FCC TEST REPORT

REPORT NO.: RF950420L10

MODEL NO.: WMP300N

RECEIVED: Apr. 20, 2006

TESTED: Apr. 10 ~ Apr. 14, 2006

ISSUED: Apr. 28, 2006

APPLICANT: Cisco-Linksys LLC

ADDRESS: 121 Theory Drive Irvine, CA 92617 (USA)

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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1. CERTIFICATION

PRODUCT:	Wireless-N PCI Adapter
MODEL NO.:	WMP300N
BRAND:	Linksys
APPLICANT:	Cisco-Linksys LLC
TESTED:	Apr. 10 ~ Apr. 14, 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	: Jessie Wang Jessie Wang	**DATE:**	Apr. 28, 2006
TECHNICAL ACCEPTANCE Responsible for RF	: Long Chen Long Chen	**DATE:**	Apr. 28, 2006
APPROVED BY	: Gary Chang Gary Chang / Supervisor	**DATE:**	Apr. 28, 2006

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 –14.40dB at 0.642MHz.
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 -1.00dB 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	3.55dB
	200MHz ~1000MHz	3.58dB
	1GHz ~ 18GHz	1.10dB
	18GHz ~ 40GHz	0.91dB

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	Wireless-N PCI Adapter
MODEL NO.	WMP300N
FCC ID	Q87-WMP300N
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): 130/ 117/ 104/ 78/ 52/ 39/ 26/ 13Mbps Draft 802.11n (40MHz): 270/ 243/ 216/ 162/ 108/ 81/ 54/ 27Mbps
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	321.139mW
ANTENNA TYPE	Dipole antenna with –0.48dBi gain
DATA CABLE	NA
I/O PORTS	NA

NOTE:

1. The EUT incorporates a MIMO function with 802.11b, 802.11g, draft 802.11n. Physically, the card provides two completed transmitters and three receivers.
2. The EUT is 2 * 2 spatial MIMO (2Tx & 2Rx) without beam forming function that only operate dual chain configuration (both chain 0 and chain 1 transceivers are operational).
3. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, only set 0 ~ 15 of “MCS” (MCS: Modulation and Coding Schemes) for dual Tx.
4. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g products.
5. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 270Mbps.
6. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

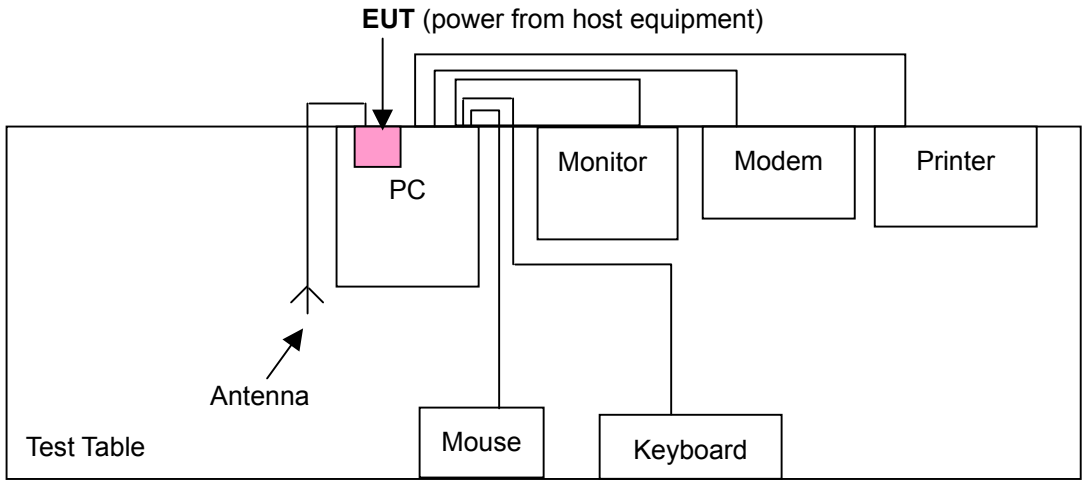
Eleven channels are provided for 802.11b, 802.11g, draft 802.11n (20MHz):

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

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

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

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

Where **PLC:** Power Line Conducted Emission **RE < 1G:** Radiated Emission below 1GHz

RE ≥ 1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

POWER LINE CONDUCTED EMISSION TEST:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX CONDITION
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	Single
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	13	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	27	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	13	Dual
Draft 802.11n (40MHz)	1 to 7	1	OFDM	BPSK	27	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	13	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	27	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	13	Dual
Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	27	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	13	Dual
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	27	Dual

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C. (15.247)

ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PC	MSI	Hetis 865G Giga	3AS0119572	FCC DoC Approved
2	PRINTER	EPSON	LQ-300+	DCGY054146	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008260	IFAXDM1414
4	LCD MONITOR	ACER	AL1721	ET.L0408.0104 04001F9PK00	FCC DoC Approved
5	MOUSE	HP	M-S69	M4-010569	INZ211443
6	USB KEYBOARD	BTC	5200U	G09302046726	E5XKB5122U

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.6 m shielded without core
3	1.8 m shielded without core
4	1.8 m shielded without core
5	1.3 m shielded without core
6	1.2 m shielded without core

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 (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 11, 2006
RF signal cable Woken	5D-FB	Cable-HYC01-01	Jan. 06, 2007
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Feb. 15, 2007
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.

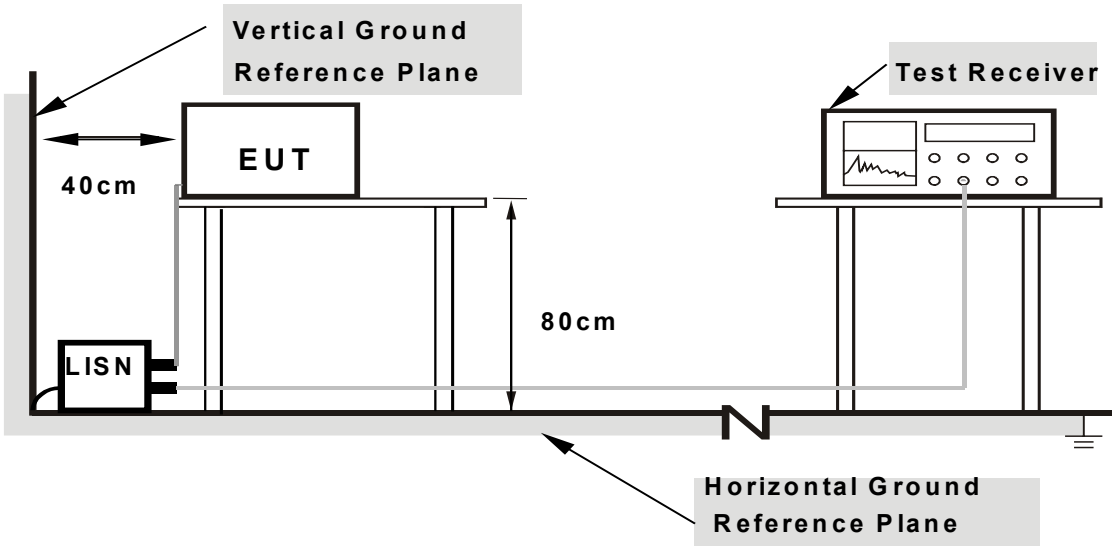
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

a. Plugged the EUT to the computer system.
b. The computer system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
c. The computer system sent "H" messages to its screen.
d. The computer system sent "H" messages to its modem.
e. The computer system sent "H" messages to printer and the printer printed them on paper.
f. Steps c ~ e were repeated.

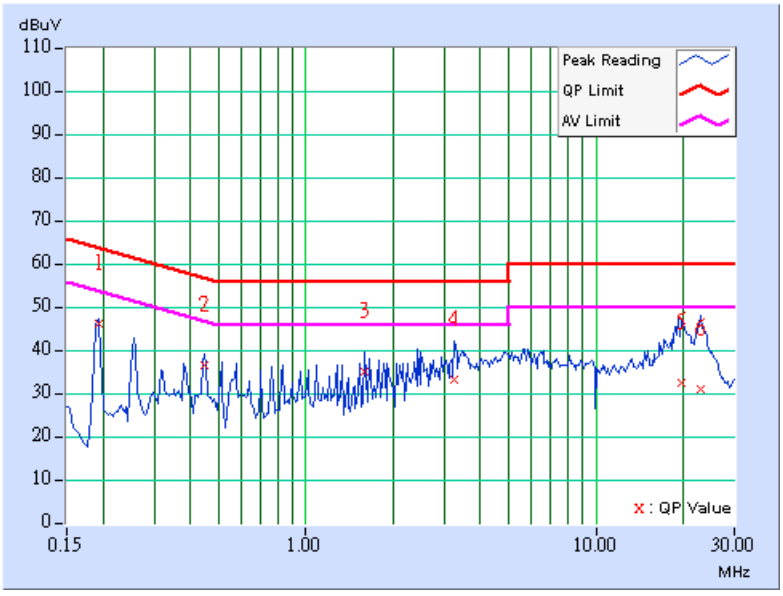
4.1.7 TEST RESULTS

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	20deg. C, 70%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	0.193	0.10	45.23	-	45.33	-	63.91	53.91	-18.58	-
2	0.447	0.11	35.88	-	35.99	-	56.93	46.93	-20.95	-
3	1.594	0.20	34.16	-	34.36	-	56.00	46.00	-21.64	-
4	3.254	0.37	32.26	-	32.63	-	56.00	46.00	-23.37	-
5	19.801	0.82	31.64	-	32.46	-	60.00	50.00	-27.54	-
6	22.980	0.95	30.12	-	31.07	-	60.00	50.00	-28.93	-

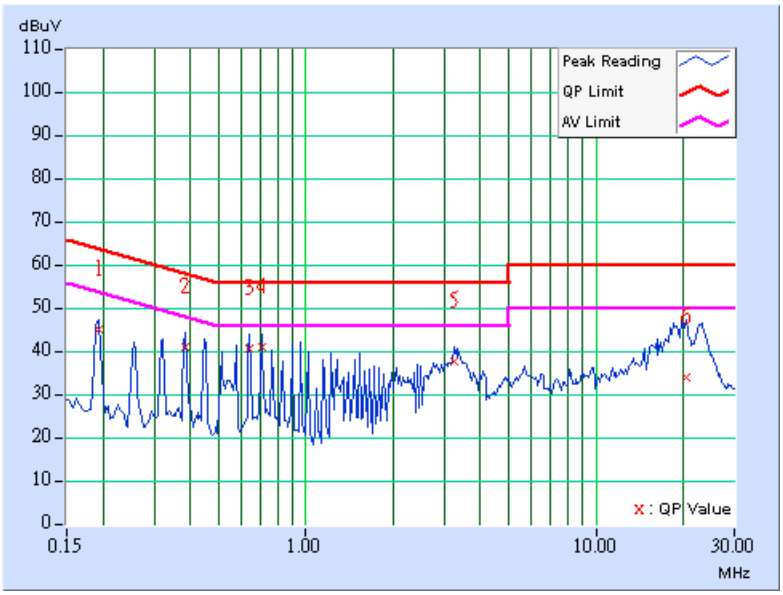
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	20deg. C, 70%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	0.193	0.10	44.41	-	44.51	-	63.91	53.91	-19.40	-
2	0.384	0.10	40.48	-	40.58	-	58.18	48.18	-17.60	-
3	0.642	0.10	40.29	-	40.39	-	56.00	46.00	-15.61	-
4	0.705	0.10	40.43	-	40.53	-	56.00	46.00	-15.47	-
5	3.266	0.31	37.18	-	37.49	-	56.00	46.00	-18.51	-
6	20.406	0.63	33.34	-	33.97	-	60.00	50.00	-26.03	-

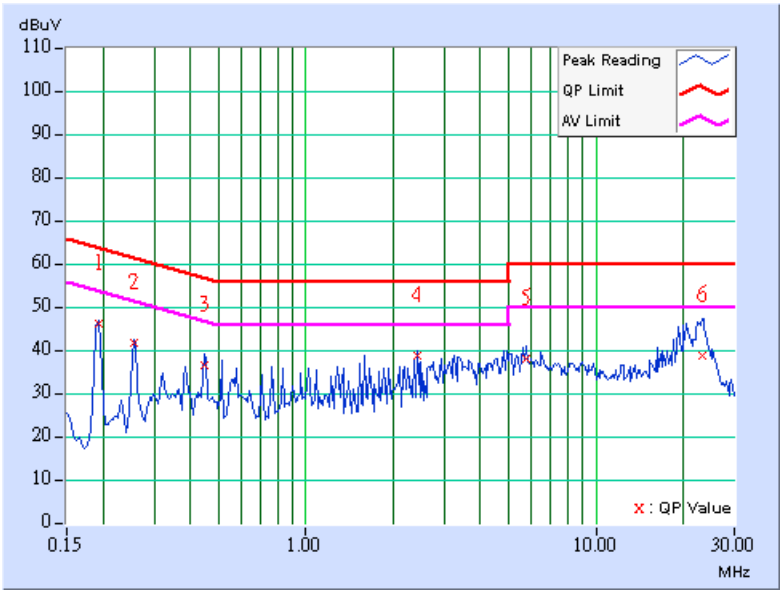
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	20deg. C, 70%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	0.193	0.10	45.35	-	45.45	-	63.91	53.91	-18.46	-
2	0.255	0.10	40.91	-	41.01	-	61.58	51.58	-20.57	-
3	0.447	0.11	35.78	-	35.89	-	56.93	46.93	-21.05	-
4	2.438	0.26	37.81	-	38.07	-	56.00	46.00	-17.93	-
5	5.770	0.47	37.13	-	37.60	-	60.00	50.00	-22.40	-
6	23.188	0.96	37.89	-	38.85	-	60.00	50.00	-21.15	-

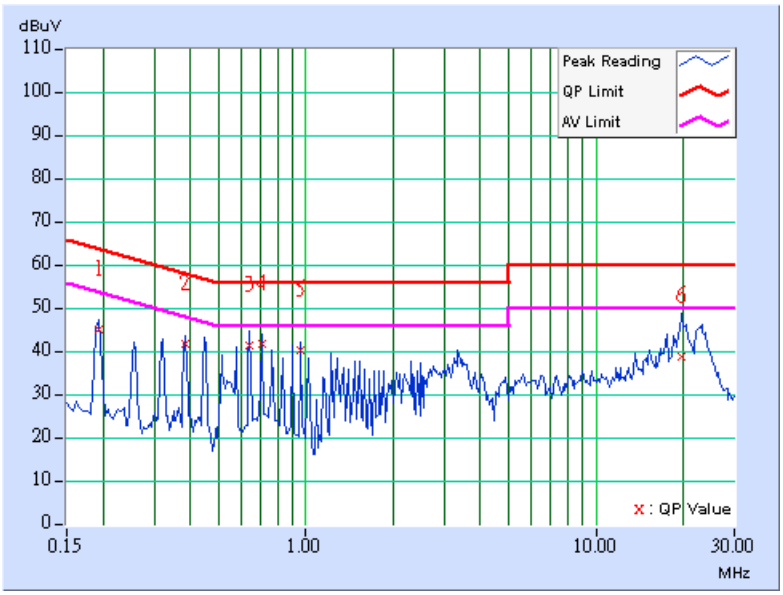
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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	20deg. C, 70%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	0.193	0.10	44.68	-	44.78	-	63.91	53.91	-19.13	-
2	0.384	0.10	41.15	-	41.25	-	58.18	48.18	-16.93	-
3	0.642	0.10	40.96	-	41.06	-	56.00	46.00	-14.94	-
4	0.705	0.10	41.06	-	41.16	-	56.00	46.00	-14.84	-
5	0.963	0.10	39.90	-	40.00	-	56.00	46.00	-16.00	-
6	19.793	0.63	38.27	-	38.90	-	60.00	50.00	-21.10	-

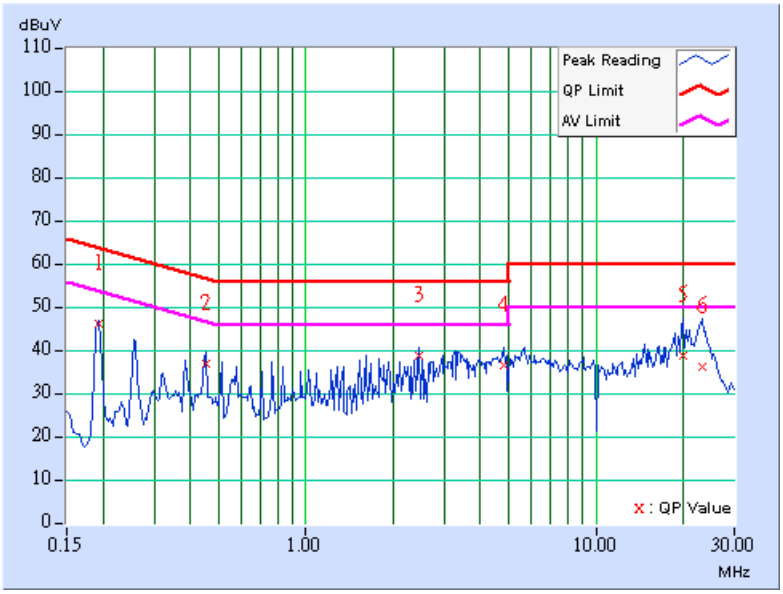
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	20deg. C, 70%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	0.193	0.10	45.43	-	45.53	-	63.91	53.91	-18.38	-
2	0.451	0.11	36.23	-	36.34	-	56.86	46.86	-20.52	-
3	2.441	0.26	38.03	-	38.29	-	56.00	46.00	-17.71	-
4	4.813	0.47	35.86	-	36.33	-	56.00	46.00	-19.67	-
5	19.965	0.83	37.76	-	38.59	-	60.00	50.00	-21.41	-
6	23.168	0.96	35.33	-	36.29	-	60.00	50.00	-23.71	-

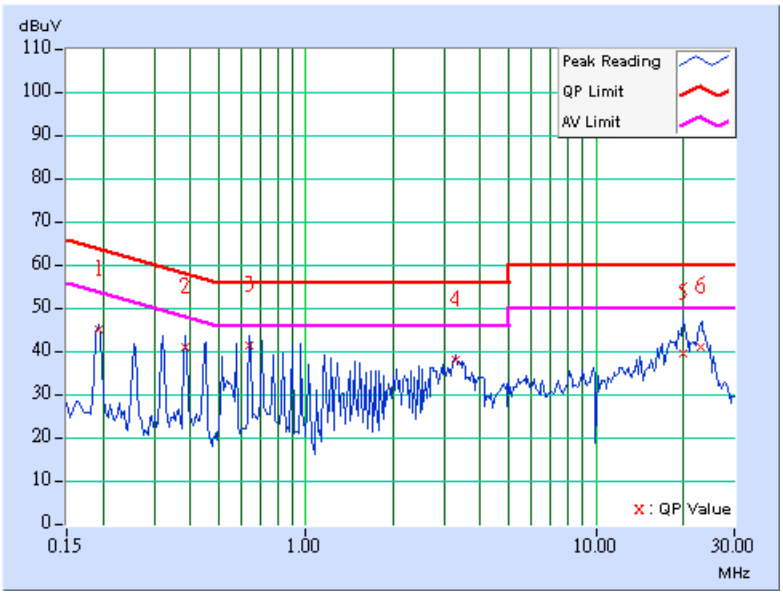
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	20deg. C, 70%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	0.193	0.10	44.43	-	44.53	-	63.91	53.91	-19.38	-
2	0.384	0.10	40.46	-	40.56	-	58.18	48.18	-17.62	-
3	0.642	0.10	40.98	-	41.08	-	56.00	46.00	-14.92	-
4	3.273	0.31	37.50	-	37.81	-	56.00	46.00	-18.19	-
5	19.973	0.63	38.88	-	39.51	-	60.00	50.00	-20.49	-
6	22.992	0.63	40.63	-	41.26	-	60.00	50.00	-18.74	-

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.

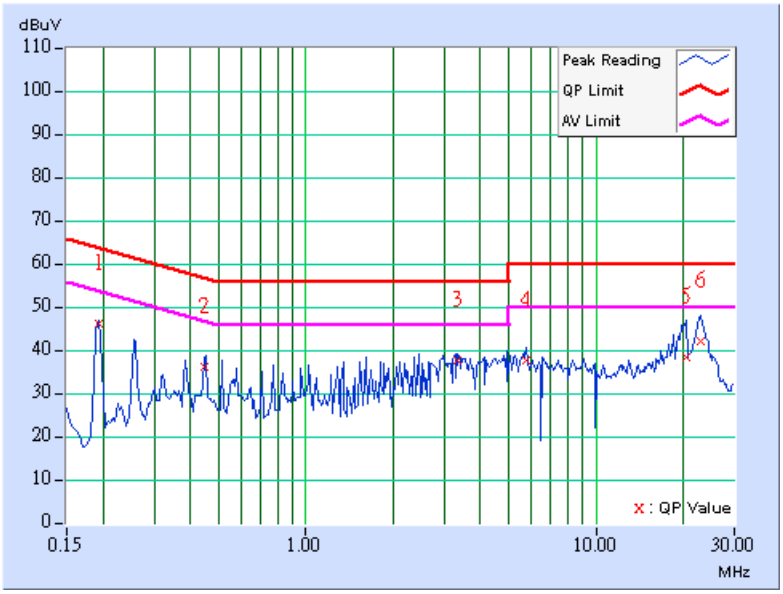


DRAFT 802.11n (20MHz) OFDM MODULATION: DUAL TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	13Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	45.35	-	45.45	-	63.91	53.91	-18.46	-
2	0.447	0.11	35.40	-	35.51	-	56.93	46.93	-21.43	-
3	3.340	0.38	36.83	-	37.21	-	56.00	46.00	-18.79	-
4	5.785	0.47	36.78	-	37.25	-	60.00	50.00	-22.75	-
5	20.621	0.85	37.40	-	38.25	-	60.00	50.00	-21.75	-
6	23.063	0.95	41.27	-	42.22	-	60.00	50.00	-17.78	-

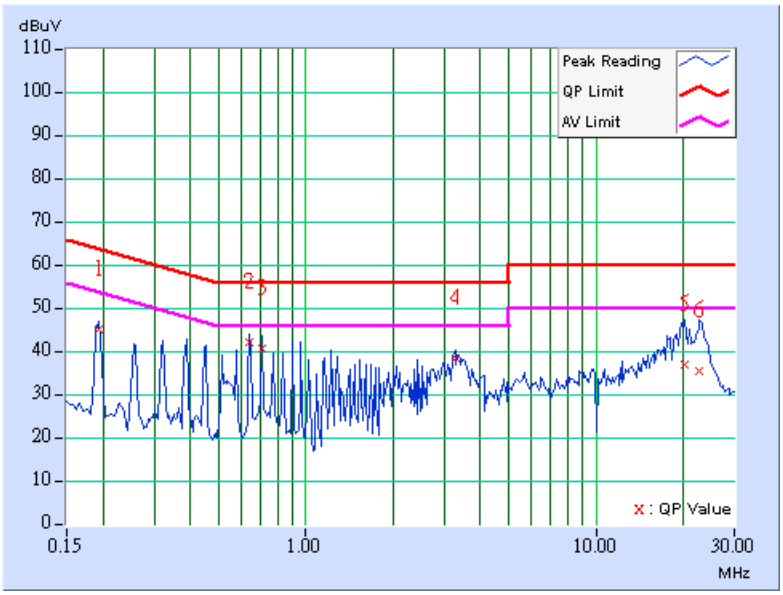
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	13Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	44.56	-	44.66	-	63.91	53.91	-19.25	-
2	0.642	0.10	41.44	-	41.54	-	56.00	46.00	-14.46	-
3	0.709	0.10	40.09	-	40.19	-	56.00	46.00	-15.81	-
4	3.277	0.31	37.78	-	38.09	-	56.00	46.00	-17.91	-
5	20.355	0.63	36.25	-	36.88	-	60.00	50.00	-23.12	-
6	22.793	0.63	34.76	-	35.39	-	60.00	50.00	-24.61	-

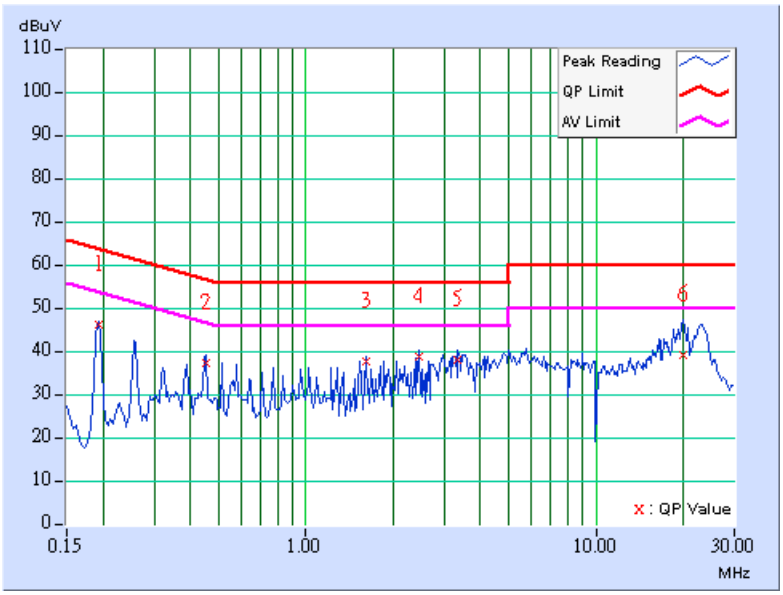
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	13Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	45.37	-	45.47	-	63.91	53.91	-18.44	-
2	0.451	0.11	36.43	-	36.54	-	56.86	46.86	-20.32	-
3	1.605	0.20	37.03	-	37.23	-	56.00	46.00	-18.77	-
4	2.441	0.26	38.05	-	38.31	-	56.00	46.00	-17.69	-
5	3.344	0.38	37.37	-	37.75	-	56.00	46.00	-18.25	-
6	19.980	0.83	38.40	-	39.23	-	60.00	50.00	-20.77	-

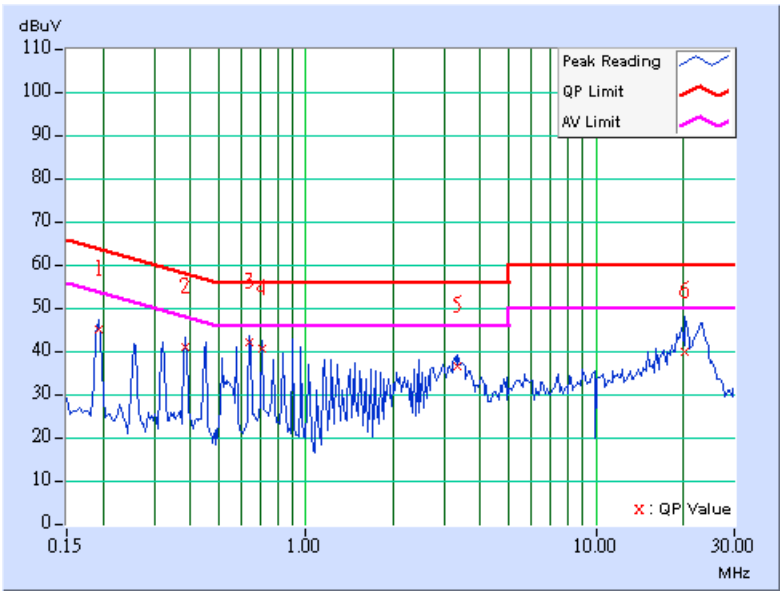
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	13Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	44.45	-	44.55	-	63.91	53.91	-19.36	-
2	0.384	0.10	40.48	-	40.58	-	58.18	48.18	-17.60	-
3	**0.642**	**0.10**	**41.50**	**-**	**41.60**	**-**	**56.00**	**46.00**	**-14.40**	**-**
4	0.709	0.10	40.15	-	40.25	-	56.00	46.00	-15.75	-
5	3.344	0.31	36.05	-	36.36	-	56.00	46.00	-19.64	-
6	20.238	0.63	39.28	-	39.91	-	60.00	50.00	-20.09	-

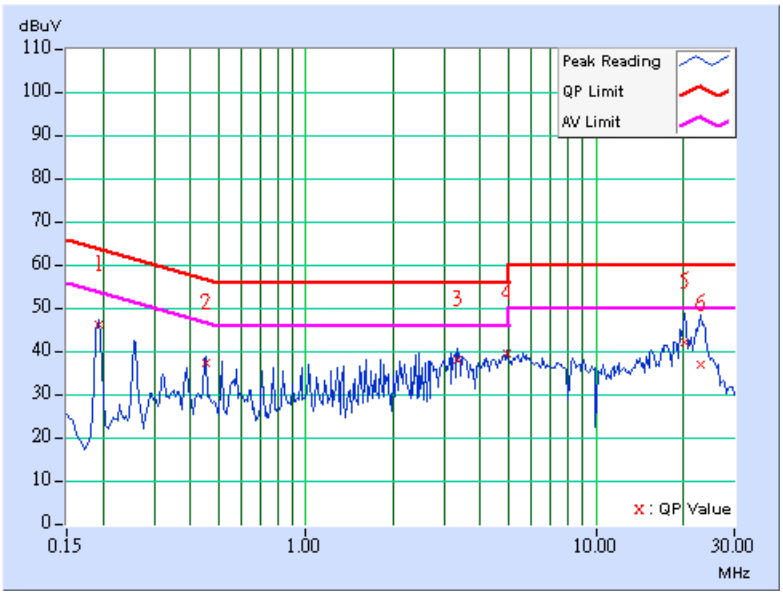
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	13Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	45.37	-	45.47	-	63.91	53.91	-18.44	-
2	0.451	0.11	36.33	-	36.44	-	56.86	46.86	-20.42	-
3	3.344	0.38	37.17	-	37.55	-	56.00	46.00	-18.45	-
4	4.949	0.47	38.58	-	39.05	-	56.00	46.00	-16.95	-
5	20.117	0.83	41.19	-	42.02	-	60.00	50.00	-17.98	-
6	22.938	0.95	36.26	-	37.21	-	60.00	50.00	-22.79	-

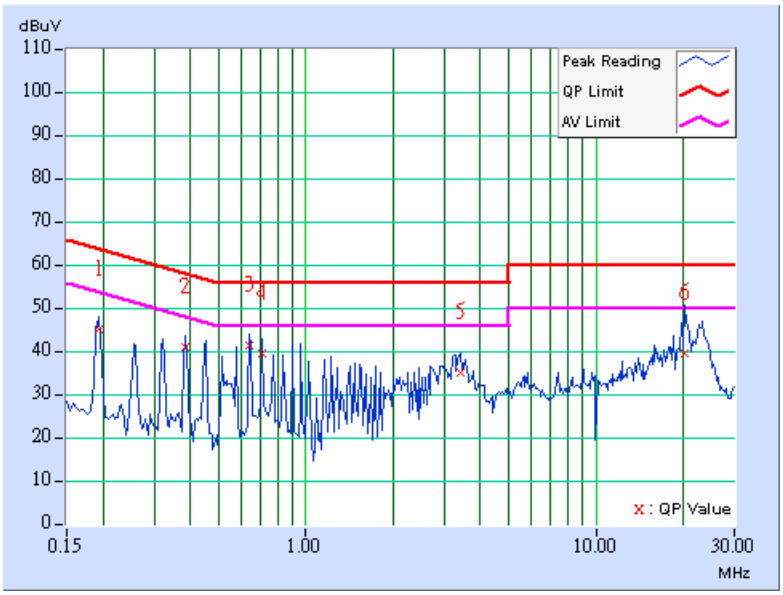
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	13Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	44.70	-	44.80	-	63.91	53.91	-19.11	-
2	0.384	0.10	40.38	-	40.48	-	58.18	48.18	-17.70	-
3	0.642	0.10	40.92	-	41.02	-	56.00	46.00	-14.98	-
4	0.705	0.10	39.16	-	39.26	-	56.00	46.00	-16.74	-
5	3.406	0.32	34.41	-	34.73	-	56.00	46.00	-21.27	-
6	20.250	0.63	39.00	-	39.63	-	60.00	50.00	-20.37	-

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.

