FCC TEST REPORT

REPORT NO.: RF981223L08

MODEL NO.: DIR-615

RECEIVED: Dec. 23, 2009

TESTED: Dec. 28, 2009 ~ Jan. 05, 2010

ISSUED: Jan. 06, 2010

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.

TABLE OF CONTENTS

1. CERTIFICATION

PRODUCT:	D-Link DIR-615 Wireless N Router
MODEL:	DIR-615
BRAND:	D-Link
APPLICANT:	D-Link Corporation
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Dec. 28, 2009 ~ Jan. 05, 2010
STANDARDS:	**FCC Part 15, Subpart C (Section 15.247)**
	ANSI C63.4-2003

The above equipment (Model: DIR-615) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Peggy Chen , **DATE :** Jan. 06, 2010
Peggy Chen / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE :** Jan. 06, 2010
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE :** Jan. 06, 2010
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -3.11dB at 24.352MHz.
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 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 -1.0dB at 2483.50MHz.
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.
15.203	Antenna Requirement	PASS	Detachable antenna connector is RSMA not a standard connector.

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	2.44dB
Radiated emissions	30MHz ~ 200MHz	2.93dB
	200MHz ~1000MHz	2.95dB
	1GHz ~ 18GHz	2.26dB
	18GHz ~ 40GHz	1.94dB

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

EUT	D-Link DIR-615 Wireless N Router
MODEL NO.	DIR-615
FCC ID	KA2IR615E3
POWER SUPPLY	5Vdc
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 802.11n: up to 270.0Mbps
OPERATING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz)
OUTPUT POWER	385.5mW
ANTENNA TYPE	Dipole antenna with 2dBi gain
DATA CABLE	NA
I/O PORTS	RJ45
ACCESSORY DEVICES	Adapter

NOTE:

1. The EUT has two types on market. They are identical in all aspects except for the antenna connector.

TYPE	DIFFERENCE
1	Fixed antenna without antenna connector
2	Detachable antenna with R-SMA antenna connector

2. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	2TX
802.11g	2TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX

3. The EUT uses following adapters.

ADAPTER 1	
BRAND	D-Link
MODEL	CF0605-B IW
INPUT POWER	100-240Vac, 50/60Hz, 0.18A
OUTPUT POWER	5Vdc, 1.2A
POEWR LINE	1.5m non-shielded cable without core

ADAPTER 2	
BRAND	D-Link
MODEL	AMS1-0501200FU
INPUT POWER	100-240Vac, 50-60Hz, 0.2A, 15VA
OUTPUT POWER	5Vdc, 1.2A
POEWR LINE	1.5m non-shielded cable without core

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

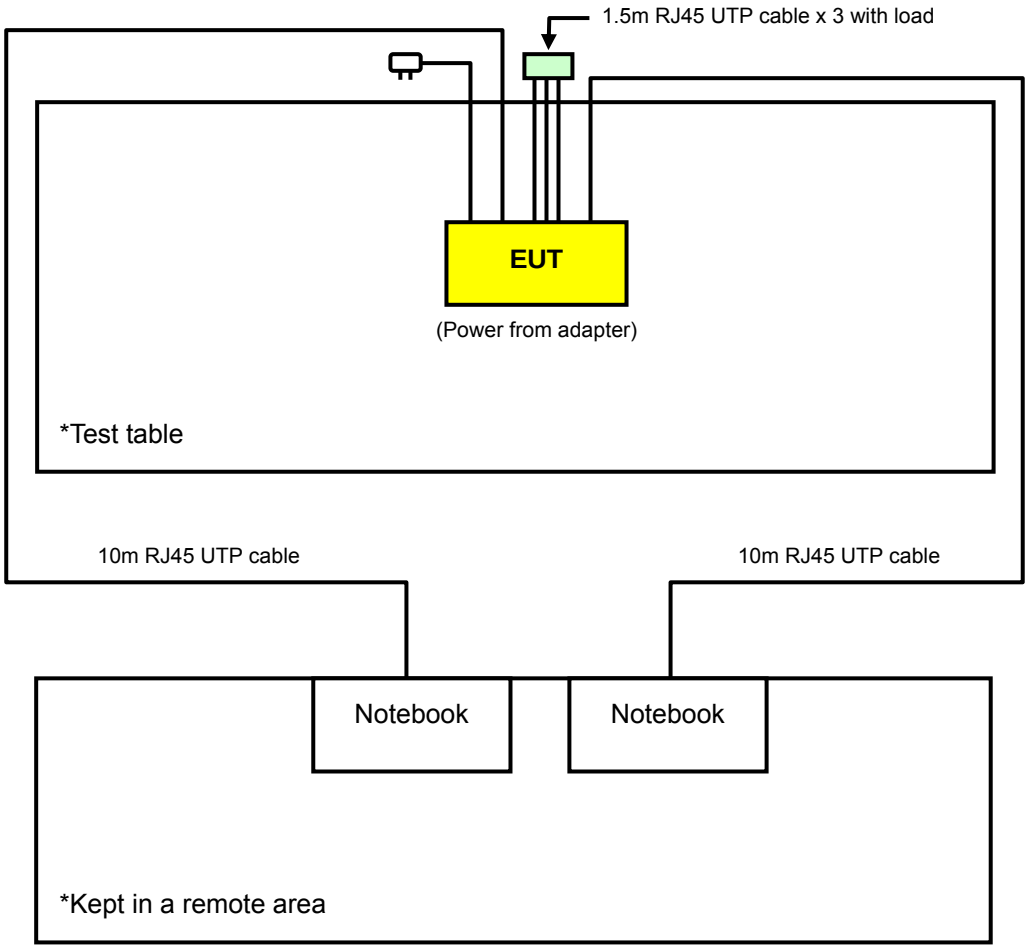
11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

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		

7 channels are provided for 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	Antenna Type	Adapter Model
A	√	√	√	√	Fixed antenna	CF0605-B IW
B	-	√	√	-		AMS1-0501200FU
C	-	√	√	-	Detachable antenna	CF0605-B IW
D	-	√	√	-		AMS1-0501200FU

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

NOTE: "-" means no effect

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ 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
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5

RADIATED EMISSION TEST (BELOW 1GHz):

☒ 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)
A, B, C, D	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	6.5

POWER LINE CONDUCTED EMISSION TEST:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C, D	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	6.5

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
	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5
	802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	13.5

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ 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
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	19deg. C, 66%RH, 1006 hPa	120Vac, 60Hz	Lori Chiu
RE<1G	19deg. C, 66%RH, 1006 hPa	120Vac, 60Hz	Lori Chiu
PLC	17deg. C, 65%RH, 1005 hPa	120Vac, 60Hz	Daniel Lin
APCM	25deg. C, 65%RH, 1008 hPa	120Vac, 60Hz	Lori Chiu

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	PP05L	16484462992	E2K24CLNS
2	NOTEBOOK	DELL	PP05L	12130898320	E2K24CLNS

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

NOTE:
1. All power cords of the above support units are non shielded (1.8m).
2. Item 1~2 acted as communication partners 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 25, 2009	May 24, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 07, 2009	Jul. 06, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 30, 2009	Apr. 29, 2010
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Aug. 10, 2009	Aug. 09, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01910	Sep. 11, 2009	Sep. 10, 2010
Preamplifier Agilent	8447D	2944A10638	Dec. 21, 2009	Dec. 20, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218190/4 231241/4	May 13, 2009	May 12, 2010
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 17, 2009	Aug. 16, 2010
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.

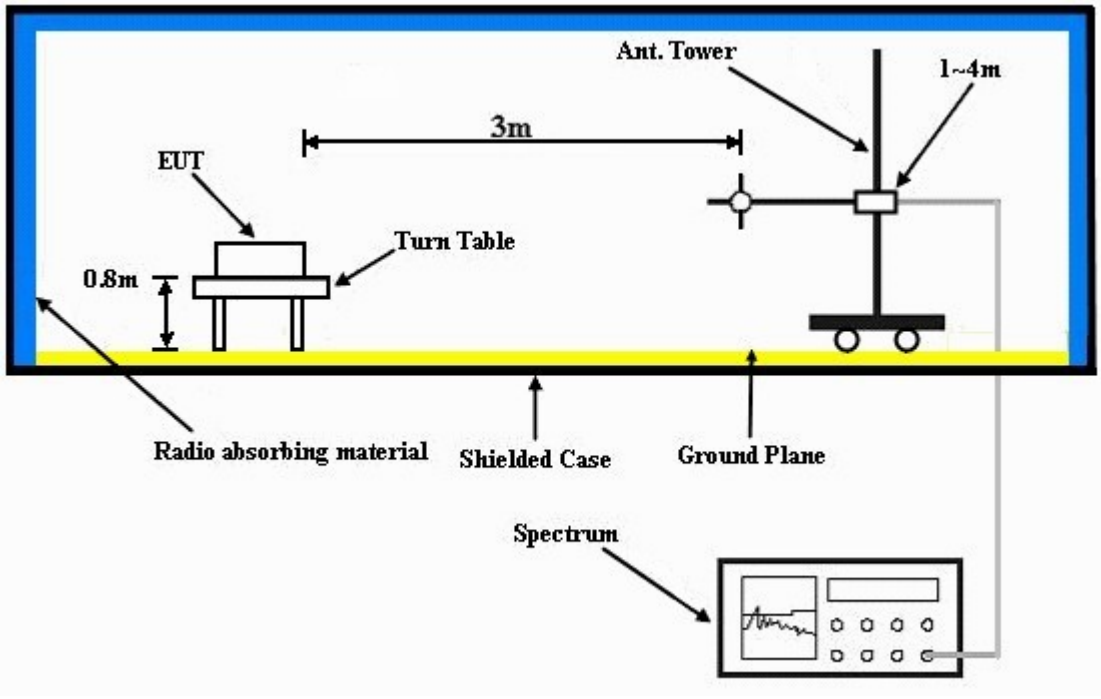
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz 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 two notebook systems outside of testing area to act as communication partner.
c. The communication partners connected with EUT via a RJ45 cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

4.1.7 TEST RESULTS

802.11b

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

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	2387.00	57.7 PK	74.0	-16.3	1.04 H	330	25.49	32.21
2	2387.00	46.0 AV	54.0	-8.0	1.04 H	330	13.83	32.21
3	*2412.00	102.7 PK			1.04 H	330	70.39	32.30
4	*2412.00	97.8 AV			1.04 H	330	65.46	32.30
5	2497.00	57.7 PK	74.0	-16.3	1.04 H	330	25.09	32.61
6	2497.00	46.2 AV	54.0	-7.9	1.04 H	330	13.54	32.61
7	4824.00	48.6 PK	74.0	-25.4	1.00 H	341	10.26	38.33
8	4824.00	39.6 AV	54.0	-14.4	1.00 H	341	1.30	38.33
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	2387.00	60.0 PK	74.0	-14.0	1.19 V	231	27.77	32.21
2	2387.00	49.8 AV	54.0	-4.2	1.19 V	231	17.61	32.21
3	*2412.00	113.9 PK			1.17 V	165	81.62	32.30
4	*2412.00	108.6 AV			1.17 V	165	76.25	32.30
5	2497.00	61.7 PK	74.0	-12.3	1.11 V	105	29.06	32.61
6	2497.00	52.3 AV	54.0	-1.7	1.11 V	105	19.66	32.61
7	4824.00	54.0 PK	74.0	-20.0	1.10 V	52	15.69	38.33
8	4824.00	48.6 AV	54.0	-5.4	1.10 V	52	10.30	38.33

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

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	2354.00	57.1 PK	74.0	-16.9	1.32 H	305	25.05	32.08
2	2354.00	46.2 AV	54.0	-7.8	1.32 H	305	14.11	32.08
3	*2437.00	102.9 PK			1.32 H	305	70.46	32.39
4	*2437.00	97.9 AV			1.32 H	305	65.49	32.39
5	2483.50	58.3 PK	74.0	-15.7	1.32 H	305	25.76	32.56
6	2483.50	47.2 AV	54.0	-6.8	1.32 H	305	14.64	32.56
7	4874.00	48.1 PK	74.0	-25.9	1.13 H	345	9.66	38.41
8	4874.00	39.7 AV	54.0	-14.3	1.13 H	345	1.25	38.41
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	2354.00	58.0 PK	74.0	-16.0	1.17 V	339	25.93	32.08
2	2354.00	49.0 AV	54.0	-5.0	1.17 V	339	16.91	32.08
3	*2437.00	114.1 PK			1.17 V	339	81.70	32.39
4	*2437.00	109.0 AV			1.17 V	339	76.62	32.39
5	2483.50	59.0 PK	74.0	-15.0	1.17 V	339	26.40	32.56
6	2483.50	47.9 AV	54.0	-6.1	1.17 V	339	15.30	32.56
7	4874.00	48.8 PK	74.0	-25.2	1.17 V	140	10.39	38.41
8	4874.00	41.2 AV	54.0	-12.8	1.17 V	140	2.79	38.41

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

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	2378.00	57.0 PK	74.0	-17.0	1.05 H	329	24.84	32.17
2	2378.00	46.0 AV	54.0	-8.0	1.05 H	329	13.83	32.17
3	*2462.00	102.3 PK			1.05 H	329	69.84	32.48
4	*2462.00	97.5 AV			1.05 H	329	65.05	32.48
5	2487.00	58.4 PK	74.0	-15.6	1.05 H	329	25.86	32.57
6	2487.00	46.3 AV	54.0	-7.7	1.05 H	329	13.76	32.57
7	4924.00	48.3 PK	74.0	-25.7	1.46 H	351	9.79	38.51
8	4924.00	39.4 AV	54.0	-14.6	1.46 H	351	0.90	38.51
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	2378.00	59.2 PK	74.0	-14.8	1.12 V	102	27.00	32.17
2	2378.00	48.1 AV	54.0	-5.9	1.12 V	102	15.91	32.17
3	*2462.00	113.2 PK			1.10 V	234	80.70	32.48
4	*2462.00	107.6 AV			1.10 V	234	75.14	32.48
5	2487.00	62.6 PK	74.0	-11.4	1.13 V	162	30.04	32.57
6	2487.00	52.7 AV	54.0	-1.3	1.13 V	162	20.09	32.57
7	4924.00	50.1 PK	74.0	-24.0	1.14 V	293	11.53	38.51
8	4924.00	41.6 AV	54.0	-12.4	1.14 V	293	3.07	38.51

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.

802.11g

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.3 PK	74.0	-12.7	1.07 H	163	29.11	32.22
2	2390.00	46.8 AV	54.0	-7.2	1.07 H	163	14.58	32.22
3	*2412.00	98.9 PK			1.07 H	163	66.63	32.30
4	*2412.00	87.3 AV			1.07 H	163	54.96	32.30
5	2500.00	57.9 PK	74.0	-16.2	1.07 H	163	25.23	32.62
6	2500.00	46.5 AV	54.0	-7.6	1.07 H	163	13.83	32.62
7	4824.00	47.3 PK	74.0	-26.7	1.00 H	155	9.00	38.33
8	4824.00	34.8 AV	54.0	-19.2	1.00 H	155	-3.53	38.33
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.9 PK	74.0	-1.1	1.21 V	28	40.70	32.22
2	2390.00	52.2 AV	54.0	-1.8	1.21 V	28	20.00	32.22
3	*2412.00	110.3 PK			1.20 V	31	77.96	32.30
4	*2412.00	98.5 AV			1.20 V	31	66.15	32.30
5	2500.00	60.6 PK	74.0	-13.4	1.15 V	31	27.99	32.62
6	2500.00	49.5 AV	54.0	-4.5	1.15 V	31	16.86	32.62
7	4824.00	47.4 PK	74.0	-26.6	1.01 V	113	9.10	38.33
8	4824.00	34.9 AV	54.0	-19.1	1.01 V	113	-3.47	38.33

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	100.2 PK			1.10 H	150	67.76	32.39
2	*2437.00	89.5 AV			1.10 H	150	57.07	32.39
3	2483.50	56.0 PK	74.0	-18.0	1.10 H	150	23.40	32.56
4	2483.50	46.4 AV	54.0	-7.6	1.10 H	150	13.81	32.56
5	4874.00	47.7 PK	74.0	-26.3	1.00 H	289	9.33	38.41
6	4874.00	34.9 AV	54.0	-19.1	1.00 H	289	-3.52	38.41
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.6 PK			1.17 V	166	79.22	32.39
2	*2437.00	99.6 AV			1.17 V	166	67.18	32.39
3	2483.50	65.2 PK	74.0	-8.8	1.11 V	222	32.63	32.56
4	2483.50	52.0 AV	54.0	-2.0	1.11 V	222	19.47	32.56
5	4874.00	48.2 PK	74.0	-25.8	1.03 V	330	9.81	38.41
6	4874.00	35.1 AV	54.0	-18.9	1.03 V	330	-3.30	38.41

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	98.7 PK			1.08 H	170	66.18	32.48
2	*2462.00	87.1 AV			1.08 H	170	54.64	32.48
3	2483.50	61.3 PK	74.0	-12.7	1.08 H	170	28.73	32.56
4	2483.50	46.8 AV	54.0	-7.2	1.08 H	170	14.22	32.56
5	2500.00	57.8 PK	74.0	-16.2	1.08 H	170	25.16	32.62
6	2500.00	46.4 AV	54.0	-7.6	1.08 H	170	13.81	32.62
7	4924.00	47.4 PK	74.0	-26.6	1.01 H	166	8.91	38.51
8	4924.00	34.8 AV	54.0	-19.2	1.01 H	166	-3.69	38.51
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	*2462.00	110.1 PK			1.16 V	33	77.62	32.48
2	*2462.00	97.7 AV			1.16 V	33	65.20	32.48
3	2483.50	72.7 PK	74.0	-1.3	1.15 V	349	40.12	32.56
4	2483.50	52.6 AV	54.0	-1.4	1.15 V	349	20.00	32.56
5	2500.00	63.5 PK	74.0	-10.5	1.15 V	36	30.85	32.62
6	2500.00	50.8 AV	54.0	-3.2	1.15 V	36	18.22	32.62
7	4924.00	47.5 PK	74.0	-26.5	1.00 V	120	9.01	38.51
8	4924.00	34.9 AV	54.0	-19.1	1.00 V	120	-3.61	38.51

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.

802.11n (20MHz)

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

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	59.1 PK	74.0	-14.9	1.09 H	161	26.88	32.22
2	2390.00	47.2 AV	54.0	-6.8	1.09 H	161	14.95	32.22
3	*2412.00	98.3 PK			1.09 H	161	65.97	32.30
4	*2412.00	86.0 AV			1.09 H	161	53.70	32.30
5	2500.00	57.8 PK	74.0	-16.2	1.09 H	161	25.20	32.62
6	2500.00	46.3 AV	54.0	-7.7	1.09 H	161	13.71	32.62
7	4824.00	47.2 PK	74.0	-26.8	1.00 H	269	8.88	38.33
8	4824.00	34.8 AV	54.0	-19.2	1.00 H	269	-3.57	38.33
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.9 PK	74.0	-1.1	1.16 V	164	40.69	32.22
2	2390.00	52.5 AV	54.0	-1.5	1.16 V	164	20.31	32.22
3	*2412.00	109.7 PK			1.17 V	165	77.37	32.30
4	*2412.00	97.0 AV			1.17 V	165	64.70	32.30
5	2500.00	59.4 PK	74.0	-14.6	1.21 V	32	26.74	32.62
6	2500.00	48.0 AV	54.0	-6.0	1.21 V	32	15.42	32.62
7	4824.00	47.6 PK	74.0	-26.5	1.15 V	200	9.22	38.33
8	4824.00	35.0 AV	54.0	-19.0	1.15 V	200	-3.33	38.33

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	100.1 PK			1.08 H	146	67.73	32.39
2	*2437.00	88.6 AV			1.08 H	146	56.21	32.39
3	2483.50	55.8 PK	74.0	-18.2	1.01 H	146	23.26	32.56
4	2483.50	46.3 AV	54.0	-7.7	1.01 H	146	13.73	32.56
5	4874.00	48.0 PK	74.0	-26.0	1.28 H	310	9.61	38.41
6	4874.00	35.2 AV	54.0	-18.8	1.28 H	310	-3.25	38.41
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.4 PK			1.46 V	36	78.99	32.39
2	*2437.00	98.7 AV			1.46 V	36	66.27	32.39
3	2483.50	63.3 PK	74.0	-10.7	1.18 V	38	30.71	32.56
4	2483.50	50.8 AV	54.0	-3.2	1.18 V	38	18.22	32.56
5	4874.00	48.4 PK	74.0	-25.7	1.01 V	115	9.94	38.41
6	4874.00	35.7 AV	54.0	-18.3	1.01 V	115	-2.75	38.41

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	98.2 PK			1.10 H	150	65.68	32.48
2	*2462.00	85.9 AV			1.10 H	150	53.44	32.48
3	2483.50	59.3 PK	74.0	-14.7	1.10 H	150	26.78	32.56
4	2483.50	47.2 AV	54.0	-6.8	1.10 H	150	14.66	32.56
5	2500.00	57.6 PK	74.0	-16.4	1.10 H	150	25.01	32.62
6	2500.00	47.0 AV	54.0	-7.0	1.10 H	150	14.41	32.62
7	4924.00	47.5 PK	74.0	-26.5	1.23 H	215	9.01	38.51
8	4924.00	34.6 AV	54.0	-19.4	1.23 H	215	-3.93	38.51
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	*2462.00	108.9 PK			1.16 V	348	76.44	32.48
2	*2462.00	97.0 AV			1.16 V	348	64.52	32.48
3	2483.50	72.8 PK	74.0	-1.2	1.14 V	343	40.28	32.56
4	2483.50	52.1 AV	54.0	-1.9	1.14 V	343	19.58	32.56
5	2500.00	63.5 PK	74.0	-10.5	1.14 V	347	30.89	32.62
6	2500.00	50.2 AV	54.0	-3.8	1.14 V	347	17.57	32.62
7	4924.00	47.6 PK	74.0	-26.4	1.00 V	111	9.12	38.51
8	4924.00	34.9 AV	54.0	-19.1	1.00 V	111	-3.58	38.51

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.

