FCC 47 CFR PART 15 SUBPART C

Product Type	:	Notebook
Applicant	:	DIALOGUE INC
Address	:	4TH FL 20 LN 54 JHONGJHENG RD, SINDIAN CITY TAIPEI HSIEN, 231, TW
Trade Name	:	M2
Model Number	:	M2A1
Test Specification	:	FCC 47 CFR PART 15 SUBPART C: Oct., 2009 ANSI C63.4-2003
Issue Date	:	Mar. 31, 2010

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
Taoyuan Country 334, Taiwan R.O.C.
Tel：+886-3-2710188 / Fax：+886-3-2710190

Taiwan Accreditation Foundation accreditation number: 1330

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Mar. 31, 2010	Initial Issue	

Verification

Issued Date: 2010/03/31

Product Type	:	Notebook
Applicant	:	DIALOGUE INC
Address	:	4TH FL 20 LN 54 JHONGJHENG RD, SINDIAN CITY TAIPEI HSIEN, 231, TW
Trade Name	:	M2
Model Number	:	M2A1
FCC ID	:	X8P-M2A1
EUT Rated Voltage	:	DC 19V, 3.42A
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C: Oct., 2009 ANSI C63.4-2003
Test Result	:	Complied
Performed Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade City, Taoyuan Country 334, Taiwan R.O.C. Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the Electromagnetic Compatibility Directive 2004/108/EC and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By	:		Reviewed By	:
(Manager)		(Miller Lee)	(Testing Engineer)	(Gary Wu)

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1 General Information

1.1 Summary of Test Result

Standard		Item	Result	Remark
15.247	RSS-GEN			
15.207	7.2.2	AC Power Conducted Emission	PASS	-----
-----	6	Receiver Radiated Emissions	PASS	-----
Standard		Item	Result	Remark
15.247	RSS-210			
15.247(d)	A8.5	Transmitter Radiated Emissions	PASS	-----
15.247(b)(3)	A8.4	Max. Output Power	PASS	-----
15.247(a)(2)	A8.2 (a)	6dB RF Bandwidth	PASS	-----
15.247(e)	A8.2 (b)	Power Spectral Density	PASS	-----
15.247(c)	A8.5	Out of Band Conducted Spurious Emission	PASS	-----
15.247(d)	A8.5	Band Edge Measurement	PASS	-----
15.247(c)	A8.5	Occupied Bandwidth Measurement	PASS	-----
15.203	-	Antenna Requirement	PASS	-----

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.24 dB.

Radiated Emission

The measurement uncertainty of 30 MHz - 1GHz is evaluated as ± 3.072dB.

2 EUT Description

Product	:	Notebook
Trade Name	:	M2
Model Number	:	M2A1
Applicant	:	DIALOGUE INC 4TH FL 20 LN 54 JHONGJHENG RD, SINDIAN CITY TAIPEI HSIEN, 231, TW
Manufacturer	:	AOpen Information Product (Zhongshan) Inc. Zhongshan Torch High-tech Industrial Development Zone, Zhongshan City, Guangdong, China
FCC ID	:	X8P-M2A1
Frequency Range	:	2412 ~ 2462 MHz, 2422 ~ 2452 MHz
Modulation Type	:	IEEE 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g:DSSS(CCK, DQPSK, DBPSK)+ OFDM(QPSK, BPSK, 16-QAM, 64-QAM)
Antenna Type	:	PCB Antenna
Antenna Gain	:	0.83 dBi
Max. RF Output Power	:	IEEE 802.11b: 0.061 W / 17.84 dBm IEEE 802.11g: 0.123 W / 20.89 dBm
Component		
Power Adapter	:	DELTA, ADP-65HB BB Input:100-240Vac, 1.5A, 50-60Hz Output: 19Vdc, 3.42A Cable in: Shielded, 1.75 m Cable out: Non-Shielded, 1.74 m with a core
Battery	:	Boston-Power, PS00D0Q 11.1 Vdc, 48Wh

3 Test Methodology

3.1. Mode of Operation

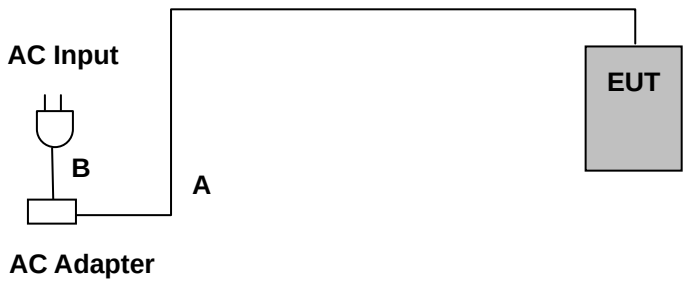
Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Normal Operation Mode
Mode 2: IEEE 802.11b Link Mode
Mode 3: IEEE 802.11g Link Mode
Mode 4: IDLE Mode

3.2. EUT Exercise Software

1.	Turn on the power of all equipment.
2.	EUT run test program.
3.	Open WLAN function link to AP.

3.3. Configuration of Test System Details



Signal Cable Type		Signal Cable Description
A	DC Power Cable	Non Shielded, 1.75 m with a core
B	AC Power Cable	Shielded, 1.75 m

3.4. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	25
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

4 Conducted Emission Measurement

4.1. Limit

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

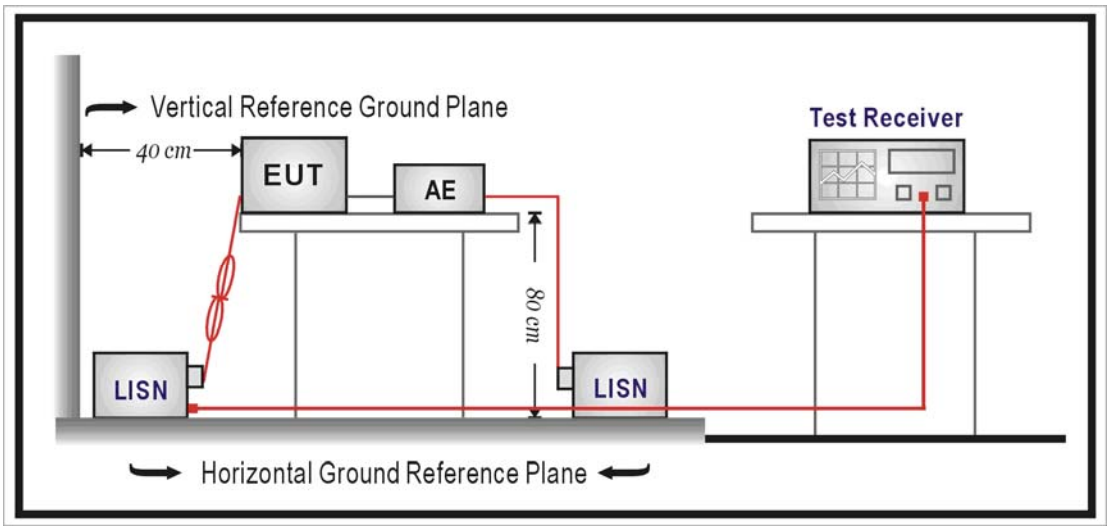
4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	07/01/2009	(1)
LISN	EMCO	3816/2 SH	00060110	06/05/2009	(1)
LISN	EMCO	3816/2 SH	00060111	06/29/2009	(1)
Transient Limiter	ELECTRO-METRICS	EM-7600	777	09/22/2009	(2)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

4.3. Test Setup



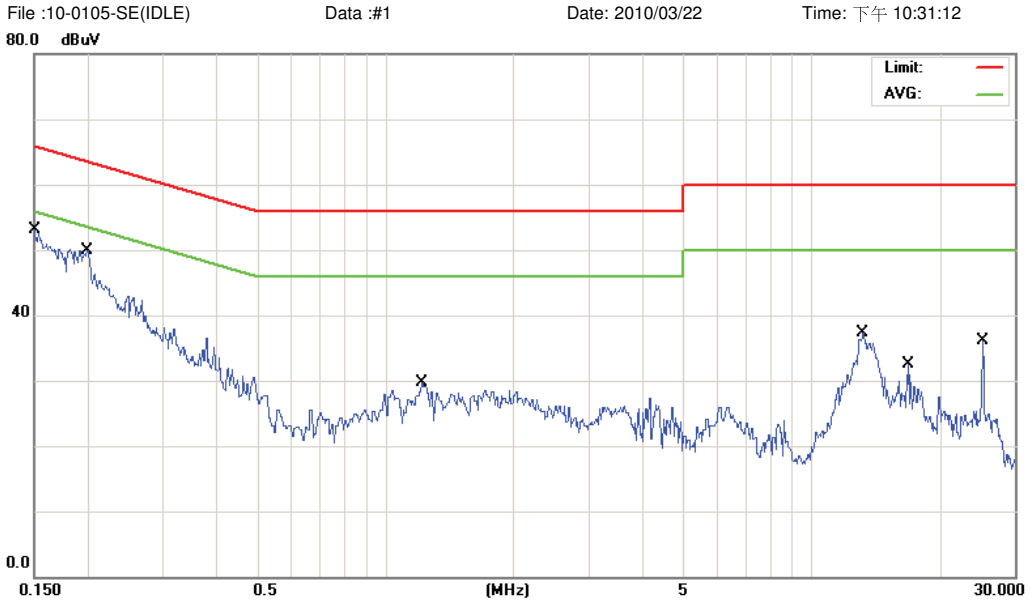
4.4. Test Procedure

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.1.

4.5. Test Result



Site : Conducted
Limit: CISPR22 Class B Conduction(QP)
EUT: Notebook
M/N: M2A1
Mode: 4
Note:

Phase: *L1*
Power: AC 120V/60Hz

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	30.70	10.11	40.81	65.99	-25.18	QP	
2		0.1500	10.60	10.11	20.71	55.99	-35.28	AVG	
3	*	0.1997	34.60	10.08	44.68	63.62	-18.94	QP	
4		0.1997	18.10	10.08	28.18	53.62	-25.44	AVG	
5		1.2200	13.20	9.66	22.86	56.00	-33.14	QP	
6		1.2200	3.60	9.66	13.26	46.00	-32.74	AVG	
7		13.2000	24.20	10.34	34.54	60.00	-25.46	QP	
8		13.2000	15.60	10.34	25.94	50.00	-24.06	AVG	
9		16.8000	13.10	10.26	23.36	60.00	-36.64	QP	
10		16.8000	7.30	10.26	17.56	50.00	-32.44	AVG	
11		25.1500	20.20	10.53	30.73	60.00	-29.27	QP	
12		25.1500	17.10	10.53	27.63	50.00	-22.37	AVG	

*:Maximum data x:Over limit !:over margin ●Reference Only

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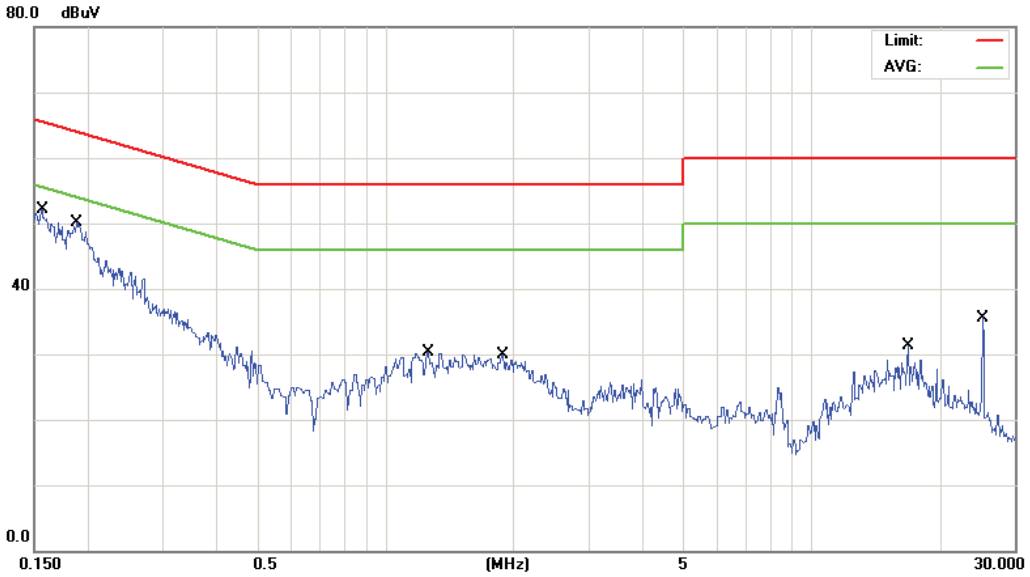

Site : Conducted Phase: N Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55 %

EUT: Notebook

M/N: M2A1

Mode: 4

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1563	34.30	10.10	44.40	65.65	-21.25	QP	
2		0.1563	9.30	10.10	19.40	55.65	-36.25	AVG	
3	*	0.1884	35.40	10.07	45.47	64.10	-18.63	QP	
4		0.1884	17.90	10.07	27.97	54.10	-26.13	AVG	
5		1.2560	16.30	9.64	25.94	56.00	-30.06	QP	
6		1.2560	7.20	9.64	16.84	46.00	-29.16	AVG	
7		1.8860	17.00	9.69	26.69	56.00	-29.31	QP	
8		1.8860	6.80	9.69	16.49	46.00	-29.51	AVG	
9		16.8000	11.70	10.33	22.03	60.00	-37.97	QP	
10		16.8000	6.20	10.33	16.53	50.00	-33.47	AVG	
11		25.1500	20.00	10.67	30.67	60.00	-29.33	QP	
12		25.1500	17.10	10.67	27.77	50.00	-22.23	AVG	

*:Maximum data x:Over limit !:over margin ●Reference Only

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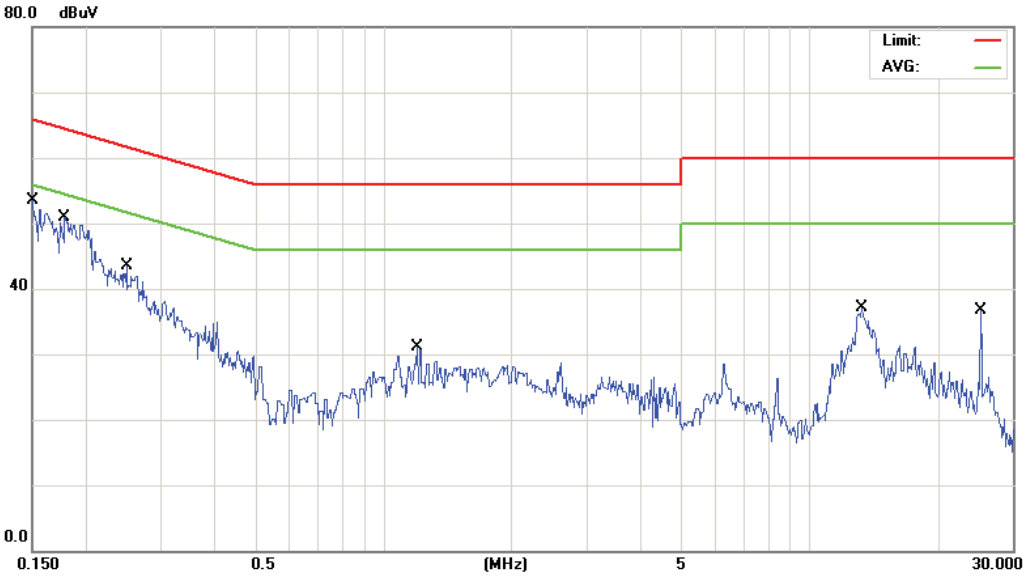

Site : Conducted Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55 %

EUT: Notebook

M/N: M2A1

Mode: 1

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	32.20	10.11	42.31	65.99	-23.68	QP	
2		0.1500	11.10	10.11	21.21	55.99	-34.78	AVG	
3	*	0.1787	33.40	10.09	43.49	64.54	-21.05	QP	
4		0.1787	11.70	10.09	21.79	54.54	-32.75	AVG	
5		0.2494	26.80	10.06	36.86	61.77	-24.91	QP	
6		0.2494	10.20	10.06	20.26	51.77	-31.51	AVG	
7		1.2019	15.50	9.67	25.17	56.00	-30.83	QP	
8		1.2019	7.60	9.67	17.27	46.00	-28.73	AVG	
9		13.2500	22.70	10.34	33.04	60.00	-26.96	QP	
10		13.2500	15.50	10.34	25.84	50.00	-24.16	AVG	
11		25.1500	20.50	10.53	31.03	60.00	-28.97	QP	
12		25.1500	17.60	10.53	28.13	50.00	-21.87	AVG	