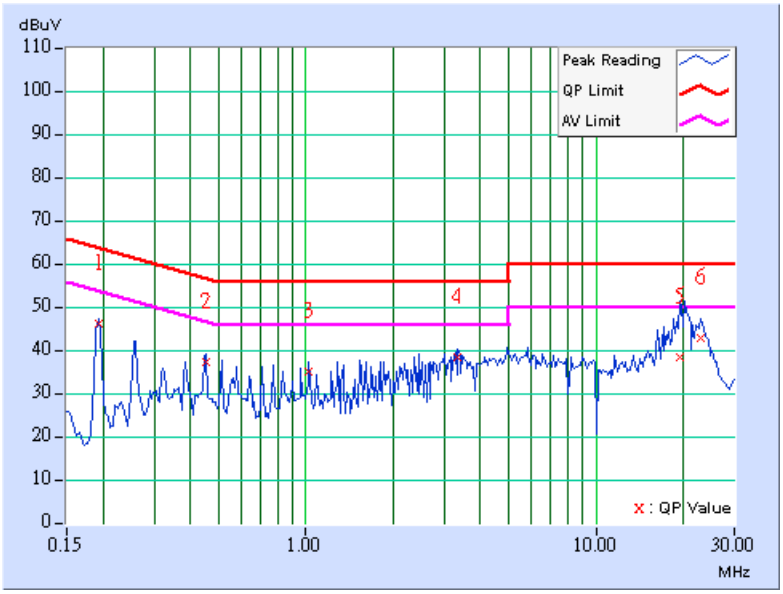


DRAFT 802.11n (40MHz) OFDM MODULATION: DUAL TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	27Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	45.41	-	45.51	-	63.91	53.91	-18.40	-
2	0.451	0.11	36.47	-	36.58	-	56.86	46.86	-20.28	-
3	1.027	0.20	34.28	-	34.48	-	56.00	46.00	-21.52	-
4	3.344	0.38	37.65	-	38.03	-	56.00	46.00	-17.97	-
5	19.551	0.81	37.48	-	38.29	-	60.00	50.00	-21.71	-
6	23.020	0.95	42.06	-	43.01	-	60.00	50.00	-16.99	-

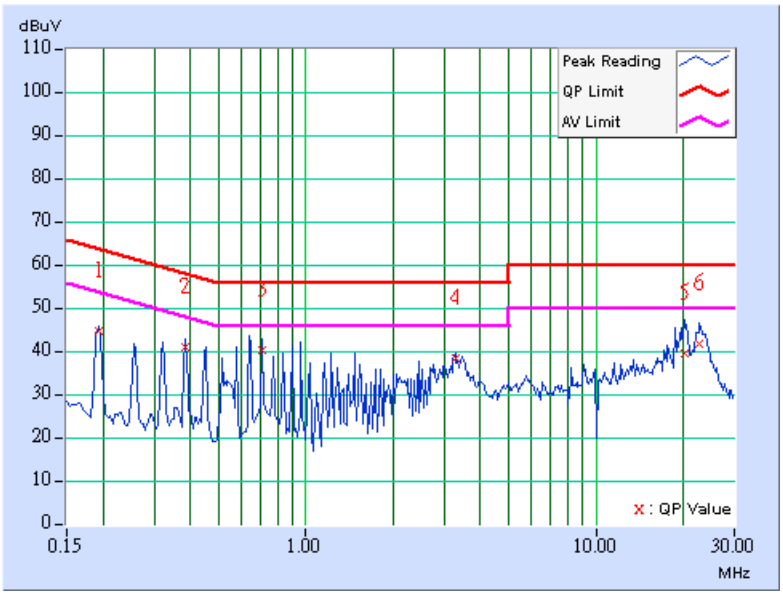
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	27Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	44.31	-	44.41	-	63.91	53.91	-19.50	-
2	0.384	0.10	40.32	-	40.42	-	58.18	48.18	-17.76	-
3	0.709	0.10	39.79	-	39.89	-	56.00	46.00	-16.11	-
4	3.277	0.31	37.80	-	38.11	-	56.00	46.00	-17.89	-
5	20.191	0.63	39.04	-	39.67	-	60.00	50.00	-20.33	-
6	22.762	0.63	41.15	-	41.78	-	60.00	50.00	-18.22	-

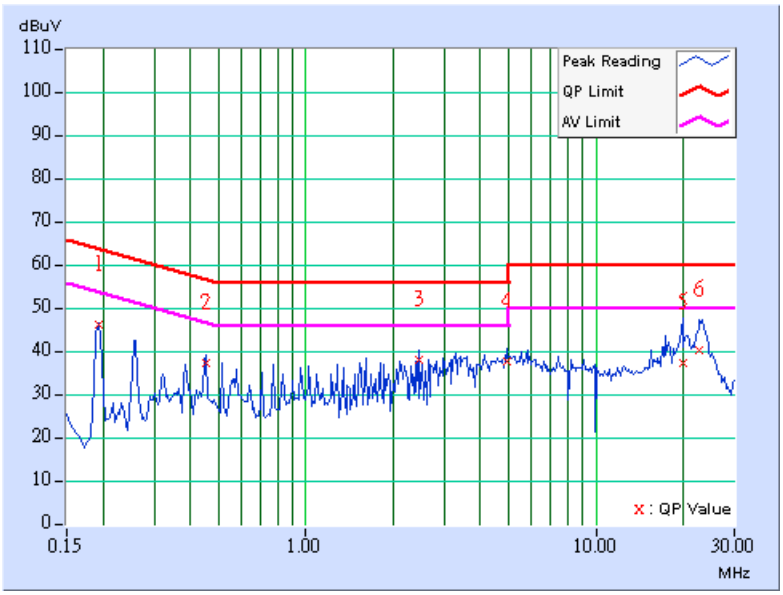
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	27Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	45.33	-	45.43	-	63.91	53.91	-18.48	-
2	0.451	0.11	36.35	-	36.46	-	56.86	46.86	-20.40	-
3	2.441	0.26	37.19	-	37.45	-	56.00	46.00	-18.55	-
4	4.949	0.47	36.86	-	37.33	-	56.00	46.00	-18.67	-
5	19.867	0.82	36.57	-	37.39	-	60.00	50.00	-22.61	-
6	22.828	0.94	39.33	-	40.27	-	60.00	50.00	-19.73	-

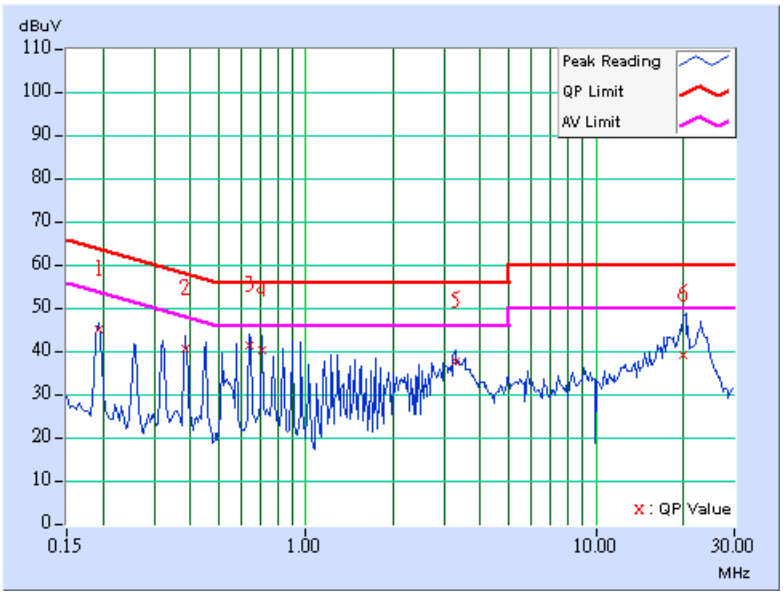
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	27Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	44.39	-	44.49	-	63.91	53.91	-19.42	-
2	0.384	0.10	40.24	-	40.34	-	58.18	48.18	-17.84	-
3	0.642	0.10	40.92	-	41.02	-	56.00	46.00	-14.98	-
4	0.709	0.10	39.85	-	39.95	-	56.00	46.00	-16.05	-
5	3.281	0.31	37.08	-	37.39	-	56.00	46.00	-18.61	-
6	20.004	0.63	38.74	-	39.37	-	60.00	50.00	-20.63	-

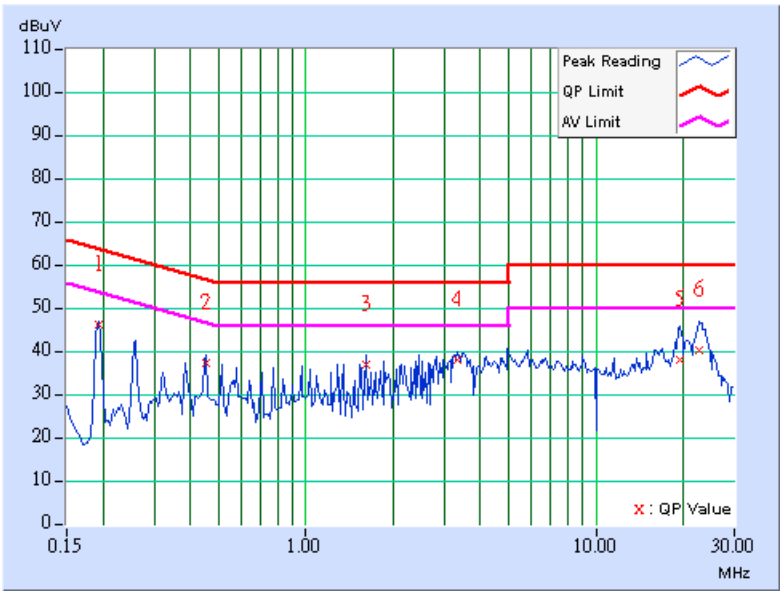
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	27Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	45.37	-	45.47	-	63.91	53.91	-18.44	-
2	0.451	0.11	36.43	-	36.54	-	56.86	46.86	-20.32	-
3	1.609	0.20	36.13	-	36.33	-	56.00	46.00	-19.67	-
4	3.348	0.38	37.39	-	37.77	-	56.00	46.00	-18.23	-
5	19.426	0.81	37.19	-	38.00	-	60.00	50.00	-22.00	-
6	22.582	0.93	39.40	-	40.33	-	60.00	50.00	-19.67	-

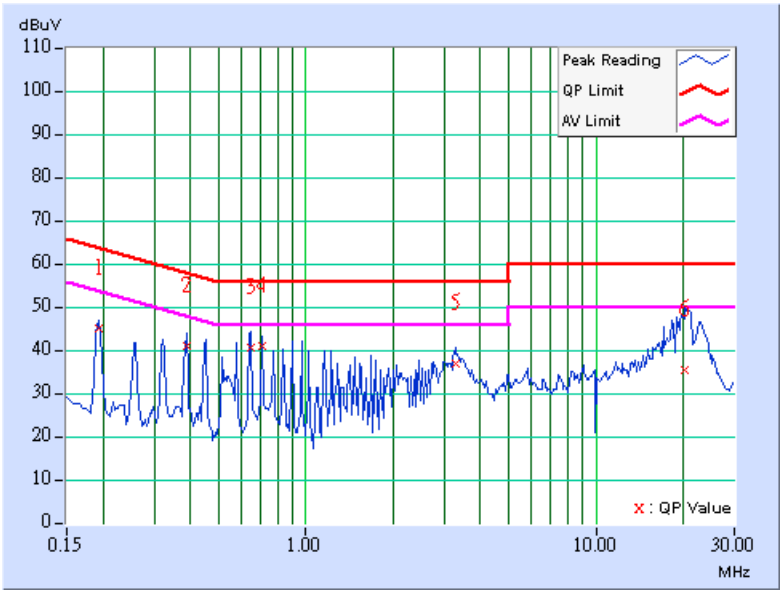
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	27Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 70%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	0.193	0.10	44.72	-	44.82	-	63.91	53.91	-19.09	-
2	0.388	0.10	40.50	-	40.60	-	58.10	48.10	-17.50	-
3	0.646	0.10	40.25	-	40.35	-	56.00	46.00	-15.65	-
4	0.709	0.10	40.47	-	40.57	-	56.00	46.00	-15.43	-
5	3.277	0.31	36.40	-	36.71	-	56.00	46.00	-19.29	-
6	20.191	0.63	34.94	-	35.57	-	60.00	50.00	-24.43	-

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	ESIB7	100188	Dec. 20, 2006
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 27, 2006
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 15, 2007
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 22, 2007
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170147	Jan. 26, 2007
Preamplifier Agilent	8449B	3008A01961	Oct. 23, 2006
Preamplifier Agilent	8447D	2944A10629	Oct. 27, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	214380/4	Jan. 16, 2007
RF signal cable HUBER+SUHNER	SUCOFLEX 104	219266/4	Jan. 16, 2007
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	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 1.

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 IC4924-2.

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.

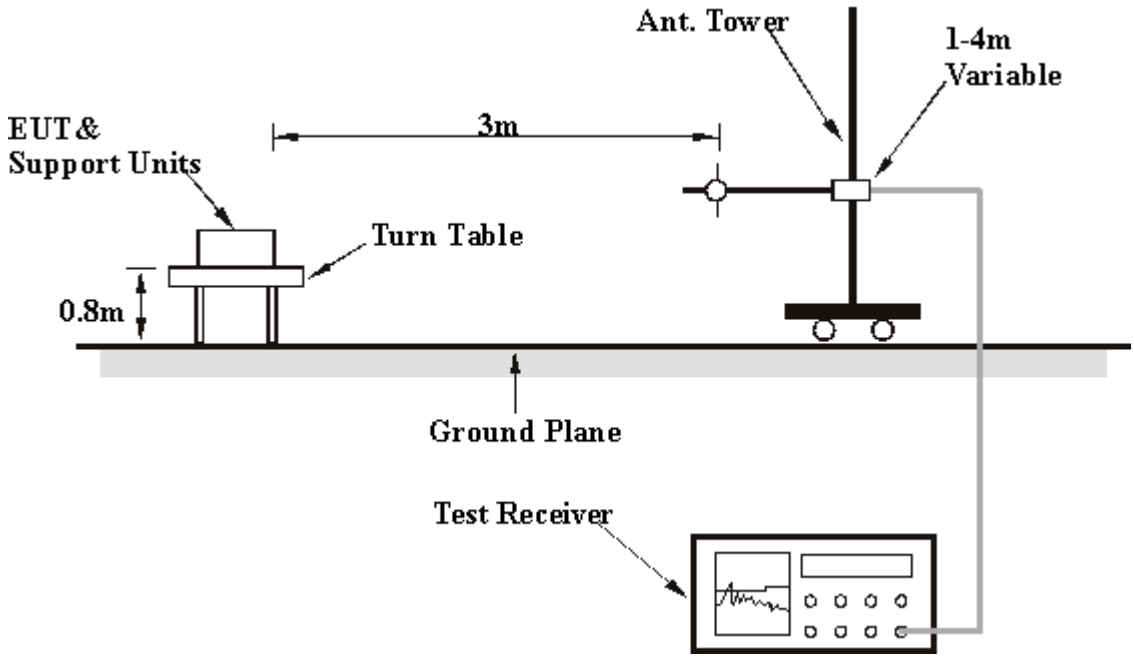
NOTE:

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 are 10Hz(for 802.11b, 802.11g) and 100Hz (for 802.11n) 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	25deg. C, 65%RH, 991hPa	**TESTED BY**	Long Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	168.02	30.31 QP	43.50	-13.19	1.50 H	106	17.39	12.91
2	302.14	36.01 QP	46.00	-9.99	1.00 H	283	20.37	15.64
3	350.74	32.98 QP	46.00	-13.02	2.00 H	244	16.67	16.31
4	370.18	34.71 QP	46.00	-11.29	1.50 H	139	17.76	16.95
5	401.28	32.88 QP	46.00	-13.12	1.00 H	283	14.92	17.96
6	595.67	33.33 QP	46.00	-12.67	1.00 H	166	10.96	22.37
7	675.37	32.56 QP	46.00	-13.44	1.00 H	49	8.97	23.59
8	743.41	32.99 QP	46.00	-13.01	1.00 H	217	7.43	25.56
9	805.61	32.32 QP	46.00	-13.68	1.00 H	217	6.25	26.07

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	168.02	35.23 QP	43.50	-8.27	1.00 V	208	22.31	12.91
2	302.14	33.88 QP	46.00	-12.12	1.00 V	157	18.24	15.64
3	387.68	32.35 QP	46.00	-13.65	1.00 V	172	14.82	17.53
4	574.29	32.88 QP	46.00	-13.12	1.00 V	196	11.07	21.81
5	636.49	33.29 QP	46.00	-12.71	1.50 V	43	10.40	22.88
6	675.37	33.03 QP	46.00	-12.97	2.00 V	235	9.44	23.59
7	737.58	33.18 QP	46.00	-12.82	1.00 V	196	7.81	25.37
8	805.61	32.90 QP	46.00	-13.10	1.00 V	31	6.83	26.07
9	914.47	34.05 QP	46.00	-11.95	1.00 V	208	6.30	27.76
10	947.52	34.65 QP	46.00	-11.35	1.00 V	157	5.35	29.30

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK for draft 802.11n (20MHz)	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TRANSFER RATE	13Mbps	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TESTED BY**	Long Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	168.02	31.18 QP	43.50	-12.32	1.00 H	205	18.27	12.91
2	302.14	36.73 QP	46.00	-9.27	1.50 H	208	21.09	15.64
3	370.18	32.43 QP	46.00	-13.57	2.00 H	55	15.48	16.95
4	638.44	33.00 QP	46.00	-13.00	1.00 H	73	10.10	22.90
5	671.48	32.51 QP	46.00	-13.49	1.00 H	73	9.00	23.50
6	743.41	34.08 QP	46.00	-11.92	2.00 H	73	8.52	25.56
7	811.44	32.26 QP	46.00	-13.74	1.00 H	322	6.11	26.15

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	168.02	33.85 QP	43.50	-9.65	1.50 V	133	20.94	12.91
2	436.27	36.99 QP	46.00	-9.01	1.00 V	331	18.32	18.67
3	638.44	33.51 QP	46.00	-12.49	1.00 V	82	10.60	22.90
4	675.37	33.55 QP	46.00	-12.45	2.00 V	343	9.95	23.59
5	739.52	32.12 QP	46.00	-13.88	2.00 V	343	6.69	25.44
6	879.48	33.39 QP	46.00	-12.61	1.50 V	217	6.48	26.91
7	914.47	32.74 QP	46.00	-13.26	1.50 V	133	4.99	27.76
8	947.52	33.51 QP	46.00	-12.49	1.00 V	73	4.21	29.30

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK for draft 802.11n (40MHz)	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TRANSFER RATE	27Mbps	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TESTED BY**	Long Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	168.02	34.97 QP	43.50	-8.53	1.00 H	76	22.06	12.91
2	269.10	33.53 QP	46.00	-12.47	2.50 H	106	19.51	14.01
3	317.70	37.90 QP	46.00	-8.10	1.50 H	142	22.05	15.85
4	370.18	36.68 QP	46.00	-9.32	1.00 H	184	19.73	16.95
5	595.67	33.24 QP	46.00	-12.76	1.00 H	337	10.87	22.37
6	743.41	34.84 QP	46.00	-11.16	1.50 H	355	9.28	25.56
7	832.83	39.78 QP	46.00	-6.22	2.00 H	298	13.33	26.44
8	850.32	34.42 QP	46.00	-11.58	1.00 H	337	7.74	26.68
9	914.47	43.57 QP	46.00	-2.43	1.00 H	76	15.82	27.76
10	951.40	39.54 QP	46.00	-6.46	1.50 H	283	10.16	29.39

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	168.02	36.66 QP	43.50	-6.84	1.00 V	19	23.75	12.91
2	302.14	34.70 QP	46.00	-11.30	1.00 V	343	19.06	15.64
3	673.43	34.03 QP	46.00	-11.97	1.00 V	208	10.49	23.55
4	743.41	33.32 QP	46.00	-12.68	1.50 V	304	7.76	25.56
5	760.90	33.23 QP	46.00	-12.77	1.00 V	343	7.41	25.83
6	836.71	40.89 QP	46.00	-5.11	1.50 V	304	14.40	26.50
7	850.32	35.09 QP	46.00	-10.91	1.00 V	214	8.41	26.68
8	879.48	44.00 QP	46.00	-2.00	1.00 V	94	17.09	26.91
9	914.47	34.46 QP	46.00	-11.54	1.00 V	19	6.70	27.76
10	947.52	38.78 QP	46.00	-7.22	1.00 V	343	9.48	29.30

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	25deg. C, 65%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.55 PK	74.00	-12.45	1.00 H	315	29.64	31.91
1	2390.00	51.22 AV	54.00	-2.78	1.00 H	315	19.31	31.91
2	*2412.00	106.16 PK			1.00 H	322	74.12	32.04
2	*2412.00	102.64 AV			1.00 H	322	70.60	32.04
3	3216.00	48.55 PK	74.00	-25.45	1.05 H	315	15.00	33.55
3	3216.00	45.18 AV	54.00	-8.82	1.05 H	315	11.63	33.55
4	4824.00	50.89 PK	74.00	-23.11	1.28 H	8	13.38	37.51
4	4824.00	46.42 AV	54.00	-7.58	1.28 H	8	8.91	37.51

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.96 PK	74.00	-10.04	1.05 V	83	32.05	31.91
1	**2390.00**	**53.00 AV**	**54.00**	**-1.00**	**1.05 V**	**83**	**21.09**	**31.91**
2	*2412.00	108.01 PK			1.05 V	83	75.97	32.04
2	*2412.00	105.40 AV			1.05 V	83	73.36	32.04
3	3216.00	50.91 PK	74.00	-23.09	1.07 V	327	17.37	33.55
3	3216.00	47.28 AV	54.00	-6.72	1.07 V	327	13.74	33.55
4	4824.00	52.98 PK	74.00	-21.02	1.33 V	9	15.47	37.51
4	4824.00	48.32 AV	54.00	-5.68	1.33 V	9	10.81	37.51

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	25deg. C, 65%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.12 PK			1.04 H	316	78.92	32.20
1	*2437.00	107.75 AV			1.04 H	316	75.55	32.20
2	3248.00	48.49 PK	74.00	-25.51	1.03 H	328	14.85	33.64
2	3248.00	45.22 AV	54.00	-8.78	1.03 H	328	11.58	33.64
3	4874.00	50.98 PK	74.00	-23.02	1.25 H	1	13.43	37.55
3	4874.00	46.61 AV	54.00	-7.39	1.25 H	1	9.06	37.55

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	113.02 PK			1.05 V	98	80.82	32.20
1	*2437.00	109.85 AV			1.05 V	98	77.65	32.20
2	3248.00	50.80 PK	74.00	-23.20	1.05 V	92	17.16	33.64
2	3248.00	47.19 AV	54.00	-6.81	1.05 V	92	13.55	33.64
3	4874.00	53.55 PK	74.00	-20.45	1.29 V	7	16.00	37.55
3	4874.00	48.89 AV	54.00	-5.11	1.29 V	7	11.34	37.55

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	25deg. C, 65%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.32 PK			1.00 H	320	72.97	32.35
1	*2462.00	101.79 AV			1.00 H	320	69.44	32.35
2	2483.50	61.49 PK	74.00	-12.51	1.02 H	308	29.00	32.49
2	2483.50	51.10 AV	54.00	-2.90	1.02 H	308	18.61	32.49
3	3282.00	48.65 PK	74.00	-25.35	1.06 H	301	14.91	33.74
3	3282.00	45.23 AV	54.00	-8.77	1.06 H	301	11.49	33.74
4	4924.00	50.98 PK	74.00	-23.02	1.25 H	3	13.40	37.58
4	4924.00	46.58 AV	54.00	-7.42	1.25 H	3	9.00	37.58

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.11 PK			1.02 V	75	74.76	32.35
1	*2462.00	104.52 AV			1.02 V	75	72.17	32.35
2	2483.50	63.89 PK	74.00	-10.11	1.01 V	71	31.40	32.49
2	2483.50	52.96 AV	54.00	-1.04	1.01 V	71	20.47	32.49
3	3282.00	51.72 PK	74.00	-22.28	1.09 V	319	17.98	33.74
3	3282.00	48.73 AV	54.00	-5.27	1.09 V	319	14.99	33.74
4	4924.00	53.55 PK	74.00	-20.45	1.28 V	4	15.97	37.58
4	4924.00	49.10 AV	54.00	-4.90	1.28 V	4	11.52	37.58

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	25deg. C, 65%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.99 PK	74.00	-3.01	1.05 H	36	39.08	31.91
1	2390.00	51.02 AV	54.00	-2.98	1.05 H	36	19.11	31.91
2	*2412.00	109.08 PK			1.00 H	46	77.04	32.04
2	*2412.00	99.02 AV			1.00 H	46	66.98	32.04
3	3216.00	50.12 PK	74.00	-23.88	1.06 H	308	16.57	33.55
3	3216.00	47.39 AV	54.00	-6.61	1.06 H	308	13.84	33.55
4	4824.00	47.63 PK	74.00	-26.37	1.09 H	158	10.12	37.51
4	4824.00	42.18 AV	54.00	-11.82	1.09 H	158	4.67	37.51

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.97 PK	74.00	-1.03	1.08 V	9	41.06	31.91
1	**2390.00**	**53.00 AV**	**54.00**	**-1.00**	**1.08 V**	**9**	**21.09**	**31.91**
2	*2412.00	111.16 PK			1.06 V	15	79.12	32.04
2	*2412.00	101.09 AV			1.06 V	15	69.04	32.04
3	3216.00	52.02 PK	74.00	-21.98	1.16 V	149	18.47	33.55
3	3216.00	49.49 AV	54.00	-4.51	1.16 V	149	15.94	33.55
4	4824.00	49.55 PK	74.00	-24.45	1.12 V	165	12.04	37.51
4	4824.00	44.03 AV	54.00	-9.97	1.12 V	165	6.52	37.51

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	25deg. C, 65%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.65 PK	74.00	-5.35	1.05 H	11	36.74	31.91
1	2390.00	50.55 AV	54.00	-3.45	1.05 H	11	18.64	31.91
2	*2437.00	111.59 PK			1.02 H	2	79.39	32.20
2	*2437.00	100.66 AV			1.02 H	2	68.46	32.20
3	2483.50	68.55 PK	74.00	-5.45	1.02 H	8	36.06	32.49
3	2483.50	50.43 AV	54.00	-3.57	1.02 H	8	17.94	32.49
4	3248.00	51.65 PK	74.00	-22.35	1.08 H	325	18.01	33.64
4	3248.00	45.65 AV	54.00	-8.35	1.08 H	325	12.01	33.64
5	4874.00	51.32 PK	74.00	-22.68	1.07 H	315	13.77	37.55
5	4874.00	49.65 AV	54.00	-4.35	1.07 H	315	12.10	37.55

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.33 PK	74.00	-3.67	1.02 V	13	38.42	31.91
1	2390.00	52.43 AV	54.00	-1.57	1.02 V	13	20.52	31.91
2	*2437.00	113.61 PK			1.10 V	3	81.41	32.20
2	*2437.00	102.72 AV			1.10 V	3	70.52	32.20
3	2483.50	70.26 PK	74.00	-3.74	1.01 V	26	37.77	32.49
3	2483.50	52.56 AV	54.00	-1.44	1.01 V	26	20.07	32.49
4	3248.00	53.45 PK	74.00	-20.55	1.02 V	135	19.81	33.64
4	3248.00	51.71 AV	54.00	-2.29	1.02 V	135	18.07	33.64
5	4874.00	52.12 PK	74.00	-21.88	1.07 V	125	14.57	37.55
5	4874.00	47.02 AV	54.00	-6.98	1.07 V	125	9.47	37.55

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	25deg. C, 65%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.55 PK			1.05 H	26	75.20	32.35
1	*2462.00	97.39 AV			1.05 H	26	65.04	32.35
2	2483.50	69.13 PK	74.00	-4.87	1.02 H	3	36.64	32.49
2	2483.50	59.25 AV	54.00	5.25	1.02 H	3	26.76	32.49
3	3282.00	50.31 PK	74.00	-23.69	1.05 H	322	16.57	33.74
3	3282.00	45.45 AV	54.00	-8.55	1.05 H	322	11.71	33.74
4	4924.00	50.55 PK	74.00	-23.45	1.04 H	329	12.97	37.58
4	4924.00	47.35 AV	54.00	-6.65	1.04 H	329	9.77	37.58

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.45 PK			1.08 V	9	77.10	32.35
1	*2462.00	99.19 AV			1.08 V	9	66.84	32.35
2	2483.50	71.89 PK	74.00	-2.11	1.09 V	13	39.40	32.49
2	2483.50	51.98 AV	54.00	-2.02	1.09 V	13	19.49	32.49
3	3282.00	52.63 PK	74.00	-21.37	1.01 V	128	18.89	33.74
3	3282.00	50.62 AV	54.00	-3.38	1.01 V	128	16.88	33.74
4	4924.00	51.22 PK	74.00	-22.78	1.05 V	132	13.64	37.58
4	4924.00	46.12 AV	54.00	-7.88	1.05 V	132	8.54	37.58

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	13Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 62%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.89 PK	74.00	-4.11	1.05 H	311	37.98	31.91
1	2390.00	50.51 AV	54.00	-3.49	1.05 H	311	18.60	31.91
2	*2412.00	109.50 PK			1.13 H	320	77.46	32.04
2	*2412.00	99.58 AV			1.13 H	320	67.54	32.04
3	3216.00	50.01 PK	74.00	-23.99	1.12 H	123	16.46	33.55
3	3216.00	48.12 AV	54.00	-5.88	1.12 H	123	14.57	33.55
4	4824.00	48.55 PK	74.00	-25.45	1.11 H	312	11.04	37.51
4	4824.00	43.61 AV	54.00	-10.39	1.11 H	312	6.10	37.51

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.96 PK	74.00	-2.04	1.04 V	352	40.05	31.91
1	2390.00	52.43 AV	54.00	-1.57	1.04 V	352	20.52	31.91
2	*2412.00	111.40 PK			1.04 V	352	79.36	32.04
2	*2412.00	101.65 AV			1.04 V	352	69.61	32.04
3	3216.00	51.78 PK	74.00	-22.22	1.28 V	156	18.23	33.55
3	3216.00	49.20 AV	54.00	-4.80	1.28 V	156	15.65	33.55
4	4824.00	50.12 PK	74.00	-23.88	1.02 V	349	12.61	37.51
4	4824.00	45.21 AV	54.00	-8.79	1.02 V	349	7.70	37.51

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	13Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 62%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.12 PK	74.00	-5.88	1.12 H	321	36.21	31.91
1	2390.00	49.85 AV	54.00	-4.15	1.12 H	321	17.94	31.91
2	*2437.00	113.55 PK			1.12 H	315	81.35	32.20
2	*2437.00	103.69 AV			1.12 H	315	71.49	32.20
3	2483.50	67.59 PK	74.00	-6.41	4.00 H	125	35.10	32.49
3	2483.50	49.36 AV	54.00	-4.64	4.00 H	125	16.87	32.49
4	3248.00	49.55 PK	74.00	-24.45	1.15 H	320	15.91	33.64
4	3248.00	44.62 AV	54.00	-9.38	1.15 H	320	10.98	33.64
5	4874.00	50.58 PK	74.00	-23.42	1.09 H	305	13.03	37.55
5	4874.00	45.85 AV	54.00	-8.15	1.09 H	305	8.30	37.55

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.22 PK	74.00	-3.78	1.03 V	349	38.31	31.91
1	2390.00	51.98 AV	54.00	-2.02	1.03 V	349	20.07	31.91
2	*2437.00	115.65 PK			1.03 V	344	83.45	32.20
2	*2437.00	105.89 AV			1.03 V	344	73.69	32.20
3	2483.50	69.97 PK	74.00	-4.03	1.04 V	341	37.48	32.49
3	2483.50	51.59 AV	54.00	-2.41	1.04 V	341	19.10	32.49
4	3248.00	53.22 PK	74.00	-20.78	1.15 V	135	19.58	33.64
4	3248.00	51.50 AV	54.00	-2.50	1.15 V	135	17.86	33.64
5	4874.00	52.12 PK	74.00	-21.88	1.01 V	299	14.57	37.55
5	4874.00	47.32 AV	54.00	-6.68	1.01 V	299	9.77	37.55

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	13Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 62%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.61 PK			1.05 H	322	75.26	32.35
1	*2462.00	97.75 AV			1.05 H	322	65.40	32.35
2	2484.00	68.55 PK	74.00	-5.45	1.05 H	325	36.06	32.49
2	2484.00	50.70 AV	54.00	-3.30	1.05 H	325	18.21	32.49
3	3282.00	47.21 PK	74.00	-26.79	1.16 H	312	13.47	33.74
3	3282.00	42.55 AV	54.00	-11.45	1.16 H	312	8.81	33.74
4	4924.00	47.55 PK	74.00	-26.45	1.05 H	315	9.97	37.58
4	4924.00	43.18 AV	54.00	-10.82	1.05 H	315	5.60	37.58

