

FCC TEST REPORT

REPORT NO.: RF931104L08
MODEL NO.: WHRTC-100GW
(refer to the note 3 of page 6 for other models)
RECEIVED: Sep. 27, 2004
TESTED: Sep. 27 ~ Dec. 10, 2004

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No. 2177-01



0528
ILAC MRA

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1 CERTIFICATION

PRODUCT: Home Plug Wireless 802.11g Router

BRAND NAME: Gemtek

MODEL NO. : WHRTC-100GW

(refer to the note 3 of page 6 for other product names, brand names and models)

APPLICANT : Gemtek Technology Co., Ltd.

TESTED : Sep. 27 ~ Dec. 10, 2004

TEST SAMPLE : ENGINEERING SAMPLE

STANDARDS : FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2003

The above equipment (which model no.: WHRTC-100GW) has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Windy Chou , **DATE:** Dec. 10, 2004
(Windy Chou)

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE:** Dec. 10, 2004
Responsible for RF (Gary Chang)

APPROVED BY : Cody Chang , **DATE:** Dec. 10, 2004
(Cody Chang, Deputy Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -14.07dB at 0.615MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit : min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.22dB at 400.00MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.63 dB
	200MHz ~ 1000MHz	3.65 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Home Plug Wireless 802.11g Router (refer to the note 3 as below for other product names)
MODEL NO.	WHRTC-100GW (refer to the note 3 as below for other models)
POWER SUPPLY	120Vac, 60Hz from AC line
MODULATION TYPE	BPSK, QPSK, CCK, 16QAM, 64QAM
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
MAXIMUM OUTPUT POWER	26.303mW
ANTENNA TYPE	Monopole antenna with 2.0dBi gain
DATA CABLE	NA
I/O PORTS	RJ45
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.
2. The EUT complies with IEEE 802.11g standards and backwards compatible with IEEE 802.11b products.
3. This EUT has other different product names, brand names and models that listed below due to marketing requirement.

Product Name	Brand Name	Model No.
Home Plug Wireless 802.11g Router	Gemtek	WHRTC-100GW
Corinex Wireless to Powerline Router G	Corinex	CXP-RTG

4. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided to this EUT.

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

NOTE:

1. Below 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11 with OFDM technique, worst case one, was chosen for final test.
2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
3. After pre-tested, we have chosen data rates 11Mbps with DSSS technique and 6Mbps with OFDM technique, as the worst cases for the test among other data rates.
4. Two test results were presented in the following sections. The test result A was for DSSS technique and the test result B was for OFDM technique.
5. For conducted emission test, we have chosen OFDM technique as the worst case after pre-testing in conducted emission test site.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Home Plug Wireless 802.11g Router. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)
ANSI C63.4-2003

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

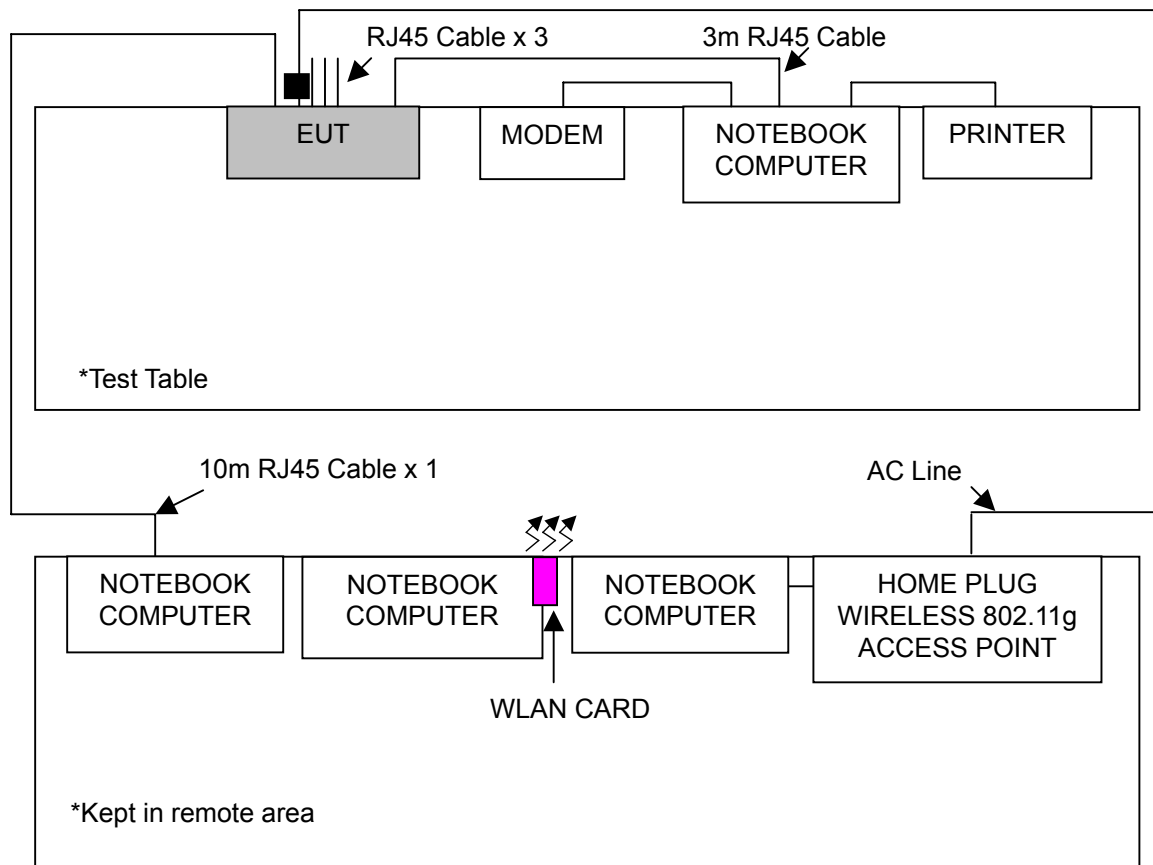
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
2	MODEM	ACEEX	1414V/3	0401008269	IFAXDM1414
3	PRINTER	EPSON	LQ-300+	DCGY054147	FCC DoC Approved
4	NOTEBOOK COMPUTER	DELL	PP05L	16484462992	E2K24CLNS
5	NOTEBOOK COMPUTER	DELL	PP05L	33898721680	E2K24CLNS
6	WLAN CARD (Insert into NB)	NA	WN825G	NA	ACQWN825Gv2
7	HOME PLUG WIRELESS 802.11g ACCESS POINT	Gemtek	HACC-100	NA	MXF-HAP930819G

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8 m shielded cable
3	1.8 m shielded cable
4	NA
5	NA
6	NA
7	NA

NOTE: 1. All power cords of the above support units are non shielded (1.8m).
2. Item 4 ~ 7 act as a communication partner to transfer data.

3.5 CONFIGURATION OF SYSTEM UNDER TEST



4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Mar. 07, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Mar. 10, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Mar. 04, 2005
Software ADT	ADT_Cond_V3	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2.
 3. The VCCI Site Registration No. is C-2047.



