FCC TEST REPORT

REPORT NO.:	RF980417L07
MODEL NO.:	DIR-600
RECEIVED:	Apr. 17, 2009
TESTED:	Apr. 17 ~ Apr. 28, 2009
ISSUED:	May 05, 2009

APPLICANT:	D-Link Corporation
ADDRESS:	17595 Mt. Herrmann, Fountain Valley, CA 92708, U.S.A.
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: Wireless 150 Router
MODEL: DIR-600
BRAND: D-Link
APPLICANT: D-Link Corporation
TESTED: Apr. 17 ~ Apr. 28, 2009
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.4-2003

The above equipment (model: DIR-600) 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	: Andrea Hsia / Specialist	**, DATE :**	May 05, 2009
TECHNICAL ACCEPTANCE Responsible for RF	: Long Chen / Senior Engineer	**, DATE :**	May 05, 2009
APPROVED BY	: Gary Chang / Assistant Manager	**, DATE :**	May 05, 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 -16.22dB at 0.548MHz.
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 -1.42dB at 2483.5MHz.
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	3.19 dB
	200MHz ~1000MHz	3.21 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	Wireless 150 Router
MODEL NO.	DIR-600
FCC ID	KA2DIR600A1
POWER SUPPLY	5Vdc from AC Adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n: up to 135Mbps
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	264.850mW
ANTENNA TYPE	Dipole antenna with 2.0dBi gain
DATA CABLE	NA
I/O PORTS	RJ45
ACCESSORY DEVICES	AC adapter

NOTE:

1. 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

2. The EUT was operated with following power adapter:

ADAPTER 1	
BRAND:	D-Link
MODEL:	CF0605-B IW
INPUT:	100-120Vac, 50-60Hz, 0.18A
OUTPUT:	5Vdc, 1.2A
POWER LINE:	DC:1.5m non-shielded cable without core

ADAPTER 2	
BRAND:	D-Link
MODEL:	CF0605-B
INPUT:	100-120Vac, 50-60Hz, 0.15A
OUTPUT:	5Vdc, 1.2A
POWER LINE:	DC:1.5m non-shielded cable without core

3. 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

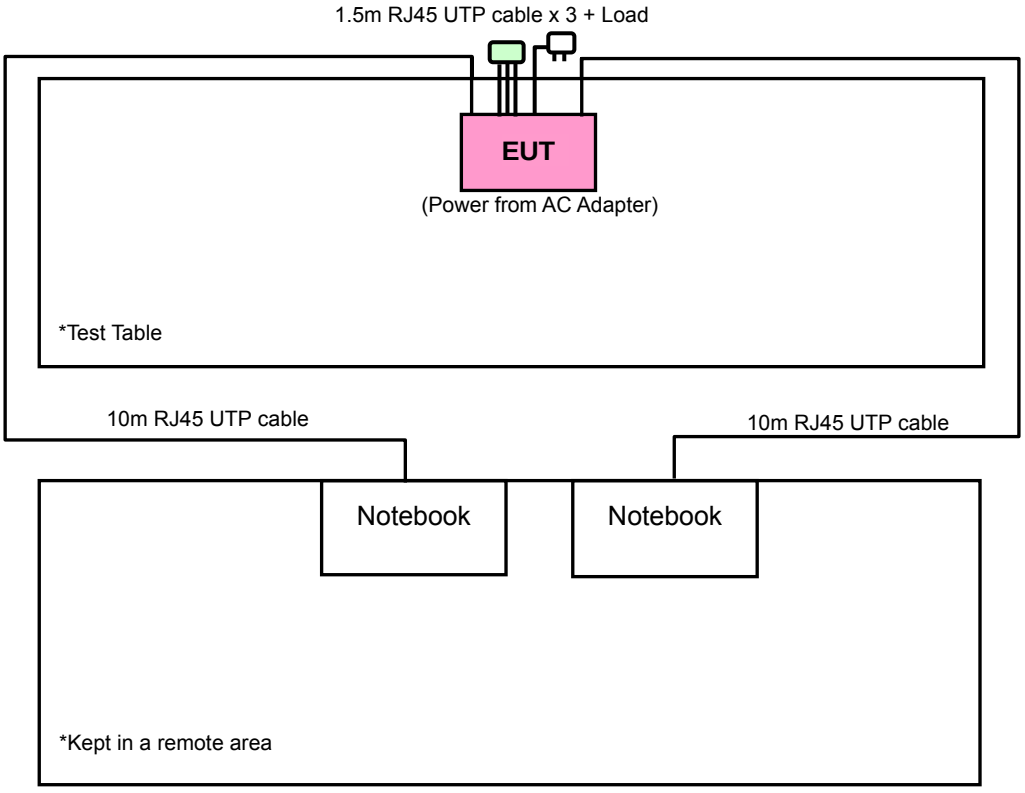
Eleven channels are provided for 802.11b, 802.11g and draft 802.11n (20MHz):

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	√	√	√	√	Power from Adapter 1
B	-	√	√	-	Power from Adapter 2

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

RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, 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)	AXIS
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	X
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	X
A	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	X
A	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	X

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)	AXIS
A	802.11g	1 to 11	1	OFDM	BPSK	6.0	X
B	802.11g	1 to 11	1	OFDM	BPSK	6.0	X

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	1	OFDM	BPSK	6.0
B	802.11g	1 to 11	1	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 COMPUTER	DELL	PP05L	25191592336	E2K24CLNS
2	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m UTP RJ45 cable
2	10m UTP RJ45 cable

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

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	ESIB7	100212	May 28, 2008	May 27, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Aug. 08, 2008	Aug. 07, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-161	Apr. 29, 2008	Apr. 28, 2009
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Aug. 06, 2008	Aug. 05, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01911	Sep. 10, 2008	Sep. 09, 2009
Preamplifier Agilent	8447D	2944A10638	Dec. 26, 2008	Dec. 25, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218190/4 231241/4	May 20, 2008	May 19, 2009
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 09, 2008	Aug. 08, 2009
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	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 Chamber 9.
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 460141.
5. The IC Site Registration No. is IC 7450F-4.

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.

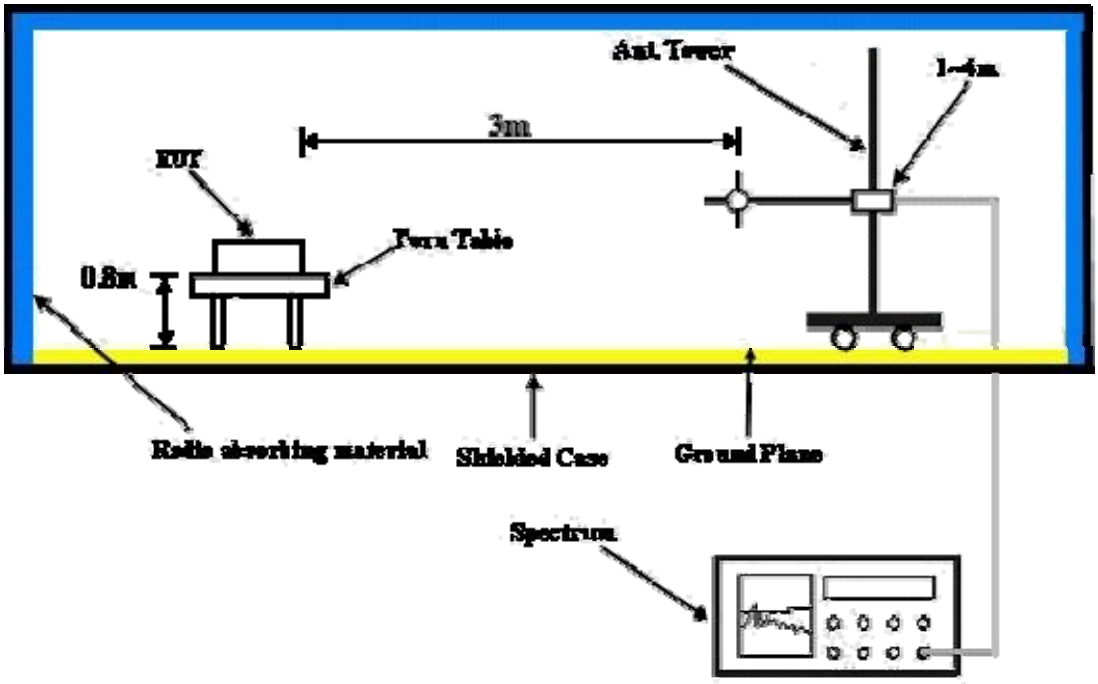
NOTE:

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. Placed the EUT on the testing table.
b. Prepared notebook systems to act as a communication partner and placed them outside of testing area.
c. The communication partners connected with EUT via a UTP cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partners sent data to EUT by command "PING".

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.47 PK	81.41	-30.94	1.10 H	170	19.85	30.62
2	#1750.00	48.96 AV	76.54	-27.58	1.10 H	170	18.34	30.62
3	2390.00	57.77 PK	74.00	-16.23	1.39 H	351	24.69	33.08
4	2390.00	46.96 AV	54.00	-7.04	1.39 H	351	13.88	33.08
5	*2412.00	101.41 PK			1.41 H	344	68.23	33.18
6	*2412.00	96.54 AV			1.41 H	344	63.36	33.18
7	4824.00	48.31 PK	74.00	-25.69	1.30 H	360	9.16	39.15
8	4824.00	35.51 AV	54.00	-18.49	1.30 H	360	-3.64	39.15
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.27 PK	92.48	-39.21	1.39 V	32	22.66	30.62
2	#1750.00	51.46 AV	88.09	-36.63	1.39 V	32	20.85	30.62
3	2390.00	60.21 PK	74.00	-13.79	1.13 V	118	27.13	33.08
4	2390.00	51.54 AV	54.00	-2.46	1.13 V	118	18.46	33.08
5	*2412.00	112.48 PK			1.13 V	141	79.30	33.18
6	*2412.00	108.09 AV			1.13 V	141	74.91	33.18
7	4824.00	52.97 PK	74.00	-21.03	1.02 V	168	13.82	39.15
8	4824.00	47.62 AV	54.00	-6.38	1.02 V	168	8.47	39.15
9	#7236.00	52.29 PK	92.48	-40.19	1.40 V	207	6.99	45.30
10	#7236.00	41.82 AV	88.09	-46.27	1.40 V	207	-3.48	45.30

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

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.31 PK	81.30	-30.99	1.08 H	165	19.70	30.62
2	#1750.00	48.77 AV	76.84	-28.07	1.08 H	165	18.16	30.62
3	*2437.00	101.30 PK			1.30 H	340	68.02	33.28
4	*2437.00	96.84 AV			1.30 H	340	63.56	33.28
5	4874.00	48.47 PK	74.00	-25.53	1.38 H	355	9.33	39.14
6	4874.00	35.84 AV	54.00	-18.16	1.38 H	355	-3.30	39.14
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	51.09 PK	92.32	-41.23	1.13 V	209	20.47	30.62
2	#1750.00	49.06 AV	87.67	-38.61	1.13 V	209	18.45	30.62
3	*2437.00	112.32 PK			1.11 V	144	79.04	33.28
4	*2437.00	107.67 AV			1.11 V	144	74.39	33.28
5	4874.00	52.92 PK	74.00	-21.08	1.00 V	171	13.78	39.14
6	4874.00	47.21 AV	54.00	-6.79	1.00 V	171	8.07	39.14
7	7311.00	53.67 PK	74.00	-20.33	1.57 V	208	8.14	45.53
8	7311.00	44.24 AV	54.00	-9.76	1.57 V	208	-1.29	45.53

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

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.66 PK	81.17	-30.51	1.09 H	168	20.05	30.62
2	#1750.00	48.70 AV	76.77	-28.07	1.09 H	168	18.09	30.62
3	*2462.00	101.17 PK			1.38 H	339	67.79	33.38
4	*2462.00	96.77 AV			1.38 H	339	63.39	33.38
5	2483.50	58.46 PK	74.00	-15.54	1.38 H	339	25.00	33.46
6	2483.50	47.71 AV	54.00	-6.29	1.38 H	339	14.25	33.46
7	4924.00	48.21 PK	74.00	-25.79	1.47 H	28	8.85	39.35
8	4924.00	35.56 AV	54.00	-18.44	1.47 H	28	-3.80	39.35
9	7386.00	51.58 PK	74.00	-22.42	1.39 H	326	5.83	45.76
10	7386.00	38.83 AV	54.00	-15.17	1.39 H	326	-6.92	45.76
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	52.98 PK	92.07	-39.09	1.00 V	228	22.36	30.62
2	#1750.00	51.70 AV	87.46	-35.76	1.00 V	228	21.08	30.62
3	*2462.00	112.07 PK			1.09 V	145	78.69	33.38
4	*2462.00	107.46 AV			1.09 V	145	74.08	33.38
5	2483.50	59.91 PK	74.00	-14.09	1.11 V	169	26.45	33.46
6	2483.50	52.27 AV	54.00	-1.73	1.11 V	169	18.81	33.46
7	4924.00	50.24 PK	74.00	-23.76	1.11 V	169	10.88	39.35
8	4924.00	42.17 AV	54.00	-11.83	1.11 V	169	2.82	39.35
9	7386.00	53.69 PK	74.00	-20.31	1.48 V	247	7.94	45.76
10	7386.00	40.25 AV	54.00	-13.75	1.48 V	247	-5.50	45.76

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

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.98 PK	79.75	-28.77	1.10 H	175	20.37	30.62
2	#1750.00	49.06 AV	69.56	-20.50	1.10 H	175	18.45	30.62
3	#2100.00	47.90 PK	79.75	-31.85	1.22 H	174	16.10	31.80
4	#2100.00	43.63 AV	69.56	-25.93	1.22 H	174	11.83	31.80
5	2390.00	59.98 PK	74.00	-14.02	1.37 H	75	26.90	33.08
6	2390.00	48.02 AV	54.00	-5.98	1.37 H	75	14.94	33.08
7	*2412.00	99.75 PK			1.37 H	75	66.57	33.18
8	*2412.00	89.56 AV			1.37 H	75	56.38	33.18
9	4824.00	49.06 PK	74.00	-24.94	1.00 H	0	9.91	39.15
10	4824.00	35.95 AV	54.00	-18.05	1.00 H	0	-3.20	39.15
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.12 PK	89.66	-36.54	1.00 V	231	22.51	30.62
2	#1750.00	51.46 AV	79.38	-27.92	1.00 V	231	20.85	30.62
3	#2100.00	49.25 PK	89.66	-40.41	1.07 V	48	17.45	31.80
4	#2100.00	46.20 AV	79.38	-33.18	1.07 V	48	14.40	31.80
5	2390.00	66.11 PK	74.00	-7.89	1.17 V	141	33.03	33.08
6	2390.00	52.33 AV	54.00	-1.67	1.17 V	141	19.25	33.08
7	*2412.00	109.66 PK			1.12 V	142	76.48	33.18
8	*2412.00	99.38 AV			1.12 V	142	66.20	33.18
9	4824.00	48.50 PK	74.00	-25.50	1.01 V	360	9.35	39.15
10	4824.00	36.24 AV	54.00	-17.76	1.01 V	360	-2.91	39.15

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.47 PK	79.97	-29.50	1.04 H	184	19.85	30.62
2	#1750.00	49.00 AV	69.84	-20.84	1.04 H	184	18.38	30.62
3	*2437.00	99.97 PK			1.41 H	88	66.69	33.28
4	*2437.00	89.84 AV			1.41 H	88	56.56	33.28
5	4874.00	49.03 PK	74.00	-24.97	1.00 H	360	9.89	39.14
6	4874.00	35.88 AV	54.00	-18.12	1.00 H	360	-3.26	39.14
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.39 PK	89.80	-36.41	1.41 V	223	22.78	30.62
2	#1750.00	51.66 AV	78.77	-27.11	1.41 V	223	21.04	30.62
3	2390.00	62.92 PK	74.00	-11.08	1.14 V	138	29.84	33.08
4	2390.00	50.54 AV	54.00	-3.46	1.14 V	138	17.46	33.08
5	*2437.00	109.80 PK			1.09 V	139	76.52	33.28
6	*2437.00	98.77 AV			1.09 V	139	65.49	33.28
7	2483.50	64.48 PK	74.00	-9.52	1.10 V	142	31.02	33.46
8	2483.50	52.48 AV	54.00	-1.52	1.10 V	142	19.02	33.46
9	4874.00	49.18 PK	74.00	-24.82	1.00 V	360	10.03	39.14
10	4874.00	35.86 AV	54.00	-18.14	1.00 V	360	-3.29	39.14

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.47 PK	79.47	-29.00	1.10 H	180	19.85	30.62
2	#1750.00	48.99 AV	69.51	-20.52	1.10 H	180	18.37	30.62
3	*2462.00	99.47 PK			1.40 H	70	66.09	33.38
4	*2462.00	89.51 AV			1.40 H	70	56.13	33.38
5	2483.50	59.44 PK	74.00	-14.56	1.36 H	90	25.98	33.46
6	2483.50	47.93 AV	54.00	-6.07	1.36 H	90	14.47	33.46
7	4924.00	49.34 PK	74.00	-24.66	1.04 H	360	9.99	39.35
8	4924.00	35.58 AV	54.00	-18.42	1.04 H	360	-3.77	39.35
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	#1750.00	53.37 PK	89.25	-35.88	1.37 V	218	22.76	30.62
2	#1750.00	51.80 AV	78.97	-27.17	1.37 V	218	21.18	30.62
3	*2462.00	109.25 PK			1.10 V	143	75.87	33.38
4	*2462.00	98.97 AV			1.10 V	143	65.59	33.38
5	2483.50	68.81 PK	74.00	-5.19	1.08 V	142	35.35	33.46
6	2483.50	52.56 AV	54.00	-1.44	1.08 V	142	19.10	33.46
7	4924.00	49.23 PK	74.00	-24.77	1.00 V	0	9.87	39.35
8	4924.00	35.85 AV	54.00	-18.15	1.00 V	0	-3.51	39.35

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.98 PK	77.02	-26.04	1.10 H	169	20.36	30.62
2	#1750.00	48.98 AV	66.99	-18.01	1.10 H	169	18.37	30.62
3	2390.00	58.38 PK	74.00	-15.62	1.36 H	77	25.30	33.08
4	2390.00	47.60 AV	54.00	-6.40	1.36 H	77	14.52	33.08
5	*2412.00	97.02 PK			1.36 H	77	63.84	33.18
6	*2412.00	86.99 AV			1.36 H	77	53.81	33.18
7	4824.00	48.06 PK	74.00	-25.94	1.00 H	0	8.91	39.15
8	4824.00	35.37 AV	54.00	-18.63	1.00 H	0	-3.78	39.15
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.16 PK	89.12	-35.96	1.00 V	263	22.54	30.62
2	#1750.00	51.30 AV	77.96	-26.66	1.00 V	263	20.69	30.62
3	2390.00	67.29 PK	74.00	-6.71	1.14 V	123	34.21	33.08
4	2390.00	52.24 AV	54.00	-1.76	1.14 V	123	19.16	33.08
5	*2412.00	109.12 PK			1.12 V	172	75.94	33.18
6	*2412.00	97.96 AV			1.12 V	172	64.78	33.18
7	4824.00	49.17 PK	74.00	-24.83	1.00 V	360	10.02	39.15
8	4824.00	36.09 AV	54.00	-17.91	1.00 V	360	-3.06	39.15

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.87 PK	77.54	-26.67	1.07 H	170	20.25	30.62
2	#1750.00	48.79 AV	67.13	-18.34	1.07 H	170	18.17	30.62
3	*2437.00	97.54 PK			1.33 H	101	64.26	33.28
4	*2437.00	87.13 AV			1.33 H	101	53.85	33.28
5	4874.00	48.01 PK	74.00	-25.99	1.30 H	360	8.87	39.14
6	4874.00	35.24 AV	54.00	-18.76	1.30 H	360	-3.90	39.14
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.34 PK	89.23	-35.89	1.00 V	266	22.73	30.62
2	#1750.00	51.42 AV	78.27	-26.85	1.00 V	266	20.80	30.62
3	2390.00	60.36 PK	74.00	-13.64	1.08 V	174	27.28	33.08
4	2390.00	49.10 AV	54.00	-4.90	1.08 V	174	16.02	33.08
5	*2437.00	109.23 PK			1.12 V	173	75.95	33.28
6	*2437.00	98.27 AV			1.12 V	173	64.99	33.28
7	2483.50	64.85 PK	74.00	-9.15	1.08 V	174	31.39	33.46
8	2483.50	52.36 AV	54.00	-1.64	1.08 V	174	18.90	33.46
9	4874.00	48.99 PK	74.00	-25.01	1.00 V	360	9.84	39.14
10	4874.00	36.08 AV	54.00	-17.92	1.00 V	360	-3.07	39.14

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	50.71 PK	73.67	-22.96	1.00 H	181	20.09	30.62
2	#1750.00	48.63 AV	63.06	-14.43	1.00 H	181	18.02	30.62
3	*2462.00	93.67 PK			1.29 H	100	60.29	33.38
4	*2462.00	83.06 AV			1.29 H	100	49.68	33.38
5	2483.50	57.47 PK	74.00	-16.53	1.24 H	103	24.01	33.46
6	2483.50	46.33 AV	54.00	-7.67	1.24 H	103	12.87	33.46
7	4924.00	47.99 PK	74.00	-26.01	1.24 H	0	8.64	39.35
8	4924.00	35.21 AV	54.00	-18.79	1.24 H	0	-4.14	39.35
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	#1750.00	53.07 PK	85.16	-32.09	1.00 V	247	22.45	30.62
2	#1750.00	51.26 AV	73.24	-21.98	1.00 V	247	20.64	30.62
3	*2462.00	105.16 PK			1.10 V	173	71.78	33.38
4	*2462.00	93.24 AV			1.10 V	173	59.86	33.38
5	2483.50	65.16 PK	74.00	-8.84	1.09 V	173	31.70	33.46
6	**2483.50**	**52.58 AV**	**54.00**	**-1.42**	**1.09 V**	**173**	**19.12**	**33.46**
7	4924.00	49.18 PK	74.00	-24.82	1.10 V	360	9.82	39.35
8	4924.00	36.11 AV	54.00	-17.89	1.10 V	360	-3.25	39.35

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	51.11 PK	68.35	-17.24	1.10 H	180	20.49	30.62
2	#1750.00	49.00 AV	57.92	-8.92	1.10 H	180	18.38	30.62
3	2390.00	58.77 PK	74.00	-15.23	1.35 H	76	25.69	33.08
4	2390.00	47.63 AV	54.00	-6.37	1.35 H	76	14.55	33.08
5	*2422.00	88.35 PK			1.35 H	76	55.13	33.22
6	*2422.00	77.92 AV			1.35 H	76	44.70	33.22
7	4844.00	49.17 PK	74.00	-24.83	1.10 H	360	10.03	39.15
8	4844.00	35.65 AV	54.00	-18.35	1.10 H	360	-3.49	39.15
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.01 PK	80.41	-27.40	1.04 V	271	22.39	30.62
2	#1750.00	51.11 AV	68.76	-17.65	1.04 V	271	20.49	30.62
3	2390.00	67.33 PK	74.00	-6.67	1.10 V	119	34.25	33.08
4	2390.00	52.09 AV	54.00	-1.91	1.10 V	119	19.01	33.08
5	*2422.00	100.41 PK			1.12 V	172	67.19	33.22
6	*2422.00	88.76 AV			1.12 V	172	55.54	33.22
7	4844.00	49.09 PK	74.00	-24.91	1.00 V	10	9.95	39.15
8	4844.00	36.17 AV	54.00	-17.83	1.00 V	10	-2.97	39.15

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	51.01 PK	73.14	-22.13	1.11 H	186	20.39	30.62
2	#1750.00	48.90 AV	63.08	-14.18	1.11 H	186	18.28	30.62
3	*2437.00	93.14 PK			1.30 H	80	59.86	33.28
4	*2437.00	83.08 AV			1.30 H	80	49.80	33.28
5	4874.00	49.04 PK	74.00	-24.96	1.10 H	360	9.90	39.14
6	4874.00	35.27 AV	54.00	-18.73	1.10 H	360	-3.87	39.14
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1750.00	53.14 PK	85.72	-32.58	1.02 V	255	22.52	30.62
2	#1750.00	51.24 AV	74.59	-23.35	1.02 V	255	20.62	30.62
3	2390.00	61.54 PK	74.00	-12.46	1.14 V	147	28.46	33.08
4	2390.00	50.08 AV	54.00	-3.92	1.14 V	147	17.00	33.08
5	*2437.00	105.72 PK			1.10 V	92	72.44	33.28
6	*2437.00	94.59 AV			1.10 V	92	61.31	33.28
7	2483.50	66.98 PK	74.00	-7.02	1.06 V	172	33.52	33.46
8	2483.50	52.49 AV	54.00	-1.51	1.06 V	172	19.03	33.46
9	4874.00	48.96 PK	74.00	-25.04	1.10 V	360	9.81	39.14
10	4874.00	35.99 AV	54.00	-18.01	1.10 V	360	-3.16	39.14

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.
6. "#":The radiated frequency is out the restricted band.