*:Maximum data x:Over limit !:over margin ●Reference Only

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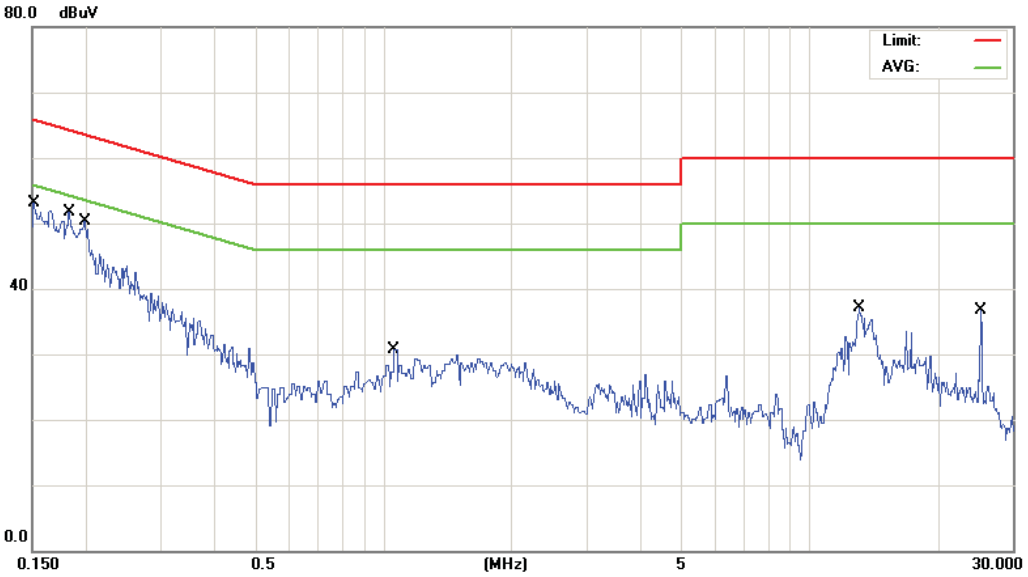


Site : Conducted Phase: N Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55 %

EUT: Notebook

M/N: M2A1

Mode: 1

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1514	35.60	10.10	45.70	65.92	-20.22	QP	
2		0.1514	10.80	10.10	20.90	55.92	-35.02	AVG	
3	*	0.1829	35.80	10.08	45.88	64.35	-18.47	QP	
4		0.1829	16.30	10.08	26.38	54.35	-27.97	AVG	
5		0.1990	34.80	10.07	44.87	63.65	-18.78	QP	
6		0.1990	18.70	10.07	28.77	53.65	-24.88	AVG	
7		1.0669	14.50	9.72	24.22	56.00	-31.78	QP	
8		1.0669	6.80	9.72	16.52	46.00	-29.48	AVG	
9		13.0500	23.80	10.37	34.17	60.00	-25.83	QP	
10		13.0500	16.00	10.37	26.37	50.00	-23.63	AVG	
11		25.1500	21.20	10.67	31.87	60.00	-28.13	QP	
12		25.1500	18.20	10.67	28.87	50.00	-21.13	AVG	

*:Maximum data x:Over limit !:over margin ●Reference Only

5 Transmitter Radiated Emissions Measurement

5.1. Limit

Frequency Range (MHz)	Peak (dBuV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960	54

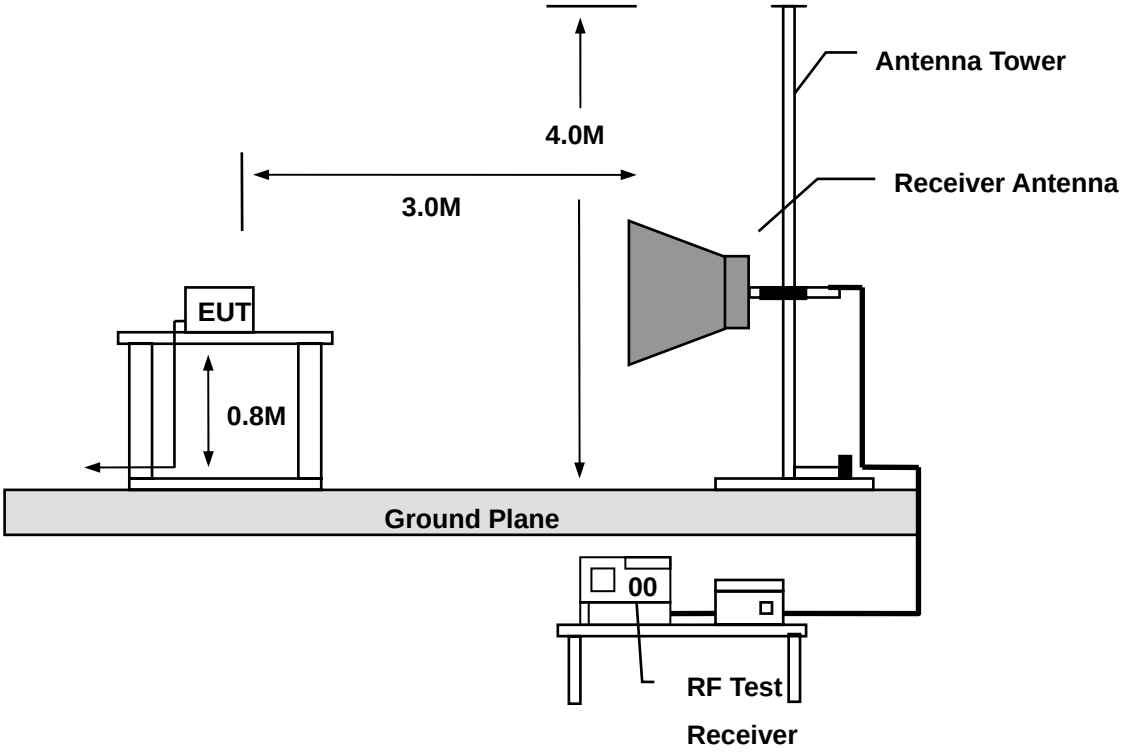
5.2. Test Instruments

3 Meter Chamber					
Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Cal. Date**	**Remark**
RF Pre-selector	Agilent	N9039A	MY46520256	01/27/2009	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/20/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Pre Amplifier	Agilent	8447D	2944A10961	06/30/2009	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/23/2009	(2)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	TE01	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

5.3. Setup



5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

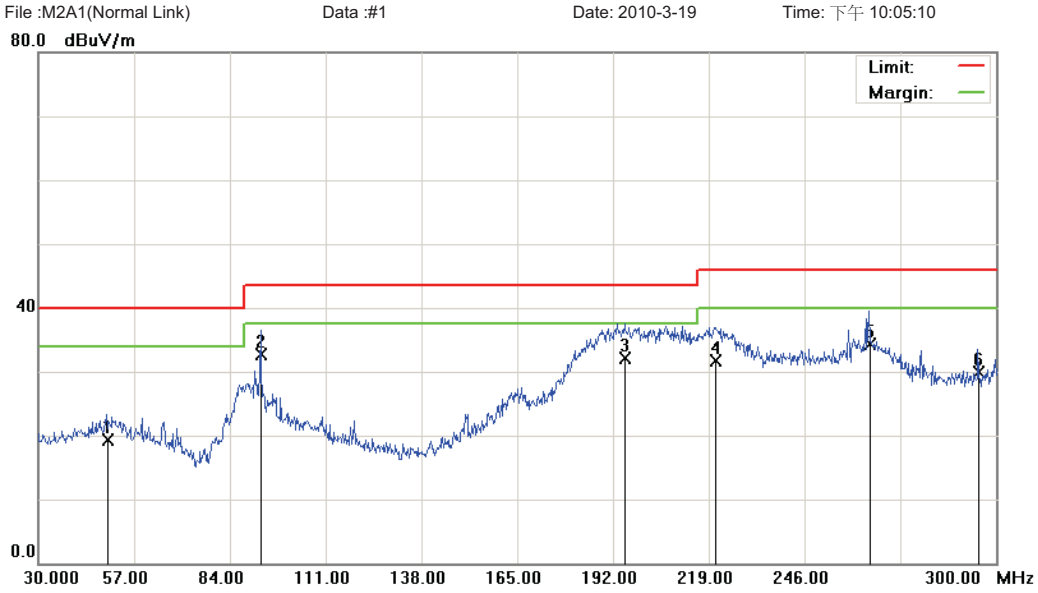
(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

5.5. Test Result



Site: : 966 Chamber
Limit: FCC Class B 3M Radiation
EUT: Notebook
M/N: M2A1
Mode: 1
Note:

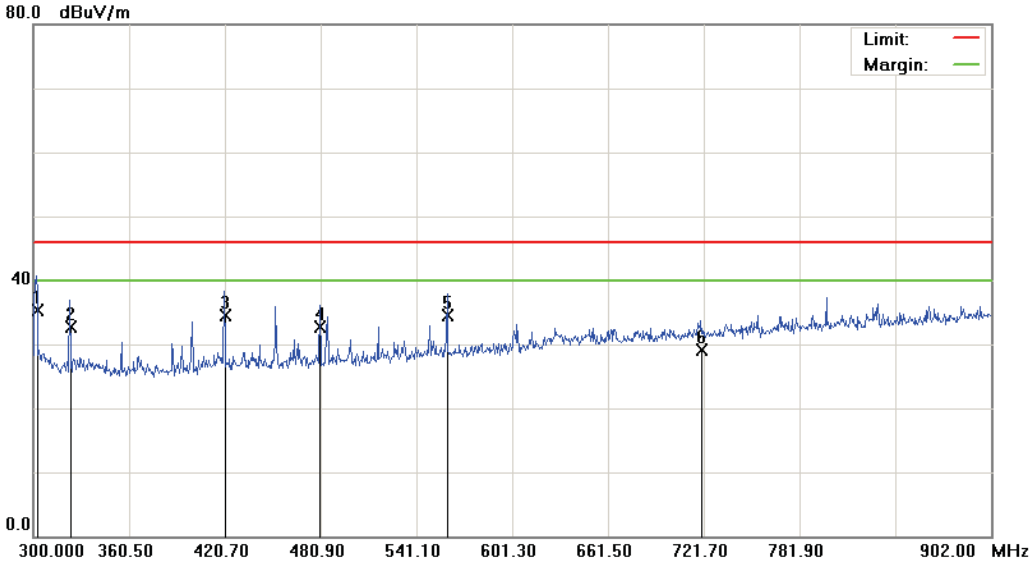
Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 120 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		49.3050	31.49	-12.12	19.37	40.00	-20.63	QP			
2	*	92.7750	45.26	-12.55	32.71	43.50	-10.79	QP			
3		195.3750	45.13	-13.10	32.03	43.50	-11.47	QP			
4		220.8900	44.09	-12.34	31.75	46.00	-14.25	QP			
5		264.2250	45.29	-11.07	34.22	46.00	-11.78	QP			
6		295.0050	40.18	-10.20	29.98	46.00	-16.02	QP			

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

File :M2A1(Normal Link) Data :#2 Date: 2010-3-19 Time: 下午 10:08:04



Site: : 966 Chamber
Limit: FCC Class B 3M Radiation
EUT: Notebook
M/N: M2A1
Mode: 1
Note:

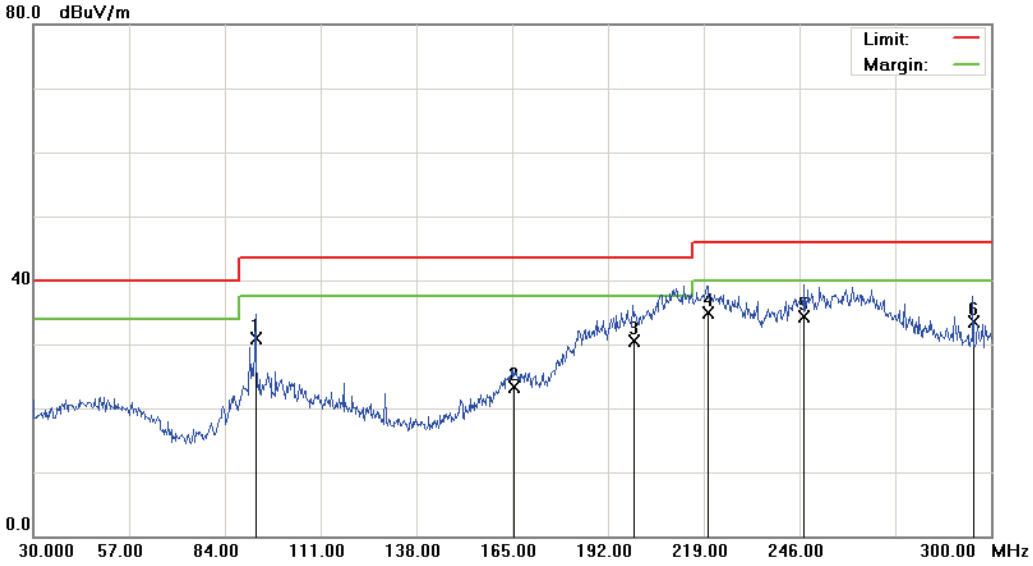
Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 120 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	302.1070	45.36	-10.04	35.32	46.00	-10.68	QP			
2		323.1770	42.48	-9.68	32.80	46.00	-13.20	QP			
3		420.0990	42.58	-8.09	34.49	46.00	-11.51	QP			
4		479.9980	40.29	-7.52	32.77	46.00	-13.23	QP			
5		560.0640	40.16	-5.66	34.50	46.00	-11.50	QP			
6		719.8950	32.59	-3.55	29.04	46.00	-16.96	QP			

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

File :M2A1(Normal Link) Data :#3 Date: 2010-3-19 Time: 下午 10:10:58



Site: : 966 Chamber
Limit: FCC Class B 3M Radiation
EUT: Notebook
M/N: M2A1
Mode: 1
Note:

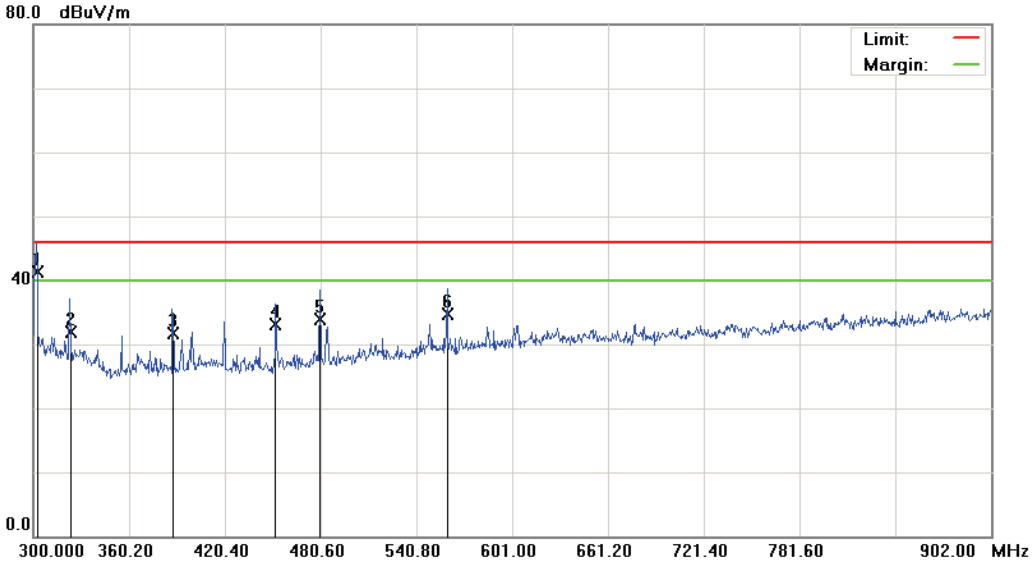
Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 120 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		92.6400	43.45	-12.57	30.88	43.50	-12.62	QP			
2		165.4050	38.57	-15.31	23.26	43.50	-20.24	QP			
3		199.1550	43.67	-13.16	30.51	43.50	-12.99	QP			
4	*	219.9450	47.26	-12.38	34.88	46.00	-11.12	QP			
5		247.3500	45.26	-11.05	34.21	46.00	-11.79	QP			
6		295.0050	43.78	-10.20	33.58	46.00	-12.42	QP			

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

File :M2A1(Normal Link) Data :#4 Date: 2010-3-19 Time: 下午 10:13:53



Site: : 966 Chamber
Limit: FCC Class B 3M Radiation
EUT: Notebook
M/N: M2A1
Mode: 1
Note:

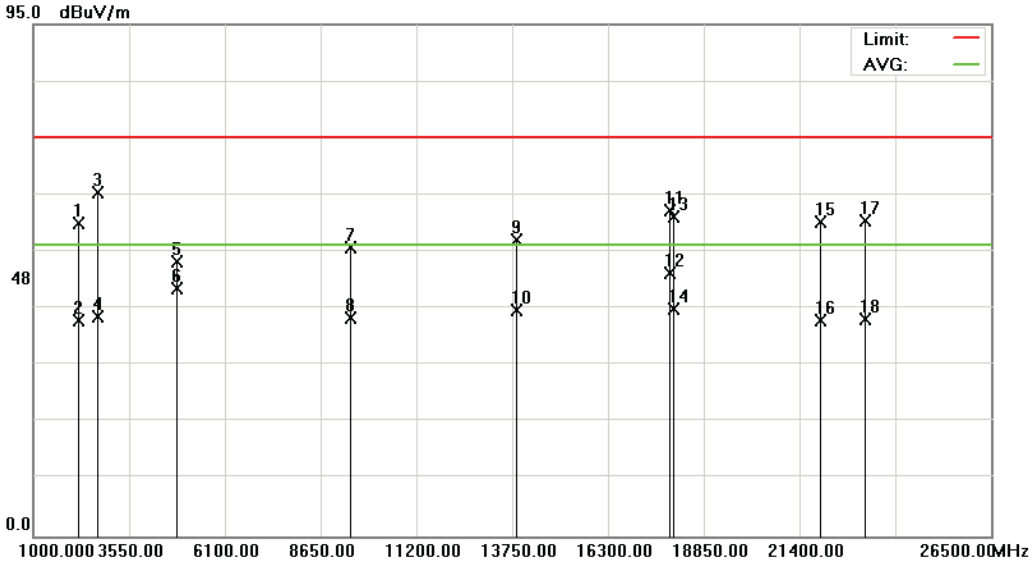
Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 120 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	302.1070	51.34	-10.04	41.30	46.00	-4.70	QP			
2		323.1770	41.67	-9.68	31.99	46.00	-14.01	QP			
3		387.5910	40.26	-8.53	31.73	46.00	-14.27	QP			
4		452.3060	41.29	-8.10	33.19	46.00	-12.81	QP			
5		479.9980	41.37	-7.52	33.85	46.00	-12.15	QP			
6		560.0640	40.29	-5.66	34.63	46.00	-11.37	QP			

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

File :M2A1(2412MHz) Data :#17 Date: 2010/3/22 Time: 下午 03:50:14



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH01(2412MHz)

Polarization: *Vertical*
Power:
Distance: 3m

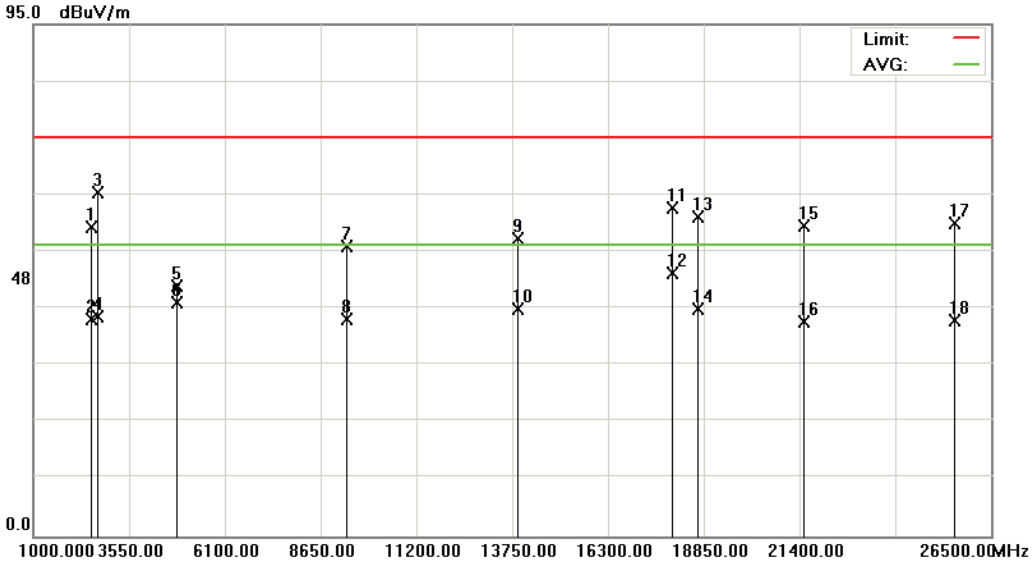
Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2198.500	57.63	0.52	58.15	74.00	-15.85	peak			
2		2198.500	39.48	0.52	40.00	54.00	-14.00	AVG			
3		2703.650	41.82	21.89	63.71	74.00	-10.29	peak			
4		2703.650	18.88	21.89	40.77	54.00	-13.23	AVG			
5		4824.300	43.40	7.49	50.89	74.00	-23.11	peak			
6		4824.300	38.57	7.49	46.06	54.00	-7.94	AVG			
7		9437.900	36.62	17.03	53.65	74.00	-20.35	peak			
8		9437.900	23.40	17.03	40.43	54.00	-13.57	AVG			
9		13864.000	36.72	18.26	54.98	74.00	-19.02	peak			
10		13864.000	23.69	18.26	41.95	54.00	-12.05	AVG			
11		17912.000	35.51	24.89	60.40	74.00	-13.60	peak			
12	*	17912.000	23.91	24.89	48.80	54.00	-5.20	AVG			
13		18055.250	35.96	23.26	59.22	74.00	-14.78	peak			
14		18055.250	18.93	23.26	42.19	54.00	-11.81	AVG			
15		21961.000	37.11	21.14	58.25	74.00	-15.75	peak			
16		21961.000	18.81	21.14	39.95	54.00	-14.05	AVG			
17		23146.750	37.72	20.83	58.55	74.00	-15.45	peak			
18		23146.750	19.35	20.83	40.18	54.00	-13.82	AVG			

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

1

File :M2A1(2412MHz) Data :#18 Date: 2010/3/22 Time: 下午 03:51:32



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH01(2412MHz)

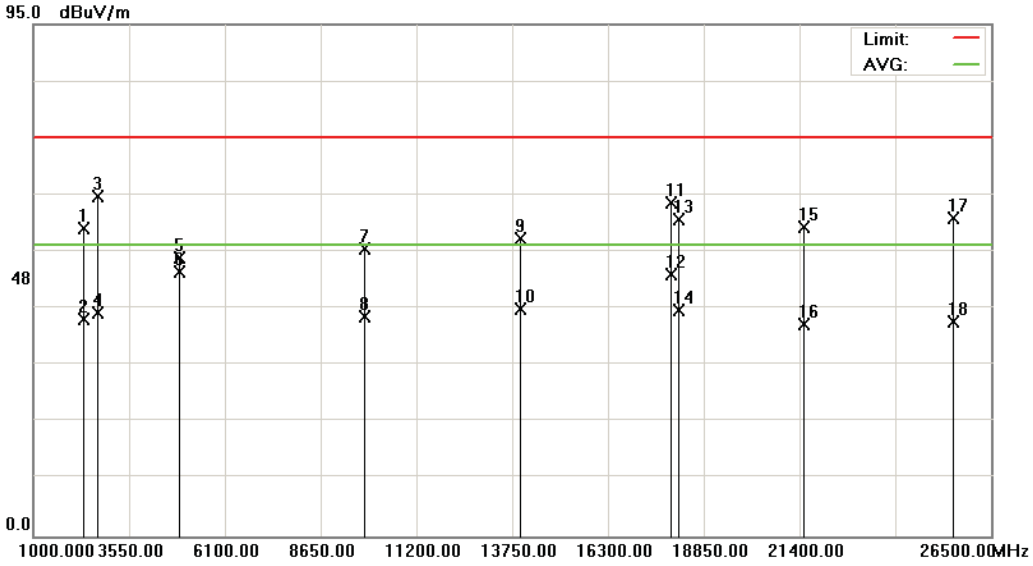
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2518.950	56.85	0.40	57.25	74.00	-16.75	peak			
2		2518.950	39.96	0.40	40.36	54.00	-13.64	AVG			
3		2703.650	41.88	21.89	63.77	74.00	-10.23	peak			
4		2703.650	18.88	21.89	40.77	54.00	-13.23	AVG			
5		4824.300	38.96	7.49	46.45	74.00	-27.55	peak			
6		4824.300	35.76	7.49	43.25	54.00	-10.75	AVG			
7		9321.100	36.91	16.91	53.82	74.00	-20.18	peak			
8		9321.100	23.44	16.91	40.35	54.00	-13.65	AVG			
9		13884.000	36.90	18.41	55.31	74.00	-18.69	peak			
10		13884.000	23.83	18.41	42.24	54.00	-11.76	AVG			
11		17988.000	35.54	25.34	60.88	74.00	-13.12	peak			
12	*	17988.000	23.40	25.34	48.74	54.00	-5.26	AVG			
13		18692.750	36.13	23.10	59.23	74.00	-14.77	peak			
14		18692.750	19.17	23.10	42.27	54.00	-11.73	AVG			
15		21506.250	36.15	21.35	57.50	74.00	-16.50	peak			
16		21506.250	18.42	21.35	39.77	54.00	-14.23	AVG			
17		25531.000	39.22	18.96	58.18	74.00	-15.82	peak			
18		25531.000	20.98	18.96	39.94	54.00	-14.06	AVG			

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

File :M2A1(2437MHz) Data :#17 Date: 2010/3/22 Time: 下午 03:53:50



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH06(2437MHz)

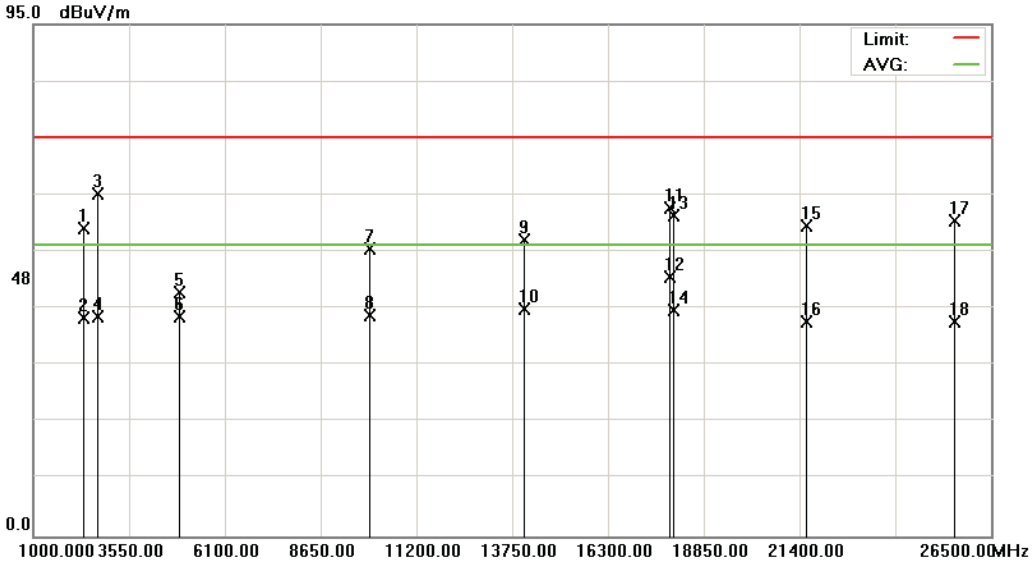
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2312.400	56.71	0.35	57.06	74.00	-16.94	peak			
2		2312.400	39.81	0.35	40.16	54.00	-13.84	AVG			
3		2700.000	40.42	22.58	63.00	74.00	-11.00	peak			
4		2700.000	18.85	22.58	41.43	54.00	-12.57	AVG			
5		4875.400	43.83	7.74	51.57	74.00	-22.43	peak			
6	*	4875.400	41.19	7.74	48.93	54.00	-5.07	AVG			
7		9806.550	35.67	17.70	53.37	74.00	-20.63	peak			
8		9806.550	23.15	17.70	40.85	54.00	-13.15	AVG			
9		13944.000	36.59	18.53	55.12	74.00	-18.88	peak			
10		13944.000	23.63	18.53	42.16	54.00	-11.84	AVG			
11		17980.000	36.57	25.21	61.78	74.00	-12.22	peak			
12		17980.000	23.47	25.21	48.68	54.00	-5.32	AVG			
13		18165.750	35.63	23.23	58.86	74.00	-15.14	peak			
14		18165.750	18.76	23.23	41.99	54.00	-12.01	AVG			
15		21519.000	35.91	21.34	57.25	74.00	-16.75	peak			
16		21519.000	18.05	21.34	39.39	54.00	-14.61	AVG			
17		25497.000	40.10	18.99	59.09	74.00	-14.91	peak			
18		25497.000	20.89	18.99	39.88	54.00	-14.12	AVG			

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

File :M2A1(2437MHz) Data :#18 Date: 2010/3/22 Time: 下午 03:55:08



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH06(2437MHz)

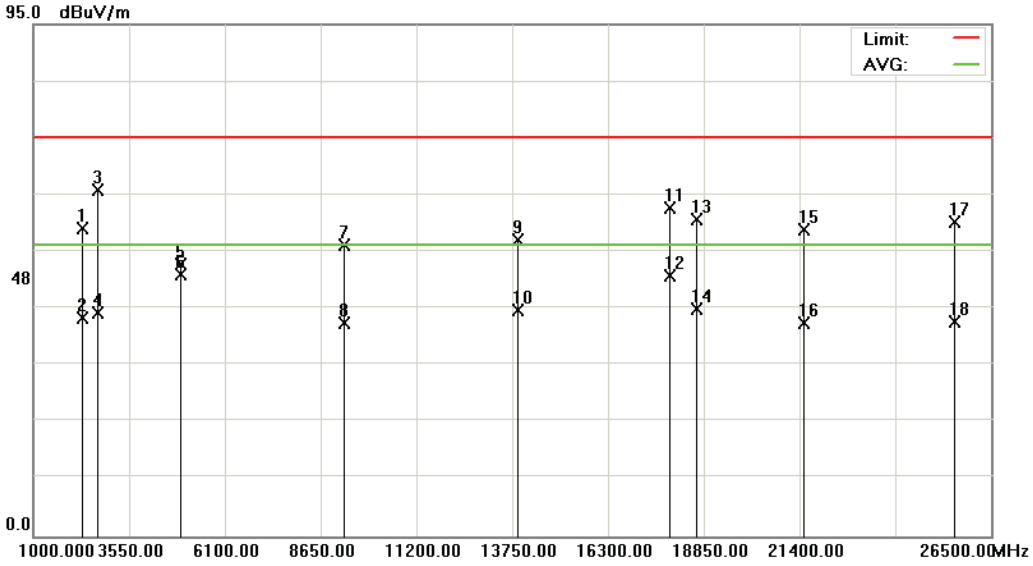
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2301.350	56.50	0.53	57.03	74.00	-16.97	peak			
2		2301.350	39.96	0.53	40.49	54.00	-13.51	AVG			
3		2703.650	41.67	21.89	63.56	74.00	-10.44	peak			
4		2703.650	18.85	21.89	40.74	54.00	-13.26	AVG			
5		4875.400	37.60	7.74	45.34	74.00	-28.66	peak			
6		4875.400	32.89	7.74	40.63	54.00	-13.37	AVG			
7		9948.900	35.65	17.78	53.43	74.00	-20.57	peak			
8		9948.900	23.18	17.78	40.96	54.00	-13.04	AVG			
9		14064.000	36.26	18.73	54.99	74.00	-19.01	peak			
10		14064.000	23.48	18.73	42.21	54.00	-11.79	AVG			
11		17932.000	36.14	24.76	60.90	74.00	-13.10	peak			
12	*	17932.000	23.43	24.76	48.19	54.00	-5.81	AVG			
13		18017.000	36.20	23.29	59.49	74.00	-14.51	peak			
14		18017.000	18.55	23.29	41.84	54.00	-12.16	AVG			
15		21565.750	36.34	21.31	57.65	74.00	-16.35	peak			
16		21565.750	18.36	21.31	39.67	54.00	-14.33	AVG			
17		25531.000	39.69	18.96	58.65	74.00	-15.35	peak			
18		25531.000	20.91	18.96	39.87	54.00	-14.13	AVG			

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

File :M2A1(2462MHz) Data :#18 Date: 2010/3/22 Time: 下午 03:56:35



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH11(2462MHz)

