

## FCC Test Report

**Report No.:** RF170731C10

**FCC ID:** QXO-AP3917E

**Test Model:** AP3917e

**Series Model:** AP7662 (refer to item 3.1 for more details)

**Received Date:** Jul. 31, 2017

**Test Date:** Aug. 14 ~ Oct. 25, 2017

**Issued Date:** Nov. 08, 2017

**Applicant:** Extreme Networks, Inc.

**Address:** 6480 VIA DEL ORO SAN JOSE CA 95119 USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
RF170731C10	Original release.	Nov. 08, 2017

## 1 Certificate of Conformity

**Product:** Wireless 802.11 a/ac+b/g/n Access Point

**Brand:** Extreme Networks

**Test Model:** AP3917e

**Series Model:** AP7662 (refer to item 3.1 for more details)


**Sample Status:** Engineering sample


**Applicant:** Extreme Networks, Inc.

**Test Date:** Aug. 14 ~ Oct. 25, 2017

**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:** Nov. 08, 2017  
Polly Chen / Specialist

**Approved by :**  , **Date:** Nov. 08, 2017  
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 -4.89dB at 0.47537MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.1dB at 2390.00MHz & 2483.50MHz.
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	Antenna connectors are N Male and 4 N Male 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	Expanded Uncertainty (k=2) ( $\pm$ )
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 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 802.11 a/ac+b/g/n Access Point
Brand	Extreme Networks
Test Model	AP3917e
Series Model	AP7662
Model Difference	Refer to note for more details
Sample Status	Engineering sample
Power Supply Rating	54Vdc from POE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps
Operating Frequency	2412 ~ 2462MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7
Output Power	Refer to Note
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Cable Supplied	1.75m non-shielded grounding cable w/o core

Note:

1. All models are listed as below. Model: AP3917e was chosen for final test.

Brand	Model	Difference
Extreme Networks	AP3917e	All models are electrically identical, only cover printing different.
	AP7662	

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

Modulation Mode	TX Function	Beamforming
802.11b	2TX	Not Support
802.11g	2TX	Not Support
802.11n (HT20)	2TX	Support
802.11n (HT40)	2TX	Support

\* For 802.11n, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

3. Output Power is listed as below.

Antenna Model	CDD Mode (mW)	Beamforming Mode (mW)
ML-2499-HPA8-01	548.600	255.270
ML-2452-PNA5-01R	541.158	255.270
ML-2452-PNA7-01R	541.158	231.206
ML-2452-PNL6M4-N36	548.600	255.270
ML-2452-PNL9M3-N36	296.431	143.219

4. The EUT consumes power from following POE. (Support unit only)

POE	
Brand	EnGenius
Model	EPA5006GP
Input Power	100-240Vac, 50-60Hz, 0.8A
Output Power	54Vdc, 0.6A Pin 4, 5: 54Vdc Pin 7, 8: Return

5. The EUT uses following antennas.

Item	Function	Antenna Type	Part No	Connector	Gain (dBi)		
					2.4G	4.9G	5G
1	WLAN	Dipole	ML-2452-HPAG5A8-01	N Male	5	7.5	8
2	WLAN	Dipole	ML-2452-HPAG4A6-01	N Male	4		7.3
3	WLAN	Dipole	ML-2452-HPA6X6-036	N Male	4		6
4	WLAN	Dipole	WS-AO-DQ04360N	4 N Male	5.5		6
5	WLAN	Dipole	ML-2499-HPA4-01	N Male	4.5		
6	WLAN	Dipole	ML-2452-HPA6-01	N Male	5.3	4.6	6.1
7	WLAN	Dipole	ML-5299-HPA5-01	N Male			5.6
8	WLAN & BT LE & Zigbee	Dipole	ML-2499-HPA8-01	N Male	8		
9	WLAN	Dipole	ML-2499-FHPA5-01R	N Male	7.7		
10	WLAN	Dipole	ML-5299-FHPA6-01R	N Male		8.25	8.25
11	WLAN	Panel	ML-2452-PNA5-01R	N Male	4.5	5	5~4.5 MAX:5
12	WLAN & BT LE & Zigbee	Panel	ML-2452-PNA7-01R	N Male	7.8	7	10.7~7 MAX:10.7
13	WLAN	Polarized Panel	ML-2452-PNL6M4-N36	4 N Male	5.6	6.7	6.7
14	WLAN	Polarized Panel	ML-2452-SEC6M4-N36	4 N Male	6.92		7.23
15	WLAN	Polarized Panel	ML-2452-SEC6M4-N30	4 N Male	5.5		6
16	WLAN	Polarized Panel	ML-2452-PNL9M3-N36	N Male	11	7.3	10.7

For 2.4GHz band:

- \* Antenna 8 with the maximum gain was chosen for final test among Antenna 1~10.
- \* Antenna 11, 12 were chosen for final test.
- \* Antenna 13 with the maximum gain was chosen for final test among Antenna 13 & 15.
- \* Antenna 16 with the maximum gain was chosen for final test among Antenna 14 & 16.



6. Power Setting as below.

ML-2452-HPAG5A8-01& ML-5299-FHPA6-01R, ML-2452-HPAG4A6-01, ML-2452-HPA6X6-036,  
 WS-AO-DQ04360N, ML-2499-HPA4-01, ML-2452-HPA6-01, ML-5299-HPA5-01, ML-2499-HPA8-01,  
 ML-2499-FHPA5-01R:

CDD Mode					
	802.11b	802.11g	802.11n (HT20)		802.11n (HT40)
CH 1	22.5	17.5	16.5	CH 3	12.5
CH 6	23.5	23.5	23.5	CH 6	16.5
CH 11	18.5	15	14	CH 9	11.5
Beamforming Mode					
	802.11n (HT20)			802.11n (HT40)	
CH 1	16.5		CH 3	12.5	
CH 6	23.5		CH 6	16.5	
CH 11	14		CH 9	11.5	

ML-2452-PNA5-01R Ant.:

CDD Mode					
	802.11b	802.11g	802.11n (HT20)		802.11n (HT40)
CH 1	22.5	18.5	17	CH 3	13.5
CH 6	23.5	23.5	23.5	CH 6	17
CH 11	22	19	18	CH 9	14
Beamforming Mode					
	802.11n (HT20)			802.11n (HT40)	
CH 1	17		CH 3	13.5	
CH 6	23.5		CH 6	17	
CH 11	18		CH 9	14	

ML-2452-PNA7-01R Ant.:

CDD Mode					
	802.11b	802.11g	802.11n (HT20)		802.11n (HT40)
CH 1	21.5	16.5	14.5	CH 3	12
CH 6	23.5	23.5	23	CH 6	15
CH 11	19	16	14	CH 9	11
Beamforming Mode					
	802.11n (HT20)			802.11n (HT40)	
CH 1	14.5		CH 3	12	
CH 6	23		CH 6	15	
CH 11	14		CH 9	11	

ML-2452-PNL6M4-N36 Ant.:

CDD Mode					
	802.11b	802.11g	802.11n (HT20)		802.11n (HT40)
CH 1	23.5	18.5	17	CH 3	14
CH 6	23.5	23.5	23.5	CH 6	18.5
CH 11	22	19.5	18.5	CH 9	17.5
Beamforming Mode					
	802.11n (HT20)			802.11n (HT40)	
CH 1	17		CH 3	14	
CH 6	23.5		CH 6	18.5	
CH 11	18.5		CH 9	17.5	

ML-2452-PNL9M3-N36 & ML-2452-SEC6M4-N30, ML-2452-PNL9M3-N36

CDD Mode					
	802.11b	802.11g	802.11n (HT20)		802.11n (HT40)
CH 1	21	18.5	18	CH 3	14.5
CH 6	21	21	21	CH 6	18.5
CH 11	21	18	17.5	CH 9	15
Beamforming Mode					
	802.11n (HT20)			802.11n (HT40)	
CH 1	18		CH 3	14.5	
CH 6	21		CH 6	18.5	
CH 11	17.5		CH 9	15	

7. 2.4GHz & 5GHz & BT LE or 2.4GHz & 5GHz & Zigbee technology can transmit at same time. BT LE and Zigbee cannot transmit simultaneously.
8. Spurious emission of the simultaneous operation (2.4GHz & 5GHz & BT LE or 2.4GHz & 5GHz & Zigbee) has been evaluated and no non-compliance was found.

### 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 $\geq$ 1G	RE<1G	PLC	APCM	Antenna Model
A	√	√	√	√	ML-2499-HPA8-01
B	√	√	√	√	ML-2452-PNA5-01R
C	√	√	√	√	ML-2452-PNA7-01R
D	√	√	√	√	ML-2452-PNL6M4-N36
E	√	√	√	√	ML-2452-PNL9M3-N36

Where RE $\geq$ 1G: Radiated Emission above 1GHz & Bandedge Measurement  
 RE<1G: Radiated Emission below 1GHz  
 PLC: Power Line Conducted Emission  
 APCM: Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane for test mode A (RE $\geq$ 1G), C and Z-plane for test mode mode A (RE<1G), B, D, E.**

#### **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, B, C, D, E	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, B, C, D, E	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, B, C, D, E	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B, C, D, E	802.11n (HT40)	3 to 9	3, 6, 9	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 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, E	802.11b	1 to 11	6	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, C, D, E	802.11b	1 to 11	6	DSSS	DBPSK	1.0

**6dB Bandwidth, Power Spectral Density and Conducted Out of Band Emission 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, B, C, D, E	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, B, C, D, E	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, B, C, D, E	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B, C, D, E	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

**Conducted Output Power 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)
<b>CDD Mode</b>						
A, B, C, D, E	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, B, C, D, E	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, B, C, D, E	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B, C, D, E	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
<b>Beamforming Mode</b>						
A, B, C, D, E	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B, C, D, E	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

**Test Condition:**

Applicable to	Environmental Conditions	Input Power (System)	Tested by
<b>RE≥1G</b>	23 deg. C, 68% RH 22 deg. C, 64% RH 23 deg. C, 69% RH 24 deg. C, 68% RH	120Vac, 60Hz	James Chang Willy Cheng
<b>RE&lt;1G</b>	22 deg. C, 64% RH 23 deg. C, 68% RH 23 deg. C, 69% RH	120Vac, 60Hz	Willy Cheng
<b>PLC</b>	25 deg. C, 68% RH	120Vac, 60Hz	Jones Chang
<b>APCM</b>	25 deg. C, 60% RH	120Vac, 60Hz	Han Wu

### 3.3 Duty Cycle of Test Signal

Duty cycle of test signal is  $\geq 98\%$ , duty factor is not required.

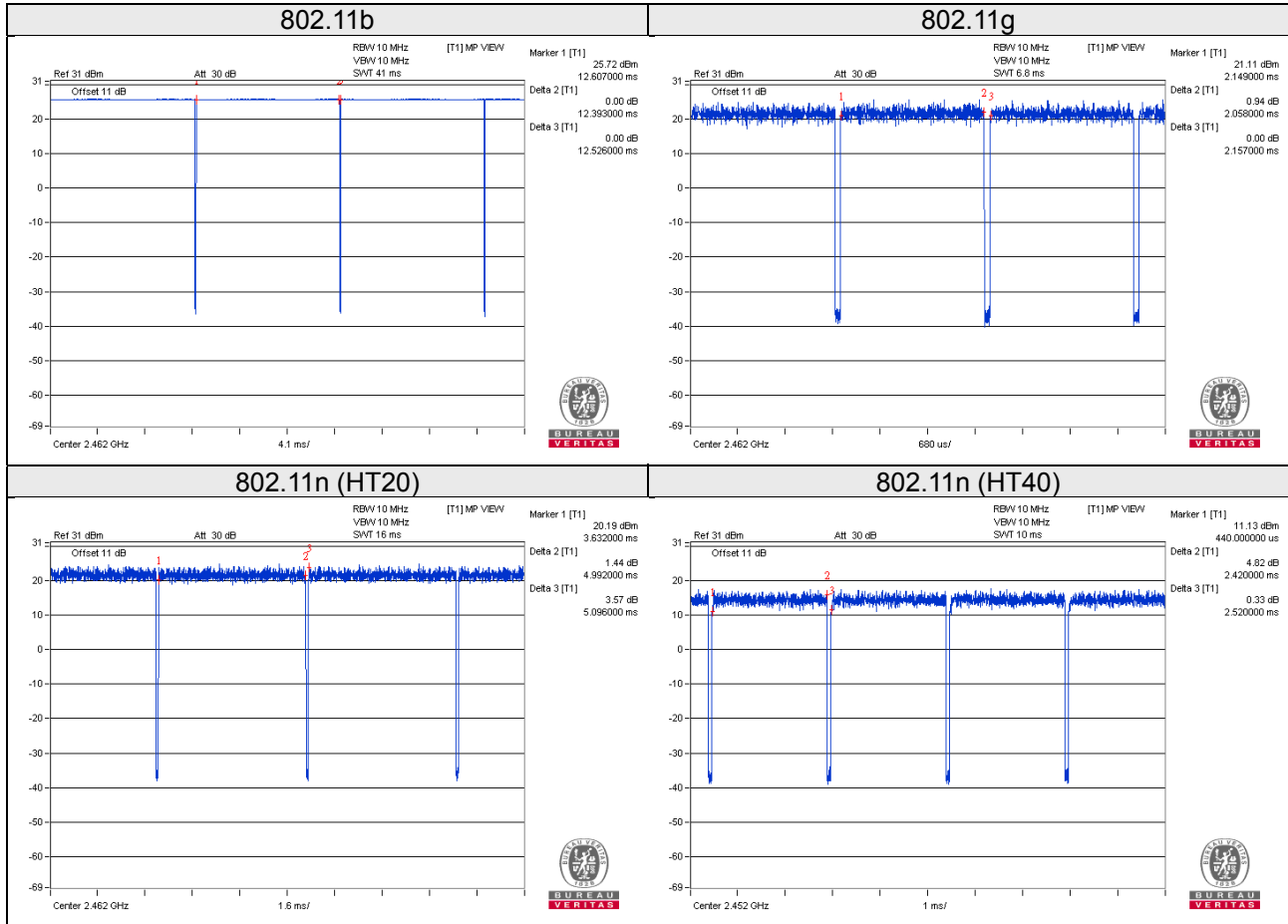
Duty cycle of test signal is  $< 98\%$ , duty factor is required.

802.11b: Duty cycle =  $12.393/12.526 = 0.989$

802.11g: Duty cycle =  $2.058/2.157 = 0.954$ , Duty factor =  $10 * \log(1/0.954) = 0.20$

802.11n (HT20): Duty cycle =  $4.992/5.096 = 0.980$

802.11n (HT40): Duty cycle =  $2.420/2.520 = 0.960$ , Duty factor =  $10 * \log(1/0.960) = 0.18$



### 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.

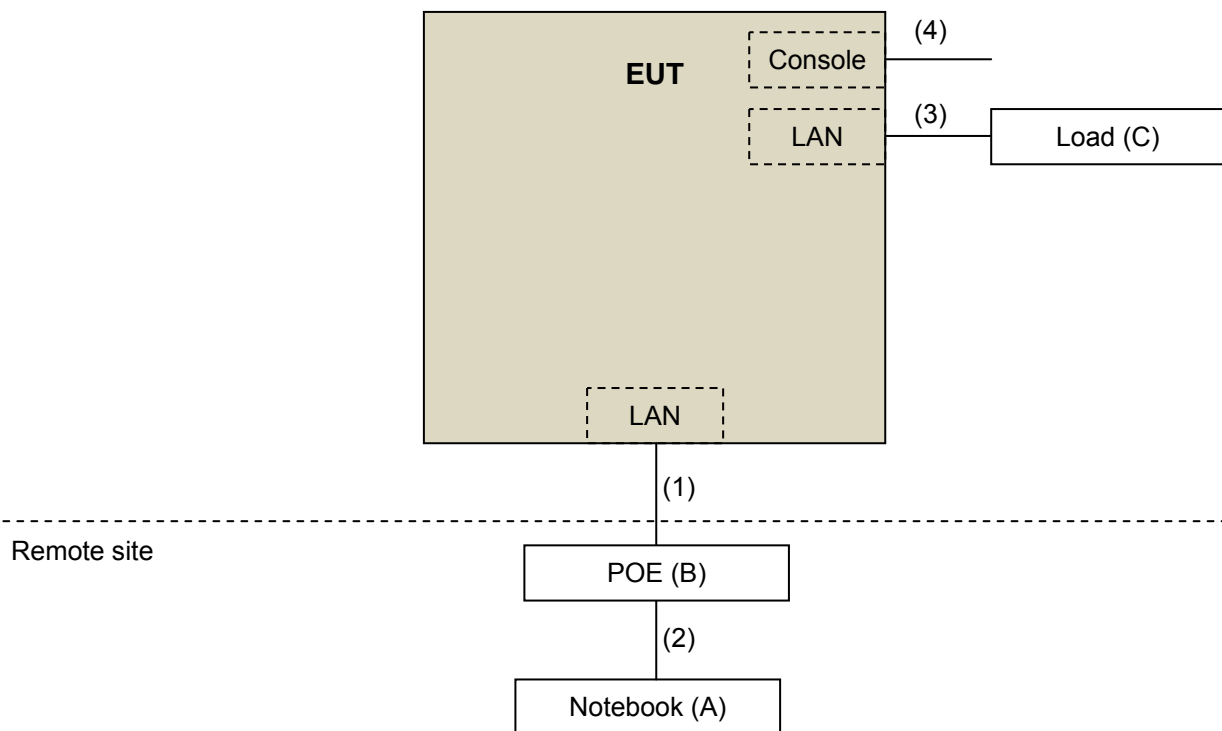
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	POE	EnGenius	EPA5006GP	NA	NA	Provided by manufacturer
C.	Load	NA	NA	NA	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	3	N	0	-
2.	RJ45, Cat5e	1	1.8	N	0	-
3.	RJ45, Cat5e	1	1.8	N	0	-
4.	Console cable	1	0.2	N	0	Provided by manufacturer

#### 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 v04**

**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.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 02, 2017	May 01, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	9120D	209	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
Preamplifier Agilent	8449B	3008A02465	Apr. 05, 2017	Apr. 04, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2017	Aug. 20, 2018
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-S M-8000	Cable-CH3-03 (309224+170907)	Sep.11, 2017	Sep. 10, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
High Speed Peak Power Meter	ML2495A	0824012	Aug. 18, 2017	Aug. 17, 2018
Power Sensor	MA2411B	0738171	Aug. 18, 2017	Aug. 17, 2018

- Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The test was performed in HwaYa Chamber 3.
  3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
  5. The IC Site Registration No. is IC 7450F-3.

### 4.1.3 Test Procedures

#### For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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.

**Note:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

#### For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 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:**

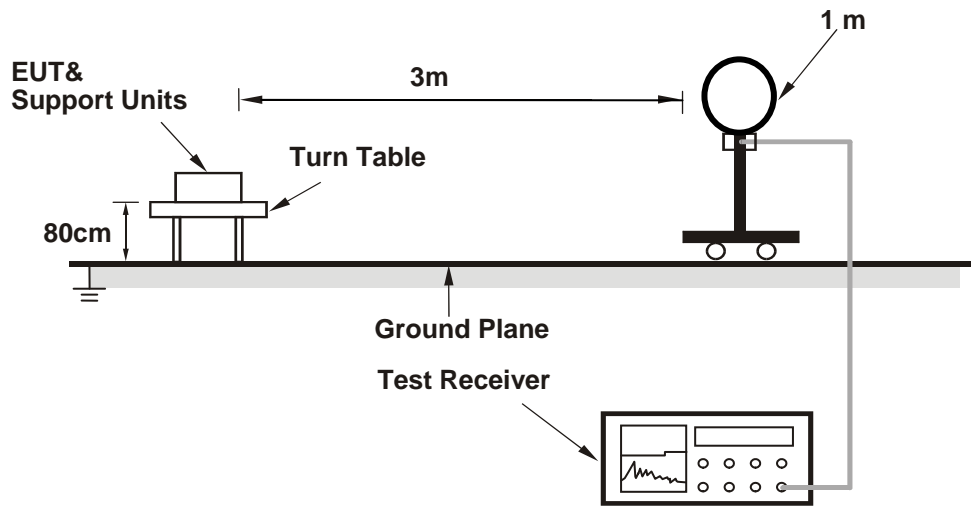
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10 Hz (Duty cycle  $\geq 98\%$ ) for Peak detection 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

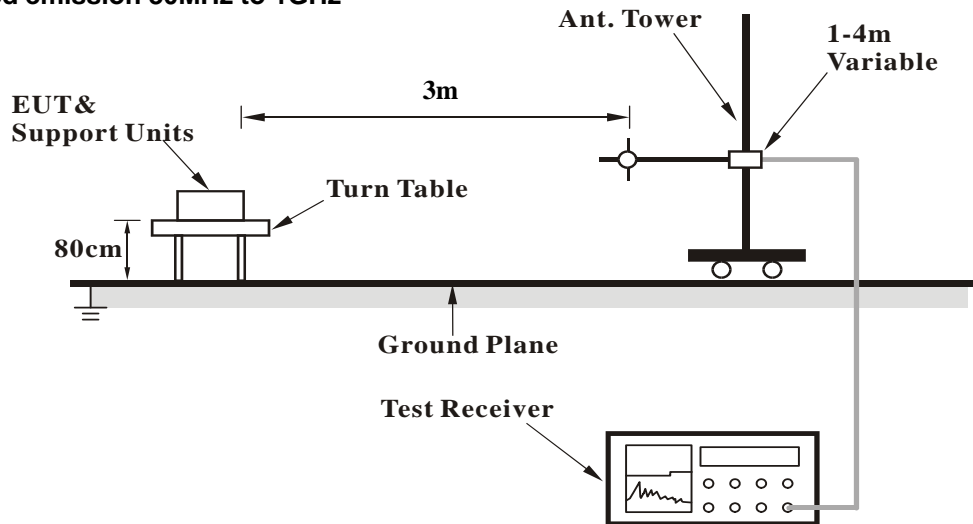
No deviation.

#### 4.1.5 Test Setup

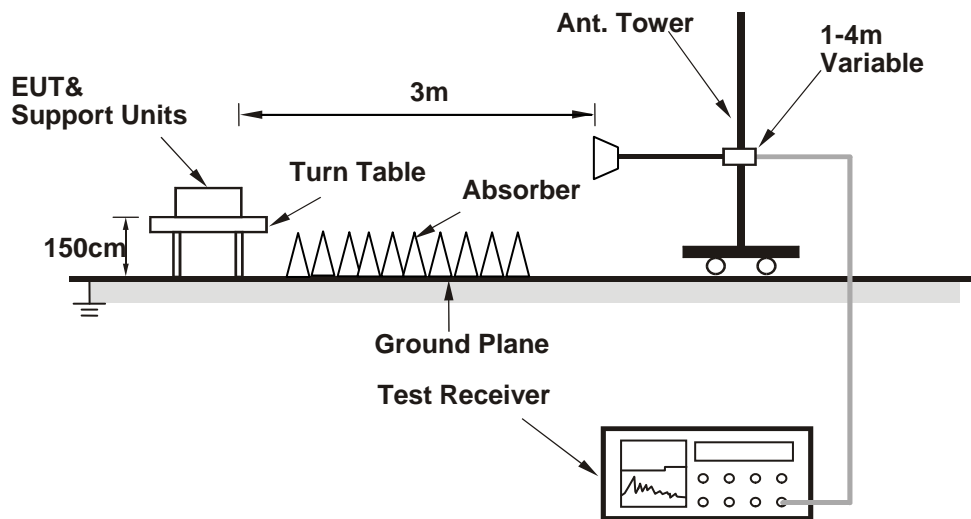
##### For Radiated emission below 30MHz



##### For Radiated emission 30MHz to 1GHz



### For Radiated emission above 1GHz



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 a notebook to act as a communication partner and placed it outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and ran 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

Above 1GHz Data:

Test Mode A

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	60.5 PK	74.0	-13.5	1.13 H	354	29.50	31.00
2	2386.00	52.7 AV	54.0	-1.3	1.13 H	354	21.70	31.00
3	*2412.00	122.6 PK			3.37 H	352	91.40	31.20
4	*2412.00	118.3 AV			3.37 H	352	87.10	31.20
5	4824.00	52.6 PK	74.0	-21.4	2.54 H	32	52.10	0.50
6	4824.00	48.1 AV	54.0	-5.9	2.54 H	32	47.60	0.50
7	#7236.00	53.8 PK	92.6	-38.8	2.45 H	107	46.70	7.10
8	#7236.00	45.0 AV	88.3	-43.3	2.45 H	107	37.90	7.10
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	2390.00	58.1 PK	74.0	-15.9	3.20 V	100	27.10	31.00
2	2390.00	47.5 AV	54.0	-6.5	3.20 V	100	16.50	31.00
3	*2412.00	114.5 PK			3.46 V	96	83.30	31.20
4	*2412.00	110.6 AV			3.46 V	96	79.40	31.20
5	4824.00	51.7 PK	74.0	-22.3	2.14 V	54	51.20	0.50
6	4824.00	44.3 AV	54.0	-9.7	2.14 V	54	43.80	0.50
7	#7236.00	52.6 PK	84.5	-31.9	1.41 V	66	45.50	7.10
8	#7236.00	40.6 AV	80.6	-40.0	1.41 V	66	33.50	7.10

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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

**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	124.7 PK			2.10 H	355	91.50	33.20
2	*2437.00	120.7 AV			2.10 H	355	87.50	33.20
3	2495.00	60.9 PK	74.0	-13.1	1.10 H	356	27.40	33.50
4	2495.00	51.9 AV	54.0	-2.1	1.10 H	356	18.40	33.50
5	4874.00	55.1 PK	74.0	-18.9	2.49 H	36	53.30	1.80
6	4874.00	50.7 AV	54.0	-3.3	2.49 H	36	48.90	1.80
7	7311.00	60.3 PK	74.0	-13.7	2.43 H	103	52.90	7.40
8	7311.00	51.1 AV	54.0	-2.9	2.43 H	103	43.70	7.40

**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	*2437.00	115.8 PK			3.39 V	61	84.50	31.30
2	*2437.00	111.9 AV			3.39 V	61	80.60	31.30
3	2495.00	58.5 PK	74.0	-15.5	3.30 V	55	26.90	31.60
4	2495.00	47.4 AV	54.0	-6.6	3.30 V	55	15.80	31.60
5	4874.00	51.7 PK	74.0	-22.3	1.33 V	43	51.10	0.60
6	4874.00	47.7 AV	54.0	-6.3	1.33 V	43	47.10	0.60
7	7311.00	57.4 PK	74.0	-16.6	3.44 V	81	50.30	7.10
8	7311.00	48.6 AV	54.0	-5.4	3.44 V	81	41.50	7.10

**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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	120.5 PK			2.76 H	168	89.10	31.40
2	*2462.00	113.6 AV			2.76 H	168	82.20	31.40
3	2487.00	61.2 PK	74.0	-12.8	2.42 H	355	29.70	31.50
4	2487.00	52.5 AV	54.0	-1.5	2.42 H	355	21.00	31.50
5	4924.00	50.9 PK	74.0	-23.1	1.98 H	31	50.30	0.60
6	4924.00	45.3 AV	54.0	-8.7	1.98 H	31	44.70	0.60
7	7386.00	54.8 PK	74.0	-19.2	1.32 H	105	47.70	7.10
8	7386.00	43.2 AV	54.0	-10.8	1.32 H	105	36.10	7.10

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	*2462.00	103.9 PK			1.26 V	358	72.50	31.40
2	*2462.00	100.1 AV			1.26 V	358	68.70	31.40
3	2487.00	55.7 PK	74.0	-18.3	1.26 V	358	24.20	31.50
4	2487.00	46.2 AV	54.0	-7.8	1.26 V	358	14.70	31.50
5	4924.00	49.6 PK	74.0	-24.4	2.86 V	5	49.00	0.60
6	4924.00	40.9 AV	54.0	-13.1	2.86 V	5	40.30	0.60
7	7386.00	51.6 PK	74.0	-22.4	2.92 V	81	44.50	7.10
8	7386.00	40.1 AV	54.0	-13.9	2.92 V	81	33.00	7.10

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	67.3 PK	74.0	-6.7	1.39 H	353	36.30	31.00
2	2390.00	52.5 AV	54.0	-1.5	1.39 H	353	21.50	31.00
3	*2412.00	119.4 PK			2.34 H	351	88.20	31.20
4	*2412.00	109.1 AV			2.34 H	351	77.90	31.20
5	4824.00	47.3 PK	74.0	-26.7	2.30 H	359	46.80	0.50
6	4824.00	36.0 AV	54.0	-18.0	2.30 H	359	35.50	0.50
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	56.0 PK	74.0	-18.0	2.98 V	260	25.00	31.00
2	2390.00	45.4 AV	54.0	-8.6	2.98 V	260	14.40	31.00
3	*2412.00	104.7 PK			2.98 V	262	73.50	31.20
4	*2412.00	94.7 AV			2.98 V	262	63.50	31.20
5	4824.00	44.5 PK	74.0	-29.5	3.00 V	19	44.00	0.50
6	4824.00	33.0 AV	54.0	-21.0	3.00 V	19	32.50	0.50

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

**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	63.4 PK	74.0	-10.6	2.65 H	170	32.40	31.00
2	2390.00	49.8 AV	54.0	-4.2	2.65 H	170	18.80	31.00
3	*2437.00	125.8 PK			2.79 H	352	94.50	31.30
4	*2437.00	115.8 AV			2.79 H	352	84.50	31.30
5	2495.00	65.5 PK	74.0	-8.5	1.22 H	357	33.90	31.60
6	2495.00	52.4 AV	54.0	-1.6	1.22 H	357	20.80	31.60
7	4874.00	53.3 PK	74.0	-20.7	1.35 H	16	52.70	0.60
8	4874.00	40.6 AV	54.0	-13.4	1.35 H	16	40.00	0.60
9	7311.00	56.6 PK	74.0	-17.4	1.60 H	109	49.50	7.10
10	7311.00	43.0 AV	54.0	-11.0	1.60 H	109	35.90	7.10

**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	2390.00	56.1 PK	74.0	-17.9	2.80 V	294	25.10	31.00
2	2390.00	46.4 AV	54.0	-7.6	2.80 V	294	15.40	31.00
3	*2437.00	111.5 PK			2.82 V	313	80.20	31.30
4	*2437.00	107.7 AV			2.82 V	313	76.40	31.30
5	2495.00	55.9 PK	74.0	-18.1	3.00 V	166	24.30	31.60
6	2495.00	46.1 AV	54.0	-7.9	3.00 V	166	14.50	31.60
7	4874.00	51.7 PK	74.0	-22.3	3.19 V	13	51.10	0.60
8	4874.00	48.0 AV	54.0	-6.0	3.19 V	13	47.40	0.60
9	7311.00	53.7 PK	74.0	-20.3	3.08 V	102	46.60	7.10
10	7311.00	45.1 AV	54.0	-8.9	3.08 V	102	38.00	7.10

**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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	117.7 PK			3.28 H	352	86.30	31.40
2	*2462.00	107.2 AV			3.28 H	352	75.80	31.40
3	2483.50	65.2 PK	74.0	-8.8	2.67 H	354	33.70	31.50
4	2483.50	52.8 AV	54.0	-1.2	2.67 H	354	21.30	31.50
5	4924.00	47.8 PK	74.0	-26.2	2.34 H	33	47.20	0.60
6	4924.00	35.7 AV	54.0	-18.3	2.34 H	33	35.10	0.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.5 PK			2.79 V	300	73.10	31.40
2	*2462.00	94.2 AV			2.79 V	300	62.80	31.40
3	2483.50	56.2 PK	74.0	-17.8	2.79 V	0	24.70	31.50
4	2483.50	45.6 AV	54.0	-8.4	2.79 V	0	14.10	31.50
5	4924.00	43.7 PK	74.0	-30.3	2.56 V	65	43.10	0.60
6	4924.00	32.7 AV	54.0	-21.3	2.56 V	65	32.10	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	67.3 PK	74.0	-6.7	1.16 H	353	36.30	31.00
2	2390.00	52.5 AV	54.0	-1.5	1.16 H	353	21.50	31.00
3	*2412.00	117.9 PK			2.60 H	350	86.70	31.20
4	*2412.00	108.2 AV			2.60 H	350	77.00	31.20
5	4824.00	43.6 PK	74.0	-30.4	1.89 H	326	43.10	0.50
6	4824.00	33.1 AV	54.0	-20.9	1.89 H	326	32.60	0.50
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	63.3 PK	74.0	-10.7	3.74 V	88	32.30	31.00
2	2390.00	48.6 AV	54.0	-5.4	3.74 V	88	17.60	31.00
3	*2412.00	110.0 PK			3.79 V	91	78.80	31.20
4	*2412.00	99.6 AV			3.79 V	91	68.40	31.20
5	4824.00	46.9 PK	74.0	-27.1	2.87 V	99	46.40	0.50
6	4824.00	33.4 AV	54.0	-20.6	2.87 V	99	32.90	0.50

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 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	69.6 PK	74.0	-4.4	1.15 H	353	36.70	32.90
2	2390.00	51.8 AV	54.0	-2.2	1.15 H	353	18.90	32.90
3	*2437.00	125.4 PK			2.82 H	355	92.20	33.20
4	*2437.00	115.7 AV			2.82 H	355	82.50	33.20
5	2495.00	65.6 PK	74.0	-8.4	2.13 H	222	32.10	33.50
6	2495.00	51.0 AV	54.0	-3.0	2.13 H	222	17.50	33.50
7	4874.00	46.8 PK	74.0	-27.2	1.12 H	102	45.00	1.80
8	4874.00	33.6 AV	54.0	-20.4	1.12 H	102	31.80	1.80
9	7311.00	53.5 PK	74.0	-20.5	1.66 H	301	46.10	7.40
10	7311.00	40.9 AV	54.0	-13.1	1.66 H	301	33.50	7.40

**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	2390.00	59.8 PK	74.0	-14.2	3.59 V	67	28.80	31.00
2	2390.00	45.3 AV	54.0	-8.7	3.59 V	67	14.30	31.00
3	*2437.00	117.1 PK			3.50 V	64	85.80	31.30
4	*2437.00	106.5 AV			3.50 V	64	75.20	31.30
5	2495.00	58.7 PK	74.0	-15.3	3.37 V	59	27.10	31.60
6	2495.00	45.6 AV	54.0	-8.4	3.37 V	59	14.00	31.60
7	4874.00	48.2 PK	74.0	-25.8	3.46 V	43	47.60	0.60
8	4874.00	34.8 AV	54.0	-19.2	3.46 V	43	34.20	0.60
9	7311.00	55.1 PK	74.0	-18.9	3.49 V	84	48.00	7.10
10	7311.00	41.5 AV	54.0	-12.5	3.49 V	84	34.40	7.10

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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	116.9 PK			3.31 H	350	85.50	31.40
2	*2462.00	106.2 AV			3.31 H	350	74.80	31.40
3	2483.50	64.9 PK	74.0	-9.1	3.24 H	354	33.40	31.50
<b>4</b>	<b>2483.50</b>	<b>52.9 AV</b>	<b>54.0</b>	<b>-1.1</b>	<b>3.24 H</b>	<b>354</b>	<b>21.40</b>	<b>31.50</b>
5	4924.00	45.8 PK	74.0	-28.2	1.16 H	156	45.20	0.60
6	4924.00	33.8 AV	54.0	-20.2	1.16 H	156	33.20	0.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.5 PK			3.33 V	69	74.10	31.40
2	*2462.00	95.3 AV			3.33 V	69	63.90	31.40
3	2483.50	58.3 PK	74.0	-15.7	3.42 V	101	26.80	31.50
4	2483.50	45.4 AV	54.0	-8.6	3.42 V	101	13.90	31.50
5	4924.00	48.0 PK	74.0	-26.0	3.17 V	94	47.40	0.60
6	4924.00	33.9 AV	54.0	-20.1	3.17 V	94	33.30	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

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	67.1 PK	74.0	-6.9	2.66 H	351	36.10	31.00
2	2390.00	52.4 AV	54.0	-1.6	2.66 H	351	21.40	31.00
3	*2422.00	112.2 PK			2.58 H	354	81.00	31.20
4	*2422.00	102.7 AV			2.58 H	354	71.50	31.20
5	4844.00	46.7 PK	74.0	-27.3	1.59 H	346	46.30	0.40
6	4844.00	33.6 AV	54.0	-20.4	1.59 H	346	33.20	0.40
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	2390.00	57.9 PK	74.0	-16.1	3.35 V	103	26.90	31.00
2	2390.00	45.5 AV	54.0	-8.5	3.35 V	103	14.50	31.00
3	*2422.00	102.1 PK			3.45 V	96	70.90	31.20
4	*2422.00	93.0 AV			3.45 V	96	61.80	31.20
5	4844.00	47.5 PK	74.0	-26.5	3.42 V	57	47.10	0.40
6	4844.00	33.0 AV	54.0	-21.0	3.42 V	57	32.60	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
5. " \* ": Fundamental frequency.

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

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	65.9 PK	74.0	-8.1	1.70 H	354	34.90	31.00
2	2390.00	52.4 AV	54.0	-1.6	1.70 H	354	21.40	31.00
3	*2437.00	116.2 PK			1.69 H	354	84.90	31.30
4	*2437.00	106.9 AV			1.69 H	354	75.60	31.30
5	4874.00	47.0 PK	74.0	-27.0	1.76 H	177	46.40	0.60
6	4874.00	33.9 AV	54.0	-20.1	1.76 H	177	33.30	0.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.2 PK	74.0	-15.8	3.59 V	66	27.20	31.00
2	2390.00	45.6 AV	54.0	-8.4	3.59 V	66	14.60	31.00
3	*2437.00	106.0 PK			3.40 V	64	74.70	31.30
4	*2437.00	96.6 AV			3.40 V	64	65.30	31.30
5	4874.00	47.1 PK	74.0	-26.9	3.16 V	47	46.50	0.60
6	4874.00	33.7 AV	54.0	-20.3	3.16 V	47	33.10	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

**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	111.3 PK			2.74 H	355	79.90	31.40
2	*2452.00	101.9 AV			2.74 H	355	70.50	31.40
3	2483.50	65.2 PK	74.0	-8.8	1.65 H	356	33.70	31.50
4	2483.50	52.5 AV	54.0	-1.5	1.65 H	356	21.00	31.50
5	4904.00	47.2 PK	74.0	-26.8	1.07 H	178	46.70	0.50
6	4904.00	34.0 AV	54.0	-20.0	1.07 H	178	33.50	0.50

**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	*2452.00	101.2 PK			3.81 V	81	69.80	31.40
2	*2452.00	91.4 AV			3.81 V	81	60.00	31.40
3	2483.50	58.0 PK	74.0	-16.0	3.85 V	68	26.50	31.50
4	2483.50	45.7 AV	54.0	-8.3	3.85 V	68	14.20	31.50
5	4904.00	47.3 PK	74.0	-26.7	3.35 V	21	46.80	0.50
6	4904.00	33.7 AV	54.0	-20.3	3.35 V	21	33.20	0.50

**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.

Test Mode B

802.11b

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

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	55.2 PK	74.0	-18.8	2.12 H	177	24.20	31.00
2	2390.00	43.4 AV	54.0	-10.6	2.12 H	177	12.40	31.00
3	*2412.00	104.0 PK			2.27 H	224	72.80	31.20
4	*2412.00	101.8 AV			2.27 H	224	70.60	31.20
5	4824.00	51.6 PK	74.0	-22.4	3.38 H	237	51.10	0.50
6	4824.00	46.6 AV	54.0	-7.4	3.38 H	237	46.10	0.50
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	61.8 PK	74.0	-12.2	1.74 V	346	30.80	31.00
2	2390.00	52.5 AV	54.0	-1.5	1.74 V	346	21.50	31.00
3	*2412.00	118.1 PK			1.87 V	347	86.90	31.20
4	*2412.00	116.0 AV			1.87 V	347	84.80	31.20
5	4824.00	49.7 PK	74.0	-24.3	1.09 V	63	49.20	0.50
6	4824.00	42.5 AV	54.0	-11.5	1.09 V	63	42.00	0.50

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

**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	108.2 PK			1.17 H	72	75.00	33.20
2	*2437.00	106.1 AV			1.17 H	72	72.90	33.20
3	4974.00	52.1 PK	74.0	-21.9	3.61 H	305	50.20	1.90
4	4974.00	46.4 AV	54.0	-7.6	3.61 H	305	44.50	1.90

**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	*2437.00	121.1 PK			1.15 V	5	87.90	33.20
2	*2437.00	118.9 AV			1.15 V	5	85.70	33.20
3	4874.00	51.3 PK	74.0	-22.7	2.01 V	195	49.50	1.80
4	4874.00	45.4 AV	54.0	-8.6	2.01 V	195	43.60	1.80

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

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	103.4 PK			4.00 H	254	72.00	31.40
2	*2462.00	101.3 AV			4.00 H	254	69.90	31.40
3	2483.50	55.9 PK	74.0	-18.1	3.48 H	267	24.40	31.50
4	2483.50	44.1 AV	54.0	-9.9	3.48 H	267	12.60	31.50
5	4924.00	50.1 PK	74.0	-23.9	3.54 H	155	49.50	0.60
6	4924.00	43.8 AV	54.0	-10.2	3.54 H	155	43.20	0.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.5 PK			1.67 V	27	85.10	31.40
2	*2462.00	113.5 AV			1.67 V	27	82.10	31.40
3	2483.50	60.6 PK	74.0	-13.4	1.75 V	14	29.10	31.50
4	2483.50	52.6 AV	54.0	-1.4	1.75 V	14	21.10	31.50
5	4924.00	51.4 PK	74.0	-22.6	2.71 V	246	50.80	0.60
6	4924.00	46.0 AV	54.0	-8.0	2.71 V	246	45.40	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	*2462.00	116.5 PK			1.67 V	27	85.10	31.40
2	*2462.00	113.5 AV			1.67 V	27	82.10	31.40
3	2483.50	60.6 PK	74.0	-13.4	1.75 V	14	29.10	31.50
4	2483.50	52.6 AV	54.0	-1.4	1.75 V	14	21.10	31.50
5	4924.00	51.4 PK	74.0	-22.6	2.71 V	246	50.80	0.60
6	4924.00	46.0 AV	54.0	-8.0	2.71 V	246	45.40	0.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.1 PK	74.0	-4.9	1.72 V	349	38.10	31.00
2	2390.00	52.4 AV	54.0	-1.6	1.72 V	349	21.40	31.00
3	*2412.00	115.8 PK			1.91 V	328	84.60	31.20
4	*2412.00	105.9 AV			1.91 V	328	74.70	31.20
5	4824.00	45.4 PK	74.0	-28.6	1.66 V	322	44.90	0.50
6	4824.00	32.6 AV	54.0	-21.4	1.66 V	322	32.10	0.50

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.4 PK	74.0	-16.6	1.68 H	322	26.40	31.00
2	2390.00	46.0 AV	54.0	-8.0	1.68 H	322	15.00	31.00
3	*2437.00	106.5 PK			1.35 H	336	75.20	31.30
4	*2437.00	98.3 AV			1.35 H	336	67.00	31.30
5	4874.00	45.8 PK	74.0	-28.2	1.50 H	176	45.20	0.60
6	4874.00	33.0 AV	54.0	-21.0	1.50 H	176	32.40	0.60

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.7 PK	74.0	-10.3	1.88 V	344	30.80	32.90
2	2390.00	49.5 AV	54.0	-4.5	1.88 V	344	16.60	32.90
3	*2437.00	121.3 PK			1.26 V	349	88.10	33.20
4	*2437.00	111.3 AV			1.26 V	349	78.10	33.20
5	4874.00	46.9 PK	74.0	-27.1	1.71 V	193	45.10	1.80
6	4874.00	34.6 AV	54.0	-19.4	1.71 V	193	32.80	1.80

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

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	102.2 PK			2.13 H	330	70.80	31.40
2	*2462.00	92.2 AV			2.13 H	330	60.80	31.40
3	2483.50	55.8 PK	74.0	-18.2	1.78 H	55	24.30	31.50
4	2483.50	44.3 AV	54.0	-9.7	1.78 H	55	12.80	31.50
5	4924.00	45.8 PK	74.0	-28.2	1.86 H	321	45.20	0.60
6	4924.00	32.2 AV	54.0	-21.8	1.86 H	321	31.60	0.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	115.9 PK			1.37 V	327	84.50	31.40
2	*2462.00	106.5 AV			1.37 V	327	75.10	31.40
3	2483.50	63.7 PK	74.0	-10.3	1.74 V	2	32.20	31.50
4	2483.50	52.3 AV	54.0	-1.7	1.74 V	2	20.80	31.50
5	4924.00	45.6 PK	74.0	-28.4	3.33 V	181	45.00	0.60
6	4924.00	32.9 AV	54.0	-21.1	3.33 V	181	32.30	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	1.19 H	239	27.30	31.00
2	2390.00	44.8 AV	54.0	-9.2	1.19 H	239	13.80	31.00
3	*2412.00	103.0 PK			1.25 H	50	71.80	31.20
4	*2412.00	92.6 AV			1.25 H	50	61.40	31.20
5	4824.00	46.7 PK	74.0	-27.3	1.34 H	112	46.20	0.50
6	4824.00	32.6 AV	54.0	-21.4	1.34 H	112	32.10	0.50

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	63.4 PK	74.0	-10.6	1.40 V	332	32.40	31.00
2	2390.00	52.3 AV	54.0	-1.7	1.40 V	332	21.30	31.00
3	*2412.00	115.7 PK			1.84 V	329	84.50	31.20
4	*2412.00	105.5 AV			1.84 V	329	74.30	31.20
5	4824.00	45.1 PK	74.0	-28.9	1.69 V	322	44.60	0.50
6	4824.00	32.0 AV	54.0	-22.0	1.69 V	322	31.50	0.50

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.6 PK	74.0	-17.4	1.07 H	237	25.60	31.00
2	2390.00	44.0 AV	54.0	-10.0	1.07 H	237	13.00	31.00
3	*2437.00	106.5 PK			3.56 H	219	75.20	31.30
4	*2437.00	96.3 AV			3.56 H	219	65.00	31.30
5	4874.00	47.2 PK	74.0	-26.8	1.26 H	134	46.60	0.60
6	4874.00	33.6 AV	54.0	-20.4	1.26 H	134	33.00	0.60

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.8 PK	74.0	-7.2	1.84 V	350	35.80	31.00
2	2390.00	51.2 AV	54.0	-2.8	1.84 V	350	20.20	31.00
3	*2437.00	120.3 PK			1.48 V	337	89.00	31.30
4	*2437.00	110.7 AV			1.48 V	337	79.40	31.30
5	4874.00	45.7 PK	74.0	-28.3	1.66 V	205	45.10	0.60
6	4874.00	32.5 AV	54.0	-21.5	1.66 V	205	31.90	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

**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	101.1 PK			3.03 H	244	69.70	31.40
2	*2462.00	90.6 AV			3.03 H	244	59.20	31.40
3	2483.50	56.2 PK	74.0	-17.8	1.48 H	137	24.70	31.50
4	2483.50	44.2 AV	54.0	-9.8	1.48 H	137	12.70	31.50
5	4924.00	46.3 PK	74.0	-27.7	1.73 H	214	45.70	0.60
6	4924.00	32.7 AV	54.0	-21.3	1.73 H	214	32.10	0.60

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	115.8 PK			1.56 V	330	84.40	31.40
2	*2462.00	105.7 AV			1.56 V	330	74.30	31.40
3	2483.50	64.7 PK	74.0	-9.3	1.74 V	316	33.20	31.50
4	2483.50	52.3 AV	54.0	-1.7	1.74 V	316	20.80	31.50
5	4924.00	45.7 PK	74.0	-28.3	1.82 V	301	45.10	0.60
6	4924.00	32.9 AV	54.0	-21.1	1.82 V	301	32.30	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	55.4 PK	74.0	-18.6	1.62 H	113	24.40	31.00
2	2390.00	43.9 AV	54.0	-10.1	1.62 H	113	12.90	31.00
3	*2422.00	96.1 PK			1.21 H	59	64.90	31.20
4	*2422.00	86.9 AV			1.21 H	59	55.70	31.20
5	4844.00	46.7 PK	74.0	-27.3	1.48 H	94	46.30	0.40
6	4844.00	32.2 AV	54.0	-21.8	1.48 H	94	31.80	0.40

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	2390.00	65.4 PK	74.0	-8.6	1.89 V	358	34.40	31.00
2	2390.00	52.3 AV	54.0	-1.7	1.89 V	358	21.30	31.00
3	*2422.00	109.9 PK			1.60 V	338	78.70	31.20
4	*2422.00	100.4 AV			1.60 V	338	69.20	31.20
5	4844.00	45.4 PK	74.0	-28.6	1.98 V	219	45.00	0.40
6	4844.00	31.7 AV	54.0	-22.3	1.98 V	219	31.30	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
5. " \* ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.6 PK	74.0	-17.4	1.13 H	77	25.60	31.00
2	2390.00	44.7 AV	54.0	-9.3	1.13 H	77	13.70	31.00
3	*2437.00	99.7 PK			1.16 H	53	68.40	31.30
4	*2437.00	90.4 AV			1.16 H	53	59.10	31.30
5	4874.00	46.2 PK	74.0	-27.8	1.28 H	136	45.60	0.60
6	4874.00	32.8 AV	54.0	-21.2	1.28 H	136	32.20	0.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	1.77 V	347	33.90	31.00
2	2390.00	52.3 AV	54.0	-1.7	1.77 V	347	21.30	31.00
3	*2437.00	112.4 PK			1.72 V	341	81.10	31.30
4	*2437.00	103.4 AV			1.72 V	341	72.10	31.30
5	4874.00	45.4 PK	74.0	-28.6	1.89 V	303	44.80	0.60
6	4874.00	32.4 AV	54.0	-21.6	1.89 V	303	31.80	0.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	94.4 PK			4.00 H	220	63.00	31.40
2	*2452.00	85.0 AV			4.00 H	220	53.60	31.40
3	2483.50	56.2 PK	74.0	-17.8	1.94 H	206	24.70	31.50
4	2483.50	44.1 AV	54.0	-9.9	1.94 H	206	12.60	31.50
5	4904.00	45.7 PK	74.0	-28.3	1.51 H	132	45.20	0.50
6	4904.00	32.7 AV	54.0	-21.3	1.51 H	132	32.20	0.50
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	*2452.00	108.6 PK			1.54 V	316	77.20	31.40
2	*2452.00	99.5 AV			1.54 V	316	68.10	31.40
3	2483.50	64.7 PK	74.0	-9.3	1.74 V	346	33.20	31.50
4	2483.50	52.3 AV	54.0	-1.7	1.74 V	346	20.80	31.50
5	4904.00	45.2 PK	74.0	-28.8	1.84 V	321	44.70	0.50
6	4904.00	32.9 AV	54.0	-21.1	1.84 V	321	32.40	0.50

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.

