EMC
TEST REPORT

Report No. : EME-020442
Model No. : WUB1500
Issued Date : May 2, 2002

Applicant : AboCom Systems, Inc.
300 1F, No. 21, R&D Rd. II, SBIP, Hsin-Chu,
Taiwan, R.O.C.

Test By : Intertek Testing Services Taiwan Ltd.
No. 11, Ko-Tze-Nan Chia-Tung Li, Shiang-Shan District,
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Summary of Tests

Wireless USB ADAPTER-Model: WUB1500
FCC ID: MQ4WUB1K5

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Maximum Output Power test	15.247(b)	Complies
RF Antenna Conducted Spurious test	15.247(c)	Complies
Radiated Spurious Emission test	15.205, 15.209	Complies
Power Spectrum Density test	15.247(d)	Complies
Power Line Conducted Emission test	15.207	Complies

1. General information

1.1 Identification of the EUT

Manufacturer	: AboCom System, Inc.
Product	: Wireless USB Adapter
Model No.	: WUB1500
FCC ID.	: MQ4WUB1K5
Frequency Range	: 2400Mz to 2483.5 MHz
Channel Number	: 11
Frequency of Each Channel	: 2412MHz, 2417MHz, 2422MHz, 2427MHz, 2432MHz, 2437MHz, 2442MHz, 2447MHz, 2452MHz, 2457MHz, 2462MHz
Type of Modulation	: DSSS, DBPSK, DQPSK, CCK
Power Supply	: 5Vdc from PC
Power Cord	: N/A
Sample Received	: April 9, 2002
Test Date(s)	: April 9, 2002 to April 17, 2002

A FCC DoC report has been generated for the client.

1.2 Additional information about the EUT

The EUT is designed for a USB type A port of a laptop or desktop computer for creating a wireless workstation, it compliant with IEEE802.11b standard that offers a data rate up to 11bps in a wireless LAN environment. It is a wireless network card that plugs into notebook or desktop PC and accesses to the LAN or peer-to-peer networking without wires or cables.

For more detail features, please refer to User's manual as file name “Installation guide.pdf”

1.3 Antenna description

The antenna is affixed to the EUT using a unique connector, which allows for replacement of a broken antenna, but DOES NOT use a standard antenna jack or electrical connector.

Antenna Gain : 0.8dBi
Antenna Type : Dipole antenna

1.4 Peripherals equipment

Peripherals	Manufacturer	Product No.	Serial No.	FCC ID
PC	IBM	634588V	BN3R1VC	FCC DoC Approved
Key Board	IBM	37L2548	0095996	FCC DoC Approved
Monitor	IBM	6331-0LN	23-NW855	ARSCM560S
Mouse	Logitech	850693-0001	LAZ82706831	FCC DoC Approved
Printer	HP	C2642A	TH86K1N2ZB	FCC DoC Approved
Modem	Dynalink	V1456VQE	00V230A00051494	FCC DoC Approved

2. Test specifications

2.1 Test standard

The EUT was performed according to the procedures in FCC Part 15 Subpart C Section §15.207、§15.209 、§15.247 and ANSI C63.4/1992.

The AC power conducted emissions was invested over the frequency range from 0.45MHz to 30MHz using a receiver bandwidth of 9kHz. (15.207 paragraph)

Radiated emissions were invested cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading recorded also on the report.

The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of this frequency band were all meet limit requirement, thus we evaluate the EUT pass the specified test.

The EUT setup configurations please refer to the photo of test configuration in item.

2.2 Operation mode

Connect the EUT to personal computer via a 0.9 meter length USB Cable, run the testing program “RF test tool” under Windows OS, which provided by manufacture.

The EUT transmitted continuously during all the tests.

