



# A Test Lab Techno Corp.

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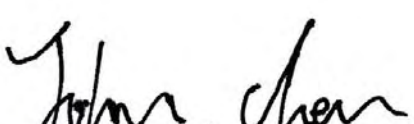
## Part 15 C Measurement Report



<b>Report No.</b>	<b>: 0908FR12</b>
<b>Applicant</b>	<b>: Partner Tech Corp.</b>
<b>Product Name</b>	<b>: E-Menu</b>
<b>Trade Name</b>	<b>: Partner</b>
<b>Model No.</b>	<b>: EM-200</b>
<b>FCC ID</b>	<b>: NDPEM200</b>
<b>Dates of Test</b>	<b>: Aug. 12 ~ Aug. 19, 2009</b>
<b>Test Specification</b>	<b>: FCC CFR Title 47 Part 15 Subpart C (15.247) (2008-10)</b>
	<b>PUBLIC NOTICE :DA 00-705 Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems</b>
<b>Location of Test Lab.</b>	<b>: Chang-an Lab.</b>

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full. This report shall not be reproduced except in full, without the written approval of A Test Lab Techno Corp.
4. This document may be altered or revised by A Test Lab Techno. Corp. personnel only, and shall be noted in the revision section of the document.

  
**Miller Lee**                      **20090820**  
**Approve Signer**

  
**John Cheng**                      **20090820**  
**Testing Engineer**



# CERTIFICATION

We hereby verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2003. All test were conducted by *A Test Lab Techno Corp. No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)* Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with Class B radiated and conducted emission limit of FCC Rules Part 15 Subpart C (15.247).

Product Name : E-Menu  
Applicant : Partner Tech Corp.  
Applicant Address : 10F, No 233-2, Pao Chiao Rd., Shin Tien, Taipei, Taiwan231  
Manufacturer : Partner Tech Corp.  
Manufacturer Address : 10F, No 233-2, Pao Chiao Rd., Shin Tien, Taipei, Taiwan231  
Trade Name : Partner  
Model No. : EM-200  
FCC ID : NDPEM200  
Rated Voltage : 100-240Vac, 1A, 50/60Hz  
EUT Voltage : 12Vdc, 3A  
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C (15.247) (2008-10)  
Classification : B  
Test Result : Complied

Approved by :   
Miller Lee 2009/08/20

Prepared by :   
John Cheng 2009/08/20

## A Test Lab Techno Corp.

No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)  
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## 1. GENERAL

### 1.1 Description of Equipment under Test (EUT)

<b>Applicant</b>	: Partner Tech Corp.
<b>Applicant Address</b>	: 10F, No 233-2, Pao Chiao Rd., Shin Tien, Taipei, Taiwan231
<b>Manufacturer</b>	: Partner Tech Corp.
<b>Manufacturer Address</b>	: 10F, No 233-2, Pao Chiao Rd., Shin Tien, Taipei, Taiwan231
<b>Product Name</b>	: E-Menu
<b>Trade Name</b>	: Partner
<b>Model No.</b>	: EM-200
<b>Frequency Range</b>	: IEEE 802.11b / IEEE 802.11g: 2412MHz~2462MHz draft 802.11n Standard-20MHz: 2412MHz~2462MHz draft 802.11n Wide-40MHz: 2422MHz~2452MHz
<b>Type of Modulation</b>	: IEEE 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g:DSSS(CCK, DQPSK, DBPSK)+ OFDM(QPSK, BPSK, 16-QAM, 64-QAM) draft 802.11n Standard-20MHz channel mode: OFDM(6.5,7.2, 13,14.4, 14.44, 19.5,217,26,28.89,28.9,39.43.3,43.33,52,57.78, 57.8, 58.5, 65.0, 72.2, 78, 86.67,104,115.56,117,130 and 144.44 Mbps) draft 802.11n Wide-40MHz channel mode:OFDM(13.5,15,27,30,40.5,45, 54, 60,81,90,108,120,121.5,135,150,162,180,216,240,243, 270 and 300 Mbps)
<b>Hardware Version</b>	: 2.0
<b>Software Version</b>	: XP SP2
<b>Component</b>	
<b>Power Adapter</b>	: DELTA , ADP-36EH C Input:100-240Vac, 1A, 50/60Hz Output: 12Vdc, 3A Cable in: Non-Shielded, 1.75 m Cable out: Non-Shielded, 1.75 m

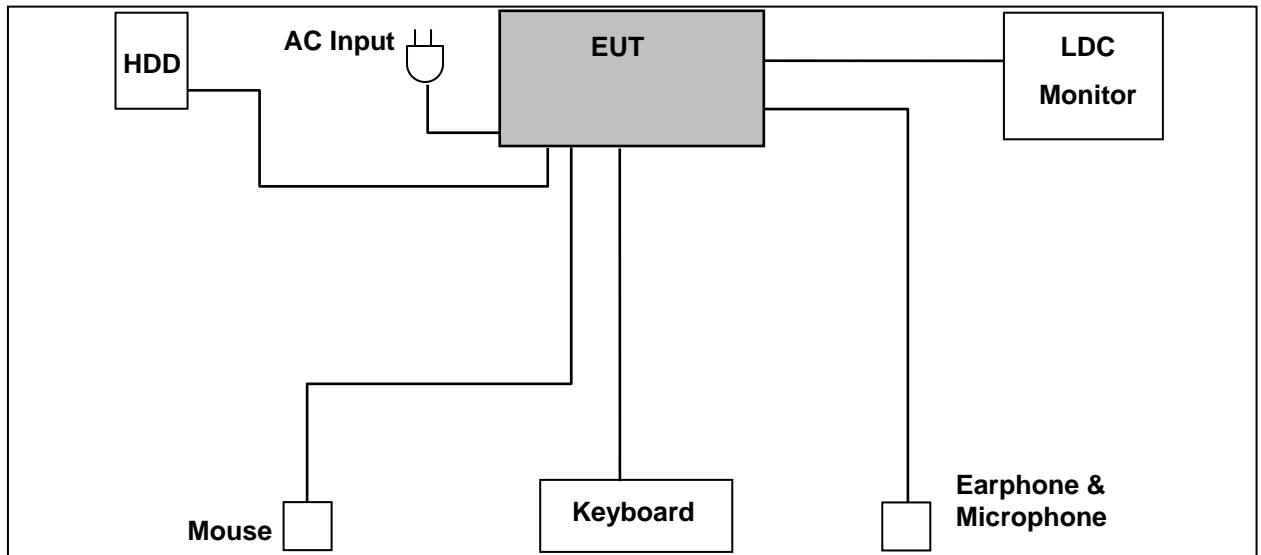
### 1.2 Introduction

The following measurement report is submitted on behalf of **Partner Tech Corp.** In support of a Class B Digital Device certification in accordance with Part2 Subpart J and Part 15 Subpart A and B&C of the Commission's and Regulations.

### 1.3 Summary of Tests

47 CFR Part 15 Subpart C			
Reference	Test	Results	Note
15.207	AC Power Conducted Emission	PASS	-----
15.247(c)	Transmitter Radiated Emissions	PASS	-----
15.247(b)	Max. Output Power	PASS	-----
15.247(a)(2)	6dB RF Bandwidth	PASS	-----
15.247(d)	Max. Power Density	PASS	-----
15.247(c)	Out of Band Conducted Spurious Emission	PASS	-----
15.247(c)	Band Edge Measurement	PASS	-----
15.203	Antenna Requirement	PASS	-----

### 1.4 Configuration of System under Test



During testing the EUT's USB port1 connected to the hard discs and USB port2 connected to the mouse and USB port3 connected to the keyboard. The EUT's VGA port connected to the LCD monitor. The EUT's earphone port connected to the earphone and the microphone connected to the microphone.



## 2. Conducted Emissions Requirements

### 2.1 Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

### 2.2 Limits

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

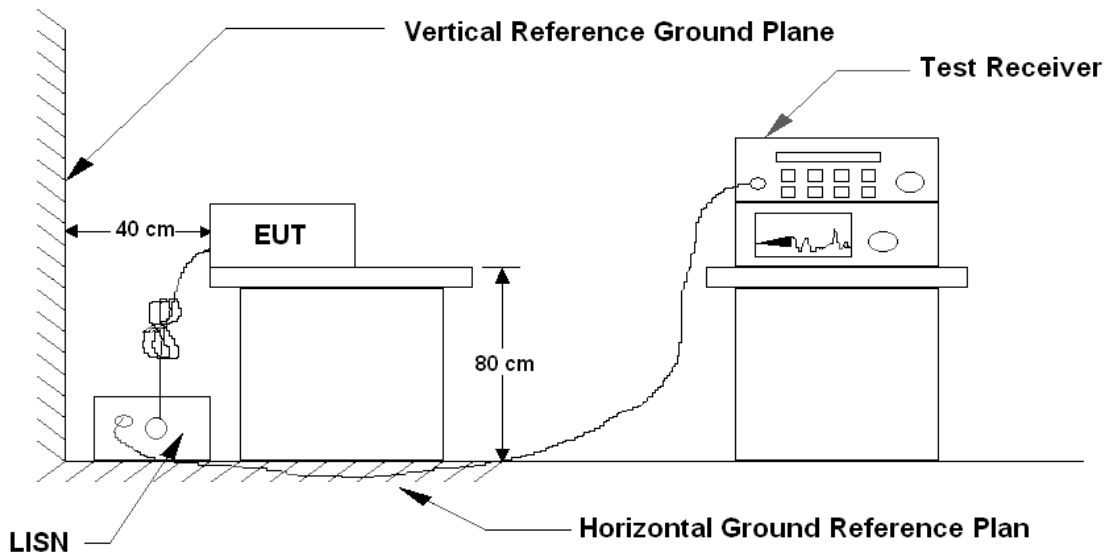
### 2.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Advantest	R3132	160300103	Mar. 10, 2009	Mar. 10, 2010
Test Receiver	R&S	ESCI	100367	Jun. 05, 2009	Jun. 05, 2010
LISN	EMCO	3816/2 SH	00060110	Jun. 05, 2009	Jun. 05, 2010
LISN	EMCO	3816/2 SH	00060111	Jun. 29, 2009	Jun. 29, 2010
Transient Limiter	ELECTRO-METRICS	EM-7600	777	Sep. 22, 2008	Sep. 22, 2009

### 2.4 Test condition

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

## 2.5 Test Instruments Configuration



## 2.6 Test Results

EUT : E-Menu  
Model No. : EM-200  
Test Mode : Link Mode  
Test Date : 08/12/2009

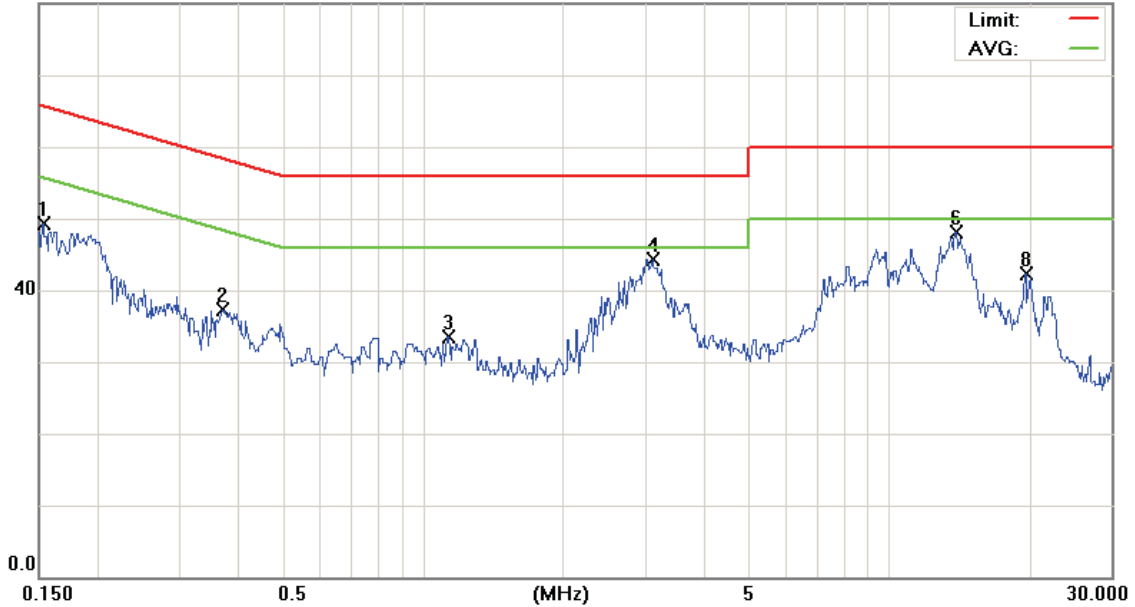
Please refer to next page of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.



File :EM-200                      Data :#1                      Date: 2009/8/12                      Time: 上午 03:36:16



Site site #1                      Phase: **L1**                      Temperature: 26 °C  
 Limit: CISPR 22 Class B Conduction(QP)                      Power: AC 120V/60Hz                      Humidity: 55 %  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: Link Mode  
 Note:

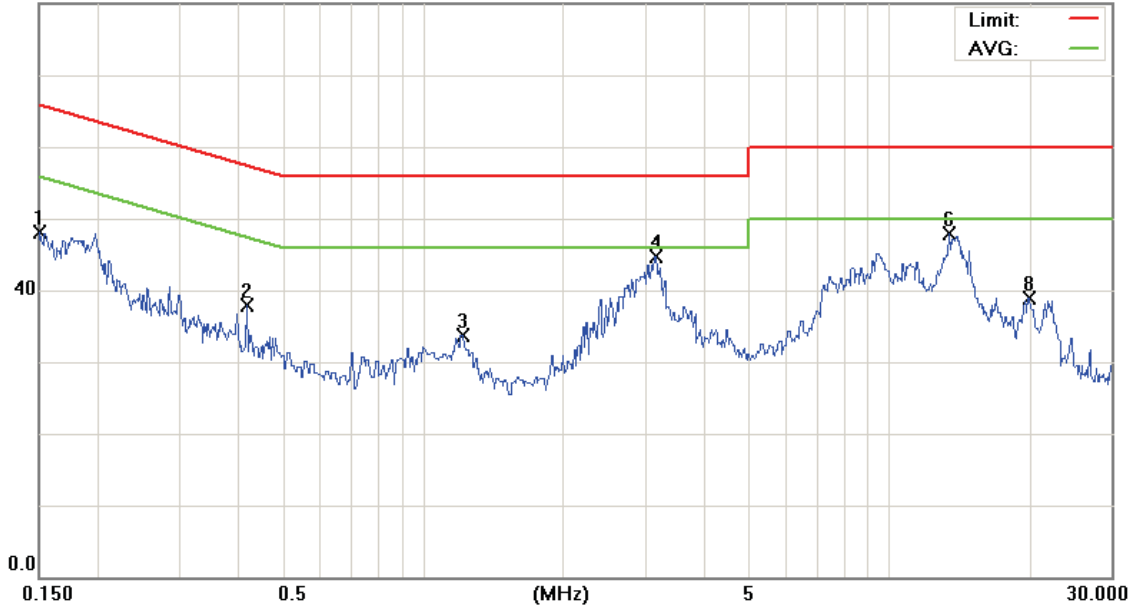
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1528	39.51	9.73	49.24	65.85	-16.61	peak	
2		0.3704	27.61	9.78	37.39	58.49	-21.10	peak	
3		1.1300	23.73	9.80	33.53	56.00	-22.47	peak	
4	*	3.1010	34.47	9.90	44.37	56.00	-11.63	peak	
5		3.1010	14.77	9.90	24.67	46.00	-21.33	AVG	
6		13.8500	37.88	10.20	48.08	60.00	-11.92	peak	
7		13.8500	25.70	10.20	35.90	50.00	-14.10	AVG	
8		19.5500	31.97	10.28	42.25	60.00	-17.75	peak	

\*:Maximum data    x:Over limit    !:over margin





File :EM-200(全接)      Data :#2      Date: 2009/8/12      Time: 上午 03:42:03



Site site #1      Phase: **L2**      Temperature: 26 °C  
 Limit: CISPR 22 Class B Conduction(QP)      Power: AC 120V/60Hz      Humidity: 55 %  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: Link Mode  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1507	38.39	9.73	48.12	65.96	-17.84	peak	
2		0.4181	28.20	9.78	37.98	57.49	-19.51	peak	
3		1.2110	23.84	9.81	33.65	56.00	-22.35	peak	
4	*	3.1460	34.72	9.91	44.63	56.00	-11.37	peak	
5		3.1460	14.99	9.91	24.90	46.00	-21.10	AVG	
6		13.4500	37.73	10.21	47.94	60.00	-12.06	peak	
7		13.4500	23.19	10.21	33.40	50.00	-16.60	AVG	
8		19.8500	28.71	10.24	38.95	60.00	-21.05	peak	

\*:Maximum data    x:Over limit    !:over margin



### 3. Radiated Emissions Requirements

#### 3.1 Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

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

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The EUT was positioned such that the distance from antenna to the EUT was 10 meters for the frequency under 1GHz and 3 meters for the frequency above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30) is 120 kHz and above 1GHz is 1MHz.

#### 3.2 Radiated Emissions Limits

Frequency range (MHz)	Field strength (microvolts/meter)	Measure-ment dis-tance (meters)
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30.0	30	30
30 to 88	100**	3
88 to 216	150**	3
216 to 960	200**	3
Above 960	500**	3

\*\*Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 MHz, 76– 88 MHz, 174–216 MHz or 470–806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

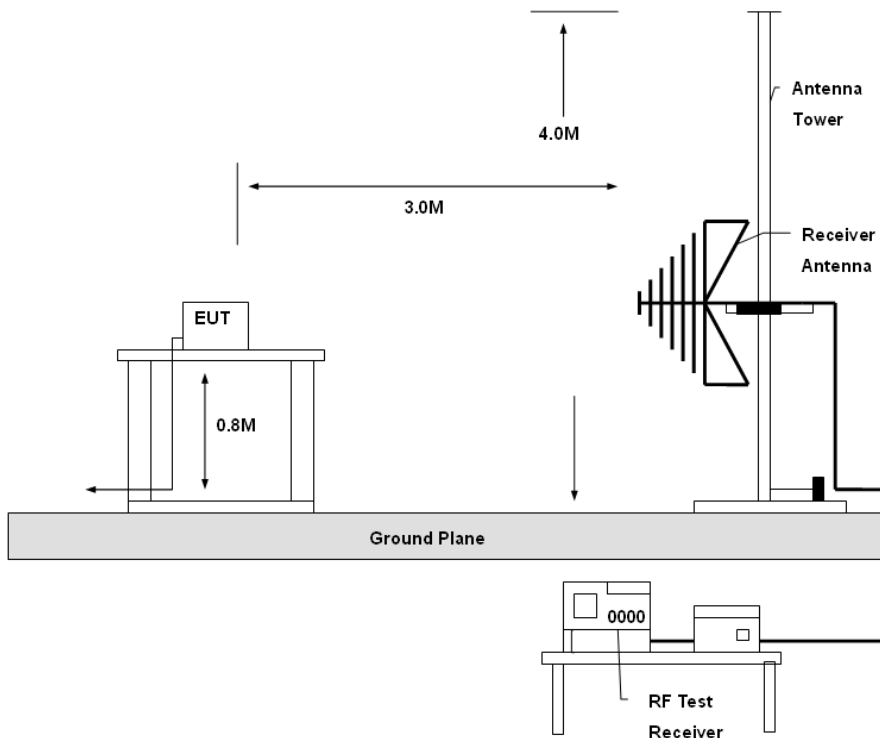
### 3.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY46181421	Mar. 13, 2009	Mar. 13, 2010
Pre Amplifier	Agilent	8449B	3008A02457	Mar. 04, 2009	Mar. 04, 2010
Pre Amplifier	Agilent	8447D	2944A11119	Jan. 19, 2009	Jan. 19, 2010
Test Receiver	R&S	ESCI	100367	Jun. 05, 2009	Jun. 05, 2010
Biconilog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	Jun. 23, 2009	Jun. 23, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jul. 01, 2009	Jul. 01, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	Jun. 30, 2009	Jun. 30, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120E	0899	Jun. 23, 2009	Jun. 23, 2010

### 3.4 Test condition

EUT tested in accordance with the specifications given by the manufacturer, and exercised in the most unfavorable manner.

### 3.5 Test Instruments Configuration





### 3.6 Test Results

EUT : E-Menu  
Model No. : EM-200  
Test Mode : IEEE 802.11b Link Mode  
Test Date : 08/17 ~ 08/19/2009  
Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



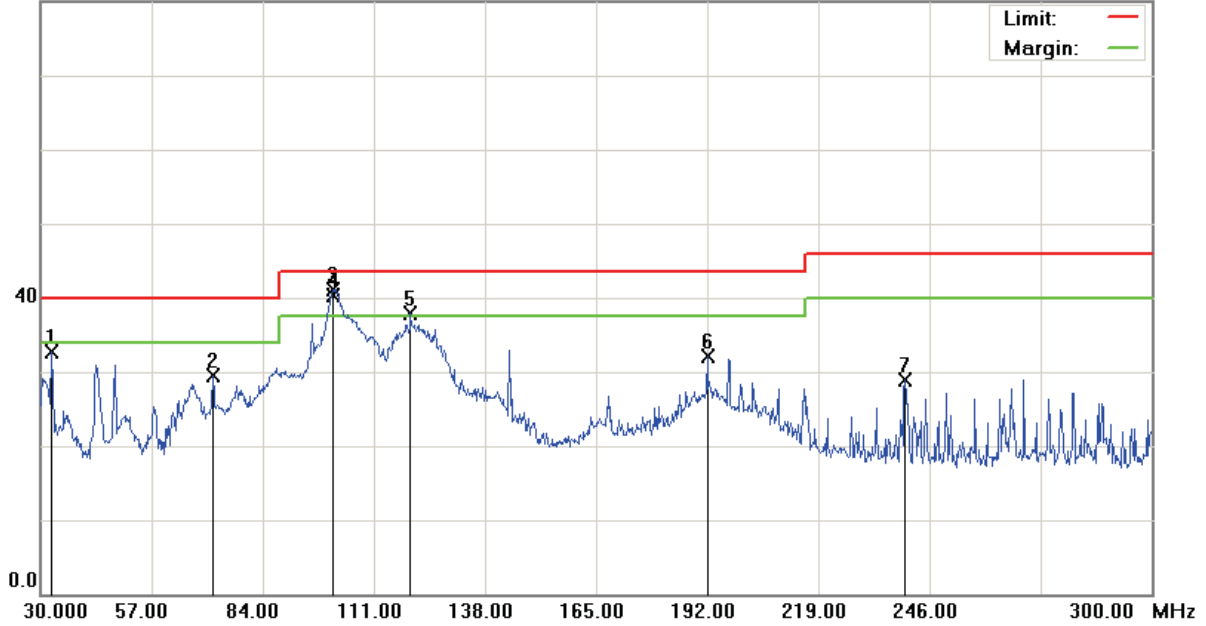
File :EM-200(WIFI)

Data :#1

Date: 2009/8/17

Time: 上午 11:54:08

80.0 dBuV



Site: site #1 Polarization: *Vertical* Temperature: 22 °C  
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		32.7000	45.88	-13.26	32.62	40.00	-7.38	peak			
2		71.8500	46.39	-16.79	29.60	40.00	-10.40	peak			
3	*	101.0100	52.97	-11.82	41.15	43.50	-2.35	peak			
4	!	101.0100	52.16	-11.82	40.34	43.50	-3.16	QP	102	52	
5	!	119.9100	52.17	-14.18	37.99	43.50	-5.51	peak			
6		192.0000	45.44	-13.26	32.18	43.50	-11.32	peak			
7		240.0600	40.31	-11.43	28.88	46.00	-17.12	peak			

\*:Maximum data x:Over limit !:over margin





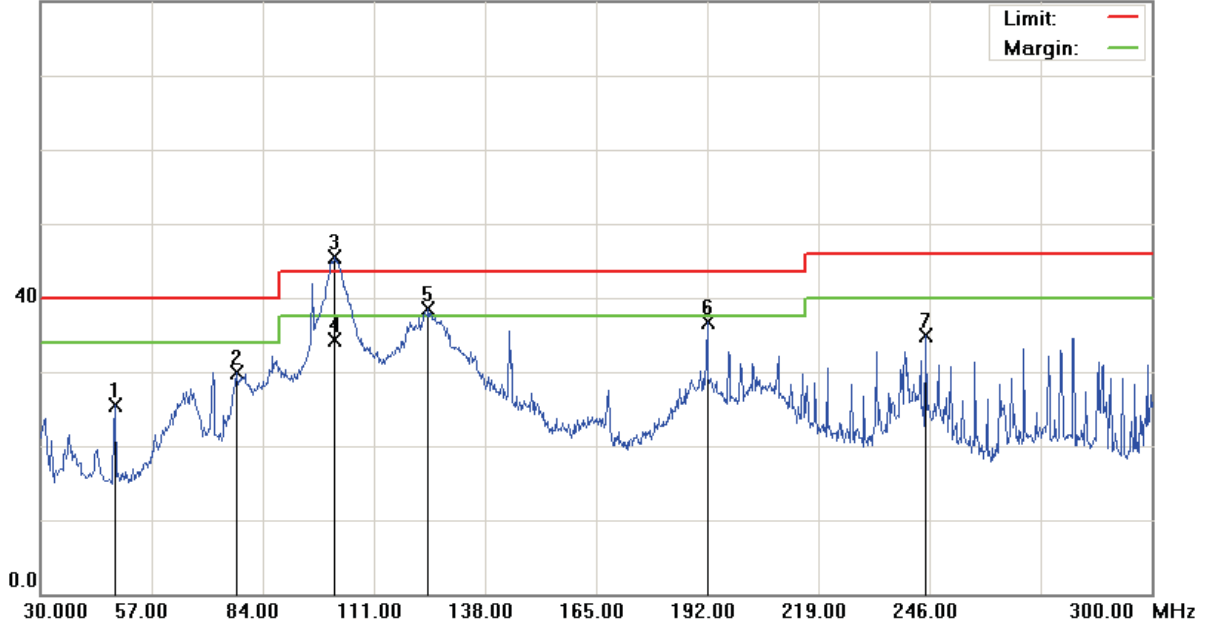
File :EM-200(WIFI)

Data :#3

Date: 2009/8/17

Time: 下午 12:02:36

80.0 dBuV



Site: site #1  
 Limit: FCC Class B 3M Radiation  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note:

Polarization: *Horizontal*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		48.0900	37.54	-12.04	25.50	40.00	-14.50			peak	
2		77.5200	46.81	-16.86	29.95	40.00	-10.05			peak	
3	*	101.5500	57.35	-11.86	45.49	43.50	1.99			peak	
4		101.5500	46.07	-11.86	34.21	43.50	-9.29			QP	
5	!	124.2300	53.46	-14.91	38.55	43.50	-4.95			peak	
6		192.0000	49.99	-13.26	36.73	43.50	-6.77			peak	
7		245.1900	46.08	-11.24	34.84	46.00	-11.16			peak	

\*:Maximum data x:Over limit !:over margin







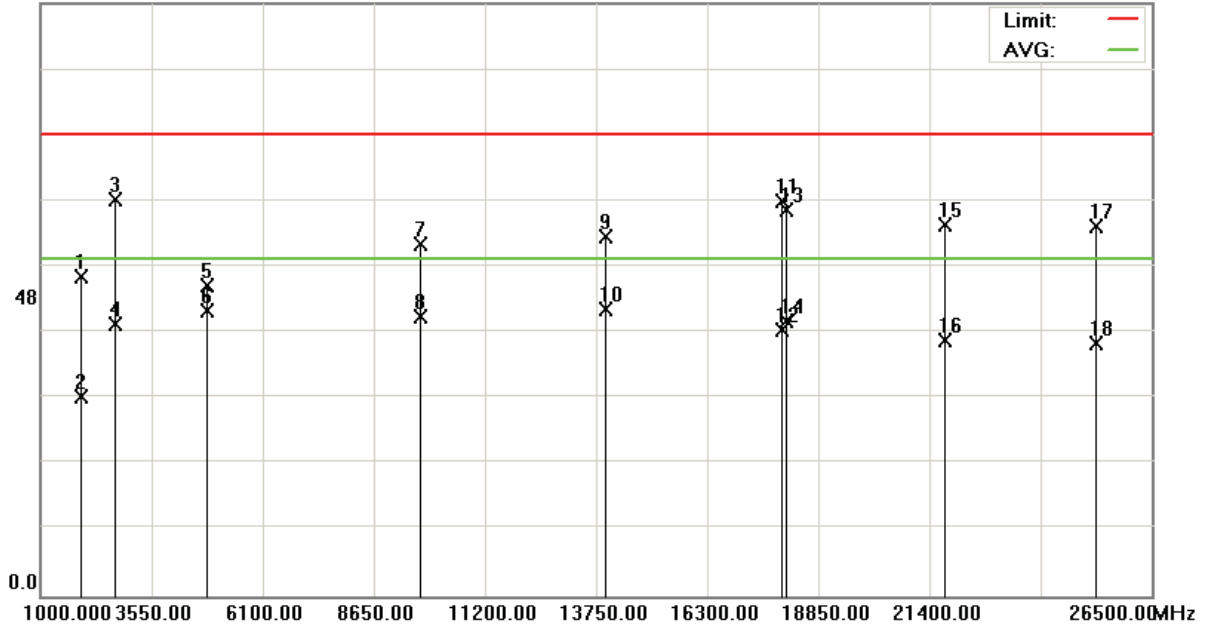
File :EM-200(2412MHz)

