FCC TEST REPORT

REPORT NO.: RF950906L16

MODEL NO.: TEW-630APB

RECEIVED: Sep. 06, 2006

TESTED: Sep. 07 ~ Sep. 08, 2006

ISSUED: Sep. 12, 2006

APPLICANT: TRENDware International Inc.

ADDRESS: 3135 Kashiwa street, Torrance, CA 90505, USA

ISSUED BY: Advance Data Technology Corporation

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

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

ACCREDITED
No. 2177-01

0528

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1. CERTIFICATION

PRODUCT :	300Mbps Wireless N Draft AP
MODEL NO.:	TEW-630APB
BRAND:	TRENDnet
APPLICANT :	TRENDware International Inc.
TESTED:	Sep. 07 ~ Sep. 08, 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 : Wendy Liao (Wendy Liao) , **DATE:** Sep. 12, 2006

TECHNICAL ACCEPTANCE : Long Chen (Long Chen) , **DATE:** Sep. 12, 2006
Responsible for RF

APPROVED BY : Gary Chang (Gary Chang / Supervisor) , **DATE:** Sep. 12, 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 –14.98dB at 7.358MHz.
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 -1.02dB at 2386.00MHz.
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	3.64 dB
	200MHz ~1000MHz	3.65 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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	300Mbps Wireless N Draft AP
MODEL NO.	TEW-630APB
FCC ID	S9ZTEW630APB
POWER SUPPLY	5Vdc from AC adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n (20MHz): 144.44/ 130.00/ 115.56/ 86.67/ 57.78/ 43.33/ 28.89/ 14.44/ 72.2/ 65.0/ 57.8/ 43.3/ 28.9/ 21.7/ 14.4/ 7.2Mbps Draft 802.11n (40MHz): 300.0/ 270.0/ 240.0/ 180.0/ 120.0/ 90.0/ 60.0/ 30.0/ 150.0/ 135.0/ 120.0/ 90.0/ 60.0/ 45.0/ 30.0/ 15.0Mbps
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	80.730mW
ANTENNA TYPE	Dipole antenna with 4dBi gain
DATA CABLE	NA
I/O PORTS	RJ45

NOTE:

1. The EUT was powered by the following adapter:

BRAND:	DVE
MODEL:	DSA-15P-05 US 050125
INPUT:	100-240Vac, 50/60Hz, 0.5A
OUTPUT:	5Vdc, 2.5A
POWER LINE:	1.8m non-shielded cable without core

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

3.2 DESCRIPTION OF TEST MODES

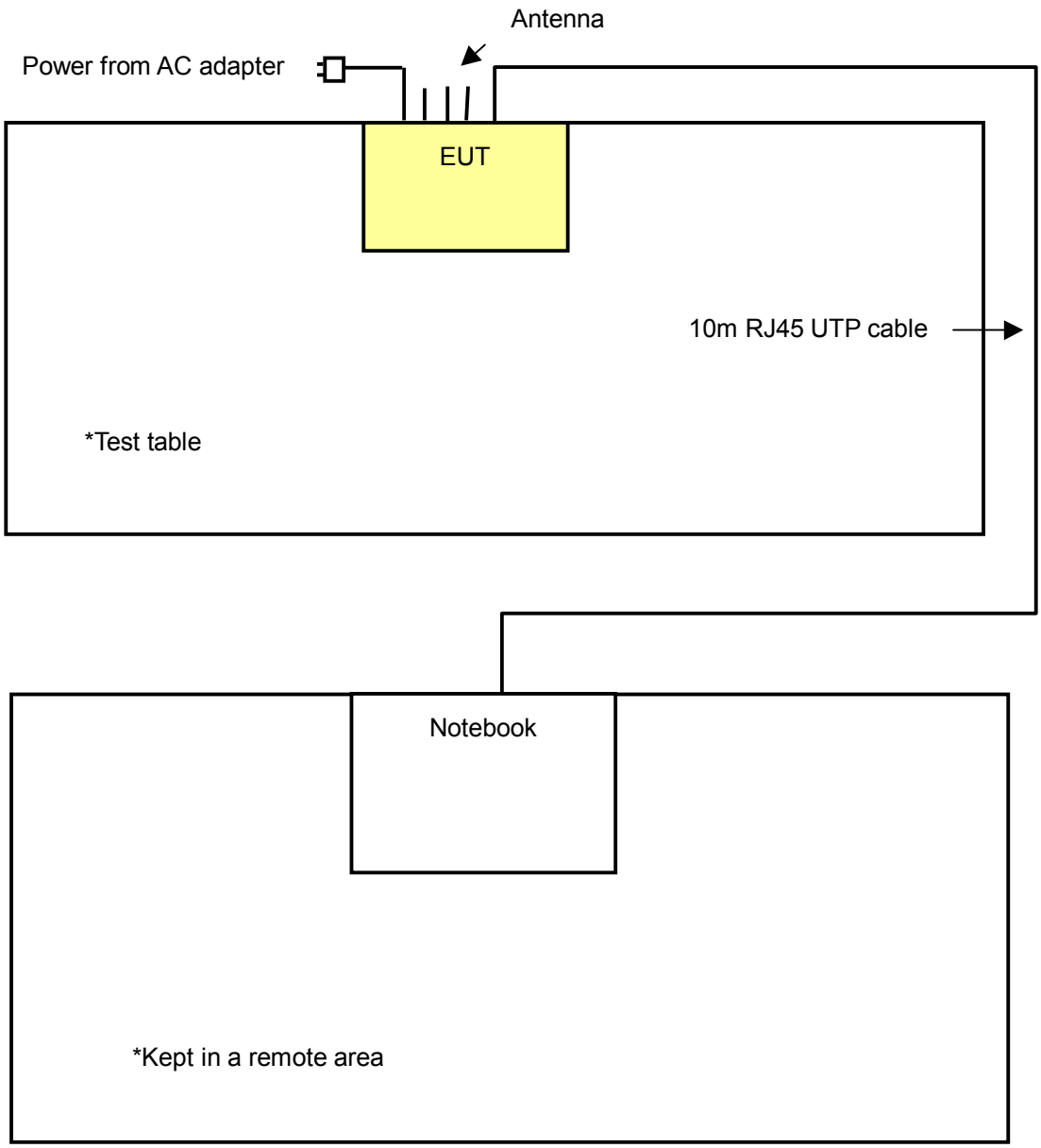
Eleven channels are provided for 802.11b, 802.11g, draft 802.11n (20MHz):

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

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

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

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

Where **PLC:** Power Line Conducted Emission **RE < 1G:** Radiated Emission below 1GHz
RE ≥ 1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

POWER LINE CONDUCTED EMISSION TEST:

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

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

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

RADIATED EMISSION TEST (BELOW 1 GHz):

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

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

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

RADIATED EMISSION TEST (ABOVE 1 GHz):

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

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

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

BANDEDGE MEASUREMENT:

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

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

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

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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

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

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C. (15.247)

ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	25191592336	E2K24CLNS

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

NOTE: 1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 acted as communication partners to transfer data.

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	100288	Nov. 02, 2006
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 06, 2007
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 09, 2007
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 22, 2007
Software ADT	ADT_Cond_V3	NA	NA

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

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

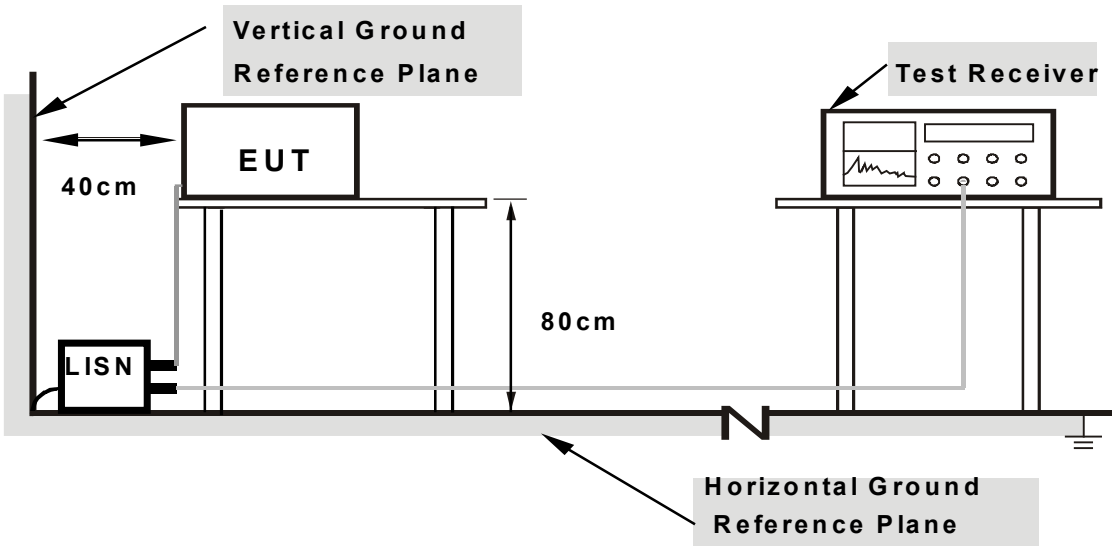
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.1.6 EUT OPERATING CONDITIONS

a. The EUT connected with notebook system via a RJ45 cable.

b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.

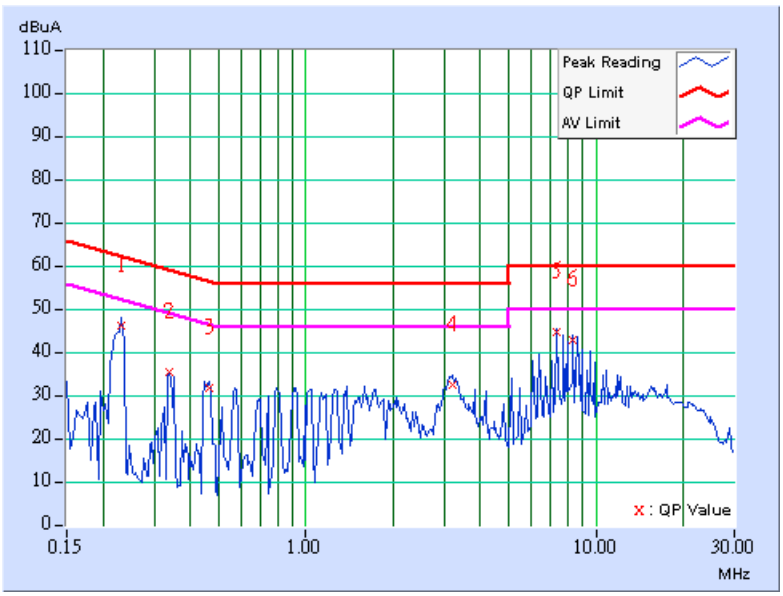
4.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA:
802.11g OFDM MODULATION – DUAL TX:

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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		**Factor**	**[dB (uV)]**		**[dB (uV)]**		**[dB (uV)]**		**(dB)**	
	[MHz]	**(dB)**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.232	0.10	46.10	-	46.20	-	62.38	52.38	-16.18	-
2	0.338	0.10	35.16	-	35.26	-	59.26	49.26	-24.00	-
3	0.466	0.10	31.60	-	31.70	-	56.58	46.58	-24.88	-
4	3.199	0.30	32.39	-	32.69	-	56.00	46.00	-23.31	-
5	7.359	0.36	44.30	-	44.66	-	60.00	50.00	-15.34	-
6	8.316	0.36	42.45	-	42.81	-	60.00	50.00	-17.19	-

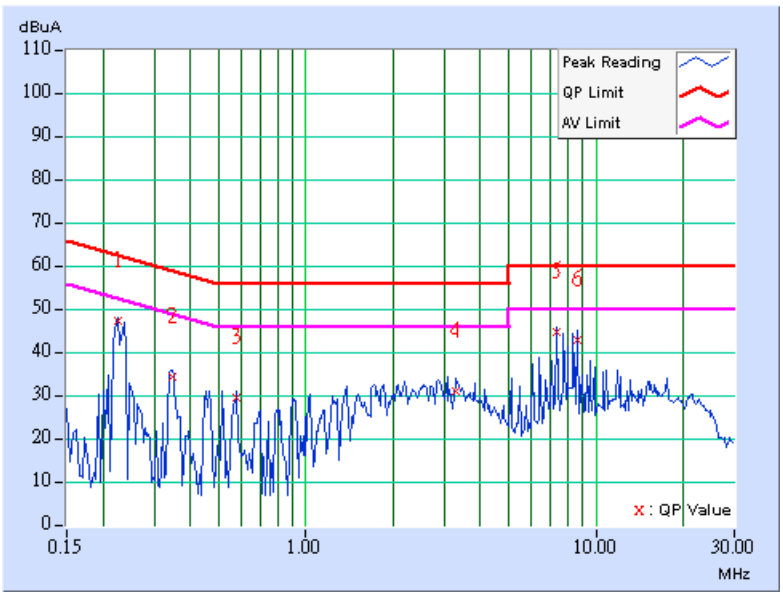
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.224	0.10	46.81	-	46.91	-	62.66	52.66	-15.75	-
2	0.345	0.10	33.90	-	34.00	-	59.07	49.07	-25.07	-
3	0.580	0.13	29.27	-	29.40	-	56.00	46.00	-26.60	-
4	3.285	0.31	30.59	-	30.90	-	56.00	46.00	-25.10	-
5	7.359	0.42	44.38	-	44.80	-	60.00	50.00	-15.20	-
6	8.637	0.44	42.69	-	43.13	-	60.00	50.00	-16.87	-

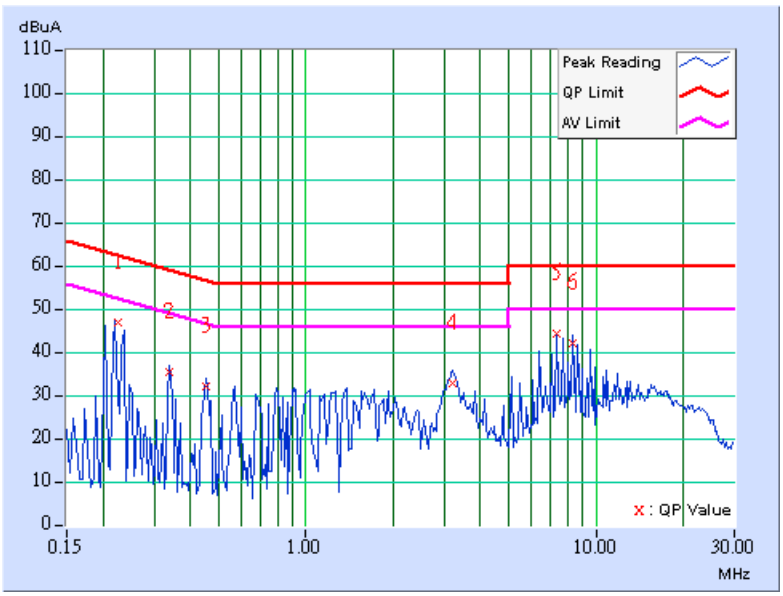
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.227	0.10	46.59	-	46.69	-	62.57	52.57	-15.88	-
2	0.338	0.10	35.34	-	35.44	-	59.26	49.26	-23.82	-
3	0.451	0.10	31.79	-	31.89	-	56.86	46.86	-24.97	-
4	3.199	0.30	32.43	-	32.73	-	56.00	46.00	-23.27	-
5	7.359	0.36	44.22	-	44.58	-	60.00	50.00	-15.42	-
6	8.320	0.36	41.97	-	42.33	-	60.00	50.00	-17.67	-

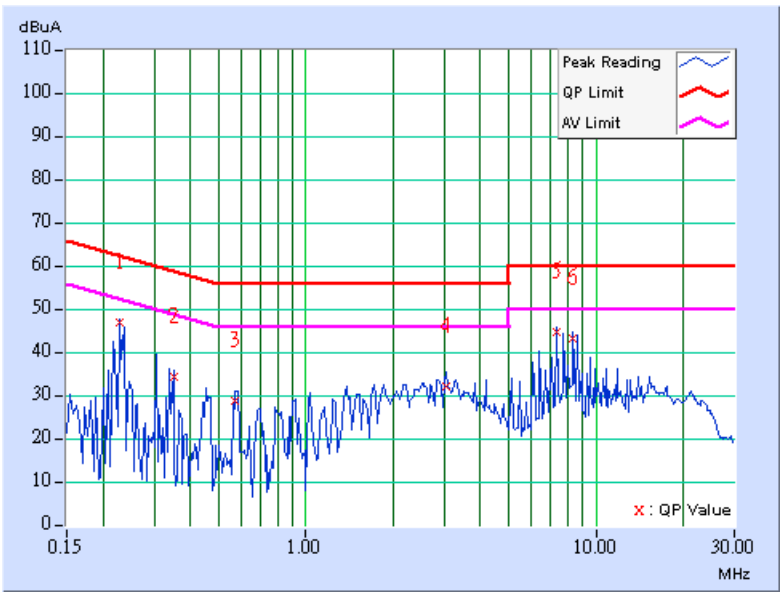
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.228	0.10	46.67	-	46.77	-	62.52	52.52	-15.75	-
2	0.349	0.10	34.12	-	34.22	-	58.98	48.98	-24.76	-
3	0.572	0.13	28.53	-	28.66	-	56.00	46.00	-27.34	-
4	3.063	0.29	31.69	-	31.98	-	56.00	46.00	-24.02	-
5	7.359	0.42	44.32	-	44.74	-	60.00	50.00	-15.26	-
6	8.316	0.43	42.87	-	43.30	-	60.00	50.00	-16.70	-