Test Mode C

802.11b

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

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	61.5 PK	74.0	-12.5	1.89 H	347	28.60	32.90
2	2390.00	52.4 AV	54.0	-1.6	1.89 H	347	19.50	32.90
3	*2412.00	123.1 PK			1.37 H	344	90.00	33.10
4	*2412.00	120.8 AV			1.37 H	344	87.70	33.10
5	4824.00	49.8 PK	74.0	-24.2	2.00 H	120	48.10	1.70
6	4824.00	43.2 AV	54.0	-10.8	2.00 H	120	41.50	1.70

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	2390.00	57.5 PK	74.0	-16.5	1.77 V	199	24.60	32.90
2	2390.00	44.9 AV	54.0	-9.1	1.77 V	199	12.00	32.90
3	*2412.00	111.9 PK			3.30 V	304	78.80	33.10
4	*2412.00	108.9 AV			3.30 V	304	75.80	33.10
5	4824.00	49.3 PK	74.0	-24.7	1.62 V	193	47.60	1.70
6	4824.00	44.0 AV	54.0	-10.0	1.62 V	193	42.30	1.70

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.

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

**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	125.4 PK			2.00 H	345	92.20	33.20
2	*2437.00	123.4 AV			2.00 H	345	90.20	33.20
3	4874.00	51.2 PK	74.0	-22.8	2.00 H	118	49.40	1.80
4	4874.00	46.9 AV	54.0	-7.1	2.00 H	118	45.10	1.80

**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	*2437.00	112.2 PK			2.46 V	228	79.00	33.20
2	*2437.00	110.2 AV			2.46 V	228	77.00	33.20
3	4874.00	51.5 PK	74.0	-22.5	2.00 V	191	49.70	1.80
4	4874.00	47.6 AV	54.0	-6.4	2.00 V	191	45.80	1.80

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

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	120.9 PK			1.58 H	343	87.60	33.30
2	*2462.00	118.8 AV			1.58 H	343	85.50	33.30
3	2483.50	61.8 PK	74.0	-12.2	1.30 H	333	28.40	33.40
4	2483.50	52.3 AV	54.0	-1.7	1.30 H	333	18.90	33.40
5	4924.00	46.4 PK	74.0	-27.6	1.96 H	128	44.60	1.80
6	4924.00	37.5 AV	54.0	-16.5	1.96 H	128	35.70	1.80
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	*2462.00	108.8 PK			3.37 V	304	75.50	33.30
2	*2462.00	106.5 AV			3.37 V	304	73.20	33.30
3	2483.50	56.8 PK	74.0	-17.2	1.69 V	233	23.40	33.40
4	2483.50	45.3 AV	54.0	-8.7	1.69 V	233	11.90	33.40
5	4924.00	47.6 PK	74.0	-26.4	2.10 V	192	45.80	1.80
6	4924.00	41.1 AV	54.0	-12.9	2.10 V	192	39.30	1.80

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.



802.11g

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

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	68.4 PK	74.0	-5.6	1.63 H	356	35.50	32.90
2	2390.00	52.4 AV	54.0	-1.6	1.63 H	356	19.50	32.90
3	*2412.00	118.1 PK			1.56 H	345	85.00	33.10
4	*2412.00	108.6 AV			1.56 H	345	75.50	33.10
5	4824.00	45.8 PK	74.0	-28.2	1.86 H	199	44.10	1.70
6	4824.00	32.8 AV	54.0	-21.2	1.86 H	199	31.10	1.70

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	2390.00	56.6 PK	74.0	-17.4	1.73 V	156	23.70	32.90
2	2390.00	45.3 AV	54.0	-8.7	1.73 V	156	12.40	32.90
3	*2412.00	107.9 PK			3.25 V	306	74.80	33.10
4	*2412.00	98.0 AV			3.25 V	306	64.90	33.10
5	4824.00	46.1 PK	74.0	-27.9	2.03 V	239	44.40	1.70
6	4824.00	33.0 AV	54.0	-21.0	2.03 V	239	31.30	1.70

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.

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

**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	67.2 PK	74.0	-6.8	1.38 H	356	34.30	32.90
2	2390.00	52.2 AV	54.0	-1.8	1.38 H	356	19.30	32.90
3	*2437.00	123.7 PK			1.90 H	346	90.50	33.20
4	*2437.00	113.6 AV			1.90 H	346	80.40	33.20
5	4874.00	46.8 PK	74.0	-27.2	1.75 H	109	45.00	1.80
6	4874.00	34.1 AV	54.0	-19.9	1.75 H	109	32.30	1.80

**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	60.6 PK	74.0	-13.4	3.69 V	55	27.70	32.90
2	2390.00	47.0 AV	54.0	-7.0	3.69 V	55	14.10	32.90
3	*2437.00	113.8 PK			3.55 V	316	80.60	33.20
4	*2437.00	104.3 AV			3.55 V	316	71.10	33.20
5	4874.00	48.6 PK	74.0	-25.4	3.78 V	239	46.80	1.80
6	4874.00	35.7 AV	54.0	-18.3	3.78 V	239	33.90	1.80

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

**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	117.9 PK			1.57 H	342	84.60	33.30
2	*2462.00	108.0 AV			1.57 H	342	74.70	33.30
3	2483.50	65.0 PK	74.0	-9.0	2.01 H	329	31.60	33.40
4	2483.50	52.5 AV	54.0	-1.5	2.01 H	329	19.10	33.40
5	4924.00	46.7 PK	74.0	-27.3	1.88 H	133	44.90	1.80
6	4924.00	33.2 AV	54.0	-20.8	1.88 H	133	31.40	1.80

**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	*2462.00	108.0 PK			3.90 V	300	74.70	33.30
2	*2462.00	97.6 AV			3.90 V	300	64.30	33.30
3	2483.50	57.6 PK	74.0	-16.4	1.77 V	209	24.20	33.40
4	2483.50	45.4 AV	54.0	-8.6	1.77 V	209	12.00	33.40
5	4924.00	46.5 PK	74.0	-27.5	2.66 V	163	44.70	1.80
6	4924.00	33.1 AV	54.0	-20.9	2.66 V	163	31.30	1.80

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.

802.11n (HT20)

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

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	67.5 PK	74.0	-6.5	1.67 H	347	34.60	32.90
2	2390.00	52.4 AV	54.0	-1.6	1.67 H	347	19.50	32.90
3	*2412.00	116.5 PK			1.57 H	350	83.40	33.10
4	*2412.00	106.4 AV			1.57 H	350	73.30	33.10
5	4824.00	46.2 PK	74.0	-27.8	1.78 H	296	44.50	1.70
6	4824.00	32.7 AV	54.0	-21.3	1.78 H	296	31.00	1.70

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	2390.00	56.5 PK	74.0	-17.5	1.56 V	188	23.60	32.90
2	2390.00	44.9 AV	54.0	-9.1	1.56 V	188	12.00	32.90
3	*2412.00	99.6 PK			2.60 V	340	66.50	33.10
4	*2412.00	88.5 AV			2.60 V	340	55.40	33.10
5	4824.00	46.4 PK	74.0	-27.6	1.93 V	229	44.70	1.70
6	4824.00	33.6 AV	54.0	-20.4	1.93 V	229	31.90	1.70

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.

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

**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	69.7 PK	74.0	-4.3	1.65 H	355	36.80	32.90
2	2390.00	52.6 AV	54.0	-1.4	1.65 H	355	19.70	32.90
3	*2437.00	125.3 PK			1.39 H	346	92.10	33.20
4	*2437.00	115.0 AV			1.39 H	346	81.80	33.20
5	4874.00	46.4 PK	74.0	-27.6	1.71 H	233	44.60	1.80
6	4874.00	33.9 AV	54.0	-20.1	1.71 H	233	32.10	1.80

**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	58.6 PK	74.0	-15.4	1.92 V	110	25.70	32.90
2	2390.00	46.4 AV	54.0	-7.6	1.92 V	110	13.50	32.90
3	*2437.00	113.6 PK			3.25 V	315	80.40	33.20
4	*2437.00	103.4 AV			3.25 V	315	70.20	33.20
5	4874.00	47.0 PK	74.0	-27.0	2.03 V	303	45.20	1.80
6	4874.00	33.7 AV	54.0	-20.3	2.03 V	303	31.90	1.80

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

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	115.9 PK			1.54 H	349	82.60	33.30
2	*2462.00	106.2 AV			1.54 H	349	72.90	33.30
3	2483.50	65.1 PK	74.0	-8.9	1.50 H	343	31.70	33.40
4	2483.50	52.4 AV	54.0	-1.6	1.50 H	343	19.00	33.40
5	4924.00	46.0 PK	74.0	-28.0	1.90 H	152	44.20	1.80
6	4924.00	33.0 AV	54.0	-21.0	1.90 H	152	31.20	1.80
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	*2462.00	106.7 PK			3.85 V	297	73.40	33.30
2	*2462.00	96.5 AV			3.85 V	297	63.20	33.30
3	2483.50	56.5 PK	74.0	-17.5	2.99 V	283	23.10	33.40
4	2483.50	46.7 AV	54.0	-7.3	2.99 V	283	13.30	33.40
5	4924.00	43.7 PK	74.0	-30.3	1.87 V	222	41.90	1.80
6	4924.00	30.0 AV	54.0	-24.0	1.87 V	222	28.20	1.80

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.

802.11n (HT40)

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

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	67.0 PK	74.0	-7.0	1.76 H	8	34.10	32.90
2	2390.00	52.7 AV	54.0	-1.3	1.76 H	8	19.80	32.90
3	*2422.00	111.2 PK			1.55 H	5	78.10	33.10
4	*2422.00	102.0 AV			1.55 H	5	68.90	33.10
5	4844.00	45.8 PK	74.0	-28.2	1.56 H	22	44.20	1.60
6	4844.00	32.5 AV	54.0	-21.5	1.56 H	22	30.90	1.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	2.22 V	309	23.60	32.90
2	2390.00	44.8 AV	54.0	-9.2	2.22 V	309	11.90	32.90
3	*2422.00	93.3 PK			1.67 V	330	60.20	33.10
4	*2422.00	84.5 AV			1.67 V	330	51.40	33.10
5	4844.00	45.7 PK	74.0	-28.3	1.96 V	302	44.10	1.60
6	4844.00	33.6 AV	54.0	-20.4	1.96 V	302	32.00	1.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	66.3 PK	74.0	-7.7	1.40 H	352	33.40	32.90
2	2390.00	52.6 AV	54.0	-1.4	1.40 H	352	19.70	32.90
3	*2437.00	113.2 PK			2.17 H	357	80.00	33.20
4	*2437.00	104.0 AV			2.17 H	357	70.80	33.20
5	4874.00	47.4 PK	74.0	-26.6	1.87 H	299	45.60	1.80
6	4874.00	33.3 AV	54.0	-20.7	1.87 H	299	31.50	1.80

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	58.4 PK	74.0	-15.6	3.01 V	322	25.50	32.90
2	2390.00	45.8 AV	54.0	-8.2	3.01 V	322	12.90	32.90
3	*2437.00	103.1 PK			3.70 V	289	69.90	33.20
4	*2437.00	93.9 AV			3.70 V	289	60.70	33.20
5	4874.00	46.4 PK	74.0	-27.6	2.93 V	229	44.60	1.80
6	4874.00	32.9 AV	54.0	-21.1	2.93 V	229	31.10	1.80

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

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	109.6 PK			1.65 H	345	76.30	33.30
2	*2452.00	100.3 AV			1.65 H	345	67.00	33.30
3	2483.50	65.9 PK	74.0	-8.1	1.58 H	358	32.50	33.40
4	2483.50	52.6 AV	54.0	-1.4	1.56 H	358	19.20	33.40
5	4904.00	45.9 PK	74.0	-28.1	1.96 H	322	44.20	1.70
6	4904.00	32.8 AV	54.0	-21.2	1.96 H	322	31.10	1.70
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	*2452.00	100.2 PK			3.96 V	51	66.90	33.30
2	*2452.00	91.1 AV			3.96 V	51	57.80	33.30
3	2483.50	57.9 PK	74.0	-16.1	2.92 V	303	24.50	33.40
4	2483.50	45.5 AV	54.0	-8.5	2.92 V	303	12.10	33.40
5	4904.00	45.1 PK	74.0	-28.9	2.63 V	336	43.40	1.70
6	4904.00	32.1 AV	54.0	-21.9	2.63 V	336	30.40	1.70

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.

Test Mode D

802.11b

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

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	60.1 PK	74.0	-13.9	2.14 H	0	27.20	32.90
2	2390.00	52.3 AV	54.0	-1.7	2.14 H	0	19.40	32.90
3	*2412.00	116.0 PK			2.14 H	350	82.90	33.10
4	*2412.00	112.3 AV			2.14 H	350	79.20	33.10
5	4824.00	54.9 PK	74.0	-19.1	2.16 H	350	53.20	1.70
6	4824.00	49.4 AV	54.0	-4.6	2.16 H	350	47.70	1.70

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	2390.00	58.0 PK	74.0	-16.0	2.20 V	22	25.10	32.90
2	2390.00	46.9 AV	54.0	-7.1	2.20 V	22	14.00	32.90
3	*2412.00	111.8 PK			2.25 V	19	78.70	33.10
4	*2412.00	107.9 AV			2.25 V	19	74.80	33.10
5	4824.00	52.3 PK	74.0	-21.7	2.37 V	109	50.60	1.70
6	4824.00	47.1 AV	54.0	-6.9	2.37 V	109	45.40	1.70

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.

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

**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	113.4 PK			1.95 H	320	80.20	33.20
2	*2437.00	109.4 AV			1.95 H	320	76.20	33.20
3	4874.00	52.1 PK	74.0	-21.9	2.64 H	313	50.30	1.80
4	4874.00	49.5 AV	54.0	-4.5	2.64 H	313	47.70	1.80

**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	*2437.00	109.8 PK			1.73 V	320	76.60	33.20
2	*2437.00	105.8 AV			1.73 V	320	72.60	33.20
3	4874.00	50.3 PK	74.0	-23.7	1.96 V	107	48.50	1.80
4	4874.00	45.4 AV	54.0	-8.6	1.96 V	107	43.60	1.80

**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 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

**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	114.6 PK			1.83 H	0	81.30	33.30
2	*2462.00	110.6 AV			1.83 H	0	77.30	33.30
3	2483.50	57.4 PK	74.0	-16.6	1.83 H	21	24.00	33.40
4	2483.50	46.9 AV	54.0	-7.1	1.83 H	21	13.50	33.40
5	4924.00	49.9 PK	74.0	-24.1	2.47 H	77	48.10	1.80
6	4924.00	46.3 AV	54.0	-7.7	2.47 H	77	44.50	1.80

**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	*2462.00	110.7 PK			1.88 V	313	77.40	33.30
2	*2462.00	106.6 AV			1.88 V	313	73.30	33.30
3	2483.50	59.0 PK	74.0	-15.0	1.88 V	313	25.60	33.40
4	2483.50	48.3 AV	54.0	-5.7	1.88 V	313	14.90	33.40
5	4924.00	50.2 PK	74.0	-23.8	2.25 V	111	48.40	1.80
6	4924.00	45.2 AV	54.0	-8.8	2.25 V	111	43.40	1.80

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.

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	70.9 PK	74.0	-3.1	1.74 H	27	38.00	32.90
2	2390.00	52.6 AV	54.0	-1.4	1.74 H	27	19.70	32.90
3	*2412.00	116.6 PK			1.64 H	351	83.50	33.10
4	*2412.00	106.6 AV			1.64 H	351	73.50	33.10
5	4824.00	47.2 PK	74.0	-26.8	1.65 H	56	45.50	1.70
6	4824.00	36.0 AV	54.0	-18.0	1.65 H	56	34.30	1.70

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	2390.00	64.6 PK	74.0	-9.4	2.35 V	345	31.70	32.90
2	2390.00	50.8 AV	54.0	-3.2	2.35 V	345	17.90	32.90
3	*2412.00	113.8 PK			2.35 V	345	80.70	33.10
4	*2412.00	104.0 AV			2.35 V	345	70.90	33.10
5	4824.00	49.5 PK	74.0	-24.5	2.65 V	35	47.80	1.70
6	4824.00	38.0 AV	54.0	-16.0	2.65 V	35	36.30	1.70

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.

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

**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	119.7 PK			1.69 H	352	86.50	33.20
2	*2437.00	108.9 AV			1.69 H	352	75.70	33.20
3	4874.00	49.3 PK	74.0	-24.7	1.80 H	30	47.50	1.80
4	4874.00	38.3 AV	54.0	-15.7	1.80 H	30	36.50	1.80

**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	*2437.00	117.3 PK			2.16 V	340	84.10	33.20
2	*2437.00	107.0 AV			2.16 V	340	73.80	33.20
3	4874.00	49.5 PK	74.0	-24.5	2.17 V	0	47.70	1.80
4	4874.00	40.6 AV	54.0	-13.4	2.17 V	0	38.80	1.80

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

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	117.7 PK			1.69 H	356	84.40	33.30
2	*2462.00	108.6 AV			1.69 H	356	75.30	33.30
3	2483.50	67.9 PK	74.0	-6.1	1.73 H	14	34.50	33.40
<b>4</b>	<b>2483.50</b>	<b>52.9 AV</b>	<b>54.0</b>	<b>-1.1</b>	<b>1.73 H</b>	<b>14</b>	<b>19.50</b>	<b>33.40</b>
5	4924.00	47.5 PK	74.0	-26.5	2.03 H	35	45.70	1.80
6	4924.00	36.1 AV	54.0	-17.9	2.03 H	35	34.30	1.80
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	*2462.00	113.6 PK			2.28 V	358	80.30	33.30
2	*2462.00	103.6 AV			2.28 V	358	70.30	33.30
3	2483.50	66.3 PK	74.0	-7.7	1.68 V	340	32.90	33.40
4	2483.50	52.5 AV	54.0	-1.5	1.68 V	340	19.10	33.40
5	4924.00	50.0 PK	74.0	-24.0	2.75 V	58	48.20	1.80
6	4924.00	40.8 AV	54.0	-13.2	2.75 V	58	39.00	1.80

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.

802.11n (HT20)

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

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	67.8 PK	74.0	-6.2	1.57 H	0	34.90	32.90
2	2390.00	52.7 AV	54.0	-1.3	1.57 H	0	19.80	32.90
3	*2412.00	112.7 PK			1.67 H	348	79.60	33.10
4	*2412.00	104.7 AV			1.67 H	348	71.60	33.10
5	4824.00	47.9 PK	74.0	-26.1	1.91 H	340	46.20	1.70
6	4824.00	37.2 AV	54.0	-16.8	1.91 H	340	35.50	1.70
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	2390.00	62.9 PK	74.0	-11.1	2.60 V	360	30.00	32.90
2	2390.00	50.4 AV	54.0	-3.6	2.60 V	360	17.50	32.90
3	*2412.00	110.3 PK			2.60 V	6	77.20	33.10
4	*2412.00	100.7 AV			2.60 V	6	67.60	33.10
5	4824.00	48.8 PK	74.0	-25.2	1.89 V	40	47.10	1.70
6	4824.00	38.5 AV	54.0	-15.5	1.89 V	40	36.80	1.70

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.



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

**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	122.6 PK			1.71 H	340	89.40	33.20
2	*2437.00	112.8 AV			1.71 H	340	79.60	33.20
3	4874.00	48.9 PK	74.0	-25.1	1.99 H	283	47.10	1.80
4	4874.00	39.1 AV	54.0	-14.9	1.99 H	283	37.30	1.80

**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	*2437.00	118.2 PK			2.65 V	358	85.00	33.20
2	*2437.00	107.8 AV			2.65 V	358	74.60	33.20
3	4874.00	50.4 PK	74.0	-23.6	2.39 V	19	48.60	1.80
4	4874.00	40.9 AV	54.0	-13.1	2.39 V	19	39.10	1.80

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

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	117.8 PK			1.71 H	358	84.50	33.30
2	*2462.00	107.7 AV			1.71 H	358	74.40	33.30
3	2483.50	67.1 PK	74.0	-6.9	1.56 H	355	33.70	33.40
4	2483.50	52.8 AV	54.0	-1.2	1.56 H	355	19.40	33.40
5	4924.00	48.1 PK	74.0	-25.9	2.19 H	2	46.30	1.80
6	4924.00	37.0 AV	54.0	-17.0	2.19 H	2	35.20	1.80
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	*2462.00	111.0 PK			2.60 V	351	77.70	33.30
2	*2462.00	100.6 AV			2.60 V	351	67.30	33.30
3	2483.50	61.1 PK	74.0	-12.9	2.50 V	349	27.70	33.40
4	2483.50	51.7 AV	54.0	-2.3	2.50 V	349	18.30	33.40
5	4924.00	48.7 PK	74.0	-25.3	2.21 V	35	46.90	1.80
6	4924.00	38.9 AV	54.0	-15.1	2.21 V	35	37.10	1.80

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.

802.11n (HT40)

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

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	65.6 PK	74.0	-8.4	1.89 H	10	32.70	32.90
2	<b>2390.00</b>	<b>52.9 AV</b>	<b>54.0</b>	<b>-1.1</b>	<b>1.89 H</b>	<b>10</b>	<b>20.00</b>	<b>32.90</b>
3	*2422.00	108.5 PK			1.75 H	353	75.40	33.10
4	*2422.00	99.7 AV			1.75 H	353	66.60	33.10
5	4844.00	46.0 PK	74.0	-28.0	2.15 H	303	44.40	1.60
6	4844.00	36.0 AV	54.0	-18.0	2.15 H	303	34.40	1.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.2 PK	74.0	-10.8	1.89 V	337	30.30	32.90
2	2390.00	52.1 AV	54.0	-1.9	1.89 V	337	19.20	32.90
3	*2422.00	105.4 PK			1.74 V	348	72.30	33.10
4	*2422.00	97.6 AV			1.74 V	348	64.50	33.10
5	4844.00	45.5 PK	74.0	-28.5	2.11 V	35	43.90	1.60
6	4844.00	35.3 AV	54.0	-18.7	2.11 V	35	33.70	1.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

**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	67.8 PK	74.0	-6.2	1.64 H	319	34.90	32.90
2	2390.00	52.5 AV	54.0	-1.5	1.64 H	319	19.60	32.90
3	*2437.00	114.5 PK			1.64 H	1	81.30	33.20
4	*2437.00	105.5 AV			1.64 H	1	72.30	33.20
5	4874.00	48.8 PK	74.0	-25.2	1.77 H	29	47.00	1.80
6	4874.00	39.4 AV	54.0	-14.6	1.77 H	29	37.60	1.80

**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	62.1 PK	74.0	-11.9	1.63 V	358	29.20	32.90
2	2390.00	50.6 AV	54.0	-3.4	1.63 V	358	17.70	32.90
3	*2437.00	108.8 PK			1.96 V	8	75.60	33.20
4	*2437.00	100.4 AV			1.96 V	8	67.20	33.20
5	4874.00	48.1 PK	74.0	-25.9	2.11 V	333	46.30	1.80
6	4874.00	38.4 AV	54.0	-15.6	2.11 V	333	36.60	1.80

**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 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	113.7 PK			1.70 H	353	80.40	33.30
2	*2452.00	104.5 AV			1.70 H	353	71.20	33.30
3	2483.50	66.1 PK	74.0	-7.9	1.71 H	336	32.70	33.40
4	2483.50	52.4 AV	54.0	-1.6	1.71 H	336	19.00	33.40
5	4904.00	48.5 PK	74.0	-25.5	1.90 H	0	46.80	1.70
6	4904.00	37.2 AV	54.0	-16.8	1.90 H	0	35.50	1.70

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	*2452.00	109.4 PK			1.66 V	353	76.10	33.30
2	*2452.00	100.3 AV			1.66 V	353	67.00	33.30
3	2483.50	66.0 PK	74.0	-8.0	1.46 V	8	32.60	33.40
4	2483.50	51.7 AV	54.0	-2.3	1.46 V	8	18.30	33.40
5	4904.00	45.6 PK	74.0	-28.4	1.00 V	353	43.90	1.70
6	4904.00	35.0 AV	54.0	-19.0	1.00 V	353	33.30	1.70

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.

Test Mode E

802.11b

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

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	60.2 PK	74.0	-13.8	1.65 H	356	27.30	32.90
2	2390.00	51.1 AV	54.0	-2.9	1.65 H	356	18.20	32.90
3	*2412.00	117.3 PK			1.85 H	359	84.20	33.10
4	*2412.00	114.7 AV			1.85 H	359	81.60	33.10
5	4824.00	51.6 PK	74.0	-22.4	2.64 H	143	49.90	1.70
6	4824.00	45.6 AV	54.0	-8.4	2.64 H	143	43.90	1.70

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	2390.00	59.1 PK	74.0	-14.9	2.23 V	344	26.20	32.90
2	2390.00	50.0 AV	54.0	-4.0	2.23 V	344	17.10	32.90
3	*2412.00	116.5 PK			1.35 V	350	83.40	33.10
4	*2412.00	114.3 AV			1.35 V	350	81.20	33.10
5	4824.00	50.9 PK	74.0	-23.1	3.89 V	151	49.20	1.70
6	4824.00	46.5 AV	54.0	-7.5	3.89 V	151	44.80	1.70

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.

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

**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	116.9 PK			2.44 H	358	83.70	33.20
2	*2437.00	114.9 AV			2.44 H	358	81.70	33.20
3	4874.00	51.0 PK	74.0	-23.0	2.08 H	352	49.20	1.80
4	4874.00	44.0 AV	54.0	-10.0	2.08 H	352	42.20	1.80

**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	*2437.00	116.9 PK			1.47 V	10	83.70	33.20
2	*2437.00	114.6 AV			1.47 V	10	81.40	33.20
3	4874.00	51.3 PK	74.0	-22.7	1.08 V	254	49.50	1.80
4	4874.00	45.1 AV	54.0	-8.9	1.08 V	254	43.30	1.80

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

**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	117.6 PK			1.79 H	0	84.30	33.30
2	*2462.00	115.5 AV			1.79 H	0	82.20	33.30
3	2483.50	61.9 PK	74.0	-12.1	1.75 H	5	28.50	33.40
4	2483.50	52.7 AV	54.0	-1.3	1.75 H	5	19.30	33.40
5	4924.00	49.7 PK	74.0	-24.3	2.48 H	352	47.90	1.80
6	4924.00	41.7 AV	54.0	-12.3	2.48 H	352	39.90	1.80

**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	*2462.00	115.8 PK			1.67 V	352	82.50	33.30
2	*2462.00	113.7 AV			1.67 V	352	80.40	33.30
3	2483.50	60.4 PK	74.0	-13.6	1.31 V	3	27.00	33.40
4	2483.50	51.6 AV	54.0	-2.4	1.31 V	3	18.20	33.40
5	4924.00	50.3 PK	74.0	-23.7	3.98 V	360	48.50	1.80
6	4924.00	42.7 AV	54.0	-11.3	3.98 V	360	40.90	1.80

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.



802.11g

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

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	67.7 PK	74.0	-6.3	1.88 H	340	34.80	32.90
2	2390.00	52.5 AV	54.0	-1.5	1.88 H	340	19.60	32.90
3	*2412.00	117.0 PK			2.04 H	352	83.90	33.10
4	*2412.00	106.2 AV			2.04 H	352	73.10	33.10
5	4824.00	46.9 PK	74.0	-27.1	1.46 H	188	45.20	1.70
6	4824.00	33.9 AV	54.0	-20.1	1.46 H	188	32.20	1.70

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	2390.00	65.4 PK	74.0	-8.6	1.86 V	336	32.50	32.90
2	2390.00	50.0 AV	54.0	-4.0	1.86 V	336	17.10	32.90
3	*2412.00	113.6 PK			2.71 V	338	80.50	33.10
4	*2412.00	102.9 AV			2.71 V	338	69.80	33.10
5	4824.00	47.0 PK	74.0	-27.0	3.44 V	351	45.30	1.70
6	4824.00	33.6 AV	54.0	-20.4	3.44 V	351	31.90	1.70

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.

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

**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	118.2 PK			2.22 H	349	85.00	33.20
2	*2437.00	108.3 AV			2.22 H	349	75.10	33.20
3	4874.00	49.7 PK	74.0	-24.3	2.72 H	145	47.90	1.80
4	4874.00	36.1 AV	54.0	-17.9	2.72 H	145	34.30	1.80

**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	*2437.00	116.6 PK			1.91 V	343	83.40	33.20
2	*2437.00	106.7 AV			1.91 V	343	73.50	33.20
3	4874.00	47.6 PK	74.0	-26.4	2.28 V	313	45.80	1.80
4	4874.00	34.3 AV	54.0	-19.7	2.28 V	313	32.50	1.80

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

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	116.1 PK			1.76 H	344	82.80	33.30
2	*2462.00	105.4 AV			1.76 H	344	72.10	33.30
3	2483.50	65.7 PK	74.0	-8.3	1.59 H	2	32.30	33.40
4	2483.50	52.4 AV	54.0	-1.6	1.59 H	2	19.00	33.40
5	4924.00	47.8 PK	74.0	-26.2	2.37 H	169	46.00	1.80
6	4924.00	34.3 AV	54.0	-19.7	2.37 H	169	32.50	1.80
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	*2462.00	113.4 PK			1.66 V	351	80.10	33.30
2	*2462.00	103.1 AV			1.66 V	351	69.80	33.30
3	2483.50	63.0 PK	74.0	-11.0	2.03 V	351	29.60	33.40
4	2483.50	49.2 AV	54.0	-4.8	2.03 V	351	15.80	33.40
5	4924.00	48.1 PK	74.0	-25.9	3.01 V	355	46.30	1.80
6	4924.00	34.0 AV	54.0	-20.0	3.01 V	355	32.20	1.80

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.

802.11n (HT20)

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

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	67.9 PK	74.0	-6.1	1.49 H	352	35.00	32.90
2	2390.00	52.6 AV	54.0	-1.4	1.49 H	352	19.70	32.90
3	*2412.00	114.6 PK			1.82 H	355	81.50	33.10
4	*2412.00	104.1 AV			1.82 H	355	71.00	33.10
5	4824.00	45.8 PK	74.0	-28.2	1.78 H	333	44.10	1.70
6	4824.00	32.6 AV	54.0	-21.4	1.78 H	333	30.90	1.70

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	2390.00	66.1 PK	74.0	-7.9	2.84 V	347	33.20	32.90
2	2390.00	52.3 AV	54.0	-1.7	2.84 V	347	19.40	32.90
3	*2412.00	113.6 PK			2.60 V	353	80.50	33.10
4	*2412.00	102.9 AV			2.60 V	353	69.80	33.10
5	4824.00	46.0 PK	74.0	-28.0	2.77 V	333	44.30	1.70
6	4824.00	32.7 AV	54.0	-21.3	2.77 V	333	31.00	1.70

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.

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

**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	118.3 PK			1.61 H	6	85.10	33.20
2	*2437.00	107.7 AV			1.61 H	6	74.50	33.20
3	4874.00	45.9 PK	74.0	-28.1	1.52 H	348	44.10	1.80
4	4874.00	33.2 AV	54.0	-20.8	1.52 H	348	31.40	1.80

**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	*2437.00	118.9 PK			2.80 V	18	85.70	33.20
2	*2437.00	107.7 AV			2.80 V	18	74.50	33.20
3	4874.00	46.0 PK	74.0	-28.0	2.66 V	354	44.20	1.80
4	4874.00	33.2 AV	54.0	-20.8	2.66 V	354	31.40	1.80

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

**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	115.2 PK			1.55 H	11	81.90	33.30
2	*2462.00	104.4 AV			1.55 H	11	71.10	33.30
3	2483.50	64.9 PK	74.0	-9.1	1.60 H	357	31.50	33.40
4	2483.50	52.5 AV	54.0	-1.5	1.60 H	357	19.10	33.40
5	4924.00	45.8 PK	74.0	-28.2	1.63 H	351	44.00	1.80
6	4924.00	32.9 AV	54.0	-21.1	1.63 H	351	31.10	1.80

**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	*2462.00	111.5 PK			2.64 V	18	78.20	33.30
2	*2462.00	101.1 AV			2.64 V	18	67.80	33.30
3	2483.50	62.1 PK	74.0	-11.9	2.80 V	10	28.70	33.40
4	2483.50	51.1 AV	54.0	-2.9	2.80 V	10	17.70	33.40
5	4924.00	45.3 PK	74.0	-28.7	2.29 V	349	43.50	1.80
6	4924.00	32.0 AV	54.0	-22.0	2.29 V	349	30.20	1.80

**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.

802.11n (HT40)

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

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	62.7 PK	74.0	-11.3	1.64 H	14	29.80	32.90
2	2390.00	52.3 AV	54.0	-1.7	1.64 H	14	19.40	32.90
3	*2422.00	107.2 PK			1.76 H	5	74.10	33.10
4	*2422.00	97.8 AV			1.76 H	5	64.70	33.10
5	4844.00	46.0 PK	74.0	-28.0	1.77 H	349	44.40	1.60
6	4844.00	32.4 AV	54.0	-21.6	1.77 H	349	30.80	1.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.0 PK	74.0	-13.0	2.15 V	358	28.10	32.90
2	2390.00	50.1 AV	54.0	-3.9	2.15 V	358	17.20	32.90
3	*2422.00	105.1 PK			2.19 V	349	72.00	33.10
4	*2422.00	96.2 AV			2.19 V	349	63.10	33.10
5	4844.00	45.8 PK	74.0	-28.2	1.87 V	319	44.20	1.60
6	4844.00	32.6 AV	54.0	-21.4	1.87 V	319	31.00	1.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	65.6 PK	74.0	-8.4	1.66 H	344	32.70	32.90
2	2390.00	52.4 AV	54.0	-1.6	1.66 H	344	19.50	32.90
3	*2437.00	111.5 PK			2.04 H	347	78.30	33.20
4	*2437.00	102.2 AV			2.04 H	347	69.00	33.20
5	4874.00	46.5 PK	74.0	-27.5	1.93 H	355	44.70	1.80
6	4874.00	33.4 AV	54.0	-20.6	1.93 H	355	31.60	1.80

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	63.6 PK	74.0	-10.4	2.22 V	354	30.70	32.90
2	2390.00	50.9 AV	54.0	-3.1	2.22 V	354	18.00	32.90
3	*2437.00	110.7 PK			2.38 V	338	77.50	33.20
4	*2437.00	101.4 AV			2.38 V	338	68.20	33.20
5	4874.00	45.2 PK	74.0	-28.8	2.11 V	352	43.40	1.80
6	4874.00	32.8 AV	54.0	-21.2	2.11 V	352	31.00	1.80

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

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	108.7 PK			1.78 H	358	75.40	33.30
2	*2452.00	99.3 AV			1.78 H	358	66.00	33.30
3	2483.50	65.3 PK	74.0	-8.7	1.42 H	354	31.90	33.40
4	2483.50	52.6 AV	54.0	-1.4	1.42 H	354	19.20	33.40
5	4904.00	47.0 PK	74.0	-27.0	1.92 H	333	45.30	1.70
6	4904.00	33.2 AV	54.0	-20.8	1.92 H	333	31.50	1.70

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	*2452.00	106.9 PK			2.33 V	337	73.60	33.30
2	*2452.00	97.7 AV			2.33 V	337	64.40	33.30
3	2483.50	61.9 PK	74.0	-12.1	2.11 V	352	28.50	33.40
4	2483.50	50.1 AV	54.0	-3.9	2.11 V	352	16.70	33.40
5	4904.00	45.8 PK	74.0	-28.2	2.21 V	321	44.10	1.70
6	4904.00	31.8 AV	54.0	-22.2	2.21 V	321	30.10	1.70

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.

Below 1GHz worst-case data: 802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 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	57.12	26.8 QP	40.0	-13.2	1.99 H	350	41.40	-14.60
2	97.95	29.0 QP	43.5	-14.5	1.99 H	15	47.80	-18.80
3	206.83	26.5 QP	43.5	-17.0	1.00 H	11	43.30	-16.80
4	366.26	31.7 QP	46.0	-14.3	1.99 H	4	43.40	-11.70
5	519.86	30.6 QP	46.0	-15.4	1.00 H	140	39.70	-9.10
6	636.52	30.7 QP	46.0	-15.3	1.00 H	66	37.50	-6.80
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	29.90	27.6 QP	40.0	-12.4	1.49 V	15	44.00	-16.40
2	51.29	31.8 QP	40.0	-8.2	1.00 V	40	46.20	-14.40
3	142.67	24.0 QP	43.5	-19.5	1.00 V	82	38.20	-14.20
4	206.83	18.9 QP	43.5	-24.6	1.00 V	15	35.70	-16.80
5	374.04	29.5 QP	46.0	-16.5	1.00 V	359	41.10	-11.60
6	595.69	29.9 QP	46.0	-16.1	1.00 V	73	37.50	-7.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 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	57.12	27.5 QP	40.0	-12.5	1.98 H	51	42.10	-14.60
2	138.78	27.3 QP	43.5	-16.2	1.98 H	84	41.80	-14.50
3	173.78	26.5 QP	43.5	-17.0	1.50 H	299	40.90	-14.40
4	249.60	21.7 QP	46.0	-24.3	1.00 H	146	36.30	-14.60
5	383.76	24.7 QP	46.0	-21.3	1.00 H	16	36.20	-11.50
6	595.69	30.4 QP	46.0	-15.6	1.50 H	135	38.00	-7.60

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.28	37.5 QP	40.0	-2.5	1.00 V	181	53.40	-15.90
2	61.91	28.9 QP	40.0	-11.1	1.98 V	19	44.20	-15.30
3	92.12	35.9 QP	43.5	-7.6	1.00 V	253	55.40	-19.50
4	171.83	30.5 QP	43.5	-13.0	1.00 V	186	44.90	-14.40
5	276.82	23.3 QP	46.0	-22.7	1.49 V	180	36.50	-13.20
6	591.80	29.2 QP	46.0	-16.8	1.49 V	190	36.90	-7.70

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

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
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	57.12	27.1 QP	40.0	-12.9	2.00 H	143	41.67	-14.55
2	136.84	28.1 QP	43.5	-15.4	2.00 H	131	42.81	-14.71
3	166.00	36.4 QP	43.5	-7.1	1.49 H	142	50.56	-14.13
4	331.26	32.5 QP	46.0	-13.5	1.00 H	214	44.63	-12.12
5	504.31	32.8 QP	46.0	-13.3	1.49 H	215	42.13	-9.38
6	607.35	32.3 QP	46.0	-13.7	1.49 H	110	39.66	-7.34

**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	61.01	35.3 QP	40.0	-4.7	1.01 V	18	50.31	-15.02
2	166.00	29.1 QP	43.5	-14.4	1.99 V	246	43.26	-14.13
3	331.26	21.5 QP	46.0	-24.5	1.01 V	174	33.61	-12.12
4	502.36	25.5 QP	46.0	-20.5	1.99 V	150	34.88	-9.42
5	605.41	29.7 QP	46.0	-16.3	1.01 V	310	37.00	-7.33
6	712.35	26.5 QP	46.0	-19.5	1.50 V	10	32.43	-5.94

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 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
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	57.12	25.7 QP	40.0	-14.3	1.35 H	322	40.30	-14.60
2	92.12	26.1 QP	43.5	-17.4	1.35 H	285	45.60	-19.50
3	154.33	29.6 QP	43.5	-13.9	1.39 H	140	43.50	-13.90
4	249.60	21.8 QP	46.0	-24.2	1.35 H	149	36.40	-14.60
5	549.03	31.6 QP	46.0	-14.4	1.35 H	159	40.30	-8.70
6	747.34	28.0 QP	46.0	-18.0	1.35 H	234	32.90	-4.90

**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	59.06	34.3 QP	40.0	-5.7	1.35 V	13	49.02	-14.68
2	154.33	23.4 QP	43.5	-20.1	1.35 V	160	37.30	-13.91
3	278.77	18.2 QP	46.0	-27.8	1.35 V	132	31.38	-13.14
4	383.76	23.4 QP	46.0	-22.6	1.35 V	142	34.87	-11.46
5	549.03	25.4 QP	46.0	-20.7	1.35 V	176	34.16	-8.81
6	714.29	27.6 QP	46.0	-18.4	1.35 V	188	33.47	-5.89

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 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	E		

**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	78.51	32.5 QP	40.0	-7.5	1.99 H	176	50.70	-18.20
2	169.89	33.0 QP	43.5	-10.5	1.49 H	102	47.20	-14.20
3	261.27	29.4 QP	46.0	-16.6	1.00 H	127	43.50	-14.10
4	331.26	34.3 QP	46.0	-11.7	1.00 H	122	46.40	-12.10
5	471.25	28.9 QP	46.0	-17.1	1.49 H	115	38.80	-9.90
6	603.47	31.4 QP	46.0	-14.6	1.49 H	82	38.80	-7.40

**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	35.60	33.1 QP	40.0	-6.9	1.00 V	184	49.00	-15.90
2	55.18	34.2 QP	40.0	-5.8	1.00 V	301	48.70	-14.50
3	80.45	33.0 QP	40.0	-7.0	1.00 V	59	51.60	-18.60
4	171.83	25.8 QP	43.5	-17.7	1.00 V	221	40.20	-14.40
5	331.26	30.6 QP	46.0	-15.4	1.49 V	234	42.70	-12.10
6	467.36	26.3 QP	46.0	-19.7	1.00 V	217	36.20	-9.90

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

## 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

Tested date: Sep. 25, 2017

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 21, 2016	Nov. 20, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2017	Sep. 04, 2018
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 15, 2017	Aug. 14, 2018
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

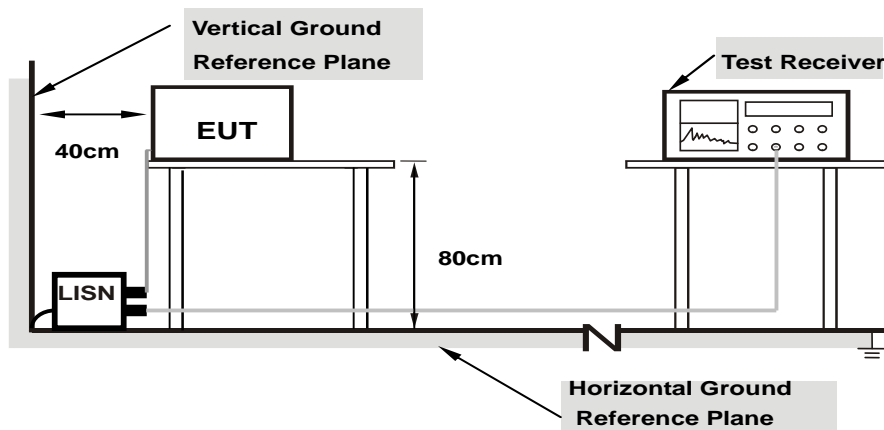
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

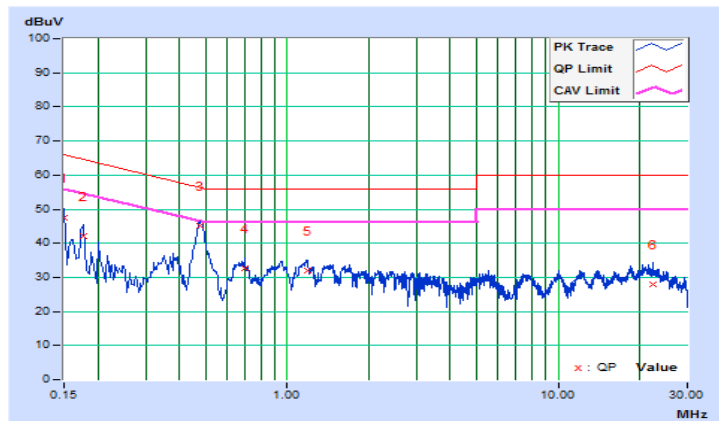
Worst-case data: 802.11b

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15000	10.45	36.99	24.33	47.44	34.78	66.00
2	0.17737	10.45	31.68	19.32	42.13	29.77	64.61	54.61	-22.48	-24.84
3	0.47412	10.51	34.54	29.30	45.05	39.81	56.44	46.44	-11.39	-6.63
4	0.69740	10.50	22.11	17.70	32.61	28.20	56.00	46.00	-23.39	-17.80
5	1.18608	10.49	21.66	18.24	32.15	28.73	56.00	46.00	-23.85	-17.27
6	22.42527	11.52	16.50	11.12	28.02	22.64	60.00	50.00	-31.98	-27.36

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.

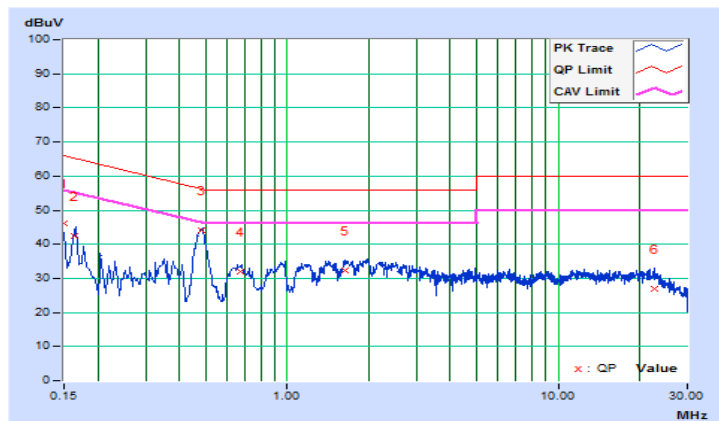


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15000	10.20	35.86	23.55	46.06	33.75	66.00
2	0.16439	10.21	32.32	19.41	42.53	29.62	65.24	55.24	-22.71	-25.62
3	0.48041	10.24	33.72	29.57	43.96	39.81	56.33	46.33	-12.37	-6.52
4	0.66781	10.25	21.87	18.45	32.12	28.70	56.00	46.00	-23.88	-17.30
5	1.63146	10.30	21.88	18.07	32.18	28.37	56.00	46.00	-23.82	-17.63
6	22.63641	11.13	15.83	10.63	26.96	21.76	60.00	50.00	-33.04	-28.24

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.

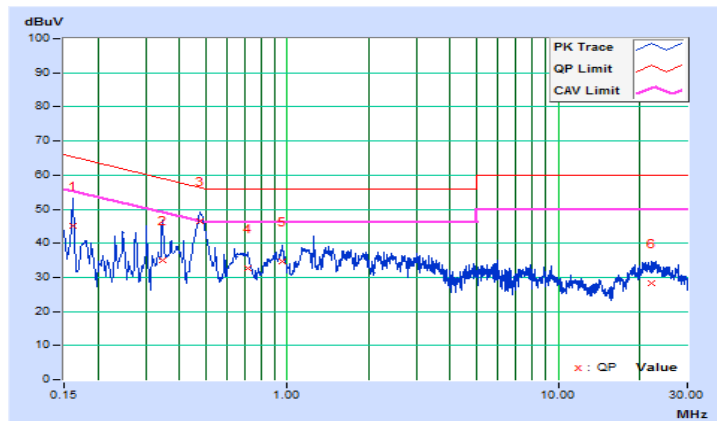


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16173	10.45	34.83	21.53	45.28	31.98	65.37
2	0.34550	10.50	24.66	18.79	35.16	29.29	59.07	49.07	-23.91	-19.78
<b>3</b>	<b>0.47537</b>	<b>10.51</b>	<b>35.99</b>	<b>31.02</b>	<b>46.50</b>	<b>41.53</b>	<b>56.42</b>	<b>46.42</b>	<b>-9.92</b>	<b>-4.89</b>
4	0.71328	10.50	22.23	18.44	32.73	28.94	56.00	46.00	-23.27	-17.06
5	0.96319	10.48	24.05	20.59	34.53	31.07	56.00	46.00	-21.47	-14.93
6	22.02645	11.51	16.67	11.44	28.18	22.95	60.00	50.00	-31.82	-27.05

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.

