



FCC TEST REPORT

REPORT NO.: RF921005H02A

MODEL NO.: 3CRWE454A72

RECEIVED: Oct. 22, 2003

TESTED: Nov. 12 to Dec. 3, 2003

APPLICANT: Arcadyan Technology Corporation

ADDRESS: 4F, No. 9, Park Avenue II, Science-based Industrial
Park, Hsinchu 300, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien,
Taiwan, R.O.C.

This test report consists of 122 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by NVLAP or any government agencies. The test results in the report only apply to the tested sample.



0536

ILAC MRA



Lab Code: 200376-0



Table of Contents

1.	CERTIFICATION.....	5
2.	SUMMARY OF TEST RESULTS	6
3.	GENERAL INFORMATION	8
3.1	GENERAL DESCRIPTION OF EUT	8
3.2	DESCRIPTION OF TEST MODES	10
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	11
3.4	DESCRIPTION OF SUPPORT UNITS	12
4.	TEST TYPES AND RESULTS (For Part 802.11b)	13
4.1	CONDUCTED EMISSION MEASUREMENT.....	13
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT.....	13
4.1.2	TEST INSTRUMENTS.....	13
4.1.3	TEST PROCEDURES	14
4.1.4	DEVIATION FROM TEST STANDARD	14
4.1.5	TEST SETUP.....	15
4.1.6	EUT OPERATING CONDITIONS	15
4.1.7	TEST RESULTS (A)- DSSS	16
4.1.8	TEST RESULTS (B)- OFDM	18
4.2	Radiated Emission Measurement	20
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT.....	20
4.2.2	TEST INSTRUMENTS.....	21
4.2.3	TEST PROCEDURES	22
4.2.4	DEVIATION FROM TEST STANDARD	22
4.2.5	TEST SETUP	23
4.2.6	EUT OPERATING CONDITIONS	23
4.2.7	TEST RESULTS.....	24
4.3	6dB BANDWIDTH MEASUREMENT.....	31
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT.....	31
4.3.2	TEST INSTRUMENTS.....	31
4.3.3	TEST PROCEDURE	32
4.3.4	DEVIATION FROM TEST STANDARD	32
4.3.5	TEST SETUP	32
4.3.6	EUT OPERATING CONDITIONS	32
4.3.7	TEST RESULTS (A).....	33
4.3.8	TEST RESULTS (B).....	37
4.4	MAXIMUM PEAK OUTPUT POWER.....	41
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT.....	41
4.4.2	INSTRUMENTS	41
4.4.3	TEST PROCEDURES	42
4.4.4	TEST SETUP	42
4.4.5	EUT OPERATING CONDITIONS	42
4.4.6	TEST RESULTS (A).....	43



4.4.7	TEST RESULTS (B).....	43
4.5	POWER SPECTRAL DENSITY MEASUREMENT.....	44
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT.....	44
4.5.2	TEST INSTRUMENTS.....	44
4.5.3	TEST PROCEDURE	45
4.5.4	DEVIATION FROM TEST STANDARD	45
4.5.5	TEST SETUP	45
4.5.6	EUT OPERATING CONDITION.....	45
4.5.7	TEST RESULTS(A).....	46
4.5.8	TEST RESULTS(B).....	50
4.6	BAND EDGES MEASUREMENT	51
4.6.1	LIMITS OF BAND EDGES MEASUREMENT.....	51
4.6.2	TEST INSTRUMENTS.....	51
4.6.3	TEST PROCEDURE	51
4.6.4	DEVIATION FROM TEST STANDARD	51
4.6.5	EUT OPERATING CONDITION.....	51
4.6.6	TEST RESULTS (A).....	51
4.6.7	TEST RESULTS (B).....	51
4.7	ANTENNA REQUIREMENT.....	51
4.7.1	STANDARD APPLICABLE	51
4.7.2	ANTENNA CONNECTED CONSTRUCTION.....	51
5.	TEST TYPES AND RESULTS (For part 802.11a).....	51
5.1	CONDUCTED EMISSION MEASUREMENT.....	51
5.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT.....	51
5.1.2	TEST INSTRUMENTS.....	51
5.1.3	TEST PROCEDURES	51
5.1.4	DEVIATION FROM TEST STANDARD	51
5.1.5	TEST SETUP.....	51
5.1.6	EUT OPERATING CONDITIONS	51
5.1.7	TEST RESULTS.....	51
5.2	Radiated Emission Measurement	51
5.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT.....	51
5.2.2	LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS	51
5.2.3	TEST INSTRUMENTS.....	51
5.2.4	TEST PROCEDURES	51
5.2.5	DEVIATION FROM TEST STANDARD	51
5.2.6	TEST SETUP	51
5.2.7	EUT OPERATING CONDITIONS	51
5.2.8	TEST RESULTS.....	51
5.2.9	TEST RESULTS.....	51
5.3	Peak transmit power MEASUREMENT.....	51
5.3.1	LIMITS OF PEAK TRANSMIT POWER MEASUREMENT.....	51
5.3.2	TEST INSTRUMENTS.....	51
5.3.3	TEST PROCEDURE	51



5.3.4	DEVIATION FROM TEST STANDARD	51
5.3.5	TEST SETUP.....	51
5.3.6	EUT OPERATING CONDITIONS	51
5.3.7	TEST RESULTS.....	51
5.4	Peak power EXCURSION MEASUREMENT.....	51
5.4.1	LIMITS OF PEAK POWER EXCURSION MEASUREMENT.....	51
5.4.2	TEST INSTRUMENTS.....	51
5.4.3	TEST PROCEDURE	51
5.4.4	DEVIATION FROM TEST STANDARD	51
5.4.5	TEST SETUP.....	51
5.4.6	EUT OPERATING CONDITIONS	51
5.4.7	TEST RESULTS.....	51
5.5	PEAK power spectral density measurement.....	51
5.5.1	LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT.....	51
5.5.2	TEST INSTRUMENTS.....	51
5.5.3	TEST PROCEDURES.....	51
5.5.4	DEVIATION FROM TEST STANDARD	51
5.5.5	TEST SETUP.....	51
5.5.6	EUT OPERATING CONDITIONS	51
5.5.7	TEST RESULTS.....	51
5.6	FREQUENCY STABILITY	51
5.6.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT.....	51
5.6.2	TEST INSTRUMENTS.....	51
5.6.3	TEST PROCEDURE	51
5.6.4	DEVIATION FROM TEST STANDARD	51
5.6.5	TEST SETUP.....	51
5.6.6	EUT OPERATING CONDITION.....	51
5.6.7	TEST RESULTS.....	51
5.7	BAND EDGES MEASUREMENT	51
5.7.1	TEST INSTRUMENTS.....	51
5.7.2	TEST PROCEDURE	51
5.7.3	EUT OPERATING CONDITION.....	51
5.7.4	TEST RESULTS.....	51
5.8	ANTENNA REQUIREMENT.....	51
5.8.1	STANDARD APPLICABLE	51
5.8.2	ANTENNA CONNECTED CONSTRUCTION.....	51
6.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	51
7.	INFORMATION ON THE TESTING LABORATORIES.....	51



1. CERTIFICATION

PRODUCT : 3Com OfficeConnect Wireless 11a/b/g Access Point
BRAND NAME : 3Com
MODEL NO. : 3CRWE454A72
APPLICANT : Arcadyan Technology Corporation
STANDARDS : 47 CFR 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 Nov. 12 to Dec. 3, 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: Carol Liao, **DATE:** Dec. 09, 2003
(Carol Liao)

APPROVED BY: Eric Lin, **DATE:** Dec. 09, 2003
(Eric Lin, Manager)

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 -23.82dBuV at 29.237MHz
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 -1.8dBuV at 2483.5 MHz
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: 47 CFR 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 -23.90dBuV at 29.237MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30 MHz – 40000 MHz	PASS	Meet the requirement of limit Minimum passing margin is -0.60dBuV at 5715.00MHz
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	3Com OfficeConnect Wireless 11a/b/g Access Point
MODEL NO.	3CRWE454A72
POWER SUPPLY	12VDC from AC adapter
MODULATION	DSSS, OFDM
TRANSFER RATE	802.11b and draft 802.11g: 1/2/5.5/6/9/11/12/18/24/36/48/54Mbps 802.11a: 6 to 54Mbps
FREQUENCY RANGE	802.11b and draft 802.11g: 2400MHz ~ 2483.5MHz 802.11a: 5.15~5.35GHz and 5.725~5.825GHz
NUMBER OF CHANNEL	802.11b and draft 802.11g: 11 802.11a: 12 for Normal mode
CHANNEL SPACING	802.11b and draft 802.11g: 5MHz 802.11a: 20MHz for Normal mode
OUTPUT POWER	802.11b: 19.21dBm / draft 802.11g: 18.62dBm 802.11a: 19.36dBm
DATA CABLE	NA
ANTENNA TYPE	Dual Band Omni-directional Antenna
I/O PORTS	RJ45 (WAN)Port x 1
ASSOCIATED DEVICES	NA

NOTE:

- There are two antennas provided to this EUT, please refer to the following table:

Type Name	Model No.	Antenna Type	Antenna Gain	Antenna Connector
2.4/4.9~5.85GHz Swivel Antenna	F1B-303710-93 (L=215mm) F1B-303709-93 (L=105mm)	Dual Band Omni-directional Antenna	1.82dBi(2.4GHz) 4.28dBi(5GHz)	I-Pex MHF-20278- 111R-18

2. The EUT was powered by the following adapter:

Adapter:	
Brand:	3Com
Model No.:	P48121000A040G
Input power :	120V AC 60Hz 21W
Output power :	DC 12V 1000mA

3. Dual-band, the EUT communicates with Wireless-A (802.11a), Wireless-B, (802.11b), and Wireless-G (draft 802.11g) wireless networks.
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: 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 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. Transfer rate, 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst case, were chosen for final test.
4. Test result A is for CCK technique and test result B is for OFDM technique which presented in Section 4.