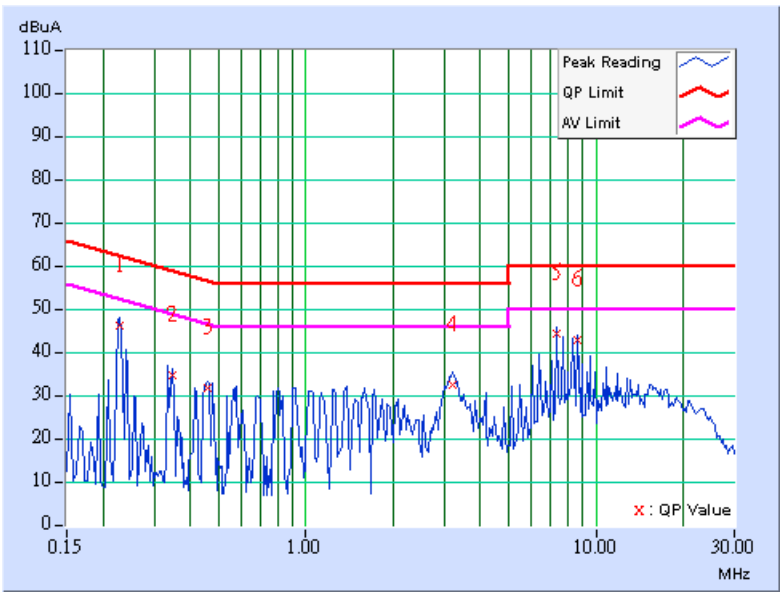
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.228	0.10	46.00	-	46.10	-	62.52	52.52	-16.42	-
2	0.345	0.10	34.39	-	34.49	-	59.07	49.07	-24.58	-
3	0.460	0.10	31.37	-	31.47	-	56.69	46.69	-25.22	-
4	3.203	0.30	32.19	-	32.49	-	56.00	46.00	-23.51	-
5	7.359	0.36	44.14	-	44.50	-	60.00	50.00	-15.50	-
6	8.637	0.36	42.75	-	43.11	-	60.00	50.00	-16.89	-

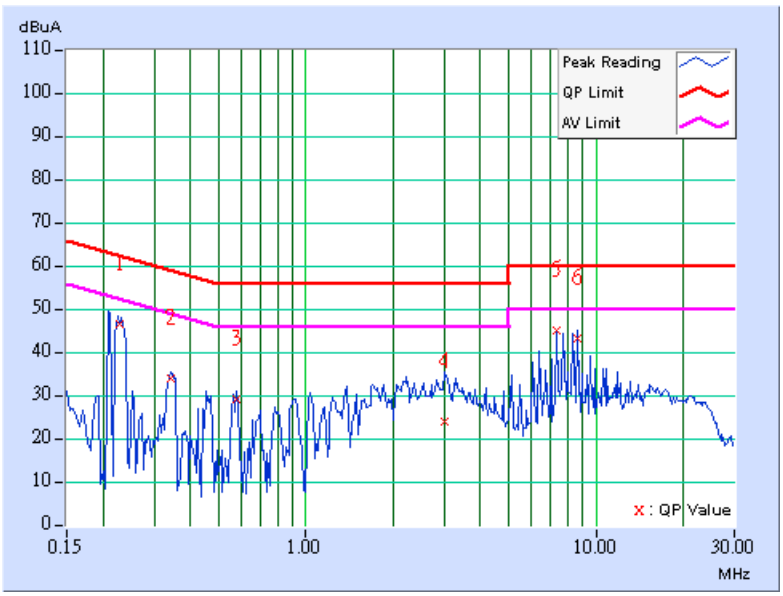
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.227	0.10	46.36	-	46.46	-	62.57	52.57	-16.11	-
2	0.341	0.10	33.73	-	33.83	-	59.17	49.17	-25.34	-
3	0.576	0.13	28.76	-	28.89	-	56.00	46.00	-27.11	-
4	3.023	0.29	23.77	-	24.06	-	56.00	46.00	-31.94	-
5	**7.358**	**0.42**	**44.60**	**-**	**45.02**	**-**	**60.00**	**50.00**	**-14.98**	**-**
6	8.637	0.44	42.75	-	43.19	-	60.00	50.00	-16.81	-

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

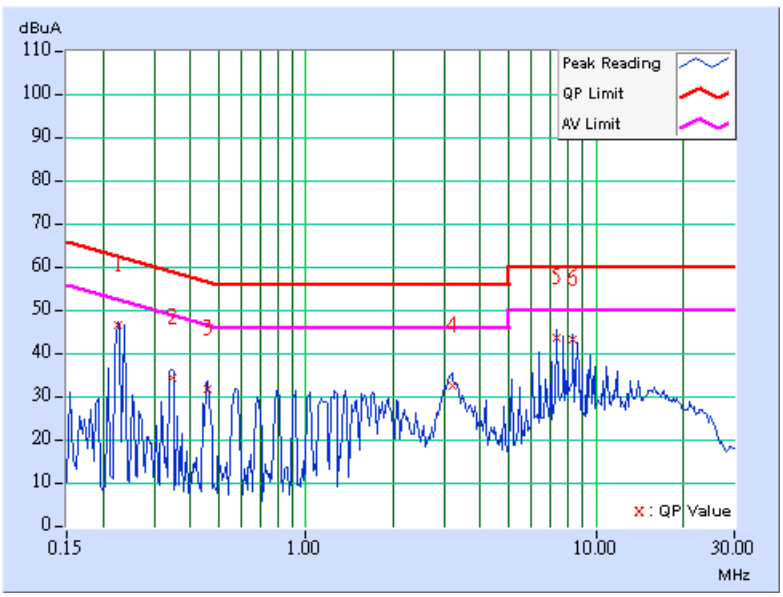


DRAFT 802.11n (20MHz) OFDM MODULATION – DUAL TX:

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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.224	0.10	46.22	-	46.32	-	62.66	52.66	-16.34	-
2	0.345	0.10	34.24	-	34.34	-	59.07	49.07	-24.73	-
3	0.459	0.10	31.37	-	31.47	-	56.72	46.72	-25.25	-
4	3.195	0.30	32.11	-	32.41	-	56.00	46.00	-23.59	-
5	7.359	0.36	43.51	-	43.87	-	60.00	50.00	-16.13	-
6	8.316	0.36	43.11	-	43.47	-	60.00	50.00	-16.53	-

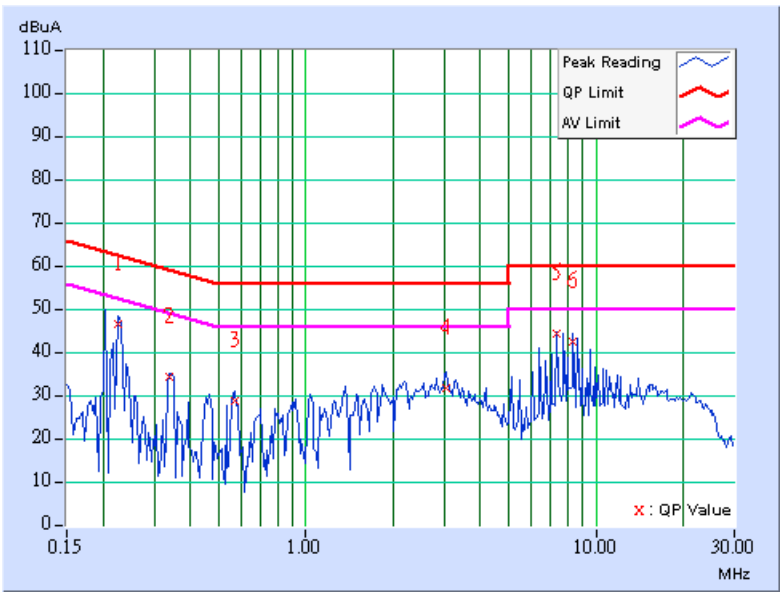
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.224	0.10	46.24	-	46.34	-	62.66	52.66	-16.32	-
2	0.338	0.10	33.87	-	33.97	-	59.26	49.26	-25.29	-
3	0.572	0.13	28.31	-	28.44	-	56.00	46.00	-27.56	-
4	3.059	0.29	31.26	-	31.55	-	56.00	46.00	-24.45	-
5	7.359	0.42	44.12	-	44.54	-	60.00	50.00	-15.46	-
6	8.320	0.43	42.22	-	42.65	-	60.00	50.00	-17.35	-

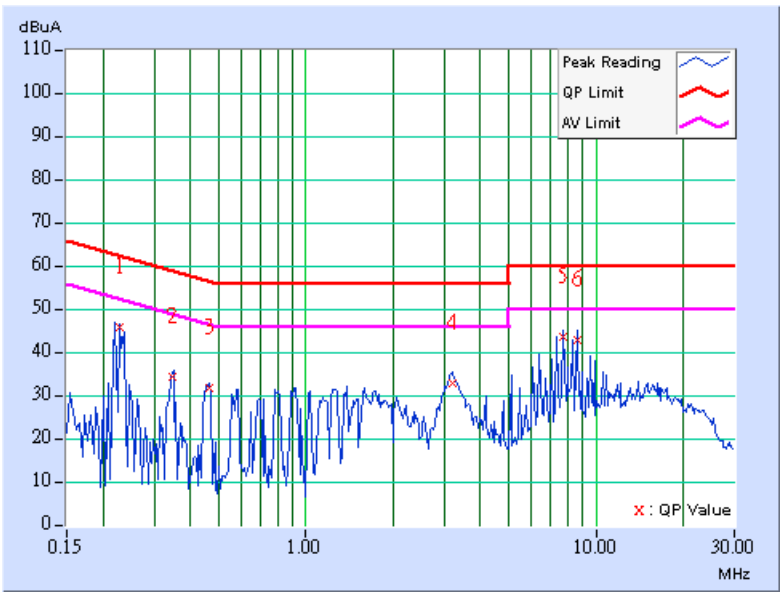
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.228	0.10	45.73	-	45.83	-	62.52	52.52	-16.69	-
2	0.345	0.10	34.12	-	34.22	-	59.07	49.07	-24.85	-
3	0.463	0.10	31.32	-	31.42	-	56.65	46.65	-25.23	-
4	3.199	0.30	32.49	-	32.79	-	56.00	46.00	-23.21	-
5	7.676	0.36	43.31	-	43.67	-	60.00	50.00	-16.33	-
6	8.637	0.36	42.67	-	43.03	-	60.00	50.00	-16.97	-

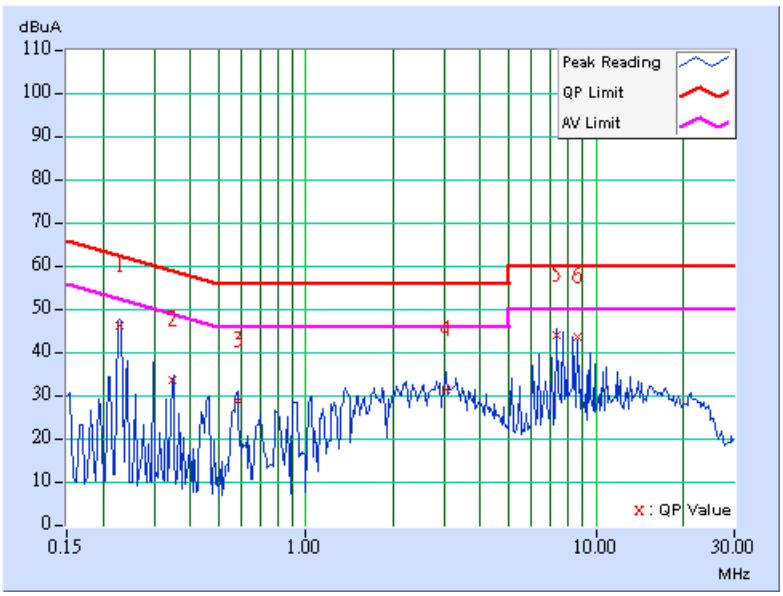
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.228	0.10	45.86	-	45.96	-	62.52	52.52	-16.56	-
2	0.345	0.10	33.42	-	33.52	-	59.07	49.07	-25.55	-
3	0.584	0.13	28.56	-	28.69	-	56.00	46.00	-27.31	-
4	3.055	0.29	31.18	-	31.47	-	56.00	46.00	-24.53	-
5	7.359	0.42	43.60	-	44.02	-	60.00	50.00	-15.98	-
6	8.637	0.44	43.11	-	43.55	-	60.00	50.00	-16.45	-

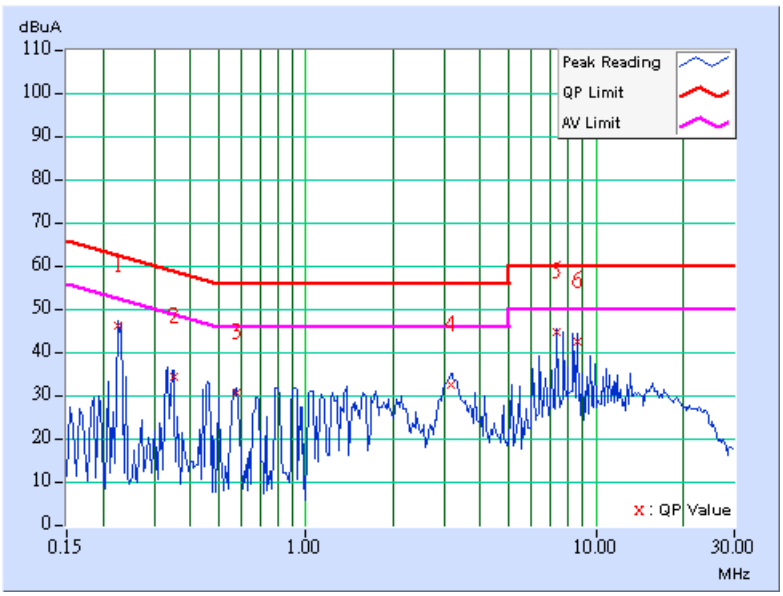
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.224	0.10	46.00	-	46.10	-	62.66	52.66	-16.56	-
2	0.349	0.10	34.20	-	34.30	-	58.98	48.98	-24.68	-
3	0.580	0.10	30.35	-	30.45	-	56.00	46.00	-25.55	-
4	3.152	0.30	32.16	-	32.46	-	56.00	46.00	-23.54	-
5	7.355	0.36	44.40	-	44.76	-	60.00	50.00	-15.24	-
6	8.633	0.36	42.27	-	42.63	-	60.00	50.00	-17.37	-

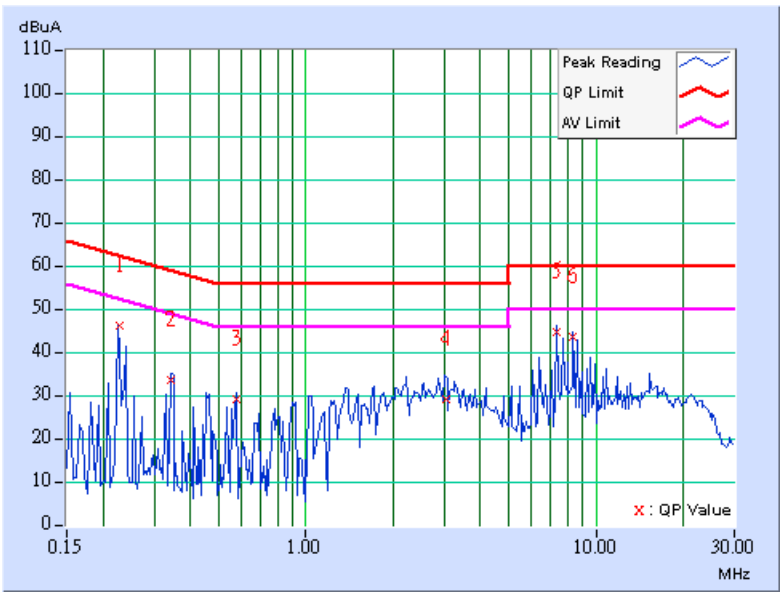
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.227	0.10	45.98	-	46.08	-	62.57	52.57	-16.49	-
2	0.341	0.10	33.27	-	33.37	-	59.17	49.17	-25.80	-
3	0.580	0.13	28.86	-	28.99	-	56.00	46.00	-27.01	-
4	3.036	0.29	28.78	-	29.07	-	56.00	46.00	-26.93	-
5	7.355	0.42	44.54	-	44.96	-	60.00	50.00	-15.04	-
6	8.316	0.43	43.25	-	43.68	-	60.00	50.00	-16.32	-

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.

