FCC Test Report

Report No.:	RF160215C06
FCC ID:	MSQ-RT1P00
Test Model:	RT-N300 B1
Series Model:	RT-N12+ B1, RT-N12+ V3
Received Date:	Feb. 15, 2016
Test Date:	Apr. 13 ~ Jun. 02, 2016
Issued Date:	Jun. 03, 2016
Applicant:	ASUSTek COMPUTER INC.
Address:	4F, No. 150 Li-Te Rd., Peitou, Taipei, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

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Release Control Record

Issue No.	Description	Date Issued
RF160215C06	Original release.	Jun. 03, 2016

1 Certificate of Conformity

Product:	Wireless-N Router
Brand:	ASUS
Test Model:	RT-N300 B1
Series Model:	RT-N12+ B1, RT-N12+ V3
Sample Status:	Engineering sample
Applicant:	ASUSTeK COMPUTER INC.
Test Date:	Apr. 13 ~ Jun. 02, 2016
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) ANSI C63.10:2013

The above equipment 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 : _____ , **Date:** Jun. 03, 2016

Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Jun. 03, 2016

Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (SECTION 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -3.13dB at 0.40605MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2385.00MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

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	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.63 dB
	200MHz ~1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless-N Router
Brand	ASUS
Test Model	RT-N300 B1
Series model	RT-N12+ B1, RT-N12+ V3
Model Difference	Marketing purpose
Status of EUT	Engineering sample
Power Supply Rating	5Vdc (Adapter)
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 300Mbps
Operating Frequency	2412 ~ 2462MHz
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	309.133mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA
Accessory Device	Adapter
Data Cable Supplied	NA

Note:

1. The following models are provided to this EUT.

Brand	Model	Difference
ASUS	RT-N300 B1 (Main test model)	All models are electrically identical, different model names are for marketing purpose.
	RT-N12+ B1	
	RT-N12+ V3	

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

Modulation Mode	TX Function
802.11b	2TX
802.11g	2TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX

3. The EUT consumes power from the following adapters.

Adapter 1	
Brand	Shenzhen Gongjin Electronics CO., LTD.
Model	S06A12-050A100-C4
Input Power	100-240Vac, 50/60Hz, 0.3A Max.
Output Power	5Vdc, 1A
Power Cord	1.45m DC cable without core attached on adapter

Adapter 2	
Brand	Shenzhen Frecom Electronics CO., LTD.
Model	F05L5-050100SPAU
Input Power	100-240Vac, 50/60Hz, 0.2A
Output Power	5Vdc, 1A
Power Cord	1.5m DC cable without core attached on adapter

4. The antennas used in this EUT are listed as below table:

Type	Brand	P/N	Connector	Gain (dBi)
Dipole	Walsin	RFDPA141010NNAB302	N/A	3.52
	Walsin	RFDPA141015NNAB302	N/A	3.32

5. The above EUT information is 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 (HT20):

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 (HT40):

Channel	Frequency	Channel	Frequency
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

3.2.1 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 **RE≥1G:** Radiated Emission above 1GHz & Bandedge Measurement **RE<1G:** Radiated Emission below 1GHz

PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

NOTE:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.
2. "-" 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
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
A	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	15.0

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 and antenna ports (if EUT with antenna diversity architecture).

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11b	1 to 11	1	DSSS	DBPSK	1.0

Power Line Conducted Emission Test:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11b	1 to 11	1	DSSS	DBPSK	1.0

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
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
A	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	15.0

Test Condition:

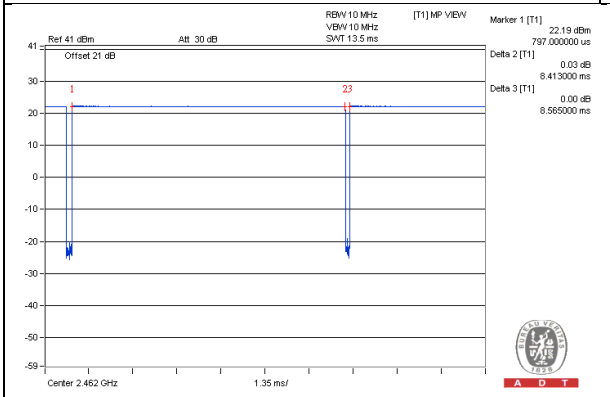
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	20deg. C, 69%RH 16deg. C, 70%RH	120Vac, 60Hz	Bayu Chen Nick Hsu
RE<1G	20deg. C, 69%RH	120Vac, 60Hz	Bayu Chen Tank Wu
PLC	25deg. C, 60%RH	120Vac, 60Hz	Bayu Chen Tank Wu
APCM	25deg. C, 60%RH	120Vac, 60Hz	Chris Lin

3.3 Duty Cycle of Test Signal

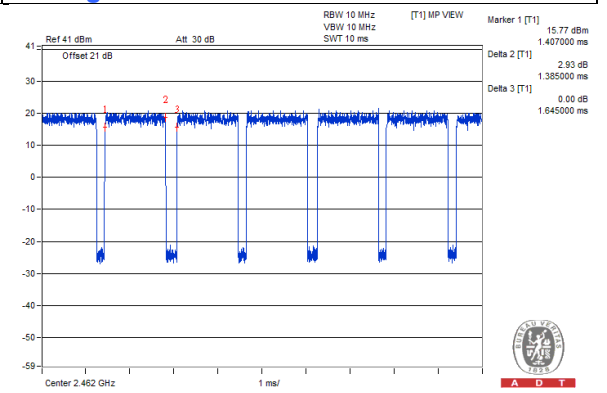
Duty cycle of test signal is > 98%, duty factor is not required.
Duty cycle of test signal is < 98%, duty factor is required.

802.11b: Duty cycle = 8.413/8.565 = 0.982
802.11g: Duty cycle = 1.385/1.645 = 0.842, Duty factor = 10 * log(1/0.842) = 0.75
802.11n (HT20): Duty cycle = 1.293/1.585 = 0.816, Duty factor = 10 * log(1/0.816) = 0.88
802.11n (HT40): Duty cycle = 0.642/0.834 = 0.770, Duty factor = 10 * log(1/0.770) = 1.14

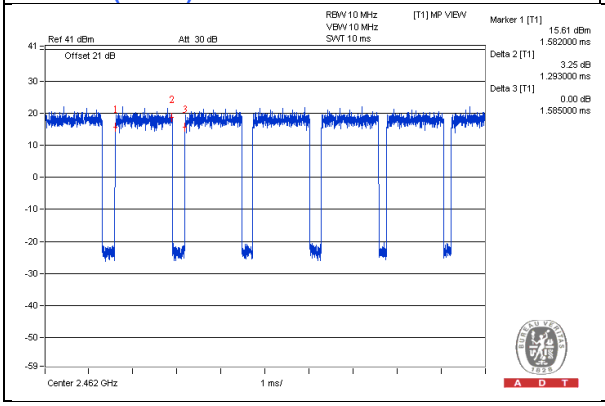
802.11b



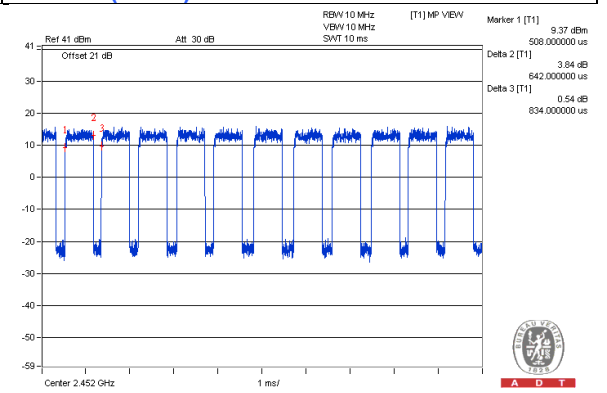
802.11g



802.11n (HT20)



802.11n (HT40)



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.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	6RP2YM1	FCC DoC Approved	-
B.	Load	N/A	N/A	N/A	N/A	-

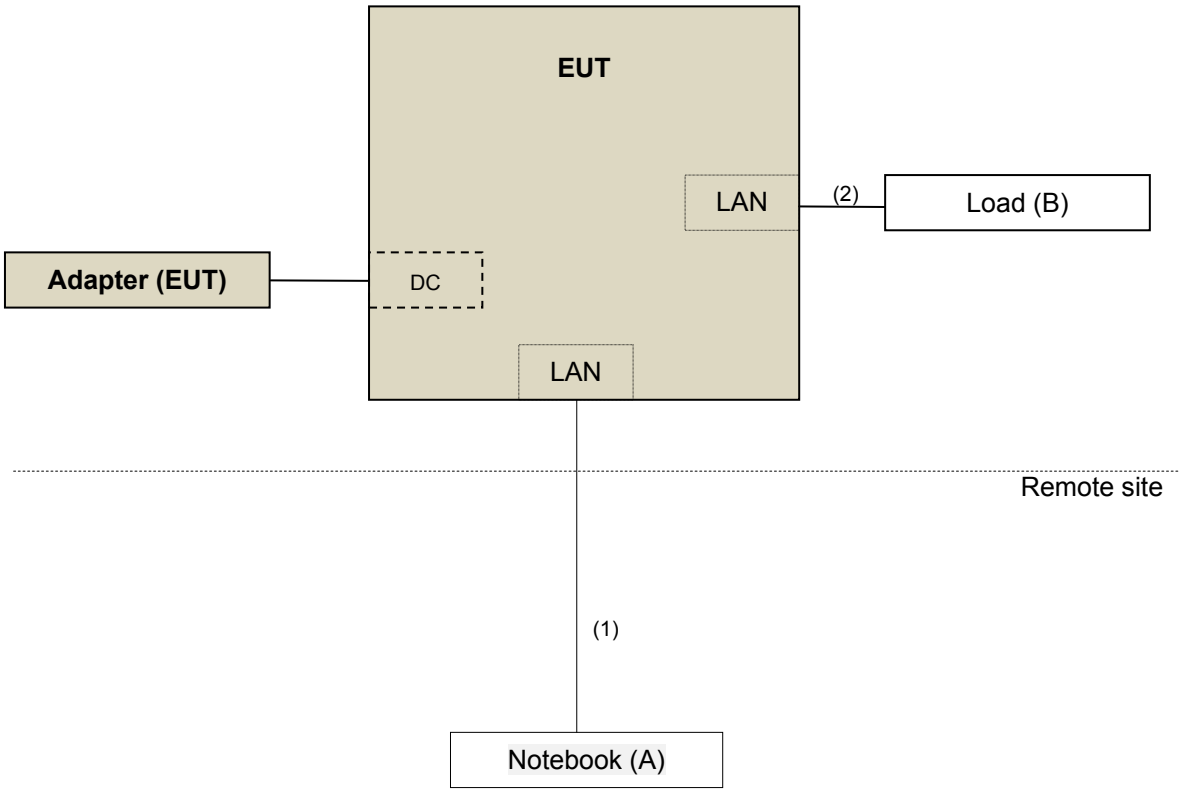
Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	10	N	0	-
2.	RJ45 cable	4	1.8	N	0	-

Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test



3.5 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)
KDB 558074 D01 DTS Meas Guidance v03r05
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

NOTE: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

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. 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 30dB 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	ESCS30	100289	Dec. 23, 2015	Dec. 22, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 08, 2015	Jul. 07, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	Feb. 09, 2016	Feb. 08, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Jan. 18, 2016	Jan. 17, 2017
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Jan. 08, 2016	Jan. 07, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Preamplifier Agilent	8449B	3008A01911	Aug. 09, 2015	Aug. 08, 2016
Preamplifier Agilent	8447D	2944A10638	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-02(309222 +248780)	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-03(274092)	Aug. 09, 2015	Aug. 08, 2016
RF signal cable Woken	8D-FB	Cable-CH9-01	Aug. 11, 2015	Aug. 10, 2016
Software BV ADT	ADT_Radiated_V7.6.15.9.4	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 BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
High Speed Peak Power Meter	ML2495A	0824011	Jul. 09, 2015	Jul. 08, 2016
Power Sensor	MA2411B	0738171	Jul. 09, 2015	Jul. 08, 2016

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 preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 215374.
5. The IC Site Registration No. is IC 7450F-9.

