

## FCC Test Report

**Report No.:** RF200331C03

**FCC ID:** 2AWD3ESRM

**Test Model:** ESR-M

**Received Date:** Mar. 31, 2020

**Test Date:** May 19 ~ May 28, 2020

**Issued Date:** Jun. 02, 2020

**Applicant:** Aetheros Inc

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

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

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



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### Release Control Record

Issue No.	Description	Date Issued
RF200331C03	Original release	Jun. 02, 2020

## 1 Certificate of Conformity

**Product:** ESR-M  
**Brand:** Aetheros (AOS)  
**Test Model:** ESR-M  
**Sample Status:** Production Unit  
**Applicant:** Aetheros Inc  
**Test Date:** May 19 ~ May 28, 2020  
**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 RF characteristics under the conditions specified in this report.

**Prepared by :**           *Polly Chien*           , **Date:**           Jun. 02, 2020            
Polly Chien / Specialist

**Approved by :**           *Bruce Chen*           , **Date:**           Jun. 02, 2020            
Bruce Chen / Senior Project Engineer

## 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 -4.84dB at 0.52153MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.8dB at 2390.00MHz & 4824.00MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

Note:

- For 2.4G band compliance with rule 15.247(d) of the band-edge items, the test plots were recorded in Annex A. Test Procedures refer to report 4.1.3.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 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) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.63 dB
	200MHz ~ 1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	ESR-M
Brand	Aetheros (AOS)
Test Model	ESR-M
Sample Status	Production Unit
Power Supply Rating	1.9 to 5.5Vdc from ESRM11 4.2 to 24Vdc from ESRME3
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 150Mbps
Operating Frequency	2412 ~ 2462MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7
Output Power	205.116mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Cable Supplied	NA

Note:

- The EUT was installed in specific End-product. All models on End-product are listed as below. The model of the ESRM11, ESRME3 were chosen for final test.

Product	Brand	Model	Description
Antenna Housing	Honeywell	ESRM11	SKU01
		ESRMIX	(X=1-9, different regions of LTE bands , do not effect WiFi/BT/WiSun)
Antenna Housing	Pegatron/ INTELLIHUB*	ESRME3	SKU02
		ESRMEX	(X=1-9, different regions of LTE bands , do not effect WiFi/BT/WiSun)

\*The brand names are electrically identical, different brand names are for marketing purpose.

- The EUT provide 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
802.11b	1TX
802.11g	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX

2. The following antennas were provided to the EUT.

Antenna Type		Dipole	
Antenna Connector		IPEX	
	Brand	Model	Peak Gain (dBi)
			2.4GHz
SKU1	PEGATRON	1415-07UJ000	3.42
SKU2	PEGATRON	1415-07RH000	3.79

\* The maximum antenna gain is chosen for final test.

3. The WI-SUN could transmit simultaneously either with WLAN 2.4GHz or BT at the same time.

### 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	
A	√	√	√	√	EUT with SKU1
B	√	√	√	-	EUT with SKU2

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:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane (Mode A) & Y-plane (Mode B)**.
2. "-": Means no effect.

#### **Radiated Emission Test (Above 1GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, B	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B	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	802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

#### **Power Line Conducted Emission Test:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

**Antenna Port Conducted Measurement:**

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

**Test Condition:**

Applicable to	Environmental Conditions	Input Power (System)	Tested by
RE $\geq$ 1G	25 deg. C, 70% RH	120Vac, 60Hz	Luis Lin
RE $<$ 1G	25 deg. C, 70% RH	120Vac, 60Hz	Luis Lin
PLC	25 deg. C, 68% RH	120Vac, 60Hz	Luis Lin
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Frank Liu

### 3.3 Duty Cycle of Test Signal

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

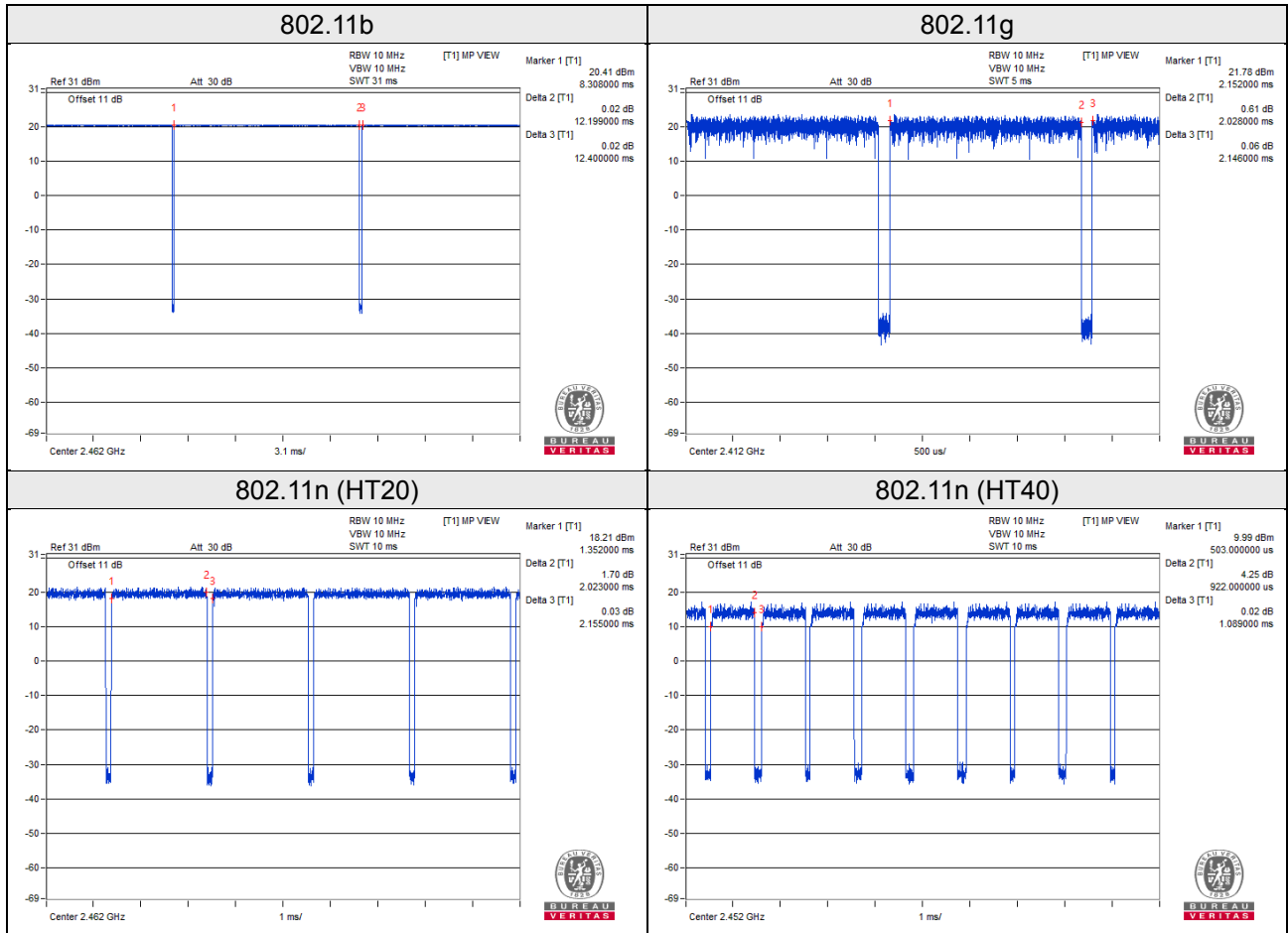
Duty cycle of test signal is  $< 98\%$ , duty factor shall be considered.

802.11b: Duty cycle =  $12.199/12.400 = 0.984$

802.11g: Duty cycle =  $2.028/2.146 = 0.945$ , Duty factor =  $10 * \log(1/0.945) = 0.25$

802.11n (HT20): Duty cycle =  $2.023/2.155 = 0.939$ , Duty factor =  $10 * \log(1/0.939) = 0.27$

802.11n (HT40): Duty cycle =  $0.922/1.089 = 0.847$ , Duty factor =  $10 * \log(1/0.847) = 0.72$



### 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.	Convertible Board	NA	NA	NA	NA	Provided by client
B.	Adapter	DELTA	ADP-24EW A	NA	NA	Provided by client Input: 100 ~ 240Vac, 50 ~ 60Hz Output: 12Vdc, 2A
C.	Antenna Housing	Honeywell	ESRMI1	NA	NA	Provided by client
D.	Antenna Housing	Pegatron/ INTELLIHUB*	ESRME3	NA	NA	Provided by client

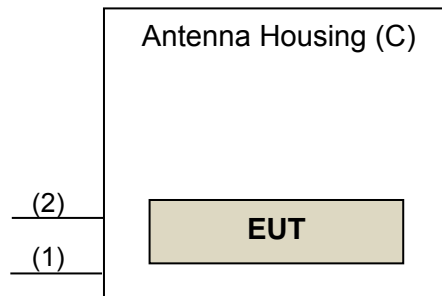
\*The brand names are electrically identical, different brand names are for marketing purpose.

Note: All power cords of the above support units are non-shielded (1.8m).

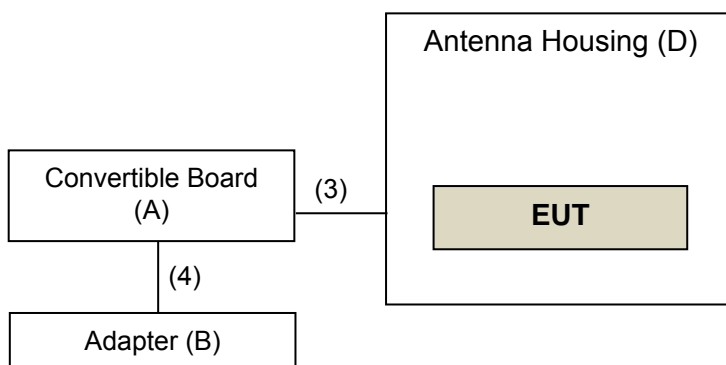
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Micor USB cable	1	1	Y	0	Provided by client
2.	Power cable	1	1.5	Y	0	Provided by client
3.	Convertible board cable	1	1.5m	Y	0	Provided by client
4.	Adapter cable	1	1.8m	N	0	Provided by client

#### 3.4.1 Configuration of System under Test

Mode A



Mode B



### **3.5 General Description of Applied Standards and References**

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

**Test standard:**

**FCC Part 15, Subpart C (15.247)**

ANSI C63.10-2013

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

**References Test Guidance:**

**KDB 558074 D01 15.247 Meas Guidance v05r02**

All test items have been performed as a reference to the above KDB test guidance.

## 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 20dB under any condition of modulation.

#### 4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Dec. 31, 2019	Dec. 30, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 23, 2019	Sep. 22, 2020
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Nov. 11, 2019	Nov. 10, 2020
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
Loop Antenna TESEQ	HLA 6121	45745	Jul. 01, 2019	Jun. 30, 2020
Preamplifier Agilent (Below 1GHz)	8447D	2944A10631	Jul. 11, 2019	Jul. 10, 2020
Preamplifier KEYSIGHT (Above 1GHz)	83017A	MY53270295	Jun. 11, 2019	Jun. 10, 2020
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH4-01	Aug. 20, 2019	Aug. 19, 2020
RF Coaxial Cable EMCI	EMC102-KM-KM-3 000	150929	Aug. 20, 2019	Aug. 19, 2020
RF Coaxial Cable EMCI	EMC102-KM-KM-6 00	150928	Aug. 20, 2019	Aug. 19, 2020
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Jul. 11, 2019	Jul. 10, 2020
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Jul. 11, 2019	Jul. 10, 2020
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190 004/MY55190007/MY55 210005	Jul. 15, 2019	Jul. 14, 2020

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 4.

### 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. Parallel, perpendicular, and ground-parallel orientations 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 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.  
(802.11b: RBW = 1MHz, VBW = 10Hz; 802.11g: RBW = 1MHz, VBW = 1kHz; 802.11n (HT20): RBW = 1MHz, VBW = 1kHz; 802.11n (HT40): RBW = 1MHz, VBW = 3kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

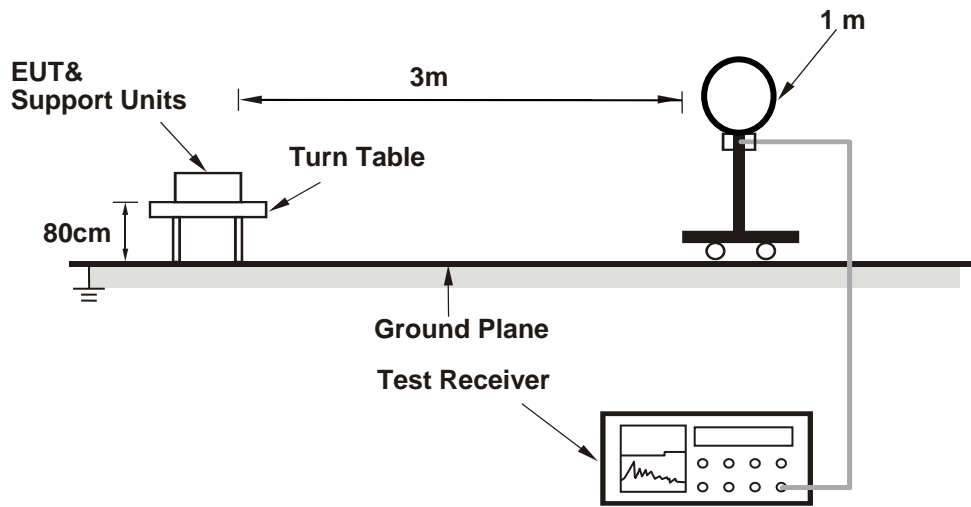
### 4.1.4 Deviation from Test Standard

No deviation.