Data :#17

Date: 2009/8/19

Time: 上午 02:07:35

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: 2412MHz

Polarization: **Vertical**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		1909.500	53.54	-2.39	51.15	74.00	-22.85			peak	
2		1909.500	34.31	-2.39	31.92	54.00	-22.08			AVG	
3		2700.000	40.90	22.58	63.48	74.00	-10.52			peak	
4		2700.000	21.02	22.58	43.60	54.00	-10.40			AVG	
5		4817.000	42.28	7.42	49.70	74.00	-24.30			peak	
6		4817.000	38.26	7.42	45.68	54.00	-8.32			AVG	
7		9708.000	39.00	17.49	56.49	74.00	-17.51			peak	
8		9708.000	27.26	17.49	44.75	54.00	-9.25			AVG	
9		13960.000	38.99	18.57	57.56	74.00	-16.44			peak	
10	*	13960.000	27.30	18.57	45.87	54.00	-8.13			AVG	
11		18000.000	37.73	25.57	63.30	74.00	-10.70			peak	
12		18000.000	17.16	25.57	42.73	54.00	-11.27			AVG	
13		18106.250	38.54	23.23	61.77	74.00	-12.23			peak	
14		18106.250	20.71	23.23	43.94	54.00	-10.06			AVG	
15		21740.000	38.24	21.23	59.47	74.00	-14.53			peak	
16		21740.000	19.79	21.23	41.02	54.00	-12.98			AVG	
17		25225.000	40.21	19.16	59.37	74.00	-14.63			peak	
18		25225.000	21.26	19.16	40.42	54.00	-13.58			AVG	

\*:Maximum data x:Over limit !:over margin



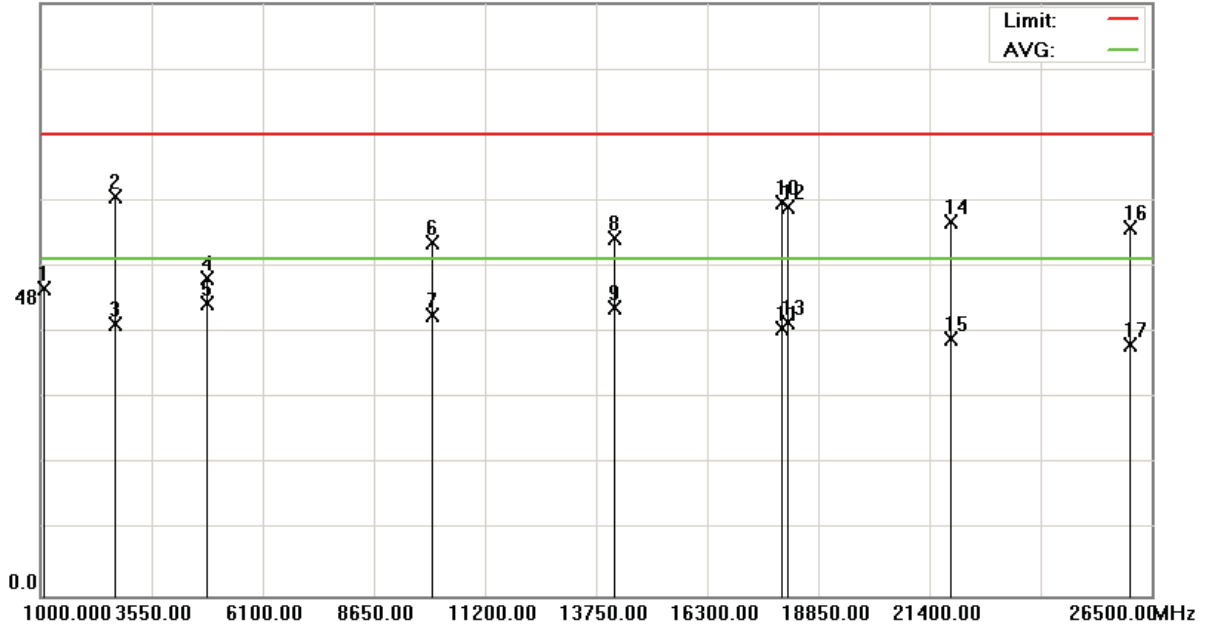
File :EM-200(2412MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:20:16

95.0 dBuV



Site: site #1 Polarization: **Horizontal** Temperature: 22 °C  
 Limit: FCC part 15 (PK) Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: 2412MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1062.900	55.32	-6.14	49.18	74.00	-24.82	peak		
2		2700.000	41.38	22.58	63.96	74.00	-10.04	peak		
3		2700.000	20.93	22.58	43.51	54.00	-10.49	AVG		
4		4817.000	43.56	7.42	50.98	74.00	-23.02	peak		
5	*	4817.000	39.57	7.42	46.99	54.00	-7.01	AVG		
6		9981.750	38.82	17.88	56.70	74.00	-17.30	peak		
7		9981.750	27.03	17.88	44.91	54.00	-9.09	AVG		
8		14180.000	38.43	18.85	57.28	74.00	-16.72	peak		
9		14180.000	27.36	18.85	46.21	54.00	-7.79	AVG		
10		18000.000	37.38	25.57	62.95	74.00	-11.05	peak		
11		18000.000	17.36	25.57	42.93	54.00	-11.07	AVG		
12		18148.750	39.05	23.22	62.27	74.00	-11.73	peak		
13		18148.750	20.60	23.22	43.82	54.00	-10.18	AVG		
14		21867.500	38.71	21.19	59.90	74.00	-14.10	peak		
15		21867.500	19.95	21.19	41.14	54.00	-12.86	AVG		
16		26011.250	40.41	18.54	58.95	74.00	-15.05	peak		
17		26011.250	21.69	18.54	40.23	54.00	-13.77	AVG		

\*:Maximum data x:Over limit !:over margin



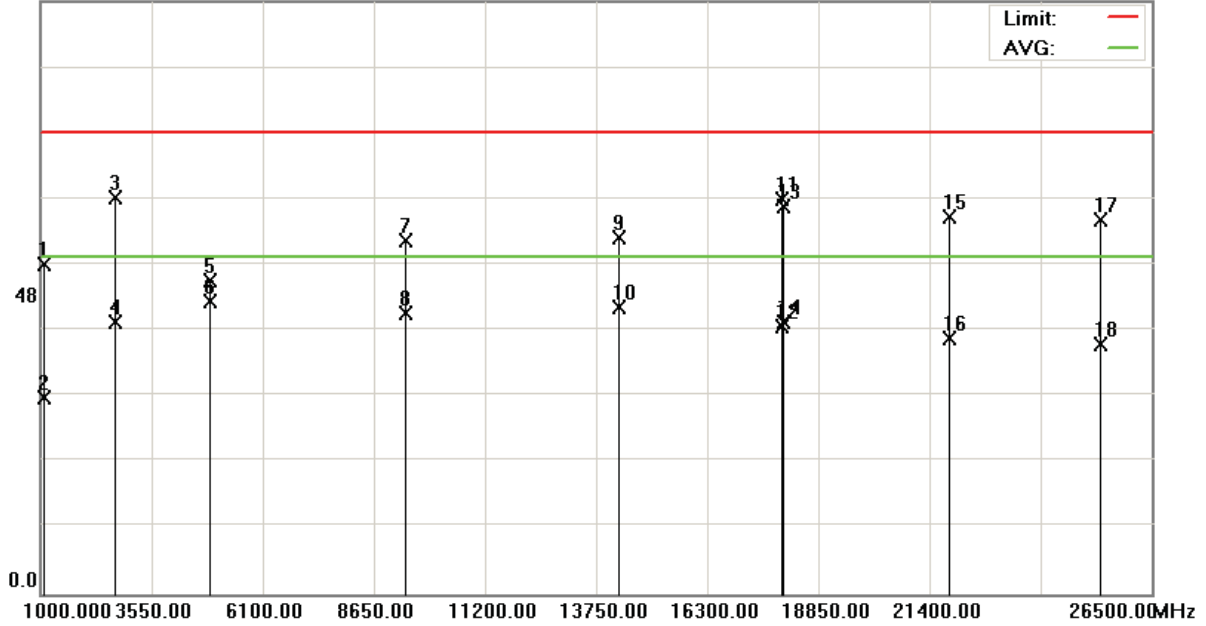
File :EM-200(2437MHz)

Data :#17

Date: 2009/8/19

Time: 上午 02:11:19

95.0 dBuV



Site: site #1 Polarization: **Vertical** Temperature: 22 °C  
 Limit: FCC part 15 (PK) Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: 2437MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1062.900	58.98	-6.14	52.84	74.00	-21.16	peak		
2		1062.900	37.64	-6.14	31.50	54.00	-22.50	AVG		
3		2700.000	41.01	22.58	63.59	74.00	-10.41	peak		
4		2700.000	20.98	22.58	43.56	54.00	-10.44	AVG		
5		4871.750	42.49	7.72	50.21	74.00	-23.79	peak		
6	*	4871.750	39.29	7.72	47.01	54.00	-6.99	AVG		
7		9343.000	39.66	16.93	56.59	74.00	-17.41	peak		
8		9343.000	28.01	16.93	44.94	54.00	-9.06	AVG		
9		14240.000	38.51	18.71	57.22	74.00	-16.78	peak		
10		14240.000	27.30	18.71	46.01	54.00	-7.99	AVG		
11		18000.000	37.61	25.57	63.18	74.00	-10.82	peak		
12		18000.000	17.19	25.57	42.76	54.00	-11.24	AVG		
13		18021.250	38.83	23.28	62.11	74.00	-11.89	peak		
14		18021.250	20.32	23.28	43.60	54.00	-10.40	AVG		
15		21846.250	39.17	21.20	60.37	74.00	-13.63	peak		
16		21846.250	19.73	21.20	40.93	54.00	-13.07	AVG		
17		25310.000	40.86	19.10	59.96	74.00	-14.04	peak		
18		25310.000	20.96	19.10	40.06	54.00	-13.94	AVG		

\*:Maximum data x:Over limit !:over margin



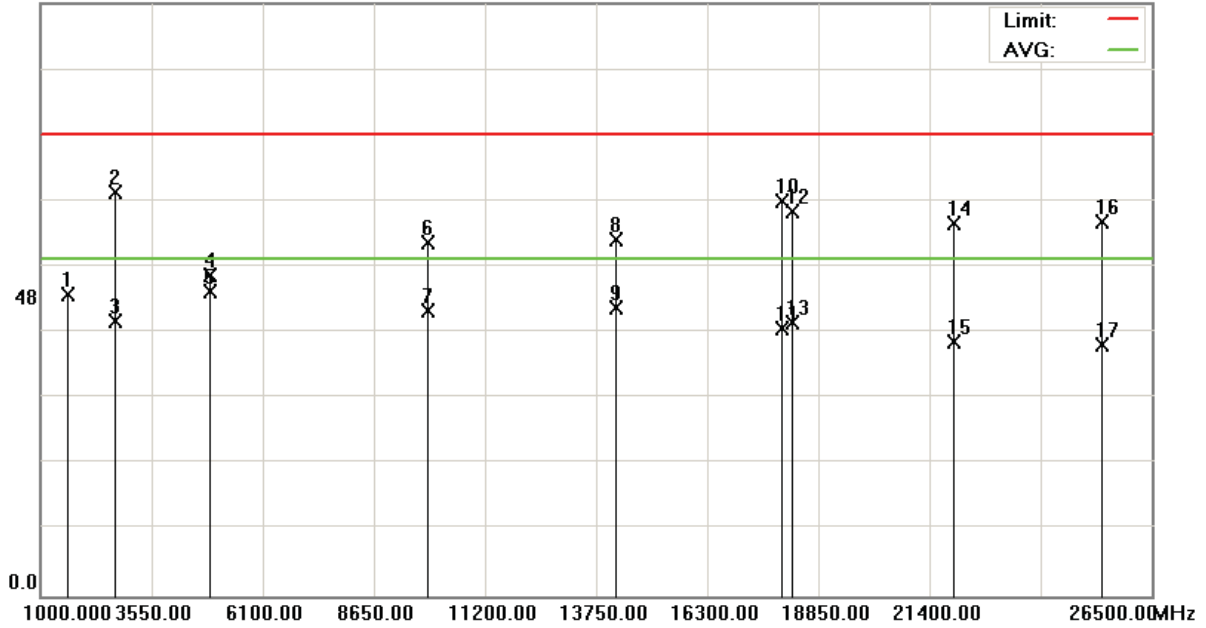
File :EM-200(2437MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:23:38

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: 2437MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		1595.000	52.09	-3.77	48.32	74.00	-25.68	peak			
2		2700.000	42.09	22.58	64.67	74.00	-9.33	peak			
3		2700.000	21.38	22.58	43.96	54.00	-10.04	AVG			
4		4871.750	43.64	7.72	51.36	74.00	-22.64	peak			
5	*	4871.750	41.13	7.72	48.85	54.00	-5.15	AVG			
6		9854.000	38.68	17.89	56.57	74.00	-17.43	peak			
7		9854.000	27.89	17.89	45.78	54.00	-8.22	AVG			
8		14200.000	38.20	18.86	57.06	74.00	-16.94	peak			
9		14200.000	27.39	18.86	46.25	54.00	-7.75	AVG			
10		18000.000	37.81	25.57	63.38	74.00	-10.62	peak			
11		18000.000	17.29	25.57	42.86	54.00	-11.14	AVG			
12		18233.750	38.53	23.21	61.74	74.00	-12.26	peak			
13		18233.750	20.59	23.21	43.80	54.00	-10.20	AVG			
14		21952.500	38.52	21.15	59.67	74.00	-14.33	peak			
15		21952.500	19.50	21.15	40.65	54.00	-13.35	AVG			
16		25331.250	40.89	19.09	59.98	74.00	-14.02	peak			
17		25331.250	21.13	19.09	40.22	54.00	-13.78	AVG			

\*:Maximum data x:Over limit !:over margin





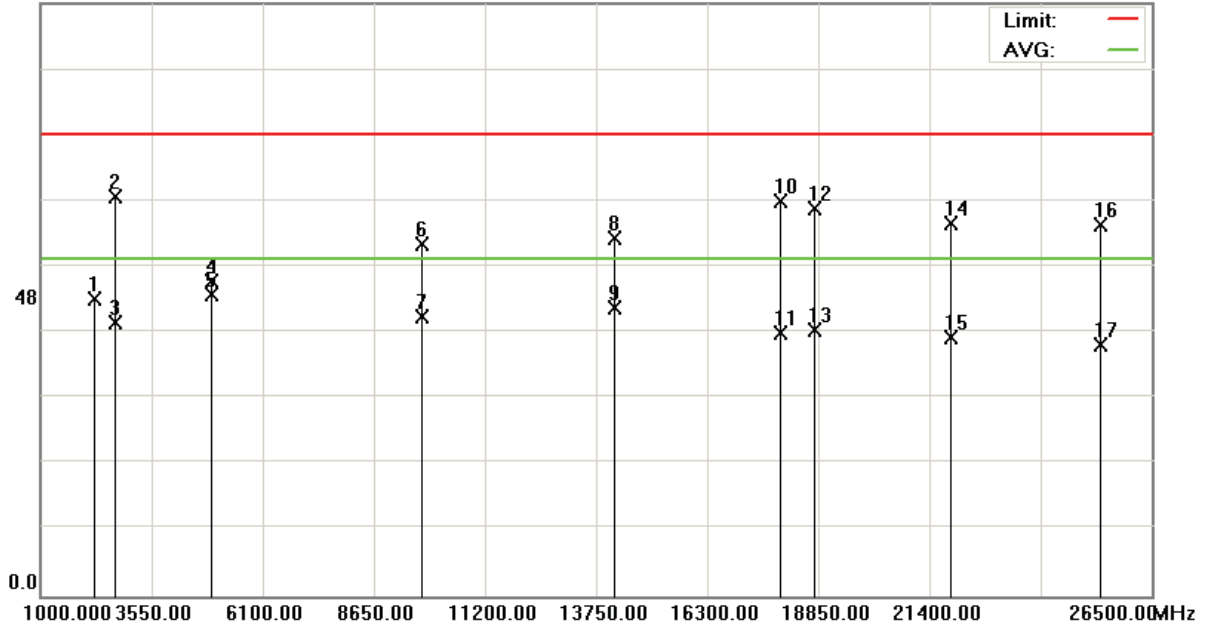
File :EM-200(2462MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:26:35

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: 2462MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		2244.400	47.06	0.46	47.52	74.00	-26.48			peak	
2		2700.000	41.37	22.58	63.95	74.00	-10.05			peak	
3		2700.000	21.19	22.58	43.77	54.00	-10.23			AVG	
4		4926.500	42.80	7.66	50.46	74.00	-23.54			peak	
5	*	4926.500	40.77	7.66	48.43	54.00	-5.57			AVG	
6		9744.500	38.76	17.69	56.45	74.00	-17.55			peak	
7		9744.500	26.99	17.69	44.68	54.00	-9.32			AVG	
8		14160.000	38.58	18.83	57.41	74.00	-16.59			peak	
9		14160.000	27.32	18.83	46.15	54.00	-7.85			AVG	
10		17960.000	38.49	24.84	63.33	74.00	-10.67			peak	
11		17960.000	17.20	24.84	42.04	54.00	-11.96			AVG	
12		18765.000	38.91	23.13	62.04	74.00	-11.96			peak	
13		18765.000	19.49	23.13	42.62	54.00	-11.38			AVG	
14		21867.500	38.66	21.19	59.85	74.00	-14.15			peak	
15		21867.500	20.15	21.19	41.34	54.00	-12.66			AVG	
16		25310.000	40.36	19.10	59.46	74.00	-14.54			peak	
17		25310.000	21.19	19.10	40.29	54.00	-13.71			AVG	

\*:Maximum data x:Over limit !:over margin



EUT : E-Menu  
Model No. : EM-200  
Test Mode : IEEE 802.11g Link Mode  
Test Date : 08/17 ~ 08/19/2009  
Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



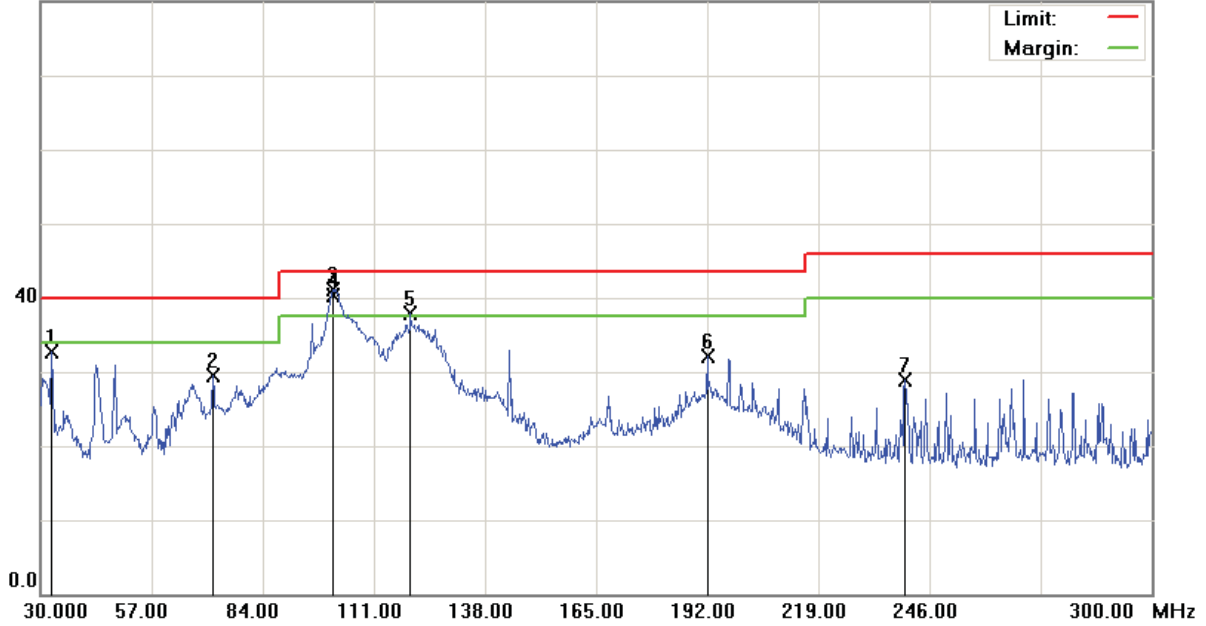
File :EM-200(WIFI)

Data :#1

Date: 2009/8/17

Time: 上午 11:54:08

80.0 dBuV



Site: site #1  
 Limit: FCC Class B 3M Radiation  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note:

Polarization: *Vertical*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		32.7000	45.88	-13.26	32.62	40.00	-7.38	peak			
2		71.8500	46.39	-16.79	29.60	40.00	-10.40	peak			
3	*	101.0100	52.97	-11.82	41.15	43.50	-2.35	peak			
4	!	101.0100	52.16	-11.82	40.34	43.50	-3.16	QP	102	52	
5	!	119.9100	52.17	-14.18	37.99	43.50	-5.51	peak			
6		192.0000	45.44	-13.26	32.18	43.50	-11.32	peak			
7		240.0600	40.31	-11.43	28.88	46.00	-17.12	peak			

\*:Maximum data x:Over limit !:over margin







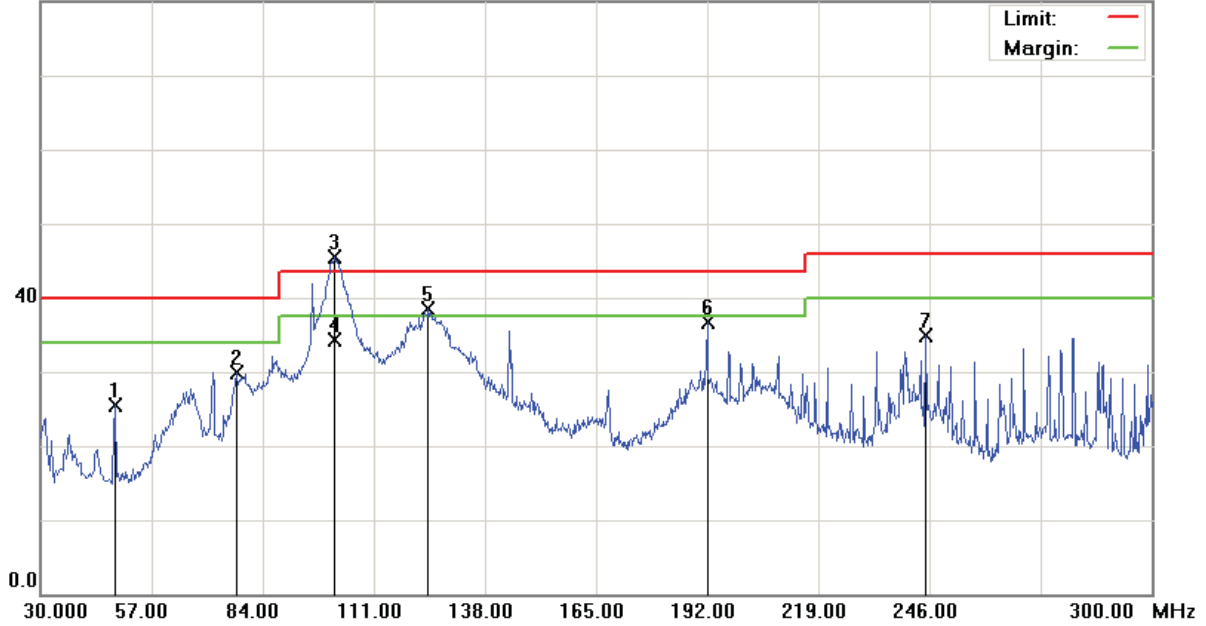
File :EM-200(WIFI)

Data :#3

Date: 2009/8/17

Time: 下午 12:02:36

80.0 dBuV



Site: site #1  
 Limit: FCC Class B 3M Radiation  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note:

Polarization: *Horizontal*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		48.0900	37.54	-12.04	25.50	40.00	-14.50			peak	
2		77.5200	46.81	-16.86	29.95	40.00	-10.05			peak	
3	*	101.5500	57.35	-11.86	45.49	43.50	1.99			peak	
4		101.5500	46.07	-11.86	34.21	43.50	-9.29			QP	
5	!	124.2300	53.46	-14.91	38.55	43.50	-4.95			peak	
6		192.0000	49.99	-13.26	36.73	43.50	-6.77			peak	
7		245.1900	46.08	-11.24	34.84	46.00	-11.16			peak	

\*:Maximum data x:Over limit !:over margin











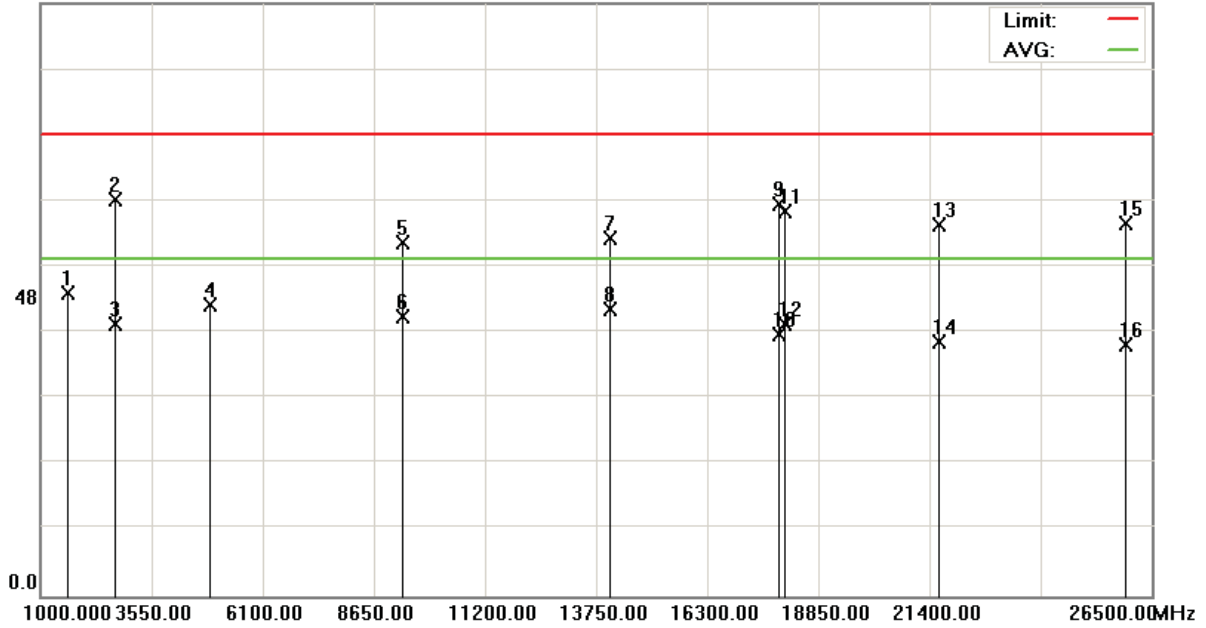
File :EM-200(2437MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:13:58

95.0 dBuV



Site: site #1 Polarization: **Horizontal** Temperature: 22 °C  
 Limit: FCC part 15 (PK) Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note: 2437MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		1595.000	52.41	-3.77	48.64	74.00	-25.36			peak	
2		2700.000	41.02	22.58	63.60	74.00	-10.40			peak	
3		2700.000	21.01	22.58	43.59	54.00	-10.41			AVG	
4		4874.000	39.06	7.72	46.78	74.00	-27.22			peak	
5		9306.500	39.76	16.89	56.65	74.00	-17.35			peak	
6		9306.500	27.87	16.89	44.76	54.00	-9.24			AVG	
7		14040.000	38.61	18.66	57.27	74.00	-16.73			peak	
8	*	14040.000	27.30	18.66	45.96	54.00	-8.04			AVG	
9		17940.000	38.22	24.71	62.93	74.00	-11.07			peak	
10		17940.000	17.16	24.71	41.87	54.00	-12.13			AVG	
11		18085.000	38.28	23.25	61.53	74.00	-12.47			peak	
12		18085.000	20.42	23.25	43.67	54.00	-10.33			AVG	
13		21612.500	38.24	21.28	59.52	74.00	-14.48			peak	
14		21612.500	19.39	21.28	40.67	54.00	-13.33			AVG	
15		25883.750	40.99	18.65	59.64	74.00	-14.36			peak	
16		25883.750	21.50	18.65	40.15	54.00	-13.85			AVG	

\*:Maximum data x:Over limit !:over margin



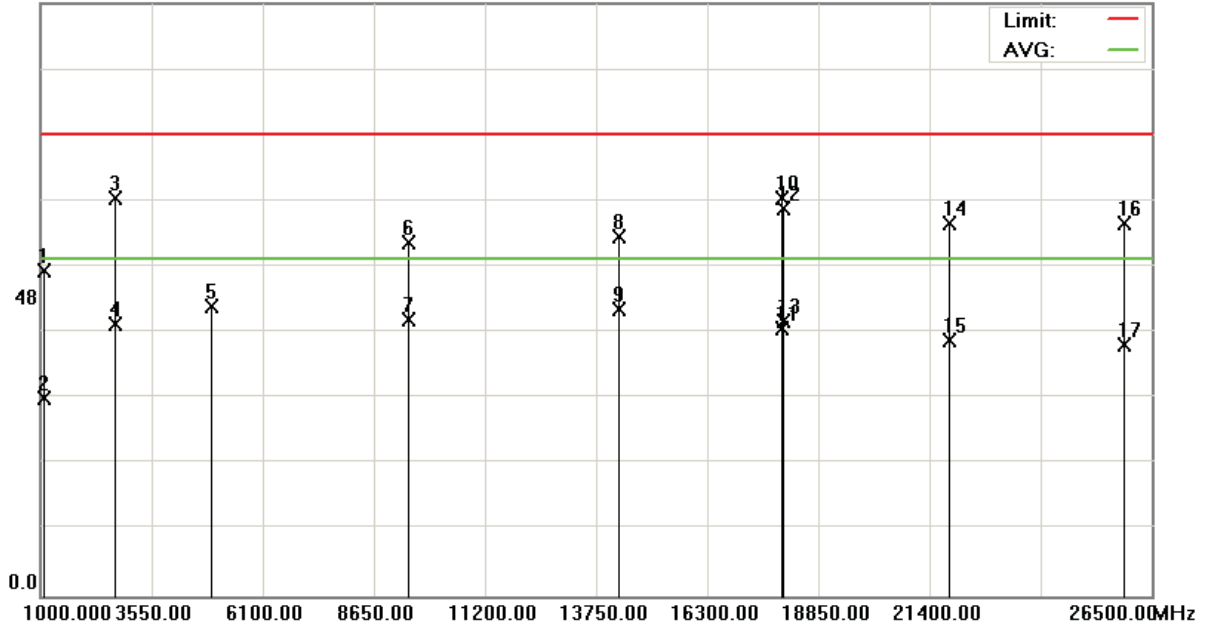
File :EM-200(2462MHz)