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. 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 height of antenna 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

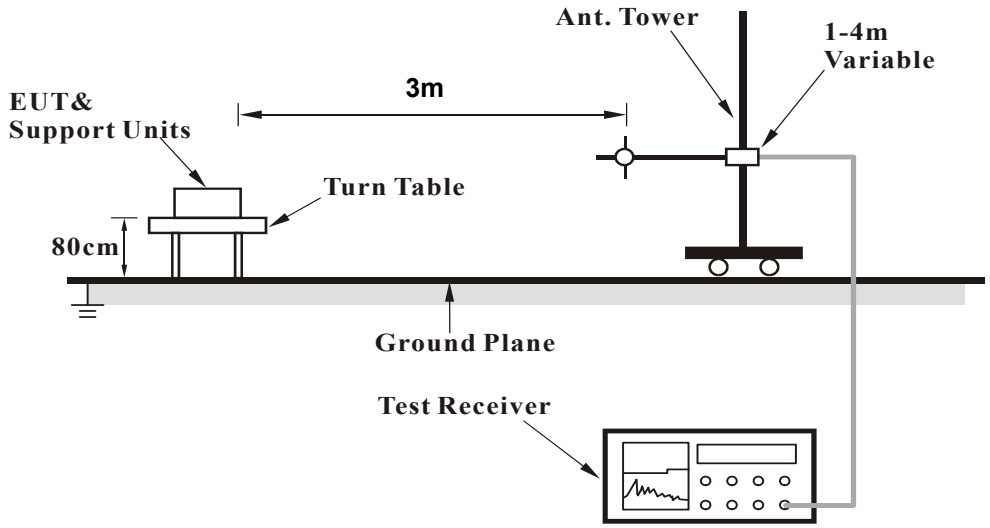
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

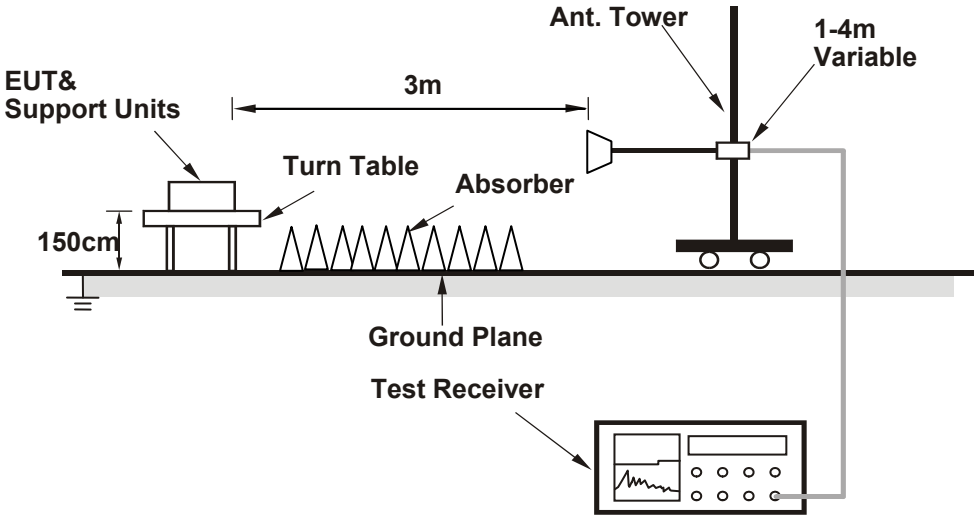
No deviation.

4.1.5 Test Set Up

<Frequency Range 30MHz ~ 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Conditions

Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data：

802.11b

CHANNEL	TX Channel 1	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	2385.00	59.8 PK	74.0	-14.2	1.00 H	274	25.00	34.80
2	2385.00	48.1 AV	54.0	-5.9	1.00 H	274	13.30	34.80
3	*2412.00	105.7 PK			1.06 H	314	70.80	34.90
4	*2412.00	102.0 AV			1.06 H	314	67.10	34.90
5	4824.00	53.1 PK	74.0	-20.9	1.57 H	123	48.70	4.40
6	4824.00	46.7 AV	54.0	-7.3	1.57 H	123	42.30	4.40
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	2385.00	63.5 PK	74.0	-10.5	1.20 V	355	28.70	34.80
2	**2385.00**	**53.0 AV**	**54.0**	**-1.0**	**1.20 V**	**355**	**18.20**	**34.80**
3	*2412.00	114.3 PK			1.12 V	238	79.40	34.90
4	*2412.00	110.6 AV			1.12 V	238	75.70	34.90
5	4824.00	56.1 PK	74.0	-17.9	3.01 V	3	51.70	4.40
6	4824.00	51.8 AV	54.0	-2.2	3.01 V	3	47.40	4.40

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.8 PK			1.05 H	299	70.80	35.00
2	*2437.00	101.3 AV			1.05 H	299	66.30	35.00
3	4874.00	52.5 PK	74.0	-21.5	1.62 H	118	48.00	4.50
4	4874.00	48.6 AV	54.0	-5.4	1.62 H	118	44.10	4.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	114.5 PK			1.21 V	28	79.50	35.00
2	*2437.00	110.8 AV			1.21 V	28	75.80	35.00
3	4874.00	55.8 PK	74.0	-18.2	3.12 V	6	51.30	4.50
4	4874.00	51.9 AV	54.0	-2.1	3.12 V	6	47.40	4.50

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	104.7 PK			1.07 H	321	69.50	35.20
2	*2462.00	100.2 AV			1.07 H	321	65.00	35.20
3	2483.50	59.8 PK	74.0	-14.2	1.00 H	291	24.60	35.20
4	2483.50	48.5 AV	54.0	-5.5	1.00 H	291	13.30	35.20
5	4924.00	53.2 PK	74.0	-20.8	1.62 H	131	48.50	4.70
6	4924.00	48.7 AV	54.0	-5.3	1.62 H	131	44.00	4.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.6 PK			1.53 V	231	78.40	35.20
2	*2462.00	109.8 AV			1.53 V	231	74.60	35.20
3	2483.50	63.2 PK	74.0	-10.8	1.16 V	22	28.00	35.20
4	2483.50	52.7 AV	54.0	-1.3	1.16 V	22	17.50	35.20
5	4924.00	55.8 PK	74.0	-18.2	1.51 V	330	51.10	4.70
6	4924.00	51.8 AV	54.0	-2.2	1.51 V	330	47.10	4.70

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)– Pre-Amplifier 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

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	58.3 PK	74.0	-15.7	1.71 H	178	25.50	32.80
2	2390.00	47.1 AV	54.0	-6.9	1.71 H	178	14.30	32.80
3	*2412.00	105.5 PK			1.48 H	180	72.60	32.90
4	*2412.00	96.3 AV			1.48 H	180	63.40	32.90
5	4824.00	48.3 PK	74.0	-25.7	1.59 H	203	42.40	5.90
6	4824.00	35.9 AV	54.0	-18.1	1.59 H	203	30.00	5.90
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	2390.00	67.8 PK	74.0	-6.2	1.03 V	170	35.00	32.80
2	2390.00	52.9 AV	54.0	-1.1	1.03 V	170	20.10	32.80
3	*2412.00	114.2 PK			1.00 V	169	81.30	32.90
4	*2412.00	105.0 AV			1.00 V	169	72.10	32.90
5	4824.00	48.3 PK	74.0	-25.7	1.67 V	327	42.40	5.90
6	4824.00	36.4 AV	54.0	-17.6	1.67 V	327	30.50	5.90

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.5	1.35 H	218	25.70	34.80
2	2390.00	48.4 AV	54.0	-5.6	1.35 H	218	13.60	34.80
3	*2437.00	112.3 PK			1.46 H	228	77.30	35.00
4	*2437.00	102.5 AV			1.46 H	228	67.50	35.00
5	2483.50	61.1 PK	74.0	-12.9	1.53 H	220	25.90	35.20
6	2483.50	49.1 AV	54.0	-4.9	1.53 H	220	13.90	35.20
7	4874.00	51.4 PK	74.0	-22.6	1.62 H	128	46.90	4.50
8	4874.00	38.0 AV	54.0	-16.0	1.62 H	128	33.50	4.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	1.26 V	359	32.40	34.80
2	2390.00	52.8 AV	54.0	-1.2	1.26 V	359	18.00	34.80
3	*2437.00	120.7 PK			1.05 V	359	85.70	35.00
4	*2437.00	110.3 AV			1.05 V	359	75.30	35.00
5	2483.50	66.2 PK	74.0	-7.8	1.00 V	335	31.00	35.20
6	2483.50	52.6 AV	54.0	-1.4	1.00 V	335	17.40	35.20
7	4874.00	53.4 PK	74.0	-20.6	1.26 V	6	48.90	4.50
8	4874.00	40.7 AV	54.0	-13.3	1.26 V	6	36.20	4.50

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	105.0 PK			1.21 H	200	72.10	32.90
2	*2462.00	95.8 AV			1.21 H	200	62.90	32.90
3	2483.50	59.2 PK	74.0	-14.8	1.10 H	201	26.20	33.00
4	2483.50	47.1 AV	54.0	-6.9	1.10 H	201	14.10	33.00
5	4924.00	50.7 PK	74.0	-23.3	2.53 H	12	44.70	6.00
6	4924.00	37.5 AV	54.0	-16.5	2.53 H	12	31.50	6.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.5 PK			1.48 V	263	79.60	32.90
2	*2462.00	103.2 AV			1.48 V	263	70.30	32.90
3	2483.50	67.0 PK	74.0	-7.0	1.14 V	174	34.00	33.00
4	2483.50	52.8 AV	54.0	-1.2	1.14 V	174	19.80	33.00
5	4924.00	50.5 PK	74.0	-23.5	1.47 V	16	44.50	6.00
6	4924.00	38.0 AV	54.0	-16.0	1.47 V	16	32.00	6.00

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)– Pre-Amplifier 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 (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	58.9 PK	74.0	-15.1	1.44 H	178	26.10	32.80
2	2390.00	47.8 AV	54.0	-6.2	1.44 H	178	15.00	32.80
3	*2412.00	105.7 PK			1.71 H	178	72.80	32.90
4	*2412.00	95.1 AV			1.71 H	178	62.20	32.90
5	4824.00	48.3 PK	74.0	-25.7	1.24 H	45	42.40	5.90
6	4824.00	35.0 AV	54.0	-19.0	1.24 H	45	29.10	5.90
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	2390.00	66.8 PK	74.0	-7.2	1.14 V	171	34.00	32.80
2	2390.00	52.6 AV	54.0	-1.4	1.14 V	171	19.80	32.80
3	*2412.00	112.2 PK			1.04 V	268	79.30	32.90
4	*2412.00	102.4 AV			1.04 V	268	69.50	32.90
5	4824.00	50.2 PK	74.0	-23.8	2.57 V	346	44.30	5.90
6	4824.00	36.9 AV	54.0	-17.1	2.57 V	346	31.00	5.90

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	61.0 PK	74.0	-13.0	1.42 H	248	26.20	34.80
2	2390.00	48.6 AV	54.0	-5.4	1.42 H	248	13.80	34.80
3	*2437.00	110.5 PK			1.47 H	231	75.50	35.00
4	*2437.00	100.3 AV			1.47 H	231	65.30	35.00
5	2483.50	61.4 PK	74.0	-12.6	1.39 H	211	26.20	35.20
6	2483.50	49.2 AV	54.0	-4.8	1.39 H	211	14.00	35.20
7	4874.00	51.7 PK	74.0	-22.3	1.59 H	131	47.20	4.50
8	4874.00	38.2 AV	54.0	-15.8	1.59 H	131	33.70	4.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.9 PK	74.0	-7.1	1.02 V	8	32.10	34.80
2	2390.00	52.7 AV	54.0	-1.3	1.02 V	8	17.90	34.80
3	*2437.00	118.7 PK			1.02 V	356	83.70	35.00
4	*2437.00	108.8 AV			1.02 V	356	73.80	35.00
5	2483.50	65.8 PK	74.0	-8.2	1.09 V	0	30.60	35.20
6	2483.50	52.5 AV	54.0	-1.5	1.09 V	0	17.30	35.20
7	4874.00	55.2 PK	74.0	-18.8	2.66 V	4	50.70	4.50
8	4874.00	40.7 AV	54.0	-13.3	2.66 V	4	36.20	4.50

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	104.6 PK			1.17 H	201	71.70	32.90
2	*2462.00	94.0 AV			1.17 H	201	61.10	32.90
3	2483.50	58.1 PK	74.0	-15.9	1.32 H	202	25.10	33.00
4	2483.50	46.6 AV	54.0	-7.4	1.32 H	202	13.60	33.00
5	4924.00	47.3 PK	74.0	-26.7	1.85 H	352	41.30	6.00
6	4924.00	35.6 AV	54.0	-18.4	1.85 H	352	29.60	6.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	111.1 PK			1.06 V	266	78.20	32.90
2	*2462.00	101.3 AV			1.06 V	266	68.40	32.90
3	2483.50	66.3 PK	74.0	-7.7	1.19 V	169	33.30	33.00
4	2483.50	52.5 AV	54.0	-1.5	1.19 V	169	19.50	33.00
5	4924.00	49.1 PK	74.0	-24.9	1.17 V	308	43.10	6.00
6	4924.00	37.1 AV	54.0	-16.9	1.17 V	308	31.10	6.00

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)– Pre-Amplifier 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 (HT40)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	58.0 PK	74.0	-16.0	1.40 H	178	25.20	32.80
2	2390.00	47.5 AV	54.0	-6.5	1.40 H	178	14.70	32.80
3	*2422.00	100.3 PK			1.72 H	177	67.40	32.90
4	*2422.00	90.5 AV			1.72 H	177	57.60	32.90
5	4844.00	46.9 PK	74.0	-27.1	1.20 H	29	41.10	5.80
6	4844.00	35.8 AV	54.0	-18.2	1.20 H	29	30.00	5.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.8 PK	74.0	-5.2	1.15 V	167	36.00	32.80
2	2390.00	52.4 AV	54.0	-1.6	1.15 V	167	19.60	32.80
3	*2422.00	107.7 PK			1.25 V	168	74.80	32.90
4	*2422.00	99.6 AV			1.25 V	168	66.70	32.90
5	4844.00	47.2 PK	74.0	-26.8	1.24 V	31	41.40	5.80
6	4844.00	35.6 AV	54.0	-18.4	1.24 V	31	29.80	5.80

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.9 PK	74.0	-13.1	1.33 H	251	26.10	34.80
2	2390.00	48.6 AV	54.0	-5.4	1.33 H	251	13.80	34.80
3	*2437.00	104.7 PK			1.42 H	229	69.70	35.00
4	*2437.00	93.1 AV			1.42 H	229	58.10	35.00
5	2483.50	61.6 PK	74.0	-12.4	1.52 H	198	26.40	35.20
6	2483.50	49.0 AV	54.0	-5.0	1.52 H	198	13.80	35.20
7	4874.00	51.0 PK	74.0	-23.0	1.73 H	135	46.50	4.50
8	4874.00	36.8 AV	54.0	-17.2	1.73 H	135	32.30	4.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.1 PK	74.0	-7.9	1.58 V	260	31.30	34.80
2	2390.00	52.8 AV	54.0	-1.2	1.58 V	260	18.00	34.80
3	*2437.00	111.2 PK			1.02 V	359	76.20	35.00
4	*2437.00	101.2 AV			1.02 V	359	66.20	35.00
5	2483.50	64.6 PK	74.0	-9.4	1.57 V	41	29.40	35.20
6	2483.50	51.7 AV	54.0	-2.3	1.57 V	41	16.50	35.20
7	4874.00	50.4 PK	74.0	-23.6	1.06 V	357	45.90	4.50
8	4874.00	37.5 AV	54.0	-16.5	1.06 V	357	33.00	4.50