802.11n (40MHz)

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.1 PK	74.0	-7.9	1.07 H	330	33.87	32.22
2	2390.00	48.5 AV	54.0	-5.5	1.07 H	330	16.31	32.22
3	*2422.00	94.4 PK			1.07 H	330	62.08	32.34
4	*2422.00	82.0 AV			1.07 H	330	49.68	32.34
5	4844.00	46.5 PK	74.0	-27.5	1.01 H	110	8.16	38.36
6	4844.00	33.8 AV	54.0	-20.2	1.01 H	110	-4.54	38.36
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.8 PK	74.0	-1.2	1.17 V	352	40.57	32.22
2	2390.00	52.2 AV	54.0	-1.8	1.17 V	352	20.02	32.22
3	*2422.00	104.9 PK			1.19 V	343	72.53	32.34
4	*2422.00	90.5 AV			1.19 V	343	58.11	32.34
5	4844.00	46.9 PK	74.0	-27.1	1.01 V	119	8.57	38.36
6	4844.00	34.0 AV	54.0	-20.0	1.01 V	119	-4.39	38.36

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

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	65.5 PK	74.0	-8.5	1.01 H	156	33.27	32.22
2	2390.00	47.6 AV	54.0	-6.5	1.01 H	156	15.33	32.22
3	*2437.00	96.6 PK			1.11 H	150	64.25	32.39
4	*2437.00	84.6 AV			1.11 H	150	52.17	32.39
5	2483.50	64.4 PK	74.0	-9.6	1.11 H	150	31.81	32.56
6	2483.50	46.6 AV	54.0	-7.4	1.11 H	150	14.03	32.56
7	4874.00	47.2 PK	74.0	-26.8	1.00 H	288	8.80	38.41
8	4874.00	34.2 AV	54.0	-19.8	1.00 H	288	-4.19	38.41
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	67.5 PK	74.0	-6.5	1.22 V	34	35.25	32.22
2	2390.00	49.6 AV	54.0	-4.4	1.22 V	34	17.39	32.22
3	*2437.00	106.2 PK			1.18 V	342	73.85	32.39
4	*2437.00	92.8 AV			1.18 V	342	60.38	32.39
5	2483.50	64.5 PK	74.0	-9.5	1.22 V	34	31.94	32.56
6	2483.50	48.3 AV	54.0	-5.7	1.22 V	34	15.72	32.56
7	4874.00	47.9 PK	74.0	-26.1	1.05 V	248	9.47	38.41
8	4874.00	34.5 AV	54.0	-19.5	1.05 V	248	-3.92	38.41

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	94.3 PK			1.10 H	169	61.87	32.45
2	*2452.00	81.9 AV			1.10 H	169	49.44	32.45
3	2483.50	66.1 PK	74.0	-7.9	1.10 H	169	33.54	32.56
4	2483.50	48.5 AV	54.0	-5.5	1.10 H	169	15.93	32.56
5	4904.00	46.8 PK	74.0	-27.3	1.00 H	116	8.29	38.46
6	4904.00	34.2 AV	54.0	-19.8	1.00 H	116	-4.27	38.46
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	*2452.00	104.7 PK			1.17 V	345	72.20	32.45
2	*2452.00	90.9 AV			1.17 V	345	58.47	32.45
3	2483.50	72.1 PK	74.0	-1.9	1.15 V	6	39.57	32.56
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.15 V**	**6**	**20.44**	**32.56**
5	4904.00	46.8 PK	74.0	-27.2	1.10 V	199	8.36	38.46
6	4904.00	34.0 AV	54.0	-20.0	1.10 V	199	-4.46	38.46

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

BELOW 1GHz WORST-CASE DATA：802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu
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	500.42	34.4 QP	46.0	-11.6	1.75 H	154	15.10	19.30
2	601.52	38.9 QP	46.0	-7.1	1.25 H	187	16.90	22.00
3	626.80	38.2 QP	46.0	-7.8	1.25 H	151	16.00	22.20
4	801.78	43.9 QP	46.0	-2.1	1.00 H	10	18.50	25.40
5	877.61	33.4 QP	46.0	-12.6	1.00 H	148	7.50	25.90
6	902.89	42.8 QP	46.0	-3.2	1.50 H	238	16.60	26.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	38.88	35.2 QP	40.0	-4.8	1.00 V	10	22.80	12.40
2	68.79	32.8 QP	40.0	-7.2	1.00 V	283	21.00	11.80
3	97.95	33.8 QP	43.5	-9.7	1.00 V	298	24.40	9.40
4	601.52	36.6 QP	46.0	-9.4	1.75 V	214	14.60	22.00
5	751.23	33.1 QP	46.0	-12.9	1.50 V	106	9.10	24.00
6	801.78	38.9 QP	46.0	-7.1	1.75 V	238	13.50	25.40

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu
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	175.72	32.3 QP	43.5	-11.2	2.00 H	283	19.70	12.60
2	500.42	35.8 QP	46.0	-10.2	1.50 H	154	16.50	19.30
3	601.52	38.5 QP	46.0	-7.5	1.50 H	223	16.50	22.00
4	626.80	38.3 QP	46.0	-7.7	1.25 H	154	16.10	22.20
5	801.78	43.8 QP	46.0	-2.2	1.00 H	199	18.40	25.40
6	877.61	32.6 QP	46.0	-13.4	1.50 H	214	6.70	25.90
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	35.73	35.6 QP	40.0	-4.4	1.00 V	109	23.40	12.20
2	62.95	34.9 QP	40.0	-5.1	1.00 V	307	22.00	12.90
3	97.95	36.1 QP	43.5	-7.4	1.25 V	337	26.70	9.40
4	500.42	35.3 QP	46.0	-10.7	1.00 V	205	16.00	19.30
5	601.52	36.1 QP	46.0	-9.9	1.25 V	208	14.10	22.00
6	801.78	38.4 QP	46.0	-7.6	1.75 V	217	13.00	25.40

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	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu
TEST MODE	C		

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	175.72	29.7 QP	43.5	-13.8	1.75 H	280	17.10	12.60
2	208.77	30.3 QP	43.5	-13.2	1.25 H	130	19.30	11.00
3	401.26	34.4 QP	46.0	-11.6	1.00 H	67	18.20	16.20
4	500.42	33.8 QP	46.0	-12.2	1.75 H	169	14.50	19.30
5	601.52	39.4 QP	46.0	-6.6	1.25 H	151	17.40	22.00
6	803.73	43.3 QP	46.0	-2.7	1.00 H	208	17.90	25.40
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	31.84	35.1 QP	40.0	-4.9	1.00 V	133	22.80	12.30
2	62.95	32.4 QP	40.0	-7.6	1.00 V	274	19.50	12.90
3	97.95	30.6 QP	43.5	-12.9	1.00 V	307	21.20	9.40
4	601.52	36.6 QP	46.0	-9.4	1.75 V	196	14.60	22.00
5	803.73	39.3 QP	46.0	-6.7	1.75 V	226	13.90	25.40
6	947.60	37.5 QP	46.0	-8.5	2.00 V	220	11.00	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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH 1006 hPa	TESTED BY	Lori Chiu
TEST MODE	D		

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	30.00	34.3 QP	40.0	-5.7	1.75 H	139	22.00	12.30
2	80.45	34.2 QP	40.0	-5.8	2.00 H	226	26.00	8.20
3	401.26	36.1 QP	46.0	-9.9	1.00 H	214	19.90	16.20
4	601.52	37.5 QP	46.0	-8.5	1.50 H	346	15.50	22.00
5	626.80	36.3 QP	46.0	-9.7	1.25 H	139	14.10	22.20
6	801.78	43.5 QP	46.0	-2.5	1.00 H	49	18.10	25.40
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	31.84	36.9 QP	40.0	-3.1	1.25 V	22	24.60	12.30
2	97.95	34.8 QP	43.5	-8.7	1.00 V	250	25.40	9.40
3	175.72	29.3 QP	43.5	-14.2	1.25 V	163	16.70	12.60
4	401.26	33.6 QP	46.0	-12.4	1.25 V	235	17.40	16.20
5	601.52	38.4 QP	46.0	-7.6	1.75 V	205	16.40	22.00
6	803.73	39.6 QP	46.0	-6.4	1.25 V	97	14.20	25.40

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 0.50MHz.

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. 24, 2009	Sep. 23, 2010
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 31, 2009	Dec. 30, 2010
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Aug. 24, 2009	Aug. 23, 2010
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.

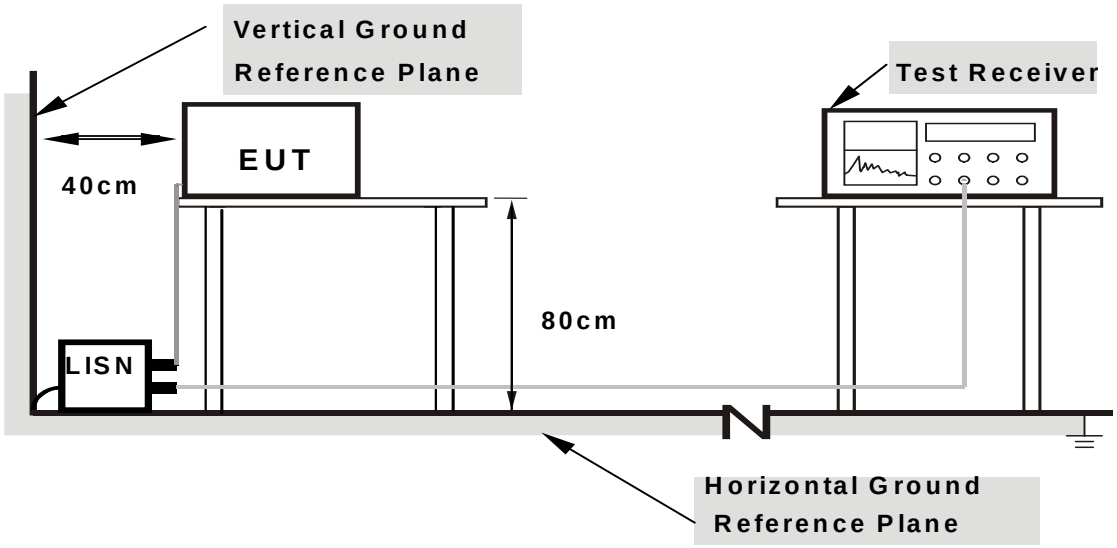
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

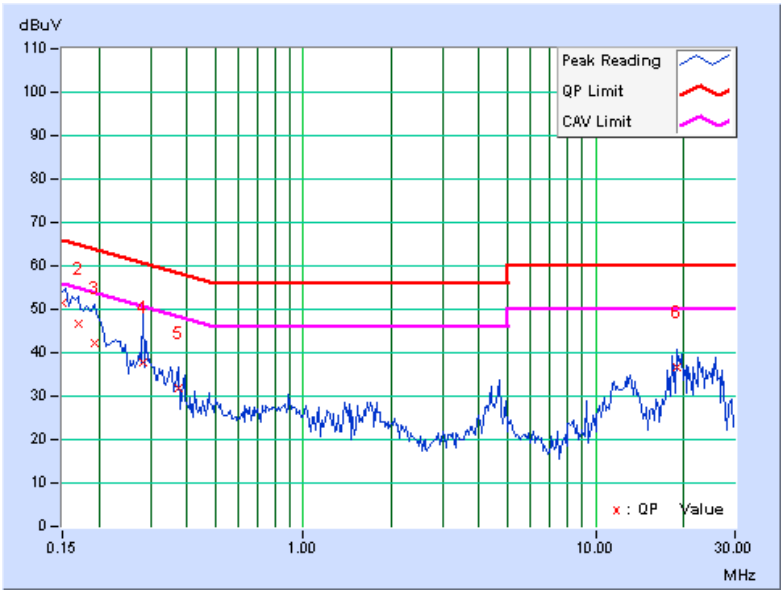
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：802.11n (20MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
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	0.150	0.13	51.52	-	51.65	-	66.00	56.00	-14.35	-
2	0.170	0.13	46.56	-	46.69	-	64.98	54.98	-18.29	-
3	0.193	0.13	41.92	-	42.05	-	63.91	53.91	-21.86	-
4	0.283	0.13	37.61	-	37.74	-	60.73	50.73	-22.99	-
5	0.373	0.14	31.70	-	31.84	-	58.44	48.44	-26.60	-
6	18.914	0.65	36.14	-	36.79	-	60.00	50.00	-23.21	-

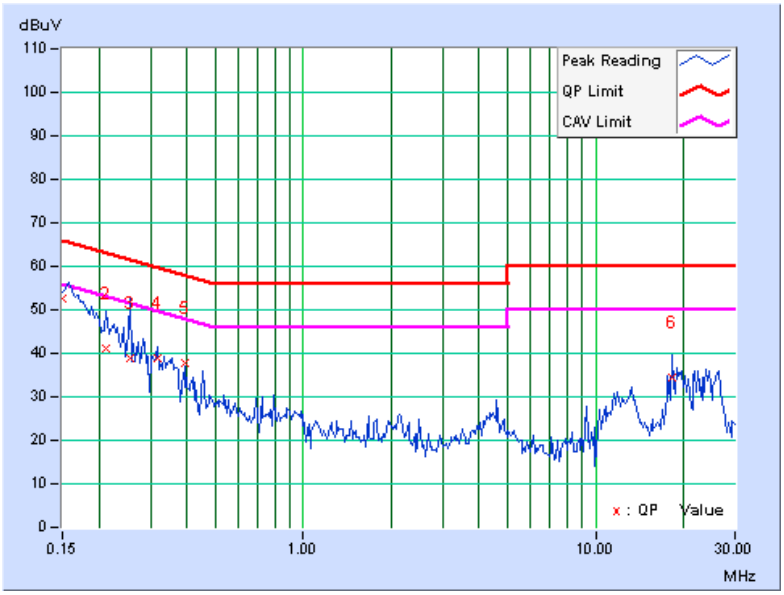
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz
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	0.150	0.13	52.55	-	52.68	-	66.00	56.00	-13.32	-
2	0.213	0.13	41.08	-	41.21	-	63.11	53.11	-21.90	-
3	0.255	0.14	38.85	-	38.99	-	61.58	51.58	-22.59	-
4	0.318	0.14	38.93	-	39.07	-	59.76	49.76	-20.69	-
5	0.396	0.15	37.47	-	37.62	-	57.93	47.93	-20.32	-
6	18.367	0.77	33.83	-	34.60	-	60.00	50.00	-25.40	-

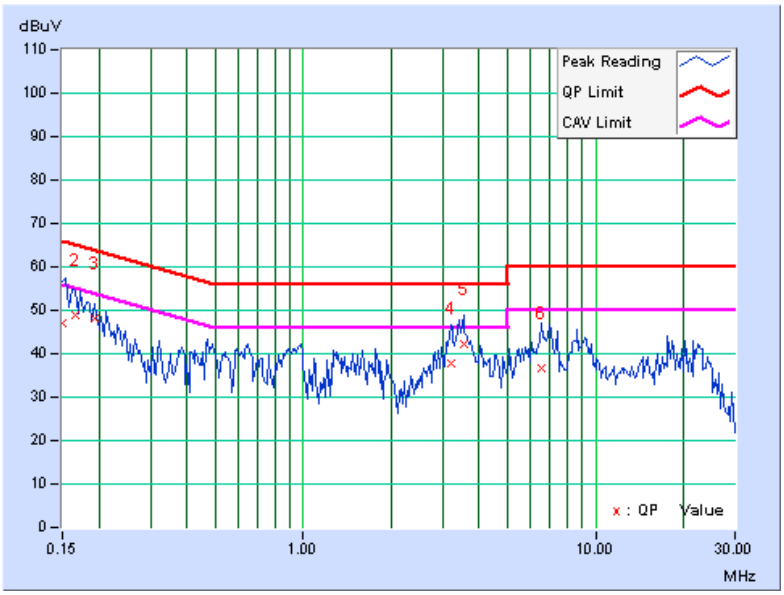
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 1	6dB BANDWIDTH	9kHz
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	0.150	0.13	46.83	-	46.96	-	66.00	56.00	-19.04	-
2	0.166	0.13	48.94	-	49.07	-	65.18	55.18	-16.11	-
3	0.193	0.13	47.98	-	48.11	-	63.91	53.91	-15.80	-
4	3.191	0.24	37.68	-	37.92	-	56.00	46.00	-18.08	-
5	3.535	0.26	41.84	-	42.10	-	56.00	46.00	-13.90	-
6	6.520	0.34	36.27	-	36.61	-	60.00	50.00	-23.39	-

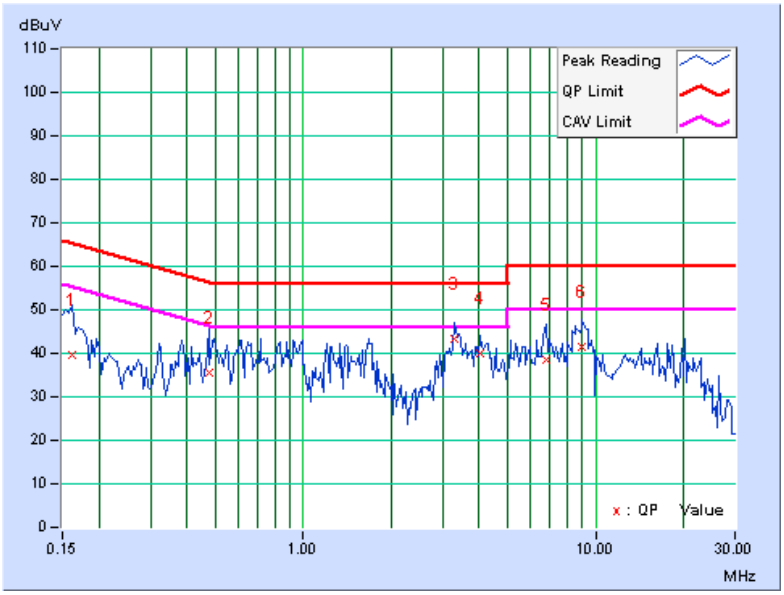
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz
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	0.162	0.13	39.54	-	39.67	-	65.38	55.38	-25.71	-
2	0.474	0.15	35.24	-	35.39	-	56.44	46.44	-21.05	-
3	3.309	0.27	43.00	-	43.27	-	56.00	46.00	-12.73	-
4	4.020	0.30	39.52	-	39.82	-	56.00	46.00	-16.18	-
5	6.758	0.39	38.08	-	38.47	-	60.00	50.00	-21.53	-
6	8.992	0.47	41.18	-	41.65	-	60.00	50.00	-18.35	-