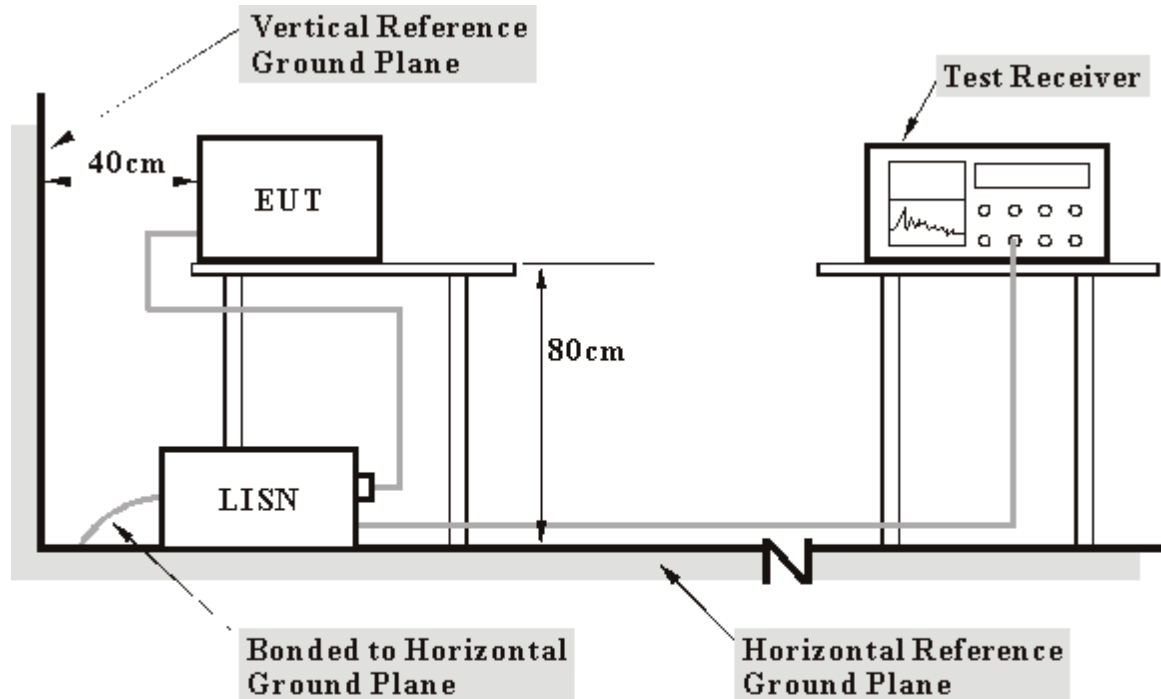
4.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under Limit – 20dB was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

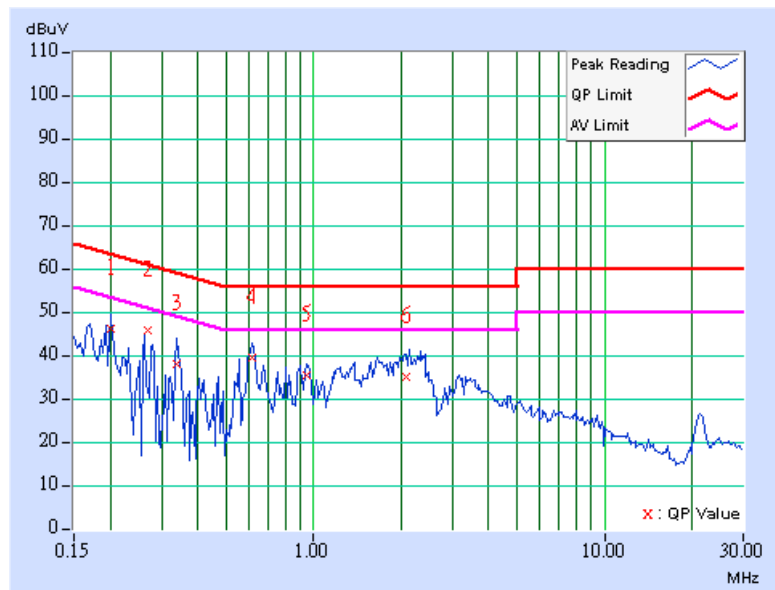
- a. Placed the EUT on the testing table.
- b. Prepared another Notebook system to act as a communication partner and placed it outside of testing area.
- c. The communication partner run a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ45 cable.
- d. The communication partner sent data to EUT by command "PING".

4.1.7 TEST RESULTS

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	23deg. C, 69% RH, 991 hPa	TESTED BY	Steven Lu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	46.00	-	46.10	-	63.58	53.58	-17.48	-
2	0.270	0.10	45.52	-	45.62	-	61.13	51.13	-15.50	-
3	0.338	0.11	38.05	-	38.16	-	59.26	49.26	-21.11	-
4	0.611	0.16	39.45	-	39.61	-	56.00	46.00	-16.39	-
5	0.943	0.24	35.43	-	35.67	-	56.00	46.00	-20.33	-
6	2.070	0.26	34.90	-	35.16	-	56.00	46.00	-20.84	-

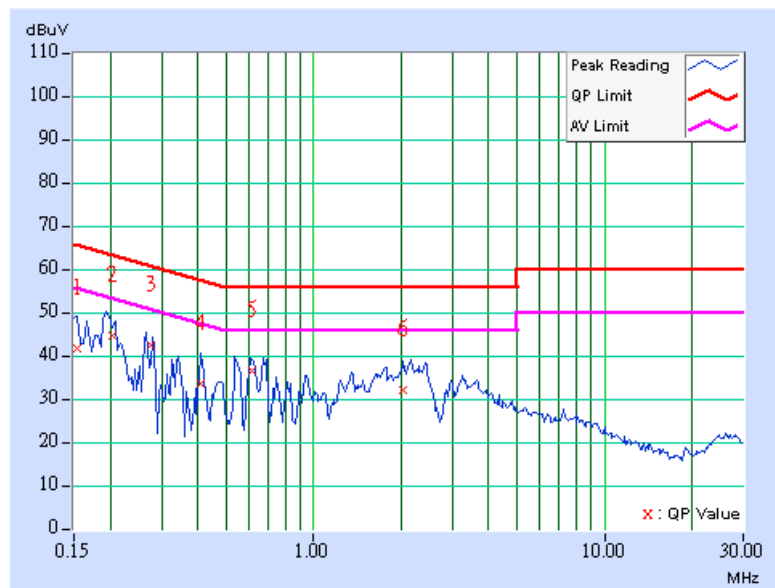
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	23deg. C, 69% RH, 991 hPa	TESTED BY	Steven Lu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.10	41.46	-	41.56	-	65.79	55.79	-24.23	-
2	0.202	0.10	44.55	-	44.65	-	63.51	53.51	-18.86	-
3	0.275	0.10	42.47	-	42.57	-	60.97	50.97	-18.40	-
4	0.412	0.12	33.48	-	33.60	-	57.61	47.61	-24.02	-
5	0.611	0.16	36.54	-	36.70	-	56.00	46.00	-19.30	-
6	2.035	0.25	31.94	-	32.19	-	56.00	46.00	-23.81	-

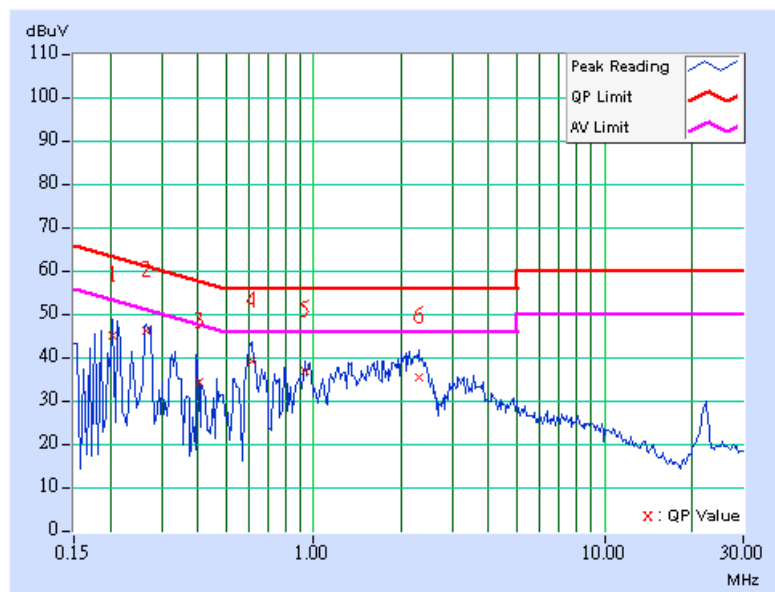
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	23deg. C, 69% RH, 991 hPa	TESTED BY	Steven Lu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	44.97	-	45.07	-	63.42	53.42	-18.35	-
2	0.267	0.10	45.95	-	46.05	-	61.20	51.20	-15.15	-
3	0.406	0.11	34.10	-	34.21	-	57.72	47.72	-23.51	-
4	0.611	0.16	38.90	-	39.06	-	56.00	46.00	-16.94	-
5	0.931	0.23	36.69	-	36.92	-	56.00	46.00	-19.08	-
6	2.293	0.27	35.18	-	35.45	-	56.00	46.00	-20.55	-

