

FCC TEST REPORT

REPORT NO.: RF950509L02

MODEL NO.: WN311T

RECEIVED: May 09, 2006

TESTED: May 09, 2006

ISSUED: May 10, 2006

APPLICANT: Netgear Incorporated

ADDRESS: 4500 Great America Parkway Santa Clara,
CA 95054, U.S.A.

ISSUED BY: Advance Data Technology Corporation

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

TEST LOCATION: No. 19, Hwa Ya 2nd Rd., Kueishan, Taoyuan,
Taiwan, R.O.C.

This test report consists of 137 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 CNLA, A2LA or any government agencies. The test results in the report only apply to the tested sample.



TABLE OF CONTENTS

1.	CERTIFICATION	4
2.	SUMMARY OF TEST RESULTS	5
2.1	MEASUREMENT UNCERTAINTY	5
3.	GENERAL INFORMATION	6
3.1	GENERAL DESCRIPTION OF EUT	6
3.2	DESCRIPTION OF TEST MODES	7
3.2.1	CONFIGURATION OF SYSTEM UNDER TEST	7
3.2.2	TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	8
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	11
3.4	DESCRIPTION OF SUPPORT UNITS	11
4.	TEST TYPES AND RESULTS	12
4.1	CONDUCTED EMISSION MEASUREMENT	12
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	12
4.1.2	TEST INSTRUMENTS	12
4.1.3	TEST PROCEDURES	13
4.1.4	DEVIATION FROM TEST STANDARD	13
4.1.5	TEST SETUP	14
4.1.6	EUT OPERATING CONDITIONS	14
4.1.7	TEST RESULTS	15
4.2	RADIATED EMISSION MEASUREMENT	33
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	33
4.2.2	TEST INSTRUMENTS	34
4.2.3	TEST PROCEDURES	35
4.2.4	DEVIATION FROM TEST STANDARD	35
4.2.5	TEST SETUP	36
4.2.6	EUT OPERATING CONDITIONS	36
4.2.7	TEST RESULTS	37
4.3	6dB BANDWIDTH MEASUREMENT	58
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	58
4.3.2	TEST INSTRUMENTS	58
4.3.3	TEST PROCEDURE	58
4.3.4	DEVIATION FROM TEST STANDARD	58
4.3.5	TEST SETUP	59
4.3.6	EUT OPERATING CONDITIONS	59
4.3.7	TEST RESULTS	60
4.4	MAXIMUM PEAK OUTPUT POWER	80
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	80
4.4.2	INSTRUMENTS	80
4.4.3	TEST PROCEDURES	80
4.4.4	DEVIATION FROM TEST STANDARD	80
4.4.5	TEST SETUP	81
4.4.6	EUT OPERATING CONDITIONS	81
4.4.7	TEST RESULTS	82
4.5	POWER SPECTRAL DENSITY MEASUREMENT	85
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	85
4.5.2	TEST INSTRUMENTS	85
4.5.3	TEST PROCEDURE	85
4.5.4	DEVIATION FROM TEST STANDARD	85

4.5.5	TEST SETUP	86
4.5.6	EUT OPERATING CONDITION	86
4.5.7	TEST RESULTS	87
4.6	BAND EDGES MEASUREMENT	107
4.6.1	LIMITS OF BAND EDGES MEASUREMENT	107
4.6.2	TEST INSTRUMENTS	107
4.6.3	TEST PROCEDURE	108
4.6.4	DEVIATION FROM TEST STANDARD	108
4.6.5	EUT OPERATING CONDITION	109
4.6.6	TEST RESULTS	109
4.7	ANTENNA REQUIREMENT	133
4.7.1	STANDARD APPLICABLE	133
4.7.2	ANTENNA CONNECTED CONSTRUCTION.....	133
5.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	134
6.	INFORMATION ON THE TESTING LABORATORIES	136
APPENDIX-A		A-1

1. CERTIFICATION

PRODUCT : RangeMax NEXT Wireless PCI Adapter

MODEL NO.: WN311T

BRAND: NETGEAR

APPLICANT : Netgear Incorporated

TESTED: May 09, 2006

TEST SAMPLE: ENGINEERING SAMPLE

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

The above equipment has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Rennie Wang , **DATE:** May 10, 2006
Rennie Wang

TECHNICAL
ACCEPTANCE : Long Chen , **DATE:** May 10, 2006
Responsible for RF Long Chen

APPROVED BY : Gary Chang , **DATE:** May 10, 2006
Gary Chang / Supervisor

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 -12.94dB at 0.658MHz.
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit : min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.10dB at 2390.00MHz.
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz ~ 30MHz	2.44dB
Radiated emissions	30MHz ~ 200MHz	3.63dB
	200MHz ~ 1000MHz	3.65dB
	1GHz ~ 18GHz	2.20dB
	18GHz ~ 40GHz	1.88dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	RangeMax NEXT Wireless PCI Adapter
MODEL NO.	WN311T
FCC ID	PY306200044
POWER SUPPLY	3.3Vdc from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/ 5.5/ 2/ 1Mbps 802.11g: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6Mbps Draft 802.11n (20MHz): 144.444/ 130.000/ 115.556/ 86.667/ 57.778/ 43.333/ 28.889/ 14.444/ 72.2/ 65.0/ 57.8/ 43.3/ 28.9/ 21.7/ 14.4/ 7.2Mbps Draft 802.11n (40MHz): 300/ 270/ 240/ 180/ 120/ 90/ 60/ 30/ 150/ 135/ 120/ 90/ 60/ 45/ 30/ 15Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz)
MAXIMUM OUTPUT POWER	202.084mW
ANTENNA TYPE	Dipole antenna with -1.1dBi gain
DATA CABLE	NA
I/O PORTS	NA

NOTE:

1. The EUT incorporates a MIMO function with 802.11b, 802.11g, draft 802.11n. Physically, the card provides two completed transmitters and three receivers.
2. The EUT is 2 * 3 spatial MIMO (2Tx & 3Rx) without beam forming function that only operate dual chain configuration (both chain 0 and chain 1 transceivers are operational).
3. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, only set 0 ~ 15 of "MCS" (MCS: Modulation and Coding Schemes) for dual Tx.
4. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g products.
5. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 300Mbps.
6. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

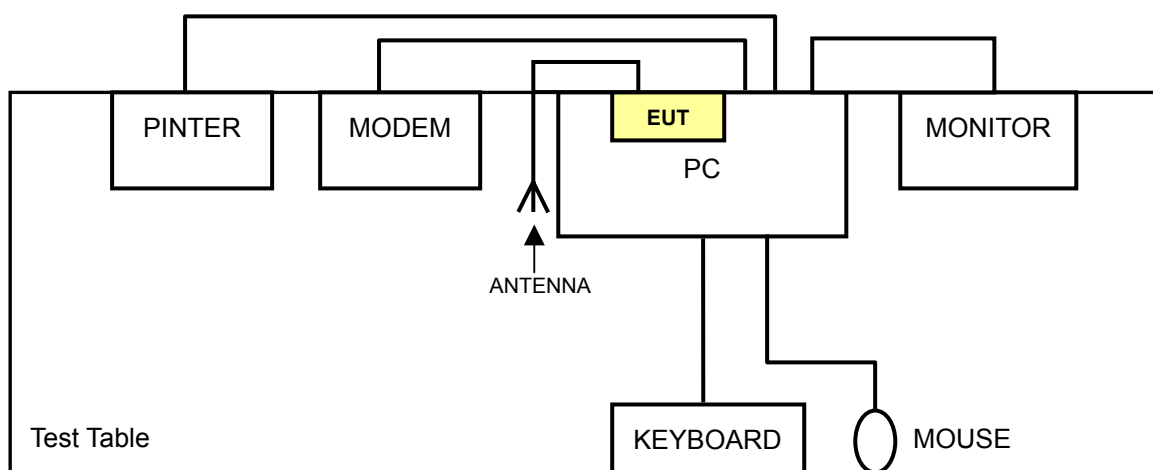
Eleven channels are provided for 802.11b, 802.11g, draft 802.11n (20MHz):

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

Seven channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE < 1G	RE ≥ 1G	APCM	
-	√	√	√	√	-

Where **PLC**: Power Line Conducted Emission

RE < 1G: Radiated Emission below 1GHz

RE ≥ 1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX CONDITION
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Dual
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0	Dual

RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX CONDITION
802.11g	1 to 11	1	OFDM	BPSK	6.0	Dual
Draft 802.11n (20MHz)	1 to 11	1	OFDM	BPSK	7.2	Dual
Draft 802.11n (40MHz)	1 to 7	1	OFDM	BPSK	15.0	Dual

RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX CONDITION
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Single
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Dual
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Single
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Dual
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0	Dual

BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX CONDITION
802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0	Single
802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0	Dual
802.11g	1 to 11	1, 11	OFDM	BPSK	6.0	Single
802.11g	1 to 11	1, 11	OFDM	BPSK	6.0	Dual
Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2	Dual
Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	15.0	Dual

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX CONDITION
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Single
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Dual
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Single
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Dual
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0	Dual

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)

ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PC	MSI	Hetis 865G Giga	3AS0119574	FCC DoC Approved
2	LCD MONITOR	ACER	AL1721	ET.L0408.0104 04001F9PK00	FCC DoC Approved
3	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved
4	MODEM	ACEEX	1414V/3	0401008248	IFAXDM1414
5	USB KEYBOARD	BTC	5200U	G09302046726	E5XKB5122U
6	MOUSE	DELL	MO56U0	516056250	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8m shielded cable
3	1.2m shielded cable
4	1.2m shielded cable
5	1.5m non-shielded cable
6	1.5m non-shielded cable

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

4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 02, 2006
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 06, 2007
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 09, 2007
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 22, 2007
Software ADT	ADT_Cond_V3	NA	NA

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

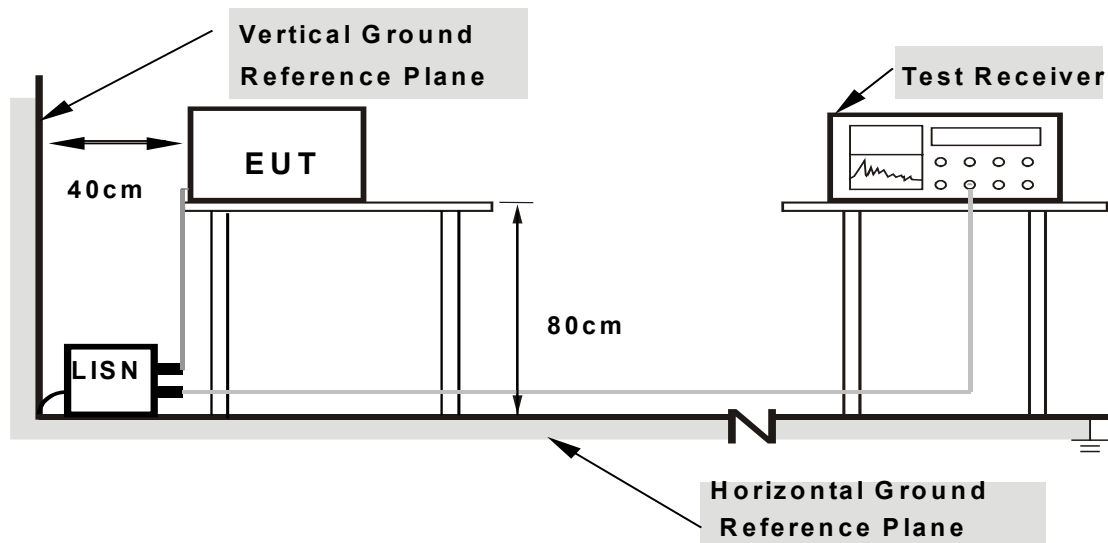
4.1.3 TEST PROCEDURES

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.1.6 EUT OPERATING CONDITIONS

- Connected the EUT into the computer system and placed on a testing table.
- The computer system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
- The computer system sent "H" messages to monitor, and the monitor displayed them on the screen.
- The computer system show "H" messages to modem.
- The computer system sent "H" messages to printer and the printer prints them on paper.
- Repeated item c ~e.

4.1.7 TEST RESULTS

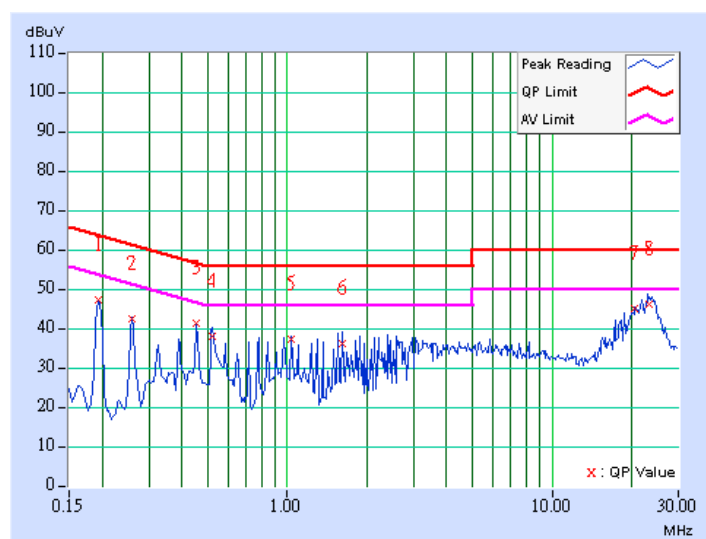
CONDUCTED WORST-CASE DATA:

802.11g OFDM MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.193	0.10	46.55	-	46.65	-	63.91	53.91	-17.26	-
2	0.259	0.10	41.75	-	41.85	-	61.45	51.45	-19.60	-
3	0.455	0.10	40.78	-	40.88	-	56.79	46.79	-15.91	-
4	0.521	0.10	37.43	-	37.53	-	56.00	46.00	-18.47	-
5	1.039	0.10	36.73	-	36.83	-	56.00	46.00	-19.17	-
6	1.621	0.16	35.59	-	35.75	-	56.00	46.00	-20.25	-
7	20.621	0.61	44.55	-	45.16	-	60.00	50.00	-14.84	-
8	23.137	0.79	45.49	-	46.28	-	60.00	50.00	-13.72	-

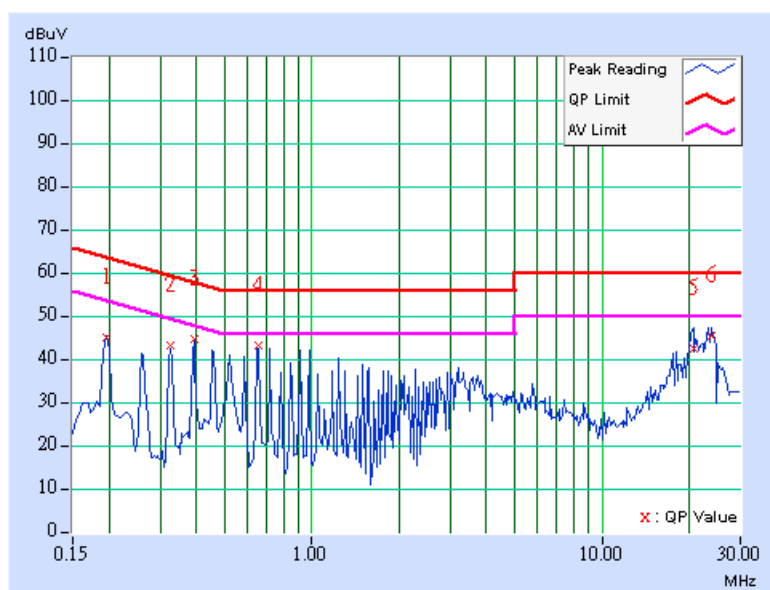
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.26	-	44.36	-	63.74	53.74	-19.38	-
2	0.326	0.10	42.44	-	42.54	-	59.56	49.56	-17.02	-
3	0.392	0.10	43.99	-	44.09	-	58.02	48.02	-13.93	-
4	0.654	0.14	42.57	-	42.71	-	56.00	46.00	-13.29	-
5	20.689	0.60	41.92	-	42.52	-	60.00	50.00	-17.48	-
6	23.767	0.76	44.75	-	45.51	-	60.00	50.00	-14.49	-

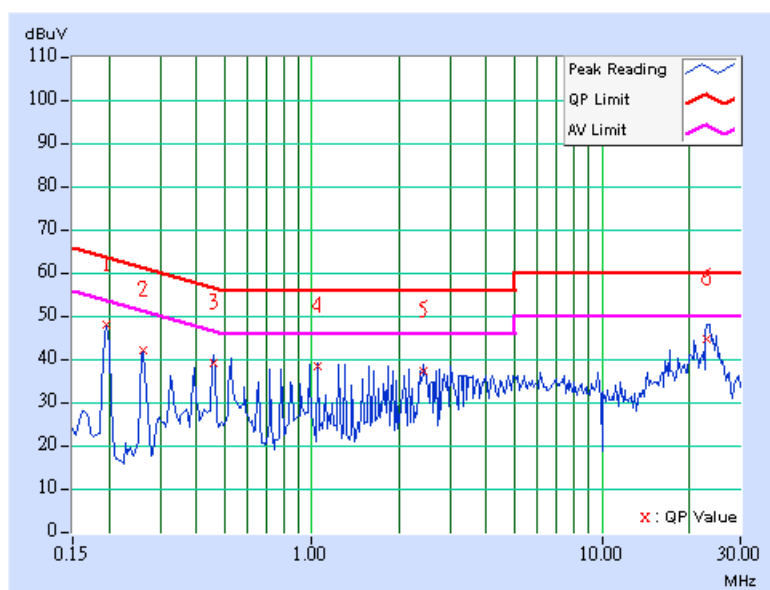
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	47.48	-	47.58	-	63.74	53.74	-16.16	-
2	0.263	0.10	41.43	-	41.53	-	61.33	51.33	-19.80	-
3	0.459	0.10	38.52	-	38.62	-	56.72	46.72	-18.10	-
4	1.047	0.10	37.74	-	37.84	-	56.00	46.00	-18.16	-
5	2.422	0.24	36.67	-	36.91	-	56.00	46.00	-19.09	-
6	23.102	0.79	44.14	-	44.93	-	60.00	50.00	-15.07	-

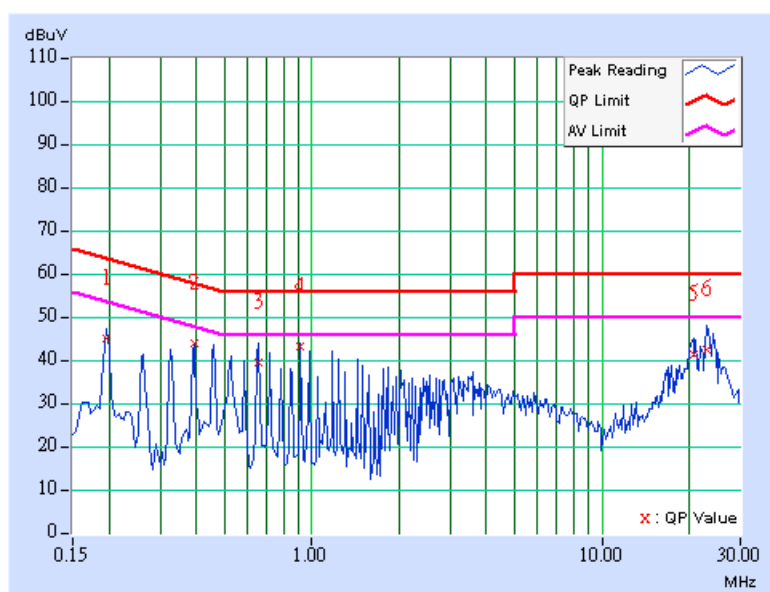
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.38	-	44.48	-	63.74	53.74	-19.26	-
2	0.392	0.10	43.25	-	43.35	-	58.02	48.02	-14.67	-
3	0.654	0.14	38.80	-	38.94	-	56.00	46.00	-17.06	-
4	0.916	0.19	42.55	-	42.74	-	56.00	46.00	-13.26	-
5	20.652	0.60	40.95	-	41.55	-	60.00	50.00	-18.45	-
6	22.870	0.71	42.00	-	42.71	-	60.00	50.00	-17.29	-

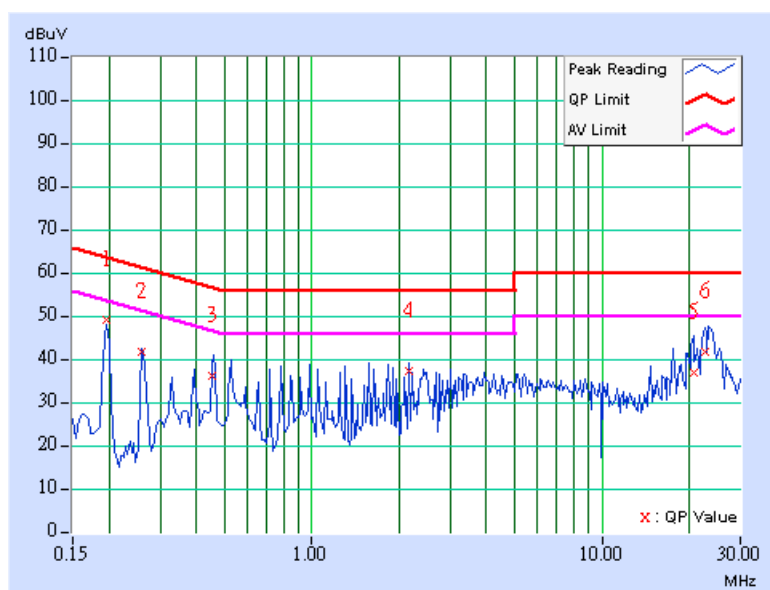
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	48.54	-	48.64	-	63.74	53.74	-15.10	-
2	0.259	0.10	41.23	-	41.33	-	61.45	51.45	-20.12	-
3	0.455	0.10	35.44	-	35.54	-	56.79	46.79	-21.25	-
4	2.160	0.21	36.71	-	36.92	-	56.00	46.00	-19.08	-
5	20.688	0.61	36.39	-	37.00	-	60.00	50.00	-23.00	-
6	22.664	0.76	40.97	-	41.73	-	60.00	50.00	-18.27	-

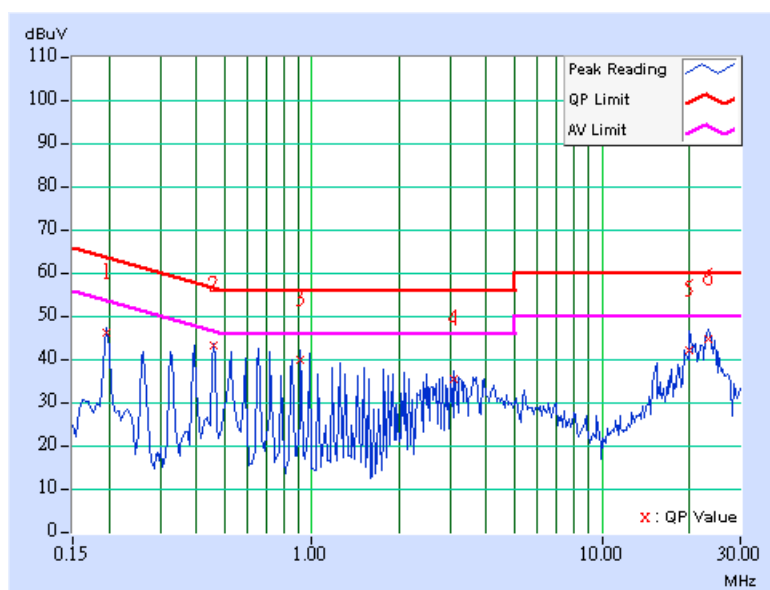
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	45.51	-	45.61	-	63.74	53.74	-18.13	-
2	0.459	0.11	42.47	-	42.58	-	56.72	46.72	-14.14	-
3	0.916	0.19	39.41	-	39.60	-	56.00	46.00	-16.40	-
4	3.083	0.29	34.66	-	34.95	-	56.00	46.00	-21.05	-
5	19.973	0.56	41.36	-	41.92	-	60.00	50.00	-18.08	-
6	23.191	0.73	44.00	-	44.73	-	60.00	50.00	-15.27	-

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

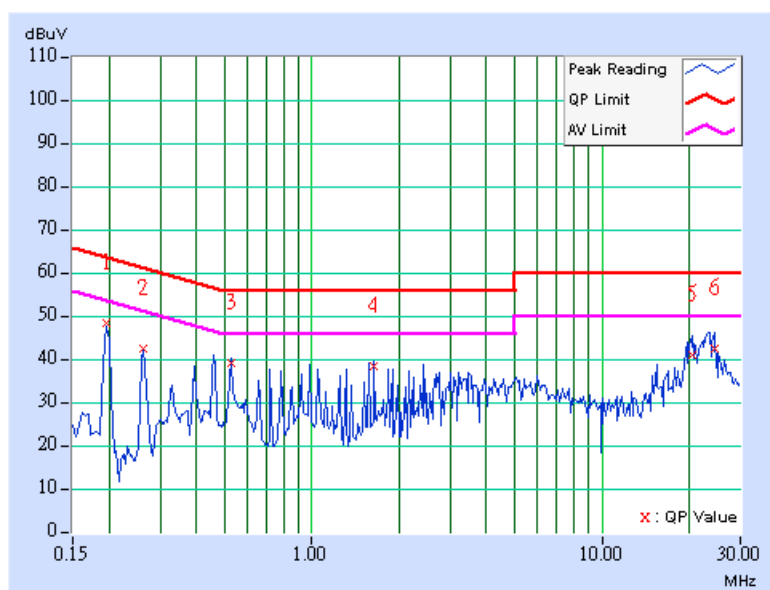


DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	7.2Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