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	24deg. C, 64%RH 1000hPa	TESTED BY	Match Tsui

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	#1750.00	51.01 PK	68.43	-17.42	1.10 H	200	20.39	30.62
2	#1750.00	48.92 AV	58.01	-9.09	1.10 H	200	18.30	30.62
3	*2452.00	88.43 PK			1.30 H	80	55.09	33.34
4	*2452.00	78.01 AV			1.30 H	80	44.67	33.34
5	2483.50	58.86 PK	74.00	-15.14	1.25 H	82	25.40	33.46
6	2483.50	47.83 AV	54.00	-6.17	1.25 H	82	14.37	33.46
7	4904.00	48.22 PK	74.00	-25.78	1.00 H	360	9.04	39.18
8	4904.00	35.22 AV	54.00	-18.78	1.00 H	360	-3.96	39.18
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	#1750.00	53.21 PK	80.00	-26.79	1.10 V	280	22.59	30.62
2	#1750.00	51.27 AV	68.46	-17.19	1.10 V	280	20.66	30.62
3	*2452.00	100.00 PK			1.10 V	145	66.66	33.34
4	*2452.00	88.46 AV			1.10 V	145	55.12	33.34
5	2483.50	68.52 PK	74.00	-5.48	1.09 V	135	35.06	33.46
6	2483.50	52.58 AV	54.00	-1.42	1.09 V	135	19.12	33.46
7	4904.00	49.22 PK	74.00	-24.78	1.00 V	360	10.04	39.18
8	4904.00	36.22 AV	54.00	-17.78	1.00 V	360	-2.96	39.18

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.
6. "#":The radiated frequency is out the restricted band.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH 999hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	29.90	30.48 QP	40.00	-9.52	2.00 H	223	18.20	12.28
2	140.72	30.84 QP	43.50	-12.66	2.00 H	298	18.21	12.63
3	230.16	33.08 QP	46.00	-12.92	1.25 H	100	21.13	11.94
4	348.76	36.96 QP	46.00	-9.04	1.00 H	178	22.14	14.82
5	624.85	35.94 QP	46.00	-10.06	1.25 H	217	13.82	22.11
6	700.68	41.63 QP	46.00	-4.37	1.00 H	226	18.89	22.75
7	751.23	36.54 QP	46.00	-9.46	1.00 H	184	12.56	23.98
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	55.18	36.61 QP	40.00	-3.39	1.00 V	358	23.08	13.53
2	92.12	30.98 QP	43.50	-12.52	1.00 V	133	21.73	9.24
3	103.78	35.22 QP	43.50	-8.28	1.25 V	301	25.43	9.79
4	525.69	34.04 QP	46.00	-11.96	2.00 V	100	14.02	20.02
5	624.85	33.46 QP	46.00	-12.54	1.00 V	265	11.35	22.11
6	700.68	40.44 QP	46.00	-5.56	1.00 V	268	17.69	22.75
7	751.23	35.19 QP	46.00	-10.81	1.00 V	187	11.21	23.98
8	902.89	33.99 QP	46.00	-12.01	1.00 V	187	7.86	26.13

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH 999hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	29.90	30.80 QP	40.00	-9.20	2.00 H	127	18.52	12.28
2	78.51	32.16 QP	40.00	-7.84	2.00 H	175	23.57	8.59
3	348.76	36.86 QP	46.00	-9.14	1.00 H	148	22.04	14.82
4	624.85	35.35 QP	46.00	-10.65	1.25 H	211	13.24	22.11
5	700.68	40.53 QP	46.00	-5.47	1.25 H	154	17.79	22.75
6	751.23	35.44 QP	46.00	-10.56	1.25 H	343	11.46	23.98
7	760.95	33.33 QP	46.00	-12.67	1.00 H	10	9.08	24.25
8	840.67	32.45 QP	46.00	-13.55	1.00 H	160	6.88	25.57
9	945.66	33.79 QP	46.00	-12.21	1.50 H	208	7.34	26.46
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.34	37.62 QP	40.00	-2.38	1.00 V	283	24.09	13.53
2	97.95	34.50 QP	43.50	-9.00	1.00 V	175	25.19	9.31
3	525.69	32.77 QP	46.00	-13.23	1.00 V	64	12.74	20.02
4	624.85	33.11 QP	46.00	-12.89	1.00 V	271	11.00	22.11
5	700.68	39.72 QP	46.00	-6.28	1.00 V	280	16.97	22.75
6	893.16	33.90 QP	46.00	-12.10	1.00 V	169	7.85	26.04
7	951.49	32.13 QP	46.00	-13.87	1.25 V	40	5.63	26.50

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

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

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

4. Margin value = Emission level – Limit value.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.2.2 TEST INSTRUMENTS

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

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

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

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

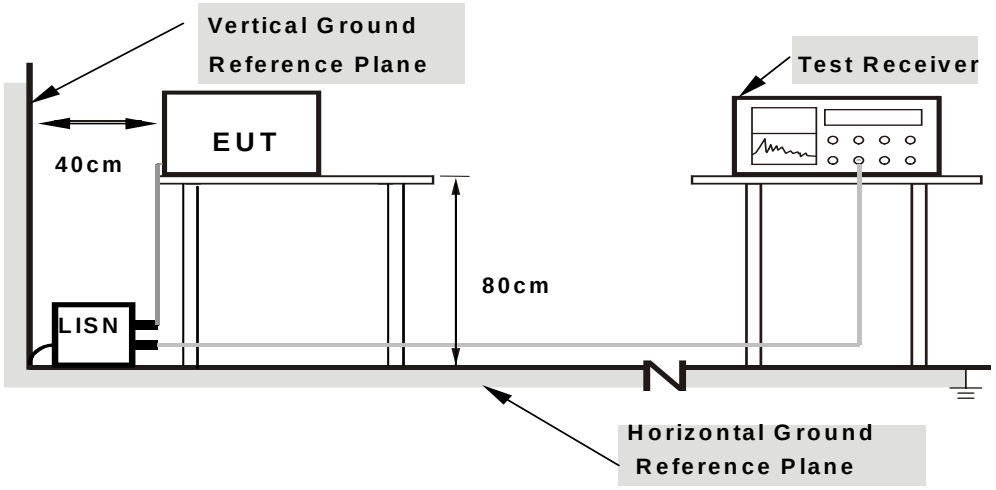
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

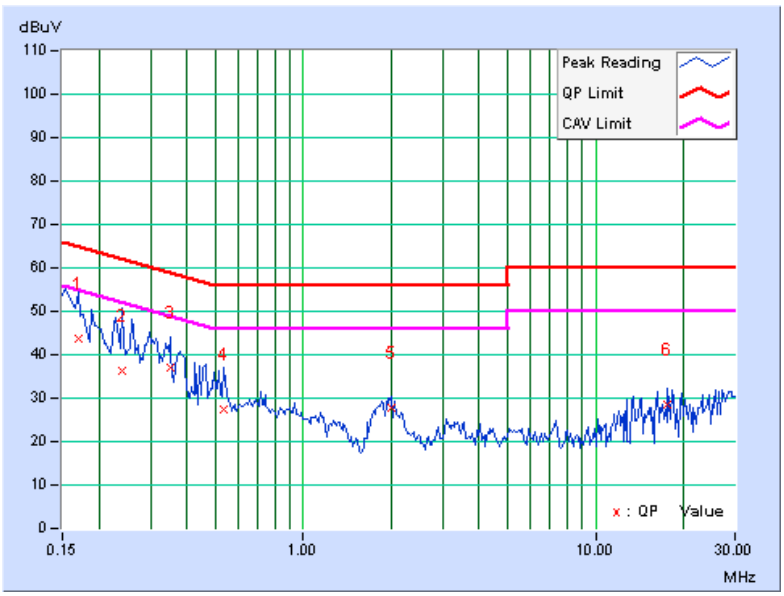
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1027hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.13	43.70	-	43.83	-	64.98	54.98	-21.15	-
2	0.240	0.13	35.99	-	36.12	-	62.10	52.10	-25.98	-
3	0.349	0.14	36.75	-	36.89	-	58.98	48.98	-22.09	-
4	0.537	0.15	27.31	-	27.46	-	56.00	46.00	-28.54	-
5	2.004	0.23	27.57	-	27.80	-	56.00	46.00	-28.20	-
6	17.695	1.04	27.41	-	28.45	-	60.00	50.00	-31.55	-

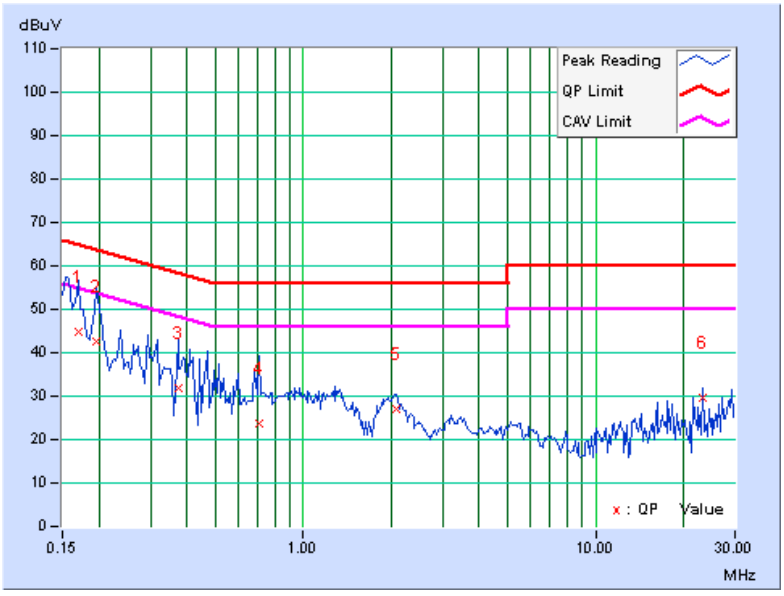
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1027hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.14	44.53	-	44.67	-	64.98	54.98	-20.31	-
2	0.197	0.15	42.51	-	42.66	-	63.74	53.74	-21.08	-
3	0.373	0.16	31.51	-	31.67	-	58.44	48.44	-26.77	-
4	0.709	0.18	23.64	-	23.82	-	56.00	46.00	-32.18	-
5	2.074	0.26	26.90	-	27.16	-	56.00	46.00	-28.84	-
6	23.129	0.91	28.64	-	29.55	-	60.00	50.00	-30.45	-

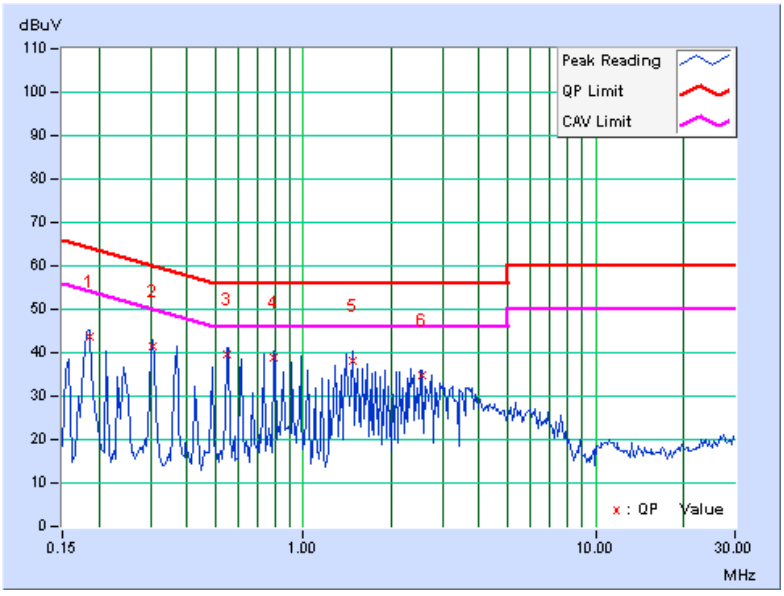
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1027hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.13	43.60	-	43.73	-	64.25	54.25	-20.52	-
2	0.306	0.14	41.29	-	41.43	-	60.07	50.07	-18.65	-
3	**0.548**	**0.15**	**39.63**	**-**	**39.78**	**-**	**56.00**	**46.00**	**-16.22**	**-**
4	0.795	0.17	38.62	-	38.79	-	56.00	46.00	-17.21	-
5	1.469	0.20	38.11	-	38.31	-	56.00	46.00	-17.69	-
6	2.566	0.27	34.39	-	34.66	-	56.00	46.00	-21.34	-

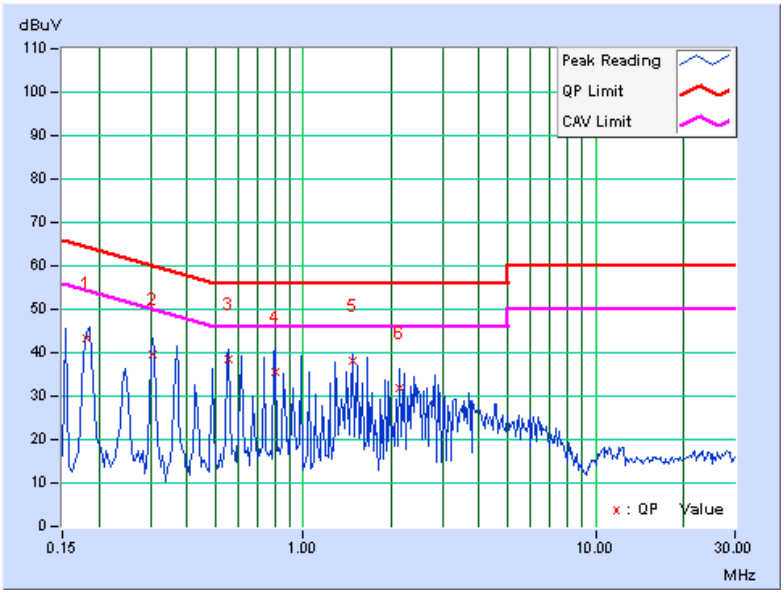
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1027hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.183	0.15	43.04	-	43.19	-	64.37	54.37	-21.18	-
2	0.306	0.16	39.50	-	39.66	-	60.07	50.07	-20.42	-
3	0.552	0.17	38.18	-	38.35	-	56.00	46.00	-17.65	-
4	0.798	0.19	35.42	-	35.61	-	56.00	46.00	-20.39	-
5	1.469	0.22	38.11	-	38.33	-	56.00	46.00	-17.67	-
6	2.145	0.26	31.55	-	31.81	-	56.00	46.00	-24.19	-

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



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	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP

4.3.6 EUT OPERATING CONDITIONS

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

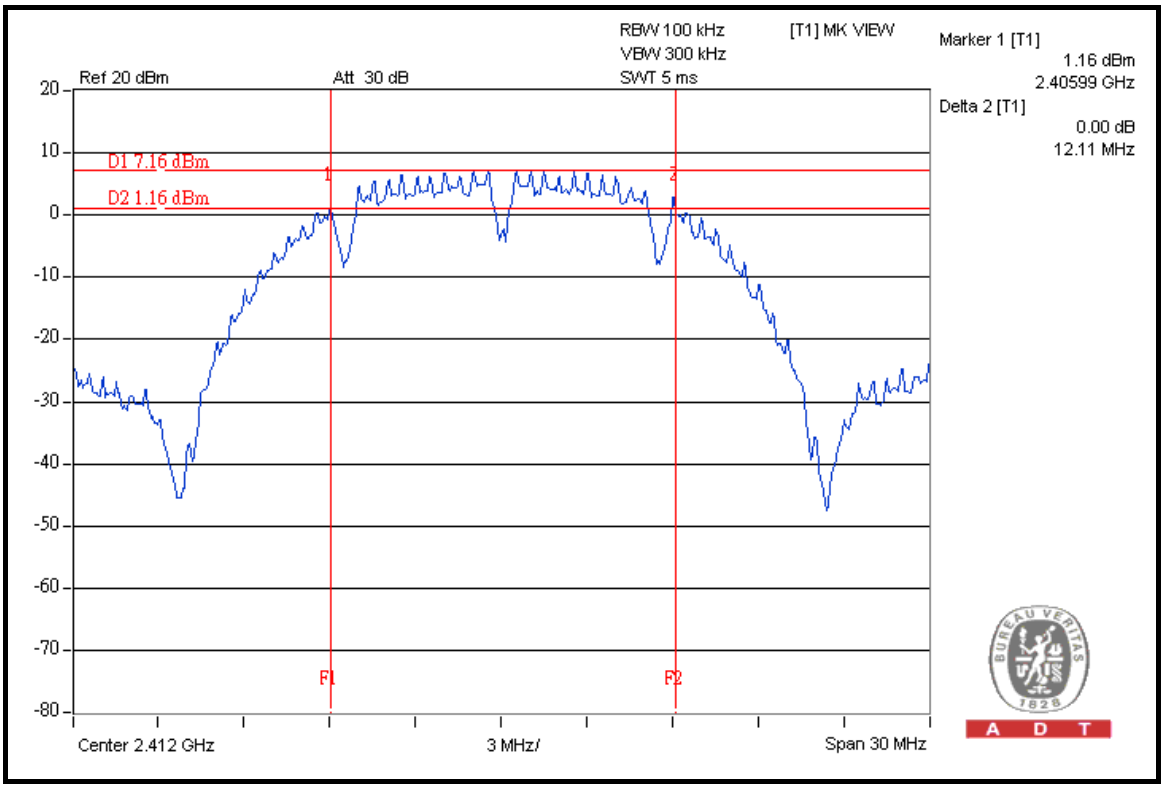
4.3.7 TEST RESULTS

802.11b DSSS MODULATION

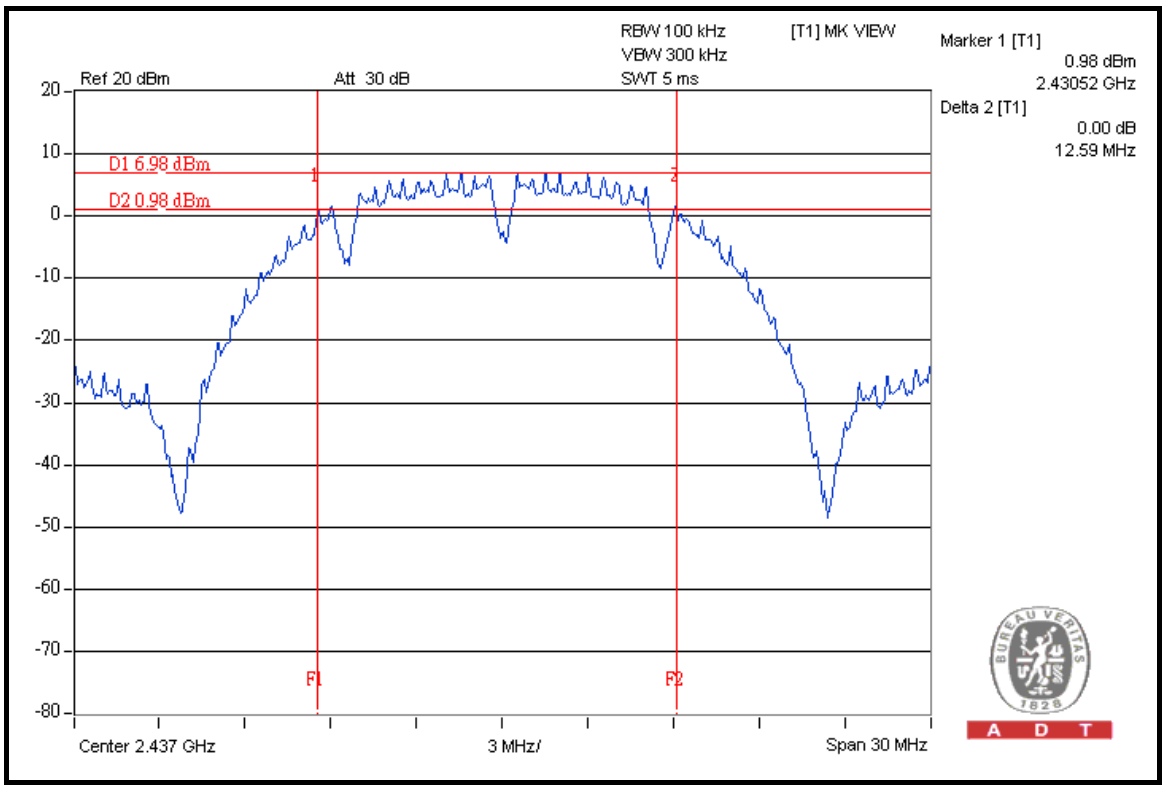
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.11	0.5	PASS
6	2437	12.59	0.5	PASS
11	2462	12.11	0.5	PASS

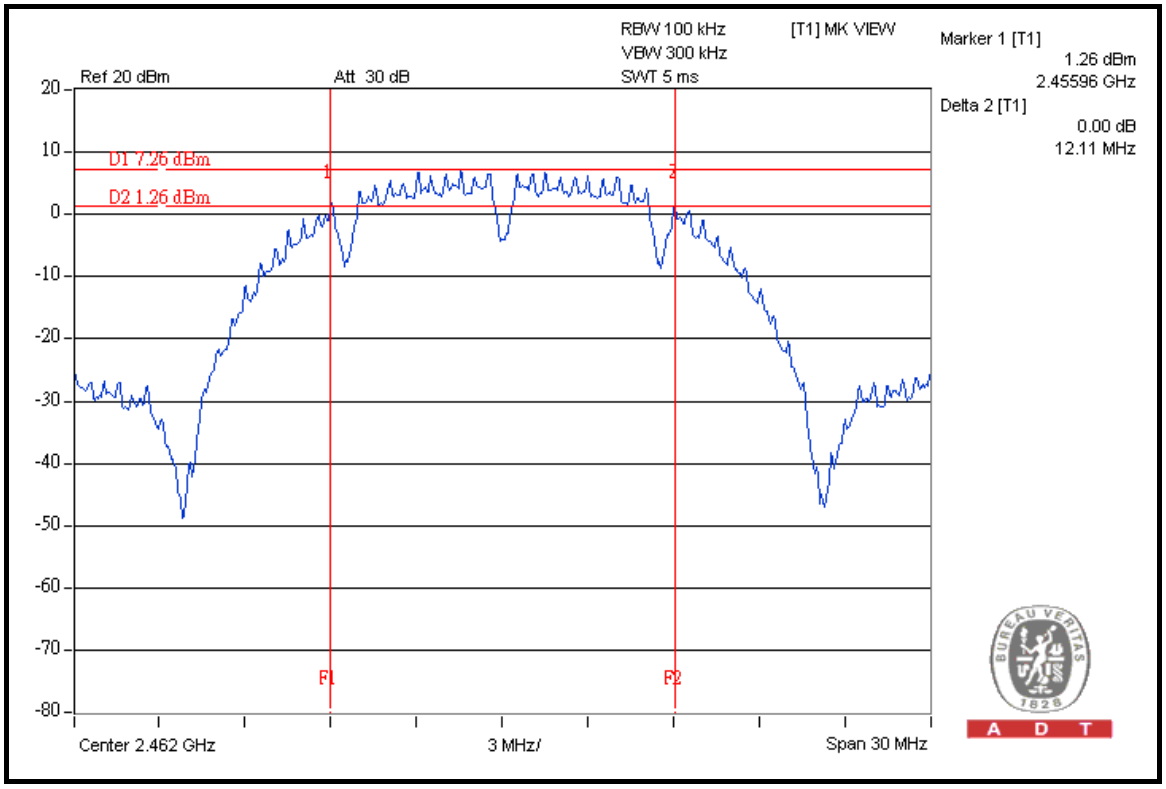
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
0.98 dBm
2.43052 GHz
Delta 2 [T1]
0.00 dB
12.59 MHz
Ref 20 dBm
Att 30 dB
D1 6.98 dBm
D2 0.98 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

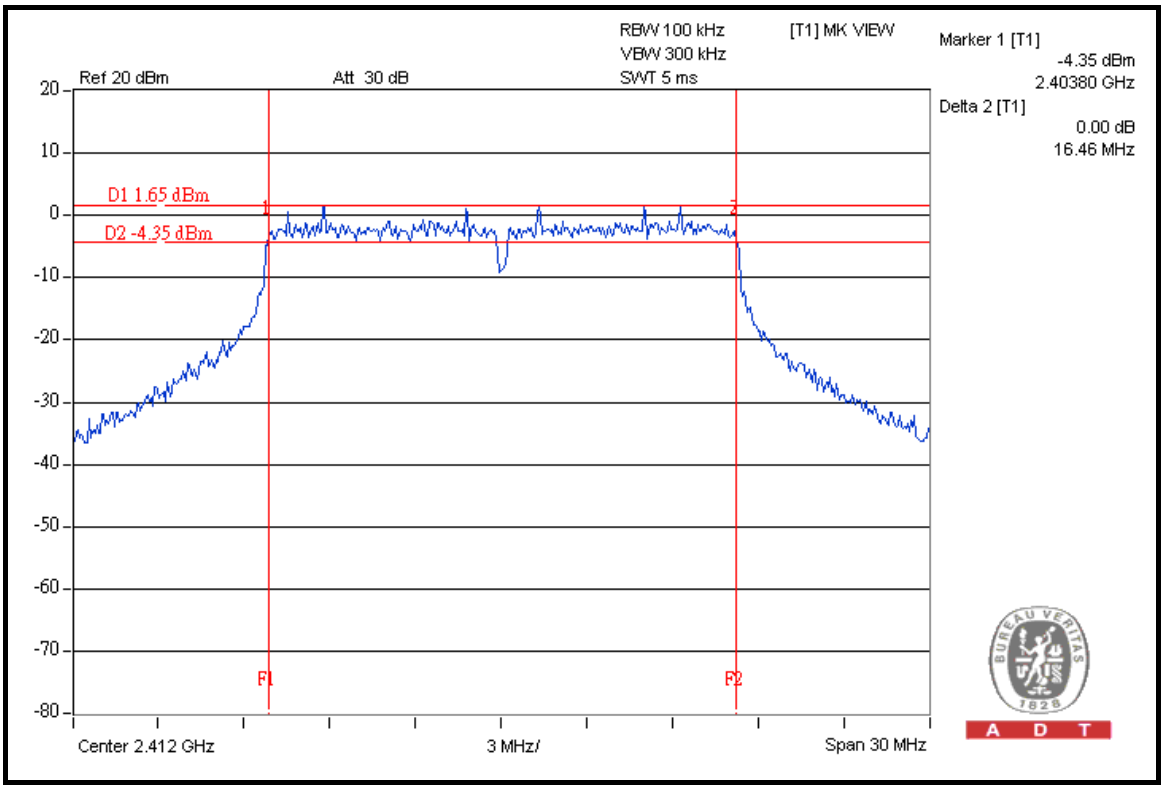

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
1.26 dBm
2.45596 GHz
Delta 2 [T1]
0.00 dB
12.11 MHz
Ref 20 dBm
Att 30 dB
D1 7.26 dBm
D2 1.26 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

