FCC TEST REPORT

REPORT NO.:	RF980624L27
MODEL NO.:	LR802UKN2
	(Refer to item 3.1 for the more details)
RECEIVED:	Jun. 24, 2009
TESTED:	Jul. 13 ~ Aug. 23, 2009
ISSUED:	Aug. 25, 2009

APPLICANT:	Qcom Technology Inc.
ADDRESS:	7F, NO.178, MING CHUAN E. RD.SEC 3, TAIPEI TAIWAN R.O.C.

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: 802.11 b/g/n Wireless USB Module
MODEL: LR802UKN2 (Refer to item 3.1 for the more details)
BRAND: QCOM TECHNOLOGY INC.
APPLICANT: Qcom Technology Inc.
TESTED: Jul. 13 ~ Aug. 23, 2009
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.4-2003

The above equipment (model: LR802UKN2) 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	: Polly Chien Polly Chien / Specialist	**, DATE :**	Aug. 25, 2009
TECHNICAL ACCEPTANCE Responsible for RF	: Long Chen Long Chen / Senior Engineer	**, DATE :**	Aug. 25, 2009
APPROVED BY	: Gary Chang Gary Chang / Assistant Manager	**, DATE :**	Aug. 25, 2009

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -12.78dB at 3.727MHz.
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 -1.03dB at 119.99MHz.
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	802.11 b/g/n Wireless USB Module
MODEL NO.	LR802UKN2 (Refer to Note 1 for the more details)
FCC ID	RUJ-LR802UKN2
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 150Mbps
OPRTAING 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	115.08mW
ANTENNA TYPE	Refer to note 3 for more details
DATA CABLE	NA
I/O PORTS	USB
ACCESSORY DEVICES	NA

NOTE:

1. The following models are electrically identical, different model names are for marketing purpose.

BRAND	MODEL	DIFFERENCE
QCOM TECHNOLOGY INC.	LR802UKN2	Main test model.
	LR802UKN3	All circuit design and layout are identical. Only the main board is different size.

2. The EUT provides one completed transmitter and one receiver.

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

3. The EUT uses with following antennas:

ANTENNA	BRAND	MODEL NO.	TYPE	GAIN (dBi)	CONNECTOR
Antenna 1	Airgain	M2445J	PIFA	4.50	UFL
Antenna 2	Unictron	CT004	Printed	2.45	UFL
Antenna 3	Airgain	N2420	Printed	3.30	UFL
Antenna 4	ThinkYard Technology	T000701	PIFA	0.48	UFL
Antenna 5	ThinkYard Technology	T000805	PIFA	-0.11	UFL

*The antenna 1 and 3 with the highest antenna gain were chosen for final test.

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

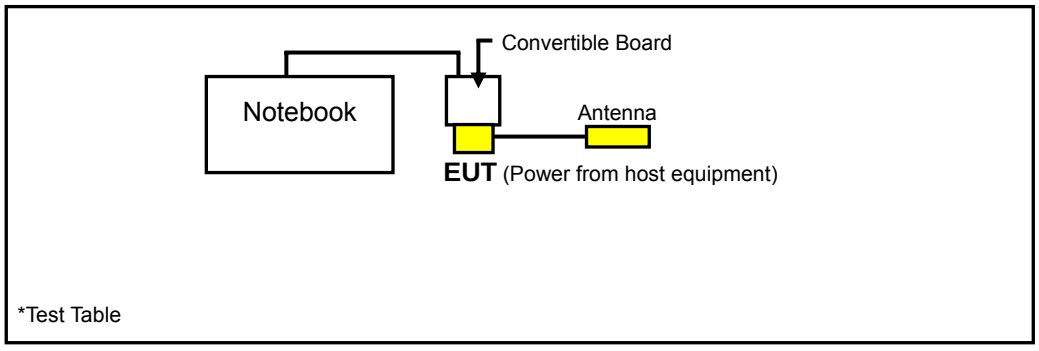
Eleven channels are provided for 802.11b, 802.11g and draft 802.11n (20MHz):

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



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, Type : PIFA (Model: M2445J)
B	√	√	√	-	Antenna 3, Type : Printed (Model: N2420)

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, 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)	EUT AXIS	ANT. AXIS
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z	X
B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z	Y
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z	X
B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z	Y
A	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Z	X
B	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Z	Y
A	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	Z	X
B	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	Z	Y

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, 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)	EUT AXIS	ANT. AXIS
A	802.11g	1 to 11	6	OFDM	BPSK	6.0	Z	X
B	802.11g	1 to 11	6	OFDM	BPSK	6.0	Z	Y

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	802.11g	1 to 11	6	OFDM	BPSK	6.0
B	802.11g	1 to 11	6	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A	Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5
A	Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	13.5

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	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
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	D600	CN-0G5152-48643-485-5636	NA
2	CONVERTIBLE BOARD	Qcom	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m USB cable.

NOTE:
1. All power cords of the above support units are non-shielded (1.8 m).
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	Jul. 06, 2009	Jul. 05, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100076	May. 26, 2009	May. 25, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 27, 2009	Apr. 26, 2010
HORN Antenna SCHWARZBECK	9120D	9120D-209	Jul. 01, 2009	Jun. 30, 2010
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 13, 2009	May 12, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	May 13, 2009	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.

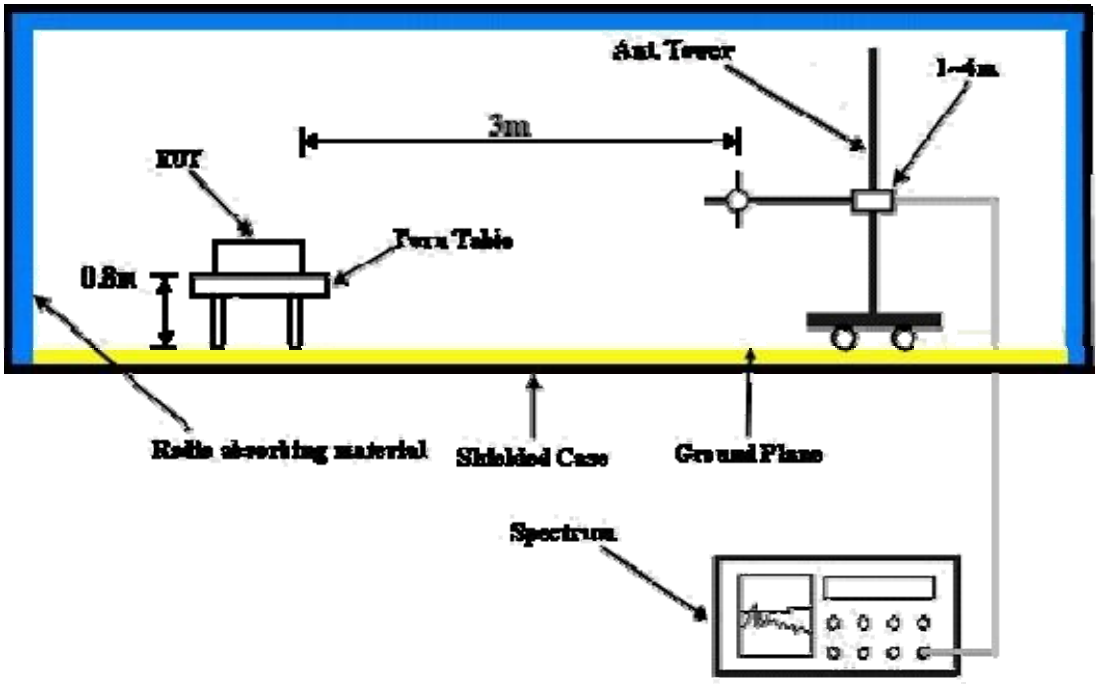
NOTE:

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. Connected the EUT with convertible board to notebook (via USB cable) and placed on a testing table.

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

c. The necessary accessories enable the system 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	25deg. C, 65%RH 1000 hPa	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	2386.00	61.86 PK	74.00	-12.14	1.00 H	321	31.22	30.64
2	2386.00	52.38 AV	54.00	-1.62	1.00 H	321	21.74	30.64
3	*2412.00	112.81 PK			1.00 H	321	82.08	30.73
4	*2412.00	108.07 AV			1.00 H	321	77.34	30.73
5	4824.00	50.48 PK	74.00	-23.52	1.02 H	129	14.06	36.42
6	4824.00	41.25 AV	54.00	-12.75	1.02 H	129	4.83	36.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	56.46 PK	74.00	-17.54	1.00 V	262	25.82	30.64
2	2386.00	45.60 AV	54.00	-8.40	1.00 V	262	14.96	30.64
3	*2412.00	104.41 PK			1.00 V	262	73.68	30.73
4	*2412.00	99.88 AV			1.00 V	262	69.15	30.73
5	4824.00	49.13 PK	74.00	-24.87	1.02 V	232	12.71	36.42
6	4824.00	37.82 AV	54.00	-16.18	1.02 V	232	1.40	36.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": 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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	110.97 PK			1.20 H	360	80.16	30.81
2	*2437.00	106.55 AV			1.20 H	360	75.74	30.81
3	4874.00	48.44 PK	74.00	-25.56	1.13 H	130	11.97	36.47
4	4874.00	36.06 AV	54.00	-17.94	1.13 H	130	-0.41	36.47
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	102.34 PK			1.00 V	260	71.53	30.81
2	*2437.00	97.66 AV			1.00 V	260	66.85	30.81
3	4874.00	46.20 PK	74.00	-27.80	1.23 V	198	9.73	36.47
4	4874.00	35.48 AV	54.00	-18.52	1.23 V	198	-0.99	36.47

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.
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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	112.22 PK			1.40 H	311	81.33	30.89
2	*2462.00	107.47 AV			1.40 H	311	76.58	30.89
3	2483.50	59.05 PK	74.00	-14.95	1.40 H	311	28.09	30.96
4	2483.50	48.44 AV	54.00	-5.56	1.40 H	311	17.48	30.96
5	4924.00	49.91 PK	74.00	-24.09	1.53 H	175	13.33	36.58
6	4924.00	35.63 AV	54.00	-18.37	1.53 H	175	-0.95	36.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.08 PK			1.11 V	13	72.19	30.89
2	*2462.00	98.52 AV			1.11 V	13	67.63	30.89
3	2483.50	67.41 PK	74.00	-6.59	1.11 V	13	36.45	30.96
4	2483.50	46.16 AV	54.00	-7.84	1.11 V	13	15.20	30.96
5	4924.00	45.19 PK	74.00	-28.81	1.05 V	122	8.61	36.58
6	4924.00	35.73 AV	54.00	-18.27	1.05 V	122	-0.85	36.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	2386.00	62.30 PK	74.00	-11.70	1.50 H	189	31.66	30.64
2	2386.00	52.36 AV	54.00	-1.64	1.50 H	189	21.72	30.64
3	*2412.00	111.96 PK			1.50 H	189	81.23	30.73
4	*2412.00	107.22 AV			1.50 H	189	76.49	30.73
5	4824.00	52.26 PK	74.00	-21.74	1.04 H	154	15.84	36.42
6	4824.00	45.23 AV	54.00	-8.77	1.04 H	154	8.81	36.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	56.18 PK	74.00	-17.82	1.55 V	210	25.54	30.64
2	2386.00	45.09 AV	54.00	-8.91	1.55 V	210	14.45	30.64
3	*2412.00	101.58 PK			1.55 V	210	70.85	30.73
4	*2412.00	97.10 AV			1.55 V	210	66.37	30.73
5	4824.00	49.84 PK	74.00	-24.16	1.30 V	213	13.42	36.42
6	4824.00	39.58 AV	54.00	-14.42	1.30 V	213	3.16	36.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	110.15 PK			1.45 H	164	79.34	30.81
2	*2437.00	105.68 AV			1.45 H	164	74.87	30.81
3	4874.00	51.16 PK	74.00	-22.84	1.08 H	162	14.69	36.47
4	4874.00	40.01 AV	54.00	-13.99	1.08 H	162	3.54	36.47
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	100.03 PK			1.58 V	220	69.22	30.81
2	*2437.00	95.62 AV			1.58 V	220	64.81	30.81
3	4874.00	49.25 PK	74.00	-24.75	1.31 V	200	12.78	36.47
4	4874.00	38.14 AV	54.00	-15.86	1.31 V	200	1.67	36.47

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.
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	25deg. C, 65%RH 1000 hPa	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	111.35 PK			1.46 H	190	80.46	30.89
2	*2462.00	106.58 AV			1.46 H	190	75.69	30.89
3	2488.00	59.81 PK	74.00	-14.19	1.46 H	190	28.84	30.97
4	2488.00	48.59 AV	54.00	-5.41	1.46 H	190	17.62	30.97
5	4924.00	51.03 PK	74.00	-22.97	1.01 H	236	14.45	36.58
6	4924.00	39.44 AV	54.00	-14.56	1.01 H	236	2.86	36.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.03 PK			1.56 V	202	70.14	30.89
2	*2462.00	96.64 AV			1.56 V	202	65.75	30.89
3	2488.00	58.45 PK	74.00	-15.55	1.56 V	202	27.48	30.97
4	2488.00	47.22 AV	54.00	-6.78	1.56 V	202	16.25	30.97
5	4924.00	50.83 PK	74.00	-23.17	1.09 V	68	14.25	36.58
6	4924.00	39.26 AV	54.00	-14.74	1.09 V	68	2.68	36.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": 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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	2360.00	58.72 PK	74.00	-15.28	1.44 H	312	28.17	30.55
2	2360.00	48.69 AV	54.00	-5.31	1.44 H	312	18.14	30.55
3	*2412.00	108.05 PK			1.44 H	312	77.32	30.73
4	*2412.00	98.35 AV			1.44 H	312	67.62	30.73
5	4824.00	48.54 PK	74.00	-25.46	1.04 H	286	12.12	36.42
6	4824.00	34.66 AV	54.00	-19.34	1.04 H	286	-1.76	36.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.03 PK	74.00	-16.97	1.02 V	261	26.38	30.65
2	2390.00	46.47 AV	54.00	-7.53	1.02 V	261	15.82	30.65
3	*2412.00	96.77 PK			1.02 V	261	66.04	30.73
4	*2412.00	86.30 AV			1.02 V	261	55.57	30.73
5	4824.00	47.75 PK	74.00	-26.25	1.07 V	22	11.33	36.42
6	4824.00	34.66 AV	54.00	-19.34	1.07 V	22	-1.76	36.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": 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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	107.56 PK			1.41 H	310	76.75	30.81
2	*2437.00	97.01 AV			1.41 H	310	66.20	30.81
3	4874.00	48.85 PK	74.00	-25.15	1.03 H	303	12.38	36.47
4	4874.00	35.33 AV	54.00	-18.67	1.03 H	303	-1.14	36.47
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	96.31 PK			1.00 V	259	65.50	30.81
2	*2437.00	86.39 AV			1.00 V	259	55.58	30.81
3	4874.00	46.47 PK	74.00	-27.53	1.03 V	256	10.00	36.47
4	4874.00	33.85 AV	54.00	-20.15	1.03 V	256	-2.62	36.47

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.
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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	108.89 PK			1.39 H	311	78.00	30.89
2	*2462.00	98.29 AV			1.39 H	311	67.40	30.89
3	2483.50	57.36 PK	74.00	-16.64	1.39 H	311	26.40	30.96
4	2483.50	47.60 AV	54.00	-6.40	1.39 H	311	16.64	30.96
5	4924.00	47.49 PK	74.00	-26.51	1.08 H	252	10.91	36.58
6	4924.00	35.53 AV	54.00	-18.47	1.08 H	252	-1.05	36.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	97.74 PK			1.11 V	38	66.85	30.89
2	*2462.00	87.17 AV			1.11 V	38	56.28	30.89
3	2483.50	57.46 PK	74.00	-16.54	1.20 V	350	26.50	30.96
4	2483.50	46.12 AV	54.00	-7.88	1.20 V	350	15.16	30.96
5	4924.00	47.38 PK	74.00	-26.62	1.31 V	59	10.80	36.58
6	4924.00	34.31 AV	54.00	-19.69	1.31 V	59	-2.27	36.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	2360.00	57.94 PK	74.00	-16.06	1.45 H	191	27.39	30.55
2	2360.00	47.91 AV	54.00	-6.09	1.45 H	191	17.36	30.55
3	*2412.00	107.16 PK			1.45 H	191	76.43	30.73
4	*2412.00	97.47 AV			1.45 H	191	66.74	30.73
5	4824.00	48.68 PK	74.00	-25.32	1.02 H	261	12.26	36.42
6	4824.00	34.82 AV	54.00	-19.18	1.02 H	261	-1.60	36.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.03 PK	74.00	-16.97	1.50 V	208	26.38	30.65
2	2390.00	46.95 AV	54.00	-7.05	1.50 V	208	16.30	30.65
3	*2412.00	97.02 PK			1.50 V	208	66.29	30.73
4	*2412.00	87.31 AV			1.50 V	208	56.58	30.73
5	4824.00	48.32 PK	74.00	-25.68	1.02 V	246	11.90	36.42
6	4824.00	34.51 AV	54.00	-19.49	1.02 V	246	-1.91	36.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	106.03 PK			1.46 H	192	75.22	30.81
2	*2437.00	95.94 AV			1.46 H	192	65.13	30.81
3	4874.00	48.62 PK	74.00	-25.38	1.03 H	249	12.15	36.47
4	4874.00	35.11 AV	54.00	-18.89	1.03 H	249	-1.36	36.47
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	95.82 PK			1.49 V	211	65.01	30.81
2	*2437.00	86.14 AV			1.49 V	211	55.33	30.81
3	4874.00	48.01 PK	74.00	-25.99	1.05 V	27	11.54	36.47
4	4874.00	34.26 AV	54.00	-19.74	1.05 V	27	-2.21	36.47

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.
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	25deg. C, 65%RH 1000 hPa	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	107.42 PK			1.48 H	186	76.53	30.89
2	*2462.00	97.64 AV			1.48 H	186	66.75	30.89
3	2483.50	57.24 PK	74.00	-16.76	1.48 H	186	26.28	30.96
4	2483.50	47.48 AV	54.00	-6.52	1.48 H	186	16.52	30.96
5	4924.00	48.92 PK	74.00	-25.08	1.03 H	211	12.34	36.58
6	4924.00	35.16 AV	54.00	-18.84	1.03 H	211	-1.42	36.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	97.28 PK			1.49 V	201	66.39	30.89
2	*2462.00	87.54 AV			1.49 V	201	56.65	30.89
3	2483.50	56.84 PK	74.00	-17.16	1.49 V	201	25.88	30.96
4	2483.50	47.03 AV	54.00	-6.97	1.49 V	201	16.07	30.96
5	4924.00	48.53 PK	74.00	-25.47	1.08 V	261	11.95	36.58
6	4924.00	34.88 AV	54.00	-19.12	1.08 V	261	-1.70	36.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	2360.00	59.41 PK	74.00	-14.59	1.48 H	315	28.86	30.55
2	2360.00	48.41 AV	54.00	-5.59	1.48 H	315	17.86	30.55
3	*2412.00	107.93 PK			1.44 H	313	77.20	30.73
4	*2412.00	97.91 AV			1.44 H	313	67.18	30.73
5	4824.00	48.74 PK	74.00	-25.26	1.50 H	320	12.32	36.42
6	4824.00	34.40 AV	54.00	-19.60	1.50 H	320	-2.02	36.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2360.00	57.40 PK	74.00	-16.60	1.05 V	270	26.85	30.55
2	2360.00	46.33 AV	54.00	-7.67	1.05 V	270	15.78	30.55
3	*2412.00	97.33 PK			1.03 V	261	66.60	30.73
4	*2412.00	87.23 AV			1.03 V	261	56.50	30.73
5	4824.00	47.24 PK	74.00	-26.76	1.15 V	113	10.82	36.42
6	4824.00	34.28 AV	54.00	-19.72	1.15 V	113	-2.14	36.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": 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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	106.54 PK			1.42 H	310	75.73	30.81
2	*2437.00	96.62 AV			1.42 H	310	65.81	30.81
3	4874.00	49.62 PK	74.00	-24.38	1.50 H	118	13.15	36.47
4	4874.00	35.22 AV	54.00	-18.78	1.50 H	118	-1.25	36.47
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	96.20 PK			1.01 V	259	65.39	30.81
2	*2437.00	86.55 AV			1.01 V	259	55.74	30.81
3	4874.00	47.14 PK	74.00	-26.86	1.00 V	352	10.67	36.47
4	4874.00	34.34 AV	54.00	-19.66	1.00 V	352	-2.13	36.47

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.
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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	107.76 PK			1.39 H	320	76.87	30.89
2	*2462.00	97.35 AV			1.39 H	320	66.46	30.89
3	2483.50	60.12 PK	74.00	-13.88	1.40 H	312	29.16	30.96
4	2483.50	48.17 AV	54.00	-5.83	1.40 H	312	17.21	30.96
5	4924.00	49.59 PK	74.00	-24.41	1.02 H	43	13.01	36.58
6	4924.00	34.14 AV	54.00	-19.86	1.02 H	43	-2.44	36.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	97.30 PK			1.11 V	12	66.41	30.89
2	*2462.00	87.40 AV			1.11 V	12	56.51	30.89
3	2483.50	56.44 PK	74.00	-17.56	1.02 V	10	25.48	30.96
4	2483.50	46.06 AV	54.00	-7.94	1.02 V	10	15.10	30.96
5	4924.00	48.11 PK	74.00	-25.89	1.30 V	318	11.53	36.58
6	4924.00	34.11 AV	54.00	-19.89	1.30 V	318	-2.47	36.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	2360.00	57.81 PK	74.00	-16.19	1.46 H	192	27.26	30.55
2	2360.00	47.82 AV	54.00	-6.18	1.46 H	192	17.27	30.55
3	*2412.00	107.03 PK			1.46 H	192	76.30	30.73
4	*2412.00	97.34 AV			1.46 H	192	66.61	30.73
5	4824.00	48.89 PK	74.00	-25.11	1.04 H	272	12.47	36.42
6	4824.00	35.06 AV	54.00	-18.94	1.04 H	272	-1.36	36.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.92 PK	74.00	-17.08	1.51 V	202	26.27	30.65
2	2390.00	46.83 AV	54.00	-7.17	1.51 V	202	16.18	30.65
3	*2412.00	96.91 PK			1.51 V	202	66.18	30.73
4	*2412.00	87.18 AV			1.51 V	202	56.45	30.73
5	4824.00	48.19 PK	74.00	-25.81	1.06 V	253	11.77	36.42
6	4824.00	34.38 AV	54.00	-19.62	1.06 V	253	-2.04	36.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	105.89 PK			1.45 H	193	75.08	30.81
2	*2437.00	95.82 AV			1.45 H	193	65.01	30.81
3	4874.00	48.51 PK	74.00	-25.49	1.01 H	266	12.04	36.47
4	4874.00	35.02 AV	54.00	-18.98	1.01 H	266	-1.45	36.47
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	95.68 PK			1.48 V	209	64.87	30.81
2	*2437.00	86.02 AV			1.48 V	209	55.21	30.81
3	4874.00	48.26 PK	74.00	-25.74	1.03 V	219	11.79	36.47
4	4874.00	34.53 AV	54.00	-19.47	1.03 V	219	-1.94	36.47

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.
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	25deg. C, 65%RH 1000 hPa	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	107.22 PK			1.47 H	189	76.33	30.89
2	*2462.00	97.43 AV			1.47 H	189	66.54	30.89
3	2483.50	57.11 PK	74.00	-16.89	1.47 H	189	26.15	30.96
4	2483.50	47.36 AV	54.00	-6.64	1.47 H	189	16.40	30.96
5	4924.00	48.82 PK	74.00	-25.18	1.06 H	238	12.24	36.58
6	4924.00	35.07 AV	54.00	-18.93	1.06 H	238	-1.51	36.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	97.06 PK			1.48 V	195	66.17	30.89
2	*2462.00	87.29 AV			1.48 V	195	56.40	30.89
3	2483.50	56.61 PK	74.00	-17.39	1.48 V	195	25.65	30.96
4	2483.50	46.92 AV	54.00	-7.08	1.48 V	195	15.96	30.96
5	4924.00	48.69 PK	74.00	-25.31	1.11 V	25	12.11	36.58
6	4924.00	35.06 AV	54.00	-18.94	1.11 V	25	-1.52	36.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	60.06 PK	74.00	-13.94	1.44 H	312	29.41	30.65
2	2390.00	48.58 AV	54.00	-5.42	1.44 H	312	17.93	30.65
3	*2422.00	103.96 PK			1.44 H	312	73.20	30.76
4	*2422.00	93.59 AV			1.44 H	312	62.83	30.76
5	4844.00	48.99 PK	74.00	-25.01	1.23 H	237	12.55	36.44
6	4844.00	35.31 AV	54.00	-18.69	1.23 H	237	-1.13	36.44
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.04 PK	74.00	-16.96	1.03 V	260	26.39	30.65
2	2390.00	46.00 AV	54.00	-8.00	1.03 V	260	15.35	30.65
3	*2422.00	92.80 PK			1.03 V	260	62.04	30.76
4	*2422.00	82.25 AV			1.03 V	260	51.49	30.76
5	4844.00	48.24 PK	74.00	-25.76	1.02 V	120	11.80	36.44
6	4844.00	34.37 AV	54.00	-19.63	1.02 V	120	-2.07	36.44

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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	102.91 PK			1.47 H	325	72.10	30.81
2	*2437.00	92.12 AV			1.47 H	325	61.31	30.81
3	4874.00	49.09 PK	74.00	-24.91	1.32 H	301	12.62	36.47
4	4874.00	35.34 AV	54.00	-18.66	1.32 H	301	-1.13	36.47
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	91.35 PK			1.02 V	261	60.54	30.81
2	*2437.00	81.75 AV			1.02 V	261	50.94	30.81
3	4874.00	47.98 PK	74.00	-26.02	1.00 V	238	11.51	36.47
4	4874.00	34.44 AV	54.00	-19.56	1.00 V	238	-2.03	36.47

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.
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	25deg. C, 65%RH 1000 hPa	TESTED BY	Sun Lin
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	103.56 PK			1.40 H	322	72.70	30.86
2	*2452.00	93.26 AV			1.40 H	322	62.40	30.86
3	2483.50	60.74 PK	74.00	-13.26	1.40 H	322	29.78	30.96
4	2483.50	49.59 AV	54.00	-4.41	1.40 H	322	18.63	30.96
5	4904.00	48.98 PK	74.00	-25.02	1.33 H	312	12.47	36.51
6	4904.00	35.34 AV	54.00	-18.66	1.33 H	312	-1.17	36.51
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	*2452.00	92.62 PK			1.02 V	259	61.76	30.86
2	*2452.00	82.27 AV			1.02 V	259	51.41	30.86
3	2483.50	58.79 PK	74.00	-15.21	1.02 V	259	27.83	30.96
4	2483.50	46.19 AV	54.00	-7.81	1.02 V	259	15.23	30.96
5	4904.00	48.20 PK	74.00	-25.80	1.25 V	147	11.69	36.51
6	4904.00	34.31 AV	54.00	-19.69	1.25 V	147	-2.20	36.51