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

Channel	Frequency	Channel	Frequency
1	5180 MHz	7	5300 MHz
2	5200 MHz	8	5320 MHz
3	5220 MHz	9	5745MHz
4	5240 MHz	10	5765MHz
5	5260 MHz	11	5785MHz
6	5280 MHz	12	5805MHz

NOTE:

- 1..The EUT was tested in normal mode (channel bandwidth of approximately 30MHz).
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. Channel 1, 4, 5, 8, 9 and 12 are the closest frequencies to the band edge, were chosen for final test of Normal Mode.



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a 3Com OfficeConnect Wireless 11a/b/g Access Point According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**47 CFR Part 15, Subpart C. (15.247),
Subpart E (15.407). 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 47CFR Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

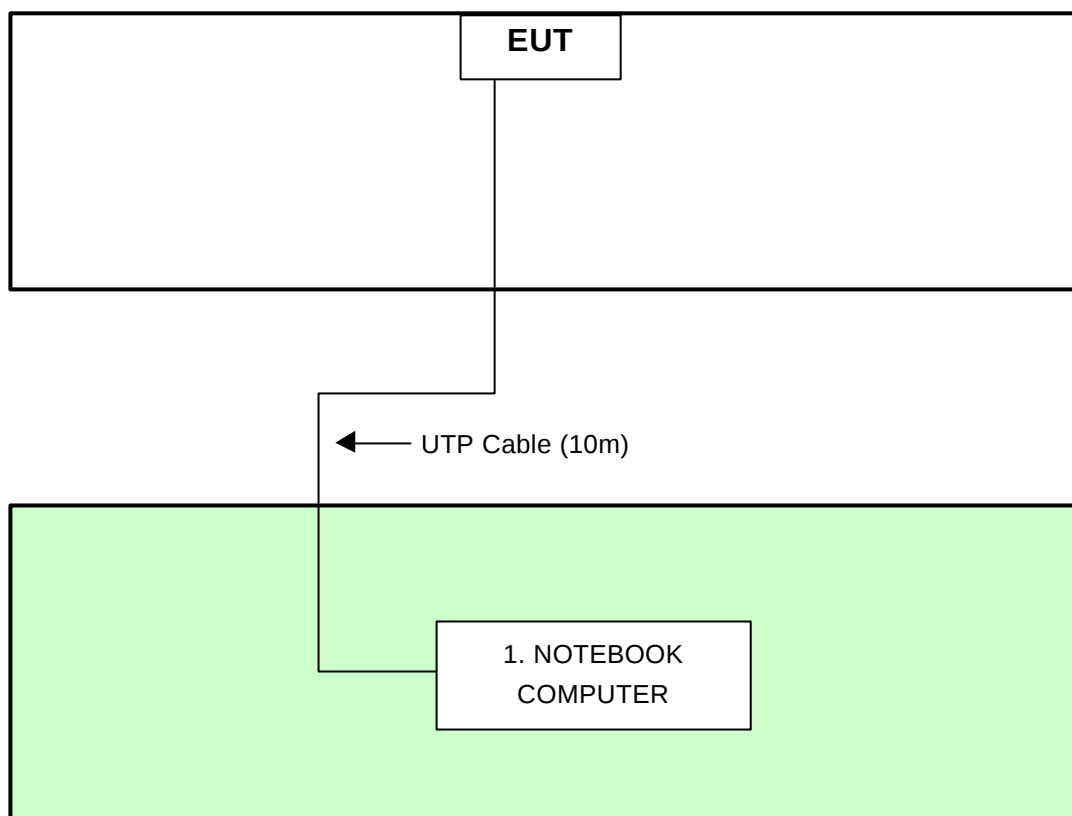
3.4 DESCRIPTION OF SUPPORT UNITS

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

No.	Product	Brand	Model No.	Serial No.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-1A3-1999	FCC DoC

No.	Signal cable description
1	NA

Note: 1. All power cords of the above support units are unshielded (1.8m).



NOTE: 1. Support unit 1 was kept in the control room during the test.
2. Please refer to the photos of test configuration in Item 5 also.

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

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	847124/029	Dec. 4, 2004
ROHDE & SCHWARZ LISN (for EUT)	ESHS-Z5	848773/004	Nov. 04, 2004
KYORITSU LISN (for peripheral)	KNW-407	8/1395/12	Jul. 27, 2004
RF Cable (JETBAO)	RG233/U	Cable_CA_01	Jul. 03, 2004
Terminator(for KYORITSU)	50	3	Apr. 11, 2004
Software	Cond-V2e	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in ADT Shielded Room No. A.
 3. The VCCI Con A Registration No. is C-817.



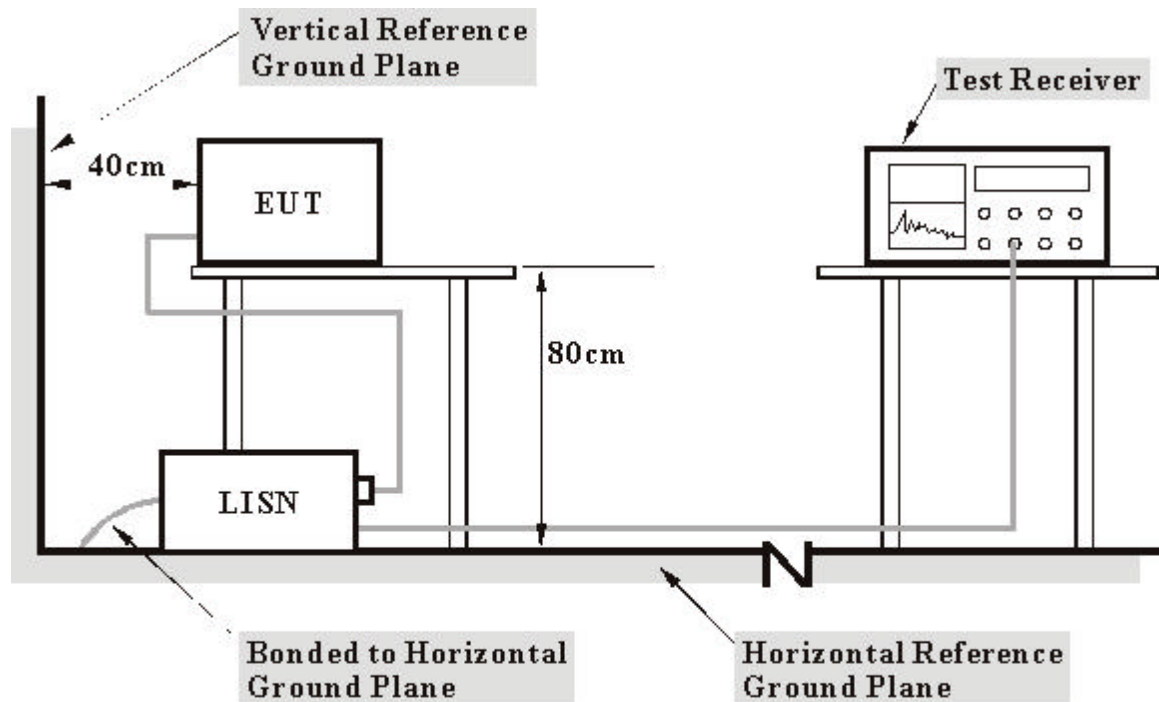
4.1.3 TEST PROCEDURES

- 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 150 kHz to 30 MHz 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

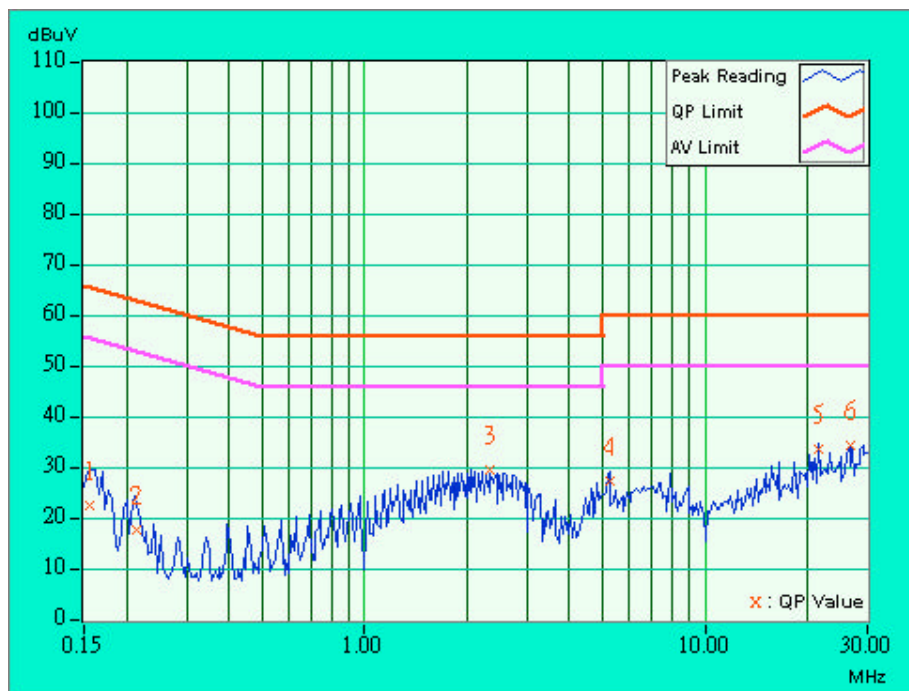
- a. Placed the EUT on the testing table.
- b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
- c. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via RJ 45 cable and wireless.
- d. The communication partner sent data to EUT by command "Atheros 4.6 Build 6".

