FCC TEST REPORT

REPORT NO.:	RF980423L13
MODEL NO.:	AW-NU103
RECEIVED:	Apr. 23, 2009
TESTED:	May 06 ~ May 08, 2009
ISSUED:	May 25, 2009

APPLICANT:	AzureWave Technologies, Inc.
ADDRESS:	8F, No. 94, Baozhong Rd., Xindian, Taipei, Taiwan 231.

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, 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: 802.11b/g/n WLAN USB module
MODEL: AW-NU103
BRAND: AzureWave
APPLICANT: AzureWave Technologies, Inc.
TESTED: May 06 ~ May 08, 2009
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.4-2003

The above equipment (model: AW-NU103) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** 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 : Peggy Chen , **DATE:** May 25, 2009
Peggy Chen / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** May 25, 2009
Responsible for RF
Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** May 25, 2009
Gary Chang / Assistant Manager

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 -16.54dB at 0.205MHz.
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)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -4.49dB at 4824.00MHz.
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 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 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	802.11b/g/n WLAN USB module
MODEL NO.	AW-NU103
FCC ID	TLZ-NU103
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: 11.0/ 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: up to 135Mbps
OPERATING FREQUENCY	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz)
MAXIMUM OUTPUT POWER	90.573mW
ANTENNA TYPE	Refer to NOTE for more details
DATA CABLE	NA
I/O PORTS	NA
ACCESSORY DEVICES	NA

NOTE:

1. The EUT incorporates a MIMO function. Physically, the EUT provides one completed transmitter and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
Draft 802.11n (20MHz)	1TX
Draft 802.11n (40MHz)	1TX

2. The EUT uses with following antennas:

ANTENNA	BRAND	MODEL NO.	TYPE	GAIN (dBi)	CONNECTOR	REMARK
Antenna 1	ACON	APP6P-700261	PIFA	1.36	UFL	For mobile device
Antenna 2	ACON	APP6M-100001	Printed	0.64 (Main) -0.02 (Aux.)	mcx	For portable device
Antenna 3	ACON	APP6M-100000	Printed	0.64 (Main) -0.02 (Aux.)	mcx	

*Antenna 1 and Antenna 2 were chosen for final test.

3. Human exposure report for antenna 1 is MPE (Report No.: SA980423L13-1), for antenna 2 and antenna 3 is SAR (Report No.: SA980423L13).
4. 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 and draft 802.11n (20MHz):

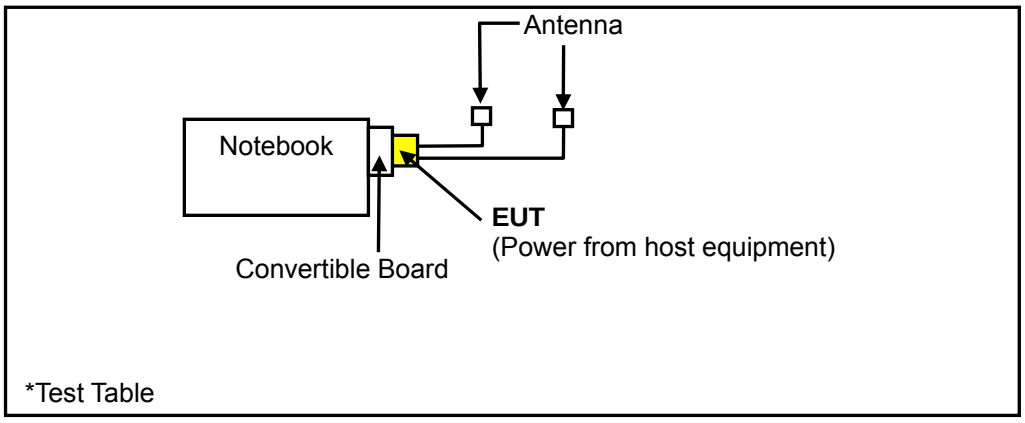
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

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

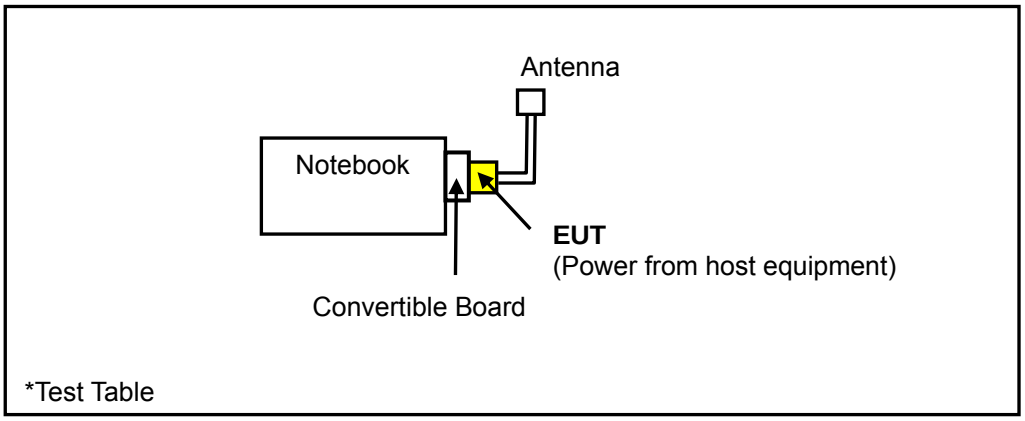
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

TEST MODE A



TEST MODE B



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Antenna 1
B	√	√	√	-	Antenna 2

Where **PLC:** Power Line Conducted Emission **RE<1G:** Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement
NOTE: "-": Means no effect.

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, antenna XYZ axis and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	ANTENNA AXIS
A, B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1	Z
A, B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	Z
A, B	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Z
A, B	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	Z

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, antenna XYZ axis and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	ANTENNA AXIS
A, B	802.11g	1 to 11	1	OFDM	BPSK	6	Z

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11g	1 to 11	1	OFDM	BPSK	6

BANDEDGE MEASUREMENT:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	ANTENNA AXIS
A, B	802.11b	1 to 11	1, 11	DSSS	DBPSK	1	Z
A, B	802.11g	1 to 11	1, 11	OFDM	BPSK	6	Z
A, B	Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5	Z
A, B	Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	13.5	Z

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
A	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5

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	DELL	D531	CN-0XM006-48643-81U-2786	QDS-BRCM1020
2	CONVERTIBLE BOARD	AzureWave	TEST BOARD	NA	NA

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

NOTE:

1. All power cords of the above support units are non shielded (1.8m).
2. Item 2 was provided by the client.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	100033	Jun. 30, 2008	Jun. 29, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 27, 2009	Apr. 26, 2010
HORN Antenna SCHWARZBECK	9120D	9120D-209	Jun. 24, 2008	Jun. 23, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 25, 2008	Dec. 24, 2009
Preamplifier Agilent	8447D	2944A10633	Nov. 03, 2008	Nov. 02, 2009
Preamplifier Agilent	8449B	3008A01964	Oct. 23, 2008	Oct. 22, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	238141/4	May 20, 2008	May 12, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	May 20, 2008	May 12, 2010
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	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 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 FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC 7450F-3.

4.1.3 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.

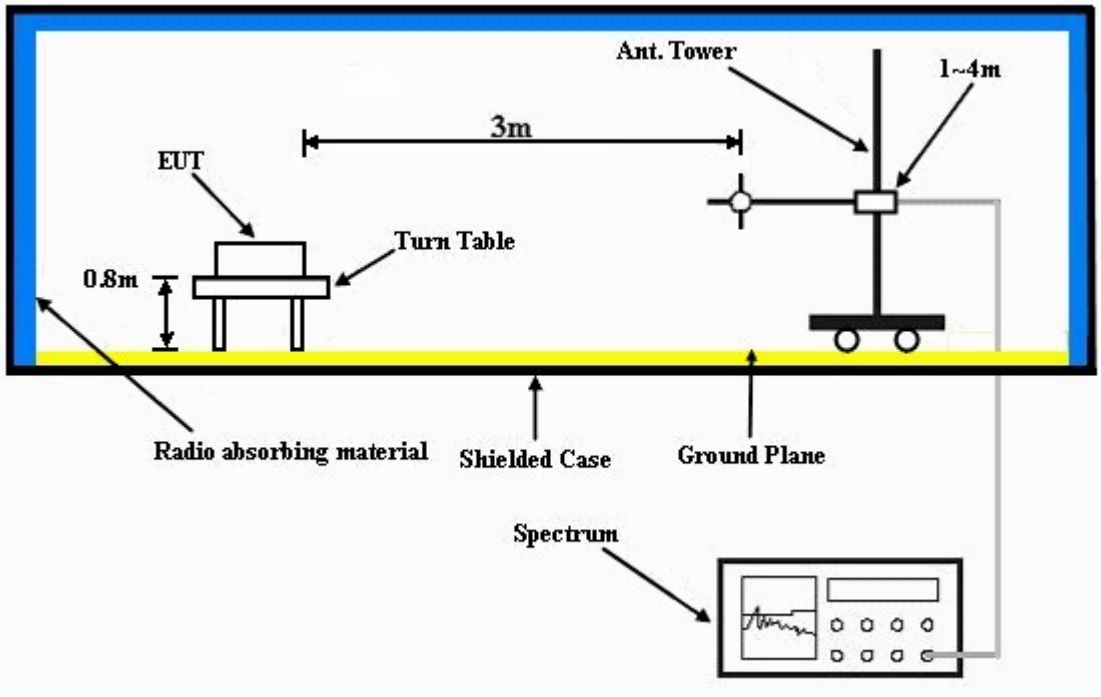
NOTE:

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 of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3MHz 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. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo)

4.1.6 EUT OPERATING CONDITIONS

a. Plugged the EUT to the notebook and placed them on the testing table.
b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
c. The necessary accessories enable the EUT in full functions.

4.1.7 TEST RESULTS

802.11b DSSS MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	56.04 PK	74.00	-17.96	1.25 H	251	23.60	32.44
2	2390.00	45.54 AV	54.00	-8.46	1.25 H	251	13.10	32.44
3	*2412.00	99.33 PK			1.25 H	251	66.81	32.52
4	*2412.00	94.59 AV			1.25 H	251	62.07	32.52
5	4824.00	51.54 PK	74.00	-22.46	1.21 H	63	13.24	38.30
6	4824.00	45.40 AV	54.00	-8.60	1.21 H	63	7.10	38.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.04 PK	74.00	-16.96	1.07 V	280	24.60	32.44
2	2390.00	46.25 AV	54.00	-7.75	1.07 V	280	13.81	32.44
3	*2412.00	105.82 PK			1.07 V	280	73.30	32.52
4	*2412.00	101.06 AV			1.07 V	280	68.54	32.52
5	4824.00	54.04 PK	74.00	-19.96	1.09 V	316	15.74	38.30
6	**4824.00**	**49.51 AV**	**54.00**	**-4.49**	**1.09 V**	**316**	**11.21**	**38.30**

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	98.86 PK			1.24 H	256	66.26	32.60
2	*2437.00	94.06 AV			1.24 H	256	61.46	32.60
3	4874.00	51.04 PK	74.00	-22.96	1.20 H	54	12.54	38.50
4	4874.00	44.92 AV	54.00	-9.08	1.20 H	54	6.42	38.50
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	105.36 PK			1.08 V	272	72.76	32.60
2	*2437.00	100.58 AV			1.08 V	272	67.98	32.60
3	4874.00	51.80 PK	74.00	-22.20	1.08 V	315	13.30	38.50
4	4874.00	46.03 AV	54.00	-7.97	1.08 V	315	7.53	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	98.15 PK			1.21 H	243	65.47	32.68
2	*2462.00	93.36 AV			1.21 H	243	60.68	32.68
3	2483.50	57.61 PK	74.00	-16.39	1.21 H	243	24.85	32.76
4	2483.50	46.23 AV	54.00	-7.77	1.21 H	243	13.47	32.76
5	4924.00	50.13 PK	74.00	-23.87	1.04 H	225	11.49	38.64
6	4924.00	44.18 AV	54.00	-9.82	1.04 H	225	5.54	38.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.69 PK			1.08 V	304	72.01	32.68
2	*2462.00	99.92 AV			1.08 V	304	67.24	32.68
3	2483.50	58.06 PK	74.00	-15.94	1.08 V	304	25.30	32.76
4	2483.50	46.55 AV	54.00	-7.45	1.08 V	304	13.79	32.76
5	4924.00	51.62 PK	74.00	-22.38	1.10 V	338	12.98	38.64
6	4924.00	45.84 AV	54.00	-8.16	1.10 V	338	7.20	38.64

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	56.83 PK	74.00	-17.17	1.33 H	240	24.39	32.44
2	2390.00	45.50 AV	54.00	-8.50	1.33 H	240	13.06	32.44
3	*2412.00	100.00 PK			1.33 H	240	67.48	32.52
4	*2412.00	95.36 AV			1.33 H	240	62.84	32.52
5	4824.00	51.17 PK	74.00	-22.83	1.21 H	63	12.87	38.30
6	4824.00	44.95 AV	54.00	-9.05	1.21 H	63	6.65	38.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.45 PK	74.00	-16.55	1.18 V	214	25.01	32.44
2	2390.00	45.68 AV	54.00	-8.32	1.18 V	214	13.24	32.44
3	*2412.00	103.62 PK			1.18 V	214	71.10	32.52
4	*2412.00	98.99 AV			1.18 V	214	66.47	32.52
5	4824.00	51.35 PK	74.00	-22.65	1.14 V	2	13.05	38.30
6	4824.00	45.24 AV	54.00	-8.76	1.14 V	2	6.94	38.30

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	99.86 PK			1.32 H	241	67.26	32.60
2	*2437.00	95.14 AV			1.32 H	241	62.54	32.60
3	4874.00	51.03 PK	74.00	-22.97	1.20 H	54	12.53	38.50
4	4874.00	44.84 AV	54.00	-9.16	1.20 H	54	6.34	38.50
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	103.48 PK			1.15 V	212	70.88	32.60
2	*2437.00	98.68 AV			1.15 V	212	66.08	32.60
3	4874.00	51.52 PK	74.00	-22.48	1.11 V	350	13.02	38.50
4	4874.00	44.85 AV	54.00	-9.15	1.11 V	350	6.35	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	99.45 PK			1.35 H	243	66.77	32.68
2	*2462.00	94.74 AV			1.35 H	243	62.06	32.68
3	2483.50	57.35 PK	74.00	-16.65	1.35 H	243	24.59	32.76
4	2483.50	46.12 AV	54.00	-7.88	1.35 H	243	13.36	32.76
5	4924.00	49.04 PK	74.00	-24.96	1.13 H	54	10.40	38.64
6	4924.00	40.85 AV	54.00	-13.15	1.13 H	54	2.21	38.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.25 PK			1.12 V	213	70.57	32.68
2	*2462.00	98.42 AV			1.12 V	213	65.74	32.68
3	2483.50	57.81 PK	74.00	-16.19	1.12 V	213	25.05	32.76
4	2483.50	46.57 AV	54.00	-7.43	1.12 V	213	13.81	32.76
5	4924.00	50.19 PK	74.00	-23.81	1.24 V	352	11.55	38.64
6	4924.00	41.94 AV	54.00	-12.06	1.24 V	352	3.30	38.64

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. " * ": Fundamental frequency.

802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	60.95 PK	74.00	-13.05	1.02 H	343	28.51	32.44
2	2390.00	46.44 AV	54.00	-7.56	1.02 H	343	14.00	32.44
3	*2412.00	100.68 PK			1.02 H	343	68.16	32.52
4	*2412.00	90.65 AV			1.02 H	343	58.13	32.52
5	4824.00	49.63 PK	74.00	-24.37	1.04 H	211	11.33	38.30
6	4824.00	36.94 AV	54.00	-17.06	1.04 H	211	-1.36	38.30
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	64.02 PK	74.00	-9.98	1.14 V	256	31.58	32.44
2	2390.00	48.84 AV	54.00	-5.16	1.14 V	256	16.40	32.44
3	*2412.00	107.20 PK			1.14 V	258	74.68	32.52
4	*2412.00	97.05 AV			1.14 V	258	64.53	32.52
5	4824.00	49.98 PK	74.00	-24.02	1.04 V	236	11.68	38.30
6	4824.00	37.24 AV	54.00	-16.76	1.04 V	236	-1.06	38.30

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	100.51 PK			1.04 H	352	67.91	32.60
2	*2437.00	90.48 AV			1.04 H	352	57.88	32.60
3	4874.00	49.98 PK	74.00	-24.02	1.09 H	265	11.48	38.50
4	4874.00	37.24 AV	54.00	-16.76	1.09 H	265	-1.26	38.50
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	107.12 PK			1.14 V	196	74.52	32.60
2	*2437.00	96.95 AV			1.14 V	196	64.35	32.60
3	4874.00	50.24 PK	74.00	-23.76	1.01 V	239	11.74	38.50
4	4874.00	37.56 AV	54.00	-16.44	1.01 V	239	-0.94	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	99.94 PK			1.03 H	345	67.26	32.68
2	*2462.00	89.92 AV			1.03 H	345	57.24	32.68
3	2483.50	60.52 PK	74.00	-13.48	1.03 H	345	27.76	32.76
4	2483.50	47.34 AV	54.00	-6.66	1.03 H	345	14.58	32.76
5	4924.00	49.84 PK	74.00	-24.16	1.09 H	266	11.20	38.64
6	4924.00	37.11 AV	54.00	-16.89	1.09 H	266	-1.53	38.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.42 PK			1.13 V	209	73.74	32.68
2	*2462.00	96.35 AV			1.13 V	209	63.67	32.68
3	2483.50	61.71 PK	74.00	-12.29	1.13 V	209	28.95	32.76
4	2483.50	48.51 AV	54.00	-5.49	1.13 V	209	15.75	32.76
5	4924.00	50.36 PK	74.00	-23.64	1.03 V	29	11.72	38.64
6	4924.00	37.68 AV	54.00	-16.32	1.03 V	29	-0.96	38.64

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	60.31 PK	74.00	-13.69	1.31 H	242	27.87	32.44
2	2390.00	46.59 AV	54.00	-7.41	1.31 H	242	14.15	32.44
3	*2412.00	101.44 PK			1.31 H	242	68.92	32.52
4	*2412.00	91.19 AV			1.31 H	242	58.67	32.52
5	4824.00	47.23 PK	74.00	-26.77	1.00 H	14	8.93	38.30
6	4824.00	35.12 AV	54.00	-18.88	1.00 H	14	-3.18	38.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.28 PK	74.00	-12.72	1.18 V	215	28.84	32.44
2	2390.00	47.28 AV	54.00	-6.72	1.18 V	215	14.84	32.44
3	*2412.00	105.05 PK			1.18 V	215	72.53	32.52
4	*2412.00	95.00 AV			1.18 V	215	62.48	32.52
5	4824.00	49.49 PK	74.00	-24.51	1.03 V	216	11.19	38.30
6	4824.00	36.74 AV	54.00	-17.26	1.03 V	216	-1.56	38.30

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.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	101.21 PK			1.30 H	245	68.61	32.60
2	*2437.00	90.94 AV			1.30 H	245	58.34	32.60
3	4874.00	47.44 PK	74.00	-26.56	1.01 H	25	8.94	38.50
4	4874.00	35.26 AV	54.00	-18.74	1.01 H	25	-3.24	38.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	104.82 PK			1.19 V	214	72.22	32.60
2	*2437.00	94.79 AV			1.19 V	214	62.19	32.60
3	4874.00	49.56 PK	74.00	-24.44	1.01 V	27	11.06	38.50
4	4874.00	36.82 AV	54.00	-17.18	1.01 V	27	-1.68	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	100.73 PK			1.31 H	248	68.05	32.68
2	*2462.00	90.44 AV			1.31 H	248	57.76	32.68
3	2483.50	60.11 PK	74.00	-13.89	1.31 H	248	27.35	32.76
4	2483.50	47.62 AV	54.00	-6.38	1.31 H	248	14.86	32.76
5	4924.00	47.23 PK	74.00	-26.77	1.00 H	96	8.59	38.64
6	4924.00	35.04 AV	54.00	-18.96	1.00 H	96	-3.60	38.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.41 PK			1.15 V	213	71.73	32.68
2	*2462.00	94.35 AV			1.15 V	213	61.67	32.68
3	2483.50	61.24 PK	74.00	-12.76	1.14 V	213	28.48	32.76
4	2483.50	48.20 AV	54.00	-5.80	1.14 V	213	15.44	32.76
5	4924.00	49.65 PK	74.00	-24.35	1.03 V	215	11.01	38.64
6	4924.00	36.88 AV	54.00	-17.12	1.03 V	215	-1.76	38.64

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. " * ": Fundamental frequency.

DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	60.76 PK	74.00	-13.24	1.03 H	349	28.32	32.44
2	2390.00	46.21 AV	54.00	-7.79	1.03 H	349	13.77	32.44
3	*2412.00	98.54 PK			1.03 H	349	66.02	32.52
4	*2412.00	88.41 AV			1.03 H	349	55.89	32.52
5	4824.00	49.54 PK	74.00	-24.46	1.15 H	28	11.24	38.30
6	4824.00	36.81 AV	54.00	-17.19	1.15 H	28	-1.49	38.30
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	59.43 PK	74.00	-14.57	1.15 V	261	26.99	32.44
2	2390.00	47.36 AV	54.00	-6.64	1.15 V	261	14.92	32.44
3	*2412.00	105.13 PK			1.15 V	261	72.61	32.52
4	*2412.00	94.92 AV			1.15 V	261	62.40	32.52
5	4824.00	49.65 PK	74.00	-24.35	1.04 V	213	11.35	38.30
6	4824.00	37.01 AV	54.00	-16.99	1.04 V	213	-1.29	38.30

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	98.21 PK			1.06 H	353	65.61	32.60
2	*2437.00	88.13 AV			1.06 H	353	55.53	32.60
3	4874.00	49.86 PK	74.00	-24.14	1.13 H	219	11.36	38.50
4	4874.00	37.13 AV	54.00	-16.87	1.13 H	219	-1.37	38.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	104.84 PK			1.14 V	265	72.24	32.60
2	*2437.00	94.76 AV			1.14 V	265	62.16	32.60
3	4874.00	49.74 PK	74.00	-24.26	1.10 V	26	11.24	38.50
4	4874.00	37.14 AV	54.00	-16.86	1.10 V	26	-1.36	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	97.75 PK			1.05 H	351	65.07	32.68
2	*2462.00	87.63 AV			1.05 H	351	54.95	32.68
3	2483.50	60.15 PK	74.00	-13.85	1.05 H	351	27.39	32.76
4	2483.50	45.65 AV	54.00	-8.35	1.05 H	351	12.89	32.76
5	4924.00	49.63 PK	74.00	-24.37	1.01 H	74	10.99	38.64
6	4924.00	36.92 AV	54.00	-17.08	1.01 H	74	-1.72	38.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.36 PK			1.16 V	265	71.68	32.68
2	*2462.00	94.25 AV			1.16 V	265	61.57	32.68
3	2483.50	60.65 PK	74.00	-13.35	1.16 V	265	27.89	32.76
4	2483.50	47.47 AV	54.00	-6.53	1.16 V	265	14.71	32.76
5	4924.00	50.13 PK	74.00	-23.87	1.01 V	25	11.49	38.64
6	4924.00	37.54 AV	54.00	-16.46	1.01 V	25	-1.10	38.64

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	57.95 PK	74.00	-16.05	1.28 H	243	25.51	32.44
2	2390.00	45.89 AV	54.00	-8.11	1.28 H	243	13.45	32.44
3	*2412.00	99.86 PK			1.28 H	243	67.34	32.52
4	*2412.00	89.52 AV			1.28 H	243	57.00	32.52
5	4824.00	49.52 PK	74.00	-24.48	1.04 H	236	11.22	38.30
6	4824.00	36.64 AV	54.00	-17.36	1.04 H	236	-1.66	38.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.40 PK	74.00	-15.60	1.18 V	218	25.96	32.44
2	2390.00	46.32 AV	54.00	-7.68	1.18 V	218	13.88	32.44
3	*2412.00	103.38 PK			1.18 V	218	70.86	32.52
4	*2412.00	92.98 AV			1.18 V	218	60.46	32.52
5	4824.00	49.63 PK	74.00	-24.37	1.04 V	222	11.33	38.30
6	4824.00	36.88 AV	54.00	-17.12	1.04 V	222	-1.42	38.30

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	99.51 PK			1.25 H	238	66.91	32.60
2	*2437.00	89.24 AV			1.25 H	238	56.64	32.60
3	4874.00	49.26 PK	74.00	-24.74	1.01 H	77	10.76	38.50
4	4874.00	36.41 AV	54.00	-17.59	1.01 H	77	-2.09	38.50
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	103.04 PK			1.19 V	220	70.44	32.60
2	*2437.00	92.65 AV			1.19 V	220	60.05	32.60
3	4874.00	49.52 PK	74.00	-24.48	1.01 V	195	11.02	38.50
4	4874.00	36.69 AV	54.00	-17.31	1.01 V	195	-1.81	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	99.03 PK			1.26 H	245	66.35	32.68
2	*2462.00	88.69 AV			1.26 H	245	56.01	32.68
3	2483.50	59.03 PK	74.00	-14.97	1.26 H	245	26.27	32.76
4	2483.50	46.82 AV	54.00	-7.18	1.26 H	245	14.06	32.76
5	4924.00	49.35 PK	74.00	-24.65	1.01 H	223	10.71	38.64
6	4924.00	36.42 AV	54.00	-17.58	1.01 H	223	-2.22	38.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.54 PK			1.14 V	212	69.86	32.68
2	*2462.00	92.15 AV			1.14 V	212	59.47	32.68
3	2483.50	59.40 PK	74.00	-14.60	1.14 V	212	26.64	32.76
4	2483.50	47.23 AV	54.00	-6.77	1.14 V	212	14.47	32.76
5	4924.00	49.41 PK	74.00	-24.59	1.06 V	71	10.77	38.64
6	4924.00	36.65 AV	54.00	-17.35	1.06 V	71	-1.99	38.64

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. " * ": Fundamental frequency.

DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	59.68 PK	74.00	-14.32	1.09 H	356	27.24	32.44
2	2390.00	47.65 AV	54.00	-6.35	1.09 H	356	15.21	32.44
3	*2422.00	95.46 PK			1.09 H	356	62.91	32.55
4	*2422.00	85.38 AV			1.09 H	356	52.83	32.55
5	4844.00	49.65 PK	74.00	-24.35	1.14 H	215	11.27	38.38
6	4844.00	35.28 AV	54.00	-18.72	1.14 H	215	-3.10	38.38
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	59.52 PK	74.00	-14.48	1.16 V	269	27.08	32.44
2	2390.00	48.53 AV	54.00	-5.47	1.16 V	269	16.09	32.44
3	*2422.00	102.08 PK			1.16 V	269	69.53	32.55
4	*2422.00	91.82 AV			1.16 V	269	59.27	32.55
5	4844.00	50.14 PK	74.00	-23.86	1.03 V	274	11.76	38.38
6	4844.00	35.68 AV	54.00	-18.32	1.03 V	274	-2.70	38.38

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	95.13 PK			1.10 H	354	62.53	32.60
2	*2437.00	85.06 AV			1.10 H	354	52.46	32.60
3	4874.00	49.86 PK	74.00	-24.14	1.07 H	45	11.36	38.50
4	4874.00	35.49 AV	54.00	-18.51	1.07 H	45	-3.01	38.50
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	101.79 PK			1.13 V	251	69.19	32.60
2	*2437.00	91.51 AV			1.13 V	251	58.91	32.60
3	4874.00	50.36 PK	74.00	-23.64	1.14 V	211	11.86	38.50
4	4874.00	35.81 AV	54.00	-18.19	1.14 V	211	-2.69	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	A		

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	94.55 PK			1.11 H	347	61.90	32.65
2	*2452.00	84.46 AV			1.11 H	347	51.81	32.65
3	2483.50	58.46 PK	74.00	-15.54	1.11 H	347	25.70	32.76
4	2483.50	45.68 AV	54.00	-8.32	1.11 H	347	12.92	32.76
5	4904.00	49.46 PK	74.00	-24.54	1.09 H	341	10.85	38.61
6	4904.00	35.18 AV	54.00	-18.82	1.09 H	341	-3.43	38.61
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	101.13 PK			1.13 V	254	68.48	32.65
2	*2452.00	90.96 AV			1.13 V	254	58.31	32.65
3	2483.50	58.86 PK	74.00	-15.14	1.13 V	254	26.10	32.76
4	2483.50	47.35 AV	54.00	-6.65	1.13 V	254	14.59	32.76
5	4904.00	49.96 PK	74.00	-24.04	1.17 V	236	11.35	38.61
6	4904.00	35.58 AV	54.00	-18.42	1.17 V	236	-3.03	38.61

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	59.08 PK	74.00	-14.92	1.26 H	245	26.64	32.44
2	2390.00	47.13 AV	54.00	-6.87	1.26 H	245	14.69	32.44
3	*2422.00	96.53 PK			1.26 H	245	63.98	32.55
4	*2422.00	86.28 AV			1.26 H	245	53.73	32.55
5	4844.00	49.42 PK	74.00	-24.58	1.01 H	236	11.04	38.38
6	4844.00	35.03 AV	54.00	-18.97	1.01 H	236	-3.35	38.38
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.05 PK	74.00	-13.95	1.20 V	188	27.61	32.44
2	2390.00	47.91 AV	54.00	-6.09	1.20 V	188	15.47	32.44
3	*2422.00	99.98 PK			1.20 V	188	67.43	32.55
4	*2422.00	89.87 AV			1.20 V	188	57.32	32.55
5	4844.00	49.91 PK	74.00	-24.09	1.01 V	25	11.53	38.38
6	4844.00	35.54 AV	54.00	-18.46	1.01 V	25	-2.84	38.38

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	96.21 PK			1.25 H	248	63.61	32.60
2	*2437.00	85.96 AV			1.25 H	248	53.36	32.60
3	4874.00	49.31 PK	74.00	-24.69	1.01 H	258	10.81	38.50
4	4874.00	34.95 AV	54.00	-19.05	1.01 H	258	-3.55	38.50
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	99.65 PK			1.21 V	186	67.05	32.60
2	*2437.00	89.54 AV			1.21 V	186	56.94	32.60
3	4874.00	49.82 PK	74.00	-24.18	1.03 V	58	11.32	38.50
4	4874.00	35.41 AV	54.00	-18.59	1.03 V	58	-3.09	38.50

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. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25.0deg. C, 65.0%RH 1002hPa	TESTED BY	Brad Wu
TEST MODE	B		

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	95.81 PK			1.24 H	249	63.16	32.65
2	*2452.00	85.54 AV			1.24 H	249	52.89	32.65
3	2483.50	57.84 PK	74.00	-16.16	1.24 H	249	25.08	32.76
4	2483.50	45.04 AV	54.00	-8.96	1.24 H	249	12.28	32.76
5	4904.00	49.24 PK	74.00	-24.76	1.01 H	324	10.63	38.61
6	4904.00	34.91 AV	54.00	-19.09	1.01 H	324	-3.70	38.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	99.12 PK			1.21 V	192	66.47	32.65
2	*2452.00	89.04 AV			1.21 V	192	56.39	32.65
3	2483.50	58.16 PK	74.00	-15.84	1.21 V	192	25.40	32.76
4	2483.50	46.62 AV	54.00	-7.38	1.21 V	192	13.86	32.76
5	4904.00	49.81 PK	74.00	-24.19	1.01 V	131	11.20	38.61
6	4904.00	35.42 AV	54.00	-18.58	1.01 V	131	-3.19	38.61

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. " * ": Fundamental frequency.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23.0deg. C, 65.0%RH 1000hPa	TESTED BY	Antony Lee
TEST MODE	A		

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	101.84	31.19 QP	43.50	-12.31	2.25 H	331	19.62	11.58
2	241.83	38.76 QP	46.00	-7.24	1.00 H	10	25.48	13.28
3	440.14	33.45 QP	46.00	-12.55	1.75 H	247	14.40	19.06
4	556.80	34.08 QP	46.00	-11.92	2.25 H	256	12.48	21.60
5	720.12	39.75 QP	46.00	-6.25	2.25 H	277	14.53	25.22
6	879.55	33.41 QP	46.00	-12.59	1.75 H	262	5.90	27.51
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	101.84	26.38 QP	43.50	-17.12	1.50 V	301	14.81	11.58
2	226.27	29.02 QP	46.00	-16.98	1.75 V	346	16.79	12.23
3	558.75	33.76 QP	46.00	-12.24	1.00 V	325	12.12	21.63
4	720.12	38.96 QP	46.00	-7.04	1.25 V	325	13.74	25.22
5	797.89	35.25 QP	46.00	-10.75	2.00 V	280	9.25	26.00
6	877.61	37.30 QP	46.00	-8.70	1.00 V	262	9.83	27.47

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23.0deg. C, 65.0%RH 1000hPa	TESTED BY	Antony Lee
TEST MODE	B		

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	164.06	34.41 QP	43.50	-9.09	1.50 H	7	20.34	14.07
2	239.88	40.30 QP	46.00	-5.70	1.25 H	343	27.15	13.15
3	560.69	36.18 QP	46.00	-9.82	1.50 H	19	14.51	21.67
4	718.18	36.75 QP	46.00	-9.25	2.00 H	274	11.55	25.20
5	797.89	36.80 QP	46.00	-9.20	1.00 H	64	10.80	26.00
6	961.21	32.62 QP	54.00	-21.38	1.75 H	229	4.01	28.61
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	53.23	33.63 QP	40.00	-6.37	1.50 V	265	20.54	13.09
2	239.88	33.87 QP	46.00	-12.13	1.50 V	274	20.72	13.15
3	558.75	32.37 QP	46.00	-13.63	1.00 V	340	10.74	21.63
4	720.12	39.28 QP	46.00	-6.72	1.25 V	313	14.06	25.22
5	799.84	36.69 QP	46.00	-9.31	1.50 V	157	10.68	26.02
6	879.55	37.57 QP	46.00	-8.43	1.00 V	262	10.06	27.51

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.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 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.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 19, 2008	Nov. 18, 2009
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 31, 2008	Dec. 30, 2009
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jun. 13, 2008	Jun. 12, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Dec. 04, 2008	Dec. 03, 2009
Software ADT	ADT_Cond_ V7.3.7	NA	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.

4.2.3 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.

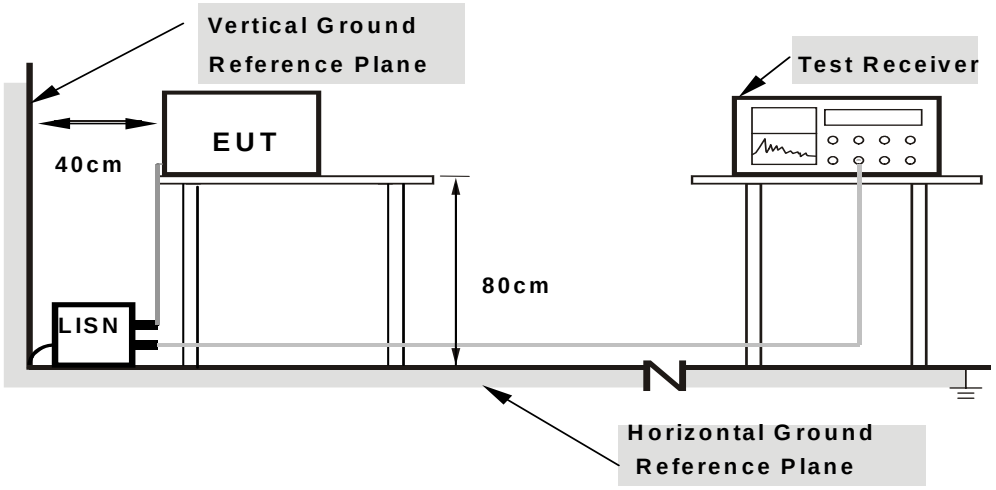
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 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 attached file (Test Setup Photo).

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

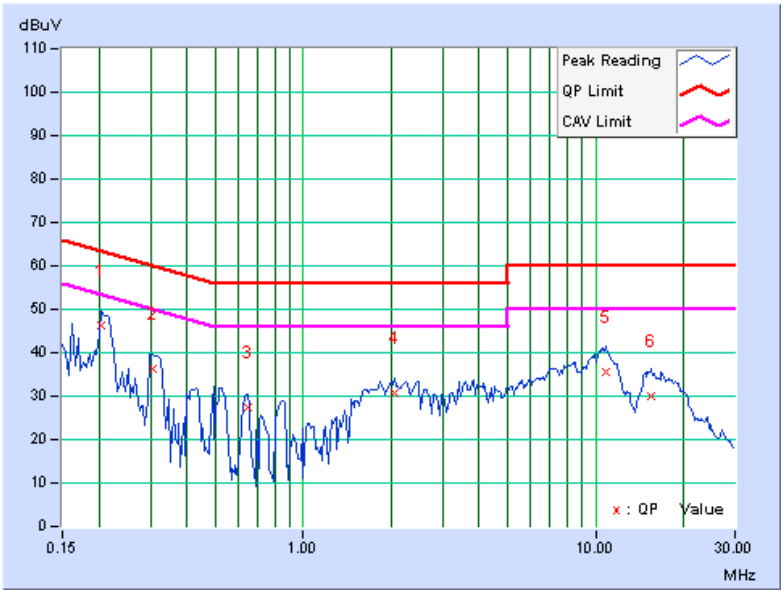
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 1027hPa	TESTED BY	Brad Wu
TEST MODE	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.13	46.14	-	46.27	-	63.42	53.42	-17.15	-
2	0.306	0.14	36.19	-	36.33	-	60.07	50.07	-23.75	-
3	0.650	0.16	27.18	-	27.34	-	56.00	46.00	-28.66	-
4	2.051	0.23	30.51	-	30.74	-	56.00	46.00	-25.26	-
5	10.848	0.70	35.01	-	35.71	-	60.00	50.00	-24.29	-
6	15.551	0.93	29.20	-	30.13	-	60.00	50.00	-29.87	-

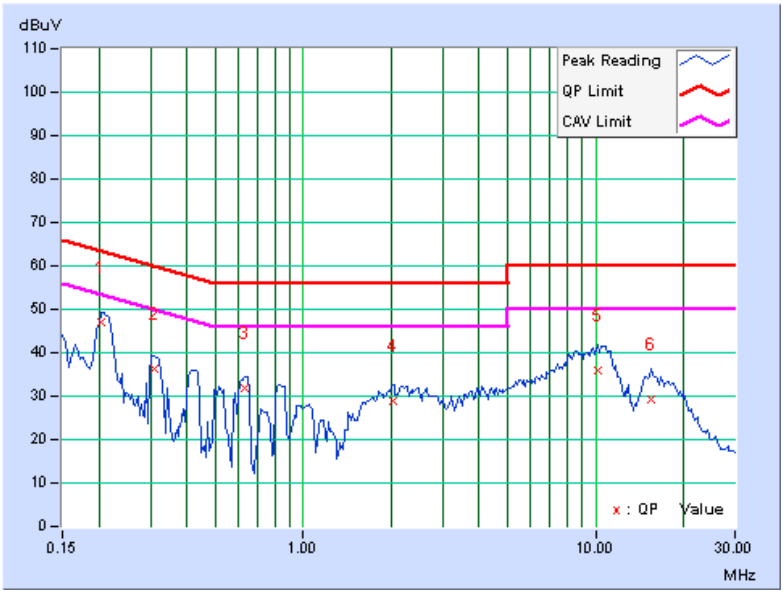
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 1027hPa	TESTED BY	Brad Wu
TEST MODE	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.205**	**0.15**	**46.73**	**-**	**46.88**	**-**	**63.42**	**53.42**	**-16.54**	**-**
2	0.310	0.16	36.16	-	36.32	-	59.97	49.97	-23.65	-
3	0.634	0.18	31.64	-	31.82	-	56.00	46.00	-24.18	-
4	2.023	0.25	28.64	-	28.89	-	56.00	46.00	-27.11	-
5	10.184	0.67	35.43	-	36.10	-	60.00	50.00	-23.90	-
6	15.516	0.84	28.57	-	29.41	-	60.00	50.00	-30.59	-

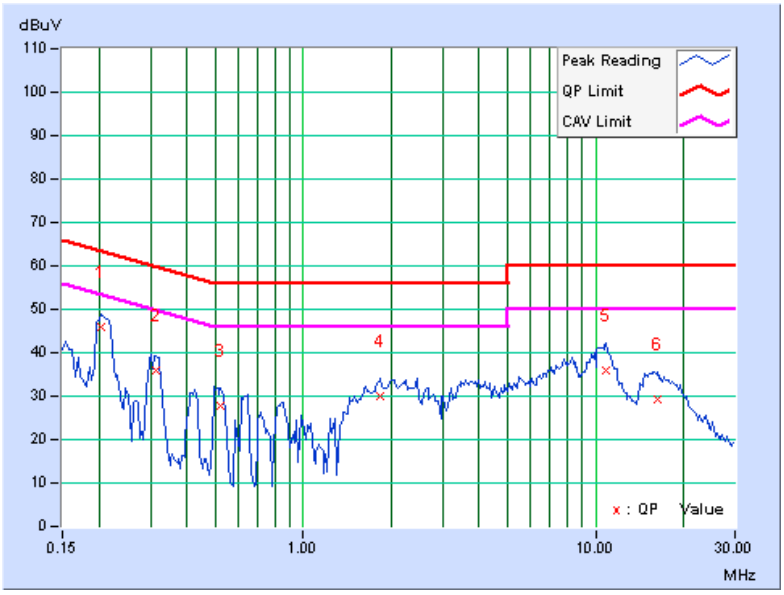
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 1027hPa	TESTED BY	Brad Wu
TEST MODE	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.13	45.90	-	46.03	-	63.42	53.42	-17.39	-
2	0.314	0.14	35.66	-	35.80	-	59.86	49.86	-24.07	-
3	0.521	0.15	27.73	-	27.88	-	56.00	46.00	-28.12	-
4	1.836	0.22	29.79	-	30.01	-	56.00	46.00	-25.99	-
5	10.863	0.70	35.25	-	35.95	-	60.00	50.00	-24.05	-
6	16.227	0.97	28.41	-	29.38	-	60.00	50.00	-30.62	-

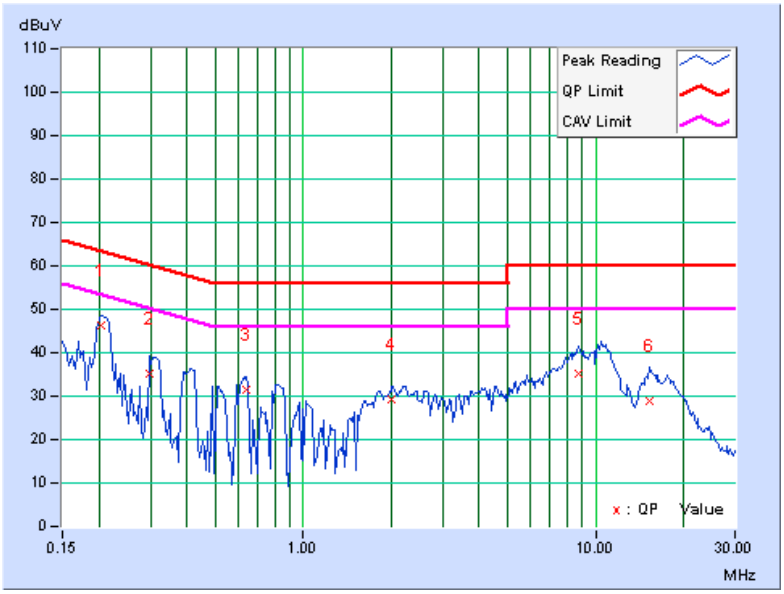
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 1027hPa	TESTED BY	Brad Wu
TEST MODE	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.15	46.04	-	46.19	-	63.42	53.42	-17.23	-
2	0.298	0.15	35.06	-	35.21	-	60.29	50.29	-25.07	-
3	0.638	0.18	31.45	-	31.63	-	56.00	46.00	-24.37	-
4	2.016	0.25	29.06	-	29.31	-	56.00	46.00	-26.69	-
5	8.801	0.61	34.45	-	35.06	-	60.00	50.00	-24.94	-
6	15.395	0.83	28.24	-	29.07	-	60.00	50.00	-30.93	-

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.



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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

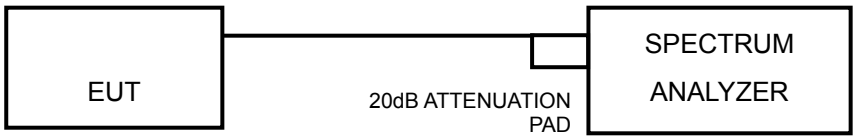
4.3.3 TEST PROCEDURE

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.

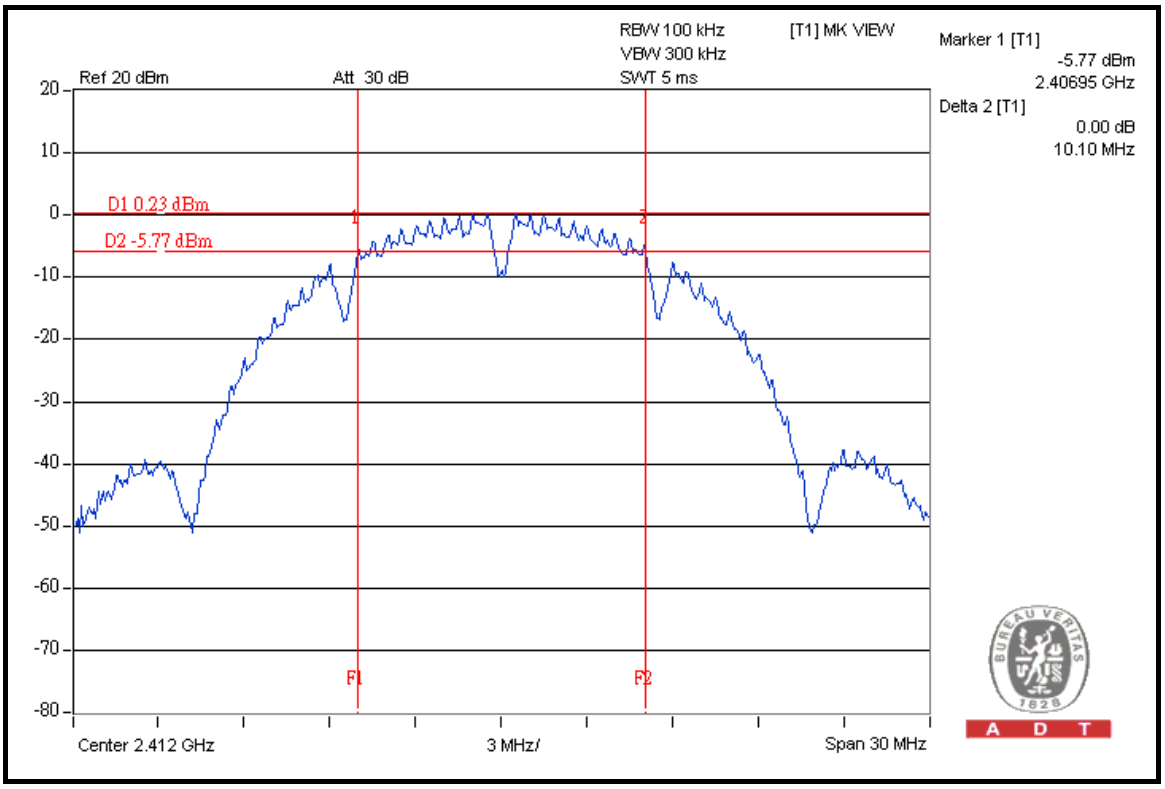
4.3.7 TEST RESULTS

802.11b DSSS MODULATION

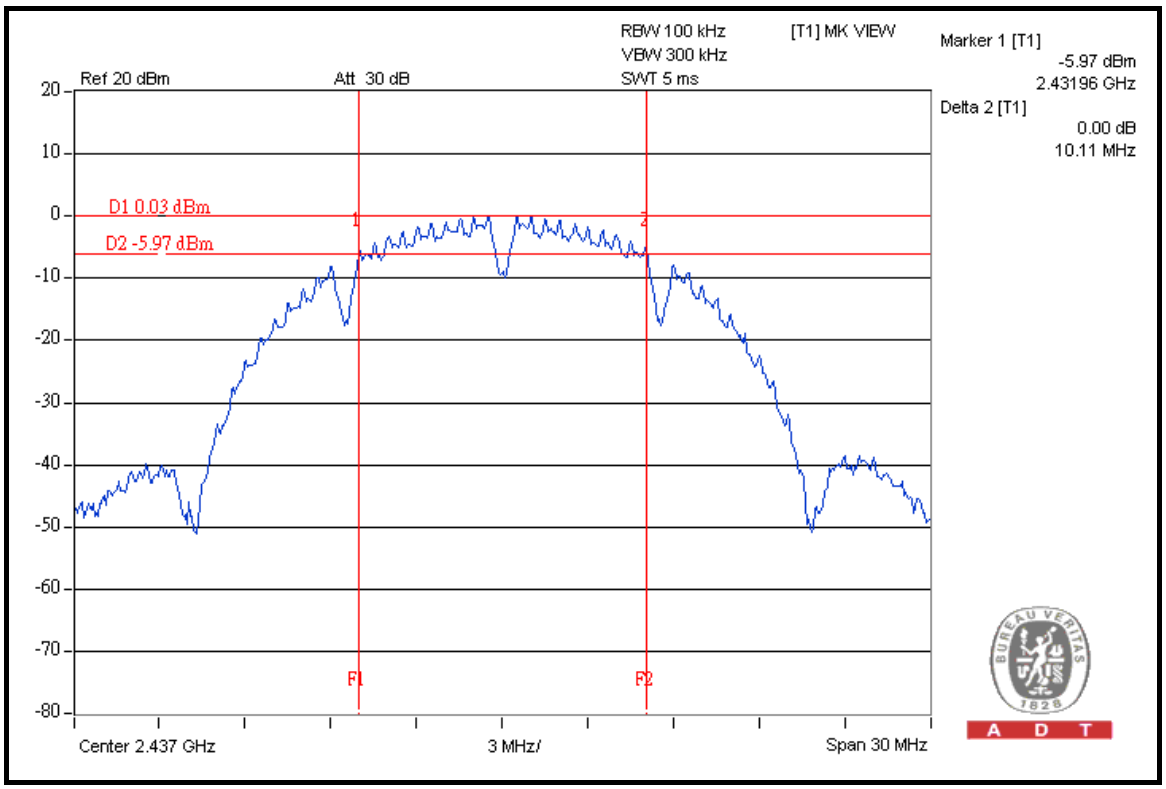
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	10.10	0.5	PASS
6	2437	10.11	0.5	PASS
11	2462	10.12	0.5	PASS

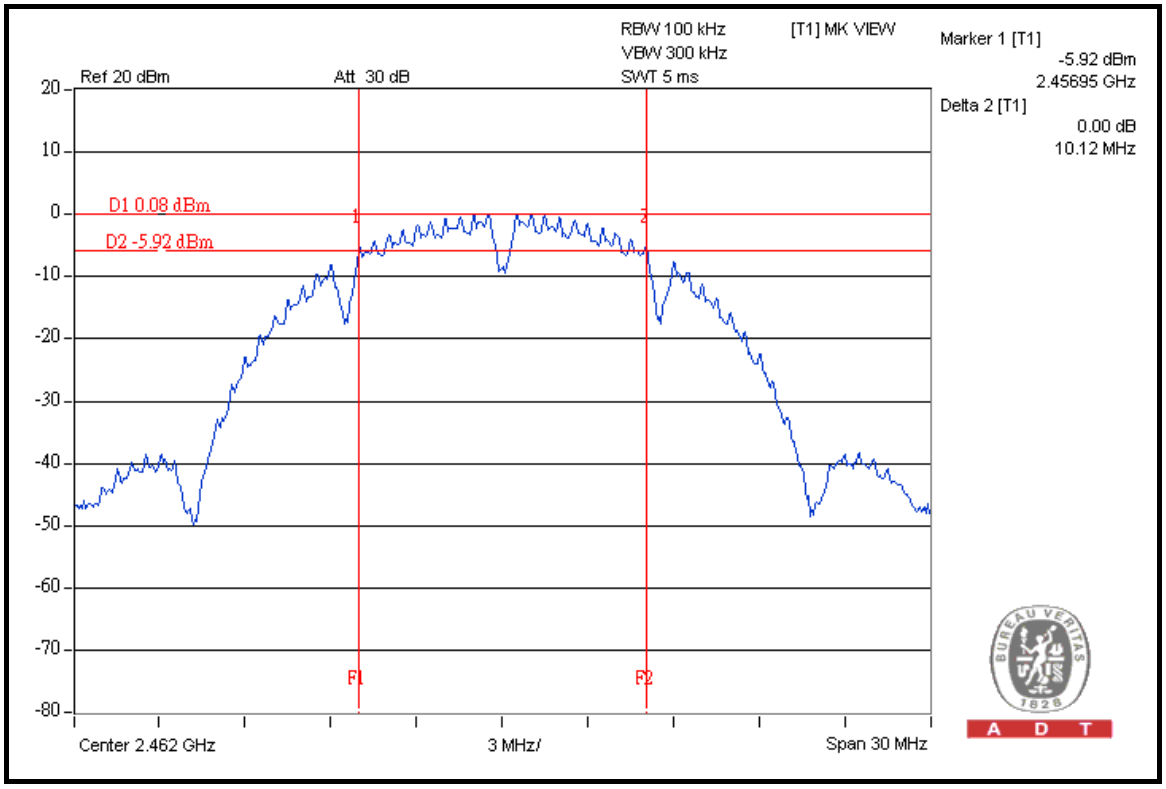
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-5.97 dBm
2.43196 GHz
Delta 2 [T1]
0.00 dB
10.11 MHz
Ref 20 dBm
Att 30 dB
D1 0.03 dBm
D2 -5.97 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

