FCC ID: KA22003070024-2

FCC TEST REPORT

REPORT NO.:	RF920808R02A
MODEL NO.:	DWL-AG520, DWL-AG530
RECEIVED:	October 22, 2003
TESTED:	Aug. 08 ~ Sep. 13, 2003 for original report Nov. 04 ~ Dec. 10, 2003 for testing spurious emission

APPLICANT:	D-LINK CORPORATION
ADDRESS:	NO.8, Li Hsing Rd VII, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU, TAIWAN, R.O.C.

ISSUED BY:	Advance Data Technology Corporation
LAB LOCATION:	47 14th Lin, Chiapau Tsun, Linko, Taipei, Taiwan, R.O.C.

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1. CERTIFICATION

PRODUCT :	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter
BRAND NAME :	D-Link
MODEL NO. :	DWL-AG520, DWL-AG530
TEST ITEM:	ENGINEERING SAMPLE
APPLICANT :	D-LINK CORPORATION
STANDARDS :	FCC Part 15, Subpart C (Section 15.247), Subpart E (Section 15.407), ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Aug. 08, 2003 to Sep. 13, 2003 and Nov. 04, 2003 to January 13, 2004 for testing spurious emission. 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: Stacy Hsueh , **DATE:** January 13, 2004
Stacy Hsueh

APPROVED BY: , **DATE:** January 13, 2004
Ellis Wu / 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 –20.40dB at 0.181MHz
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)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –1.40dB at 2688.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

APPLIED STANDARD: FCC Part 15, Subpart E			
Standard Section	**Test Type**	**Result**	**REMARK**
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –19.51dB at 0.181MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit Minimum passing margin is –1.60dB at 11610.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter
MODEL NO.	DWL-AG520, DWL-AG530
POWER SUPPLY	5Vdc from host equipment
MODULATION TYPE	BPSK, QPSK, CCK,16QAM, 64QAM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11a: 6 to 54Mbps (Turbo mode: up to 108Mbps *see note 1)
FREQUENCY RANGE	802.11b and 802.11g: 2412~2462MHz 802.11a: 5.25~5.35GHz and 5.725~5.825GHz
NUMBER OF CHANNEL	802.11b and 802.11g: 11 / 1 for Turbo mode 802.11a: 7 for Normal mode / 3 for Turbo mode
CHANNEL SPACING	802.11b and 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
OUTPUT POWER	802.11b and 802.11g: 18.36dBm 802.11a: 18.13dBm
DATA CABLE	NA
ANTENNA TYPE	Dipole antenna with 5dBi
I/O PORTS	NA

NOTE:

1. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
2. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
3. This is a duplicate report of RF920808R02, the difference is changing the antenna and connector type. So we test for radiation which is below 1GHz.
4. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

For 802.11b and 802.11g: 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. Transfer rate of 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst case, was chosen for final test.
4. One turbo mode at frequency 2437MHz.
5. Test result A is for CCK technique, test result B is for OFDM technique and test result C is for OFDM technique in Turbo mode which presented in Section 4.

For 802.11a: Seven channels are provided to this EUT for Normal mode.

Channel	Frequency	Channel	Frequency
1	5280 MHz	5	5765 MHz
2	5300 MHz	6	5785 MHz
3	5320 MHz	7	5805 MHz
4	5745 MHz		

Three channels are provided to this EUT for Turbo Mode.

Channel	Frequency
1	5290 MHz
2	5760 MHz
3	5800 MHz

NOTE:

1. The EUT was tested in both normal mode (channel bandwidth of approximately 30MHz) and turbo mode (channel bandwidth of approximately 60MHz).
2. “Normal Mode” allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).
3. “Turbo Mode” allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).
4. Channel 3, 4 and 7 are the closest frequencies to the band edge, were chosen for final test of Normal Mode.
5. Channel 1 ~ 3 were chosen for final test of turbo mode.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR Part 15, Subpart C. (15.247),
Subpart E (15.407). ANSI C63.4 : 1992

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	PERSONAL COMPUTER	HP	DTPC 27	SG21103567	FCC DoC Approved
2	MONITOR	ADI	CM100	026058T10200531	FCC DoC Approved
3	MOUSE	DEXIN	A2R800A	80110020	NIYA2P800A
4	PS/2 KEYBOARD	FORWARD	FDA-104GA	FDKB 8110056	F4ZFDA-104G
5	MODEM	ACEEX	1414	0206026775	IFAXDM1414
6	MATRIX PRINTER	EPSON	LQ-300+	DCGY017079	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core
3	1.5 m foil shielded wire, terminated with PS2 connector via drain wire, w/o core.
4	NA
5	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
6	NA

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

4. TEST TYPES AND RESULTS (FOR PART 802.11b & 802.11g)

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
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 20, 2004
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 09, 2004
*ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19 2004
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19 2004
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER 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.

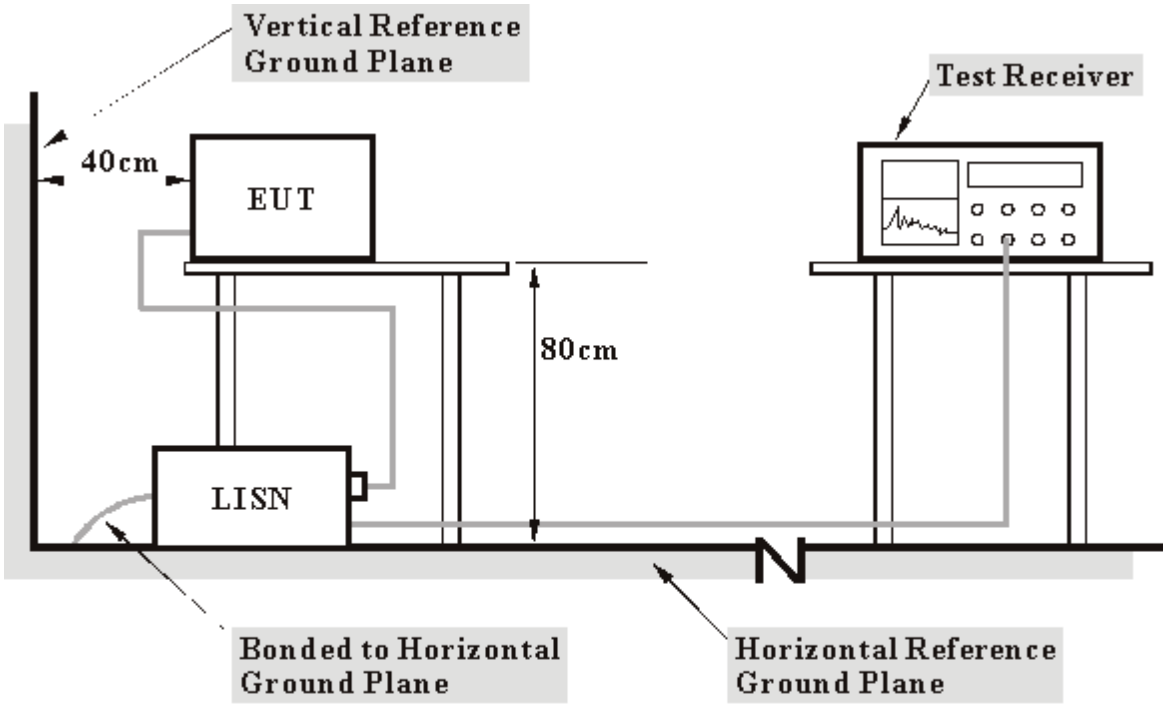
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

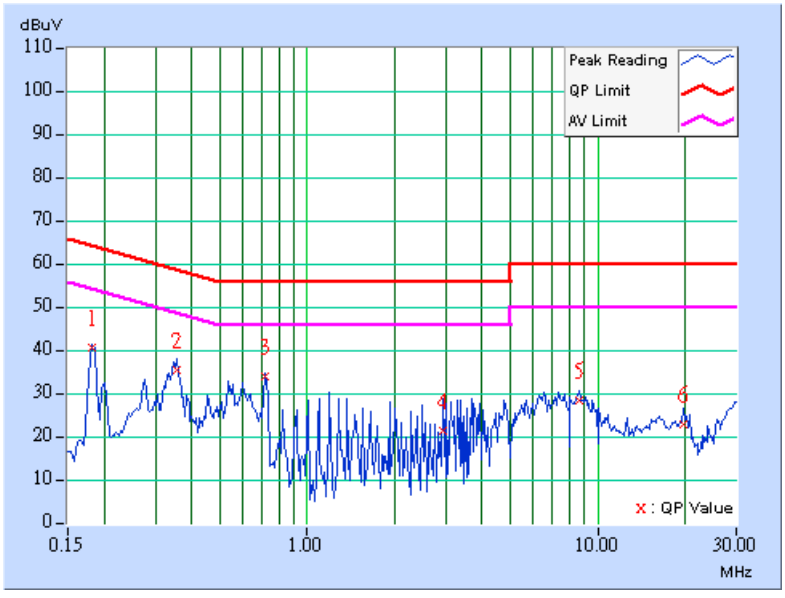
a. Plug the EUT into the computer system placed on a testing table.
b. The computer system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The computer system sent "H" messages to its screen.
d. The computer system sent “H” messages to modem.
e. The computer system sent "H" messages to printer, and the printer prints them on paper.

4.1.7 TEST RESULTS

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	0.181	0.06	39.97	-	40.03	-	64.43	54.43	-24.40	-
2	0.357	0.06	34.79	-	34.85	-	58.80	48.80	-23.95	-
3	0.716	0.11	33.60	-	33.71	-	56.00	46.00	-22.29	-
4	2.926	0.20	20.79	-	20.99	-	56.00	46.00	-35.01	-
5	8.605	0.37	27.73	-	28.10	-	60.00	50.00	-31.90	-
6	19.776	0.64	22.23	-	22.87	-	60.00	50.00	-37.13	-

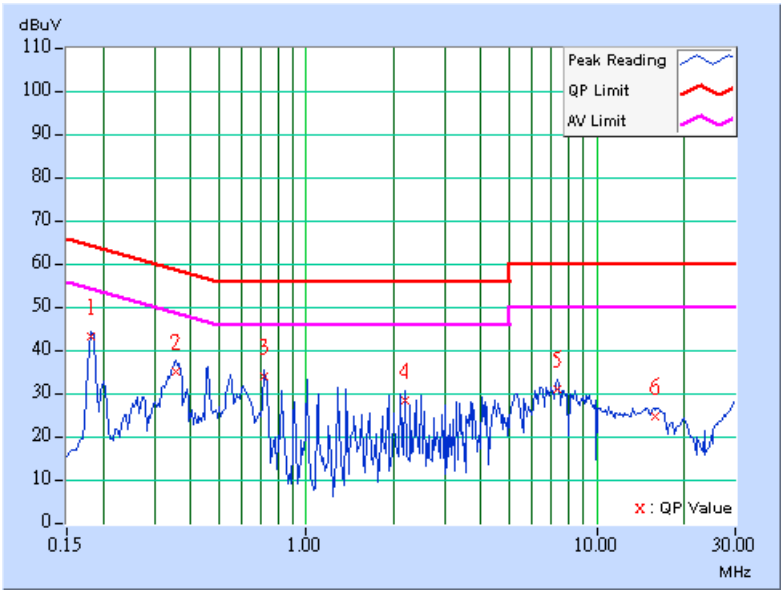
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	0.181	0.05	42.85	-	42.90	-	64.43	54.43	-21.53	-
2	0.356	0.05	34.85	-	34.90	-	58.81	48.81	-23.91	-
3	0.713	0.11	33.68	-	33.79	-	56.00	46.00	-22.21	-
4	2.199	0.18	27.89	-	28.07	-	56.00	46.00	-27.93	-
5	7.324	0.31	30.54	-	30.85	-	60.00	50.00	-29.15	-
6	15.840	0.49	24.45	-	24.94	-	60.00	50.00	-35.06	-

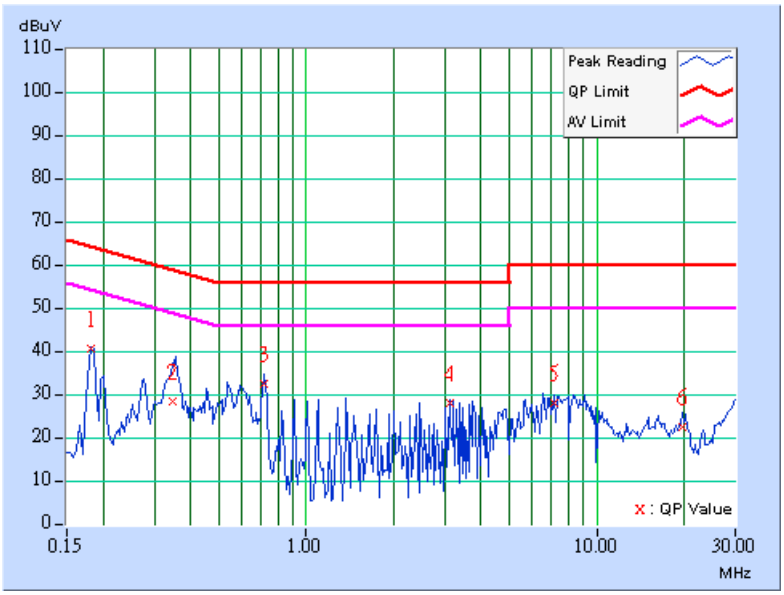
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	0.181	0.06	39.92	-	39.98	-	64.43	54.43	-24.45	-
2	0.349	0.06	28.05	-	28.11	-	58.99	48.99	-30.88	-
3	0.716	0.11	32.11	-	32.22	-	56.00	46.00	-23.78	-
4	3.113	0.20	27.54	-	27.74	-	56.00	46.00	-28.26	-
5	7.141	0.32	27.51	-	27.83	-	60.00	50.00	-32.17	-
6	19.773	0.64	21.97	-	22.61	-	60.00	50.00	-37.39	-

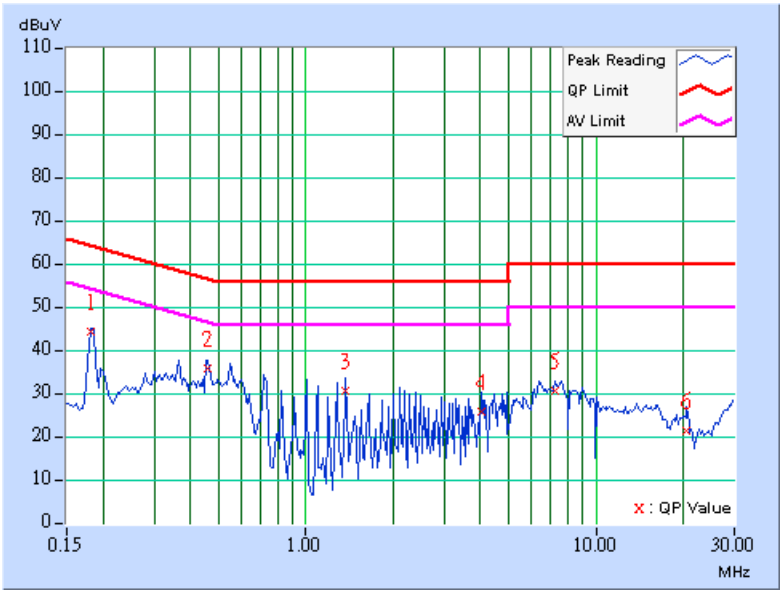
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	**0.181**	**0.05**	**43.98**	**-**	**44.03**	**-**	**64.43**	**54.43**	**-20.40**	**-**
2	0.458	0.06	35.49	-	35.55	-	56.73	46.73	-21.18	-
3	1.371	0.17	30.22	-	30.39	-	56.00	46.00	-25.61	-
4	4.028	0.21	25.55	-	25.76	-	56.00	46.00	-30.24	-
5	7.230	0.31	30.20	-	30.51	-	60.00	50.00	-29.49	-
6	20.504	0.53	20.85	-	21.38	-	60.00	50.00	-38.62	-

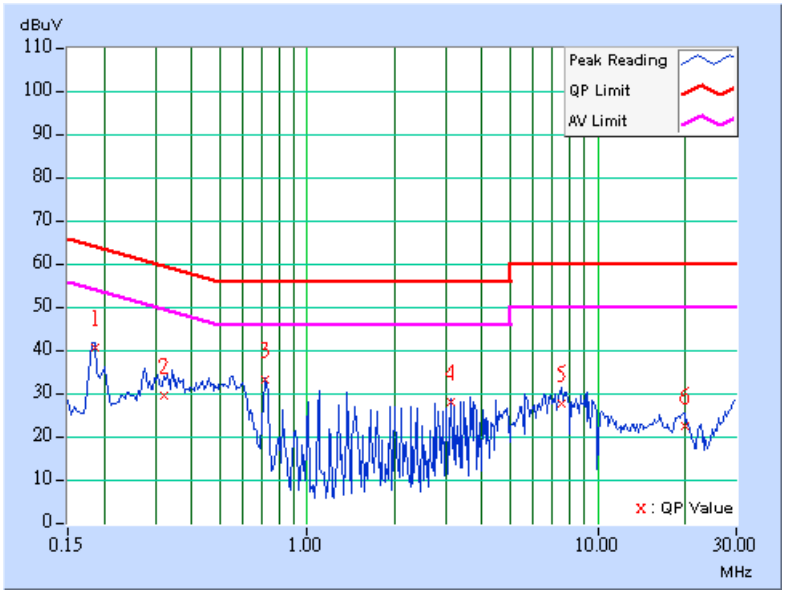
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	0.185	0.06	39.98	-	40.04	-	64.25	54.25	-24.21	-
2	0.322	0.06	28.89	-	28.95	-	59.65	49.65	-30.70	-
3	0.716	0.11	32.67	-	32.78	-	56.00	46.00	-23.22	-
4	3.113	0.20	27.36	-	27.56	-	56.00	46.00	-28.44	-
5	7.504	0.33	27.11	-	27.44	-	60.00	50.00	-32.56	-
6	19.864	0.64	21.90	-	22.54	-	60.00	50.00	-37.46	-

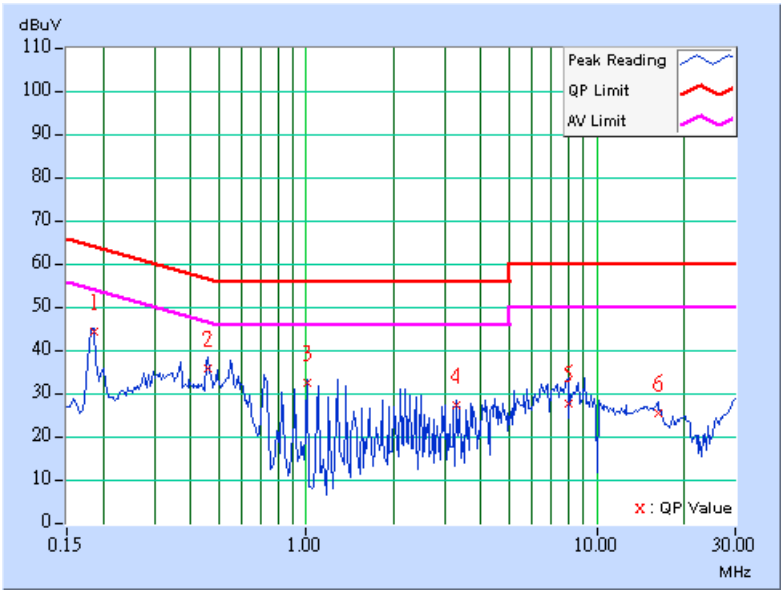
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	0.185	0.05	43.91	-	43.96	-	64.25	54.25	-20.29	-
2	0.459	0.06	35.43	-	35.49	-	56.72	46.72	-21.23	-
3	1.008	0.16	32.27	-	32.43	-	56.00	46.00	-23.57	-
4	3.297	0.20	27.01	-	27.21	-	56.00	46.00	-28.79	-
5	7.963	0.33	27.13	-	27.46	-	60.00	50.00	-32.54	-
6	16.202	0.49	25.22	-	25.71	-	60.00	50.00	-34.29	-

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	8594E	3911A07465	July 07, 2004
* HP Preamplifier	8447D	2432A03504	June 10, 2004
* HP Preamplifier	8449B	3008A01292	Aug. 11, 2004
SCHAFFNER Tunable Dipole Antenna SCHWARZBECK Tunable Dipole Antenna	VHBA 9123 UHA 9105	459 977	Jun. 26, 2004
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
*Schwarzbeck Antenna	VULB9168	137	Apr. 03, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 30, 2004
*ADT. Turn Table	TT100	0306	NA
*ADT. Tower	AT100	0306	NA
*Software	ADT_Radiated_V 5.14	NA	NA
*TIMES RF cable	LL142	CABLE-CH6-01	Apr. 30, 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 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 Chamber No. 6.