4.1.7 TEST RESULTS (A)- DSSS

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 50%RH, 980 hPa	TESTED BY	Eric Lee

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	0.156	0.20	21.30	-	21.50	-	65.67	55.67	-44.17	-
2	0.215	0.20	16.55	-	16.75	-	63.02	53.02	-46.27	-
3	2.334	0.32	28.27	-	28.59	-	56.00	46.00	-27.41	-
4	5.234	0.48	26.19	-	26.67	-	60.00	50.00	-33.33	-
5	21.664	1.17	32.47	-	33.64	-	60.00	50.00	-26.36	-
6	26.613	1.30	32.97	-	34.27	-	60.00	50.00	-25.73	-

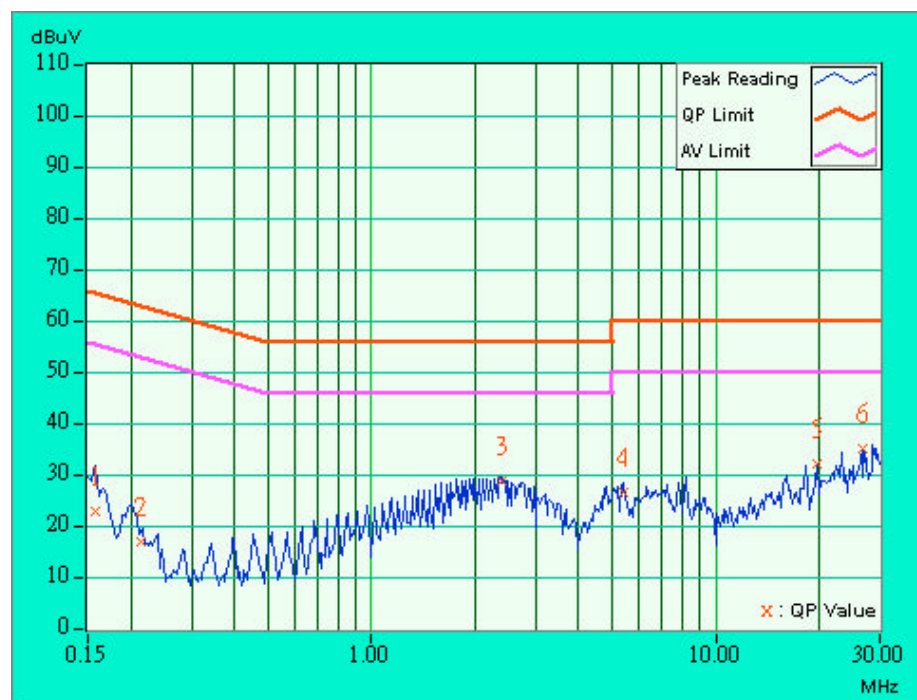
- NOTES:** (1) "-": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5)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



EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 50%RH, 980 hPa	TESTED BY	Eric Lee

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	0.158	0.20	21.93	-	22.13	-	65.58	55.58	-43.45	-
2	0.214	0.20	15.87	-	16.07	-	63.04	53.04	-46.97	-
3	2.389	0.32	27.88	-	28.20	-	56.00	46.00	-27.80	-
4	5.405	0.47	25.63	-	26.10	-	60.00	50.00	-33.90	-
5	19.711	1.00	31.08	-	32.08	-	60.00	50.00	-27.92	-
6	26.610	1.17	34.06	-	35.23	-	60.00	50.00	-24.77	-

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

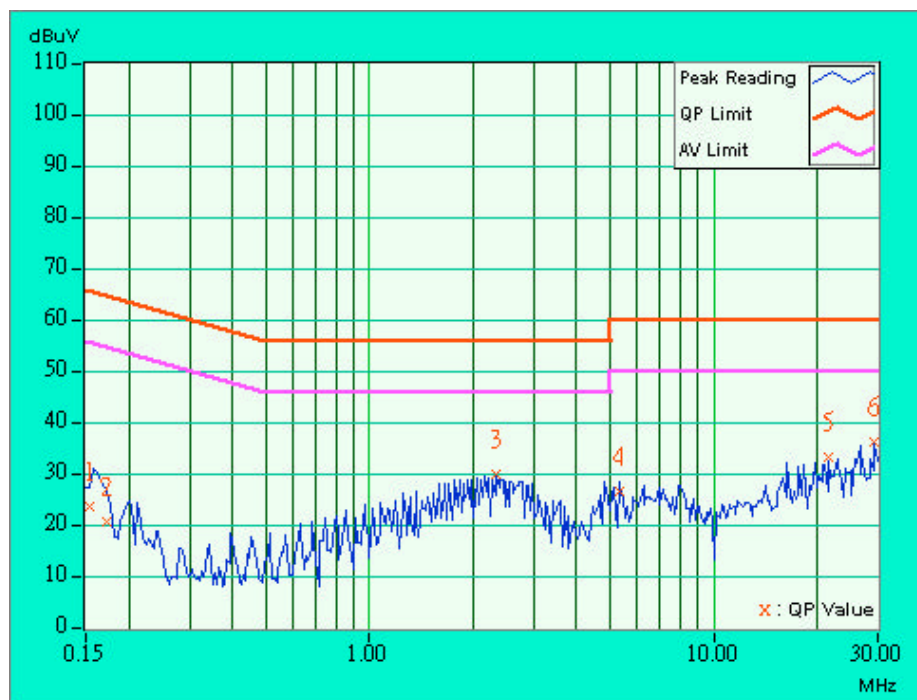


4.1.8 TEST RESULTS (B)- OFDM

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 55%RH, 980 hPa	TESTED BY	Eric Lee

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	0.155	0.20	22.26	-	22.46	-	65.74	55.74	-43.28	-
2	0.172	0.20	19.40	-	19.60	-	64.89	54.89	-45.29	-
3	2.334	0.32	28.56	-	28.88	-	56.00	46.00	-27.12	-
4	5.349	0.49	25.24	-	25.73	-	60.00	50.00	-34.27	-
5	21.666	1.17	32.08	-	33.25	-	60.00	50.00	-26.75	-
6	29.237	1.30	34.88	-	36.18	-	60.00	50.00	-23.82	-

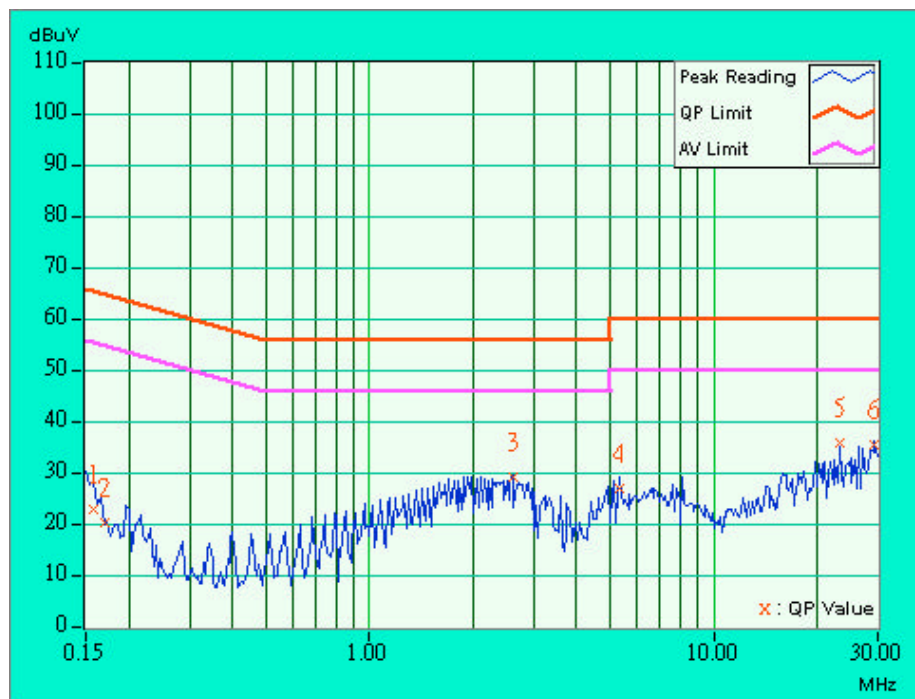
- NOTES:** (1) "-": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5)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



EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 55%RH, 980 hPa	TESTED BY	Eric Lee

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	0.158	0.20	21.83	-	22.03	-	65.58	55.58	-43.55	-
2	0.171	0.20	19.08	-	19.28	-	64.93	54.93	-45.65	-
3	2.615	0.33	28.17	-	28.50	-	56.00	46.00	-27.50	-
4	5.344	0.47	25.77	-	26.24	-	60.00	50.00	-33.76	-
5	23.130	1.13	34.93	-	36.06	-	60.00	50.00	-23.94	-
6	29.238	1.12	34.59	-	35.71	-	60.00	50.00	-24.29	-

- NOTES:** (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction Factor = Insertion loss + Cable loss
(6) Margin value = Emission level - Limit 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	8594ER	3829U04676	Aug. 30, 2004
ADVANTEST Spectrum Analyzer	R3271A	85060311	Jun. 16, 2004
CHASE RF Pre_Amplifier	CPA9232	1057	May. 10, 2004
HP Pre_Amplifier	8449B	3008A01281	Dec. 27, 2003
ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Sep. 30, 2004
CHASE Broadband Antenna	CBL6111c	2730	Jul 30, 2004
Schwarzbeck Horn_Antenna	3115	5619	Jul. 17, 2004
SCHWARZBECK Tunable Dipole Antenna	UHAP	897	Mar. 07, 2005
SCHWARZBECK Tunable Dipole Antenna	VHAP	880	Mar. 07, 2005
RF Switches (ARNITSU)	CS-201	1565157	Dec. 01, 2004
RF CABLE (Chaintek) 1GHz-20GHz	SF102	22054-2	Feb. 10. 2004
RF Cable(RICHTEC)	9913-30M	STCCAB-30M- 1GHz-021	Dec. 01, 2004
Software	AS60P8	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA
CHANCE MOST Turn Table	TT-100	0203	NA

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna) 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. C.
5. The FCC Site Registration No. is 656396.
6. The VCCI Site Registration No. is R-1626.
7. The CANADA Site Registration No. is IC 3789-C.



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.

