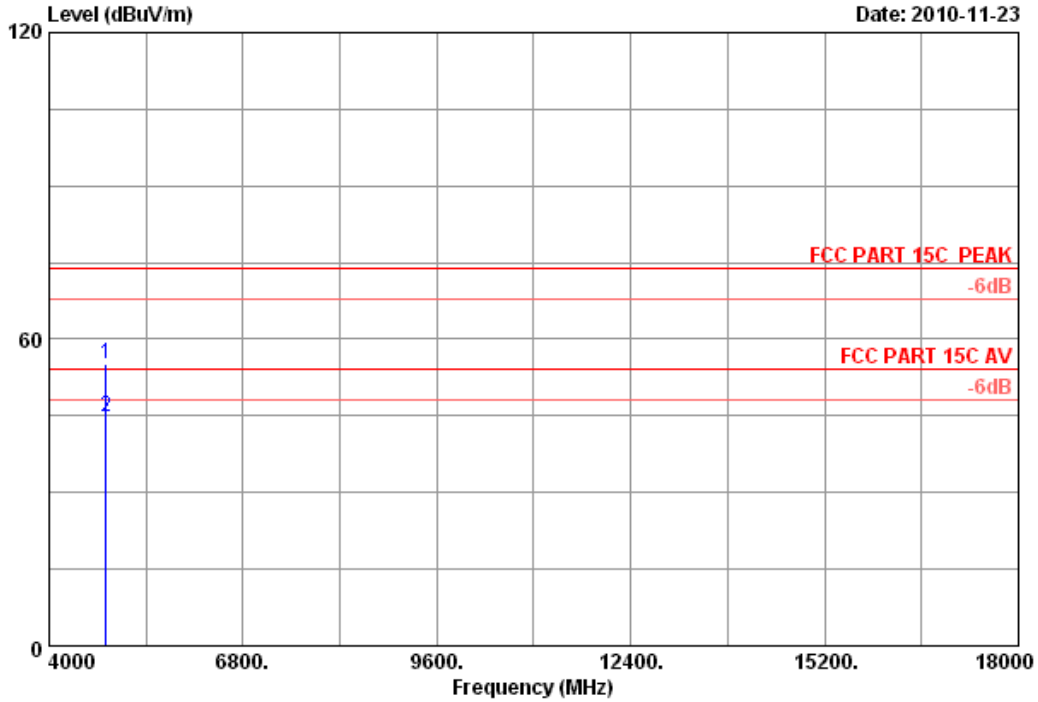


Site no. : RF Chamber Data no. : 21  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

Data: 22

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



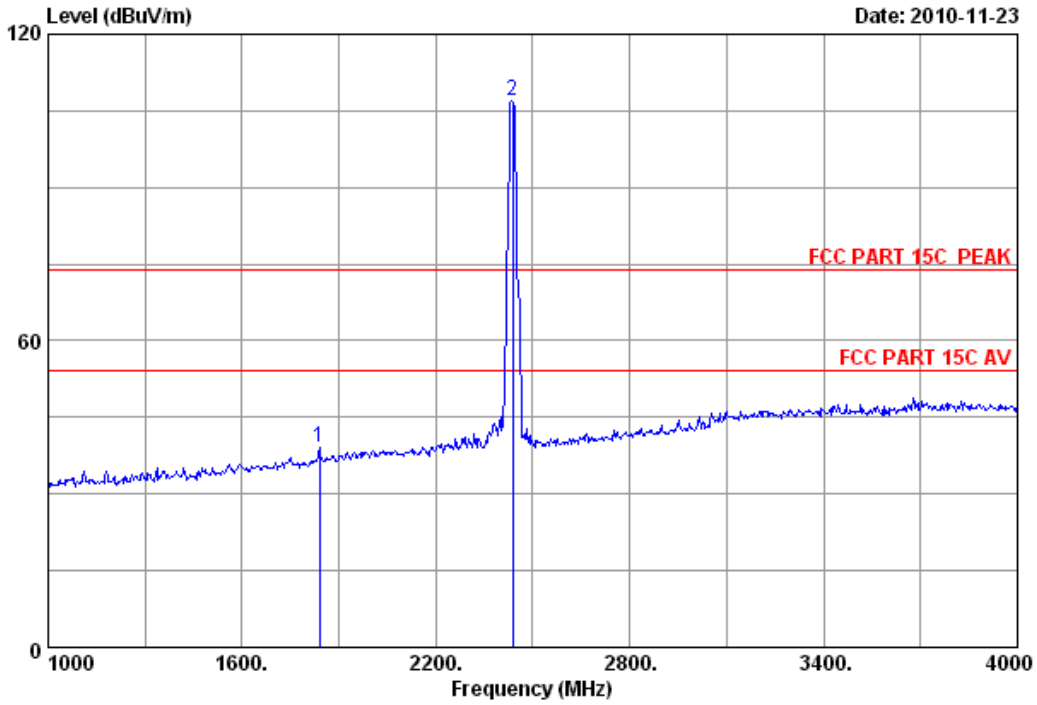
Site no. : RF Chamber Data no. : 22  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	45.13	55.01	74.00	18.99	Peak
2	4824.000	34.32	10.64	35.08	34.99	44.87	54.00	9.13	Average

Remarks:

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

Data: 25 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23



Site no. : RF Chamber Data no. : 25  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH6 2437MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1840.000	28.27	6.37	36.79	41.19	39.04	74.00	34.96	Peak
2	2437.000	29.47	7.46	36.61	106.61	106.93	74.00	-32.93	Peak

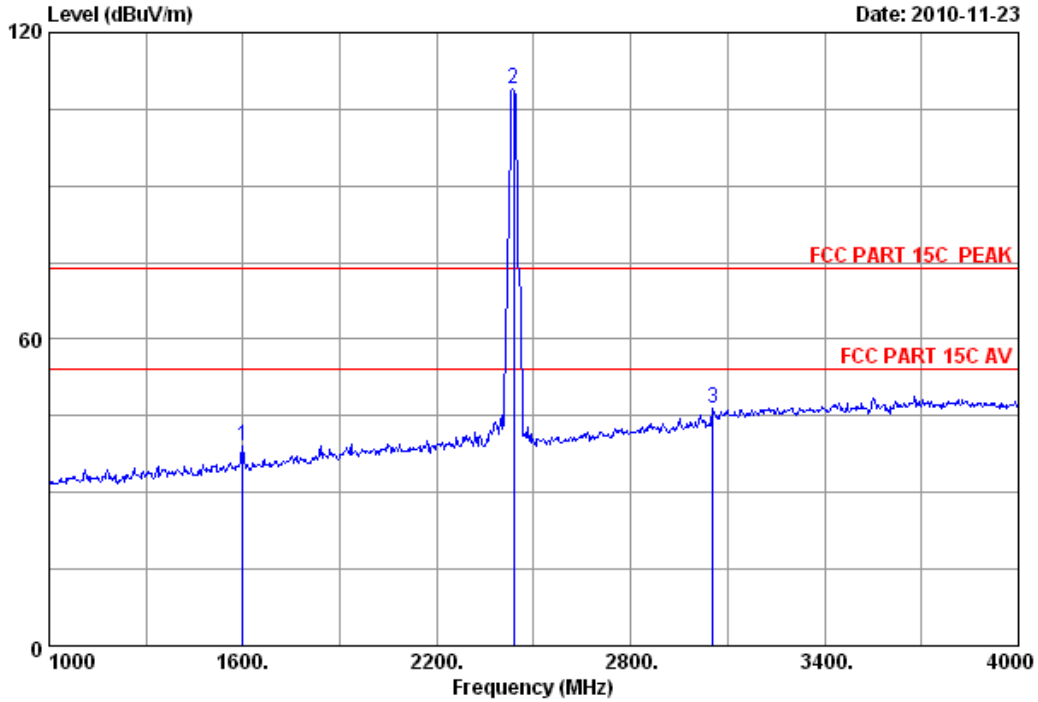
Remarks:

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

Data: 26

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 26  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH6 2437MHz Tx  
 WA8011E

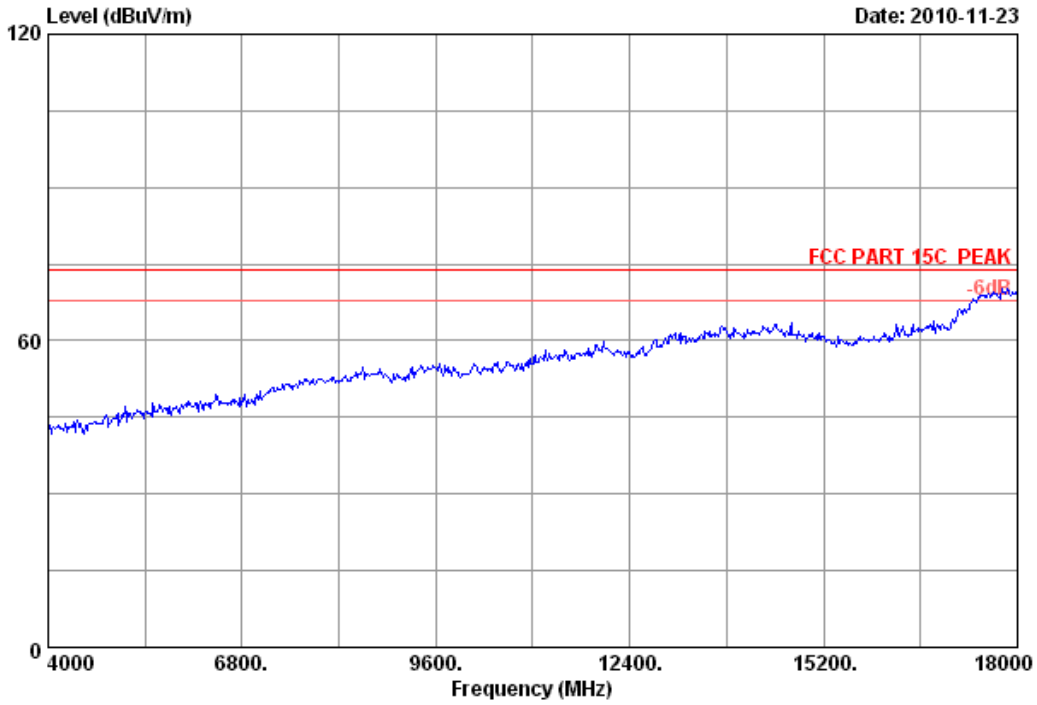
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1600.000	26.96	5.91	36.94	43.01	38.94	74.00	35.06	Peak
2	2437.000	29.47	7.46	36.61	108.61	108.93	74.00	-34.93	Peak
3	3055.000	32.13	8.61	36.42	42.12	46.44	74.00	27.56	Peak

Remarks:

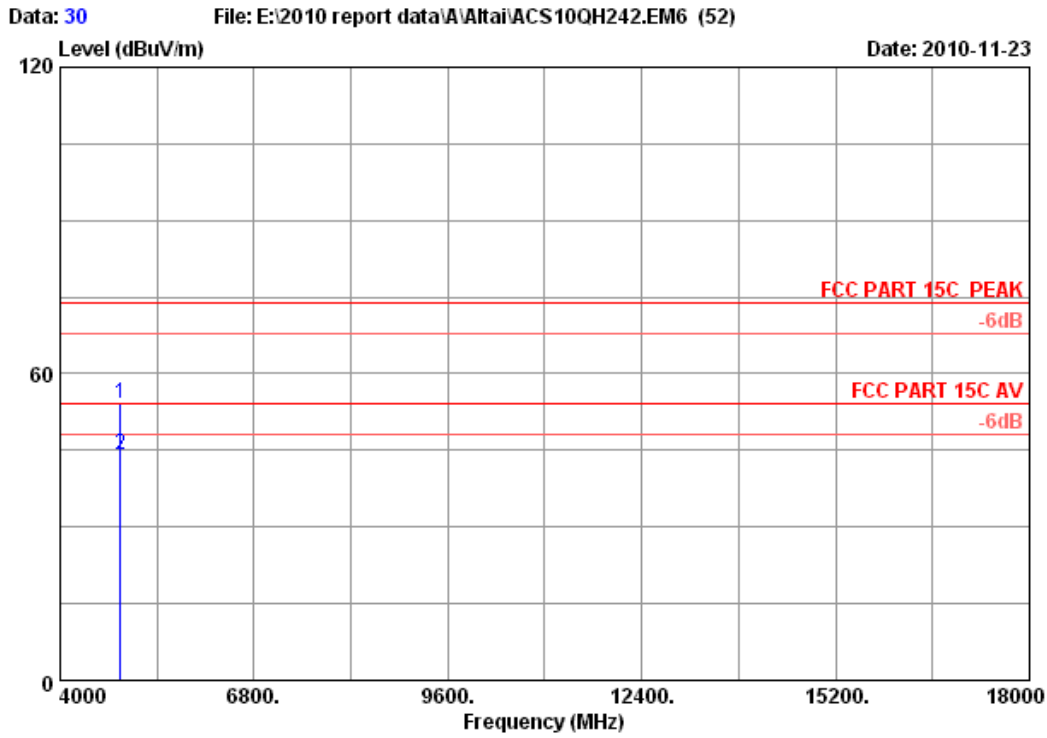
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Data: 29 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23



Site no. : RF Chamber Data no. : 29  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH6 2437MHz Tx  
 WA8011E



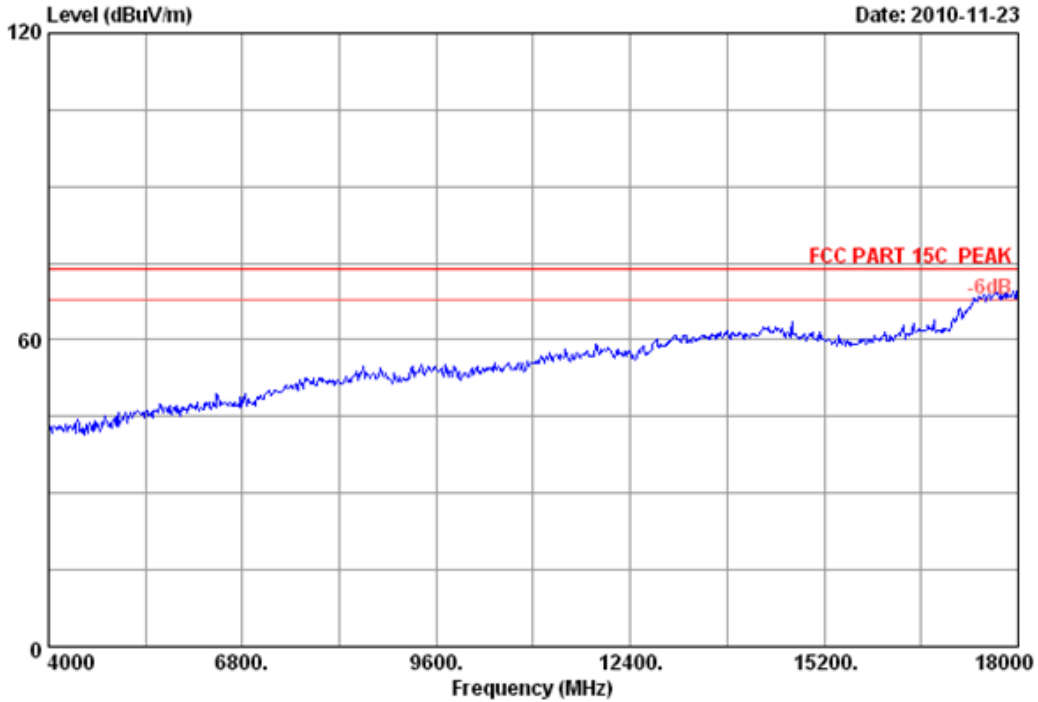
Site no. : RF Chamber Data no. : 30  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH6 2437MHz Tx  
 WA8011E

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	44.19	54.26	74.00	19.74	Peak
2	4874.000	34.41	10.69	35.03	34.08	44.15	54.00	9.85	Average

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

Data: 27 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23

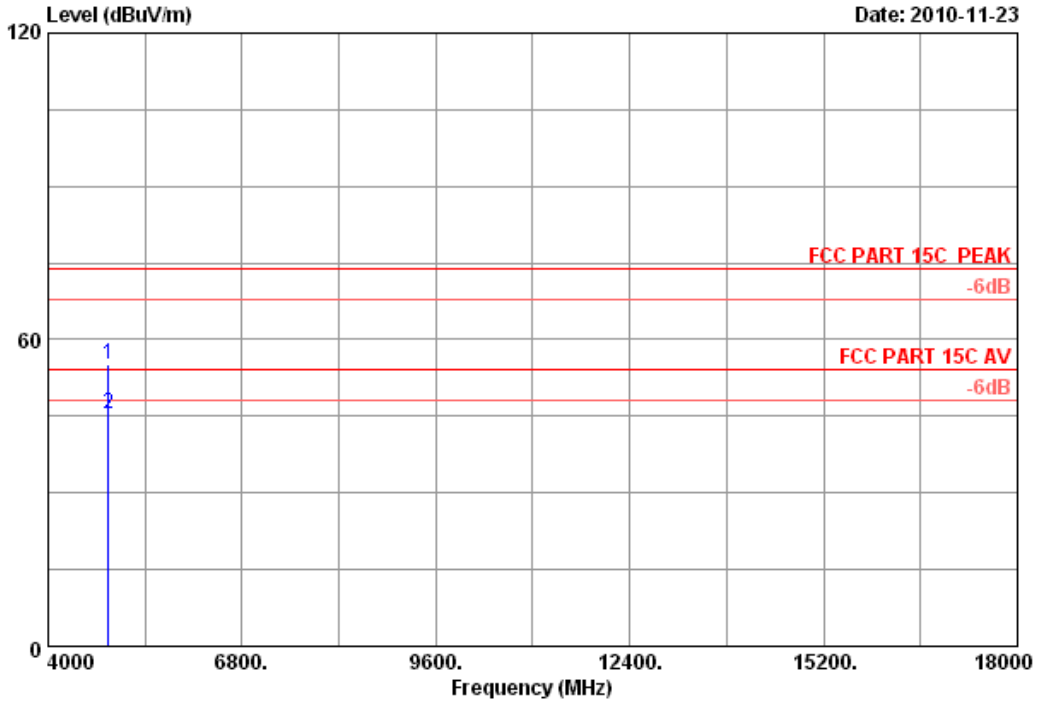


Site no. : RF Chamber Data no. : 27  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11g CH6 2437MHz Tx  
WA8011E

Data: 28

File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



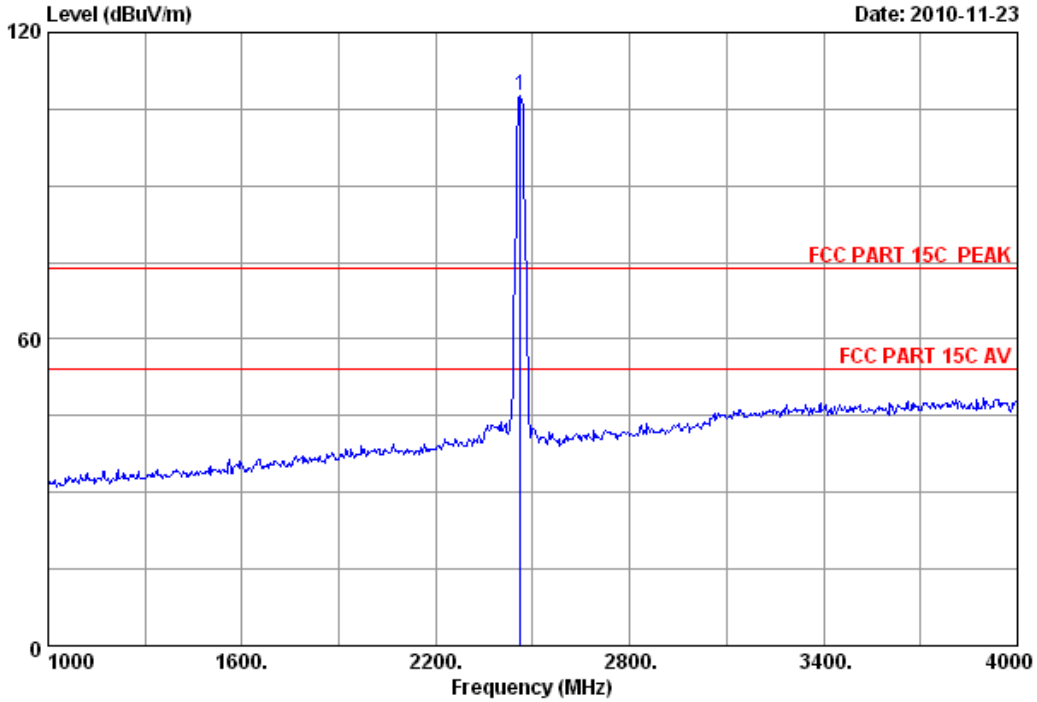
Site no. : RF Chamber Data no. : 28  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH6 2437MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	44.97	55.04	74.00	18.96	Peak
2	4874.000	34.41	10.69	35.03	35.28	45.35	54.00	8.65	Average

Remarks:

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

Data: 31 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52) Date: 2010-11-23



Site no. : RF Chamber Data no. : 31  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

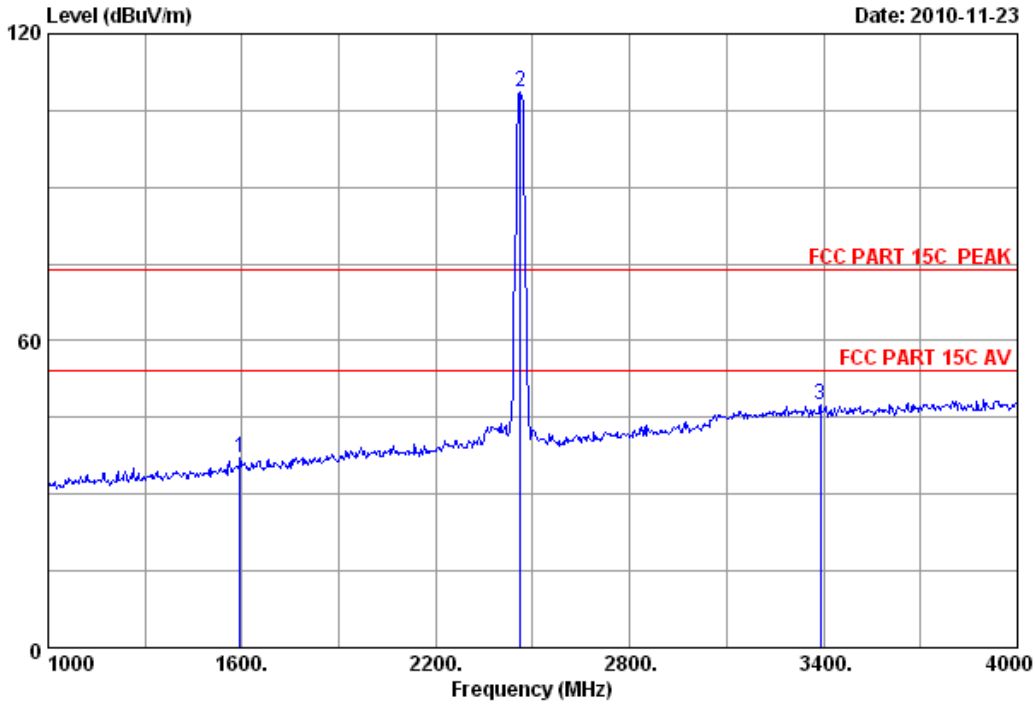
	Ant.	Cable	Amp.	Emission					
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1 2462.000	29.48	7.54	36.61	107.38	107.79	74.00	-33.79	Peak	

Remarks:

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

Data: 32 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 32  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

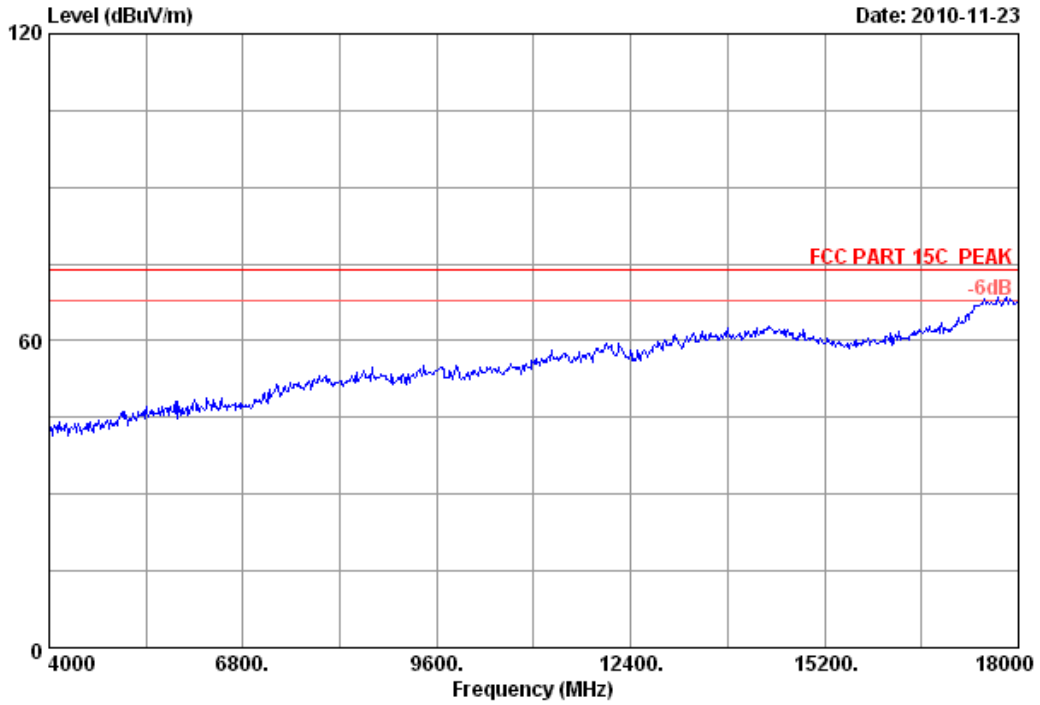
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1594.000	26.96	5.88	36.95	41.38	37.27	74.00	36.73	Peak
2	2462.000	29.48	7.54	36.61	108.38	108.79	74.00	-34.79	Peak
3	3391.000	33.03	9.00	36.10	41.65	47.58	74.00	26.42	Peak

Remarks:

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

Data: 33 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23

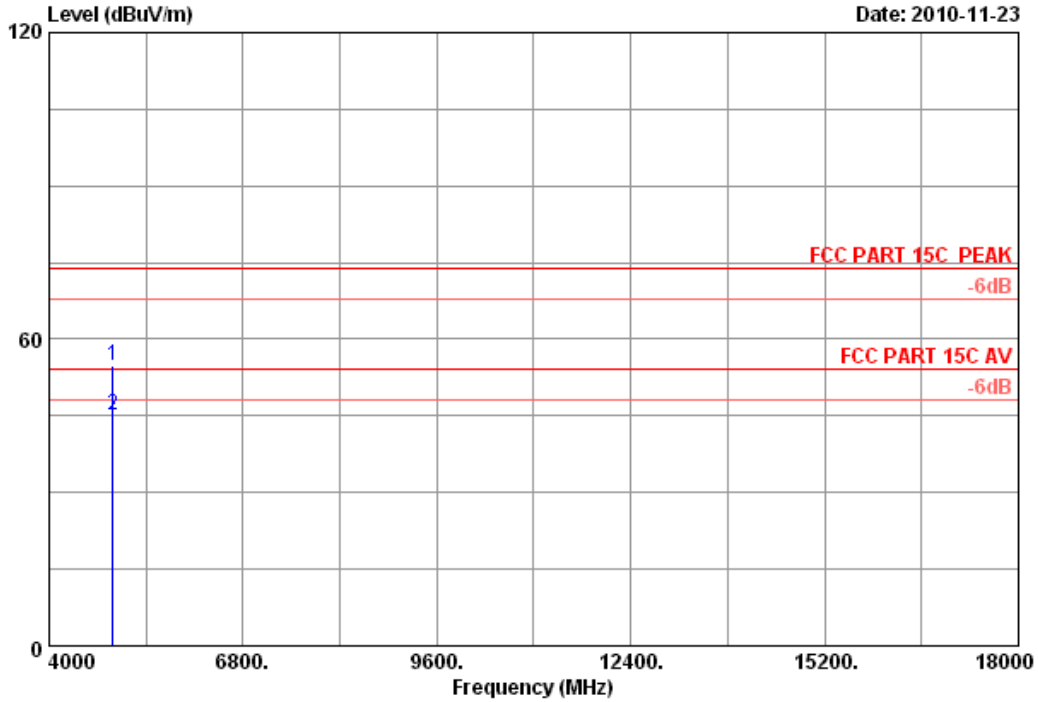


Site no. : RF Chamber Data no. : 33  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
EUT : AS-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11g CH11 2462MHz Tx  
WA8011E

Data: 34

File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 34  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

	Ant.	Cable	Amp.	Emission					
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1 4924.000	34.49	10.76	34.98	44.69	54.96	74.00	19.04	Peak	
2 4924.000	34.49	10.76	34.98	34.89	45.16	54.00	8.84	Average	

Remarks:

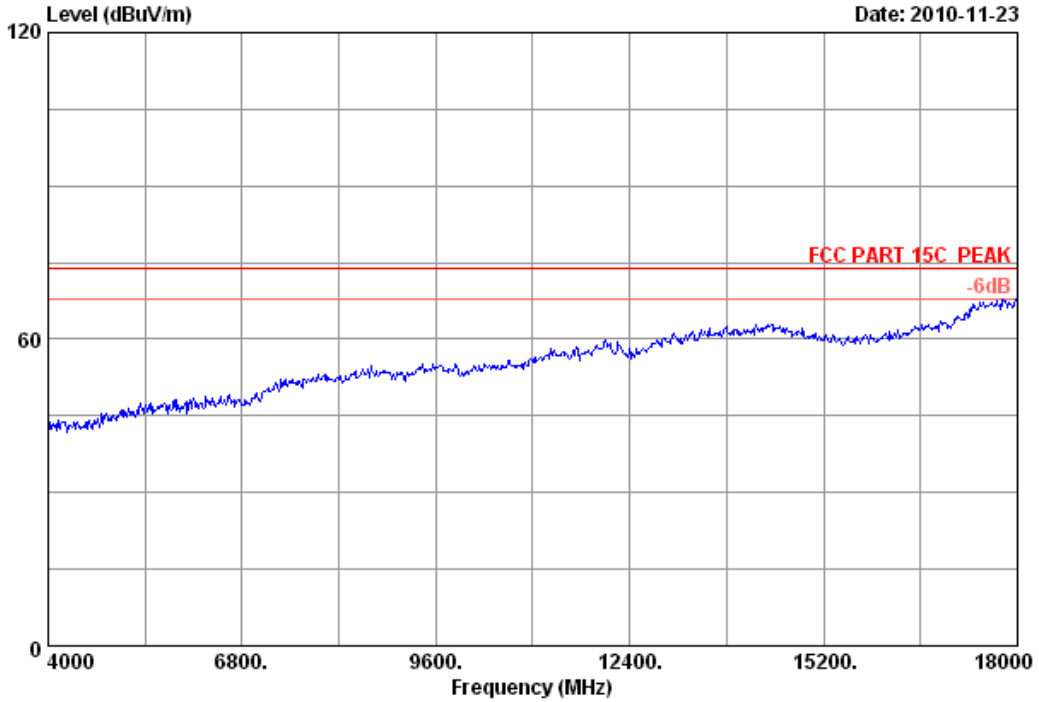
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Data: 35

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23

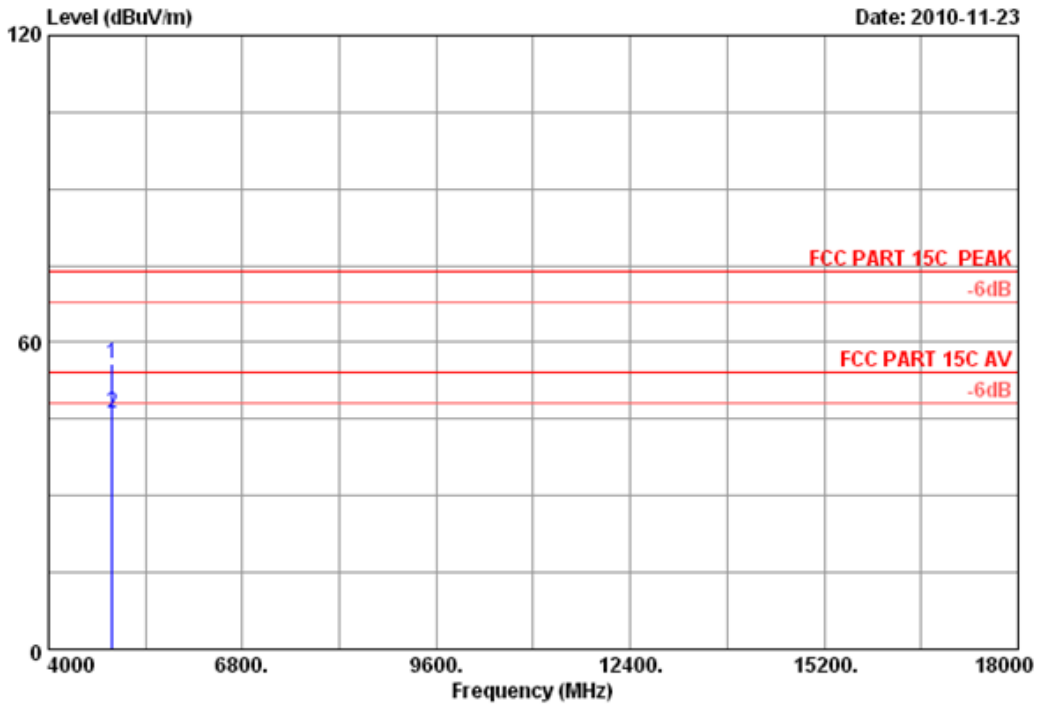


Site no. : RF Chamber Data no. : 35  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

Data: 36

File: E:\2010 report data\Altai\ACS10QH242.EM6 (52)

Date: 2010-11-23



Site no. : RF Chamber Data no. : 36  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

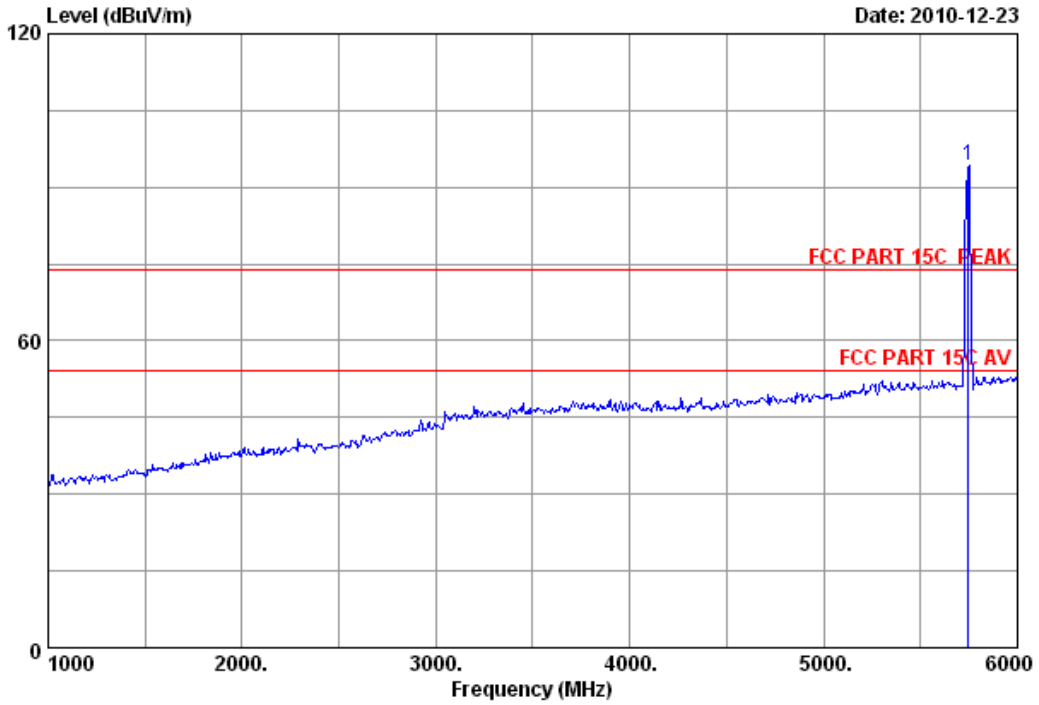
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	34.49	10.76	34.98	45.68	55.95	74.00	18.05	Peak
2	4924.000	34.49	10.76	34.98	35.75	46.02	54.00	7.98	Average

Remarks:

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

Data: 53 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 53  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH149 5745MHz Tx  
 M/N : WA8011E

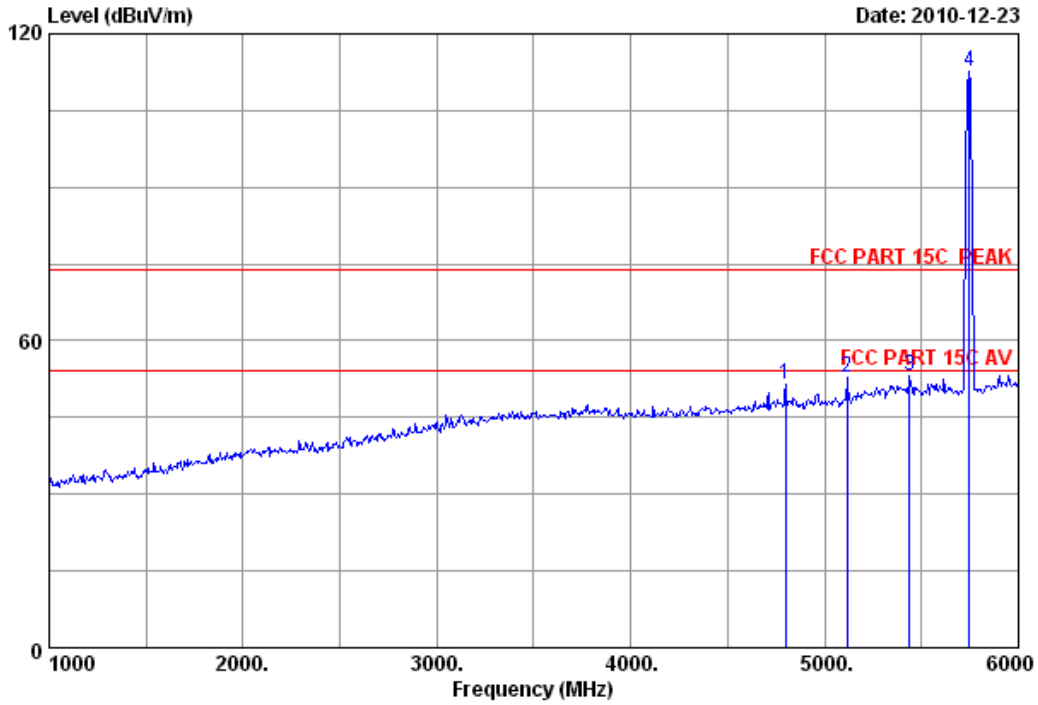
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.000	36.00	11.70	34.50	81.20	94.40	74.00	-20.40	Peak

Remarks:

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

Data: 54 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



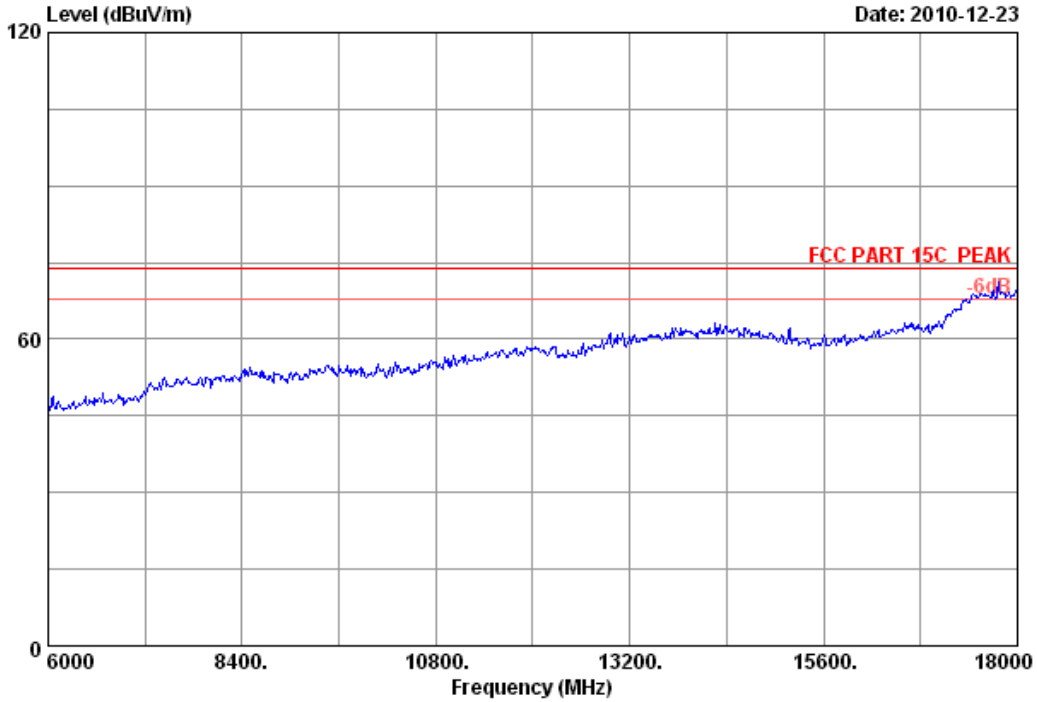
Site no. : RF Chamber Data no. : 54  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH149 5745MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4800.000	34.30	10.62	35.10	41.75	51.57	74.00	22.43	Peak
2	5115.000	34.93	10.96	34.84	41.76	52.81	74.00	21.19	Peak
3	5440.000	35.81	11.35	34.63	40.65	53.18	74.00	20.82	Peak
4	5745.000	36.00	11.70	34.50	99.39	112.59	74.00	-38.59	Peak

Remarks:

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

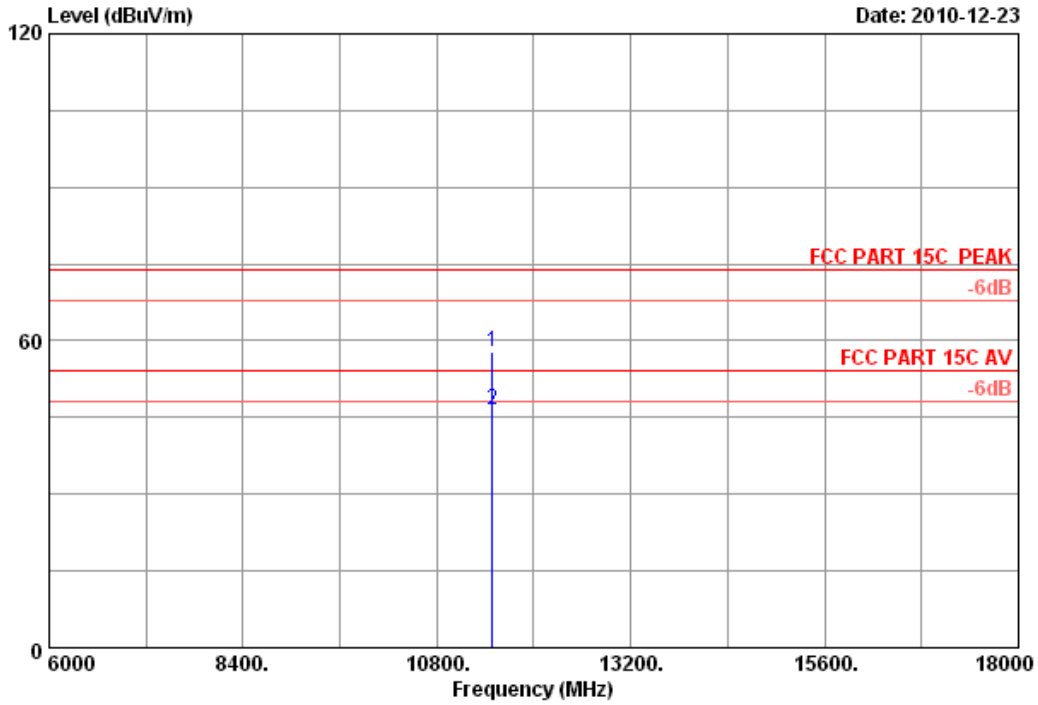
Data: 55 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84) Date: 2010-12-23



Site no. : RF Chamber Data no. : 55  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH149 5745MHz Tx  
 M/N : WA8011E

Data: 56 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 56  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH149 5745MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11490.000	39.60	16.96	33.53	34.70	57.73	74.00	16.27	Peak
2	11490.000	39.60	16.96	33.53	23.57	46.60	54.00	7.40	Average

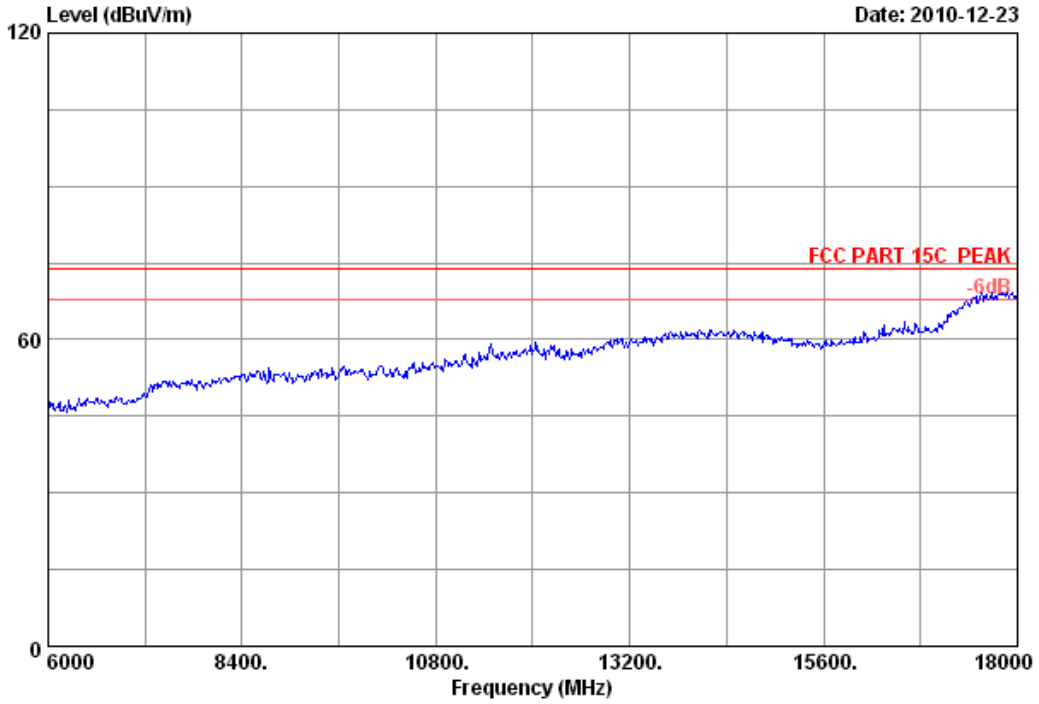
Remarks:

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

Data: 57

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23

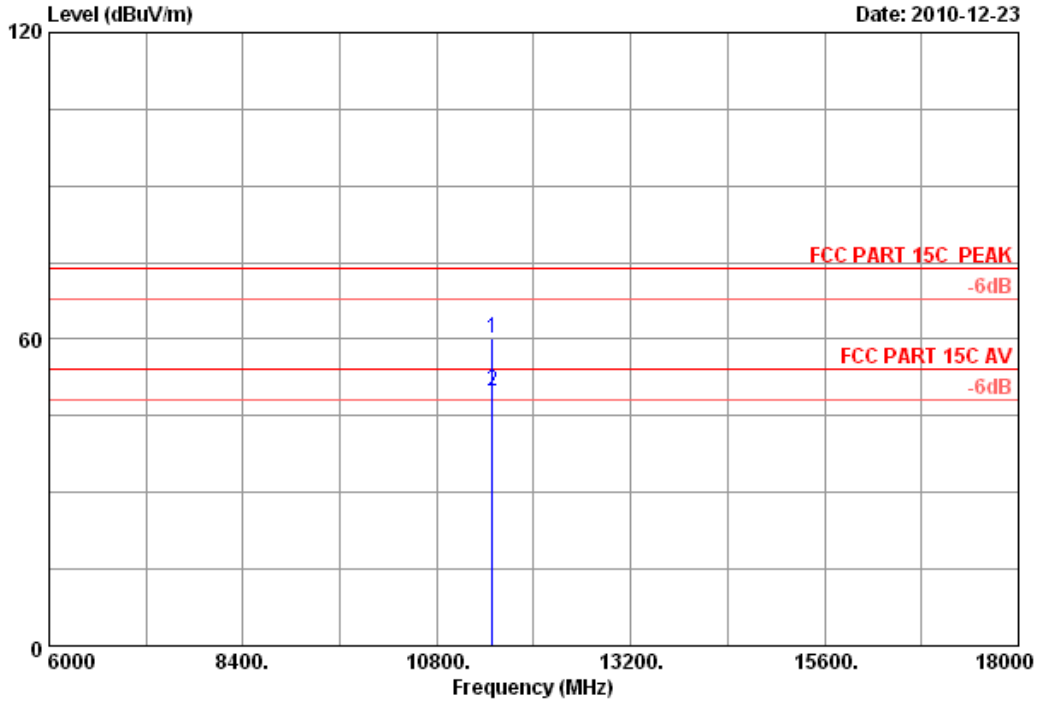


Site no.	: RF Chamber	Data no. :	57
Dis. / Ant.	: 3m 3115(0911)	Ant. pol. :	VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer :	Sunny-lu
EUT	: A8-Ei Super WiFi Base Station		
Power	: DC 48V From Adapter input AC 120V/60Hz		
Test mode	: IEEE802.11a CH149 5745MHz Tx		
M/N	: WA8011E		

Data: 58

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 58  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH149 5745MHz Tx  
 M/N : WA8011E

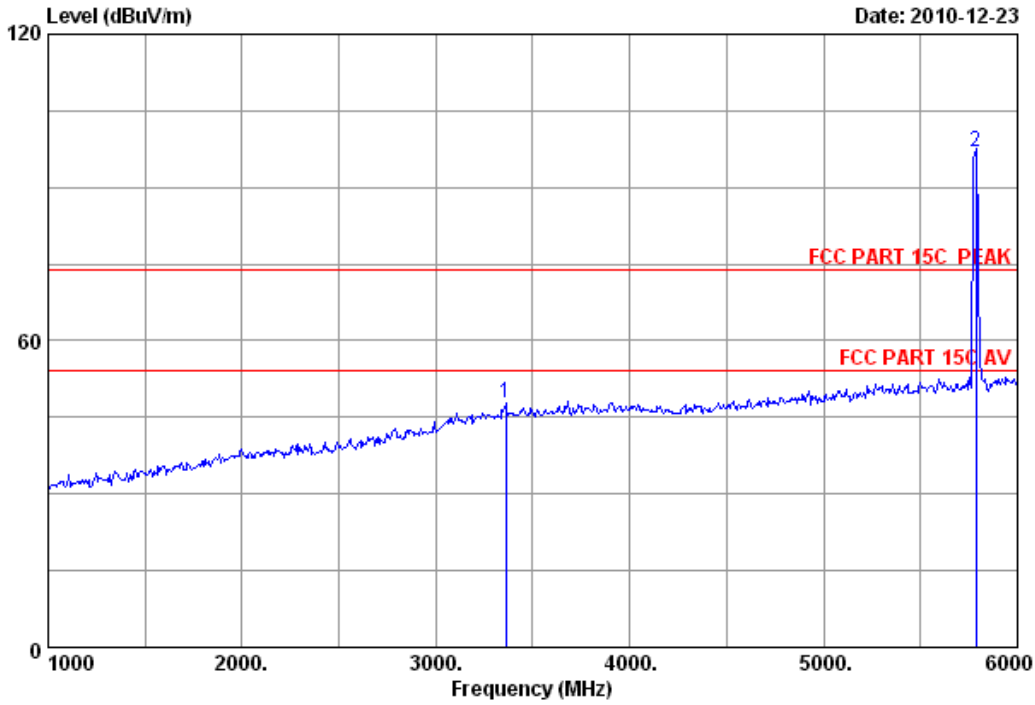
	Ant.	Cable	Amp.	Emission		Limits	Margin	Remark
Freq.	Factor	loss	Factor	Reading	Level	Margin	(dB)	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)		
1 11490.000	39.60	16.96	33.53	37.24	60.27	74.00	13.73	Peak
2 11490.000	39.60	16.96	33.53	26.79	49.82	54.00	4.18	Average

Remarks:

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



Data: 60 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84) Date: 2010-12-23



Site no. : RF Chamber Data no. : 60  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH157 5785MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	3360.000	32.94	8.97	36.12	42.00	47.79	74.00	26.21	Peak
2	5785.000	36.00	11.74	34.48	83.61	96.87	74.00	-22.87	Peak

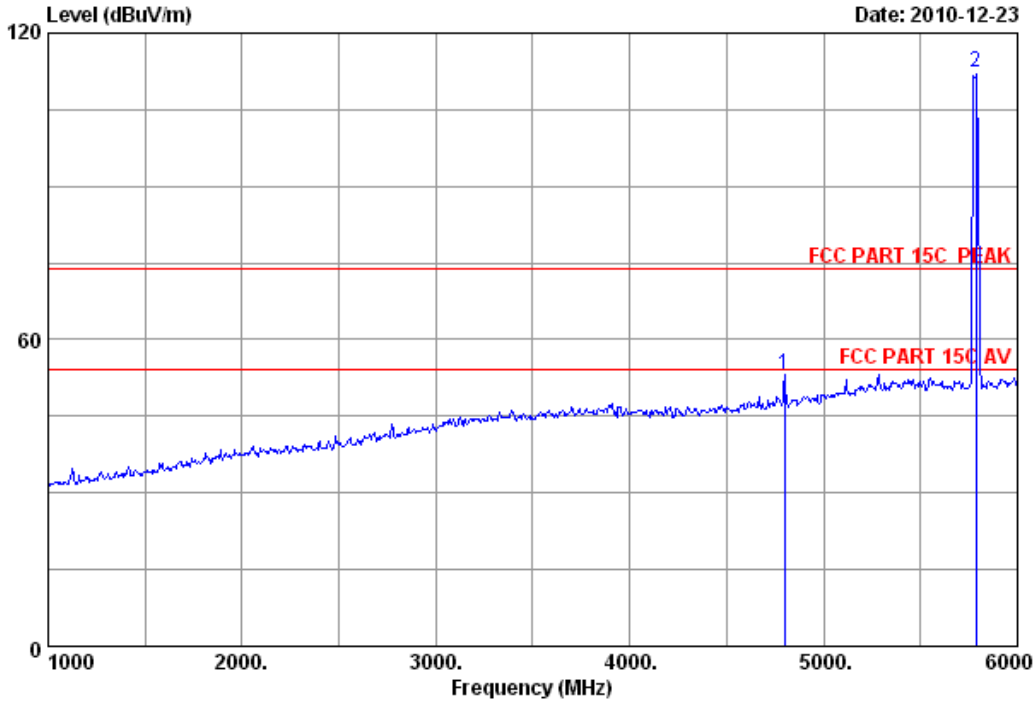
Remarks:

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

Data: 59

File: E:\2010 report data\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 59  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH157 5785MHz Tx  
 M/N : WA8011E

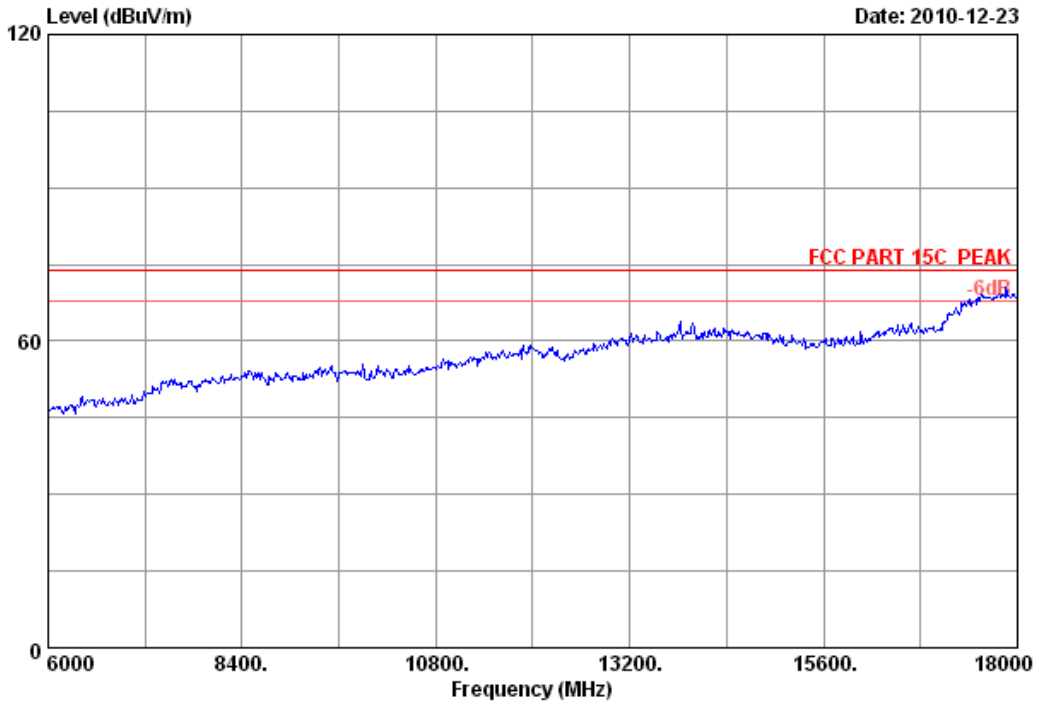
	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4800.000	34.30	10.62	35.10	43.31	53.13	74.00	20.87	Peak
2	5785.000	36.00	11.74	34.48	99.03	112.29	74.00	-38.29	Peak

Remarks:

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

Data: 61 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

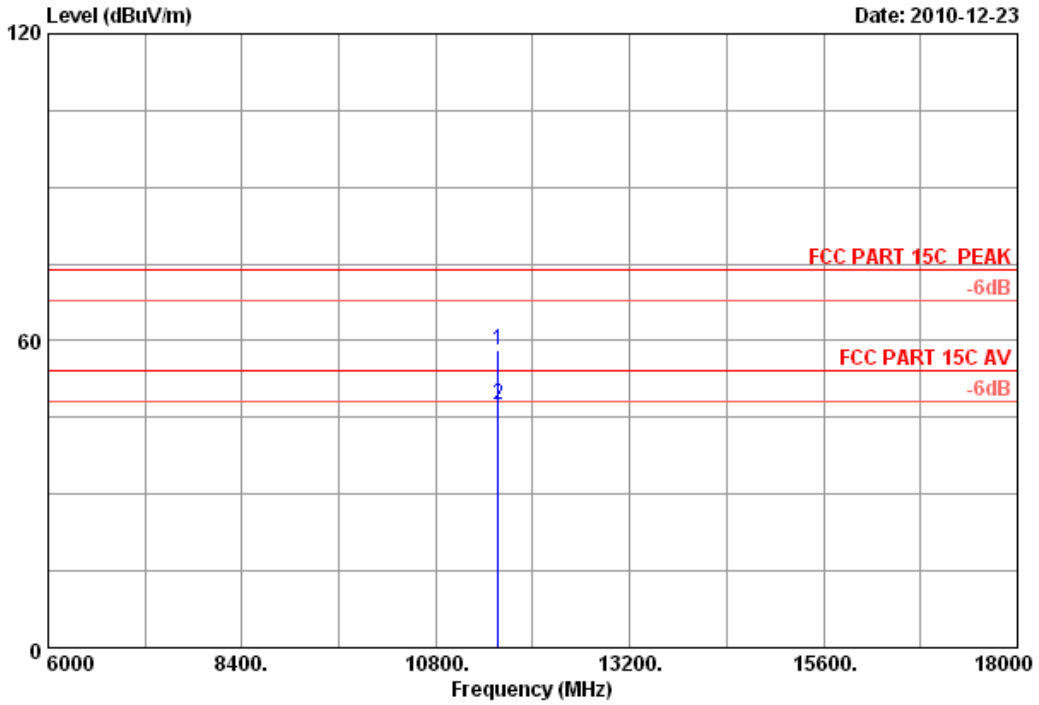
Date: 2010-12-23



Site no. : RF Chamber Data no. : 61  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH157 5785MHz Tx  
 M/N : WA8011E