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 the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

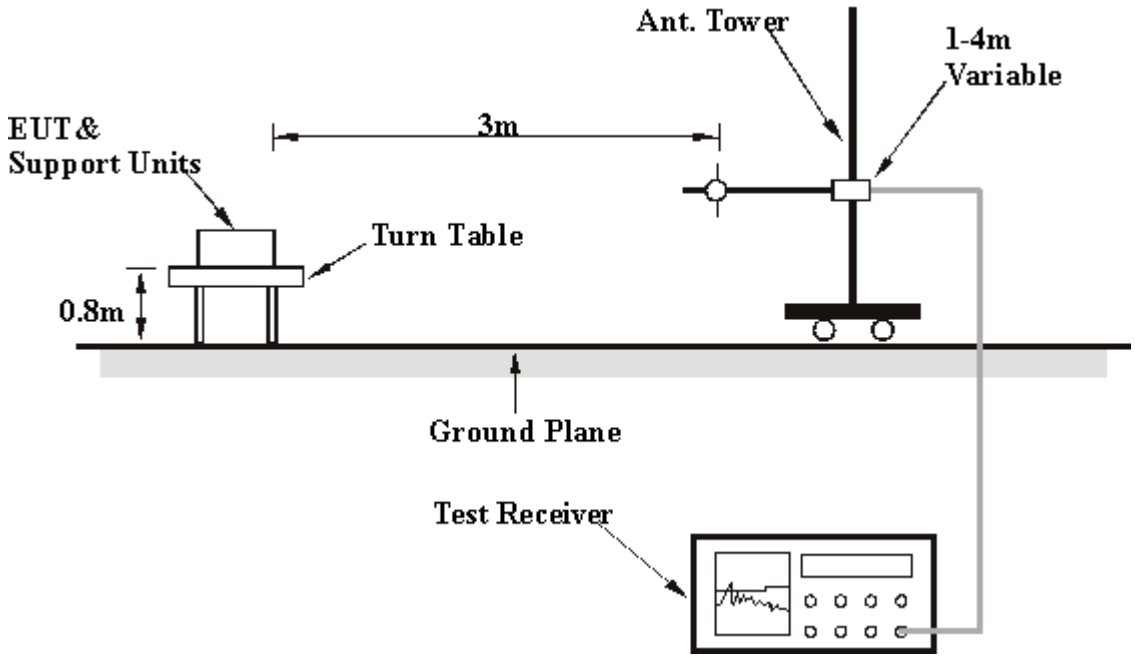
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) 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	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	**TESTED BY**: Jun Wu	

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	64.99	29.49 QP	40.00	-10.51	3.00 H	211	16.96	12.54
2	111.64	28.87 QP	43.50	-14.63	4.00 H	106	17.40	11.47
3	197.17	26.75 QP	43.50	-16.75	1.75 H	112	15.37	11.38
4	243.83	27.01 QP	46.00	-18.99	1.00 H	67	13.75	13.25
5	288.54	24.87 QP	46.00	-21.13	1.25 H	247	10.04	14.83
6	500.42	26.22 QP	46.00	-19.78	1.75 H	28	6.20	20.02
7	799.78	34.38 QP	46.00	-11.62	1.00 H	79	8.76	25.62
8	850.32	30.44 QP	46.00	-15.56	1.00 H	187	4.30	26.15
9	928.08	35.74 QP	46.00	-10.26	1.25 H	76	8.28	27.46

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	66.93	31.27 QP	40.00	-8.73	1.00 V	103	18.96	12.30
2	111.64	29.22 QP	43.50	-14.28	1.00 V	112	17.75	11.47
3	245.77	23.63 QP	46.00	-22.37	1.50 V	136	10.33	13.29
4	288.54	24.66 QP	46.00	-21.34	1.00 V	184	9.84	14.83
5	430.44	24.70 QP	46.00	-21.30	1.50 V	151	6.02	18.68
6	793.95	35.16 QP	46.00	-10.84	2.00 V	187	9.57	25.59
7	830.88	30.05 QP	46.00	-15.95	1.50 V	37	4.11	25.94
8	865.87	28.67 QP	46.00	-17.33	1.00 V	346	2.21	26.46
9	930.02	35.59 QP	46.00	-10.41	1.50 V	124	8.11	27.48

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.

4.2.8 TEST RESULTS (A)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2360.00	42.6 PK	74.00	-31.40	1.00 H	251	12.30	30.30
2	2390.00	51.9 PK	74.00	-22.10	1.49 H	262	21.50	30.40
2	2390.00	41.2 AV	54.00	-12.80	1.49 H	262	10.80	30.40
3	*2412.00	101.2 PK			1.08 H	51	70.70	30.50
3	*2412.00	93.2 AV			1.08 H	51	62.70	30.50
4	2688.00	40.3 PK	74.00	-33.70	1.01 H	20	9.00	31.30
5	4824.00	48.0 PK	74.00	-26.00	1.57 H	44	11.80	36.20
6	7236.00	44.0 PK	74.00	-30.00	1.54 H	23	2.30	41.70
7	9648.00	49.0 PK	74.00	-25.00	1.39 H	262	4.10	44.90

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	2360.00	48.8 PK	74.00	-25.20	1.01 V	323	18.50	30.30
2	2390.00	60.4 PK	74.00	-13.60	1.36 V	62	30.00	30.40
2	2390.00	48.7 AV	54.00	-5.30	1.36 V	62	18.30	30.40
3	*2412.00	109.8 PK			1.05 V	5	79.20	30.50
3	*2412.00	102.9 AV			1.05 V	5	72.30	30.50
4	2688.00	48.5 PK	74.00	-25.50	1.01 V	20	17.30	31.30
5	4824.00	53.8 PK	74.00	-20.20	1.12 V	2	17.60	36.20
5	4824.00	43.4 AV	54.00	-10.60	1.12 V	2	7.20	36.20
6	7236.00	48.4 PK	74.00	-25.60	1.08 V	13	6.80	41.70
7	9648.00	53.2 PK	74.00	-20.80	1.03 V	21	8.30	44.90
7	9648.00	44.0 AV	54.00	-10.00	1.03 V	21	-0.90	44.90

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2360.00	43.0 PK	74.00	-31.00	1.09 H	3	12.70	30.30
2	2390.00	49.8 PK	74.00	-24.20	1.63 H	26	19.40	30.40
3	*2437.00	102.2 PK			1.11 H	61	71.60	30.70
3	*2437.00	94.0 AV			1.11 H	61	63.30	30.70
4	2483.50	52.2 PK	74.00	-21.80	1.36 H	62	21.20	31.00
4	2483.50	40.1 AV	54.00	-13.90	1.36 H	62	9.10	31.00
5	2688.00	42.4 PK	74.00	-31.60	1.01 H	20	11.10	31.30
6	4874.00	47.2 PK	74.00	-26.80	1.36 H	9	10.70	36.50
7	7311.00	44.2 PK	74.00	-29.80	1.53 H	333	2.50	41.80
8	9748.00	49.2 PK	74.00	-24.80	1.37 H	222	4.60	44.60

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	2356.00	49.0 PK	74.00	-25.00	1.01 V	318	18.70	30.30
2	2390.00	56.7 PK	74.00	-17.30	1.54 V	22	26.30	30.40
2	2390.00	45.7 AV	54.00	-8.30	1.54 V	22	15.20	30.40
3	*2437.00	110.1 PK			1.02 V	10	79.40	30.70
3	*2437.00	103.4 AV			1.02 V	10	72.70	30.70
4	2483.50	57.3 PK	74.00	-16.70	1.69 V	32	26.30	31.00
4	2483.50	45.2 AV	54.00	-8.80	1.69 V	32	14.20	31.00
5	2688.00	48.6 PK	74.00	-25.40	1.72 V	45	17.40	31.30
6	4874.00	52.4 PK	74.00	-21.60	1.19 V	58	15.90	36.50
6	4874.00	43.7 AV	54.00	-10.30	1.19 V	58	7.20	36.50
7	7311.00	48.5 PK	74.00	-25.50	1.08 V	53	6.70	41.80
8	9748.00	54.4 PK	74.00	-19.60	1.51 V	249	9.80	44.60
8	9748.00	43.3 AV	54.00	-10.70	1.51 V	249	-1.30	44.60

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2360.00	44.0 PK	74.00	-30.00	1.04 H	55	13.70	30.30
2	*2462.00	103.9 PK			1.16 H	352	73.10	30.80
2	*2462.00	95.0 AV			1.16 H	352	64.20	30.80
3	2483.50	56.9 PK	74.00	-17.10	1.49 H	63	25.90	31.00
3	2483.50	42.2 AV	54.00	-11.80	1.49 H	63	11.30	31.00
4	2688.00	44.2 PK	74.00	-29.80	1.57 H	84	12.90	31.30
5	4924.00	48.2 PK	74.00	-25.80	1.36 H	9	11.50	36.70
6	7386.00	43.0 PK	74.00	-31.00	1.57 H	26	1.20	41.80
7	9848.00	49.0 PK	74.00	-25.00	1.48 H	208	4.60	44.40

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	2360.00	48.6 PK	74.00	-25.40	1.20 V	215	18.30	30.30
2	*2462.00	110.8 PK			1.03 V	12	80.00	30.80
2	*2462.00	103.9 AV			1.03 V	12	73.00	30.80
3	2483.50	60.6 PK	74.00	-13.40	1.35 V	26	29.60	31.00
3	2483.50	49.5 AV	54.00	-4.50	1.35 V	26	18.60	31.00
4	2688.00	52.6 PK	74.00	-21.40	1.78 V	54	21.40	31.30
4	2688.00	51.7 AV	54.00	-2.30	1.78 V	54	20.40	31.30
5	4924.00	54.4 PK	74.00	-19.60	1.21 V	48	17.70	36.70
5	4924.00	43.9 AV	54.00	-10.10	1.21 V	48	7.20	36.70
6	7386.00	48.5 PK	74.00	-25.50	1.27 V	84	6.60	41.80
7	9848.00	53.1 PK	74.00	-20.90	1.11 V	62	8.70	44.40
7	9848.00	42.4 AV	54.00	-11.60	1.11 V	62	-2.00	44.40

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.9 TEST RESULTS (B)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2360.00	36.8 PK	74.00	-37.20	1.08 H	79	6.50	30.30
2	2390.00	56.8 PK	74.00	-17.20	1.36 H	52	26.40	30.40
2	2390.00	45.7 AV	54.00	-8.30	1.36 H	52	15.30	30.40
3	*2412.00	99.8 PK			1.36 H	260	69.20	30.50
3	*2412.00	90.5 AV			1.36 H	260	60.00	30.50
4	2688.00	43.6 PK	74.00	-30.40	1.56 H	69	12.40	31.30
5	4824.00	43.5 PK	74.00	-30.50	1.65 H	24	7.20	36.20
6	7236.00	46.2 PK	74.00	-27.80	1.04 H	54	4.50	41.70
7	9648.00	49.5 PK	74.00	-24.50	1.05 H	215	4.60	44.90

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	2359.00	37.9 PK	74.00	-36.10	4.00 V	10	7.50	30.30
2	2390.00	60.4 PK	74.00	-13.60	1.57 V	45	30.00	30.40
2	2390.00	50.3 AV	54.00	-3.70	1.57 V	45	19.90	30.40
3	*2412.00	105.5 PK			1.08 V	309	75.00	30.50
3	*2412.00	96.6 AV			1.08 V	309	66.10	30.50
4	2688.00	50.8 PK	74.00	-23.20	1.17 V	352	19.60	31.30
5	4824.00	44.8 PK	74.00	-29.20	1.11 V	15	8.50	36.20
6	7236.00	47.4 PK	74.00	-26.60	1.64 V	213	5.70	41.70
7	9648.00	49.5 PK	74.00	-24.50	1.10 V	50	4.60	44.90

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2356.00	41.9 PK	74.00	-32.10	1.29 H	276	11.60	30.30
2	2390.00	50.1 PK	74.00	-23.90	1.69 H	66	19.70	30.40
3	*2437.00	99.0 PK			1.40 H	150	68.40	30.70
3	*2437.00	90.8 AV			1.40 H	150	60.10	30.70
4	2483.50	50.2 PK	74.00	-23.80	1.40 H	113	19.20	31.00
5	2688.00	43.2 PK	74.00	-30.80	1.44 H	52	11.90	31.30
6	4874.00	44.5 PK	74.00	-29.50	1.65 H	352	8.00	36.50
7	7311.00	43.1 PK	74.00	-30.90	1.26 H	36	1.30	41.80
8	9748.00	47.7 PK	74.00	-26.30	1.09 H	333	3.10	44.60

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	2356.00	48.1 PK	74.00	-25.90	1.29 V	276	17.80	30.30
2	2390.00	57.5 PK	74.00	-16.50	1.05 V	24	27.10	30.40
2	2390.00	46.9 AV	54.00	-7.10	1.05 V	24	16.40	30.40
3	*2437.00	106.6 PK			1.44 V	356	75.90	30.70
3	*2437.00	97.2 AV			1.44 V	356	66.50	30.70
4	2483.50	57.3 PK	74.00	-16.70	1.30 V	263	26.40	31.00
4	2483.50	46.4 AV	54.00	-7.60	1.30 V	263	15.50	31.00
5	2688.00	50.9 PK	74.00	-23.10	1.16 V	326	19.60	31.30
6	4874.00	48.5 PK	74.00	-25.50	1.10 V	67	12.00	36.50
7	7311.00	48.5 PK	74.00	-25.50	1.01 V	36	6.70	41.80
8	9748.00	49.4 PK	74.00	-24.60	1.16 V	99	4.80	44.60

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2360.00	41.9 PK	74.00	-32.10	1.29 H	276	11.60	30.30
2	*2462.00	99.5 PK			1.35 H	245	68.70	30.80
2	*2462.00	90.8 AV			1.35 H	245	60.00	30.80
3	2483.50	56.3 PK	74.00	-17.70	1.12 H	69	25.40	31.00
3	2483.50	45.2 AV	54.00	-8.80	1.12 H	69	14.20	31.00
4	2688.00	43.8 PK	74.00	-30.20	1.44 H	52	12.60	31.30
5	4924.00	44.2 PK	74.00	-29.80	1.63 H	265	7.60	36.70
6	7386.00	43.4 PK	74.00	-30.60	1.11 H	58	1.60	41.80
7	9848.00	47.3 PK	74.00	-26.70	1.08 H	78	3.00	44.40

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	2360.00	50.8 PK	74.00	-23.20	1.44 V	316	20.50	30.30
2	*2462.00	105.9 PK			1.09 V	311	75.00	30.80
2	*2462.00	96.9 AV			1.09 V	311	66.10	30.80
3	2483.50	63.0 PK	74.00	-11.00	1.56 V	358	32.00	31.00
3	2483.50	52.2 AV	54.00	-1.80	1.56 V	358	21.20	31.00
4	2688.00	55.0 PK	74.00	-19.00	1.20 V	328	23.80	31.30
4	**2688.00**	**52.6 AV**	**54.00**	**-1.40**	**1.20 V**	**328**	**21.40**	**31.30**
5	4924.00	49.6 PK	74.00	-24.40	1.36 V	320	12.90	36.70
6	7386.00	47.9 PK	74.00	-26.10	1.65 V	246	6.10	41.80
7	9848.00	50.4 PK	74.00	-23.60	1.36 V	26	6.00	44.40

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.10 TEST RESULTS (C)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**TESTED BY**: Eric 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	2356.00	37.6 PK	74.00	-36.40	1.60 H	219	7.30	30.30
2	2390.00	53.7 PK	74.00	-20.30	1.45 H	214	23.30	30.40
2	2390.00	41.6 AV	54.00	-12.40	1.45 H	214	11.20	30.40
3	*2437.00	93.9 PK			1.63 H	69	63.20	30.70
3	*2437.00	87.3 AV			1.63 H	69	56.60	30.70
4	2483.50	53.2 PK	74.00	-20.80	1.54 H	89	22.20	31.00
4	2483.50	43.3 AV	54.00	-10.70	1.54 H	89	12.40	31.00
5	2688.00	43.6 PK	74.00	-30.40	1.08 H	221	12.40	31.30
6	4874.00	44.5 PK	74.00	-29.50	1.08 H	297	8.10	36.50
7	7311.00	44.2 PK	74.00	-29.80	1.08 H	98	2.50	41.80
8	9748.00	45.4 PK	74.00	-28.60	1.57 H	98	0.80	44.60