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.55 PK			1.02 V	348	77.20	32.35
1	*2462.00	99.65 AV			1.02 V	348	67.30	32.35
2	2484.00	70.32 PK	74.00	-3.68	1.06 V	341	37.83	32.49
2	2484.00	52.65 AV	54.00	-1.35	1.06 V	341	20.16	32.49
3	3282.00	50.85 PK	74.00	-23.15	1.22 V	315	17.11	33.74
3	3282.00	48.35 AV	54.00	-5.65	1.22 V	315	14.61	33.74
4	4924.00	49.89 PK	74.00	-24.11	1.05 V	322	12.31	37.58
4	4924.00	45.12 AV	54.00	-8.88	1.05 V	322	7.54	37.58

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	27Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 62%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.55 PK	74.00	-6.45	1.15 H	315	35.64	31.91
1	2390.00	50.19 AV	54.00	-3.81	1.15 H	315	18.28	31.91
2	*2422.00	105.22 PK			1.03 H	325	73.11	32.11
2	*2422.00	95.31 AV			1.03 H	325	63.21	32.11
3	3229.00	50.01 PK	74.00	-23.99	1.13 H	352	16.43	33.58
3	3229.00	47.15 AV	54.00	-6.85	1.13 H	352	13.57	33.58
4	4844.00	47.12 PK	74.00	-26.88	1.45 H	235	9.59	37.53
4	4844.00	36.85 AV	54.00	-17.15	1.45 H	235	-0.68	37.53

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.88 PK	74.00	-4.12	1.20 V	139	37.97	31.91
1	2390.00	52.65 AV	54.00	-1.35	1.20 V	139	20.74	31.91
2	*2422.00	107.08 PK			1.08 V	75	74.97	32.11
2	*2422.00	97.02 AV			1.08 V	75	64.91	32.11
3	3229.00	52.01 PK	74.00	-21.99	1.28 V	52	18.43	33.58
3	3229.00	49.21 AV	54.00	-4.79	1.28 V	52	15.63	33.58
4	4844.00	50.20 PK	74.00	-23.80	1.03 V	165	12.67	37.53
4	4844.00	44.71 AV	54.00	-9.29	1.03 V	165	7.18	37.53

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	27Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 62%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.33 PK	74.00	-7.67	1.02 H	311	34.42	31.91
1	2390.00	49.56 AV	54.00	-4.44	1.02 H	311	17.65	31.91
2	*2437.00	106.55 PK			1.03 H	325	74.35	32.20
2	*2437.00	96.68 AV			1.03 H	325	64.48	32.20
3	2483.50	66.99 PK	74.00	-7.01	1.08 H	315	34.50	32.49
3	2483.50	49.98 AV	54.00	-4.02	1.08 H	315	17.49	32.49
4	3248.00	50.12 PK	74.00	-23.88	1.09 H	349	16.48	33.64
4	3248.00	47.35 AV	54.00	-6.65	1.09 H	349	13.71	33.64
5	4874.00	48.39 PK	74.00	-25.61	1.25 H	326	10.84	37.55
5	4874.00	38.45 AV	54.00	-15.55	1.25 H	326	0.90	37.55

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.55 PK	74.00	-5.45	1.13 V	132	36.64	31.91
1	2390.00	51.75 AV	54.00	-2.25	1.13 V	132	19.84	31.91
2	*2437.00	108.65 PK			1.15 V	145	76.45	32.20
2	*2437.00	98.75 AV			1.15 V	145	66.55	32.20
3	2483.50	68.78 PK	74.00	-5.22	1.16 V	128	36.30	32.49
3	2483.50	51.86 AV	54.00	-2.14	1.16 V	128	19.37	32.49
4	3248.00	52.05 PK	74.00	-21.95	1.16 V	32	18.41	33.64
4	3248.00	49.32 AV	54.00	-4.68	1.16 V	32	15.68	33.64
5	4874.00	50.12 PK	74.00	-23.88	1.08 V	325	12.57	37.55
5	4874.00	44.62 AV	54.00	-9.38	1.08 V	325	7.07	37.55

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	27Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 62%RH, 991hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	105.05 PK			1.11 H	321	72.76	32.29
1	*2452.00	95.01 AV			1.11 H	321	62.72	32.29
2	2483.50	57.11 PK	74.00	-16.89	1.13 H	320	24.62	32.49
2	2483.50	50.35 AV	54.00	-3.65	1.13 H	320	17.86	32.49
3	3269.00	49.55 PK	74.00	-24.45	1.16 H	321	15.85	33.70
3	3269.00	46.25 AV	54.00	-7.75	1.16 H	321	12.55	33.70
4	4904.00	48.55 PK	74.00	-25.45	1.05 H	119	10.98	37.57
4	4904.00	42.71 AV	54.00	-11.29	1.05 H	119	5.14	37.57

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	107.15 PK			1.08 V	125	74.86	32.29
1	*2452.00	97.08 AV			1.08 V	125	64.79	32.29
2	2483.50	69.55 PK	74.00	-4.45	1.08 V	315	37.06	32.49
2	2483.50	52.69 AV	54.00	-1.31	1.08 V	315	20.20	32.49
3	3269.00	51.50 PK	74.00	-22.50	1.22 V	39	17.80	33.70
3	3269.00	48.42 AV	54.00	-5.58	1.22 V	39	14.72	33.70
4	4904.00	50.21 PK	74.00	-23.79	1.08 V	122	12.64	37.57
4	4904.00	44.89 AV	54.00	-9.11	1.08 V	122	7.32	37.57

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.

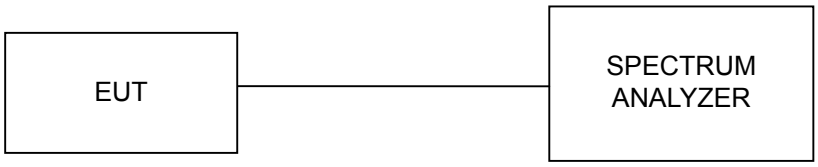
4.3.3 TEST PROCEDURE

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.

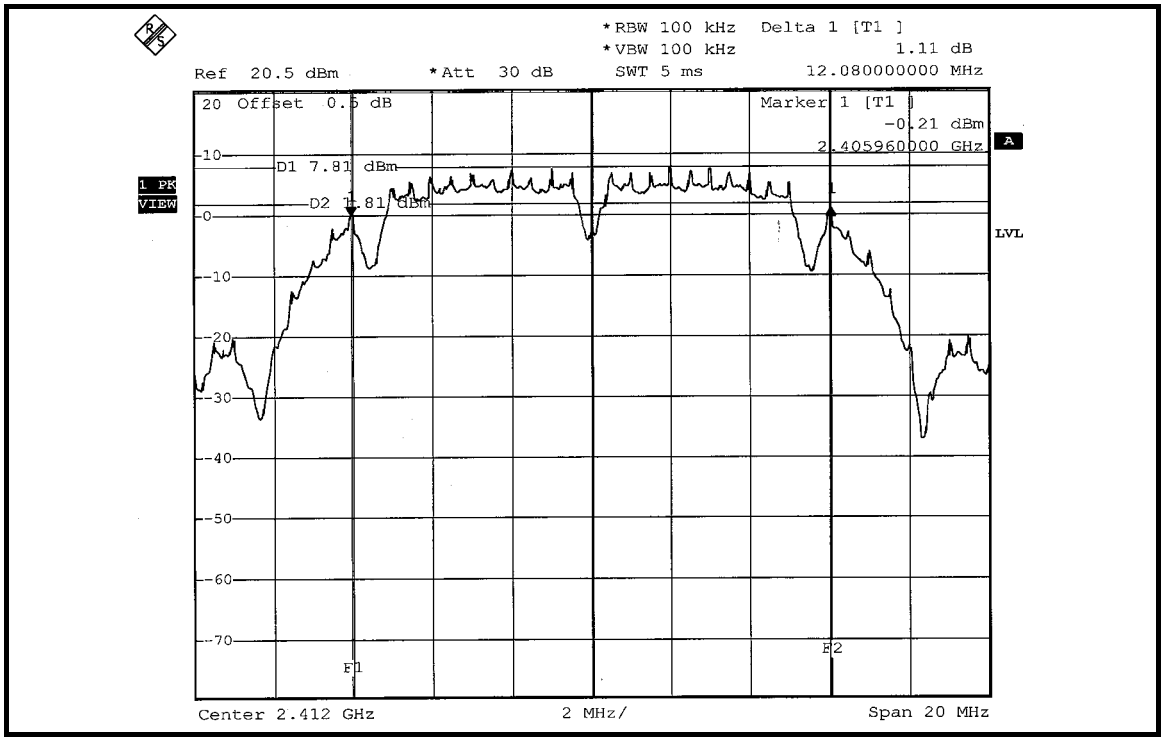
4.3.7 TEST RESULTS

802.11b DSSS MODULATION:

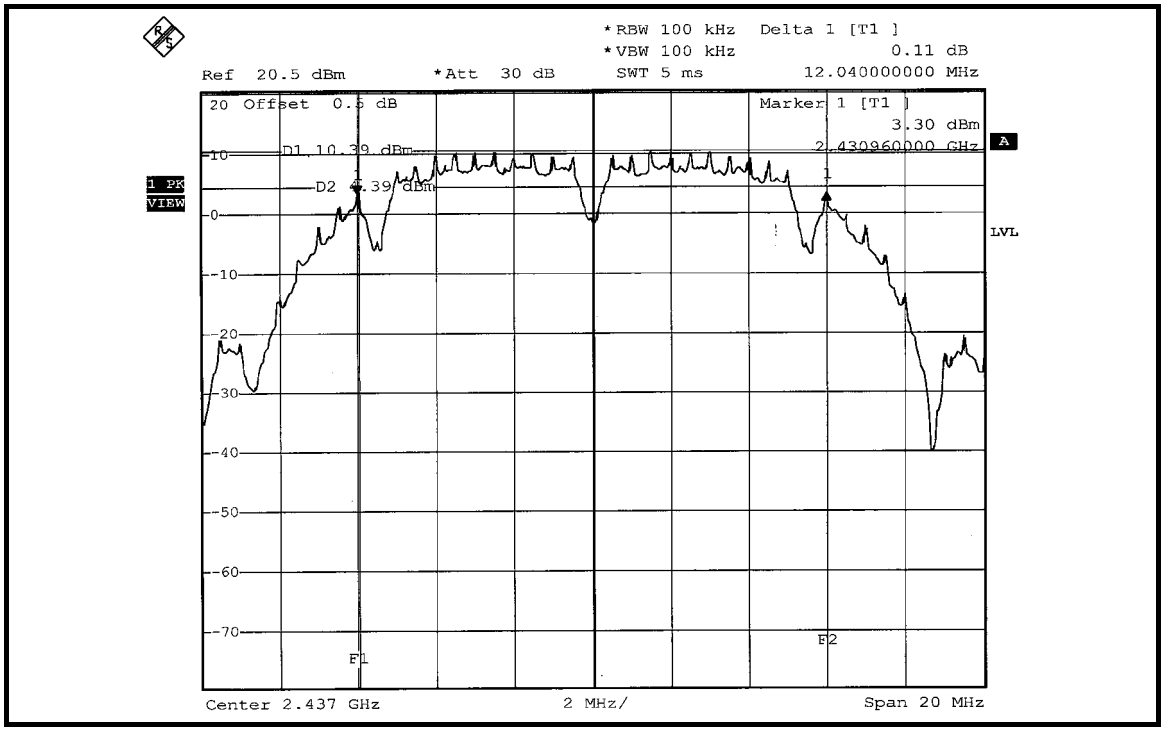
MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.08	0.5	PASS
6	2437	12.04	0.5	PASS
11	2462	12.00	0.5	PASS

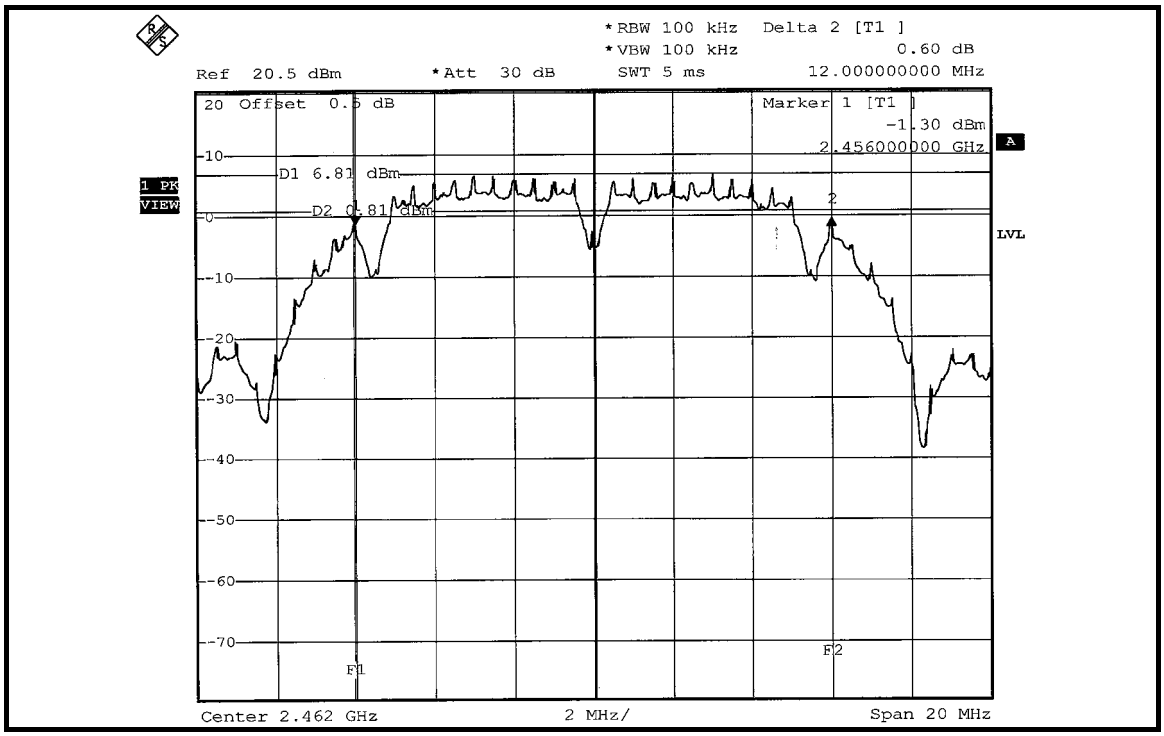
CH 1



CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.11 dB
12.040000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
3.30 dBm
2.430960000 GHz
D1 10.39 dBm
D2 -1.61 dBm
1 PK VIEW
A
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

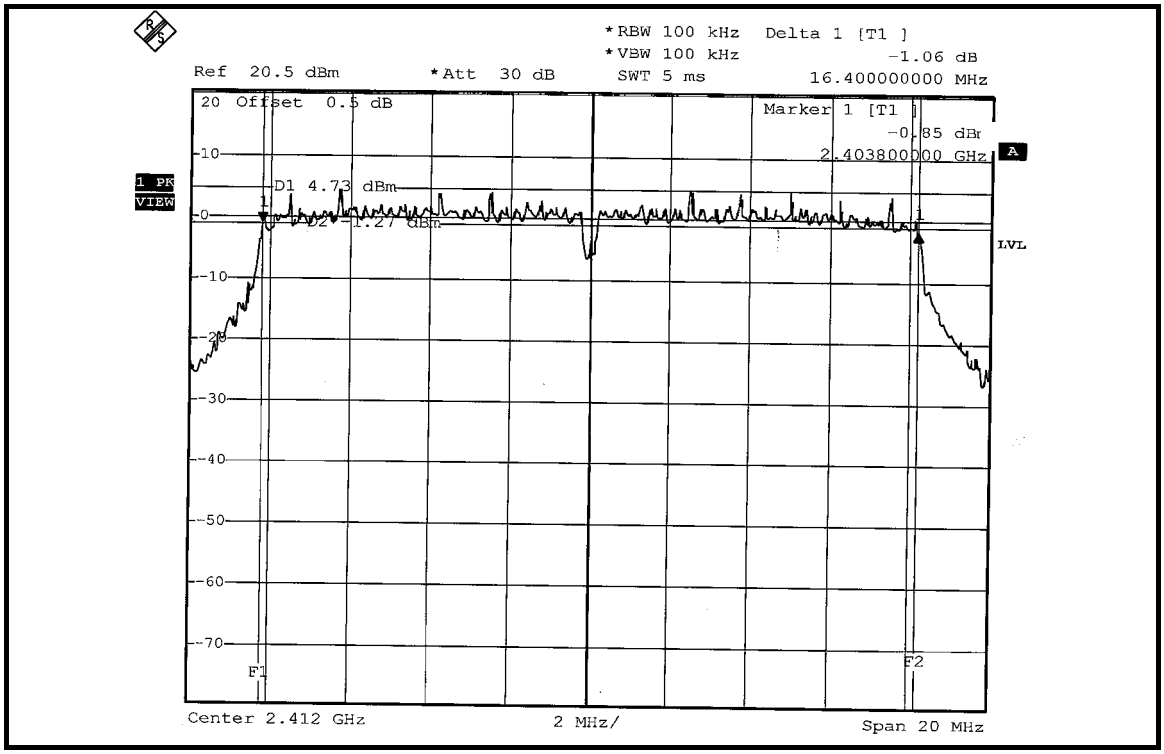

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
0.60 dB
12.000000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-1.30 dBm
2.456000000 GHz
D1 6.81 dBm
D2 6.81 dBm
1 PK VIEW
A
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM MODULATION:

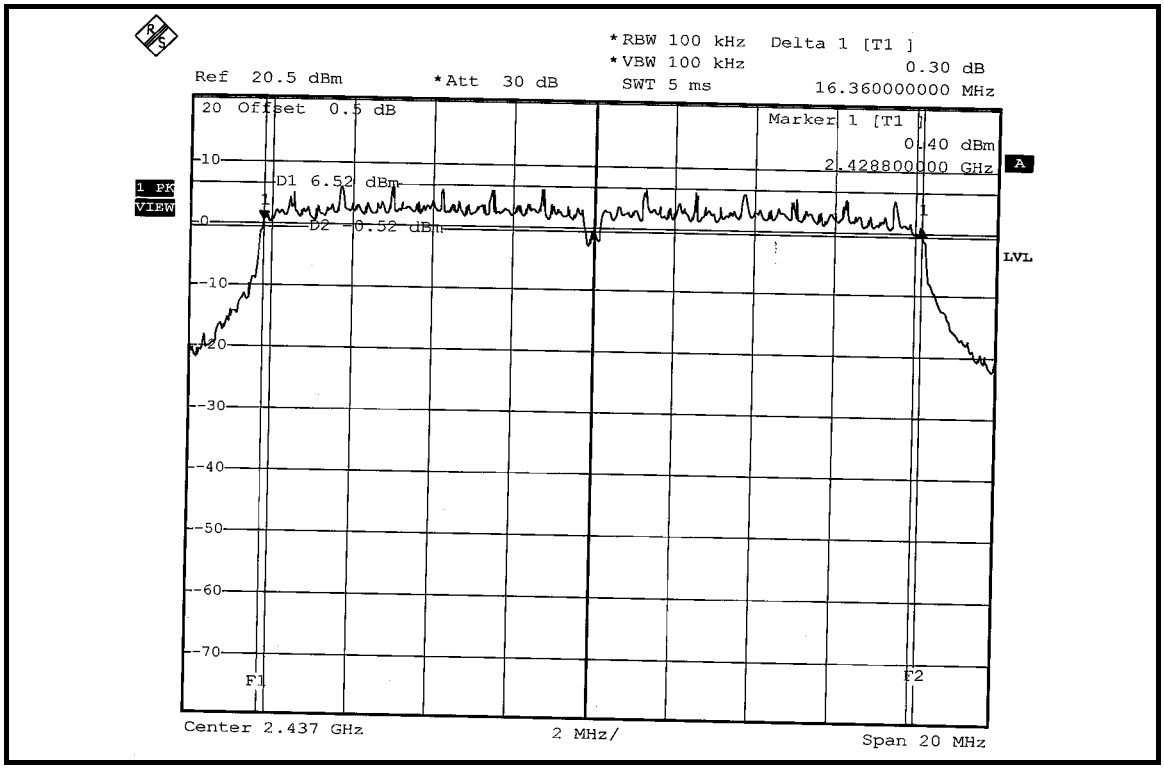
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.40	0.5	PASS
6	2437	16.36	0.5	PASS
11	2462	16.40	0.5	PASS

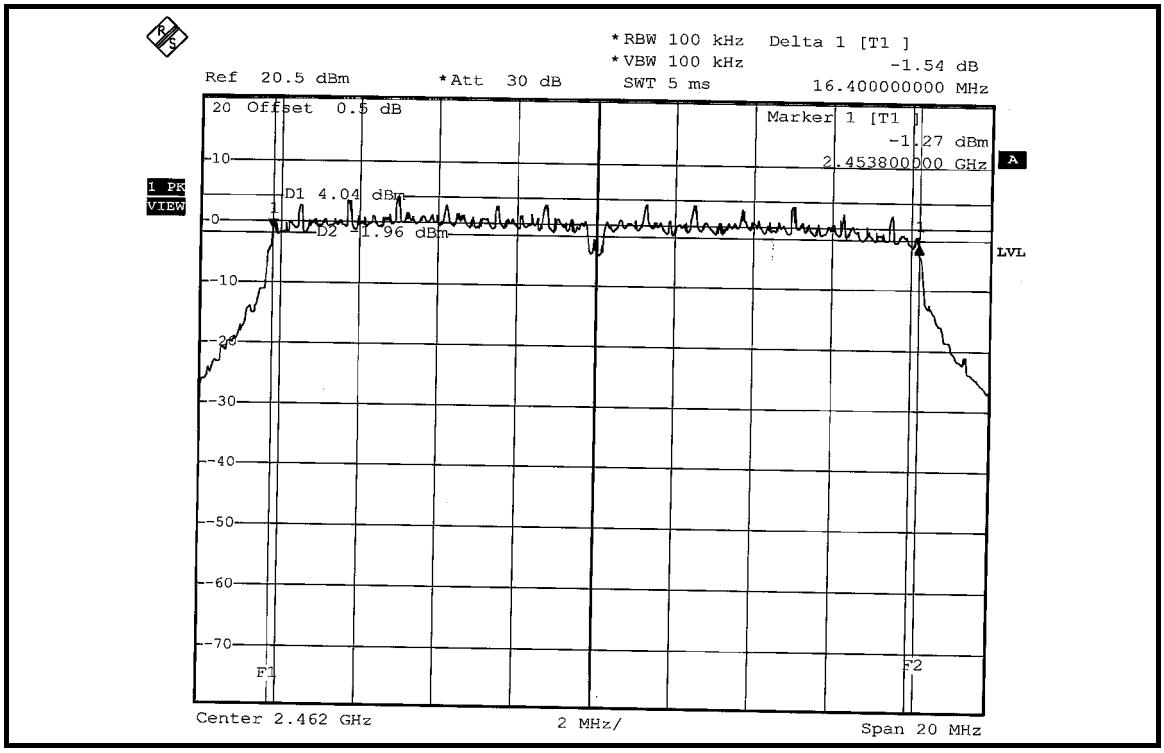
CH 1



CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.30 dB
16.360000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
0.40 dBm
2.428800000 GHz
1 PK
VIEW
D1 6.52 dBm
D2 -0.52 dBm
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

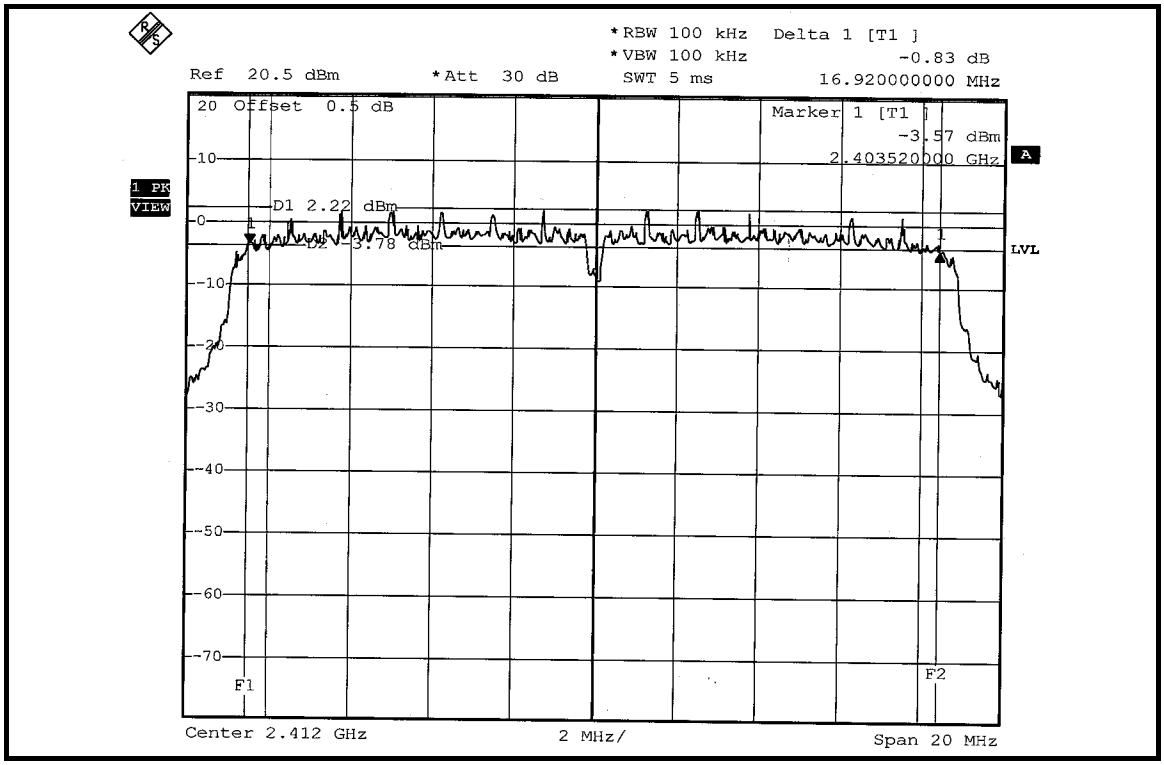

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.54 dB
16.400000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-1.27 dBm
2.453800000 GHz
1 PK
VIEW
D1 4.04 dBm
D2 1.96 dBm
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

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

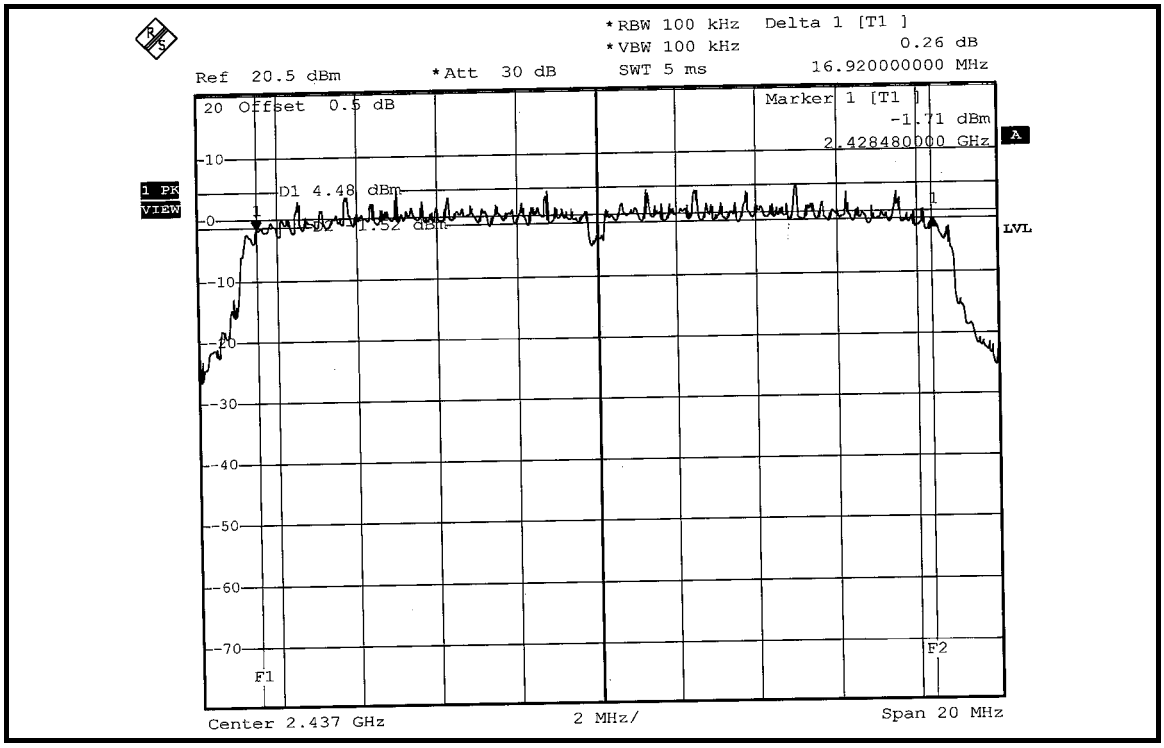
MODULATION TYPE	BPSK	TRANSFER RATE	13Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.92	17.28	0.5	PASS
6	2437	16.92	17.04	0.5	PASS
11	2462	17.08	17.56	0.5	PASS

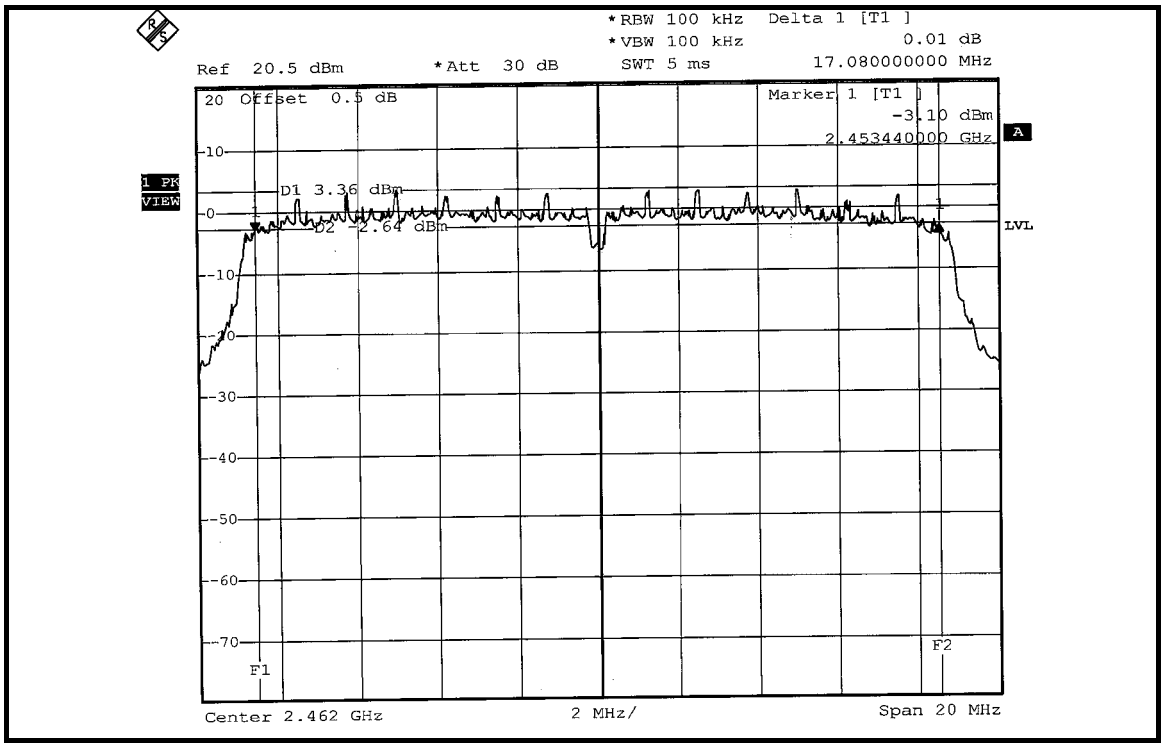
FOR CHAIN 0: CH 1



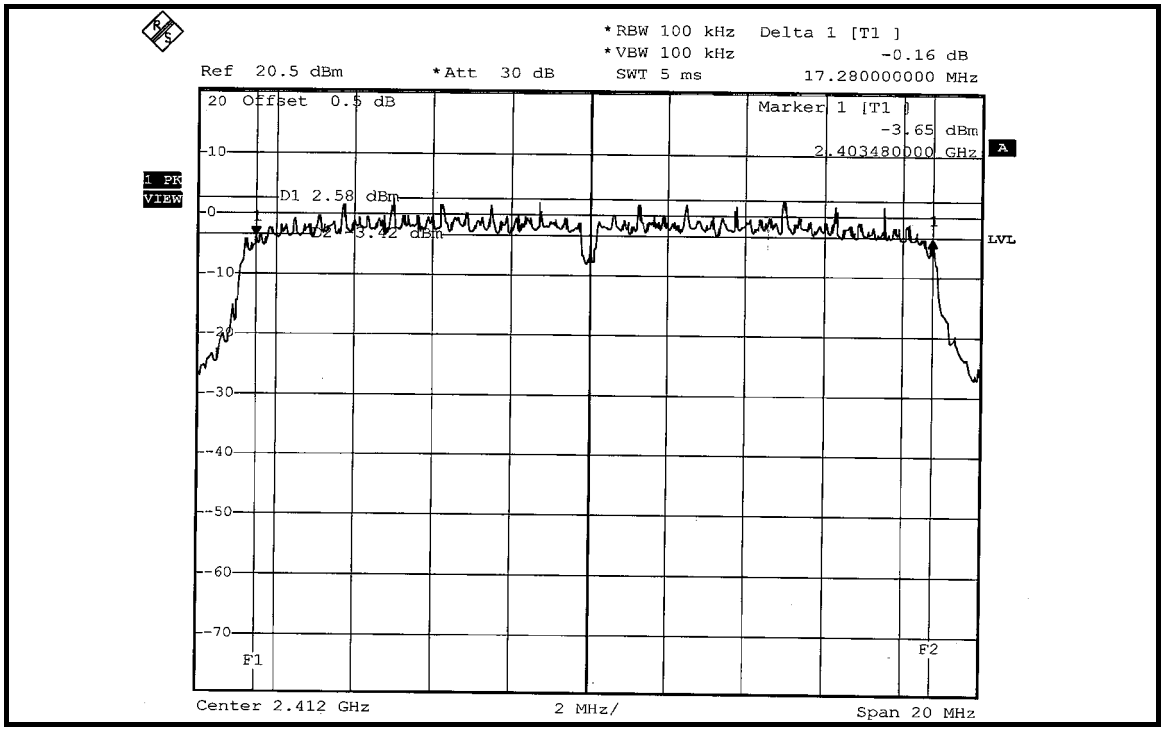
CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.26 dB
16.920000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-1.71 dBm
2.428480000 GHz
D1 4.48 dBm
D2 1.52 dBm
1 PK VIEW
A
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