802.11g OFDM MODULATION

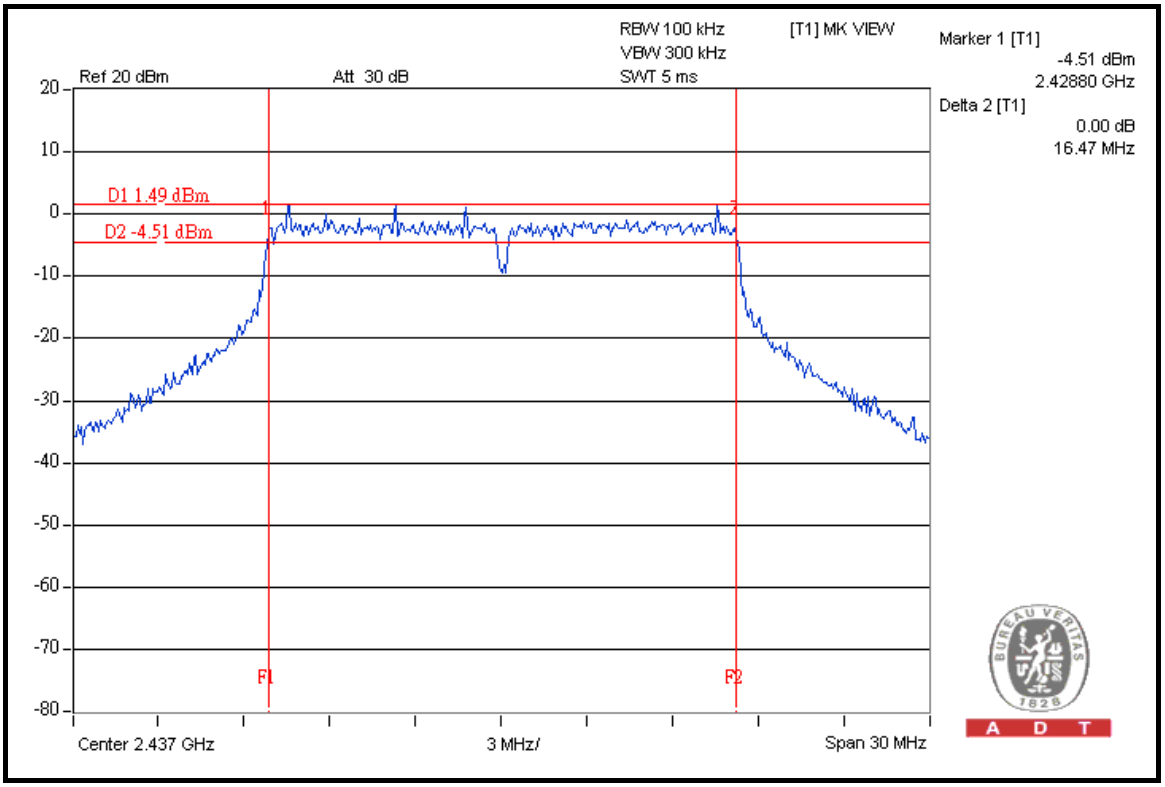
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.46	0.5	PASS
6	2437	16.47	0.5	PASS
11	2462	16.44	0.5	PASS

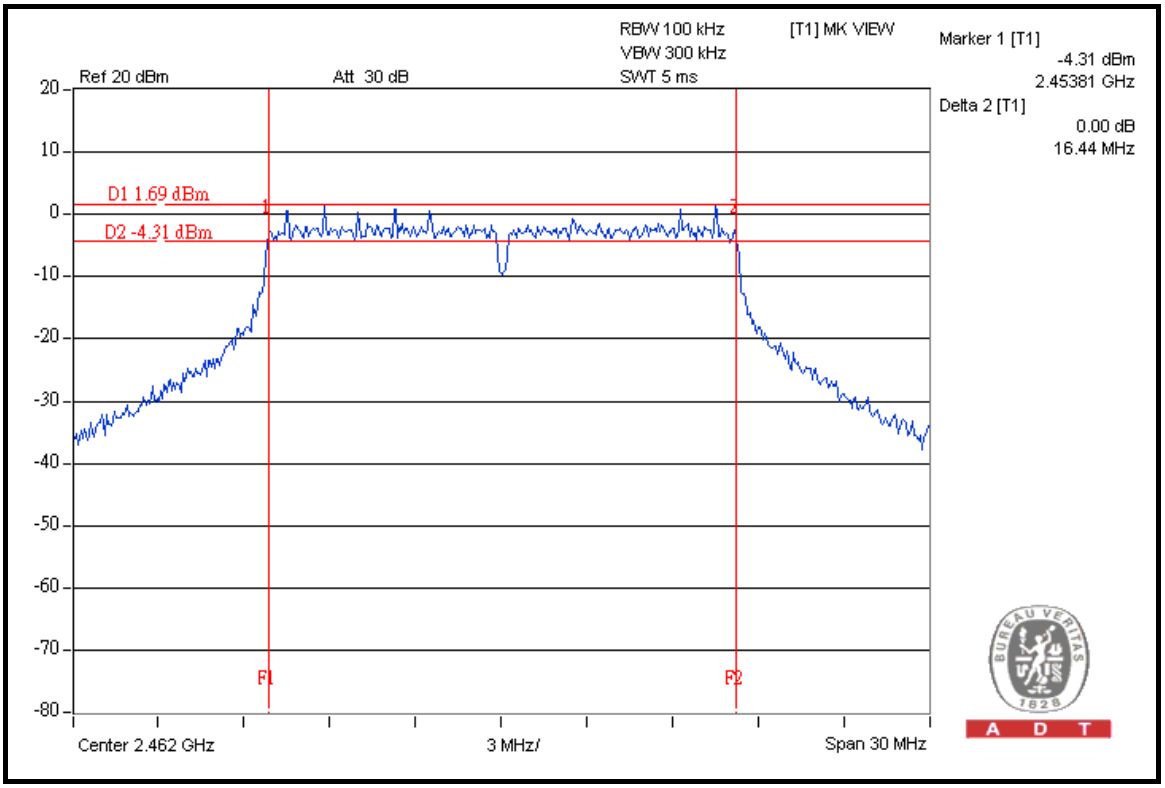
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-4.51 dBm
2.42880 GHz
Delta 2 [T1]
0.00 dB
16.47 MHz
Ref 20 dBm
Att 30 dB
D1 1.49 dBm
D2 -4.51 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

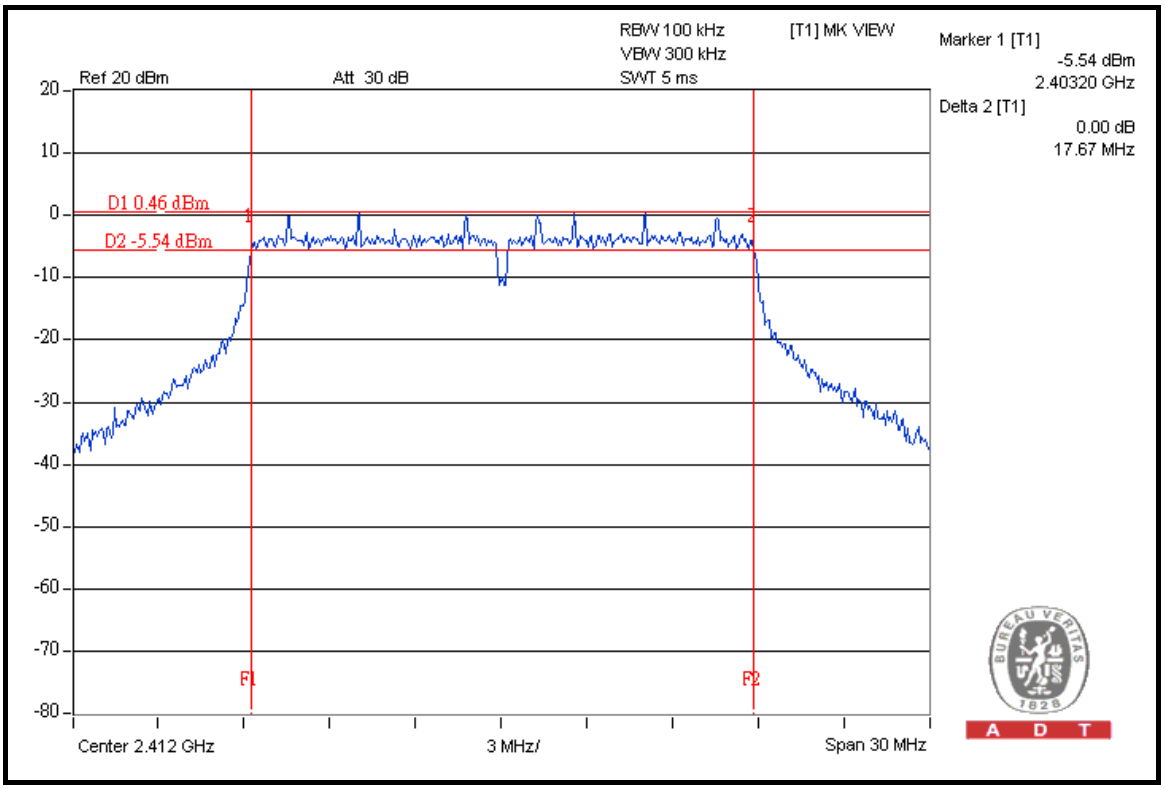

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-4.31 dBm
2.45381 GHz
Delta 2 [T1]
0.00 dB
16.44 MHz
Ref 20 dBm
Att 30 dB
D1 1.69 dBm
D2 -4.31 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION

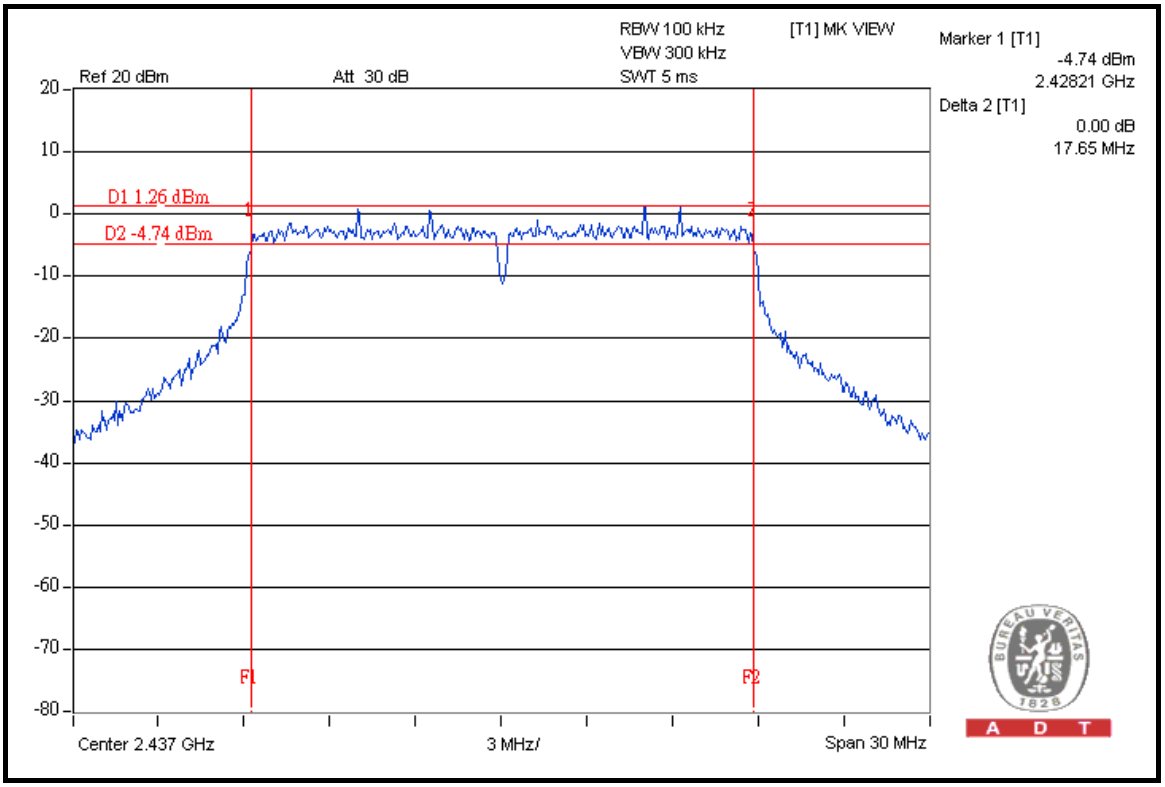
MODULATION TYPE	BPSK	**TRANSFER RATE**	6.5Mbps
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.67	0.5	PASS
6	2437	17.65	0.5	PASS
11	2462	17.64	0.5	PASS

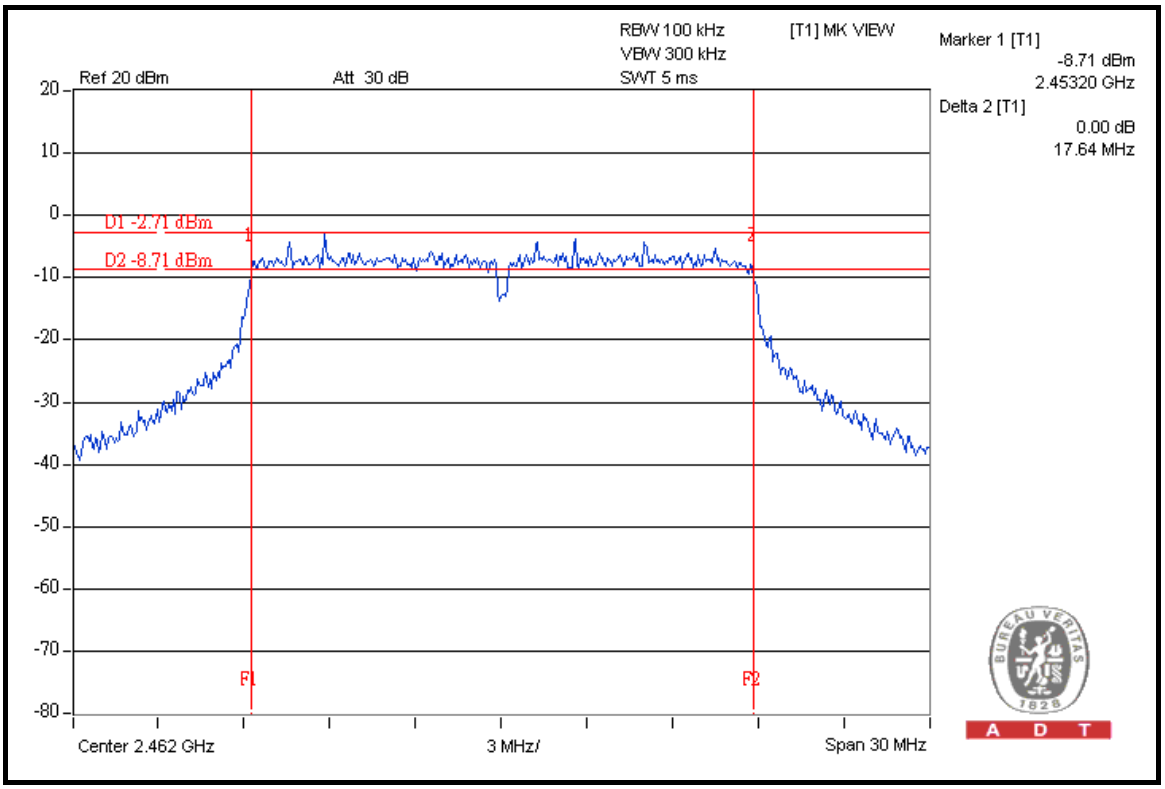
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-4.74 dBm
2.42821 GHz
Delta 2 [T1]
0.00 dB
17.65 MHz
Ref 20 dBm
Att 30 dB
D1 1.26 dBm
D2 -4.74 dBm
F1
F2
Center 2.437 GHz
3 MHz/
Span 30 MHz

CH 11

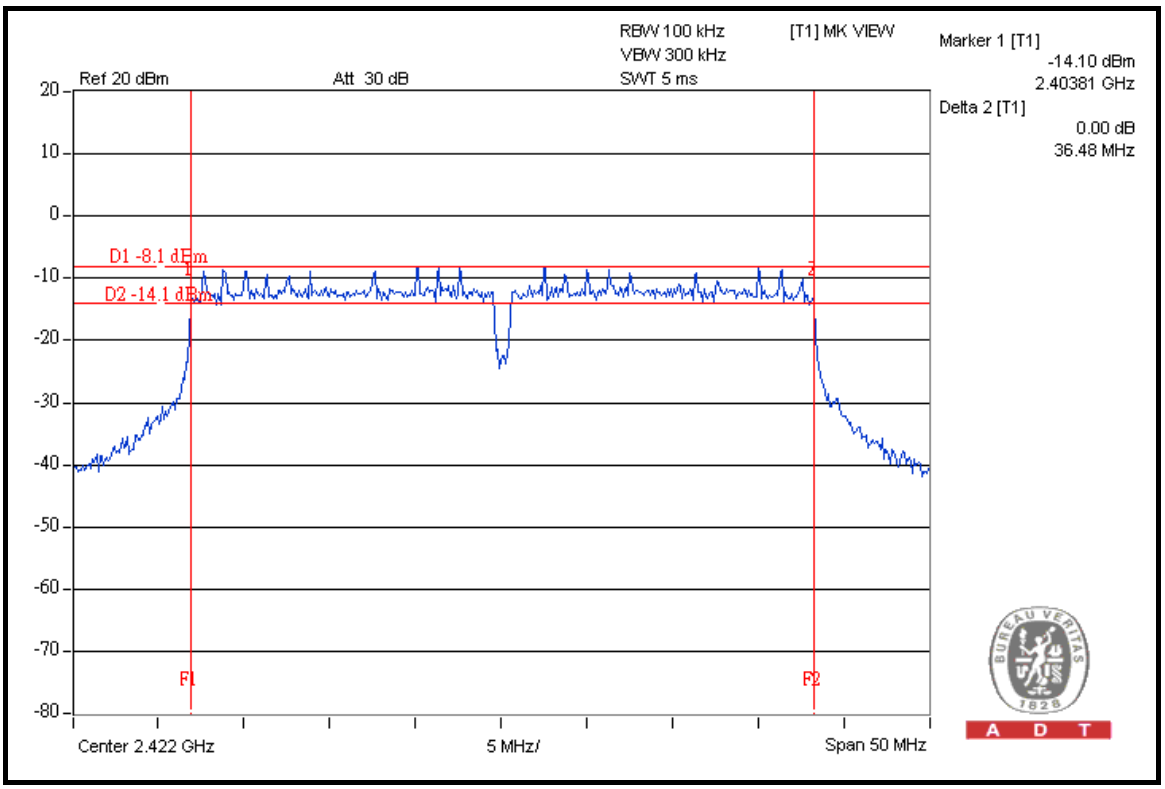

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.71 dBm
2.45320 GHz
Delta 2 [T1]
0.00 dB
17.64 MHz
Ref 20 dBm
Att 30 dB
D1 -2.71 dBm
D2 -8.71 dBm
F1
F2
Center 2.462 GHz
3 MHz/
Span 30 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION

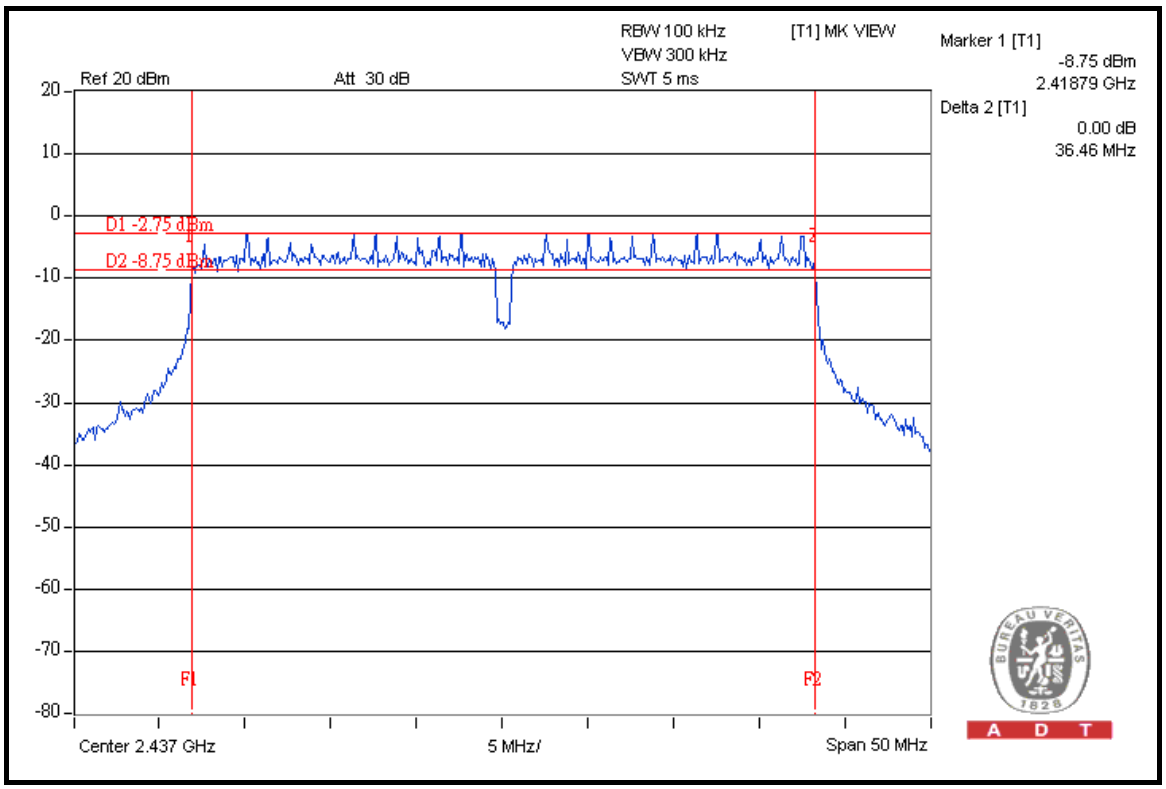
MODULATION TYPE	BPSK	TRANSFER RATE	13.5Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.48	0.5	PASS
4	2437	36.46	0.5	PASS
7	2452	36.39	0.5	PASS

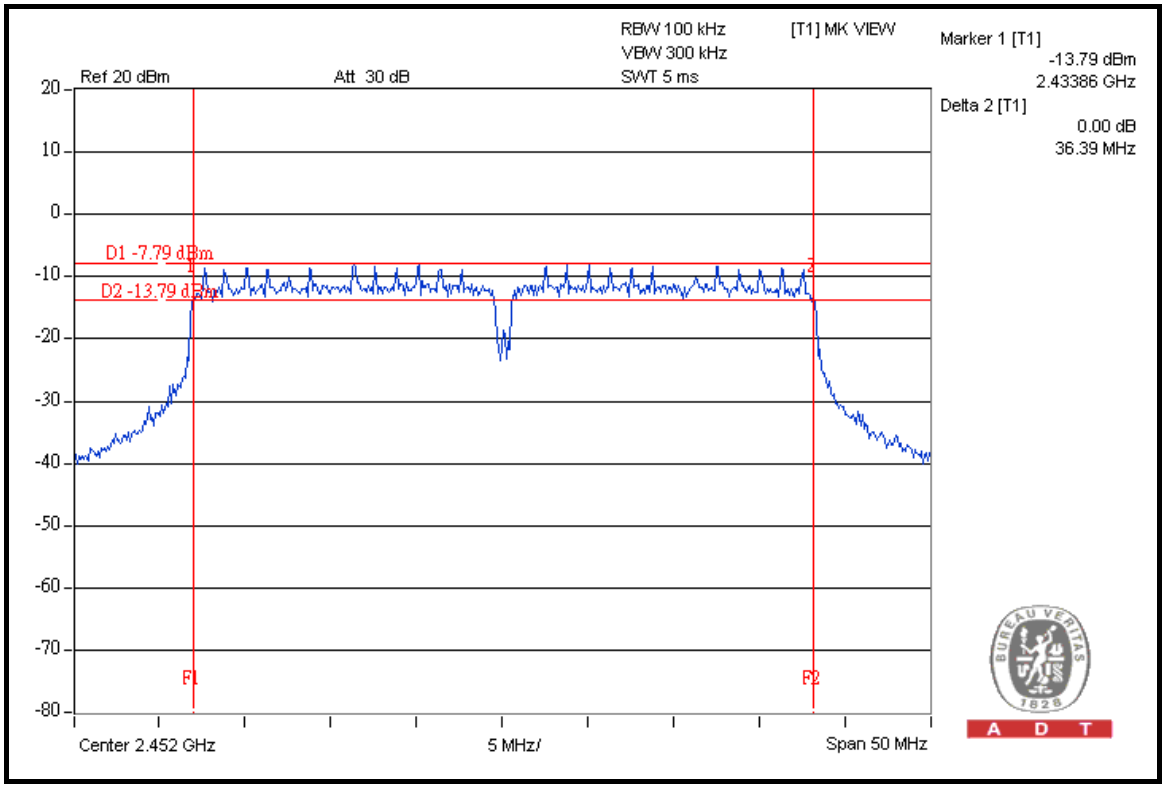
CH 1



CH 4


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.75 dBm
2.41879 GHz
Delta 2 [T1]
0.00 dB
36.46 MHz
Ref 20 dBm
Att 30 dB
D1 -2.75 dBm
D2 -8.75 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]
-13.79 dBm
2.43386 GHz
Delta 2 [T1]
0.00 dB
36.39 MHz
Ref 20 dBm
Att 30 dB
D1 -7.79 dBm
D2 -13.79 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	CALIBRATED UNTIL
High Speed Peak Power Meter	ML2495A	0824012	Aug. 04, 2008	Aug. 03, 2009
Power Sensor	MA2411B	0738138	Aug. 04, 2008	Aug. 03, 2009

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Measurement Bandwidth of ML2495A is 65MHz greater than 6dB bandwidth of emission.