2.4 Test equipment

Equipment	Brand	Frequency range	Model No.	Series No.	Cal.Date
EMI Receiver	Rohde & Schwarz	9kHz~2.75GHz	ESCS 30	825788/014	May 29, 2001
Pulse Limiter	Rohde & Schwarz	9kHz~30MHz	ESH3-Z2	848.766/052	N/A
Spectrum Analyzer	Rohde & Schwarz	9kHz~30GHz	FSP 30	100137	July 9, 2001
Horn Antenna	EMCO	1GHz~18GHz	3115	9906-5822	Sep. 10, 2001
Horn Antenna	SCHWARZBECK	14GHz~40GHz	BBHA 9170	159	June 21, 2001
Bilog Antenna	SCHWARZBECK	25MHz~1.7GHz	VULB 9160	3111	June 21, 2001
Turn Table	HDGmbH	N/A	DS 420S	420/669/01	N/A
Antenna Tower	HDGmbH	N/A	MA 240	240/573	N/A
Microwave Amplifier	Agilent	2GHz~26.5GHz	8348A	3111A00567	Dec. 20, 2002
RF Power Meter	Boonton	10kHz~100GHz	4230	27003	June 12, 2001
Power Sensor	Boonton	30MHz~8GHz	51011-EMC	30395	June 12, 2001
Power Sensor	Boonton	30MHz~8GHz	51011-EMC	30417	June 12, 2001

Note:
1. The calibration interval of the above instruments is 12 months.

3. Minimum 6dB Bandwidth test

3.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 58 %

3.2 Test setup & procedure

The minimum 6dB bandwidth per FCC §15.247(a)(2) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth set at 3MHz, and the SPAN>>RBW. The test was performed at 3 channels (lowest, middle and highest channel). The minimum 6-dB modulation bandwidth is in the following Table.

See Minimum 6dB Bandwidth plot as file name “Minimum 6dB Bandwidth plot.pdf”

3.3 Measured data of Minimum 6dB Bandwidth test results

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit
Low	2413.60	11.6	＞500kHz
Middle	2435.60	11.5	＞500kHz
High	2460.40	11.5	＞500kHz

4. Maximum Output Power test

4.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 60 %

4.2 Test setup & procedure

The power output per FCC §15.247(b) was measured on the EUT using a 50 ohm SMA cable connected to power meter via power sensor. Power was read directly and cable loss correction (0.5dB) was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel).

4.3 Measured data of Maximum Output Power test results

Channel	Frequency (MHz)	C.B.L. (dB)	Reading (dBm)	Power Output		Limit (W)
				(dBm)	(mW)	
Lowest	2412	0.5	17.92	18.42	69.50	1
Middle	2437	0.5	18.14	18.64	73.11	1
Highest	2462	0.5	16.99	17.49	56.10	1

5. RF Antenna Conducted Spurious test

5.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 58 %

5.2 Test setup & procedure

The measurements were performed from 30MHz to 25GHz RF antenna conducted per FCC 15.247 (c) was measured from the EUT antenna port using a 50ohm spectrum analyzer with the resolution bandwidth set at 100 kHz, and the video bandwidth set at 300 kHz.
Harmonics and spurious noise must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. The table below is the results from the highest emission for each channel within the authorized band. This table was used to determine the spurious limits for each channel.

See RF Antenna Conducted plot as file name “RF Antenna Conducted plot.pdf”

5.3 Measured data of the highest RF Antenna Conducted Spurious test result

Channel	Max Spurious level at Frequency (MHz)	Spurious Emission level (dBm)	Limit (dB)
Low	673.90	-31.57	-17.58
Middle	357.06	-31.79	-16.84
High	724.08	-32.59	-18.57

Note: 1. Limit = peak power output (in 100kHz RBW) – 20dB
2. All the other emissions were very low the limit.