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": 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	25deg. C, 65%RH 1000 hPa	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	59.84 PK	74.00	-14.16	1.49 H	195	29.19	30.65
2	2390.00	48.43 AV	54.00	-5.57	1.49 H	195	17.78	30.65
3	*2422.00	102.81 PK			1.49 H	195	72.05	30.76
4	*2422.00	93.24 AV			1.49 H	195	62.48	30.76
5	4844.00	48.52 PK	74.00	-25.48	1.01 H	43	12.08	36.44
6	4844.00	34.66 AV	54.00	-19.34	1.01 H	43	-1.78	36.44
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.62 PK	74.00	-15.38	1.47 V	199	27.97	30.65
2	2390.00	46.95 AV	54.00	-7.05	1.47 V	199	16.30	30.65
3	*2422.00	92.66 PK			1.47 V	199	61.90	30.76
4	*2422.00	83.04 AV			1.47 V	199	52.28	30.76
5	4844.00	48.46 PK	74.00	-25.54	1.01 V	66	12.02	36.44
6	4844.00	34.62 AV	54.00	-19.38	1.01 V	66	-1.82	36.44

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	25deg. C, 65%RH 1000 hPa	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	101.82 PK			1.48 H	200	71.01	30.81
2	*2437.00	91.96 AV			1.48 H	200	61.15	30.81
3	4874.00	48.69 PK	74.00	-25.31	1.07 H	82	12.22	36.47
4	4874.00	34.85 AV	54.00	-19.15	1.07 H	82	-1.62	36.47
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	91.54 PK			1.45 V	196	60.73	30.81
2	*2437.00	81.96 AV			1.45 V	196	51.15	30.81
3	4874.00	48.53 PK	74.00	-25.47	1.06 V	52	12.06	36.47
4	4874.00	34.86 AV	54.00	-19.14	1.06 V	52	-1.61	36.47

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.
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	25deg. C, 65%RH 1000 hPa	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	102.45 PK			1.48 H	196	71.59	30.86
2	*2452.00	92.38 AV			1.48 H	196	61.52	30.86
3	2483.50	60.52 PK	74.00	-13.48	1.48 H	196	29.56	30.96
4	2483.50	49.38 AV	54.00	-4.62	1.48 H	196	18.42	30.96
5	4904.00	48.44 PK	74.00	-25.56	1.07 H	244	11.93	36.51
6	4904.00	34.57 AV	54.00	-19.43	1.07 H	244	-1.94	36.51
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	*2452.00	92.38 PK			1.44 V	205	61.52	30.86
2	*2452.00	82.51 AV			1.44 V	205	51.65	30.86
3	2483.50	59.41 PK	74.00	-14.59	1.44 V	205	28.45	30.96
4	2483.50	48.25 AV	54.00	-5.75	1.44 V	205	17.29	30.96
5	4904.00	48.67 PK	74.00	-25.33	1.01 V	42	12.16	36.51
6	4904.00	34.75 AV	54.00	-19.25	1.01 V	42	-1.76	36.51

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 999 hPa	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	101.84	33.05 QP	43.50	-10.45	1.25 H	220	21.48	11.58
2	175.72	35.43 QP	43.50	-8.07	1.00 H	241	22.30	13.13
3	239.88	39.53 QP	46.00	-6.47	1.00 H	235	26.38	13.15
4	360.43	39.46 QP	46.00	-6.54	1.00 H	340	23.08	16.38
5	480.97	36.61 QP	46.00	-9.39	1.25 H	235	16.61	20.00
6	961.21	49.86 QP	54.00	-4.14	1.25 H	265	21.25	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	66.84	34.52 QP	40.00	-5.48	1.00 V	10	21.38	13.14
2	88.23	33.74 QP	43.50	-9.76	1.25 V	277	25.82	7.92
3	465.42	35.63 QP	46.00	-10.37	1.00 V	175	15.98	19.65
4	638.46	32.08 QP	46.00	-13.92	1.00 V	130	8.61	23.47
5	768.73	29.20 QP	46.00	-16.80	1.25 V	280	3.51	25.69
6	930.11	30.74 QP	46.00	-15.26	1.00 V	319	2.44	28.30

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 999 hPa	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	**119.99**	**42.47 QP**	**43.50**	**-1.03**	**1.46 H**	**16**	**31.15**	**11.32**
2	360.43	39.48 QP	46.00	-6.52	1.00 H	34	23.09	16.38
3	599.58	36.94 QP	46.00	-9.06	1.25 H	337	14.55	22.39
4	665.68	40.31 QP	46.00	-5.69	1.25 H	307	16.12	24.18
5	840.67	36.74 QP	46.00	-9.26	1.00 H	352	9.98	26.76
6	960.00	44.58 QP	46.00	-1.42	1.33 H	150	15.98	28.60
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	39.37	38.69 QP	40.00	-1.31	1.50 V	155	23.65	15.04
2	66.84	36.59 QP	40.00	-3.41	1.25 V	127	23.45	13.14
3	119.34	39.27 QP	43.50	-4.23	1.50 V	175	27.94	11.33
4	599.58	33.92 QP	46.00	-12.08	1.00 V	121	11.52	22.39
5	665.68	39.68 QP	46.00	-6.32	1.25 V	199	15.50	24.18
6	960.00	42.13 QP	46.00	-3.87	1.60 V	172	13.53	28.60

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	100288	Sep. 22, 2008	Sep. 21, 2009
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 31, 2008	Dec. 30, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Dec. 29, 2008	Dec. 28, 2009
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jul. 29, 2009	Jul. 28, 2010
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 2.
3. The VCCI Site Registration No. is C-2047.

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.

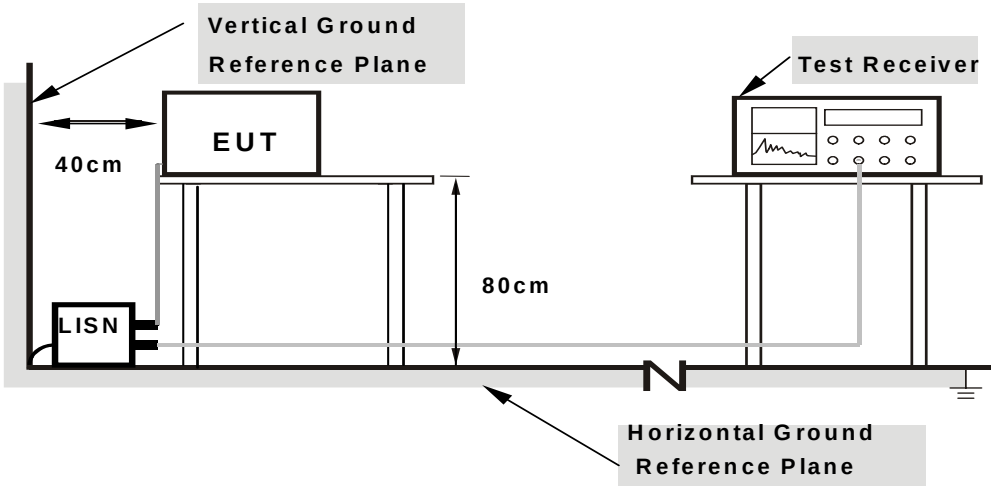
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

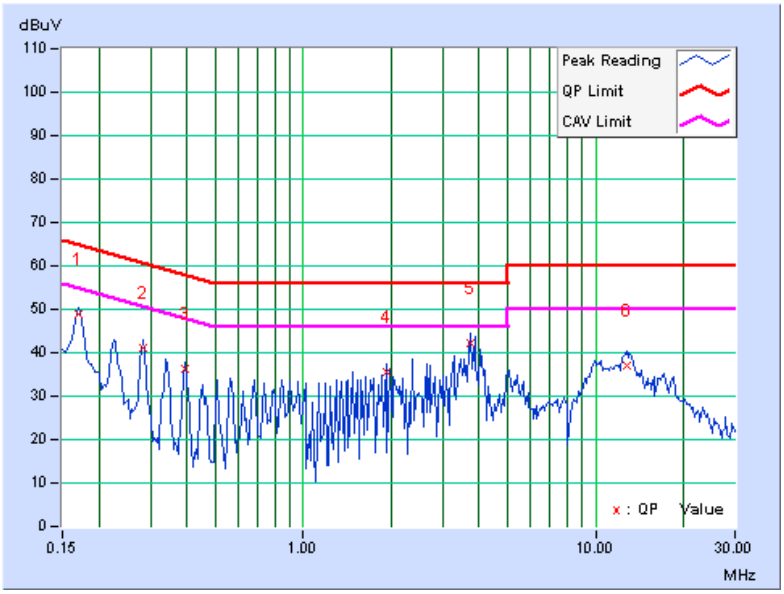
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1019hPa	TESTED BY	Match Tsui
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	0.170	0.13	48.94	-	49.07	-	64.98	54.98	-15.91	-
2	0.283	0.13	41.02	-	41.15	-	60.73	50.73	-19.58	-
3	0.396	0.14	36.28	-	36.42	-	57.93	47.93	-21.52	-
4	1.922	0.19	35.25	-	35.44	-	56.00	46.00	-20.56	-
5	3.727	0.27	42.01	-	42.28	-	56.00	46.00	-13.72	-
6	12.762	0.50	36.38	-	36.88	-	60.00	50.00	-23.12	-

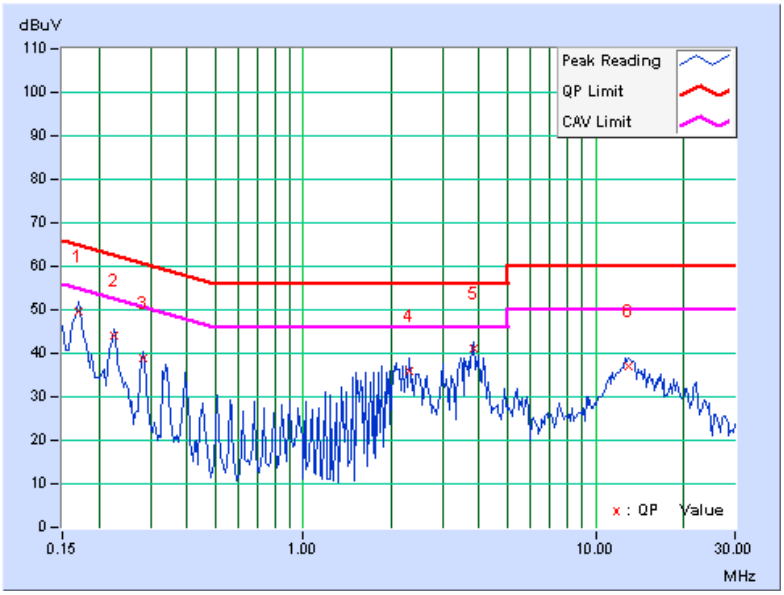
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1019hPa	TESTED BY	Match Tsui
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	0.170	0.13	49.35	-	49.48	-	64.98	54.98	-15.50	-
2	0.224	0.13	43.77	-	43.90	-	62.66	52.66	-18.76	-
3	0.283	0.14	38.76	-	38.90	-	60.73	50.73	-21.83	-
4	2.316	0.22	35.72	-	35.94	-	56.00	46.00	-20.06	-
5	3.840	0.29	41.00	-	41.29	-	56.00	46.00	-14.71	-
6	13.047	0.60	36.32	-	36.92	-	60.00	50.00	-23.08	-

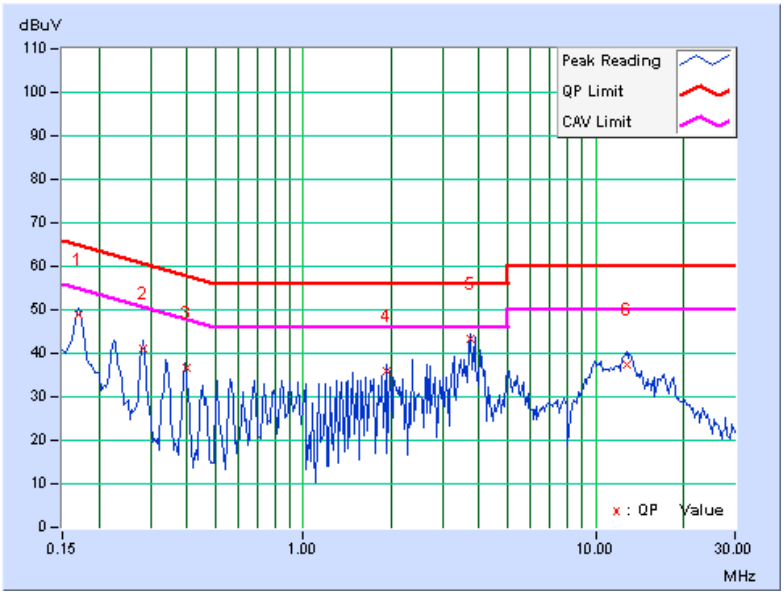
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1019hPa	TESTED BY	Match Tsui
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	0.169	0.13	48.84	-	48.97	-	64.99	54.99	-16.02	-
2	0.283	0.13	41.12	-	41.25	-	60.73	50.73	-19.48	-
3	0.397	0.14	36.46	-	36.60	-	57.92	47.92	-21.32	-
4	1.922	0.19	35.61	-	35.80	-	56.00	46.00	-20.20	-
5	**3.727**	**0.27**	**42.95**	**-**	**43.22**	**-**	**56.00**	**46.00**	**-12.78**	**-**
6	12.762	0.50	36.96	-	37.46	-	60.00	50.00	-22.54	-

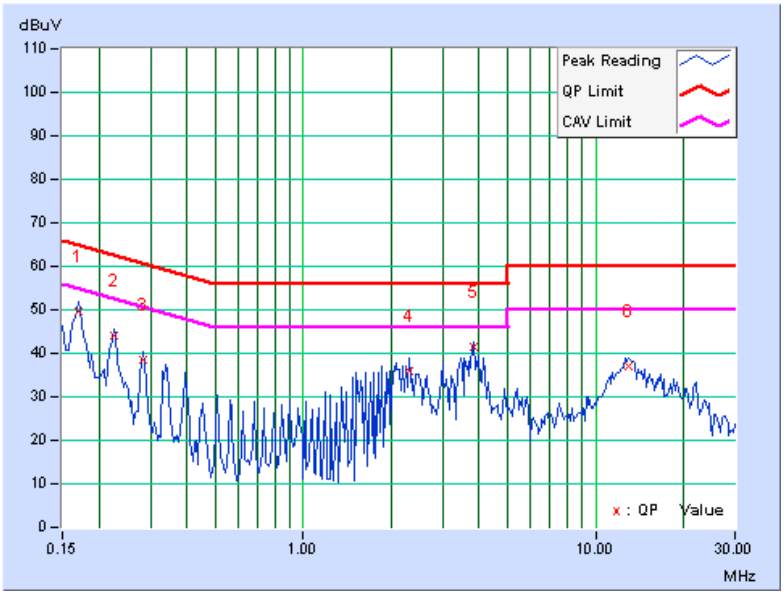
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1019hPa	TESTED BY	Match Tsui
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	0.170	0.13	49.35	-	49.48	-	64.98	54.98	-15.50	-
2	0.224	0.13	43.77	-	43.90	-	62.66	52.66	-18.76	-
3	0.283	0.14	38.38	-	38.52	-	60.73	50.73	-22.21	-
4	2.317	0.22	35.86	-	36.08	-	56.00	46.00	-19.92	-
5	3.840	0.29	41.36	-	41.65	-	56.00	46.00	-14.35	-
6	13.047	0.60	36.48	-	37.08	-	60.00	50.00	-22.92	-

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	100041	May 13, 2009	May 12, 2010

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

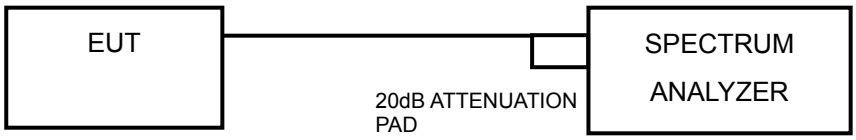
4.3.3 TEST PROCEDURE

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 300kHz 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.

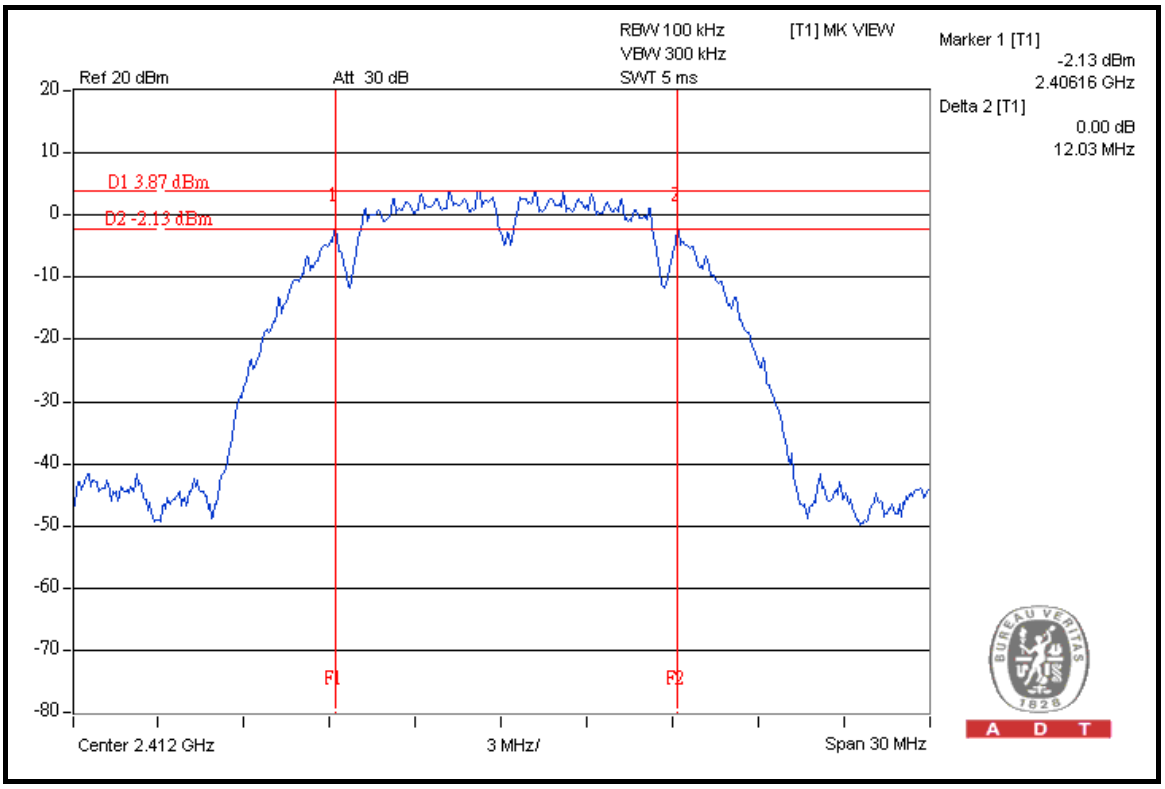
4.3.7 TEST RESULTS

802.11b DSSS MODULATION

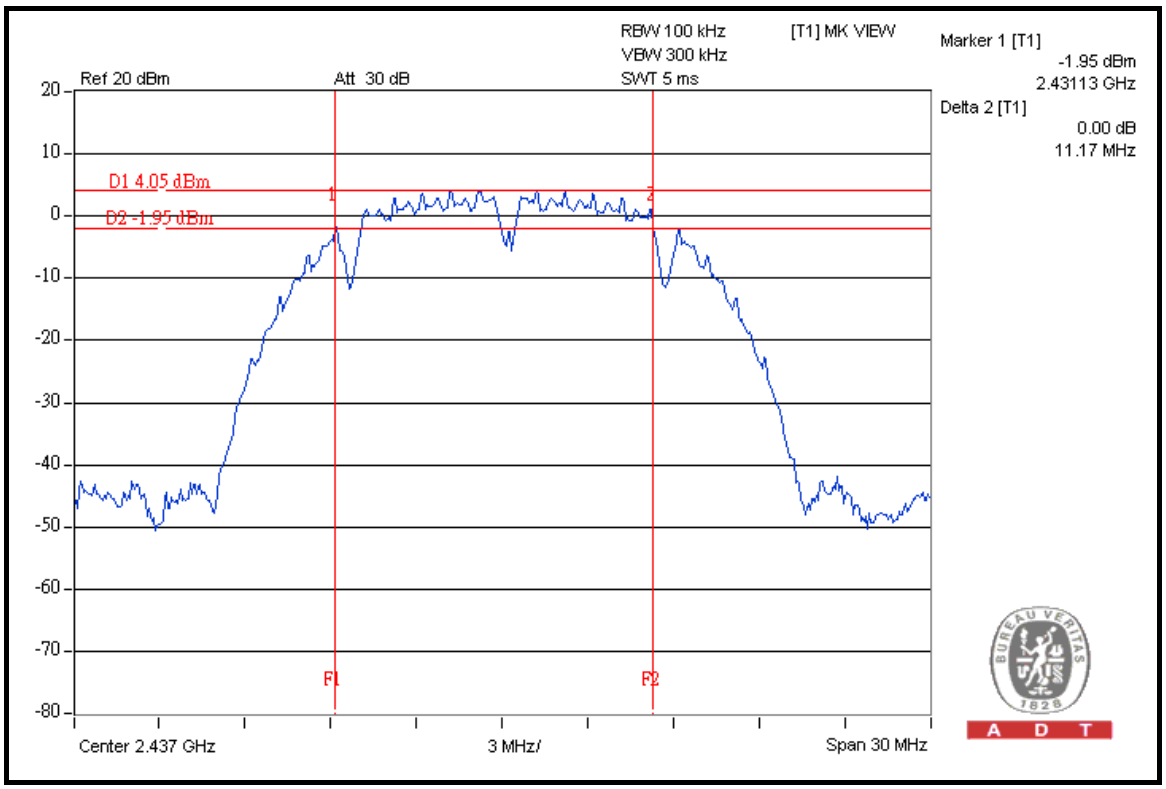
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.03	0.5	PASS
6	2437	11.17	0.5	PASS
11	2462	11.15	0.5	PASS

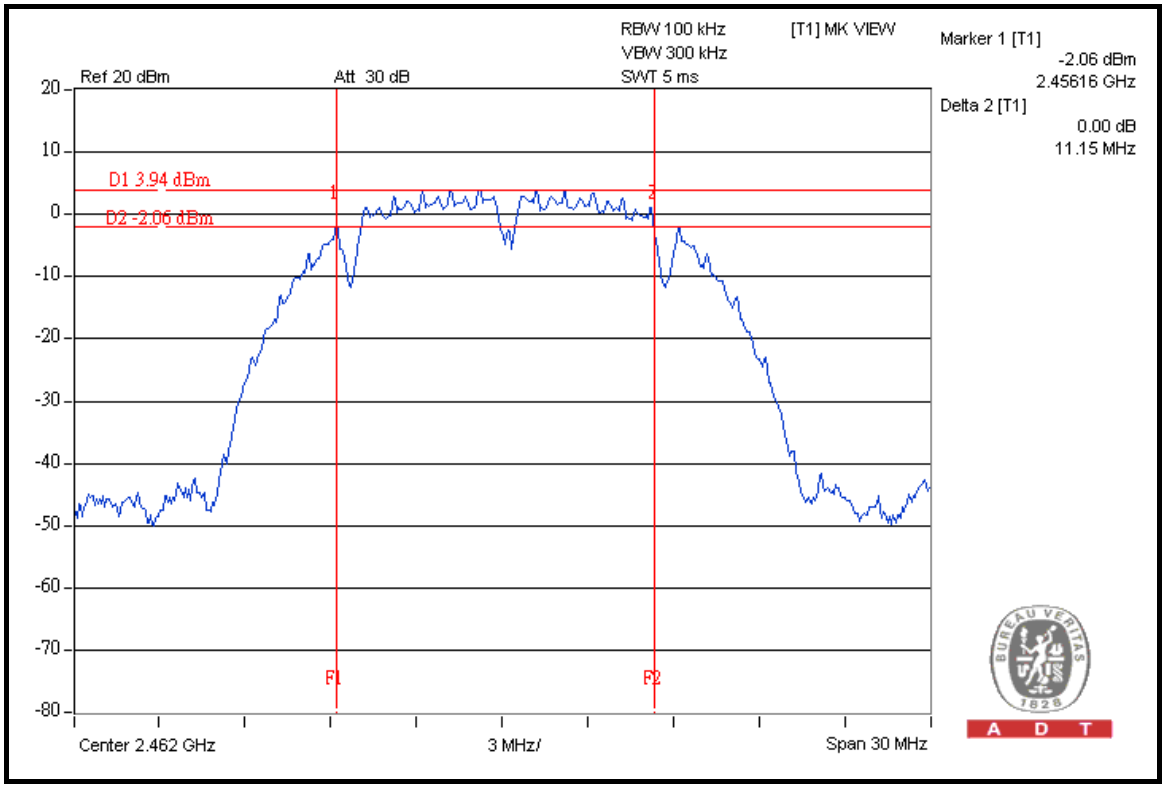
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-1.95 dBm
2.43113 GHz
Delta 2 [T1]
0.00 dB
11.17 MHz
Ref 20 dBm
Att 30 dB
D1 4.05 dBm
D2 -1.95 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