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	0.197	0.10	47.72	-	47.82	-	63.74	53.74	-15.92	-
2	0.263	0.10	41.78	-	41.88	-	61.33	51.33	-19.45	-
3	0.525	0.10	38.30	-	38.40	-	56.00	46.00	-17.60	-
4	1.641	0.16	37.72	-	37.88	-	56.00	46.00	-18.12	-
5	20.410	0.59	40.34	-	40.93	-	60.00	50.00	-19.07	-
6	24.352	0.88	41.84	-	42.72	-	60.00	50.00	-17.28	-

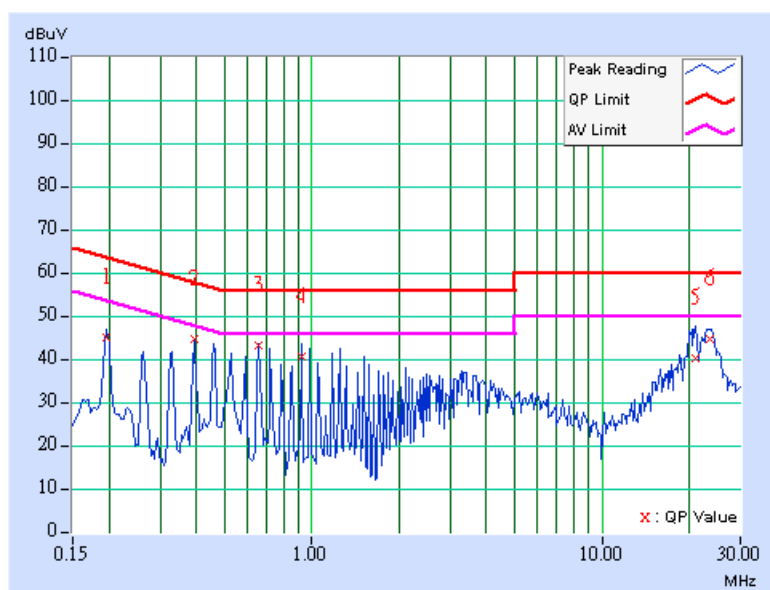
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	7.2Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.58	-	44.68	-	63.74	53.74	-19.06	-
2	0.392	0.10	43.91	-	44.01	-	58.02	48.02	-14.01	-
3	0.654	0.14	42.77	-	42.91	-	56.00	46.00	-13.09	-
4	0.920	0.19	39.92	-	40.11	-	56.00	46.00	-15.89	-
5	21.055	0.62	39.48	-	40.10	-	60.00	50.00	-19.90	-
6	23.422	0.74	44.03	-	44.77	-	60.00	50.00	-15.23	-

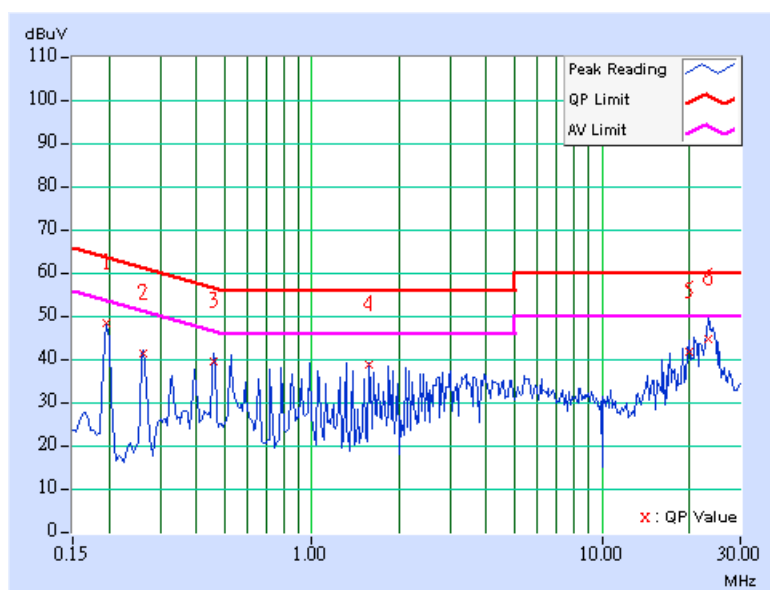
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	7.2Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	47.80	-	47.90	-	63.74	53.74	-15.84	-
2	0.263	0.10	40.84	-	40.94	-	61.33	51.33	-20.39	-
3	0.459	0.10	38.73	-	38.83	-	56.72	46.72	-17.89	-
4	1.574	0.16	38.10	-	38.26	-	56.00	46.00	-17.74	-
5	20.023	0.56	40.91	-	41.47	-	60.00	50.00	-18.53	-
6	23.172	0.79	43.96	-	44.75	-	60.00	50.00	-15.25	-

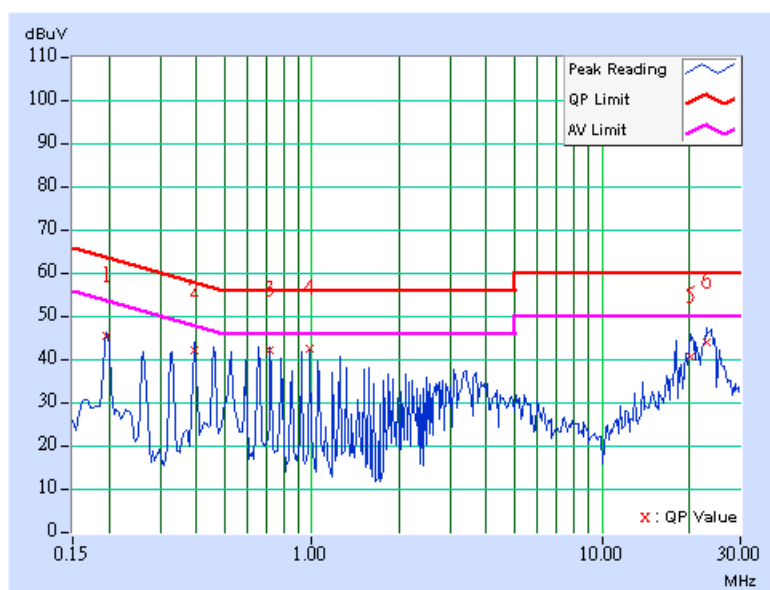
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	7.2Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.72	-	44.82	-	63.74	53.74	-18.92	-
2	0.396	0.10	41.38	-	41.48	-	57.93	47.93	-16.45	-
3	0.720	0.15	41.65	-	41.80	-	56.00	46.00	-14.20	-
4	0.986	0.20	41.81	-	42.01	-	56.00	46.00	-13.99	-
5	20.227	0.57	40.11	-	40.68	-	60.00	50.00	-19.32	-
6	22.984	0.72	43.22	-	43.94	-	60.00	50.00	-16.06	-

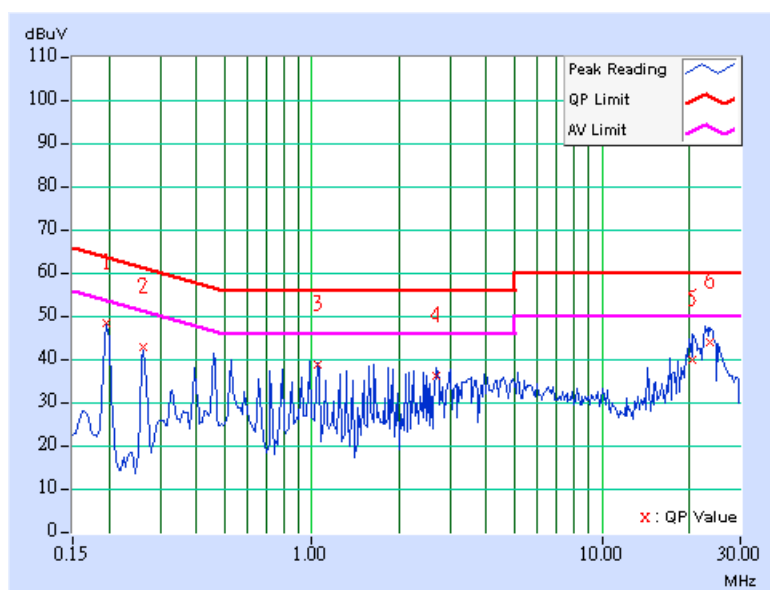
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	7.2Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	47.82	-	47.92	-	63.74	53.74	-15.82	-
2	0.263	0.10	42.00	-	42.10	-	61.33	51.33	-19.23	-
3	1.051	0.11	38.03	-	38.14	-	56.00	46.00	-17.86	-
4	2.695	0.26	35.44	-	35.70	-	56.00	46.00	-20.30	-
5	20.496	0.60	39.08	-	39.68	-	60.00	50.00	-20.32	-
6	23.652	0.83	43.17	-	44.00	-	60.00	50.00	-16.00	-

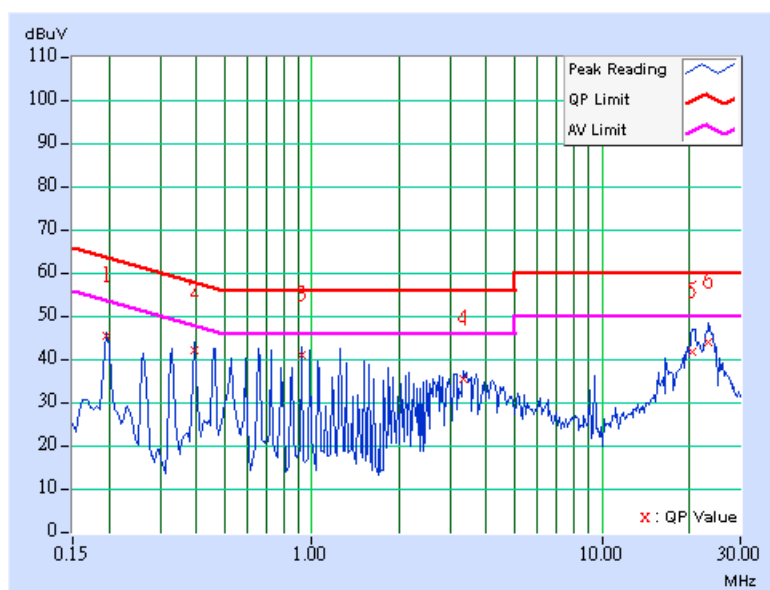
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	7.2Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.82	-	44.92	-	63.74	53.74	-18.82	-
2	0.392	0.10	41.64	-	41.74	-	58.02	48.02	-16.28	-
3	0.920	0.19	40.46	-	40.65	-	56.00	46.00	-15.35	-
4	3.348	0.31	34.81	-	35.12	-	56.00	46.00	-20.88	-
5	20.496	0.59	41.08	-	41.67	-	60.00	50.00	-18.33	-
6	23.387	0.74	43.18	-	43.92	-	60.00	50.00	-16.08	-

- 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.

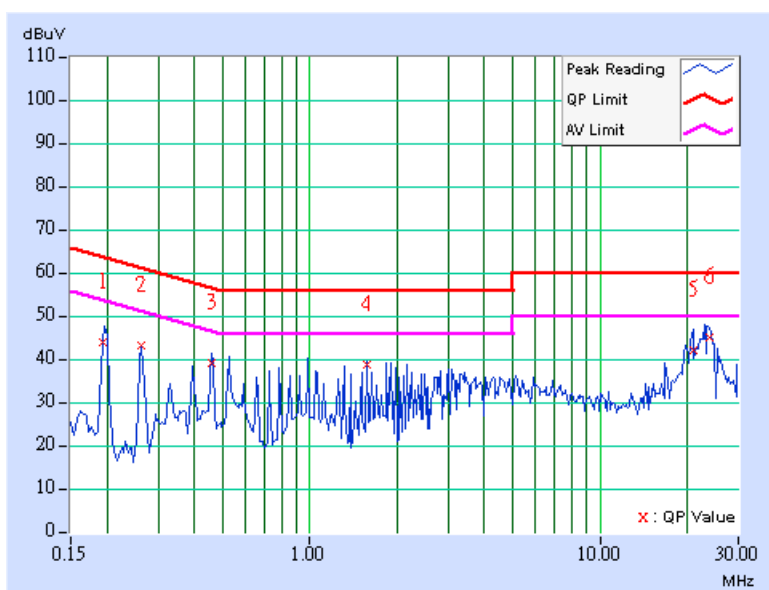


DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	15.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

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	0.193	0.10	43.42	-	43.52	-	63.91	53.91	-20.39	-
2	0.261	0.10	42.52	-	42.62	-	61.39	51.39	-18.77	-
3	0.459	0.10	38.52	-	38.62	-	56.72	46.72	-18.10	-
4	1.578	0.16	38.10	-	38.26	-	56.00	46.00	-17.74	-
5	20.902	0.63	41.45	-	42.08	-	60.00	50.00	-17.92	-
6	23.727	0.84	44.38	-	45.22	-	60.00	50.00	-14.78	-

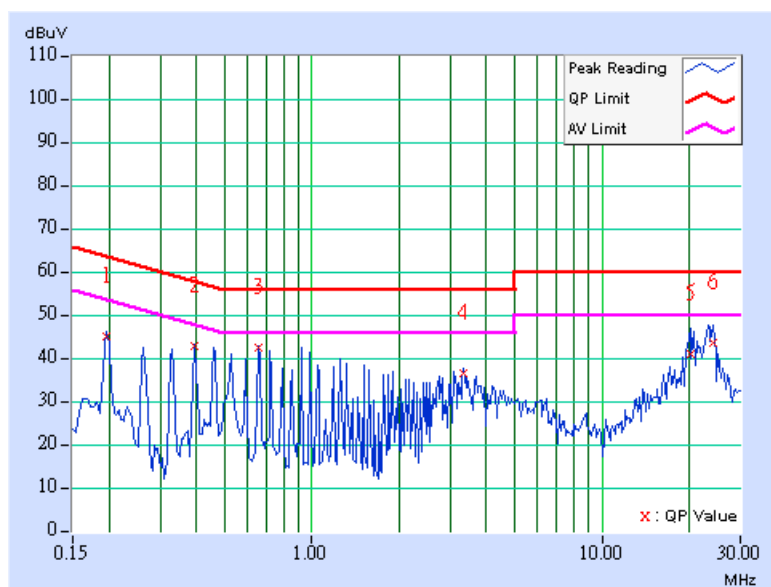
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	15.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

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	0.197	0.10	44.58	-	44.68	-	63.74	53.74	-19.06	-
2	0.392	0.10	42.26	-	42.36	-	58.02	48.02	-15.66	-
3	0.658	0.14	41.65	-	41.79	-	56.00	46.00	-14.21	-
4	3.352	0.31	35.95	-	36.26	-	56.00	46.00	-19.74	-
5	20.117	0.57	40.36	-	40.93	-	60.00	50.00	-19.07	-
6	24.059	0.78	42.75	-	43.53	-	60.00	50.00	-16.47	-

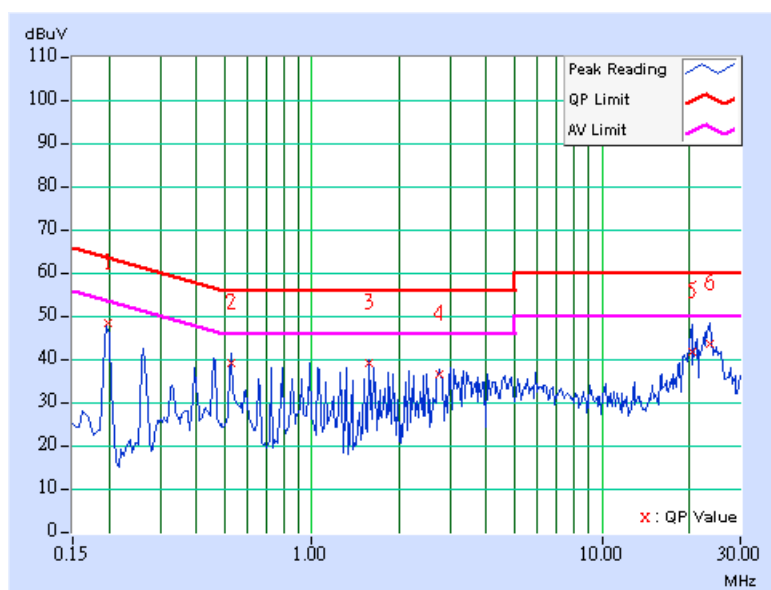
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	15.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.198	0.10	47.70	-	47.80	-	63.71	53.71	-15.91	-
2	0.525	0.10	38.28	-	38.38	-	56.00	46.00	-17.62	-
3	1.578	0.16	38.30	-	38.46	-	56.00	46.00	-17.54	-
4	2.762	0.26	35.89	-	36.15	-	56.00	46.00	-19.85	-
5	20.387	0.59	41.15	-	41.74	-	60.00	50.00	-18.26	-
6	23.539	0.82	42.72	-	43.54	-	60.00	50.00	-16.46	-

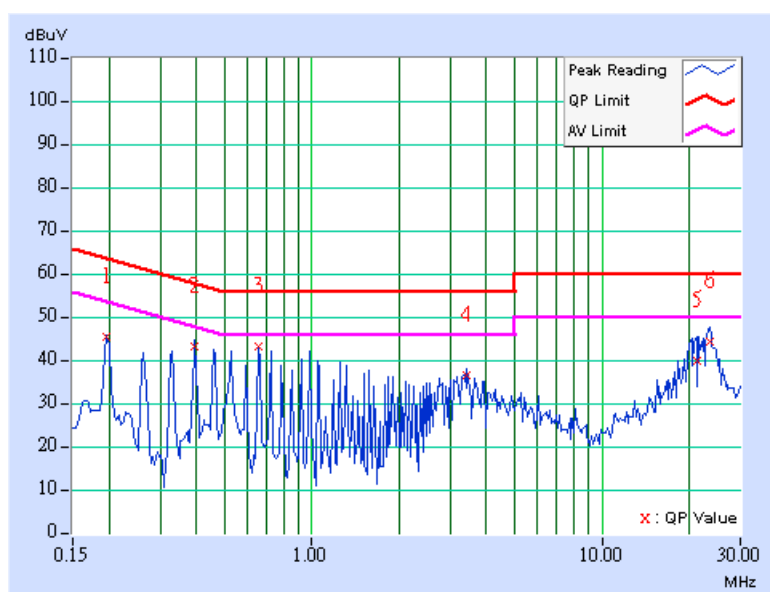
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	15.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.72	-	44.82	-	63.74	53.74	-18.92	-
2	0.396	0.10	42.70	-	42.80	-	57.93	47.93	-15.13	-
3	0.658	0.14	42.63	-	42.77	-	56.00	46.00	-13.23	-
4	3.418	0.32	35.88	-	36.20	-	56.00	46.00	-19.80	-
5	21.234	0.63	39.29	-	39.92	-	60.00	50.00	-20.08	-
6	23.539	0.75	43.81	-	44.56	-	60.00	50.00	-15.44	-

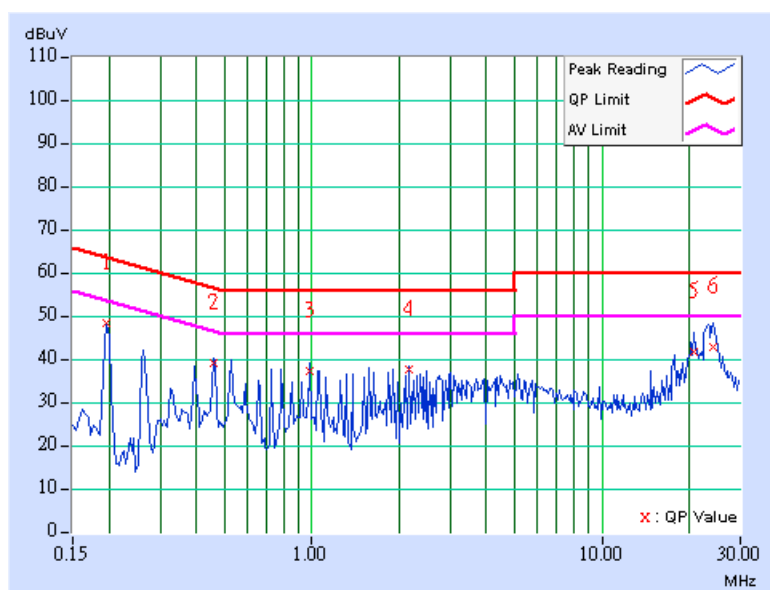
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	15.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	47.78	-	47.88	-	63.74	53.74	-15.86	-
2	0.459	0.10	38.36	-	38.46	-	56.72	46.72	-18.26	-
3	0.986	0.10	36.55	-	36.65	-	56.00	46.00	-19.35	-
4	2.172	0.21	37.04	-	37.25	-	56.00	46.00	-18.75	-
5	20.789	0.62	40.90	-	41.52	-	60.00	50.00	-18.48	-
6	24.277	0.88	42.06	-	42.94	-	60.00	50.00	-17.06	-

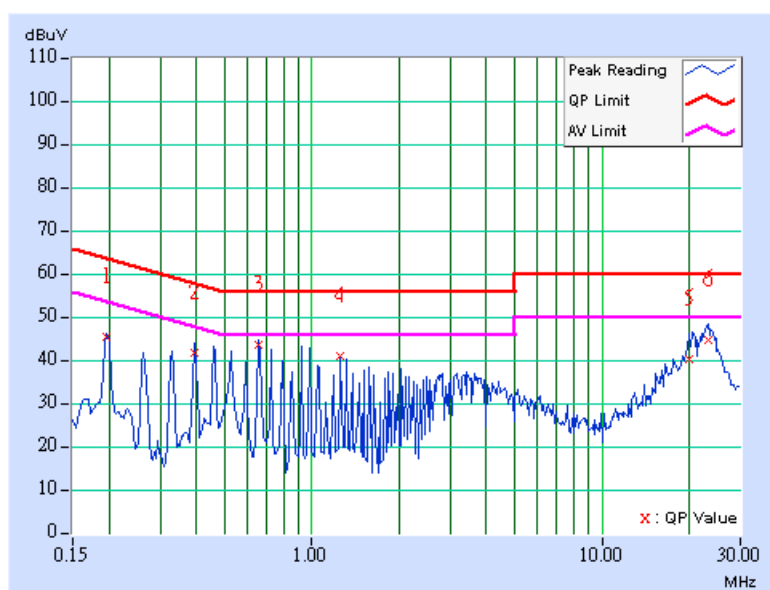
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	15.0Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	TESTED BY	Daniel Lin

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	44.70	-	44.80	-	63.74	53.74	-18.94	-
2	0.392	0.10	41.02	-	41.12	-	58.02	48.02	-16.90	-
3	0.658	0.14	42.92	-	43.06	-	56.00	46.00	-12.94	-
4	1.250	0.20	40.25	-	40.45	-	56.00	46.00	-15.55	-
5	20.000	0.56	39.54	-	40.10	-	60.00	50.00	-19.90	-
6	23.230	0.73	44.12	-	44.85	-	60.00	50.00	-15.15	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400 / F(kHz)	300
0.490 ~ 1.705	24000 / F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Jan. 01, 2007
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 04, 2006
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 15, 2007
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Jan. 01, 2007
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 19, 2007
Preamplifier Agilent	8449B	3008A01960	Nov. 09, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219268/4	Dec. 20, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	230129/4	Dec. 20, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA

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

4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

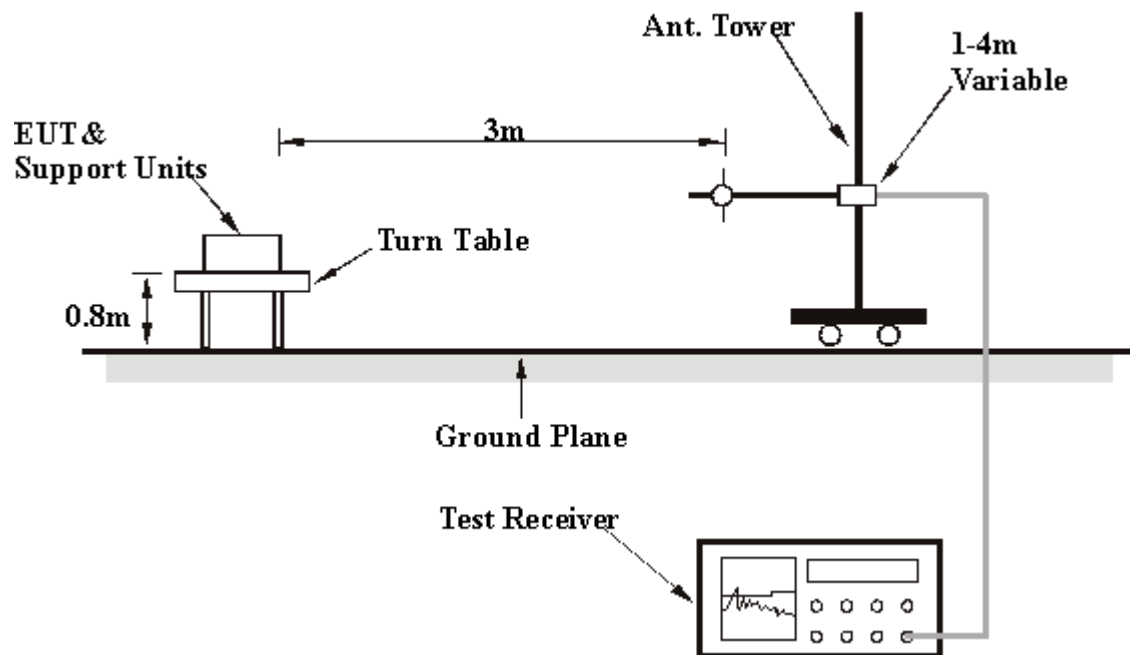
NOTE:

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 1MHz and the video bandwidth is 10Hz 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

BELOW 1GHz WORST-CASE DATA 802.11g OFDM MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK for 802.11g	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	236.05	29.40 QP	46.00	-16.60	1.00 H	253	17.43	11.97
2	300.20	33.36 QP	46.00	-12.64	1.00 H	70	17.92	15.43
3	399.34	26.50 QP	46.00	-19.50	1.00 H	283	8.72	17.78
4	488.76	35.11 QP	46.00	-10.89	1.50 H	220	15.45	19.66
5	512.08	32.19 QP	46.00	-13.81	1.25 H	250	11.99	20.20
6	675.37	32.19 QP	46.00	-13.81	1.00 H	217	8.55	23.64

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	37.78	26.82 QP	40.00	-13.18	1.25 V	235	12.97	13.85
2	267.15	30.82 QP	46.00	-15.18	1.50 V	214	17.19	13.63
3	300.20	37.20 QP	46.00	-8.80	1.00 V	127	21.76	15.43
4	366.29	31.08 QP	46.00	-14.92	1.00 V	79	14.41	16.66
5	496.53	38.36 QP	46.00	-7.64	1.00 V	217	18.50	19.86
6	906.69	35.63 QP	46.00	-10.37	1.25 V	328	7.87	27.76

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

DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK for draft 802.11n (20MHz)	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	232.16	26.37 QP	46.00	-19.63	1.25 H	10	14.53	11.84
2	267.15	28.37 QP	46.00	-17.63	1.00 H	241	14.73	13.63
3	300.20	33.84 QP	46.00	-12.16	1.00 H	79	18.40	15.43
4	335.19	27.53 QP	46.00	-18.47	1.00 H	313	11.62	15.91
5	671.48	30.00 QP	46.00	-16.00	1.50 H	220	6.44	23.56
6	739.52	32.38 QP	46.00	-13.62	1.00 H	235	6.94	25.44

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	232.16	29.64 QP	46.00	-16.36	1.25 V	157	17.80	11.84
2	267.15	31.30 QP	46.00	-14.70	1.00 V	289	17.66	13.63
3	300.20	35.86 QP	46.00	-10.14	1.00 V	136	20.42	15.43
4	366.29	29.03 QP	46.00	-16.97	1.00 V	82	12.36	16.66
5	488.76	32.56 QP	46.00	-13.44	1.50 V	322	12.90	19.66
6	720.08	29.56 QP	46.00	-16.44	1.00 V	13	4.77	24.80

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

DRAFT 802.11n (40MHz) OFDM MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK for draft 802.11n (40MHz)	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	267.15	27.99 QP	46.00	-18.01	1.50 H	262	14.36	13.63
2	300.20	33.91 QP	46.00	-12.09	1.00 H	88	18.48	15.43
3	496.53	29.95 QP	46.00	-16.05	1.25 H	214	10.09	19.86
4	675.37	30.00 QP	46.00	-16.00	1.00 H	232	6.36	23.64
5	737.58	32.03 QP	46.00	-13.97	1.00 H	256	6.66	25.38
6	908.64	34.61 QP	46.00	-11.39	1.25 H	355	6.76	27.85

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	232.16	28.80 QP	46.00	-17.20	1.00 V	91	16.96	11.84
2	267.15	30.06 QP	46.00	-15.94	1.00 V	307	16.42	13.63
3	300.20	35.54 QP	46.00	-10.46	1.25 V	139	20.10	15.43
4	366.29	28.12 QP	46.00	-17.88	1.00 V	94	11.46	16.66
5	432.38	28.69 QP	46.00	-17.31	1.00 V	202	10.30	18.38
6	535.41	30.20 QP	46.00	-15.80	1.50 V	214	9.51	20.69

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

802.11b DSSS MODULATION: SINGLE TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	2386.00	62.35 PK	74.00	-11.65	1.61 H	354	30.25	32.10
2	2386.00	52.33 AV	54.00	-1.67	1.61 H	354	20.23	32.10
3	*2412.00	107.59 PK			1.36 H	140	75.40	32.19
4	*2412.00	103.83 AV			1.36 H	140	71.64	32.19
5	4824.00	54.26 PK	74.00	-19.74	1.05 H	217	15.61	38.65
6	4824.00	49.23 AV	54.00	-4.77	1.05 H	217	10.58	38.65
7	7236.00	57.34 PK	74.00	-16.66	1.03 H	326	12.13	45.21
8	7236.00	48.09 AV	54.00	-5.91	1.03 H	326	2.88	45.21

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	2386.00	52.91 PK	74.00	-21.09	1.81 V	242	20.81	32.10
2	2386.00	49.15 AV	54.00	-4.85	1.81 V	242	17.05	32.10
3	*2412.00	104.41 PK			1.81 V	242	72.22	32.19
4	*2412.00	100.65 AV			1.81 V	242	68.46	32.19
5	4824.00	56.56 PK	74.00	-17.44	1.00 V	216	17.91	38.65
6	4824.00	52.64 AV	54.00	-1.36	1.00 V	216	13.99	38.65
7	7236.00	59.32 PK	74.00	-14.68	1.23 V	224	14.11	45.21
8	7236.00	51.40 AV	54.00	-2.60	1.23 V	224	6.19	45.21

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	*2437.00	107.96 PK			1.35 H	141	75.67	32.29
2	*2437.00	104.25 AV			1.35 H	141	71.96	32.29
3	4874.00	54.38 PK	74.00	-19.62	1.07 H	226	15.59	38.79
4	4874.00	49.35 AV	54.00	-4.65	1.07 H	226	10.56	38.79
5	7311.00	57.68 PK	74.00	-16.32	1.06 H	313	12.27	45.41
6	7311.00	48.42 AV	54.00	-5.58	1.06 H	313	3.01	45.41

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	*2437.00	104.93 PK			1.80 V	241	72.64	32.29
2	*2437.00	101.18 AV			1.80 V	241	68.89	32.29
3	4874.00	56.59 PK	74.00	-17.41	1.07 V	215	17.80	38.79
4	4874.00	52.75 AV	54.00	-1.25	1.07 V	215	13.96	38.79
5	7311.00	59.09 PK	74.00	-14.91	1.09 V	203	13.68	45.41
6	7311.00	51.13 AV	54.00	-2.87	1.09 V	203	5.72	45.41

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	*2462.00	107.87 PK			1.34 H	140	75.49	32.38
2	*2462.00	104.19 AV			1.34 H	140	71.81	32.38
3	2483.50	56.53 PK	74.00	-17.47	1.34 H	140	24.07	32.46
4	2483.50	52.85 AV	54.00	-1.15	1.34 H	140	20.39	32.46
5	4924.00	54.21 PK	74.00	-19.79	1.08 H	237	15.29	38.92
6	4924.00	49.17 AV	54.00	-4.83	1.08 H	237	10.25	38.92
7	7386.00	57.84 PK	74.00	-16.16	1.10 H	304	12.25	45.59
8	7386.00	48.61 AV	54.00	-5.39	1.10 H	304	3.02	45.59

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	*2462.00	104.87 PK			1.78 V	238	72.49	32.38
2	*2462.00	101.13 AV			1.78 V	238	68.75	32.38
3	2483.50	56.53 PK	74.00	-17.47	1.78 V	238	24.07	32.46
4	2483.50	49.79 AV	54.00	-4.21	1.78 V	238	17.33	32.46
5	4924.00	56.70 PK	74.00	-17.30	1.08 V	211	17.78	38.92
6	4924.00	52.63 AV	54.00	-1.37	1.08 V	211	13.71	38.92
7	7386.00	59.13 PK	74.00	-14.87	1.07 V	116	13.54	45.59
8	7386.00	51.24 AV	54.00	-2.76	1.07 V	116	5.65	45.59

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * ”: Fundamental frequency.

802.11b DSSS MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa	TESTED BY	Brad 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	2390.00	53.01 PK	74.00	-20.99	1.33 H	208	20.90	32.11
2	2390.00	49.28 AV	54.00	-4.72	1.33 H	208	17.17	32.11
3	*2412.00	109.85 PK			1.33 H	208	77.66	32.19
4	*2412.00	106.12 AV			1.33 H	208	73.93	32.19
5	4824.00	54.15 PK	74.00	-19.85	1.22 H	107	15.50	38.65
6	4824.00	49.12 AV	54.00	-4.88	1.22 H	107	10.47	38.65
7	7236.00	57.11 PK	74.00	-16.89	1.11 H	220	11.90	45.21
8	7236.00	47.86 AV	54.00	-6.14	1.11 H	220	2.65	45.21

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	49.51 PK	74.00	-24.49	1.65 V	210	17.40	32.11
2	2390.00	45.74 AV	54.00	-8.26	1.65 V	210	13.63	32.11
3	*2412.00	106.35 PK			1.65 V	210	74.16	32.19
4	*2412.00	102.58 AV			1.65 V	210	70.39	32.19
5	4824.00	55.92 PK	74.00	-18.08	1.18 V	223	17.27	38.65
6	4824.00	52.15 AV	54.00	-1.85	1.18 V	223	13.50	38.65
7	7236.00	59.71 PK	74.00	-14.29	1.15 V	217	14.50	45.21
8	7236.00	51.84 AV	54.00	-2.16	1.15 V	217	6.63	45.21

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa	TESTED BY	Brad 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	*2437.00	109.96 PK			1.38 H	213	77.67	32.29
2	*2437.00	106.22 AV			1.38 H	213	73.93	32.29
3	4874.00	54.26 PK	74.00	-19.74	1.20 H	62	15.47	38.79
4	4874.00	49.21 AV	54.00	-4.79	1.20 H	62	10.42	38.79
5	7311.00	57.39 PK	74.00	-16.61	1.06 H	269	11.98	45.41
6	7311.00	48.02 AV	54.00	-5.98	1.06 H	269	2.61	45.41

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	*2437.00	106.41 PK			1.66 V	214	74.12	32.29
2	*2437.00	102.65 AV			1.66 V	214	70.36	32.29
3	4874.00	56.54 PK	74.00	-17.46	1.14 V	232	17.75	38.79
4	4874.00	52.49 AV	54.00	-1.51	1.14 V	232	13.70	38.79
5	7311.00	59.46 PK	74.00	-14.54	1.12 V	195	14.05	45.41
6	7311.00	51.66 AV	54.00	-2.34	1.12 V	195	6.25	45.41

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * ”: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa	TESTED BY	Brad 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	*2462.00	110.06 PK			1.34 H	212	77.68	32.38
2	*2462.00	106.31 AV			1.34 H	212	73.93	32.38
3	2483.50	53.05 PK	74.00	-20.95	1.34 H	212	20.59	32.46
4	2483.50	49.30 AV	54.00	-4.70	1.34 H	212	16.84	32.46
5	4924.00	54.05 PK	74.00	-19.95	1.20 H	211	15.13	38.92
6	4924.00	49.04 AV	54.00	-4.96	1.20 H	211	10.12	38.92
7	7386.00	57.22 PK	74.00	-16.78	1.14 H	234	11.62	45.59
8	7386.00	48.02 AV	54.00	-5.98	1.14 H	234	2.42	45.59

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	*2462.00	106.47 PK			1.64 V	208	74.09	32.38
2	*2462.00	102.70 AV			1.64 V	208	70.32	32.38
3	2483.50	49.46 PK	74.00	-24.54	1.64 V	208	17.00	32.46
4	2483.50	45.69 AV	54.00	-8.31	1.64 V	208	13.23	32.46
5	4924.00	56.71 PK	74.00	-17.29	1.03 V	222	17.79	38.92
6	4924.00	52.28 AV	54.00	-1.72	1.03 V	222	13.36	38.92
7	7386.00	59.83 PK	74.00	-14.17	1.16 V	209	14.23	45.59
8	7386.00	51.96 AV	54.00	-2.04	1.16 V	209	6.36	45.59

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * ”: Fundamental frequency.

802.11g OFDM MODULATION: SINGLE TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	2390.00	62.28 PK	74.00	-11.72	1.04 H	212	30.17	32.11
2	2390.00	52.90 AV	54.00	-1.10	1.04 H	212	20.79	32.11
3	*2412.00	107.29 PK			1.04 H	212	75.10	32.19
4	*2412.00	97.91 AV			1.04 H	212	65.72	32.19
5	4824.00	44.26 PK	74.00	-29.74	1.03 H	214	5.61	38.65
6	4824.00	39.17 AV	54.00	-14.83	1.03 H	214	0.52	38.65
7	7236.00	55.39 PK	74.00	-18.61	1.09 H	223	10.18	45.21
8	7236.00	46.07 AV	54.00	-7.93	1.09 H	223	0.86	45.21

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	57.74 PK	74.00	-16.26	1.13 V	167	25.63	32.11
2	2390.00	47.82 AV	54.00	-6.18	1.13 V	167	15.71	32.11
3	*2412.00	102.75 PK			1.13 V	167	70.56	32.19
4	*2412.00	92.83 AV			1.13 V	167	60.64	32.19
5	4824.00	46.53 PK	74.00	-27.47	1.09 V	267	7.88	38.65
6	4824.00	41.36 AV	54.00	-12.64	1.09 V	267	2.71	38.65
7	7236.00	57.46 PK	74.00	-16.54	1.06 V	229	12.25	45.21
8	7236.00	48.06 AV	54.00	-5.94	1.06 V	229	2.85	45.21

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	2382.00	62.30 PK	74.00	-11.70	1.05 H	209	30.22	32.08
2	2382.00	52.69 AV	54.00	-1.31	1.05 H	209	20.61	32.08
3	*2437.00	110.18 PK			1.05 H	209	77.89	32.29
4	*2437.00	100.82 AV			1.05 H	209	68.53	32.29
5	4874.00	46.11 PK	74.00	-27.89	1.05 H	209	7.32	38.79
6	4874.00	41.02 AV	54.00	-12.98	1.05 H	209	2.23	38.79
7	7311.00	56.42 PK	74.00	-17.58	1.12 H	208	11.01	45.41
8	7311.00	47.13 AV	54.00	-6.87	1.12 H	208	1.72	45.41

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	2382.00	57.49 PK	74.00	-16.51	1.12 V	168	25.41	32.08
2	2382.00	47.58 AV	54.00	-6.42	1.12 V	168	15.50	32.08
3	*2437.00	105.62 PK			1.12 V	168	73.33	32.29
4	*2437.00	95.71 AV			1.12 V	168	63.42	32.29
5	4874.00	47.65 PK	74.00	-26.35	1.12 V	283	8.86	38.79
6	4874.00	42.48 AV	54.00	-11.52	1.12 V	283	3.69	38.79
7	7311.00	57.69 PK	74.00	-16.31	1.09 V	245	12.28	45.41
8	7311.00	48.17 AV	54.00	-5.83	1.09 V	245	2.76	45.41

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	*2462.00	107.36 PK			1.05 H	211	74.98	32.38
2	*2462.00	98.02 AV			1.05 H	211	65.64	32.38
3	2483.50	62.21 PK	74.00	-11.79	1.05 H	211	29.75	32.46
4	2483.50	52.87 AV	54.00	-1.13	1.05 H	211	20.41	32.46
5	4924.00	44.12 PK	74.00	-29.88	1.05 H	209	5.20	38.92
6	4924.00	39.03 AV	54.00	-14.97	1.05 H	209	0.11	38.92
7	7386.00	55.42 PK	74.00	-18.58	1.10 H	265	9.83	45.59
8	7386.00	46.11 AV	54.00	-7.89	1.10 H	265	0.52	45.59

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	*2462.00	102.87 PK			1.12 V	168	70.49	32.38
2	*2462.00	92.96 AV			1.12 V	168	60.58	32.38
3	2483.50	57.72 PK	74.00	-16.28	1.12 V	168	25.26	32.46
4	2483.50	47.81 AV	54.00	-6.19	1.12 V	168	15.35	32.46
5	4924.00	46.67 PK	74.00	-27.33	1.11 V	266	7.75	38.92
6	4924.00	41.48 AV	54.00	-12.52	1.11 V	266	2.56	38.92
7	7386.00	57.62 PK	74.00	-16.38	1.09 V	234	12.02	45.59
8	7386.00	48.23 AV	54.00	-5.77	1.09 V	234	2.63	45.59

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

802.11g OFDM MODULATION: DUAL TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	2390.00	66.25 PK	74.00	-7.75	1.50 H	221	34.14	32.11
2	2390.00	52.23 AV	54.00	-1.77	1.50 H	221	20.12	32.11
3	*2412.00	108.03 PK			1.50 H	172	75.84	32.19
4	*2412.00	98.52 AV			1.50 H	172	66.33	32.19
5	4824.00	43.07 PK	74.00	-30.93	1.09 H	206	4.42	38.65
6	4824.00	38.02 AV	54.00	-15.98	1.09 H	206	-0.63	38.65
7	7236.00	55.17 PK	74.00	-18.83	1.11 H	52	9.96	45.21
8	7236.00	45.82 AV	54.00	-8.18	1.11 H	52	0.61	45.21

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.39 PK	74.00	-15.61	1.36 V	108	26.28	32.11
2	2390.00	48.95 AV	54.00	-5.05	1.36 V	108	16.84	32.11
3	*2412.00	104.68 PK			1.36 V	108	72.49	32.19
4	*2412.00	95.24 AV			1.36 V	108	63.05	32.19
5	4824.00	46.24 PK	74.00	-27.76	1.03 V	72	7.59	38.65
6	4824.00	41.05 AV	54.00	-12.95	1.03 V	72	2.40	38.65
7	7236.00	57.11 PK	74.00	-16.89	1.00 V	239	11.90	45.21
8	7236.00	47.73 AV	54.00	-6.27	1.00 V	239	2.52	45.21

- REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. The limit value is defined as per 15.247.
6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	2382.00	62.59 PK	74.00	-11.41	1.56 H	206	30.51	32.08
2	2382.00	52.15 AV	54.00	-1.85	1.56 H	206	20.07	32.08
3	*2437.00	110.98 PK			1.53 H	174	78.69	32.29
4	*2437.00	101.49 AV			1.53 H	174	69.20	32.29
5	2483.50	58.35 PK	74.00	-15.65	1.53 H	174	25.89	32.46
6	2483.50	48.86 AV	54.00	-5.14	1.53 H	174	16.40	32.46
7	4874.00	43.06 PK	74.00	-30.94	1.06 H	231	4.27	38.79
8	4874.00	38.02 AV	54.00	-15.98	1.06 H	231	-0.77	38.79
9	7311.00	55.24 PK	74.00	-18.76	1.01 H	29	9.83	45.41
10	7311.00	45.83 AV	54.00	-8.17	1.01 H	29	0.42	45.41

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	2382.00	58.35 PK	74.00	-15.65	1.36 V	103	26.27	32.08
2	2382.00	48.90 AV	54.00	-5.10	1.36 V	103	16.82	32.08
3	*2437.00	107.69 PK			1.36 V	103	75.40	32.29
4	*2437.00	98.24 AV			1.36 V	103	65.95	32.29
5	2483.50	55.06 PK	74.00	-18.94	1.36 V	103	22.60	32.46
6	2483.50	45.61 AV	54.00	-8.39	1.36 V	103	13.15	32.46
7	4874.00	46.25 PK	74.00	-27.75	1.13 V	309	7.46	38.79
8	4874.00	41.18 AV	54.00	-12.82	1.13 V	309	2.39	38.79
9	7311.00	57.36 PK	74.00	-16.64	1.08 V	64	11.95	45.41
10	7311.00	47.95 AV	54.00	-6.05	1.08 V	64	2.54	45.41

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * ”: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TESTED BY	Brad 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	*2462.00	108.51 PK			1.52 H	171	76.13	32.38
2	*2462.00	99.03 AV			1.52 H	171	66.65	32.38
3	2483.50	66.96 PK	74.00	-7.04	1.02 H	219	34.50	32.46
4	2483.50	52.87 AV	54.00	-1.13	1.02 H	219	20.41	32.46
5	4924.00	42.97 PK	74.00	-31.03	1.01 H	82	4.05	38.92
6	4924.00	37.91 AV	54.00	-16.09	1.01 H	82	-1.01	38.92
7	7386.00	55.06 PK	74.00	-18.94	1.08 H	67	9.47	45.59
8	7386.00	45.69 AV	54.00	-8.31	1.08 H	67	0.09	45.59

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	*2462.00	105.17 PK			1.38 V	110	72.79	32.38
2	*2462.00	95.72 AV			1.38 V	110	63.34	32.38
3	2483.50	59.01 PK	74.00	-14.99	1.38 V	110	26.55	32.46
4	2483.50	49.56 AV	54.00	-4.44	1.38 V	110	17.10	32.46
5	4924.00	46.03 PK	74.00	-27.97	1.10 V	231	7.11	38.92
6	4924.00	40.88 AV	54.00	-13.12	1.10 V	231	1.96	38.92
7	7386.00	57.05 PK	74.00	-16.95	1.03 V	64	11.45	45.59
8	7386.00	47.68 AV	54.00	-6.32	1.03 V	64	2.09	45.59

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 63%RH, 991hPa	TESTED BY	Brad 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	2390.00	64.08 PK	74.00	-9.92	1.02 H	164	31.97	32.11
2	2390.00	52.78 AV	54.00	-1.22	1.02 H	164	20.67	32.11
3	*2412.00	107.55 PK			1.02 H	164	75.36	32.19
4	*2412.00	96.25 AV			1.02 H	164	64.06	32.19
5	4824.00	43.29 PK	74.00	-30.71	1.13 H	124	4.64	38.65
6	4824.00	38.25 AV	54.00	-15.75	1.13 H	124	-0.40	38.65
7	7236.00	55.31 PK	74.00	-18.69	1.01 H	296	10.10	45.21
8	7236.00	45.96 AV	54.00	-8.04	1.01 H	296	0.75	45.21

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.82 PK	74.00	-12.18	1.64 V	288	29.71	32.11
2	2390.00	50.62 AV	54.00	-3.38	1.64 V	288	18.51	32.11
3	*2412.00	105.29 PK			1.64 V	288	73.10	32.19
4	*2412.00	94.09 AV			1.64 V	288	61.90	32.19
5	4824.00	46.38 PK	74.00	-27.62	1.06 V	33	7.73	38.65
6	4824.00	41.21 AV	54.00	-12.79	1.06 V	33	2.56	38.65
7	7236.00	57.26 PK	74.00	-16.74	1.05 V	226	12.05	45.21
8	7236.00	47.85 AV	54.00	-6.15	1.05 V	226	2.64	45.21

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 63%RH, 991hPa	TESTED BY	Brad 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	2382.00	62.99 PK	74.00	-11.01	1.59 H	207	30.91	32.08
2	2382.00	52.73 AV	54.00	-1.27	1.59 H	207	20.65	32.08
3	*2437.00	111.36 PK			1.03 H	172	79.07	32.29
4	*2437.00	100.12 AV			1.03 H	172	67.83	32.29
5	2483.50	59.81 PK	74.00	-14.19	1.29 H	237	27.35	32.46
6	2483.50	50.61 AV	54.00	-3.39	1.29 H	237	18.15	32.46
7	4874.00	45.13 PK	74.00	-28.87	1.03 H	249	6.34	38.79
8	4874.00	40.09 AV	54.00	-13.91	1.03 H	249	1.30	38.79
9	7311.00	56.34 PK	74.00	-17.66	1.05 H	39	10.93	45.41
10	7311.00	46.91 AV	54.00	-7.09	1.05 H	39	1.50	45.41

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	2382.00	61.76 PK	74.00	-12.24	1.65 V	290	29.68	32.08
2	2382.00	50.63 AV	54.00	-3.37	1.65 V	290	18.55	32.08
3	*2437.00	109.15 PK			1.65 V	290	76.86	32.29
4	*2437.00	98.02 AV			1.65 V	290	65.73	32.29
5	2483.50	59.64 PK	74.00	-14.36	1.65 V	290	27.18	32.46
6	2483.50	48.51 AV	54.00	-5.49	1.65 V	290	16.05	32.46
7	4874.00	47.98 PK	74.00	-26.02	1.01 V	62	9.19	38.79
8	4874.00	42.83 AV	54.00	-11.17	1.01 V	62	4.04	38.79
9	7311.00	58.39 PK	74.00	-15.61	1.02 V	269	12.98	45.41
10	7311.00	48.96 AV	54.00	-5.04	1.02 V	269	3.55	45.41

- REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. The limit value is defined as per 15.247.
6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 63%RH, 991hPa	TESTED BY	Brad 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	*2462.00	108.62 PK			1.03 H	166	76.24	32.38
2	*2462.00	97.35 AV			1.03 H	166	64.97	32.38
3	2483.50	67.95 PK	74.00	-6.05	1.00 H	217	35.49	32.46
4	2483.50	52.88 AV	54.00	-1.12	1.00 H	217	20.42	32.46
5	4924.00	43.52 PK	74.00	-30.48	1.12 H	161	4.60	38.92
6	4924.00	38.47 AV	54.00	-15.53	1.12 H	161	-0.45	38.92
7	7386.00	55.17 PK	74.00	-18.83	1.12 H	84	9.58	45.59
8	7386.00	45.82 AV	54.00	-8.18	1.12 H	84	0.23	45.59

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	*2462.00	106.34 PK			1.61 V	283	73.96	32.38
2	*2462.00	95.21 AV			1.61 V	283	62.83	32.38
3	2483.50	61.87 PK	74.00	-12.13	1.61 V	283	29.41	32.46
4	2483.50	50.74 AV	54.00	-3.26	1.61 V	283	18.28	32.46
5	4924.00	46.59 PK	74.00	-27.41	1.03 V	45	7.67	38.92
6	4924.00	41.42 AV	54.00	-12.58	1.03 V	45	2.50	38.92
7	7386.00	57.38 PK	74.00	-16.62	1.01 V	221	11.79	45.59
8	7386.00	47.96 AV	54.00	-6.04	1.01 V	221	2.37	45.59

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * ”: Fundamental frequency.