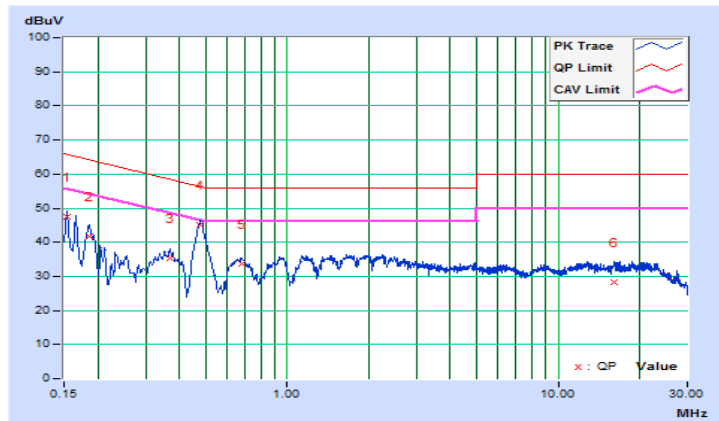


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15391	10.21	37.24	24.74	47.45	34.95	65.79
2	0.18508	10.22	31.52	19.30	41.74	29.52	64.25	54.25	-22.51	-24.73
3	0.36913	10.23	25.13	18.94	35.36	29.17	58.52	48.52	-23.16	-19.35
4	0.47915	10.24	34.86	30.59	45.10	40.83	56.35	46.35	-11.25	-5.52
5	0.67667	10.25	23.30	18.76	33.55	29.01	56.00	46.00	-22.45	-16.99
6	16.13408	10.90	17.50	12.29	28.40	23.19	60.00	50.00	-31.60	-26.81

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.

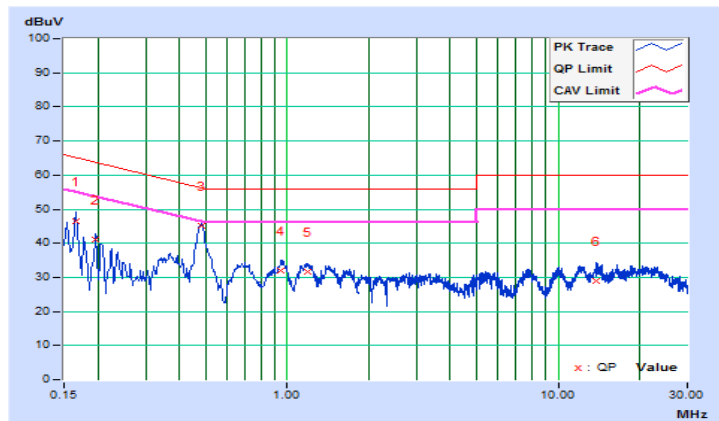


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16564	10.45	35.97	21.55	46.42	32.00	65.18
2	0.19692	10.45	30.65	16.63	41.10	27.08	63.74	53.74	-22.64	-26.66
3	0.48168	10.51	34.61	30.43	45.12	40.94	56.31	46.31	-11.19	-5.37
4	0.94764	10.48	21.63	18.81	32.11	29.29	56.00	46.00	-23.89	-16.71
5	1.18296	10.49	21.05	18.06	31.54	28.55	56.00	46.00	-24.46	-17.45
6	13.82718	11.12	17.98	12.86	29.10	23.98	60.00	50.00	-30.90	-26.02

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.

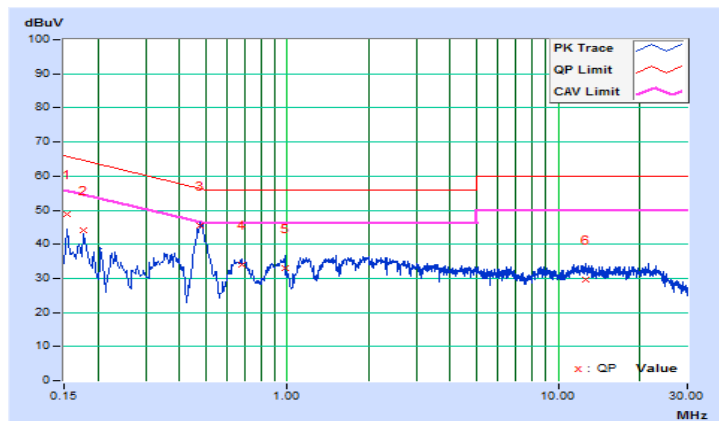


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15391	10.21	38.61	25.75	48.82	35.96	65.79
2	0.17744	10.21	33.81	21.53	44.02	31.74	64.60	54.60	-20.58	-22.86
3	0.47844	10.24	35.14	30.72	45.38	40.96	56.37	46.37	-10.99	-5.41
4	0.67785	10.25	23.60	19.08	33.85	29.33	56.00	46.00	-22.15	-16.67
5	0.97892	10.26	22.75	18.34	33.01	28.60	56.00	46.00	-22.99	-17.40
6	12.69328	10.77	18.99	13.82	29.76	24.59	60.00	50.00	-30.24	-25.41

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.

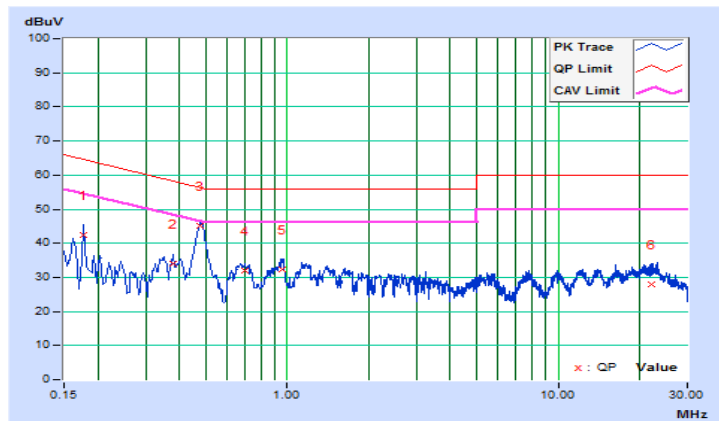


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.17744	10.45	31.93	19.41	42.38	29.86	64.60
2	0.37999	10.51	23.65	16.96	34.16	27.47	58.28	48.28	-24.12	-20.81
3	0.47789	10.51	34.50	29.99	45.01	40.50	56.38	46.38	-11.37	-5.88
4	0.69656	10.50	21.53	17.23	32.03	27.73	56.00	46.00	-23.97	-18.27
5	0.95309	10.48	22.01	18.86	32.49	29.34	56.00	46.00	-23.51	-16.66
6	22.17503	11.51	16.50	11.10	28.01	22.61	60.00	50.00	-31.99	-27.39

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.

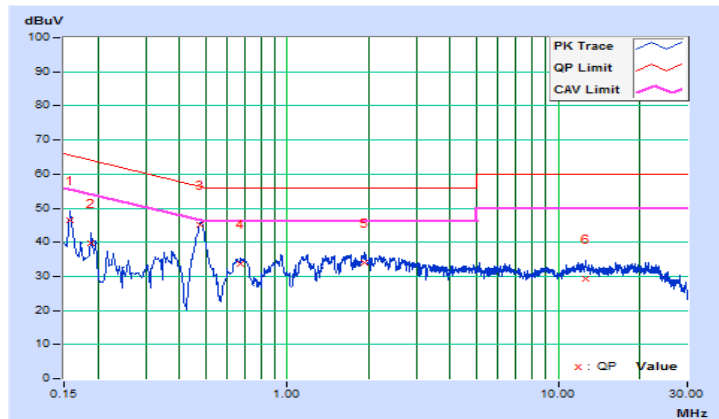


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15782	10.21	36.11	23.43	46.32	33.64	65.58
2	0.18903	10.22	29.66	18.17	39.88	28.39	64.08	54.08	-24.20	-25.69
3	0.47789	10.24	34.98	30.49	45.22	40.73	56.38	46.38	-11.16	-5.65
4	0.67311	10.25	23.35	19.44	33.60	29.69	56.00	46.00	-22.40	-16.31
5	1.93296	10.31	23.63	19.28	33.94	29.59	56.00	46.00	-22.06	-16.41
6	12.65809	10.77	18.38	13.11	29.15	23.88	60.00	50.00	-30.85	-26.12

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.



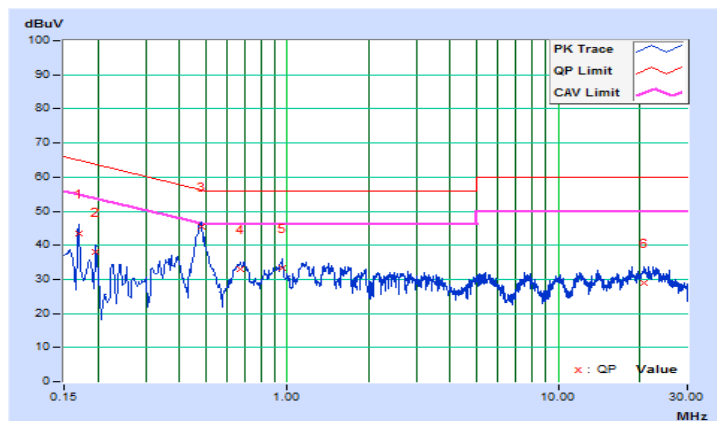


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	E		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16955	10.45	33.15	20.43	43.60	30.88	64.98
2	0.19692	10.45	27.65	14.51	38.10	24.96	63.74	53.74	-25.64	-28.78
3	0.48235	10.51	35.09	30.65	45.60	41.16	56.30	46.30	-10.70	-5.14
4	0.67311	10.50	22.58	18.57	33.08	29.07	56.00	46.00	-22.92	-16.93
5	0.95937	10.48	23.01	19.30	33.49	29.78	56.00	46.00	-22.51	-16.22
6	20.87691	11.46	17.39	12.18	28.85	23.64	60.00	50.00	-31.15	-26.36

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.

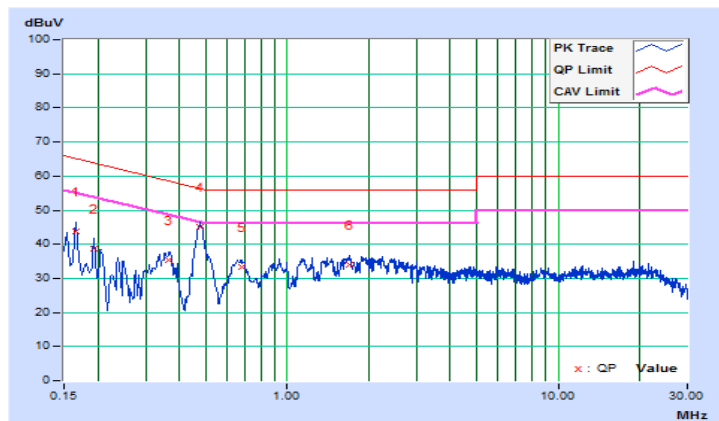


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	E		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16569	10.21	33.59	20.68	43.80	30.89	65.17
2	0.19301	10.22	28.43	17.02	38.65	27.24	63.91	53.91	-25.26	-26.67
3	0.36526	10.23	25.05	19.25	35.28	29.48	58.61	48.61	-23.33	-19.13
4	0.47844	10.24	34.97	30.59	45.21	40.83	56.37	46.37	-11.16	-5.54
5	0.67667	10.25	23.23	18.59	33.48	28.84	56.00	46.00	-22.52	-17.16
6	1.69054	10.30	23.62	19.73	33.92	30.03	56.00	46.00	-22.08	-15.97

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.

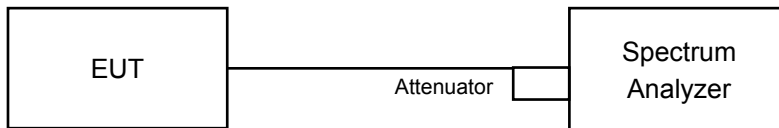


### 4.3 6dB Bandwidth Measurement

#### 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

- Set resolution bandwidth (RBW) = 100kHz.
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = average.
- Trace mode = max hold.
- Sweep = auto couple.
- 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 from Test 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

Test Mode A

##### 802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.12	7.62	0.5	Pass
6	2437	7.61	8.11	0.5	Pass
11	2462	7.62	7.62	0.5	Pass

##### 802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.41	16.42	0.5	Pass
6	2437	16.36	16.38	0.5	Pass
11	2462	16.37	16.41	0.5	Pass

##### 802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.63	17.63	0.5	Pass
6	2437	17.61	17.60	0.5	Pass
11	2462	17.60	17.62	0.5	Pass

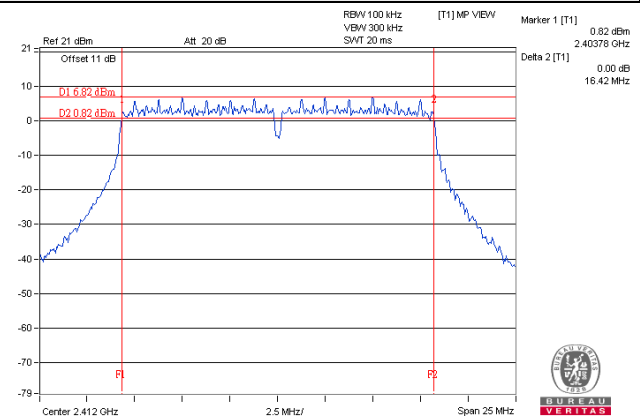
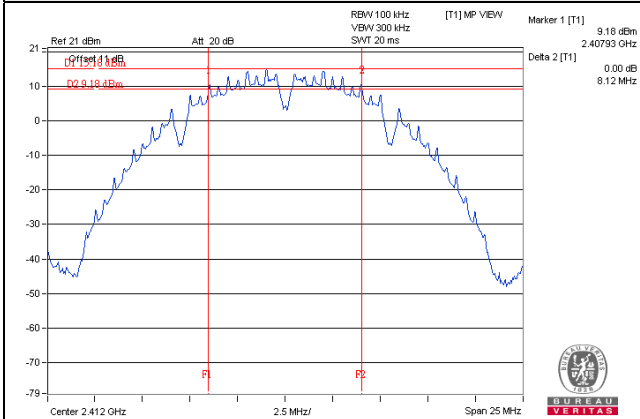
##### 802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.31	35.25	0.5	Pass
6	2437	35.21	35.24	0.5	Pass
9	2452	35.28	35.27	0.5	Pass

### Spectrum Plot of Worst Value

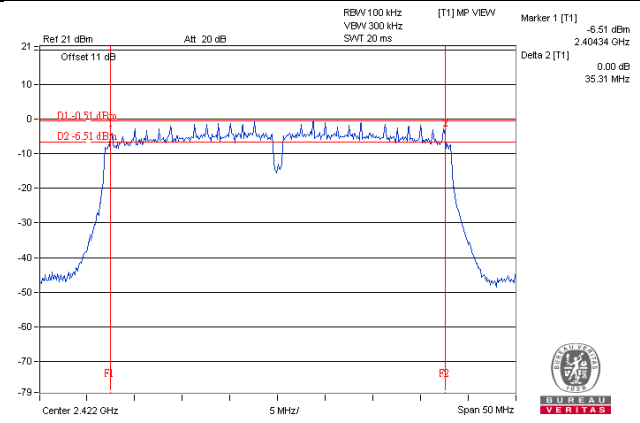
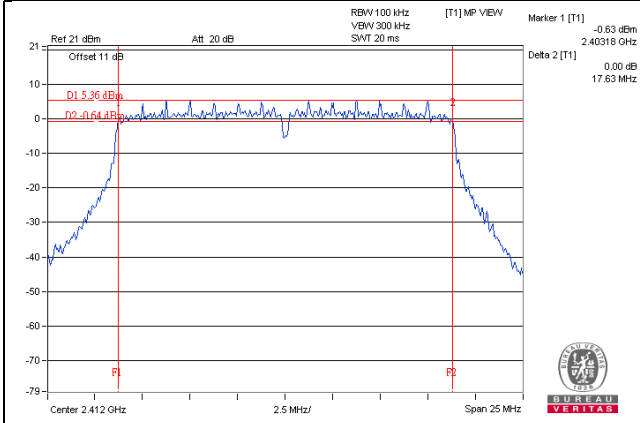
**802.11b**

**802.11g**



**802.11n (HT20)**

**802.11n (HT40)**



Test Mode B

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.12	8.13	0.5	Pass
6	2437	8.11	8.11	0.5	Pass
11	2462	8.12	7.62	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.40	16.42	0.5	Pass
6	2437	16.36	16.39	0.5	Pass
11	2462	16.38	16.41	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.61	17.63	0.5	Pass
6	2437	17.57	17.61	0.5	Pass
11	2462	17.60	17.62	0.5	Pass

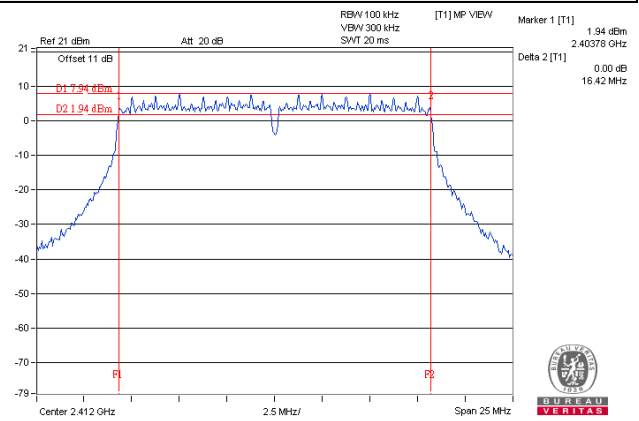
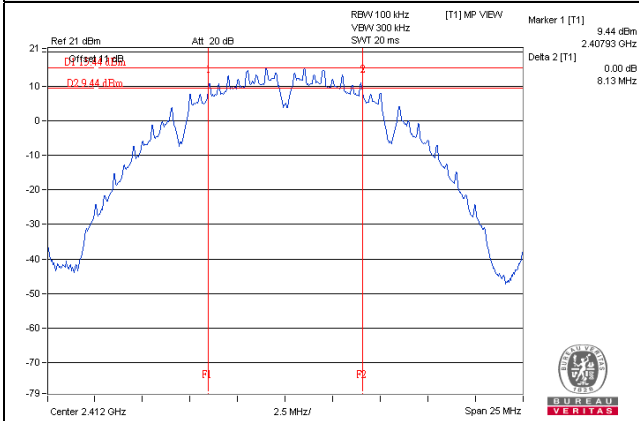
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.32	35.22	0.5	Pass
6	2437	35.17	35.30	0.5	Pass
9	2452	35.24	35.23	0.5	Pass

### Spectrum Plot of Worst Value

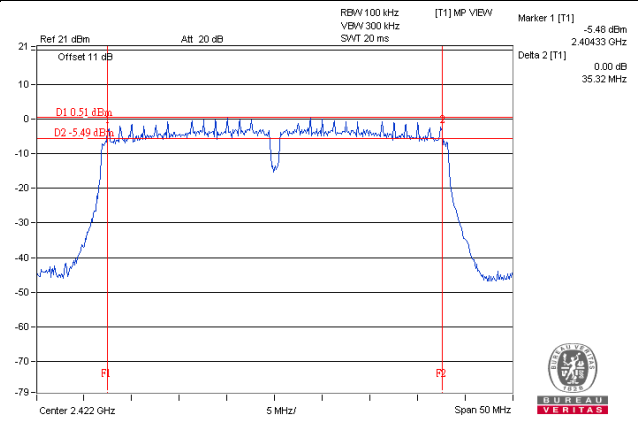
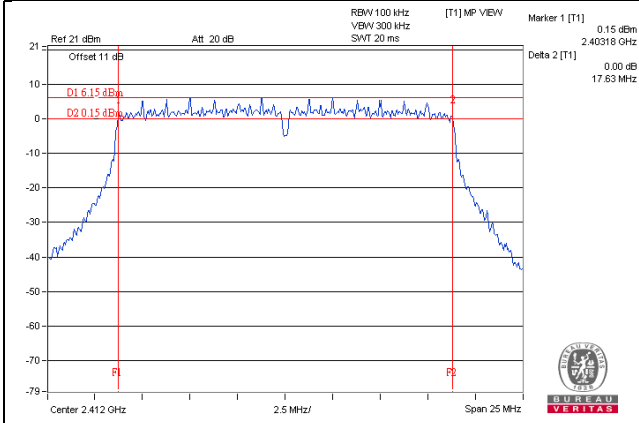
#### 802.11b

#### 802.11g



#### 802.11n (HT20)

#### 802.11n (HT40)



Test Mode C

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.10	8.10	0.5	Pass
6	2437	8.12	8.12	0.5	Pass
11	2462	8.11	8.11	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.40	16.41	0.5	Pass
6	2437	16.37	16.39	0.5	Pass
11	2462	16.38	16.42	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.61	17.64	0.5	Pass
6	2437	17.62	17.61	0.5	Pass
11	2462	17.61	17.63	0.5	Pass

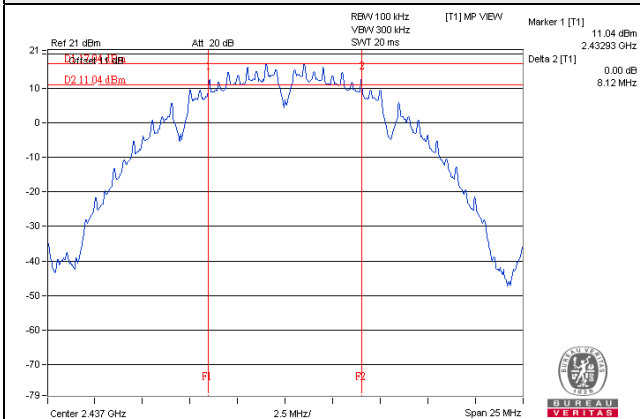
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.33	35.32	0.5	Pass
6	2437	35.20	35.20	0.5	Pass
9	2452	35.21	35.22	0.5	Pass

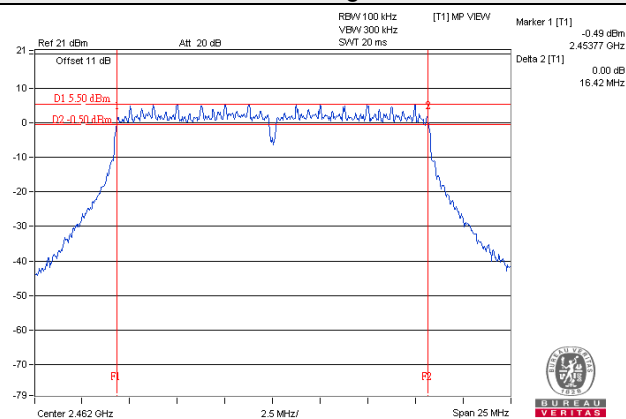


### Spectrum Plot of Worst Value

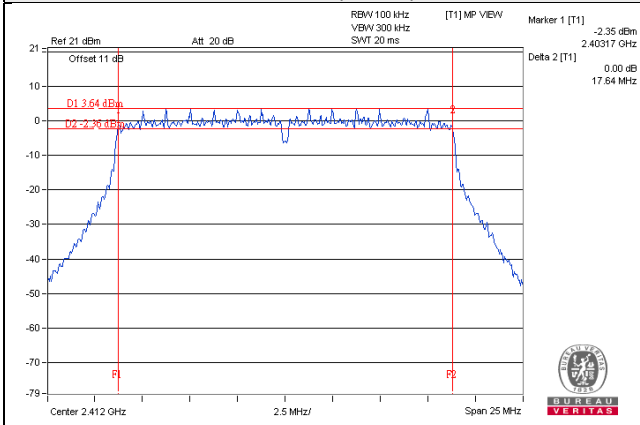
#### 802.11b



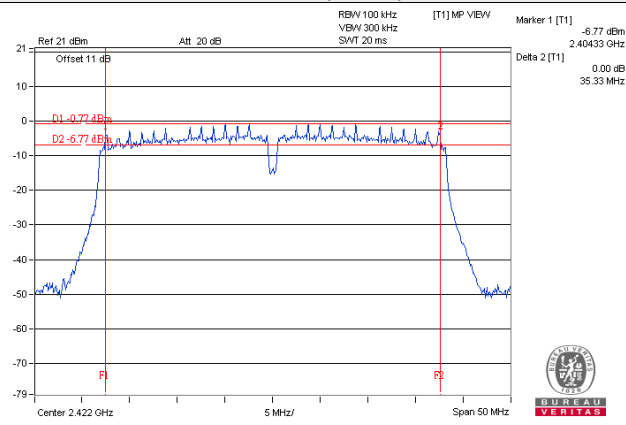
#### 802.11g



#### 802.11n (HT20)



#### 802.11n (HT40)



Test Mode D

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.11	8.11	0.5	Pass
6	2437	8.12	8.12	0.5	Pass
11	2462	8.12	8.11	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.38	16.40	0.5	Pass
6	2437	16.37	16.40	0.5	Pass
11	2462	16.39	16.40	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.61	17.61	0.5	Pass
6	2437	17.61	17.61	0.5	Pass
11	2462	17.61	17.64	0.5	Pass

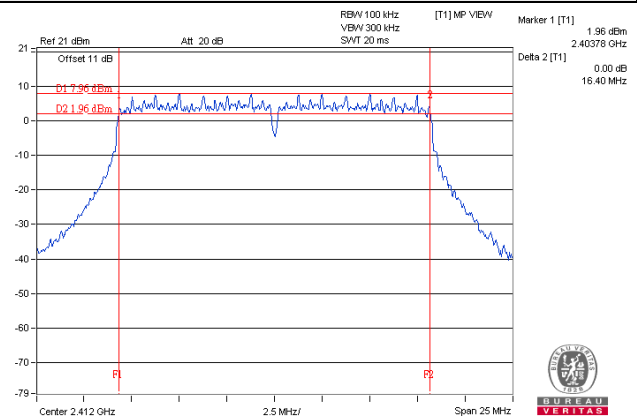
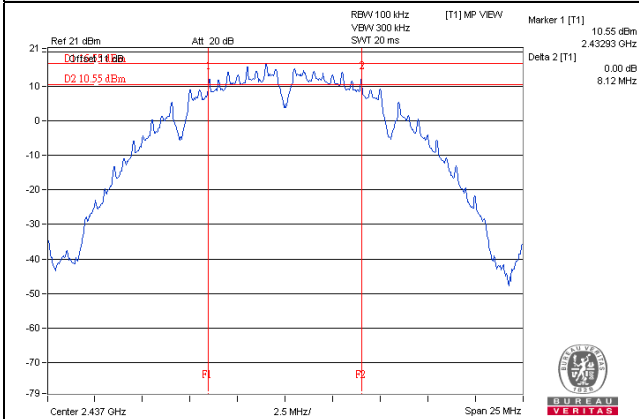
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.16	35.22	0.5	Pass
6	2437	35.19	35.25	0.5	Pass
9	2452	35.26	35.26	0.5	Pass

### Spectrum Plot of Worst Value

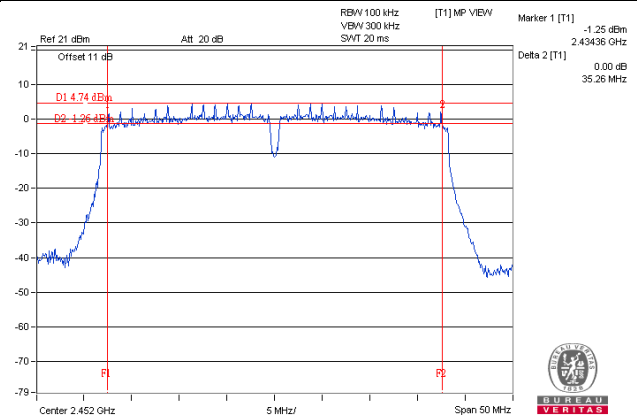
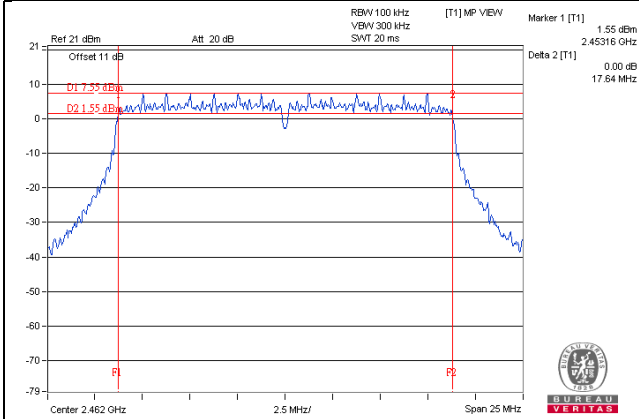
#### 802.11b

#### 802.11g



#### 802.11n (HT20)

#### 802.11n (HT40)



Test Mode E

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.11	7.60	0.5	Pass
6	2437	8.11	7.62	0.5	Pass
11	2462	8.12	8.12	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.38	16.40	0.5	Pass
6	2437	16.38	16.40	0.5	Pass
11	2462	16.39	16.41	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.62	17.61	0.5	Pass
6	2437	17.60	17.62	0.5	Pass
11	2462	17.61	17.62	0.5	Pass

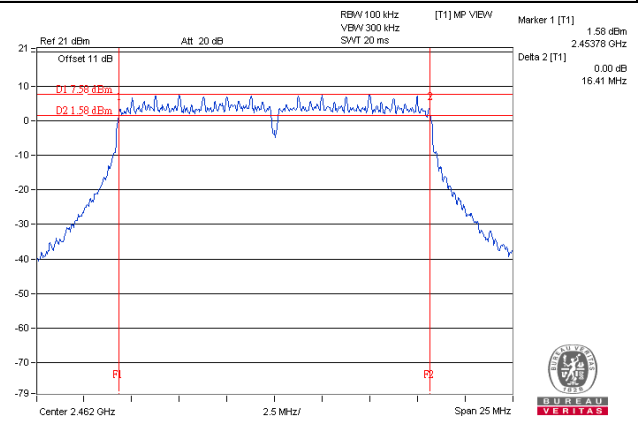
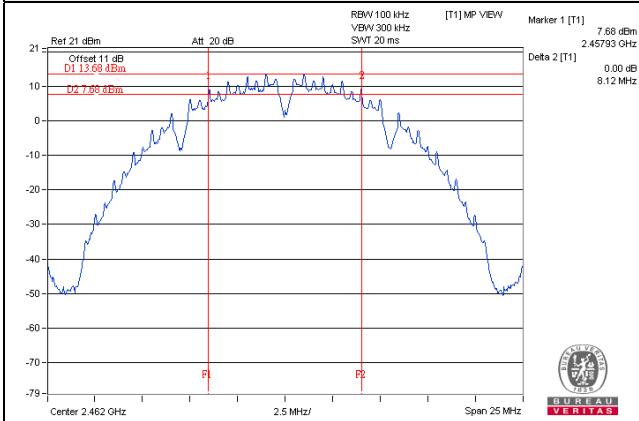
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.21	35.25	0.5	Pass
6	2437	35.24	35.27	0.5	Pass
9	2452	35.25	35.24	0.5	Pass

### Spectrum Plot of Worst Value

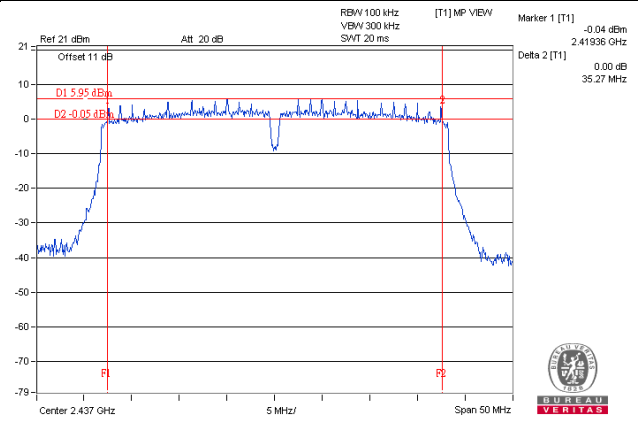
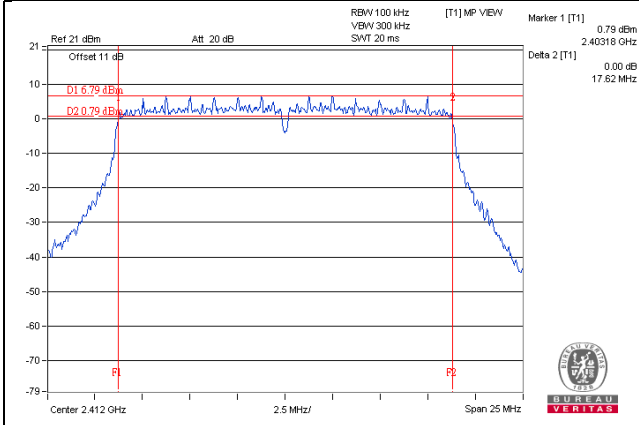
#### 802.11b

#### 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,

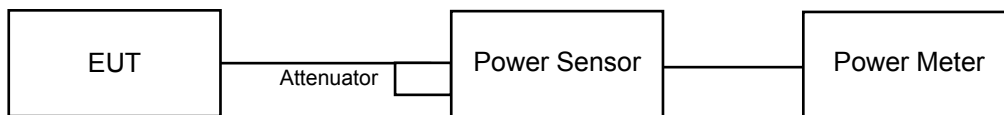
Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  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

Test Mode A

CDD Mode

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	22.76	23.19	397.248	25.99	28.00	Pass
6	2437	24.24	24.52	<b>548.600</b>	27.39	28.00	Pass
11	2462	18.82	18.89	153.654	21.87	28.00	Pass

Note: Gain = 8dBi > 6dBi, so the power limit shall be reduced to 30-(8-6) = 28.00dBm.

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	17.47	17.58	113.127	20.54	28.00	Pass
6	2437	24.01	24.11	509.400	27.07	28.00	Pass
11	2462	15.29	15.33	67.925	18.32	28.00	Pass

Note: Gain = 8dBi > 6dBi, so the power limit shall be reduced to 30-(8-6) = 28.00dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	16.68	16.70	93.333	19.70	28.00	Pass
6	2437	24.01	24.13	510.589	27.08	28.00	Pass
11	2462	14.37	14.18	53.535	17.29	28.00	Pass

Note: Gain = 8dBi > 6dBi, so the power limit shall be reduced to 30-(8-6) = 28.00dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	12.94	12.93	39.313	15.95	28.00	Pass
6	2437	17.18	17.16	104.240	20.18	28.00	Pass
9	2452	12.31	12.12	33.315	15.23	28.00	Pass

Note: Gain = 8dBi > 6dBi, so the power limit shall be reduced to 30-(8-6) = 28.00dBm.

### Beamforming Mode

#### 802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	13.67	13.69	46.666	16.69	24.99	Pass
6	2437	21.00	21.12	<b>255.270</b>	24.07	24.99	Pass
11	2462	11.36	11.17	26.792	14.28	24.99	Pass

Note: Directional gain =  $8\text{dBi} + 10\log(2) = 11.01\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (11.1 - 6) = 24.99\text{dBm}$ .

#### 802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	9.93	9.92	19.679	12.94	24.99	Pass
6	2437	14.17	14.15	52.119	17.17	24.99	Pass
9	2452	9.30	9.11	16.672	12.22	24.99	Pass

Note: Directional gain =  $8\text{dBi} + 10\log(2) = 11.01\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (11.1 - 6) = 24.99\text{dBm}$ .



Test Mode B

CDD Mode

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	22.76	23.19	397.248	25.99	30.00	Pass
6	2437	24.16	24.48	<b>541.158</b>	27.33	30.00	Pass
11	2462	22.50	22.72	364.896	25.62	30.00	Pass

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.80	19.08	156.768	21.95	30.00	Pass
6	2437	24.01	24.11	509.400	27.07	30.00	Pass
11	2462	19.35	19.67	178.782	22.52	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	17.03	17.57	107.614	20.32	30.00	Pass
6	2437	24.01	24.13	510.589	27.08	30.00	Pass
11	2462	18.32	18.42	137.422	21.38	30.00	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	14.06	14.40	53.010	17.24	30.00	Pass
6	2437	17.67	17.93	120.566	20.81	30.00	Pass
9	2452	14.79	14.95	61.391	17.88	30.00	Pass

## Beamforming Mode

### 802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.02	14.56	53.827	17.31	28.49	Pass
6	2437	21.00	21.12	<b>255.270</b>	24.07	28.49	Pass
11	2462	15.31	15.41	68.707	18.37	28.49	Pass

Note: Directional gain =  $4.5\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (7.51 - 6) = 28.49\text{dBm}$ .

### 802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	11.05	11.39	26.485	14.23	28.49	Pass
6	2437	14.66	14.92	60.256	17.80	28.49	Pass
9	2452	11.78	11.94	30.690	14.87	28.49	Pass

Note: Directional gain =  $4.5\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (7.51 - 6) = 28.49\text{dBm}$ .

Test Mode C

CDD Mode

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.73	22.08	310.372	24.92	28.20	Pass
6	2437	24.16	24.48	<b>541.158</b>	27.33	28.20	Pass
11	2462	19.31	19.55	175.467	22.44	28.20	Pass

Note: Gain = 7.8dBi > 6dBi, so the power limit shall be reduced to  $30-(7.8-6) = 28.20$ dBm.

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	16.58	16.88	94.252	19.74	28.20	Pass
6	2437	24.01	24.11	509.400	27.07	28.20	Pass
11	2462	16.05	16.32	83.127	19.20	28.20	Pass

Note: Gain = 7.8dBi > 6dBi, so the power limit shall be reduced to  $30-(7.8-6) = 28.20$ dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.54	15.01	60.141	17.79	28.20	Pass
6	2437	23.55	23.72	461.969	26.65	28.20	Pass
11	2462	14.18	14.37	53.535	17.29	28.20	Pass

Note: Gain = 7.8dBi > 6dBi, so the power limit shall be reduced to  $30-(7.8-6) = 28.20$ dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	12.44	12.77	36.462	15.62	28.20	Pass
6	2437	15.71	15.89	76.054	18.81	28.20	Pass
9	2452	11.71	11.58	29.213	14.66	28.20	Pass

Note: Gain = 7.8dBi > 6dBi, so the power limit shall be reduced to  $30-(7.8-6) = 28.20$ dBm.

## Beamforming Mode

### 802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	11.53	12.00	30.061	14.78	25.19	Pass
6	2437	20.54	20.71	<b>231.206</b>	23.64	25.19	Pass
11	2462	11.17	11.36	26.792	14.28	25.19	Pass

Note: Directional gain =  $7.8\text{dBi} + 10\log(2) = 10.81\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (10.81 - 6) = 25.19\text{dBm}$ .

### 802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	9.43	9.76	18.239	12.61	25.19	Pass
6	2437	12.70	12.88	38.019	15.80	25.19	Pass
9	2452	8.70	8.57	14.622	11.65	25.19	Pass

Note: Directional gain =  $7.8\text{dBi} + 10\log(2) = 10.81\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (10.81 - 6) = 25.19\text{dBm}$ .

Test Mode D

CDD Mode

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	23.57	24.43	504.842	27.03	30.00	Pass
6	2437	24.24	24.52	<b>548.600</b>	27.39	30.00	Pass
11	2462	22.50	22.72	364.896	25.62	30.00	Pass

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.80	19.08	156.768	21.95	30.00	Pass
6	2437	24.01	24.11	509.400	27.07	30.00	Pass
11	2462	19.52	19.21	172.904	22.38	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	17.03	17.57	107.614	20.32	30.00	Pass
6	2437	24.01	24.13	510.589	27.08	30.00	Pass
11	2462	18.59	18.08	136.546	21.35	30.00	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	14.09	14.31	52.622	17.21	30.00	Pass
6	2437	19.26	19.55	174.490	22.42	30.00	Pass
9	2452	17.56	17.78	116.995	20.68	30.00	Pass

## Beamforming Mode

### 802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.02	14.56	53.827	17.31	27.39	Pass
6	2437	21.00	21.12	<b>255.270</b>	24.07	27.39	Pass
11	2462	15.58	15.07	68.234	18.34	27.39	Pass

Note: Directional gain =  $5.6\text{dBi} + 10\log(2) = 8.61\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (8.61 - 6) = 27.39\text{dBm}$ .

### 802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	11.08	11.3	26.303	14.20	27.39	Pass
6	2437	16.25	16.54	87.297	19.41	27.39	Pass
9	2452	14.55	14.77	58.479	17.67	27.39	Pass

Note: Directional gain =  $5.6\text{dBi} + 10\log(2) = 8.61\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (8.61 - 6) = 27.39\text{dBm}$ .

Test Mode E

CDD Mode

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.43	21.61	283.872	24.53	25.00	Pass
6	2437	21.52	21.89	<b>296.431</b>	24.72	25.00	Pass
11	2462	21.46	21.66	286.514	24.57	25.00	Pass

Note: Gain = 11dBi > 6dBi, so the power limit shall be reduced to 30-(11-6) = 25.00dBm.

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.61	19.22	156.171	21.94	25.00	Pass
6	2437	21.49	21.74	290.208	24.63	25.00	Pass
11	2462	18.27	18.42	136.645	21.36	25.00	Pass

Note: Gain = 11dBi > 6dBi, so the power limit shall be reduced to 30-(11-6) = 25.00dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	17.96	18.57	134.462	21.29	25.00	Pass
6	2437	21.46	21.66	286.514	24.57	25.00	Pass
11	2462	17.73	17.98	122.099	20.87	25.00	Pass

Note: Gain = 11dBi > 6dBi, so the power limit shall be reduced to 30-(11-6) = 25.00dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	14.92	15.22	64.312	18.08	25.00	Pass
6	2437	19.26	19.55	174.490	22.42	25.00	Pass
9	2452	15.75	15.94	76.848	18.86	25.00	Pass

Note: Gain = 11dBi > 6dBi, so the power limit shall be reduced to 30-(11-6) = 25.00dBm.

## Beamforming Mode

### 802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.95	15.56	67.298	18.28	21.99	Pass
6	2437	18.45	18.65	<b>143.219</b>	21.56	21.99	Pass
11	2462	14.72	14.97	61.094	17.86	21.99	Pass

Note: Directional gain =  $11\text{dBi} + 10\log(2) = 14.01\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (14.01 - 6) = 21.99\text{dBm}$ .

### 802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	11.91	12.21	32.137	15.07	21.99	Pass
6	2437	16.25	16.54	87.297	19.41	21.99	Pass
9	2452	12.74	12.93	38.459	15.85	21.99	Pass

Note: Directional gain =  $11\text{dBi} + 10\log(2) = 14.01\text{dBi} > 6\text{dBi}$ , so the power limit shall be reduced to  $30 - (14.01 - 6) = 21.99\text{dBm}$ .

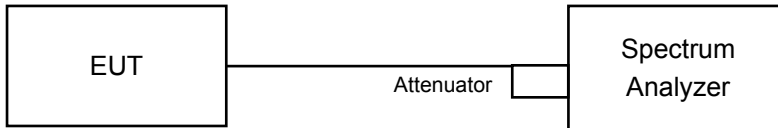


## 4.5 Power Spectral Density Measurement

### 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 Average Power (Duty cycle  $\geq 98\%$ )

- 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:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- d. Set VBW  $\geq 3 \times \text{RBW}$ .
- e. Detector = power averaging (RMS) or sample detector (when RMS not available).
- f. Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span}/\text{RBW}$ .
- 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 Average Power (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:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- e. Set VBW  $\geq 3 \times \text{RBW}$ .
- f. Detector = power averaging (RMS) or sample detector (when RMS not available).
- g. Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span}/\text{RBW}$ .
- h. Sweep time = auto couple.
- i. Do not 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

##### Test Mode A

##### 802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-4.67	3.01	-1.66	2.99	Pass
	6	2437	-2.36	3.01	0.65	2.99	Pass
	11	2462	-7.71	3.01	-4.70	2.99	Pass
1	1	2412	-4.13	3.01	-1.12	2.99	Pass
	6	2437	-2.33	3.01	0.68	2.99	Pass
	11	2462	-7.74	3.01	-4.73	2.99	Pass

Note:

- 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.
- Directional gain =  $8\text{dBi} + 10\log(2) = 11.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (11.01 - 6) = 2.99\text{dBm}$ .

##### 802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-12.84	3.01	0.20	-9.63	2.99	Pass
	6	2437	-6.83	3.01	0.20	-3.62	2.99	Pass
	11	2462	-15.07	3.01	0.20	-11.86	2.99	Pass
1	1	2412	-12.80	3.01	0.20	-9.59	2.99	Pass
	6	2437	-6.33	3.01	0.20	-3.12	2.99	Pass
	11	2462	-15.12	3.01	0.20	-11.91	2.99	Pass

Note:

- 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.
- Directional gain =  $8\text{dBi} + 10\log(2) = 11.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (11.01 - 6) = 2.99\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-13.63	3.01	-10.62	2.99	Pass
	6	2437	-6.52	3.01	-3.51	2.99	Pass
	11	2462	-16.56	3.01	-13.55	2.99	Pass
1	1	2412	-13.91	3.01	-10.90	2.99	Pass
	6	2437	-6.43	3.01	-3.42	2.99	Pass
	11	2462	-15.67	3.01	-12.66	2.99	Pass

Note:

- 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.
- Directional gain =  $8\text{dBi} + 10\log(2) = 11.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (11.01 - 6) = 2.99\text{dBm}$ .

### 802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-20.42	3.01	0.18	-17.23	2.99	Pass
	6	2437	-16.94	3.01	0.18	-13.75	2.99	Pass
	9	2452	-21.70	3.01	0.18	-18.51	2.99	Pass
1	3	2422	-20.53	3.01	0.18	-17.34	2.99	Pass
	6	2437	-16.64	3.01	0.18	-13.45	2.99	Pass
	9	2452	-22.01	3.01	0.18	-18.82	2.99	Pass

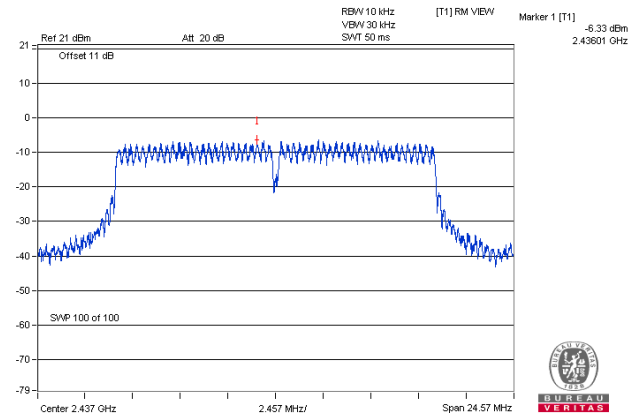
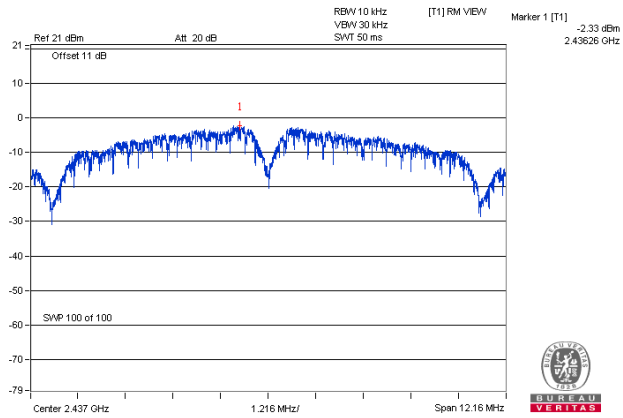
Note:

- 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.
- Directional gain =  $8\text{dBi} + 10\log(2) = 11.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (11.01 - 6) = 2.99\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

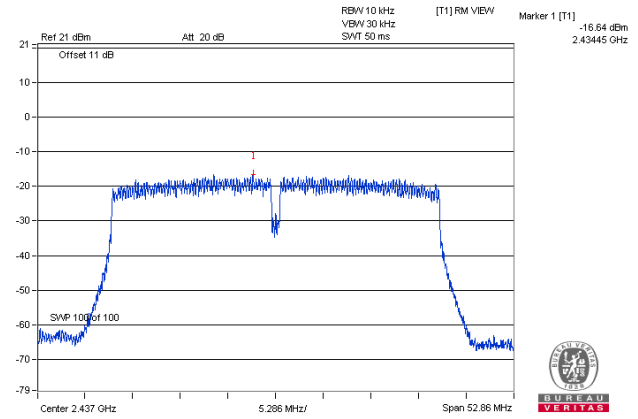
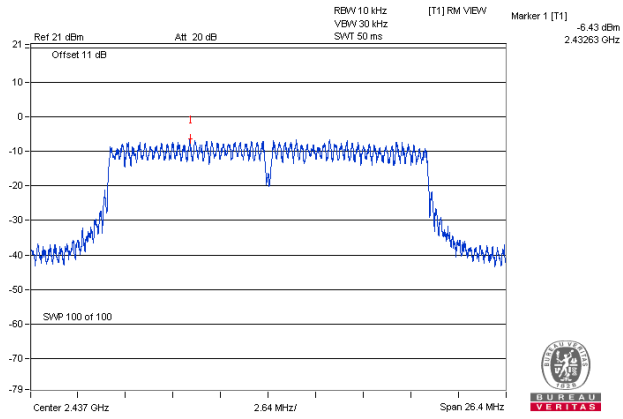
#### 802.11b

#### 802.11g



#### 802.11n (HT20)

#### 802.11n (HT40)



Test Mode B

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-4.22	3.01	-1.21	6.49	Pass
	6	2437	-2.87	3.01	0.14	6.49	Pass
	11	2462	-4.24	3.01	-1.23	6.49	Pass
1	1	2412	-3.53	3.01	-0.52	6.49	Pass
	6	2437	-2.90	3.01	0.11	6.49	Pass
	11	2462	-3.93	3.01	-0.92	6.49	Pass

Note:

- 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.
- Directional gain =  $4.5\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (7.51 - 6) = 6.49\text{dBm}$ .