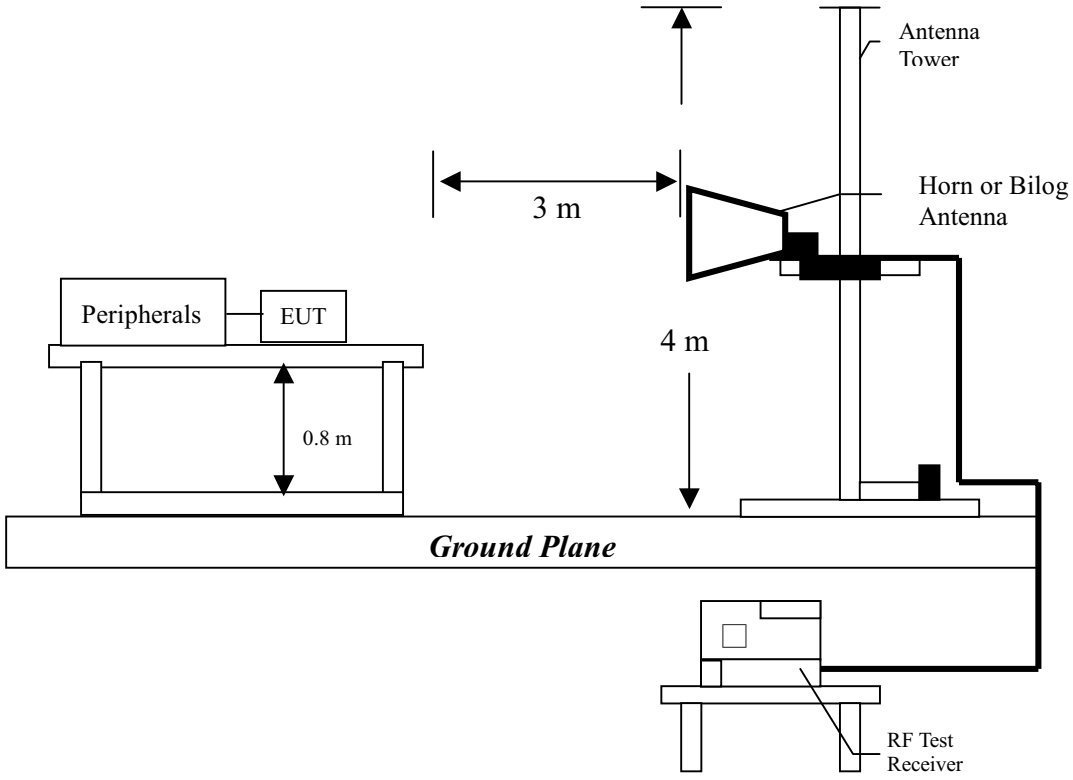
6. Radiated Emission test

6.1 Operating environment

Temperature:	22	℃
Relative Humidity:	58	%

6.2 Test setup & procedure

The Diagram below shows the test setup, which is utilized to make these measurements.



Radiated emission measurements were performed from 30MHz to 25GHz. Spectrum Analyzer Resolution Bandwidth is 100kHz or greater for frequencies 30MHz to 1GHz, 1MHz – for frequencies above 1GHz.
The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.
The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

6.3 Emission limits

The spurious Emission shall test through the 10th harmonic. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Frequency (MHz)	Limits (dB μ V/m@3m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Remark:
1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Uncertainty was calculated in accordance with NAMAS NIS 81.
Expanded uncertainty (k=2) of radiated emission measurement is ±3.078 dB.

6.4 Radiated spurious emission test data

6.4.1 Measurement results: frequencies equal to or less than 1 GHz

EUT : WUB1500
Test Condition : Low channel
Test Mode : Transmitter

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
73.70000	QP	V	10.64	22.56	33.20	40	-6.80
132.10000	QP	V	10.13	20.07	30.20	43.5	-13.30
220.10000	QP	V	14.09	13.11	27.20	46	-18.80
240.10000	QP	V	14.92	9.78	24.70	46	-21.30
500.20000	QP	V	22.63	12.27	34.90	46	-11.10
748.00000	QP	V	26.04	5.46	31.50	46	-14.50
73.70000	QP	H	10.64	23.96	34.60	40	-5.40
143.90000	QP	H	10.25	23.25	33.50	43.5	-10.00
203.90000	QP	H	13.38	19.92	33.30	43.5	-10.20
395.20000	QP	H	20.11	7.29	27.40	46	-18.60
574.40000	QP	H	24.17	4.33	28.50	46	-17.50
748.00000	QP	H	26.04	6.16	32.20	46	-13.80

Remark:
1.Corrected Level = Reading Level + Correction Factor
2.Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.