Data :#17

Date: 2009/8/19

Time: 上午 02:26:35

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note: 2462MHz

Polarization: **Vertical**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1062.900	58.33	-6.14	52.19	74.00	-21.81	peak		
2		1062.900	37.85	-6.14	31.71	54.00	-22.29	AVG		
3		2700.000	41.21	22.58	63.79	74.00	-10.21	peak		
4		2700.000	20.99	22.58	43.57	54.00	-10.43	AVG		
5		4924.000	38.84	7.65	46.49	74.00	-27.51	peak		
6		9434.250	39.53	17.03	56.56	74.00	-17.44	peak		
7		9434.250	27.36	17.03	44.39	54.00	-9.61	AVG		
8		14260.000	39.00	18.66	57.66	74.00	-16.34	peak		
9	*	14260.000	27.36	18.66	46.02	54.00	-7.98	AVG		
10		18000.000	38.18	25.57	63.75	74.00	-10.25	peak		
11		18000.000	17.39	25.57	42.96	54.00	-11.04	AVG		
12		18042.500	38.80	23.27	62.07	74.00	-11.93	peak		
13		18042.500	20.68	23.27	43.95	54.00	-10.05	AVG		
14		21846.250	38.59	21.20	59.79	74.00	-14.21	peak		
15		21846.250	19.67	21.20	40.87	54.00	-13.13	AVG		
16		25841.250	41.14	18.69	59.83	74.00	-14.17	peak		
17		25841.250	21.59	18.69	40.28	54.00	-13.72	AVG		

\*:Maximum data x:Over limit !:over margin





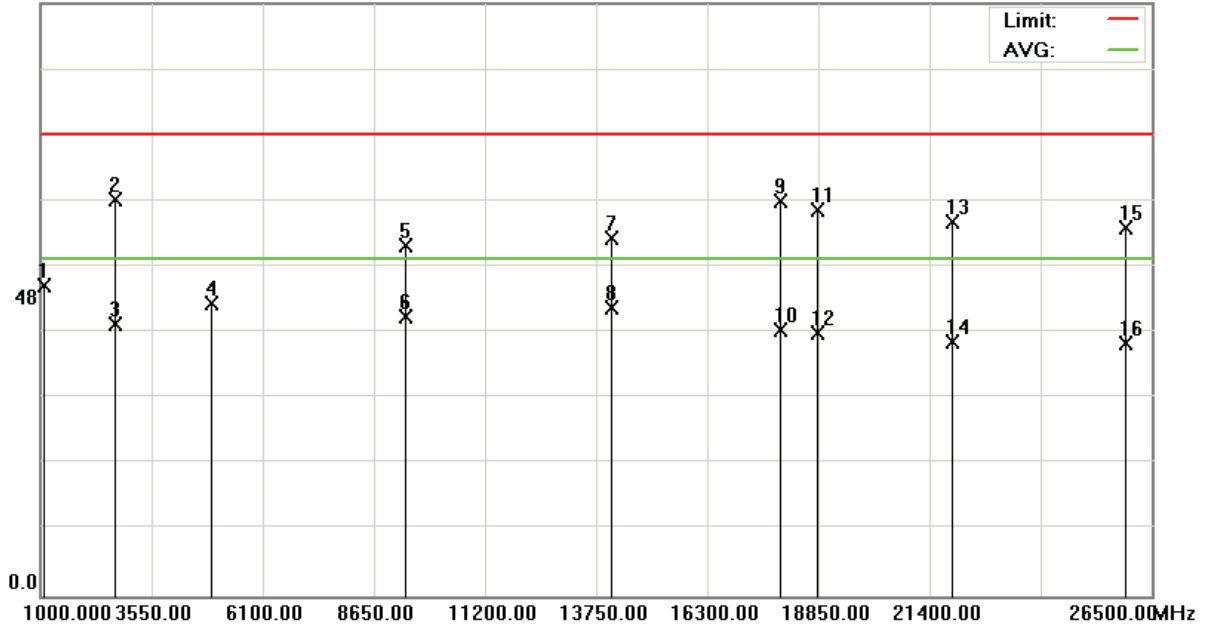
File :EM-200(2462MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:10:52

95.0 dBuV



Site: site #1 Polarization: **Horizontal** Temperature: 22 °C  
 Limit: FCC part 15 (PK) Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note: 2462MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1064.600	55.94	-6.13	49.81	74.00	-24.19	peak		
2		2700.000	40.96	22.58	63.54	74.00	-10.46	peak		
3		2700.000	21.06	22.58	43.64	54.00	-10.36	AVG		
4		4924.000	39.32	7.65	46.97	74.00	-27.03	peak		
5		9361.250	39.30	16.98	56.28	74.00	-17.72	peak		
6		9361.250	27.80	16.98	44.78	54.00	-9.22	AVG		
7		14100.000	38.45	18.90	57.35	74.00	-16.65	peak		
8	*	14100.000	27.32	18.90	46.22	54.00	-7.78	AVG		
9		17980.000	38.09	25.21	63.30	74.00	-10.70	peak		
10		17980.000	17.32	25.21	42.53	54.00	-11.47	AVG		
11		18807.500	38.79	23.16	61.95	74.00	-12.05	peak		
12		18807.500	19.08	23.16	42.24	54.00	-11.76	AVG		
13		21910.000	38.91	21.16	60.07	74.00	-13.93	peak		
14		21910.000	19.65	21.16	40.81	54.00	-13.19	AVG		
15		25905.000	40.39	18.63	59.02	74.00	-14.98	peak		
16		25905.000	21.78	18.63	40.41	54.00	-13.59	AVG		

\*:Maximum data x:Over limit !:over margin



EUT : E-Menu  
Model No. : EM-200  
Test Mode : draft 802.11n Standard-20MHz Link Mode  
Test Date : 08/17 ~ 08/19/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



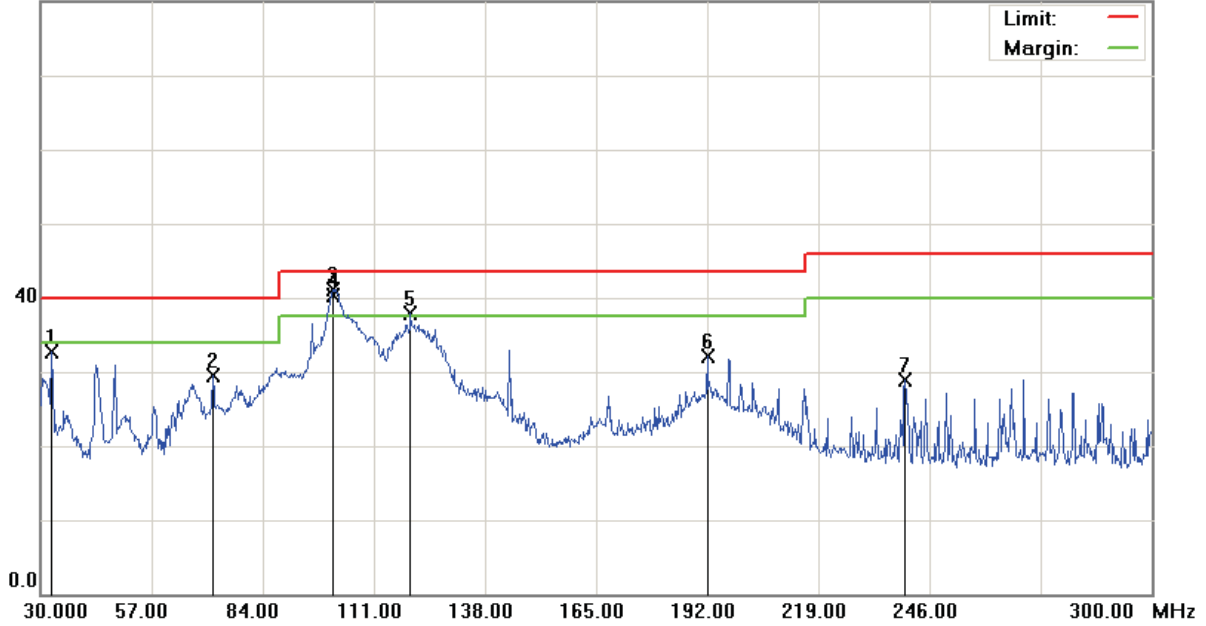
File :EM-200(WIFI)

Data :#1

Date: 2009/8/17

Time: 上午 11:54:08

80.0 dBuV



Site: site #1  
 Limit: FCC Class B 3M Radiation  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note:

Polarization: *Vertical*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		32.7000	45.88	-13.26	32.62	40.00	-7.38	peak			
2		71.8500	46.39	-16.79	29.60	40.00	-10.40	peak			
3	*	101.0100	52.97	-11.82	41.15	43.50	-2.35	peak			
4	!	101.0100	52.16	-11.82	40.34	43.50	-3.16	QP	102	52	
5	!	119.9100	52.17	-14.18	37.99	43.50	-5.51	peak			
6		192.0000	45.44	-13.26	32.18	43.50	-11.32	peak			
7		240.0600	40.31	-11.43	28.88	46.00	-17.12	peak			

\*:Maximum data x:Over limit !:over margin





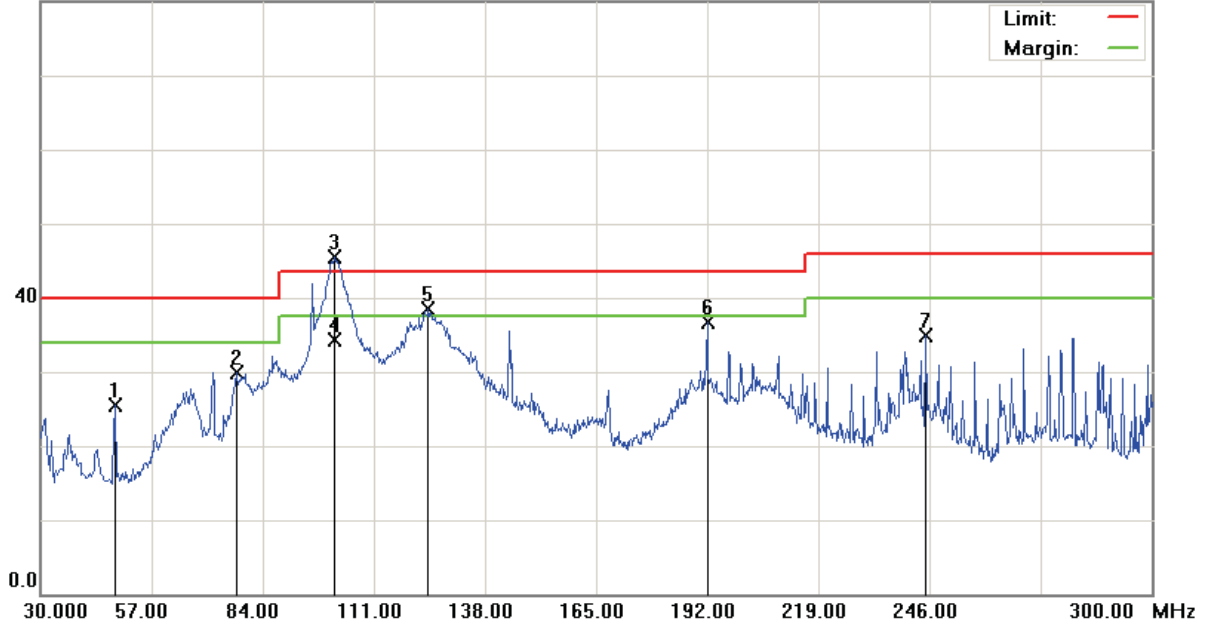
File :EM-200(WIFI)

Data :#3

Date: 2009/8/17

Time: 下午 12:02:36

80.0 dBuV



Site: site #1  
 Limit: FCC Class B 3M Radiation  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note:

Polarization: *Horizontal*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		48.0900	37.54	-12.04	25.50	40.00	-14.50			peak	
2		77.5200	46.81	-16.86	29.95	40.00	-10.05			peak	
3	*	101.5500	57.35	-11.86	45.49	43.50	1.99			peak	
4		101.5500	46.07	-11.86	34.21	43.50	-9.29			QP	
5	!	124.2300	53.46	-14.91	38.55	43.50	-4.95			peak	
6		192.0000	49.99	-13.26	36.73	43.50	-6.77			peak	
7		245.1900	46.08	-11.24	34.84	46.00	-11.16			peak	

\*:Maximum data x:Over limit !:over margin



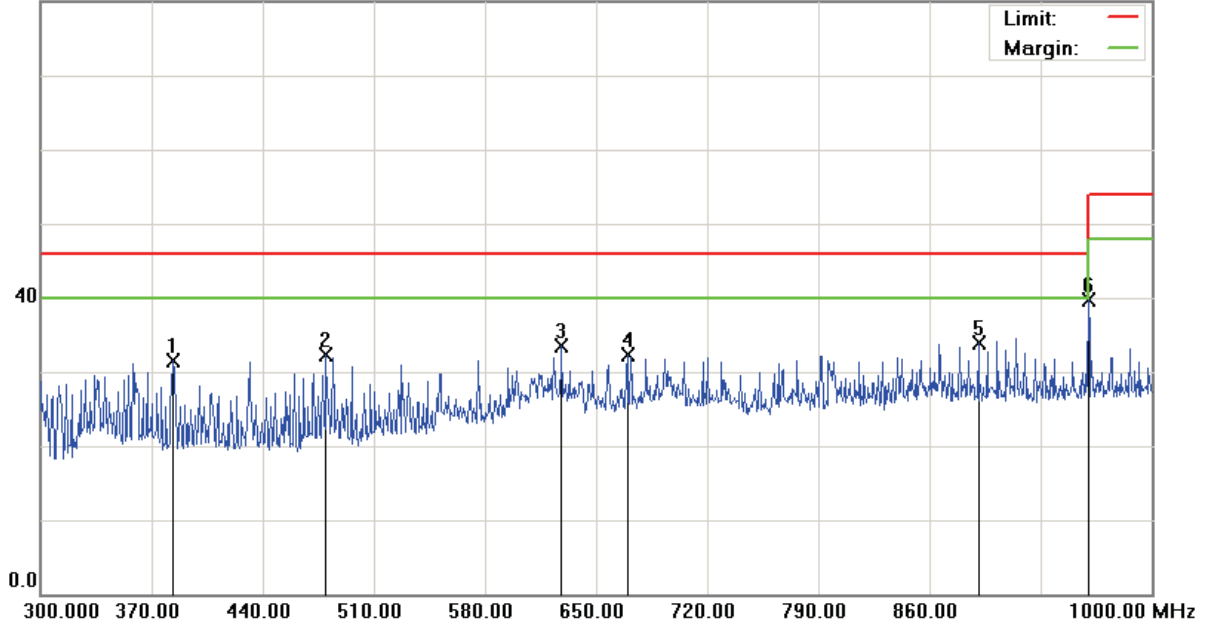
File :EM-200(WIFI)

Data :#4

Date: 2009/8/17

Time: 下午 12:06:50

80.0 dBuV



Site: site #1 Polarization: *Horizontal* Temperature: 22 °C  
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		383.3000	40.10	-8.65	31.45	46.00	-14.55	peak			
2		479.9000	39.87	-7.53	32.34	46.00	-13.66	peak			
3		628.3000	37.87	-4.46	33.41	46.00	-12.59	peak			
4		669.6000	36.53	-4.29	32.24	46.00	-13.76	peak			
5	*	890.8000	34.72	-0.79	33.93	46.00	-12.07	peak			
6		960.1000	39.27	0.43	39.70	54.00	-14.30	peak			

\*:Maximum data x:Over limit !:over margin



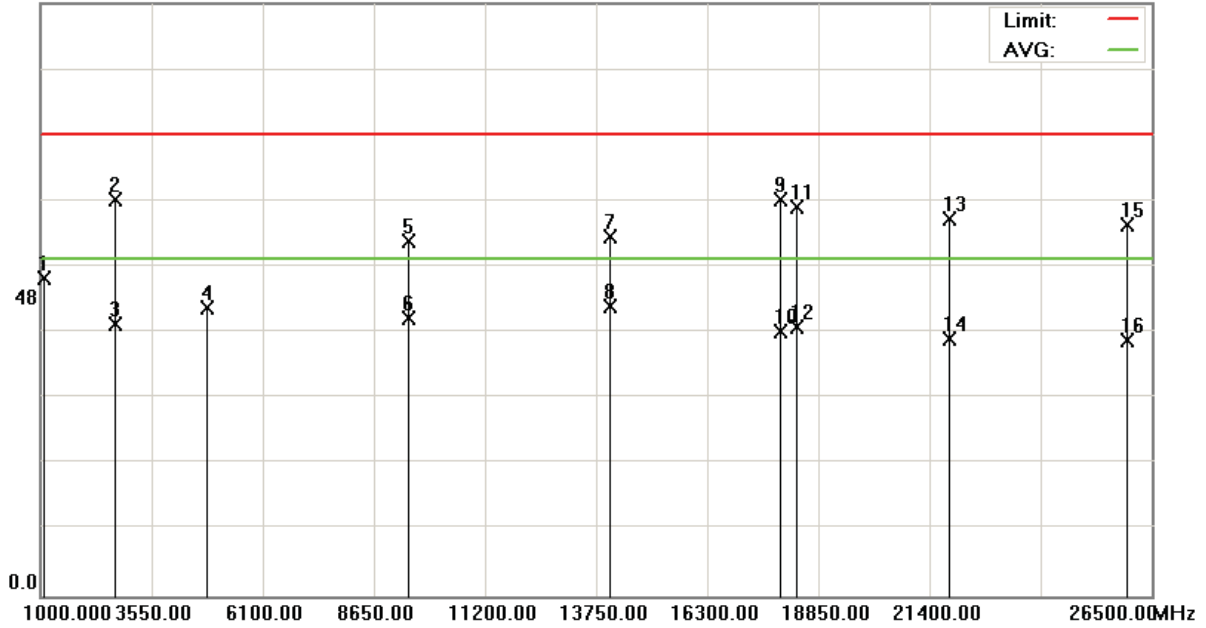
File :EM-200(2412MHz)

Data :#17

Date: 2009/8/19

Time: 上午 02:30:08

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note: 2412MHz

Polarization: **Vertical**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1062.900	57.11	-6.14	50.97	74.00	-23.03	peak		
2		2700.000	40.96	22.58	63.54	74.00	-10.46	peak		
3		2700.000	21.02	22.58	43.60	54.00	-10.40	AVG		
4		4824.000	38.82	7.48	46.30	74.00	-27.70	peak		
5		9416.000	39.74	17.07	56.81	74.00	-17.19	peak		
6		9416.000	27.46	17.07	44.53	54.00	-9.47	AVG		
7		14060.000	38.83	18.72	57.55	74.00	-16.45	peak		
8	*	14060.000	27.62	18.72	46.34	54.00	-7.66	AVG		
9		17980.000	38.42	25.21	63.63	74.00	-10.37	peak		
10		17980.000	17.27	25.21	42.48	54.00	-11.52	AVG		
11		18361.250	39.09	23.16	62.25	74.00	-11.75	peak		
12		18361.250	20.00	23.16	43.16	54.00	-10.84	AVG		
13		21846.250	39.29	21.20	60.49	74.00	-13.51	peak		
14		21846.250	20.05	21.20	41.25	54.00	-12.75	AVG		
15		25926.250	40.85	18.62	59.47	74.00	-14.53	peak		
16		25926.250	22.28	18.62	40.90	54.00	-13.10	AVG		

\*:Maximum data x:Over limit !:over margin



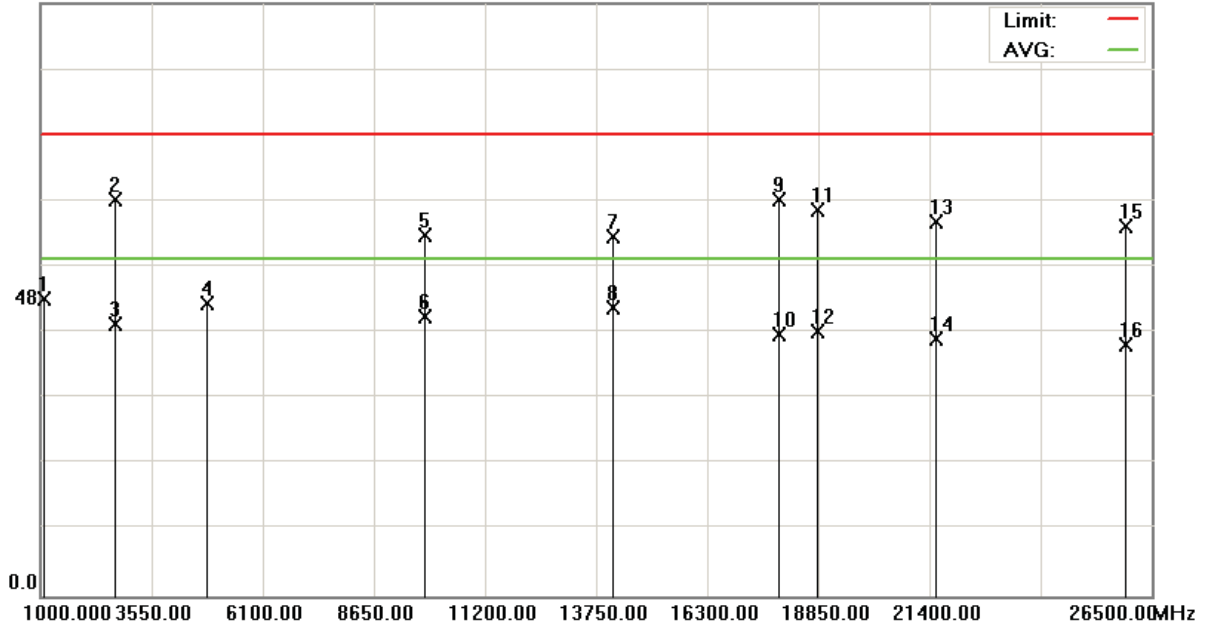
File :EM-200(2412MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:01:23

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note: 2412MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		1061.200	53.84	-6.13	47.71	74.00	-26.29			peak	
2		2700.000	41.01	22.58	63.59	74.00	-10.41			peak	
3		2700.000	21.06	22.58	43.64	54.00	-10.36			AVG	
4		4824.000	39.48	7.48	46.96	74.00	-27.04			peak	
5		9799.250	40.14	17.67	57.81	74.00	-16.19			peak	
6		9799.250	27.03	17.67	44.70	54.00	-9.30			AVG	
7		14120.000	38.67	18.87	57.54	74.00	-16.46			peak	
8	*	14120.000	27.36	18.87	46.23	54.00	-7.77			AVG	
9		17920.000	38.61	24.84	63.45	74.00	-10.55			peak	
10		17920.000	17.19	24.84	42.03	54.00	-11.97			AVG	
11		18807.500	38.70	23.16	61.86	74.00	-12.14			peak	
12		18807.500	19.22	23.16	42.38	54.00	-11.62			AVG	
13		21548.750	38.60	21.33	59.93	74.00	-14.07			peak	
14		21548.750	19.78	21.33	41.11	54.00	-12.89			AVG	
15		25883.750	40.56	18.65	59.21	74.00	-14.79			peak	
16		25883.750	21.71	18.65	40.36	54.00	-13.64			AVG	

\*:Maximum data x:Over limit !:over margin







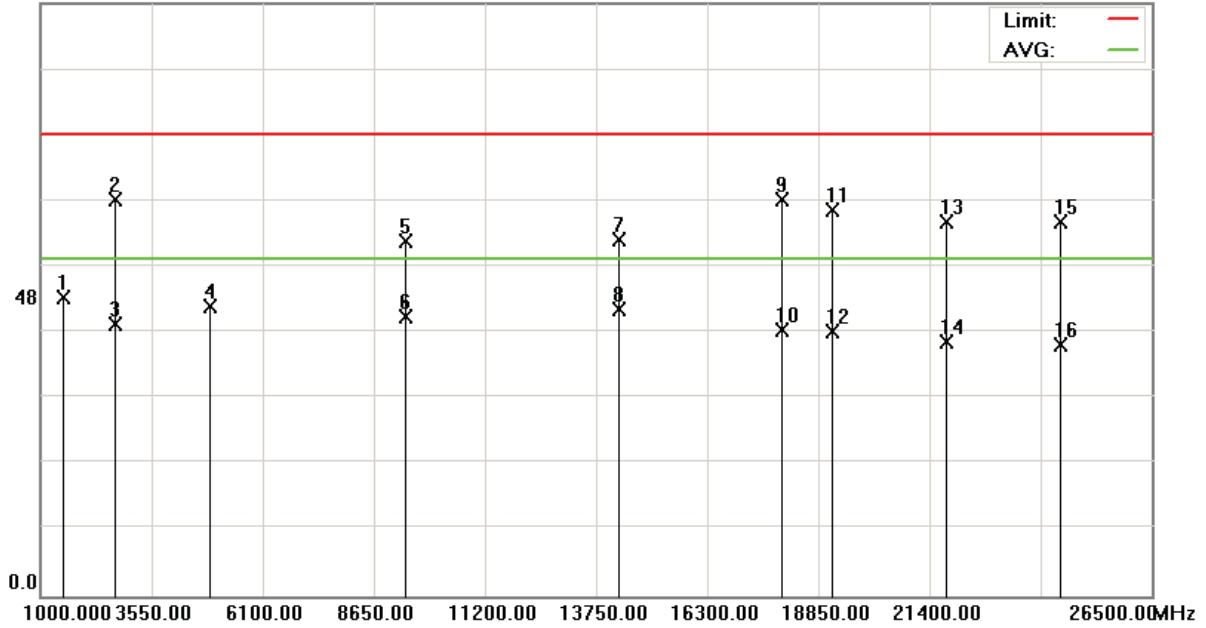
File :EM-200(2437MHz)

Data :#18

Date: 2009/8/19

Time: 上午 03:04:30

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note: 2437MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1496.400	51.61	-3.85	47.76	74.00	-26.24	peak		
2		2700.000	41.07	22.58	63.65	74.00	-10.35	peak		
3		2700.000	20.95	22.58	43.53	54.00	-10.47	AVG		
4		4874.000	38.83	7.72	46.55	74.00	-27.45	peak		
5		9361.250	40.00	16.98	56.98	74.00	-17.02	peak		
6		9361.250	27.79	16.98	44.77	54.00	-9.23	AVG		
7		14260.000	38.42	18.66	57.08	74.00	-16.92	peak		
8	*	14260.000	27.39	18.66	46.05	54.00	-7.95	AVG		
9		18000.000	38.03	25.57	63.60	74.00	-10.40	peak		
10		18000.000	17.10	25.57	42.67	54.00	-11.33	AVG		
11		19168.750	38.92	22.95	61.87	74.00	-12.13	peak		
12		19168.750	19.34	22.95	42.29	54.00	-11.71	AVG		
13		21782.500	38.66	21.22	59.88	74.00	-14.12	peak		
14		21782.500	19.52	21.22	40.74	54.00	-13.26	AVG		
15		24396.250	40.15	19.72	59.87	74.00	-14.13	peak		
16		24396.250	20.62	19.72	40.34	54.00	-13.66	AVG		

\*:Maximum data x:Over limit !:over margin







EUT : E-Menu  
Model No. : EM-200  
Test Mode : draft 802.11n Wide-40MHz Link Mode  
Test Date : 08/17 ~ 08/19/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



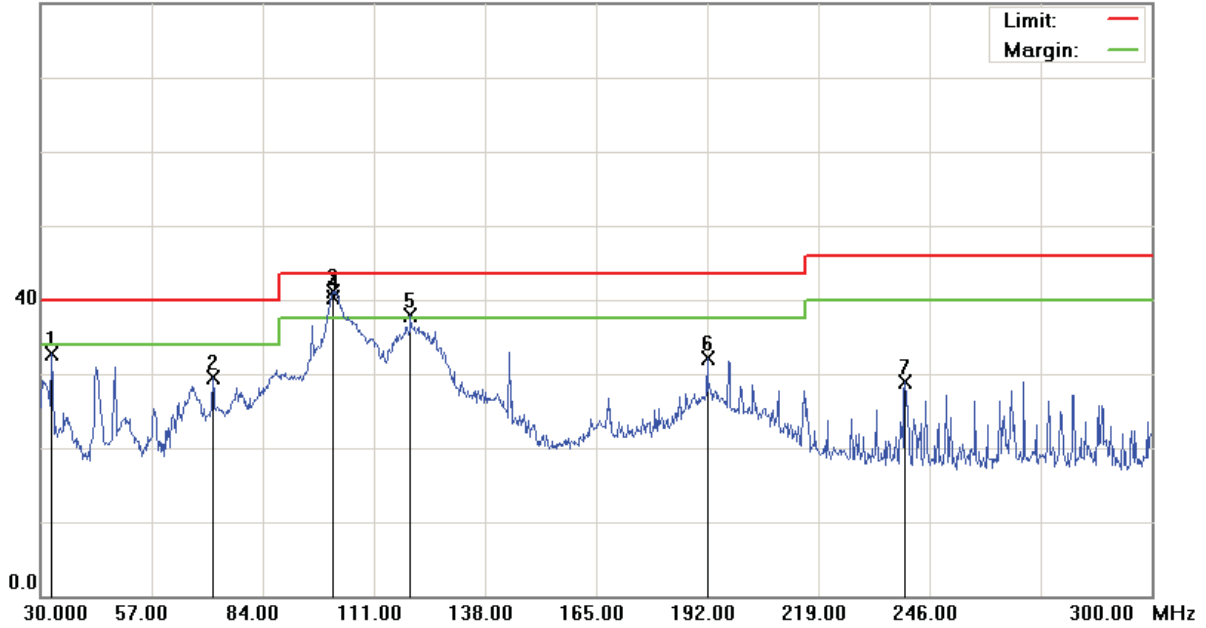
File :EM-200(WIFI)