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	2356.00	46.8 PK	74.00	-27.20	1.31 V	269	16.50	30.30
2	2390.00	57.7 PK	74.00	-16.30	1.36 V	62	27.30	30.40
2	2390.00	46.9 AV	54.00	-7.10	1.36 V	62	16.50	30.40
3	*2437.00	102.8 PK			1.25 V	243	72.10	30.70
3	2437.00	95.3 AV			1.25 V	243	64.60	30.70
4	2483.50	59.3 PK	74.00	-14.70	1.36 V	65	28.40	31.00
4	2483.50	48.0 AV	54.00	-6.00	1.36 V	65	17.00	31.00
5	2688.00	48.9 PK	74.00	-25.10	1.18 V	20	17.60	31.30
6	4874.00	47.2 PK	74.00	-26.80	1.00 V	66	10.70	36.50
7	7311.00	47.1 PK	74.00	-26.90	1.06 V	326	5.40	41.80
8	9748.00	48.9 PK	74.00	-25.10	1.54 V	24	4.30	44.60

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. The limit value is defined as per 15.247
6. " * " : 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	FSP 40	100035	April 14, 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 100kHz 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

4.3.6 EUT OPERATING CONDITIONS

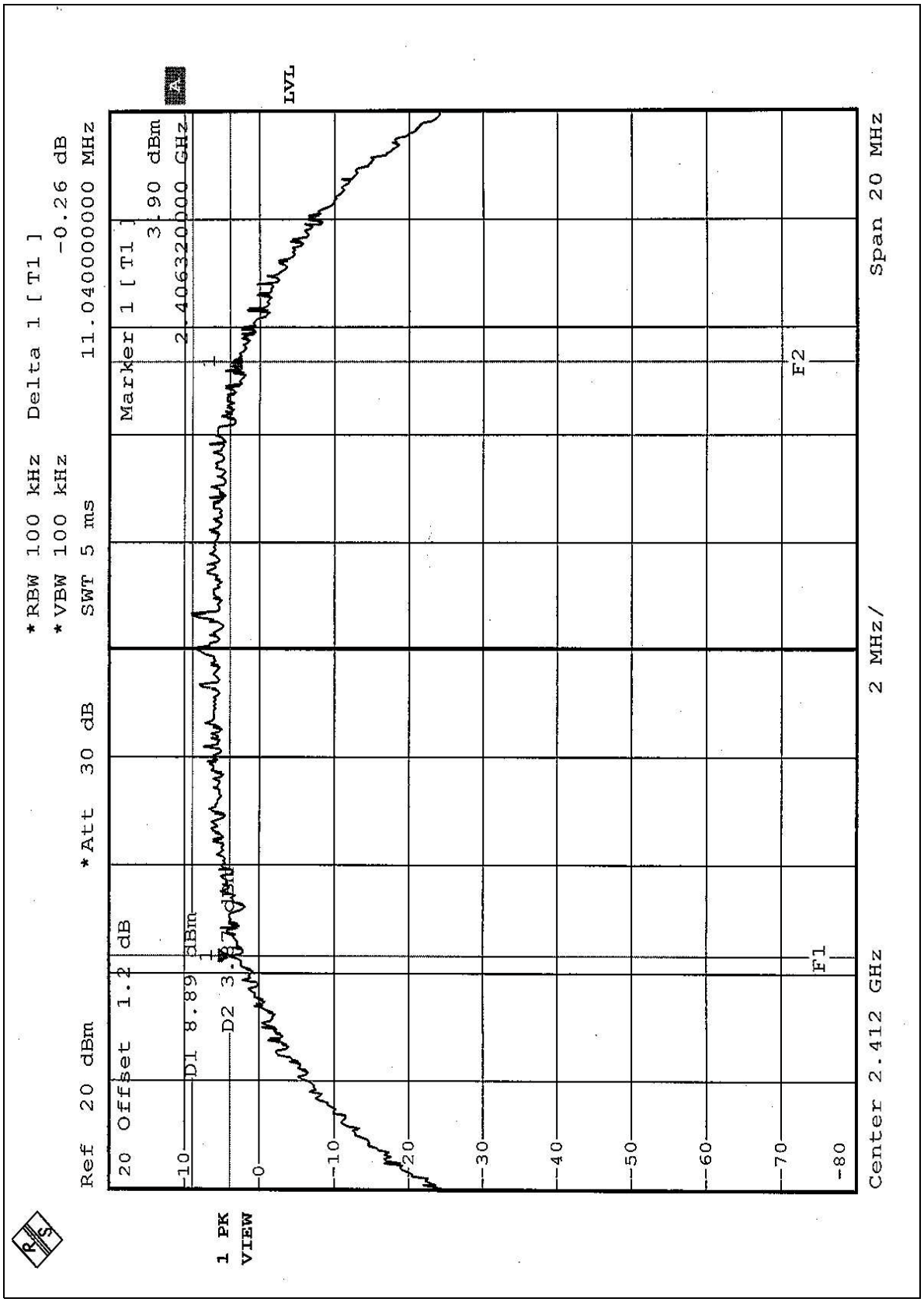
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS (A)

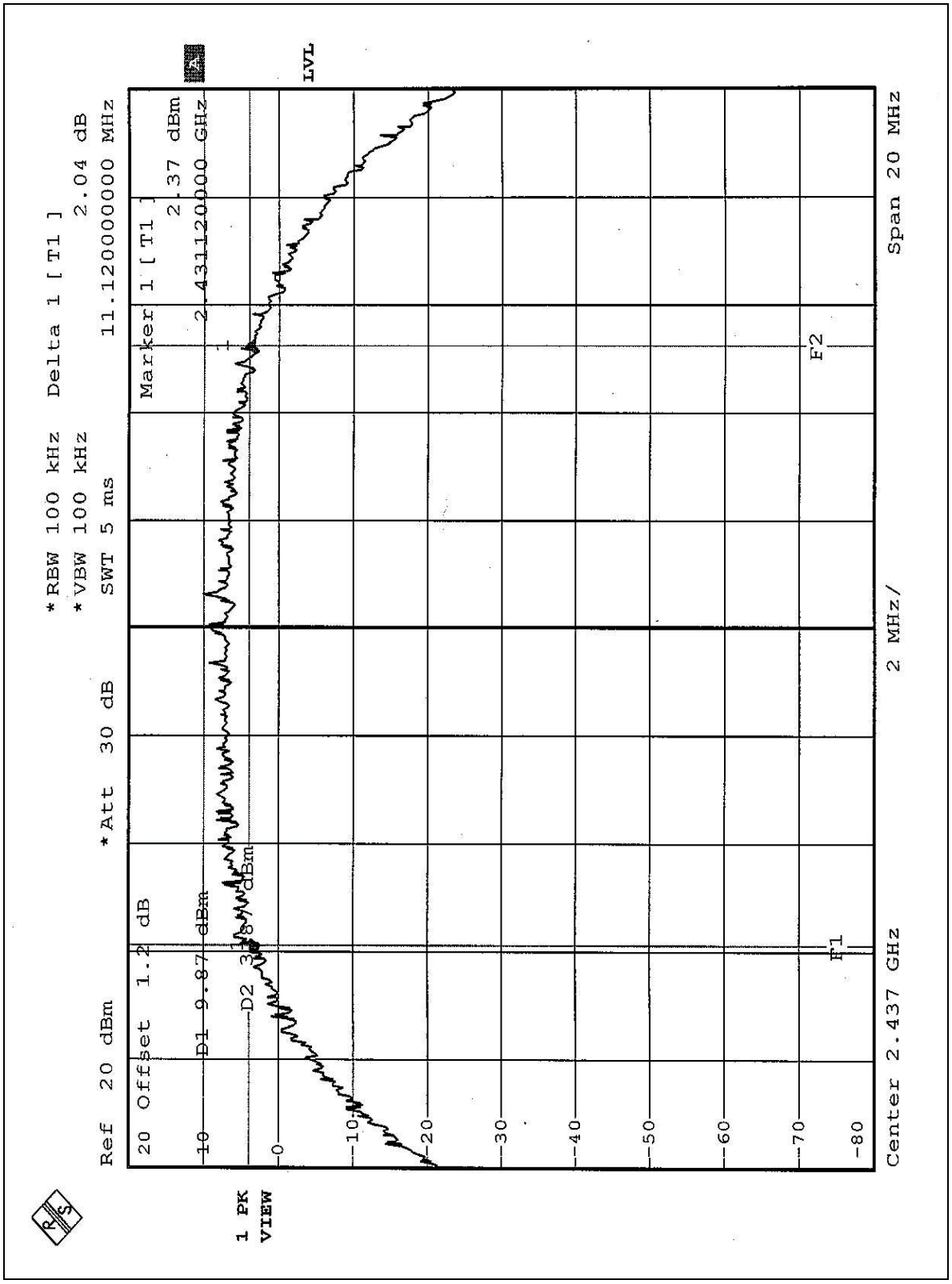
EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 58%RH, 991hPa
TESTED BY: Hank Chung			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.04	0.5	PASS
6	2437	11.12	0.5	PASS
11	2462	11.64	0.5	PASS

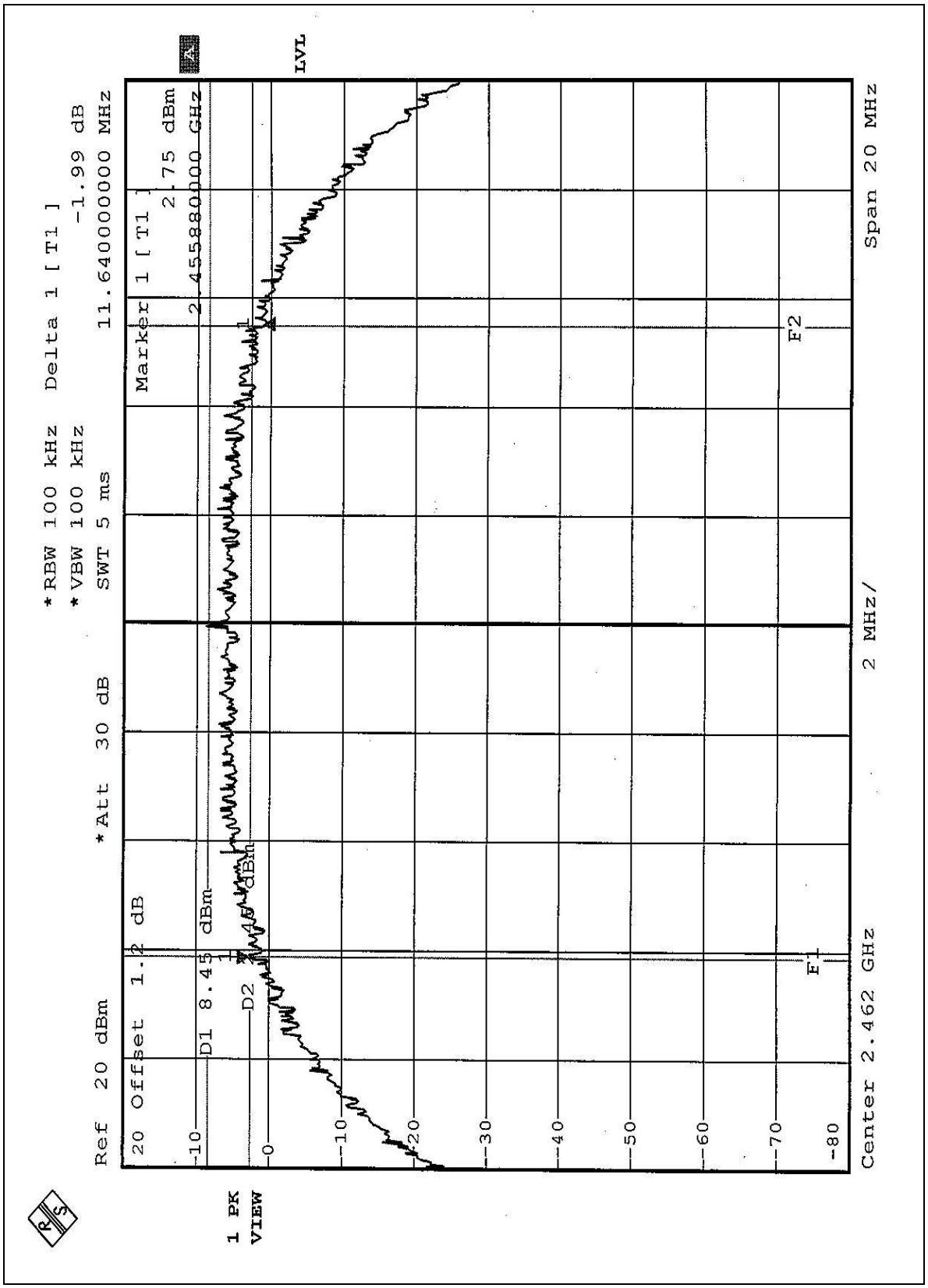
CH1


Ref 20 dBm
20 Offset 1.2 dB
D1 8.89 dBm
D2 3.
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.26 dB
11.040000000 MHz
Marker 1 [T1]
3.90 dBm
2.406320000 GHz
LVL
1 PK
VIEW
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
2.04 dB
11.120000000 MHz
Marker 1 [T1]
2.37 dBm
2.431120000 GHz
Ref 20 dBm
Offset 1.2 dB
Att 30 dB
D1 9.87 dBm
D2 3.8 dBm
1 PK
VIEW
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11

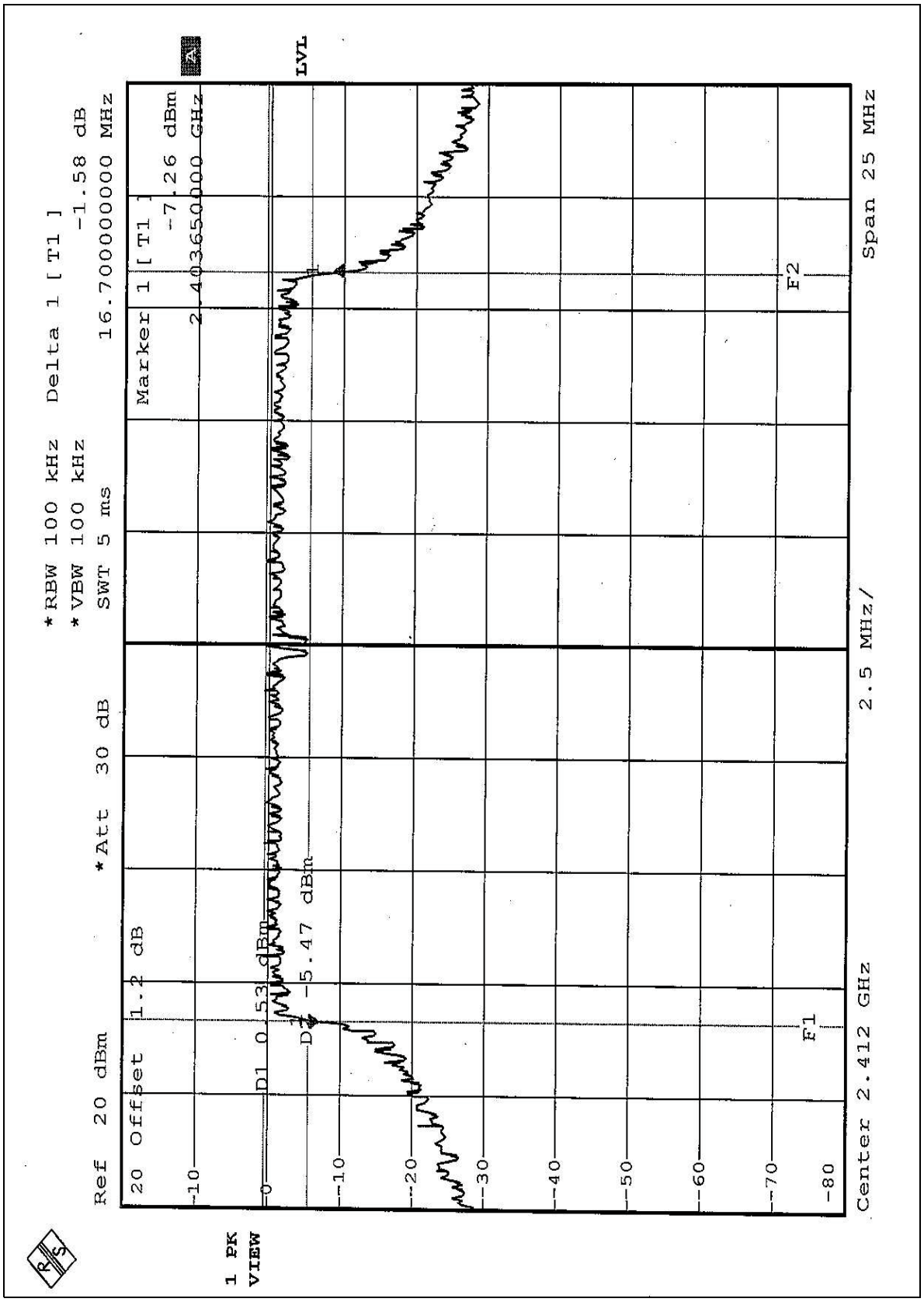

RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.99 dB
11.640000000 MHz
Marker 1 [T1]
2.75 dBm
2.455880000 GHz
Ref 20 dBm
Offset 1.2 dB
Att 30 dB
D1 8.45 dBm
D2
1 PK
VIEW
LVL
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2