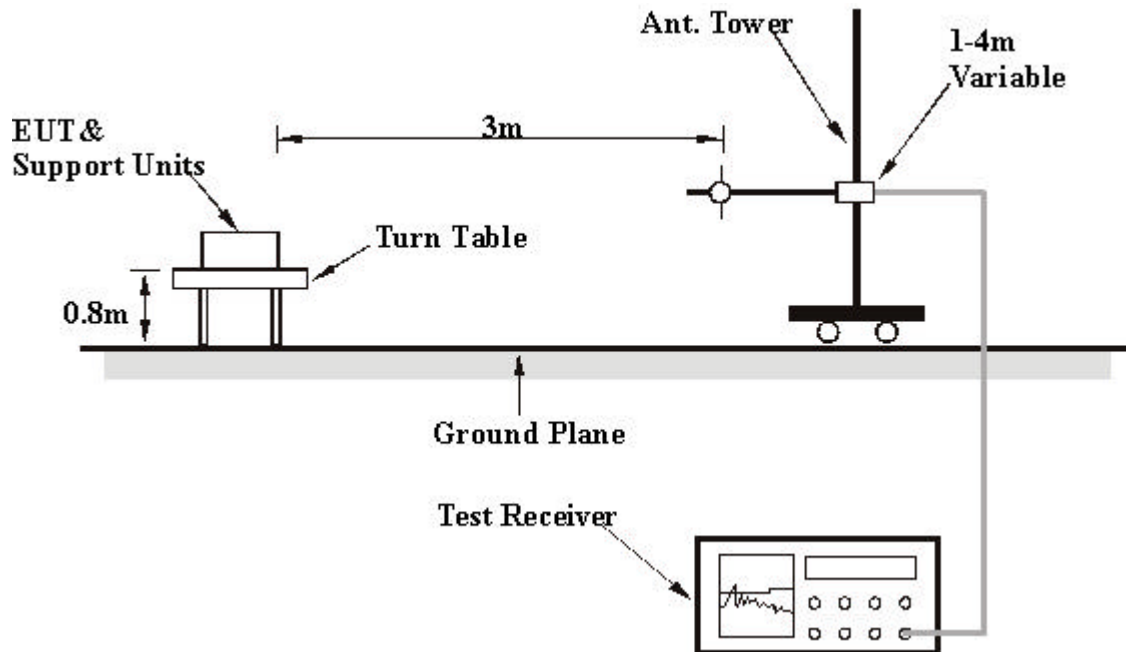
NOTE:

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 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

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	FREQUENCY RANGE	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 66%RH, 980 hPa	TESTED BY	Hank Chung

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	125.10	23.70 QP	43.50	-19.80	1.56 H	264	11.70	12.00
2	200.01	22.30 QP	43.50	-21.20	1.16 H	10	13.30	9.00
3	250.03	24.00 QP	46.00	-22.00	1.44 H	1	11.00	13.00
4	325.03	29.10 QP	46.00	-16.90	1.18 H	270	14.40	14.70
5	350.06	26.80 QP	46.00	-19.20	1.14 H	163	11.30	15.50
6	375.02	28.10 QP	46.00	-17.90	2.34 H	315	11.90	16.20
7	400.00	30.90 QP	46.00	-15.10	2.65 H	47	13.80	17.10
8	425.05	32.10 QP	46.00	-13.90	1.33 H	11	14.30	17.90
9	450.00	32.20 QP	46.00	-13.80	2.86 H	28	14.10	18.10
10	550.05	39.30 QP	46.00	-6.70	1.72 H	314	17.60	21.60
11	575.06	32.20 QP	46.00	-13.80	1.51 H	11	10.90	21.30
12	600.00	37.50 QP	46.00	-8.50	1.41 H	46	16.60	20.90

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	125.00	23.10 QP	43.50	-20.40	3.10 V	10	11.00	12.00
2	250.01	25.80 QP	46.00	-20.20	3.51 V	61	12.80	13.00
3	350.04	25.50 QP	46.00	-20.50	1.75 V	302	10.00	15.50
4	375.04	29.40 QP	46.00	-16.60	1.36 V	10	13.20	16.20
5	400.00	32.60 QP	46.00	-13.40	1.00 V	67	15.50	17.10
6	425.04	33.80 QP	46.00	-12.20	1.24 V	138	16.00	17.90
7	450.02	29.50 QP	46.00	-16.50	1.26 V	254	11.40	18.10
8	500.04	29.60 QP	46.00	-16.40	1.25 V	328	10.30	19.30
9	550.04	37.40 QP	46.00	-8.60	1.83 V	26	15.80	21.60
10	575.02	32.30 QP	46.00	-13.70	1.32 V	355	11.00	21.30
11	599.99	35.40 QP	46.00	-10.60	1.32 V	80	14.50	20.90

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.

TEST RESULTS (A)- DSSS

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 1	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 58%RH, 980 hPa	TESTED BY	Tony Chen

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	36.80 PK	74.00	-37.20	1.15 H	2	6.40	30.30
2	*2412.00	104.10 PK			1.21 H	319	73.50	30.50
2	*2412.00	97.00 AV			1.21 H	319	66.40	30.50
3	2688.00	38.60 PK	74.00	-35.40	1.02 H	360	7.30	31.30
4	4824.00	41.20 PK	74.00	-32.80	1.86 H	246	5.00	36.20
5	7236.00	48.60 PK	74.00	-25.40	1.40 H	182	6.90	41.70
6	9648.00	49.10 PK	74.00	-24.90	1.29 H	169	4.20	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	43.10 PK	74.00	-30.90	1.15 V	330	12.70	30.30
2	*2412.00	111.20 PK			1.11 V	344	80.70	30.50
2	*2412.00	104.10 AV			1.11 V	344	73.60	30.50
3	2688.00	41.40 PK	74.00	-32.60	1.60 V	360	10.10	31.30
4	4824.00	46.10 PK	74.00	-27.90	1.91 V	360	9.90	36.20
5	7236.00	53.40 PK	74.00	-20.60	1.78 V	159	11.80	41.70
5	7236.00	44.40 AV	54.00	-9.60	1.78 V	159	2.80	41.70
6	9648.00	51.20 PK	74.00	-22.80	1.59 V	336	6.30	44.90
6	9648.00	43.50 AV	54.00	-10.50	1.59 V	336	-1.40	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	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 6	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 58%RH, 980 hPa	TESTED BY	Tony Chen

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	1080.00	46.10 PK	74.00	-27.90	1.42 H	40	19.70	26.50
2	*2437.00	103.10 PK			1.15 H	319	72.40	30.70
2	*2437.00	95.50 AV			1.15 H	319	64.80	30.70
3	2688.00	38.00 PK	74.00	-36.00	1.42 H	270	6.80	31.30
4	4874.00	43.10 PK	74.00	-30.90	1.46 H	323	6.60	36.50
5	7311.00	49.80 PK	74.00	-24.20	1.68 H	109	8.00	41.80
6	9648.00	49.80 PK	74.00	-24.20	1.03 H	14	4.90	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	1080.00	48.20 PK	74.00	-25.80	1.11 V	360	21.70	26.50
2	2360.00	56.80 PK	74.00	-17.20	1.13 V	261	26.50	30.30
2	2360.00	46.10 AV	54.00	-7.90	1.13 V	261	15.80	30.30
3	*2437.00	111.80 PK			1.05 V	322	81.10	30.70
3	*2437.00	104.20 AV			1.05 V	322	73.50	30.70
4	2688.00	42.60 PK	74.00	-31.40	1.00 V	21	11.30	31.30
5	4874.00	50.20 PK	74.00	-23.80	1.46 V	14	13.70	36.50
6	7311.00	52.00 PK	74.00	-22.00	1.47 V	60	10.20	41.80
6	7311.00	41.90 AV	54.00	-12.10	1.47 V	60	0.20	41.80
7	9748.00	51.00 PK	74.00	-23.00	1.50 V	145	6.30	44.60
7	9748.00	43.10 AV	54.00	-10.90	1.50 V	145	-1.60	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	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 58%RH, 980 hPa	TESTED BY	Tony Chen

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	103.60 PK			1.14 H	320	72.80	30.80
1	*2462.00	96.00 AV			1.14 H	320	65.20	30.80
2	2492.00	44.80 PK	74.00	-29.20	1.46 H	304	14.00	30.80
3	2688.00	38.50 PK	74.00	-35.50	1.09 H	343	7.20	31.30
4	4924.00	42.70 PK	74.00	-31.30	1.44 H	202	6.00	36.70
5	7386.00	45.40 PK	74.00	-28.60	1.08 H	336	3.50	41.80
6	9848.00	49.70 PK	74.00	-24.30	1.16 H	34	5.30	44.40

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	111.60 PK			1.71 V	320	80.70	30.80
1	*2462.00	103.10 AV			1.71 V	320	72.20	30.80
2	2483.50	59.60 PK	74.00	-14.40	1.24 V	245	28.70	31.00
2	2483.50	50.20 AV	54.00	-3.80	1.24 V	245	19.20	31.00
3	2688.00	45.10 PK	74.00	-28.90	1.00 V	342	13.90	31.30
4	4924.00	47.30 PK	74.00	-26.70	1.73 V	197	10.60	36.70
5	7386.00	51.00 PK	74.00	-23.00	1.97 V	45	9.10	41.80
5	7386.00	42.30 AV	54.00	-11.70	1.97 V	45	0.40	41.80
6	9848.00	47.80 PK	74.00	-26.20	1.22 V	34	3.50	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

TEST RESULTS (B)- OFDM

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 1	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 980 hPa	TESTED BY	Tony Chen

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	2292.00	47.40 PK	74.00	-26.60	1.29 H	253	17.30	30.10
2	2360.00	39.00 PK	74.00	-35.00	1.05 H	301	8.70	30.30
3	2390.00	48.40 PK	74.00	-25.60	1.24 H	233	17.90	30.40
4	*2412.00	98.00 PK			1.44 H	35	67.50	30.50
4	*2412.00	90.50 AV			1.44 H	35	59.90	30.50
5	2688.00	37.80 PK	74.00	-36.20	1.17 H	222	6.60	31.30
6	4824.00	41.50 PK	74.00	-32.50	1.38 H	240	5.30	36.20
7	7236.00	46.10 PK	74.00	-27.90	1.36 H	311	4.40	41.70

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	1080.00	44.30 PK	74.00	-29.70	1.16 V	263	17.80	26.50
2	2292.00	50.80 PK	74.00	-23.20	1.18 V	349	20.70	30.10
3	2360.00	42.20 PK	74.00	-31.80	1.20 V	23	11.90	30.30
4	2390.00	58.30 PK	74.00	-15.70	1.07 V	235	27.90	30.40
4	2390.00	49.60 AV	54.00	-4.40	1.07 V	235	19.20	30.40
5	*2412.00	109.10 PK			1.14 V	360	78.60	30.50
5	*2412.00	100.90 AV			1.14 V	360	70.40	30.50
6	2688.00	43.00 PK	74.00	-31.00	1.03 V	349	11.80	31.30
7	4824.00	42.40 PK	74.00	-31.60	1.06 V	297	6.20	36.20
8	7236.00	46.50 PK	74.00	-27.50	1.00 V	308	4.80	41.70