Data :#1

Date: 2009/8/17

Time: 上午 11:54:08

80.0 dBuV



Site: site #1 Polarization: *Vertical* Temperature: 22 °C  
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		32.7000	45.88	-13.26	32.62	40.00	-7.38	peak			
2		71.8500	46.39	-16.79	29.60	40.00	-10.40	peak			
3	*	101.0100	52.97	-11.82	41.15	43.50	-2.35	peak			
4	!	101.0100	52.16	-11.82	40.34	43.50	-3.16	QP	102	52	
5	!	119.9100	52.17	-14.18	37.99	43.50	-5.51	peak			
6		192.0000	45.44	-13.26	32.18	43.50	-11.32	peak			
7		240.0600	40.31	-11.43	28.88	46.00	-17.12	peak			

\*:Maximum data x:Over limit !:over margin





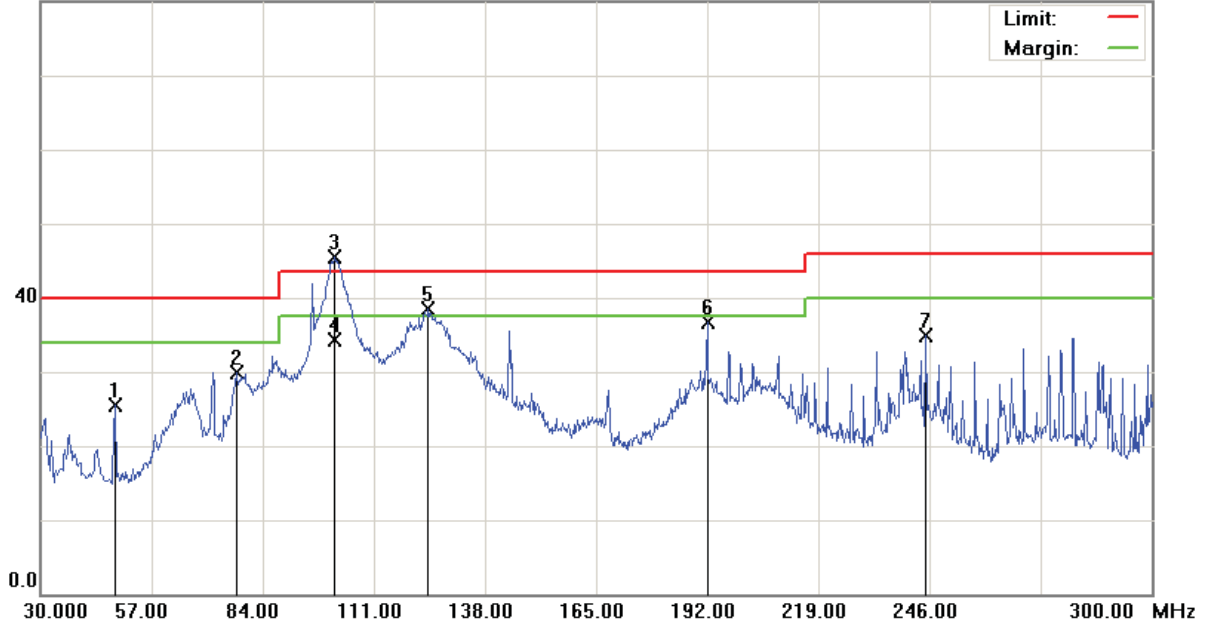
File :EM-200(WIFI)

Data :#3

Date: 2009/8/17

Time: 下午 12:02:36

80.0 dBuV



Site: site #1  
 Limit: FCC Class B 3M Radiation  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note:

Polarization: *Horizontal*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		48.0900	37.54	-12.04	25.50	40.00	-14.50			peak	
2		77.5200	46.81	-16.86	29.95	40.00	-10.05			peak	
3	*	101.5500	57.35	-11.86	45.49	43.50	1.99			peak	
4		101.5500	46.07	-11.86	34.21	43.50	-9.29			QP	
5	!	124.2300	53.46	-14.91	38.55	43.50	-4.95			peak	
6		192.0000	49.99	-13.26	36.73	43.50	-6.77			peak	
7		245.1900	46.08	-11.24	34.84	46.00	-11.16			peak	

\*:Maximum data x:Over limit !:over margin





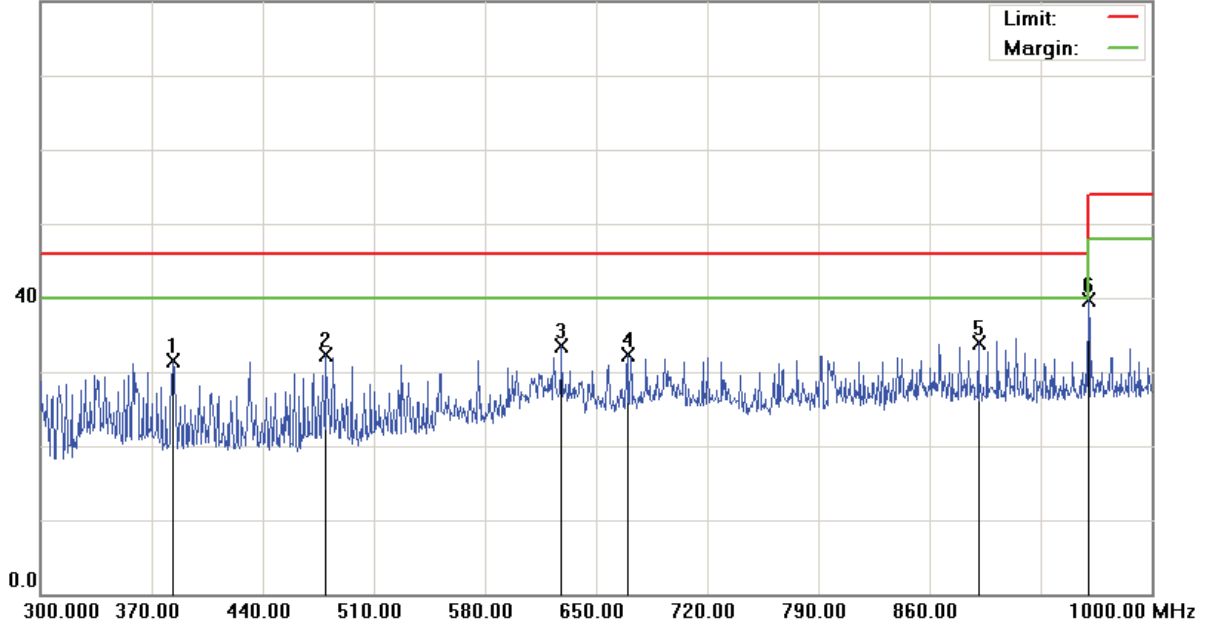
File :EM-200(WIFI)

Data :#4

Date: 2009/8/17

Time: 下午 12:06:50

80.0 dBuV



Site: site #1 Polarization: *Horizontal* Temperature: 22 °C  
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
 EUT: Distance: 3m  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		383.3000	40.10	-8.65	31.45	46.00	-14.55	peak			
2		479.9000	39.87	-7.53	32.34	46.00	-13.66	peak			
3		628.3000	37.87	-4.46	33.41	46.00	-12.59	peak			
4		669.6000	36.53	-4.29	32.24	46.00	-13.76	peak			
5	*	890.8000	34.72	-0.79	33.93	46.00	-12.07	peak			
6		960.1000	39.27	0.43	39.70	54.00	-14.30	peak			

\*:Maximum data x:Over limit !:over margin





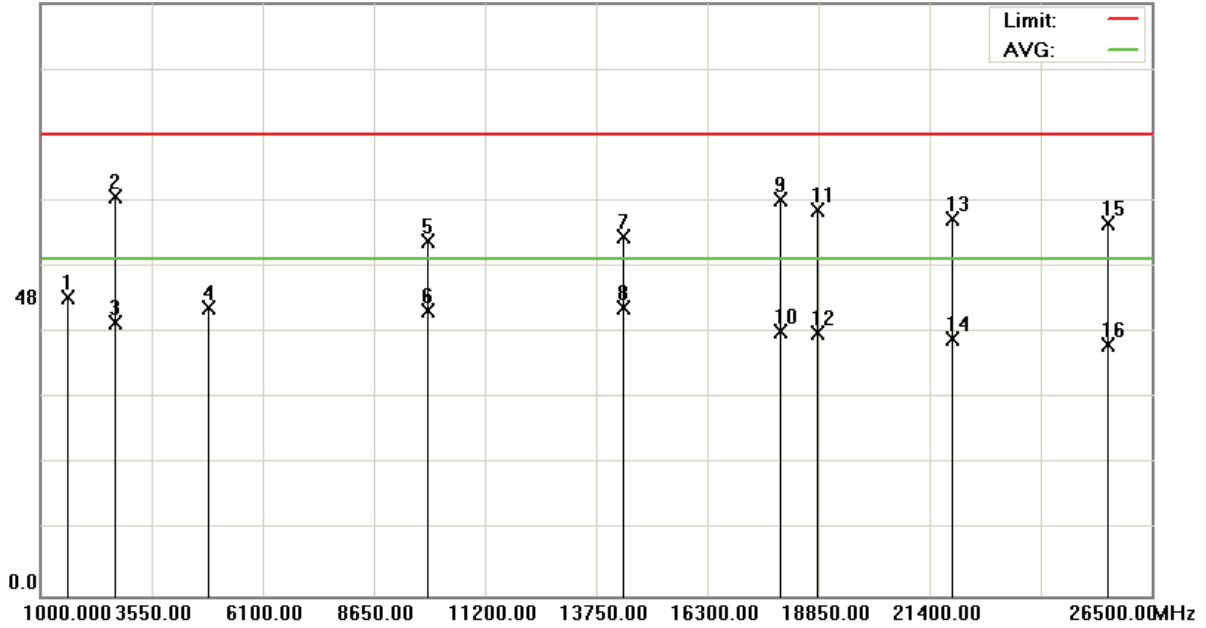
File :EM-200(2422MHz)

Data :#18

Date: 2009/8/19

Time: 上午 02:51:49

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note: 2422MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1		1595.000	51.65	-3.77	47.88	74.00	-26.12			peak	
2		2700.000	41.54	22.58	64.12	74.00	-9.88			peak	
3		2700.000	21.13	22.58	43.71	54.00	-10.29			AVG	
4		4844.000	38.64	7.67	46.31	74.00	-27.69			peak	
5		9872.250	38.96	17.84	56.80	74.00	-17.20			peak	
6		9872.250	27.86	17.84	45.70	54.00	-8.30			AVG	
7		14340.000	39.03	18.54	57.57	74.00	-16.43			peak	
8	*	14340.000	27.72	18.54	46.26	54.00	-7.74			AVG	
9		17980.000	38.24	25.21	63.45	74.00	-10.55			peak	
10		17980.000	17.07	25.21	42.28	54.00	-11.72			AVG	
11		18807.500	38.73	23.16	61.89	74.00	-12.11			peak	
12		18807.500	18.93	23.16	42.09	54.00	-11.91			AVG	
13		21888.750	39.20	21.18	60.38	74.00	-13.62			peak	
14		21888.750	19.95	21.18	41.13	54.00	-12.87			AVG	
15		25458.750	40.68	19.01	59.69	74.00	-14.31			peak	
16		25458.750	21.23	19.01	40.24	54.00	-13.76			AVG	

\*:Maximum data x:Over limit !:over margin



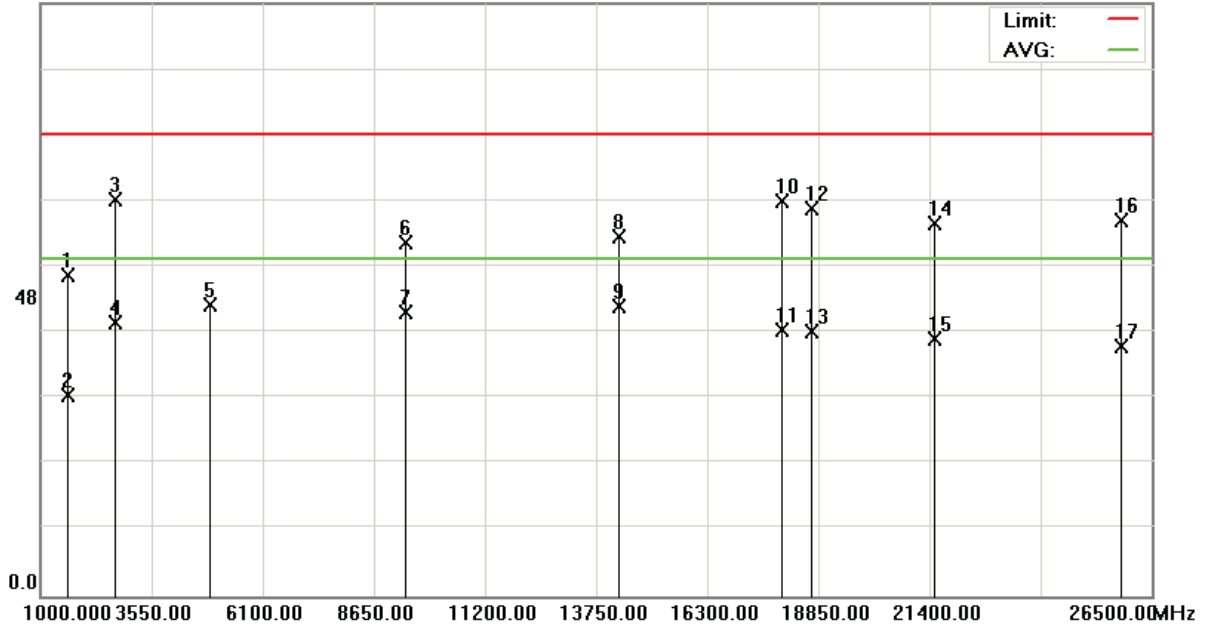
File :EM-200(2437MHz)

Data :#17

Date: 2009/8/19

Time: 上午 02:44:20

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note: 2437MHz

Polarization: **Vertical**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1593.300	55.22	-3.78	51.44	74.00	-22.56	peak		
2		1593.300	36.06	-3.78	32.28	54.00	-21.72	AVG		
3		2700.000	40.97	22.58	63.55	74.00	-10.45	peak		
4		2700.000	21.29	22.58	43.87	54.00	-10.13	AVG		
5		4884.000	38.89	7.74	46.63	74.00	-27.37	peak		
6		9343.000	39.79	16.93	56.72	74.00	-17.28	peak		
7		9343.000	28.60	16.93	45.53	54.00	-8.47	AVG		
8		14240.000	38.91	18.71	57.62	74.00	-16.38	peak		
9	*	14240.000	27.76	18.71	46.47	54.00	-7.53	AVG		
10		18000.000	37.74	25.57	63.31	74.00	-10.69	peak		
11		18000.000	17.08	25.57	42.65	54.00	-11.35	AVG		
12		18680.000	39.02	23.09	62.11	74.00	-11.89	peak		
13		18680.000	19.27	23.09	42.36	54.00	-11.64	AVG		
14		21527.500	38.43	21.35	59.78	74.00	-14.22	peak		
15		21527.500	19.87	21.35	41.22	54.00	-12.78	AVG		
16		25798.750	41.43	18.72	60.15	74.00	-13.85	peak		
17		25798.750	21.34	18.72	40.06	54.00	-13.94	AVG		

\*:Maximum data x:Over limit !:over margin



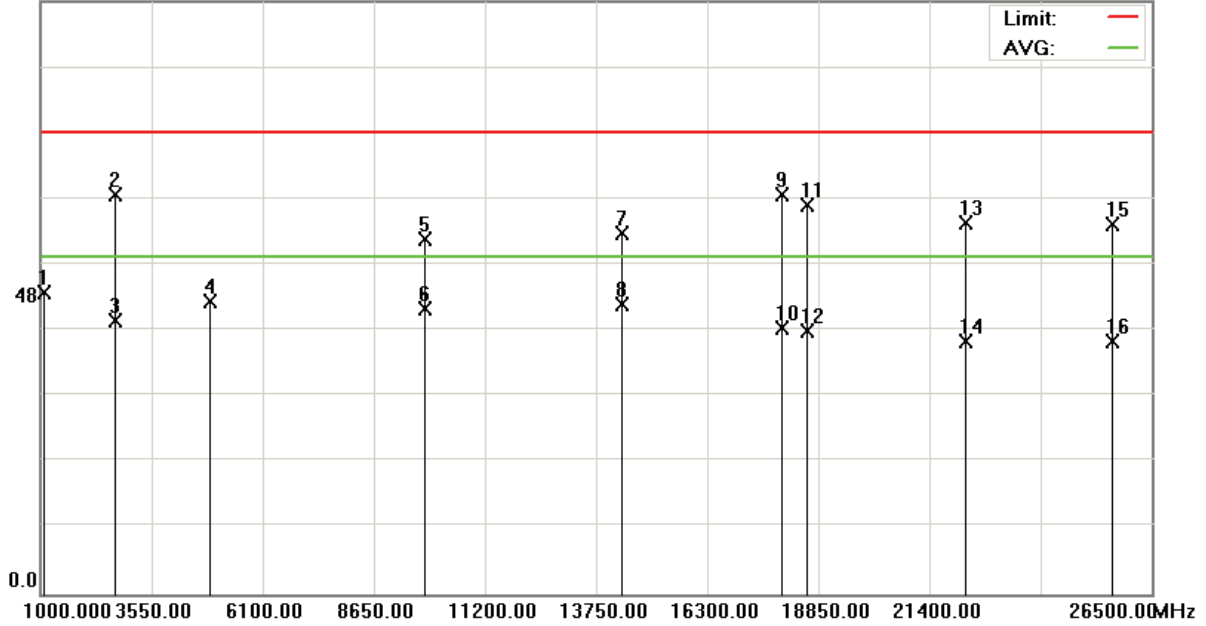
File :EM-200(2437MHz)

Data :#18

Date: 2009/8/19

Time: 上午 02:54:53

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note: 2437MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1064.600	54.53	-6.13	48.40	74.00	-25.60	peak		
2		2700.000	41.36	22.58	63.94	74.00	-10.06	peak		
3		2700.000	21.30	22.58	43.88	54.00	-10.12	AVG		
4		4884.000	39.09	7.74	46.83	74.00	-27.17	peak		
5		9817.500	39.24	17.75	56.99	74.00	-17.01	peak		
6		9817.500	27.91	17.75	45.66	54.00	-8.34	AVG		
7		14320.000	39.25	18.57	57.82	74.00	-16.18	peak		
8	*	14320.000	27.77	18.57	46.34	54.00	-7.66	AVG		
9		18000.000	38.33	25.57	63.90	74.00	-10.10	peak		
10		18000.000	17.08	25.57	42.65	54.00	-11.35	AVG		
11		18595.000	39.29	23.07	62.36	74.00	-11.64	peak		
12		18595.000	19.17	23.07	42.24	54.00	-11.76	AVG		
13		22207.500	38.59	21.02	59.61	74.00	-14.39	peak		
14		22207.500	19.52	21.02	40.54	54.00	-13.46	AVG		
15		25565.000	40.31	18.94	59.25	74.00	-14.75	peak		
16		25565.000	21.59	18.94	40.53	54.00	-13.47	AVG		

\*:Maximum data x:Over limit !:over margin





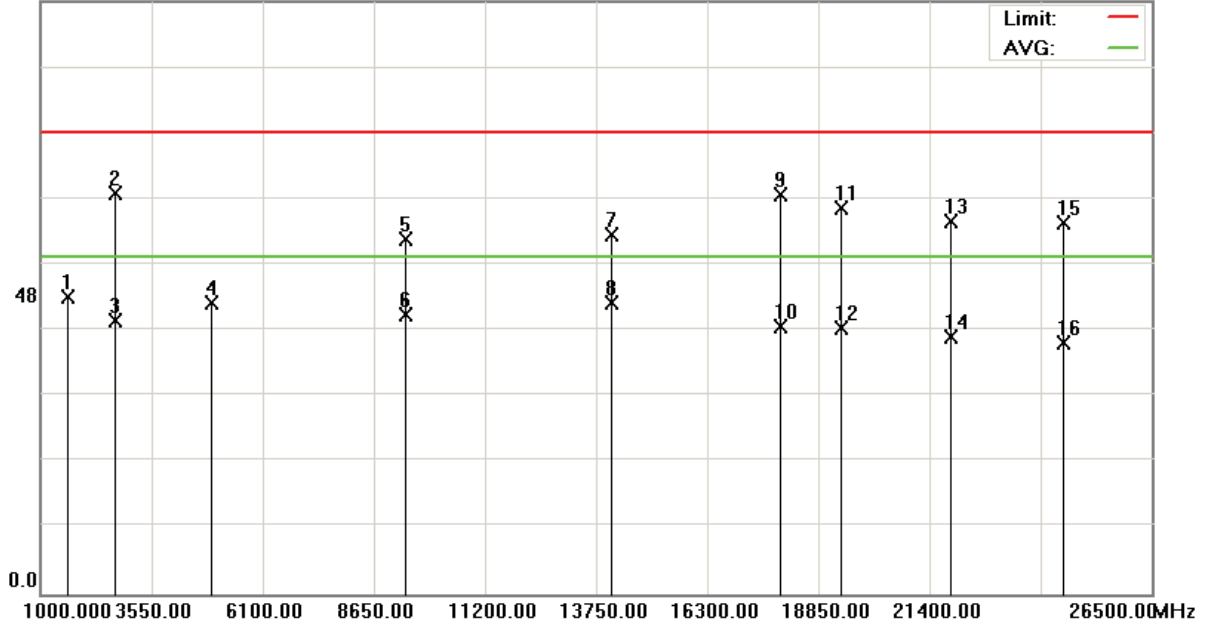
File :EM-200(2452MHz)

Data :#18

Date: 2009/8/19

Time: 上午 02:58:10

95.0 dBuV



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note: 2452MHz

Polarization: **Horizontal**  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1593.300	51.44	-3.78	47.66	74.00	-26.34	peak		
2		2700.000	41.68	22.58	64.26	74.00	-9.74	peak		
3		2700.000	21.16	22.58	43.74	54.00	-10.26	AVG		
4		4904.000	39.06	7.71	46.77	74.00	-27.23	peak		
5		9343.000	39.99	16.93	56.92	74.00	-17.08	peak		
6		9343.000	27.90	16.93	44.83	54.00	-9.17	AVG		
7		14100.000	38.79	18.90	57.69	74.00	-16.31	peak		
8	*	14100.000	27.78	18.90	46.68	54.00	-7.32	AVG		
9		17980.000	38.70	25.21	63.91	74.00	-10.09	peak		
10		17980.000	17.64	25.21	42.85	54.00	-11.15	AVG		
11		19338.750	39.08	22.87	61.95	74.00	-12.05	peak		
12		19338.750	19.87	22.87	42.74	54.00	-11.26	AVG		
13		21867.500	38.60	21.19	59.79	74.00	-14.21	peak		
14		21867.500	20.08	21.19	41.27	54.00	-12.73	AVG		
15		24438.750	39.70	19.69	59.39	74.00	-14.61	peak		
16		24438.750	20.67	19.69	40.36	54.00	-13.64	AVG		

\*:Maximum data x:Over limit !:over margin



## 4. Maximum Conducted Output Power Requirements

### 4.1 Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to spectrum analyzer. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the spectrum Analyzer, for prevent the spectrum analyzer input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to  $(GAIN - 6)/3$  dBm.

The antenna port of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

### 4.2 Limits

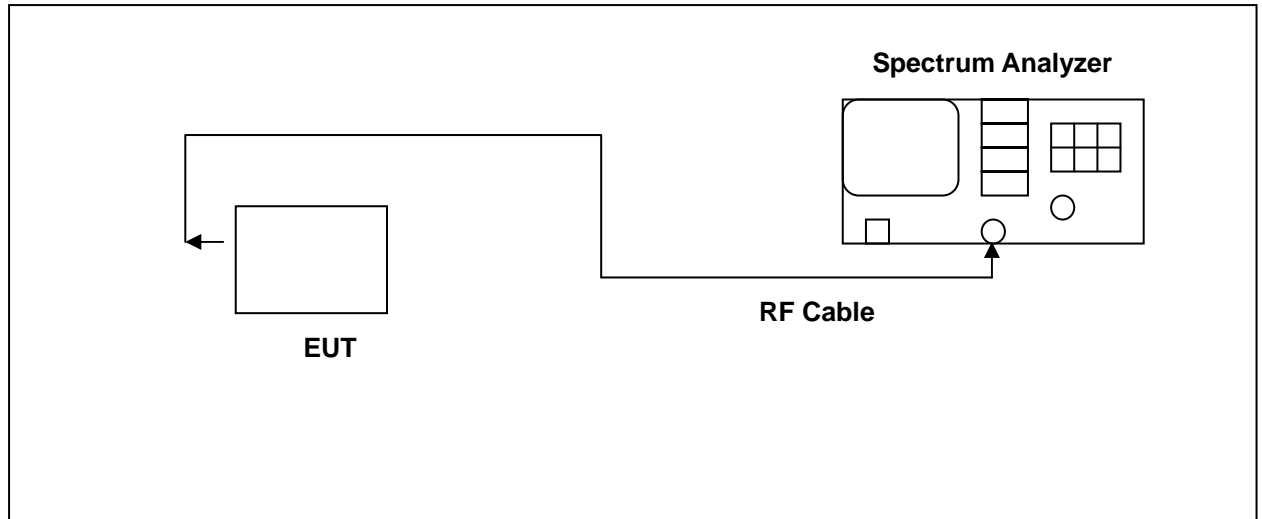
For systems using digital modulation in the 2400 - 2483.5 MHz bands: 1 Watt.