Data: 62 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23

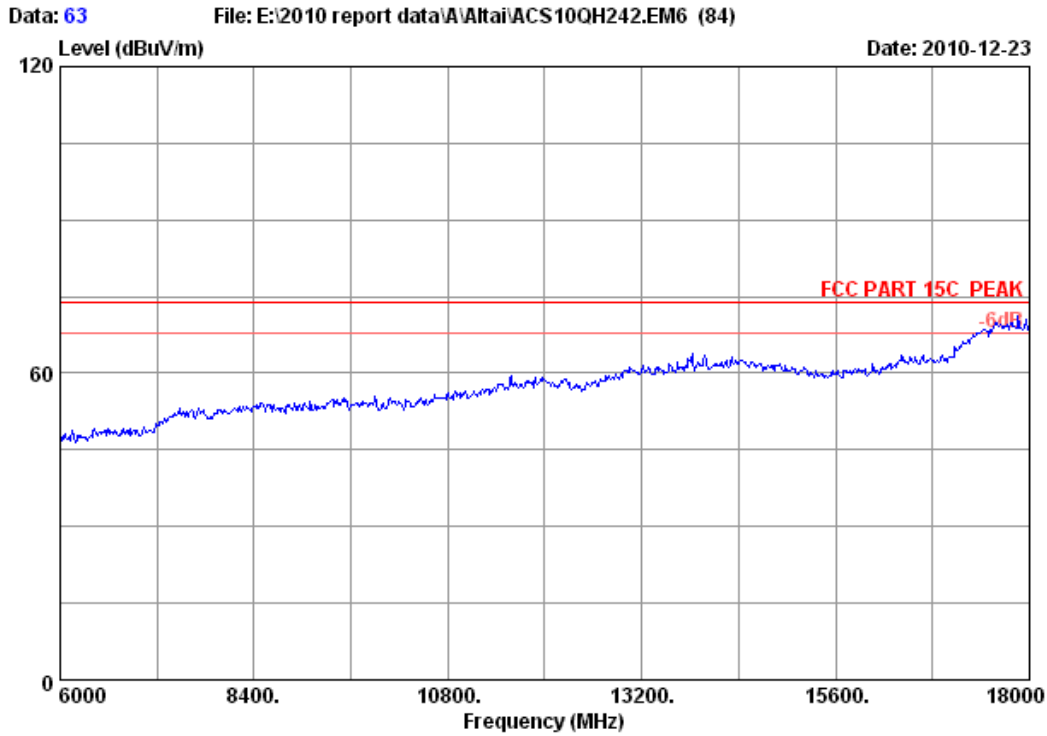


Site no. : RF Chamber Data no. : 62  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : AS-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH157 5785MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11570.000	39.57	17.03	33.39	34.99	58.20	74.00	15.80	Peak
2	11570.000	39.57	17.03	33.39	24.14	47.35	54.00	6.65	Average

Remarks:

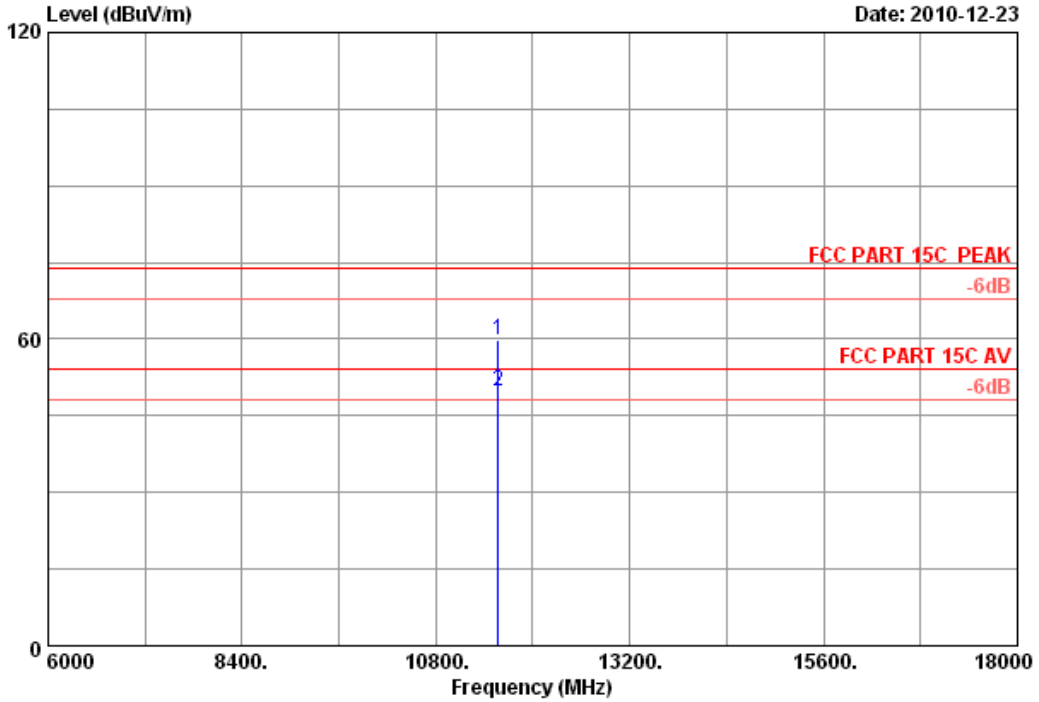
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : RF Chamber Data no. : 63  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH157 5785MHz Tx  
 M/N : WA8011E

Data: 64 File: E:\2010 report data\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



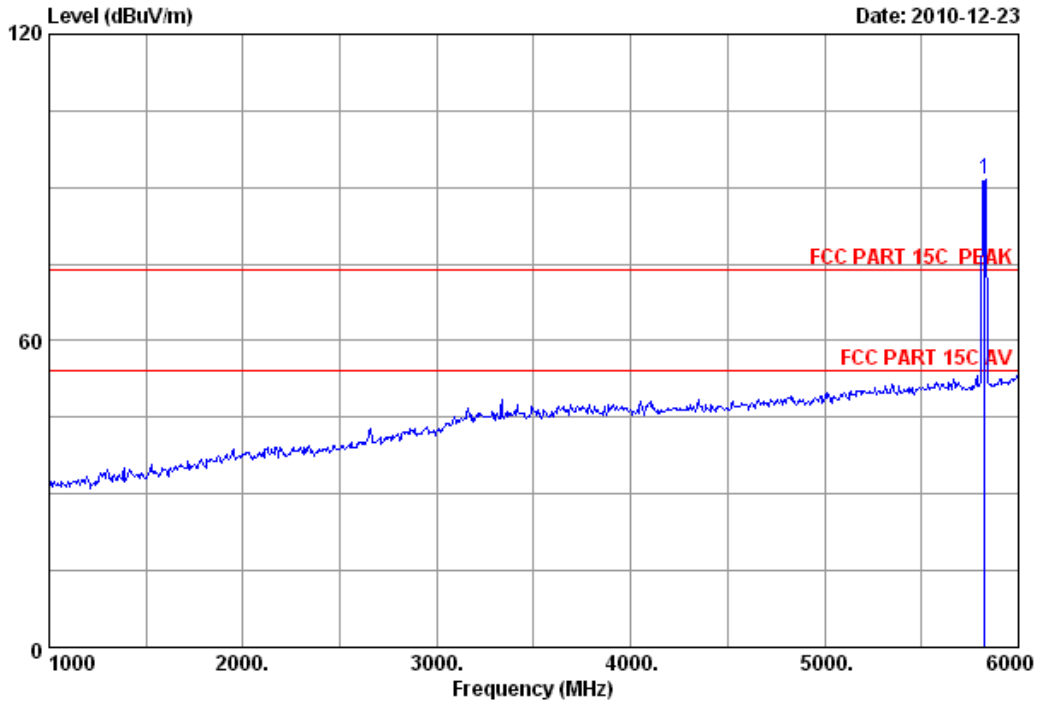
Site no. : RF Chamber Data no. : 64  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH157 5785MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11570.000	39.57	17.03	33.39	36.68	59.89	74.00	14.11	Peak
2	11570.000	39.57	17.03	33.39	26.57	49.78	54.00	4.22	Average

Remarks:

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

Data: 66 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)



Site no. : RF Chamber Data no. : 66  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH165 5825MHz Tx  
 M/N : WA8011E

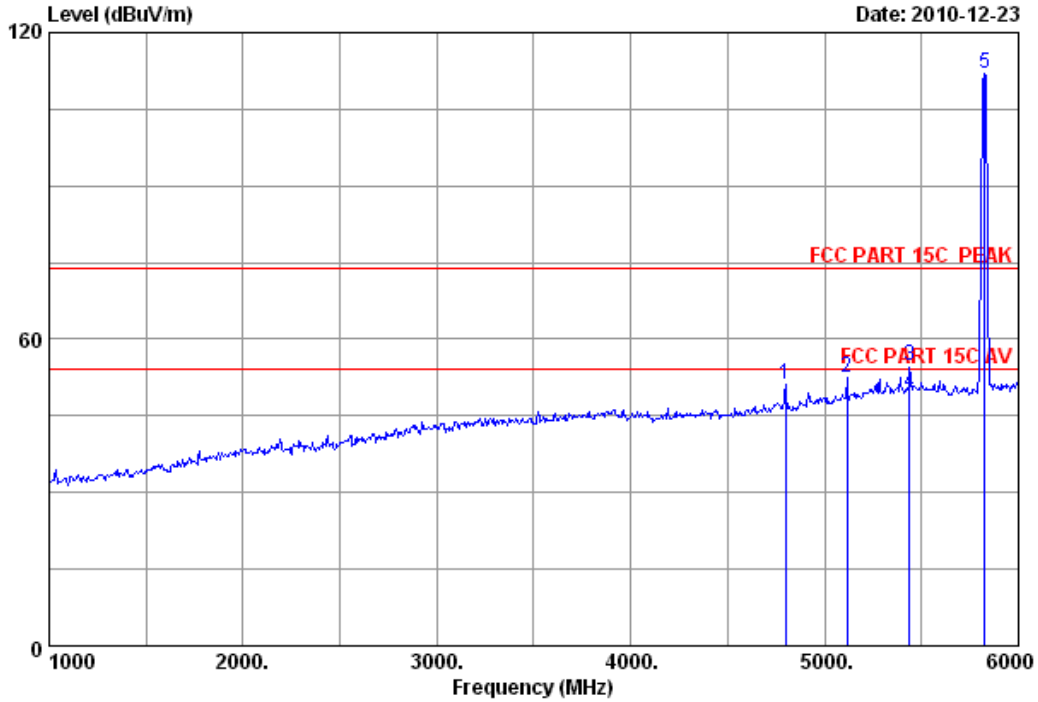
	Ant.	Cable	Amp.	Emission					
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1 5825.000	36.00	11.79	34.47	78.38	91.70	74.00	-17.70	Peak	

Remarks:

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

Data: 65 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 65  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH165 5825MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4800.000	34.30	10.62	35.10	41.30	51.12	74.00	22.88	Peak
2	5115.000	34.93	10.96	34.84	41.27	52.32	74.00	21.68	Peak
3	5440.000	35.81	11.35	34.63	42.21	54.74	74.00	19.26	Peak
4	5440.000	35.81	11.35	34.63	36.99	49.52	54.00	4.48	Average
5	5825.000	36.00	11.79	34.47	98.54	111.86	74.00	-37.86	Peak

Remarks:

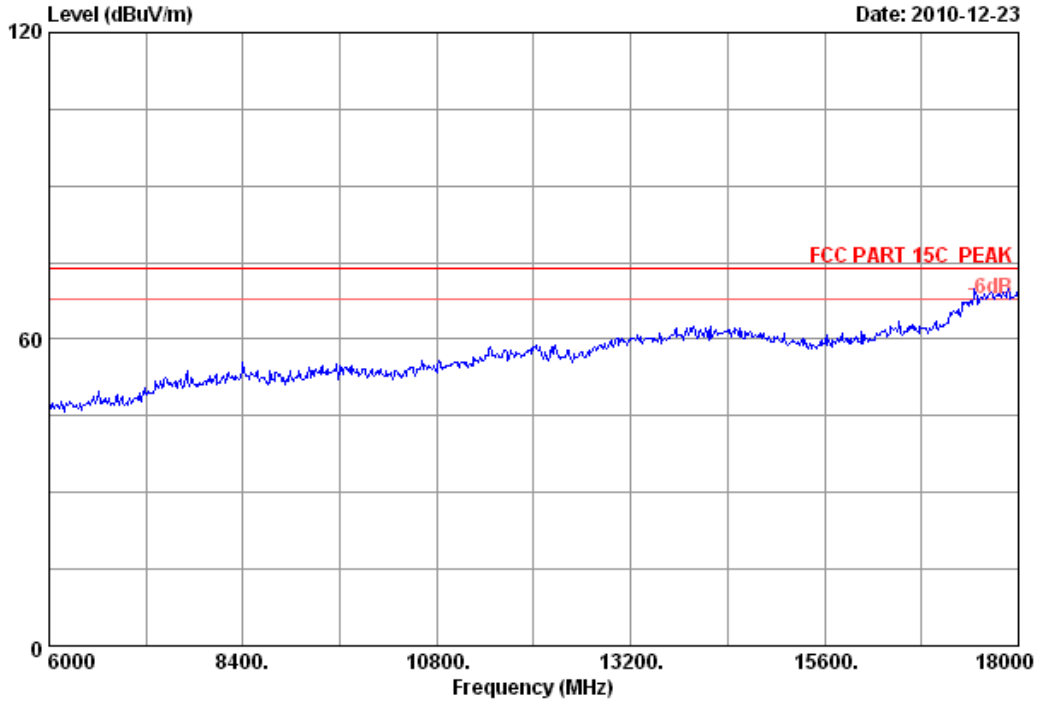
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Data: 69

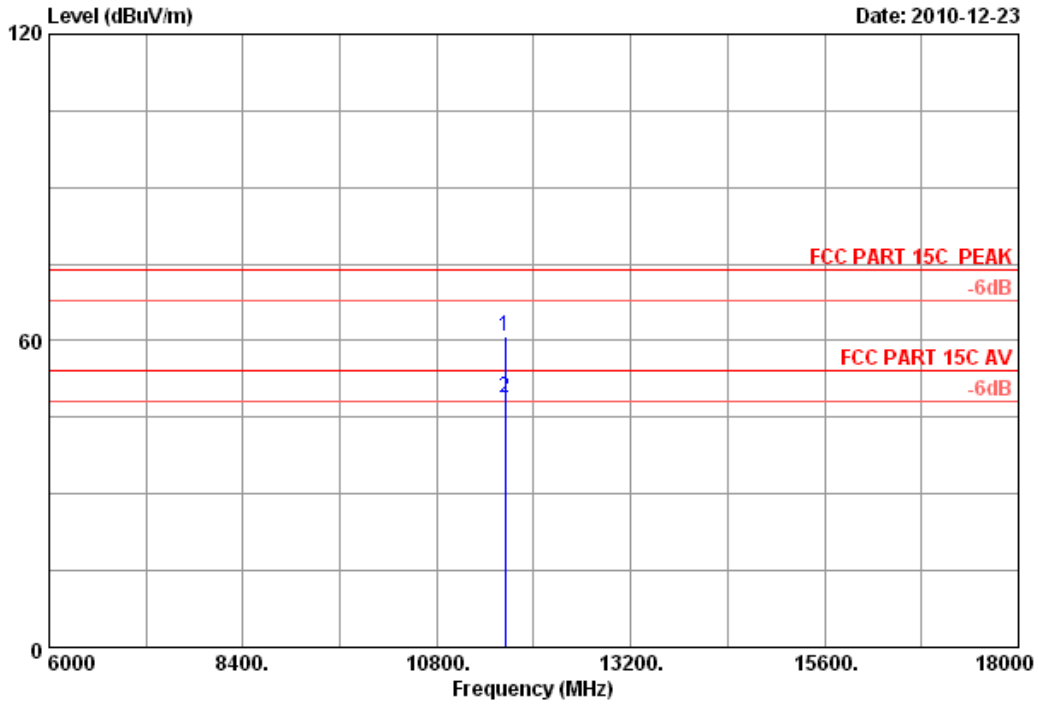
File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 69  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11a CH165 5825MHz Tx  
M/N : WA8011E

Data: 70 File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84) Date: 2010-12-23



Site no. : RF Chamber Data no. : 70  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH165 5825MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11650.000	39.54	17.09	33.28	37.34	60.69	74.00	13.31	Peak
2	11650.000	39.54	17.09	33.28	25.48	48.83	54.00	5.17	Average

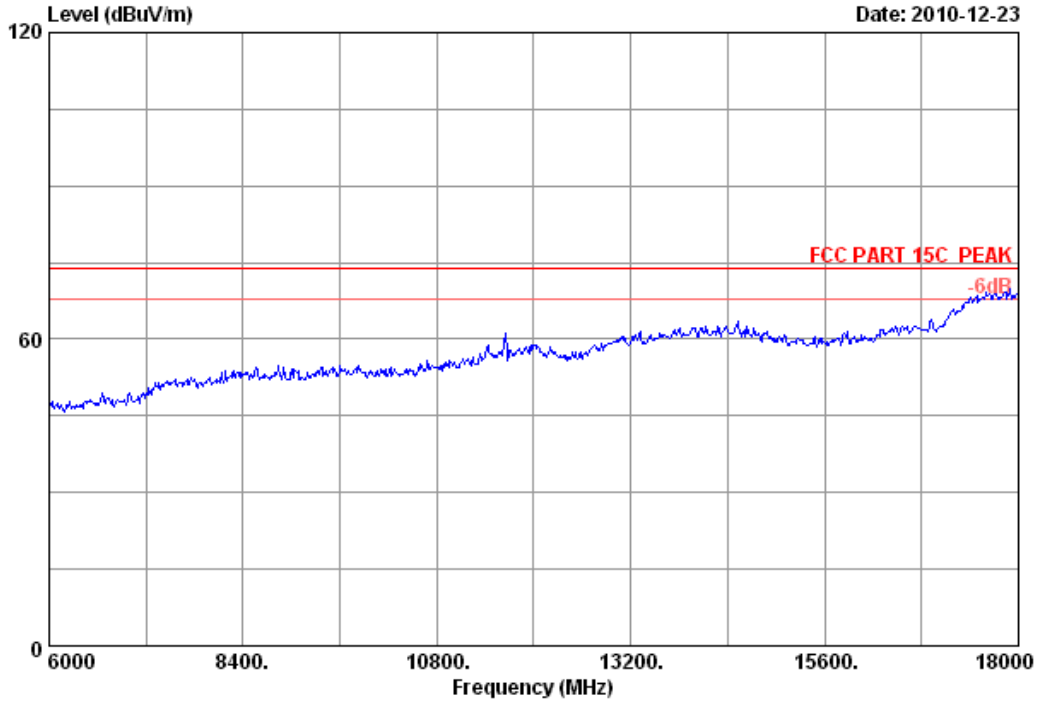
Remarks:

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

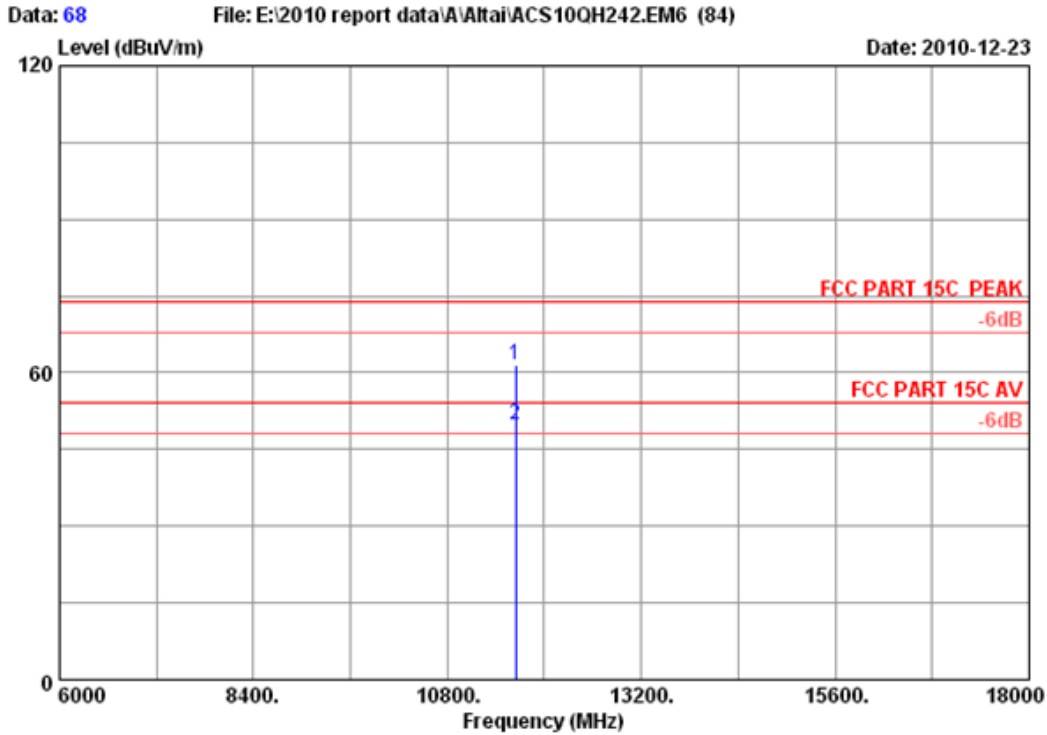
Data: 67

File: E:\2010 report data\A\Altai\ACS10QH242.EM6 (84)

Date: 2010-12-23



Site no. : RF Chamber Data no. : 67  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
EUT : A8-Ei Super WiFi Base Station  
Power : DC 48V From Adapter input AC 120V/60Hz  
Test mode : IEEE802.11a CH165 5825MHz Tx  
M/N : WA8011E



Site no. : RF Chamber Data no. : 68  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11a CH165 5825MHz Tx  
 M/N : WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11650.000	39.54	17.09	33.28	38.07	61.42	74.00	12.58	Peak
2	11650.000	39.54	17.09	33.28	26.47	49.82	54.00	4.18	Average

Remarks:

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

## 5. CONDUCTED SPURIOUS EMISSIONS

### 5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May.08, 10	1Year

### 5.2. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 5.3. Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer by 20dB attenuator.
- 2, Measure all the conducted emissions from antenna port by spectrum analyzer as below set:  
RBW=100KHz; VBW=300KHz; Detector: Peak; Sweep time: Auto

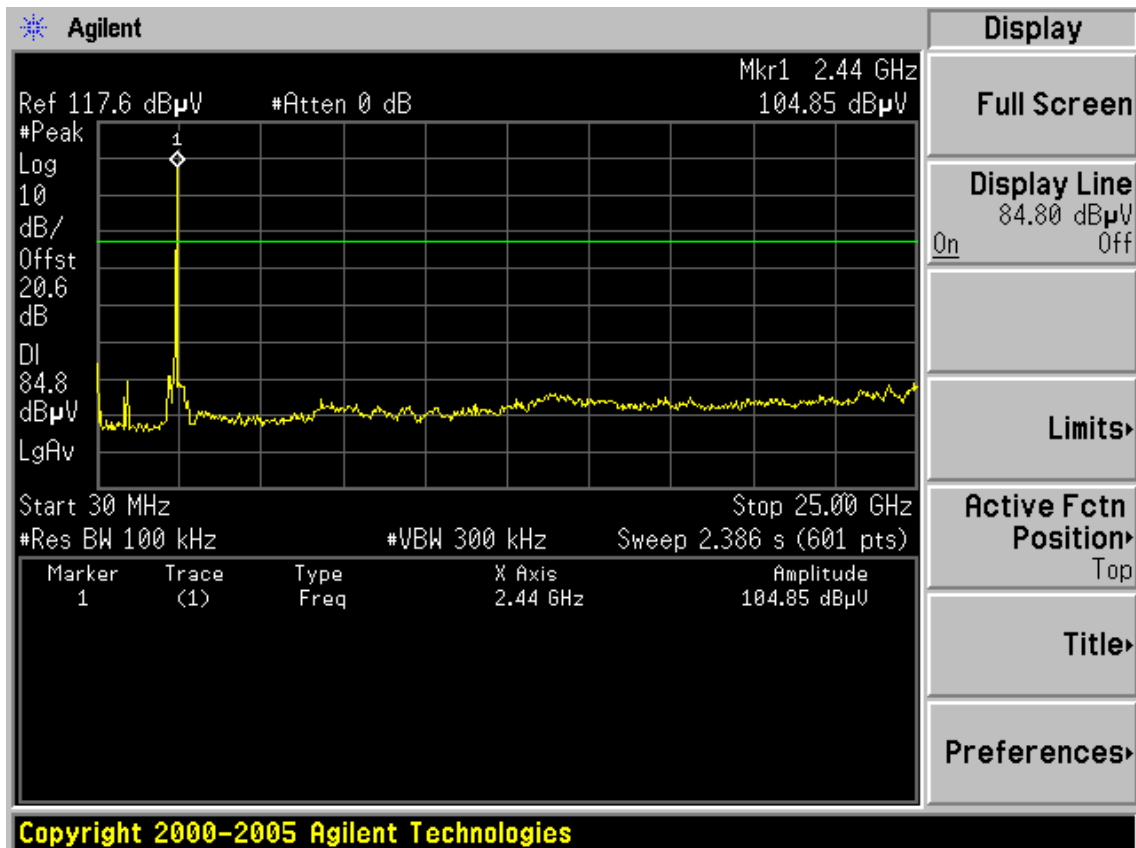
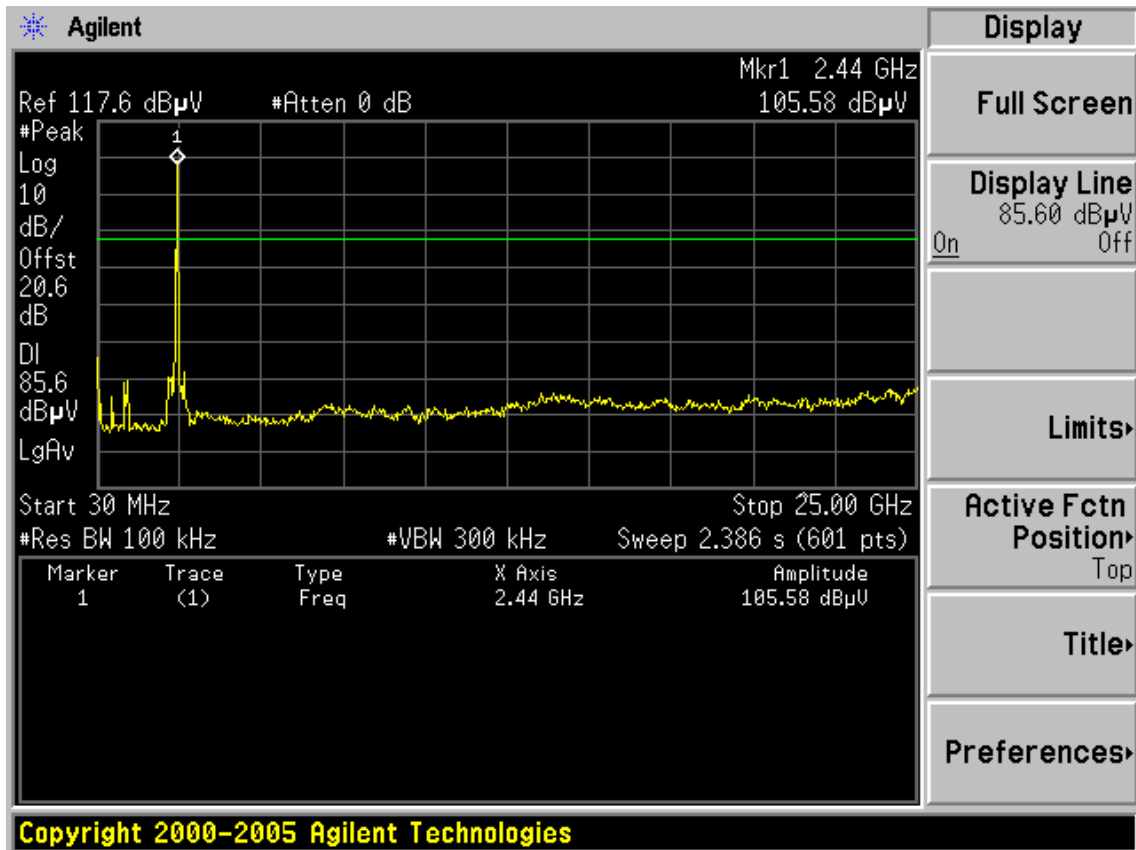
Note: The cable loss and attenuator loss were offset into spectrum analyzer as an amplitude offset.

