

FCC Test Report

Report No.: RF181001C08

FCC ID: A4RG020B

Model Name: G020B

Received Date: Oct. 01, 2018

Test Date: Oct. 25 ~ Nov. 22, 2018

Issued Date: Dec. 18, 2018

Applicant: Google LLC

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

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FCC Registration / Designation Number (1): 788550 / TW0003

FCC Registration / Designation Number (2): 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RF181001C08	Original release	Dec. 18, 2018

1 Certificate of Conformity

Product: Smartphone
Model Name: G020B
Sample Status: Identical Prototype
Applicant: Google LLC
Test Date: Oct. 25 ~ Nov. 22, 2018
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 : Celine Chou , **Date:** Dec. 18, 2018
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Dec. 18, 2018
Bruce Chen / 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 -8.46dB at 1.04148MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.5dB at 2389.89MHz, 2483.60MHz and 2483.54MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.31 dB
Radiated Emissions above 1 GHz	1 GHz ~ 6 GHz	3.40 dB
	6GHz ~ 18GHz	3.73 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Smartphone
Model Name	G020B
Sample Status	Identical Prototype
Power Supply Rating	3.85Vdc (Battery) 5Vdc or 9Vdc (Adapter) 5Vdc (Host equipment)
Modulation Type	CCK, DQPSK, DBPSK for DSSS 256QAM, 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/ac: up to 300Mbps
Operating Frequency	2412 ~ 2472MHz
Number of Channel	13
Output Power	277.332mW
Antenna Type	Refer to Note as below
Antenna Connector	Refer to Note as below
Accessory Device	Refer to Note as below
Cable Supplied	Refer to Note as below

Note:

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

Modulation Mode	TX Function
802.11b	1TX(SISO)/2TX(MIMO)
802.11g	1TX(SISO)/2TX(MIMO)
802.11n (HT20)	1TX(SISO)/2TX(MIMO)
802.11ac (VHT20)	1TX(SISO)/2TX(MIMO)

* The modulation and bandwidth are similar for 802.11n mode for 20MHz and 802.11ac mode for 20MHz, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

* SISO mode and MIMO mode are presented in power output test item. For other test items, MIMO mode is the worst case for final tests after pretesting.

2. There're 2 configurations for the EUT listed as below.

- Main Sample: EUT + Battery 1
- 2nd Sample: EUT + Battery 2

After pre-tested with the EUT, only the worst configuration (main sample) was chosen for the final test.

3. The EUT accessories list refers to EUT Photo.pdf.

4. The following antennas were provided to the EUT.

No.	Type	Connector	Gain (dBi)
0	PIFA	NA	-0.6
1	PIFA	NA	0

3.2 Description of Test Modes

13 channels are provided for 802.11b, 802.11g, 802.11n (HT20) and 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
1	2412MHz	8	2447MHz
2	2417MHz	9	2452MHz
3	2422MHz	10	2457MHz
4	2427MHz	11	2462MHz
5	2432MHz	12	2467MHz
6	2437MHz	13	2472MHz
7	2442MHz		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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 **Z-plane**.

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)
-	802.11b	1 to 13	1, 6, 11, 12, 13	DSSS	DBPSK	1.0
-	802.11g	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	6.5

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)
-	802.11g	1 to 13	6	OFDM	BPSK	6.0

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)
-	802.11g	1 to 13	6	OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11b	1 to 13	1, 6, 11, 12, 13	DSSS	DBPSK	1.0
-	802.11g	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	6.5

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	25 deg. C, 69% RH	120Vac, 60Hz	Rey Chen
RE $<$ 1G	22 deg. C, 70% RH	120Vac, 60Hz	Andy Ho
PLC	25 deg. C, 70% RH	120Vac, 60Hz	Jones Chang
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Chris Lin

3.3 Duty Cycle of Test Signal

802.11b: Duty cycle of test signal is $\geq 98\%$.

802.11g, 802.11n (HT20): Duty cycle of test signal is $< 98\%$.

802.11b: Duty cycle = $12.300/12.550 = 0.980$

802.11g: Duty cycle = $2.049/2.097 = 0.977$, Duty factor = $10 * \log(1/0.977) = 0.10$

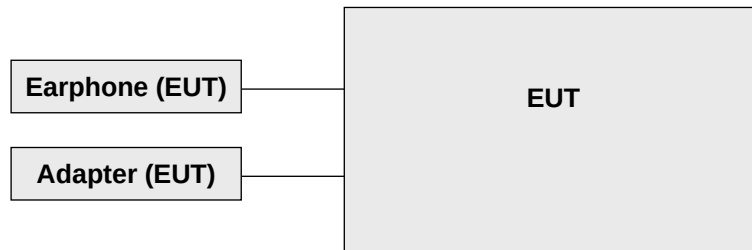
802.11n (HT20): Duty cycle = $1.915/1.972 = 0.971$, Duty factor = $10 * \log(1/0.971) = 0.13$



3.4 Description of Support Units

The EUT has been tested as an independent unit.

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 15.247 Meas Guidance v05

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

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 20dB 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 Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI (Below 30MHz)	EMC001340	980142	Feb. 09, 2018	Feb. 08, 2019
Loop Antenna(*) Electro-Metrics (Below 30MHz)	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable (Below 30MHz)	NA	LOOPCAB-001	Jan. 15, 2018	Jan. 14, 2019
RF Cable (Below 30MHz)	NA	LOOPCAB-002	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier Mini-Circuits (30MHz~1GHz)	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK (30MHz~1GHz)	VULB 9168	9168-361	Jan. 15, 2018	Jan. 14, 2019
RF Cable (30MHz~1GHz)	8D	966-3-1	Mar. 20, 2018	Mar. 19, 2019
RF Cable (30MHz~1GHz)	8D	966-3-2	Mar. 20, 2018	Mar. 19, 2019
RF Cable (30MHz~1GHz)	8D	966-3-3	Mar. 20, 2018	Mar. 19, 2019
Fixed attenuator Mini-Circuits (30MHz~1GHz)	UNAT-5+	PAD-3m-3-01	Sep. 27, 2018	Sep. 26, 2019
Horn_Antenna SCHWARZBECK (1GHz~18GHz)	BBHA9120-D	9120D-406	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier EMCI (1GHz~18GHz)	EMC12630SE	980384	Jan. 29, 2018	Jan. 28, 2019
RF Cable (1GHz~18GHz)	EMC104-SM-SM-1200	160922	Jan. 29, 2018	Jan. 28, 2019
RF Cable (1GHz~18GHz)	EMC104-SM-SM-2000	150317	Jan. 29, 2018	Jan. 28, 2019
RF Cable (1GHz~18GHz)	EMC104-SM-SM-5000	150322	Jan. 29, 2018	Jan. 28, 2019
Spectrum Analyzer Keysight (18GHz~40GHz)	N9030A	MY54490679	July 23, 2018	July 22, 2019
Pre-Amplifier EMCI (18GHz~40GHz)	EMC184045SE	980386	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK (18GHz~40GHz)	BBHA 9170	BBHA9170519	Jan. 15, 2018	Jan. 14, 2019
RF Cable (18GHz~40GHz)	EMC102-KM-KM-1200	160924	Jan. 29, 2018	Jan. 28, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture (1GHz~18GHz)	FBA-01	FBA-SIP01	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months (24 months for Loop Antenna) and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Hsinchu 966 Chamber No. 3.
4. The Industry Canada Reference No. 20331-1.

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:

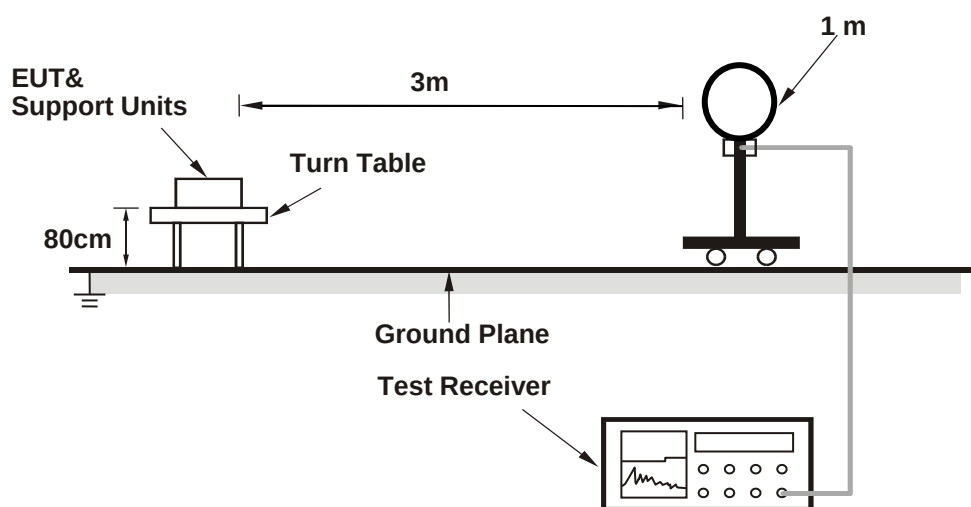
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

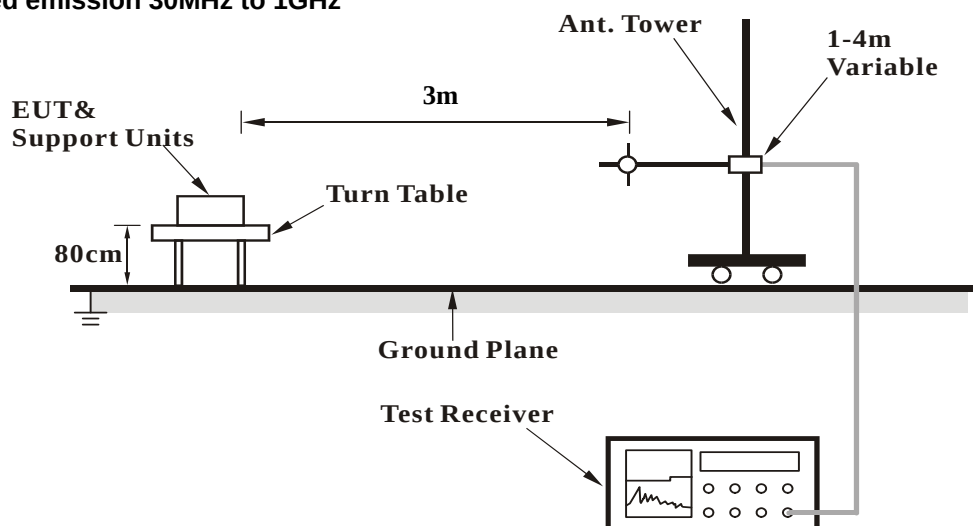
No deviation.

4.1.5 Test Setup

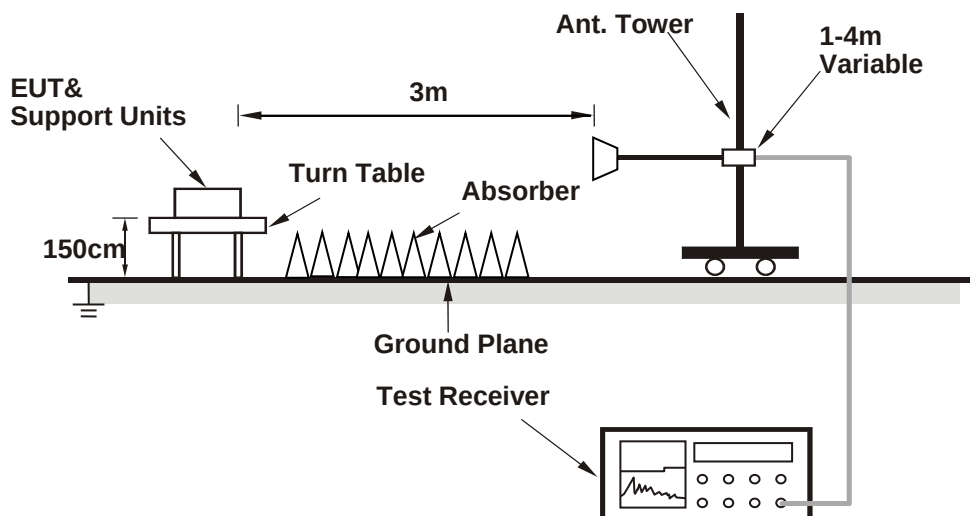
For Radiated emission below 30MHz



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).

Test Mode	DutyCycle (%)	RBW (PK)	VBW (PK)	RBW (AV)	VBW (AV)
802.11b	98.0	1MHz	3MHz	1MHz	10Hz
802.11g	97.7	1MHz	3MHz	1MHz	1kHz
802.11n (HT20)	97.1	1MHz	3MHz	1MHz	1kHz

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results for Fundamental and Harmonic above 1GHz

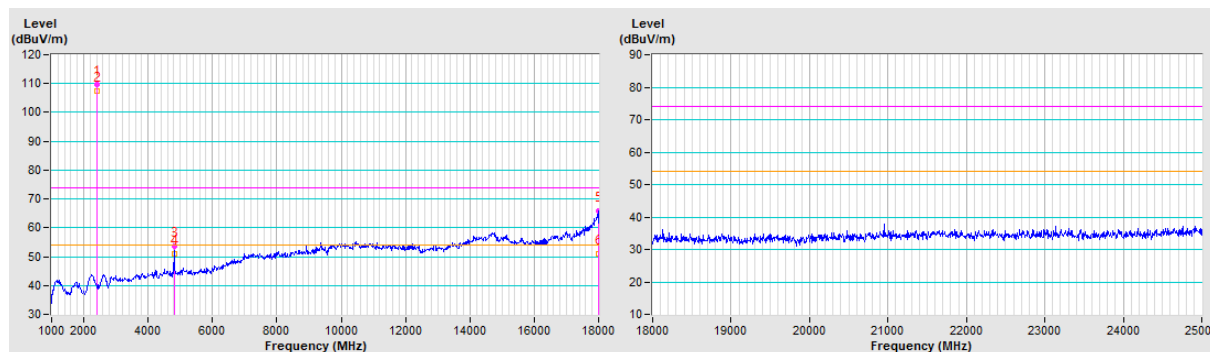
802.11b

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	*2412.00	109.7 PK			1.52 H	186	112.4	-2.7
2	*2412.00	107.5 AV			1.52 H	186	110.2	-2.7
3	4824.00	53.7 PK	74.0	-20.3	2.11 H	360	52.1	1.6
4	4824.00	50.8 AV	54.0	-3.2	2.11 H	360	49.2	1.6
5	17987.67	65.7 PK	74.0	-8.3	1.43 H	255	44.1	21.6
6	17987.67	50.8 AV	54.0	-3.2	1.43 H	255	29.2	21.6

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

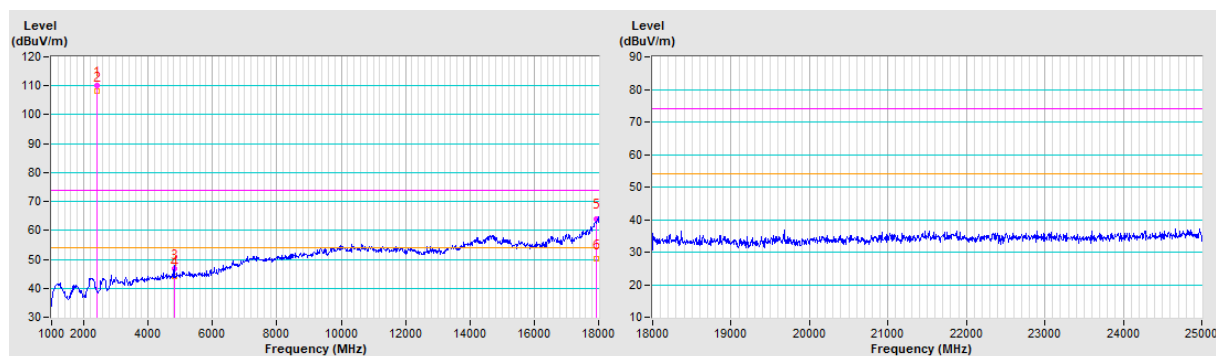


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2412.00	110.2 PK			1.54 V	48	112.9	-2.7
2	*2412.00	108.0 AV			1.54 V	48	110.7	-2.7
3	4824.00	46.6 PK	74.0	-27.4	1.74 V	170	45.0	1.6
4	4824.00	44.3 AV	54.0	-9.7	1.74 V	170	42.7	1.6
5	17935.83	64.1 PK	74.0	-9.9	1.96 V	214	43.4	20.7
6	17935.83	50.1 AV	54.0	-3.9	1.96 V	214	29.4	20.7

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

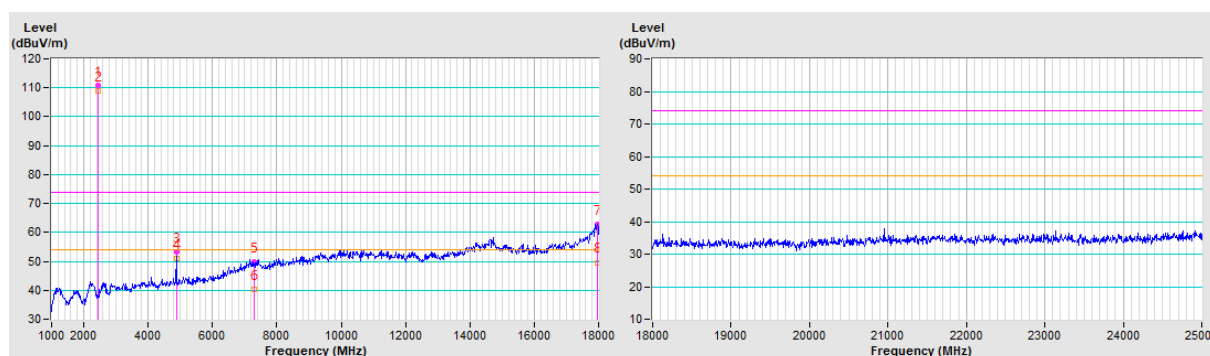


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	110.9 PK			1.47 H	186	113.9	-3.0
2	*2437.00	108.9 AV			1.47 H	186	111.9	-3.0
3	4874.00	53.4 PK	74.0	-20.6	2.07 H	360	51.8	1.6
4	4874.00	50.8 AV	54.0	-3.2	2.07 H	360	49.2	1.6
5	7311.00	49.9 PK	74.0	-24.1	1.21 H	97	42.2	7.7
6	7311.00	40.2 AV	54.0	-13.8	1.21 H	97	32.5	7.7
7	17963.45	62.8 PK	74.0	-11.2	1.41 H	210	41.5	21.3
8	17963.45	49.6 AV	54.0	-4.4	1.41 H	210	28.3	21.3

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

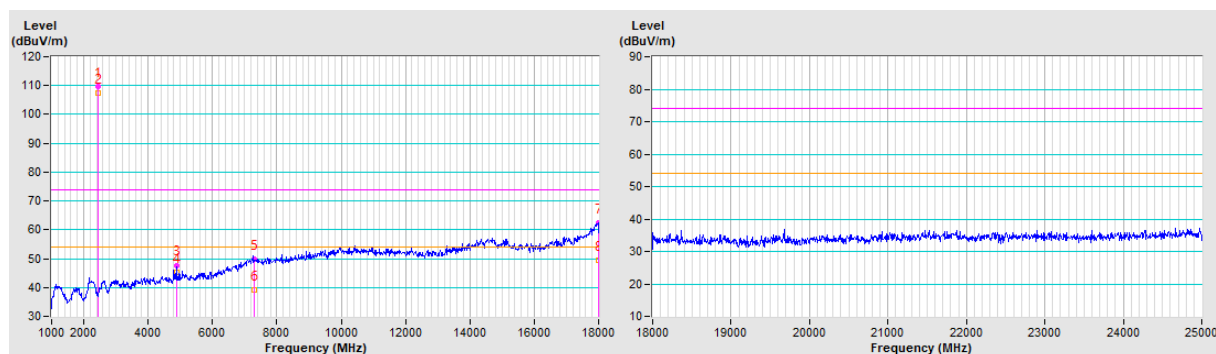


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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			1.71 V	55	112.8	-3.0
2	*2437.00	107.3 AV			1.71 V	55	110.3	-3.0
3	4874.00	47.7 PK	74.0	-26.3	1.72 V	162	46.1	1.6
4	4874.00	45.4 AV	54.0	-8.6	1.72 V	162	43.8	1.6
5	7311.00	49.7 PK	74.0	-24.3	1.49 V	345	42.0	7.7
6	7311.00	39.2 AV	54.0	-14.8	1.49 V	345	31.5	7.7
7	17996.60	62.3 PK	74.0	-11.7	1.45 V	314	40.4	21.9
8	17996.60	49.3 AV	54.0	-4.7	1.45 V	314	27.4	21.9

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

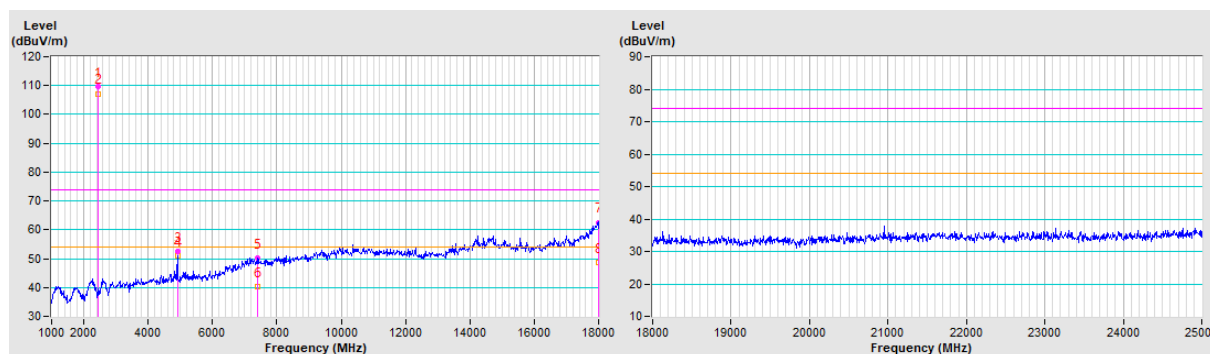


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	109.7 PK			1.45 H	186	112.7	-3.0
2	*2462.00	107.2 AV			1.45 H	186	110.2	-3.0
3	4924.00	52.6 PK	74.0	-21.4	2.41 H	360	50.9	1.7
4	4924.00	50.9 AV	54.0	-3.1	2.41 H	360	49.2	1.7
5	7386.00	50.3 PK	74.0	-23.7	1.20 H	96	42.4	7.9
6	7386.00	40.4 AV	54.0	-13.6	1.20 H	96	32.5	7.9
7	17990.22	62.6 PK	74.0	-11.4	1.39 H	354	40.8	21.8
8	17990.22	48.7 AV	54.0	-5.3	1.39 H	354	26.9	21.8

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

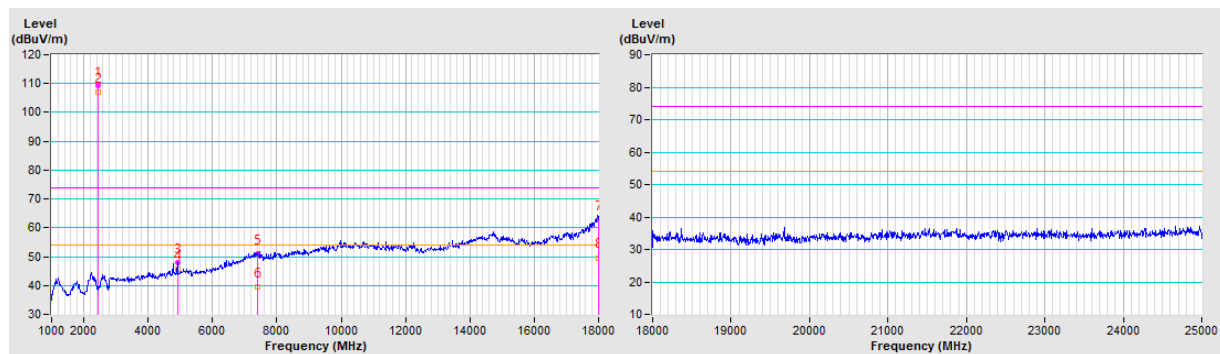


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	109.3 PK			1.98 V	44	112.3	-3.0
2	*2462.00	106.9 AV			1.98 V	44	109.9	-3.0
3	4924.00	48.0 PK	74.0	-26.0	1.75 V	155	46.3	1.7
4	4924.00	45.5 AV	54.0	-8.5	1.75 V	155	43.8	1.7
5	7386.00	50.8 PK	74.0	-23.2	1.43 V	347	42.9	7.9
6	7386.00	39.4 AV	54.0	-14.6	1.43 V	347	31.5	7.9
7	17994.90	62.7 PK	74.0	-11.3	2.01 V	154	40.9	21.8
8	17994.90	49.6 AV	54.0	-4.4	2.01 V	154	27.8	21.8