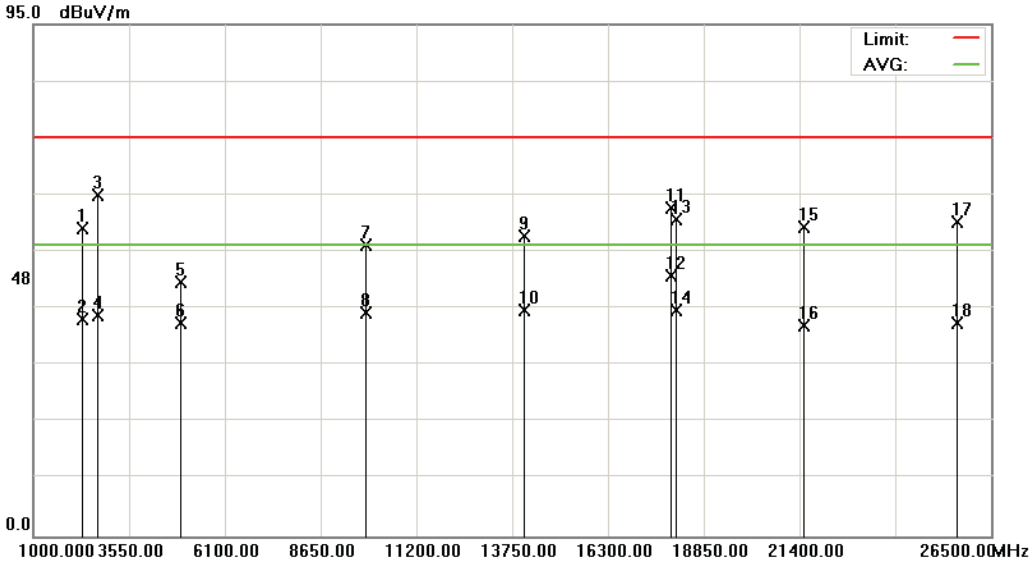
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2297.100	56.70	0.51	57.21	74.00	-16.79	peak			
2		2297.100	39.95	0.51	40.46	54.00	-13.54	AVG			
3		2700.000	41.61	22.58	64.19	74.00	-9.81	peak			
4		2700.000	18.75	22.58	41.33	54.00	-12.67	AVG			
5		4922.850	42.85	7.66	50.51	74.00	-23.49	peak			
6	*	4922.850	40.88	7.66	48.54	54.00	-5.46	AVG			
7		9255.400	37.48	16.47	53.95	74.00	-20.05	peak			
8		9255.400	23.07	16.47	39.54	54.00	-14.46	AVG			
9		13900.000	36.48	18.53	55.01	74.00	-18.99	peak			
10		13900.000	23.42	18.53	41.95	54.00	-12.05	AVG			
11		17912.000	36.13	24.89	61.02	74.00	-12.98	peak			
12		17912.000	23.37	24.89	48.26	54.00	-5.74	AVG			
13		18658.750	35.72	23.09	58.81	74.00	-15.19	peak			
14		18658.750	19.00	23.09	42.09	54.00	-11.91	AVG			
15		21502.000	35.58	21.36	56.94	74.00	-17.06	peak			
16		21502.000	18.26	21.36	39.62	54.00	-14.38	AVG			
17		25522.500	39.44	18.97	58.41	74.00	-15.59	peak			
18		25522.500	20.72	18.97	39.69	54.00	-14.31	AVG			

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

File :M2A1(2462MHz) Data :#19 Date: 2010/3/22 Time: 下午 03:57:53



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH11(2462MHz)

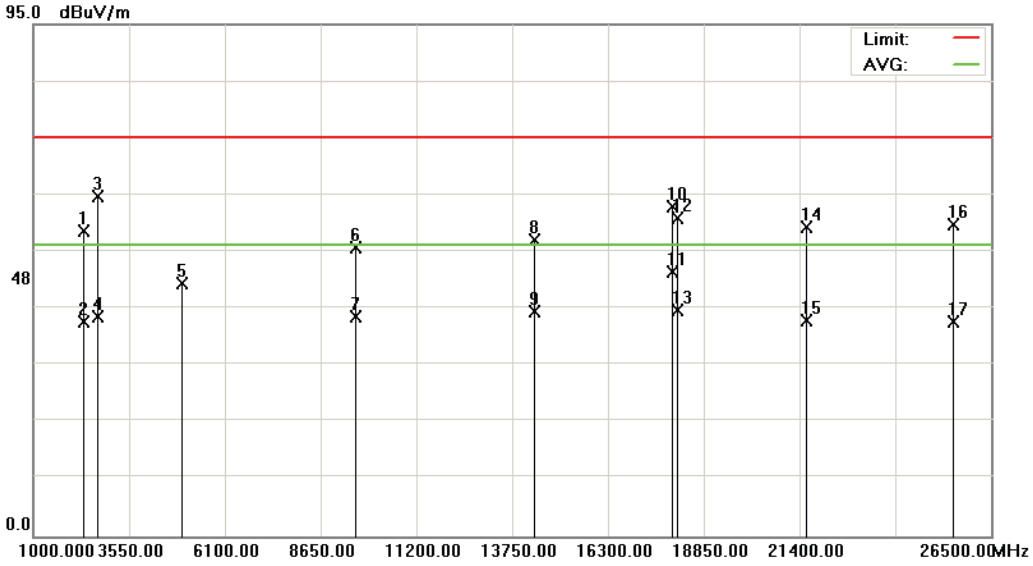
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2286.900	56.76	0.41	57.17	74.00	-16.83	peak			
2		2286.900	39.89	0.41	40.30	54.00	-13.70	AVG			
3		2700.000	40.72	22.58	63.30	74.00	-10.70	peak			
4		2700.000	18.38	22.58	40.96	54.00	-13.04	AVG			
5		4922.850	39.53	7.66	47.19	74.00	-26.81	peak			
6		4922.850	31.94	7.66	39.60	54.00	-14.40	AVG			
7		9828.450	36.26	17.79	54.05	74.00	-19.95	peak			
8		9828.450	23.65	17.79	41.44	54.00	-12.56	AVG			
9		14064.000	37.06	18.73	55.79	74.00	-18.21	peak			
10		14064.000	23.28	18.73	42.01	54.00	-11.99	AVG			
11		17960.000	36.03	24.84	60.87	74.00	-13.13	peak			
12	*	17960.000	23.58	24.84	48.42	54.00	-5.58	AVG			
13		18093.500	35.50	23.24	58.74	74.00	-15.26	peak			
14		18093.500	18.70	23.24	41.94	54.00	-12.06	AVG			
15		21519.000	36.09	21.34	57.43	74.00	-16.57	peak			
16		21519.000	17.76	21.34	39.10	54.00	-14.90	AVG			
17		25577.750	39.49	18.93	58.42	74.00	-15.58	peak			
18		25577.750	20.52	18.93	39.45	54.00	-14.55	AVG			

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

File :M2A1(2412MHz) Data :#17 Date: 2010/3/22 Time: 下午 04:01:00



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH01(2412MHz)

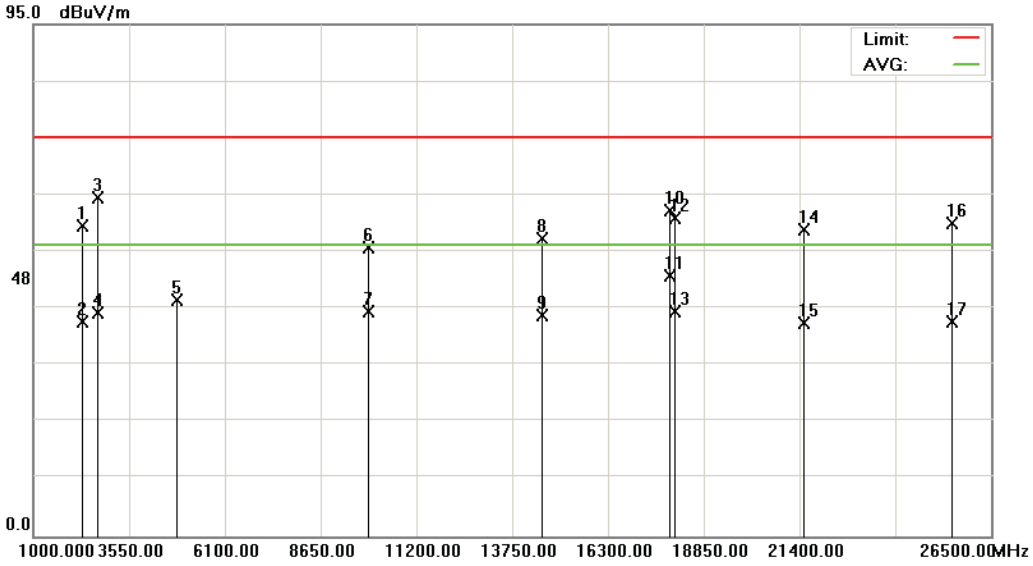
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2306.450	56.18	0.44	56.62	74.00	-17.38	peak			
2		2306.450	39.45	0.44	39.89	54.00	-14.11	AVG			
3		2703.650	41.18	21.89	63.07	74.00	-10.93	peak			
4		2703.650	18.76	21.89	40.65	54.00	-13.35	AVG			
5		4930.150	39.15	7.66	46.81	74.00	-27.19	peak			
6		9591.200	36.20	17.37	53.57	74.00	-20.43	peak			
7		9591.200	23.45	17.37	40.82	54.00	-13.18	AVG			
8		14320.000	36.49	18.57	55.06	74.00	-18.94	peak			
9		14320.000	23.15	18.57	41.72	54.00	-12.28	AVG			
10		18000.000	35.62	25.57	61.19	74.00	-12.81	peak			
11	*	18000.000	23.41	25.57	48.98	54.00	-5.02	AVG			
12		18131.750	35.79	23.23	59.02	74.00	-14.98	peak			
13		18131.750	18.61	23.23	41.84	54.00	-12.16	AVG			
14		21561.500	36.01	21.32	57.33	74.00	-16.67	peak			
15		21561.500	18.68	21.32	40.00	54.00	-14.00	AVG			
16		25488.500	38.77	19.00	57.77	74.00	-16.23	peak			
17		25488.500	20.68	19.00	39.68	54.00	-14.32	AVG			

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

File :M2A1(2412MHz) Data :#18 Date: 2010/3/22 Time: 下午 04:02:18



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH01(2412MHz)

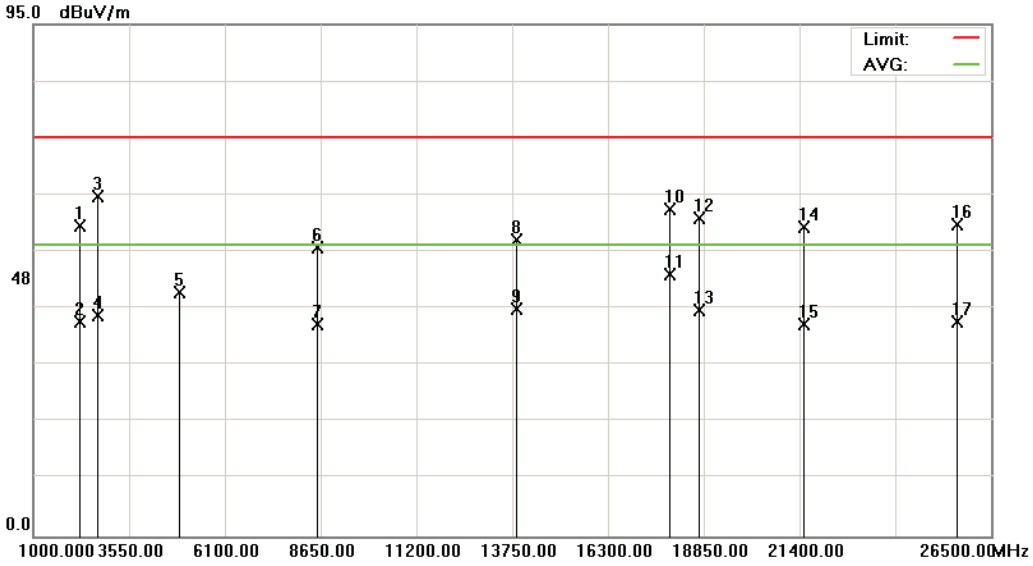
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2276.700	57.53	0.00	57.53	74.00	-16.47	peak			
2		2276.700	39.82	0.00	39.82	54.00	-14.18	AVG			
3		2700.000	40.13	22.58	62.71	74.00	-11.29	peak			
4		2700.000	18.96	22.58	41.54	54.00	-12.46	AVG			
5		4824.000	36.35	7.48	43.83	74.00	-30.17	peak			
6		9923.350	35.81	17.78	53.59	74.00	-20.41	peak			
7		9923.350	23.84	17.78	41.62	54.00	-12.38	AVG			
8		14516.000	37.45	17.82	55.27	74.00	-18.73	peak			
9		14516.000	23.18	17.82	41.00	54.00	-13.00	AVG			
10		17916.000	35.66	24.87	60.53	74.00	-13.47	peak			
11	*	17916.000	23.37	24.87	48.24	54.00	-5.76	AVG			
12		18085.000	35.80	23.25	59.05	74.00	-14.95	peak			
13		18085.000	18.51	23.25	41.76	54.00	-12.24	AVG			
14		21506.250	35.61	21.35	56.96	74.00	-17.04	peak			
15		21506.250	18.13	21.35	39.48	54.00	-14.52	AVG			
16		25441.750	39.12	19.02	58.14	74.00	-15.86	peak			
17		25441.750	20.70	19.02	39.72	54.00	-14.28	AVG			

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

File :M2A1(2437MHz) Data :#18 Date: 2010/3/22 Time: 下午 04:03:42



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH06(2437MHz)

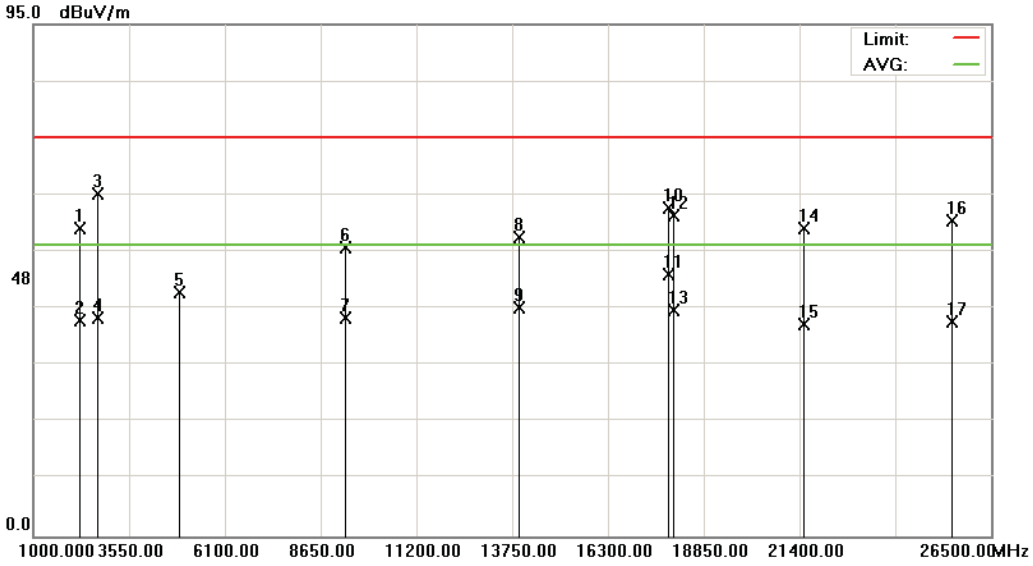
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2204.450	57.16	0.48	57.64	74.00	-16.36	peak			
2		2204.450	39.40	0.48	39.88	54.00	-14.12	AVG			
3		2700.000	40.40	22.58	62.98	74.00	-11.02	peak			
4		2700.000	18.48	22.58	41.06	54.00	-12.94	AVG			
5		4874.000	37.52	7.72	45.24	74.00	-28.76	peak			
6		8565.550	37.87	15.68	53.55	74.00	-20.45	peak			
7		8565.550	23.53	15.68	39.21	54.00	-14.79	AVG			
8		13876.000	36.55	18.35	54.90	74.00	-19.10	peak			
9		13876.000	23.73	18.35	42.08	54.00	-11.92	AVG			
10		17940.000	35.98	24.71	60.69	74.00	-13.31	peak			
11	*	17940.000	23.76	24.71	48.47	54.00	-5.53	AVG			
12		18718.250	35.89	23.11	59.00	74.00	-15.00	peak			
13		18718.250	18.70	23.11	41.81	54.00	-12.19	AVG			
14		21519.000	35.92	21.34	57.26	74.00	-16.74	peak			
15		21519.000	17.94	21.34	39.28	54.00	-14.72	AVG			
16		25565.000	39.01	18.94	57.95	74.00	-16.05	peak			
17		25565.000	20.86	18.94	39.80	54.00	-14.20	AVG			

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

File :M2A1(2437MHz) Data :#19 Date: 2010/3/22 Time: 下午 04:05:01



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH06(2437MHz)