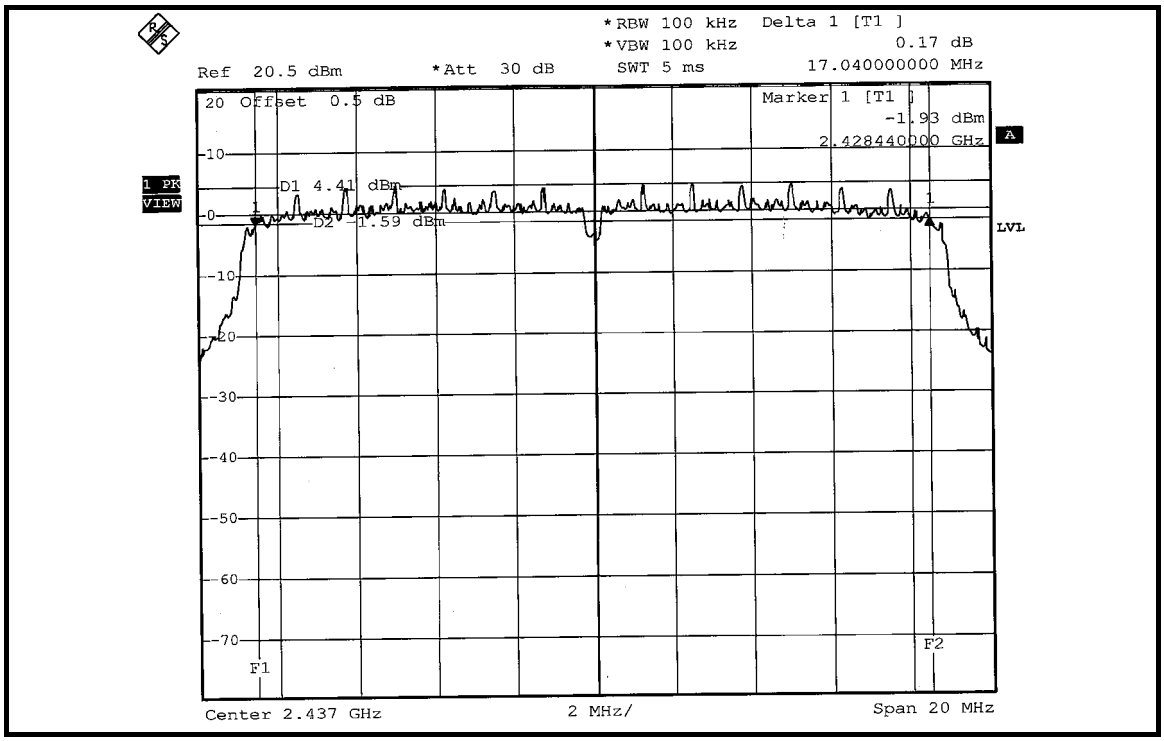
CH 11


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.01 dB
17.080000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-3.10 dBm
2.453440000 GHz
D1 3.36 dBm
D2 -2.64 dBm
1 PK VIEW
A
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

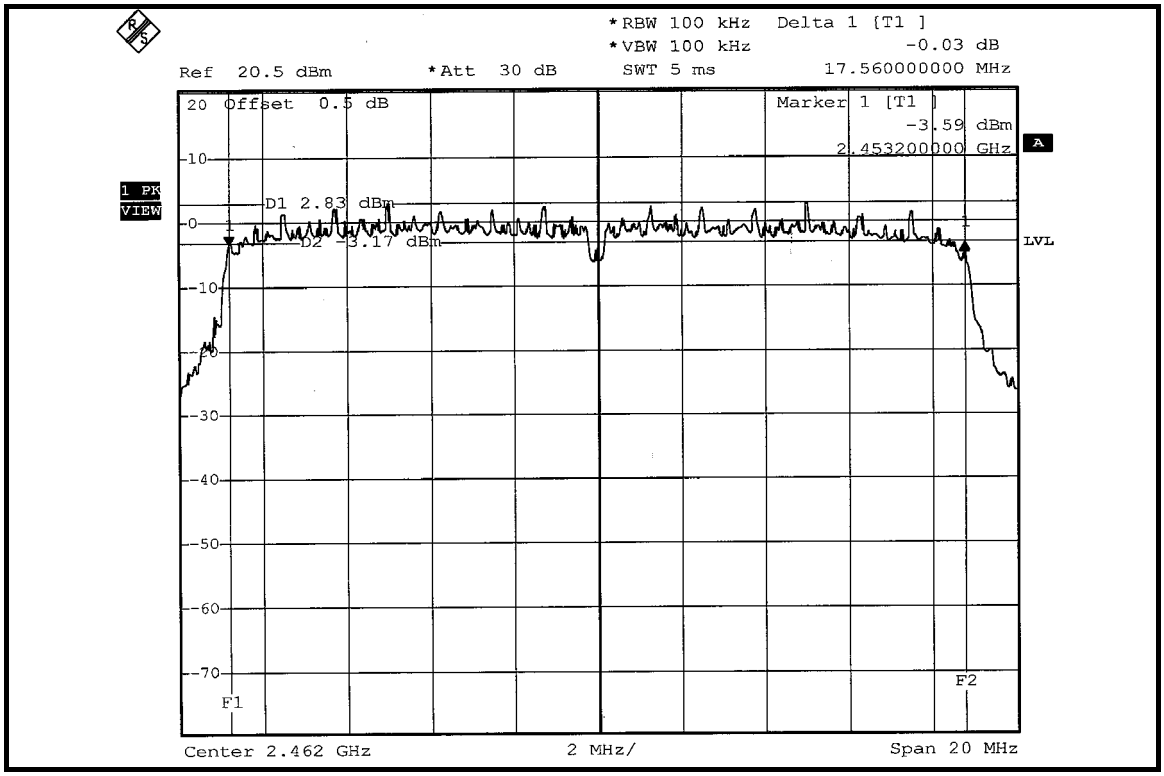
FOR CHAIN 1: CH 1



CH 6



CH 11

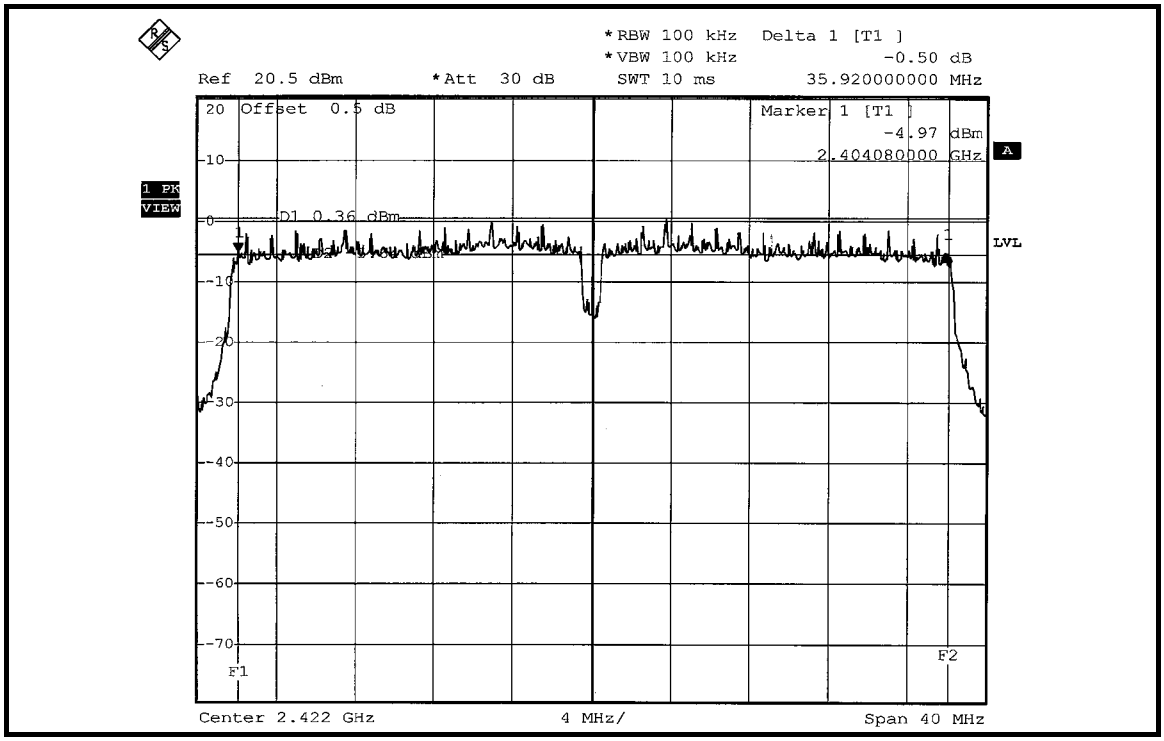

*RBW 100 kHz
Delta 1 [T1]
*VBW 100 kHz
-0.03 dB
Ref 20.5 dBm
*Att 30 dB
SWT 5 ms
17.560000000 MHz
20 Offset 0.5 dB
Marker 1 [T1]
-3.59 dBm
2.453200000 GHz
1 PK
VIEW
D1 2.83 dBm
D2 -3.17 dBm
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

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

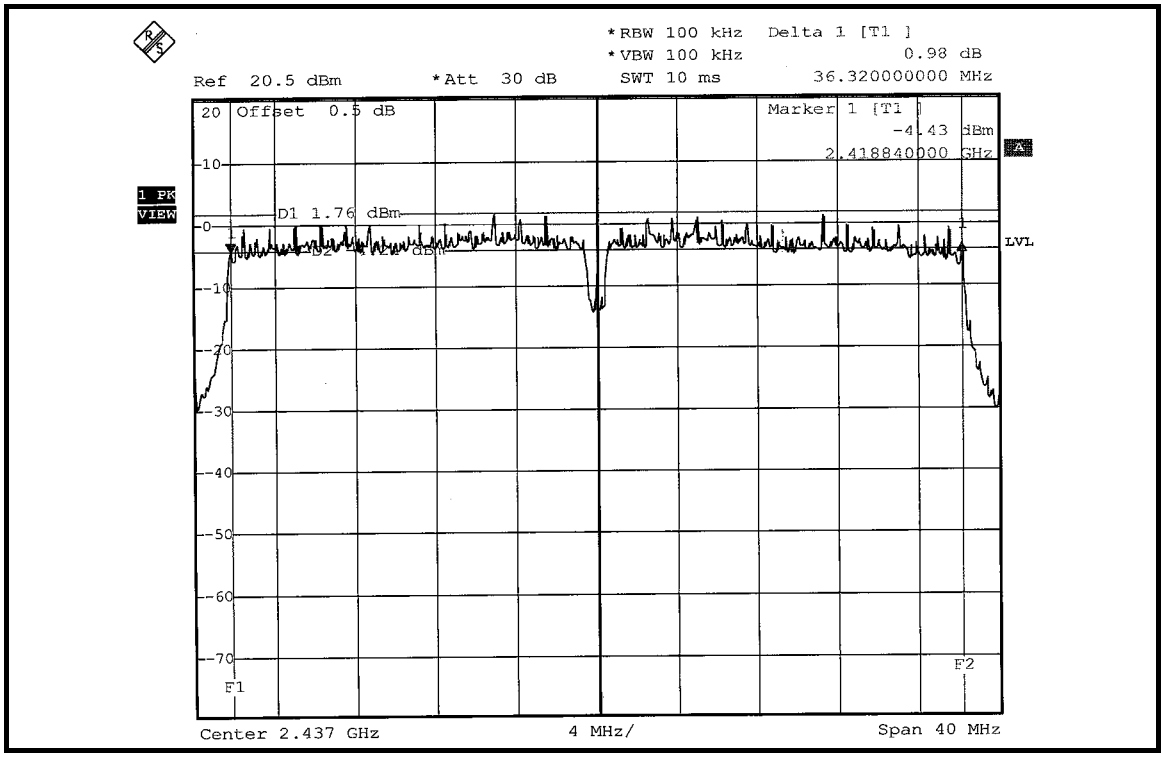
MODULATION TYPE	BPSK	TRANSFER RATE	27Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	35.92	35.68	0.5	PASS
4	2437	36.32	36.24	0.5	PASS
7	2452	35.76	35.84	0.5	PASS

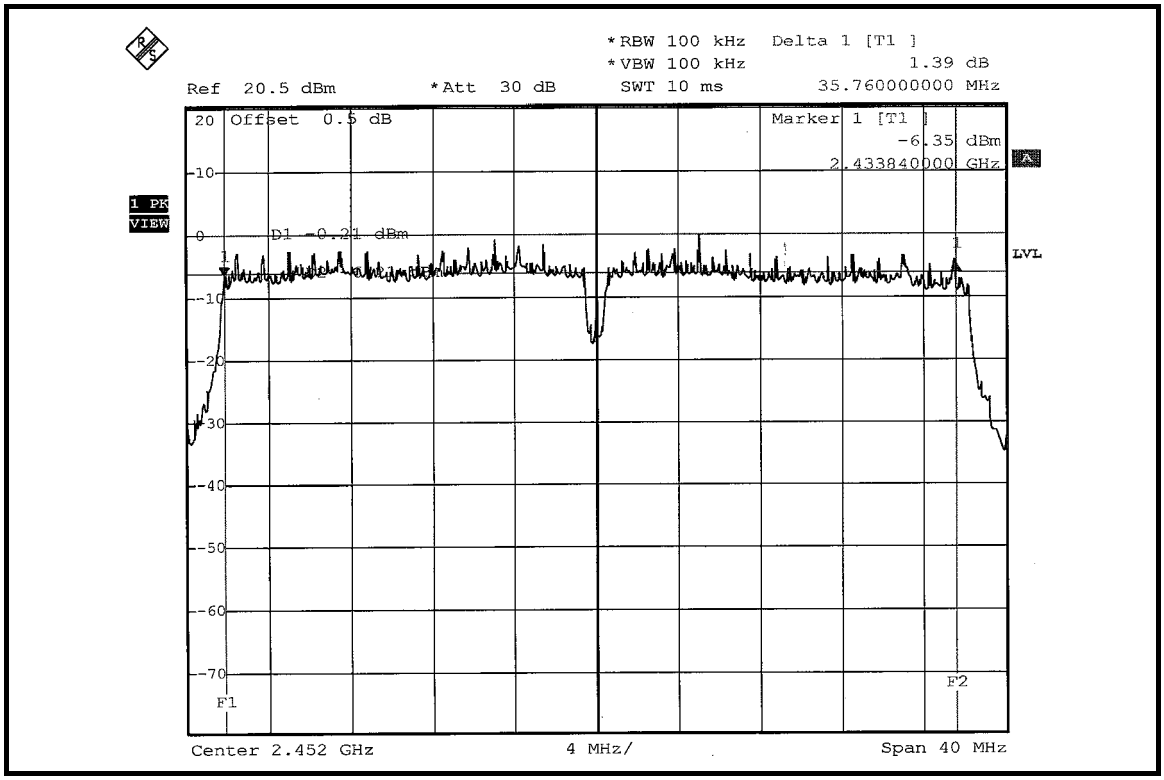
FOR CHAIN 0: CH 1



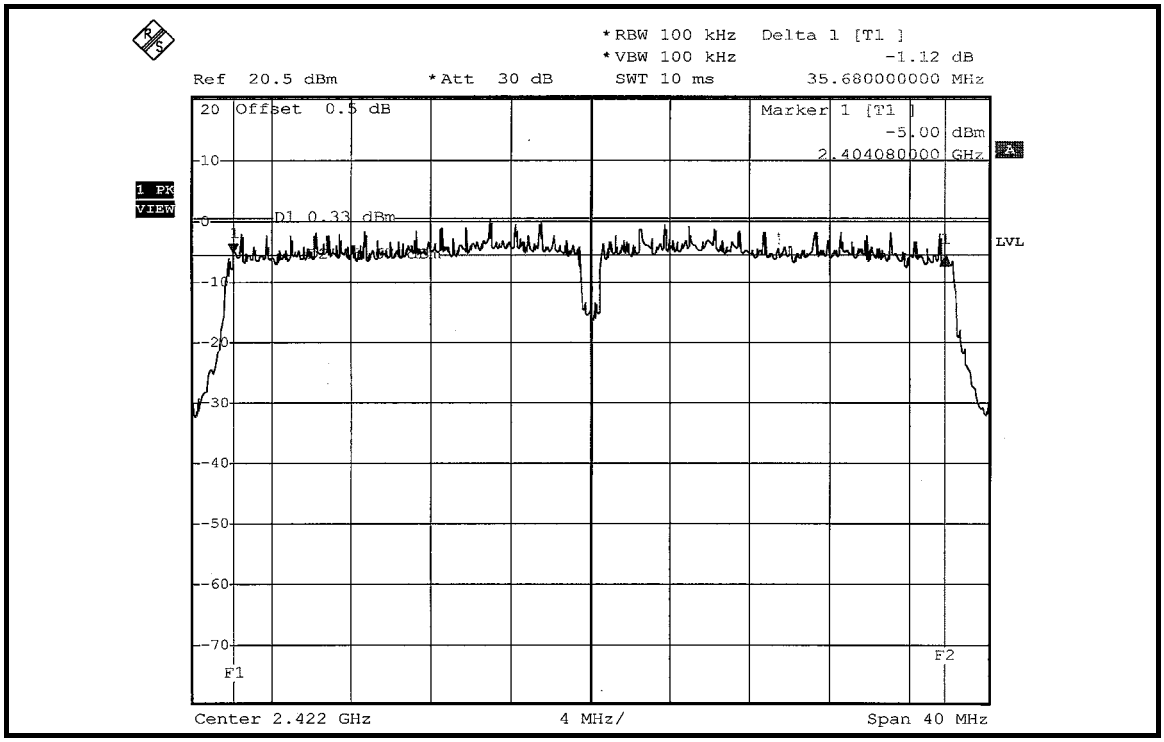
CH 4


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
0.98 dB
36.320000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-4.43 dBm
2.418840000 GHz
1 PK
VIEW
D1 1.76 dBm
LVL
F1
F2
Center 2.437 GHz
4 MHz/
Span 40 MHz

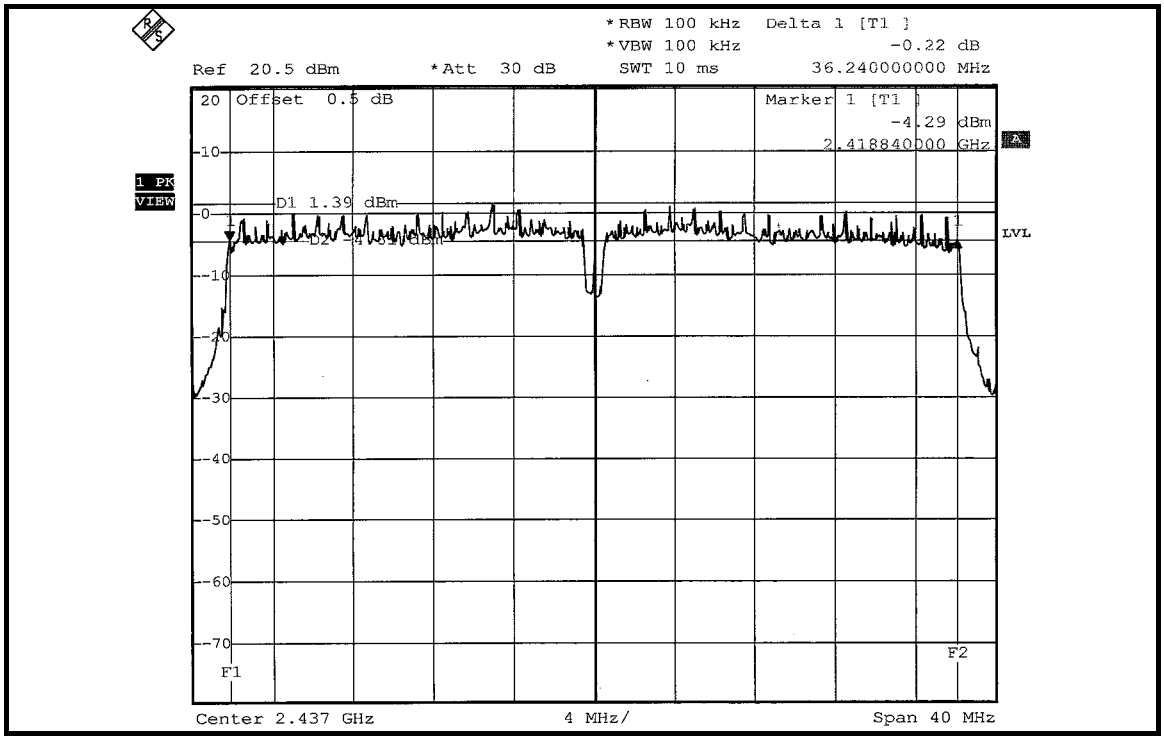
CH 7


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
1.39 dB
35.760000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-6.35 dBm
2.433840000 GHz
1 PK
VIEW
D1 -0.21 dBm
LVL
F1
F2
Center 2.452 GHz
4 MHz/
Span 40 MHz

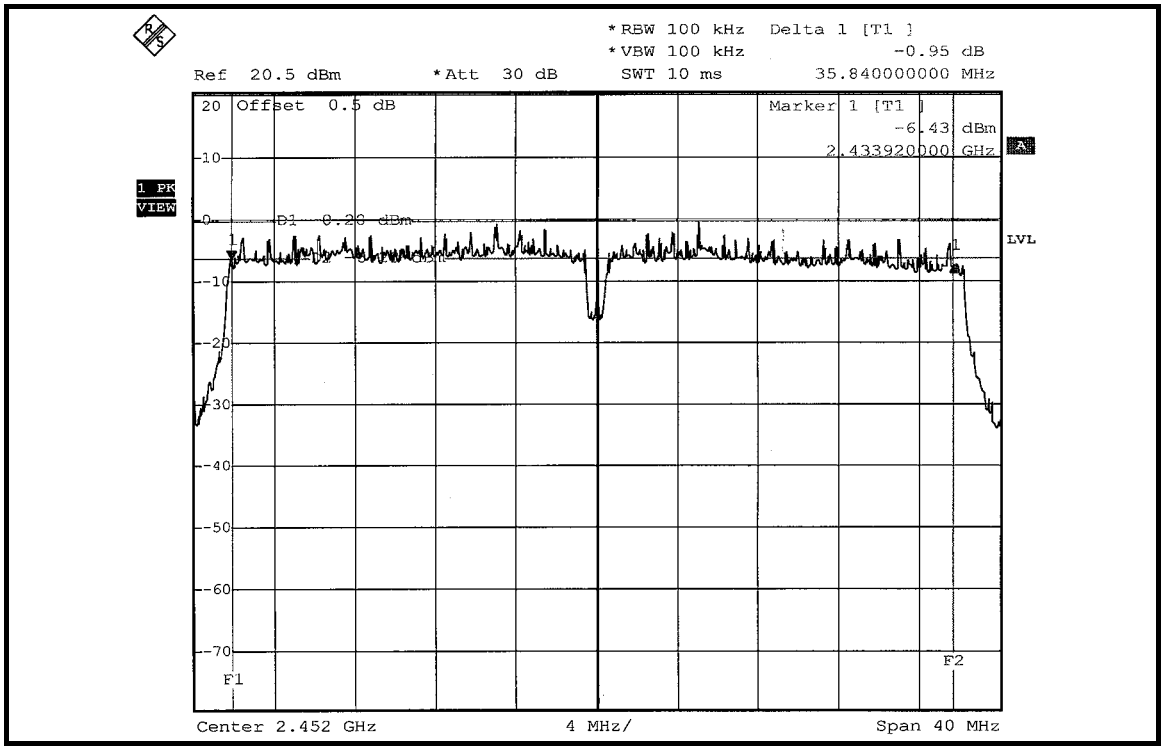
FOR CHAIN 1: CH 1



CH 4



CH 7


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
-0.95 dB
35.840000000 MHz
Ref 20.5 dBm
*Att 30 dB
Offset 0.5 dB
Marker 1 [T1]
-6.43 dBm
2.433920000 GHz
1 PK
VIEW
D1 0.20 dBm
LVL
F1
F2
Center 2.452 GHz
4 MHz/
Span 40 MHz

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, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	105.439	20.23	30	PASS
6	2437	185.353	22.68	30	PASS
11	2462	69.984	18.45	30	PASS

802.11g OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	131.826	21.20	30	PASS
6	2437	183.654	22.64	30	PASS
11	2462	102.802	20.12	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	13Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

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	80.724	80.353	19.07	19.05	161.077	22.07	30	PASS
6	2437	161.065	160.325	22.07	22.05	321.139	25.07	30	PASS
11	2462	81.096	80.910	19.09	19.08	162.006	22.10	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	27Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

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	71.945	71.779	18.57	18.56	143.724	21.58	30	PASS
4	2437	91.201	90.157	19.60	19.55	181.358	22.59	30	PASS
7	2452	61.235	60.954	17.87	17.85	122.189	20.87	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

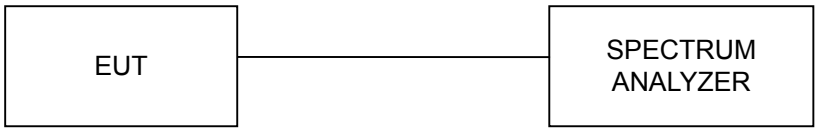
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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

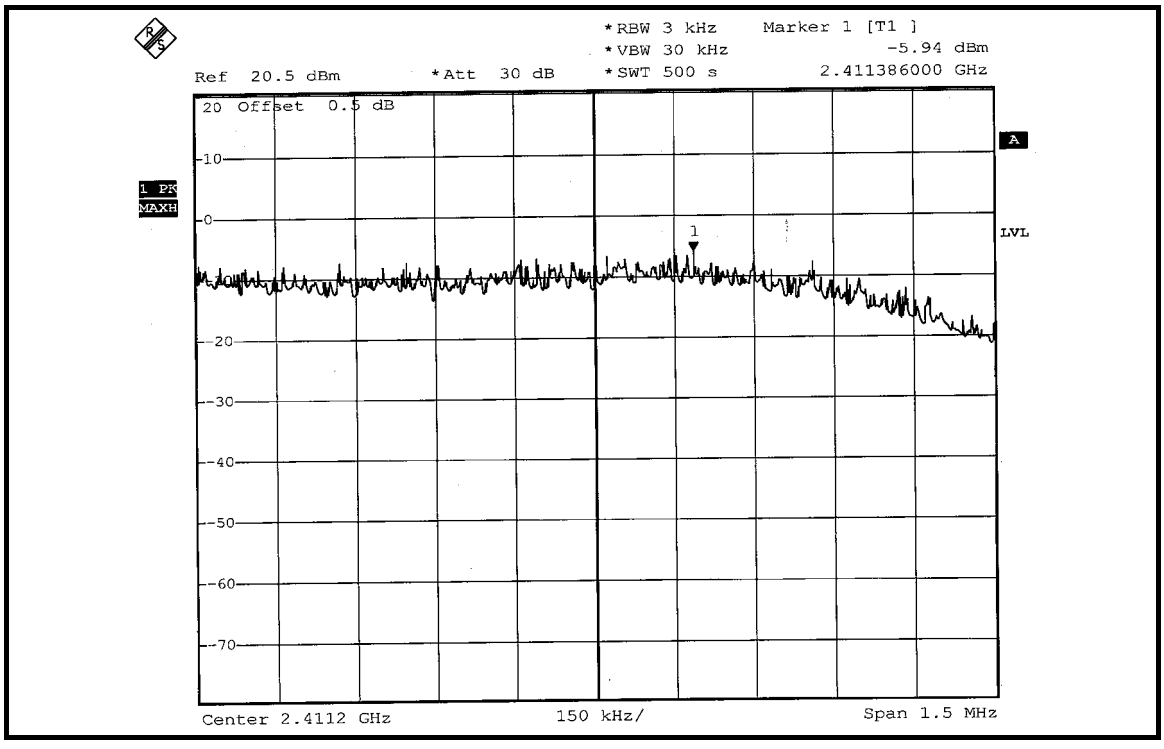
4.5.7 TEST RESULTS

802.11b DSSS MODULATION:

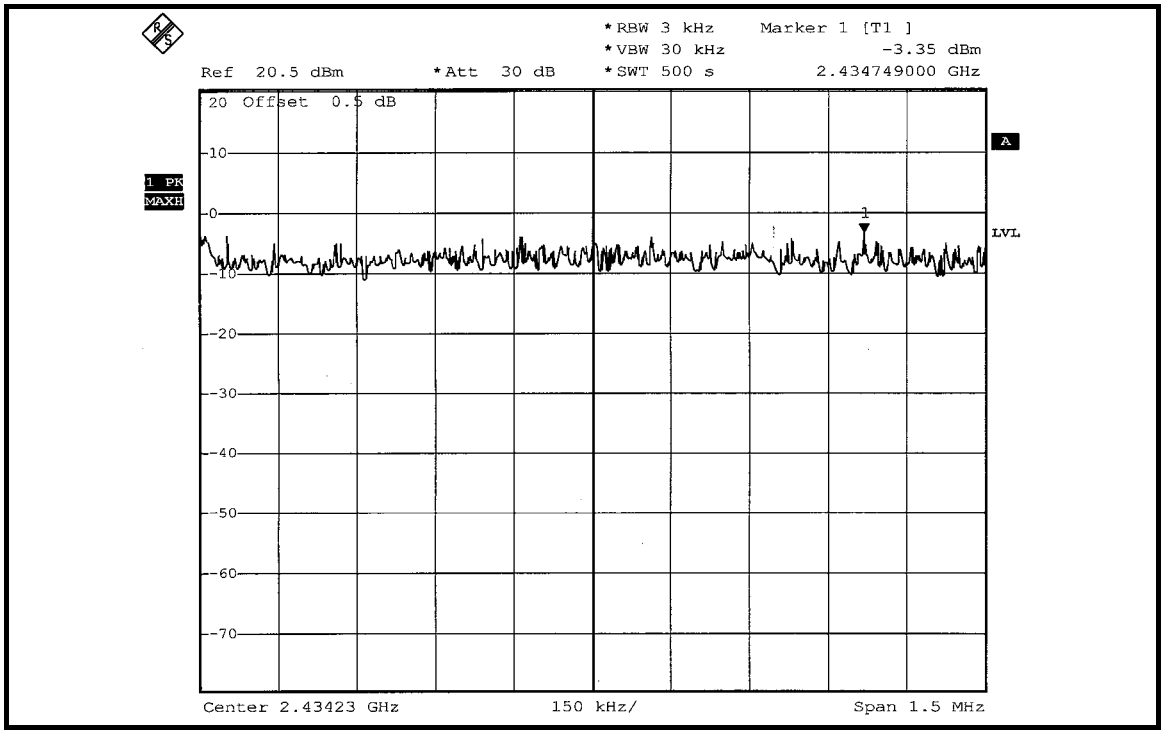
MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-5.94	8	PASS
6	2437	-3.35	8	PASS
11	2462	-7.31	8	PASS