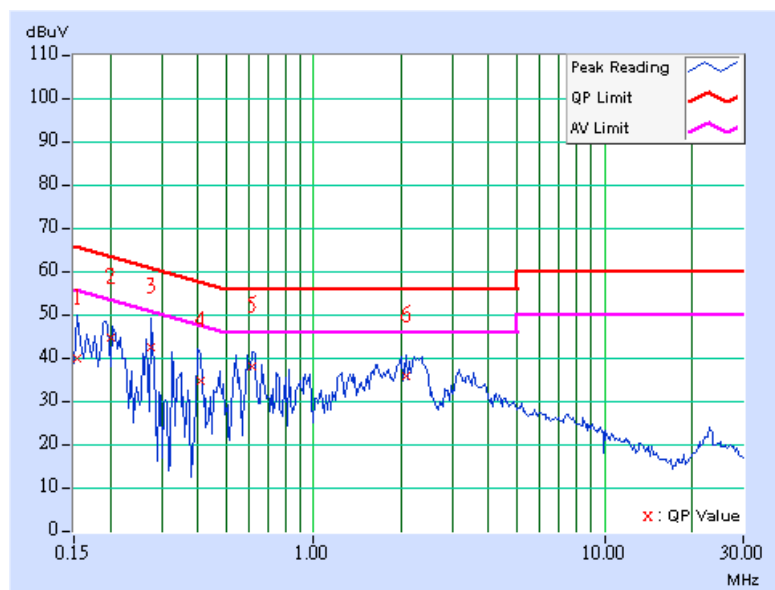
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	23deg. C, 69% RH, 991 hPa	TESTED BY	Steven Lu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.10	39.58	-	39.68	-	65.79	55.79	-26.11	-
2	0.201	0.10	44.71	-	44.81	-	63.57	53.57	-18.76	-
3	0.275	0.11	42.27	-	42.38	-	60.97	50.97	-18.59	-
4	0.408	0.12	34.55	-	34.67	-	57.69	47.69	-23.02	-
5	0.615	0.16	37.94	-	38.10	-	56.00	46.00	-17.90	-
6	2.082	0.25	35.49	-	35.74	-	56.00	46.00	-20.26	-

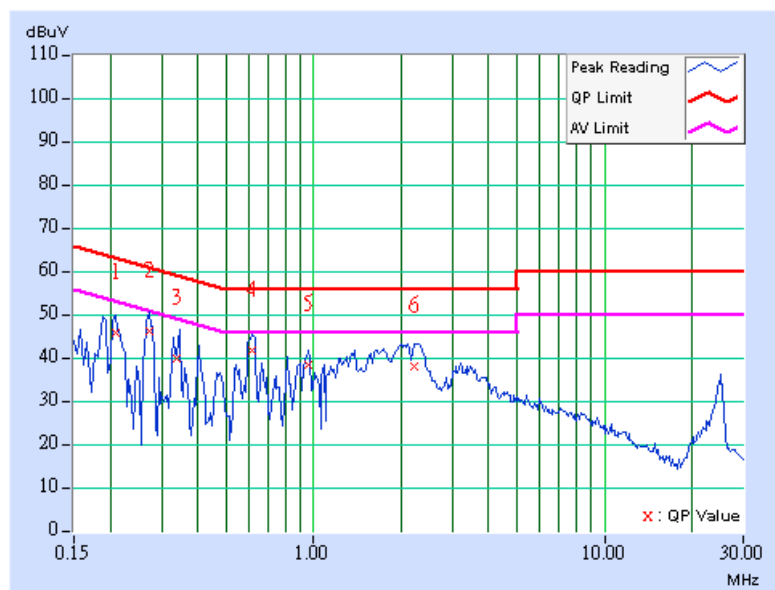
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	23deg. C, 69% RH, 991 hPa	TESTED BY	Steven Lu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.10	45.78	-	45.88	-	63.26	53.26	-17.38	-
2	0.271	0.10	46.03	-	46.13	-	61.08	51.08	-14.95	-
3	0.338	0.11	39.70	-	39.81	-	59.26	49.26	-19.45	-
4	0.615	0.16	41.77	-	41.93	-	56.00	46.00	-14.07	-
5	0.963	0.24	38.16	-	38.40	-	56.00	46.00	-17.60	-
6	2.211	0.27	37.84	-	38.11	-	56.00	46.00	-17.89	-

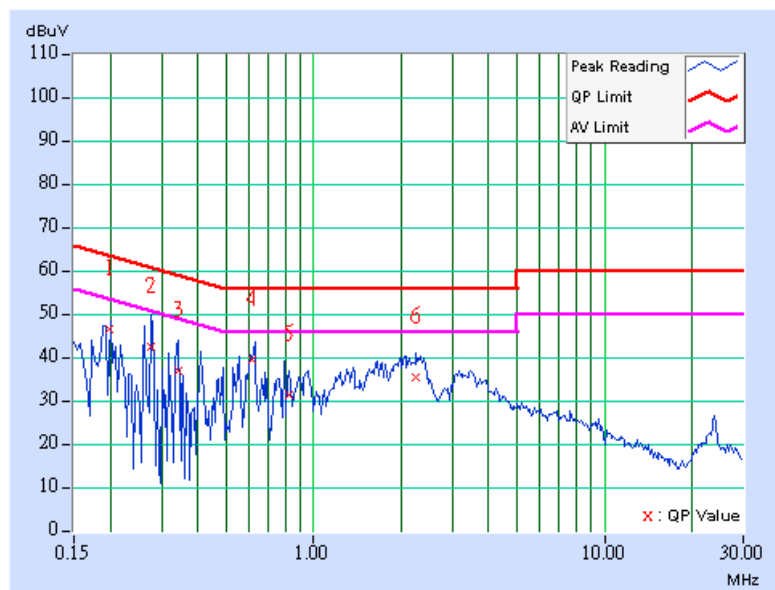
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	PHASE	Netural (N)
ENVIRONMENTAL CONDITIONS	23deg. C, 69% RH, 991 hPa	TESTED BY	Steven Lu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.198	0.10	46.38	-	46.48	-	63.69	53.69	-17.21	-
2	0.275	0.11	42.29	-	42.40	-	60.97	50.97	-18.57	-
3	0.341	0.11	36.63	-	36.74	-	59.17	49.17	-22.43	-
4	0.615	0.16	39.29	-	39.45	-	56.00	46.00	-16.55	-
5	0.819	0.20	31.29	-	31.49	-	56.00	46.00	-24.51	-
6	2.254	0.26	35.20	-	35.46	-	56.00	46.00	-20.54	-

- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Feb. 09, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 29, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170242	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10631	Nov. 17, 2005
Preamplifier Agilent	8449B	3008A01960	Nov. 14, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219272/4	Mar. 04, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219275/4	Mar. 04, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is IC4924-4.