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	102.1 PK			1.13 H	201	69.10	33.00
2	*2452.00	91.6 AV			1.13 H	201	58.60	33.00
3	2483.50	57.5 PK	74.0	-16.5	1.20 H	202	24.50	33.00
4	2483.50	47.2 AV	54.0	-6.8	1.20 H	202	14.20	33.00
5	4904.00	47.1 PK	74.0	-26.9	1.31 H	319	41.20	5.90
6	4904.00	35.8 AV	54.0	-18.2	1.31 H	319	29.90	5.90
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	*2452.00	108.6 PK			1.02 V	171	75.60	33.00
2	*2452.00	100.2 AV			1.02 V	171	67.20	33.00
3	2483.50	65.3 PK	74.0	-8.7	1.15 V	169	32.30	33.00
4	2483.50	52.5 AV	54.0	-1.5	1.15 V	169	19.50	33.00
5	4904.00	47.4 PK	74.0	-26.6	1.22 V	333	41.50	5.90
6	4904.00	36.0 AV	54.0	-18.0	1.22 V	333	30.10	5.90

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)– Pre-Amplifier 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 Data:

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	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	31.94	28.2 QP	40.0	-11.8	1.99 H	15	44.10	-15.90
2	84.32	29.4 QP	40.0	-10.6	1.50 H	271	48.40	-19.00
3	142.52	30.5 QP	43.5	-13.0	1.99 H	269	44.90	-14.40
4	167.74	31.8 QP	43.5	-11.7	1.50 H	112	45.90	-14.10
5	249.22	30.4 QP	46.0	-15.6	1.00 H	264	44.80	-14.40
6	897.18	35.6 QP	46.0	-10.4	1.24 H	273	36.60	-1.00
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	45.26	34.9 QP	40.0	-5.1	1.00 V	171	49.20	-14.30
2	55.22	33.5 QP	40.0	-6.5	1.24 V	34	47.70	-14.20
3	125.06	29.4 QP	43.5	-14.1	1.00 V	61	45.40	-16.00
4	142.52	32.2 QP	43.5	-11.3	1.00 V	70	46.60	-14.40
5	249.22	26.7 QP	46.0	-19.3	2.00 V	135	41.10	-14.40
6	730.34	38.0 QP	46.0	-8.0	2.00 V	10	41.90	-3.90

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)– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	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	32.45	31.0 QP	40.0	-9.0	2.00 H	281	46.80	-15.80
2	62.33	27.9 QP	40.0	-12.1	1.00 H	116	43.10	-15.20
3	142.46	32.6 QP	43.5	-10.9	1.00 H	261	47.00	-14.40
4	249.30	32.6 QP	46.0	-13.4	1.00 H	14	47.00	-14.40
5	335.06	31.5 QP	46.0	-14.5	1.00 H	212	43.10	-11.60
6	895.97	40.8 QP	46.0	-5.2	1.00 H	202	41.90	-1.10
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	38.03	35.8 QP	40.0	-4.2	1.00 V	285	50.60	-14.80
2	62.33	31.8 QP	40.0	-8.2	1.00 V	16	47.00	-15.20
3	105.91	31.5 QP	43.5	-12.0	1.24 V	266	49.50	-18.00
4	335.06	31.5 QP	46.0	-14.5	1.24 V	307	43.10	-11.60
5	895.97	41.6 QP	46.0	-4.4	1.24 V	16	42.70	-1.10
6	932.52	37.0 QP	46.0	-9.0	1.00 V	273	37.40	-0.40

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)– Pre-Amplifier 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 (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	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.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 16, 2015	Nov. 15, 2016
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2015	Dec. 25, 2016
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 24, 2015	Jul. 23, 2016
Software ADT	BV ADT_Cond_ V7.3.7.3	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.

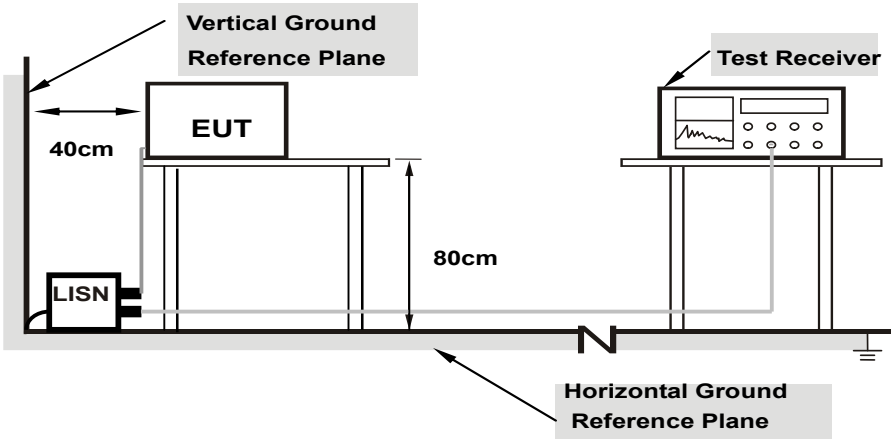
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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.

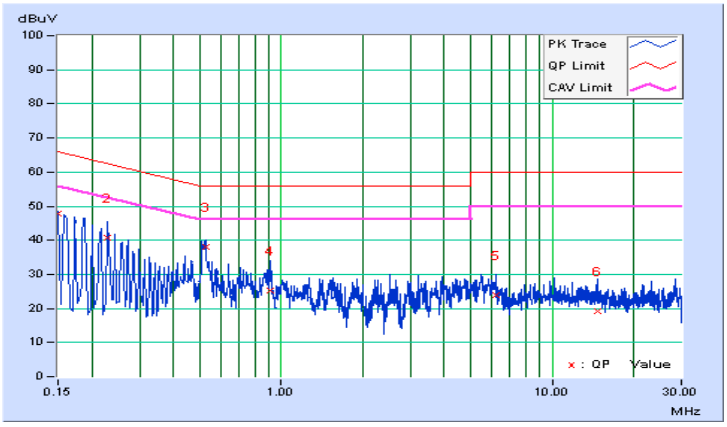
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.01	37.73	23.37	47.74	33.38	66.00	56.00	-18.26	-22.62
2	0.22820	10.04	30.70	17.40	40.74	27.44	62.51	52.51	-21.77	-25.07
3	0.52544	10.14	27.92	21.15	38.06	31.29	56.00	46.00	-17.94	-14.71
4	0.91636	10.19	14.94	8.56	25.13	18.75	56.00	46.00	-30.87	-27.25
5	6.19486	10.53	13.27	5.38	23.80	15.91	60.00	50.00	-36.20	-34.09
6	14.78122	11.00	8.04	2.38	19.04	13.38	60.00	50.00	-40.96	-36.62

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

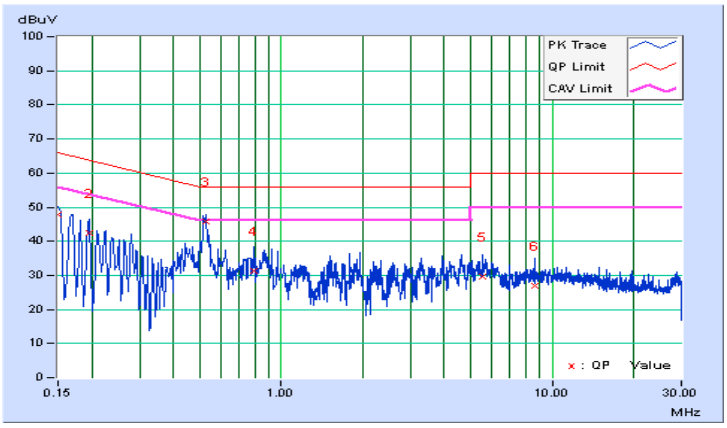


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.03	37.88	25.21	47.91	35.24	66.00	56.00	-18.09	-20.76
2	0.19665	10.04	32.48	18.32	42.52	28.36	63.75	53.75	-21.23	-25.39
3	0.52544	10.15	35.54	28.29	45.69	38.44	56.00	46.00	-10.31	-7.56
4	0.79515	10.18	21.01	13.83	31.19	24.01	56.00	46.00	-24.81	-21.99
5	5.56926	10.53	19.12	10.57	29.65	21.10	60.00	50.00	-30.35	-28.90
6	8.58387	10.71	16.13	8.94	26.84	19.65	60.00	50.00	-33.16	-30.35

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

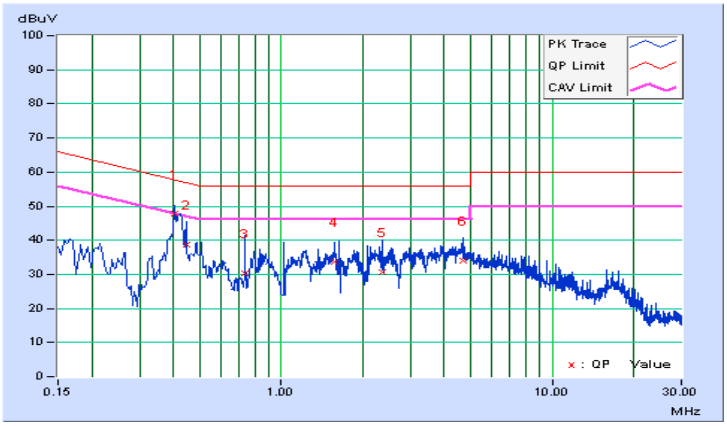


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.40600	10.12	37.60	34.00	47.72	44.12	57.73	47.73	-10.01	-3.61
2	0.44645	10.13	28.48	22.09	38.61	32.22	56.94	46.94	-18.33	-14.72
3	0.73400	10.16	20.26	12.17	30.42	22.33	56.00	46.00	-25.58	-23.67
4	1.57702	10.24	23.54	17.22	33.78	27.46	56.00	46.00	-22.22	-18.54
5	2.35800	10.30	20.47	12.05	30.77	22.35	56.00	46.00	-25.23	-23.65
6	4.70200	10.45	23.60	16.14	34.05	26.59	56.00	46.00	-21.95	-19.41

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

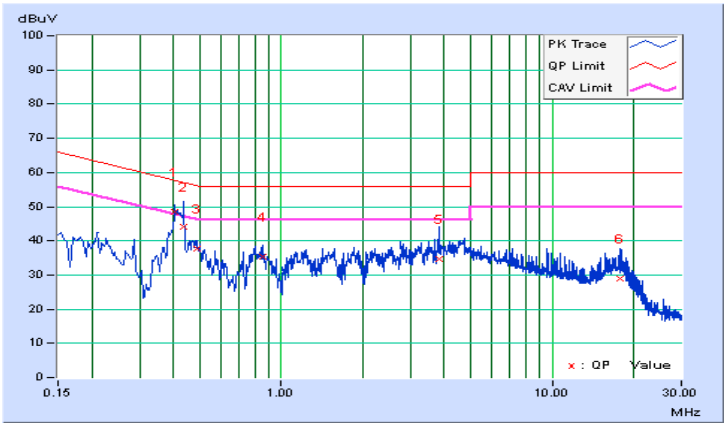


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.40605**	**10.13**	**38.34**	**34.47**	**48.47**	**44.60**	**57.73**	**47.73**	**-9.26**	**-3.13**
2	0.43800	10.14	33.88	23.33	44.02	33.47	57.10	47.10	-13.08	-13.63
3	0.48600	10.14	27.61	21.25	37.75	31.39	56.24	46.24	-18.48	-14.84
4	0.85357	10.19	25.01	17.29	35.20	27.48	56.00	46.00	-20.80	-18.52
5	3.80600	10.42	24.42	16.28	34.84	26.70	56.00	46.00	-21.16	-19.30
6	17.71400	11.31	17.48	10.63	28.79	21.94	60.00	50.00	-31.21	-28.06

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

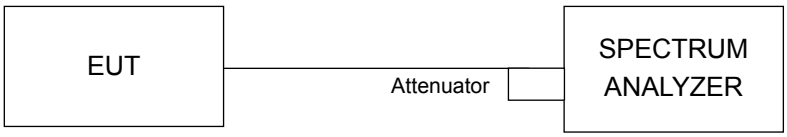


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 Deviation fromTest Standard

No deviation.