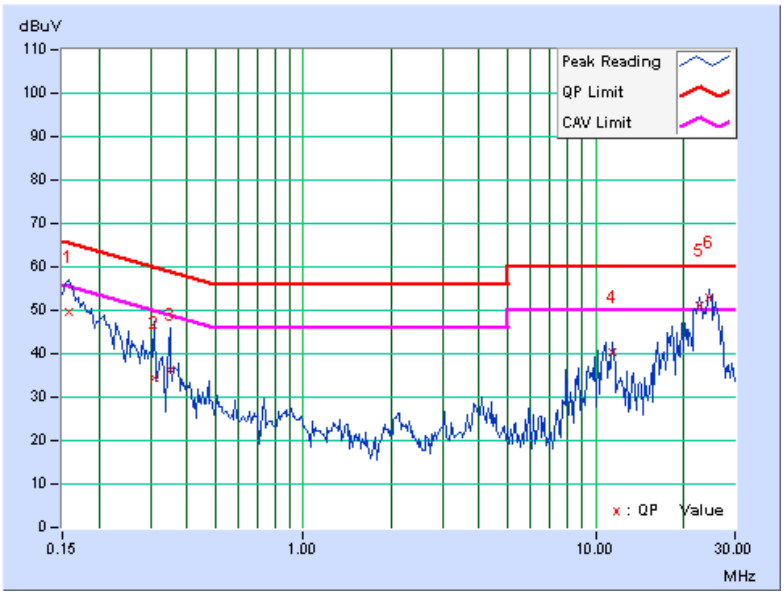
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	C		

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	0.158	0.13	49.46	-	49.59	-	65.58	55.58	-15.99	-
2	0.310	0.14	34.27	-	34.41	-	59.97	49.97	-25.56	-
3	0.349	0.14	36.02	-	36.16	-	58.98	48.98	-22.82	-
4	11.465	0.47	39.88	-	40.35	-	60.00	50.00	-19.65	-
5	22.578	0.65	50.42	46.16	51.07	46.81	60.00	50.00	-8.93	-3.19
6	24.348	0.64	52.44	46.01	53.08	46.65	60.00	50.00	-6.92	-3.35

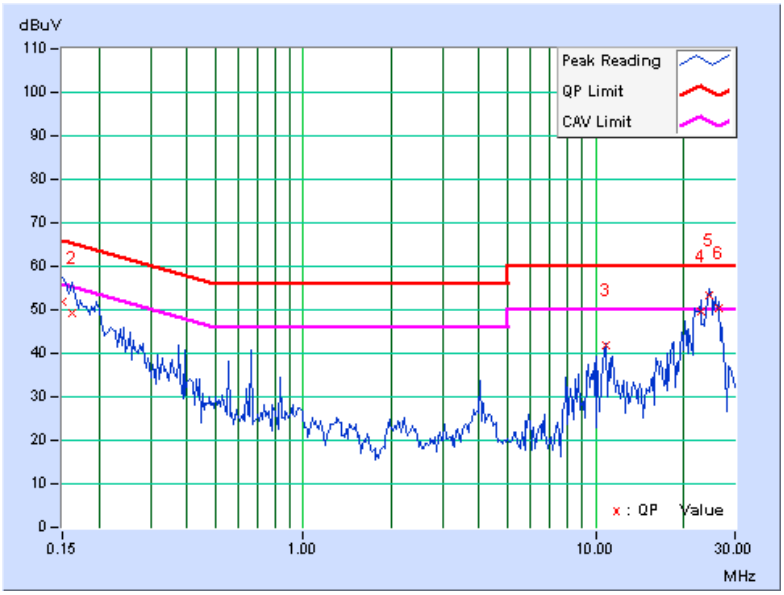
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	C		

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	0.150	0.13	51.70	-	51.83	-	66.00	56.00	-14.17	-
2	0.162	0.13	49.20	-	49.33	-	65.38	55.38	-16.05	-
3	10.793	0.53	41.44	-	41.97	-	60.00	50.00	-18.03	-
4	22.887	0.80	48.77	-	49.57	-	60.00	50.00	-10.43	-
5	**24.352**	**0.79**	**52.52**	**46.10**	**53.31**	**46.89**	**60.00**	**50.00**	**-6.69**	**-3.11**
6	26.484	0.78	49.76	45.59	50.54	46.37	60.00	50.00	-9.46	-3.63

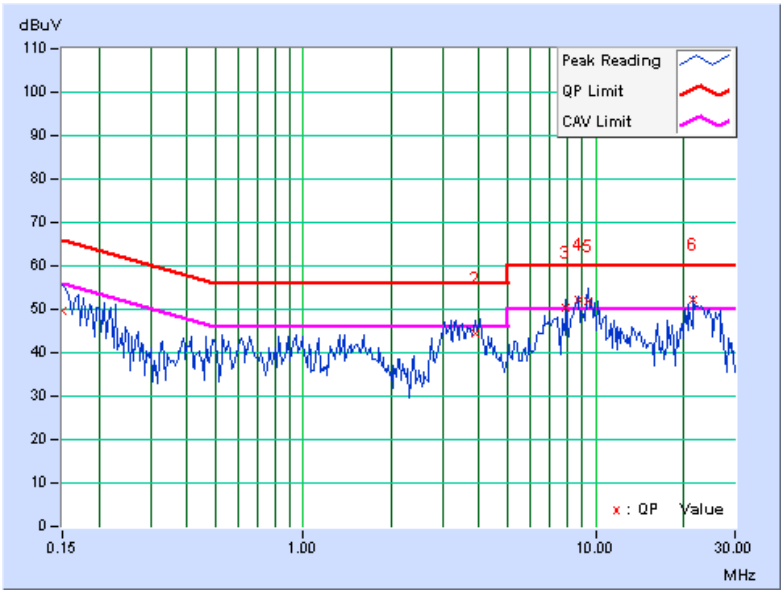
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	D		

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	0.150	0.13	49.40	-	49.53	-	66.00	56.00	-16.47	-
2	3.895	0.28	44.24	-	44.52	-	56.00	46.00	-11.48	-
3	7.922	0.38	50.07	45.38	50.45	45.76	60.00	50.00	-9.55	-4.24
4	8.719	0.40	51.66	45.27	52.06	45.67	60.00	50.00	-7.94	-4.33
5	9.387	0.41	51.55	45.04	51.96	45.45	60.00	50.00	-8.04	-4.55
6	21.664	0.66	51.63	45.37	52.29	46.03	60.00	50.00	-7.71	-3.97

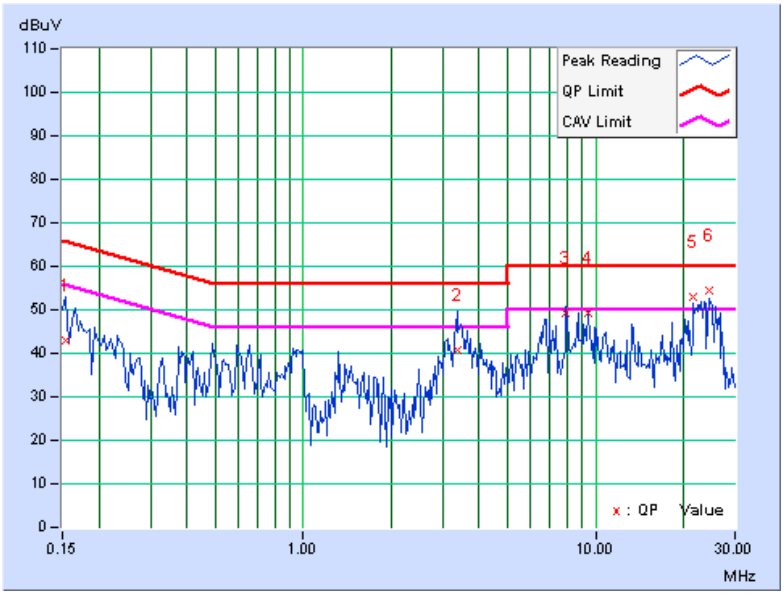
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	D		

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	0.154	0.13	42.65	-	42.78	-	65.79	55.79	-23.01	-
2	3.367	0.27	40.32	-	40.59	-	56.00	46.00	-15.41	-
3	7.922	0.43	48.86	-	49.29	-	60.00	50.00	-10.71	-
4	9.391	0.48	48.86	-	49.34	-	60.00	50.00	-10.66	-
5	21.664	0.81	52.01	46.05	52.82	46.86	60.00	50.00	-7.18	-3.14
6	24.348	0.79	53.57	45.00	54.36	45.79	60.00	50.00	-5.64	-4.21

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
SPECTRUM ANALYZER R&S	FSP40	100040	Jul. 07, 2009	Jul. 06, 2010

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

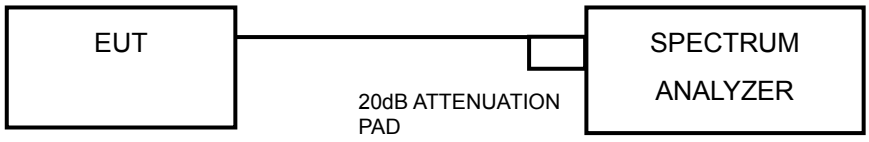
4.3.3 TEST PROCEDURE

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

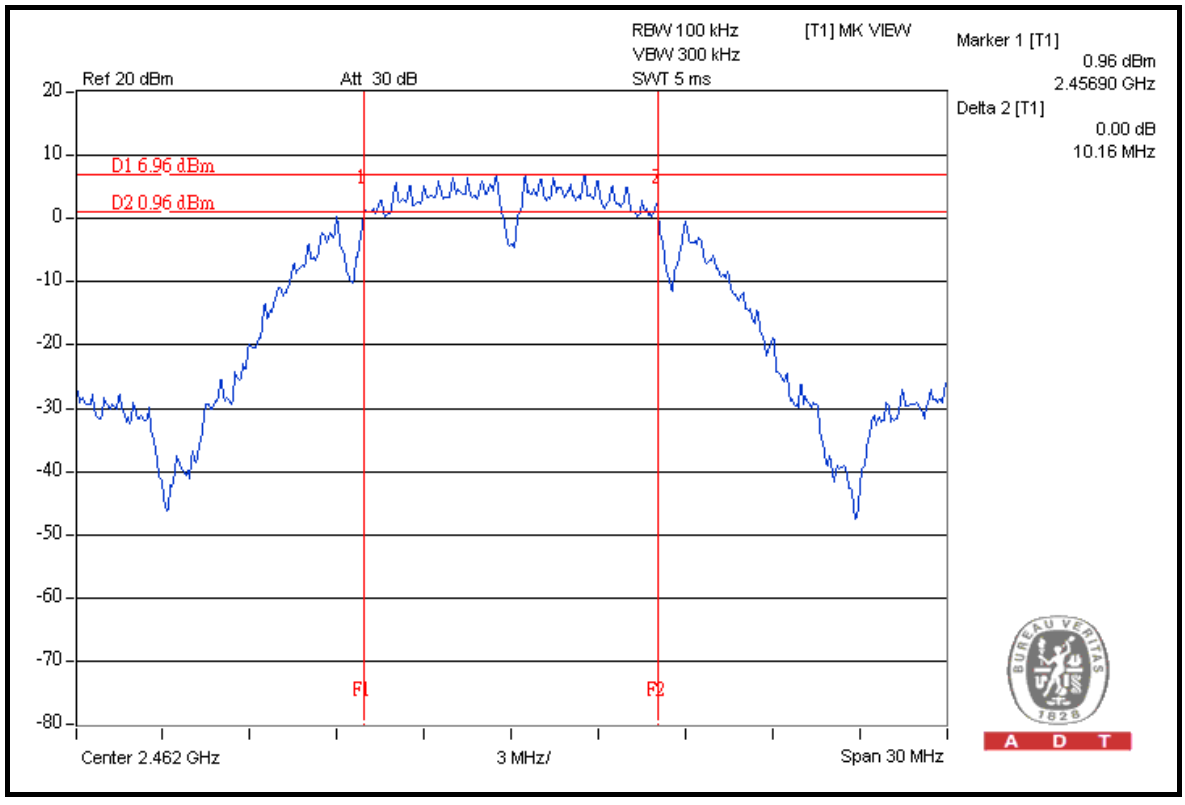
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	10.14	10.11	0.5	PASS
6	2437	10.14	10.12	0.5	PASS
11	2462	10.15	10.16	0.5	PASS

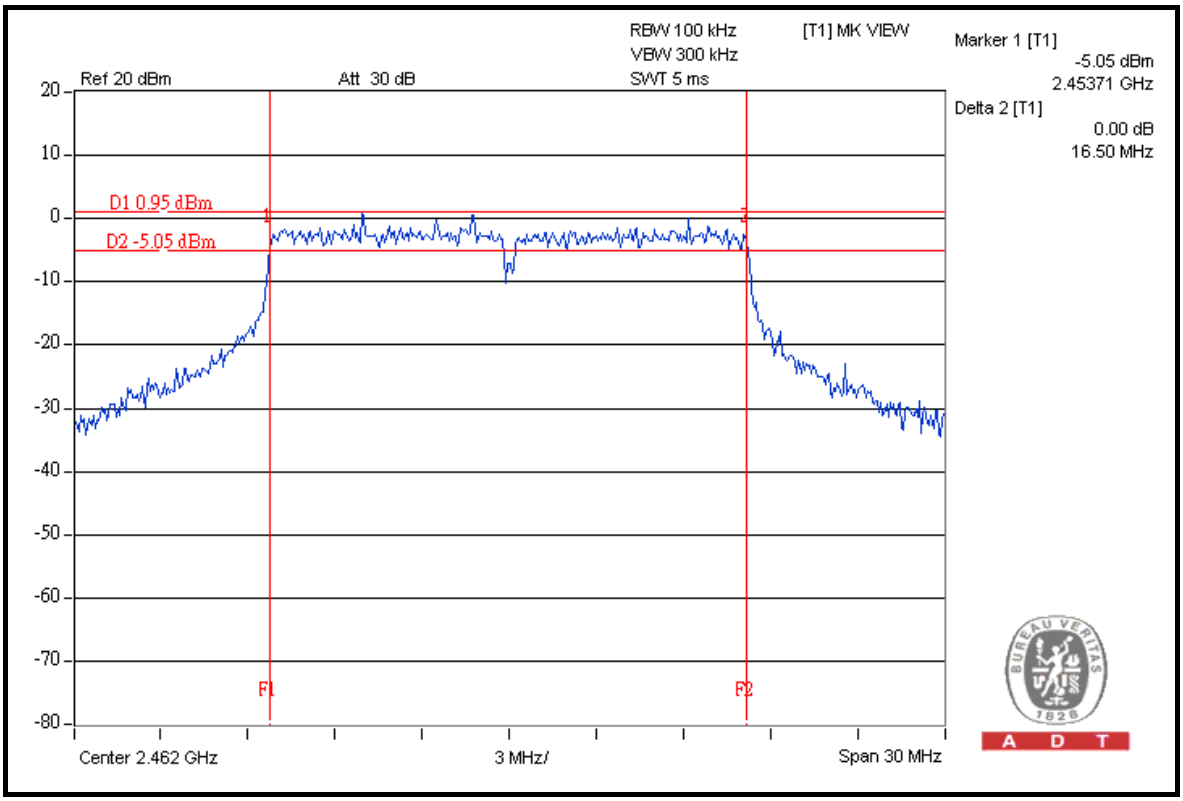
FOR CHAIN 1: CH 11



802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.45	16.46	0.5	PASS
6	2437	16.47	16.45	0.5	PASS
11	2462	16.44	16.50	0.5	PASS

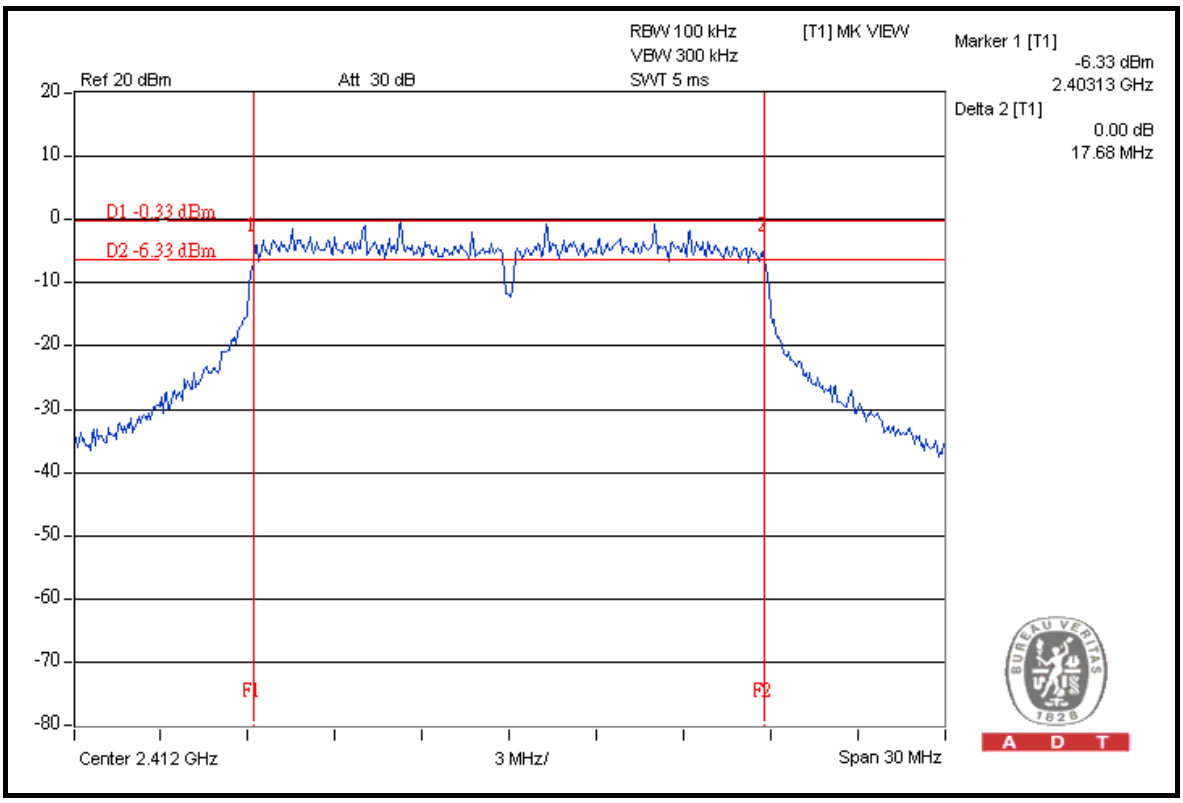
FOR CHAIN 1: CH 11



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.68	17.67	0.5	PASS
6	2437	17.67	17.67	0.5	PASS
11	2462	17.67	17.65	0.5	PASS

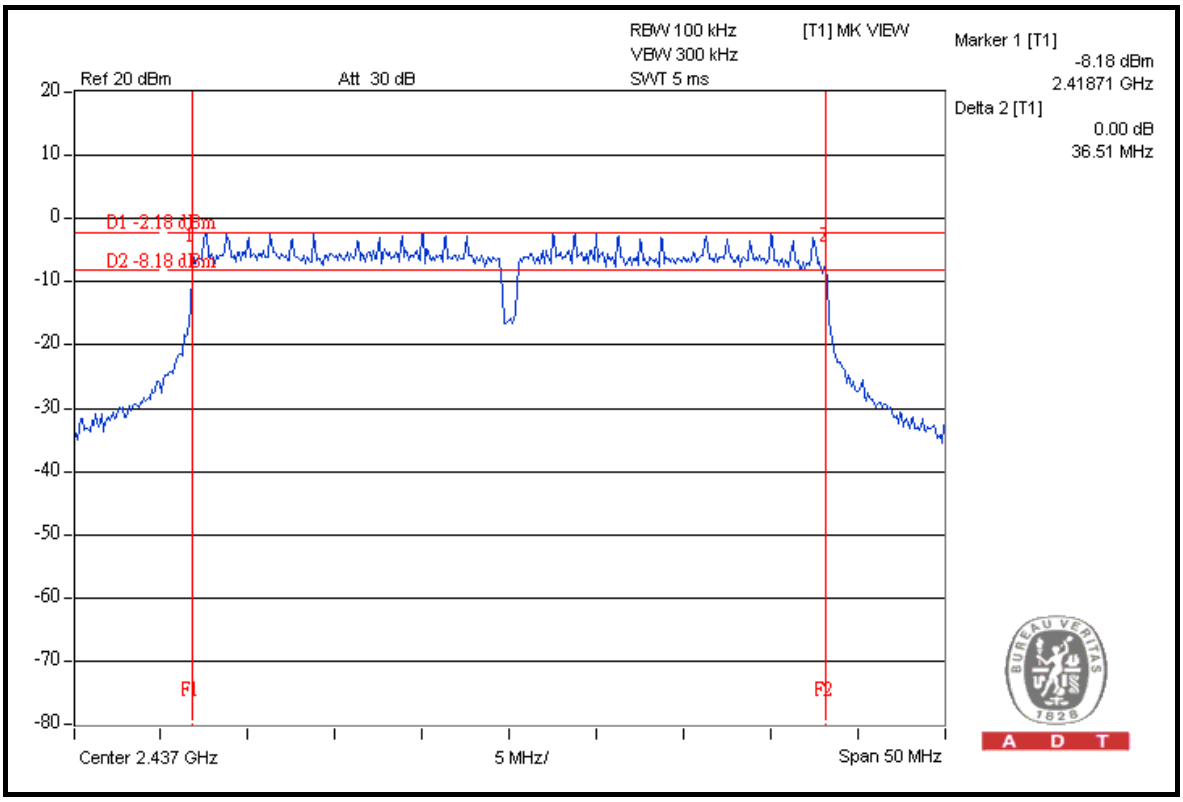
FOR CHAIN 0: CH 1



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	36.43	35.90	0.5	PASS
4	2437	36.47	36.51	0.5	PASS
7	2452	36.47	36.12	0.5	PASS

FOR CHAIN 1: CH 4



4.4 MAXIMUM OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0824012	Aug. 10, 2009	Aug. 09, 2010
Power Sensor	MA2411B	0738138	Aug. 10, 2009	Aug. 09, 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.