EUT : WUB1500
Test Condition : Middle channel
Test Mode : Transmitter

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
73.70000	QP	V	10.64	22.06	32.70	40	-7.30
107.80000	QP	V	10.63	20.17	30.80	43.5	-12.70
143.90000	QP	V	10.25	12.95	23.20	43.5	-20.30
220.10000	QP	V	14.09	9.61	23.70	46	-22.30
498.80000	QP	V	22.63	11.07	33.70	46	-12.30
571.60000	QP	V	24.17	6.13	30.30	46	-15.70
73.70000	QP	H	10.64	23.26	33.90	40	-6.10
143.90000	QP	H	10.25	21.85	32.10	43.5	-11.40
220.10000	QP	H	14.09	13.91	28.00	46	-18.00
395.20000	QP	H	20.11	7.59	27.70	46	-18.30
720.00000	QP	H	25.57	4.03	29.60	46	-16.40
748.00000	QP	H	26.04	4.86	30.90	46	-15.10

Remark:
1.Corrected Level = Reading Level + Correction Factor
2.Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.

EUT : WUB1500
Test Condition : High channel
Test Mode : Transmitter

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
73.70000	QP	V	10.64	20.96	31.60	40	-8.40
131.50000	QP	V	10.13	19.37	29.50	43.5	-14.00
143.90000	QP	V	10.25	21.55	31.80	43.5	-11.70
220.10000	QP	V	14.09	13.61	27.70	46	-18.30
240.10000	QP	V	14.92	9.18	24.10	46	-21.90
559.00000	QP	V	23.17	11.43	34.60	46	-11.40
73.70000	QP	H	10.64	23.16	33.80	40	-6.20
143.90000	QP	H	10.25	22.75	33.00	43.5	-10.50
192.00000	QP	H	13.01	19.49	32.50	43.5	-11.00
220.10000	QP	H	14.09	15.91	30.00	46	-16.00
301.40000	QP	H	16.31	15.99	32.30	46	-13.70
748.00000	QP	H	26.04	4.56	30.60	46	-15.40

Remark:
1.Corrected Level = Reading Level + Correction Factor
2.Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.

6.4.2 Measurement results: frequency above 1GHz

The radiated spurious emissions at

Frequency(MHz)	Margin
4824.2	-0.1
4824.01	-0.22

are less than uncertainty. This is within the stated measurement uncertainty, this may affect compliance determined in other test arrangements.

EUT : WUB1500
Test Channel : Low channel
Test Mode : Transmitter

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
4824.2	PK	V	28.02	38.7	50.17	60.85	74	-13.15
4824.2	AV	V	28.02	38.7	43.22	53.9	54	-0.1
7233.36	PK	V	28.02	43.86	45.32	61.16	74	-12.84
7233.36	AV	V	28.02	43.86	34.67	50.51	54	-3.49
2038.03	PK	V	0	31.99	22.09	54.08	74	-19.92
2038.03	AV	V	0	31.99	11.84	43.83	54	-10.17
4075.57	PK	V	28.02	38.94	37.11	48.03	74	-25.97
4075.57	AV	V	28.02	38.94	28.45	39.37	54	-14.63
4824.01	PK	H	28.02	38.7	50.88	61.56	74	-12.44
4824.01	AV	H	28.02	38.7	43.1	53.78	54	-0.22
7233.35	PK	H	28.02	43.86	41.59	57.43	74	-16.57
7233.35	AV	H	28.02	43.86	32.25	48.09	54	-5.91
2037.95	PK	H	0	31.99	21.19	53.18	74	-20.82
2037.95	AV	H	0	31.99	12.45	44.44	54	-9.56
4075.12	PK	H	28.02	38.94	37.44	48.36	74	-25.64
4075.12	AV	H	28.02	38.94	26.51	37.43	54	-16.57

Remark:
1.Corrected Level = Reading Level + Correction Factor－Preamp
2.Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.