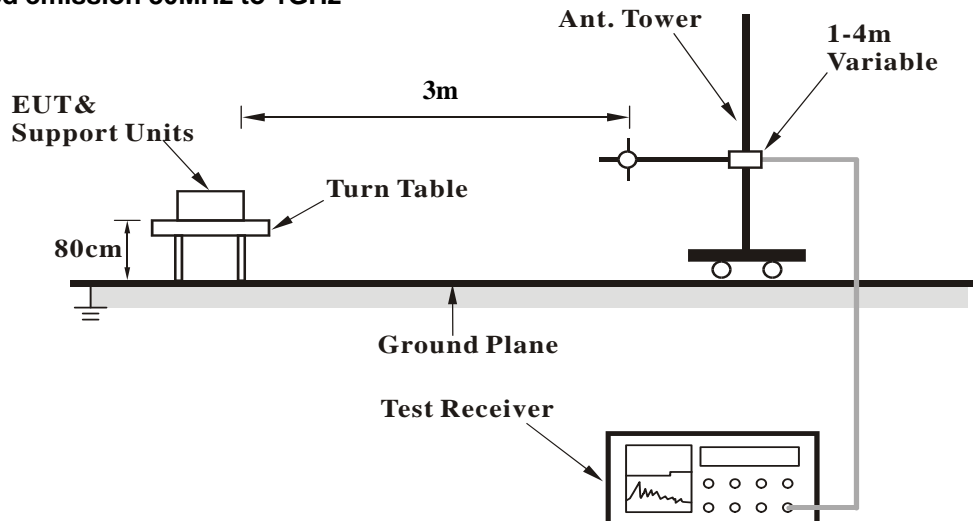


#### 4.1.5 Test Setup

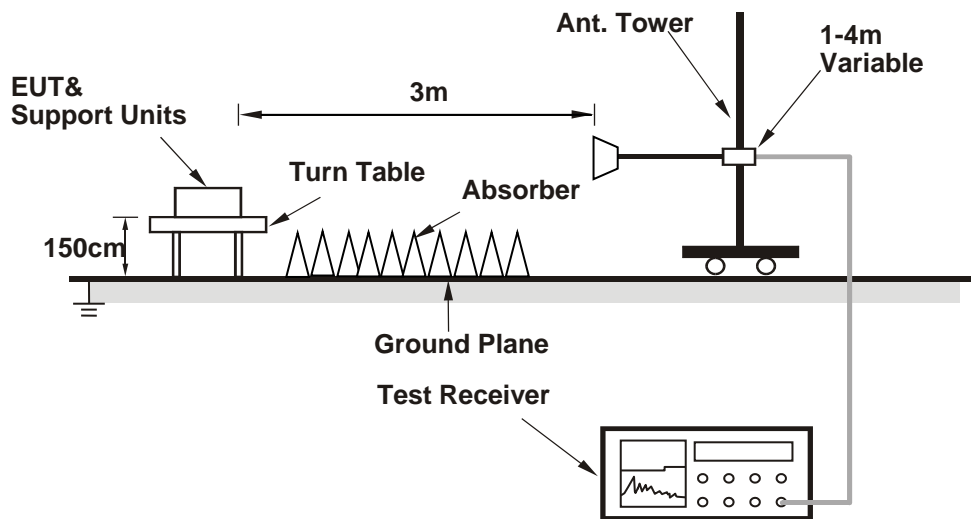
##### For Radiated emission below 30MHz



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

#### 4.1.7 Test Results

Above 1GHz Data:

Mode A

802.11b

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	61.4 PK	74.0	-12.6	1.30 H	357	27.8	33.6
2	2387.00	52.7 AV	54.0	-1.3	1.30 H	357	19.1	33.6
3	*2412.00	114.9 PK			1.30 H	357	81.4	33.5
4	*2412.00	112.5 AV			1.30 H	357	79.0	33.5
5	4824.00	51.3 PK	74.0	-22.7	1.36 H	13	41.5	9.8
6	4824.00	47.5 AV	54.0	-6.5	1.36 H	13	37.7	9.8

#### 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	2389.20	60.7 PK	74.0	-13.3	2.16 V	295	27.2	33.5
2	2389.20	50.1 AV	54.0	-3.9	2.16 V	295	16.6	33.5
3	*2412.00	110.7 PK			2.16 V	295	77.2	33.5
4	*2412.00	108.4 AV			2.16 V	295	74.9	33.5
5	4824.00	51.8 PK	74.0	-22.2	2.19 V	328	42.0	9.8
6	4824.00	47.9 AV	54.0	-6.1	2.19 V	328	38.1	9.8

#### 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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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	2388.00	62.2 PK	74.0	-11.8	2.04 H	305	28.6	33.6
2	2388.00	52.7 AV	54.0	-1.3	2.04 H	305	19.1	33.6
3	*2437.00	116.8 PK			2.04 H	305	83.2	33.6
4	*2437.00	114.5 AV			2.04 H	305	80.9	33.6
5	4874.00	54.0 PK	74.0	-20.0	2.42 H	343	44.2	9.8
6	4874.00	50.5 AV	54.0	-3.5	2.42 H	343	40.7	9.8

**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	2388.00	60.7 PK	74.0	-13.3	2.19 V	288	27.1	33.6
2	2388.00	49.9 AV	54.0	-4.1	2.19 V	288	16.3	33.6
3	*2437.00	112.0 PK			2.19 V	288	78.4	33.6
4	*2437.00	109.7 AV			2.19 V	288	76.1	33.6
5	4874.00	54.5 PK	74.0	-19.5	2.20 V	325	44.7	9.8
6	4874.00	51.0 AV	54.0	-3.0	2.20 V	325	41.2	9.8

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.8 PK			2.04 H	304	80.2	33.6
2	*2462.00	111.5 AV			2.04 H	304	77.9	33.6
3	2483.50	61.8 PK	74.0	-12.2	2.04 H	304	28.1	33.7
4	2483.50	52.7 AV	54.0	-1.3	2.04 H	304	19.0	33.7
5	4924.00	49.1 PK	74.0	-24.9	1.99 H	241	39.3	9.8
6	4924.00	44.9 AV	54.0	-9.1	1.99 H	241	35.1	9.8

**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	108.6 PK			2.12 V	291	75.0	33.6
2	*2462.00	106.2 AV			2.12 V	291	72.6	33.6
3	2483.50	60.3 PK	74.0	-13.7	2.12 V	291	26.6	33.7
4	2483.50	49.0 AV	54.0	-5.0	2.12 V	291	15.3	33.7
5	4924.00	49.6 PK	74.0	-24.4	2.17 V	169	39.8	9.8
6	4924.00	45.4 AV	54.0	-8.6	2.17 V	169	35.6	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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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	65.0 PK	74.0	-9.0	2.05 H	304	31.5	33.5
2	2390.00	52.6 AV	54.0	-1.4	2.05 H	304	19.1	33.5
3	*2412.00	114.2 PK			2.05 H	304	80.7	33.5
4	*2412.00	104.7 AV			2.05 H	304	71.2	33.5
5	4824.00	47.8 PK	74.0	-26.2	1.99 H	241	38.0	9.8
6	4824.00	36.5 AV	54.0	-17.5	1.99 H	241	26.7	9.8

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	60.5 PK	74.0	-13.5	2.16 V	287	27.0	33.5
2	2390.00	49.5 AV	54.0	-4.5	2.16 V	287	16.0	33.5
3	*2412.00	108.7 PK			2.16 V	287	75.2	33.5
4	*2412.00	99.2 AV			2.16 V	287	65.7	33.5
5	4824.00	47.6 PK	74.0	-26.4	1.50 V	293	37.8	9.8
6	4824.00	36.3 AV	54.0	-17.7	1.50 V	293	26.5	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	119.4 PK			2.05 H	309	85.8	33.6
2	*2437.00	109.7 AV			2.05 H	309	76.1	33.6
3	2483.50	65.4 PK	74.0	-8.6	2.05 H	309	31.7	33.7
4	2483.50	53.0 AV	54.0	-1.0	2.05 H	309	19.3	33.7
5	4874.00	47.9 PK	74.0	-26.1	2.57 H	184	38.1	9.8
6	4874.00	36.6 AV	54.0	-17.4	2.57 H	184	26.8	9.8

**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	113.3 PK			2.10 V	296	79.7	33.6
2	*2437.00	103.7 AV			2.10 V	296	70.1	33.6
3	2483.50	61.6 PK	74.0	-12.4	2.10 V	296	27.9	33.7
4	2483.50	49.6 AV	54.0	-4.4	2.10 V	296	15.9	33.7
5	4874.00	47.4 PK	74.0	-26.6	1.67 V	224	37.6	9.8
6	4874.00	36.1 AV	54.0	-17.9	1.67 V	224	26.3	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.4 PK			1.98 H	303	79.8	33.6
2	*2462.00	104.0 AV			1.98 H	303	70.4	33.6
3	2483.50	65.6 PK	74.0	-8.4	1.98 H	303	31.9	33.7
4	2483.50	52.9 AV	54.0	-1.1	1.98 H	303	19.2	33.7
5	4924.00	48.0 PK	74.0	-26.0	3.74 H	152	38.2	9.8
6	4924.00	36.7 AV	54.0	-17.3	3.74 H	152	26.9	9.8

**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	108.1 PK			2.10 V	284	74.5	33.6
2	*2462.00	98.7 AV			2.10 V	284	65.1	33.6
3	2483.50	62.1 PK	74.0	-11.9	2.10 V	284	28.4	33.7
4	2483.50	49.9 AV	54.0	-4.1	2.10 V	284	16.2	33.7
5	4924.00	47.4 PK	74.0	-26.6	2.80 V	270	37.6	9.8
6	4924.00	36.1 AV	54.0	-17.9	2.80 V	270	26.3	9.8

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.



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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	63.8 PK	74.0	-10.2	2.33 H	305	30.3	33.5
2	2390.00	52.5 AV	54.0	-1.5	2.33 H	305	19.0	33.5
3	*2412.00	113.9 PK			2.33 H	305	80.4	33.5
4	*2412.00	104.6 AV			2.33 H	305	71.1	33.5
5	4824.00	47.9 PK	74.0	-26.1	2.67 H	184	38.1	9.8
6	4824.00	36.5 AV	54.0	-17.5	2.67 H	184	26.7	9.8

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	60.5 PK	74.0	-13.5	2.24 V	296	27.0	33.5
2	2390.00	49.3 AV	54.0	-4.7	2.24 V	296	15.8	33.5
3	*2412.00	107.5 PK			2.24 V	296	74.0	33.5
4	*2412.00	98.3 AV			2.24 V	296	64.8	33.5
5	4824.00	47.3 PK	74.0	-26.7	2.95 V	105	37.5	9.8
6	4824.00	36.3 AV	54.0	-17.7	2.95 V	105	26.5	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	119.0 PK			2.03 H	304	85.4	33.6
2	*2437.00	109.3 AV			2.03 H	304	75.7	33.6
3	2483.50	65.6 PK	74.0	-8.4	2.03 H	304	31.9	33.7
4	2483.50	53.1 AV	54.0	-0.9	2.03 H	304	19.4	33.7
5	4874.00	47.6 PK	74.0	-26.4	1.26 H	271	37.8	9.8
6	4874.00	36.2 AV	54.0	-17.8	1.26 H	271	26.4	9.8

**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	113.0 PK			2.30 V	292	79.4	33.6
2	*2437.00	103.3 AV			2.30 V	292	69.7	33.6
3	2483.50	61.9 PK	74.0	-12.1	2.30 V	292	28.2	33.7
4	2483.50	49.8 AV	54.0	-4.2	2.30 V	292	16.1	33.7
5	4874.00	47.4 PK	74.0	-26.6	1.66 V	287	37.6	9.8
6	4874.00	36.1 AV	54.0	-17.9	1.66 V	287	26.3	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.3 PK			1.99 H	303	78.7	33.6
2	*2462.00	103.1 AV			1.99 H	303	69.5	33.6
3	2483.50	65.1 PK	74.0	-8.9	1.99 H	303	31.4	33.7
4	2483.50	52.8 AV	54.0	-1.2	1.99 H	303	19.1	33.7
5	4924.00	48.0 PK	74.0	-26.0	2.51 H	190	38.2	9.8
6	4924.00	36.7 AV	54.0	-17.3	2.51 H	190	26.9	9.8

**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	106.3 PK			2.29 V	291	72.7	33.6
2	*2462.00	97.1 AV			2.29 V	291	63.5	33.6
3	2483.50	61.1 PK	74.0	-12.9	2.29 V	291	27.4	33.7
4	2483.50	49.5 AV	54.0	-4.5	2.29 V	291	15.8	33.7
5	4924.00	47.2 PK	74.0	-26.8	2.00 V	174	37.4	9.8
6	4924.00	36.0 AV	54.0	-18.0	2.00 V	174	26.2	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.2 PK	74.0	-7.8	2.13 H	304	32.7	33.5
2	2390.00	52.9 AV	54.0	-1.1	2.13 H	304	19.4	33.5
3	*2422.00	108.5 PK			2.13 H	304	74.9	33.6
4	*2422.00	99.6 AV			2.13 H	304	66.0	33.6
5	4844.00	48.1 PK	74.0	-25.9	3.17 H	146	38.3	9.8
6	4844.00	36.6 AV	54.0	-17.4	3.17 H	146	26.8	9.8

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	2.29 V	294	27.1	33.5
2	2390.00	49.8 AV	54.0	-4.2	2.29 V	294	16.3	33.5
3	*2422.00	102.8 PK			2.29 V	294	69.2	33.6
4	*2422.00	94.1 AV			2.29 V	294	60.5	33.6
5	4844.00	47.2 PK	74.0	-26.8	2.50 V	184	37.4	9.8
6	4844.00	35.9 AV	54.0	-18.1	2.50 V	184	26.1	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	110.1 PK			1.96 H	321	76.5	33.6
2	*2437.00	101.2 AV			1.96 H	321	67.6	33.6
3	2483.50	64.6 PK	74.0	-9.4	1.96 H	321	30.9	33.7
4	2483.50	53.0 AV	54.0	-1.0	1.96 H	321	19.3	33.7
5	4874.00	48.0 PK	74.0	-26.0	2.01 H	173	38.2	9.8
6	4874.00	36.7 AV	54.0	-17.3	2.01 H	173	26.9	9.8

**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	104.4 PK			2.28 V	287	70.8	33.6
2	*2437.00	95.6 AV			2.28 V	287	62.0	33.6
3	2483.50	61.0 PK	74.0	-13.0	2.28 V	287	27.3	33.7
4	2483.50	49.6 AV	54.0	-4.4	2.28 V	287	15.9	33.7
5	4874.00	47.4 PK	74.0	-26.6	2.58 V	196	37.6	9.8
6	4874.00	36.2 AV	54.0	-17.8	2.58 V	196	26.4	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	106.6 PK			2.09 H	304	73.1	33.5
2	*2452.00	97.1 AV			2.09 H	304	63.6	33.5
3	2483.50	66.5 PK	74.0	-7.5	2.09 H	304	32.8	33.7
4	2483.50	52.9 AV	54.0	-1.1	2.09 H	304	19.2	33.7
5	4904.00	48.3 PK	74.0	-25.7	2.13 H	174	38.4	9.9
6	4904.00	36.8 AV	54.0	-17.2	2.13 H	174	26.9	9.9

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	101.0 PK			2.27 V	285	67.5	33.5
2	*2452.00	91.4 AV			2.27 V	285	57.9	33.5
3	2483.50	62.3 PK	74.0	-11.7	2.27 V	285	28.6	33.7
4	2483.50	50.0 AV	54.0	-4.0	2.27 V	285	16.3	33.7
5	4904.00	47.1 PK	74.0	-26.9	1.90 V	271	37.2	9.9
6	4904.00	36.0 AV	54.0	-18.0	1.90 V	271	26.1	9.9

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

Mode B

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.2 PK	74.0	-13.8	1.40 H	312	26.7	33.5
2	2390.00	47.1 AV	54.0	-6.9	1.40 H	312	13.6	33.5
3	*2412.00	108.5 PK			1.40 H	312	75.0	33.5
4	*2412.00	106.2 AV			1.40 H	312	72.7	33.5
5	4824.00	51.0 PK	74.0	-23.0	1.18 H	292	41.2	9.8
6	4824.00	46.2 AV	54.0	-7.8	1.18 H	292	36.4	9.8

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	2.04 V	27	27.1	33.5
2	2390.00	47.7 AV	54.0	-6.3	2.04 V	27	14.2	33.5
3	*2412.00	111.4 PK			2.04 V	27	77.9	33.5
4	*2412.00	109.0 AV			2.04 V	27	75.5	33.5
5	4824.00	56.0 PK	74.0	-18.0	2.31 V	287	46.2	9.8
<b>6</b>	<b>4824.00</b>	<b>53.2 AV</b>	<b>54.0</b>	<b>-0.8</b>	<b>2.31 V</b>	<b>287</b>	<b>43.4</b>	<b>9.8</b>

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	108.4 PK			1.38 H	315	74.8	33.6
2	*2437.00	106.1 AV			1.38 H	315	72.5	33.6
3	4874.00	51.1 PK	74.0	-22.9	1.20 H	289	41.3	9.8
4	4874.00	46.3 AV	54.0	-7.7	1.20 H	289	36.5	9.8

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.0 PK			2.09 V	35	77.4	33.6
2	*2437.00	108.7 AV			2.09 V	35	75.1	33.6
3	4874.00	55.9 PK	74.0	-18.1	2.28 V	287	46.1	9.8
4	4874.00	52.8 AV	54.0	-1.2	2.28 V	287	43.0	9.8

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.



