

FCC TEST REPORT

REPORT NO.: RF950329L08A

MODEL NO.: WN511T

RECEIVED: Apr. 03, 2006

TESTED: Apr. 03 ~ Apr. 05, 2006

ISSUED: Apr. 06, 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.

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No. 2177-01



0528

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1. CERTIFICATION

PRODUCT : RangeMax Next Wireless PC Card

MODEL NO.: WN511T

BRAND: NETGEAR

APPLICANT : Netgear Incorporated

TESTED: Apr. 03 ~ Apr. 05, 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 : Andrea Hsia, **DATE:** Apr. 06, 2006
Andrea Hsia

TECHNICAL ACCEPTANCE : Long Chen, **DATE:** Apr. 06, 2006
Responsible for RF Long Chen

APPROVED BY : Gary Chang, **DATE:** Apr. 06, 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 -20.35dB at 0.216MHz.
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 -1.23dB 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	3.73dB
	200MHz ~1000MHz	3.74dB
	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 PC Card
MODEL NO.	WN511T
FCC ID	PY306100040
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	36.058mW
ANTENNA TYPE	Printed antenna with 3.6dBi gain
DATA CABLE	NA
I/O PORTS	NA

NOTE:

1. This report is issued as a supplementary report of ADT report no.: RF950329L08. This report is prepared for FCC class II permissive change. The difference compared with the original design are different version (this time is V03: final version), layout, and adding EMC solution.
2. The EUT incorporates a MIMO function with 802.11b, 802.11g, draft 802.11n. Physically, the card provides two completed transmit and three receivers.
3. 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).
4. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, only set 0 ~ 7 of "MCS" (MCS: Modulation and Coding Schemes) for single Tx, 8 ~ 15 for dual Tx.
5. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g products.
6. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 300Mbps.
7. 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

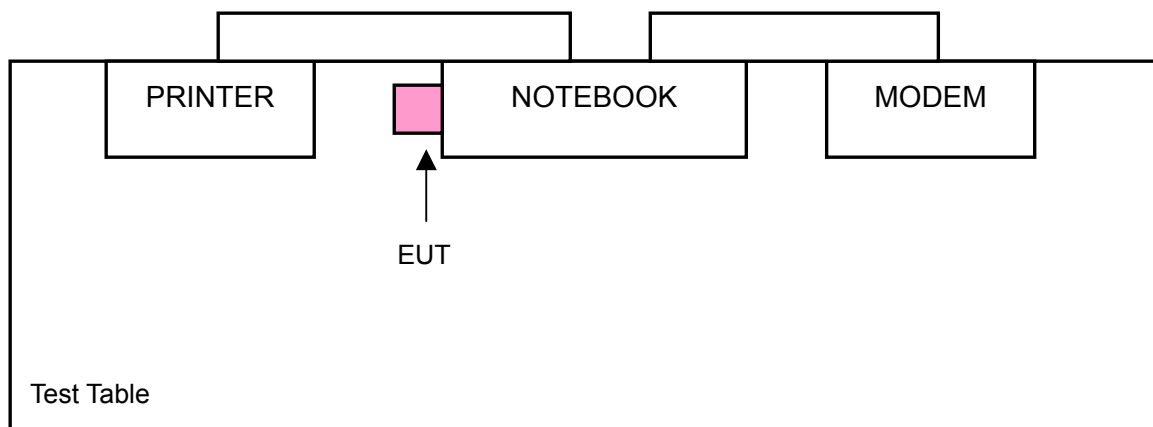
Eleven channels are provided for 802.11b, 802.11g, draft 802.11n (20MHz):

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	Single
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	14.444	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	30	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	Single
Draft 802.11n (20MHz)	1 to 11	1	OFDM	BPSK	7.2	Single
Draft 802.11n (20MHz)	1 to 11	1	OFDM	BPSK	14.444	Dual
Draft 802.11n (40MHz)	1 to 7	1	OFDM	BPSK	15	Single
Draft 802.11n (40MHz)	1 to 7	1	OFDM	BPSK	30	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	Single
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	Single
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Single
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	14.444	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15	Single
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	30	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	Single
802.11g	1 to 11	1, 11	OFDM	BPSK	6	Single
Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2	Single
Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	14.444	Dual
Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	15	Single
Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	30	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	Single
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	Single
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Single
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	14.444	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15	Single
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	30	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	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
2	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008248	IFAXDM1414

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

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

4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 11, 2006
RF signal cable Woken	5D-FB	Cable-HYC01-01	Jan. 06, 2007
LISN SCHWARZBECK	NNBL 8226-2	8226-142	May 02, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Feb. 07, 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 1.
 3. The VCCI Site Registration No. is C-2040.

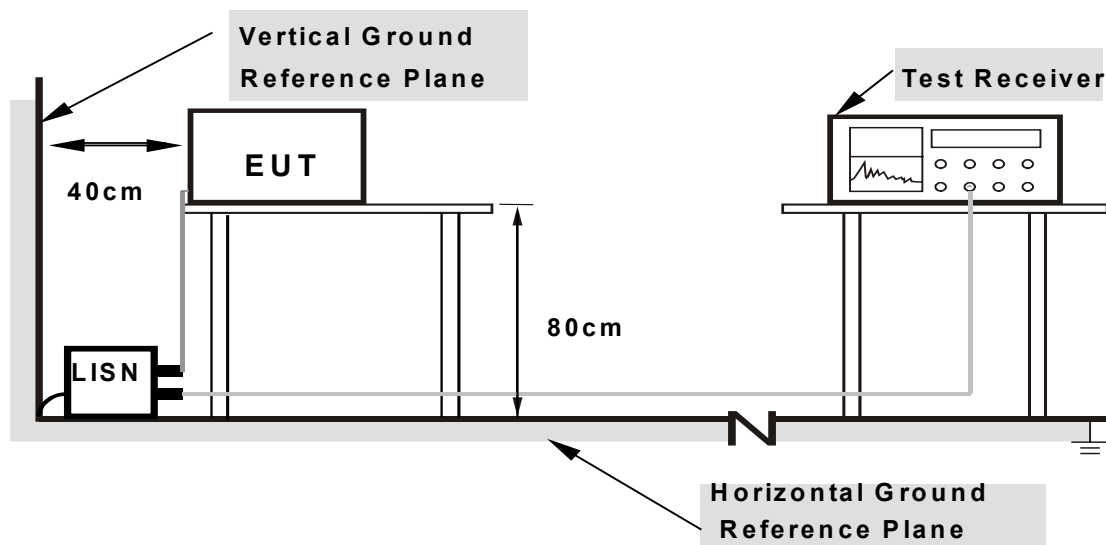
4.1.3 TEST PROCEDURES

- 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 notebook 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 notebook system displayed "H" messages on its screen.
- The notebook system show "H" messages to modem.
- The notebook system sent "H" messages to printer and the printer prints them on paper.
- Repeated item c ~e.

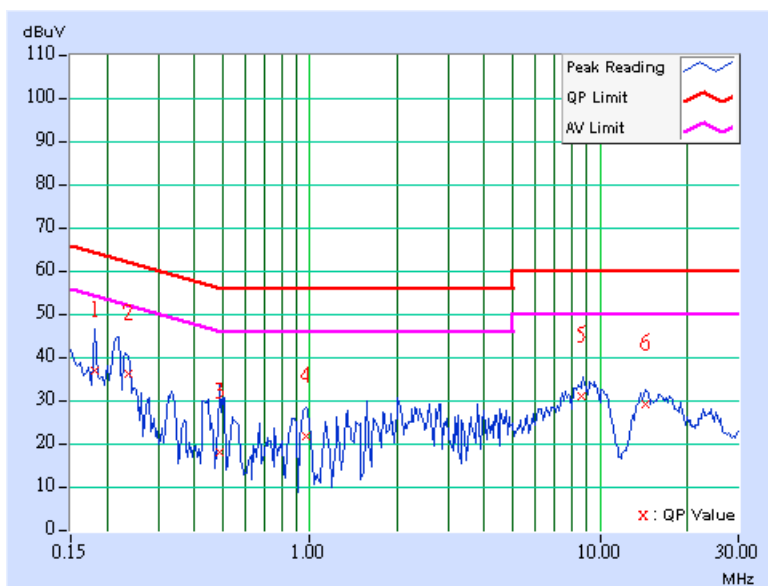
4.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11g OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa	TESTED BY	Brad Wu

	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	0.181	0.10	36.47	-	36.57	-	64.43	54.43	-27.86	-
2	0.236	0.10	35.82	-	35.92	-	62.24	52.24	-26.32	-
3	0.490	0.11	17.51	-	17.62	-	56.17	46.17	-38.55	-
4	0.966	0.19	21.11	-	21.30	-	56.00	46.00	-34.70	-
5	8.637	0.46	30.58	-	31.04	-	60.00	50.00	-28.96	-
6	14.270	0.61	28.60	-	29.21	-	60.00	50.00	-30.79	-

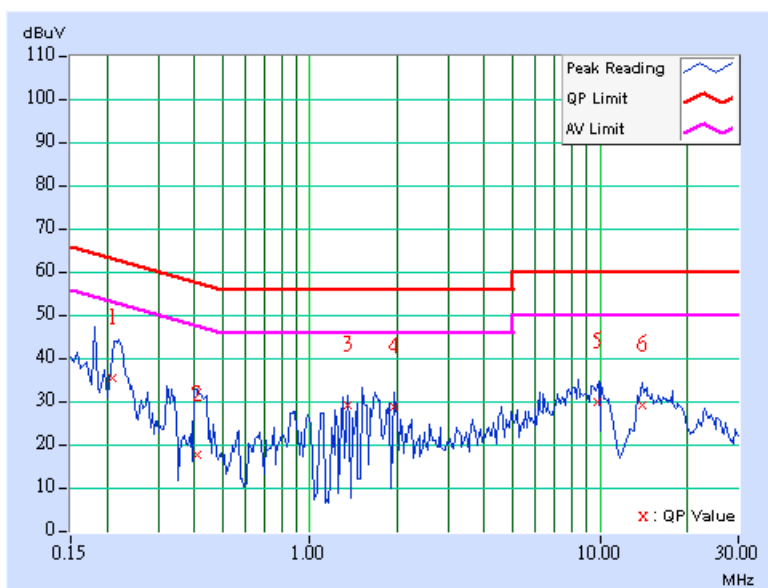
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa	TESTED BY	Brad Wu

	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	0.209	0.10	35.13	-	35.23	-	63.26	53.26	-28.03	-
2	0.408	0.10	17.18	-	17.28	-	57.69	47.69	-40.41	-
3	1.344	0.13	28.73	-	28.86	-	56.00	46.00	-27.14	-
4	1.941	0.19	28.27	-	28.46	-	56.00	46.00	-27.54	-
5	9.754	0.46	29.54	-	30.00	-	60.00	50.00	-30.00	-
6	13.938	0.52	28.65	-	29.17	-	60.00	50.00	-30.83	-

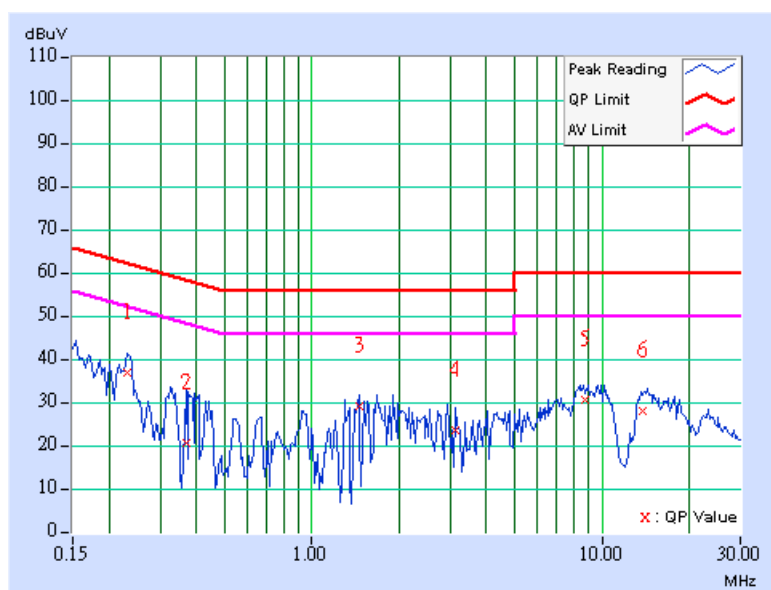
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa	TESTED BY	Brad Wu

	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	0.232	0.10	36.45	-	36.55	-	62.38	52.38	-25.83	-
2	0.369	0.10	20.26	-	20.36	-	58.53	48.53	-38.17	-
3	1.461	0.20	28.54	-	28.74	-	56.00	46.00	-27.26	-
4	3.121	0.35	22.96	-	23.31	-	56.00	46.00	-32.69	-
5	8.773	0.46	30.03	-	30.49	-	60.00	50.00	-29.51	-
6	13.789	0.59	27.67	-	28.26	-	60.00	50.00	-31.74	-

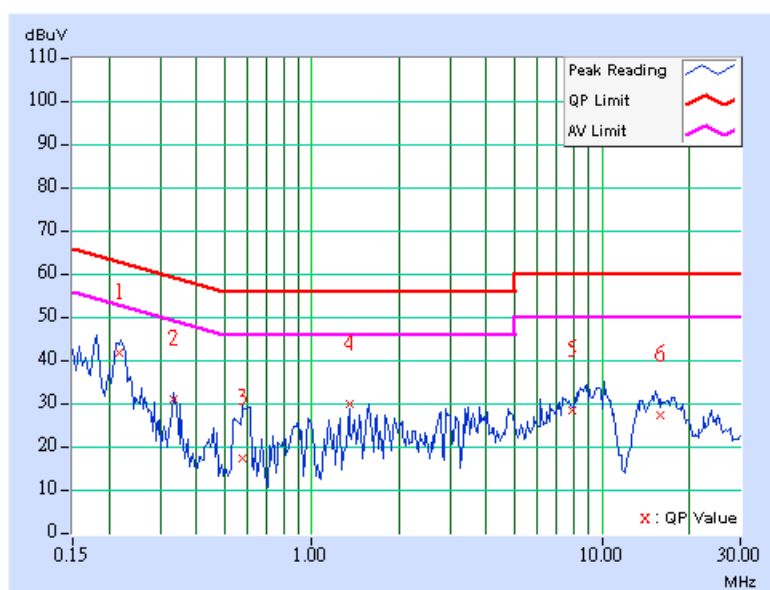
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa	TESTED BY	Brad Wu

	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	0.216	0.10	41.20	-	41.30	-	62.96	52.96	-21.66	-
2	0.334	0.10	30.44	-	30.54	-	59.36	49.36	-28.82	-
3	0.580	0.10	16.79	-	16.89	-	56.00	46.00	-39.11	-
4	1.344	0.13	29.44	-	29.57	-	56.00	46.00	-26.43	-
5	7.914	0.43	27.89	-	28.32	-	60.00	50.00	-31.68	-
6	15.813	0.55	26.81	-	27.36	-	60.00	50.00	-32.64	-

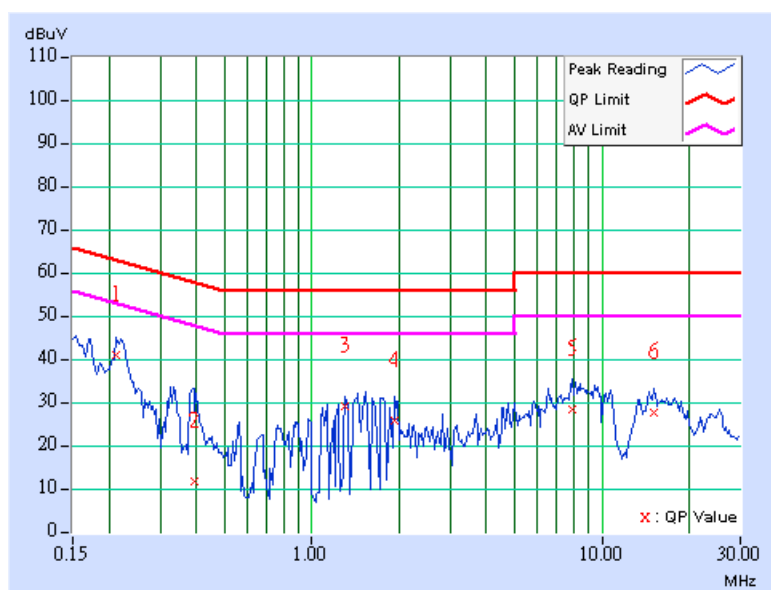
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa	TESTED BY	Brad Wu

	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	0.213	0.10	40.41	-	40.51	-	63.11	53.11	-22.60	-
2	0.392	0.10	11.22	-	11.32	-	58.02	48.02	-46.70	-
3	1.309	0.20	28.49	-	28.69	-	56.00	46.00	-27.31	-
4	1.922	0.20	25.33	-	25.53	-	56.00	46.00	-30.47	-
5	7.859	0.46	28.01	-	28.47	-	60.00	50.00	-31.53	-
6	15.074	0.63	27.18	-	27.81	-	60.00	50.00	-32.19	-

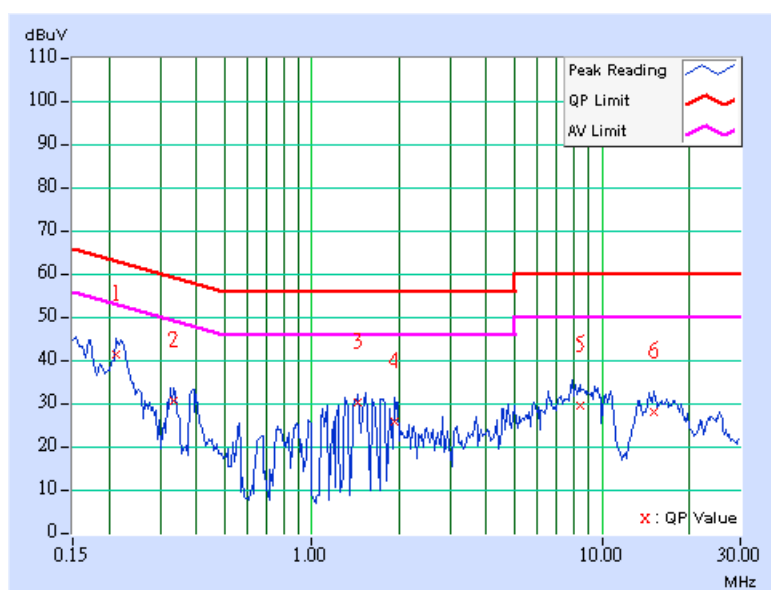
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa	TESTED BY	Brad Wu

	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	0.213	0.10	40.88	-	40.98	-	63.11	53.11	-22.13	-
2	0.334	0.10	30.36	-	30.46	-	59.36	49.36	-28.90	-
3	1.445	0.14	29.66	-	29.80	-	56.00	46.00	-26.20	-
4	1.922	0.19	25.41	-	25.60	-	56.00	46.00	-30.40	-
5	8.469	0.44	29.12	-	29.56	-	60.00	50.00	-30.44	-
6	15.074	0.53	27.58	-	28.11	-	60.00	50.00	-31.89	-

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

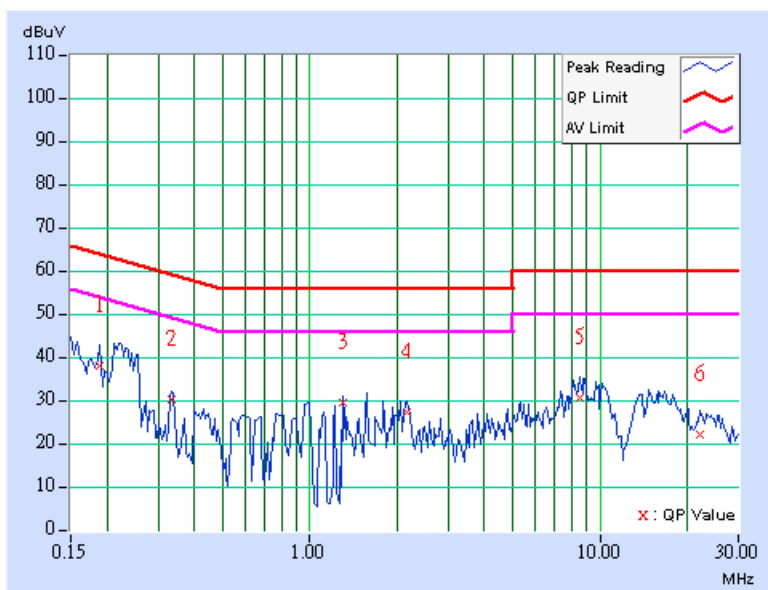


DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	14.444Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.189	0.10	37.17	-	37.27	-	64.08	54.08	-26.81	-
2	0.334	0.10	29.32	-	29.42	-	59.36	49.36	-29.94	-
3	1.309	0.20	28.85	-	29.05	-	56.00	46.00	-26.95	-
4	2.176	0.22	26.54	-	26.76	-	56.00	46.00	-29.24	-
5	8.516	0.46	30.00	-	30.46	-	60.00	50.00	-29.54	-
6	22.152	0.92	21.13	-	22.05	-	60.00	50.00	-37.95	-

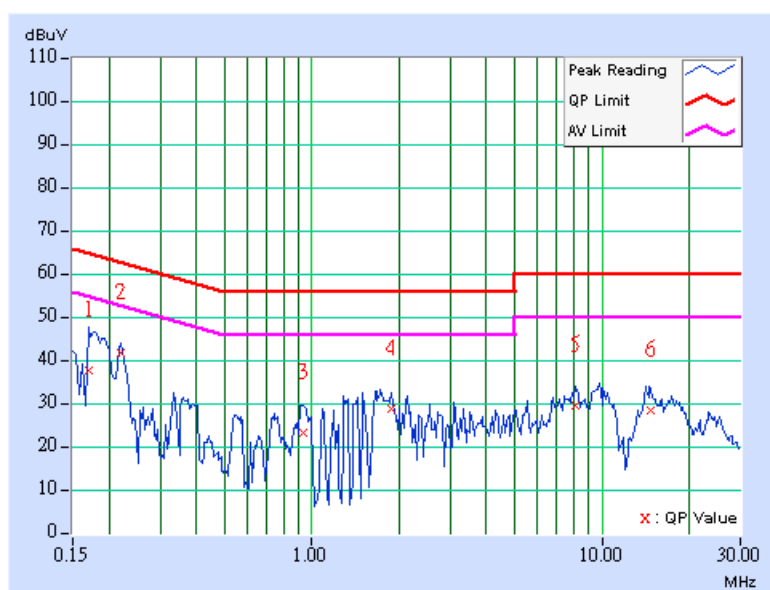
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	14.444Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.170	0.10	37.07	-	37.17	-	64.98	54.98	-27.81	-
2	0.220	0.10	41.24	-	41.34	-	62.81	52.81	-21.47	-
3	0.931	0.10	22.67	-	22.77	-	56.00	46.00	-33.23	-
4	1.887	0.19	28.51	-	28.70	-	56.00	46.00	-27.30	-
5	8.082	0.43	28.94	-	29.37	-	60.00	50.00	-30.63	-
6	14.695	0.53	27.88	-	28.41	-	60.00	50.00	-31.59	-

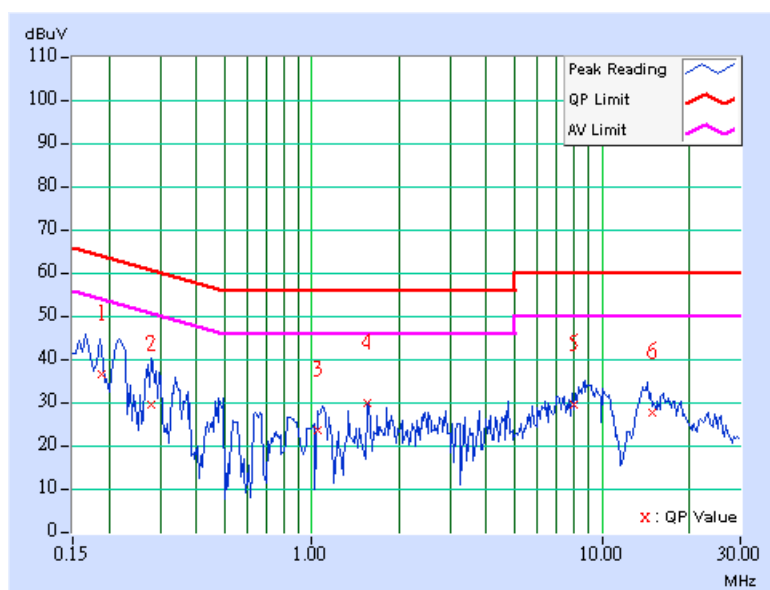
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	14.444Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.189	0.10	36.16	-	36.26	-	64.08	54.08	-27.82	-
2	0.279	0.10	29.10	-	29.20	-	60.85	50.85	-31.65	-
3	1.047	0.20	23.22	-	23.42	-	56.00	46.00	-32.58	-
4	1.563	0.20	29.30	-	29.50	-	56.00	46.00	-26.50	-
5	8.008	0.46	28.98	-	29.44	-	60.00	50.00	-30.56	-
6	14.980	0.63	27.17	-	27.80	-	60.00	50.00	-32.20	-

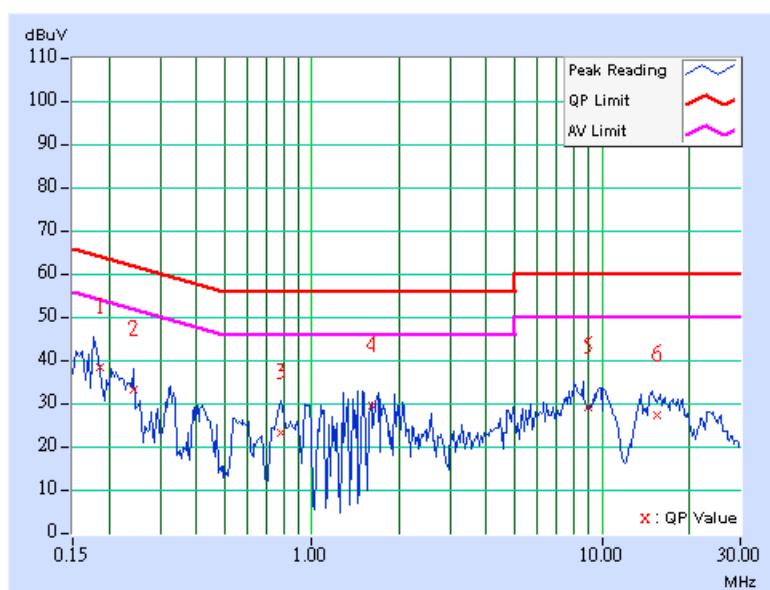
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	14.444Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.185	0.10	37.85	-	37.95	-	64.25	54.25	-26.30	-
2	0.244	0.10	32.93	-	33.03	-	61.97	51.97	-28.94	-
3	0.779	0.10	22.96	-	23.06	-	56.00	46.00	-32.94	-
4	1.605	0.16	29.21	-	29.37	-	56.00	46.00	-26.63	-
5	8.918	0.44	28.89	-	29.33	-	60.00	50.00	-30.67	-
6	15.434	0.54	26.88	-	27.42	-	60.00	50.00	-32.58	-

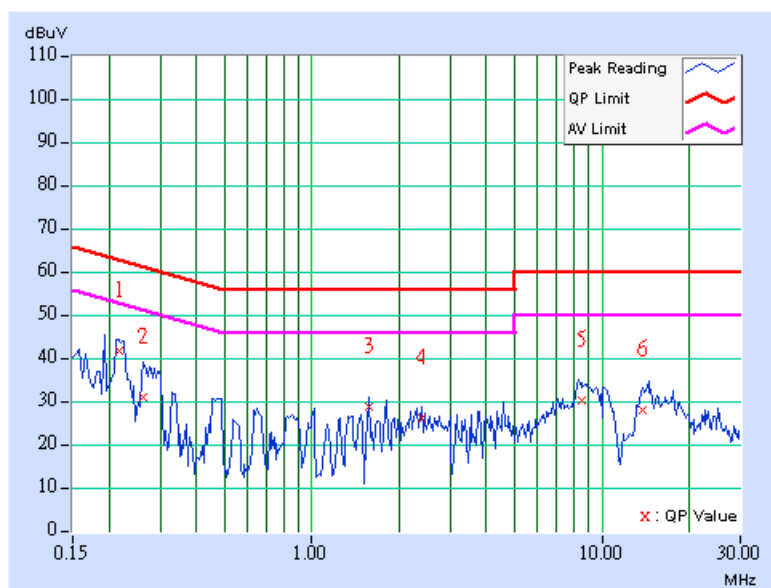
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	14.444Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.216	0.10	41.38	-	41.48	-	62.96	52.96	-21.48	-
2	0.263	0.10	30.51	-	30.61	-	61.33	51.33	-30.72	-
3	1.570	0.20	28.38	-	28.58	-	56.00	46.00	-27.42	-
4	2.379	0.25	25.57	-	25.82	-	56.00	46.00	-30.18	-
5	8.492	0.46	29.81	-	30.27	-	60.00	50.00	-29.73	-
6	13.777	0.59	27.47	-	28.06	-	60.00	50.00	-31.94	-

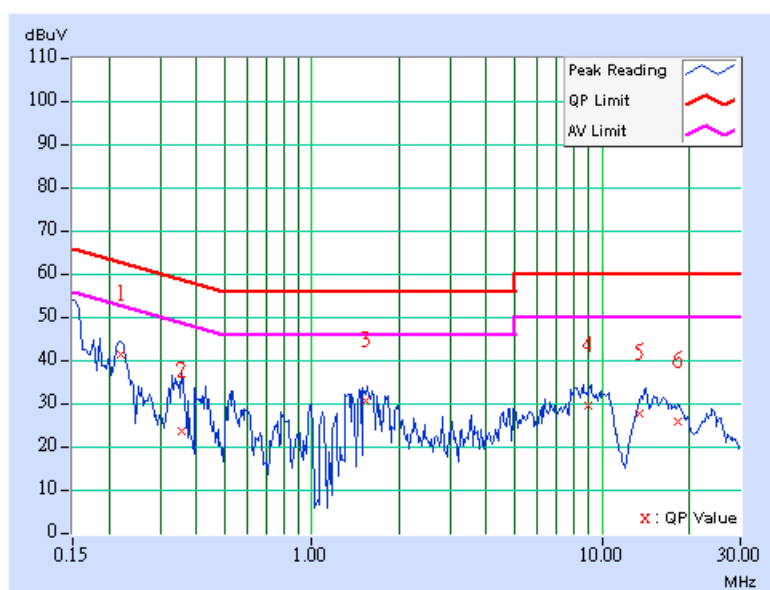
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	14.444Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.220	0.10	40.96	-	41.06	-	62.81	52.81	-21.75	-
2	0.357	0.10	23.28	-	23.38	-	58.80	48.80	-35.42	-
3	1.531	0.15	30.15	-	30.30	-	56.00	46.00	-25.70	-
4	8.977	0.44	29.09	-	29.53	-	60.00	50.00	-30.47	-
5	13.520	0.51	27.16	-	27.67	-	60.00	50.00	-32.33	-
6	18.391	0.60	25.33	-	25.93	-	60.00	50.00	-34.07	-

- 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.

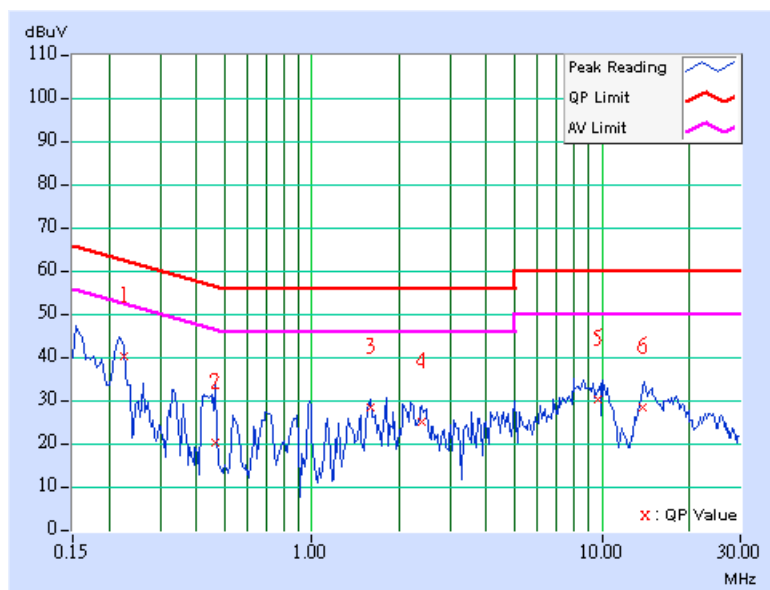


DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	30Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.224	0.10	39.69	-	39.79	-	62.66	52.66	-22.87	-
2	0.463	0.11	19.63	-	19.74	-	56.65	46.65	-36.91	-
3	1.586	0.20	28.01	-	28.21	-	56.00	46.00	-27.79	-
4	2.398	0.25	24.56	-	24.81	-	56.00	46.00	-31.19	-
5	9.637	0.46	29.77	-	30.23	-	60.00	50.00	-29.77	-
6	13.813	0.59	27.93	-	28.52	-	60.00	50.00	-31.48	-

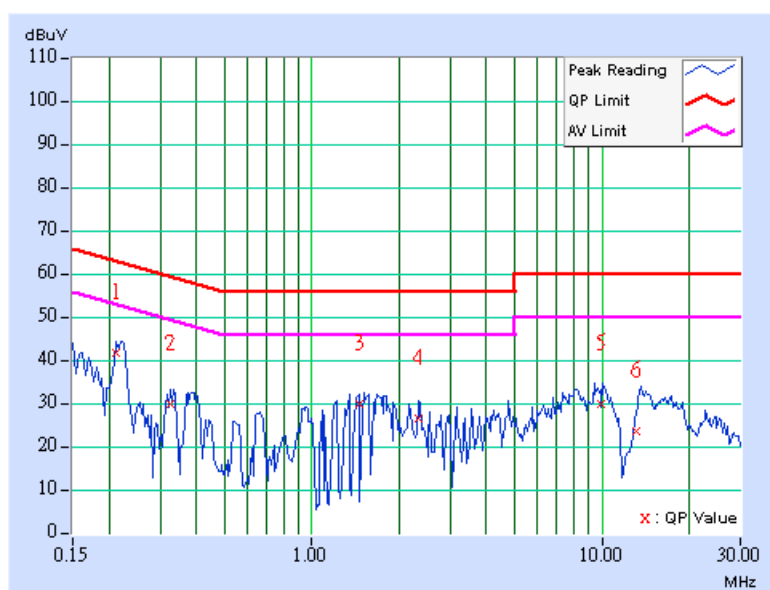
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	30Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.213	0.10	41.26	-	41.36	-	63.11	53.11	-21.75	-
2	0.326	0.10	29.41	-	29.51	-	59.56	49.56	-30.05	-
3	1.457	0.15	29.38	-	29.53	-	56.00	46.00	-26.47	-
4	2.340	0.23	26.29	-	26.52	-	56.00	46.00	-29.48	-
5	9.992	0.46	29.57	-	30.03	-	60.00	50.00	-29.97	-
6	13.148	0.50	23.38	-	23.88	-	60.00	50.00	-36.12	-

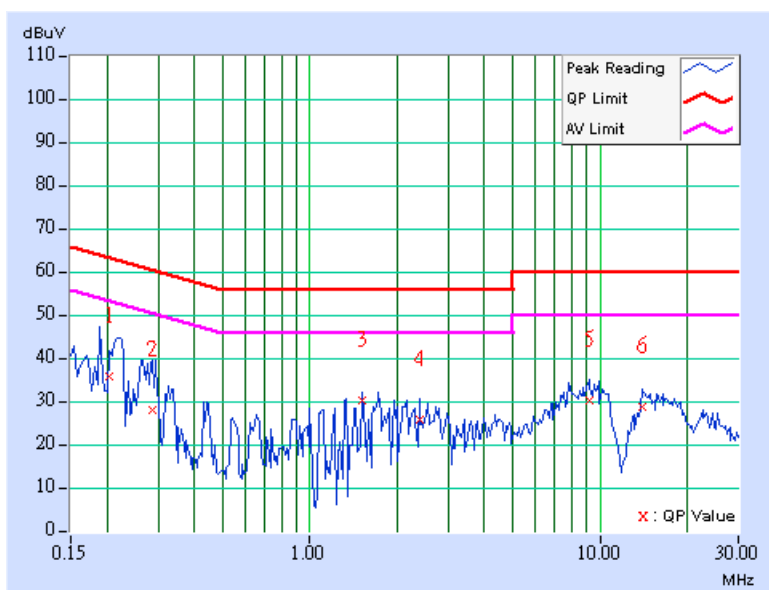
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	30Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.205	0.10	35.17	-	35.27	-	63.42	53.42	-28.15	-
2	0.287	0.10	27.53	-	27.63	-	60.62	50.62	-32.99	-
3	1.520	0.20	29.95	-	30.15	-	56.00	46.00	-25.85	-
4	2.379	0.25	25.26	-	25.51	-	56.00	46.00	-30.49	-
5	9.152	0.46	29.61	-	30.07	-	60.00	50.00	-29.93	-
6	14.004	0.60	28.35	-	28.95	-	60.00	50.00	-31.05	-

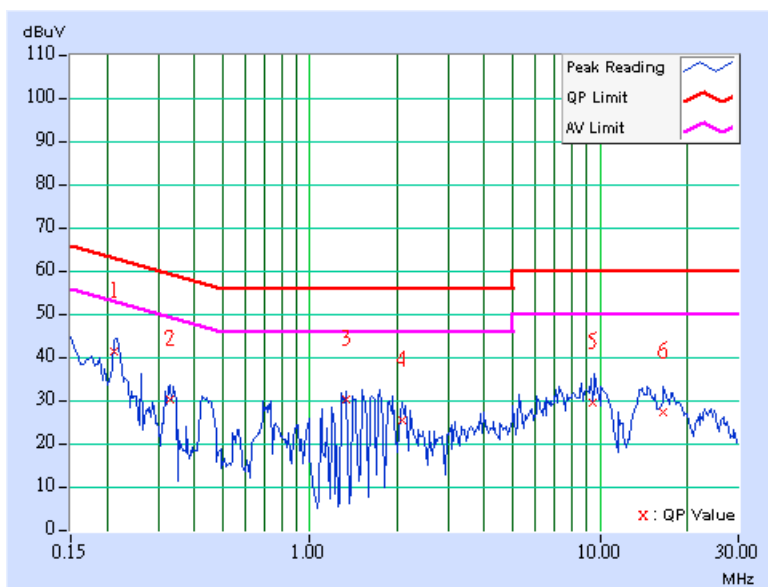
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	30Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.213	0.10	40.78	-	40.88	-	63.11	53.11	-22.23	-
2	0.330	0.10	29.84	-	29.94	-	59.46	49.46	-29.52	-
3	1.332	0.13	29.96	-	30.09	-	56.00	46.00	-25.91	-
4	2.086	0.21	24.94	-	25.15	-	56.00	46.00	-30.85	-
5	9.387	0.45	29.14	-	29.59	-	60.00	50.00	-30.41	-
6	16.508	0.56	26.97	-	27.53	-	60.00	50.00	-32.47	-

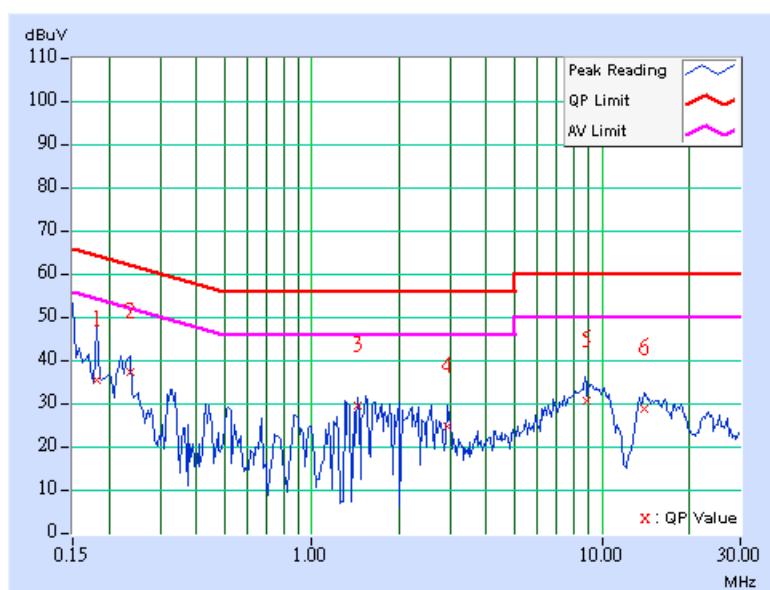
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	30Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.181	0.10	34.82	-	34.92	-	64.43	54.43	-29.51	-
2	0.236	0.10	36.68	-	36.78	-	62.24	52.24	-25.46	-
3	1.441	0.20	28.88	-	29.08	-	56.00	46.00	-26.92	-
4	2.926	0.32	24.19	-	24.51	-	56.00	46.00	-31.49	-
5	8.805	0.46	30.08	-	30.54	-	60.00	50.00	-29.46	-
6	14.023	0.60	28.21	-	28.81	-	60.00	50.00	-31.19	-

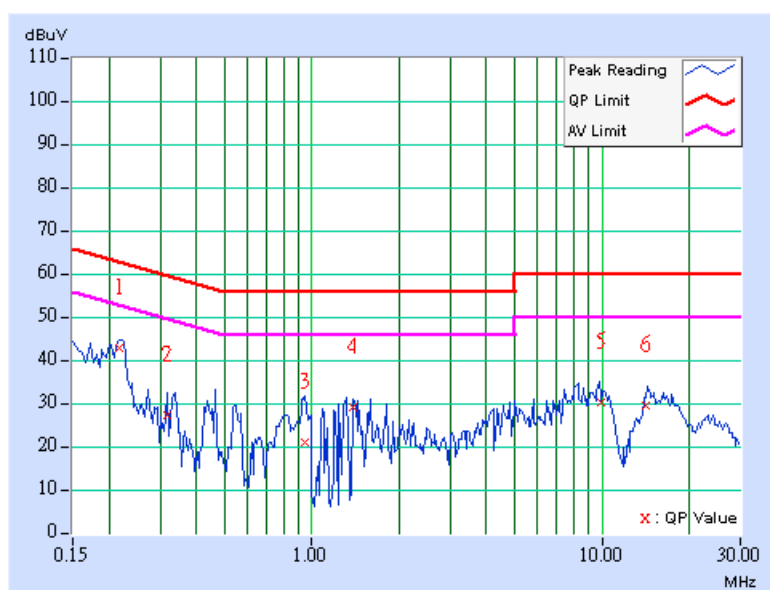
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	30Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 63%RH, 991hPa	TESTED BY	Brad Wu

	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	0.216	0.10	42.51	-	42.61	-	62.96	52.96	-20.35	-
2	0.318	0.10	27.01	-	27.11	-	59.76	49.76	-32.65	-
3	0.951	0.10	20.42	-	20.52	-	56.00	46.00	-35.48	-
4	1.395	0.14	28.71	-	28.85	-	56.00	46.00	-27.15	-
5	9.910	0.46	29.75	-	30.21	-	60.00	50.00	-29.79	-
6	14.133	0.52	29.01	-	29.53	-	60.00	50.00	-30.47	-

- 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.