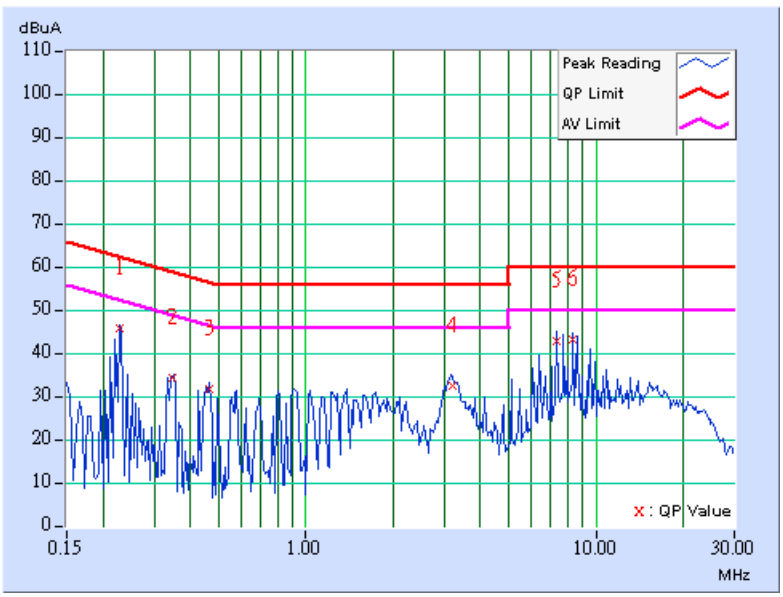


DRAFT 802.11n (40MHz) OFDM MODULATION – DUAL TX:

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

	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	0.228	0.10	45.61	-	45.71	-	62.52	52.52	-16.81	-
2	0.349	0.10	34.24	-	34.34	-	59.00	49.00	-24.66	-
3	0.466	0.10	31.44	-	31.54	-	56.58	46.58	-25.04	-
4	3.198	0.30	32.13	-	32.43	-	56.00	46.00	-23.57	-
5	7.359	0.36	42.58	-	42.94	-	60.00	50.00	-17.06	-
6	8.316	0.36	43.05	-	43.41	-	60.00	50.00	-16.59	-

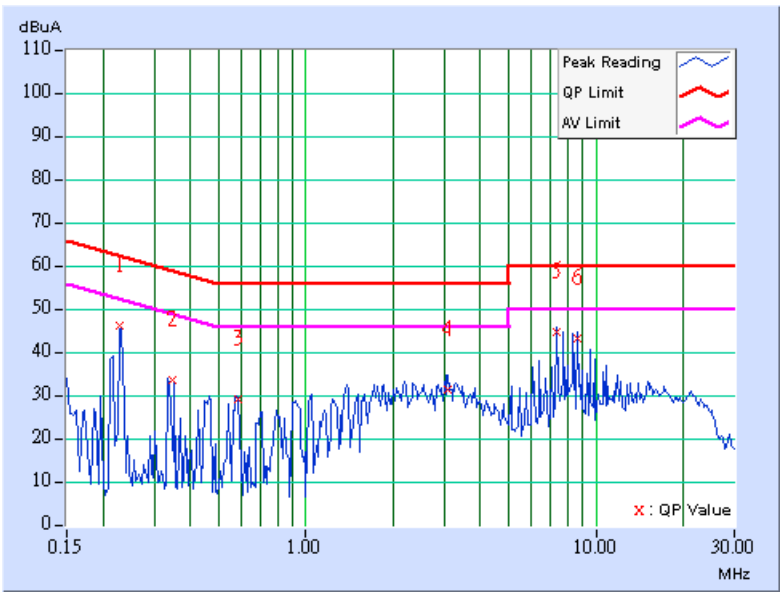
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.228	0.10	45.69	-	45.79	-	62.52	52.52	-16.73	-
2	0.345	0.10	33.16	-	33.26	-	59.07	49.07	-25.81	-
3	0.584	0.13	28.74	-	28.87	-	56.00	46.00	-27.13	-
4	3.074	0.29	31.22	-	31.51	-	56.00	46.00	-24.49	-
5	7.355	0.42	44.52	-	44.94	-	60.00	50.00	-15.06	-
6	8.637	0.44	42.79	-	43.23	-	60.00	50.00	-16.77	-

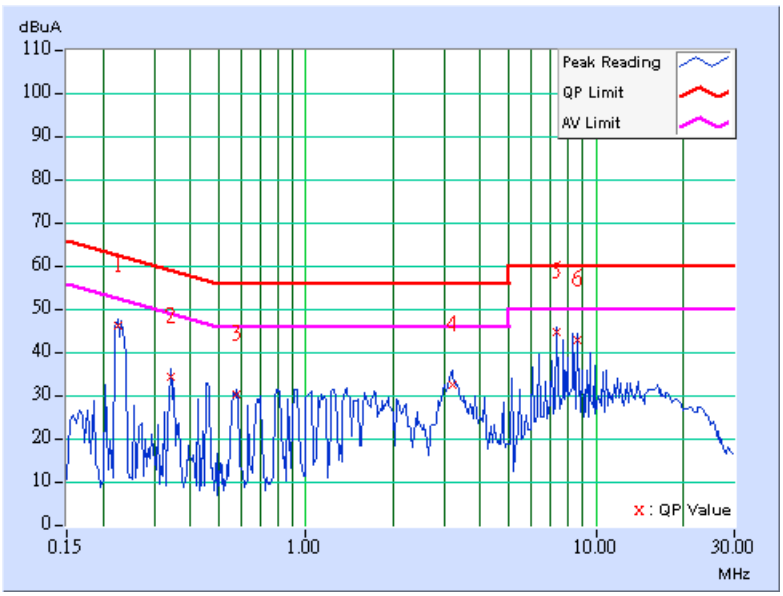
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.224	0.10	46.00	-	46.10	-	62.66	52.66	-16.56	-
2	0.341	0.10	34.01	-	34.11	-	59.17	49.17	-25.06	-
3	0.576	0.10	30.13	-	30.23	-	56.00	46.00	-25.77	-
4	3.195	0.30	32.19	-	32.49	-	56.00	46.00	-23.51	-
5	7.355	0.36	44.42	-	44.78	-	60.00	50.00	-15.22	-
6	8.637	0.36	42.63	-	42.99	-	60.00	50.00	-17.01	-

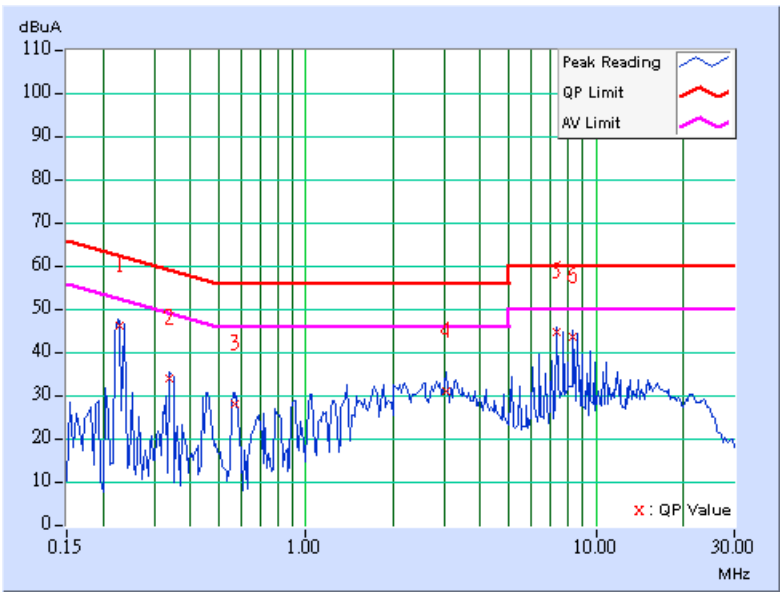
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.227	0.10	45.90	-	46.00	-	62.57	52.57	-16.57	-
2	0.338	0.10	33.57	-	33.67	-	59.26	49.26	-25.59	-
3	0.569	0.13	27.76	-	27.89	-	56.00	46.00	-28.11	-
4	3.043	0.29	30.55	-	30.84	-	56.00	46.00	-25.16	-
5	7.355	0.42	44.52	-	44.94	-	60.00	50.00	-15.06	-
6	8.316	0.43	43.33	-	43.76	-	60.00	50.00	-16.24	-

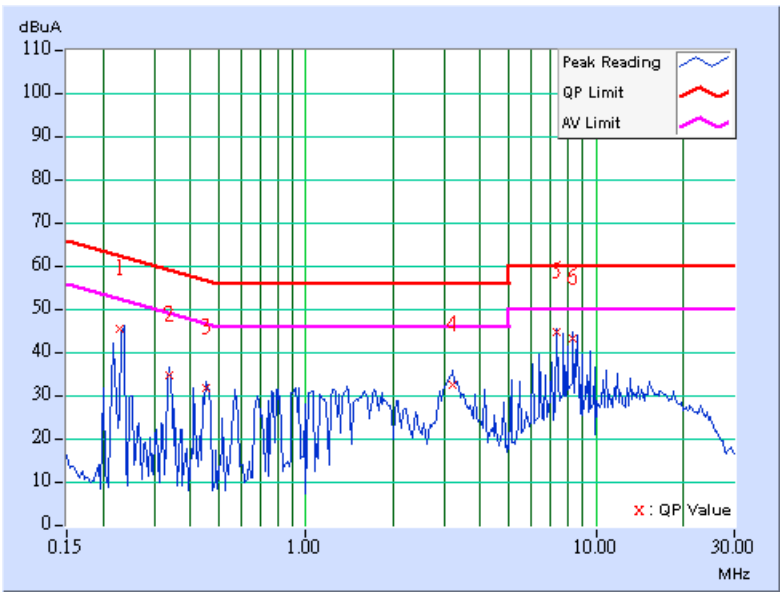
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	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	0.230	0.10	45.37	-	45.47	-	62.46	52.46	-16.99	-
2	0.338	0.10	34.52	-	34.62	-	59.26	49.26	-24.64	-
3	0.451	0.10	31.34	-	31.44	-	56.86	46.86	-25.42	-
4	3.199	0.30	32.29	-	32.59	-	56.00	46.00	-23.41	-
5	7.355	0.36	44.40	-	44.76	-	60.00	50.00	-15.24	-
6	8.316	0.36	42.79	-	43.15	-	60.00	50.00	-16.85	-

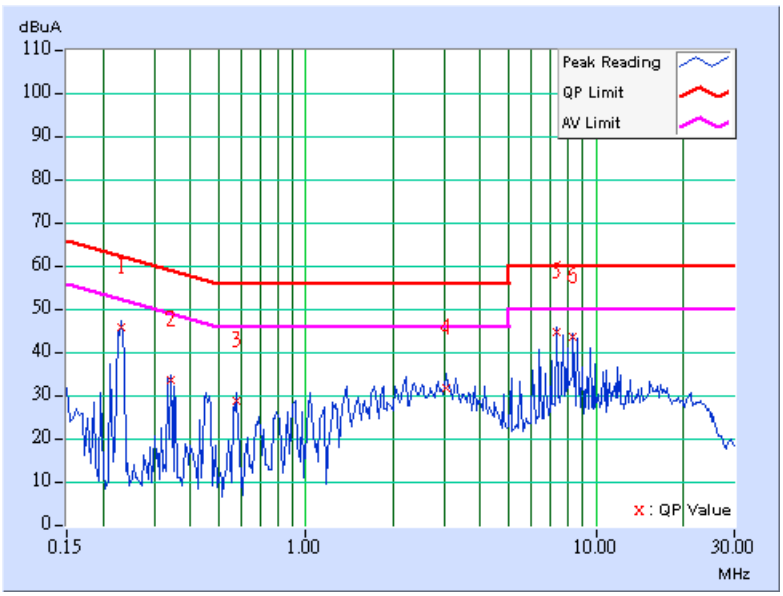
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



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

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.232	0.10	45.51	-	45.61	-	62.38	52.38	-16.77	-
2	0.341	0.10	33.15	-	33.25	-	59.17	49.17	-25.92	-
3	0.576	0.13	28.48	-	28.61	-	56.00	46.00	-27.39	-
4	3.063	0.29	31.32	-	31.61	-	56.00	46.00	-24.39	-
5	7.355	0.42	44.44	-	44.86	-	60.00	50.00	-15.14	-
6	8.316	0.43	43.09	-	43.52	-	60.00	50.00	-16.48	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	100033	May. 22, 2007
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100025	Dec. 05, 2006
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	May 31, 2007
HORN Antenna SCHWARZBECK	9120D	9120D-408	Jan. 08, 2007
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Jan. 19, 2007
Preamplifier Agilent	8447D	2944A10633	Nov. 04, 2006
Preamplifier Agilent	8449B	3008A01964	Oct. 30, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	214377/4	Dec. 13, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219272/4	Dec. 13, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 3.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The VCCI Site Registration No. is R-237.

5. The IC Site Registration No. is IC4924-3.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

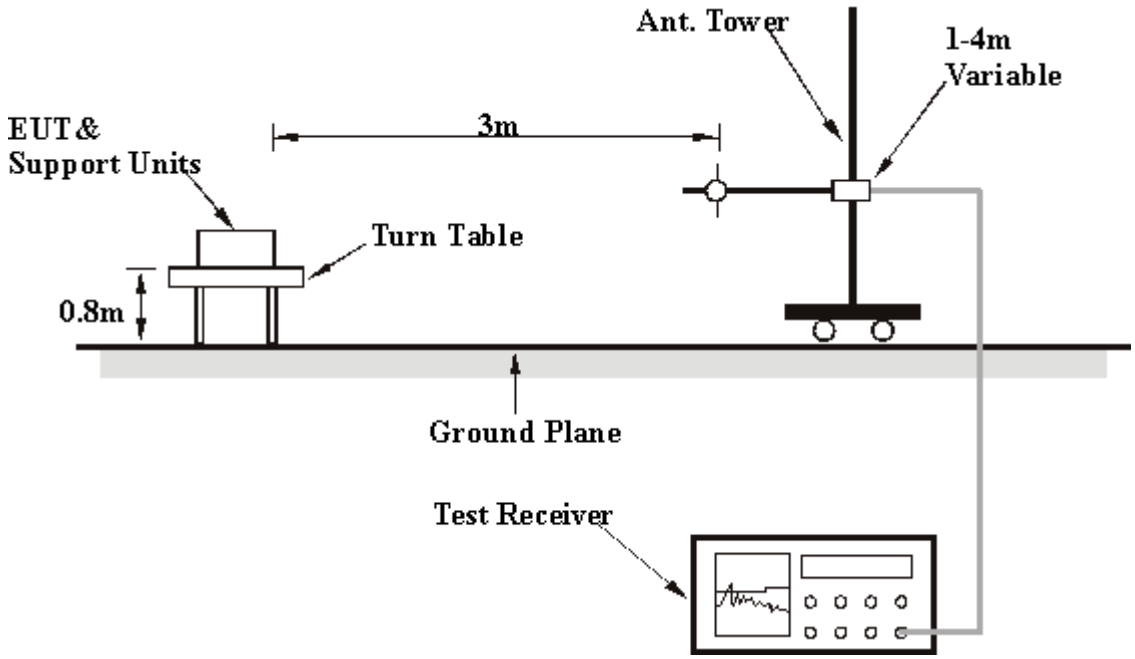
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11g OFDM MODULATION – DUAL TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK for 802.11g	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	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	249.66	33.13 QP	46.00	-12.87	2.50 H	295	21.57	11.56
2	374.07	34.13 QP	46.00	-11.87	1.00 H	358	18.29	15.84
3	500.42	36.11 QP	46.00	-9.89	1.00 H	308	17.49	18.62
4	648.16	41.99 QP	46.00	-4.01	1.50 H	327	20.65	21.33
5	681.20	33.55 QP	46.00	-12.45	1.50 H	327	11.55	22.00
6	945.57	33.52 QP	46.00	-12.48	1.00 H	339	6.37	27.14

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	43.61	38.16 QP	40.00	-1.84	1.00 V	314	23.80	14.36
2	55.27	38.19 QP	40.00	-1.81	1.00 V	232	24.77	13.42
3	63.05	35.18 QP	40.00	-4.82	1.50 V	118	22.59	12.60
4	144.69	34.93 QP	43.50	-8.57	1.00 V	251	22.26	12.67
5	249.66	33.61 QP	46.00	-12.39	2.00 V	232	22.05	11.56
6	374.07	35.63 QP	46.00	-10.37	1.00 V	16	19.78	15.84
7	500.42	38.36 QP	46.00	-7.64	1.00 V	105	19.74	18.62
8	648.16	39.98 QP	46.00	-6.02	1.00 V	194	18.65	21.33

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK for draft 802.11n (20MHz)	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	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	199.12	29.99 QP	43.50	-13.51	2.50 H	238	20.00	9.99
2	249.66	33.48 QP	46.00	-12.52	1.00 H	327	21.92	11.56
3	374.07	33.95 QP	46.00	-12.05	3.00 H	314	18.11	15.84
4	500.42	34.84 QP	46.00	-11.16	3.00 H	320	16.22	18.62
5	648.16	41.47 QP	46.00	-4.53	1.50 H	352	20.14	21.33
6	681.20	32.48 QP	46.00	-13.52	1.50 H	352	10.48	22.00
7	875.59	32.49 QP	46.00	-13.51	1.00 H	24	7.72	24.77
8	945.57	33.46 QP	46.00	-12.54	3.00 H	333	6.32	27.14

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	43.61	38.23 QP	40.00	-1.77	1.00 V	232	23.87	14.36
2	63.05	34.11 QP	40.00	-5.89	1.00 V	257	21.52	12.60
3	98.04	35.35 QP	43.50	-8.15	1.00 V	339	26.94	8.41
4	142.75	35.14 QP	43.50	-8.36	1.00 V	232	22.46	12.67
5	249.66	33.26 QP	46.00	-12.74	1.00 V	320	21.70	11.56
6	374.07	35.33 QP	46.00	-10.67	1.00 V	232	19.49	15.84
7	500.42	37.27 QP	46.00	-8.73	1.00 V	42	18.64	18.62
8	648.16	40.38 QP	46.00	-5.62	1.00 V	333	19.05	21.33
9	951.40	33.90 QP	46.00	-12.10	1.00 V	238	6.58	27.32

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK for draft 802.11n (40MHz)	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	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	142.75	30.05 QP	43.50	-13.45	2.00 H	320	17.37	12.67
2	199.12	29.86 QP	43.50	-13.64	2.50 H	308	19.88	9.99
3	249.66	32.98 QP	46.00	-13.02	1.00 H	339	21.42	11.56
4	374.07	34.20 QP	46.00	-11.80	2.00 H	320	18.36	15.84
5	500.42	35.37 QP	46.00	-10.63	3.00 H	346	16.75	18.62
6	648.16	41.46 QP	46.00	-4.54	2.00 H	301	20.13	21.33
7	681.20	32.57 QP	46.00	-13.43	2.00 H	301	10.57	22.00
8	875.59	33.42 QP	46.00	-12.58	1.50 H	276	8.65	24.77