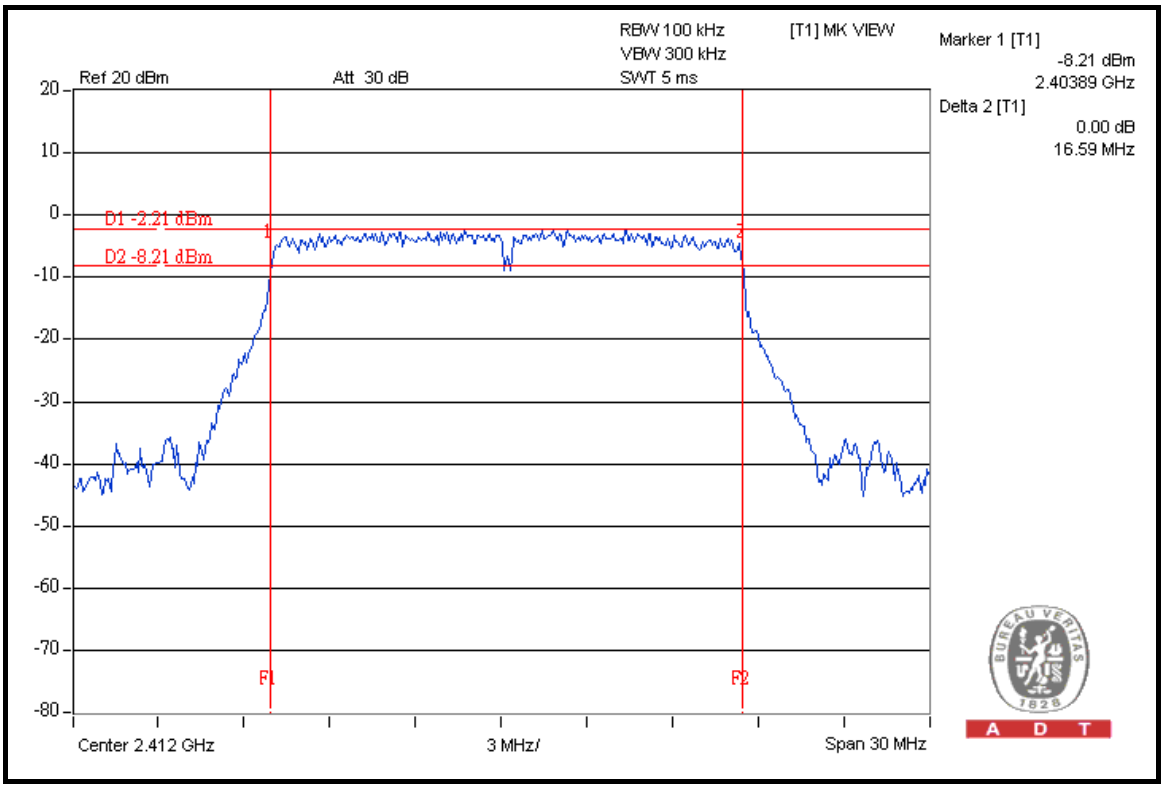

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-2.06 dBm
2.45616 GHz
Delta 2 [T1]
0.00 dB
11.15 MHz
Ref 20 dBm
Att 30 dB
D1 3.94 dBm
D2 -2.06 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

802.11g OFDM MODULATION

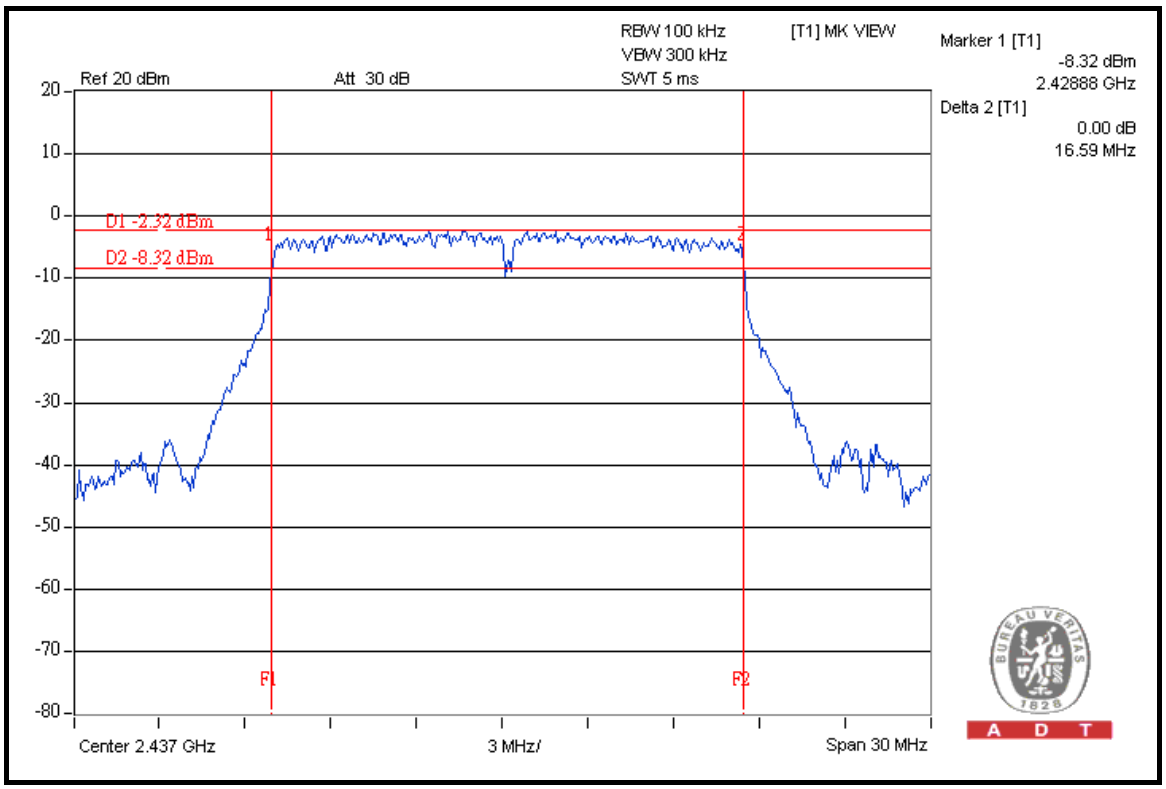
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.59	0.5	PASS
6	2437	16.59	0.5	PASS
11	2462	16.57	0.5	PASS

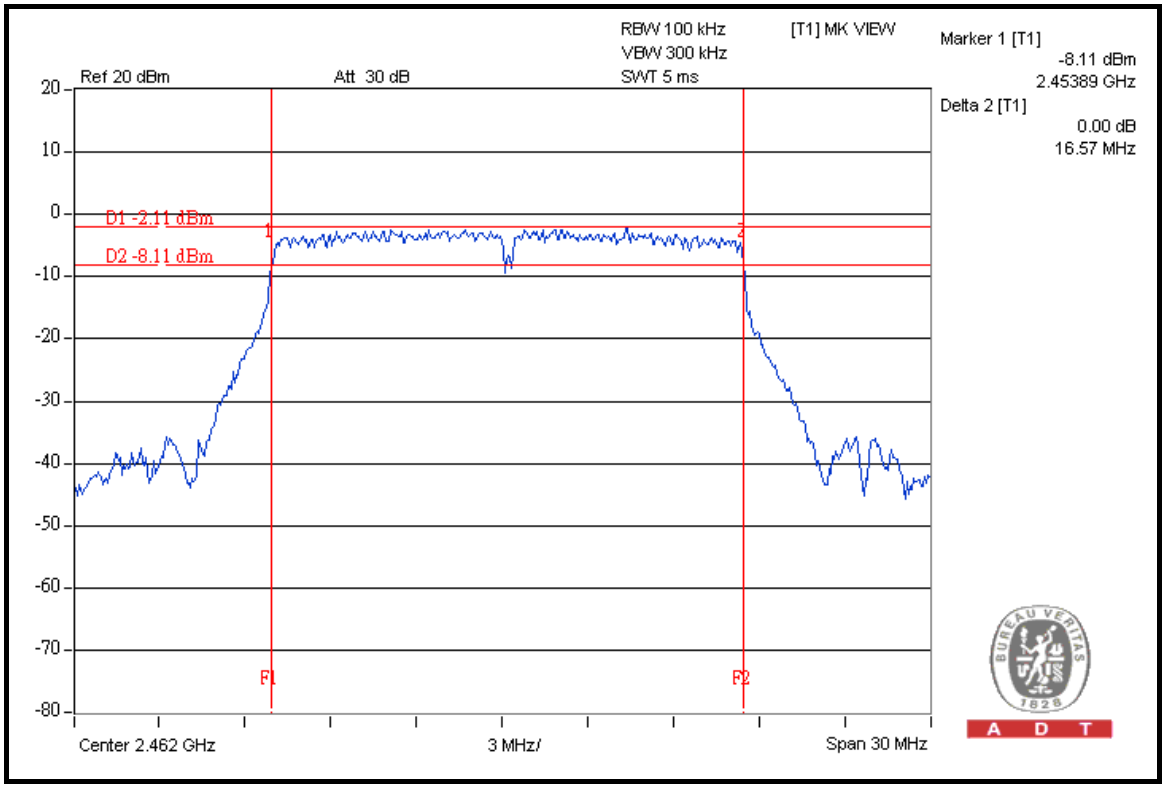
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.32 dBm
2.42888 GHz
Delta 2 [T1]
0.00 dB
16.59 MHz
Ref 20 dBm
Att 30 dB
D1 -2.32 dBm
D2 -8.32 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

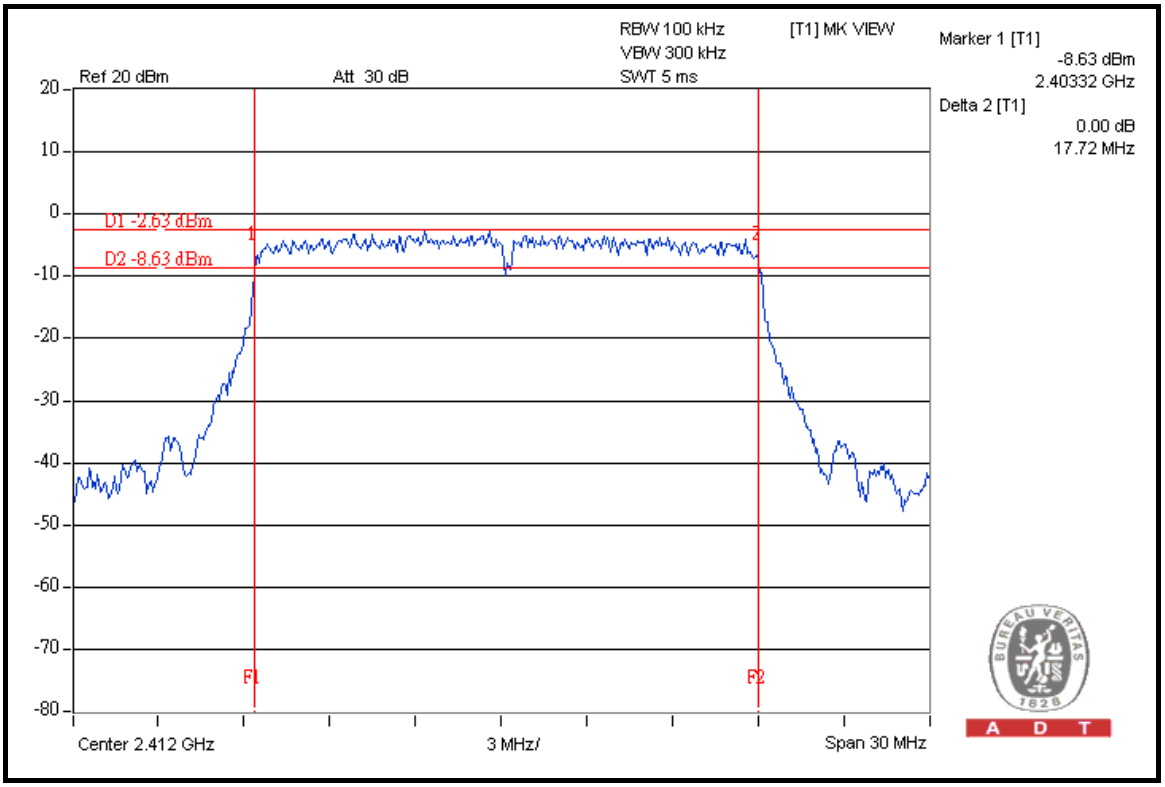

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.11 dBm
2.45389 GHz
Delta 2 [T1]
0.00 dB
16.57 MHz
Ref 20 dBm
Att 30 dB
D1 -2.11 dBm
D2 -8.11 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION

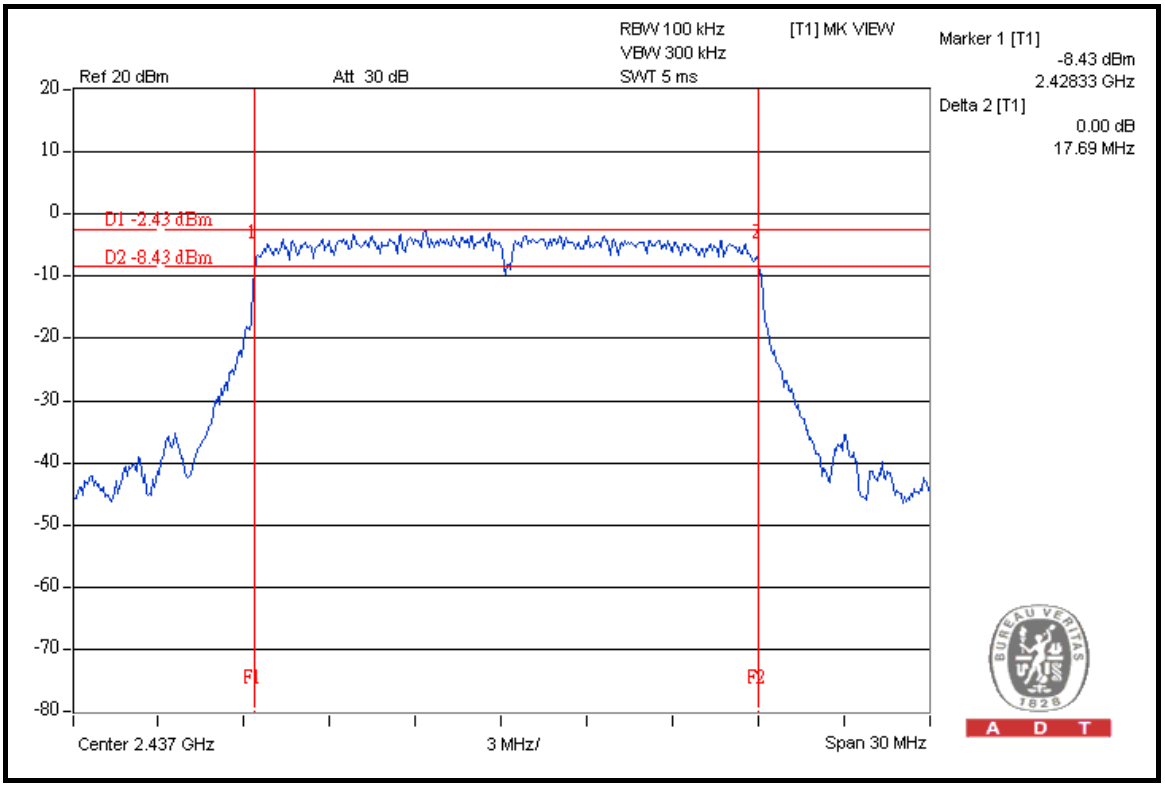
MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.72	0.5	PASS
6	2437	17.69	0.5	PASS
11	2462	17.72	0.5	PASS

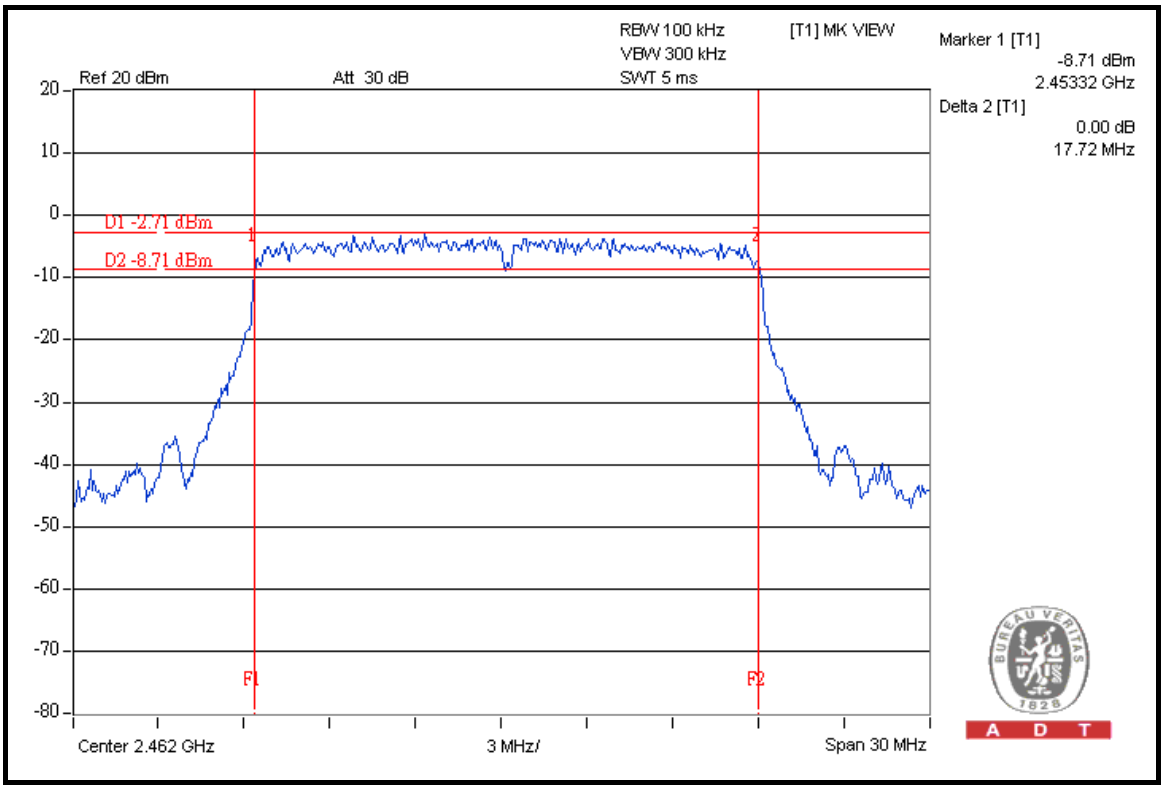
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.43 dBm
2.42833 GHz
Delta 2 [T1]
0.00 dB
17.69 MHz
Ref 20 dBm
Att 30 dB
D1 -2.43 dBm
D2 -8.43 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

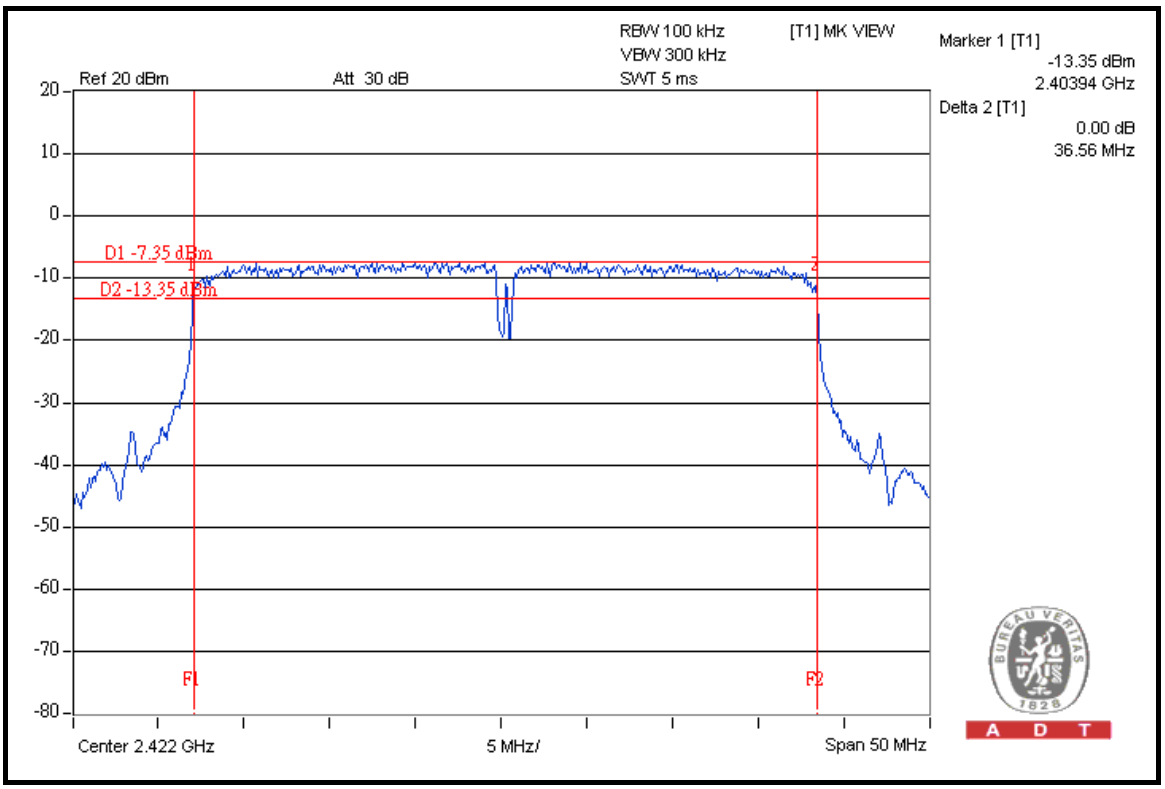

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.71 dBm
2.45332 GHz
Delta 2 [T1]
0.00 dB
17.72 MHz
Ref 20 dBm
Att 30 dB
D1 -2.71 dBm
D2 -8.71 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION

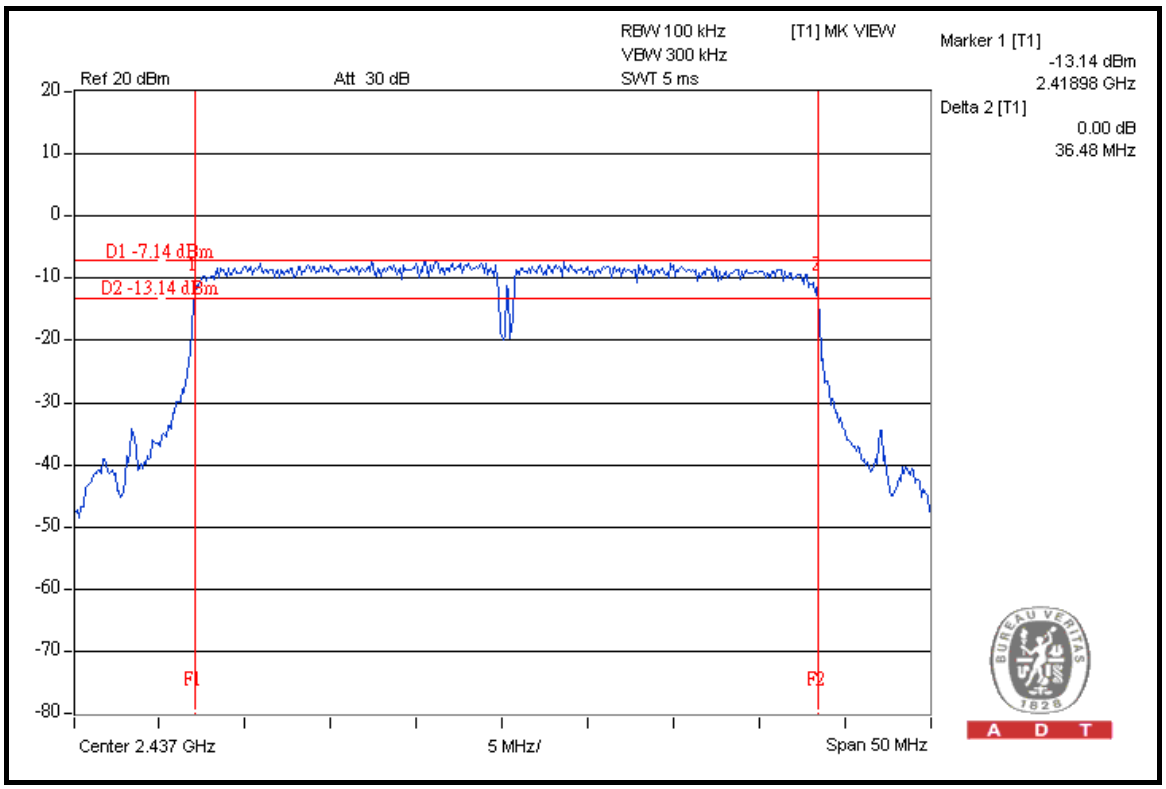
MODULATION TYPE	BPSK	TRANSFER RATE	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.56	0.5	PASS
4	2437	36.48	0.5	PASS
7	2452	36.54	0.5	PASS

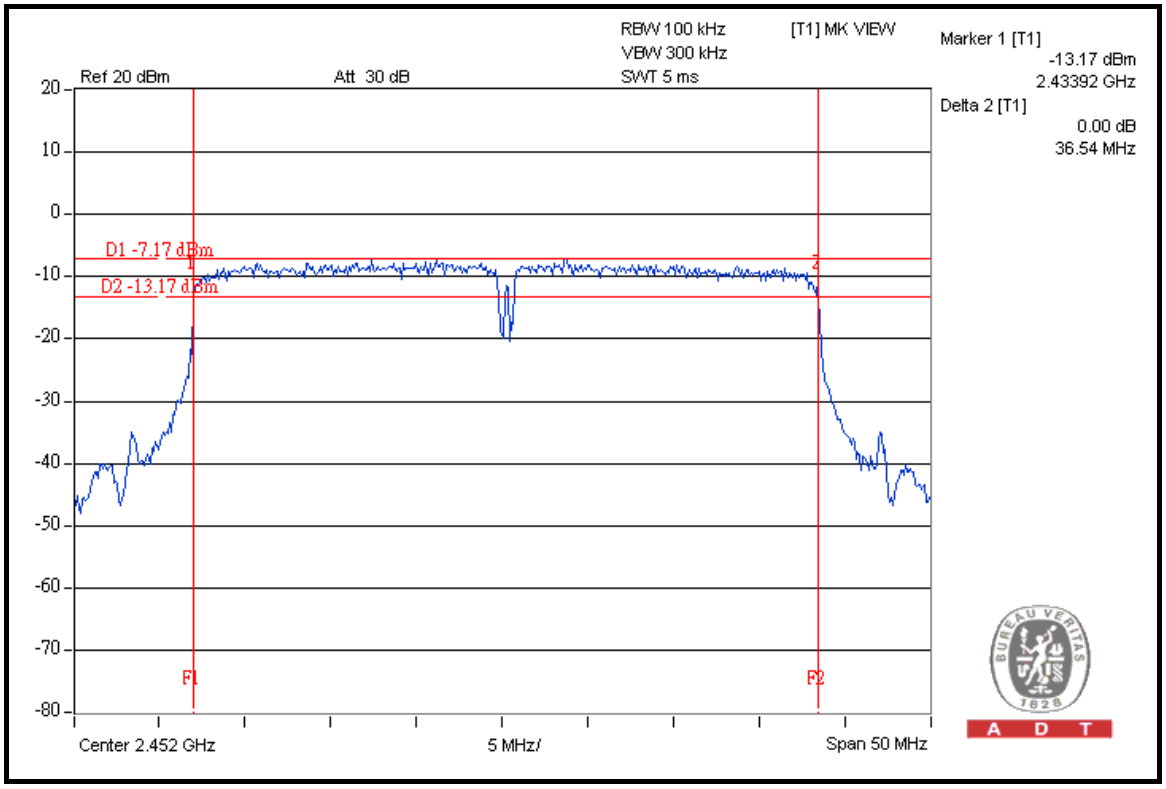
CH 1



CH 4


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-13.14 dBm
2.41898 GHz
Delta 2 [T1]
0.00 dB
36.48 MHz
Ref 20 dBm
Att 30 dB
D1 -7.14 dBm
D2 -13.14 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]
-13.17 dBm
2.43392 GHz
Delta 2 [T1]
0.00 dB
36.54 MHz
Ref 20 dBm
Att 30 dB
D1 -7.17 dBm
D2 -13.17 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	0824011	Jul. 30, 2009	Jul. 29, 2010
Power Sensor	MA2411B	0738171	Jul. 30, 2009	Jul. 29, 2010

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.