4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

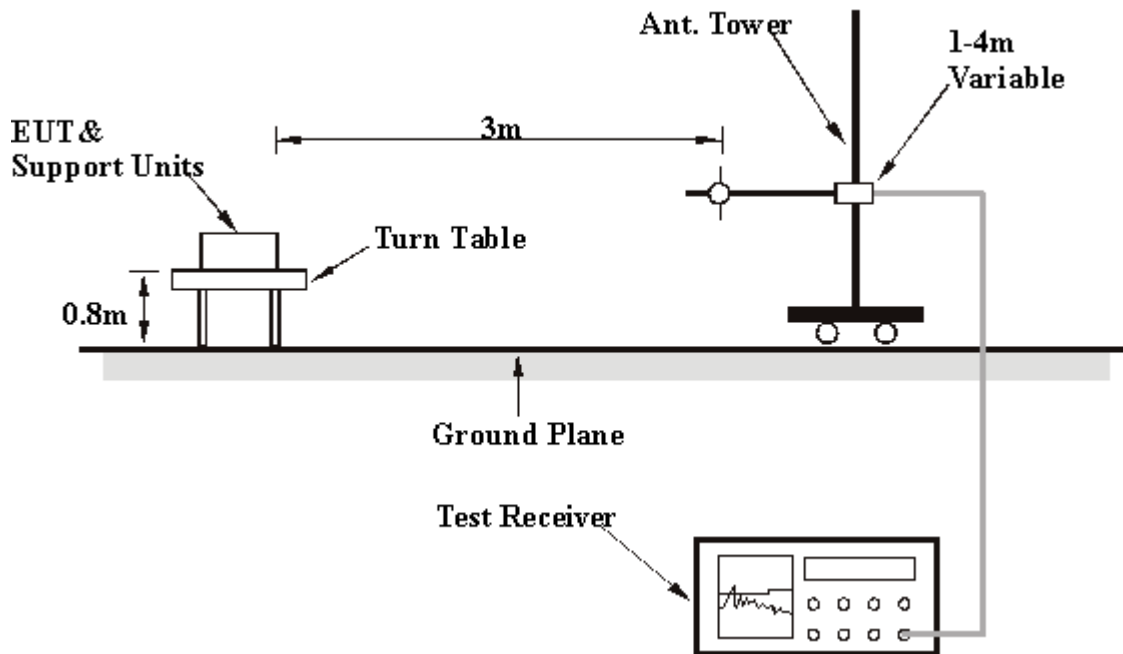
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	FREQUENCY RANGE	Below 1000 MHz
INPUT POWER (SYSTEM)	120 Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 63% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	199.12	38.73 QP	43.50	-4.77	1.00 H	7	27.39	11.34
2	249.66	39.45 QP	46.00	-6.55	1.00 H	223	26.35	13.11
3	300.20	44.34 QP	46.00	-1.66	1.00 H	259	29.93	14.41
4	400.00	44.78 QP	46.00	-1.22	2.00 H	28	28.05	16.73
5	449.88	40.02 QP	46.00	-5.98	1.00 H	226	22.03	18.00
6	500.42	42.45 QP	46.00	-3.55	1.50 H	319	23.88	18.58
7	599.56	40.33 QP	46.00	-5.67	1.50 H	154	19.52	20.82
8	700.64	41.93 QP	46.00	-4.07	1.25 H	286	19.90	22.03
9	799.78	38.95 QP	46.00	-7.05	1.00 H	19	15.49	23.46
10	900.86	38.18 QP	46.00	-7.82	1.50 H	280	13.36	24.82

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	FREQUENCY RANGE	Below 1000 MHz
INPUT POWER (SYSTEM)	120 Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 63% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	43.61	35.39 QP	40.00	-4.61	1.00 V	334	20.01	15.39
2	84.43	35.99 QP	40.00	-4.01	1.25 V	25	26.02	9.97
3	199.12	39.61 QP	43.50	-3.89	1.00 V	127	28.27	11.34
4	249.66	41.72 QP	46.00	-4.28	1.00 V	244	28.62	13.11
5	300.00	44.36 QP	46.00	-1.64	1.04 V	24	29.95	14.41
6	399.34	44.48 QP	46.00	-1.52	1.00 V	352	27.77	16.71
7	500.42	39.45 QP	46.00	-6.55	1.00 V	124	20.87	18.58
8	599.56	36.19 QP	46.00	-9.81	1.00 V	76	15.38	20.82
9	700.64	39.28 QP	46.00	-6.72	1.00 V	163	17.26	22.03
10	900.86	38.75 QP	46.00	-7.25	1.00 V	7	13.93	24.82

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

4.2.8 TEST RESULTS (A)

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	1	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	46.94 PK	74.00	-27.06	1.33 H	244	18.01	28.93
1	1100.00	41.42 AV	54.00	-12.58	1.33 H	244	12.49	28.93
2	1300.00	46.08 PK	74.00	-27.92	1.21 H	186	15.94	30.14
2	1300.00	40.03 AV	54.00	-13.97	1.21 H	186	9.89	30.14
3	1608.00	45.56 PK	74.00	-28.44	1.19 H	319	15.43	30.13
3	1608.00	40.65 AV	54.00	-13.35	1.19 H	319	10.52	30.13
4	2390.00	40.66 PK	74.00	-33.34	1.52 H	349	6.83	33.83
4	2390.00	33.37 AV	54.00	-20.63	1.52 H	349	-0.46	33.83
5	*2412.00	99.18 PK			1.52 H	349	65.25	33.93
5	*2412.00	91.89 AV			1.52 H	349	57.96	33.93
6	3216.00	52.56 PK	74.00	-21.44	1.06 H	128	16.22	36.33
6	3216.00	48.28 AV	54.00	-5.72	1.06 H	128	11.94	36.33
7	4824.00	53.81 PK	74.00	-20.19	1.47 H	69	13.15	40.66
7	4824.00	49.38 AV	54.00	-4.62	1.47 H	69	8.72	40.66

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	1	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	43.48 PK	74.00	-30.52	1.02 V	247	14.55	28.93
1	1100.00	39.22 AV	54.00	-14.78	1.02 V	247	10.29	28.93
2	1300.00	42.67 PK	74.00	-31.33	1.08 V	303	12.53	30.14
2	1300.00	35.05 AV	54.00	-18.95	1.08 V	303	4.91	30.14
3	1608.00	36.05 PK	74.00	-37.95	1.09 V	111	5.92	30.13
3	1608.00	40.08 AV	54.00	-13.92	1.09 V	111	9.95	30.13
4	2390.00	52.56 PK	74.00	-21.44	1.04 V	0	18.73	33.83
4	2390.00	45.85 AV	54.00	-8.15	1.04 V	0	12.02	33.83
5	*2412.00	111.08 PK			1.04 V	0	77.15	33.93
5	*2412.00	104.37 AV			1.04 V	0	70.44	33.93
6	3216.00	57.22 PK	91.08	-33.86	1.17 V	293	20.89	36.33
6	3216.00	54.75 AV	84.37	-29.62	1.17 V	293	18.42	36.33
7	4824.00	55.55 PK	74.00	-18.45	1.60 V	253	14.89	40.66
7	4824.00	52.51 AV	54.00	-1.49	1.60 V	253	11.85	40.66