- 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	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 6	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 980 hPa	TESTED BY	Tony Chen

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	1080.00	48.30 PK	74.00	-25.70	1.00 H	139	21.80	26.50
2	2337.00	48.40 PK	74.00	-25.60	1.00 H	330	18.20	30.20
3	*2437.00	96.40 PK			1.74 H	34	65.70	30.70
3	*2437.00	88.90 AV			1.74 H	34	58.20	30.70
4	2489.00	44.10 PK	74.00	-29.90	1.28 H	251	13.30	30.90
5	2688.00	37.70 PK	74.00	-36.30	1.25 H	13	6.50	31.30
6	4874.00	41.40 PK	74.00	-32.60	1.35 H	146	4.90	36.50
7	7311.00	46.90 PK	74.00	-27.10	1.28 H	188	5.10	41.80

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	1080.00	49.40 PK	74.00	-24.60	1.06 V	351	22.90	26.50
2	2320.00	54.90 PK	74.00	-19.10	1.36 V	78	24.70	30.20
2	2320.00	47.40 AV	54.00	-6.60	1.36 V	78	17.20	30.20
3	*2437.00	107.80 PK			1.12 V	7	77.10	30.70
3	*2437.00	100.30 AV			1.12 V	7	69.60	30.70
4	2485.00	51.50 PK	74.00	-22.50	1.30 V	87	20.50	30.90
4	2485.00	40.50 AV	54.00	-13.50	1.30 V	87	9.60	30.90
5	2688.00	42.10 PK	74.00	-31.90	1.41 V	355	10.80	31.30
6	4874.00	43.80 PK	74.00	-30.20	1.40 V	101	7.30	36.50
7	7311.00	52.80 PK	74.00	-21.20	1.60 V	152	11.00	41.80
7	7311.00	39.60 AV	54.00	-14.40	1.60 V	152	-2.20	41.80

- 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	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
MODE	Channel 11	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 980 hPa	TESTED BY	Tony Chen

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	1080.00	45.80 PK	74.00	-28.20	1.26 H	130	19.30	26.50
2	*2462.00	98.40 PK			1.52 H	53	67.60	30.80
2	*2462.00	90.70 AV			1.52 H	53	59.90	30.80
3	2483.50	49.40 PK	74.00	-24.60	1.05 H	23	18.40	31.00
4	2688.00	38.70 PK	74.00	-35.30	1.36 H	360	7.40	31.30
5	4924.00	40.20 PK	74.00	-33.80	1.18 H	101	3.50	36.70
6	7386.00	46.40 PK	74.00	-27.60	1.15 H	168	4.60	41.80

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	1080.00	50.30 PK	74.00	-23.70	1.00 V	2	23.90	26.50
2	*2462.00	110.00 PK			1.07 V	342	79.10	30.80
2	*2462.00	101.70 AV			1.07 V	342	70.90	30.80
3	2483.50	59.30 PK	74.00	-14.70	1.23 V	256	28.40	31.00
3	2483.50	52.20 AV	54.00	-1.80	1.23 V	256	21.20	31.00
4	2688.00	45.10 PK	74.00	-28.90	1.53 V	357	13.80	31.30
5	4924.00	43.10 PK	74.00	-30.90	1.24 V	256	6.40	36.70
6	7386.00	47.80 PK	74.00	-26.20	1.26 V	160	6.00	41.80

- 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
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

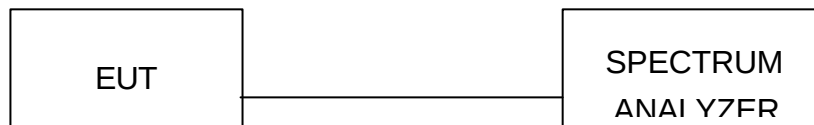
4.3.3 TEST PROCEDURE

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 6 dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

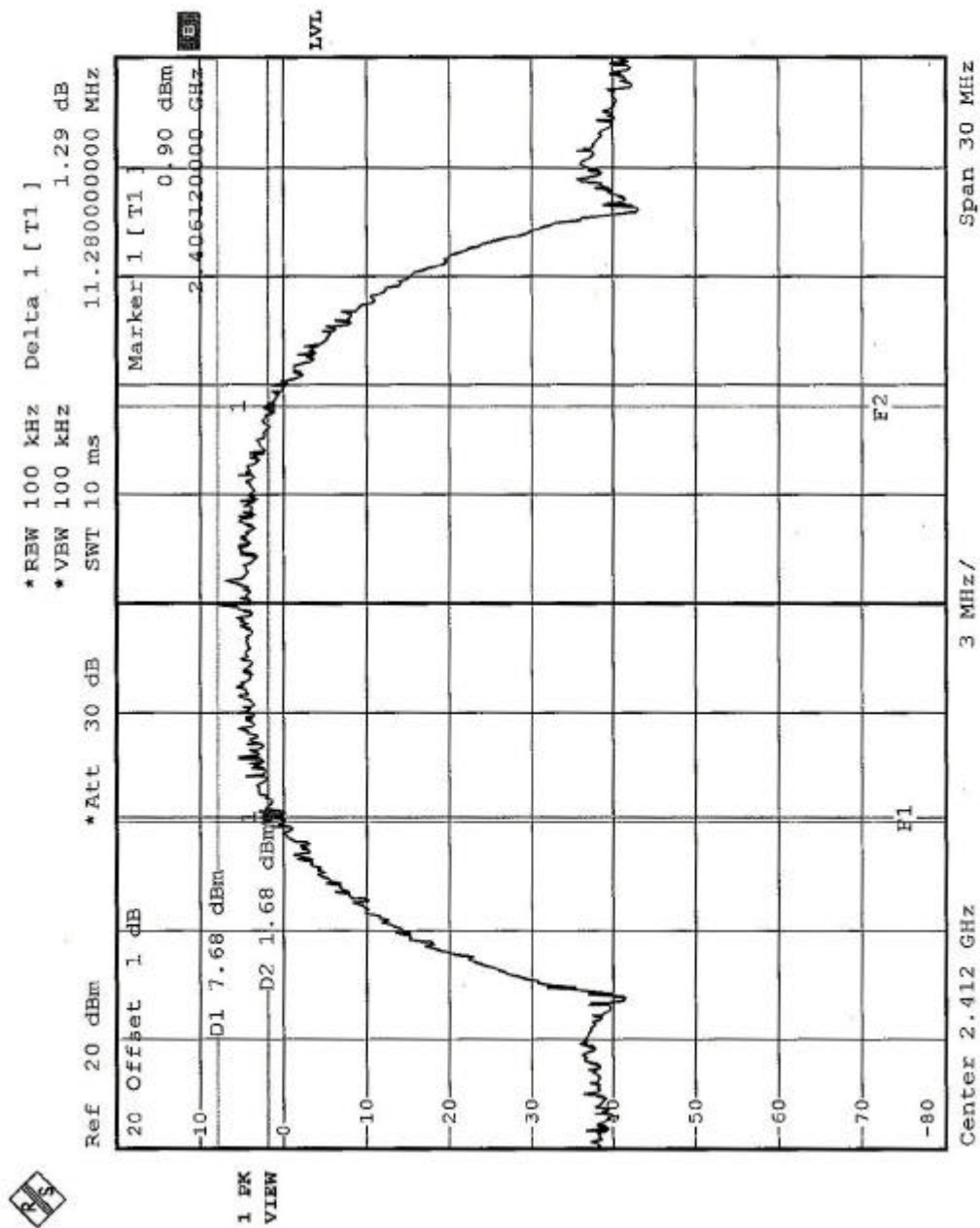
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS (A)

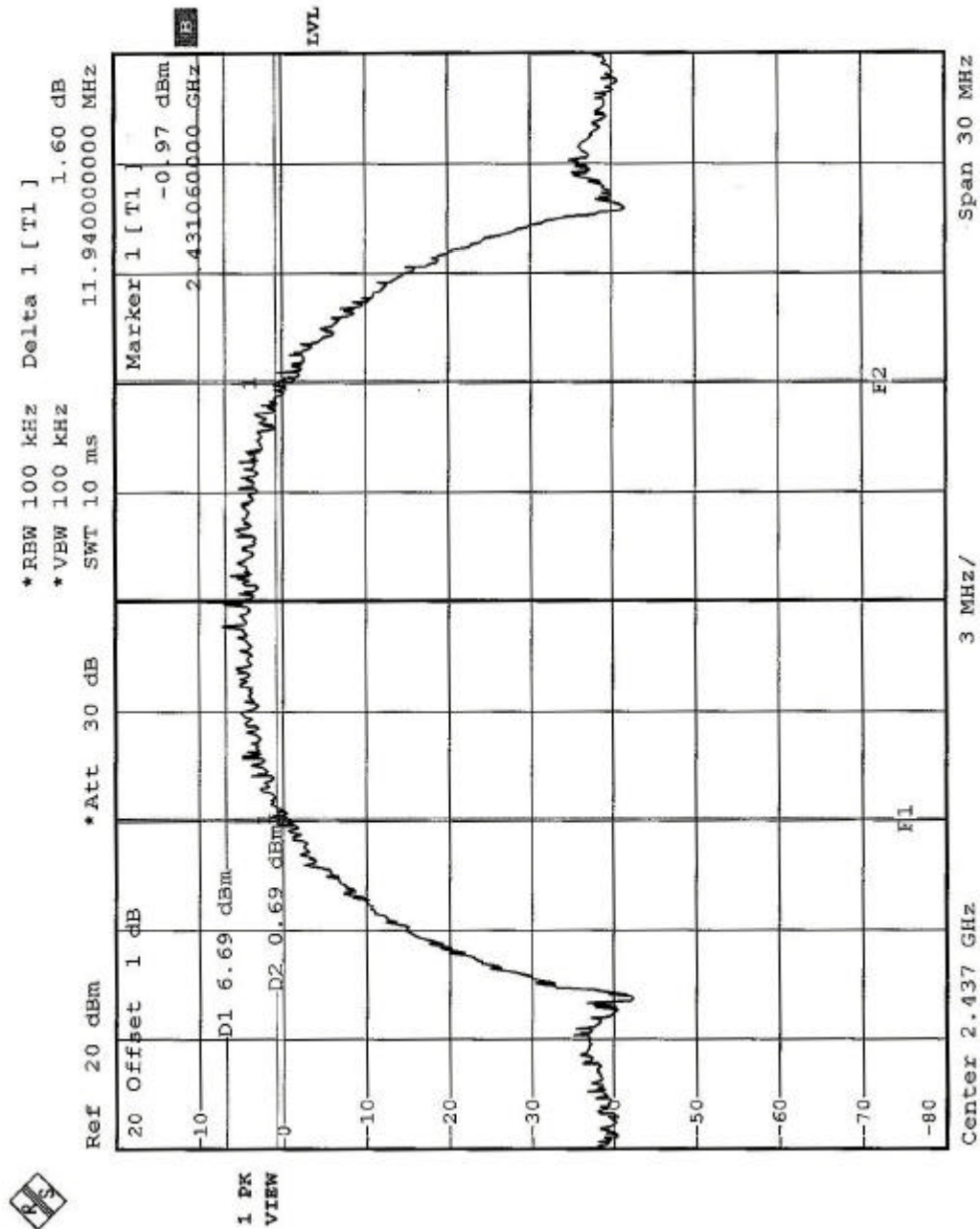
EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 58%RH 980 hPa
TESTED BY	Tony Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.28	0.5	PASS
6	2437	11.94	0.5	PASS
11	2462	11.64	0.5	PASS