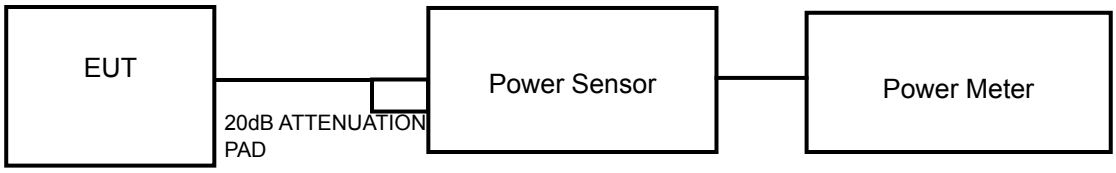
4.4.3 TEST PROCEDURES

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	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	56.75	17.54	30	PASS
6	2437	57.28	17.58	30	PASS
11	2462	56.49	17.52	30	PASS

802.11g OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	113.76	20.56	30	PASS
6	2437	**115.08**	20.61	30	PASS
11	2462	112.98	20.53	30	PASS

DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	**TRANSFER RATE**	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	112.72	20.52	30	PASS
6	2437	114.03	20.57	30	PASS
11	2462	113.50	20.55	30	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	**TRANSFER RATE**	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2422	89.95	19.54	30	PASS
4	2437	90.99	19.59	30	PASS
7	2452	90.78	19.58	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	100041	May 13, 2009	May 12, 2010

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

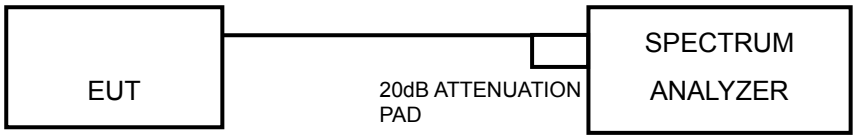
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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.

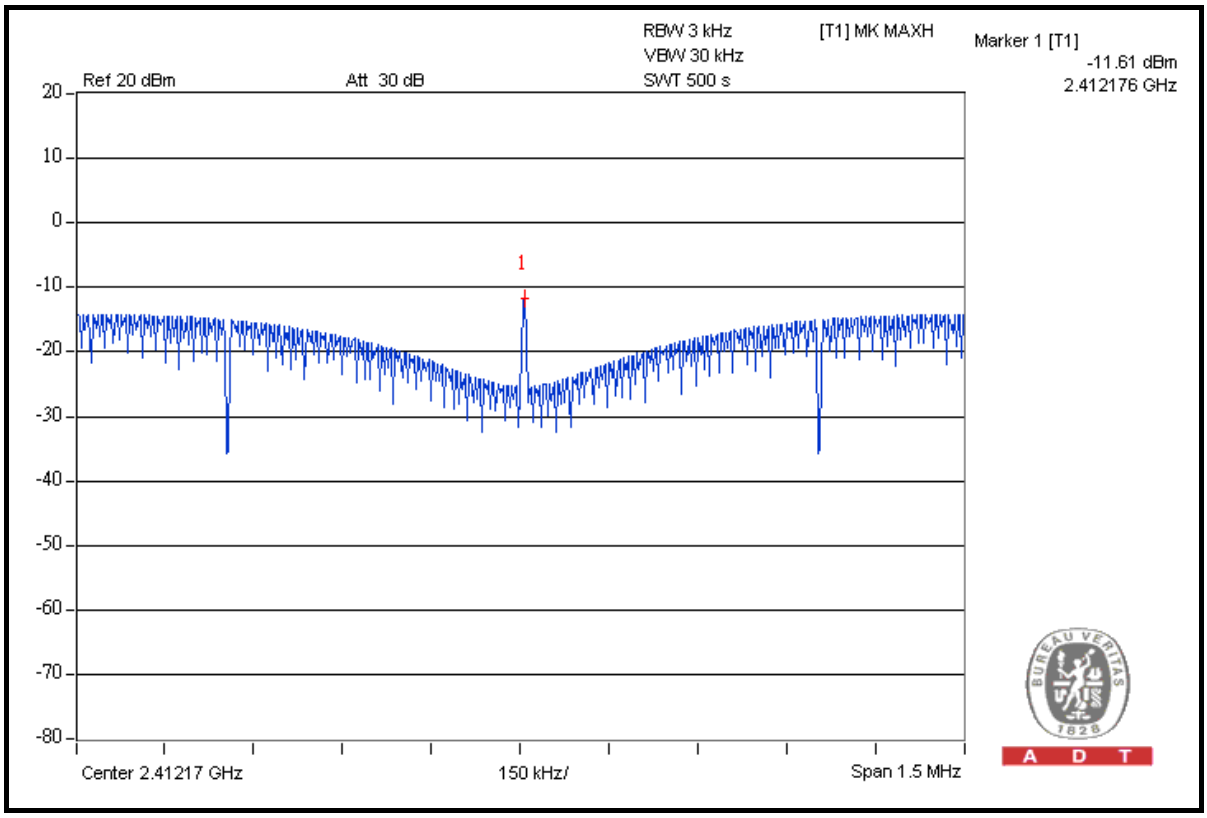
4.5.7 TEST RESULTS

802.11b DSSS MODULATION

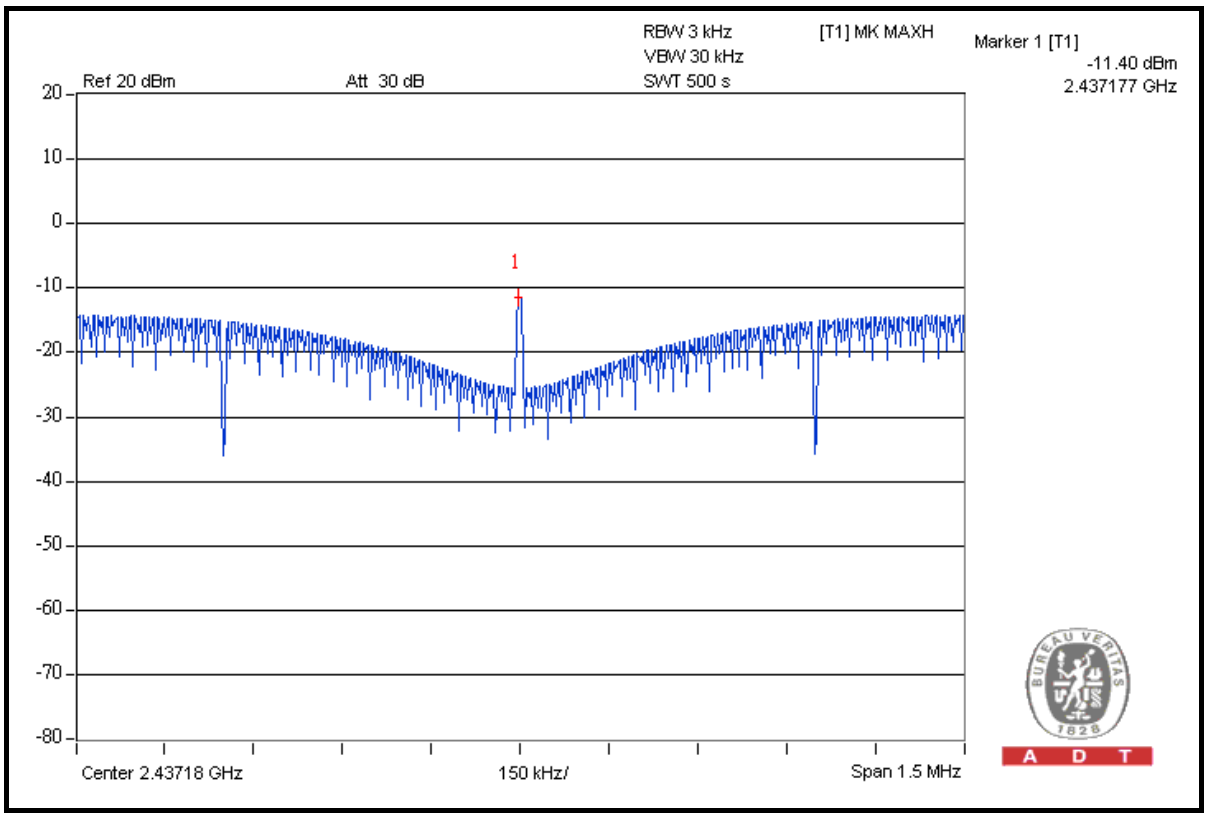
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-11.61	8	PASS
6	2437	-11.40	8	PASS
11	2462	-11.50	8	PASS

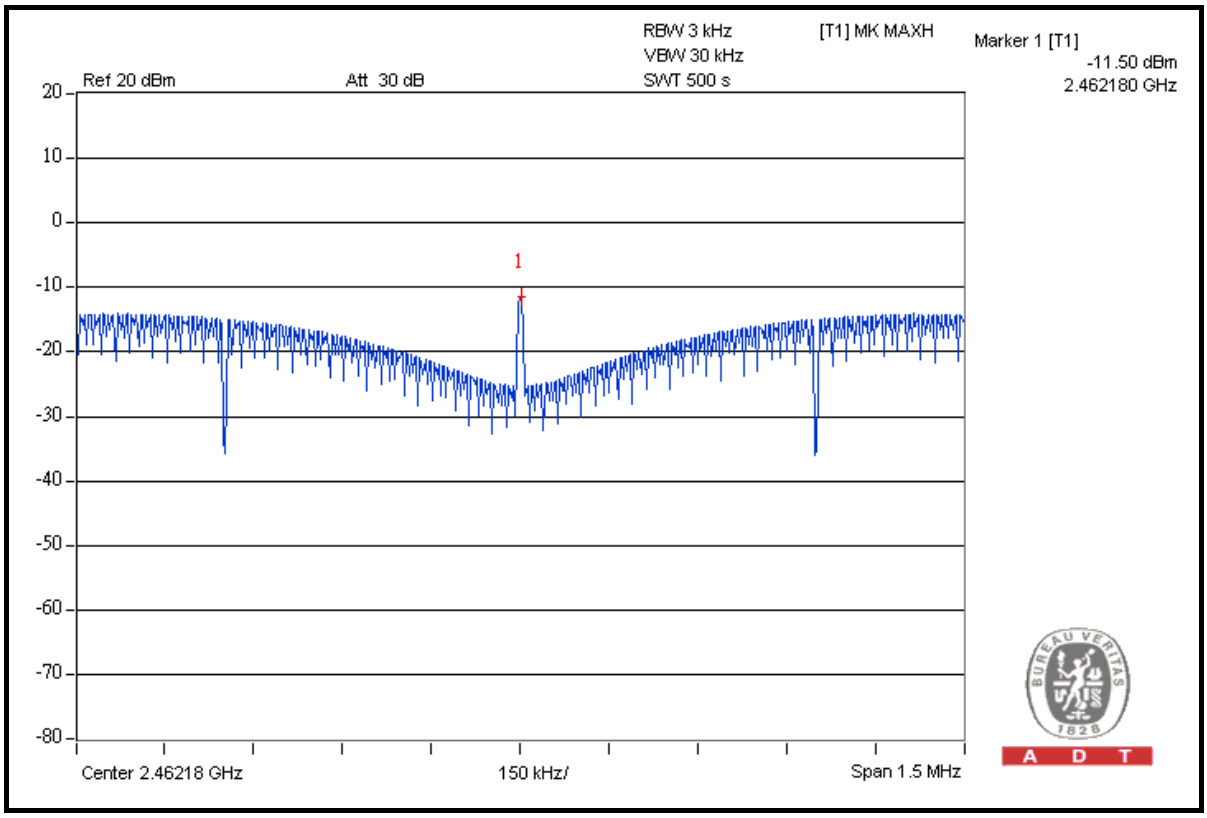
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-11.40 dBm
2.437177 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43718 GHz
150 kHz/
Span 1.5 MHz

CH 11

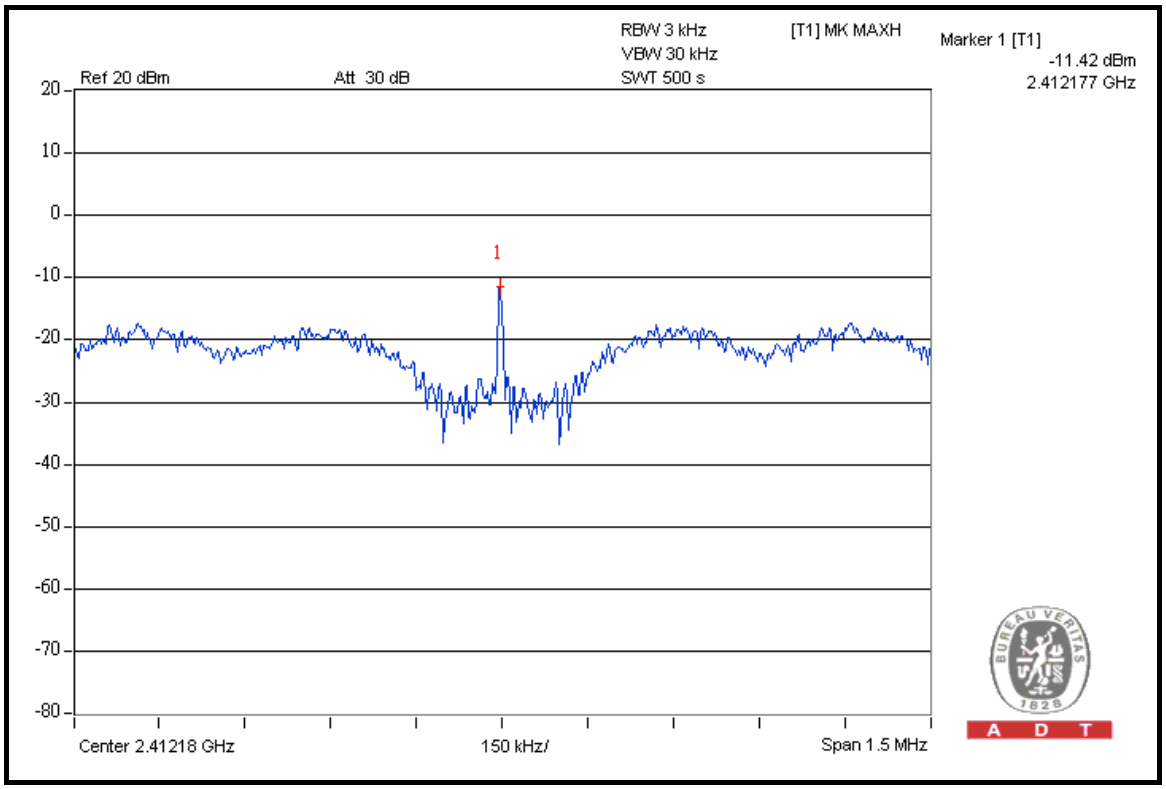

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-11.50 dBm
2.462180 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46218 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM MODULATION

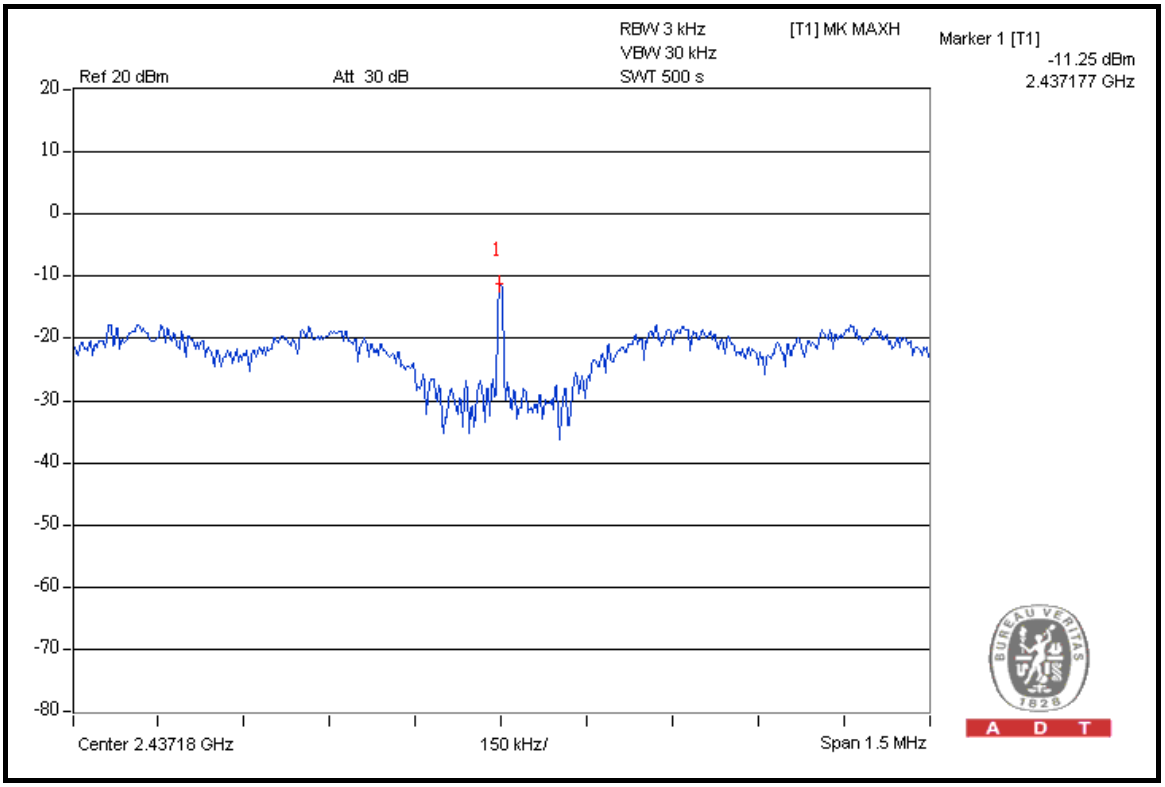
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-11.42	8	PASS
6	2437	-11.25	8	PASS
11	2462	-11.21	8	PASS

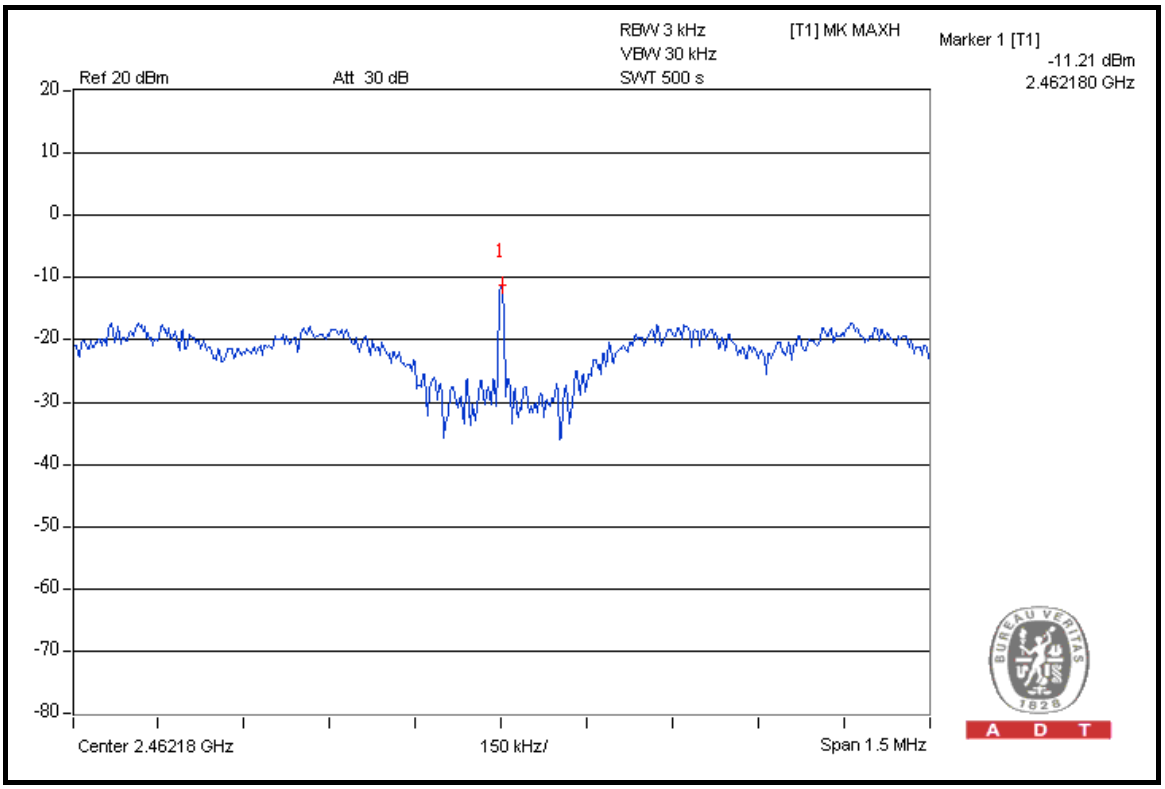
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-11.25 dBm
2.437177 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43718 GHz
150 kHz/
Span 1.5 MHz

CH 11

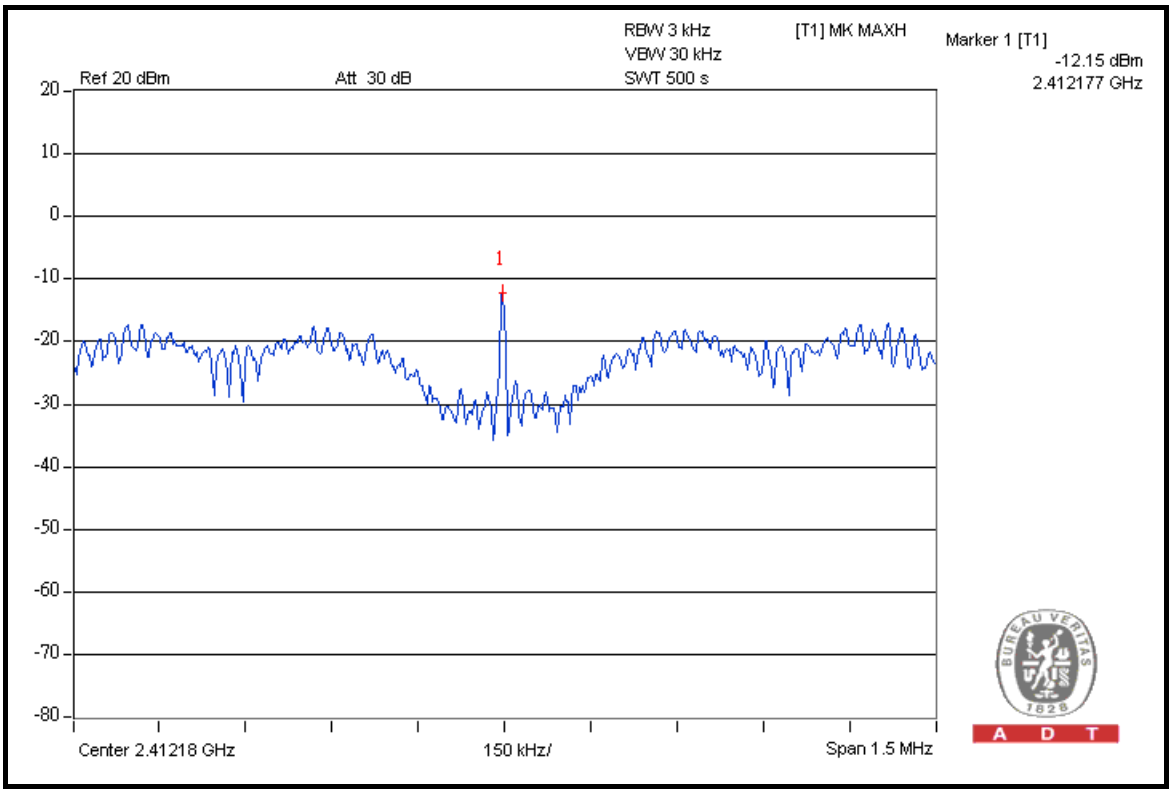

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-11.21 dBm
2.462180 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46218 GHz
150 kHz/
Span 1.5 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION

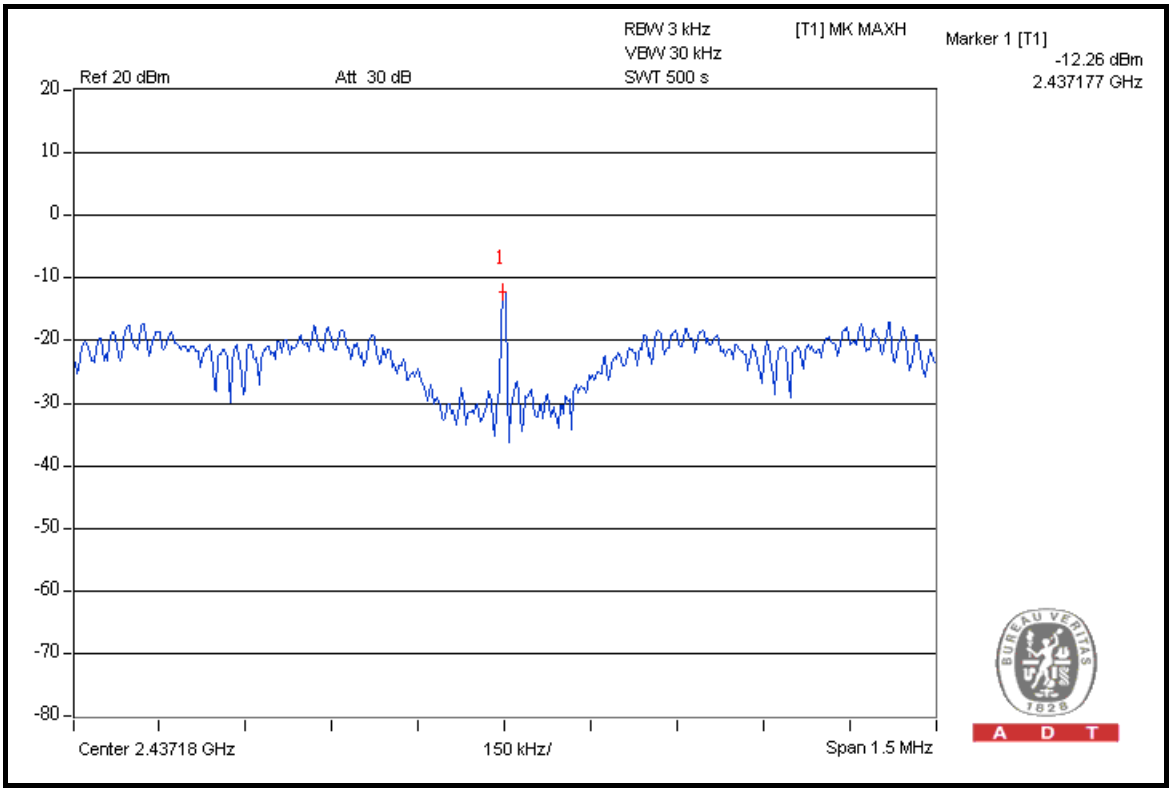
MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-12.15	8	PASS
6	2437	-12.26	8	PASS
11	2462	-12.04	8	PASS