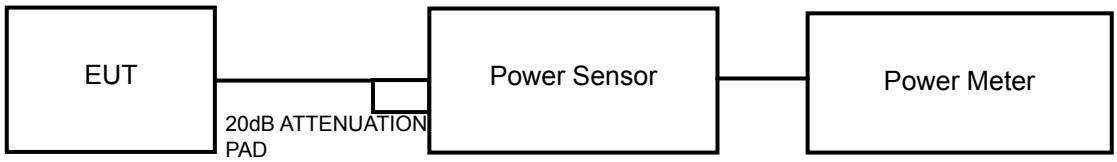
4.4.3 TEST PROCEDURES

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

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	21.2	21.3	266.7	24.3	30	PASS
6	2437	21.7	21.5	289.2	24.6	30	PASS
11	2462	20.5	20.3	219.4	23.4	30	PASS

802.11g

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	21.5	21.6	285.8	24.6	30	PASS
6	2437	22.7	22.7	372.4	25.7	30	PASS
11	2462	22.1	22.1	324.4	25.1	30	PASS

802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	21.1	20.7	246.3	23.9	30	PASS
6	2437	22.8	22.9	**385.5**	25.9	30	PASS
11	2462	20.8	20.5	232.4	23.7	30	PASS

802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2422	21.1	21.1	257.7	24.1	30	PASS
4	2437	22.5	22.9	372.8	25.7	30	PASS
7	2452	21.3	21.1	263.7	24.2	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
SPECTRUM ANALYZER R&S	FSP40	100040	Jul. 07, 2009	Jul. 06, 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

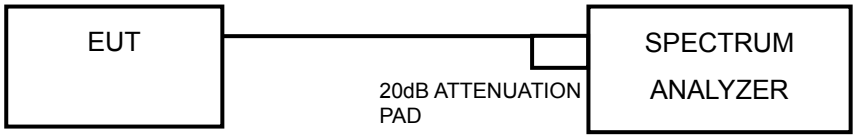
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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

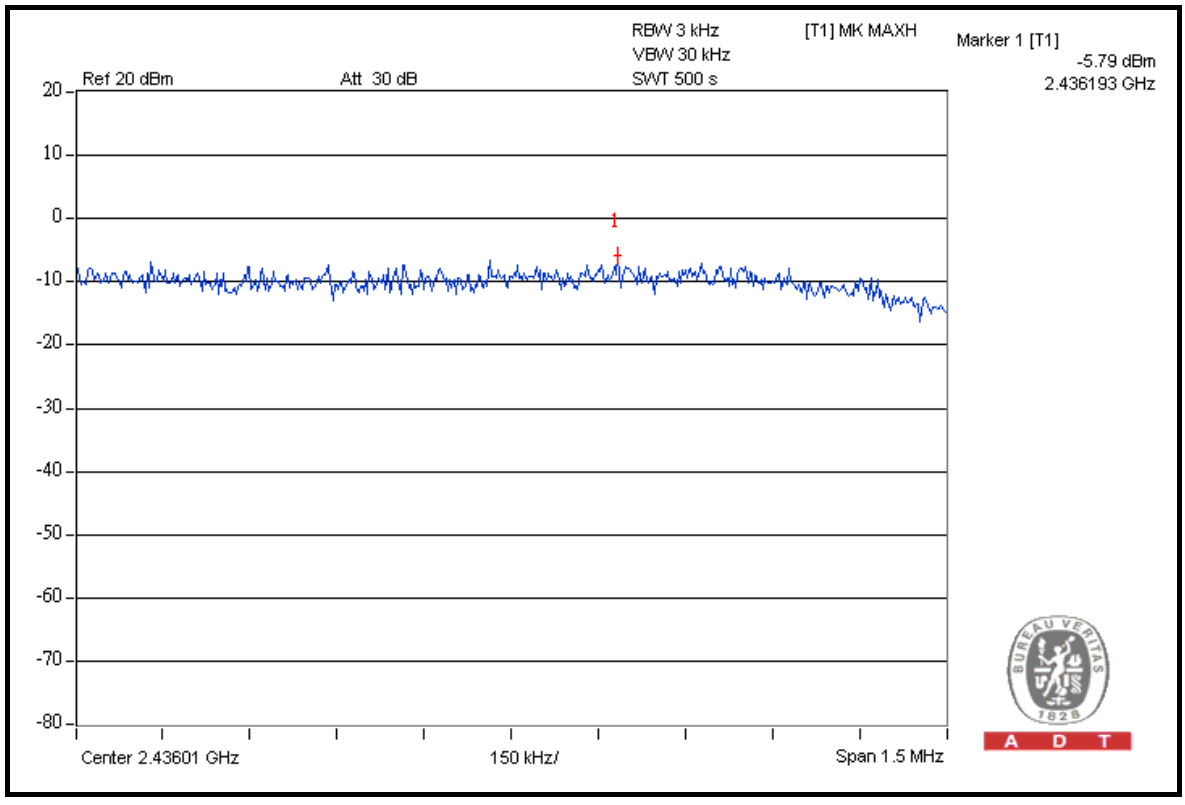
Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
1	2412	-6.6	-6.2	-3.4	8	PASS
6	2437	-5.9	-5.8	-2.8	8	PASS
11	2462	-7.1	-7.0	-4.0	8	PASS

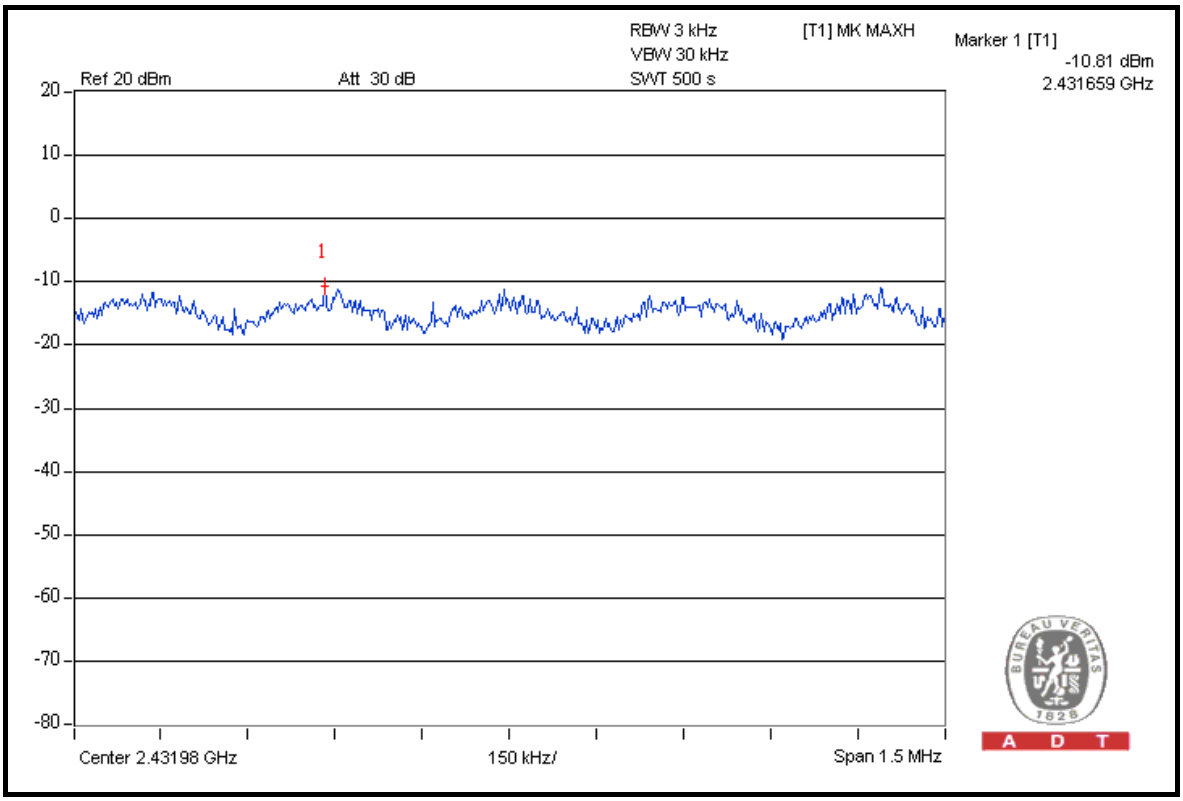
FOR CHAIN 1: CH 6



802.11g

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
1	2412	-13.7	-12.1	-9.8	8	PASS
6	2437	-12.4	-10.8	-8.5	8	PASS
11	2462	-12.9	-11.4	-9.1	8	PASS

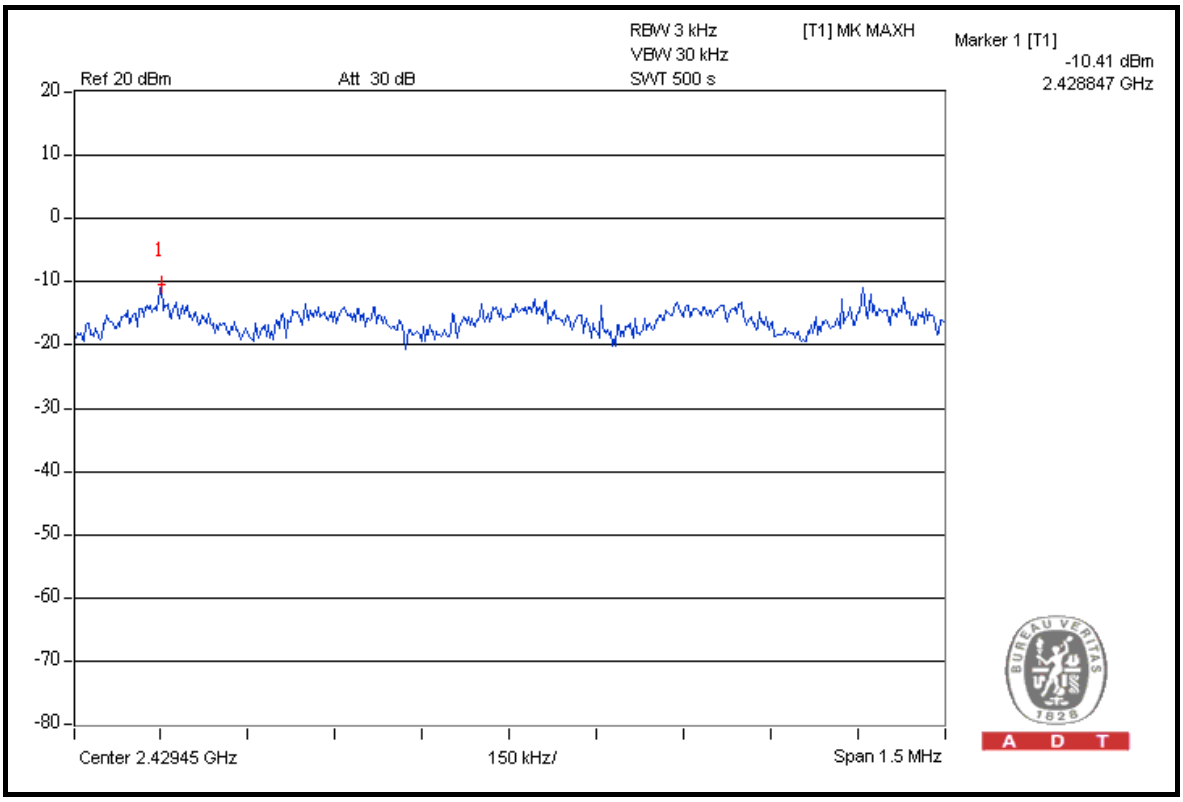
FOR CHAIN 1: CH 6



802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
1	2412	-12.3	-13.8	-10.0	8	PASS
6	2437	-10.4	-11.5	-7.9	8	PASS
11	2462	-12.4	-14.2	-10.2	8	PASS

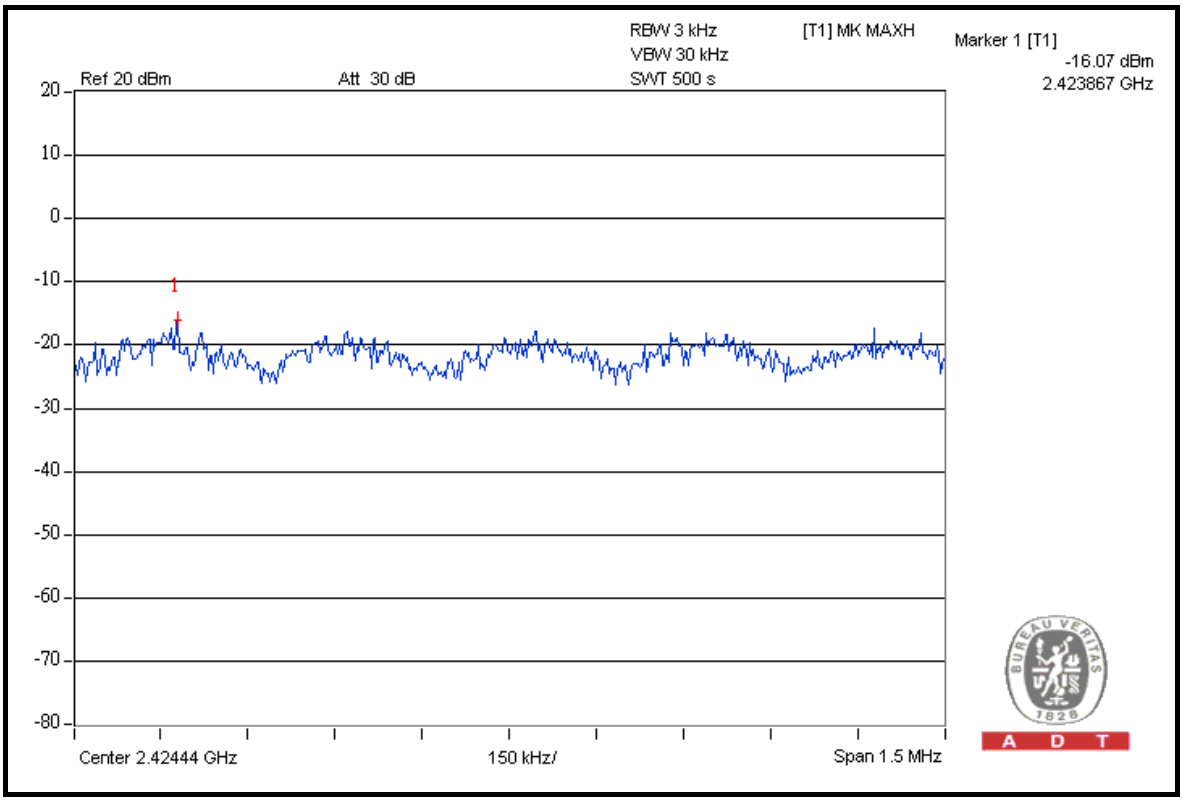
FOR CHAIN 0: CH 6



802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
1	2422	-17.7	-19.3	-15.4	8	PASS
4	2437	-16.1	-17.3	-13.7	8	PASS
7	2452	-17.3	-19.1	-15.1	8	PASS

FOR CHAIN 0: CH 4



4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	May 25, 2009	May 24, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 07, 2009	Jul. 06, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 30, 2009	Apr. 29, 2010
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Aug. 10, 2009	Aug. 09, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01910	Sep. 11, 2009	Sep. 10, 2010
Preamplifier Agilent	8447D	2944A10638	Dec. 21, 2009	Dec. 20, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218190/4 231241/4	May 13, 2009	May 12, 2010
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 17, 2009	Aug. 16, 2010
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: 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

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

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

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

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

e. Set both RBW and VBW of spectrum analyzer to 100kHz 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) are attached on the following pages.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.