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	6	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	45.91 PK	74.00	-28.09	1.48 H	124	16.98	28.93
1	1100.00	41.38 AV	54.00	-12.62	1.48 H	124	12.45	28.93
2	1300.00	46.23 PK	74.00	-27.77	1.14 H	190	16.09	30.14
2	1300.00	39.86 AV	54.00	-14.14	1.14 H	190	9.72	30.14
3	1624.00	44.64 PK	74.00	-29.36	1.16 H	312	14.48	30.16
3	1624.00	40.50 AV	54.00	-13.50	1.16 H	312	10.34	30.16
4	*2437.00	98.46 PK			1.00 H	348	64.41	34.05
4	*2437.00	92.11 AV			1.00 H	348	58.06	34.05
5	3248.00	49.92 PK	74.00	-24.08	1.16 H	89	13.56	36.36
5	3248.00	42.86 AV	54.00	-11.14	1.16 H	89	6.50	36.36
6	4874.00	54.44 PK	74.00	-19.56	1.21 H	228	13.75	40.69
6	4874.00	48.85 AV	54.00	-5.15	1.21 H	228	8.16	40.69

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	6	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	43.63 PK	74.00	-30.37	1.00 V	261	14.70	28.93
1	1100.00	38.96 AV	54.00	-15.04	1.00 V	261	10.03	28.93
2	1300.00	44.59 PK	74.00	-29.41	1.59 V	329	14.45	30.14
2	1300.00	37.01 AV	54.00	-16.99	1.59 V	329	6.87	30.14
3	1624.00	45.74 PK	74.00	-28.26	1.03 V	75	15.58	30.16
3	1624.00	42.20 AV	54.00	-11.80	1.03 V	75	12.04	30.16
4	*2437.00	111.71 PK			1.00 V	360	77.66	34.05
4	*2437.00	104.99 AV			1.00 V	360	70.94	34.05
5	3248.00	57.34 PK	91.71	-34.37	1.10 V	312	20.98	36.36
5	3248.00	54.33 AV	84.99	-30.66	1.10 V	312	17.97	36.36
6	4874.00	54.54 PK	74.00	-19.46	1.51 V	210	13.85	40.69
6	4874.00	51.46 AV	54.00	-2.54	1.51 V	210	10.77	40.69

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	46.33 PK	74.00	-27.67	1.40 H	128	17.40	28.93
1	1100.00	41.12 AV	54.00	-12.88	1.40 H	128	12.19	28.93
2	1300.00	45.89 PK	74.00	-28.11	1.16 H	185	15.75	30.14
2	1300.00	40.00 AV	54.00	-14.00	1.16 H	185	9.86	30.14
3	1641.00	44.20 PK	74.00	-29.80	1.17 H	322	14.02	30.18
3	1641.00	38.92 AV	54.00	-15.08	1.17 H	322	8.74	30.18
4	2280.00	46.47 PK	74.00	-27.53	1.59 H	100	13.19	33.28
4	2280.00	34.76 AV	54.00	-19.24	1.59 H	100	1.48	33.28
5	*2462.00	99.87 PK			1.00 H	350	65.71	34.16
5	*2462.00	92.78 AV			1.00 H	350	58.62	34.16
6	2483.50	41.95 PK	74.00	-32.05	1.00 H	350	7.69	34.26
6	2483.50	34.86 AV	54.00	-19.14	1.00 H	350	0.60	34.26
7	3282.00	49.01 PK	74.00	-24.99	1.18 H	86	12.62	36.40
7	3282.00	41.10 AV	54.00	-12.90	1.18 H	86	4.71	36.40
8	4924.00	54.16 PK	74.00	-19.84	1.17 H	224	13.30	40.86
8	4924.00	48.41 AV	54.00	-5.59	1.17 H	224	7.55	40.86

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 991 hPa	TESTED BY	Rush Kao

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	44.22 PK	74.00	-29.78	1.00 V	253	15.29	28.93
1	1100.00	39.46 AV	54.00	-14.54	1.00 V	253	10.53	28.93
2	1300.00	43.10 PK	74.00	-30.90	1.45 V	267	12.96	30.14
2	1300.00	34.45 AV	54.00	-19.55	1.45 V	267	4.31	30.14
3	1641.00	45.52 PK	74.00	-28.48	1.00 V	75	15.34	30.18
3	1641.00	38.88 AV	54.00	-15.12	1.00 V	75	8.70	30.18
4	2280.00	49.73 PK	74.00	-24.27	1.00 V	253	16.45	33.28
4	2280.00	37.51 AV	54.00	-16.49	1.00 V	253	4.23	33.28
5	*2462.00	111.23 PK			1.00 V	360	77.07	34.16
5	*2462.00	104.49 AV			1.00 V	360	70.33	34.16
6	2483.50	53.31 PK	74.00	-20.69	1.00 V	360	19.05	34.26
6	2483.50	46.57 AV	54.00	-7.43	1.00 V	360	12.31	34.26
7	3282.00	54.22 PK	74.00	-19.78	1.00 V	34	17.83	36.40
7	3282.00	50.99 AV	54.00	-3.01	1.00 V	34	14.60	36.40
8	4924.00	55.75 PK	74.00	-18.25	1.00 V	352	14.89	40.86
8	4924.00	51.21 AV	54.00	-2.79	1.00 V	352	10.35	40.86

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

4.2.9 TEST RESULTS (B)

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	1	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 67% RH, 991 hPa	TESTED BY	Steven Lu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	45.25 PK	74.00	-28.75	1.27 H	300	16.32	28.93
1	1100.00	40.34 AV	54.00	-13.66	1.27 H	300	11.41	28.93
2	1608.00	45.40 PK	74.00	-28.60	1.25 H	240	15.27	30.13
2	1608.00	40.54 AV	54.00	-13.46	1.25 H	240	10.41	30.13
3	2280.00	49.16 PK	74.00	-24.84	1.01 H	193	15.88	33.28
3	2280.00	38.13 AV	54.00	-15.87	1.01 H	193	4.85	33.28
4	2390.00	47.14 PK	74.00	-26.86	1.00 H	195	13.31	33.83
4	2390.00	40.96 AV	54.00	-13.04	1.00 H	195	7.13	33.83
5	*2412.00	102.25 PK			1.00 H	195	68.32	33.93
5	*2412.00	96.07 AV			1.00 H	195	62.14	33.93
6	3216.00	52.96 PK	74.00	-21.04	1.10 H	230	16.62	36.33
6	3216.00	48.23 AV	54.00	-5.77	1.10 H	230	11.89	36.33
7	4824.00	53.66 PK	74.00	-20.34	1.28 H	352	13.00	40.66
7	4824.00	44.61 AV	54.00	-9.39	1.28 H	352	3.95	40.66

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	1	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 67% RH, 991 hPa	TESTED BY	Steven Lu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	45.96 PK	74.00	-28.04	1.12 V	70	17.03	28.93
1	1100.00	40.97 AV	54.00	-13.03	1.12 V	70	12.04	28.93
2	1608.00	46.84 PK	74.00	-27.16	1.00 V	243	16.71	30.13
2	1608.00	43.35 AV	54.00	-10.65	1.00 V	243	13.22	30.13
3	2280.40	54.42 PK	74.00	-19.58	1.08 V	178	21.14	33.28
3	2280.40	42.21 AV	54.00	-11.79	1.08 V	178	8.93	33.28
4	2390.00	51.54 PK	74.00	-22.46	1.02 V	197	17.71	33.83
4	2390.00	44.70 AV	54.00	-9.30	1.02 V	197	10.87	33.83
5	*2412.00	106.65 PK			1.02 V	197	72.72	33.93
5	*2412.00	99.79 AV			1.02 V	197	65.86	33.93
6	3216.00	57.37 PK	86.65	-29.28	1.00 V	148	21.04	36.33
6	3216.00	54.46 AV	79.79	-25.33	1.00 V	148	18.13	36.33
7	4824.00	55.02 PK	74.00	-18.98	1.08 V	150	14.36	40.66
7	4824.00	49.10 AV	54.00	-4.90	1.08 V	150	8.44	40.66