4.3.8 TEST RESULTS (B)

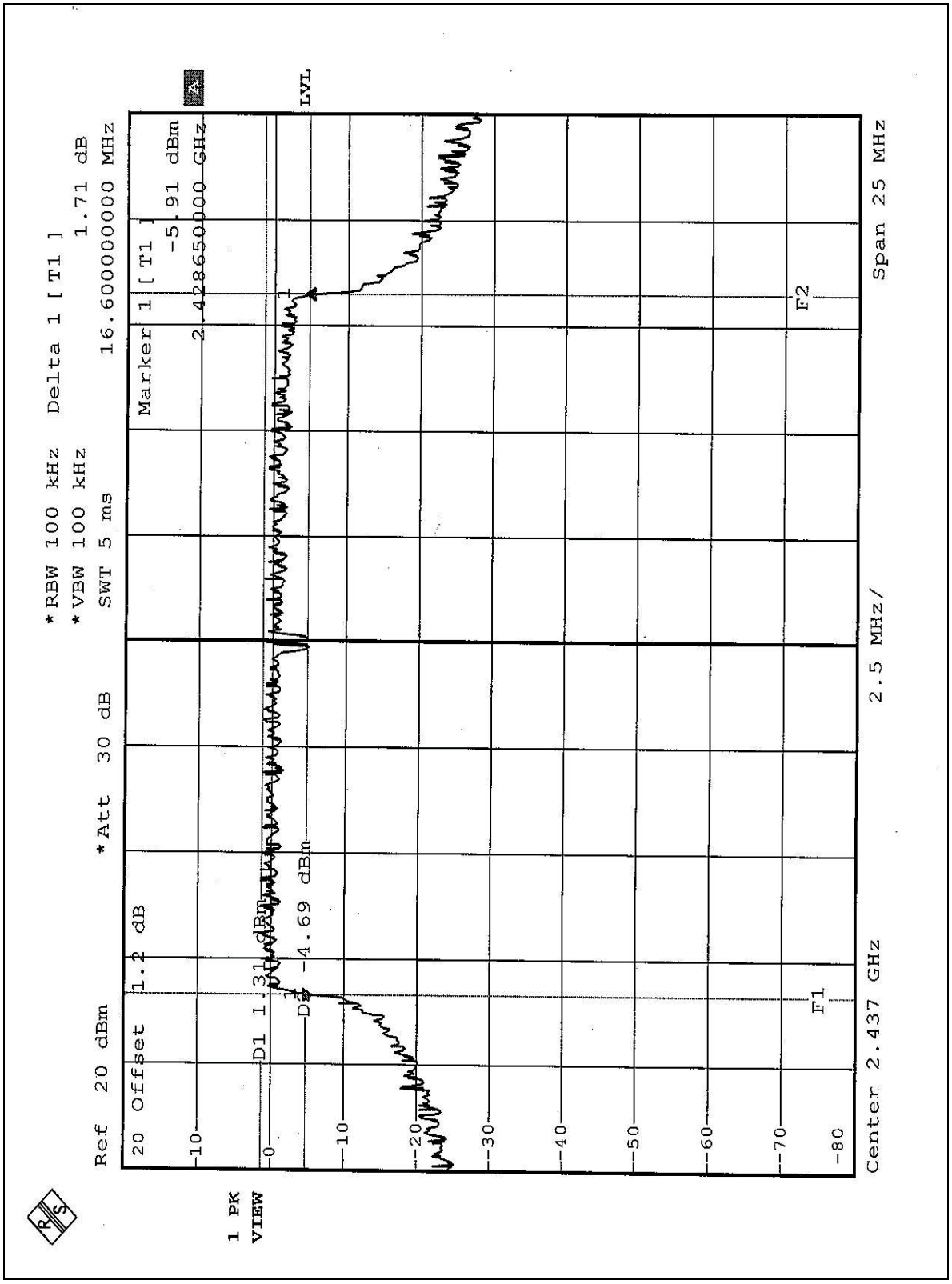
EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 88%RH, 991hPa
TESTED BY: Hank Chung			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.70	0.5	PASS
6	2437	16.60	0.5	PASS
11	2462	16.55	0.5	PASS

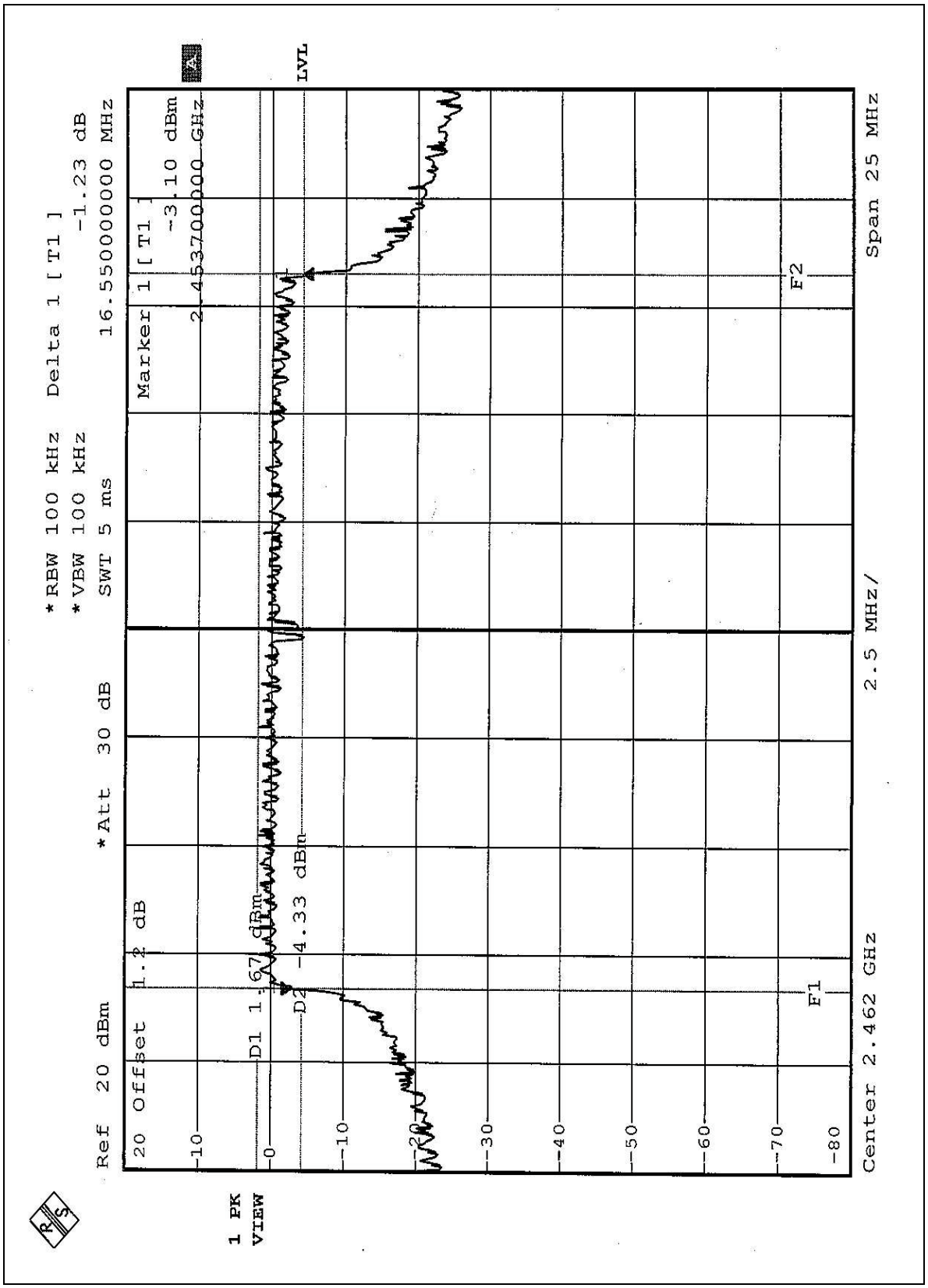
CH1


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.58 dB
16.700000000 MHz
Marker 1 [T1]
-7.26 dBm
2.403650000 GHz
LVL
Ref 20 dBm
20 Offset 1.2 dB
Att 30 dB
D1 0.53 dBm
D2 -5.47 dBm
F1
F2
Span 25 MHz
2.5 MHz/
Center 2.412 GHz
1 PK
VIEW

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
1.71 dB
16.600000000 MHz
Marker 1 [T1]
-5.91 dBm
2.42650000 GHz
Ref 20 dBm
Offset 1.2 dB
Att 30 dB
D1 1.31 dBm
D2 -4.69 dBm
Center 2.437 GHz
2.5 MHz/
Span 25 MHz
F1
F2
1 PK
VIEW

CH11

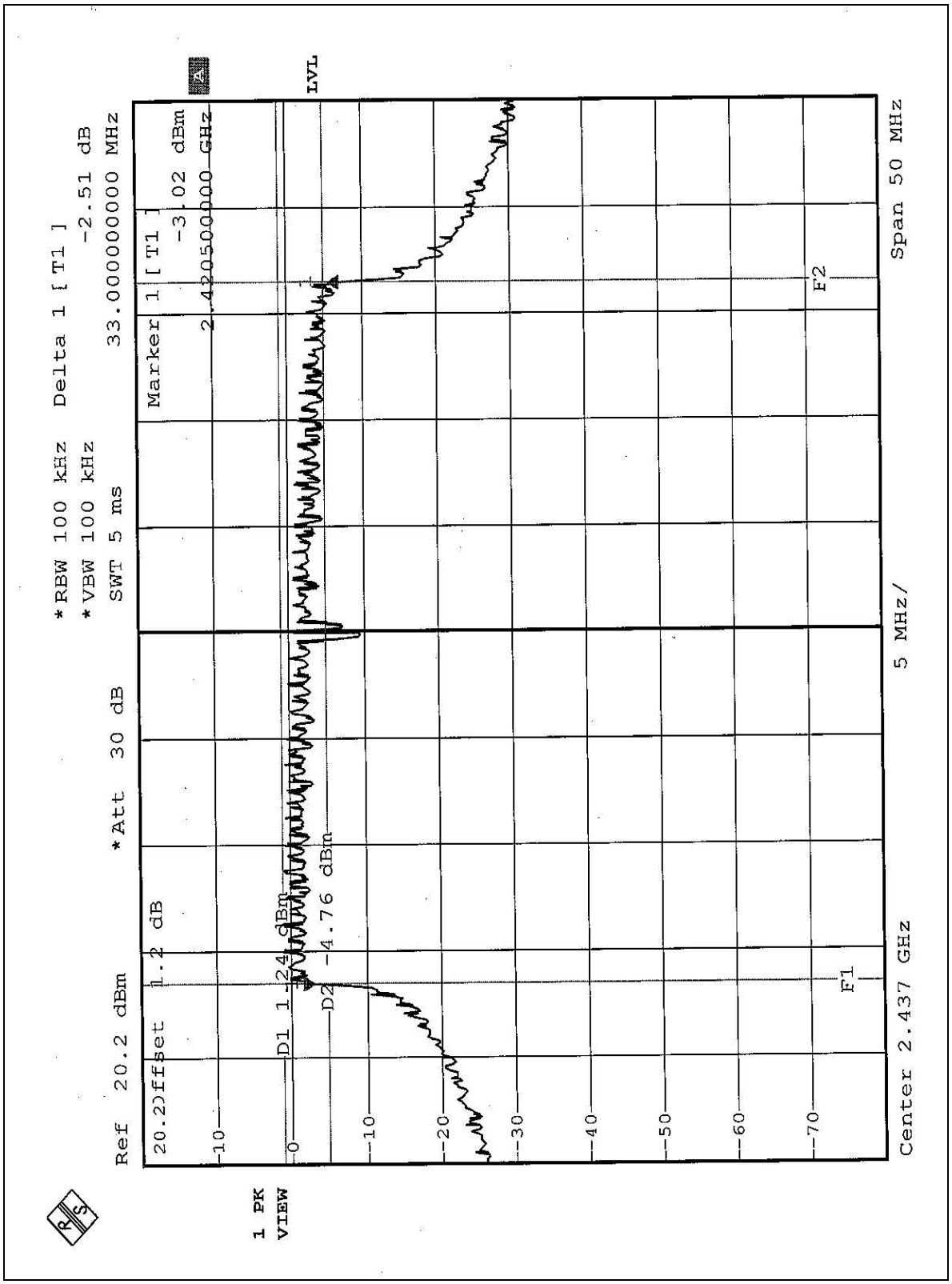

Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.23 dB
16.550000000 MHz
Marker 1 [T1]
-3.10 dBm
2.453700000 GHz
LVL
D1 1.67 dBm
D2 -4.33 dBm
F1
F2
Center 2.462 GHz
2.5 MHz/
Span 25 MHz
1 PK
VIEW

4.3.9 TEST RESULTS (C)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	28deg. C, 64%RH, 991hPa
TESTED BY: Hank Chung			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
6	2437	33.00	0.5	PASS

CH6


Ref 20.2 dBm
*Att 30 dB
*VBW 100 kHz
SWT 5 ms
*RBW 100 kHz
Delta 1 [T1]
-2.51 dB
33.000000000 MHz
Marker 1 [T1]
-3.02 dBm
2.420500000 GHz
LVL
20.2)ffset 1.2 dB
D1 1.24 dBm
D2 -4.76 dBm
F1
F2
Center 2.437 GHz
5 MHz/
Span 50 MHz
1 PK
VIEW

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 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..

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4.4.1 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.

4.4.2 DEVIATION FROM TEST STANDARD

No deviation

4.4.3 TEST SETUP

4.4.4 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.3 TEST RESULTS (A)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	28deg.C, 56%RH, 991hPa
TESTED BY: Eric Lee			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.10	30	PASS
6	2437	18.24	30	PASS
11	2462	18.22	30	PASS

4.4.4 TEST RESULTS (B)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	28deg.C, 56%RH, 991hPa
TESTED BY: Eric Lee			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.11	30	PASS
6	2437	18.31	30	PASS
11	2462	18.36	30	PASS

4.4.5 TEST RESULTS (C)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	28deg.C, 56%RH, 991hPa
TESTED BY: Eric Lee			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
6	2437	18.09	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	FSP 40	100035	April 14, 2004

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

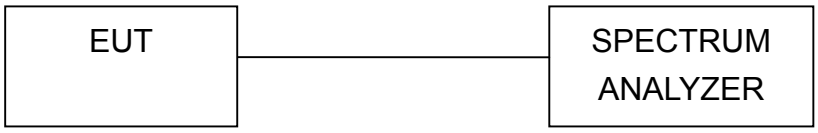
4.5.3 TEST PROCEDURE

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 CONDITION

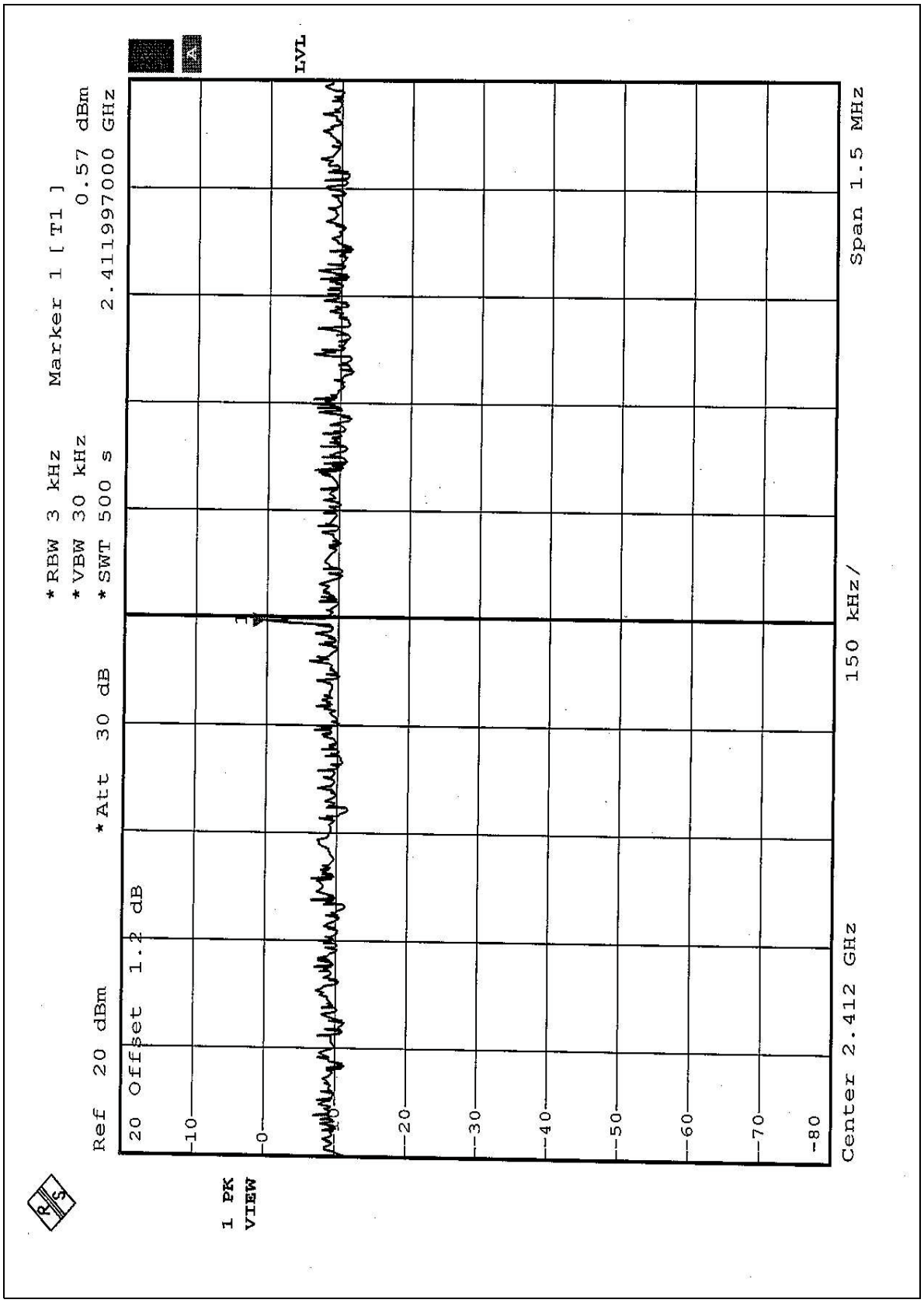
Same as Item 4.3.6

4.5.7 TEST RESULTS (A)

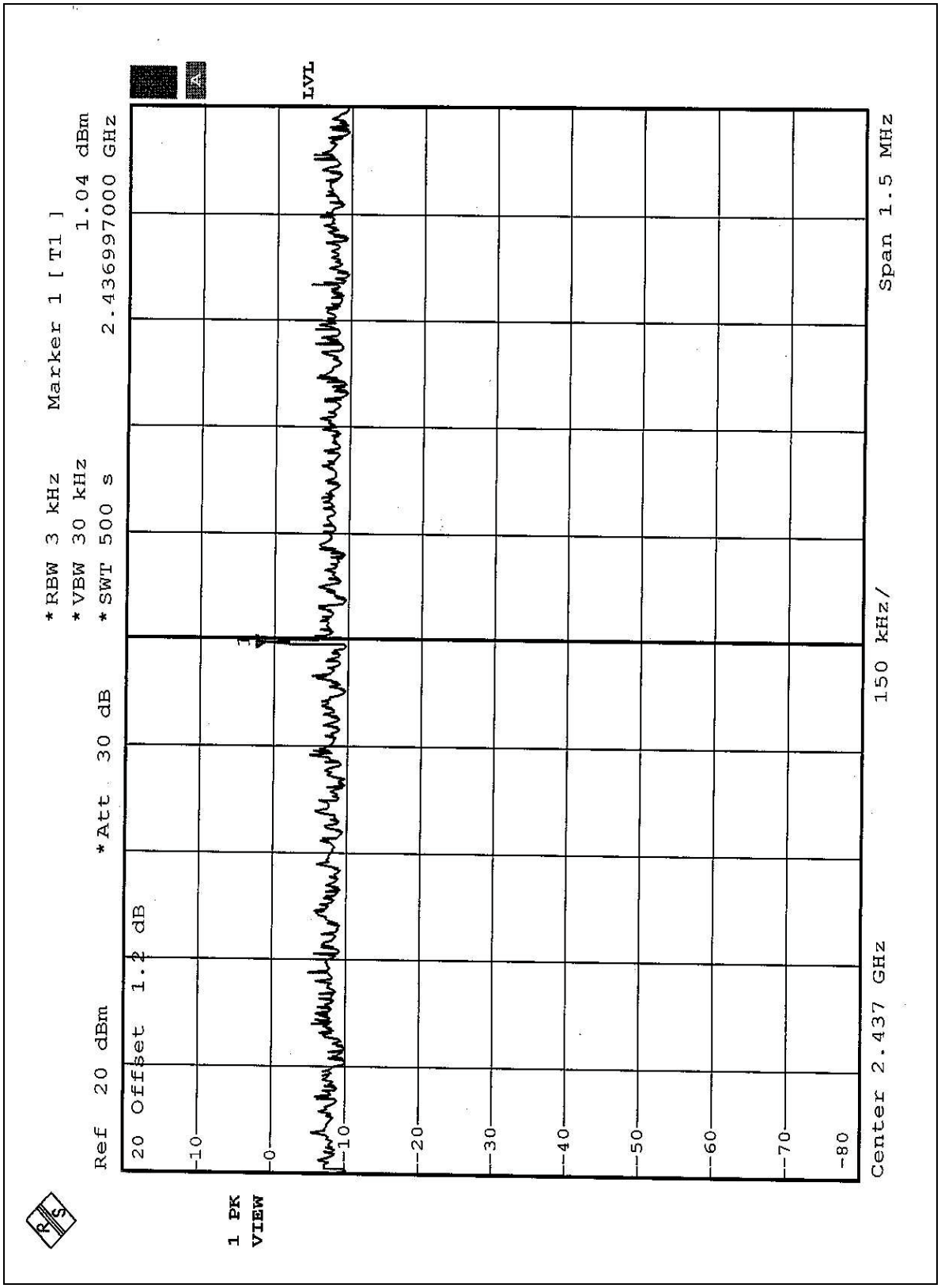
EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	28deg.C, 56%RH, 991hPa
TESTED BY: Hank Chung			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	0.57	8	PASS
6	2437	1.04	8	PASS
11	2462	0.20	8	PASS