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.

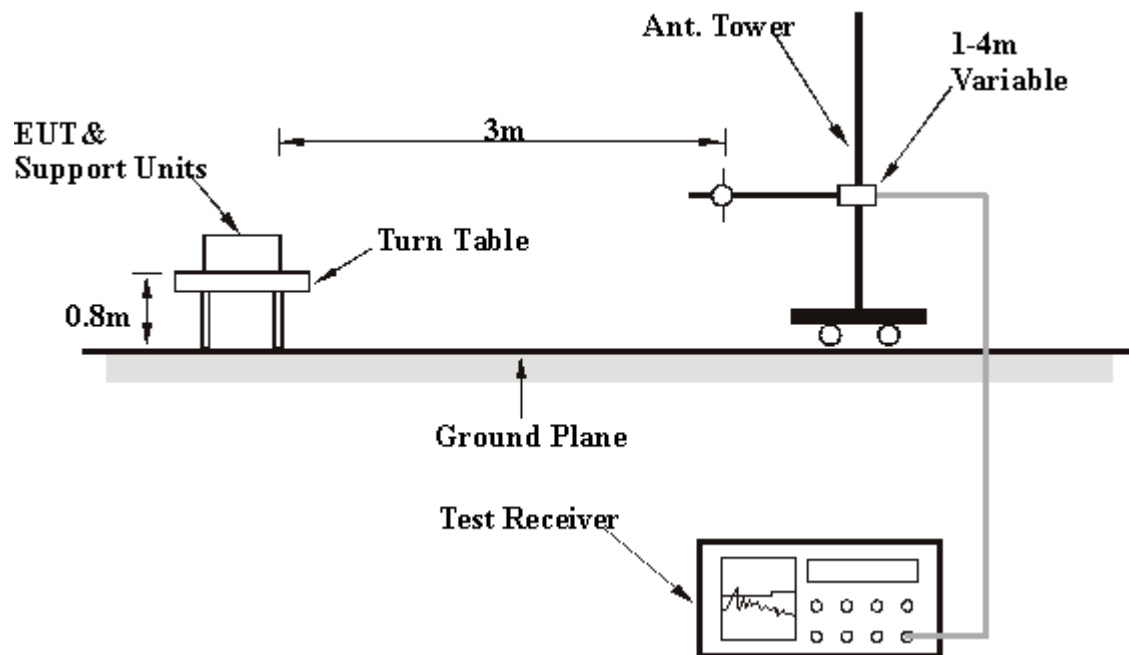
NOTE:

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:

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	6Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. 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	267.15	28.40 QP	46.00	-17.60	1.25 H	355	14.77	13.63
2	298.26	30.97 QP	46.00	-15.03	1.00 H	148	15.61	15.35
3	331.30	33.56 QP	46.00	-12.44	1.25 H	325	17.70	15.86
4	465.43	31.94 QP	46.00	-14.06	1.00 H	82	12.86	19.08
5	603.45	31.47 QP	46.00	-14.53	1.25 H	100	8.88	22.59
6	951.40	32.30 QP	46.00	-13.70	1.25 H	127	2.54	29.76

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	298.26	29.35 QP	46.00	-16.65	1.50 V	139	14.00	15.35
2	333.25	32.02 QP	46.00	-13.98	1.25 V	274	16.14	15.89
3	467.37	26.48 QP	46.00	-19.52	1.25 V	64	7.35	19.13
4	601.50	27.31 QP	46.00	-18.69	1.00 V	40	4.75	22.57
5	671.48	26.23 QP	46.00	-19.77	1.00 V	55	2.67	23.56
6	949.46	32.49 QP	46.00	-13.51	1.00 V	82	2.72	29.76

- 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:

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	24deg. 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	265.26	28.35 QP	46.00	-17.65	1.50 H	144	15.04	13.31
2	300.27	31.22 QP	46.00	-14.78	1.00 H	153	15.79	15.43
3	333.29	33.67 QP	46.00	-12.33	1.00 H	287	17.78	15.89
4	465.49	30.87 QP	46.00	-15.13	1.00 H	65	11.79	19.08
5	720.14	27.79 QP	46.00	-18.21	1.50 H	142	2.99	24.80
6	799.71	27.34 QP	46.00	-18.66	1.00 H	121	1.23	26.11

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	164.45	27.25 QP	43.50	-16.25	1.00 V	205	14.30	12.95
2	331.42	28.67 QP	46.00	-17.33	1.00 V	142	12.81	15.86
3	465.47	32.48 QP	46.00	-13.52	1.00 V	131	13.40	19.08
4	601.55	28.19 QP	46.00	-17.81	1.50 V	74	5.62	22.57
5	908.54	32.49 QP	46.00	-13.51	1.00 V	155	4.64	27.85
6	951.44	32.38 QP	46.00	-13.62	1.00 V	82	2.62	29.76

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.

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	14.444Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. 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	265.29	28.37 QP	46.00	-17.63	1.25 H	207	15.05	13.32
2	300.28	31.11 QP	46.00	-14.89	1.00 H	111	15.68	15.43
3	333.27	33.68 QP	46.00	-12.32	1.25 H	304	17.79	15.89
4	465.49	30.87 QP	46.00	-15.13	1.25 H	66	11.79	19.08
5	720.23	27.77 QP	46.00	-18.23	1.25 H	146	2.97	24.80
6	799.82	27.28 QP	46.00	-18.72	1.50 H	100	1.17	26.11

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	164.24	27.38 QP	43.50	-16.12	1.25 V	129	14.42	12.96
2	331.31	28.72 QP	46.00	-17.28	1.25 V	178	12.86	15.86
3	465.39	32.44 QP	46.00	-13.56	1.25 V	102	13.36	19.08
4	601.59	28.13 QP	46.00	-17.87	1.00 V	86	5.56	22.57
5	908.68	32.48 QP	46.00	-13.52	1.25 V	196	4.62	27.86
6	951.49	32.34 QP	46.00	-13.66	1.25 V	101	2.58	29.76

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 (40MHz) OFDM MODULATION:

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	15Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 64%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	265.21	28.29 QP	46.00	-17.71	1.50 H	148	14.98	13.31
2	300.20	31.14 QP	46.00	-14.86	1.00 H	124	15.70	15.43
3	333.25	33.61 QP	46.00	-12.39	1.00 H	295	17.73	15.89
4	465.43	30.80 QP	46.00	-15.20	1.00 H	52	11.72	19.08
5	720.08	27.75 QP	46.00	-18.25	1.50 H	139	2.95	24.80
6	799.78	27.27 QP	46.00	-18.73	1.00 H	127	1.16	26.11

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	164.13	27.25 QP	43.50	-16.25	1.25 V	205	14.28	12.97
2	331.30	28.81 QP	46.00	-17.19	1.00 V	157	12.95	15.86
3	465.43	32.40 QP	46.00	-13.60	1.00 V	124	13.32	19.08
4	601.50	28.09 QP	46.00	-17.91	1.50 V	46	5.52	22.57
5	908.64	32.42 QP	46.00	-13.58	1.00 V	136	4.57	27.85
6	951.40	32.32 QP	46.00	-13.68	1.00 V	76	2.56	29.76

- 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.

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	30Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 64%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	265.28	28.34 QP	46.00	-17.66	1.50 H	141	15.02	13.32
2	300.25	31.27 QP	46.00	-14.73	1.50 H	156	15.84	15.43
3	333.21	33.68 QP	46.00	-12.32	1.25 H	289	17.79	15.89
4	465.47	30.88 QP	46.00	-15.12	1.07 H	66	11.80	19.08
5	720.17	27.70 QP	46.00	-18.30	1.50 H	145	2.90	24.80
6	799.72	27.36 QP	46.00	-18.64	1.25 H	133	1.25	26.11

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	164.18	27.29 QP	43.50	-16.21	1.50 V	202	14.32	12.97
2	331.38	28.75 QP	46.00	-17.25	1.50 V	123	12.89	15.86
3	465.40	32.49 QP	46.00	-13.51	1.00 V	122	13.41	19.08
4	601.54	28.01 QP	46.00	-17.99	1.25 V	52	5.44	22.57
5	908.61	32.43 QP	46.00	-13.57	1.50 V	127	4.58	27.85
6	951.42	32.35 QP	46.00	-13.65	1.00 V	88	2.59	29.76

- 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.

802.11b DSSS MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.79 PK	74.00	-32.21	1.02 H	47	13.88	27.91
1	1120.00	32.13 AV	54.00	-21.87	1.02 H	47	4.22	27.91
2	2390.00	53.88 PK	74.00	-20.12	1.12 H	190	21.77	32.11
2	2390.00	50.23 AV	54.00	-3.77	1.12 H	190	18.12	32.11
3	*2412.00	106.93 PK			1.12 H	190	74.74	32.19
3	*2412.00	103.31 AV			1.12 H	190	71.12	32.19
4	4824.00	48.69 PK	74.00	-25.31	1.05 H	236	10.04	38.65
4	4824.00	38.17 AV	54.00	-15.83	1.05 H	236	-0.48	38.65

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	1120.00	40.57 PK	74.00	-33.43	1.13 V	229	12.66	27.91
1	1120.00	31.08 AV	54.00	-22.92	1.13 V	229	3.17	27.91
2	2390.00	48.19 PK	74.00	-25.81	1.42 V	45	16.08	32.11
2	2390.00	44.51 AV	54.00	-9.49	1.42 V	45	12.40	32.11
3	*2412.00	101.24 PK			1.42 V	45	69.05	32.19
3	*2412.00	97.56 AV			1.42 V	45	65.37	32.19
4	4824.00	49.68 PK	74.00	-24.32	1.04 V	92	11.03	38.65
4	4824.00	39.55 AV	54.00	-14.45	1.04 V	92	0.90	38.65

- 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	1Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.96 PK	74.00	-32.04	1.01 H	62	14.05	27.91
1	1120.00	32.30 AV	54.00	-21.70	1.01 H	62	4.39	27.91
2	*2437.00	107.48 PK			1.10 H	191	75.19	32.29
2	*2437.00	103.92 AV			1.10 H	191	71.63	32.29
3	4874.00	48.75 PK	74.00	-25.25	1.03 H	217	9.96	38.79
3	4874.00	38.26 AV	54.00	-15.74	1.03 H	217	-0.53	38.79

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	1120.00	40.66 PK	74.00	-33.34	1.11 V	204	12.75	27.91
1	1120.00	31.23 AV	54.00	-22.77	1.11 V	204	3.32	27.91
2	*2437.00	101.36 PK			1.40 V	52	69.07	32.29
2	*2437.00	97.72 AV			1.40 V	52	65.43	32.29
3	4874.00	49.72 PK	74.00	-24.28	1.01 V	62	10.93	38.79
3	4874.00	39.63 AV	54.00	-14.37	1.01 V	62	0.84	38.79

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	1Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.79 PK	74.00	-32.21	1.09 H	48	13.88	27.91
1	1120.00	32.34 AV	54.00	-21.66	1.09 H	48	4.43	27.91
2	*2462.00	107.23 PK			1.22 H	194	74.85	32.38
2	*2462.00	103.58 AV			1.22 H	194	71.20	32.38
3	2483.50	54.99 PK	74.00	-19.01	1.22 H	194	22.53	32.46
3	2483.50	51.25 AV	54.00	-2.75	1.22 H	194	18.79	32.46
4	4924.00	48.38 PK	74.00	-25.62	1.03 H	200	9.46	38.92
4	4924.00	37.82 AV	54.00	-16.18	1.03 H	200	-1.10	38.92

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	1120.00	40.91 PK	74.00	-33.09	1.05 V	261	13.00	27.91
1	1120.00	31.38 AV	54.00	-22.62	1.05 V	261	3.47	27.91
2	*2462.00	101.78 PK			1.03 V	78	69.40	32.38
2	*2462.00	97.92 AV			1.03 V	78	65.54	32.38
3	2483.50	50.40 PK	74.00	-23.60	1.03 V	78	17.94	32.46
3	2483.50	46.61 AV	54.00	-7.39	1.03 V	78	14.15	32.46
4	4924.00	48.83 PK	74.00	-25.17	1.12 V	68	9.91	38.92
4	4924.00	38.78 AV	54.00	-15.22	1.12 V	68	-0.14	38.92

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:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.86 PK	74.00	-32.14	1.05 H	24	13.95	27.91
1	1120.00	32.43 AV	54.00	-21.57	1.05 H	24	4.52	27.91
2	2390.00	60.48 PK	74.00	-13.52	1.10 H	135	28.37	32.11
2	2390.00	50.09 AV	54.00	-3.91	1.10 H	135	17.98	32.11
3	*2412.00	106.45 PK			1.10 H	135	74.26	32.19
3	*2412.00	96.06 AV			1.10 H	135	63.87	32.19
4	4824.00	51.66 PK	74.00	-22.34	1.07 H	52	13.01	38.65
4	4824.00	38.87 AV	54.00	-15.13	1.07 H	52	0.22	38.65

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	1120.00	40.25 PK	74.00	-33.75	1.14 V	259	12.34	27.91
1	1120.00	30.72 AV	54.00	-23.28	1.14 V	259	2.81	27.91
2	2390.00	58.26 PK	74.00	-15.74	1.02 V	105	26.15	32.11
2	2390.00	48.00 AV	54.00	-6.00	1.02 V	105	15.89	32.11
3	*2412.00	104.23 PK			1.02 V	105	72.04	32.19
3	*2412.00	93.97 AV			1.02 V	105	61.78	32.19
4	4824.00	56.17 PK	74.00	-17.83	1.09 V	23	17.52	38.65
4	4824.00	43.58 AV	54.00	-10.42	1.09 V	23	4.93	38.65

- 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	6Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.97 PK	74.00	-32.03	1.01 H	36	14.06	27.91
1	1120.00	32.48 AV	54.00	-21.52	1.01 H	36	4.57	27.91
2	*2437.00	106.95 PK			1.11 H	133	74.66	32.29
2	*2437.00	96.91 AV			1.11 H	133	64.62	32.29
3	4874.00	52.54 PK	74.00	-21.46	1.20 H	58	13.75	38.79
3	4874.00	40.05 AV	54.00	-13.95	1.20 H	58	1.26	38.79

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	1120.00	40.69 PK	74.00	-33.31	1.12 V	239	12.78	27.91
1	1120.00	31.23 AV	54.00	-22.77	1.12 V	239	3.32	27.91
2	*2437.00	104.09 PK			1.05 V	112	71.80	32.29
2	*2437.00	93.88 AV			1.05 V	112	61.59	32.29
3	4874.00	58.74 PK	74.00	-15.26	1.02 V	63	19.95	38.79
3	4874.00	45.81 AV	54.00	-8.19	1.02 V	63	7.02	38.79

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	6Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.72 PK	74.00	-32.28	1.09 H	27	13.81	27.91
1	1120.00	31.25 AV	54.00	-22.75	1.09 H	27	3.34	27.91
2	*2462.00	106.47 PK			1.05 H	134	74.09	32.38
2	*2462.00	96.15 AV			1.05 H	134	63.77	32.38
3	2483.50	61.55 PK	74.00	-12.45	1.05 H	134	29.09	32.46
3	2483.50	51.23 AV	54.00	-2.77	1.05 H	134	18.77	32.46
4	4924.00	51.57 PK	74.00	-22.43	1.05 H	41	12.65	38.92
4	4924.00	38.94 AV	54.00	-15.06	1.05 H	41	0.02	38.92

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	1120.00	40.15 PK	74.00	-33.85	1.10 V	258	12.24	27.91
1	1120.00	30.62 AV	54.00	-23.38	1.10 V	258	2.71	27.91
2	*2462.00	103.56 PK			1.02 V	107	71.18	32.38
2	*2462.00	93.34 AV			1.02 V	107	60.96	32.38
3	2483.50	58.64 PK	74.00	-15.36	1.02 V	107	26.18	32.46
3	2483.50	48.42 AV	54.00	-5.58	1.02 V	107	15.96	32.46
4	4924.00	58.47 PK	74.00	-15.53	1.10 V	89	19.55	38.92
4	4924.00	45.56 AV	54.00	-8.44	1.10 V	89	6.64	38.92

- 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: 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	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.97 PK	74.00	-32.03	1.10 H	275	14.06	27.91
1	1120.00	32.46 AV	54.00	-21.54	1.10 H	275	4.55	27.91
2	2390.00	60.65 PK	74.00	-13.35	1.01 H	162	28.54	32.11
2	2390.00	50.94 AV	54.00	-3.06	1.01 H	162	18.83	32.11
3	*2412.00	105.86 PK			1.01 H	162	73.67	32.19
3	*2412.00	96.15 AV			1.01 H	162	63.96	32.19
4	4824.00	51.54 PK	74.00	-22.46	1.01 H	42	12.89	38.65
4	4824.00	39.07 AV	54.00	-14.93	1.01 H	42	0.42	38.65

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	1120.00	40.36 PK	74.00	-33.64	1.21 V	327	12.45	27.91
1	1120.00	30.85 AV	54.00	-23.15	1.21 V	327	2.94	27.91
2	2390.00	58.75 PK	74.00	-15.25	1.03 V	95	26.64	32.11
2	2390.00	48.94 AV	54.00	-5.06	1.03 V	95	16.83	32.11
3	*2412.00	103.96 PK			1.03 V	95	71.77	32.19
3	*2412.00	94.15 AV			1.03 V	95	61.96	32.19
4	4824.00	56.88 PK	74.00	-17.12	1.01 V	207	18.23	38.65
4	4824.00	44.42 AV	54.00	-9.58	1.01 V	207	5.77	38.65

- 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	24deg. 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	1120.00	42.36 PK	74.00	-31.64	1.00 H	53	14.45	27.91
1	1120.00	32.89 AV	54.00	-21.11	1.00 H	53	4.98	27.91
2	*2437.00	107.46 PK			1.01 H	175	75.17	32.29
2	*2437.00	97.48 AV			1.01 H	175	65.19	32.29
3	4874.00	51.82 PK	74.00	-22.18	1.10 H	261	13.03	38.79
3	4874.00	39.41 AV	54.00	-14.59	1.10 H	261	0.62	38.79

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	1120.00	40.59 PK	74.00	-33.41	1.18 V	356	12.68	27.91
1	1120.00	31.04 AV	54.00	-22.96	1.18 V	356	3.13	27.91
2	*2437.00	105.13 PK			1.05 V	101	72.84	32.29
2	*2437.00	95.34 AV			1.05 V	101	63.05	32.29
3	4874.00	56.84 PK	74.00	-17.16	1.09 V	291	18.05	38.79
3	4874.00	44.52 AV	54.00	-9.48	1.09 V	291	5.73	38.79

- 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	24deg. 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	1120.00	42.13 PK	74.00	-31.87	1.05 H	41	14.22	27.91
1	1120.00	32.67 AV	54.00	-21.33	1.05 H	41	4.76	27.91
2	*2462.00	106.35 PK			1.01 H	173	73.97	32.38
2	*2462.00	96.82 AV			1.01 H	173	64.44	32.38
3	2483.50	59.77 PK	74.00	-14.23	1.01 H	173	27.31	32.46
3	2483.50	50.24 AV	54.00	-3.76	1.01 H	173	17.78	32.46
4	4924.00	51.86 PK	74.00	-22.14	1.10 H	269	12.94	38.92
4	4924.00	39.37 AV	54.00	-14.63	1.10 H	269	0.45	38.92

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	1120.00	40.59 PK	74.00	-33.41	1.11 V	304	12.68	27.91
1	1120.00	31.04 AV	54.00	-22.96	1.11 V	304	3.13	27.91
2	*2462.00	104.25 PK			1.05 V	101	71.87	32.38
2	*2462.00	94.57 AV			1.05 V	101	62.19	32.38
3	2483.50	57.67 PK	74.00	-16.33	1.05 V	101	25.21	32.46
3	2483.50	47.99 AV	54.00	-6.01	1.05 V	101	15.53	32.46
4	4924.00	57.29 PK	74.00	-16.71	1.09 V	52	18.37	38.92
4	4924.00	44.83 AV	54.00	-9.17	1.09 V	52	5.91	38.92

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	14.444Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	40.99 PK	74.00	-33.01	1.01 H	52	13.08	27.91
1	1120.00	31.47 AV	54.00	-22.53	1.01 H	52	3.56	27.91
2	2390.00	61.56 PK	74.00	-12.44	1.41 H	80	29.45	32.11
2	2390.00	50.72 AV	54.00	-3.28	1.41 H	80	18.61	32.11
3	*2412.00	108.35 PK			1.41 H	80	76.16	32.19
3	*2412.00	97.51 AV			1.41 H	80	65.32	32.19
4	4824.00	51.54 PK	74.00	-22.46	1.02 H	54	12.89	38.65
4	4824.00	38.95 AV	54.00	-15.05	1.02 H	54	0.30	38.65

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	1120.00	39.62 PK	74.00	-34.38	1.10 V	262	11.71	27.91
1	1120.00	30.05 AV	54.00	-23.95	1.10 V	262	2.14	27.91
2	2390.00	58.95 PK	74.00	-15.05	1.02 V	109	26.84	32.11
2	2390.00	47.98 AV	54.00	-6.02	1.02 V	109	15.87	32.11
3	*2412.00	105.74 PK			1.02 V	109	73.55	32.19
3	*2412.00	94.77 AV			1.02 V	109	62.58	32.19
4	4824.00	55.24 PK	74.00	-18.76	1.01 V	13	16.59	38.65
4	4824.00	42.71 AV	54.00	-11.29	1.01 V	13	4.06	38.65

- 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	14.444Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.15 PK	74.00	-32.85	1.09 H	68	13.24	27.91
1	1120.00	31.72 AV	54.00	-22.28	1.09 H	68	3.81	27.91
2	*2437.00	108.47 PK			1.40 H	74	76.18	32.29
2	*2437.00	97.36 AV			1.40 H	74	65.07	32.29
3	4874.00	52.14 PK	74.00	-21.86	1.05 H	164	13.35	38.79
3	4874.00	39.61 AV	54.00	-14.39	1.05 H	164	0.82	38.79

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	1120.00	40.25 PK	74.00	-33.75	1.05 V	200	12.34	27.91
1	1120.00	30.78 AV	54.00	-23.22	1.05 V	200	2.87	27.91
2	*2437.00	105.75 PK			1.03 V	112	73.46	32.29
2	*2437.00	94.71 AV			1.03 V	112	62.42	32.29
3	4874.00	55.31 PK	74.00	-18.69	1.07 V	219	16.52	38.79
3	4874.00	42.81 AV	54.00	-11.19	1.07 V	219	4.02	38.79

- 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	14.444Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	40.92 PK	74.00	-33.08	1.02 H	66	13.01	27.91
1	1120.00	31.42 AV	54.00	-22.58	1.02 H	66	3.51	27.91
2	*2462.00	108.26 PK			1.40 H	71	75.88	32.38
2	*2462.00	97.05 AV			1.40 H	71	64.67	32.38
3	2483.50	61.44 PK	74.00	-12.56	1.40 H	71	28.98	32.46
3	2483.50	50.23 AV	54.00	-3.77	1.40 H	71	17.77	32.46
4	4924.00	51.96 PK	74.00	-22.04	1.05 H	74	13.04	38.92
4	4924.00	39.35 AV	54.00	-14.65	1.05 H	74	0.43	38.92

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	1120.00	40.15 PK	74.00	-33.85	1.10 V	211	12.24	27.91
1	1120.00	30.62 AV	54.00	-23.38	1.10 V	211	2.71	27.91
2	*2462.00	105.48 PK			1.02 V	108	73.10	32.38
2	*2462.00	94.47 AV			1.02 V	108	62.09	32.38
3	2483.50	58.66 PK	74.00	-15.34	1.02 V	108	26.20	32.46
3	2483.50	47.65 AV	54.00	-6.35	1.02 V	108	15.19	32.46
4	4924.00	55.41 PK	74.00	-18.59	1.02 V	88	16.49	38.92
4	4924.00	42.96 AV	54.00	-11.04	1.02 V	88	4.04	38.92

- 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: 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	15Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.35 PK	74.00	-32.65	1.01 H	55	13.44	27.91
1	1120.00	31.86 AV	54.00	-22.14	1.01 H	55	3.95	27.91
2	2390.00	62.60 PK	74.00	-11.40	1.05 H	130	30.49	32.11
2	2390.00	52.77 AV	54.00	-1.23	1.05 H	130	20.66	32.11
3	*2422.00	105.21 PK			1.05 H	130	72.98	32.23
3	*2422.00	95.38 AV			1.05 H	130	63.15	32.23
4	4844.00	51.59 PK	74.00	-22.41	1.05 H	244	12.89	38.70
4	4844.00	38.92 AV	54.00	-15.08	1.05 H	244	0.22	38.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1120.00	40.25 PK	74.00	-33.75	1.09 V	23	12.34	27.91
1	1120.00	30.71 AV	54.00	-23.29	1.09 V	23	2.80	27.91
2	2390.00	58.27 PK	74.00	-15.73	1.05 V	93	26.16	32.11
2	2390.00	49.33 AV	54.00	-4.67	1.05 V	93	17.22	32.11
3	*2422.00	100.88 PK			1.05 V	93	68.65	32.23
3	*2422.00	91.94 AV			1.05 V	93	59.71	32.23
4	4844.00	52.74 PK	74.00	-21.26	1.03 V	91	14.04	38.70
4	4844.00	40.21 AV	54.00	-13.79	1.03 V	91	1.51	38.70

- 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	15Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.47 PK	74.00	-32.53	1.08 H	104	13.56	27.91
1	1120.00	31.92 AV	54.00	-22.08	1.08 H	104	4.01	27.91
2	*2437.00	105.94 PK			1.01 H	133	73.65	32.29
2	*2437.00	96.22 AV			1.01 H	133	63.93	32.29
3	4874.00	53.72 PK	74.00	-20.28	1.02 H	167	14.93	38.79
3	4874.00	41.15 AV	54.00	-12.85	1.02 H	167	2.36	38.79

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	1120.00	42.81 PK	74.00	-31.19	1.05 V	268	14.90	27.91
1	1120.00	32.94 AV	54.00	-21.06	1.05 V	268	5.03	27.91
2	*2437.00	101.59 PK			1.02 V	117	69.30	32.29
2	*2437.00	91.94 AV			1.02 V	117	59.65	32.29
3	4874.00	54.39 PK	74.00	-19.61	1.02 V	305	15.60	38.79
3	4874.00	42.27 AV	54.00	-11.73	1.02 V	305	3.48	38.79

- 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	15Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	40.86 PK	74.00	-33.14	1.05 H	34	12.95	27.91
1	1120.00	31.37 AV	54.00	-22.63	1.05 H	34	3.46	27.91
2	*2452.00	105.49 PK			1.09 H	131	73.15	32.34
2	*2452.00	95.82 AV			1.09 H	131	63.48	32.34
3	2483.50	61.98 PK	74.00	-12.02	1.09 H	131	29.52	32.46
3	2483.50	52.31 AV	54.00	-1.69	1.09 H	131	19.85	32.46
4	4904.00	51.62 PK	74.00	-22.38	1.01 H	84	12.75	38.87
4	4904.00	39.07 AV	54.00	-14.93	1.01 H	84	0.20	38.87

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	1120.00	40.15 PK	74.00	-33.85	1.01 V	55	12.24	27.91
1	1120.00	30.58 AV	54.00	-23.42	1.01 V	55	2.67	27.91
2	*2452.00	100.96 PK			1.04 V	85	68.62	32.34
2	*2452.00	92.03 AV			1.04 V	85	59.69	32.34
3	2483.50	57.45 PK	74.00	-16.55	1.04 V	85	24.99	32.46
3	2483.50	48.52 AV	54.00	-5.48	1.04 V	85	16.06	32.46
4	4904.00	52.71 PK	74.00	-21.29	1.09 V	27	13.84	38.87
4	4904.00	40.24 AV	54.00	-13.76	1.09 V	27	1.37	38.87

- 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	30Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.95 PK	74.00	-32.05	1.01 H	94	14.04	27.91
1	1120.00	32.53 AV	54.00	-21.47	1.01 H	94	4.62	27.91
2	2390.00	61.88 PK	74.00	-12.12	1.02 H	170	29.77	32.11
2	2390.00	51.66 AV	54.00	-2.34	1.02 H	170	19.55	32.11
3	*2422.00	104.29 PK			1.02 H	170	72.06	32.23
3	*2422.00	94.07 AV			1.02 H	170	61.84	32.23
4	4844.00	52.27 PK	74.00	-21.73	1.05 H	201	13.57	38.70
4	4844.00	39.64 AV	54.00	-14.36	1.05 H	201	0.94	38.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1120.00	40.35 PK	74.00	-33.65	1.02 V	291	12.44	27.91
1	1120.00	30.84 AV	54.00	-23.16	1.02 V	291	2.93	27.91
2	2390.00	59.31 PK	74.00	-14.69	1.02 V	113	27.20	32.11
2	2390.00	48.75 AV	54.00	-5.25	1.02 V	113	16.64	32.11
3	*2422.00	101.72 PK			1.02 V	113	69.49	32.23
3	*2422.00	91.16 AV			1.02 V	113	58.93	32.23
4	4844.00	52.71 PK	74.00	-21.29	1.01 V	85	14.01	38.70
4	4844.00	40.19 AV	54.00	-13.81	1.01 V	85	1.49	38.70

- 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	30Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	41.63 PK	74.00	-32.37	1.09 H	92	13.72	27.91
1	1120.00	32.22 AV	54.00	-21.78	1.09 H	92	4.31	27.91
2	*2437.00	104.36 PK			1.02 H	181	72.07	32.29
2	*2437.00	94.22 AV			1.02 H	181	61.93	32.29
3	4874.00	52.46 PK	74.00	-21.54	1.04 H	246	13.67	38.79
3	4874.00	39.91 AV	54.00	-14.09	1.04 H	246	1.12	38.79

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	1120.00	41.79 PK	74.00	-32.21	1.07 V	225	13.88	27.91
1	1120.00	32.42 AV	54.00	-21.58	1.07 V	225	4.51	27.91
2	*2437.00	101.87 PK			1.06 V	112	69.58	32.29
2	*2437.00	91.39 AV			1.06 V	112	59.10	32.29
3	4874.00	53.07 PK	74.00	-20.93	1.04 V	255	14.28	38.79
3	4874.00	40.72 AV	54.00	-13.28	1.04 V	255	1.93	38.79

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	30Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. 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	1120.00	42.09 PK	74.00	-31.91	1.09 H	85	14.18	27.91
1	1120.00	32.67 AV	54.00	-21.33	1.09 H	85	4.76	27.91
2	*2452.00	104.40 PK			1.02 H	177	72.06	32.34
2	*2452.00	94.25 AV			1.02 H	177	61.91	32.34
3	2483.50	61.70 PK	74.00	-12.30	1.02 H	177	29.24	32.46
3	2483.50	51.55 AV	54.00	-2.45	1.02 H	177	19.09	32.46
4	4904.00	52.34 PK	74.00	-21.66	1.02 H	235	13.47	38.87
4	4904.00	39.80 AV	54.00	-14.20	1.02 H	235	0.93	38.87

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	1120.00	40.25 PK	74.00	-33.75	1.11 V	162	12.34	27.91
1	1120.00	30.71 AV	54.00	-23.29	1.11 V	162	2.80	27.91
2	*2452.00	101.84 PK			1.05 V	113	69.50	32.34
2	*2452.00	91.25 AV			1.05 V	113	58.91	32.34
3	2483.50	59.14 PK	74.00	-14.86	1.05 V	113	26.68	32.46
3	2483.50	48.55 AV	54.00	-5.45	1.05 V	113	16.09	32.46
4	4904.00	53.74 PK	74.00	-20.26	1.01 V	44	14.87	38.87
4	4904.00	41.17 AV	54.00	-12.83	1.01 V	44	2.30	38.87

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.

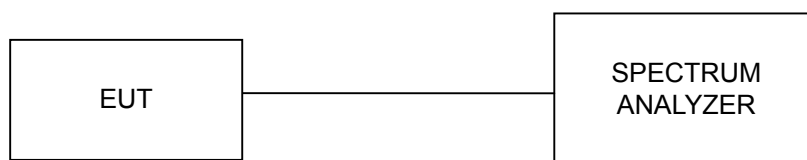
4.3.3 TEST PROCEDURE

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.