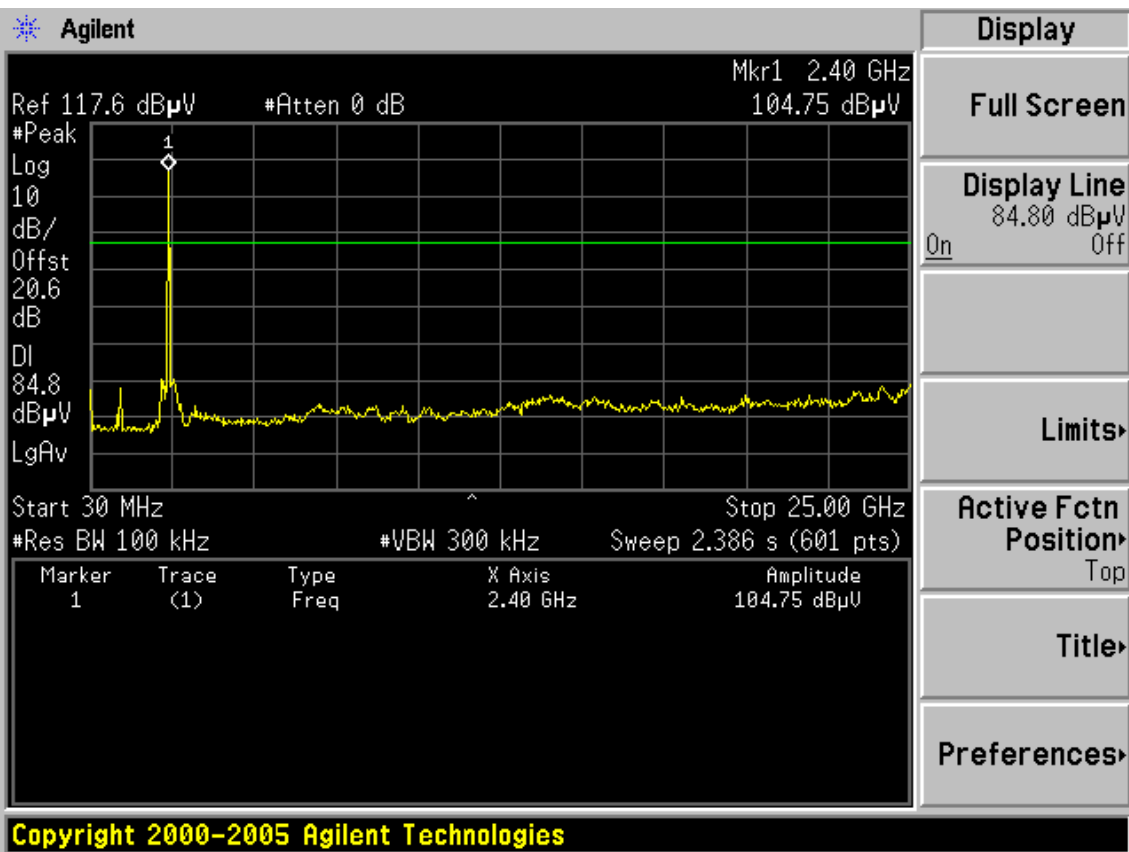
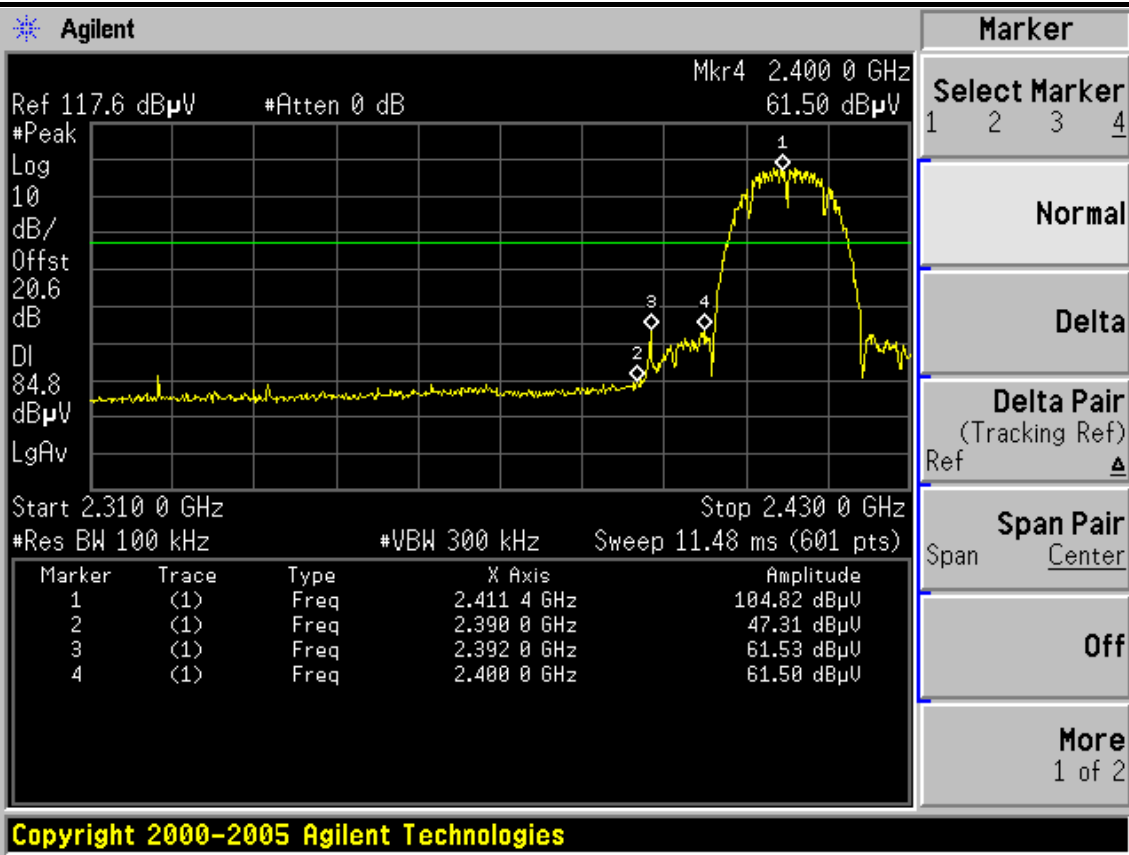
### 5.4. Test result

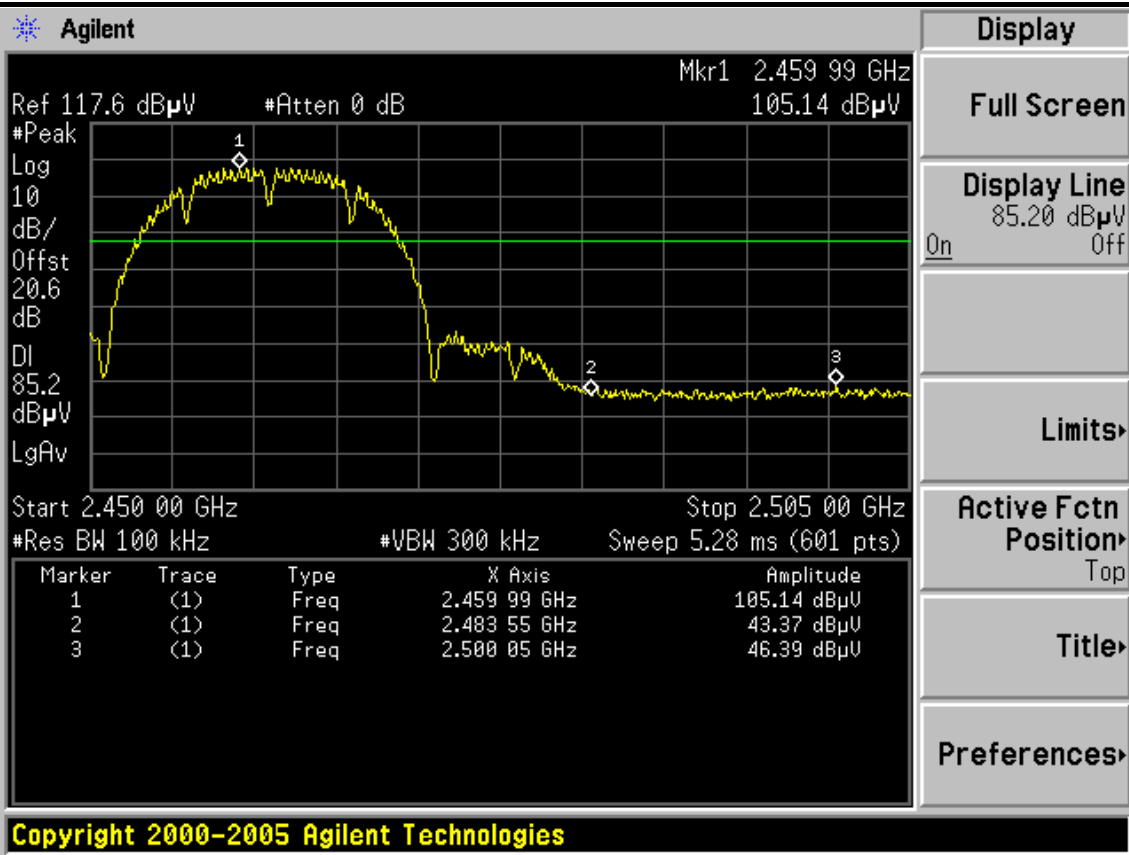
**PASS** (The testing data was attached in the next pages.)

**Conducted emission test data:**

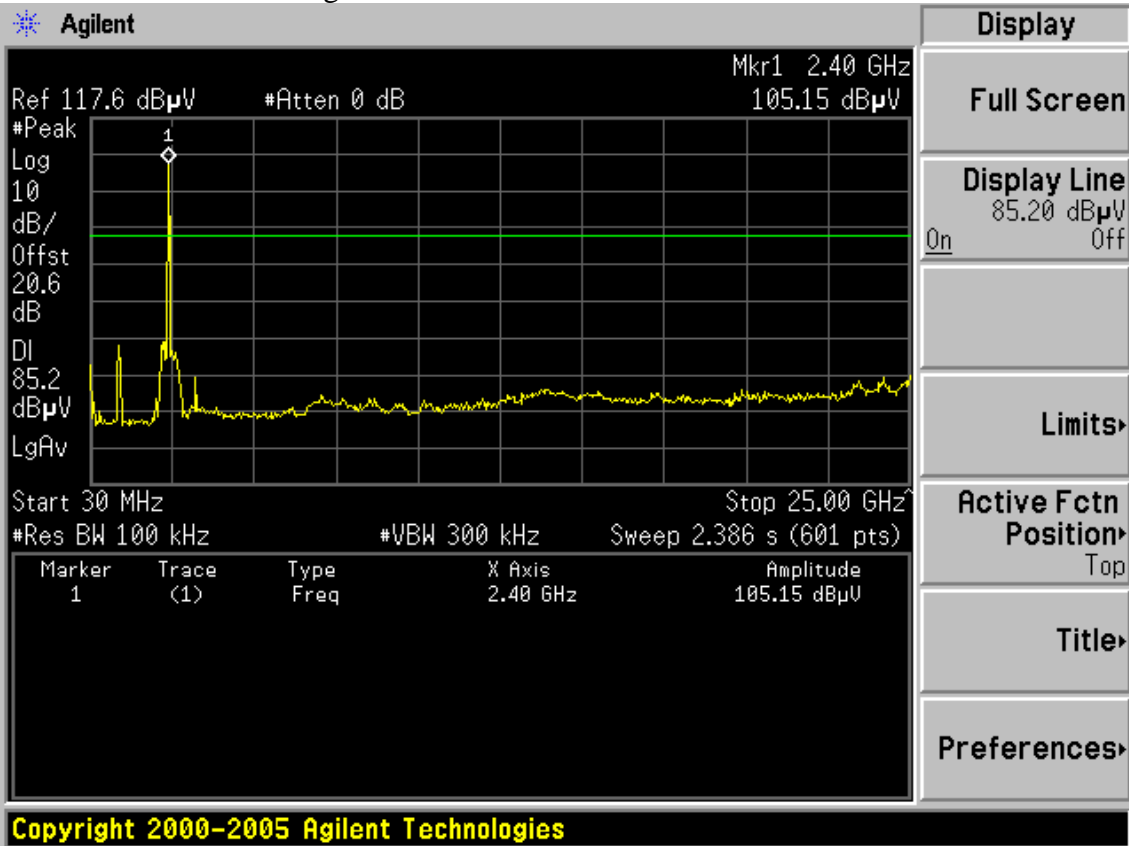
Test Mode: IEEE 802.11b TX



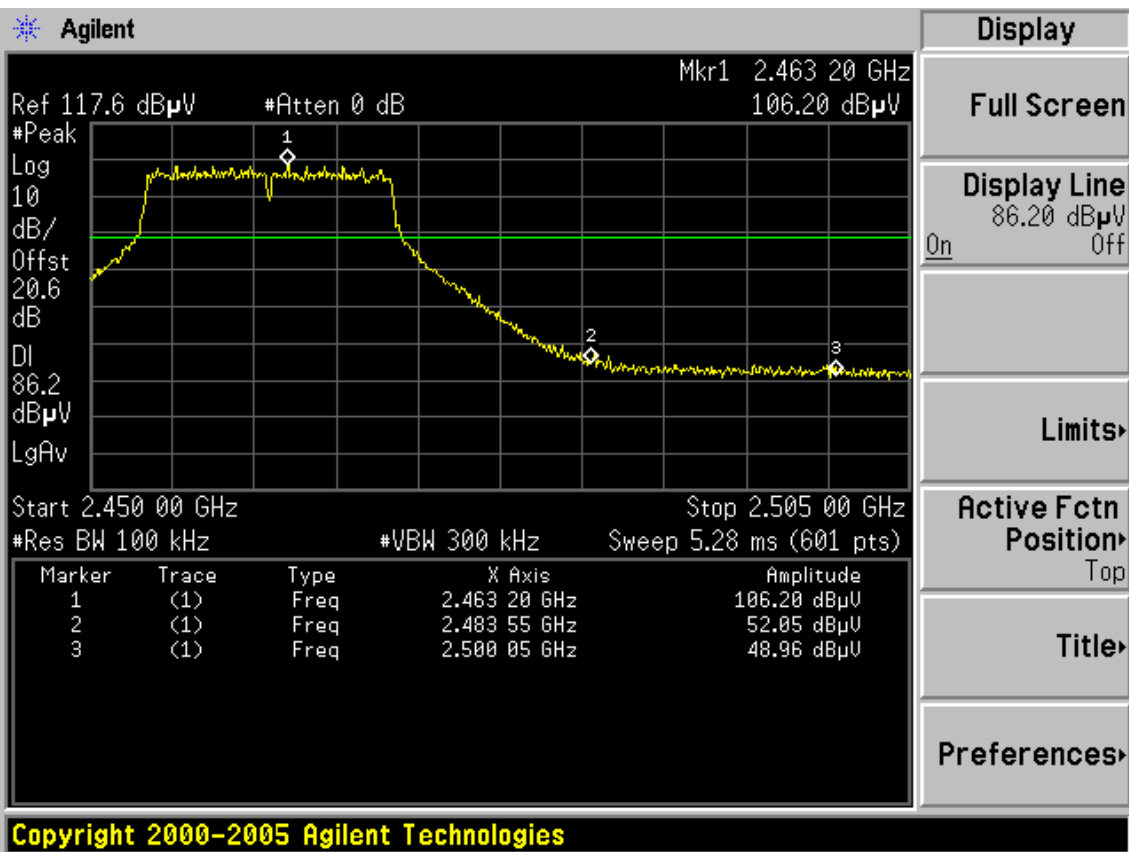
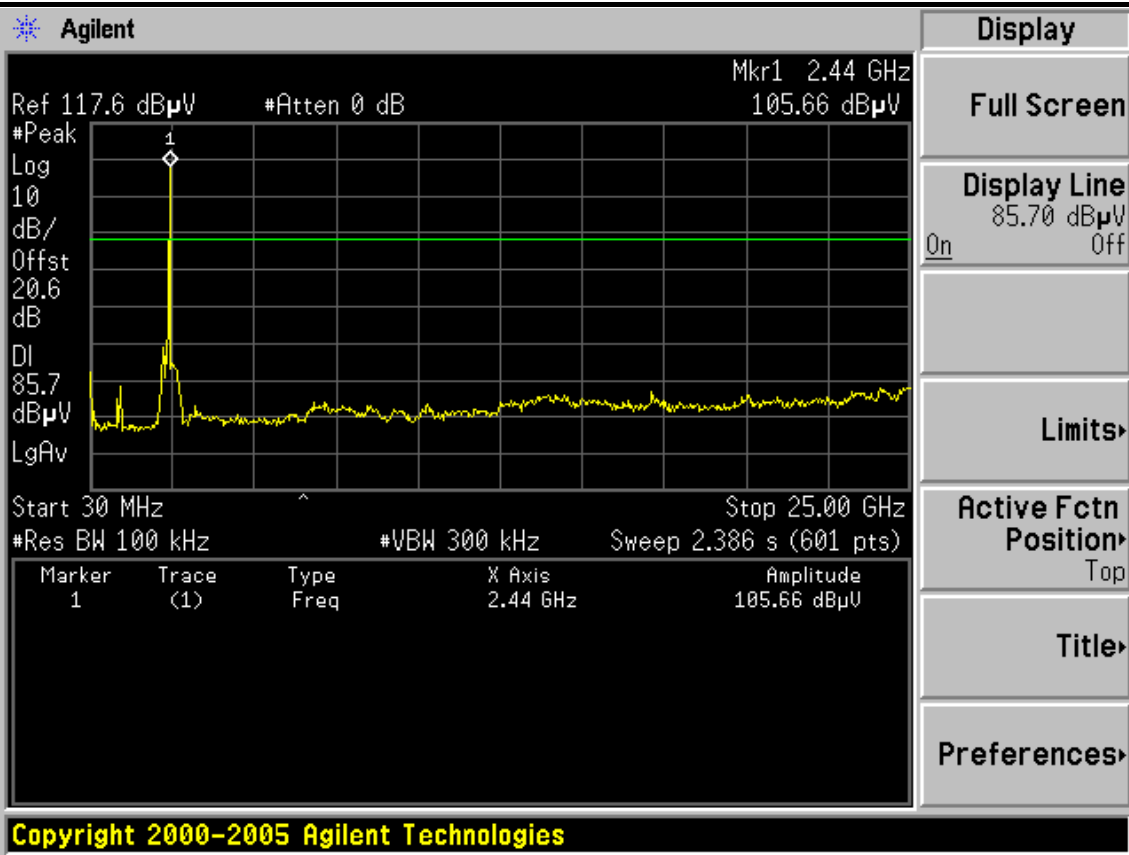


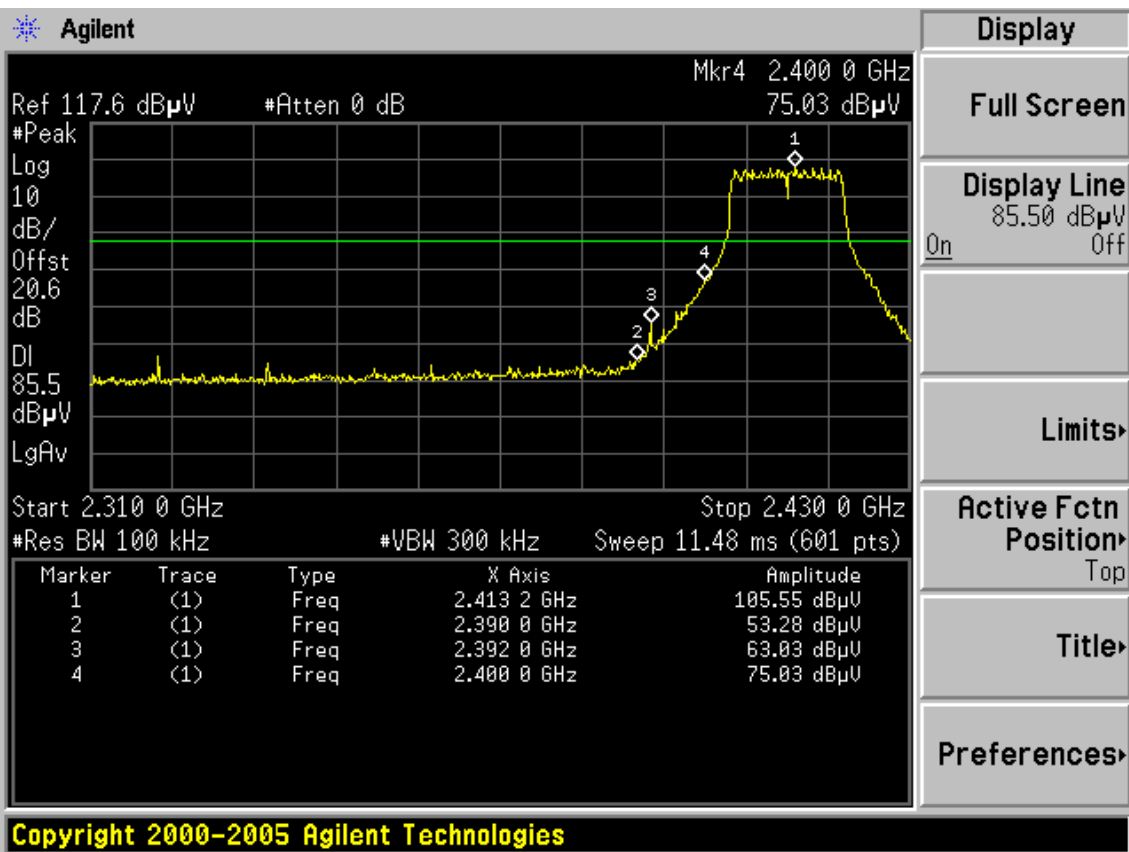
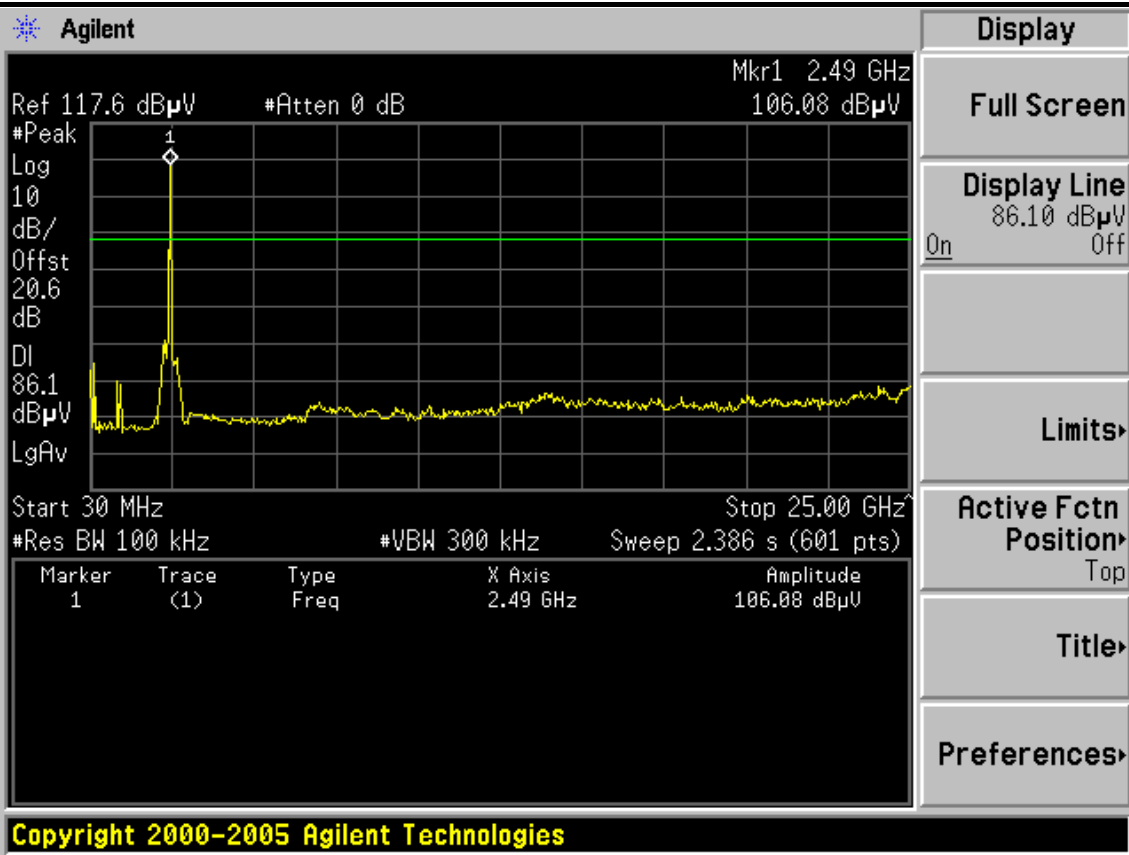


Test Mode: IEEE 802.11g mode

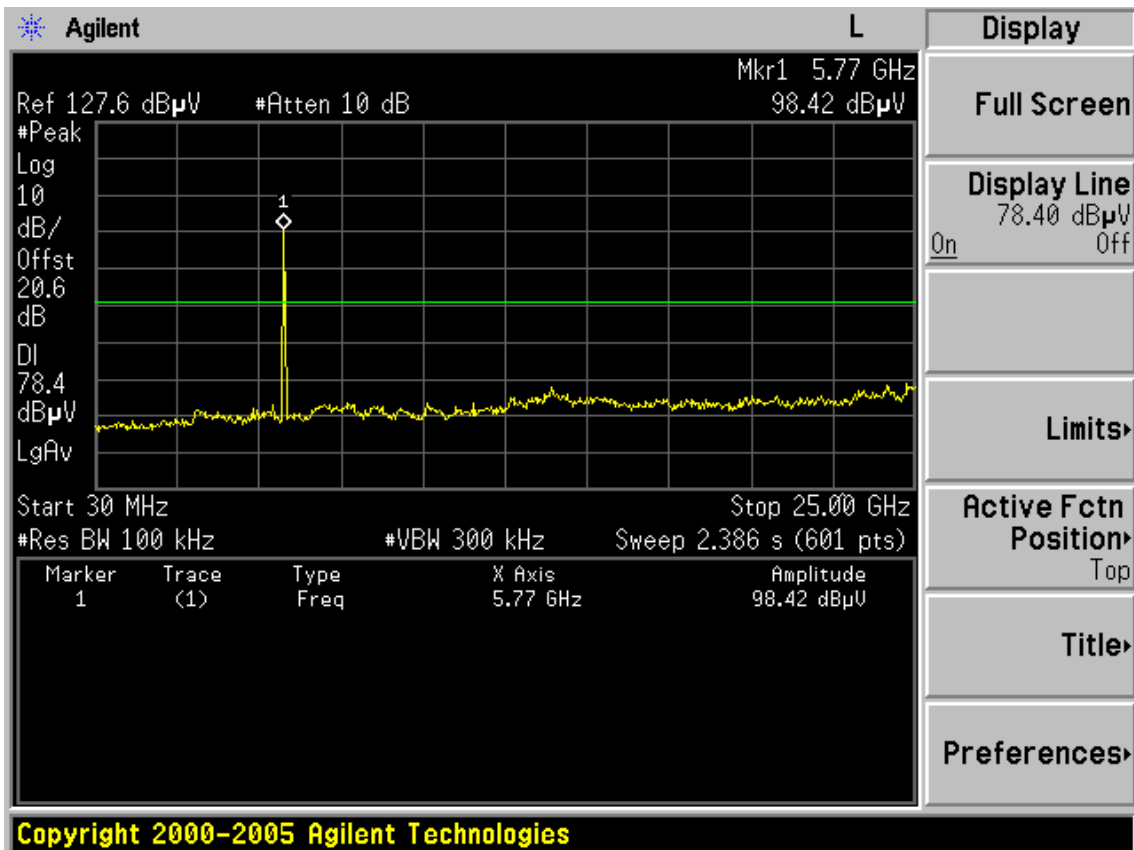
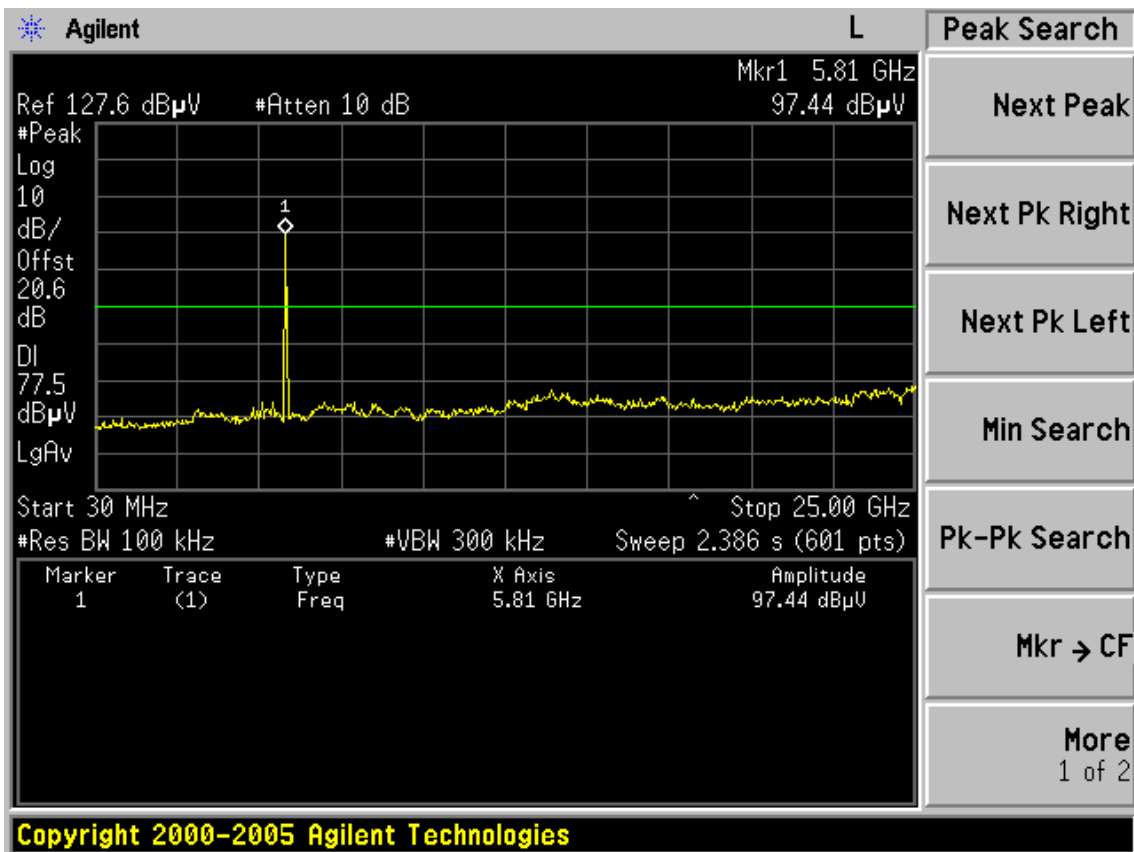