### 4.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY46181986	May 15, 2009	May 15, 2010



#### 4.4 Test Instruments Configuration



#### 4.5 Test Result

##### IEEE 802.11b

Frequency (MHz)	Average		Peak		Required Limit
	dBm	W	dBm	W	
2412	16.60	0.046	19.30	0.085	< 1W
2437	16.80	0.048	19.60	0.091	< 1W
2462	16.93	0.049	19.63	0.092	< 1W

##### IEEE 802.11g

Frequency (MHz)	Average		Peak		Required Limit
	dBm	W	dBm	W	
2412	16.16	0.041	22.93	0.196	< 1W
2437	16.50	0.045	23.14	0.206	< 1W
2462	17.00	0.050	23.53	0.225	< 1W



**draft 802.11n Standard-20MHz**

Frequency (MHz)	Average		Peak		Required Limit
	dBm	W	dBm	W	
2412	15.70	0.037	22.86	0.193	< 1W
2437	15.88	0.039	23.22	0.210	< 1W
2462	15.67	0.037	23.17	0.207	< 1W

**draft 802.11n Wide-40MHz**

Frequency (MHz)	Average		Peak		Required Limit
	dBm	W	dBm	W	
2422	16.00	0.040	22.86	0.193	< 1W
2437	16.04	0.040	23.00	0.200	< 1W
2452	15.94	0.039	23.02	0.200	< 1W

## 5. Minimum 6dB RF Bandwidth Requirements

### 5.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels (Channel 1, 6, 11)

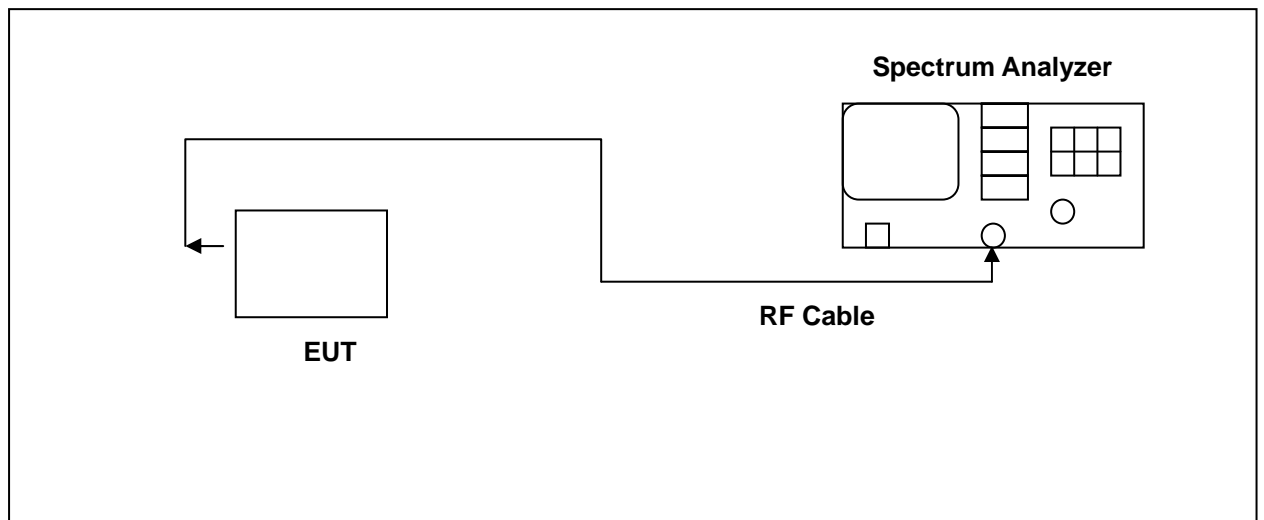
### 5.2 Limits

Systems using digital modulation techniques may operate in the 2400–2483.5 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

### 5.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY46181986	May 15, 2009	May 15, 2010

### 5.4 Test Instruments Configuration





## 5.5 Test Result

### IEEE 802.11b

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	13.125	> 500 KHz
2437	13.000	> 500 KHz
2462	13.125	> 500 KHz

### IEEE 802.11g

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	16.500	> 500 KHz
2437	16.500	> 500 KHz
2462	16.500	> 500 KHz

### draft 802.11n Standard-20MHz

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	17.500	> 500 KHz
2437	17.500	> 500 KHz
2462	17.750	> 500 KHz

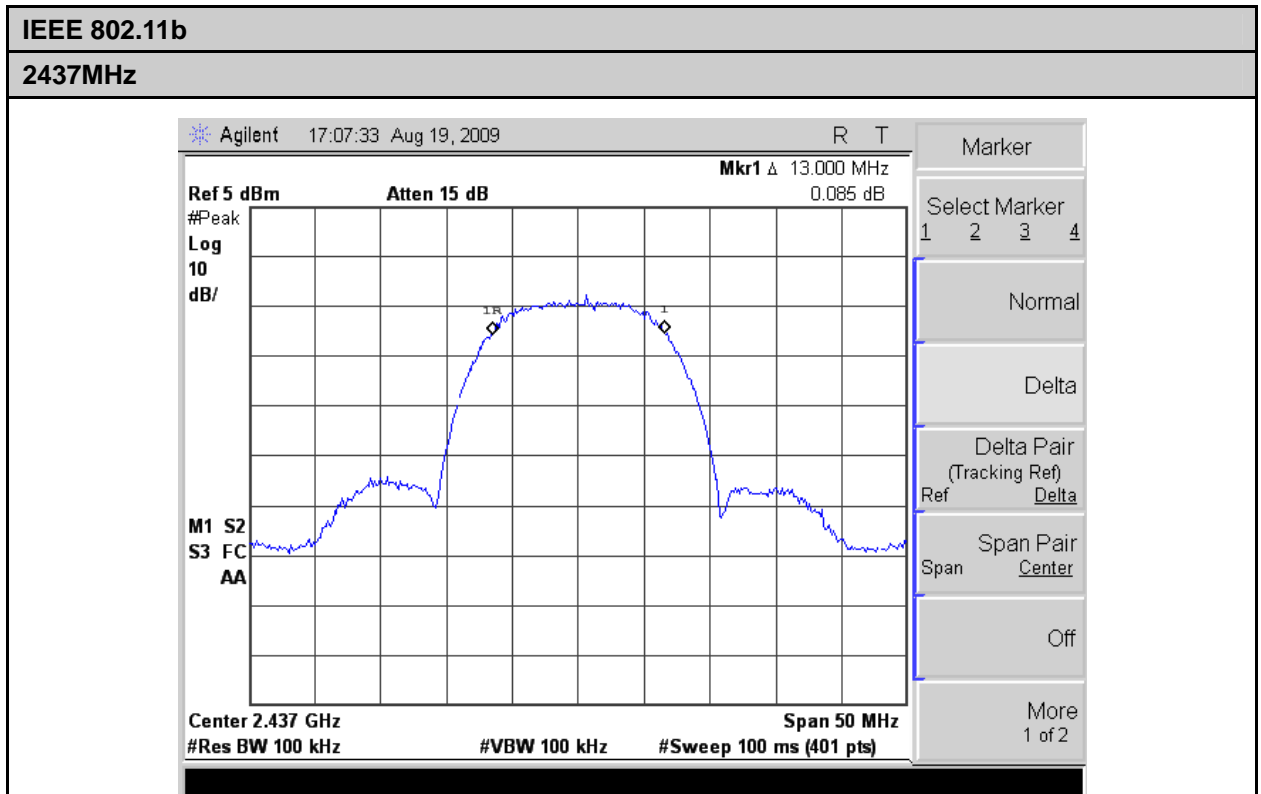
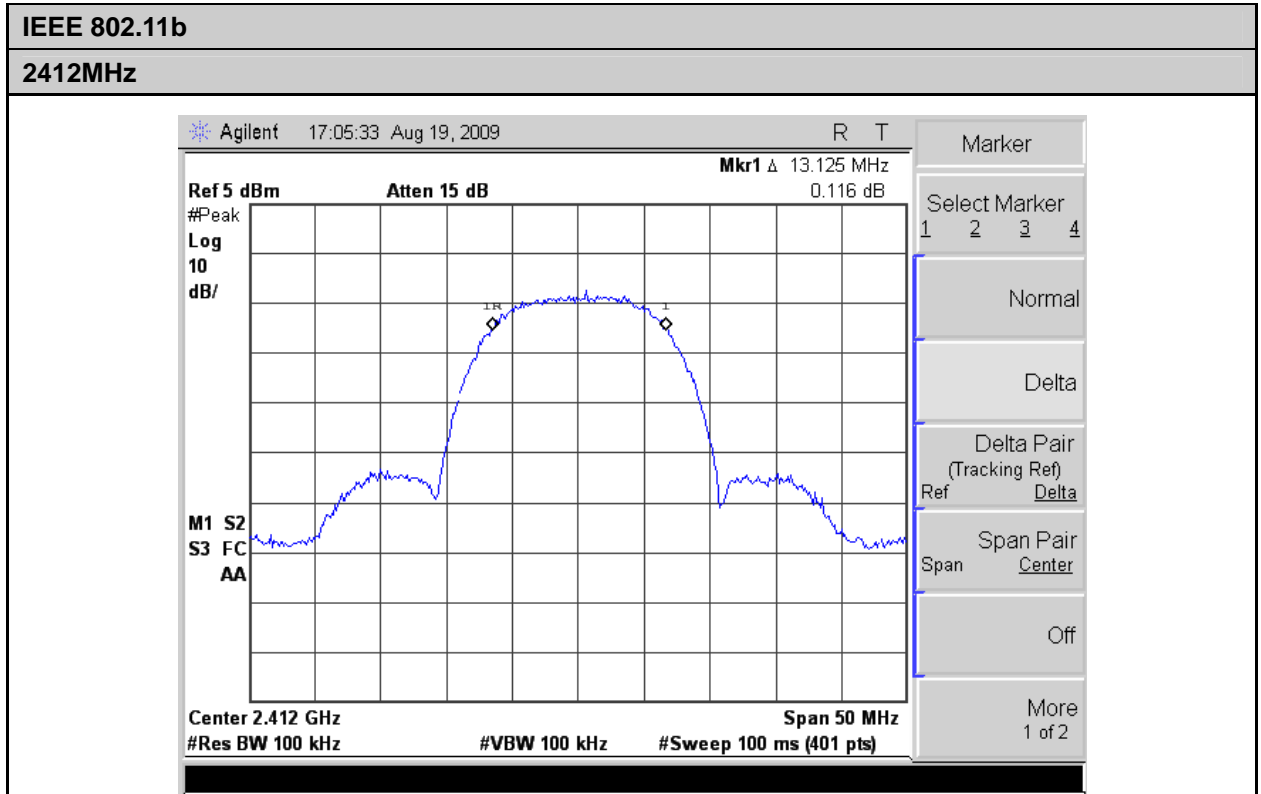
### draft 802.11n Wide-40MHz

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2422	36.500	> 500 KHz
2437	36.500	> 500 KHz
2452	36.500	> 500 KHz

Note: Test Graphs See next page.



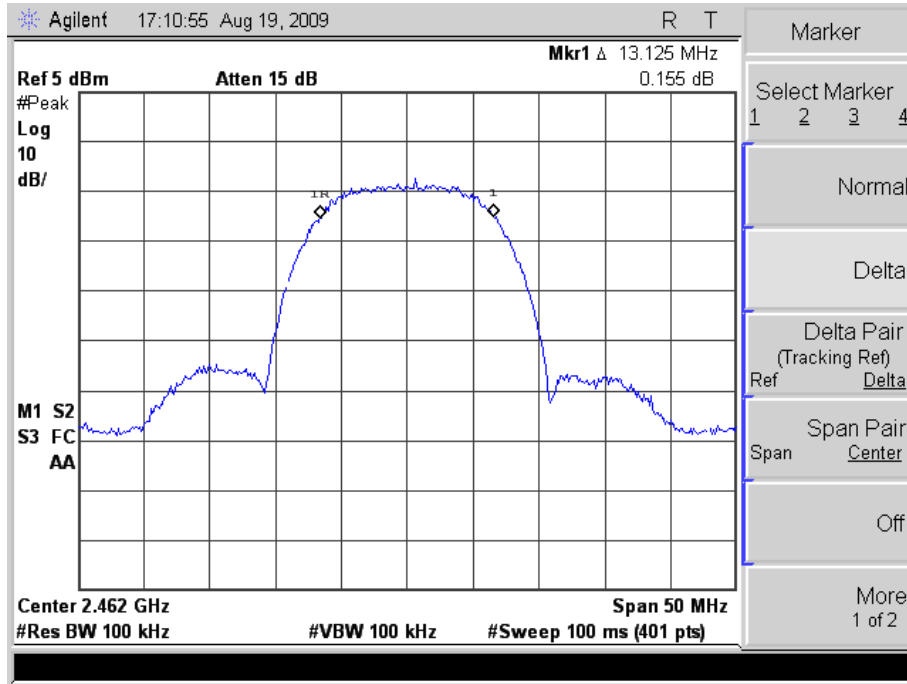
## 5.6 Test Graphs





IEEE 802.11b

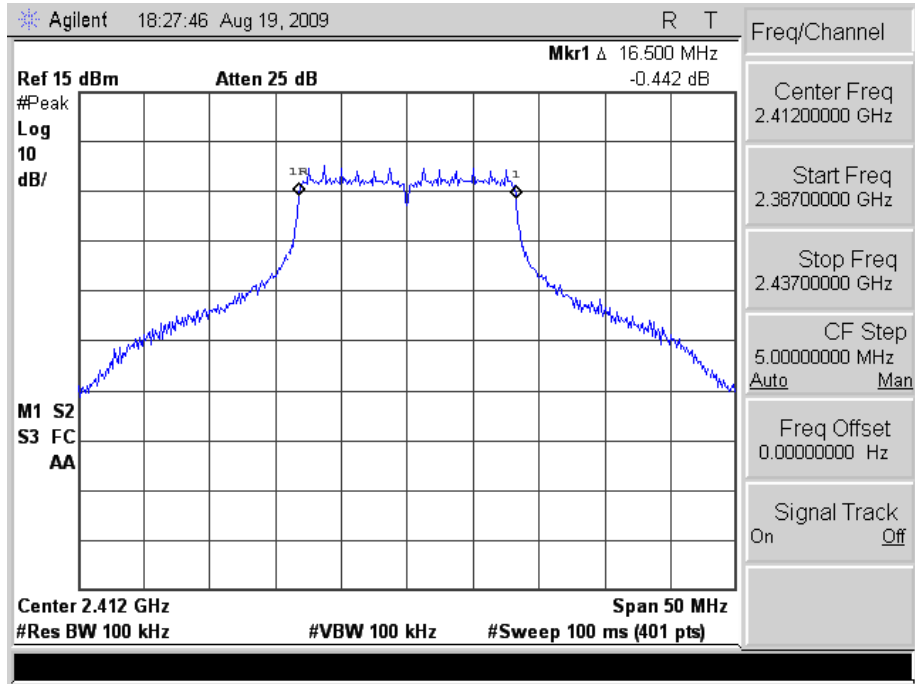
2462MHz





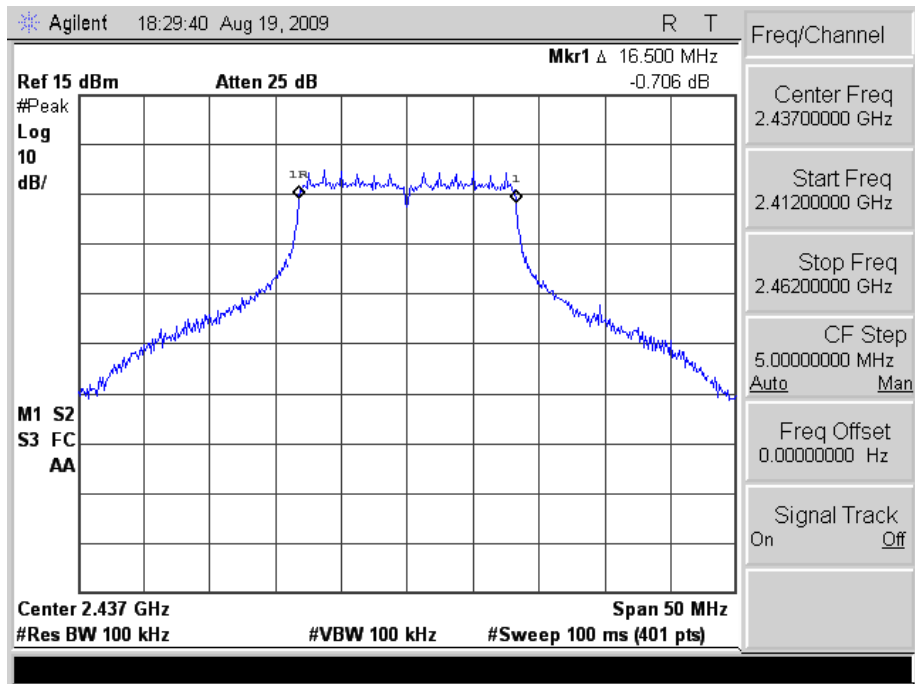
**IEEE 802.11g**

**2412MHz**



**IEEE 802.11g**

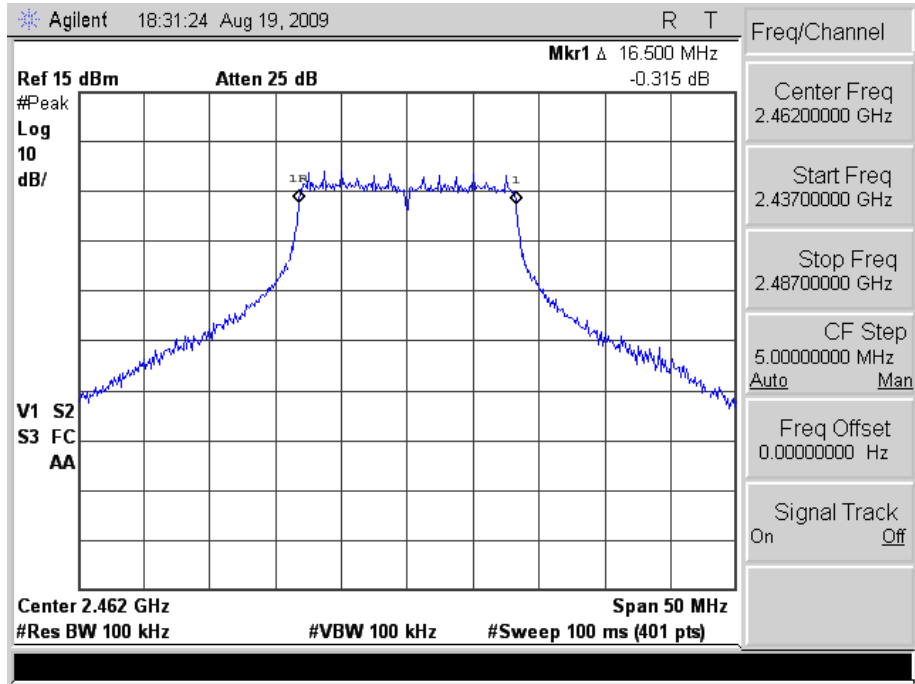
**2437MHz**





IEEE 802.11g

2462MHz

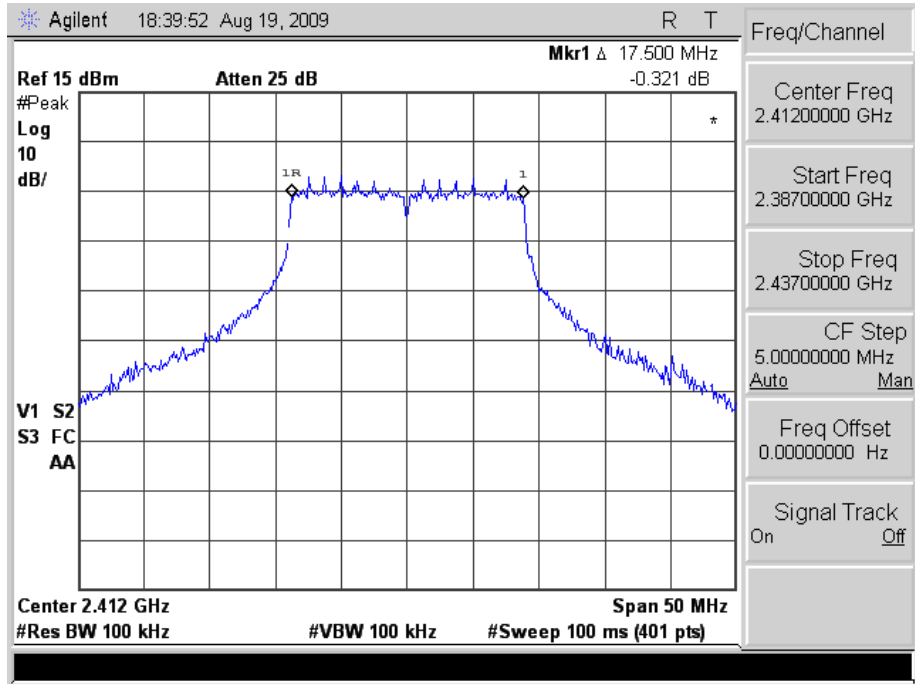






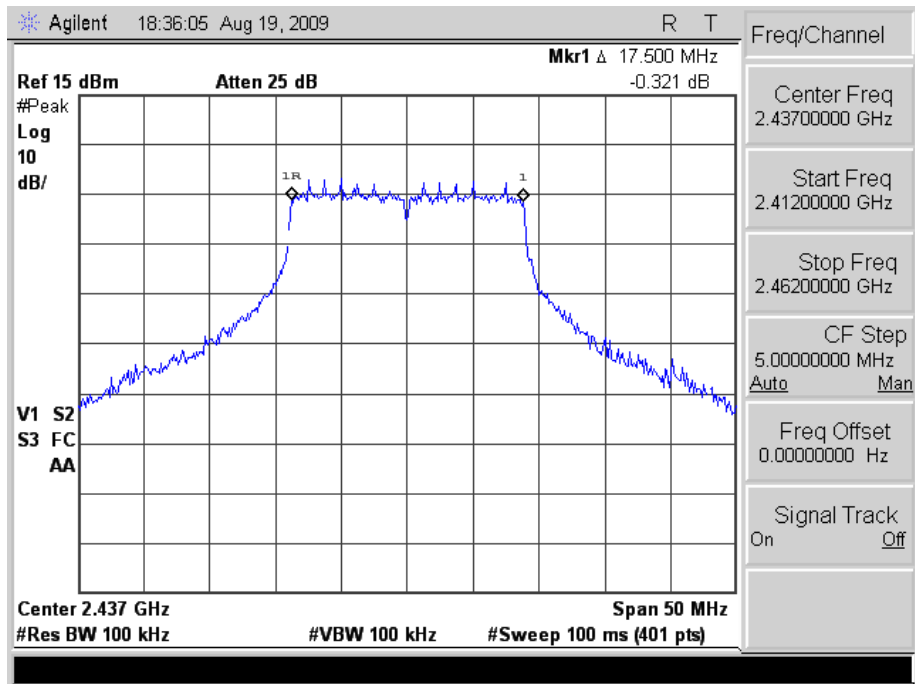
draft 802.11n Standard-20MHz

2412MHz



draft 802.11n Standard-20MHz

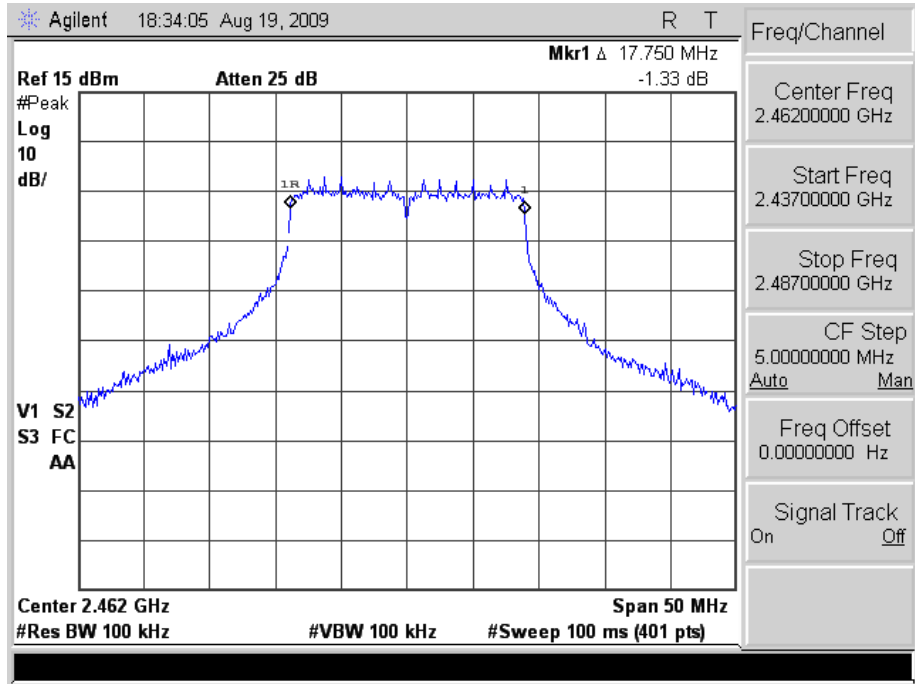
2437MHz





draft 802.11n Standard-20MHz

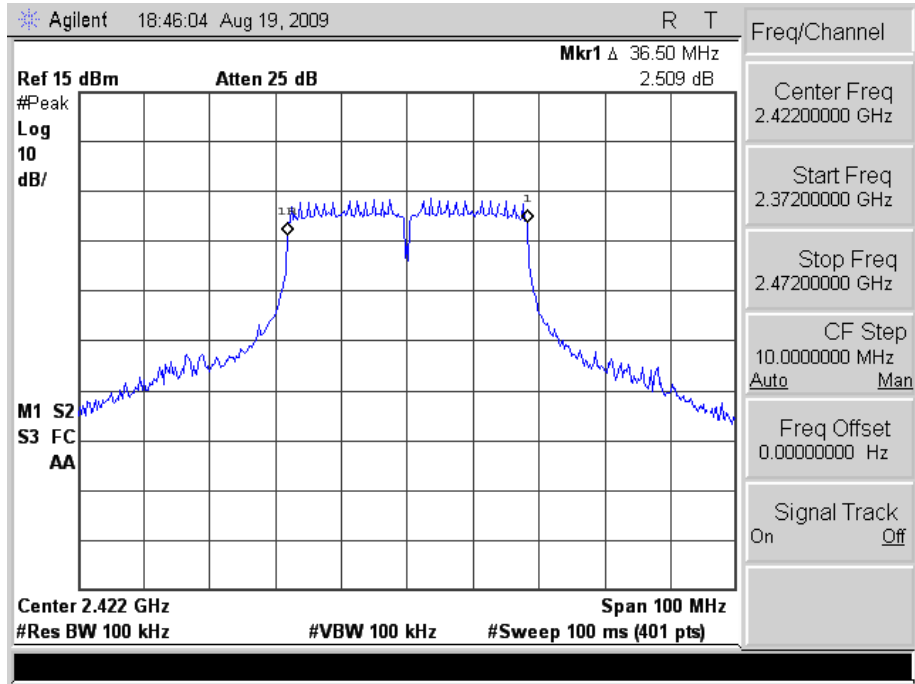
2462MHz





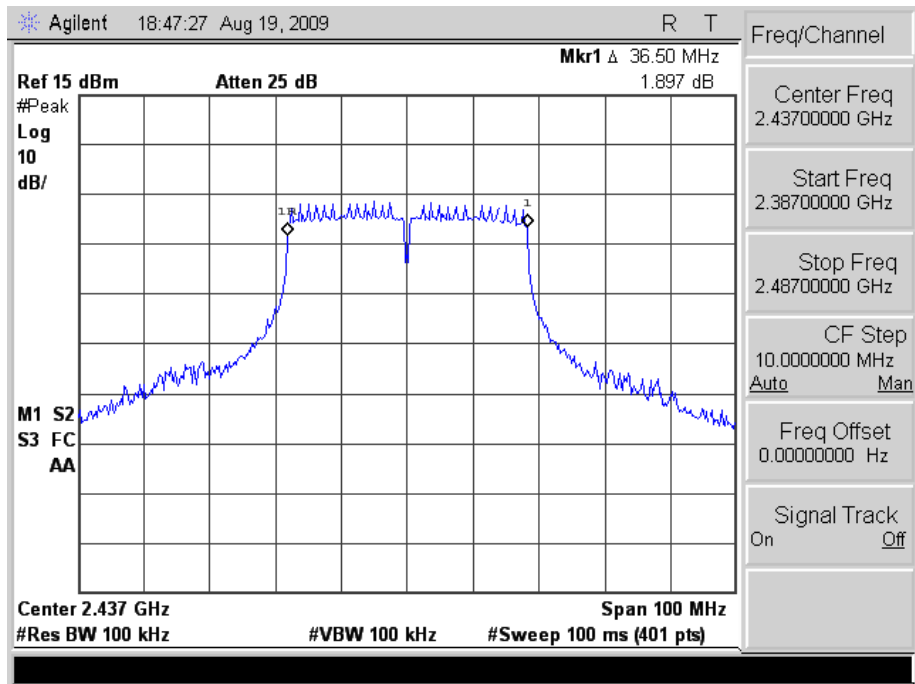
draft 802.11n Wide-40MHz

2422MHz



draft 802.11n Wide-40MHz

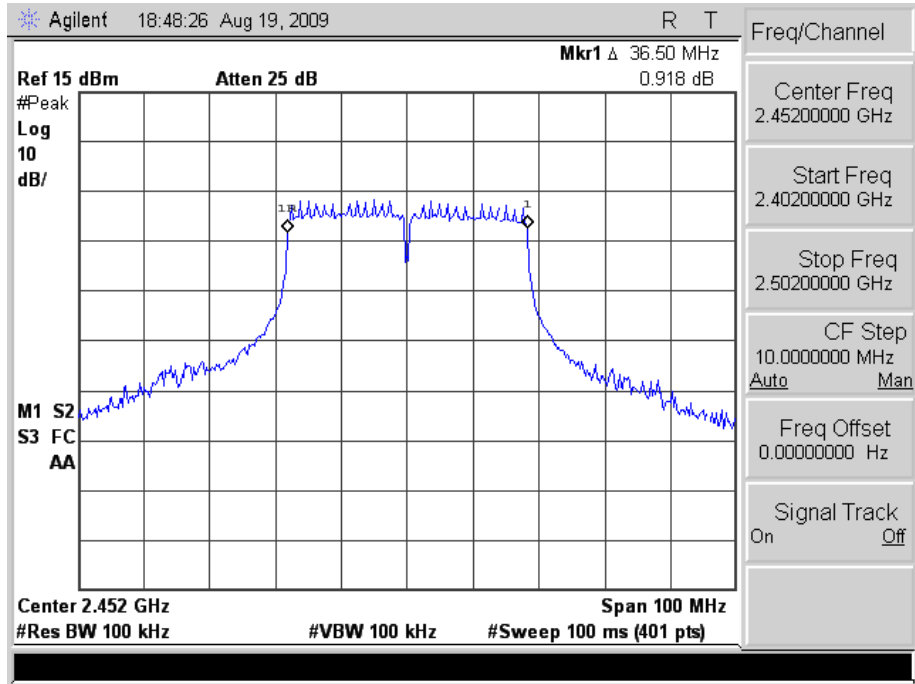
2437MHz





draft 802.11n Wide-40MHz

2452MHz





## 6. Maximum Power Density Requirements

### 6.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The spectrum analyzer RES BW was set to 3 kHz. The START and STOP frequencies were set to the band edges of the maximum output pass band. If there is no clear maximum amplitude in any given portion of the band, it may be necessary to make measurements at a number of bands defined by several START and STOP frequency pairs. The specification calls for a 1 second interval at each 3 kHz bandwidth; total SWEEP TIME is calculated as follows:

$$\text{SWEEP TIME (SEC)} = (\text{Fstop, kHz} - \text{Fstart, kHz}) / 3 \text{ kHz}$$