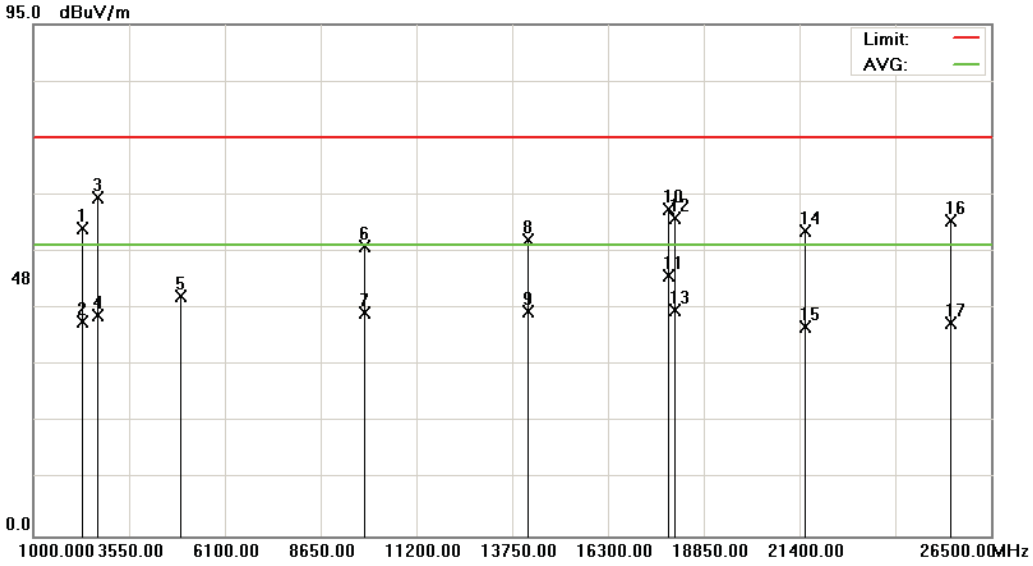
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2246.100	56.75	0.47	57.22	74.00	-16.78	peak			
2		2246.100	39.59	0.47	40.06	54.00	-13.94	AVG			
3		2703.650	41.74	21.89	63.63	74.00	-10.37	peak			
4		2703.650	18.67	21.89	40.56	54.00	-13.44	AVG			
5		4874.000	37.51	7.72	45.23	74.00	-28.77	peak			
6		9299.200	36.64	16.88	53.52	74.00	-20.48	peak			
7		9299.200	23.65	16.88	40.53	54.00	-13.47	AVG			
8		13912.000	36.98	18.53	55.51	74.00	-18.49	peak			
9		13912.000	23.83	18.53	42.36	54.00	-11.64	AVG			
10		17896.000	36.00	24.84	60.84	74.00	-13.16	peak			
11	*	17896.000	23.73	24.84	48.57	54.00	-5.43	AVG			
12		18029.750	36.33	23.28	59.61	74.00	-14.39	peak			
13		18029.750	18.74	23.28	42.02	54.00	-11.98	AVG			
14		21514.750	35.66	21.35	57.01	74.00	-16.99	peak			
15		21514.750	17.94	21.35	39.29	54.00	-14.71	AVG			
16		25446.000	39.64	19.01	58.65	74.00	-15.35	peak			
17		25446.000	20.70	19.01	39.71	54.00	-14.29	AVG			

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

File :M2A1(2462MHz) Data :#17 Date: 2010/3/22 Time: 下午 04:06:32



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH11(2462MHz)

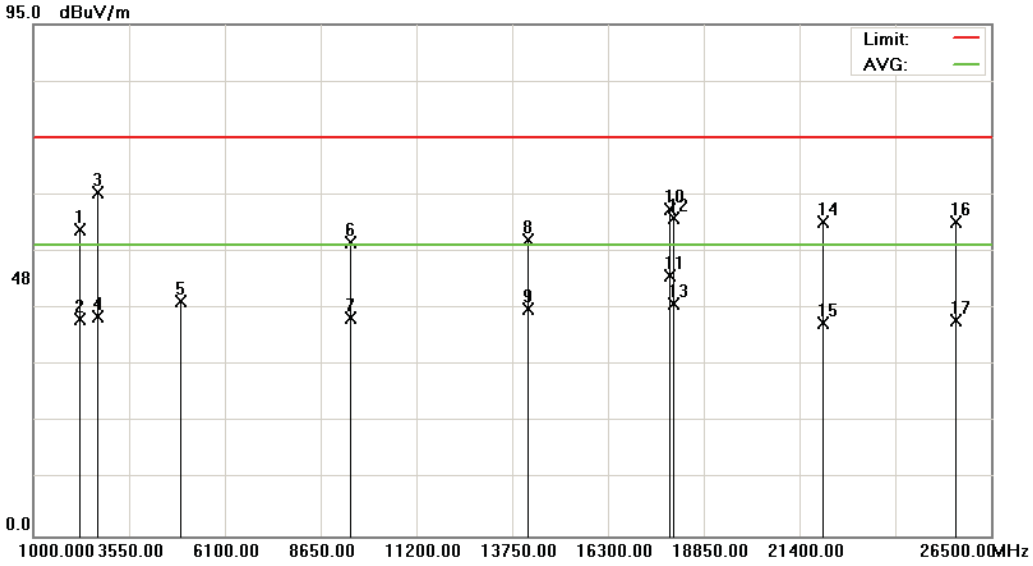
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2277.550	56.71	0.45	57.16	74.00	-16.84	peak			
2		2277.550	39.38	0.45	39.83	54.00	-14.17	AVG			
3		2700.000	40.26	22.58	62.84	74.00	-11.16	peak			
4		2700.000	18.47	22.58	41.05	54.00	-12.95	AVG			
5		4924.000	36.99	7.65	44.64	74.00	-29.36	peak			
6		9806.550	36.09	17.70	53.79	74.00	-20.21	peak			
7		9806.550	23.69	17.70	41.39	54.00	-12.61	AVG			
8		14172.000	36.22	18.84	55.06	74.00	-18.94	peak			
9		14172.000	22.96	18.84	41.80	54.00	-12.20	AVG			
10		17892.000	36.06	24.73	60.79	74.00	-13.21	peak			
11	*	17892.000	23.70	24.73	48.43	54.00	-5.57	AVG			
12		18063.750	35.85	23.26	59.11	74.00	-14.89	peak			
13		18063.750	18.68	23.26	41.94	54.00	-12.06	AVG			
14		21536.000	35.29	21.34	56.63	74.00	-17.37	peak			
15		21536.000	17.39	21.34	38.73	54.00	-15.27	AVG			
16		25424.750	39.55	19.03	58.58	74.00	-15.42	peak			
17		25424.750	20.59	19.03	39.62	54.00	-14.38	AVG			

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

File :M2A1(2462MHz) Data :#18 Date: 2010/3/22 Time: 下午 04:07:50



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH11(2462MHz)

Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2208.700	56.44	0.43	56.87	74.00	-17.13	peak			
2		2208.700	39.86	0.43	40.29	54.00	-13.71	AVG			
3		2703.650	41.84	21.89	63.73	74.00	-10.27	peak			
4		2703.650	18.95	21.89	40.84	54.00	-13.16	AVG			
5		4924.000	35.84	7.65	43.49	74.00	-30.51	peak			
6		9416.000	37.38	17.07	54.45	74.00	-19.55	peak			
7		9416.000	23.43	17.07	40.50	54.00	-13.50	AVG			
8		14140.000	36.14	18.84	54.98	74.00	-19.02	peak			
9		14140.000	23.28	18.84	42.12	54.00	-11.88	AVG			
10		17928.000	35.98	24.78	60.76	74.00	-13.24	peak			
11	*	17928.000	23.45	24.78	48.23	54.00	-5.77	AVG			
12		18038.250	35.78	23.28	59.06	74.00	-14.94	peak			
13		18038.250	19.88	23.28	43.16	54.00	-10.84	AVG			
14		22016.250	37.20	21.10	58.30	74.00	-15.70	peak			
15		22016.250	18.55	21.10	39.65	54.00	-14.35	AVG			
16		25535.250	39.43	18.96	58.39	74.00	-15.61	peak			
17		25535.250	20.96	18.96	39.92	54.00	-14.08	AVG			

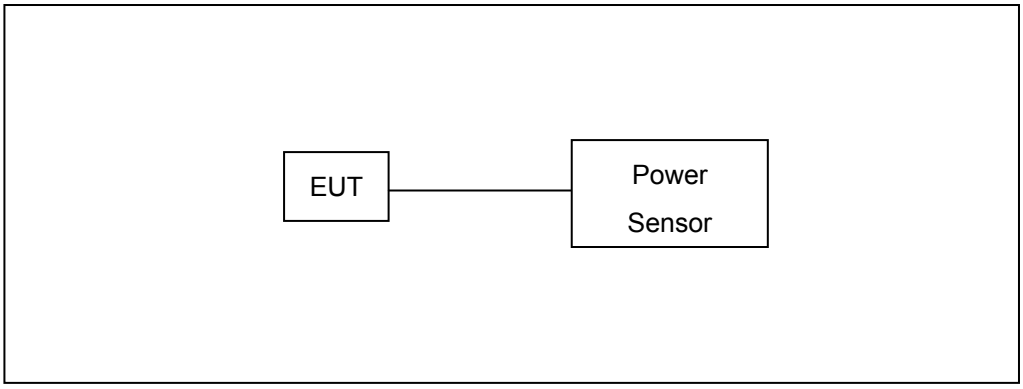
*:Maximum data x:Over limit !:over margin

6 Maximum Conducted Output Power Measurement

6.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm.

6.2. Test Setup



6.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	R&S	NRP-Z81	100017	05/17/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

6.4. 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 power sensor. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the power sensor, for prevent the power sensor 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 sensor. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

6.5. Test Result

Product	Notebook					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 2: IEEE 802.11b Link Mode					
Date of Test	03/20/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average		Peak		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	1	14.87	0.031	17.50	0.056	< 30
2437	1	14.97	0.031	17.59	0.057	< 30
2462	1	14.57	0.029	17.13	0.052	< 30
2412	11	15.04	0.032	**17.84**	0.061	< 30
2437	11	15.00	0.032	17.74	0.059	< 30
2462	11	14.53	0.028	17.30	0.054	< 30

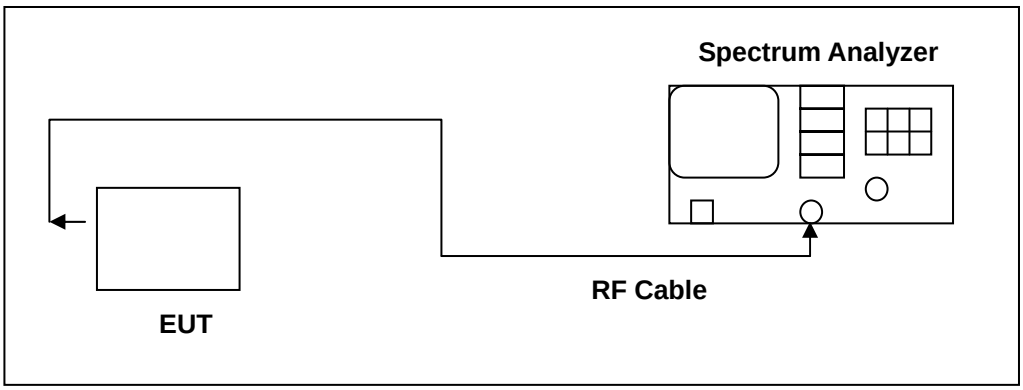
Product	Notebook					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 3: IEEE 802.11g Link Mode					
Date of Test	03/20/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average		Peak		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	6	11.71	0.015	20.74	0.119	< 30
2437	6	12.02	0.016	**20.89**	0.123	< 30
2462	6	12.08	0.016	20.76	0.119	< 30
2412	54	11.81	0.015	20.59	0.115	< 30
2437	54	12.04	0.016	20.73	0.118	< 30
2462	54	12.13	0.016	20.61	0.115	< 30

7 6dB RF Bandwidth Measurement

7.1. Limit

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.

7.2. Test Setup



7.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

7.4. 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 low, middle, high)

7.5. Test Result

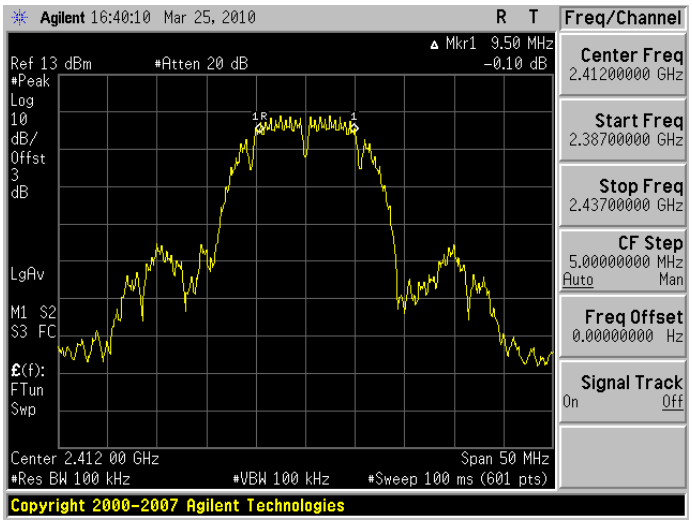
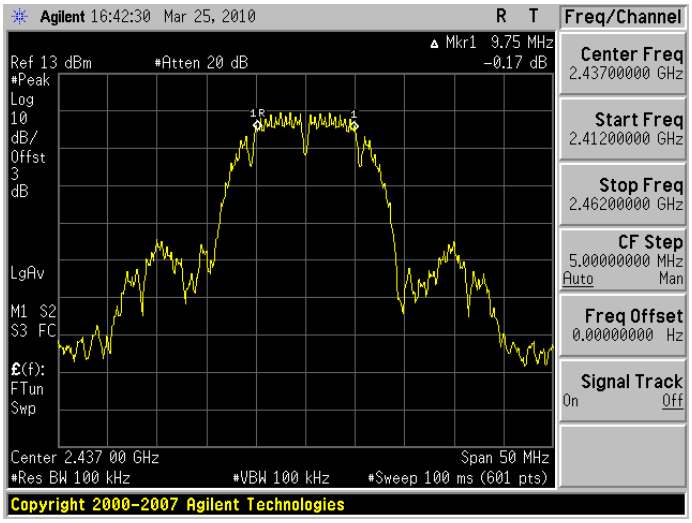
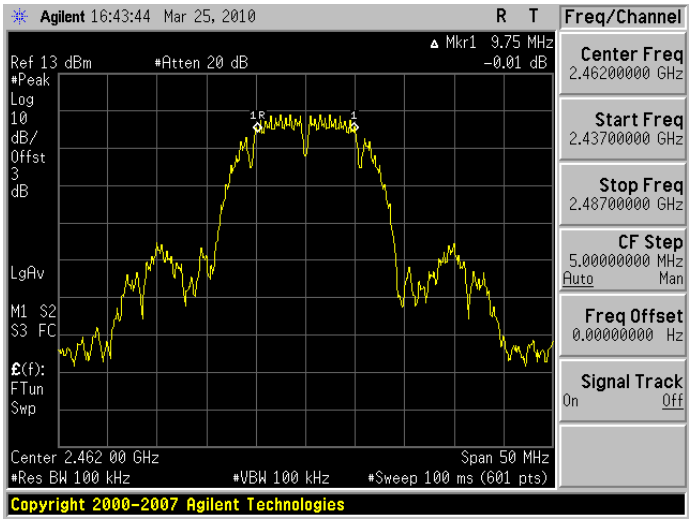
Product	Notebook		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 2: IEEE 802.11b Link Mode		
Date of Test	03/25/2010	Test Site	TE06