The radiated spurious emissions at

Frequency(MHz)	Margin
4874.2	-0.17

are less than uncertainty. This is within the stated measurement uncertainty, this may affect compliance determined in other test arrangements.

EUT : WUB1500
Test Channel : Middle channel
Test Mode : Transmitter

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
4874.2	PK	V	28.02	38.7	50.17	60.85	74	-13.15
4874.2	AV	V	28.02	38.7	43.15	53.83	54	-0.17
7311.01	PK	V	28.02	43.86	44.24	60.08	74	-13.92
7311.01	AV	V	28.02	43.86	32.79	48.63	54	-5.37
2062.77	PK	V	0	31.99	21.08	53.07	74	-20.93
2062.77	AV	V	0	31.99	10.88	42.87	54	-11.13
4125.58	PK	V	28.02	38.94	37.98	48.9	74	-25.1
4125.58	AV	V	28.02	38.94	28.66	39.58	54	-14.42
4873.76	PK	H	28.02	38.7	46.33	57.01	74	-16.99
4873.76	AV	H	28.02	38.7	38.19	48.87	54	-5.13
7310.95	PK	H	28.02	43.86	40.79	56.63	74	-17.37
7310.95	AV	H	28.02	43.86	30.85	46.69	54	-7.31
2063.11	PK	H	0	31.99	20.11	52.1	74	-21.9
2063.11	AV	H	0	31.99	11.67	43.66	54	-10.34
4125.24	PK	H	28.02	38.94	38.46	49.38	74	-24.62
4125.24	AV	H	28.02	38.94	27.05	37.97	54	-16.03

Remark:
1.Corrected Level = Reading Level + Correction Factor－Preamp
2.Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.

The radiated spurious emissions at

Frequency(MHz)	Margin
4923.79	-2.02
4923.95	-2.97

are less than uncertainty. This is within the stated measurement uncertainty, this may affect compliance determined in other test arrangements.

EUT : WUB1500
Test Channel : High channel
Test Mode : Transmitter

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
4923.79	PK	V	28.02	38.7	48.88	59.56	74	-14.44
4923.79	AV	V	28.02	38.7	41.3	51.98	54	-2.02
7386.15	PK	V	28.02	43.86	39.88	55.72	74	-18.28
7386.15	AV	V	28.02	43.86	28.15	43.99	54	-10.01
2087.75	PK	V	0	31.99	22.69	54.68	74	-19.32
2087.75	AV	V	0	31.99	12.2	44.19	54	-9.81
4175.51	PK	V	28.02	38.94	37.45	48.37	74	-25.63
4175.51	AV	V	28.02	38.94	28.65	39.57	54	-14.43
4923.95	PK	H	28.02	38.7	49.55	60.23	74	-13.77
4923.95	AV	H	28.02	38.7	40.35	51.03	54	-2.97
7386.01	PK	H	28.02	43.86	38.77	54.61	74	-19.39
7386.01	AV	H	28.02	43.86	28.49	44.33	54	-9.67
2087.85	PK	H	0	31.99	21.45	53.44	74	-20.56
2087.85	AV	H	0	31.99	13.98	45.97	54	-8.03
4175.65	PK	H	28.02	38.94	38.44	49.36	74	-24.64
4175.65	AV	H	28.02	38.94	27.19	38.11	54	-15.89

Remark:
1.Corrected Level = Reading Level + Correction Factor－Preamp
2.Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.

7. Power Spectrum Density test

7.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 60 %

7.2 Test setup & procedure

The power spectrum density per FCC §15.247(d) was measured from the antenna port of the EUT using a 50ohm spectrum analyzer with the resolution bandwidth set at 3kHz, the video bandwidth set at 30kHz, a span of 1.5 MHz, and the sweep time set at 500 seconds. Power Density was read directly and cable loss (0.5dB)/external attenuator (3dB) correction was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel). The Power Spectral Density measured result is in the following table.