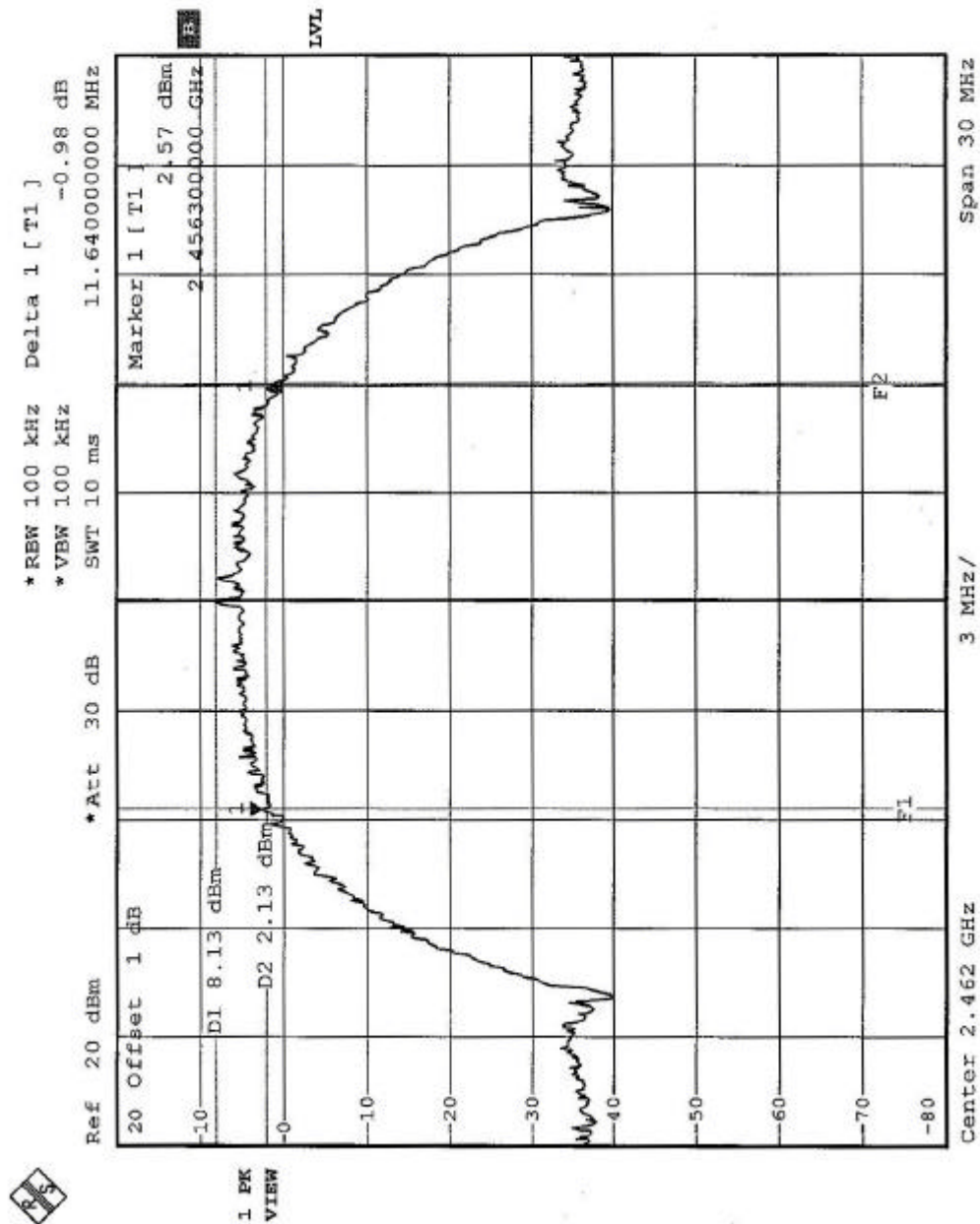
CH1



CH6



CH11

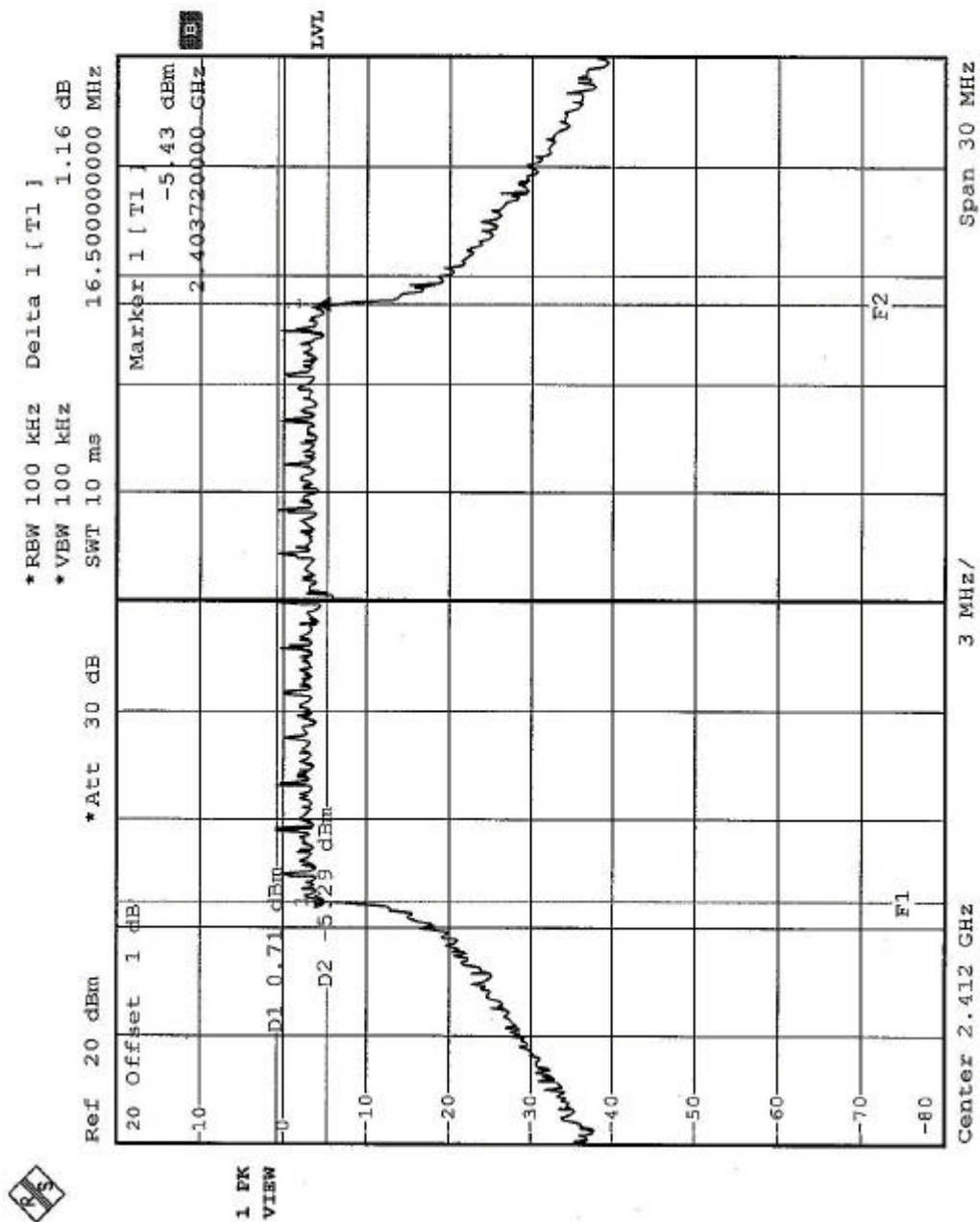


4.3.8 TEST RESULTS (B)

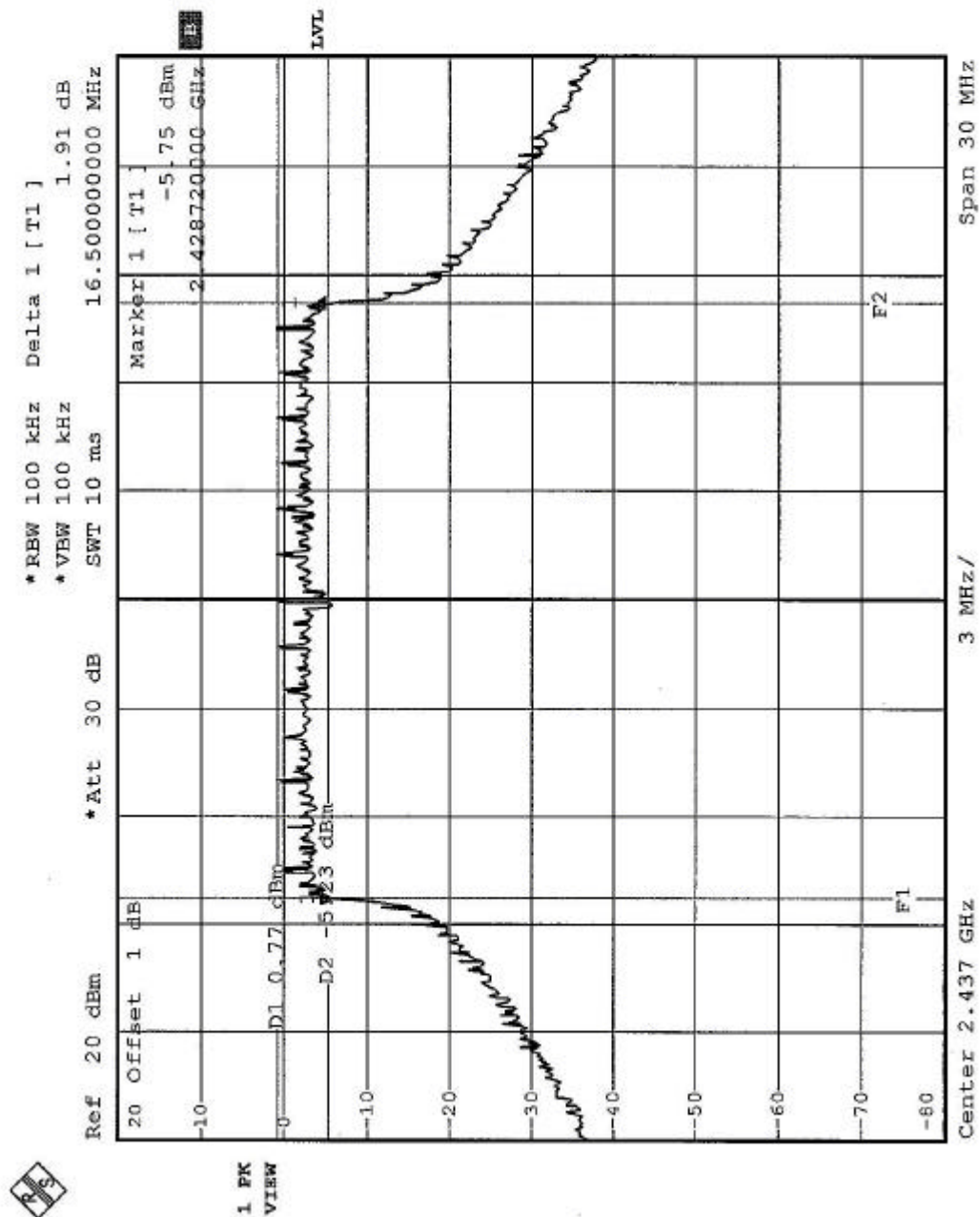
EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 58%RH 980 hPa
TESTED BY	Tony Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.50	0.5	PASS
6	2437	16.50	0.5	PASS
11	2462	16.26	0.5	PASS

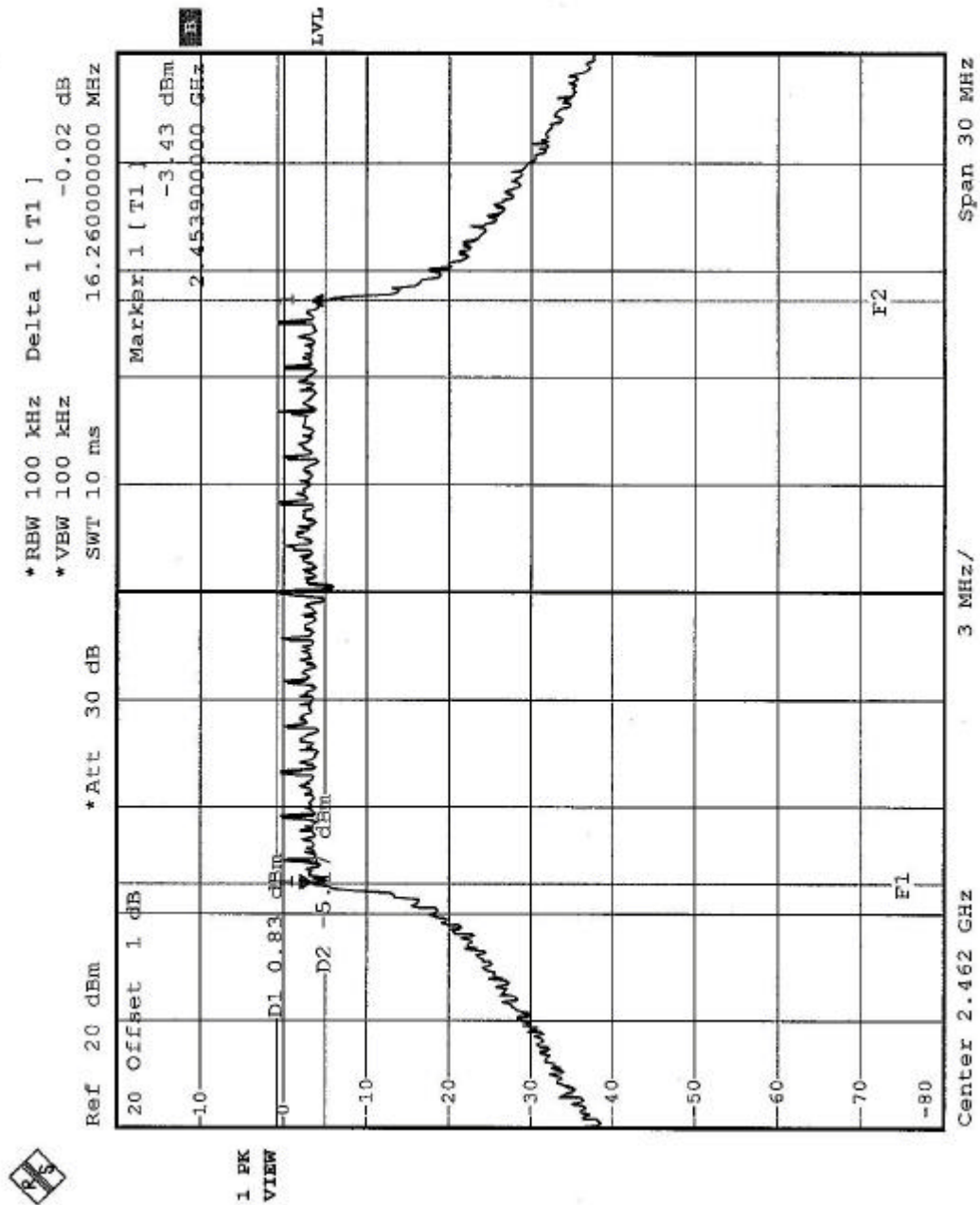
CH1



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 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP30	100019	Dec. 19, 2003
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	B048470	Mar. 05, 2004
NARDA DETECTOR	4503A	FSCM99899	NA

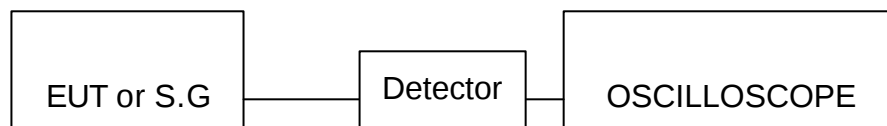
NOTE:

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 peak 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 peak reading on oscilloscope. Record the power level.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.6 TEST RESULTS (A)

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH 980 hPa
TESTED BY	Tony Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	19.01	30	PASS
6	2437	19.21	30	PASS
11	2462	18.85	30	PASS

4.4.7 TEST RESULTS (B)

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH 980 hPa
TESTED BY	Tony Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.51	30	PASS
6	2437	18.62	30	PASS
11	2462	18.54	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
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.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

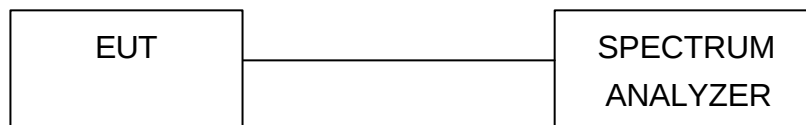
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz 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