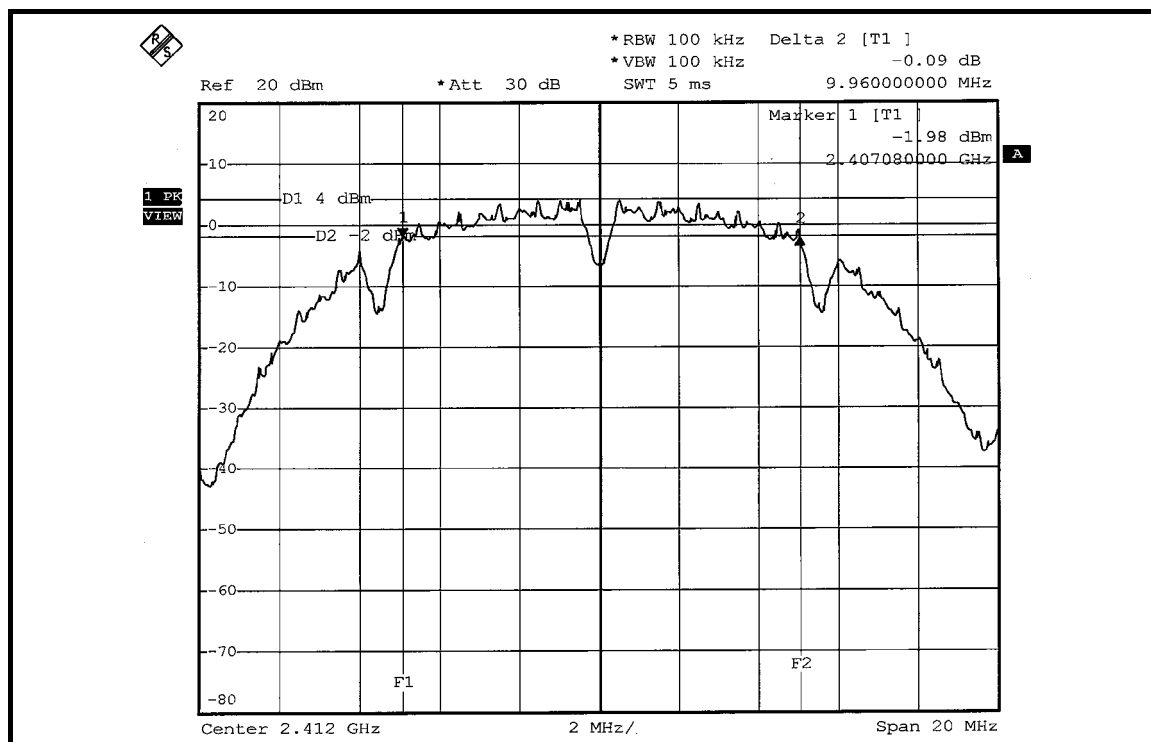
4.3.7 TEST RESULTS

802.11b DSSS MODULATION:

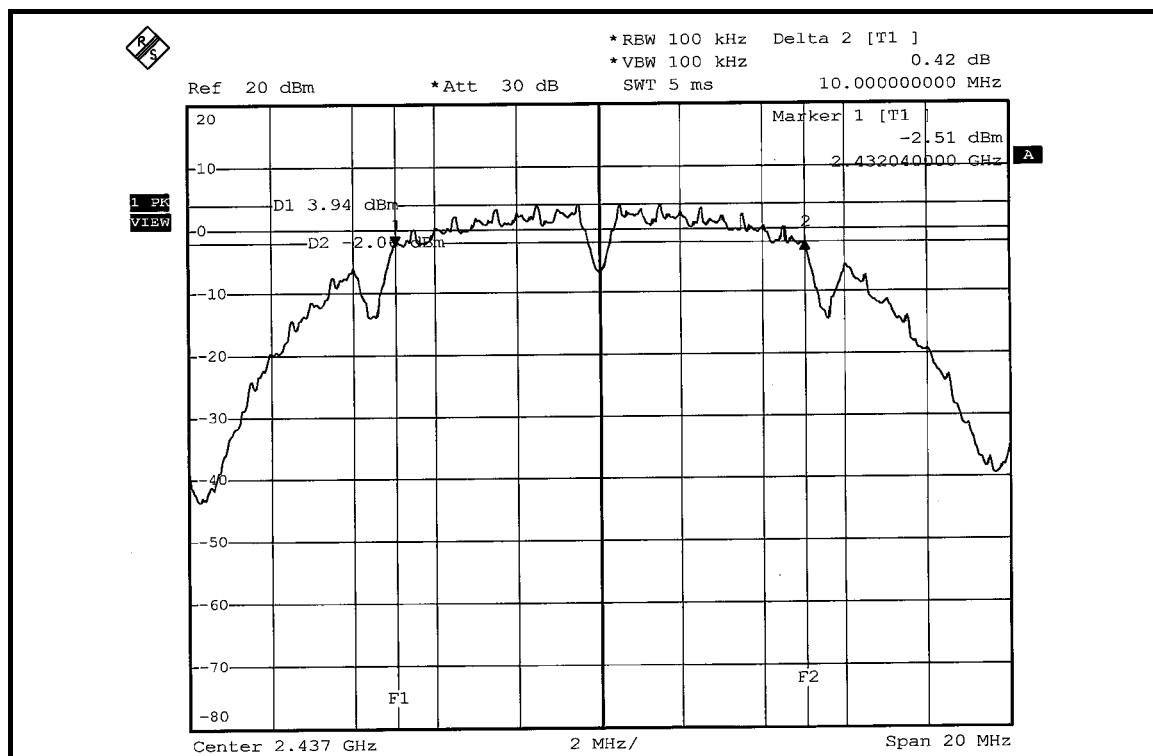
MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	9.96	0.5	PASS
6	2437	10.00	0.5	PASS
11	2462	10.00	0.5	PASS

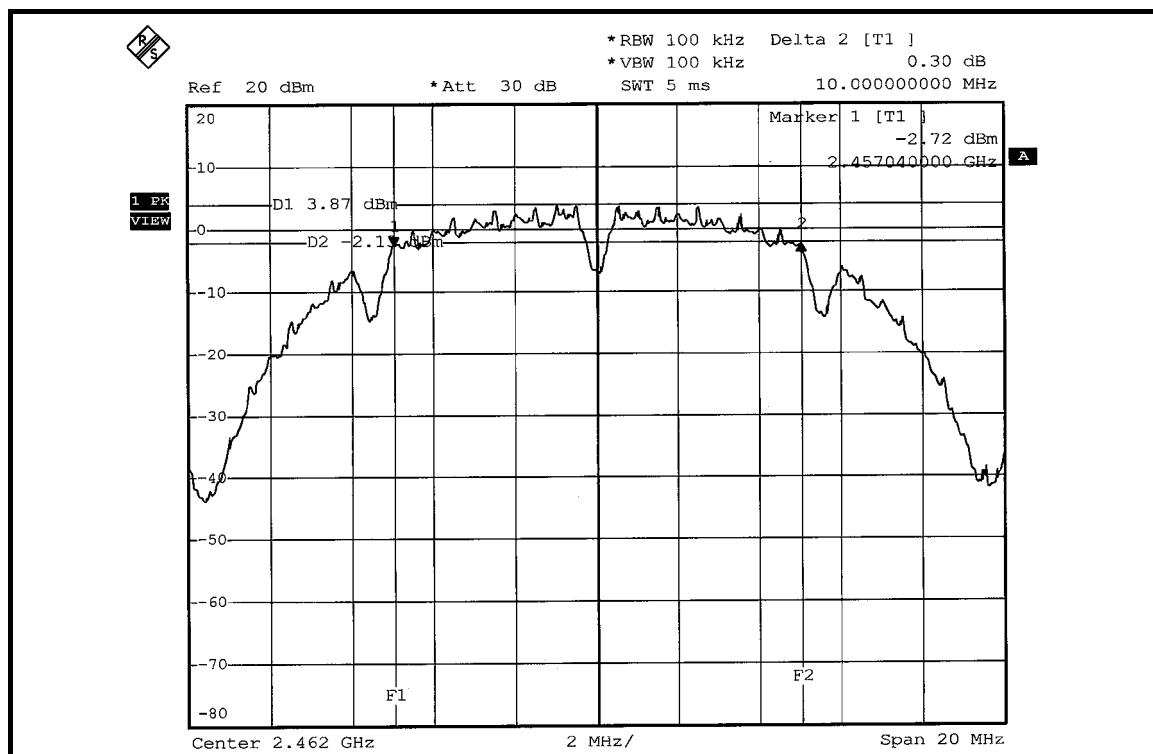
CH 1



CH 6



CH 11

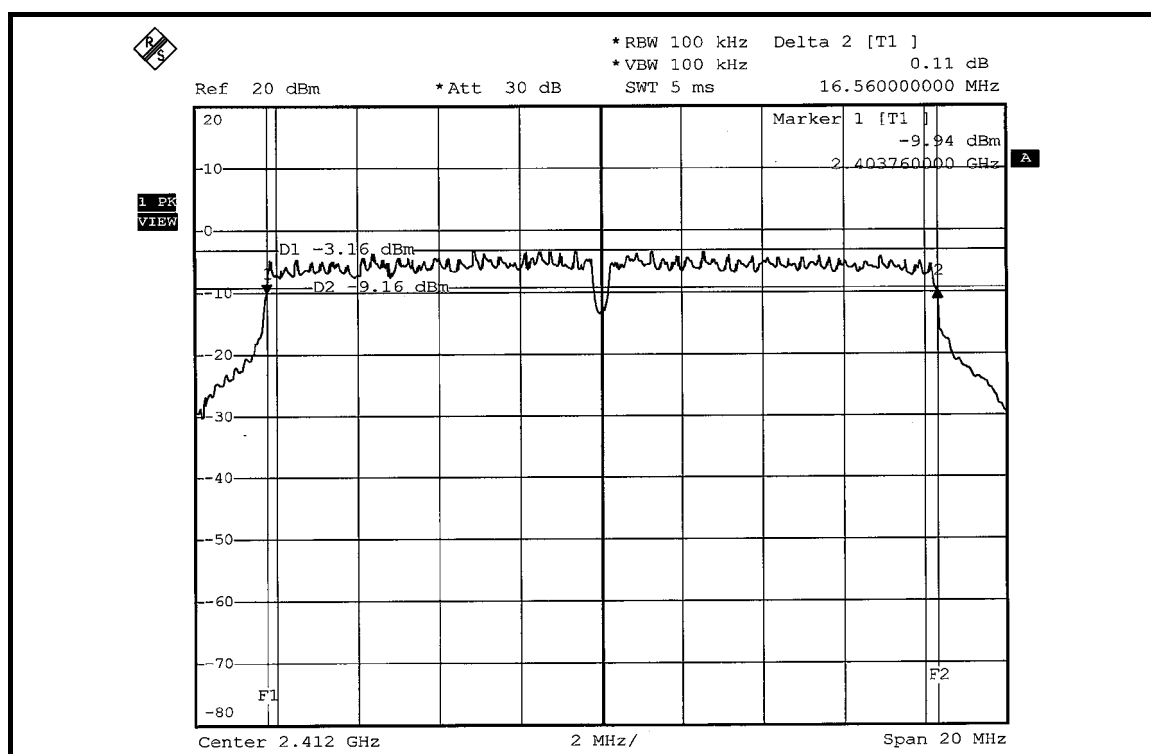


802.11g OFDM MODULATION:

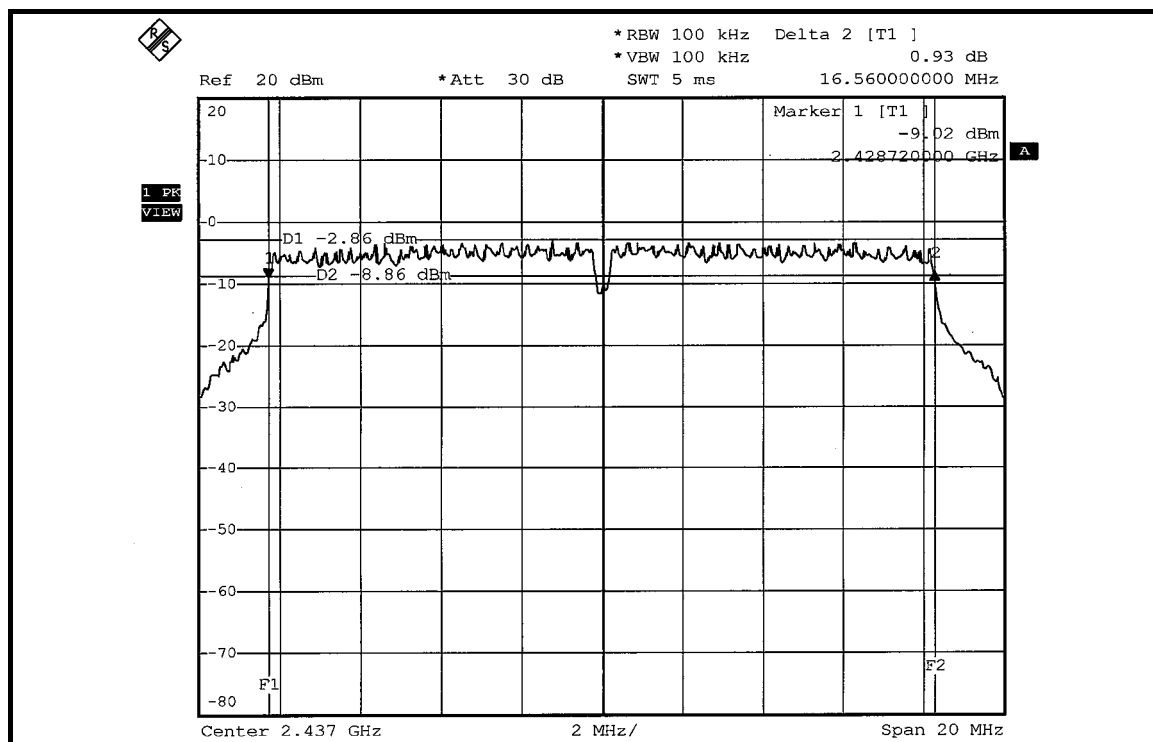
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.56	0.5	PASS
6	2437	16.56	0.5	PASS
11	2462	16.48	0.5	PASS

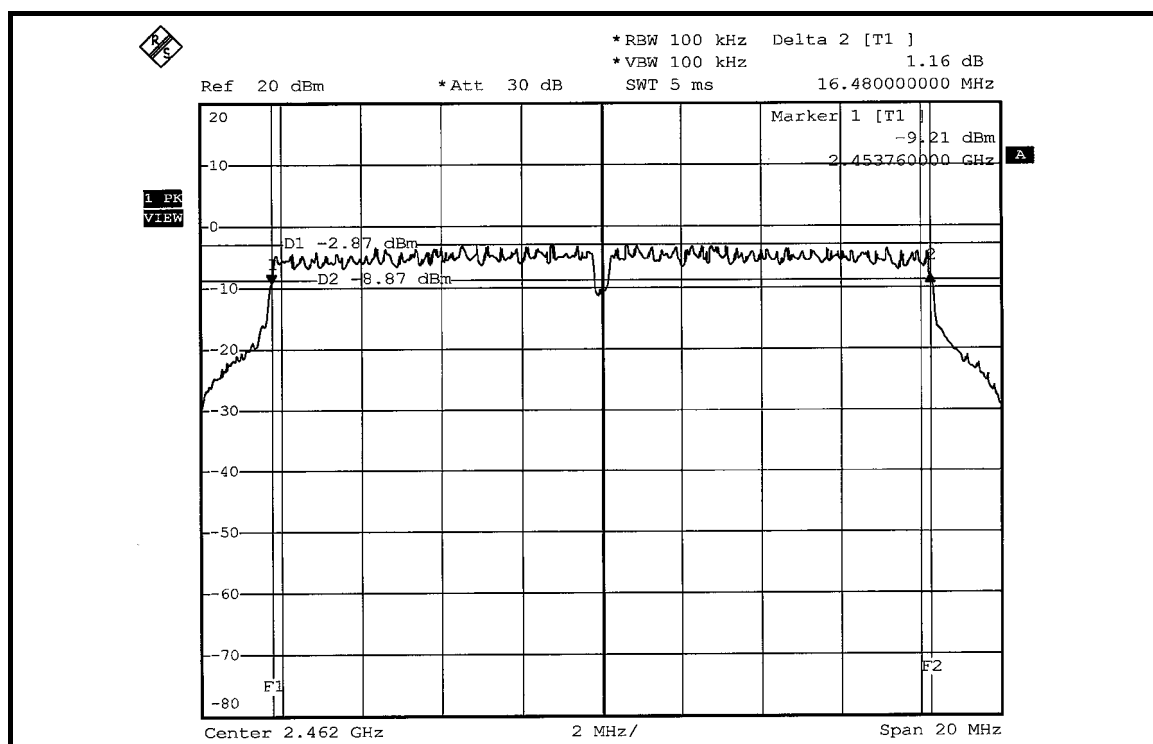
CH 1



CH 6



CH 11

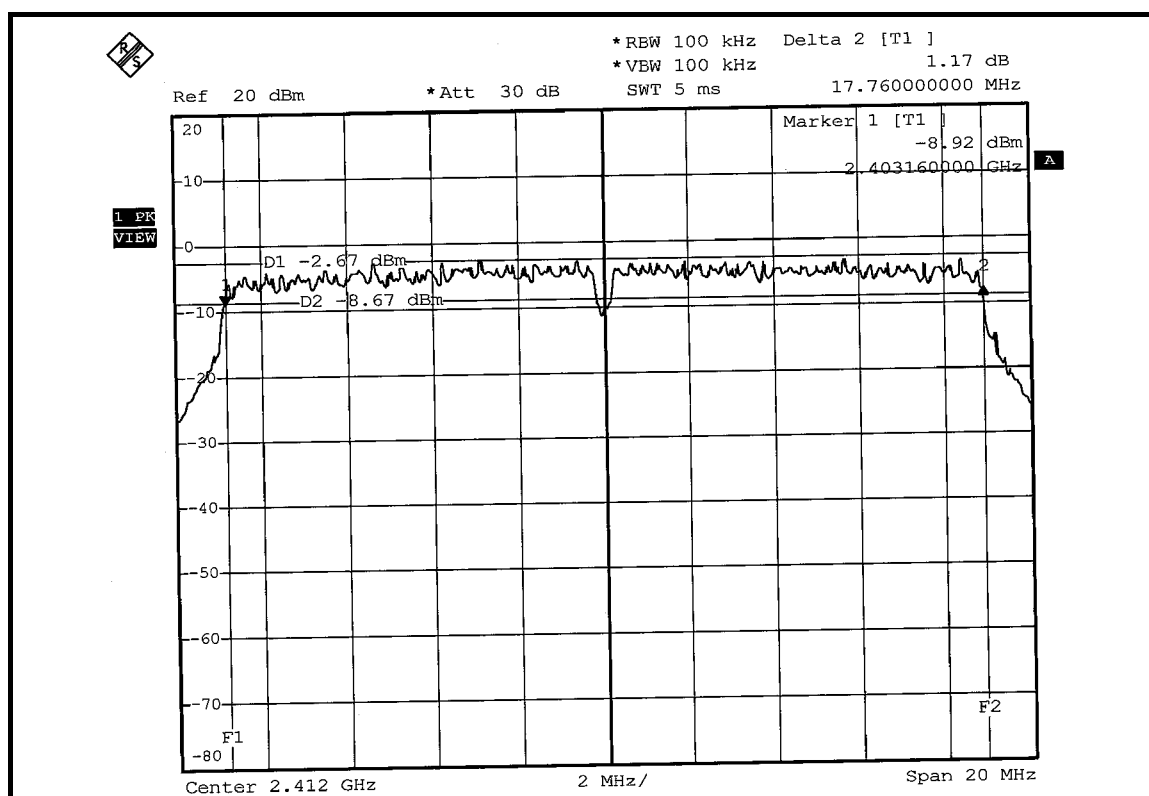


DRAFT 802.11n (20MHz) OFDM MODULATION: SINGLE TX:

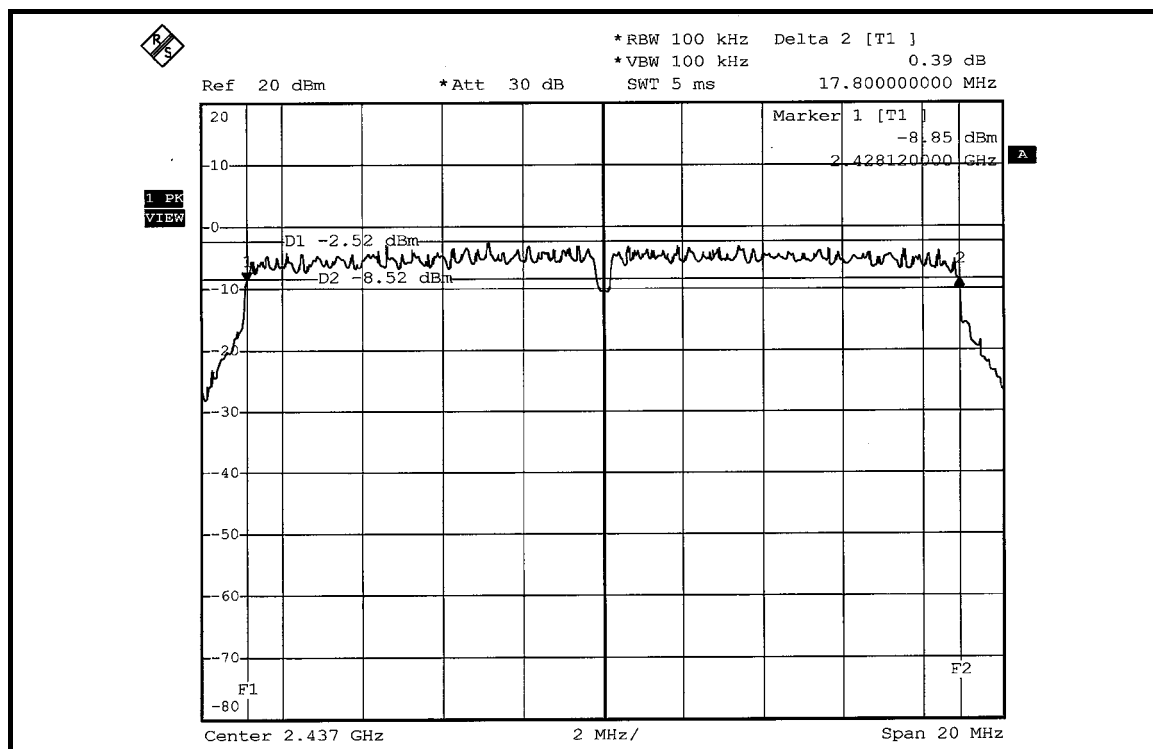
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

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

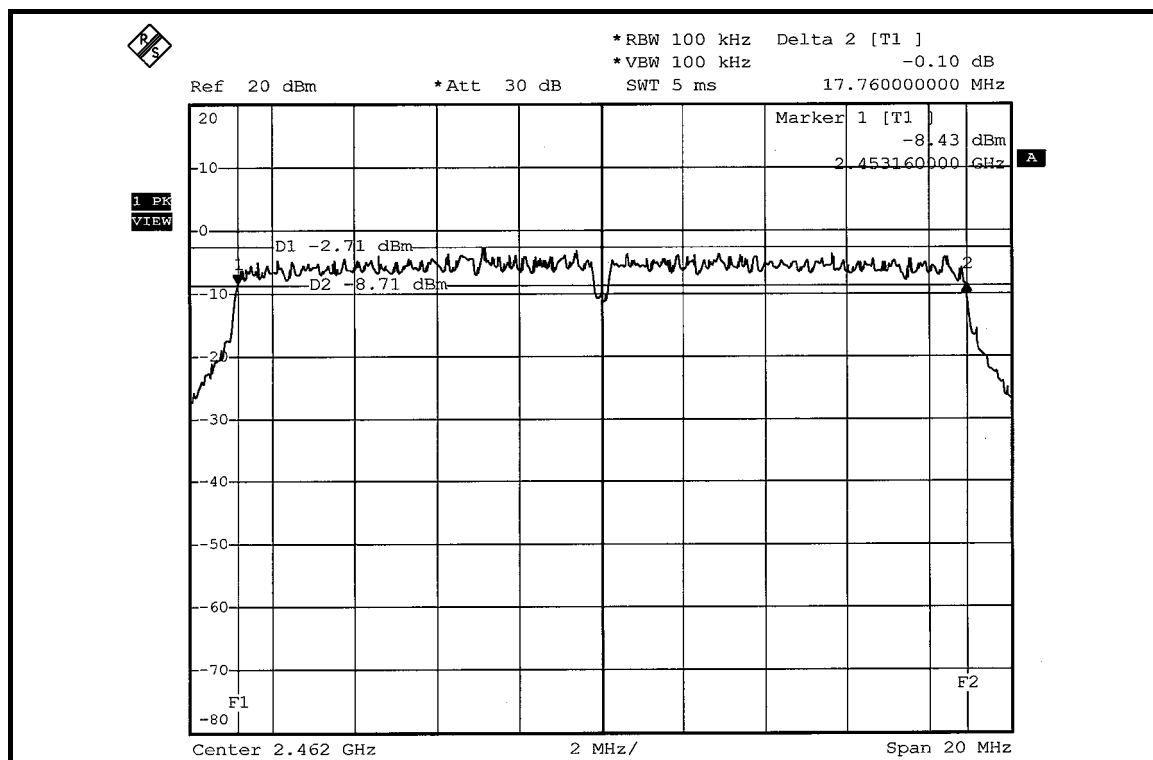
CH 1



CH 6



CH 11

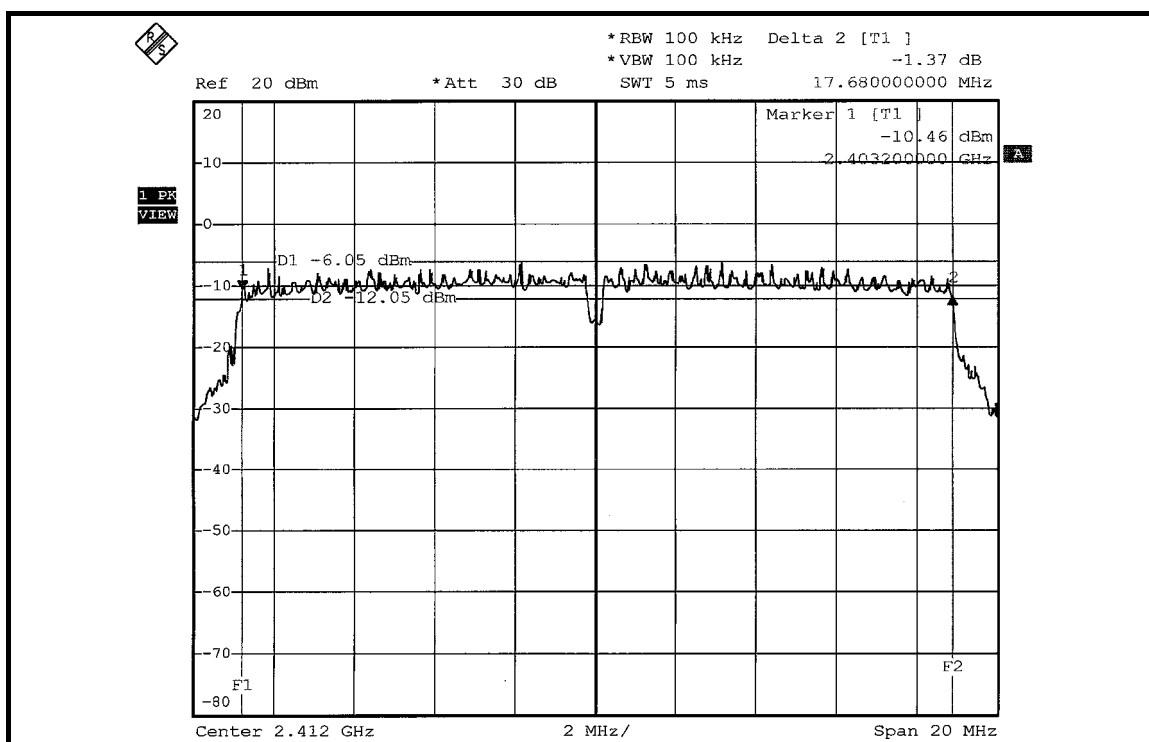


DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

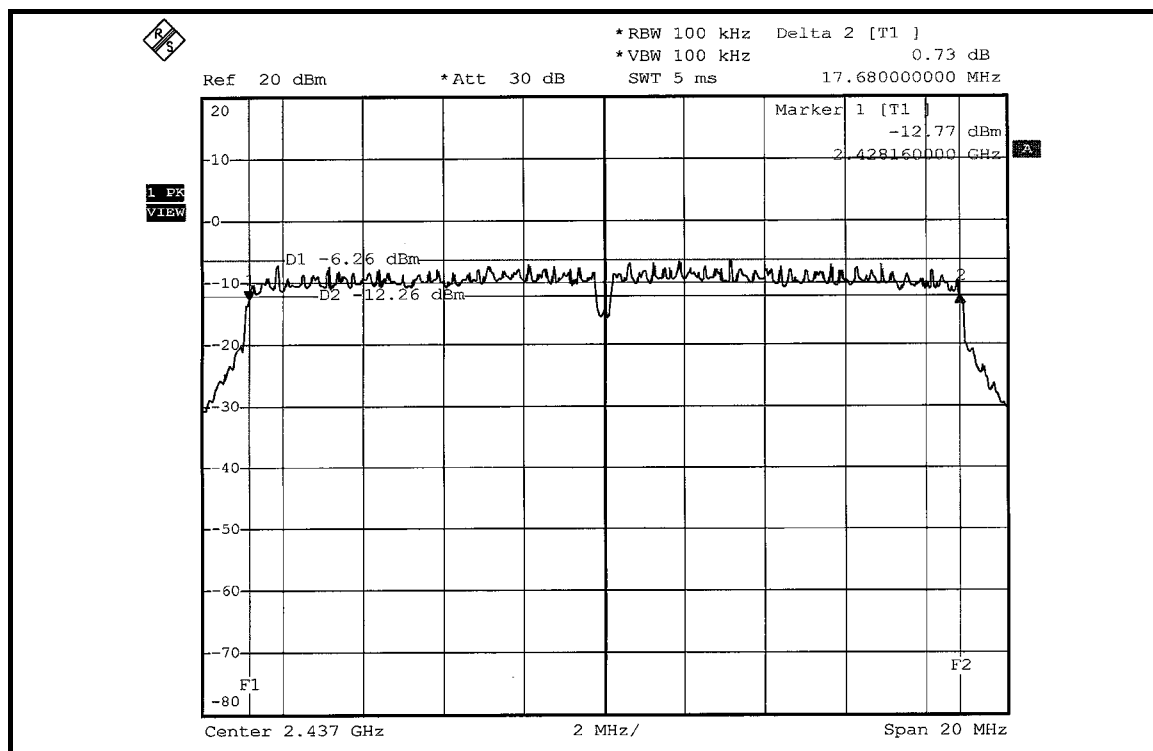
MODULATION TYPE	BPSK	TRANSFER RATE	14.444Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

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

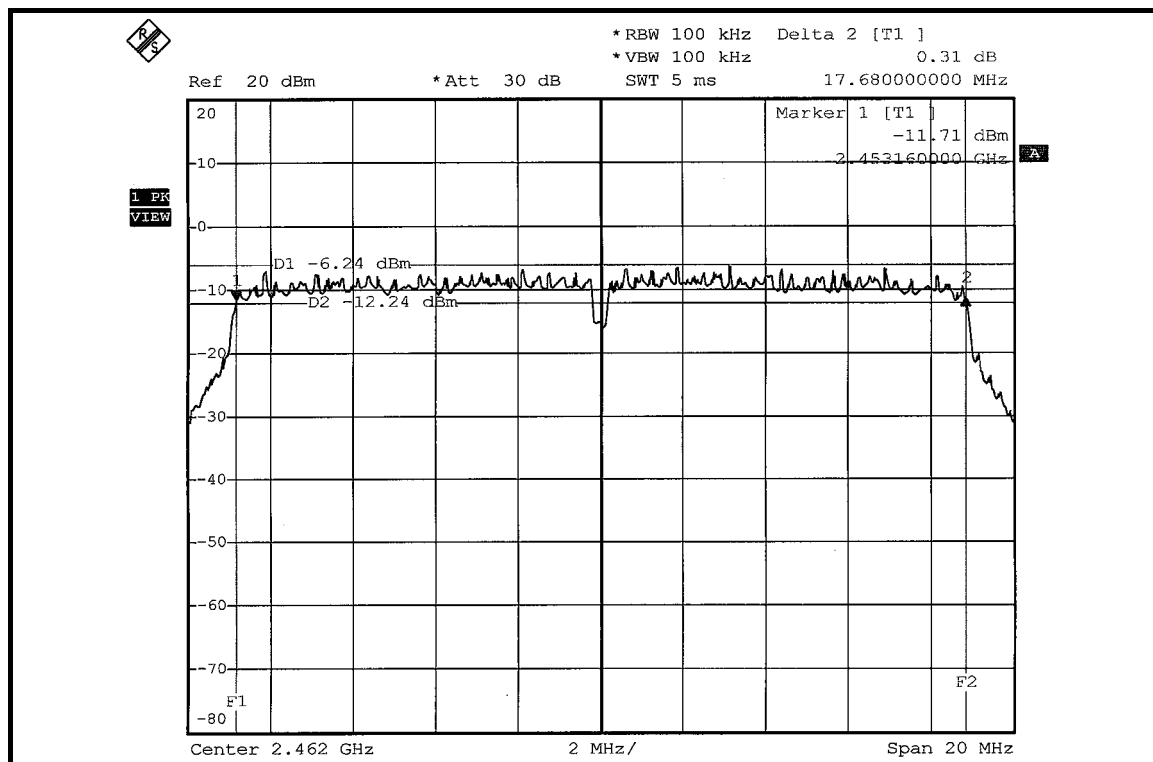
FOR CHAIN 0: CH 1



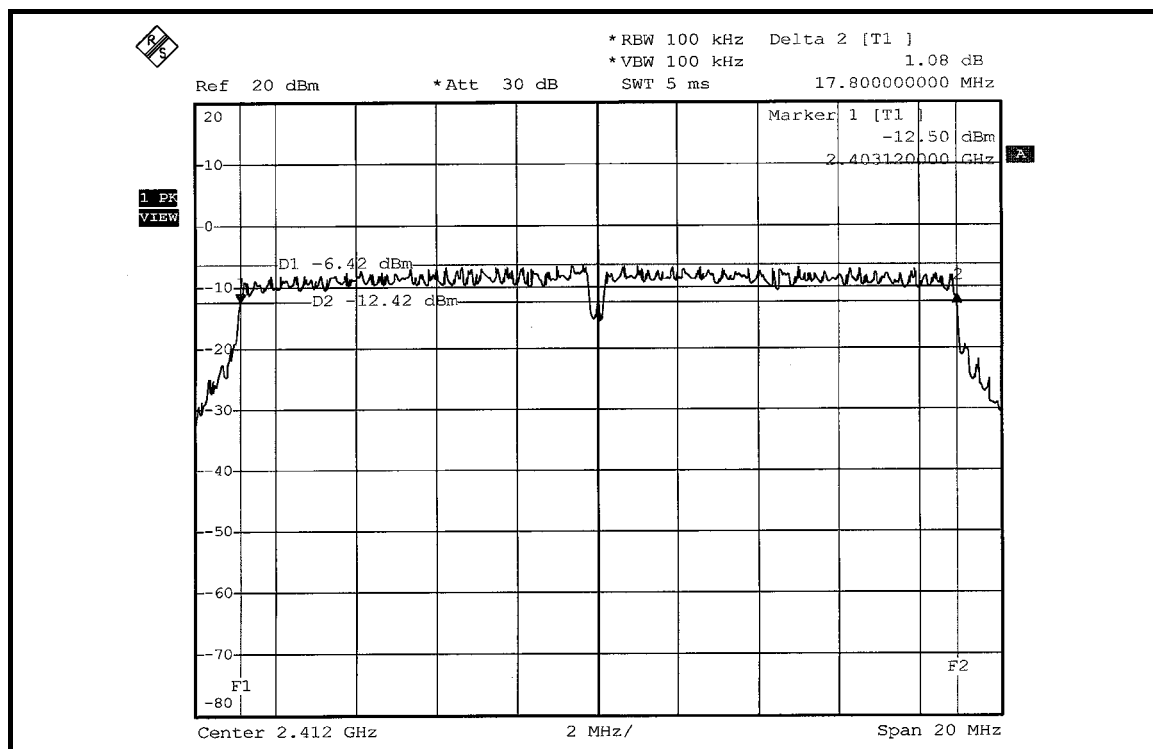
CH 6



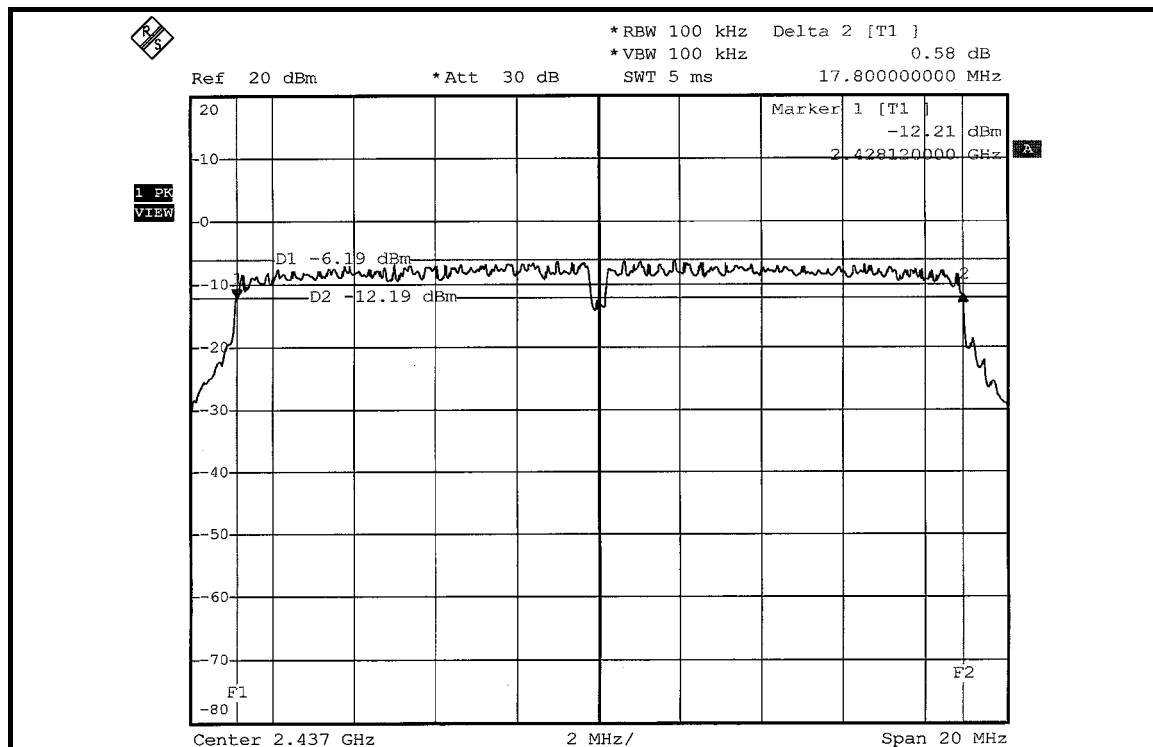
CH 11



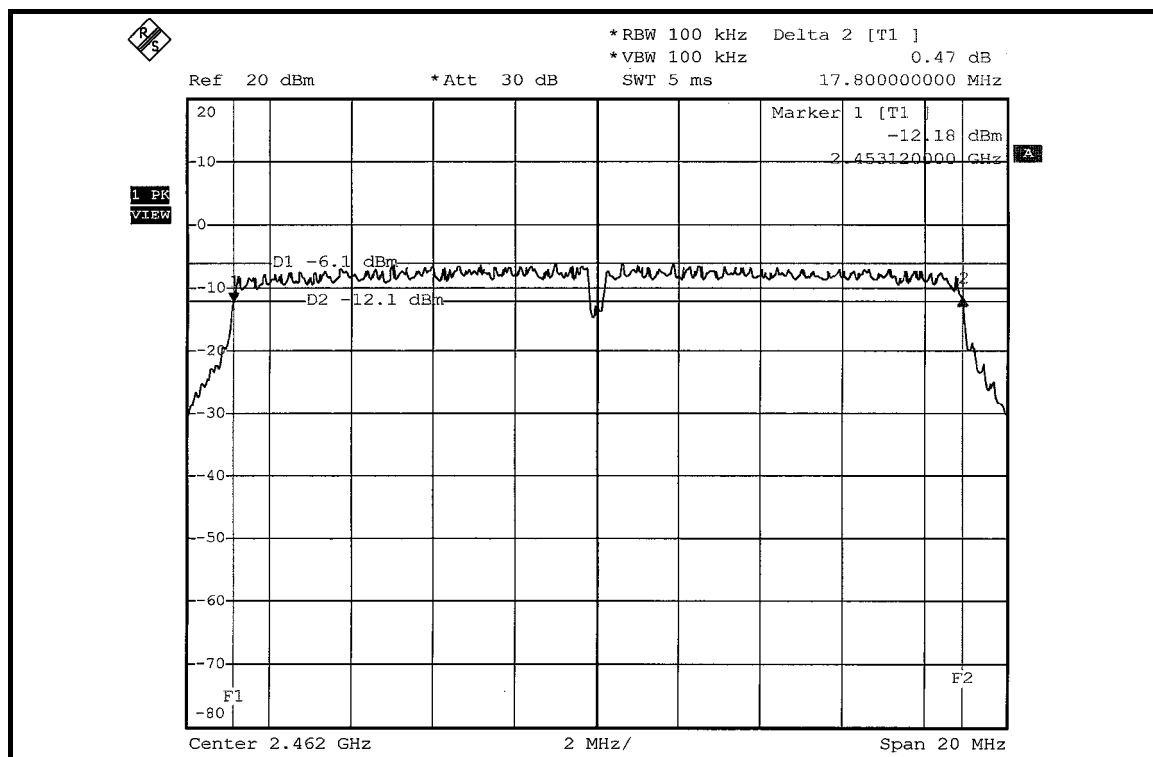
FOR CHAIN 1: CH 1



CH 6



CH 11

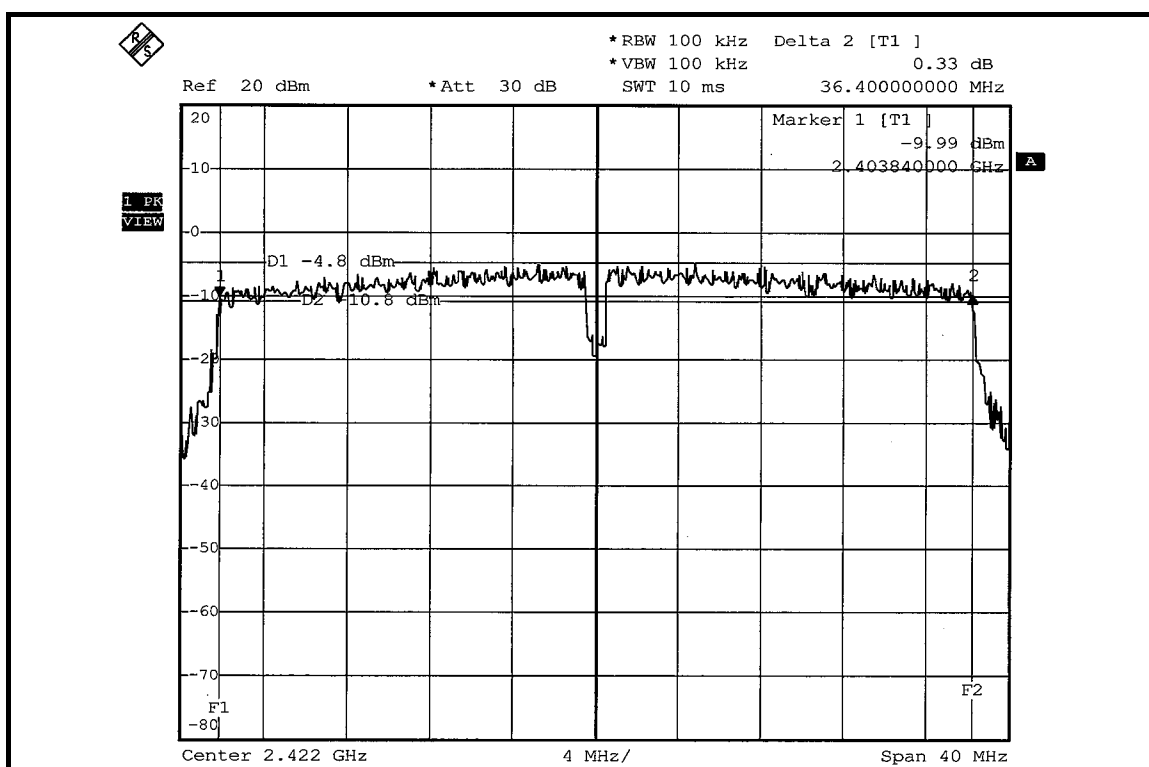


DRAFT 802.11n (40MHz) OFDM MODULATION: SINGLE TX:

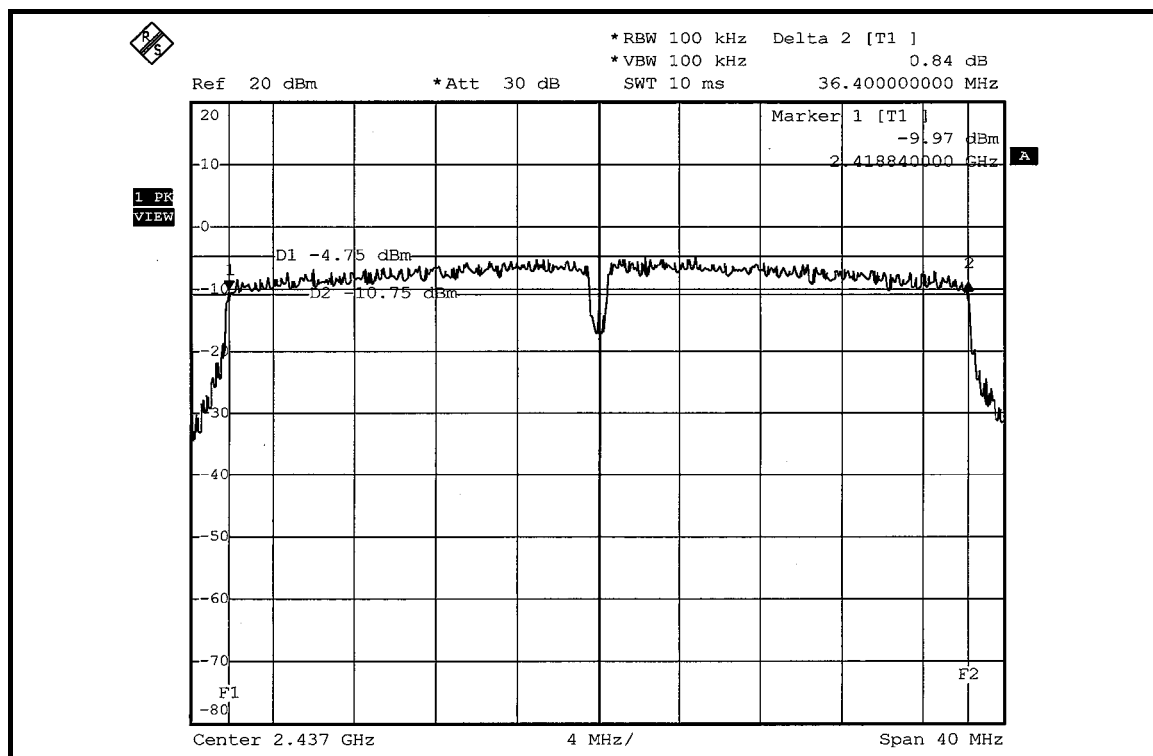
MODULATION TYPE	BPSK	TRANSFER RATE	15Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.40	0.5	PASS
4	2437	36.40	0.5	PASS
7	2452	36.40	0.5	PASS

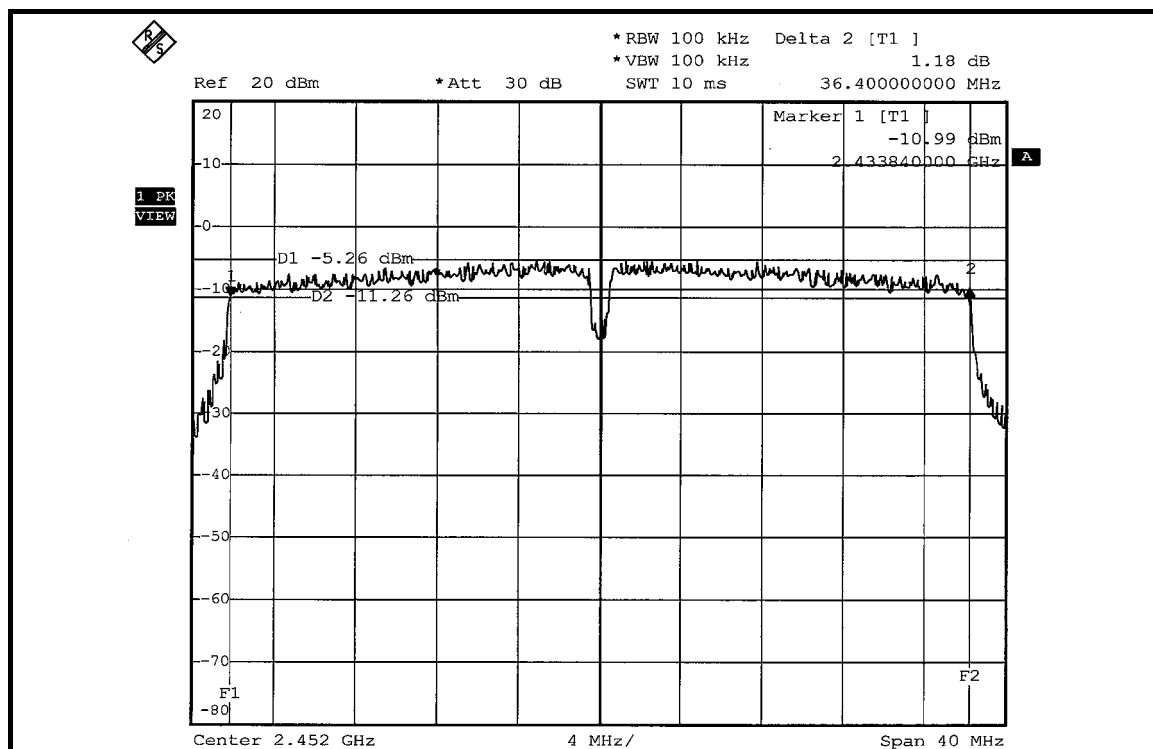
CH 1



CH 4



CH 7

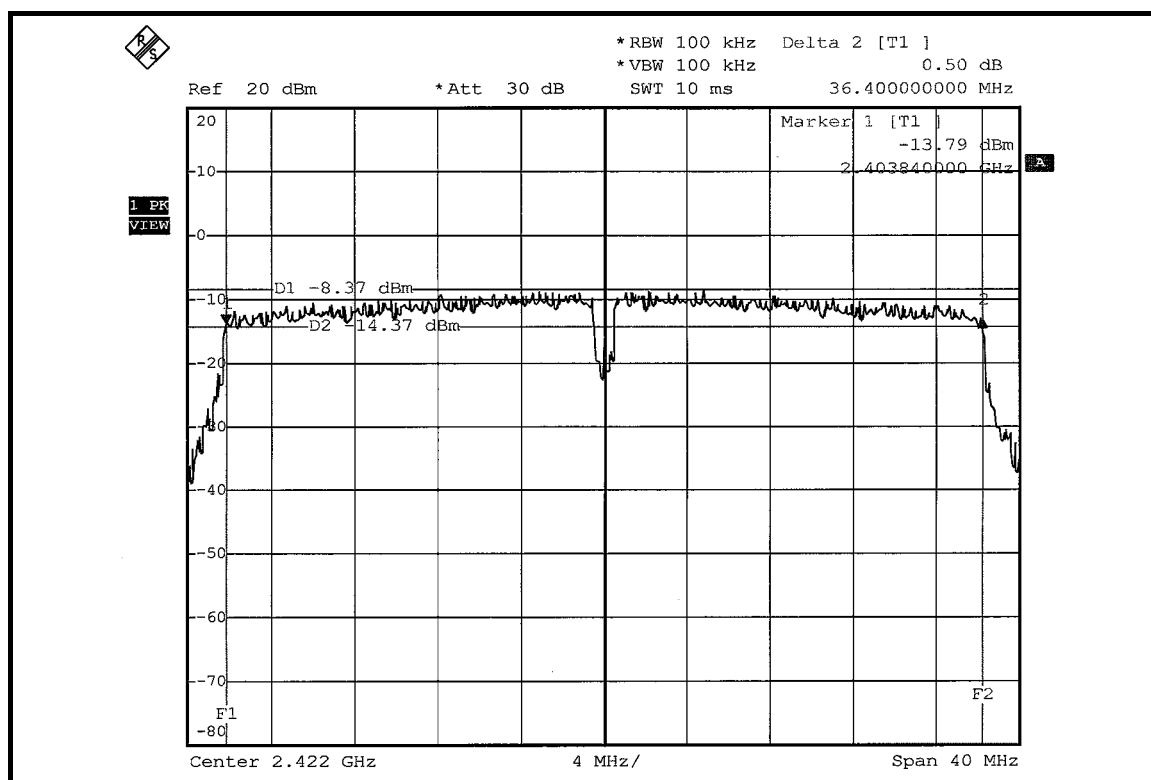


DRAFT 802.11n (40MHz) OFDM MODULATION: DUAL TX:

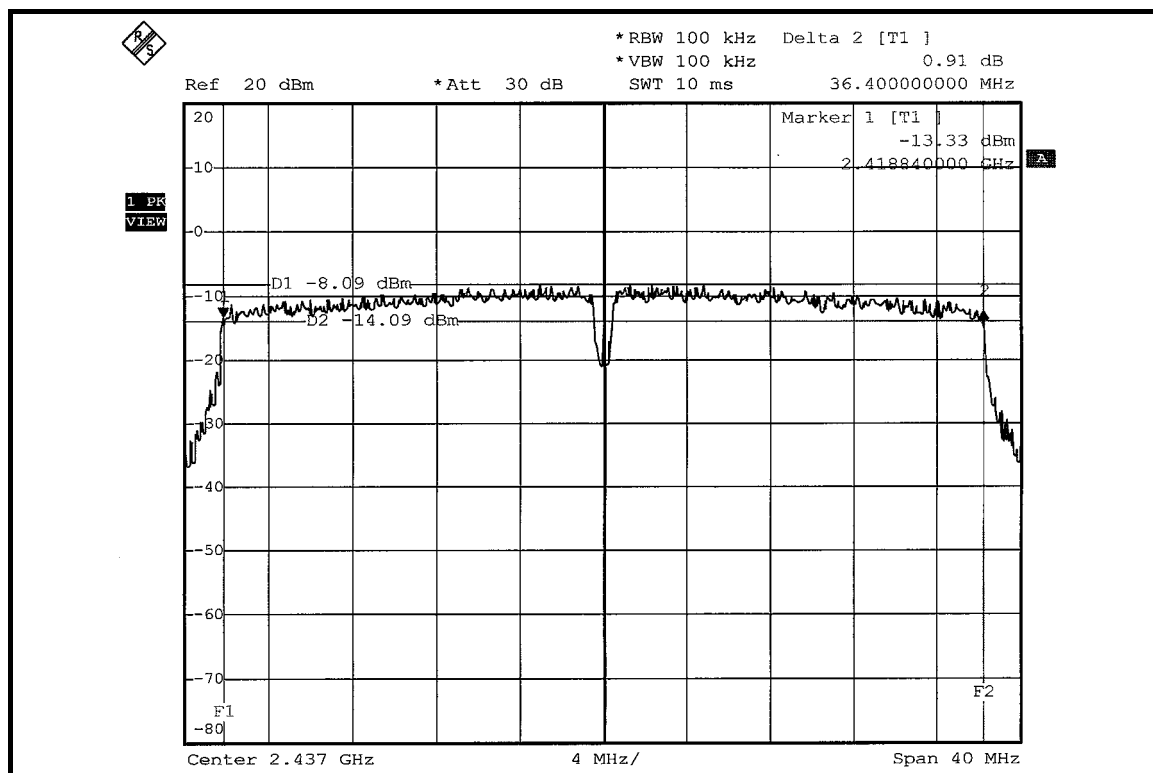
MODULATION TYPE	BPSK	TRANSFER RATE	30Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	36.40	36.32	0.5	PASS
4	2437	36.40	36.40	0.5	PASS
7	2452	36.40	36.32	0.5	PASS

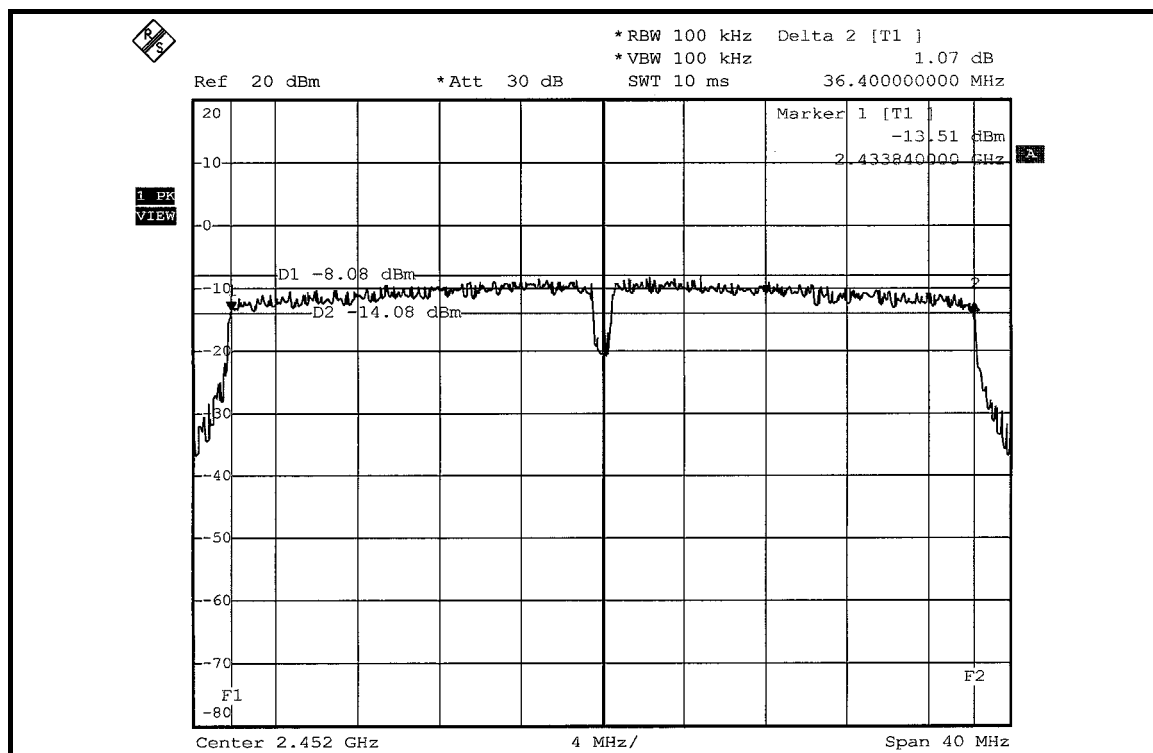
FOR CHAIN 0: CH 1



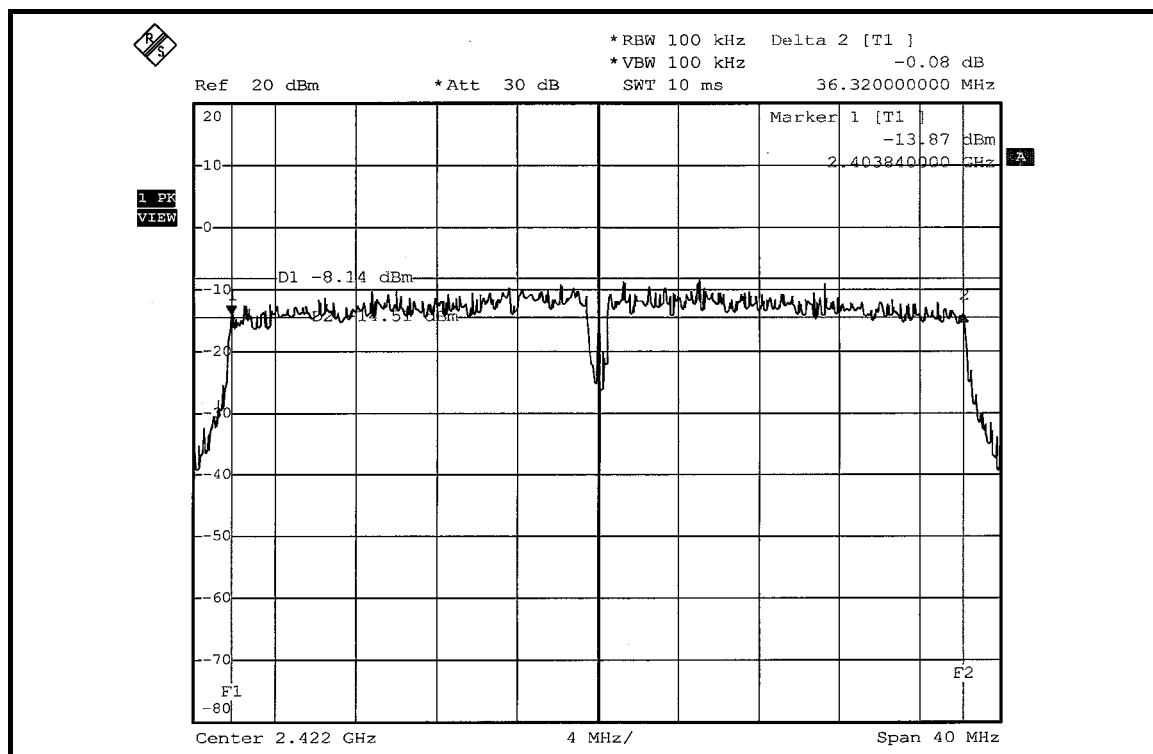
CH 4



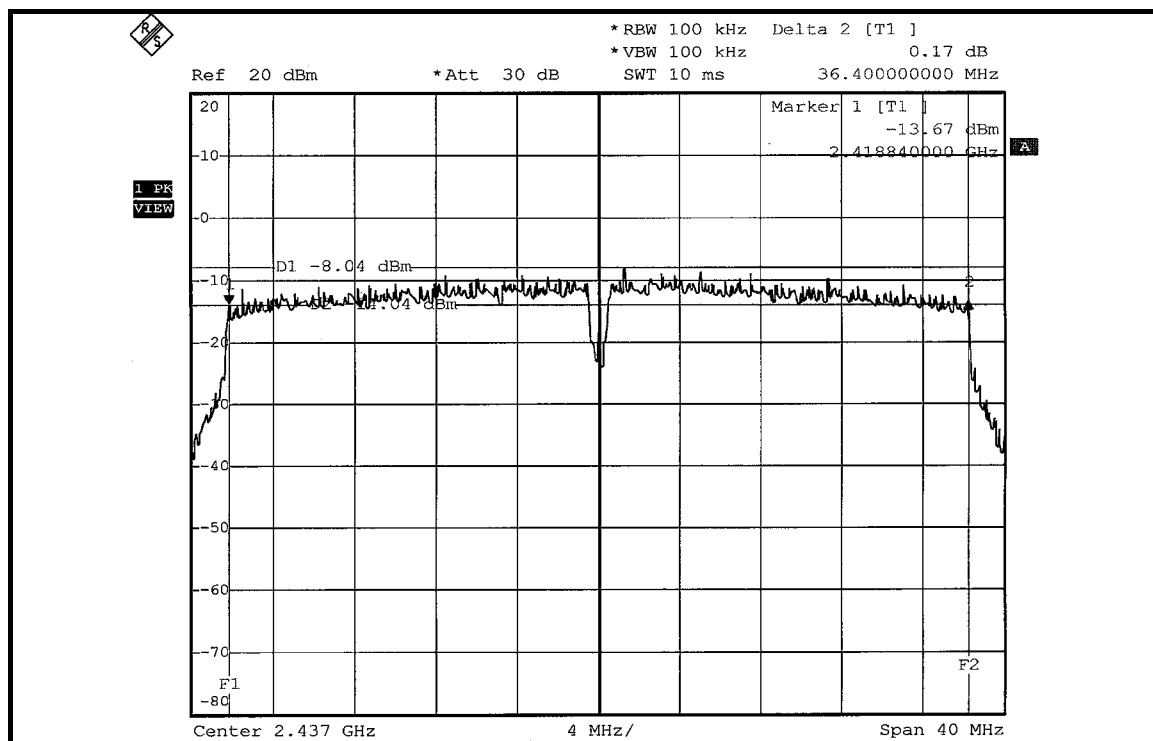
CH 7



FOR CHAIN 1: CH 1



CH 4



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.

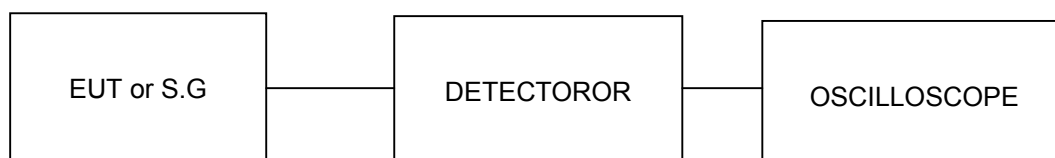
4.4.3 TEST PROCEDURES

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:

MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	35.563	15.51	30	PASS
6	2437	35.892	15.55	30	PASS
11	2462	36.058	15.57	30	PASS

802.11g OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	35.481	15.50	30	PASS
6	2437	35.892	15.55	30	PASS
11	2462	35.645	15.52	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	35.810	15.54	30	PASS
6	2437	35.563	15.51	30	PASS
11	2462	35.645	15.52	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	14.444Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

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	17.865	17.824	12.52	12.51	35.689	15.53	30	PASS
6	2437	18.072	17.824	12.57	12.51	35.896	15.55	30	PASS
11	2462	17.865	17.906	12.52	12.53	35.771	15.54	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	15Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2422	32.137	15.07	30	PASS
4	2437	35.727	15.53	30	PASS
7	2452	31.696	15.01	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	30Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

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	17.824	17.947	12.51	12.54	35.771	15.54	30	PASS
4	2437	17.906	17.824	12.53	12.51	35.730	15.53	30	PASS
7	2452	17.865	17.865	12.52	12.52	35.730	15.53	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

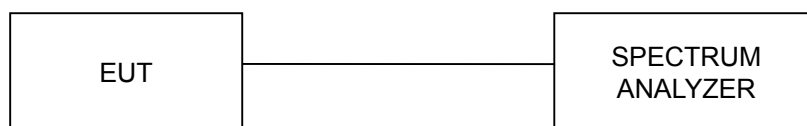
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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

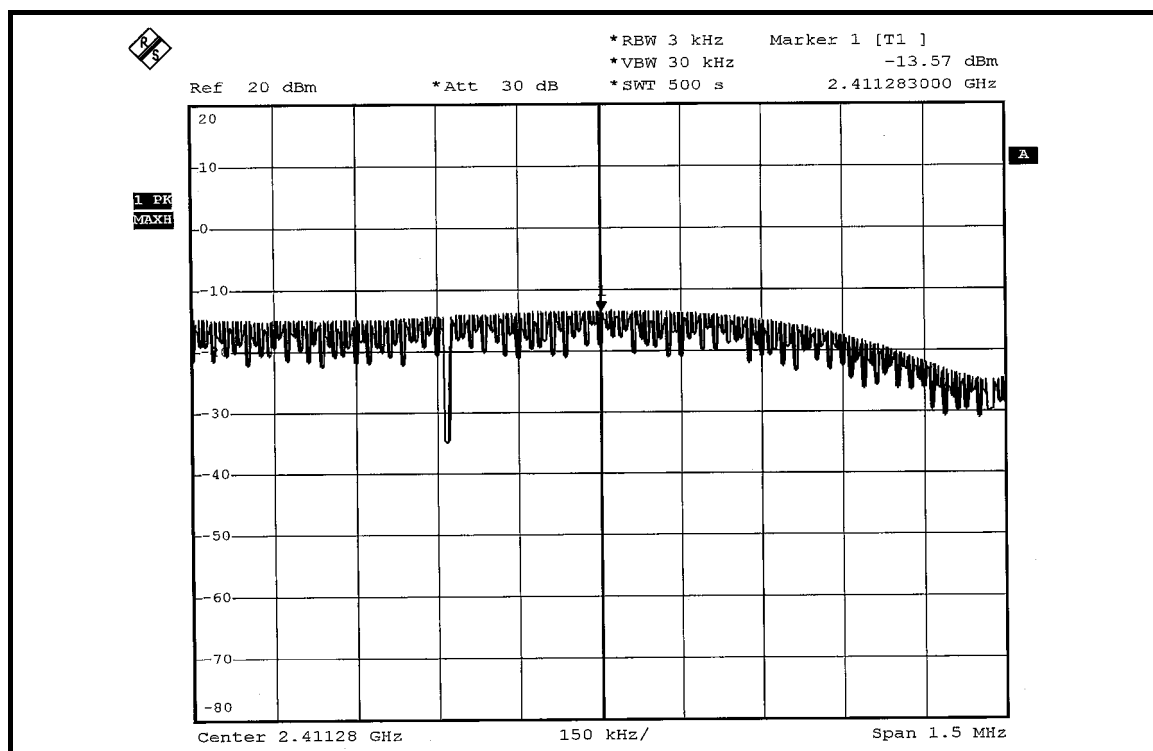
4.5.7 TEST RESULTS

802.11b DSSS MODULATION:

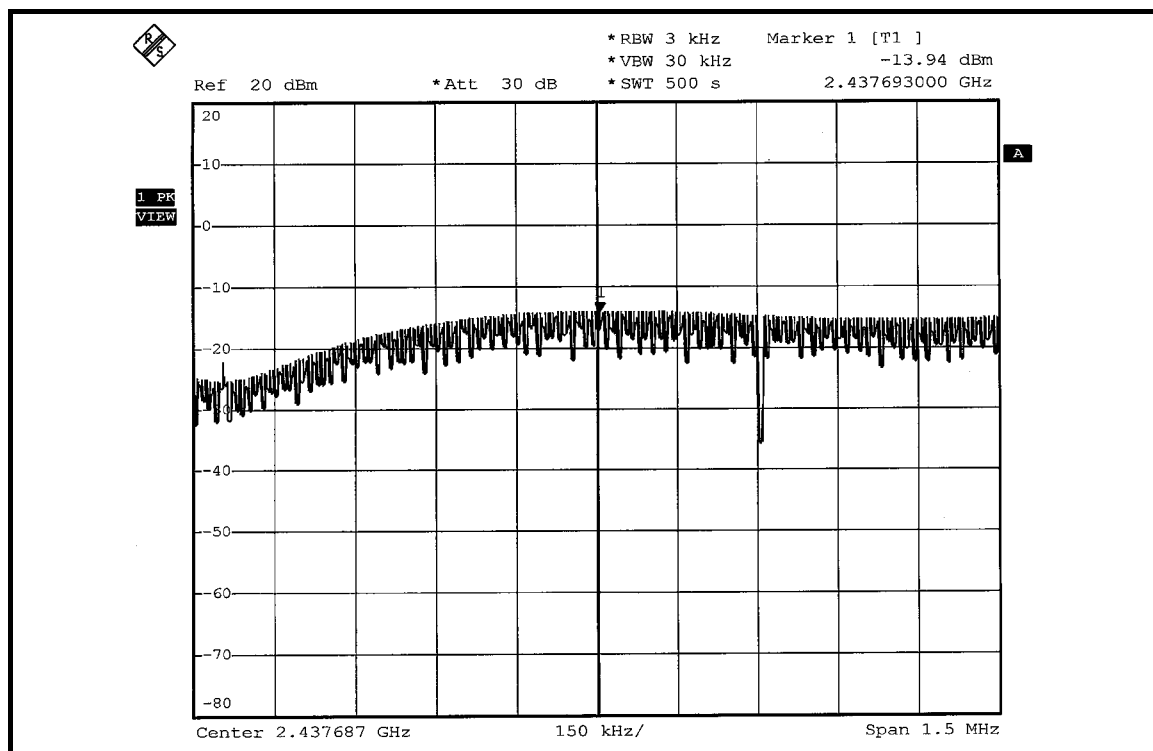
MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-13.57	8	PASS
6	2437	-13.94	8	PASS
11	2462	-13.67	8	PASS

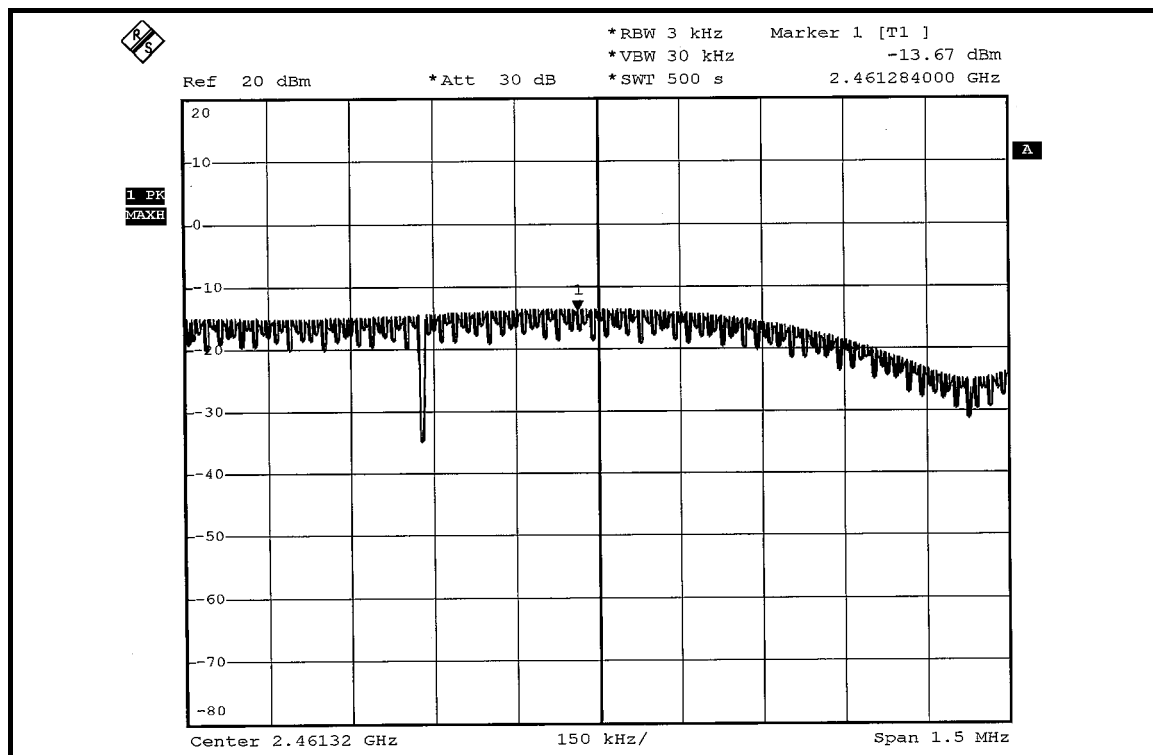
CH 1



CH 6



CH 11

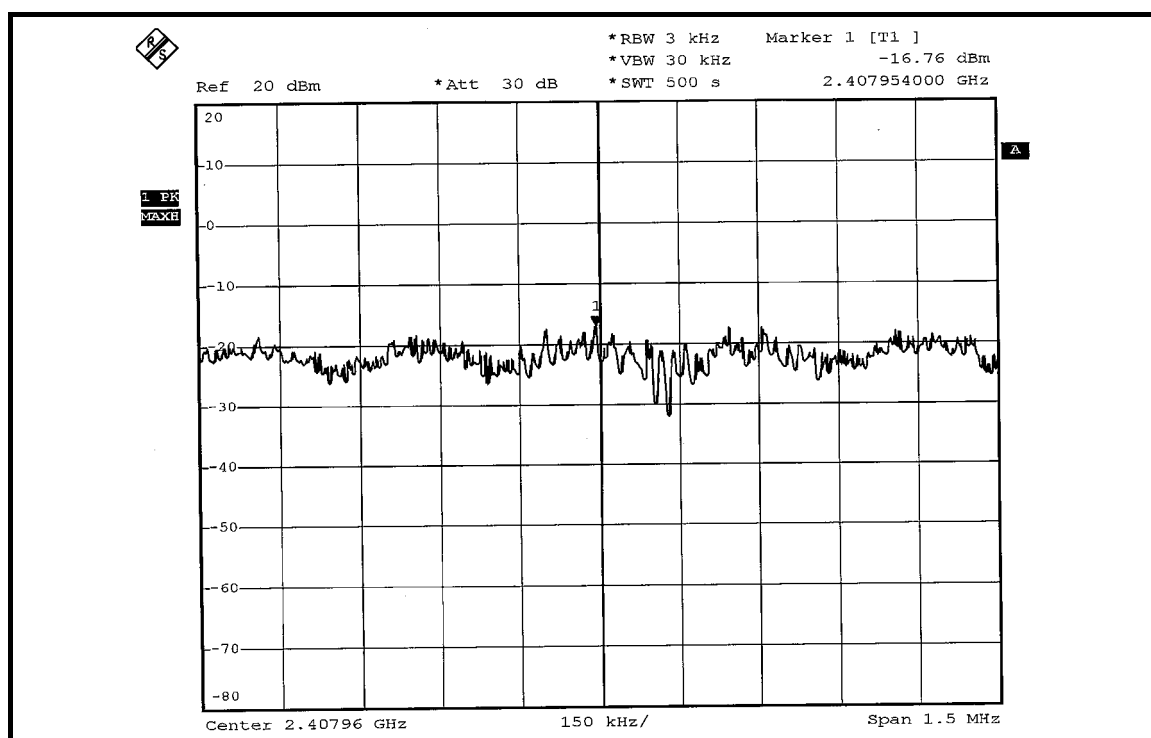


802.11g OFDM MODULATION:

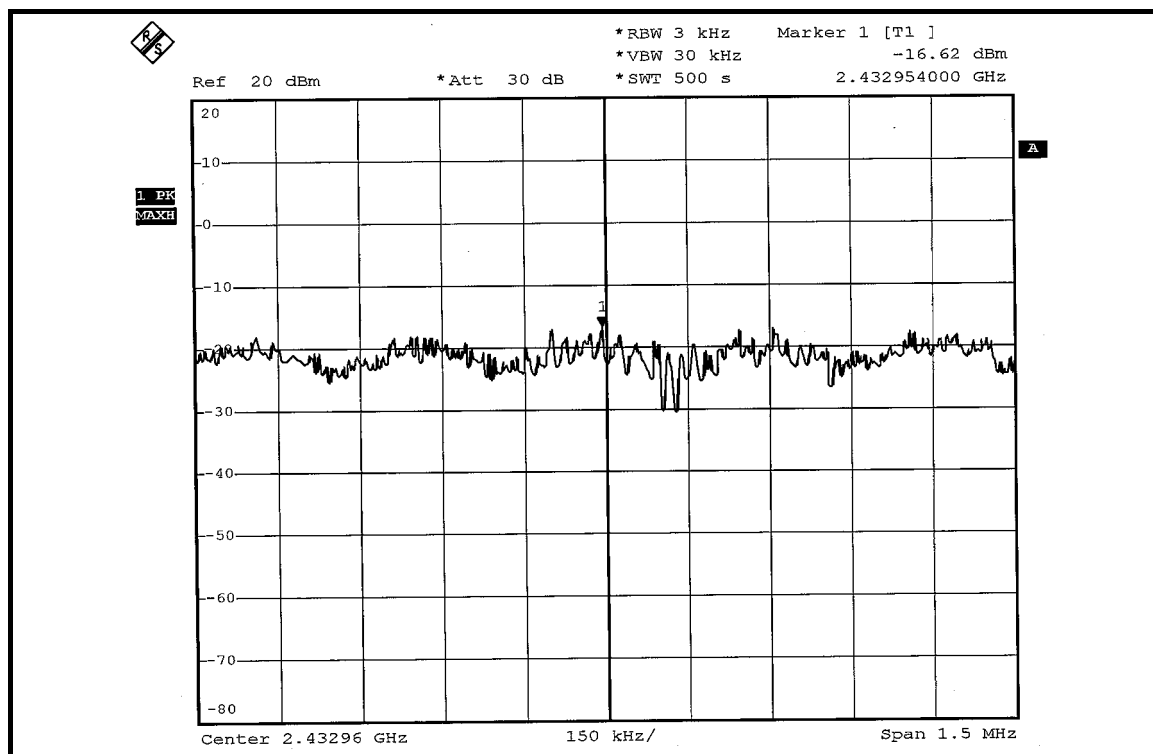
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-16.76	8	PASS
6	2437	-16.62	8	PASS
11	2462	-17.03	8	PASS