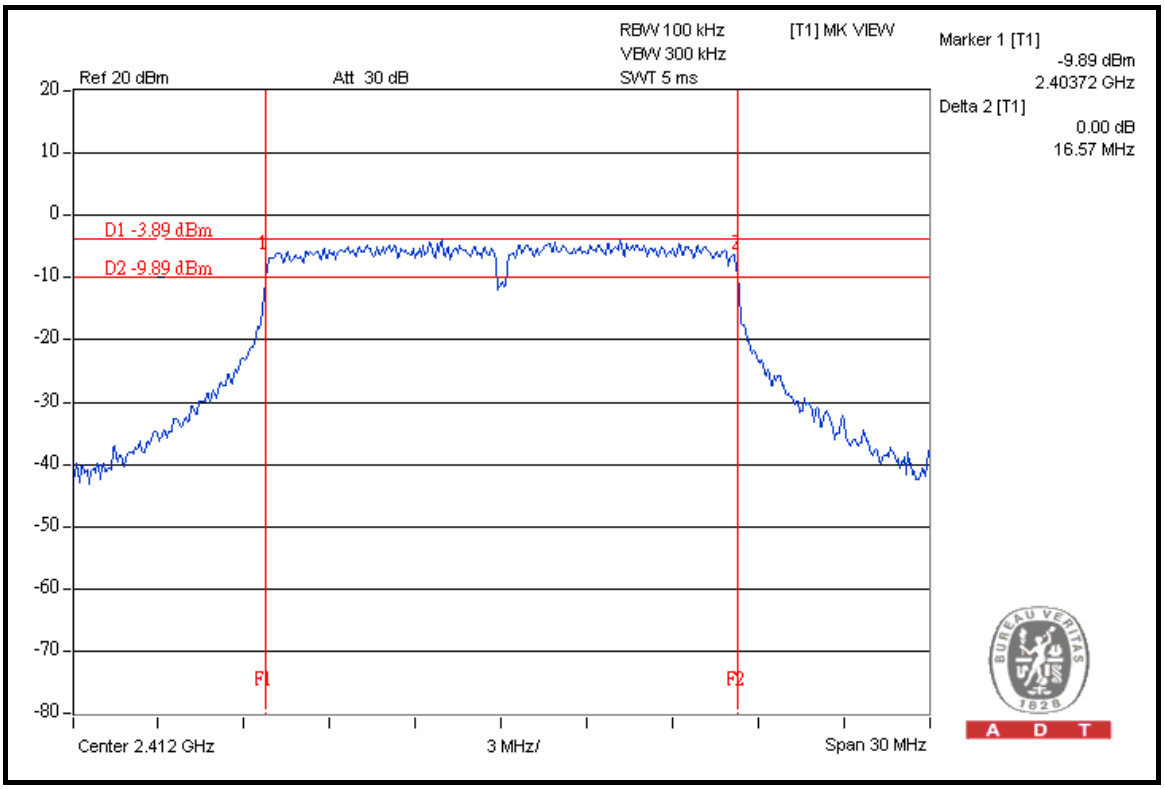

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-5.92 dBm
2.45695 GHz
Delta 2 [T1]
0.00 dB
10.12 MHz
Ref 20 dBm
Att 30 dB
D1 0.08 dBm
D2 -5.92 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

802.11g OFDM MODULATION

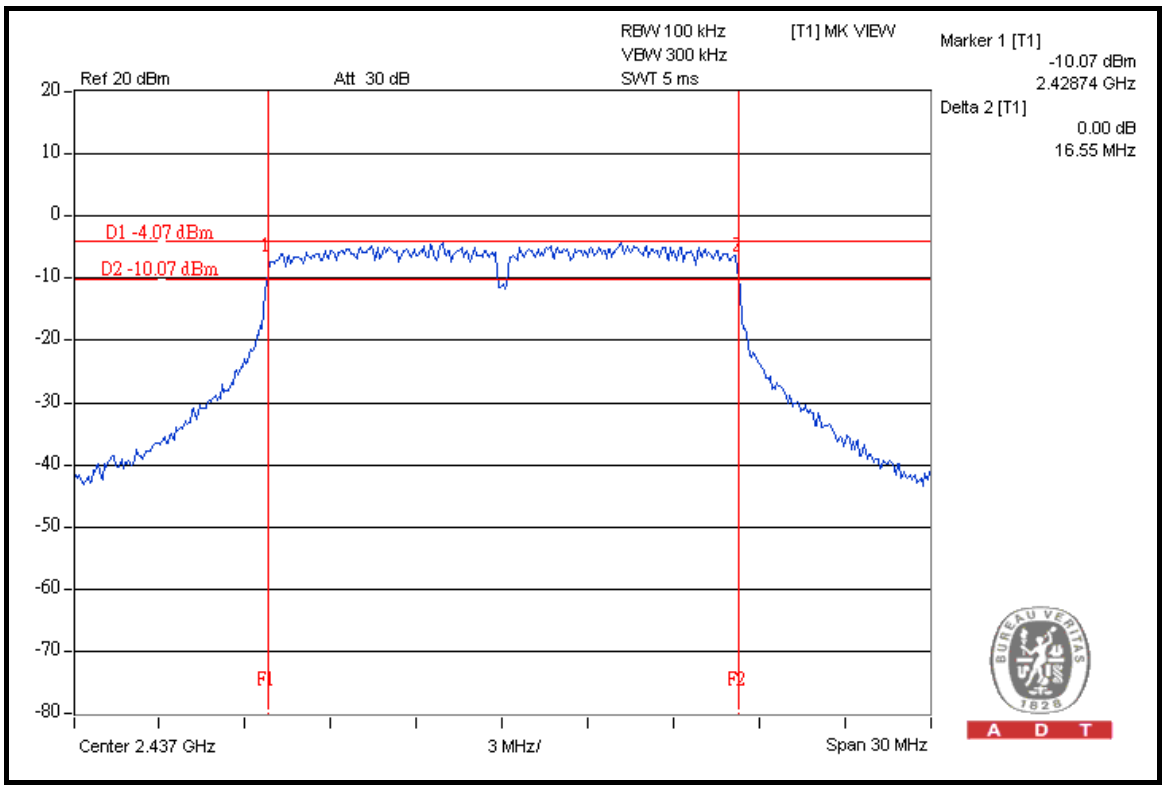
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.57	0.5	PASS
6	2437	16.55	0.5	PASS
11	2462	16.56	0.5	PASS

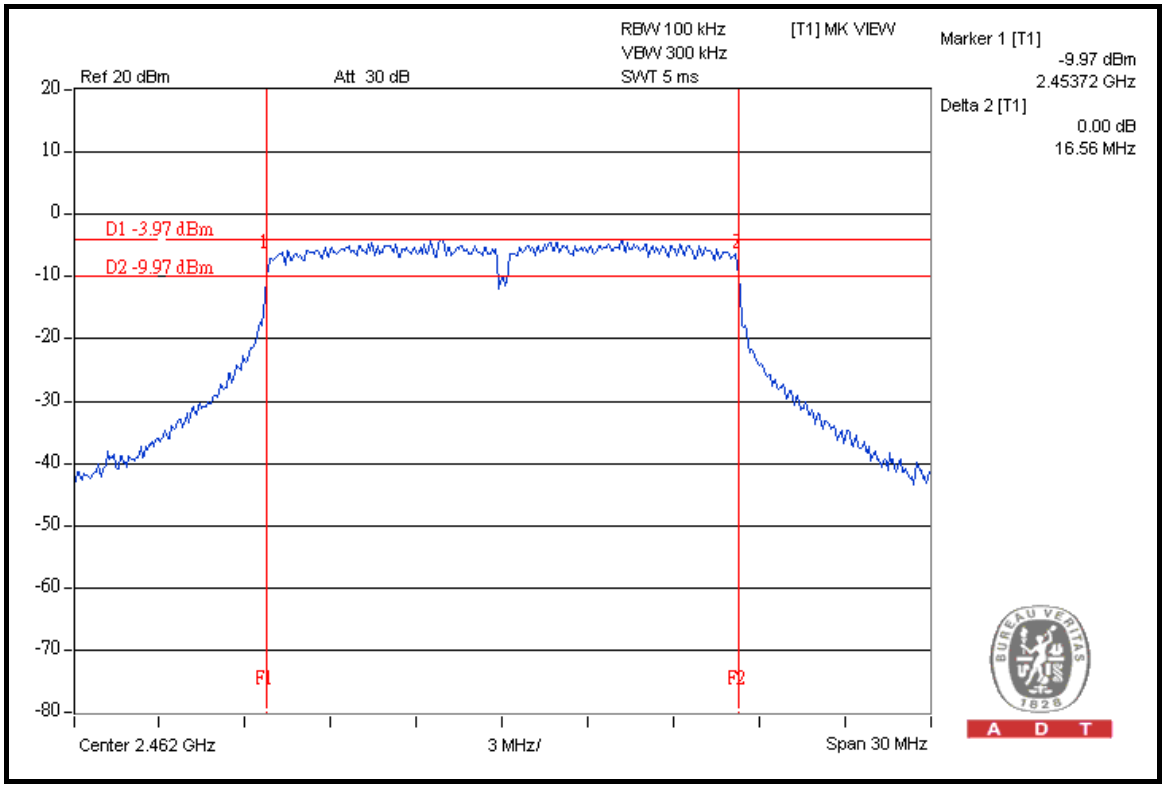
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-10.07 dBm
2.42874 GHz
Delta 2 [T1]
0.00 dB
16.55 MHz
Ref 20 dBm
Att 30 dB
D1 -4.07 dBm
D2 -10.07 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

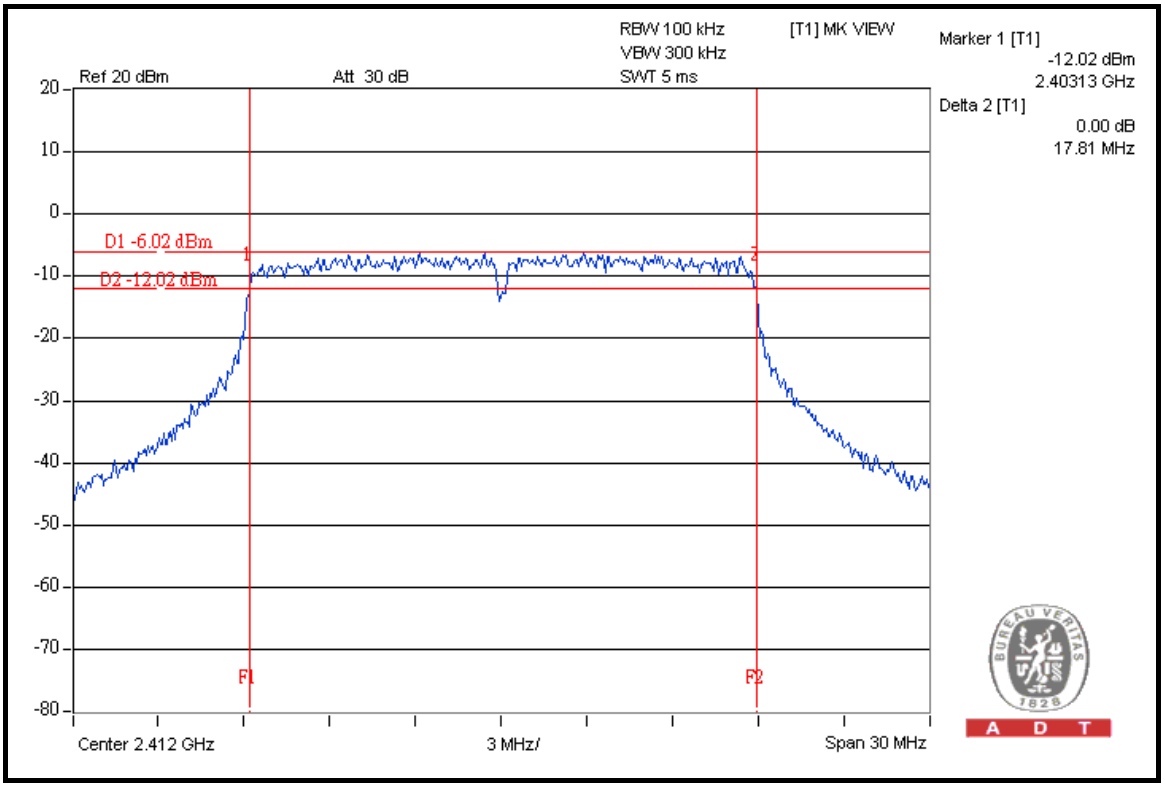

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-9.97 dBm
2.45372 GHz
Delta 2 [T1]
0.00 dB
16.56 MHz
Ref 20 dBm
Att 30 dB
D1 -3.97 dBm
D2 -9.97 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION

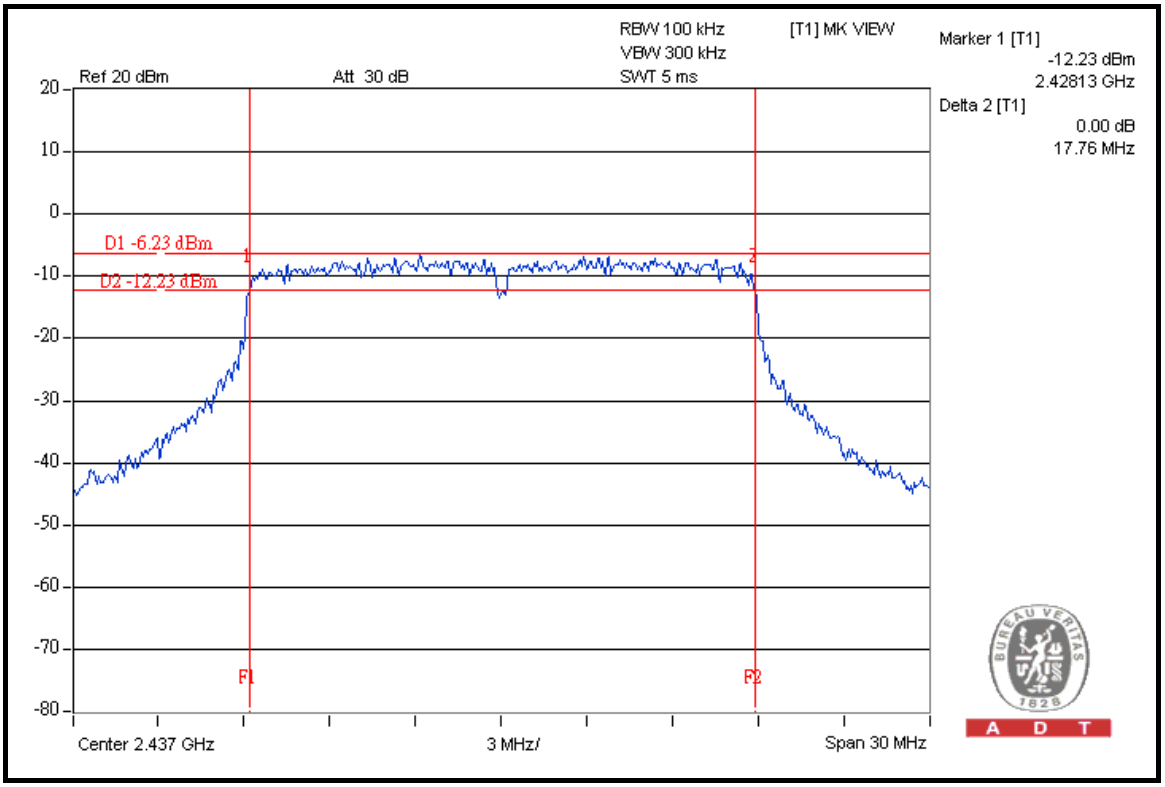
MODULATION TYPE	BPSK	**TRANSFER RATE**	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	23deg.C, 66%RH, 991hPa
TESTED BY	Brad Wu	**TEST MODE**	**A**

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.81	0.5	PASS
6	2437	17.76	0.5	PASS
11	2462	17.75	0.5	PASS

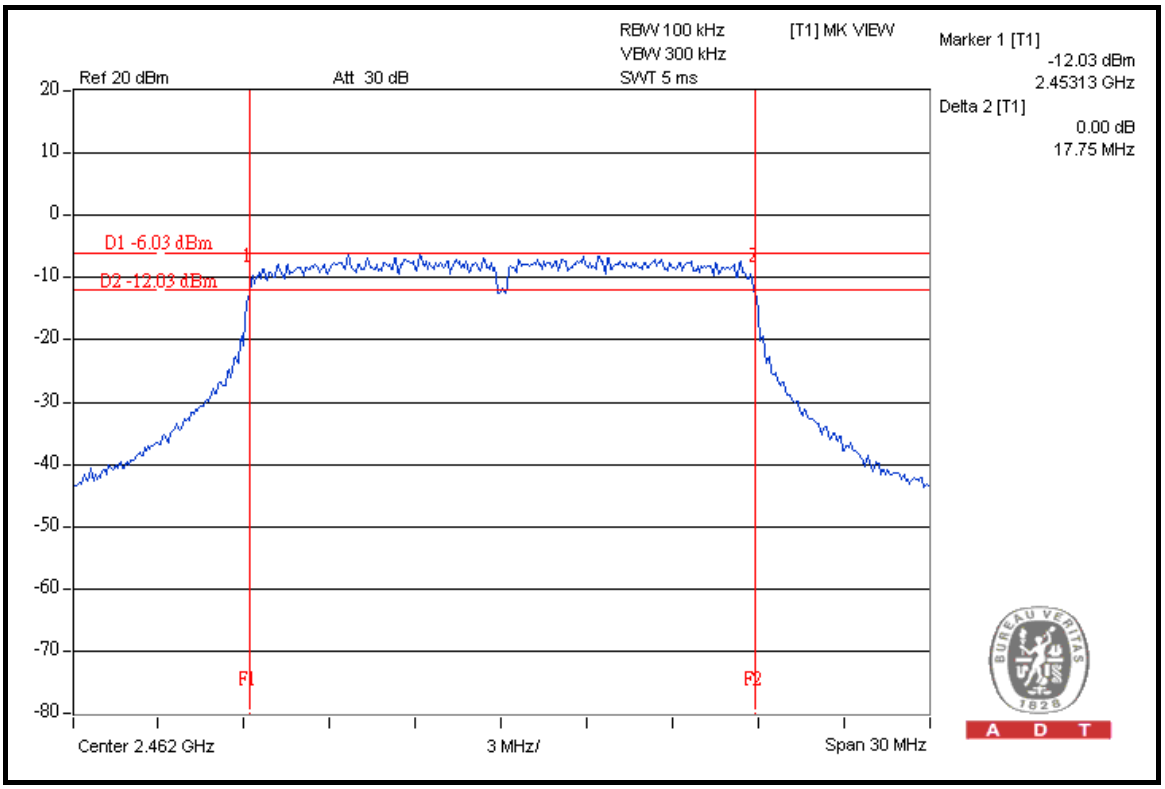
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-12.23 dBm
2.42813 GHz
Delta 2 [T1]
0.00 dB
17.76 MHz
Ref 20 dBm
Att 30 dB
D1 -6.23 dBm
D2 -12.23 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

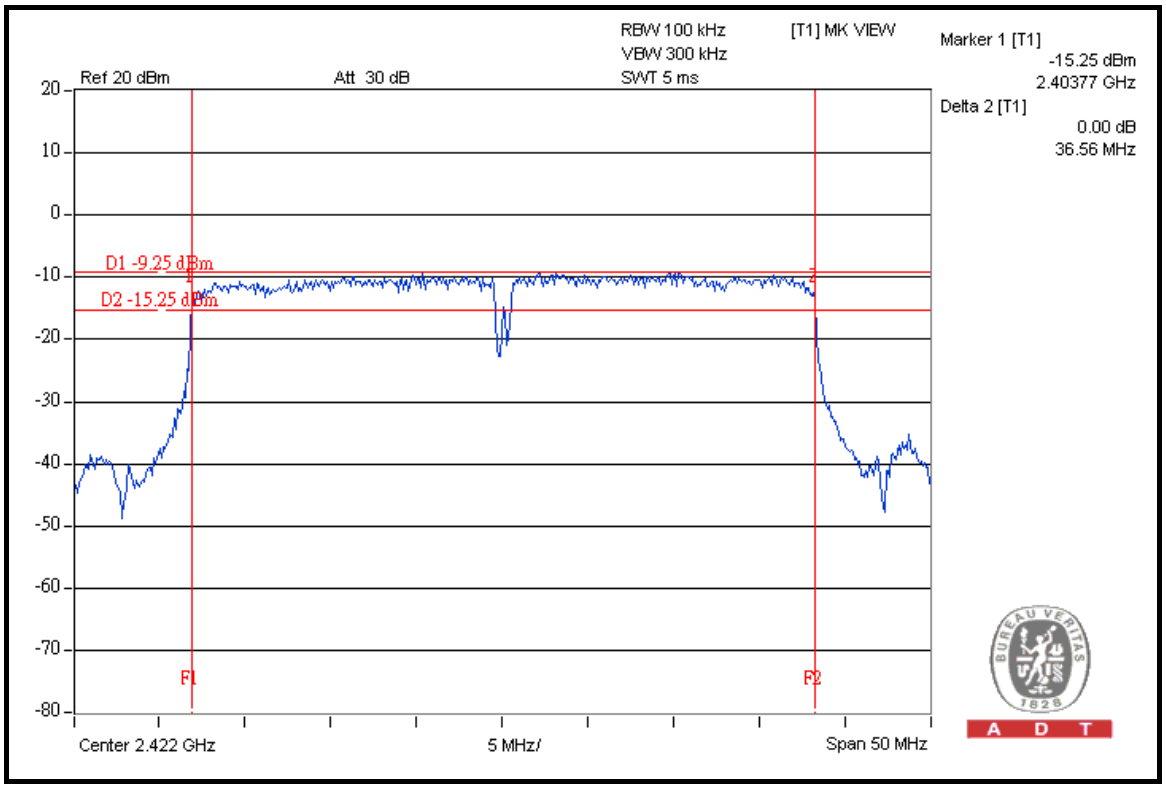

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-12.03 dBm
2.45313 GHz
Delta 2 [T1]
0.00 dB
17.75 MHz
Ref 20 dBm
Att 30 dB
D1 -6.03 dBm
D2 -12.03 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION

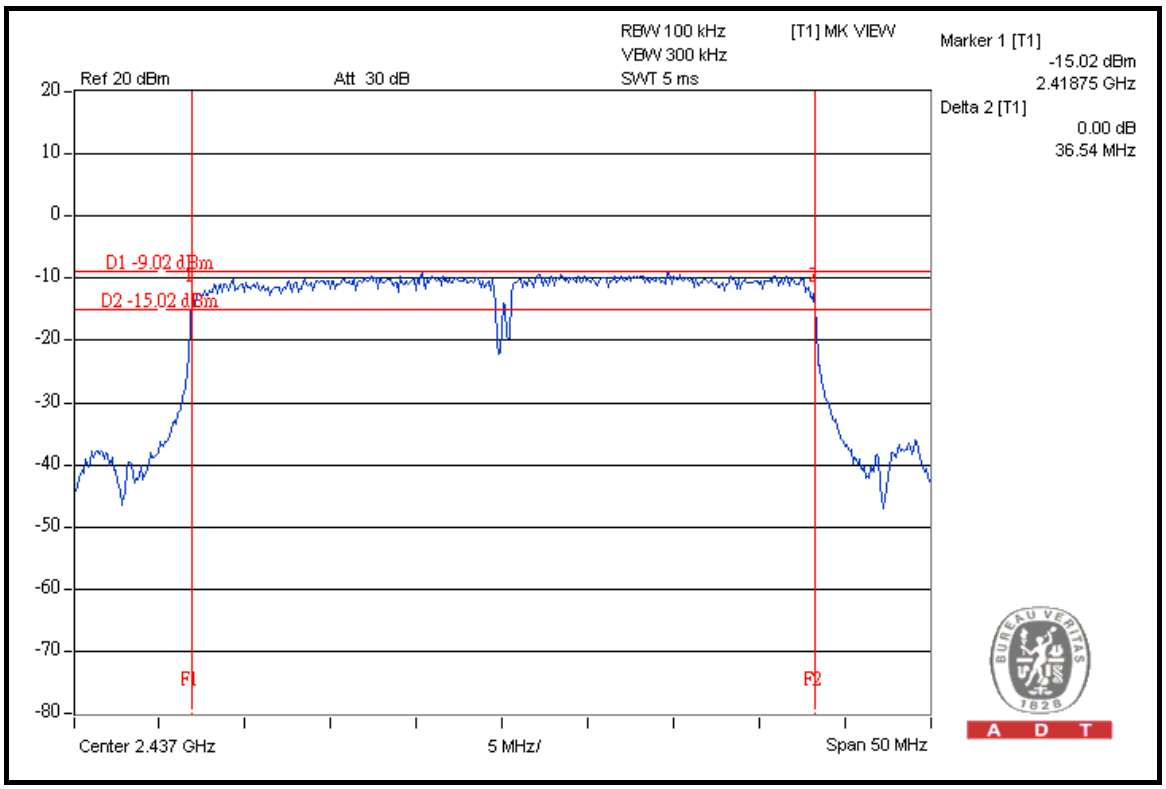
MODULATION TYPE	BPSK	**TRANSFER RATE**	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	**TEST MODE**	**A**

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.56	0.5	PASS
4	2437	36.54	0.5	PASS
7	2452	36.54	0.5	PASS

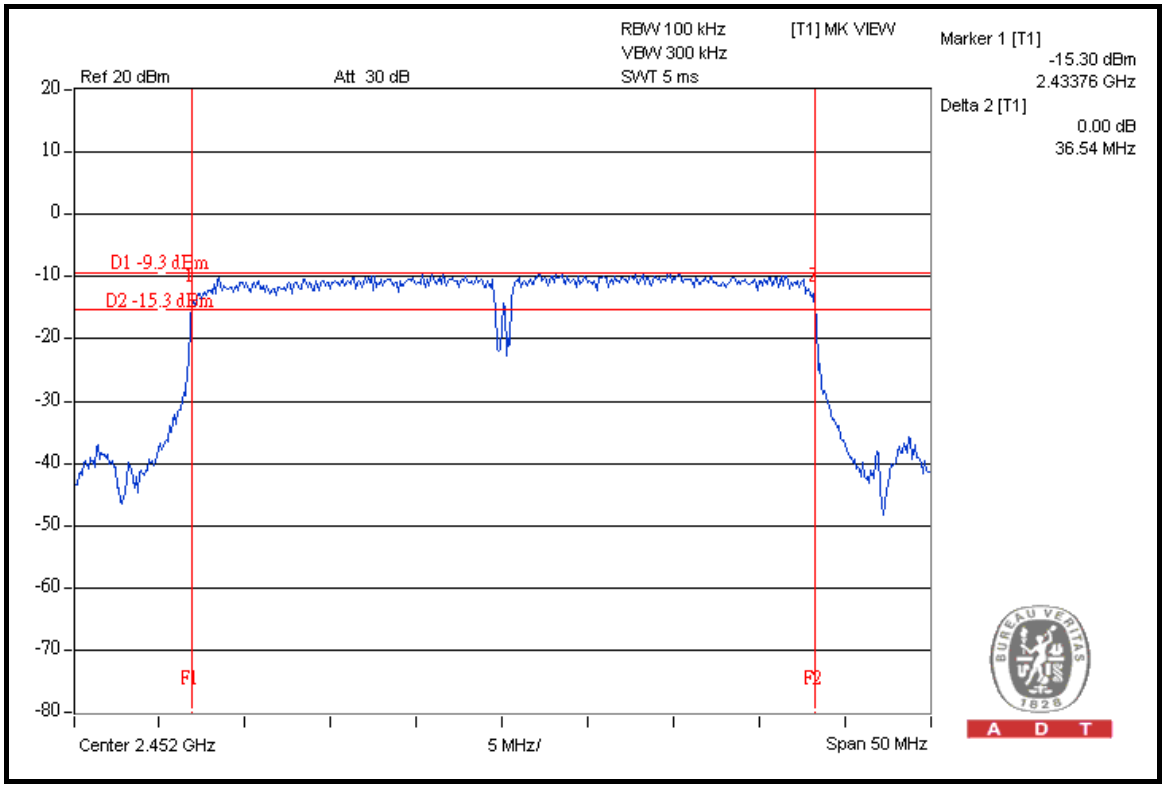
CH 1



CH 4


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-15.02 dBm
2.41875 GHz
Delta 2 [T1]
0.00 dB
36.54 MHz
Ref 20 dBm
Att 30 dB
D1 -9.02 dBm
D2 -15.02 dBm
F1
F2
Center 2.437 GHz
5 MHz/
Span 50 MHz

CH 7


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-15.30 dBm
2.43376 GHz
Delta 2 [T1]
0.00 dB
36.54 MHz
Ref 20 dBm
Att 30 dB
D1 -9.3 dBm
D2 -15.3 dBm
F1
F2
Center 2.452 GHz
5 MHz/
Span 50 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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0824012	Aug. 04, 2008	Aug. 03, 2009
Power Sensor	MA2444B	0738138	Aug. 04, 2008	Aug. 03, 2009

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. Measurement Bandwidth of ML2495A is 65MHz greater than 6dB bandwidth of emission.