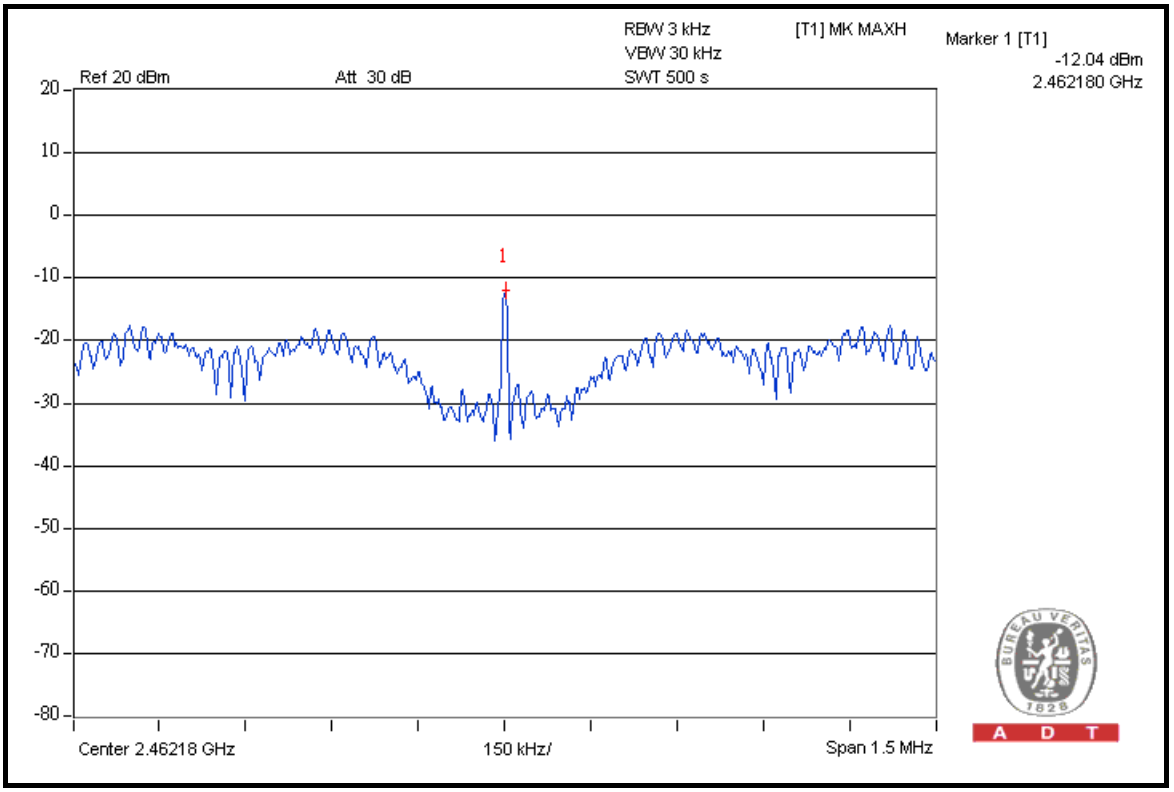
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-12.26 dBm
2.437177 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43718 GHz
150 kHz/
Span 1.5 MHz

CH 11

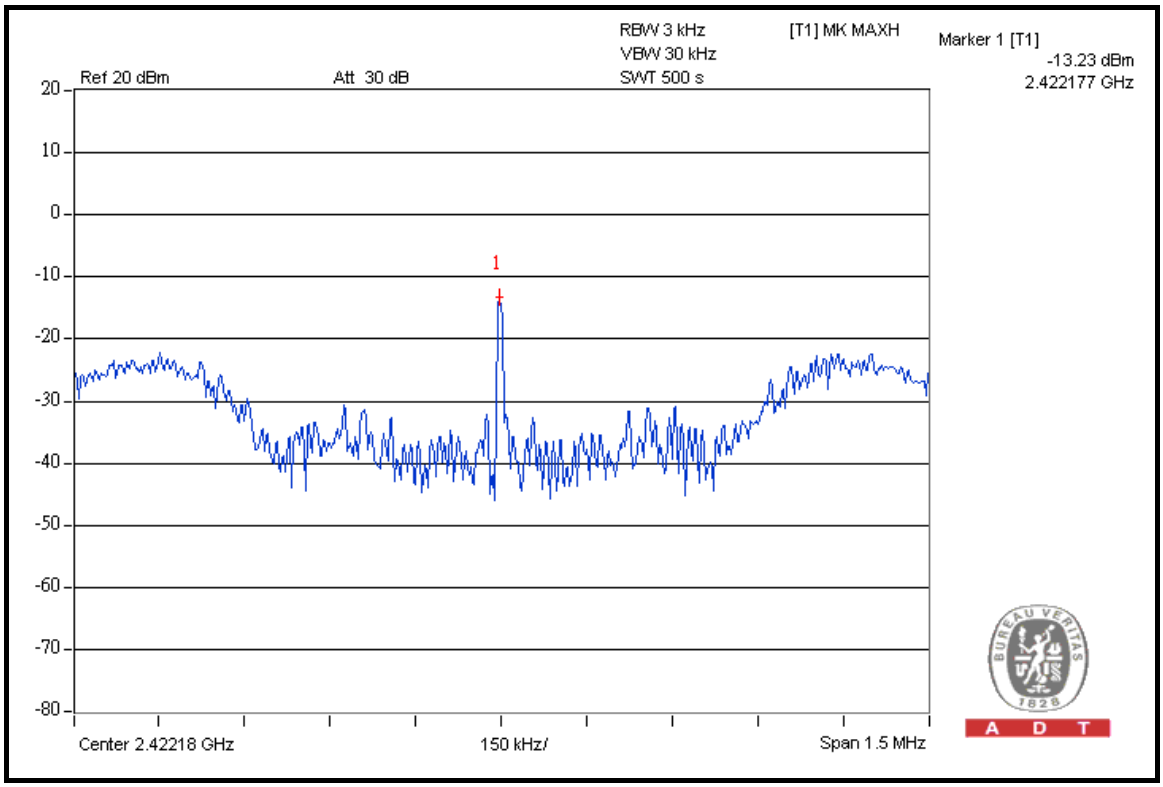

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-12.04 dBm
2.462180 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46218 GHz
150 kHz/
Span 1.5 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION

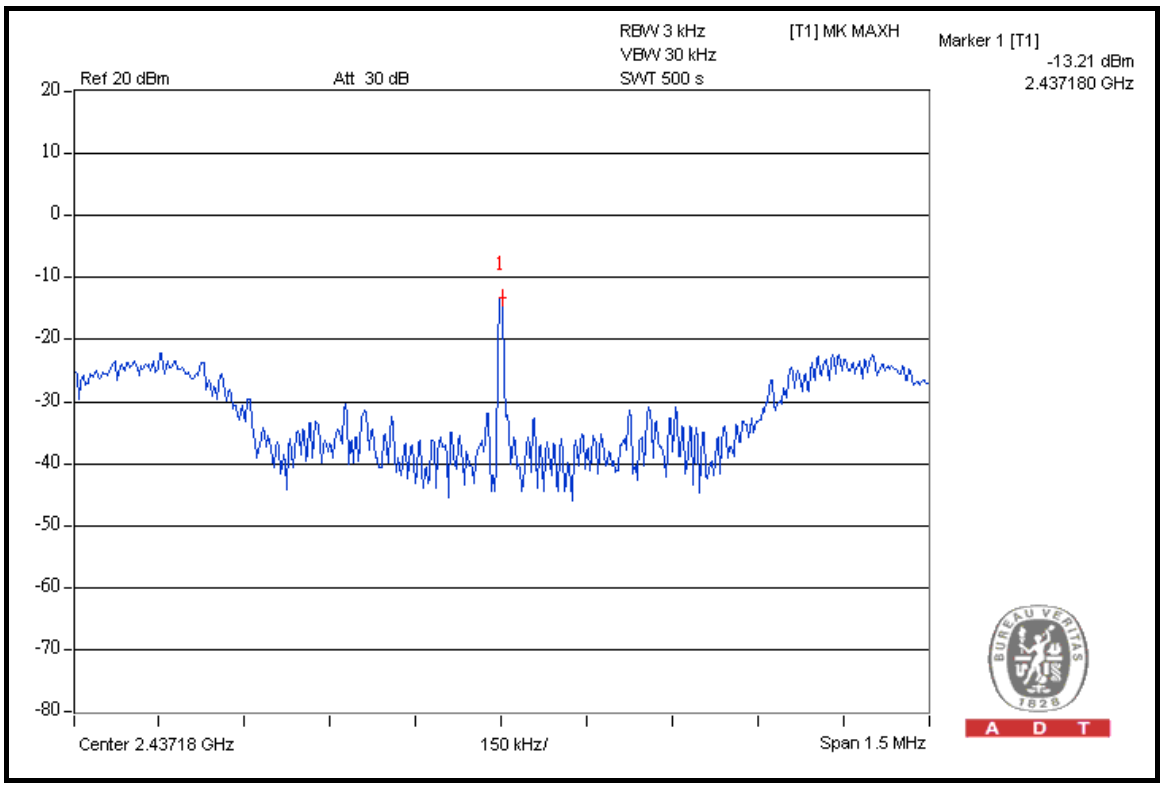
MODULATION TYPE	BPSK	TRANSFER RATE	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 1019hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2422	-13.23	8	PASS
4	2437	-13.21	8	PASS
7	2452	-13.45	8	PASS

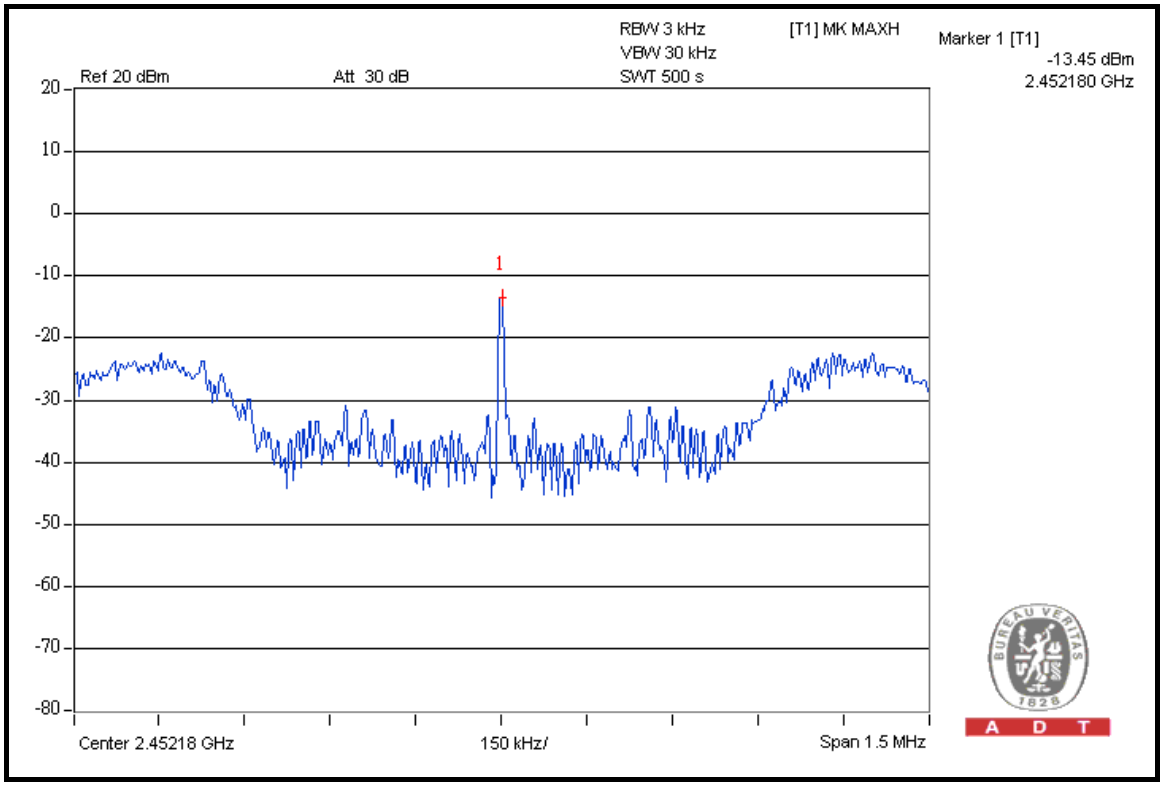
CH 1



CH 4


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-13.21 dBm
2.437180 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43718 GHz
150 kHz/
Span 1.5 MHz

CH 7


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-13.45 dBm
2.452180 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.45218 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
R&S SPECTRUM ANALYZER	FSP40	100041	May 13, 2009	May 12, 2010

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 pages. 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_FOR TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 50.59dBc between carrier maximum power and local maximum emission in restrict band (2.3864GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 112.81dBuV/m (Peak), so the maximum field strength in restrict band is 112.81 – 50.59 = 62.22dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 55.89dBc between carrier maximum power and local maximum emission in restrict band (2.3874GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 108.07dBuV/m (Average), so the maximum field strength in restrict band is 108.07 – 55.89 = 52.18dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 50.95dBc between carrier maximum power and local maximum emission in restrict band (2.4880GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 112.22dBuV/m (Peak), so the maximum field strength in restrict band is 112.22 – 50.95 = 61.27dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 54.58dBc between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 107.47dBuV/m (Average), so the maximum field strength in restrict band is 107.47 – 54.58 = 52.62dBuV/m which is under 54dBuV/m limit.

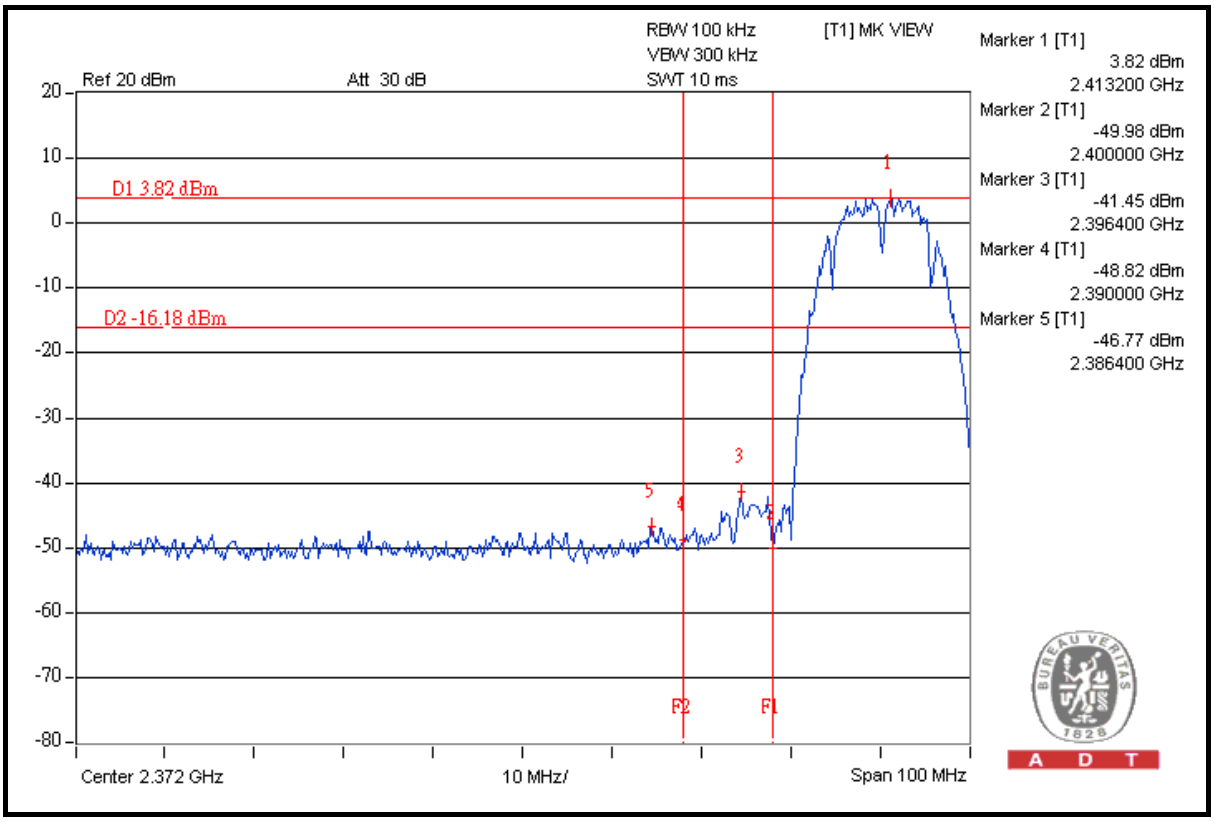
FOR TEST MODE B

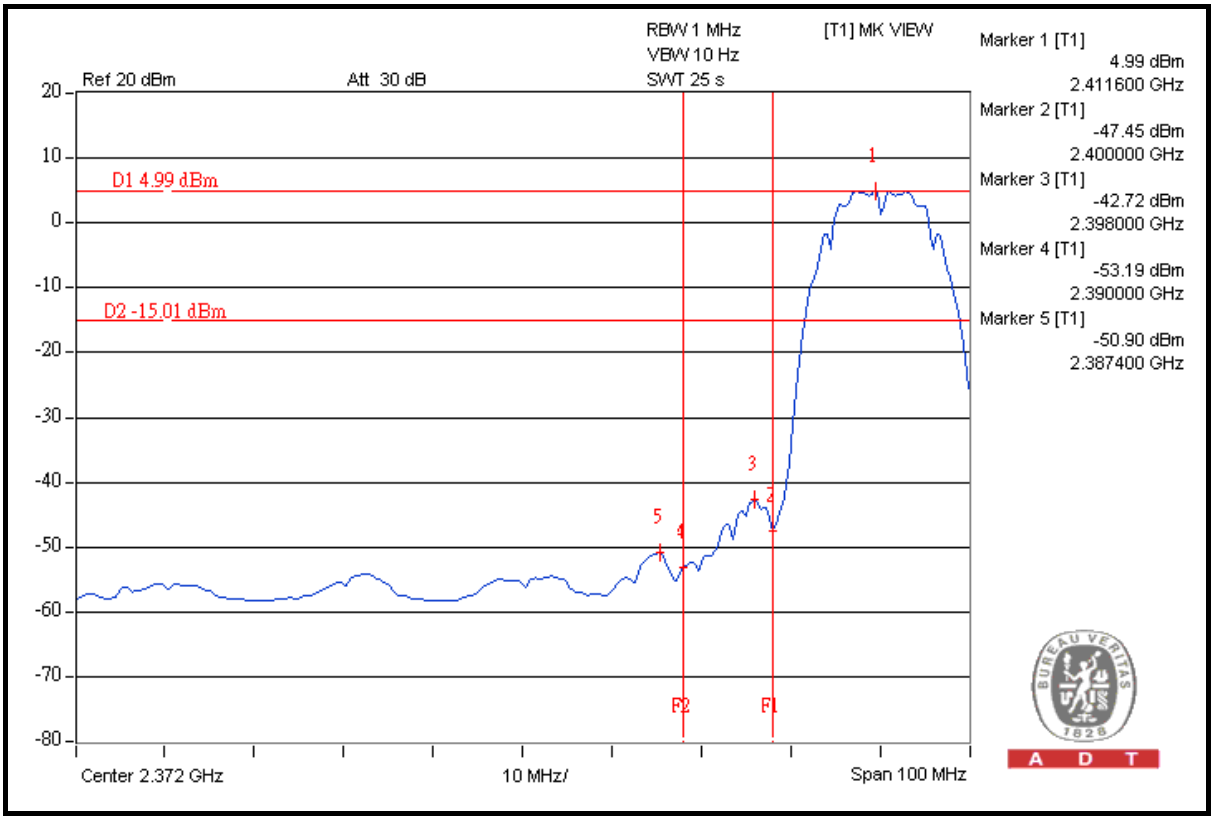
NOTE 1: The band edge emission plot on the next page shows 50.59dBc between carrier maximum power and local maximum emission in restrict band (2.3864GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 111.96dBuV/m (Peak), so the maximum field strength in restrict band is 111.96 – 50.59 = 61.37dBuV/m which is under 74dBuV/m limit.

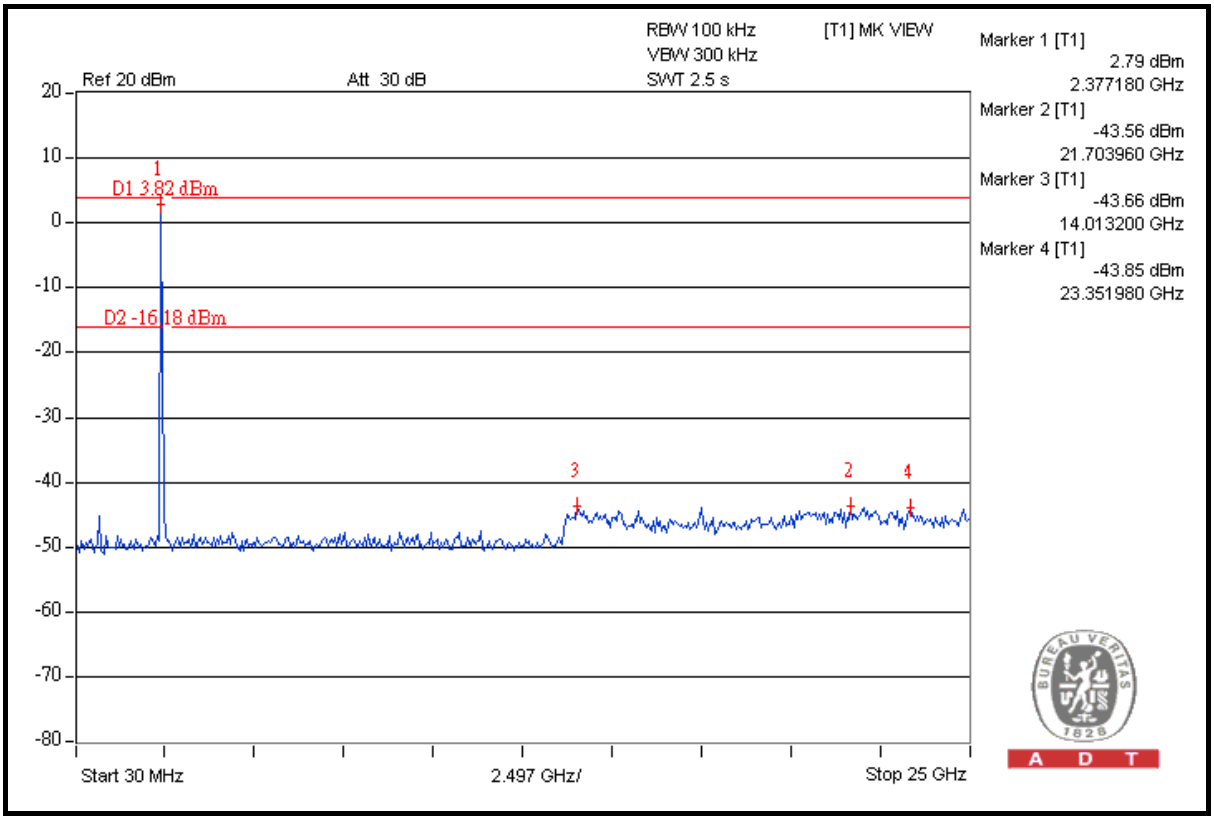
The band edge emission plot on the next page shows 55.89dBc between carrier maximum power and local maximum emission in restrict band (2.3874GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 107.22dBuV/m (Average), so the maximum field strength in restrict band is 107.22 – 55.89 = 51.33dBuV/m which is under 54dBuV/m limit.

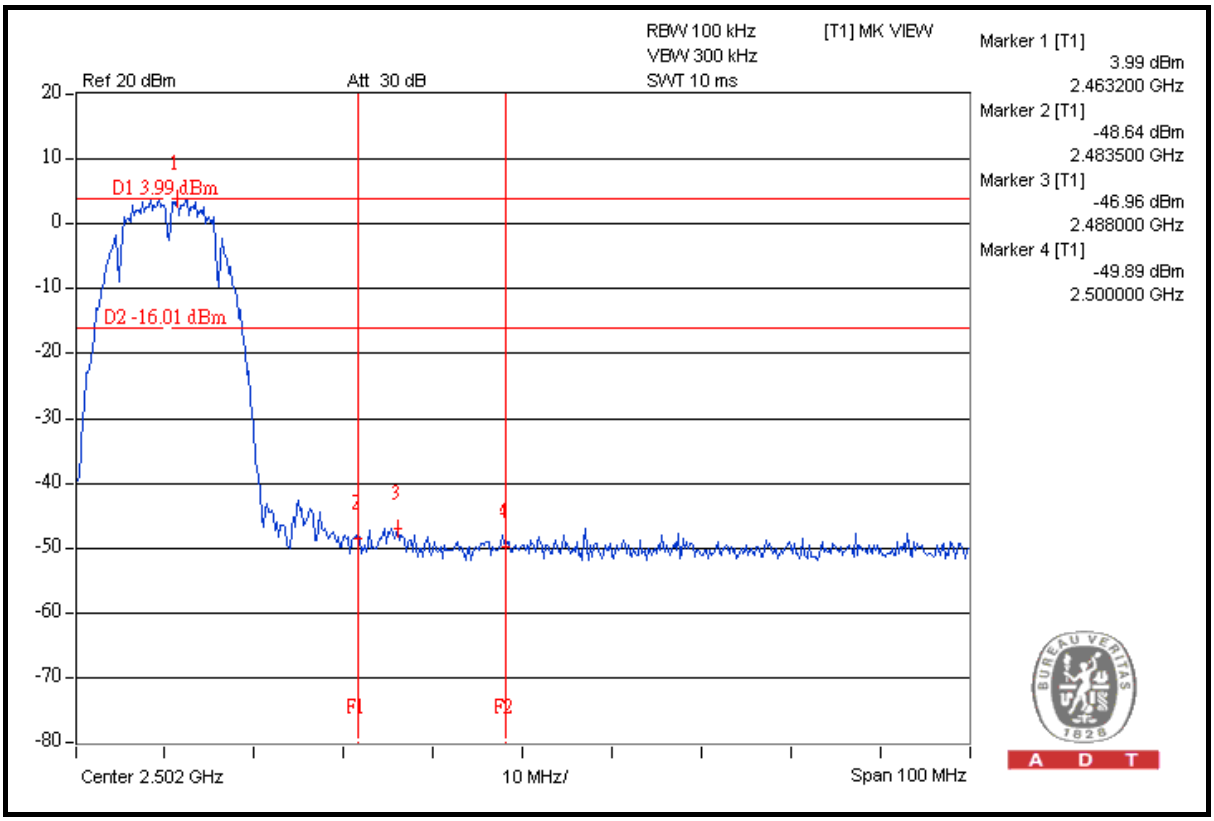
NOTE 2: The band edge emission plot on the next second page shows 50.95dBc between carrier maximum power and local maximum emission in restrict band (2.4880GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 111.35dBuV/m (Peak), so the maximum field strength in restrict band is 111.35 – 50.95 = 60.40dBuV/m which is under 74dBuV/m limit.