4.6.4 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

RESTRICT BAND (2310 ~ 2390 MHz)

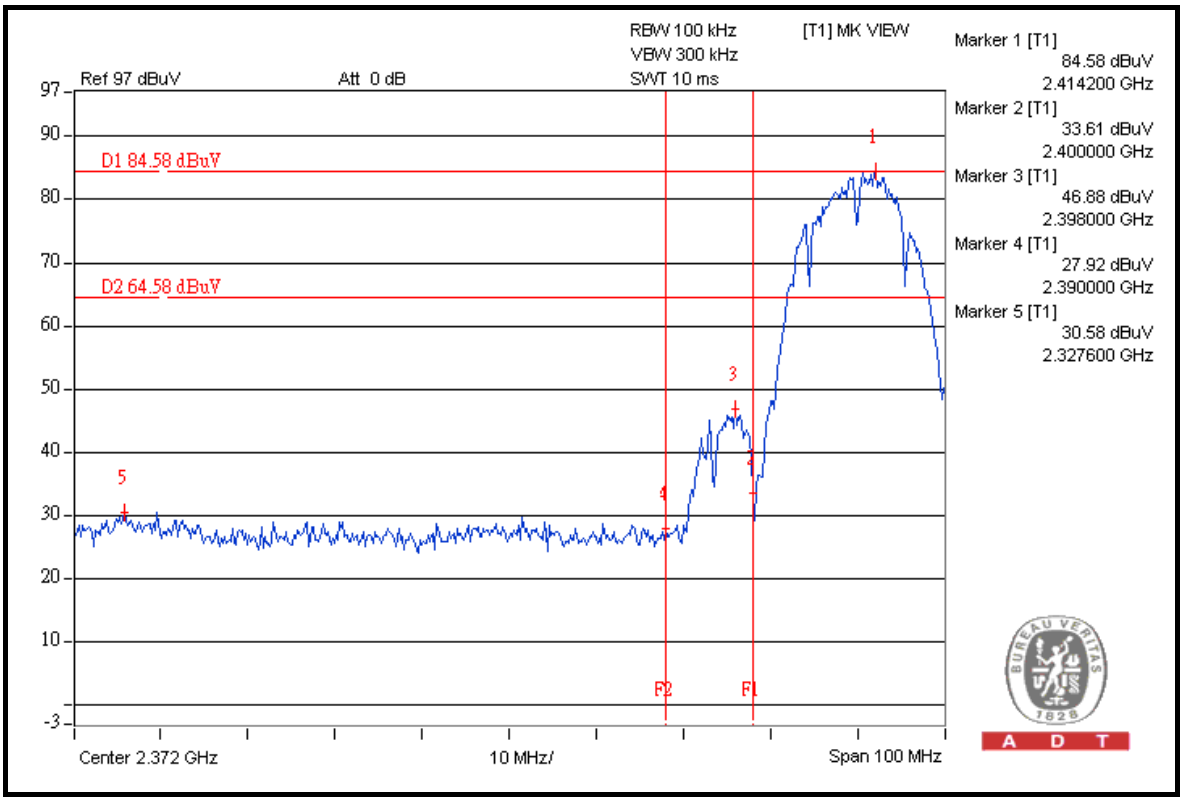
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	113.9	54.00	59.90	74.00
2412.00 (AV)	108.6	56.66	51.94	54.00

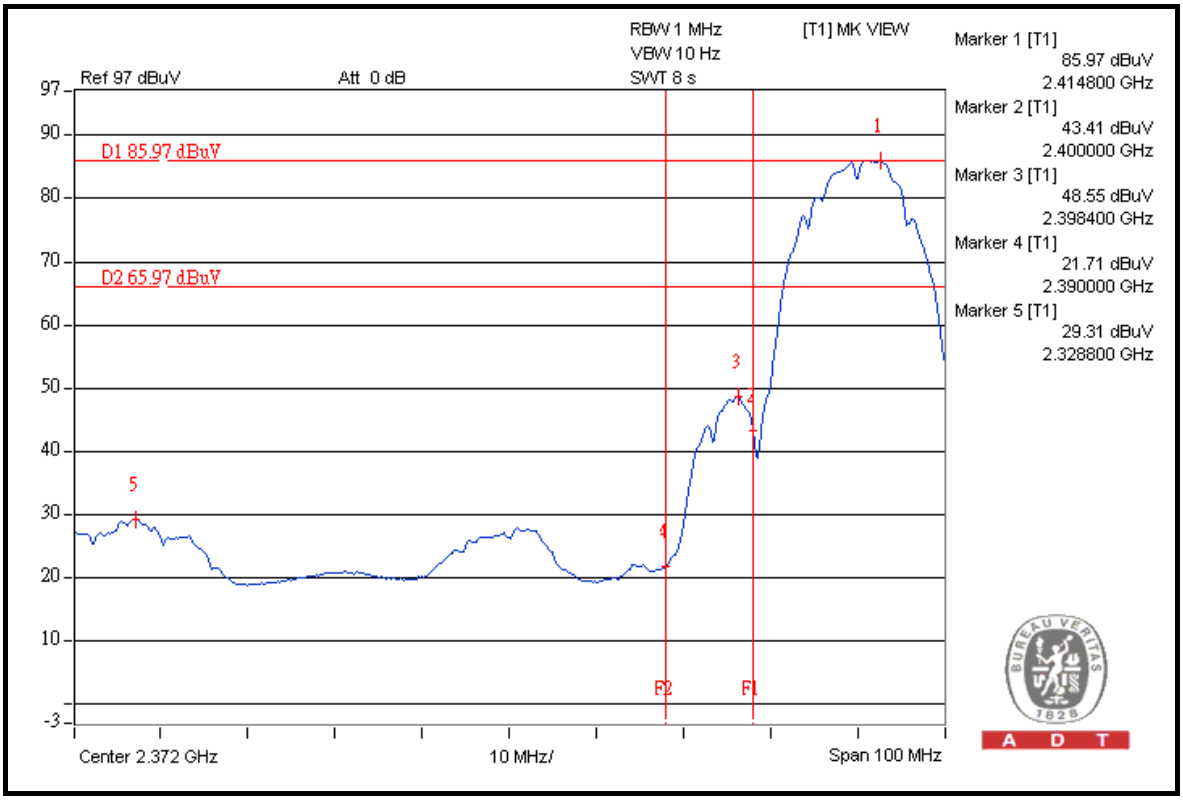
RESTRICT BAND (2483.5 ~ 2500 MHz)

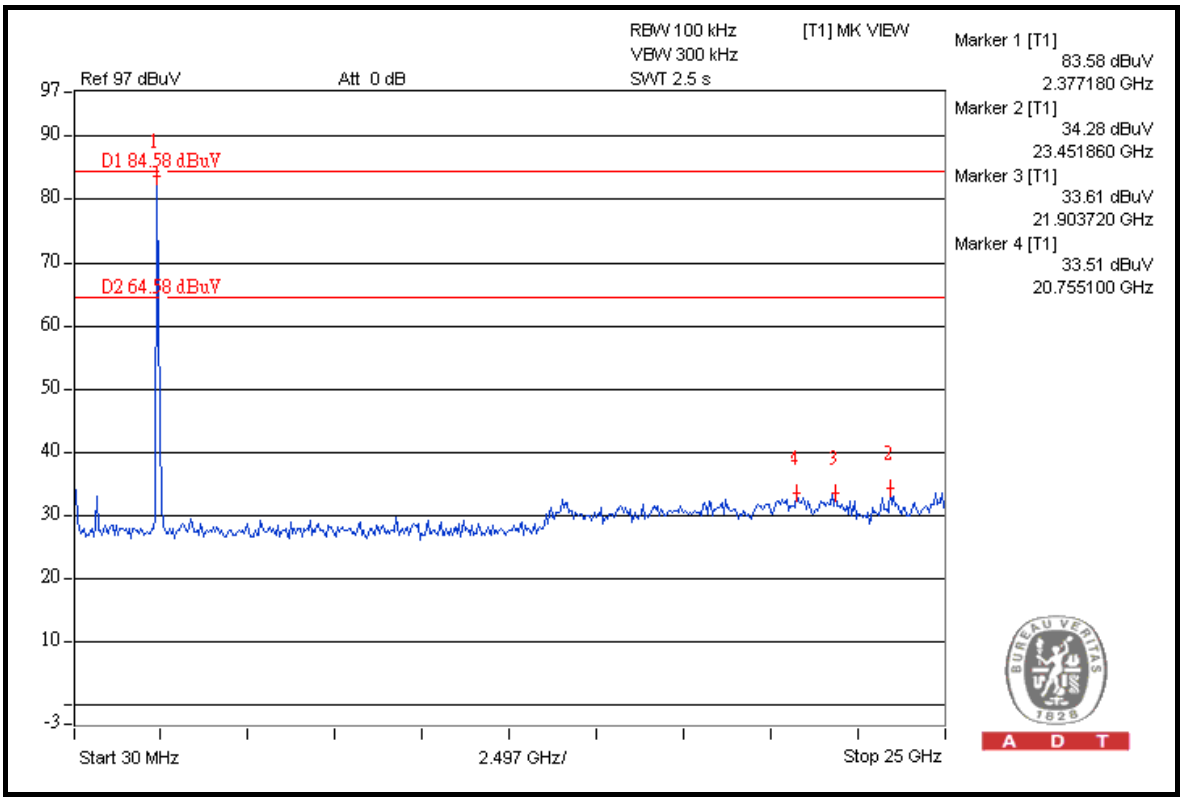
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	113.2	52.98	60.22	74.00
2462.00 (AV)	107.6	55.56	52.04	54.00

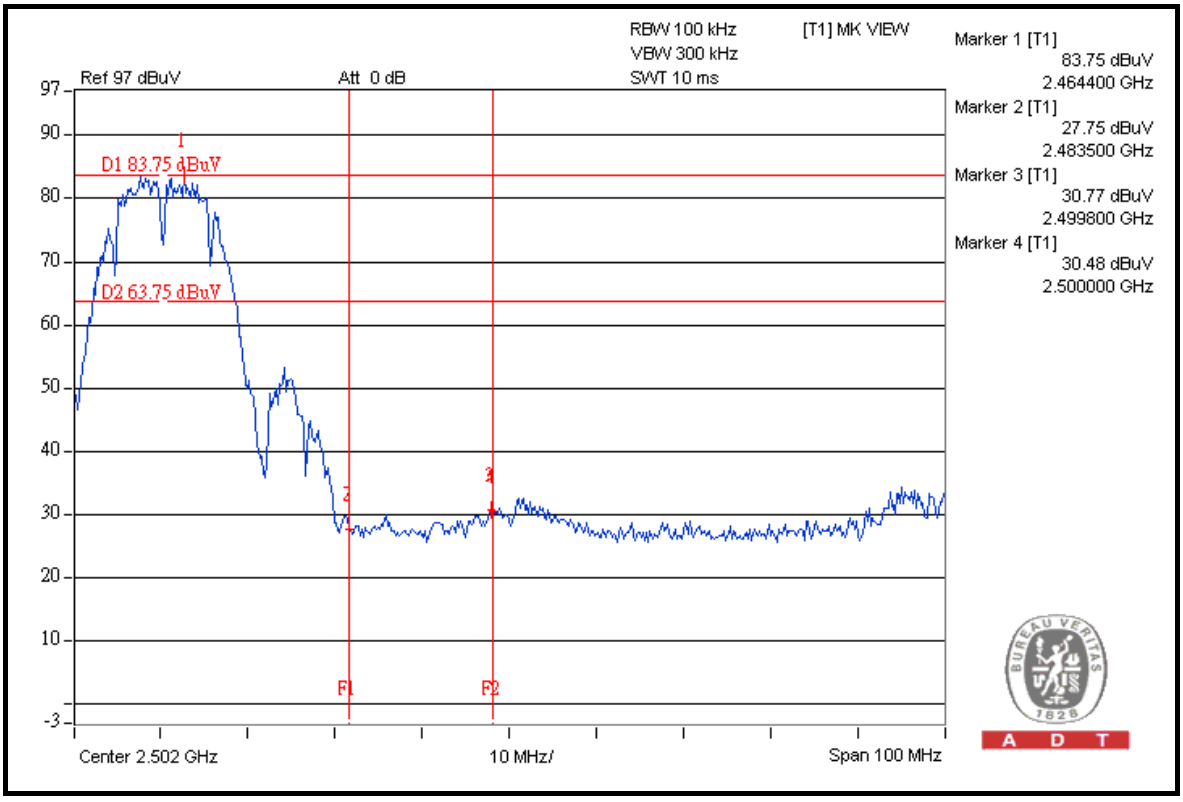
NOTE:

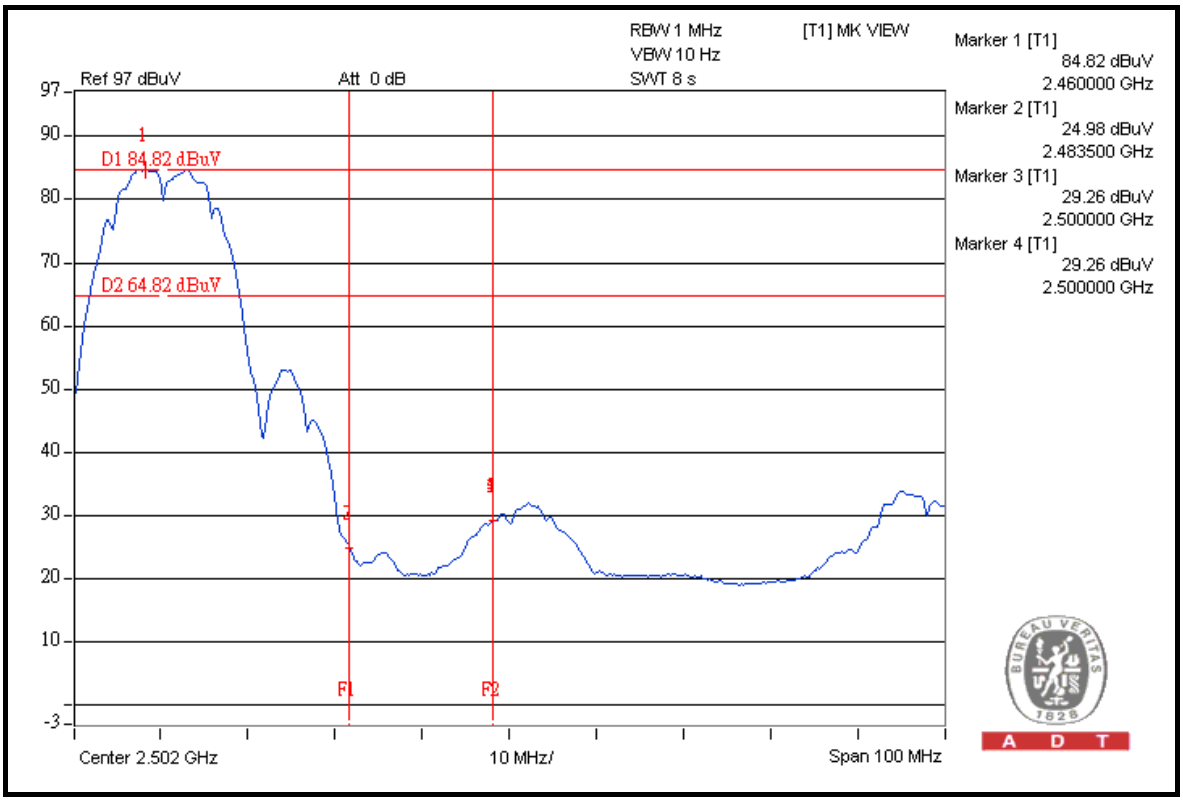
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

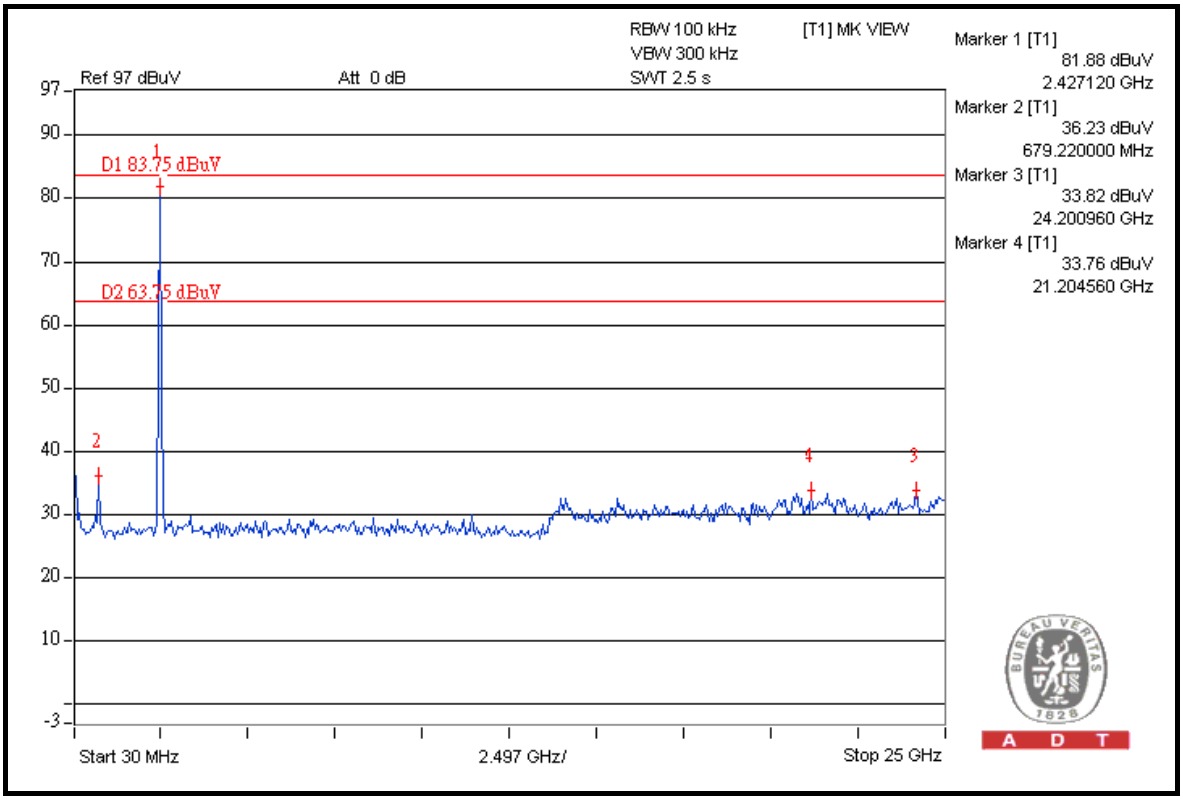

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 84.58 dBuV
D2 64.58 dBuV
Marker 1 [T1]
84.58 dBuV
2.414200 GHz
Marker 2 [T1]
33.61 dBuV
2.400000 GHz
Marker 3 [T1]
46.88 dBuV
2.398000 GHz
Marker 4 [T1]
27.92 dBuV
2.390000 GHz
Marker 5 [T1]
30.58 dBuV
2.327600 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 85.97 dBuV
D2 65.97 dBuV
Marker 1 [T1]
85.97 dBuV
2.414800 GHz
Marker 2 [T1]
43.41 dBuV
2.400000 GHz
Marker 3 [T1]
48.55 dBuV
2.398400 GHz
Marker 4 [T1]
21.71 dBuV
2.390000 GHz
Marker 5 [T1]
29.31 dBuV
2.328800 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 84.58 dBuV
D2 64.58 dBuV
Marker 1 [T1]
83.58 dBuV
2.377180 GHz
Marker 2 [T1]
34.28 dBuV
23.451860 GHz
Marker 3 [T1]
33.61 dBuV
21.903720 GHz
Marker 4 [T1]
33.51 dBuV
20.755100 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 83.75 dBuV
D2 63.75 dBuV
Marker 1 [T1]
83.75 dBuV
2.464400 GHz
Marker 2 [T1]
27.75 dBuV
2.483500 GHz
Marker 3 [T1]
30.77 dBuV
2.499800 GHz
Marker 4 [T1]
30.48 dBuV
2.500000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 84.82 dBuV
D2 64.82 dBuV
Marker 1 [T1]
84.82 dBuV
2.460000 GHz
Marker 2 [T1]
24.98 dBuV
2.483500 GHz
Marker 3 [T1]
29.26 dBuV
2.500000 GHz
Marker 4 [T1]
29.26 dBuV
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 97 dBuV
Att 0 dB
D1 83.75 dBuV
D2 63.75 dBuV
Marker 1 [T1]
81.88 dBuV
2.427120 GHz
Marker 2 [T1]
36.23 dBuV
679.220000 MHz
Marker 3 [T1]
33.82 dBuV
24.200960 GHz
Marker 4 [T1]
33.76 dBuV
21.204560 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g

RESTRICT BAND (2310 ~ 2390 MHz)

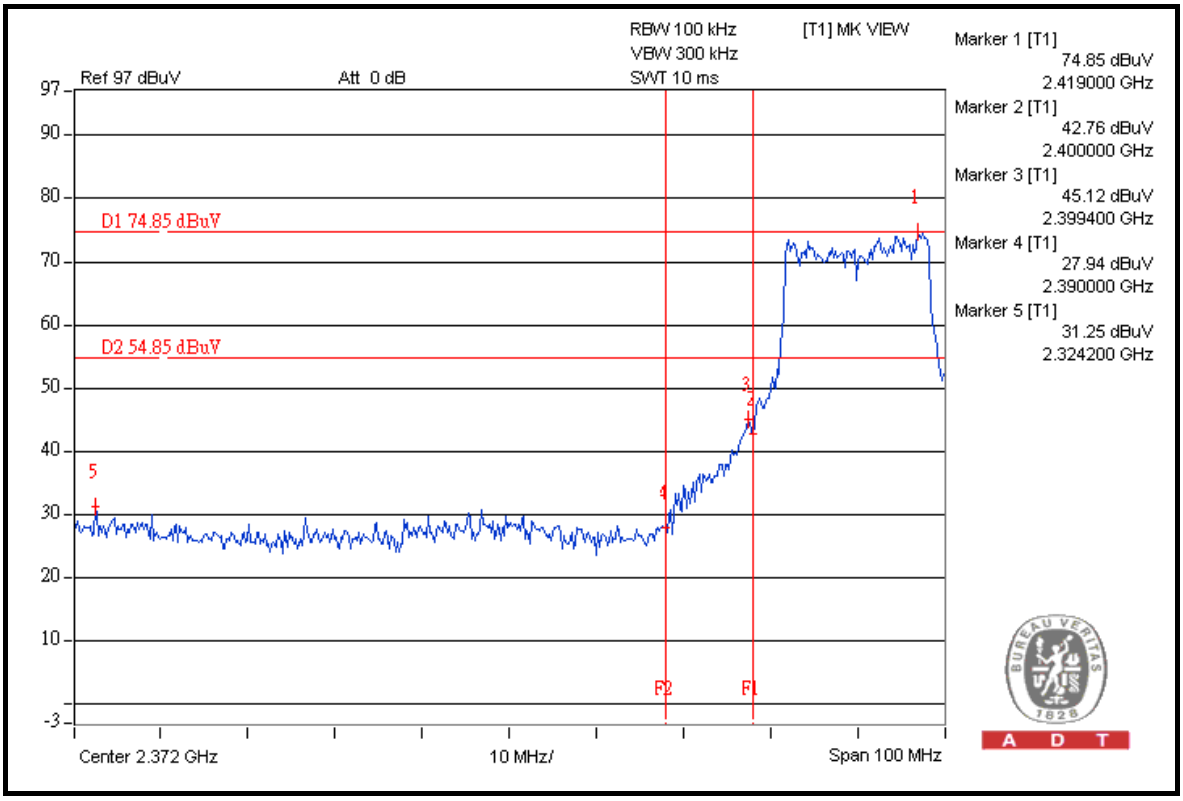
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	110.3	43.60	66.70	74.00
2412.00 (AV)	98.5	49.26	49.24	54.00