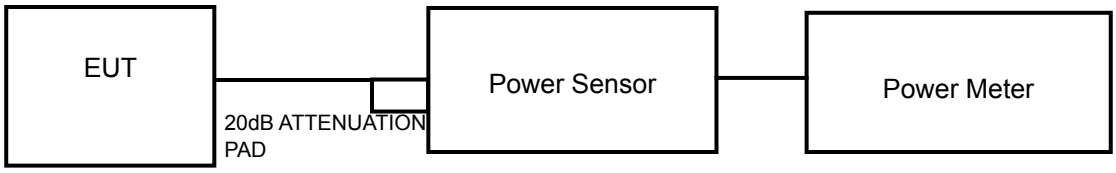
4.4.3 TEST PROCEDURES

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation.

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b DSSS MODULATION

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	127.057	21.04	30	PASS
6	2437	130.017	21.14	30	PASS
11	2462	129.122	21.11	30	PASS

802.11g OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	264.850	24.23	30	PASS
6	2437	236.592	23.74	30	PASS
11	2462	260.016	24.15	30	PASS

DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	**TRANSFER RATE**	6.5Mbps
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	197.242	22.95	30	PASS
6	2437	243.781	23.87	30	PASS
11	2462	94.624	19.76	30	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	**TRANSFER RATE**	13.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHAN	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2422	52.845	17.23	30	PASS
4	2437	181.552	22.59	30	PASS
7	2452	57.016	17.56	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	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

4.5.3 TEST PROCEDURE

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

The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation.

4.5.5 TEST SETUP

4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6.

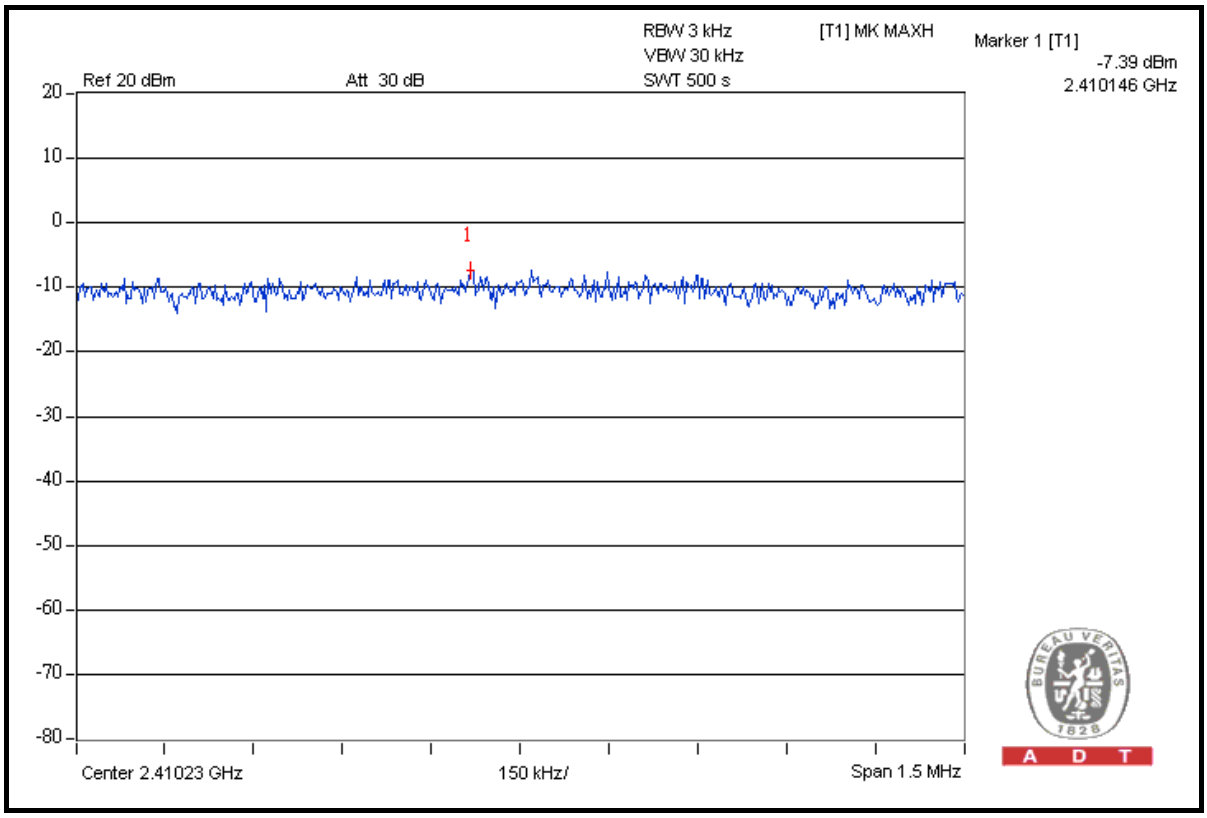
4.5.7 TEST RESULTS

802.11b DSSS MODULATION

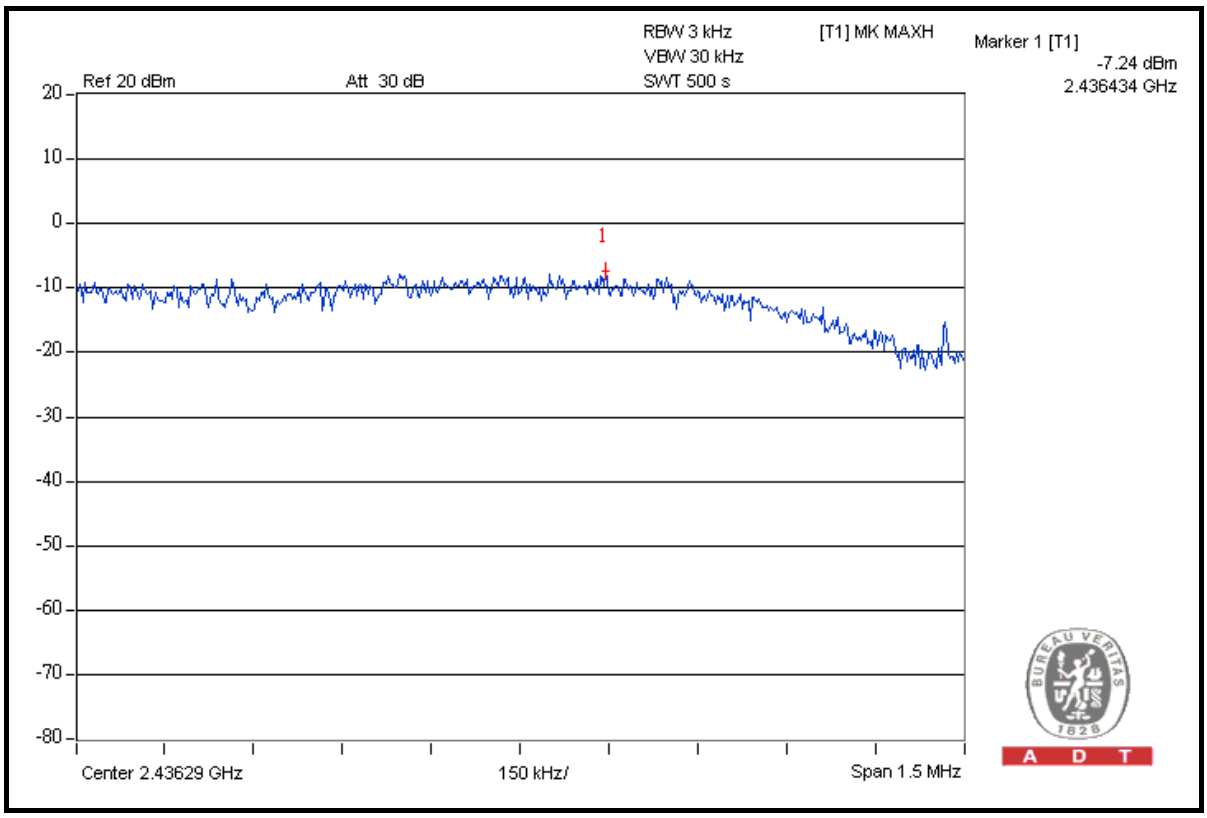
MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-7.39	8	PASS
6	2437	-7.24	8	PASS
11	2462	-7.22	8	PASS

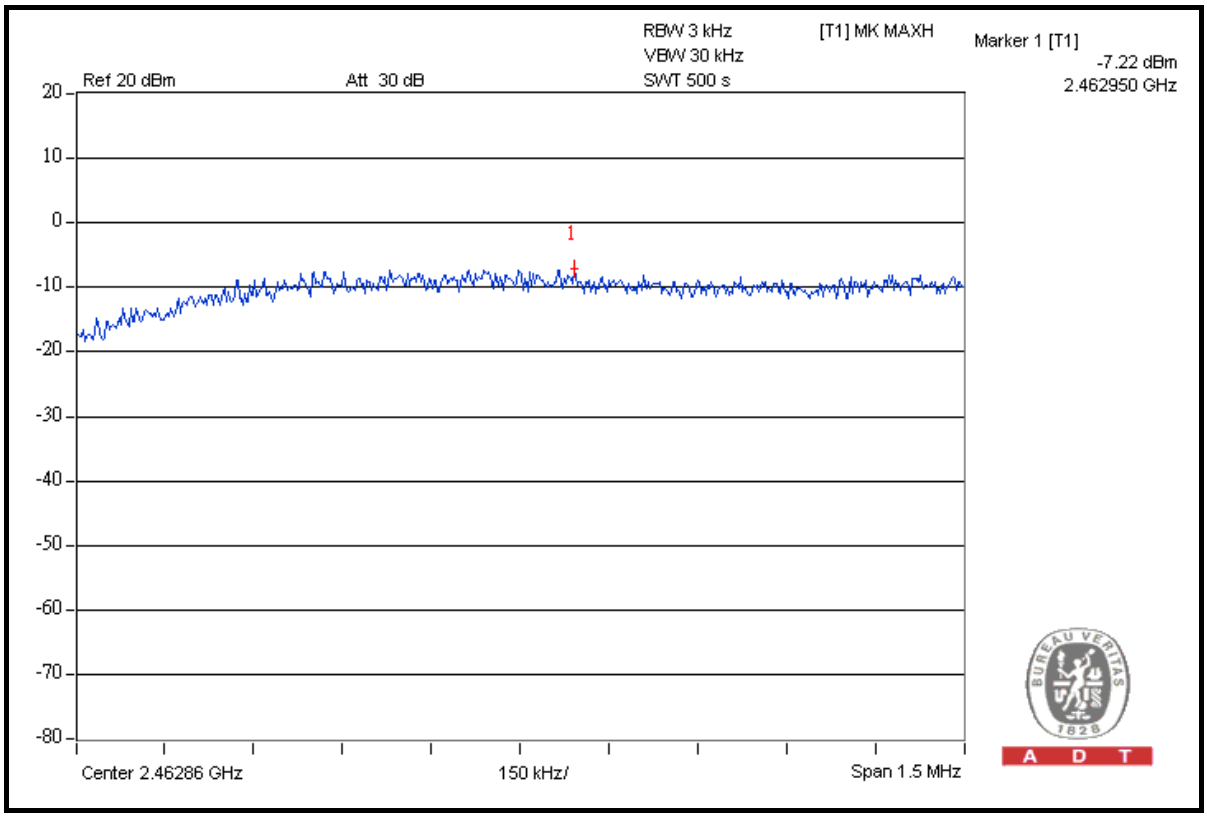
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-7.24 dBm
2.436434 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43629 GHz
150 kHz/
Span 1.5 MHz

CH 11

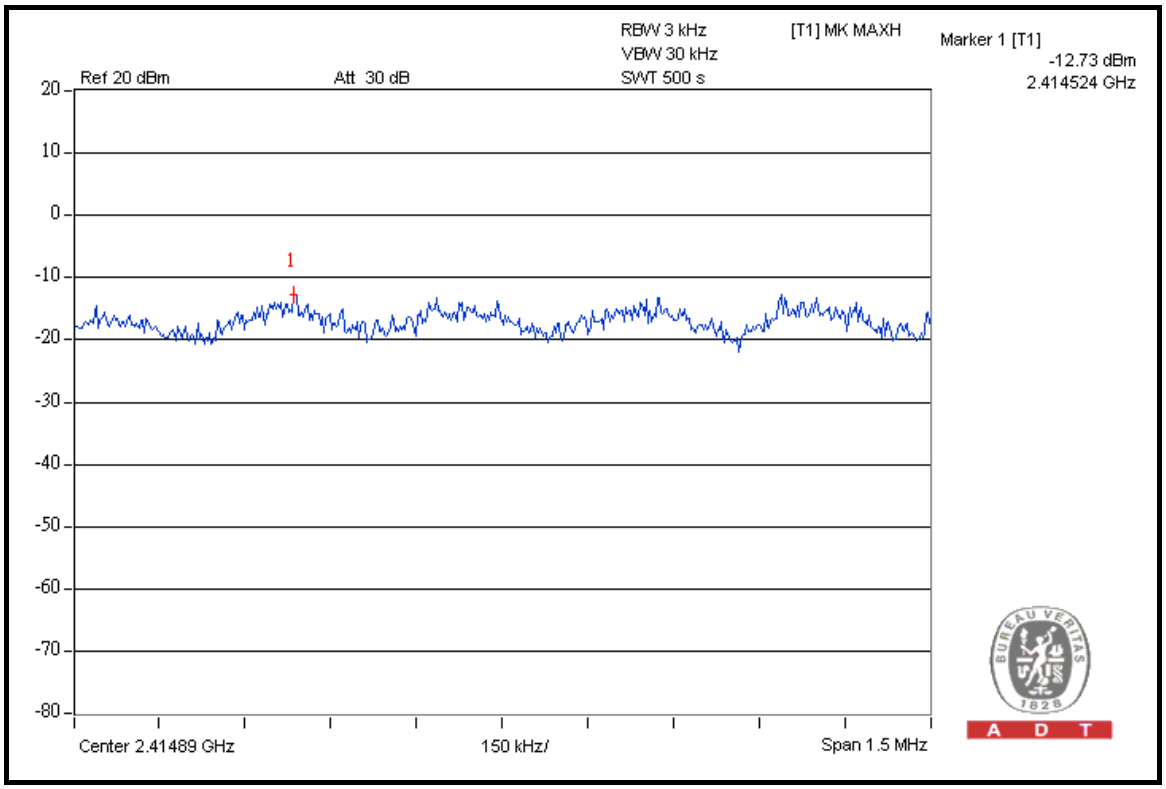

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-7.22 dBm
2.462950 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46286 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM MODULATION

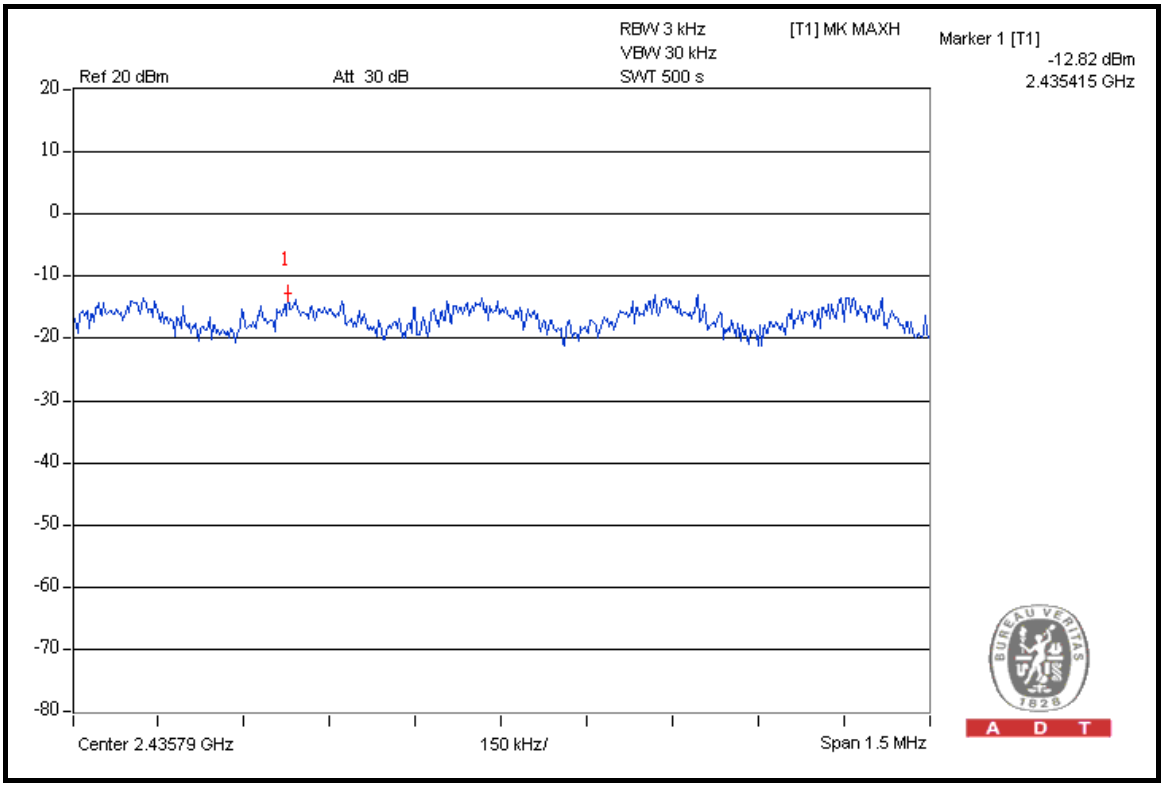
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-12.73	8	PASS
6	2437	-12.82	8	PASS
11	2462	-12.76	8	PASS

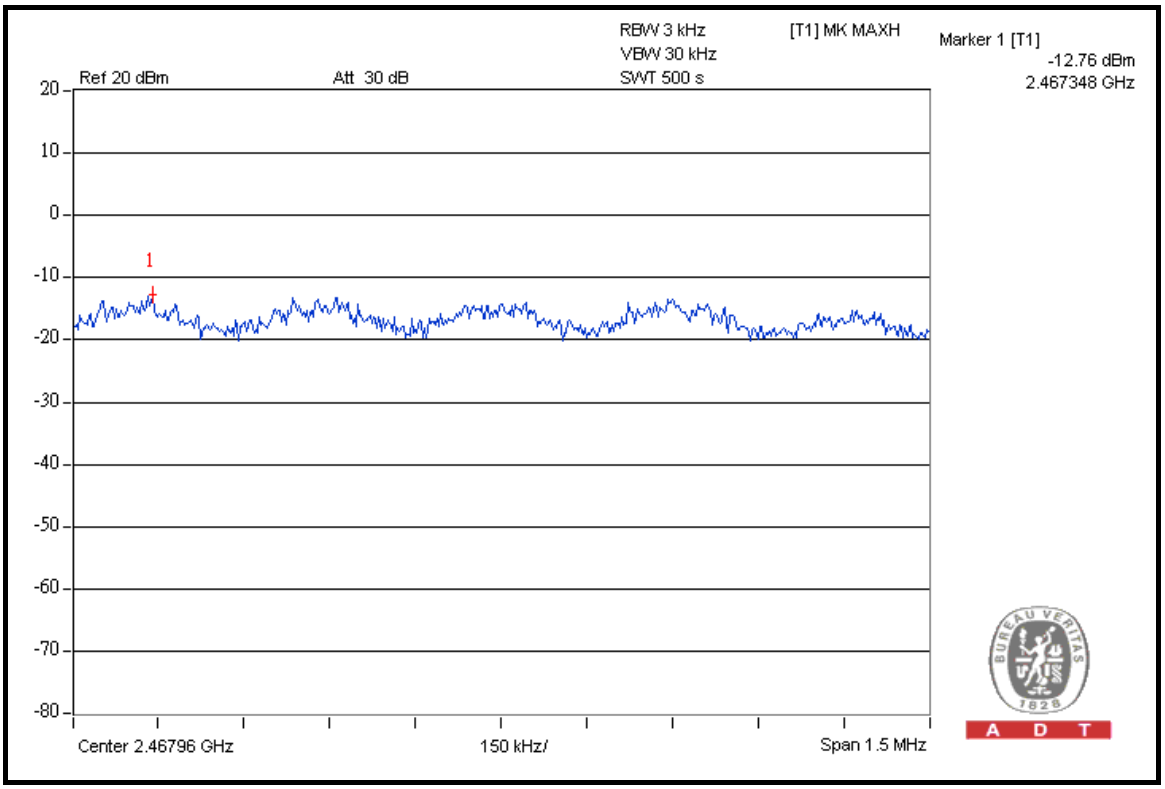
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-12.82 dBm
2.435415 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43579 GHz
150 kHz/
Span 1.5 MHz

CH 11

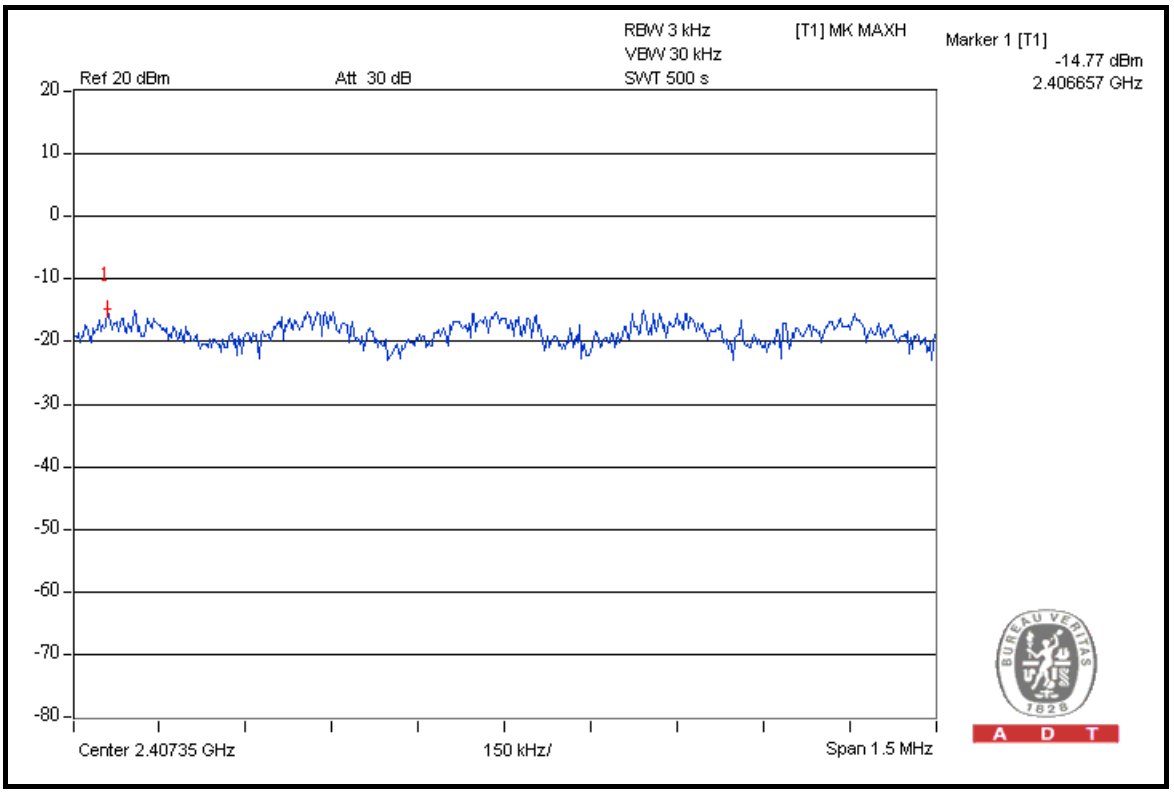

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-12.76 dBm
2.467348 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46796 GHz
150 kHz/
Span 1.5 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION

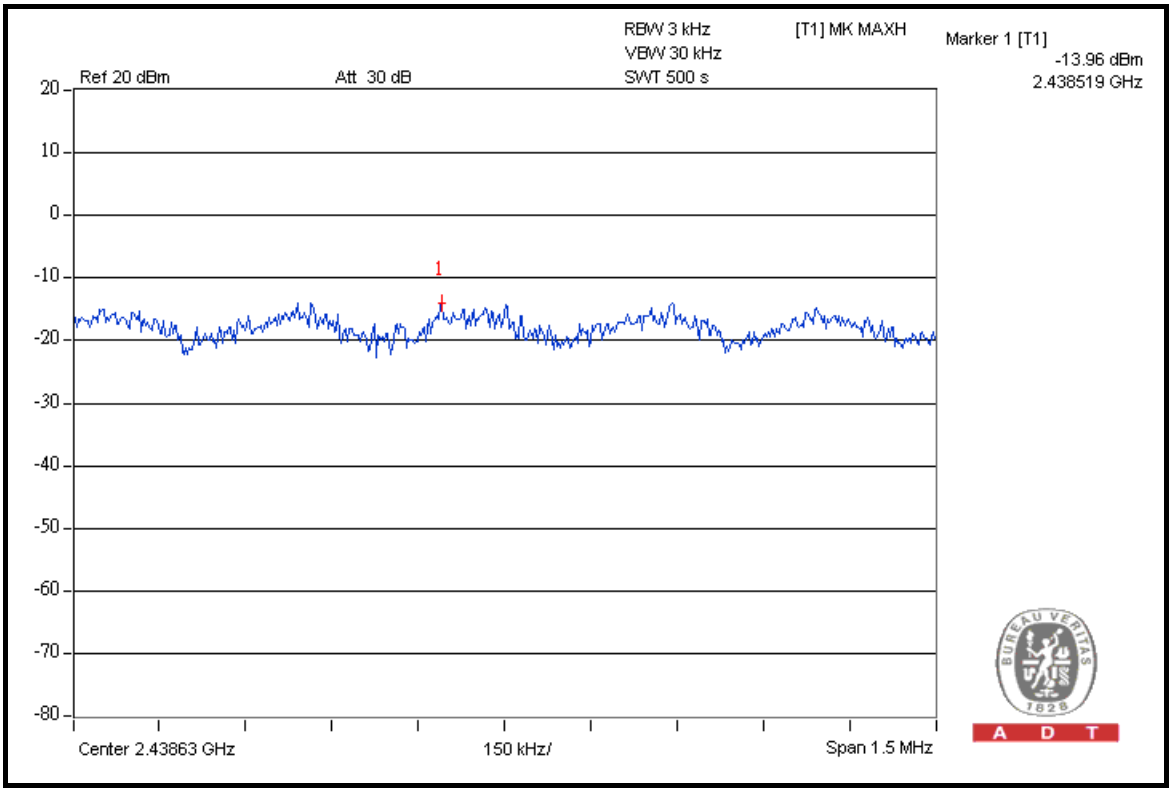
MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-14.77	8	PASS
6	2437	-13.96	8	PASS
11	2462	-17.92	8	PASS