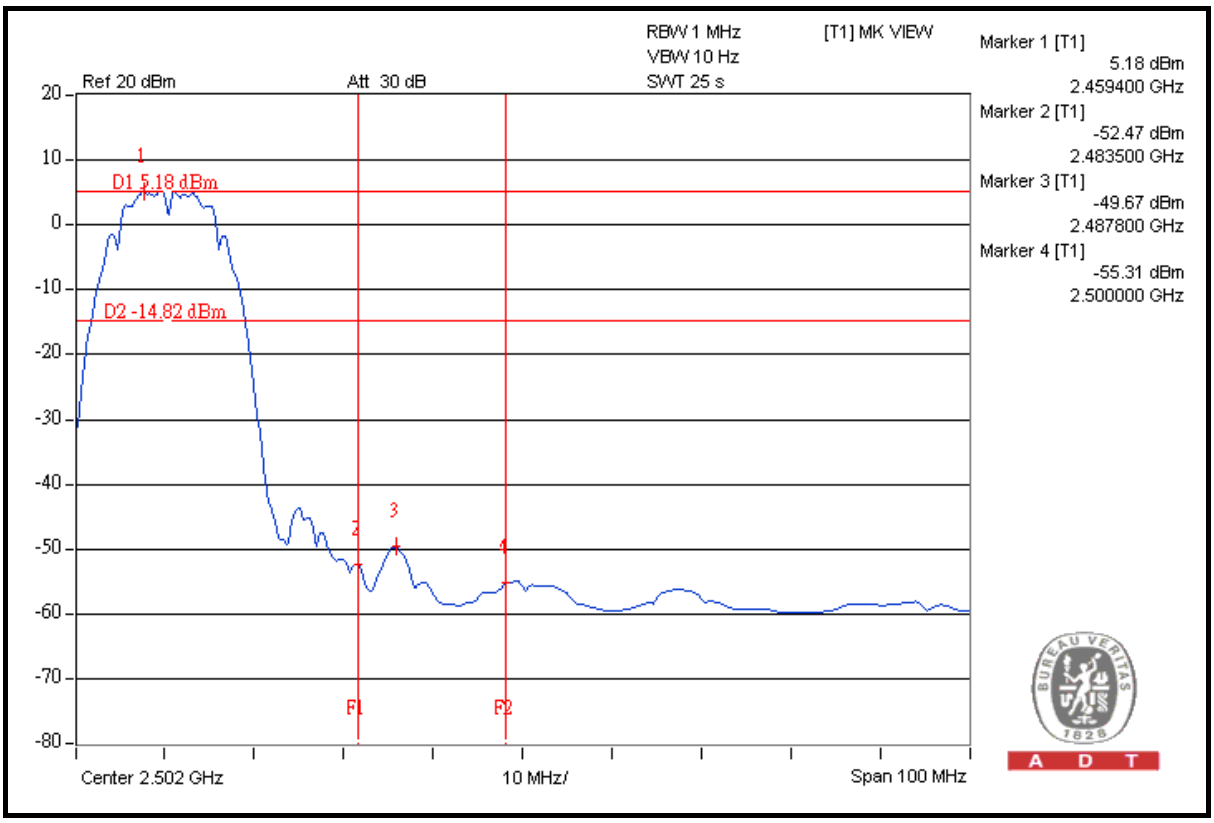
The band edge emission plot on the next third page shows 54.58dBc between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 106.58dBuV/m (Average), so the maximum field strength in restrict band is 106.58 – 54.58 = 51.73dBuV/m which is under 54dBuV/m limit.

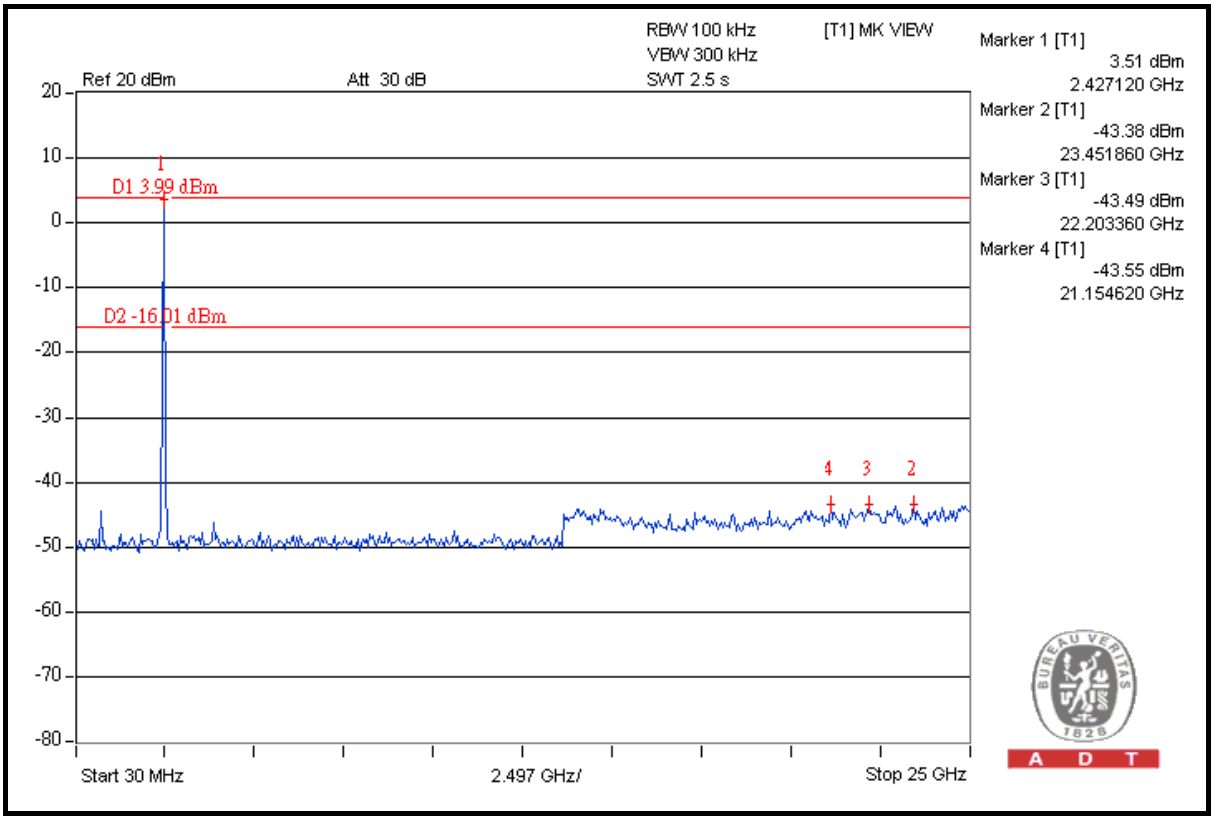

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 3.82 dBm
D2 -16.18 dBm
Marker 1 [T1]
3.82 dBm
2.413200 GHz
Marker 2 [T1]
-49.98 dBm
2.400000 GHz
Marker 3 [T1]
-41.45 dBm
2.396400 GHz
Marker 4 [T1]
-48.82 dBm
2.390000 GHz
Marker 5 [T1]
-46.77 dBm
2.386400 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.99 dBm
D2 -15.01 dBm
Marker 1 [T1]
4.99 dBm
2.411600 GHz
Marker 2 [T1]
-47.45 dBm
2.400000 GHz
Marker 3 [T1]
-42.72 dBm
2.398000 GHz
Marker 4 [T1]
-53.19 dBm
2.390000 GHz
Marker 5 [T1]
-50.90 dBm
2.387400 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
D1 3.82 dBm
D2 -16.18 dBm
Marker 1 [T1]
2.79 dBm
2.377180 GHz
Marker 2 [T1]
-43.56 dBm
21.703960 GHz
Marker 3 [T1]
-43.66 dBm
14.013200 GHz
Marker 4 [T1]
-43.85 dBm
23.351980 GHz
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
D1 3.99 dBm
D2 -16.01 dBm
Marker 1 [T1]
3.99 dBm
2.463200 GHz
Marker 2 [T1]
-48.64 dBm
2.483500 GHz
Marker 3 [T1]
-46.96 dBm
2.488000 GHz
Marker 4 [T1]
-49.89 dBm
2.500000 GHz
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 5.18 dBm
D2 -14.82 dBm
Marker 1 [T1]
5.18 dBm
2.459400 GHz
Marker 2 [T1]
-52.47 dBm
2.483500 GHz
Marker 3 [T1]
-49.67 dBm
2.487800 GHz
Marker 4 [T1]
-55.31 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 3.99 dBm
D2 -16.01 dBm
Marker 1 [T1]
3.51 dBm
2.427120 GHz
Marker 2 [T1]
-43.38 dBm
23.451860 GHz
Marker 3 [T1]
-43.49 dBm
22.203360 GHz
Marker 4 [T1]
-43.55 dBm
21.154620 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g OFDM MODULATION_FOR TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 43.90dBc between carrier maximum power and local maximum emission in restrict band (2.3818GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 108.05dBuV/m (Peak), so the maximum field strength in restrict band is 108.05 – 43.90 = 64.15dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 50.58dBc between carrier maximum power and local maximum emission in restrict band (2.3598GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 98.35dBuV/m (Average), so the maximum field strength in restrict band is 98.35 – 50.58 = 47.77dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 45.10dBc between carrier maximum power and local maximum emission in restrict band (2.4846GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 108.89dBuV/m (Peak), so the maximum field strength in restrict band is 108.89 – 45.10 = 63.79dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 51.29dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 98.29dBuV/m (Average), so the maximum field strength in restrict band is 98.29 – 51.29 = 47.00dBuV/m which is under 54dBuV/m limit.

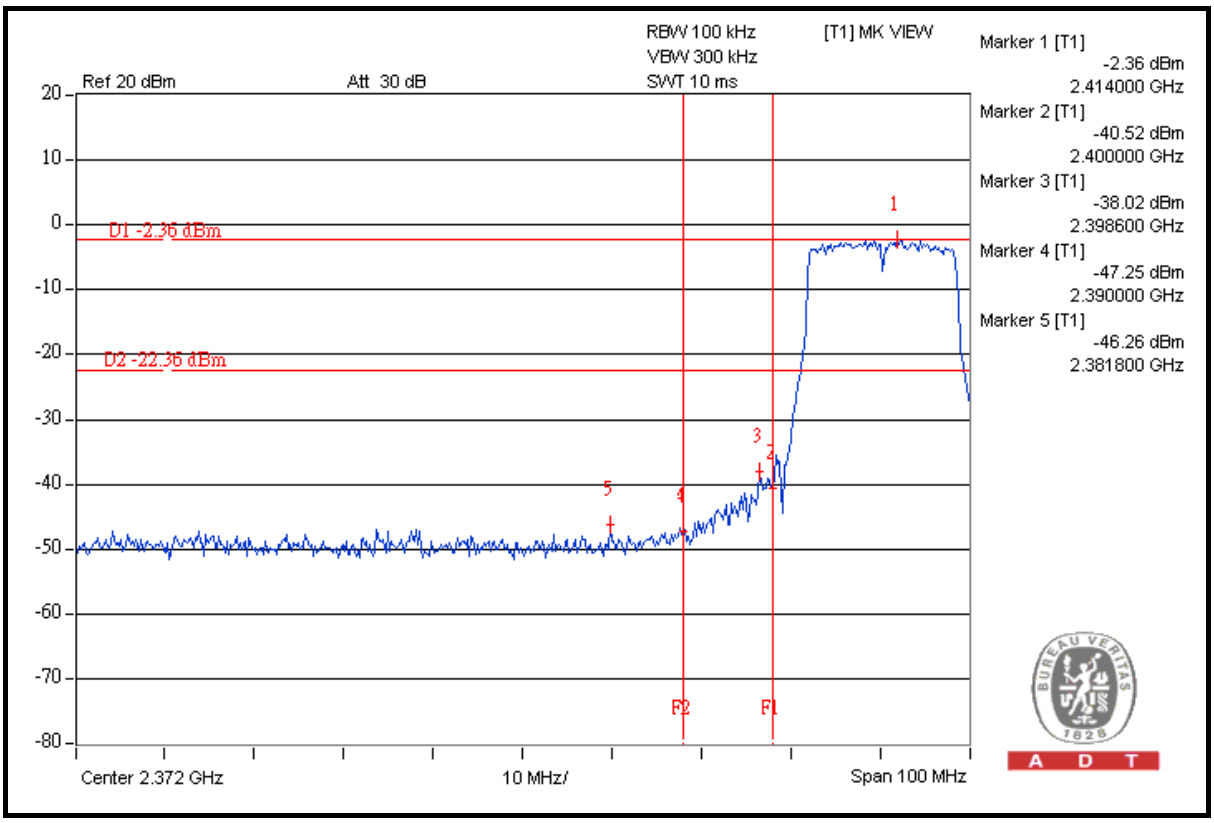
FOR TEST MODE B

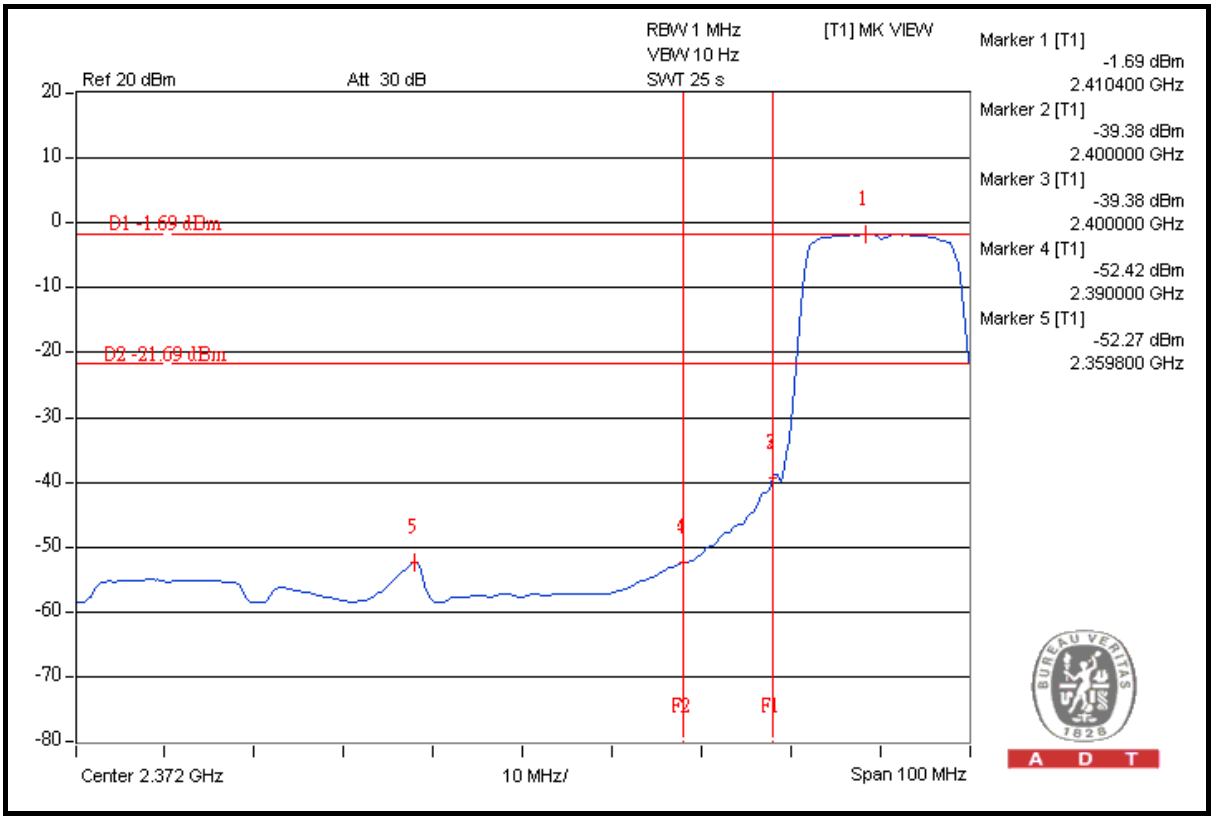
NOTE 1: The band edge emission plot on the next page shows 43.90dBc between carrier maximum power and local maximum emission in restrict band (2.3818GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 107.16dBuV/m (Peak), so the maximum field strength in restrict band is 107.16 – 43.90 = 63.26dBuV/m which is under 74dBuV/m limit.

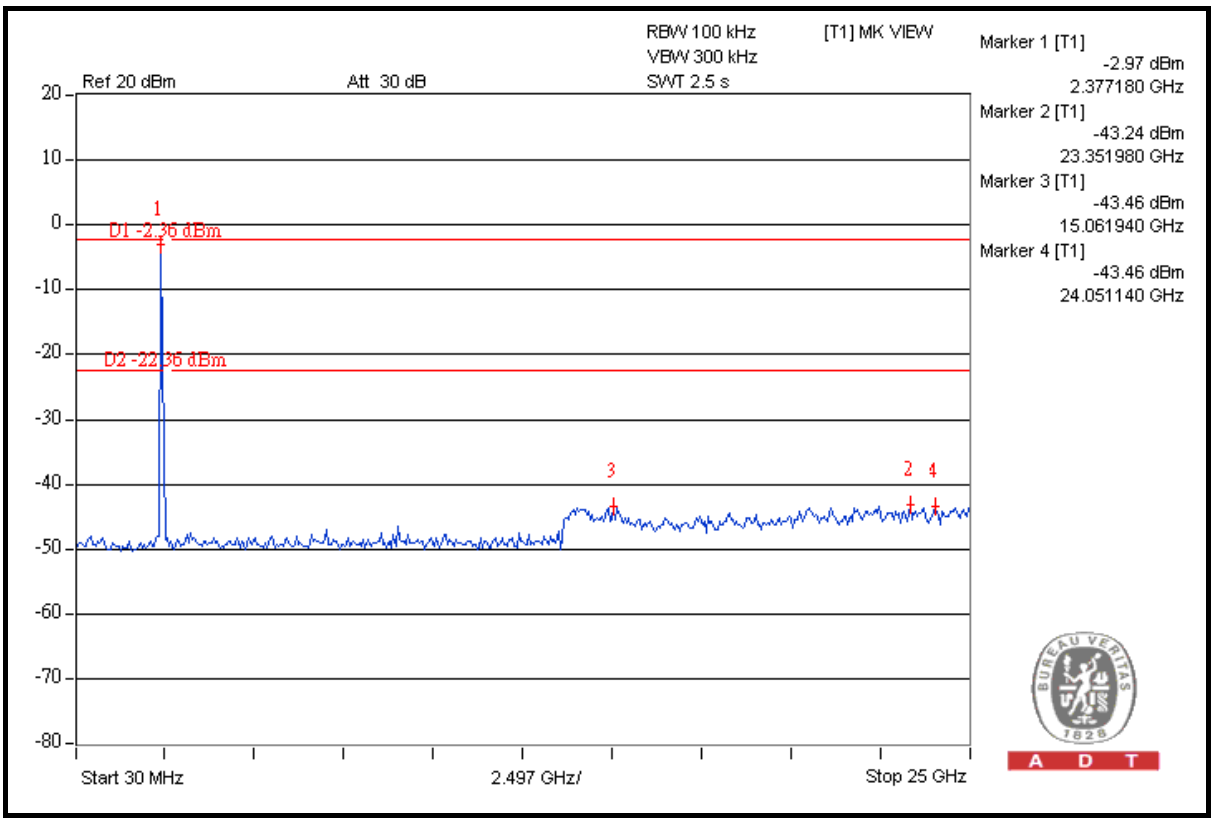
The band edge emission plot on the next page shows 50.58dBc between carrier maximum power and local maximum emission in restrict band (2.3598GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 97.47dBuV/m (Average), so the maximum field strength in restrict band is 97.47 – 50.58 = 46.89dBuV/m which is under 54dBuV/m limit.

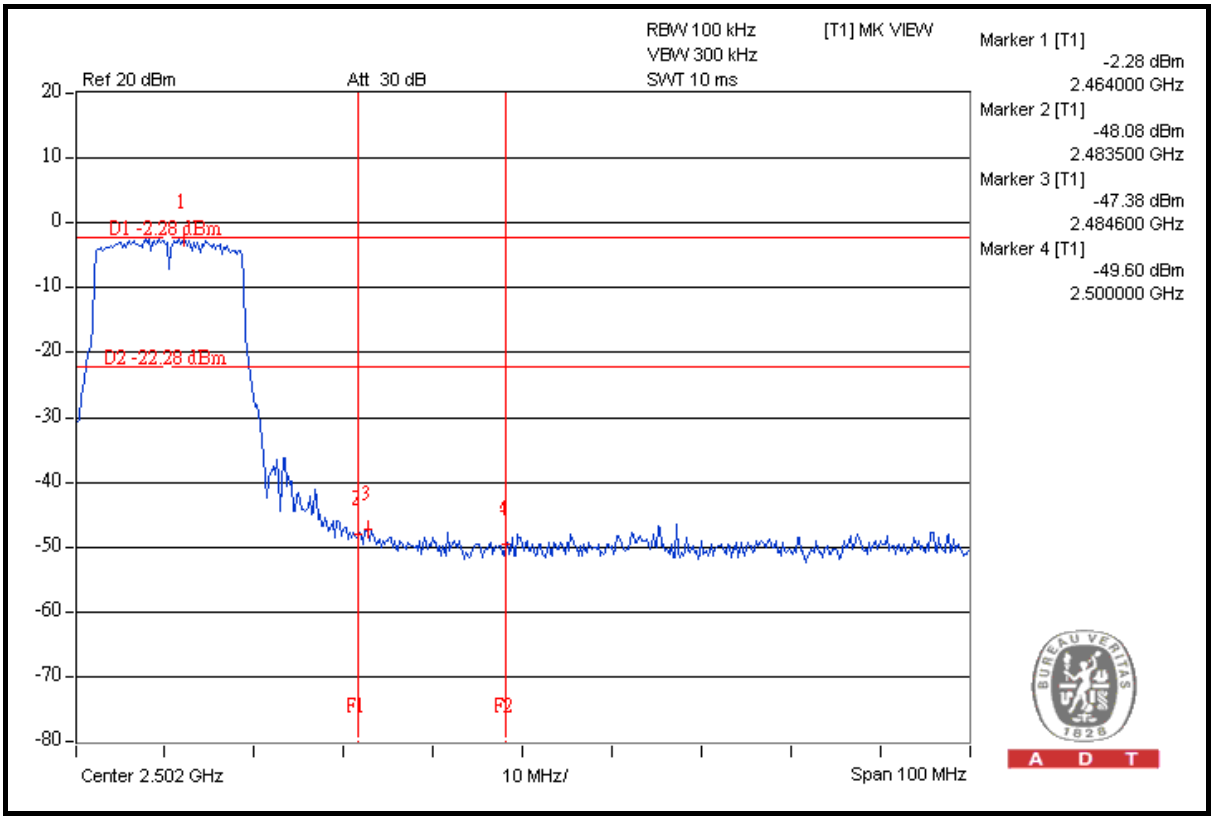
NOTE 2: The band edge emission plot on the next second page shows 45.10dBc between carrier maximum power and local maximum emission in restrict band (2.4846GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 107.42dBuV/m (Peak), so the maximum field strength in restrict band is 107.42 – 45.10 = 62.32dBuV/m which is under 74dBuV/m limit.

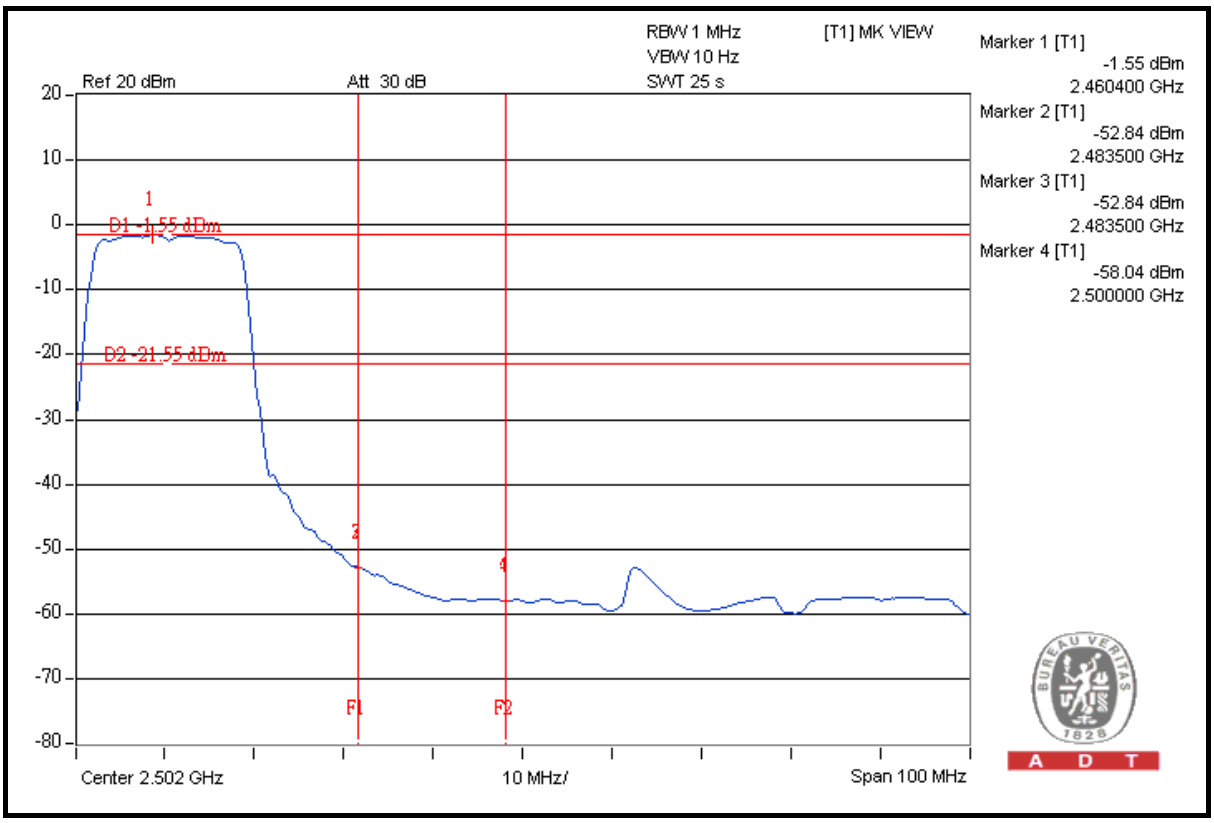
The band edge emission plot on the next third page shows 51.29dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 97.64dBuV/m (Average), so the maximum field strength in restrict band is 97.64 – 51.29 = 46.35dBuV/m which is under 54dBuV/m limit.