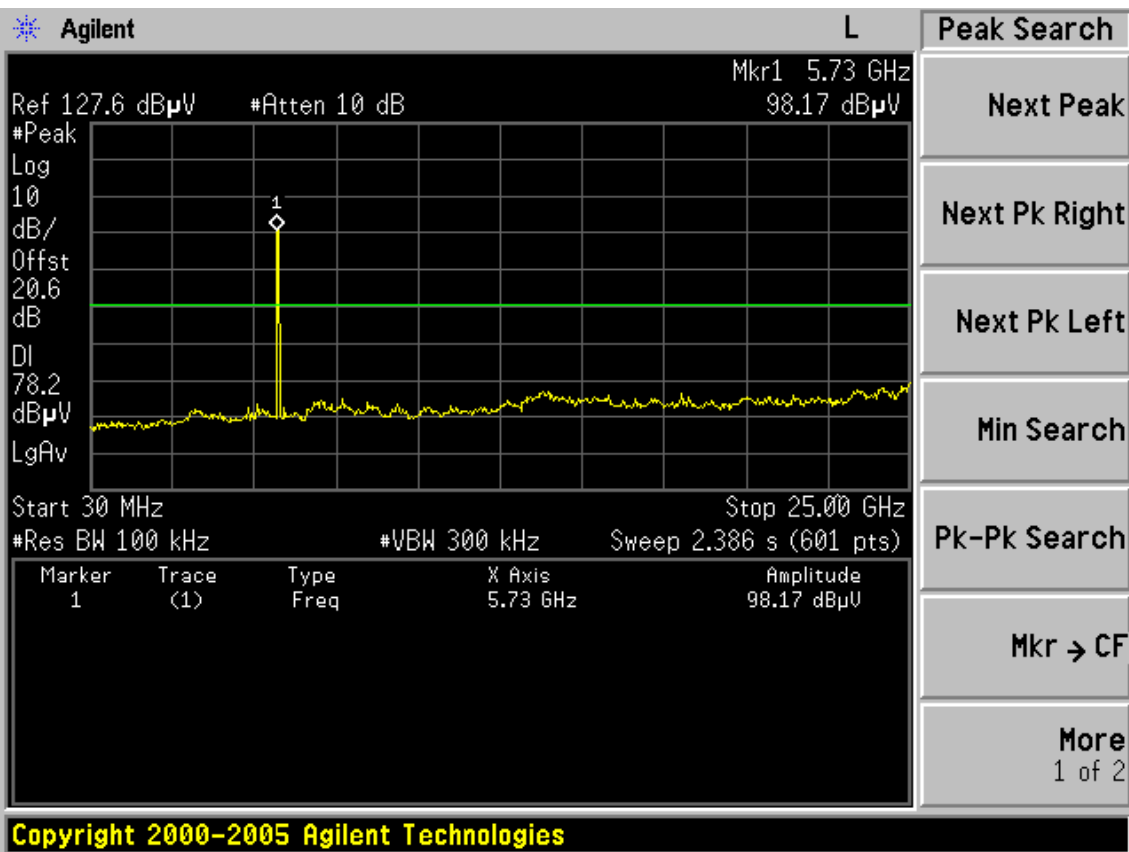
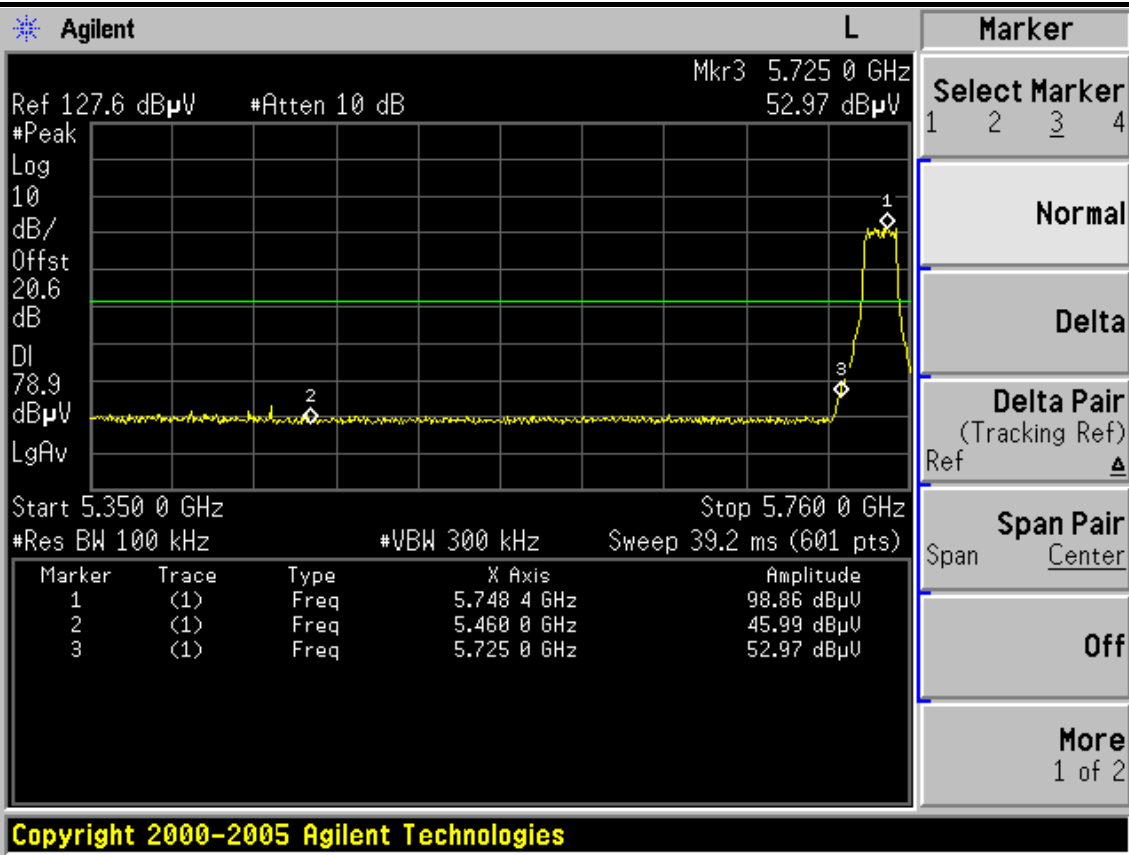


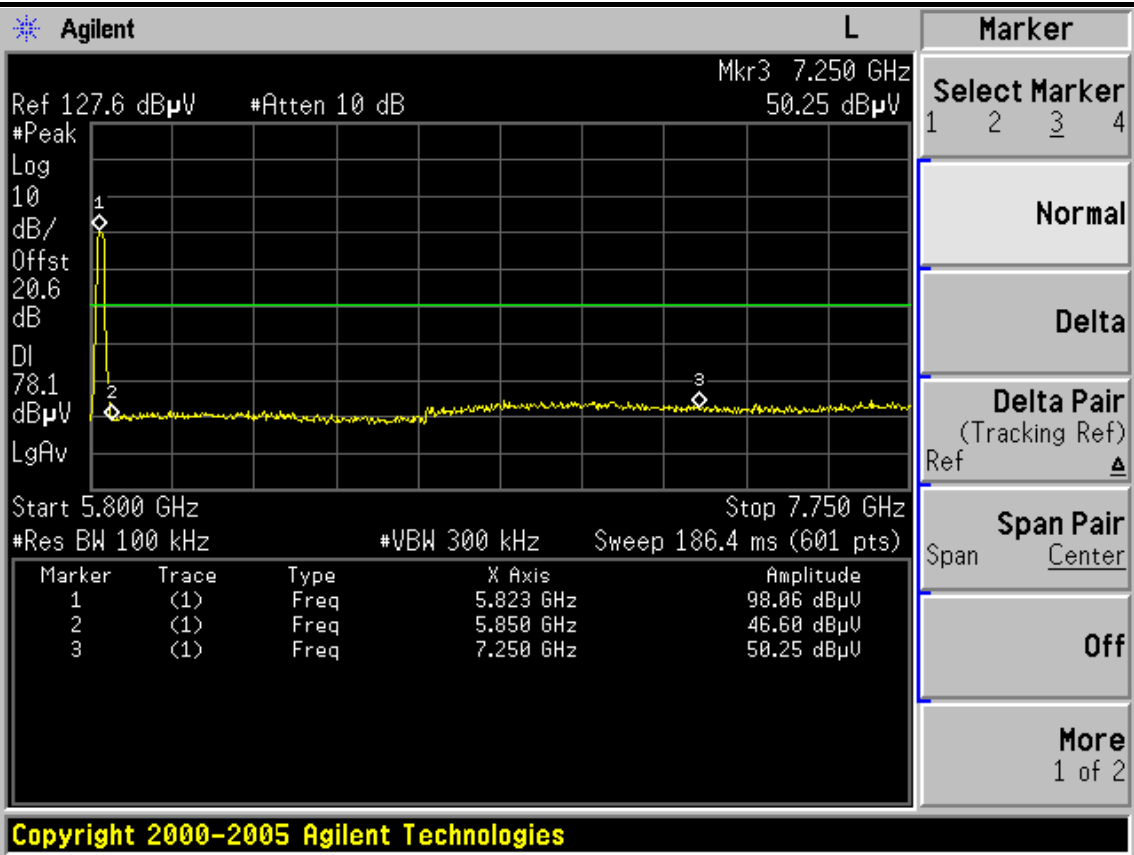




Test Mode: IEEE 802.11a







## 6. BAND EDGE COMPLIANCE TEST

### 6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,10	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

### 6.2. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz and 5725MHz to 5850MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

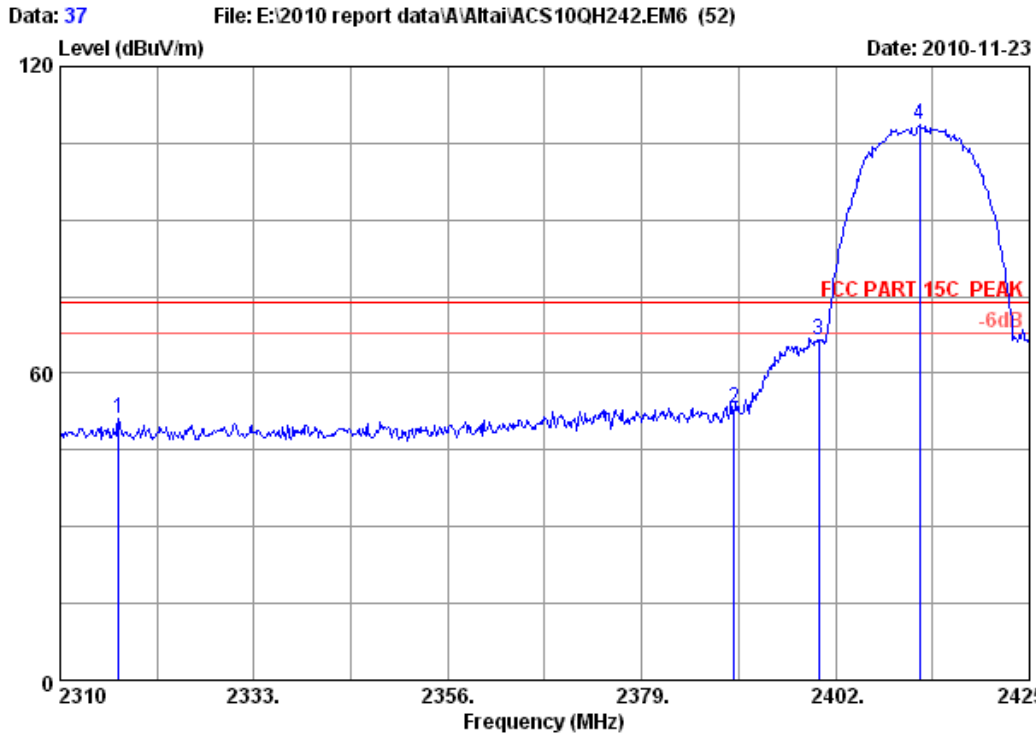
### 6.3. Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
  - (a) PEAK: RBW=1MHz;VBW=3MHz / Sweep=AUTO
  - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

### 6.4. Test Results

Pass (The testing data was attached in the next pages.)

All the emissions outside operation frequency band were comply with 15.209 limit

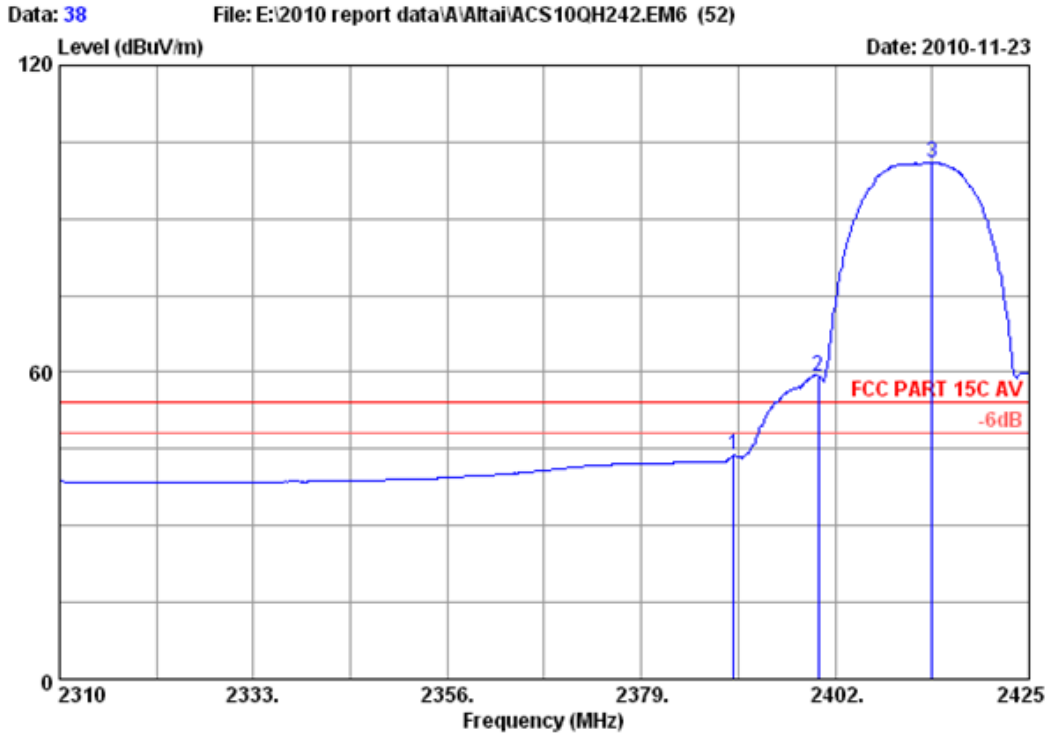


Site no. : RF Chamber Data no. : 37  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2316.900	29.39	7.24	36.63	51.20	51.20	74.00	22.80	Peak
2	2390.000	29.44	7.39	36.62	52.86	53.07	74.00	20.93	Peak
3	2400.000	29.44	7.43	36.62	66.12	66.37	74.00	7.63	Peak
4	2412.005	29.45	7.43	36.62	108.25	108.51	74.00	-34.51	Peak

Remarks:

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



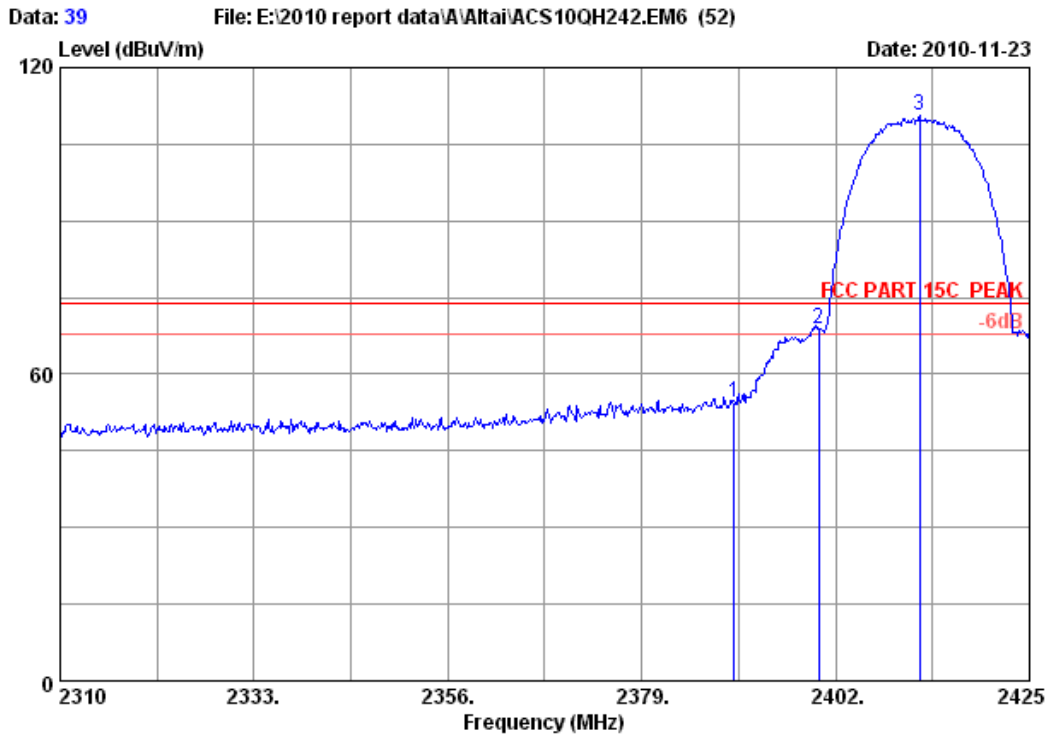
Site no. : RF Chamber Data no. : 38  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	43.48	43.69	54.00	10.31	Average
2	2400.000	29.44	7.43	36.62	59.04	59.29	54.00	-5.29	Average
3	2413.500	29.45	7.43	36.62	100.73	100.99	54.00	-46.99	Average

Remarks:

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



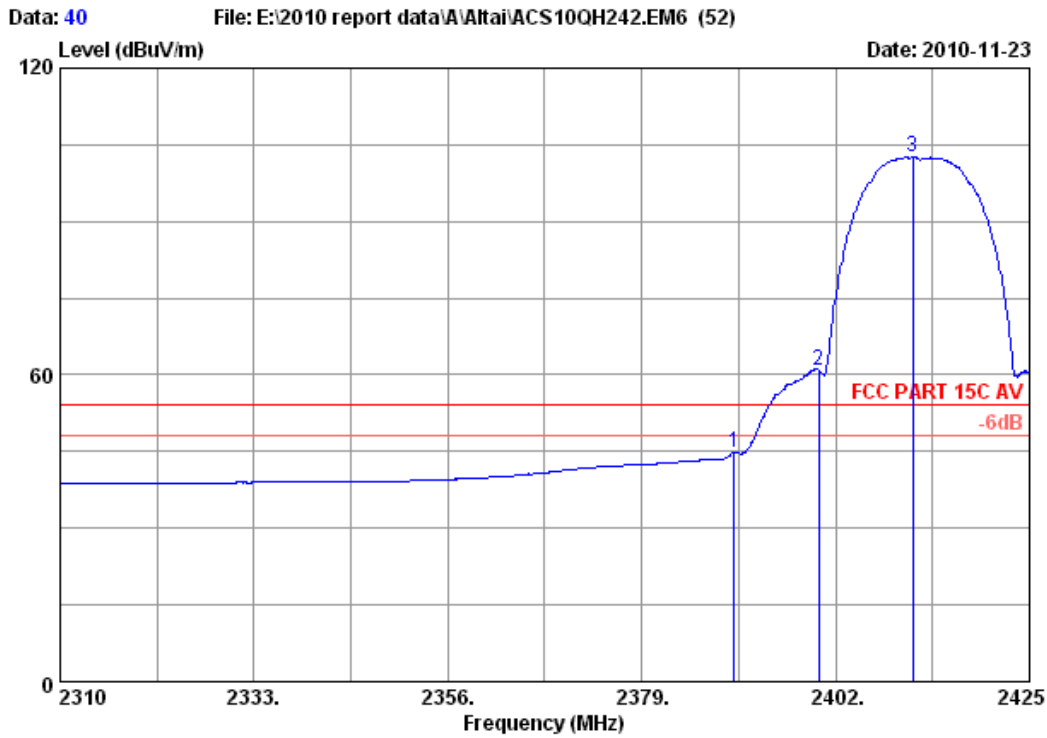


Site no. : RF Chamber Data no. : 39  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	54.35	54.56	74.00	19.44	Peak
2	2400.000	29.44	7.43	36.62	68.76	69.01	74.00	4.99	Peak
3	2412.005	29.45	7.43	36.62	110.22	110.48	74.00	-36.48	Peak

Remarks:

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

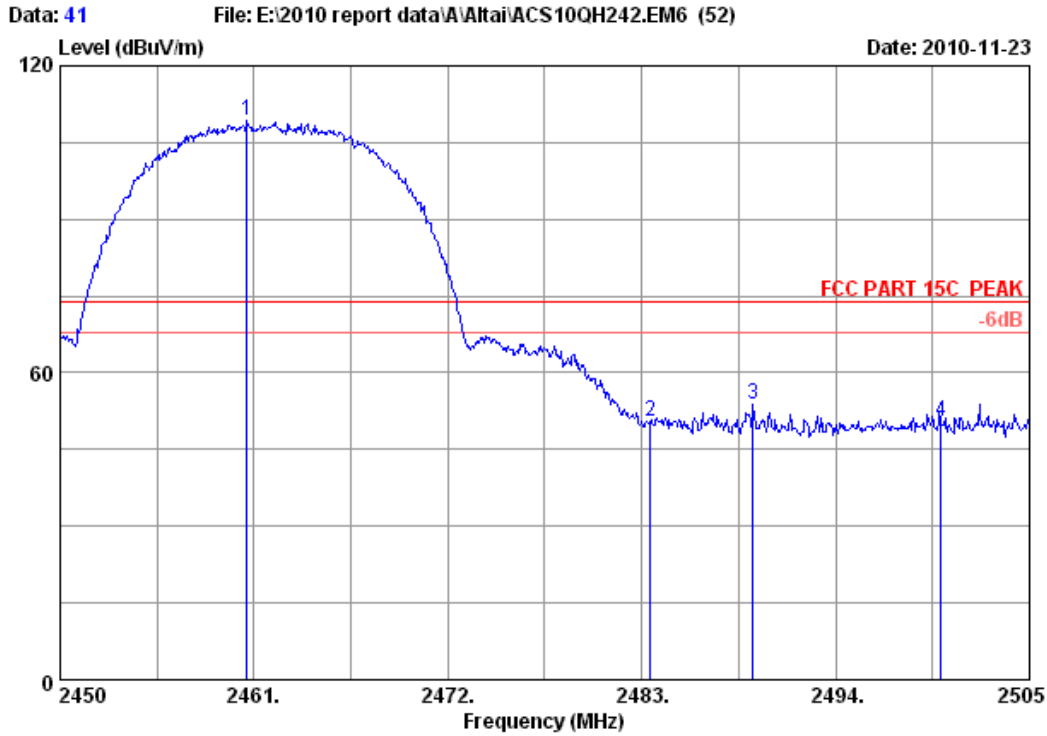


Site no. : RF Chamber Data no. : 40  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	44.68	44.89	54.00	9.11	Average
2	2400.000	29.44	7.43	36.62	60.65	60.90	54.00	-6.90	Average
3	2411.200	29.45	7.43	36.62	102.30	102.56	54.00	-48.56	Average

Remarks:

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

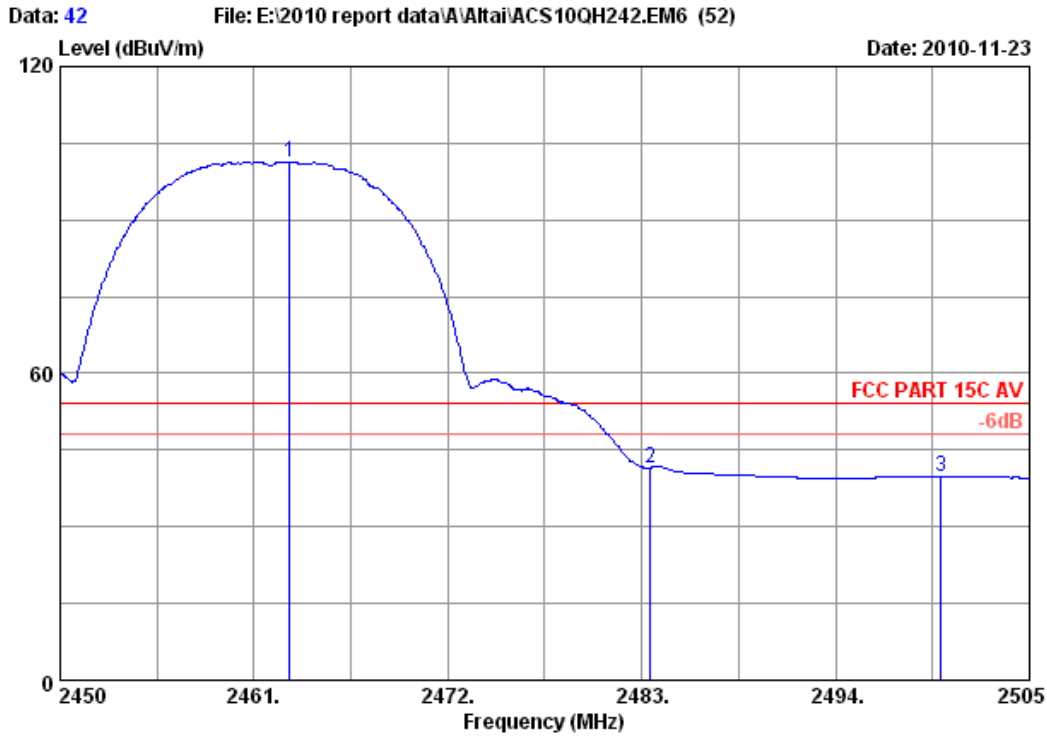


Site no. : RF Chamber Data no. : 41  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.615	29.48	7.54	36.61	108.95	109.36	74.00	-35.36	Peak
2	2483.500	29.49	7.58	36.60	50.10	50.57	74.00	23.43	Peak
3	2489.325	29.50	7.58	36.60	53.27	53.75	74.00	20.25	Peak
4	2500.000	29.50	7.62	36.60	50.11	50.63	74.00	23.37	Peak

Remarks:

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

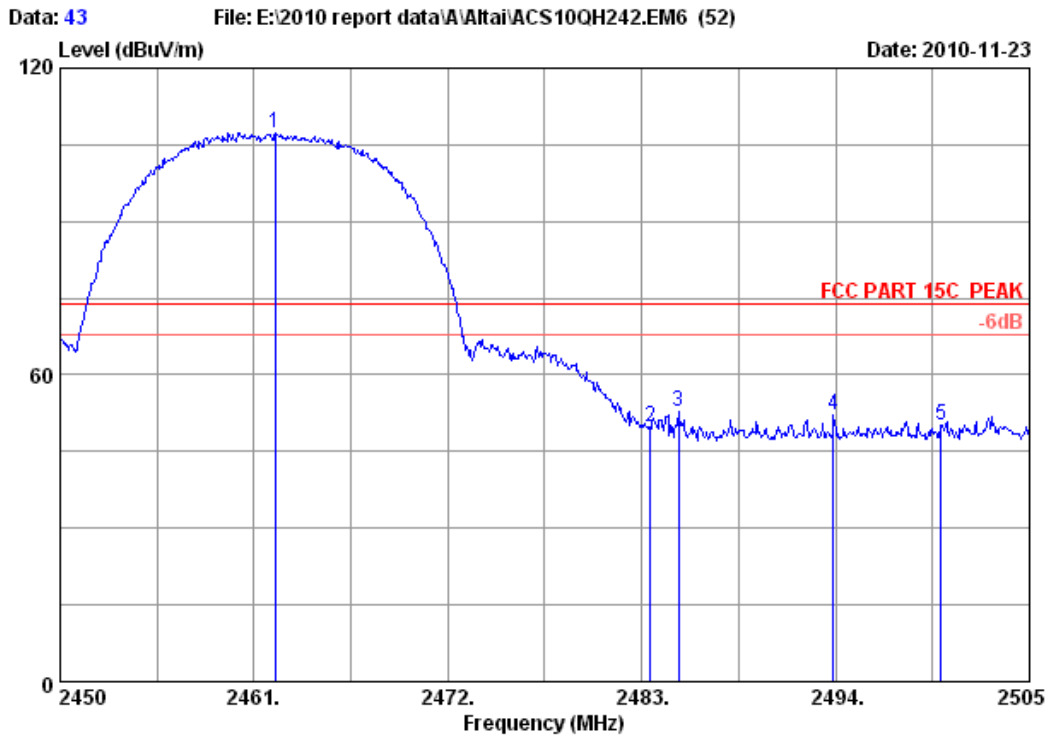


Site no. : RF Chamber Data no. : 42  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.035	29.48	7.54	36.61	101.01	101.42	54.00	-47.42	Average
2	2483.500	29.49	7.58	36.60	41.11	41.58	54.00	12.42	Average
3	2500.000	29.50	7.62	36.60	39.32	39.84	54.00	14.16	Average

Remarks:

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

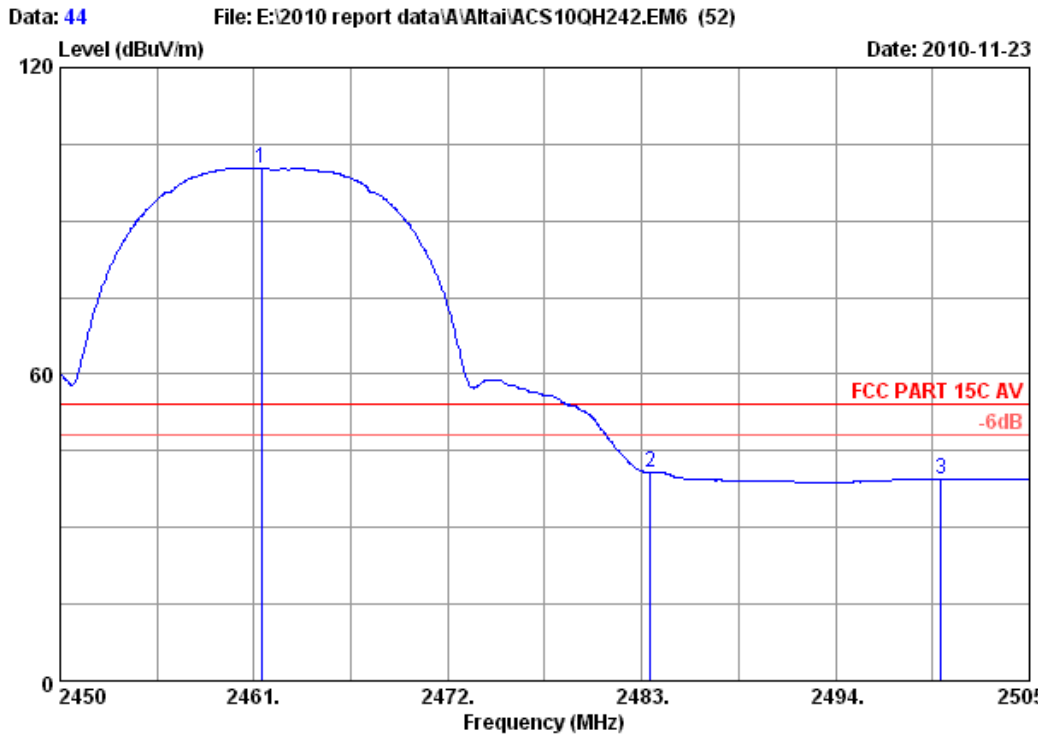


Site no. : RF Chamber Data no. : 43  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

	Ant.	Cable	Amp.	Emission					
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2462.210	29.48	7.54	36.61	106.87	107.28	74.00	-33.28	Peak
2	2483.500	29.49	7.58	36.60	49.25	49.72	74.00	24.28	Peak
3	2485.090	29.49	7.58	36.60	52.19	52.66	74.00	21.34	Peak
4	2493.890	29.50	7.58	36.60	51.65	52.13	74.00	21.87	Peak
5	2500.000	29.50	7.62	36.60	49.47	49.99	74.00	24.01	Peak

Remarks:

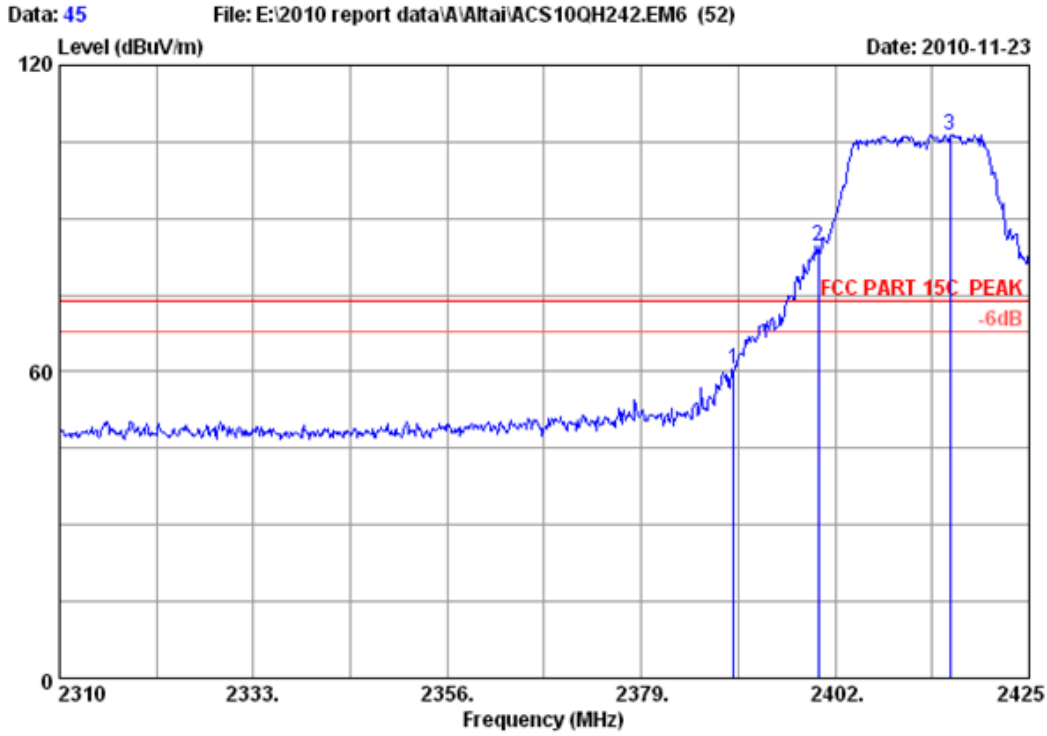
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : RF Chamber Data no. : 44  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11b CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.440	29.48	7.54	36.61	99.97	100.38	54.00	-46.38	Average
2	2483.500	29.49	7.58	36.60	40.34	40.81	54.00	13.19	Average
3	2500.000	29.50	7.62	36.60	38.91	39.43	54.00	14.57	Average

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

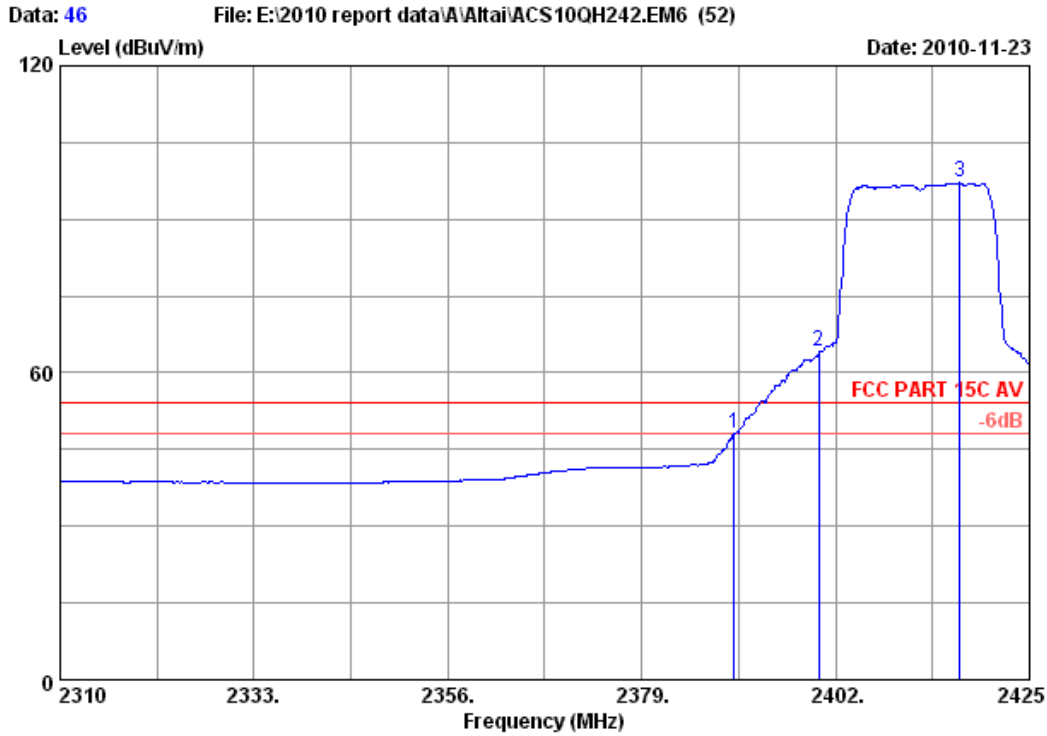


Site no. : RF Chamber Data no. : 45  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	60.45	60.66	74.00	13.34	Peak
2	2400.000	29.44	7.43	36.62	84.36	84.61	74.00	-10.61	Peak
3	2415.570	29.45	7.43	36.61	106.15	106.42	74.00	-32.42	Peak

Remarks:

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



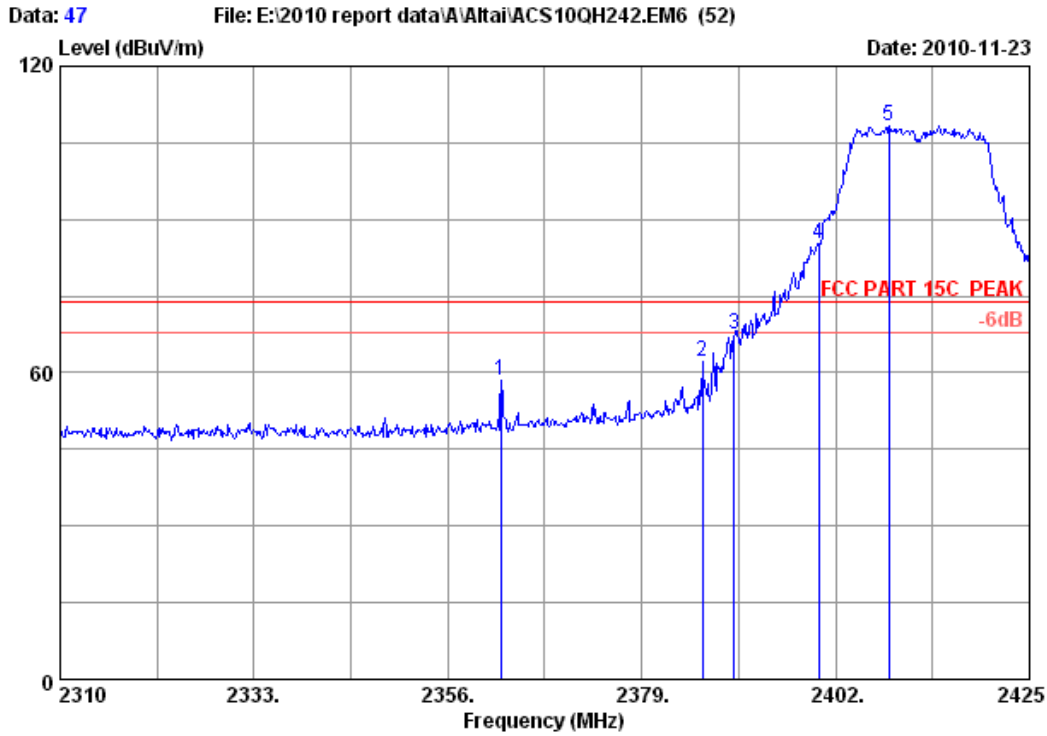
Site no. : RF Chamber Data no. : 46  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	47.99	48.20	54.00	5.80	Average
2	2400.000	29.44	7.43	36.62	63.80	64.05	54.00	-10.05	Average
3	2416.720	29.45	7.43	36.61	96.85	97.12	54.00	-43.12	Average

Remarks:

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



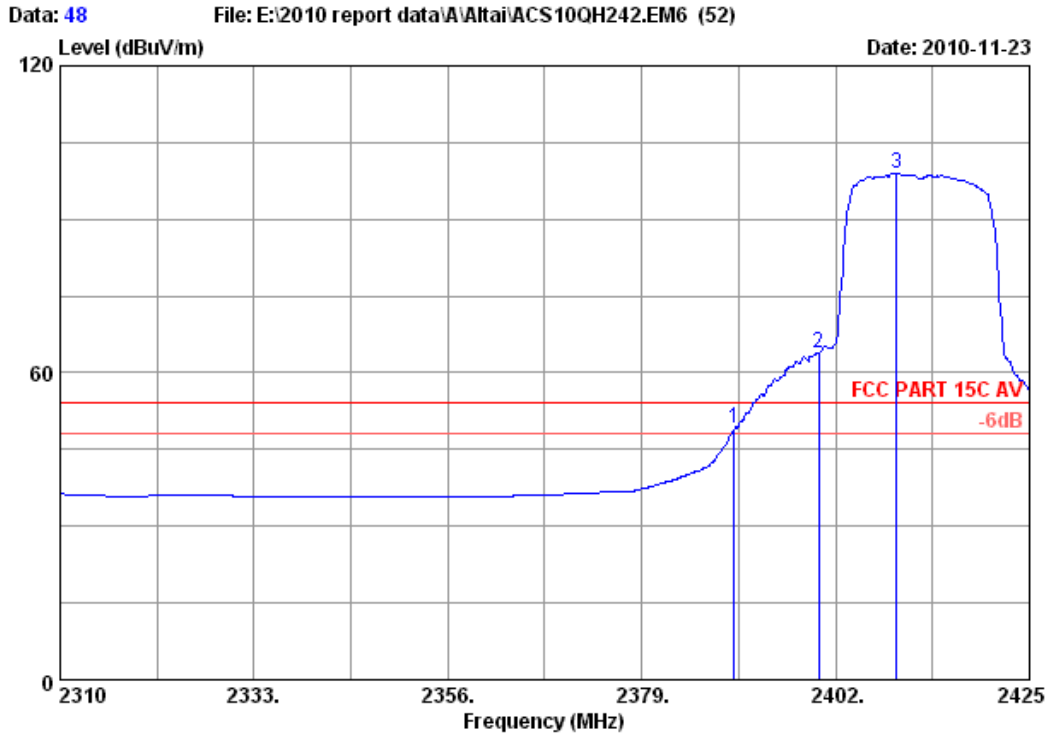


Site no. : RF Chamber Data no. : 47  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23\*C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	2362.325	29.42	7.35	36.63	58.30	58.44	74.00	15.56	Peak
2	2386.245	29.44	7.39	36.62	61.92	62.13	74.00	11.87	Peak
3	2390.000	29.44	7.39	36.62	67.44	67.65	74.00	6.35	Peak
4	2400.000	29.44	7.43	36.62	85.00	85.25	74.00	-11.25	Peak
5	2408.325	29.45	7.43	36.62	108.09	108.35	74.00	-34.35	Peak

Remarks:

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

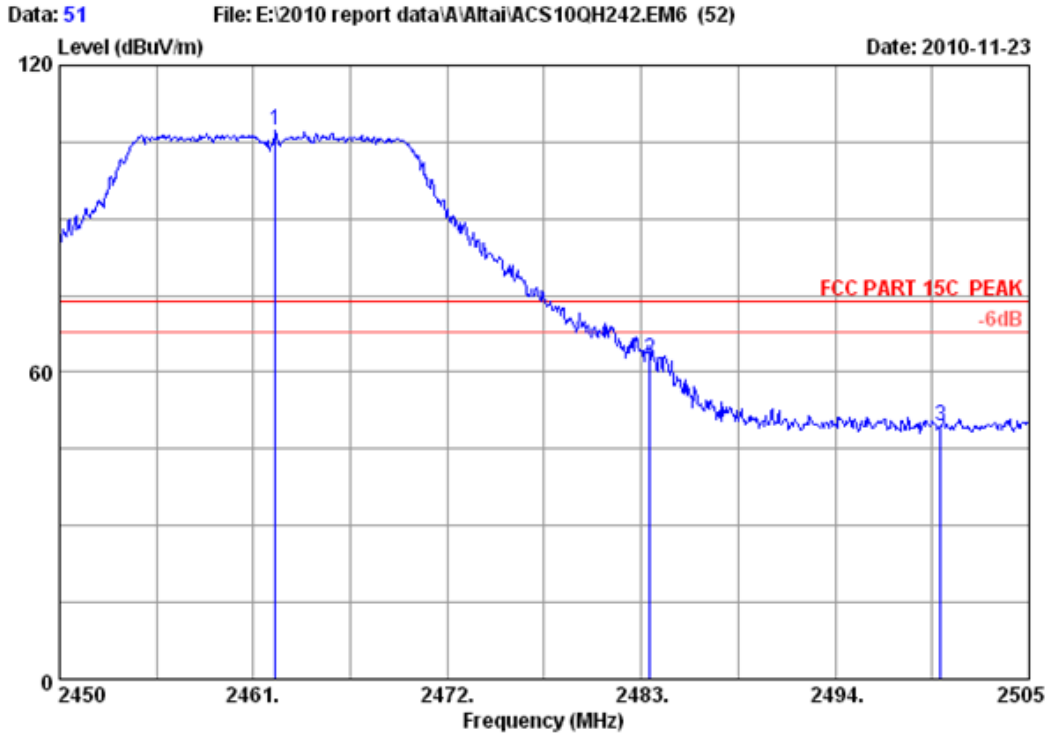


Site no. : RF Chamber Data no. : 48  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH1 2412MHz Tx  
 WA8011E

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	48.81	49.02	54.00	4.98	Average
2	2400.000	29.44	7.43	36.62	63.59	63.84	54.00	-9.84	Average
3	2409.245	29.45	7.43	36.62	98.75	99.01	54.00	-45.01	Average

Remarks:

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

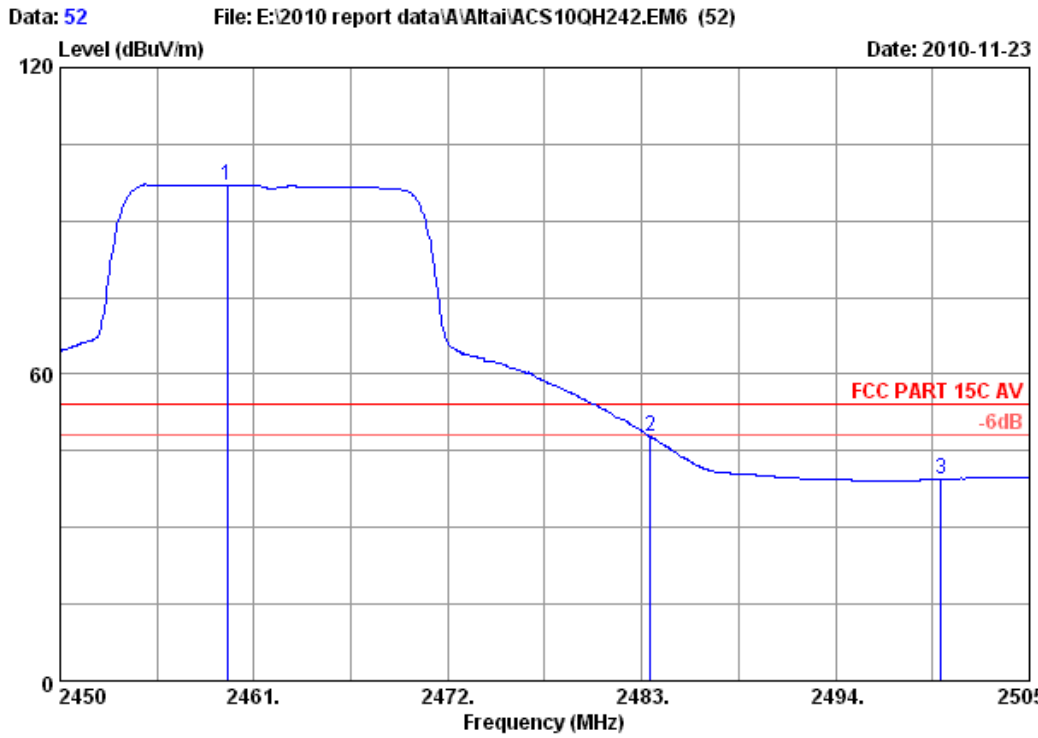


Site no. : RF Chamber Data no. : 51  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.265	29.48	7.54	36.61	106.88	107.29	74.00	-33.29	Peak
2	2483.500	29.49	7.58	36.60	62.06	62.53	74.00	11.47	Peak
3	2500.000	29.50	7.62	36.60	48.94	49.46	74.00	24.54	Peak

Remarks:

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

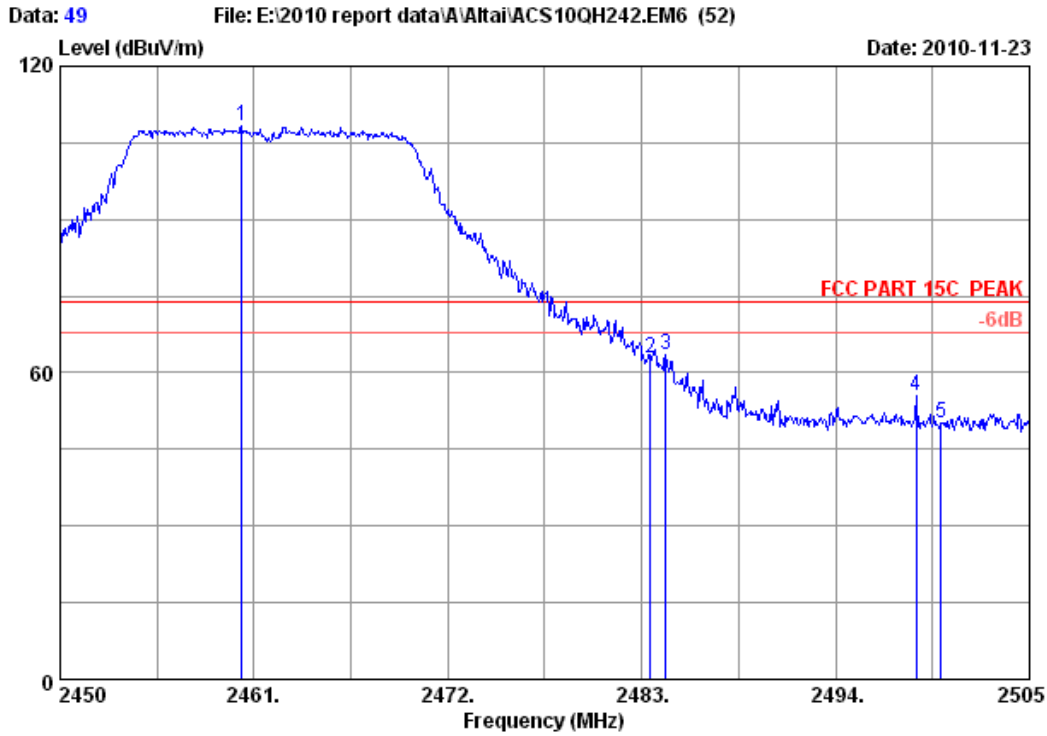


Site no. : RF Chamber Data no. : 52  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-E1 Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.460	29.48	7.54	36.61	96.64	97.05	54.00	-43.05	Average
2	2483.500	29.49	7.58	36.60	47.20	47.67	54.00	6.33	Average
3	2500.000	29.50	7.62	36.60	38.95	39.47	54.00	14.53	Average

Remarks:

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

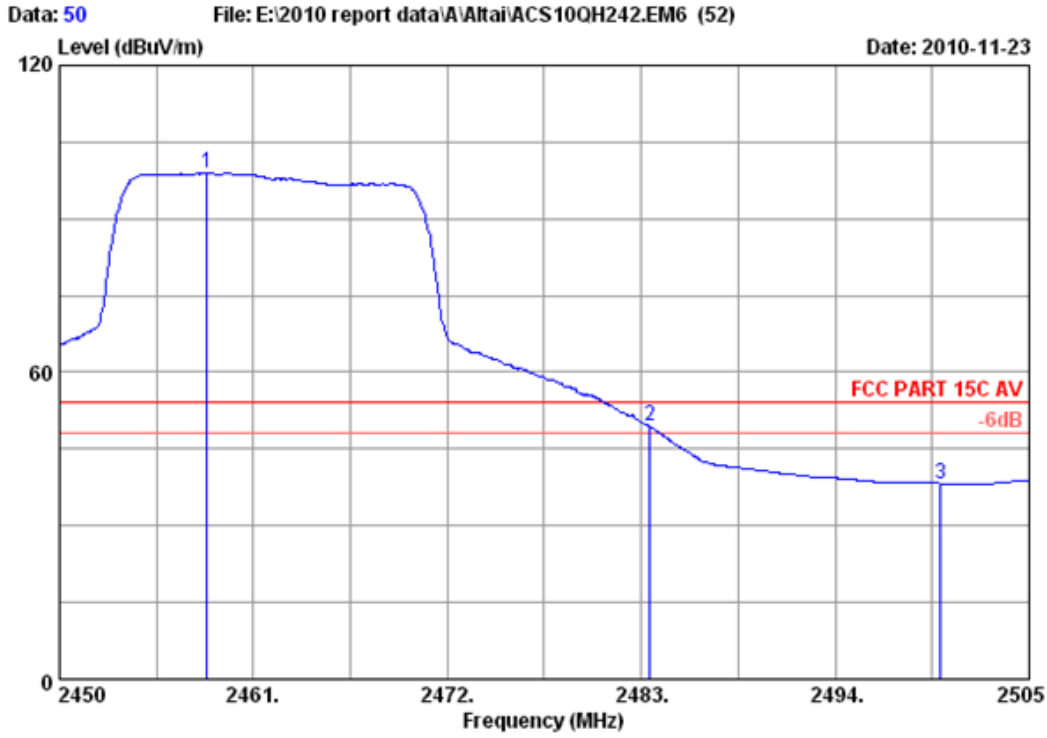


Site no. : RF Chamber Data no. : 49  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	2460.285	29.48	7.54	36.61	107.79	108.20	74.00	-34.20	Peak
2	2483.500	29.49	7.58	36.60	62.53	63.00	74.00	11.00	Peak
3	2484.375	29.49	7.58	36.60	63.16	63.63	74.00	10.37	Peak
4	2498.565	29.50	7.58	36.60	54.96	55.44	74.00	18.56	Peak
5	2500.000	29.50	7.62	36.60	49.50	50.02	74.00	23.98	Peak

Remarks:

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



Site no. : RF Chamber Data no. : 50  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 23°C/54% Engineer : Sunny-lu  
 EUT : A8-Ei Super WiFi Base Station  
 Power : DC 48V From Adapter input AC 120V/60Hz  
 Test mode : IEEE802.11g CH11 2462MHz Tx  
 WA8011E

	Ant. Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2458.360	29.48	7.50	36.61	98.52	98.89	54.00	-44.89	Average
2	2483.500	29.49	7.58	36.60	48.84	49.31	54.00	4.69	Average
3	2500.000	29.50	7.62	36.60	37.73	38.25	54.00	15.75	Average

Remarks:

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

## 7. 6dB Bandwidth Test

### 7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

### 7.2. Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

### 7.3. Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

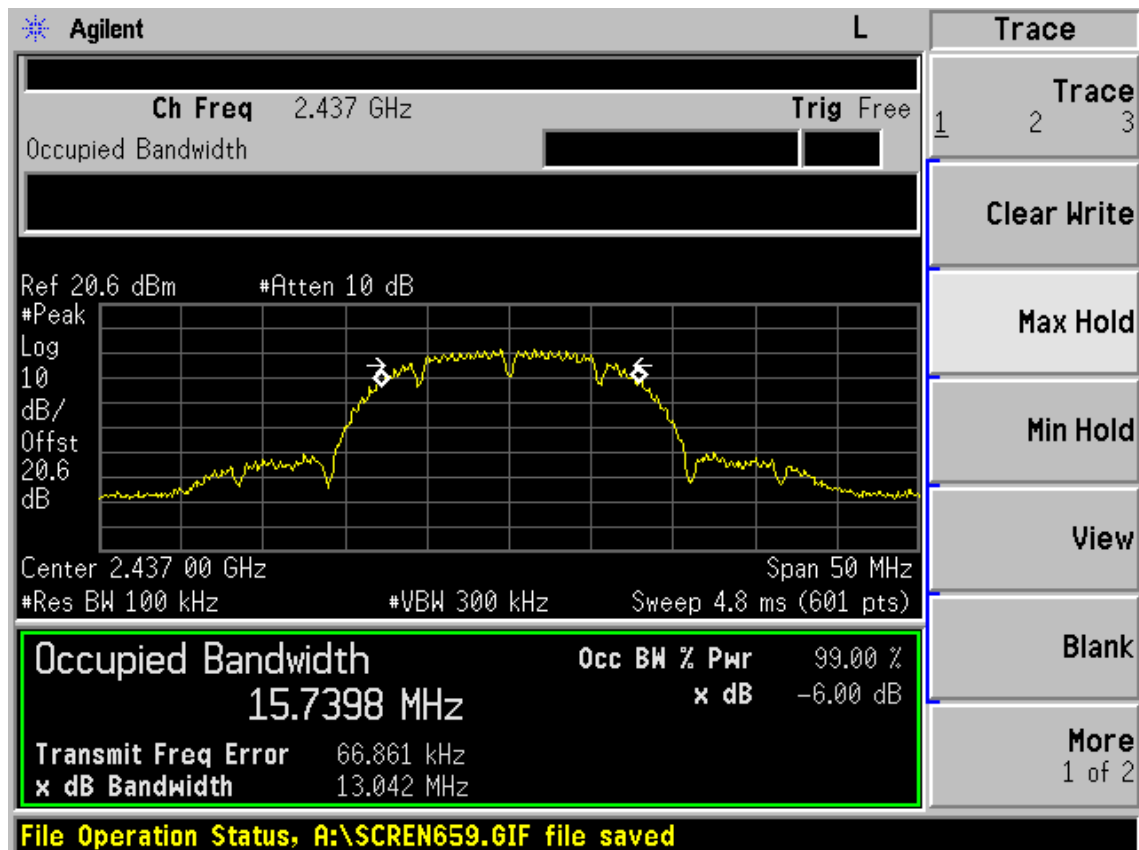
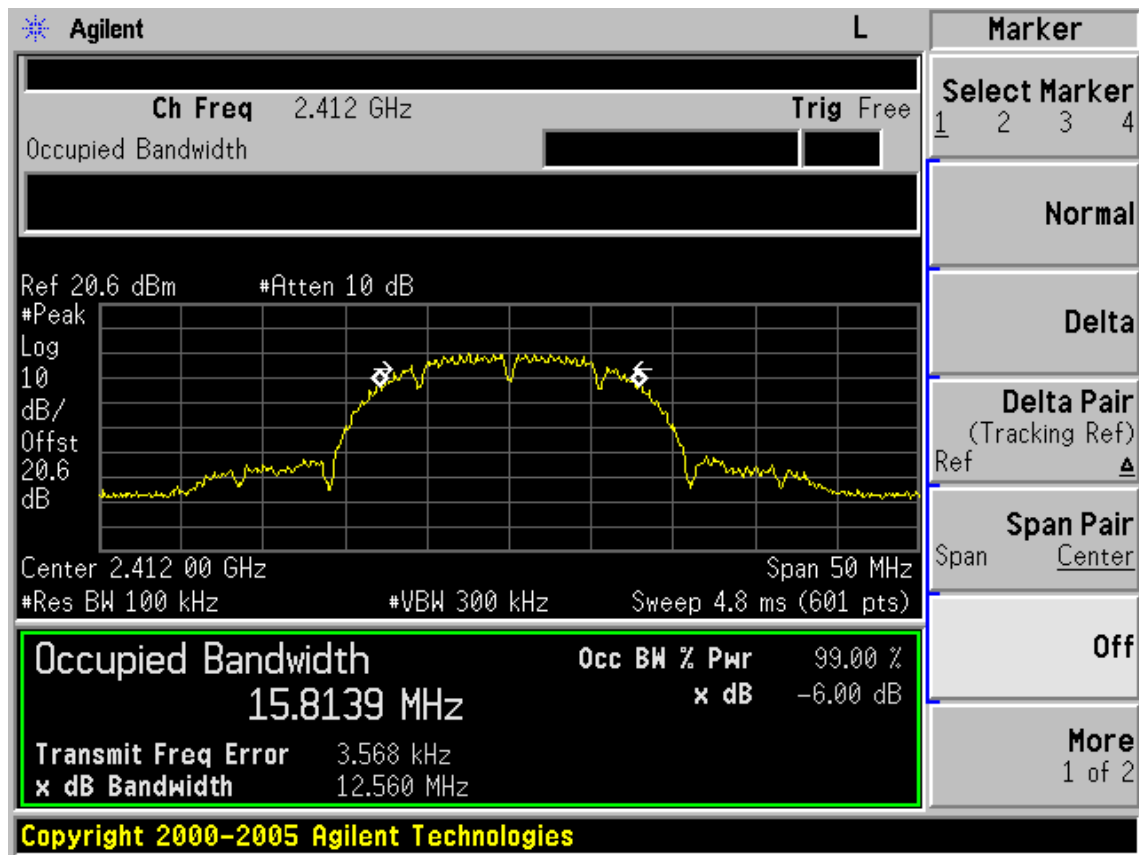
## 7.4.Test Results