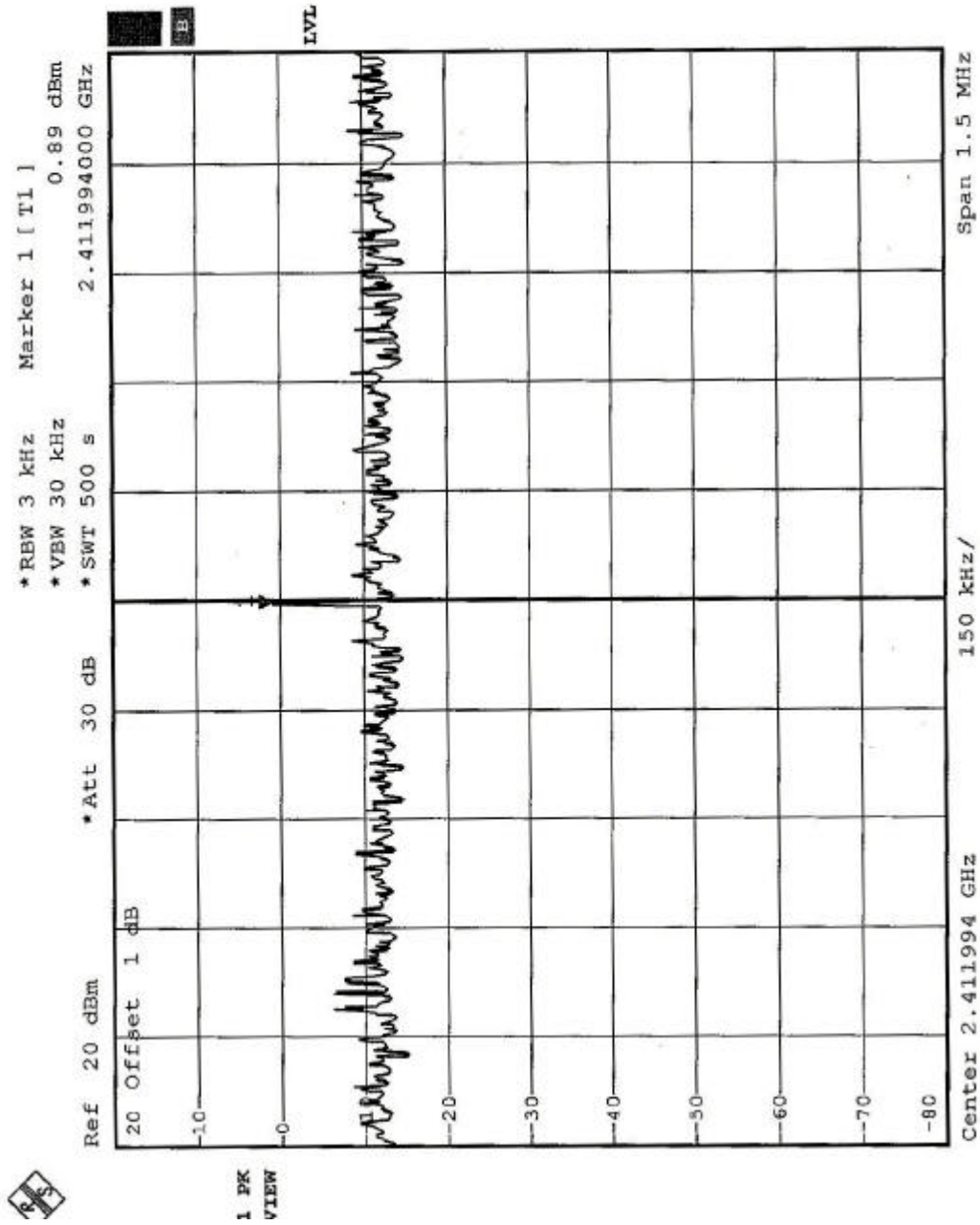


4.5.7 TEST RESULTS(A)

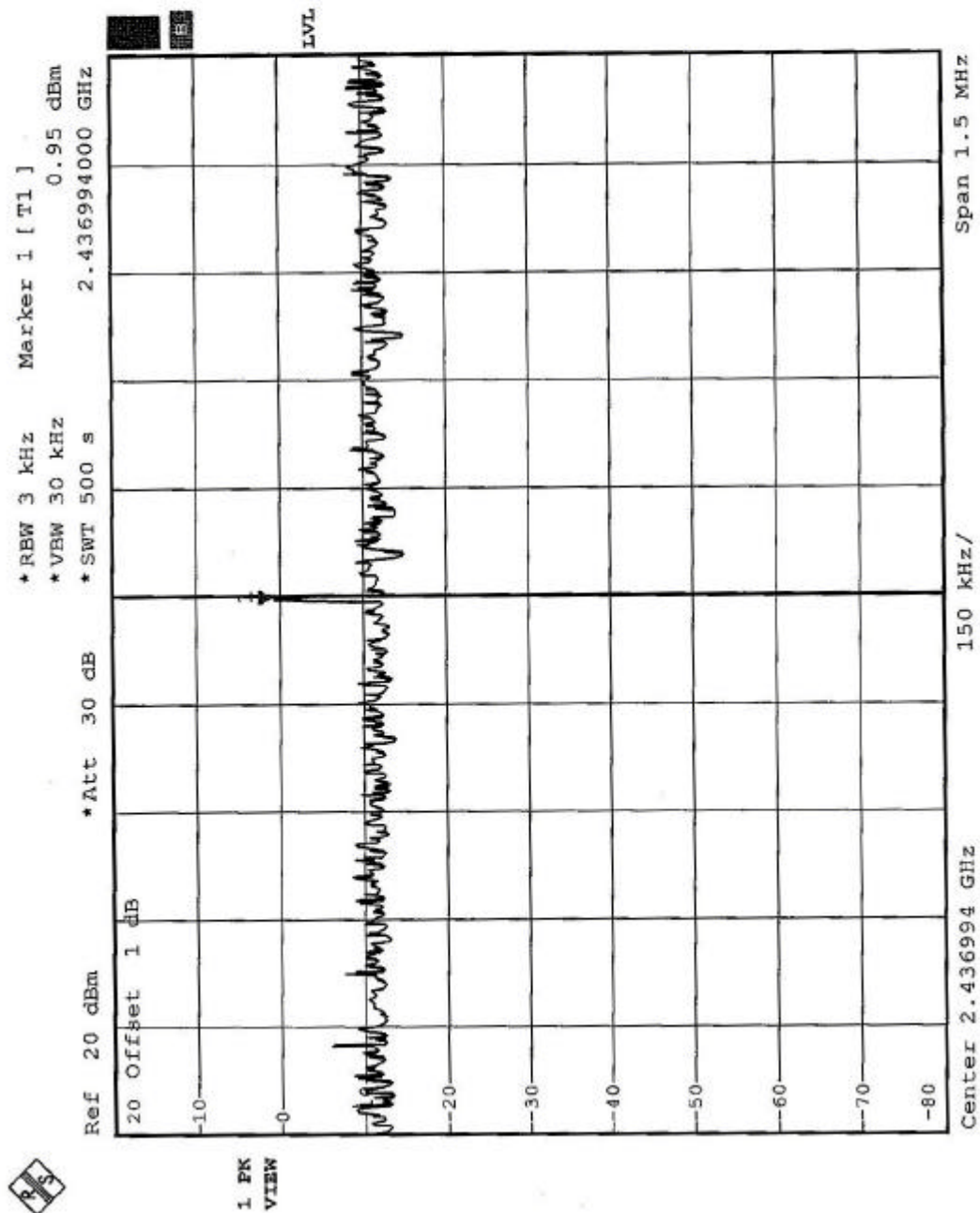
EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 58RH, 980 hPa
TESTED BY	Tony Chen		

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	0.89	8	PASS
6	2437	0.95	8	PASS
11	2462	1.26	8	PASS

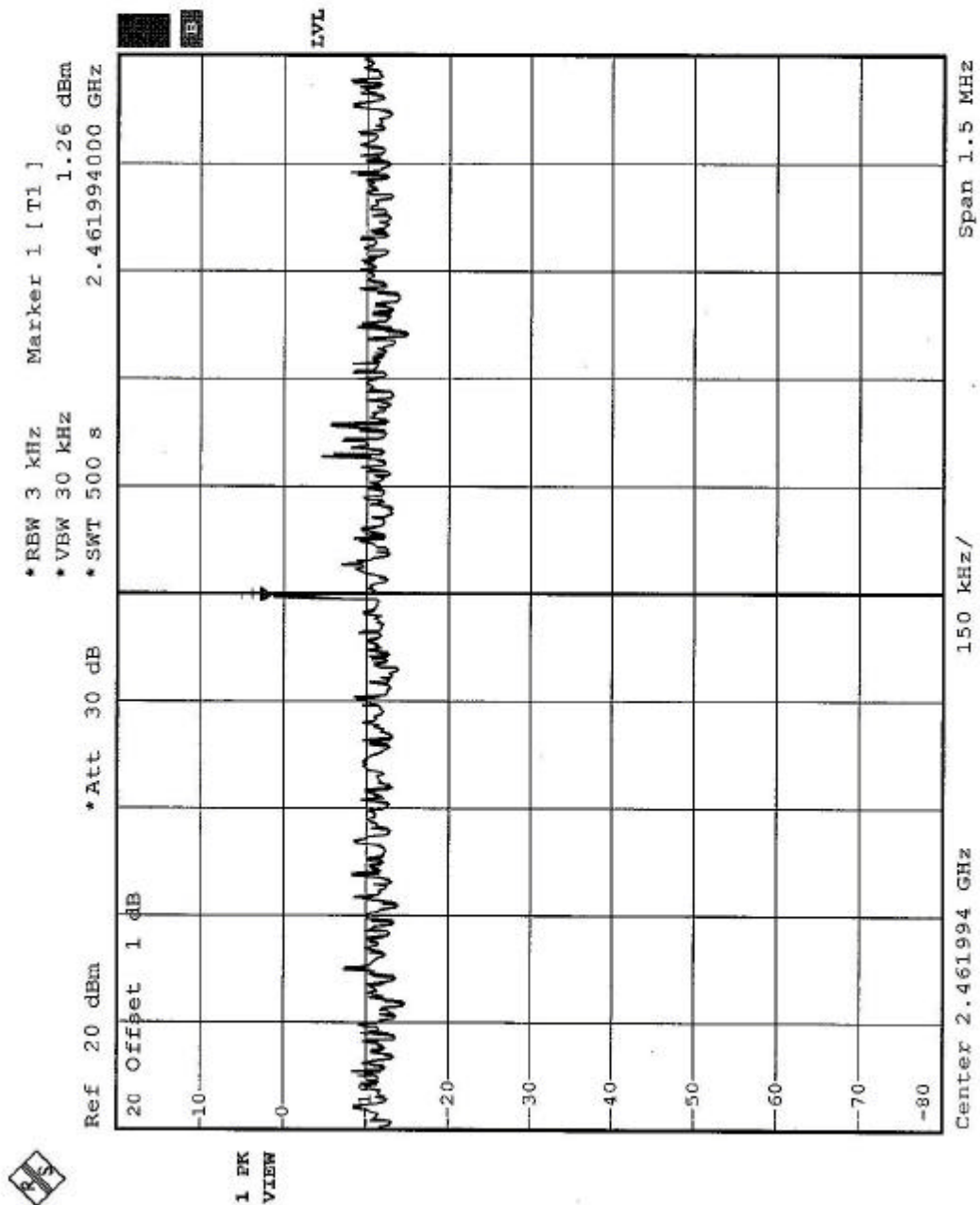
CH1



CH6



CH11





4.5.8 TEST RESULTS(B)

EUT	3Com OfficeConnect Wireless 11a/b/g Access Point	MODEL	3CRWE454A72
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 58RH, 980 hPa
TESTED BY	Tony Chen		

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-0.39	8	PASS
6	2437	-0.65	8	PASS
11	2462	-0.19	8	PASS