DRAFT 802.11n (40MHz) OFDM MODULATION: DUAL TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 63%RH, 991hPa	TESTED BY	Brad 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	2382.00	63.79 PK	74.00	-10.21	1.56 H	23	31.71	32.08
2	2382.00	52.87 AV	54.00	-1.13	1.56 H	23	20.79	32.08
3	*2422.00	102.31 PK			1.56 H	23	70.08	32.23
4	*2422.00	91.39 AV			1.56 H	23	59.16	32.23
5	4844.00	43.15 PK	74.00	-30.85	1.13 H	94	4.45	38.70
6	4844.00	38.16 AV	54.00	-15.84	1.13 H	94	-0.54	38.70
7	7266.00	55.26 PK	74.00	-18.74	1.08 H	305	9.97	45.29
8	7266.00	45.93 AV	54.00	-8.07	1.08 H	305	0.64	45.29

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	2382.00	60.77 PK	74.00	-13.23	1.14 V	142	28.69	32.08
2	2382.00	49.62 AV	54.00	-4.38	1.14 V	142	17.54	32.08
3	*2422.00	99.29 PK			1.14 V	142	67.06	32.23
4	*2422.00	88.14 AV			1.14 V	142	55.91	32.23
5	4844.00	46.35 PK	74.00	-27.65	1.09 V	261	7.65	38.70
6	4844.00	41.19 AV	54.00	-12.81	1.09 V	261	2.49	38.70
7	7266.00	57.26 PK	74.00	-16.74	1.22 V	63	11.97	45.29
8	7266.00	47.85 AV	54.00	-6.15	1.22 V	63	2.56	45.29

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 63%RH, 991hPa	TESTED BY	Brad 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	2390.00	63.70 PK	74.00	-10.30	1.54 H	28	31.59	32.11
2	2390.00	52.75 AV	54.00	-1.25	1.54 H	28	20.64	32.11
3	*2437.00	105.17 PK			1.54 H	28	72.88	32.29
4	*2437.00	94.22 AV			1.54 H	28	61.93	32.29
5	2483.50	59.80 PK	74.00	-14.20	1.54 H	28	27.34	32.46
6	2483.50	48.85 AV	54.00	-5.15	1.54 H	28	16.39	32.46
7	4874.00	43.27 PK	74.00	-30.73	1.16 H	225	4.48	38.79
8	4874.00	38.26 AV	54.00	-15.74	1.16 H	225	-0.53	38.79
9	7311.00	55.39 PK	74.00	-18.61	1.01 H	35	9.98	45.41
10	7311.00	46.07 AV	54.00	-7.93	1.01 H	35	0.66	45.41

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.84 PK	74.00	-13.16	1.15 V	140	28.73	32.11
2	2390.00	49.72 AV	54.00	-4.28	1.15 V	140	17.61	32.11
3	*2437.00	102.31 PK			1.15 V	140	70.02	32.29
4	*2437.00	91.19 AV			1.15 V	140	58.90	32.29
5	2483.50	56.94 PK	74.00	-17.06	1.15 V	140	24.48	32.46
6	2483.50	45.82 AV	54.00	-8.18	1.15 V	140	13.36	32.46
7	4874.00	46.69 PK	74.00	-27.31	1.13 V	295	7.90	38.79
8	4874.00	41.52 AV	54.00	-12.48	1.13 V	295	2.73	38.79
9	7311.00	57.78 PK	74.00	-16.22	1.20 V	84	12.37	45.41
10	7311.00	48.36 AV	54.00	-5.64	1.20 V	84	2.95	45.41

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247.
 6. “ * ”: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 63%RH, 991hPa	TESTED BY	Brad 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	*2452.00	102.14 PK			1.44 H	21	69.80	32.34
2	*2452.00	91.09 AV			1.44 H	21	58.75	32.34
3	2492.00	63.16 PK	74.00	-10.84	1.44 H	21	30.67	32.49
4	2492.00	52.11 AV	54.00	-1.89	1.44 H	21	19.62	32.49
5	4904.00	43.26 PK	74.00	-30.74	1.10 H	154	4.39	38.87
6	4904.00	38.25 AV	54.00	-15.75	1.10 H	154	-0.62	38.87
7	7356.00	55.34 PK	74.00	-18.66	1.03 H	217	9.82	45.52
8	7356.00	46.05 AV	54.00	-7.95	1.03 H	217	0.53	45.52

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	*2452.00	99.17 PK			1.15 V	149	66.83	32.34
2	*2452.00	88.02 AV			1.15 V	149	55.68	32.34
3	2492.00	60.19 PK	74.00	-13.81	1.15 V	149	27.70	32.49
4	2492.00	49.04 AV	54.00	-4.96	1.15 V	149	16.55	32.49
5	4904.00	46.47 PK	74.00	-27.53	1.10 V	258	7.60	38.87
6	4904.00	41.32 AV	54.00	-12.68	1.10 V	258	2.45	38.87
7	7356.00	57.38 PK	74.00	-16.62	1.20 V	72	11.86	45.52
8	7356.00	47.96 AV	54.00	-6.04	1.20 V	72	2.44	45.52

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. 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	FSEK 30	100049	Aug. 14, 2006

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

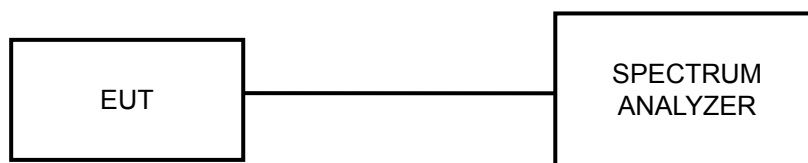
4.3.3 TEST PROCEDURE

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.

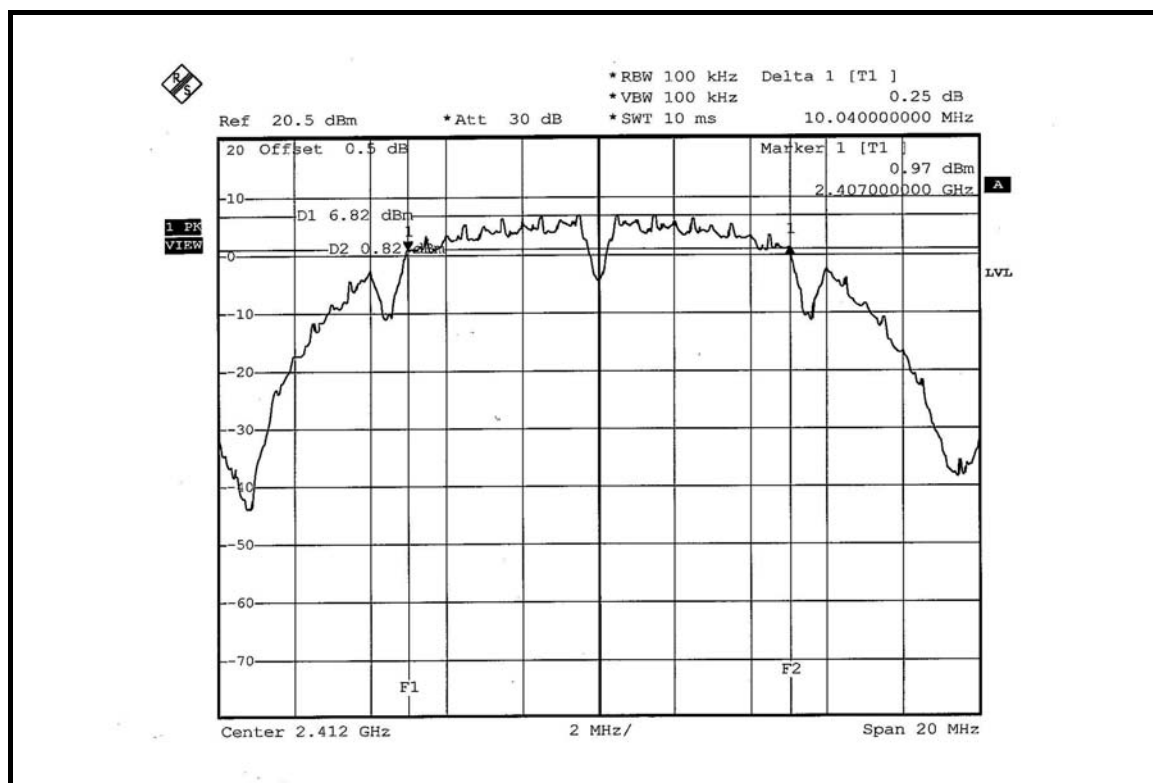
4.3.7 TEST RESULTS

802.11b DSSS MODULATION: SINGLE TX

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	10.04	0.5	PASS
6	2437	10.08	0.5	PASS
11	2462	10.00	0.5	PASS

CH 1

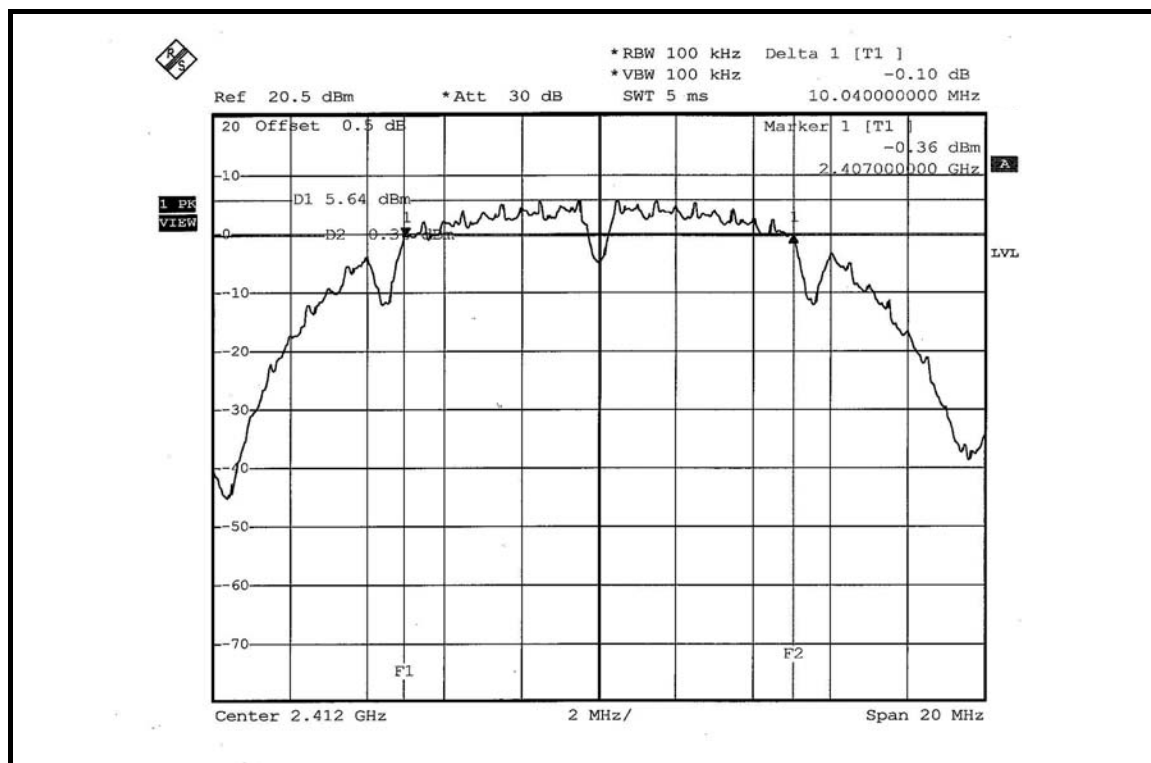


802.11b DSSS MODULATION: DUAL TX

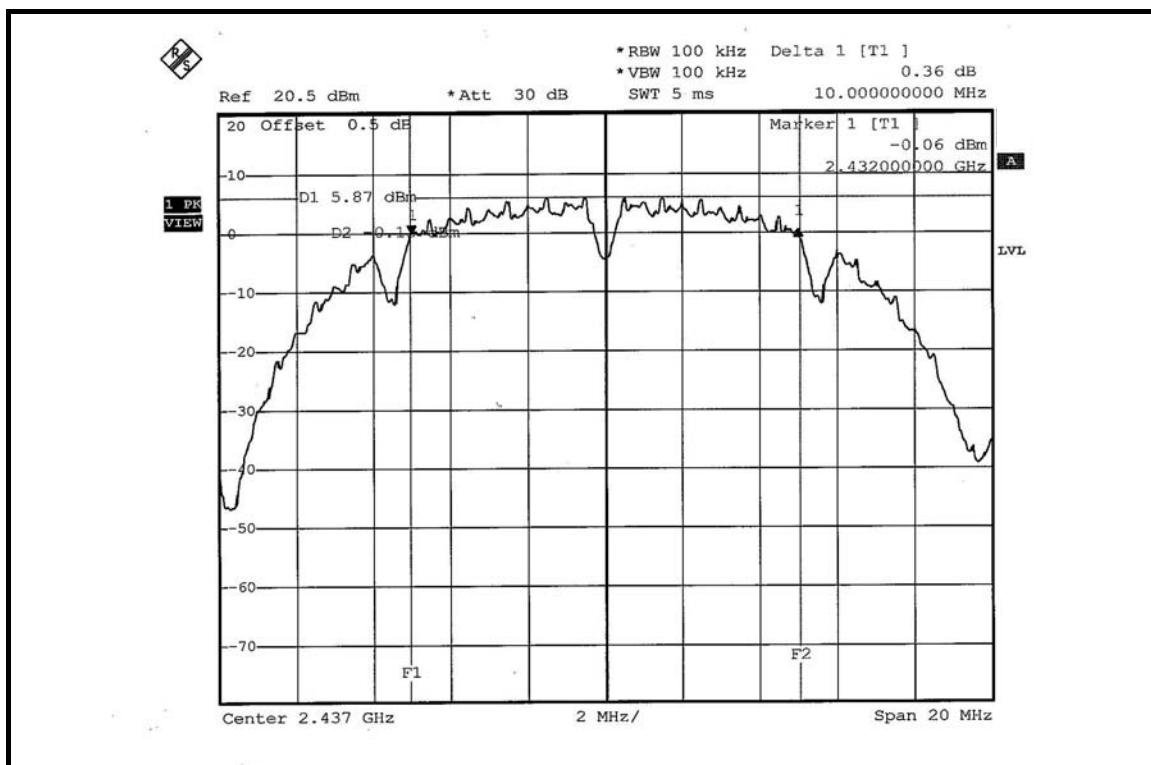
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	10.04	9.92	0.5	PASS
6	2437	10.00	10.04	0.5	PASS
11	2462	10.08	10.00	0.5	PASS