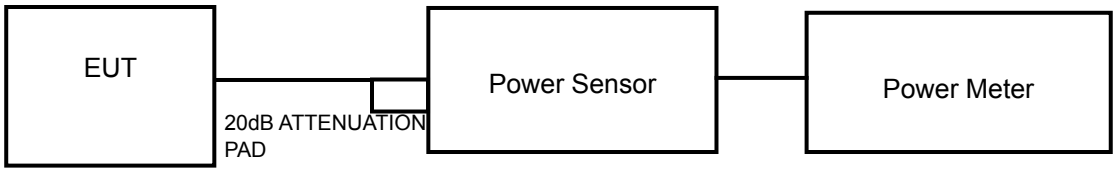
4.4.3 TEST PROCEDURES

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. 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	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	25.410	14.05	30	PASS
6	2437	25.504	14.07	30	PASS
11	2462	25.293	14.03	30	PASS

802.11g OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	90.573	19.57	30	PASS
6	2437	89.950	19.54	30	PASS
11	2462	89.536	19.52	30	PASS

DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	**TRANSFER RATE**	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	**TEST MODE**	**A**

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	64.417	18.09	30	PASS
6	2437	64.121	18.07	30	PASS
11	2462	63.680	18.04	30	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	**TRANSFER RATE**	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	**TEST MODE**	**A**

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2422	57.280	17.58	30	PASS
4	2437	57.016	17.56	30	PASS
7	2452	56.364	17.51	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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

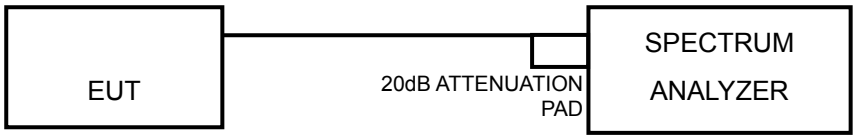
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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.

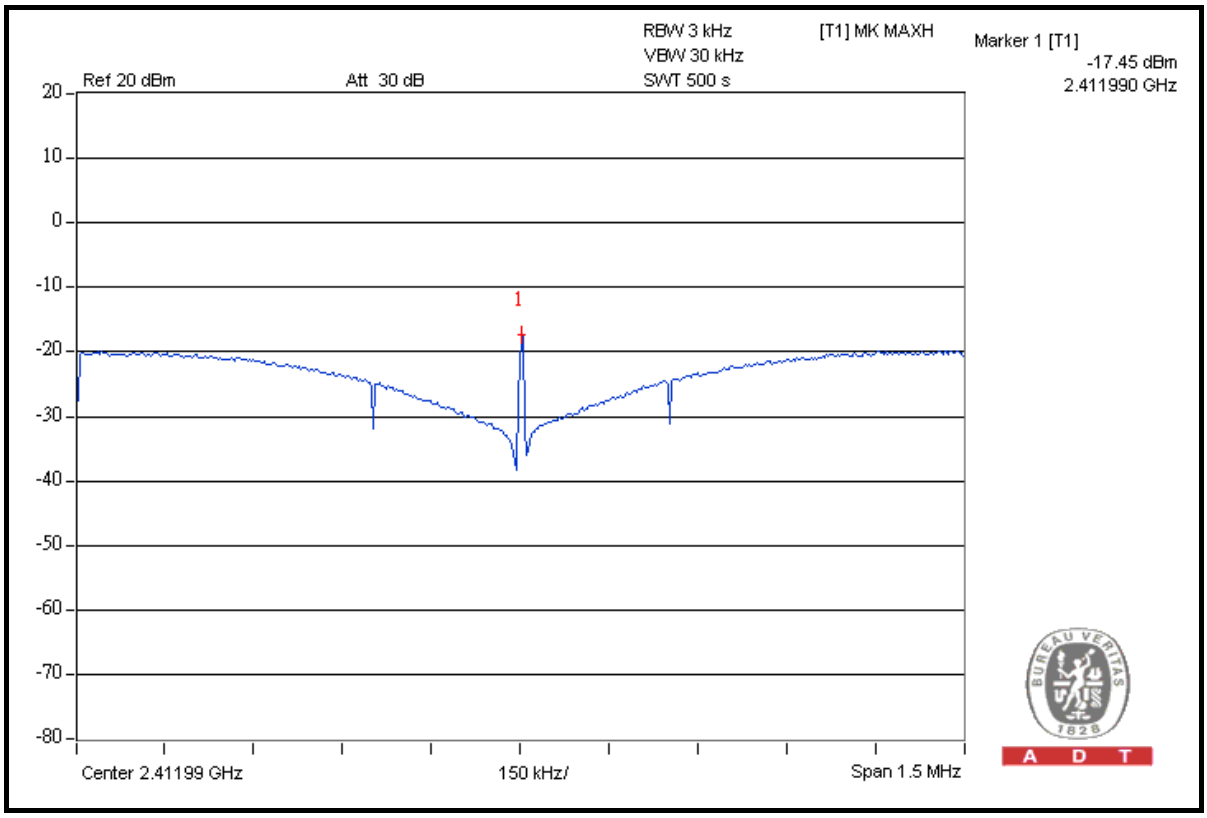
4.5.7 TEST RESULTS

802.11b DSSS MODULATION

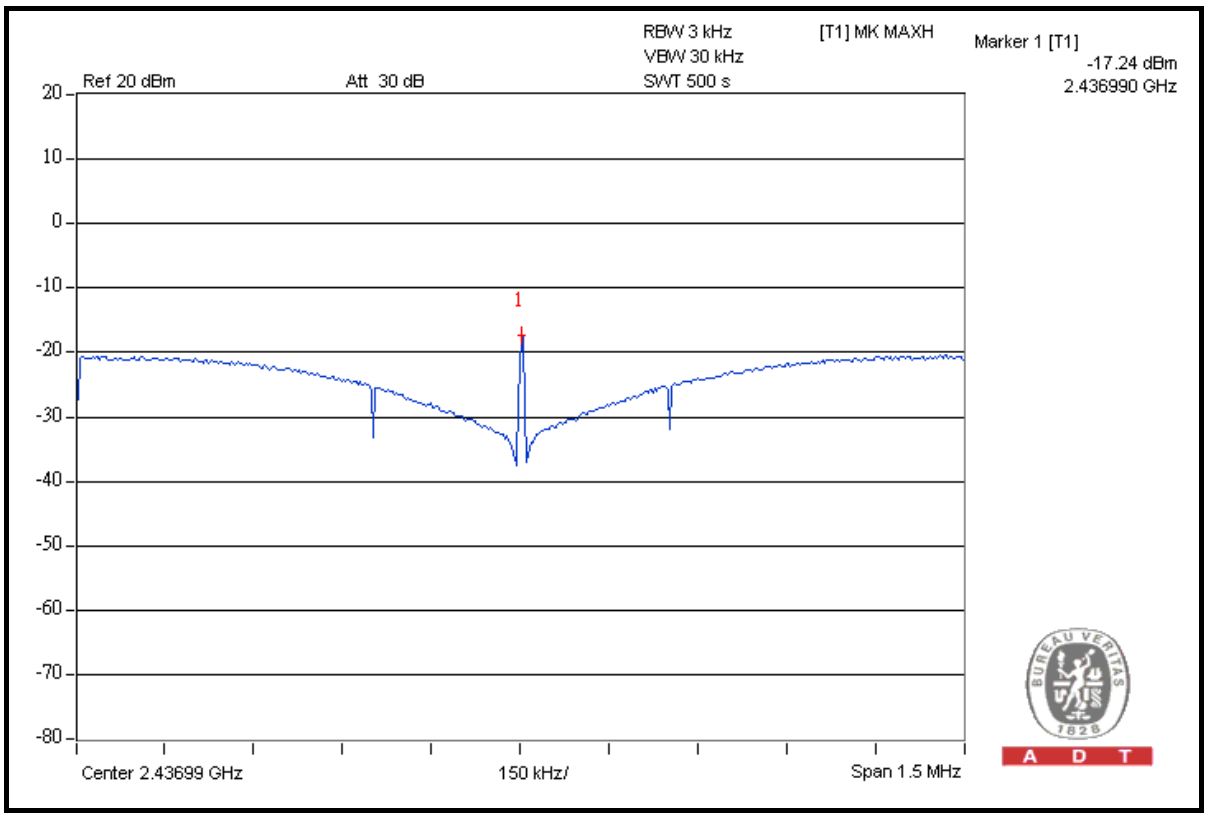
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-17.45	8	PASS
6	2437	-17.24	8	PASS
11	2462	-17.22	8	PASS

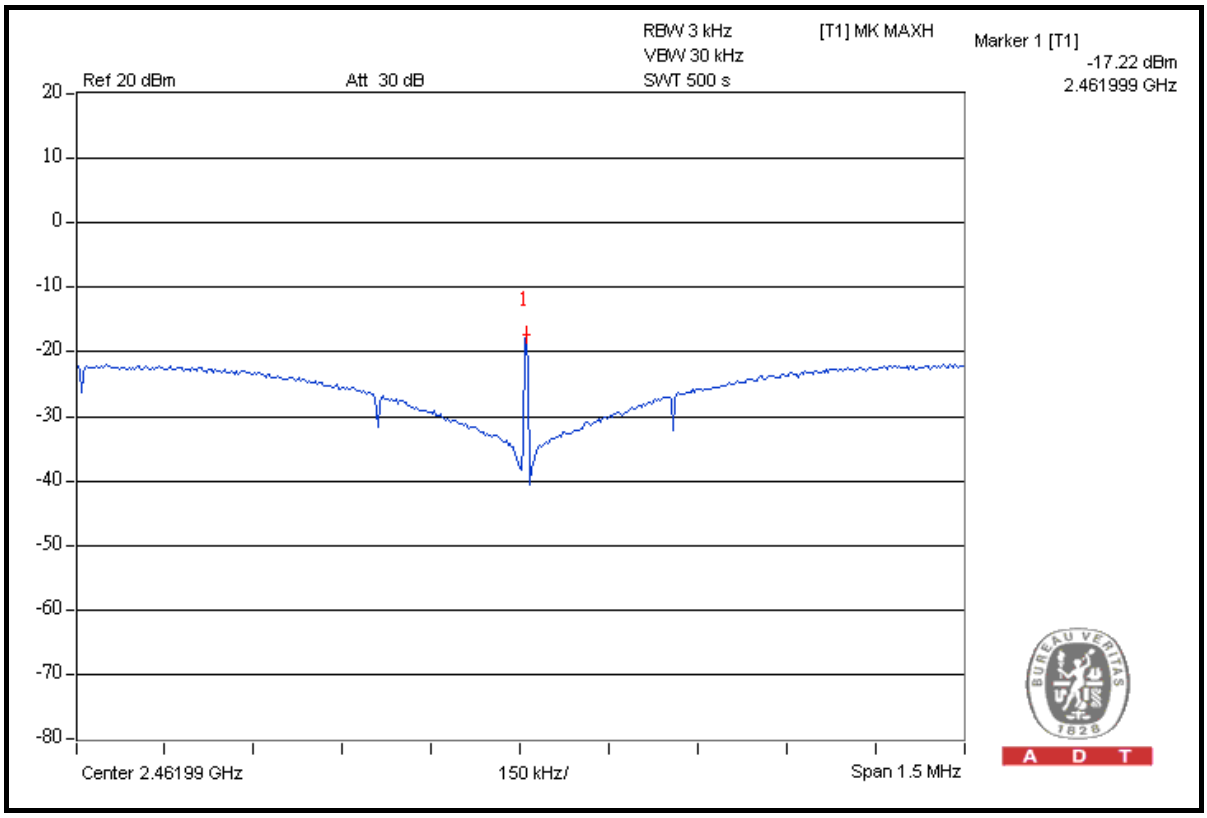
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.24 dBm
2.436990 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43699 GHz
150 kHz/
Span 1.5 MHz

CH 11

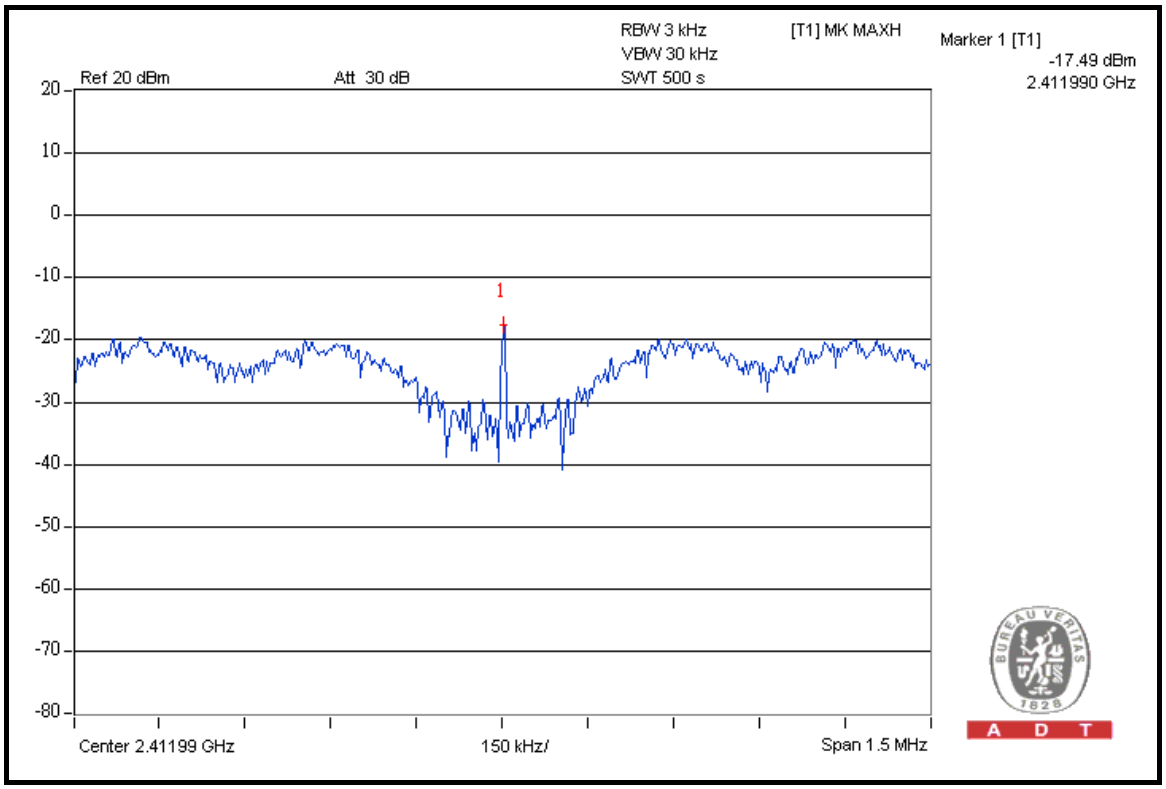

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.22 dBm
2.461999 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46199 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM MODULATION

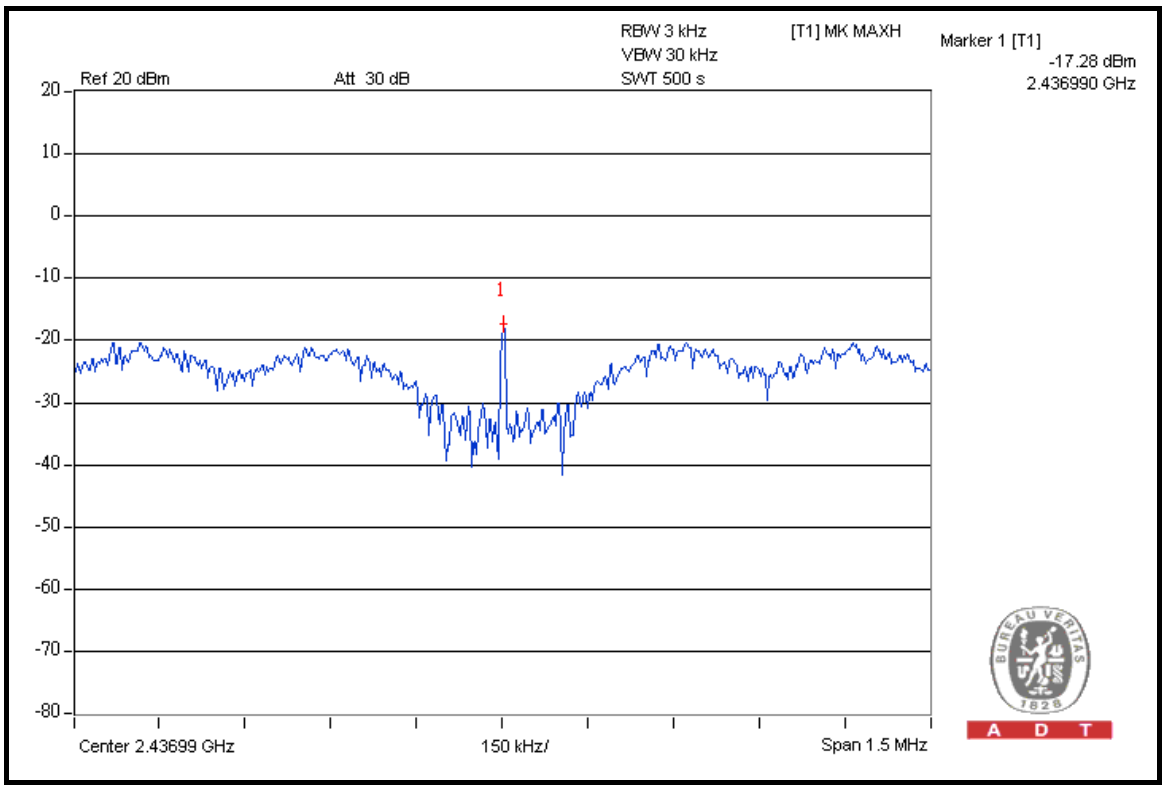
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-17.49	8	PASS
6	2437	-17.28	8	PASS
11	2462	-17.24	8	PASS

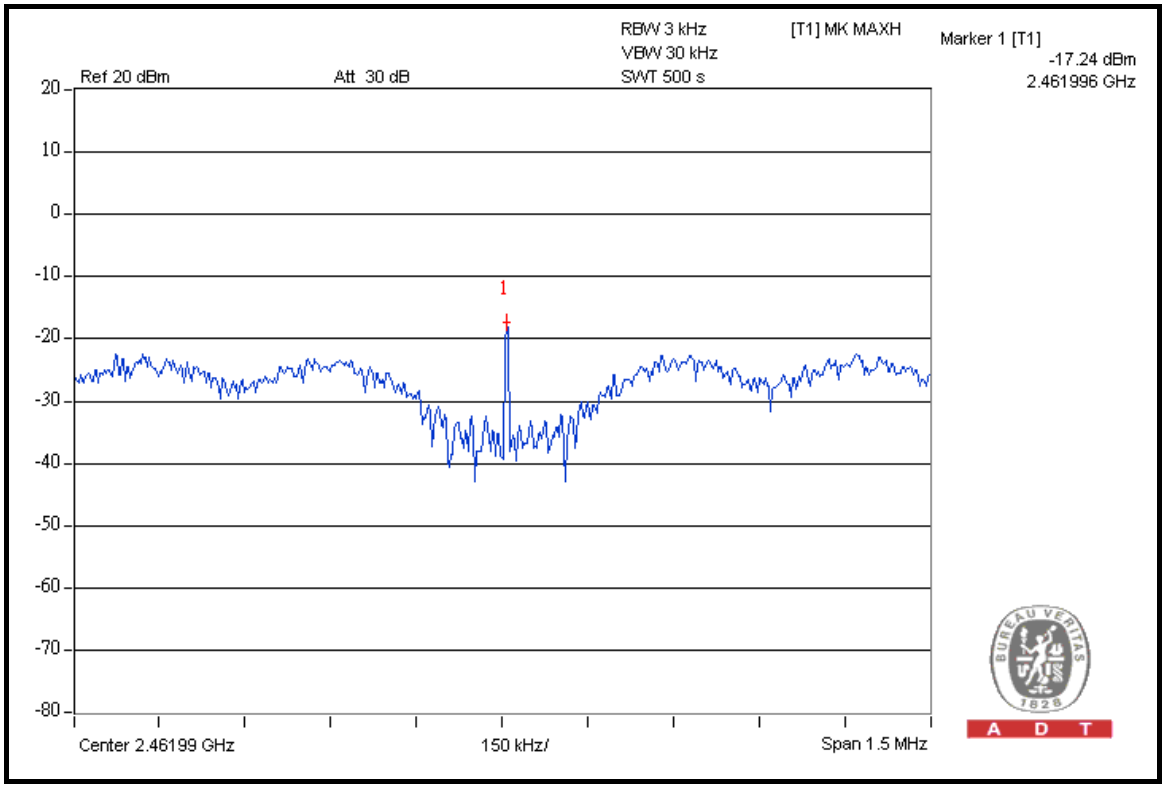
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.28 dBm
2.436990 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43699 GHz
150 kHz/
Span 1.5 MHz

CH 11

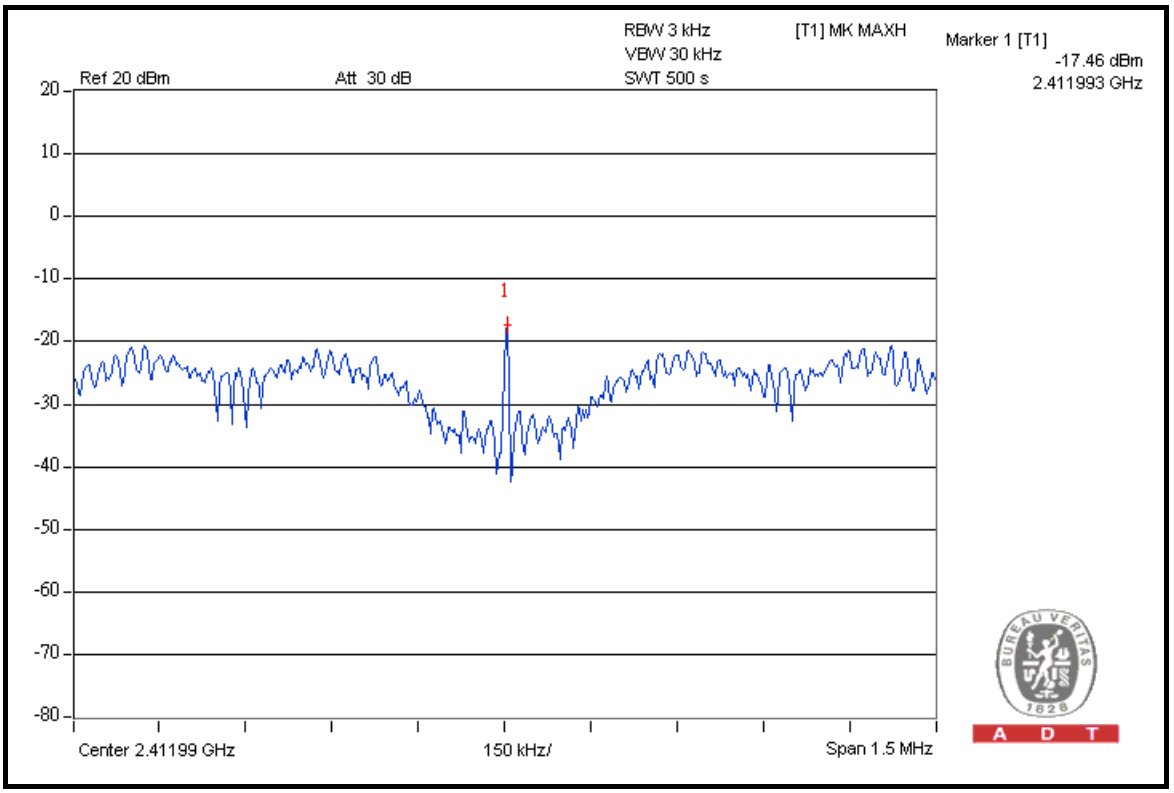

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.24 dBm
2.461996 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46199 GHz
150 kHz/
Span 1.5 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION

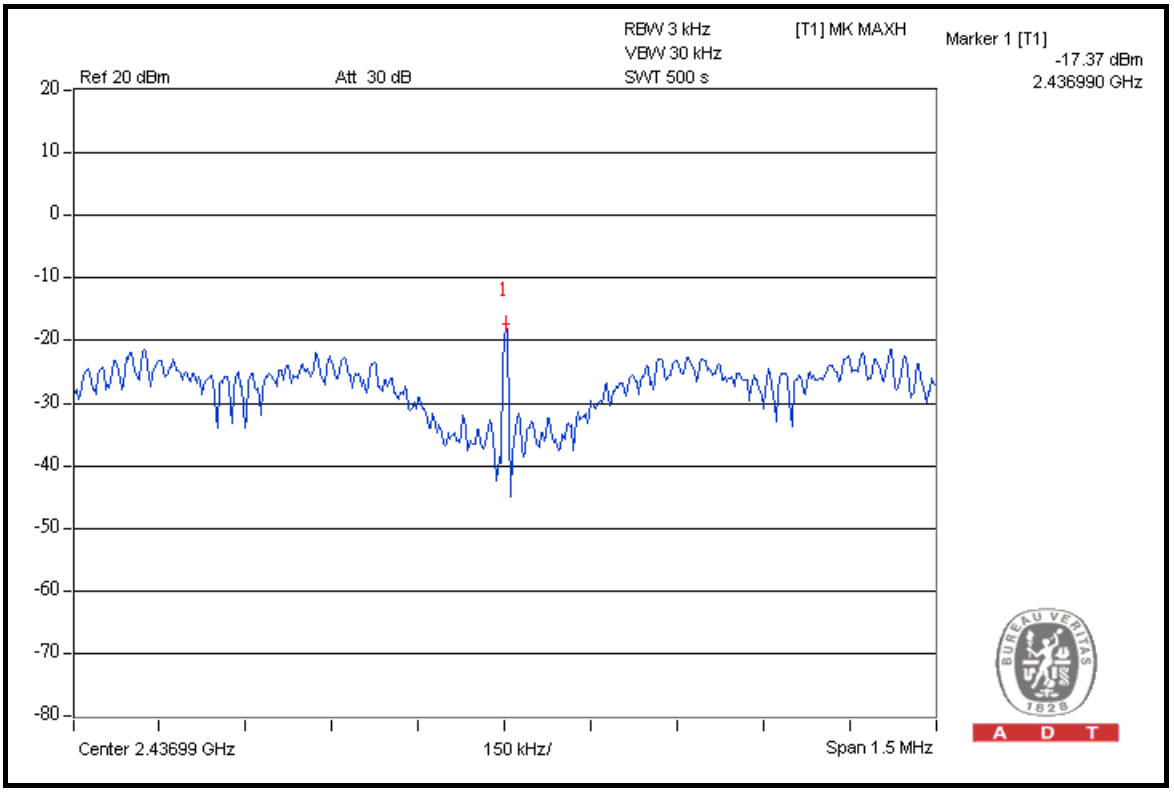
MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	TEST MODE	A

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-17.46	8	PASS
6	2437	-17.37	8	PASS
11	2462	-17.22	8	PASS

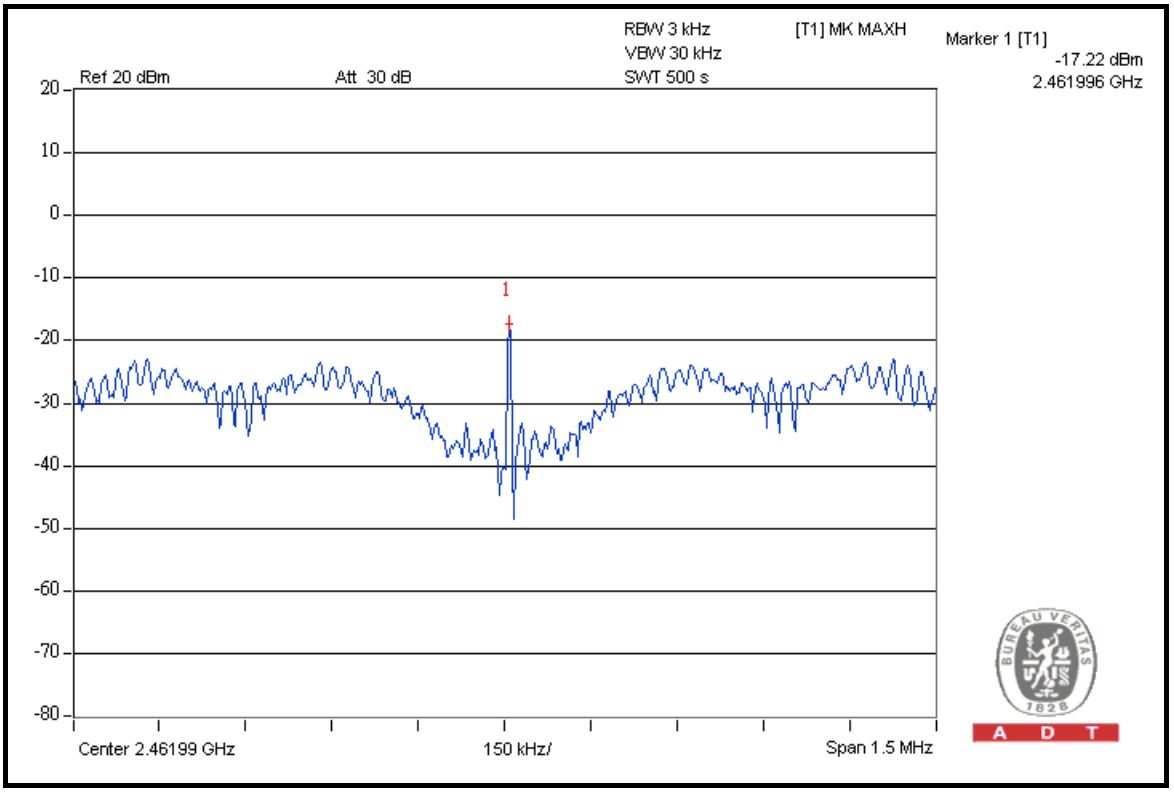
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.37 dBm
2.436990 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43699 GHz
150 kHz/
Span 1.5 MHz

CH 11

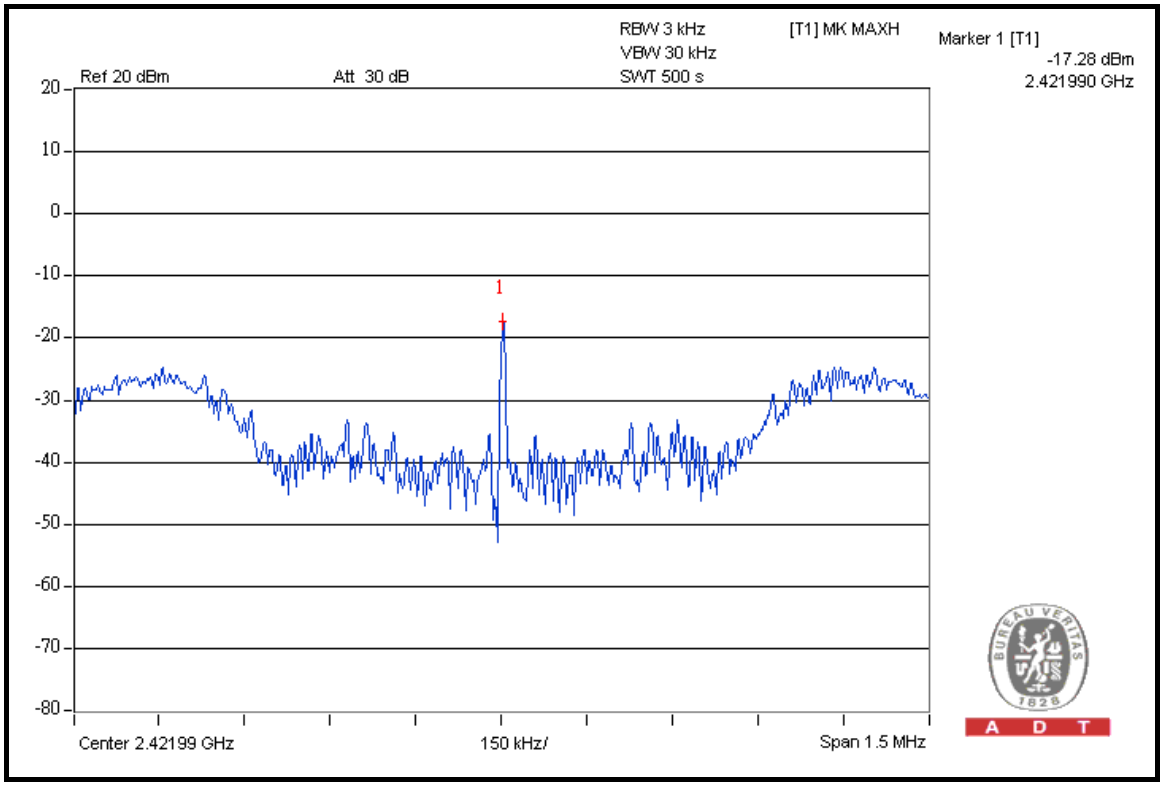

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.22 dBm
2.461996 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46199 GHz
150 kHz/
Span 1.5 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION

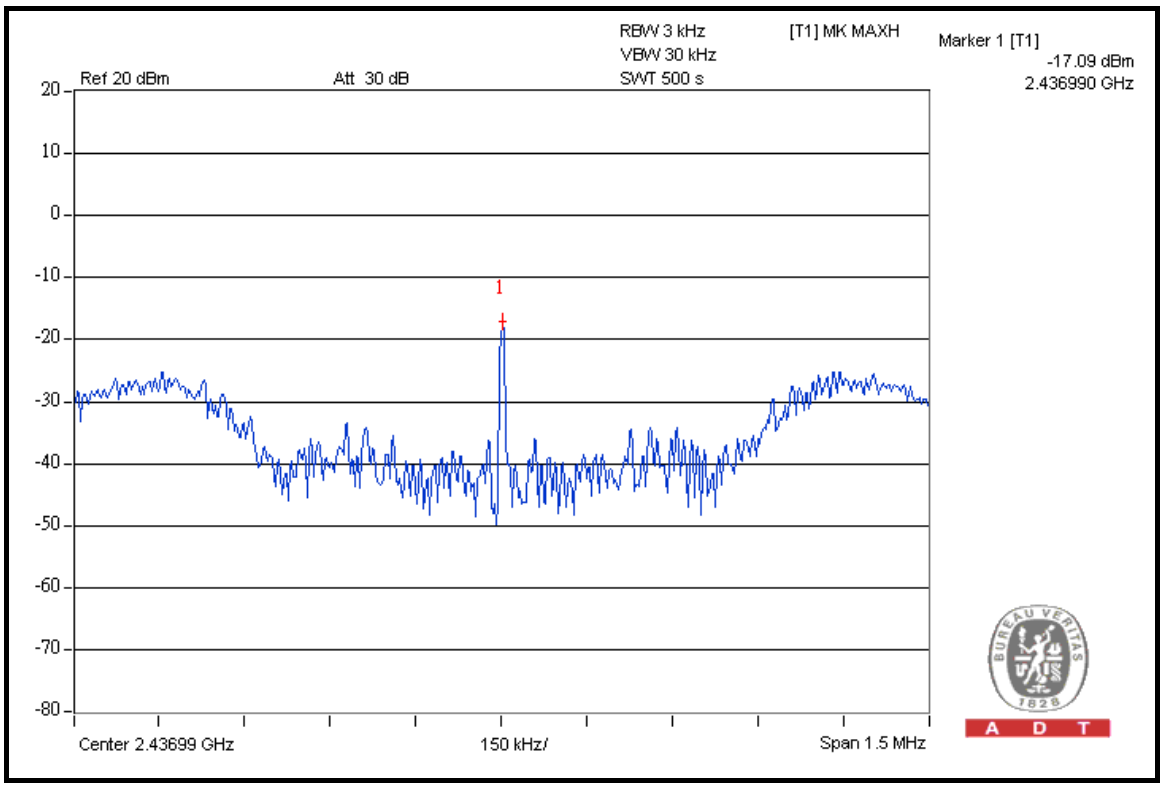
MODULATION TYPE	BPSK	**TRANSFER RATE**	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu	**TEST MODE**	**A**

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2422	-17.28	8	PASS
4	2437	-17.09	8	PASS
7	2452	-17.10	8	PASS

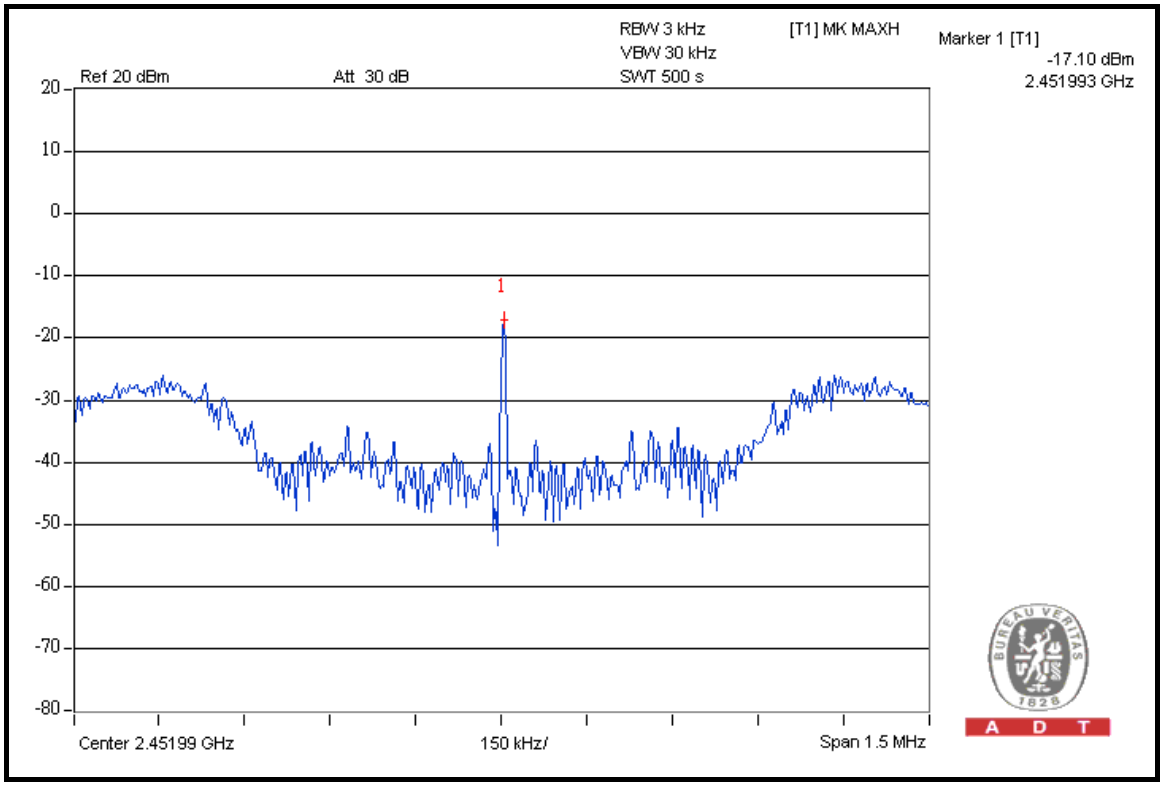
CH 1



CH 4


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.09 dBm
2.436990 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43699 GHz
150 kHz/
Span 1.5 MHz

CH 7


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.10 dBm
2.451993 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.45199 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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	100033	Jun. 30, 2008	Jun. 29, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 27, 2009	Apr. 26, 2010
HORN Antenna SCHWARZBECK	9120D	9120D-209	Jun. 24, 2008	Jun. 23, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 25, 2008	Dec. 24, 2009
Preamplifier Agilent	8447D	2944A10633	Nov. 03, 2008	Nov. 02, 2009
Preamplifier Agilent	8449B	3008A01964	Oct. 23, 2008	Oct. 22, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	238141/4	May 20, 2008	May 12, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	May 20, 2008	May 12, 2010
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA	NA

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

4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW = 100kHz, VBW = 300kHz; Average RBW = 1MHz, VBW = 10Hz) are attached on the following pages.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation.

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6.

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 24 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

TEST MODE A

NOTE 1: The band edge emission plot on the next second page shows 47.57dBc between carrier maximum power and local maximum emission in restrict band (2.33500GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 105.82dBuV/m (Peak), so the maximum field strength in restrict band is 105.82 – 47.57 = 58.25dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next second page shows 59.98dBc between carrier maximum power and local maximum emission in restrict band (2.38660GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 101.06dBuV/m (Average), so the maximum field strength in restrict band is 101.06 – 59.98 = 41.08dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next third page shows 48.11dBc between carrier maximum power and local maximum emission in restrict band (2.48680GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 104.69dBuV/m (Peak), so the maximum field strength in restrict band is 104.69 – 48.11 = 56.58dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next forth page shows 58.43dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 99.92dBuV/m (Average), so the maximum field strength in restrict band is 99.92 – 58.43 = 41.49dBuV/m which is under 54dBuV/m limit.

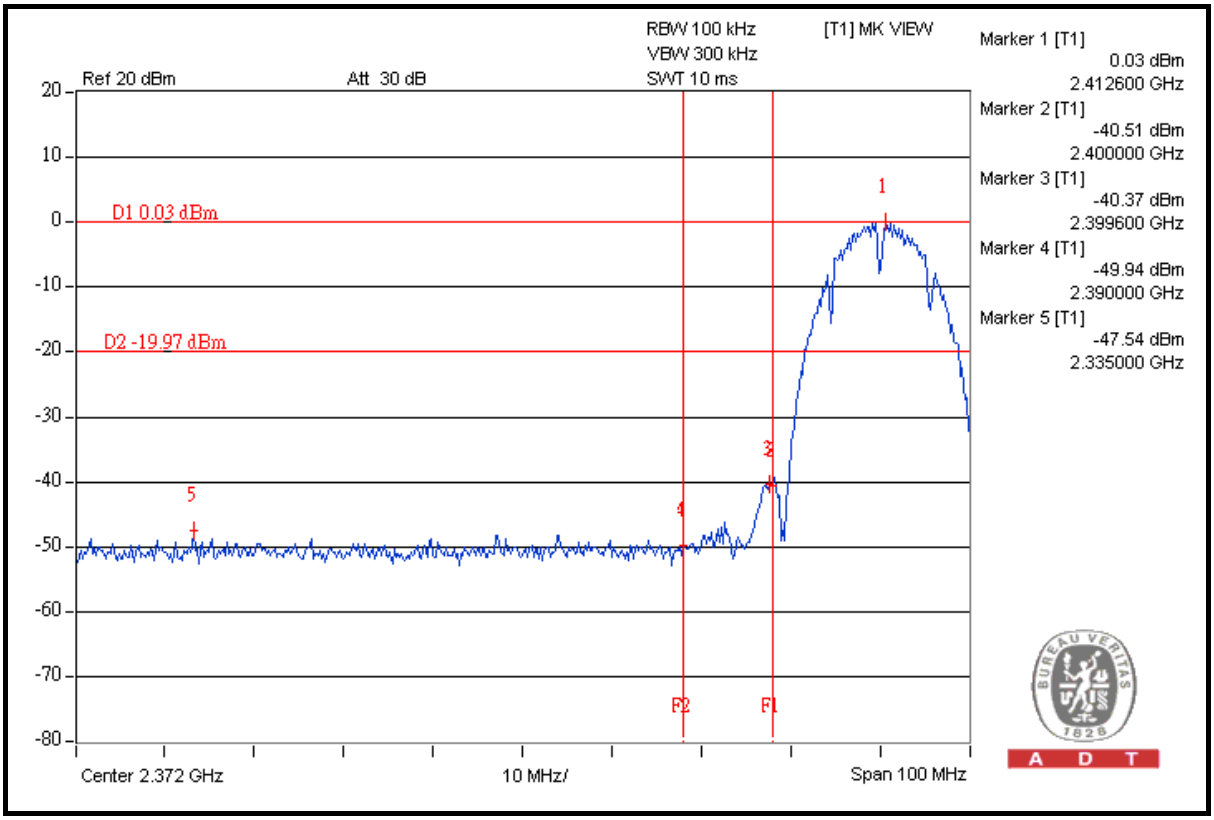
TEST MODE B

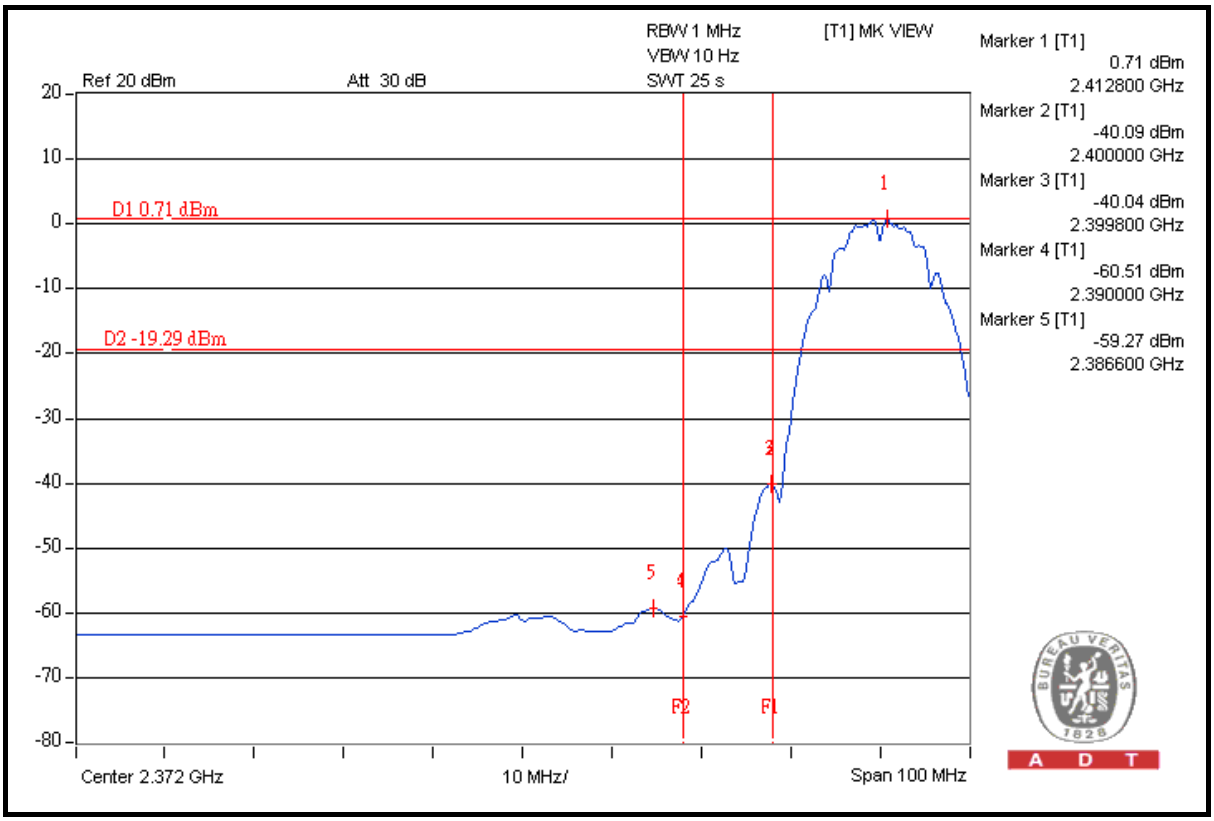
NOTE 1: The band edge emission plot on the next page shows 47.57dBc between carrier maximum power and local maximum emission in restrict band (2.33500GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 103.62dBuV/m (Peak), so the maximum field strength in restrict band is 103.62 – 47.57 = 56.05dBuV/m which is under 74dBuV/m limit.

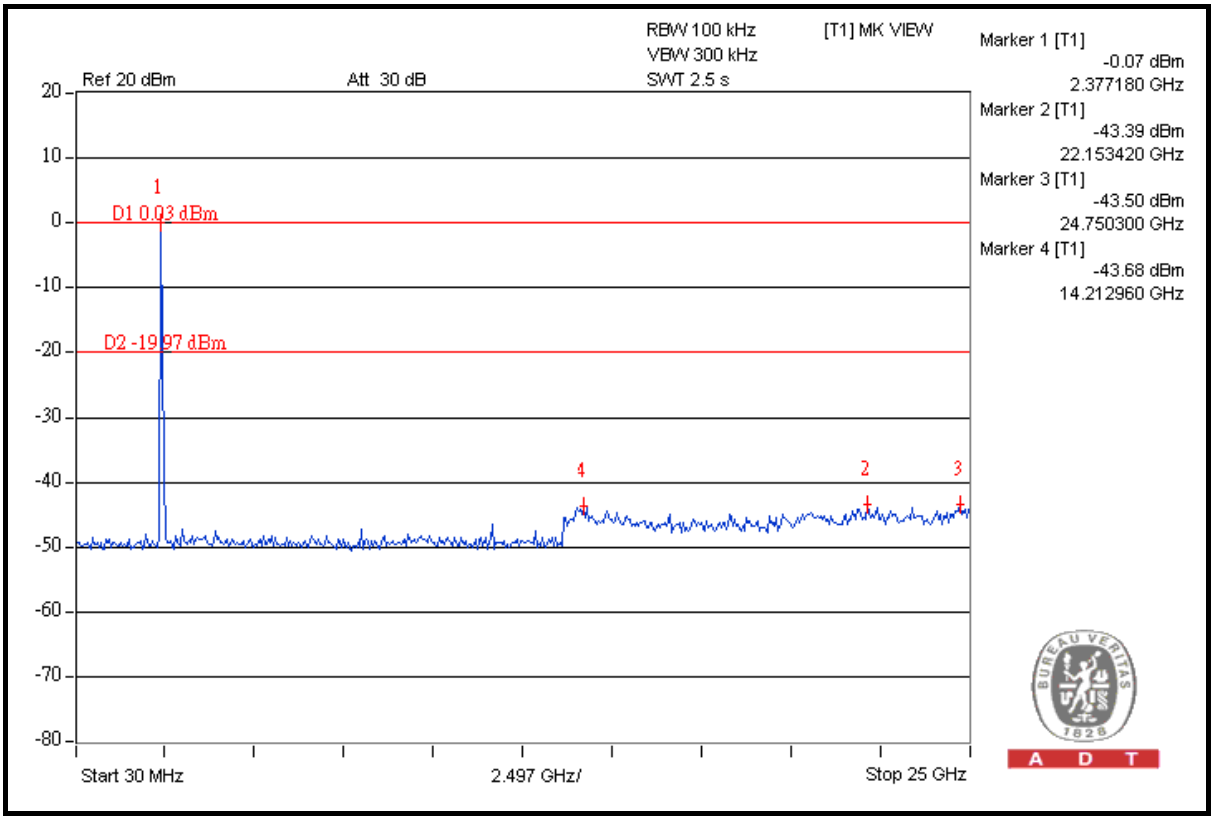
The band edge emission plot on the next page shows 59.98dBc between carrier maximum power and local maximum emission in restrict band (2.38660GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 98.99dBuV/m (Average), so the maximum field strength in restrict band is 98.99 – 59.98 = 39.01dBuV/m which is under 54dBuV/m limit.