802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-11.77	3.01	0.20	-8.56	6.49	Pass
	6	2437	-6.29	3.01	0.20	-3.08	6.49	Pass
	11	2462	-11.55	3.01	0.20	-8.34	6.49	Pass
1	1	2412	-11.72	3.01	0.20	-8.51	6.49	Pass
	6	2437	-6.45	3.01	0.20	-3.24	6.49	Pass
	11	2462	-11.08	3.01	0.20	-7.87	6.49	Pass

Note:

- 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.
- Directional gain =  $4.5\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (7.51 - 6) = 6.49\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-13.64	3.01	-10.63	6.49	Pass
	6	2437	-7.04	3.01	-4.03	6.49	Pass
	11	2462	-12.57	3.01	-9.56	6.49	Pass
1	1	2412	-12.21	3.01	-9.20	6.49	Pass
	6	2437	-6.62	3.01	-3.61	6.49	Pass
	11	2462	-12.31	3.01	-9.30	6.49	Pass

Note:

- 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.
- Directional gain =  $4.5\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(7.51-6) = 6.49\text{dBm}$ .

### 802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-20.14	3.01	0.18	-16.95	6.49	Pass
	6	2437	-15.72	3.01	0.18	-12.53	6.49	Pass
	9	2452	-19.47	3.01	0.18	-16.28	6.49	Pass
1	3	2422	-20.12	3.01	0.18	-16.93	6.49	Pass
	6	2437	-16.22	3.01	0.18	-13.03	6.49	Pass
	9	2452	-19.28	3.01	0.18	-16.09	6.49	Pass

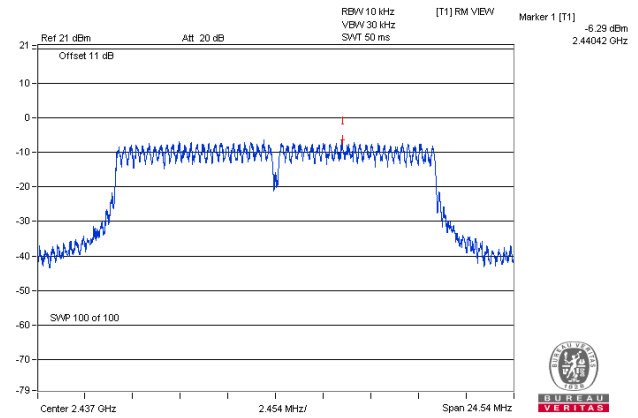
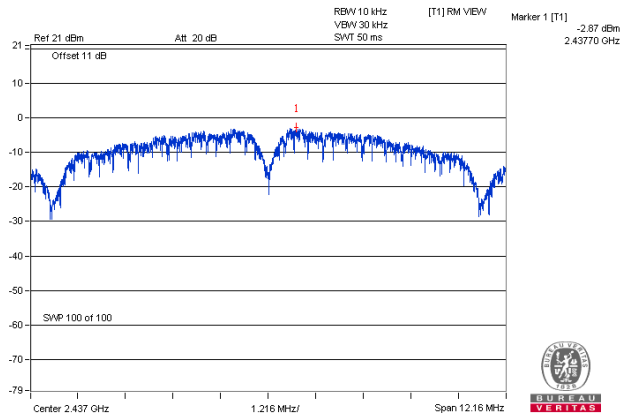
Note:

- 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.
- Directional gain =  $4.5\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(7.51-6) = 6.49\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

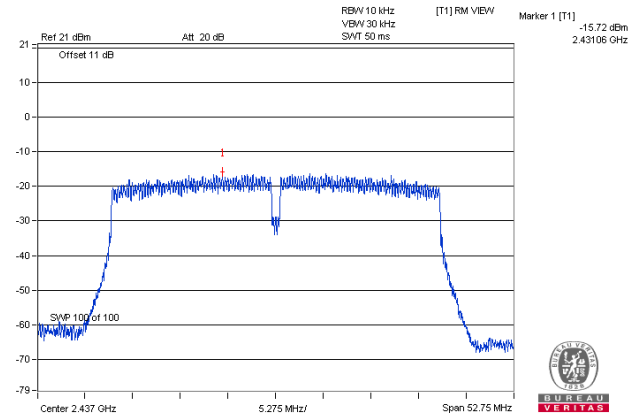
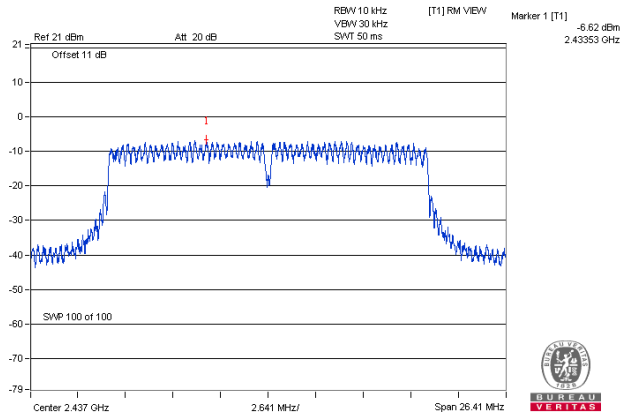
#### 802.11b

#### 802.11g



#### 802.11n (HT20)

#### 802.11n (HT40)





Test Mode C

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-4.11	3.01	-1.10	3.19	Pass
	6	2437	-1.63	3.01	1.38	3.19	Pass
	11	2462	-6.94	3.01	-3.93	3.19	Pass
1	1	2412	-4.39	3.01	-1.38	3.19	Pass
	6	2437	-1.73	3.01	1.28	3.19	Pass
	11	2462	-6.59	3.01	-3.58	3.19	Pass

Note:

- 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.
- Directional gain =  $7.8\text{dBi} + 10\log(2) = 10.81\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (10.81 - 6) = 3.19\text{dBm}$ .

802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-12.85	3.01	0.20	-9.64	3.19	Pass
	6	2437	-5.65	3.01	0.20	-2.44	3.19	Pass
	11	2462	-13.30	3.01	0.20	-10.09	3.19	Pass
1	1	2412	-13.08	3.01	0.20	-9.87	3.19	Pass
	6	2437	-5.62	3.01	0.20	-2.41	3.19	Pass
	11	2462	-12.84	3.01	0.20	-9.63	3.19	Pass

Note:

- 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.
- Directional gain =  $7.8\text{dBi} + 10\log(2) = 10.81\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8 - (10.81 - 6) = 3.19\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-14.03	3.01	-11.02	3.19	Pass
	6	2437	-5.51	3.01	-2.50	3.19	Pass
	11	2462	-14.31	3.01	-11.30	3.19	Pass
1	1	2412	-14.23	3.01	-11.22	3.19	Pass
	6	2437	-5.72	3.01	-2.71	3.19	Pass
	11	2462	-14.76	3.01	-11.75	3.19	Pass

Note:

- 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.
- Directional gain =  $7.8\text{dBi} + 10\log(2) = 10.81\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(10.81-6) = 3.19\text{dBm}$ .

### 802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-19.94	3.01	0.18	-16.75	3.19	Pass
	6	2437	-16.41	3.01	0.18	-13.22	3.19	Pass
	9	2452	-20.49	3.01	0.18	-17.30	3.19	Pass
1	3	2422	-19.78	3.01	0.18	-16.59	3.19	Pass
	6	2437	-16.59	3.01	0.18	-13.40	3.19	Pass
	9	2452	-20.51	3.01	0.18	-17.32	3.19	Pass

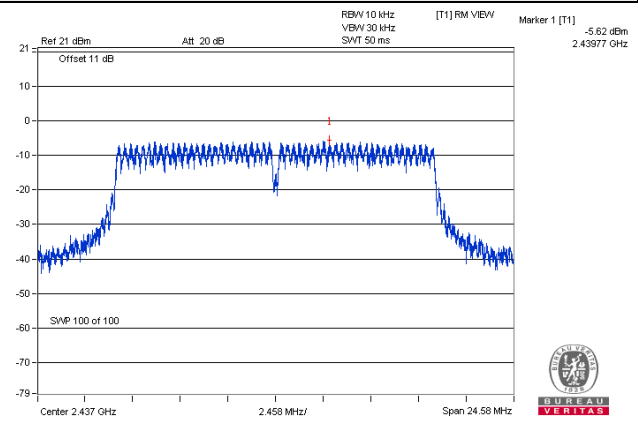
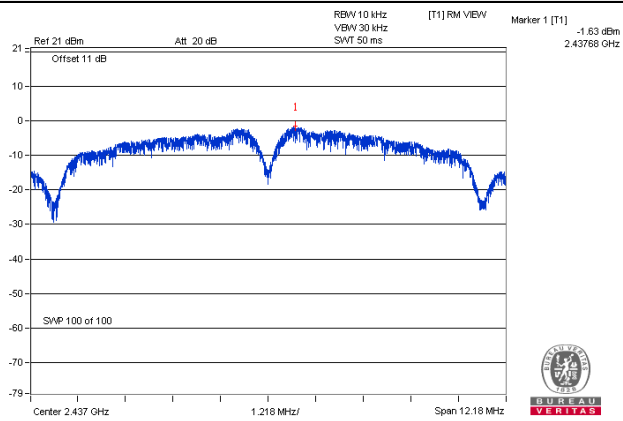
Note:

- 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.
- Directional gain =  $7.8\text{dBi} + 10\log(2) = 10.81\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(10.81-6) = 3.19\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

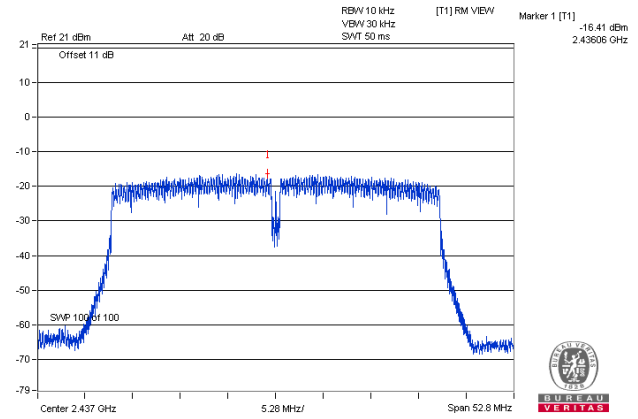
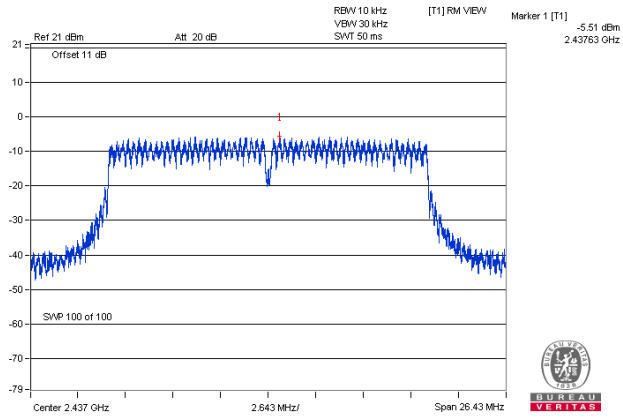
**802.11b**

**802.11g**



**802.11n (HT20)**

**802.11n (HT40)**



Test Mode D

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-2.80	3.01	0.21	5.39	Pass
	6	2437	-2.11	3.01	0.90	5.39	Pass
	11	2462	-4.19	3.01	-1.18	5.39	Pass
1	1	2412	-2.71	3.01	0.30	5.39	Pass
	6	2437	-2.48	3.01	0.53	5.39	Pass
	11	2462	-3.56	3.01	-0.55	5.39	Pass

Note:

- 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.
- Directional gain =  $5.6\text{dBi} + 10\log(2) = 8.61\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(8.61-6) = 5.39\text{dBm}$ .

802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-11.11	3.01	0.20	-7.90	5.39	Pass
	6	2437	-6.01	3.01	0.20	-2.80	5.39	Pass
	11	2462	-10.19	3.01	0.20	-6.98	5.39	Pass
1	1	2412	-10.81	3.01	0.20	-7.60	5.39	Pass
	6	2437	-5.81	3.01	0.20	-2.60	5.39	Pass
	11	2462	-9.44	3.01	0.20	-6.23	5.39	Pass

Note:

- 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.
- Directional gain =  $5.6\text{dBi} + 10\log(2) = 8.61\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(8.61-6) = 5.39\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-11.95	3.01	-8.94	5.39	Pass
	6	2437	-5.24	3.01	-2.23	5.39	Pass
	11	2462	-10.18	3.01	-7.17	5.39	Pass
1	1	2412	-11.49	3.01	-8.48	5.39	Pass
	6	2437	-5.02	3.01	-2.01	5.39	Pass
	11	2462	-9.94	3.01	-6.93	5.39	Pass

Note:

- 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.
- Directional gain =  $5.6\text{dBi} + 10\log(2) = 8.61\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(8.61-6) = 5.39\text{dBm}$ .

### 802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-17.74	3.01	0.18	-14.55	5.39	Pass
	6	2437	-12.93	3.01	0.18	-9.74	5.39	Pass
	9	2452	-14.31	3.01	0.18	-11.12	5.39	Pass
1	3	2422	-17.97	3.01	0.18	-14.78	5.39	Pass
	6	2437	-12.81	3.01	0.18	-9.62	5.39	Pass
	9	2452	-13.82	3.01	0.18	-10.63	5.39	Pass

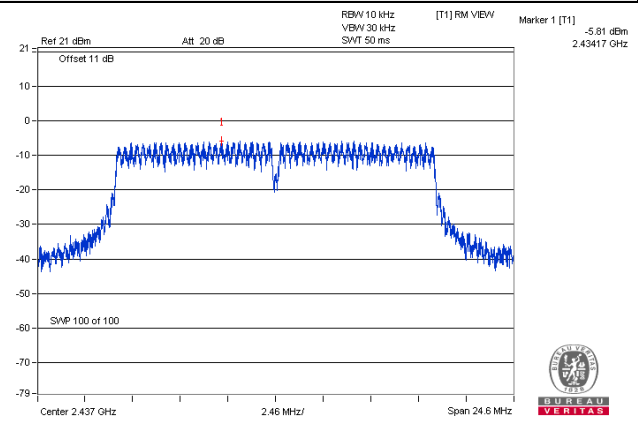
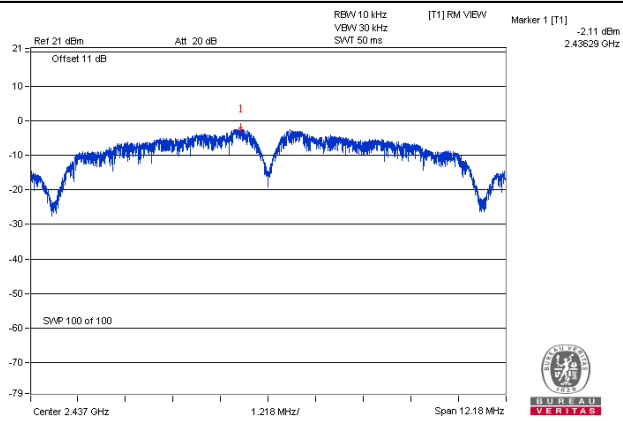
Note:

- 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.
- Directional gain =  $5.6\text{dBi} + 10\log(2) = 8.61\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(8.61-6) = 5.39\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

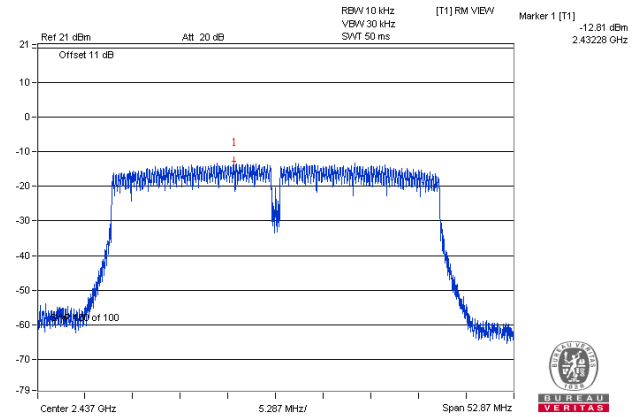
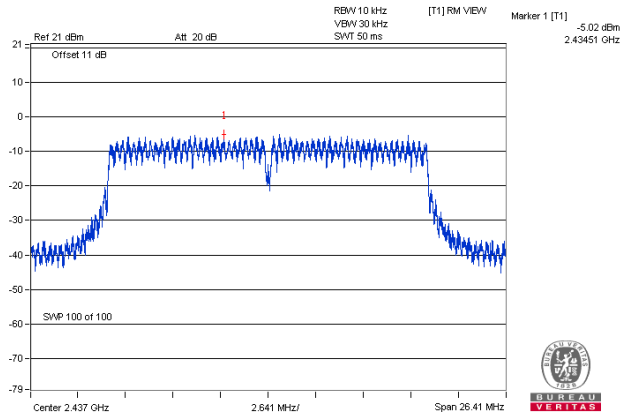
#### 802.11b

#### 802.11g



#### 802.11n (HT20)

#### 802.11n (HT40)



Test Mode E

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-4.87	3.01	-1.86	-0.01	Pass
	6	2437	-4.56	3.01	-1.55	-0.01	Pass
	11	2462	-4.87	3.01	-1.86	-0.01	Pass
1	1	2412	-5.10	3.01	-2.09	-0.01	Pass
	6	2437	-5.06	3.01	-2.05	-0.01	Pass
	11	2462	-4.94	3.01	-1.93	-0.01	Pass

Note:

- 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.
- Directional gain = 11dBi + 10log(2) = 14.01dBi > 6dBi, so the power density limit shall be reduced to 8-(14.01-6) = -0.01dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-11.16	3.01	0.20	-7.95	-0.01	Pass
	6	2437	-8.47	3.01	0.20	-5.26	-0.01	Pass
	11	2462	-11.08	3.01	0.20	-7.87	-0.01	Pass
1	1	2412	-10.78	3.01	0.20	-7.57	-0.01	Pass
	6	2437	-7.97	3.01	0.20	-4.76	-0.01	Pass
	11	2462	-11.34	3.01	0.20	-8.13	-0.01	Pass

Note:

- 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.
- Directional gain = 11dBi + 10log(2) = 14.01dBi > 6dBi, so the power density limit shall be reduced to 8-(14.01-6) = -0.01dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-11.21	3.01	-8.20	-0.01	Pass
	6	2437	-7.44	3.01	-4.43	-0.01	Pass
	11	2462	-11.66	3.01	-8.65	-0.01	Pass
1	1	2412	-10.79	3.01	-7.78	-0.01	Pass
	6	2437	-7.52	3.01	-4.51	-0.01	Pass
	11	2462	-11.06	3.01	-8.05	-0.01	Pass

Note:

- 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.
- Directional gain =  $11\text{dBi} + 10\log(2) = 14.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(14.01-6) = -0.01\text{dBm}$ .

### 802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-17.75	3.01	0.18	-14.56	-0.01	Pass
	6	2437	-12.74	3.01	0.18	-9.55	-0.01	Pass
	9	2452	-16.64	3.01	0.18	-13.45	-0.01	Pass
1	3	2422	-17.57	3.01	0.18	-14.38	-0.01	Pass
	6	2437	-13.09	3.01	0.18	-9.90	-0.01	Pass
	9	2452	-16.53	3.01	0.18	-13.34	-0.01	Pass

Note:

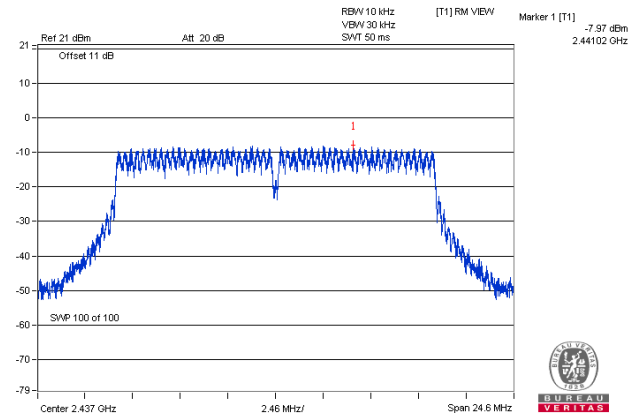
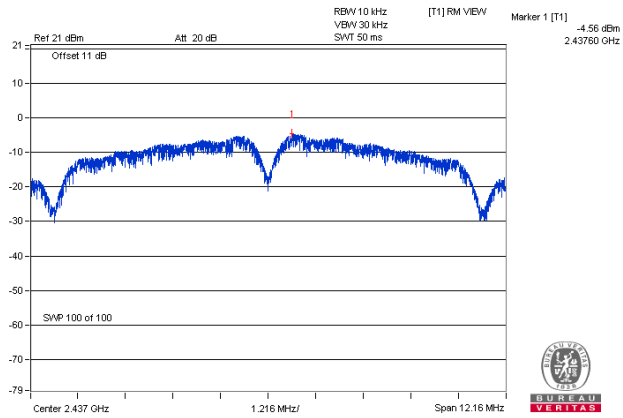
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $11\text{dBi} + 10\log(2) = 14.01\text{dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $8-(14.01-6) = -0.01\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.



### Spectrum Plot of Worst Value

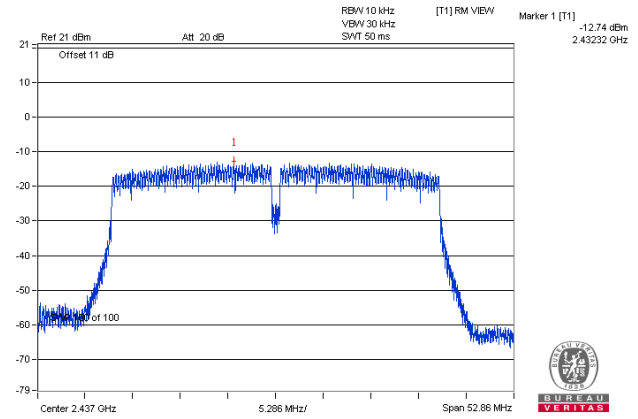
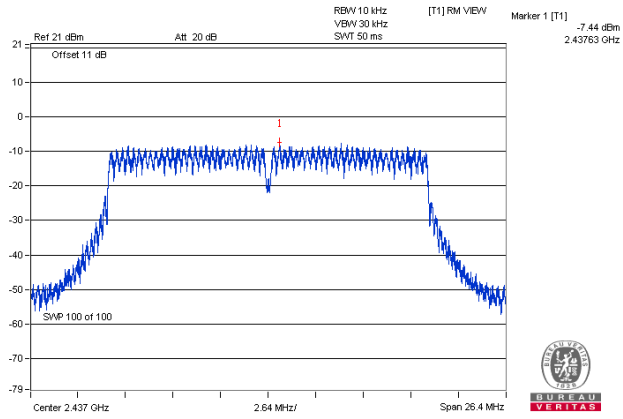
**802.11b**

**802.11g**



**802.11n (HT20)**

**802.11n (HT40)**

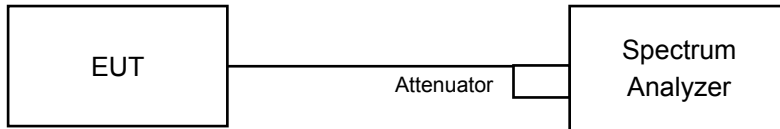


## 4.6 Conducted Out of Band Emission Measurement

### 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

- Set the RBW = 100 kHz.
- Set the VBW  $\geq$  300 kHz.
- Detector = average.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

#### MEASUREMENT PROCEDURE OOBE

- Set RBW = 100 kHz.
- Set VBW  $\geq$  300 kHz.
- Detector = average.
- Sweep = auto couple.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

Same as item 4.3.6

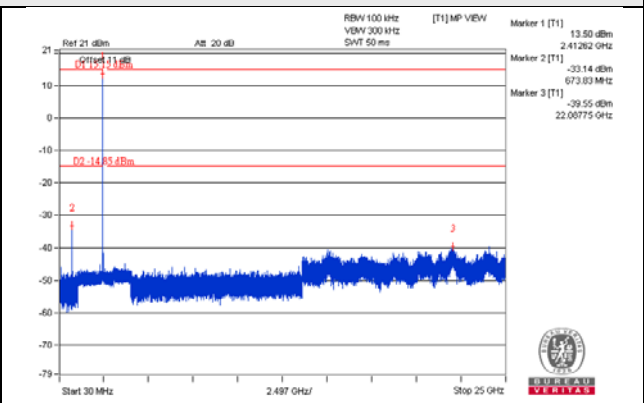
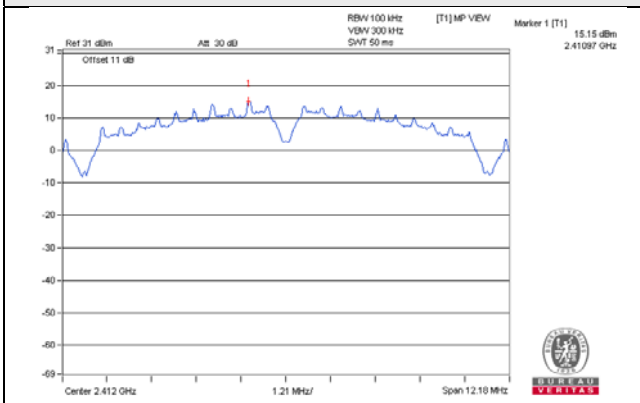
### 4.6.7 Test Results

The conducted emission test is performed on each TX port of operating mode without summing or adding  $10\log(N)$  since the limit is relative emission limit.

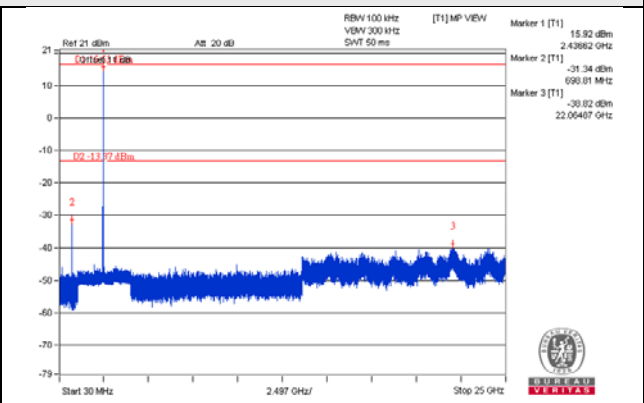
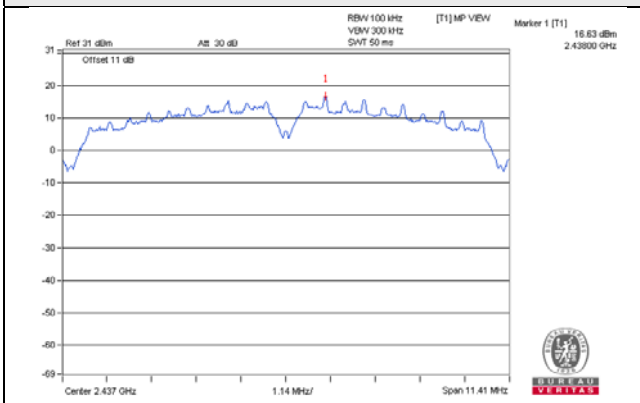
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

Test Mode A  
802.11b\_Chain 0

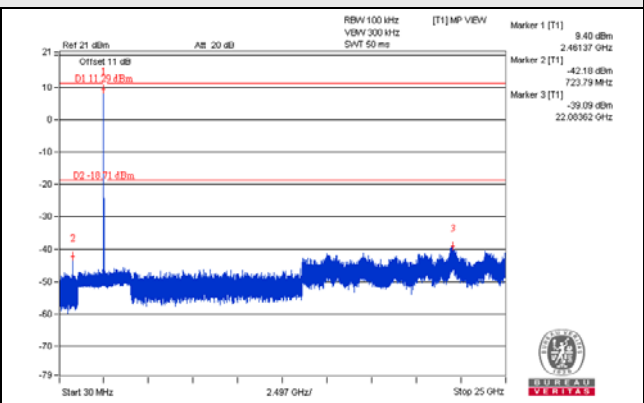
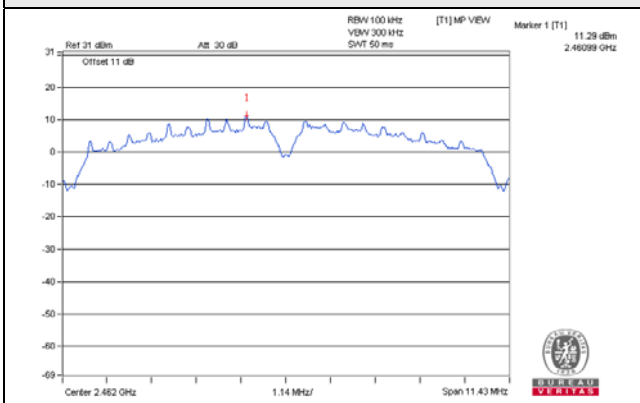
CH 1



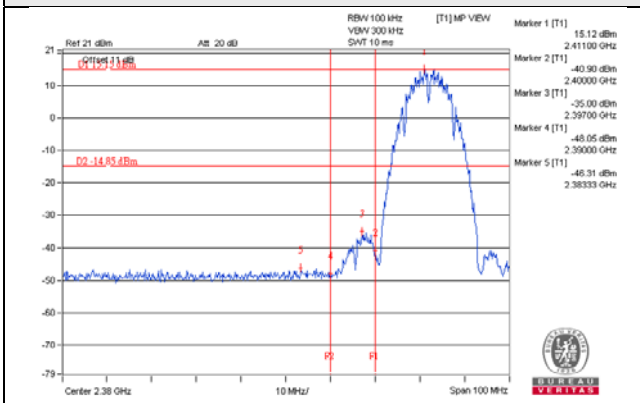
CH 6



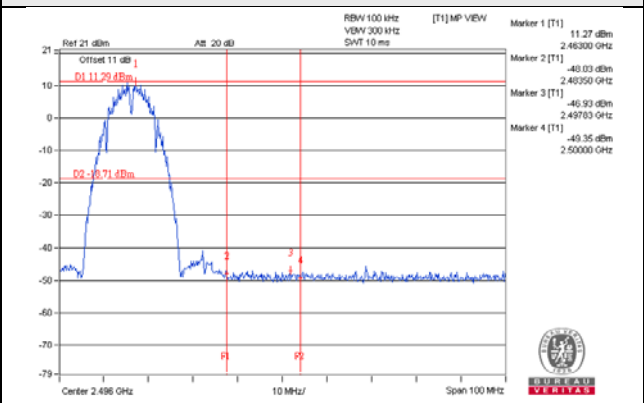
CH 11



CH 1 Band edge

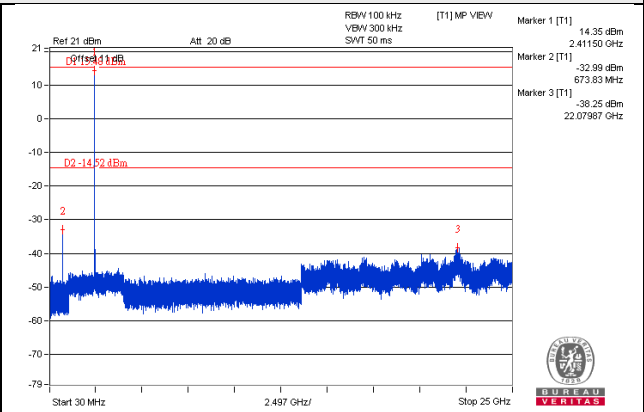
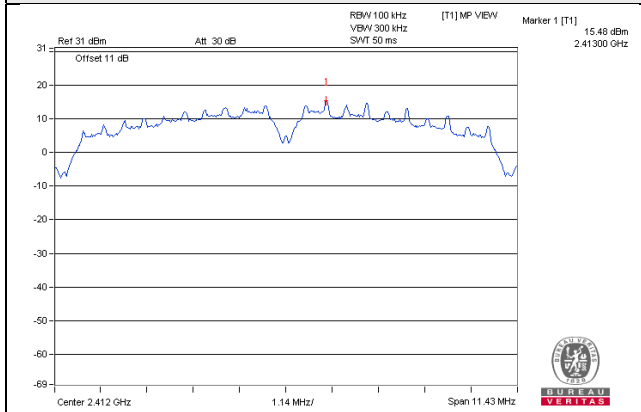


CH 11 Band edge

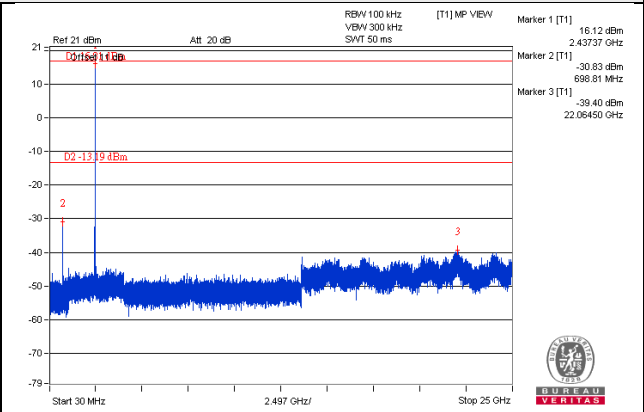
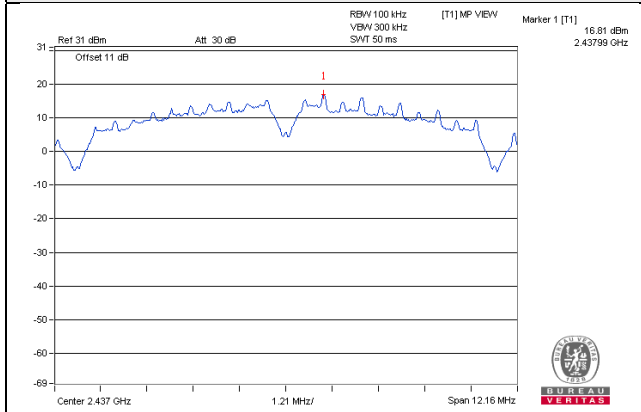


802.11b\_Chain 1

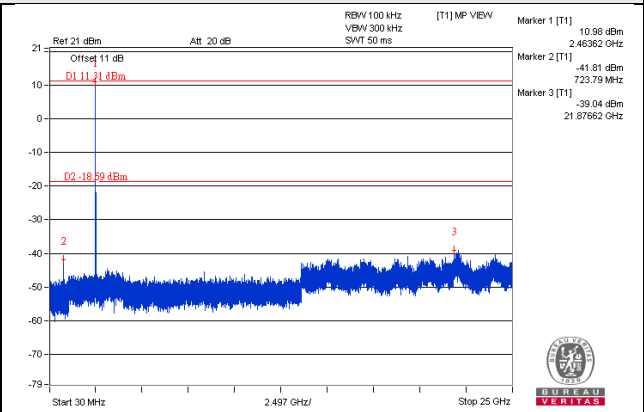
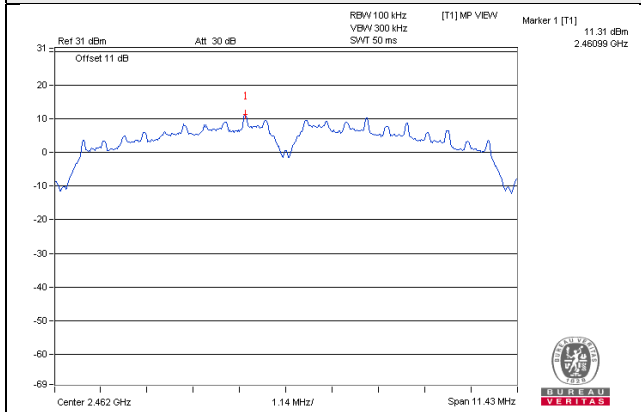
CH 1



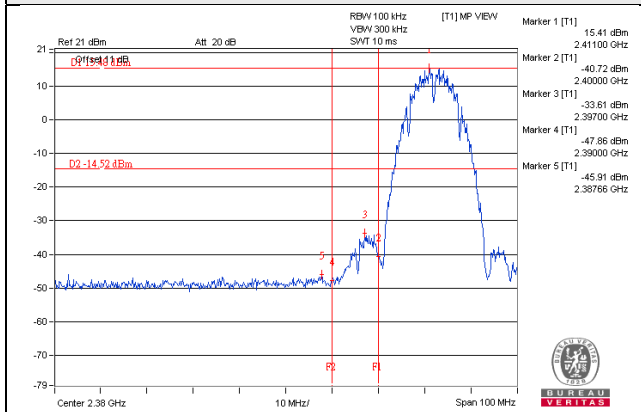
CH 6



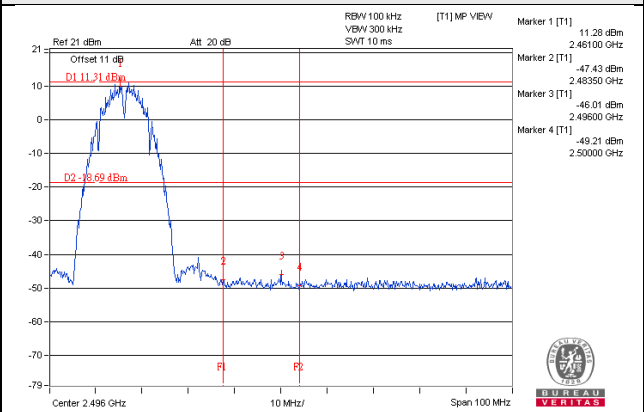
CH 11



CH 1 Band edge

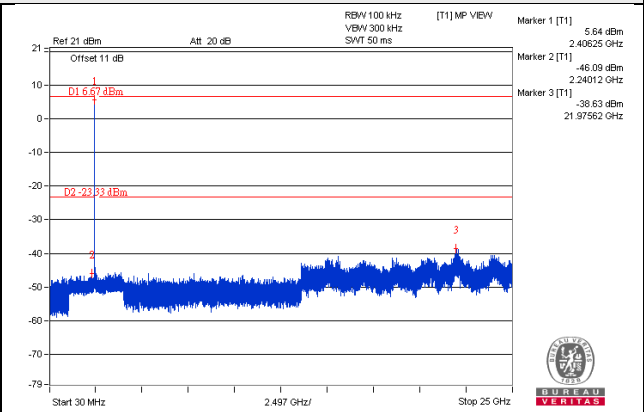
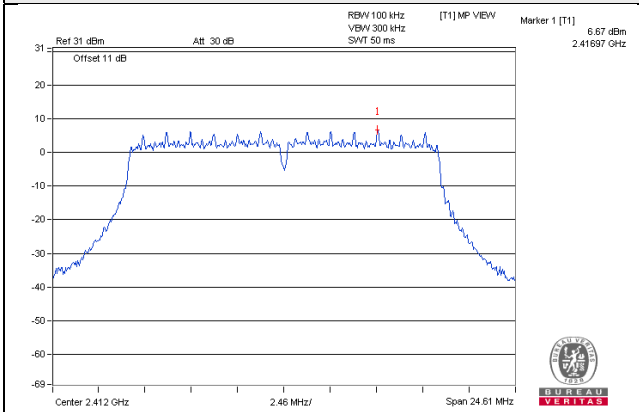


CH 11 Band edge

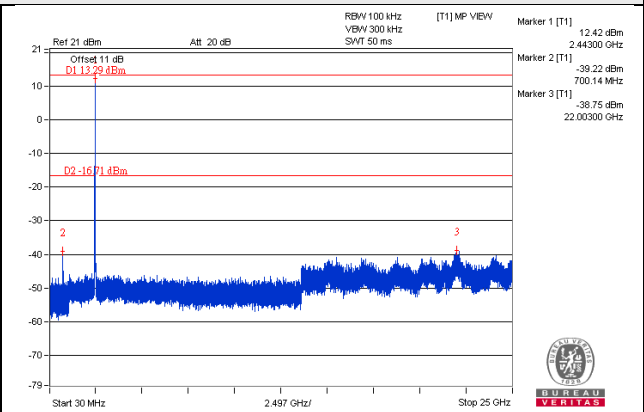
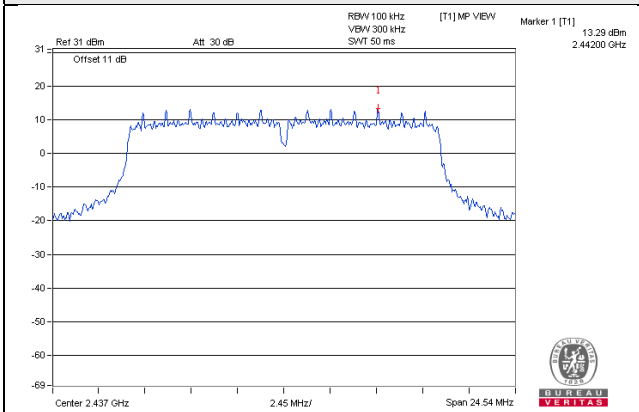


# 802.11g\_Chain 0

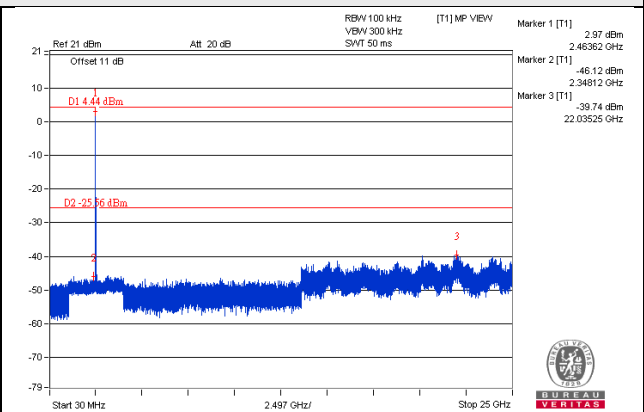
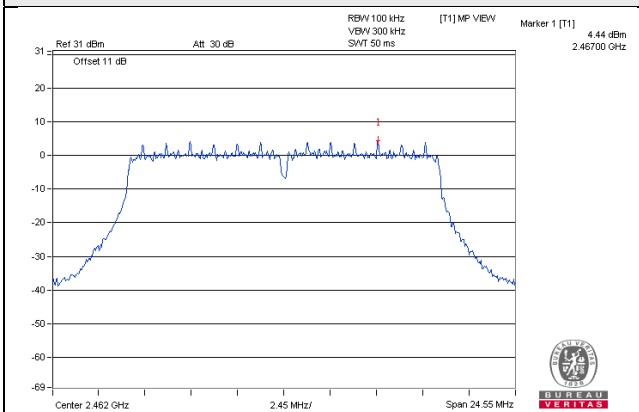
## CH 1



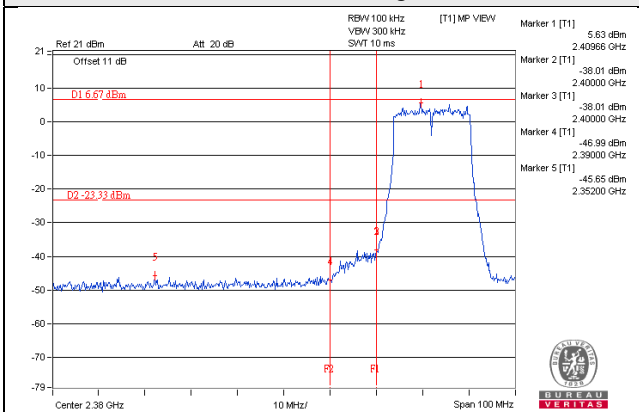
## CH 6



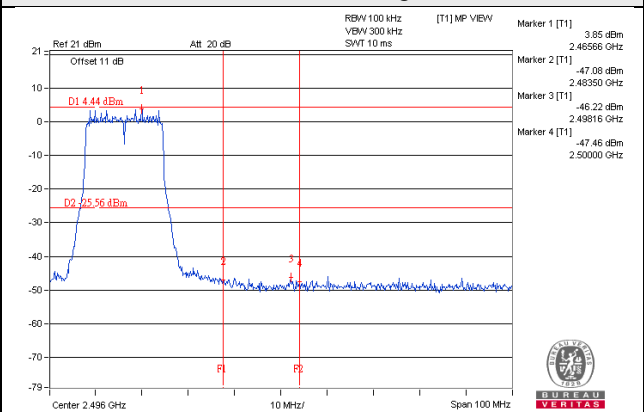
## CH 11



## CH 1 Band edge

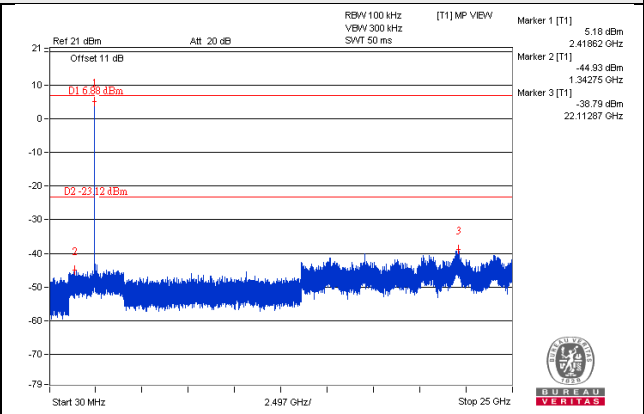
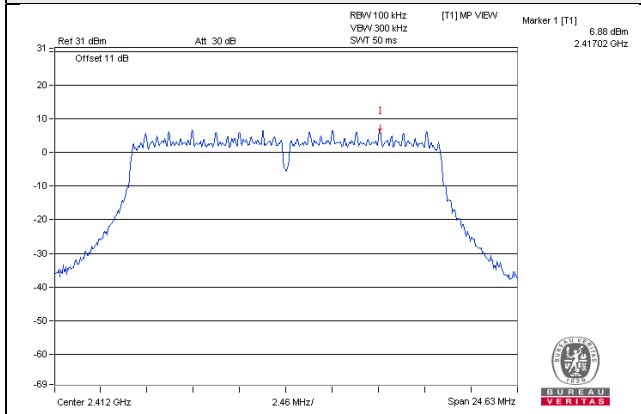


## CH 11 Band edge

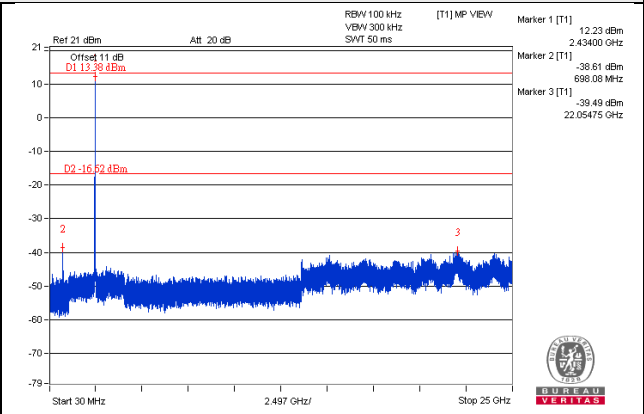
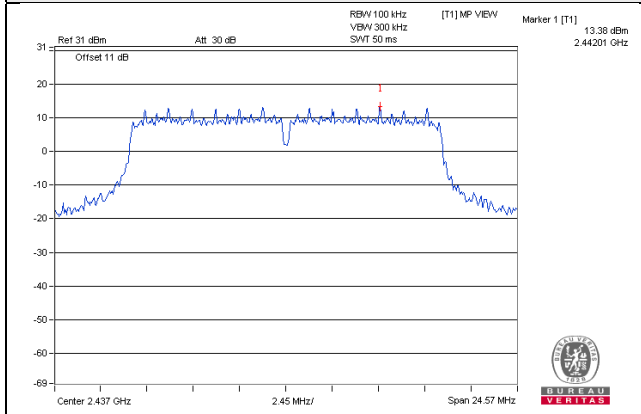


