



FCC TEST REPORT

REPORT NO.: RF920717R03

MODEL NO.: GN-B46B / GN-A16B

BRAND: GIGABYTE

RECEIVED: July 16, 2003

TESTED: Jul. 16, 2003 ~ Aug. 19, 2003

APPLICANT: GIGA-BYTE TECHNOLOGY CO., LTD.

ADDRESS: No. 6, Bau Chiang Road, Hsin-Tien, Taipei
Hsien, Taiwan, ROC

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei,
Taiwan, R.O.C.

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0528
ILAC MRA



Lab Code: 200102-0



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1 CERTIFICATION

PRODUCT : Wireless Broadband Router
/ Wireless Access Point
MODEL NO.: GN-B46B / GN-A16B
BRAND: GIGABYTE
APPLICANT : GIGA-BYTE TECHNOLOGY CO., LTD.
TEST ITEM: R&D SAMPLE
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from July 11, 2003 ~ August 19, 2003. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

PREPARED BY: Landy Soong, **DATE:** Aug. 29, 2003
Landy Soong
APPROVED BY: Dr. Alan Lane / JVP, **DATE:** Aug. 29, 2003
Dr. Alan Lane / JVP

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR 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 -16.02dBuV at 28.5820MHz
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(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -3.1dBuV/m at 718.66MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247©	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

NOTES: The information of measurement uncertainty is available upon the customer's request.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless Broadband Router / Wireless Access Point
MODEL NO.	GN-B46B / GN-A16B
BRAND	GIGABYTE
POWER SUPPLY	4.5VDC from power adapter
MODULATION TYPE	BPSK, QPSK, CCK (DSSS)
TRANSFER RATE	1/2/5.5/11Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	18.97dBm
ANTENNA TYPE	Dipole antenna with 1dBi gain
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

- The difference between the two models is that one is a router and other other is an access point.
- The following adapter is provided to this EUT:

BRAND:	EJ
MODEL:	GSU15U-0
INPUT:	100-240VAC 50/60Hz 0.5A
OUTPUT:	4.5VDC 1.5A 12W MAX

BRAND:	Outstanding Electronics MFG. Co., Ltd.(OEM)
MODEL:	ADS1618-1305-W 0420
INPUT:	100-240V~, 50-60Hz, 0.5A
OUTPUT:	4.5V, 2.0A, 9.0W

- 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, worst case one, was chosen for final test.
2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
3. Data rate with 11Mbps, the worst case, was chosen for final test.
4. For spurious emission below 1GHz, the two test results were presented in the test report. Test result (A) is for model GN-B46B and test result (B) is for model GN-A16B.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 15, Subpart C. (15.247)

ANSI C63.4 : 1992

All tests 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.

For model GN-B46B:

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-19O-B220	FCC DoC APPROVED
2	NOTEBOOK	COMPAQ	N800C	470048-515	DoC
3	FAST ETHERNET PC CARD	D-LINK	DFE-680TXD	RE1A044413	MQ4FE2K5MX
4	PRINTER	EPSON	LQ-300+	DCGY017096	FCC DoC Approved
5	MODEM	ACEEX	1414	980020569	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA
3	NA
4	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
5	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

NOTE: All power cords of the above support units are non shielded (1.8m).

For model GN-A16B:

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	COMPAQ	N800C	470048-515	DoC

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

NOTE: All power cords of the above support units are non shielded (1.8m).



4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	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
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 20, 2004
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 18, 2003
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 18, 2003
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 18, 2003
ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 29 2003
ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 29 2003
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May. 01, 2004
SUHNTER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNTER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 06, 2004

- 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. “*”: These equipment are used for conducted telecom port test only (if tested).
 3. The test was performed in ADT Shielded Room No. 10.
 4. The VCCI Site Registration No. is C-1312.



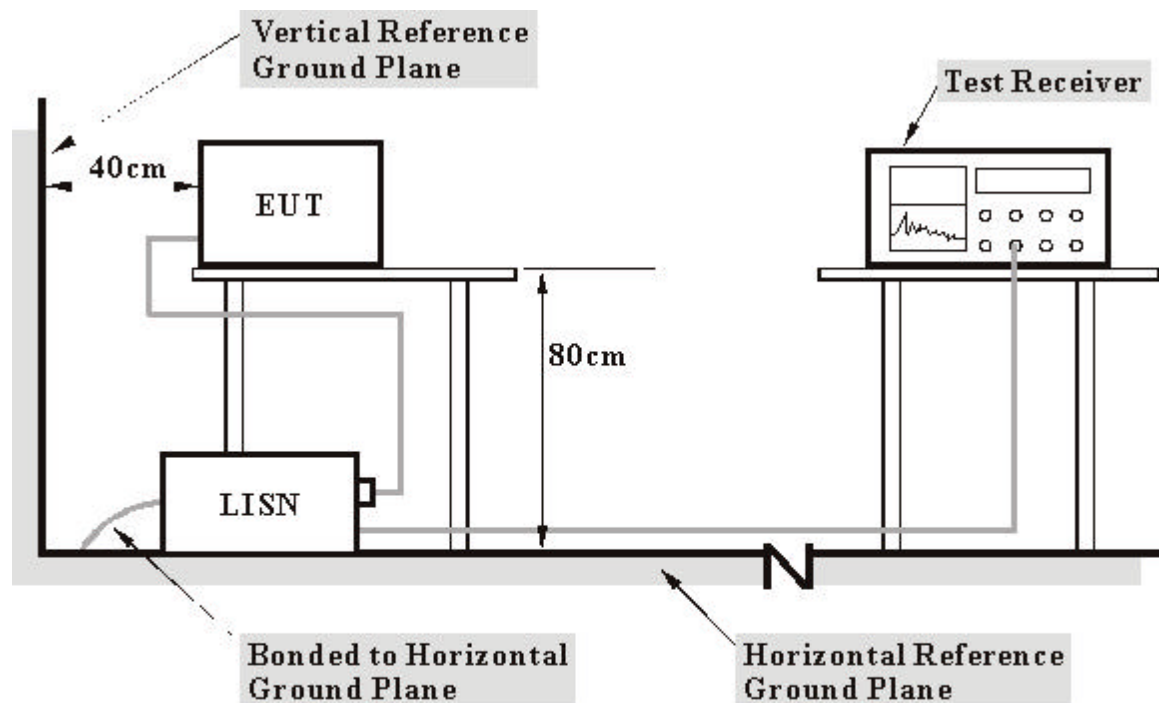
4.1.3 TEST PROCEDURES

- 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 over 10dB under the prescribed limits could not be reported

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

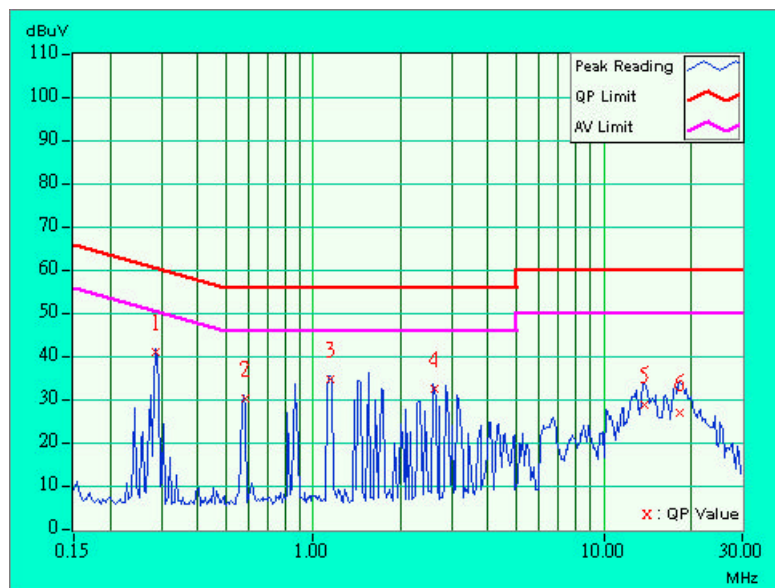
- a. Placed the EUT on the testing table.
- b. The computer system sent data to EUT by command "PIN" via an RJ 45 cable.
- c. The computer system sent "H" messages to Color Monitor and Monitor displayed "H" patterns on its screen.
- d. The computer system sent "H" messages to modem.
- e. The computer system sent "H" messages to printer, and the printer prints them on paper.
- f. Prepared another computer system to act as a communication partner and placed it outside of testing area.
- g. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ 45 cable.
- h. The communication partner sent data to EUT by command "PIN".

4.1.7 TEST RESULTS (A)

EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.287	0.06	40.56	-	40.62	-	60.62	50.62	-20.00	-
2	0.581	0.09	29.77	-	29.86	-	56.00	46.00	-26.14	-
3	1.147	0.16	34.16	-	34.32	-	56.00	46.00	-21.68	-
4	2.605	0.19	31.85	-	32.04	-	56.00	46.00	-23.96	-
5	13.809	0.52	28.23	-	28.75	-	60.00	50.00	-31.25	-
6	18.289	0.61	26.38	-	26.99	-	60.00	50.00	-33.01	-

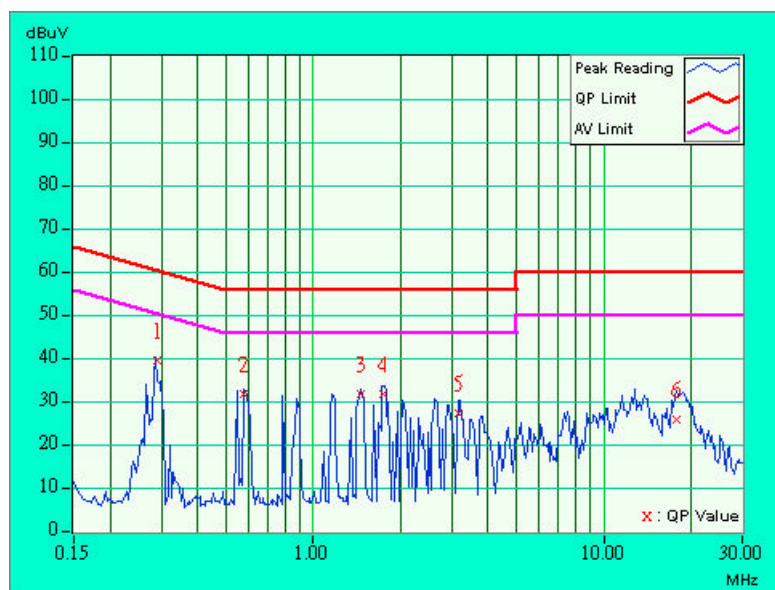
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.291	0.05	38.99	-	39.04	-	60.51	50.51	-21.47	-
2	0.580	0.08	31.31	-	31.39	-	56.00	46.00	-24.61	-
3	1.453	0.17	31.21	-	31.38	-	56.00	46.00	-24.62	-
4	1.746	0.17	31.40	-	31.57	-	56.00	46.00	-24.43	-
5	3.184	0.20	27.04	-	27.24	-	56.00	46.00	-28.76	-
6	17.781	0.50	25.56	-	26.06	-	60.00	50.00	-33.94	-