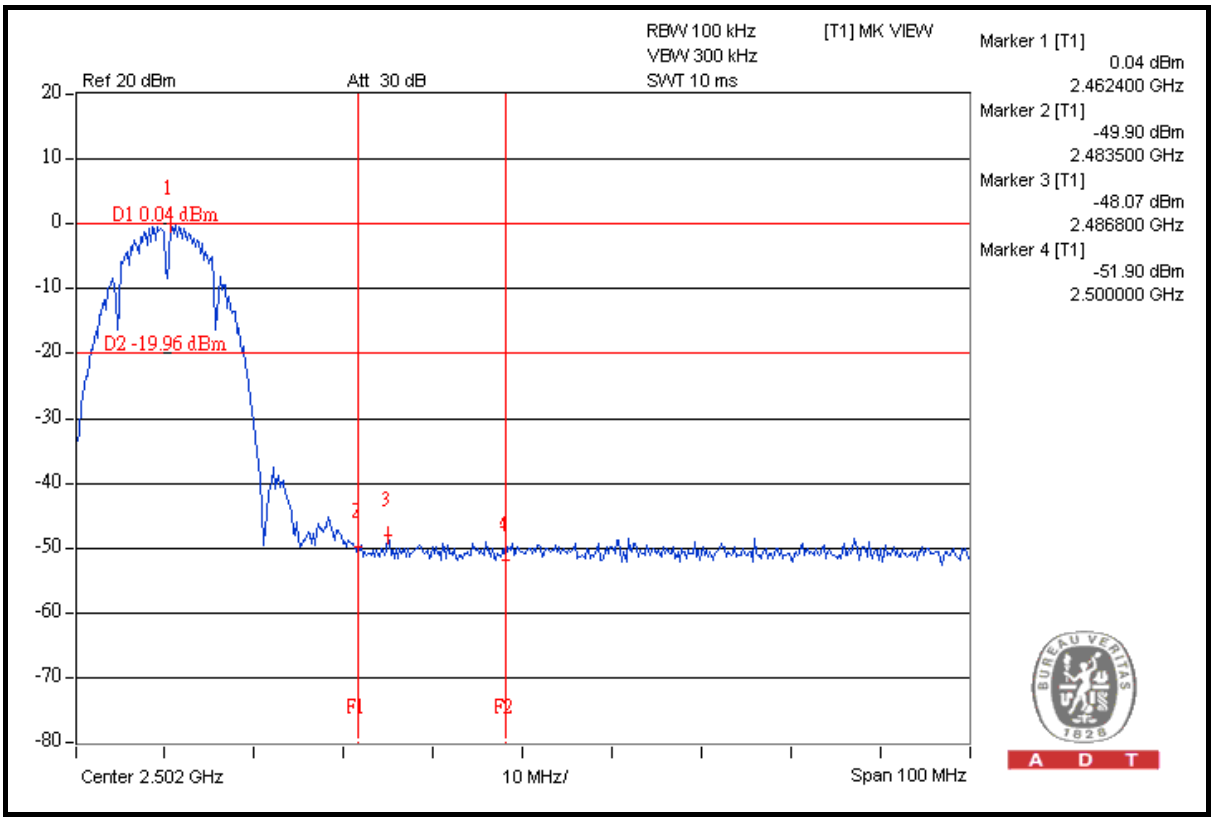
NOTE 2: The band edge emission plot on the next second page shows 48.11dBc between carrier maximum power and local maximum emission in restrict band (2.48680GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 103.28dBuV/m (Peak), so the maximum field strength in restrict band is 103.25 – 48.11 = 55.14dBuV/m which is under 74dBuV/m limit.

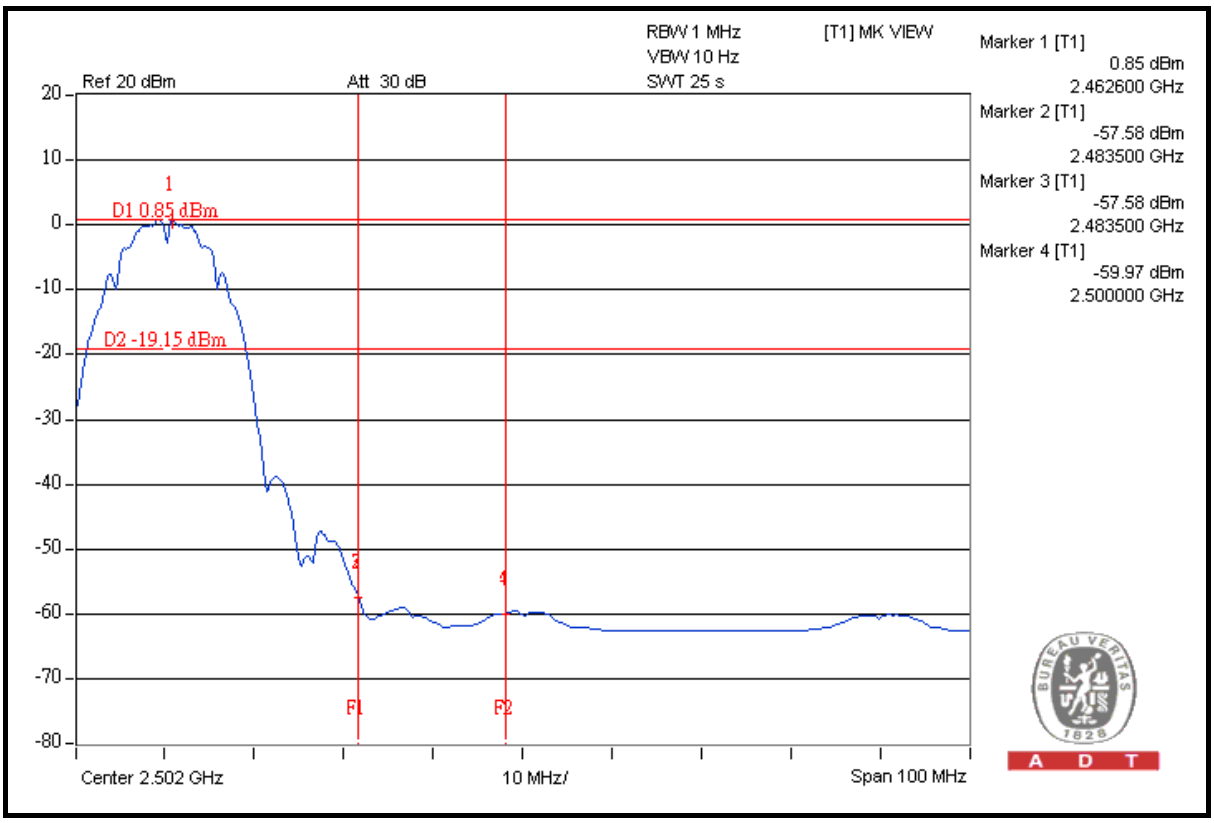
The band edge emission plot on the next third page shows 58.43dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 98.42dBuV/m (Average), so the maximum field strength in restrict band is 98.42 – 58.43 = 39.99dBuV/m which is under 54dBuV/m limit.

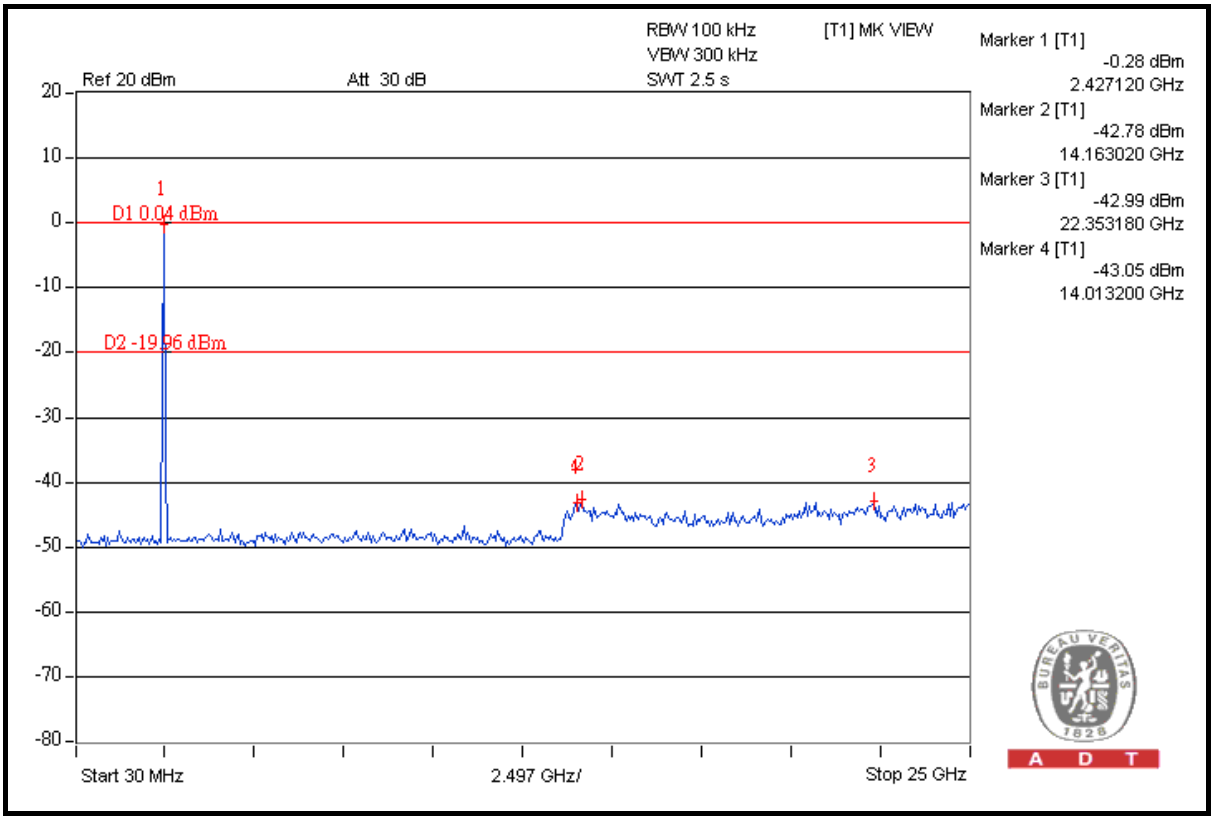

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.03 dBm
D2 -19.97 dBm
Marker 1 [T1]
0.03 dBm
2.412600 GHz
Marker 2 [T1]
-40.51 dBm
2.400000 GHz
Marker 3 [T1]
-40.37 dBm
2.399600 GHz
Marker 4 [T1]
-49.94 dBm
2.390000 GHz
Marker 5 [T1]
-47.54 dBm
2.335000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.71 dBm
D2 -19.29 dBm
Marker 1 [T1]
0.71 dBm
2.412800 GHz
Marker 2 [T1]
-40.09 dBm
2.400000 GHz
Marker 3 [T1]
-40.04 dBm
2.399800 GHz
Marker 4 [T1]
-60.51 dBm
2.390000 GHz
Marker 5 [T1]
-59.27 dBm
2.386600 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-0.07 dBm
2.377180 GHz
Marker 2 [T1]
-43.39 dBm
22.153420 GHz
Marker 3 [T1]
-43.50 dBm
24.750300 GHz
Marker 4 [T1]
-43.68 dBm
14.212960 GHz
D1 0.03 dBm
D2 -19.97 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.04 dBm
2.462400 GHz
Marker 2 [T1]
-49.90 dBm
2.483500 GHz
Marker 3 [T1]
-48.07 dBm
2.486800 GHz
Marker 4 [T1]
-51.90 dBm
2.500000 GHz
D1 0.04 dBm
D2 -19.96 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.85 dBm
D2 -19.15 dBm
Marker 1 [T1]
0.85 dBm
2.462600 GHz
Marker 2 [T1]
-57.58 dBm
2.483500 GHz
Marker 3 [T1]
-57.58 dBm
2.483500 GHz
Marker 4 [T1]
-59.97 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.04 dBm
D2 -19.96 dBm
Marker 1 [T1]
-0.28 dBm
2.427120 GHz
Marker 2 [T1]
-42.78 dBm
14.163020 GHz
Marker 3 [T1]
-42.99 dBm
22.353180 GHz
Marker 4 [T1]
-43.05 dBm
14.013200 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g OFDM MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next second page shows 42.53dBc between carrier maximum power and local maximum emission in restrict band (2.38900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 107.20dBuV/m (Peak), so the maximum field strength in restrict band is 107.20 – 42.53 = 64.67dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next second page shows 51.08dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 97.05dBuV/m (Average), so the maximum field strength in restrict band is 97.05 – 51.08 = 45.97dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next third page shows 43.56dBc between carrier maximum power and local maximum emission in restrict band (2.48520GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 106.42dBuV/m (Peak), so the maximum field strength in restrict band is 106.42 – 43.56 = 62.86dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next forth page shows 49.60dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 96.35dBuV/m (Average), so the maximum field strength in restrict band is 96.35 – 49.60 = 46.75dBuV/m which is under 54dBuV/m limit.

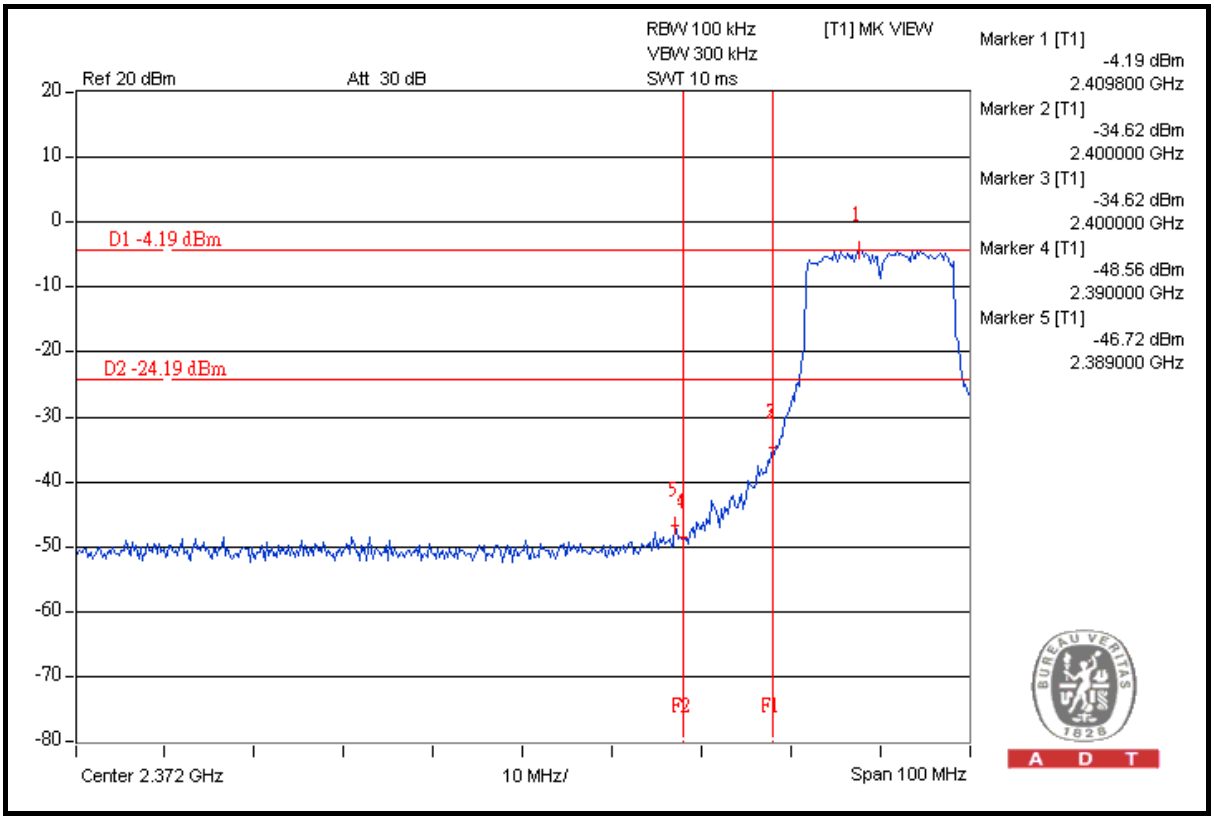
TEST MODE B

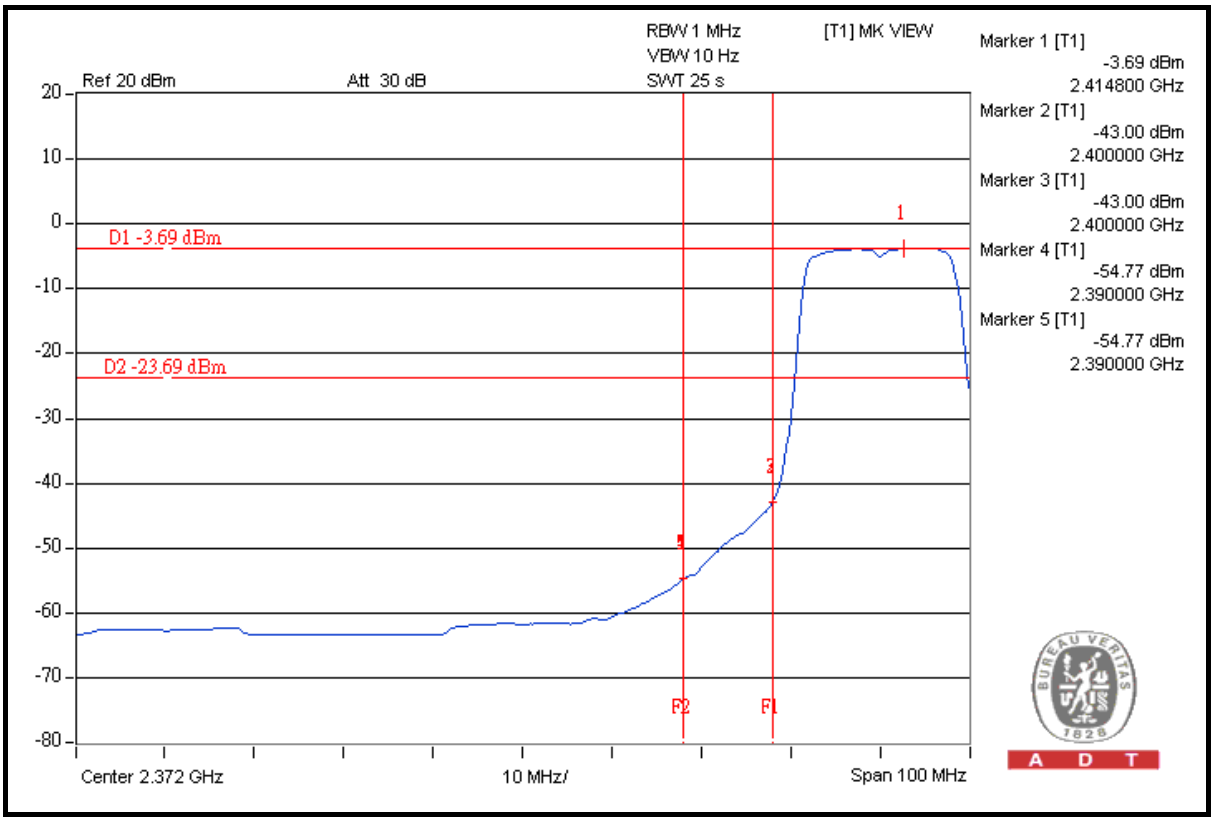
NOTE 1: The band edge emission plot on the next page shows 42.53dBc between carrier maximum power and local maximum emission in restrict band (2.38900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 105.05dBuV/m (Peak), so the maximum field strength in restrict band is 105.05 – 42.53 = 62.52dBuV/m which is under 74dBuV/m limit.

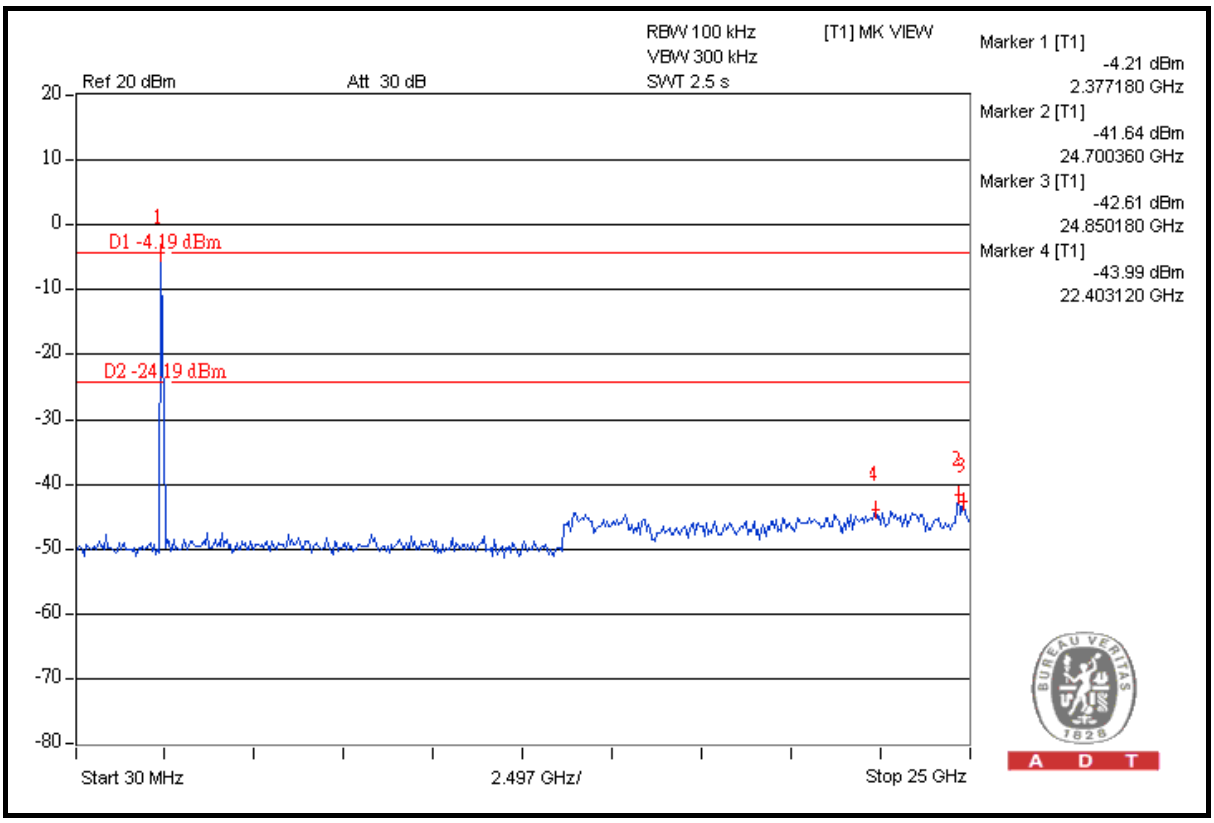
The band edge emission plot on the next page shows 51.08dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 95.00dBuV/m (Average), so the maximum field strength in restrict band is 95.00 – 51.08 = 43.92dBuV/m which is under 54dBuV/m limit.

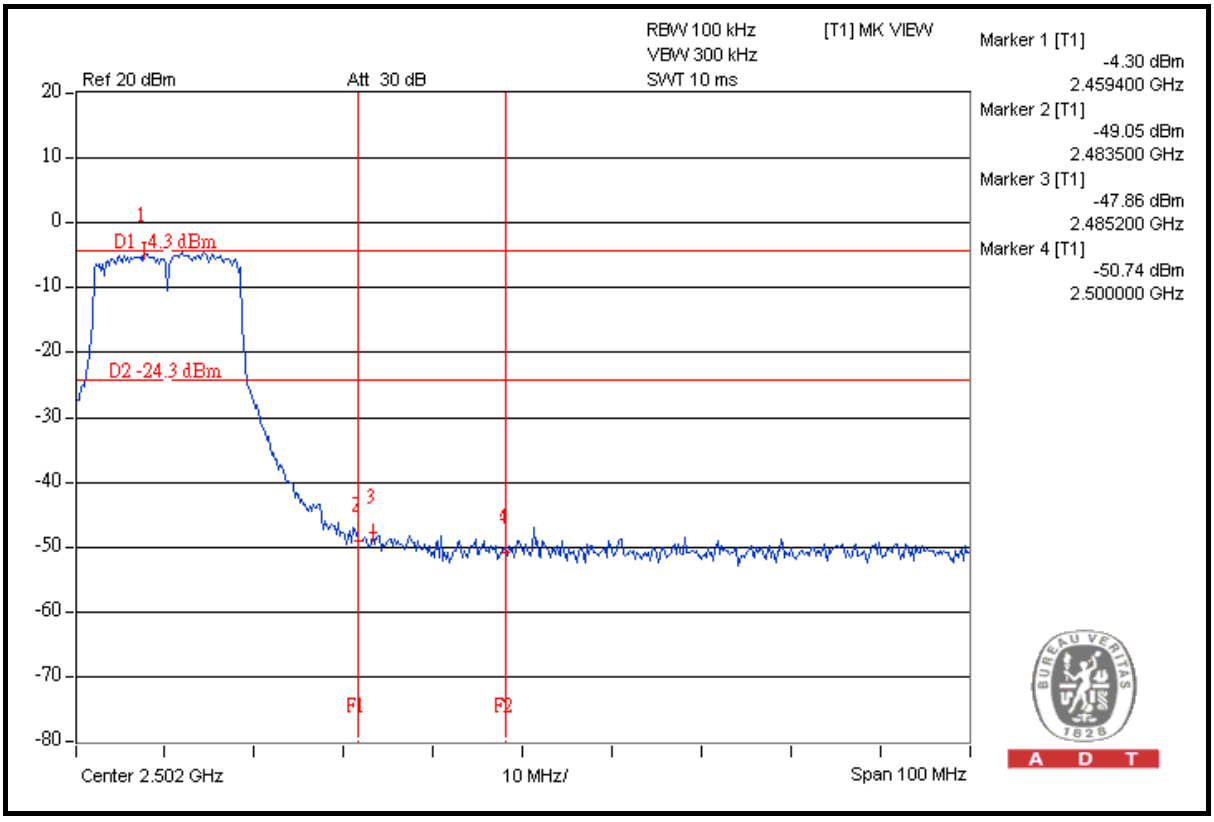
NOTE 2: The band edge emission plot on the next second page shows 43.56dBc between carrier maximum power and local maximum emission in restrict band (2.48520GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 104.41dBuV/m (Peak), so the maximum field strength in restrict band is 104.41 – 43.56 = 60.85dBuV/m which is under 74dBuV/m limit.