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 Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	10.10	10.06	0.5	Pass
6	2437	10.05	10.08	0.5	Pass
11	2462	10.11	10.06	0.5	Pass

802.11g

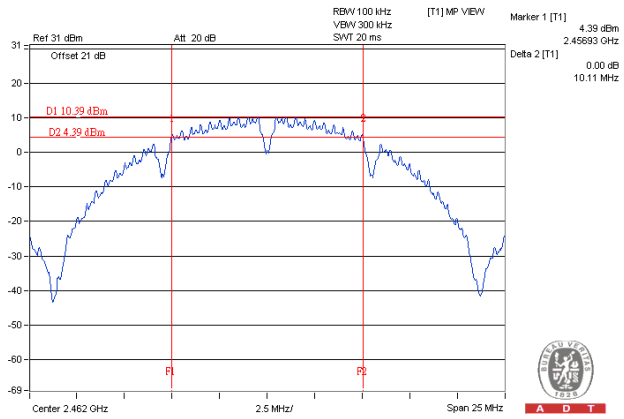
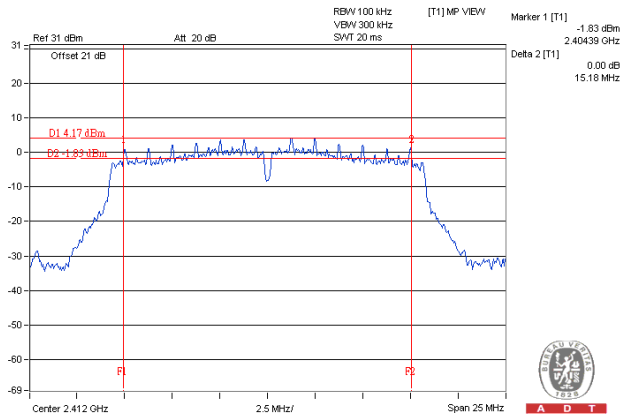
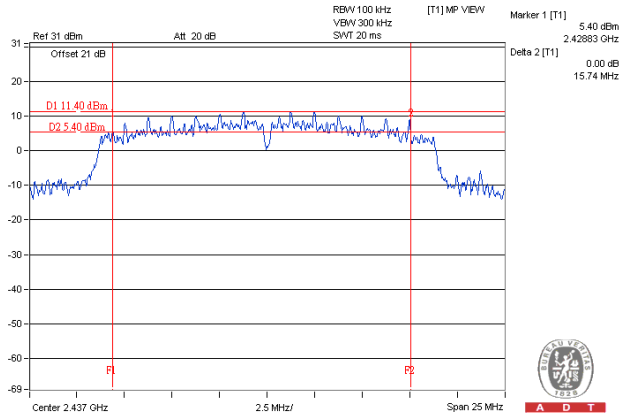
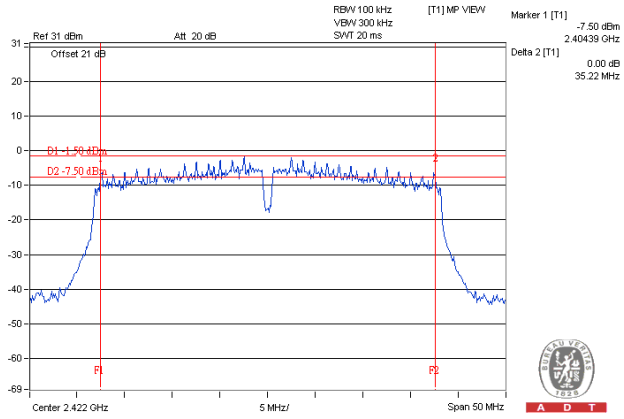
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	15.13	15.18	0.5	Pass
6	2437	15.17	15.17	0.5	Pass
11	2462	15.13	15.17	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	15.12	15.17	0.5	Pass
6	2437	15.17	15.74	0.5	Pass
11	2462	15.14	15.17	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	33.97	35.22	0.5	Pass
6	2437	35.18	35.13	0.5	Pass
9	2452	35.14	35.15	0.5	Pass

Spectrum Plot of Worst Value	
802.11b	**802.11g**
	
802.11n (HT20)	**802.11n (HT40)**
	

4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.4.2 Test Setup

4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

802.11b

Chan.	Freq. (MHz)	Avg. Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	20.04	20.55	214.426	23.31	30	Pass
6	2437	20.58	20.22	219.484	23.41	30	Pass
11	2462	19.86	19.15	179.052	22.53	30	Pass

802.11g

Chan.	Freq. (MHz)	Avg. Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.05	14.40	52.952	17.24	30	Pass
6	2437	21.99	21.79	**309.133**	24.90	30	Pass
11	2462	14.84	14.16	56.541	17.52	30	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Avg. Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	13.86	14.48	52.376	17.19	30	Pass
6	2437	21.83	21.80	303.761	24.83	30	Pass
11	2462	13.60	13.15	43.563	16.39	30	Pass

802.11n (HT40)

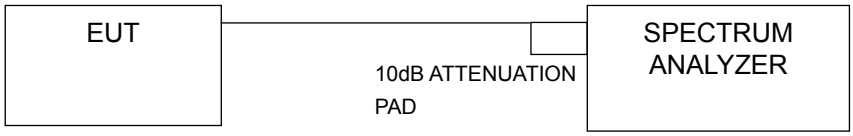
Chan.	Freq. (MHz)	Avg. Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	10.74	11.04	24.564	13.90	30	Pass
6	2437	16.76	16.18	88.919	19.49	30	Pass
9	2452	11.52	11.25	27.526	14.40	30	Pass

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 Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

For duty cycle ≥ 98%

a. Set instrument center frequency to DTS channel center frequency.
b. Set span to at least 1.5 times the OBW.
c. Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz. .
d. Set VBW ≥3 x RBW.
e. Detector = power averaging (RMS) or sample detector (when RMS not available).
f. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
g. Sweep time = auto couple.
h. Employ trace averaging (RMS) mode over a minimum of 100 traces.
i. Use the peak marker function to determine the maximum amplitude level.

For duty cycle < 98%

a. Measure the duty cycle (x).
b. Set instrument center frequency to DTS channel center frequency.
c. Set span to at least 1.5 times the OBW.
d. Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz..
e. Set VBW ≥3 x RBW.
f. Detector = power averaging (RMS) or sample detector (when RMS not available).
g. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
h. Sweep time = auto couple.
i. Don't use sweep triggering. Allow sweep to "free run".
j. Employ trace averaging (RMS) mode over a minimum of 100 traces.
k. Use the peak marker function to determine the maximum amplitude level.
l. Add 10 log (1/x), where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6

4.5.7 Test Results

802.11b

TX chain	Chan.	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/10kHz)	Pass / Fail
0	1	2412	-8.40	3.01	-5.39	7.57	Pass
	6	2437	-7.84	3.01	-4.83	7.57	Pass
	11	2462	-7.93	3.01	-4.92	7.57	Pass
1	1	2412	-7.88	3.01	-4.87	7.57	Pass
	6	2437	-7.52	3.01	-4.51	7.57	Pass
	11	2462	-8.88	3.01	-5.87	7.57	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20}$)^2/2]= 6.43dBi > 6dBi, so the power density limit shall be reduced to 8-(6.43-6) = 7.57dBm.

802.11g

TX chain	Chan.	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD with Duty Factor (dBm/10kHz)	Limit (dBm/10kHz)	Pass / Fail
0	1	2412	-16.84	3.01	0.75	-13.08	7.57	Pass
	6	2437	-9.41	3.01	0.75	-5.65	7.57	Pass
	11	2462	-18.11	3.01	0.75	-14.35	7.57	Pass
1	1	2412	-16.48	3.01	0.75	-12.72	7.57	Pass
	6	2437	-10.16	3.01	0.75	-6.40	7.57	Pass
	11	2462	-16.18	3.01	0.75	-12.42	7.57	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20}$)^2/2]= 6.43dBi > 6dBi, so the power density limit shall be reduced to 8-(6.43-6) = 7.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD with Duty Factor (dBm/10kHz)	Limit (dBm/10kHz)	Pass / Fail
0	1	2412	-16.95	3.01	0.88	-13.06	7.57	Pass
	6	2437	-9.20	3.01	0.88	-5.31	7.57	Pass
	11	2462	-17.30	3.01	0.88	-13.41	7.57	Pass
1	1	2412	-17.03	3.01	0.88	-13.14	7.57	Pass
	6	2437	-10.22	3.01	0.88	-6.33	7.57	Pass
	11	2462	-18.18	3.01	0.88	-14.29	7.57	Pass

NOTE:

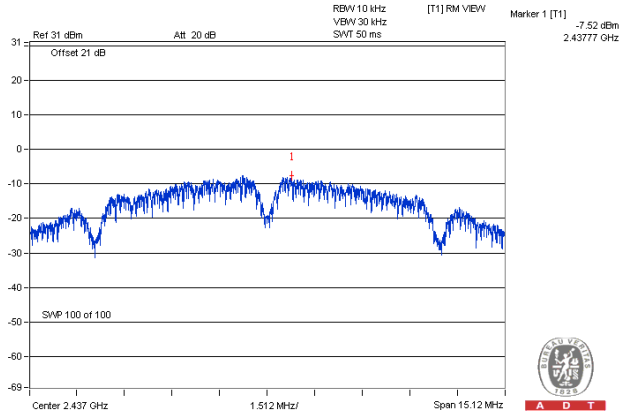
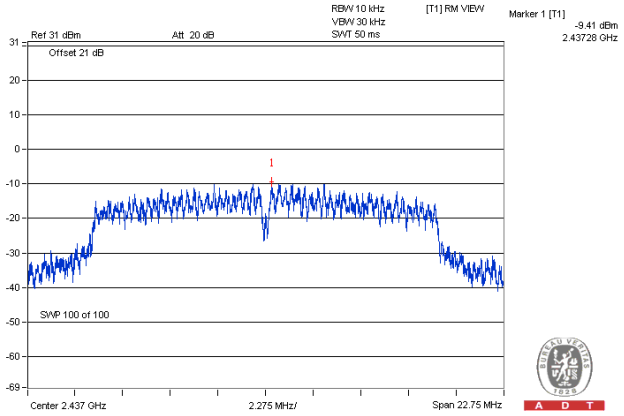
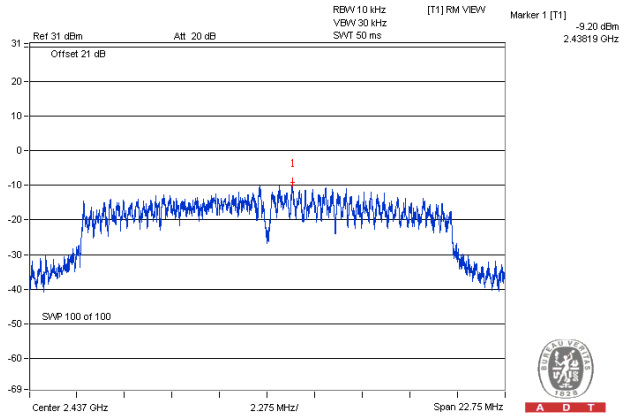
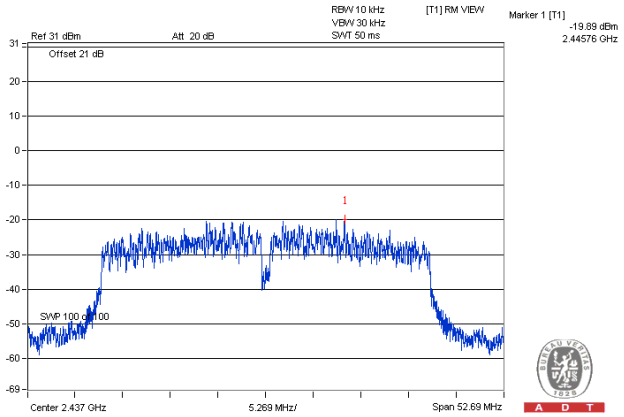
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/2$]= 6.43dBi > 6dBi, so the power density limit shall be reduced to 8-(6.43-6) = 7.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD with Duty Factor (dBm/10kHz)	Limit (dBm/10kHz)	Pass / Fail
0	3	2422	-23.93	3.01	1.14	-19.78	7.57	Pass
	6	2437	-19.99	3.01	1.14	-15.84	7.57	Pass
	9	2452	-24.24	3.01	1.14	-20.09	7.57	Pass
1	3	2422	-25.05	3.01	1.14	-20.90	7.57	Pass
	6	2437	-19.89	3.01	1.14	-15.74	7.57	Pass
	9	2452	-24.99	3.01	1.14	-20.84	7.57	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/2$]= 6.43dBi > 6dBi, so the power density limit shall be reduced to 8-(6.43-6) = 7.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

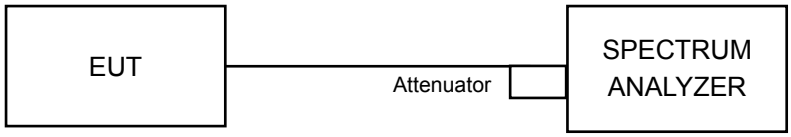
Spectrum Plot of Worst Value	
802.11b	**802.11g**
	
802.11n (HT20)	**802.11n (HT40)**
	

4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below 30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = average.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Ensure that the number of measurement points ≥ span/RBW
d. According to measurement points to set differ measurement span.
e. Detector = average.
f. Trace Mode = max hold.
g. Sweep = auto couple.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