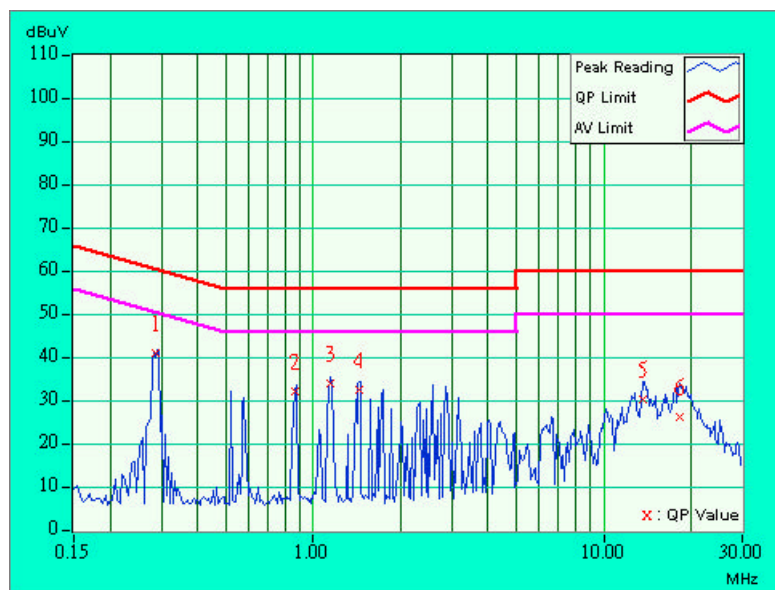
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 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.288	0.06	40.56	-	40.62	-	60.58	50.58	-19.96	-
2	0.867	0.14	31.73	-	31.87	-	56.00	46.00	-24.13	-
3	1.152	0.16	33.61	-	33.77	-	56.00	46.00	-22.23	-
4	1.445	0.17	32.08	-	32.25	-	56.00	46.00	-23.75	-
5	13.715	0.52	29.79	-	30.31	-	60.00	50.00	-29.69	-
6	18.305	0.61	25.56	-	26.17	-	60.00	50.00	-33.83	-

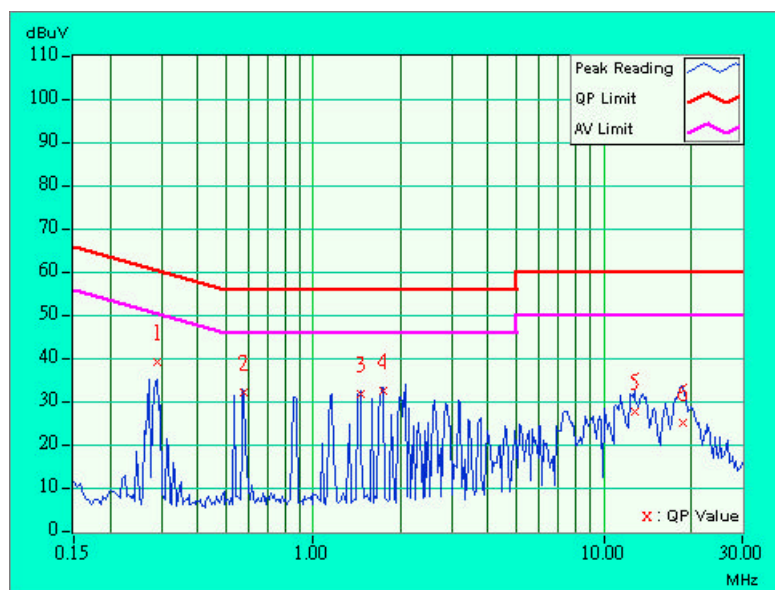
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 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.291	0.05	38.74	-	38.79	-	60.51	50.51	-21.72	-
2	0.576	0.08	31.61	-	31.69	-	56.00	46.00	-24.31	-
3	1.449	0.17	31.41	-	31.58	-	56.00	46.00	-24.42	-
4	1.733	0.17	32.03	-	32.20	-	56.00	46.00	-23.80	-
5	12.824	0.45	27.21	-	27.66	-	60.00	50.00	-32.34	-
6	18.723	0.50	24.85	-	25.35	-	60.00	50.00	-34.65	-

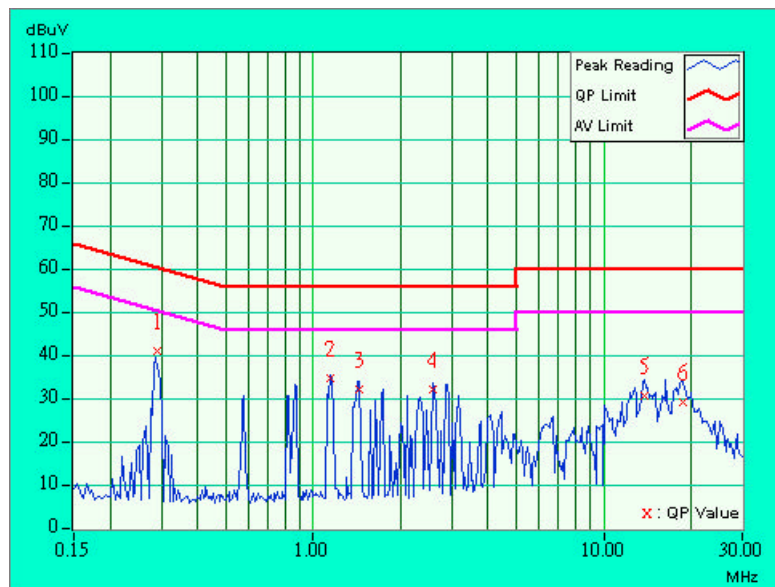
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 3. The emission levels of other frequencies were very low against the limit.
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 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.290	0.06	40.66	-	40.72	-	60.52	50.52	-19.80	-
2	1.145	0.16	34.20	-	34.36	-	56.00	46.00	-21.64	-
3	1.445	0.17	31.78	-	31.95	-	56.00	46.00	-24.05	-
4	2.594	0.19	31.77	-	31.96	-	56.00	46.00	-24.04	-
5	13.746	0.52	30.21	-	30.73	-	60.00	50.00	-29.27	-
6	18.641	0.62	28.55	-	29.17	-	60.00	50.00	-30.83	-

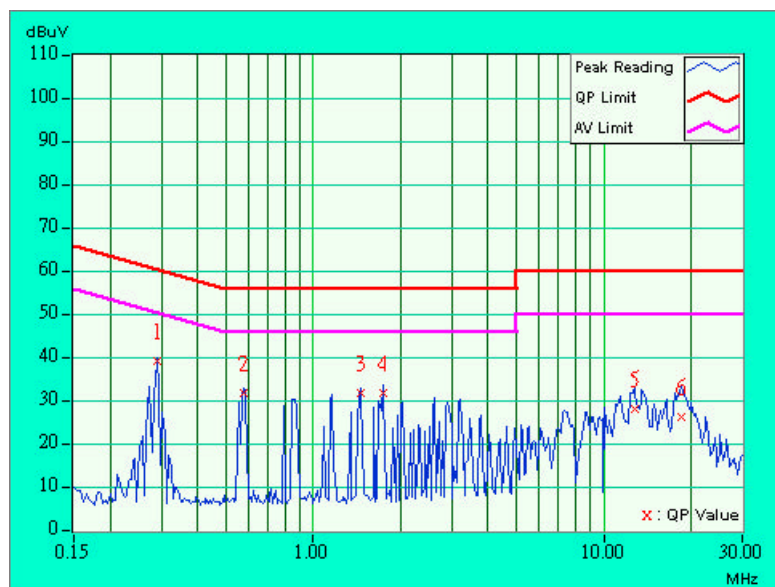
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3. The emission levels of other frequencies were very low against the limit.
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6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.291	0.05	38.72	-	38.77	-	60.51	50.51	-21.74	-
2	0.576	0.08	31.50	-	31.58	-	56.00	46.00	-24.42	-
3	1.457	0.17	31.21	-	31.38	-	56.00	46.00	-24.62	-
4	1.734	0.17	31.36	-	31.53	-	56.00	46.00	-24.47	-
5	12.766	0.45	27.56	-	28.01	-	60.00	50.00	-31.99	-
6	18.457	0.50	25.68	-	26.18	-	60.00	50.00	-33.82	-

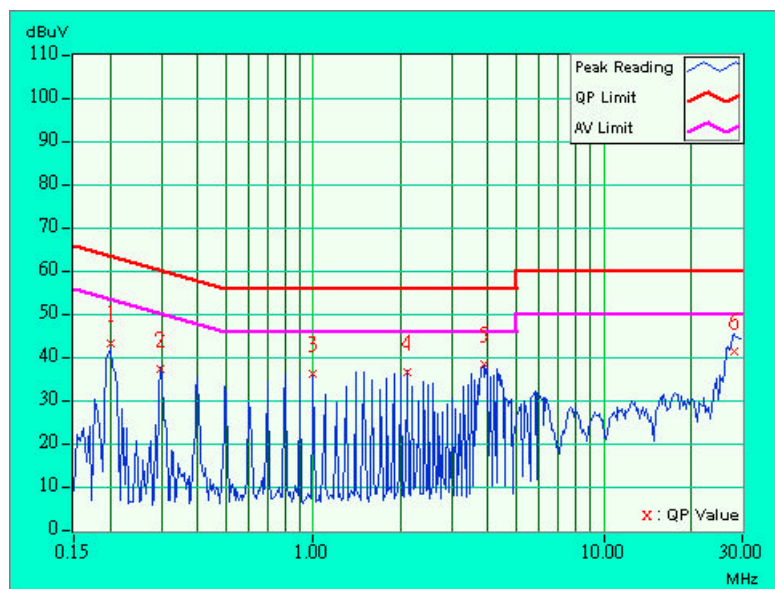
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 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
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EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.06	42.55	-	42.61	-	63.58	53.58	-20.97	-
2	0.298	0.06	36.49	-	36.55	-	60.29	50.29	-23.74	-
3	0.998	0.16	35.34	-	35.50	-	56.00	46.00	-20.50	-
4	2.098	0.18	35.92	-	36.10	-	56.00	46.00	-19.90	-
5	3.898	0.22	37.54	-	37.76	-	56.00	46.00	-18.24	-
6	28.289	0.89	40.76	-	41.65	-	60.00	50.00	-18.35	-