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

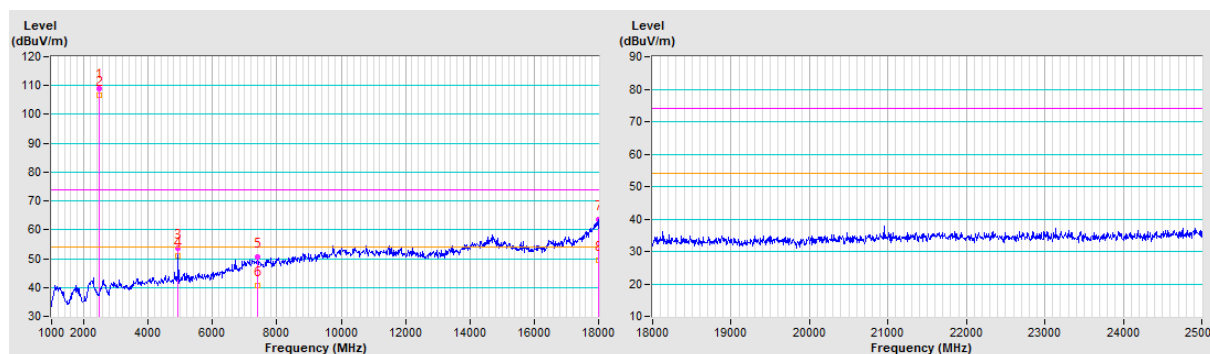


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2467.00	109.1 PK			1.42 H	187	112.0	-2.9
2	*2467.00	106.5 AV			1.42 H	187	109.4	-2.9
3	4934.00	53.5 PK	74.0	-20.5	2.51 H	360	51.7	1.8
4	4934.00	50.8 AV	54.0	-3.2	2.51 H	360	49.0	1.8
5	7401.00	50.5 PK	74.0	-23.5	1.25 H	86	42.6	7.9
6	7401.00	40.7 AV	54.0	-13.3	1.25 H	86	32.8	7.9
7	17988.95	63.5 PK	74.0	-10.5	1.43 H	201	41.8	21.7
8	17988.95	49.4 AV	54.0	-4.6	1.43 H	201	27.7	21.7

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

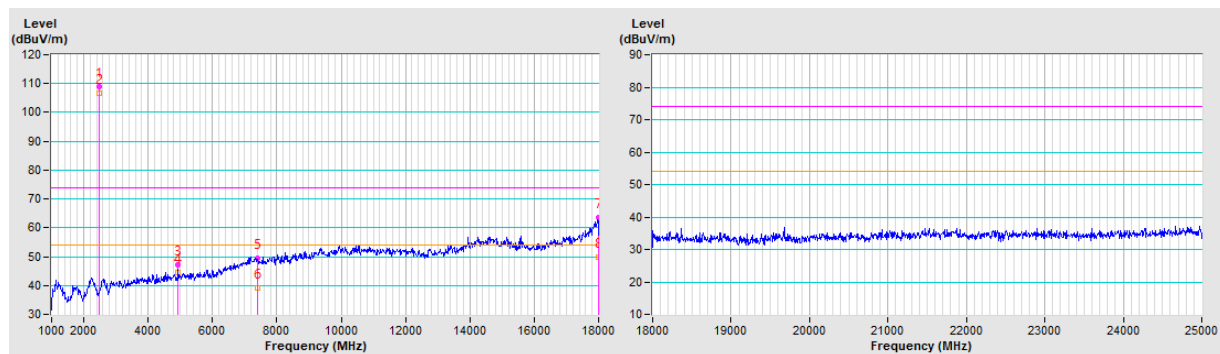


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2467.00	108.8 PK			1.96 V	42	111.7	-2.9
2	*2467.00	106.6 AV			1.96 V	42	109.5	-2.9
3	4934.00	47.1 PK	74.0	-26.9	1.77 V	145	45.3	1.8
4	4934.00	44.5 AV	54.0	-9.5	1.77 V	145	42.7	1.8
5	7401.00	49.4 PK	74.0	-24.6	1.41 V	340	41.5	7.9
6	7401.00	39.0 AV	54.0	-15.0	1.41 V	340	31.1	7.9
7	17985.12	63.5 PK	74.0	-10.5	1.94 V	237	41.9	21.6
8	17985.12	49.7 AV	54.0	-4.3	1.94 V	237	28.1	21.6

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

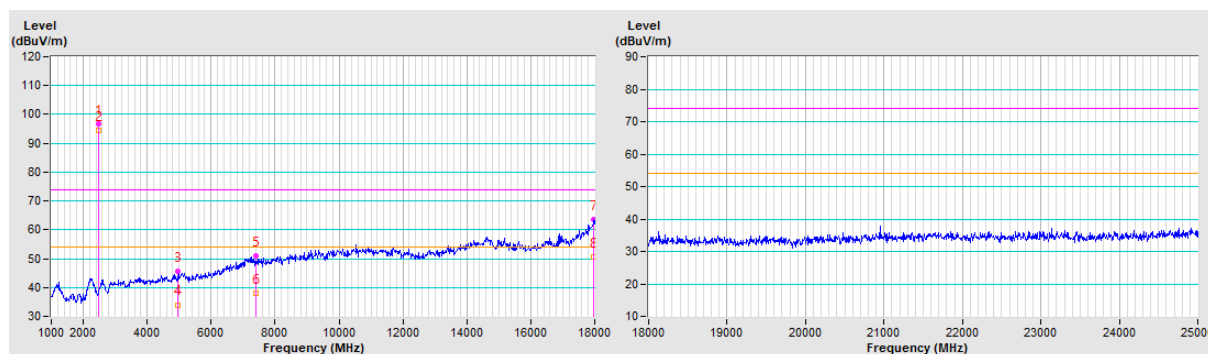


CHANNEL	TX Channel 13	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

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	*2472.00	96.7 PK			1.07 H	211	99.6	-2.9
2	*2472.00	94.4 AV			1.07 H	211	97.3	-2.9
3	4944.00	45.7 PK	74.0	-28.3	2.56 H	360	43.8	1.9
4	4944.00	34.0 AV	54.0	-20.0	2.56 H	360	32.1	1.9
5	7416.00	51.0 PK	74.0	-23.0	1.21 H	73	43.0	8.0
6	7416.00	38.1 AV	54.0	-15.9	1.21 H	73	30.1	8.0
7	17982.58	63.6 PK	74.0	-10.4	1.98 H	79	42.0	21.6
8	17982.58	50.7 AV	54.0	-3.3	1.98 H	79	29.1	21.6

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

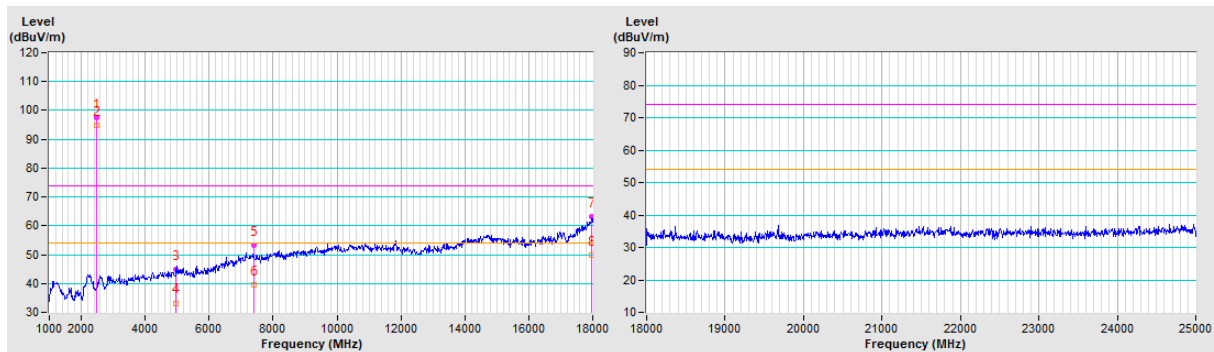


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2472.00	97.4 PK			1.55 V	229	100.3	-2.9
2	*2472.00	94.8 AV			1.55 V	229	97.7	-2.9
3	4944.00	45.0 PK	74.0	-29.0	1.55 V	208	43.1	1.9
4	4944.00	33.2 AV	54.0	-20.8	1.55 V	208	31.3	1.9
5	7416.00	53.3 PK	74.0	-20.7	2.39 V	229	45.3	8.0
6	7416.00	39.6 AV	54.0	-14.4	2.39 V	229	31.6	8.0
7	17974.08	63.0 PK	74.0	-11.0	1.45 V	177	41.5	21.5
8	17974.08	49.9 AV	54.0	-4.1	1.45 V	177	28.4	21.5

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



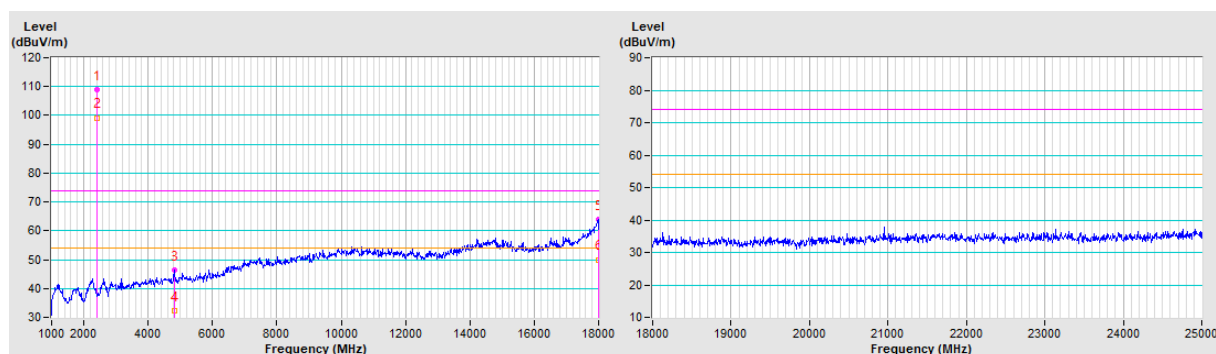
802.11g

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	*2412.00	108.8 PK			1.50 H	186	111.5	-2.7
2	*2412.00	99.2 AV			1.50 H	186	101.9	-2.7
3	4824.00	46.4 PK	74.0	-27.6	2.59 H	360	44.8	1.6
4	4824.00	32.4 AV	54.0	-21.6	2.59 H	360	30.8	1.6
5	17993.62	64.0 PK	74.0	-10.0	1.41 H	347	42.2	21.8
6	17993.62	50.0 AV	54.0	-4.0	1.41 H	347	28.2	21.8

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

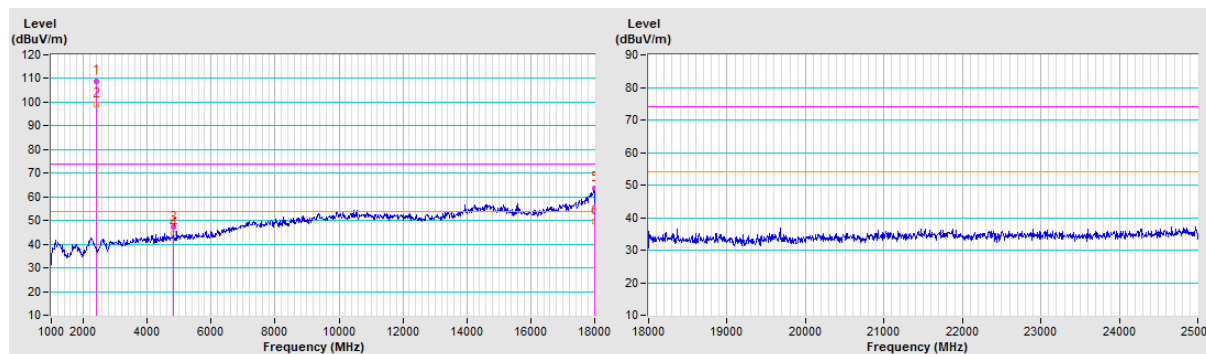


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2412.00	108.8 PK			1.96 V	42	111.5	-2.7
2	*2412.00	99.2 AV			1.96 V	42	101.9	-2.7
3	4824.00	47.1 PK	74.0	-26.9	1.77 V	145	45.5	1.6
4	4824.00	44.5 AV	54.0	-9.5	1.77 V	145	42.9	1.6
5	17985.12	63.5 PK	74.0	-10.5	1.94 V	237	41.9	21.6
6	17985.12	49.7 AV	54.0	-4.3	1.94 V	237	28.1	21.6

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

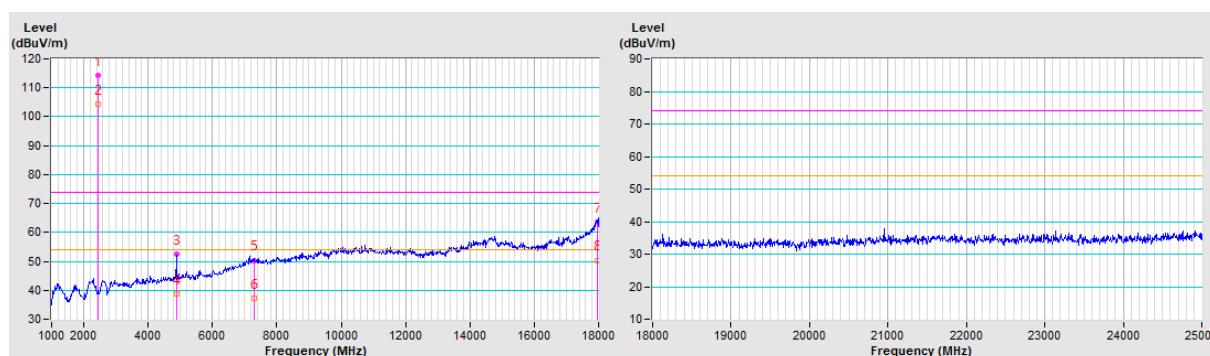


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	114.1 PK			1.46 H	187	117.1	-3.0
2	*2437.00	104.3 AV			1.46 H	187	107.3	-3.0
3	4874.00	52.4 PK	74.0	-21.6	2.56 H	358	50.8	1.6
4	4874.00	38.9 AV	54.0	-15.1	2.56 H	358	37.3	1.6
5	7311.00	50.4 PK	74.0	-23.6	1.97 H	213	42.7	7.7
6	7311.00	37.1 AV	54.0	-16.9	1.97 H	213	29.4	7.7
7	17974.92	63.4 PK	74.0	-10.6	1.49 H	254	41.9	21.5
8	17974.92	50.4 AV	54.0	-3.6	1.49 H	254	28.9	21.5

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

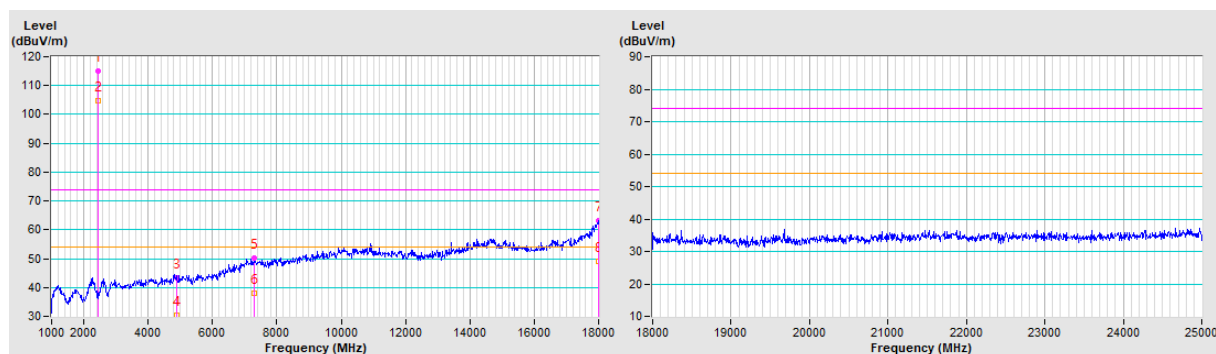


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	115.1 PK			1.24 V	62	118.1	-3.0
2	*2437.00	104.6 AV			1.24 V	62	107.6	-3.0
3	4874.00	43.2 PK	74.0	-30.8	1.13 V	295	41.6	1.6
4	4874.00	30.3 AV	54.0	-23.7	1.13 V	295	28.7	1.6
5	7311.00	50.1 PK	74.0	-23.9	1.47 V	179	42.4	7.7
6	7311.00	38.0 AV	54.0	-16.0	1.47 V	179	30.3	7.7
7	17995.33	63.0 PK	74.0	-11.0	1.56 V	247	41.1	21.9
8	17995.33	49.0 AV	54.0	-5.0	1.56 V	247	27.1	21.9

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

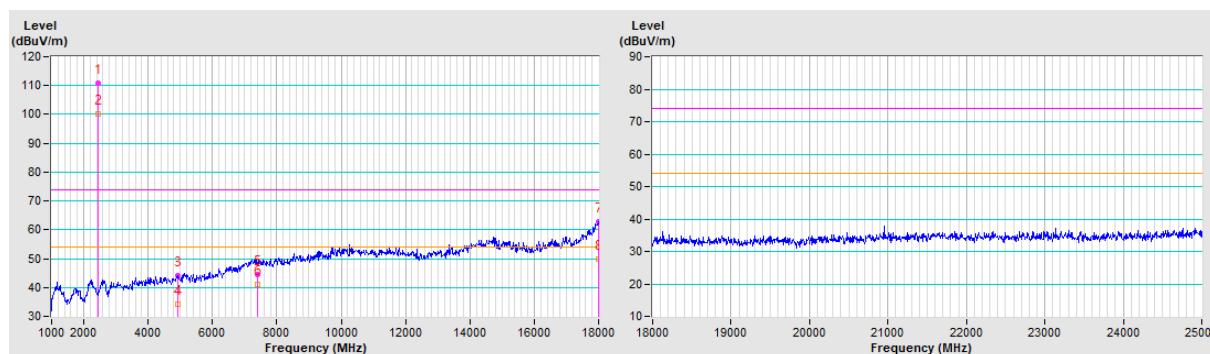


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	110.7 PK			1.45 H	186	113.7	-3.0
2	*2462.00	100.2 AV			1.45 H	186	103.2	-3.0
3	4924.00	44.2 PK	74.0	-29.8	2.56 H	360	42.5	1.7
4	4924.00	34.2 AV	54.0	-19.8	2.56 H	360	32.5	1.7
5	7386.00	44.5 PK	74.0	-29.5	2.03 H	218	36.6	7.9
6	7386.00	41.1 AV	54.0	-12.9	2.03 H	218	33.2	7.9
7	17993.20	62.7 PK	74.0	-11.3	1.40 H	125	40.9	21.8
8	17993.20	49.8 AV	54.0	-4.2	1.40 H	125	28.0	21.8

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

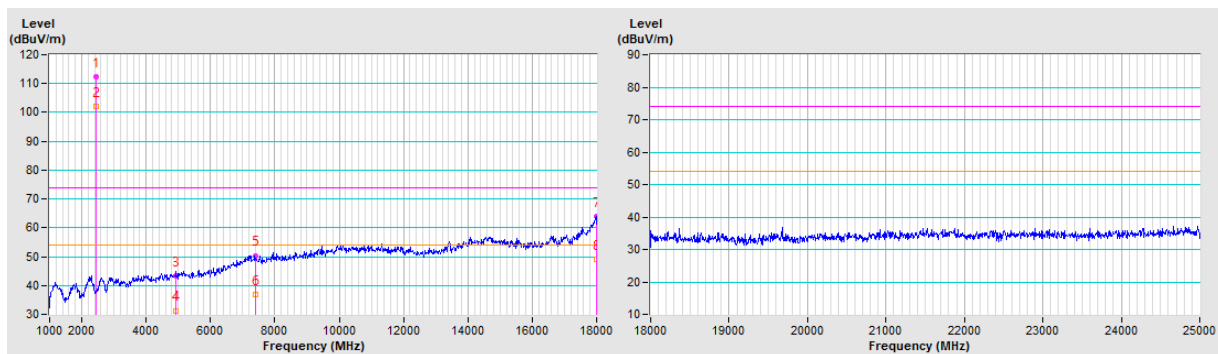


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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			1.44 V	67	115.3	-3.0
2	*2462.00	102.2 AV			1.44 V	67	105.2	-3.0
3	4924.00	43.2 PK	74.0	-30.8	1.11 V	299	41.5	1.7
4	4924.00	31.3 AV	54.0	-22.7	1.11 V	299	29.6	1.7
5	7386.00	50.4 PK	74.0	-23.6	1.45 V	165	42.5	7.9
6	7386.00	37.0 AV	54.0	-17.0	1.45 V	165	29.1	7.9
7	17988.10	64.0 PK	74.0	-10.0	1.95 V	225	42.3	21.7
8	17988.10	49.0 AV	54.0	-5.0	1.95 V	225	27.3	21.7

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

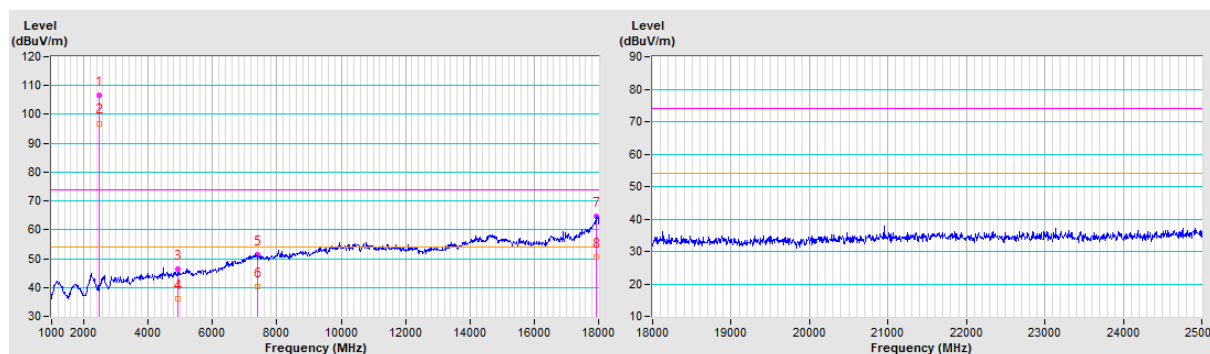


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2467.00	106.7 PK			1.34 H	187	109.6	-2.9
2	*2467.00	96.9 AV			1.34 H	187	99.8	-2.9
3	4934.00	46.3 PK	74.0	-27.7	2.56 H	360	44.5	1.8
4	4934.00	36.2 AV	54.0	-17.8	2.56 H	360	34.4	1.8
5	7401.00	51.3 PK	74.0	-22.7	1.91 H	216	43.4	7.9
6	7401.00	40.3 AV	54.0	-13.7	1.91 H	216	32.4	7.9
7	17941.35	64.8 PK	74.0	-9.2	1.36 H	247	44.0	20.8
8	17941.35	50.7 AV	54.0	-3.3	1.36 H	247	29.9	20.8

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

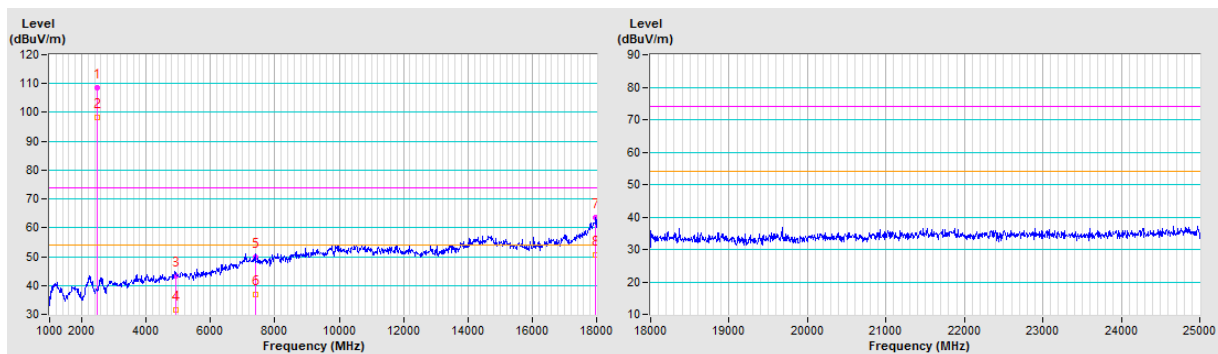


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2467.00	108.4 PK			1.38 V	60	111.3	-2.9
2	*2467.00	98.4 AV			1.38 V	60	101.3	-2.9
3	4934.00	43.2 PK	74.0	-30.8	1.19 V	285	41.4	1.8
4	4934.00	31.4 AV	54.0	-22.6	1.19 V	285	29.6	1.8
5	7401.00	49.8 PK	74.0	-24.2	1.46 V	170	41.9	7.9
6	7401.00	36.9 AV	54.0	-17.1	1.46 V	170	29.0	7.9
7	17977.47	63.4 PK	74.0	-10.6	1.98 V	286	41.9	21.5
8	17977.47	50.5 AV	54.0	-3.5	1.98 V	286	29.0	21.5

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

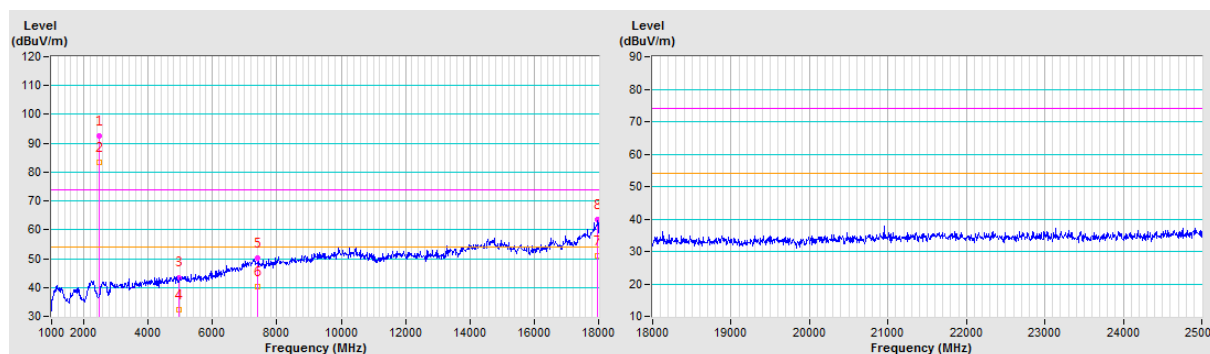


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2472.00	92.5 PK			1.36 H	44	95.4	-2.9
2	*2472.00	83.5 AV			1.36 H	44	86.4	-2.9
3	4944.00	43.5 PK	74.0	-30.5	2.62 H	360	41.6	1.9
4	4944.00	32.2 AV	54.0	-21.8	2.62 H	360	30.3	1.9
5	7416.00	50.3 PK	74.0	-23.7	1.96 H	189	42.3	8.0
6	7416.00	40.2 AV	54.0	-13.8	1.96 H	189	32.2	8.0
7	17977.93	50.8 AV	54.0	-3.2	1.26 H	360	29.3	21.5
8	17977.93	63.6 PK	74.0	-10.4	1.26 H	360	42.1	21.5