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	43.61	38.34 QP	40.00	-1.66	1.00 V	67	23.98	14.36
2	63.05	35.71 QP	40.00	-4.29	1.00 V	200	23.12	12.60
3	98.04	35.68 QP	43.50	-7.82	1.50 V	263	27.27	8.41
4	142.75	34.97 QP	43.50	-8.53	1.00 V	67	22.29	12.67
5	249.66	33.45 QP	46.00	-12.55	1.00 V	175	21.88	11.56
6	374.07	36.11 QP	46.00	-9.89	1.00 V	67	20.27	15.84
7	500.42	37.25 QP	46.00	-8.75	2.00 V	194	18.63	18.62
8	648.16	40.76 QP	46.00	-5.24	1.00 V	289	19.42	21.33

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

802.11b DSSS MODULATION – SINGLE TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	2386.00	56.71 PK	74.00	-17.29	1.03 H	2	25.50	31.21
1	2386.00	46.23 AV	54.00	-7.77	1.03 H	2	15.02	31.21
2	*2412.00	98.71 PK			1.15 H	24	67.51	31.20
2	*2412.00	94.95 AV			1.15 H	24	63.75	31.20
3	4824.00	49.50 PK	74.00	-24.50	1.15 H	347	13.08	36.42
3	4824.00	45.23 AV	54.00	-8.77	1.15 H	347	8.81	36.42

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	63.24 PK	74.00	-10.76	1.00 V	284	32.03	31.21
1	**2386.00**	**52.98 AV**	**54.00**	**-1.02**	**1.00 V**	**284**	**21.77**	**31.21**
2	*2412.00	111.89 PK			2.68 V	89	80.69	31.20
2	*2412.00	107.84 AV			2.68 V	89	76.64	31.20
3	4824.00	52.91 PK	74.00	-21.09	1.49 V	84	16.49	36.42
3	4824.00	47.83 AV	54.00	-6.17	1.49 V	84	11.41	36.42

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	DBPSK	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2437.00	98.66 PK			1.08 H	96	67.45	31.21
1	*2437.00	95.26 AV			1.08 H	96	64.05	31.21
2	4874.00	46.85 PK	74.00	-27.15	1.00 H	327	10.32	36.53
2	4874.00	43.98 AV	54.00	-10.02	1.00 H	327	7.45	36.53

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	*2437.00	111.36 PK			1.06 V	248	80.15	31.21
1	*2437.00	108.13 AV			1.06 V	248	76.92	31.21
2	4874.00	53.54 PK	74.00	-20.46	1.00 V	28	17.01	36.53
2	4874.00	47.99 AV	54.00	-6.01	1.00 V	28	11.46	36.53

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 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2462.00	98.62 PK			1.05 H	61	67.40	31.22
1	*2462.00	95.02 AV			1.05 H	61	63.80	31.22
2	2487.00	55.60 PK	74.00	-18.40	1.10 H	56	24.37	31.23
2	2487.00	46.28 AV	54.00	-7.72	1.10 H	56	15.05	31.23
3	4924.00	47.68 PK	74.00	-26.32	1.08 H	135	11.05	36.63
3	4924.00	44.23 AV	54.00	-9.77	1.08 H	135	7.60	36.63

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	111.94 PK			1.00 V	263	80.72	31.22
1	*2462.00	107.75 AV			1.00 V	263	76.53	31.22
2	2487.00	61.39 PK	74.00	-12.61	1.00 V	261	30.16	31.23
2	2487.00	51.49 AV	54.00	-2.51	1.00 V	261	20.26	31.23
3	4924.00	53.32 PK	74.00	-20.68	1.06 V	29	16.69	36.63
3	4924.00	47.93 AV	54.00	-6.07	1.06 V	29	11.30	36.63

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

802.11g OFDM MODULATION – DUAL TX:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	2390.00	52.74 PK	74.00	-21.26	1.00 H	38	21.53	31.21
1	2390.00	44.85 AV	54.00	-9.15	1.00 H	38	13.64	31.21
2	*2412.00	98.49 PK			1.00 H	63	67.29	31.20
2	*2412.00	88.19 AV			1.00 H	63	56.99	31.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.23 PK	74.00	-8.77	1.00 V	243	34.02	31.21
1	2390.00	52.06 AV	54.00	-1.94	1.00 V	243	20.85	31.21
2	*2412.00	113.26 PK			1.05 V	264	82.06	31.20
2	*2412.00	102.84 AV			1.05 V	264	71.64	31.20
3	4824.00	46.98 PK	74.00	-27.02	1.14 V	58	10.56	36.42
3	4824.00	34.87 AV	54.00	-19.13	1.14 V	58	-1.55	36.42

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2437.00	98.98 PK			1.00 H	43	67.77	31.21
1	*2437.00	89.02 AV			1.00 H	43	57.81	31.21
2	4874.00	44.87 PK	74.00	-29.13	1.00 H	83	8.34	36.53
2	4874.00	34.58 AV	54.00	-19.42	1.00 H	83	-1.95	36.53

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	*2437.00	113.38 PK			1.00 V	86	82.17	31.21
1	*2437.00	103.04 AV			1.00 V	86	71.83	31.21
2	4874.00	47.53 PK	74.00	-26.47	1.00 V	263	11.00	36.53
2	4874.00	36.96 AV	54.00	-17.04	1.00 V	263	0.43	36.53

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 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2462.00	99.32 PK			1.00 H	317	68.10	31.22
1	*2462.00	89.41 AV			1.00 H	317	58.19	31.22
2	2483.50	55.48 PK	74.00	-18.52	1.15 H	358	24.25	31.23
2	2483.50	46.23 AV	54.00	-7.77	1.15 H	358	15.00	31.23
3	4924.00	42.36 PK	74.00	-31.64	1.30 H	154	5.73	36.63
3	4924.00	32.27 AV	54.00	-21.73	1.30 H	154	-4.36	36.63

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	113.44 PK			1.15 V	243	82.22	31.22
1	*2462.00	103.16 AV			1.15 V	243	71.94	31.22
2	2483.50	63.84 PK	74.00	-10.16	1.00 V	287	32.61	31.23
2	2483.50	51.92 AV	54.00	-2.08	1.00 V	287	20.69	31.23
3	4924.00	46.98 PK	74.00	-27.02	1.08 V	43	10.35	36.63
3	4924.00	35.96 AV	54.00	-18.04	1.08 V	43	-0.67	36.63

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	2390.00	56.98 PK	74.00	-17.02	1.14 H	58	25.77	31.21
1	2390.00	47.26 AV	54.00	-6.74	1.14 H	58	16.05	31.21
2	*2412.00	98.85 PK			1.15 H	62	67.65	31.20
2	*2412.00	88.73 AV			1.15 H	62	57.53	31.20
3	4824.00	42.89 PK	74.00	-31.11	1.48 H	126	6.47	36.42
3	4824.00	32.79 AV	54.00	-21.21	1.48 H	126	-3.63	36.42

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	68.23 PK	74.00	-5.77	1.00 V	326	37.02	31.21
1	2390.00	52.14 AV	54.00	-1.86	1.00 V	326	20.93	31.21
2	*2412.00	112.30 PK			1.06 V	218	81.10	31.20
2	*2412.00	103.15 AV			1.06 V	218	71.95	31.20
3	4824.00	54.96 PK	74.00	-19.04	1.15 V	68	18.54	36.42
3	4824.00	42.87 AV	54.00	-11.13	1.15 V	68	6.45	36.42

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2437.00	99.26 PK			1.08 H	31	68.05	31.21
1	*2437.00	89.02 AV			1.08 H	31	57.81	31.21
2	4874.00	43.00 PK	74.00	-31.00	1.00 H	84	6.47	36.53
2	4874.00	33.94 AV	54.00	-20.06	1.00 H	84	-2.59	36.53

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	*2437.00	112.43 PK			1.10 V	331	81.22	31.21
1	*2437.00	102.86 AV			1.10 V	331	71.65	31.21
2	4874.00	53.99 PK	74.00	-20.01	1.25 V	36	17.46	36.53
2	4874.00	43.54 AV	54.00	-10.46	1.25 V	36	7.01	36.53

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 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	7.2Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2462.00	98.92 PK			1.08 H	317	67.70	31.22
1	*2462.00	88.62 AV			1.08 H	317	57.40	31.22
2	2483.50	55.82 PK	74.00	-18.18	1.15 H	338	24.59	31.23
2	2483.50	46.12 AV	54.00	-7.88	1.15 H	338	14.89	31.23
3	4924.00	46.33 PK	74.00	-27.67	1.15 H	154	9.70	36.63
3	4924.00	34.70 AV	54.00	-19.30	1.15 H	154	-1.93	36.63

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	112.39 PK			1.15 V	326	81.17	31.22
1	*2462.00	102.31 AV			1.15 V	326	71.09	31.22
2	2483.50	68.25 PK	74.00	-5.75	1.00 V	358	37.02	31.23
2	2483.50	52.36 AV	54.00	-1.64	1.00 V	358	21.13	31.23
3	4924.00	54.96 PK	74.00	-19.04	1.22 V	57	18.33	36.63
3	4924.00	42.54 AV	54.00	-11.46	1.22 V	57	5.91	36.63

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	2390.00	57.89 PK	74.00	-16.11	1.15 H	358	26.68	31.21
1	2390.00	46.55 AV	54.00	-7.45	1.15 H	358	15.34	31.21
2	*2422.00	95.46 PK			1.08 H	87	64.25	31.21
2	*2422.00	85.23 AV			1.08 H	87	54.02	31.21
3	4844.00	43.84 PK	74.00	-30.16	1.00 H	216	7.38	36.46
3	4844.00	32.79 AV	54.00	-21.21	1.00 H	216	-3.67	36.46

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.86 PK	74.00	-4.14	1.15 V	235	38.65	31.21
1	2390.00	52.48 AV	54.00	-1.52	1.15 V	235	21.27	31.21
2	*2422.00	107.59 PK			1.15 V	258	76.38	31.21
2	*2422.00	98.01 AV			1.15 V	258	66.80	31.21
3	4844.00	46.29 PK	74.00	-27.71	1.00 V	14	9.83	36.46
3	4844.00	35.14 AV	54.00	-18.86	1.00 V	14	-1.32	36.46

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2437.00	95.06 PK			1.14 H	328	63.85	31.21
1	*2437.00	85.32 AV			1.14 H	328	54.11	31.21
2	4874.00	44.25 PK	74.00	-29.75	1.00 H	95	7.72	36.53
2	4874.00	32.14 AV	54.00	-21.86	1.00 H	95	-4.39	36.53

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	*2437.00	107.38 PK			1.02 V	168	76.17	31.21
1	*2437.00	98.02 AV			1.02 V	168	66.81	31.21
2	4874.00	46.59 PK	74.00	-27.41	1.56 V	74	10.06	36.53
2	4874.00	34.87 AV	54.00	-19.13	1.56 V	74	-1.66	36.53

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 7	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TRANSFER RATE	15.0Mbps	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	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	*2452.00	94.04 PK			1.42 H	38	62.82	31.22
1	*2452.00	84.99 AV			1.42 H	38	53.77	31.22
2	2483.50	57.99 PK	74.00	-16.01	1.06 H	318	26.76	31.23
2	2483.50	46.82 AV	54.00	-7.18	1.06 H	318	15.59	31.23
3	4904.00	44.25 PK	74.00	-29.75	1.02 H	310	7.66	36.59
3	4904.00	32.01 AV	54.00	-21.99	1.02 H	310	-4.58	36.59

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	107.46 PK			1.15 V	284	76.24	31.22
1	*2452.00	97.54 AV			1.15 V	284	66.32	31.22
2	2483.50	68.58 PK	74.00	-5.42	1.14 V	36	37.35	31.23
2	2483.50	51.89 AV	54.00	-2.11	1.14 V	36	20.66	31.23
3	4904.00	46.88 PK	74.00	-27.12	1.00 V	68	10.29	36.59
3	4904.00	35.24 AV	54.00	-18.76	1.00 V	68	-1.35	36.59

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

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	FSP40	100040	Jun. 07, 2007

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

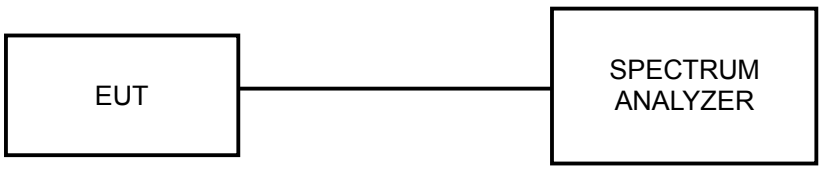
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

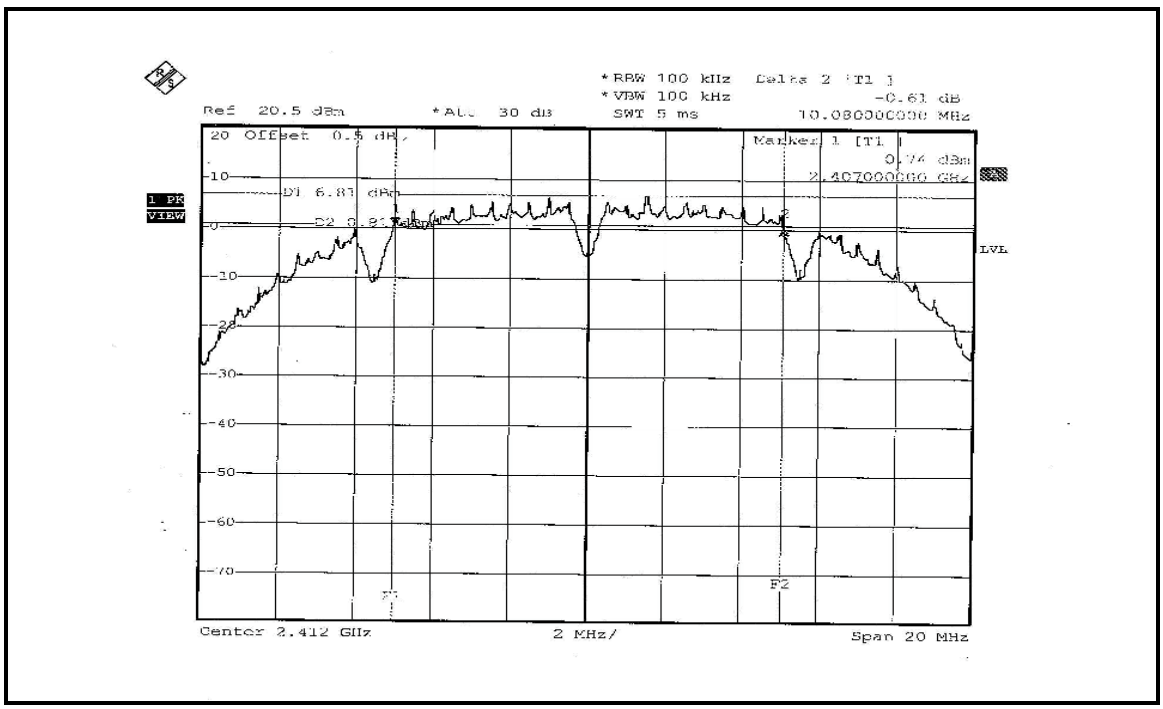
4.3.7 TEST RESULTS

802.11b DSSS MODULATION – SINGLE TX:

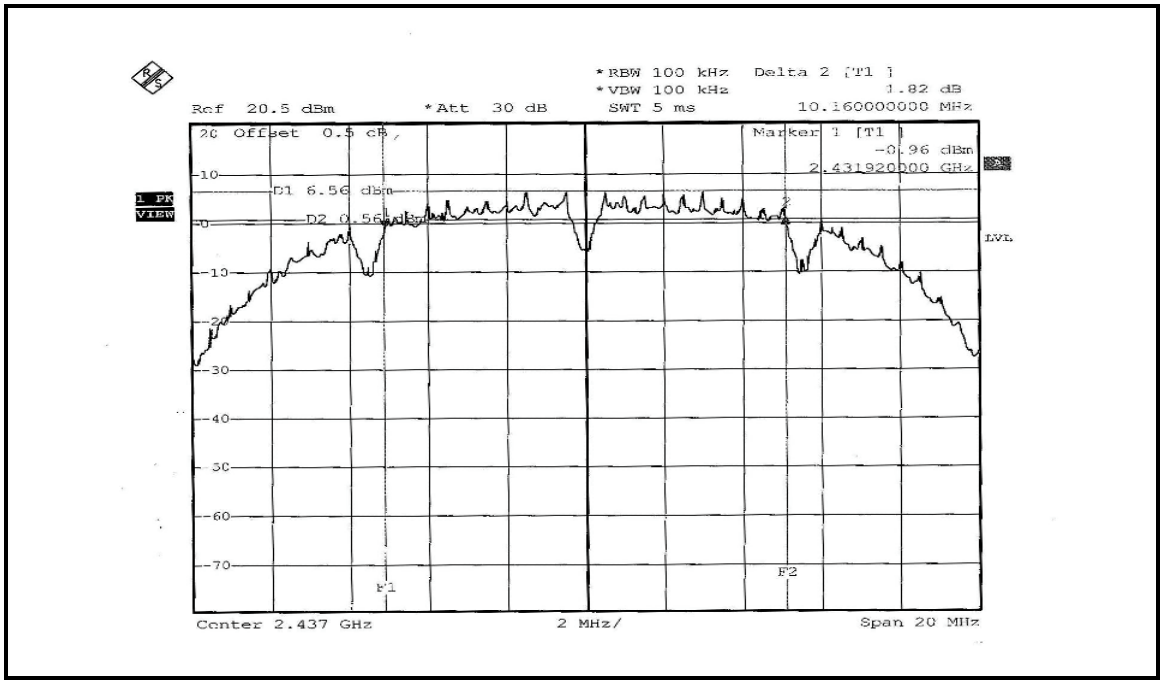
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	10.08	0.5	PASS
6	2437	10.16	0.5	PASS
11	2462	10.16	0.5	PASS