See Power Spectrum Density plot as file name “Power Spectrum Density plot.pdf”

7.3 Measured data of Power Spectrum Density test results

Channel	Frequency (MHz)	Measured level (dBm)	Limit (dBm)
Low	2142.803	-9.13	8
Middle	2436.234	-7.79	8
High	2460.849	-10.36	8

8. Emission on the band edge §FCC 15.247(C)

8.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 60 %

8.2 Test setup & procedure

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

See band-edge plot as file name “Band-edge plot.pdf”.

8.3 Measured data of the emission on the band edge

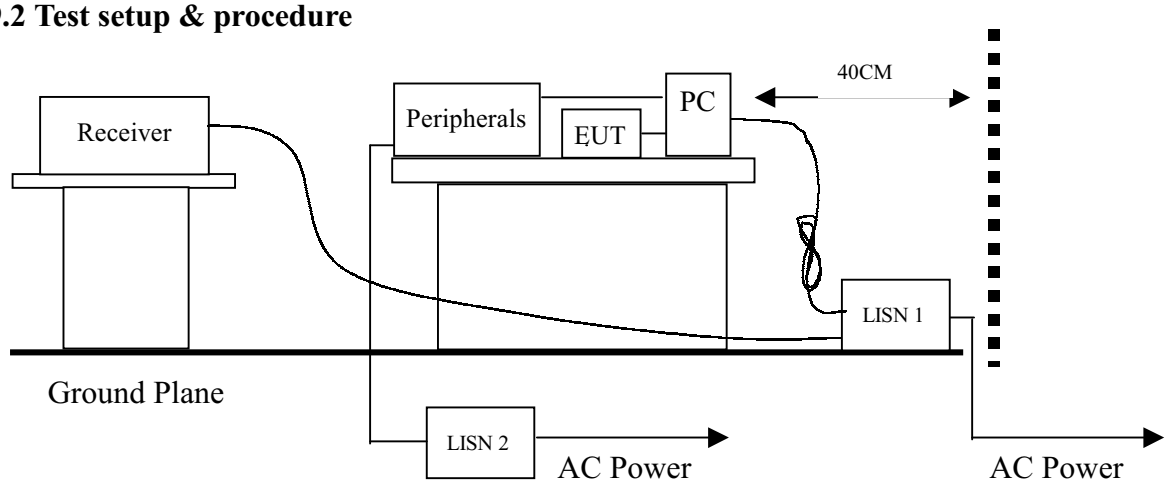
<table>
<tr><td rowspan="2">Channel</td><td colspan="2" rowspan="2">Spurious
Emission at 2310~2390MHz</td><td rowspan="2">Delta value
(dB)</td><td rowspan="2">Limit
(dB)</td></tr>
<tr></tr>
<tr><td rowspan="2">Low</td><td>Frequency
(MHz)</td><td>Level (dBm)</td><td rowspan="2">-29.30</td><td rowspan="2">20</td></tr>
<tr><td>2399.464</td><td>-18.41</td></tr>
<tr><td rowspan="2">Channel</td><td colspan="2" rowspan="2">Spurious
Emission at 2483.5~2500MHz</td><td rowspan="2">Delta value
(dBm)</td><td rowspan="2">Limit
(dB)</td></tr>
<tr></tr>
<tr><td rowspan="2">High</td><td>Frequency
(MHz)</td><td>Level (dBm)</td><td rowspan="2">-51.04</td><td rowspan="2">20</td></tr>
<tr><td>2484.262</td><td>-41.53</td></tr>
</table>

9. Power Line Conducted Emission test §FCC 15.207

9.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 60 %

9.2 Test setup & procedure



The EUT are connected to the main power through a line impedance stabilization network (LISN). 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.
Both sides (Line and Neutral) of AC 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 C63.4/1992 on conducted measurement.
The bandwidth of the field strength meter (R & S Test Receiver ESCS 30) is set at 9kHz.