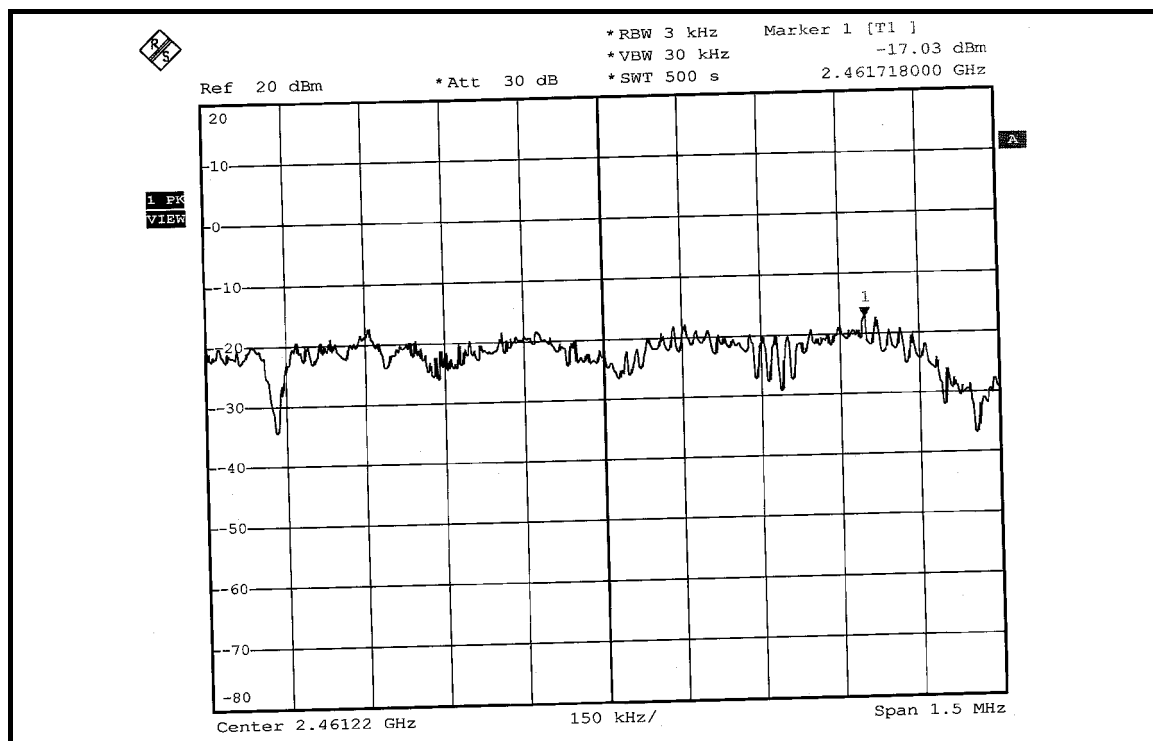
CH 1



CH 6



CH 11

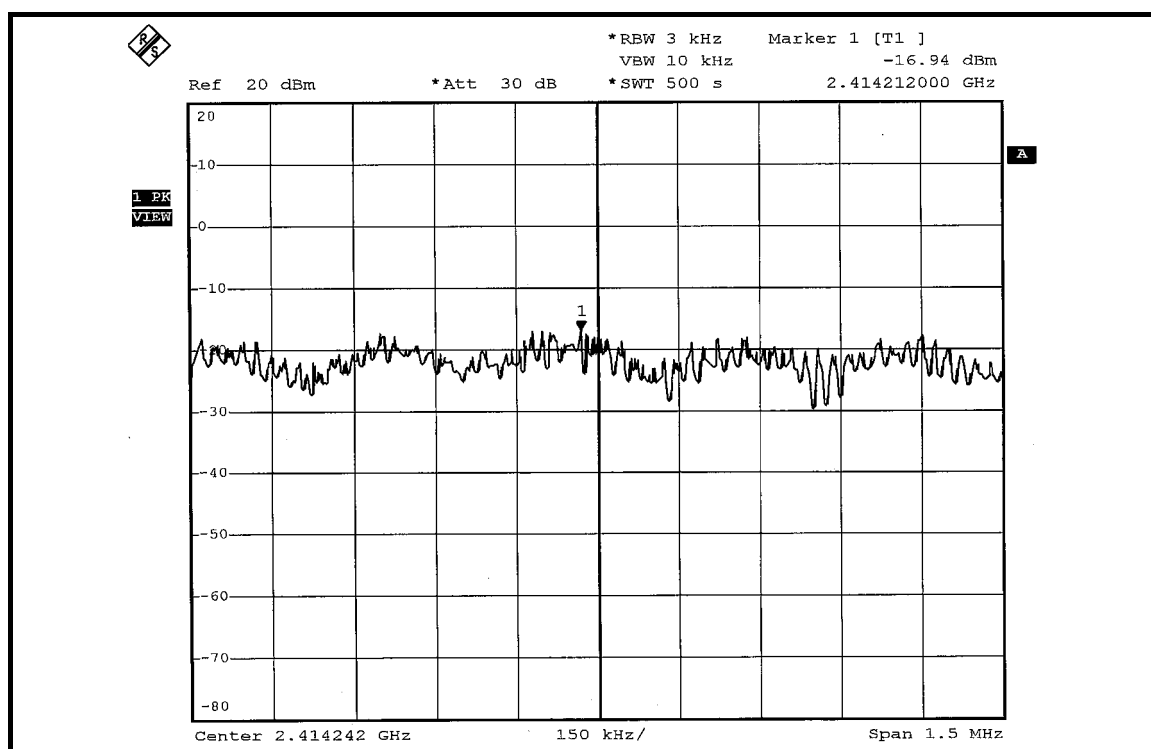


DRAFT 802.11n (20MHz) OFDM MODULATION: SINGLE TX:

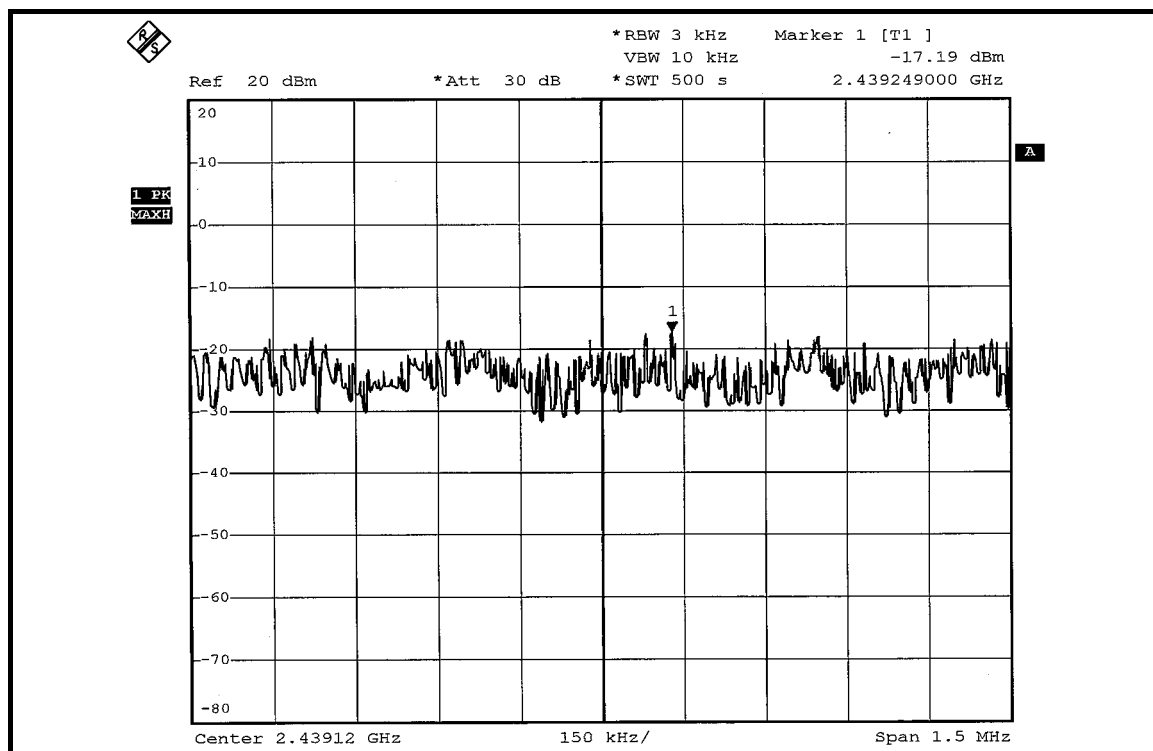
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-16.94	8	PASS
6	2437	-17.19	8	PASS
11	2462	-17.17	8	PASS

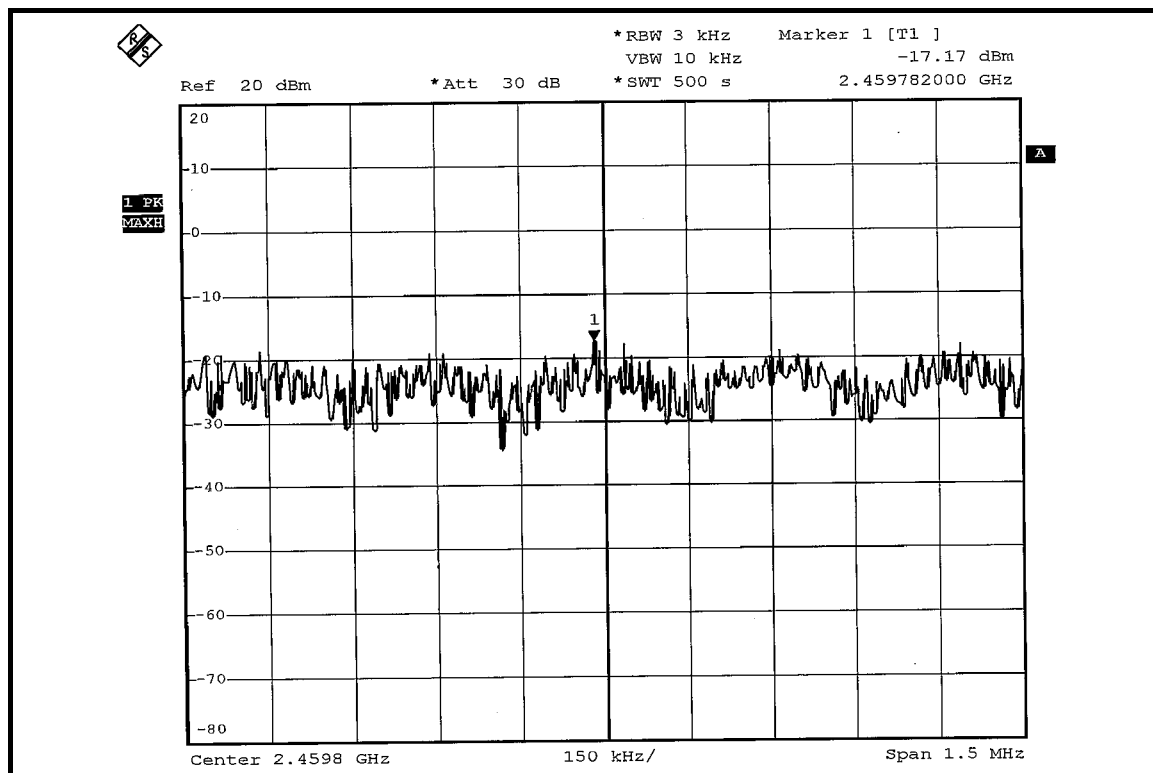
CH 1



CH 6



CH 11

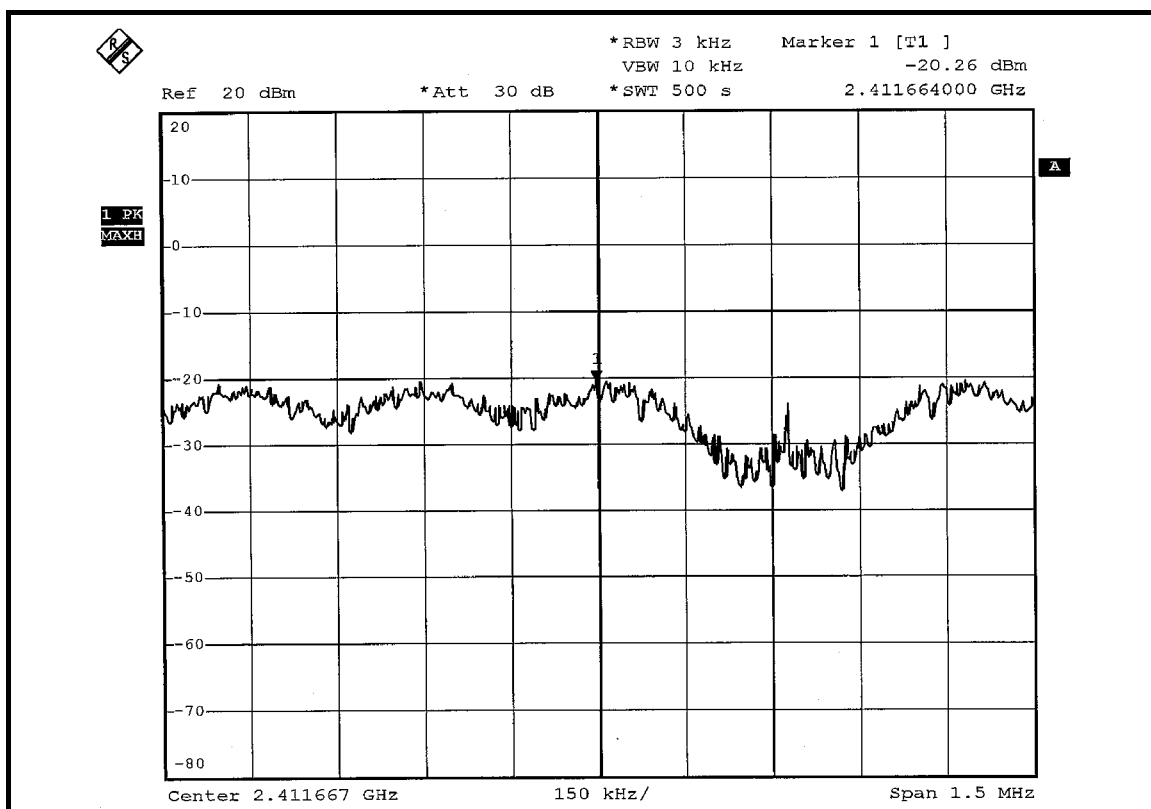


DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

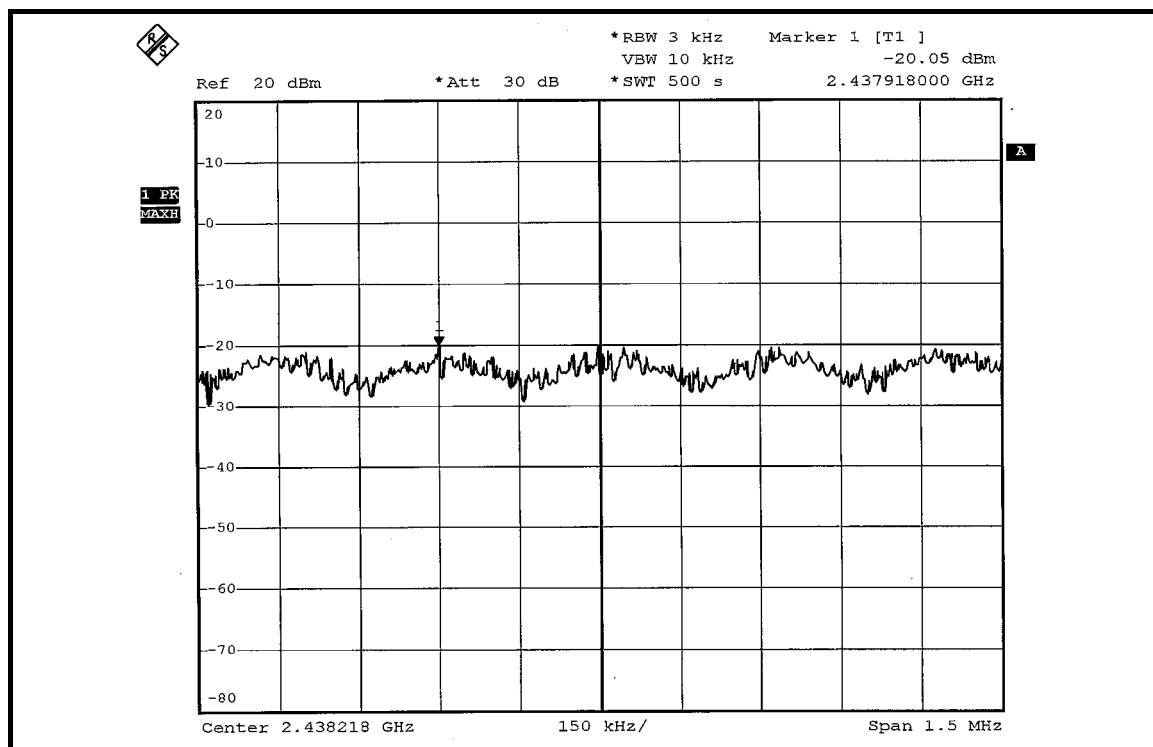
MODULATION TYPE	BPSK	TRANSFER RATE	14.444Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	-20.26	-20.40	8	PASS
6	2437	-20.05	-20.16	8	PASS
11	2462	-20.63	-20.26	8	PASS

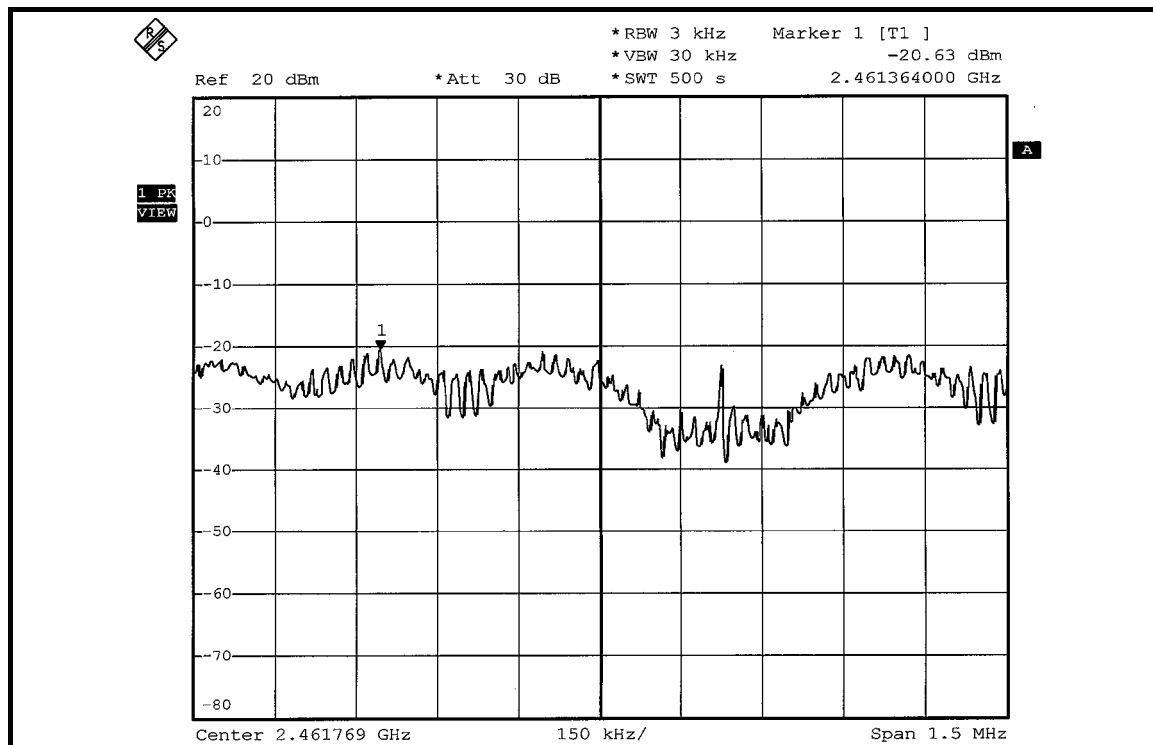
FOR CHAIN 0: CH 1



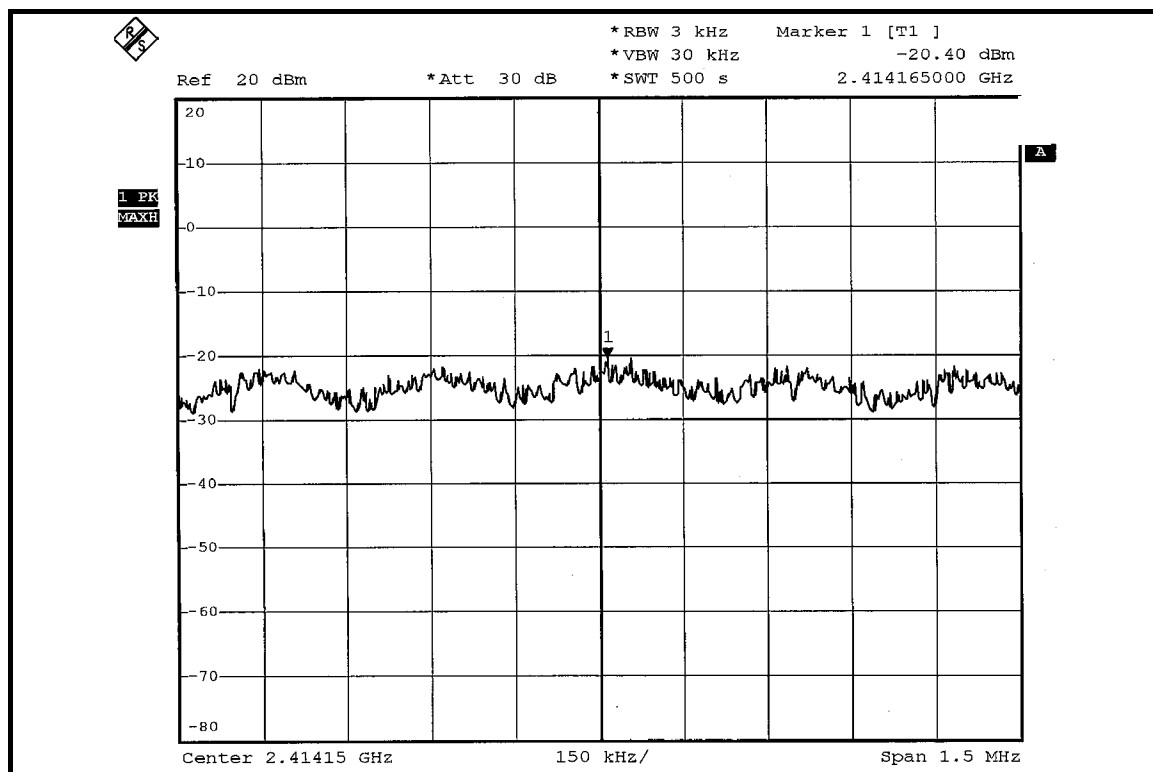
CH 6



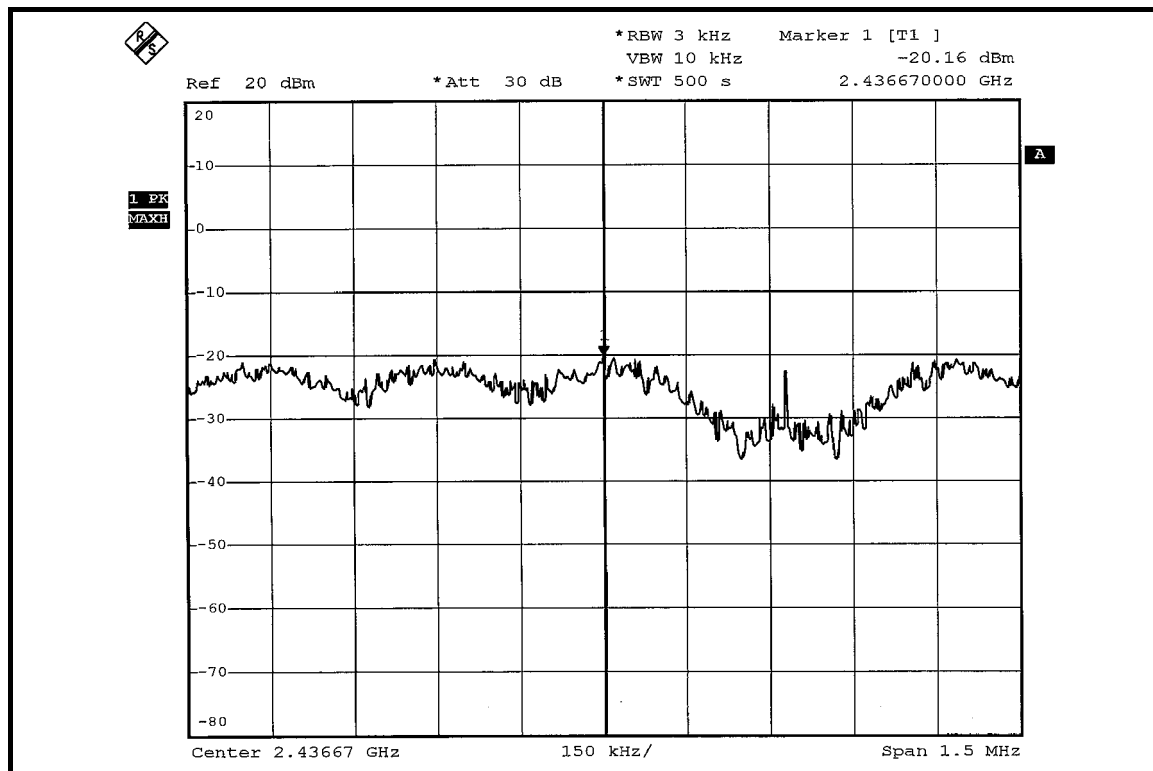
CH 11



FOR CHAIN 1: CH 1



CH 6

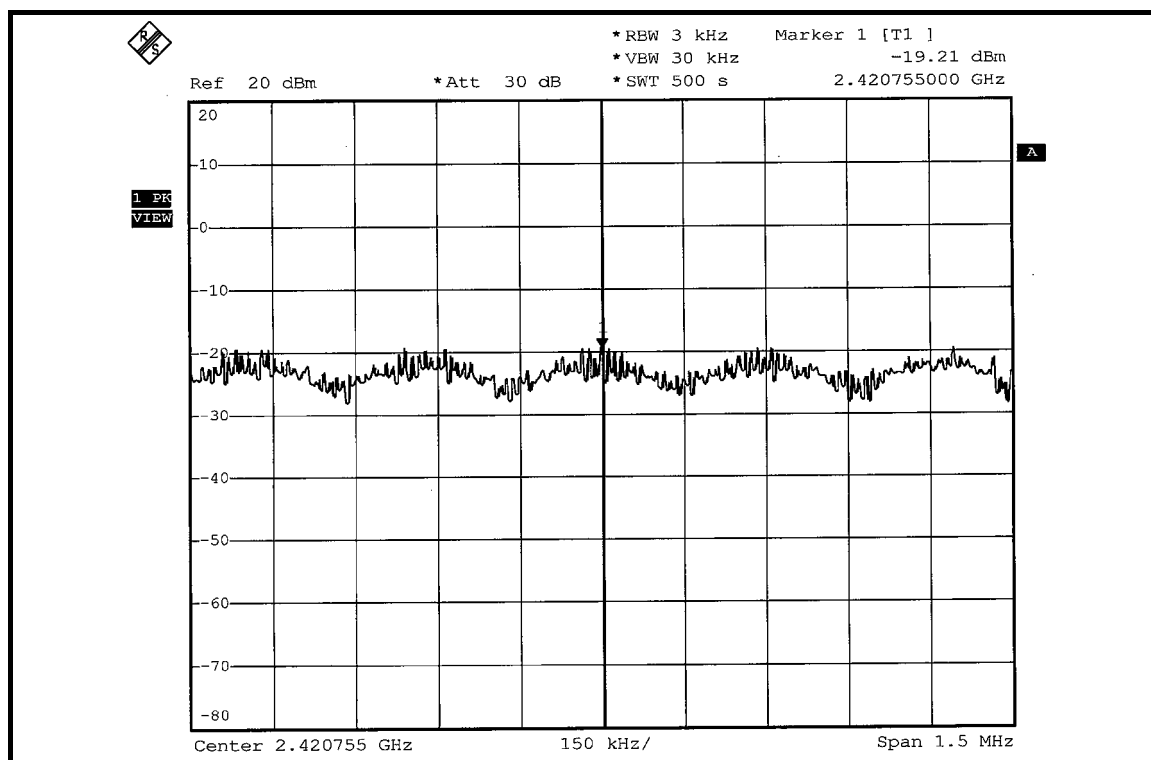


DRAFT 802.11n (40MHz) OFDM MODULATION: SINGLE TX:

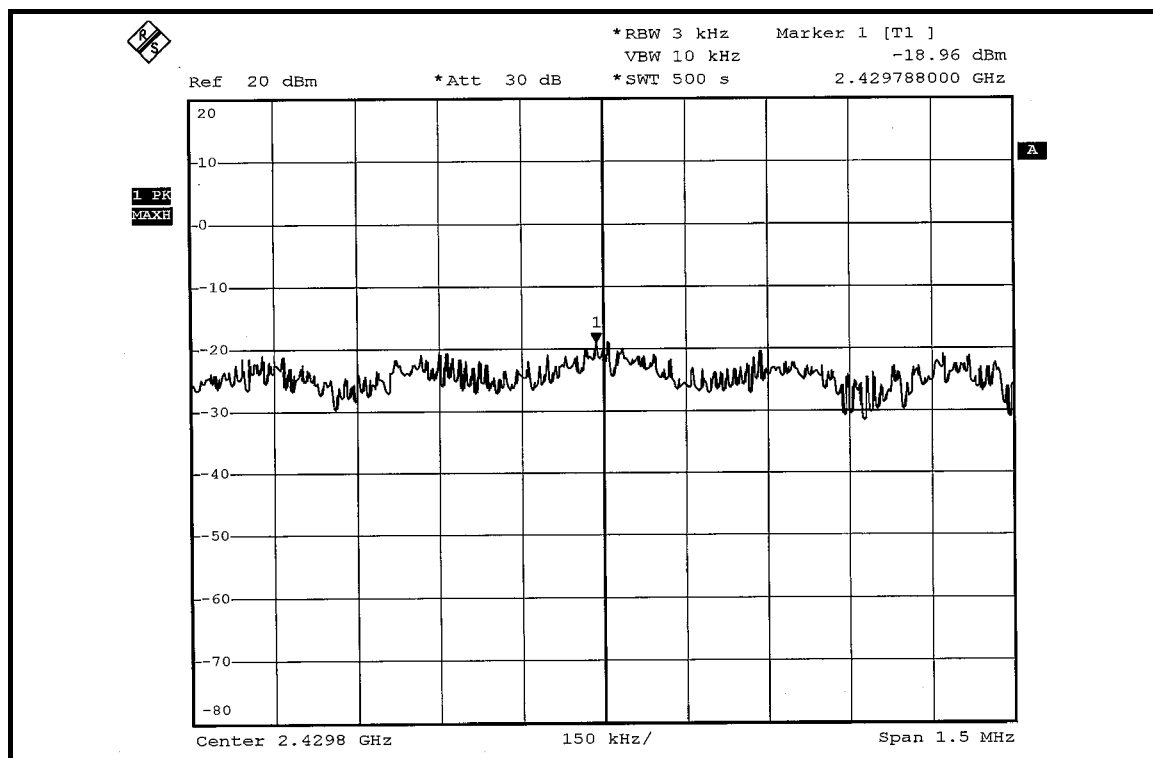
MODULATION TYPE	BPSK	TRANSFER RATE	15Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2422	-19.21	8	PASS
4	2437	-18.96	8	PASS
7	2452	-19.37	8	PASS

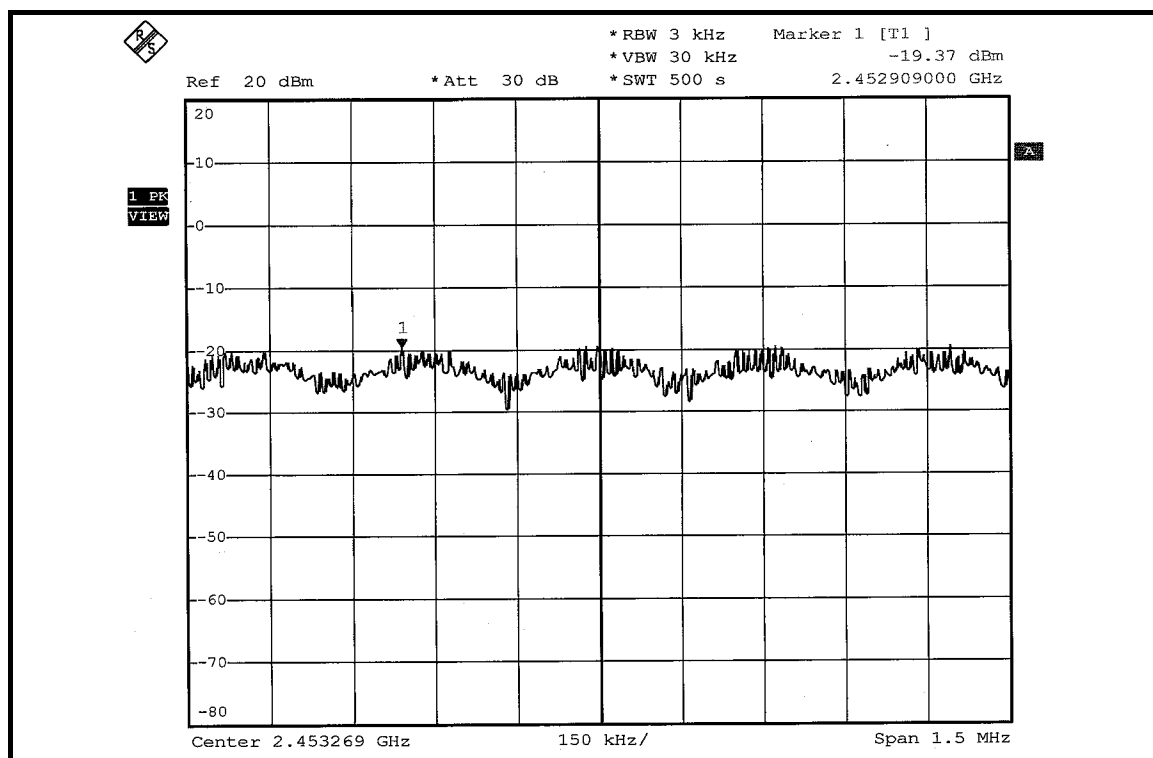
CH 1



CH 4



CH 7

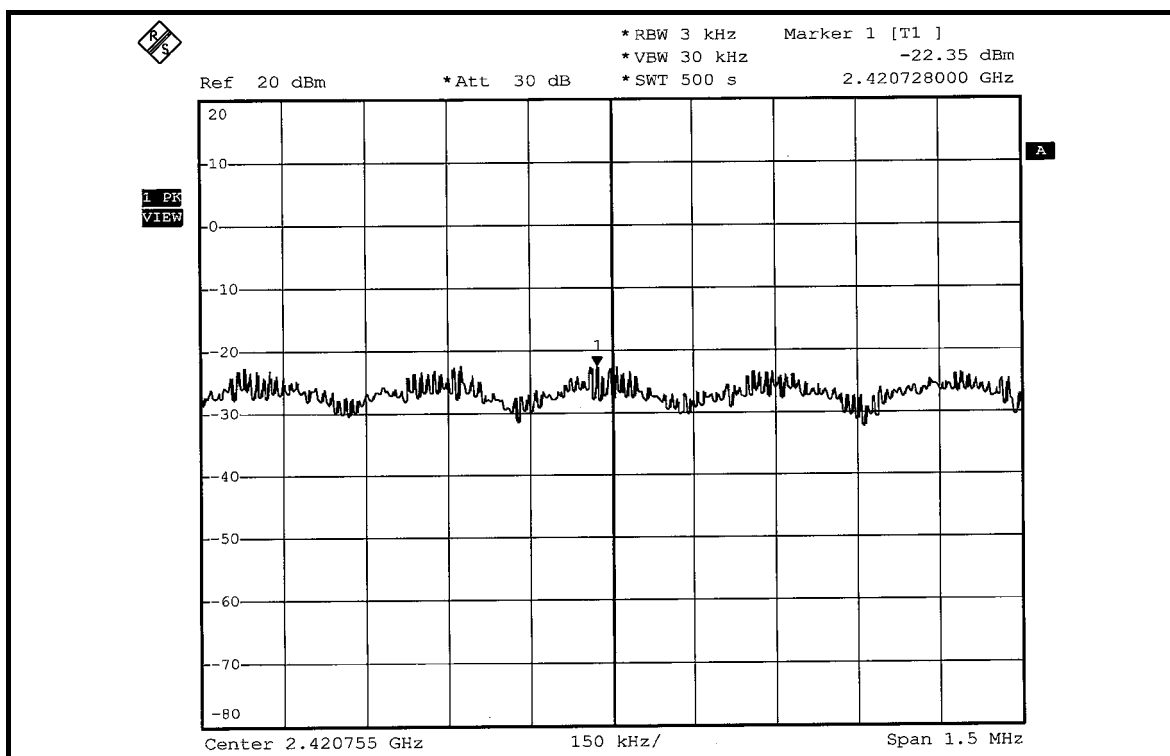


DRAFT 802.11n (40MHz) OFDM MODULATION: DUAL TX:

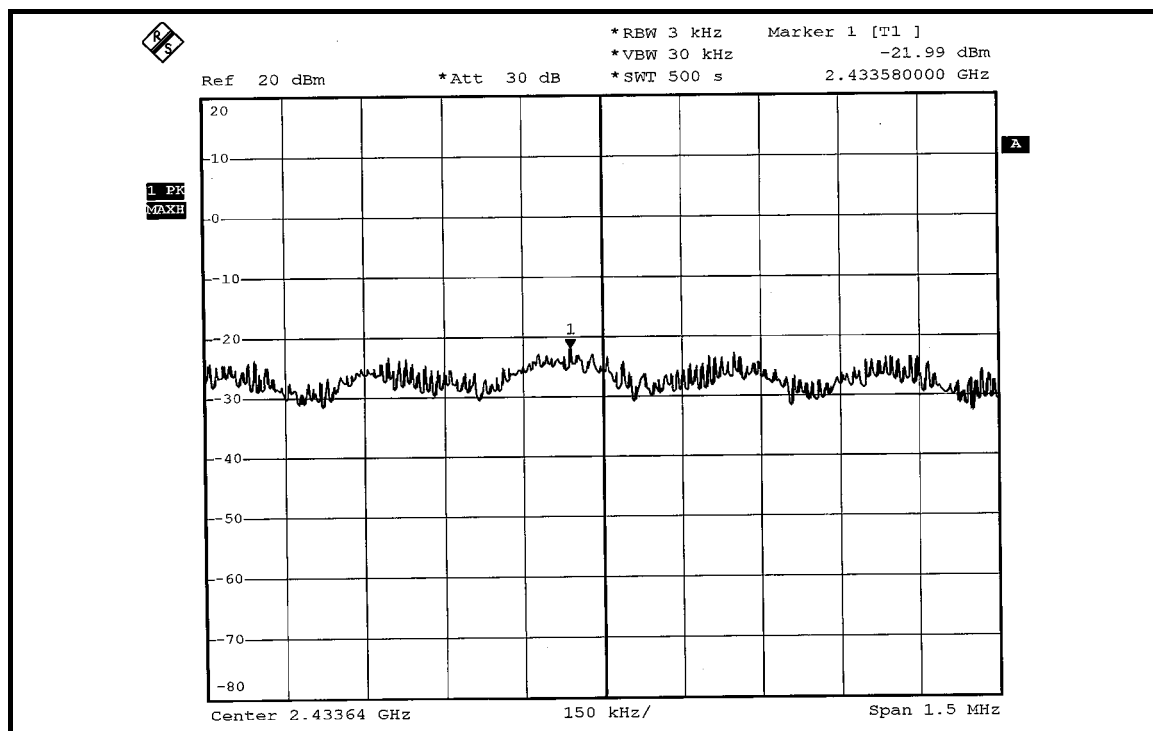
MODULATION TYPE	BPSK	TRANSFER RATE	30Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63%RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	-22.35	-22.06	8	PASS
4	2437	-21.99	-22.05	8	PASS
7	2452	-22.05	-22.37	8	PASS