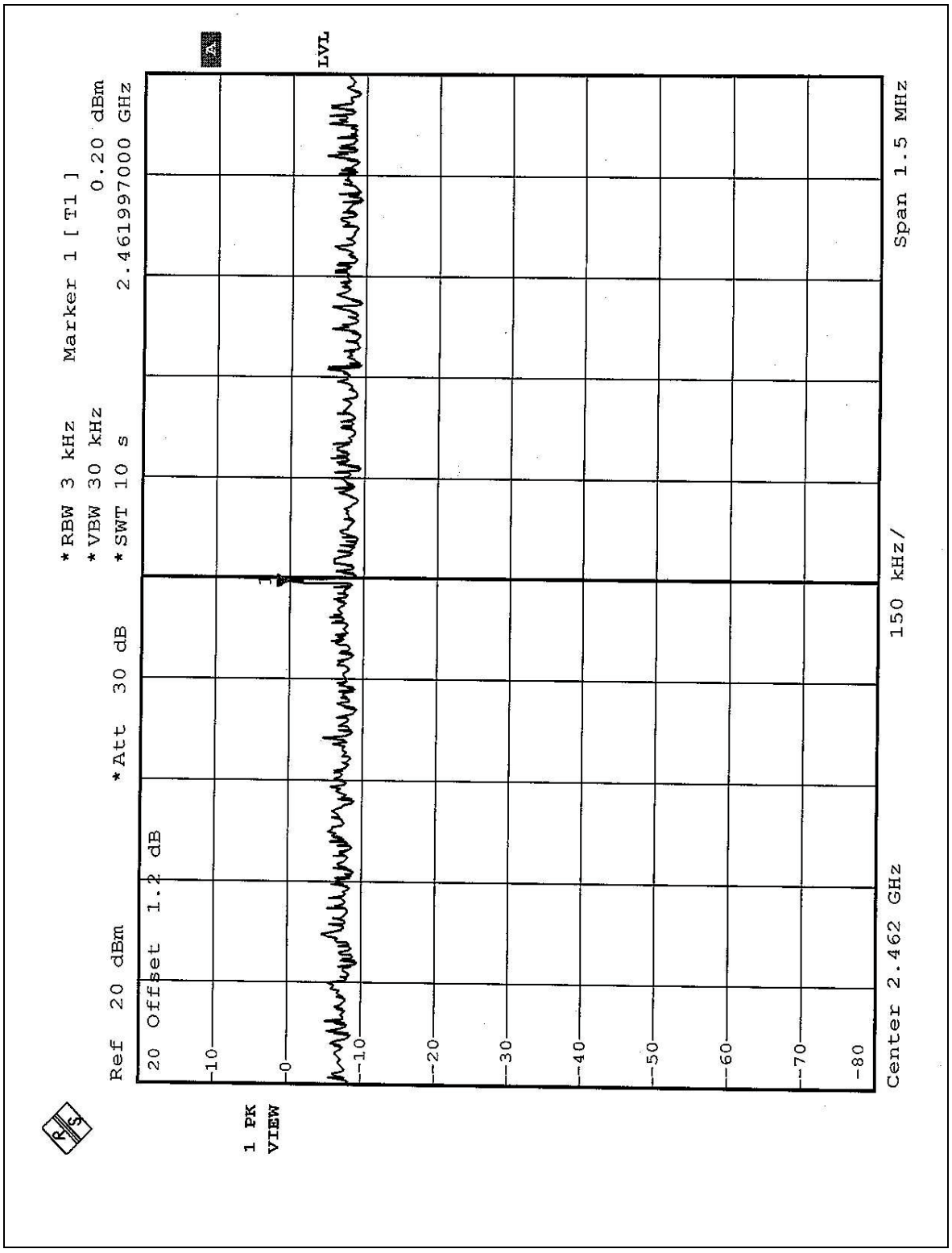
CH1


Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
0.57 dBm
2.411997000 GHz
LVL
Center 2.412 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH6


Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
1.04 dBm
2.436997000 GHz
LVL
Center 2.437 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH11

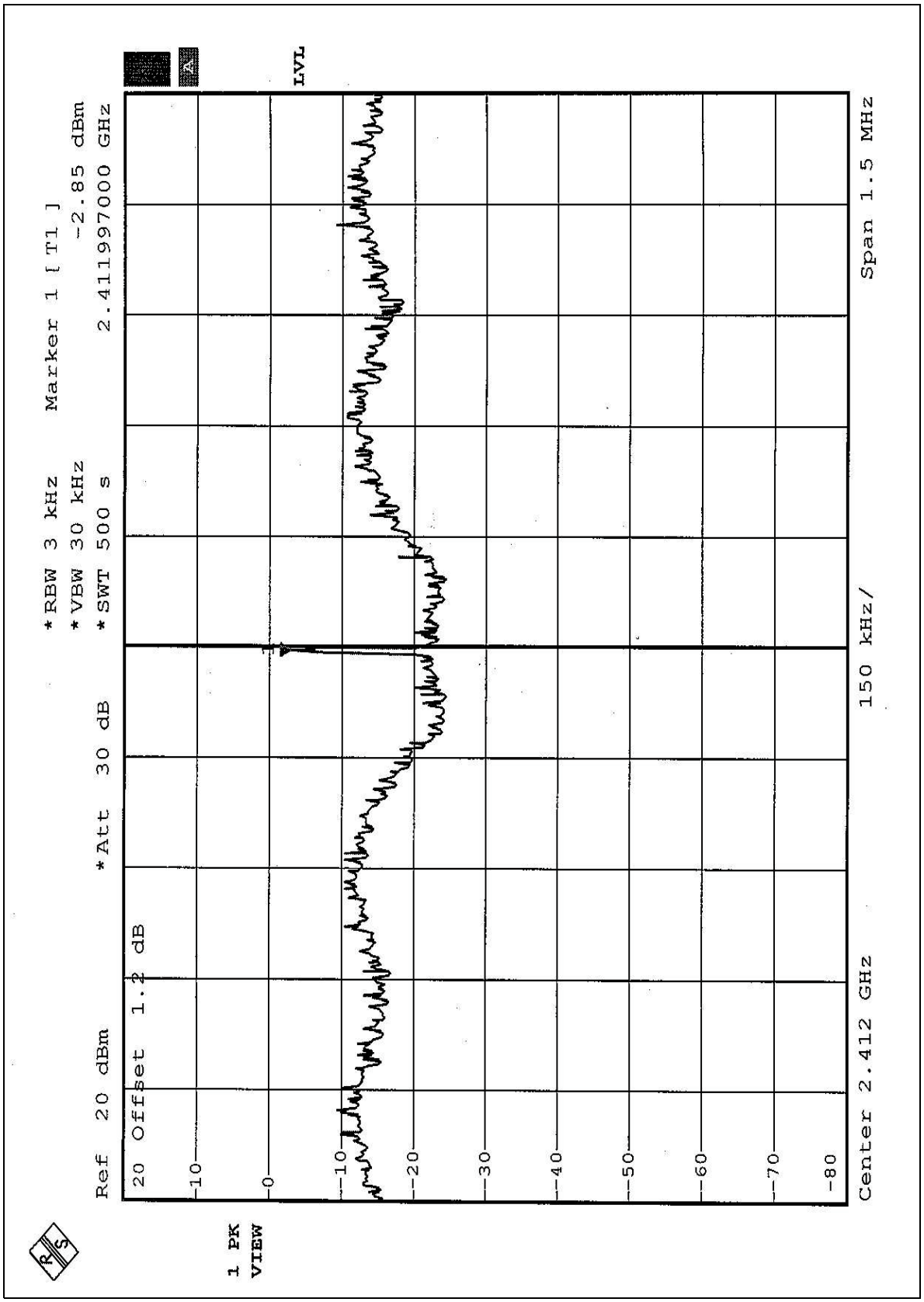

Marker 1 [T1]
0.20 dBm
2.46199700 0 GHz
*RBW 3 kHz
*VBW 30 kHz
*SWT 10 s
*Att 30 dB
Ref 20 dBm
20 Offset 1.2 dB
1 PK
VIEW
Center 2.462 GHz
150 kHz/
Span 1.5 MHz
LVL

4.5.8 TEST RESULTS (B)

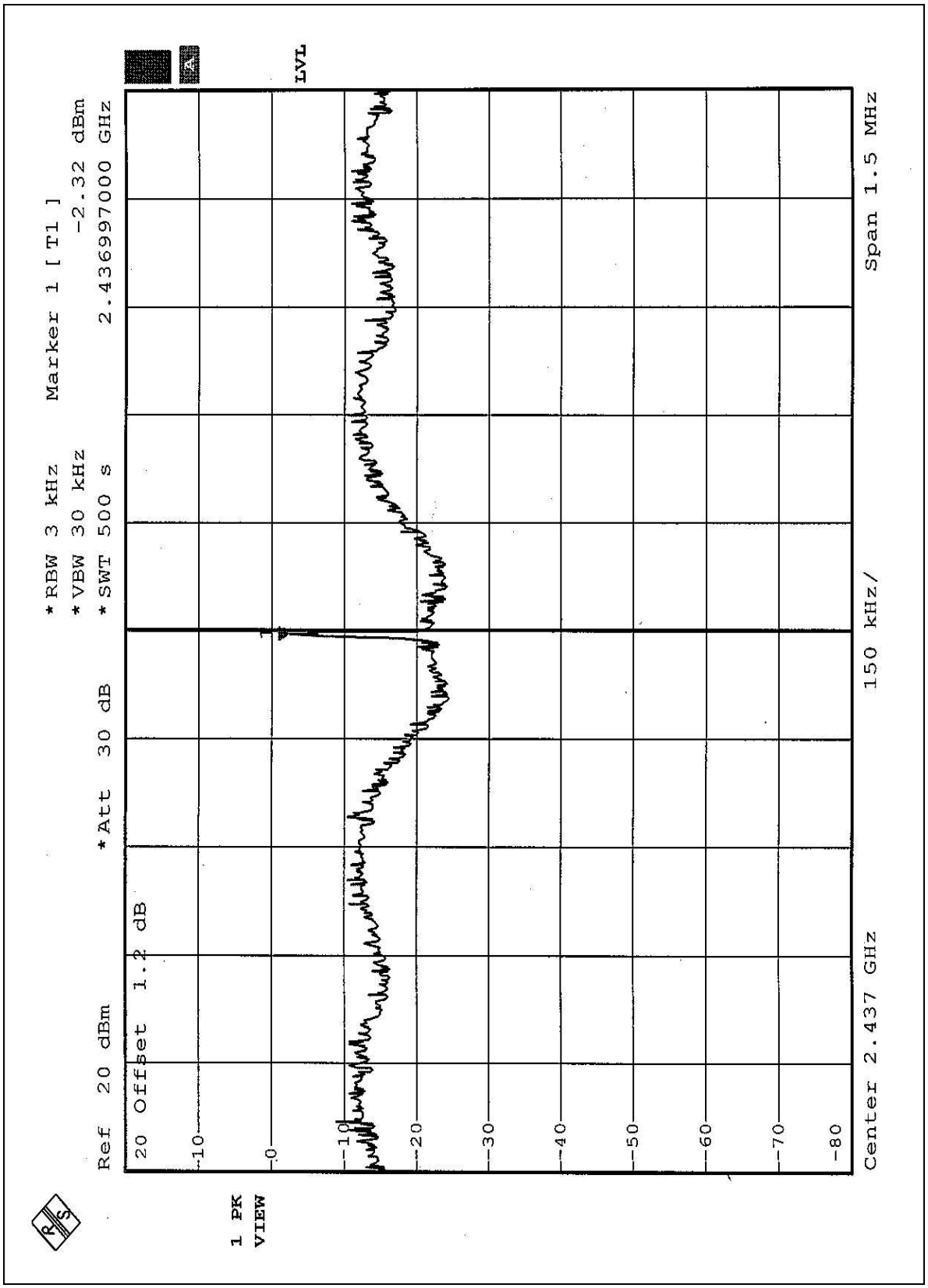
EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 58%RH, 991hPa
TESTED BY: Hank Chung			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-2.85	8	PASS
6	2437	-2.32	8	PASS
11	2462	-2.69	8	PASS

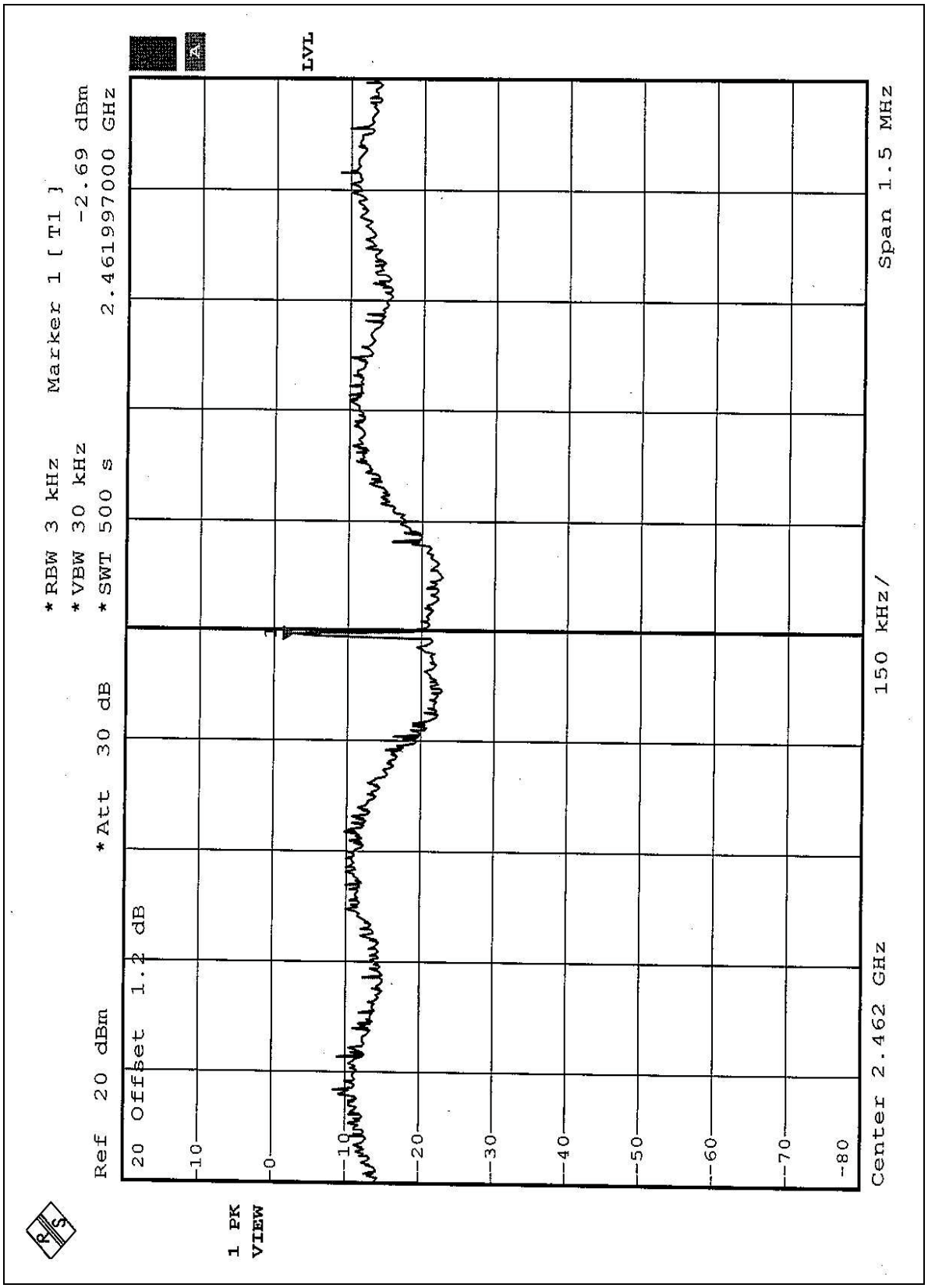
CH1


Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.85 dBm
2.411997000 GHz
LVL
Center 2.412 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH6


Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.32 dBm
2.436997000 GHz
LVL
Center 2.437 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH11