See Power Line Conducted Emission plot as file name “Power Line Conducted Emission plot.pdf”.

Emission Limit

FCC Part 15 Paragraph 15.207		
Freq. (MHz)	Maximum RF Line Voltage	
	uV	dBuV
0.45 - 30	250	48.0

9.3 Power Line Conducted Emission test data

EUT : WUB1500
Test Mode : Low Channel
Test Condition : Transmitter

Power Line (circle)	Freq. (MHz)	Reading (dB μ V) QP	Limit (dB μ V) QP	Margin (dB) QP
LINE	0.61800	29.8	48.00	-18.20
LINE	0.96200	26.1	48.00	-21.90
LINE	2.45800	22.7	48.00	-25.30
LINE	7.89800	33.6	48.00	-14.40
LINE	11.13800	33.1	48.00	-14.90
LINE	29.65000	33.8	48.00	-14.20
NEUTRAL	0.61800	31.6	48.00	-16.40
NEUTRAL	0.96200	29.3	48.00	-18.70
NEUTRAL	1.22600	28.2	48.00	-19.80
NEUTRAL	7.89800	28.8	48.00	-19.20
NEUTRAL	11.13800	31.8	48.00	-16.20
NEUTRAL	28.24200	34.5	48.00	-13.50

Remark:
1. The reading value including cable loss and LISN factor.
2. Uncertainty was calculated in accordance with NAMAS NIS 81.
   Expanded uncertainty (k=2) of conducted emission measurement is ±2.6 dB.

EUT : WUB1500
Test Mode : Middle Channel
Test Condition : Transmitter

Power Line (circle)	Freq. (MHz)	Reading (dB μ V) QP	Limit (dB μ V) QP	Margin (dB) QP
LINE	0.61800	29.7	48.00	-18.30
LINE	0.96200	26.0	48.00	-22.00
LINE	2.45800	22.4	48.00	-25.60
LINE	7.28200	33.7	48.00	-14.30
LINE	11.22600	33.4	48.00	-14.60
LINE	29.20200	32.1	48.00	-15.90
NEUTRAL	0.61800	31.8	48.00	-16.20
NEUTRAL	0.96200	29.4	48.00	-18.60
NEUTRAL	1.31400	29.0	48.00	-19.00
NEUTRAL	7.89800	29.2	48.00	-18.80
NEUTRAL	11.40200	31.9	48.00	-16.10
NEUTRAL	28.76200	33.3	48.00	-14.70

Remark:
1. 1. The reading value included cable loss and LISN factor.
2. Uncertainty was calculated in accordance with NAMAS NIS 81.
Expanded uncertainty (k=2) of conducted emission measurement is ±2.6 dB.

EUT : WUB1500
Test Mode : High Channel
Test Condition : Transmitter

Power Line (circle)	Freq. (MHz)	Reading (dB μ V) QP	Limit (dB μ V) QP	Margin (dB) QP
LINE	0.61800	29.6	48.00	-18.40
LINE	0.96200	26.4	48.00	-21.60
LINE	1.22600	25.4	48.00	-22.60
LINE	7.80200	33.1	48.00	-14.90
LINE	11.13800	32.7	48.00	-15.30
LINE	29.81800	31.6	48.00	-16.40
NEUTRAL	0.61800	31.6	48.00	-16.40
NEUTRAL	0.96200	29.3	48.00	-18.70
NEUTRAL	1.31400	28.9	48.00	-19.10
NEUTRAL	6.66600	28.2	48.00	-19.80
NEUTRAL	10.69800	31.7	48.00	-16.30
NEUTRAL	28.68200	34.1	48.00	-13.90

Remark:
1. 1. The reading value included cable loss and LISN factor.
2. Uncertainty was calculated in accordance with NAMAS NIS 81.
Expanded uncertainty (k=2) of conducted emission measurement is ±2.6 dB.