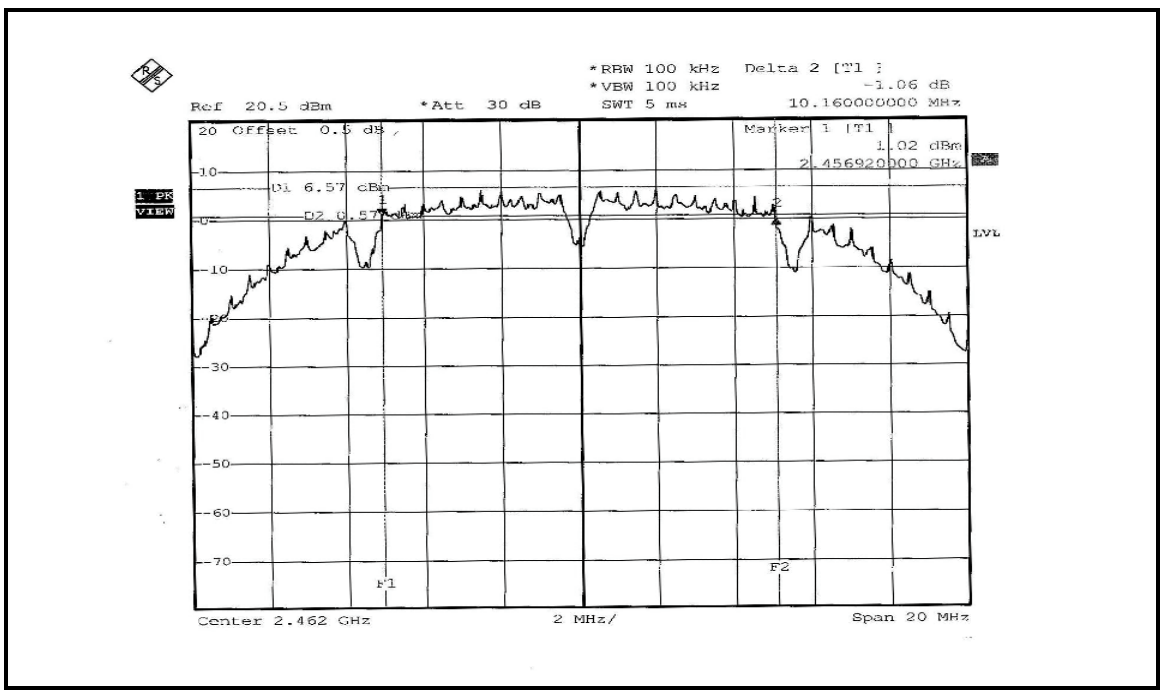
CH 1



CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
1.82 dB
10.160000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-0.96 dBm
2.431920000 GHz
D1 6.56 dBm
D2 0.56 dB
1 PK
VIEW
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

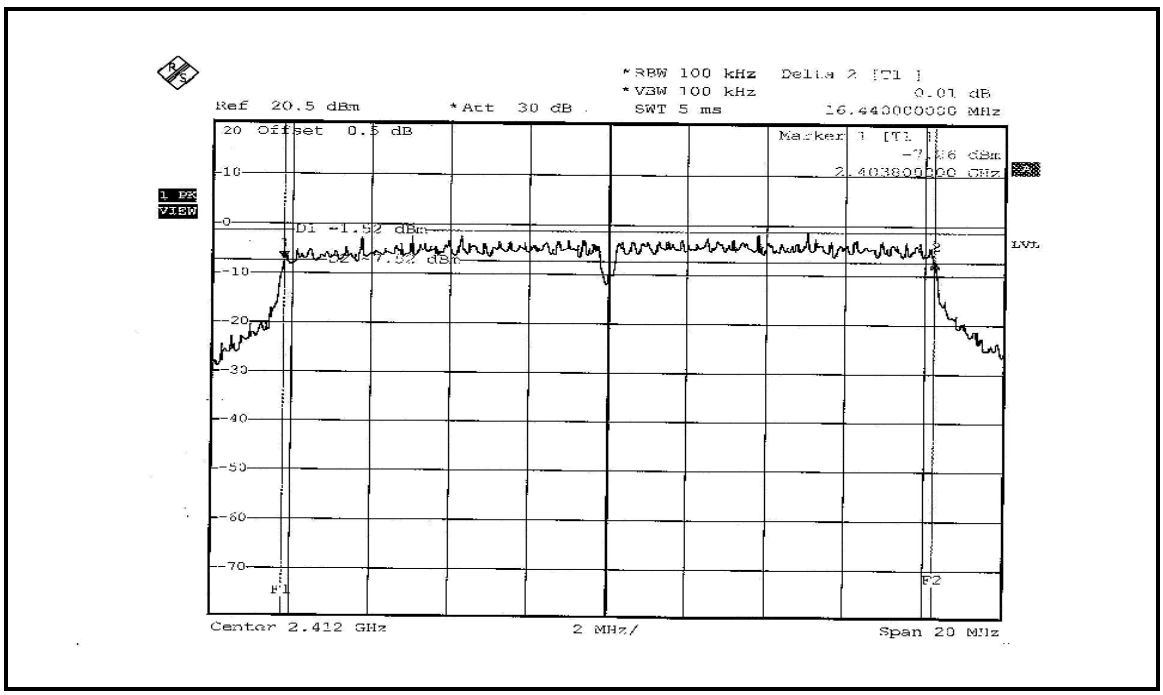

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
-1.06 dB
10.160000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
1.02 dBm
2.456920000 GHz
D1 6.57 dBm
D2 0.57 dB
1 PK
VIEW
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM MODULATION – DUAL TX:

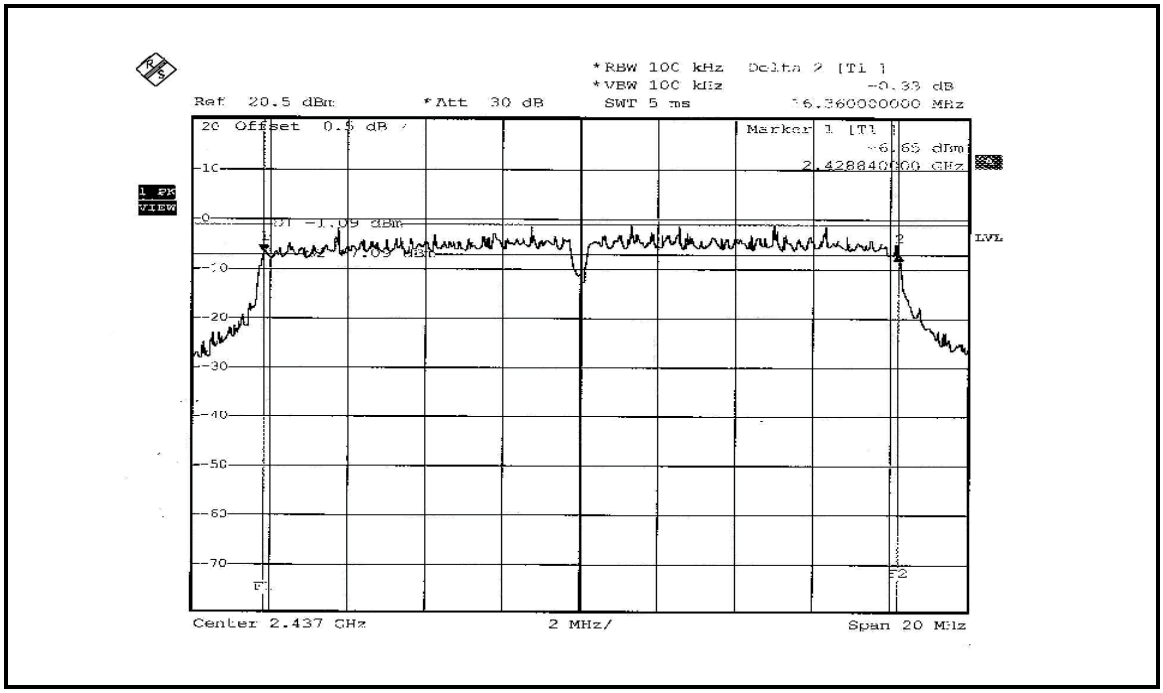
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.44	16.44	0.5	PASS
6	2437	16.36	16.32	0.5	PASS
11	2462	16.40	16.40	0.5	PASS

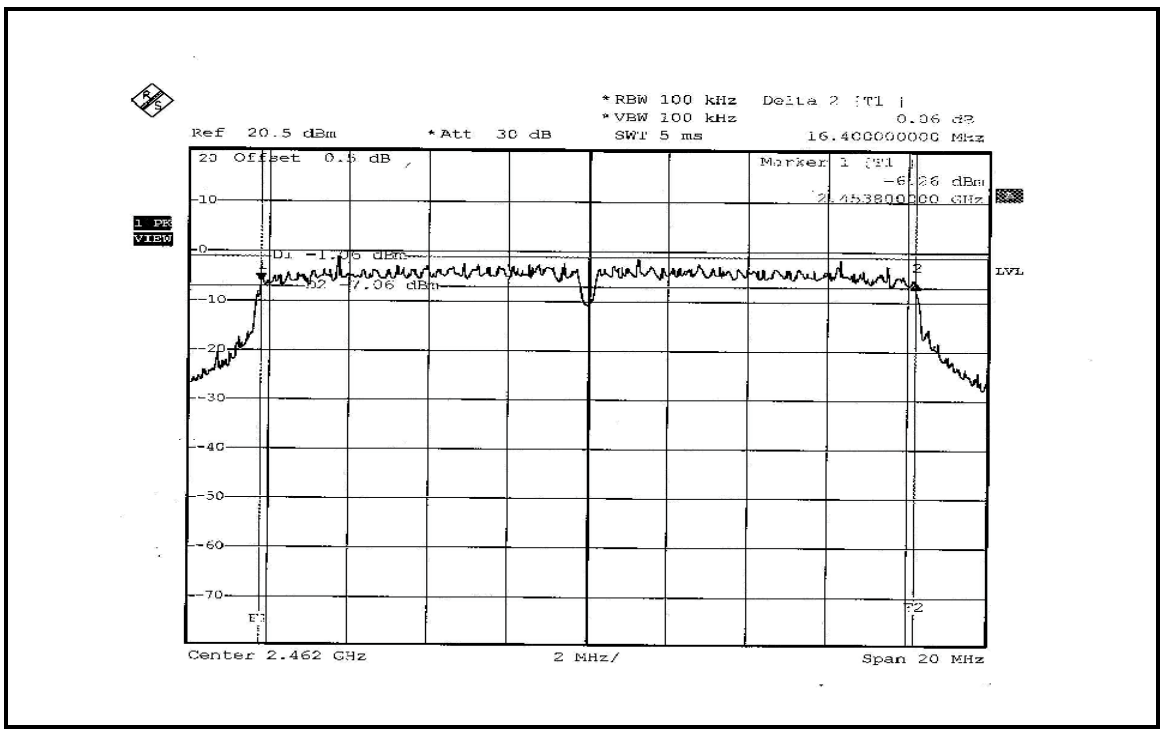
FOR CHAIN 0: CH 1



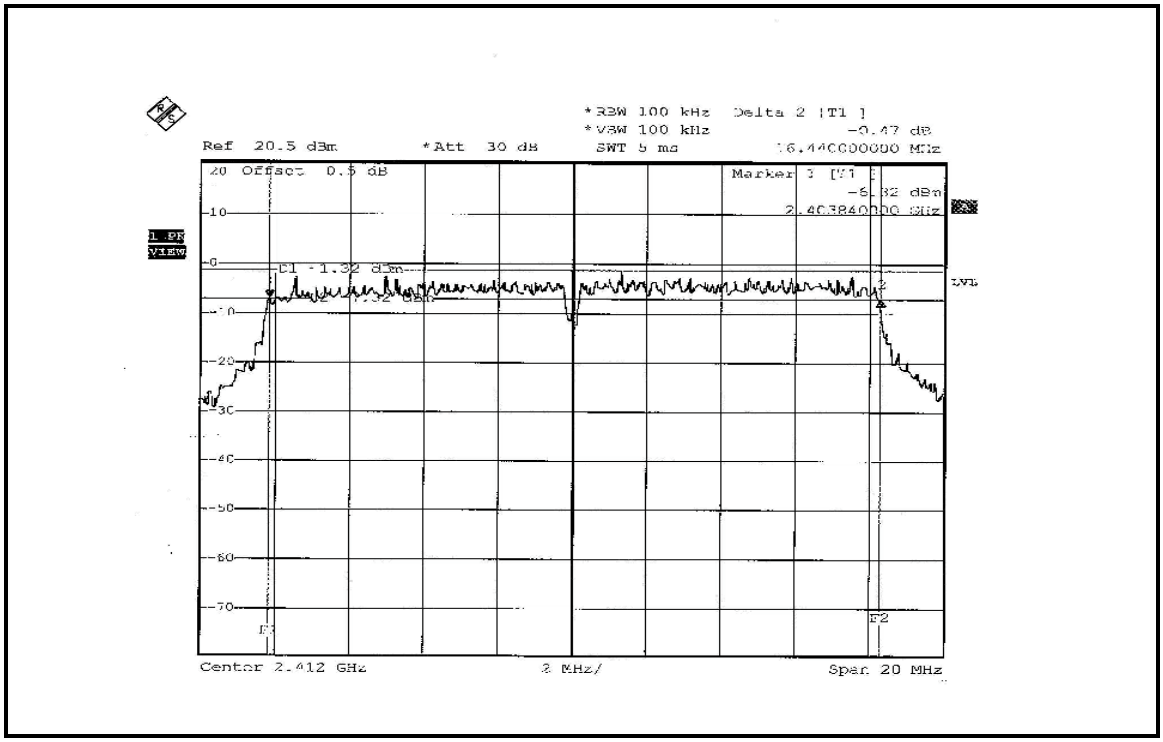
CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
-0.33 dB
16.360000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1
-6.65 dBm
2.428840000 GHz
1 PK
VIEW
D1 -1.09 dBm
D2 -7.09 dBm
LVL
Center 2.437 GHz
2 MHz/
Span 20 MHz

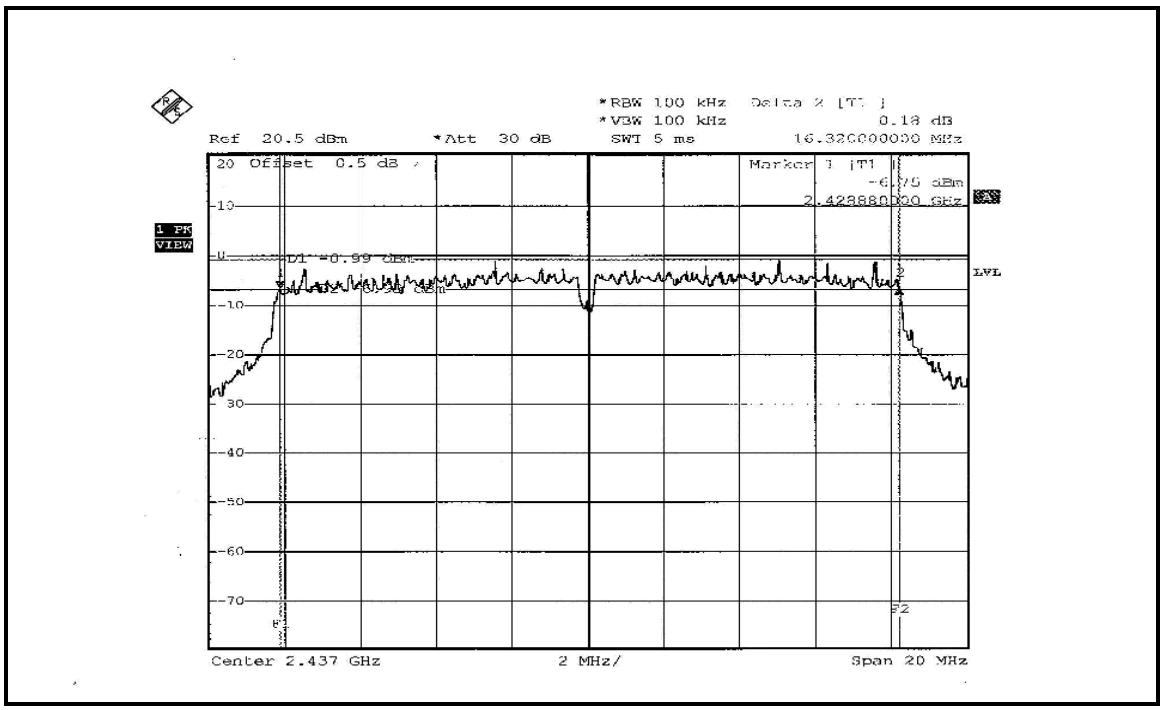
CH 11


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
0.06 dB
16.400000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1
-6.26 dBm
2.453800000 GHz
1 PK
VIEW
D1 -1.06 dBm
D2 -7.06 dBm
LVL
Center 2.462 GHz
2 MHz/
Span 20 MHz