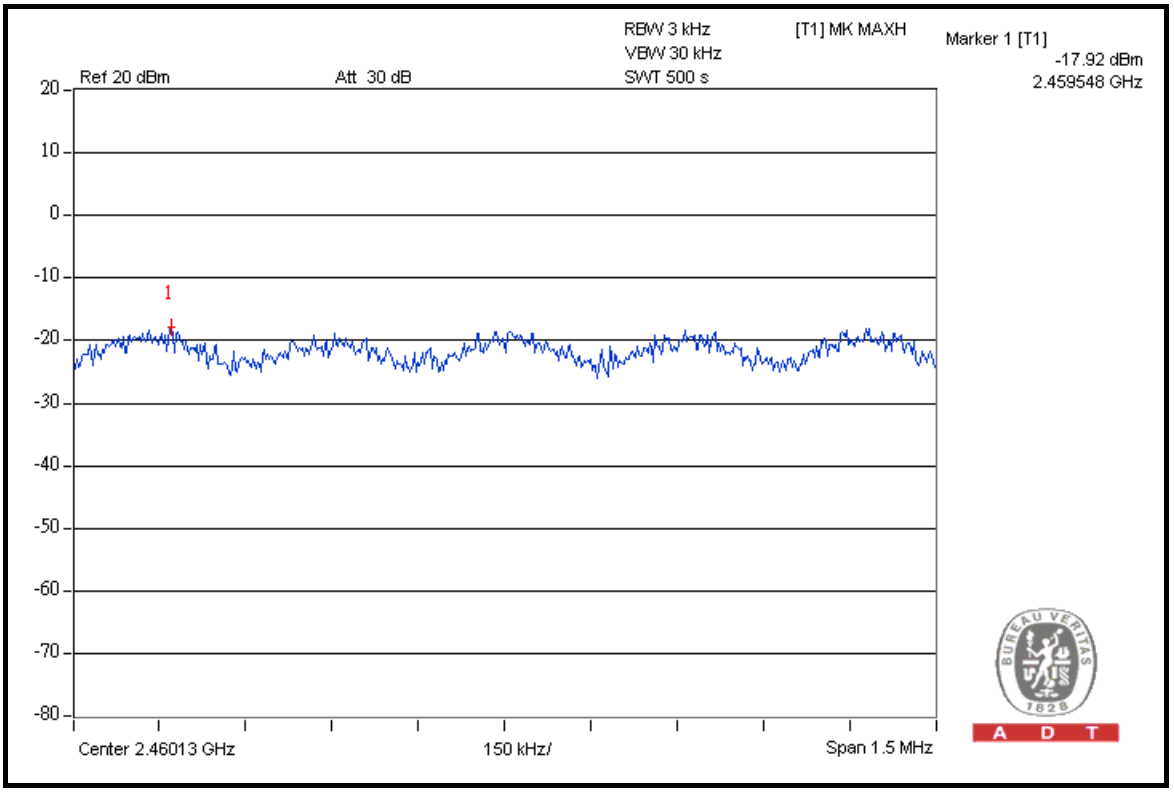
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-13.96 dBm
2.438519 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43863 GHz
150 kHz/
Span 1.5 MHz

CH 11

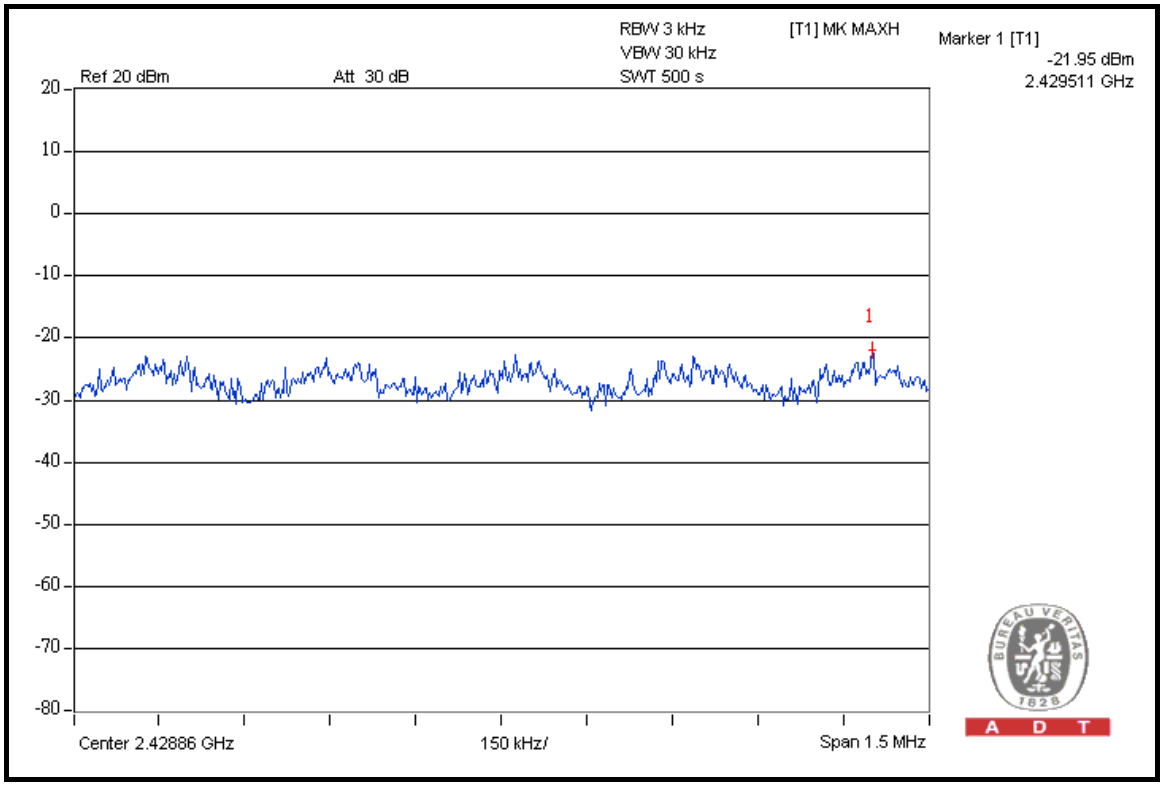

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-17.92 dBm
2.459548 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46013 GHz
150 kHz/
Span 1.5 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION

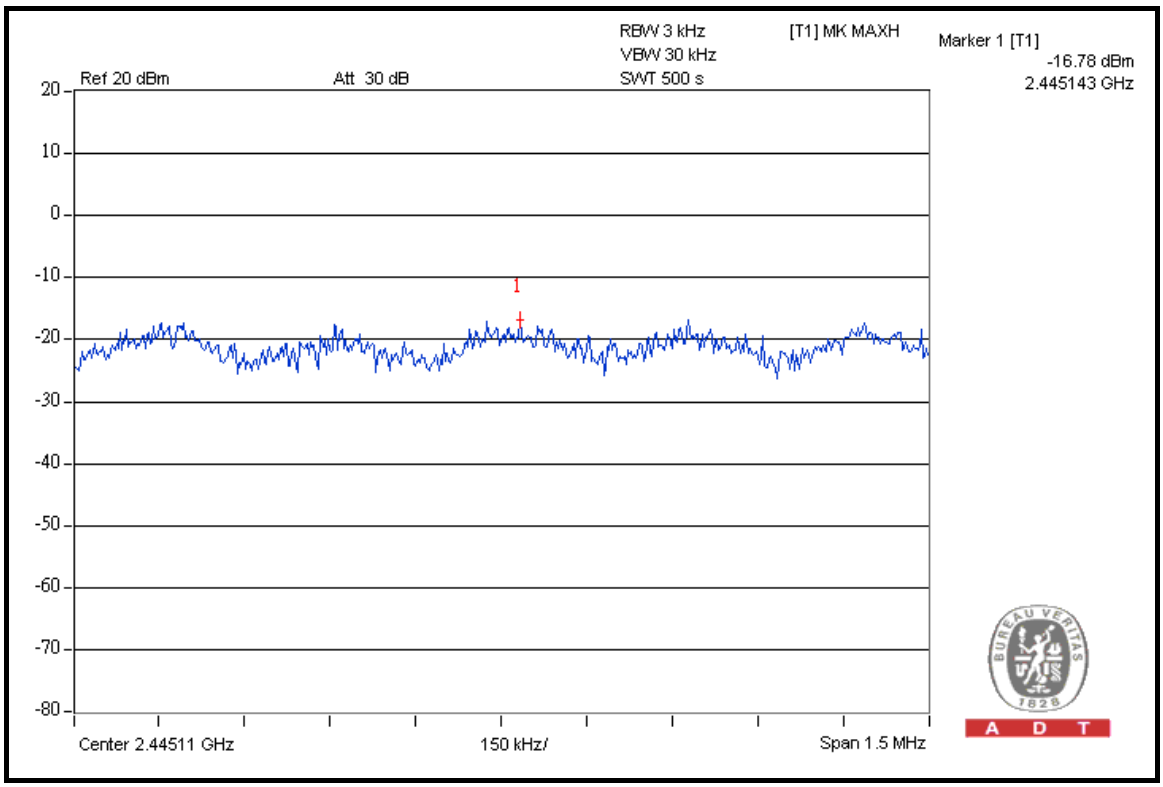
MODULATION TYPE	BPSK	**TRANSFER RATE**	13.5Mbps
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 65%RH, 991hPa
TESTED BY	Dean Wang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2422	-21.95	8	PASS
4	2437	-16.78	8	PASS
7	2452	-21.46	8	PASS

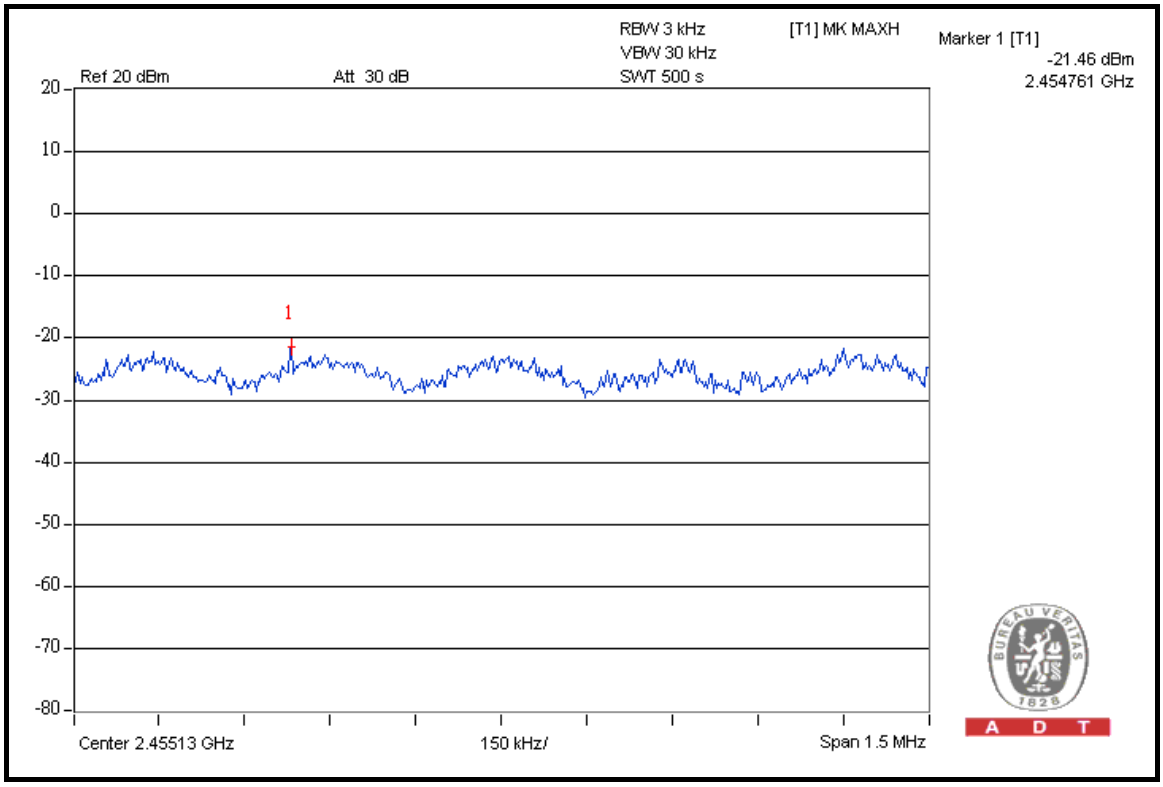
CH 1



CH 4


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-16.78 dBm
2.445143 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.44511 GHz
150 kHz/
Span 1.5 MHz

CH 7


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-21.46 dBm
2.454761 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.45513 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	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

4.6.3 TEST PROCEDURE

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

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation.

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6.

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 24 images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

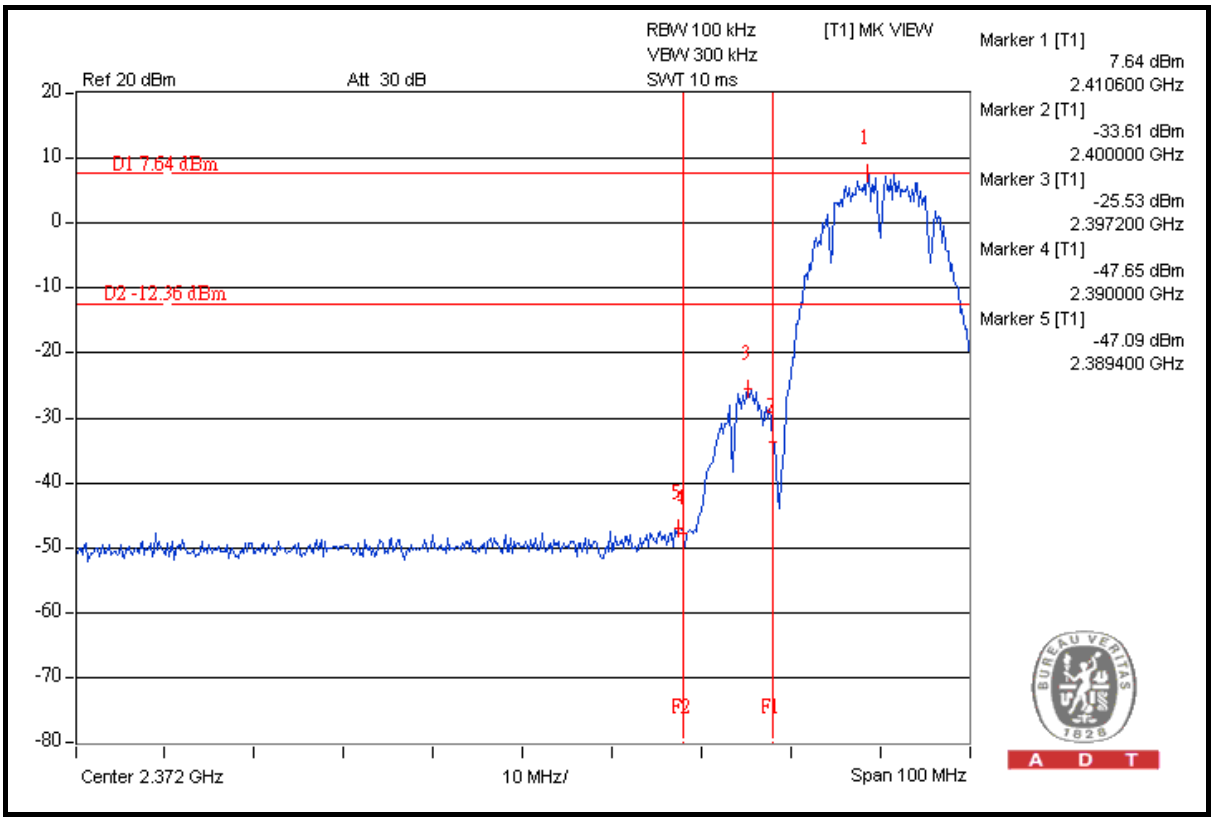
802.11b DSSS MODULATION

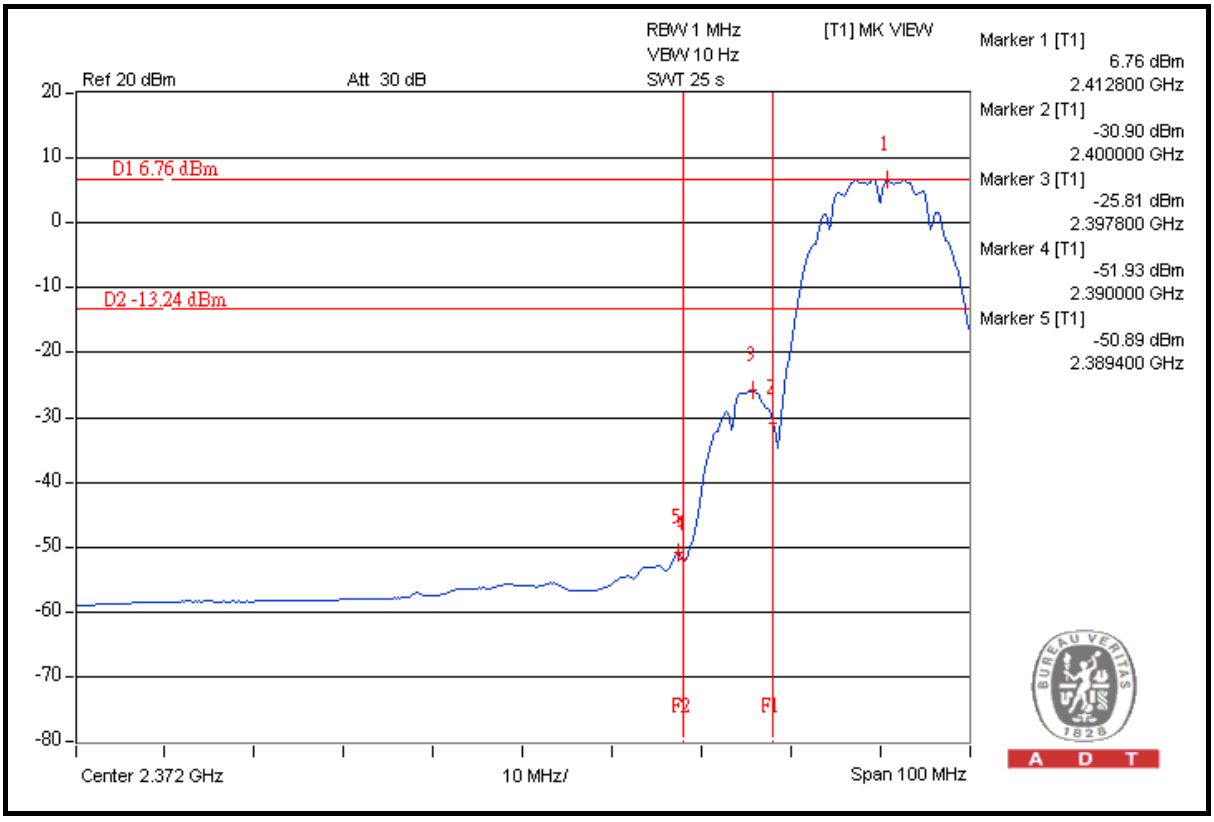
NOTE 1: The band edge emission plot on the next page shows 54.73dBc between carrier maximum power and local maximum emission in restrict band (2.3894GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 112.48dBuV/m (Peak), so the maximum field strength in restrict band is 112.48 – 54.73 = 57.75dBuV/m which is under 74dBuV/m limit.

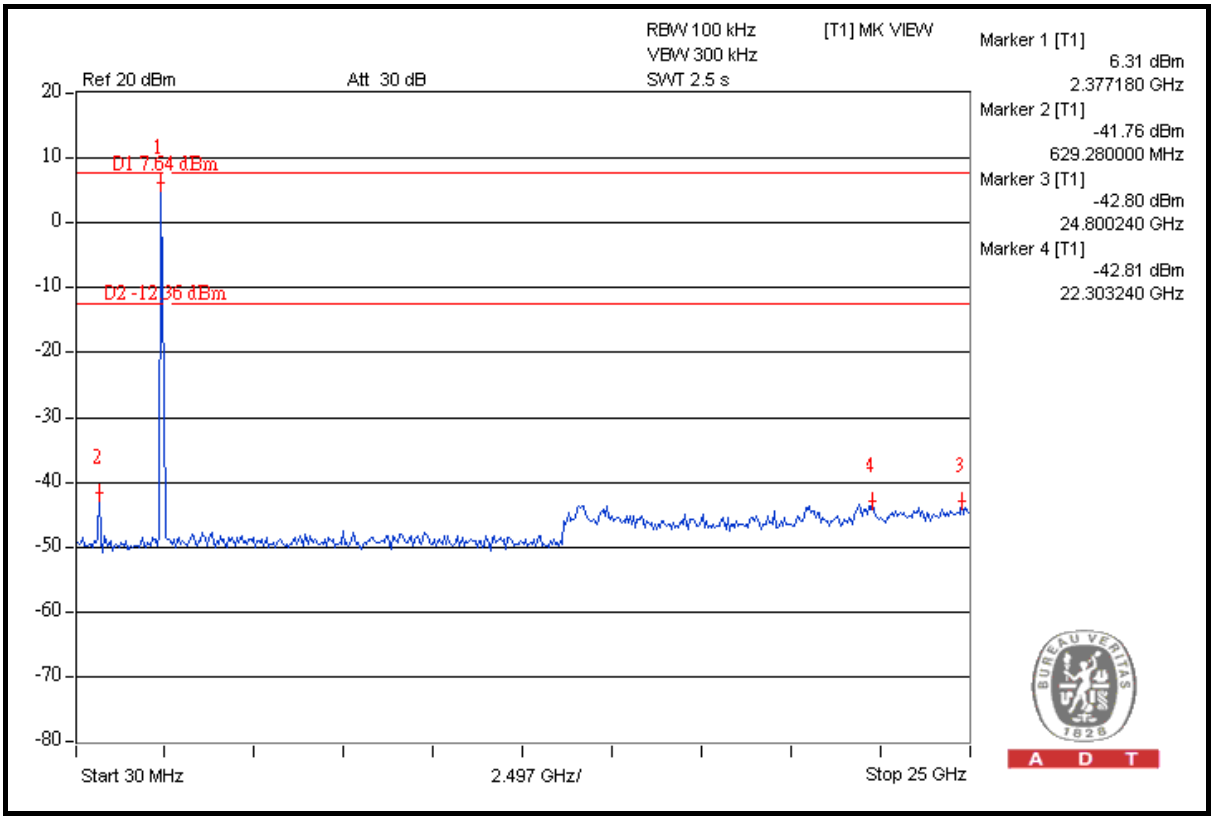
The band edge emission plot on the next page shows 57.65dBc between carrier maximum power and local maximum emission in restrict band (2.3894GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 108.09dBuV/m (Average), so the maximum field strength in restrict band is 108.09 – 57.65 = 50.44dBuV/m which is under 54dBuV/m limit.

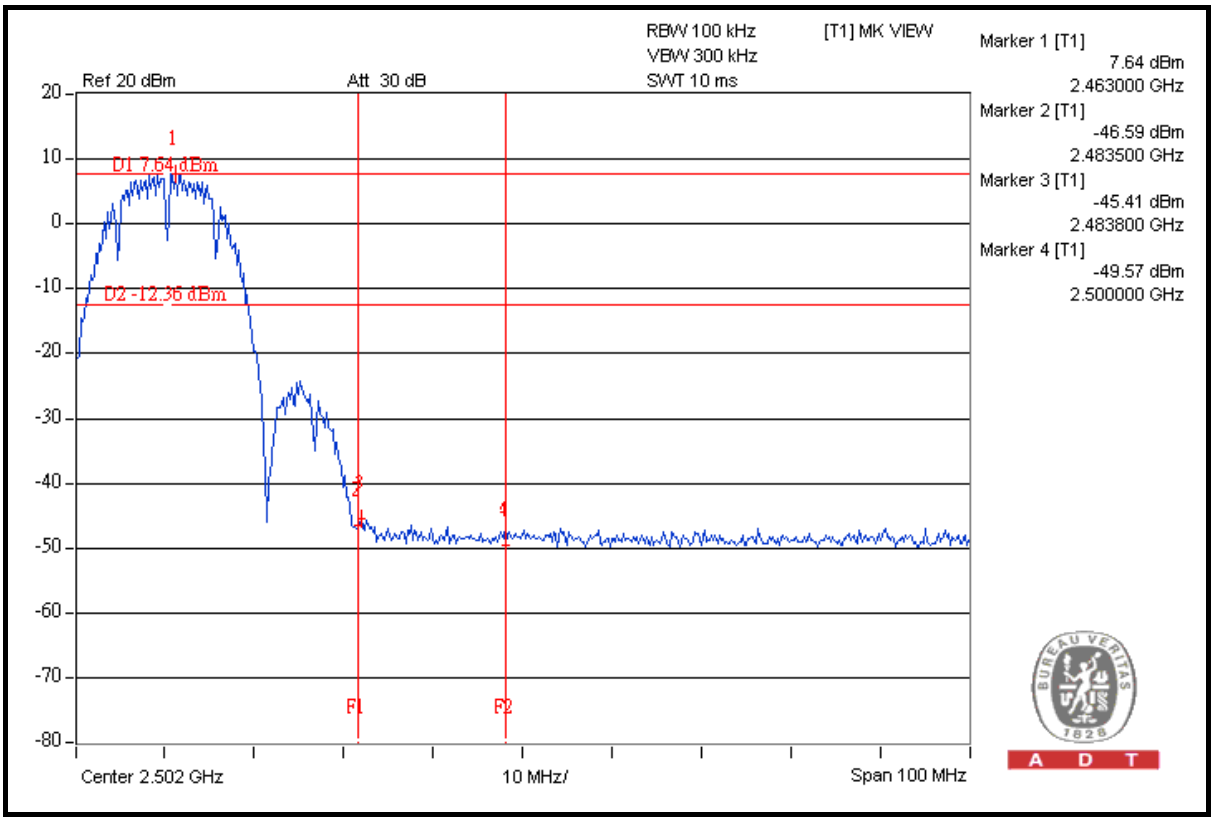
NOTE 2: The band edge emission plot on the next second page shows 53.05dBc between carrier maximum power and local maximum emission in restrict band (2.4838GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 112.07dBuV/m (Peak), so the maximum field strength in restrict band is 112.07 – 53.05 = 59.02dBuV/m which is under 74dBuV/m limit.