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

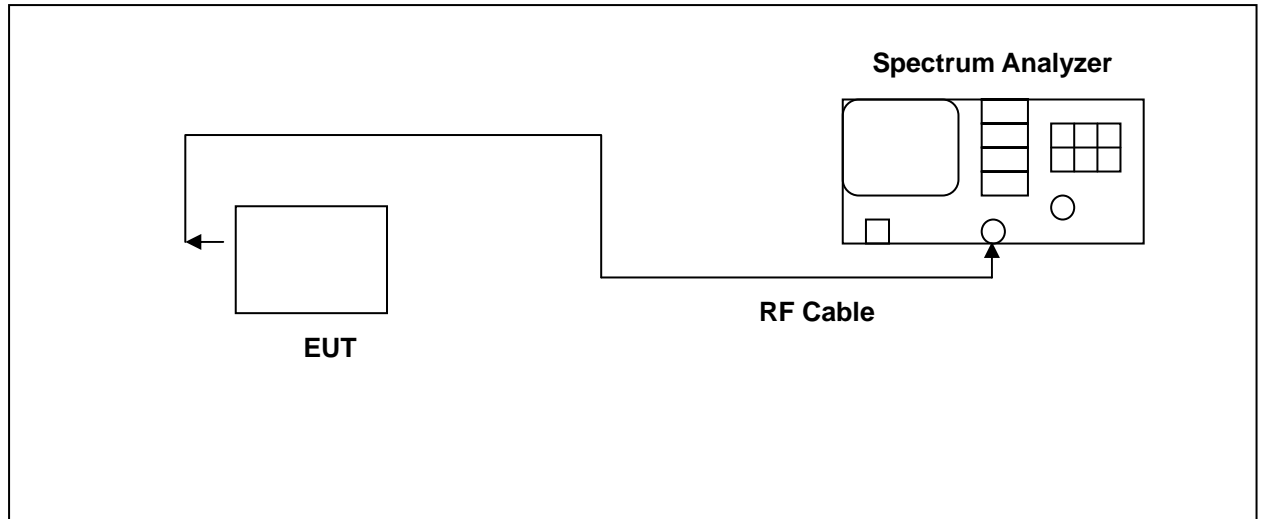
### 6.2 Limits

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

### 6.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY46181986	May 15, 2009	May 15, 2010

## 6.4 Test Instruments Configuration



## 6.5 Test Result

### IEEE 802.11b

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	3.08	<8dBm
2437	3.46	<8dBm
2462	3.35	<8dBm

### IEEE 802.11g

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-1.17	<8dBm
2437	-1.22	<8dBm
2462	-0.55	<8dBm

### draft 802.11n Standard-20MHz

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-2.92	<8dBm
2437	-2.81	<8dBm
2462	-2.71	<8dBm



**draft 802.11n Wide-40MHz**

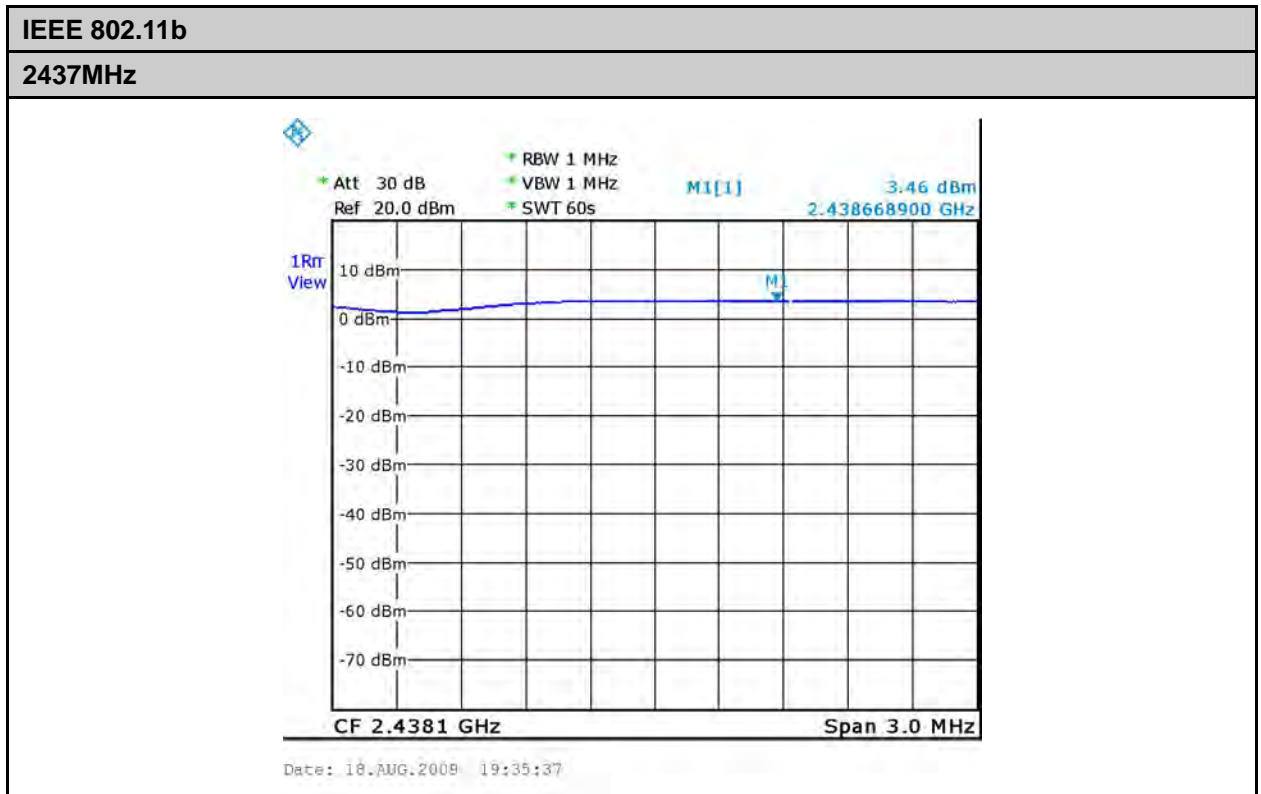
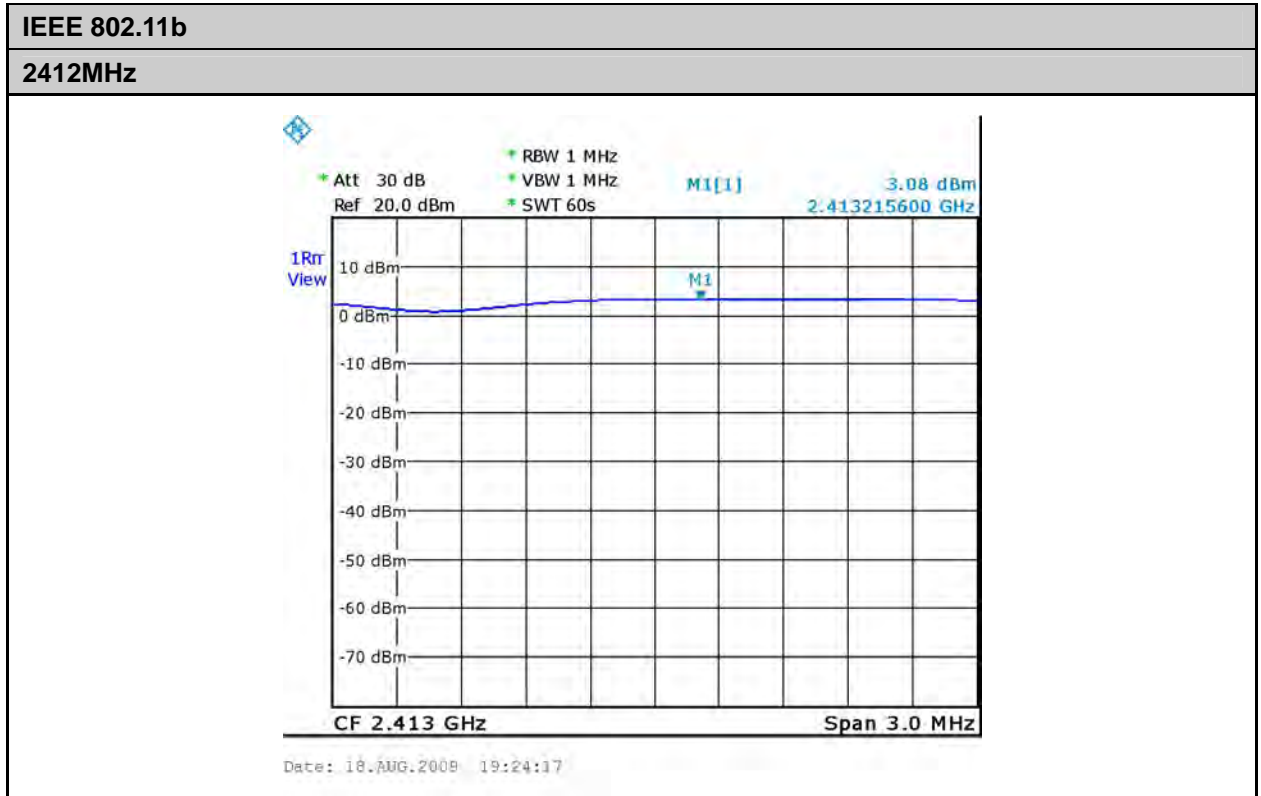
Frequency (MHz)	Power Density (dBm)	Required Limit
2422	-7.25	<8dBm
2437	-7.06	<8dBm
2452	-6.95	<8dBm

Note:

1. Frequency Span= 600 kHz
2. Sweep Time = Frequency Span/3 kHz=200secs
3. Test Graphs See next page.



## 6.6 Test Graphs

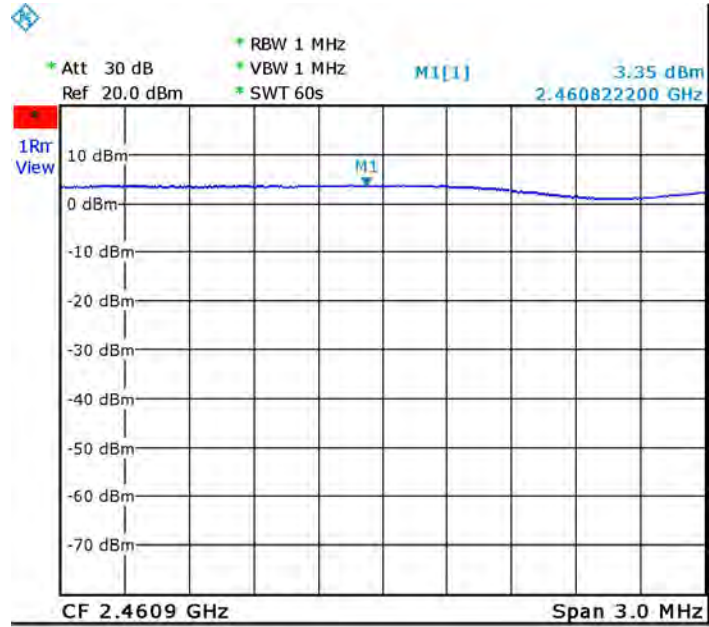






IEEE 802.11b

2462MHz

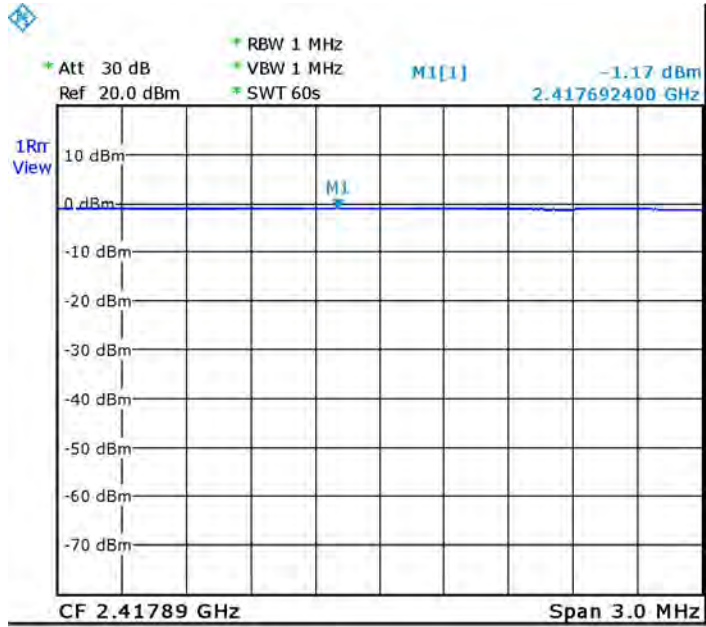


Date: 18.AUG.2009 19:56:33



IEEE 802.11g

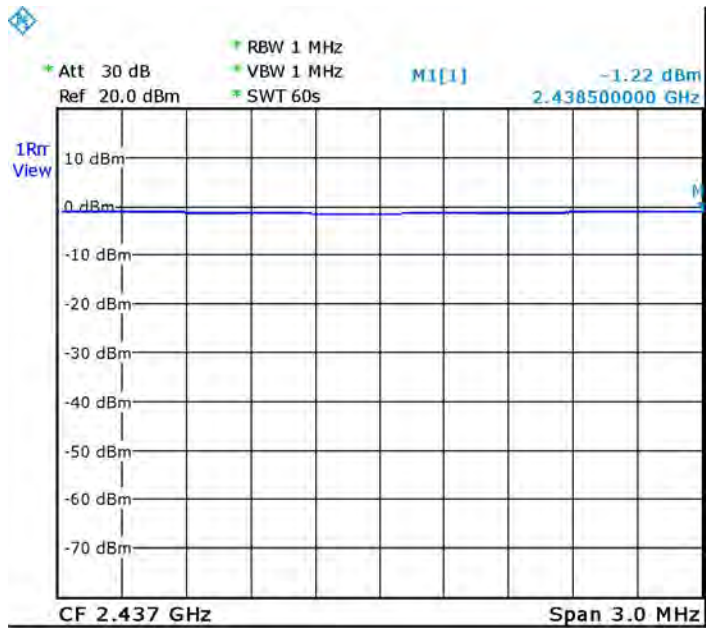
2412MHz



Date: 18.AUG.2009 20:04:16

IEEE 802.11g

2437MHz

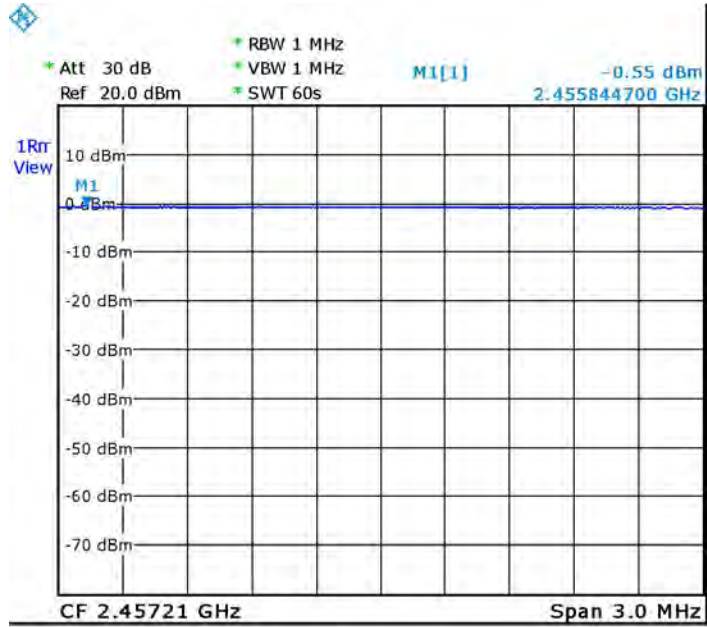


Date: 18.AUG.2009 20:09:37



IEEE 802.11g

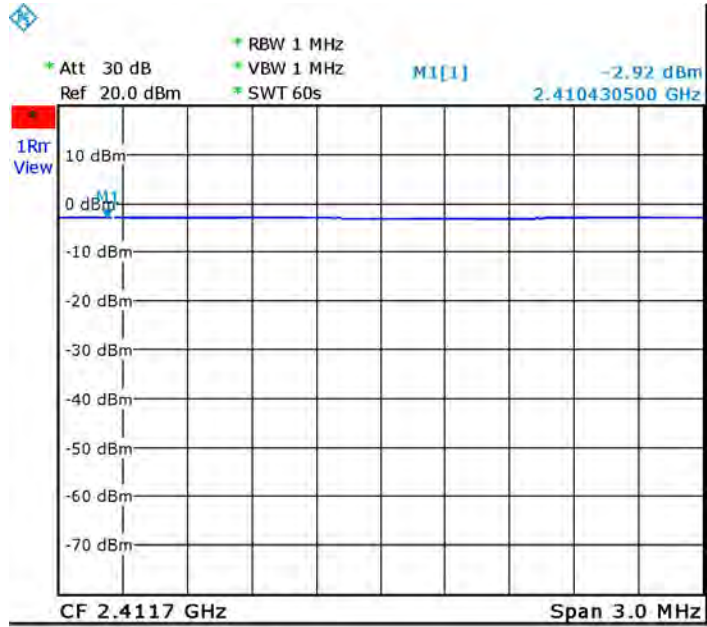
2462MHz



Date: 18.AUG.2009 20:14:19

draft 802.11n Standard-20MHz

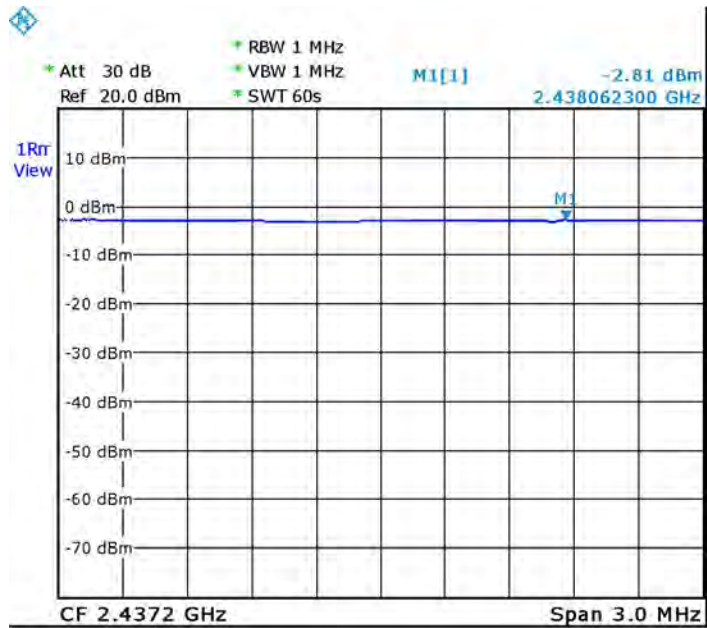
2412MHz



Date: 18.AUG.2009 20:21:25

draft 802.11n Standard-20MHz

2437MHz

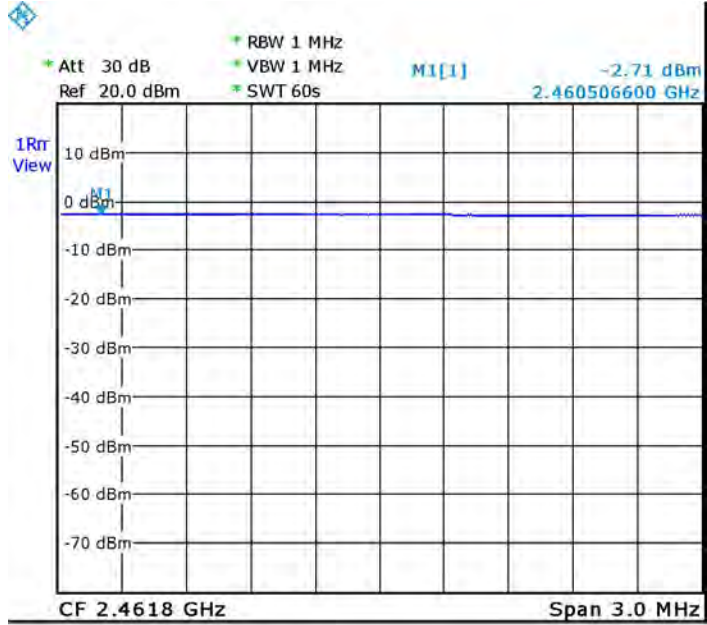


Date: 18.AUG.2009 20:24:05



draft 802.11n Standard-20MHz

2462MHz

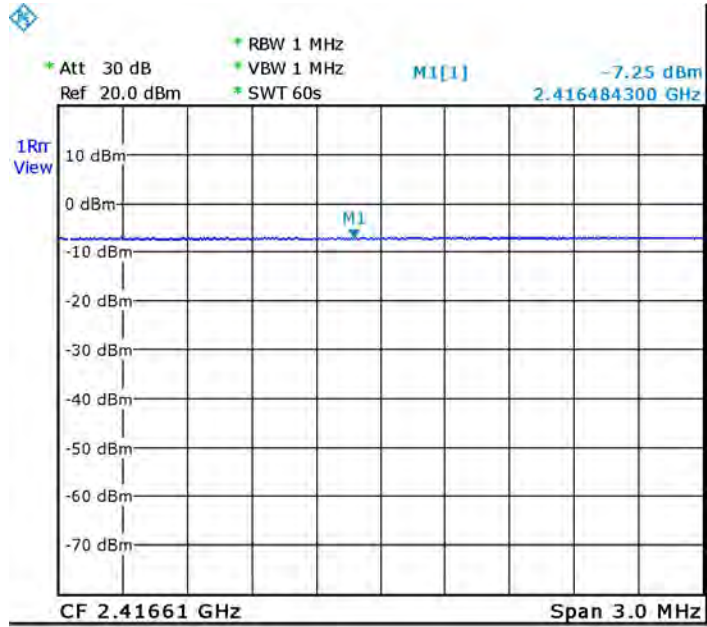


Date: 18.AUG.2009 20:28:57



draft 802.11n Wide-40MHz

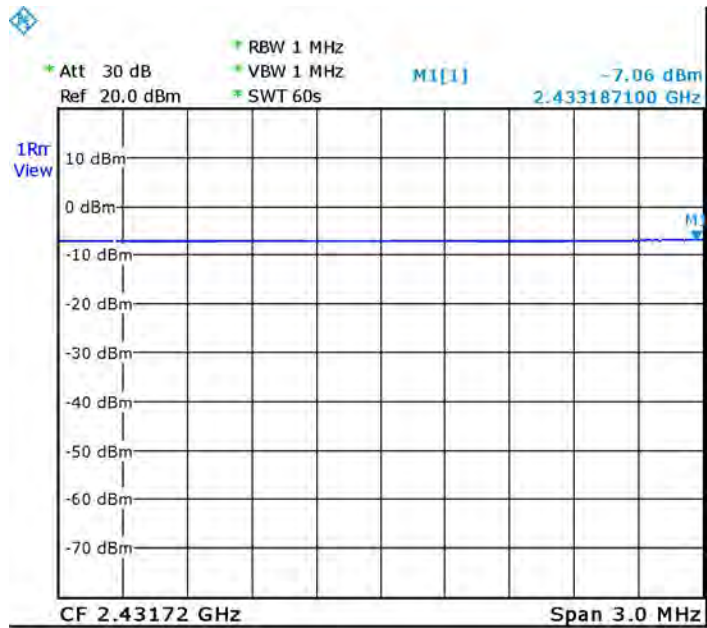
2422MHz



Date: 18.AUG.2009 19:00:04

draft 802.11n Wide-40MHz

2437MHz

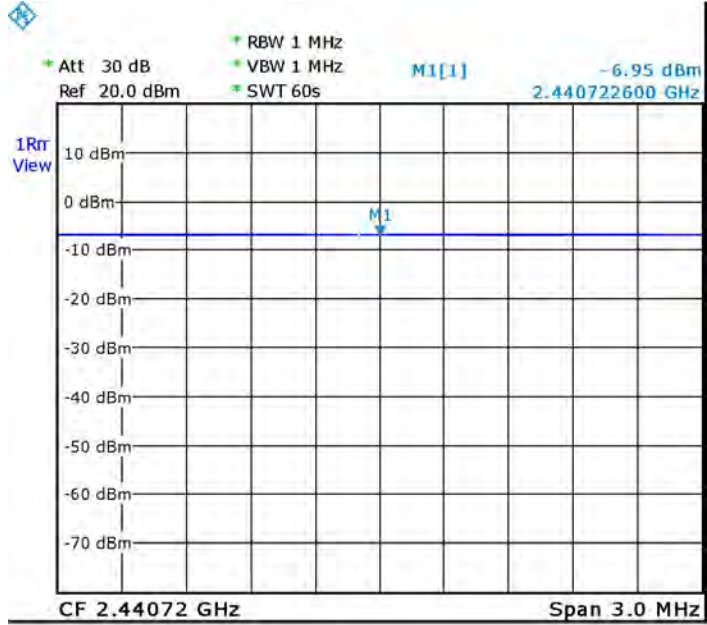


Date: 18.AUG.2009 21:42:54



draft 802.11n Wide-40MHz

2452MHz



Date: 18.AUG.2009 19:07:45

## 7. Out of Band Conducted Emissions Requirements

### 7.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel 1, 6, 11)

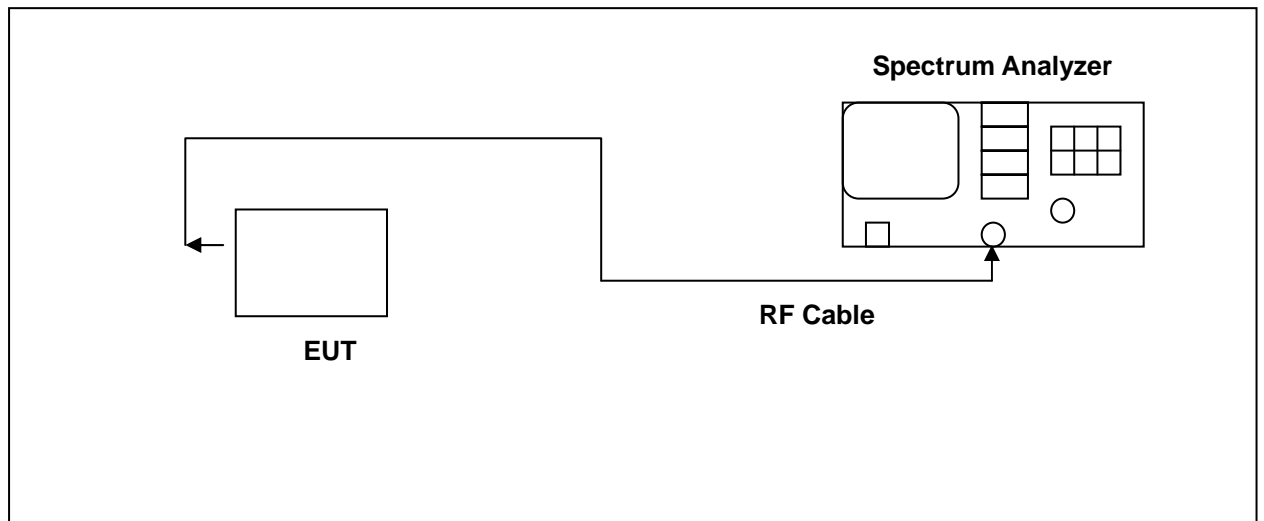
### 7.2 Limits

Refer to attached data sheets. Data shows out of band emissions are suppressed well below the -20 dBc minimum required by the Rules.

### 7.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY46181986	May 15, 2009	May 15, 2010

### 7.4 Test Instruments Configuration







## 7.5 Test Result

EUT : E-Menu

Model No. : EM-200

Test Mode : IEEE 802.11b Link Mode

Test Date : 08/19/2009

Please refer to next page of detail testing data.