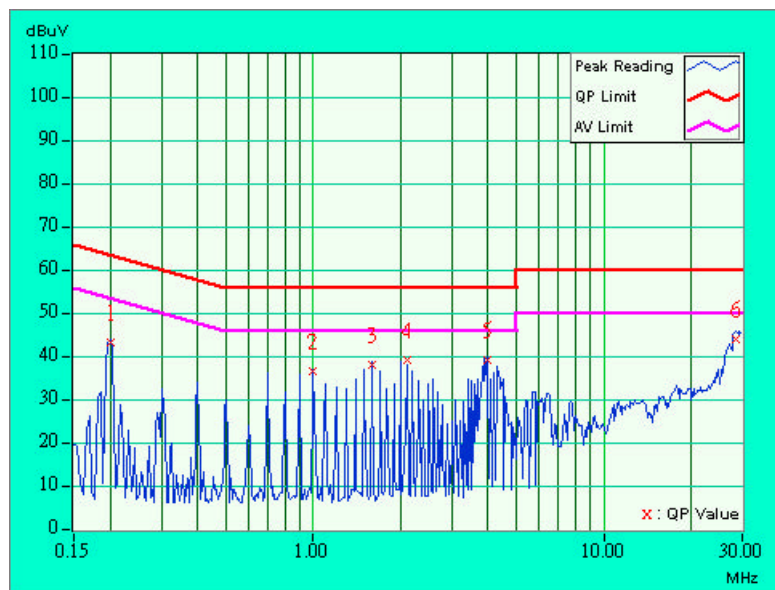
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.05	42.51	-	42.56	-	63.58	53.58	-21.02	-
2	1.000	0.16	36.05	-	36.21	-	56.00	46.00	-19.79	-
3	1.598	0.17	37.54	-	37.71	-	56.00	46.00	-18.29	-
4	2.098	0.18	38.44	-	38.62	-	56.00	46.00	-17.38	-
5	3.996	0.21	38.54	-	38.75	-	56.00	46.00	-17.25	-
6	28.582	0.72	43.26	-	43.98	-	60.00	50.00	-16.02	-

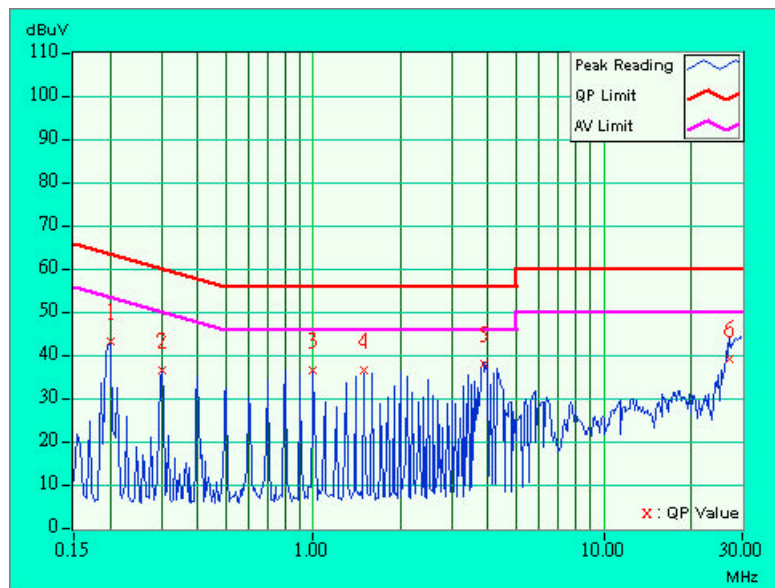
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.06	42.61	-	42.67	-	63.58	53.58	-20.91	-
2	0.302	0.06	35.69	-	35.75	-	60.18	50.18	-24.43	-
3	1.000	0.16	35.81	-	35.97	-	56.00	46.00	-20.03	-
4	1.500	0.17	35.79	-	35.96	-	56.00	46.00	-20.04	-
5	3.898	0.22	37.36	-	37.58	-	56.00	46.00	-18.42	-
6	27.090	0.89	38.51	-	39.40	-	60.00	50.00	-20.60	-

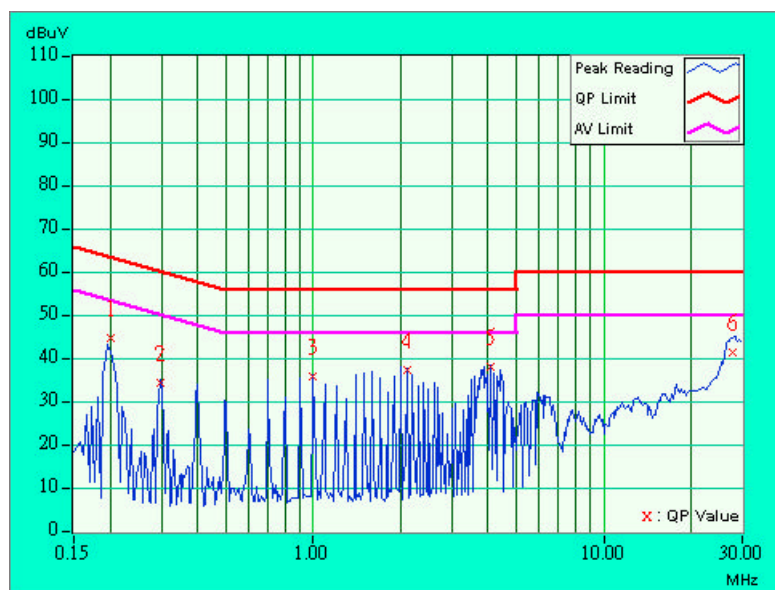
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.200	0.05	44.01	-	44.06	-	63.62	53.62	-19.56	-
2	0.298	0.05	33.75	-	33.80	-	60.29	50.29	-26.49	-
3	1.000	0.16	35.22	-	35.38	-	56.00	46.00	-20.62	-
4	2.102	0.18	36.75	-	36.93	-	56.00	46.00	-19.07	-
5	4.098	0.21	37.29	-	37.50	-	56.00	46.00	-18.50	-
6	27.891	0.72	40.88	-	41.60	-	60.00	50.00	-18.40	-

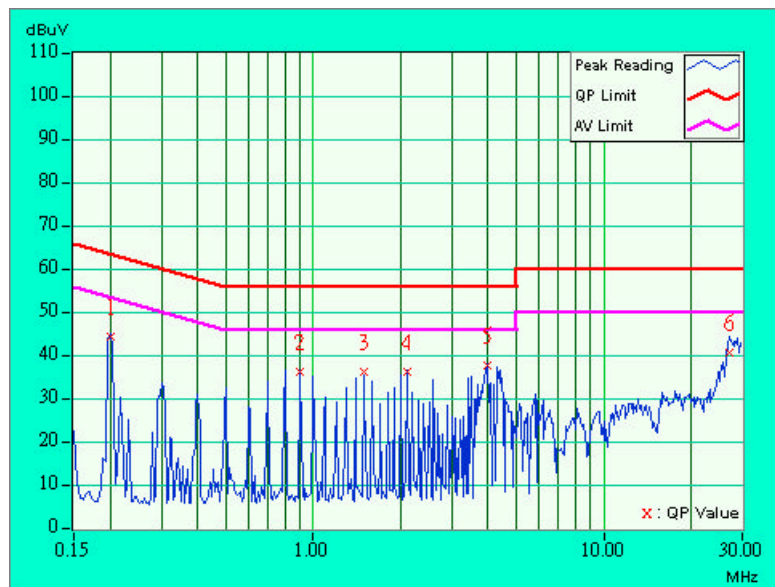
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.06	43.48	-	43.54	-	63.58	53.58	-20.04	-
2	0.900	0.14	35.48	-	35.62	-	56.00	46.00	-20.38	-
3	1.500	0.17	35.39	-	35.56	-	56.00	46.00	-20.44	-
4	2.098	0.18	35.23	-	35.41	-	56.00	46.00	-20.59	-
5	4.000	0.22	36.87	-	37.09	-	56.00	46.00	-18.91	-
6	27.191	0.89	39.86	-	40.75	-	60.00	50.00	-19.25	-

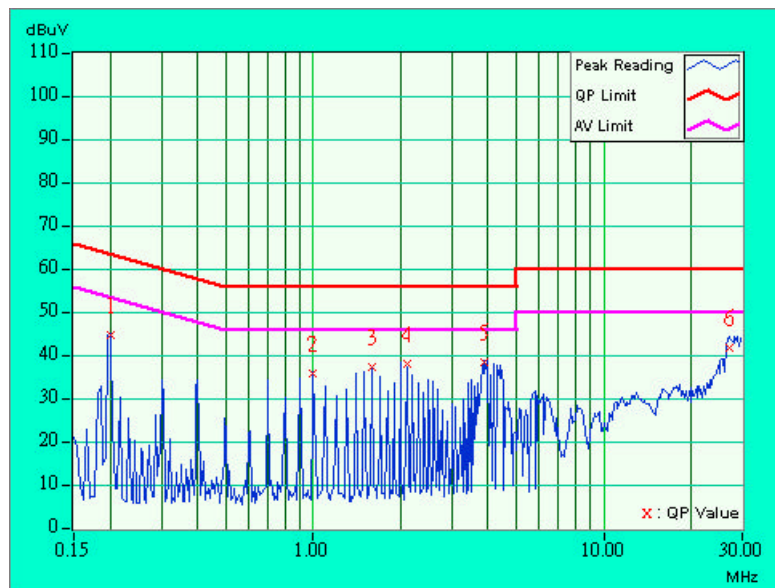
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.05	44.15	-	44.20	-	63.58	53.58	-19.38	-
2	1.000	0.16	35.14	-	35.30	-	56.00	46.00	-20.70	-
3	1.600	0.17	36.61	-	36.78	-	56.00	46.00	-19.22	-
4	2.098	0.18	37.61	-	37.79	-	56.00	46.00	-18.21	-
5	3.898	0.21	37.62	-	37.83	-	56.00	46.00	-18.17	-
6	27.191	0.72	41.17	-	41.89	-	60.00	50.00	-18.11	-

- 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.