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	6	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 67% RH, 991 hPa	TESTED BY	Steven Lu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	45.38 PK	74.00	-28.62	1.24 H	300	16.45	28.93
1	1100.00	40.86 AV	54.00	-13.14	1.24 H	300	11.93	28.93
2	1300.00	42.35 PK	74.00	-31.65	1.20 H	214	12.21	30.14
2	1300.00	38.32 AV	54.00	-15.68	1.20 H	214	8.18	30.14
3	1624.00	45.32 PK	74.00	-28.68	1.24 H	147	15.16	30.16
3	1624.00	40.68 AV	54.00	-13.32	1.24 H	147	10.52	30.16
4	2280.40	49.32 PK	74.00	-24.68	1.25 H	240	16.04	33.28
4	2280.40	39.68 AV	54.00	-14.32	1.25 H	240	6.40	33.28
5	*2437.00	102.35 PK			1.01 H	186	68.30	34.05
5	*2437.00	96.38 AV			1.01 H	186	62.33	34.05
6	3248.36	52.96 PK	74.00	-21.04	1.10 H	241	16.60	36.36
6	3248.36	48.67 AV	54.00	-5.33	1.10 H	241	12.31	36.36
7	4874.00	53.32 PK	74.00	-20.68	1.02 H	252	12.63	40.69
7	4874.00	46.68 AV	54.00	-7.32	1.02 H	252	5.99	40.69

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	6	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 67% RH, 991 hPa	TESTED BY	Steven Lu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	45.96 PK	74.00	-28.04	1.23 V	125	17.03	28.93
1	1100.00	40.68 AV	54.00	-13.32	1.23 V	125	11.75	28.93
2	1300.00	42.32 PK	74.00	-31.68	1.10 V	241	12.18	30.14
2	1300.00	38.32 AV	54.00	-15.68	1.10 V	241	8.18	30.14
3	1624.62	47.32 PK	74.00	-26.68	1.00 V	241	17.16	30.16
3	1624.62	43.68 AV	54.00	-10.32	1.00 V	241	13.52	30.16
4	2280.40	53.80 PK	74.00	-20.20	1.07 V	210	20.52	33.28
4	2280.40	42.72 AV	54.00	-11.28	1.07 V	210	9.44	33.28
5	*2437.00	106.35 PK			1.02 V	120	72.30	34.05
5	*2437.00	99.78 AV			1.02 V	120	65.73	34.05
6	3249.32	57.68 PK	86.35	-28.67	1.00 V	125	21.32	36.36
6	3249.32	54.69 AV	79.78	-25.09	1.00 V	125	18.33	36.36
7	4874.00	55.32 PK	74.00	-18.68	1.05 V	152	14.63	40.69
7	4874.00	49.68 AV	54.00	-4.32	1.05 V	152	8.99	40.69

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 67% RH, 991 hPa	TESTED BY	Steven Lu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	46.35 PK	74.00	-27.65	1.27 H	276	17.42	28.93
1	1100.00	40.85 AV	54.00	-13.15	1.27 H	276	11.92	28.93
2	1300.00	42.92 PK	74.00	-31.08	1.30 H	232	12.78	30.14
2	1300.00	37.89 AV	54.00	-16.11	1.30 H	232	7.75	30.14
3	1641.23	45.85 PK	74.00	-28.15	1.20 H	242	15.67	30.18
3	1641.23	40.37 AV	54.00	-13.63	1.20 H	242	10.19	30.18
4	2280.40	52.85 PK	74.00	-21.15	1.02 H	210	19.57	33.28
4	2280.40	42.06 AV	54.00	-11.94	1.02 H	210	8.78	33.28
5	*2462.00	102.35 PK			1.00 H	186	68.42	33.93
5	*2462.00	96.14 AV			1.00 H	186	62.21	33.93
6	2483.50	45.35 PK	74.00	-28.65	1.00 H	186	11.09	34.26
6	2483.50	39.14 AV	54.00	-14.86	1.00 H	186	4.88	34.26
7	3282.65	53.36 PK	74.00	-20.64	1.12 H	231	16.96	36.40
7	3282.65	48.75 AV	54.00	-5.25	1.12 H	231	12.35	36.40
8	4924.00	53.63 PK	74.00	-20.37	1.24 H	324	12.77	40.86
8	4924.00	45.32 AV	54.00	-8.68	1.24 H	324	4.46	40.86

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
CHANNEL	11	FREQUENCY RANGE	1~25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 67% RH, 991 hPa	TESTED BY	Steven Lu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1100.00	46.71 PK	74.00	-27.29	1.08 V	76	17.78	28.93
1	1100.00	40.96 AV	54.00	-13.04	1.08 V	76	12.03	28.93
2	1300.00	42.88 PK	74.00	-31.12	1.26 V	145	12.74	30.14
2	1300.00	37.86 AV	54.00	-16.14	1.26 V	145	7.72	30.14
3	1641.34	47.87 PK	74.00	-26.13	1.30 V	341	17.69	30.18
3	1641.34	42.47 AV	54.00	-11.53	1.30 V	341	12.29	30.18
4	2280.40	55.85 PK	74.00	-18.15	1.32 V	174	22.57	33.28
4	2280.40	45.83 AV	54.00	-8.17	1.32 V	174	12.55	33.28
5	*2462.00	106.11 PK			1.00 V	176	71.95	34.16
5	*2462.00	99.03 AV			1.00 V	176	64.87	34.16
6	2483.50	49.11 PK	74.00	-24.89	1.00 V	176	14.85	34.26
6	2483.50	42.03 AV	54.00	-11.97	1.00 V	176	7.77	34.26
7	3282.67	57.36 PK	86.11	-28.75	1.11 V	158	20.96	36.40
7	3282.67	54.63 AV	79.03	-24.40	1.11 V	158	18.23	36.40
8	4924.00	55.21 PK	74.00	-18.79	1.08 V	154	14.35	40.86
8	4924.00	49.87 AV	54.00	-4.13	1.08 V	154	9.01	40.86

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ” : Fundamental frequency.

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

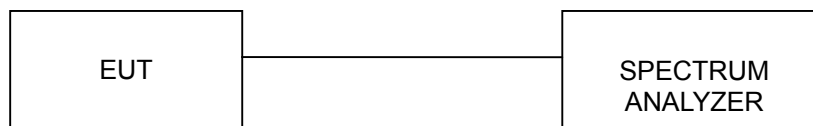
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