# 802.11g\_Chain 1

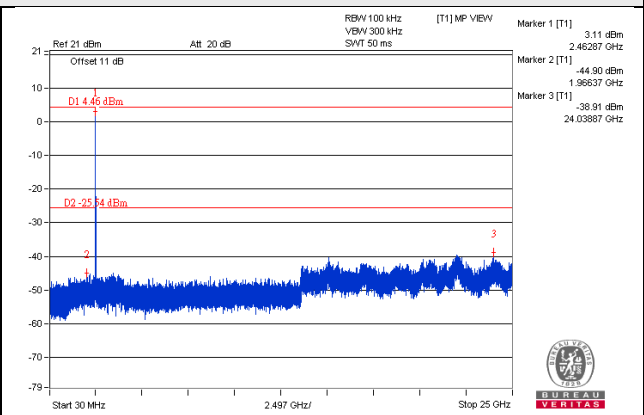
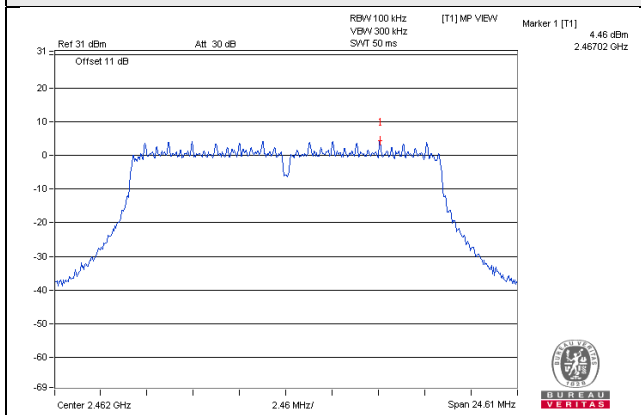
## CH 1



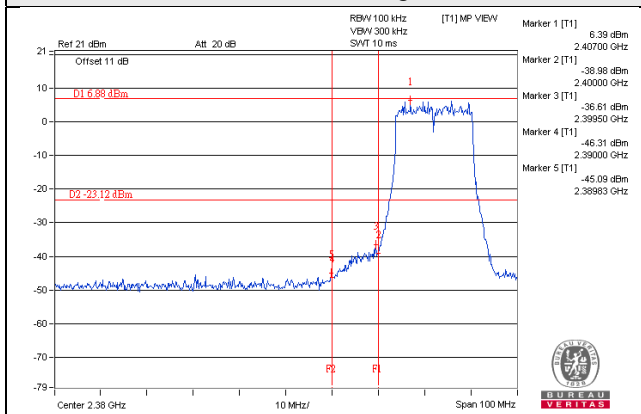
## CH 6



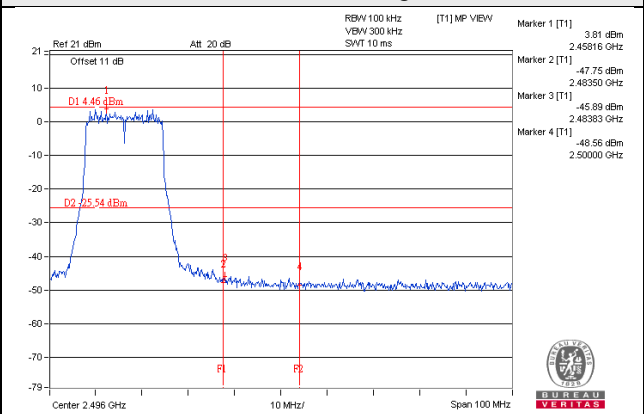
## CH 11



## CH 1 Band edge

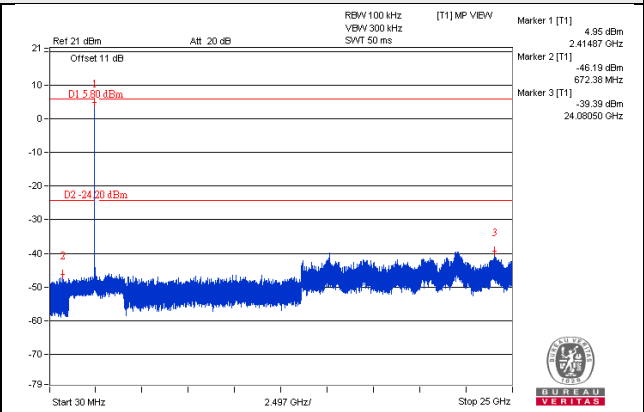
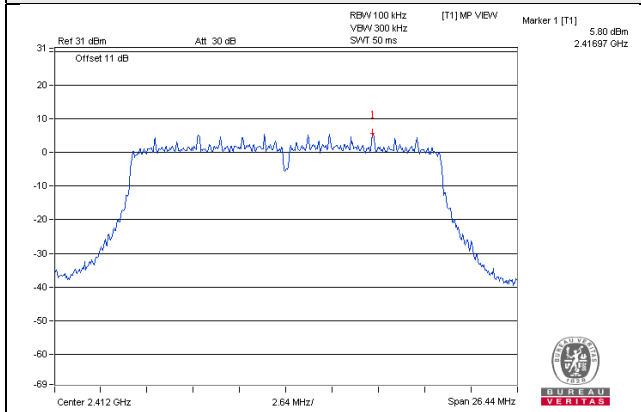


## CH 11 Band edge

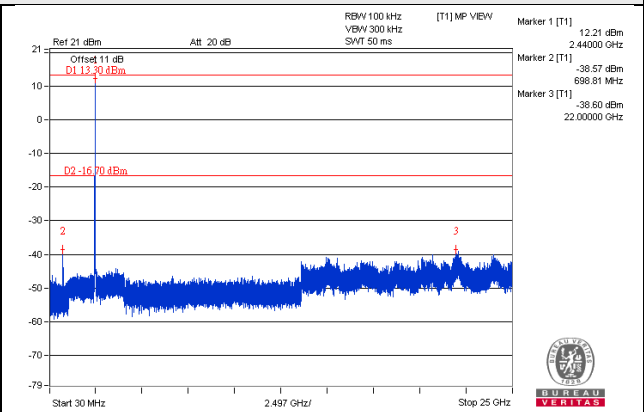
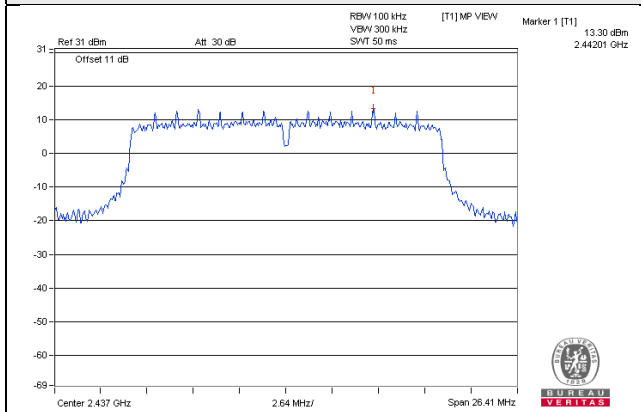


# 802.11n (HT20)\_Chain 0

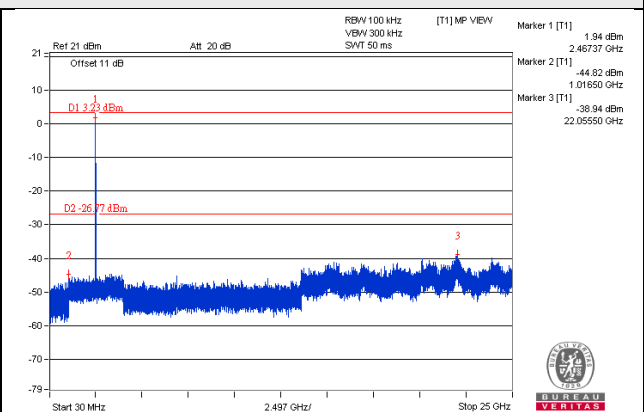
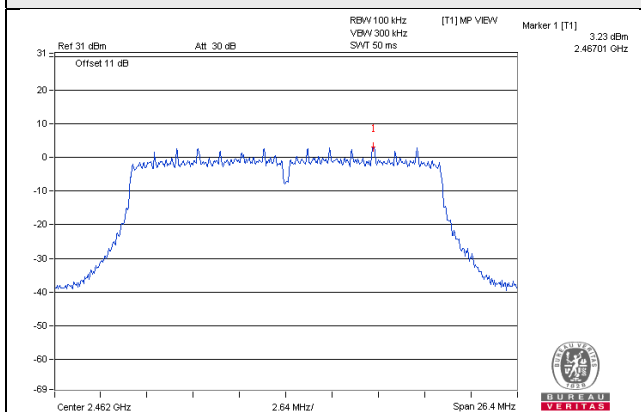
## CH 1



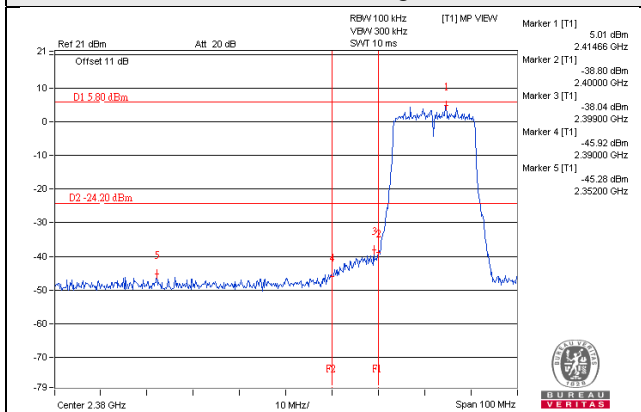
## CH 6



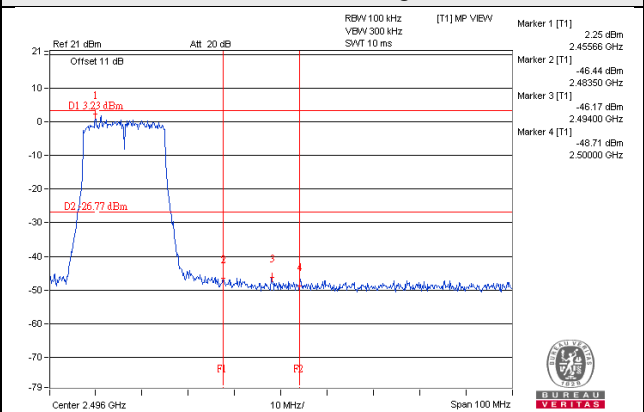
## CH 11



## CH 1 Band edge

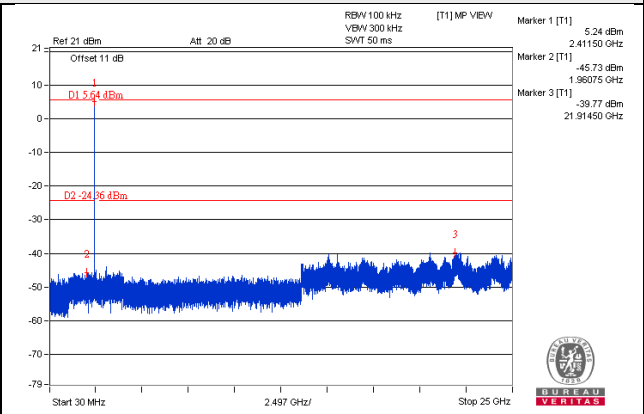
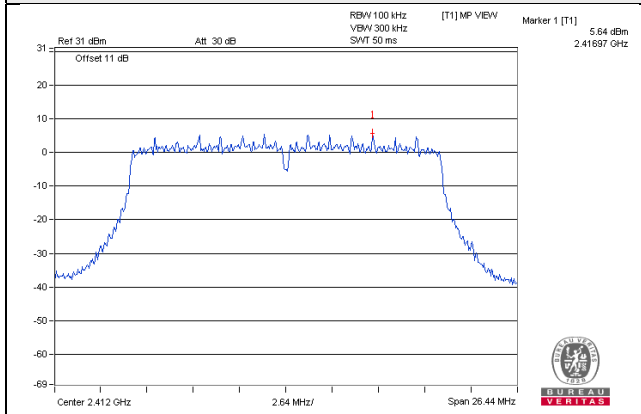


## CH 11 Band edge

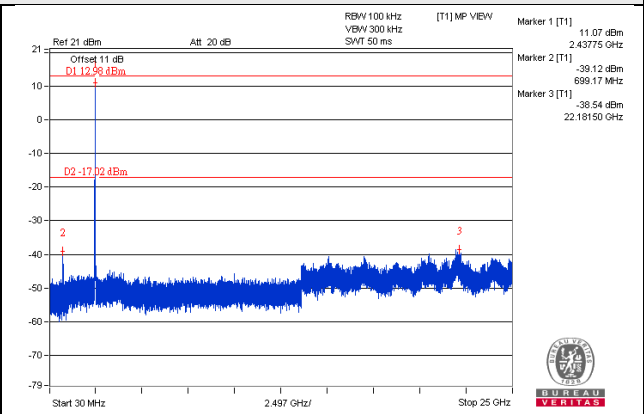
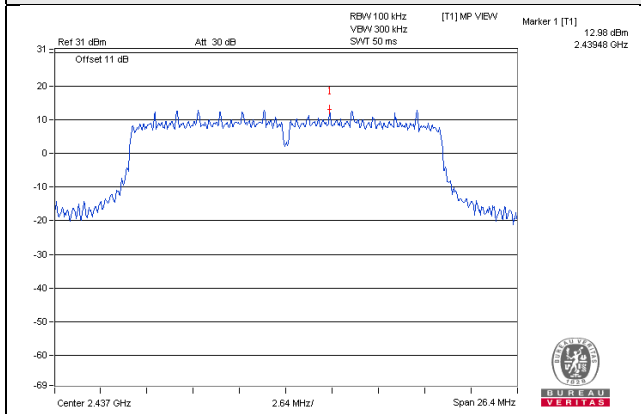


# 802.11n (HT20)\_Chain 1

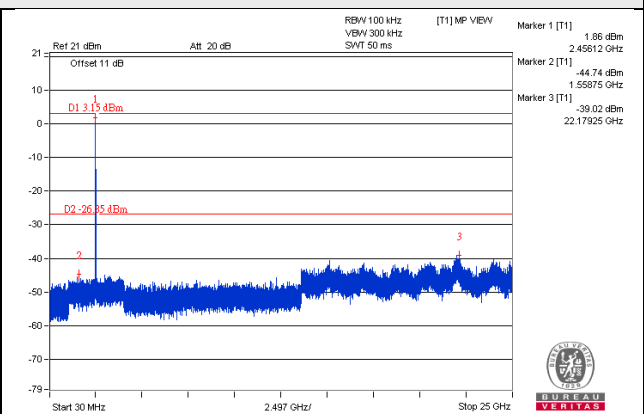
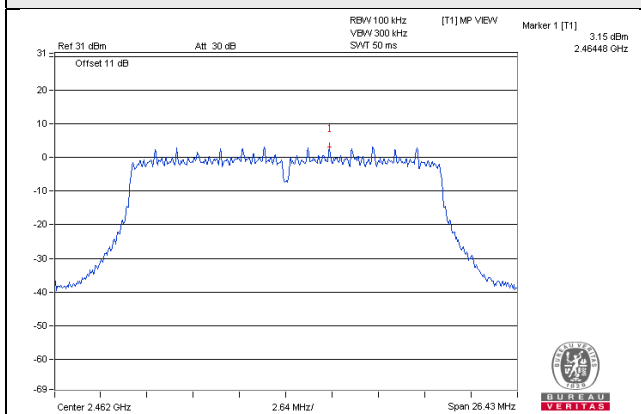
## CH 1



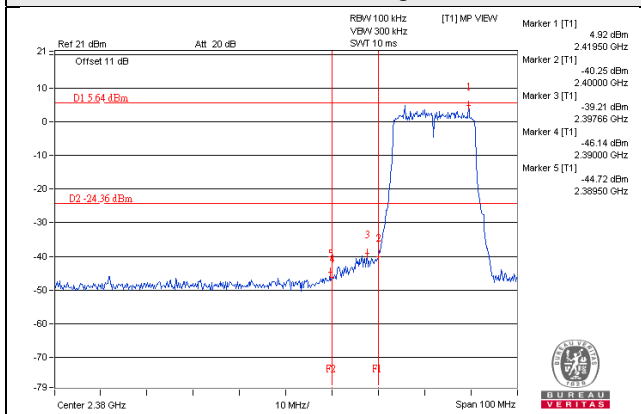
## CH 6



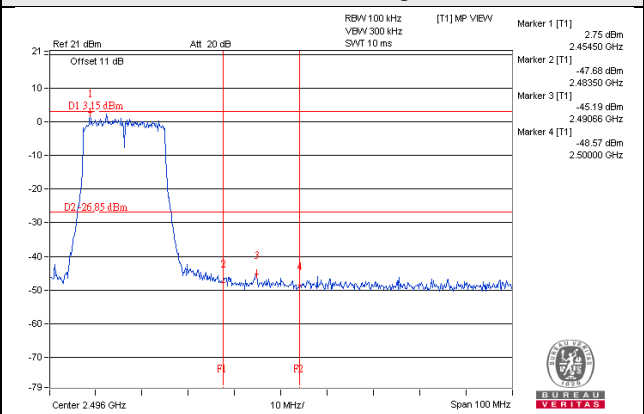
## CH 11



## CH 1 Band edge



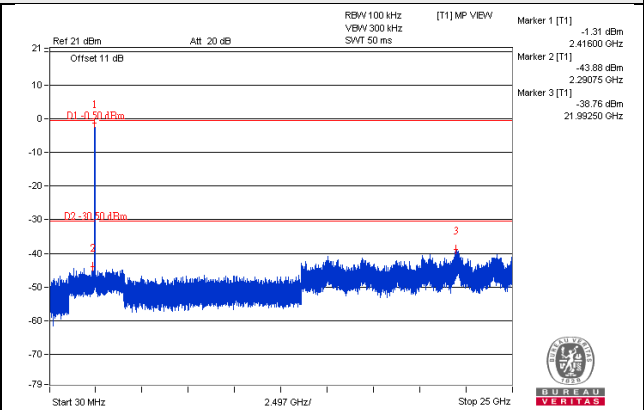
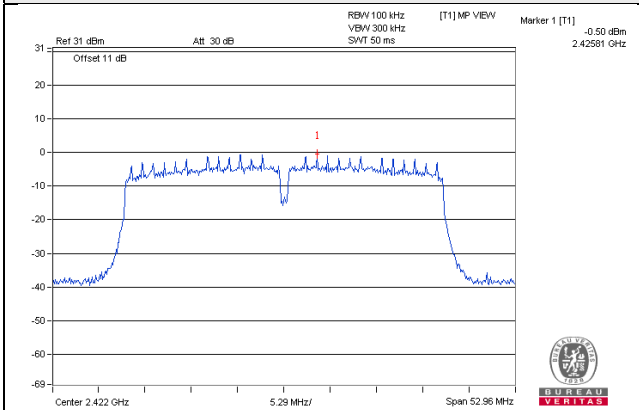
## CH 11 Band edge



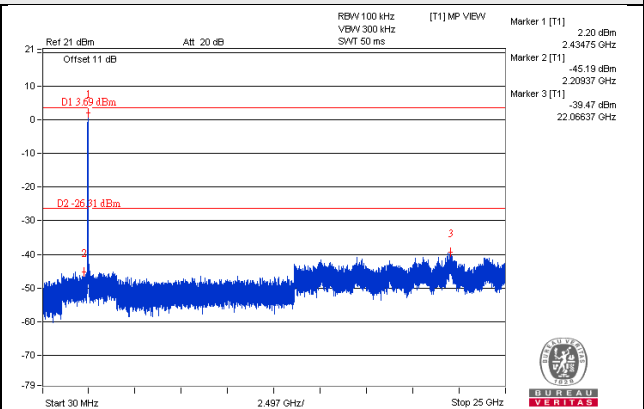
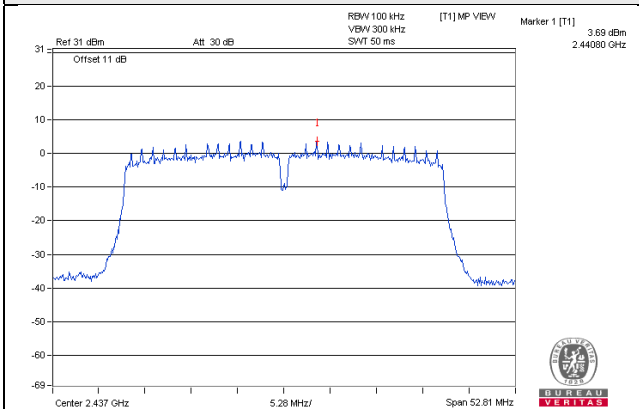


### 802.11n (HT40)\_Chain 0

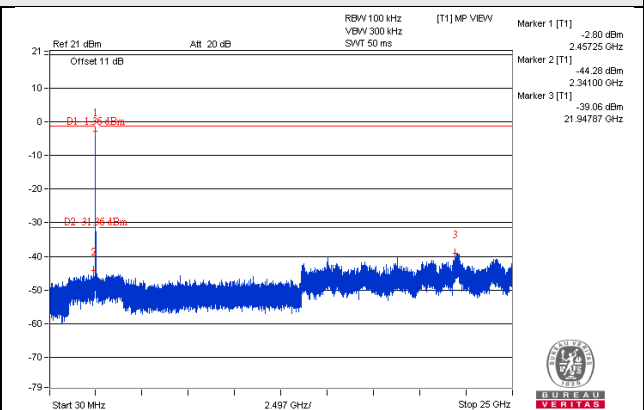
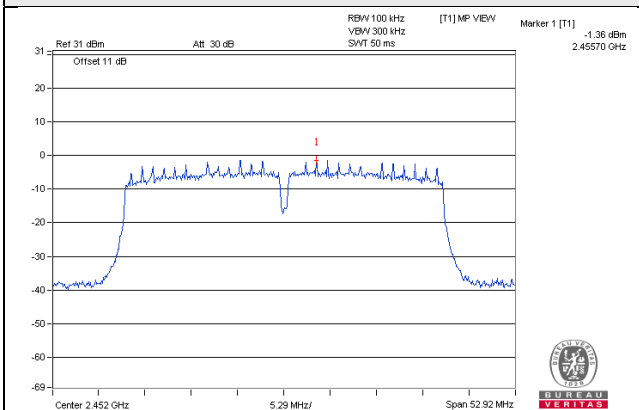
#### CH 3



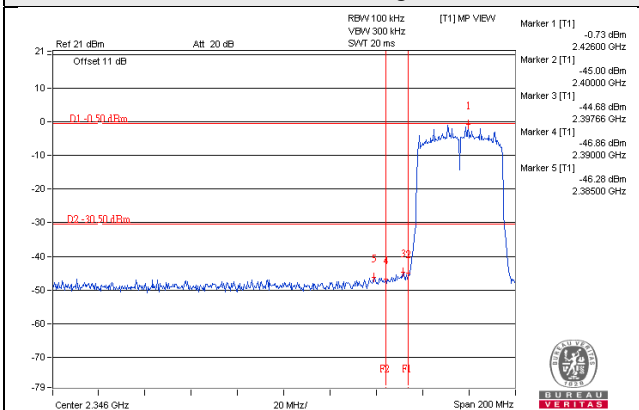
#### CH 6



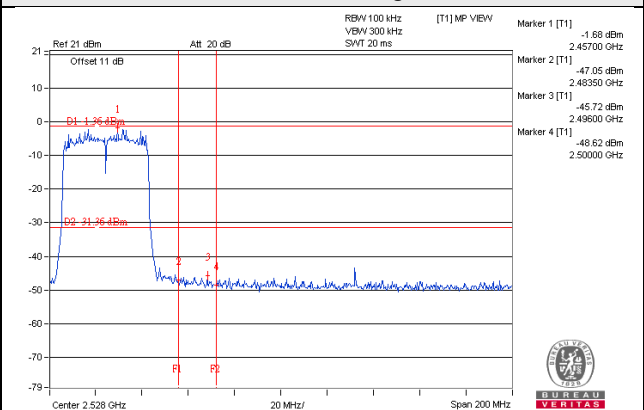
#### CH 9



#### CH 3 Band edge

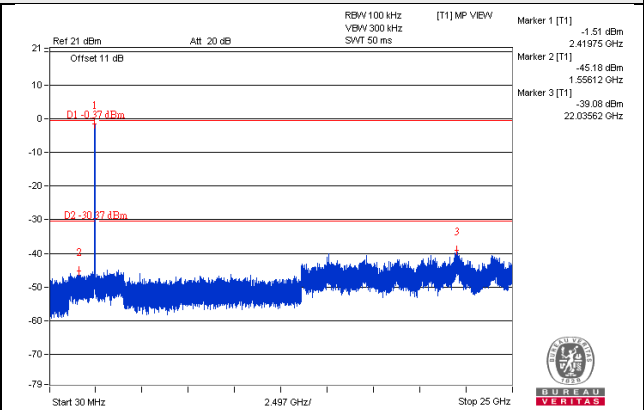
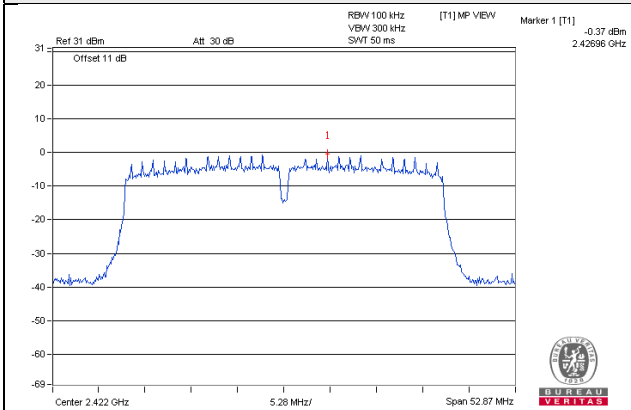


#### CH 9 Band edge

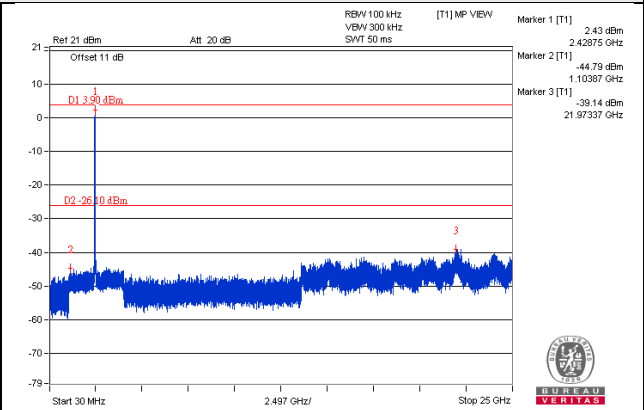
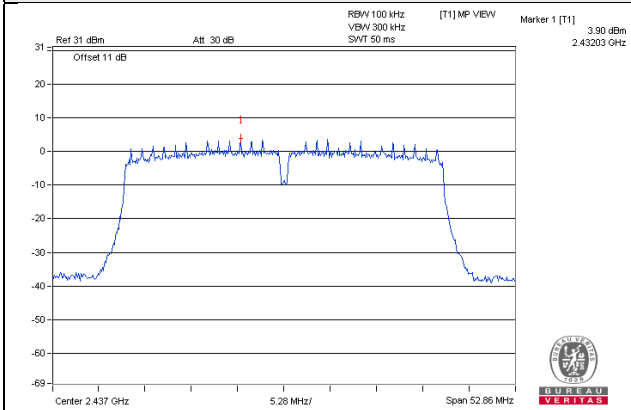


# 802.11n (HT40)\_Chain 1

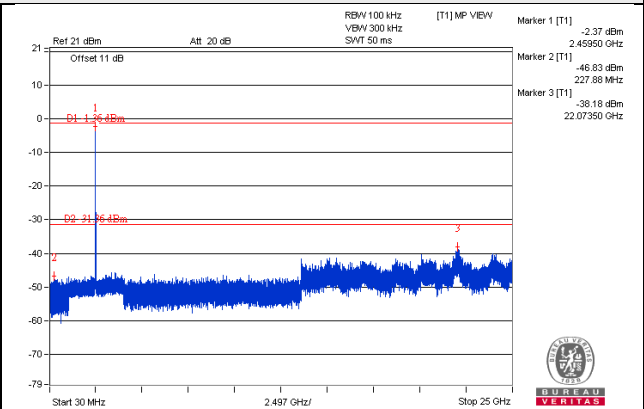
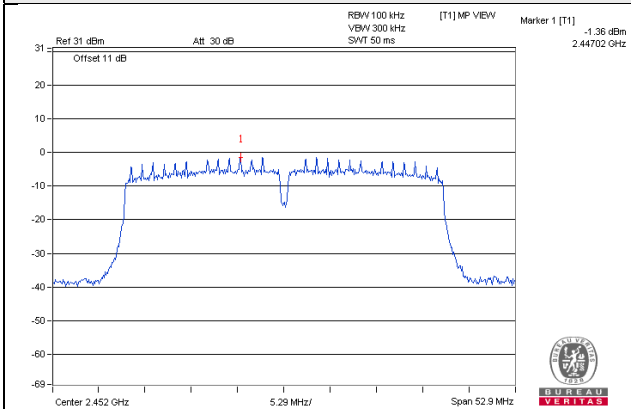
## CH 3



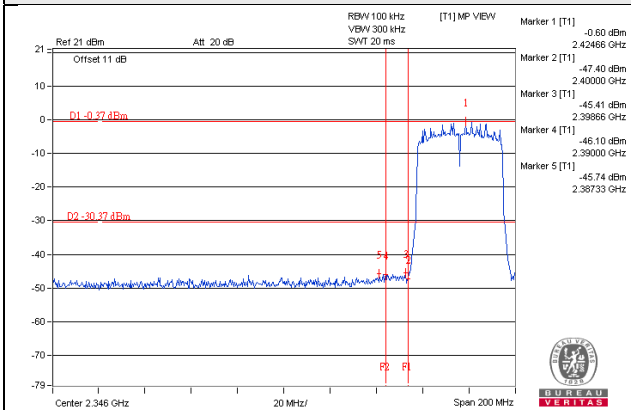
## CH 6



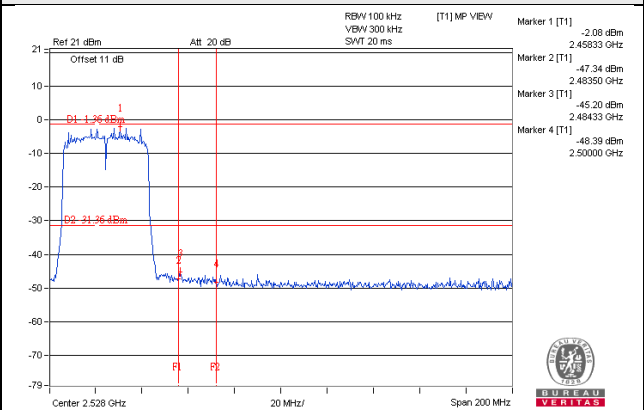
## CH 9



## CH 3 Band edge

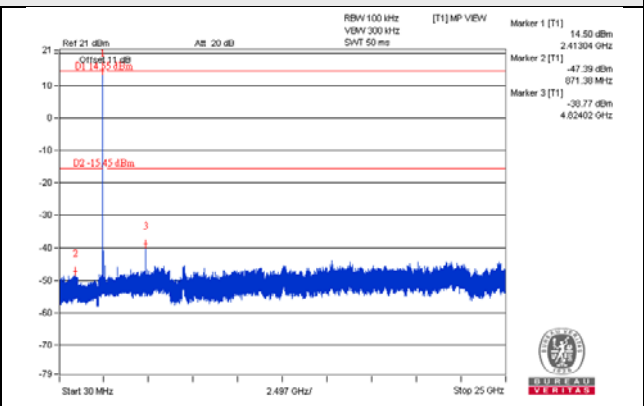
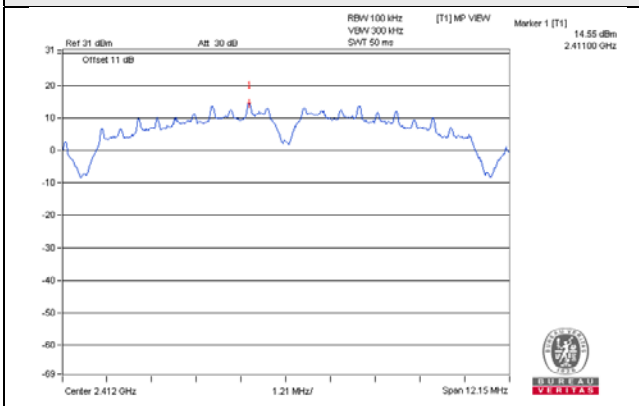


## CH 9 Band edge

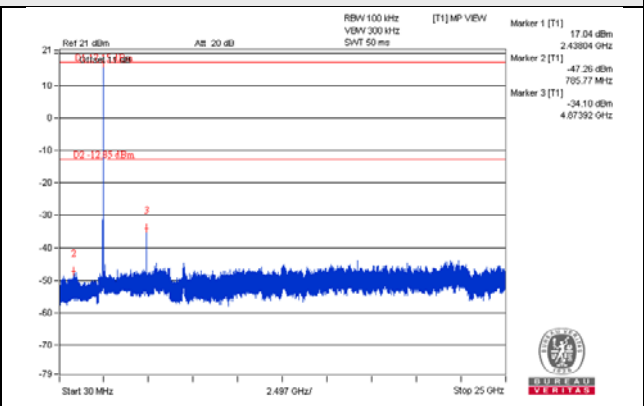
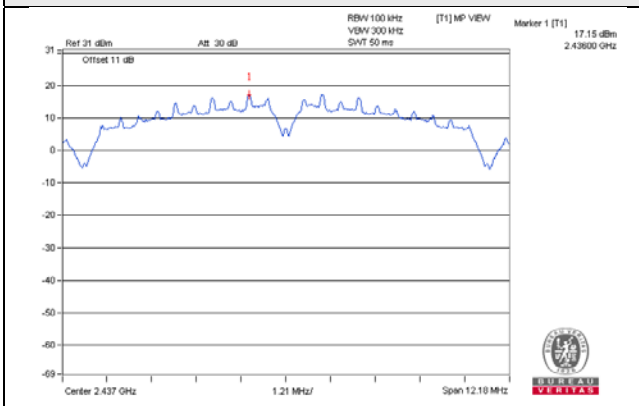


Test Mode C  
802.11b\_Chain 0

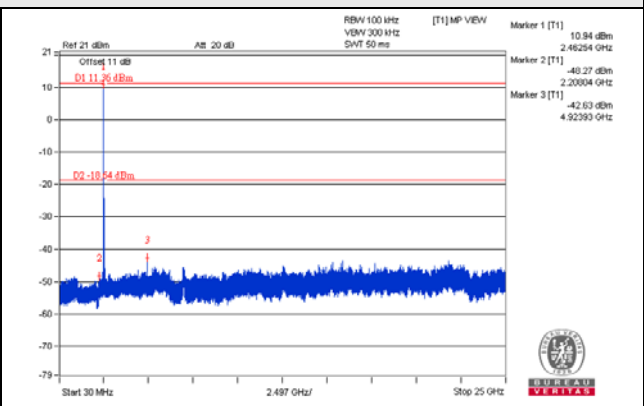
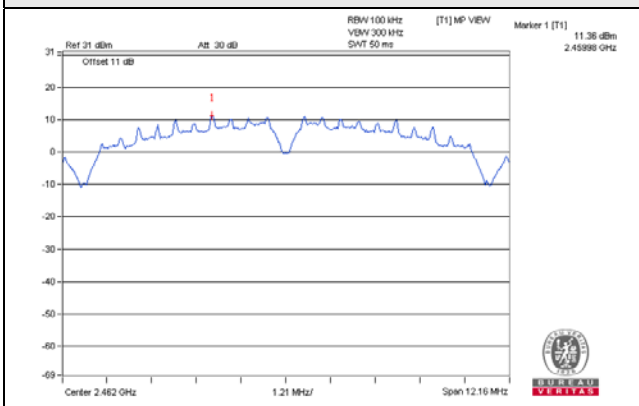
CH 1



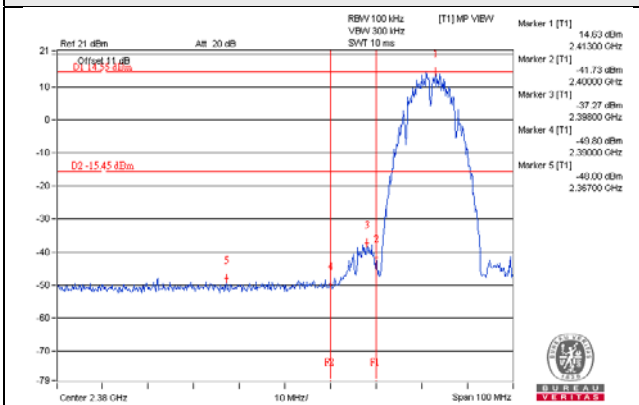
CH 6



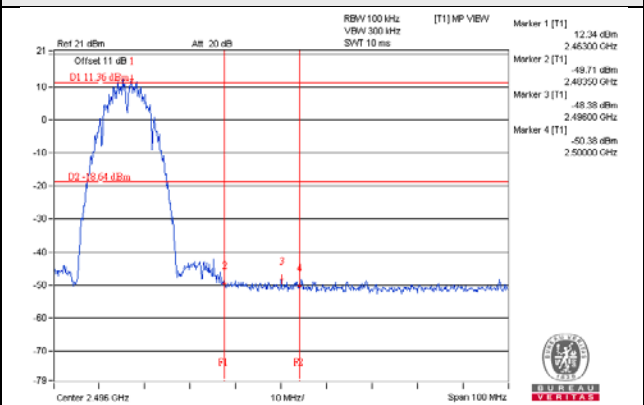
CH 11



CH 1 Band edge

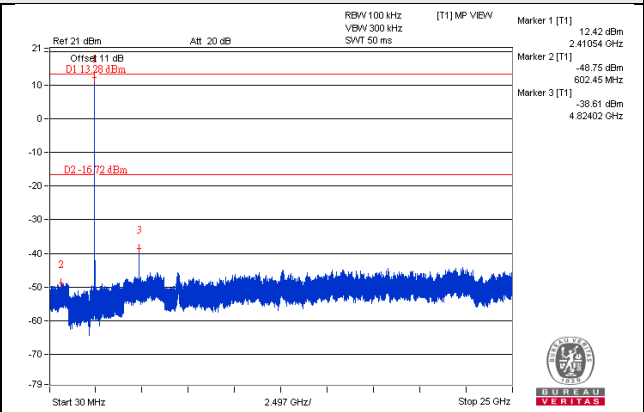
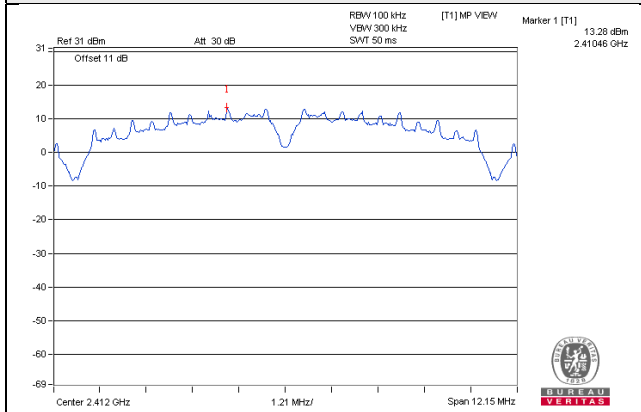


CH 11 Band edge

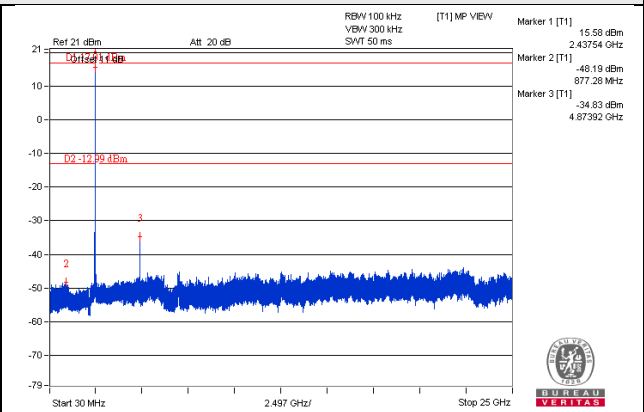
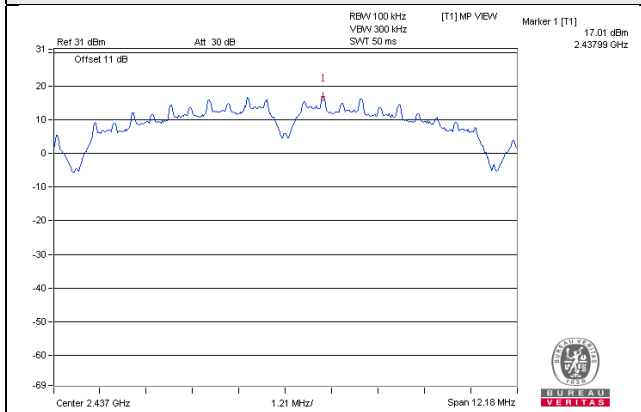


### 802.11b\_Chain 1

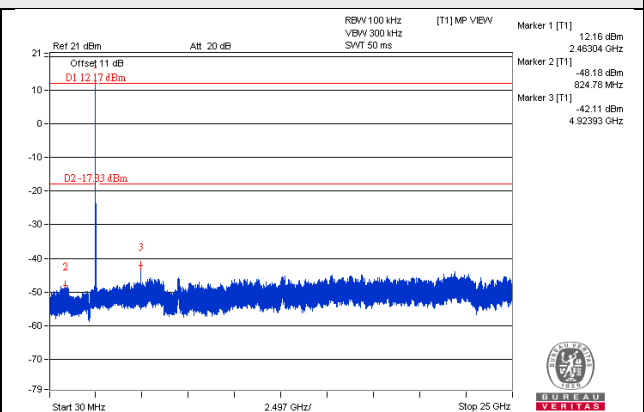
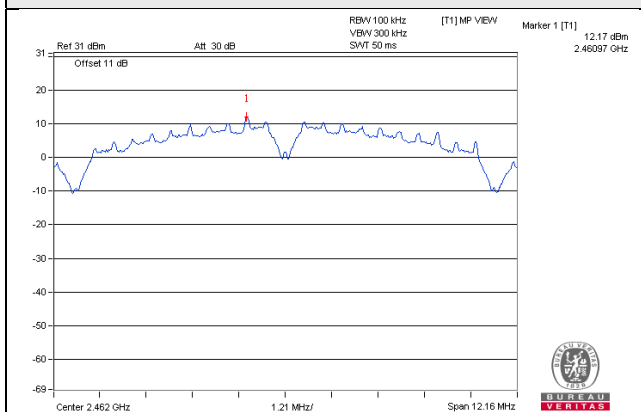
#### CH 1



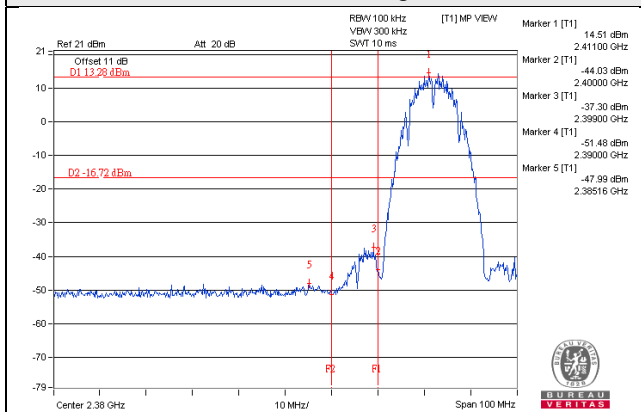
#### CH 6



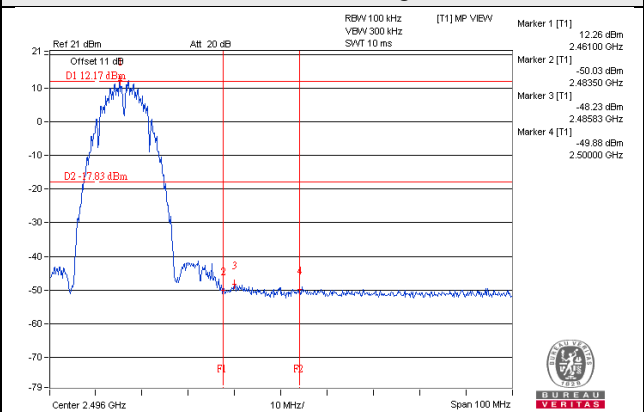
#### CH 11



#### CH 1 Band edge

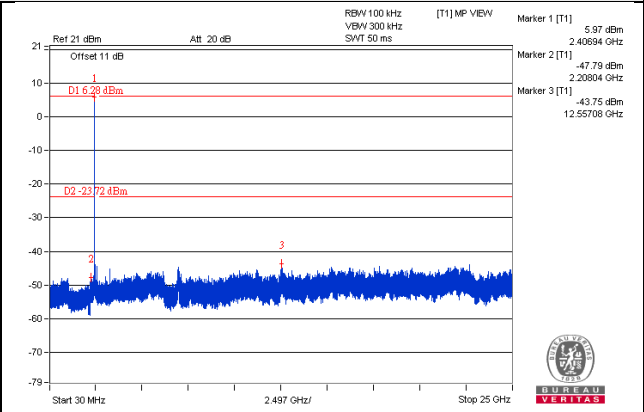
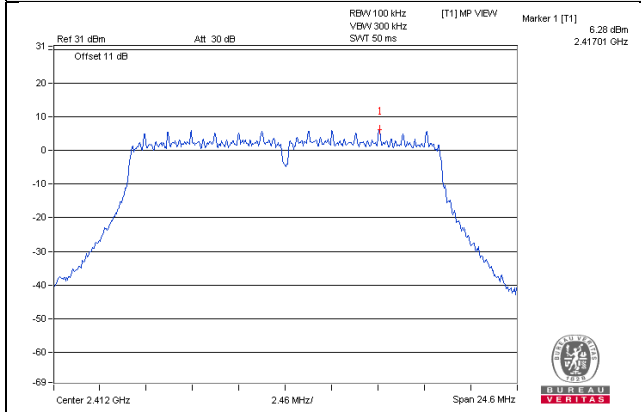


#### CH 11 Band edge

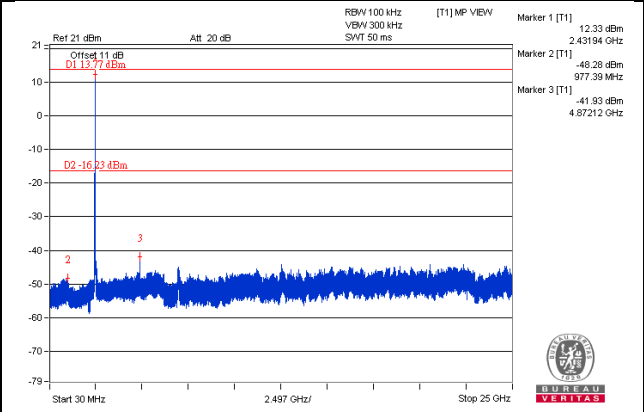
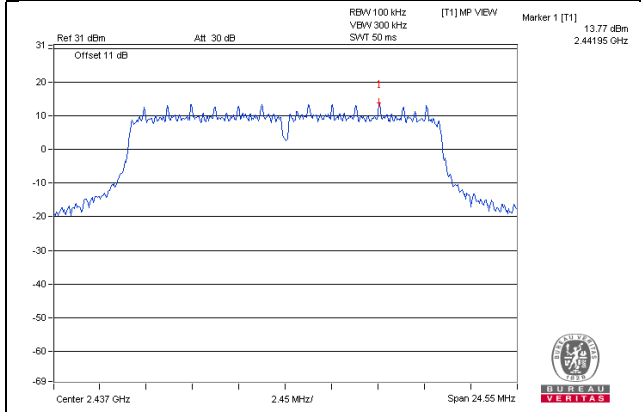