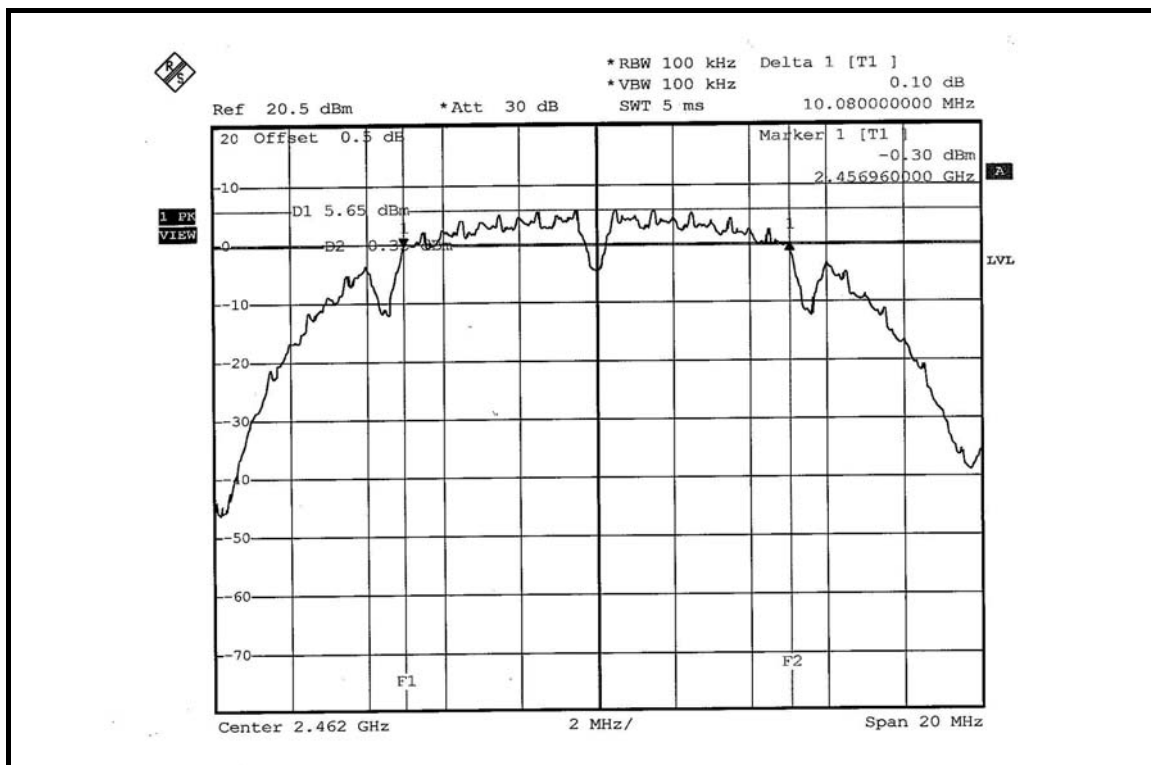
FOR CHAIN 0: CH 1



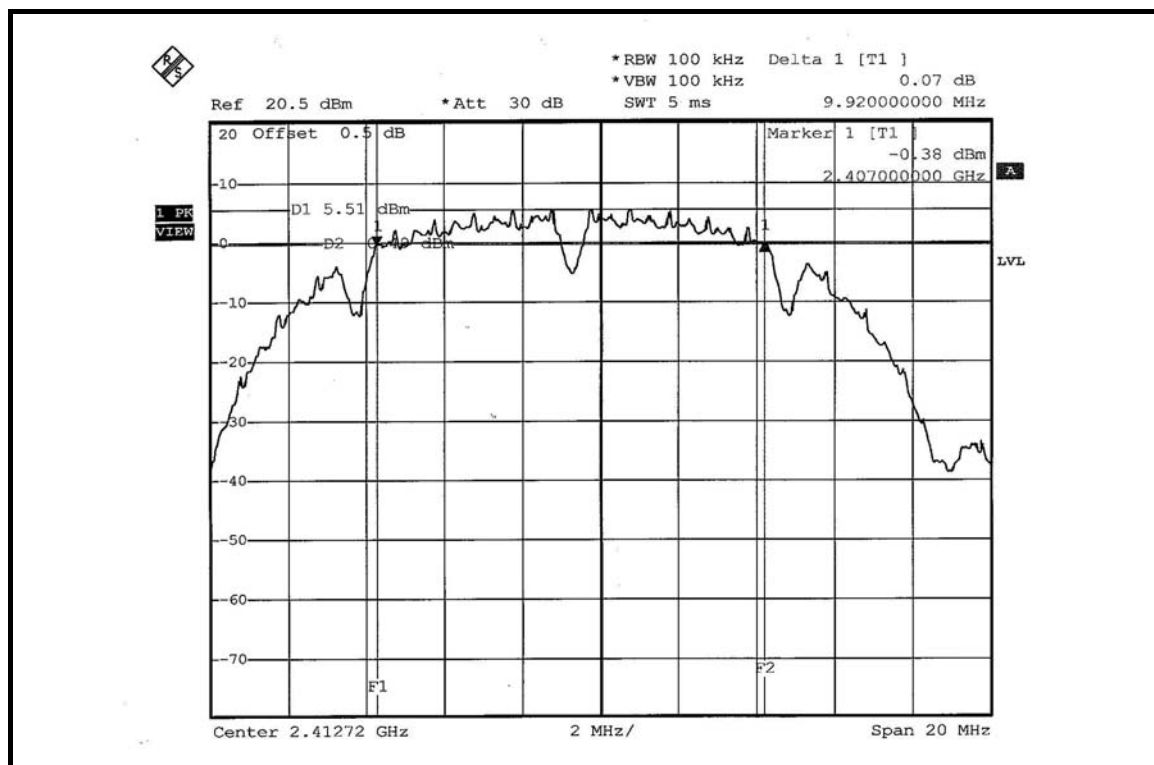
CH 6



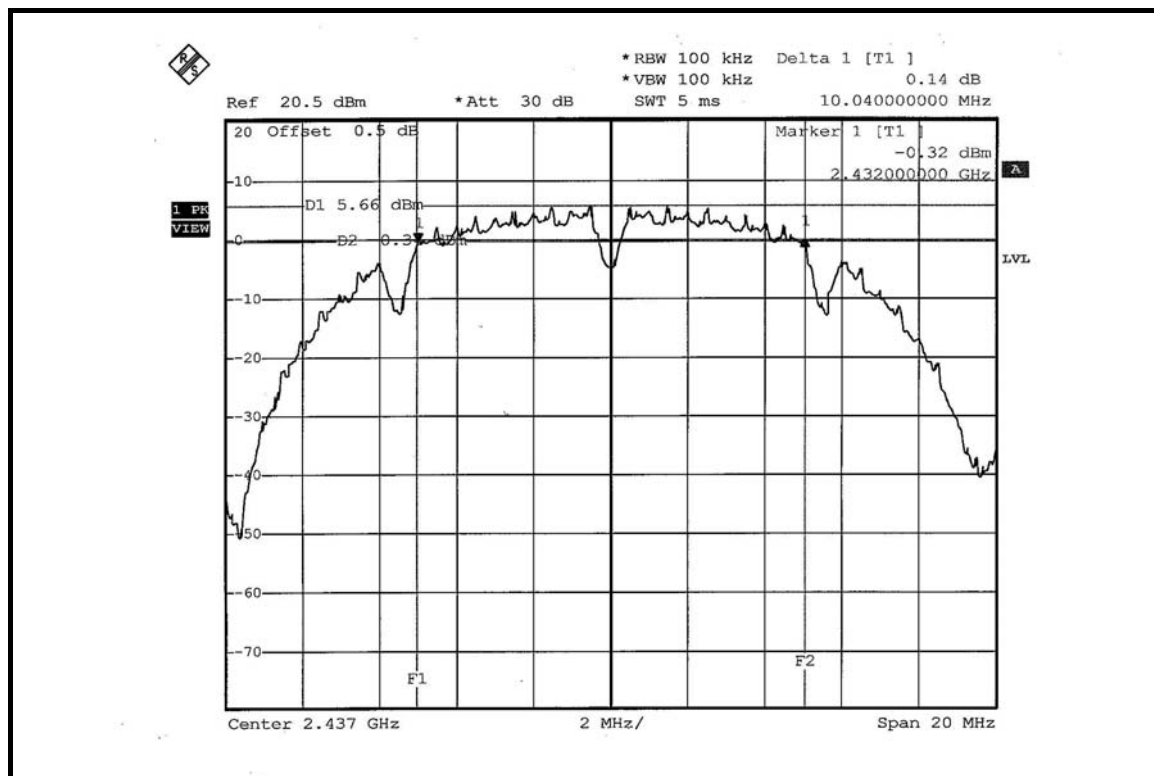
CH 11



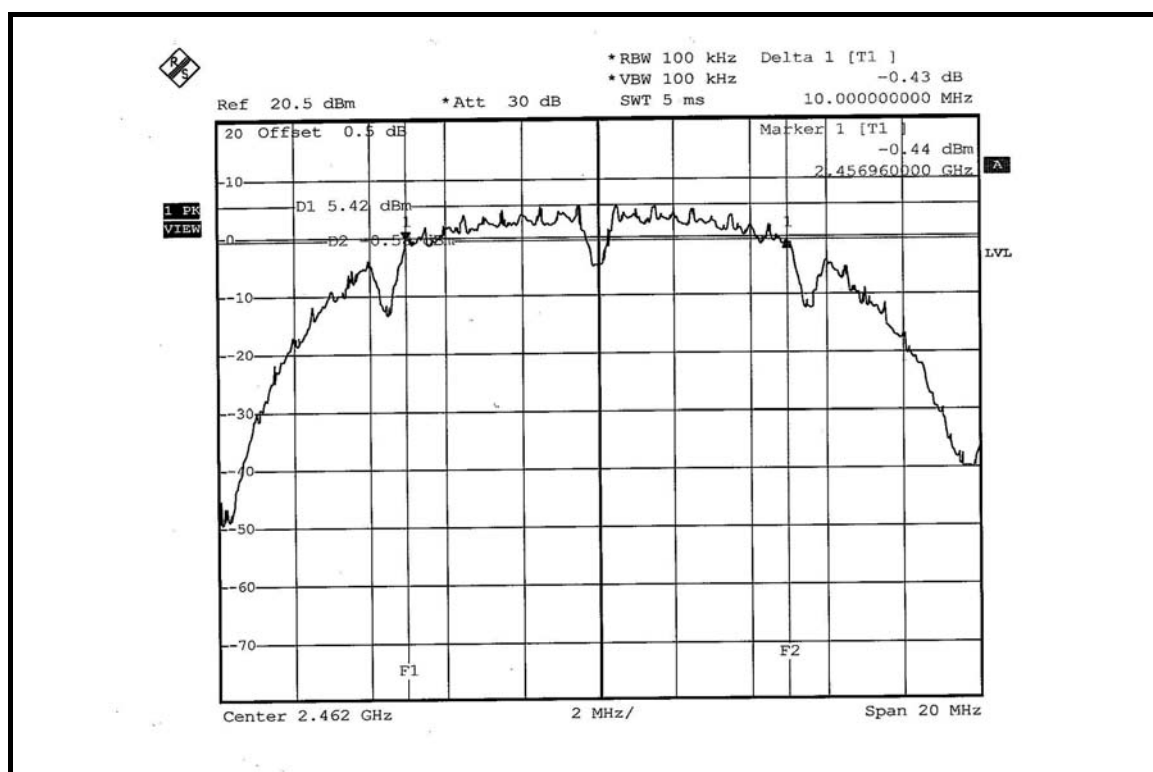
FOR CHAIN 1: CH 1



CH 6



CH 11

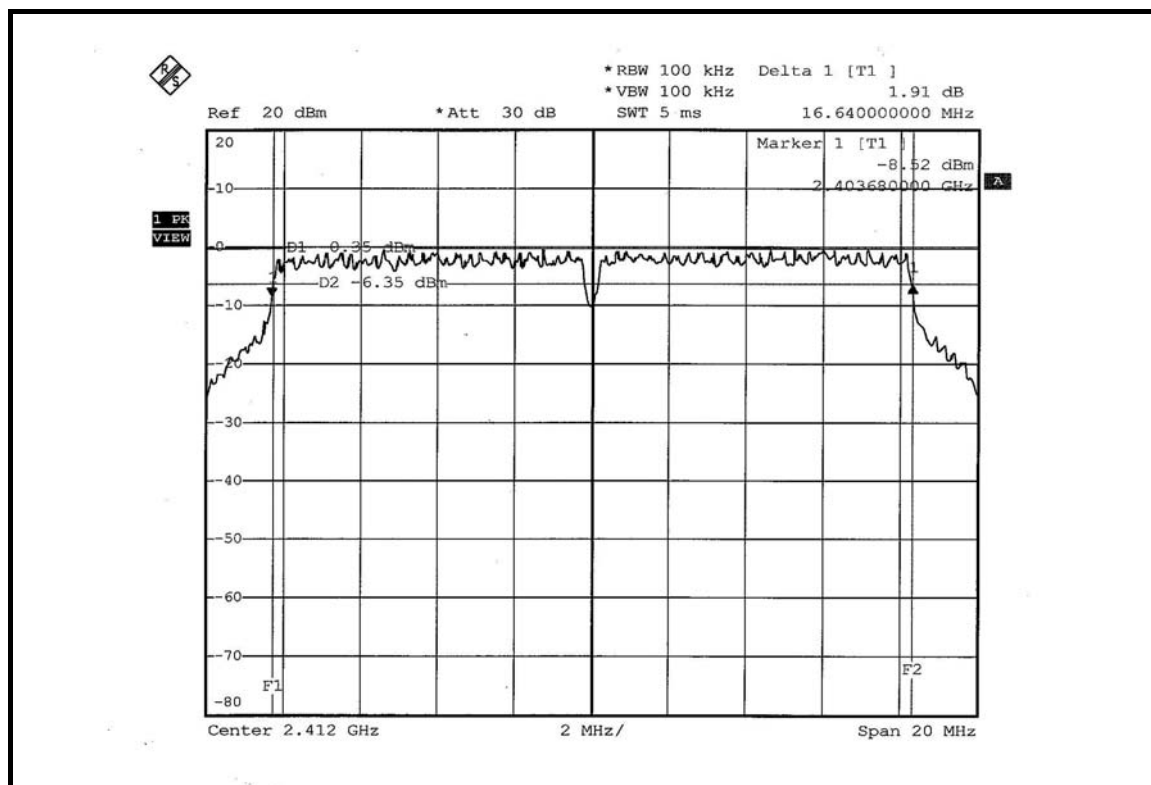


802.11g OFDM MODULATION: SINGLE TX

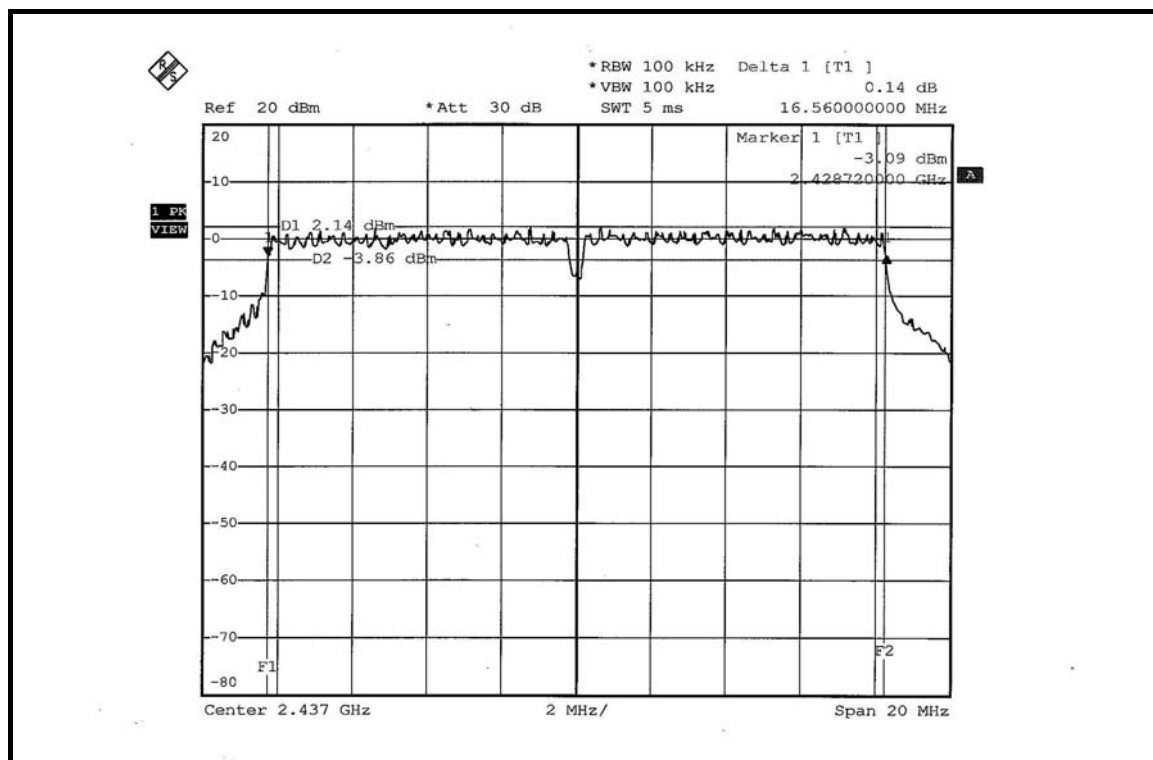
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.64	0.5	PASS
6	2437	16.56	0.5	PASS
11	2462	16.64	0.5	PASS

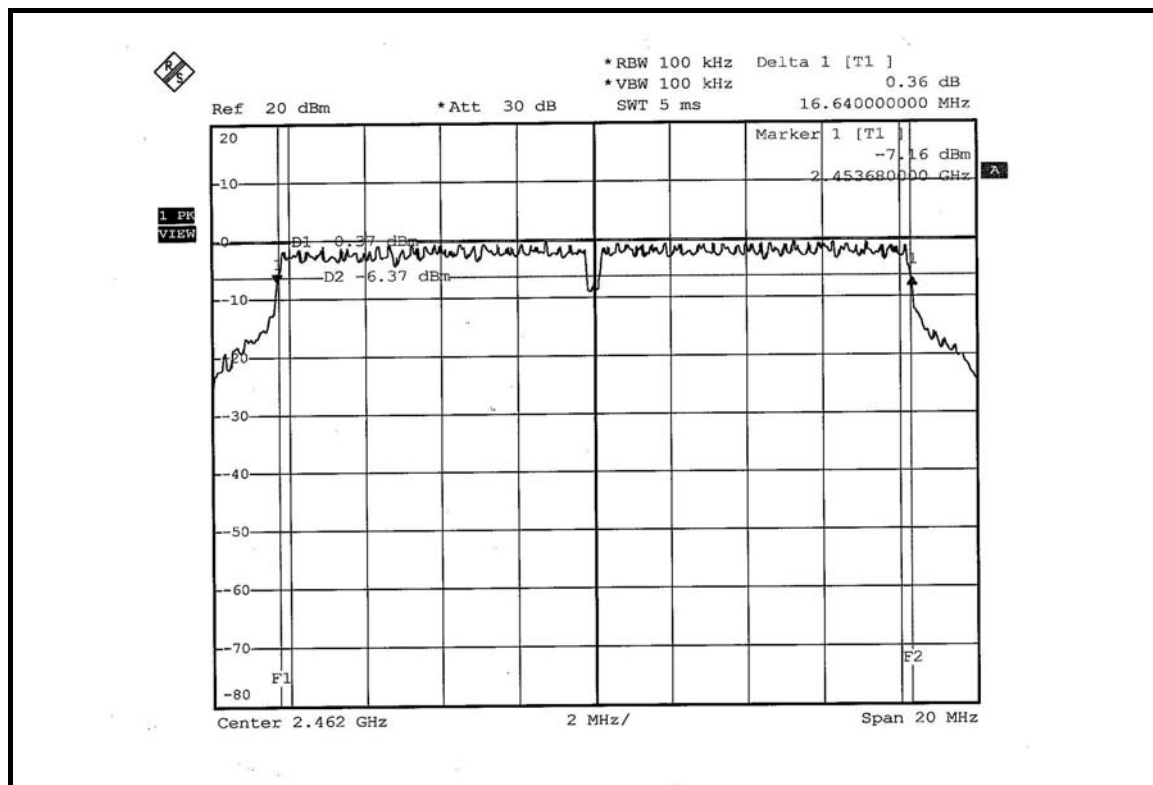
CH 1



CH 6



CH 11

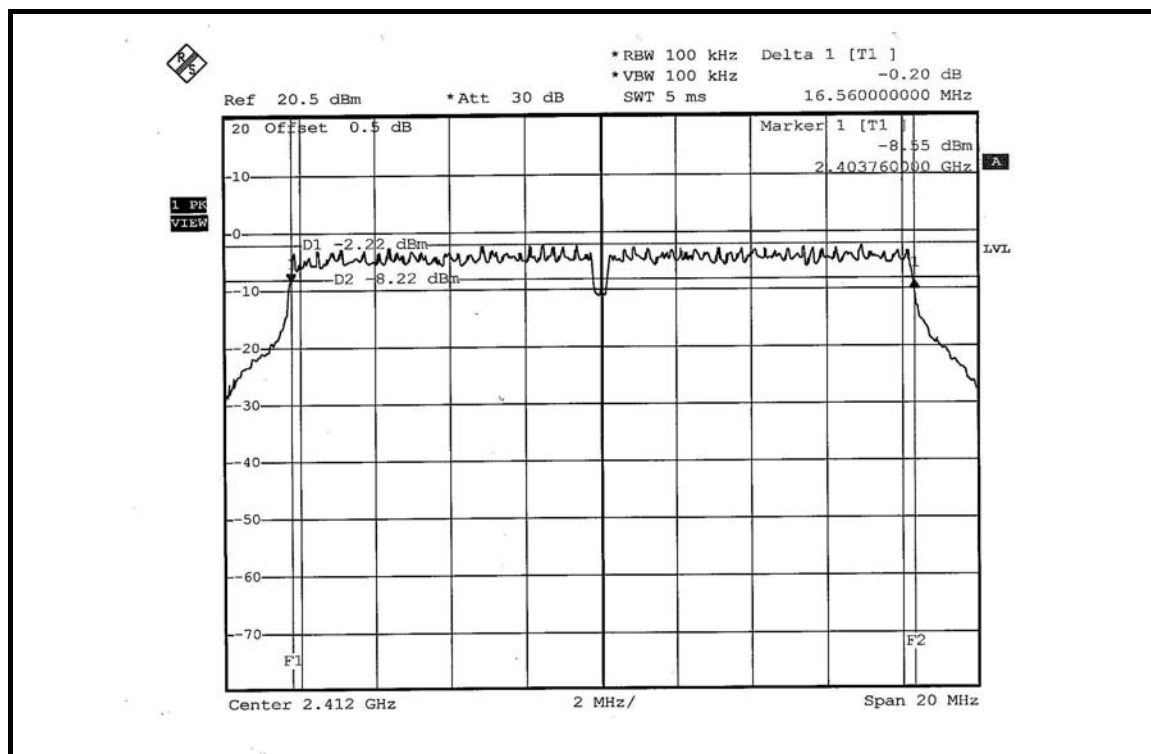


802.11g OFDM MODULATION: DUAL TX

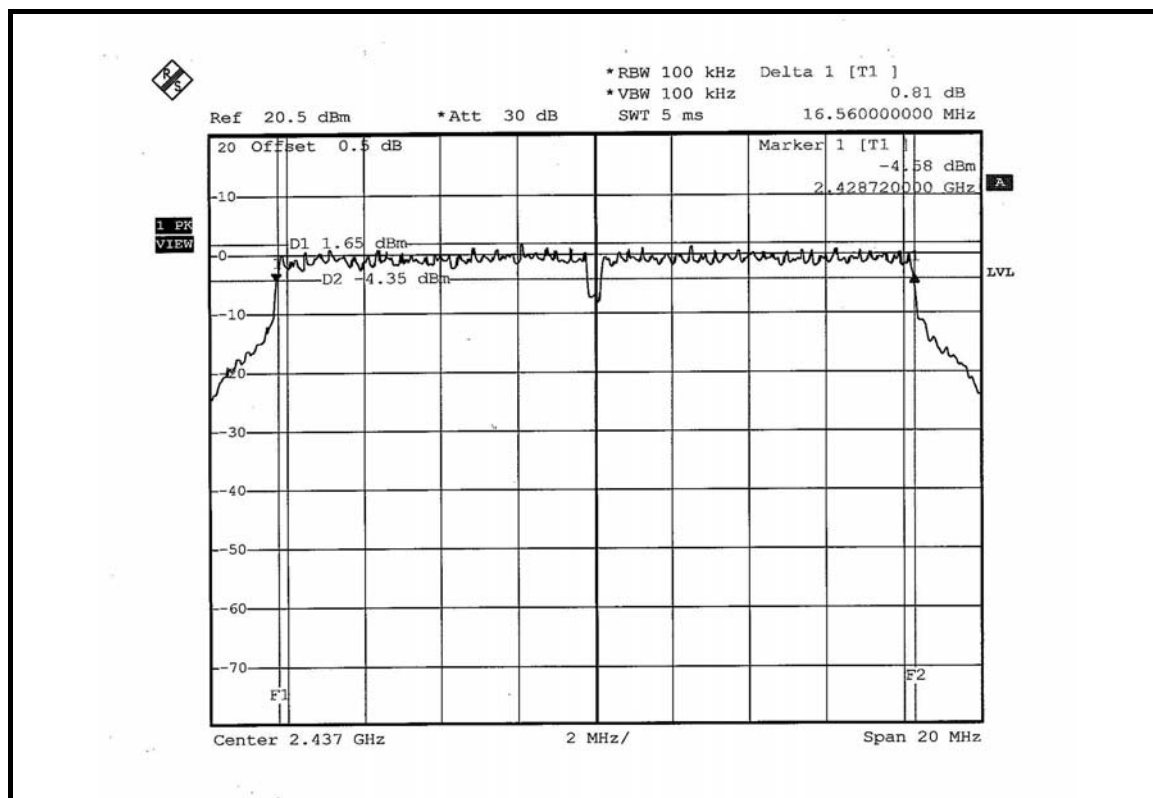
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.56	16.52	0.5	PASS
6	2437	16.56	16.52	0.5	PASS
11	2462	16.56	16.56	0.5	PASS