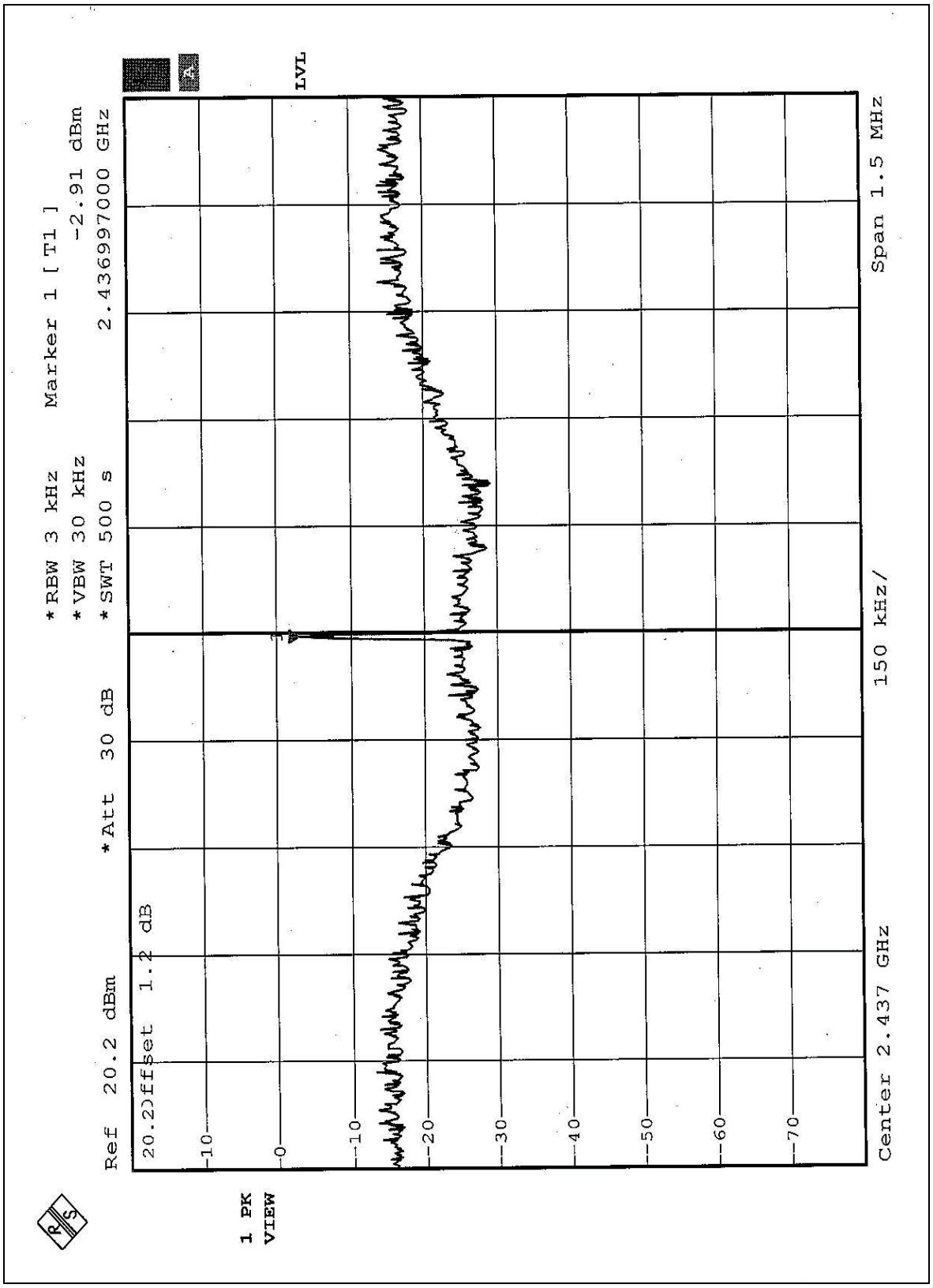

LVL
Marker 1 [T1]
-2.69 dBm
2.46199700 GHz
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
*Att 30 dB
Offset 1.2 dB
Ref 20 dBm
1 PK
VIEW
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

4.5.9 TEST RESULTS (C)

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	28deg. C, 64%RH, 991hPa
TESTED BY: Hank Chung			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
6	2437	-2.91	8	PASS

CH6


Marker 1 [T1]
-2.91 dBm
2.436997000 GHz
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
*Att 30 dB
Ref 20.2 dBm
20.2Offset 1.2 dB
1 PK
VIEW
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	8564EC	4208A00660	August 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.

4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 1MHz and 300Hz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

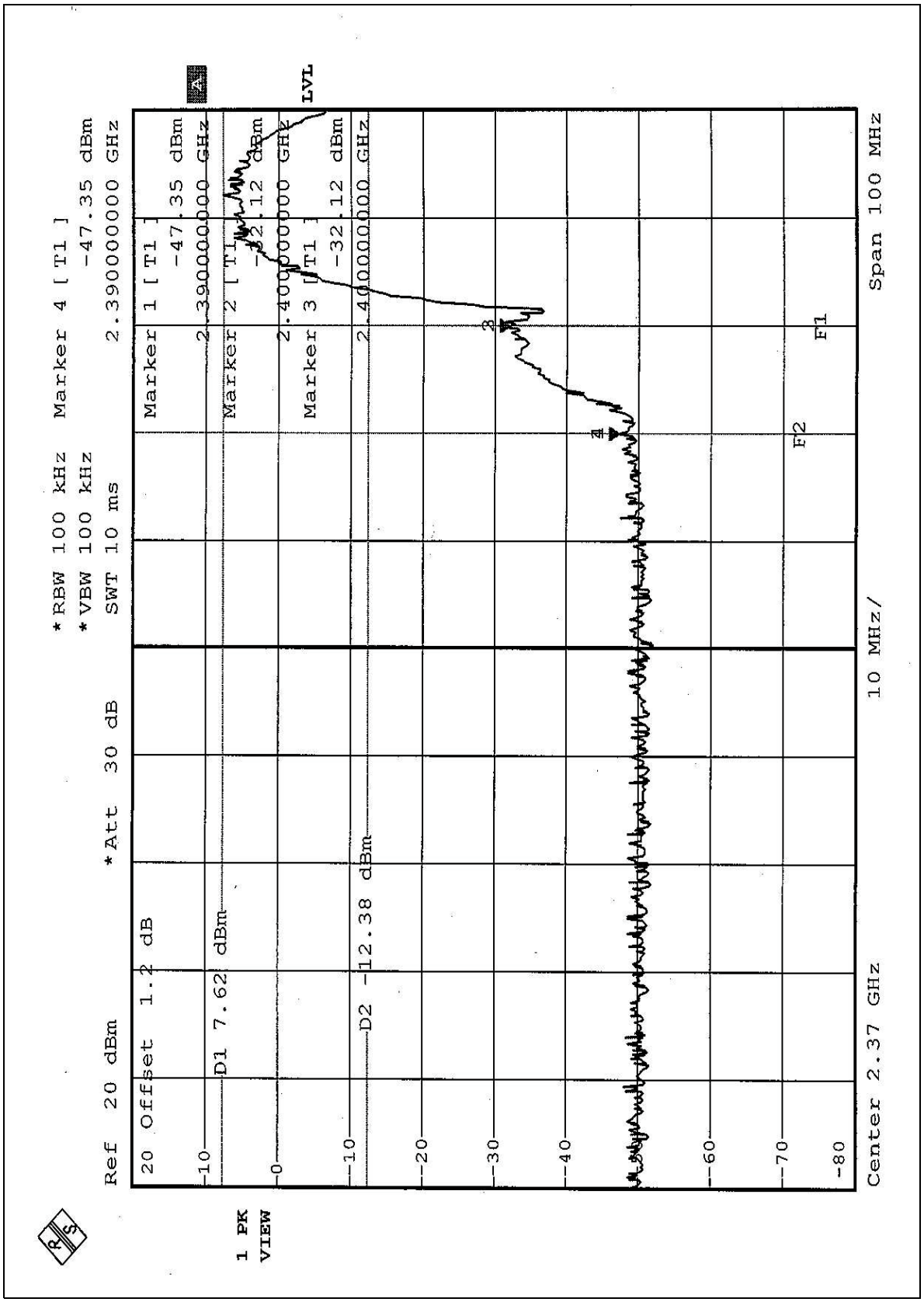
Same as Item 4.3.6

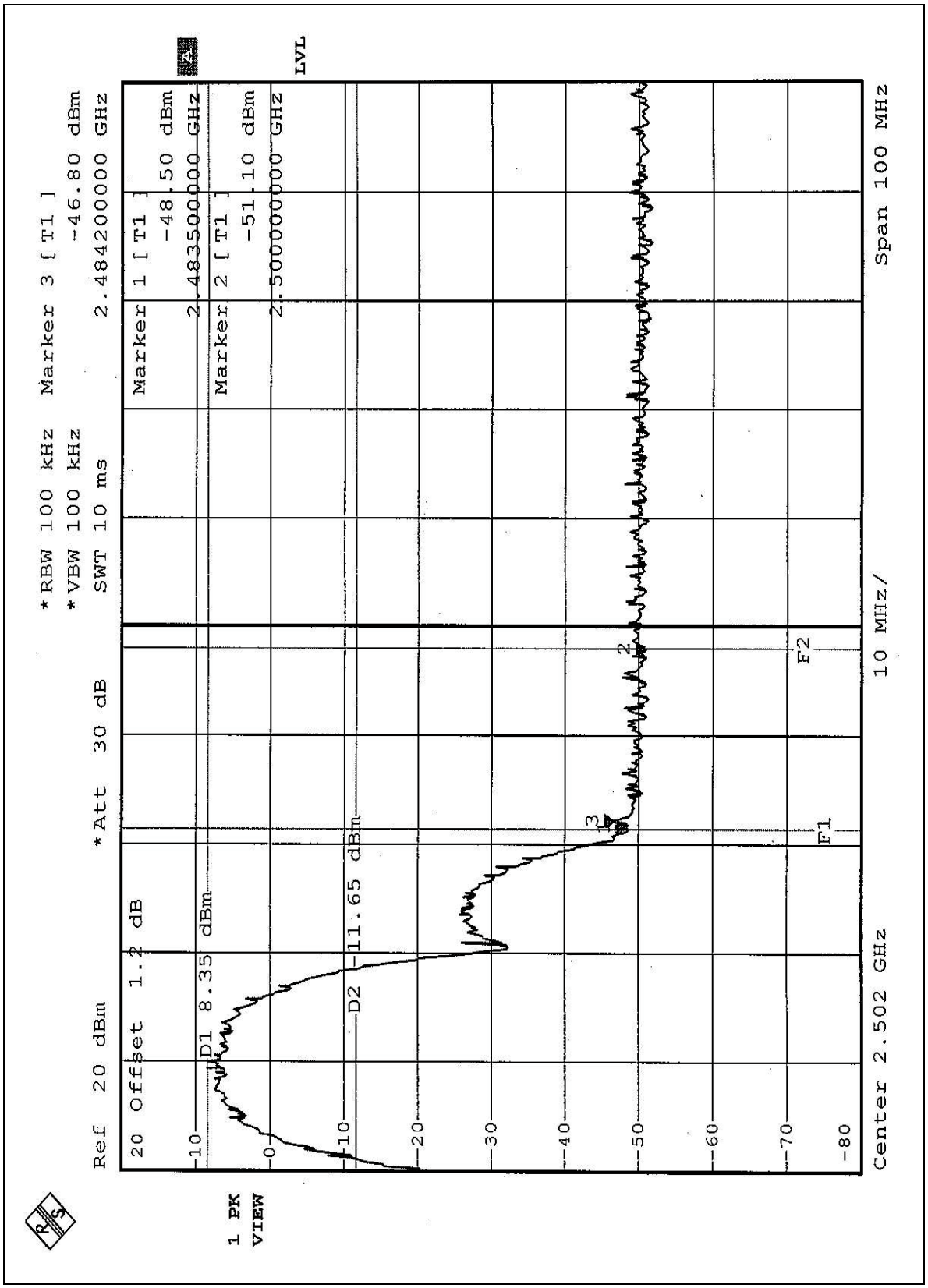
4.6.6 TEST RESULTS (A)

The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on the following 2 pages shows 54.97dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1at the item 4.2.8 is 102.9dBuV/m, so the maximum field strength in restrict band is 102.9-54.97=47.93dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of CCK technique on the following 2 pages shows 55.15dB delta between carrier maximum power and local maximum emission in restrict band (2.4842GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 103.90dBuV/m, so the maximum field strength in restrict band is 103.90-55.15=48.75dBuV/m which is under 54dBuV/m limit.


Ref 20 dBm
20 Offset 1.2 dB
D1 7.62 dBm
D2 -12.38 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 4 [T1]
-47.35 dBm
2.390000000 GHz
Marker 1 [T1]
-47.35 dBm
2.390000000 GHz
Marker 2 [T1]
-32.12 dBm
2.400000000 GHz
Marker 3 [T1]
-32.12 dBm
2.400000000 GHz
LVL
F2
F1
1 PK
VIEW
Center 2.37 GHz
10 MHz/
Span 100 MHz

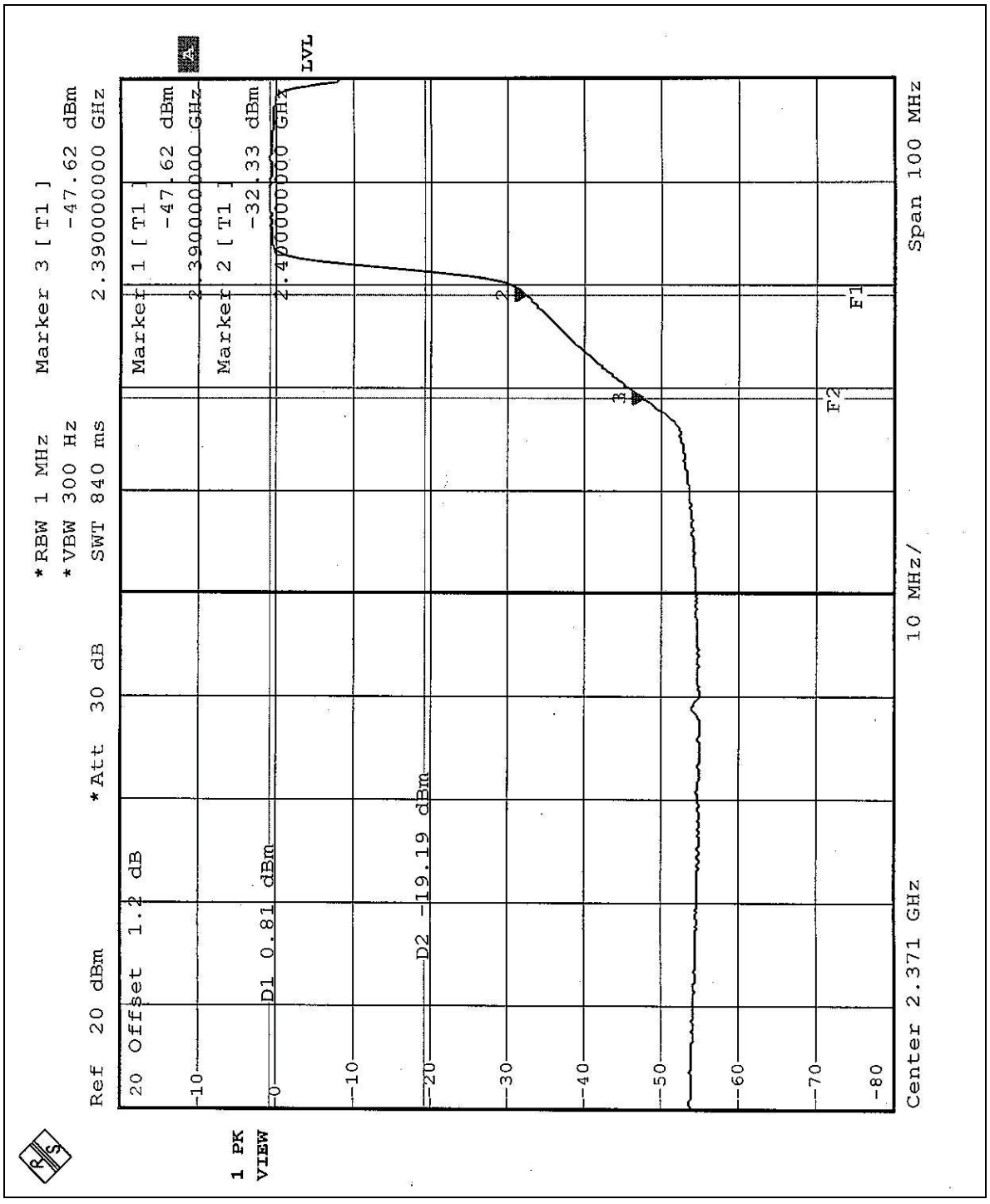

Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 3 [T1]
-46.80 dBm
2.484200000 GHz
Marker 1 [T1]
-48.50 dBm
2.483500000 GHz
Marker 2 [T1]
-51.10 dBm
2.500000000 GHz
LVL
D1 8.35 dBm
D2 -11.65 dBm
1 PK VIEW
Center 2.502 GHz
10 MHz/
Span 100 MHz
F1
F2

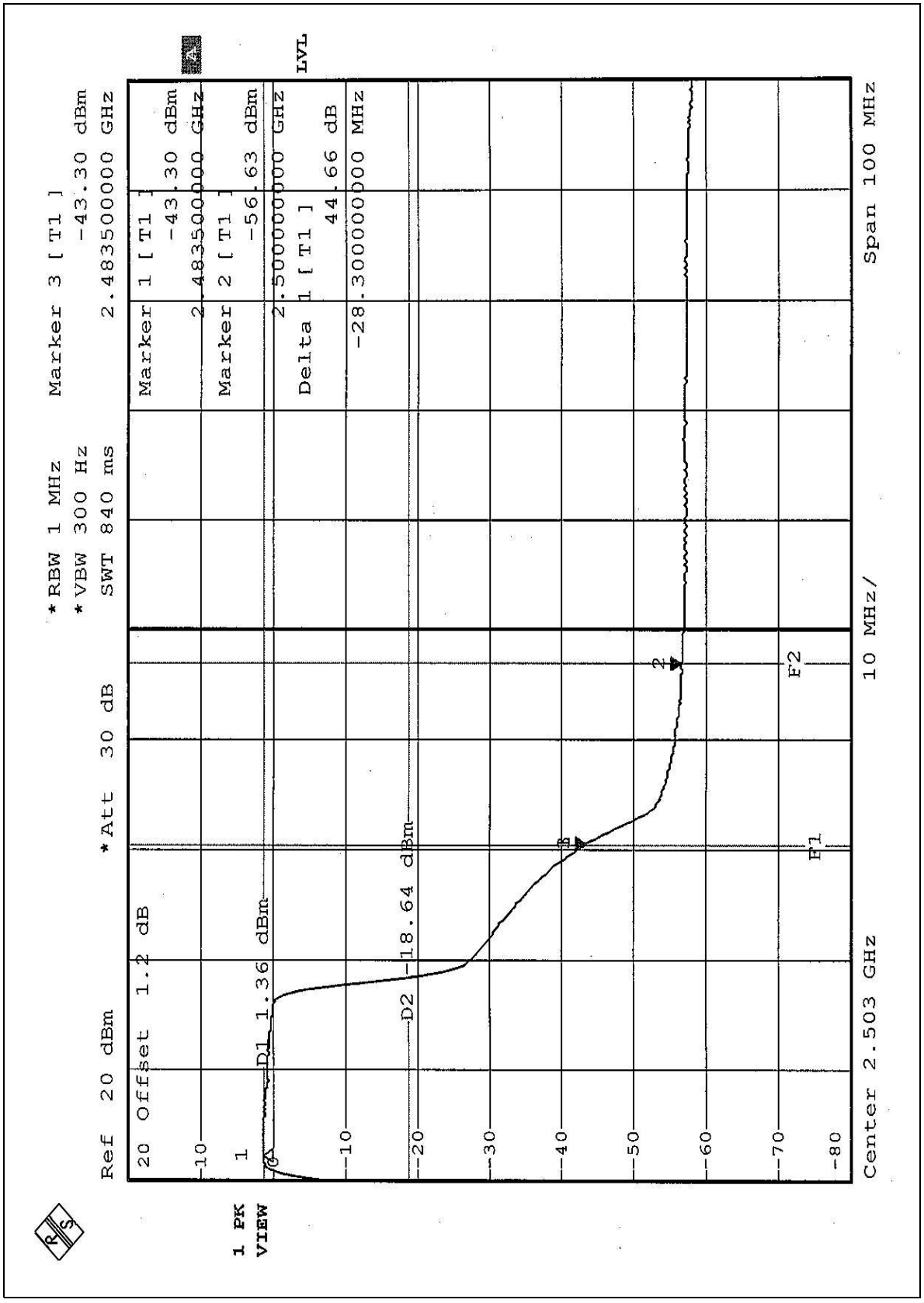
4.6.7 TEST RESULTS (B)

The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of OFDM technique on the following pages shows 48.43dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 96.6 BuV/m, so the maximum field strength in restrict band is 96.6-48.43=48.17dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of OFDM technique on the following pages shows 44.66dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 96.9 BuV/m, so the maximum field strength in restrict band is 96.9-44.66=52.24dBuV/m which is under 54dBuV/m limit.