# 802.11g\_Chain 0

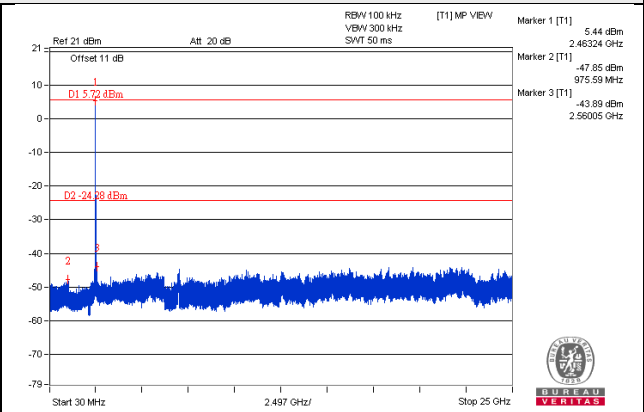
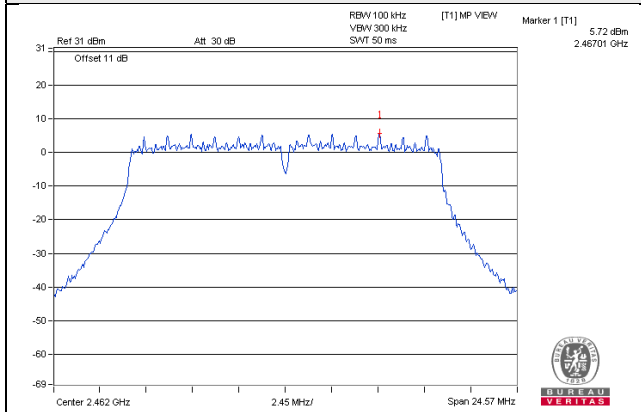
## CH 1



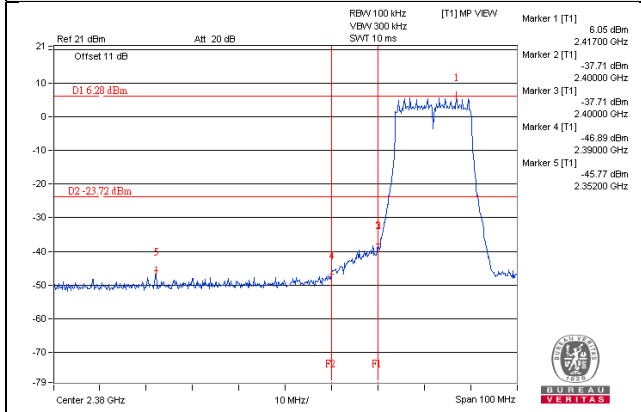
## CH 6



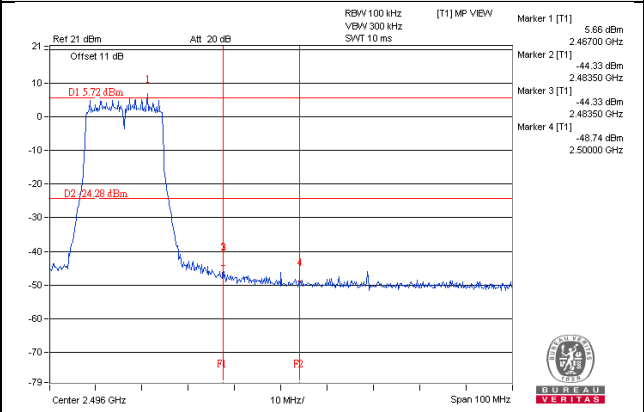
## CH 11



## CH 1 Band edge

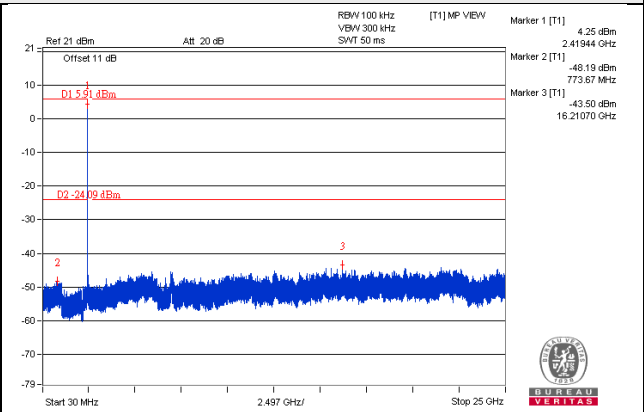
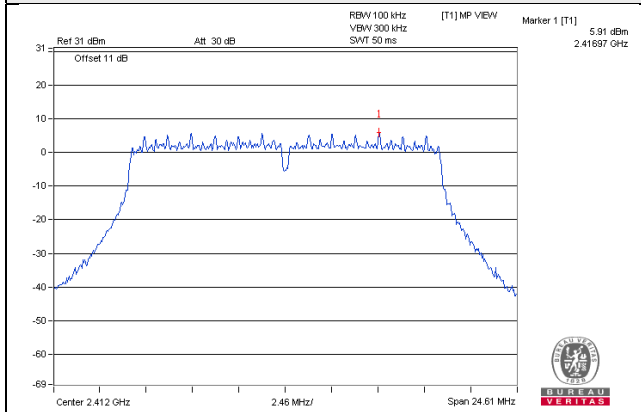


## CH 11 Band edge

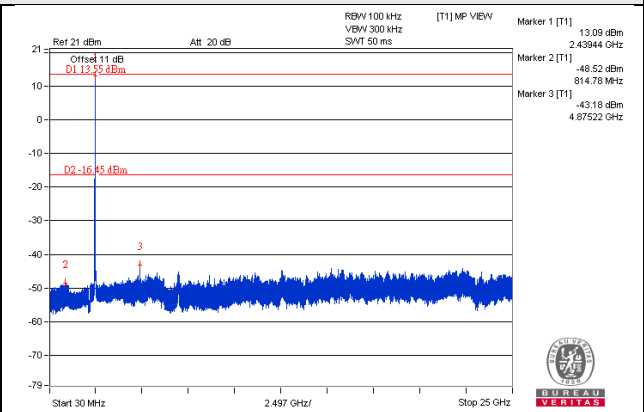
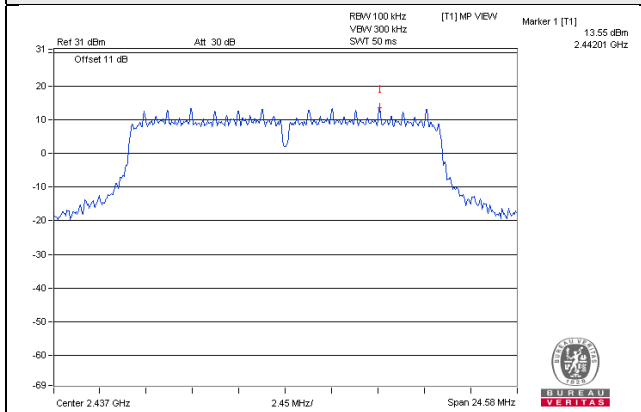


# 802.11g\_Chain 1

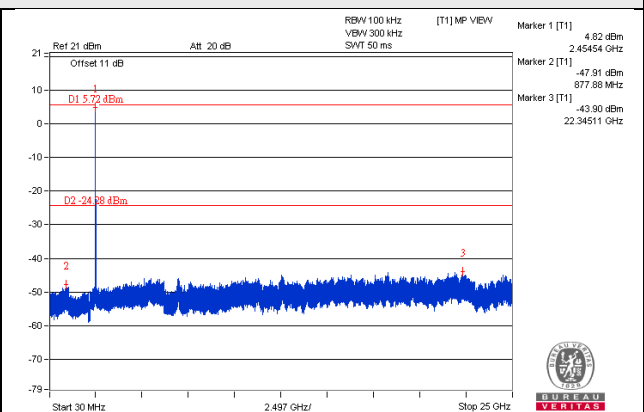
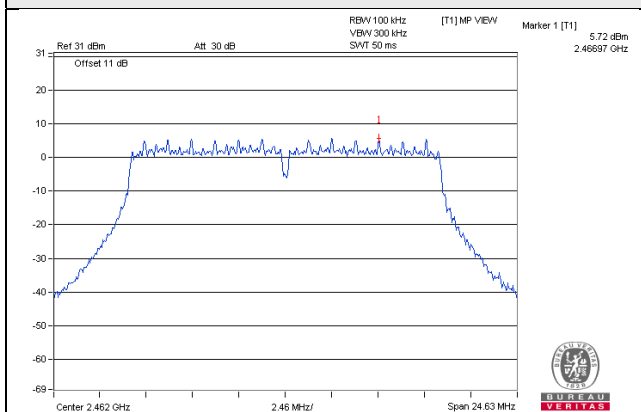
## CH 1



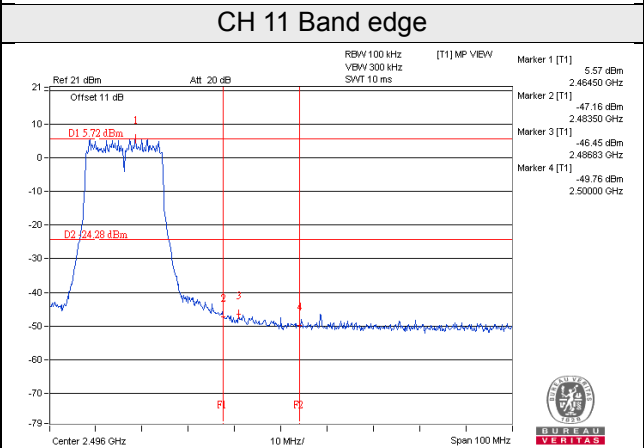
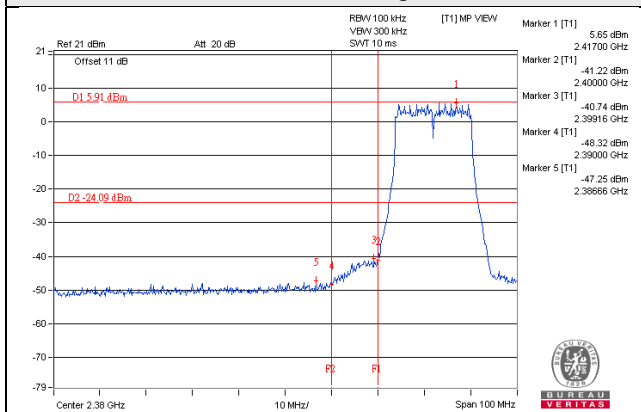
## CH 6



## CH 11

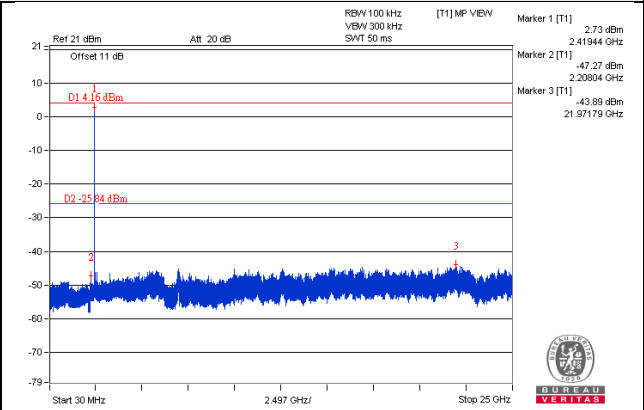
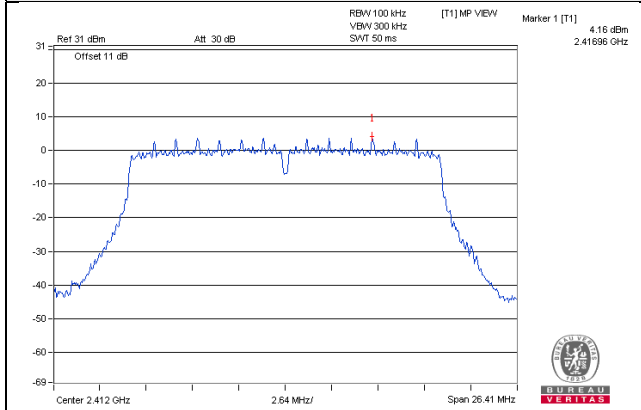


## CH 1 Band edge

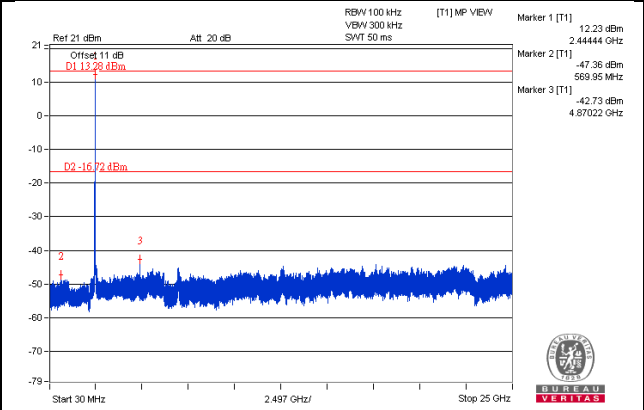
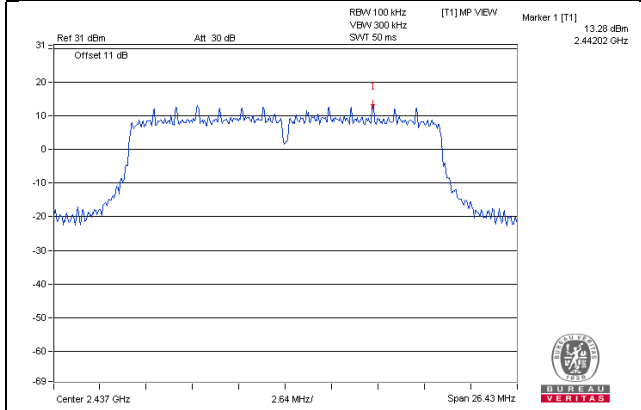


### 802.11n (HT20)\_Chain 0

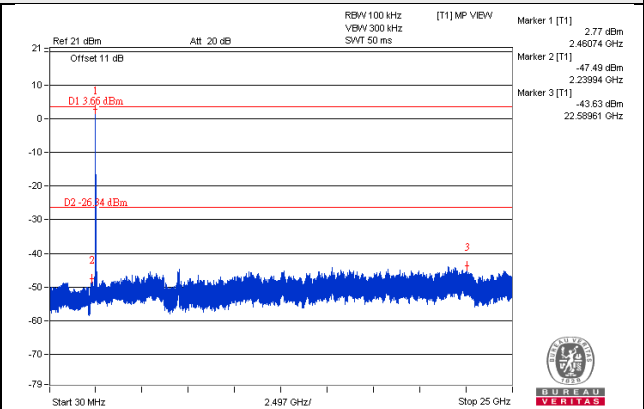
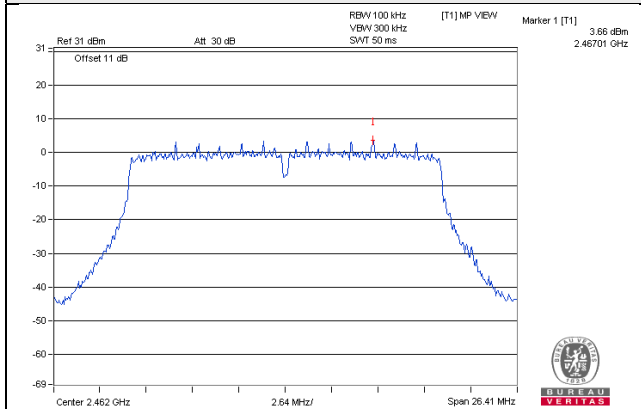
#### CH 1



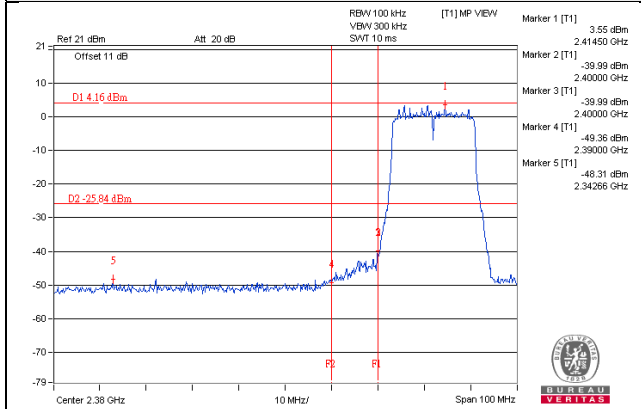
#### CH 6



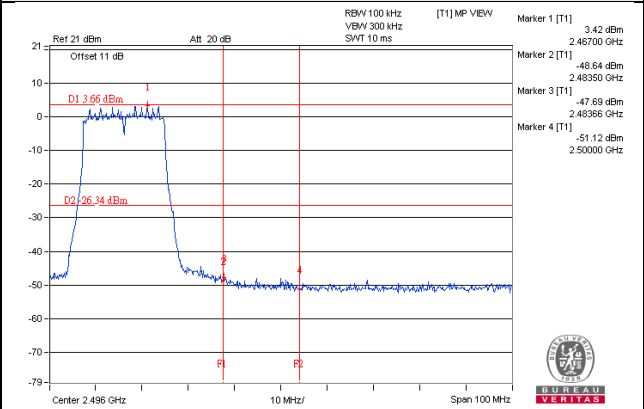
#### CH 11



#### CH 1 Band edge

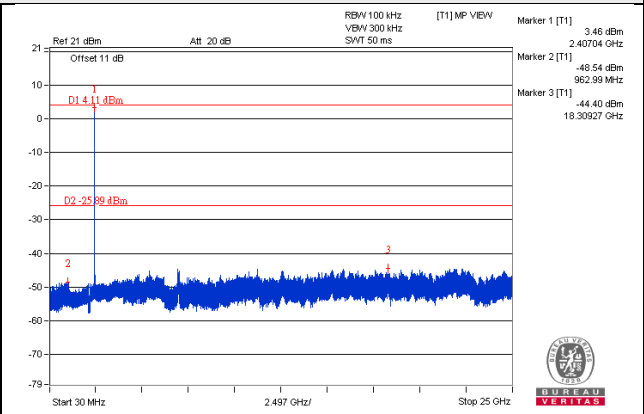
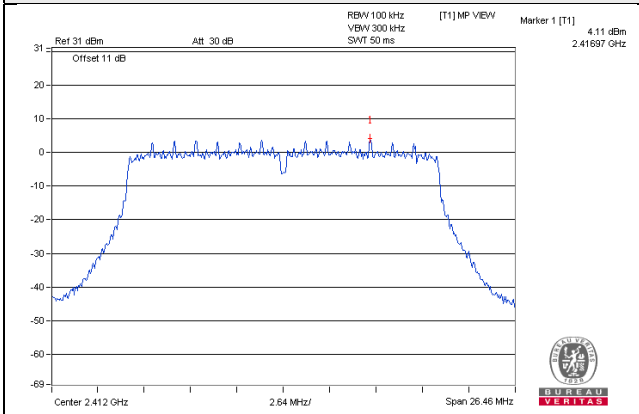


#### CH 11 Band edge

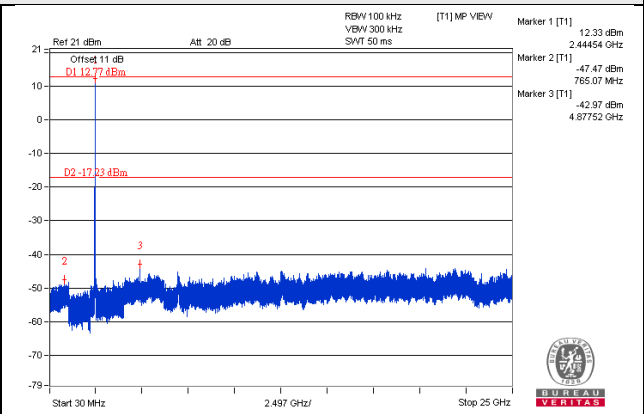
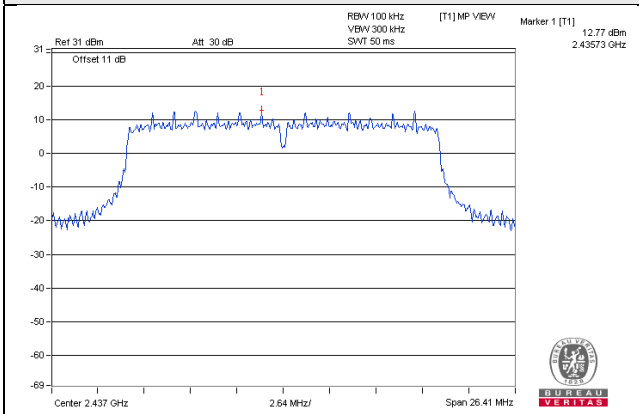


# 802.11n (HT20)\_Chain 1

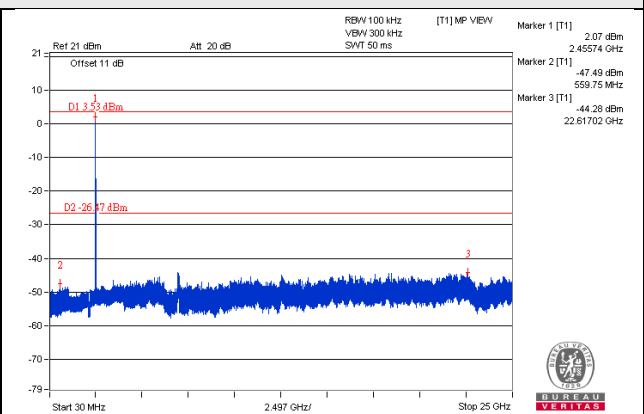
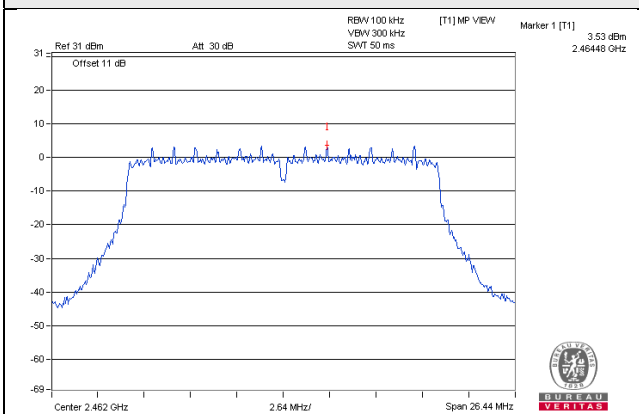
## CH 1



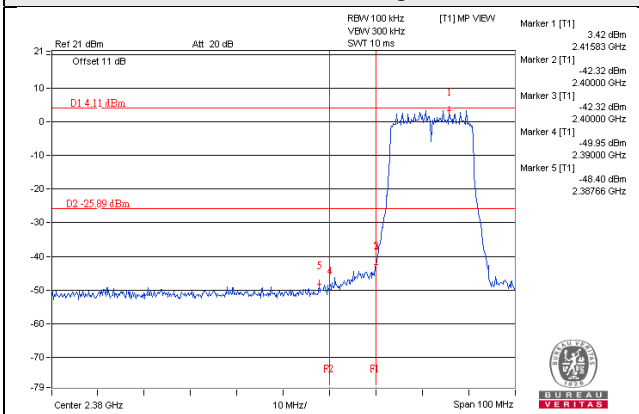
## CH 6



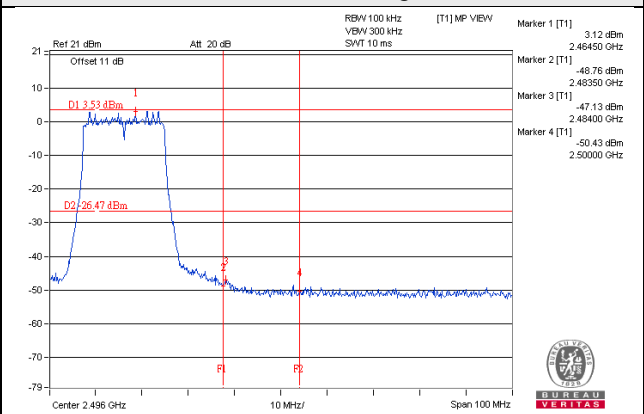
## CH 11



## CH 1 Band edge



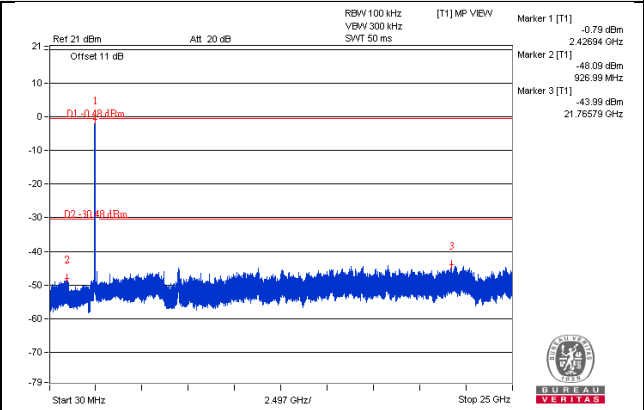
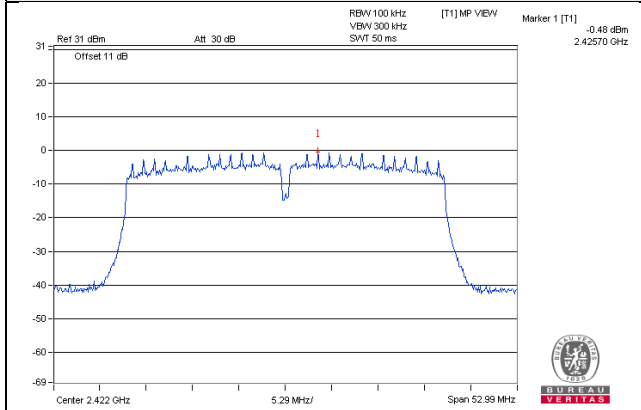
## CH 11 Band edge



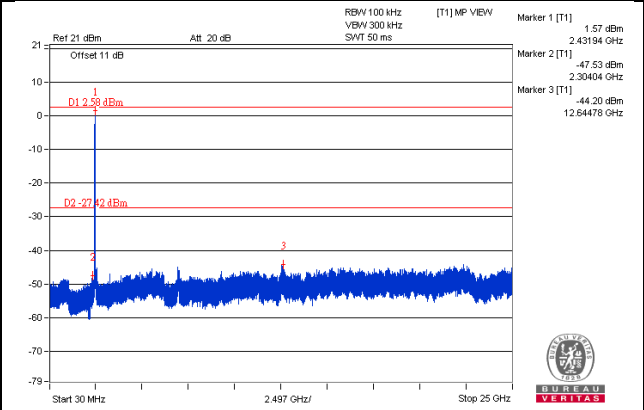
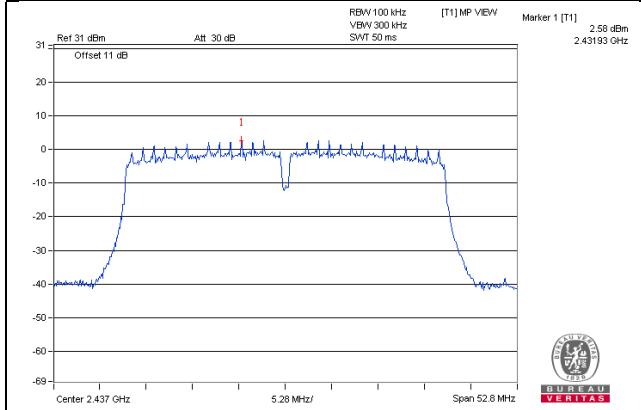


# 802.11n (HT40)\_Chain 0

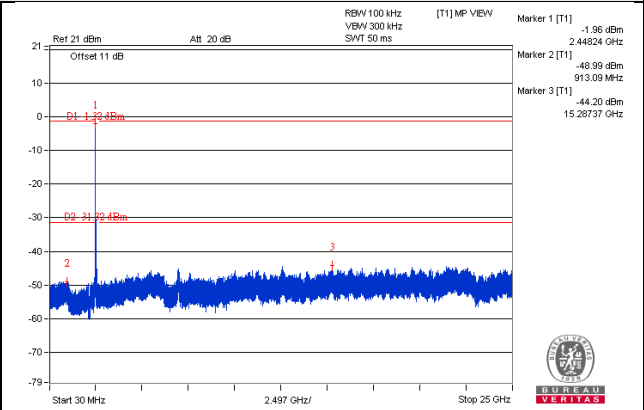
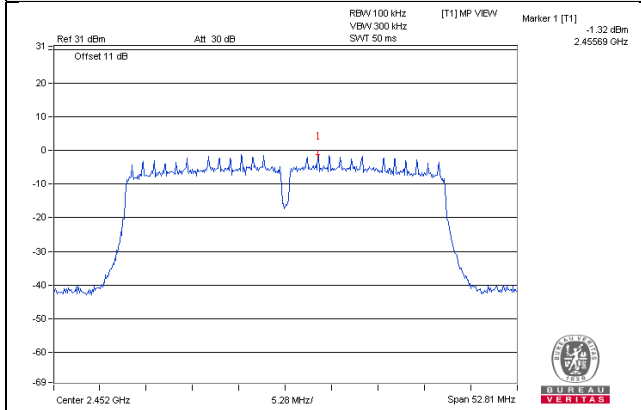
## CH 3



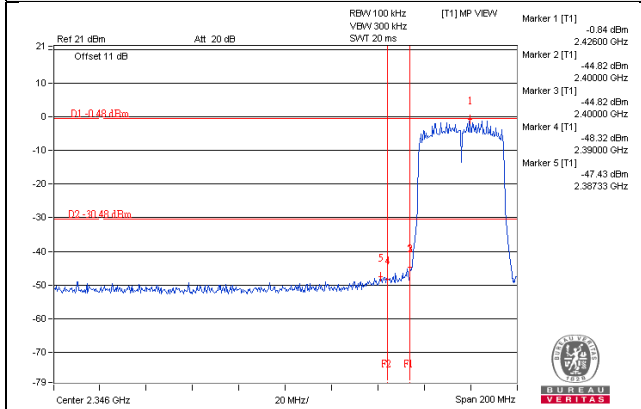
## CH 6



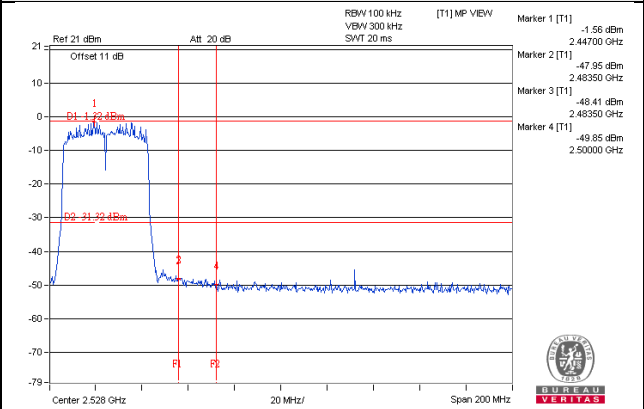
## CH 9



## CH 3 Band edge

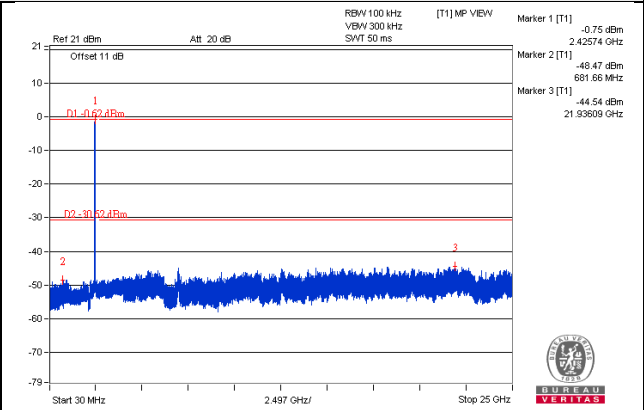
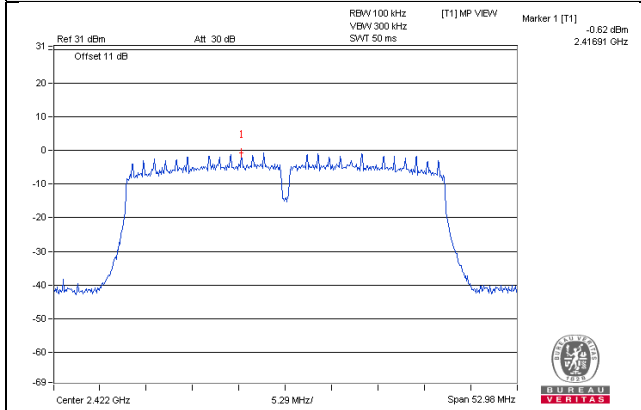


## CH 9 Band edge

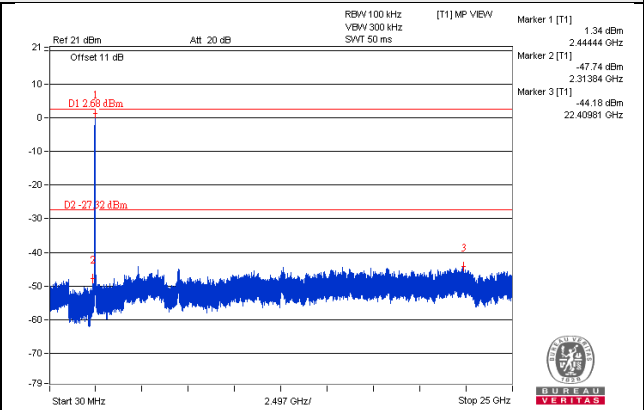
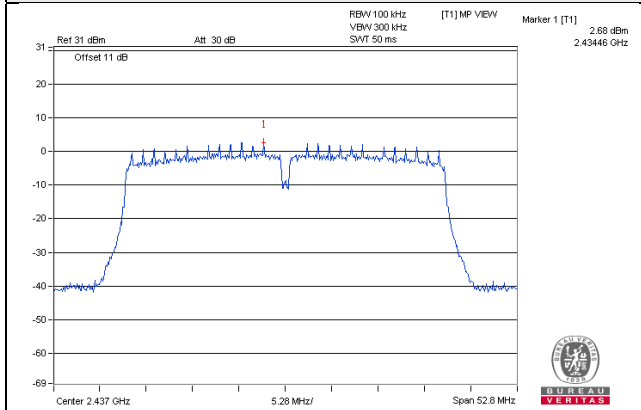


# 802.11n (HT40)\_Chain 1

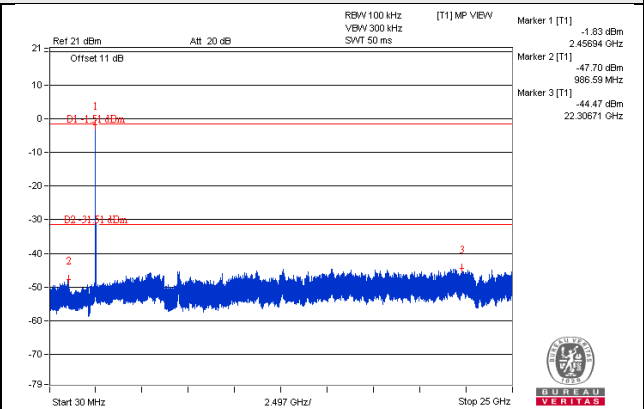
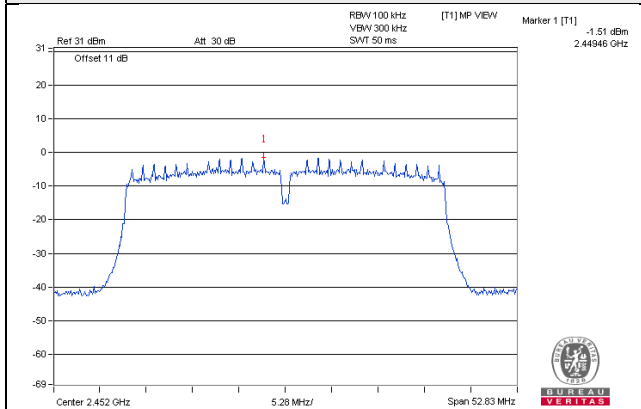
## CH 3



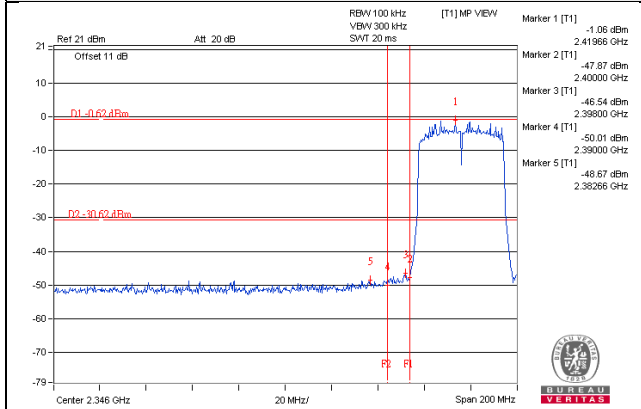
## CH 6



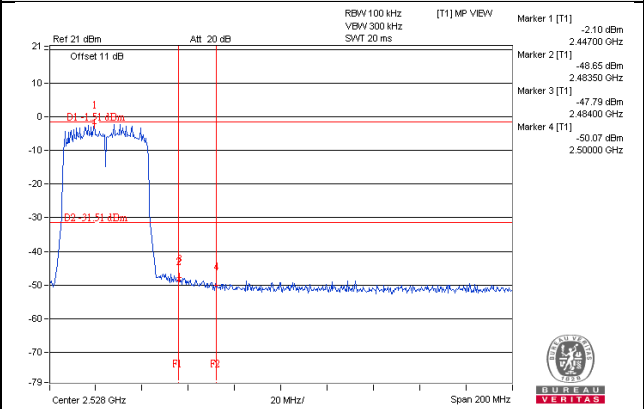
## CH 9



## CH 3 Band edge

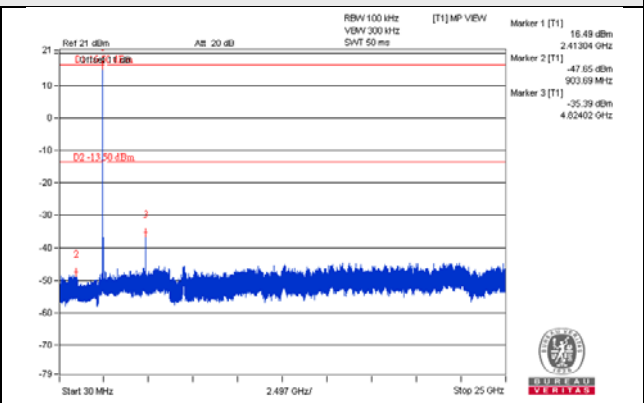
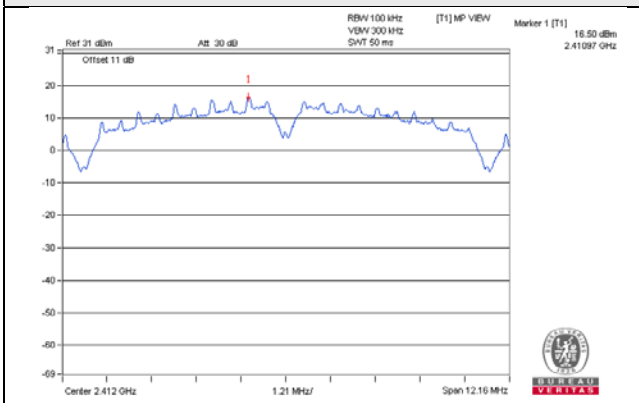


## CH 9 Band edge

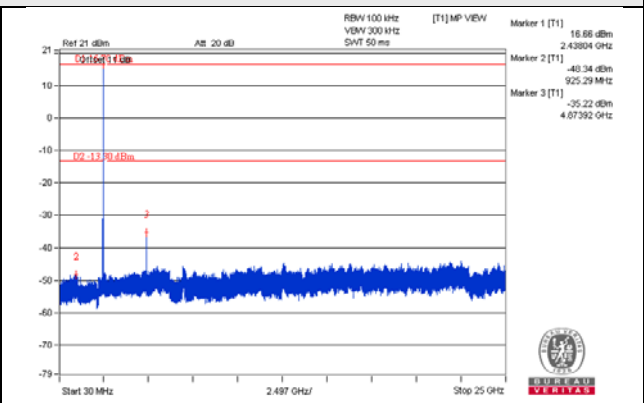
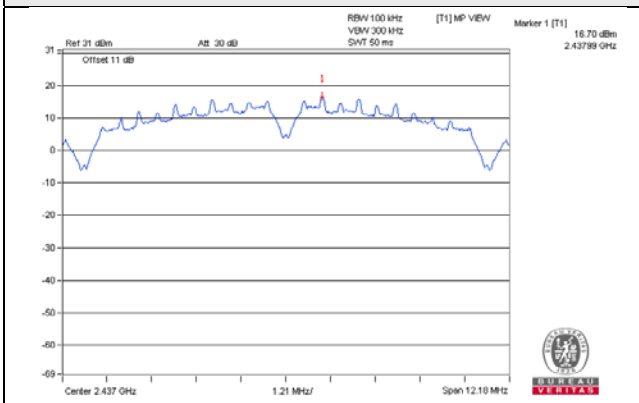


Test Mode D  
802.11b\_Chain 0

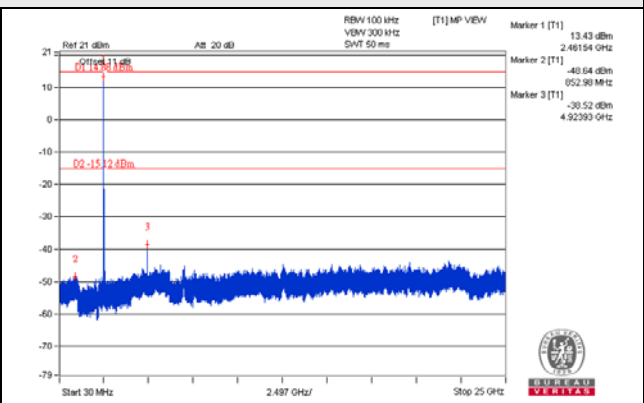
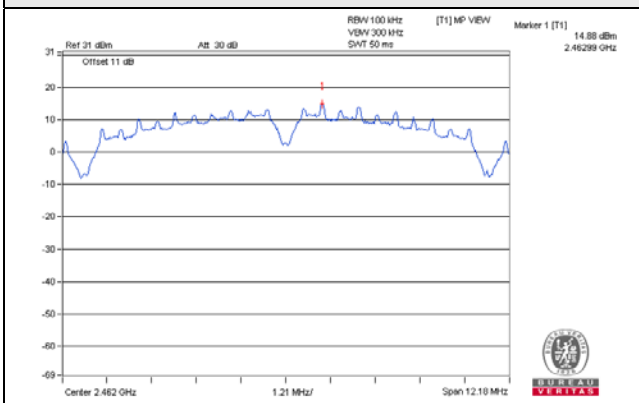
CH 1



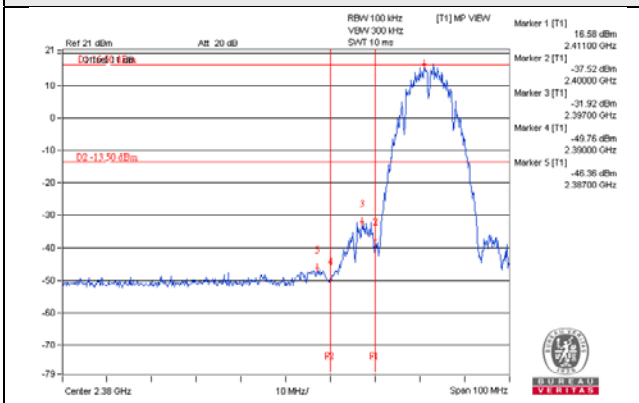
CH 6



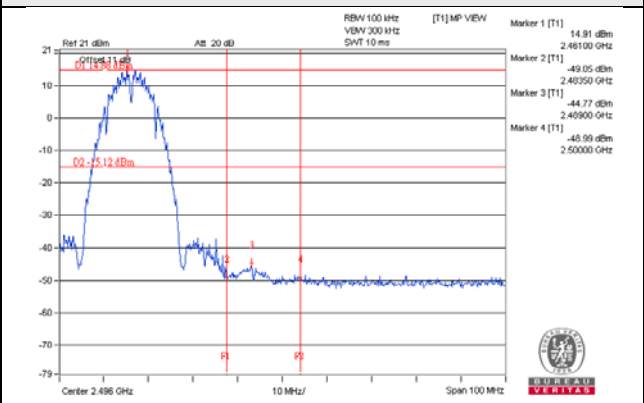
CH 11



CH 1 Band edge

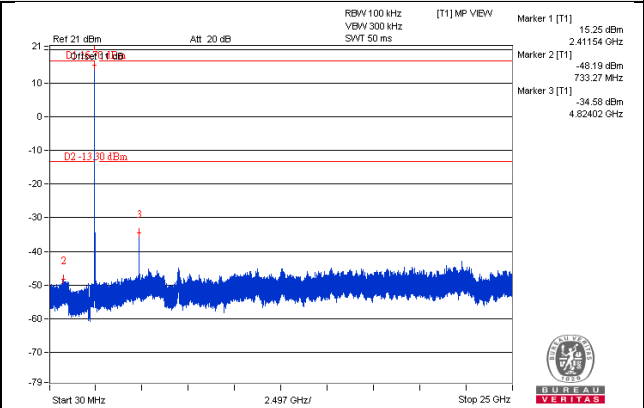
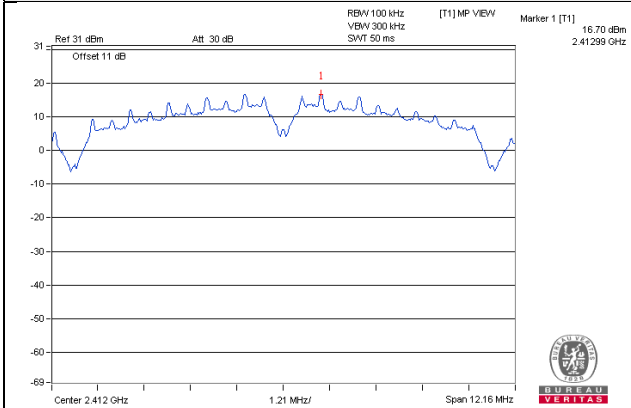


CH 11 Band edge

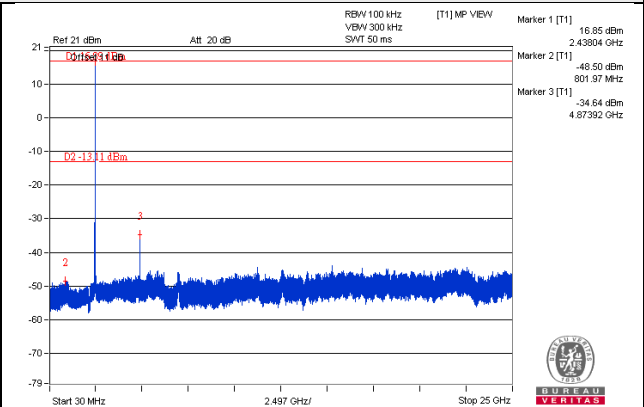
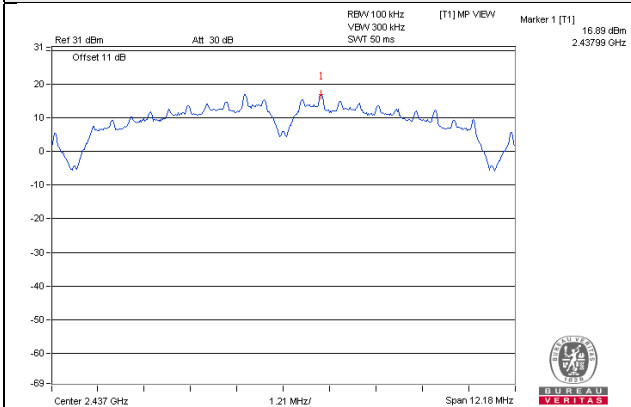


# 802.11b\_Chain 1

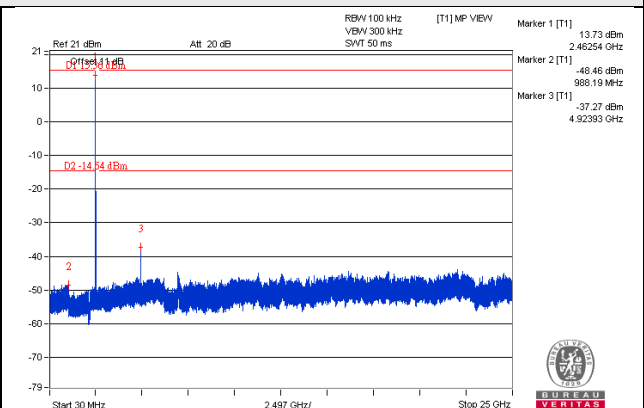
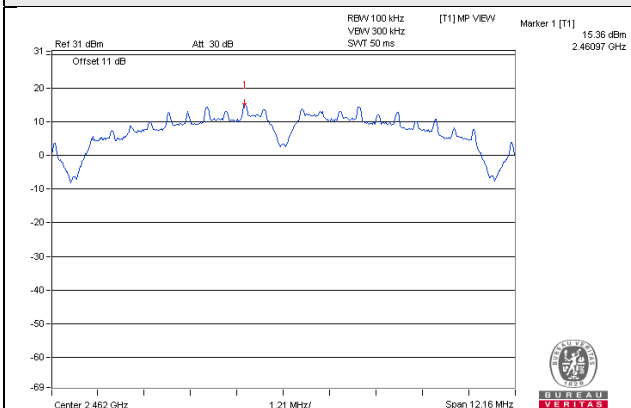
## CH 1