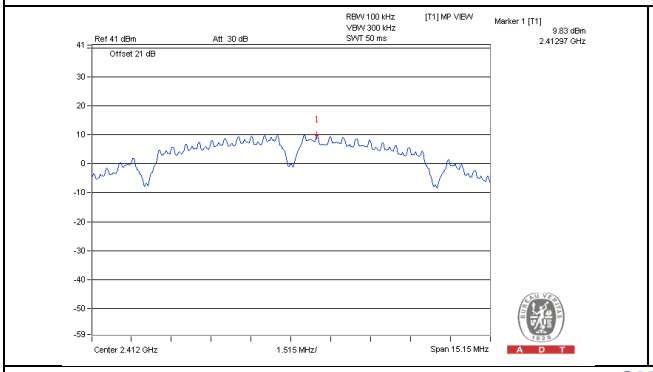
Same as Item 4.3.6

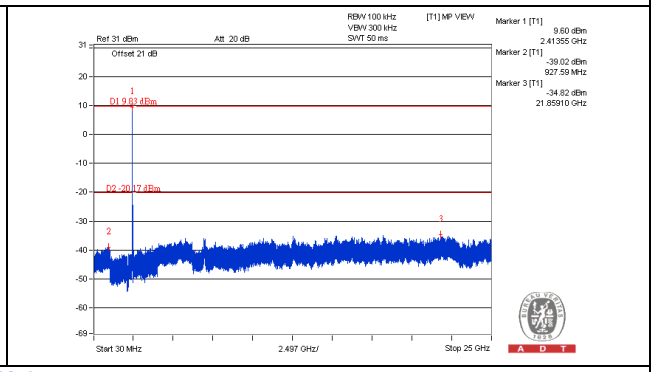
4.6.7 Test Results

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

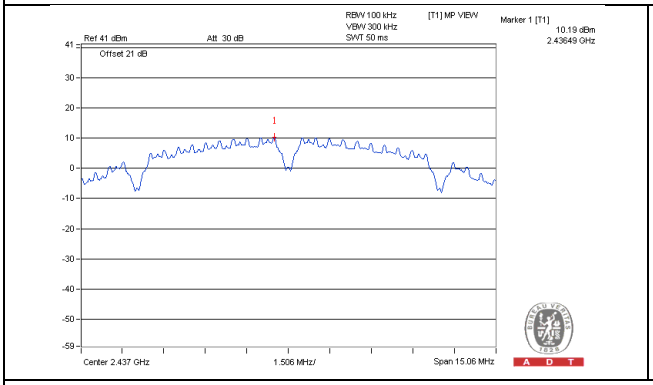
802.11b
CHAIN 0

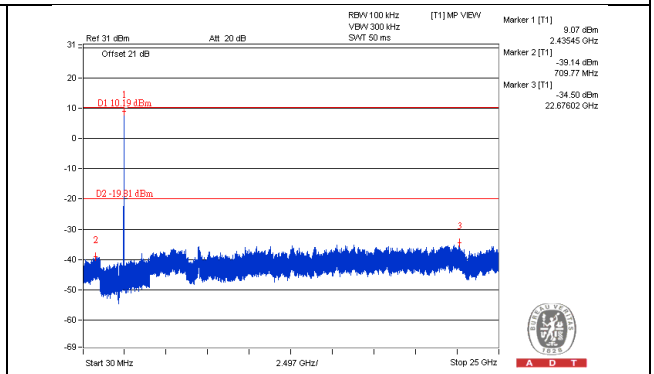
CH 1



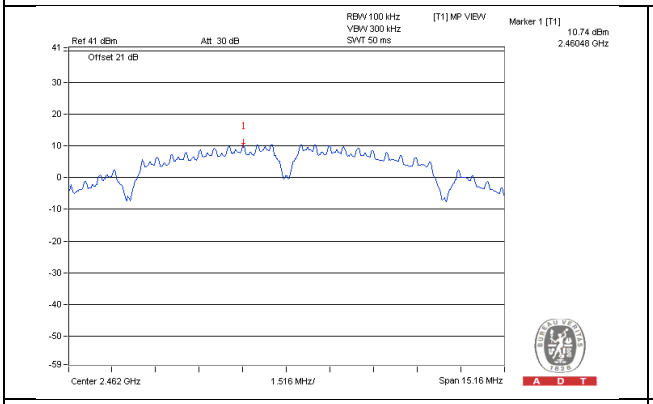


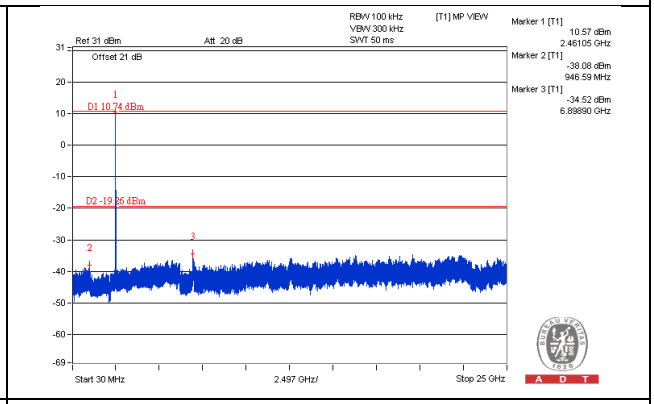
CH 6



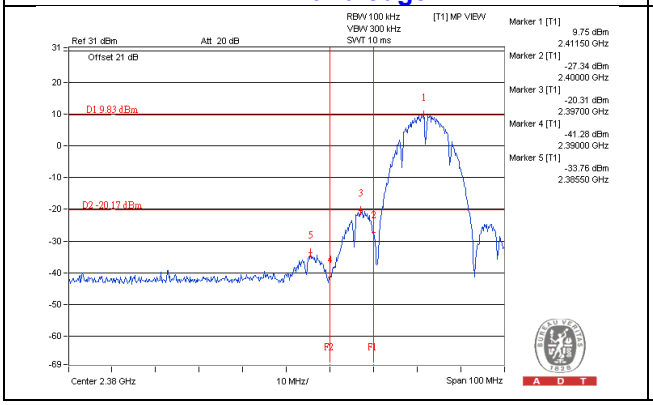


CH 11

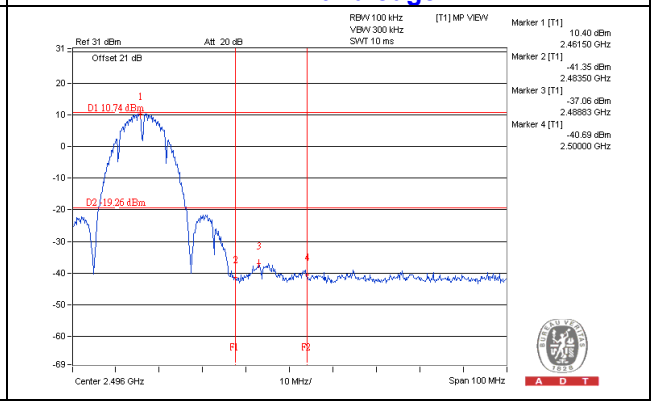




CH 1 Band edge

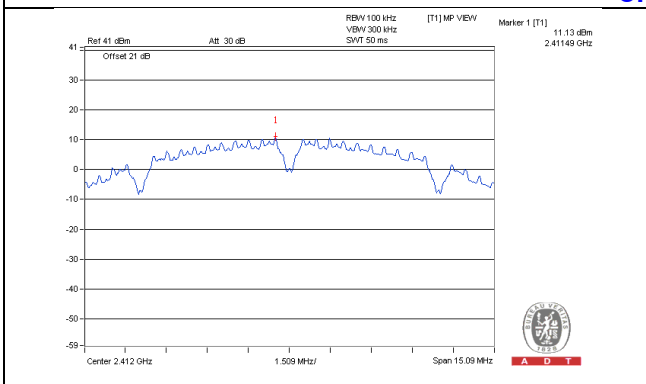


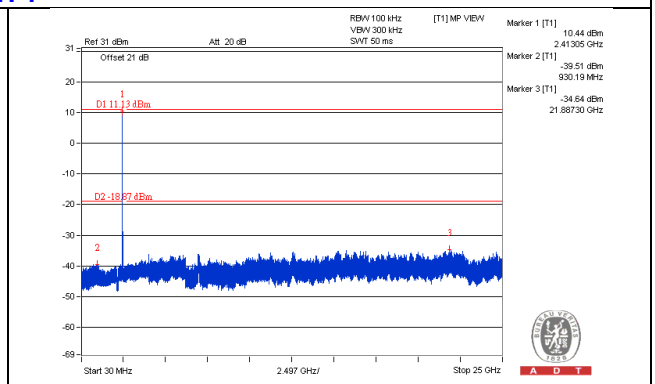
CH 11 Band edge



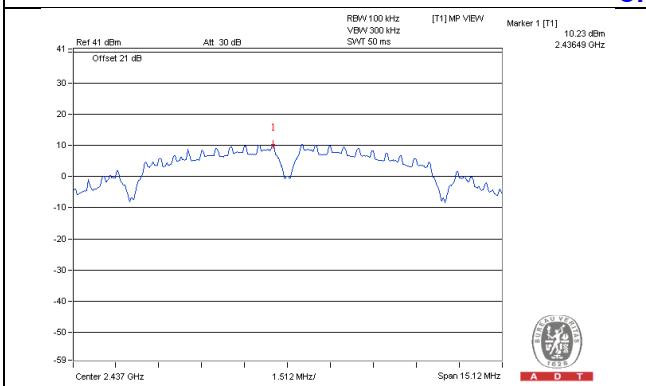
CHAIN 1

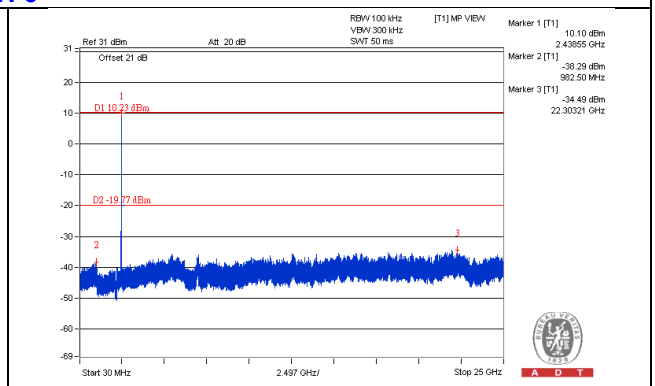
CH 1



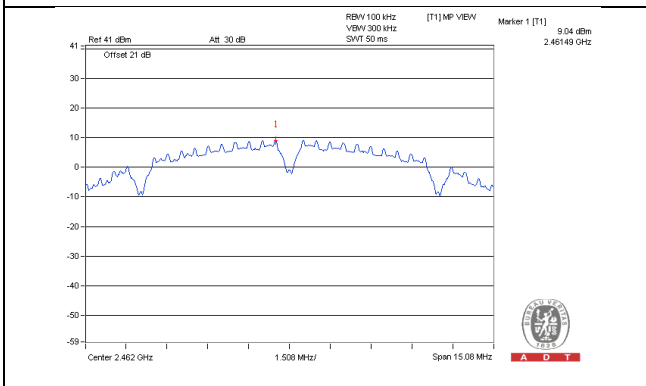


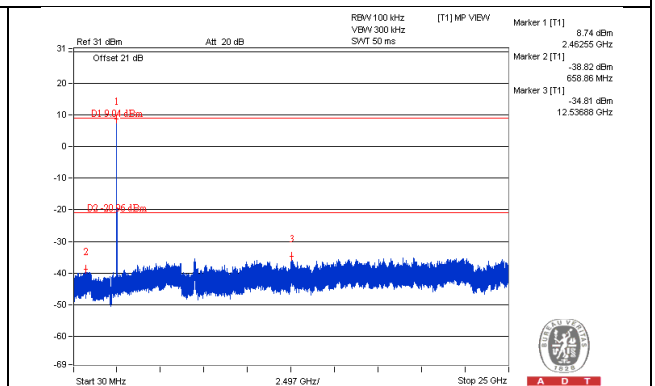
CH 6



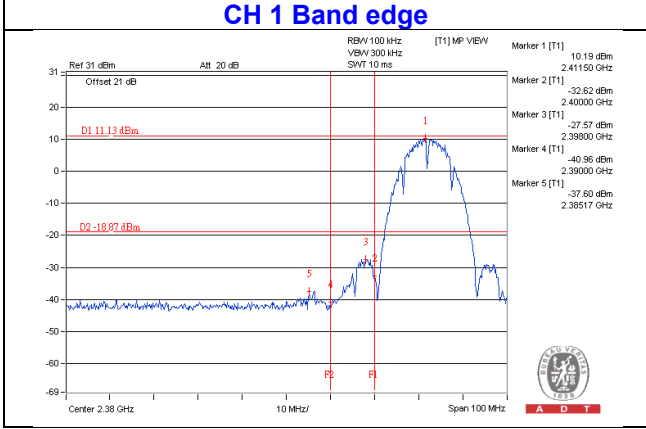


CH 11

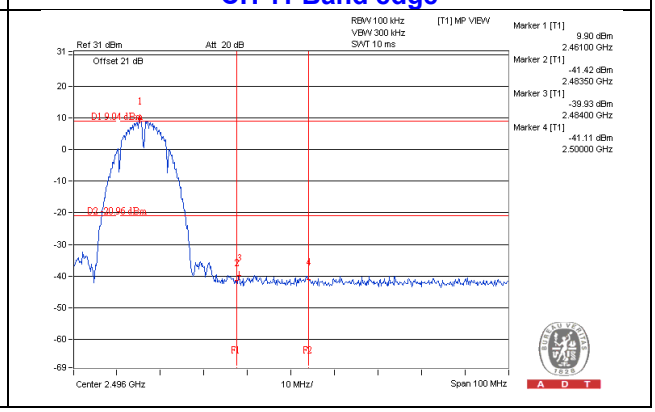




CH 1 Band edge

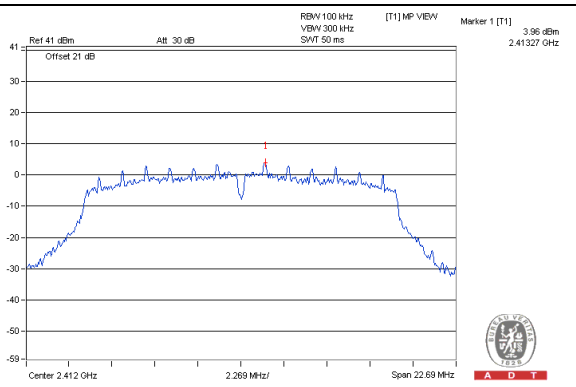