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

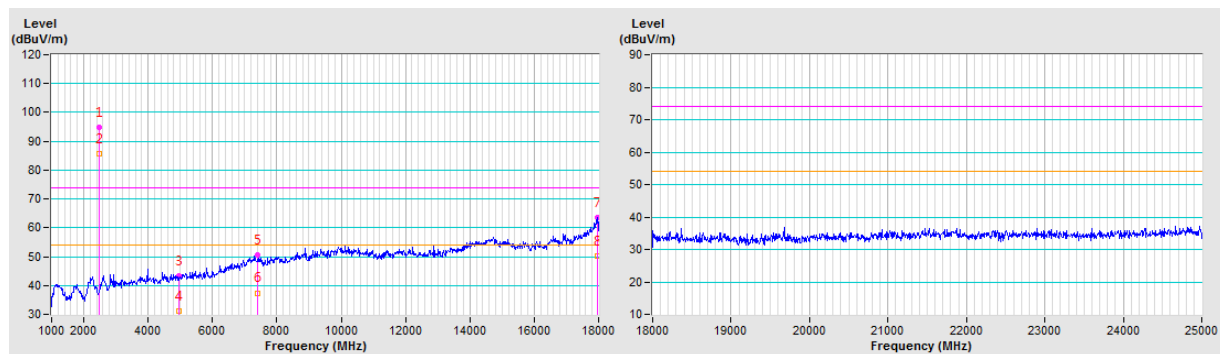


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2472.00	94.9 PK			1.38 V	72	97.8	-2.9
2	*2472.00	85.7 AV			1.38 V	72	88.6	-2.9
3	4944.00	43.4 PK	74.0	-30.6	1.14 V	296	41.5	1.9
4	4944.00	31.1 AV	54.0	-22.9	1.14 V	296	29.2	1.9
5	7416.00	50.5 PK	74.0	-23.5	1.40 V	182	42.5	8.0
6	7416.00	37.4 AV	54.0	-16.6	1.40 V	182	29.4	8.0
7	17961.20	63.4 PK	74.0	-10.6	1.35 V	227	42.1	21.3
8	17961.20	50.1 AV	54.0	-3.9	1.35 V	227	28.8	21.3

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



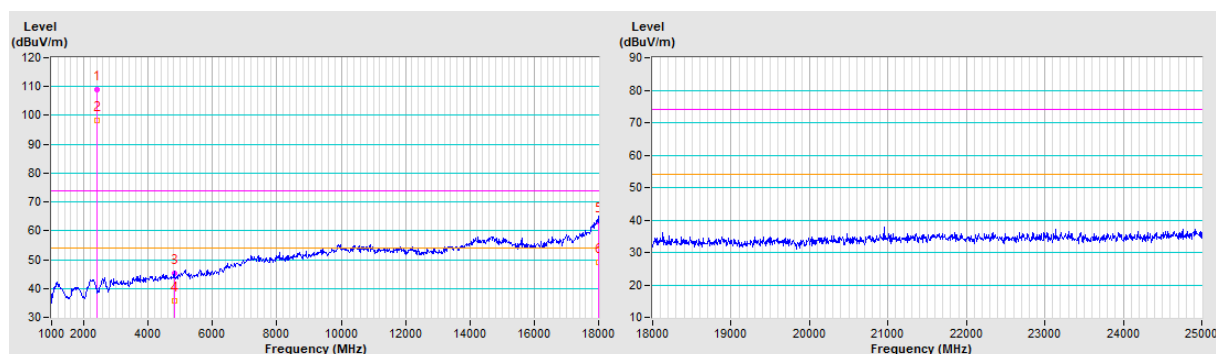
802.11n (HT20)

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	*2412.00	108.8 PK			1.47 H	185	111.5	-2.7
2	*2412.00	98.4 AV			1.47 H	185	101.1	-2.7
3	4824.00	45.3 PK	74.0	-28.7	2.56 H	351	43.7	1.6
4	4824.00	35.6 AV	54.0	-18.4	2.56 H	351	34.0	1.6
5	17997.45	63.1 PK	74.0	-10.9	1.46 H	267	41.2	21.9
6	17997.45	49.2 AV	54.0	-4.8	1.46 H	267	27.3	21.9

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

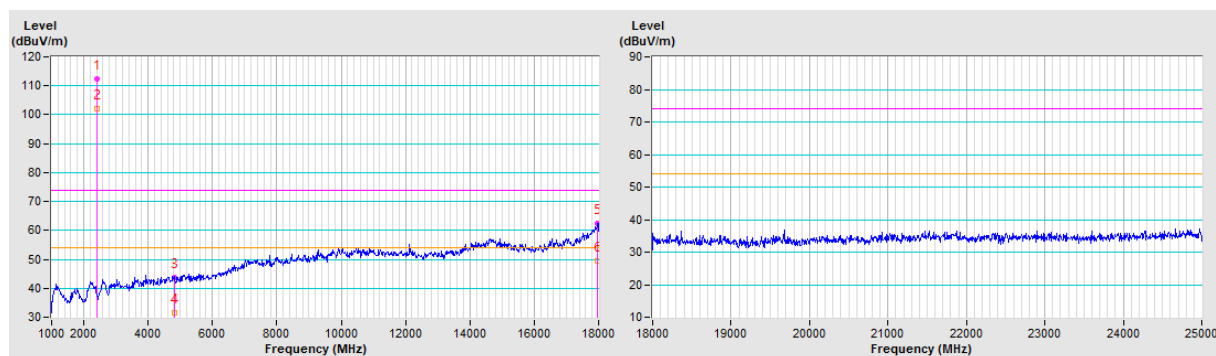


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2412.00	112.4 PK			1.60 V	48	115.1	-2.7
2	*2412.00	102.0 AV			1.60 V	48	104.7	-2.7
3	4824.00	43.6 PK	74.0	-30.4	1.13 V	310	42.0	1.6
4	4824.00	31.6 AV	54.0	-22.4	1.13 V	310	30.0	1.6
5	17951.97	62.5 PK	74.0	-11.5	2.14 V	254	41.4	21.1
6	17951.97	49.3 AV	54.0	-4.7	2.14 V	254	28.2	21.1

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

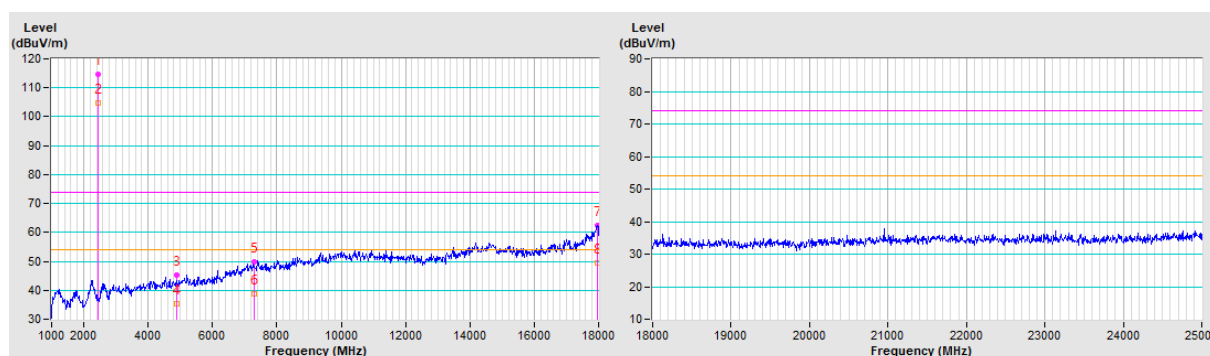


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	114.7 PK			1.47 H	186	117.7	-3.0
2	*2437.00	104.6 AV			1.47 H	186	107.6	-3.0
3	4874.00	45.4 PK	74.0	-28.6	2.58 H	359	43.8	1.6
4	4874.00	35.2 AV	54.0	-18.8	2.58 H	359	33.6	1.6
5	7311.00	49.9 PK	74.0	-24.1	1.97 H	200	42.2	7.7
6	7311.00	38.7 AV	54.0	-15.3	1.97 H	200	31.0	7.7
7	17980.03	62.4 PK	74.0	-11.6	1.44 H	115	40.9	21.5
8	17980.03	49.5 AV	54.0	-4.5	1.44 H	115	28.0	21.5

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

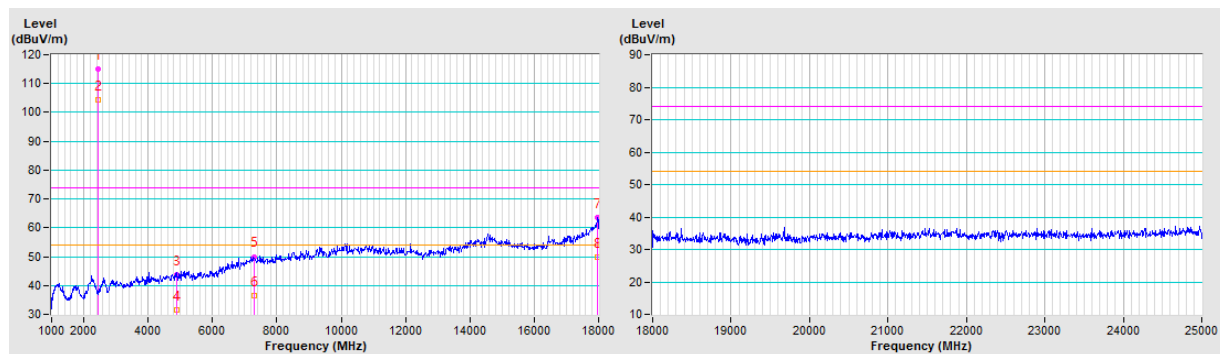


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	115.1 PK			1.23 V	76	118.1	-3.0
2	*2437.00	104.5 AV			1.23 V	76	107.5	-3.0
3	4874.00	43.8 PK	74.0	-30.2	1.14 V	301	42.2	1.6
4	4874.00	31.6 AV	54.0	-22.4	1.14 V	301	30.0	1.6
5	7311.00	50.0 PK	74.0	-24.0	1.43 V	192	42.3	7.7
6	7311.00	36.6 AV	54.0	-17.4	1.43 V	192	28.9	7.7
7	17969.40	63.5 PK	74.0	-10.5	1.98 V	285	42.1	21.4
8	17969.40	49.7 AV	54.0	-4.3	1.98 V	285	28.3	21.4

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

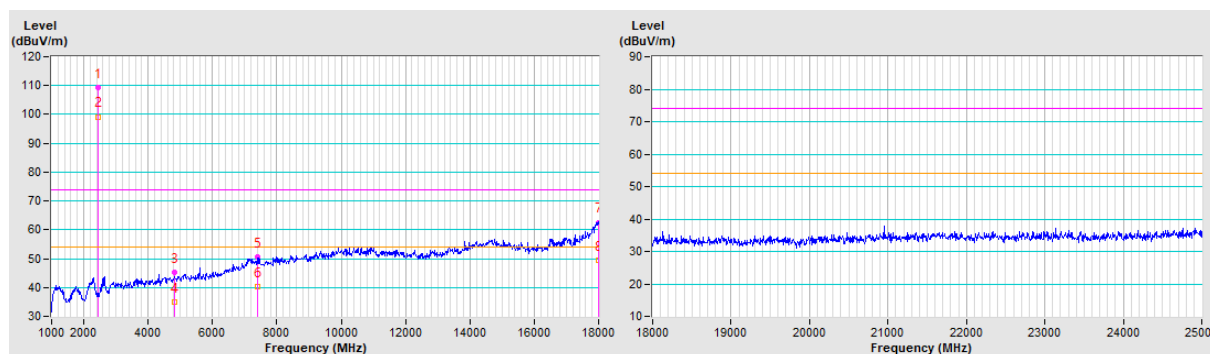


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	109.4 PK			1.45 H	187	112.4	-3.0
2	*2462.00	99.2 AV			1.45 H	187	102.2	-3.0
3	4824.00	45.4 PK	74.0	-28.6	2.54 H	343	43.8	1.6
4	4824.00	35.0 AV	54.0	-19.0	2.54 H	343	33.4	1.6
5	7386.00	50.5 PK	74.0	-23.5	1.93 H	225	42.6	7.9
6	7386.00	40.2 AV	54.0	-13.8	1.93 H	225	32.3	7.9
7	17997.45	62.6 PK	74.0	-11.4	1.43 H	155	40.7	21.9
8	17997.45	49.5 AV	54.0	-4.5	1.43 H	155	27.6	21.9

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

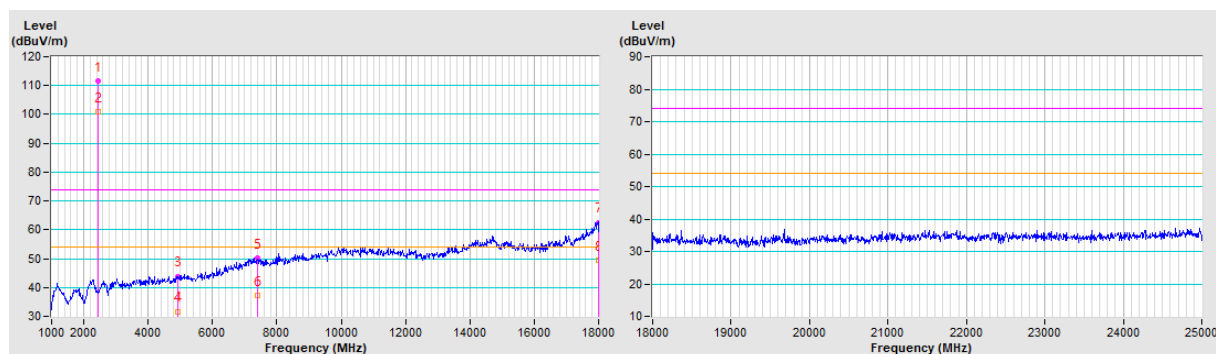


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	111.6 PK			1.26 V	62	114.6	-3.0
2	*2462.00	100.8 AV			1.26 V	62	103.8	-3.0
3	4924.00	43.9 PK	74.0	-30.1	1.09 V	311	42.2	1.7
4	4924.00	31.7 AV	54.0	-22.3	1.09 V	311	30.0	1.7
5	7386.00	50.2 PK	74.0	-23.8	1.49 V	174	42.3	7.9
6	7386.00	37.1 AV	54.0	-16.9	1.49 V	174	29.2	7.9
7	17989.37	62.6 PK	74.0	-11.4	2.14 V	314	40.9	21.7
8	17989.37	49.5 AV	54.0	-4.5	2.14 V	314	27.8	21.7

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

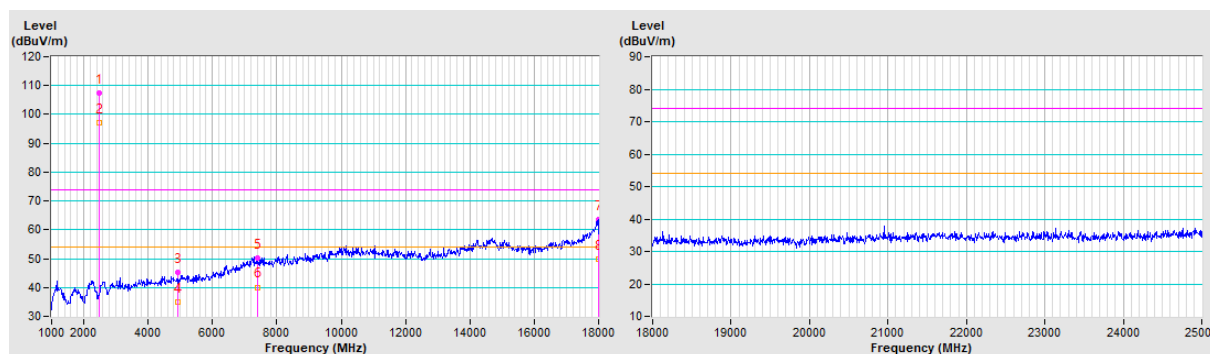


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2467.00	107.4 PK			1.15 H	40	110.3	-2.9
2	*2467.00	97.0 AV			1.15 H	40	99.9	-2.9
3	4934.00	45.3 PK	74.0	-28.7	2.57 H	360	43.5	1.8
4	4934.00	34.9 AV	54.0	-19.1	2.57 H	360	33.1	1.8
5	7401.00	50.3 PK	74.0	-23.7	1.97 H	201	42.4	7.9
6	7401.00	40.1 AV	54.0	-13.9	1.97 H	201	32.2	7.9
7	17990.22	63.7 PK	74.0	-10.3	1.46 H	169	41.9	21.8
8	17990.22	49.7 AV	54.0	-4.3	1.46 H	169	27.9	21.8

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency

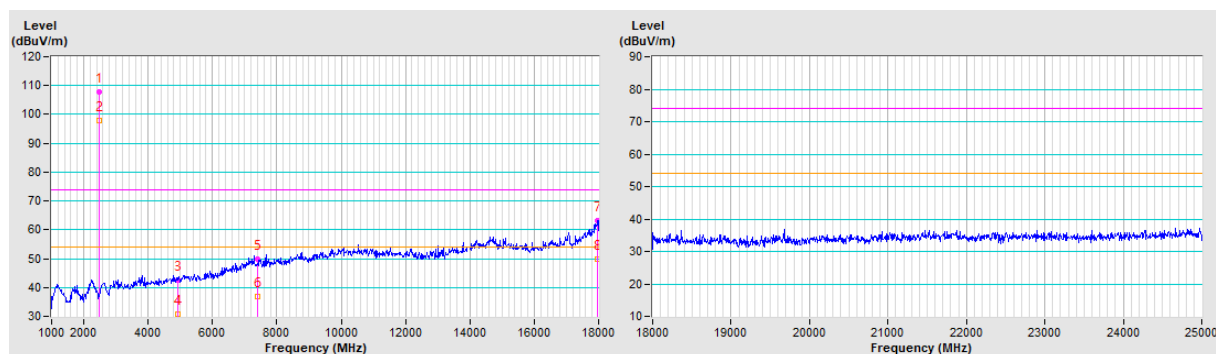


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2467.00	107.7 PK			1.28 V	116	110.6	-2.9
2	*2467.00	97.9 AV			1.28 V	116	100.8	-2.9
3	4934.00	42.4 PK	74.0	-31.6	1.14 V	302	40.6	1.8
4	4934.00	30.8 AV	54.0	-23.2	1.14 V	302	29.0	1.8
5	7401.00	49.8 PK	74.0	-24.2	1.45 V	184	41.9	7.9
6	7401.00	36.9 AV	54.0	-17.1	1.45 V	184	29.0	7.9
7	17979.17	63.1 PK	74.0	-10.9	1.95 V	360	41.6	21.5
8	17979.17	49.9 AV	54.0	-4.1	1.95 V	360	28.4	21.5

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

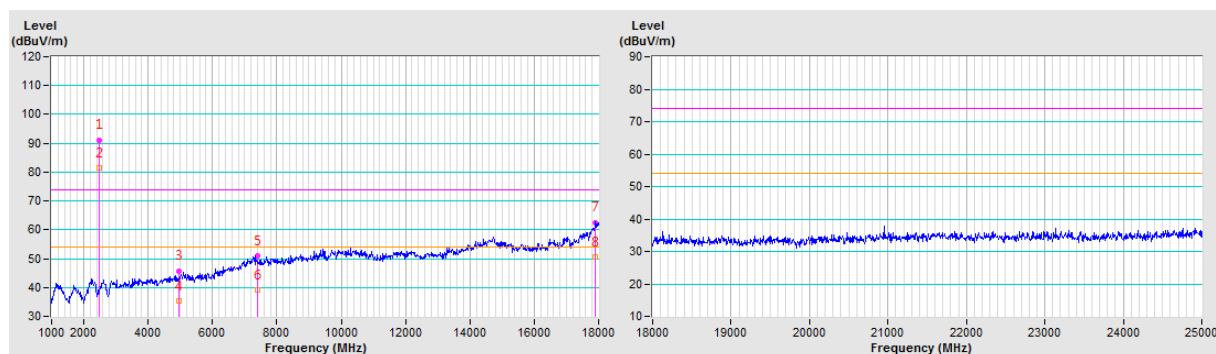


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2472.00	91.2 PK			1.36 H	46	94.1	-2.9
2	*2472.00	81.6 AV			1.36 H	46	84.5	-2.9
3	4944.00	45.8 PK	74.0	-28.2	2.51 H	360	43.9	1.9
4	4944.00	35.3 AV	54.0	-18.7	2.51 H	360	33.4	1.9
5	7416.00	50.8 PK	74.0	-23.2	2.51 H	360	42.8	8.0
6	7416.00	39.3 AV	54.0	-14.7	2.51 H	360	31.3	8.0
7	17892.10	62.6 PK	74.0	-11.4	1.65 H	267	42.7	19.9
8	17892.10	50.5 AV	54.0	-3.5	1.65 H	267	30.6	19.9

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

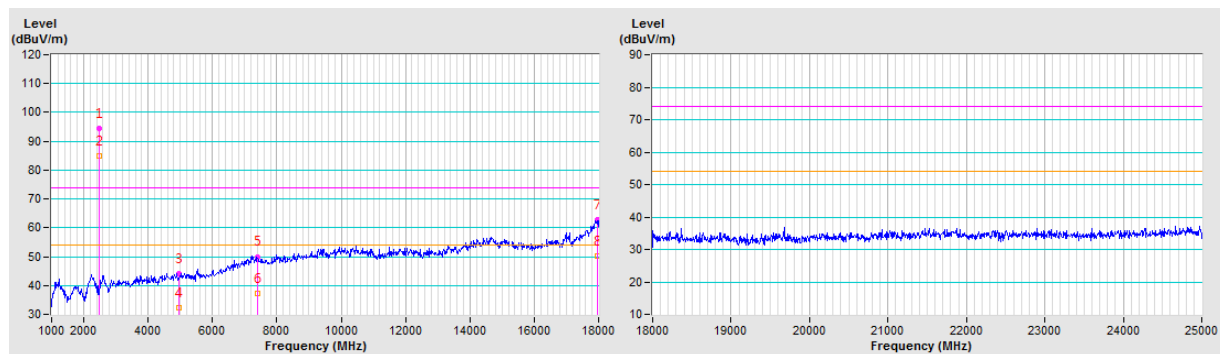


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

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	*2472.00	94.3 PK			1.37 V	81	97.2	-2.9
2	*2472.00	85.0 AV			1.37 V	81	87.9	-2.9
3	4944.00	44.0 PK	74.0	-30.0	1.18 V	288	42.1	1.9
4	4944.00	32.1 AV	54.0	-21.9	1.18 V	288	30.2	1.9
5	7416.00	50.0 PK	74.0	-24.0	1.40 V	182	42.0	8.0
6	7416.00	37.1 AV	54.0	-16.9	1.40 V	182	29.1	8.0
7	17954.98	62.7 PK	74.0	-11.3	1.36 V	255	41.6	21.1
8	17954.98	50.3 AV	54.0	-3.7	1.36 V	255	29.2	21.1

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
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency



4.1.8 Test Results for Bandedge above 1GHz

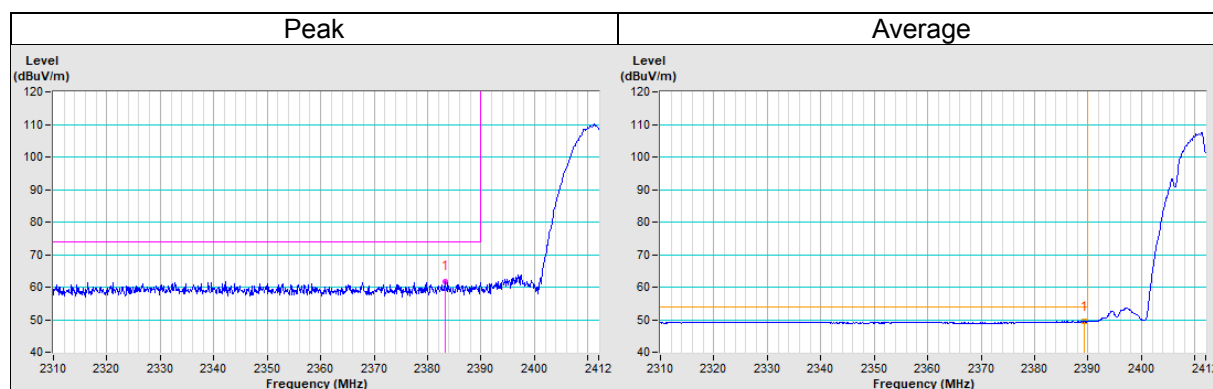
802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2412MHz		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)
PK.1	2383.20	61.7 PK	74.0	-12.3	1.52 H	186	64.4	-2.7
AV.1	2389.37	49.4 AV	54.0	-4.6	1.52 H	186	52.1	-2.7

Remarks:

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

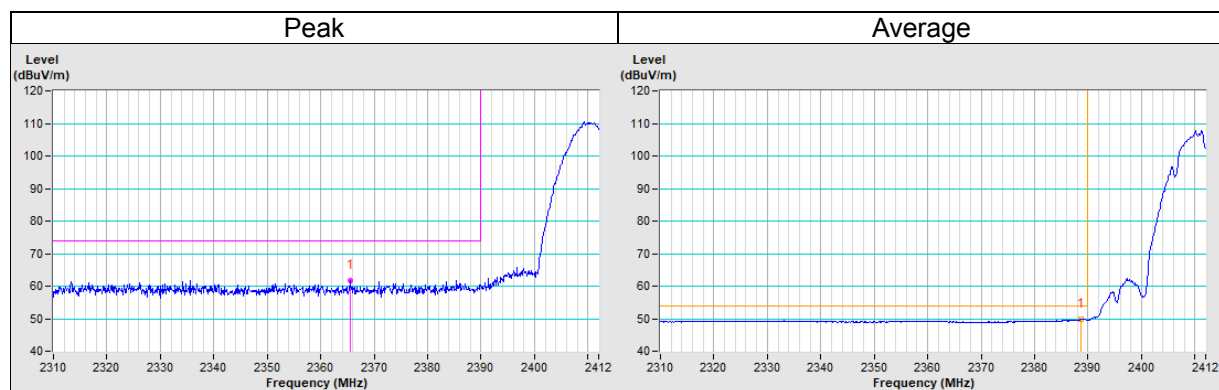


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2412MHz		Average (AV)

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)
PK.1	2365.57	61.8 PK	74.0	-12.2	1.54 V	48	64.4	-2.6
AV.1	2388.74	50.0 AV	54.0	-4.0	1.54 V	48	52.7	-2.7

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

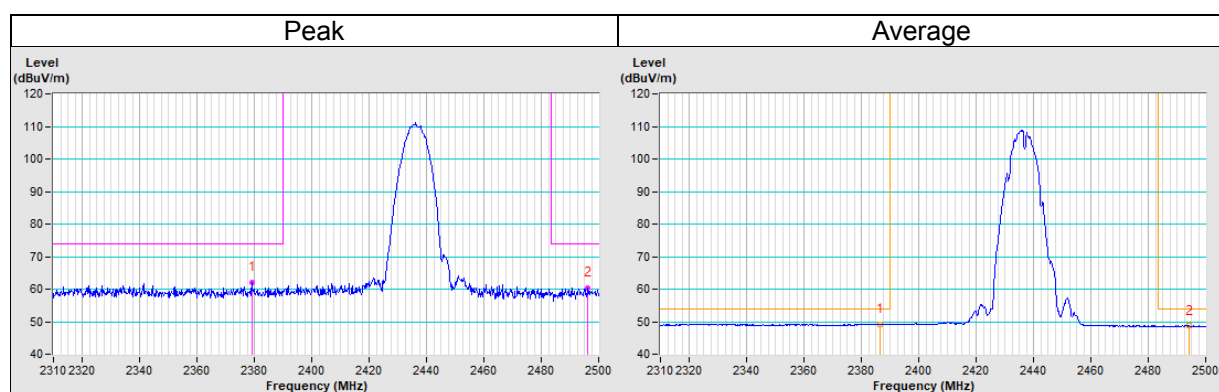


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2500MHz		Average (AV)

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)
PK.1	2379.32	62.0 PK	74.0	-12.0	1.47 H	186	64.6	-2.6
PK.2	2496.31	60.3 PK	74.0	-13.7	1.47 H	186	63.2	-2.9
AV.1	2386.49	49.3 AV	54.0	-4.7	1.47 H	186	52.0	-2.7
AV.2	2494.27	48.7 AV	54.0	-5.3	1.47 H	186	51.6	-2.9

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. The other emission levels were very low against the limit
4. Margin value = Emission Level – Limit value

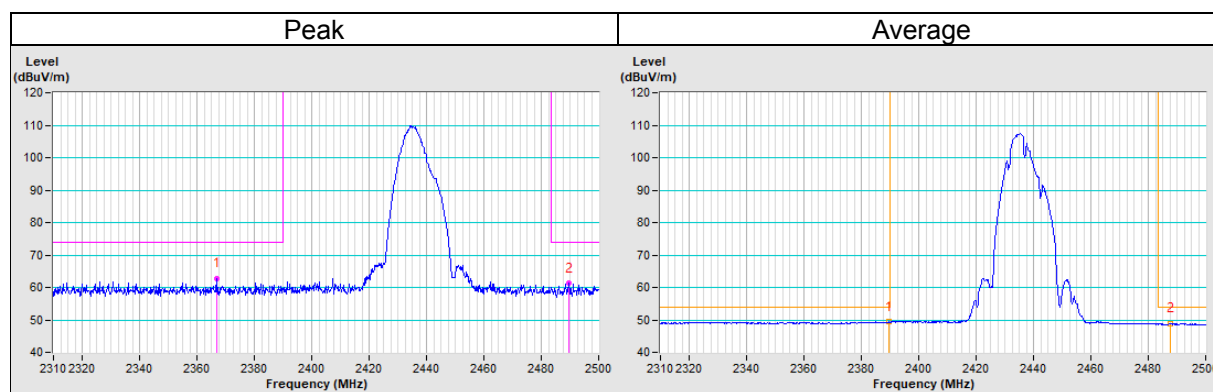


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2500MHz		Average (AV)

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)
PK.1	2366.95	62.7 PK	74.0	-11.3	1.71 V	55	65.3	-2.6
PK.2	2489.55	61.2 PK	74.0	-12.8	1.71 V	55	64.1	-2.9
AV.1	2389.60	49.4 AV	54.0	-4.6	1.71 V	55	52.1	-2.7
AV.2	2487.61	48.8 AV	54.0	-5.2	1.71 V	55	51.7	-2.9

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. The other emission levels were very low against the limit
4. Margin value = Emission Level – Limit value

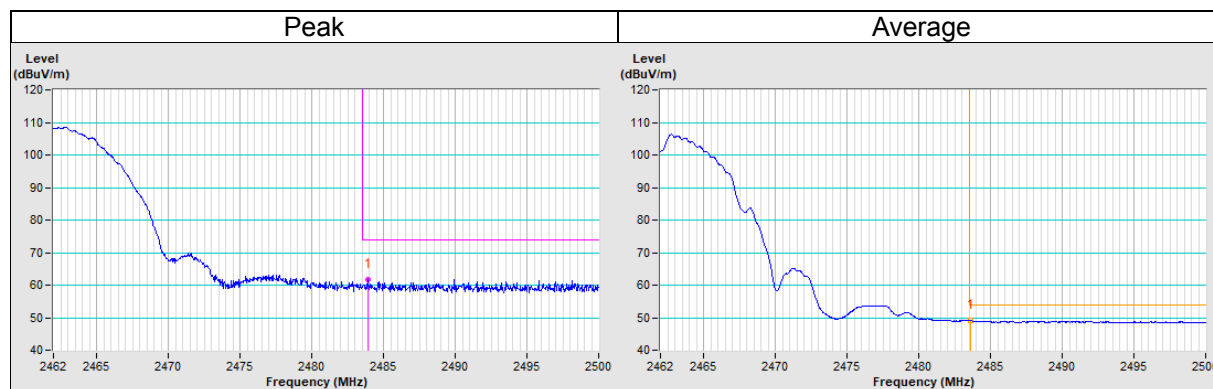


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.90	61.8 PK	74.0	-12.2	1.45 H	186	64.8	-3.0
AV.1	2483.62	49.1 AV	54.0	-4.9	1.45 H	186	52.1	-3.0

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

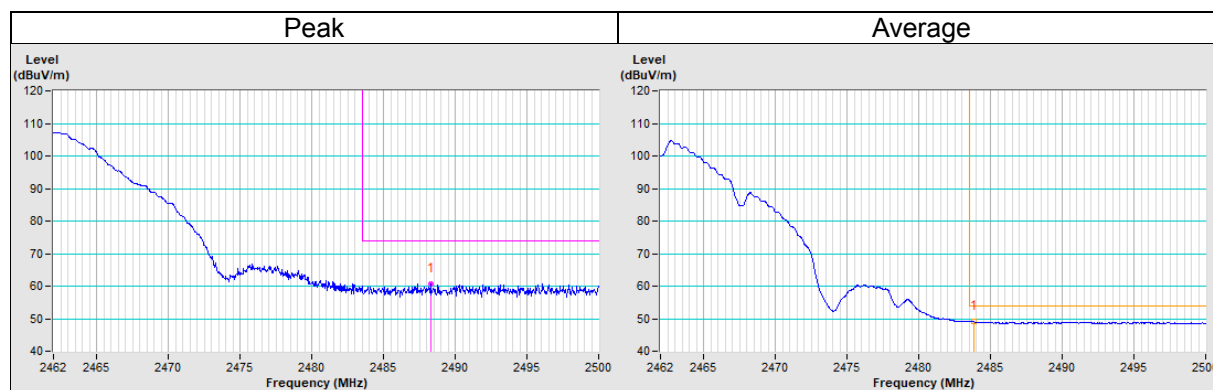


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2488.30	60.7 PK	74.0	-13.3	1.98 V	44	63.6	-2.9
AV.1	2483.81	49.2 AV	54.0	-4.8	1.98 V	44	52.2	-3.0

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

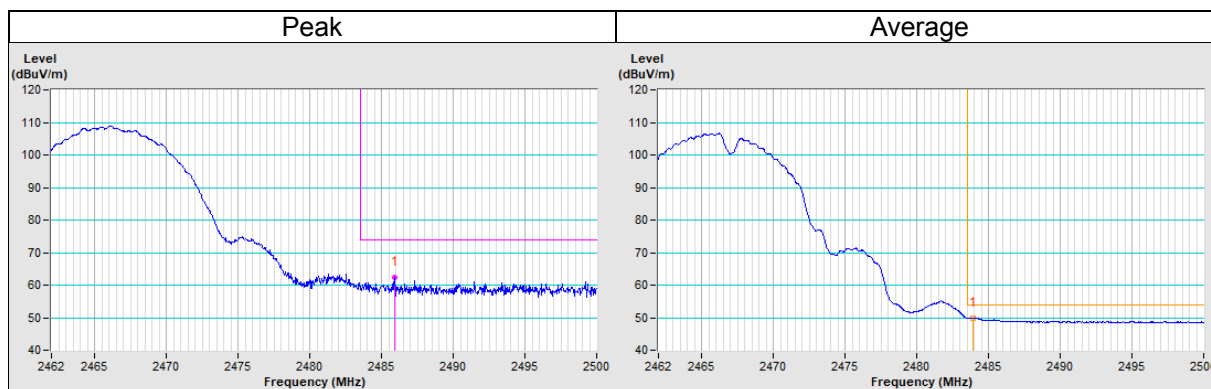


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2485.92	62.5 PK	74.0	-11.5	1.42 H	187	65.4	-2.9
AV.1	2483.95	50.0 AV	54.0	-4.0	1.42 H	187	53.0	-3.0

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

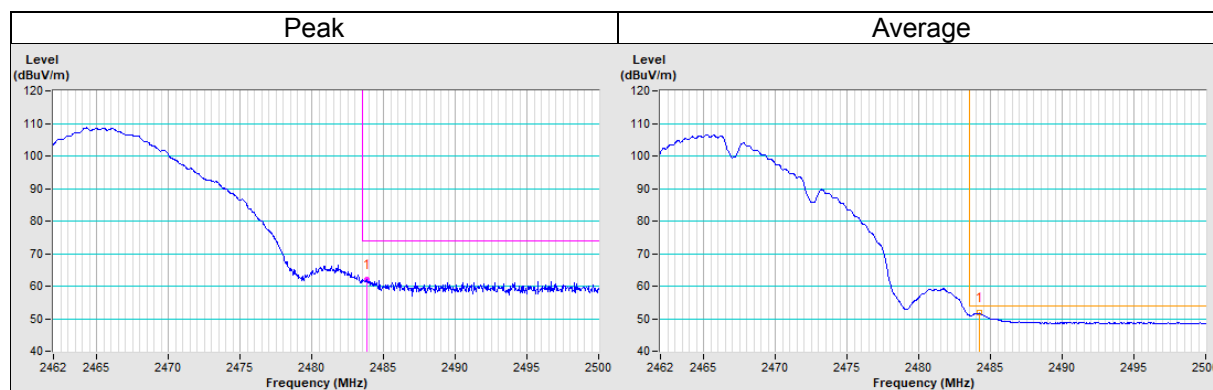


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.86	61.9 PK	74.0	-12.1	1.96 V	42	64.9	-3.0
AV.1	2484.24	51.7 AV	54.0	-2.3	1.96 V	42	54.7	-3.0

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

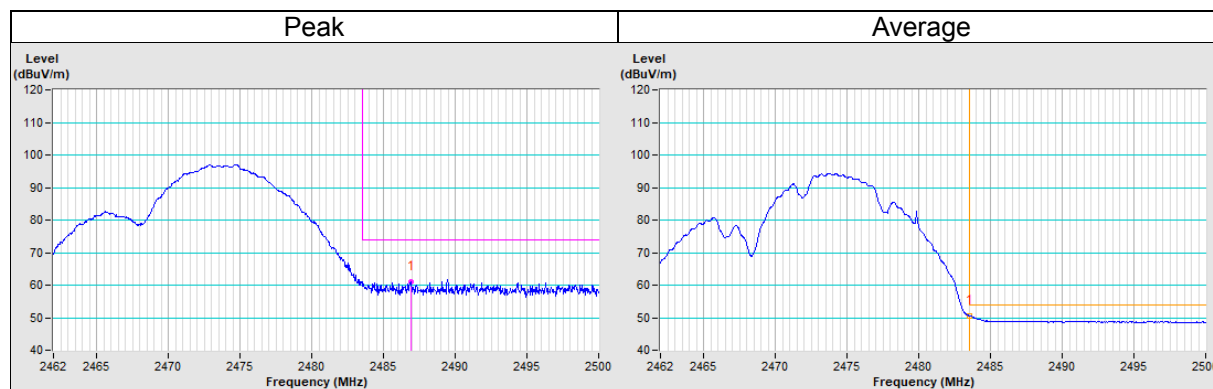


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2486.91	61.0 PK	74.0	-13.0	1.07 H	211	63.9	-2.9
AV.1	2483.50	50.5 AV	54.0	-3.5	1.07 H	211	53.5	-3.0

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

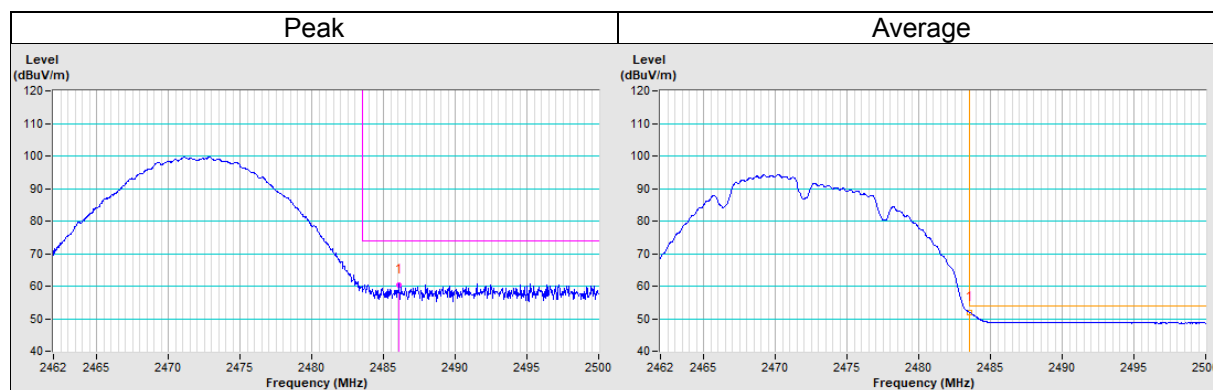


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2486.10	60.5 PK	74.0	-13.5	1.55 V	229	63.4	-2.9
AV.1	2483.50	51.8 AV	54.0	-2.2	1.55 V	229	54.8	-3.0

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



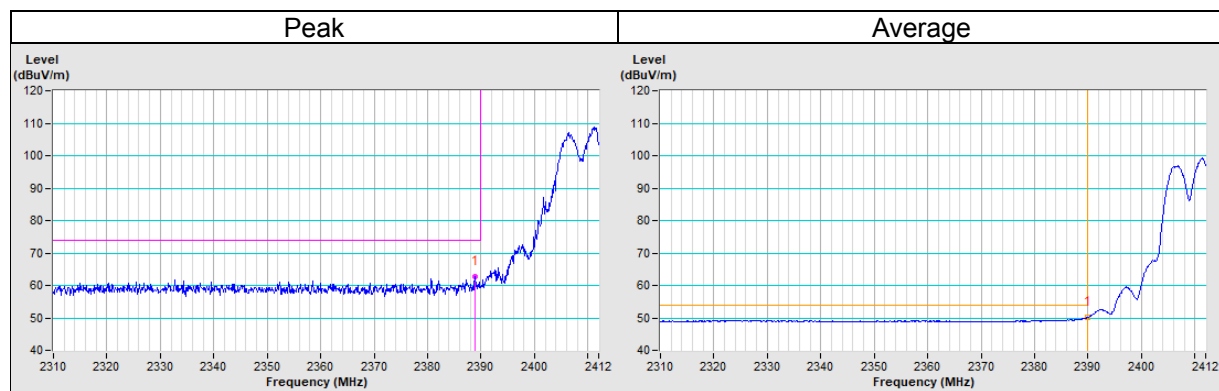
802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2412MHz		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)
PK.1	2388.90	62.8 PK	74.0	-11.2	1.50 H	186	65.5	-2.7
AV.1	2389.85	50.2 AV	54.0	-3.8	1.50 H	186	52.9	-2.7

Remarks:

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

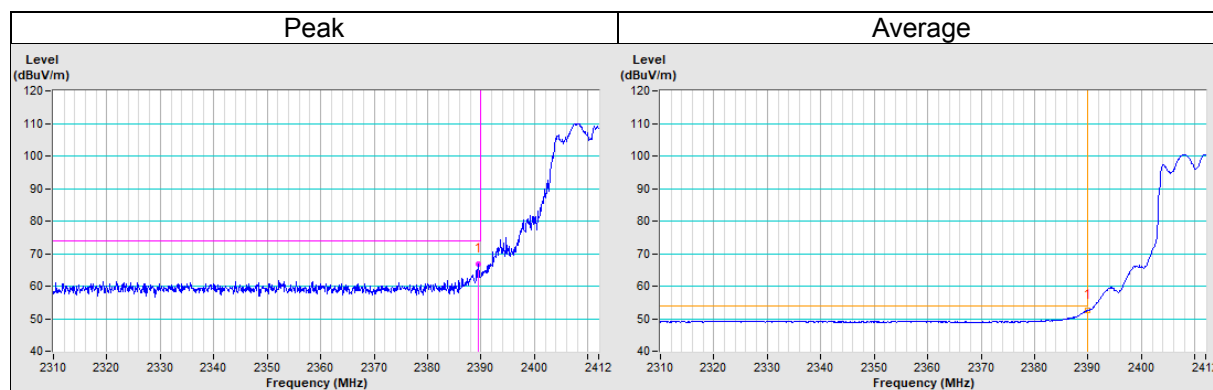


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2412MHz		Average (AV)

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)
PK.1	2389.55	66.8 PK	74.0	-7.2	1.48 V	61	69.5	-2.7
AV.1	2389.89	52.5 AV	54.0	-1.5	1.48 V	61	55.2	-2.7

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

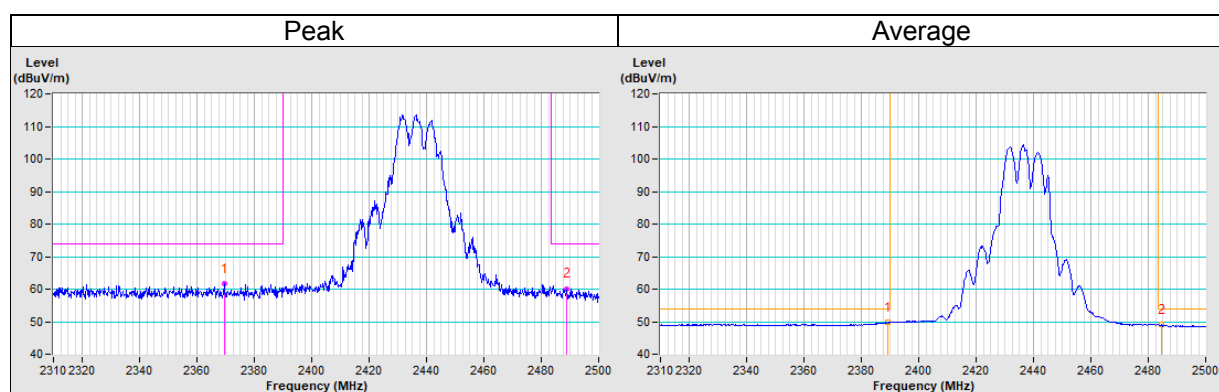


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2500MHz		Average (AV)

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)
PK.1	2369.47	61.6 PK	74.0	-12.4	1.46 H	187	64.2	-2.6
PK.2	2488.86	60.1 PK	74.0	-13.9	1.46 H	187	63.0	-2.9
AV.1	2389.21	49.7 AV	54.0	-4.3	1.46 H	187	52.4	-2.7
AV.2	2484.68	49.0 AV	54.0	-5.0	1.46 H	187	52.0	-3.0

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

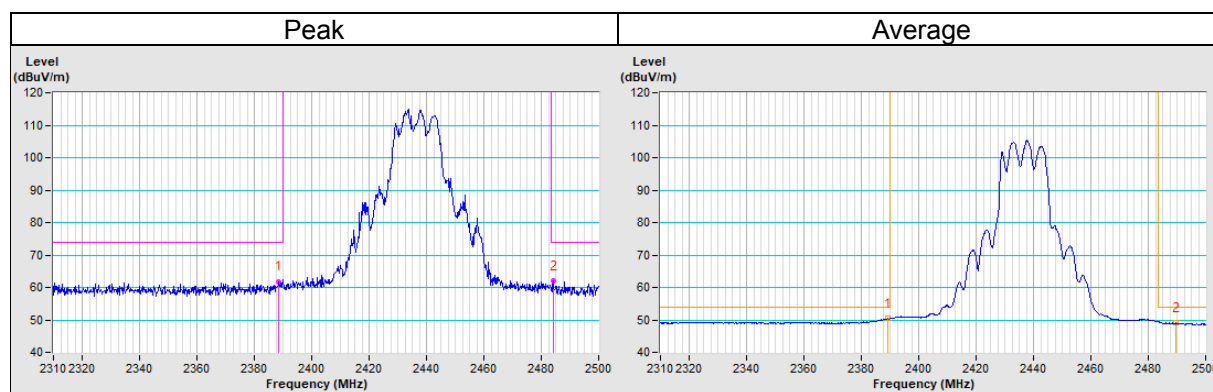


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2500MHz		Average (AV)

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)
PK.1	2388.62	61.7 PK	74.0	-12.3	1.24 V	62	64.4	-2.7
PK.2	2484.36	61.9 PK	74.0	-12.1	1.24 V	62	64.9	-3.0
AV.1	2389.25	50.4 AV	54.0	-3.6	1.24 V	62	53.1	-2.7
AV.2	2489.54	49.0 AV	54.0	-5.0	1.24 V	62	51.9	-2.9

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. The other emission levels were very low against the limit
4. Margin value = Emission Level – Limit value

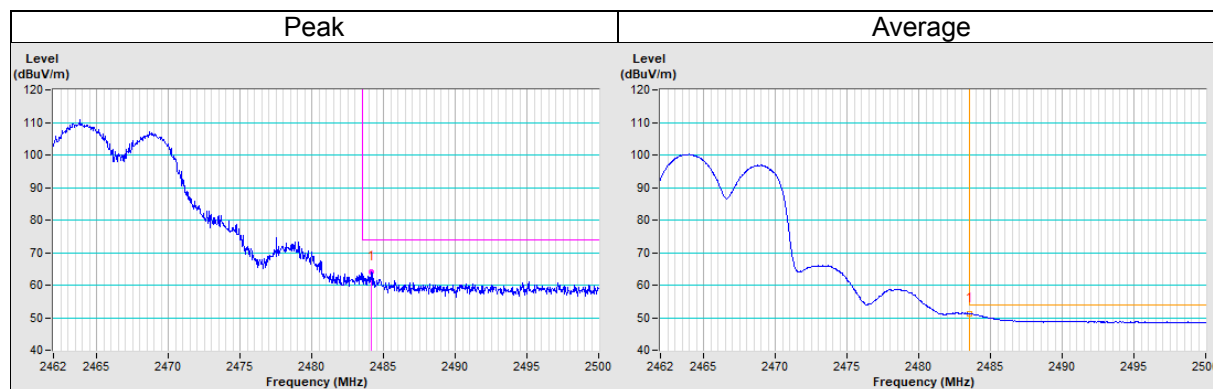


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2484.14	64.0 PK	74.0	-10.0	1.45 H	186	67.0	-3.0
AV.1	2483.50	51.3 AV	54.0	-2.7	1.45 H	186	54.3	-3.0