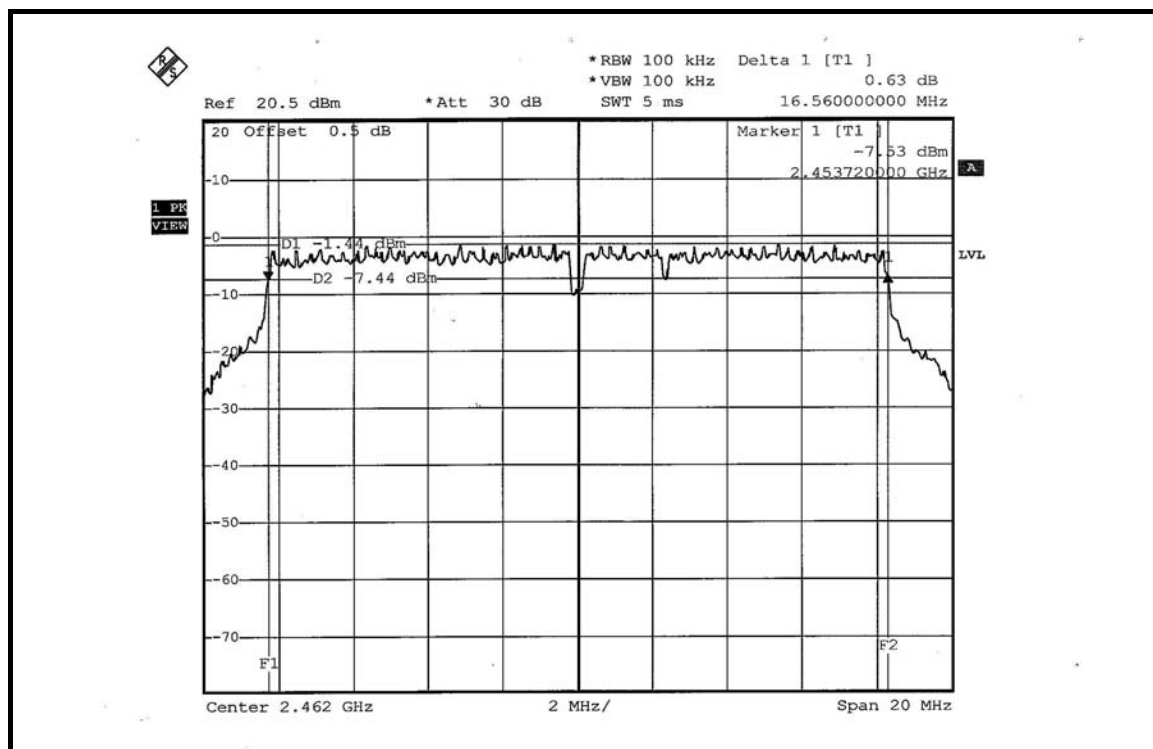
FOR CHAIN 0: CH 1



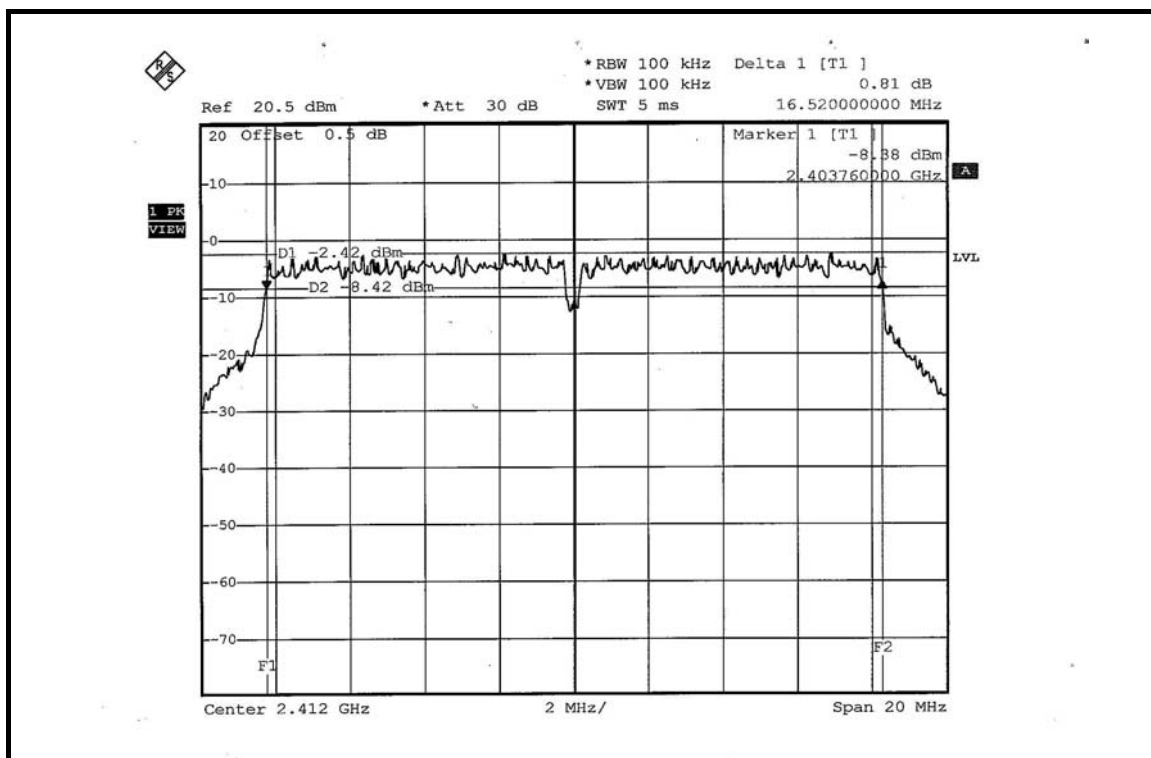
CH 6



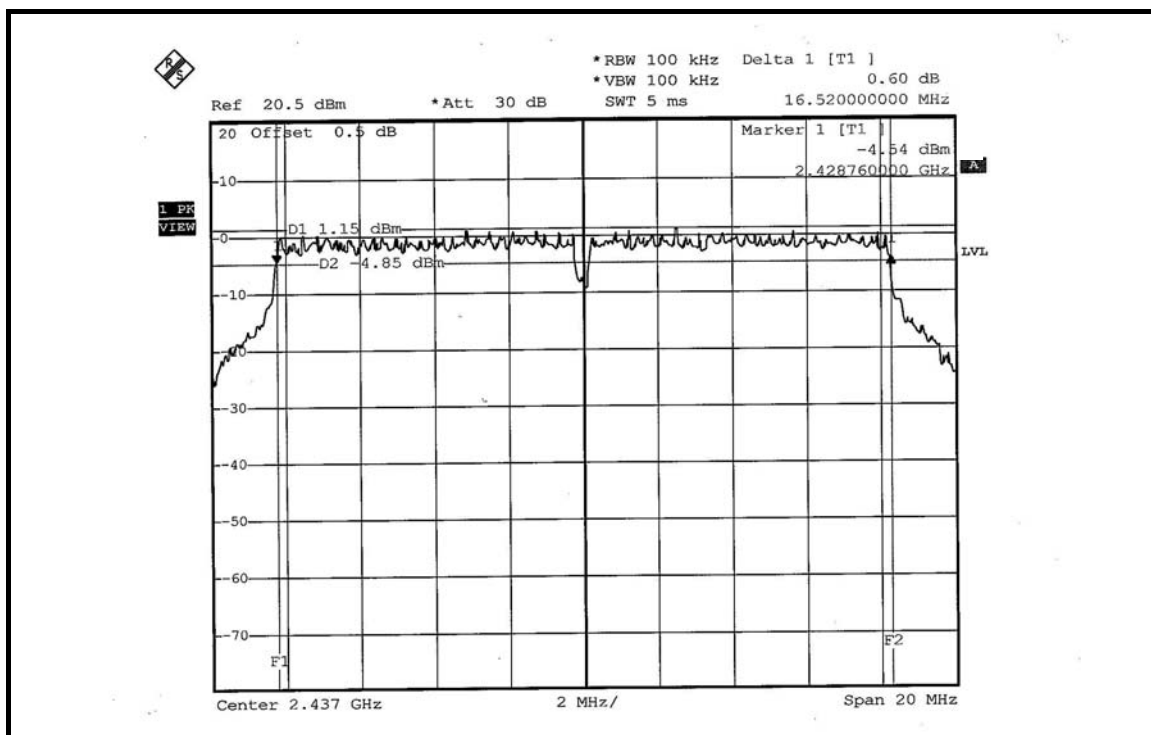
CH 11



FOR CHAIN 1: CH 1



CH 6

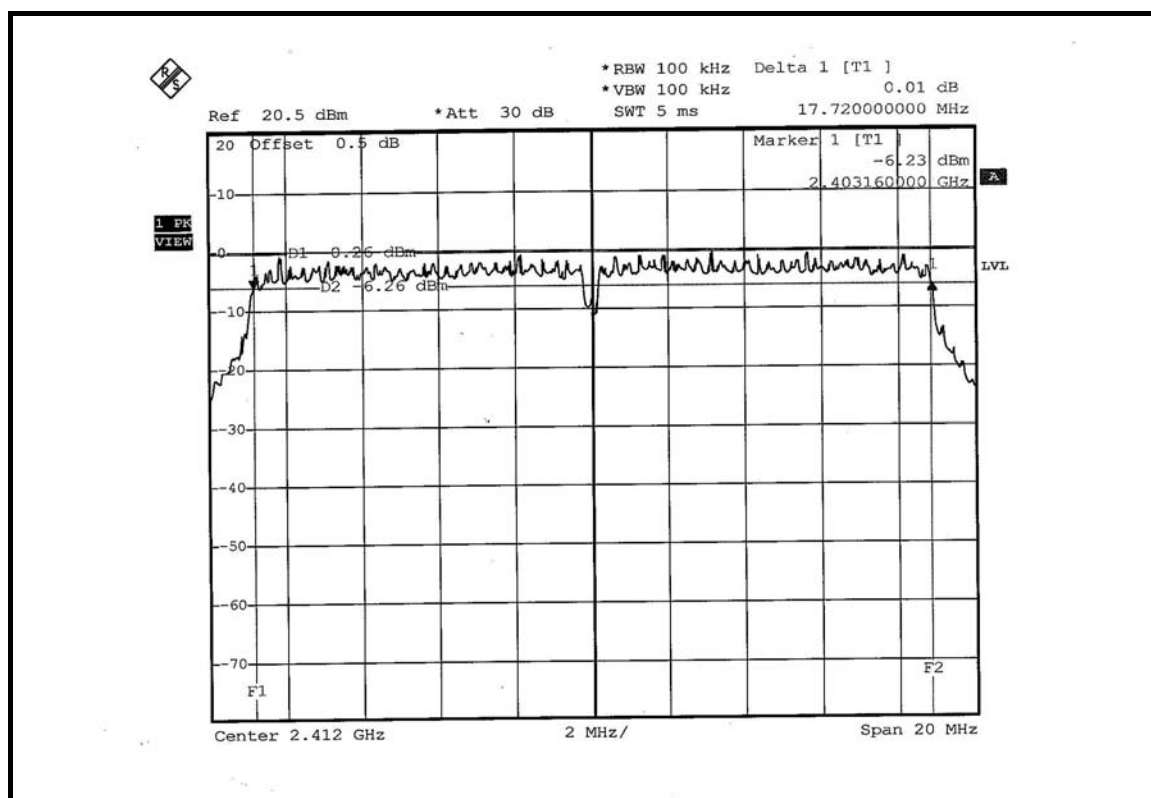


DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

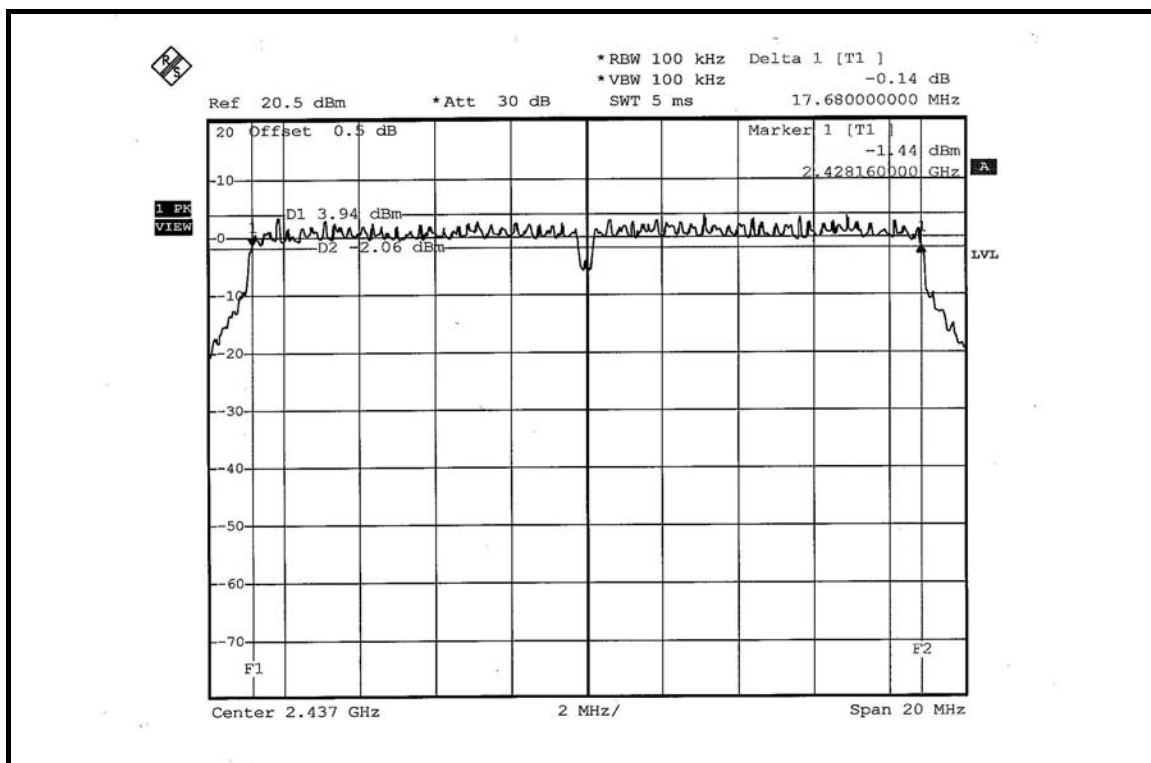
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.72	17.68	0.5	PASS
6	2437	17.68	17.76	0.5	PASS
11	2462	17.80	17.80	0.5	PASS