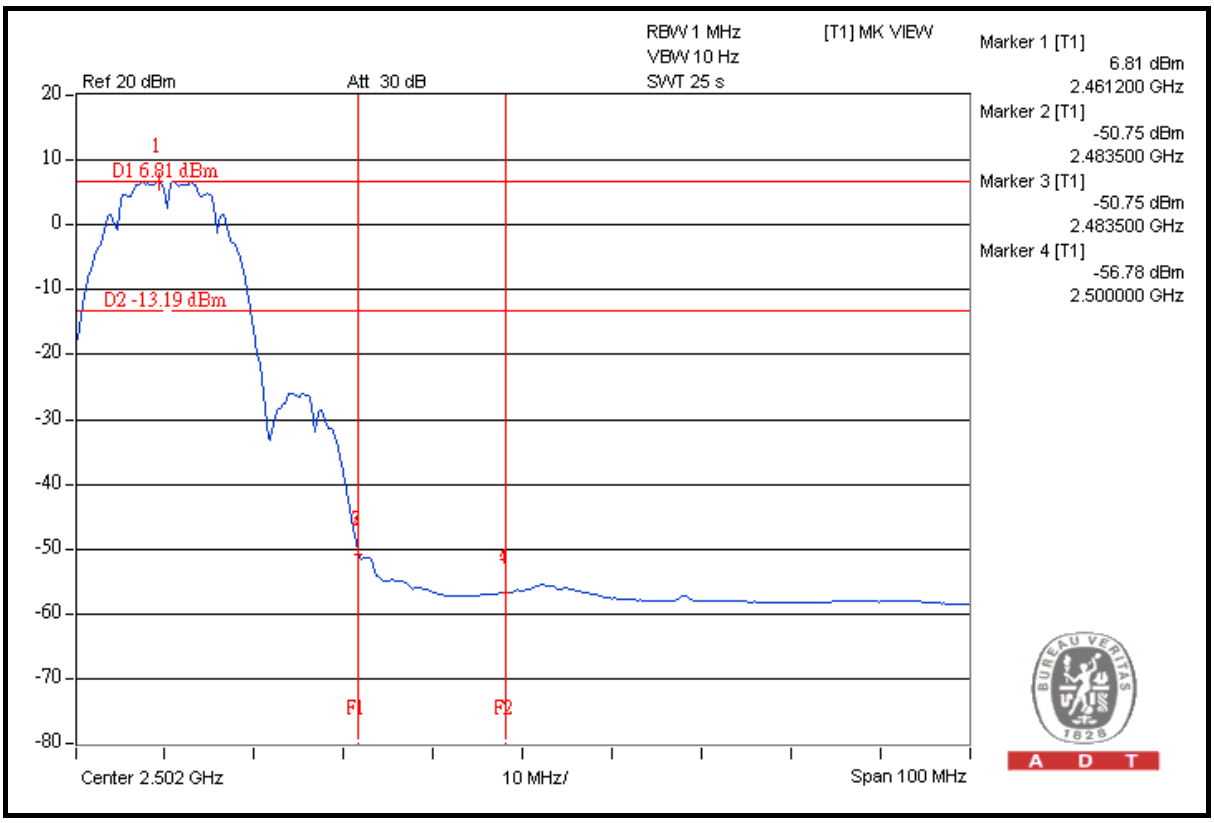
The band edge emission plot on the next third page shows 57.56dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 107.46dBuV/m (Average), so the maximum field strength in restrict band is 107.46 – 57.56 = 49.90dBuV/m which is under 54dBuV/m limit.

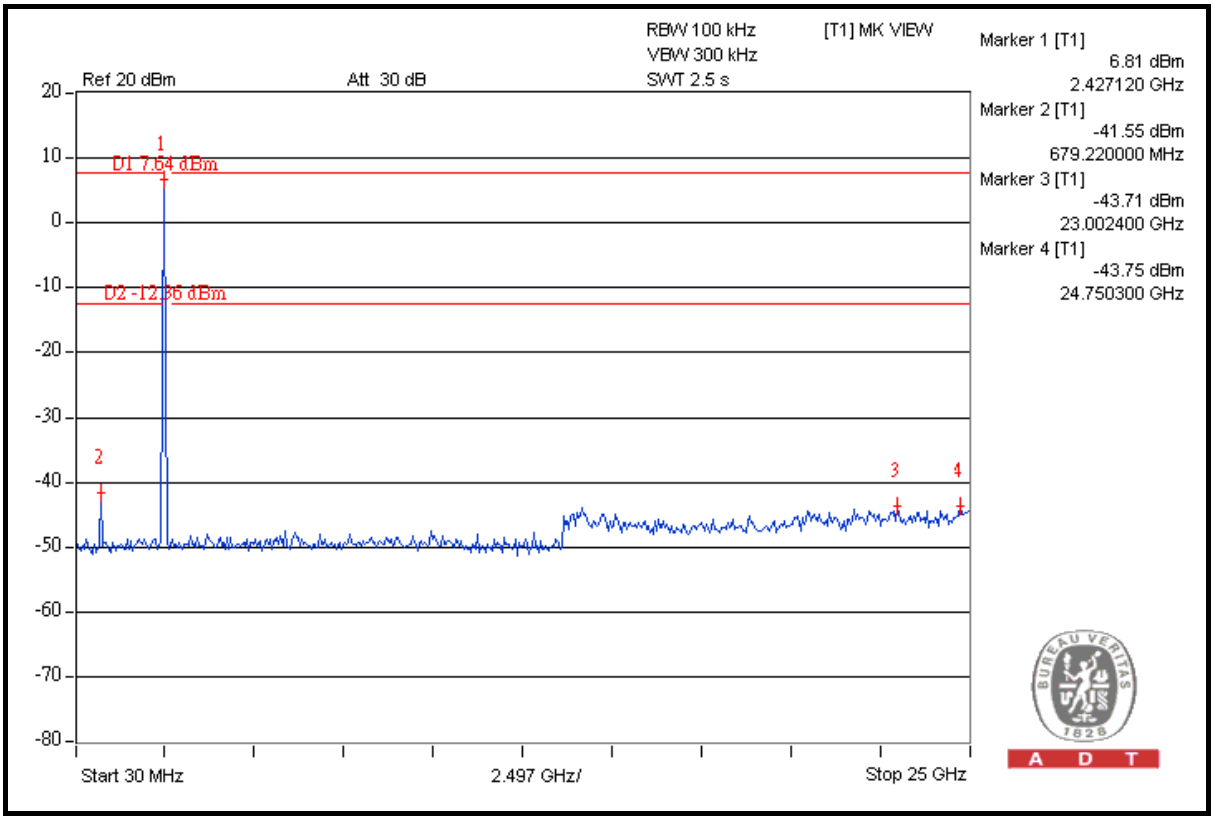

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 7.64 dBm
D2 -12.36 dBm
Marker 1 [T1]
7.64 dBm
2.410600 GHz
Marker 2 [T1]
-33.61 dBm
2.400000 GHz
Marker 3 [T1]
-25.53 dBm
2.397200 GHz
Marker 4 [T1]
-47.65 dBm
2.390000 GHz
Marker 5 [T1]
-47.09 dBm
2.389400 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 6.76 dBm
D2 -13.24 dBm
Marker 1 [T1]
6.76 dBm
2.412800 GHz
Marker 2 [T1]
-30.90 dBm
2.400000 GHz
Marker 3 [T1]
-25.81 dBm
2.397800 GHz
Marker 4 [T1]
-51.93 dBm
2.390000 GHz
Marker 5 [T1]
-50.89 dBm
2.389400 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 7.64 dBm
D2 -12.36 dBm
Marker 1 [T1]
6.31 dBm
2.377180 GHz
Marker 2 [T1]
-41.76 dBm
629.280000 MHz
Marker 3 [T1]
-42.80 dBm
24.800240 GHz
Marker 4 [T1]
-42.81 dBm
22.303240 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 7.64 dBm
D2 -12.36 dBm
Marker 1 [T1]
7.64 dBm
2.463000 GHz
Marker 2 [T1]
-46.59 dBm
2.483500 GHz
Marker 3 [T1]
-45.41 dBm
2.483800 GHz
Marker 4 [T1]
-49.57 dBm
2.500000 GHz
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 6.81 dBm
D2 -13.19 dBm
Marker 1 [T1]
6.81 dBm
2.461200 GHz
Marker 2 [T1]
-50.75 dBm
2.483500 GHz
Marker 3 [T1]
-50.75 dBm
2.483500 GHz
Marker 4 [T1]
-56.78 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 7.64 dBm
Marker 1 [T1]
6.81 dBm
2.427120 GHz
Marker 2 [T1]
-41.55 dBm
679.220000 MHz
Marker 3 [T1]
-43.71 dBm
23.002400 GHz
Marker 4 [T1]
-43.75 dBm
24.750300 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

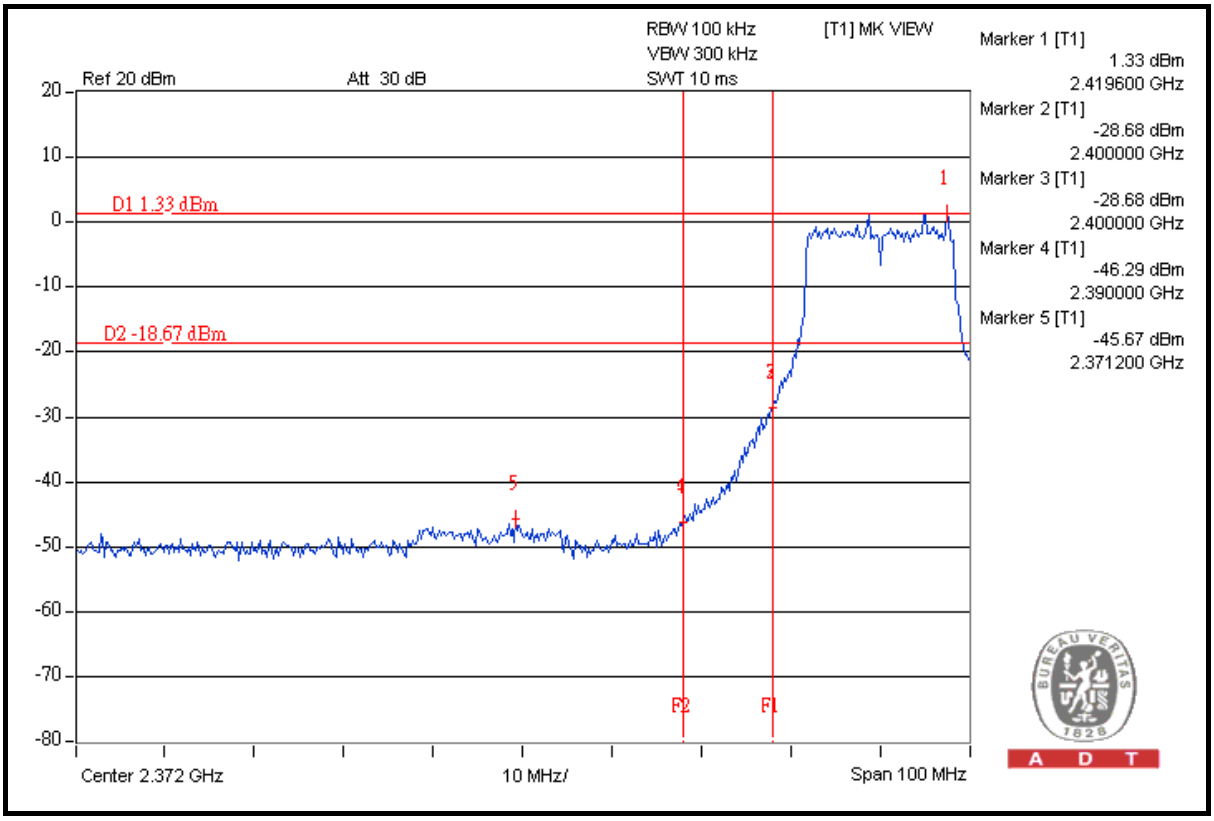
802.11g OFDM MODULATION

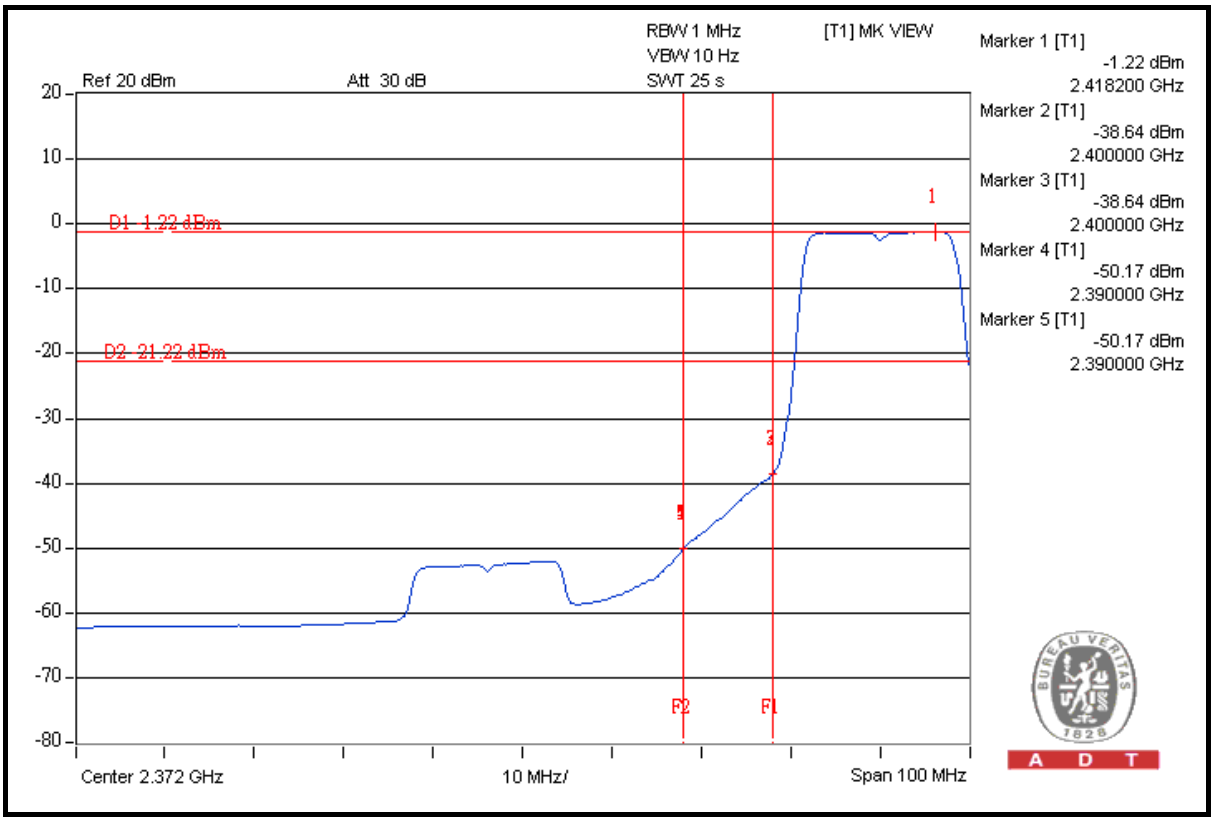
NOTE 1: The band edge emission plot on the next page shows 47.00dBc between carrier maximum power and local maximum emission in restrict band (2.3712GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 109.66dBuV/m (Peak), so the maximum field strength in restrict band is 109.66 – 47.00 = 62.66dBuV/m which is under 74dBuV/m limit.

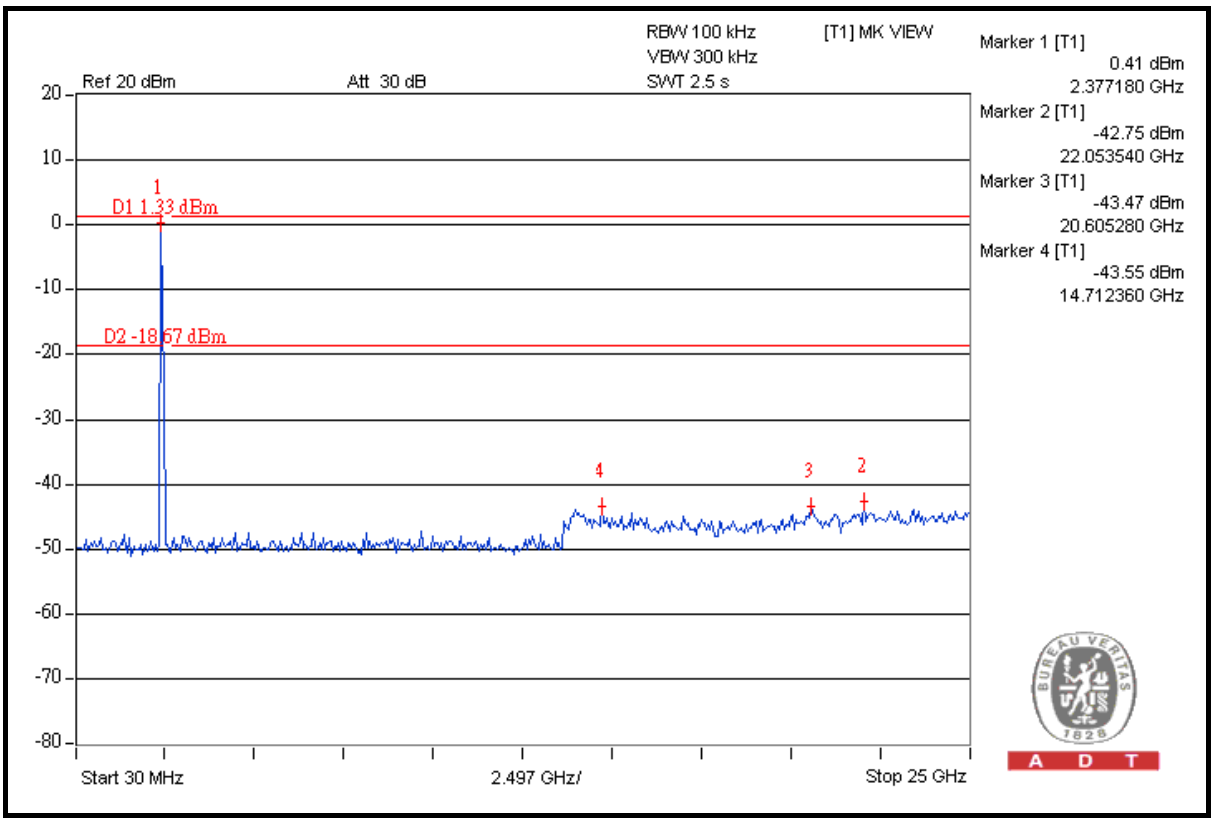
The band edge emission plot on the next page shows 48.95dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 99.38dBuV/m (Average), so the maximum field strength in restrict band is 99.38 – 48.95 = 50.43dBuV/m which is under 54dBuV/m limit.

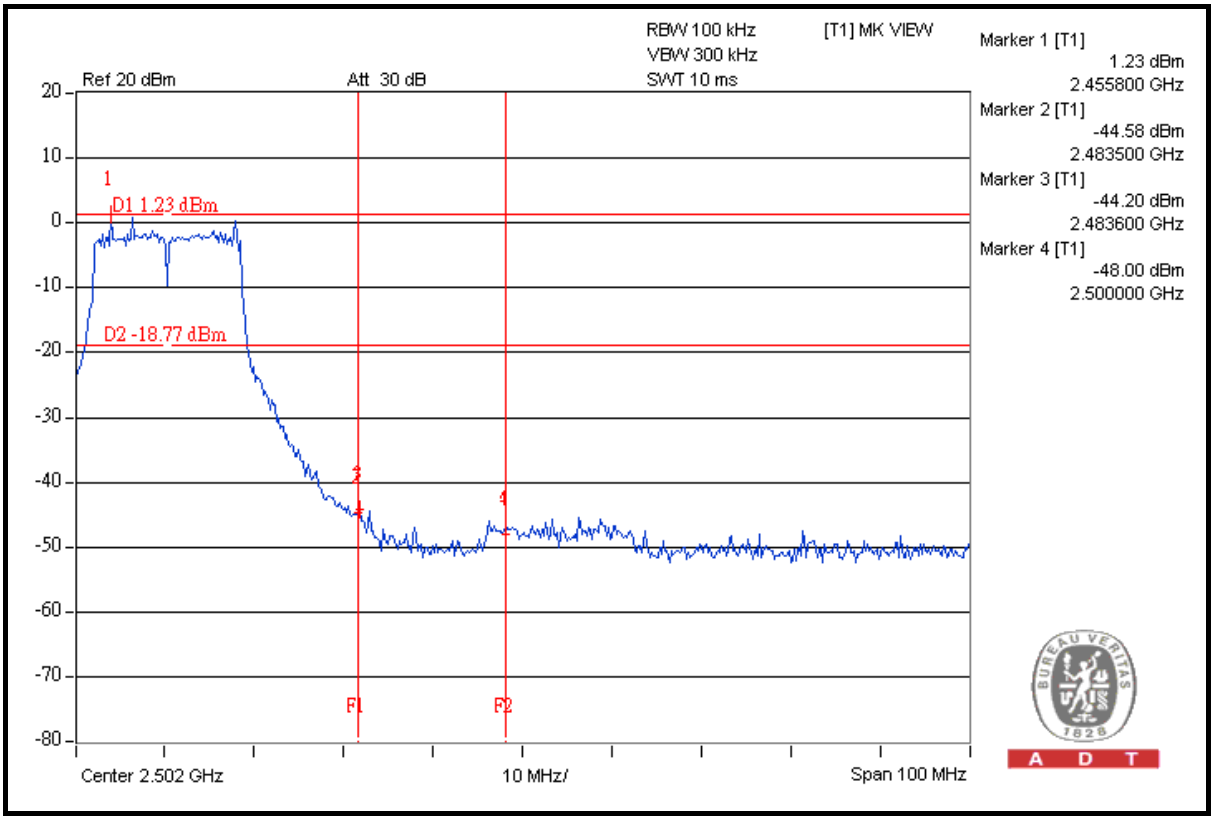
NOTE 2: The band edge emission plot on the next second page shows 45.43dBc between carrier maximum power and local maximum emission in restrict band (2.4836GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 109.25dBuV/m (Peak), so the maximum field strength in restrict band is 109.25 – 45.43 = 63.82dBuV/m which is under 74dBuV/m limit.

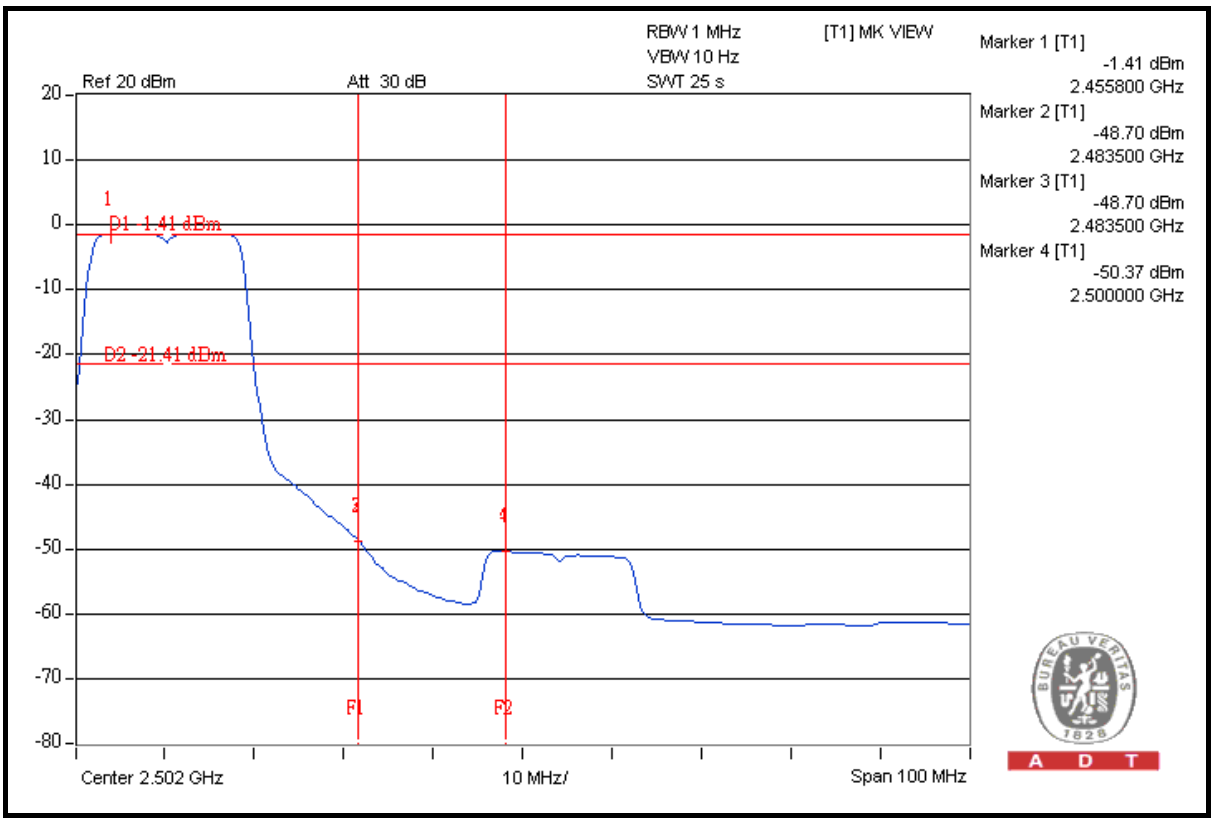
The band edge emission plot on the next third page shows 47.29dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 98.97dBuV/m (Average), so the maximum field strength in restrict band is 98.97 – 47.29 = 51.68dBuV/m which is under 54dBuV/m limit.