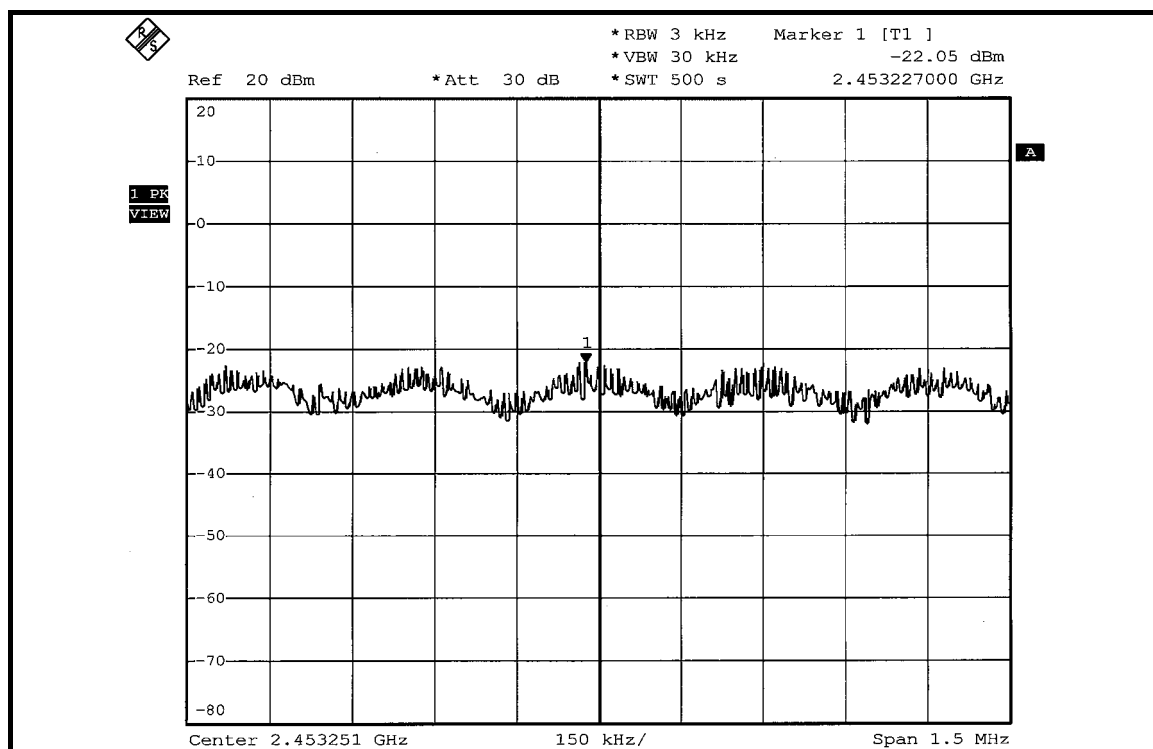
FOR CHAIN 0: CH 1



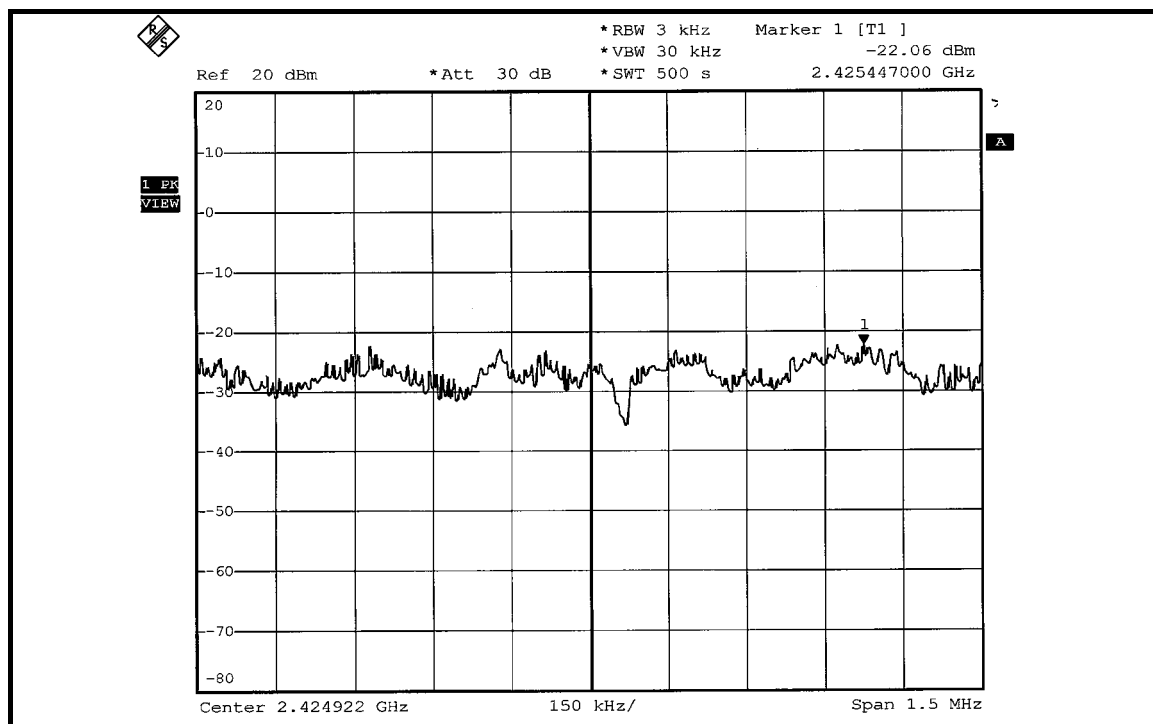
CH 4



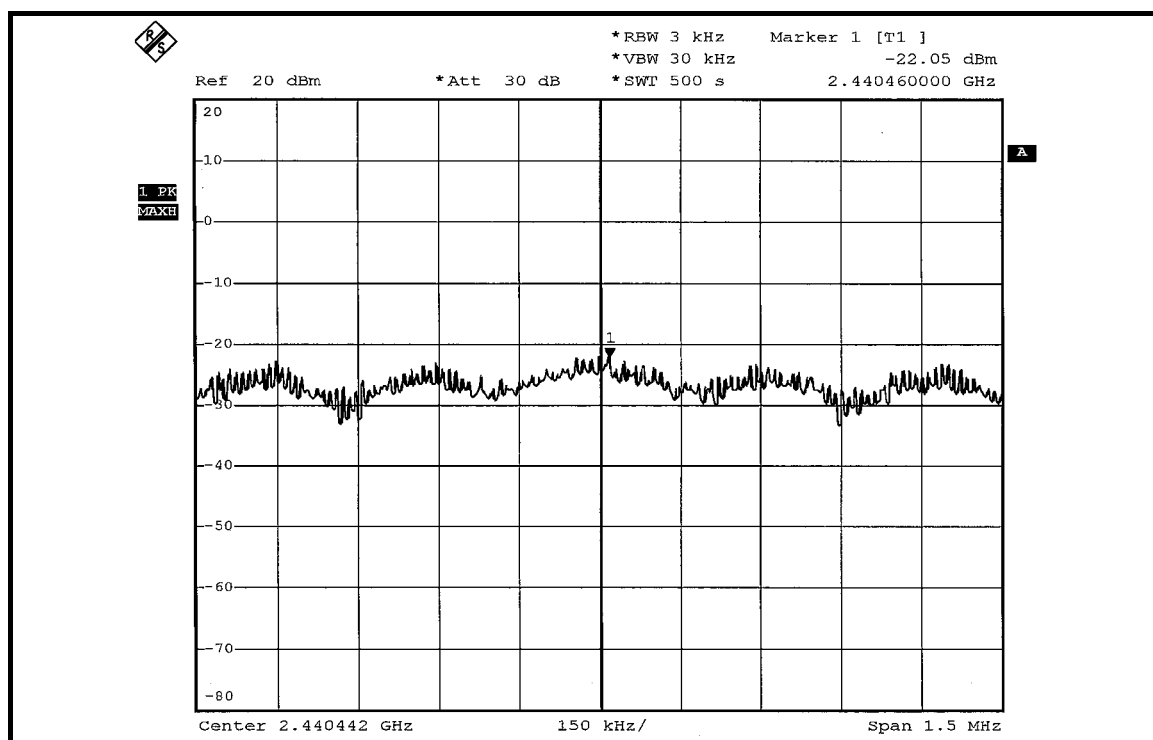
CH 7



FOR CHAIN 1: CH 1



CH 4



4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
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.

4.6.3 TEST PROCEDURE

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

The spectrum plots (Peak RBW = VBW = 100kHz; Average RBW = 1MHz, VBW = 10Hz) are attached on the following pages.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 12 images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS MODULATION:

NOTE 1:

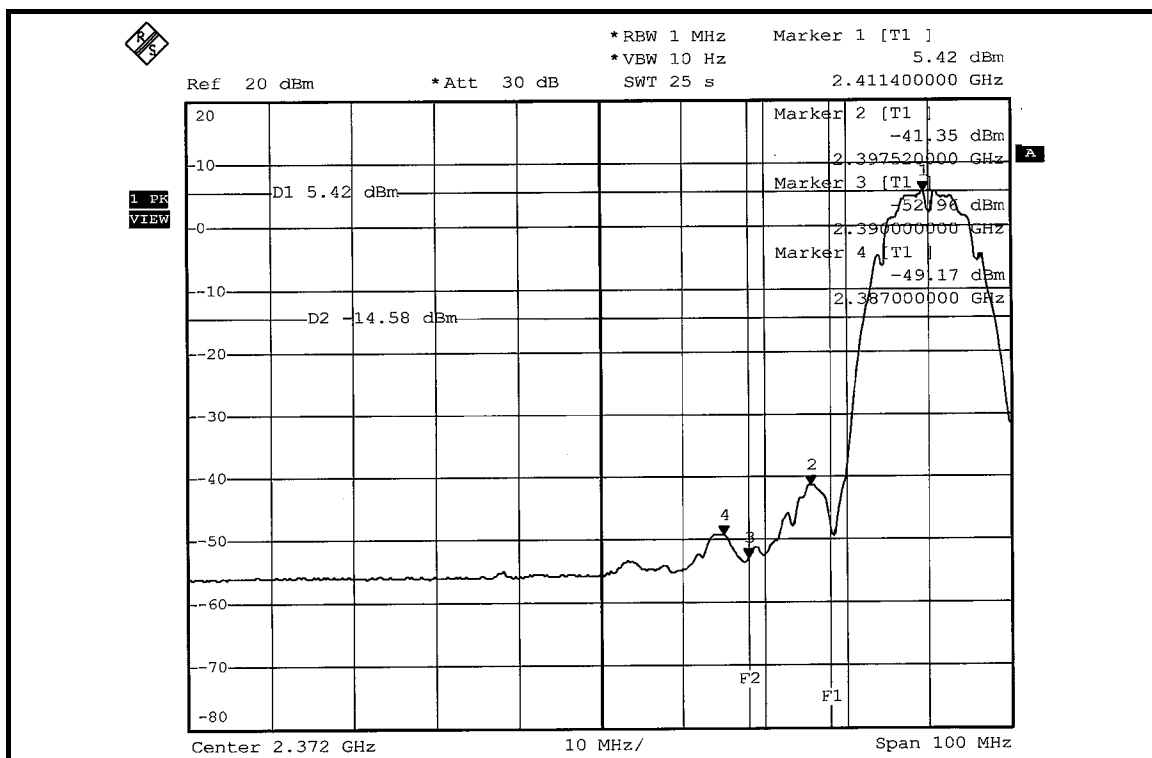
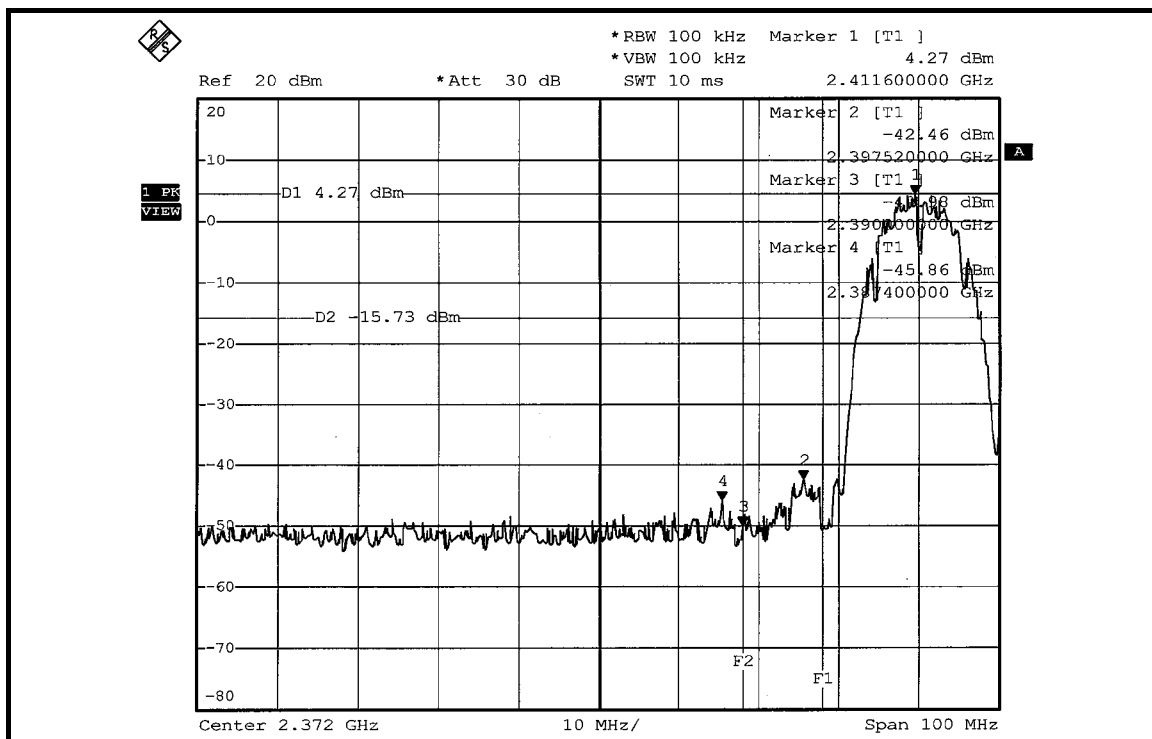
The band edge emission plot of DSSS technique on the next page shows 50.13dBc between carrier maximum power and local maximum emission in restrict band (2.3874GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 106.93dBuV/m (Peak), so the maximum field strength in restrict band is $106.93 - 50.13 = 56.80\text{dBuV/m}$ which is under 74dBuV/m limit.

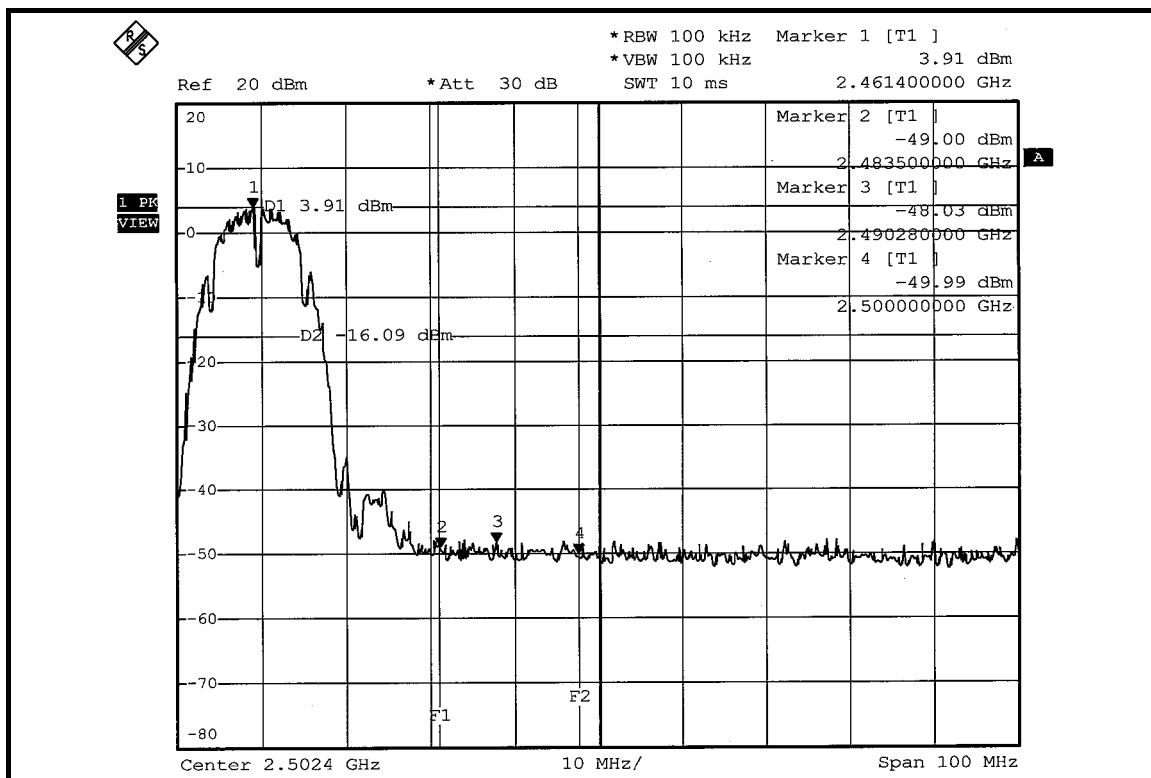
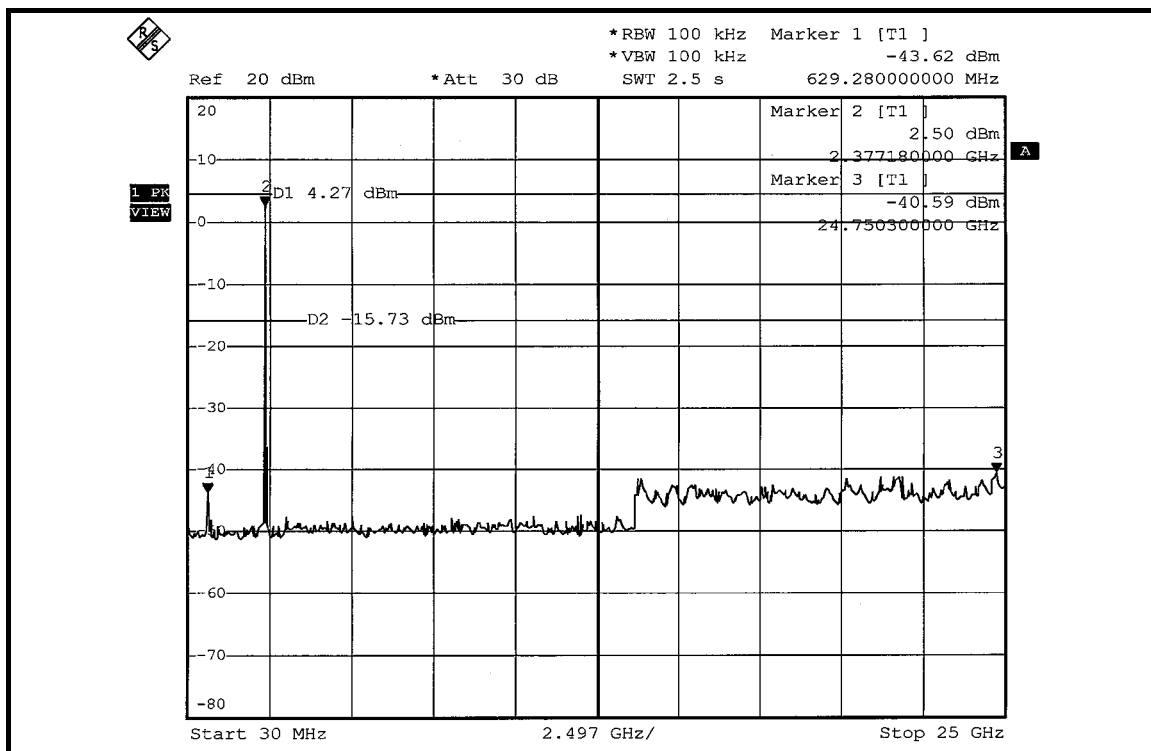
The band edge emission plot of DSSS technique on the next page shows 54.59dBc between carrier maximum power and local maximum emission in restrict band (2.3870GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 103.31dBuV/m (Average), so the maximum field strength in restrict band is $103.31 - 54.59 = 48.72\text{dBuV/m}$ which is under 54dBuV/m limit.

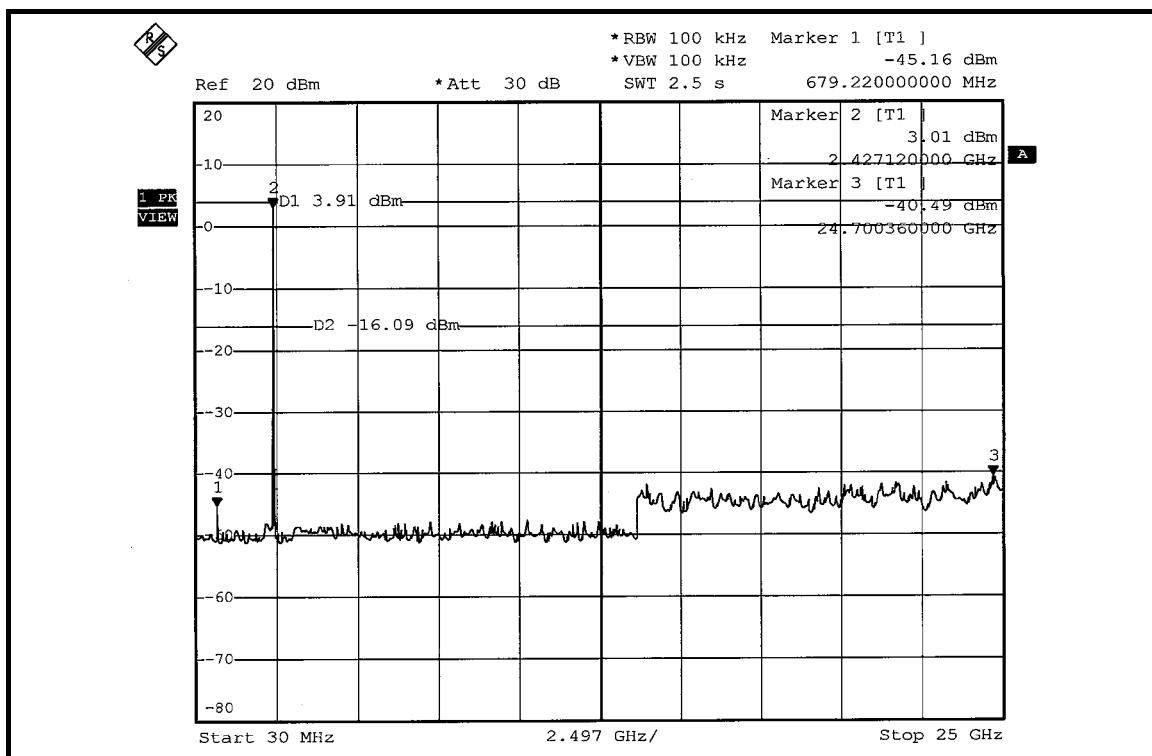
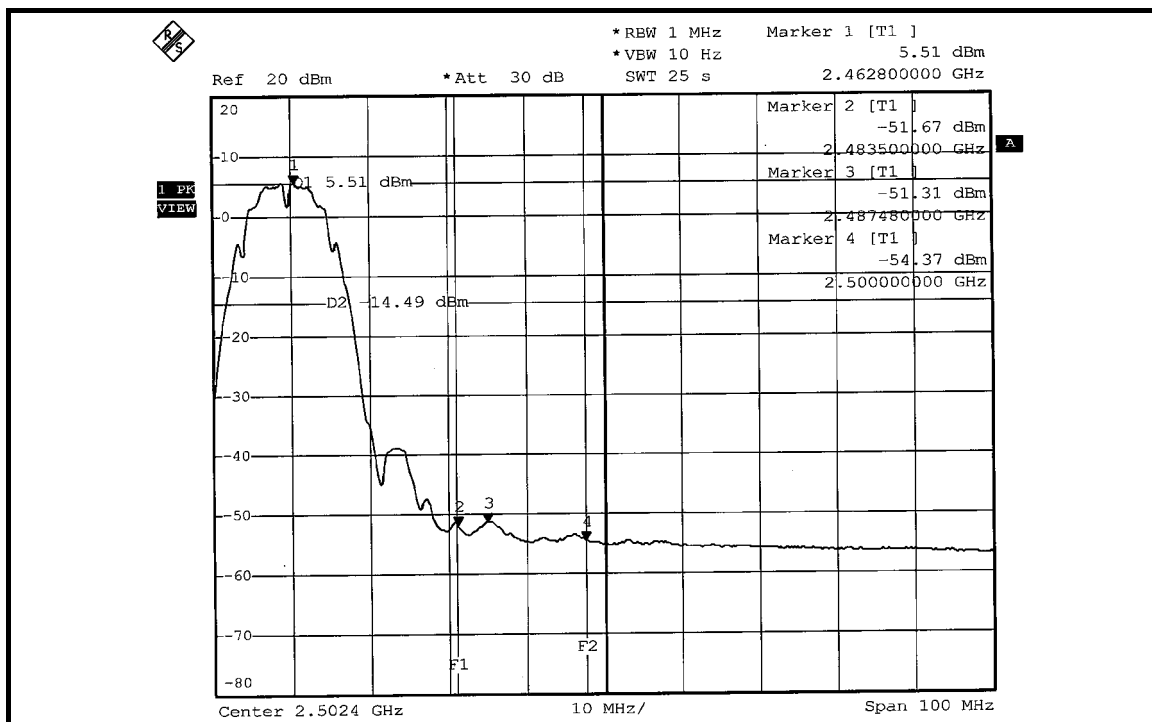
NOTE 2:

The band edge emission plot of DSSS technique on the next second page shows 51.94dBc between carrier maximum power and local maximum emission in restrict band (2.49028GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 107.23dBuV/m (Peak), so the maximum field strength in restrict band is $107.23 - 51.94 = 55.29\text{dBuV/m}$ which is under 74dBuV/m limit.

The band edge emission plot of DSSS technique on the next third page shows 56.82dBc between carrier maximum power and local maximum emission in restrict band (2.48748GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 103.58dBuV/m (Average), so the maximum field strength in restrict band is $103.58 - 56.82 = 46.76\text{dBuV/m}$ which is under 54dBuV/m limit.







802.11g OFDM MODULATION:

NOTE 1:

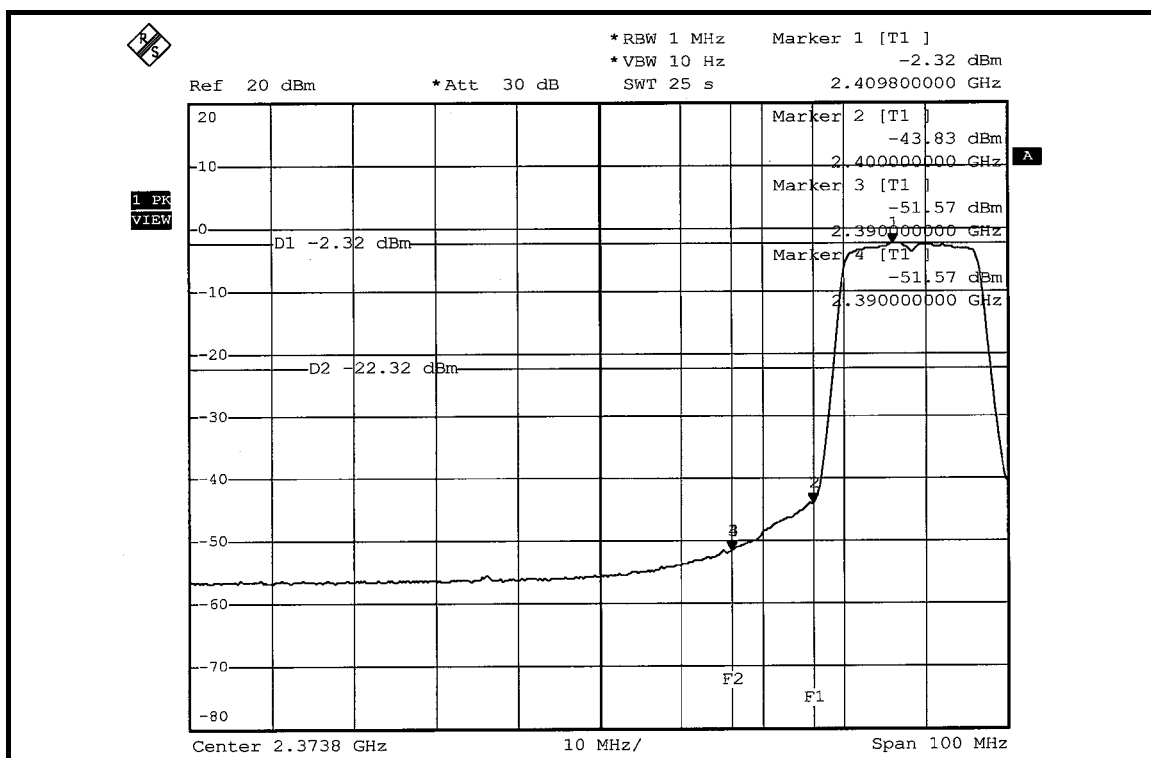
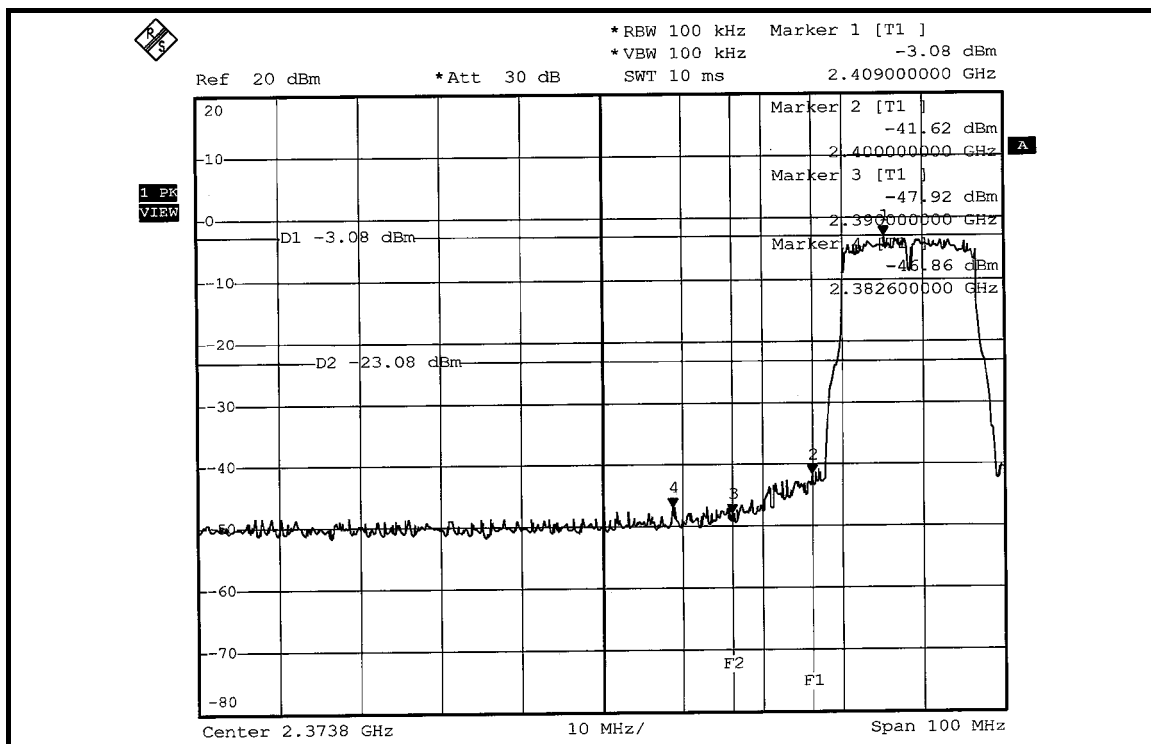
The band edge emission plot of OFDM technique on the next page shows 43.78dBc between carrier maximum power and local maximum emission in restrict band (2.3826GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 106.45dBuV/m (Peak), so the maximum field strength in restrict band is $106.45 - 43.78 = 62.67$ dBuV/m which is under 74dBuV/m limit.

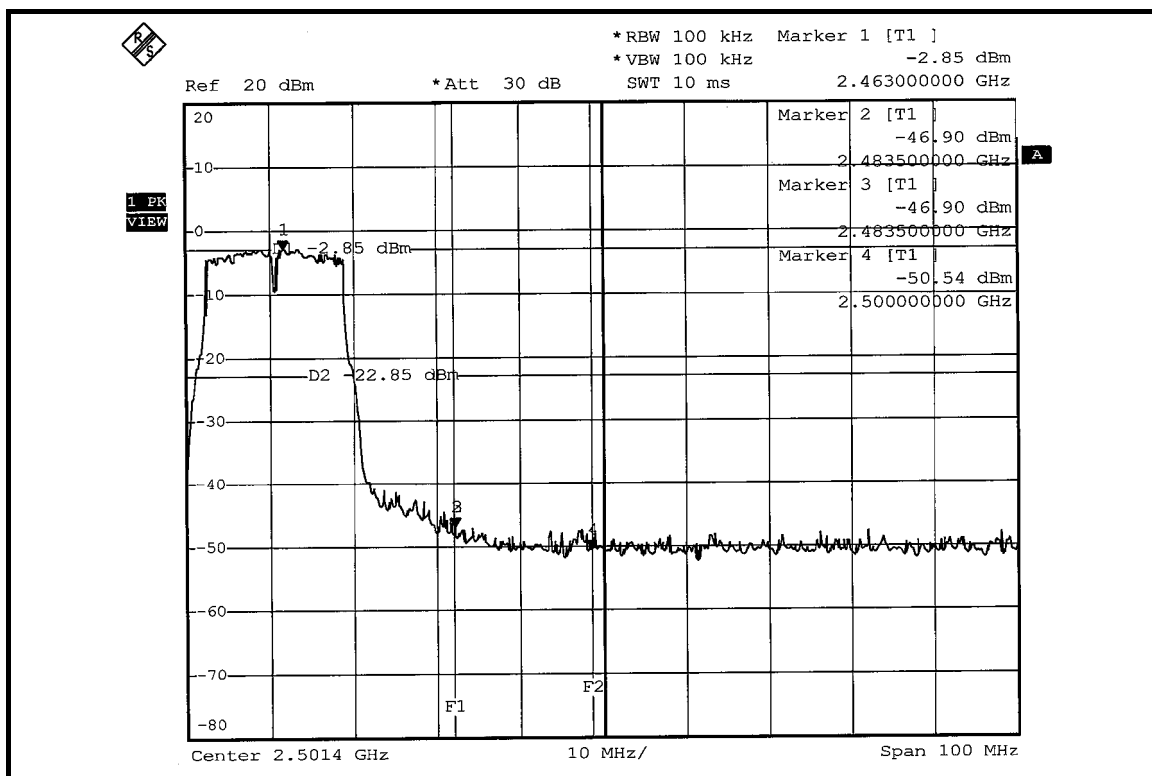
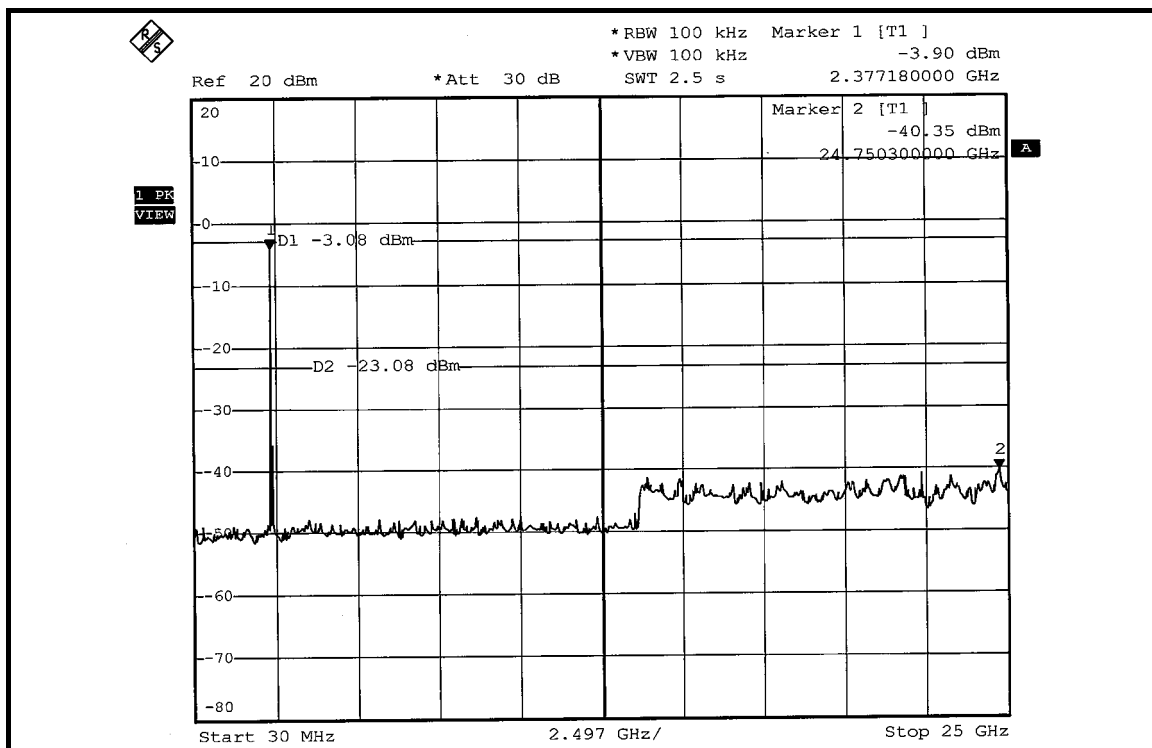
The band edge emission plot of OFDM technique on the next page shows 49.25dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 96.06dBuV/m (Average), so the maximum field strength in restrict band is $96.06 - 49.25 = 46.81$ dBuV/m which is under 54dBuV/m limit.