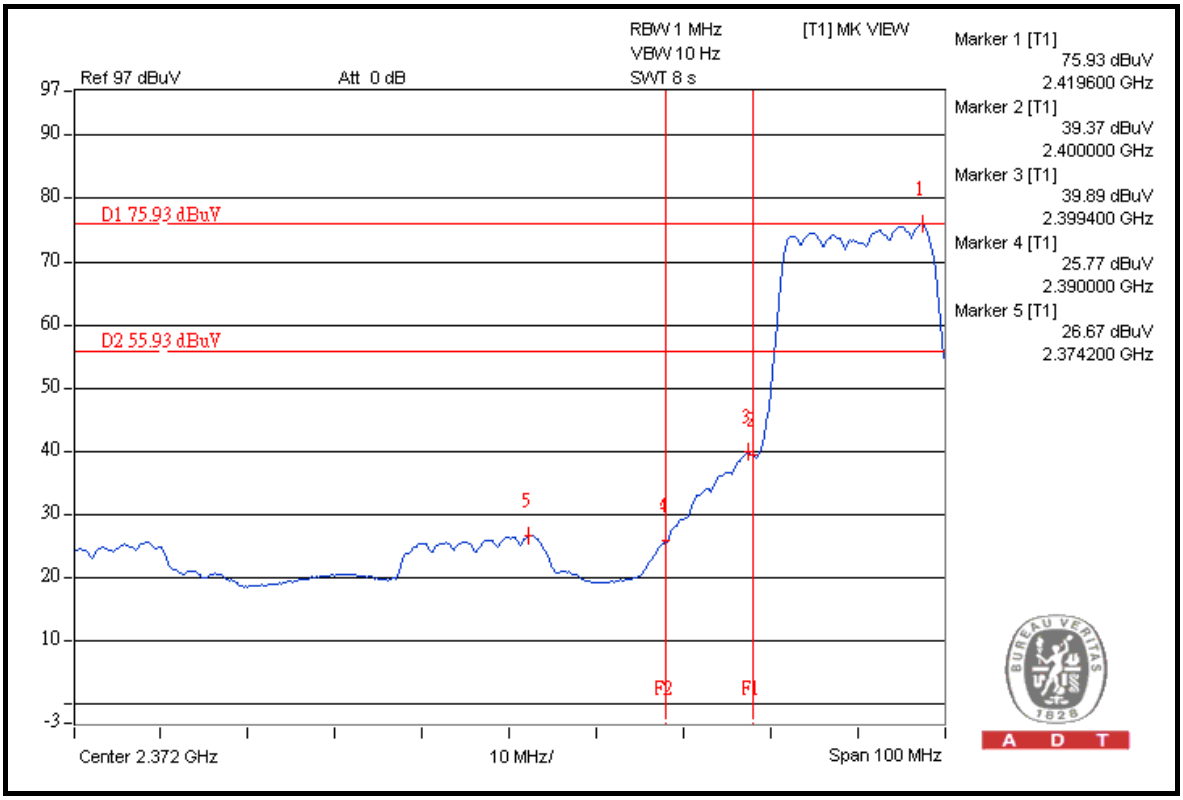
RESTRICT BAND (2483.5 ~ 2500 MHz)

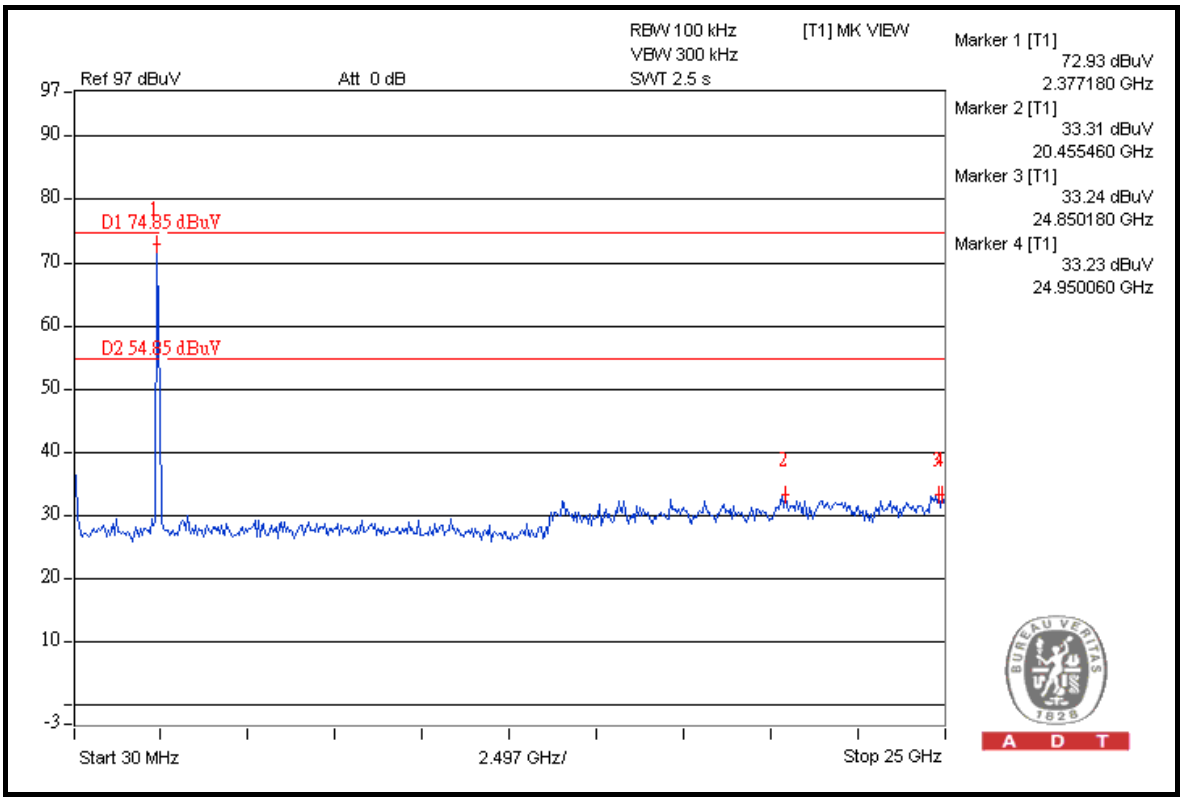
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	110.1	41.18	68.92	74.00
2462.00 (AV)	97.7	45.38	52.32	54.00

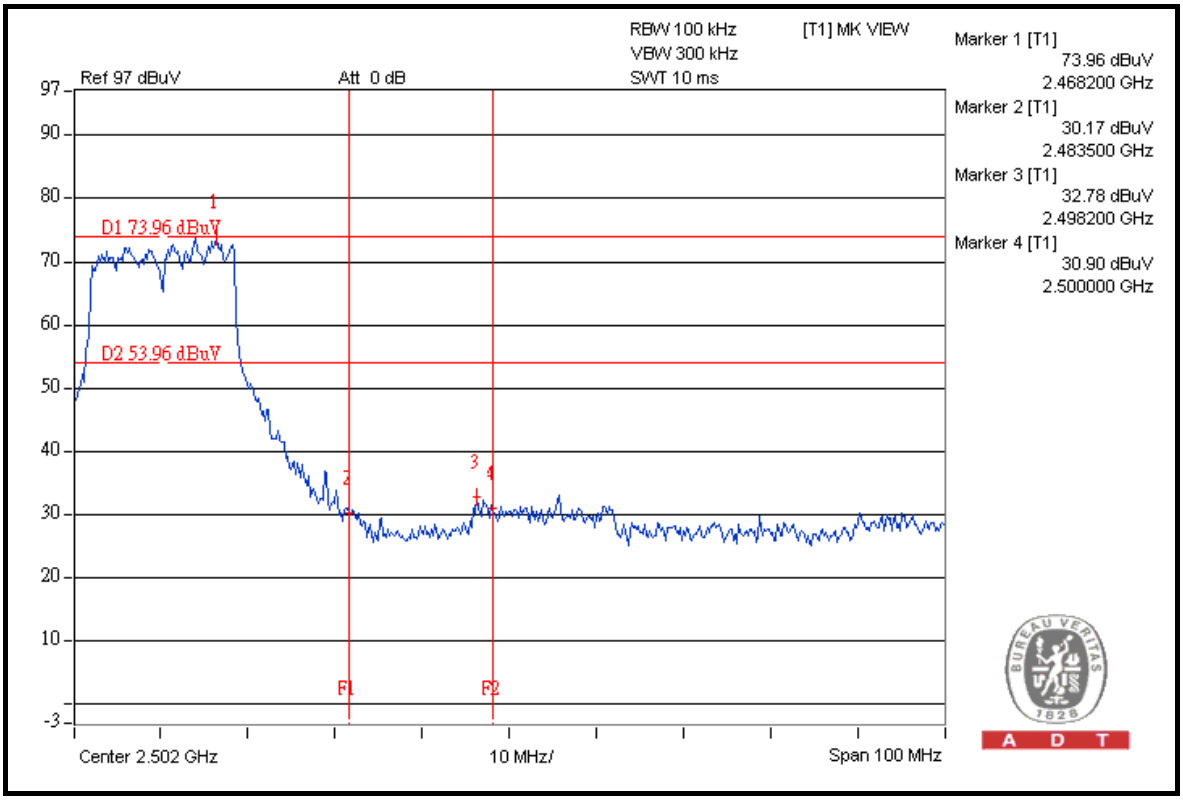
NOTE:

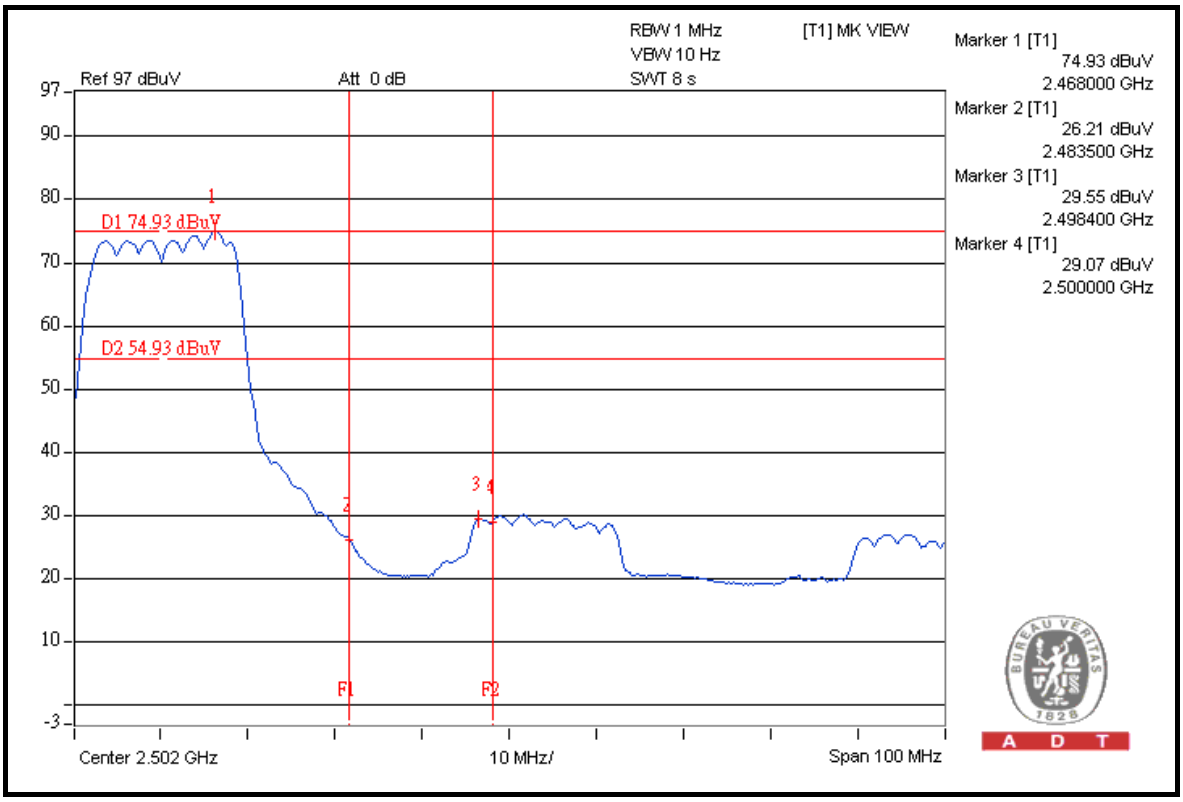
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

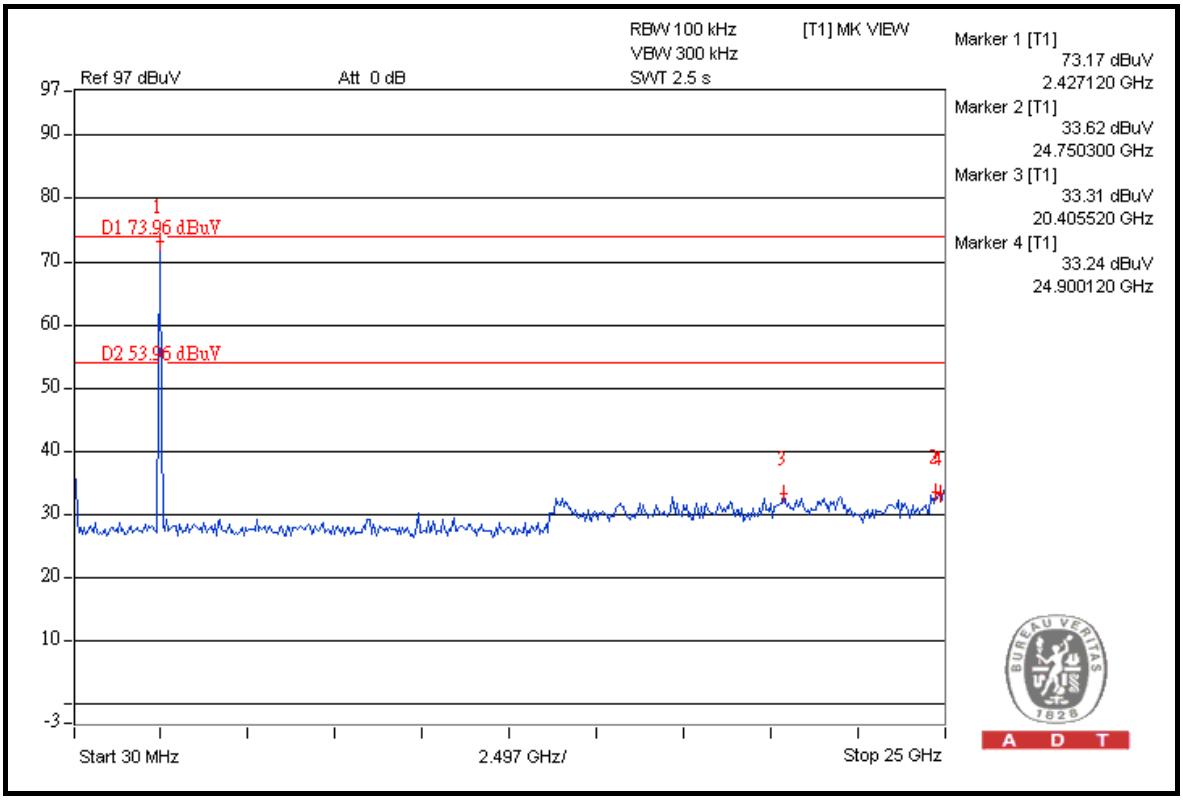

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 74.85 dBuV
D2 54.85 dBuV
Marker 1 [T1]
74.85 dBuV
2.419000 GHz
Marker 2 [T1]
42.76 dBuV
2.400000 GHz
Marker 3 [T1]
45.12 dBuV
2.399400 GHz
Marker 4 [T1]
27.94 dBuV
2.390000 GHz
Marker 5 [T1]
31.25 dBuV
2.324200 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 75.93 dBuV
D2 55.93 dBuV
Marker 1 [T1]
75.93 dBuV
2.419600 GHz
Marker 2 [T1]
39.37 dBuV
2.400000 GHz
Marker 3 [T1]
39.89 dBuV
2.399400 GHz
Marker 4 [T1]
25.77 dBuV
2.390000 GHz
Marker 5 [T1]
26.67 dBuV
2.374200 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
72.93 dBuV
2.377180 GHz
Marker 2 [T1]
33.31 dBuV
20.455460 GHz
Marker 3 [T1]
33.24 dBuV
24.850180 GHz
Marker 4 [T1]
33.23 dBuV
24.950060 GHz
D1 74.85 dBuV
D2 54.85 dBuV
97
90
80
70
60
50
40
30
20
10
-3
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
73.96 dBuV
2.468200 GHz
Marker 2 [T1]
30.17 dBuV
2.483500 GHz
Marker 3 [T1]
32.78 dBuV
2.498200 GHz
Marker 4 [T1]
30.90 dBuV
2.500000 GHz
D1 73.96 dBuV
D2 53.96 dBuV
97
90
80
70
60
50
40
30
20
10
-3
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 74.93 dBuV
D2 54.93 dBuV
Marker 1 [T1]
74.93 dBuV
2.468000 GHz
Marker 2 [T1]
26.21 dBuV
2.483500 GHz
Marker 3 [T1]
29.55 dBuV
2.498400 GHz
Marker 4 [T1]
29.07 dBuV
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 97 dBuV
Att 0 dB
D1 73.96 dBuV
D2 53.96 dBuV
Marker 1 [T1]
73.17 dBuV
2.427120 GHz
Marker 2 [T1]
33.62 dBuV
24.750300 GHz
Marker 3 [T1]
33.31 dBuV
20.405520 GHz
Marker 4 [T1]
33.24 dBuV
24.900120 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11n (20MHz)

RESTRICT BAND (2310 ~ 2390 MHz)