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

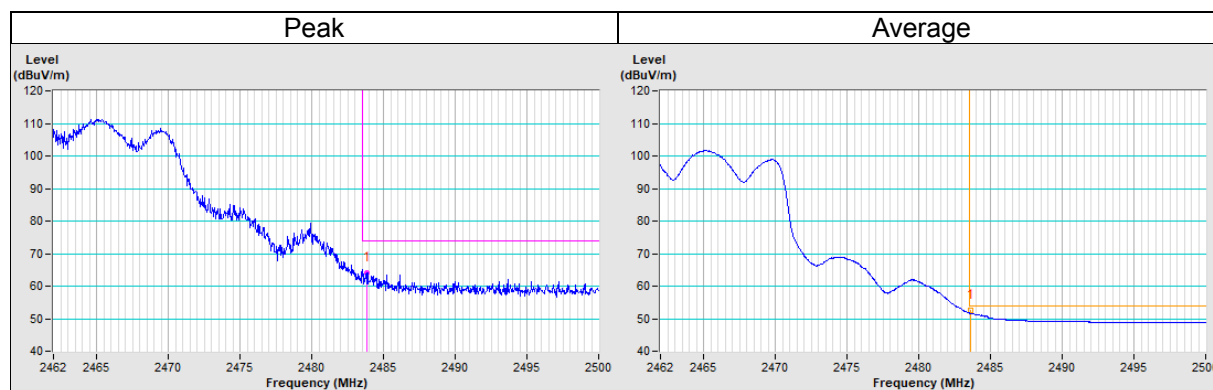


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.87	64.1 PK	74.0	-9.9	1.44 V	67	67.1	-3.0
AV.1	2483.60	52.5 AV	54.0	-1.5	1.44 V	67	55.5	-3.0

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

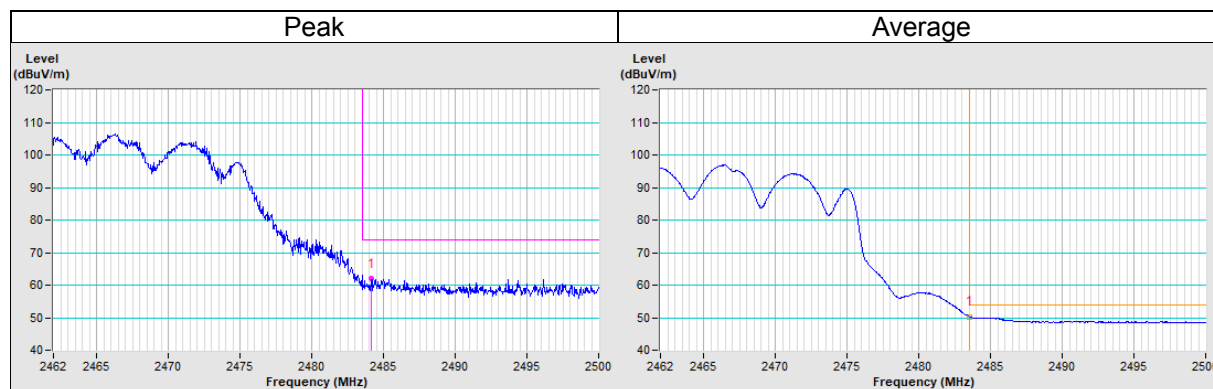


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2484.19	61.9 PK	74.0	-12.1	1.34 H	187	64.9	-3.0
AV.1	2483.50	50.1 AV	54.0	-3.9	1.34 H	187	53.1	-3.0

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

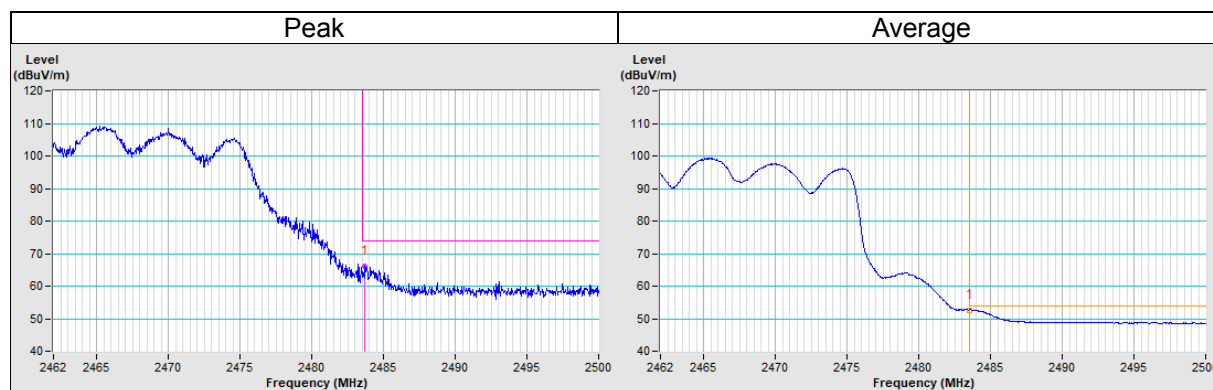


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.72	66.1 PK	74.0	-7.9	1.38 V	60	69.1	-3.0
AV.1	2483.54	52.5 AV	54.0	-1.5	1.38 V	60	55.5	-3.0

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

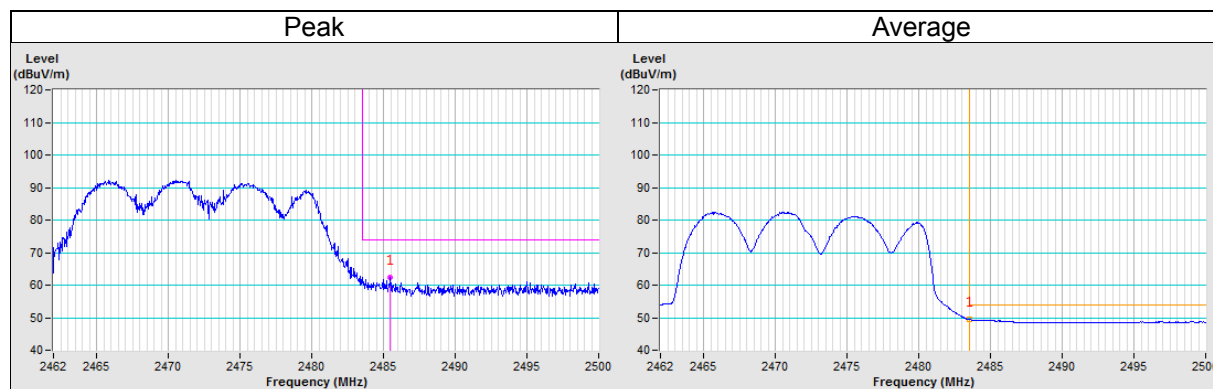


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2485.47	62.5 PK	74.0	-11.5	1.36 H	44	65.4	-2.9
AV.1	2483.50	49.5 AV	54.0	-4.5	1.36 H	44	18.4	31.1

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
4. Margin value = Emission Level – Limit value

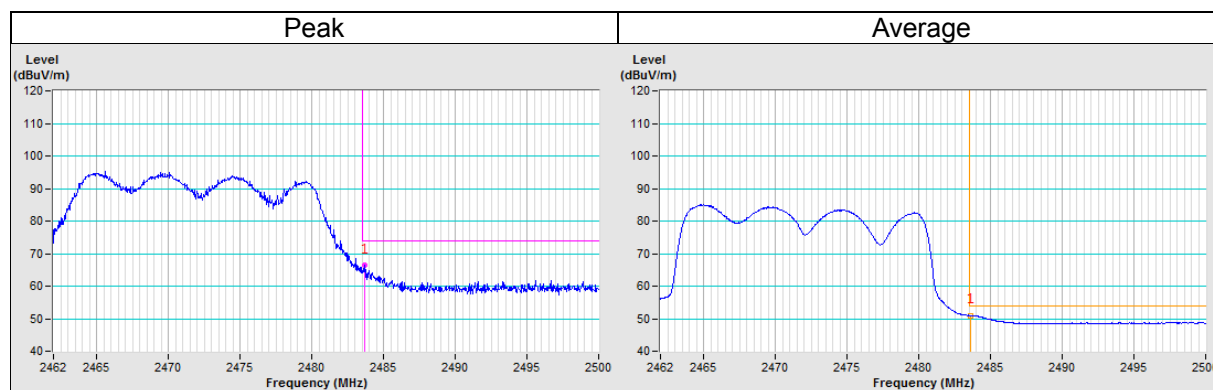


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.67	66.3 PK	74.0	-7.7	1.38 V	72	35.2	31.1
AV.1	2483.58	51.0 AV	54.0	-3.0	1.38 V	72	19.9	31.1

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
4. Margin value = Emission Level – Limit value



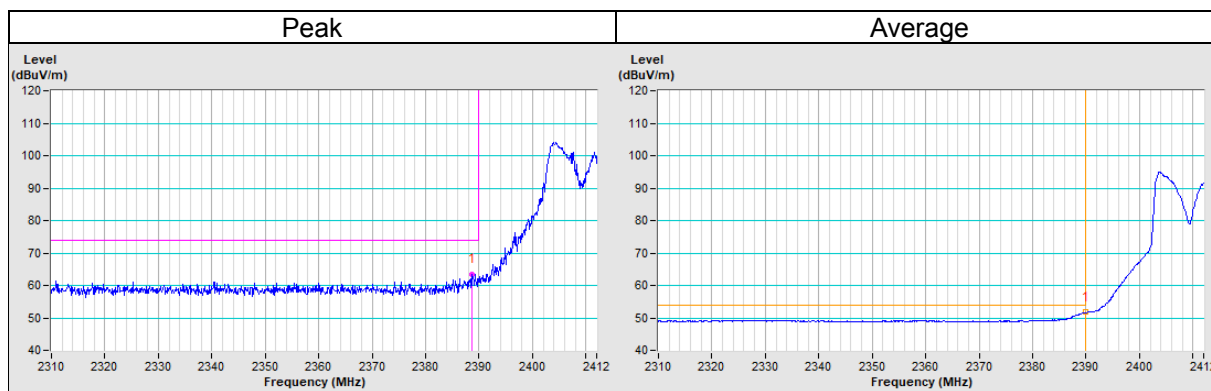
802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2412MHz		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)
PK.1	2388.76	63.5 PK	74.0	-10.5	1.47 H	185	66.2	-2.7
AV.1	2390.00	51.7 AV	54.0	-2.3	1.47 H	185	54.4	-2.7

Remarks:

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

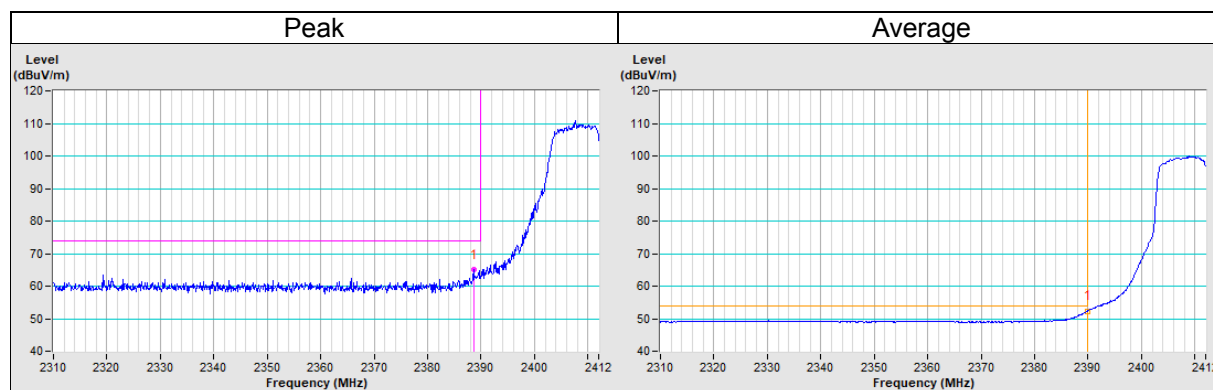


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2412MHz		Average (AV)

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)
PK.1	2388.59	65.0 PK	74.0	-9.0	1.60 V	48	67.7	-2.7
AV.1	2389.86	52.3 AV	54.0	-1.7	1.60 V	48	55.0	-2.7

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

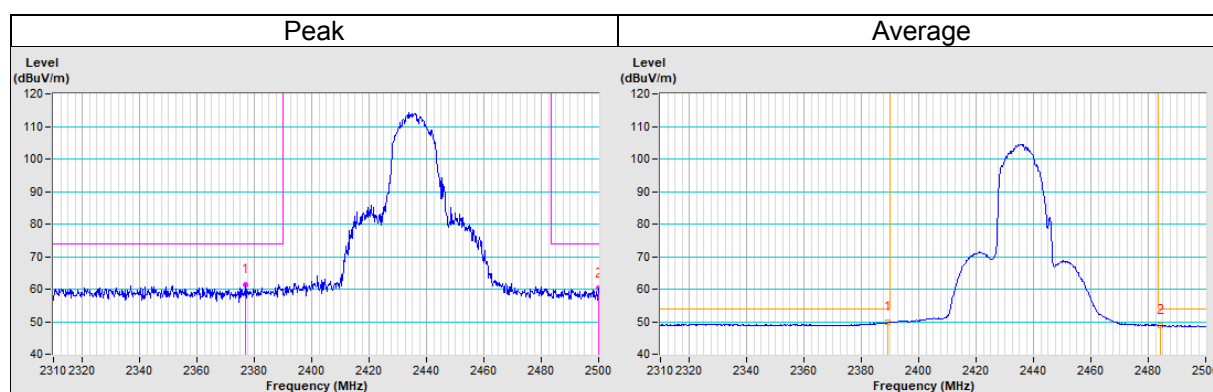


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2500MHz		Average (AV)

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)
PK.1	2377.10	61.3 PK	74.0	-12.7	1.47 H	186	63.9	-2.6
PK.2	2499.81	60.2 PK	74.0	-13.8	1.47 H	186	63.1	-2.9
AV.1	2389.14	49.9 AV	54.0	-4.1	1.47 H	186	52.6	-2.7
AV.2	2484.04	48.8 AV	54.0	-5.2	1.47 H	186	51.8	-3.0

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

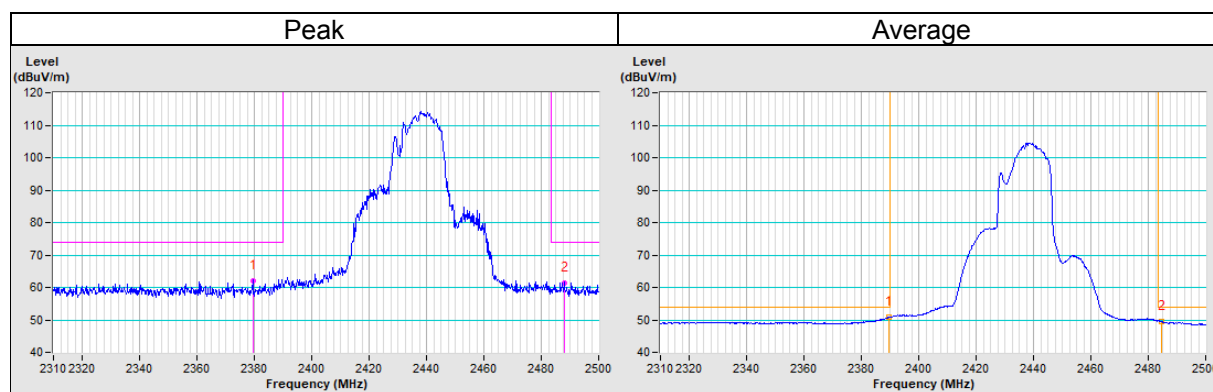


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2310MHz ~ 2500MHz		Average (AV)

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)
PK.1	2379.67	62.2 PK	74.0	-11.8	1.22 V	76	64.8	-2.6
PK.2	2487.98	61.5 PK	74.0	-12.5	1.22 V	76	64.4	-2.9
AV.1	2389.65	50.8 AV	54.0	-3.2	1.22 V	76	53.5	-2.7
AV.2	2484.52	49.5 AV	54.0	-4.5	1.22 V	76	52.5	-3.0

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

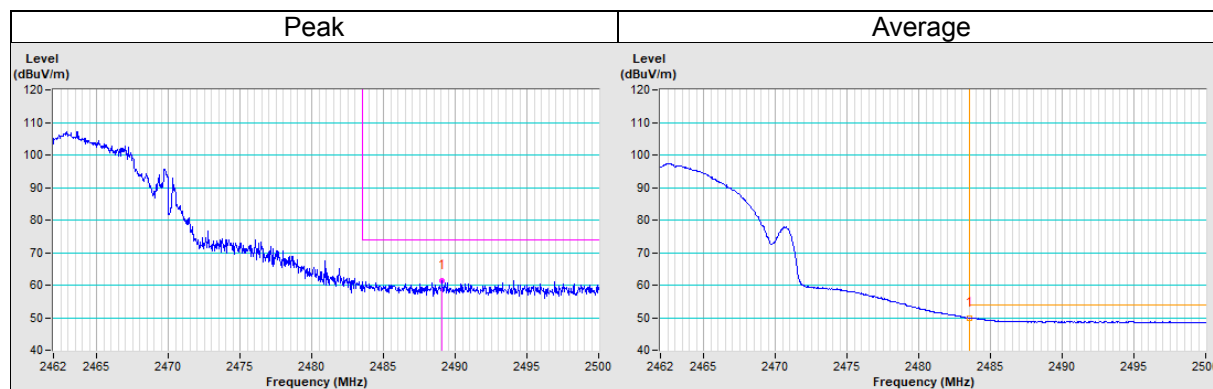


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2489.06	61.3 PK	74.0	-12.7	1.45 H	187	64.2	-2.9
AV.1	2483.50	50.0 AV	54.0	-4.0	1.45 H	187	53.0	-3.0

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

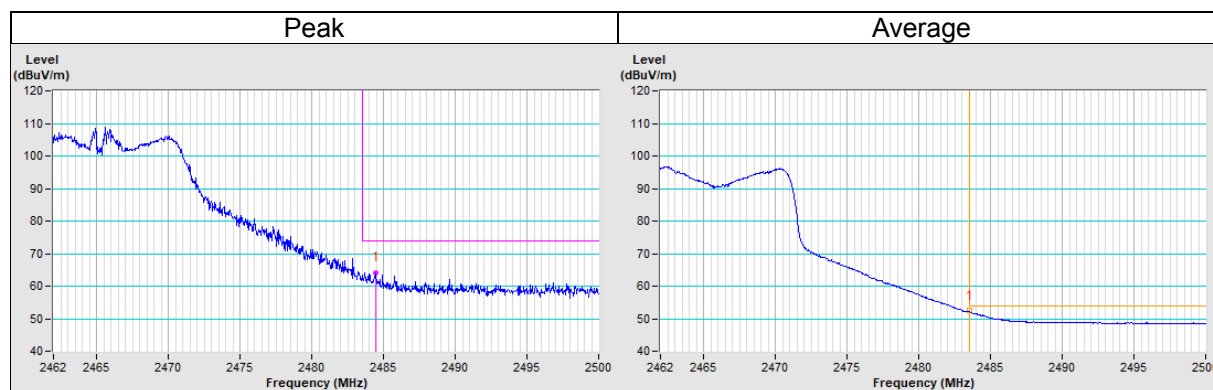


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2484.43	64.0 PK	74.0	-10.0	1.26 V	62	67.0	-3.0
AV.1	2483.50	52.4 AV	54.0	-1.6	1.26 V	62	55.4	-3.0

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

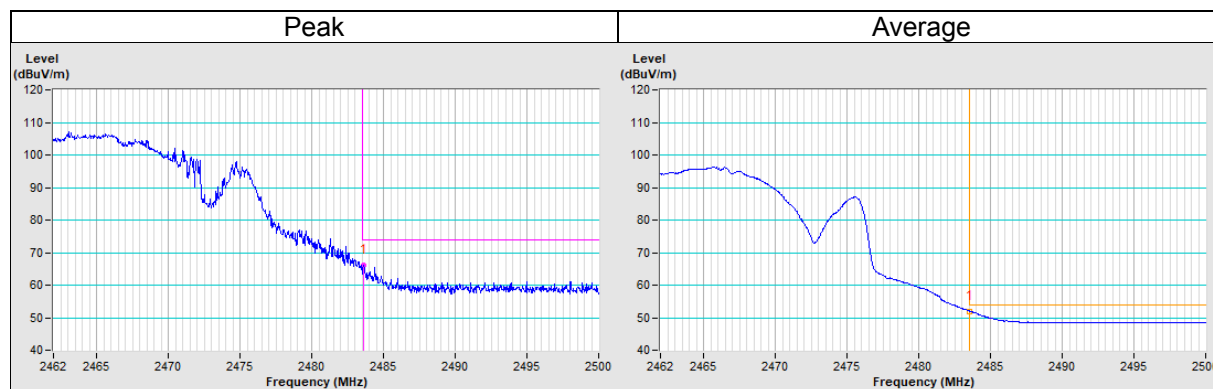


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.61	66.1 PK	74.0	-7.9	1.15 H	40	69.1	-3.0
AV.1	2483.57	52.0 AV	54.0	-2.0	1.15 H	40	55.0	-3.0

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

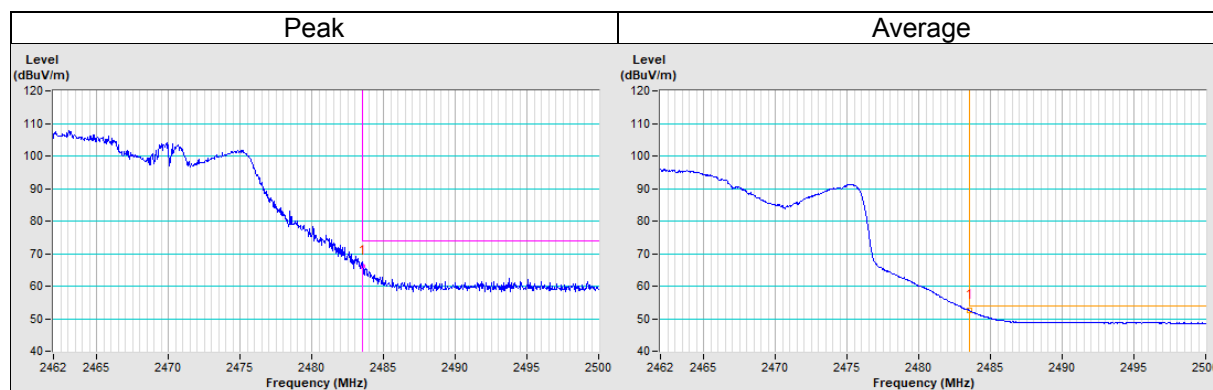


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.55	66.2 PK	74.0	-7.8	1.28 V	116	69.2	-3.0
AV.1	2483.54	52.5 AV	54.0	-1.5	1.28 V	116	55.5	-3.0

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

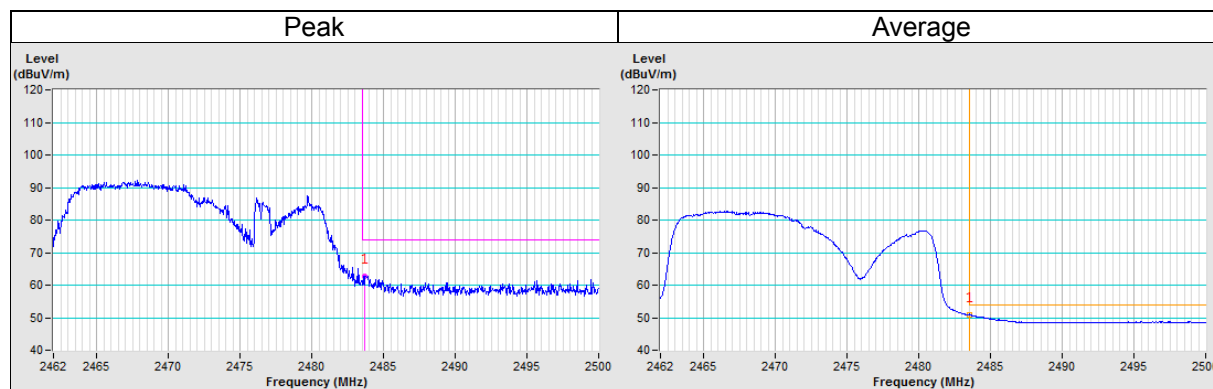


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.72	62.7 PK	74.0	-11.3	1.36 H	46	65.7	-3.0
AV.1	2483.57	50.8 AV	54.0	-3.2	1.36 H	46	53.8	-3.0

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

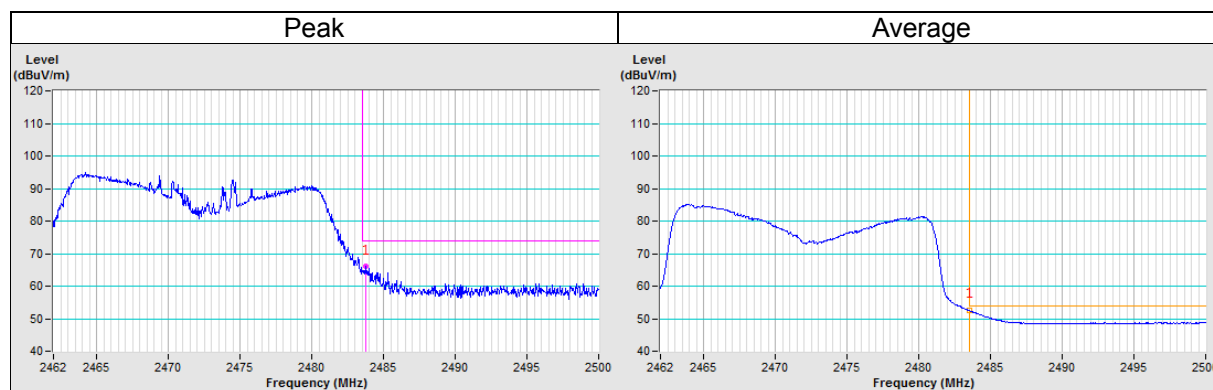


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	2462MHz ~ 2500MHz		Average (AV)