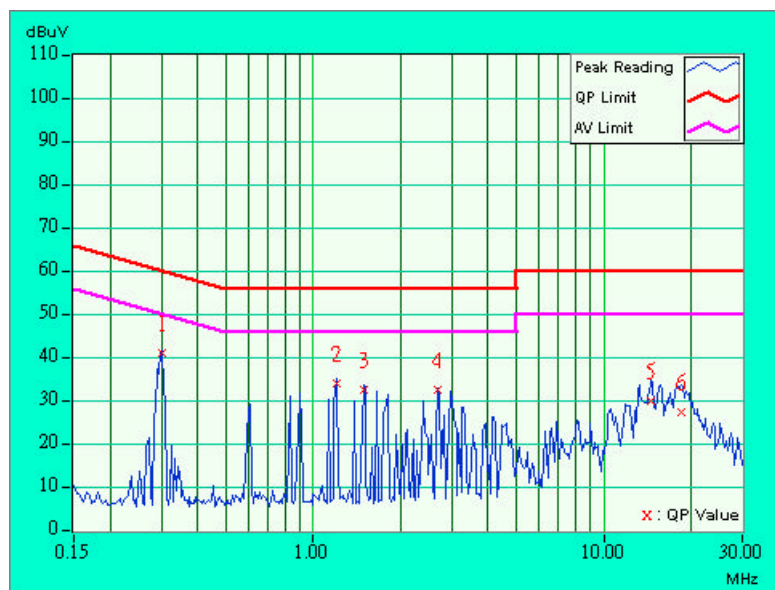


4.1.8 TEST RESULTS (B)

EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.302	0.06	40.61	-	40.67	-	60.18	50.18	-19.51	-
2	1.199	0.16	33.47	-	33.63	-	56.00	46.00	-22.37	-
3	1.488	0.17	32.06	-	32.23	-	56.00	46.00	-23.77	-
4	2.684	0.19	31.98	-	32.17	-	56.00	46.00	-23.83	-
5	14.566	0.55	29.27	-	29.82	-	60.00	50.00	-30.18	-
6	18.559	0.62	26.91	-	27.53	-	60.00	50.00	-32.47	-

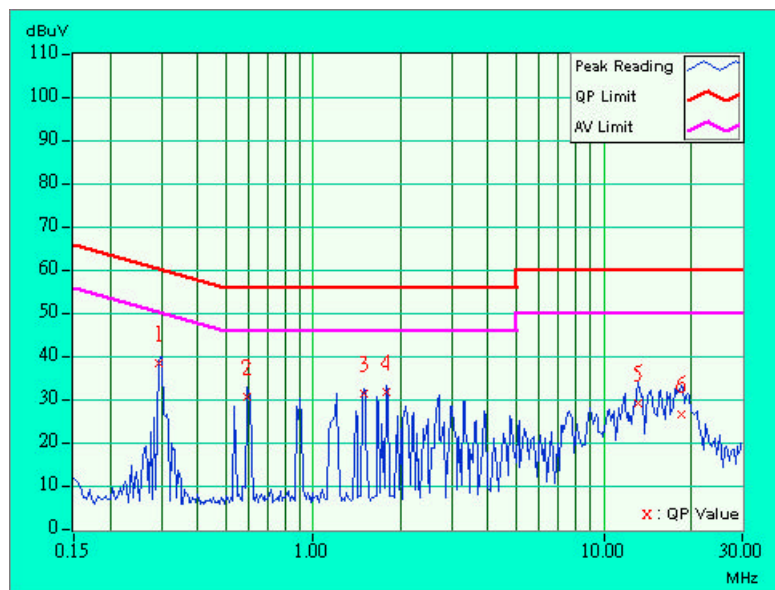
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.296	0.05	38.19	-	38.24	-	60.36	50.36	-22.12	-
2	0.595	0.08	30.40	-	30.48	-	56.00	46.00	-25.52	-
3	1.500	0.17	30.80	-	30.97	-	56.00	46.00	-25.03	-
4	1.797	0.18	31.26	-	31.44	-	56.00	46.00	-24.56	-
5	13.141	0.45	28.74	-	29.19	-	60.00	50.00	-30.81	-
6	18.523	0.50	26.34	-	26.84	-	60.00	50.00	-33.16	-

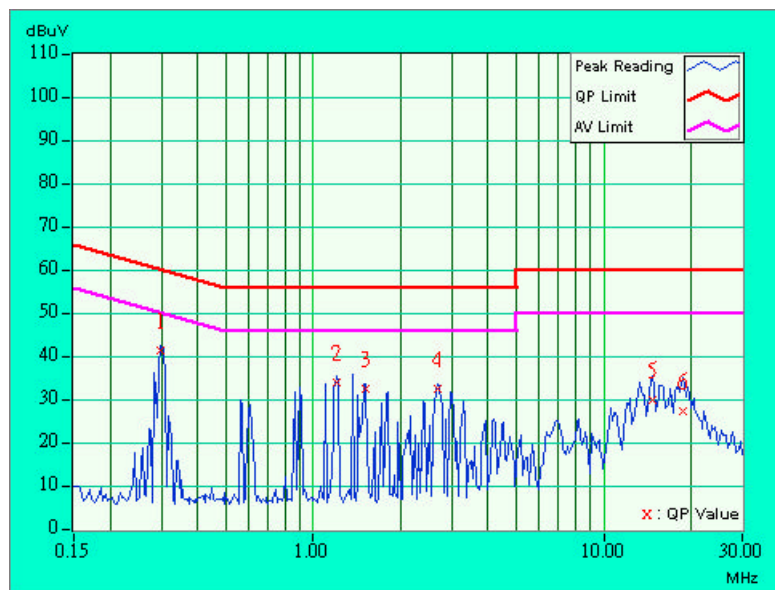
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.298	0.06	40.87	-	40.93	-	60.29	50.29	-19.36	-
2	1.199	0.16	33.47	-	33.63	-	56.00	46.00	-22.37	-
3	1.506	0.17	32.06	-	32.23	-	56.00	46.00	-23.77	-
4	2.688	0.19	31.84	-	32.03	-	56.00	46.00	-23.97	-
5	14.703	0.55	29.37	-	29.92	-	60.00	50.00	-30.08	-
6	18.668	0.62	26.94	-	27.56	-	60.00	50.00	-32.44	-

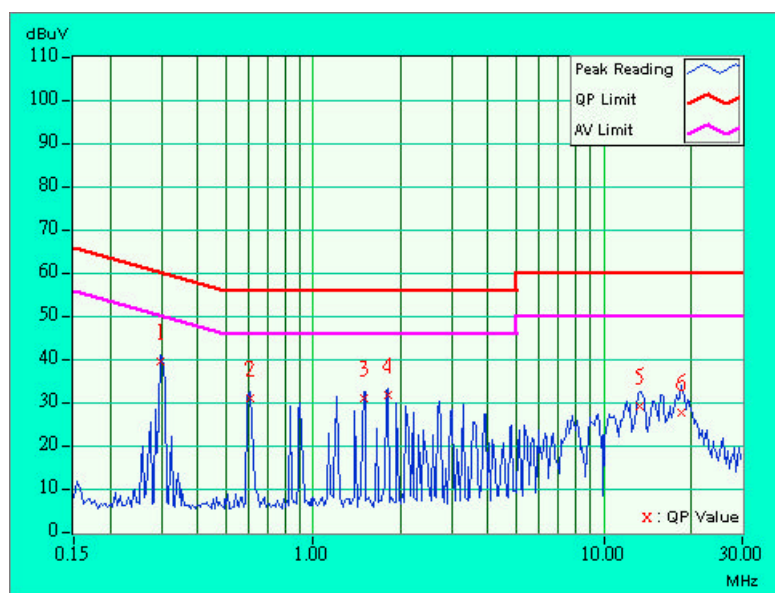
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.298	0.05	39.30	-	39.35	-	60.29	50.29	-20.94	-
2	0.603	0.09	30.70	-	30.79	-	56.00	46.00	-25.21	-
3	1.500	0.17	30.71	-	30.88	-	56.00	46.00	-25.12	-
4	1.801	0.18	31.40	-	31.58	-	56.00	46.00	-24.42	-
5	13.289	0.46	28.86	-	29.32	-	60.00	50.00	-30.68	-
6	18.551	0.50	27.17	-	27.67	-	60.00	50.00	-32.33	-

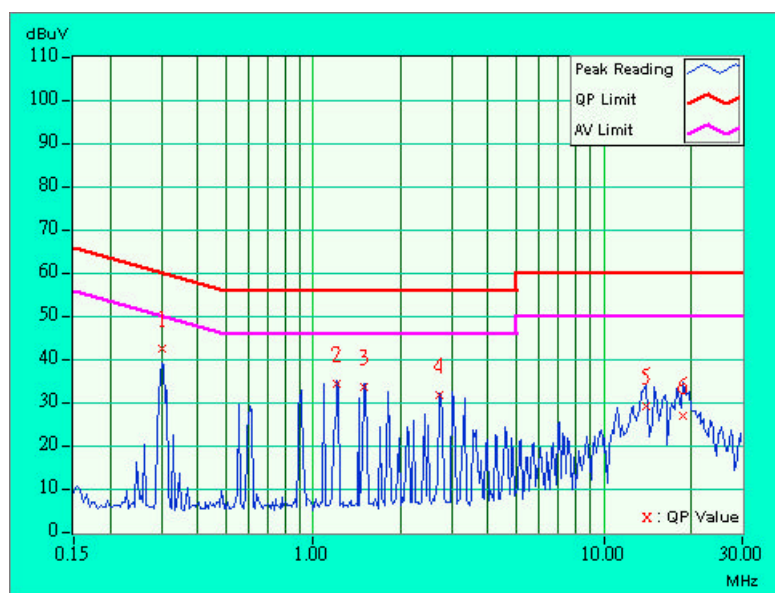
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.302	0.06	42.05	-	42.11	-	60.18	50.18	-18.07	-
2	1.203	0.16	33.98	-	34.14	-	56.00	46.00	-21.86	-
3	1.500	0.17	32.91	-	33.08	-	56.00	46.00	-22.92	-
4	2.715	0.19	31.16	-	31.35	-	56.00	46.00	-24.65	-
5	13.973	0.53	28.82	-	29.35	-	60.00	50.00	-30.65	-
6	18.742	0.62	26.52	-	27.14	-	60.00	50.00	-32.86	-