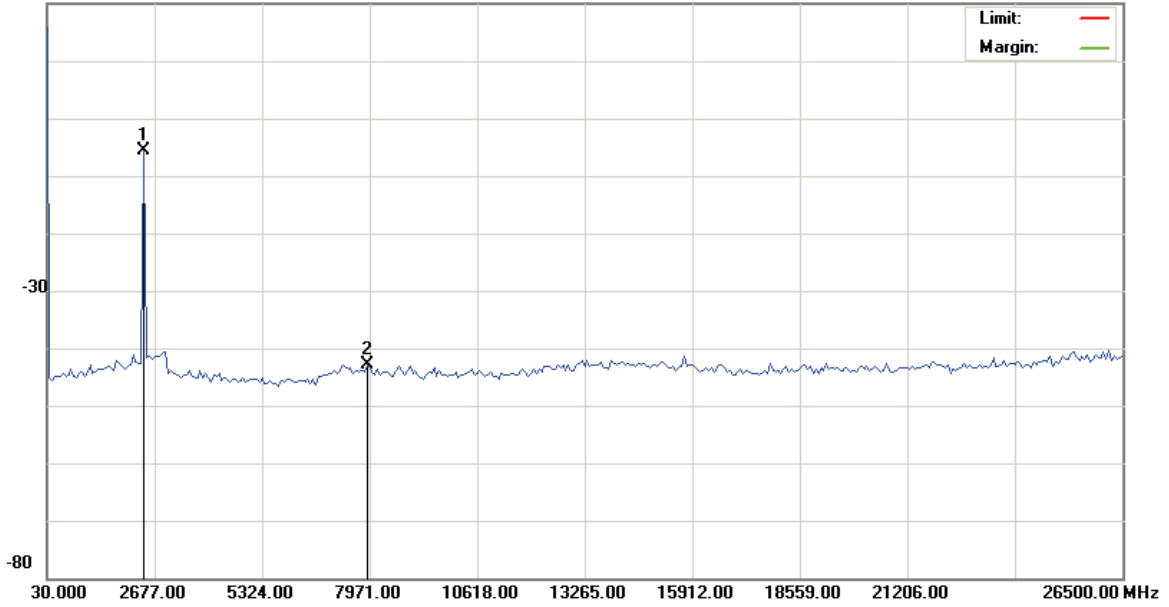


File:EM-200(11b)  
20.0 dBm

Data :#1

Date:2009/8/19

Time: 下午 03:17:56



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2412.300	-6.64	1.01	-5.63			peak		TX
2		7904.825	-43.83	1.03	-42.80			peak		

\*:Maximum data x:Over limit !:over margin

●Reference Only

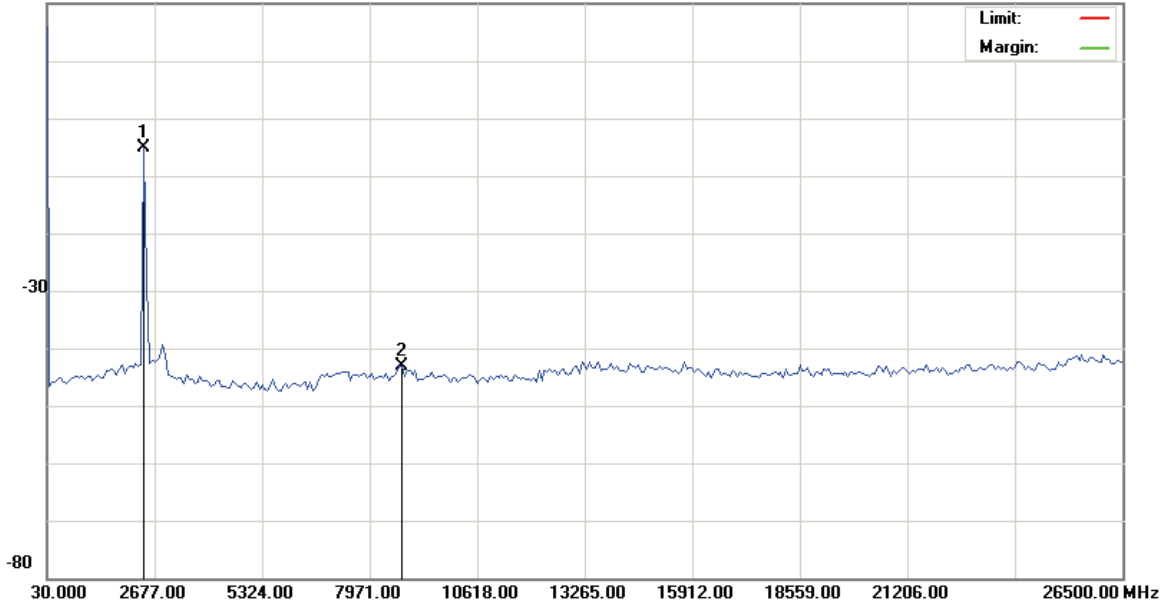


File:EM-200(11b)  
20.0 dBm

Data :#2

Date:2009/8/19

Time: 下午 03:23:30



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode  
 Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.300	-6.16	1.01	-5.15			peak		TX
2		8765.100	-44.23	1.04	-43.19			peak		

\*:Maximum data x:Over limit !:over margin

●Reference Only





EUT : E-Menu  
Model No. : EM-200  
Test Mode : IEEE 802.11g Link Mode  
Test Date : 08/19/2009  
Please refer to next page of detail testing data.



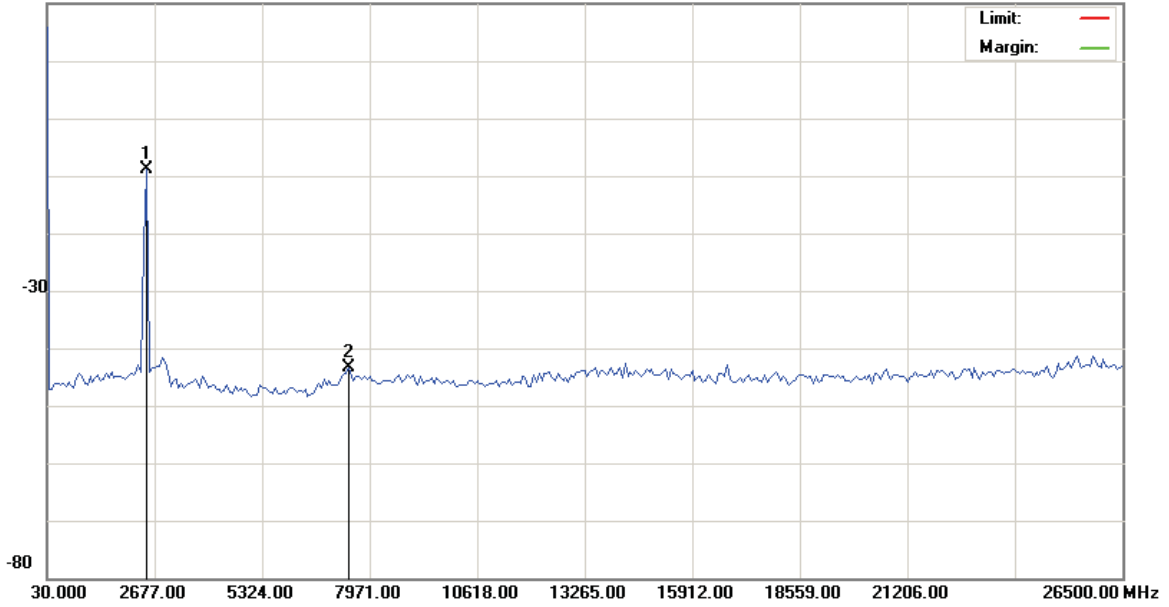


File:EM-200(11g)  
20.0 dBm

Data :#2

Date:2009/8/19

Time: 下午 03:46:21



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.475	-9.91	1.01	-8.90			peak		TX
2		7441.600	-44.28	1.03	-43.25			peak		

\*:Maximum data x:Over limit !:over margin

●Reference Only

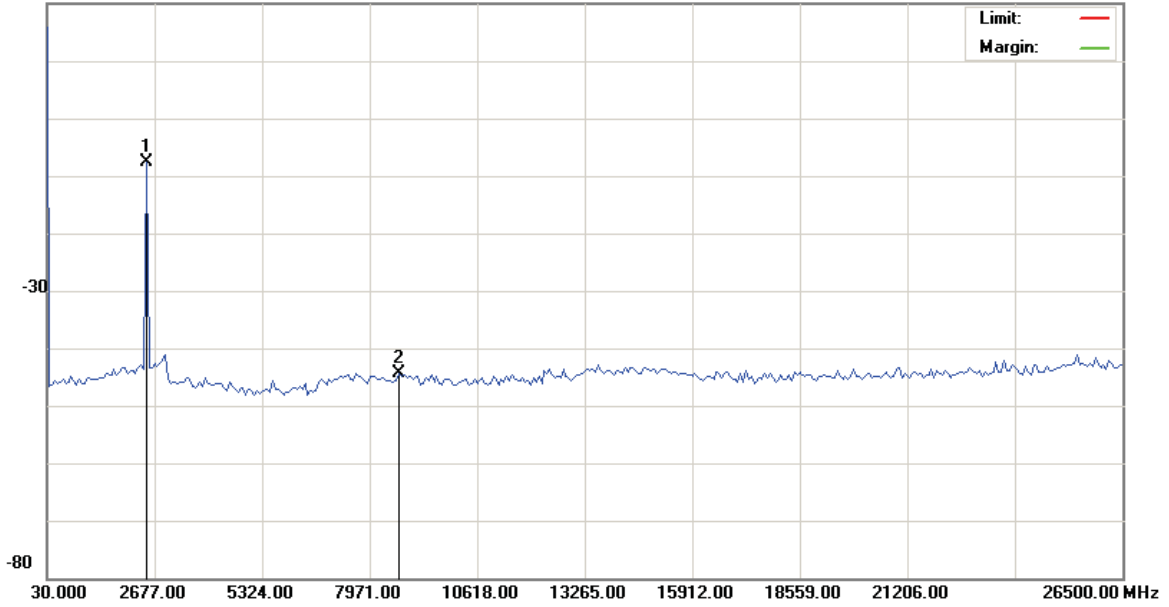


File:EM-200(11g)  
20.0 dBm

Data :#3

Date:2009/8/19

Time: 下午 03:47:22



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11g Link Mode  
 Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	-8.56	1.01	-7.55			peak		TX
2		8698.925	-45.37	1.04	-44.33			peak		

\*:Maximum data x:Over limit !:over margin

●Reference Only





EUT : E-Menu  
Model No. : EM-200  
Test Mode : draft 802.11n Standard-20MHz Link Mode  
Test Date : 08/19/2009  
Please refer to next page of detail testing data.

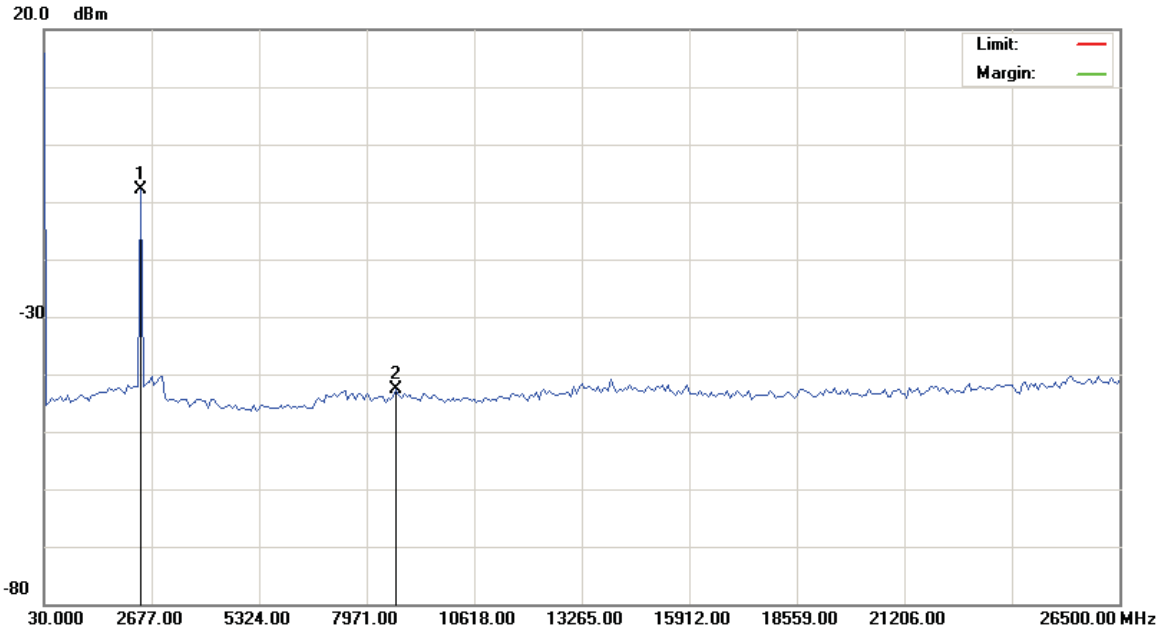


File:EM-200(11n20M)

Data :#1

Date:2009/8/19

Time: 下午 04:01:36



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note: CH01(2412MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	Comment
1	*	2412.300	-8.83	1.01	-7.82		peak			TX
2		8698.925	-43.56	1.04	-42.52		peak			

\*:Maximum data x:Over limit !:over margin

●Reference Only

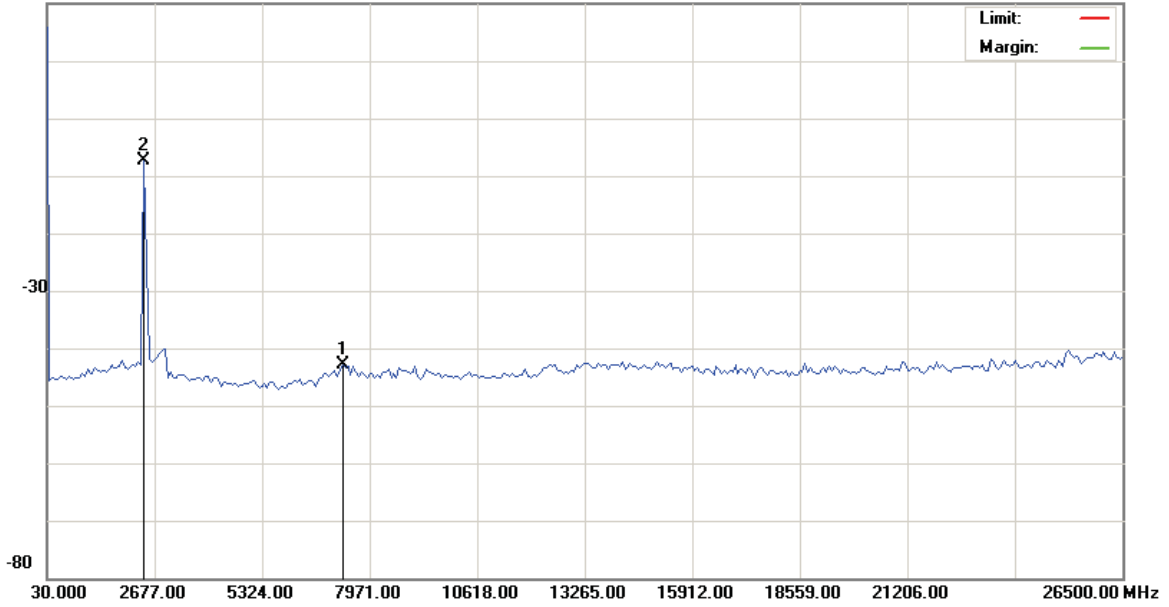


File:EM-200(11n20M)  
20.0 dBm

Data :#2

Date:2009/8/19

Time: 下午 04:03:34



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Standard-20MHz Link Mode  
 Note: CH06(2437MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	Comment
1		7309.250	-43.85	1.03	-42.82		peak			
2	*	2437.300	-8.32	1.01	-7.31		peak			TX

\*:Maximum data x:Over limit !:over margin

●Reference Only





EUT : E-Menu  
Model No. : EM-200  
Test Mode : draft 802.11n Wide-40MHz Link Mode  
Test Date : 08/19/2009  
Please refer to next page of detail testing data.





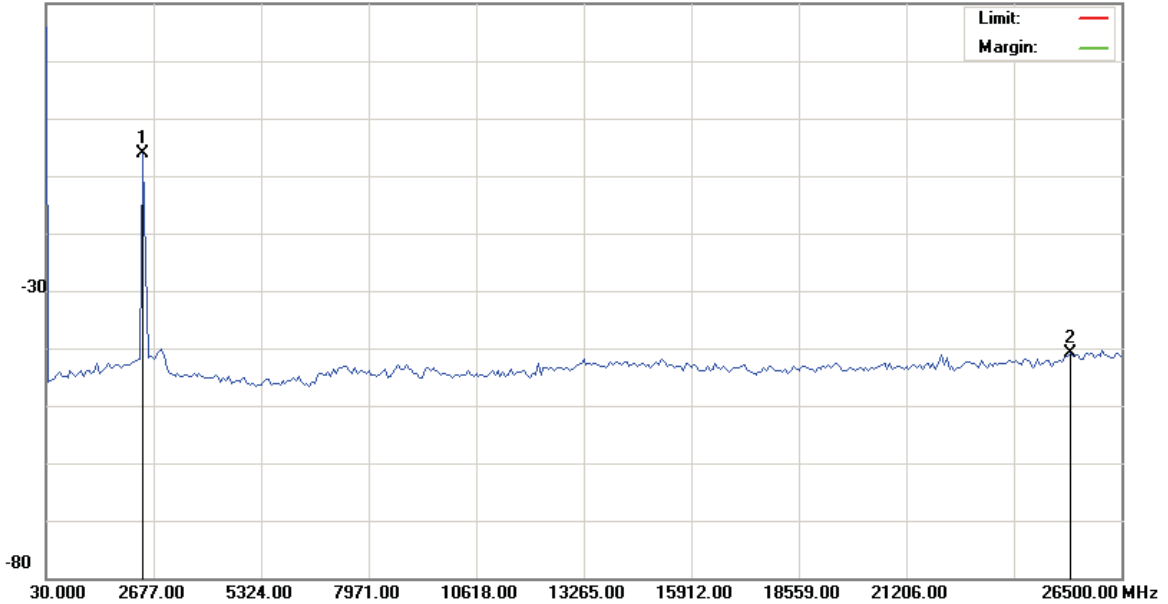
File:EM-200(11n40M)

Data :#2

Date:2009/8/19

Time: 下午 04:21:11

20.0 dBm



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.300	-7.24	1.01	-6.23			peak		TX
2		25242.67	-42.08	1.10	-40.98			peak		

\*:Maximum data x:Over limit !:over margin

●Reference Only

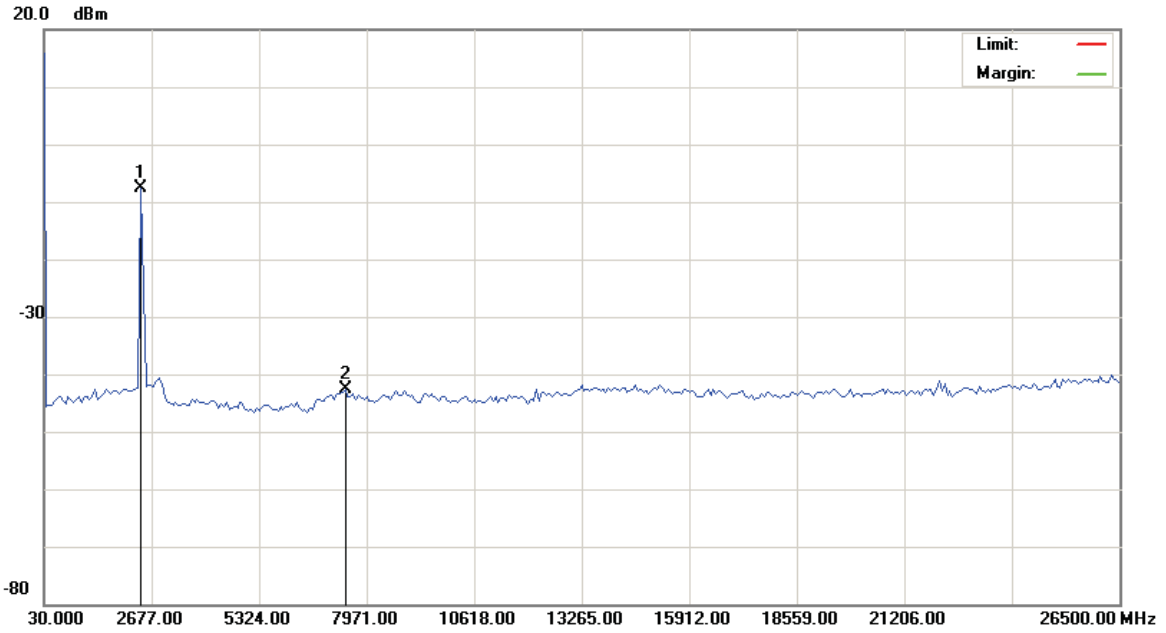


File:EM-200(11n40M)

Data :#3

Date:2009/8/19

Time: 下午 04:22:19



Site site #1 Polarization: Temperature: 26 °C  
 Limit: Power: Humidity: 55 %  
 EUT: Distance:  
 M/N: 09-0206-SEO  
 Mode: draft 802.11n Wide-40MHz Link Mode  
 Note: CH09(2452MHz)

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2452.300	-8.74	1.01	-7.73			peak		TX
2		7441.600	-43.69	1.03	-42.66			peak		

\*:Maximum data x:Over limit !:over margin

●Reference Only





## 8. Band Edges Requirements

### 8.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

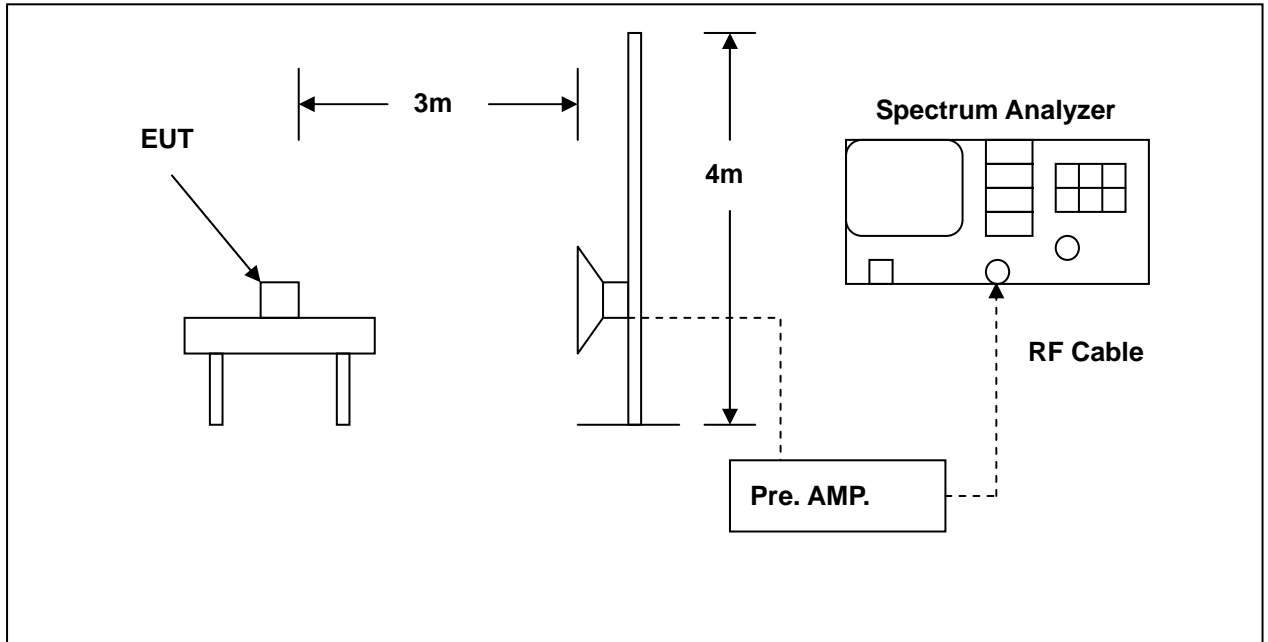
### 8.2 Limits

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

### 8.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	Jun. 08, 2009	Jun. 08, 2010
Pre Amplifier	Agilent	8449B	3008A02237	Jun. 08, 2009	Jun. 08, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jul. 01, 2009	Jul. 01, 2010

## 8.4 Test Instruments Configuration



## 8.5 Test Result

EUT : E-Menu  
 Model No. : EM-200  
 Test Mode : IEEE 802.11b Link Mode Low CH & High CH  
 Test Date : 08/18/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
 (Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.



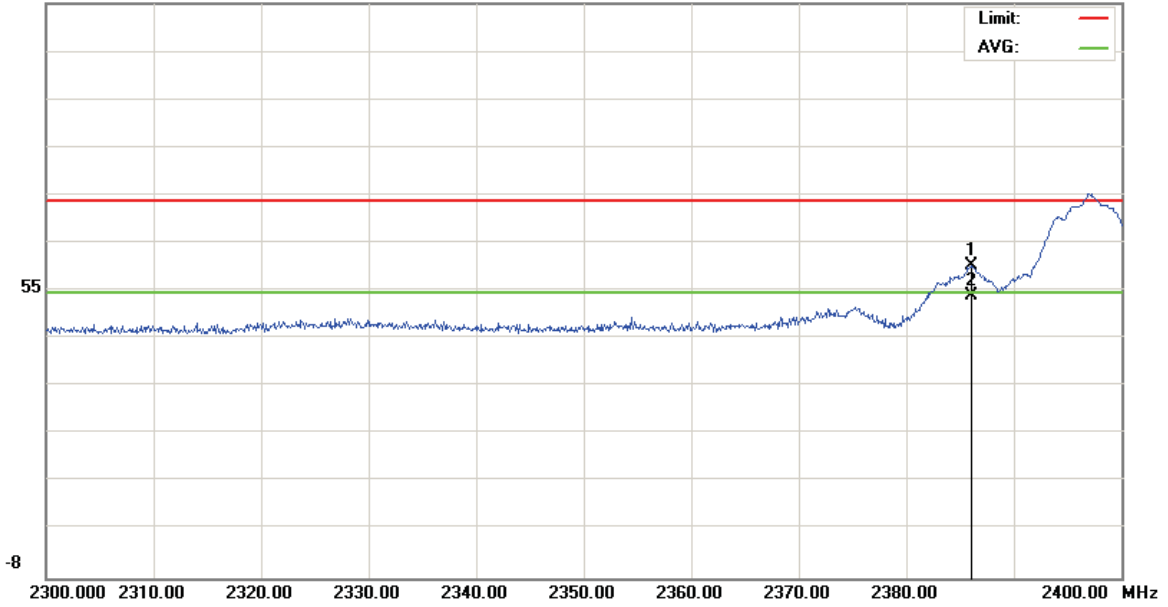


File :EM-200(Band Edge)  
117.0 dBuV

Data :#5

Date:2009/8/18

Time: 上午 11:23:48



Site: site #1  
Limit: FCC part 15 (PK)  
EUT:  
M/N: 09-0206-SEO  
Mode: IEEE 802.11b Link Mode BAND EDGE  
Note: 2412MHz

Polarization: *Horizontal*  
Power:  
Distance: 3m

Temperature: 22 °C  
Humidity: 60 %  
RBW: 1000KHz VBW: 1000KHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		2386.100	59.92	0.18	60.10	74.00	-13.90	peak			
2	*	2386.100	53.38	0.18	53.56	54.00	-0.44	AVG			

\*:Maximum data x:Over limit !:over margin

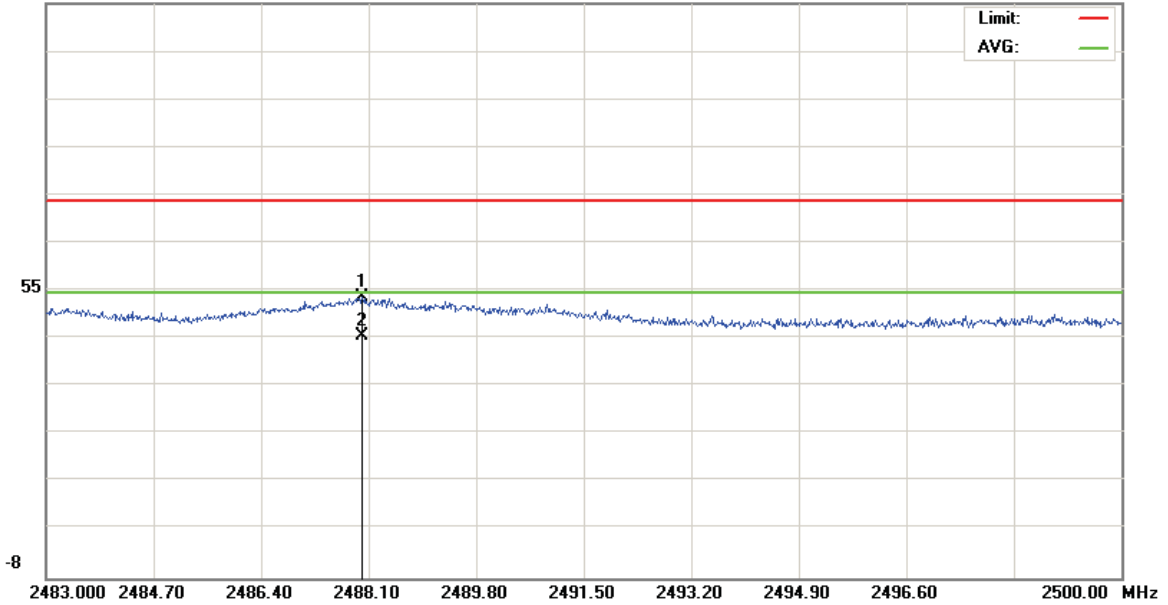


File :EM-200(Band Edge)  
117.0 dBuV

Data :#3

Date:2009/8/18

Time: 上午 11:05:05



Site: site #1  
 Limit: FCC part 15 (PK)  
 EUT:  
 M/N: 09-0206-SEO  
 Mode: IEEE 802.11b Link Mode BAND EDGE  
 Note: 2462MHz

Polarization: *Vertical*  
 Power:  
 Distance: 3m

Temperature: 22 °C  
 Humidity: 60 %  
 RBW: 1000KHz VBW: 1000KHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1		2487.998	52.78	0.23	53.01	74.00	-20.99			peak	
2	*	2487.998	44.56	0.23	44.79	54.00	-9.21			AVG	

\*:Maximum data x:Over limit !:over margin

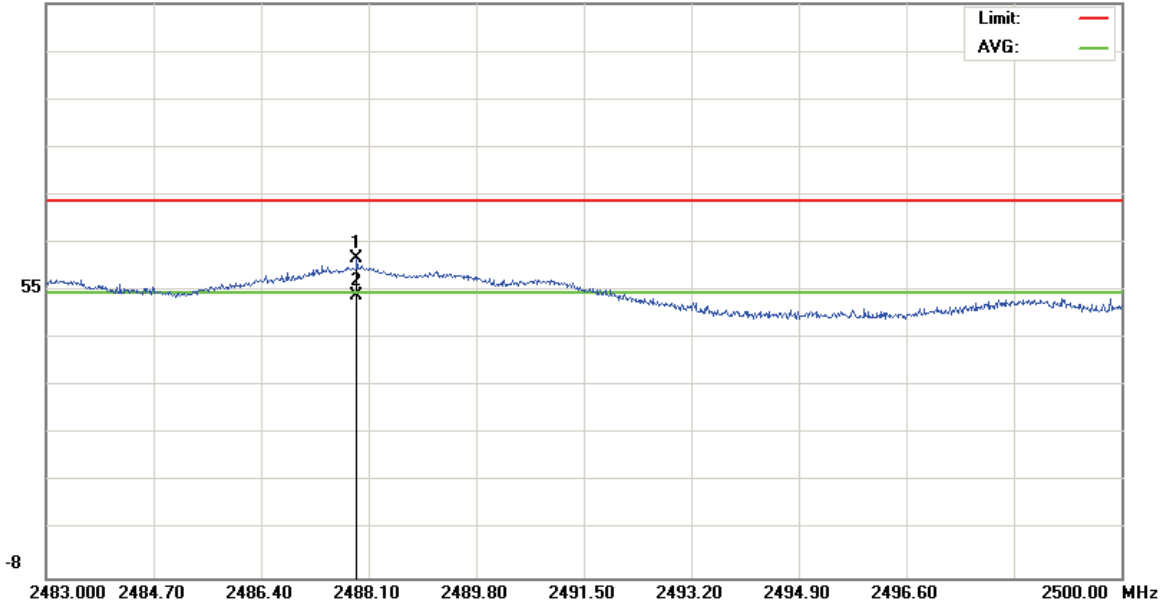


File :EM-200(Band Edge)  
117.0 dBuV

Data :#7

Date:2009/8/18

Time: 上午 11:16:06



Site: site #1	Polarization: <i>Horizontal</i>	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: IEEE 802.11b Link Mode BAND EDGE		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		2487.913	61.24	0.23	61.47	74.00	-12.53	peak			
2	*	2487.913	53.06	0.23	53.29	54.00	-0.71	AVG			

\*:Maximum data x:Over limit !:over margin



EUT : E-Menu  
Model No. : EM-200  
Test Mode : IEEE 802.11g Link Mode Low CH & High CH  
Test Date : 08/18/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.