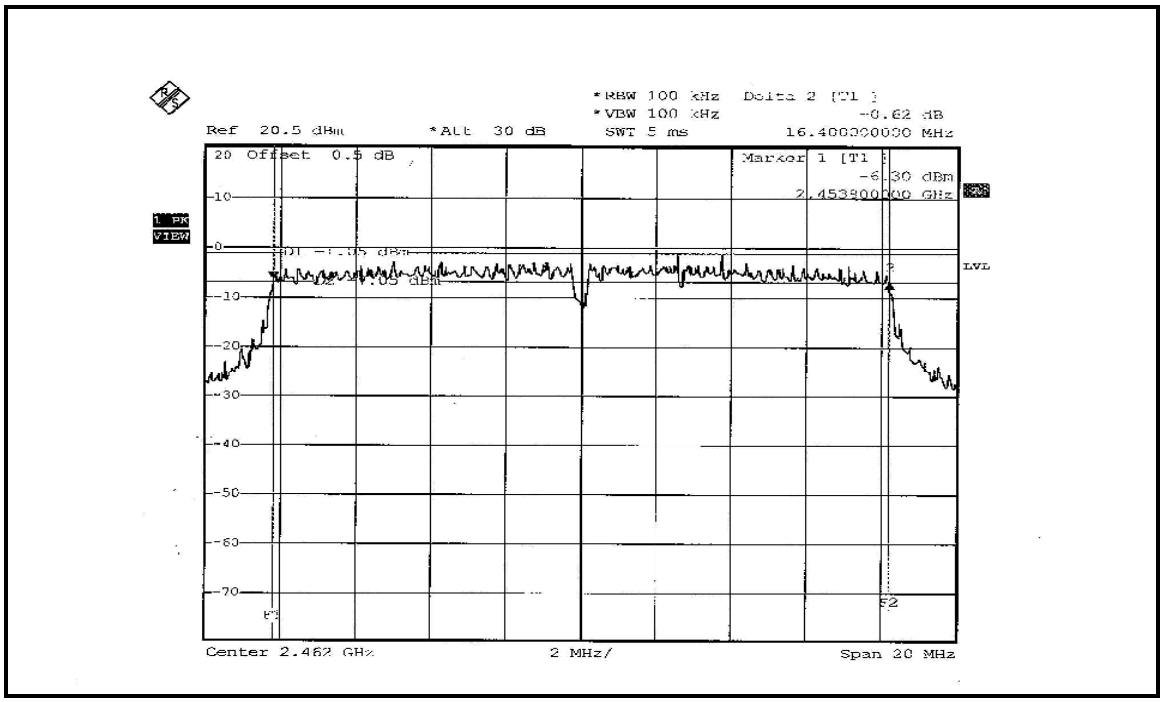
FOR CHAIN 1: CH 1



CH 6



CH 11

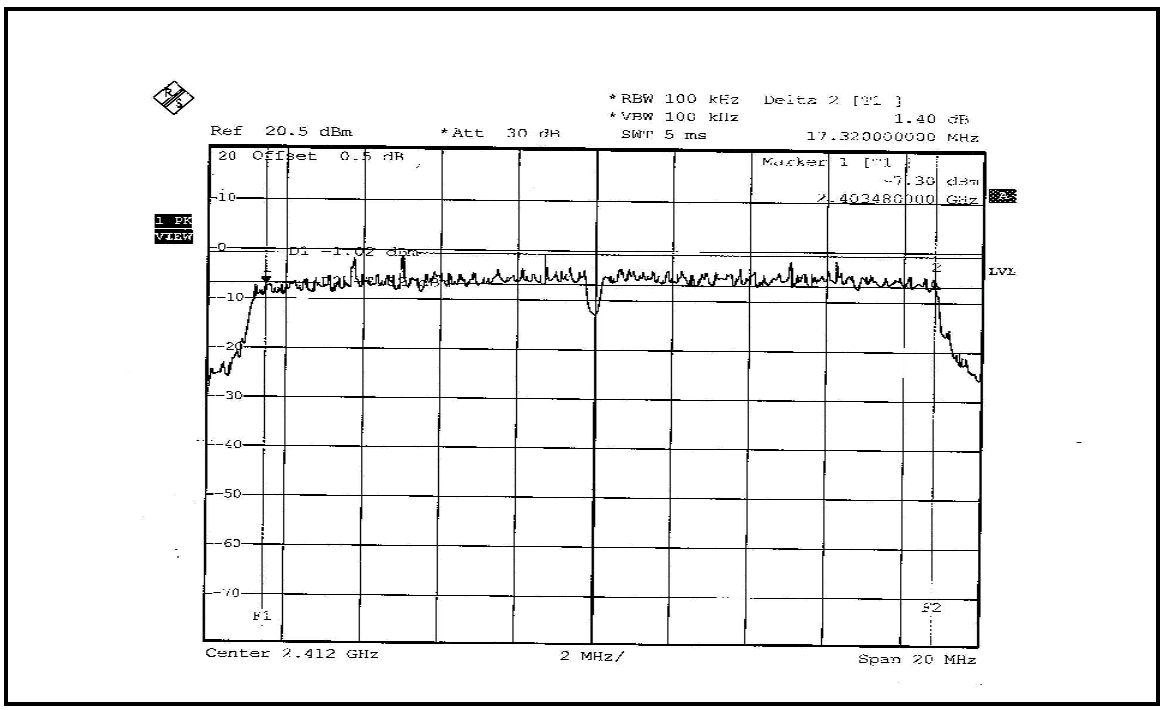

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
-0.62 dB
16.400000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-6.30 dBm
2.453800000 GHz
1 PK
VIEW
LVL
Center 2.462 GHz
2 MHz/
Span 20 MHz

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

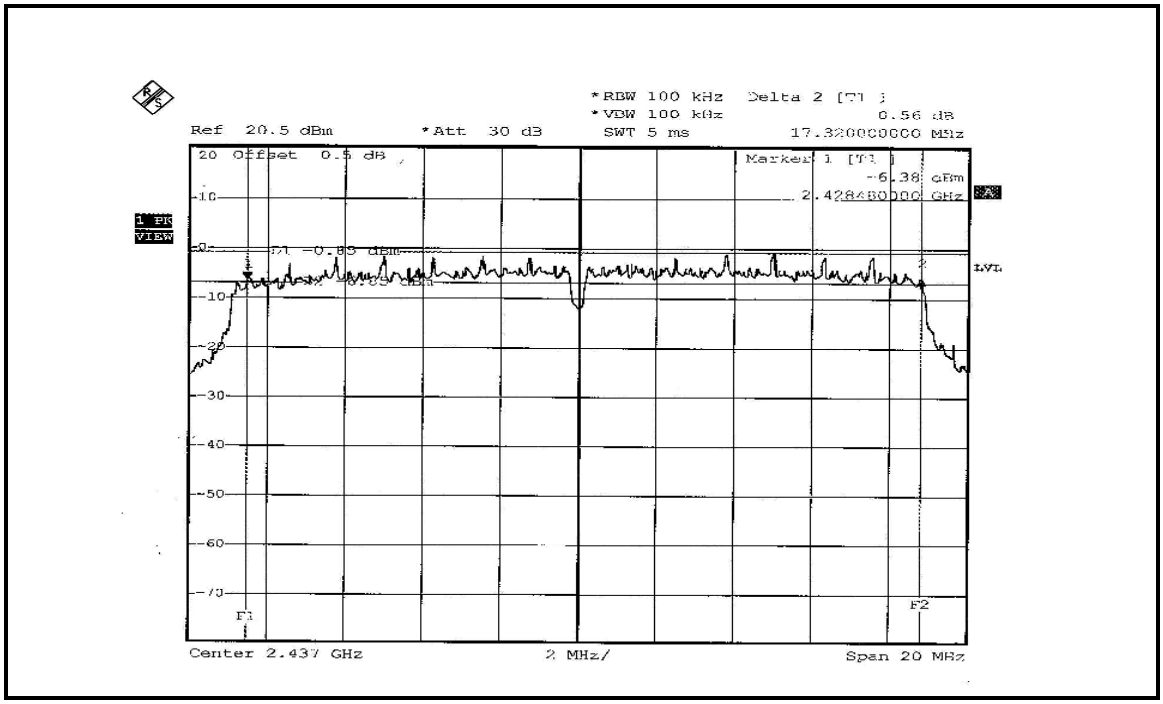
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.32	17.64	0.5	PASS
6	2437	17.32	16.88	0.5	PASS
11	2462	17.60	17.28	0.5	PASS

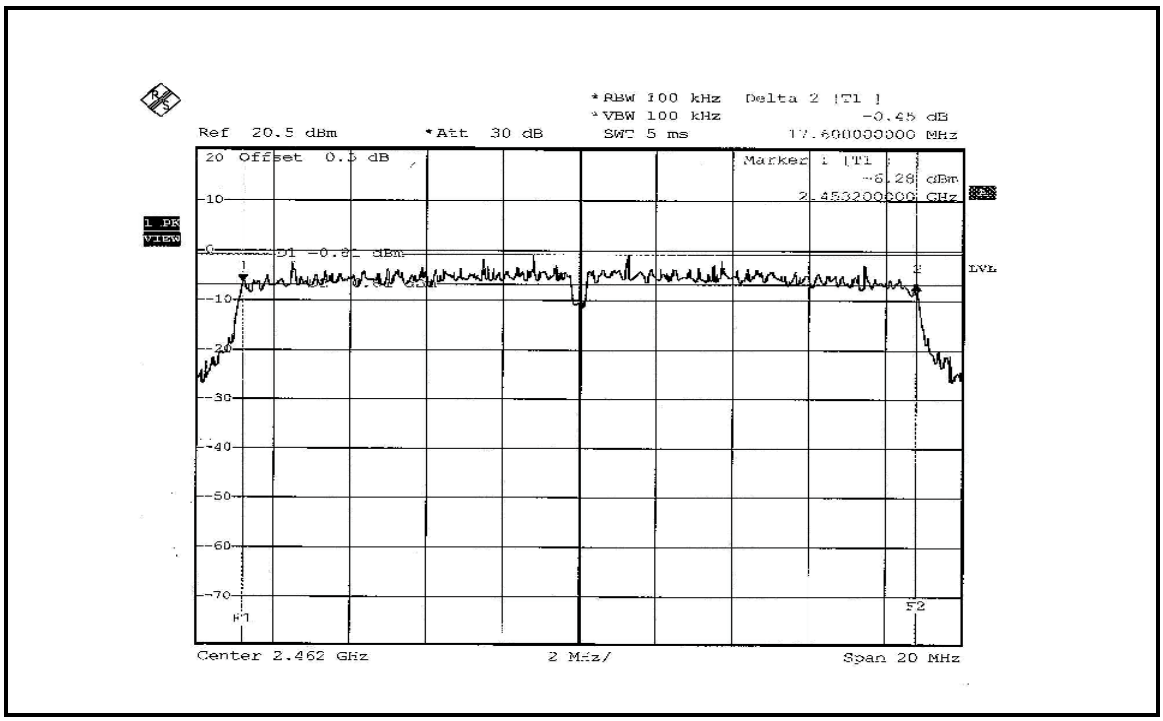
FOR CHAIN 0: CH 1



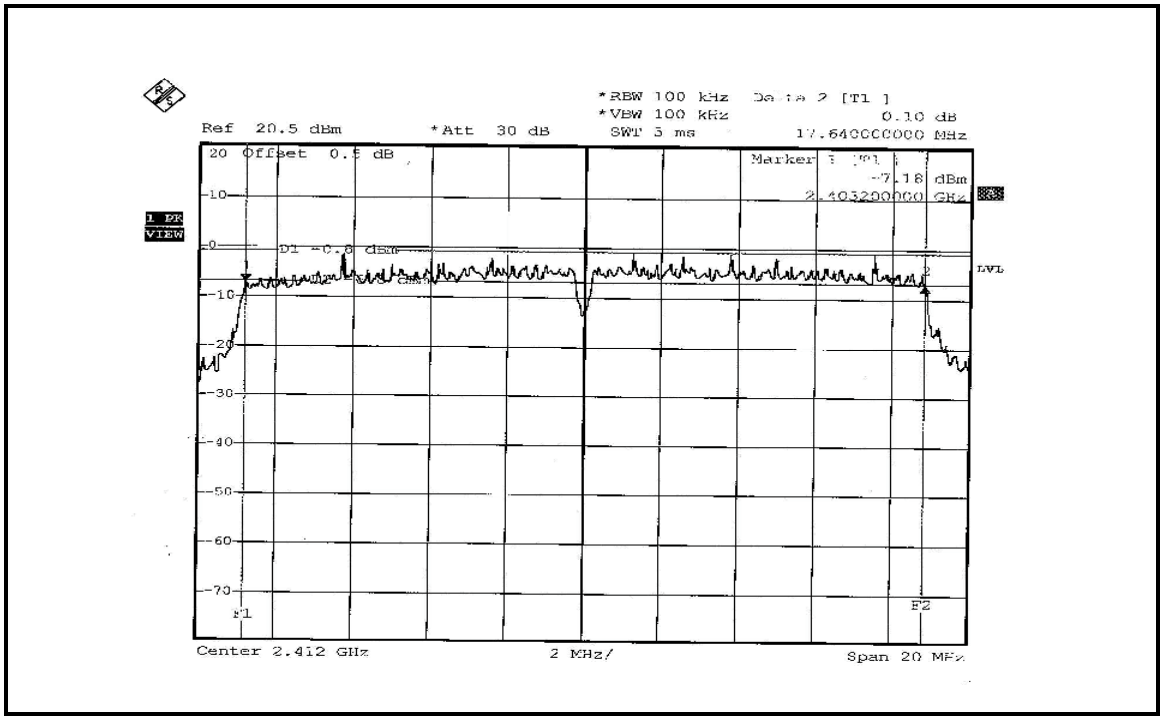
CH 6


*RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
0.56 dB
Ref 20.5 dBm
*Att 30 dB
SWT 5 ms
17.320000000 MHz
20 Offset 0.5 dB
Marker 1 [T1]
-6.38 dBm
2.428480000 GHz
1 PR
VIEW
D1 -0.83 dBm
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

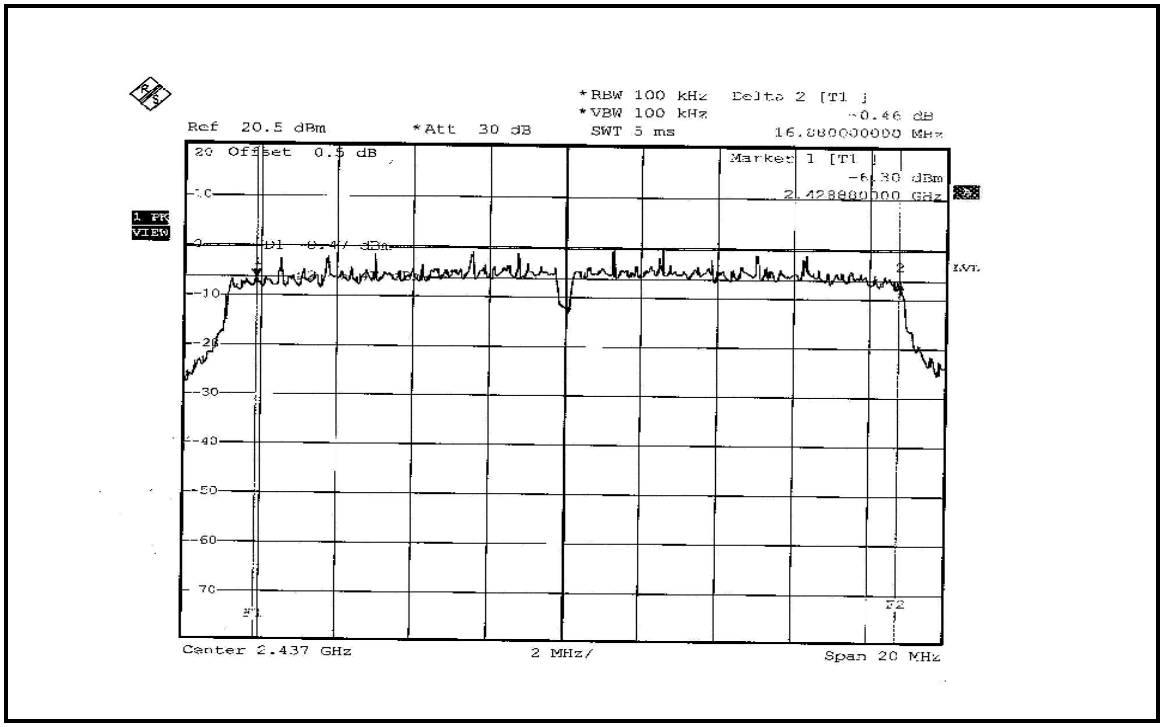
CH 11


*RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
-0.45 dB
Ref 20.5 dBm
*Att 30 dB
SWT 5 ms
17.600000000 MHz
20 Offset 0.5 dB
Marker 1 [T1]
-6.28 dBm
2.453200000 GHz
1 PR
VIEW
D1 -0.8 dBm
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