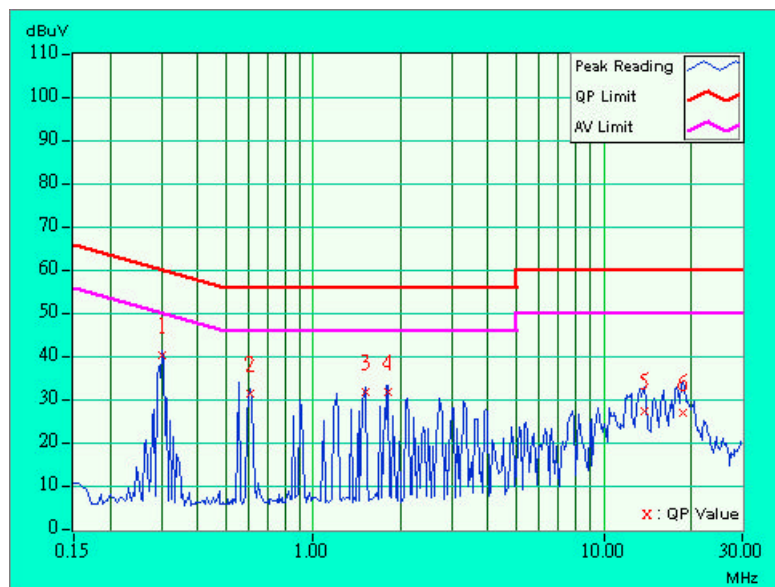
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.302	0.05	39.83	-	39.88	-	60.18	50.18	-20.30	-
2	0.607	0.09	30.96	-	31.05	-	56.00	46.00	-24.95	-
3	1.512	0.17	31.45	-	31.62	-	56.00	46.00	-24.38	-
4	1.813	0.18	31.26	-	31.44	-	56.00	46.00	-24.56	-
5	13.758	0.47	26.78	-	27.25	-	60.00	50.00	-32.75	-
6	18.645	0.50	26.70	-	27.20	-	60.00	50.00	-32.80	-

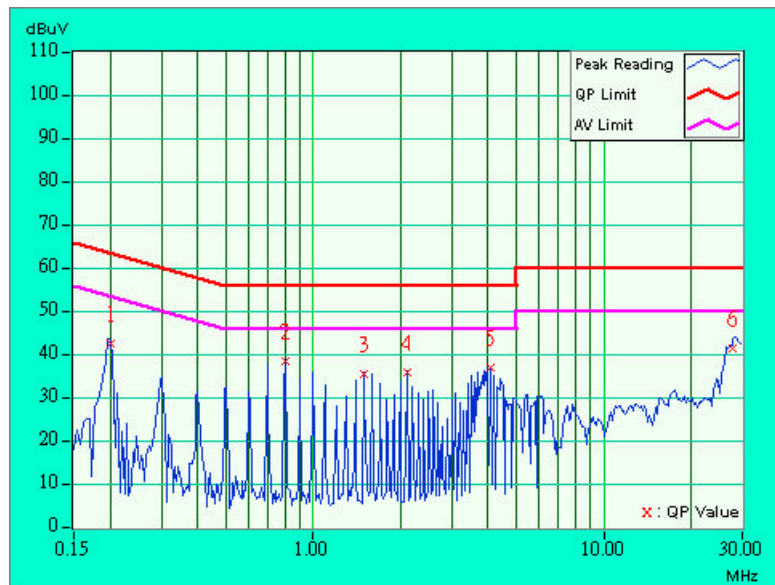
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.06	41.69	-	41.75	-	63.58	53.58	-21.83	-
2	0.798	0.13	37.77	-	37.90	-	56.00	46.00	-18.10	-
3	1.500	0.17	34.84	-	35.01	-	56.00	46.00	-20.99	-
4	2.098	0.18	34.97	-	35.15	-	56.00	46.00	-20.85	-
5	4.098	0.22	36.22	-	36.44	-	56.00	46.00	-19.56	-
6	27.885	0.89	40.70	-	41.59	-	60.00	50.00	-18.41	-

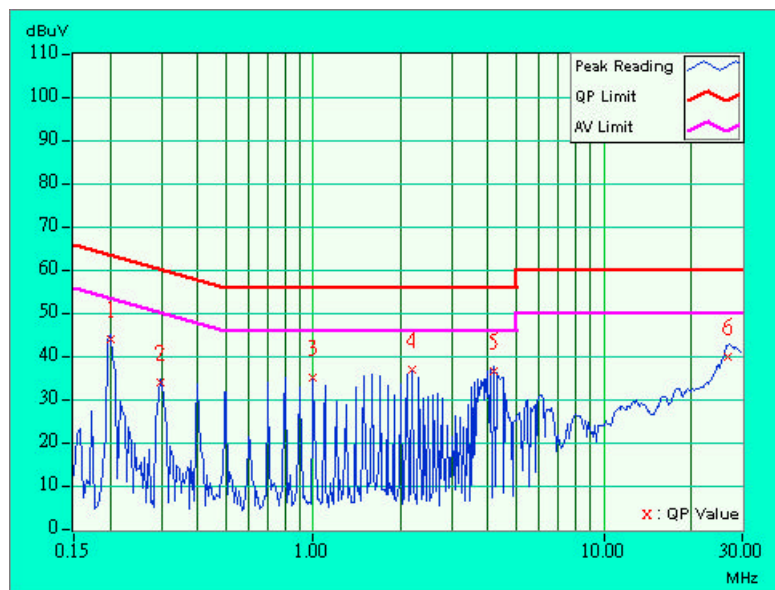
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.05	43.18	-	43.23	-	63.58	53.58	-20.35	-
2	0.298	0.05	33.23	-	33.28	-	60.29	50.29	-27.01	-
3	0.998	0.16	34.33	-	34.49	-	56.00	46.00	-21.51	-
4	2.199	0.18	36.22	-	36.40	-	56.00	46.00	-19.60	-
5	4.199	0.21	35.93	-	36.14	-	56.00	46.00	-19.86	-
6	26.887	0.72	39.46	-	40.18	-	60.00	50.00	-19.82	-

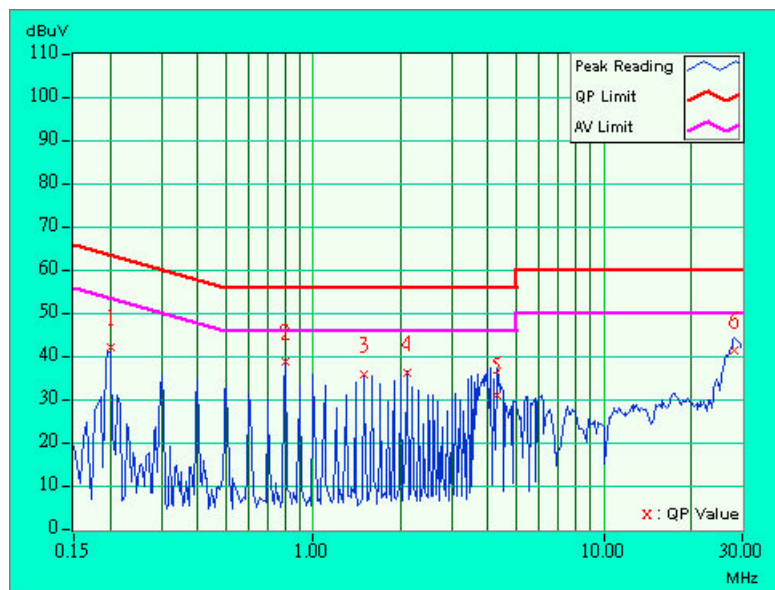
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.06	41.41	-	41.47	-	63.58	53.58	-22.11	-
2	0.798	0.13	37.86	-	37.99	-	56.00	46.00	-18.01	-
3	1.500	0.17	35.00	-	35.17	-	56.00	46.00	-20.83	-
4	2.098	0.18	35.25	-	35.43	-	56.00	46.00	-20.57	-
5	4.301	0.23	30.12	-	30.35	-	56.00	46.00	-25.65	-
6	28.289	0.89	40.76	-	41.65	-	60.00	50.00	-18.35	-

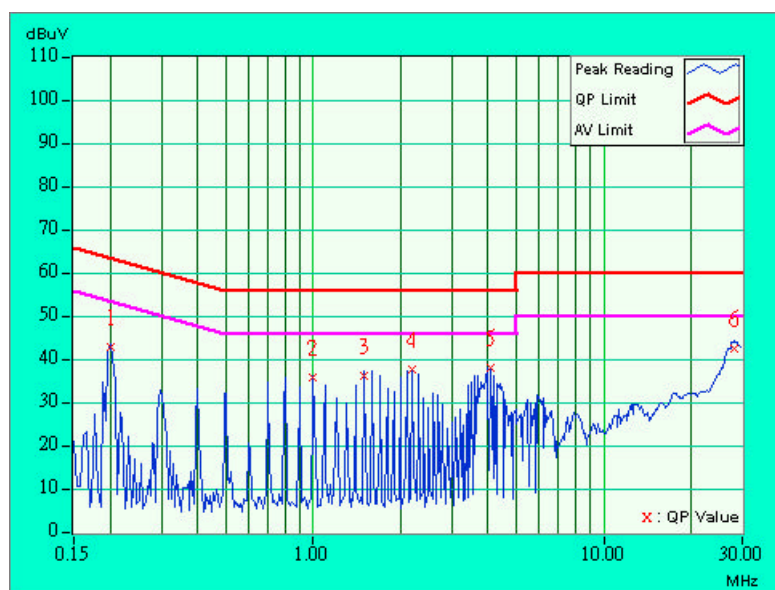
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.05	42.26	-	42.31	-	63.58	53.58	-21.27	-
2	1.000	0.16	35.35	-	35.51	-	56.00	46.00	-20.49	-
3	1.500	0.17	35.51	-	35.68	-	56.00	46.00	-20.32	-
4	2.199	0.18	36.89	-	37.07	-	56.00	46.00	-18.93	-
5	4.098	0.21	37.41	-	37.62	-	56.00	46.00	-18.38	-
6	28.086	0.72	42.01	-	42.73	-	60.00	50.00	-17.27	-