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)
PK.1	2483.74	66.0 PK	74.0	-8.0	1.37 V	81	34.9	31.1
AV.1	2483.54	52.5 AV	54.0	-1.5	1.37 V	81	21.4	31.1

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
4. Margin value = Emission Level – Limit value



4.1.9 Test Results for below 1GHz

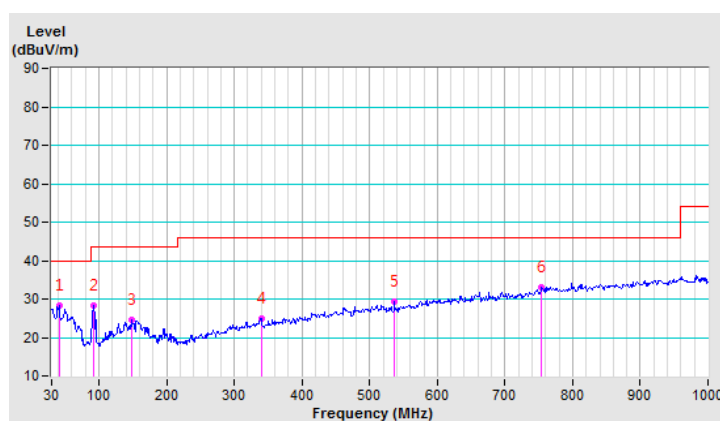
802.11g

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	40.67	28.3 PK	40.0	-11.7	3.00 H	151	36.5	-8.2
2	92.08	28.3 PK	43.5	-15.2	3.00 H	264	41.8	-13.5
3	148.34	24.5 PK	43.5	-19.0	2.50 H	117	32.1	-7.6
4	339.43	24.9 PK	46.0	-21.1	2.00 H	189	30.7	-5.8
5	536.34	29.3 PK	46.0	-16.7	1.50 H	203	30.7	-1.4
6	753.62	33.0 PK	46.0	-13.0	1.00 H	204	29.7	3.3

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
6. The PK detector measurement value is much smaller than the limit QP value, so the pass is determined

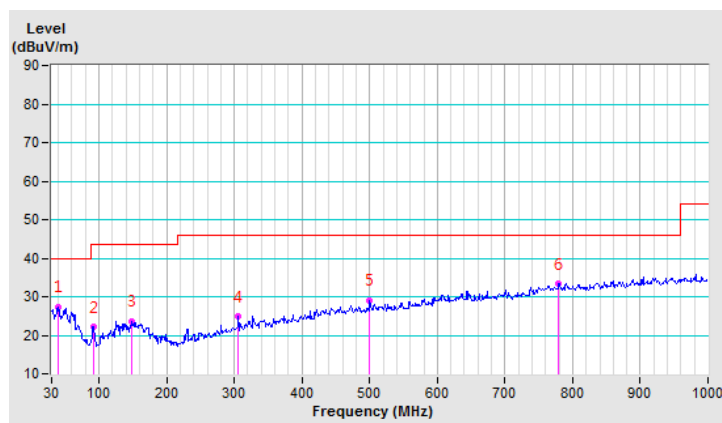


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	38.73	27.3 PK	40.0	-12.7	1.00 V	255	35.8	-8.5
2	91.11	22.1 PK	43.5	-21.4	1.00 V	308	35.7	-13.6
3	148.34	23.5 PK	43.5	-20.0	1.50 V	279	31.1	-7.6
4	305.48	24.8 PK	46.0	-21.2	1.50 V	319	31.5	-6.7
5	499.48	29.0 PK	46.0	-17.0	2.00 V	142	31.0	-2.0
6	779.81	33.3 PK	46.0	-12.7	2.00 V	26	29.6	3.7

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
6. The PK detector measurement value is much smaller than the limit QP value, so the pass is determined



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Sep. 03, 2018	Sep. 02, 2019
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 26, 2018	Feb. 25, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
Software ADT	BV ADT_Conc_ 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-2040.

4.2.3 Test Procedures

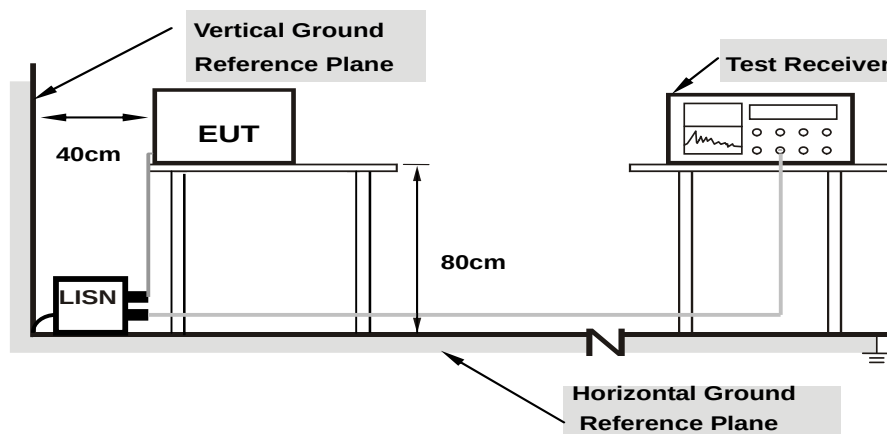
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

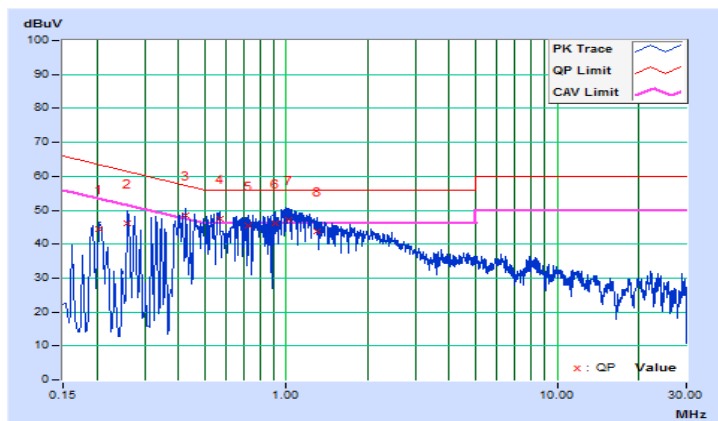
802.11g

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20474	9.72	34.74	20.50	44.46	30.22	63.42	53.42	-18.96	-23.20
2	0.25948	9.73	36.47	18.60	46.20	28.33	61.45	51.45	-15.25	-23.12
3	0.42761	9.75	38.80	20.32	48.55	30.07	57.30	47.30	-8.75	-17.23
4	0.57166	9.73	37.71	20.58	47.44	30.31	56.00	46.00	-8.56	-15.69
5	0.72656	9.71	35.80	14.66	45.51	24.37	56.00	46.00	-10.49	-21.63
6	0.90854	9.69	36.53	18.78	46.22	28.47	56.00	46.00	-9.78	-17.53
7	1.02193	9.68	37.58	20.42	47.26	30.10	56.00	46.00	-8.74	-15.90
8	1.29954	9.70	34.08	17.96	43.78	27.66	56.00	46.00	-12.22	-18.34

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.

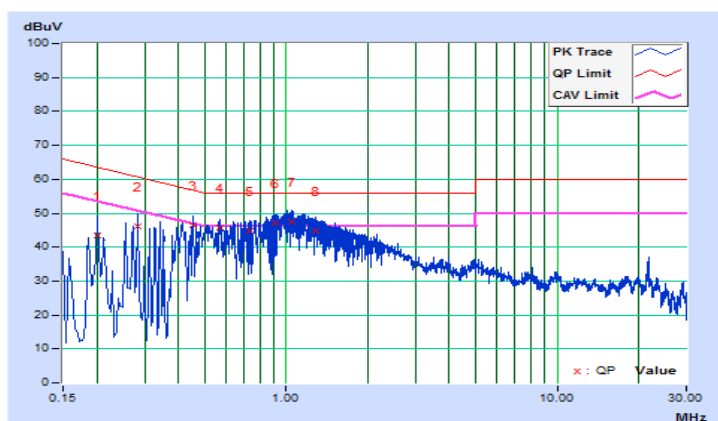


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20031	9.73	33.81	20.05	43.54	29.78	63.60	53.60	-20.06	-23.82
2	0.28294	9.74	36.23	17.57	45.97	27.31	60.73	50.73	-14.76	-23.42
3	0.45097	9.75	36.60	17.05	46.35	26.80	56.86	46.86	-10.51	-20.06
4	0.56837	9.74	36.04	20.43	45.78	30.17	56.00	46.00	-10.22	-15.83
5	0.73259	9.73	34.93	13.97	44.66	23.70	56.00	46.00	-11.34	-22.30
6	0.91636	9.72	37.33	20.91	47.05	30.63	56.00	46.00	-8.95	-15.37
7	1.04148	9.72	37.82	22.54	47.54	32.26	56.00	46.00	-8.46	-13.74
8	1.27999	9.72	34.94	22.66	44.66	32.38	56.00	46.00	-11.34	-13.62

Remarks:

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

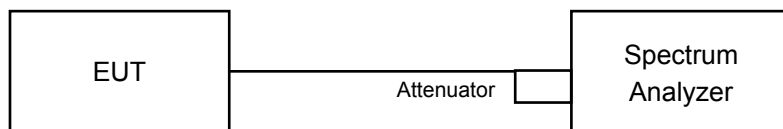


4.3 6dB Bandwidth Measurement

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

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
SPECTRUM ANALYZER R&S	FSP40	100041	Dec 12, 2017	Dec 11, 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.

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
		Chain 0	Chain 1		
1	2412	8.12	8.12	0.5	Pass
6	2437	8.13	8.13	0.5	Pass
11	2462	8.12	8.12	0.5	Pass
12	2467	8.10	8.61	0.5	Pass
13	2472	9.07	8.13	0.5	Pass

802.11g

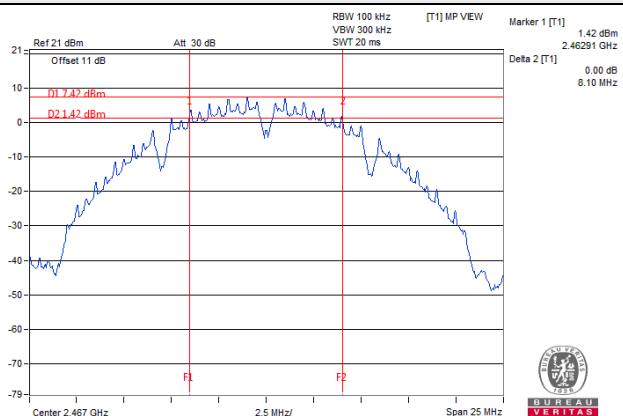
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	15.51	15.18	0.5	Pass
6	2437	15.77	15.70	0.5	Pass
11	2462	15.18	15.76	0.5	Pass
12	2467	15.34	16.31	0.5	Pass
13	2472	15.74	15.20	0.5	Pass

802.11n (HT20)

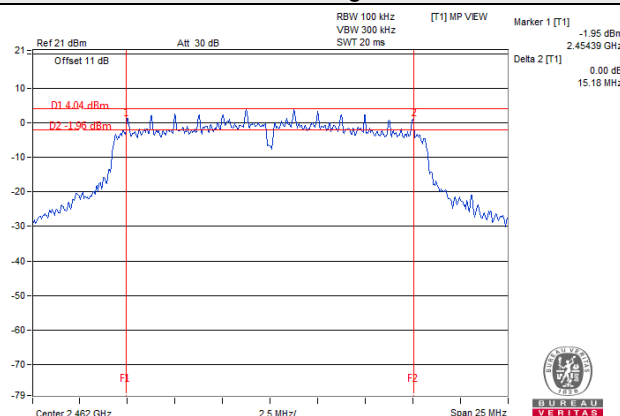
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.04	15.20	0.5	Pass
6	2437	16.05	16.35	0.5	Pass
11	2462	15.17	16.40	0.5	Pass
12	2467	15.97	16.94	0.5	Pass
13	2472	16.37	16.03	0.5	Pass

Spectrum Plot of Worst Value

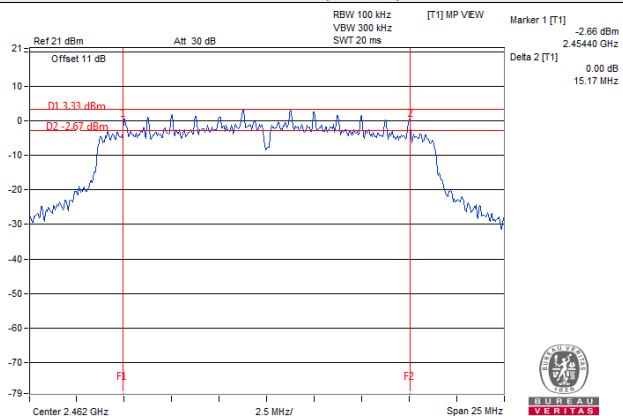
802.11b



802.11g



802.11n (HT20)



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

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

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

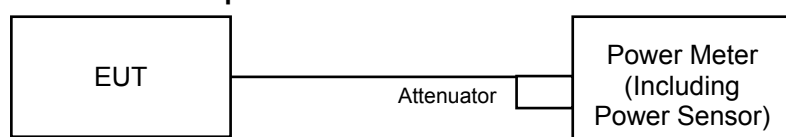
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.4.2 Test Setup



4.4.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
USB Wideband Power Meter KEYSIGHT	U2021XA	MY55050005/MY5519000 4/MY55190007/MY55210 005	Jul. 17, 2018	Jul. 16, 2019

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.4 Test Procedures

For Peak Power

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

For Average Power

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

The worst configuration mode is presented in the report as below. Please refer to SAR test report for more detail test mode.

Band		TX Antenna	WWAN Function	Body-Worn/Hotspot
WLAN	2.4G	Ant 0+1	WWAN-Off	Body-Worn/Hotspot

For Peak Power

Ant. 0 (SISO)

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	89.743	19.53	30.00	Pass
6	2437	82.414	19.16	30.00	Pass
11	2462	69.502	18.42	30.00	Pass
12	2467	63.387	18.02	30.00	Pass
13	2472	9.840	9.93	30.00	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	71.285	18.53	30.00	Pass
6	2437	130.617	21.16	30.00	Pass
11	2462	72.111	18.58	30.00	Pass
12	2467	34.914	15.43	30.00	Pass
13	2472	2.438	3.87	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	64.269	18.08	30.00	Pass
6	2437	121.899	20.86	30.00	Pass
11	2462	55.719	17.46	30.00	Pass
12	2467	34.834	15.42	30.00	Pass
13	2472	2.564	4.09	30.00	Pass

Ant. 1 (SISO)

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	91.833	19.63	30.00	Pass
6	2437	81.096	19.09	30.00	Pass
11	2462	70.632	18.49	30.00	Pass
12	2467	64.121	18.07	30.00	Pass
13	2472	9.638	9.84	30.00	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	73.114	18.64	30.00	Pass
6	2437	138.357	21.41	30.00	Pass
11	2462	70.958	18.51	30.00	Pass
12	2467	35.481	15.50	30.00	Pass
13	2472	2.564	4.09	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	71.285	18.53	30.00	Pass
6	2437	114.025	20.57	30.00	Pass
11	2462	56.234	17.50	30.00	Pass
12	2467	36.728	15.65	30.00	Pass
13	2472	2.710	4.33	30.00	Pass

Ant. 0 + 1 (MIMO)

802.11b

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	19.62	19.70	184.927	22.67	30.00	Pass
6	2437	19.27	19.16	167.109	22.23	30.00	Pass
11	2462	18.44	18.67	143.549	21.57	30.00	Pass
12	2467	18.22	18.19	132.434	21.22	30.00	Pass
13	2472	10.13	10.04	20.417	13.10	30.00	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.55	18.82	147.911	21.70	30.00	Pass
6	2437	21.32	21.51	277.332	24.43	30.00	Pass
11	2462	18.71	18.63	147.231	21.68	30.00	Pass
12	2467	15.47	15.63	71.779	18.56	30.00	Pass
13	2472	4.02	4.26	5.188	7.15	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.25	18.61	139.316	21.44	30.00	Pass
6	2437	20.98	20.62	240.436	23.81	30.00	Pass
11	2462	17.58	17.59	114.815	20.60	30.00	Pass
12	2467	15.45	15.69	72.111	18.58	30.00	Pass
13	2472	4.13	4.38	5.333	7.27	30.00	Pass

For Average Power

Ant. 0 (SISO)

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	52.966	17.24
6	2437	54.450	17.36
11	2462	38.019	15.80
12	2467	36.644	15.64
13	2472	5.248	7.20

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	23.768	13.76
6	2437	53.703	17.30
11	2462	25.942	14.14
12	2467	13.459	11.29
13	2472	0.743	-1.29

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	29.309	14.67
6	2437	55.081	17.41
11	2462	23.335	13.68
12	2467	14.757	11.69
13	2472	0.745	-1.28

Ant. 1 (SISO)

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	52.723	17.22
6	2437	53.088	17.25
11	2462	37.497	15.74
12	2467	36.392	15.61
13	2472	5.224	7.18

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	22.594	13.54
6	2437	52.602	17.21
11	2462	29.512	14.70
12	2467	13.274	11.23
13	2472	0.766	-1.16

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	29.107	14.64
6	2437	53.951	17.32
11	2462	20.654	13.15
12	2467	14.355	11.57
13	2472	0.767	-1.15

Ant. 0 + 1 (MIMO)

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	17.31	17.40	108.893	20.37
6	2437	17.32	17.42	109.144	20.38
11	2462	15.87	15.88	77.446	18.89
12	2467	15.76	15.70	74.817	18.74
13	2472	7.29	7.40	10.864	10.36

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	13.46	13.50	44.566	16.49
6	2437	17.32	17.49	110.154	20.42
11	2462	14.68	14.42	57.016	17.56
12	2467	11.64	11.65	29.242	14.66
13	2472	-1.18	-1.14	1.531	1.85

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	14.89	14.85	61.376	17.88
6	2437	17.86	17.80	121.339	20.84
11	2462	13.28	13.15	41.976	16.23
12	2467	11.76	11.72	29.854	14.75
13	2472	-1.17	-1.13	1.535	1.86

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

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
SPECTRUM ANALYZER R&S	FSP40	100041	Dec 12, 2017	Dec 11, 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.

4.5.4 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\geq 3 \times \text{RBW}$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as item 4.3.6

4.5.7 Test Results

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-0.43	3.01	2.58	8.00	Pass
	6	2437	-0.42	3.01	2.59	8.00	Pass
	11	2462	-1.38	3.01	1.63	8.00	Pass
	12	2467	-0.33	3.01	2.68	8.00	Pass
	13	2472	-1.52	3.01	1.49	8.00	Pass
1	1	2412	-0.43	3.01	2.58	8.00	Pass
	6	2437	-0.01	3.01	3.00	8.00	Pass
	11	2462	-2.85	3.01	0.16	8.00	Pass
	12	2467	-1.01	3.01	2.00	8.00	Pass
	13	2472	-0.38	3.01	2.63	8.00	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 = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 2.72\text{dBi} < 6\text{dBi}$, so the power density limit no need to reduce.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-13.09	3.01	-10.08	8.00	Pass
	6	2437	-12.83	3.01	-9.82	8.00	Pass
	11	2462	-11.81	3.01	-8.80	8.00	Pass
	12	2467	-14.51	3.01	-11.50	8.00	Pass
	13	2472	-26.18	3.01	-23.17	8.00	Pass
1	1	2412	-12.68	3.01	-9.67	8.00	Pass
	6	2437	-12.35	3.01	-9.34	8.00	Pass
	11	2462	-13.07	3.01	-10.06	8.00	Pass
	12	2467	-16.86	3.01	-13.85	8.00	Pass
	13	2472	-26.66	3.01	-23.65	8.00	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 = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 2.72\text{dBi} < 6\text{dBi}$, so the power density limit no need to reduce.

802.11n (HT20)

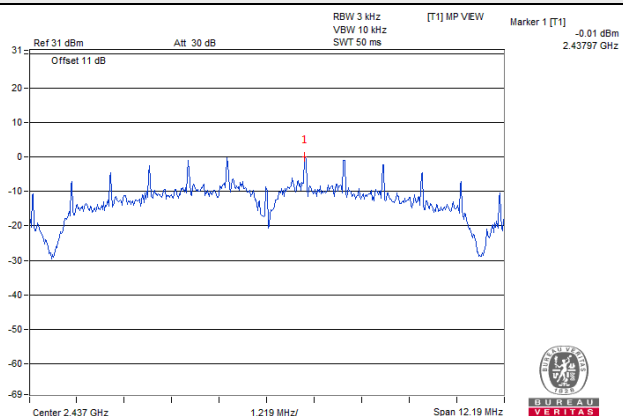
TX chain	Channel	Frequency (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-12.90	3.01	-9.89	8.00	Pass
	6	2437	-13.10	3.01	-10.09	8.00	Pass
	11	2462	-13.36	3.01	-10.35	8.00	Pass
	12	2467	-14.37	3.01	-11.36	8.00	Pass
	13	2472	-27.35	3.01	-24.34	8.00	Pass
1	1	2412	-12.71	3.01	-9.70	8.00	Pass
	6	2437	-12.83	3.01	-9.82	8.00	Pass
	11	2462	-13.49	3.01	-10.48	8.00	Pass
	12	2467	-16.69	3.01	-13.68	8.00	Pass
	13	2472	-27.47	3.01	-24.46	8.00	Pass

Note:

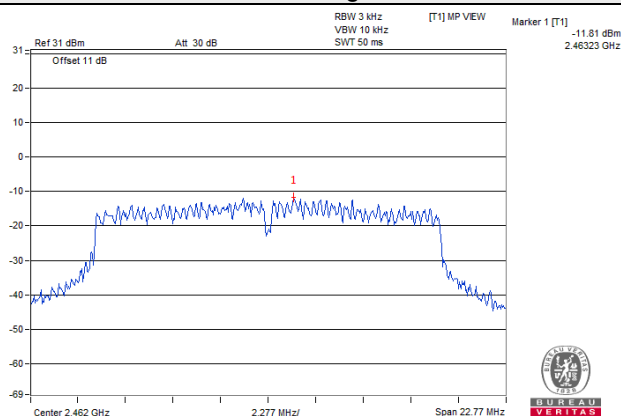
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 2.72\text{dBi} < 6\text{dBi}$, so the power density limit no need to reduce.

Spectrum Plot of Worst Value

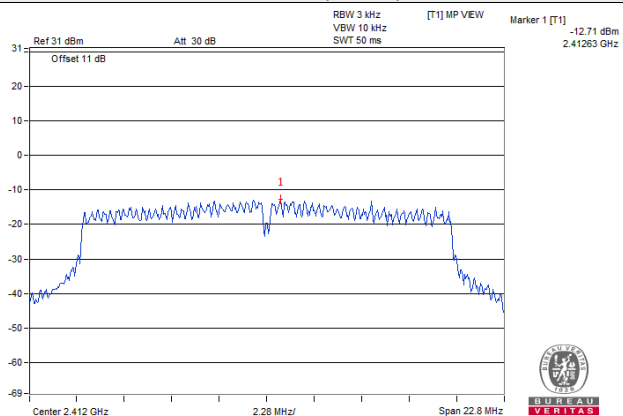
802.11b



802.11g



802.11n (HT20)



4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
SPECTRUM ANALYZER R&S	FSP40	100041	Dec 12, 2017	Dec 11, 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.

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

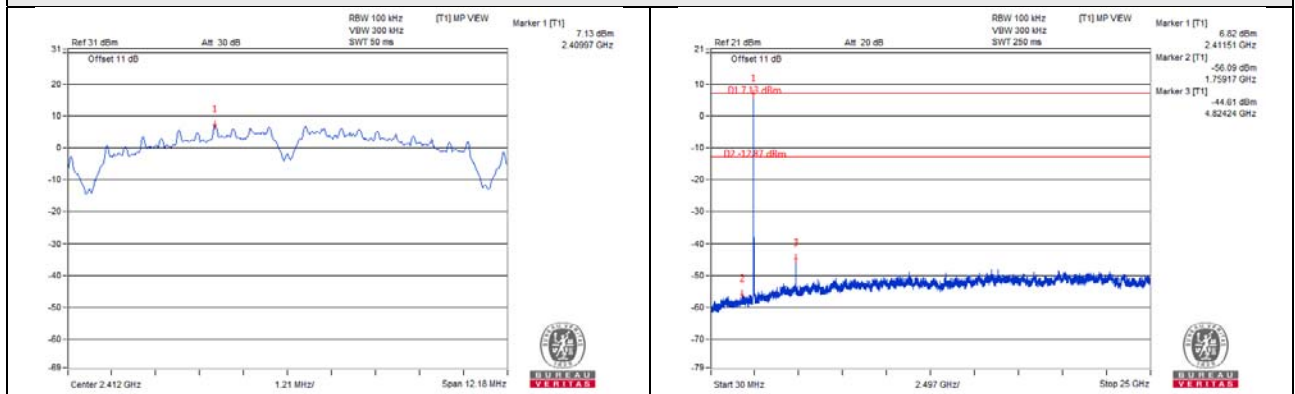
4.6.7 Test Results

The 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.