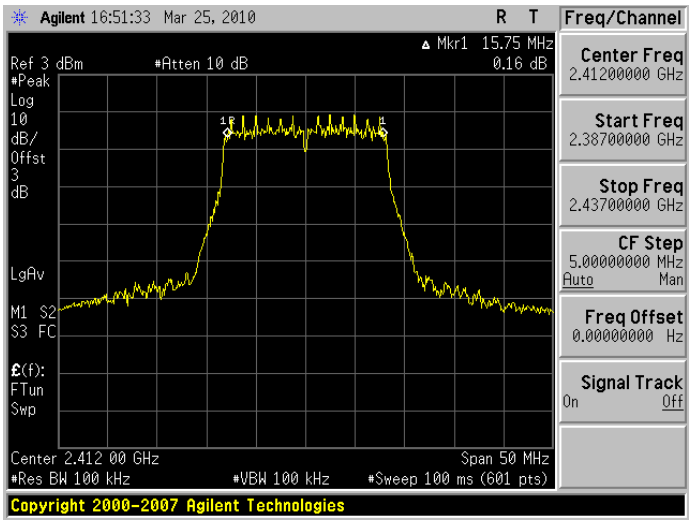
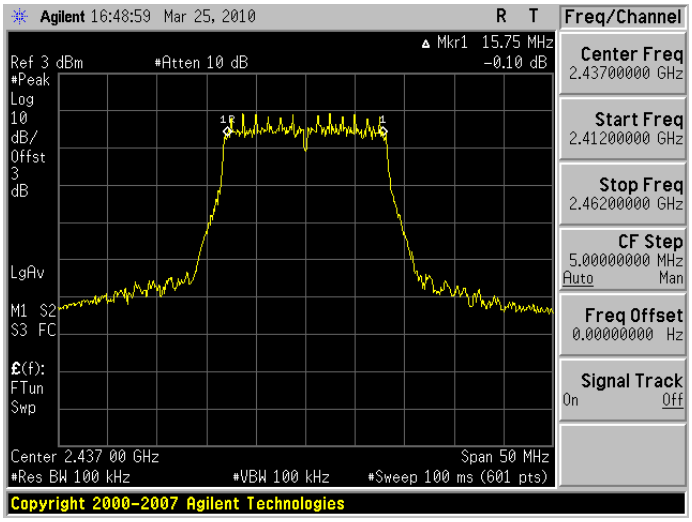
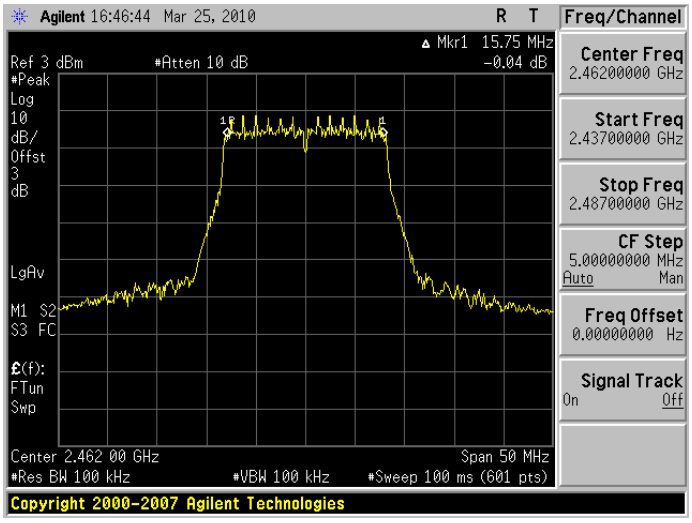
Frequency (MHz)	Measurement (kHz)	Limit (kHz)
2412	9500	> 500
2437	9750	> 500
2462	9750	> 500

Product	Notebook		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11g Link Mode		
Date of Test	03/25/2010	Test Site	TE06

Frequency (MHz)	Measurement (kHz)	Limit (kHz)
2412	15750	> 500
2437	15750	> 500
2462	15750	> 500

7.6. Test Graphs

Mode 2: IEEE 802.11b Link Mode	
2412	
2437	
2462	

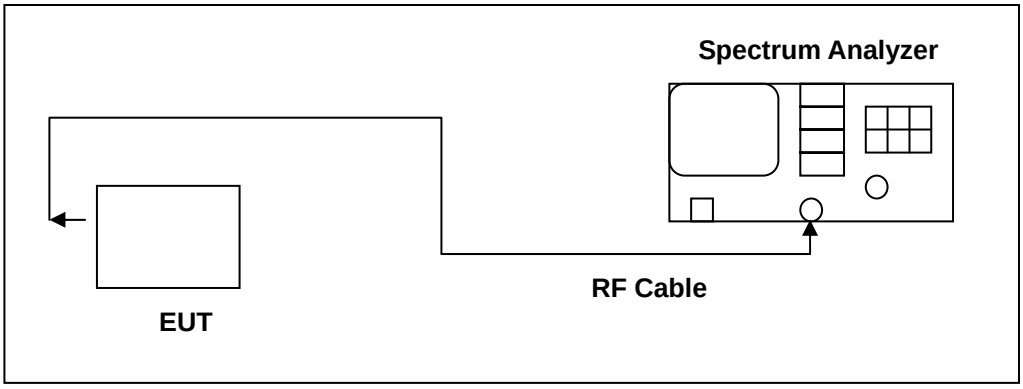
Mode 3: IEEE 802.11g Link Mode	
2412	
2437	
2462	

8 Maximum Power Density Measurement

8.1. Limit

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.

8.2. Test Setup



8.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

8.4. 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:

SWEEP TIME (SEC) = (Fstop, kHz - Fstart, kHz)/3 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.

8.5. Test Result

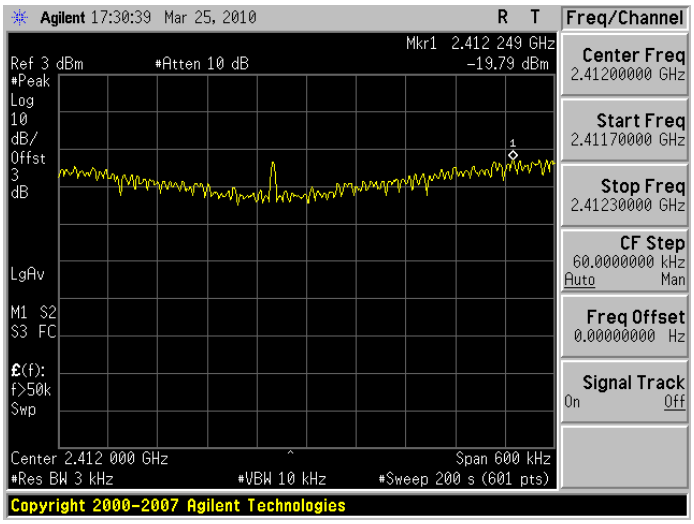
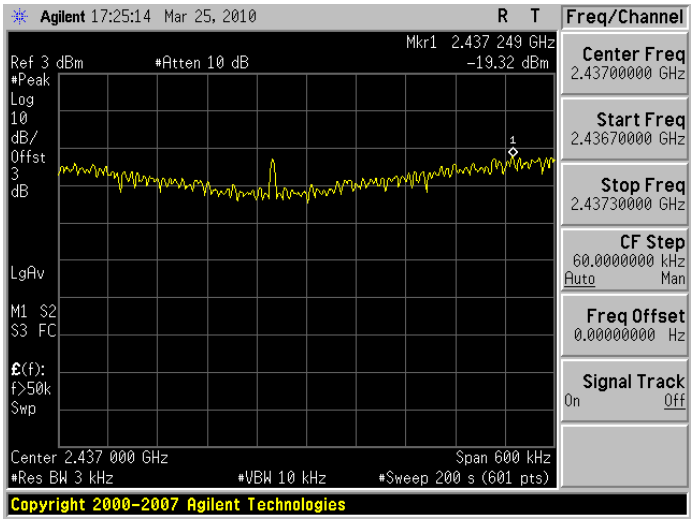
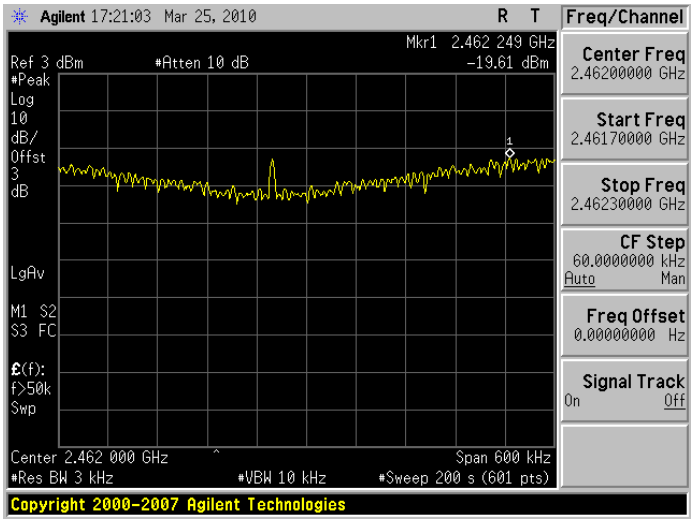
Product	Notebook		
Test Item	Maximum Power Density		
Test Mode	Mode 2: IEEE 802.11b Link Mode		
Date of Test	03/25/2010	Test Site	TE06

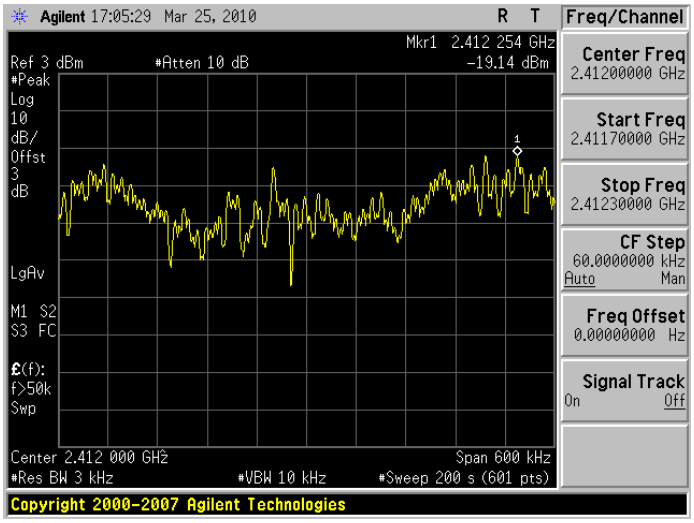
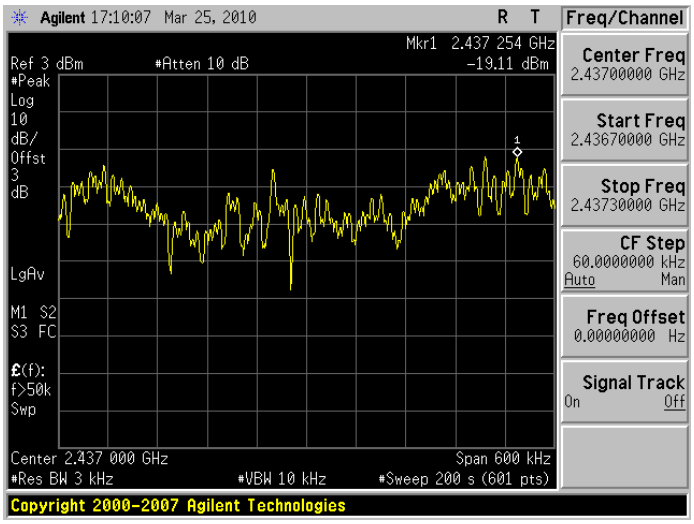
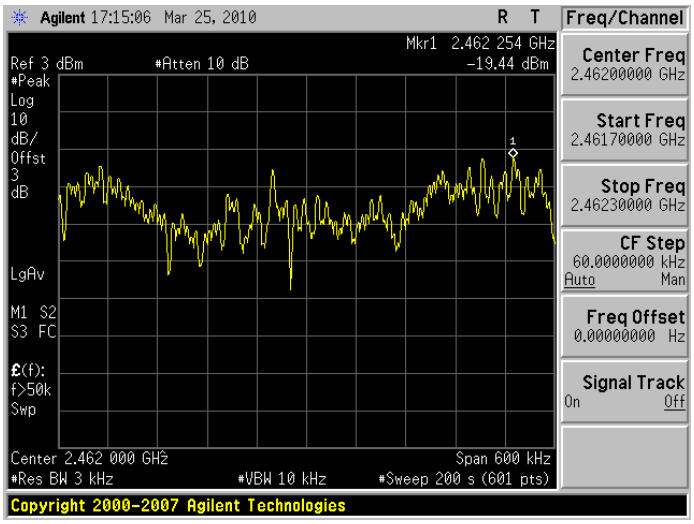
Frequency (MHz)	Measurement (dBm)	Limit (dBm)
2412	-19.79	< 8
2437	-19.32	< 8
2462	-19.61	< 8

Product	Notebook		
Test Item	Maximum Power Density		
Test Mode	Mode 3: IEEE 802.11g Link Mode		
Date of Test	03/25/2010	Test Site	TE06

Frequency (MHz)	Measurement (dBm)	Limit (dBm)
2412	-19.14	< 8
2437	-19.11	< 8
2462	-19.44	< 8

8.6. Test Graphs

Mode 2: IEEE 802.11b Link Mode	
2412	
2437	
2462	

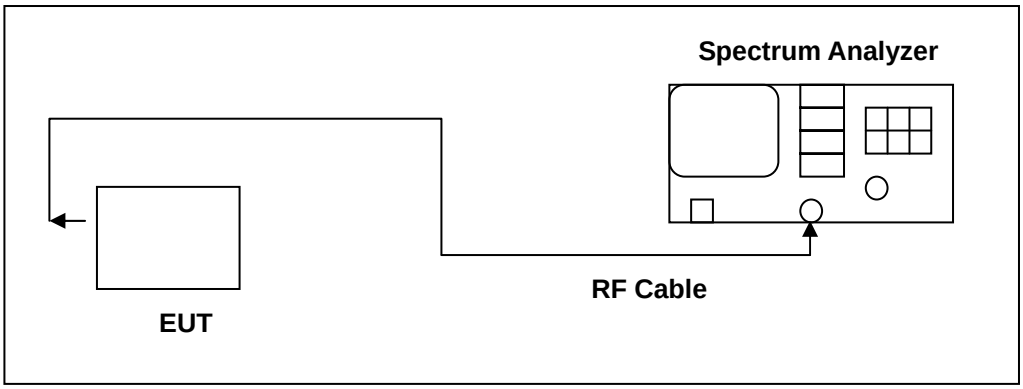
Mode 3: IEEE 802.11g Link Mode	
2412	
2437	
2462	

9 Out of Band Conducted Emissions Measurement

9.1. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

9.2. Test Setup



9.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

9.4. Test Procedure

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.

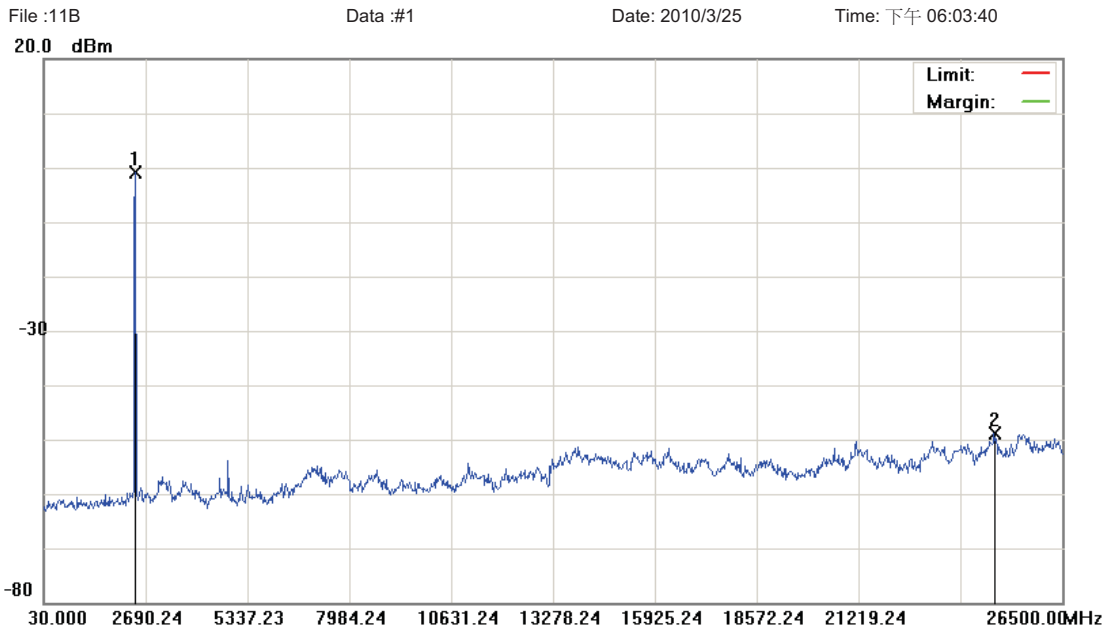
All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel low, middle, high)

9.5. Test Result

Product	Notebook		
Test Item	Out of Band Conducted Emissions		
Test Mode	Mode 2: IEEE 802.11b Link Mode		
Date of Test	03/25/2010	Test Site	TE06
Frequency (MHz)	Fundamental (dBm)	Limit (dBm)	Measurement (dBm)
2412	-0.91	-20.91	-48.93
2437	-1.21	-21.21	-49.60
2462	-1.08	-21.08	-47.67

Product	Notebook		
Test Item	Out of Band Conducted Emissions		
Test Mode	Mode 3: IEEE 802.11g Link Mode		
Date of Test	03/25/2010	Test Site	TE06
Frequency (MHz)	Fundamental (dBm)	Limit (dBm)	Measurement (dBm)
2412	-1.03	-21.03	-50.67
2437	-1.77	-21.77	-52.22
2462	-1.96	-21.96	-51.68