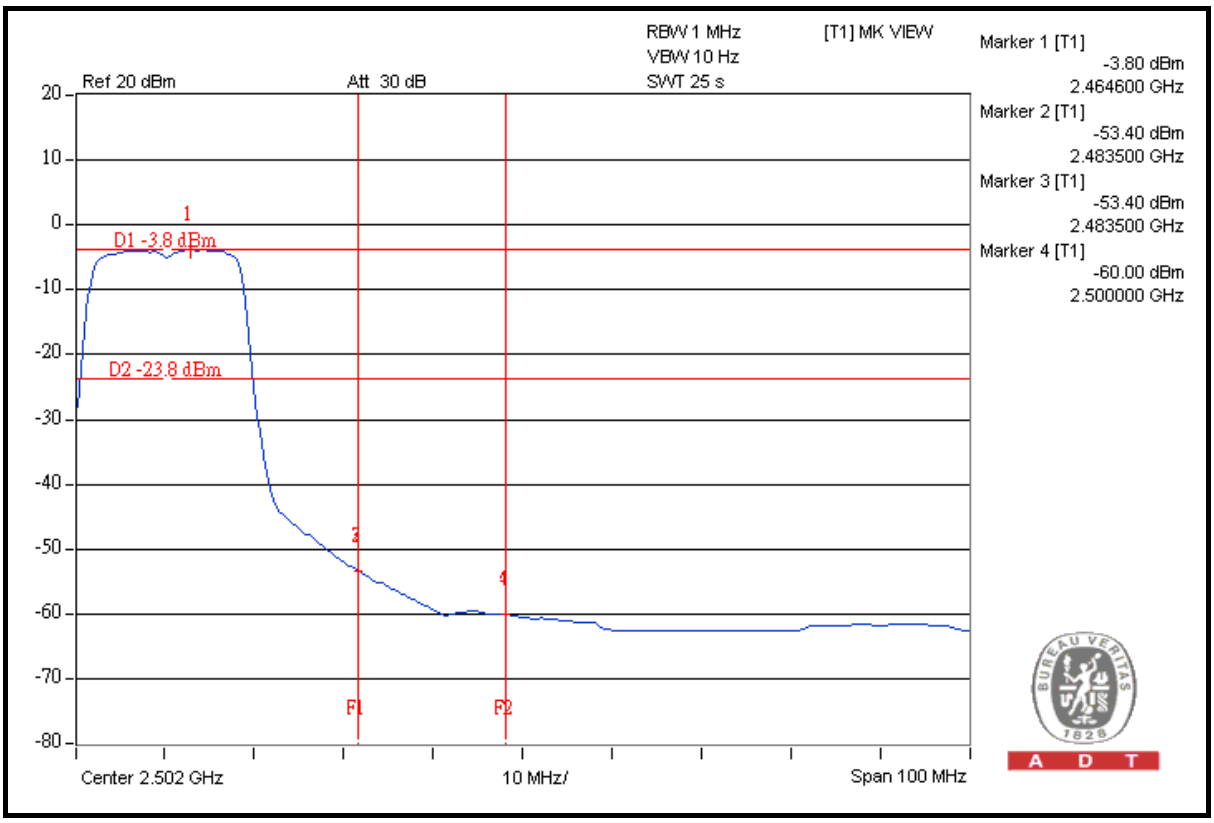
The band edge emission plot on the next third page shows 49.60dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 94.35dBuV/m (Average), so the maximum field strength in restrict band is 94.35 – 49.60 = 44.75dBuV/m which is under 54dBuV/m limit.

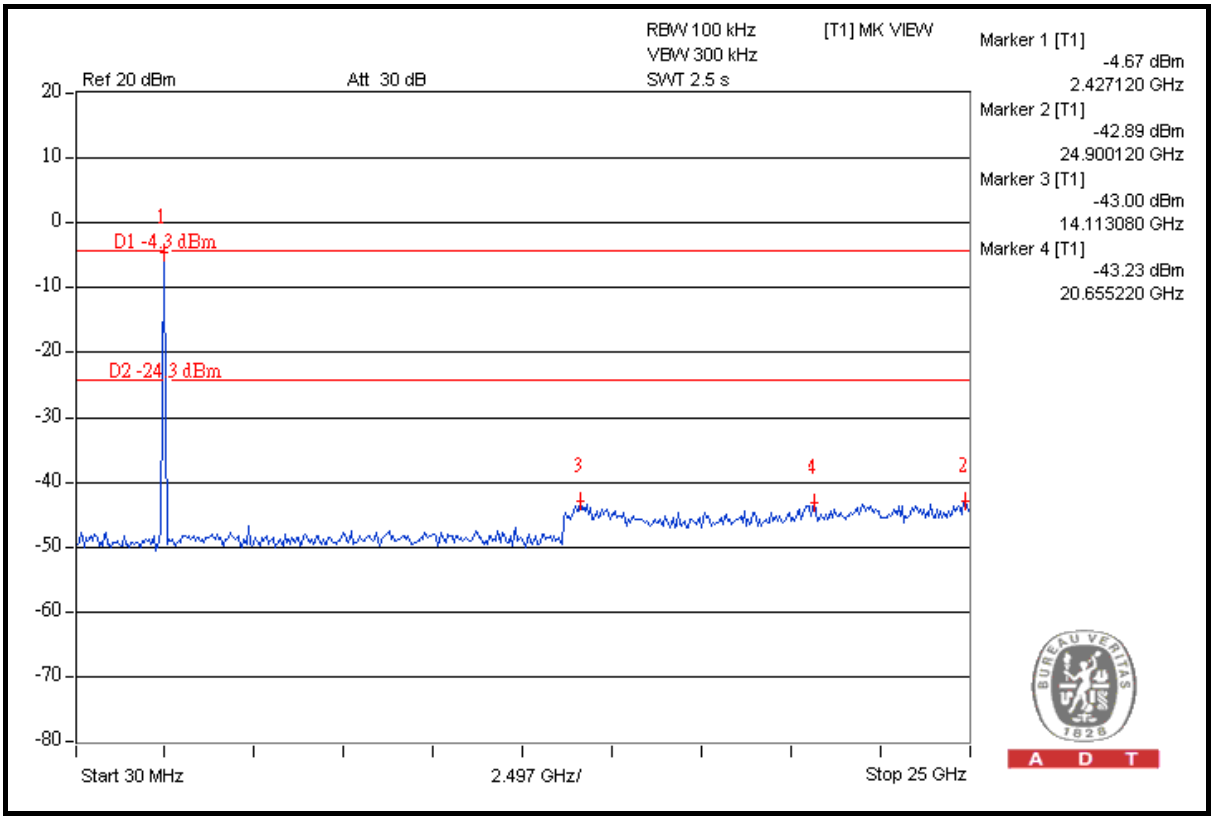

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -4.19 dBm
D2 -24.19 dBm
Marker 1 [T1]
-4.19 dBm
2.409800 GHz
Marker 2 [T1]
-34.62 dBm
2.400000 GHz
Marker 3 [T1]
-34.62 dBm
2.400000 GHz
Marker 4 [T1]
-48.56 dBm
2.390000 GHz
Marker 5 [T1]
-46.72 dBm
2.389000 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -3.69 dBm
D2 -23.69 dBm
Marker 1 [T1]
-3.69 dBm
2.414800 GHz
Marker 2 [T1]
-43.00 dBm
2.400000 GHz
Marker 3 [T1]
-43.00 dBm
2.400000 GHz
Marker 4 [T1]
-54.77 dBm
2.390000 GHz
Marker 5 [T1]
-54.77 dBm
2.390000 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-4.21 dBm
2.377180 GHz
Marker 2 [T1]
-41.64 dBm
24.700360 GHz
Marker 3 [T1]
-42.61 dBm
24.850180 GHz
Marker 4 [T1]
-43.99 dBm
22.403120 GHz
D1 -4.19 dBm
D2 -24.19 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-4.30 dBm
2.459400 GHz
Marker 2 [T1]
-49.05 dBm
2.483500 GHz
Marker 3 [T1]
-47.86 dBm
2.485200 GHz
Marker 4 [T1]
-50.74 dBm
2.500000 GHz
D1 -4.3 dBm
D2 -24.3 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -3.8 dBm
D2 -23.8 dBm
Marker 1 [T1]
-3.80 dBm
2.464600 GHz
Marker 2 [T1]
-53.40 dBm
2.483500 GHz
Marker 3 [T1]
-53.40 dBm
2.483500 GHz
Marker 4 [T1]
-60.00 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -4.3 dBm
D2 -24.3 dBm
Marker 1 [T1]
-4.67 dBm
2.427120 GHz
Marker 2 [T1]
-42.89 dBm
24.900120 GHz
Marker 3 [T1]
-43.00 dBm
14.113080 GHz
Marker 4 [T1]
-43.23 dBm
20.655220 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

DRAFT 802.11n (20MHz) OFDM MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next second page shows 42.34dBc between carrier maximum power and local maximum emission in restrict band (2.32220GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 105.13dBuV/m (Peak), so the maximum field strength in restrict band is 105.13 – 42.34 = 62.79dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next second page shows 52.14dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 94.92dBuV/m (Average), so the maximum field strength in restrict band is 94.92 – 52.14 = 42.78dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next third page shows 41.92dBc between carrier maximum power and local maximum emission in restrict band (2.48840GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 104.36dBuV/m (Peak), so the maximum field strength in restrict band is 104.36 – 41.92 = 62.44dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next forth page shows 50.07dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 94.25dBuV/m (Average), so the maximum field strength in restrict band is 94.25 – 50.07 = 44.18dBuV/m which is under 54dBuV/m limit.

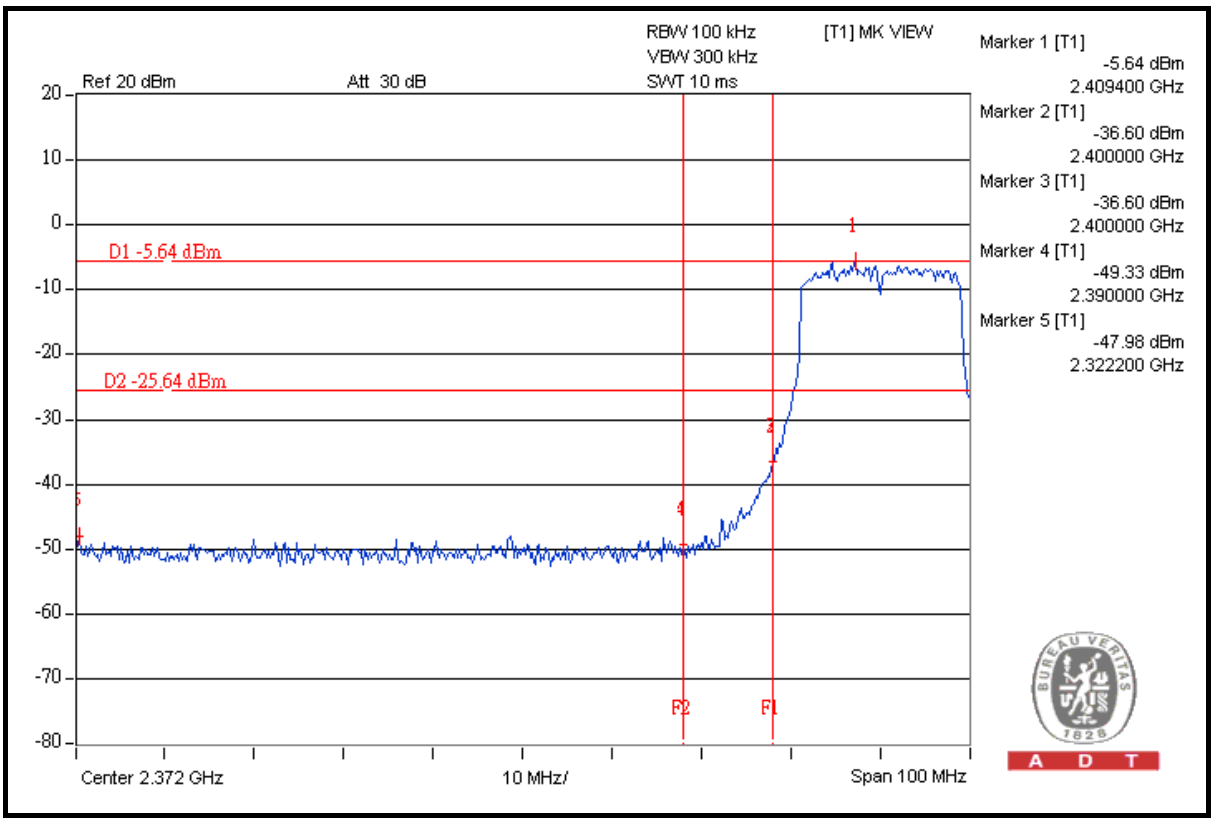
TEST MODE B

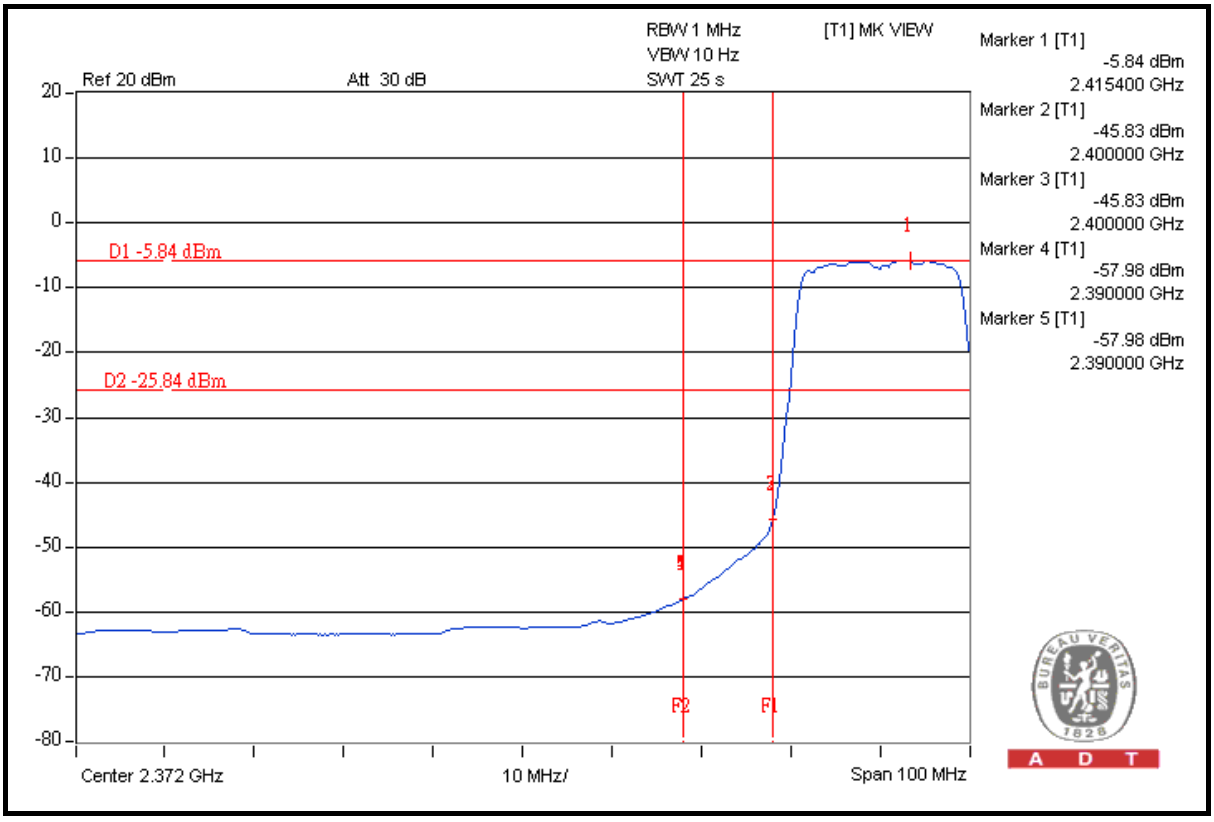
NOTE 1: The band edge emission plot on the next page shows 42.34dBc between carrier maximum power and local maximum emission in restrict band (2.32220GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 103.38dBuV/m (Peak), so the maximum field strength in restrict band is 103.38 – 42.34 = 61.04dBuV/m which is under 74dBuV/m limit.

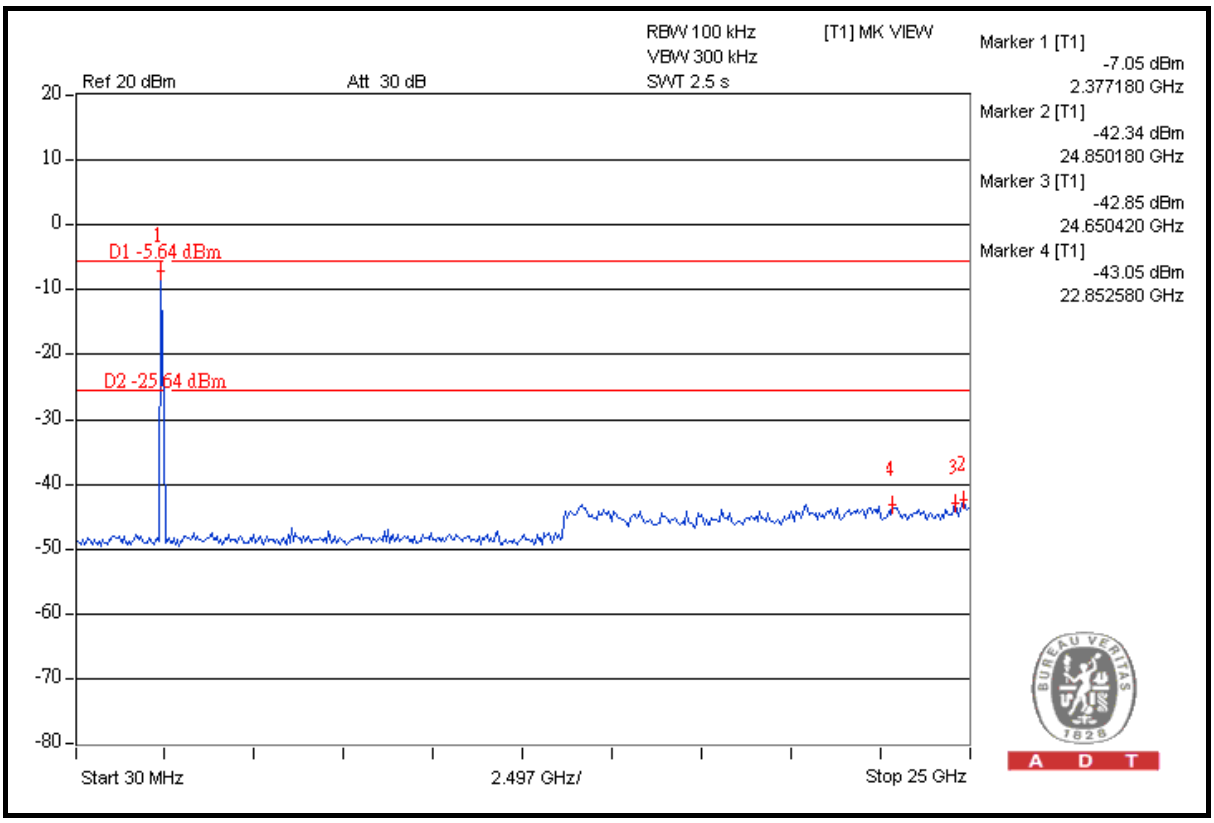
The band edge emission plot on the next page shows 52.14dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 92.98dBuV/m (Average), so the maximum field strength in restrict band is 92.98 – 52.14 = 40.84dBuV/m which is under 54dBuV/m limit.

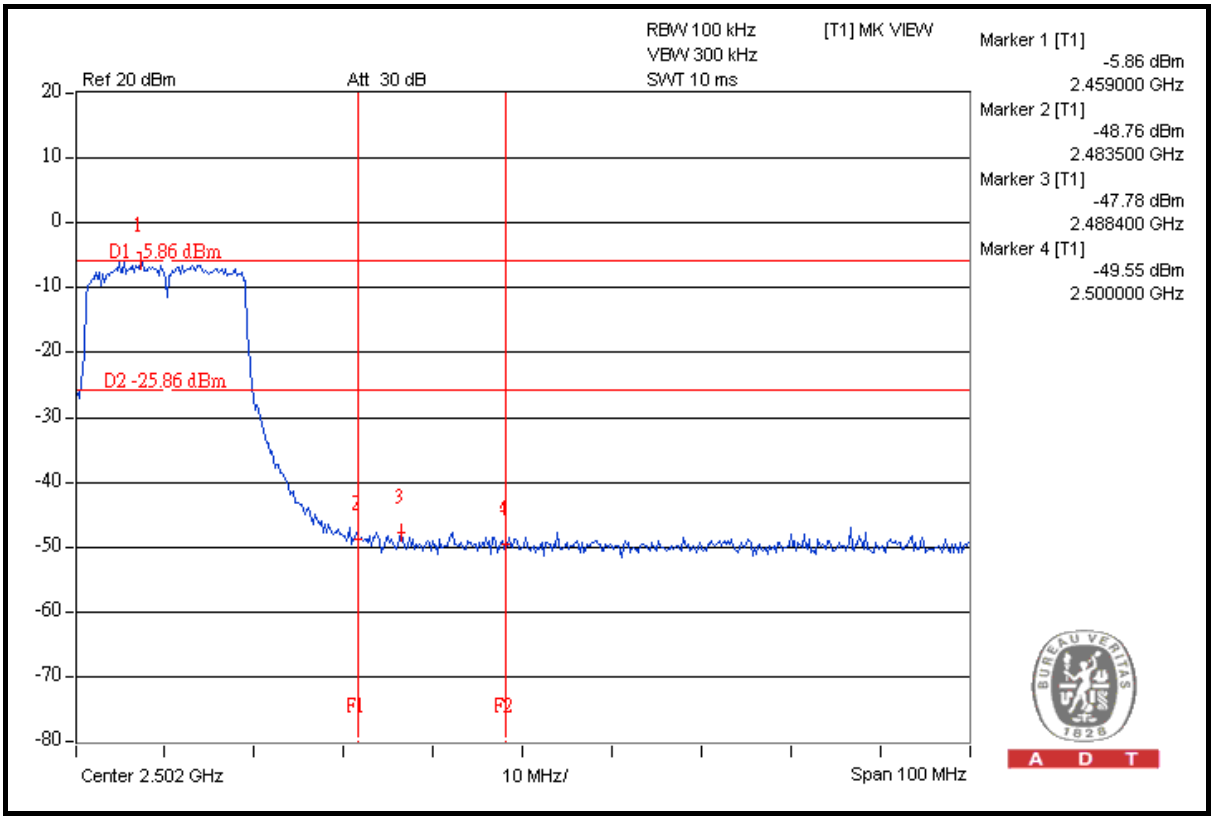
NOTE 2: The band edge emission plot on the next second page shows 41.92dBc between carrier maximum power and local maximum emission in restrict band (2.48840GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 102.54dBuV/m (Peak), so the maximum field strength in restrict band is 102.54 – 41.92 = 60.62dBuV/m which is under 74dBuV/m limit.

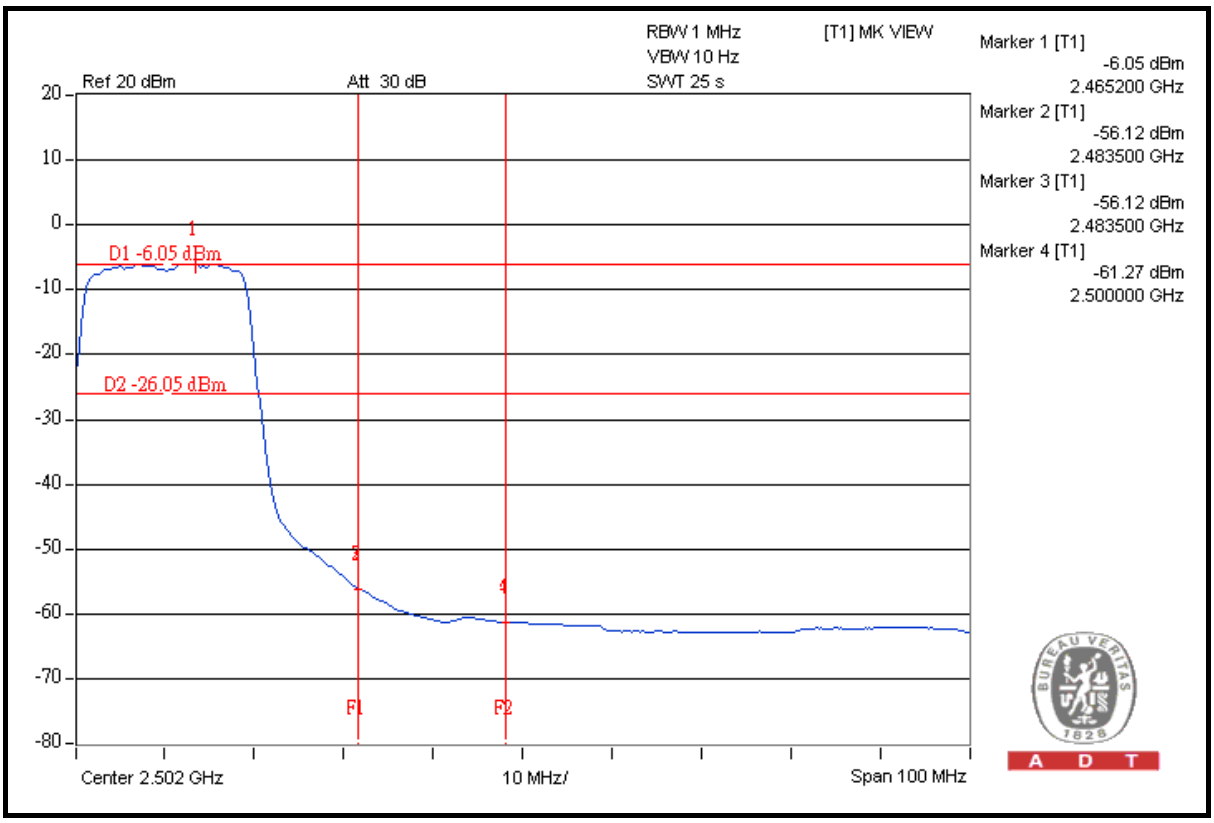
The band edge emission plot on the next third page shows 50.07dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 92.15dBuV/m (Average), so the maximum field strength in restrict band is 92.15 – 50.07 = 42.08dBuV/m which is under 54dBuV/m limit.