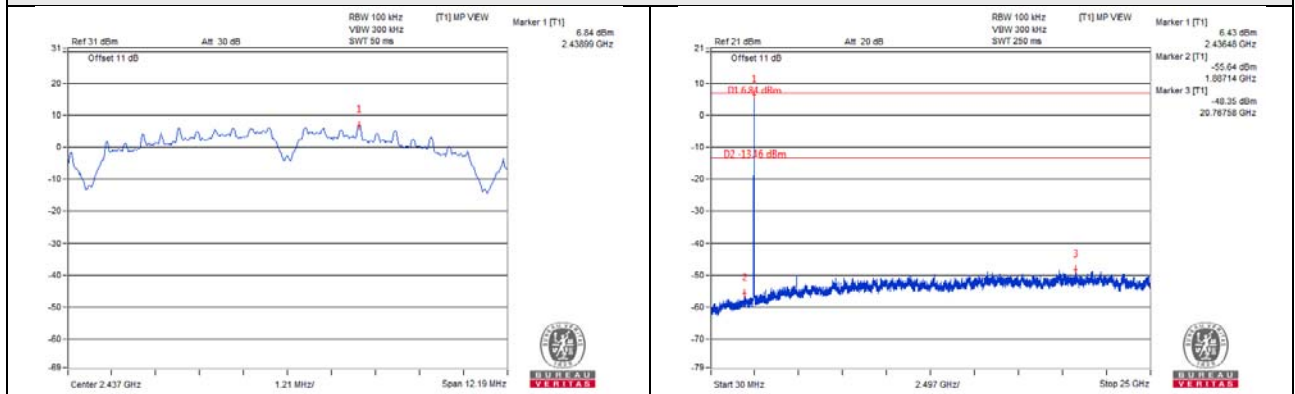
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

802.11b_Chain 0

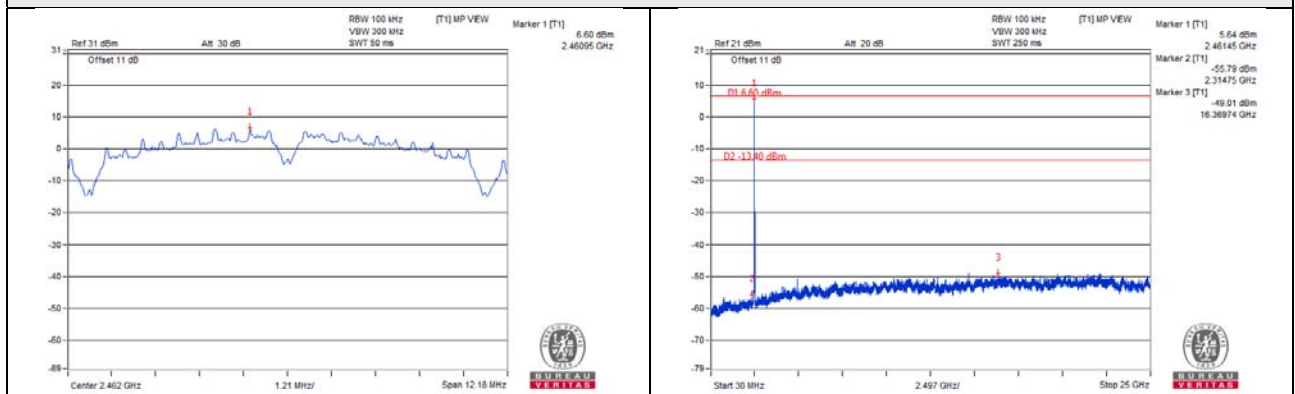
CH 1



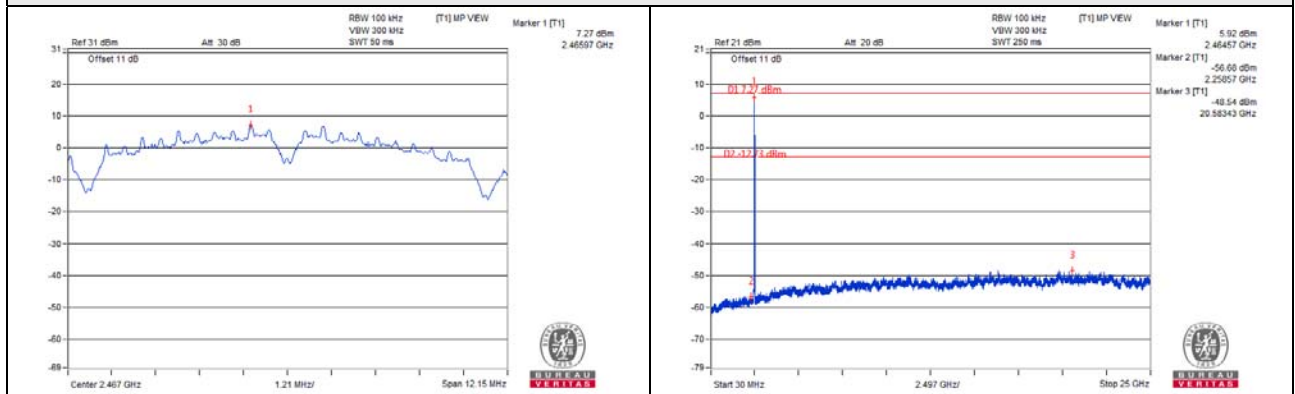
CH 6



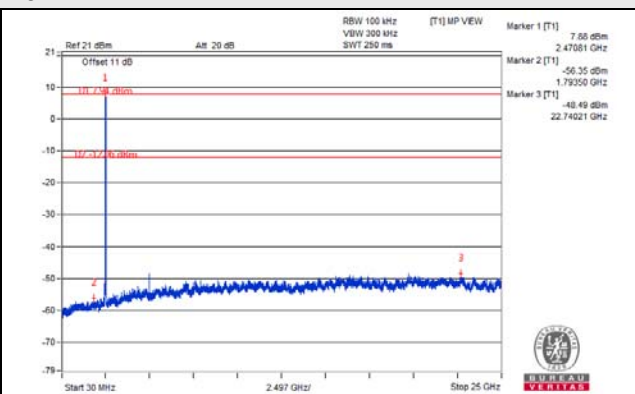
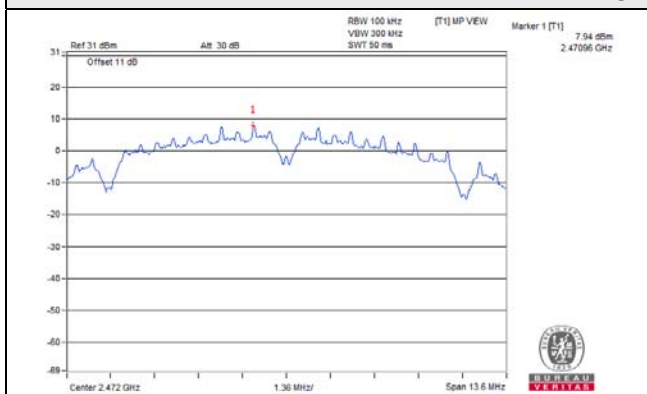
CH 11



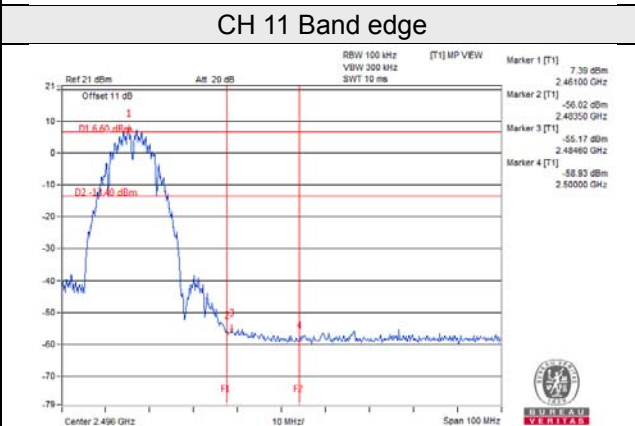
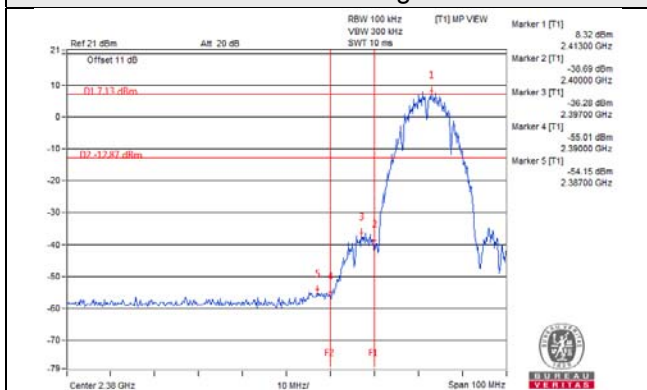
CH 12



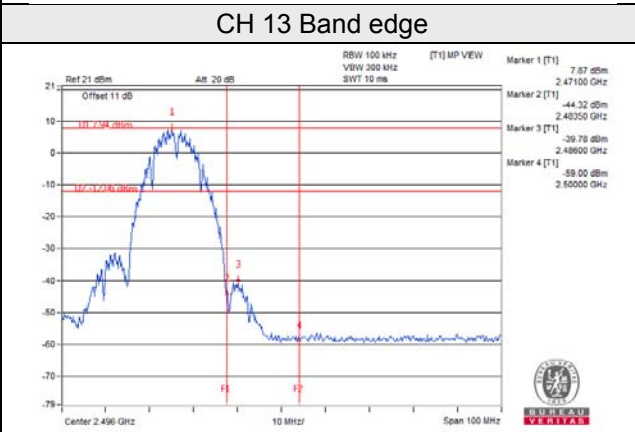
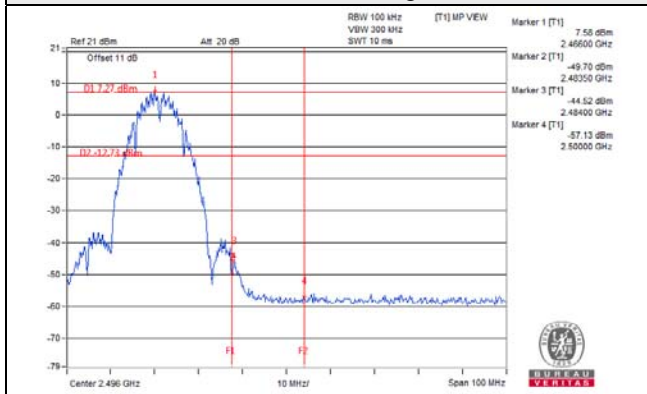
CH 13



CH 1 Band edge

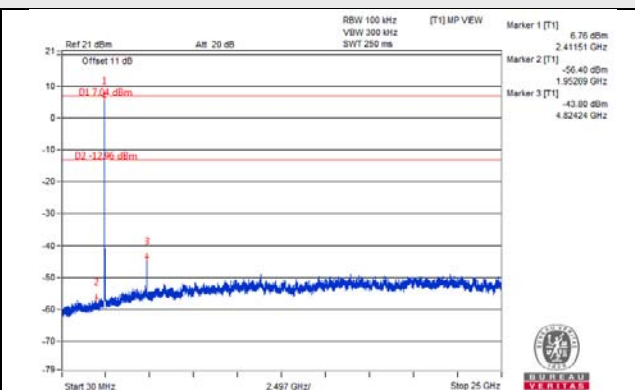
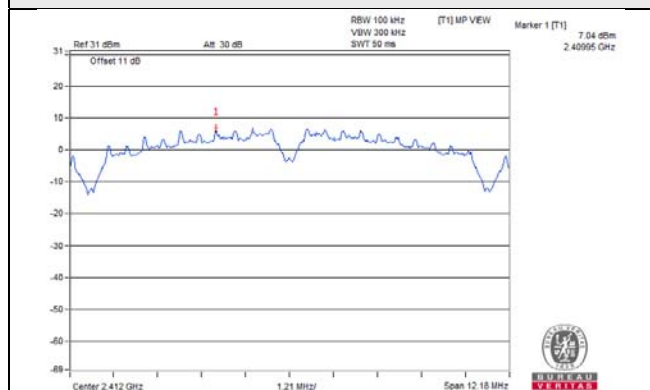


CH 12 Band edge

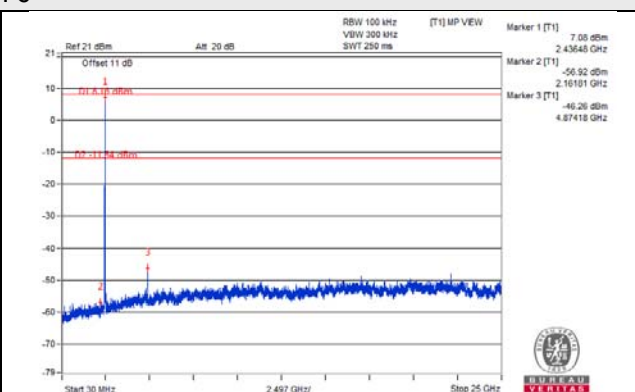
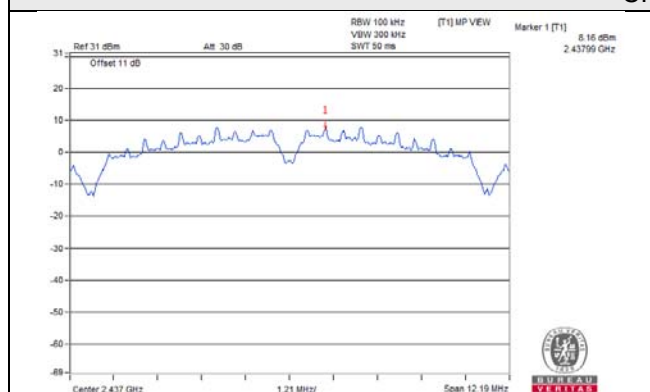


802.11b_Chain 1

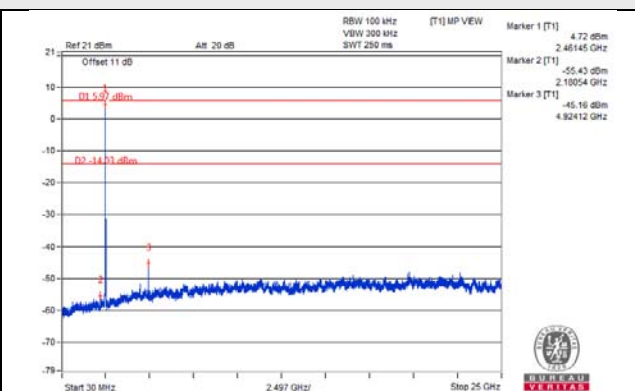
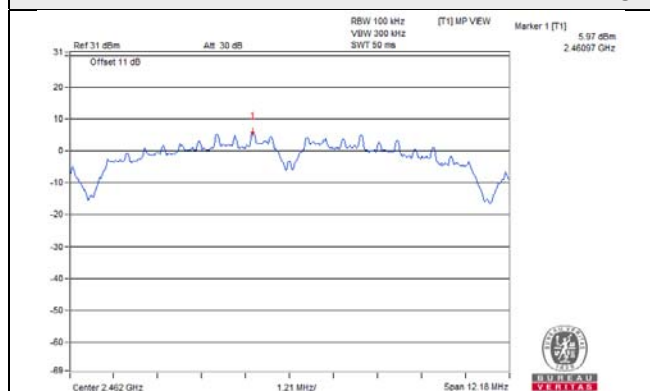
CH 1



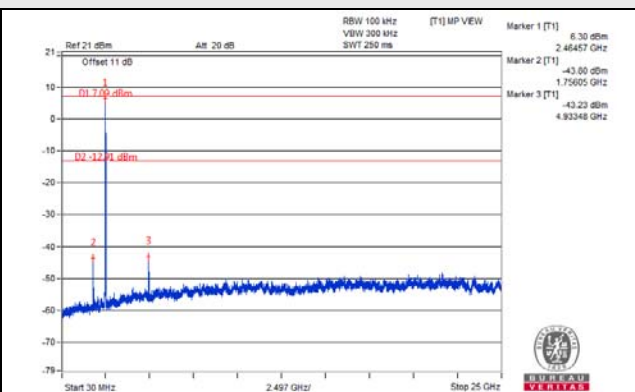
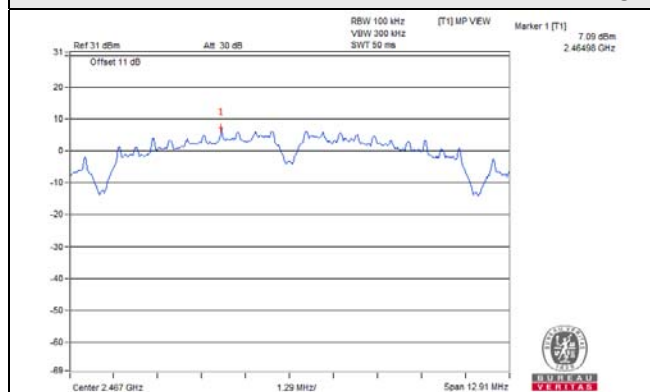
CH 6



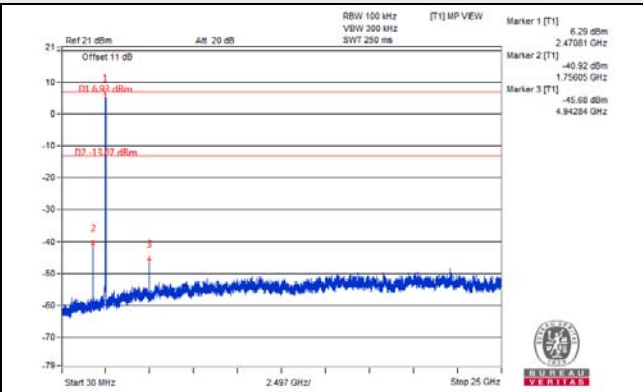
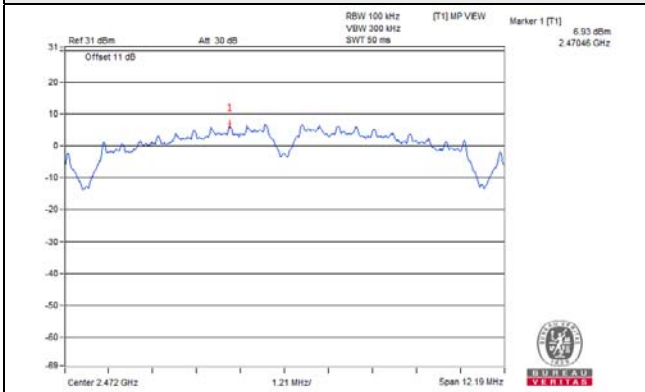
CH 11



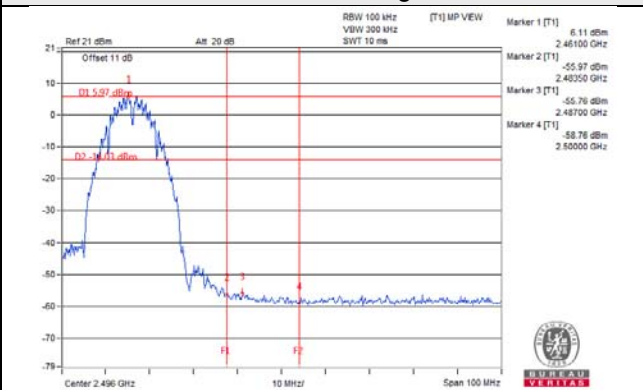
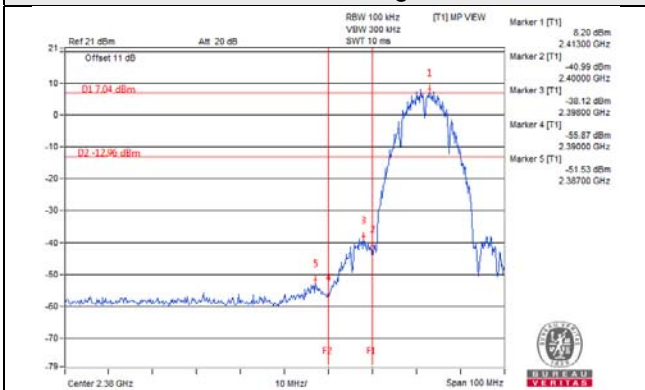
CH 12



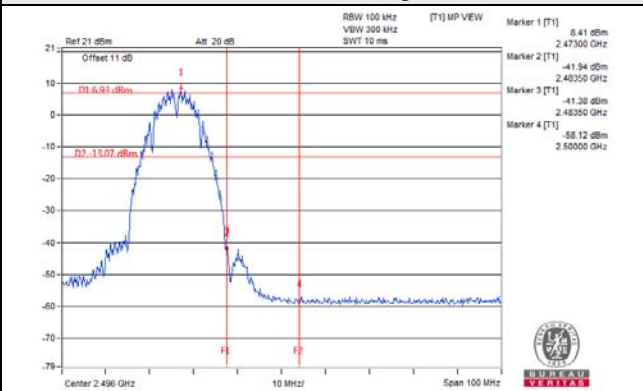
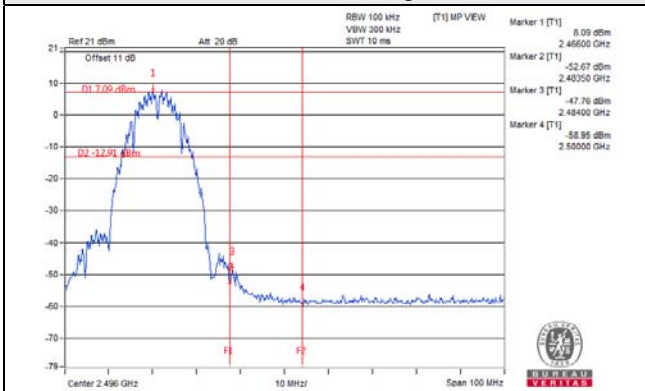
CH 13