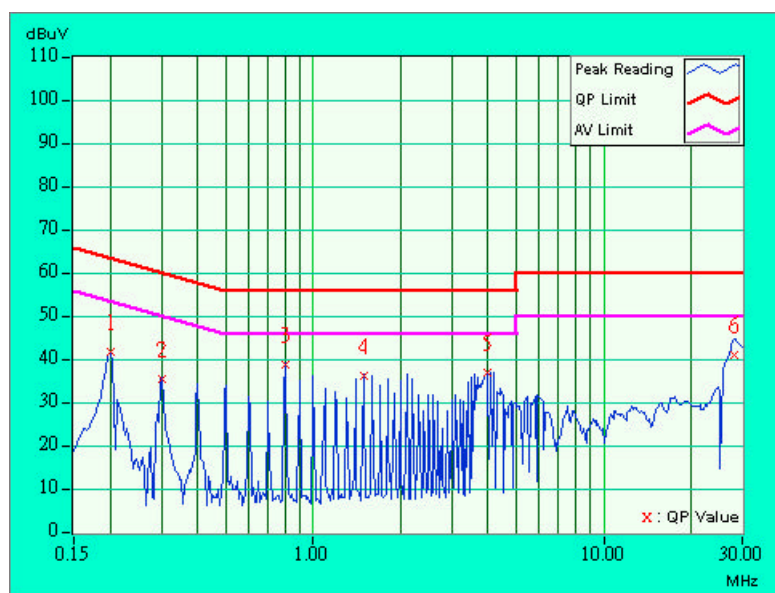
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.06	40.98	-	41.04	-	63.58	53.58	-22.54	-
2	0.302	0.06	34.76	-	34.82	-	60.18	50.18	-25.36	-
3	0.798	0.13	38.10	-	38.23	-	56.00	46.00	-17.77	-
4	1.500	0.17	35.34	-	35.51	-	56.00	46.00	-20.49	-
5	3.996	0.22	36.00	-	36.22	-	56.00	46.00	-19.78	-
6	28.184	0.89	40.27	-	41.16	-	60.00	50.00	-18.84	-

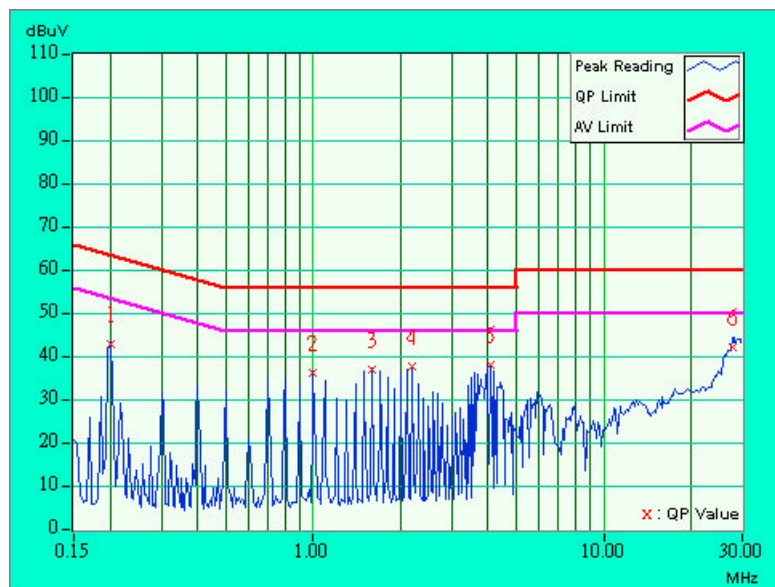
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	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	0.05	42.06	-	42.11	-	63.58	53.58	-21.47	-
2	1.000	0.16	35.45	-	35.61	-	56.00	46.00	-20.39	-
3	1.598	0.17	36.33	-	36.50	-	56.00	46.00	-19.50	-
4	2.199	0.18	37.05	-	37.23	-	56.00	46.00	-18.77	-
5	4.098	0.21	37.45	-	37.66	-	56.00	46.00	-18.34	-
6	27.688	0.72	41.45	-	42.17	-	60.00	50.00	-17.83	-

- 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
*HP Spectrum Analyzer	8590L	3520A00667	Aug. 26, 2003
*CHASE Preamplifier	CPA9231A/4	3215	Nov. 06, 2003
* HP Preamplifier	8449B	3008A01201	Dec. 01, 2003
* HP Preamplifier	8449B	3008A01292	Aug. 07, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESVS10	846285/012	Sept. 16, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	Nov. 22, 2003
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* CHASE BILOG Antenna	CBL6112B	2751	March 21, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 30, 2004
* EMCO Horn Antenna	3115	9312-4192	Mar. 23 2004
* CHANCE Turn Table & Tower Controller	ACS-I	NA	NA
* Software	ADT_Radiated V5.14	NA	NA
* ANRITSU RF Switches	MP59B	M51167	Aug. 21, 2003
* TIMES RF cable	LMR-600	CABLE-ST6-01	Aug. 21, 2003

- 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. "*" = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Open Site No. 6.
5. The VCCI Site Registration No. is R-728.



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 10 meter open area test site. 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.

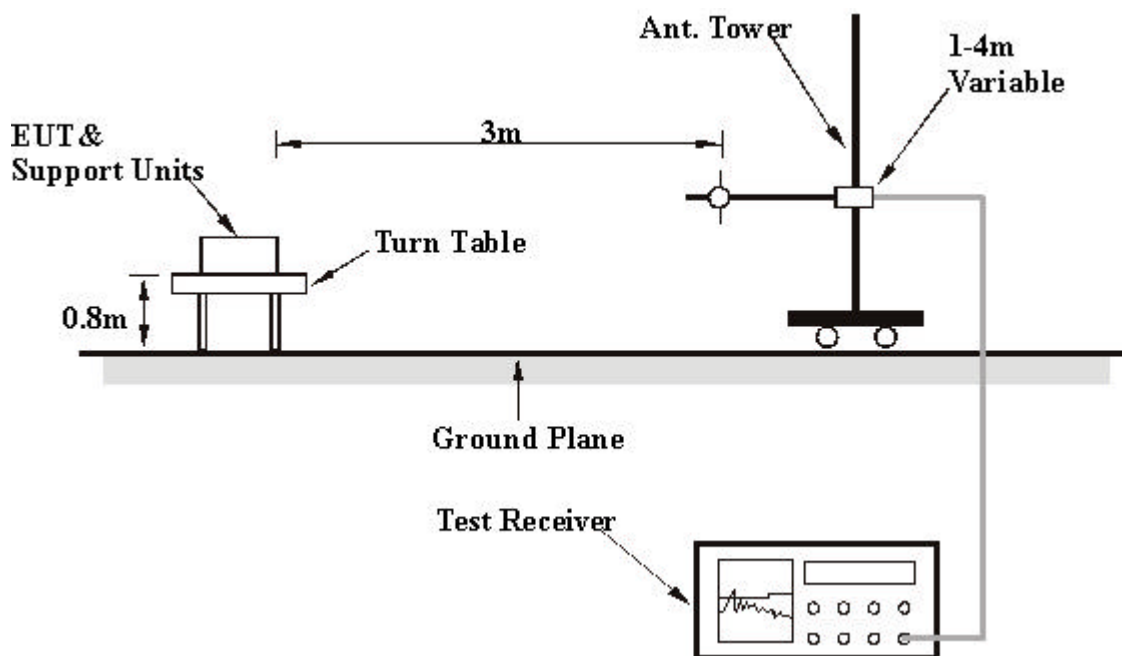
NOTE:

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 300 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 (A)

EUT	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 55%RH, 991hPa	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	250.94	38.9 QP	46.00	-7.10	1.25 H	202	25.50	13.40
2	325.31	36.1 QP	46.00	-9.90	1.00 H	130	20.30	15.80
3	375.97	35.0 QP	46.00	-11.00	1.00 H	196	17.90	17.10
4	515.00	38.2 QP	46.00	-7.80	1.75 H	238	17.80	20.30
5	576.43	34.5 QP	46.00	-11.50	1.50 H	130	12.60	21.90
6	617.39	37.0 QP	46.00	-9.00	1.25 H	214	14.20	22.80
7	719.78	41.7 QP	46.00	-4.30	1.00 H	154	17.10	24.50
8	822.17	39.4 QP	46.00	-6.60	1.00 H	154	13.50	25.90

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	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 55%RH, 991hPa	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	250.94	37.6 QP	46.00	-8.40	1.00 V	208	24.20	13.40
2	309.14	33.5 QP	46.00	-12.50	1.50 V	184	18.20	15.30
3	325.31	33.8 QP	46.00	-12.20	1.00 V	118	18.10	15.80
4	375.97	32.9 QP	46.00	-13.10	1.00 V	232	15.80	17.10
5	513.92	38.3 QP	46.00	-7.70	1.00 V	142	18.00	20.30
6	617.39	37.0 QP	46.00	-9.00	1.00 V	130	14.20	22.80
7	719.78	40.8 QP	46.00	-5.20	1.75 V	250	16.30	24.50
8	822.17	36.8 QP	46.00	-9.20	1.00 V	208	10.90	25.90

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	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 55%RH, 991hPa	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	250.94	37.4 QP	46.00	-8.60	1.00 H	190	24.00	13.40
2	326.39	36.2 QP	46.00	-9.80	1.00 H	142	20.40	15.80
3	375.97	38.1 QP	46.00	-7.90	1.00 H	214	21.00	17.10
4	411.53	35.1 QP	46.00	-10.90	1.25 H	190	17.00	18.10
5	476.20	35.8 QP	46.00	-10.20	1.50 H	178	16.10	19.70
6	525.78	37.6 QP	46.00	-8.40	1.50 H	178	17.00	20.60
7	617.39	39.9 QP	46.00	-6.10	1.00 H	166	17.10	22.80
8	719.78	43.1 QP	46.00	-2.90	1.00 H	148	18.60	24.50
9	751.03	36.8 QP	46.00	-9.20	1.00 H	178	11.50	25.40

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	Wireless Broadband Router	MODEL	GN-B46B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 55%RH, 991hPa	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	177.66	32.2 QP	43.50	-11.30	1.00 V	154	19.50	12.70
2	250.94	38.2 QP	46.00	-7.80	1.00 V	184	24.80	13.40
3	309.14	34.1 QP	46.00	-11.90	1.50 V	172	18.80	15.30
4	375.97	33.6 QP	46.00	-12.40	1.00 V	214	16.50	17.10
5	513.92	38.0 QP	46.00	-8.00	1.25 V	244	17.60	20.30
6	617.39	37.3 QP	46.00	-8.70	1.25 V	136	14.50	22.80
7	719.78	41.5 QP	46.00	-4.50	1.00 V	346	17.00	24.50

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 (B)