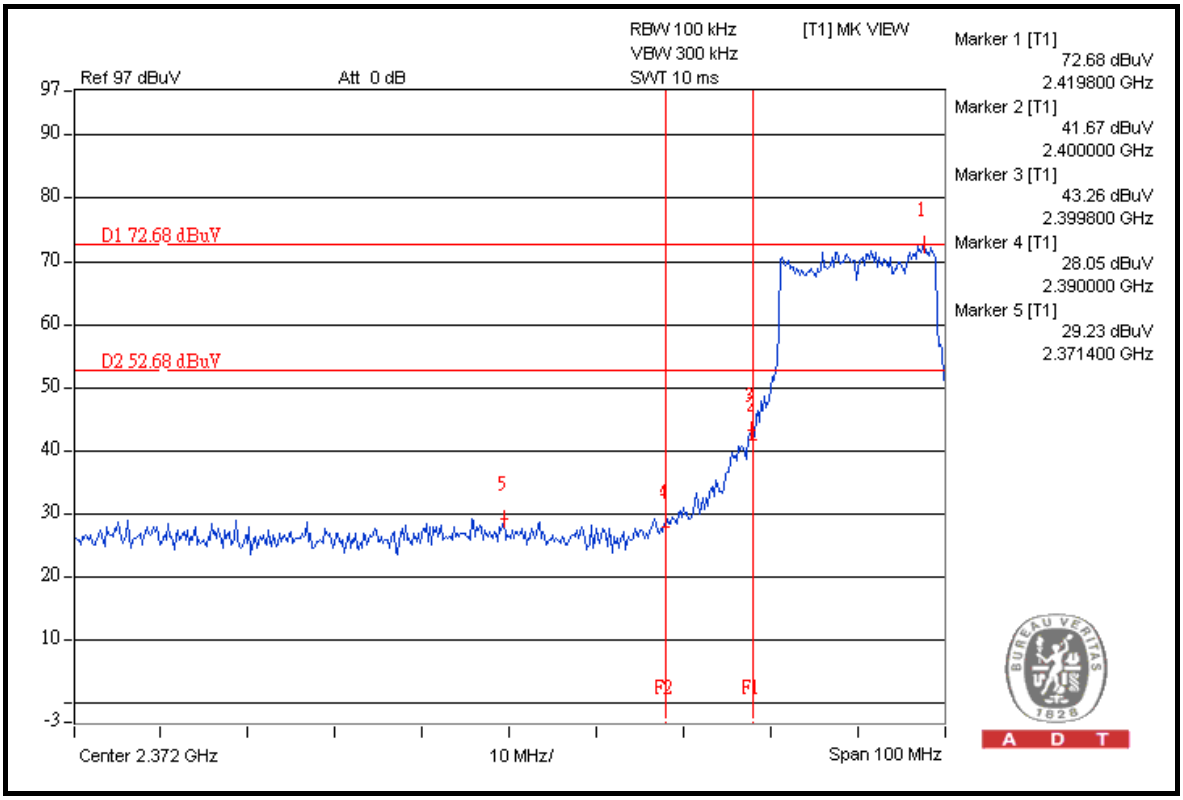
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	109.7	43.45	66.25	74.00
2412.00 (AV)	97.0	48.81	48.19	54.00

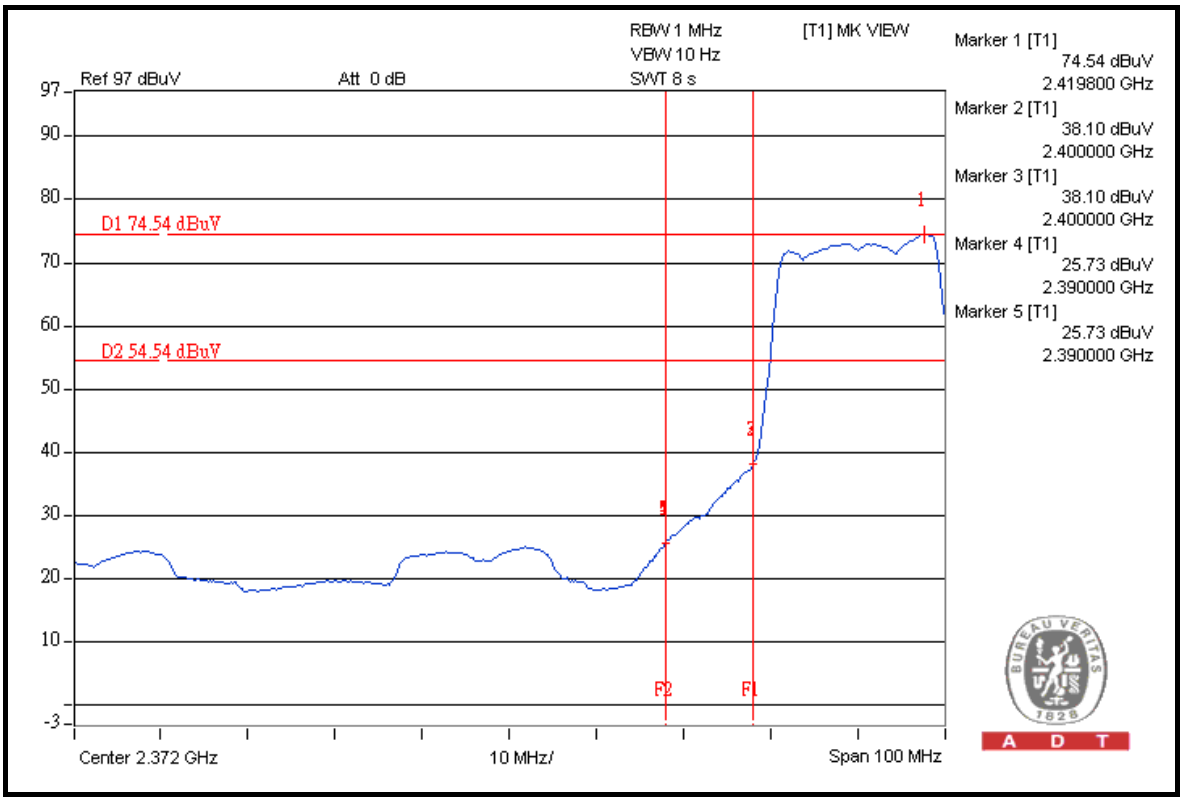
RESTRICT BAND (2483.5 ~ 2500 MHz)

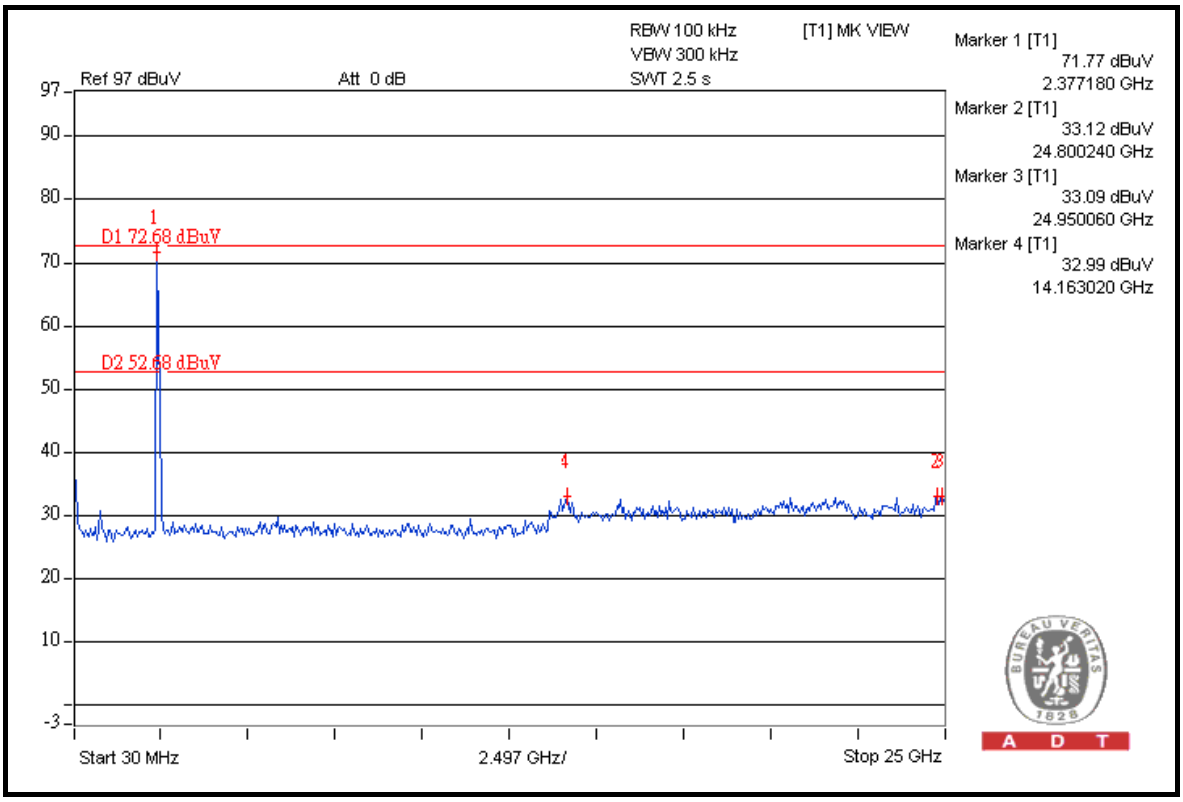
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	108.9	42.25	66.65	74.00
2462.00 (AV)	97.0	47.58	49.42	54.00

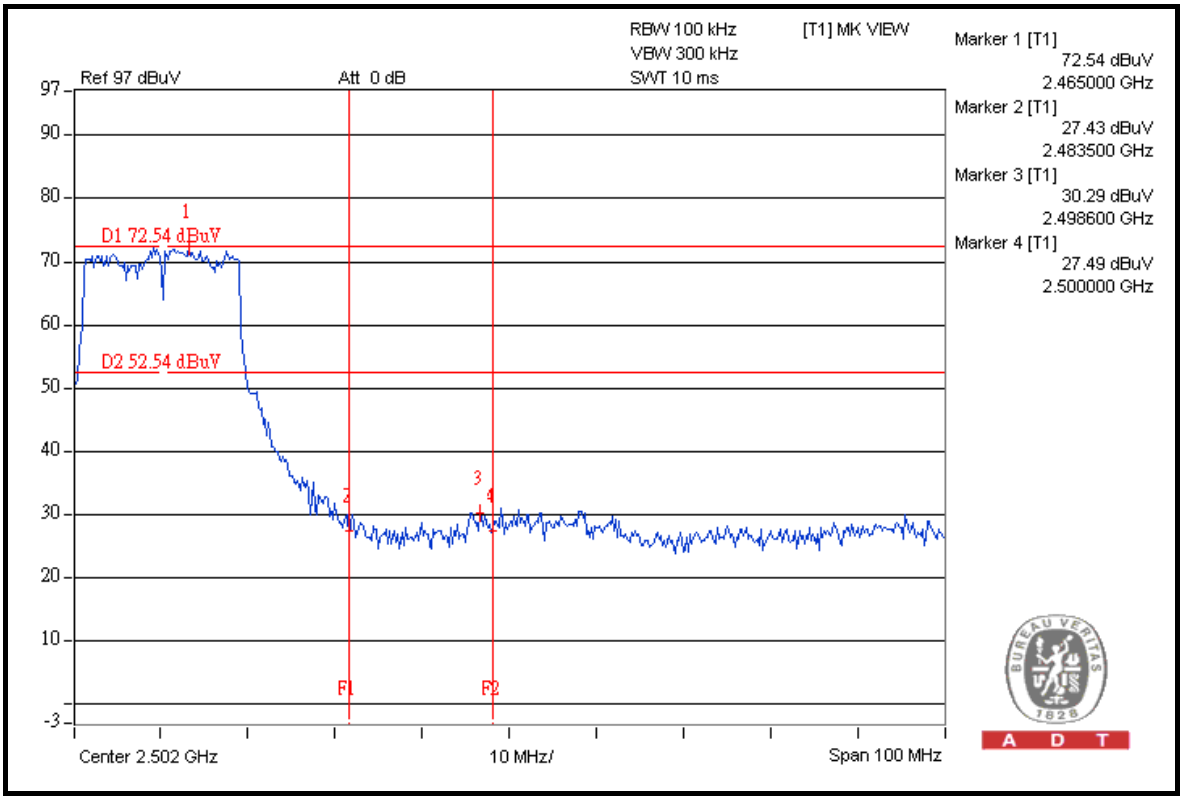
NOTE:

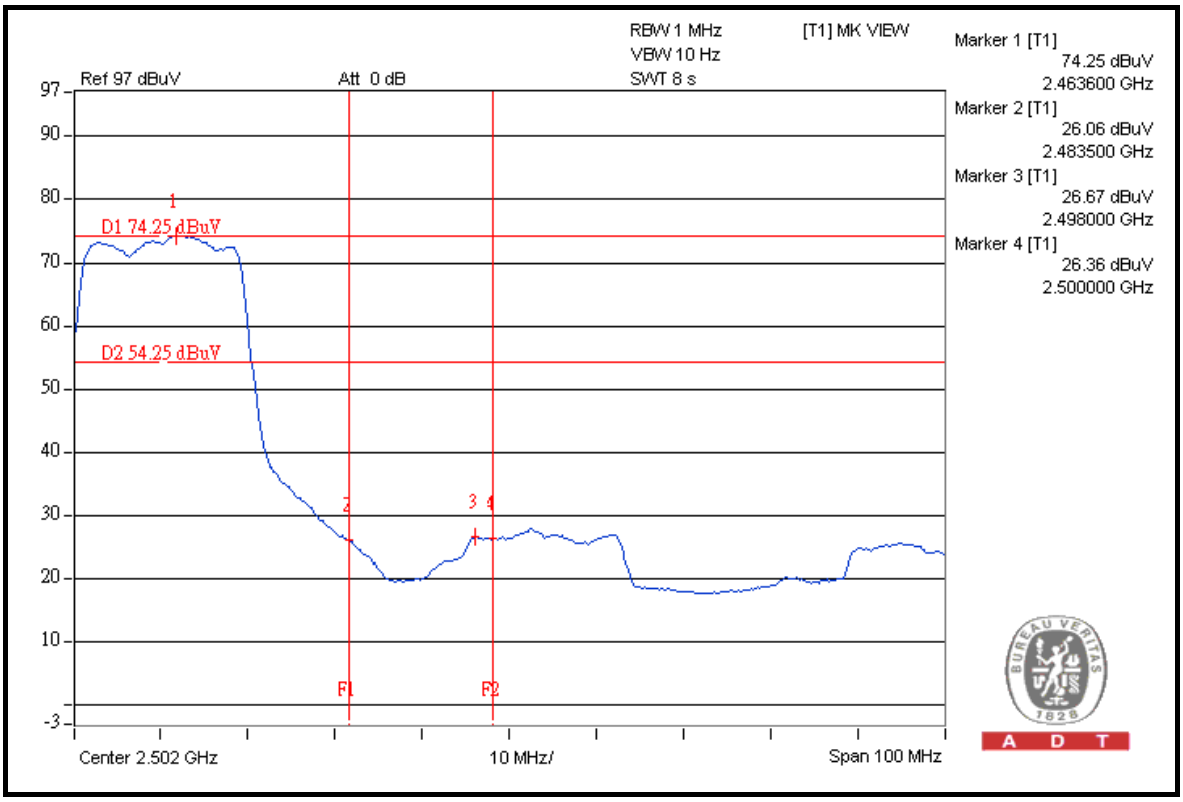
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

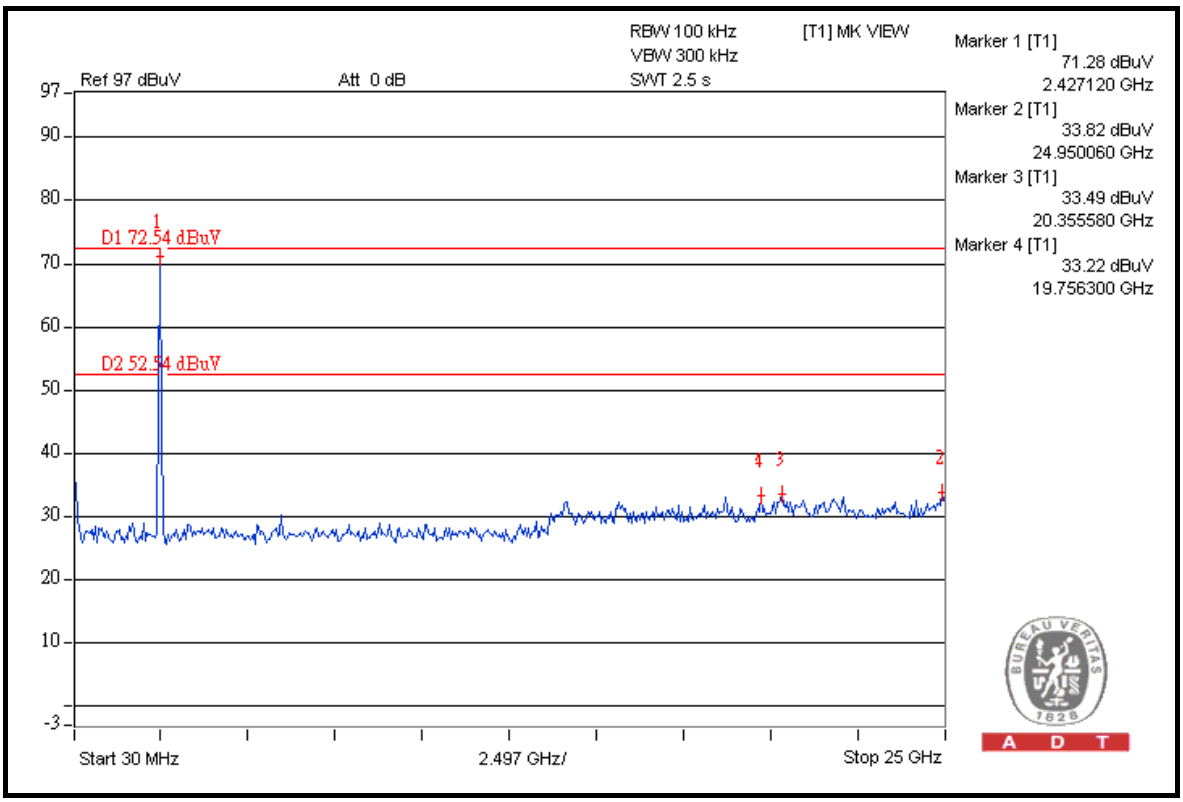

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 72.68 dBuV
D2 52.68 dBuV
Marker 1 [T1]
72.68 dBuV
2.419800 GHz
Marker 2 [T1]
41.67 dBuV
2.400000 GHz
Marker 3 [T1]
43.26 dBuV
2.399800 GHz
Marker 4 [T1]
28.05 dBuV
2.390000 GHz
Marker 5 [T1]
29.23 dBuV
2.371400 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 74.54 dBuV
D2 54.54 dBuV
Marker 1 [T1]
74.54 dBuV
2.419800 GHz
Marker 2 [T1]
38.10 dBuV
2.400000 GHz
Marker 3 [T1]
38.10 dBuV
2.400000 GHz
Marker 4 [T1]
25.73 dBuV
2.390000 GHz
Marker 5 [T1]
25.73 dBuV
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 97 dBuV
Att 0 dB
Marker 1 [T1]
71.77 dBuV
2.377180 GHz
Marker 2 [T1]
33.12 dBuV
24.800240 GHz
Marker 3 [T1]
33.09 dBuV
24.950060 GHz
Marker 4 [T1]
32.99 dBuV
14.163020 GHz
D1 72.68 dBuV
D2 52.68 dBuV
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
72.54 dBuV
2.465000 GHz
Marker 2 [T1]
27.43 dBuV
2.483500 GHz
Marker 3 [T1]
30.29 dBuV
2.498600 GHz
Marker 4 [T1]
27.49 dBuV
2.500000 GHz
D1 72.54 dBuV
D2 52.54 dBuV
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
74.25 dBuV
2.463600 GHz
Marker 2 [T1]
26.06 dBuV
2.483500 GHz
Marker 3 [T1]
26.67 dBuV
2.498000 GHz
Marker 4 [T1]
26.36 dBuV
2.500000 GHz
D1 74.25 dBuV
D2 54.25 dBuV
97
90
80
70
60
50
40
30
20
10
-3
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 97 dBuV
Att 0 dB
Marker 1 [T1]
71.28 dBuV
2.427120 GHz
Marker 2 [T1]
33.82 dBuV
24.950060 GHz
Marker 3 [T1]
33.49 dBuV
20.355580 GHz
Marker 4 [T1]
33.22 dBuV
19.756300 GHz
D1 72.54 dBuV
D2 52.54 dBuV
97
90
80
70
60
50
40
30
20
10
-3
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11n (40MHz)

RESTRICT BAND (2310 ~ 2390 MHz)