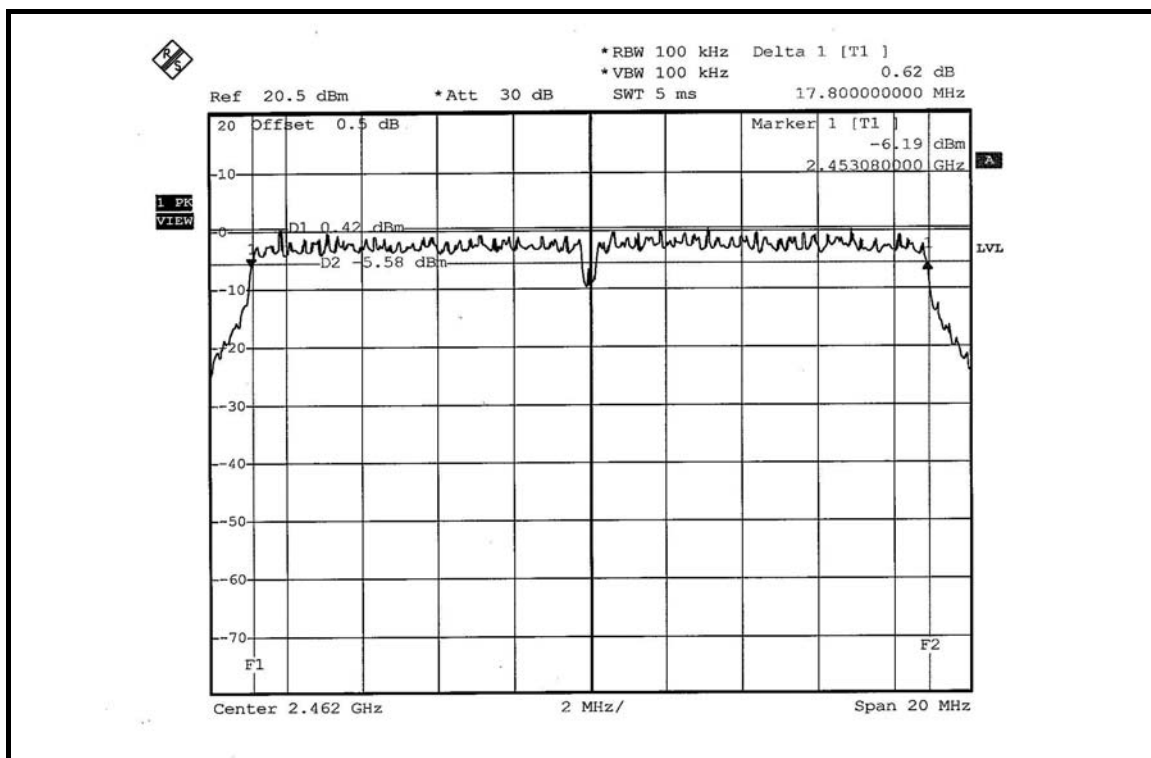
FOR CHAIN 0: CH 1



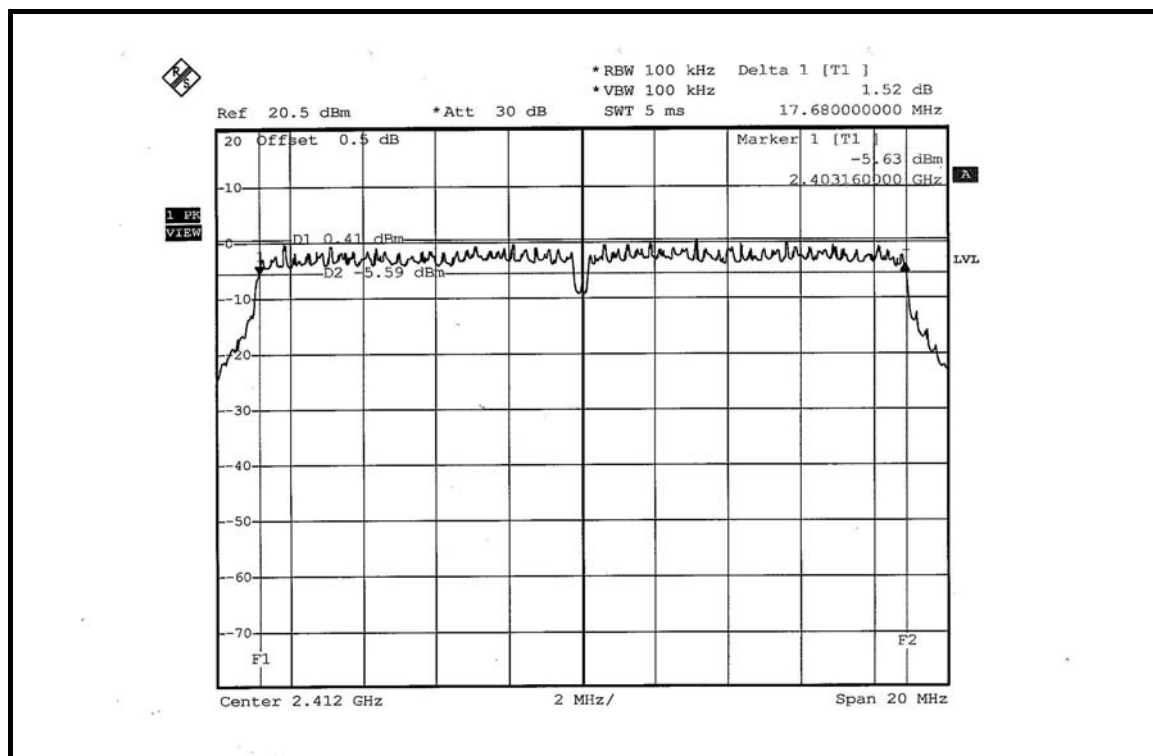
CH 6



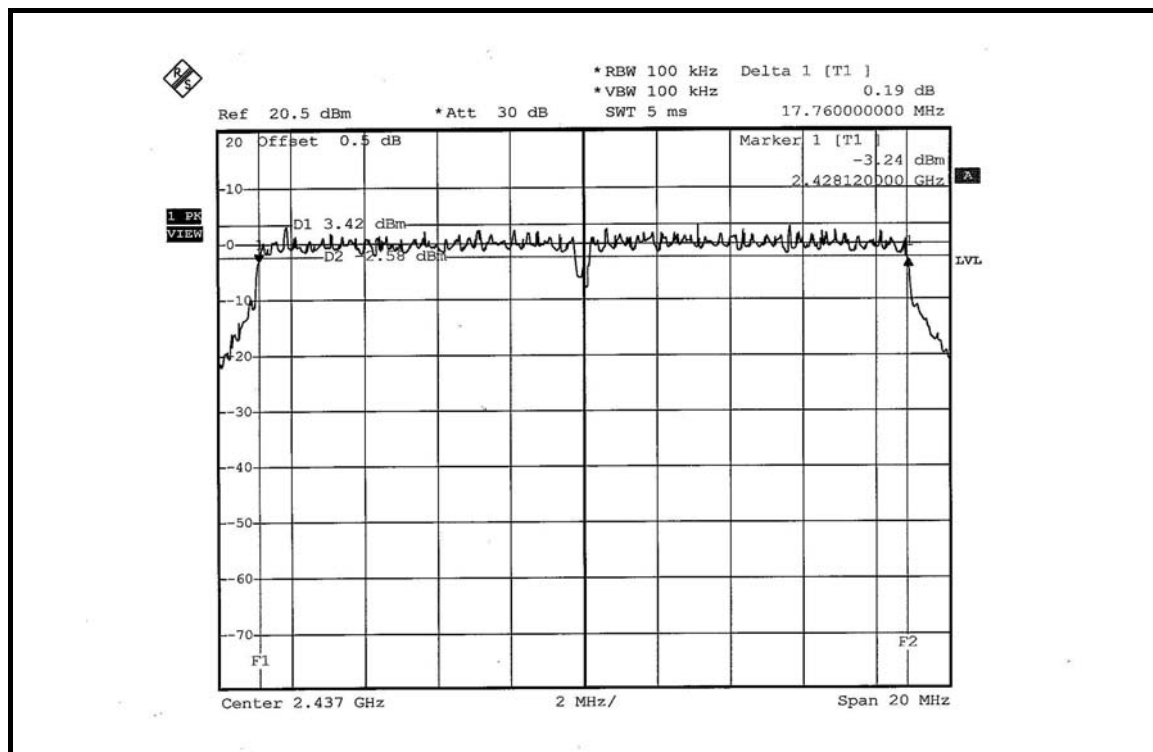
CH 11



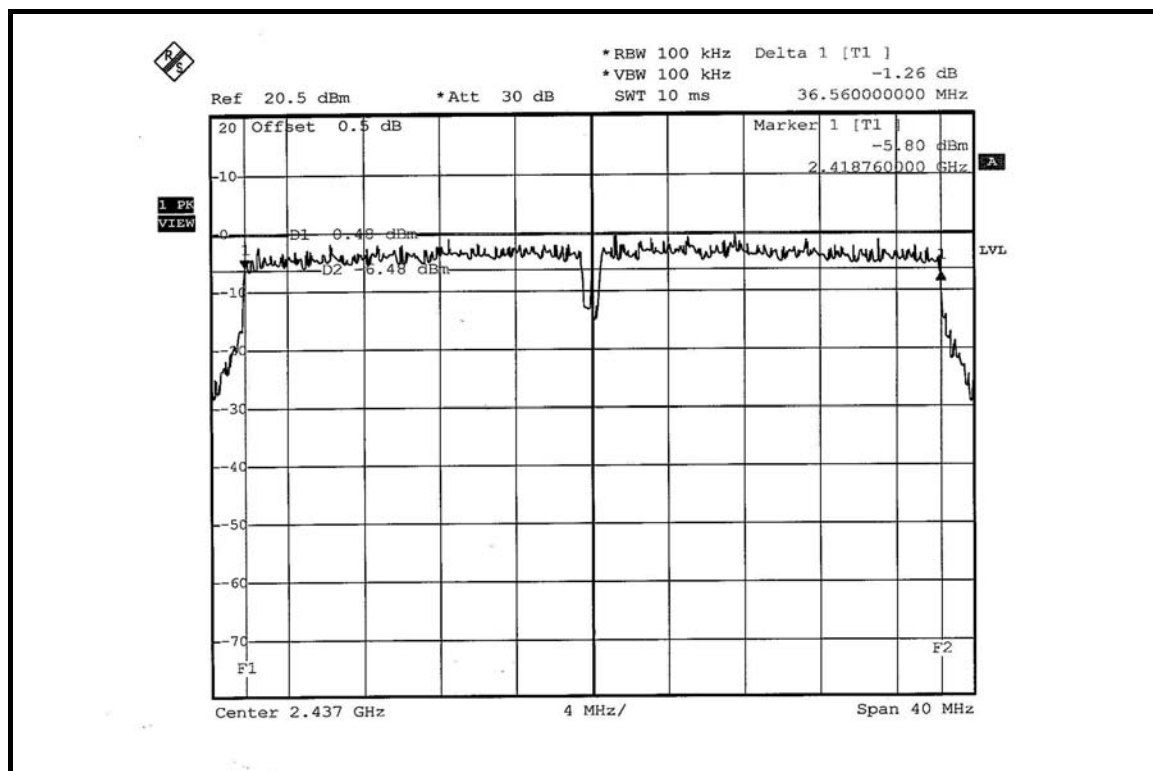
FOR CHAIN 1: CH 1



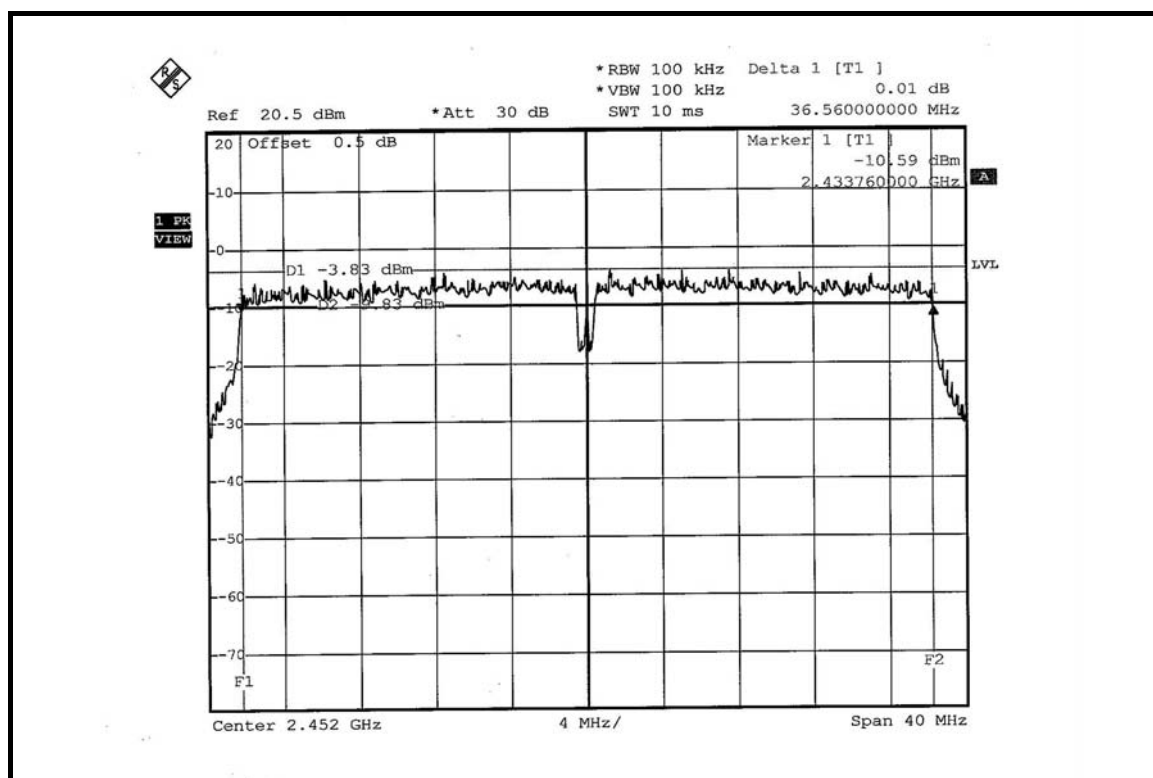
CH 6



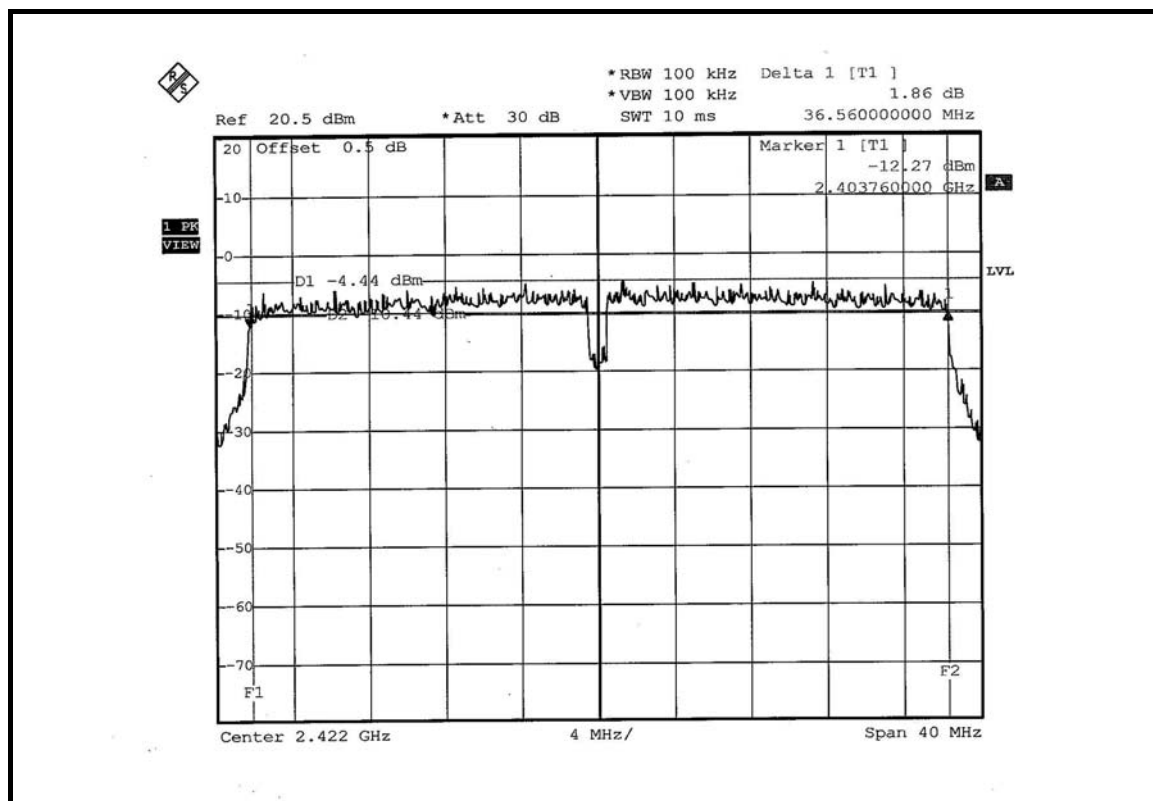
CH 4



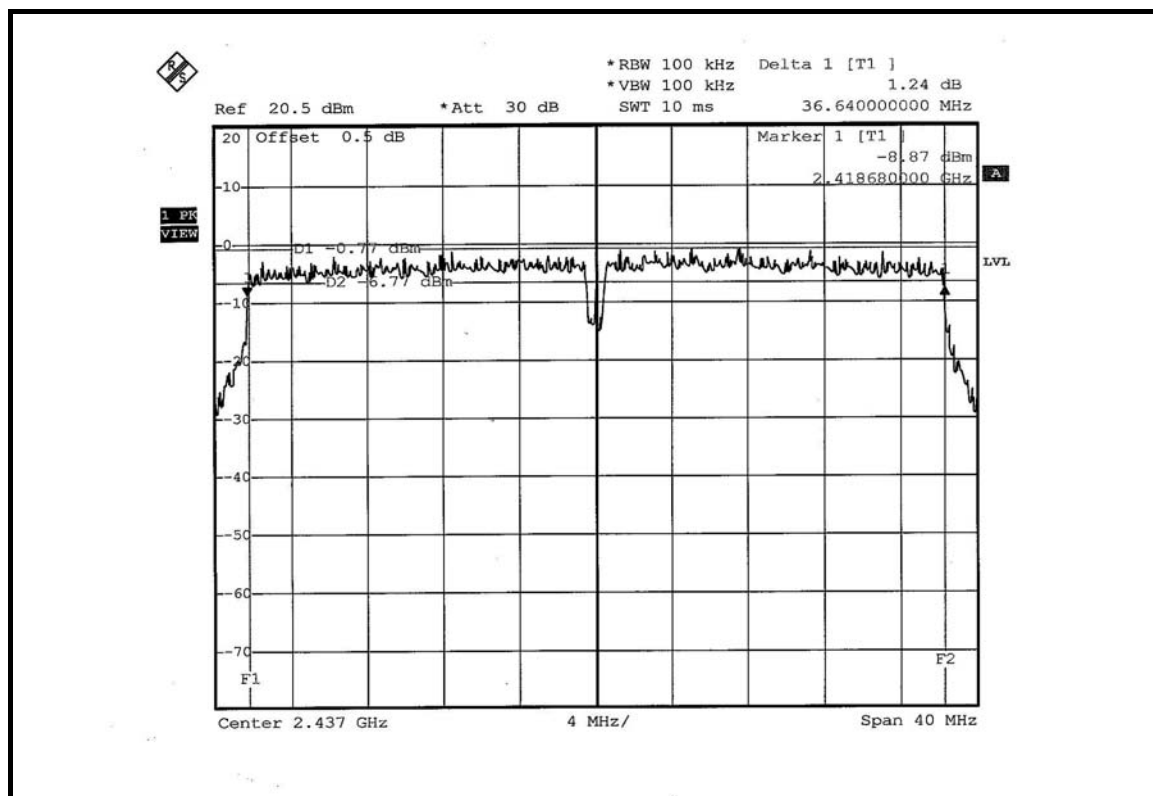
CH 7



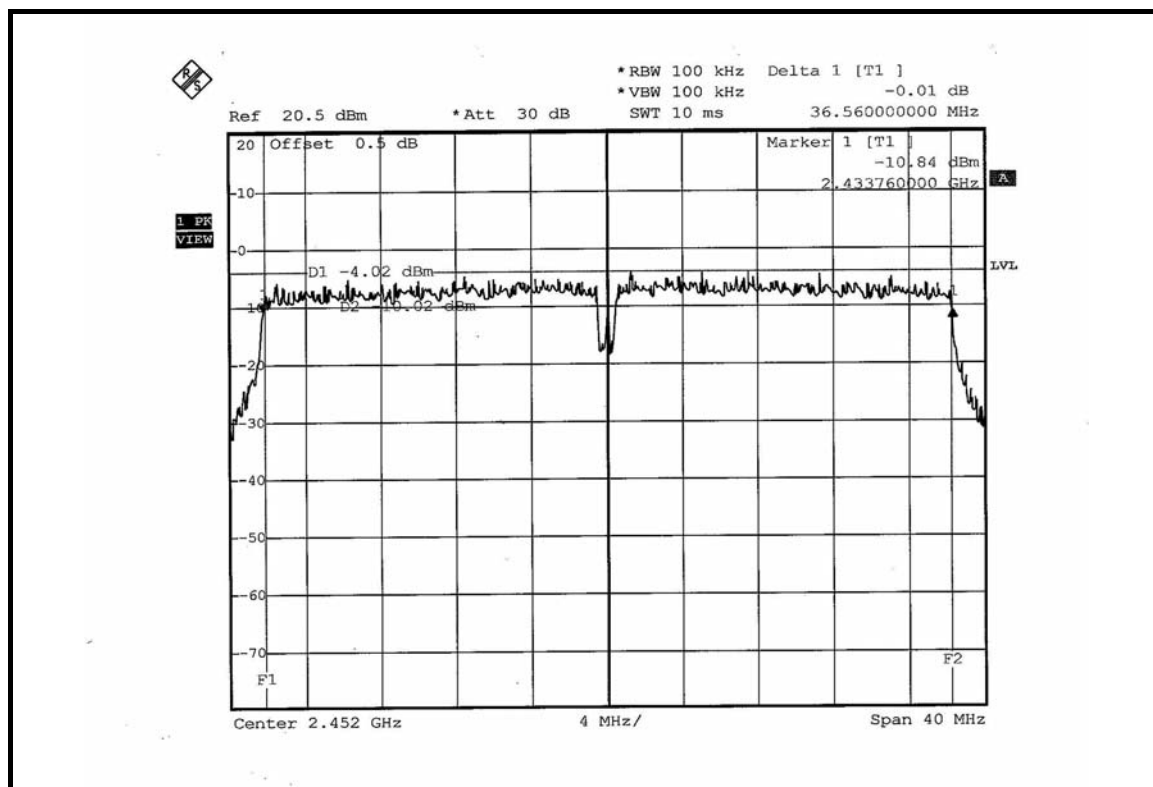
FOR CHAIN 1: CH 1



CH 4



CH 7



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. 14, 2006
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 07, 2006
DIGITAL RT OSCILLOSCOPE	TDS1012	C037299	Nov. 28, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

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

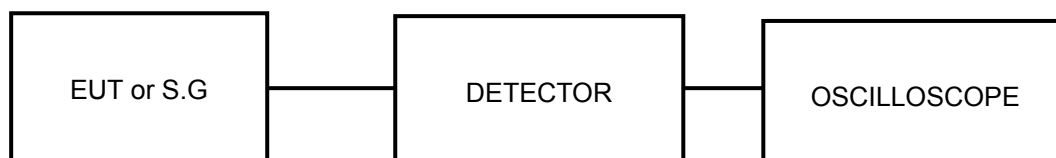
4.4.3 TEST PROCEDURES

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

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

802.11b DSSS MODULATION: SINGLE TX

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	80.353	19.05	30	PASS
6	2437	89.536	19.52	30	PASS
11	2462	90.365	19.56	30	PASS

802.11b DSSS MODULATION: DUAL TX

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	51.050	50.234	17.08	17.01	101.285	20.06	30	PASS
6	2437	51.050	50.350	17.08	17.02	101.401	20.06	30	PASS
11	2462	50.933	50.466	17.07	17.03	101.399	20.06	30	PASS

802.11g OFDM MODULATION: SINGLE TX

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	63.973	18.06	30	PASS
6	2437	127.350	21.05	30	PASS
11	2462	63.826	18.05	30	PASS

802.11g OFDM MODULATION: DUAL TX

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	35.727	32.063	15.53	15.06	67.790	18.31	30	PASS
6	2437	64.269	63.387	18.08	18.02	127.656	21.06	30	PASS
11	2462	39.994	31.915	16.02	15.04	71.910	18.57	30	PASS

DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	39.994	44.978	16.02	16.53	84.972	19.29	30	PASS
6	2437	101.391	100.693	20.06	20.03	202.084	23.06	30	PASS
11	2462	50.466	56.754	17.03	17.54	107.221	20.30	30	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION: DUAL TX:

MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2422	28.642	28.314	14.57	14.52	56.956	17.56	30	PASS
4	2437	57.148	56.364	17.57	17.51	113.512	20.55	30	PASS
7	2452	28.576	28.379	14.56	14.53	56.955	17.56	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	FSEK30	100049	Aug. 14, 2006

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

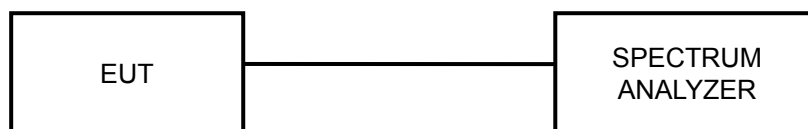
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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

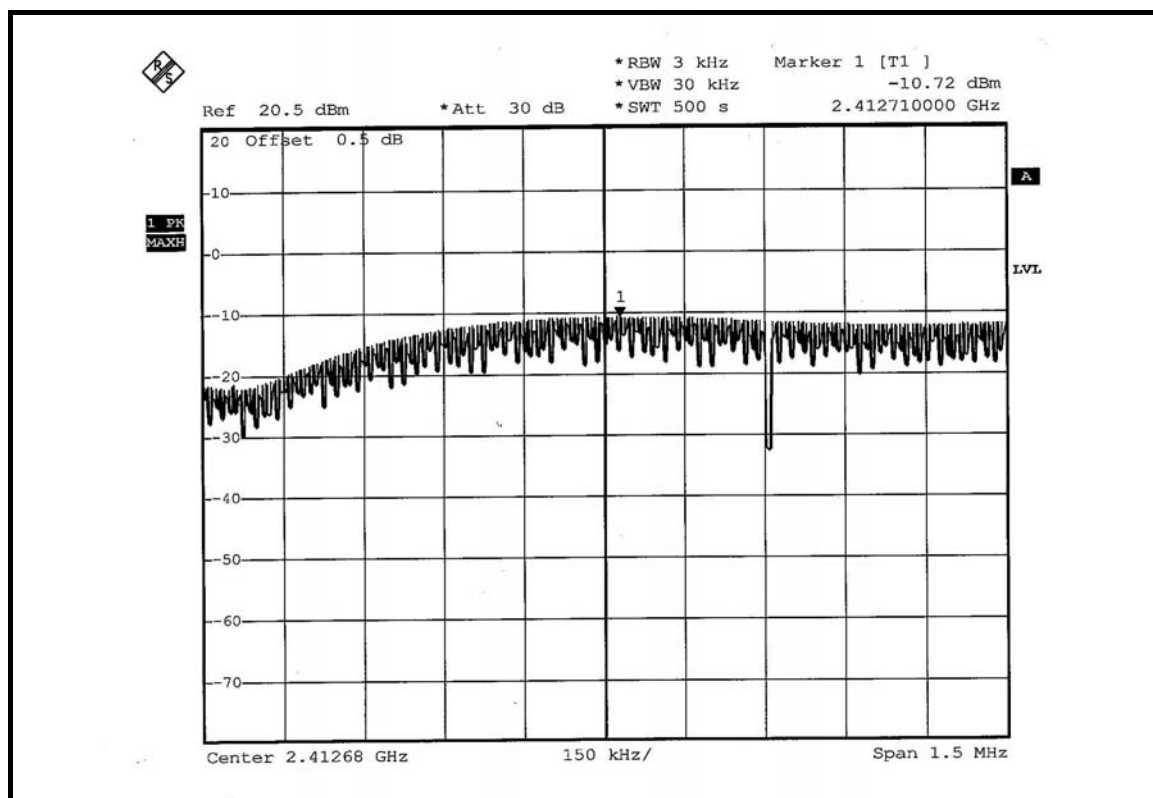
4.5.7 TEST RESULTS

802.11b DSSS MODULATION: SINGEL TX

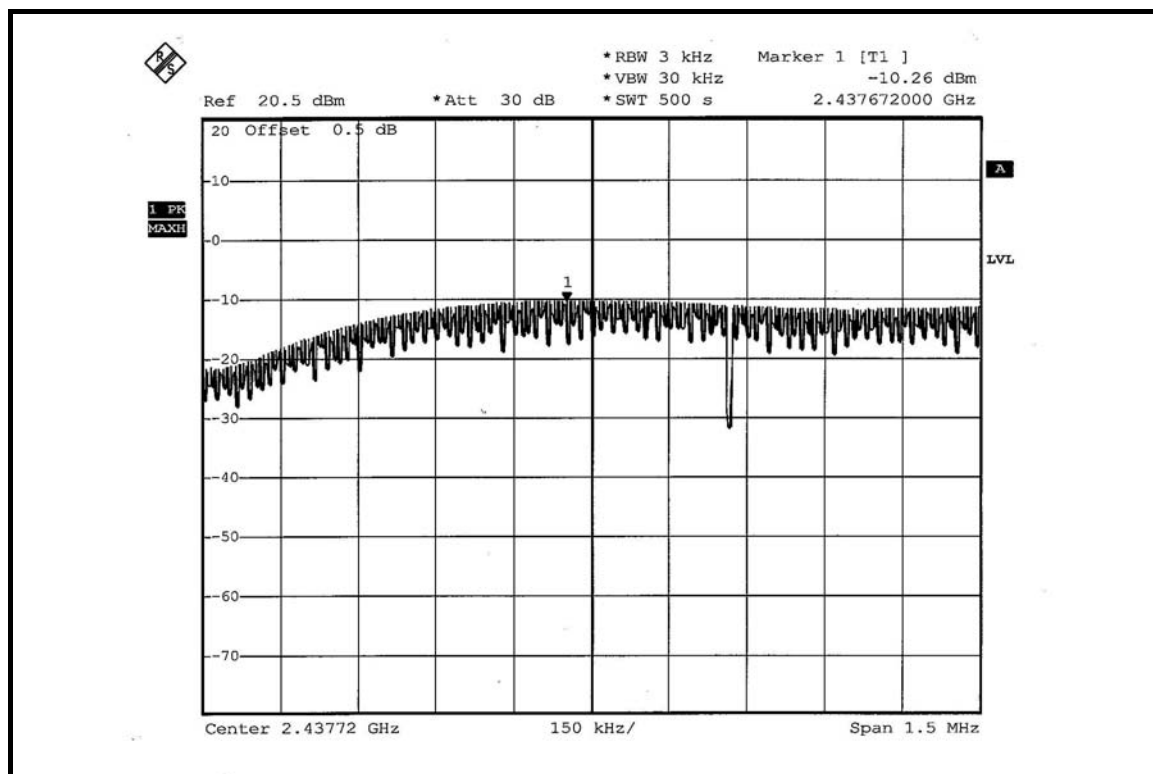
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-10.72	8	PASS
6	2437	-10.26	8	PASS
11	2462	-10.15	8	PASS

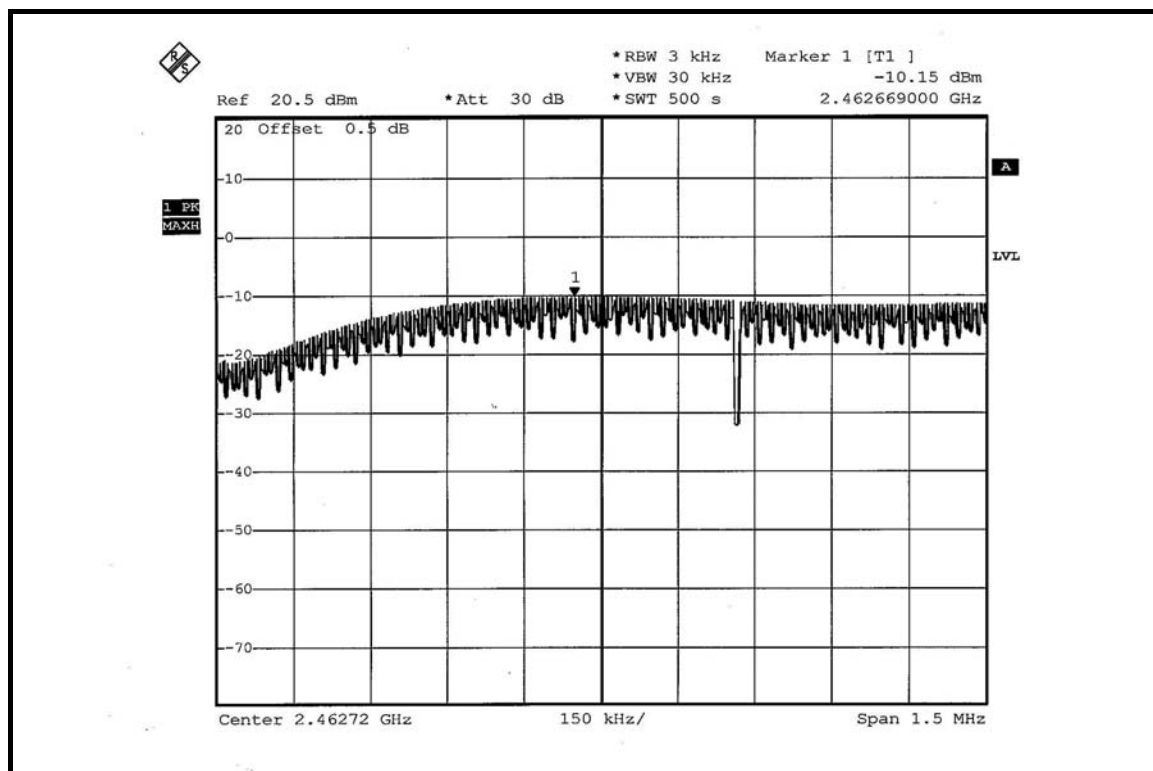
CH 1



CH 6



CH 11

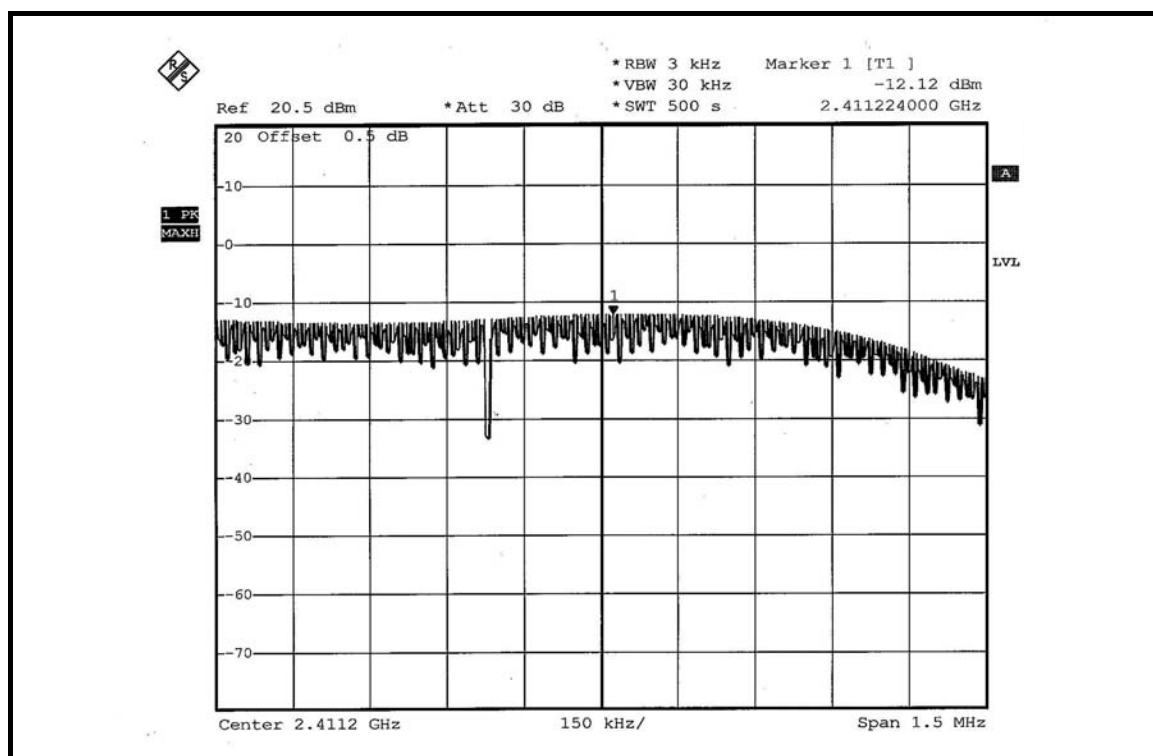


802.11b DSSS MODULATION: DUAL TX

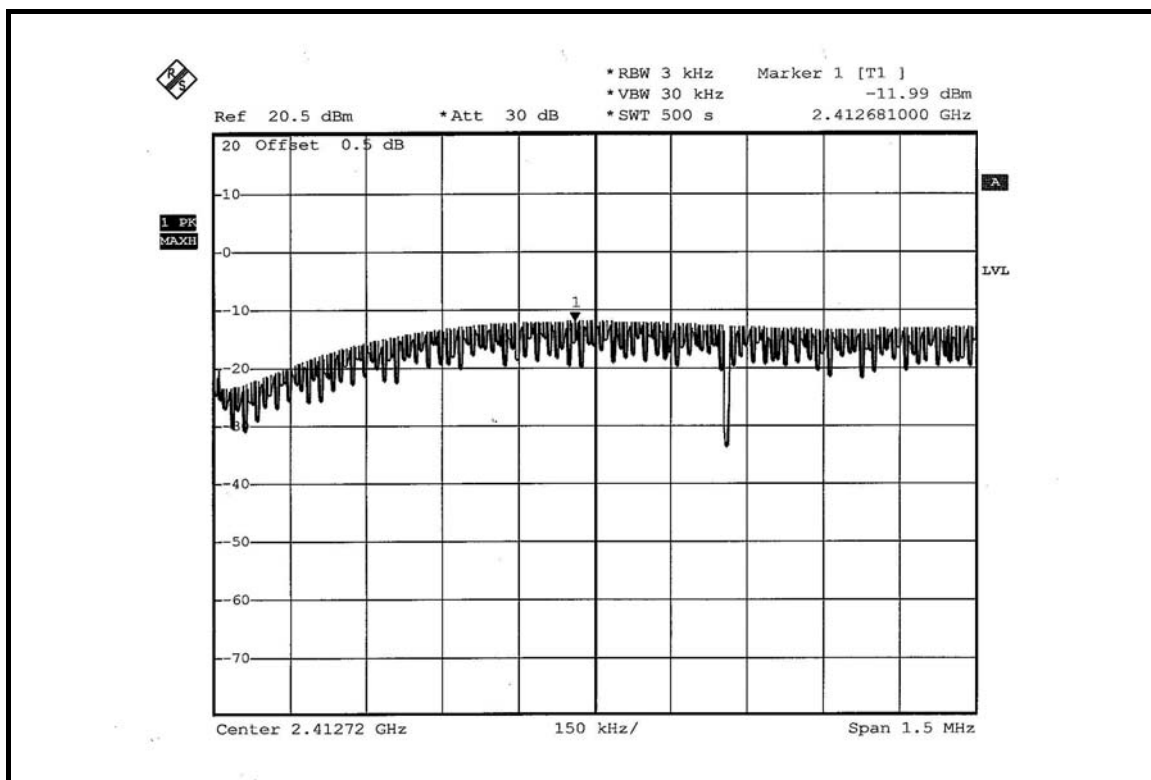
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	-12.12	-11.99	8	PASS
6	2437	-12.05	-11.94	8	PASS
11	2462	-11.86	-11.77	8	PASS