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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.0 PK			1.54 H	323	75.4	33.6
2	*2462.00	106.5 AV			1.54 H	323	72.9	33.6
3	2483.50	60.2 PK	74.0	-13.8	1.54 H	323	26.5	33.7
4	2483.50	48.6 AV	54.0	-5.4	1.54 H	323	14.9	33.7
5	4924.00	50.8 PK	74.0	-23.2	1.15 H	296	41.0	9.8
6	4924.00	46.1 AV	54.0	-7.9	1.15 H	296	36.3	9.8

**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	111.4 PK			1.74 V	39	77.8	33.6
2	*2462.00	109.1 AV			1.74 V	39	75.5	33.6
3	2483.50	60.7 PK	74.0	-13.3	1.74 V	39	27.0	33.7
4	2483.50	49.2 AV	54.0	-4.8	1.74 V	39	15.5	33.7
5	4924.00	56.1 PK	74.0	-17.9	2.34 V	288	46.3	9.8
6	4924.00	52.9 AV	54.0	-1.1	2.34 V	288	43.1	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
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	64.0 PK	74.0	-10.0	1.46 H	318	30.5	33.5
2	2390.00	52.2 AV	54.0	-1.8	1.46 H	318	18.7	33.5
3	*2412.00	113.6 PK			1.46 H	318	80.1	33.5
4	*2412.00	104.2 AV			1.46 H	318	70.7	33.5
5	4824.00	51.0 PK	74.0	-23.0	1.65 H	174	41.2	9.8
6	4824.00	40.6 AV	54.0	-13.4	1.65 H	174	30.8	9.8

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	65.8 PK	74.0	-8.2	1.74 V	30	32.3	33.5
2	<b>2390.00</b>	<b>53.2 AV</b>	<b>54.0</b>	<b>-0.8</b>	<b>1.74 V</b>	<b>30</b>	<b>19.7</b>	<b>33.5</b>
3	*2412.00	115.3 PK			1.74 V	30	81.8	33.5
4	*2412.00	105.9 AV			1.74 V	30	72.4	33.5
5	4824.00	51.7 PK	74.0	-22.3	1.25 V	341	41.9	9.8
6	4824.00	41.0 AV	54.0	-13.0	1.25 V	341	31.2	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	117.4 PK			1.44 H	313	83.8	33.6
2	*2437.00	107.7 AV			1.44 H	313	74.1	33.6
3	2483.50	64.9 PK	74.0	-9.1	1.44 H	313	31.2	33.7
4	2483.50	51.5 AV	54.0	-2.5	1.44 H	313	17.8	33.7
5	4874.00	51.9 PK	74.0	-22.1	1.78 H	193	42.1	9.8
6	4874.00	41.1 AV	54.0	-12.9	1.78 H	193	31.3	9.8

**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	119.2 PK			1.56 V	40	85.6	33.6
2	*2437.00	109.5 AV			1.56 V	40	75.9	33.6
3	2483.50	65.8 PK	74.0	-8.2	1.56 V	40	32.1	33.7
4	2483.50	52.7 AV	54.0	-1.3	1.56 V	40	19.0	33.7
5	4874.00	54.4 PK	74.0	-19.6	1.28 V	320	44.6	9.8
6	4874.00	44.9 AV	54.0	-9.1	1.28 V	320	35.1	9.8

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.9 PK			1.46 H	315	76.3	33.6
2	*2462.00	100.3 AV			1.46 H	315	66.7	33.6
3	2483.50	64.6 PK	74.0	-9.4	1.46 H	315	30.9	33.7
4	2483.50	51.2 AV	54.0	-2.8	1.46 H	315	17.5	33.7
5	4924.00	50.7 PK	74.0	-23.3	1.82 H	142	40.9	9.8
6	4924.00	40.4 AV	54.0	-13.6	1.82 H	142	30.6	9.8

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.3 PK			1.73 V	40	78.7	33.6
2	*2462.00	103.1 AV			1.73 V	40	69.5	33.6
3	2483.50	65.0 PK	74.0	-9.0	1.73 V	40	31.3	33.7
4	2483.50	52.9 AV	54.0	-1.1	1.73 V	40	19.2	33.7
5	4924.00	51.6 PK	74.0	-22.4	2.41 V	187	41.8	9.8
6	4924.00	41.3 AV	54.0	-12.7	2.41 V	187	31.5	9.8

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.7 PK	74.0	-11.3	1.49 H	324	29.2	33.5
2	2390.00	50.6 AV	54.0	-3.4	1.49 H	324	17.1	33.5
3	*2412.00	110.8 PK			1.49 H	324	77.3	33.5
4	*2412.00	101.9 AV			1.49 H	324	68.4	33.5
5	4824.00	51.1 PK	74.0	-22.9	2.58 H	196	41.3	9.8
6	4824.00	40.7 AV	54.0	-13.3	2.58 H	196	30.9	9.8

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	64.2 PK	74.0	-9.8	1.72 V	34	30.7	33.5
2	2390.00	53.0 AV	54.0	-1.0	1.72 V	34	19.5	33.5
3	*2412.00	114.4 PK			1.72 V	34	80.9	33.5
4	*2412.00	105.1 AV			1.72 V	34	71.6	33.5
5	4824.00	51.6 PK	74.0	-22.4	1.69 V	228	41.8	9.8
6	4824.00	41.3 AV	54.0	-12.7	1.69 V	228	31.5	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	116.2 PK			1.49 H	311	82.6	33.6
2	*2437.00	106.7 AV			1.49 H	311	73.1	33.6
3	2483.50	63.5 PK	74.0	-10.5	1.49 H	311	29.8	33.7
4	2483.50	51.3 AV	54.0	-2.7	1.49 H	311	17.6	33.7
5	4874.00	52.1 PK	74.0	-21.9	2.90 H	184	42.3	9.8
6	4874.00	41.7 AV	54.0	-12.3	2.90 H	184	31.9	9.8

**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	118.3 PK			1.74 V	39	84.7	33.6
2	*2437.00	109.0 AV			1.74 V	39	75.4	33.6
3	2483.50	64.5 PK	74.0	-9.5	1.74 V	39	30.8	33.7
4	2483.50	53.0 AV	54.0	-1.0	1.74 V	39	19.3	33.7
5	4874.00	54.6 PK	74.0	-19.4	1.30 V	327	44.8	9.8
6	4874.00	45.1 AV	54.0	-8.9	1.30 V	327	35.3	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	110.1 PK			1.48 H	314	76.5	33.6
2	*2462.00	100.6 AV			1.48 H	314	67.0	33.6
3	2483.50	64.1 PK	74.0	-9.9	1.48 H	314	30.4	33.7
4	2483.50	52.0 AV	54.0	-2.0	1.48 H	314	18.3	33.7
5	4924.00	50.9 PK	74.0	-23.1	1.93 H	185	41.1	9.8
6	4924.00	40.5 AV	54.0	-13.5	1.93 H	185	30.7	9.8

**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	111.3 PK			1.69 V	44	77.7	33.6
2	*2462.00	102.3 AV			1.69 V	44	68.7	33.6
3	2483.50	64.7 PK	74.0	-9.3	1.69 V	44	31.0	33.7
4	2483.50	53.1 AV	54.0	-0.9	1.69 V	44	19.4	33.7
5	4924.00	51.6 PK	74.0	-22.4	2.54 V	189	41.8	9.8
6	4924.00	41.3 AV	54.0	-12.7	2.54 V	189	31.5	9.8

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.9 PK	74.0	-8.1	1.49 H	312	32.4	33.5
2	2390.00	51.2 AV	54.0	-2.8	1.49 H	312	17.7	33.5
3	*2422.00	108.3 PK			1.49 H	312	74.7	33.6
4	*2422.00	99.5 AV			1.49 H	312	65.9	33.6
5	4844.00	51.1 PK	74.0	-22.9	2.54 H	187	41.3	9.8
6	4844.00	40.7 AV	54.0	-13.3	2.54 H	187	30.9	9.8

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	65.9 PK	74.0	-8.1	1.69 V	32	32.4	33.5
2	2390.00	52.9 AV	54.0	-1.1	1.69 V	32	19.4	33.5
3	*2422.00	109.3 PK			1.69 V	32	75.7	33.6
4	*2422.00	100.2 AV			1.69 V	32	66.6	33.6
5	4844.00	51.6 PK	74.0	-22.4	2.05 V	196	41.8	9.8
6	4844.00	41.4 AV	54.0	-12.6	2.05 V	196	31.6	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.



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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	108.4 PK			1.50 H	324	74.8	33.6
2	*2437.00	99.3 AV			1.50 H	324	65.7	33.6
3	2483.50	64.6 PK	74.0	-9.4	1.50 H	324	30.9	33.7
4	2483.50	51.4 AV	54.0	-2.6	1.50 H	324	17.7	33.7
5	4874.00	51.2 PK	74.0	-22.8	2.98 H	199	41.4	9.8
6	4874.00	40.4 AV	54.0	-13.6	2.98 H	199	30.6	9.8

**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	110.8 PK			1.69 V	34	77.2	33.6
2	*2437.00	101.5 AV			1.69 V	34	67.9	33.6
3	2483.50	66.6 PK	74.0	-7.4	1.69 V	34	32.9	33.7
4	2483.50	52.9 AV	54.0	-1.1	1.69 V	34	19.2	33.7
5	4874.00	51.8 PK	74.0	-22.2	2.50 V	179	42.0	9.8
6	4874.00	41.4 AV	54.0	-12.6	2.50 V	179	31.6	9.8

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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

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

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	104.3 PK			1.39 H	308	70.8	33.5
2	*2452.00	95.6 AV			1.39 H	308	62.1	33.5
3	2483.50	66.3 PK	74.0	-7.7	1.39 H	308	32.6	33.7
4	2483.50	51.5 AV	54.0	-2.5	1.39 H	308	17.8	33.7
5	4904.00	50.9 PK	74.0	-23.1	1.36 H	195	41.0	9.9
6	4904.00	40.6 AV	54.0	-13.4	1.36 H	195	30.7	9.9

**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	105.7 PK			1.73 V	44	72.2	33.5
2	*2452.00	97.0 AV			1.73 V	44	63.5	33.5
3	2483.50	66.2 PK	74.0	-7.8	1.73 V	44	32.5	33.7
4	2483.50	52.7 AV	54.0	-1.3	1.73 V	44	19.0	33.7
5	4904.00	51.7 PK	74.0	-22.3	2.61 V	175	41.8	9.9
6	4904.00	41.4 AV	54.0	-12.6	2.61 V	175	31.5	9.9

**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. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.

Below 1GHz worst-case data:

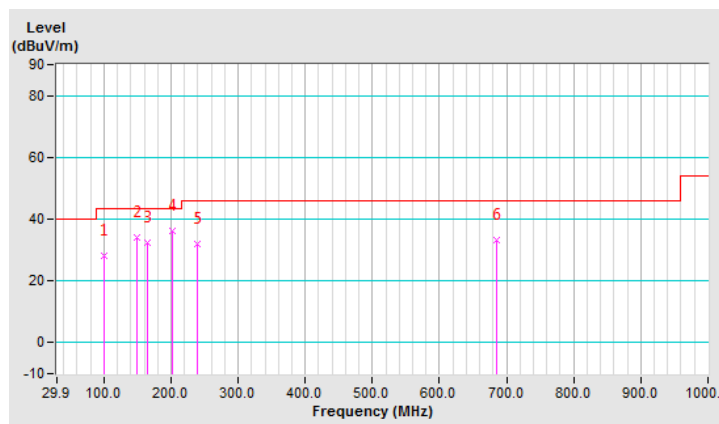
802.11n (HT20)

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	99.75	28.1 QP	43.5	-15.4	1.00 H	357	41.3	-13.2
2	148.26	33.9 QP	43.5	-9.6	1.50 H	52	42.7	-8.8
3	165.73	32.3 QP	43.5	-11.2	1.00 H	52	41.1	-8.8
4	202.60	36.3 QP	43.5	-7.2	1.00 H	52	47.7	-11.4
5	239.46	31.8 QP	46.0	-14.2	1.50 H	272	41.7	-9.9
6	685.76	33.3 QP	46.0	-12.7	1.00 H	87	31.5	1.8

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 of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

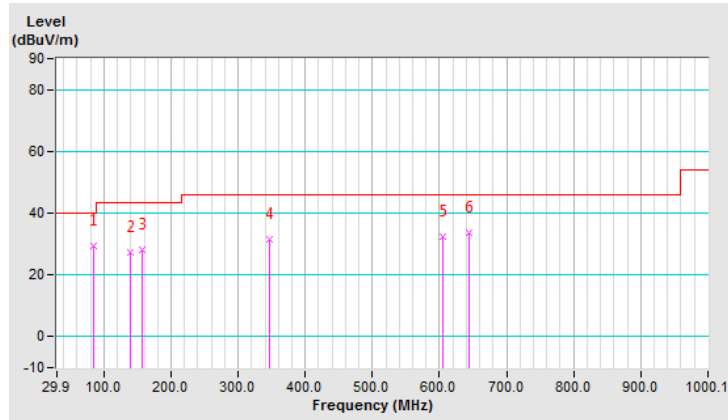


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	A

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	84.23	29.2 QP	40.0	-10.8	1.00 V	49	42.9	-13.7
2	138.56	27.1 QP	43.5	-16.4	1.00 V	210	36.4	-9.3
3	157.97	28.1 QP	43.5	-15.4	1.00 V	172	36.6	-8.5
4	346.19	31.6 QP	46.0	-14.4	1.00 V	84	37.9	-6.3
5	604.26	32.4 QP	46.0	-13.6	1.00 V	133	32.2	0.2
6	645.01	33.6 QP	46.0	-12.4	1.00 V	120	32.5	1.1

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 of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

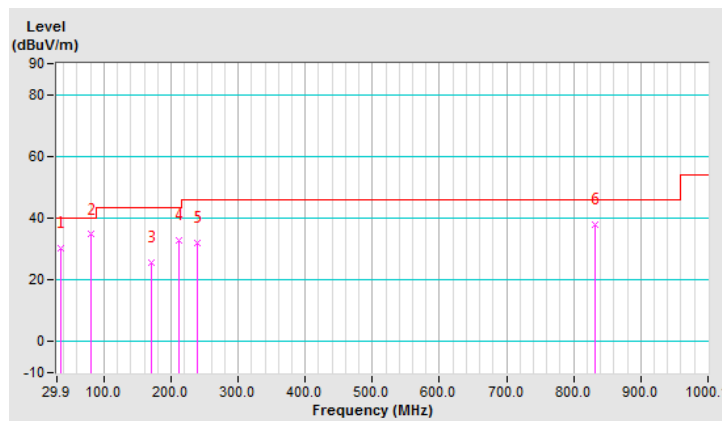


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B

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	35.72	30.1 QP	40.0	-9.9	1.50 H	72	39.8	-9.7
2	80.35	34.7 QP	40.0	-5.3	1.00 H	38	47.6	-12.9
3	171.55	25.7 QP	43.5	-17.8	1.50 H	102	34.9	-9.2
4	212.30	32.9 QP	43.5	-10.6	1.50 H	180	44.2	-11.3
5	239.46	32.0 QP	46.0	-14.0	1.00 H	174	41.9	-9.9
6	831.29	37.8 QP	46.0	-8.2	1.50 H	211	32.2	5.6

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 of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

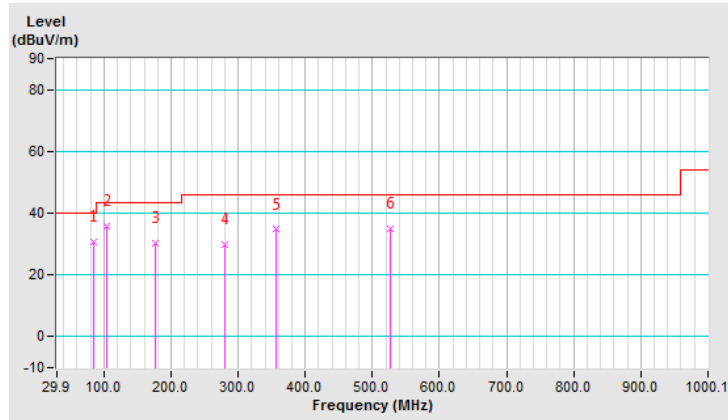


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B

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	84.23	30.8 QP	40.0	-9.2	1.49 V	236	44.5	-13.7
2	103.64	35.7 QP	43.5	-7.8	1.00 V	197	48.3	-12.6
3	177.37	30.3 QP	43.5	-13.2	1.00 V	46	40.0	-9.7
4	280.21	30.0 QP	46.0	-16.0	1.00 V	46	37.8	-7.8
5	355.89	34.7 QP	46.0	-11.3	1.00 V	46	40.8	-6.1
6	526.64	35.1 QP	46.0	-10.9	1.00 V	40	37.2	-2.1

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 of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



## 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: May 20, 2020

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 11, 2019	Dec. 10, 2020
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 20, 2020	Feb. 19, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 22, 2019	Aug. 21, 2020
Software ADT	BV ADT_Cond_ V7.3.7.4	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-12040.