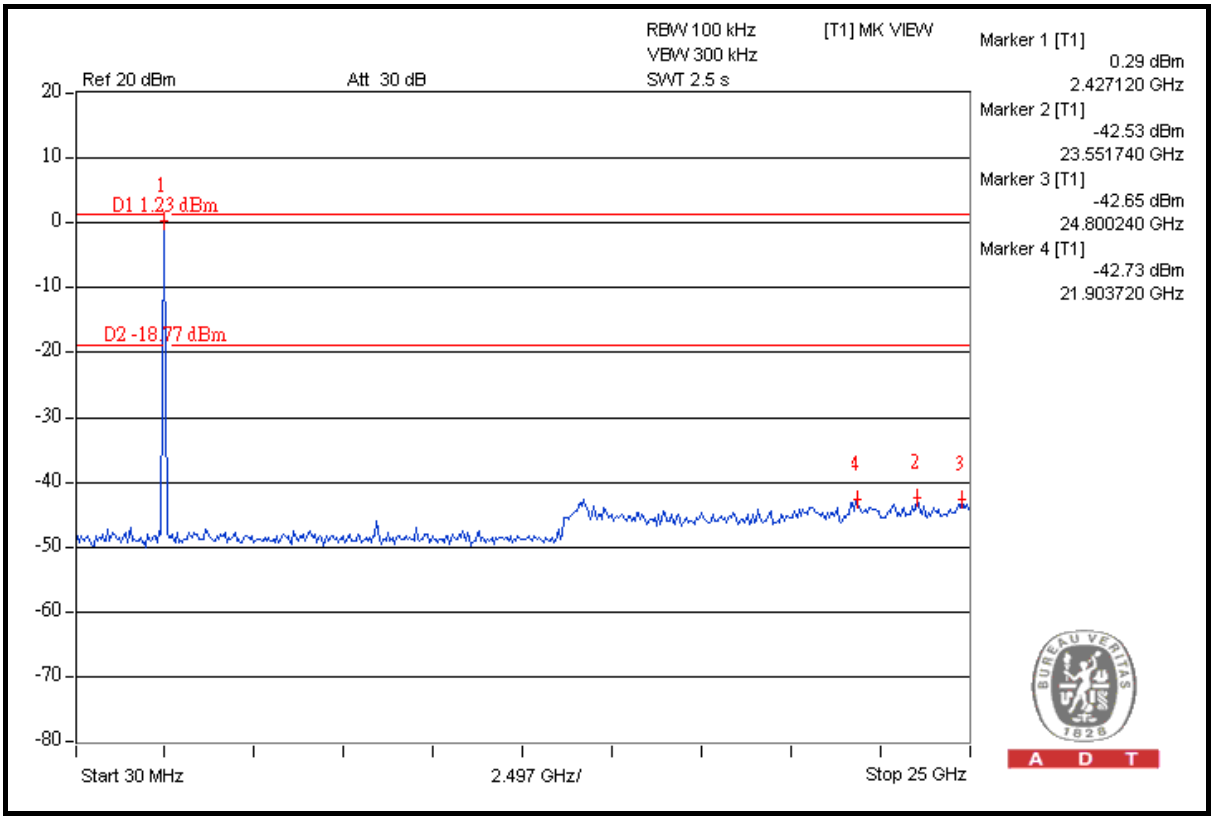

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.33 dBm
D2 -18.67 dBm
Marker 1 [T1]
1.33 dBm
2.419600 GHz
Marker 2 [T1]
-28.68 dBm
2.400000 GHz
Marker 3 [T1]
-28.68 dBm
2.400000 GHz
Marker 4 [T1]
-46.29 dBm
2.390000 GHz
Marker 5 [T1]
-45.67 dBm
2.371200 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.22 dBm
D2 -21.22 dBm
Marker 1 [T1]
-1.22 dBm
2.418200 GHz
Marker 2 [T1]
-38.64 dBm
2.400000 GHz
Marker 3 [T1]
-38.64 dBm
2.400000 GHz
Marker 4 [T1]
-50.17 dBm
2.390000 GHz
Marker 5 [T1]
-50.17 dBm
2.390000 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.33 dBm
D2 -18.67 dBm
Marker 1 [T1]
0.41 dBm
2.377180 GHz
Marker 2 [T1]
-42.75 dBm
22.053540 GHz
Marker 3 [T1]
-43.47 dBm
20.605280 GHz
Marker 4 [T1]
-43.55 dBm
14.712360 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 1.23 dBm
D2 -18.77 dBm
Marker 1 [T1]
1.23 dBm
2.455800 GHz
Marker 2 [T1]
-44.58 dBm
2.483500 GHz
Marker 3 [T1]
-44.20 dBm
2.483600 GHz
Marker 4 [T1]
-48.00 dBm
2.500000 GHz
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]
-1.41 dBm
2.455800 GHz
Marker 2 [T1]
-48.70 dBm
2.483500 GHz
Marker 3 [T1]
-48.70 dBm
2.483500 GHz
Marker 4 [T1]
-50.37 dBm
2.500000 GHz
D1 -1.41 dBm
D2 -21.41 dBm
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]
0.29 dBm
2.427120 GHz
Marker 2 [T1]
-42.53 dBm
23.551740 GHz
Marker 3 [T1]
-42.65 dBm
24.800240 GHz
Marker 4 [T1]
-42.73 dBm
21.903720 GHz
D1 1.23 dBm
D2 -18.77 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

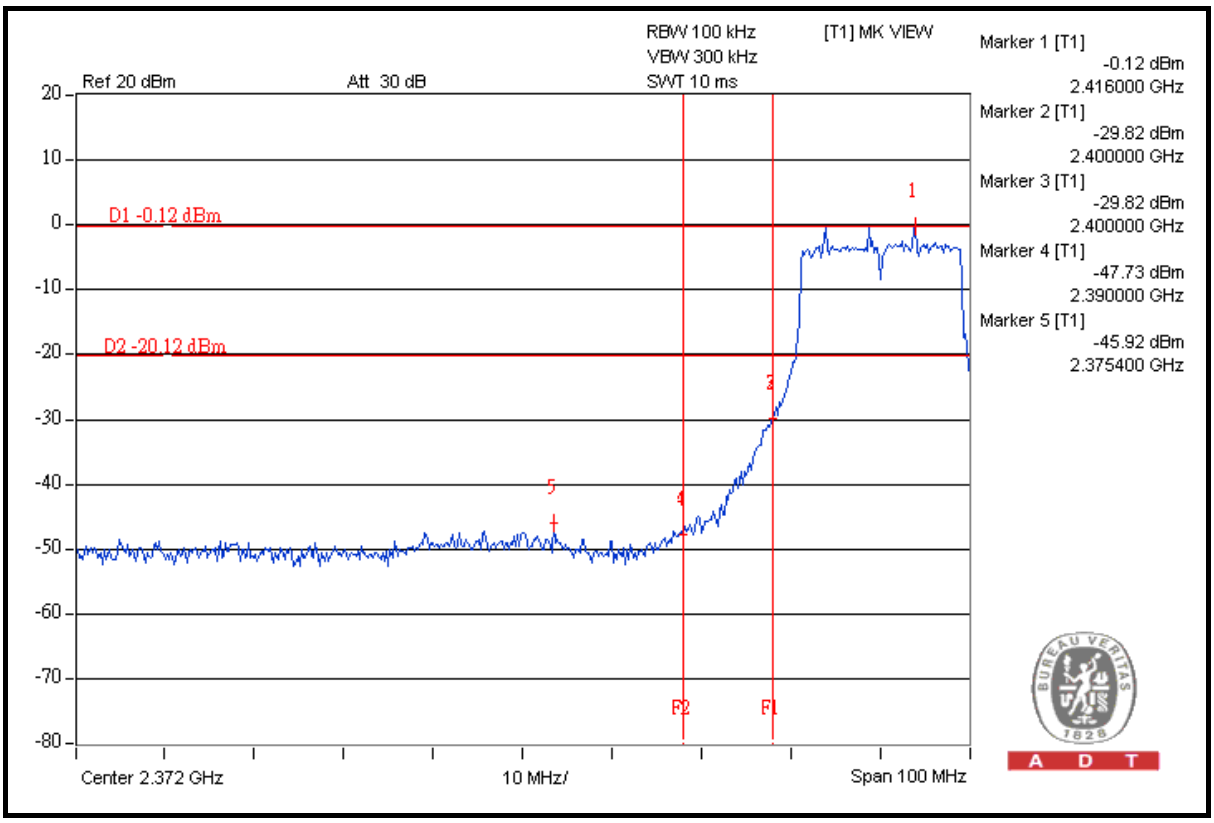
DRAFT 802.11n (20MHz) OFDM MODULATION

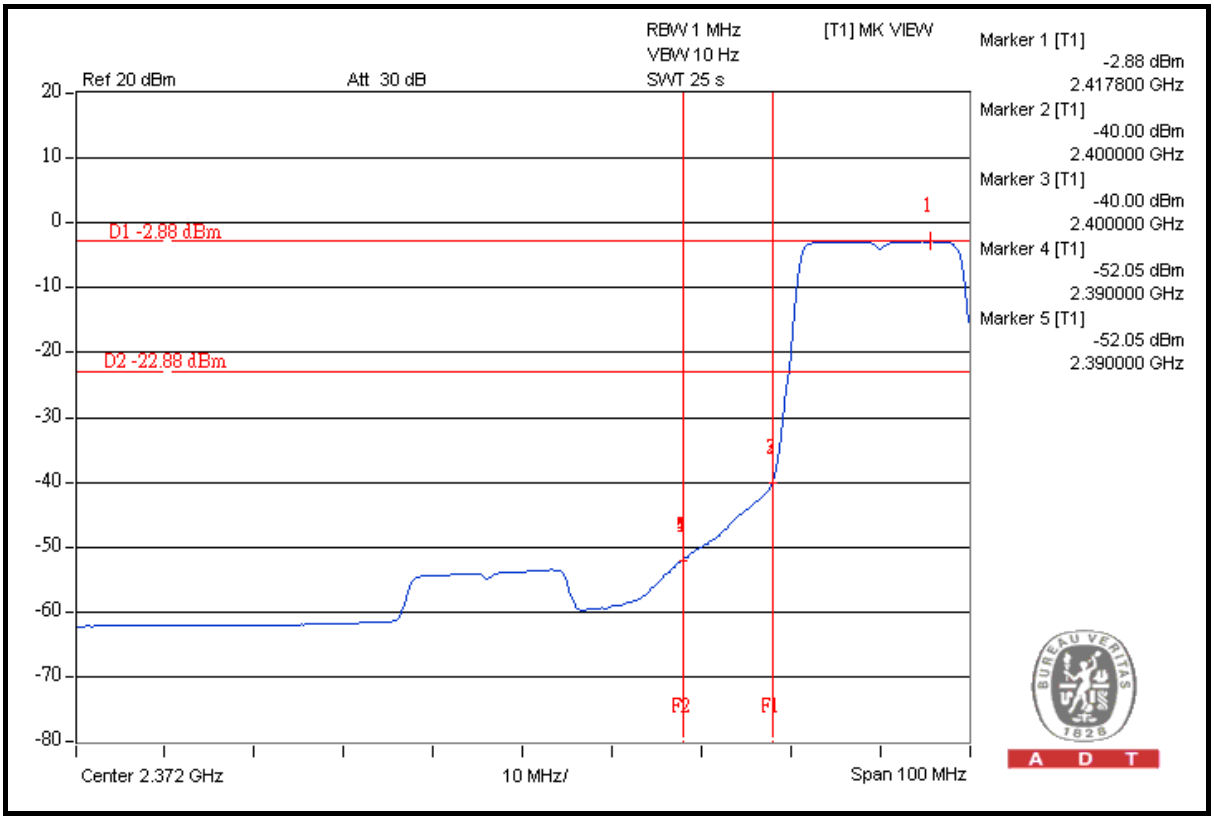
NOTE 1: The band edge emission plot on the next page shows 45.80dBc between carrier maximum power and local maximum emission in restrict band (2.3754GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 109.12dBuV/m (Peak), so the maximum field strength in restrict band is 109.12 – 45.80= 63.32dBuV/m which is under 74dBuV/m limit.

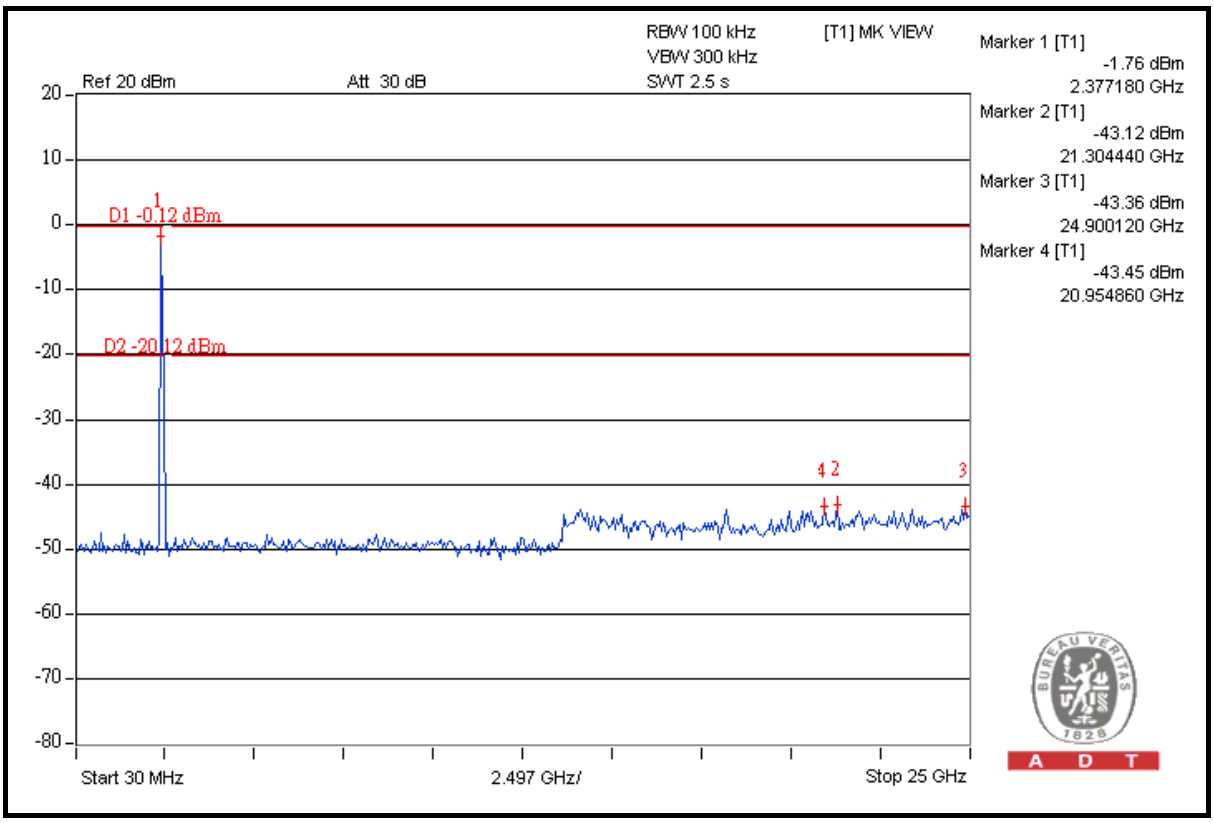
The band edge emission plot on the next page shows 49.17dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 97.96dBuV/m (Average), so the maximum field strength in restrict band is 97.96 – 49.17 = 48.79dBuV/m which is under 54dBuV/m limit.

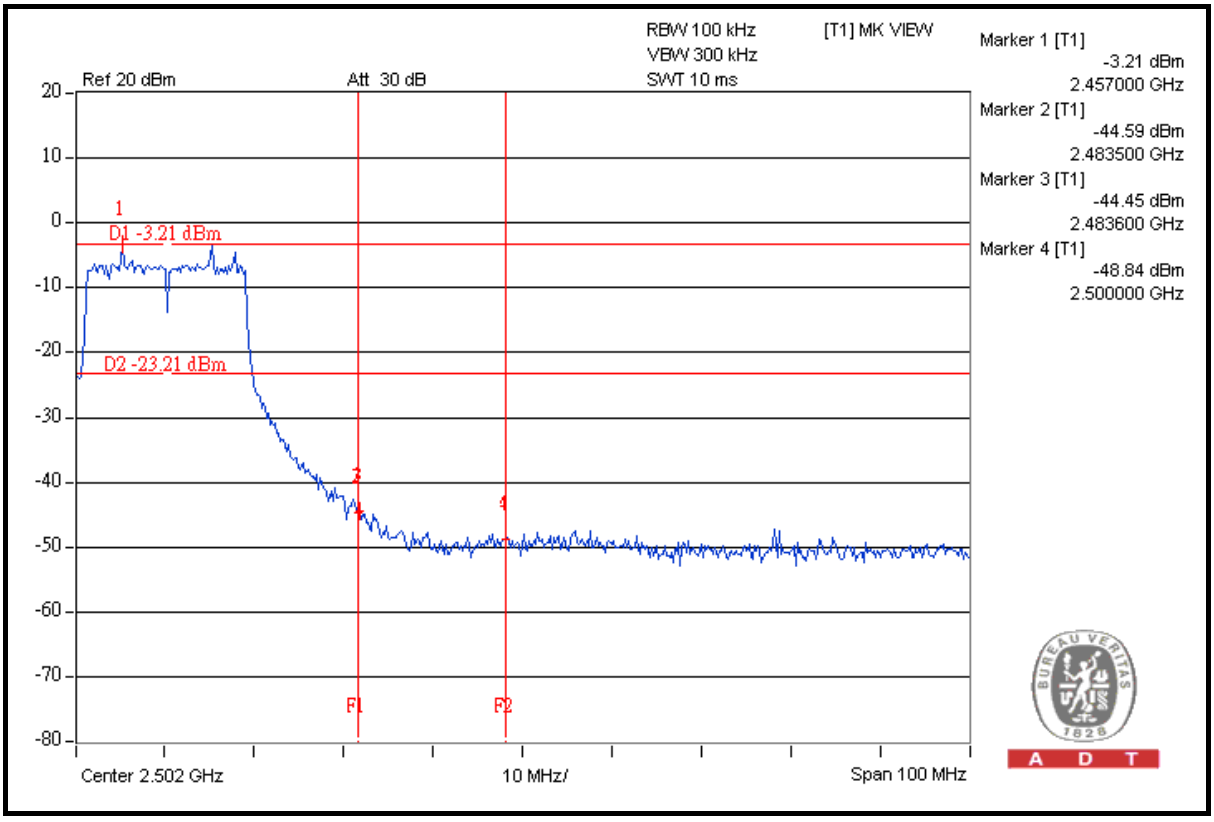
NOTE 2: The band edge emission plot on the next second page shows 41.24dBc between carrier maximum power and local maximum emission in restrict band (2.4836GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 105.16dBuV/m (Peak), so the maximum field strength in restrict band is 105.16 – 41.24 = 63.92dBuV/m which is under 74dBuV/m limit.

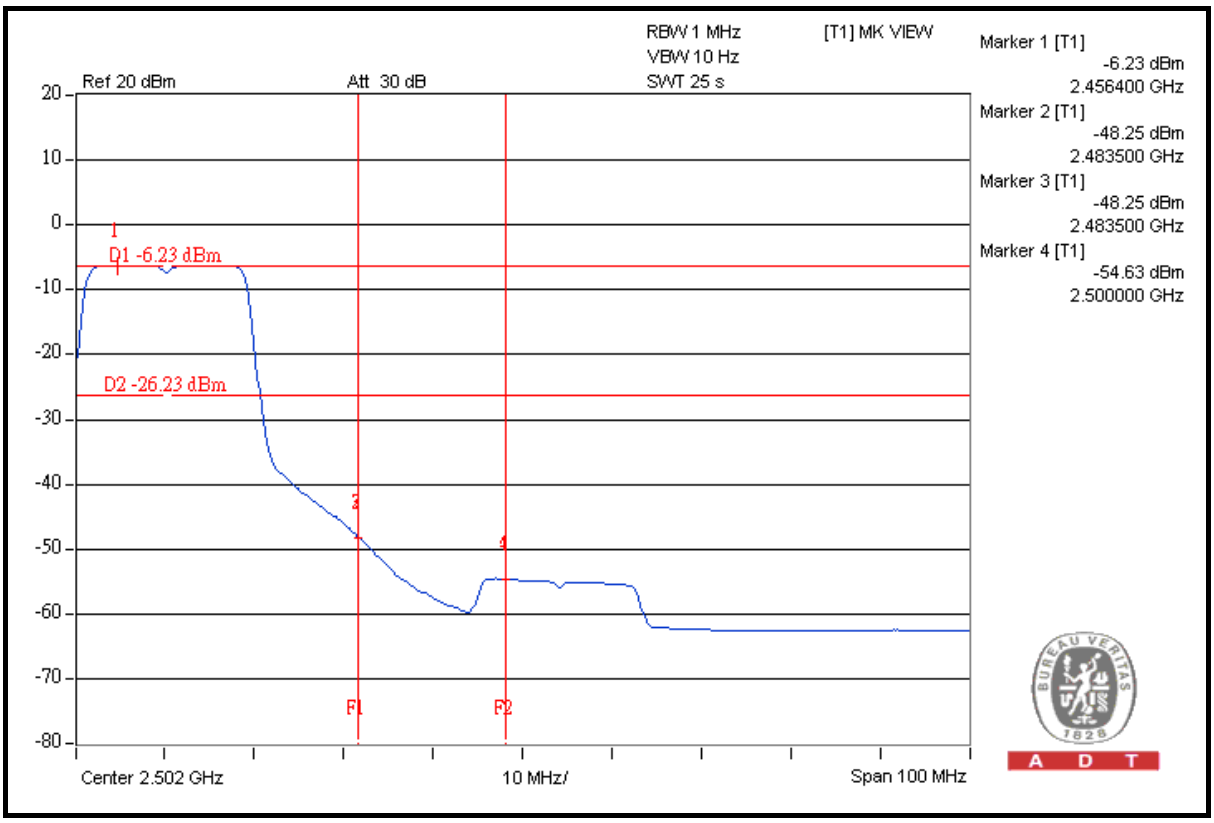
The band edge emission plot on the next third page shows 42.02dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 93.24dBuV/m (Average), so the maximum field strength in restrict band is 93.24 – 42.02 = 51.22dBuV/m which is under 54dBuV/m limit.