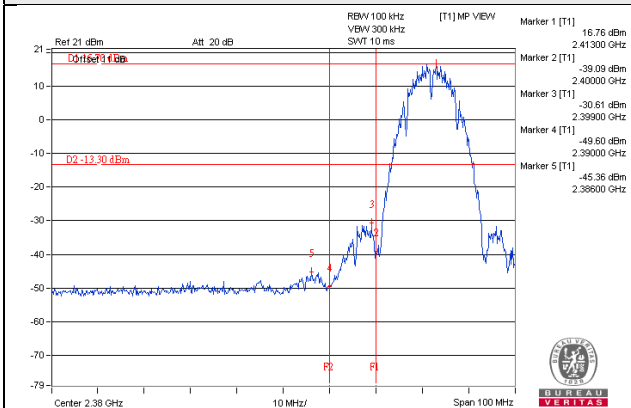
## CH 6



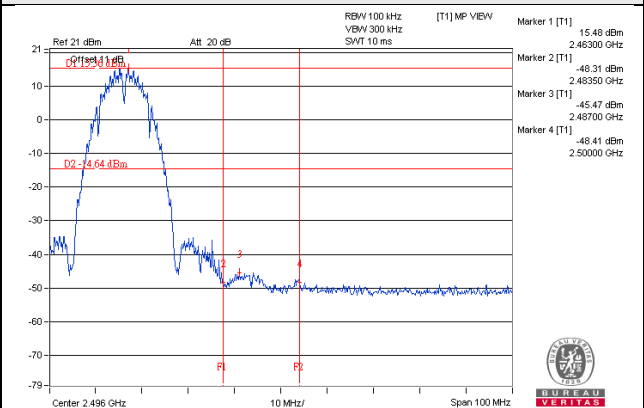
## CH 11



## CH 1 Band edge

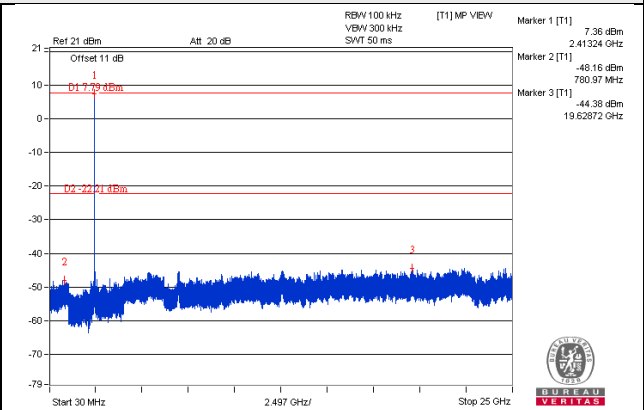
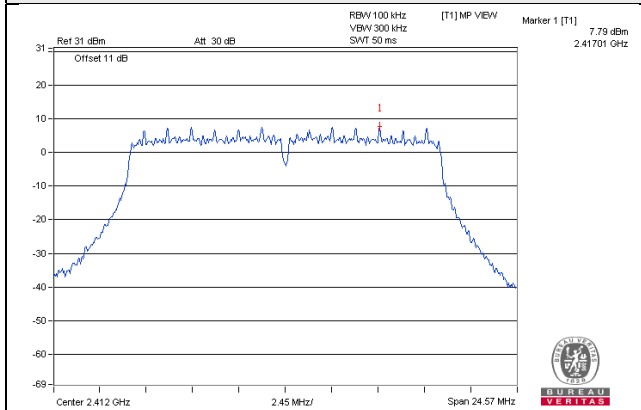


## CH 11 Band edge

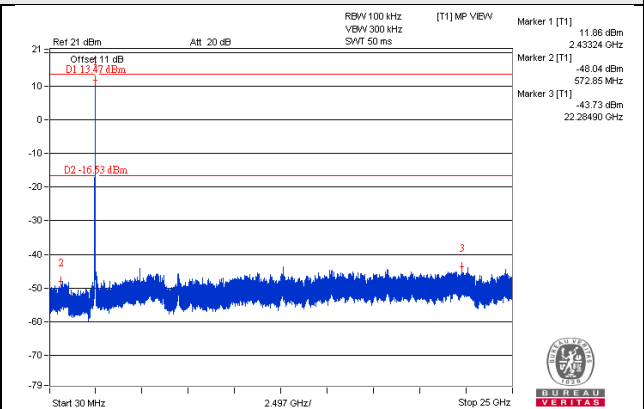
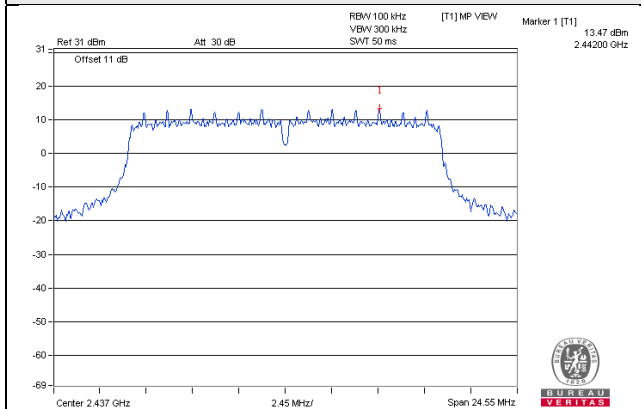


# 802.11g\_Chain 0

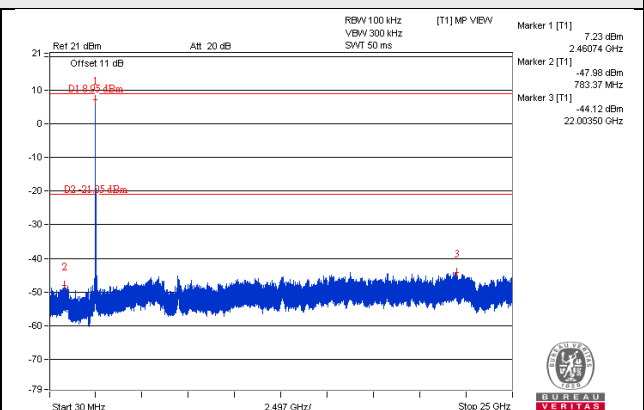
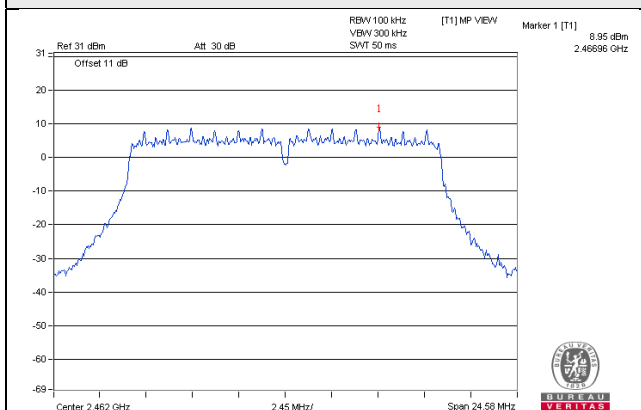
## CH 1



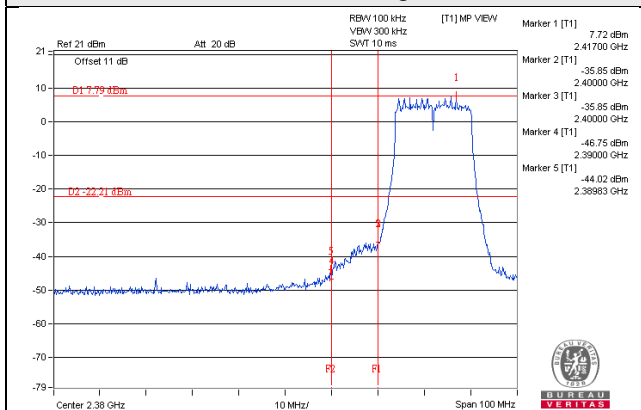
## CH 6



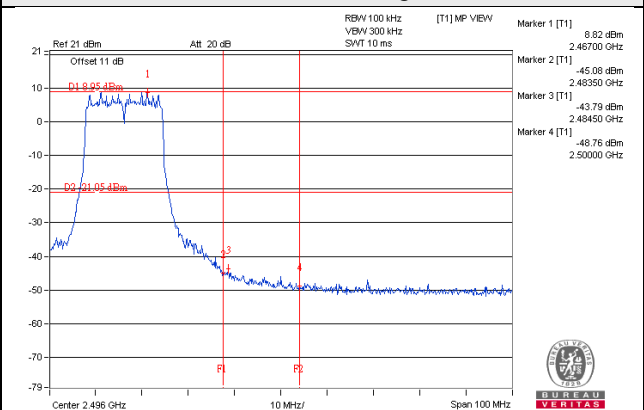
## CH 11



## CH 1 Band edge

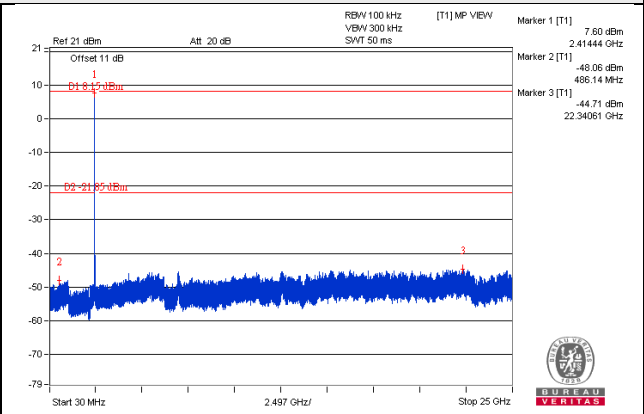
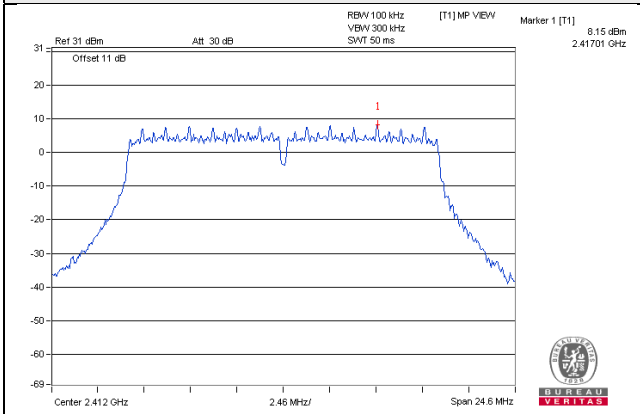


## CH 11 Band edge

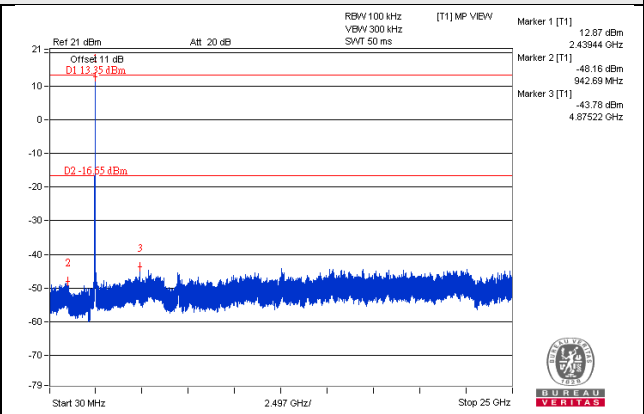
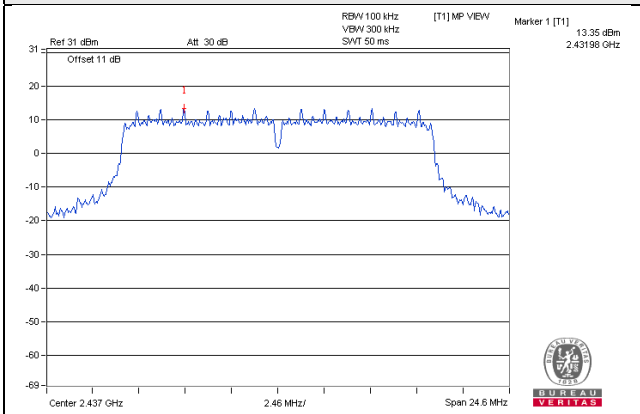


# 802.11g\_Chain 1

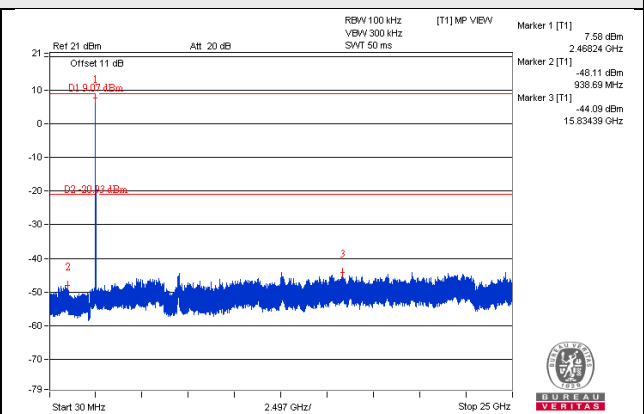
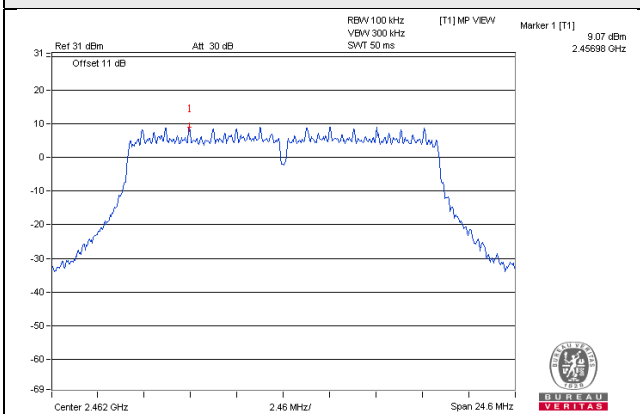
## CH 1



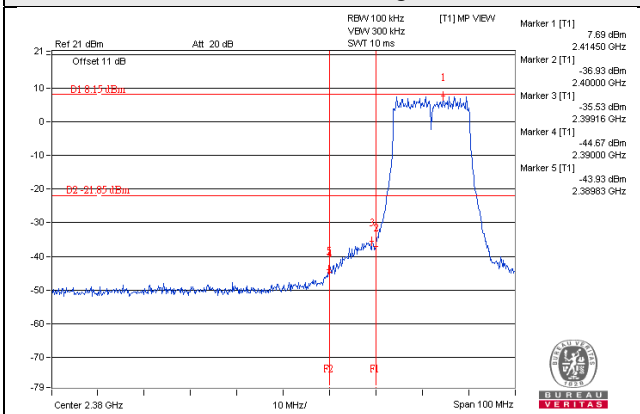
## CH 6



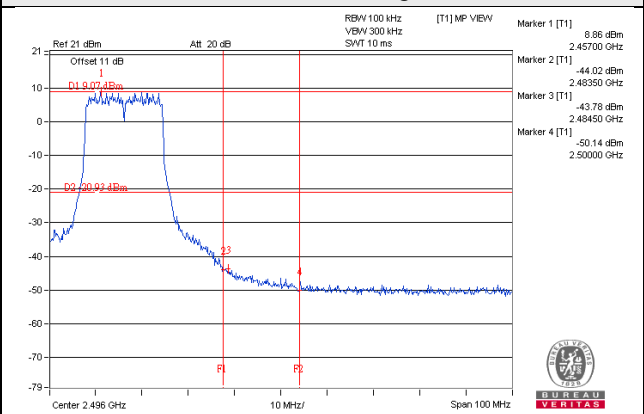
## CH 11



## CH 1 Band edge

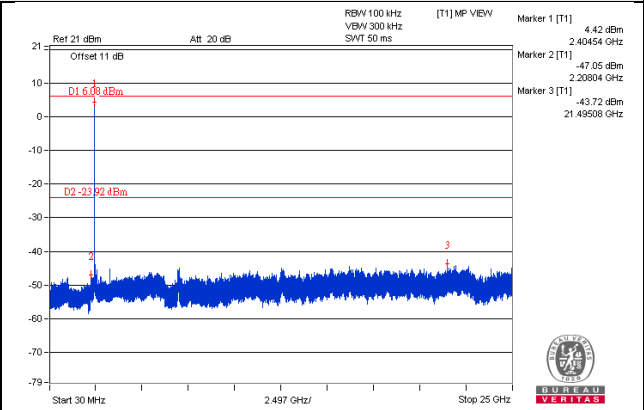
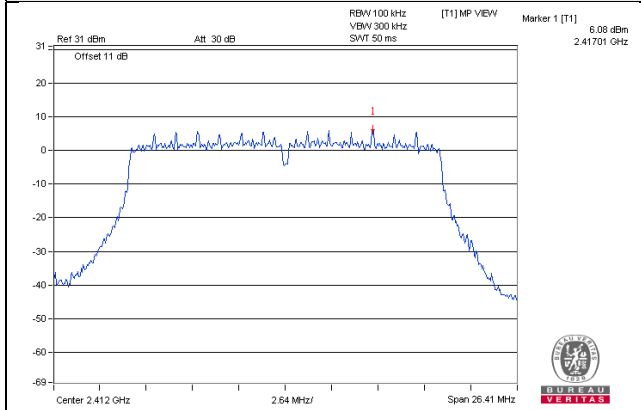


## CH 11 Band edge

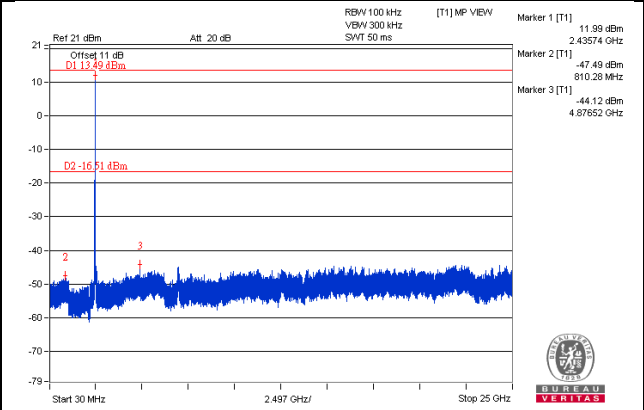
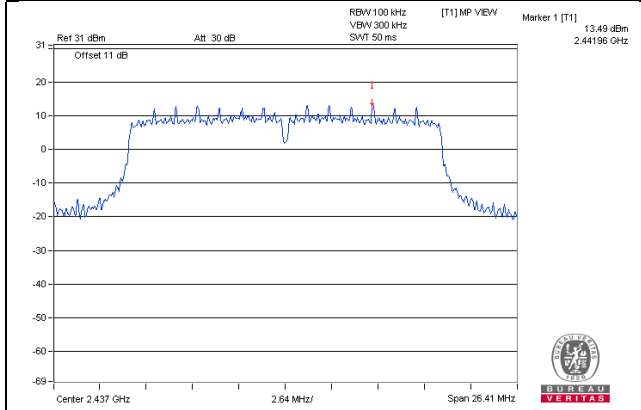


# 802.11n (HT20)\_Chain 0

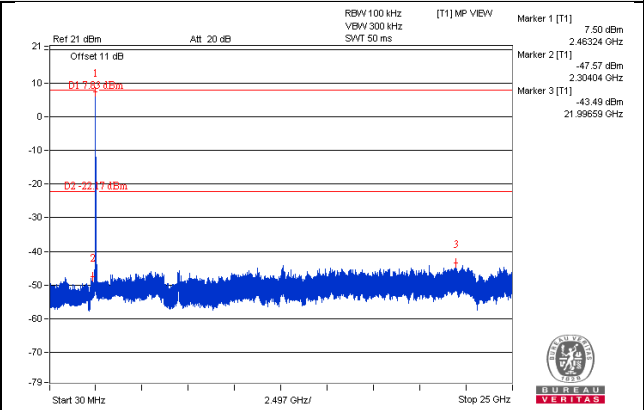
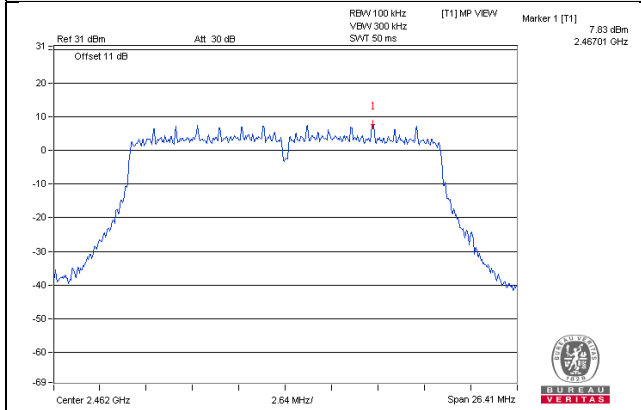
## CH 1



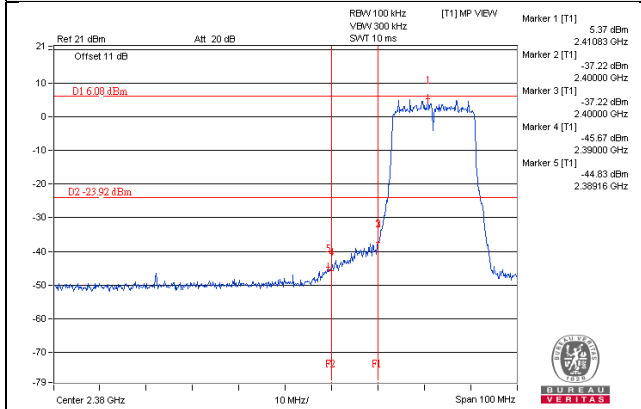
## CH 6



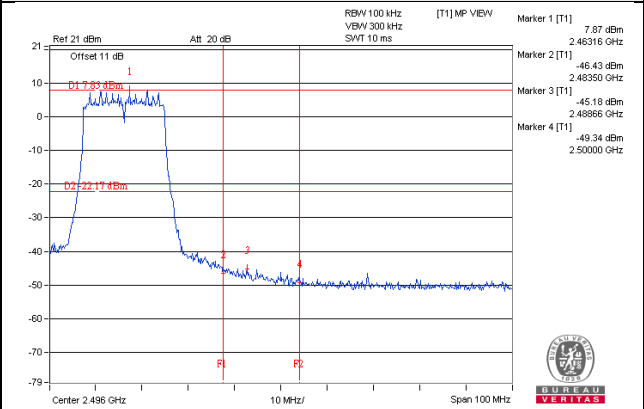
## CH 11



## CH 1 Band edge

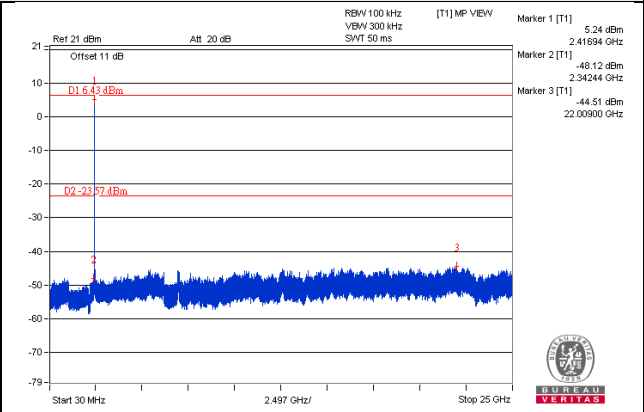
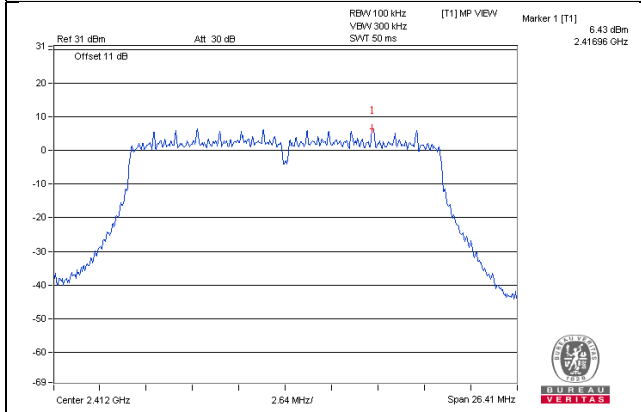


## CH 11 Band edge

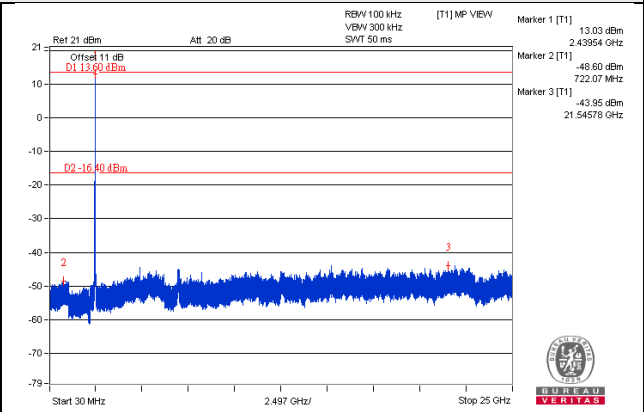
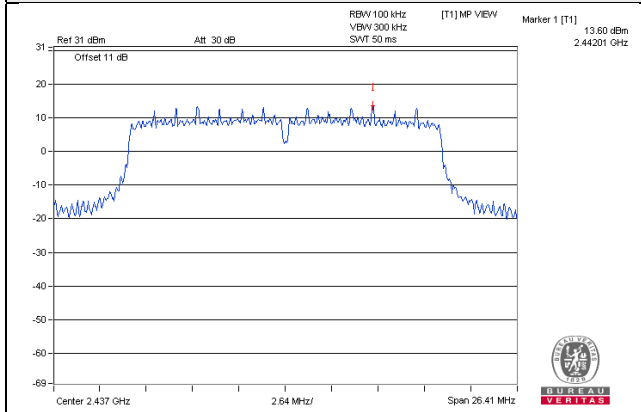


# 802.11n (HT20)\_Chain 1

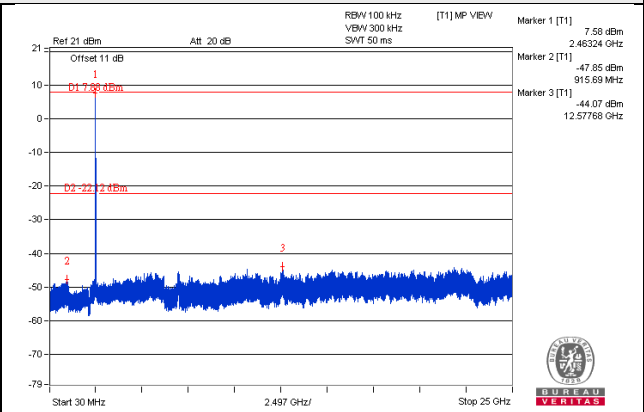
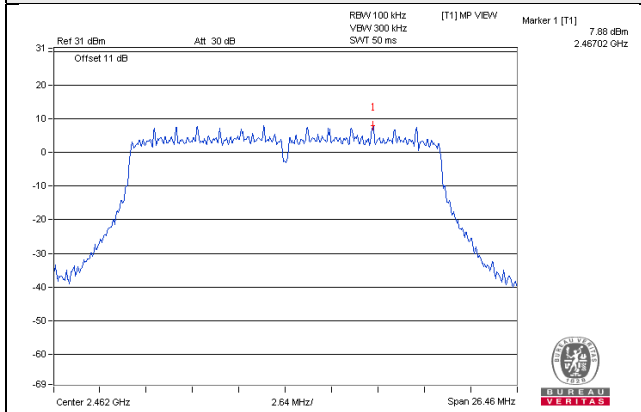
## CH 1



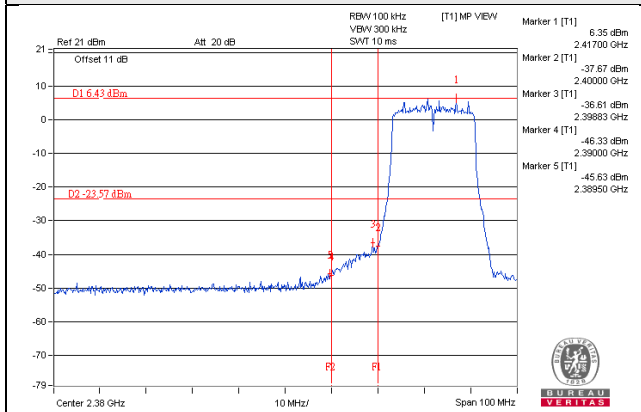
## CH 6



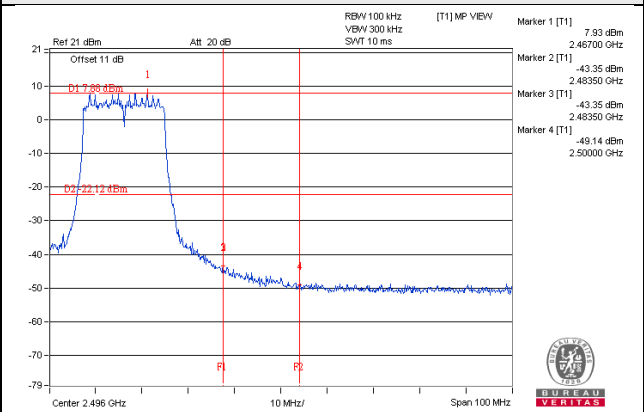
## CH 11



## CH 1 Band edge



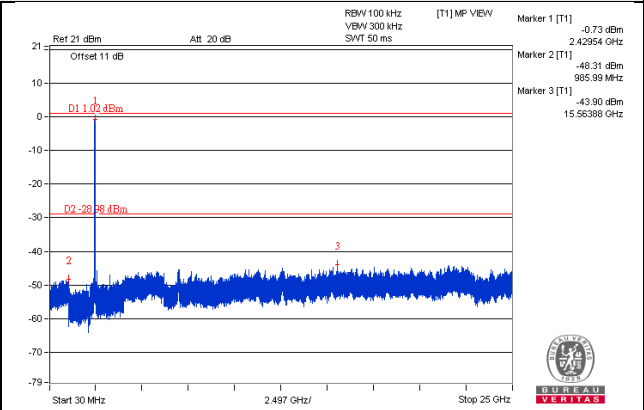
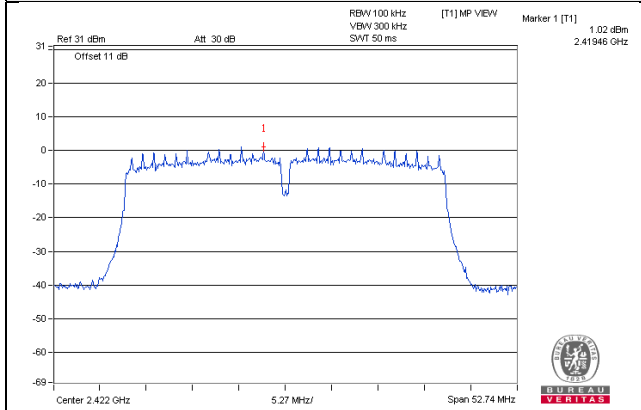
## CH 11 Band edge



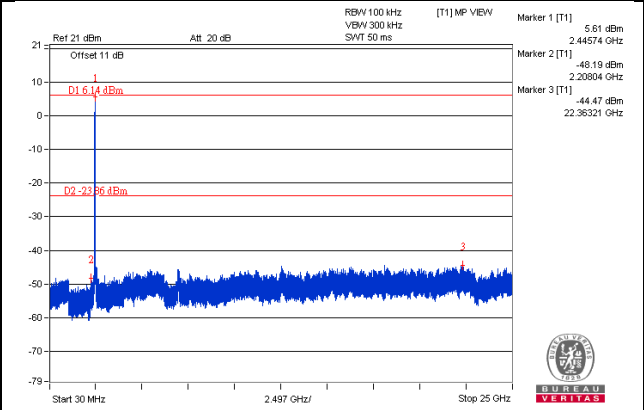
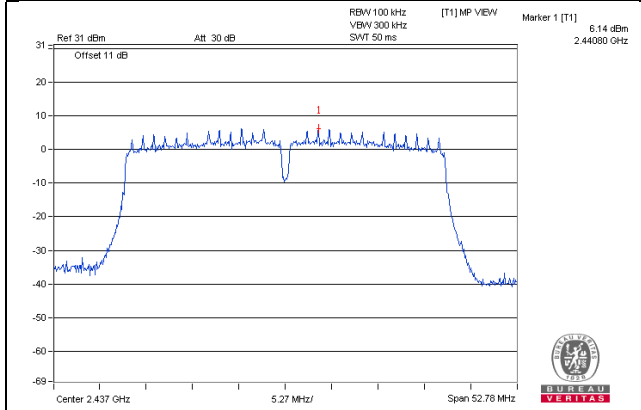


802.11n (HT40)\_Chain 0

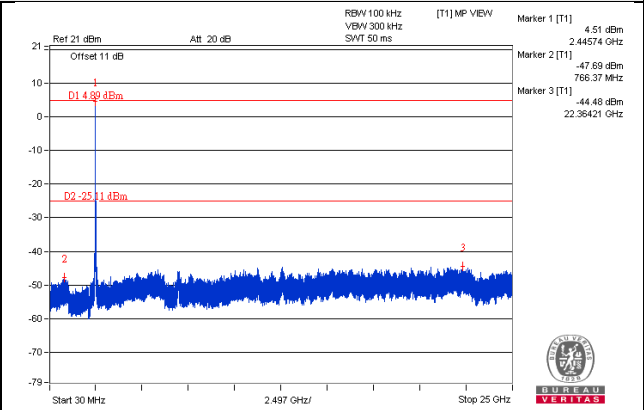
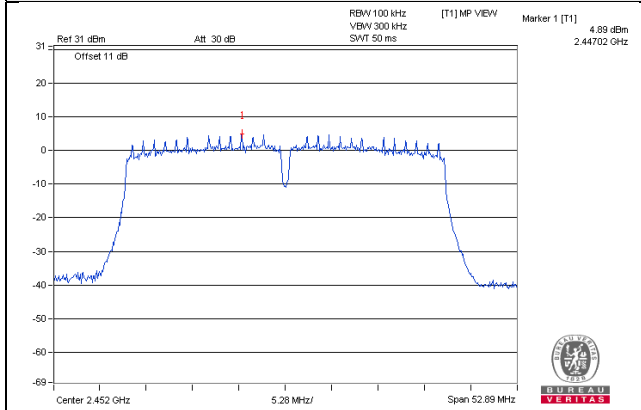
CH 3



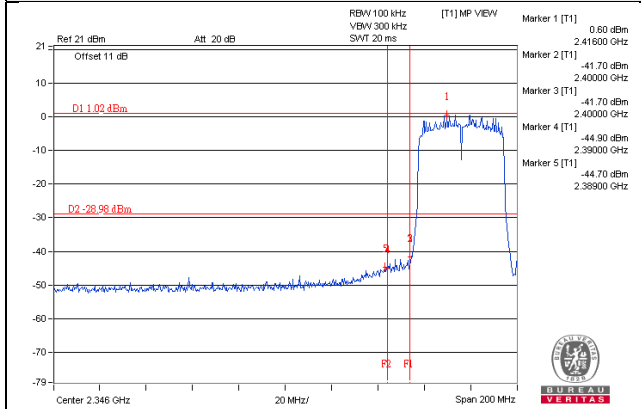
CH 6



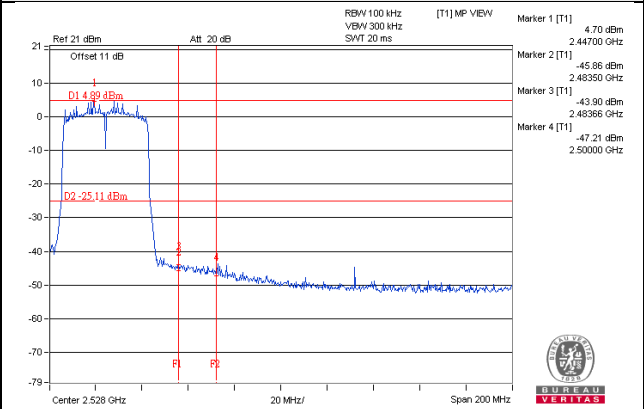
CH 9



CH 3 Band edge

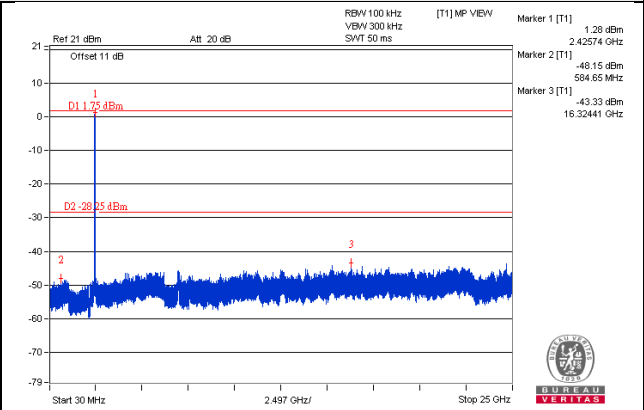
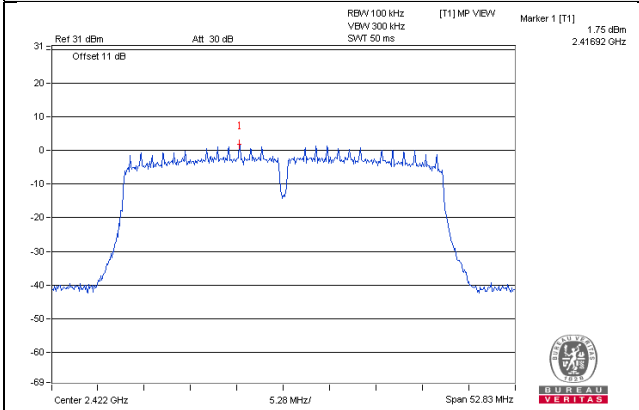


CH 9 Band edge

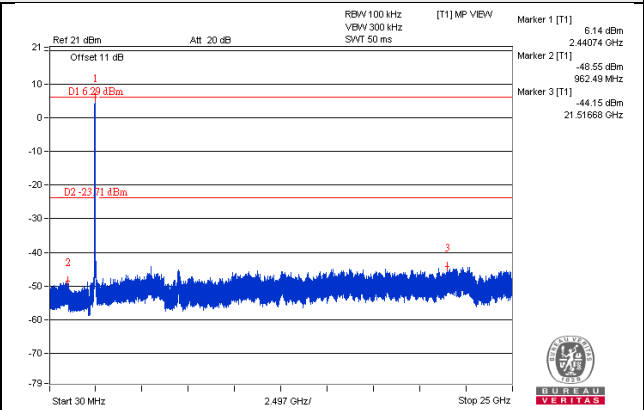
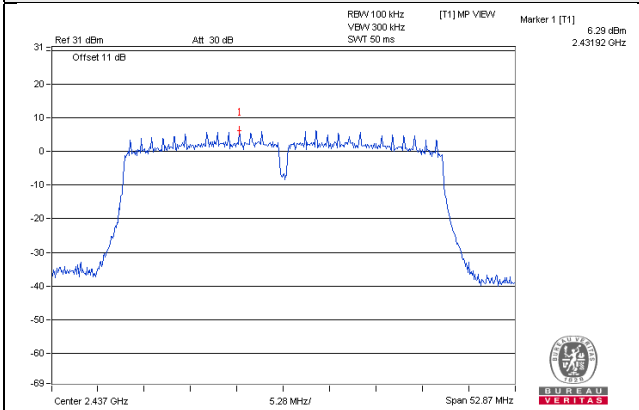


# 802.11n (HT40)\_Chain 1

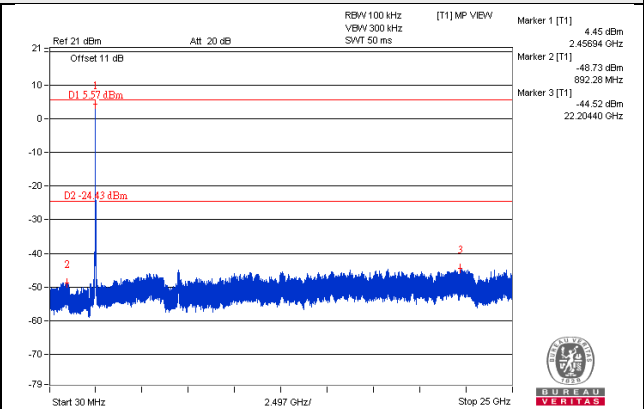
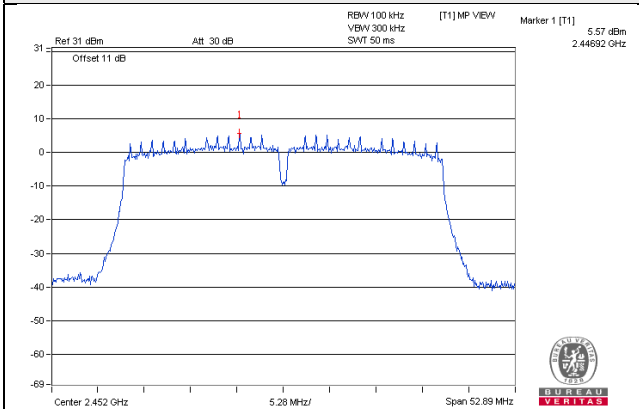
## CH 3



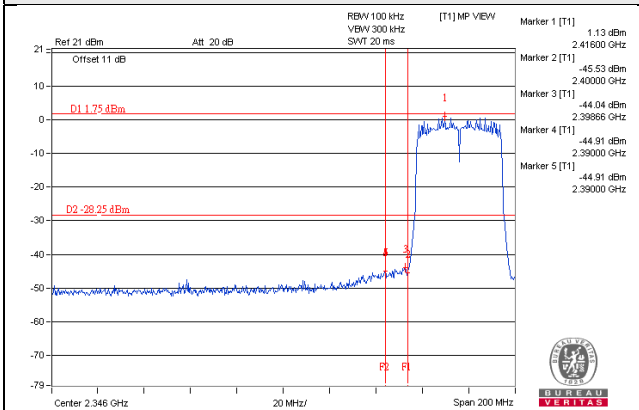
## CH 6



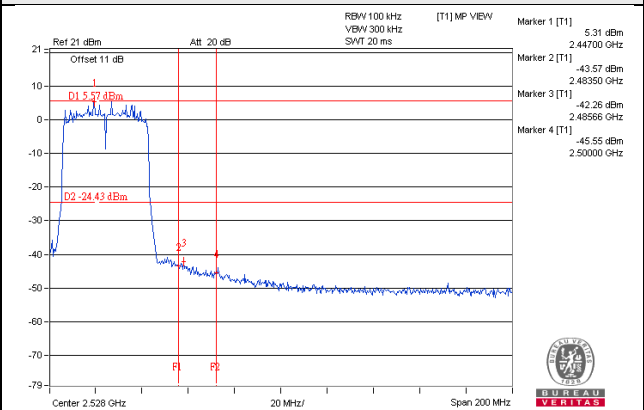
## CH 9



## CH 3 Band edge

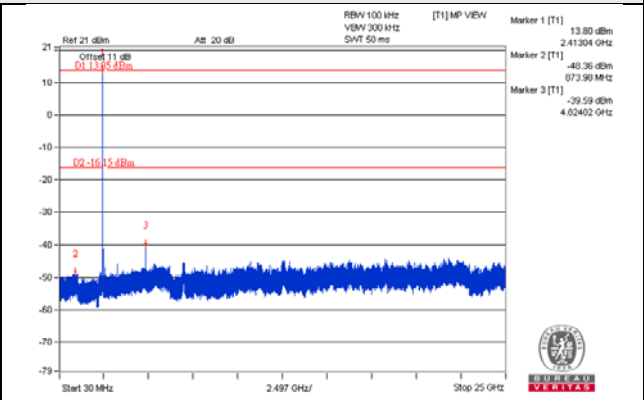
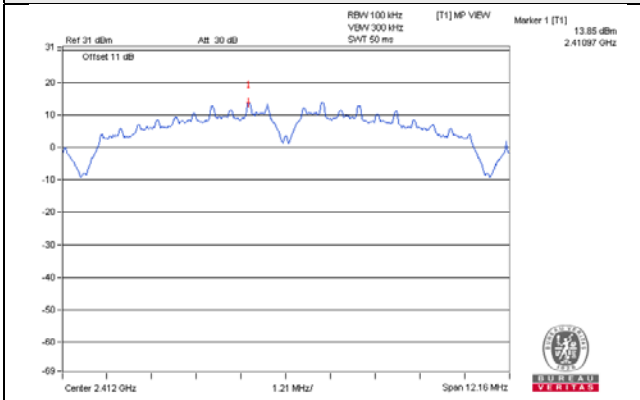


## CH 9 Band edge

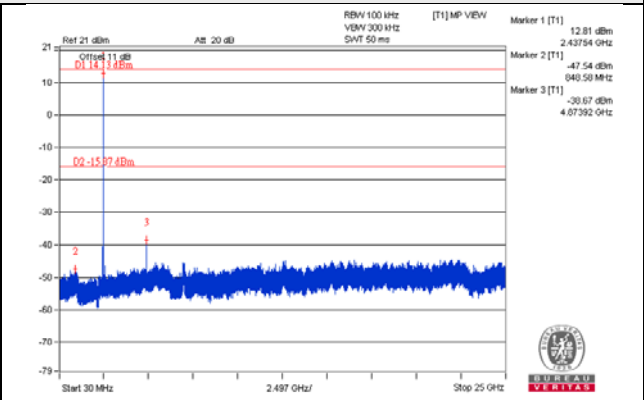
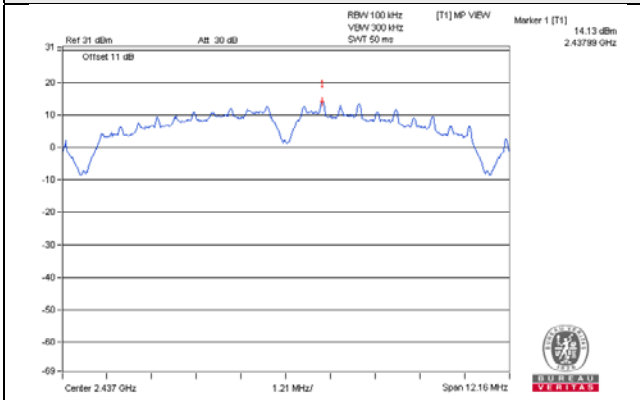


Test Mode E  
802.11b\_Chain 0

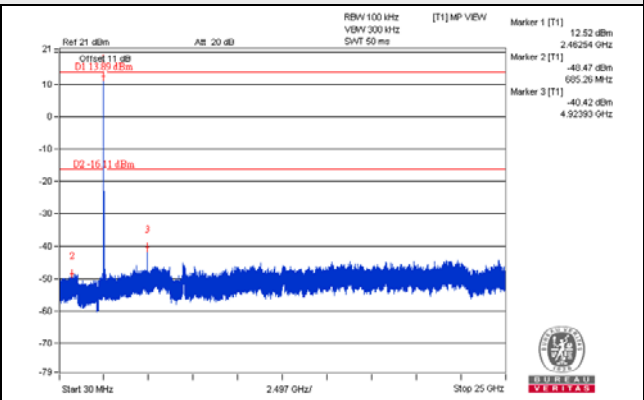
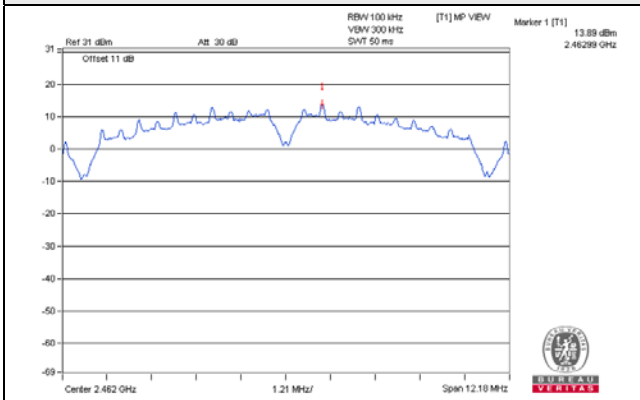
CH 1