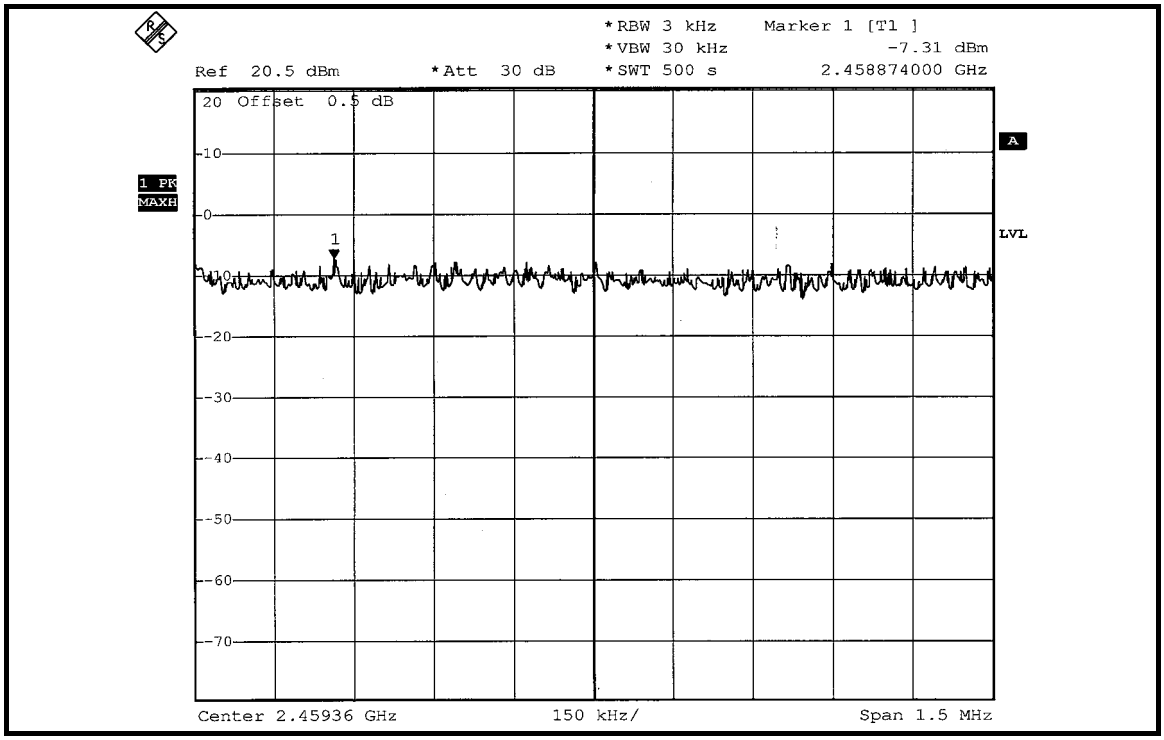
CH 1



CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-3.35 dBm
2.434749000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.43423 GHz
150 kHz/
Span 1.5 MHz

CH 11

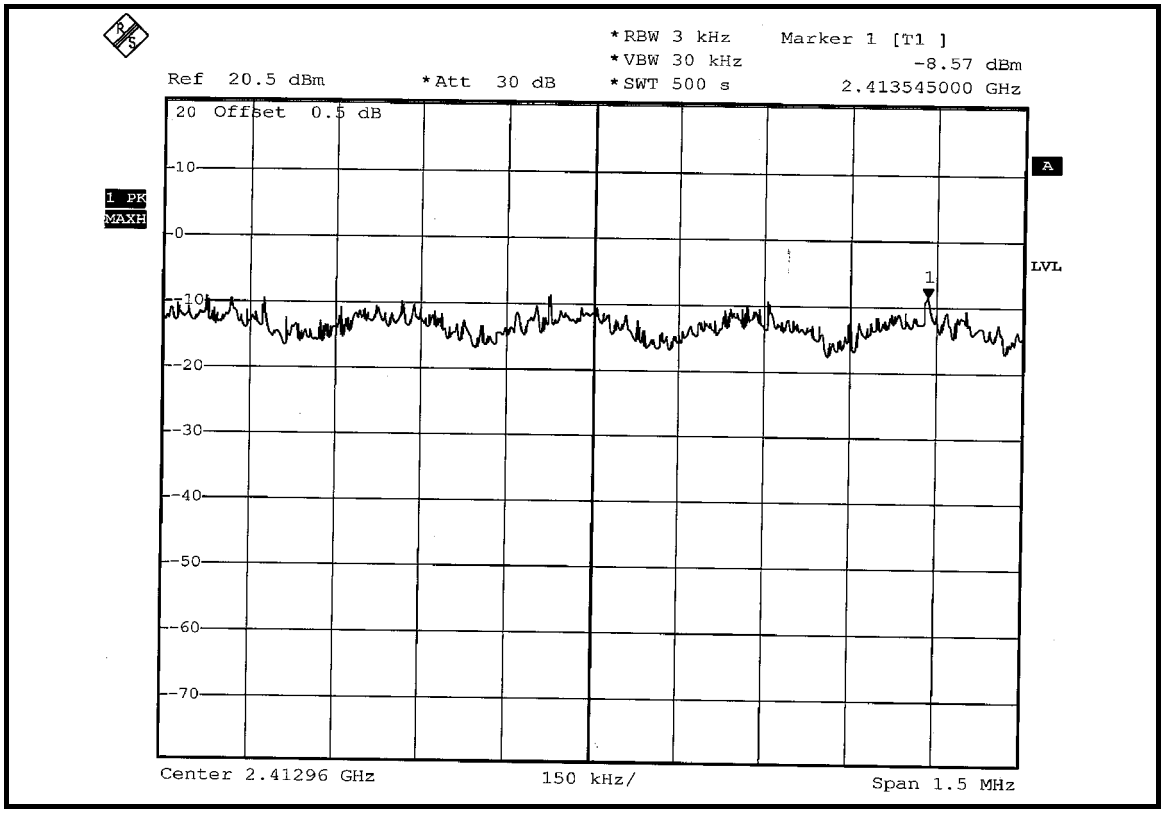

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-7.31 dBm
2.458874000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.45936 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM MODULATION:

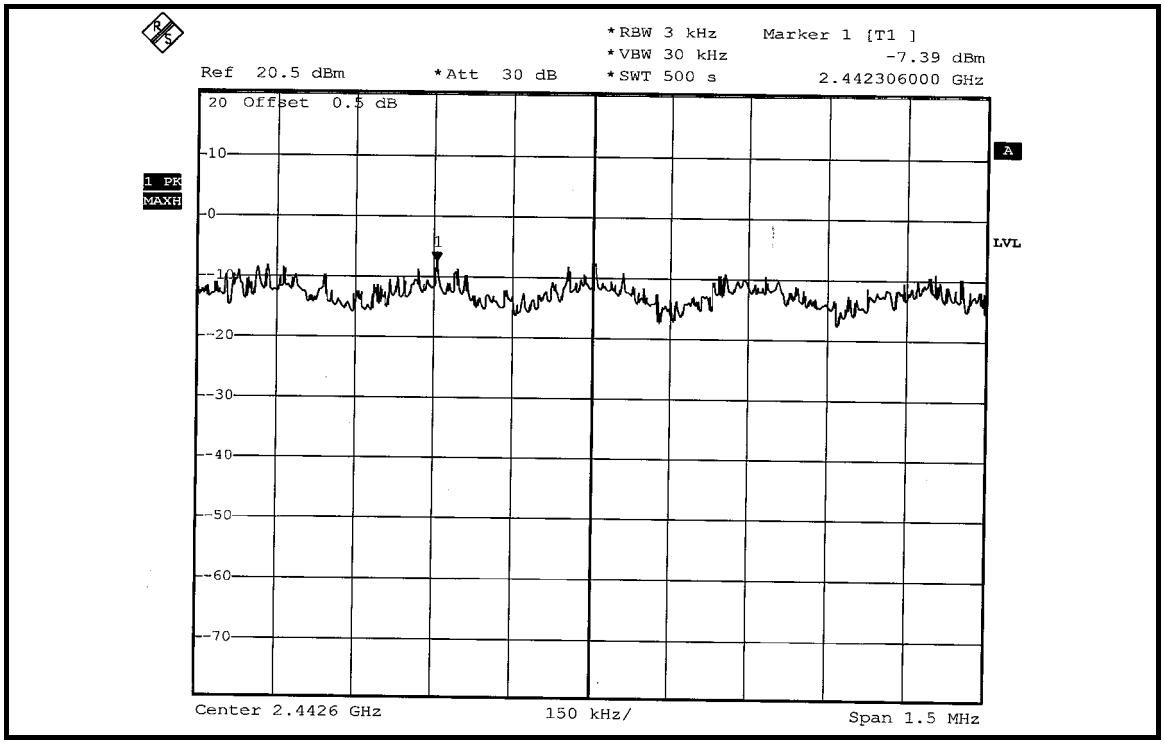
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-8.57	8	PASS
6	2437	-7.39	8	PASS
11	2462	-9.37	8	PASS

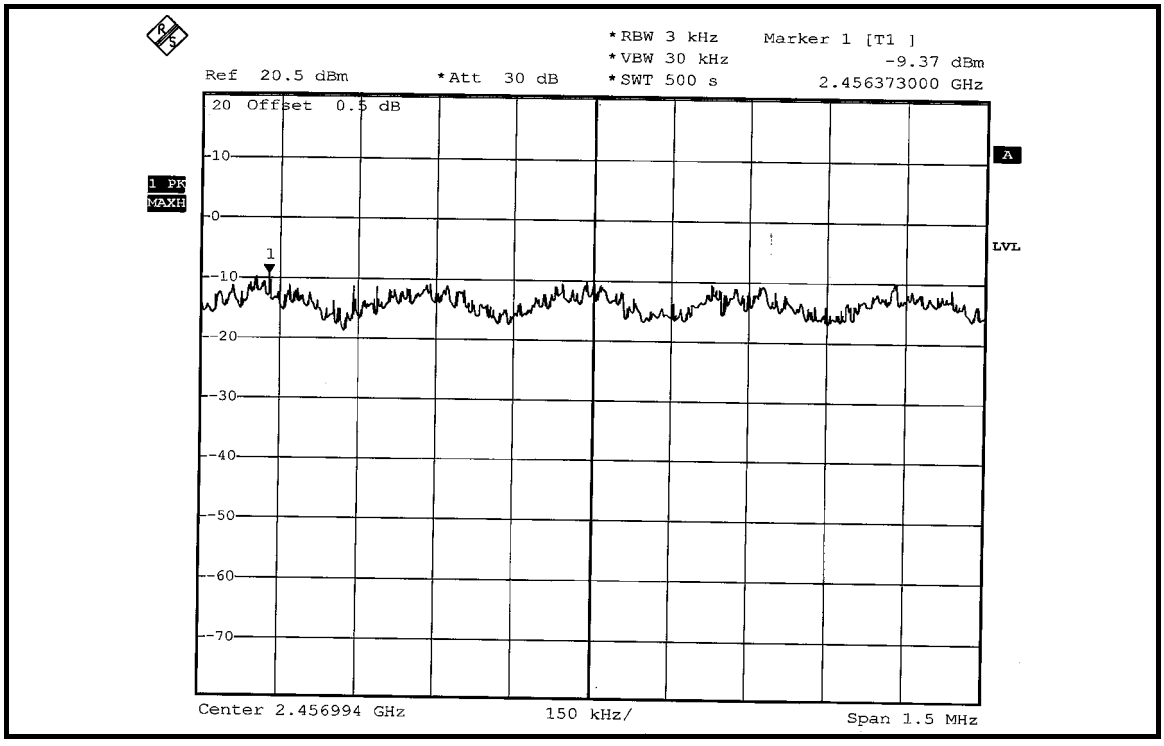
CH 1



CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-7.39 dBm
2.442306000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK MAXH
A
LVL
Center 2.4426 GHz
150 kHz/
Span 1.5 MHz

CH 11

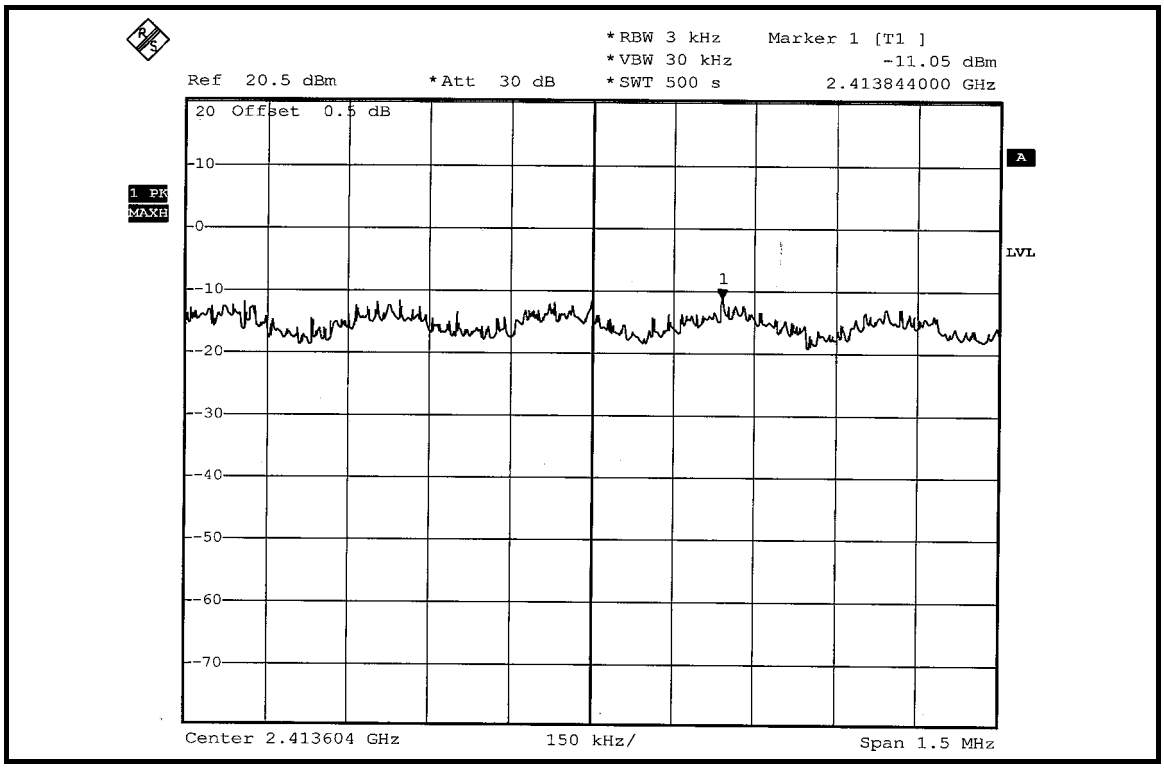

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.37 dBm
2.456373000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK MAXH
A
LVL
Center 2.456994 GHz
150 kHz/
Span 1.5 MHz

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

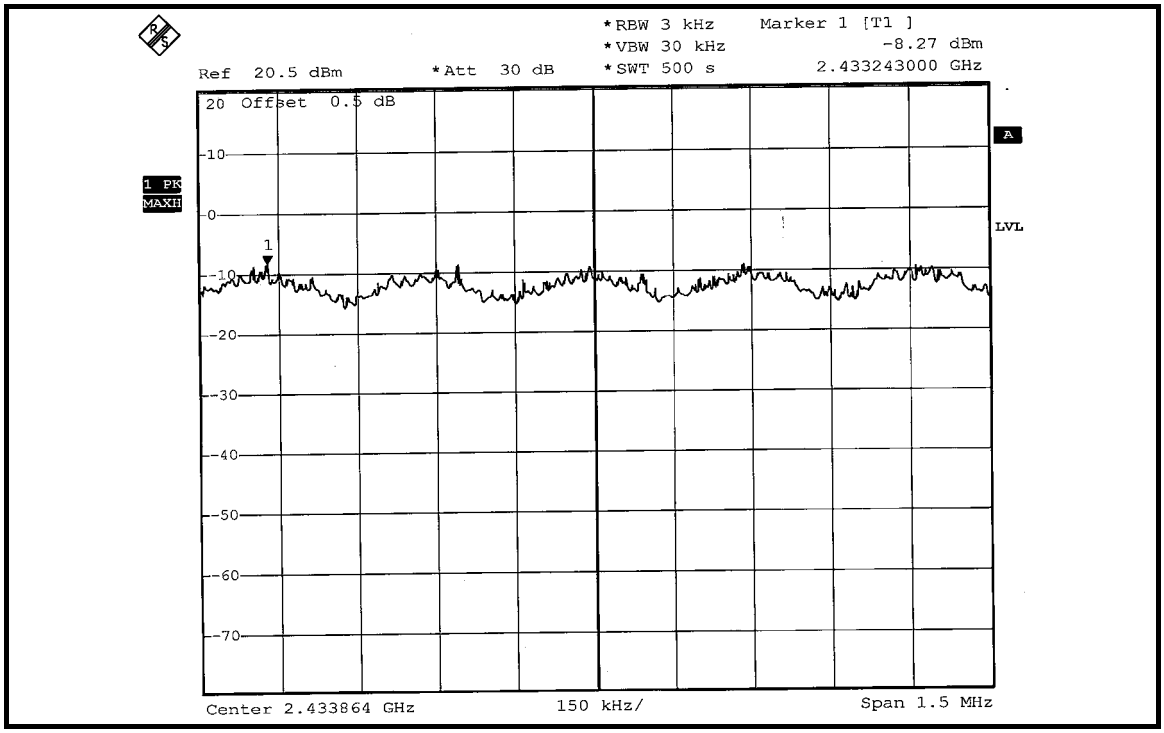
MODULATION TYPE	BPSK	**TRANSFER RATE**	13Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	-11.05	-11.10	8	PASS
6	2437	-8.27	-8.37	8	PASS
11	2462	-11.05	-11.27	8	PASS

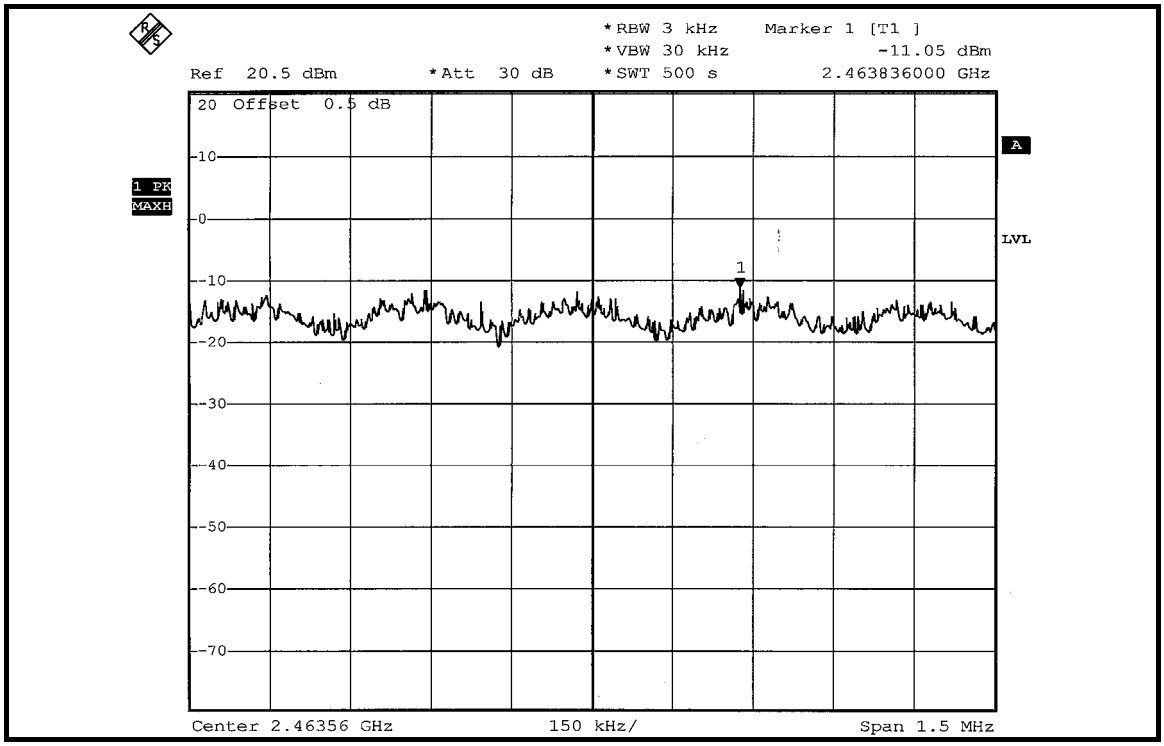
FOR CHAIN 0: CH 1



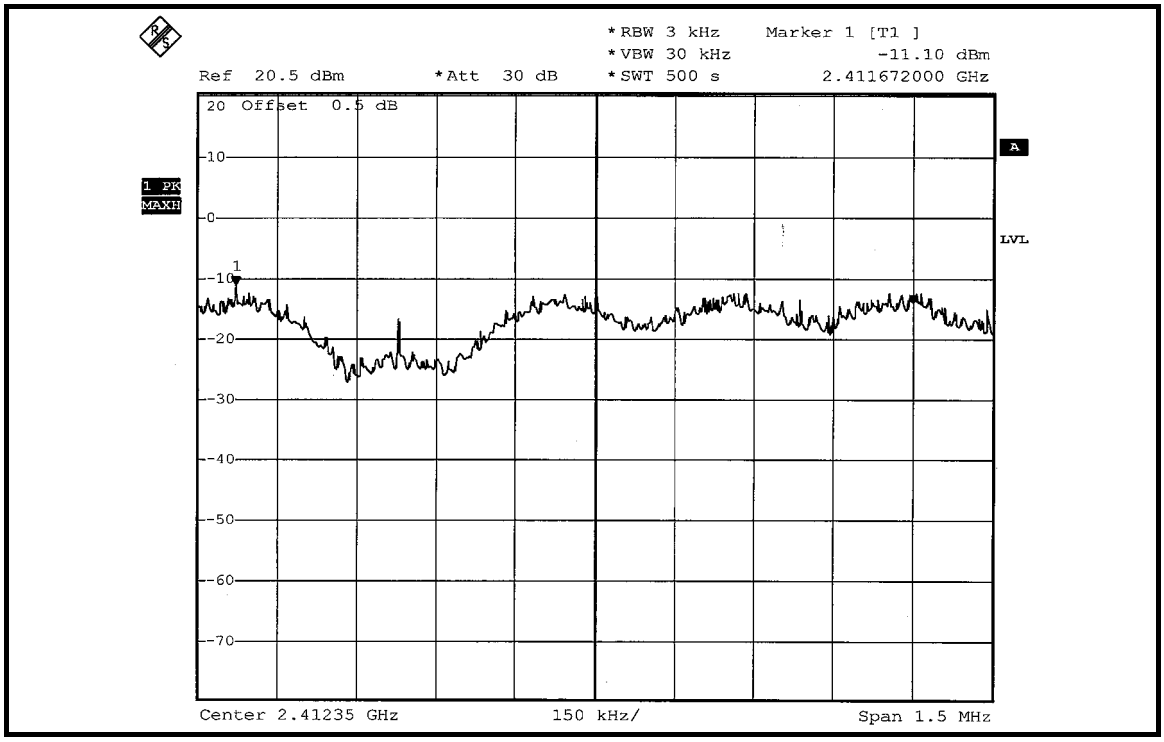
CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-8.27 dBm
2.433243000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.433864 GHz
150 kHz/
Span 1.5 MHz

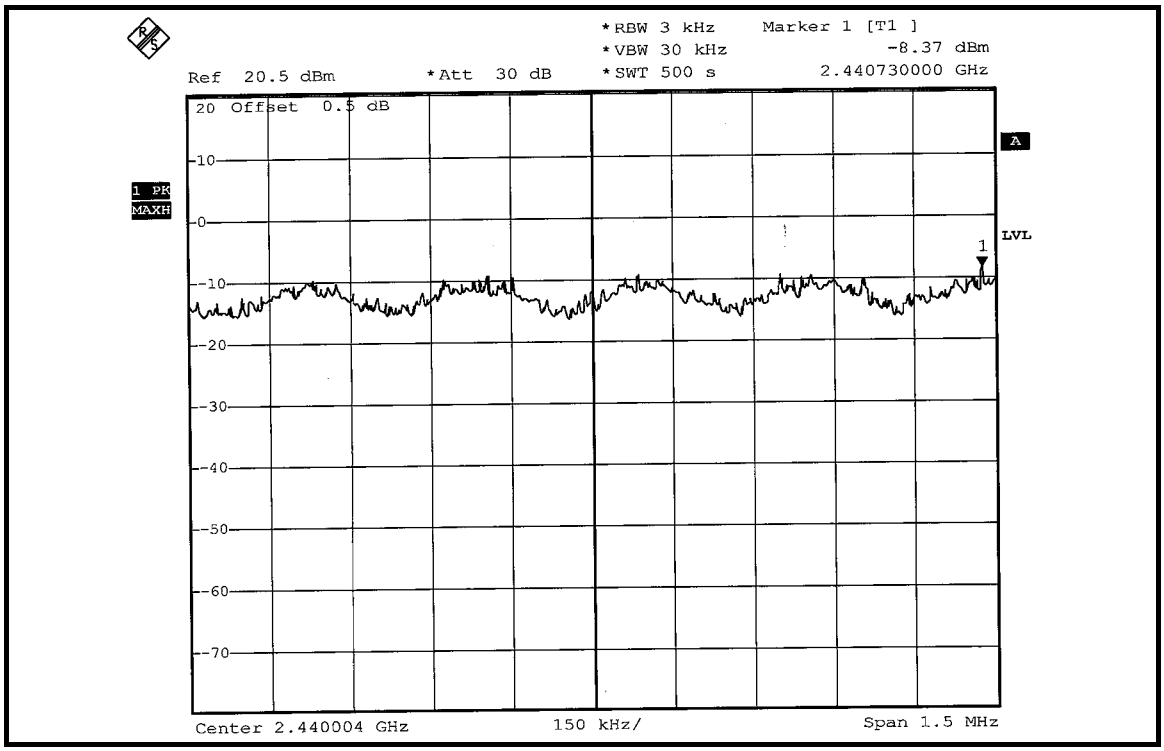
CH 11


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.05 dBm
2.463836000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.46356 GHz
150 kHz/
Span 1.5 MHz

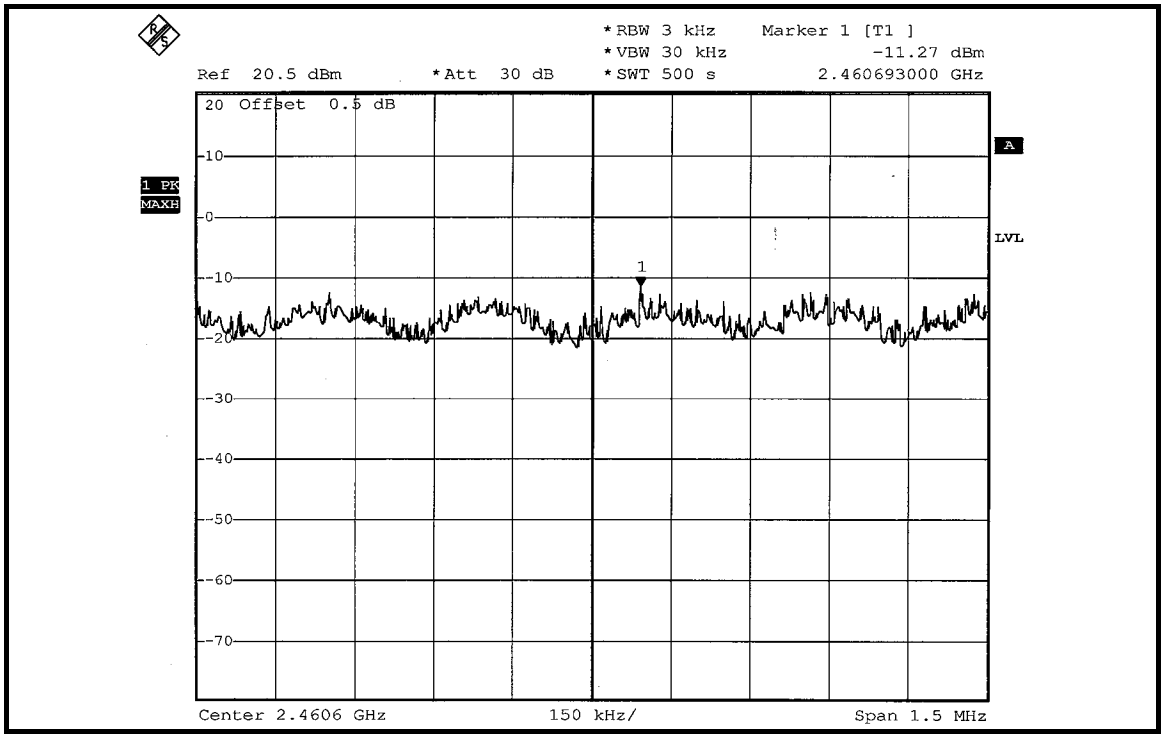
FOR CHAIN 1: CH 1



CH 6



CH 11

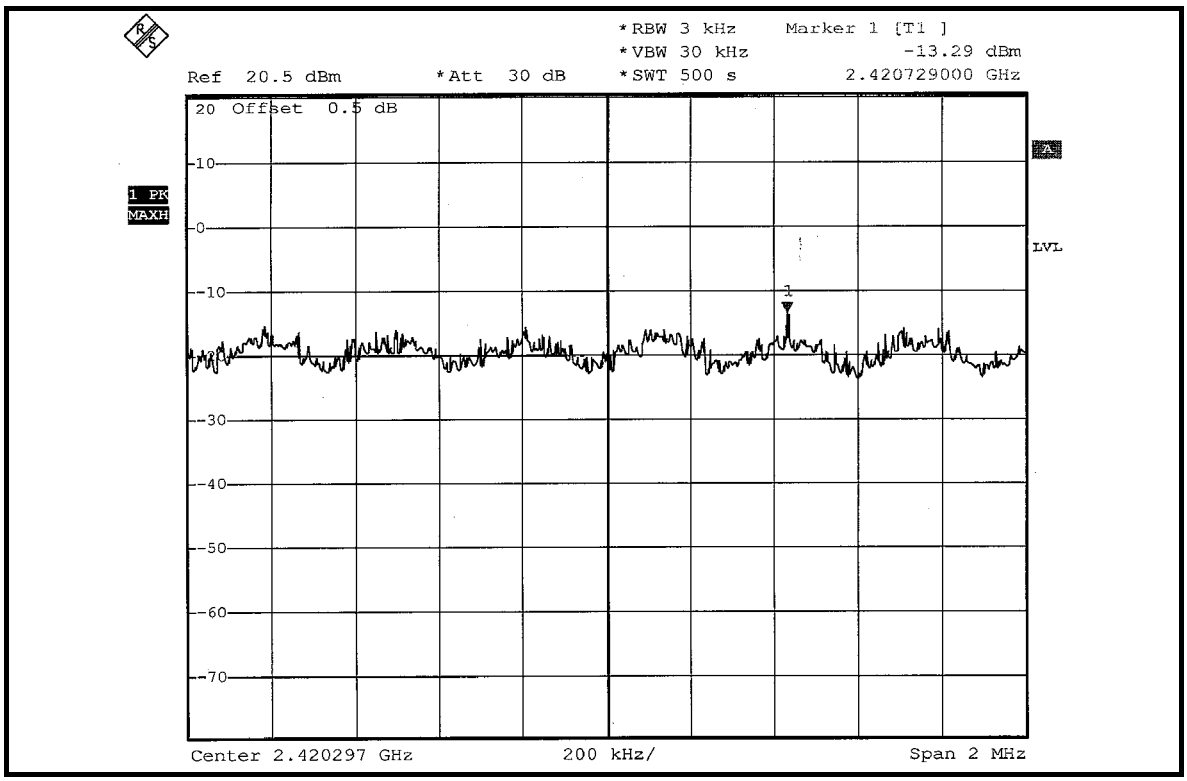

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.27 dBm
2.460693000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
1
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.4606 GHz
150 kHz/
Span 1.5 MHz