9.6. Test Graphs



Site: : RF Conducted
Limit:
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH01

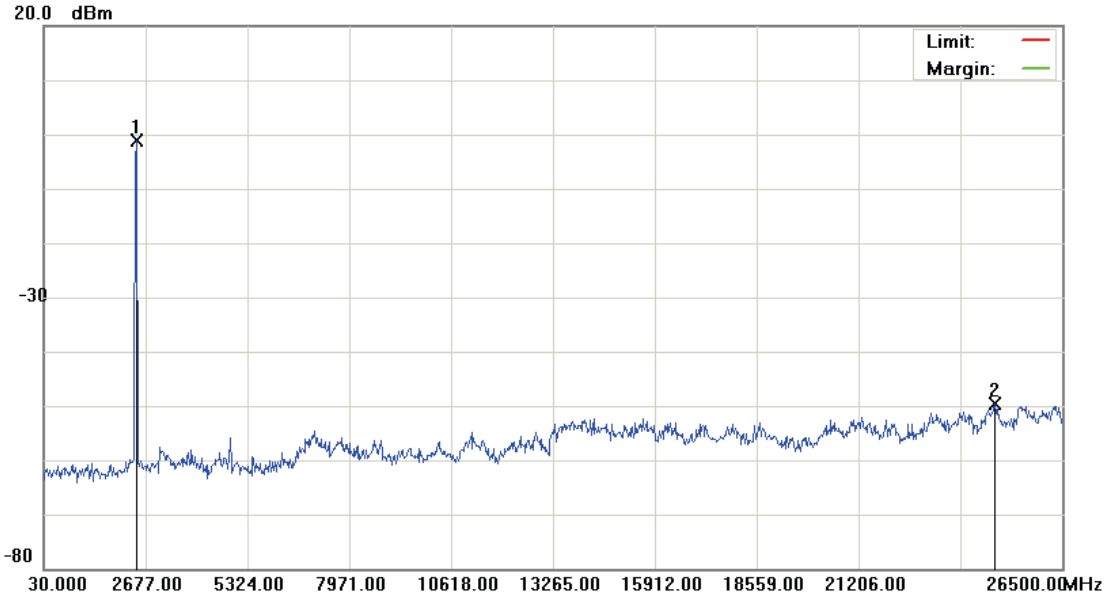
Polarization:
Power:
Distance:

Temperature: 22 ℃
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2412.300	-0.91	0.00	-0.91			peak			TX
2		24739.745	-48.93	0.00	-48.93			peak			

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

File :11B Data :#2 Date: 2010/3/25 Time: 下午 06:04:41



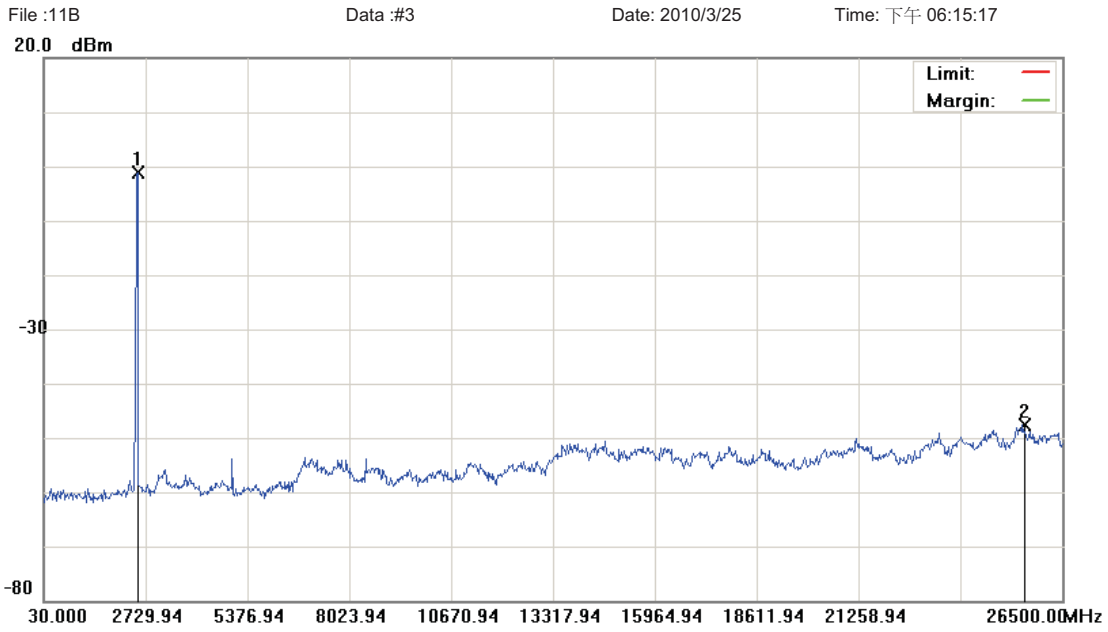
Site: : RF Conducted
Limit:
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH06

Polarization:
Power:
Distance:

Temperature: 22 ℃
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2437.000	-1.21	0.00	-1.21			peak			TX
2		24752.980	-49.60	0.00	-49.60			peak			

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



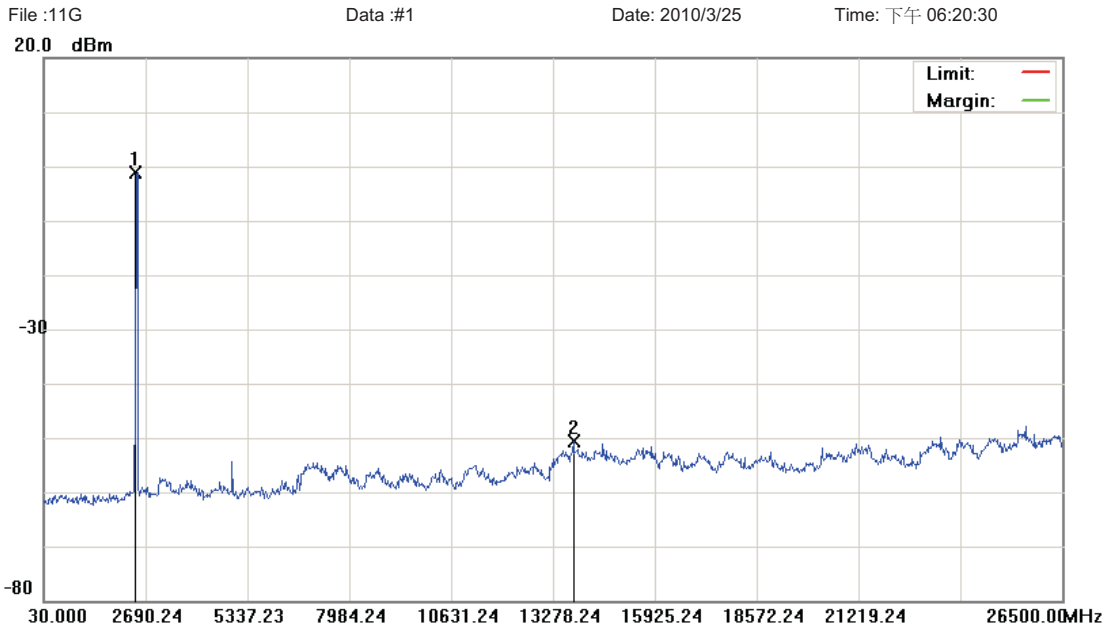
Site: : RF Conducted
Limit:
EUT: Notebook
M/N: M2A1
Mode: 2
Note: CH06

Polarization:
Power:
Distance:

Temperature: 22 ℃
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2462.000	-1.08	0.00	-1.08			peak			TX
2		25520.610	-47.67	0.00	-47.67			peak			

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



Site: : RF Conducted
Limit:
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH01

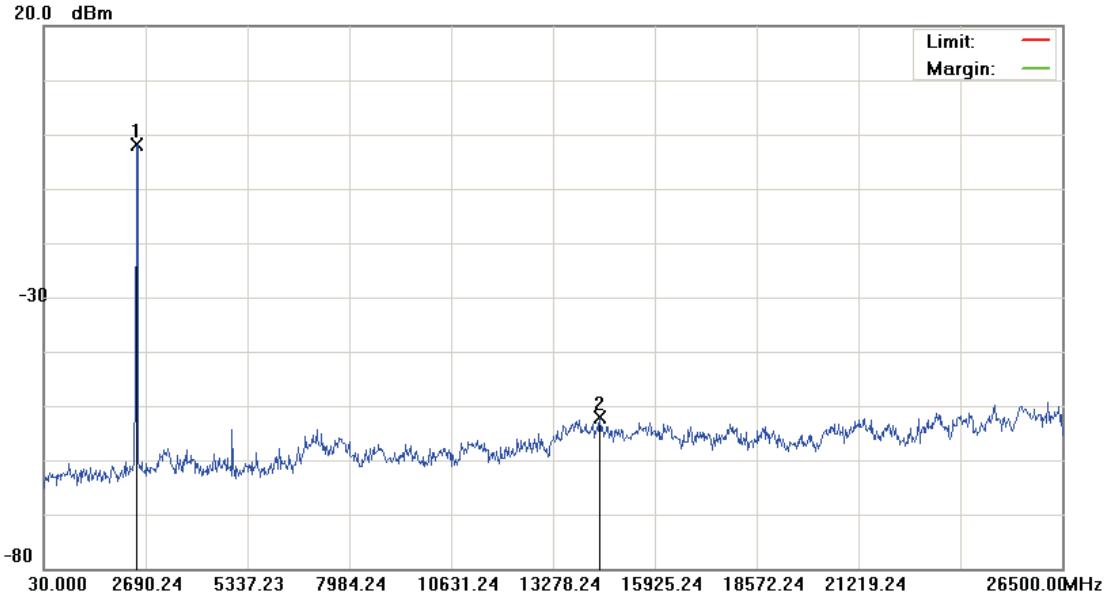
Polarization:
Power:
Distance:

Temperature: 22 ℃
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2412.000	-1.03	0.00	-1.03			peak			TX
2		13794.400	-50.67	0.00	-50.67			peak			

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

File :11G Data :#2 Date: 2010/3/25 Time: 下午 06:20:42



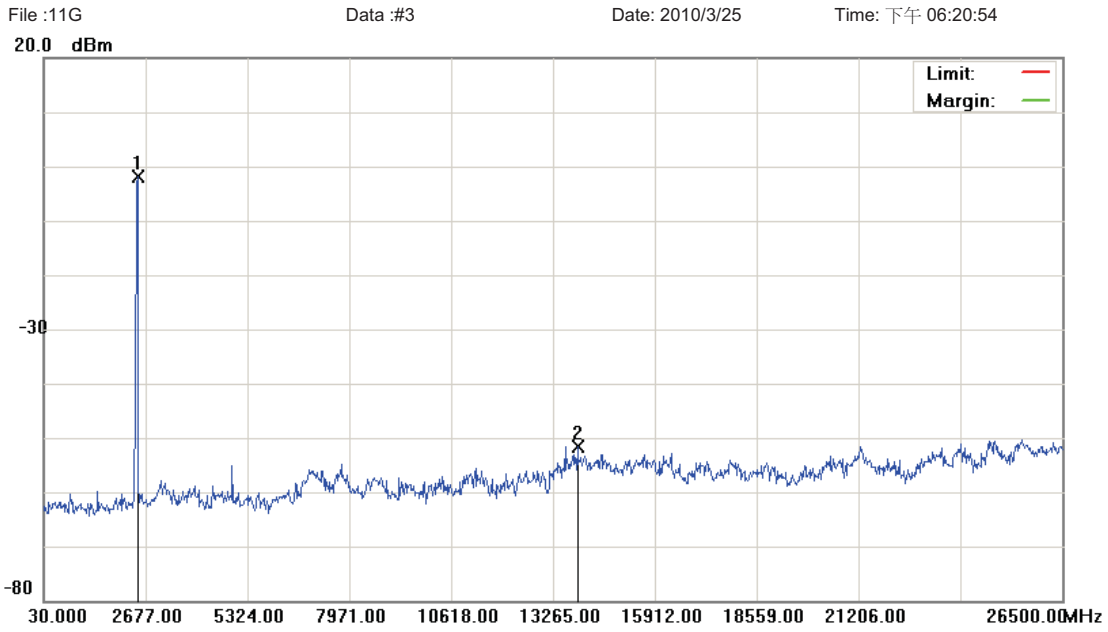
Site: : RF Conducted
Limit:
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH06

Polarization:
Power:
Distance:

Temperature: 22 ℃
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2437.000	-1.77	0.00	-1.77			peak			TX
2		14482.620	-52.22	0.00	-52.22			peak			

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



Site: : RF Conducted
Limit:
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH11

Polarization:
Power:
Distance:

Temperature: 22 ℃
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2462.000	-1.96	0.00	-1.96			peak			TX
2		13900.280	-51.68	0.00	-51.68			peak			

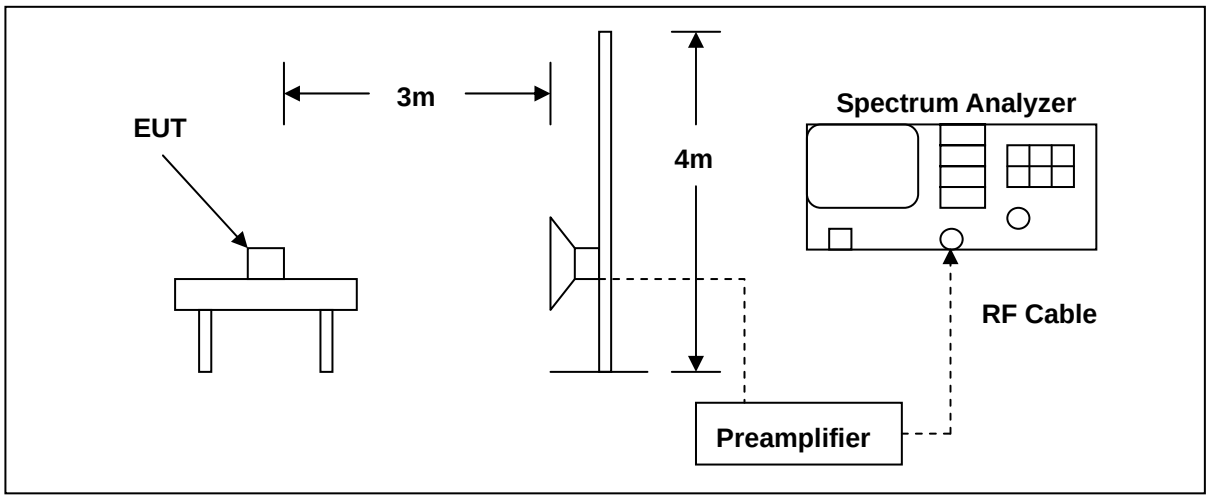
*:Maximum data x:Over limit !:over margin

10 Band Edges Measurement

10.1. Limit

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.

10.2. Test Setup



10.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	06/23/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	9120D	9120D-550	07/01/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

10.4. Test Procedure

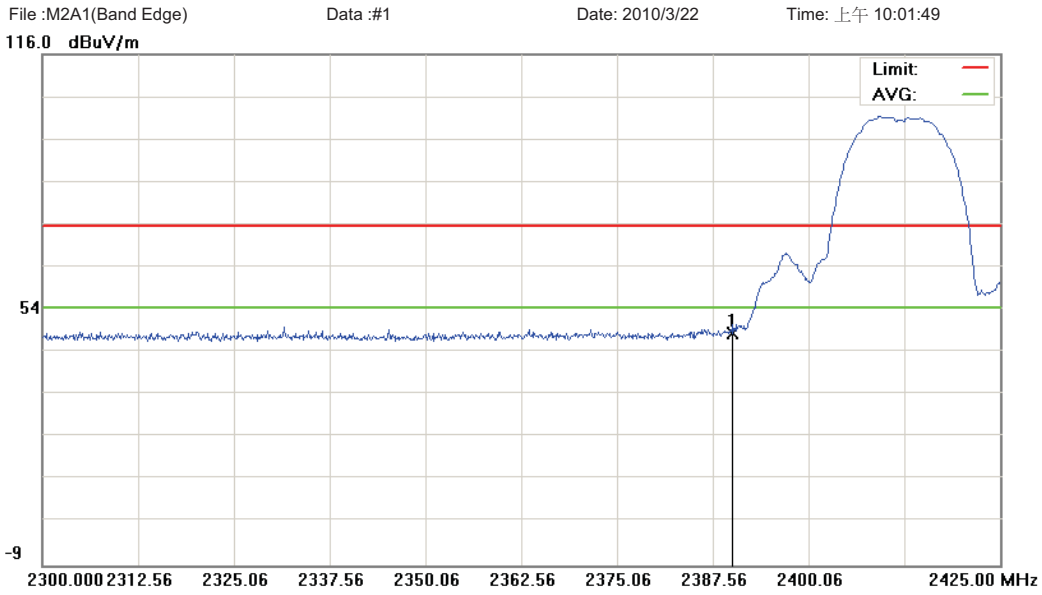
The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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.