EUT	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 63%RH, 991hPa	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	124.98	26.8 QP	43.50	-16.70	1.35 H	246	14.10	12.70
2	175.00	28.7 QP	43.50	-14.80	1.00 H	34	15.80	12.90
3	225.01	29.5 QP	46.00	-16.50	1.38 H	232	17.10	12.40
4	249.98	29.2 QP	46.00	-16.80	1.08 H	237	15.80	13.40
5	307.94	35.2 QP	46.00	-10.80	1.00 H	233	19.90	15.30
6	349.99	29.3 QP	46.00	-16.70	1.40 H	135	12.80	16.40
7	375.00	30.9 QP	46.00	-15.10	1.19 H	129	13.90	17.10
8	499.98	35.0 QP	46.00	-11.00	1.62 H	240	15.00	20.00
9	718.66	39.5 QP	46.00	-6.50	2.19 H	157	15.00	24.50

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	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	GSU15U-0		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 63%RH, 991hPa	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	124.99	28.1 QP	43.50	-15.40	1.32 V	207	15.40	12.70
2	174.98	32.5 QP	43.50	-11.00	1.45 V	324	19.60	12.90
3	224.99	25.4 QP	46.00	-20.60	1.46 V	224	12.90	12.40
4	249.99	32.4 QP	46.00	-13.60	1.52 V	314	19.00	13.40
5	307.98	32.2 QP	46.00	-13.80	2.18 V	121	16.90	15.30
6	324.99	31.0 QP	46.00	-15.00	1.33 V	188	15.20	15.80
7	375.01	29.7 QP	46.00	-16.30	1.00 V	210	12.60	17.10
8	499.95	32.5 QP	46.00	-13.50	1.34 V	227	12.50	20.00
9	615.98	33.9 QP	46.00	-12.10	1.56 V	250	11.10	22.80
10	718.54	42.6 QP	46.00	-3.40	1.32 V	69	18.20	24.50

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	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 63%RH, 991hPa	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	124.99	26.4 QP	43.50	-17.10	2.08 H	59	13.70	12.70
2	175.00	27.8 QP	43.50	-15.70	1.00 H	245	14.80	12.90
3	224.99	29.4 QP	46.00	-16.60	1.37 H	7	17.00	12.40
4	249.99	28.6 QP	46.00	-17.40	1.00 H	209	15.30	13.40
5	274.98	28.3 QP	46.00	-17.70	1.09 H	148	13.90	14.40
6	307.97	34.6 QP	46.00	-11.40	1.43 H	220	19.30	15.30
7	374.98	28.4 QP	46.00	-17.60	1.04 H	187	11.30	17.10
8	499.96	30.7 QP	46.00	-15.30	1.99 H	197	10.70	20.00
9	615.98	35.7 QP	46.00	-10.30	1.46 H	119	12.90	22.80
10	718.46	40.5 QP	46.00	-5.50	1.00 H	267	16.00	24.50

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	Wireless Access Point	MODEL	GN-A16B
ADAPTER MODEL	ADS1618-1305-W 0420		
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 63%RH, 991hPa	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	125.00	28.7 QP	43.50	-14.80	1.33 V	270	16.00	12.70
2	174.99	33.9 QP	43.50	-9.60	1.17 V	105	20.90	12.90
3	249.99	33.0 QP	46.00	-13.00	1.95 V	172	19.60	13.40
4	308.00	33.1 QP	46.00	-12.90	1.95 V	184	17.80	15.30
5	324.99	30.0 QP	46.00	-16.00	1.38 V	205	14.30	15.80
6	375.00	30.3 QP	46.00	-15.70	1.42 V	205	13.20	17.10
7	499.97	27.2 QP	46.00	-18.80	1.40 V	178	7.20	20.00
8	615.98	34.3 QP	46.00	-11.70	1.33 V	52	11.50	22.80
9	718.66	42.9 QP	46.00	-3.10	1.69 V	276	18.40	24.50

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	Wireless Broadband Router	MODEL	GN-B46B
CHANNEL	Channel 1	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY: Hardaway Lee			

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	2390.00	55.0 PK	74.00	-19.00	1.16 H	160	25.40	29.60
1	2390.00	47.9 AV	54.00	-6.10	1.16 H	160	18.30	29.60
2	*2412.00	105.4 PK			1.16 H	160	75.80	29.70
2	*2412.00	98.3 AV			1.16 H	160	68.60	29.70
3	4824.00	47.0 PK	74.00	-27.00	1.46 H	222	11.70	35.30
4	7234.00	59.4 PK	74.00	-14.60	1.73 H	22	18.30	41.10
4	7234.00	44.5 AV	54.00	-9.50	1.73 H	22	3.40	41.10
5	9649.00	55.5 PK	74.00	-18.50	1.20 H	122	11.90	43.60
5	9649.00	44.1 AV	54.00	-9.90	1.20 H	122	0.60	43.60

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	2390.00	50.8 PK	74.00	-23.20	1.68 V	36	21.20	29.60
2	*2412.00	111.2 PK			1.68 V	36	81.50	29.70
2	*2412.00	103.3 AV			1.68 V	36	73.60	29.70
3	4824.00	50.9 PK	74.00	-23.10	1.56 V	44	15.60	35.30
4	7235.00	64.3 PK	74.00	-9.70	1.56 V	44	23.20	41.10
4	7235.00	52.0 AV	54.00	-2.00	1.56 V	44	10.90	41.10
5	9647.00	60.4 PK	91.20	-30.80	1.56 V	44	16.80	43.60
5	9647.00	53.1 AV	83.30	-29.90	1.56 V	44	9.50	43.60
6	12059.00	61.4 PK	74.00	-12.60	1.56 V	44	16.10	45.30
6	12059.00	48.7 AV	54.00	-5.30	1.56 V	44	3.40	45.30

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 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	Wireless Broadband Router	MODEL	GN-B46B
CHANNEL	Channel 6	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY: Hardaway Lee			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

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	*2437.00	98.2 PK			1.25 H	34	68.50	29.70
1	*2437.00	91.6 AV			1.25 H	34	61.90	29.70
2	4874.00	48.1 PK	74.00	-25.90	1.02 H	234	12.60	35.50
3	7311.00	55.9 PK	74.00	-18.10	1.65 H	360	14.60	41.30
3	7311.00	43.2 AV	54.00	-10.80	1.65 H	360	1.90	41.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

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	*2437.00	114.8 PK			1.65 V	360	85.10	29.70
1	*2437.00	107.1 AV			1.65 V	360	77.40	29.70
2	4874.00	48.3 PK	74.00	-25.70	1.16 V	24	12.80	35.50
3	7311.00	62.8 PK	74.00	-11.20	1.52 V	172	21.60	41.30
3	7311.00	50.1 AV	54.00	-3.90	1.52 V	172	8.80	41.30

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 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	Wireless Broadband Router	MODEL	GN-B46B
CHANNEL	Channel 11	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY: Hardaway Lee			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

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	*2462.00	98.5 PK			1.20 H	122	68.60	29.80
1	*2462.00	91.1 AV			1.20 H	122	61.30	29.80
2	4924.00	46.9 PK	74.00	-27.10	1.60 H	210	11.30	35.70
3	7387.00	56.1 PK	74.00	-17.90	1.71 H	173	14.60	41.50
3	7387.00	44.5 AV	54.00	-9.50	1.71 H	173	3.00	41.50
4	9848.00	54.5 PK	74.00	-19.50	1.25 H	34	10.70	43.80
4	9848.00	44.2 AV	54.00	-9.80	1.25 H	34	0.50	43.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

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	*2462.00	114.1 PK			1.01 V	144	84.30	29.80
1	*2462.00	106.9 AV			1.01 V	144	77.10	29.80
2	2483.50	52.1 PK	74.00	-21.90	1.01 V	144	22.20	29.90
2	2483.50	44.9 AV	54.00	-9.10	1.01 V	144	15.00	29.90
3	4924.00	51.4 PK	74.00	-22.60	1.75 V	88	15.70	35.70
4	7385.00	63.5 PK	74.00	-10.50	2.22 V	144	22.00	41.50
4	7385.00	51.1 AV	54.00	-2.90	2.22 V	144	9.60	41.50
5	9847.00	60.4 PK	94.10	-33.70	1.75 V	88	16.70	43.80
5	9847.00	53.2 AV	86.90	-33.70	1.75 V	88	9.50	43.80
6	12309.00	60.0 PK	74.00	-14.00	1.25 V	188	14.60	45.40
6	12309.00	46.7 AV	54.00	-7.30	1.25 V	188	1.30	45.40

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 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, 2004

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

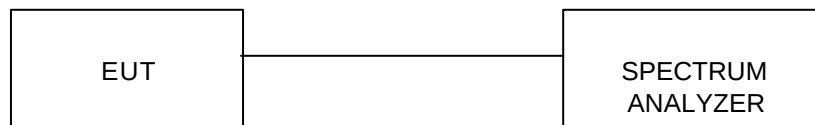
4.3.3 TEST PROCEDURE

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

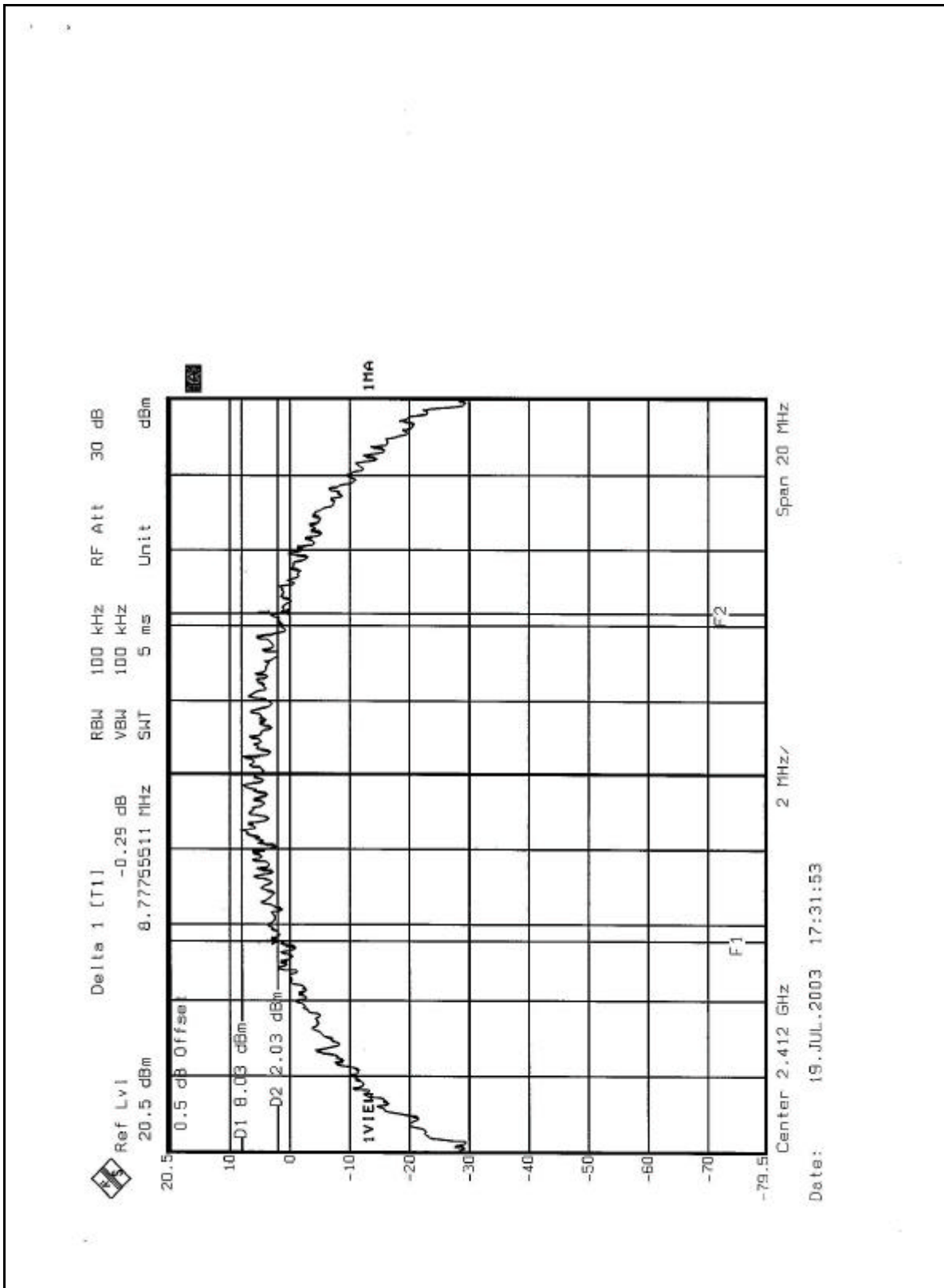
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