4.3.6 EUT OPERATING CONDITIONS

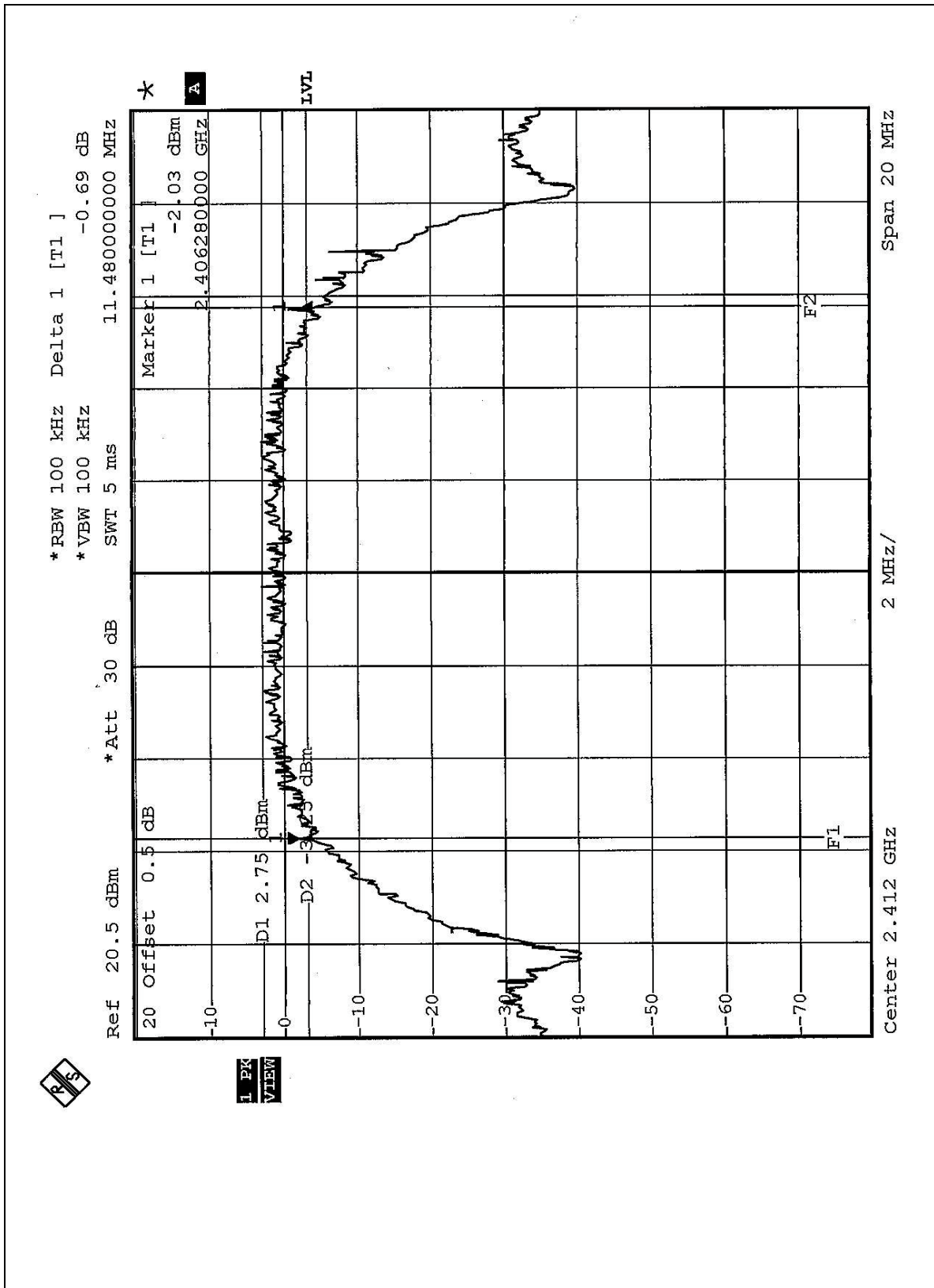
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS (A)

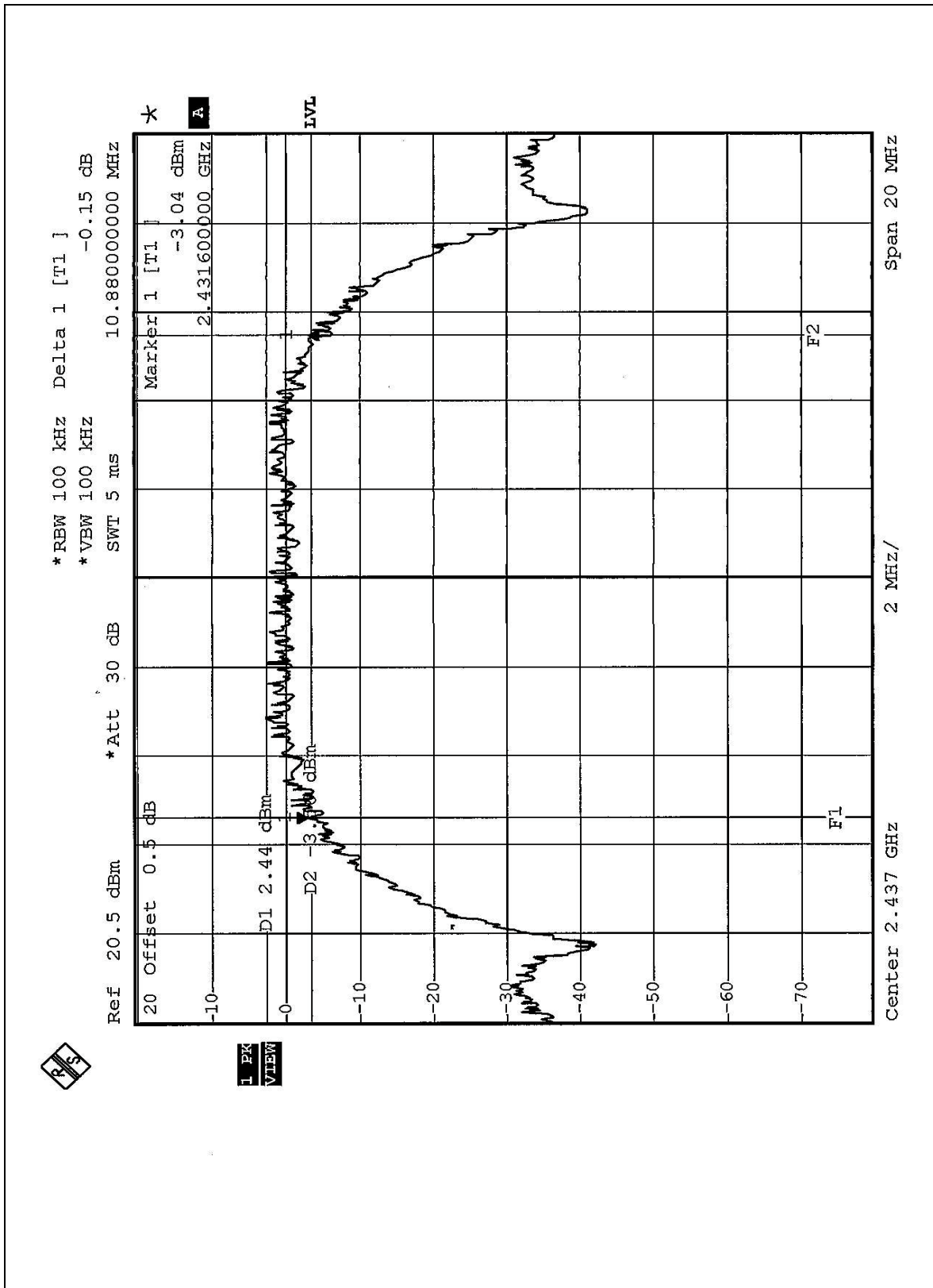
EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23 deg. C, 69% RH, 991 hPa
TESTED BY	Rush Kao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.48	0.5	PASS
6	2437	10.88	0.5	PASS
11	2462	10.52	0.5	PASS