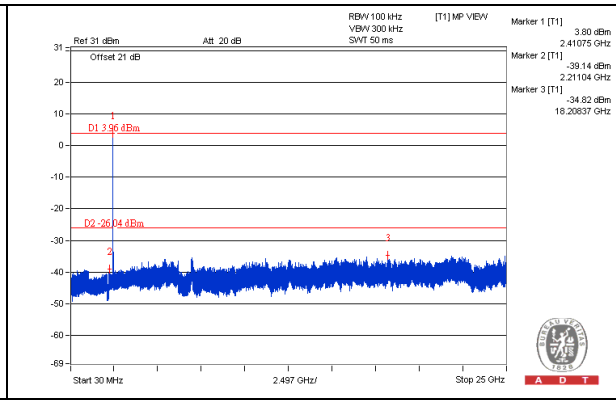
CH 11 Band edge



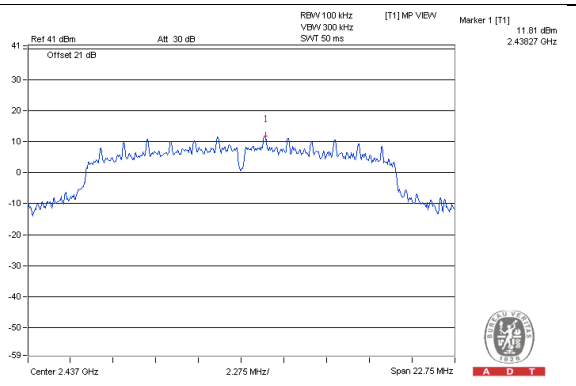
802.11g
CHAIN 0

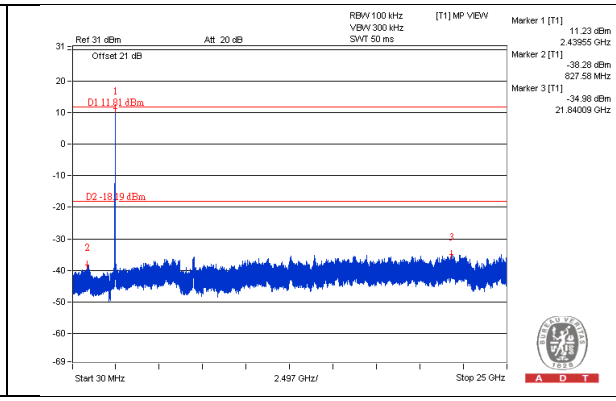
CH 1



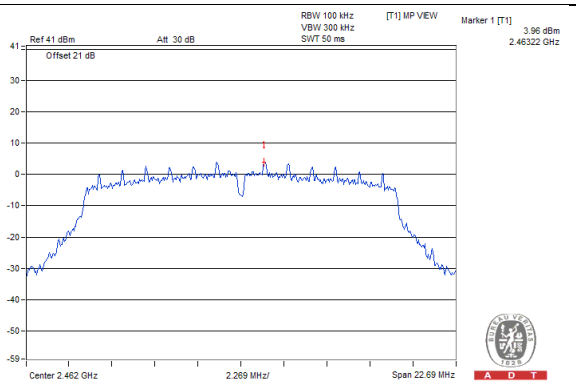


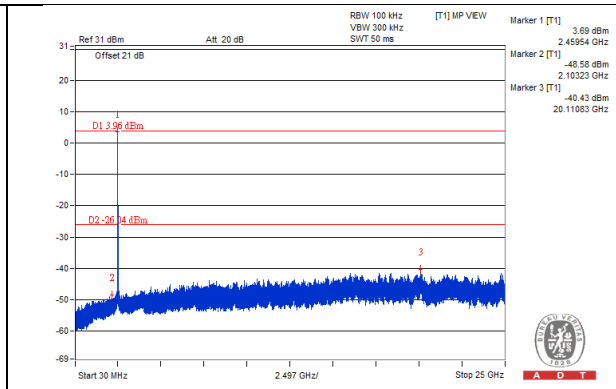
CH 6



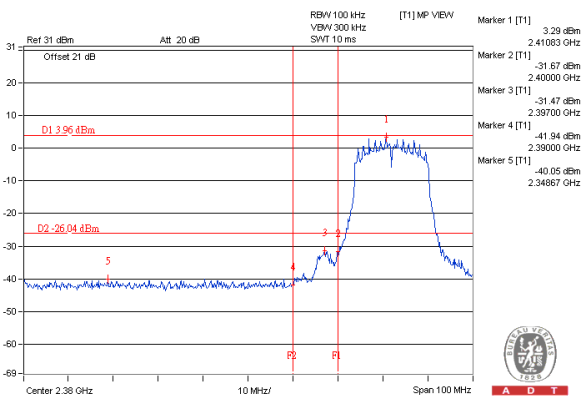


CH 11

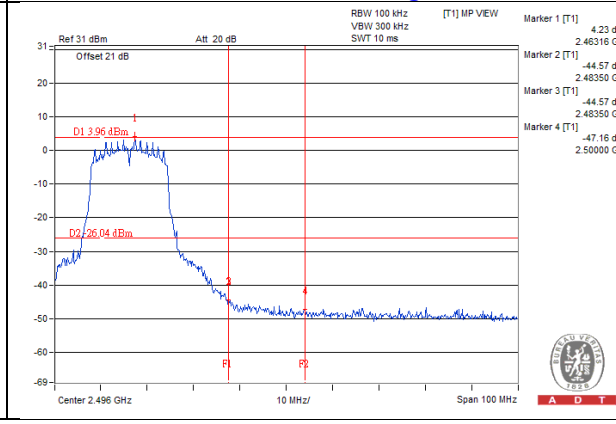




CH 1 Band edge

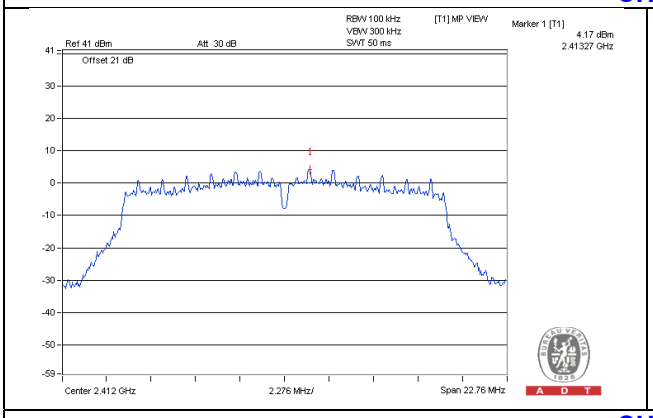


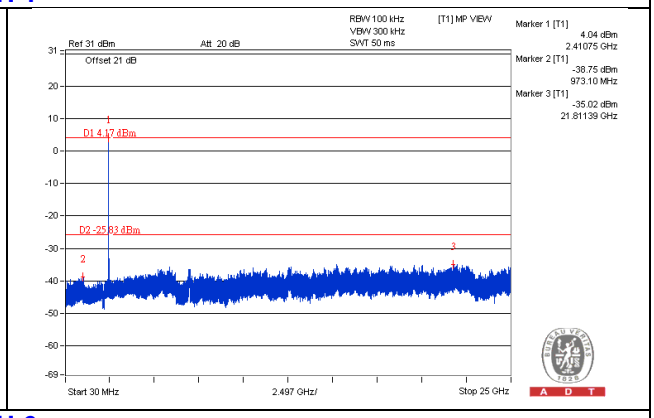
CH 11 Band edge



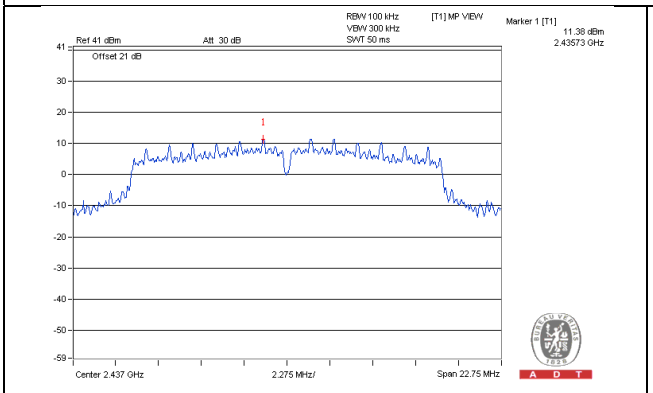
CHAIN 1

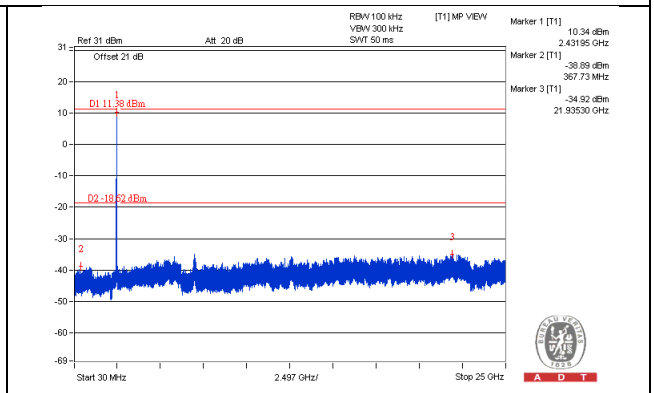
CH 1



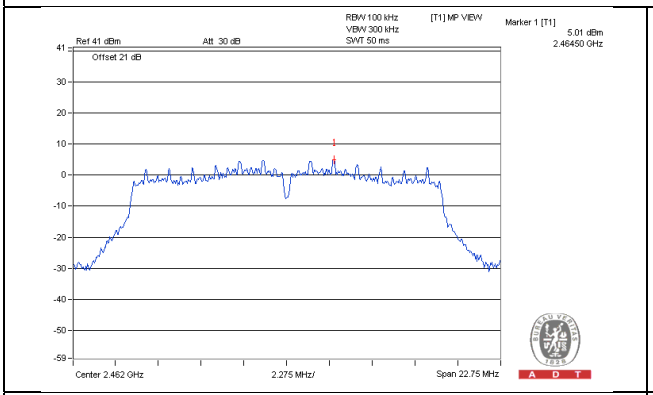


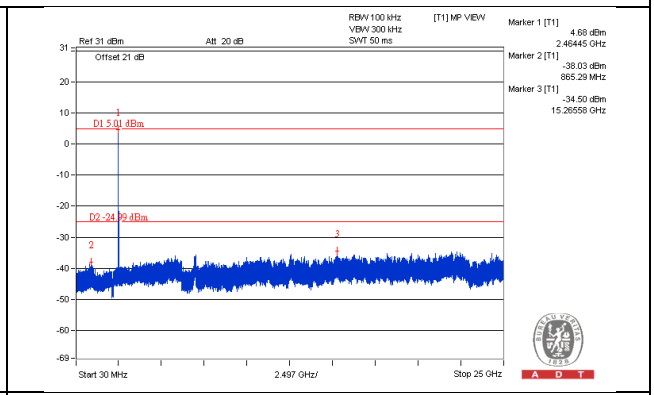
CH 6



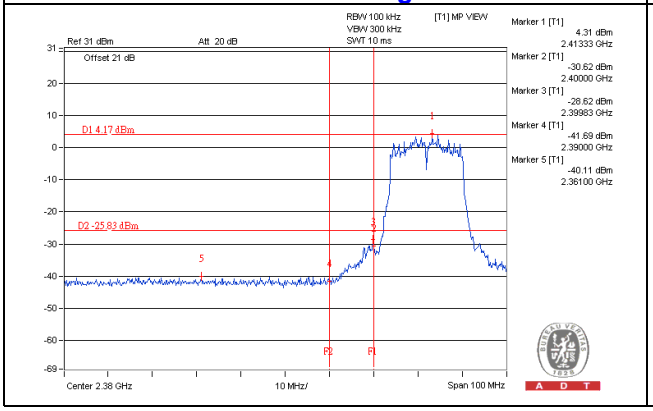


CH 11

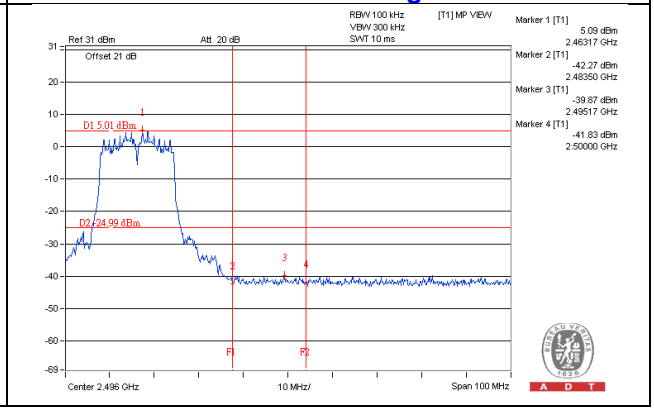




CH 1 Band edge

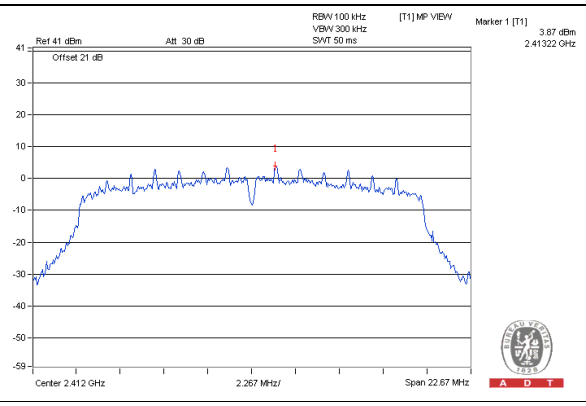


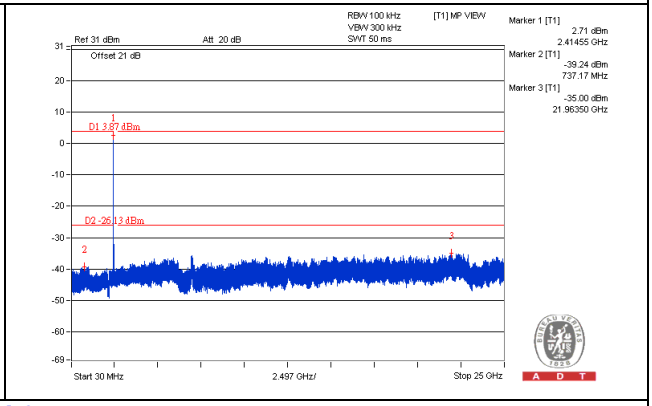
CH 11 Band edge



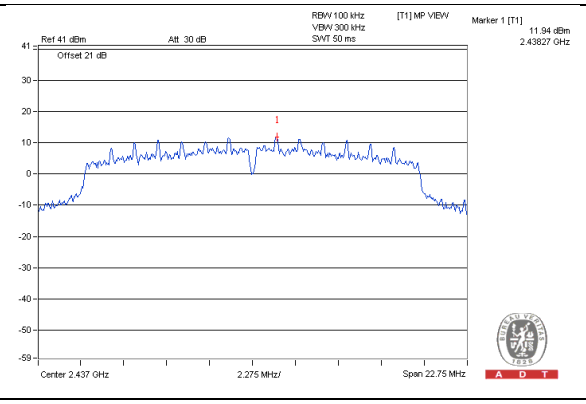