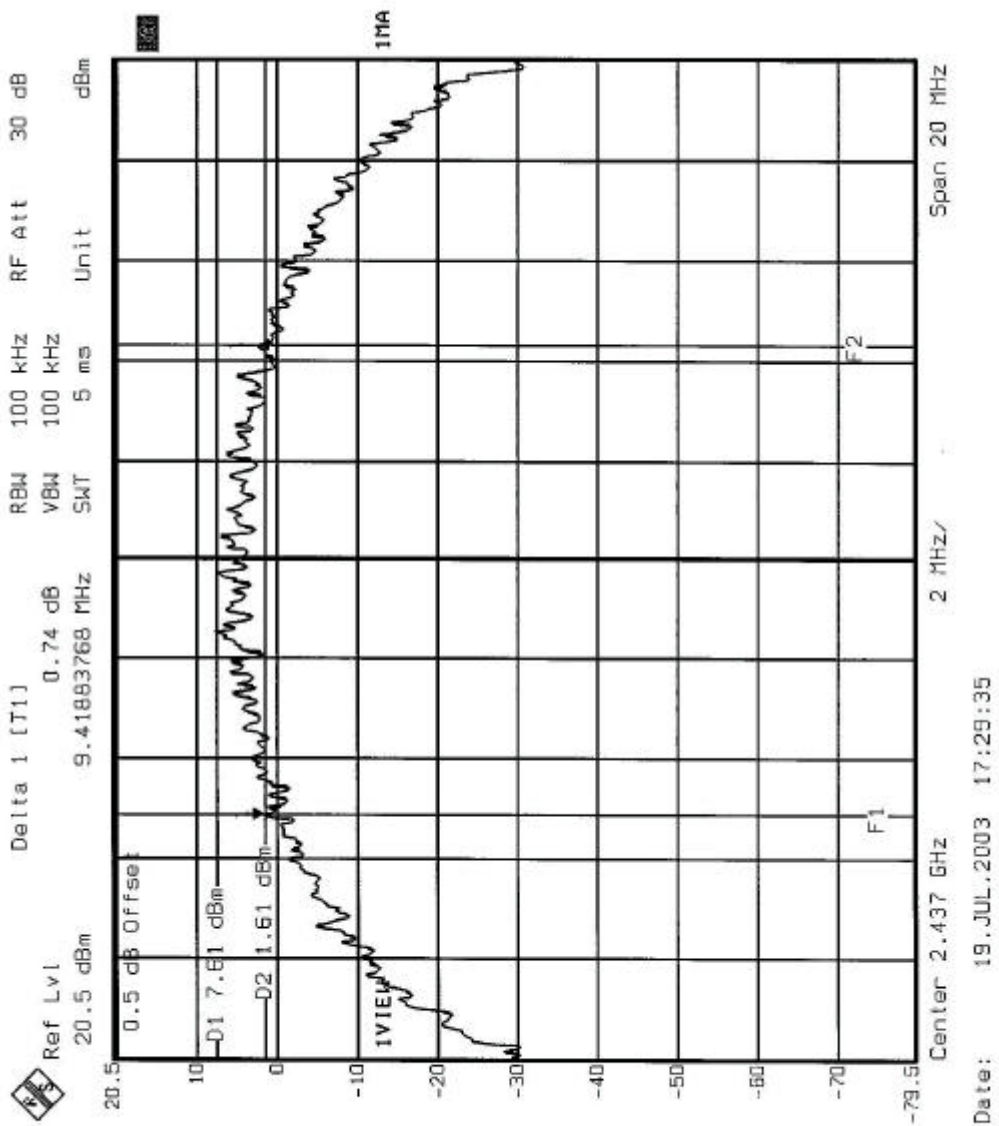
EUT	Wireless Broadband Router	MODEL	GN-B46B
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH, 991hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	8.78	0.5	PASS
6	2437	9.42	0.5	PASS
11	2462	8.78	0.5	PASS

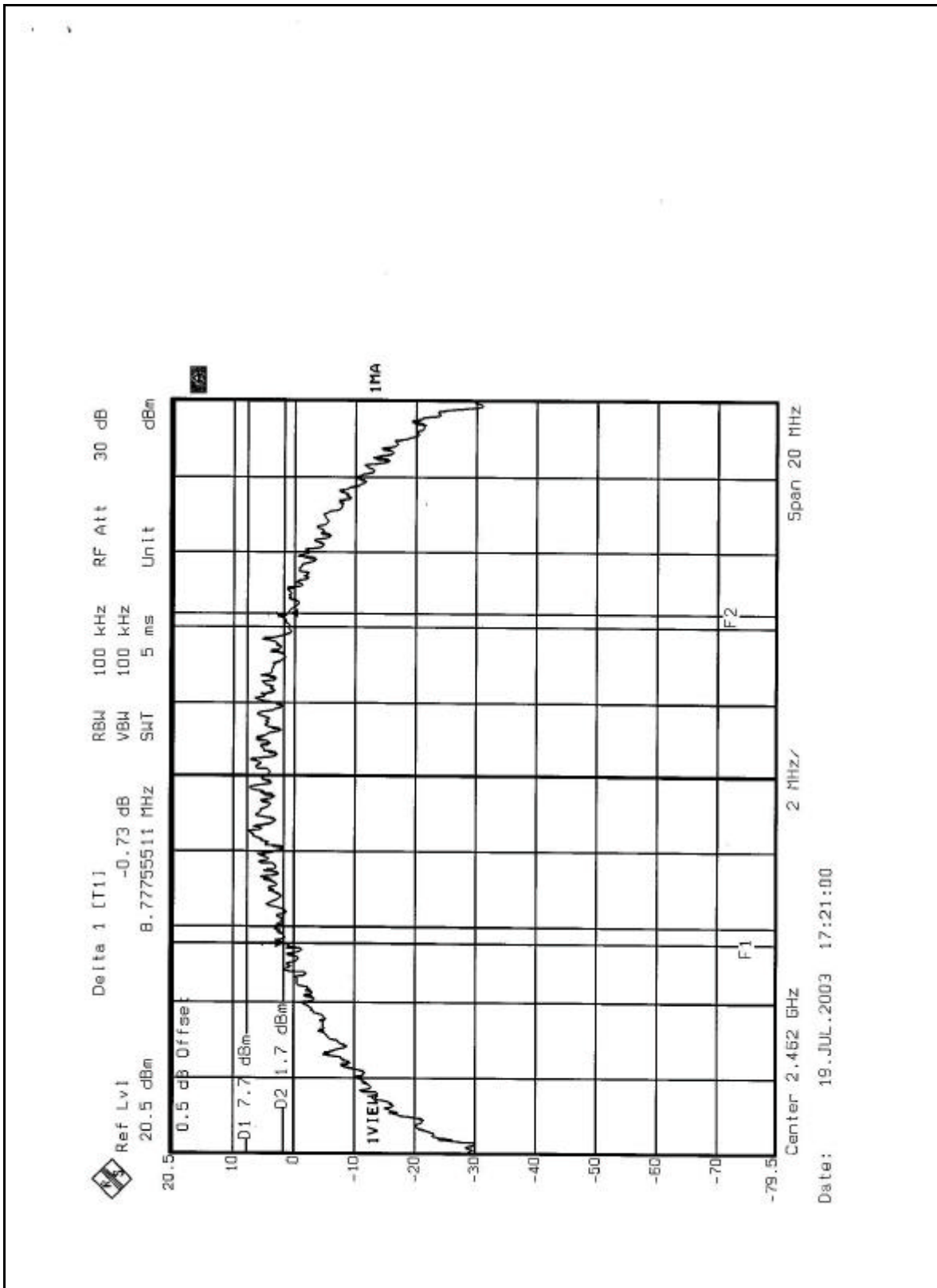
CH1



CH6



CH11



4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	B048470	Mar. 05, 2004
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE:

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

4.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator . The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

EUT	Wireless Broadband Router	MODEL	GN-B46B
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH, 991hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.97	30	PASS
6	2437	18.65	30	PASS
11	2462	18.73	30	PASS



4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

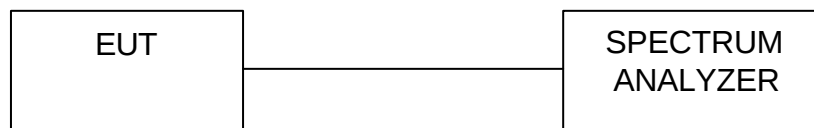
4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 4.3.6



4.5.7 TEST RESULTS

EUT	Wireless Broadband Router	MODEL	GN-B46B
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH, 991hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-6.52	8	PASS
6	2437	-7.09	8	PASS
11	2462	-7.79	8	PASS

CH1