#### 4.2.3 Test Procedures

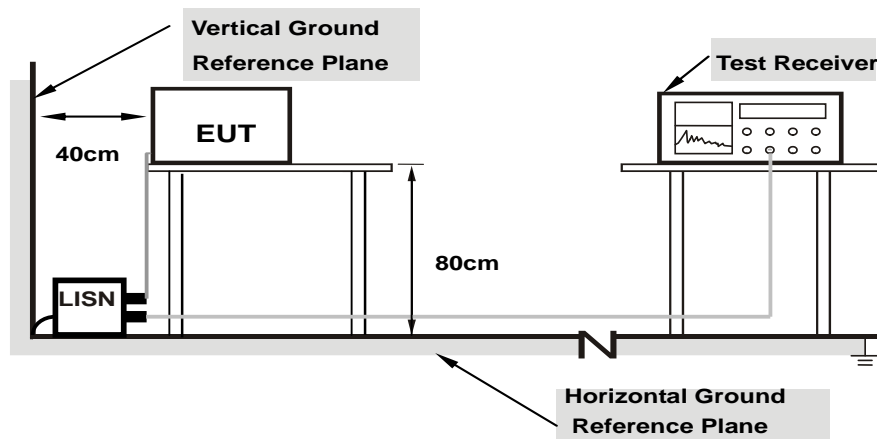
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

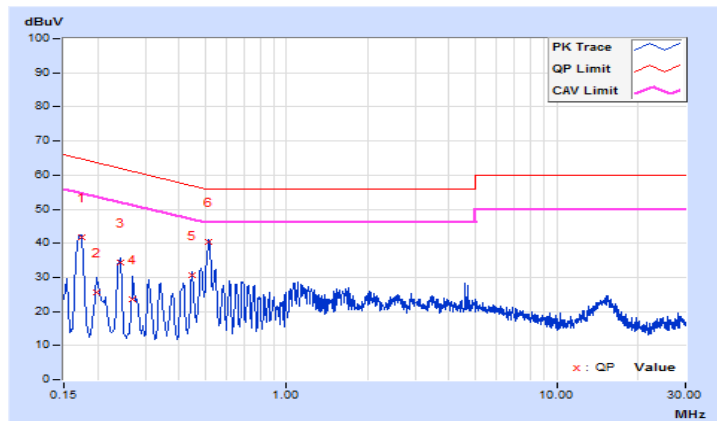
802.11n (HT20)

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	0.17400	9.63	31.97	23.99	41.60	33.62	64.77
2	0.19800	9.62	16.12	11.73	25.74	21.35	63.69	53.69	-37.95	-32.34
3	0.24200	9.63	24.80	16.89	34.43	26.52	62.03	52.03	-27.60	-25.51
4	0.27000	9.63	13.97	5.33	23.60	14.96	61.12	51.12	-37.52	-36.16
5	0.44999	9.65	20.83	18.67	30.48	28.32	56.88	46.88	-26.40	-18.56
6	0.51400	9.66	30.62	27.04	40.28	36.70	56.00	46.00	-15.72	-9.30

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.

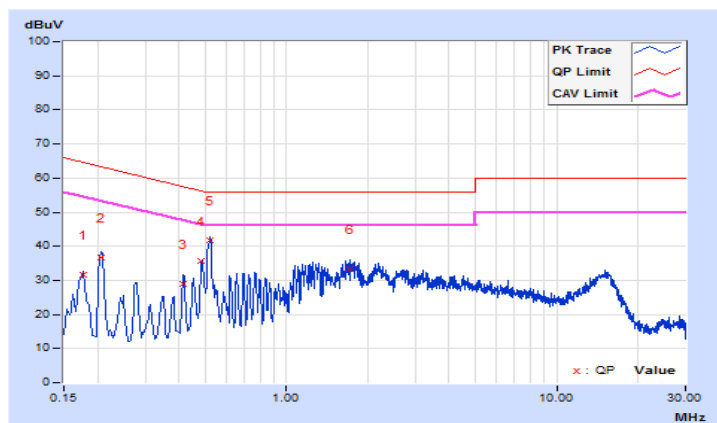


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

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	0.17800	9.65	21.85	17.42	31.50	27.07	64.58
2	0.20577	9.64	26.92	17.36	36.56	27.00	63.37	53.37	-26.81	-26.37
3	0.41400	9.67	19.30	15.27	28.97	24.94	57.57	47.57	-28.60	-22.63
4	0.48572	9.67	25.99	24.37	35.66	34.04	56.24	46.24	-20.58	-12.20
<b>5</b>	<b>0.52153</b>	<b>9.68</b>	<b>32.02</b>	<b>31.48</b>	<b>41.70</b>	<b>41.16</b>	<b>56.00</b>	<b>46.00</b>	<b>-14.30</b>	<b>-4.84</b>
6	1.73000	9.74	23.56	17.65	33.30	27.39	56.00	46.00	-22.70	-18.61

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.

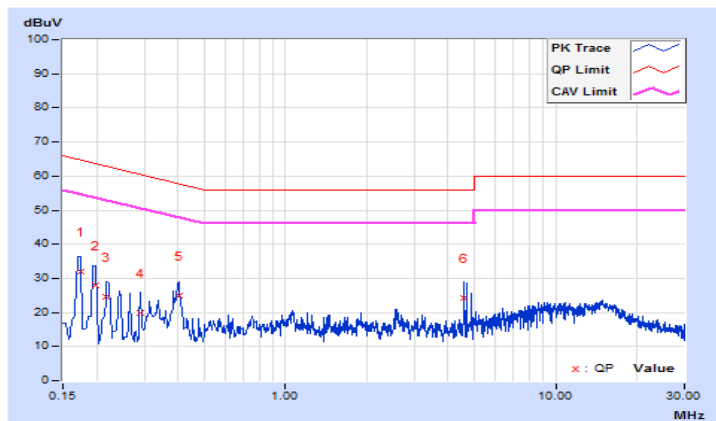


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.17384	9.80	22.27	7.75	32.07	17.55	64.77
2	0.19728	9.81	18.20	4.18	28.01	13.99	63.72	53.72	-35.71	-39.73
3	0.21800	9.81	14.83	2.12	24.64	11.93	62.89	52.89	-38.25	-40.96
4	0.29000	9.83	10.16	1.75	19.99	11.58	60.52	50.52	-40.53	-38.94
5	0.40179	9.86	15.09	12.61	24.95	22.47	57.82	47.82	-32.87	-25.35
6	4.57000	10.06	14.06	1.60	24.12	11.66	56.00	46.00	-31.88	-34.34

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.

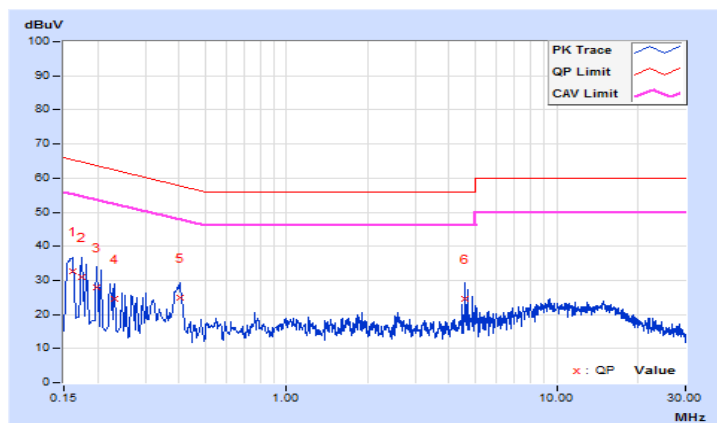


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.16105	9.82	22.87	7.00	32.69	16.82	65.41
2	0.17400	9.82	21.29	6.45	31.11	16.27	64.77	54.77	-33.66	-38.50
3	0.19800	9.81	17.97	3.75	27.78	13.56	63.69	53.69	-35.91	-40.13
4	0.23000	9.82	14.61	2.74	24.43	12.56	62.45	52.45	-38.02	-39.89
5	0.40179	9.89	15.09	12.70	24.98	22.59	57.82	47.82	-32.84	-25.23
6	4.57000	10.10	14.52	1.84	24.62	11.94	56.00	46.00	-31.38	-34.06

Remarks:

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

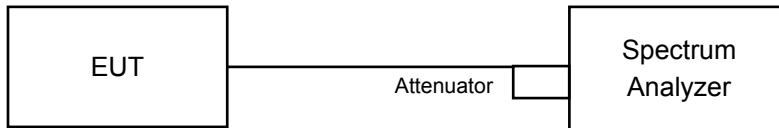


### 4.3 6dB Bandwidth Measurement

#### 4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 4.3.2 Test Setup



#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.4 Test Procedure

- Set resolution bandwidth (RBW) = 100kHz.
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = peak.
- 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

##### 802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	8.11	0.5	Pass
6	2437	8.07	0.5	Pass
11	2462	8.05	0.5	Pass

##### 802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	15.19	0.5	Pass
6	2437	15.19	0.5	Pass
11	2462	15.18	0.5	Pass

##### 802.11n (HT20)

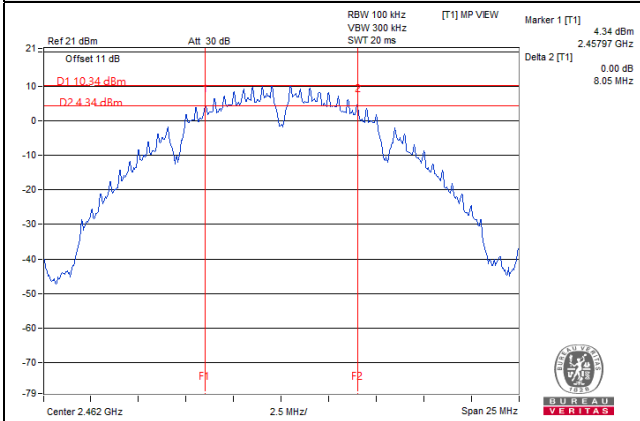
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	15.19	0.5	Pass
6	2437	15.18	0.5	Pass
11	2462	15.19	0.5	Pass

##### 802.11n (HT40)

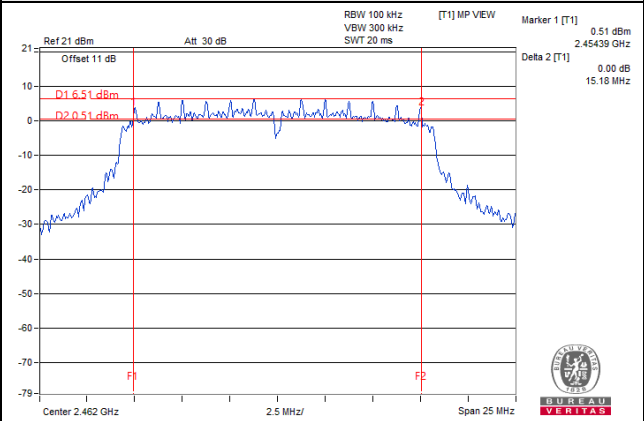
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	35.25	0.5	Pass
6	2437	35.28	0.5	Pass
9	2452	35.23	0.5	Pass

### Spectrum Plot of Worst Value

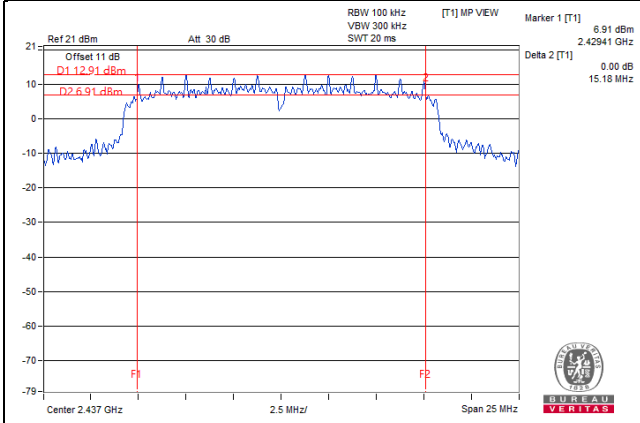
#### 802.11b



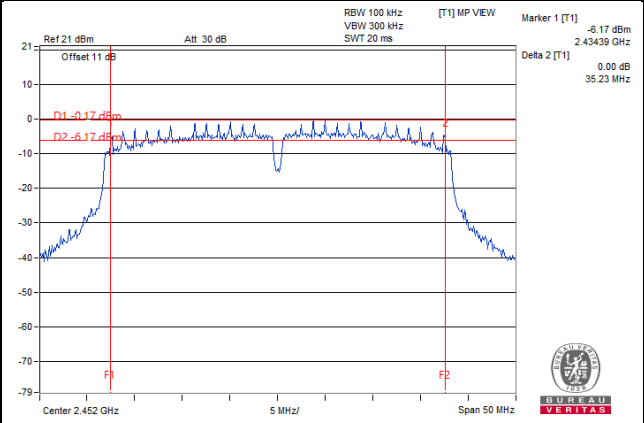
#### 802.11g



#### 802.11n (HT20)



#### 802.11n (HT40)

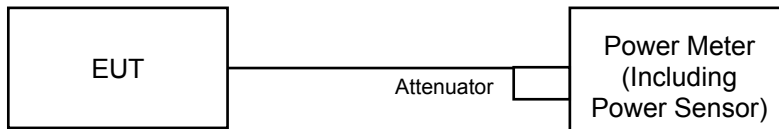


#### 4.4 Conducted Output Power Measurement

##### 4.4.1 Limits of Conducted Output Power Measurement

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

##### 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

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

##### 4.4.5 Deviation from Test Standard

No deviation.

##### 4.4.6 EUT Operating Conditions

Same as item 4.3.6.