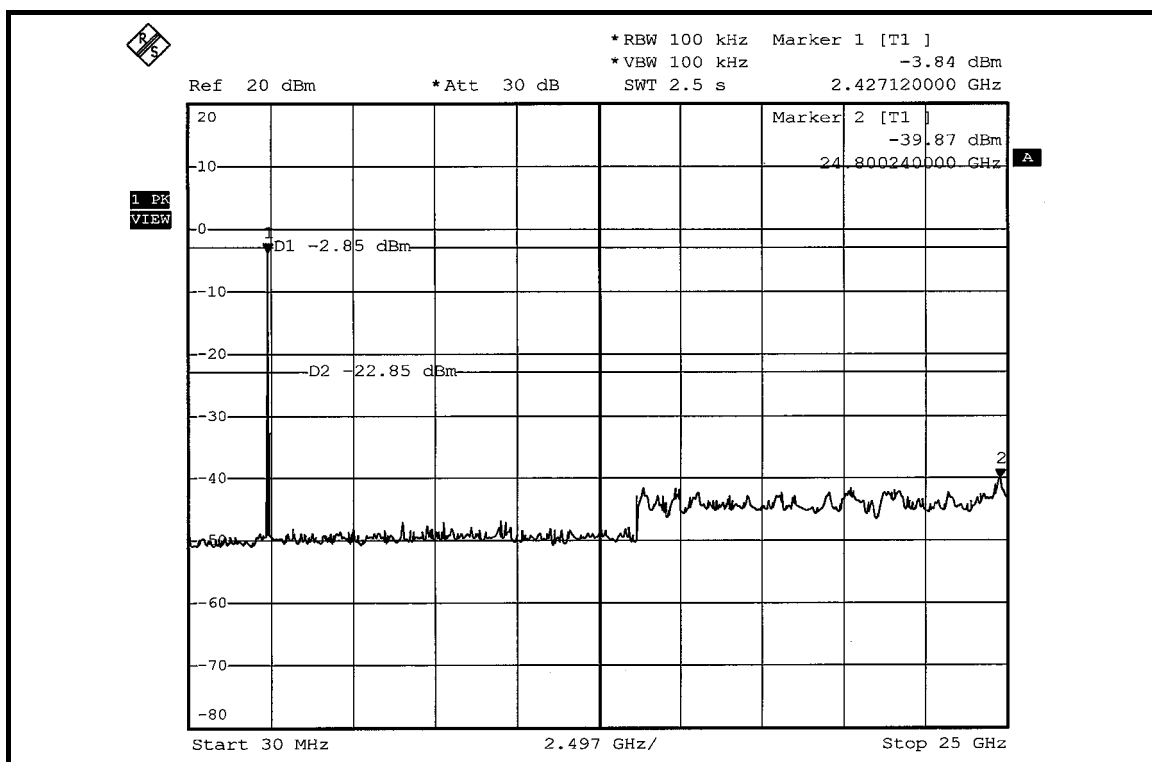
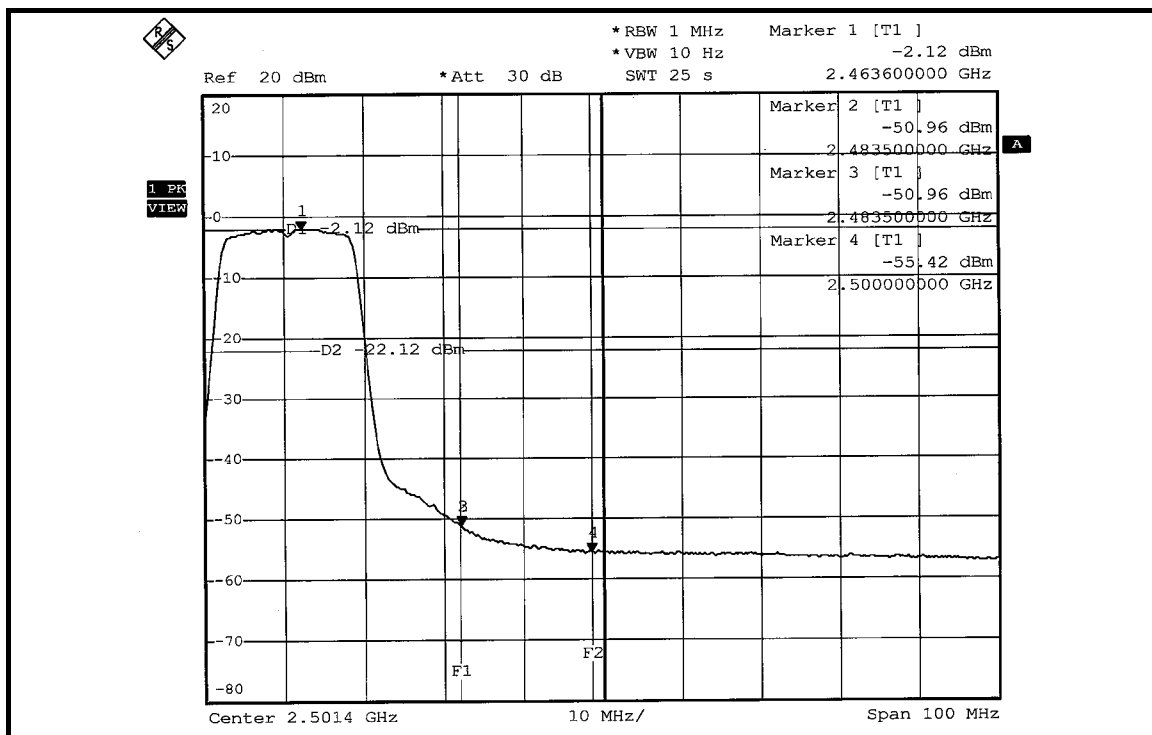
NOTE 2:

The band edge emission plot of OFDM technique on the next second page shows 44.05dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 106.47dBuV/m (Peak), so the maximum field strength in restrict band is $106.47 - 44.05 = 62.42$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of OFDM technique on the next third page shows 48.84dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 96.15dBuV/m (Average), so the maximum field strength in restrict band is $96.15 - 48.84 = 47.31$ dBuV/m which is under 54dBuV/m limit.







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

NOTE 1:

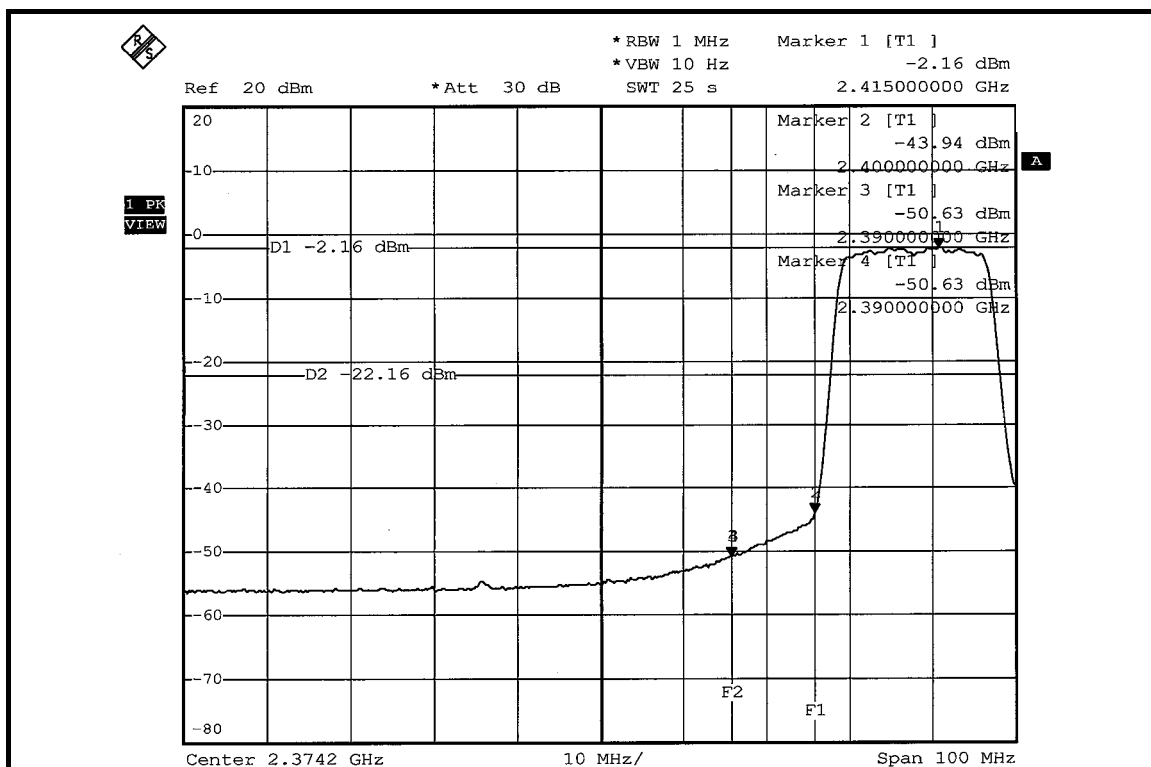
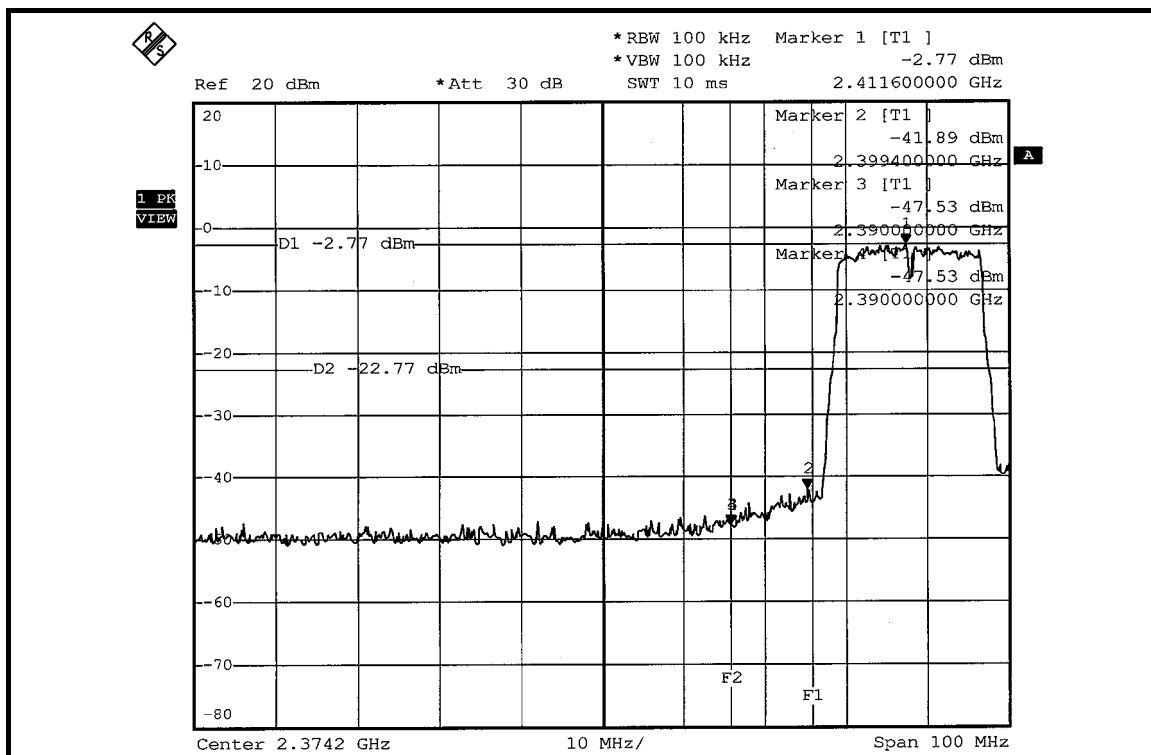
The band edge emission plot of OFDM technique on the next page shows 44.76dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 105.86dBuV/m (Peak), so the maximum field strength in restrict band is $105.86 - 44.76 = 61.10$ dBuV/m which is under 74dBuV/m limit.

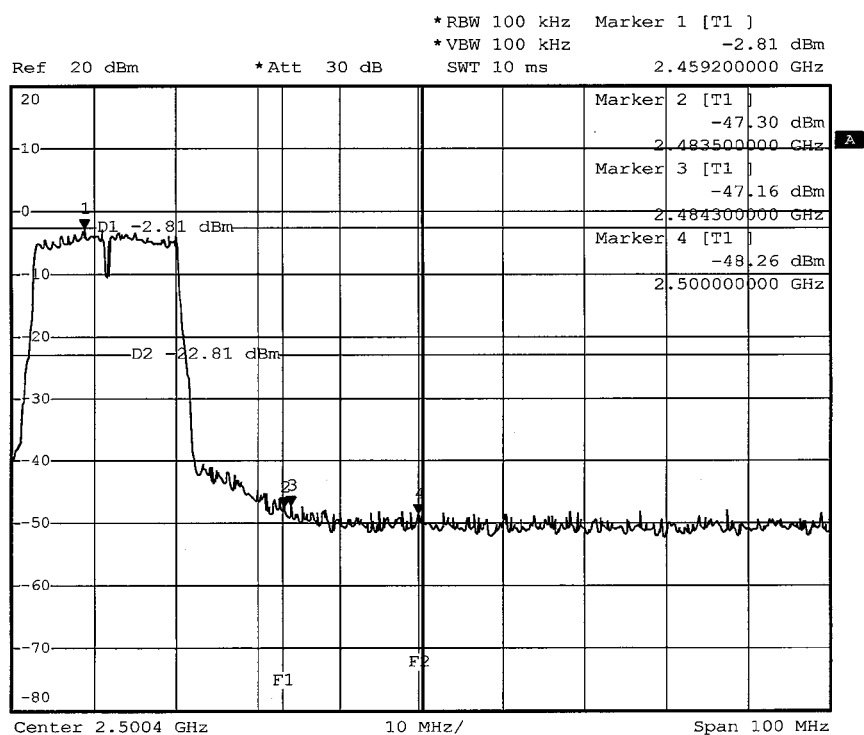
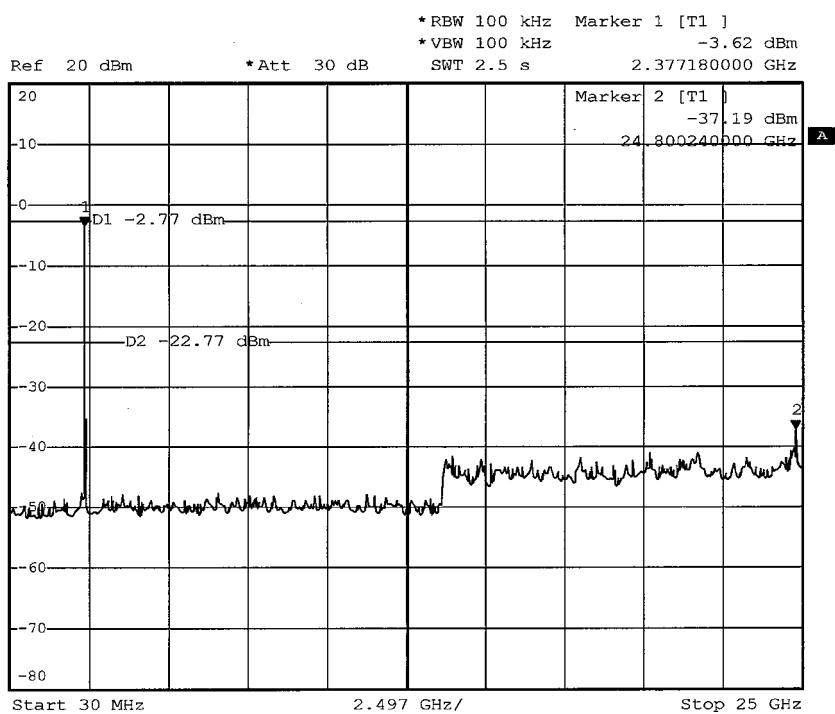
The band edge emission plot of OFDM technique on the next page shows 48.47dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 96.15dBuV/m (Average), so the maximum field strength in restrict band is $96.15 - 48.47 = 47.68$ dBuV/m which is under 54dBuV/m limit.

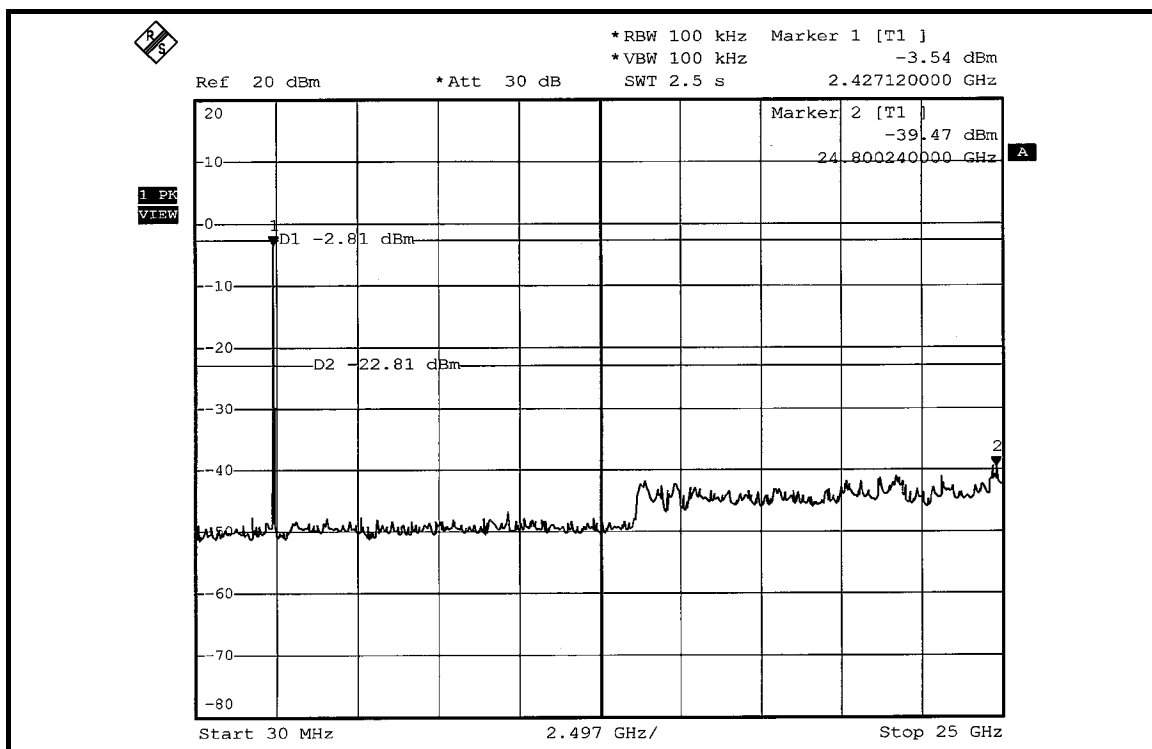
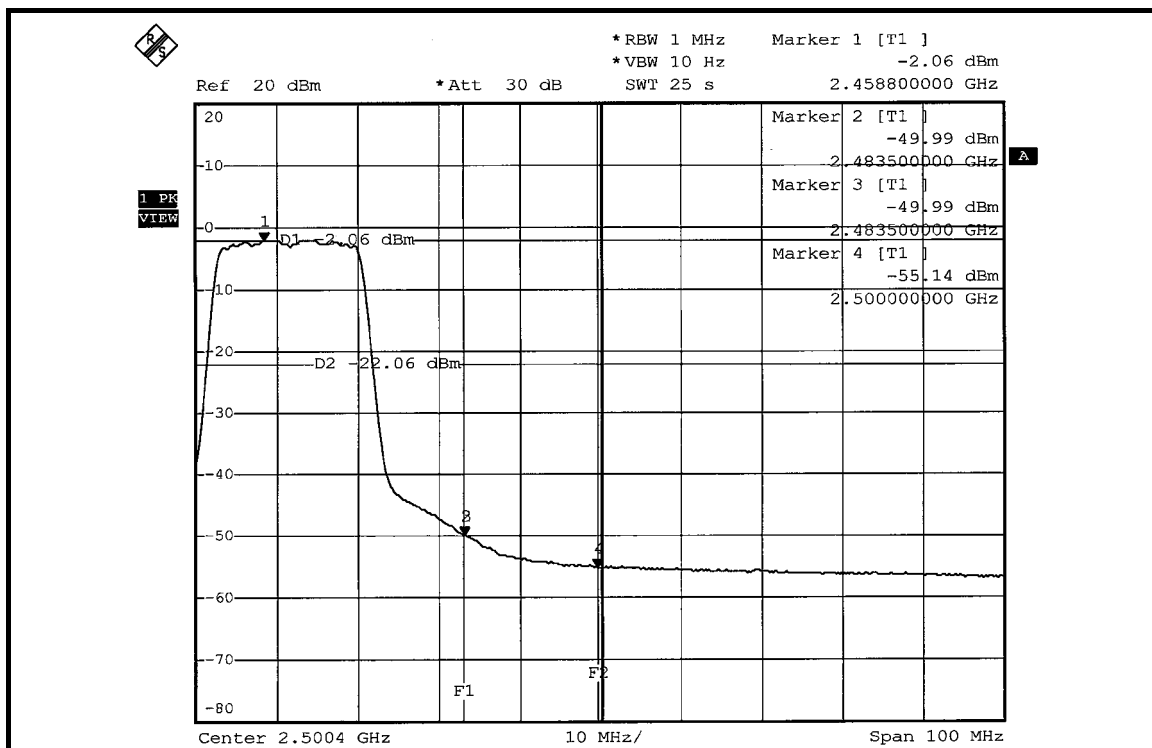
NOTE 2:

The band edge emission plot of OFDM technique on the next second page shows 44.35dBc between carrier maximum power and local maximum emission in restrict band (2.4843GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 106.35dBuV/m (Peak), so the maximum field strength in restrict band is $106.35 - 44.35 = 62.00$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of OFDM technique on the next third page shows 47.93dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 96.82dBuV/m (Average), so the maximum field strength in restrict band is $96.82 - 47.93 = 48.89$ dBuV/m which is under 54dBuV/m limit.







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

NOTE 1:

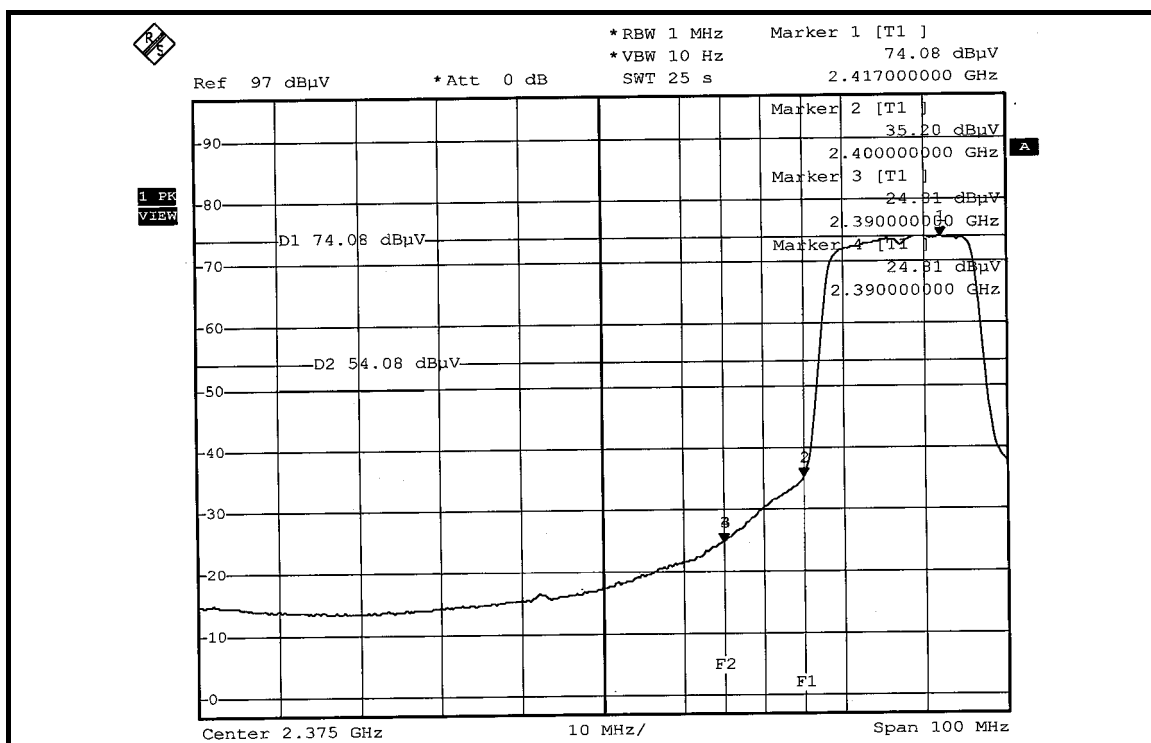
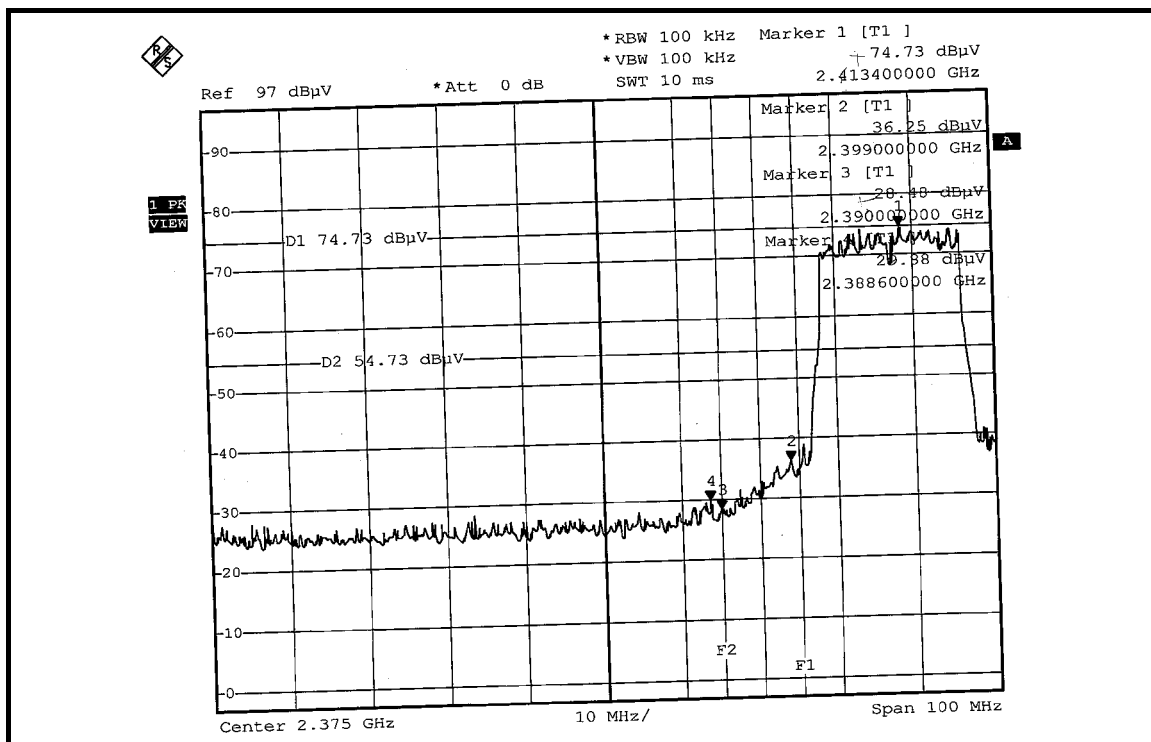
The band edge emission plot of OFDM technique on the next page shows 44.85dBc between carrier maximum power and local maximum emission in restrict band (2.3886GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 108.35dBuV/m (Peak), so the maximum field strength in restrict band is $108.35 - 44.85 = 63.50$ dBuV/m which is under 74dBuV/m limit.

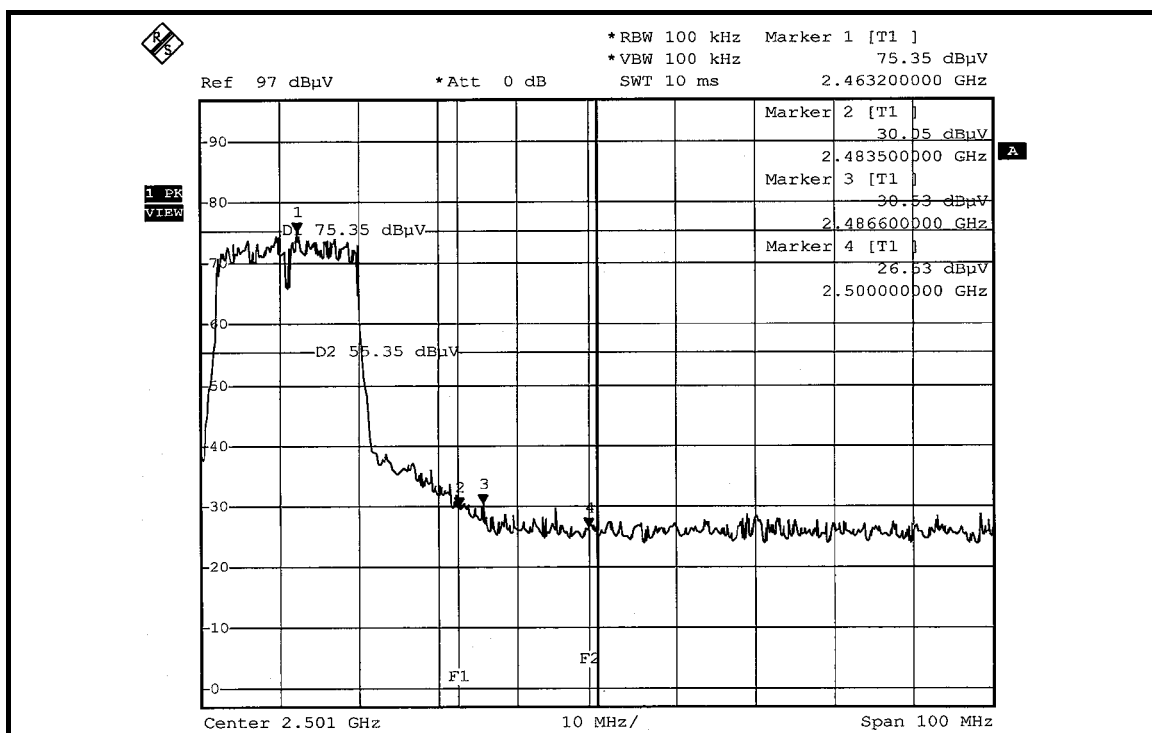
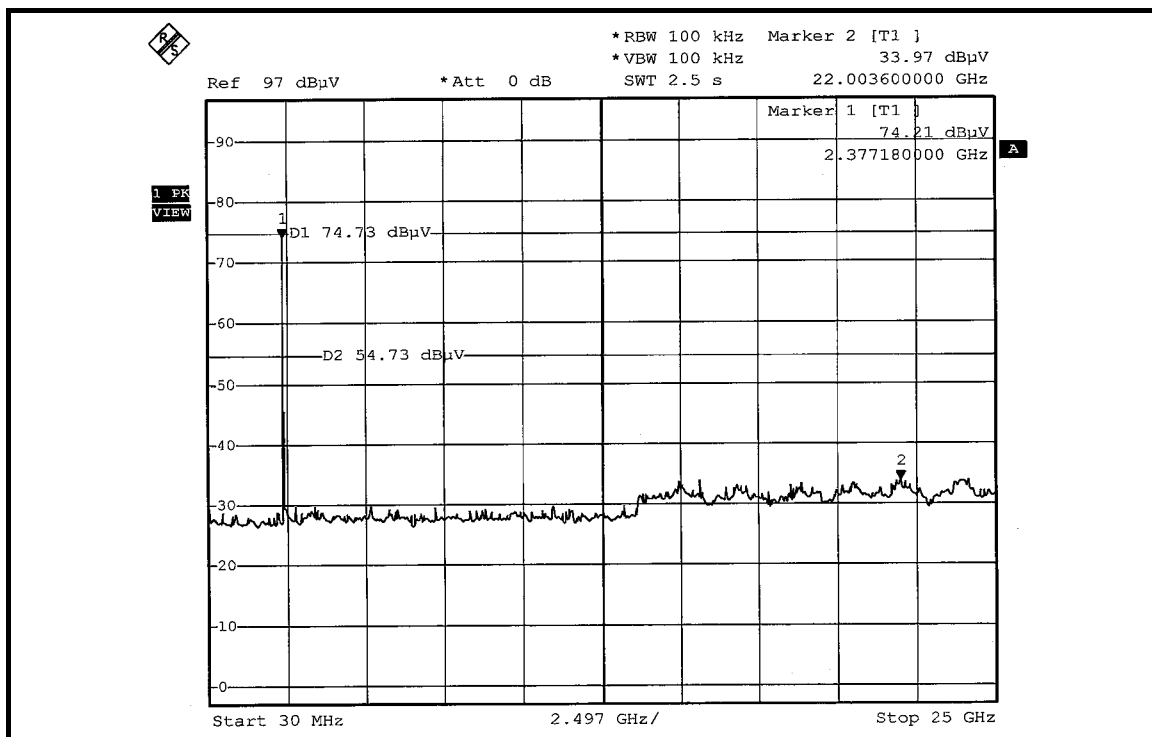
The band edge emission plot of OFDM technique on the next page shows 49.27dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 97.51dBuV/m (Average), so the maximum field strength in restrict band is $97.51 - 49.27 = 48.24$ dBuV/m which is under 54dBuV/m limit.

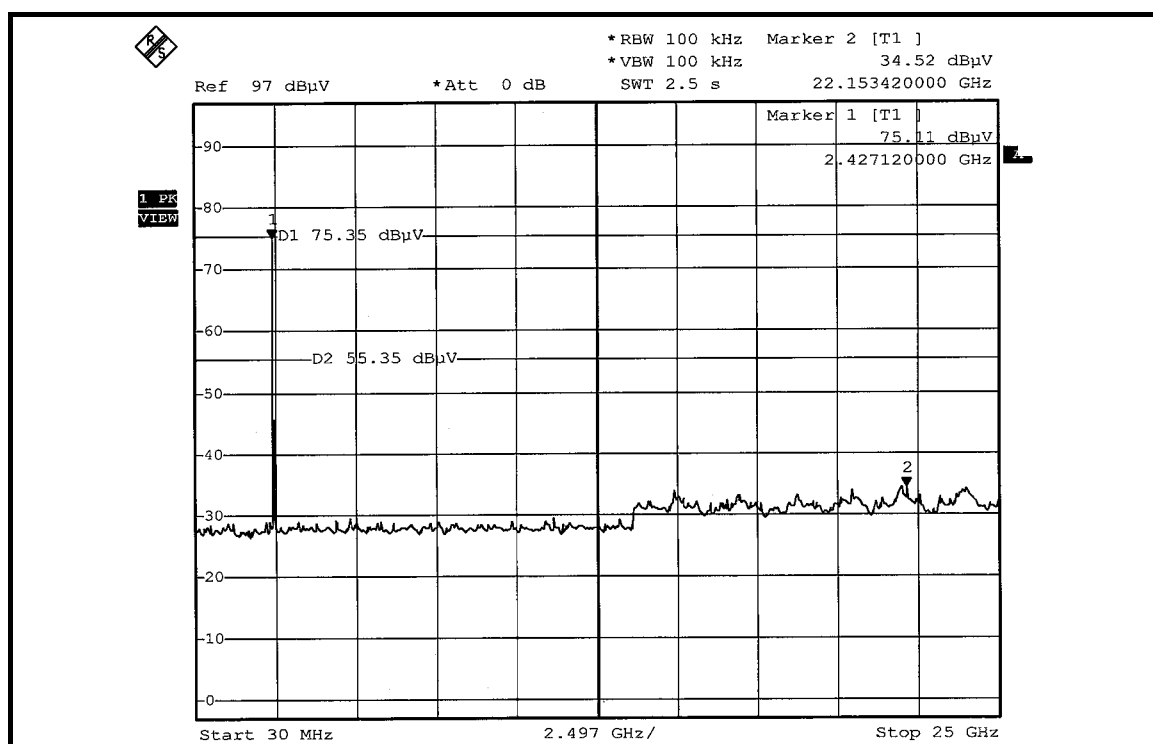
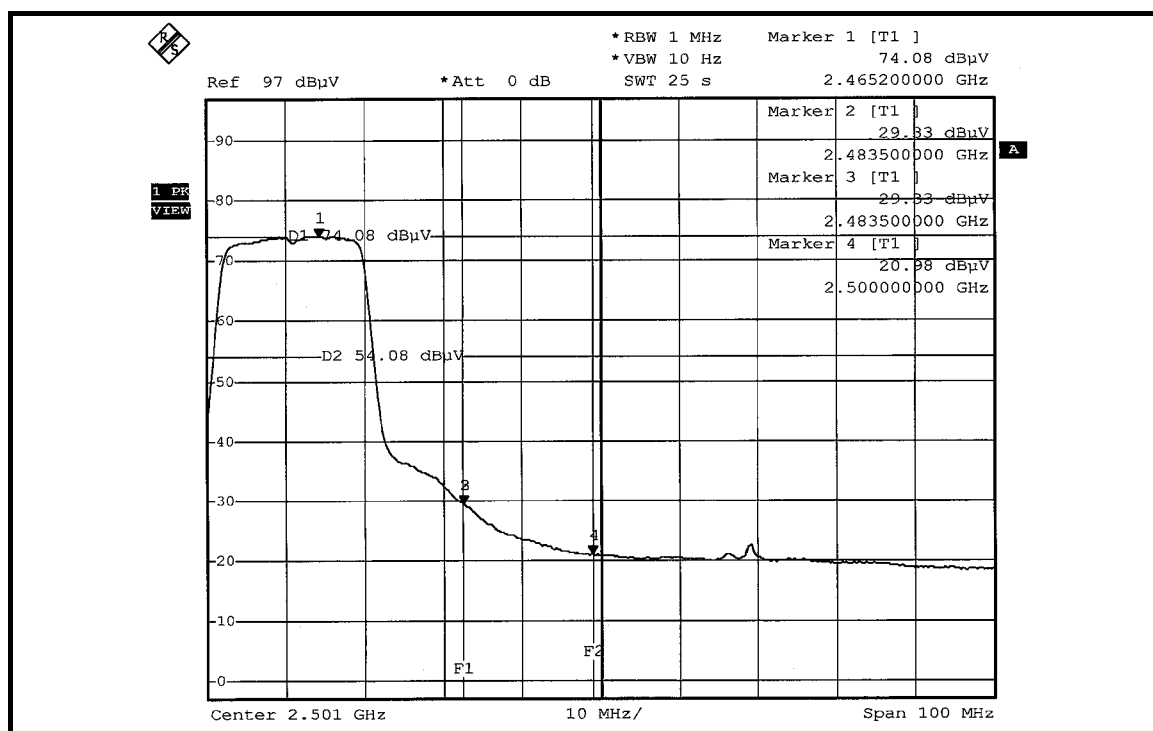
NOTE 2:

The band edge emission plot of OFDM technique on the next second page shows 44.82dBc between carrier maximum power and local maximum emission in restrict band (2.4866GHz) is 108.26dBuV/m (Peak), so the maximum field strength in restrict band is $108.26 - 44.82 = 63.44$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of OFDM technique on the next third page shows 44.75dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 97.05dBuV/m (Average), so the maximum field strength in restrict band is $97.05 - 44.75 = 52.30$ dBuV/m which is under 54dBuV/m limit.