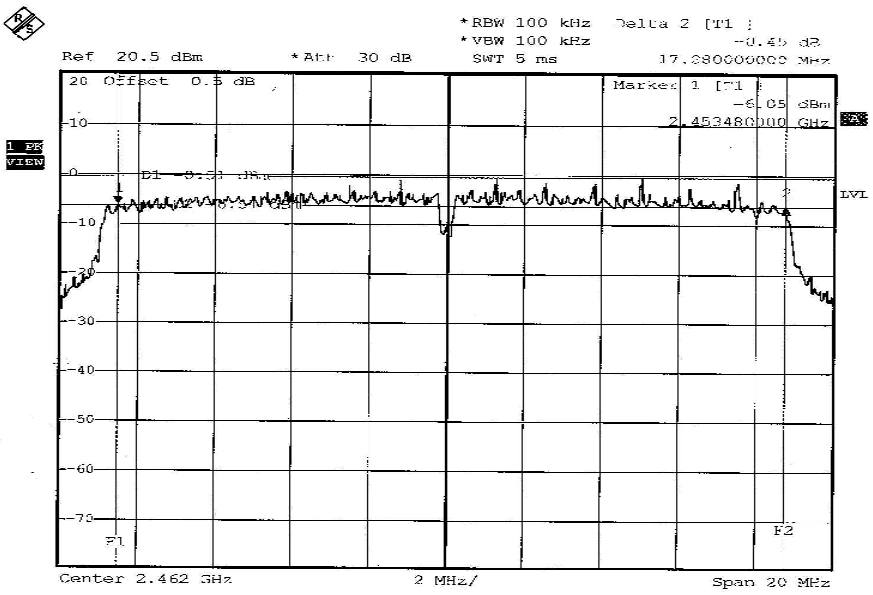
FOR CHAIN 1: CH 1



CH 6



CH 11

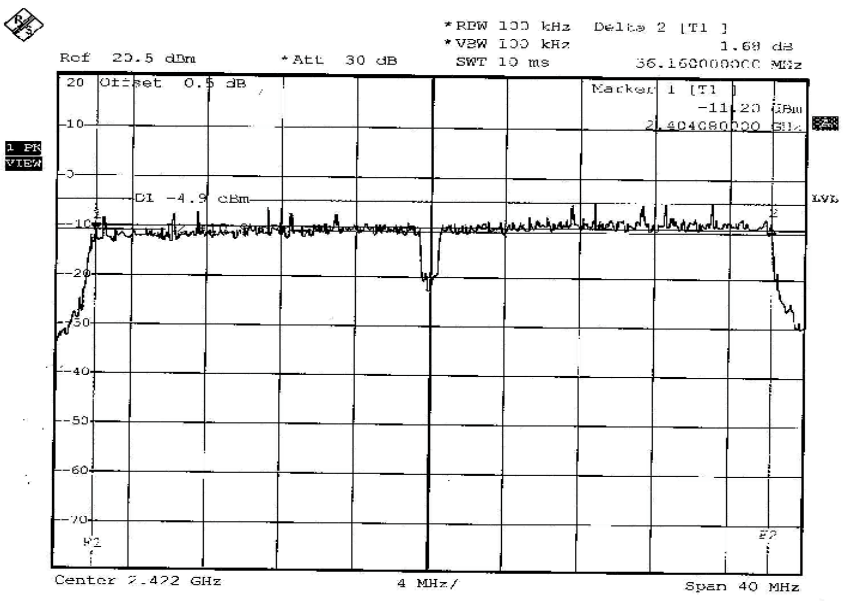

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Ref 20.5 dBm
*Att 30 dB
Offset 0.5 dB
Marker 1 [T1
-5.05 dBm
2.453480000 GHz
1 PK
VIEW
D1 -9.53 dBm
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

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

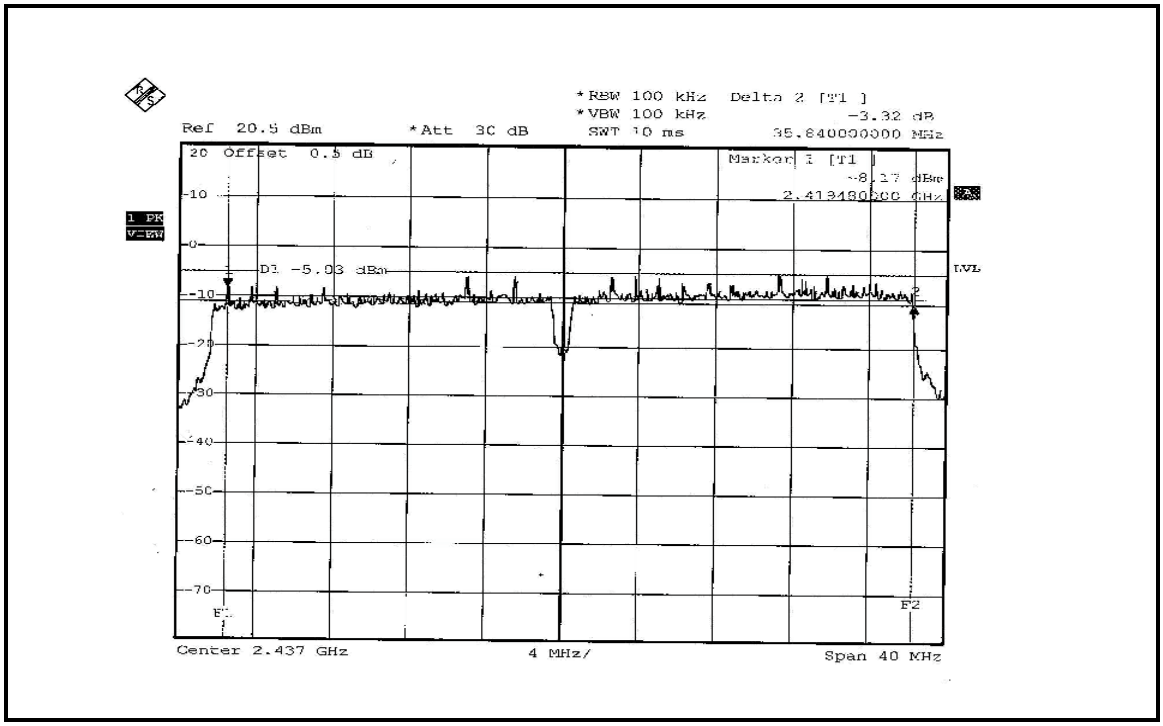
MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	36.16	35.76	0.5	PASS
4	2437	35.84	35.68	0.5	PASS
7	2452	35.84	36.40	0.5	PASS

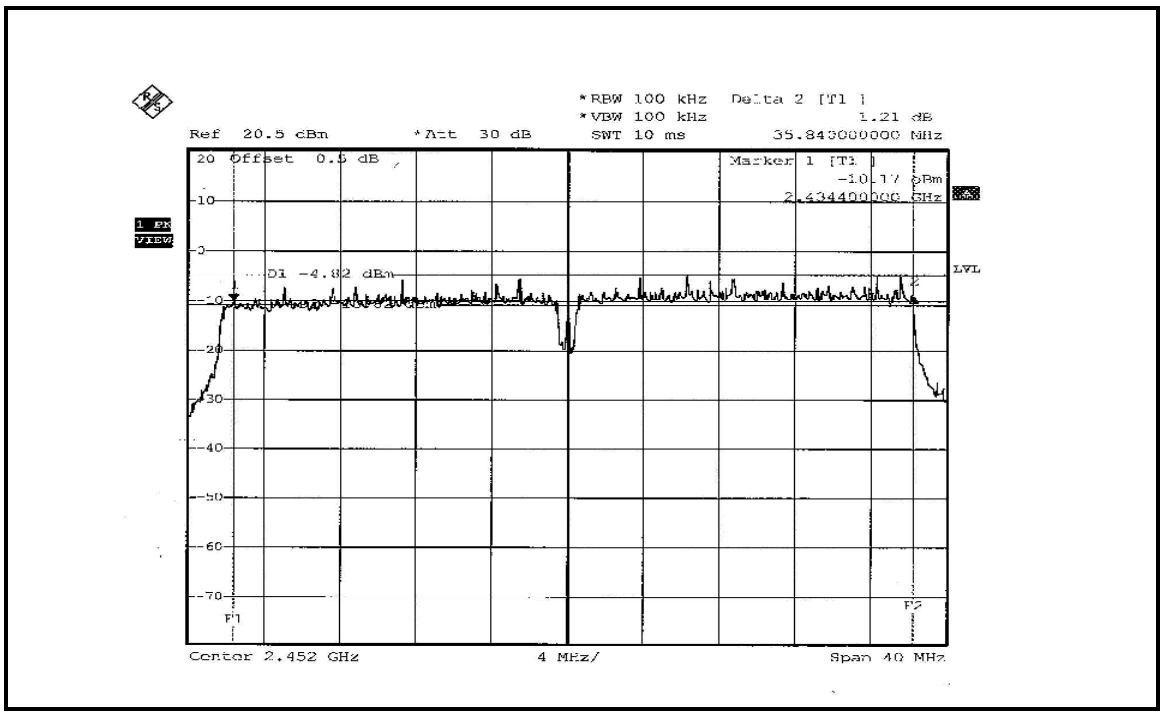
FOR CHAIN 0: CH 1



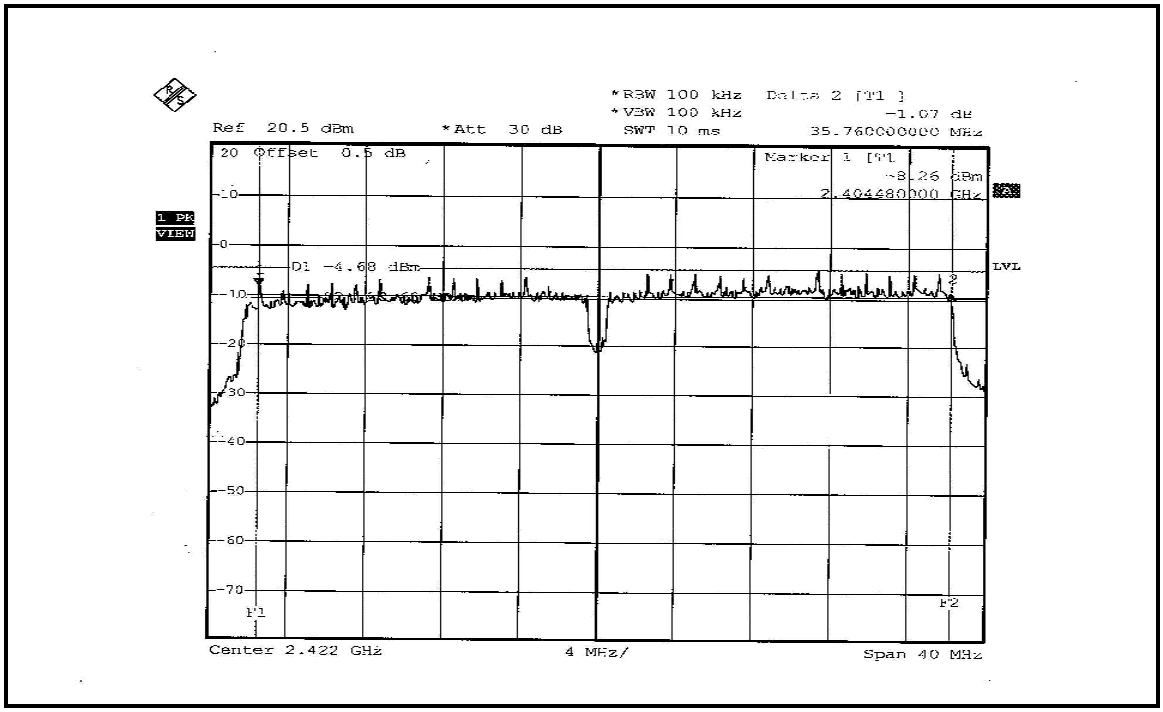
CH 4


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Delta 2 [T1]
-3.32 dB
35.840000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-8.17 dBm
2.413480000 GHz
D1 -5.03 dBm
1 PK
VIEW
LVL
F1
F2
Center 2.437 GHz
4 MHz/
Span 40 MHz

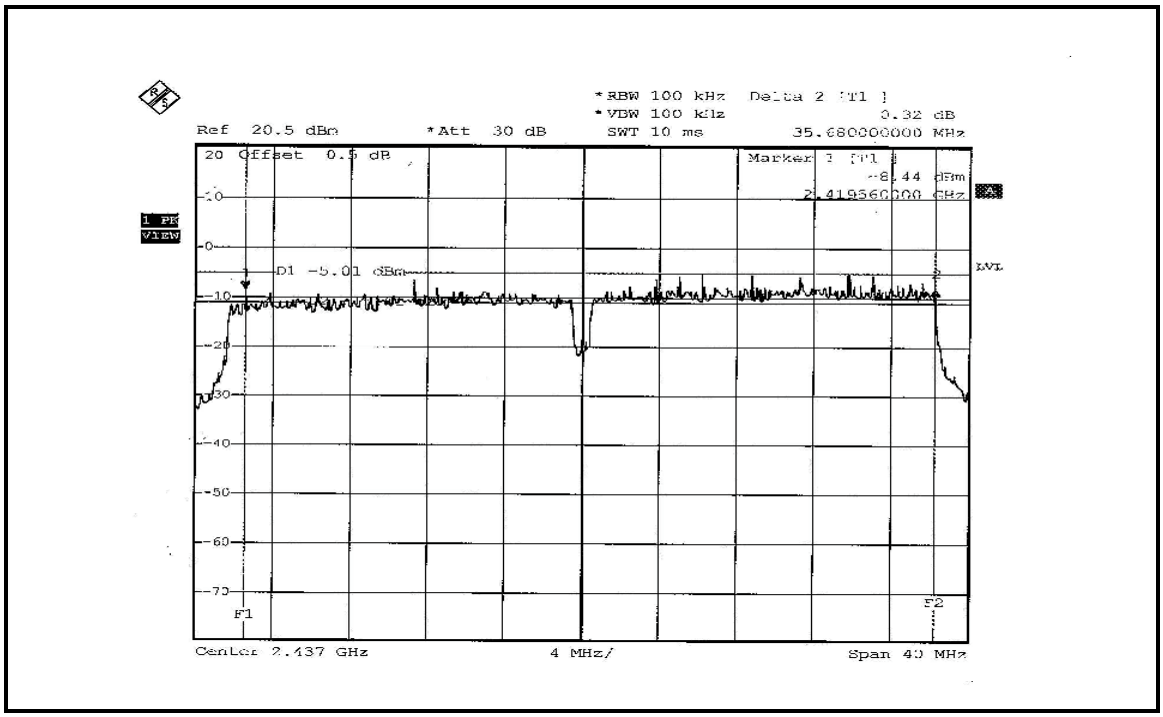
CH 7


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Delta 2 [T1]
1.21 dB
35.840000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-10.17 dBm
2.434400000 GHz
D1 -4.82 dBm
1 PK
VIEW
LVL
F1
F2
Center 2.452 GHz
4 MHz/
Span 40 MHz

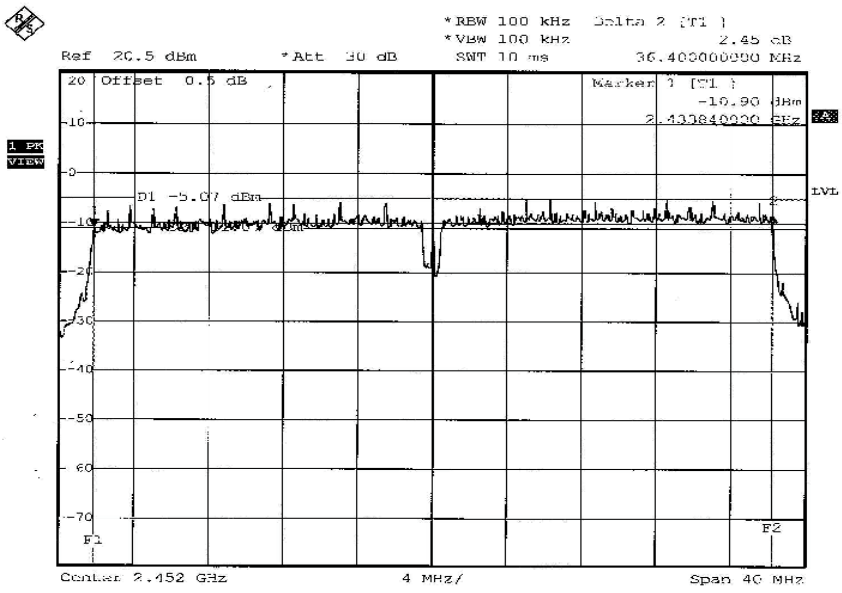
FOR CHAIN 1: CH 1



CH 4



CH 7


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Ref 20.5 dBm
*Att 30 dB
Offset 0.5 dB
Marker 1 [T1]
-10.90 dBm
2.433840000 GHz
D1 -5.07 dBm
1 PK VIEW
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	FSP40	100040	Jun. 07, 2007
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 07, 2006
DIGITAL RT OSCILLOSCOPE	TDS1012	C037299	Nov. 28, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.4.3 TEST PROCEDURES

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

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

802.11b DSSS MODULATION – SINGLE TX:

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	63.096	18.00	30	PASS
6	2437	63.973	18.06	30	PASS
11	2462	63.680	18.04	30	PASS

802.11g OFDM MODULATION – DUAL TX:

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	36.141	39.902	15.58	16.01	76.043	18.81	30	PASS
6	2437	40.458	40.272	16.07	16.05	**80.730**	19.07	30	PASS
11	2462	40.365	39.811	16.06	16.00	80.176	19.04	30	PASS

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

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

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	35.892	40.087	15.55	16.03	75.979	18.81	30	PASS
6	2437	40.272	40.272	16.05	16.05	80.544	19.06	30	PASS
11	2462	39.811	40.458	16.00	16.07	80.269	19.05	30	PASS

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

MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2422	25.410	25.410	14.05	14.05	50.820	17.06	30	PASS
4	2437	25.645	25.468	14.09	14.06	51.113	17.09	30	PASS
7	2452	25.293	25.410	14.03	14.05	50.703	17.05	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	FSP40	100040	Jun. 07, 2007

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

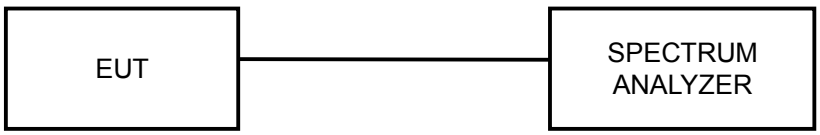
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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