#### 4.4.7 Test Results

##### 802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	59.020	17.71	30.00	Pass
6	2437	57.943	17.63	30.00	Pass
11	2462	57.810	17.62	30.00	Pass

##### 802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	55.208	17.42	30.00	Pass
6	2437	201.837	23.05	30.00	Pass
11	2462	43.053	16.34	30.00	Pass

##### 802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	54.200	17.34	30.00	Pass
6	2437	<b>205.116</b>	23.12	30.00	Pass
11	2462	39.719	15.99	30.00	Pass

##### 802.11n (HT40)

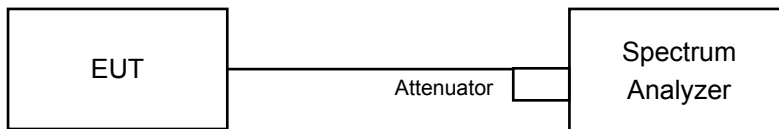
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	31.550	14.99	30.00	Pass
6	2437	39.084	15.92	30.00	Pass
9	2452	17.660	12.47	30.00	Pass

## 4.5 Power Spectral Density Measurement

### 4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm per 3kHz.

### 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

- 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

##### 802.11b

Channel	Frequency (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
1	2412	-11.31	8.00	Pass
6	2437	-11.41	8.00	Pass
11	2462	-11.56	8.00	Pass

##### 802.11g

Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-8.51	0.25	-8.26	8.00	Pass
6	2437	-6.95	0.25	-6.70	8.00	Pass
11	2462	-12.21	0.25	-11.96	8.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11n (HT20)

Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-11.58	0.27	-11.31	8.00	Pass
6	2437	-6.32	0.27	-6.05	8.00	Pass
11	2462	-12.23	0.27	-11.96	8.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

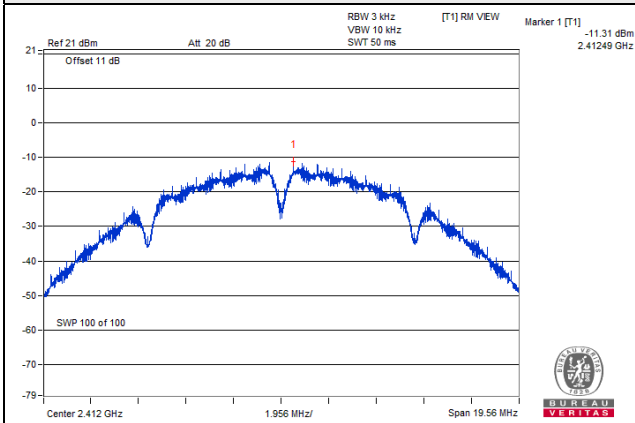
##### 802.11n (HT40)

Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-21.19	0.72	-20.47	8.00	Pass
6	2437	-20.51	0.72	-19.79	8.00	Pass
9	2452	-23.62	0.72	-22.90	8.00	Pass

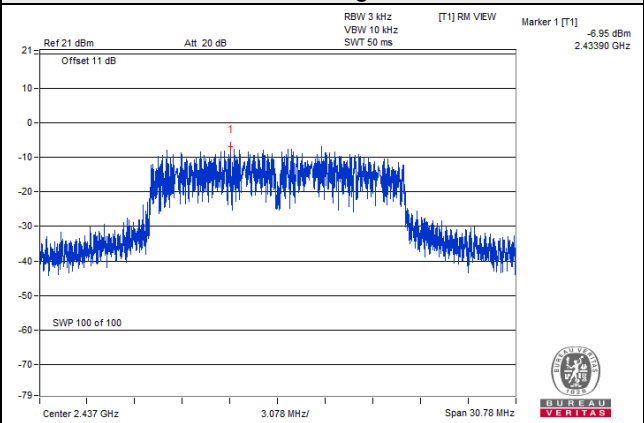
Note: Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

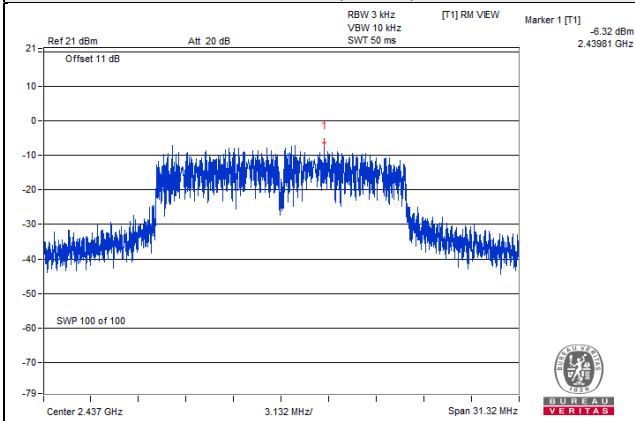
#### 802.11b



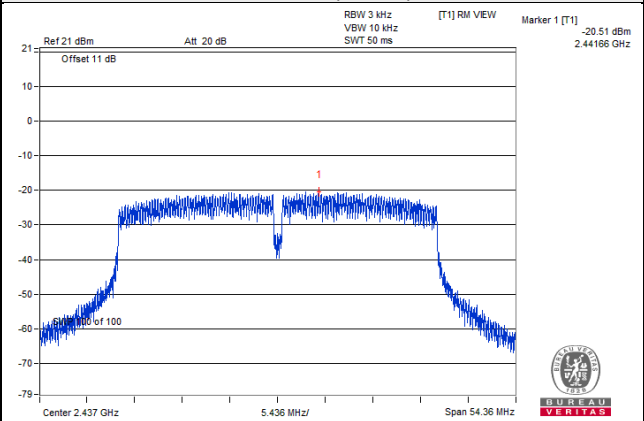
#### 802.11g



#### 802.11n (HT20)



#### 802.11n (HT40)

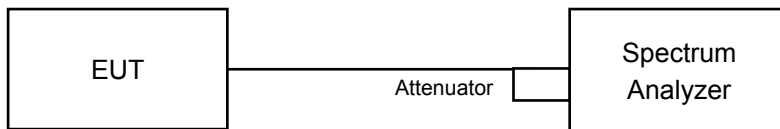


## 4.6 Conducted Out of Band Emission Measurement

### 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 = peak.
- 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 OOB

- Set RBW = 100 kHz.
- Set VBW  $\geq$  300 kHz.
- Detector = peak.
- 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

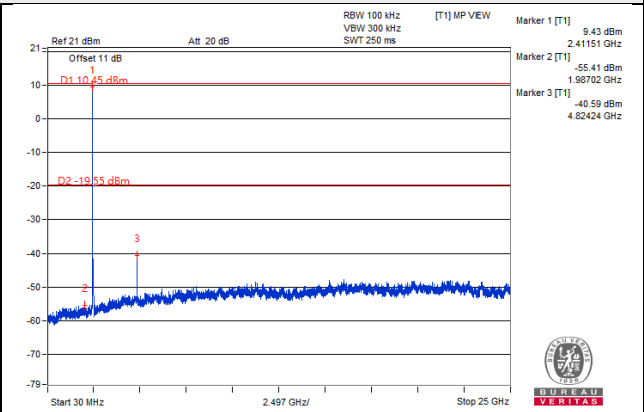
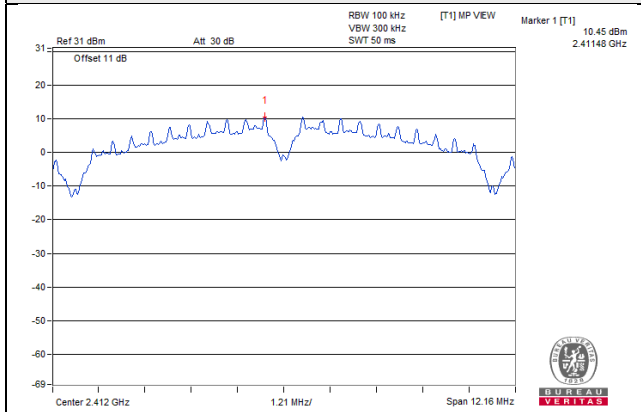
Same as item 4.3.6

### 4.6.7 Test Results

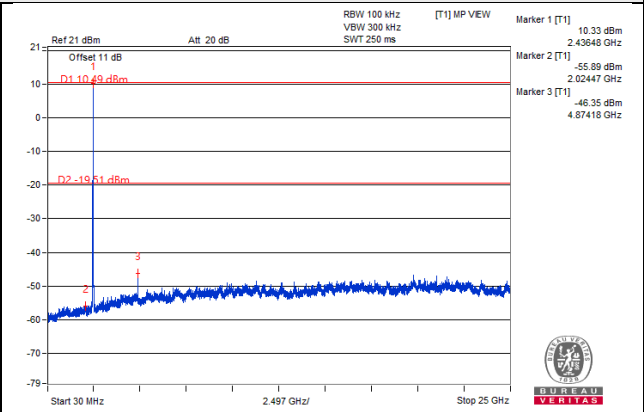
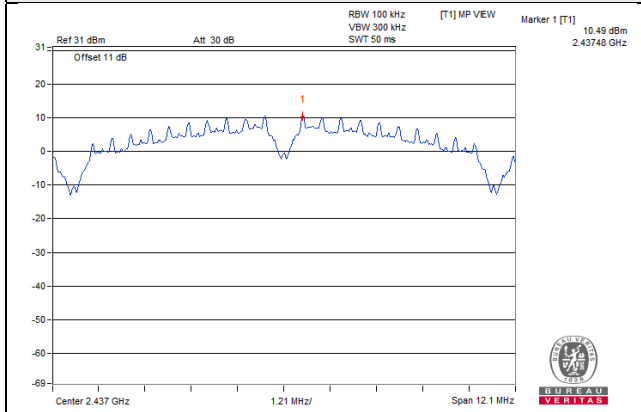
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

802.11b

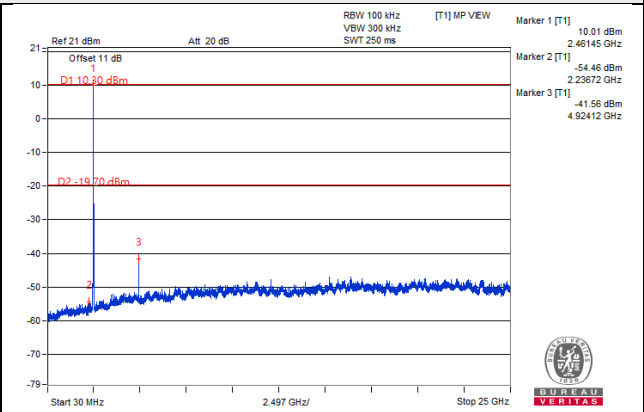
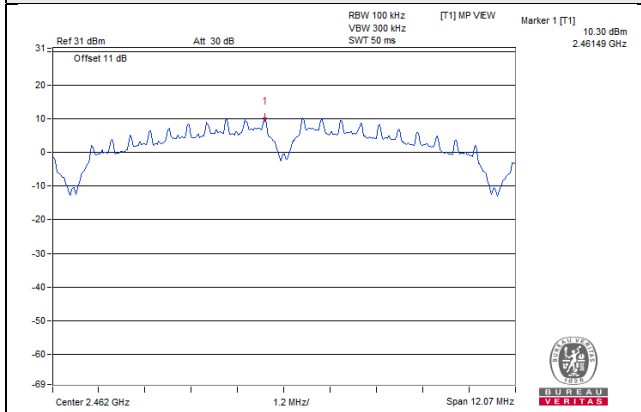
CH 1



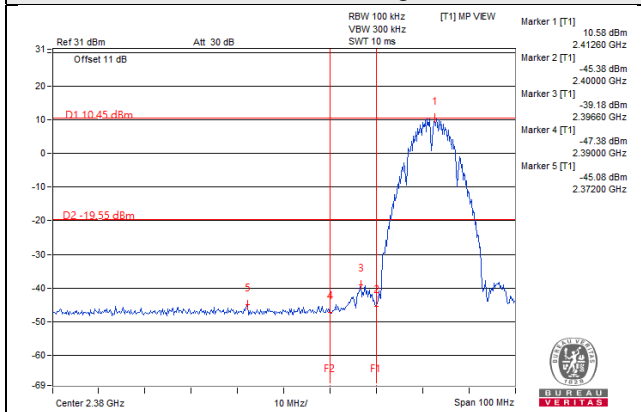
CH 6



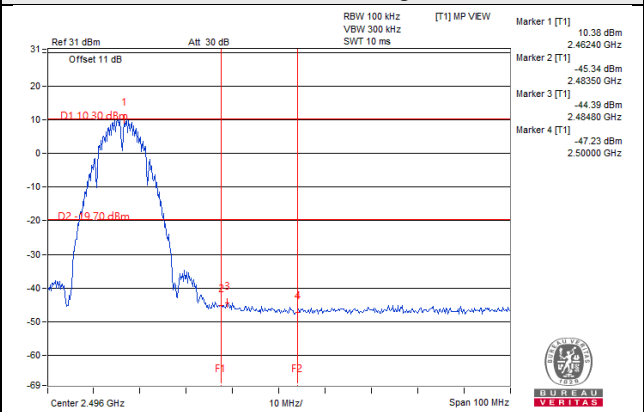
CH 11



CH 1 Band edge

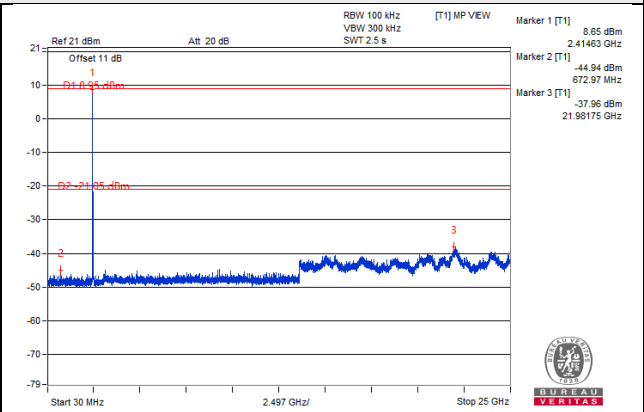
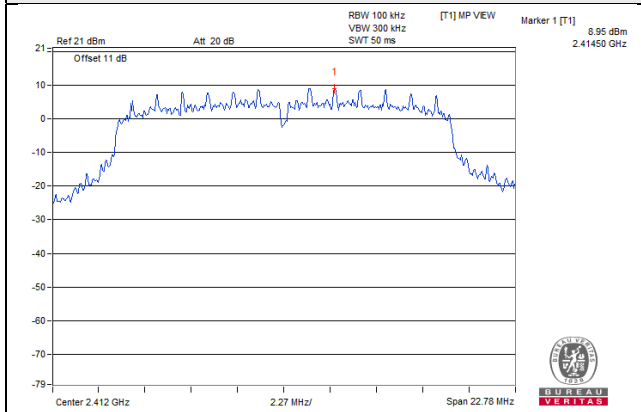


CH 11 Band edge

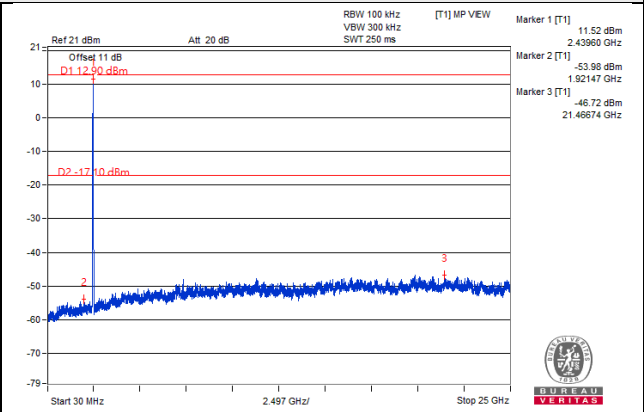
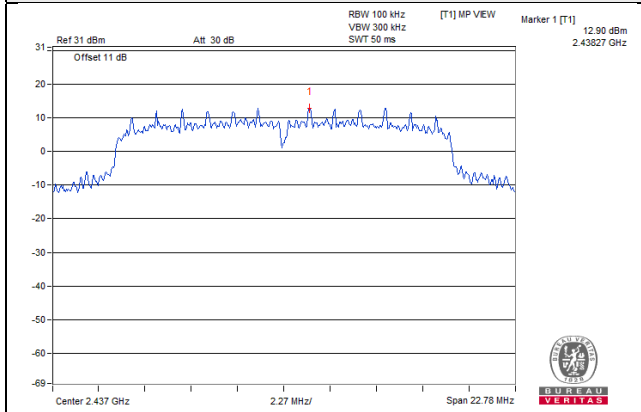