802.11n (HT20)
CHAIN 0

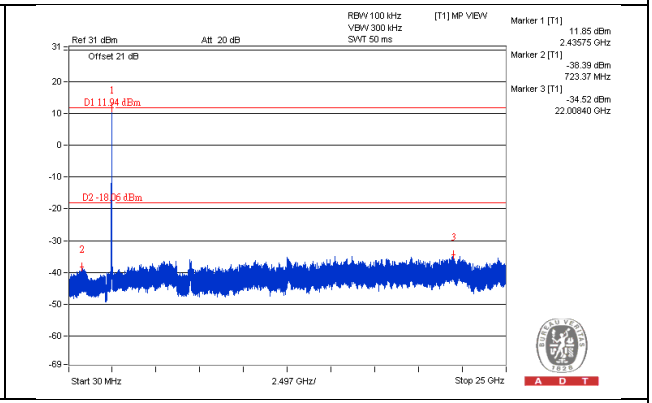
CH 1



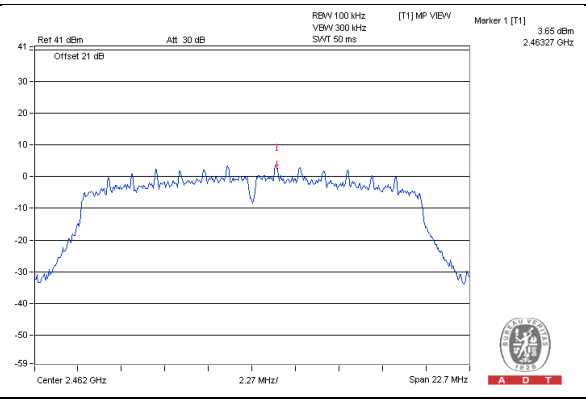


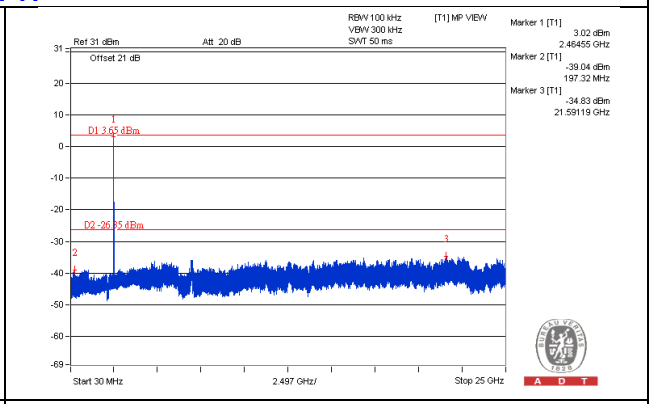
CH 6



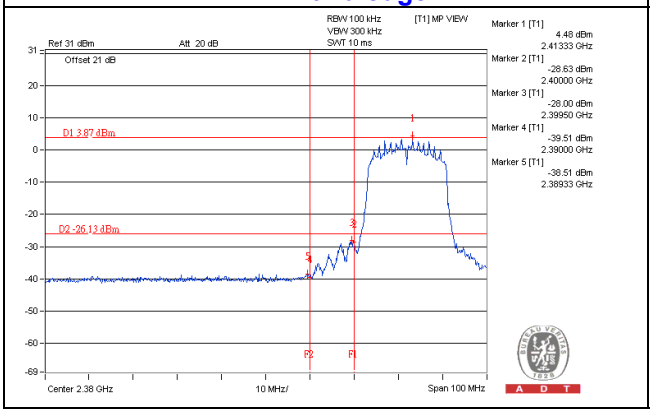


CH 11

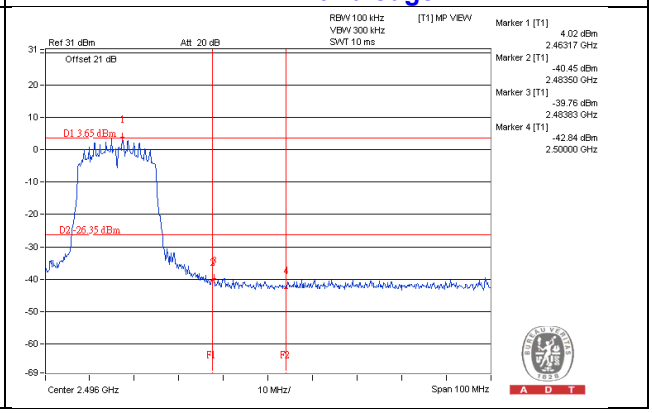




CH 1 Band edge

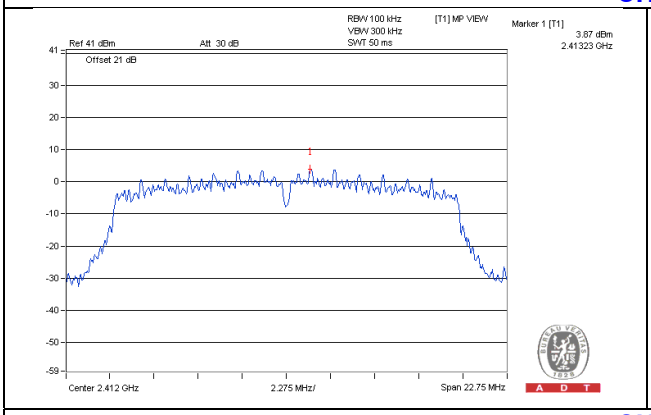


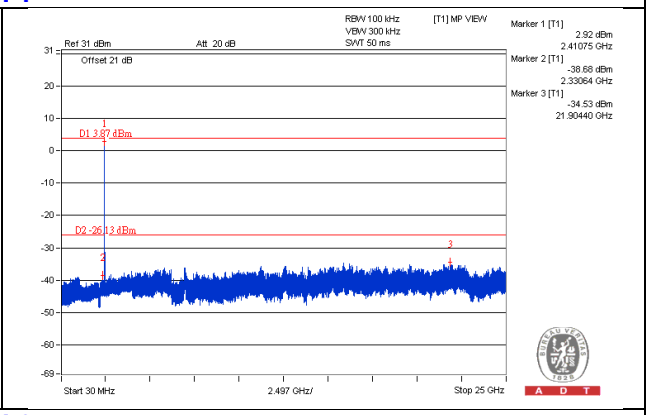
CH 11 Band edge



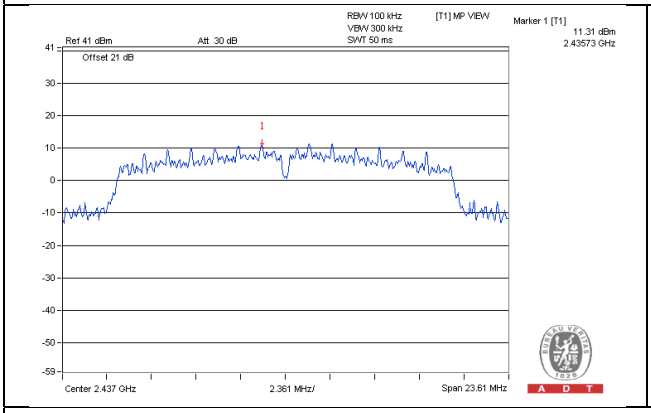
CHAIN 1

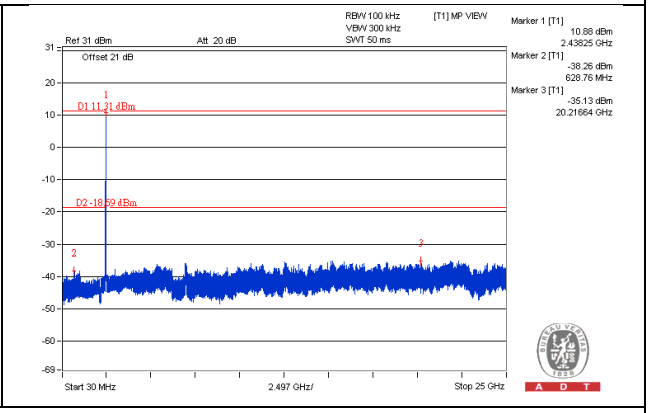
CH 1



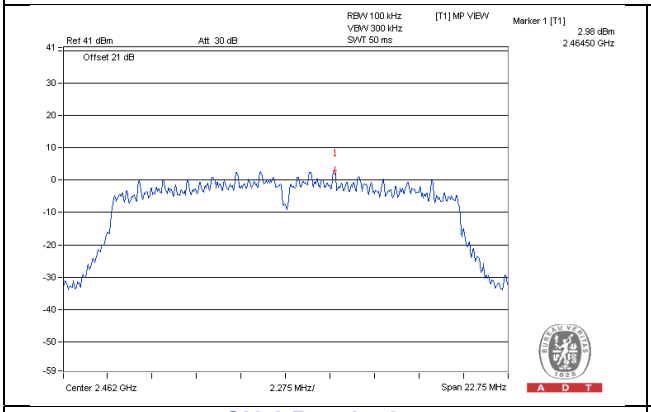


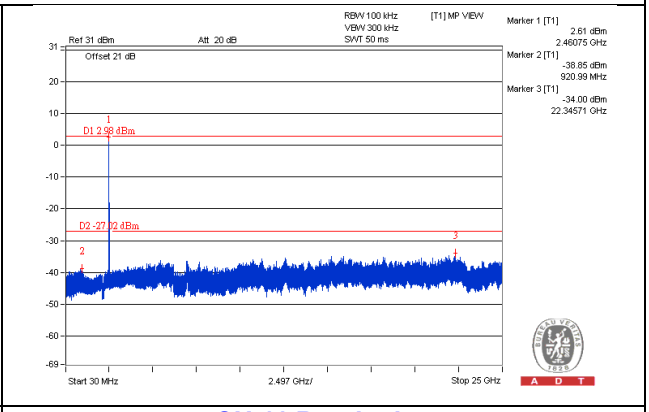
CH 6



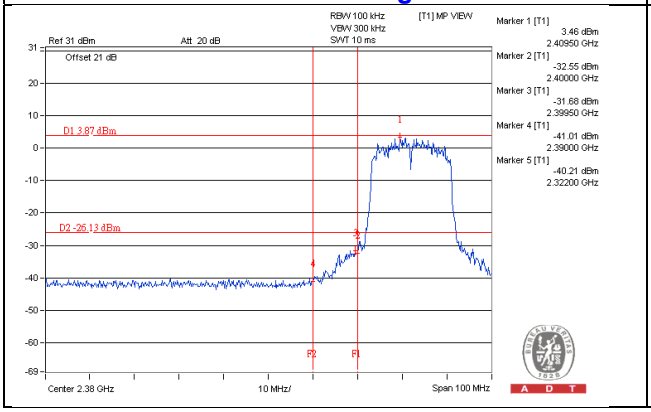


CH 11

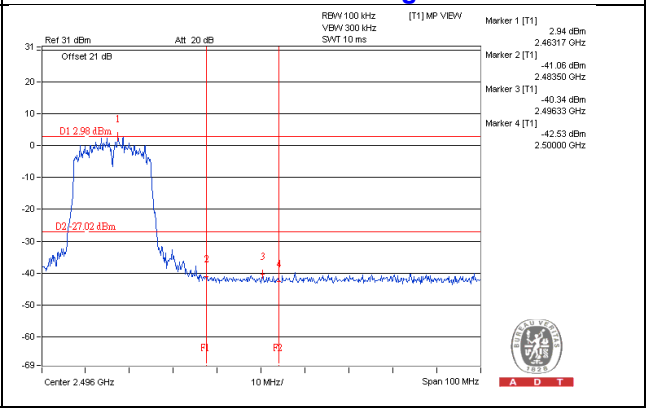




CH 1 Band edge

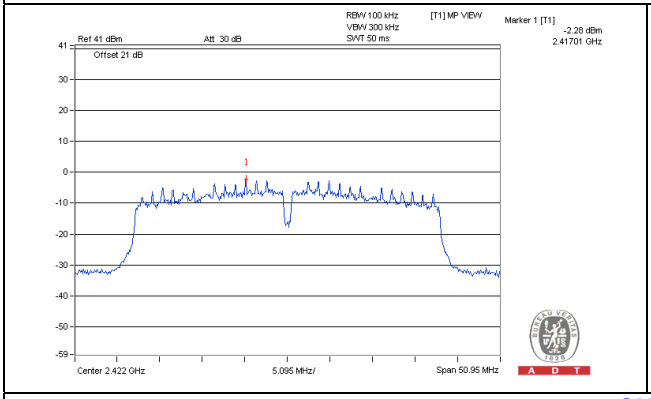


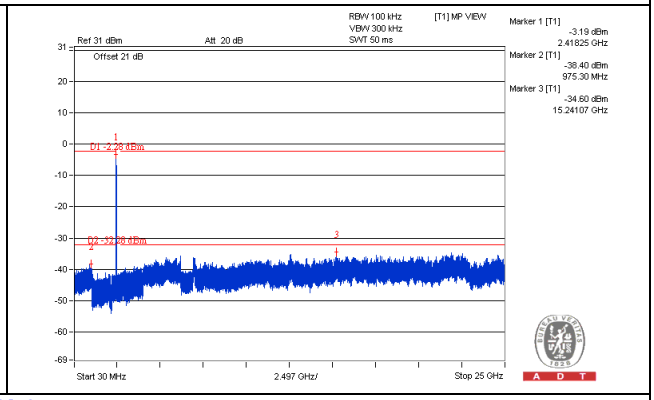
CH 11 Band edge



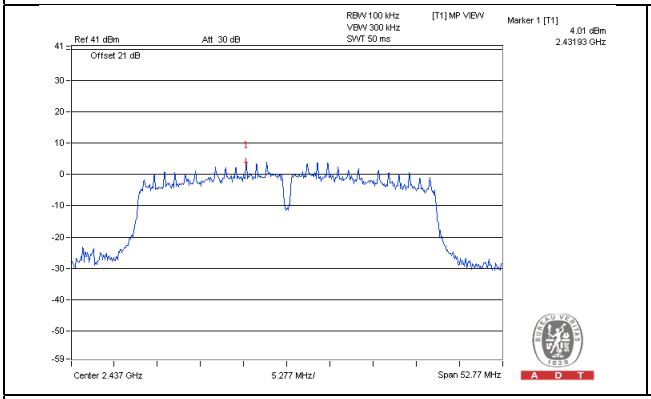
802.11n (HT40)
CHAIN 0

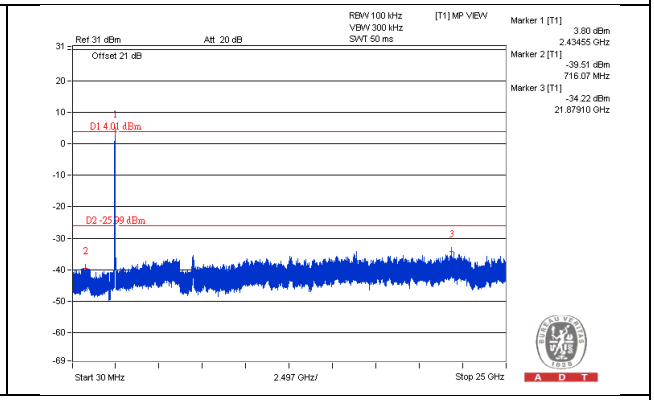
CH 3



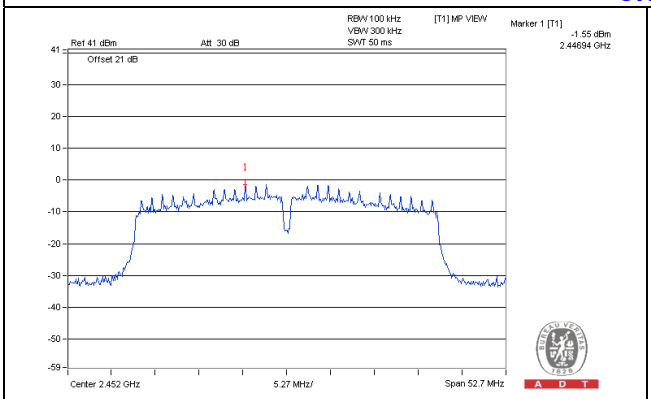