10.5. Test Graphs



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: 2412MHz

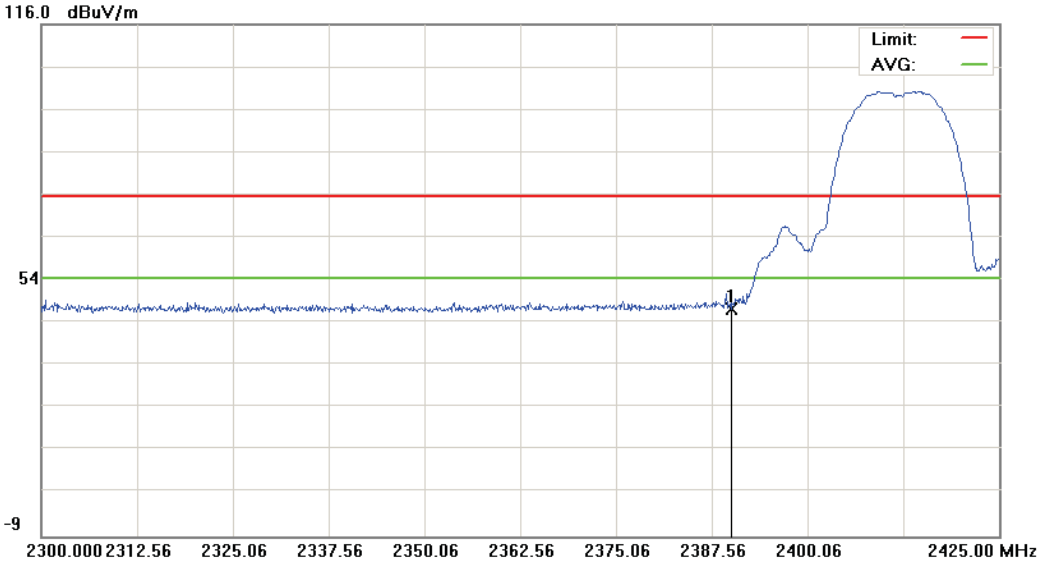
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2390.000	47.54	0.19	47.73	74.00	-26.27	peak			

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

File :M2A1(Band Edge) Data :#3 Date: 2010/3/22 Time: 上午 10:03:56



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: 2412MHz

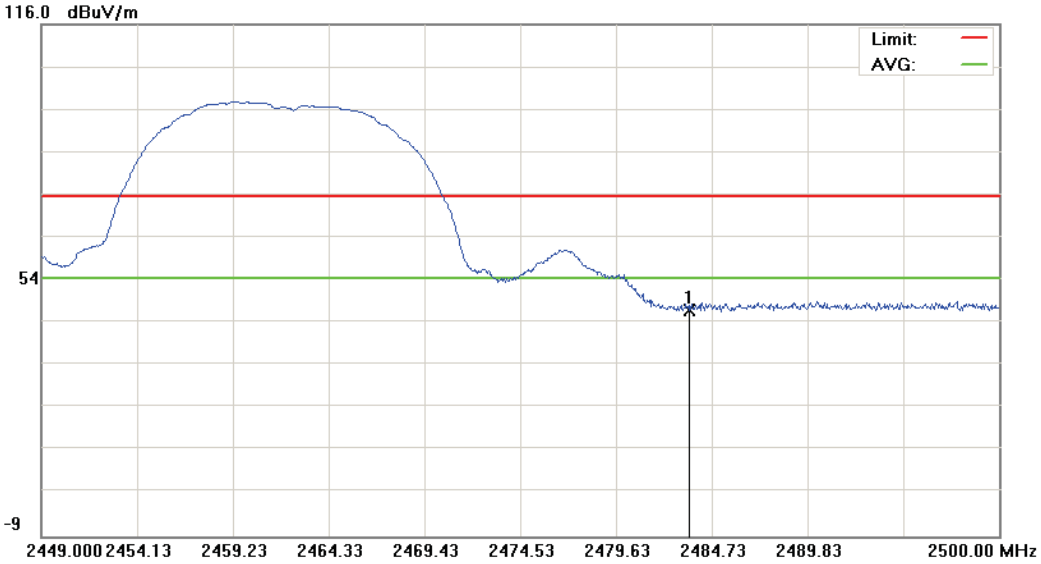
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2390.000	46.42	0.19	46.61	74.00	-27.39	peak			

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

File :M2A1(Band Edge) Data :#5 Date: 2010/3/22 Time: 上午 10:15:39



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: 2462MHz

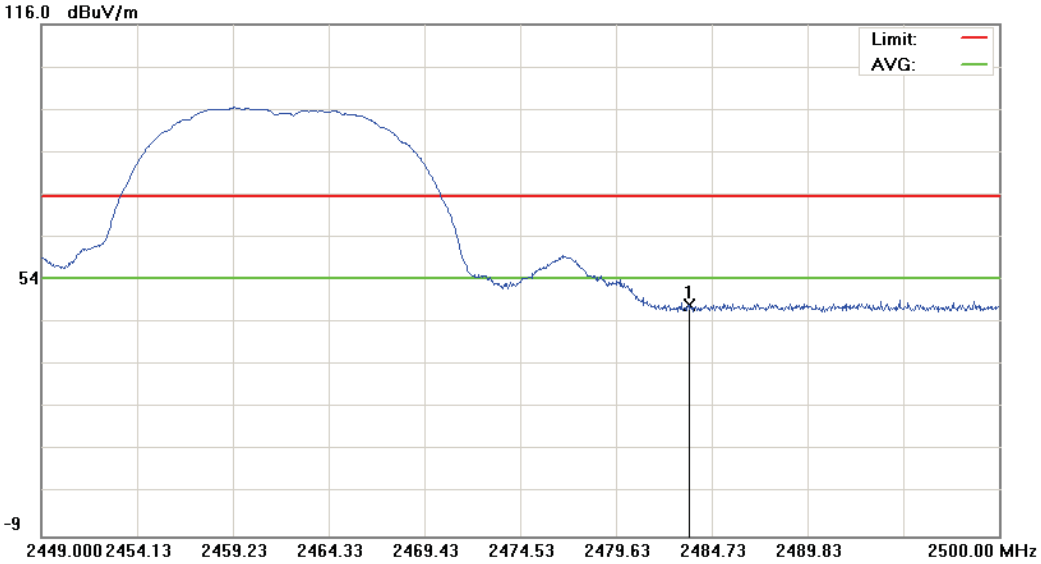
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	46.04	0.25	46.29	74.00	-27.71	peak			

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

File :M2A1(Band Edge) Data :#7 Date: 2010/3/22 Time: 上午 10:18:07



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 2
Note: 2462MHz

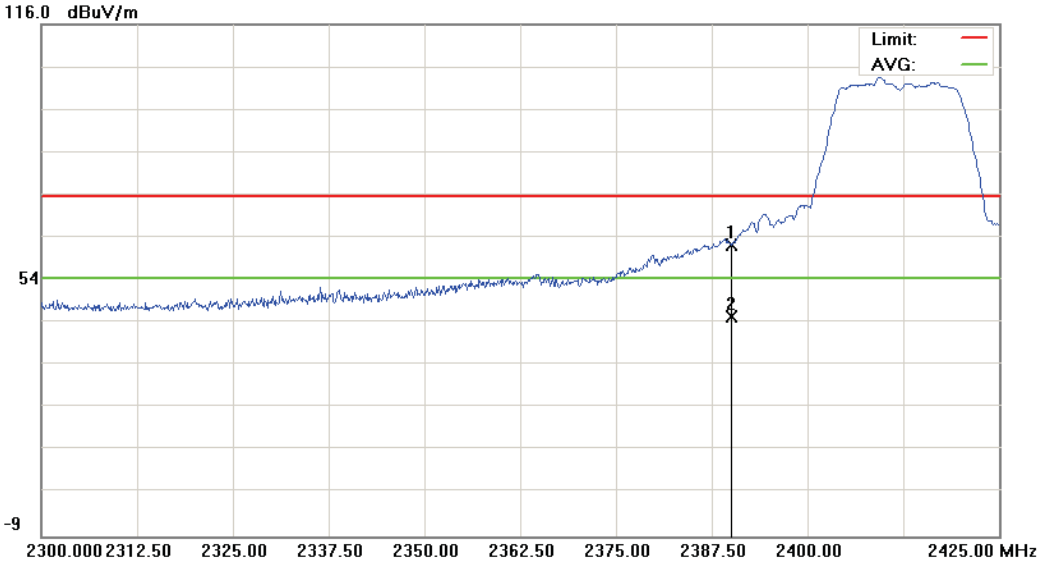
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	47.07	0.25	47.32	74.00	-26.68	peak			

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

File :M2A1(Band Edge) Data :#5 Date: 2010/3/22 Time: 上午 11:33:41

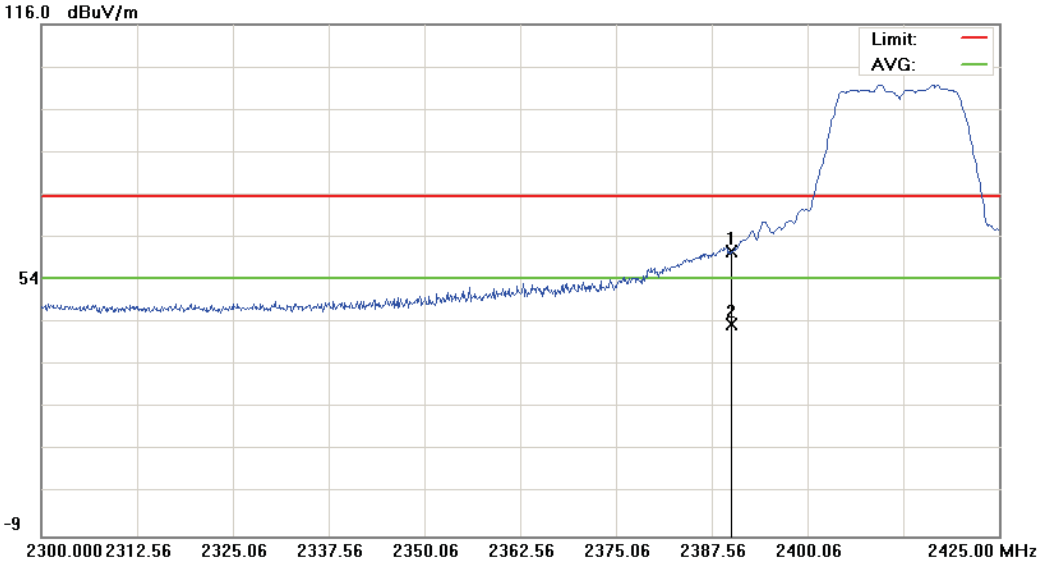


Site: : 966 Chamber	Polarization: *Vertical*	Temperature: 22 ℃
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT: Notebook	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: M2A1		
Mode: 3		
Note: CH11(2462MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	61.97	0.19	62.16	74.00	-11.84	peak			
2	*	2390.000	44.29	0.19	44.48	54.00	-9.52	AVG			

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

File :M2A1(Band Edge) Data :#7 Date: 2010/3/22 Time: 上午 11:39:11



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH11(2462MHz)

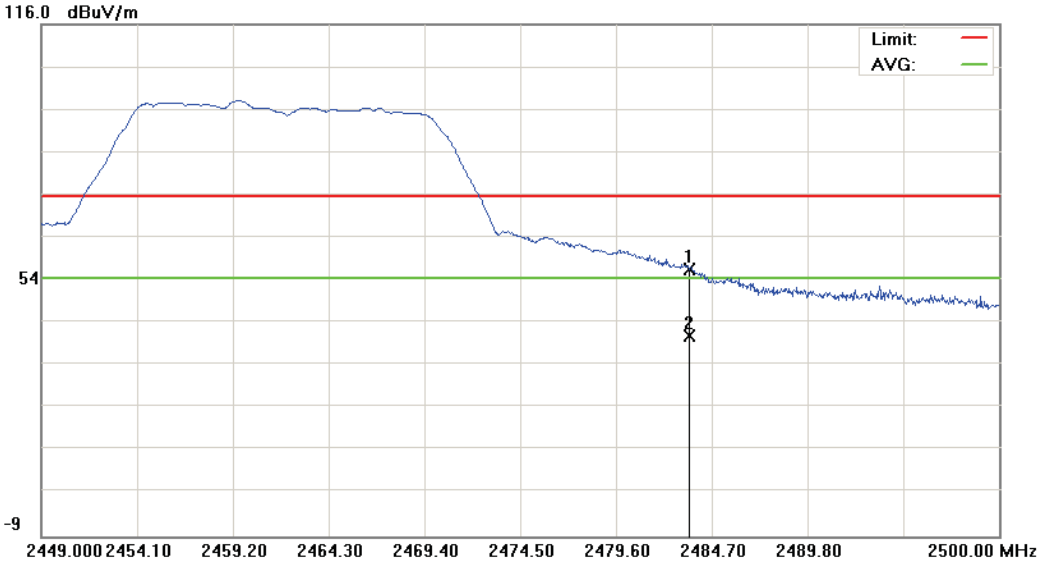
Polarization: *Horizontal*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	60.28	0.19	60.47	74.00	-13.53	peak			
2	*	2390.000	42.57	0.19	42.76	54.00	-11.24	AVG			

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

File :M2A1(Band Edge) Data :#1 Date: 2010/3/22 Time: 上午 11:10:47



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: Notebook
M/N: M2A1
Mode: 3
Note: CH01(2412MHz)

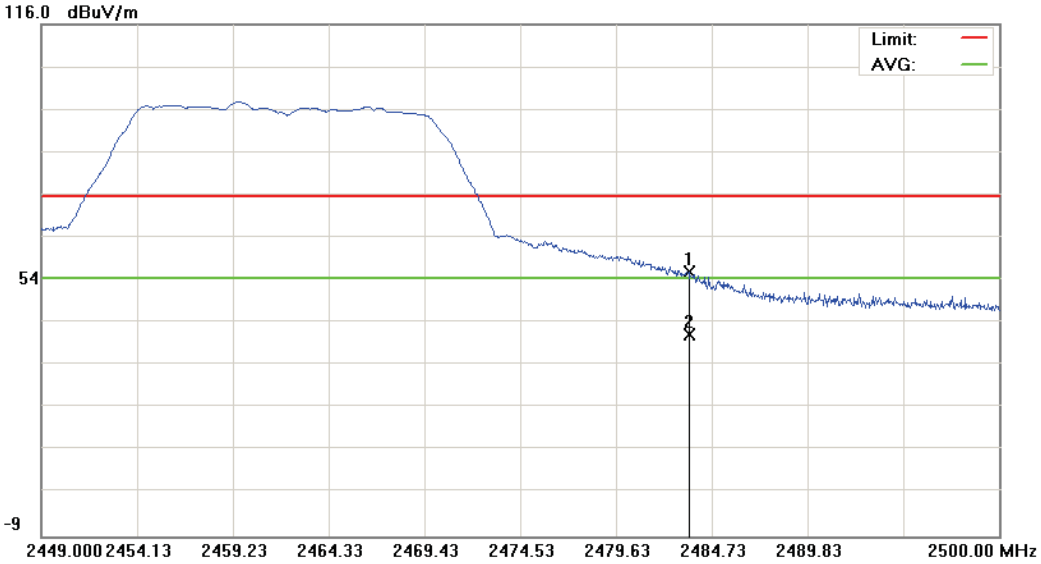
Polarization: *Vertical*
Power:
Distance: 3m

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	55.79	0.25	56.04	74.00	-17.96	peak			
2	*	2483.500	39.51	0.25	39.76	54.00	-14.24	AVG			

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

File :M2A1(Band Edge) Data :#3 Date: 2010/3/22 Time: 上午 11:16:40



Site: : 966 Chamber	Polarization: *Horizontal*	Temperature: 22 ℃
Limit: FCC part 15 (PK)	Power:	Humidity: 60 %
EUT: Notebook	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: M2A1		
Mode: 3		
Note: CH01(2412MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	55.38	0.25	55.63	74.00	-18.37	peak			
2	*	2483.500	39.82	0.25	40.07	54.00	-13.93	AVG			

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

11 Antenna Measurement

11.1. Limit

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.

11.2. Antenna Connector Construction

The antenna used in this product is **PCB antenna**. And the maximum Gain of this antenna is only **0.83 dBi**.