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

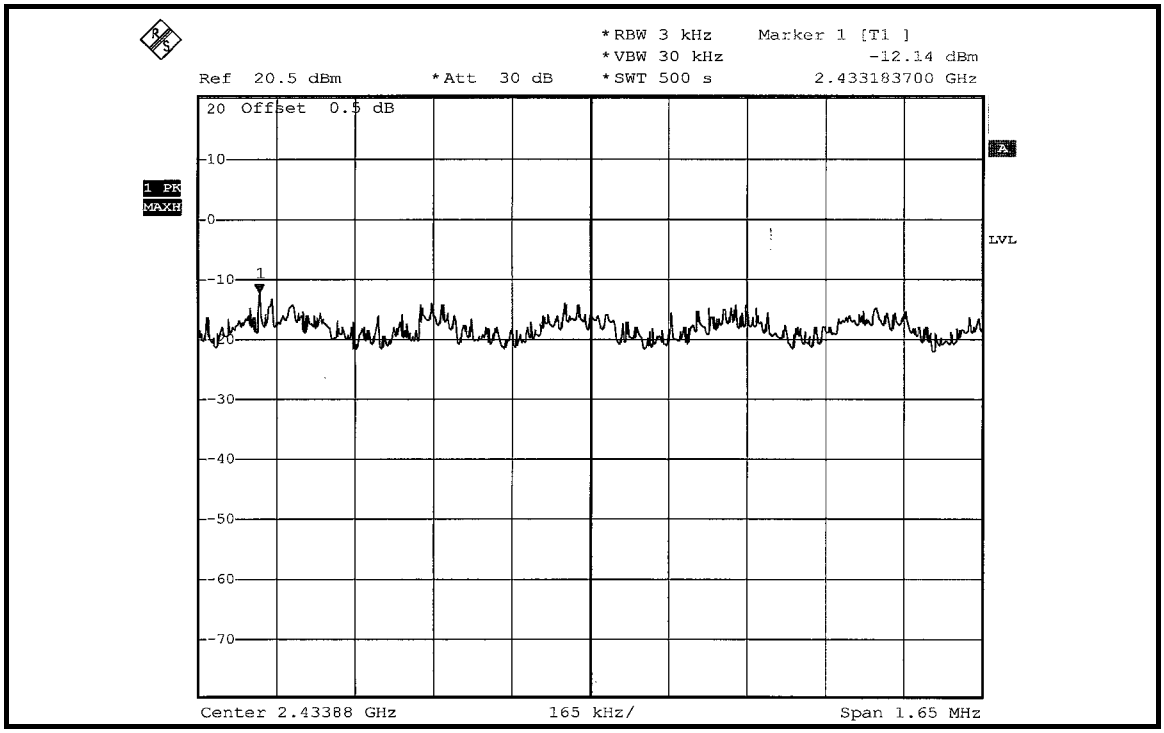
MODULATION TYPE	BPSK	**TRANSFER RATE**	27Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Lori Chiu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	-13.29	-13.30	8	PASS
4	2437	-12.14	-12.28	8	PASS
7	2452	-14.43	-14.62	8	PASS

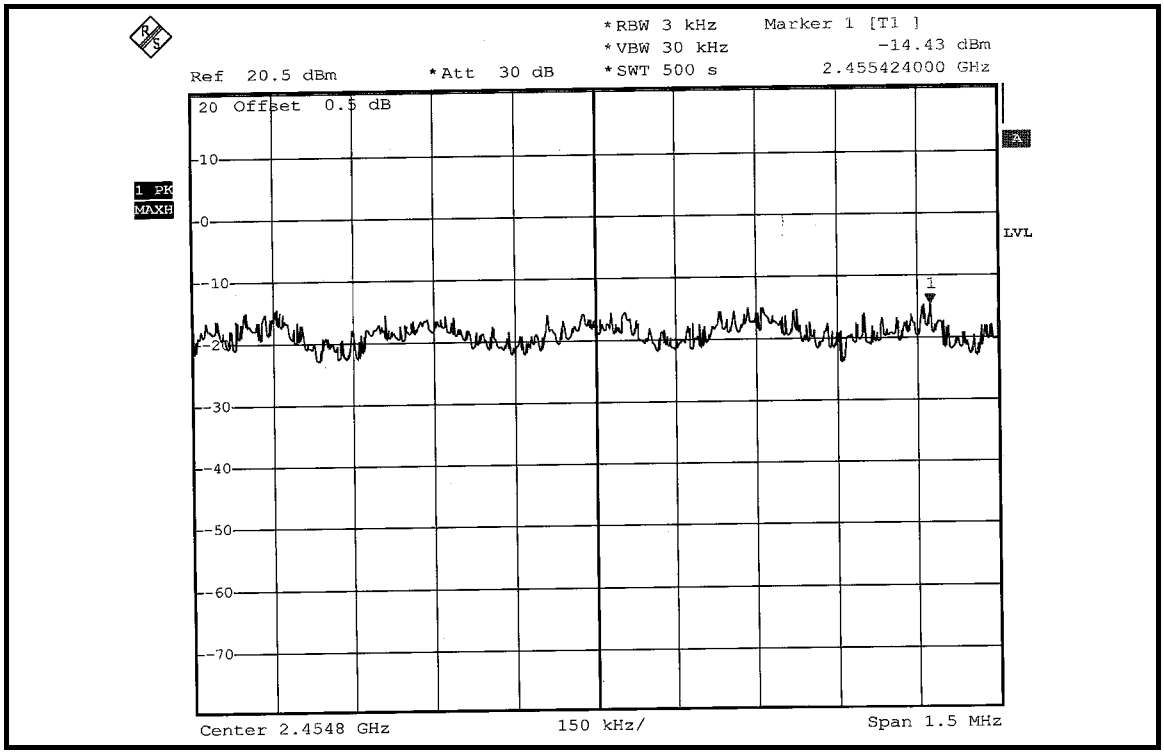
FOR CHAIN 0: CH 1



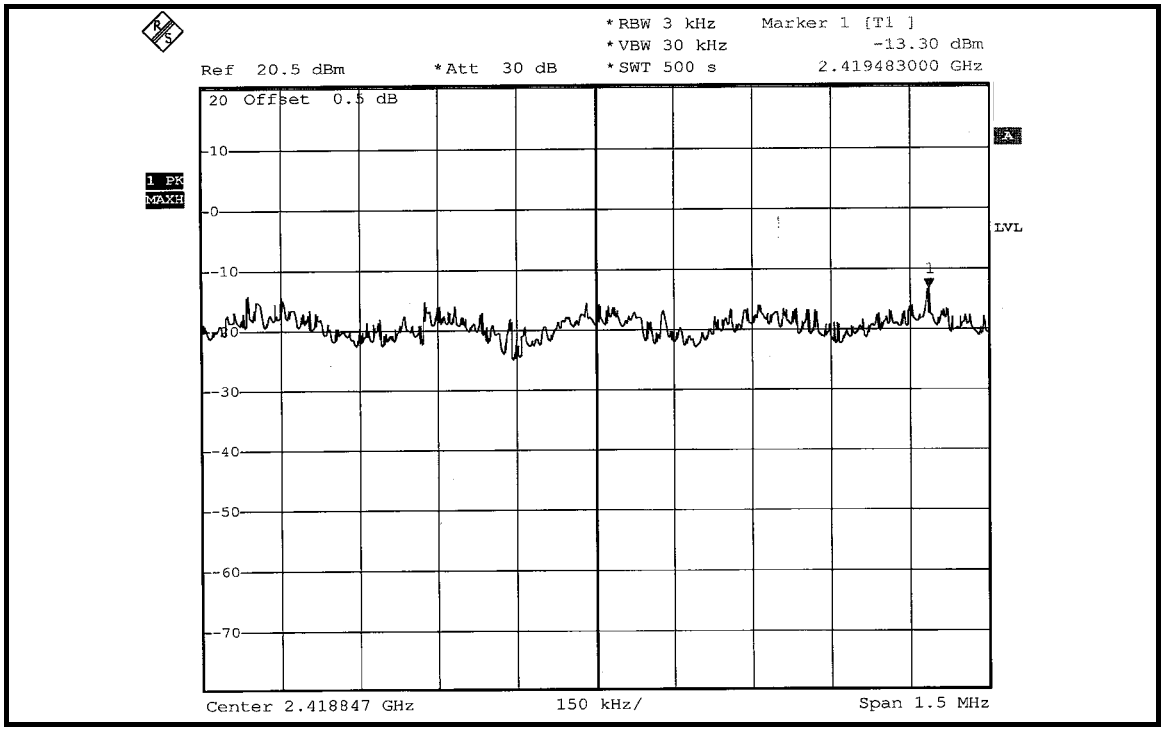
CH 4


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-12.14 dBm
2.433183700 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
LVL
Center 2.43388 GHz
165 kHz/
Span 1.65 MHz

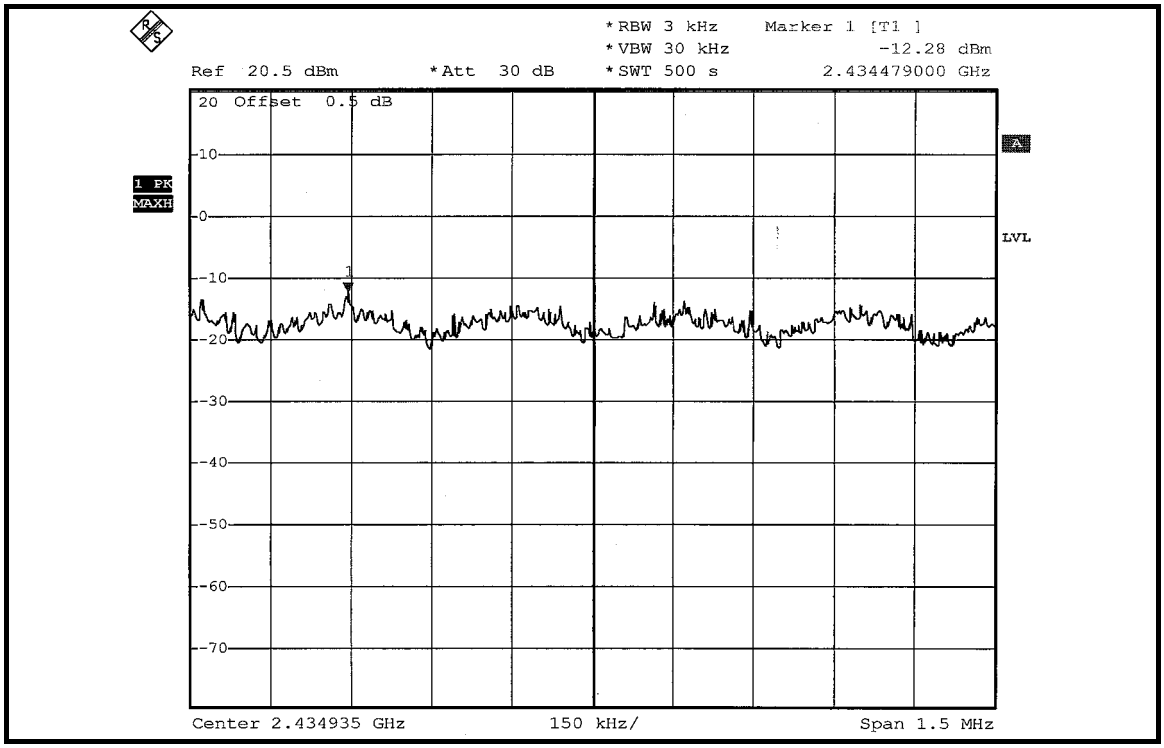
CH 7


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.43 dBm
2.455424000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
LVL
Center 2.4548 GHz
150 kHz/
Span 1.5 MHz

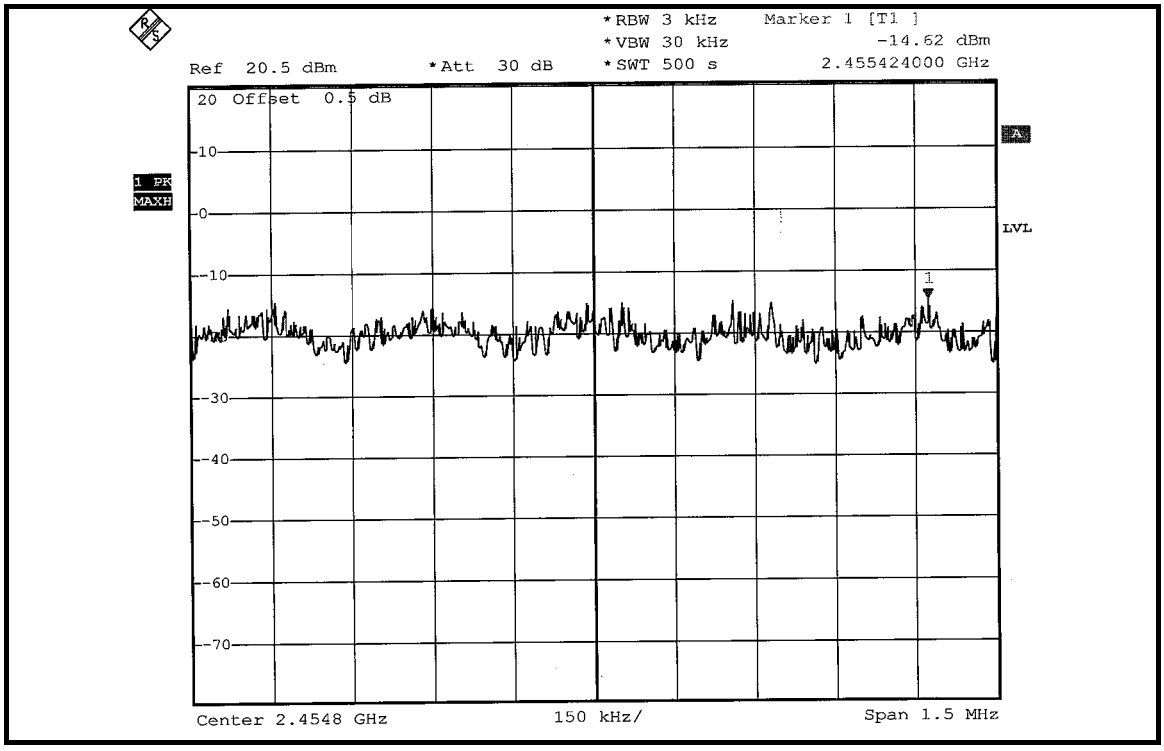
FOR CHAIN 1: CH 1



CH 4



CH 7


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.62 dBm
2.455424000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
10
0
-10
-30
-40
-50
-60
-70
Center 2.4548 GHz
150 kHz/
Span 1.5 MHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
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

For Single TX:

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 10Hz 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.

For Dual TX:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter 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. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW = VBW = 100kHz; Average RBW = 1MHz, VBW = 100Hz)

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 100Hz for Average detection (AV) at frequency above 1GHz.

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:

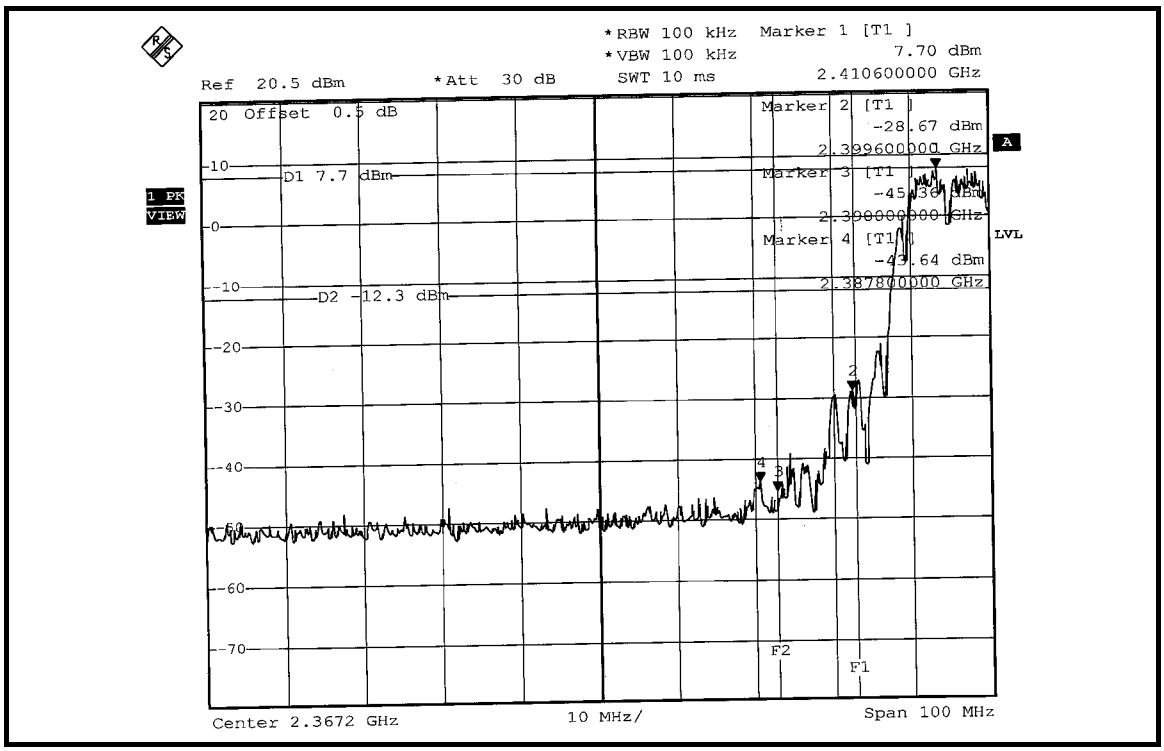
The band edge emission plot of DSSS technique on the next page shows 51.34dBc between carrier maximum power and local maximum emission in restrict band (2.3878GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 108.01dBuV/m (Peak), so the maximum field strength in restrict band is 108.01-51.34=56.67dBuV/m which is under 74dBuV/m limit.

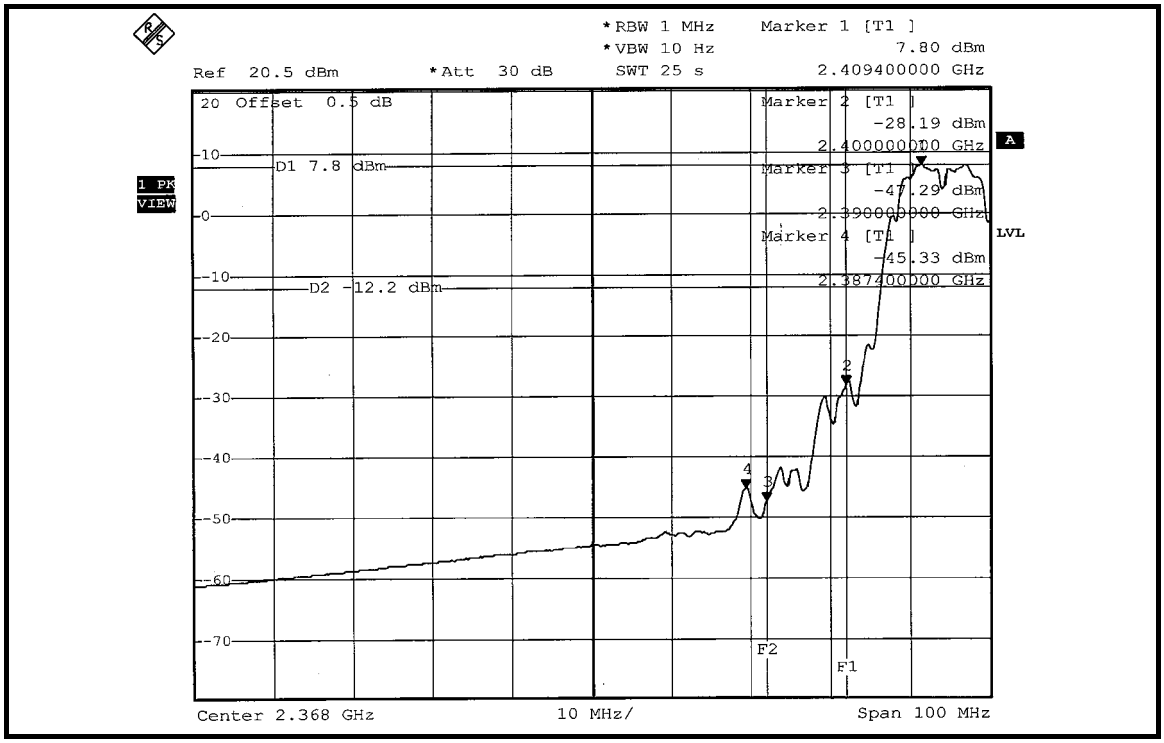
The band edge emission plot of DSSS technique on the next page shows 53.13dBc between carrier maximum power and local maximum emission in restrict band (2.3874GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 105.40dBuV/m (Average), so the maximum field strength in restrict band is 105.40-53.13=52.27dBuV/m which is under 54dBuV/m limit.

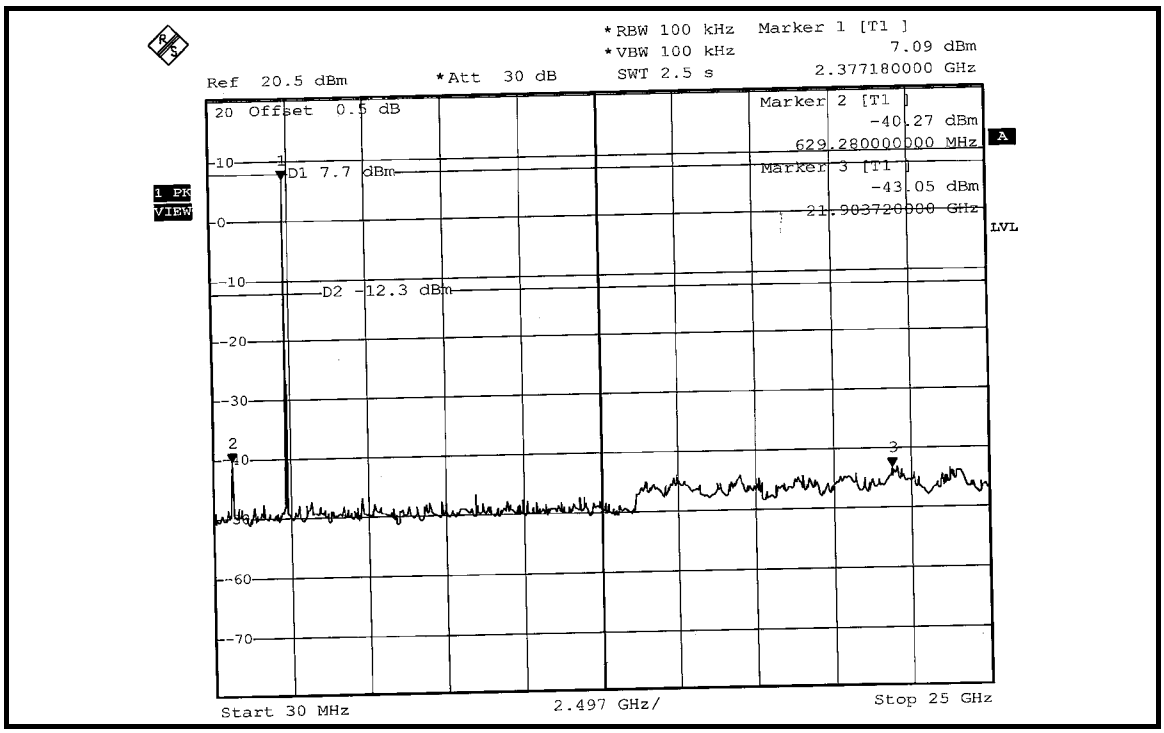
NOTE 2:

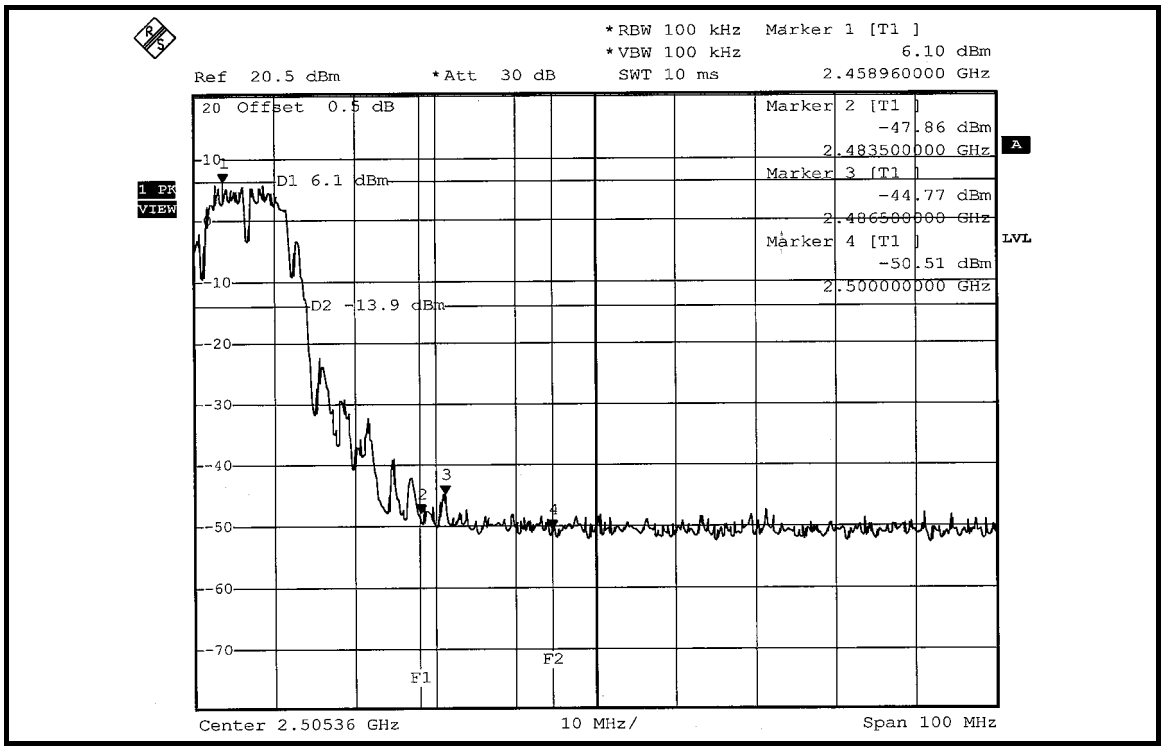
The band edge emission plot of DSSS technique on the next second page shows 50.87dBc between carrier maximum power and local maximum emission in restrict band (2.4865GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 107.11dBuV/m (Peak), so the maximum field strength in restrict band is 107.11-50.87=56.24dBuV/m which is under 74dBuV/m limit.

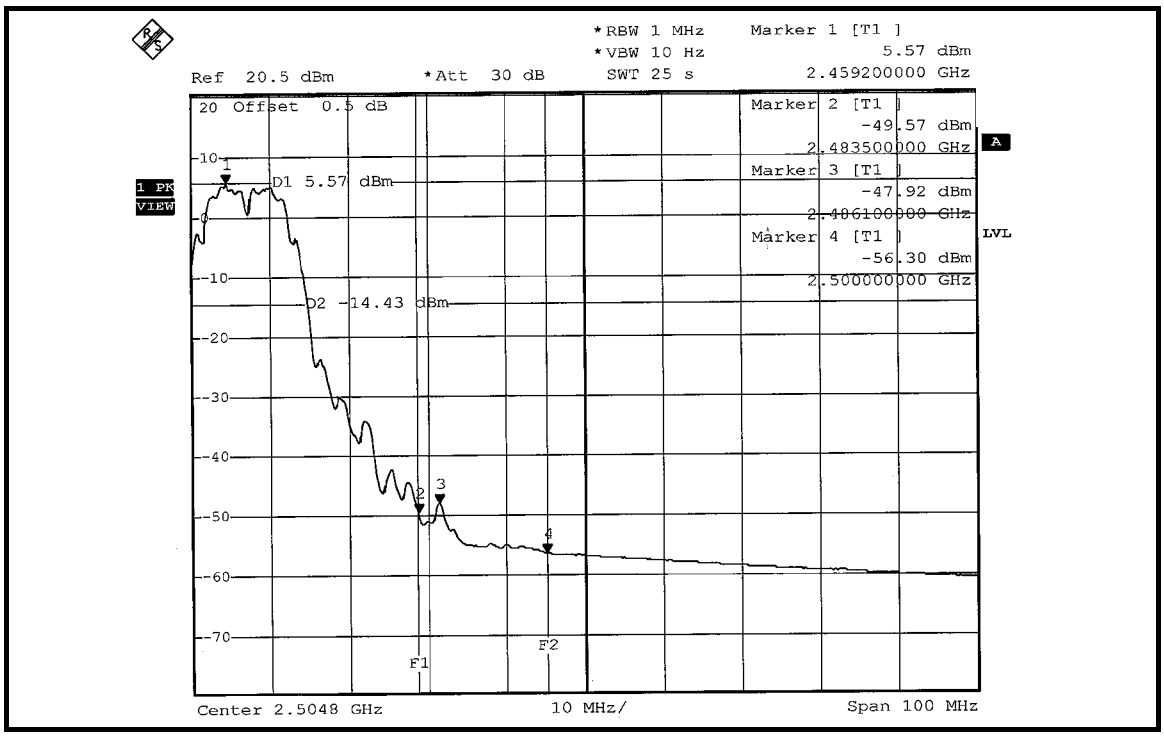
The band edge emission plot of DSSS technique on the next third page shows 53.49dBc between carrier maximum power and local maximum emission in restrict band (2.4861GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 104.52dBuV/m (Average), so the maximum field strength in restrict band is 104.52-53.49=51.03dBuV/m which is under 54dBuV/m limit.