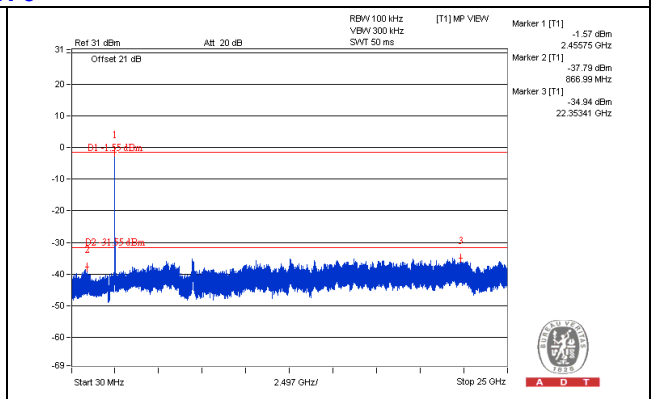
CH 6



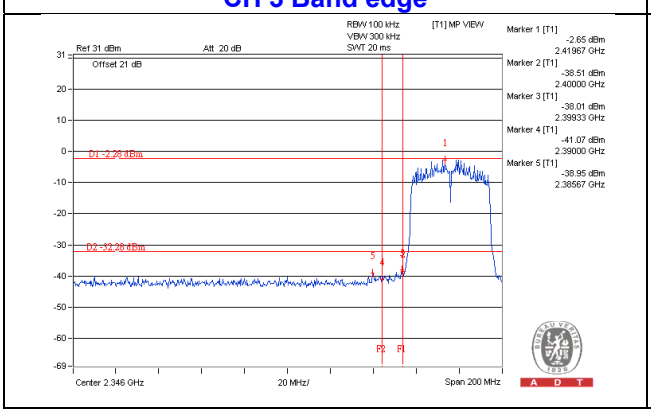


CH 9

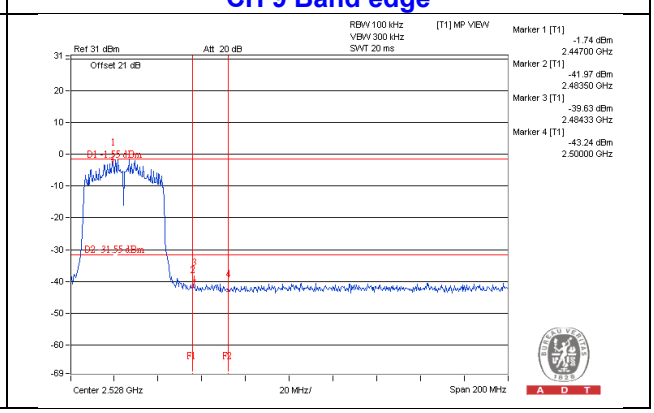




CH 3 Band edge

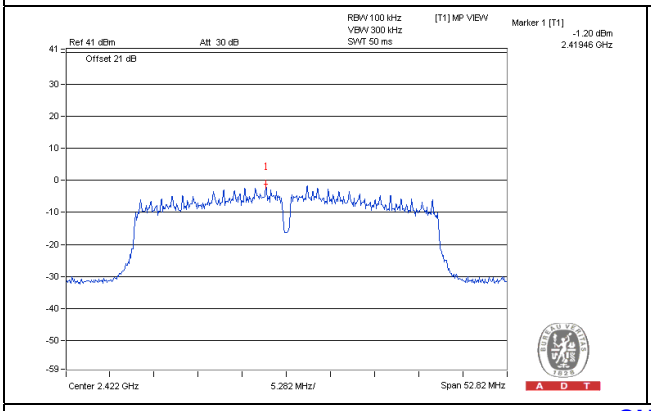


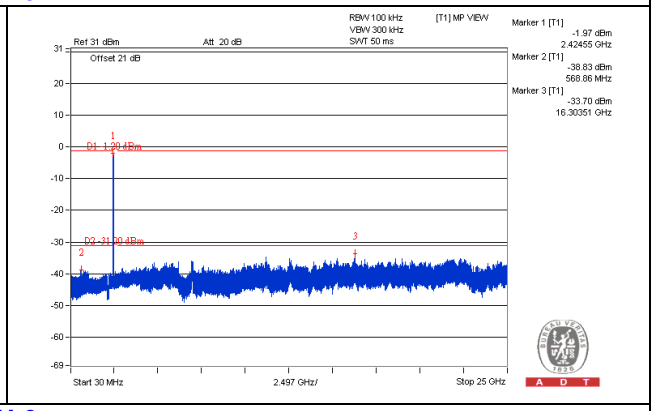
CH 9 Band edge



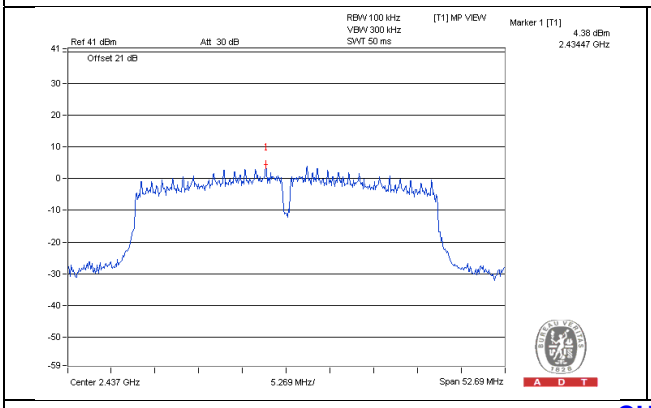
CHAIN 1

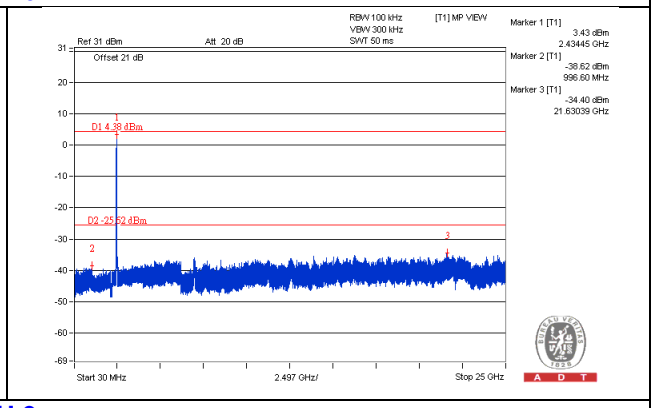
CH 3



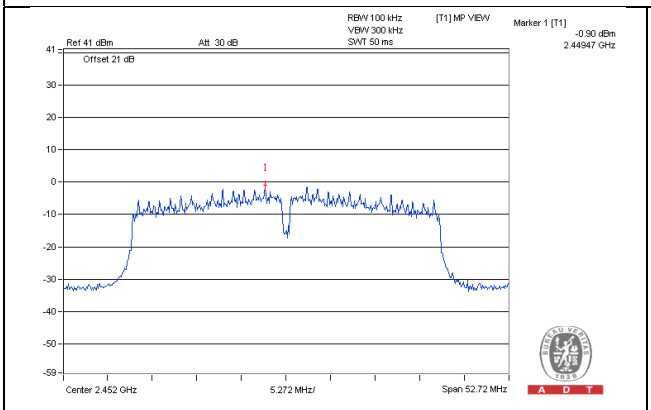


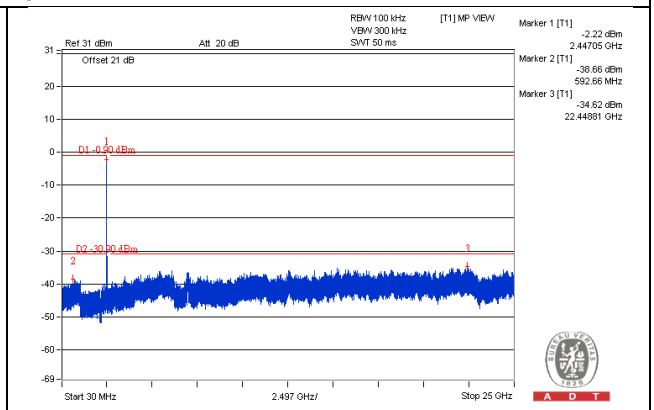
CH 6



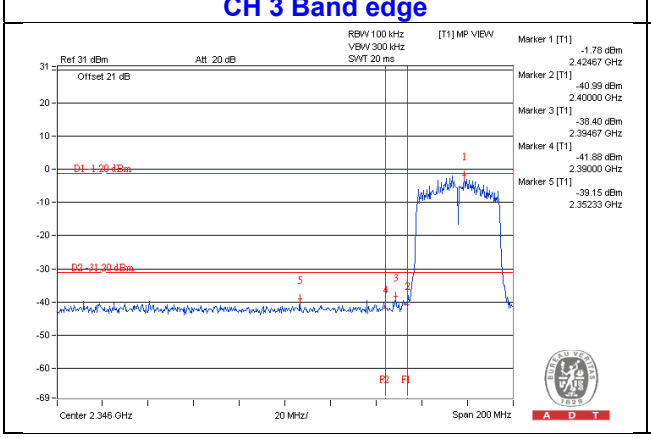


CH 9

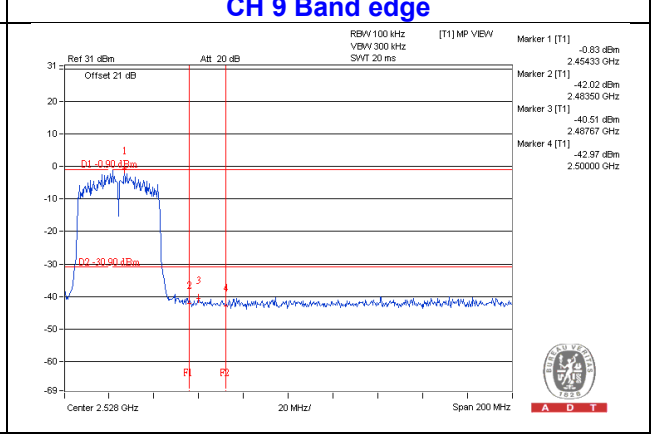




CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

Appendix – 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.

If you have any comments, please feel free to contact us at the following:

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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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