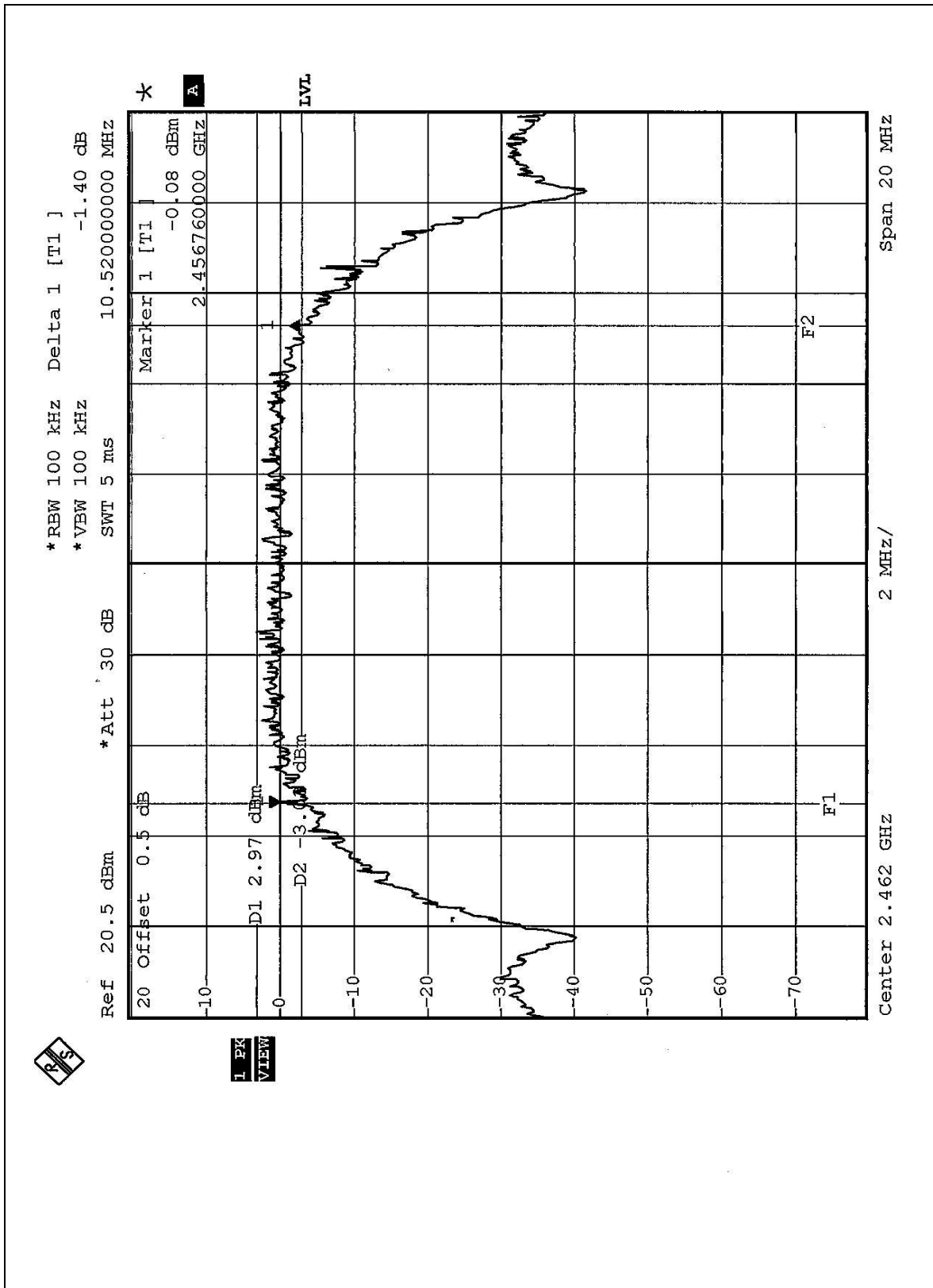
CH 1



CH 6



CH 11

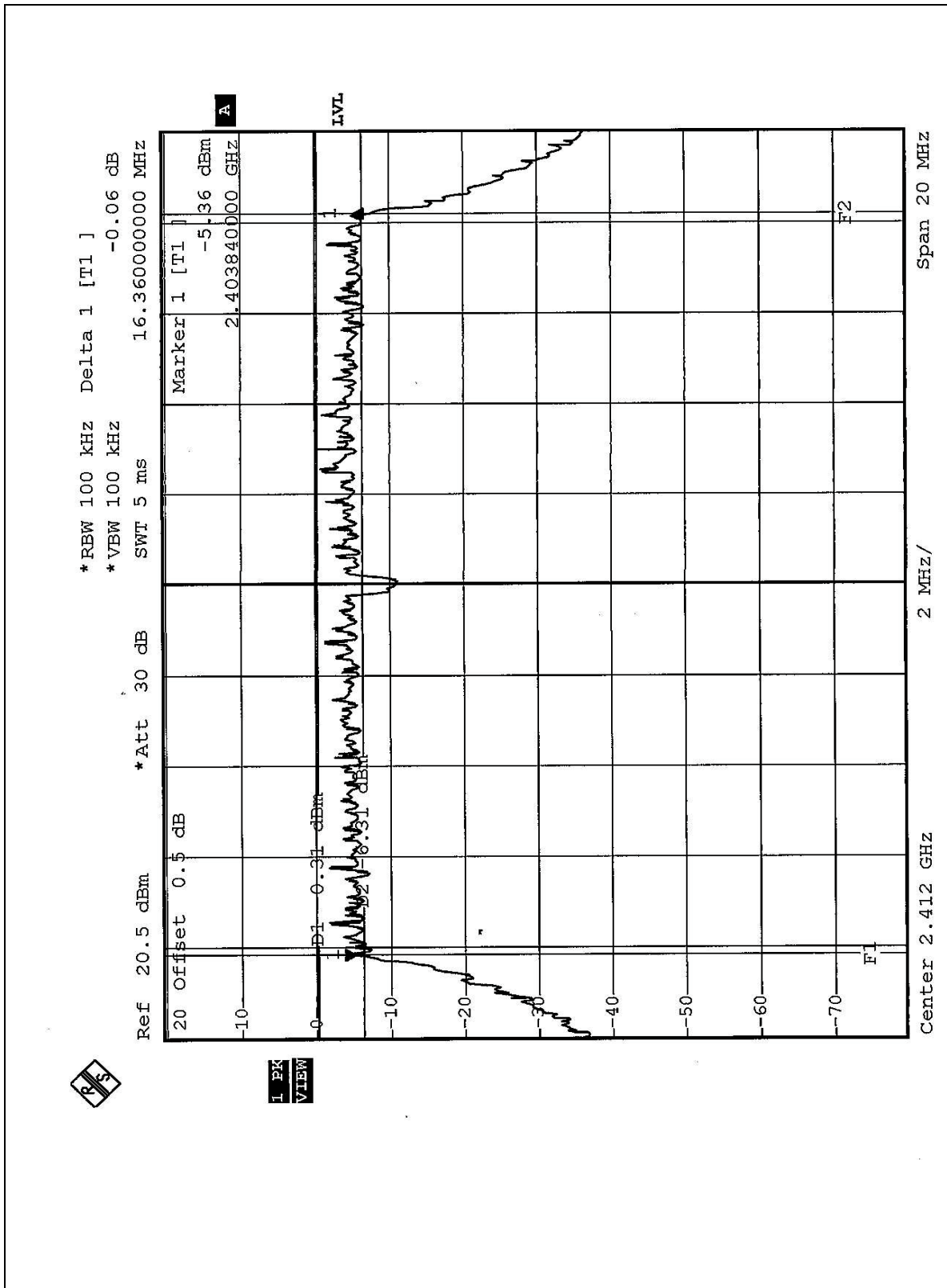


4.3.8 TEST RESULTS (B)

EUT	Home Plug Wireless 802.11g Router	MODEL	WHRTC-100GW
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23 deg. C, 69% RH, 991 hPa
TESTED BY	Rush Kao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.36	0.5	PASS
6	2437	16.32	0.5	PASS
11	2462	16.36	0.5	PASS

CH 1



CH 6