802.11g

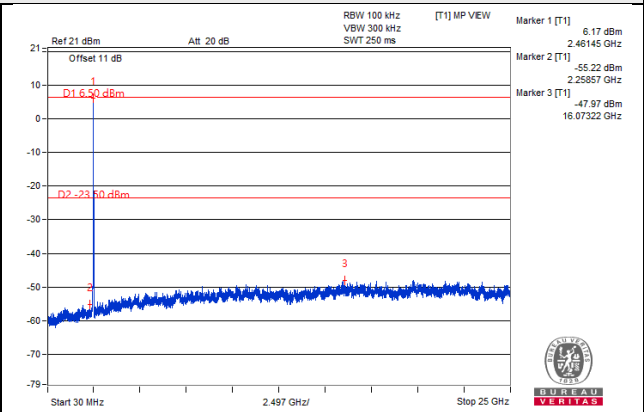
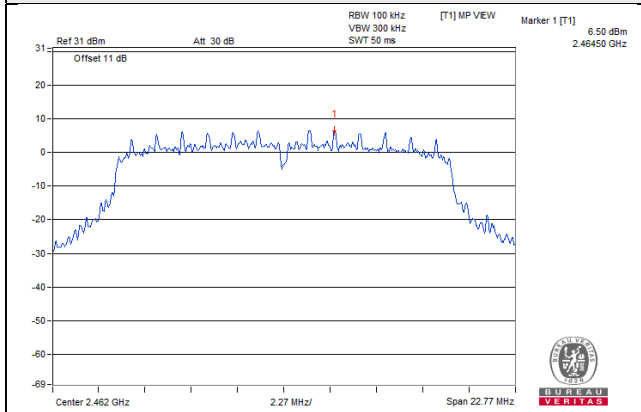
CH 1



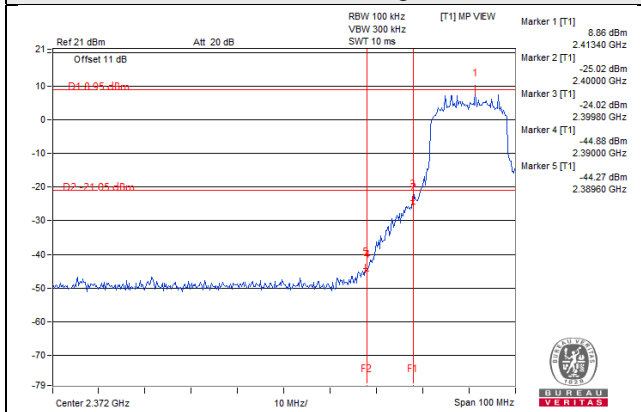
CH 6



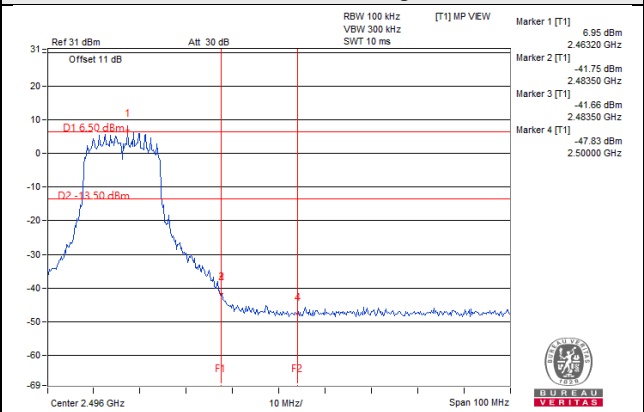
CH 11



CH 1 Band edge

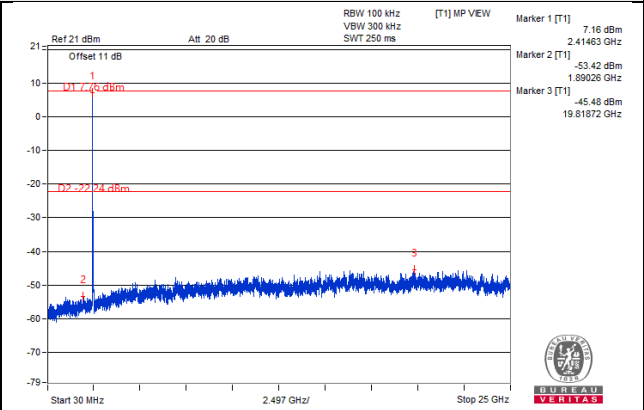
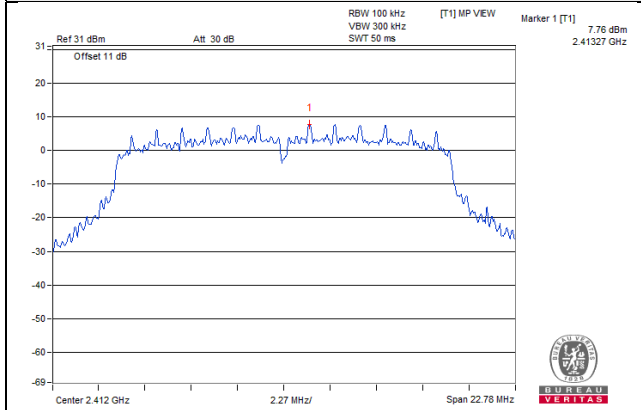


CH 11 Band edge

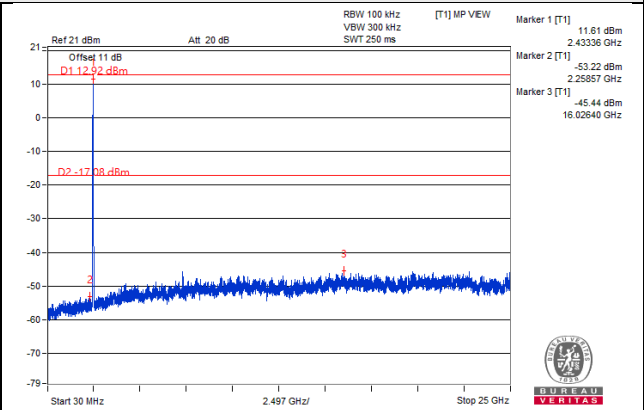
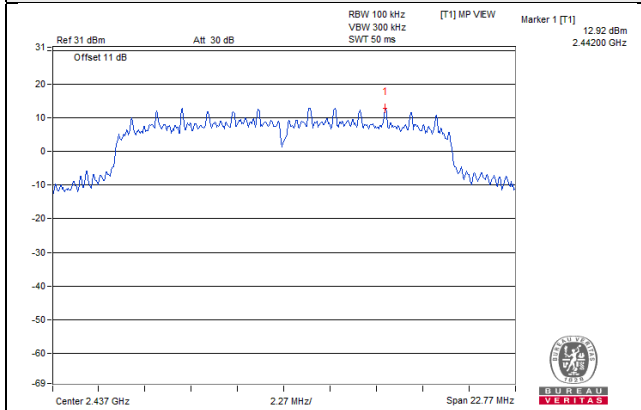


# 802.11n (HT20)

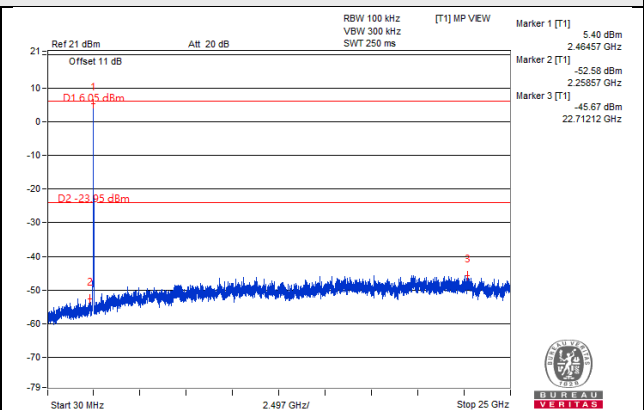
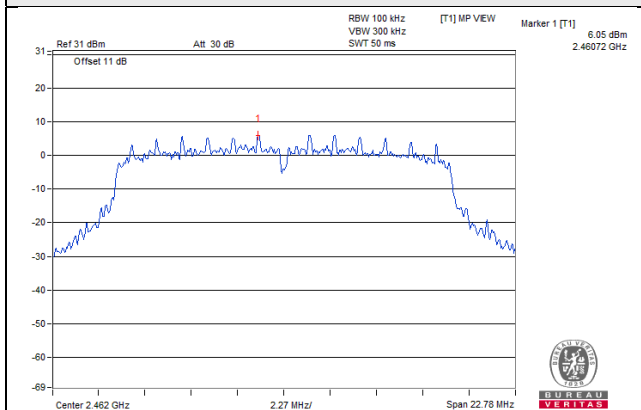
## CH 1



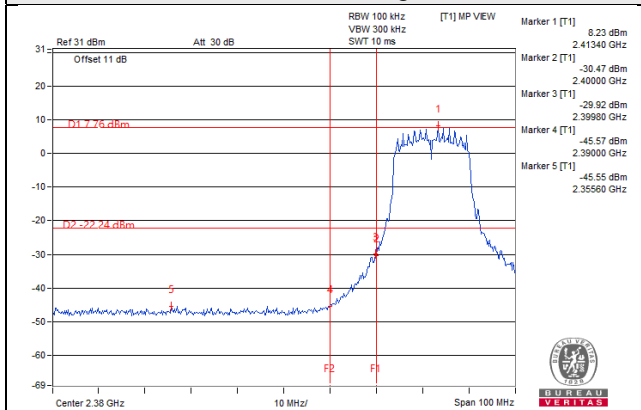
## CH 6



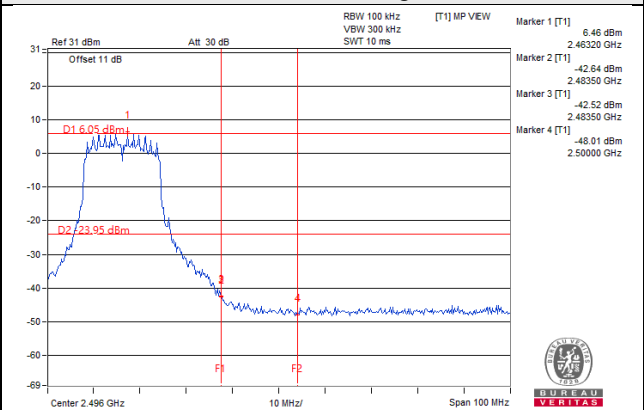
## CH 11



## CH 1 Band edge



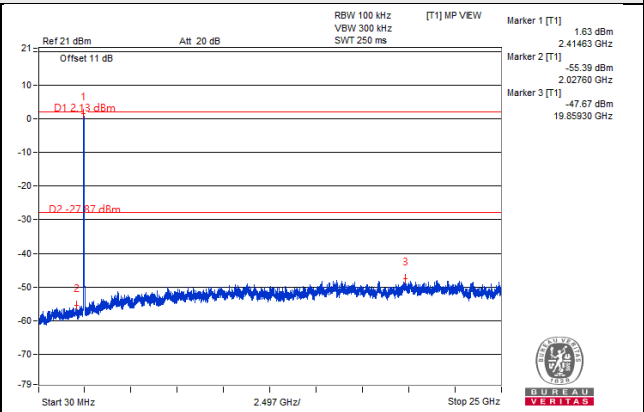
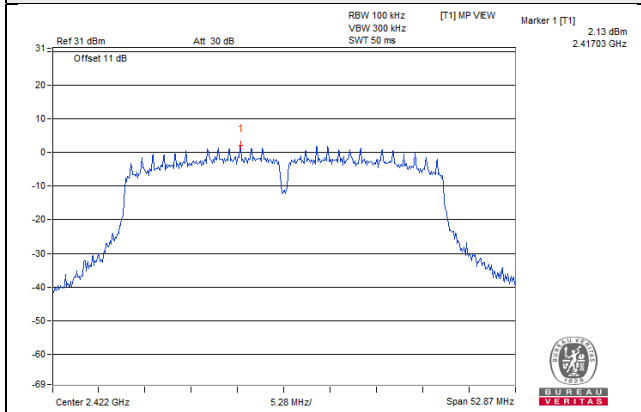
## CH 11 Band edge



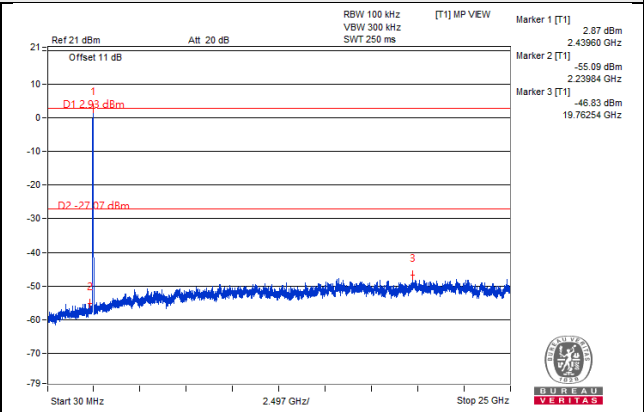
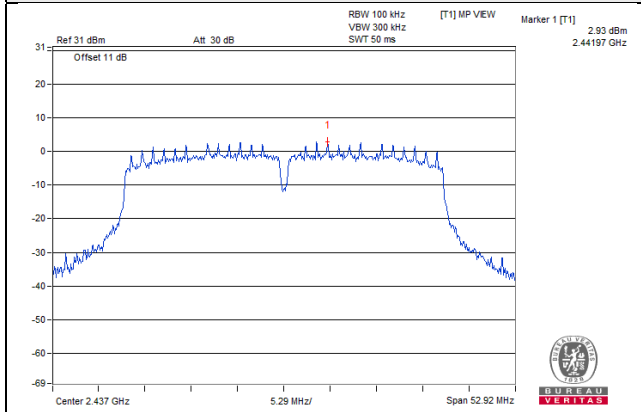


# 802.11n (HT40)

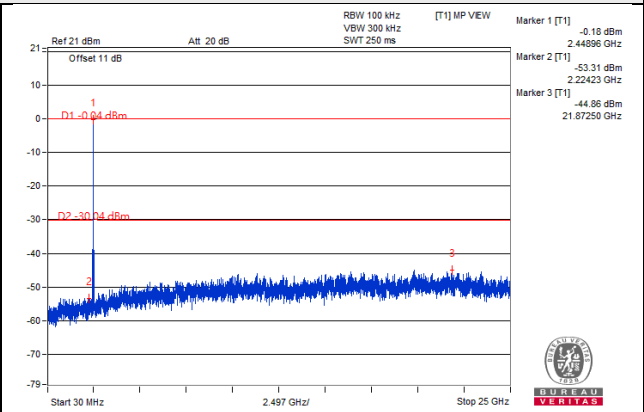
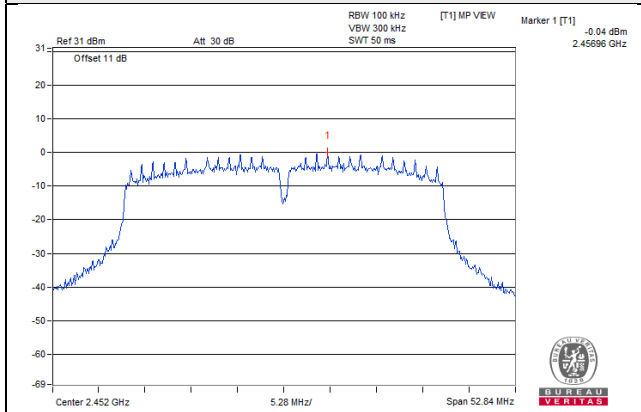
## CH 3