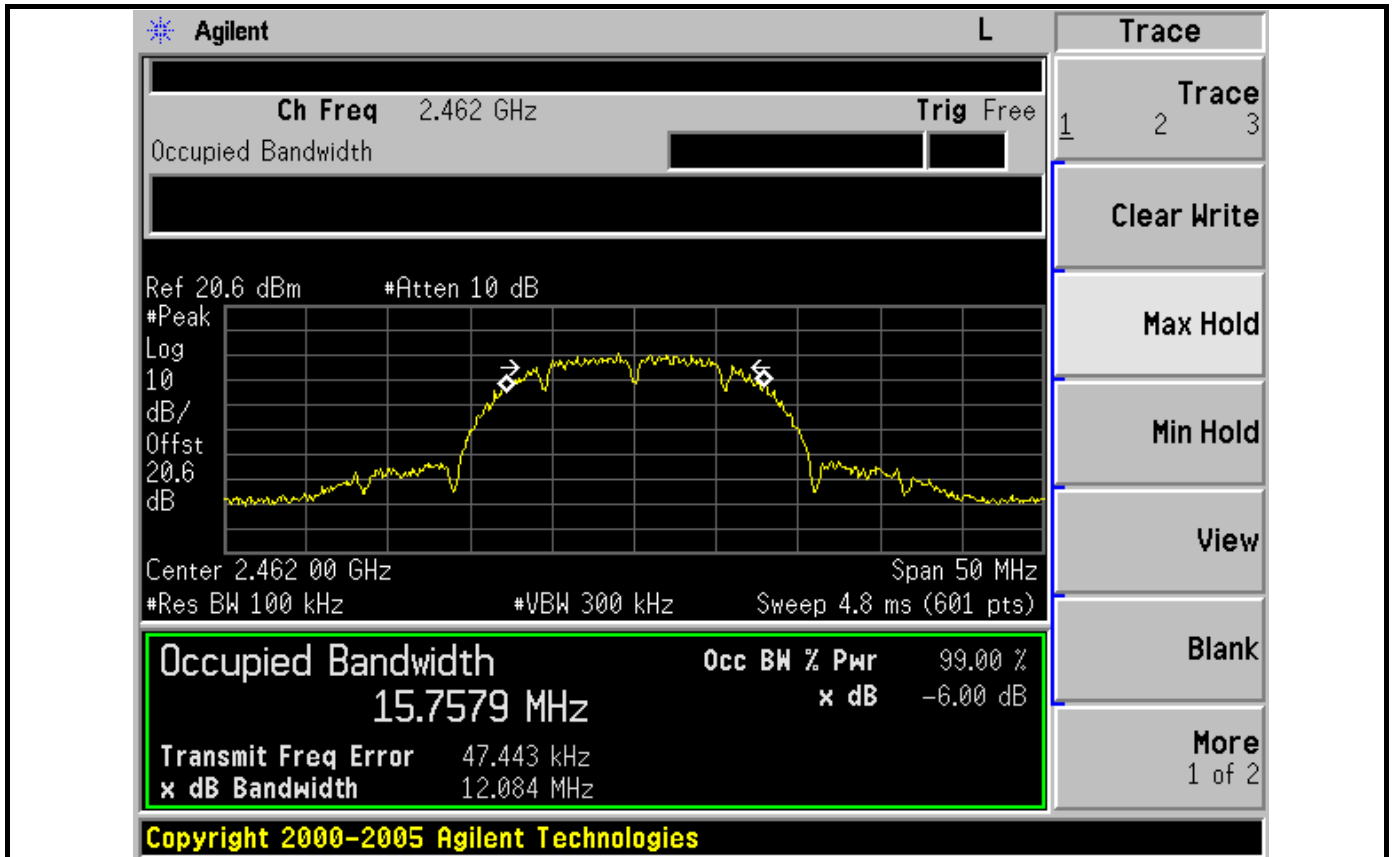
EUT:A8-Ei Super WiFi Base Station		
M/N:WA8011E		
Test date:2010-12-24	Pressure: 100.6 kpa	Humidity: 56 %
Tested by:Sunny-lu	Test site: RF Site	Temperature : 25 °C

Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 2.4GHz :19dBi 5GHz:18dBi
Test Mode	CH	6dB bandwidth ( MHz )	Limit (KHz)
11b	CH1	12.560	>500
	CH6	13.042	>500
	CH11	12.084	>500
11g	CH1	16.520	>500
	CH6	16.567	>500
	CH11	16.590	>500
11a	CH149	16.460	>500
	CH157	16.490	>500
	CH165	16.535	>500
Conclusion : PASS			

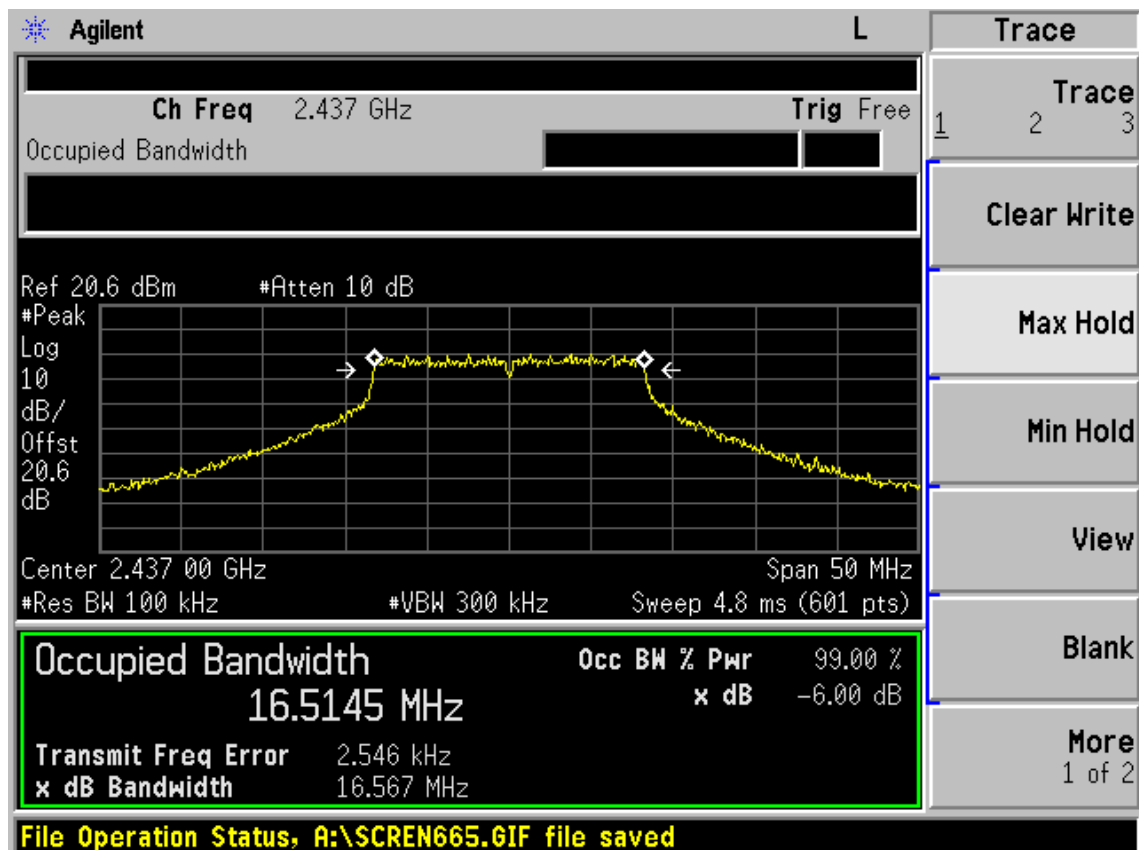
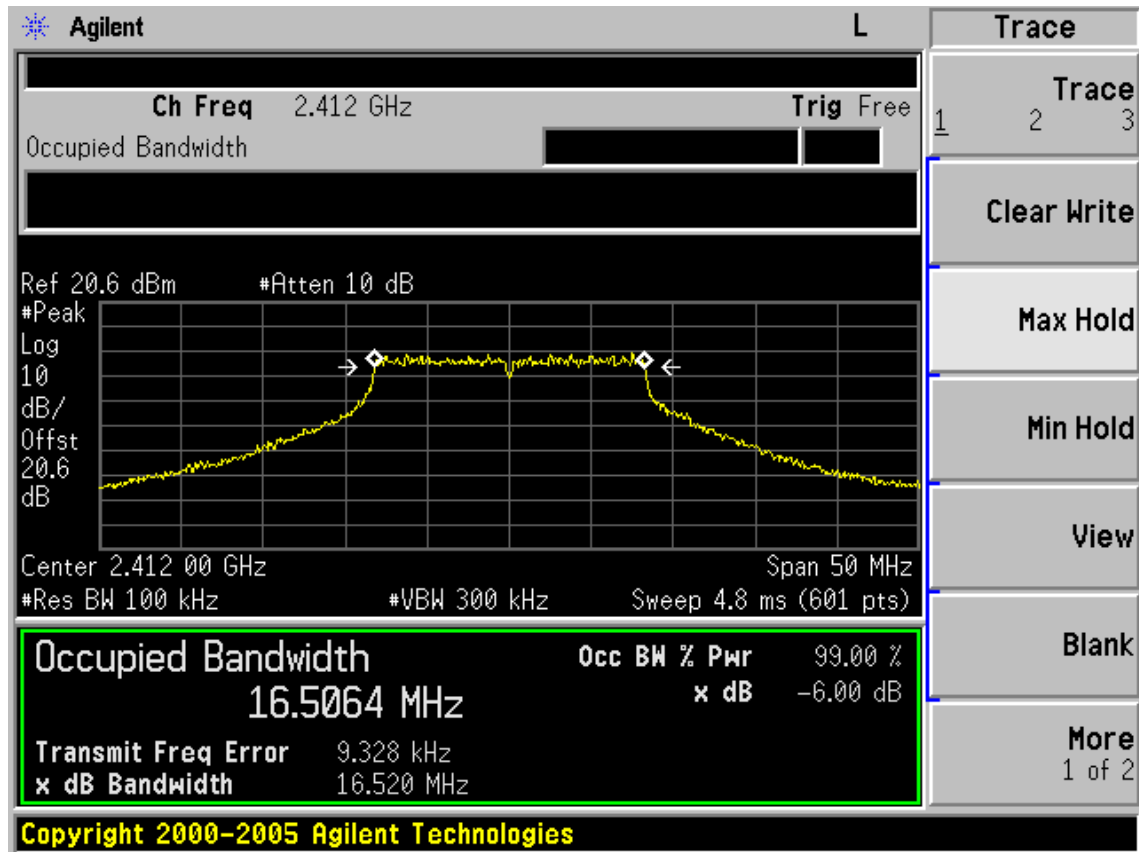


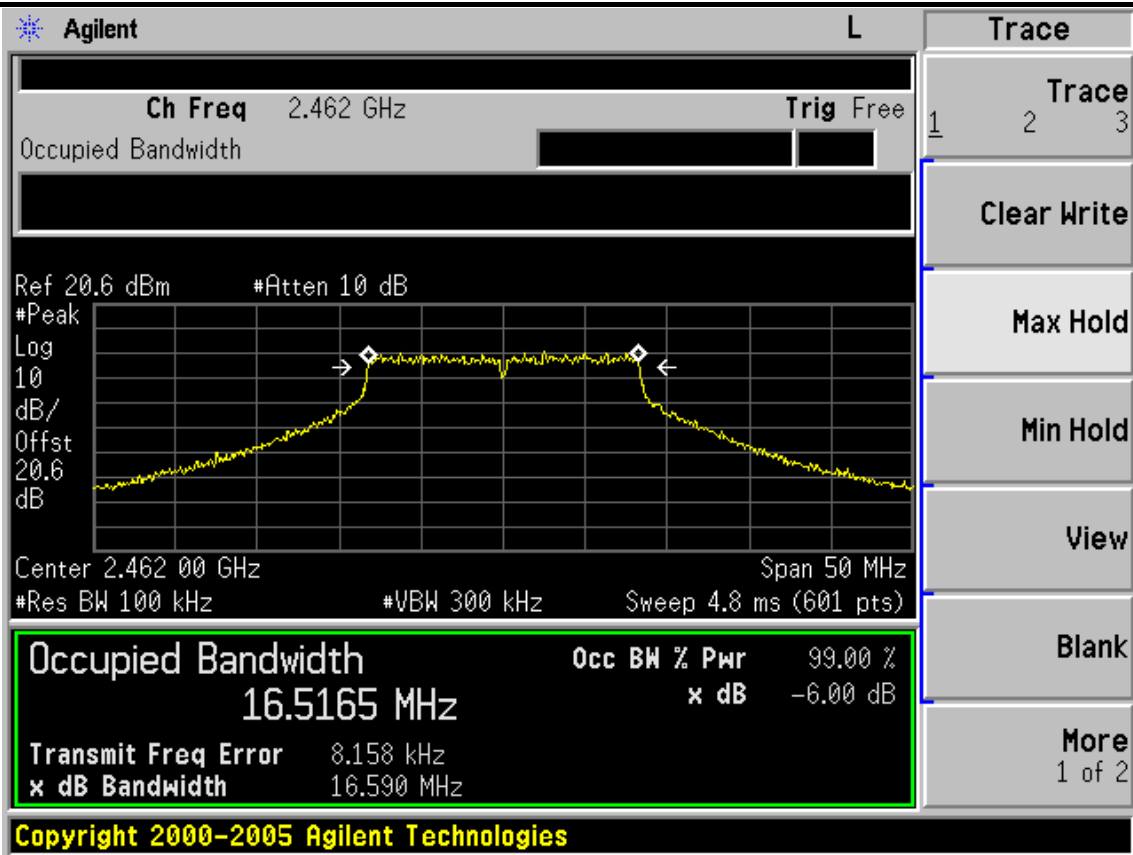
Test Mode: IEEE 802.11b:



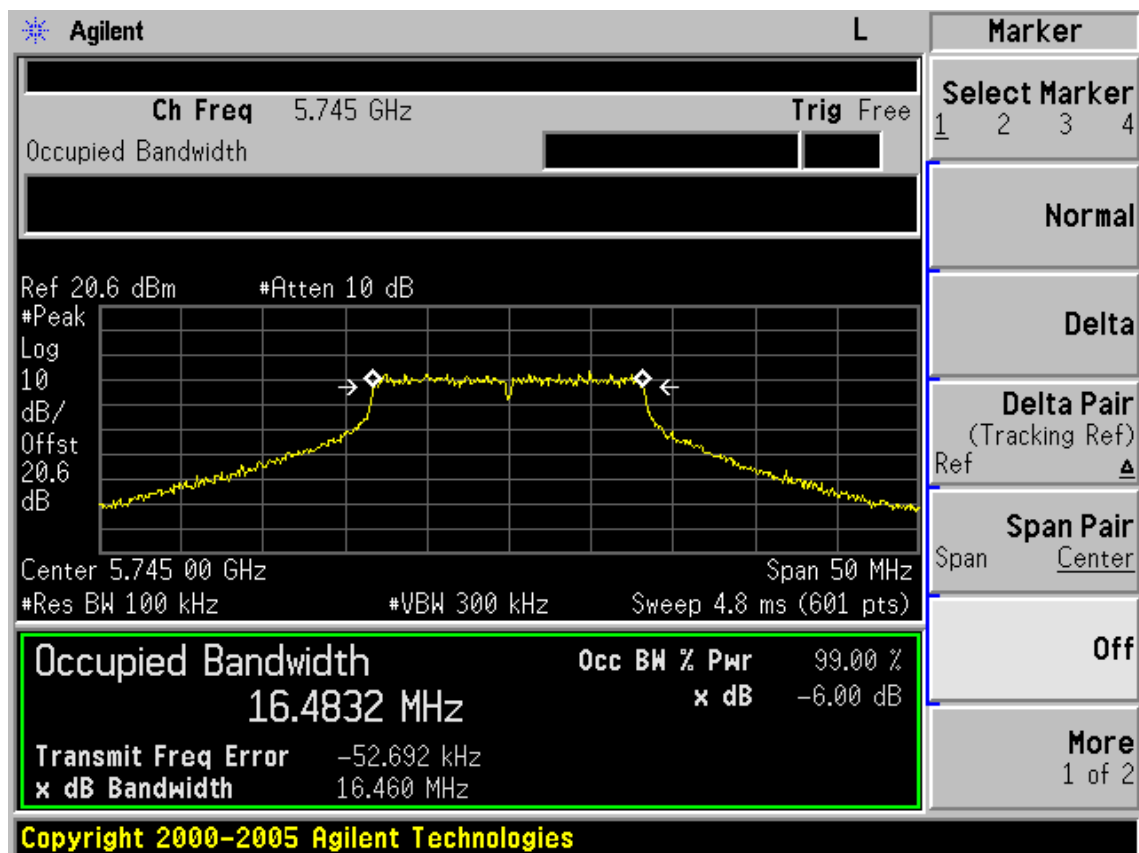


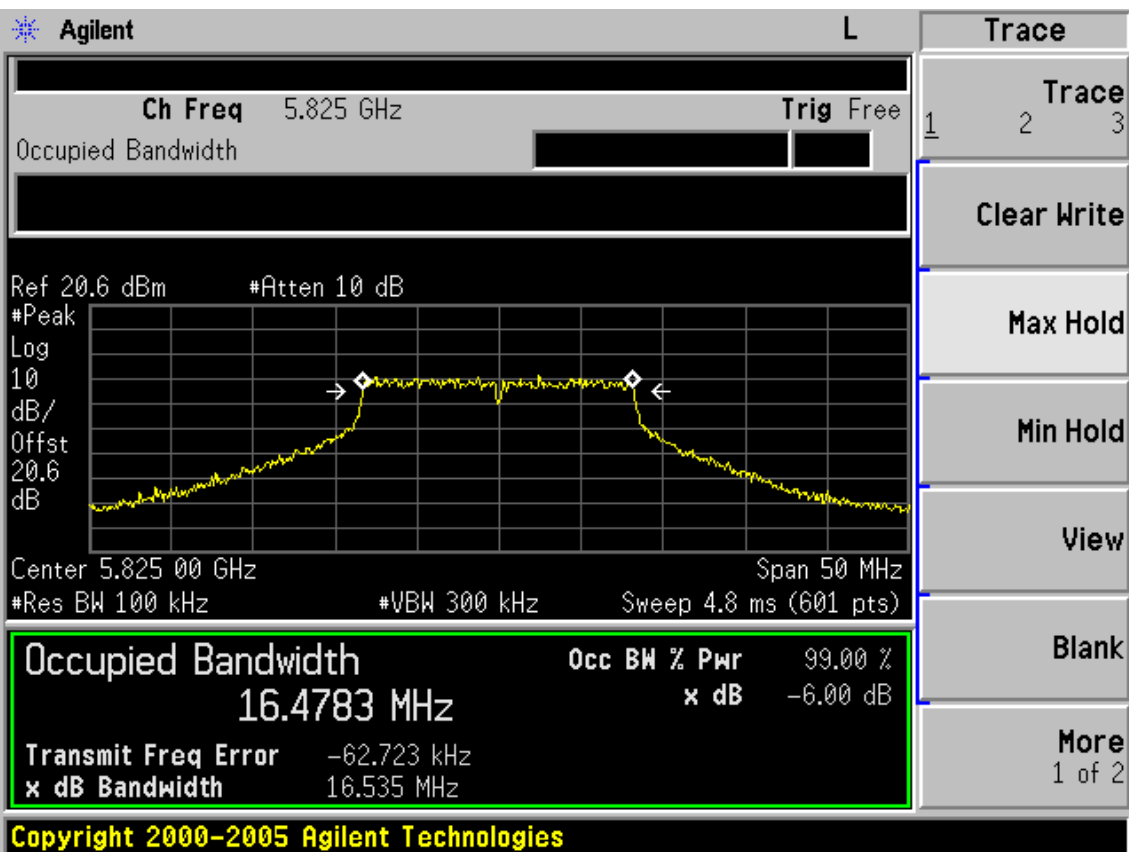
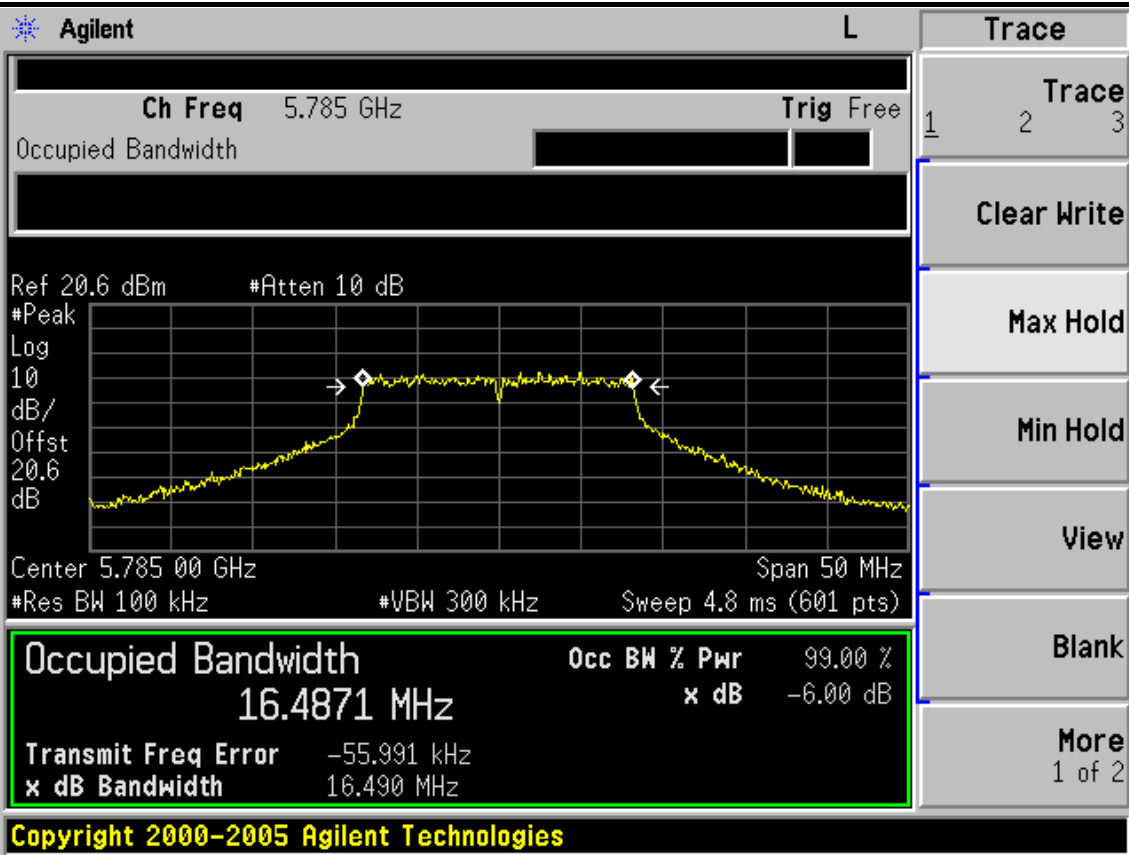
Test Mode: IEEE 802.11g:





Test Mode: IEEE 802.11a:





## 8. OUTPUT POWER TEST

### 8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Power meter	Anritsu	ML2487A	6K00002472	May.08,10	1 Year
2.	Power sensor	Anritsu	MA2491A	0033005	May.08,10	1 Year
3.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
5.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year

### 8.2. Limit (FCC Part 15C 15.247 b (3) and c (2)(i)(ii))

For systems using digital modulation in the 2400—2483.5MHz and 5725MHz-5850MHz, The Peak out put Power shall not exceed 1W(30dBm)

If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For Transmitter operation in the 2400-2483.5Mhz employs an antenna system that emits multiple directional beams,the Total conducted output power shall be reduced by 1dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6dB,So the conducted output power limit for this device in the2400-2483.5MHz should be calculate as below:

$$\text{limit}=30\text{dBm}-(19-6)/3=25.67\text{dBm}$$

### 8.3. Test Procedure

- 1, Connected the EUT's antenna port to measure device by 20dB attenuator.
- 2, Use a PK power meter and power sensor with bandwidth of 20MHz and above 6dB bandwidth of signal to measure out each test modes s PK output power.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

## 8.4. Test Results

EUT:A8-Ei Super WiFi Base Station		
M/N:WA8011E		
Test date:2010-12-24	Pressure: 100.6 kpa	Humidity: 56%
Tested by: Sunny-lu	Test site: RF Site	Temperature : 25 °C

Cable loss: 0.6dB		Attenuator loss: 20 dB		Antenna Gain: 2.4GHz :19dBi 5GHz :18dBi	
Antenna	Test Mode	CH	Peak output Power ( dBm )	Limit (dBm)	
#1	11b	CH1	16.15	25.67	
		CH6	16.22	25.67	
		CH11	16.33	25.67	
	11g	CH1	16.36	25.67	
		CH6	16.48	25.67	
		CH11	16.53	25.67	
#2	11b	CH1	16.12	25.67	
		CH6	16.20	25.67	
		CH11	16.32	25.67	
	11g	CH1	16.31	25.67	
		CH6	16.42	25.67	
		CH11	16.50	25.67	
#3	11b	CH1	16.08	25.67	
		CH6	16.18	25.67	
		CH11	16.30	25.67	
	11g	CH1	16.29	25.67	
		CH6	16.38	25.67	
		CH11	16.46	25.67	
#4	11b	CH1	16.10	25.67	
		CH6	16.14	25.67	
		CH11	16.29	25.67	
	11g	CH1	16.35	25.67	
		CH6	16.42	25.67	
		CH11	16.46	25.67	
#5	11b	CH1	16.07	25.67	
		CH6	16.12	25.67	
		CH11	16.23	25.67	
	11g	CH1	16.26	25.67	
		CH6	16.46	25.67	
		CH11	16.40	25.67	

#6	11b	CH1	16.04	25.67
		CH6	16.12	25.67
		CH11	16.30	25.67
	11g	CH1	16.27	25.67
		CH6	16.32	25.67
		CH11	16.42	25.67
#7	11b	CH1	16.07	25.67
		CH6	16.21	25.67
		CH11	16.28	25.67
	11g	CH1	16.34	25.67
		CH6	16.42	25.67
		CH11	16.43	25.67
#8	11b	CH1	16.08	25.67
		CH6	16.13	25.67
		CH11	16.28	25.67
	11g	CH1	16.24	25.67
		CH6	16.38	25.67
		CH11	16.45	25.67
/	11a	CH149	10.80	18
		CH157	10.06	18
		CH165	10.04	18

Conclusion: PASS

Note 1: For 2.4G band, the base station employs an SAS antenna system with four sectors that emits multiple directional beams but does not do emit multiple directional beams simultaneously. Note that only one transmitter can be transmitting at a time and each transmitter is only being applied to one antenna element, so summing the power form the one transmitter across all elements is not necessary, the maximum single beam is also the total output power.

Note 2: For Sectorized system, the directional gain is equal to the gain of each antenna = 19dBi.



## 9. POWER SPECTRAL DENSITY TEST

### 9.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

### 9.2. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

### 9.3. Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.
- 2, Follow the test procedure as described in ANSI C.10: 2009 Clause 6.11.2.3 to measure out each test modes power density with 3KHz.