*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 3 [T1]
-47.62 dBm
2.390000000 GHz
Marker 1 [T1]
-47.62 dBm
2.390000000 GHz
Marker 2 [T1]
-32.33 dBm
2.400000000 GHz
LVL
Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
1 PK
VIEW
D1 0.81 dBm
D2 -19.19 dBm
F1
F2
Center 2.371 GHz
10 MHz/
Span 100 MHz

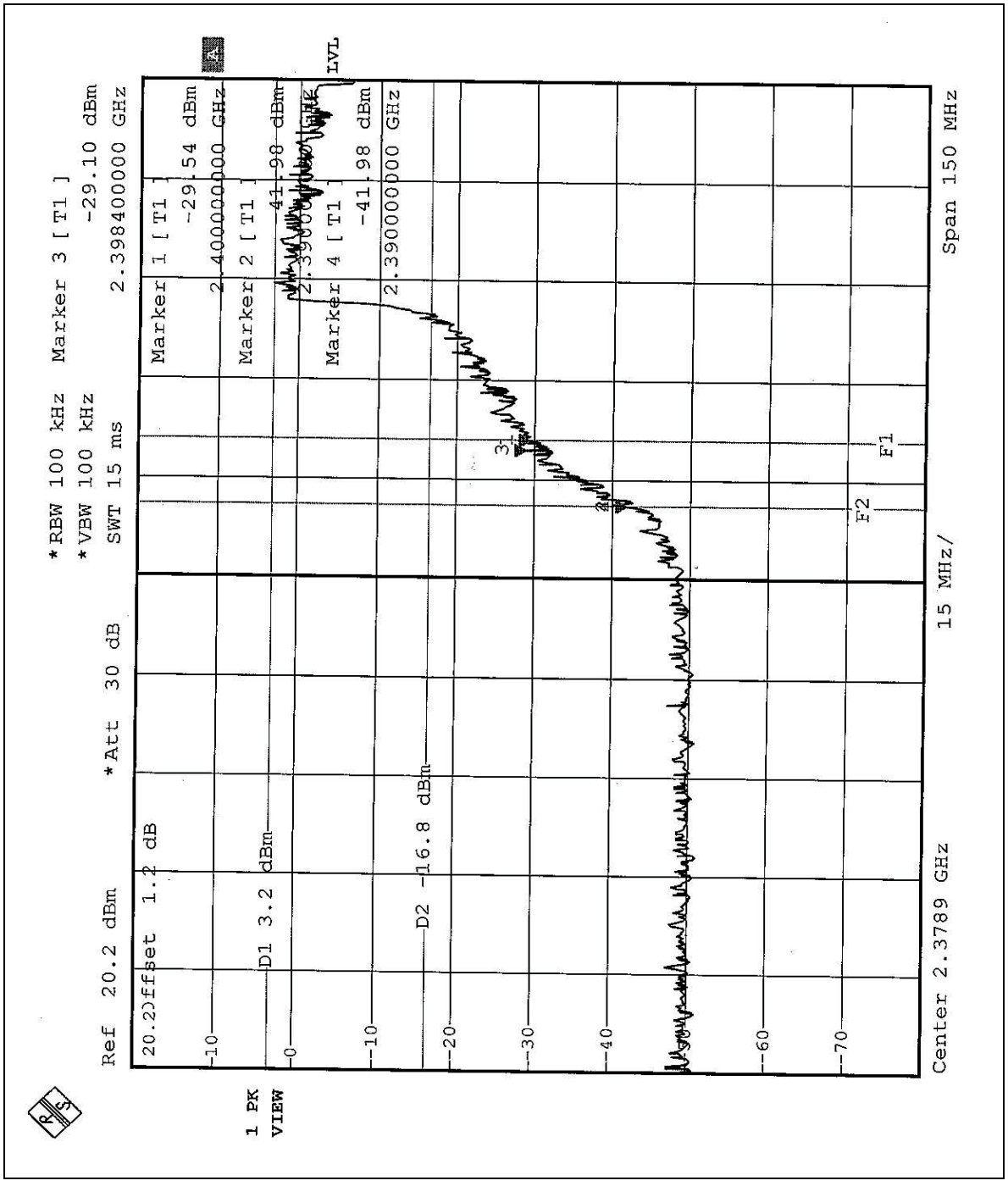

Ref 20 dBm
20 Offset 1.2 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 3 [T1]
-43.30 dBm
2.483500000 GHz
Marker 1 [T1]
-43.30 dBm
2.483500000 GHz
Marker 2 [T1]
-56.63 dBm
2.500000000 GHz
Delta 1 [T1]
44.66 dB
-28.300000000 MHz
LVL
1 PK
VIEW
D1 1.36 dBm
D2 -18.64 dBm
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz

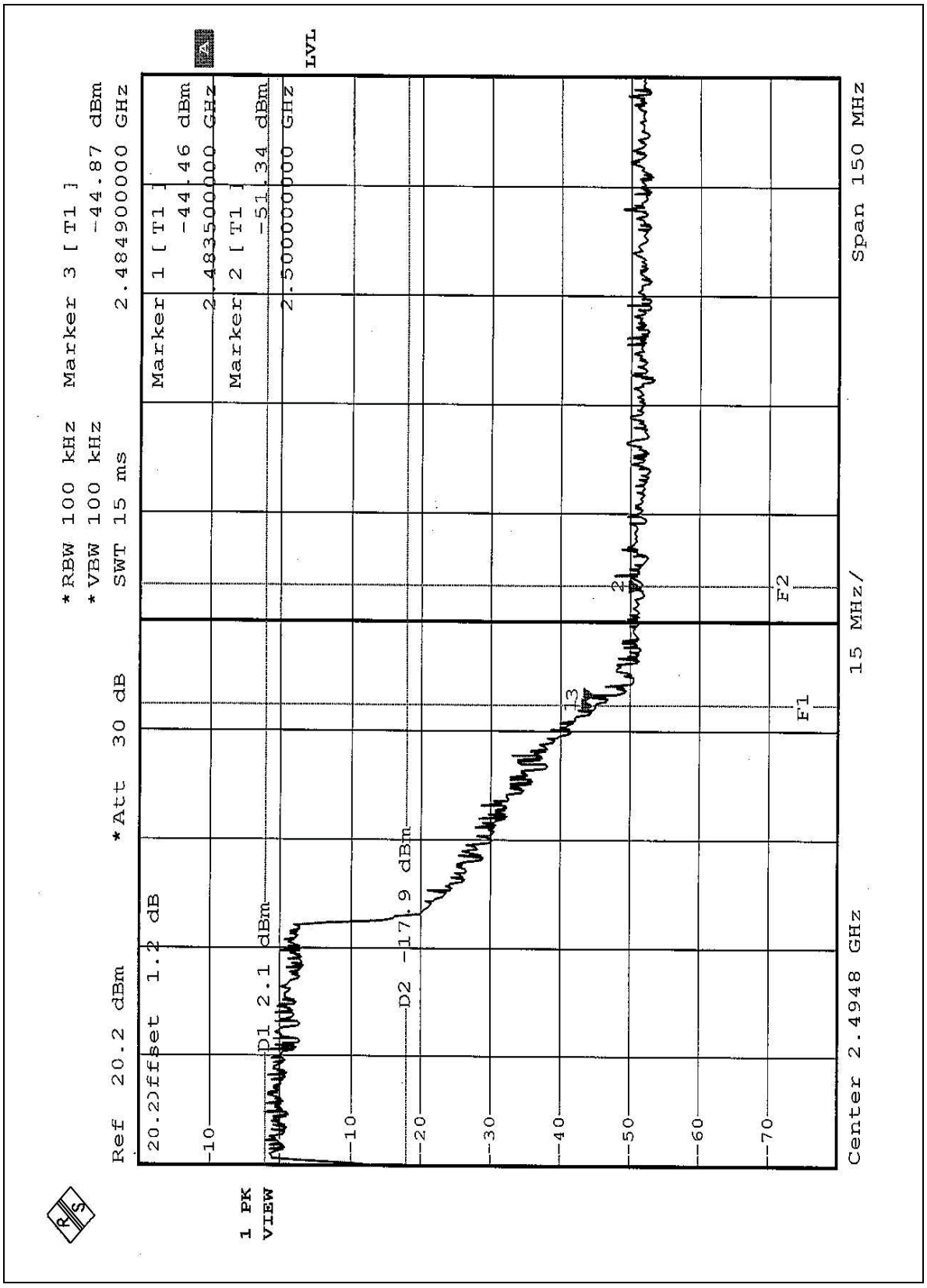
4.6.8 TEST RESULTS (C)

The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 45.12dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.10 is 95.3dBuV/m, so the maximum field strength in restrict band is 95.3-45.12=50.18dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 46.56dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.10 is 95.3dBuV/m, so the maximum field strength in restrict band is 95.3-46.56=48.74dBuV/m which is under 54dBuV/m limit.


*RBW 100 kHz
*VBW 100 kHz
SWT 15 ms
Marker 3 [T1]
-29.10 dBm
2.398400000 GHz
Ref 20.2 dBm
Offset 1.2 dB
*Att 30 dB
Marker 1 [T1]
-29.54 dBm
2.400000000 GHz
Marker 2 [T1]
-41.98 dBm
2.390000000 GHz
Marker 4 [T1]
-41.98 dBm
2.390000000 GHz
D1 3.2 dBm
D2 -16.8 dBm
1 PK
VIEW
Center 2.3789 GHz
15 MHz/
Span 150 MHz
F1
F2


Ref 20.2 dBm
20.2 Offset 1.2 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 15 ms
Marker 3 [T1]
-44.87 dBm
2.484900000 GHz
Marker 1 [T1]
-44.46 dBm
2.483500000 GHz
Marker 2 [T1]
-51.34 dBm
2.500000000 GHz
LVL
1 PK
VIEW
D1 2.1 dBm
D2 -17.9 dBm
Center 2.4948 GHz
15 MHz/
Span 150 MHz
F1
F2

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole antenna with R-SMA antenna connector. The maximum Gain of the antenna is 5dBi.

5. TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 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.

5.1.2 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. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 09, 2004
*ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19 2004
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19 2004
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER 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.

5.1.3 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.

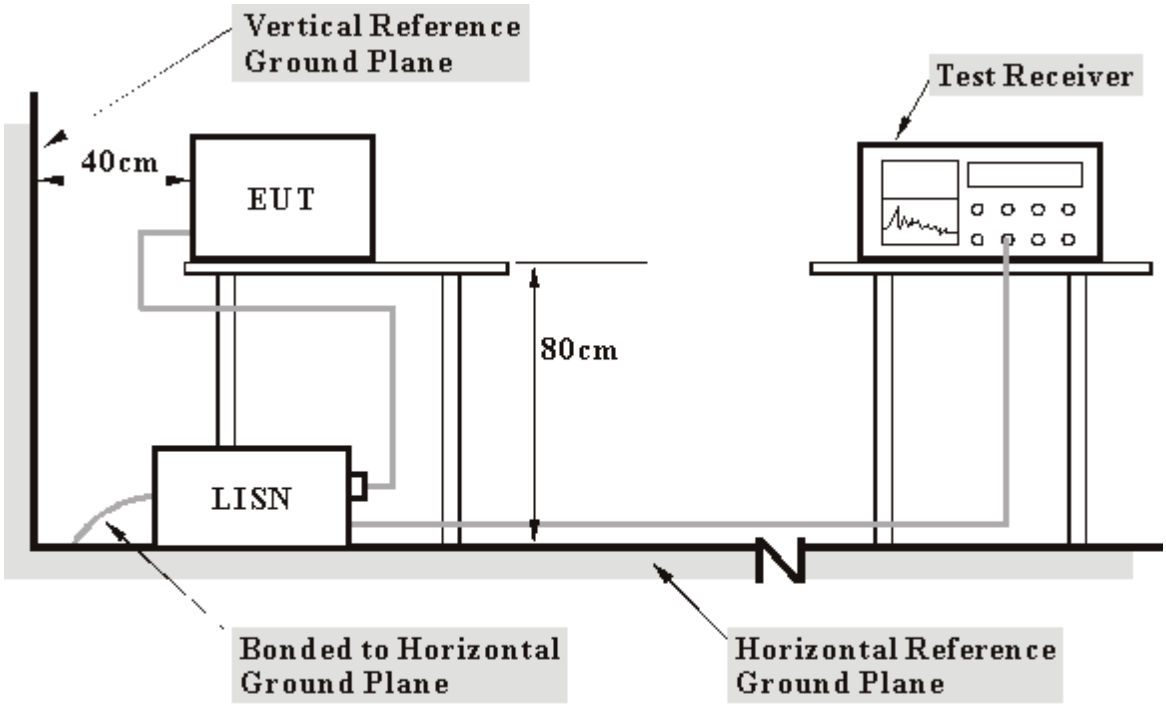
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 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.

5.1.6 EUT OPERATING CONDITIONS

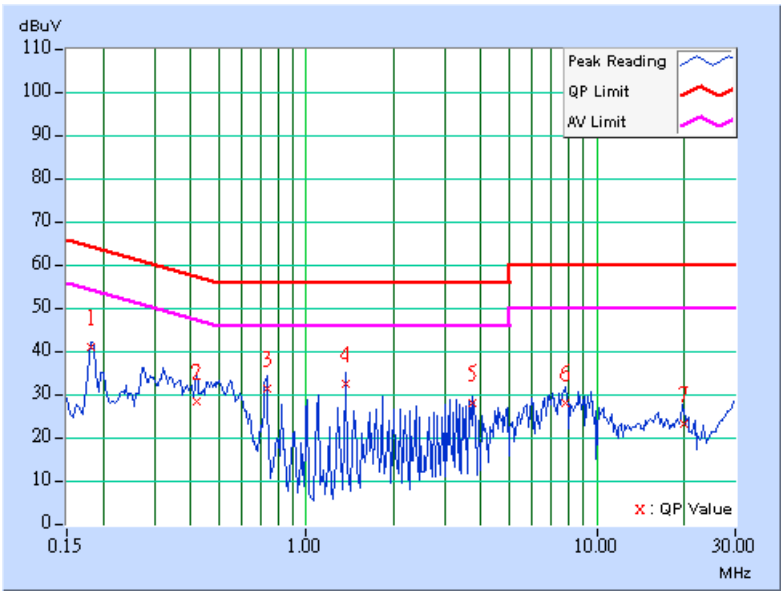
Same as 4.1.6.