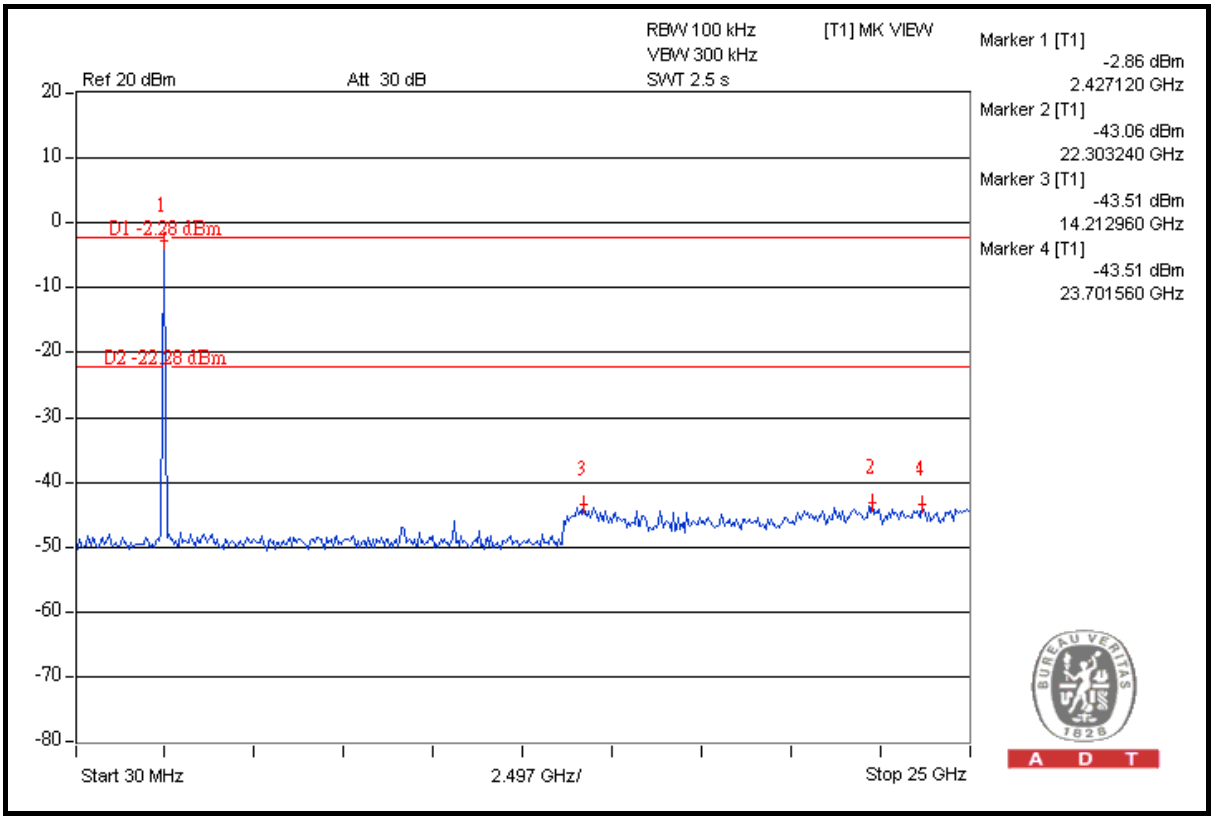

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.36 dBm
D2 -22.36 dBm
Marker 1 [T1]
-2.36 dBm
2.414000 GHz
Marker 2 [T1]
-40.52 dBm
2.400000 GHz
Marker 3 [T1]
-38.02 dBm
2.398600 GHz
Marker 4 [T1]
-47.25 dBm
2.390000 GHz
Marker 5 [T1]
-46.26 dBm
2.381800 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.69 dBm
D2 -21.69 dBm
Marker 1 [T1]
-1.69 dBm
2.410400 GHz
Marker 2 [T1]
-39.38 dBm
2.400000 GHz
Marker 3 [T1]
-39.38 dBm
2.400000 GHz
Marker 4 [T1]
-52.42 dBm
2.390000 GHz
Marker 5 [T1]
-52.27 dBm
2.359800 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]
-2.97 dBm
2.377180 GHz
Marker 2 [T1]
-43.24 dBm
23.351980 GHz
Marker 3 [T1]
-43.46 dBm
15.061940 GHz
Marker 4 [T1]
-43.46 dBm
24.051140 GHz
D1 -2.36 dBm
D2 -22.36 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]
-2.28 dBm
2.464000 GHz
Marker 2 [T1]
-48.08 dBm
2.483500 GHz
Marker 3 [T1]
-47.38 dBm
2.484600 GHz
Marker 4 [T1]
-49.60 dBm
2.500000 GHz
D1 -2.28 dBm
D2 -22.28 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 -1.55 dBm
D2 -21.55 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
-1.55 dBm
2.460400 GHz
Marker 2 [T1]
-52.84 dBm
2.483500 GHz
Marker 3 [T1]
-52.84 dBm
2.483500 GHz
Marker 4 [T1]
-58.04 dBm
2.500000 GHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.28 dBm
D2 -22.28 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-2.86 dBm
2.427120 GHz
Marker 2 [T1]
-43.06 dBm
22.303240 GHz
Marker 3 [T1]
-43.51 dBm
14.212960 GHz
Marker 4 [T1]
-43.51 dBm
23.701560 GHz

DRAFT 802.11n (20MHz) OFDM MODULATION_TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 44.15dBc between carrier maximum power and local maximum emission in restrict band (2.3590GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 107.93dBuV/m (Peak), so the maximum field strength in restrict band is 107.93 – 44.15 = 63.78dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 49.52dBc between carrier maximum power and local maximum emission in restrict band (2.3604GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 97.91dBuV/m (Average), so the maximum field strength in restrict band is 97.91 – 49.52 = 48.39dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 44.15dBc between carrier maximum power and local maximum emission in restrict band (2.4844GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 107.76dBuV/m (Peak), so the maximum field strength in restrict band is 107.76 – 44.15 = 63.61dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 51.02dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 97.35dBuV/m (Average), so the maximum field strength in restrict band is 97.35 – 51.02 = 46.33dBuV/m which is under 54dBuV/m limit.

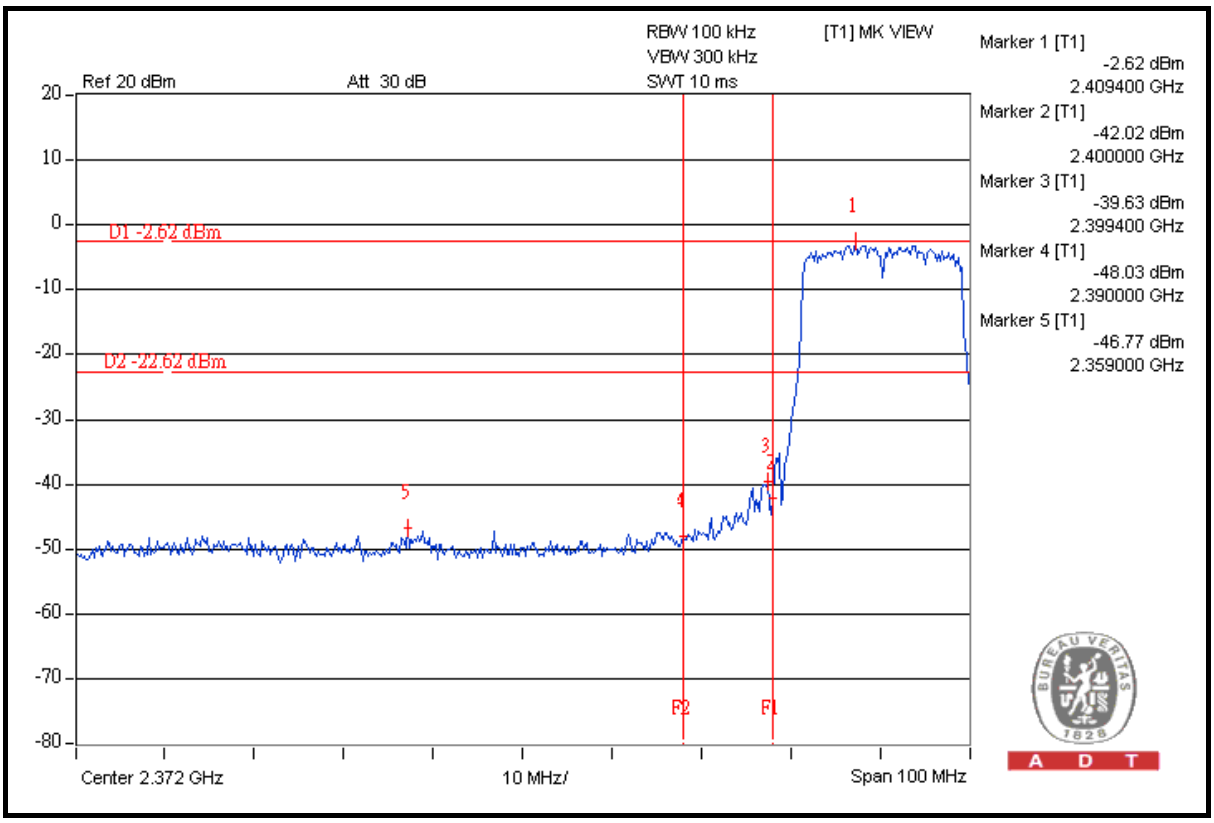
TEST MODE B

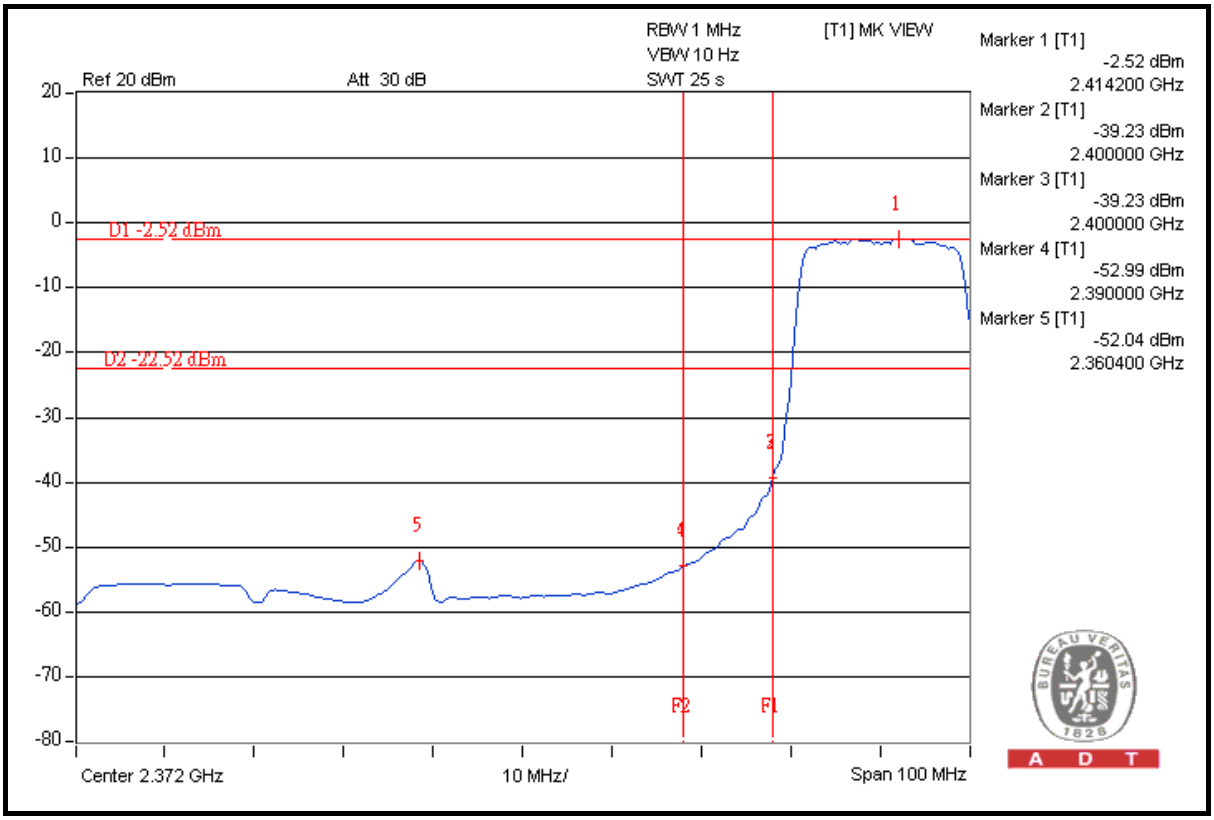
NOTE 1: The band edge emission plot on the next page shows 44.15dBc between carrier maximum power and local maximum emission in restrict band (2.3590GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 107.03dBuV/m (Peak), so the maximum field strength in restrict band is 107.03 – 44.15 = 62.88dBuV/m which is under 74dBuV/m limit.

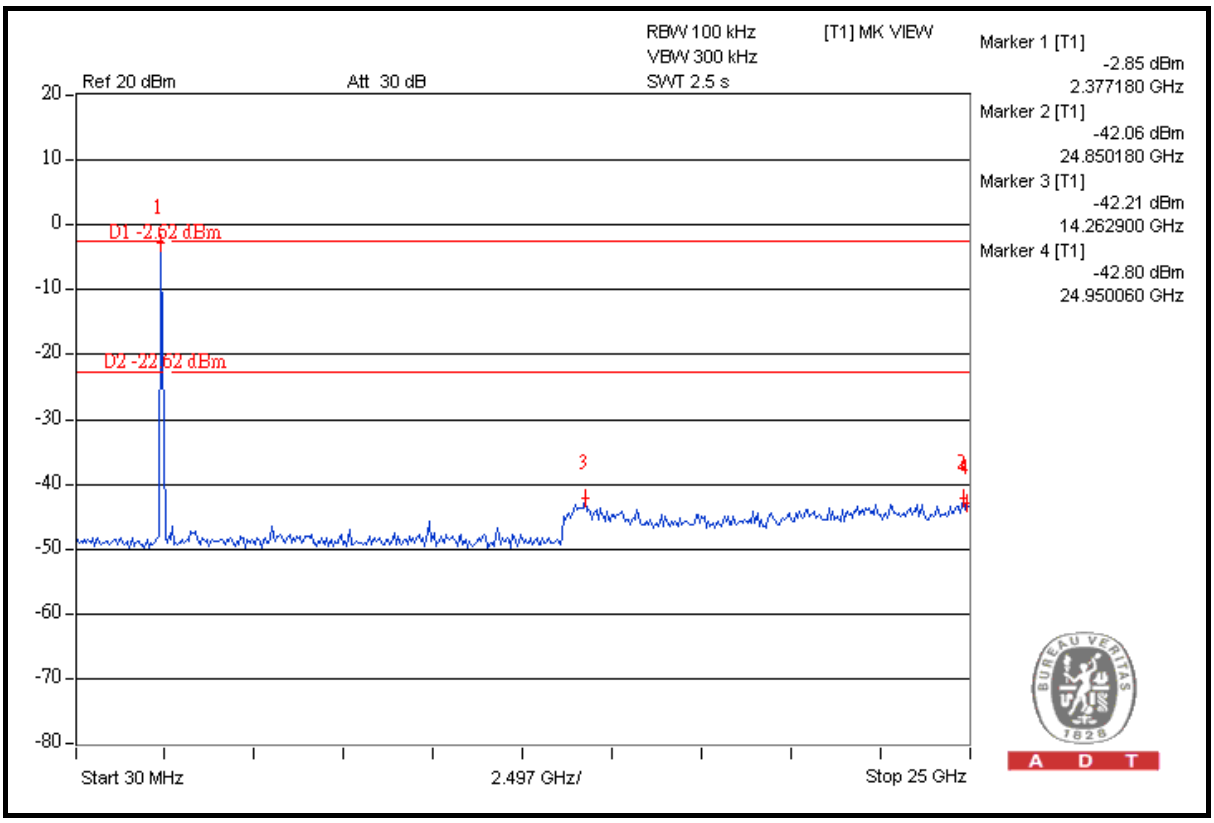
The band edge emission plot on the next page shows 49.52dBc between carrier maximum power and local maximum emission in restrict band (2.3604GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 97.34dBuV/m (Average), so the maximum field strength in restrict band is 97.34 – 49.52 = 47.82dBuV/m which is under 54dBuV/m limit.

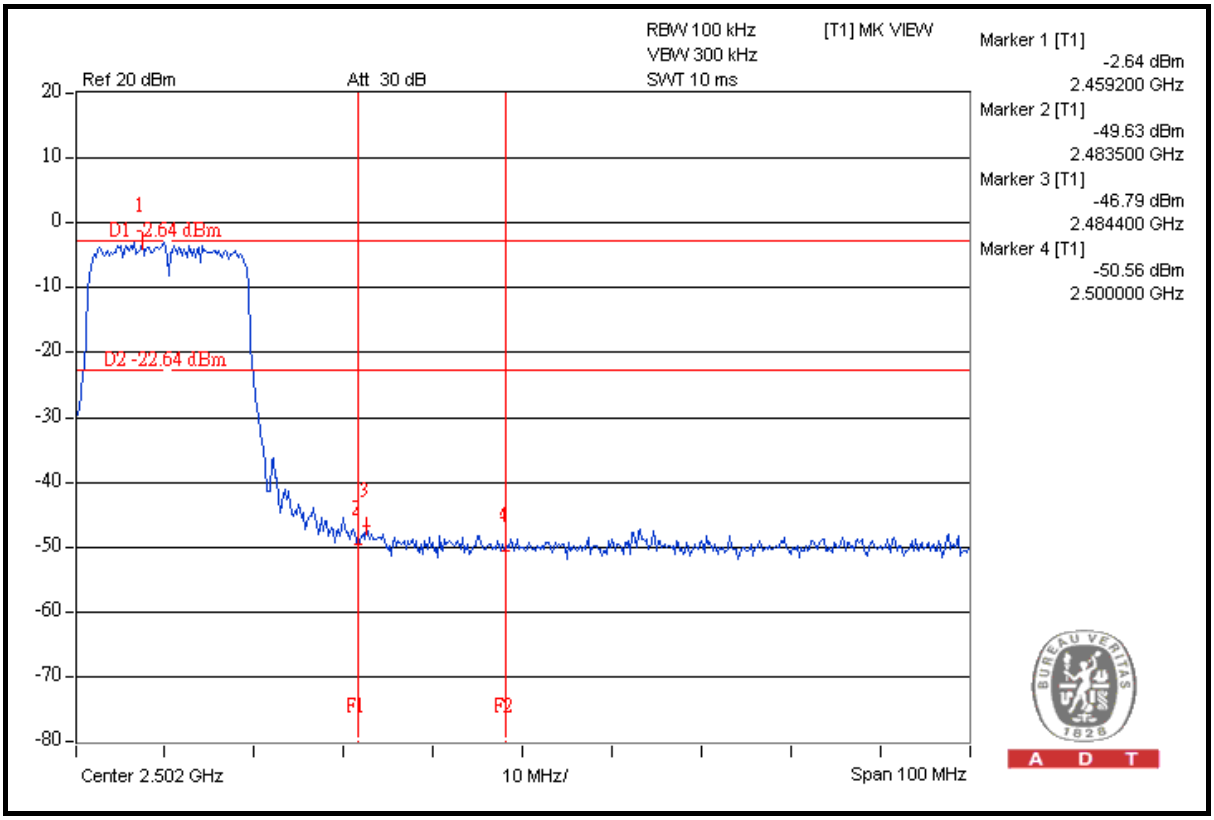
NOTE 2: The band edge emission plot on the next second page shows 44.15dBc between carrier maximum power and local maximum emission in restrict band (2.4844GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 107.22dBuV/m (Peak), so the maximum field strength in restrict band is 107.22 – 44.15 = 63.07dBuV/m which is under 74dBuV/m limit.

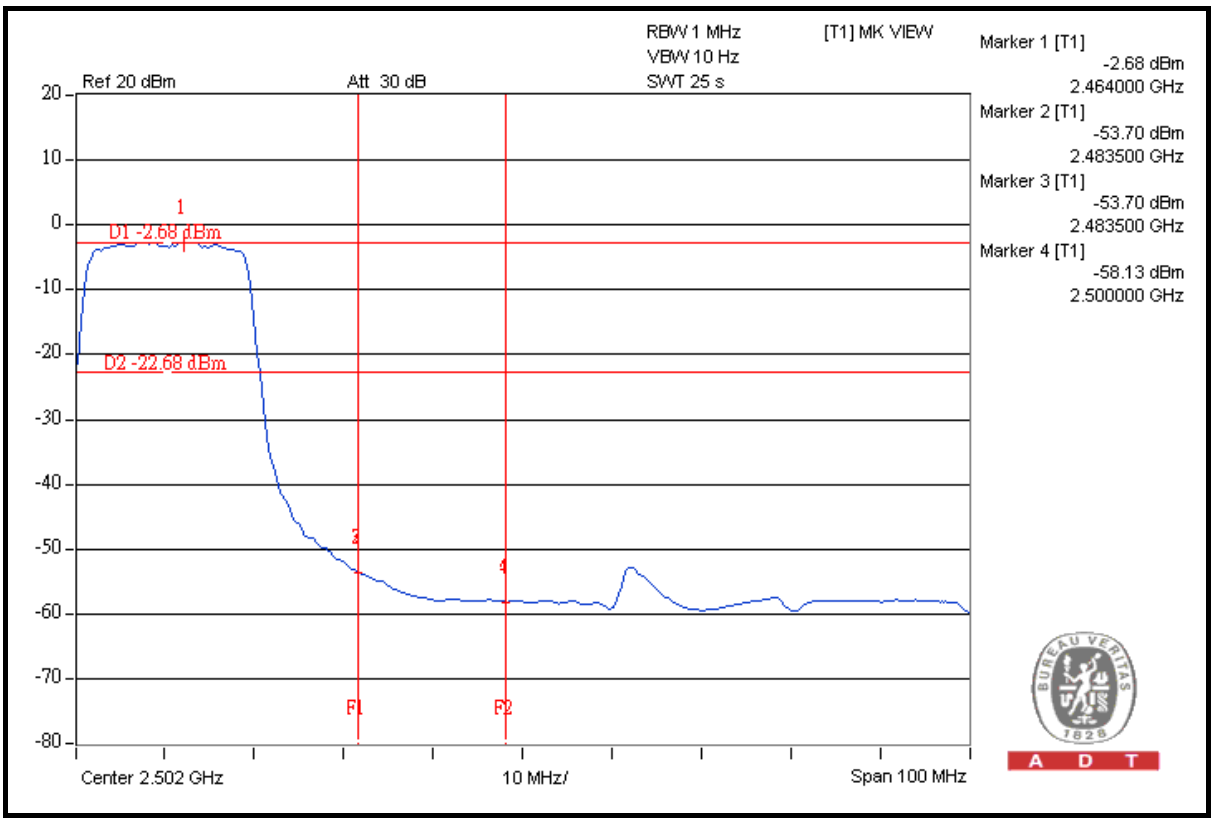
The band edge emission plot on the next third page shows 51.02dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 97.43dBuV/m (Average), so the maximum field strength in restrict band is 97.43 – 51.02 = 46.41dBuV/m which is under 54dBuV/m limit.