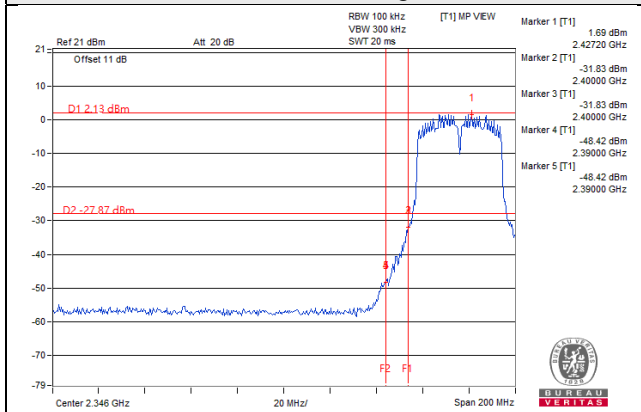
## CH 6



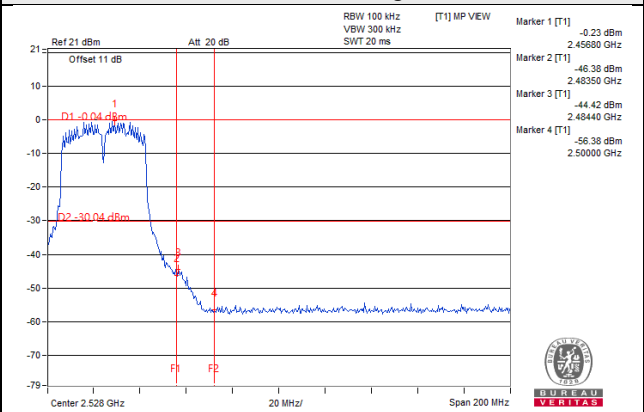
## CH 9



## CH 3 Band edge



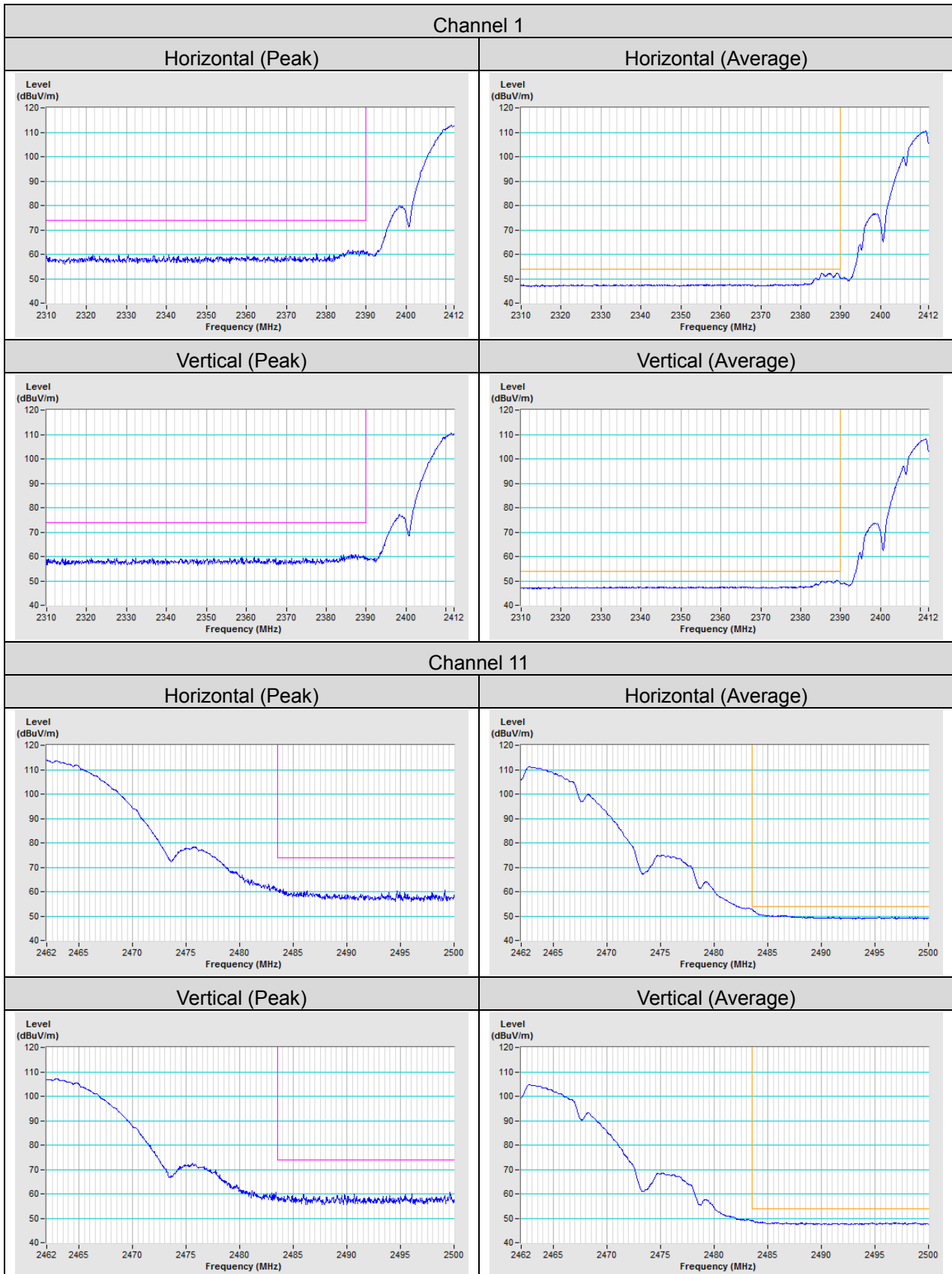
## CH 9 Band edge



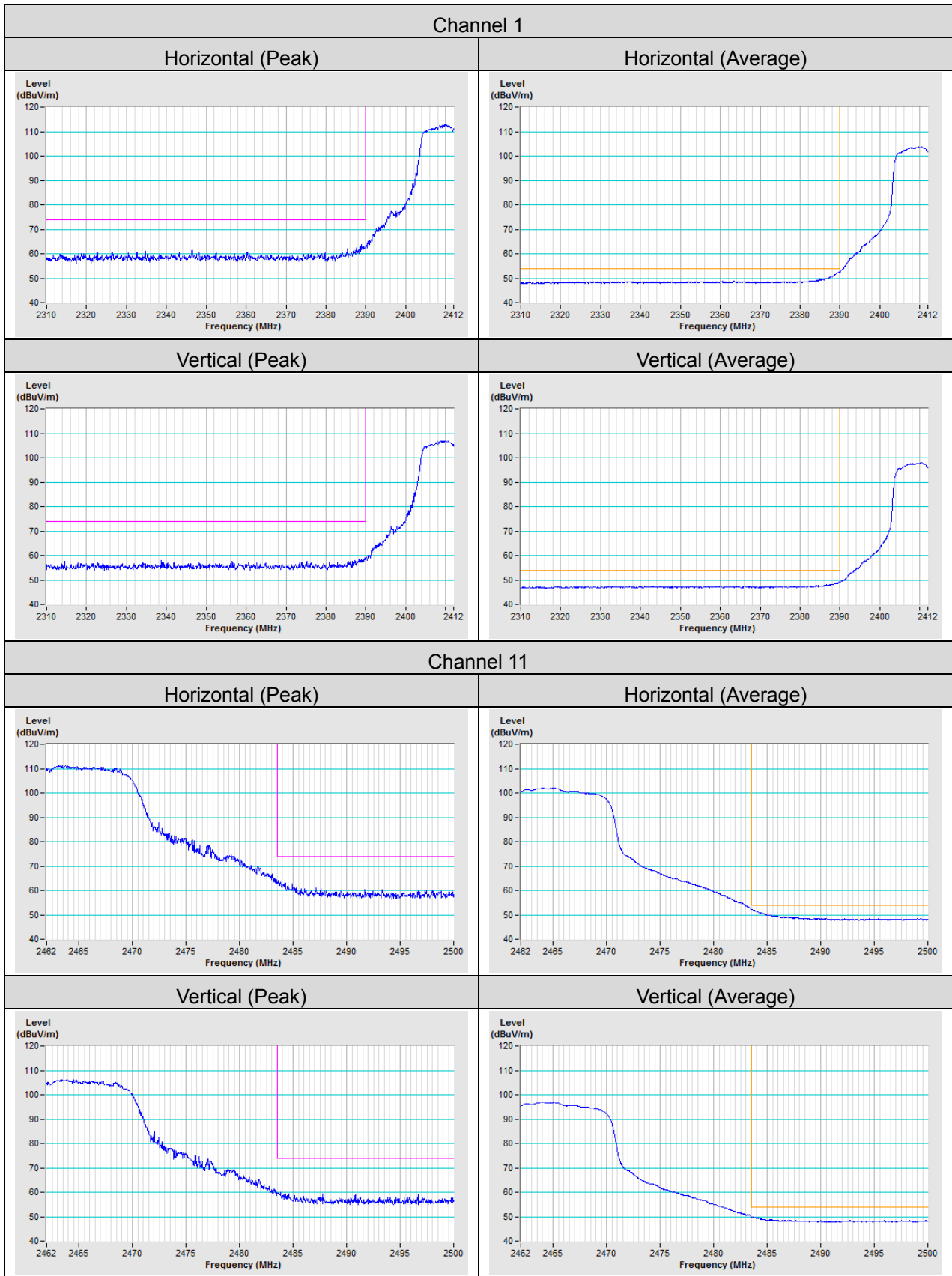
# Annex A- Band Edge Measurement

Mode A

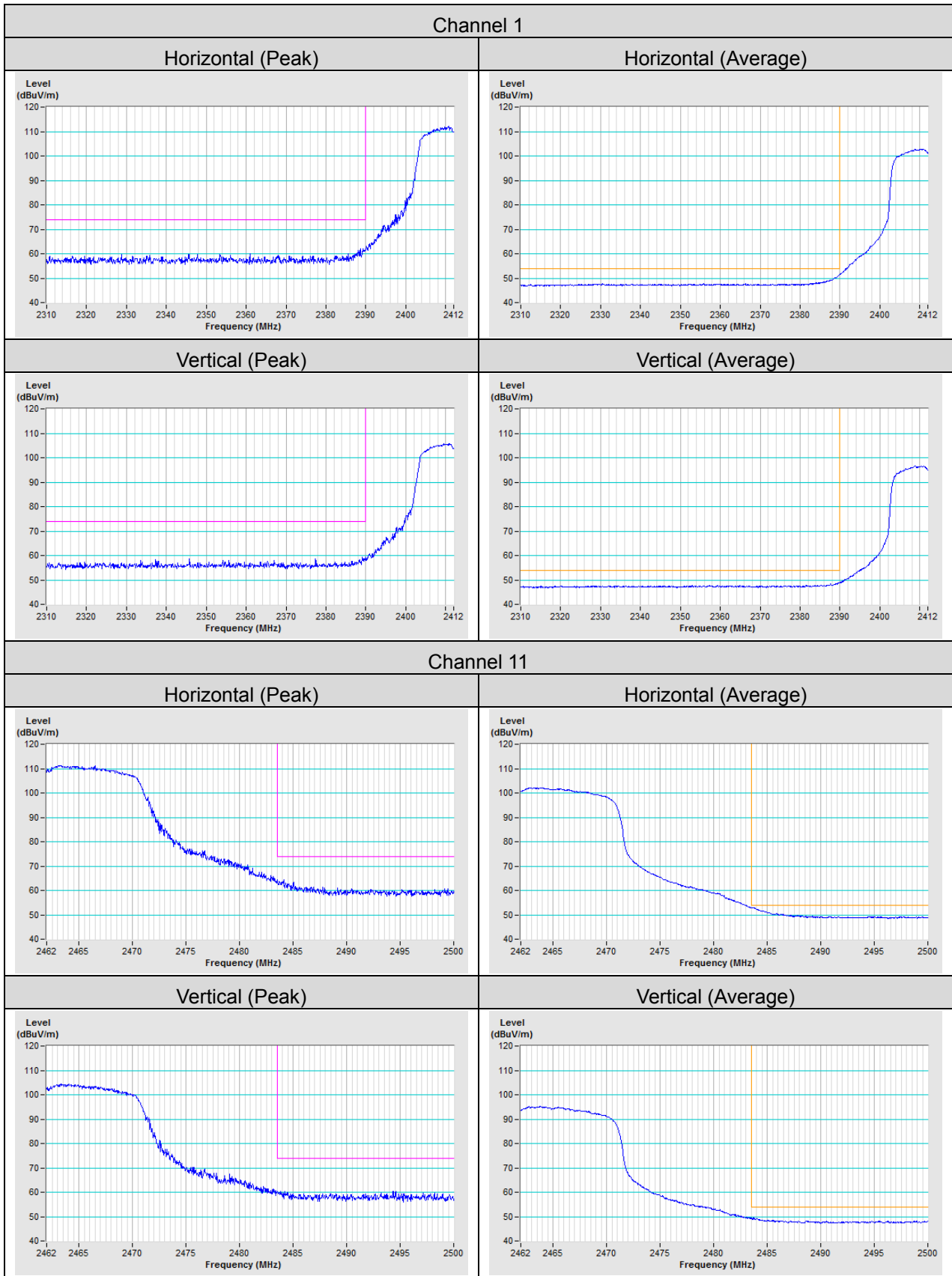
802.11b



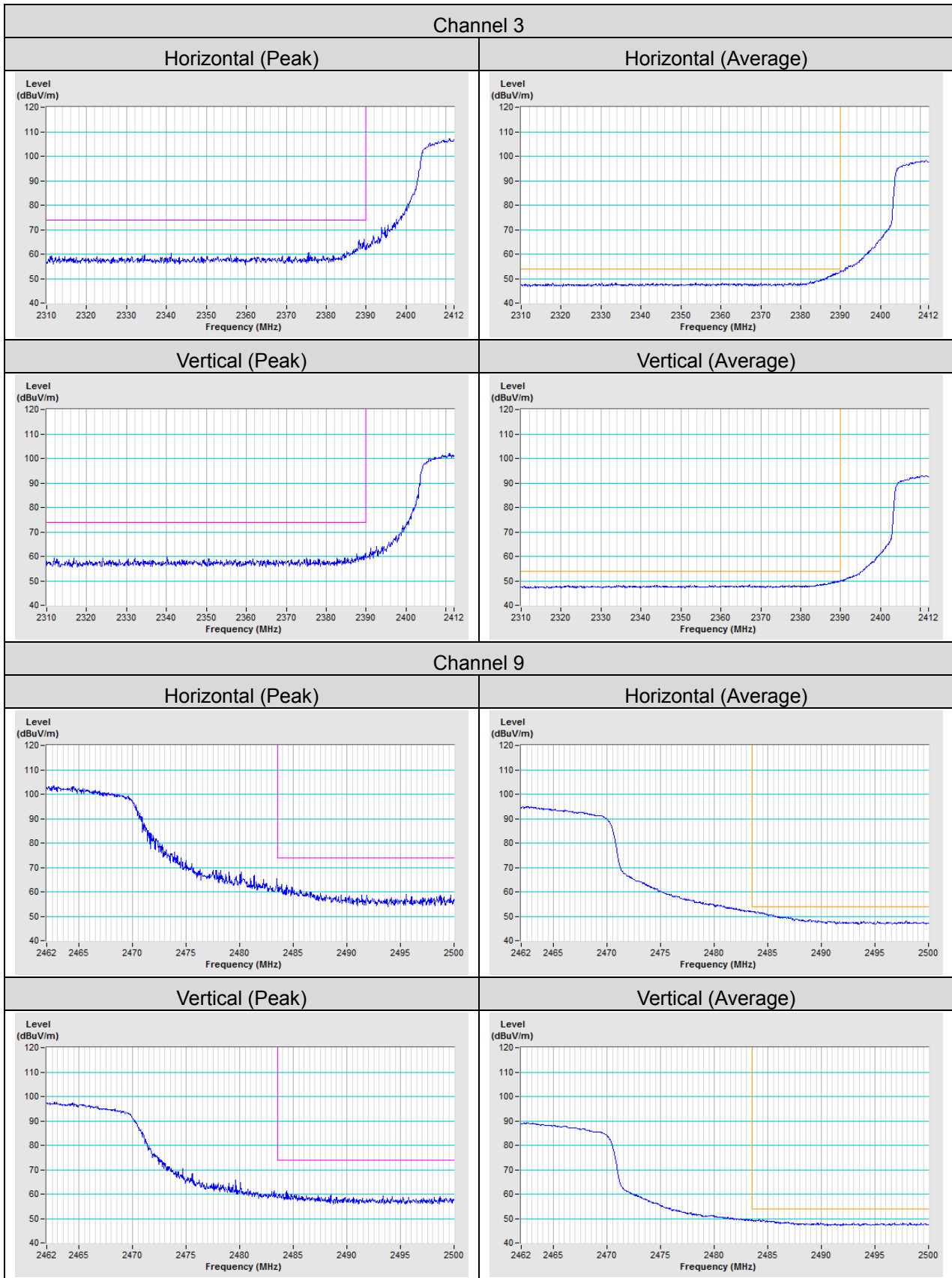
802.11g



802.11n (HT20)