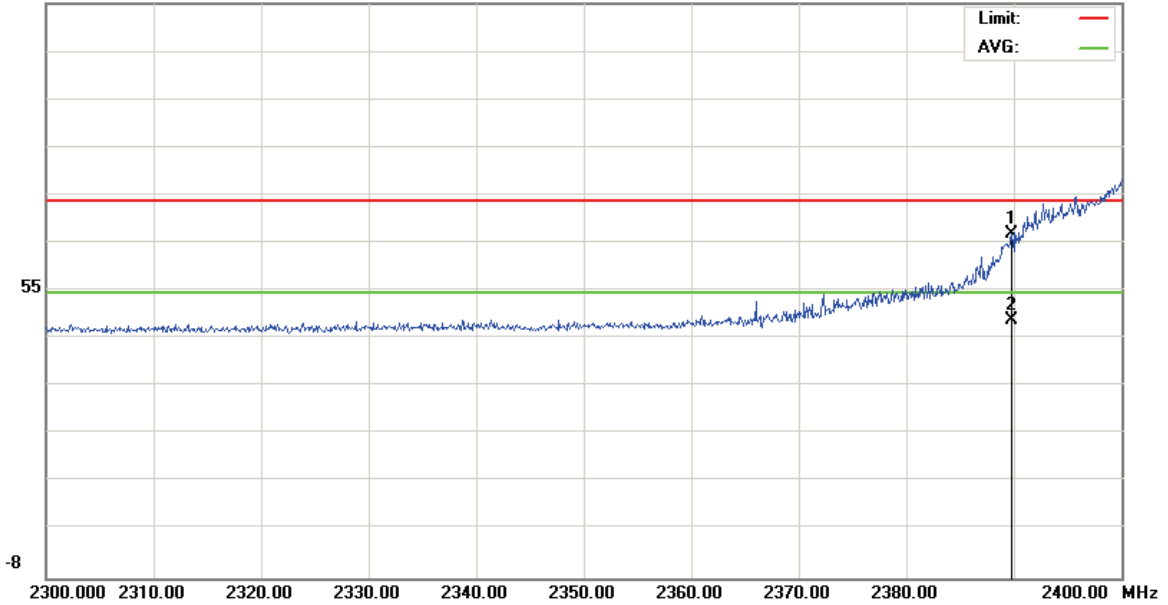


File :EM-200(Band Edge)  
117.0 dBuV

Data :#1

Date:2009/8/18

Time: 下午 12:22:14



Site: site #1  
Limit: FCC part 15 (PK)  
EUT:  
M/N: 09-0206-SEO  
Mode: IEEE 802.11g Link Mode BAND EDGE  
Note: 2412MHz

Polarization: *Vertical*  
Power:  
Distance: 3m

Temperature: 22  
Humidity: 60 %  
RBW: 1000KHz VBW: 1000KHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.800	66.65	0.19	66.84	74.00	-7.16	peak		
2	*	2389.800	47.83	0.19	48.02	54.00	-5.98	AVG		

\*:Maximum data x:Over limit !:over margin







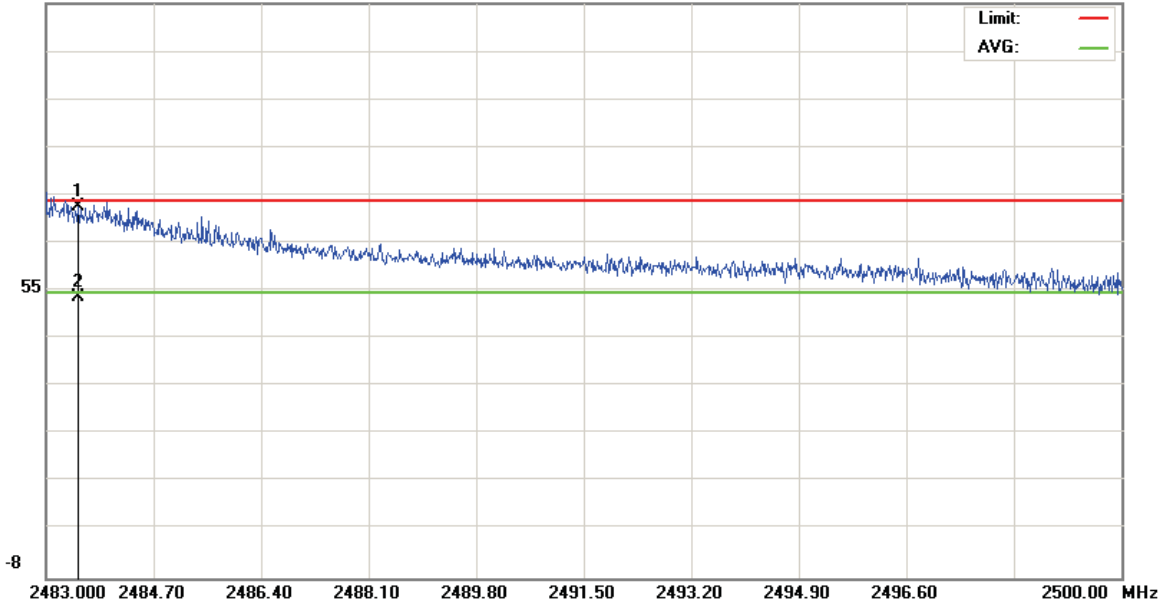


File:EM-200(Band Edge)  
117.0 dBuV

Data :#7

Date:2009/8/18

Time: 下午 02:11:18



Site: site #1	Polarization: <i>Horizontal</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: IEEE 802.11g Link Mode BAND EDGE		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	72.42	0.25	72.67	74.00	-1.33	peak		
2	*	2483.500	52.86	0.25	53.11	54.00	-0.89	AVG		

\*:Maximum data x:Over limit !:over margin



EUT : E-Menu  
Model No. : EM-200  
Test Mode : draft 802.11n Standard-20MHz Link Mode Low CH & High CH  
Test Date : 08/18/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.

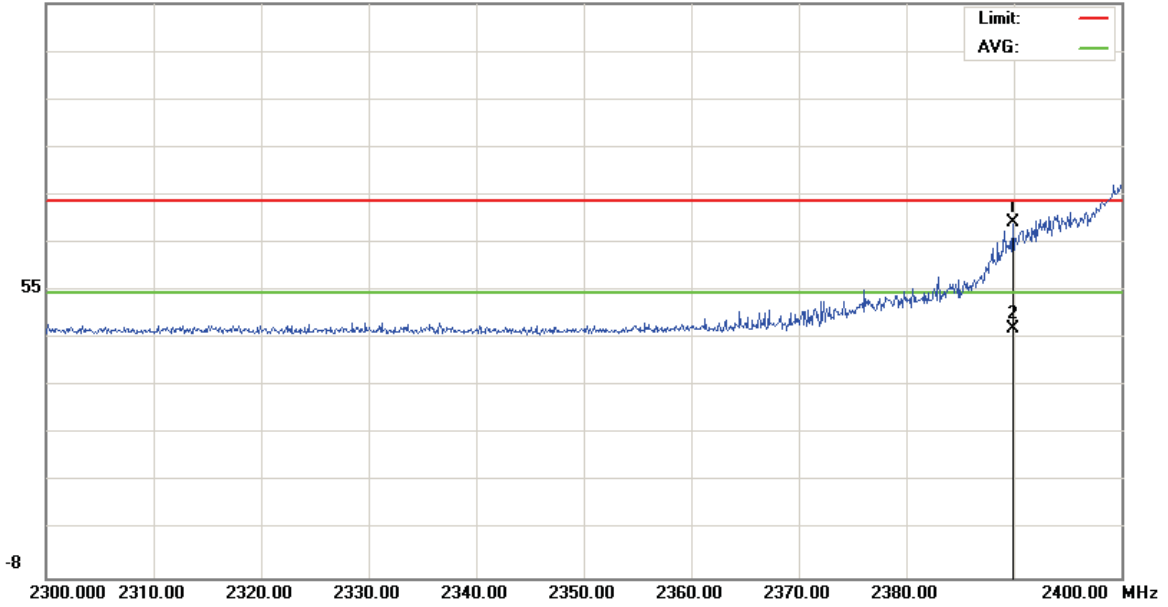


File :EM-200(Band Edge)  
117.0 dBuV

Data :#1

Date:2009/8/18

Time: 下午 03:30:08



Site: site #1	Polarization: <i>Vertical</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: drat 802.11n Standard-20MHz Link Mode BAND EDGE		
Note: 2412MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2389.900	69.00	0.19	69.19	74.00	-4.81	peak		
2		2389.900	46.09	0.19	46.28	54.00	-7.72	AVG		

\*:Maximum data x:Over limit !:over margin

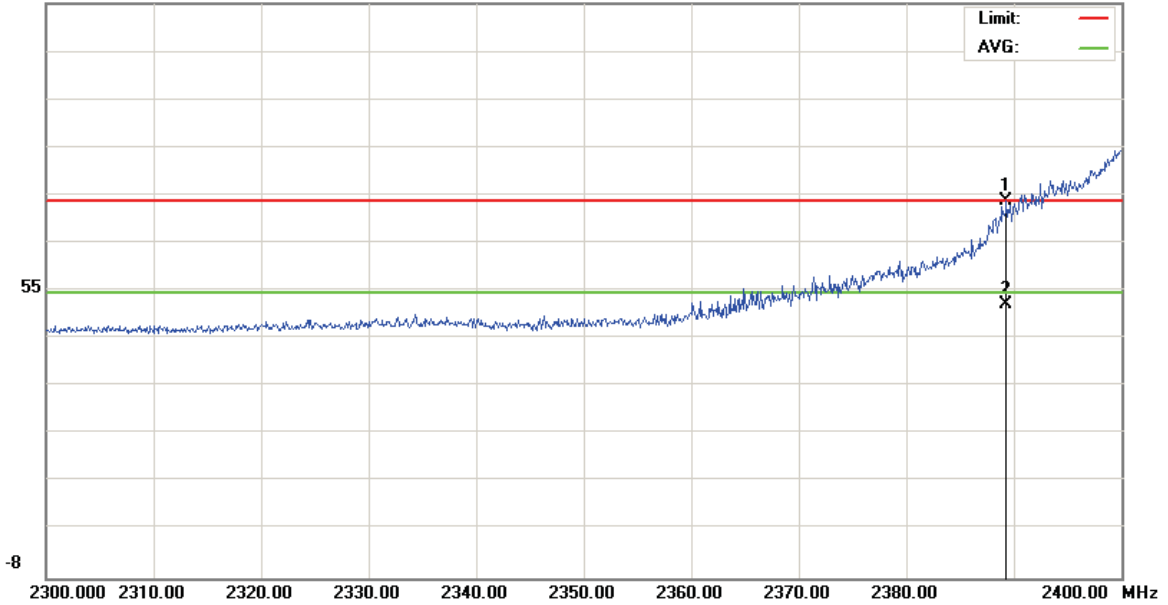


File :EM-200(Band Edge)  
117.0 dBuV

Data :#5

Date:2009/8/18

Time: 下午 03:21:44



Site: site #1	Polarization: <i>Horizontal</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: drat 802.11n Standard-20MHz Link Mode BAND EDGE		
Note: 2412MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2389.300	73.69	0.19	73.88	74.00	-0.12	peak		
2		2389.300	51.35	0.19	51.54	54.00	-2.46	AVG		

\*:Maximum data x:Over limit !:over margin

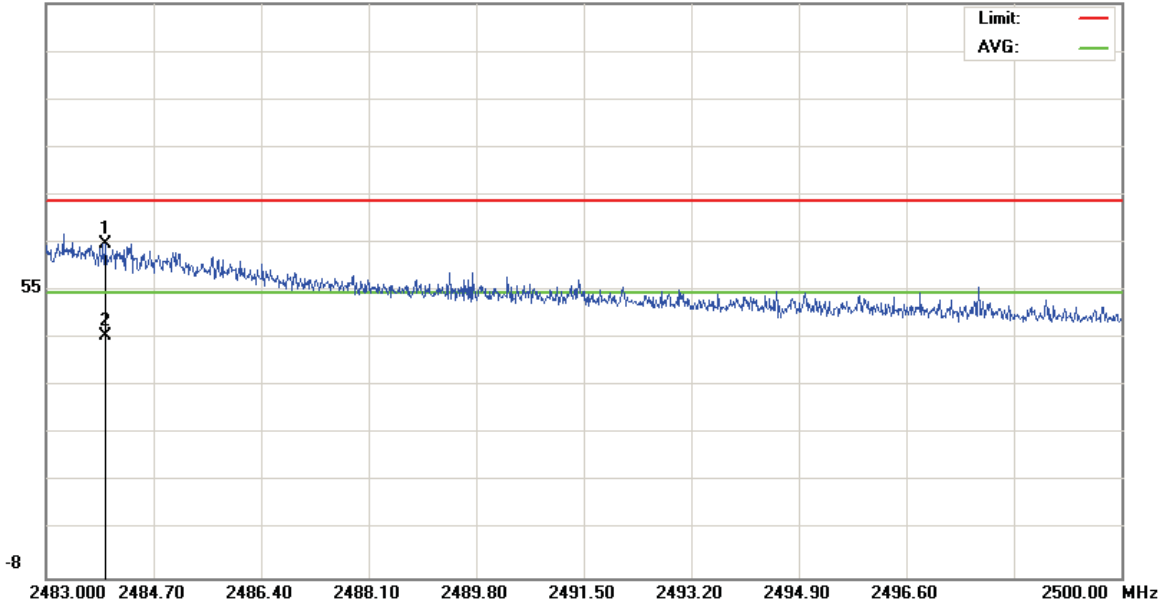


File :EM-200(Band Edge)  
117.0 dBuV

Data :#3

Date:2009/8/18

Time: 下午 03:40:40



Site: site #1	Polarization: <i>Vertical</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: drat 802.11n Standard-20MHz Link Mode BAND EDGE		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2483.935	64.54	0.25	64.79	74.00	-9.21	peak		
2		2483.935	44.42	0.25	44.67	54.00	-9.33	AVG		

\*:Maximum data x:Over limit !:over margin

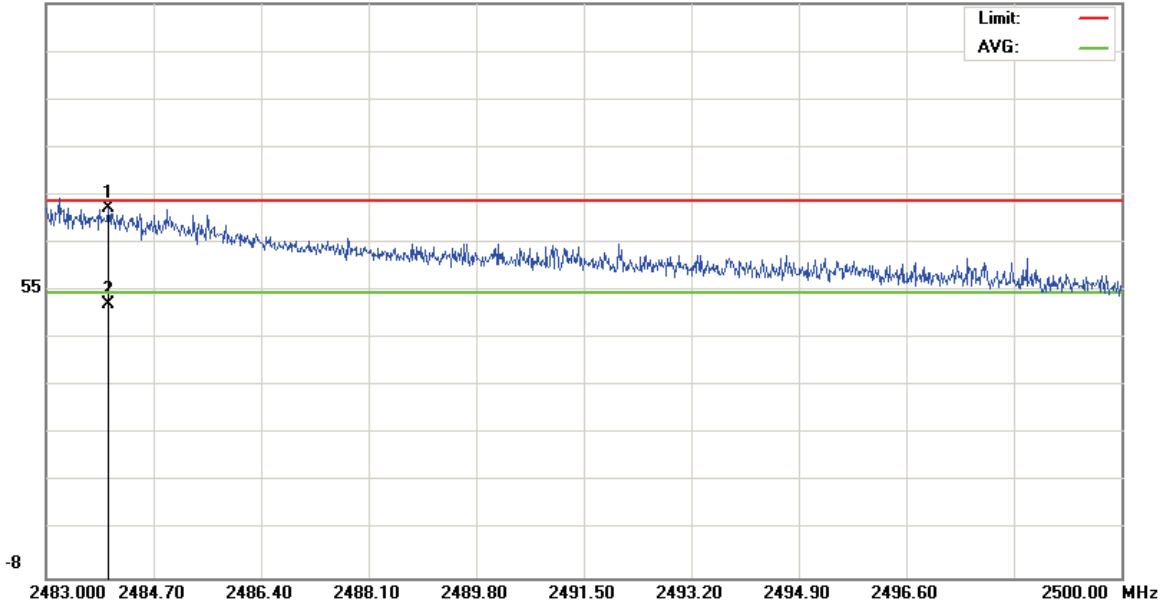


File :EM-200(Band Edge)  
117.0 dBuV

Data :#7

Date:2009/8/18

Time: 下午 03:53:56



Site: site #1	Polarization: <i>Horizontal</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: drat 802.11n Standard-20MHz Link Mode BAND EDGE		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2483.986	72.11	0.25	72.36	74.00	-1.64	peak		
2		2483.986	51.25	0.25	51.50	54.00	-2.50	AVG		

\*:Maximum data x:Over limit !:over margin





EUT : E-Menu  
Model No. : EM-200  
Test Mode : draft 802.11n Wide-40MHz Link Mode Low CH & High CH  
Test Date : 08/18/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor  
(Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.

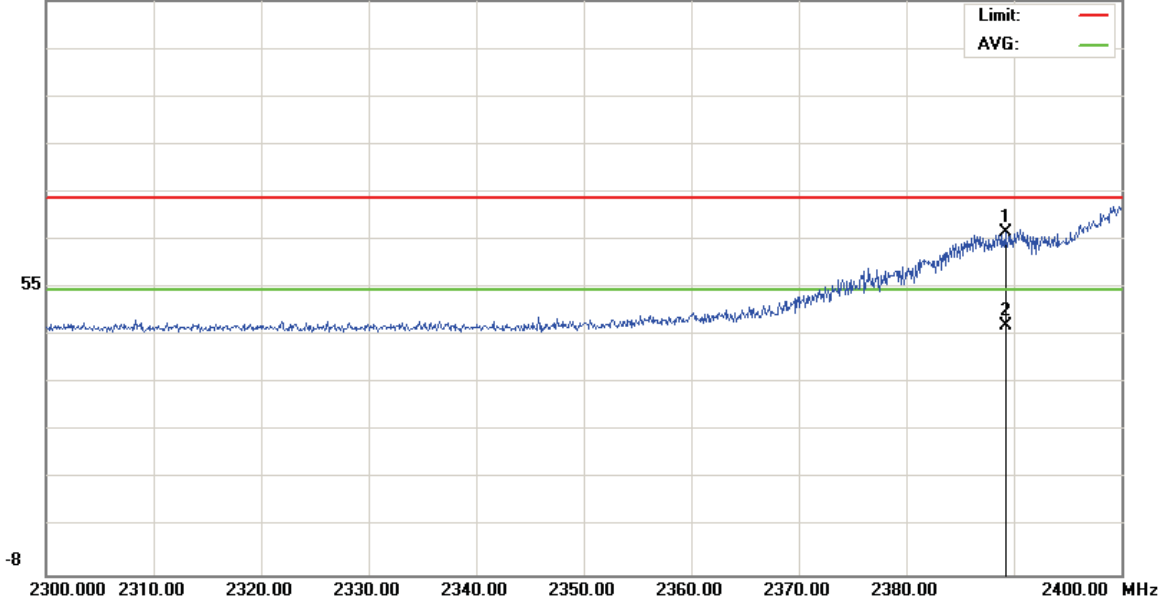


File :EM-200(Band Edge)  
117.0 dBuV

Data :#1

Date:2009/8/18

Time: 下午 04:20:33



Site: site #1	Polarization: <i>Vertical</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: drat 802.11n Wide-40MHz Link Mode BAND EDGE		
Note: 2422MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2389.200	66.27	0.19	66.46	74.00	-7.54	peak		
2		2389.200	45.92	0.19	46.11	54.00	-7.89	AVG		

\*:Maximum data x:Over limit !:over margin

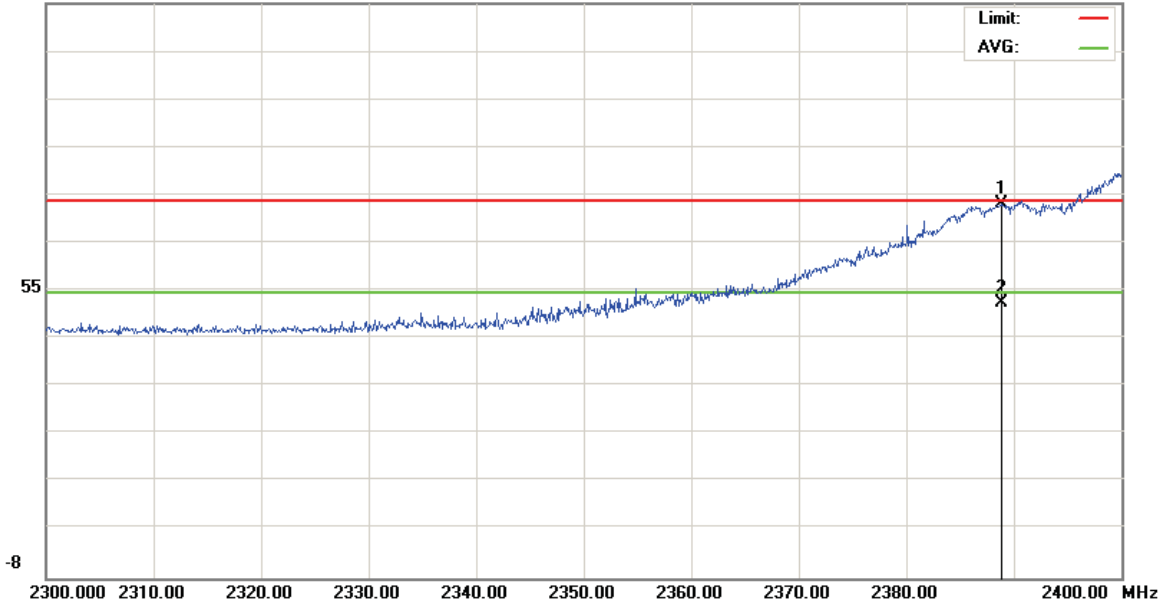


File :EM-200(Band Edge)  
117.0 dBuV

Data :#5

Date:2009/8/18

Time: 下午 04:10:02



Site: site #1  
Limit: FCC part 15 (PK)  
EUT:  
M/N: 09-0206-SEO  
Mode: drat 802.11n Wide-40MHz Link Mode BAND EDGE  
Note: 2422MHz

Polarization: *Horizontal*  
Power:  
Distance: 3m

Temperature: 22  
Humidity: 60 %  
RBW: 1000KHz VBW: 1000KHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2388.900	73.09	0.19	73.28	74.00	-0.72	peak		
2		2388.900	51.57	0.19	51.76	54.00	-2.24	AVG		

\*:Maximum data x:Over limit !:over margin

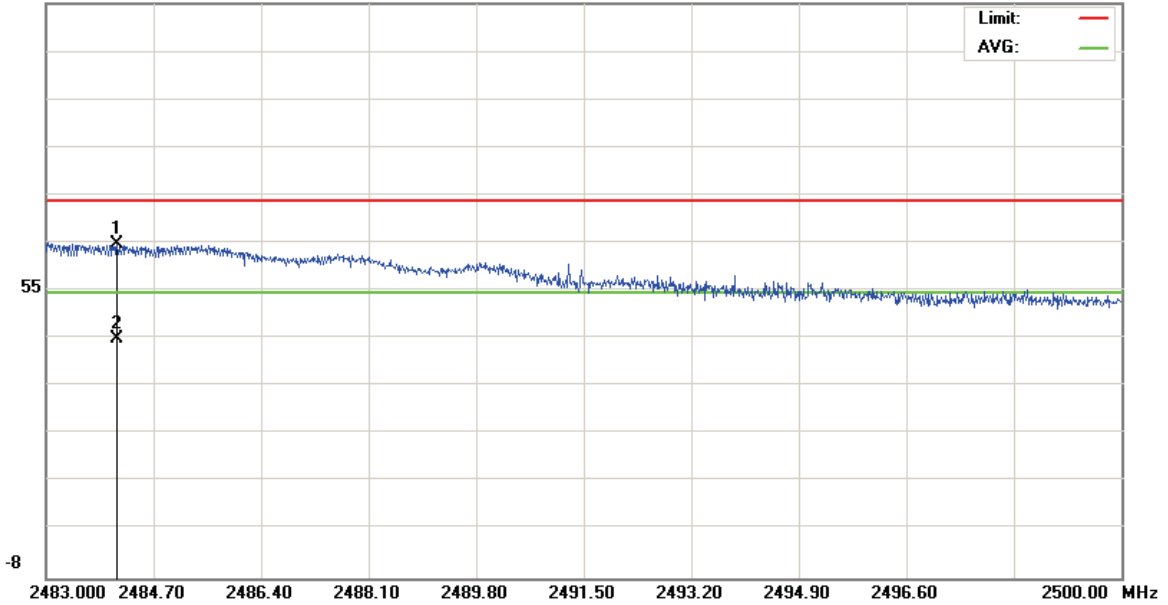


File :EM-200(Band Edge)  
117.0 dBuV

Data :#3

Date:2009/8/18

Time: 下午 04:35:32



Site: site #1  
Limit: FCC part 15 (PK)  
EUT:  
M/N: 09-0206-SEO  
Mode: drat 802.11n Wide-40MHz Link Mode BAND EDGE  
Note: 2452MHz

Polarization: *Vertical*  
Power:  
Distance: 3m

Temperature: 22  
Humidity: 60 %  
RBW: 1000KHz VBW: 1000KHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2484.122	64.26	0.25	64.51	74.00	-9.49	peak		
2		2484.122	43.75	0.25	44.00	54.00	-10.00	AVG		

\*:Maximum data x:Over limit !:over margin

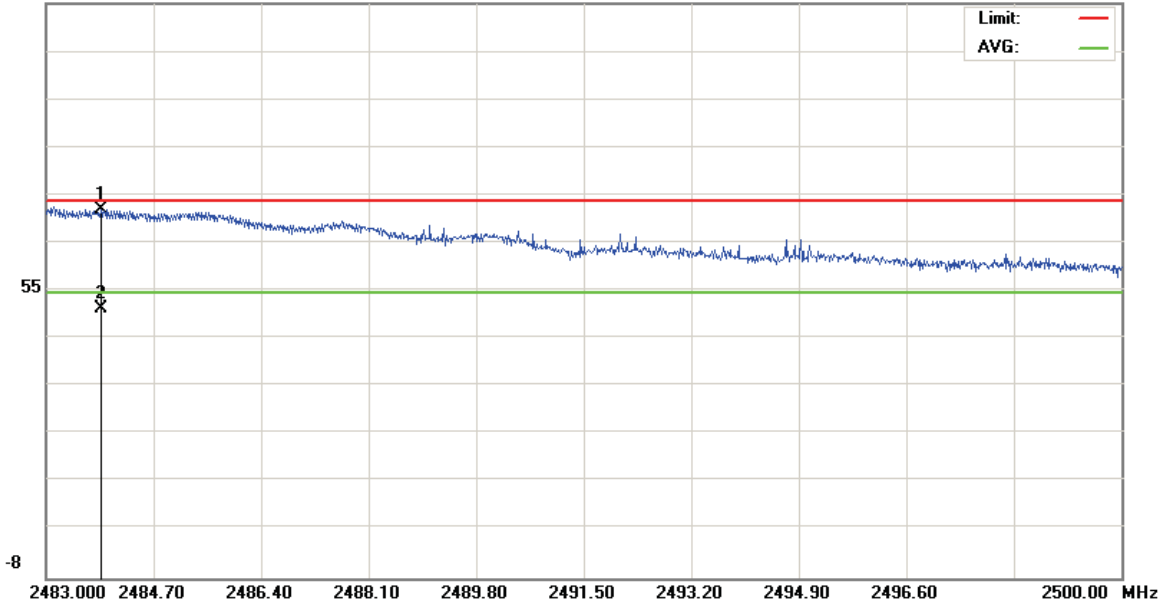


File :EM-200(Band Edge)  
117.0 dBuV

Data :#7

Date:2009/8/18

Time: 下午 04:43:56



Site: site #1	Polarization: <i>Horizontal</i>	Temperature: 22
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT:	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: 09-0206-SEO		
Mode: drat 802.11n Wide-40MHz Link Mode BAND EDGE		
Note: 2452MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2483.867	71.81	0.25	72.06	74.00	-1.94	peak		
2		2483.867	50.40	0.25	50.65	54.00	-3.35	AVG		

\*:Maximum data x:Over limit !:over margin



## **9. Antenna Requirements**

### **9.1 Standard Applicable**

For intentional device, according to 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 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **9.2 Antenna Connector Construction**

The antenna used in this product is **Fixed Antenna**. And the maximum Gain of this antenna is only **-3** dBi.