5.1.7 TEST RESULTS

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	0.181	0.06	40.33	-	40.39	-	64.43	54.43	-24.04	-
2	0.420	0.06	27.94	-	28.00	-	57.46	47.46	-29.45	-
3	0.732	0.12	30.78	-	30.90	-	56.00	46.00	-25.10	-
4	1.371	0.17	32.03	-	32.20	-	56.00	46.00	-23.80	-
5	3.750	0.22	27.40	-	27.62	-	56.00	46.00	-28.38	-
6	7.773	0.34	27.67	-	28.01	-	60.00	50.00	-31.99	-
7	19.855	0.64	22.75	-	23.39	-	60.00	50.00	-36.61	-

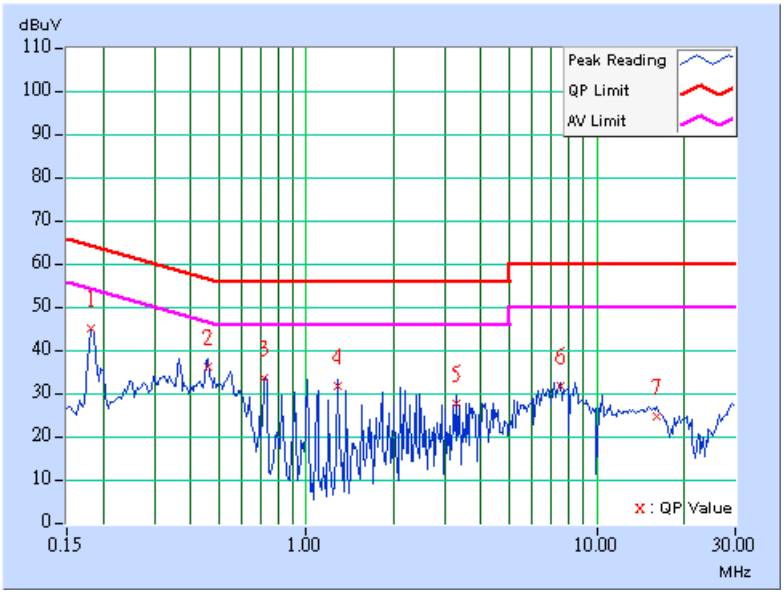
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

No	Freq.	Corr. Factor	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	**0.181**	**0.05**	**44.87**	**-**	**44.92**	**-**	**64.43**	**54.43**	**-19.51**	**-**
2	0.459	0.06	35.91	-	35.97	-	56.72	46.72	-20.75	-
3	0.716	0.11	33.25	-	33.36	-	56.00	46.00	-22.64	-
4	1.281	0.17	31.28	-	31.45	-	56.00	46.00	-24.55	-
5	3.293	0.20	27.21	-	27.41	-	56.00	46.00	-28.59	-
6	7.504	0.31	31.26	-	31.57	-	60.00	50.00	-28.43	-
7	16.102	0.49	24.50	-	24.99	-	60.00	50.00	-35.01	-

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.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	73.3
5250~5350	-27	73.3
5725~5825	-27 *note 1	73.3
	-17 *note 2	83.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E=\frac{1000000\sqrt{30P}}{3} \quad \mu V/m, \text{ where P is the eirp (Watts)}$$

5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8593E	3911A07465	July 07, 2004
* HP Preamplifier	8447D	2432A03504	June 10, 2004
HP Preamplifier	8449B	3008A01201	Dec. 11, 2004
* HP Preamplifier	8449B	3008A01292	Aug. 11, 2004
SCHAFFNER Tunable Dipole Antenna SCHWARZBECK Tunable Dipole Antenna	VHBA 9123 UHA 9105	459 977	Jun. 26, 2004
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
*Schwarzbeck Antenna	VULB9168	137	Apr. 03, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 30, 2004
*ADT. Turn Table	TT100	0306	NA
*ADT. Tower	AT100	0306	NA
*Software	ADT_Radiated_V 5.14	NA	NA
*TIMES RF cable	LL142	CABLE-CH6-01	Apr. 30, 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 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 Chamber No. 6.

5.2.4 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 10dB 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 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

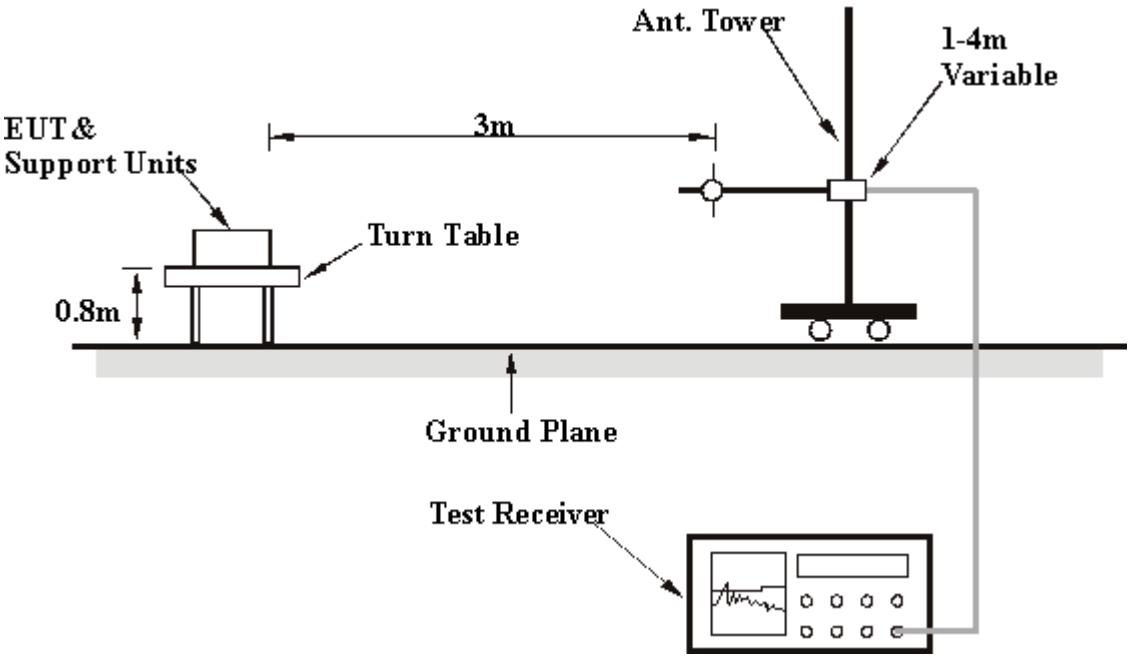
NOTE:

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.

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



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

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.2.8 TEST RESULTS

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
FREQUENCY RANGE	Below 1000MHz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Jun Wu		

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	64.99	29.49 QP	40.00	-10.51	3.00 H	211	16.96	12.54
2	111.64	28.87 QP	43.50	-14.63	4.00 H	106	17.40	11.47
3	197.17	26.75 QP	43.50	-16.75	1.75 H	112	15.37	11.38
4	243.83	27.01 QP	46.00	-18.99	1.00 H	67	13.75	13.25
5	288.54	24.87 QP	46.00	-21.13	1.25 H	247	10.04	14.83
6	500.42	26.22 QP	46.00	-19.78	1.75 H	28	6.20	20.02
7	799.78	34.38 QP	46.00	-11.62	1.00 H	79	8.76	25.62
8	850.32	30.44 QP	46.00	-15.56	1.00 H	187	4.30	26.15
9	928.08	35.74 QP	46.00	-10.26	1.25 H	76	8.28	27.46

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)
	66.93	31.27 QP	40.00	-8.73	1.00 V	103	18.96	12.30
2	111.64	29.22 QP	43.50	-14.28	1.00 V	112	17.75	11.47
3	245.77	23.63 QP	46.00	-22.37	1.50 V	136	10.33	13.29
4	288.54	24.66 QP	46.00	-21.34	1.00 V	184	9.84	14.83
5	430.44	24.70 QP	46.00	-21.30	1.50 V	151	6.02	18.68
6	793.95	35.16 QP	46.00	-10.84	2.00 V	187	9.57	25.59
7	830.88	30.05 QP	46.00	-15.95	1.50 V	37	4.11	25.94
8	865.87	28.67 QP	46.00	-17.33	1.00 V	346	2.21	26.46
9	930.02	35.59 QP	46.00	-10.41	1.50 V	124	8.11	27.48

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Normal Mode	**CHANNEL**	1
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
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)	Antenna Factor (dB)
1	5250.00	52.10 PK	73.30	-21.20	1.20 H	350	29.10	23.00
2	*5280.00	98.75 PK			1.20 H	356	75.75	23.00
2	*5280.00	90.31 AV			1.20 H	356	67.31	23.00
3	10560.00	49.96 PK	73.30	-23.34	1.14 H	360	22.74	27.22
4	#15840.00	49.32 PK	74.00	-24.68	1.25 H	13	18.22	31.10
4	#15840.00	39.98 AV	54.00	-14.02	1.25 H	13	8.88	31.10

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)	Antenna Factor (dB)
1	5250.00	60.50 PK	73.30	-12.80	1.20 V	150	35.50	25.00
2	*5280.00	106.52 PK			1.20 V	150	81.52	25.00
2	*5280.00	98.87 AV			1.20 V	150	73.87	25.00
3	10560.00	52.32 PK	73.30	-20.98	1.11 V	150	23.10	29.22
4	#15840.00	53.80 PK	74.00	-20.20	1.15 V	175	20.70	33.10
4	#15840.00	42.96 AV	54.00	-11.04	1.15 V	175	9.86	33.10

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Normal Mode	**CHANNEL**	3
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Eric 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)	Antenna Factor (dB)
1	*5320.00	101.0 PK			1.18 H	309	64.00	37.00
1	*5320.00	93.9 AV			1.18 H	309	56.90	37.00
2	#5350.00	55.3 PK	74.00	-18.70	1.24 H	333	18.20	37.00
2	#5350.00	45.9 AV	54.00	-8.10	1.24 H	333	8.90	37.00
3	#10640.00	51.3 PK	74.00	-22.70	1.52 H	1	5.00	46.30
3	#10640.00	42.2 AV	54.00	-11.80	1.52 H	1	-4.10	46.30
4	#15960.00	51.2 PK	74.00	-22.80	1.36 H	63	3.90	47.30
4	#15960.00	39.3 AV	54.00	-14.70	1.36 H	63	-8.00	47.30

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)	Antenna Factor (dB)
1	*5320.00	108.3 PK			1.49 V	154	71.30	37.00
1	*5320.00	100.2 AV			1.49 V	154	63.10	37.00
2	#5350.00	59.7 PK	74.00	-14.30	1.51 V	160	22.70	37.00
2	#5350.00	50.0 AV	54.00	-4.00	1.51 V	160	13.00	37.00
3	#10640.00	55.1 PK	74.00	-18.90	1.28 V	89	8.80	46.30
3	#10640.00	45.7 AV	54.00	-8.30	1.28 V	89	-0.60	46.30
4	#15960.00	53.2 PK	74.00	-20.80	1.68 V	59	5.30	47.90
4	#15960.00	43.2 AV	54.00	-10.80	1.68 V	59	-4.70	47.90

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Normal Mode	**CHANNEL**	4
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Eric 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	#5350.00	48.3 PK	74.00	-25.70	1.63 H	333	11.30	37.00
2	5715.00	63.5 PK	73.30	-9.80	1.54 H	24	26.00	37.50
3	5725.00	69.6 PK	83.30	-13.70	1.29 H	236	32.10	37.50
4	*5745.00	100.4 PK			1.36 H	2	62.90	37.60
4	*5745.00	91.3 AV			1.36 H	2	53.70	37.60
5	6450.00	53.5 PK	73.30	-19.80	1.47 H	69	14.70	38.80
6	#11490.00	56.3 PK	74.00	-17.70	1.41 H	357	5.00	51.30
6	#11490.00	47.5 AV	54.00	-6.50	1.41 H	357	-3.80	51.30
7	17235.00	55.6 PK	73.30	-17.70	1.04 H	102	3.90	51.70

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	#5350.00	48.3 PK	74.00	-25.70	1.63 H	333	11.30	37.00
2	5715.00	63.5 PK	73.30	-9.80	1.54 H	24	26.00	37.50
3	5725.00	69.6 PK	83.30	-13.70	1.29 H	236	32.10	37.50
4	*5745.00	100.4 PK			1.36 H	2	62.90	37.60
4	*5745.00	91.3 AV			1.36 H	2	53.70	37.60
5	6450.00	53.5 PK	73.30	-19.80	1.47 H	69	14.70	38.80
6	#11490.00	56.3 PK	74.00	-17.70	1.41 H	357	5.00	51.30
6	#11490.00	47.5 AV	54.00	-6.50	1.41 H	357	-3.80	51.30
7	17235.00	55.6 PK	73.30	-17.70	1.04 H	102	3.90	51.70

NOTE:

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.
6. "#"The radiated frequency falling in the restricted band.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Normal Mode	**CHANNEL**	7
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Eric 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	#5350.00	47.9 PK	74.00	-26.10	1.25 H	22	10.90	37.00
2	*5805.00	100.7 PK			1.39 H	66	63.00	37.70
2	*5805.00	91.3 AV			1.39 H	66	53.60	37.70
3	5825.00	70.7 PK	83.30	-12.60	1.31 H	293	33.00	37.70
4	5835.00	62.3 PK	73.30	-11.00	1.54 H	24	24.60	37.70
5	6450.00	55.2 PK	73.30	-18.10	1.09 H	111	16.40	38.80
6	#11610.00	55.9 PK	74.00	-18.10	1.66 H	62	4.90	51.00
6	#11610.00	46.9 AV	54.00	-7.10	1.66 H	62	-4.10	51.00
7	17415.00	57.8 PK	73.30	-15.50	1.00 H	316	4.20	53.60

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	#5350.00	48.0 PK	74.00	-26.00	1.64 V	26	10.90	37.00
2	*5805.00	110.6 PK			1.20 V	352	72.90	37.70
2	*5805.00	102.3 AV			1.20 V	352	64.70	37.70
3	5825.00	78.6 PK	83.30	-4.70	1.57 V	84	40.90	37.70
4	5835.00	69.6 PK	73.30	-3.70	1.10 V	165	31.90	37.70
5	6450.00	63.1 PK	73.30	-10.20	1.47 V	69	24.30	38.80
6	#11610.00	61.2 PK	74.00	-12.80	1.64 V	245	10.20	51.00
6	**#11610.00**	**52.4 AV**	**54.00**	**-1.60**	**1.64 V**	**245**	**1.40**	**51.00**
7	17415.00	63.0 PK	73.30	-10.30	1.65 V	326	9.50	53.60

NOTE:

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.
6. "#"The radiated frequency falling in the restricted band.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Turbo Mode	**CHANNEL**	1
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Eric 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)
1	*5290.00	97.0 PK			1.38 H	57	60.00	37.00
1	*5290.00	88.3 AV			1.38 H	57	51.20	37.00
2	#5350.00	52.9 PK	74.00	-21.10	1.25 H	45	15.80	37.00
2	#5350.00	45.6 AV	54.00	-8.40	1.25 H	45	8.50	37.00
3	6550.00	42.6 PK	73.30	-30.70	1.41 H	301	3.50	39.10
4	10580.00	50.8 PK	73.30	-22.50	1.08 H	278	5.10	45.70
5	#15870.00	50.5 PK	74.00	-23.50	1.11 H	208	2.90	47.60

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)
1	*5290.00	105.1 PK			1.10 V	143	68.10	37.00
1	*5290.00	97.0 AV			1.10 V	143	60.00	37.00
2	#5350.00	59.7 PK	74.00	-14.30	1.33 V	6	22.60	37.00
2	#5350.00	50.2 AV	54.00	-3.80	1.33 V	6	13.20	37.00
3	6550.00	48.8 PK	73.30	-24.50	1.56 V	326	9.70	39.10
4	10580.00	54.7 PK	73.30	-18.60	1.64 V	78	9.00	45.70
5	#15870.00	53.7 PK	74.00	-20.30	1.05 V	98	6.10	47.60

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Turbo Mode	**CHANNEL**	2
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Eric 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)
1	#5350.00	51.7 PK	74.00	-22.30	1.29 H	54	14.70	37.00
1	#5350.00	43.2 AV	54.00	-10.80	1.29 H	54	6.20	37.00
2	5715.00	61.7 PK	73.30	-11.60	1.68 H	57	24.20	37.50
3	5725.00	69.1 PK	83.30	-14.20	1.53 H	62	31.60	37.50
4	*5760.00	98.5 PK			1.07 H	66	60.90	37.60
4	*5760.00	88.6 AV			1.07 H	66	51.00	37.60
5	6370.00	43.1 PK	73.30	-30.20	1.36 H	201	4.50	38.70
6	#11520.00	57.2 PK	74.00	-16.80	1.13 H	99	5.90	51.30
6	#11520.00	47.2 AV	54.00	-6.80	1.13 H	99	-4.10	51.30
7	17280.00	55.2 PK	73.30	-18.10	1.07 H	96	3.00	52.20

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)
1	#5350.00	57.7 PK	74.00	-16.30	1.21 V	9	20.60	37.00
1	#5350.00	47.6 AV	54.00	-6.40	1.21 V	9	10.50	37.00
2	5715.00	70.6 PK	73.30	-2.70	1.17 V	135	33.10	37.50
3	5725.00	78.8 PK	83.30	-4.50	1.47 V	45	41.30	37.50
4	*5760.00	105.6 PK			1.47 V	45	68.00	37.60
4	*5760.00	97.8 AV			1.47 V	45	60.20	37.60
5	6370.00	47.4 PK	73.30	-25.90	1.47 V	54	8.70	38.70
6	#11520.00	61.2 PK	74.00	-12.80	1.63 V	69	10.00	51.30
6	#11520.00	51.6 AV	54.00	-2.40	1.63 V	69	0.30	51.30
7	17280.00	59.2 PK	73.30	-14.10	1.02 V	213	7.10	52.20

NOTE:

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.

. 6."#"The radiated frequency falling in the restricted band.

EUT	D-Link Air Premier AG 11a/11g Dualband Wireless 108Mbps PCI Adapter	**MODEL**	DWL-AG520
MODE	Turbo Mode	**CHANNEL**	3
FREQUENCY RANGE	Above 1000 MHz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 56%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Eric 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)
1	#5350.00	51.2 PK	74.00	-22.80	1.15 H	20	14.20	37.00
1	#5350.00	40.4 AV	54.00	-13.60	1.15 H	20	3.40	37.00
2	*5800.00	98.7 PK			1.54 H	274	61.00	37.70
2	*5800.00	87.9 AV			1.54 H	274	50.20	37.70
3	5825.00	72.0 PK	83.30	-11.30	1.67 H	8	34.30	37.70
4	5835.00	62.1 PK	73.30	-11.20	1.07 H	77	24.40	37.70
5	#11600.00	59.0 PK	74.00	-15.00	1.37 H	120	8.00	51.00
5	#11600.00	50.1 AV	54.00	-3.90	1.37 H	120	-0.90	51.00
6	17400.00	60.3 PK	73.30	-13.00	1.74 H	55	6.90	53.40

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)
1	#5350.00	58.0 PK	74.00	-16.00	1.09 V	59	21.00	37.00
1	#5350.00	47.0 AV	54.00	-7.00	1.09 V	59	10.00	37.00
2	*5800.00	106.2 PK			1.53 V	262	68.50	37.70
2	*5800.00	97.3 AV			1.53 V	262	59.60	37.70
3	5825.00	79.7 PK	83.30	-3.60	1.50 V	222	42.00	37.70
4	5835.00	70.6 PK	73.30	-2.70	1.20 V	135	32.90	37.70
5	#11600.00	61.1 PK	74.00	-12.90	1.25 V	24	10.10	51.00
5	#11600.00	52.1 AV	54.00	-1.90	1.25 V	24	1.10	51.00
6	17400.00	61.5 PK	73.30	-11.80	1.03 V	6	8.10	53.40

NOTE:

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.
6. "#"The radiated frequency falling in the restricted band.

5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

NOTE: Where B is the 26dB emission bandwidth in MHz.

5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	August 12, 2004
SPECTRUM ANALYZER	8564EC	4208A00660	Nov. 20, 2003

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