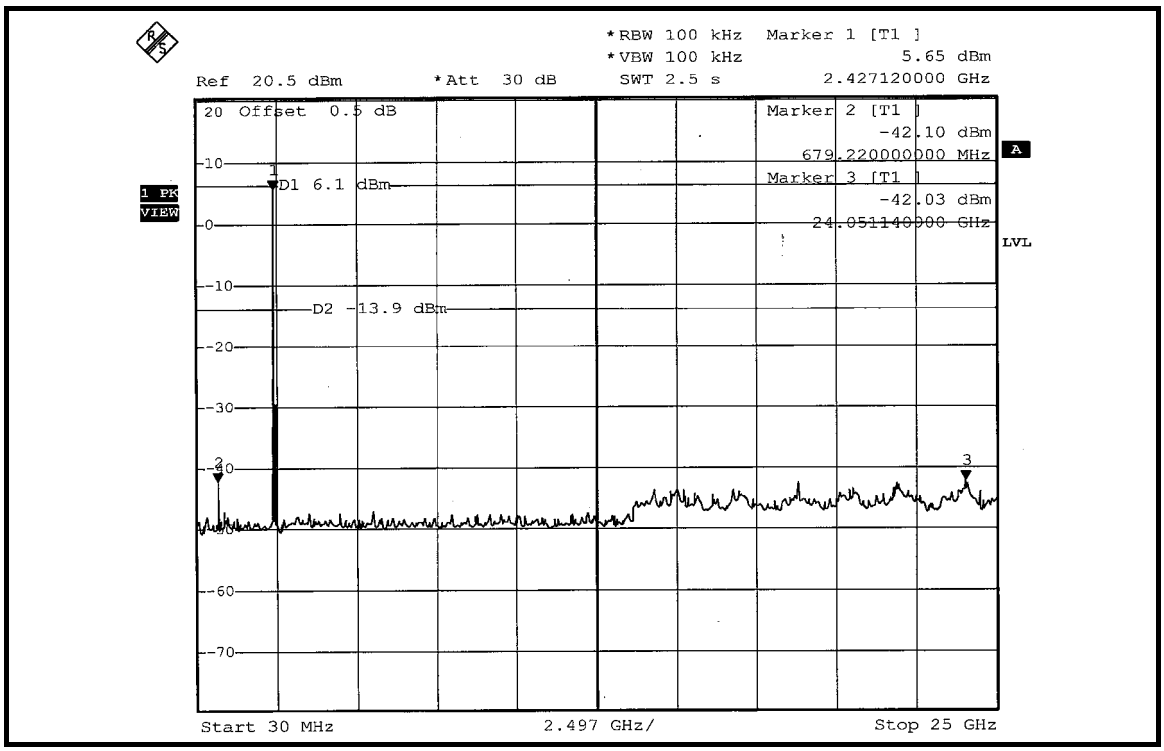

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
7.70 dBm
2.410600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-28.67 dBm
2.399600000 GHz
Marker 3 [T1]
-45.30 dBm
2.390000000 GHz
Marker 4 [T1]
-45.64 dBm
2.387800000 GHz
D1 7.7 dBm
D2 -12.3 dBm
1 PK
VIEW
A
LVL
F2
F1
Center 2.3672 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
7.80 dBm
2.409400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-28.19 dBm
2.400000000 GHz
Marker 3 [T1]
-47.29 dBm
2.390000000 GHz
Marker 4 [T1]
-45.33 dBm
2.387400000 GHz
D1 7.8 dBm
D2 -12.2 dBm
1 PK
VIEW
A
LVL
F2
F1
Center 2.368 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
7.09 dBm
2.377180000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-40.27 dBm
629.280000000 MHz
Marker 3 [T1]
-43.05 dBm
21.903720000 GHz
1 PK
VIEW
A
LVL
D1 7.7 dBm
D2 -12.3 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
6.10 dBm
2.458960000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-47.86 dBm
2.483500000 GHz
Marker 3 [T1]
-44.77 dBm
2.486500000 GHz
Marker 4 [T1]
-50.51 dBm
2.500000000 GHz
1 PK
VIEW
A
LVL
D1 6.1 dBm
D2 -13.9 dBm
F1
F2
Center 2.50536 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
5.57 dBm
2.459200000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-49.57 dBm
2.483500000 GHz
Marker 3 [T1]
-47.92 dBm
2.486100000 GHz
Marker 4 [T1]
-56.30 dBm
2.500000000 GHz
1 PK
VIEW
D1 5.57 dBm
D2 -14.43 dBm
A
LVL
F1
F2
Center 2.5048 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
5.65 dBm
2.427120000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-42.10 dBm
679.220000000 MHz
Marker 3 [T1]
-42.03 dBm
24.051140000 GHz
1 PK
VIEW
D1 6.1 dBm
D2 -13.9 dBm
A
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g OFDM MODULATION:

NOTE 1:

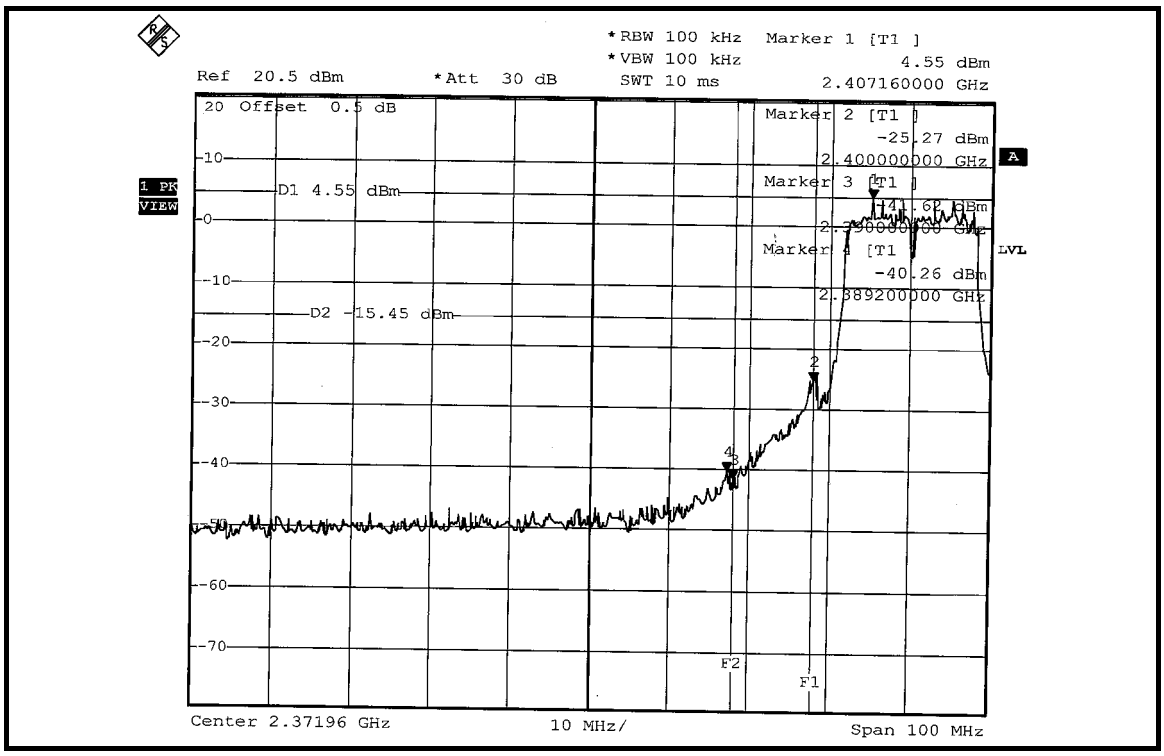
The band edge emission plot of OFDM technique on the next page shows 44.81dBc between carrier maximum power and local maximum emission in restrict band (2.3892GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 111.16dBuV/m (Peak), so the maximum field strength in restrict band is 111.16-44.81=66.35dBuV/m which is under 74dBuV/m limit.

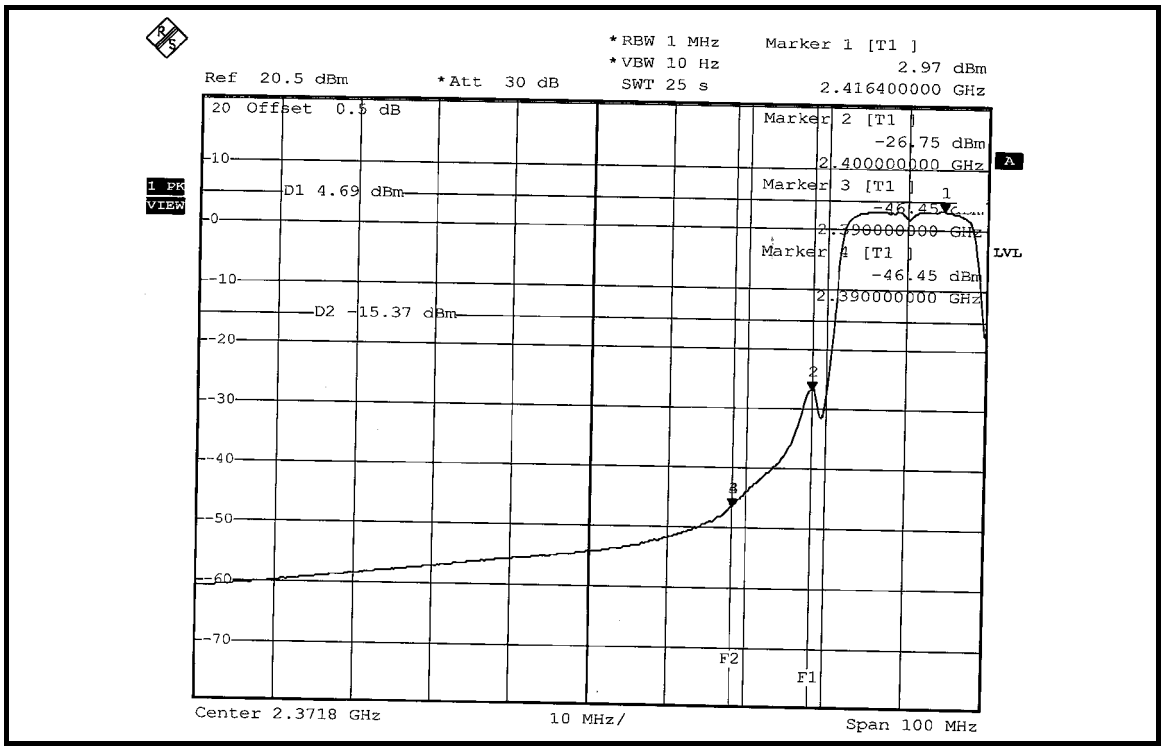
The band edge emission plot of OFDM technique on the next page shows 49.42dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 101.09dBuV/m (Average), so the maximum field strength in restrict band is 101.09-49.42=51.67dBuV/m which is under 54dBuV/m limit.

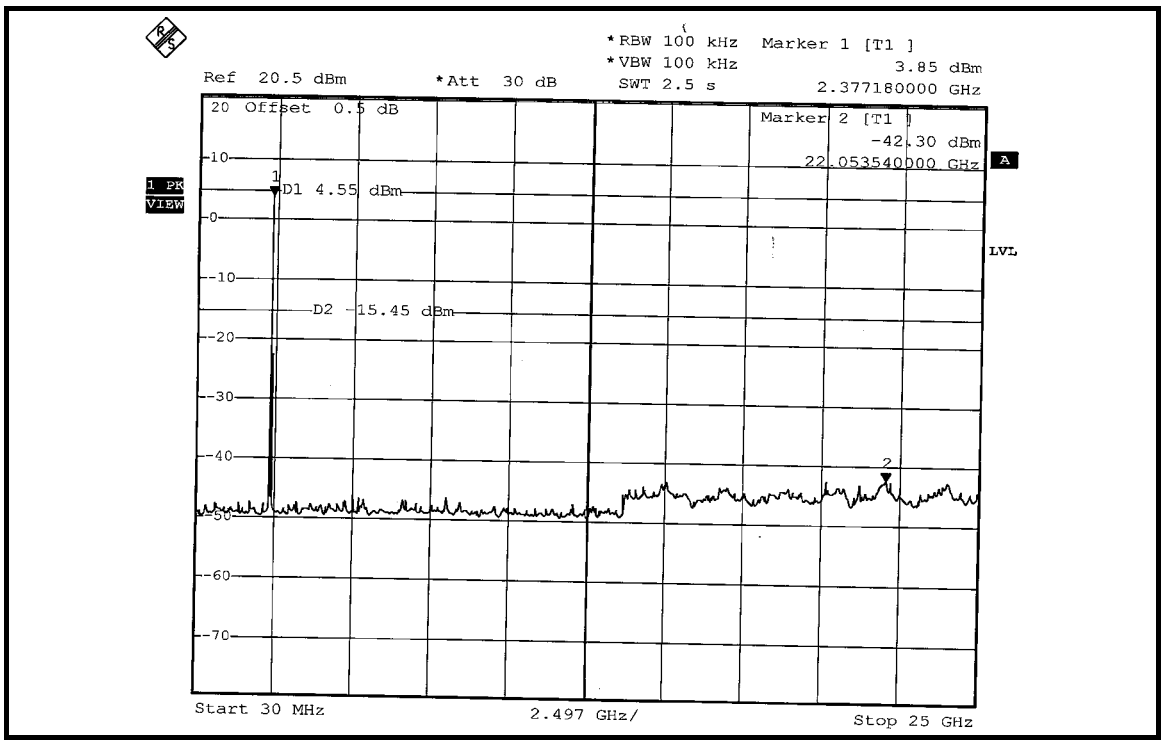
NOTE 2:

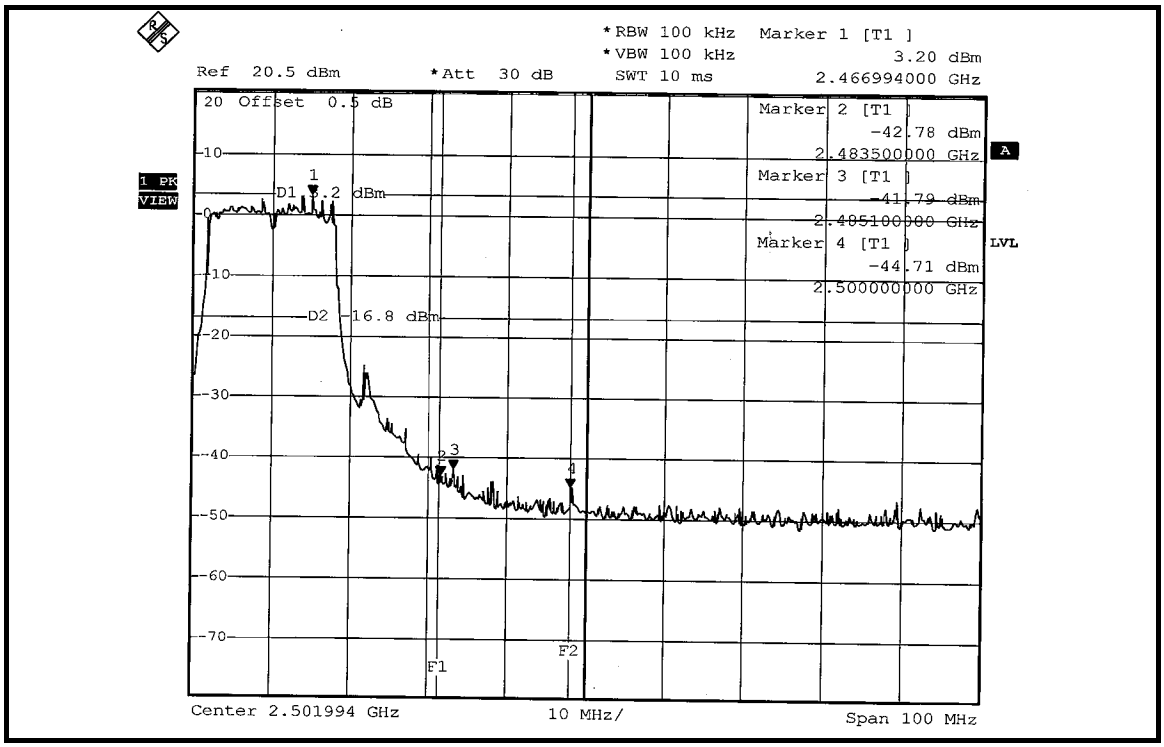
The band edge emission plot of OFDM technique on the next second page shows 44.99dBc between carrier maximum power and local maximum emission in restrict band (2.4851GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 109.45dBuV/m (Peak), so the maximum field strength in restrict band is 109.45-44.99=64.46dBuV/m which is under 74dBuV/m limit.

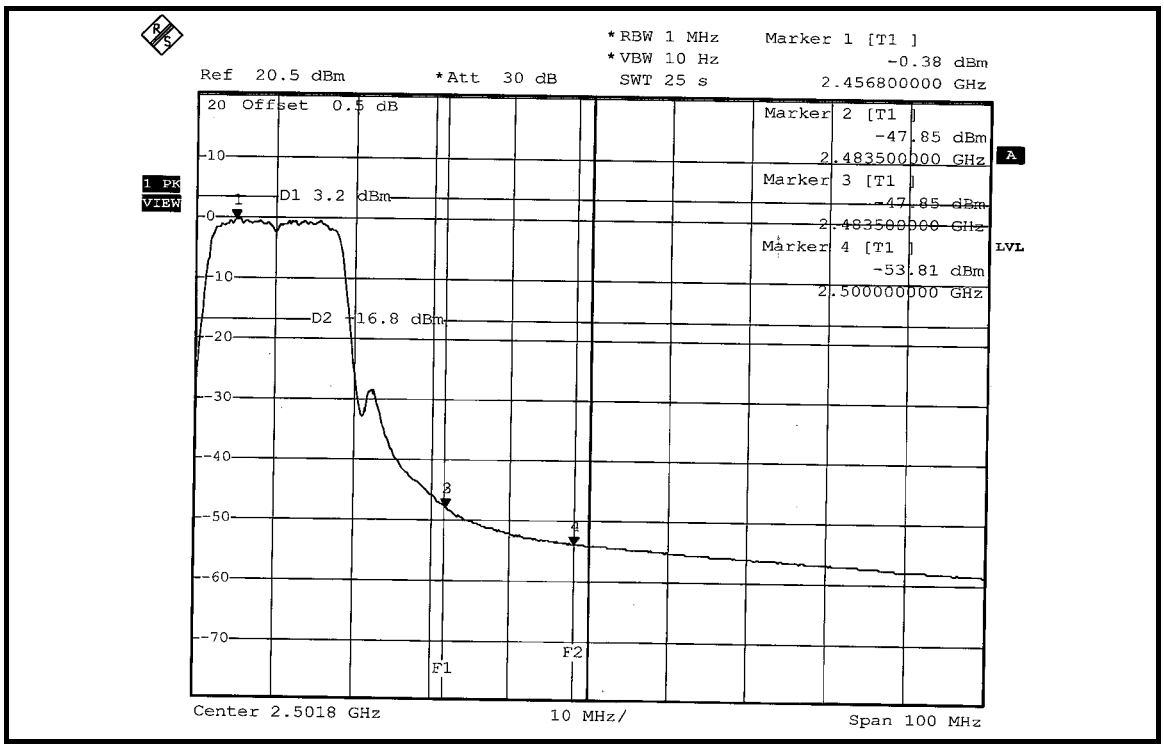
The band edge emission plot of OFDM technique on the next third page shows 47.47dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 99.19dBuV/m (Average), so the maximum field strength in restrict band is 99.19-47.47=51.72dBuV/m which is under 54dBuV/m limit.

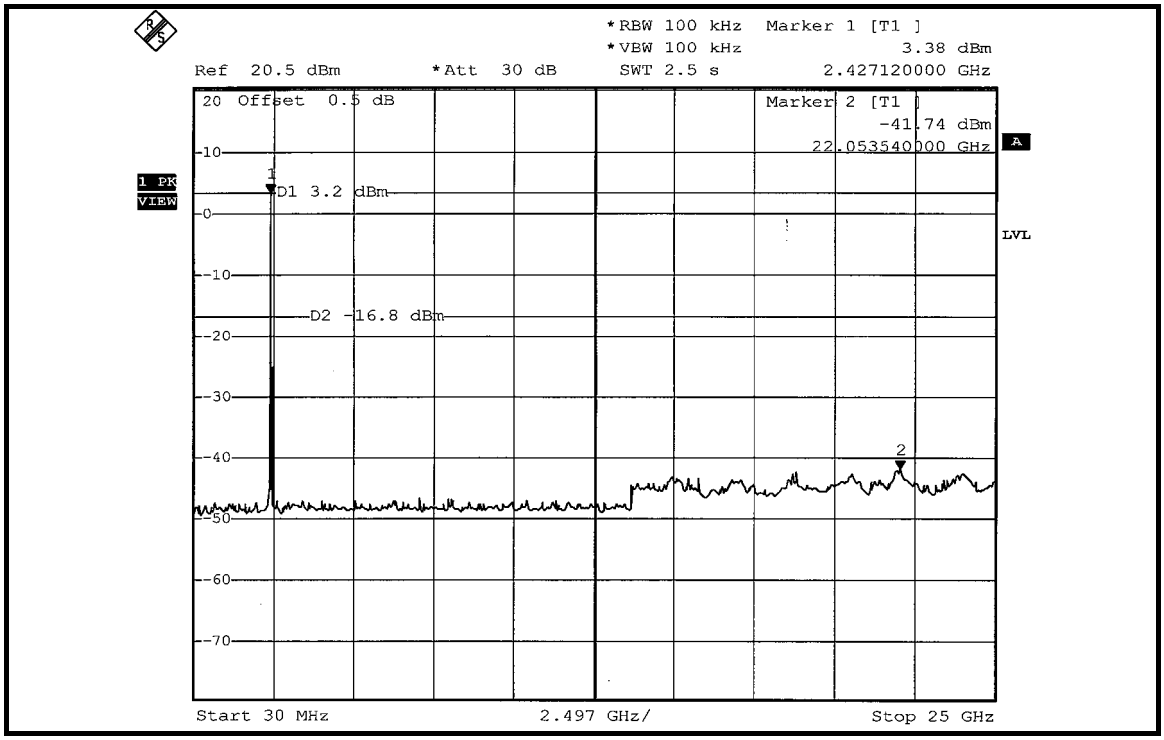

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
4.55 dBm
2.407160000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-25.27 dBm
2.400000000 GHz
Marker 3 [T1]
Marker 4 [T1]
-40.26 dBm
2.389200000 GHz
1 PK VIEW
D1 4.55 dBm
D2 -15.45 dBm
A
LVL
F2
F1
Center 2.37196 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
2.97 dBm
2.416400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-26.75 dBm
2.400000000 GHz
Marker 3 [T1]
Marker 4 [T1]
-46.45 dBm
2.390000000 GHz
1 PK VIEW
D1 4.69 dBm
D2 -15.37 dBm
A
LVL
F2
F1
Center 2.3718 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
3.85 dBm
2.377180000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-42.30 dBm
22.053540000 GHz
1 PK
VIEW
D1 4.55 dBm
D2 -15.45 dBm
A
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
3.20 dBm
2.466994000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-42.78 dBm
2.483500000 GHz
Marker 3 [T1]
-41.79 dBm
2.485100000 GHz
Marker 4 [T1]
-44.71 dBm
2.500000000 GHz
1 PK
VIEW
D1 3.2 dBm
D2 -16.8 dBm
A
LVL
F1
F2
Center 2.501994 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
-0.38 dBm
2.456800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-47.85 dBm
2.483500000 GHz
Marker 3 [T1]
-47.85 dBm
2.483500000 GHz
Marker 4 [T1]
-53.81 dBm
2.500000000 GHz
1 PK
VIEW
D1 3.2 dBm
D2 -16.8 dBm
A
LVL
F1
F2
Center 2.5018 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
3.38 dBm
2.427120000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-41.74 dBm
22.053540000 GHz
1 PK
VIEW
D1 3.2 dBm
D2 -16.8 dBm
A
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz

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

NOTE 1:

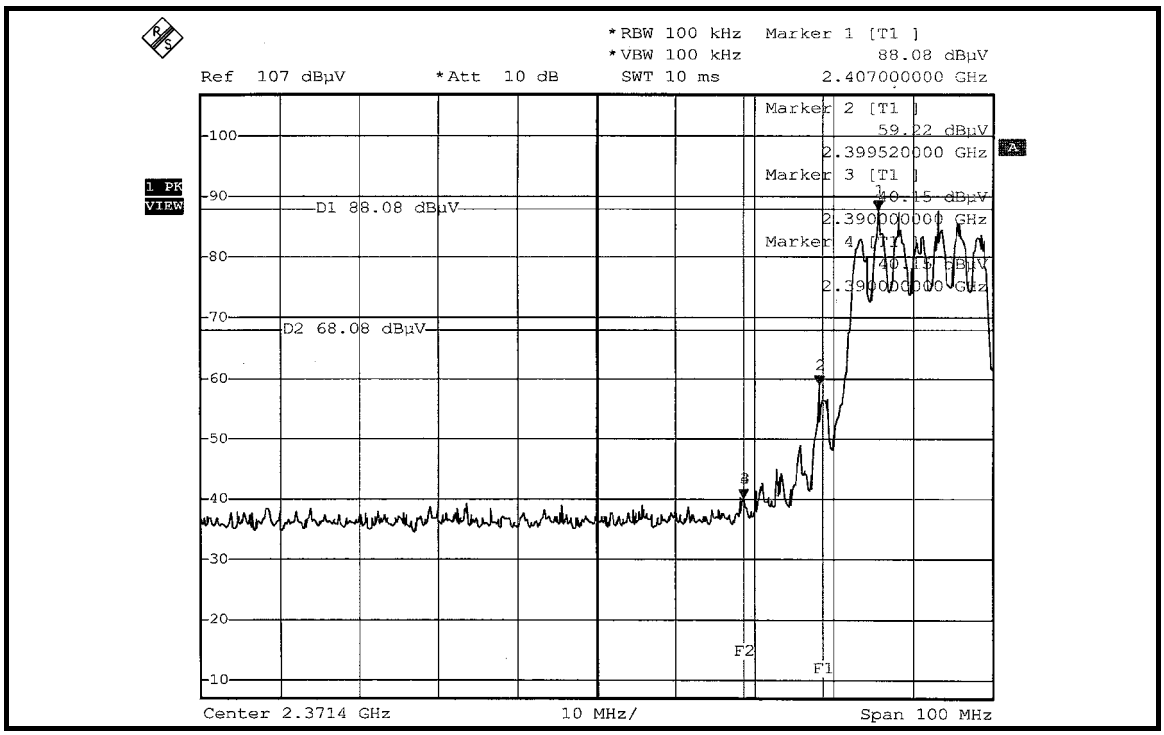
The band edge emission plot of OFDM technique on the next page shows 47.93dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.40dBuV/m (Peak), so the maximum field strength in restrict band is 110.40-47.93=63.47dBuV/m which is under 74dBuV/m limit.

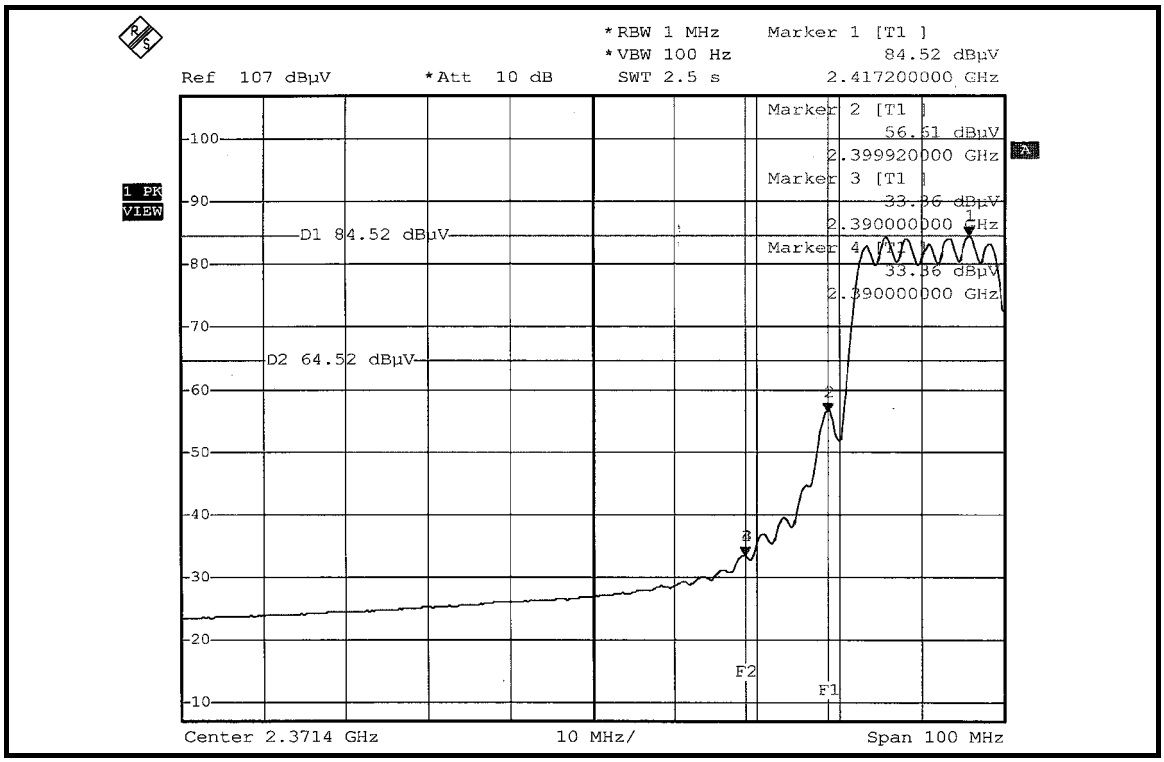
The band edge emission plot of OFDM technique on the next page shows 51.16dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 101.65dBuV/m (Average), so the maximum field strength in restrict band is 101.65-51.16=50.49dBuV/m which is under 54dBuV/m limit.

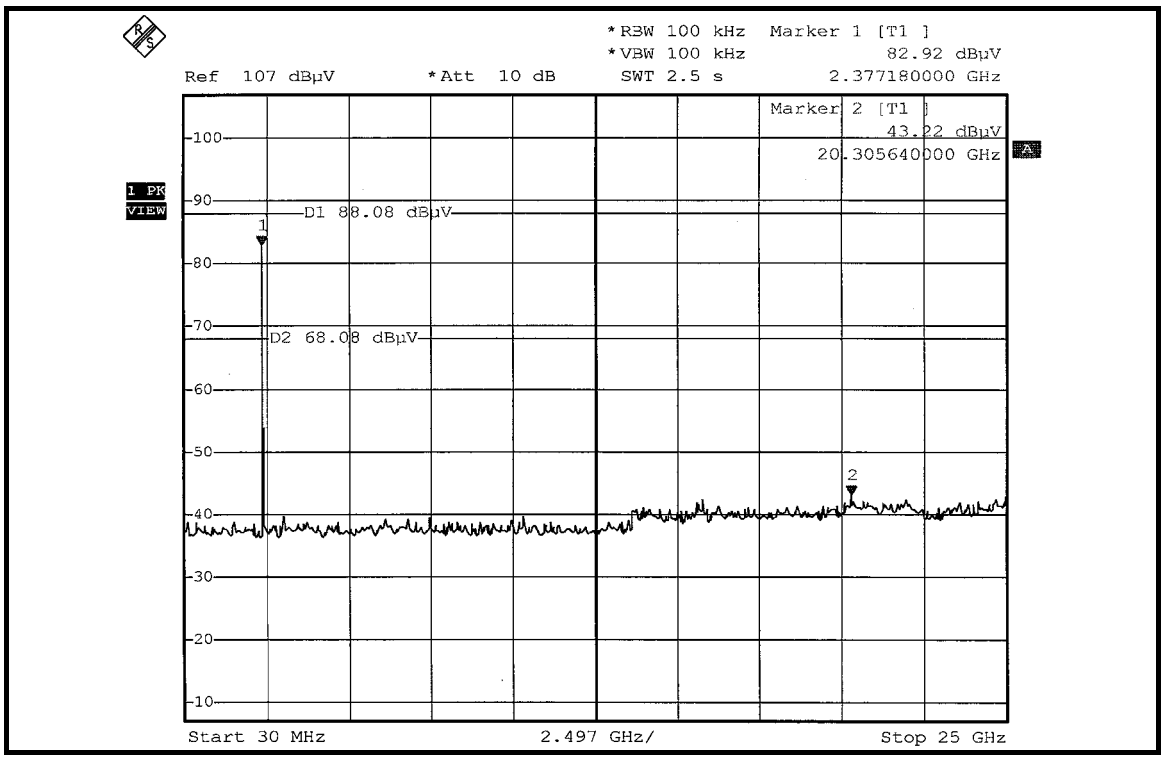
NOTE 2:

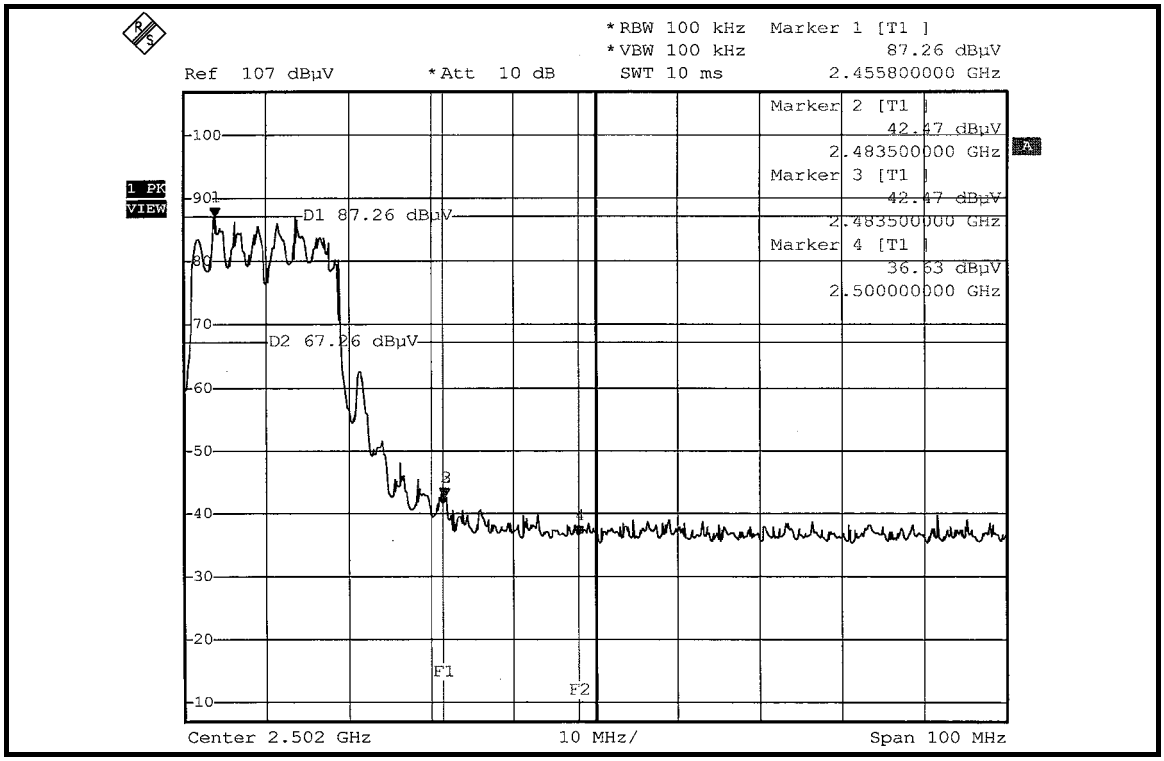
The band edge emission plot of OFDM technique on the next second page shows 44.79dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz) is 109.55dBuV/m (Peak), so the maximum field strength in restrict band is 109.55-44.79=64.76dBuV/m which is under 74dBuV/m limit.