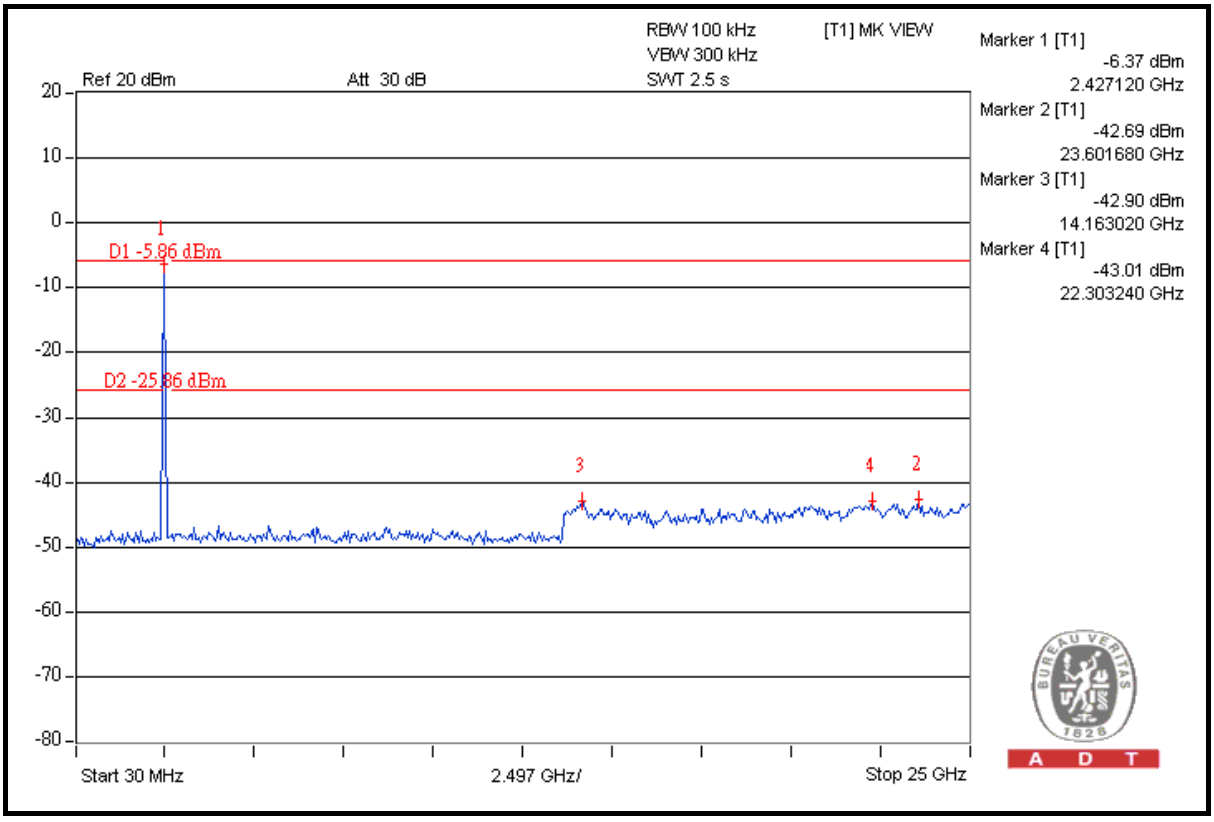

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -5.64 dBm
D2 -25.64 dBm
Marker 1 [T1]
-5.64 dBm
2.409400 GHz
Marker 2 [T1]
-36.60 dBm
2.400000 GHz
Marker 3 [T1]
-36.60 dBm
2.400000 GHz
Marker 4 [T1]
-49.33 dBm
2.390000 GHz
Marker 5 [T1]
-47.98 dBm
2.322200 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -5.84 dBm
D2 -25.84 dBm
Marker 1 [T1]
-5.84 dBm
2.415400 GHz
Marker 2 [T1]
-45.83 dBm
2.400000 GHz
Marker 3 [T1]
-45.83 dBm
2.400000 GHz
Marker 4 [T1]
-57.98 dBm
2.390000 GHz
Marker 5 [T1]
-57.98 dBm
2.390000 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-7.05 dBm
2.377180 GHz
Marker 2 [T1]
-42.34 dBm
24.850180 GHz
Marker 3 [T1]
-42.85 dBm
24.650420 GHz
Marker 4 [T1]
-43.05 dBm
22.852580 GHz
D1 -5.64 dBm
D2 -25.64 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-5.86 dBm
2.459000 GHz
Marker 2 [T1]
-48.76 dBm
2.483500 GHz
Marker 3 [T1]
-47.78 dBm
2.488400 GHz
Marker 4 [T1]
-49.55 dBm
2.500000 GHz
D1 -5.86 dBm
D2 -25.86 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-6.05 dBm
2.465200 GHz
Marker 2 [T1]
-56.12 dBm
2.483500 GHz
Marker 3 [T1]
-56.12 dBm
2.483500 GHz
Marker 4 [T1]
-61.27 dBm
2.500000 GHz
D1 -6.05 dBm
D2 -26.05 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-6.37 dBm
2.427120 GHz
Marker 2 [T1]
-42.69 dBm
23.601680 GHz
Marker 3 [T1]
-42.90 dBm
14.163020 GHz
Marker 4 [T1]
-43.01 dBm
22.303240 GHz
D1 -5.86 dBm
D2 -25.86 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

DRAFT 802.11n (40MHz) OFDM MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next second page shows 38.65dBc between carrier maximum power and local maximum emission in restrict band (2.38680GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 102.08dBuV/m (Peak), so the maximum field strength in restrict band is 102.08 – 38.65 = 63.43dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next second page shows 46.10dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 91.82dBuV/m (Average), so the maximum field strength in restrict band is 91.82 – 46.10 = 45.72dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next third page shows 37.87dBc between carrier maximum power and local maximum emission in restrict band (2.48360GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 101.13dBuV/m (Peak), so the maximum field strength in restrict band is 101.13 – 37.87 = 63.26dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next forth page shows 44.29dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 90.96dBuV/m (Average), so the maximum field strength in restrict band is 90.96 – 44.29 = 46.67dBuV/m which is under 54dBuV/m limit.

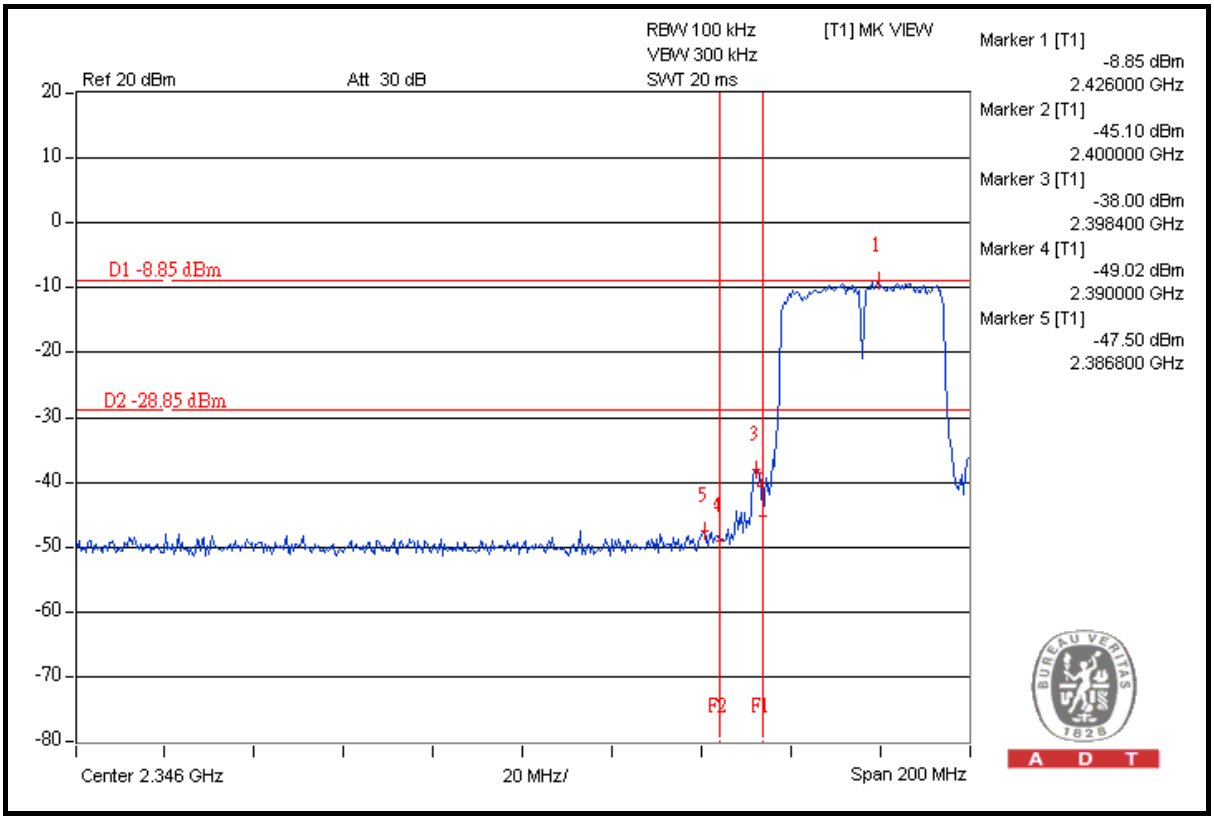
TEST MODE B

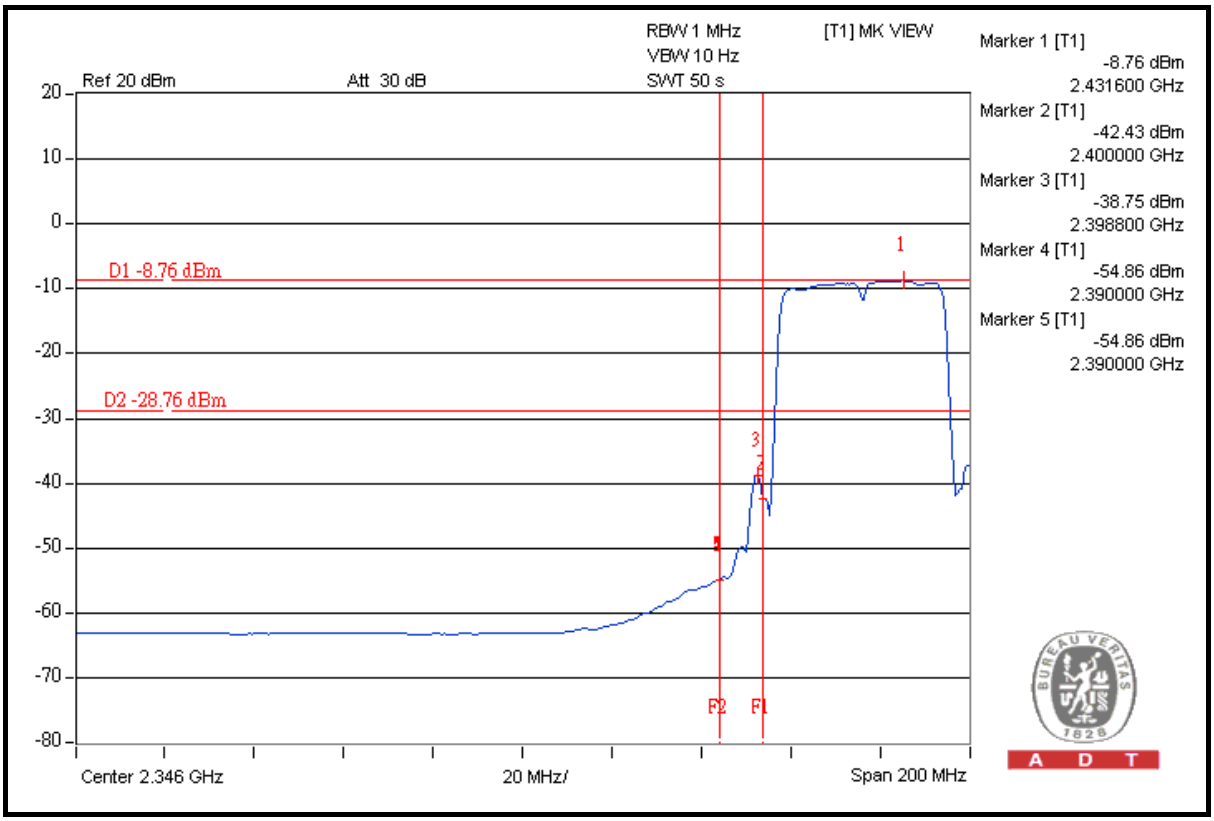
NOTE 1: The band edge emission plot on the next page shows 38.65dBc between carrier maximum power and local maximum emission in restrict band (2.38680GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 99.98dBuV/m (Peak), so the maximum field strength in restrict band is 99.98 – 38.65 = 61.33dBuV/m which is under 74dBuV/m limit.

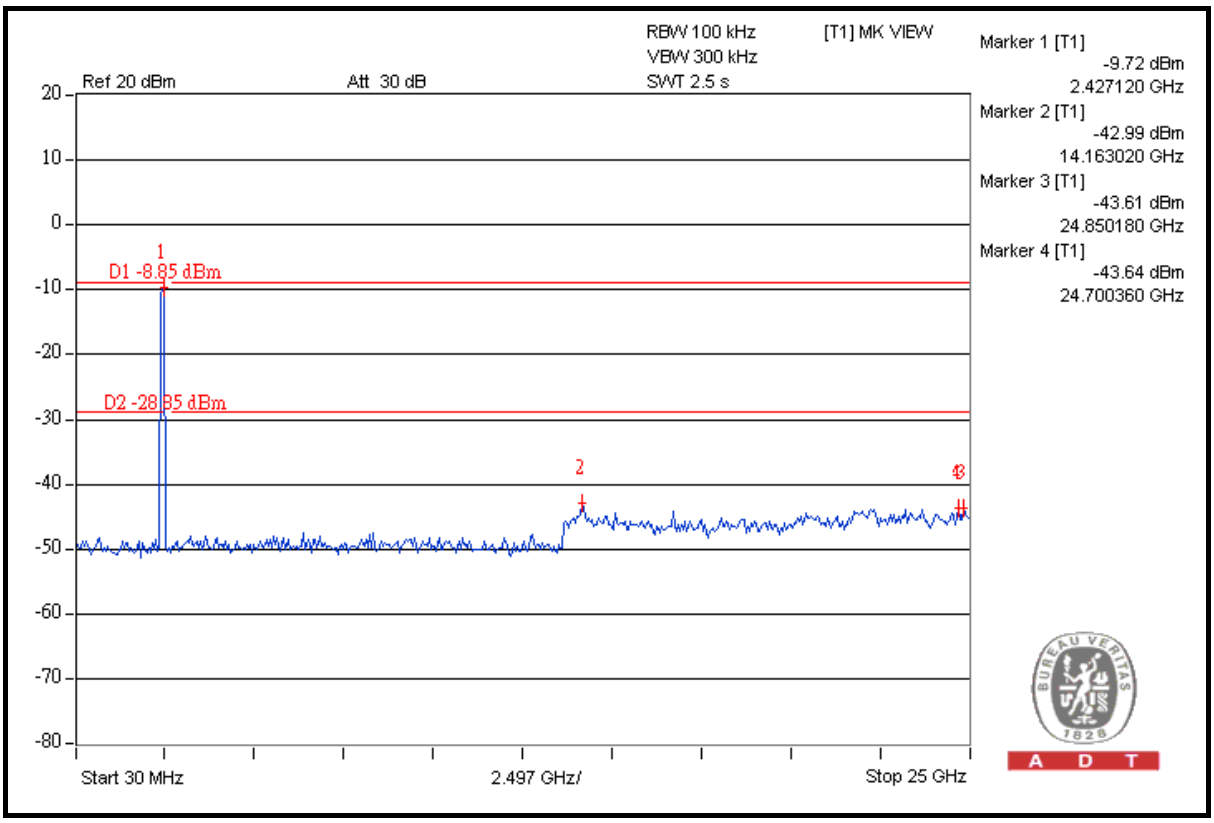
The band edge emission plot on the next page shows 46.10dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 89.87dBuV/m (Average), so the maximum field strength in restrict band is 89.87 – 46.10 = 43.77dBuV/m which is under 54dBuV/m limit.

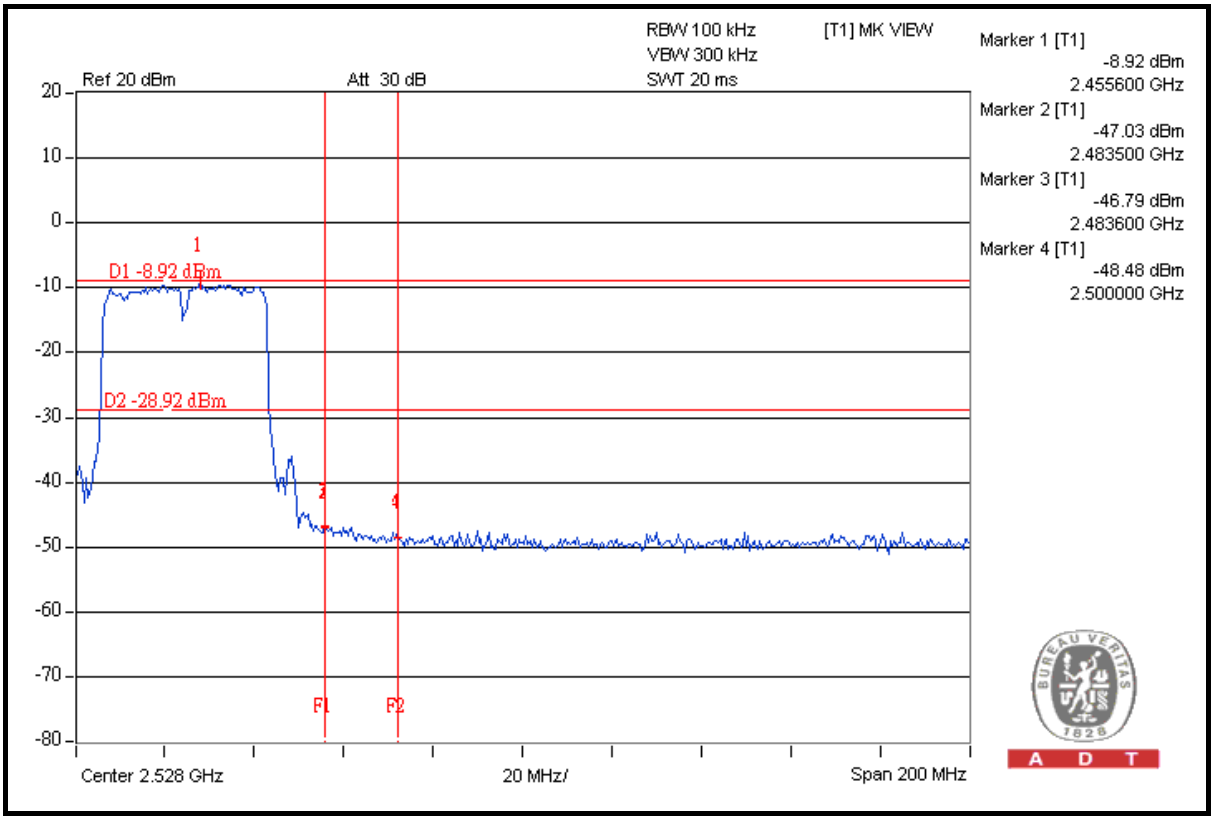
NOTE 2: The band edge emission plot on the next second page shows 37.87dBc between carrier maximum power and local maximum emission in restrict band (2.48360GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 99.12dBuV/m (Peak), so the maximum field strength in restrict band is 99.12 – 37.87 = 61.25dBuV/m which is under 74dBuV/m limit.

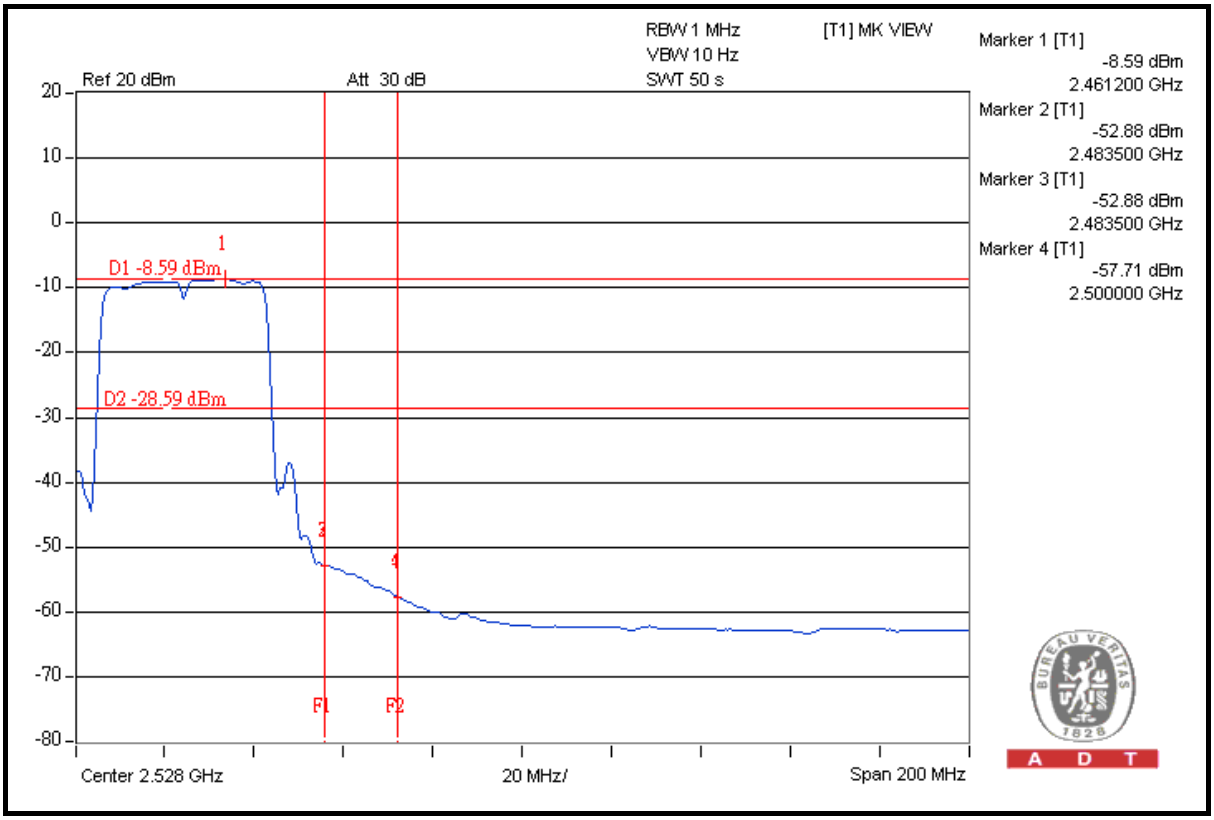
The band edge emission plot on the next third page shows 44.29dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 89.04dBuV/m (Average), so the maximum field strength in restrict band is 89.04 – 44.29 = 44.75dBuV/m which is under 54dBuV/m limit.

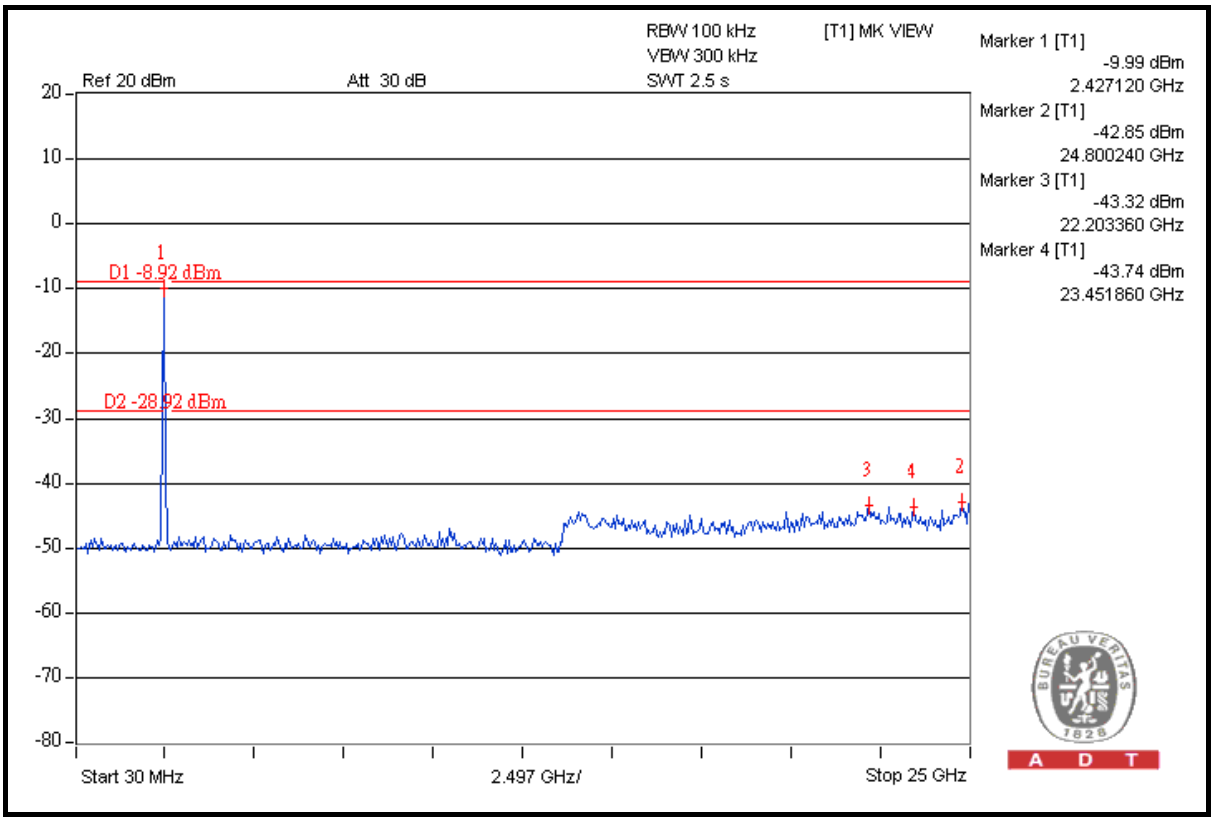

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-8.85 dBm
2.426000 GHz
Marker 2 [T1]
-45.10 dBm
2.400000 GHz
Marker 3 [T1]
-38.00 dBm
2.398400 GHz
Marker 4 [T1]
-49.02 dBm
2.390000 GHz
Marker 5 [T1]
-47.50 dBm
2.386800 GHz
D1 -8.85 dBm
D2 -28.85 dBm
F2
F1
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-8.76 dBm
2.431600 GHz
Marker 2 [T1]
-42.43 dBm
2.400000 GHz
Marker 3 [T1]
-38.75 dBm
2.398800 GHz
Marker 4 [T1]
-54.86 dBm
2.390000 GHz
Marker 5 [T1]
-54.86 dBm
2.390000 GHz
D1 -8.76 dBm
D2 -28.76 dBm
F2
F1
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.72 dBm
2.427120 GHz
Marker 2 [T1]
-42.99 dBm
14.163020 GHz
Marker 3 [T1]
-43.61 dBm
24.850180 GHz
Marker 4 [T1]
-43.64 dBm
24.700360 GHz
D1 -8.85 dBm
D2 -28.85 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-8.92 dBm
2.455600 GHz
Marker 2 [T1]
-47.03 dBm
2.483500 GHz
Marker 3 [T1]
-46.79 dBm
2.483600 GHz
Marker 4 [T1]
-48.48 dBm
2.500000 GHz
D1 -8.92 dBm
D2 -28.92 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-8.59 dBm
2.461200 GHz
Marker 2 [T1]
-52.88 dBm
2.483500 GHz
Marker 3 [T1]
-52.88 dBm
2.483500 GHz
Marker 4 [T1]
-57.71 dBm
2.500000 GHz
D1 -8.59 dBm
D2 -28.59 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.99 dBm
2.427120 GHz
Marker 2 [T1]
-42.85 dBm
24.800240 GHz
Marker 3 [T1]
-43.32 dBm
22.203360 GHz
Marker 4 [T1]
-43.74 dBm
23.451860 GHz
D1 -8.92 dBm
D2 -28.92 dBm
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 PIFA antenna with UFL antenna connector and Printed antenna with mcx antenna connector. The maximum Gain of the antenna is 1.36dBi.

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, 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, NVLAP
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	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: 886-2-26051924

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

Web Site: www.adt.com.tw

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

7. 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.

--- END ---