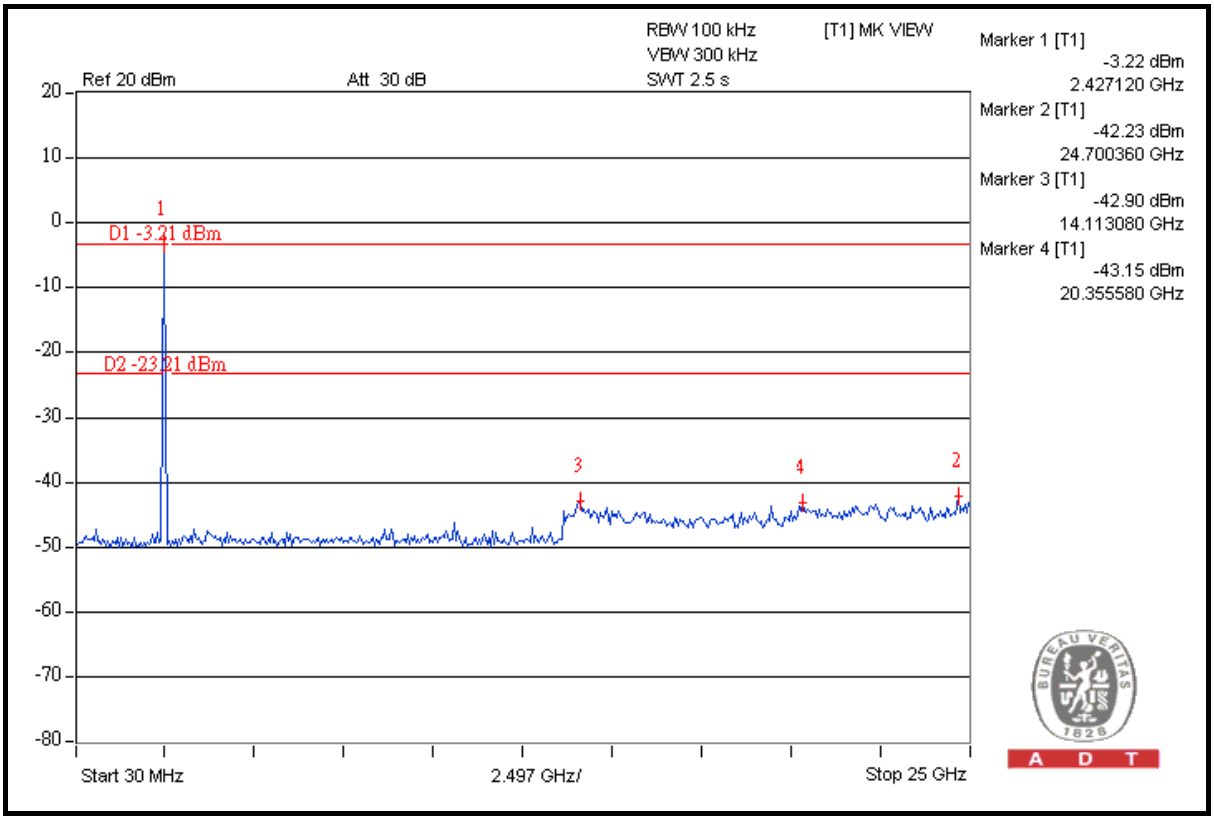

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -0.12 dBm
D2 -20.12 dBm
Marker 1 [T1]
-0.12 dBm
2.416000 GHz
Marker 2 [T1]
-29.82 dBm
2.400000 GHz
Marker 3 [T1]
-29.82 dBm
2.400000 GHz
Marker 4 [T1]
-47.73 dBm
2.390000 GHz
Marker 5 [T1]
-45.92 dBm
2.375400 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.88 dBm
D2 -22.88 dBm
Marker 1 [T1]
-2.88 dBm
2.417800 GHz
Marker 2 [T1]
-40.00 dBm
2.400000 GHz
Marker 3 [T1]
-40.00 dBm
2.400000 GHz
Marker 4 [T1]
-52.05 dBm
2.390000 GHz
Marker 5 [T1]
-52.05 dBm
2.390000 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]
-1.76 dBm
2.377180 GHz
Marker 2 [T1]
-43.12 dBm
21.304440 GHz
Marker 3 [T1]
-43.36 dBm
24.900120 GHz
Marker 4 [T1]
-43.45 dBm
20.954860 GHz
D1 -0.12 dBm
D2 -20.12 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]
-3.21 dBm
2.457000 GHz
Marker 2 [T1]
-44.59 dBm
2.483500 GHz
Marker 3 [T1]
-44.45 dBm
2.483600 GHz
Marker 4 [T1]
-48.84 dBm
2.500000 GHz
D1 -3.21 dBm
D2 -23.21 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-6.23 dBm
2.456400 GHz
Marker 2 [T1]
-48.25 dBm
2.483500 GHz
Marker 3 [T1]
-48.25 dBm
2.483500 GHz
Marker 4 [T1]
-54.63 dBm
2.500000 GHz
D1 -6.23 dBm
D2 -26.23 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]
-3.22 dBm
2.427120 GHz
Marker 2 [T1]
-42.23 dBm
24.700360 GHz
Marker 3 [T1]
-42.90 dBm
14.113080 GHz
Marker 4 [T1]
-43.15 dBm
20.355580 GHz
D1 -3.21 dBm
D2 -23.21 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

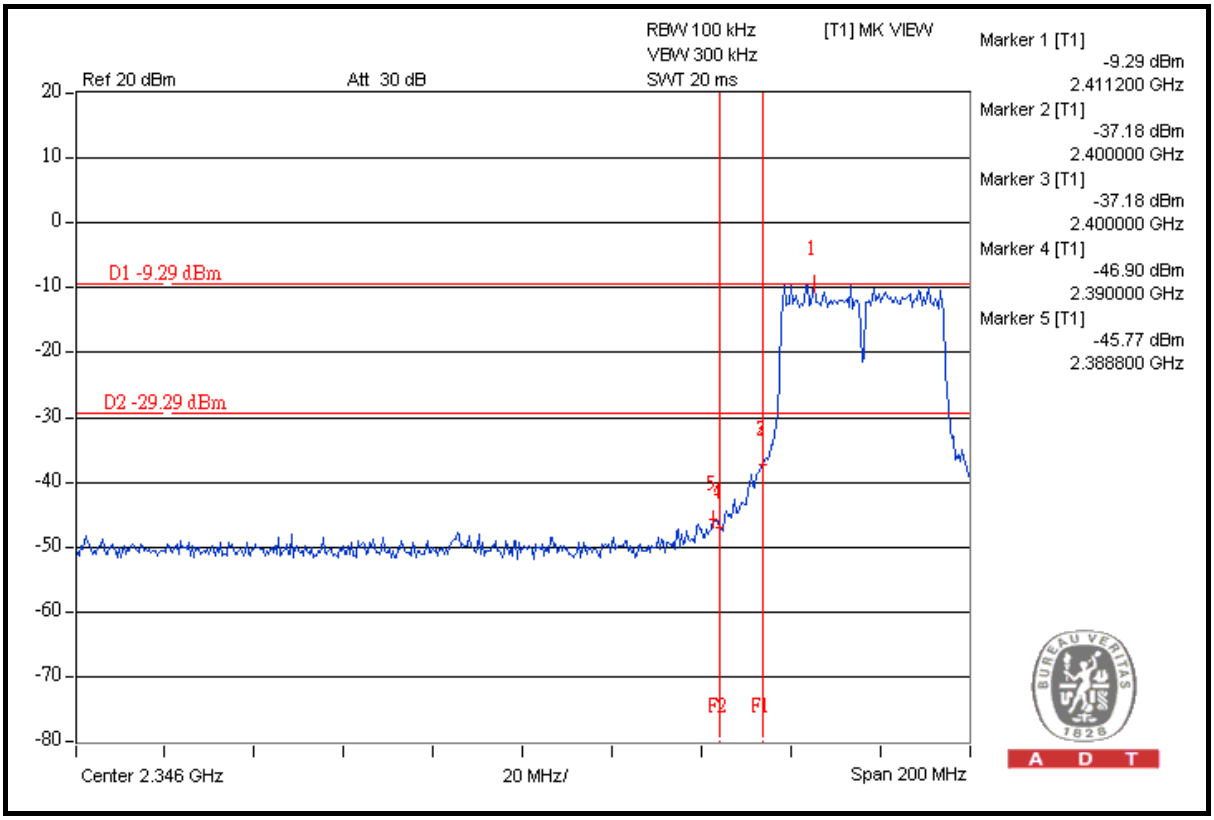
DRAFT 802.11n (40MHz) OFDM MODULATION

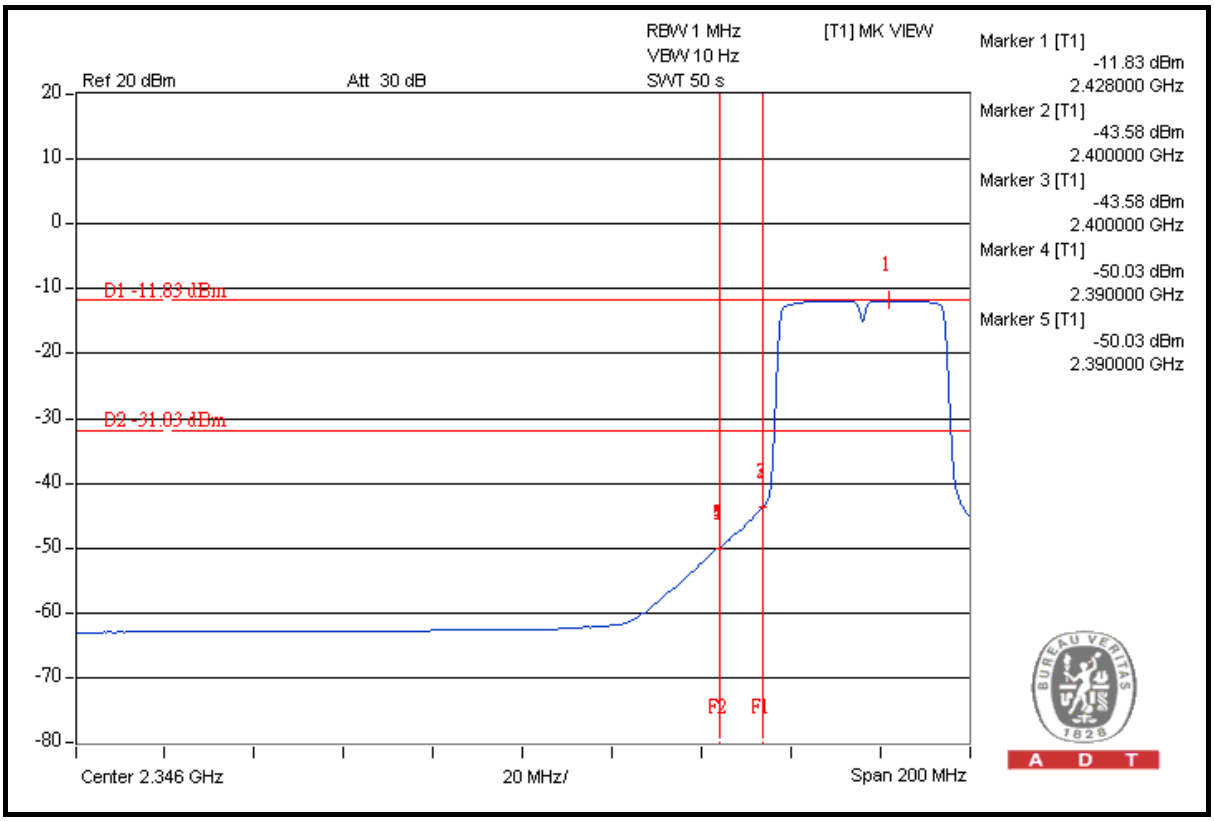
NOTE 1: The band edge emission plot on the next page shows 36.48dBc between carrier maximum power and local maximum emission in restrict band (2.3888GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 100.41dBuV/m (Peak), so the maximum field strength in restrict band is 100.41 – 36.48 = 63.93dBuV/m which is under 74dBuV/m limit.

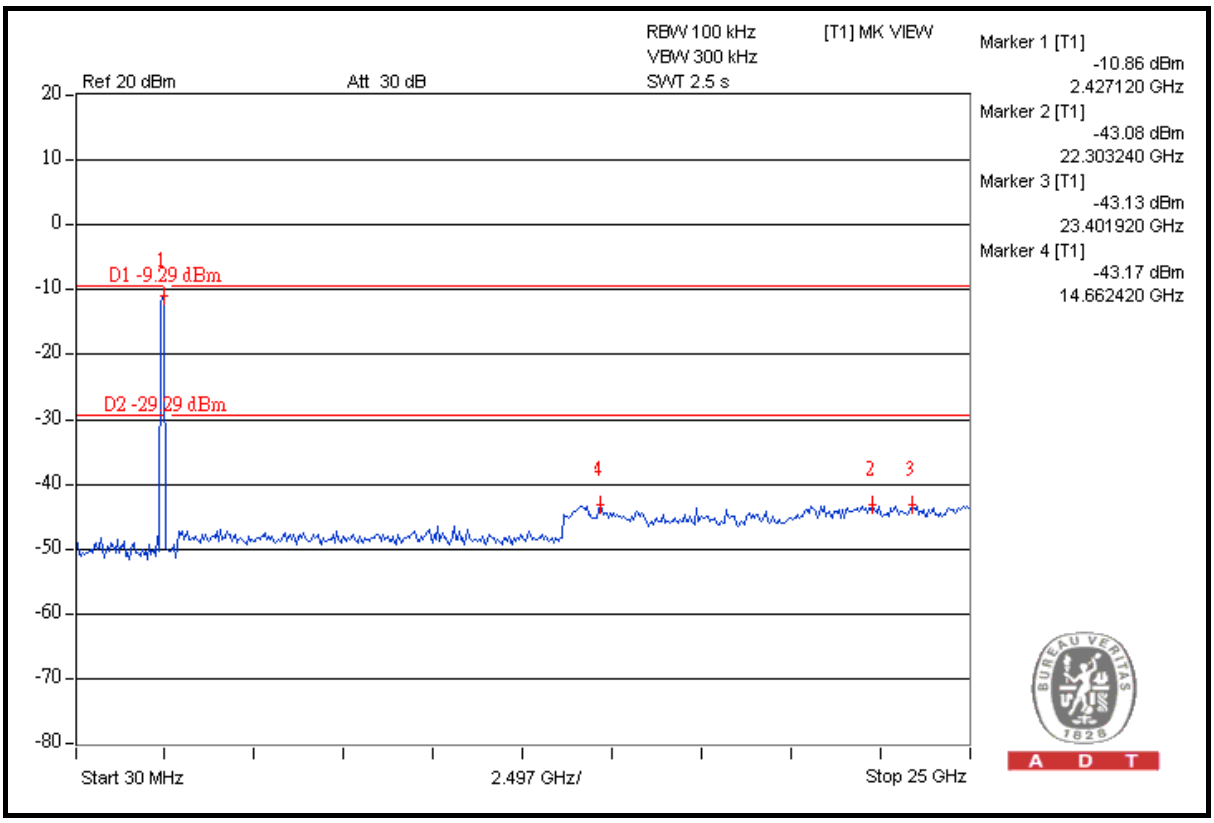
The band edge emission plot on the next page shows 38.20dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 88.76dBuV/m (Average), so the maximum field strength in restrict band is 88.76 – 38.20 = 50.56dBuV/m which is under 54dBuV/m limit.

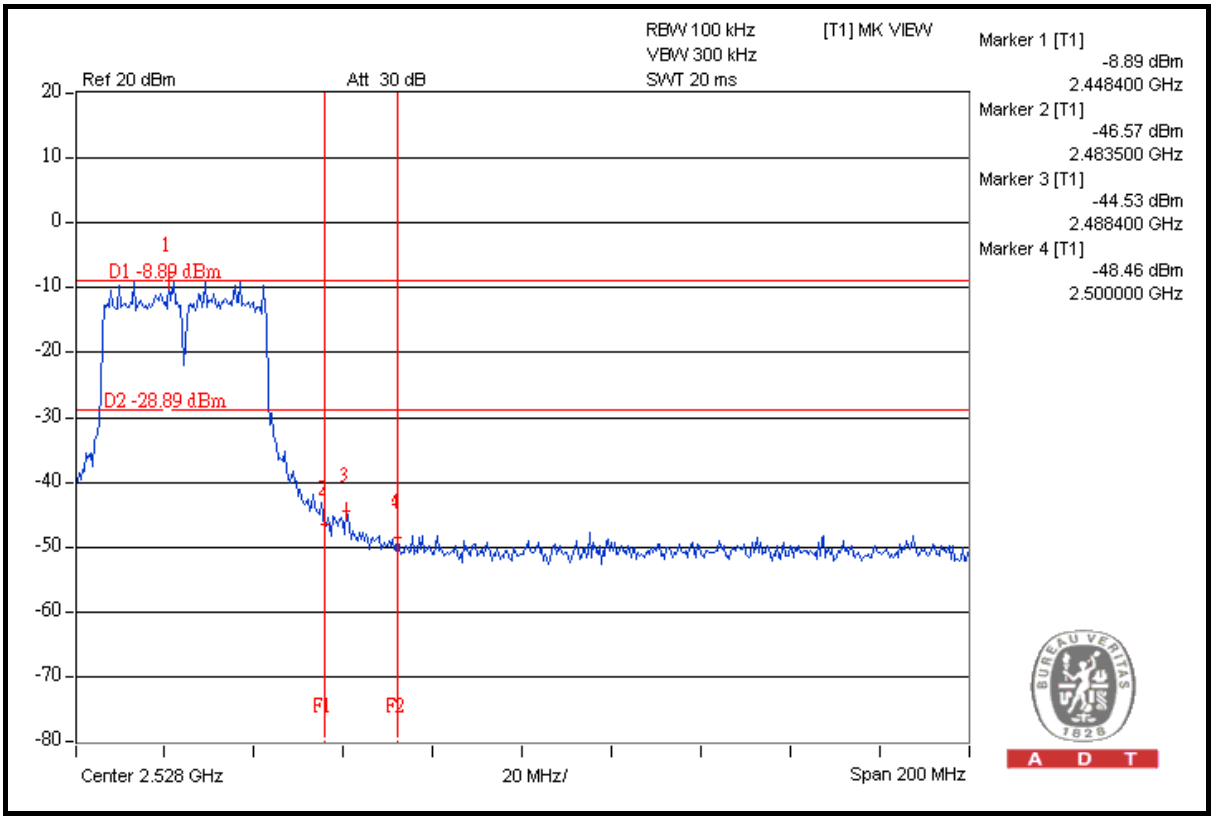
NOTE 2: The band edge emission plot on the next second page shows 35.64dBc between carrier maximum power and local maximum emission in restrict band (2.4884GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 100.00dBuV/m (Peak), so the maximum field strength in restrict band is 100.00 – 35.64 = 64.36dBuV/m which is under 74dBuV/m limit.

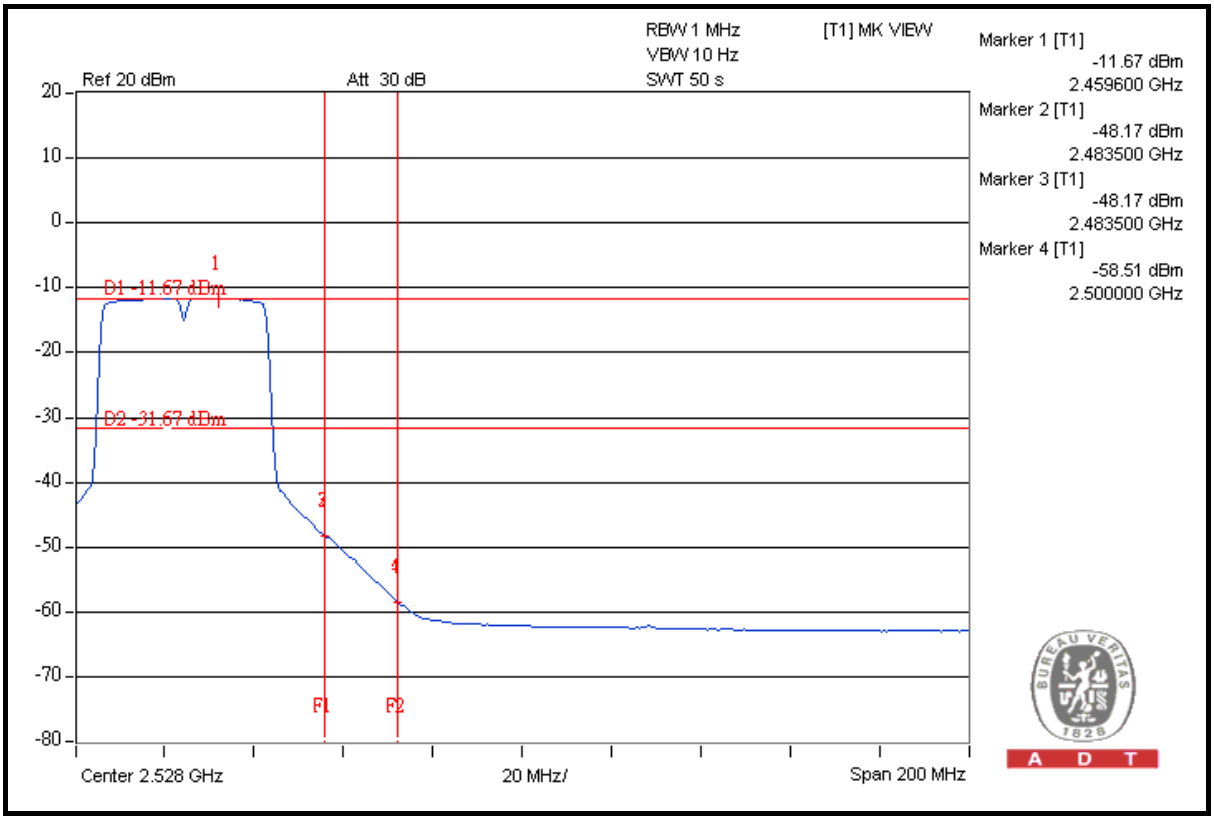
The band edge emission plot on the next third page shows 36.50dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 88.46dBuV/m (Average), so the maximum field strength in restrict band is 88.46 – 36.50 = 51.96dBuV/m which is under 54dBuV/m limit.

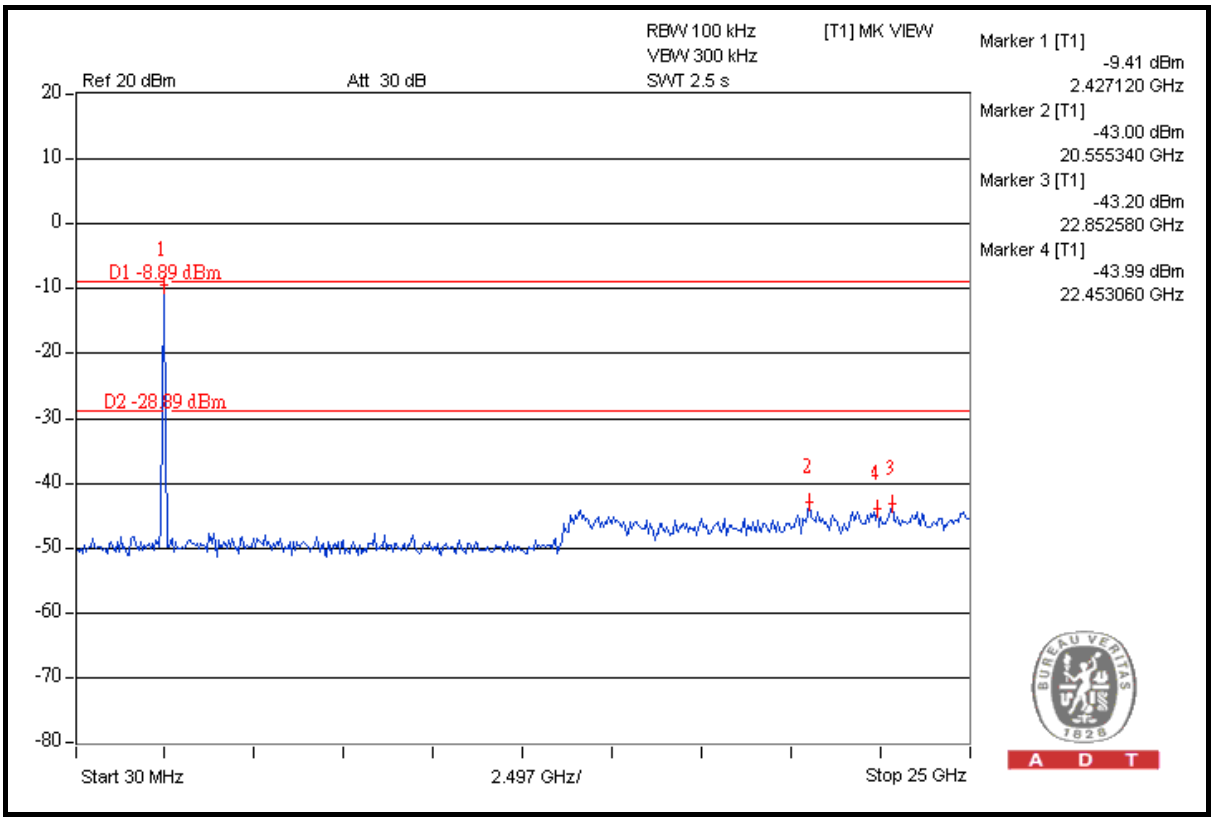

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -9.29 dBm
D2 -29.29 dBm
Marker 1 [T1]
-9.29 dBm
2.411200 GHz
Marker 2 [T1]
-37.18 dBm
2.400000 GHz
Marker 3 [T1]
-37.18 dBm
2.400000 GHz
Marker 4 [T1]
-46.90 dBm
2.390000 GHz
Marker 5 [T1]
-45.77 dBm
2.388800 GHz
F2
F1
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -11.83 dBm
D2 -31.03 dBm
Marker 1 [T1]
-11.83 dBm
2.428000 GHz
Marker 2 [T1]
-43.58 dBm
2.400000 GHz
Marker 3 [T1]
-43.58 dBm
2.400000 GHz
Marker 4 [T1]
-50.03 dBm
2.390000 GHz
Marker 5 [T1]
-50.03 dBm
2.390000 GHz
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]
-10.86 dBm
2.427120 GHz
Marker 2 [T1]
-43.08 dBm
22.303240 GHz
Marker 3 [T1]
-43.13 dBm
23.401920 GHz
Marker 4 [T1]
-43.17 dBm
14.662420 GHz
D1 -9.29 dBm
D2 -29.29 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-8.89 dBm
2.448400 GHz
Marker 2 [T1]
-46.57 dBm
2.483500 GHz
Marker 3 [T1]
-44.53 dBm
2.488400 GHz
Marker 4 [T1]
-48.46 dBm
2.500000 GHz
D1 -8.89 dBm
D2 -28.89 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-11.67 dBm
2.459600 GHz
Marker 2 [T1]
-48.17 dBm
2.483500 GHz
Marker 3 [T1]
-48.17 dBm
2.483500 GHz
Marker 4 [T1]
-58.51 dBm
2.500000 GHz
D1 -11.67 dBm
D2 -31.67 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.41 dBm
2.427120 GHz
Marker 2 [T1]
-43.00 dBm
20.555340 GHz
Marker 3 [T1]
-43.20 dBm
22.852580 GHz
Marker 4 [T1]
-43.99 dBm
22.453060 GHz
D1 -8.89 dBm
D2 -28.89 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole antenna without antenna connector.
The maximum Gain of the antenna is 2dBi.

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 ---