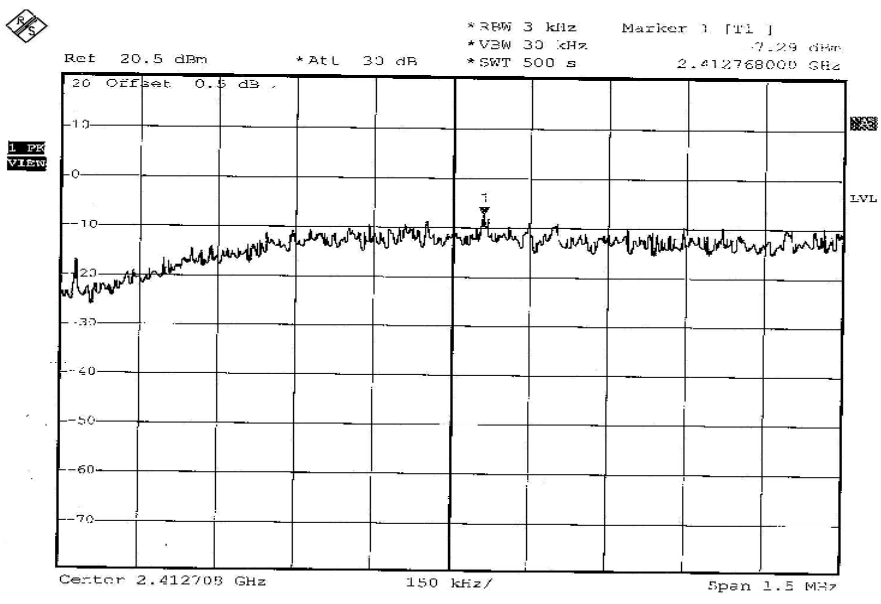
4.5.7 TEST RESULTS

802.11b DSSS MODULATION – SINGLE TX:

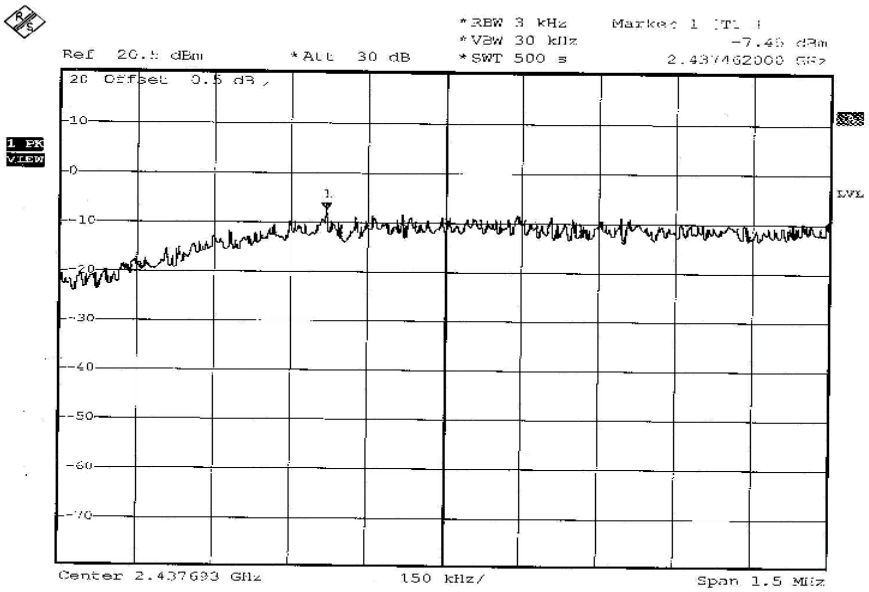
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-7.29	8	PASS
6	2437	-7.45	8	PASS
11	2462	-7.21	8	PASS

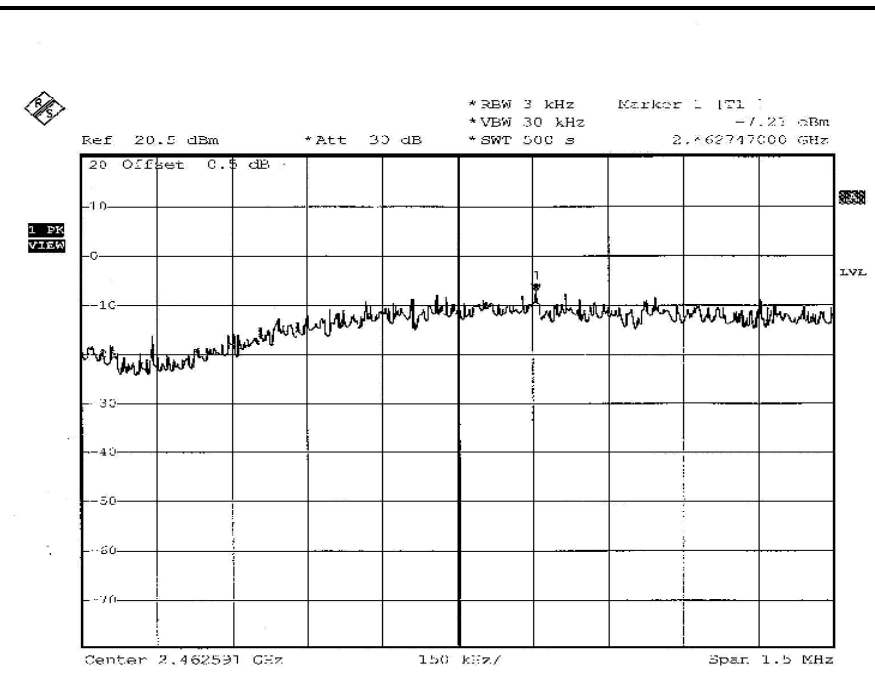
CH 1



CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-7.45 dBm
2.437462000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK VIEW
LVL
Center 2.437693 GHz
150 kHz/
Span 1.5 MHz

CH 11

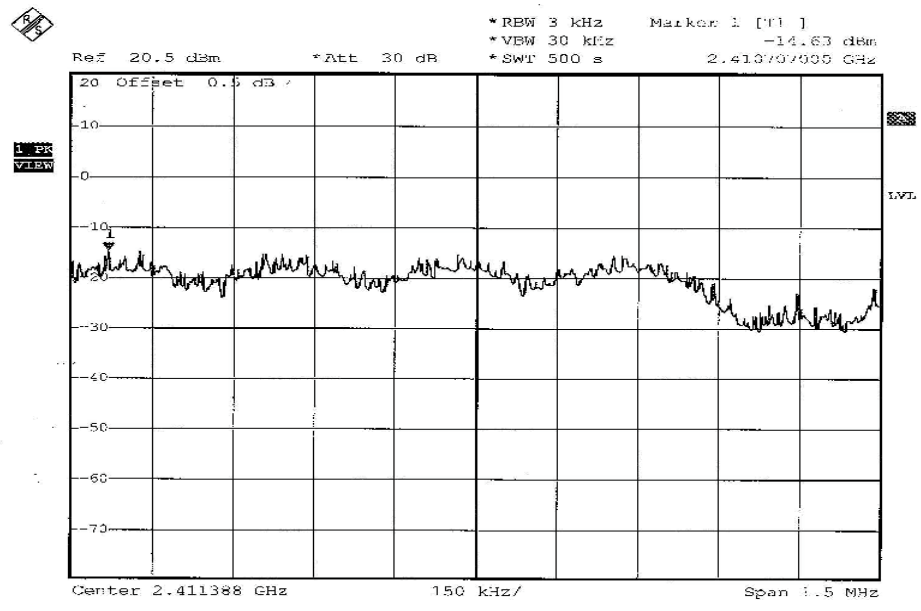

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-7.21 dBm
2.462747000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK VIEW
LVL
Center 2.462591 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM MODULATION – DUAL TX:

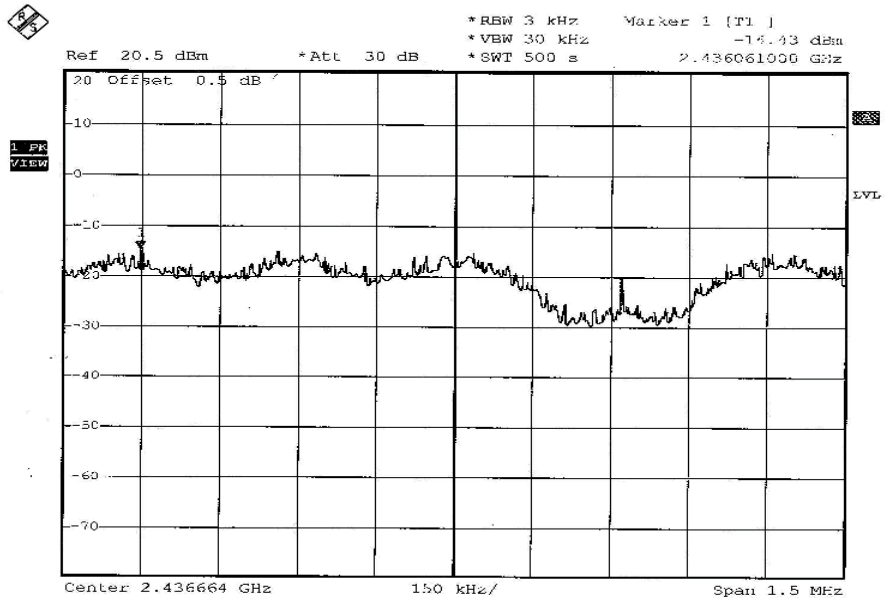
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 63% RH, 991hPa
TESTED BY	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (mW)		RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	0.034	0.038	-14.63	-14.18	0.072	-11.43	8	PASS
6	2437	0.036	0.039	-14.43	-14.12	0.075	-11.25	8	PASS
11	2462	0.037	0.037	-14.30	-14.33	0.074	-11.31	8	PASS

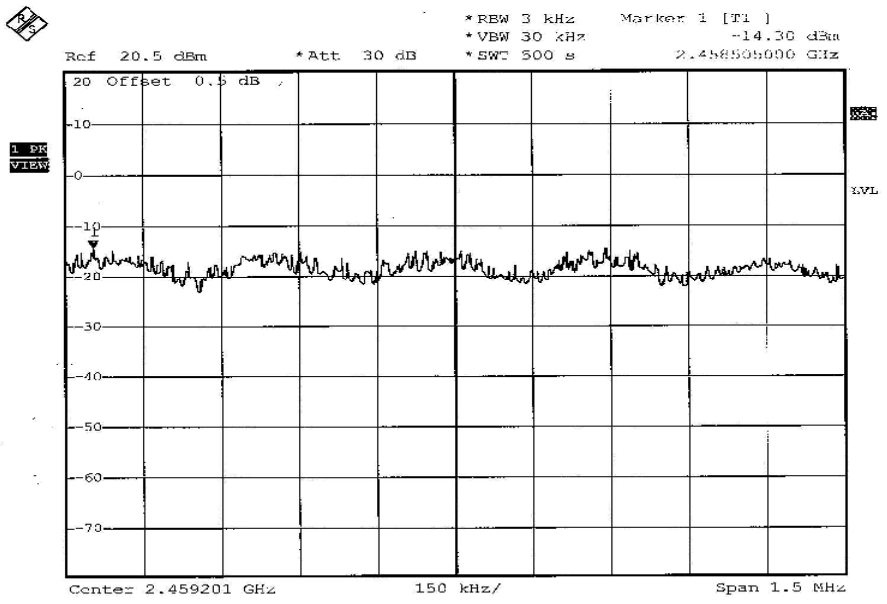
FOR CHAIN 0: CH 1



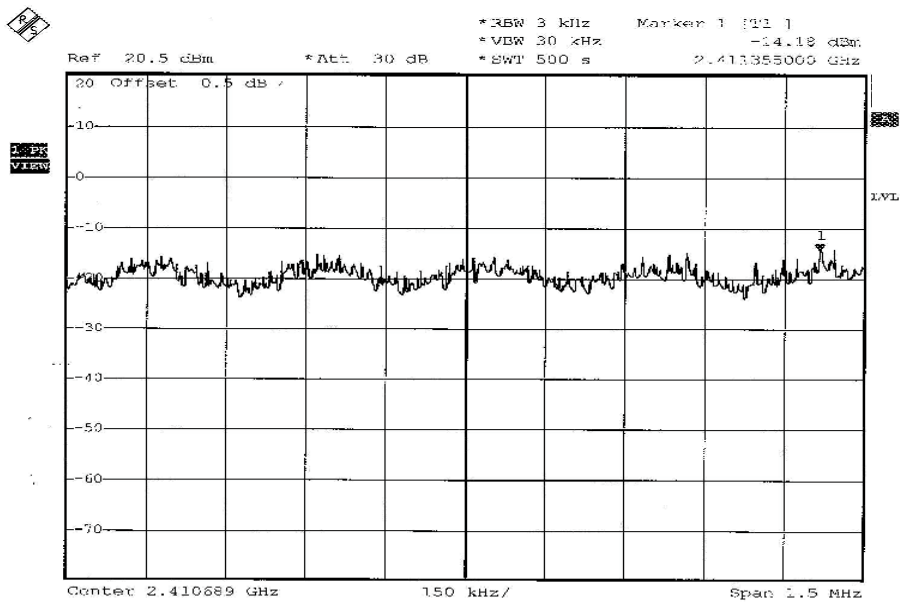
CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.43 dBm
2.436061000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK VIEW
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.436664 GHz
150 kHz/
Span 1.5 MHz

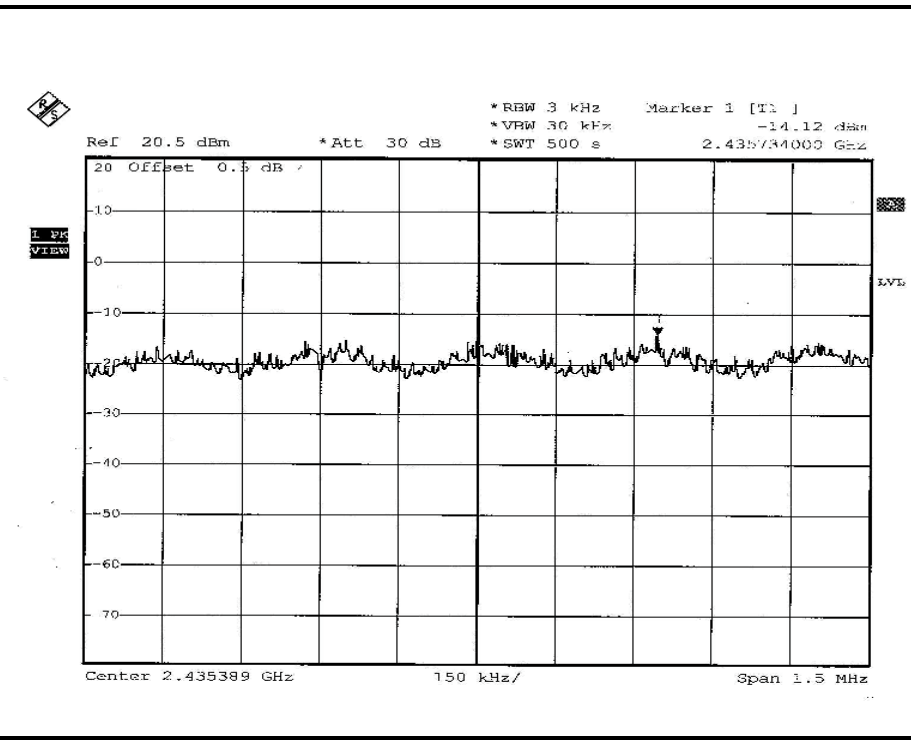
CH 11


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.30 dBm
2.458850000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK VIEW
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.459201 GHz
150 kHz/
Span 1.5 MHz

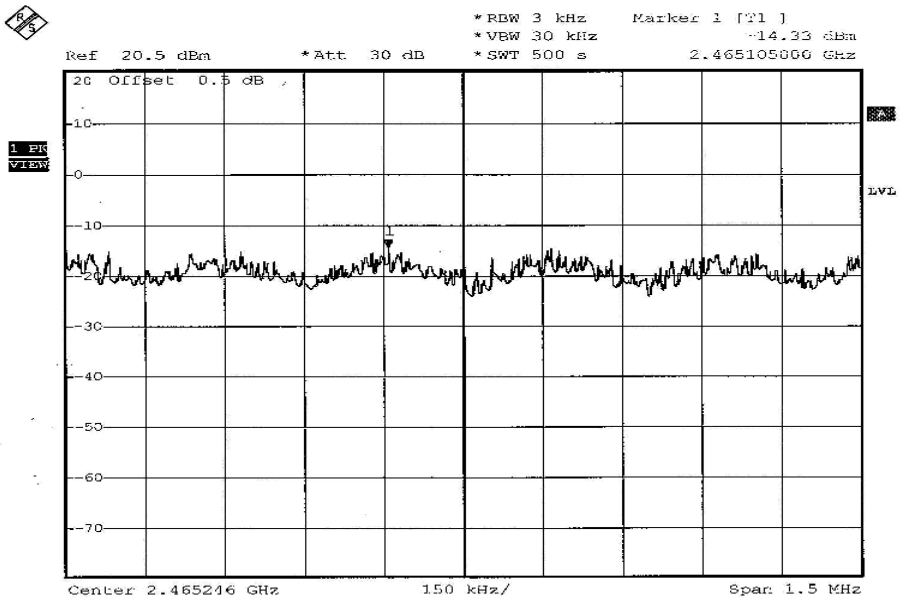
FOR CHAIN 1: CH 1



CH 6



CH 11


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.33 dBm
2.465105000 GHz
Ref 20.5 dBm
*Att 30 dB
2d Offset 0.5 dB
10
0
-10
-20
-30
-40
-50
-60
-70
1 PR
VIEW
LVL
Center 2.465246 GHz
150 kHz/
Span 1.5 MHz