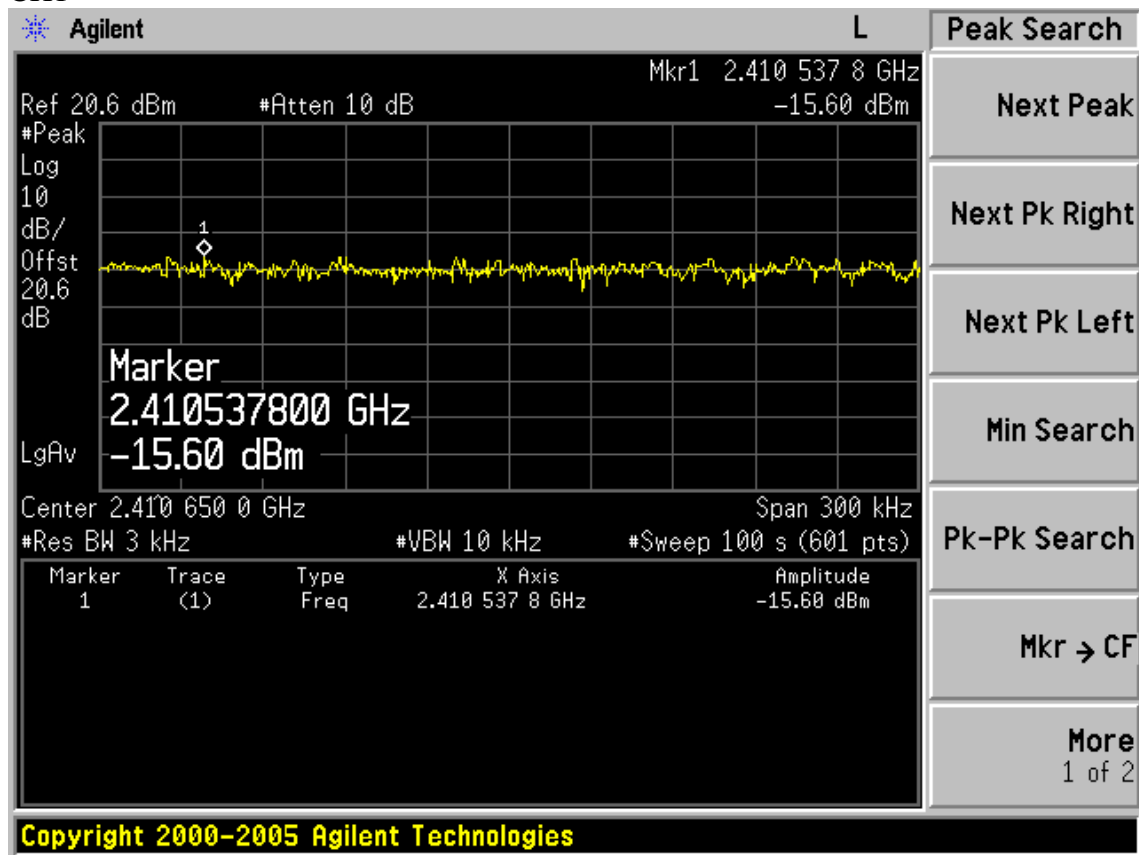
Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

## 9.4.Test Results

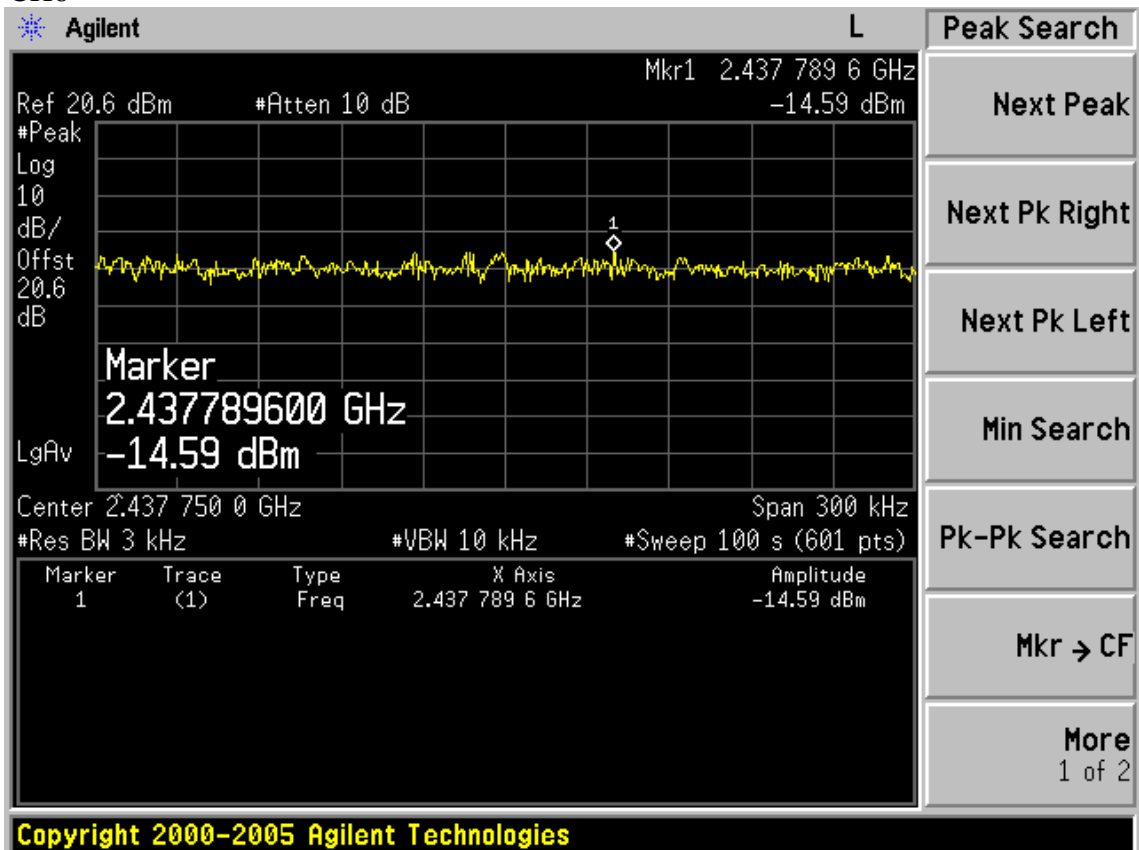
EUT:A8-Ei Super WiFi Base Station		
M/N:WA8011E		
Test date:2010-12-24	Pressure: 100.6 kpa	Humidity: 56 %
Tested by: Sunny-lu	Test site: RF Site	Temperature : 25°C

Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 2.4GHz 19dBi 5GHz 18 dBi
Test Mode	CH	Power density ( dBm/3KHz )	Limit (dBm/3KHz)
11b	CH1	-15.60	8
	CH6	-14.59	8
	CH11	-14.10	8
11g	CH1	-16.20	8
	CH6	-12.21	8
	CH11	-11.74	8
11a	CH149	-21.91	8
	CH157	-20.76	8
	CH165	-20.63	8
Conclusion : PASS			

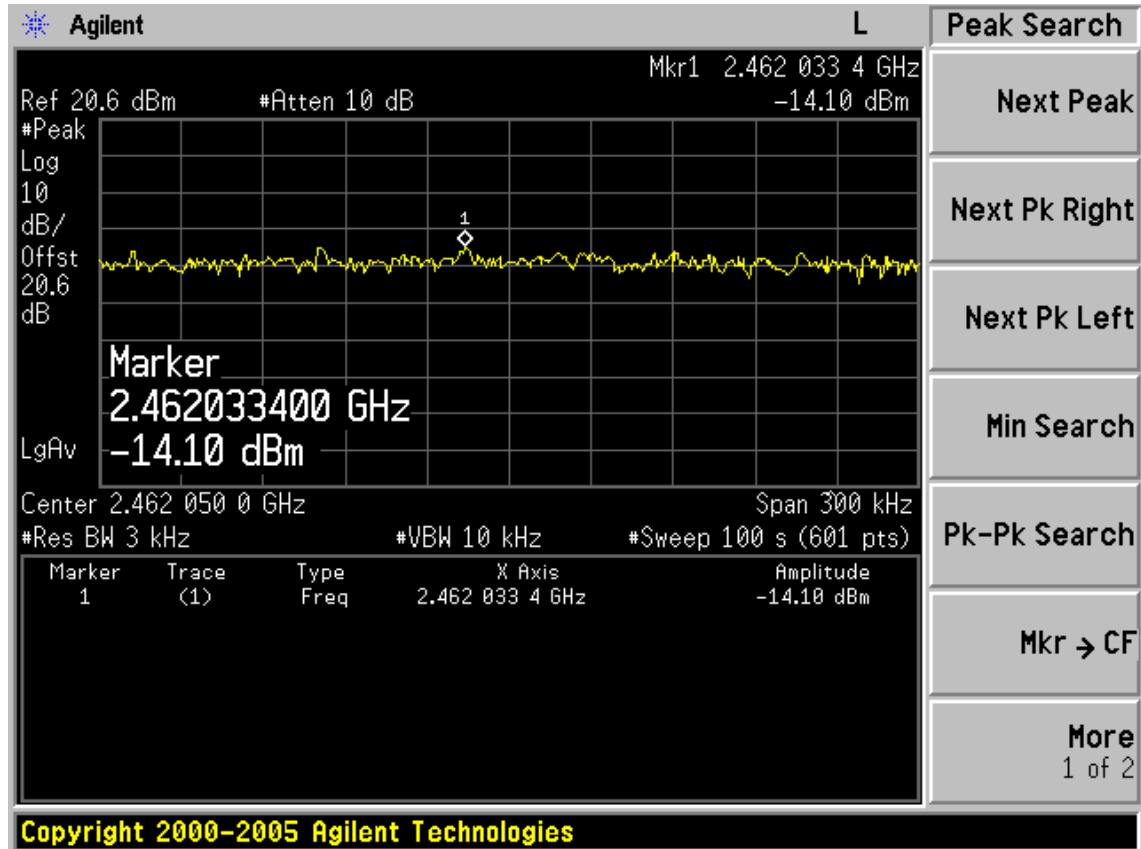
Test Mode: IEEE 802.11b TX  
CH1



CH6

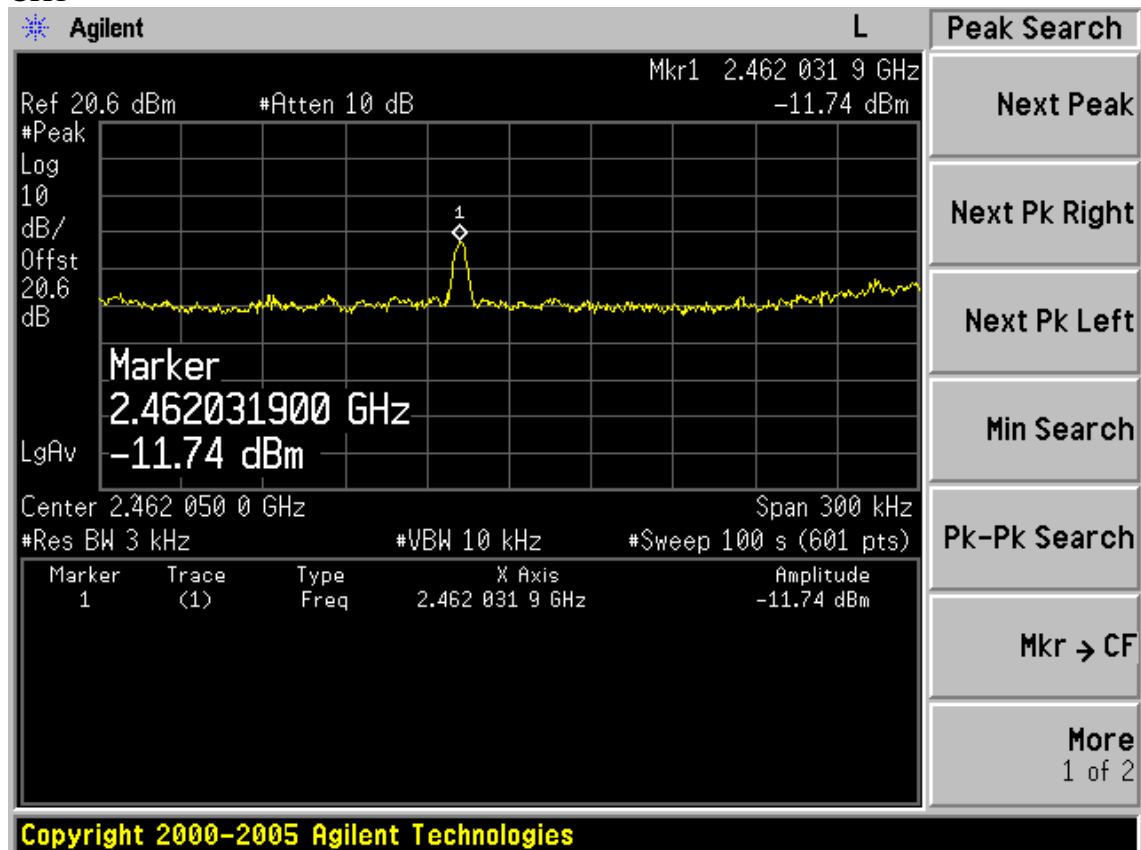


CH11

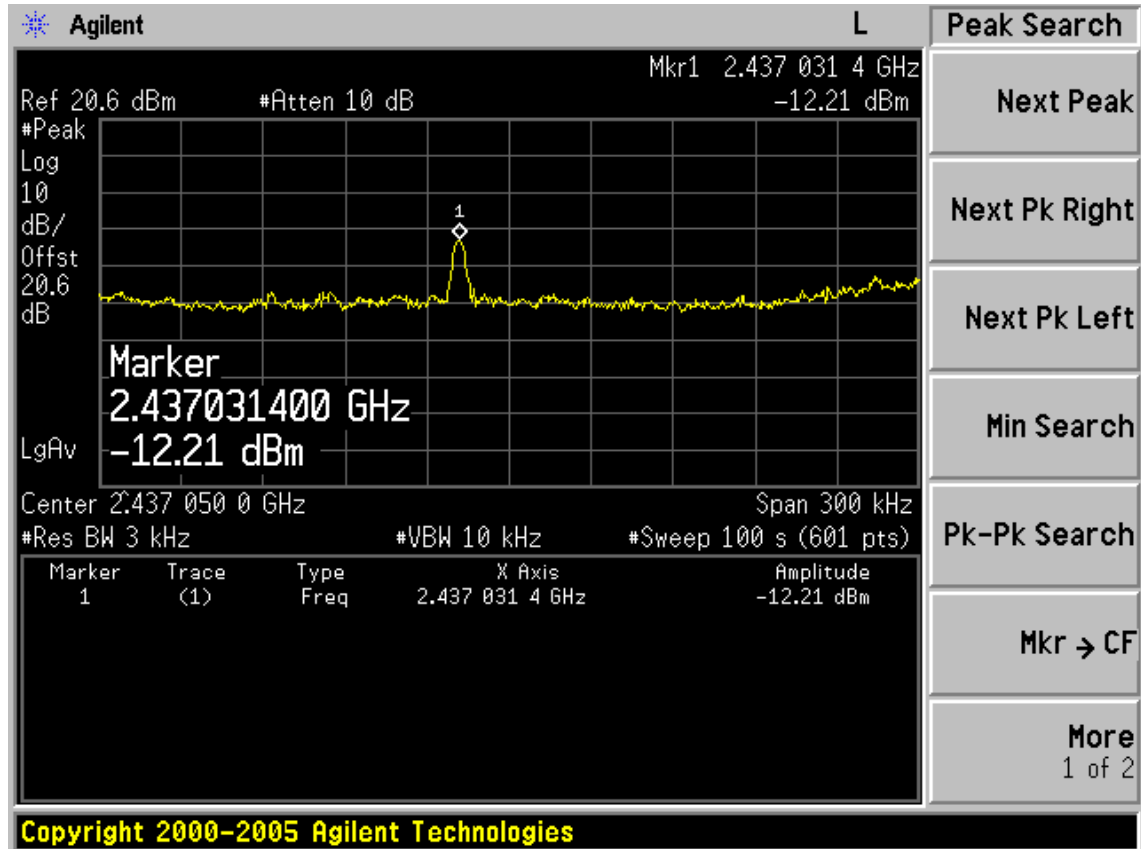


Test Mode: IEEE 802.11g TX

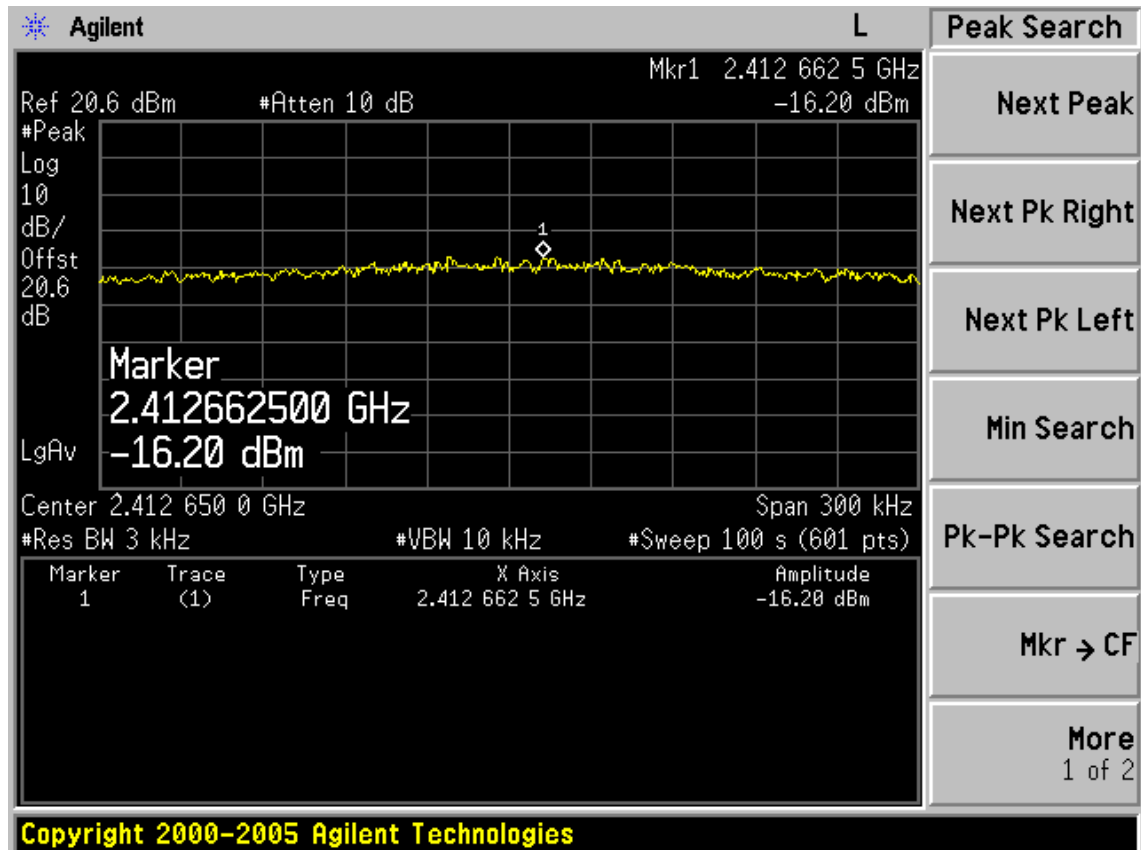
CH1



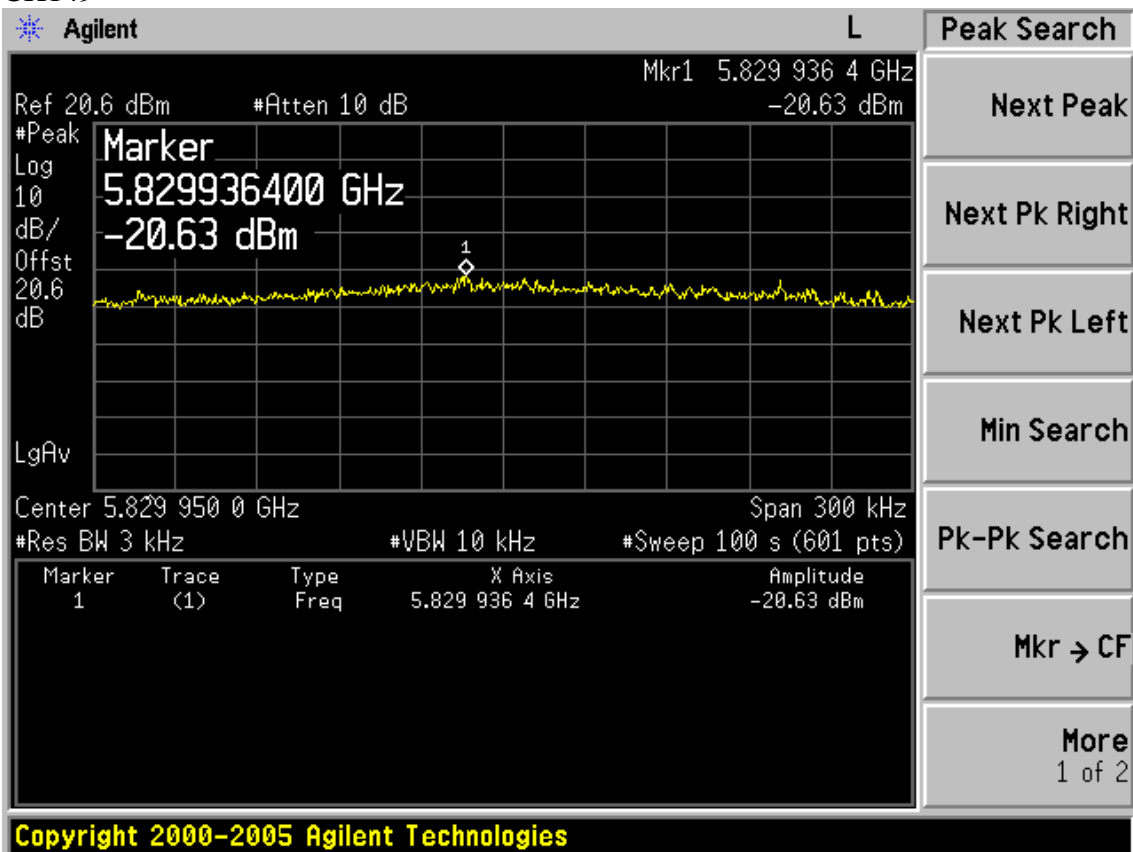
CH6



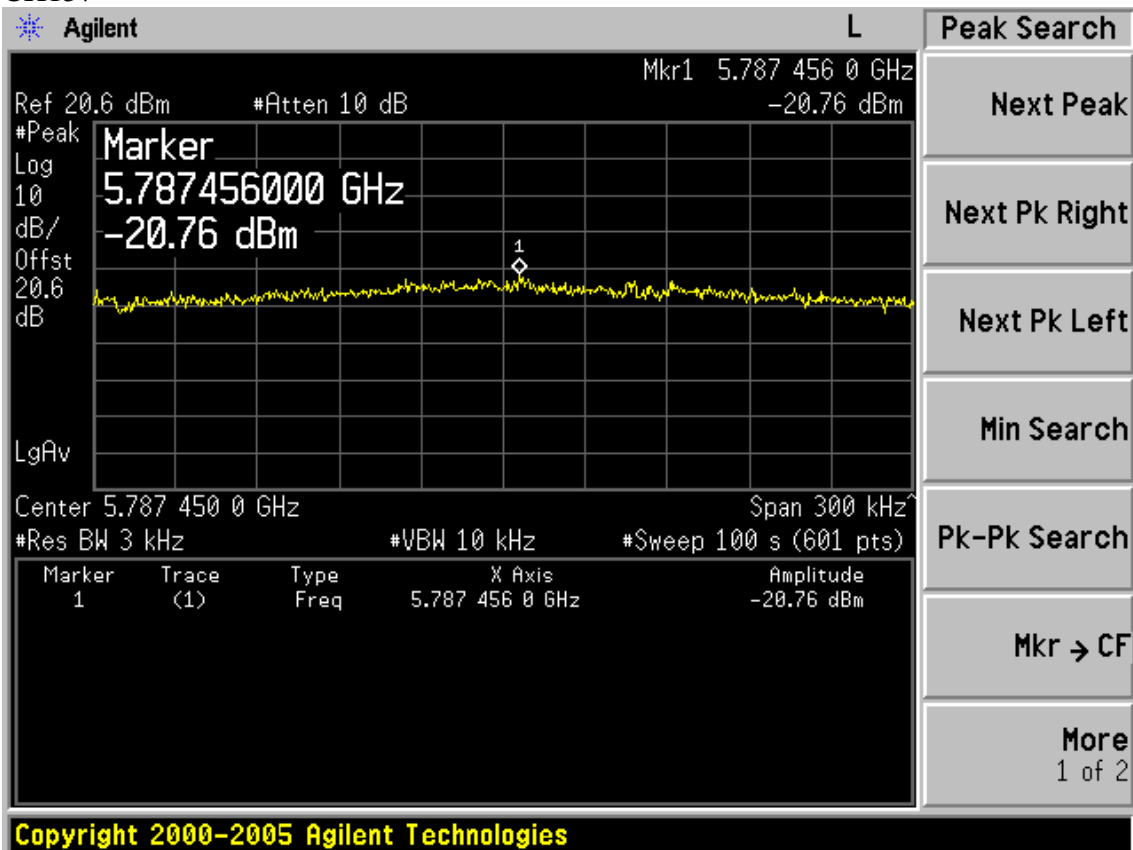
CH11



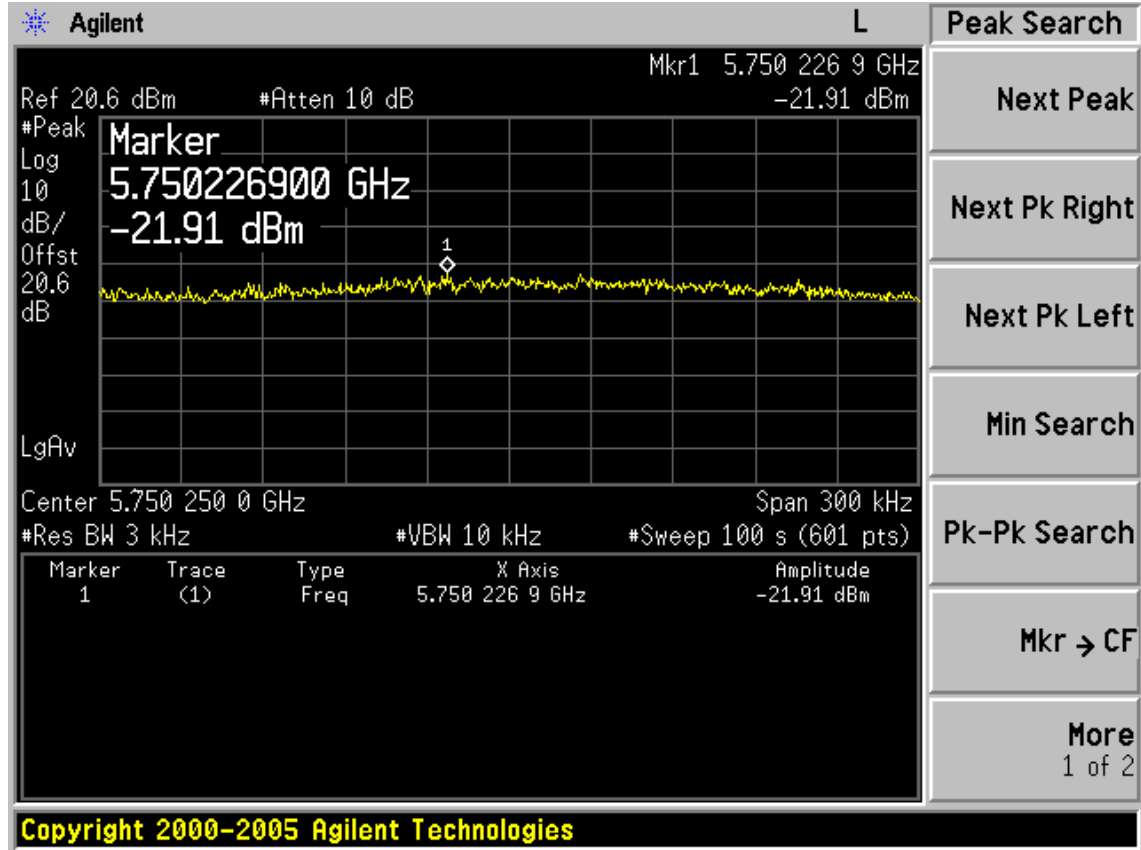
Test Mode: IEEE 802.11a TX  
CH149



CH157



CH165



## **10. ANTENNA REQUIREMENT**

### **10.1 STANDARD APPLICABLE**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **10.2 ANTENNA CONNECTED CONSTRUCTION**

For 2.4GHz band, the antenna used is Built-in Array Antenna, with 19dBi max gain, and that no antenna other than that furnished by the responsible party shall be used with the device.

For 5GHz band, the antenna used is external panel antenna with SMA connector, but this device need be professionally installed, so it's can be exclude from comply with FCC antenna connector requirements, the maximum gain is 18dBi.



## 11.MPE ESTIMATION

### 11.1.Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm <sup>2</sup> )	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Note: F= Frequency in MHz

### 11.2.Estimation Result

Mode	CH	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	Antenna Gain (dBi)	Antenna Gain(linear)	MPE
11b	1	2412	16.15	41.21	19	79.43	0.6516
	6	2437	16.22	41.88	19	79.43	0.6621
	11	2462	16.33	42.95	19	79.43	0.6791
11g	1	2412	16.36	43.25	19	79.43	0.6838
	6	2437	16.48	44.46	19	79.43	0.7030
	11	2462	16.53	44.98	19	79.43	0.7111
11a	149	5745	10.8	12.02	18	63.10	0.1510
	157	5785	10.06	10.14	18	63.10	0.1273
	165	5825	10.04	10.09	18	63.10	0.1268

Note: The estimation distance is 20cm

## **12.DEVIATION TO TEST SPECIFICATIONS**

[ NONE]