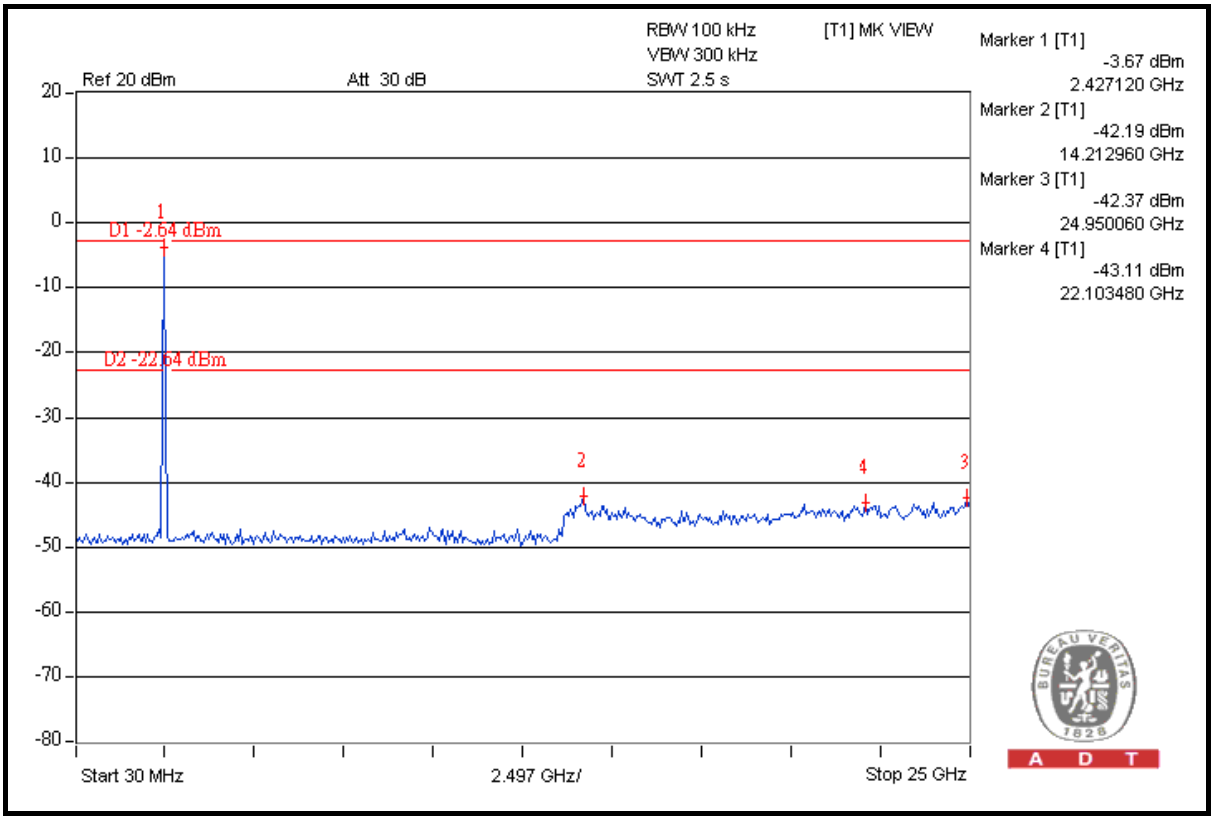

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.62 dBm
D2 -22.62 dBm
Marker 1 [T1]
-2.62 dBm
2.409400 GHz
Marker 2 [T1]
-42.02 dBm
2.400000 GHz
Marker 3 [T1]
-39.63 dBm
2.399400 GHz
Marker 4 [T1]
-48.03 dBm
2.390000 GHz
Marker 5 [T1]
-46.77 dBm
2.359000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.52 dBm
D2 -22.52 dBm
Marker 1 [T1]
-2.52 dBm
2.414200 GHz
Marker 2 [T1]
-39.23 dBm
2.400000 GHz
Marker 3 [T1]
-39.23 dBm
2.400000 GHz
Marker 4 [T1]
-52.99 dBm
2.390000 GHz
Marker 5 [T1]
-52.04 dBm
2.360400 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]
-2.85 dBm
2.377180 GHz
Marker 2 [T1]
-42.06 dBm
24.850180 GHz
Marker 3 [T1]
-42.21 dBm
14.262900 GHz
Marker 4 [T1]
-42.80 dBm
24.950060 GHz
D1 -22.62 dBm
D2 -22.62 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]
-2.64 dBm
2.459200 GHz
Marker 2 [T1]
-49.63 dBm
2.483500 GHz
Marker 3 [T1]
-46.79 dBm
2.484400 GHz
Marker 4 [T1]
-50.56 dBm
2.500000 GHz
D1 -2.64 dBm
D2 -22.64 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]
-2.68 dBm
2.464000 GHz
Marker 2 [T1]
-53.70 dBm
2.483500 GHz
Marker 3 [T1]
-53.70 dBm
2.483500 GHz
Marker 4 [T1]
-58.13 dBm
2.500000 GHz
D1 -2.68 dBm
D2 -22.68 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]
-3.67 dBm
2.427120 GHz
Marker 2 [T1]
-42.19 dBm
14.212960 GHz
Marker 3 [T1]
-42.37 dBm
24.950060 GHz
Marker 4 [T1]
-43.11 dBm
22.103480 GHz
D1 -2.64 dBm
D2 -22.64 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 page shows 37.95dBc between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 103.96dBuV/m (Peak), so the maximum field strength in restrict band is 103.96 – 37.95 = 66.01dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 43.18dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 93.59dBuV/m (Average), so the maximum field strength in restrict band is 93.59 – 43.18 = 50.41dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 39.78dBc between carrier maximum power and local maximum emission in restrict band (2.4852GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 103.56dBuV/m (Peak), so the maximum field strength in restrict band is 103.56 – 39.78= 63.78dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 43.53dBc between carrier maximum power and local maximum emission in restrict band (2.4844GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 93.26dBuV/m (Average), so the maximum field strength in restrict band is 93.26 – 43.53 = 49.73dBuV/m which is under 54dBuV/m limit.

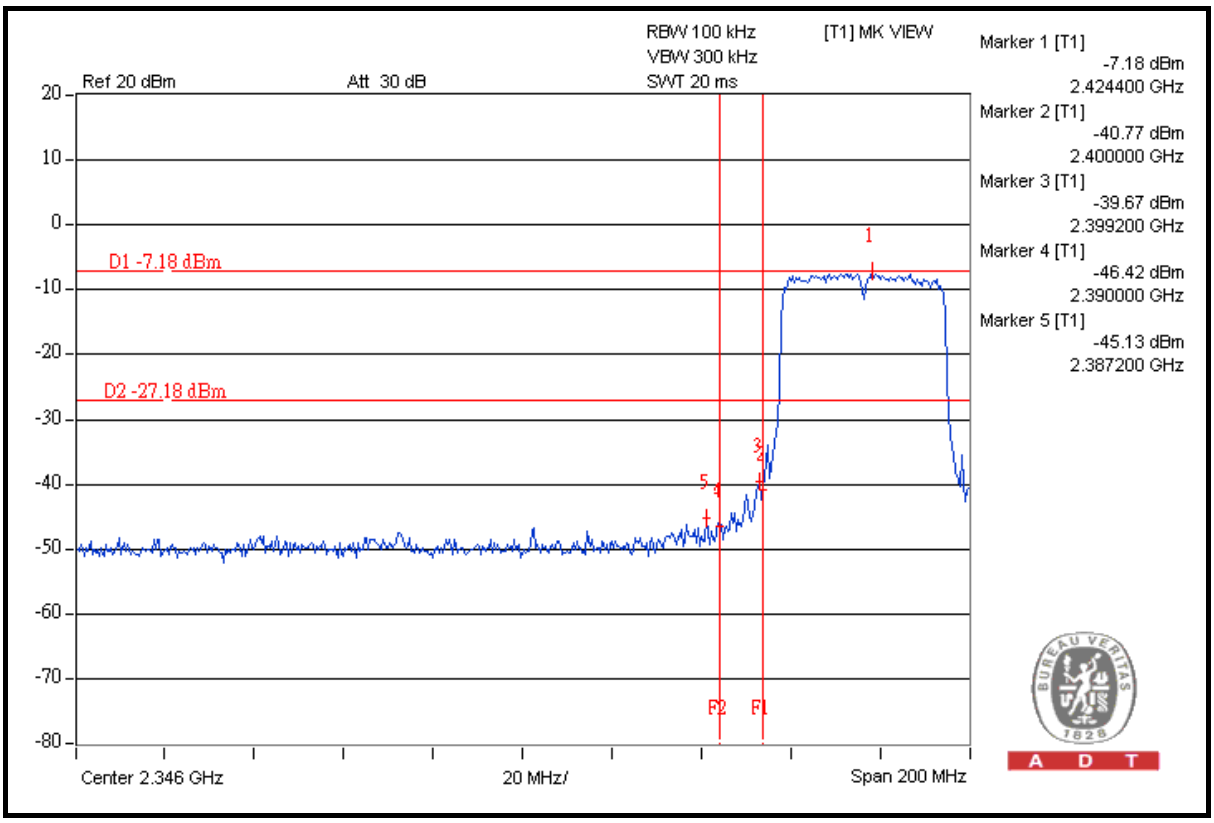
TEST MODE B

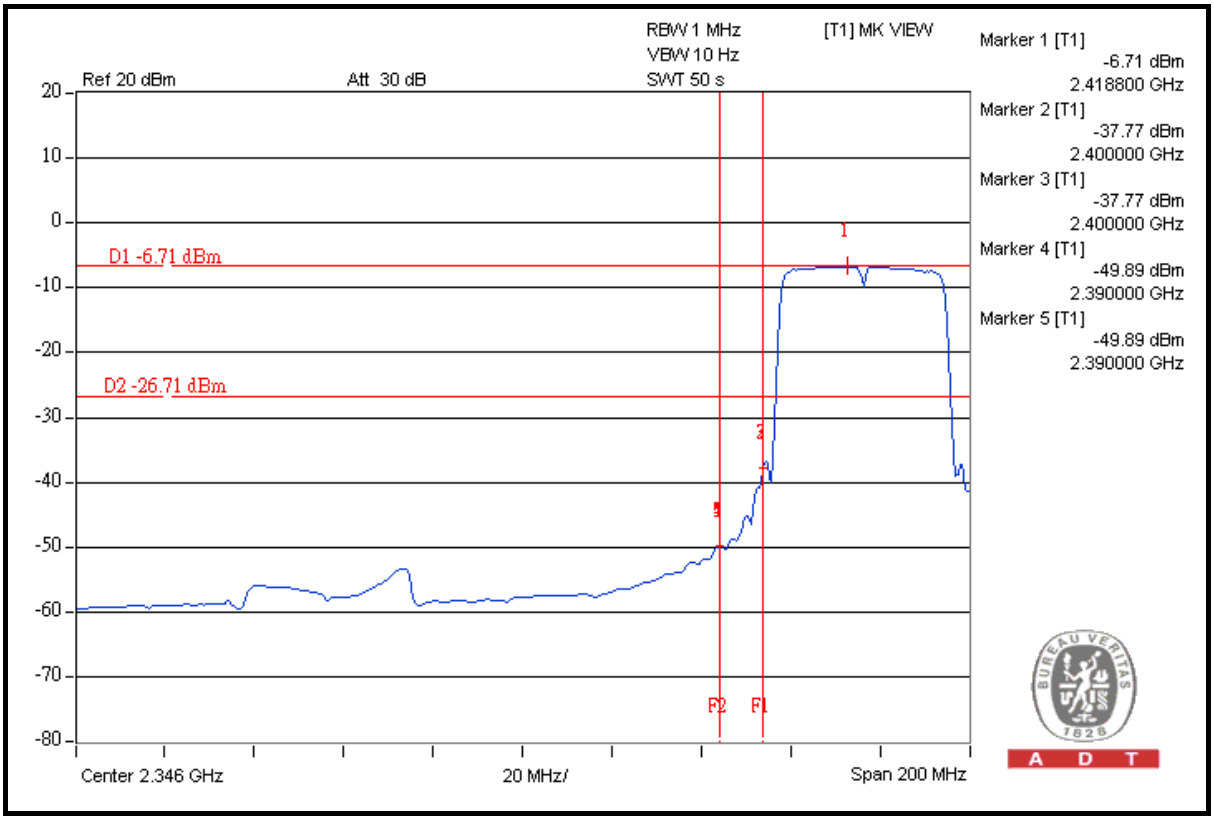
NOTE 1: The band edge emission plot on the next page shows 37.95dBc between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 102.81dBuV/m (Peak), so the maximum field strength in restrict band is 102.81 – 37.95 = 64.86dBuV/m which is under 74dBuV/m limit.

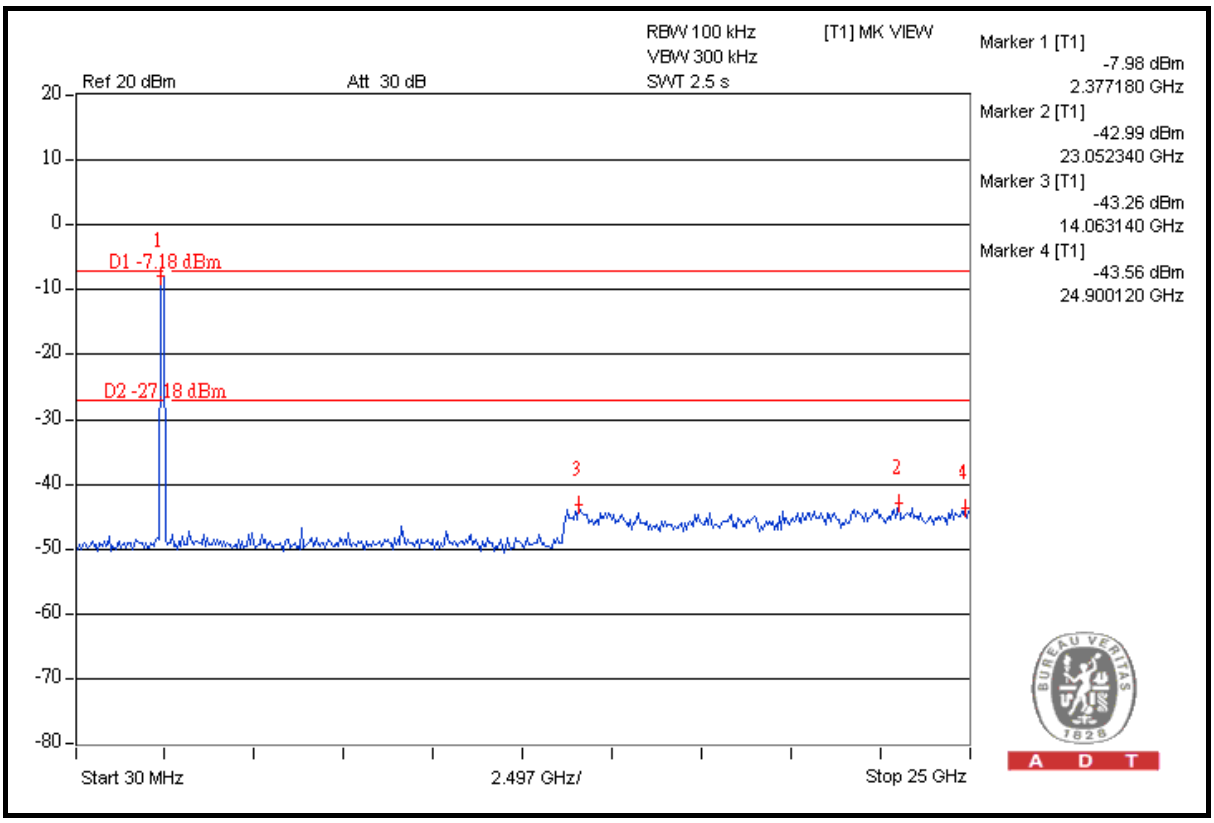
The band edge emission plot on the next page shows 43.18dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 93.24dBuV/m (Average), so the maximum field strength in restrict band is 93.24 – 43.18 = 50.06dBuV/m which is under 54dBuV/m limit.

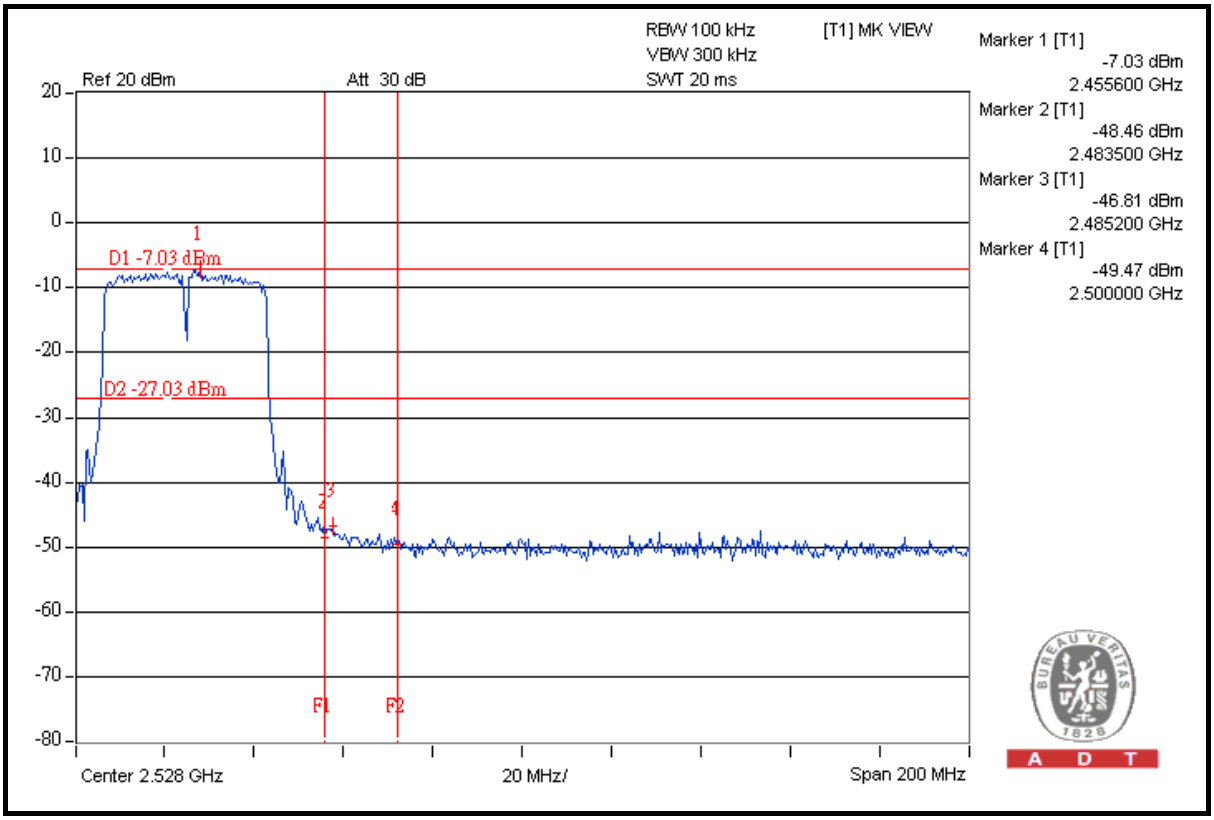
NOTE 2: The band edge emission plot on the next second page shows 39.78dBc between carrier maximum power and local maximum emission in restrict band (2.4852GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 102.45dBuV/m (Peak), so the maximum field strength in restrict band is 102.45 – 39.78= 62.67dBuV/m which is under 74dBuV/m limit.

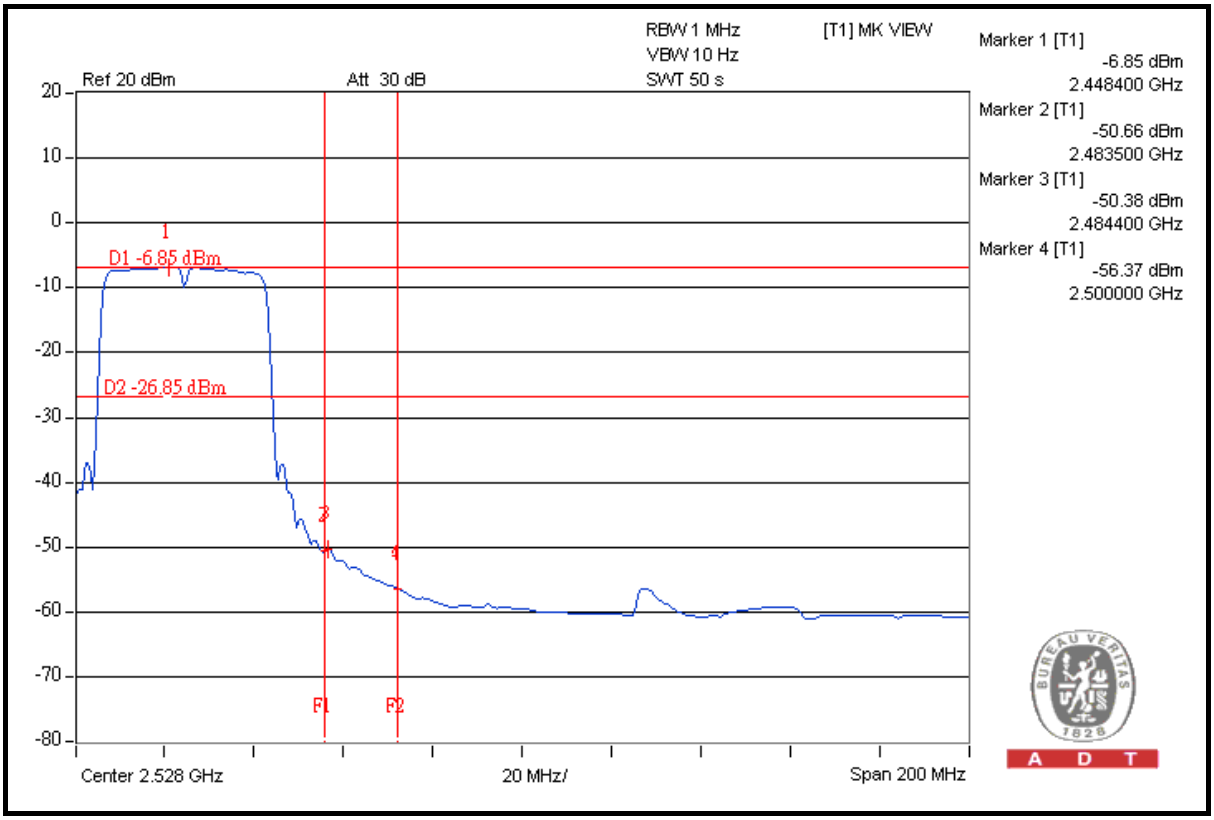
The band edge emission plot on the next third page shows 43.53dBc between carrier maximum power and local maximum emission in restrict band (2.4844GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 92.38dBuV/m (Average), so the maximum field strength in restrict band is 92.38 – 43.53 = 48.85dBuV/m which is under 54dBuV/m limit.

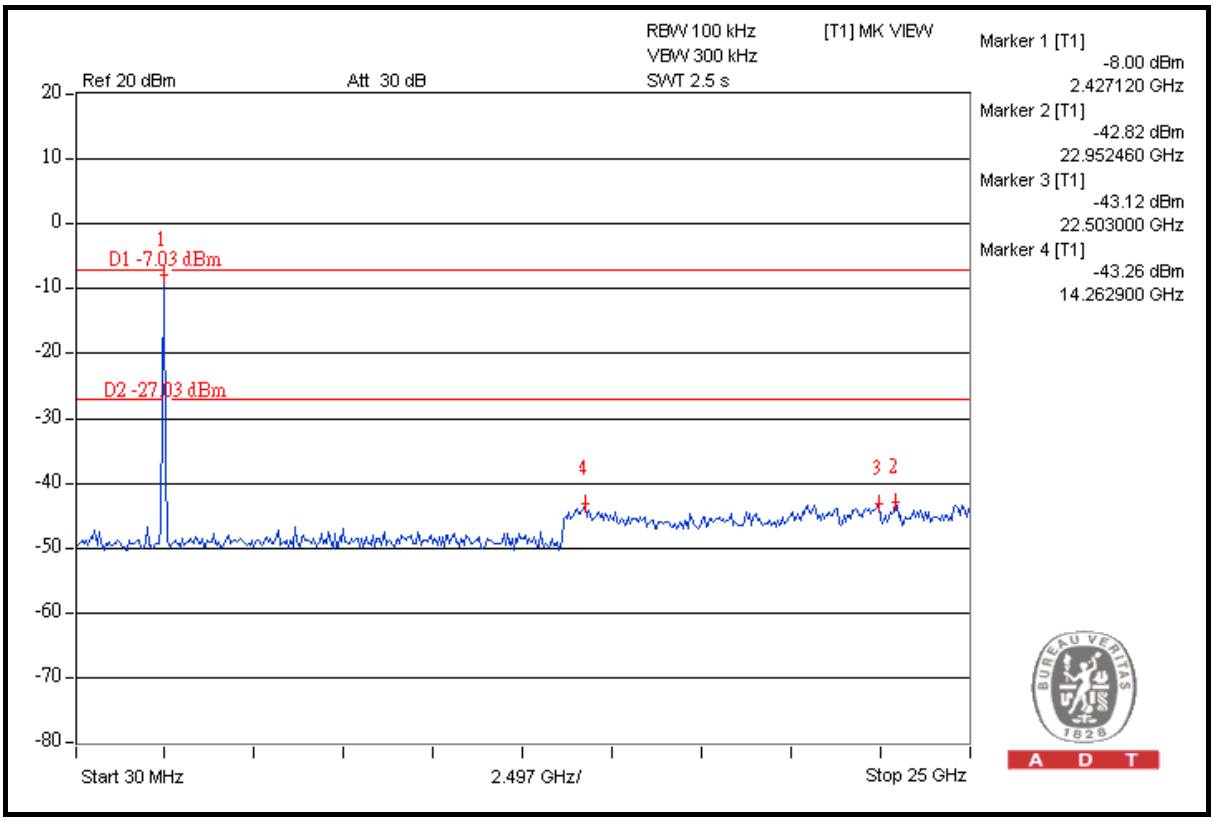

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-7.18 dBm
2.424400 GHz
Marker 2 [T1]
-40.77 dBm
2.400000 GHz
Marker 3 [T1]
-39.67 dBm
2.399200 GHz
Marker 4 [T1]
-46.42 dBm
2.390000 GHz
Marker 5 [T1]
-45.13 dBm
2.387200 GHz
D1 -7.18 dBm
D2 -27.18 dBm
F2
F1
Center 2.346 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]
-6.71 dBm
2.418800 GHz
Marker 2 [T1]
-37.77 dBm
2.400000 GHz
Marker 3 [T1]
-37.77 dBm
2.400000 GHz
Marker 4 [T1]
-49.89 dBm
2.390000 GHz
Marker 5 [T1]
-49.89 dBm
2.390000 GHz
D1 -6.71 dBm
D2 -26.71 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]
-7.98 dBm
2.377180 GHz
Marker 2 [T1]
-42.99 dBm
23.052340 GHz
Marker 3 [T1]
-43.26 dBm
14.063140 GHz
Marker 4 [T1]
-43.56 dBm
24.900120 GHz
D1 -7.18 dBm
D2 -27.18 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]
-7.03 dBm
2.455600 GHz
Marker 2 [T1]
-48.46 dBm
2.483500 GHz
Marker 3 [T1]
-46.81 dBm
2.485200 GHz
Marker 4 [T1]
-49.47 dBm
2.500000 GHz
D1 -7.03 dBm
D2 -27.03 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
D1 -6.85 dBm
D2 -26.85 dBm
Marker 1 [T1]
-6.85 dBm
2.448400 GHz
Marker 2 [T1]
-50.66 dBm
2.483500 GHz
Marker 3 [T1]
-50.38 dBm
2.484400 GHz
Marker 4 [T1]
-56.37 dBm
2.500000 GHz
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
D1 -7.03 dBm
D2 -27.03 dBm
Marker 1 [T1]
-8.00 dBm
2.427120 GHz
Marker 2 [T1]
-42.82 dBm
22.952460 GHz
Marker 3 [T1]
-43.12 dBm
22.503000 GHz
Marker 4 [T1]
-43.26 dBm
14.262900 GHz
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 antennas used in this product are PIFA antenna and Printed antenna with UFL antenna connector. The maximum Gain of the antenna is 4.50dBi.

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 ---