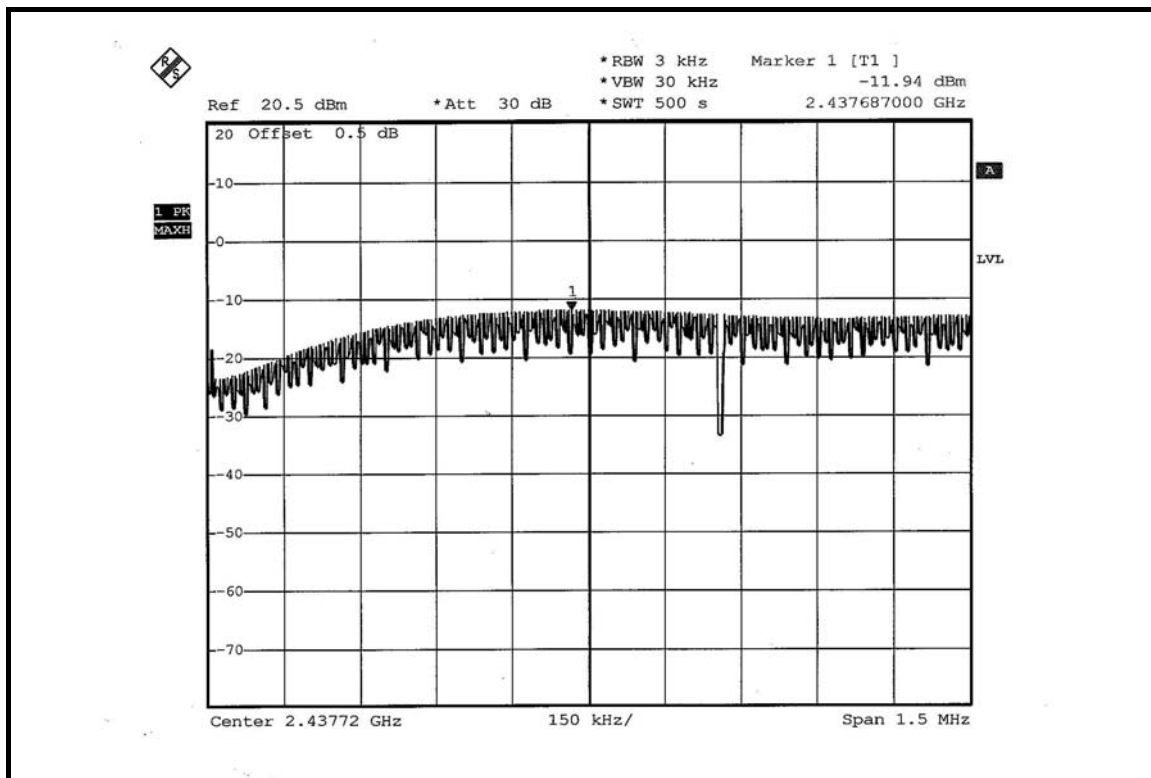
FOR CHAIN 0: CH 1



FOR CHAIN 1: CH 1



CH 6

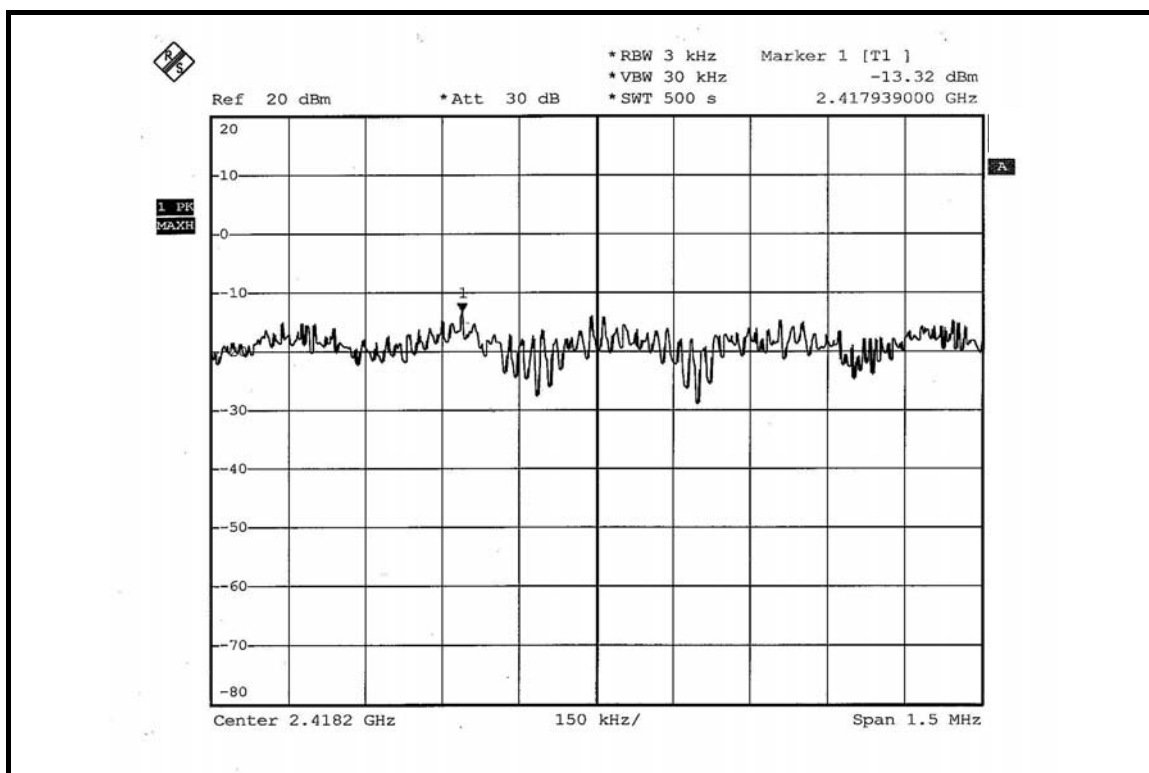


802.11g OFDM MODULATION: SINGLE TX

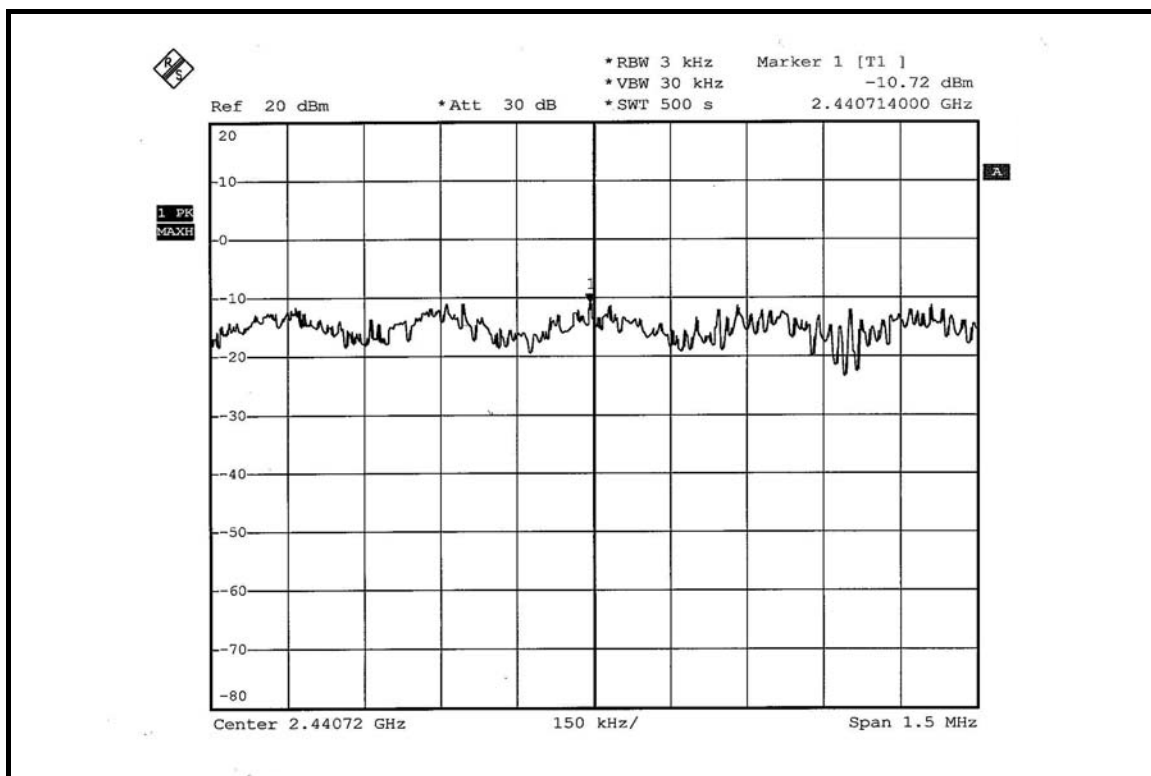
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-13.32	8	PASS
6	2437	-10.72	8	PASS
11	2462	-13.35	8	PASS

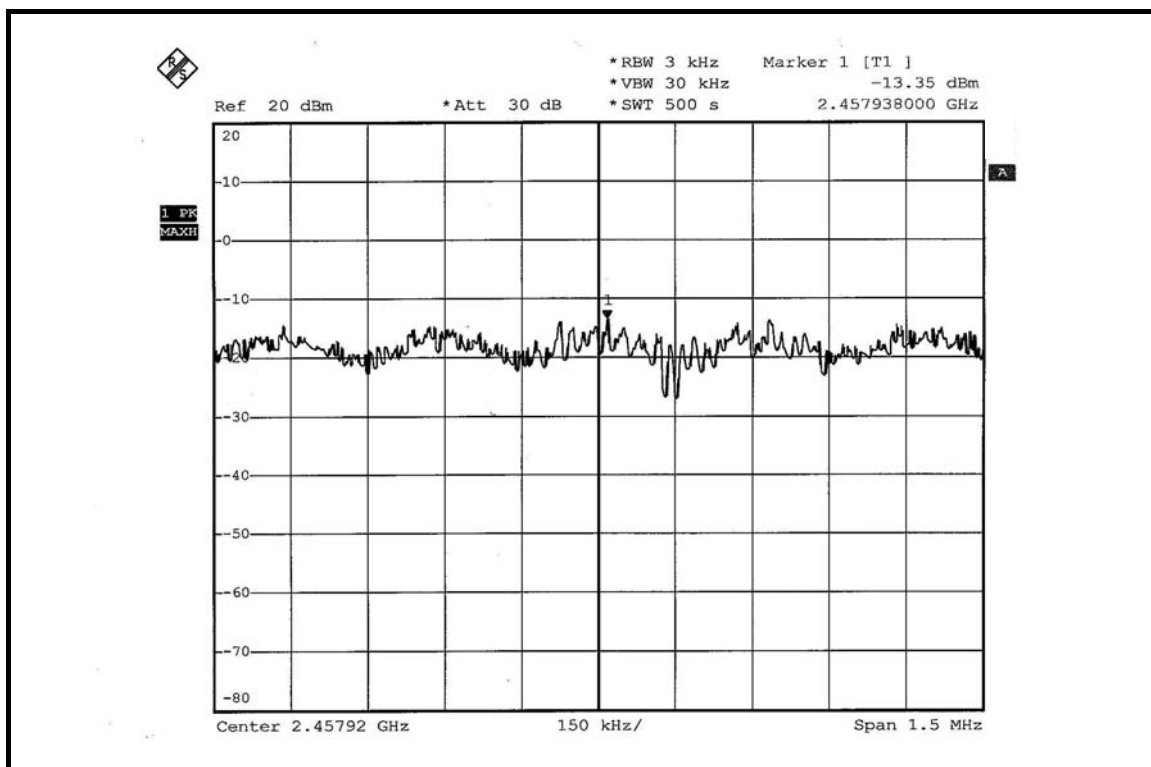
CH 1



CH 6



CH 11

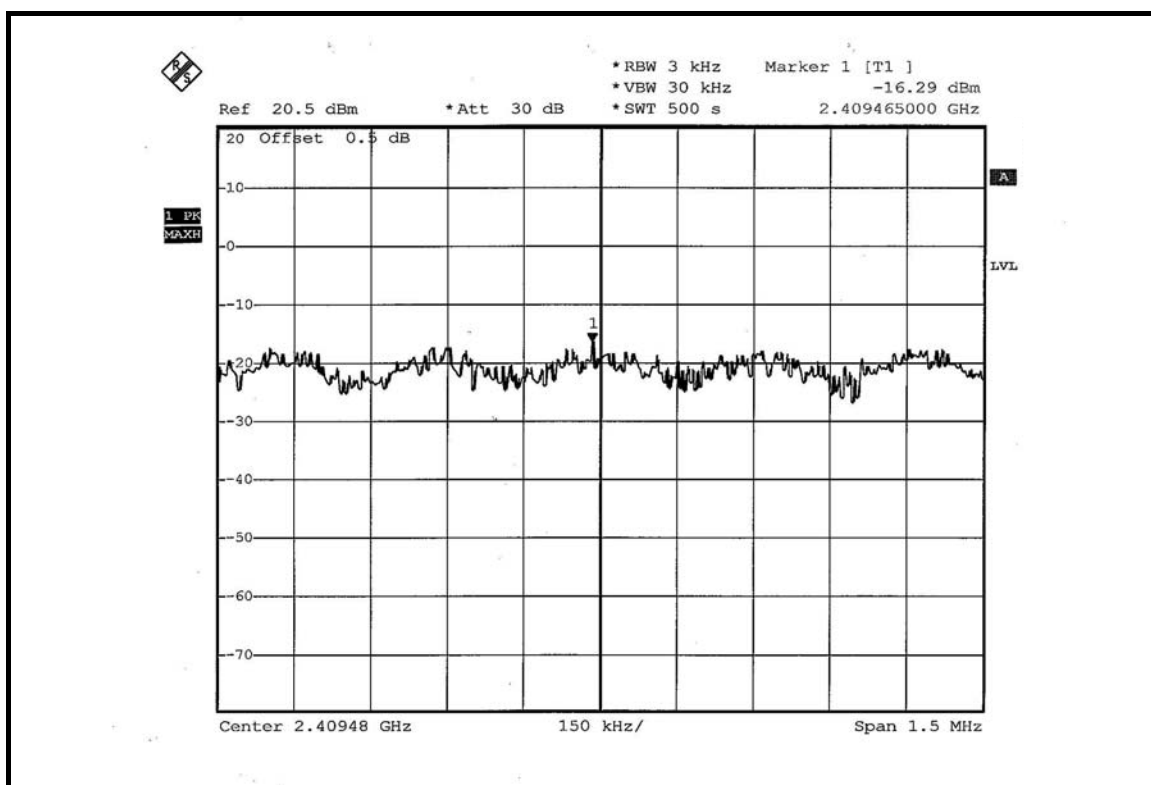


802.11g OFDM MODULATION: DUAL TX

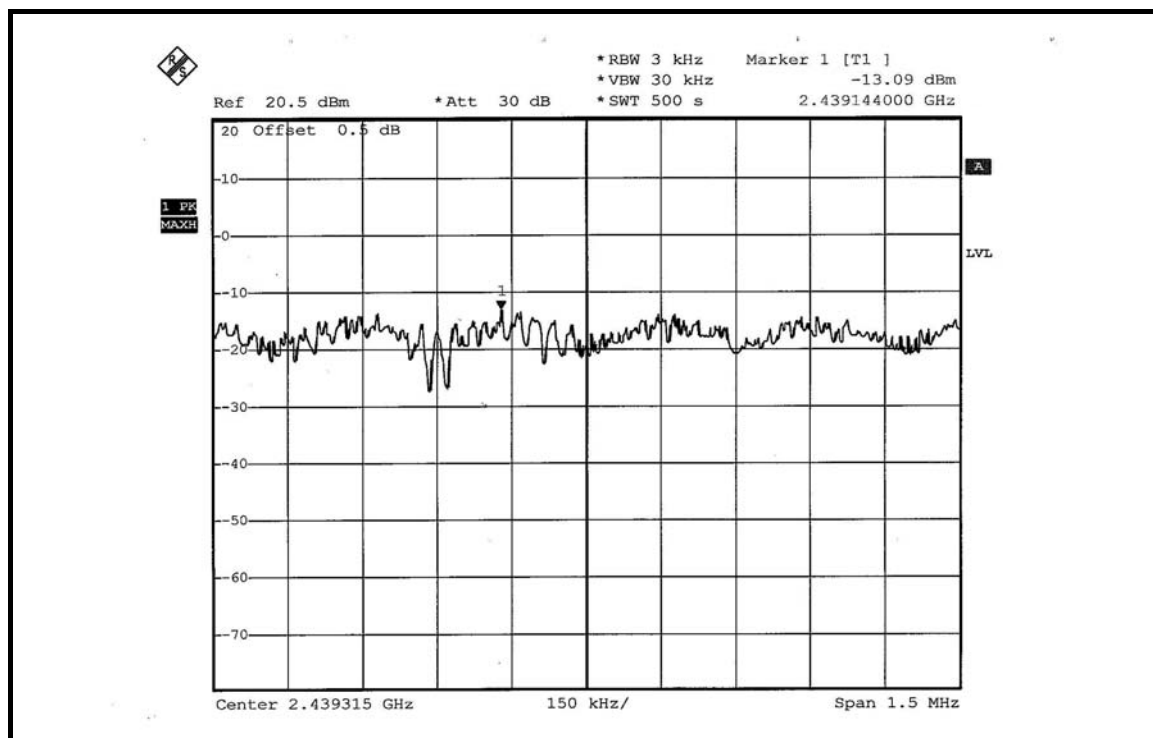
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	-16.29	-16.54	8	PASS
6	2437	-13.09	-13.46	8	PASS
11	2462	-15.29	-16.27	8	PASS

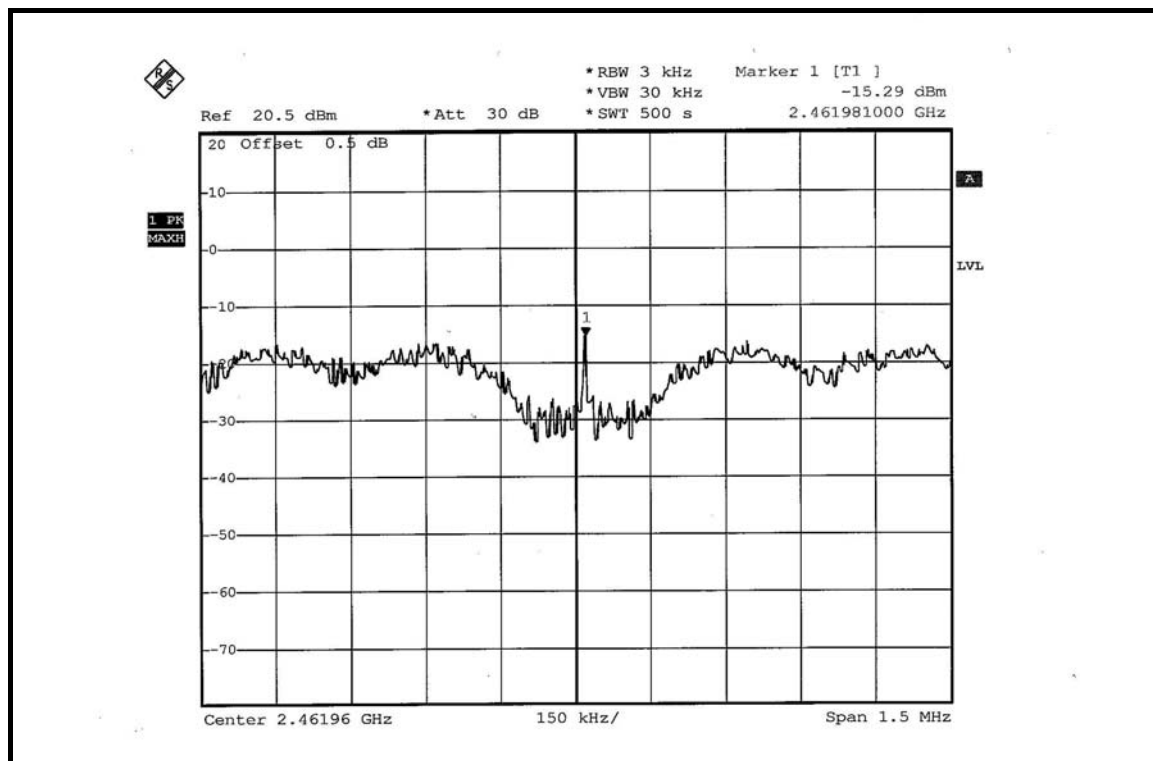
FOR CHAIN 0: CH 1



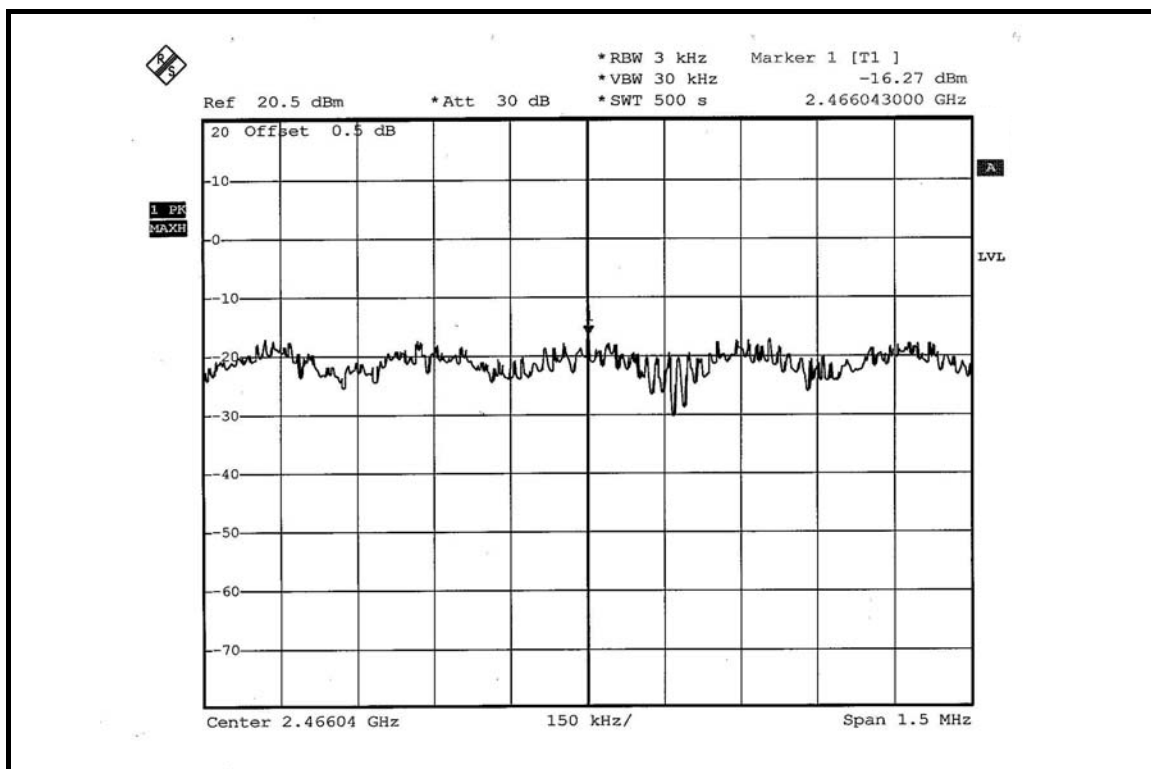
CH 6



CH 11



CH 11

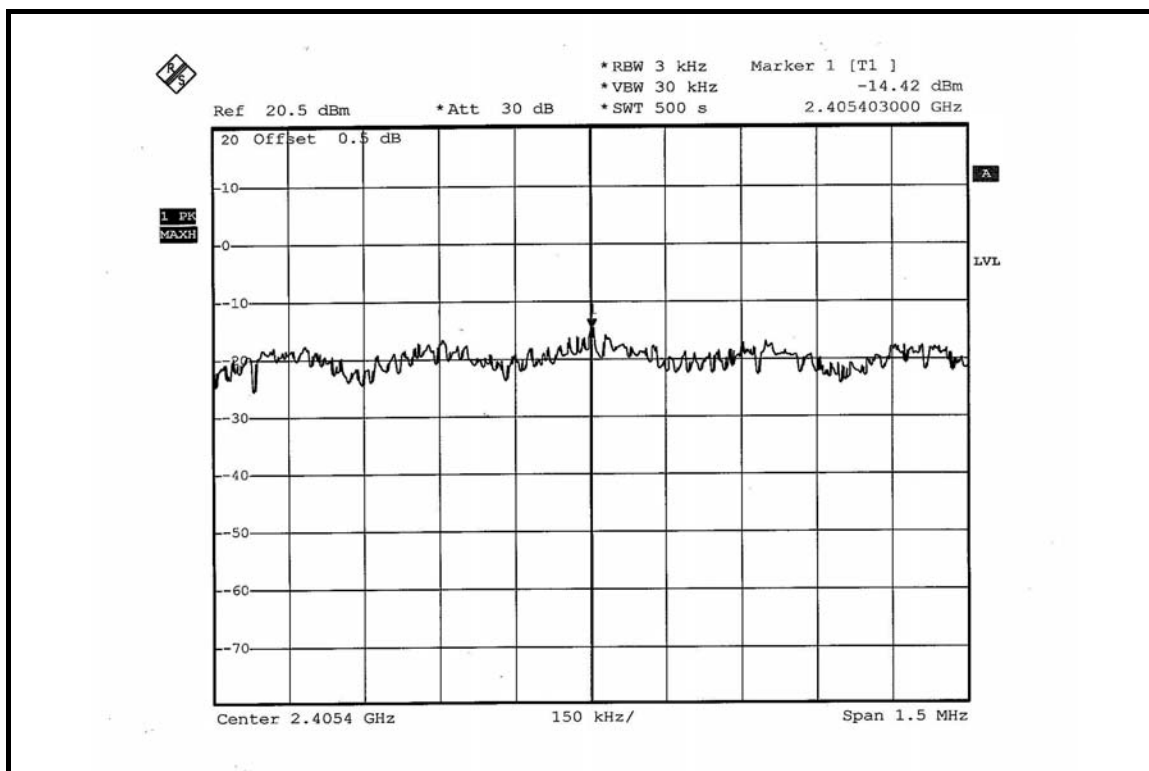


DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

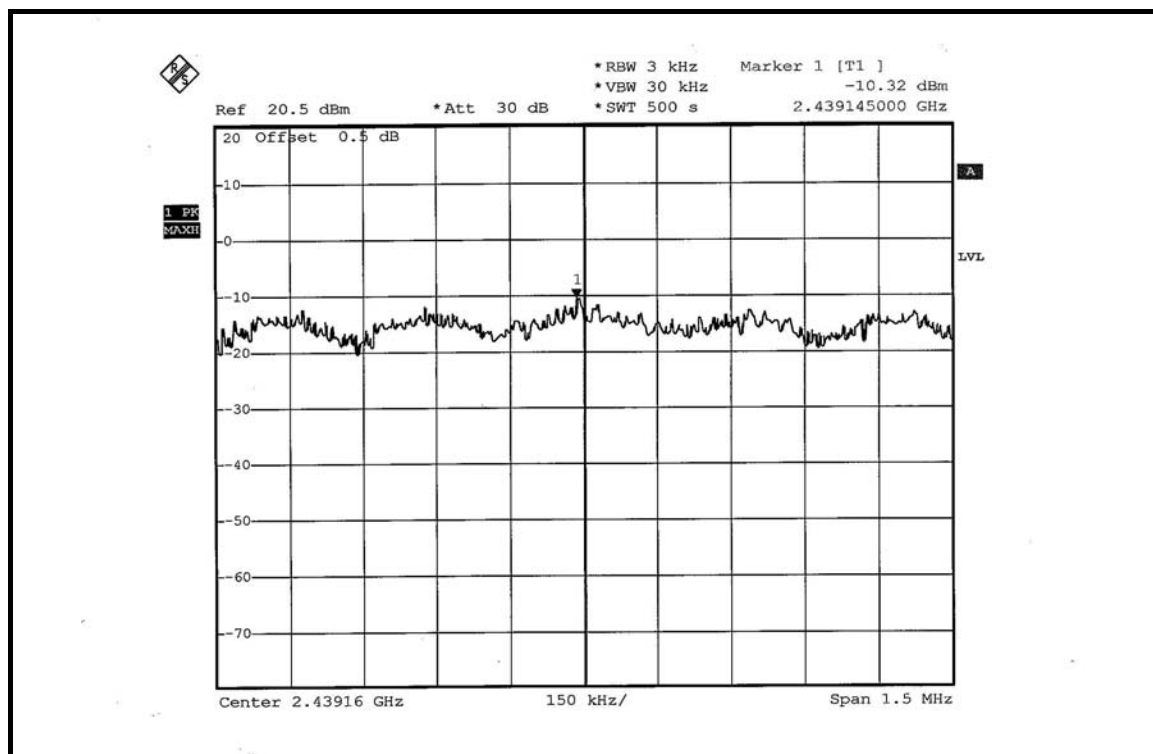
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 61%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	-14.42	-13.87	8	PASS
6	2437	-10.32	-10.70	8	PASS
11	2462	-13.49	-12.88	8	PASS

FOR CHAIN 0: CH 1



CH 6



CH 11