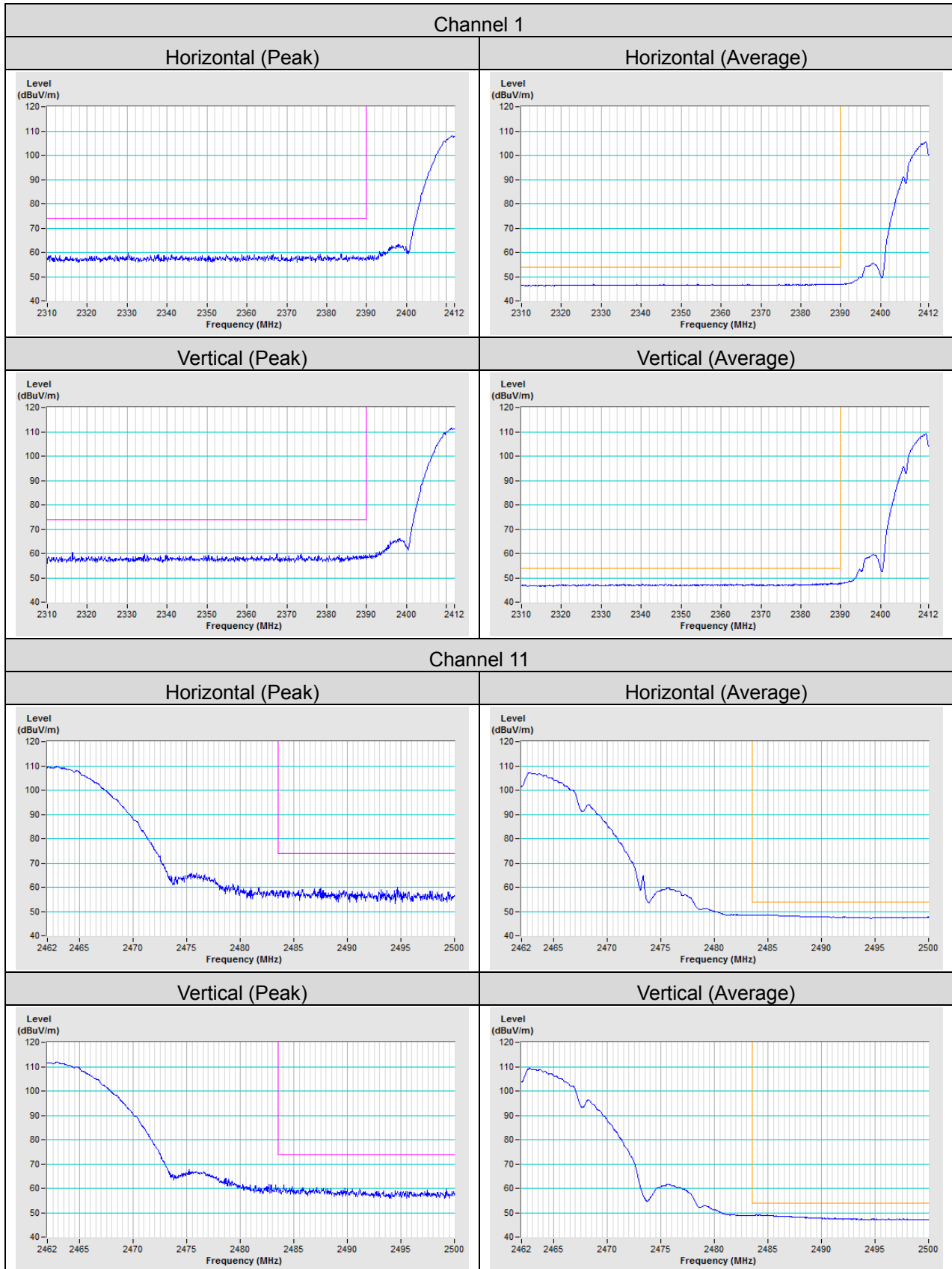


802.11n (HT40)

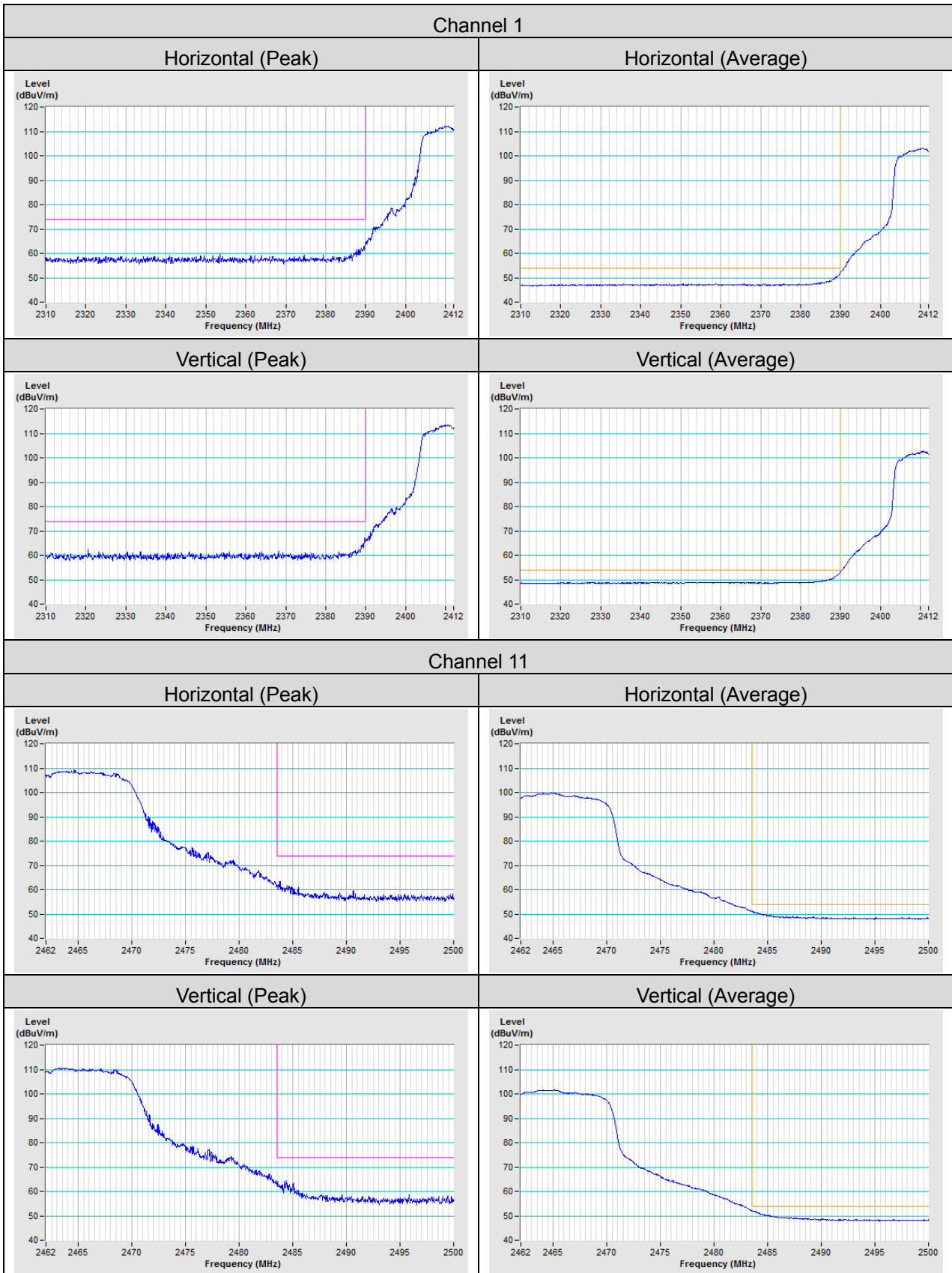


Mode B

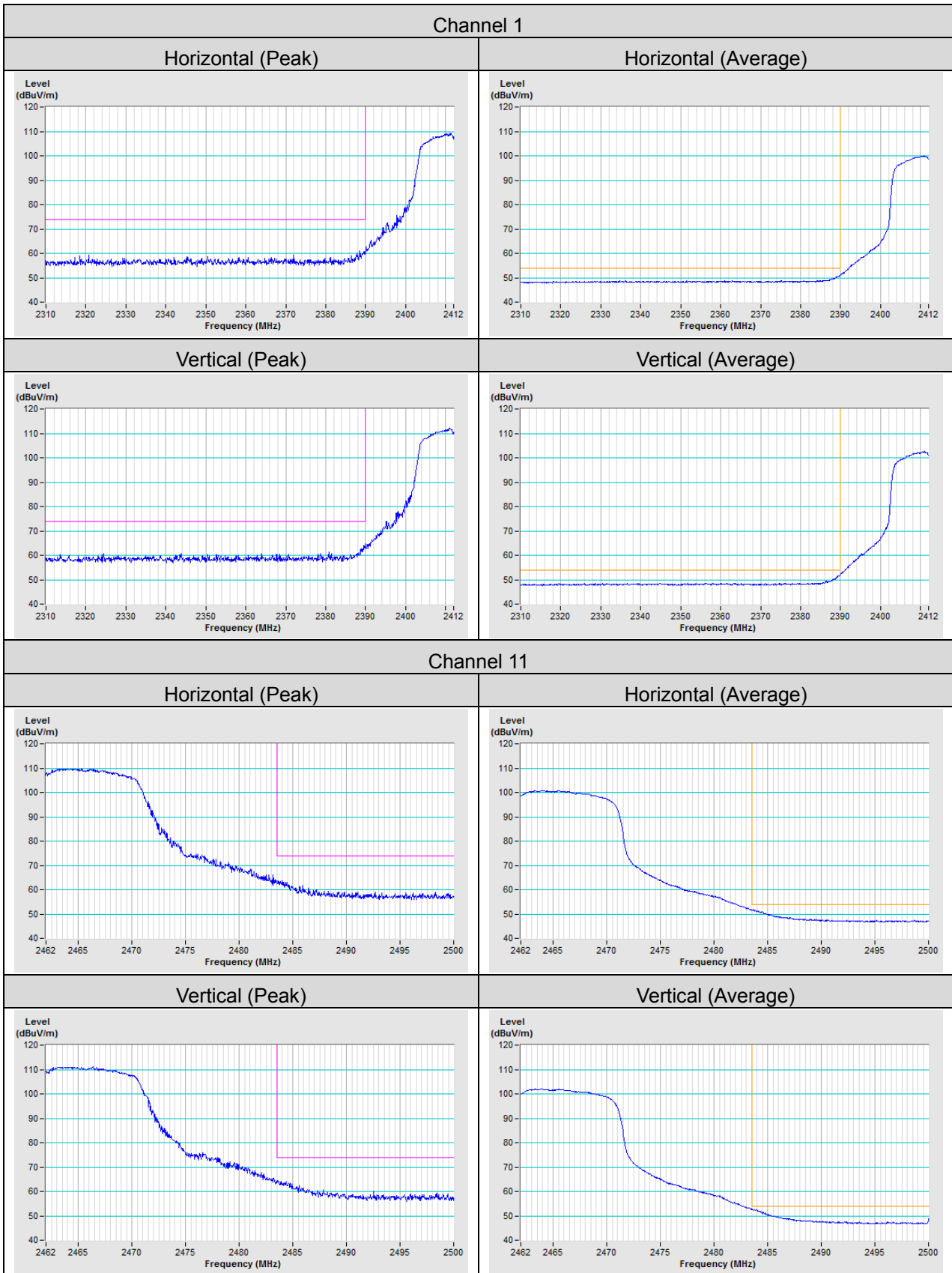
802.11b



802.11g

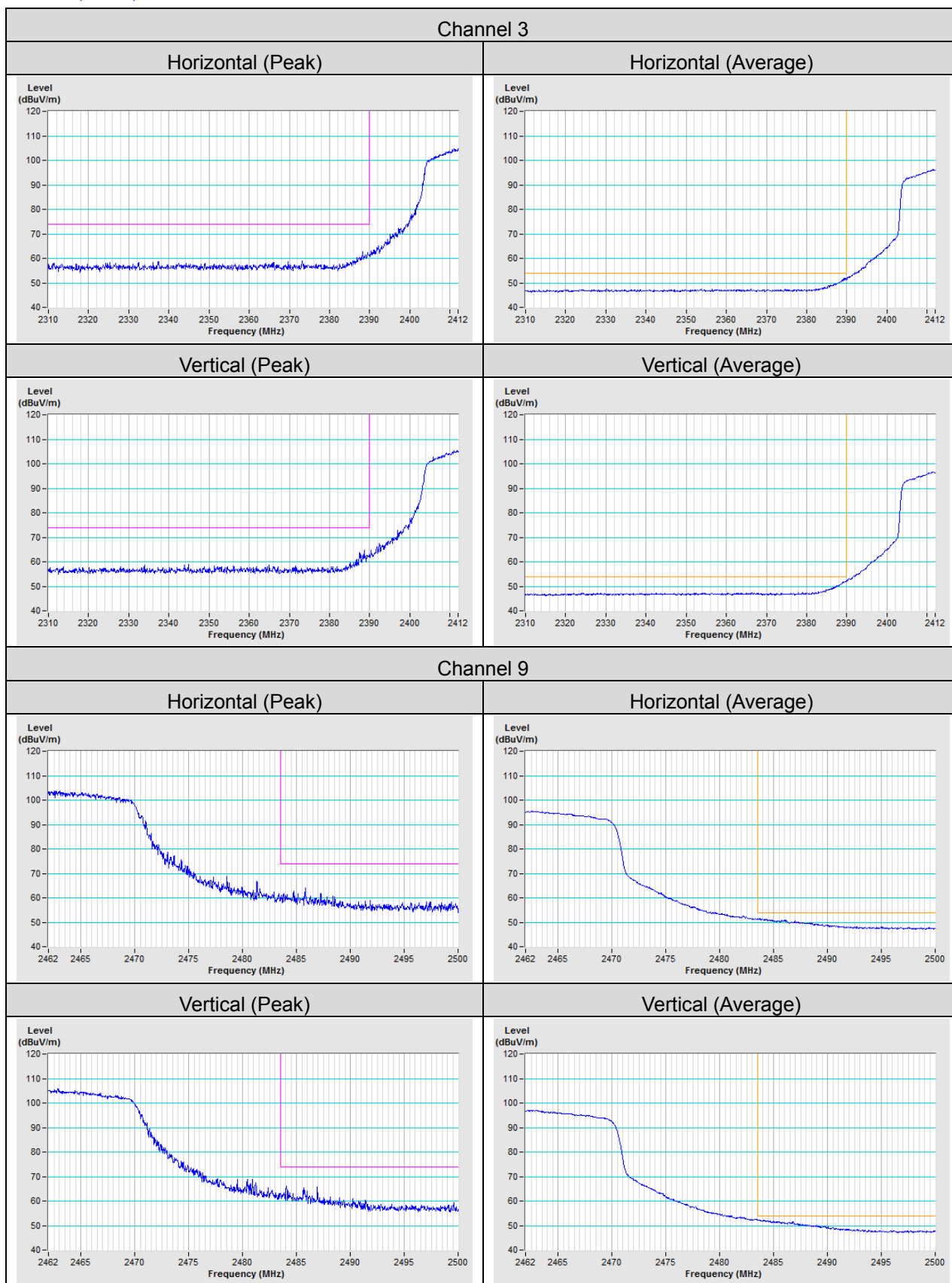


802.11n (HT20)





802.11n (HT40)



## 5 Pictures of Test Arrangements

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

## Appendix – Information of 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.

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

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Tel: 886-2-26052180

Fax: 886-2-26051924

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Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

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

--- END ---