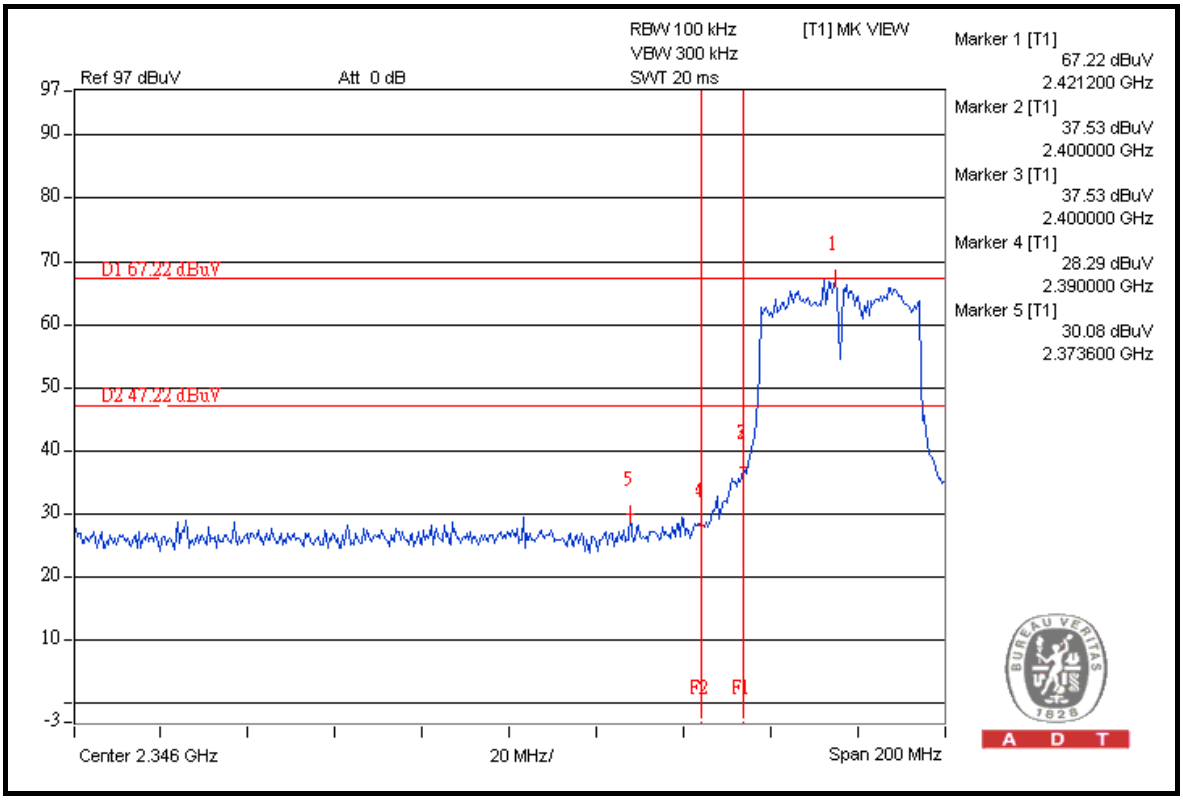
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2422.00 (PK)	104.9	37.14	67.76	74.00
2422.00 (AV)	90.5	44.17	46.33	54.00

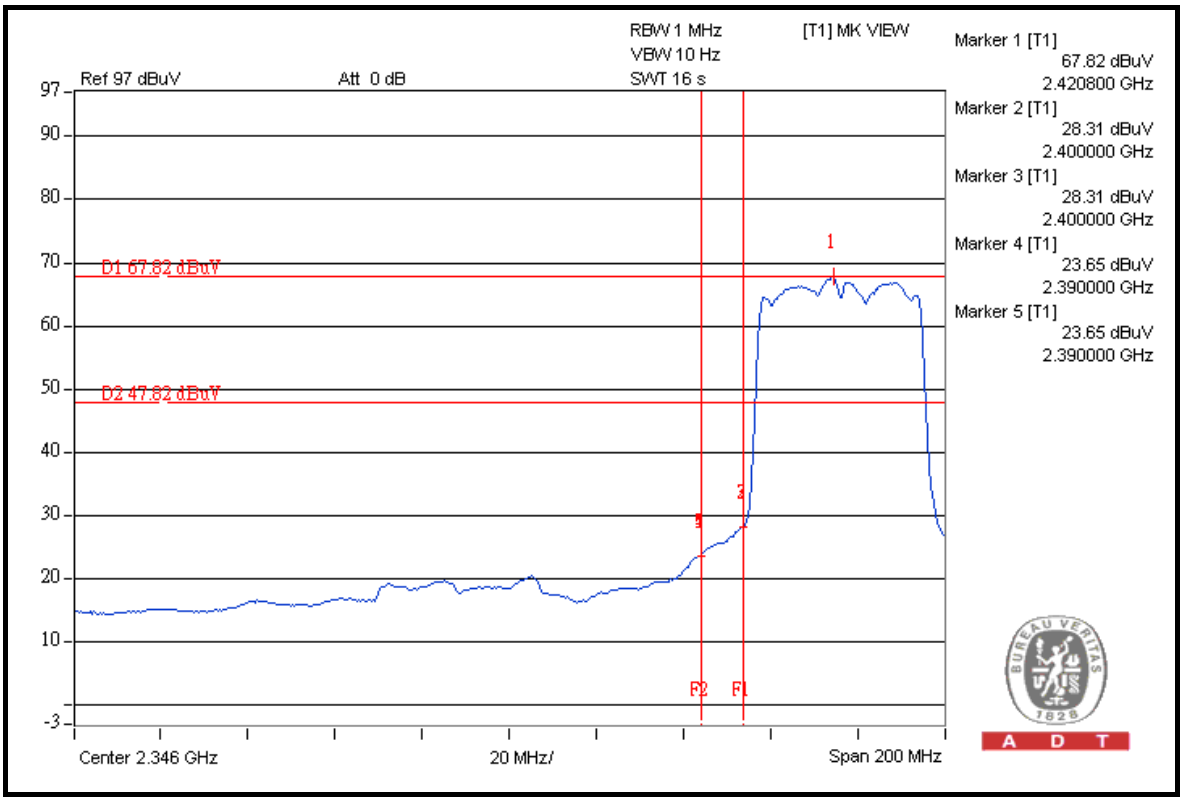
RESTRICT BAND (2483.5 ~ 2500 MHz)

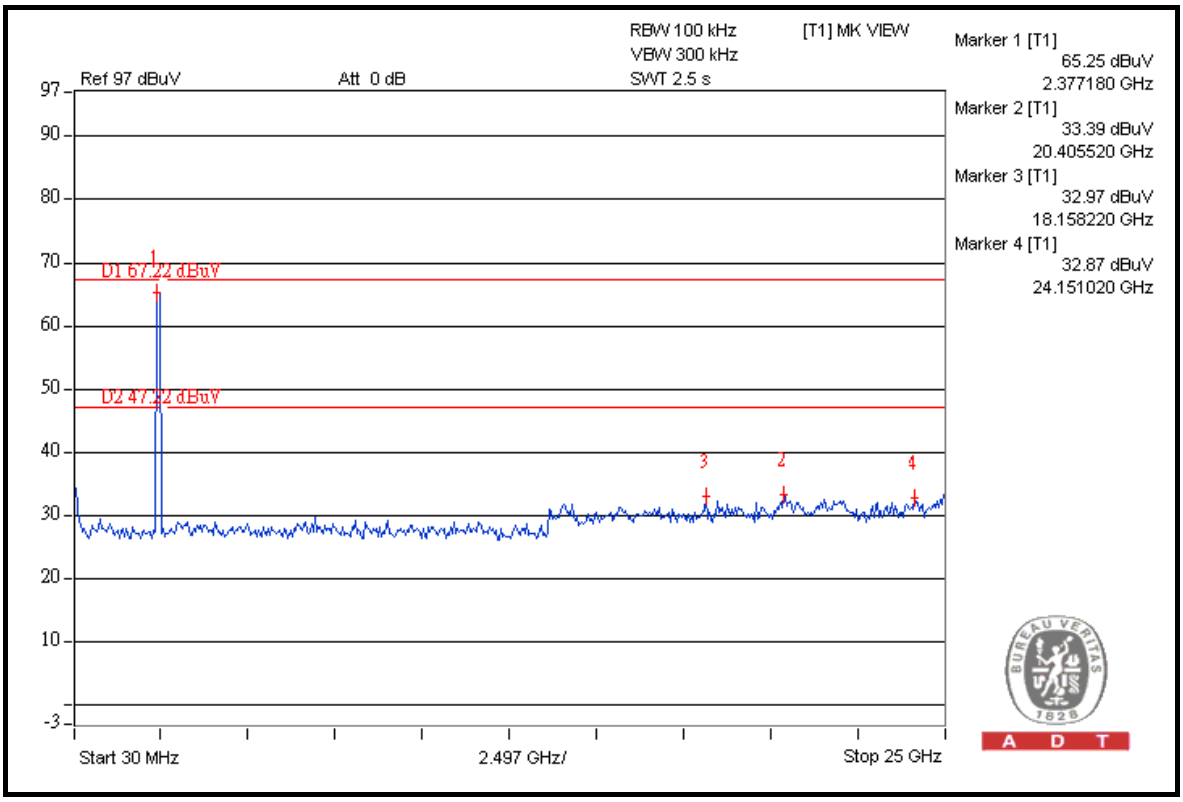
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	104.7	36.46	68.24	74.00
2452.00 (AV)	90.9	43.42	47.48	54.00

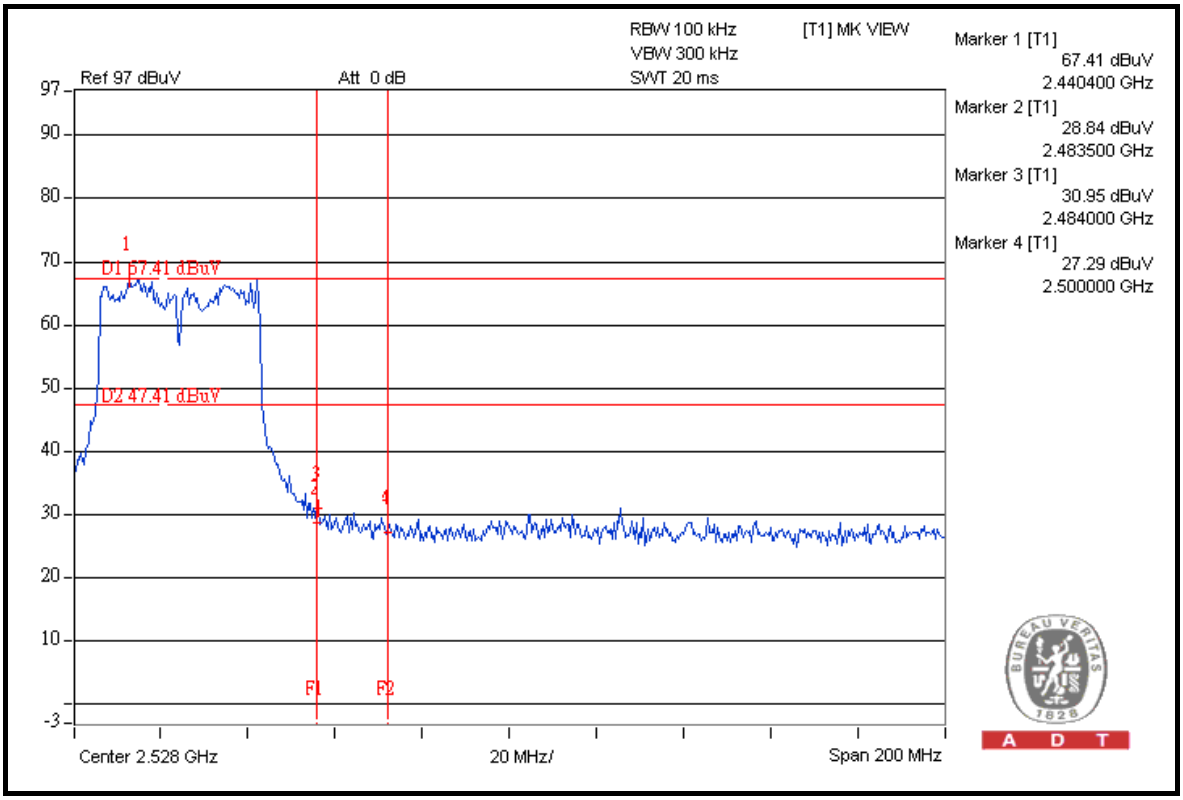
NOTE:

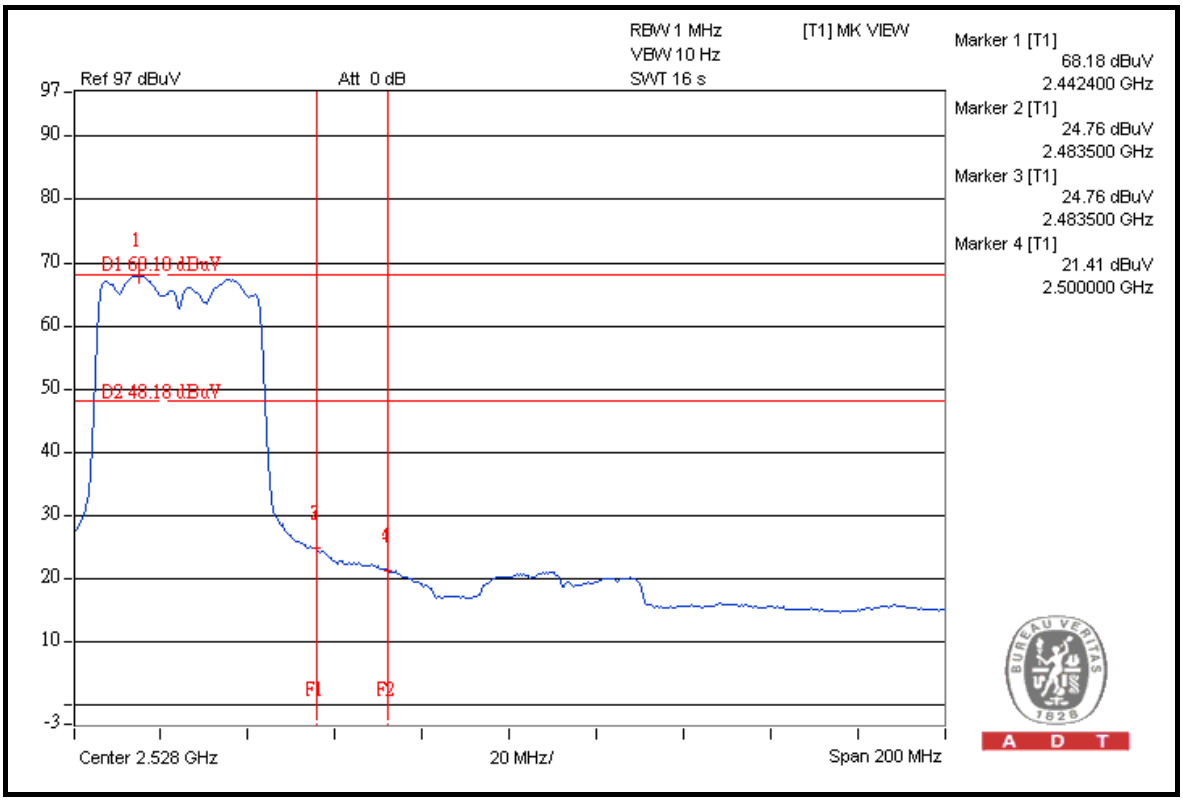
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

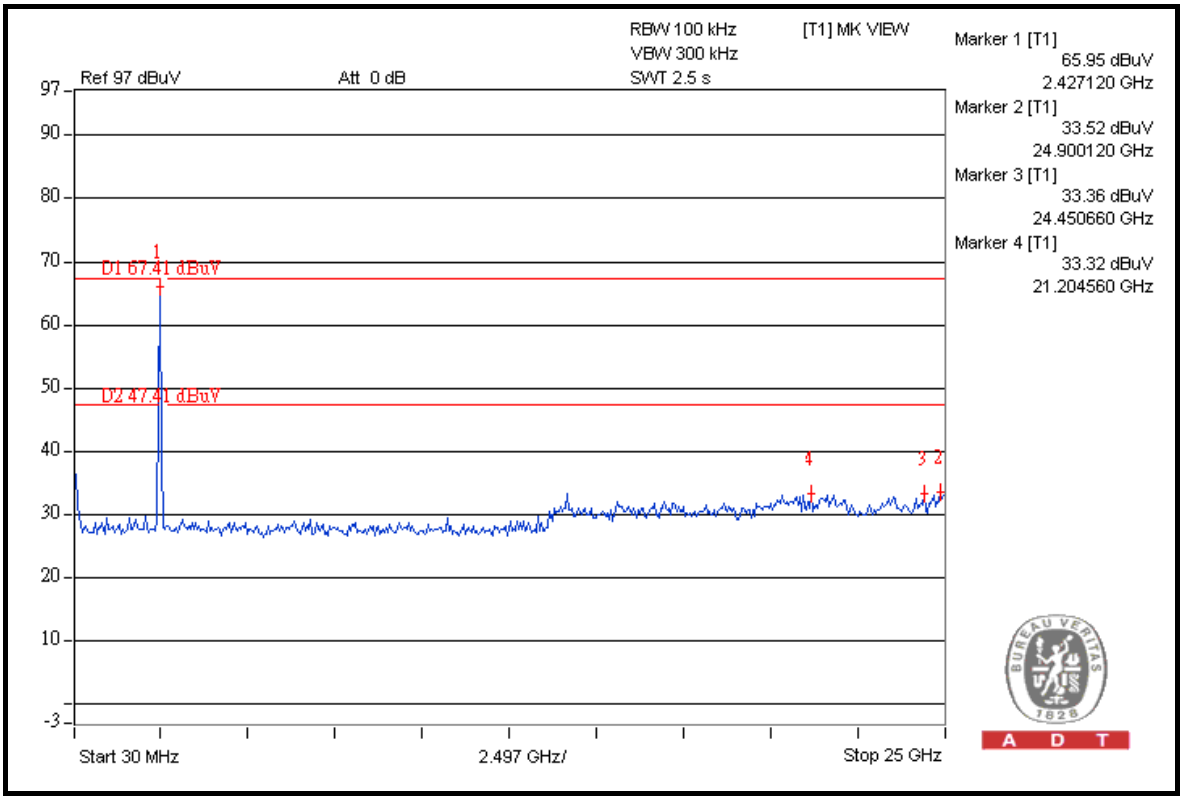

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 67.22 dBuV
D2 47.22 dBuV
Marker 1 [T1]
67.22 dBuV
2.421200 GHz
Marker 2 [T1]
37.53 dBuV
2.400000 GHz
Marker 3 [T1]
37.53 dBuV
2.400000 GHz
Marker 4 [T1]
28.29 dBuV
2.390000 GHz
Marker 5 [T1]
30.08 dBuV
2.373600 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 67.82 dBuV
D2 47.82 dBuV
Marker 1 [T1]
67.82 dBuV
2.420800 GHz
Marker 2 [T1]
28.31 dBuV
2.400000 GHz
Marker 3 [T1]
28.31 dBuV
2.400000 GHz
Marker 4 [T1]
23.65 dBuV
2.390000 GHz
Marker 5 [T1]
23.65 dBuV
2.390000 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
65.25 dBuV
2.377180 GHz
Marker 2 [T1]
33.39 dBuV
20.405520 GHz
Marker 3 [T1]
32.97 dBuV
18.158220 GHz
Marker 4 [T1]
32.87 dBuV
24.151020 GHz
D1 67.22 dBuV
D2 47.22 dBuV
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
67.41 dBuV
2.440400 GHz
Marker 2 [T1]
28.84 dBuV
2.483500 GHz
Marker 3 [T1]
30.95 dBuV
2.484000 GHz
Marker 4 [T1]
27.29 dBuV
2.500000 GHz
D1 67.41 dBuV
D2 47.41 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
68.18 dBuV
2.442400 GHz
Marker 2 [T1]
24.76 dBuV
2.483500 GHz
Marker 3 [T1]
24.76 dBuV
2.483500 GHz
Marker 4 [T1]
21.41 dBuV
2.500000 GHz
D1 68.18 dBuV
D2 48.18 dBuV
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 97 dBuV
Att 0 dB
Marker 1 [T1]
65.95 dBuV
2.427120 GHz
Marker 2 [T1]
33.52 dBuV
24.900120 GHz
Marker 3 [T1]
33.36 dBuV
24.450660 GHz
Marker 4 [T1]
33.32 dBuV
21.204560 GHz
D1 67.41 dBuV
D2 47.41 dBuV
Start 30 MHz
2.497 GHz/
Stop 25 GHz

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 according to ISO/IEC 17025.

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---