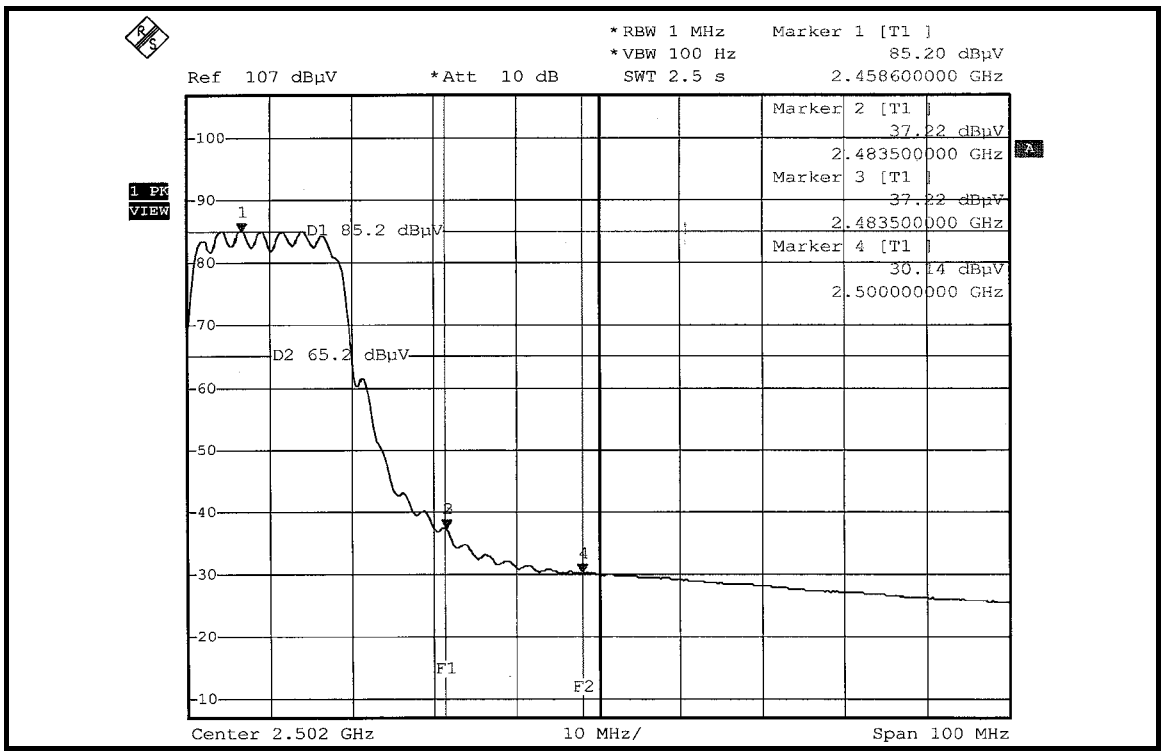
The band edge emission plot of OFDM technique on the next third page shows 47.98dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 99.65dBuV/m (Average), so the maximum field strength in restrict band is 99.65-47.98=51.67dBuV/m which is under 54dBuV/m limit.

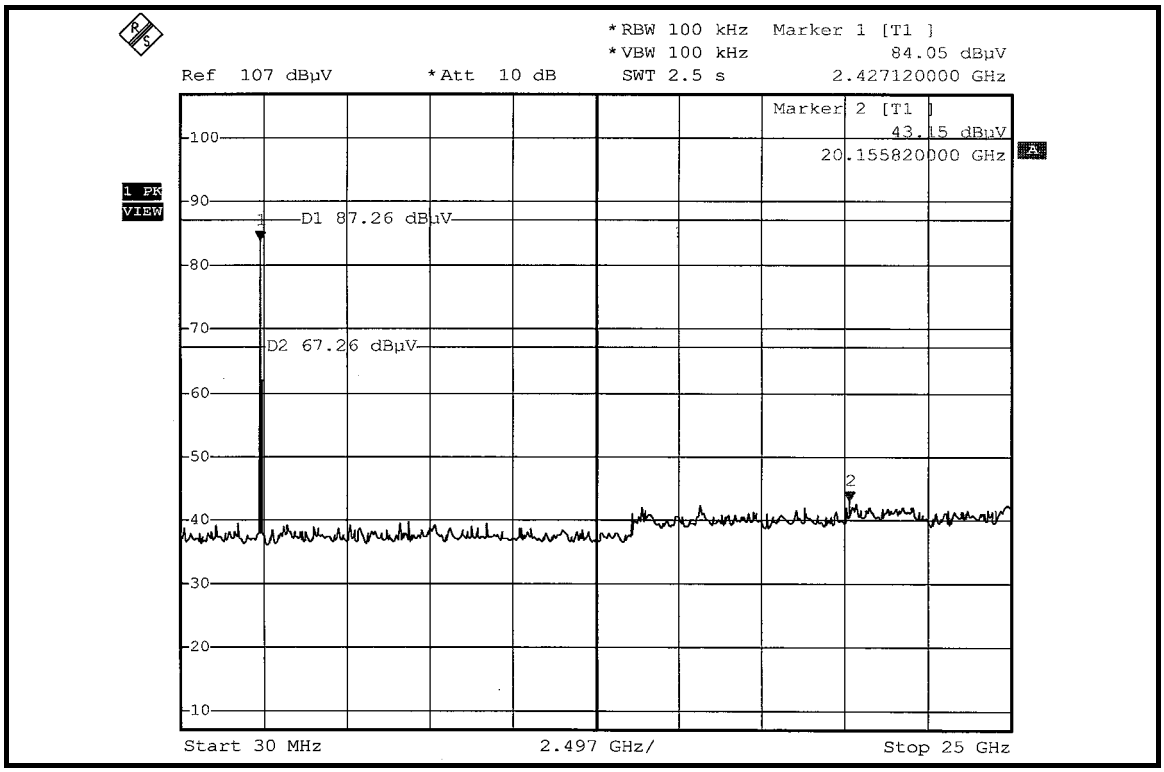

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
88.08 dBµV
2.407000000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
59.22 dBµV
2.399520000 GHz
Marker 3 [T1]
40.15 dBµV
2.390000000 GHz
Marker 4 [T1]
40.15 dBµV
2.390000000 GHz
1 PK
VIEW
D1 88.08 dBµV
D2 68.08 dBµV
F2
F1
Center 2.3714 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 100 Hz
SWT 2.5 s
Marker 1 [T1]
84.52 dBµV
2.417200000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
56.51 dBµV
2.399920000 GHz
Marker 3 [T1]
33.86 dBµV
2.390000000 GHz
Marker 4 [T1]
33.86 dBµV
2.390000000 GHz
1 PK
VIEW
D1 84.52 dBµV
D2 64.52 dBµV
F2
F1
Center 2.3714 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
82.92 dBµV
2.377180000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
43.22 dBµV
20.305640000 GHz
1 PK
VIEW
D1 88.08 dBµV
D2 68.08 dBµV
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
87.26 dBµV
2.455800000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
42.47 dBµV
2.483500000 GHz
Marker 3 [T1]
42.47 dBµV
2.483500000 GHz
Marker 4 [T1]
36.53 dBµV
2.500000000 GHz
1 PK
VIEW
D1 87.26 dBµV
D2 67.26 dBµV
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 100 Hz
SWT 2.5 s
Marker 1 [T1]
85.20 dBµV
2.458600000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
37.22 dBµV
2.483500000 GHz
Marker 3 [T1]
37.22 dBµV
2.483500000 GHz
Marker 4 [T1]
30.14 dBµV
2.500000000 GHz
1 PK VIEW
D1 85.2 dBµV
D2 65.2 dBµV
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
84.05 dBµV
2.427120000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
43.15 dBµV
20.155820000 GHz
1 PK VIEW
D1 87.26 dBµV
D2 67.26 dBµV
Start 30 MHz
2.497 GHz/
Stop 25 GHz

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

NOTE 1:

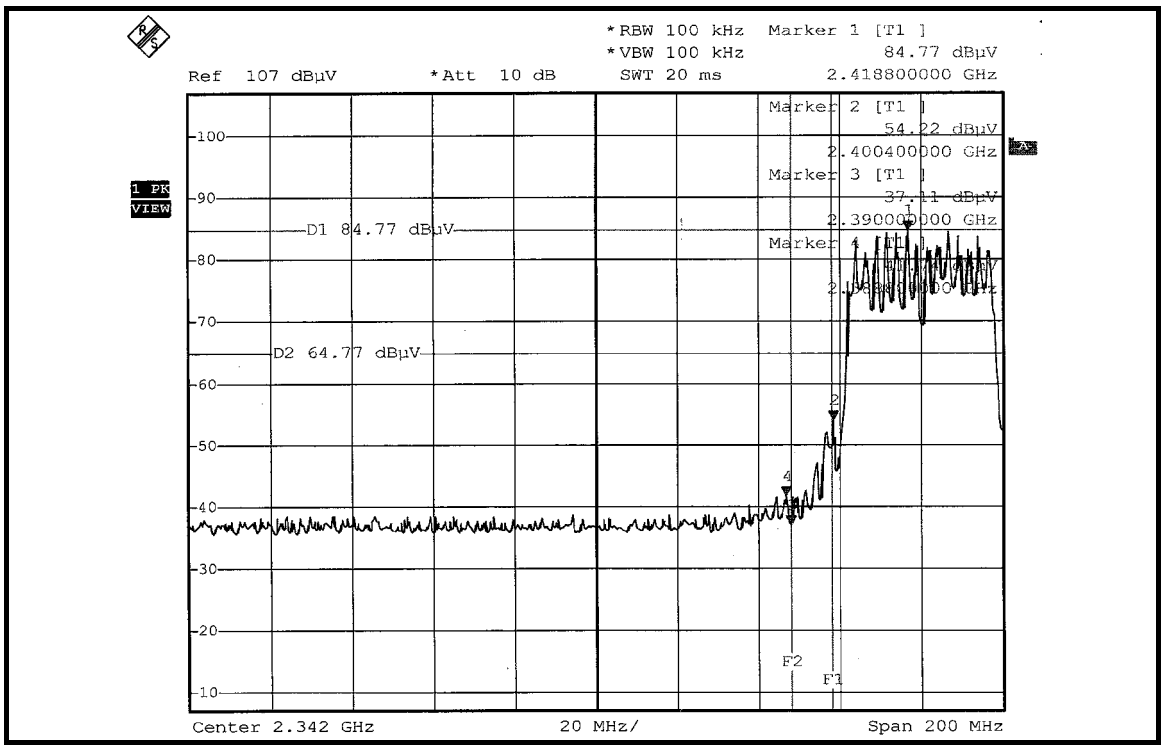
The band edge emission plot of OFDM technique on the next page shows 47.66dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 107.08dBuV/m (Peak), so the maximum field strength in restrict band is 107.08-47.66=59.42dBuV/m which is under 74dBuV/m limit.

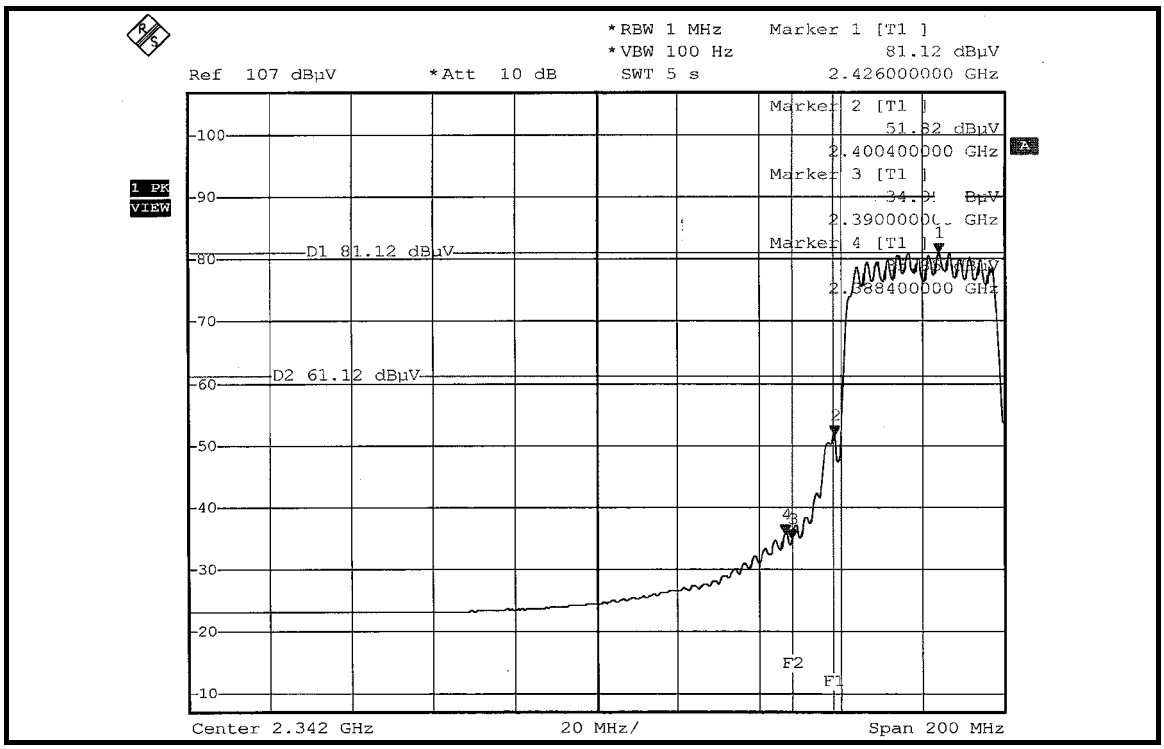
The band edge emission plot of OFDM technique on the next page shows 45.27dBc between carrier maximum power and local maximum emission in restrict band (2.3884GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 97.02dBuV/m (Average), so the maximum field strength in restrict band is 97.02-45.27=51.75dBuV/m which is under 54dBuV/m limit.

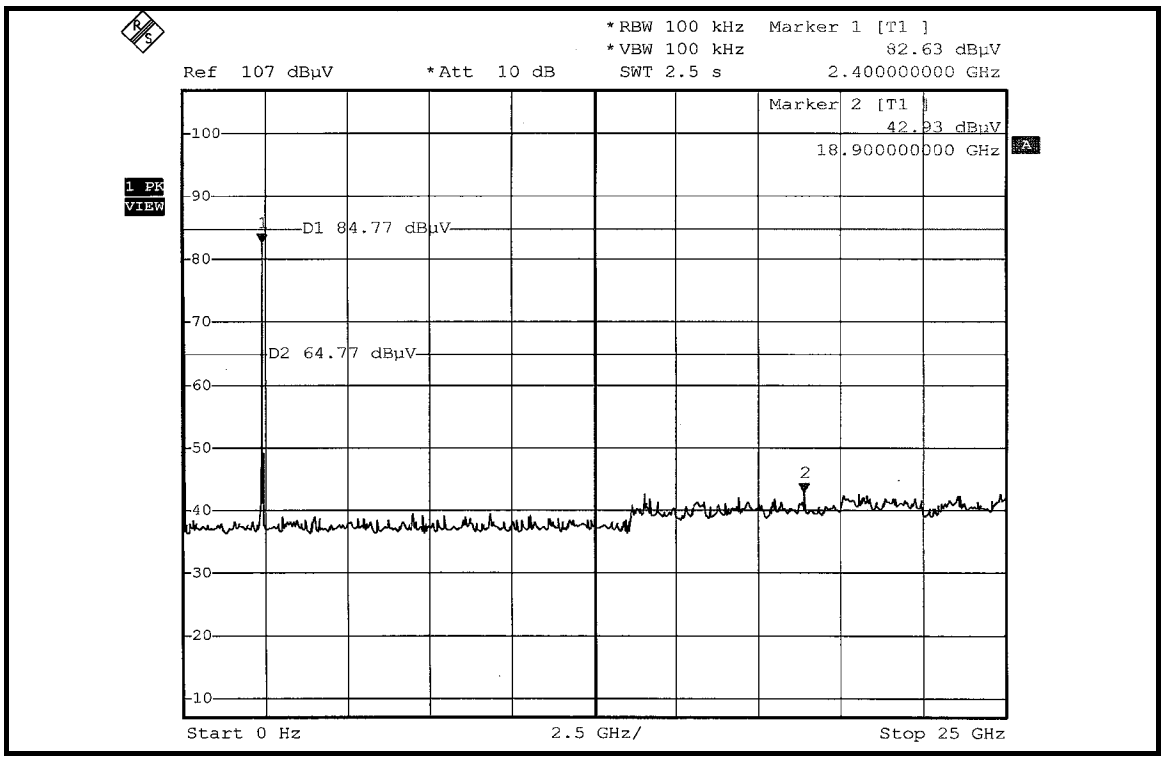
NOTE 2:

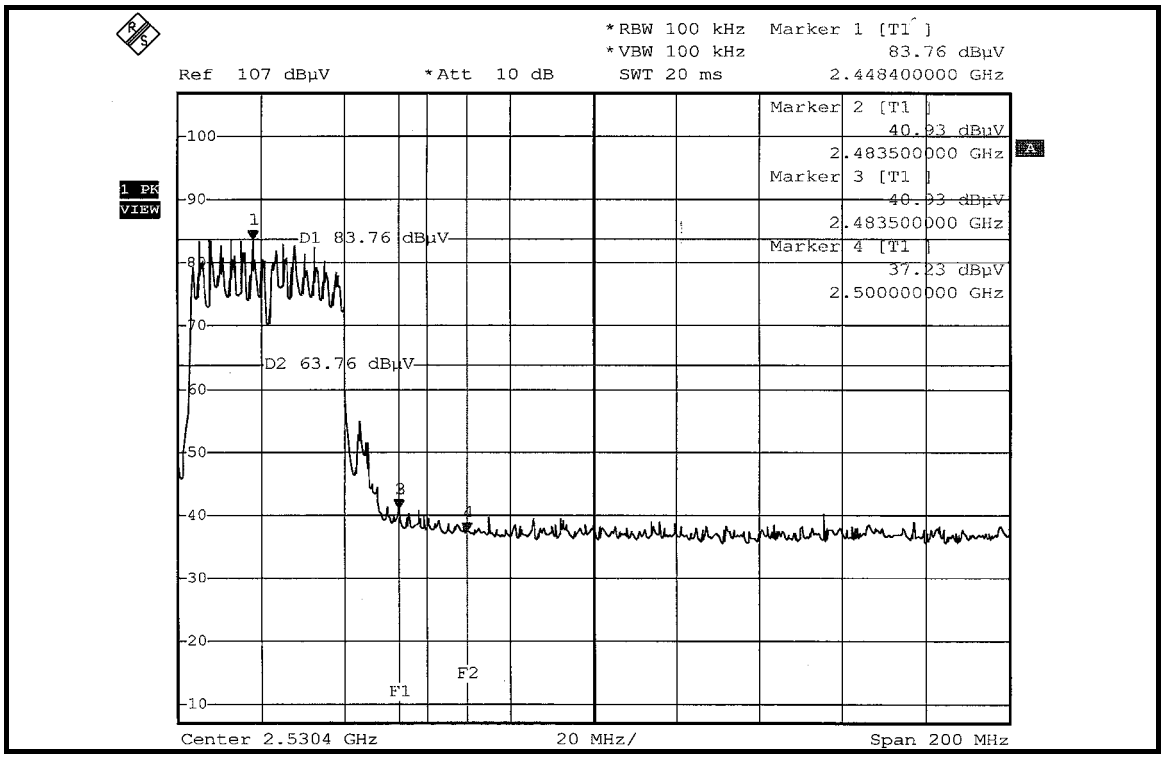
The band edge emission plot of OFDM technique on the next second page shows 42.83dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.2.7 is 107.15dBuV/m (Peak), so the maximum field strength in restrict band is 107.15-42.83=64.32dBuV/m which is under 74dBuV/m limit.

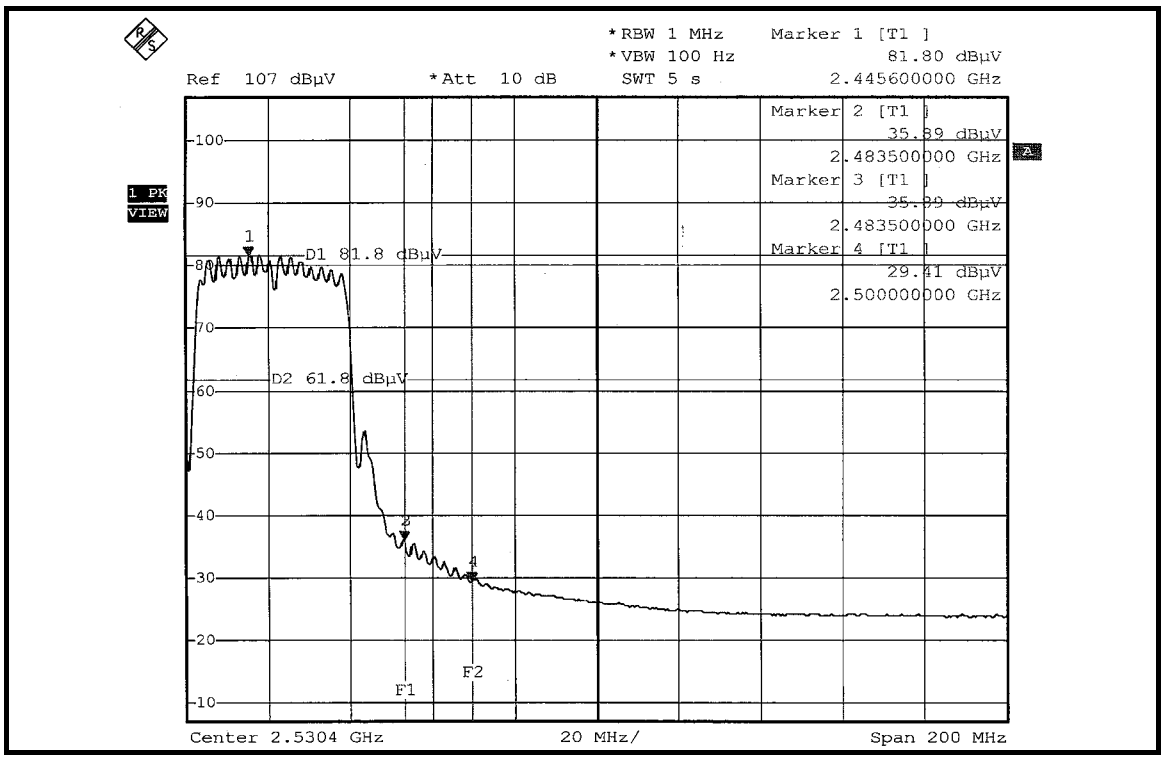
The band edge emission plot of OFDM technique on the next third page shows 45.91dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.2.7 is 97.08dBuV/m (Average), so the maximum field strength in restrict band is 97.08-45.91=51.17dBuV/m which is under 54dBuV/m limit.

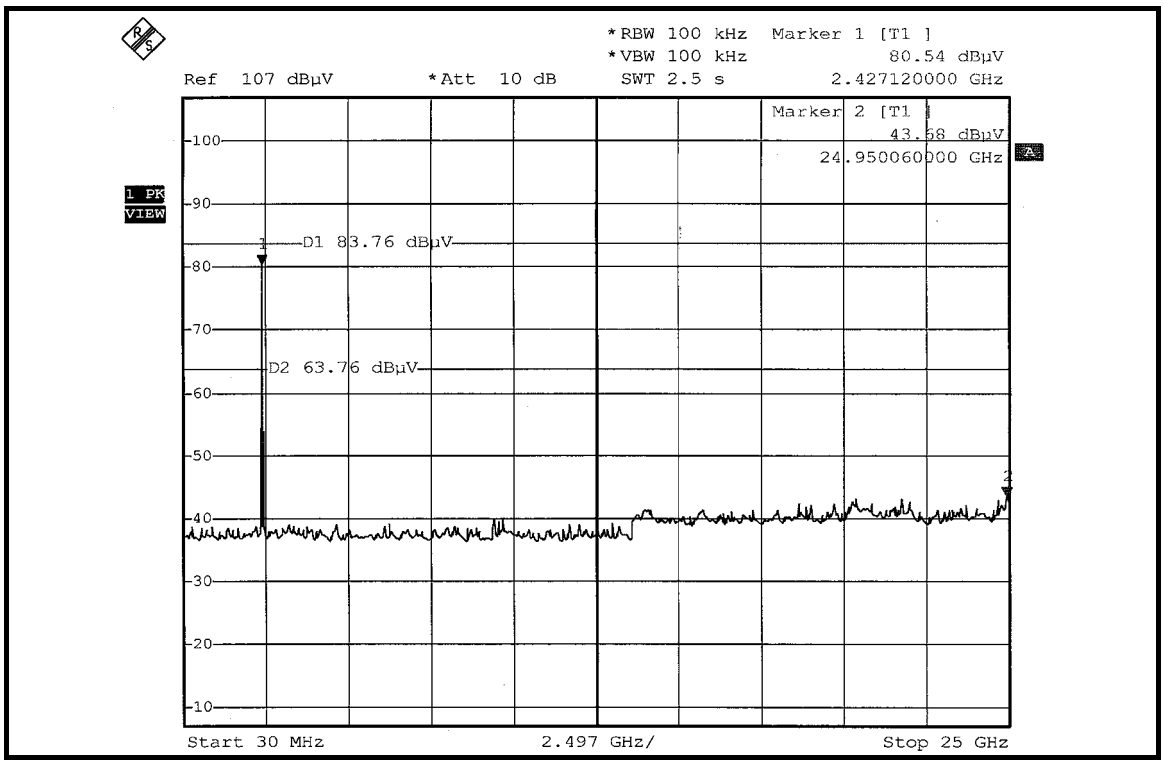

*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
84.77 dBµV
2.418800000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
54.22 dBµV
2.400400000 GHz
Marker 3 [T1]
37.11 dBµV
2.390000000 GHz
Marker 4 [T1]
1 PK
VIEW
D1 84.77 dBµV
D2 64.77 dBµV
F2
F1
Center 2.342 GHz
20 MHz/
Span 200 MHz


*RBW 1 MHz
*VBW 100 Hz
SWT 5 s
Marker 1 [T1]
81.12 dBµV
2.426000000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
51.82 dBµV
2.400400000 GHz
Marker 3 [T1]
Marker 4 [T1]
2.388400000 GHz
1 PK
VIEW
D1 81.12 dBµV
D2 61.12 dBµV
F2
F1
Center 2.342 GHz
20 MHz/
Span 200 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
82.63 dBµV
2.400000000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
42.93 dBµV
18.900000000 GHz
1 PK
VIEW
D1 84.77 dBµV
D2 64.77 dBµV
Start 0 Hz
2.5 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
83.76 dBµV
2.448400000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
40.93 dBµV
2.483500000 GHz
Marker 3 [T1]
40.93 dBµV
2.483500000 GHz
Marker 4 [T1]
37.23 dBµV
2.500000000 GHz
1 PK
VIEW
D1 83.76 dBµV
D2 63.76 dBµV
F1
F2
Center 2.5304 GHz
20 MHz/
Span 200 MHz


*RBW 1 MHz
*VBW 100 Hz
Ref 107 dBµV
*Att 10 dB
SWT 5 s
Marker 1 [T1]
81.80 dBµV
2.445600000 GHz
Marker 2 [T1]
35.89 dBµV
2.483500000 GHz
Marker 3 [T1]
35.89 dBµV
2.483500000 GHz
Marker 4 [T1]
29.41 dBµV
2.500000000 GHz
1 PK
VIEW
D1 81.8 dBµV
D2 61.8 dBµV
F1
F2
Center 2.5304 GHz
20 MHz/
Span 200 MHz


*RBW 100 kHz
*VBW 100 kHz
Ref 107 dBµV
*Att 10 dB
SWT 2.5 s
Marker 1 [T1]
80.54 dBµV
2.427120000 GHz
Marker 2 [T1]
43.58 dBµV
24.950060000 GHz
1 PK
VIEW
D1 83.76 dBµV
D2 63.76 dBµV
Start 30 MHz
2.497 GHz/
Stop 25 GHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

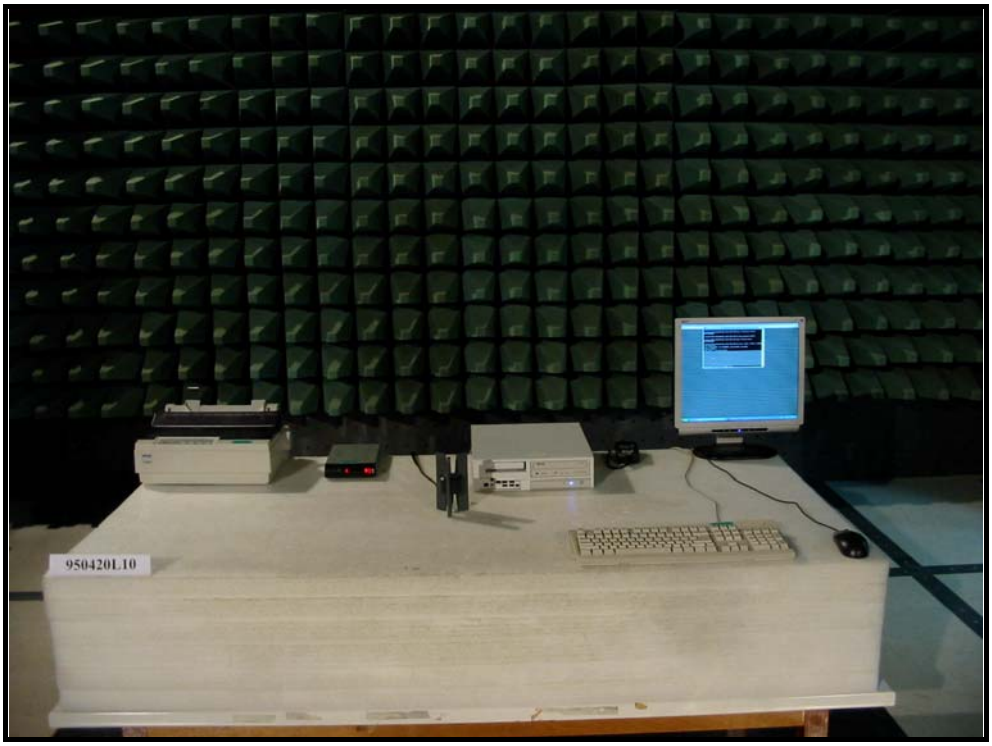
4.7.2 ANTENNA CONNECTED CONSTRUCTION

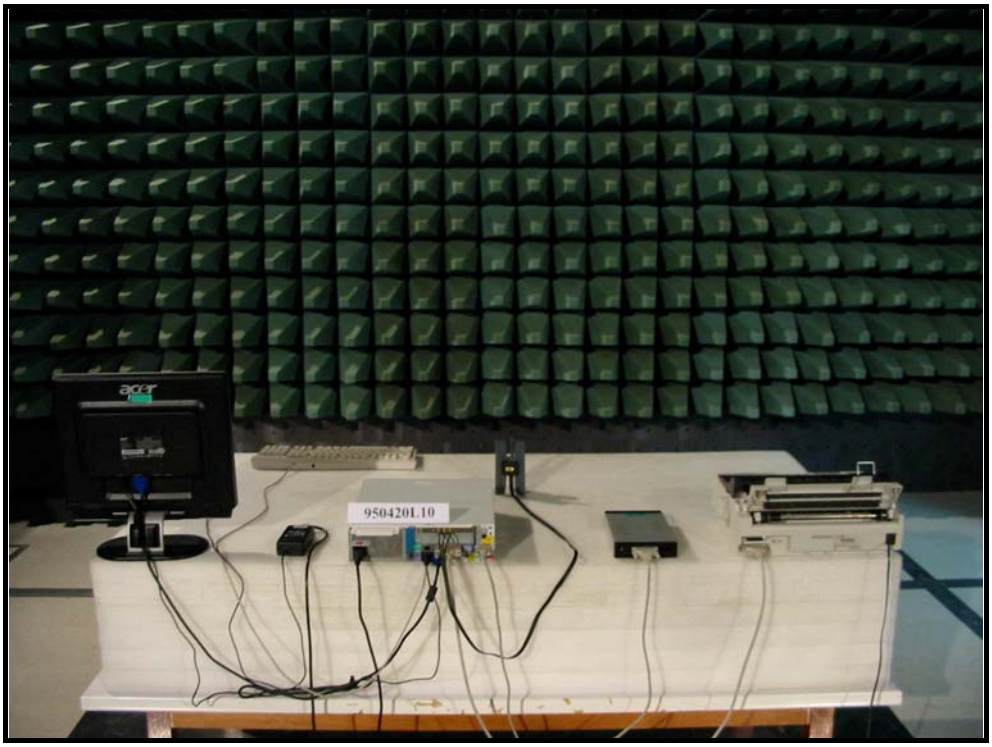
The antenna used in this product is Dipole antenna with R-SMA connector. The maximum Gain of the antenna is –0.48dBi.

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.