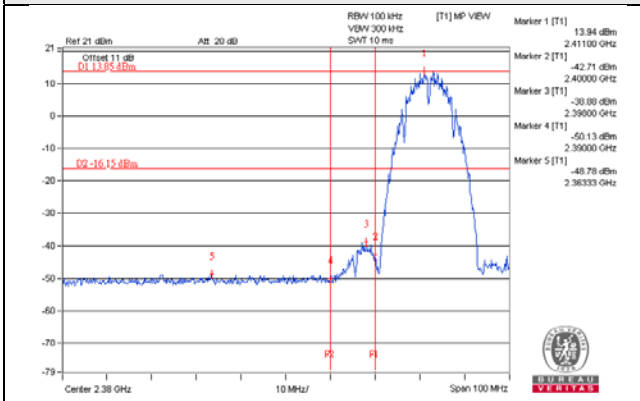
CH 6



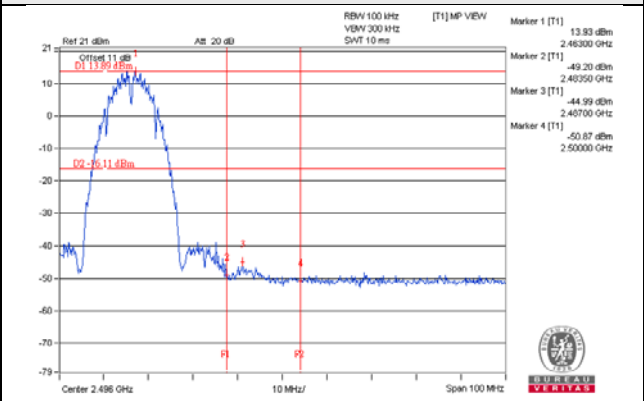
CH 11



CH 1 Band edge

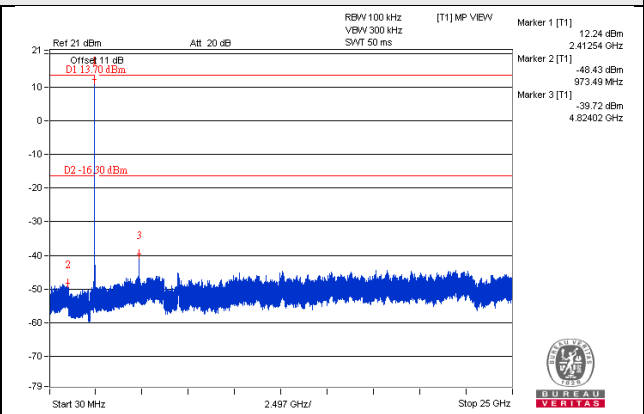
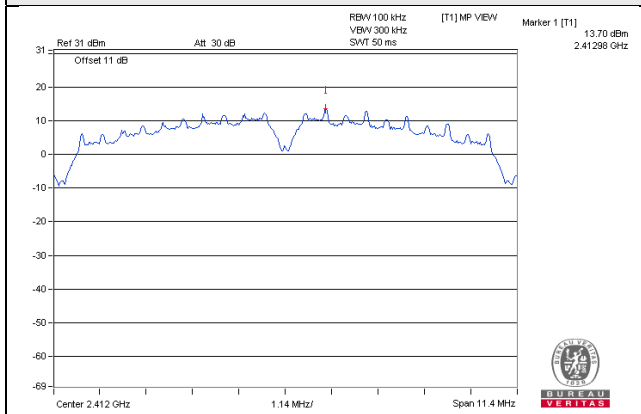


CH 11 Band edge

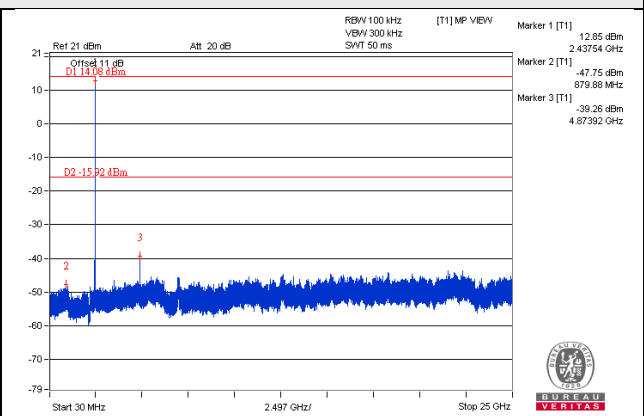
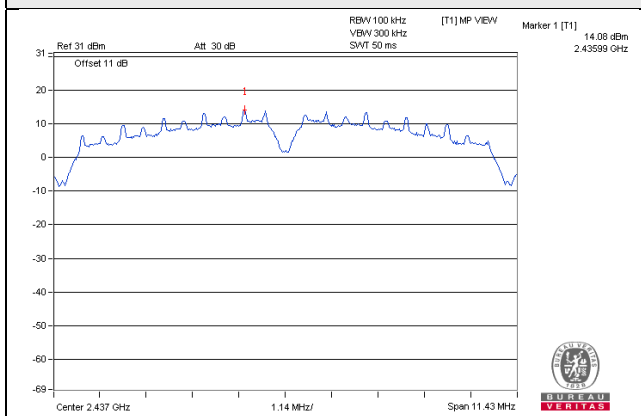


# 802.11b\_Chain 1

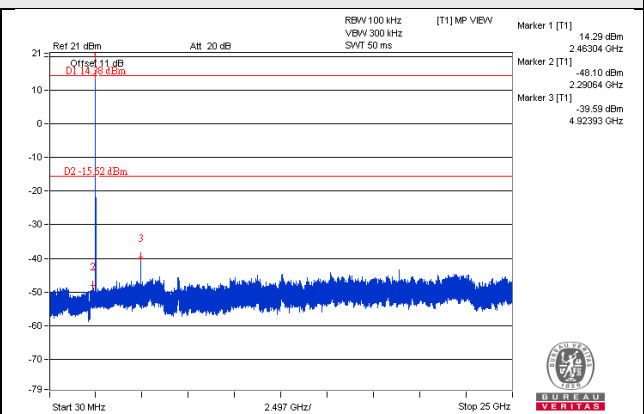
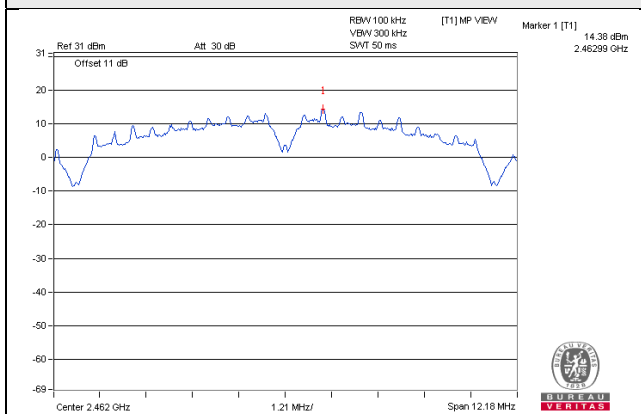
## CH 1



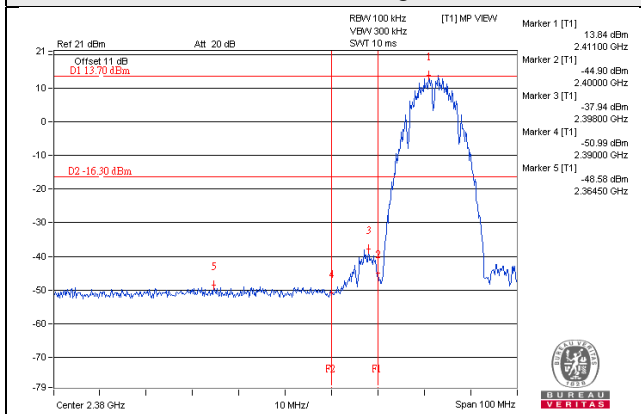
## CH 6



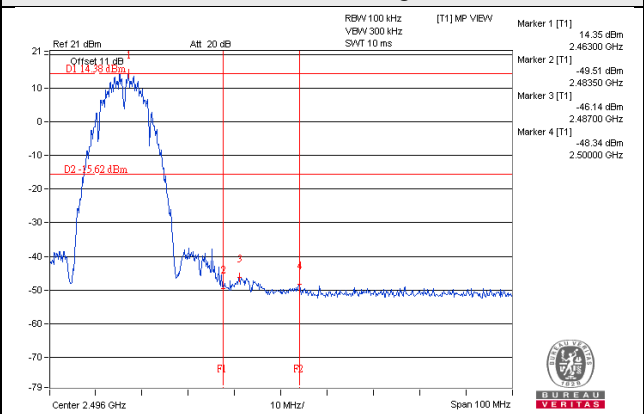
## CH 11



## CH 1 Band edge

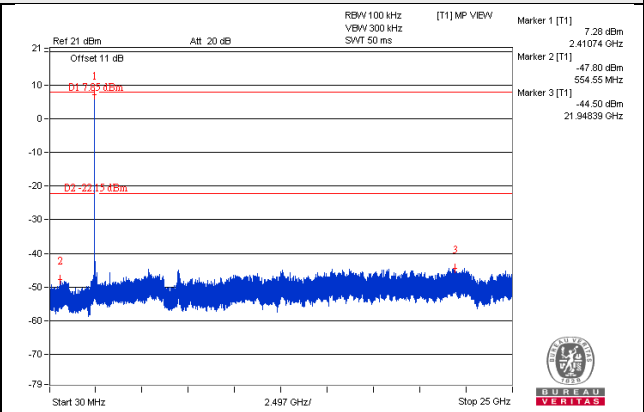
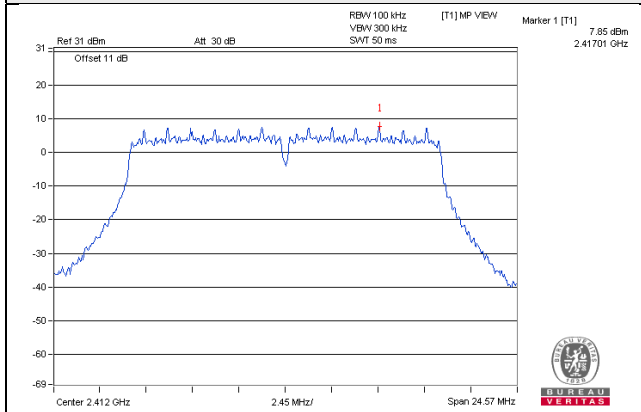


## CH 11 Band edge

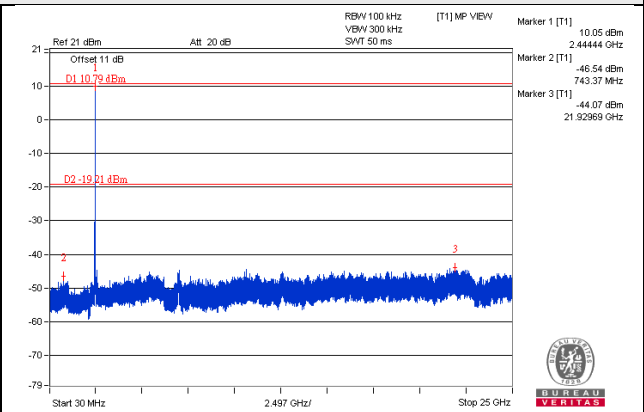
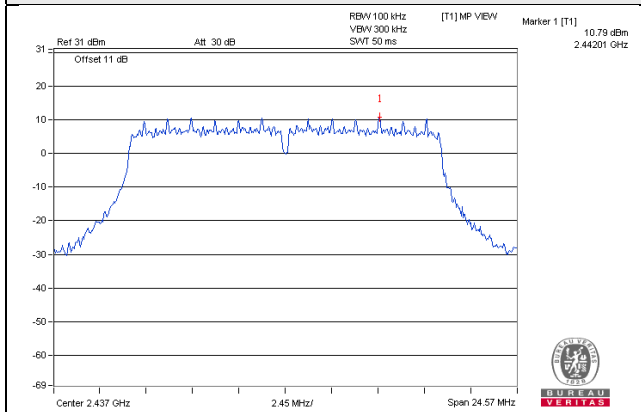


# 802.11g\_Chain 0

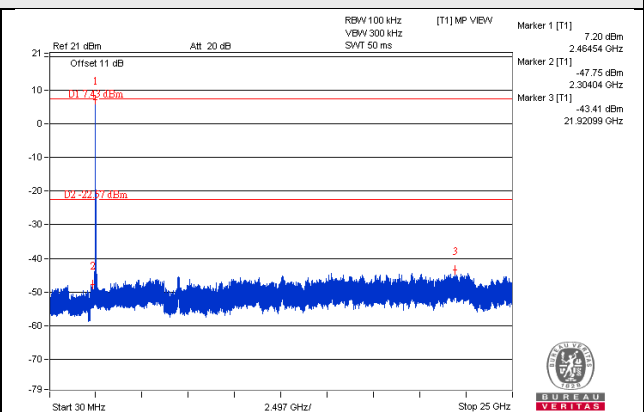
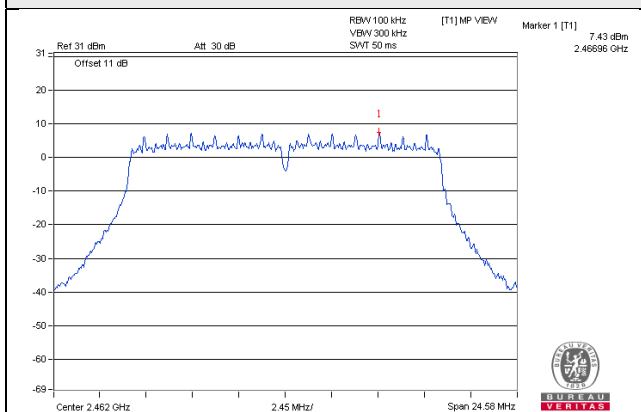
## CH 1



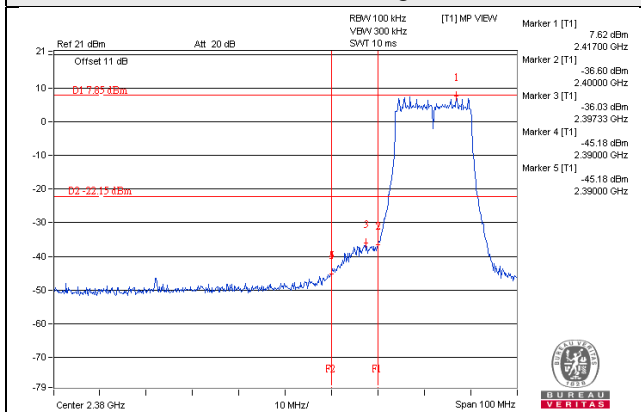
## CH 6



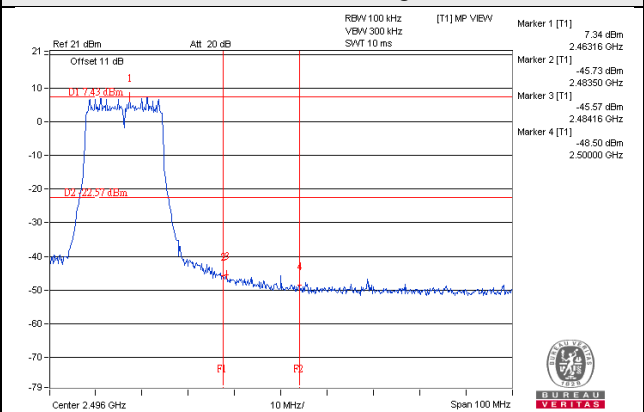
## CH 11



## CH 1 Band edge

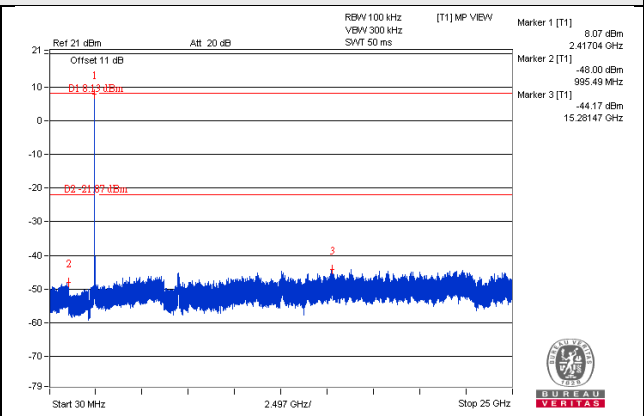
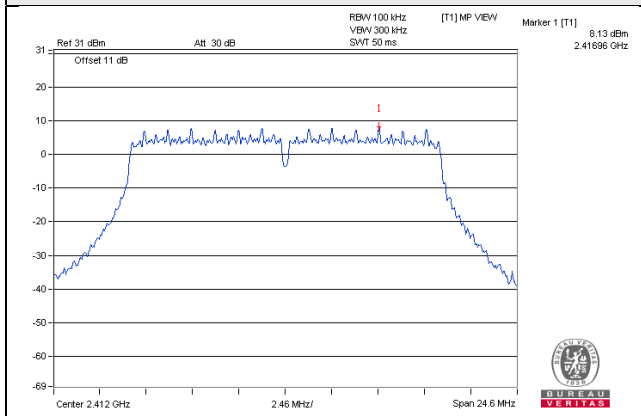


## CH 11 Band edge

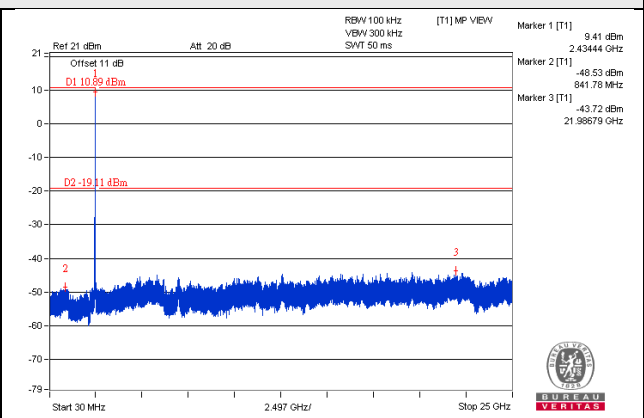
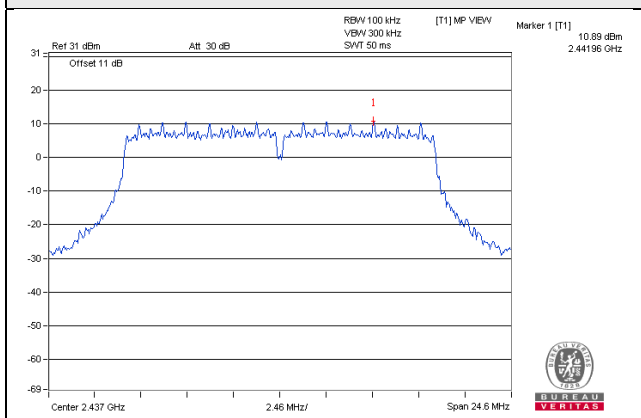


# 802.11g\_Chain 1

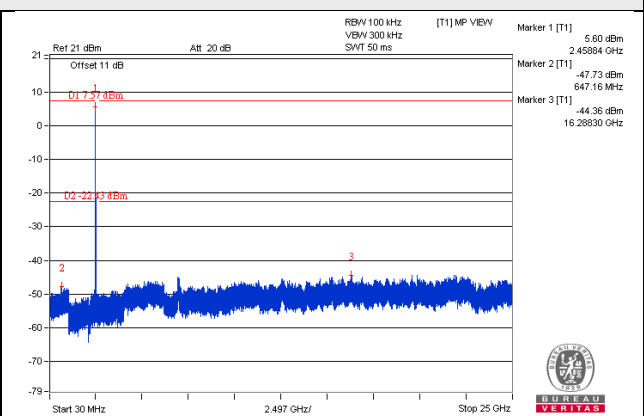
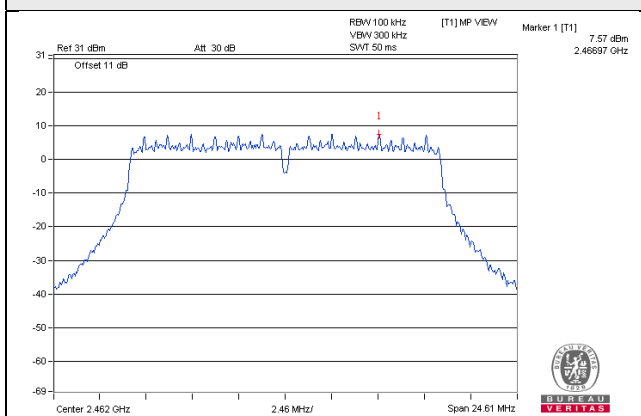
## CH 1



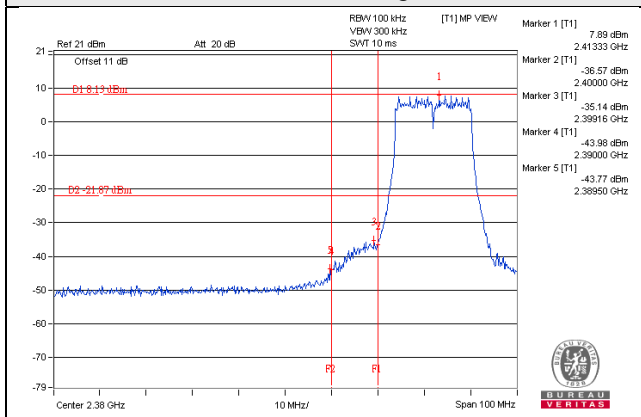
## CH 6



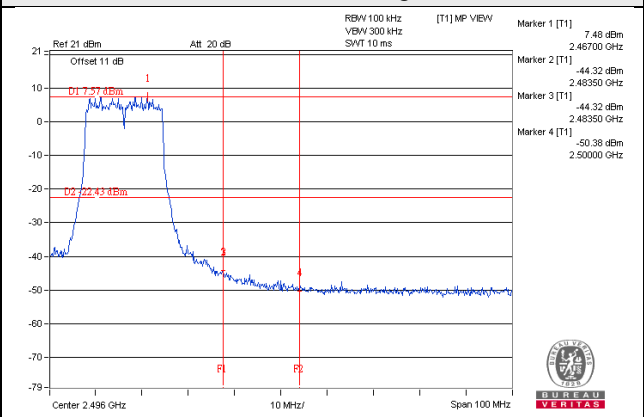
## CH 11



## CH 1 Band edge

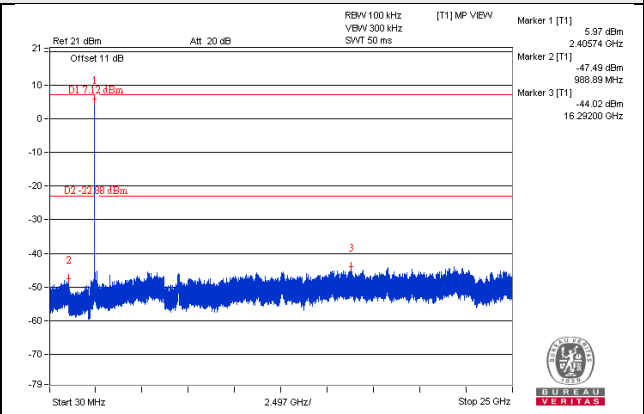
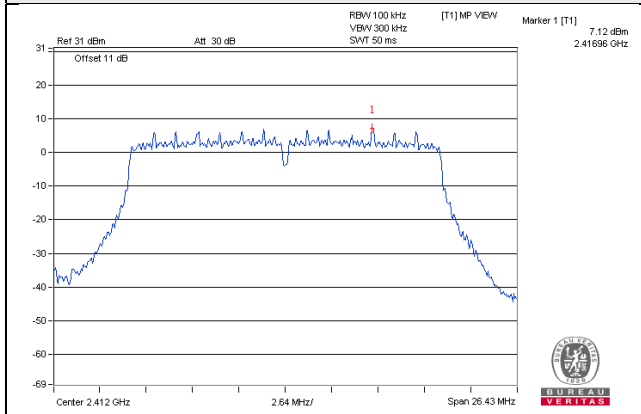


## CH 11 Band edge

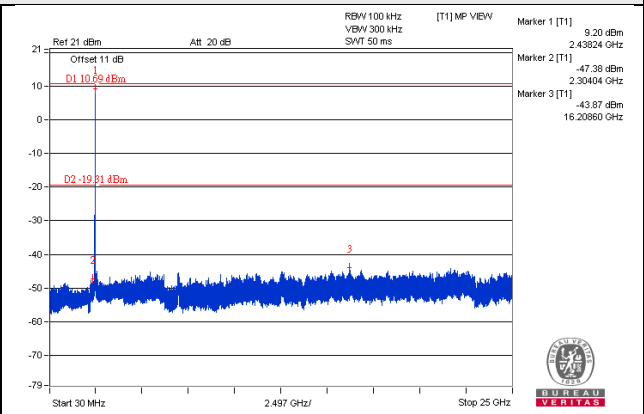
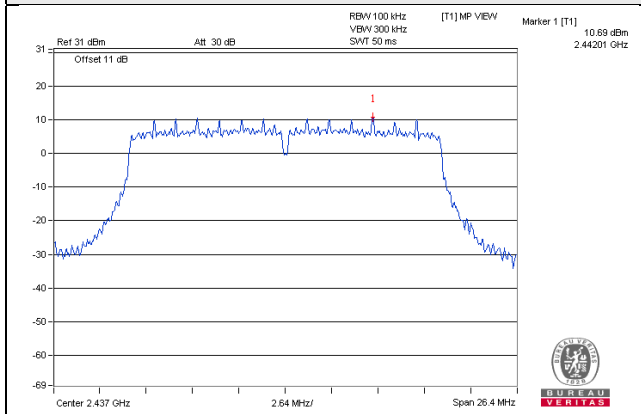


802.11n (HT20)\_Chain 0

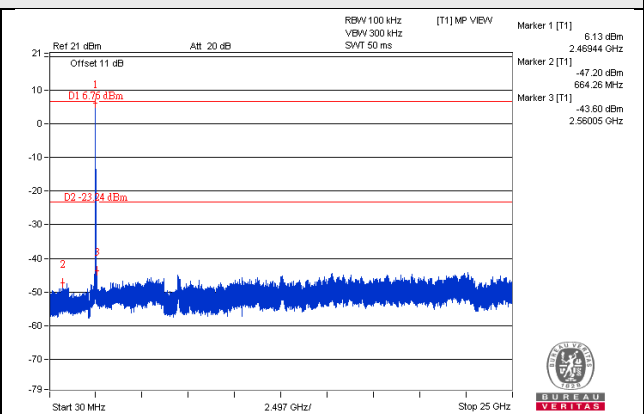
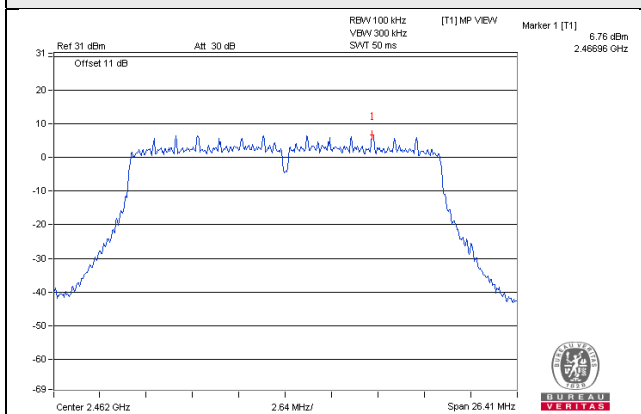
CH 1



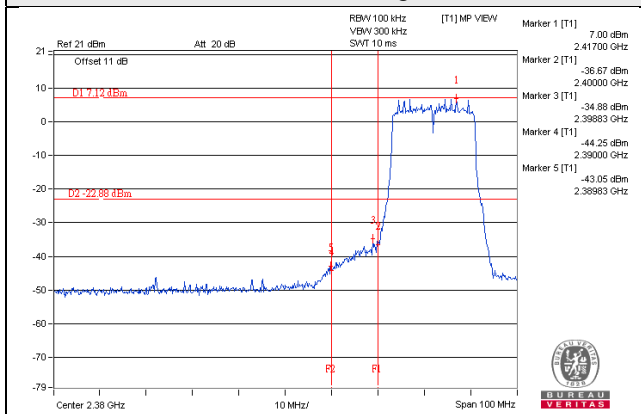
CH 6



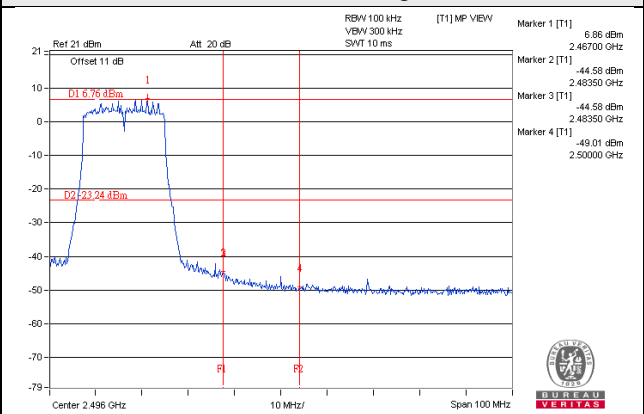
CH 11



CH 1 Band edge

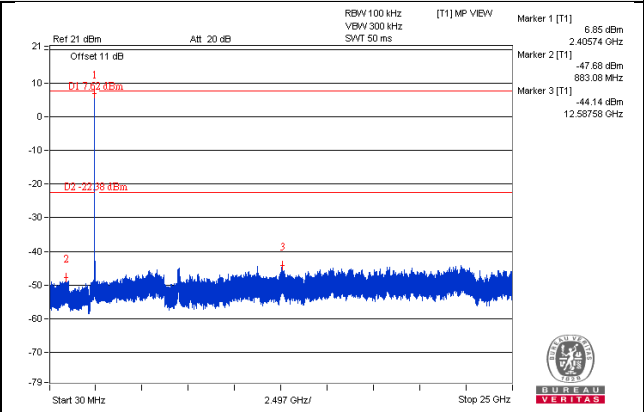
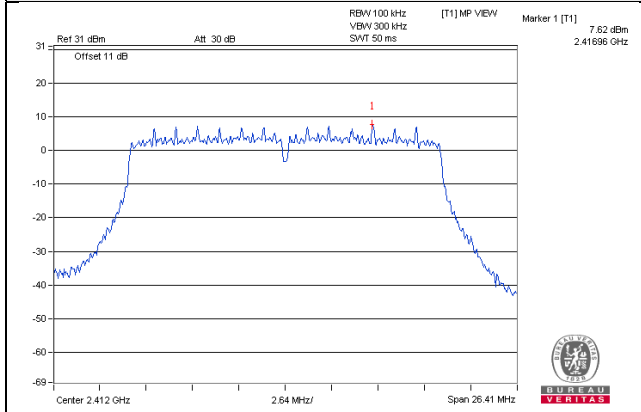


CH 11 Band edge

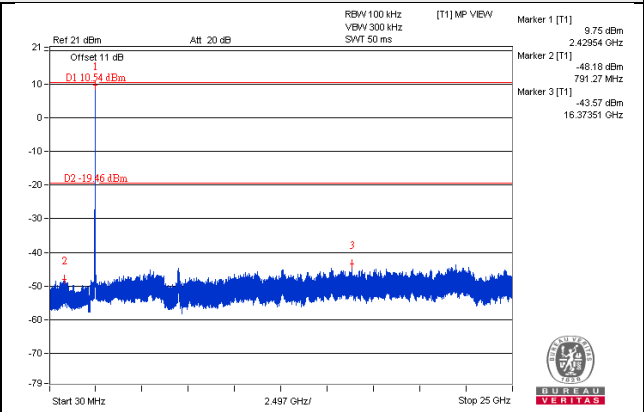
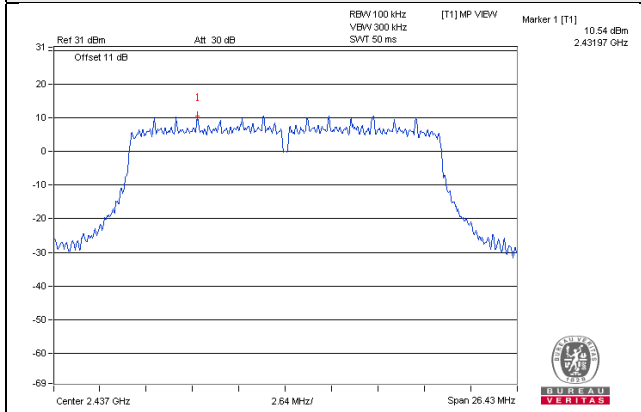


# 802.11n (HT20)\_Chain 1

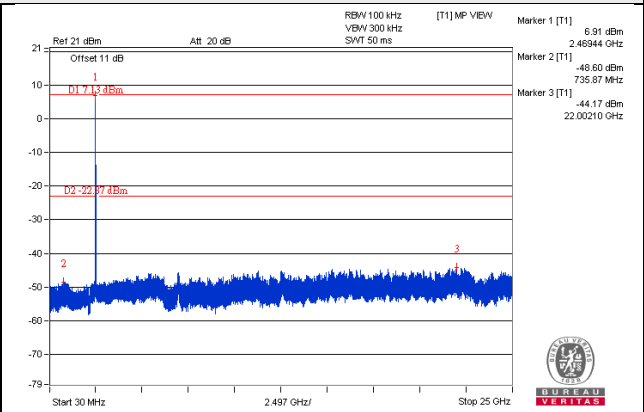
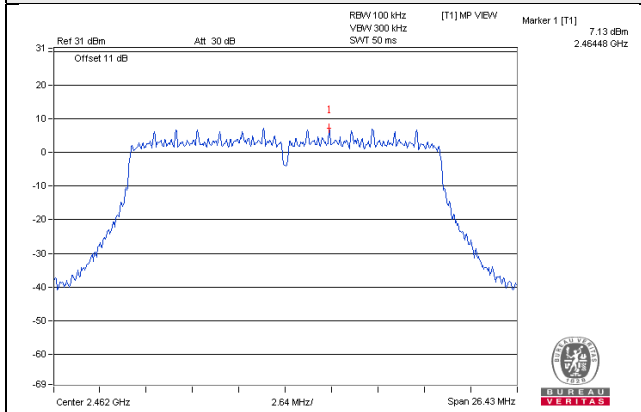
## CH 1



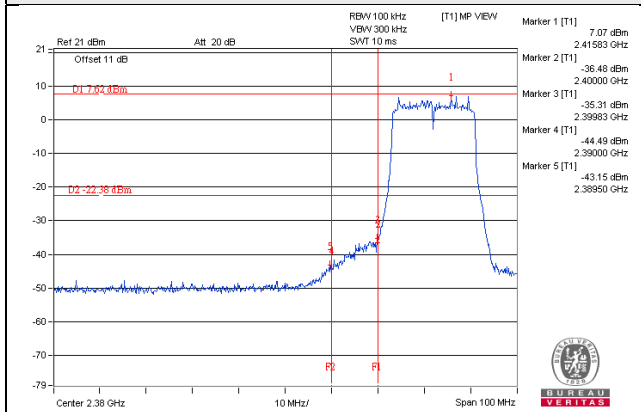
## CH 6



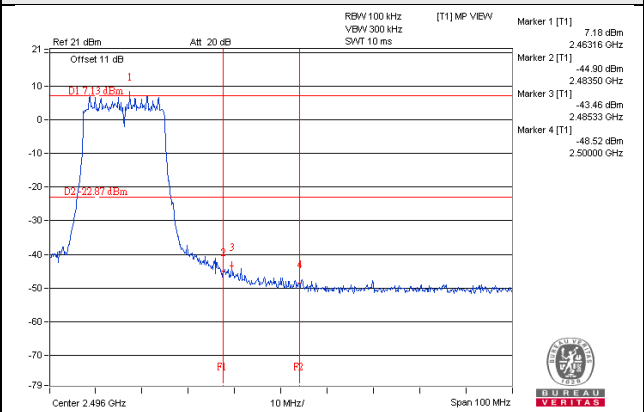
## CH 11



## CH 1 Band edge



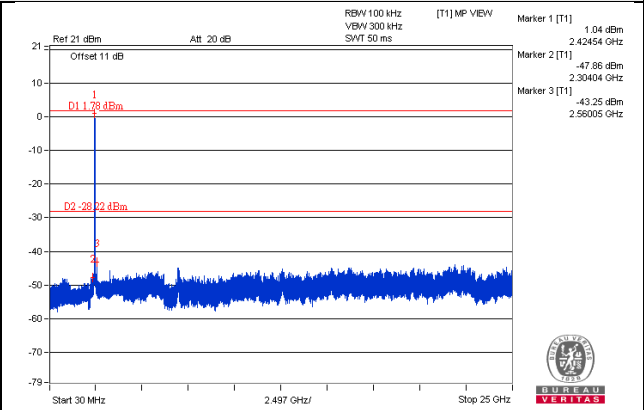
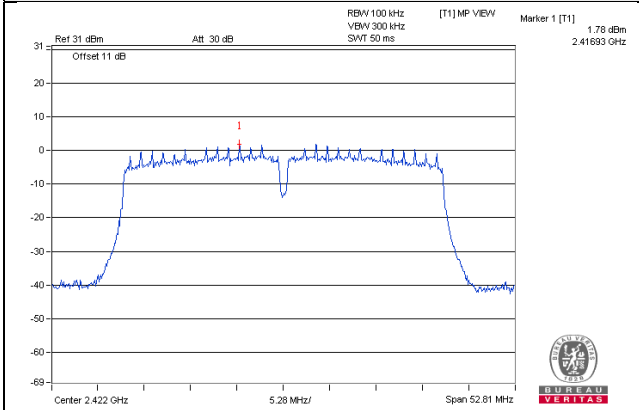
## CH 11 Band edge



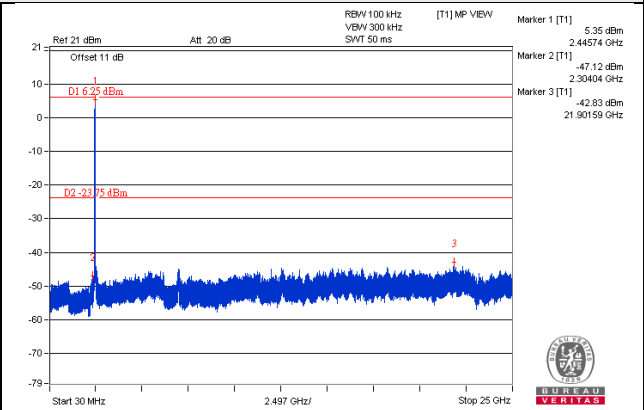
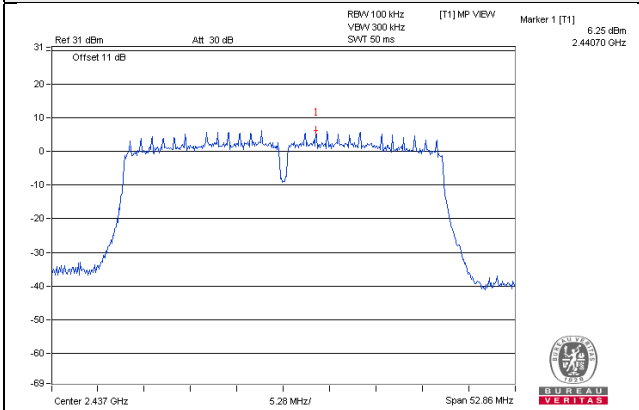


# 802.11n (HT40)\_Chain 0

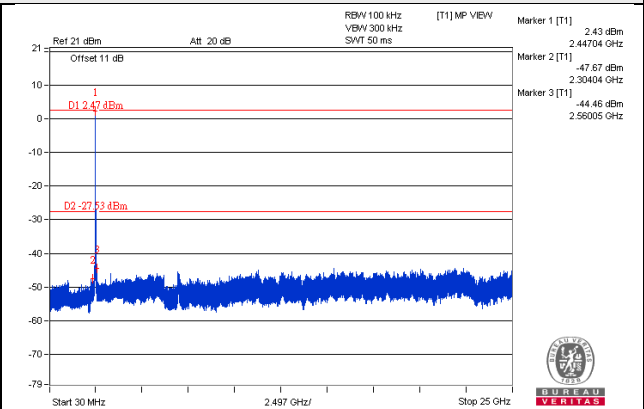
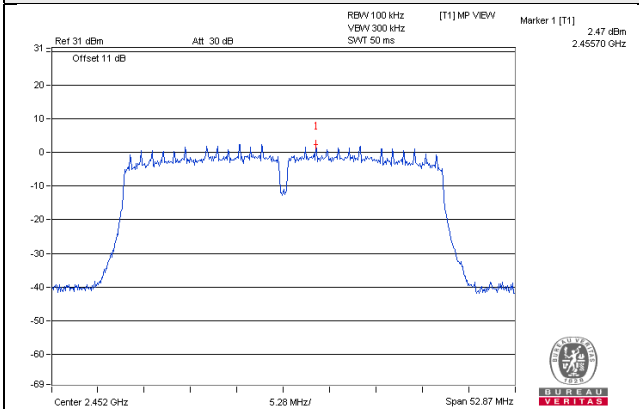
## CH 3



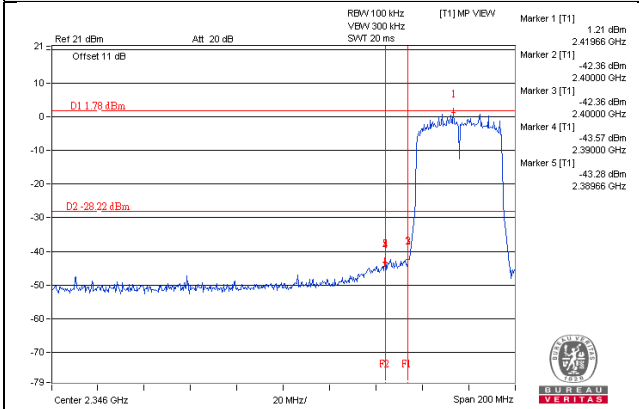
## CH 6



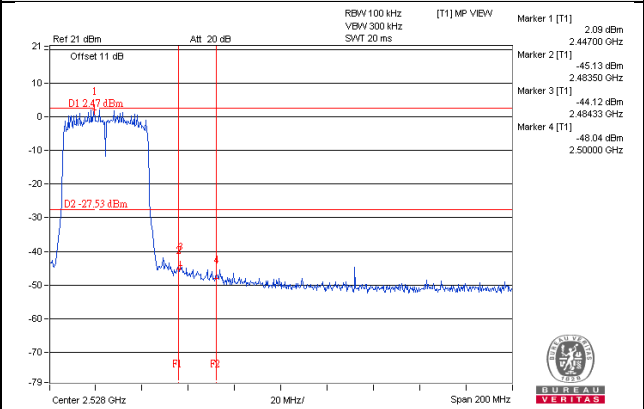
## CH 9



## CH 3 Band edge

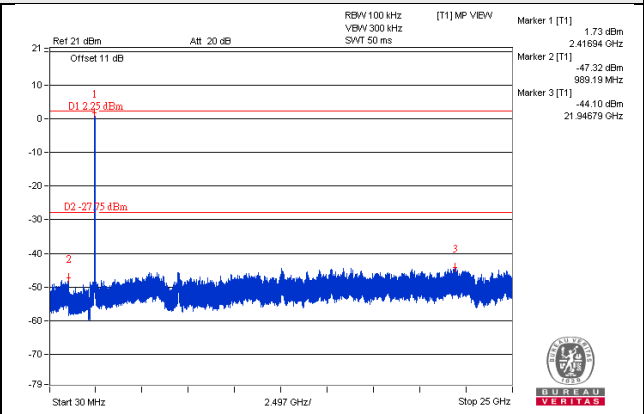
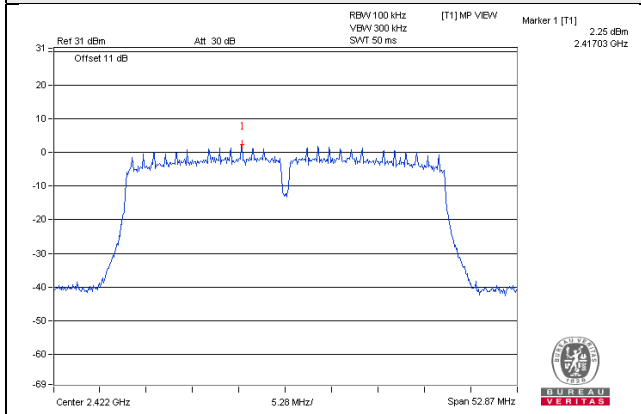


## CH 9 Band edge

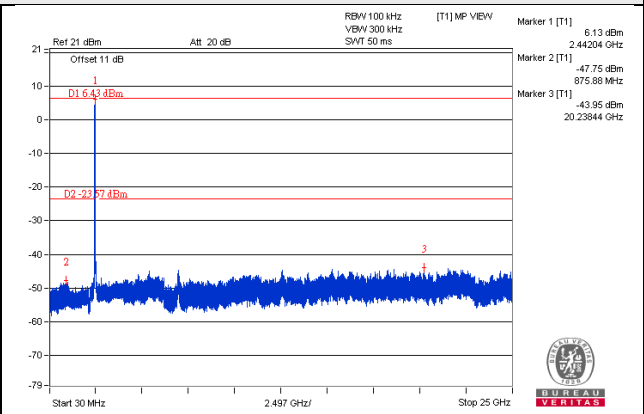
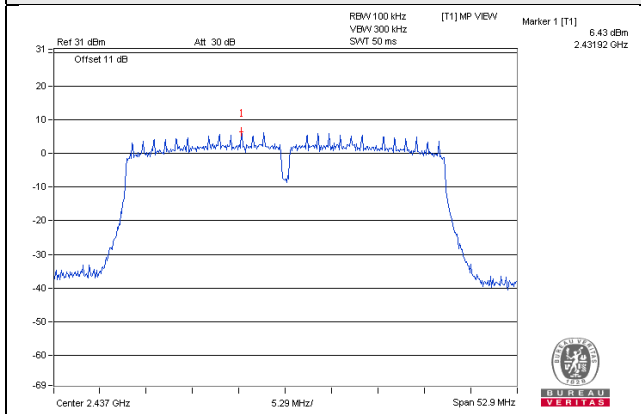


802.11n (HT40)\_Chain 1

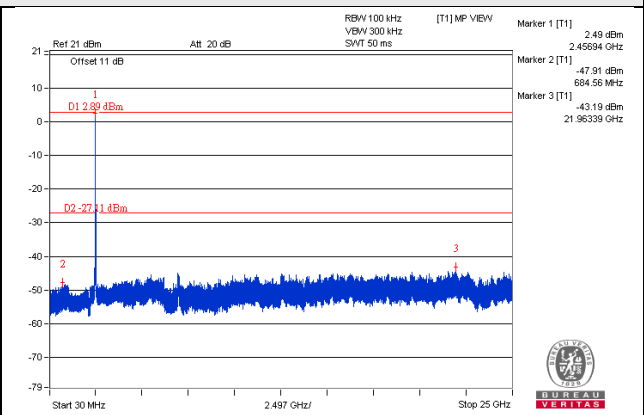
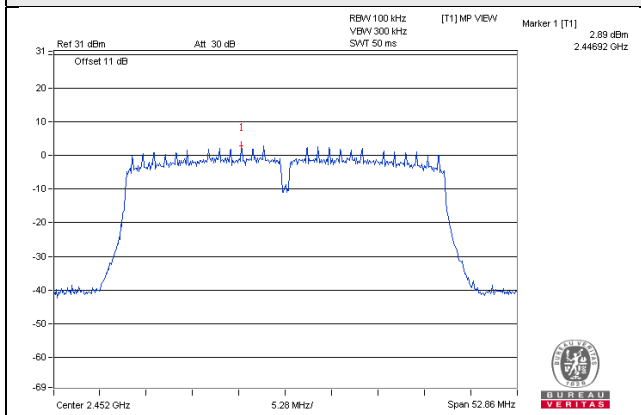
CH 3



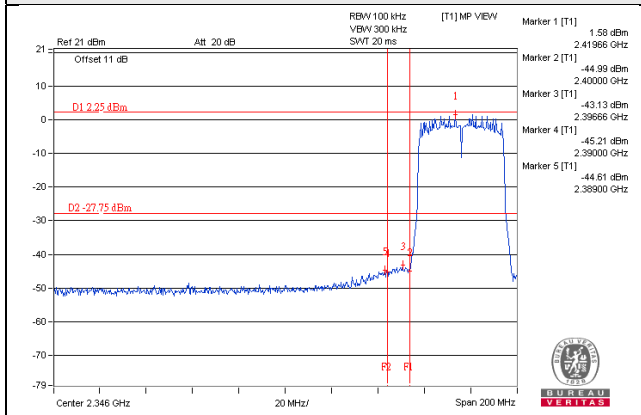
CH 6



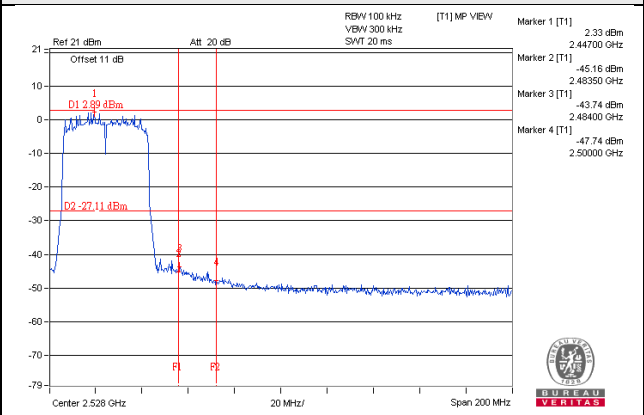
CH 9



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 FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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

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