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

NOTE 1:

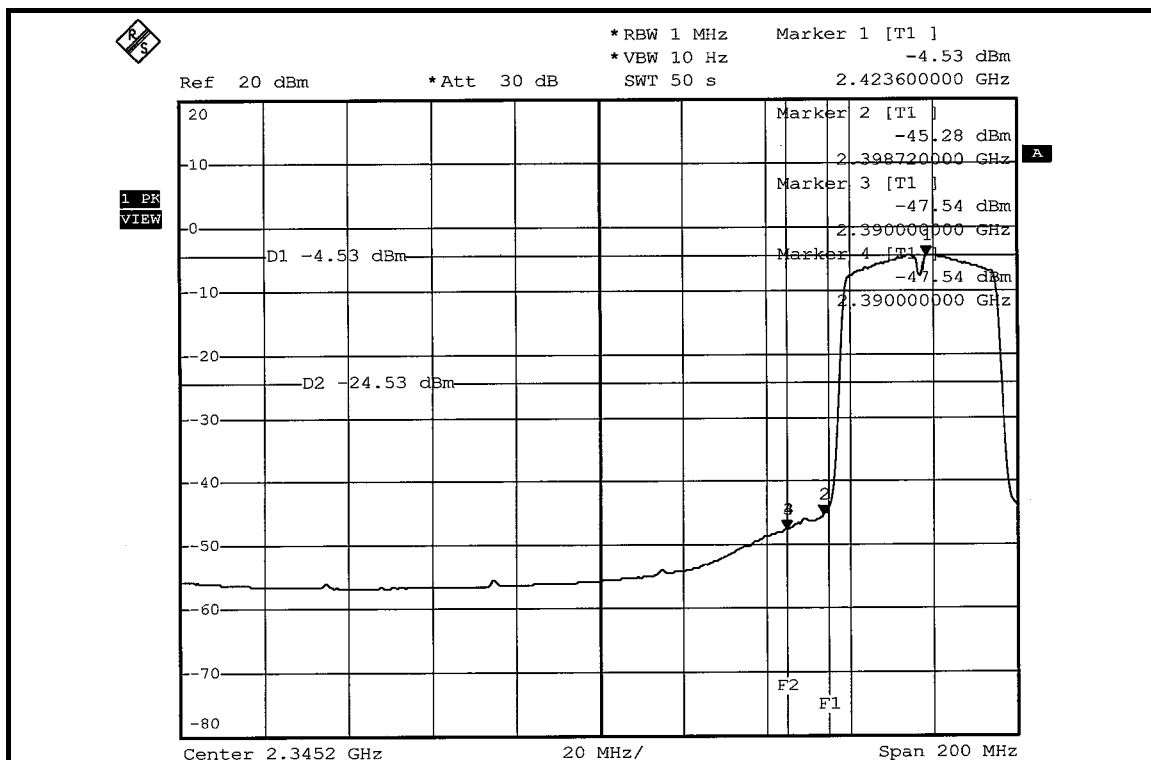
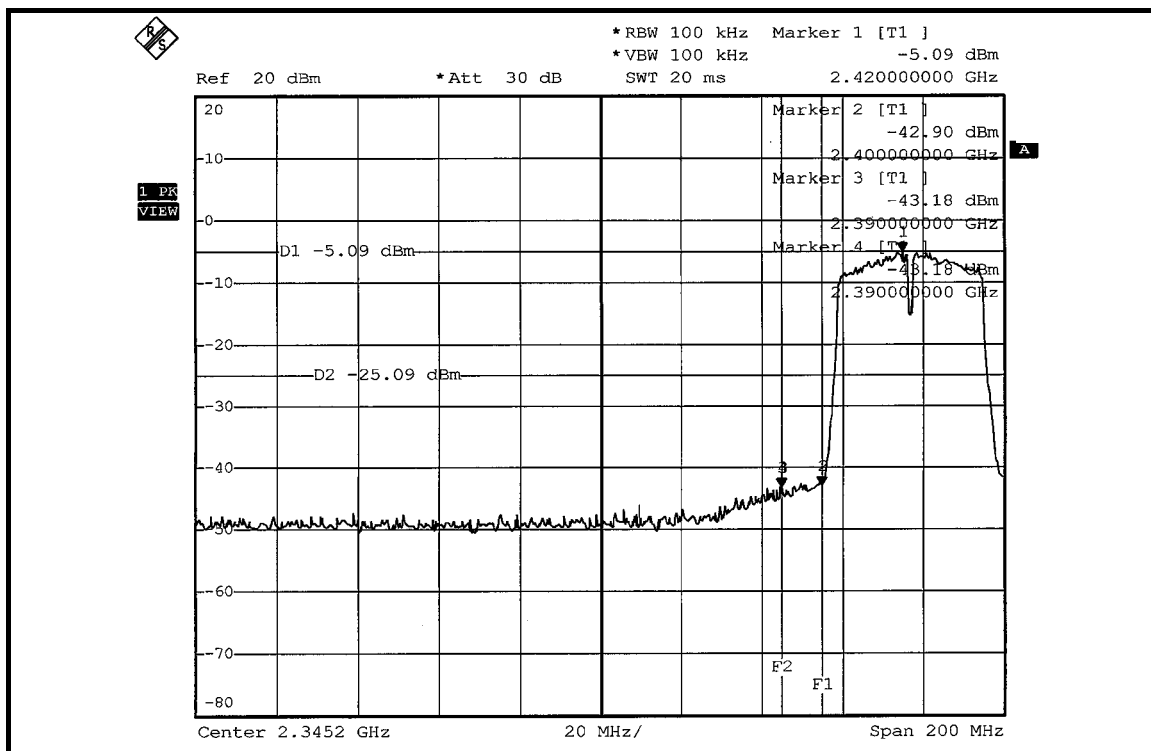
The band edge emission plot of OFDM technique on the next page shows 38.09dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 105.21dBuV/m (Peak), so the maximum field strength in restrict band is $105.21 - 38.09 = 67.12\text{dBuV/m}$ which is under 74dBuV/m limit.

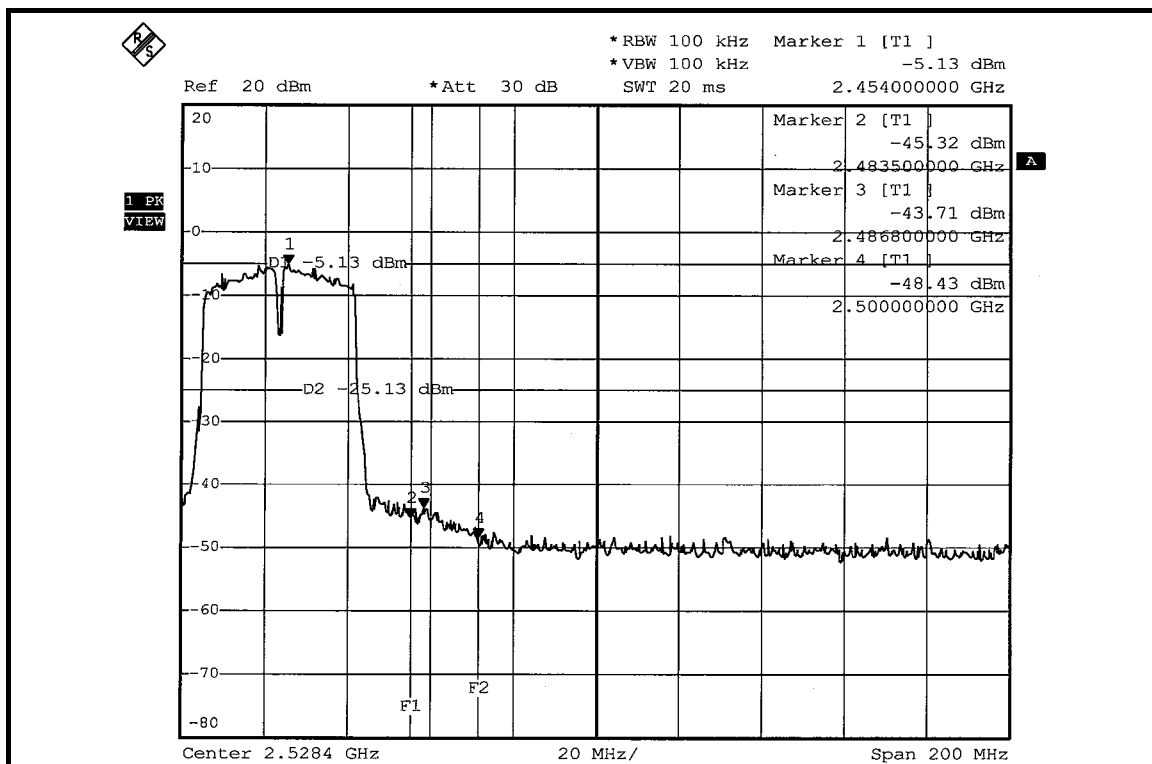
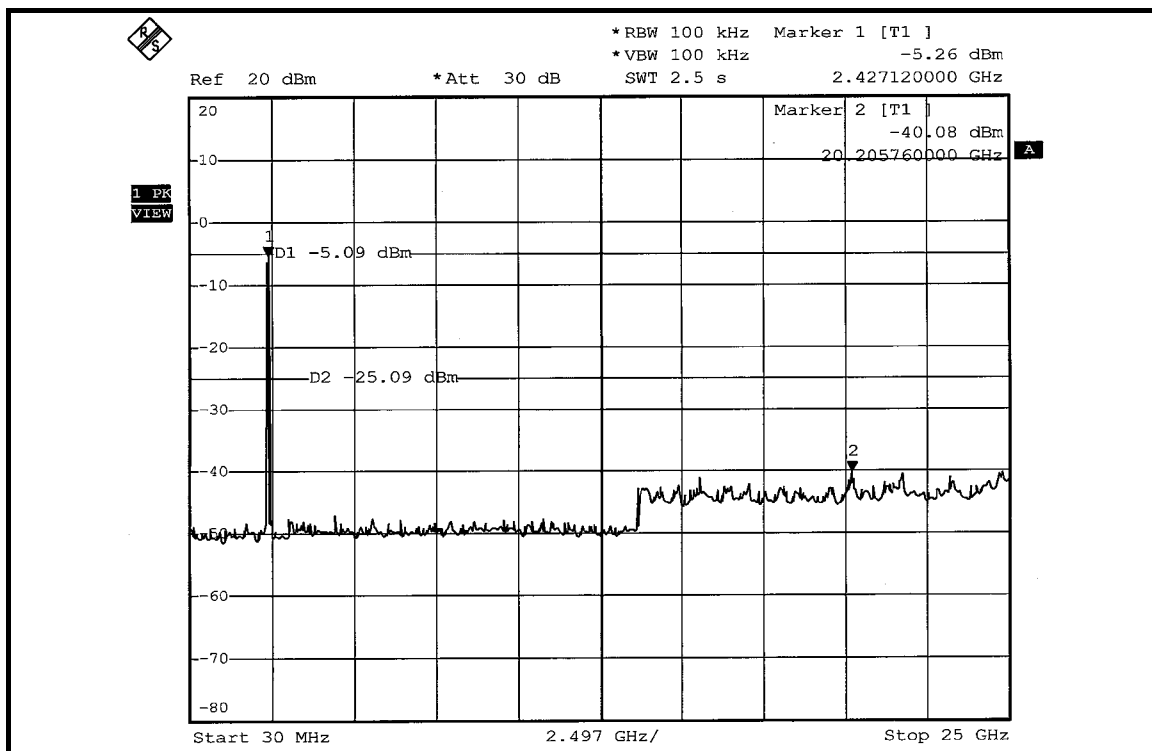
The band edge emission plot of OFDM technique on the next page shows 43.01dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 95.38dBuV/m (Average), so the maximum field strength in restrict band is $95.38 - 43.01 = 52.37\text{dBuV/m}$ which is under 54dBuV/m limit.

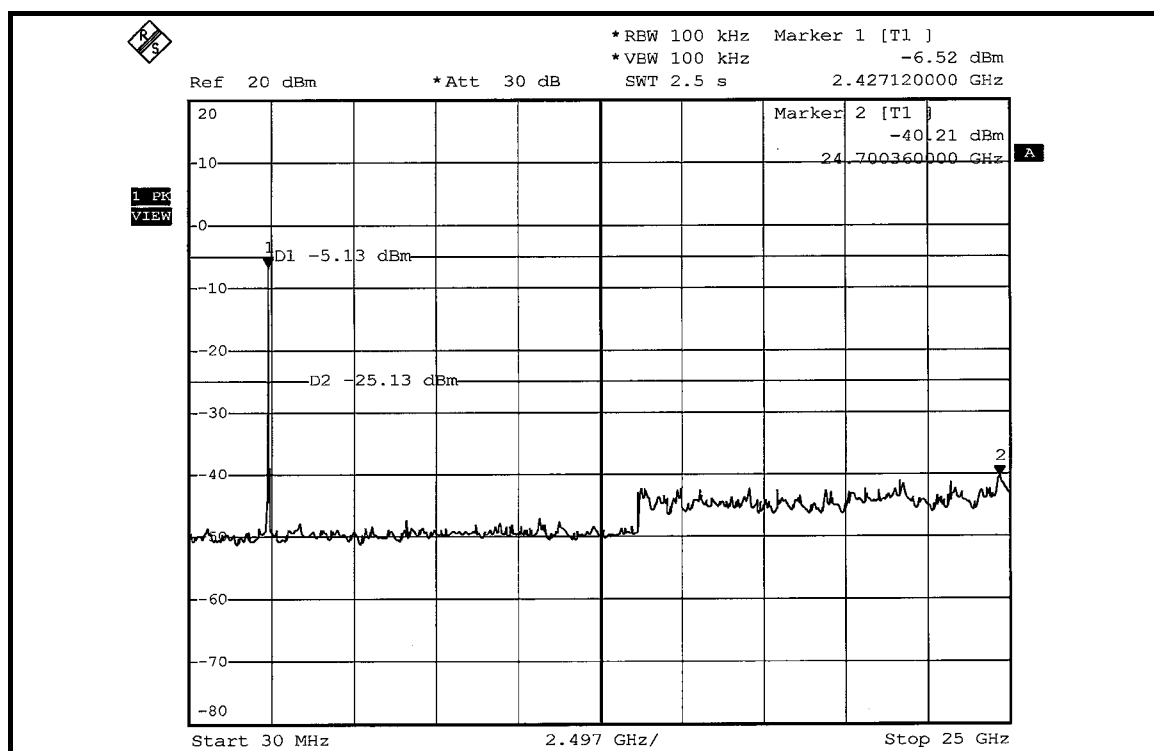
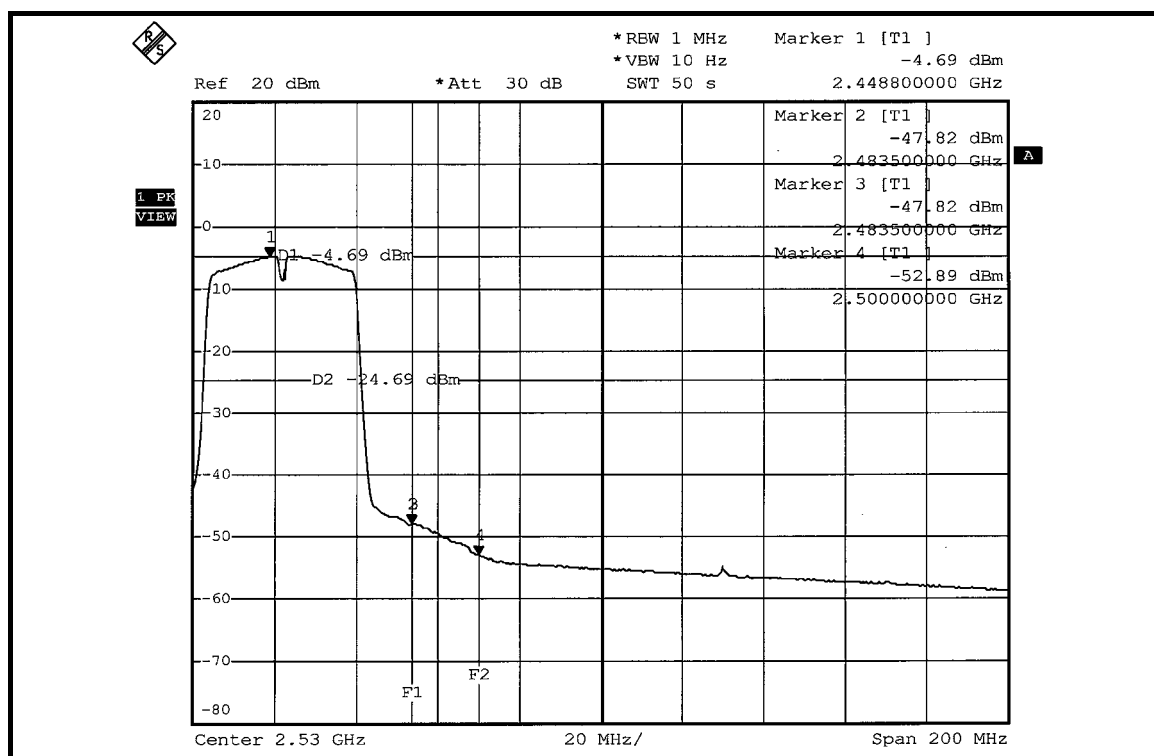
NOTE 2:

The band edge emission plot of OFDM technique on the next second page shows 38.58dBc between carrier maximum power and local maximum emission in restrict band (2.4868GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.2.7 is 105.49dBuV/m (Peak), so the maximum field strength in restrict band is $105.49 - 38.58 = 66.91\text{dBuV/m}$ which is under 74dBuV/m limit.

The band edge emission plot of OFDM technique on the next third page shows 43.13dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.2.7 is 95.82dBuV/m (Average), so the maximum field strength in restrict band is $95.82 - 43.13 = 52.69\text{dBuV/m}$ which is under 54dBuV/m limit.







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

NOTE 1:

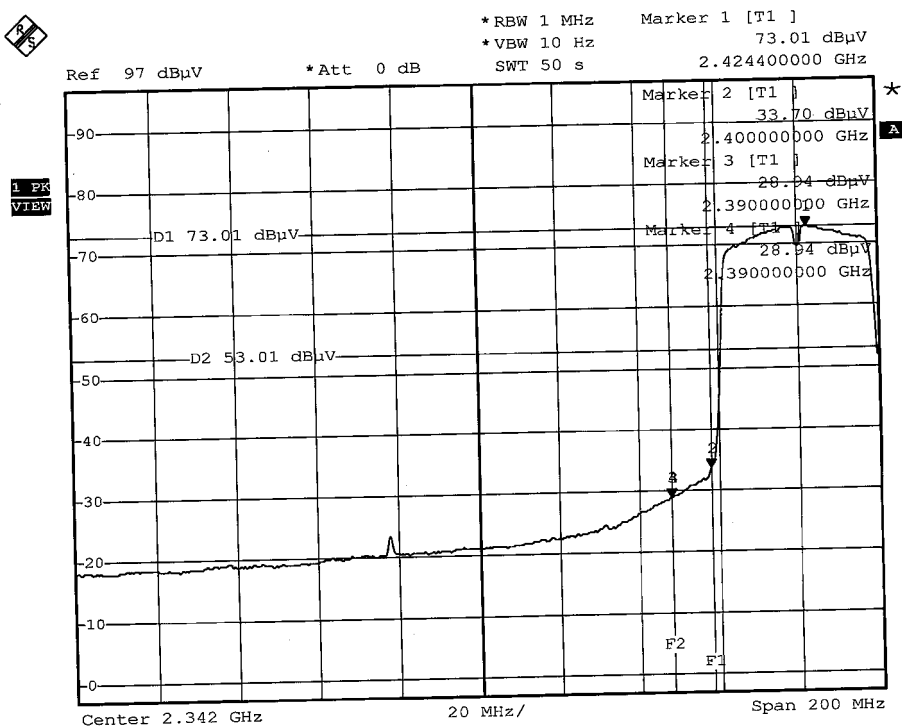
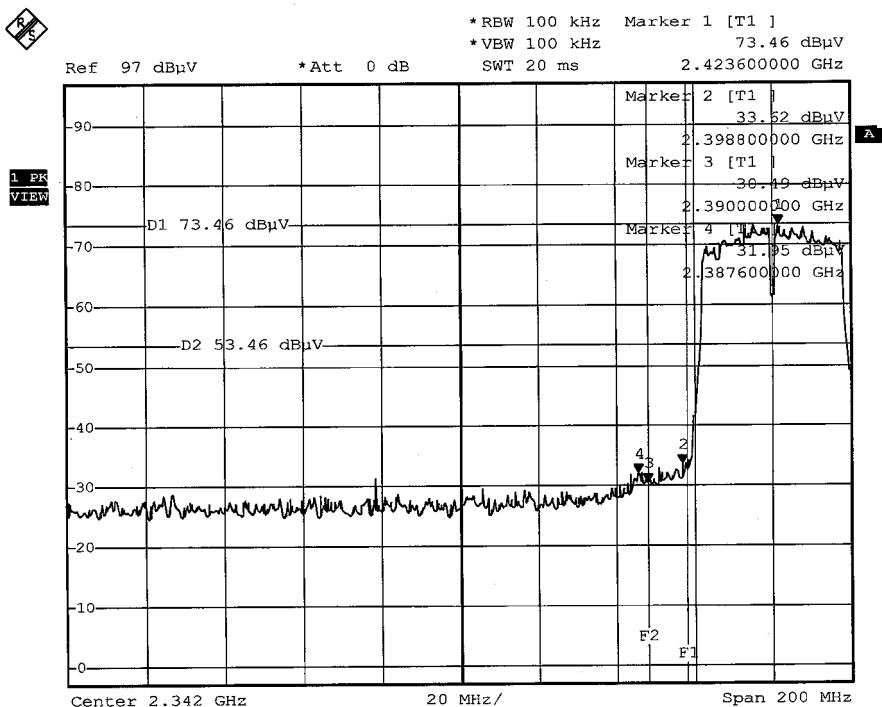
The band edge emission plot of OFDM technique on the next page shows 41.51dBc between carrier maximum power and local maximum emission in restrict band (2.3876GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 104.29dBuV/m (Peak), so the maximum field strength in restrict band is $104.29 - 41.51 = 62.78$ dBuV/m which is under 74dBuV/m limit.

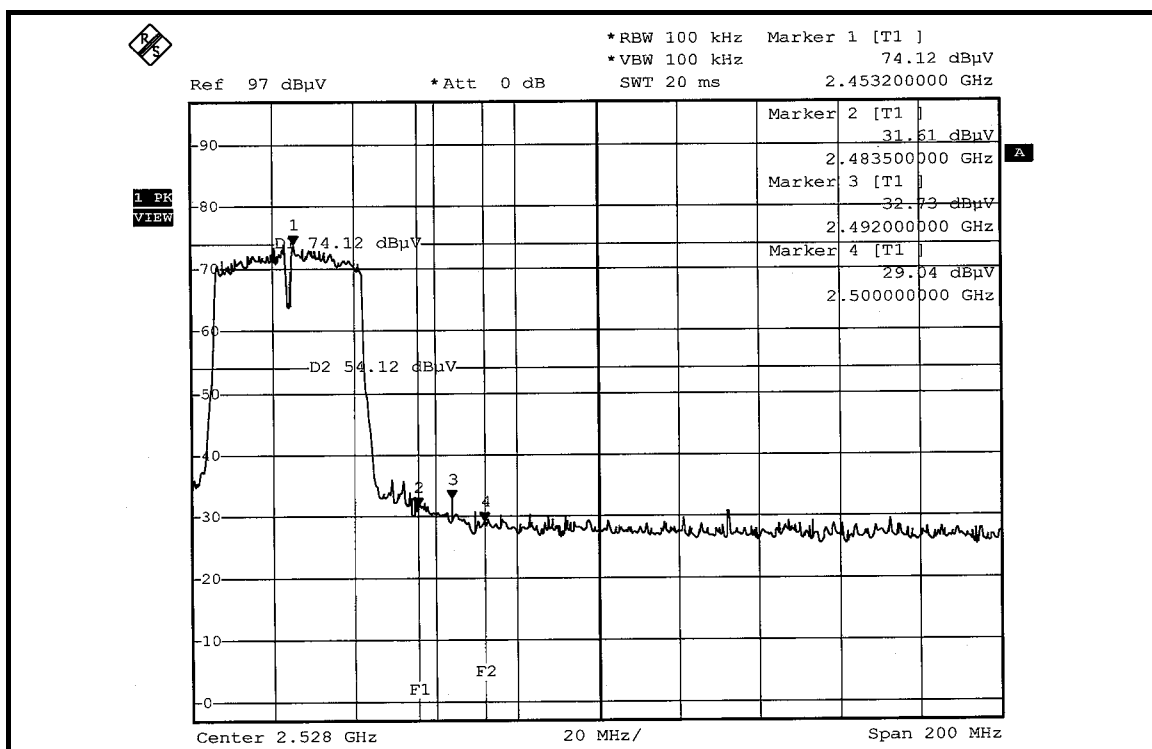
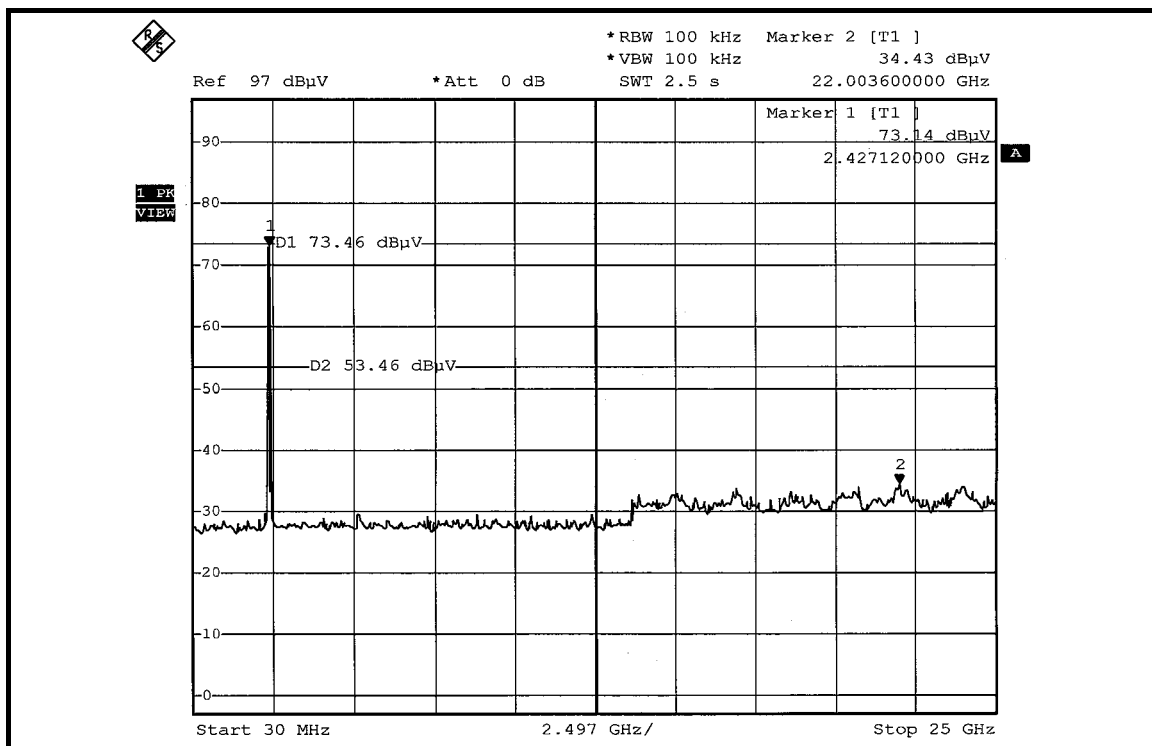
The band edge emission plot of OFDM technique on the next page shows 44.07dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 94.07dBuV/m (Average), so the maximum field strength in restrict band is $94.07 - 44.07 = 50.00$ dBuV/m which is under 54dBuV/m limit.

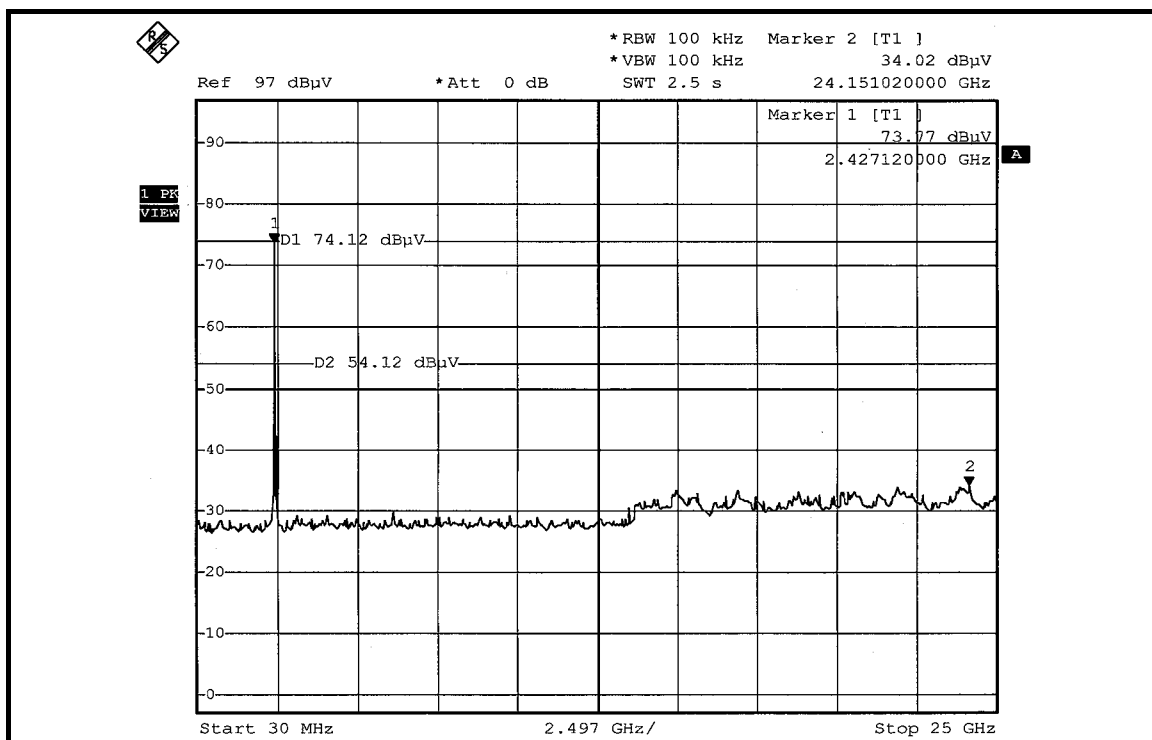
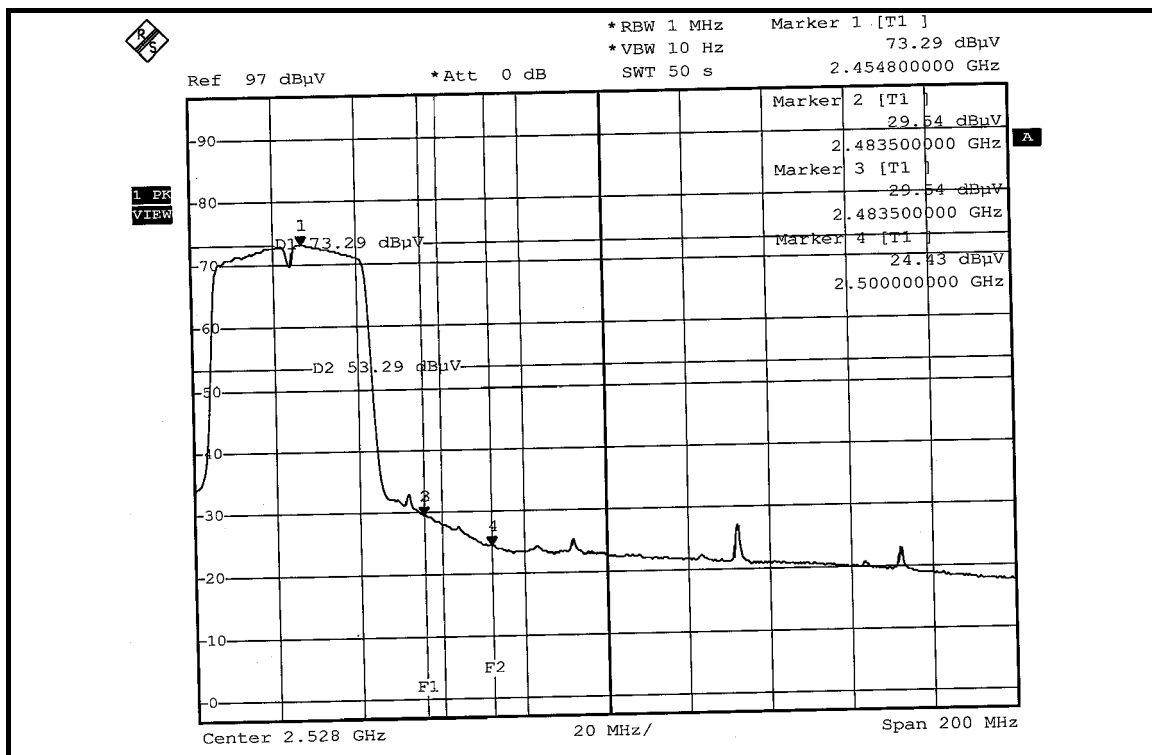
NOTE 2:

The band edge emission plot of OFDM technique on the next second page shows 41.39dBc between carrier maximum power and local maximum emission in restrict band (2.4920GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.2.7 is 104.40dBuV/m (Peak), so the maximum field strength in restrict band is $104.40 - 41.39 = 63.01$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of OFDM technique on the next third page shows 43.75dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.2.7 is 94.25dBuV/m (Average), so the maximum field strength in restrict band is $94.25 - 43.75 = 50.50$ dBuV/m which is under 54dBuV/m limit.







4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

4.7.2 ANTENNA CONNECTED CONSTRUCTION

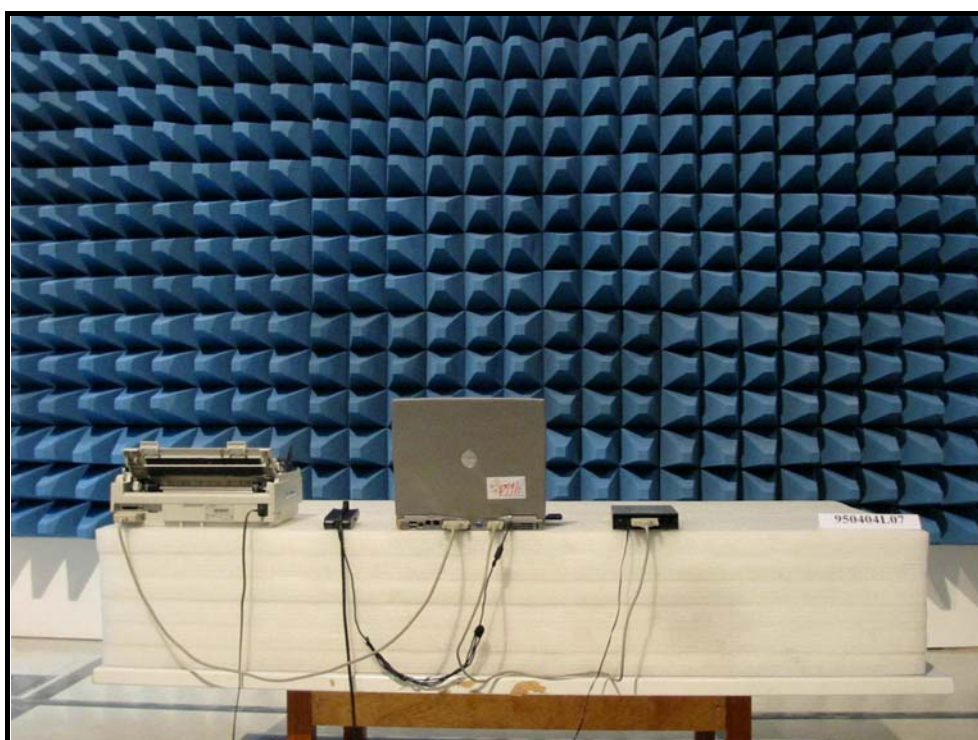
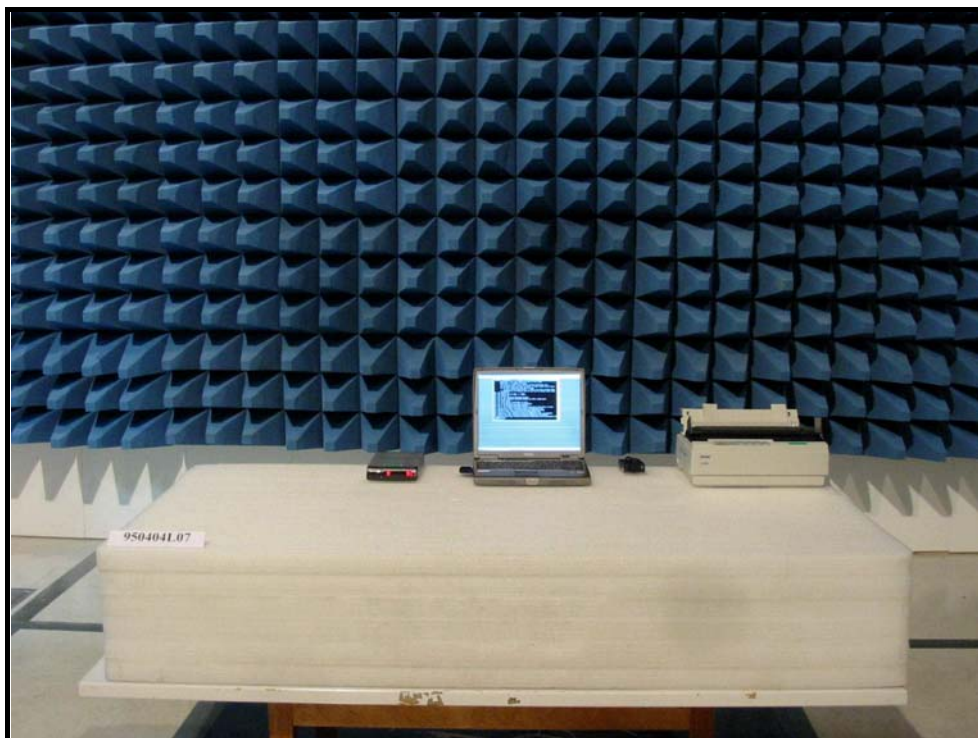
The antenna used in this product is printed antenna without connector. The maximum Gain of the antenna is 3.6dBi.

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST



6. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml.
If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Linko RF Lab.

Tel: 886-3-3270910

Fax: 886-3-3270892

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

APPENDIX-A

MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.