CH 1 Band edge

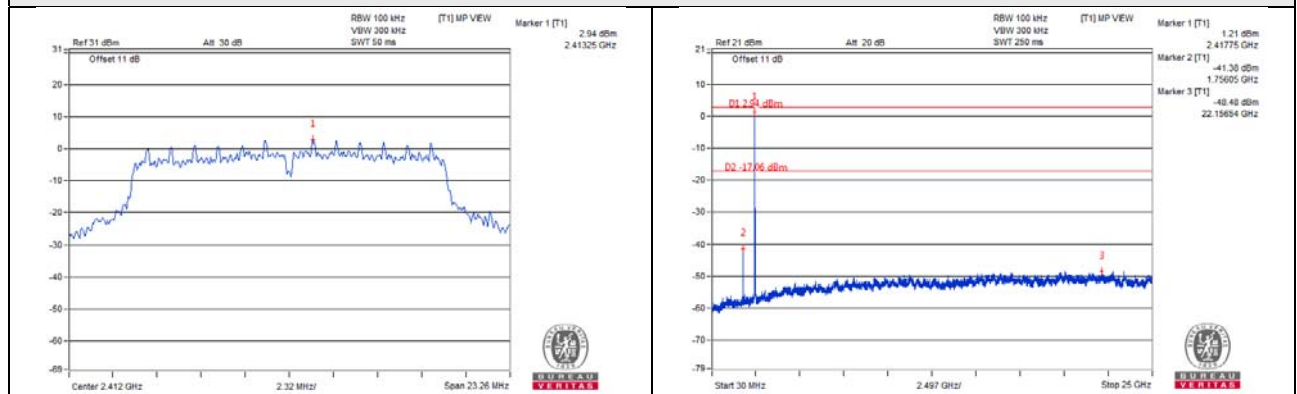


CH 12 Band edge

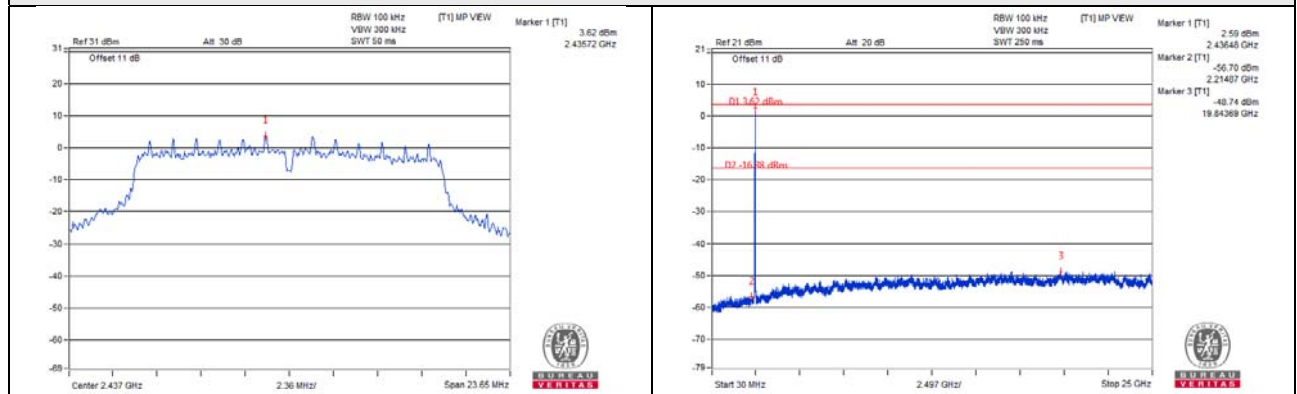


802.11g_Chain 0

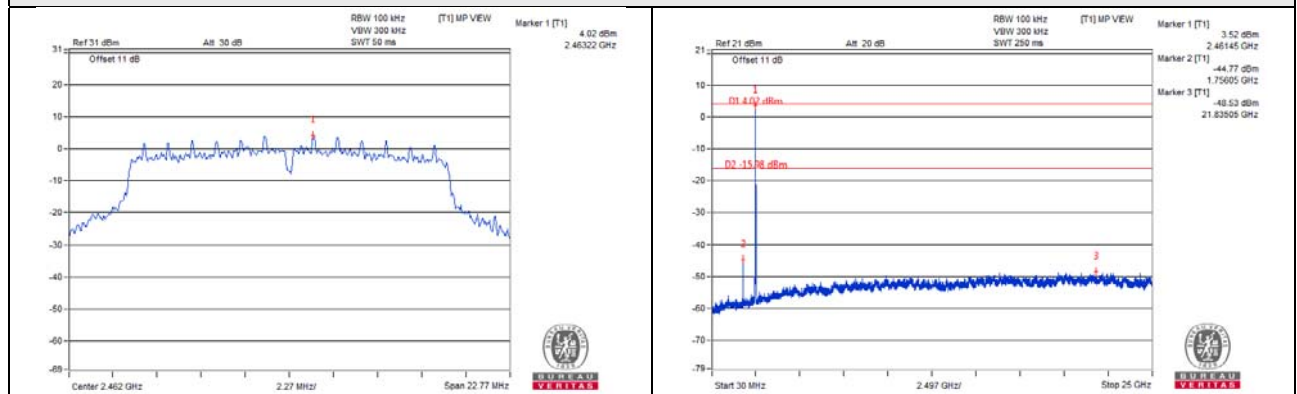
CH 1



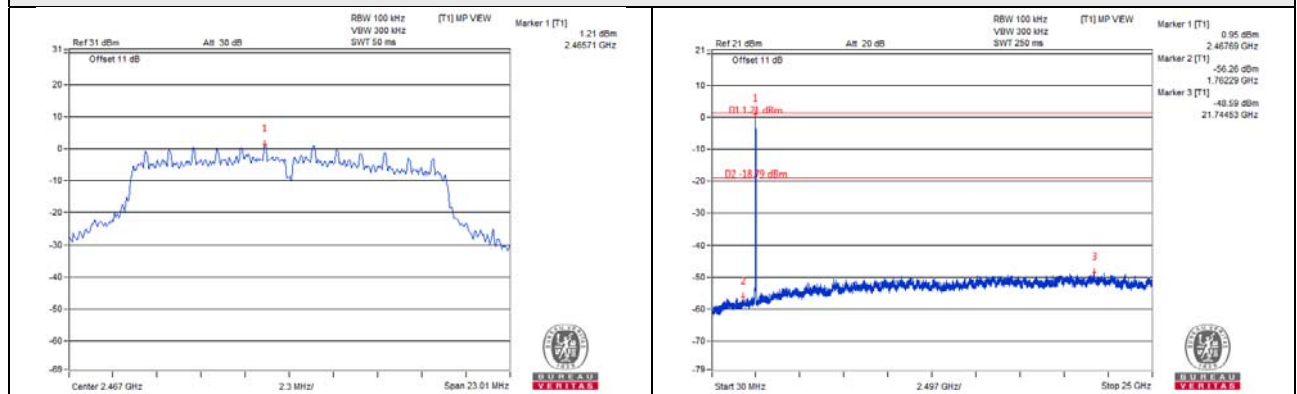
CH 6



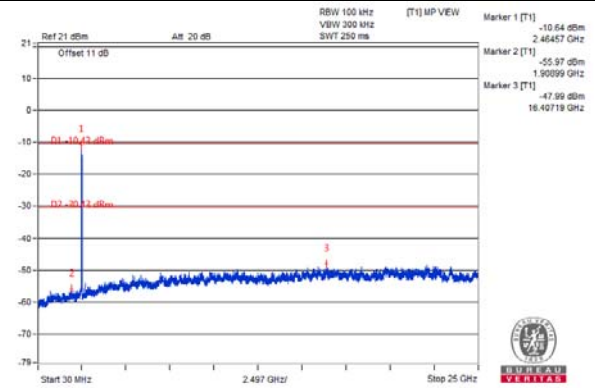
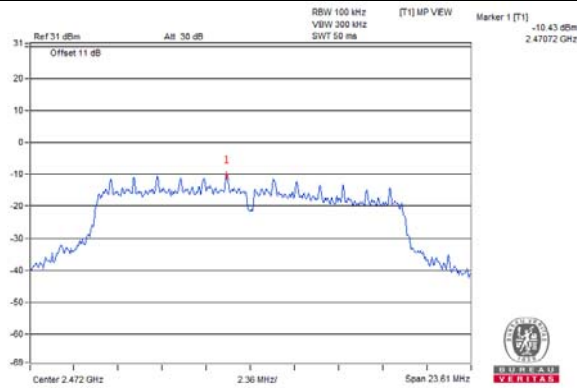
CH 11



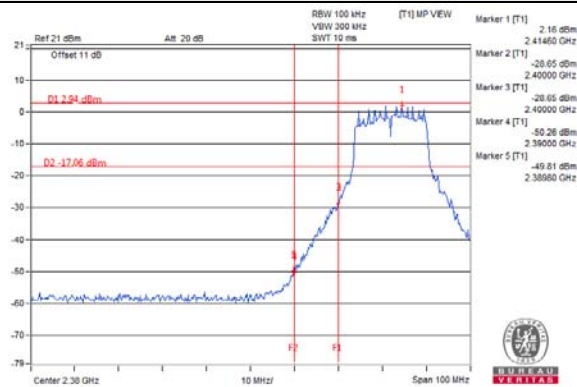
CH 12



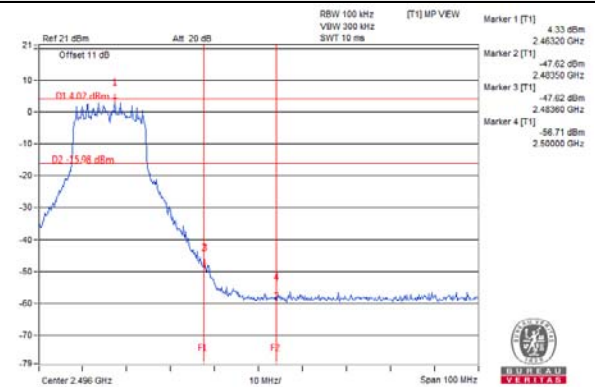
CH 13



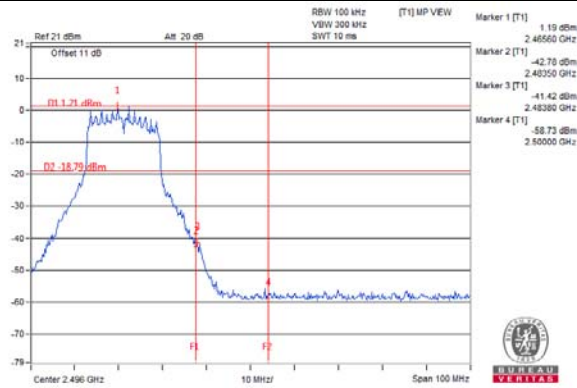
CH 1 Band edge



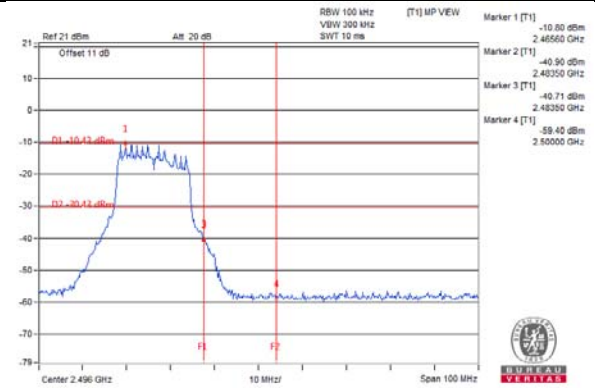
CH 11 Band edge



CH 12 Band edge

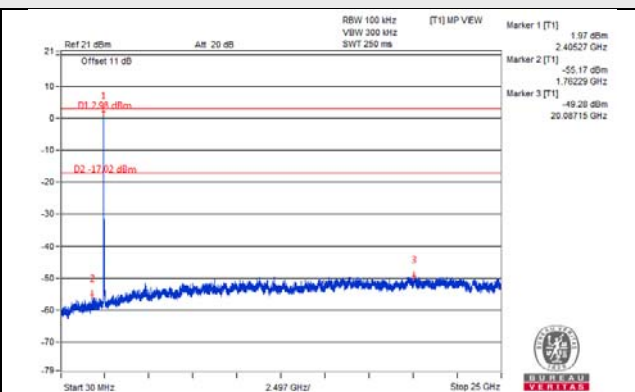
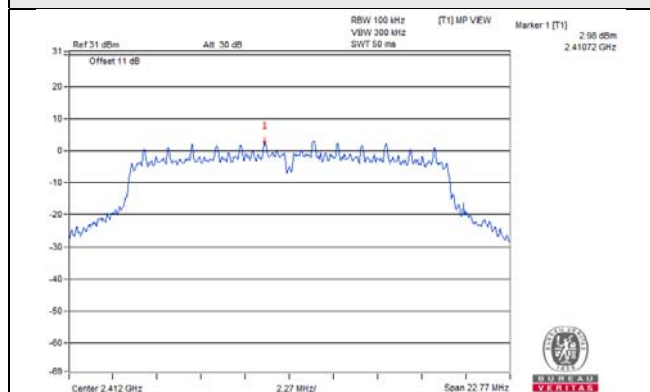


CH 13 Band edge

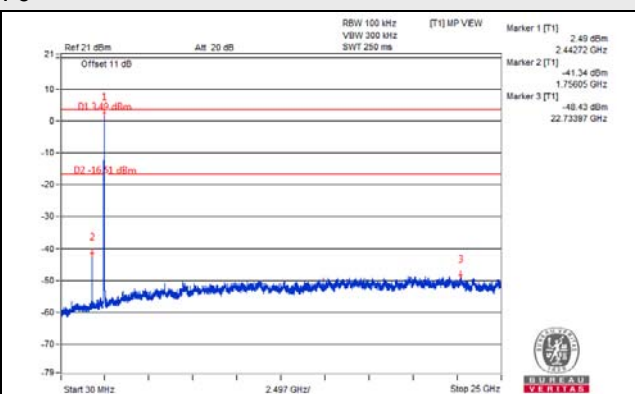
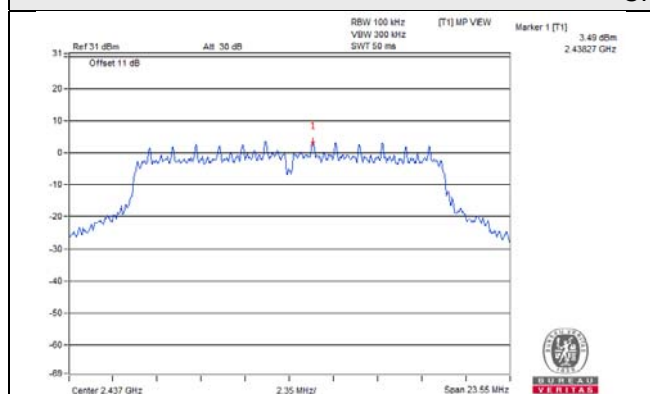


802.11g_Chain 1

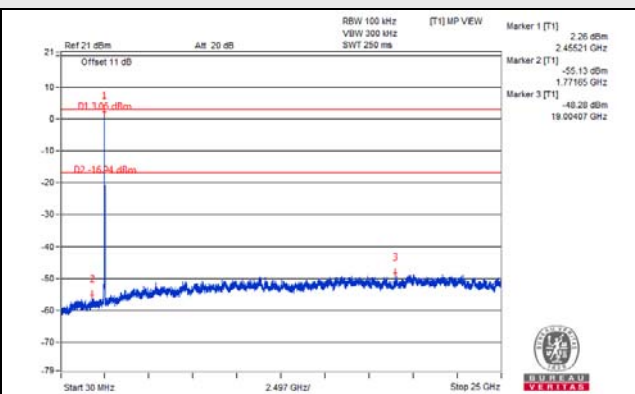
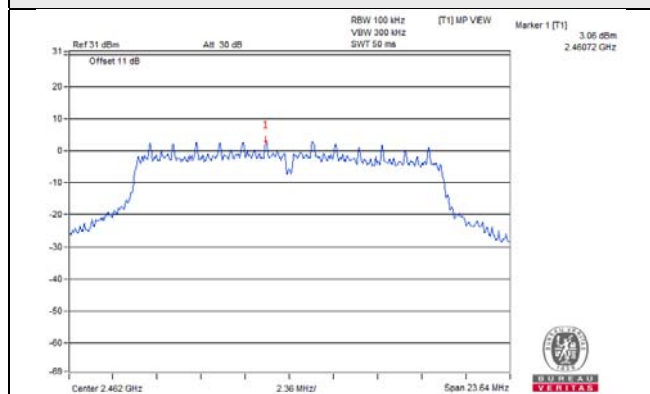
CH 1



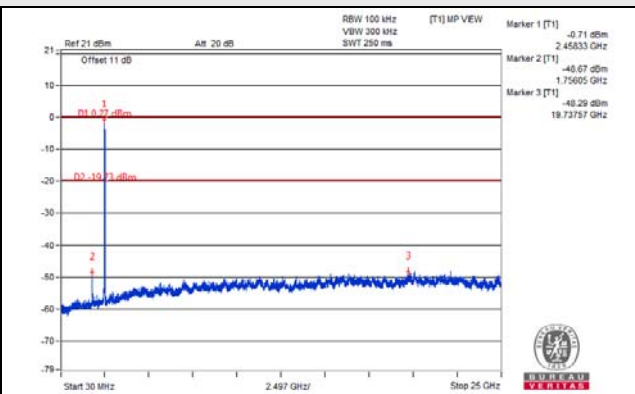
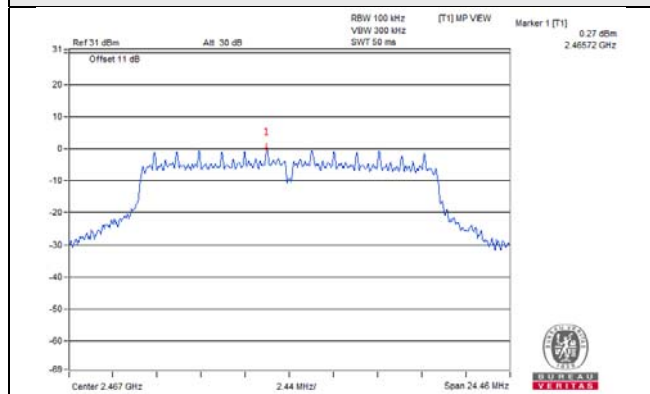
CH 6



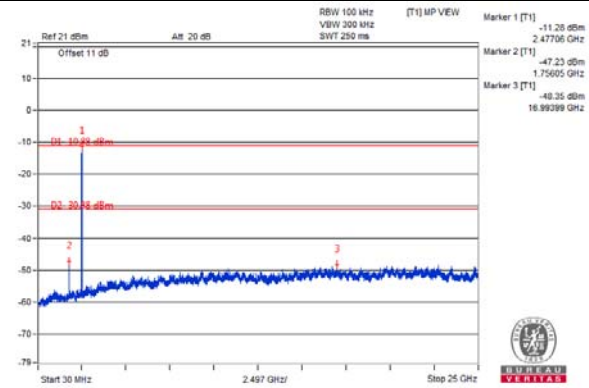
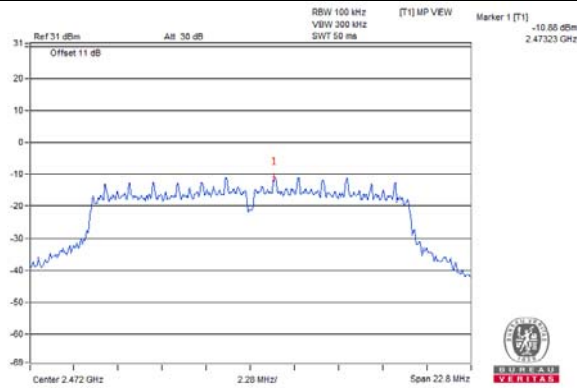
CH 11



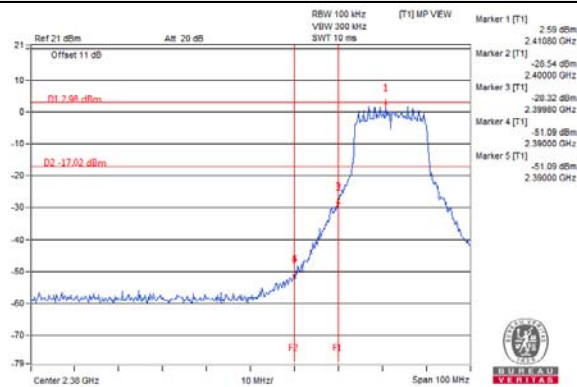
CH 12



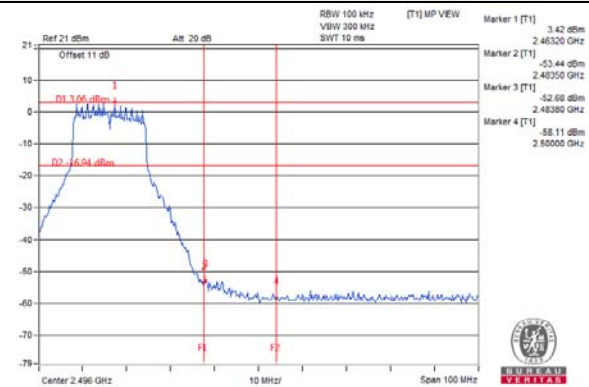
CH 13



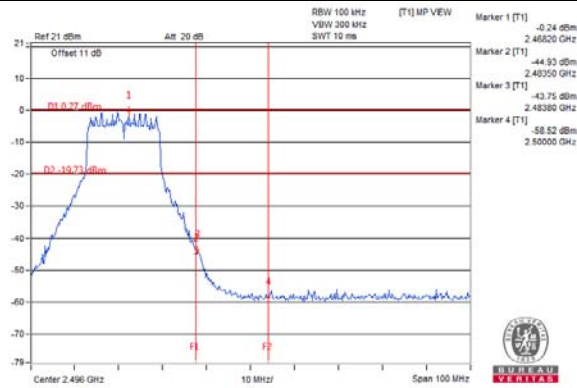
CH 1 Band edge



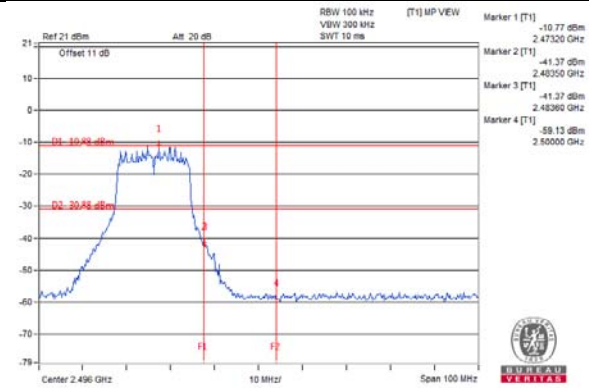
CH 11 Band edge



CH 12 Band edge

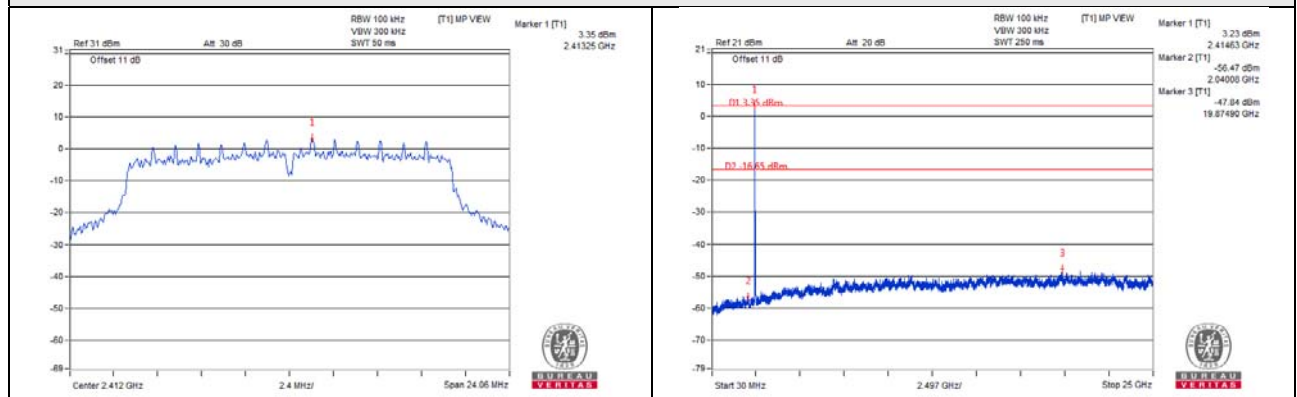


CH 13 Band edge

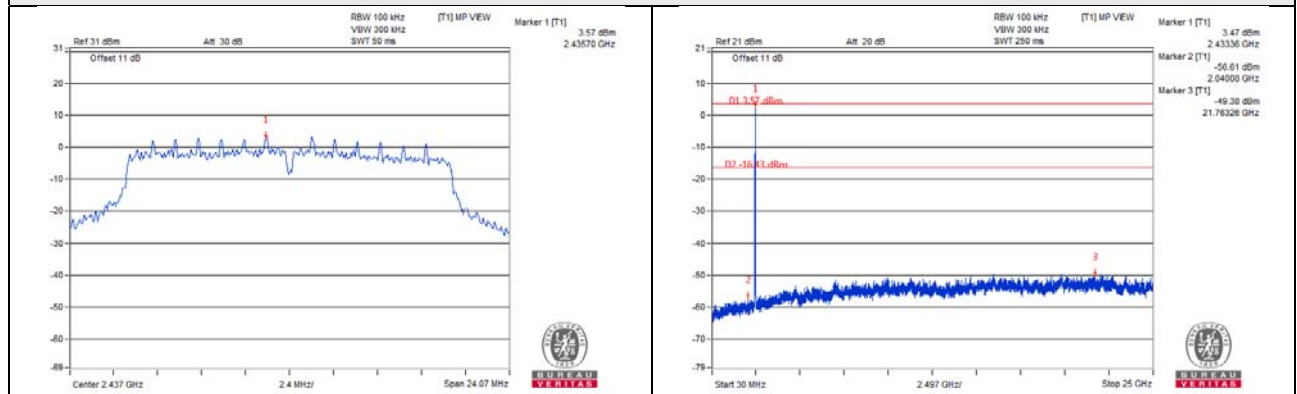


802.11n (HT20)_Chain 0

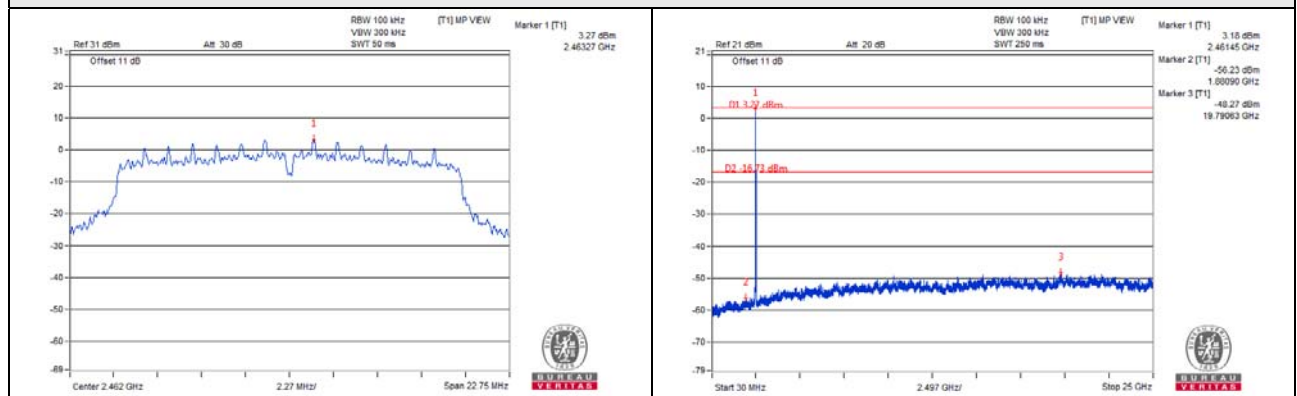
CH 1



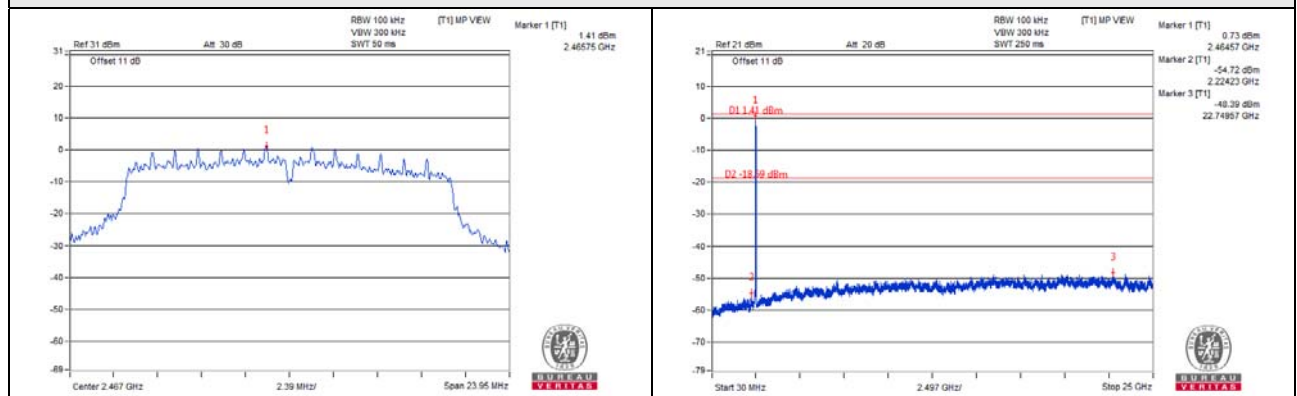
CH 6



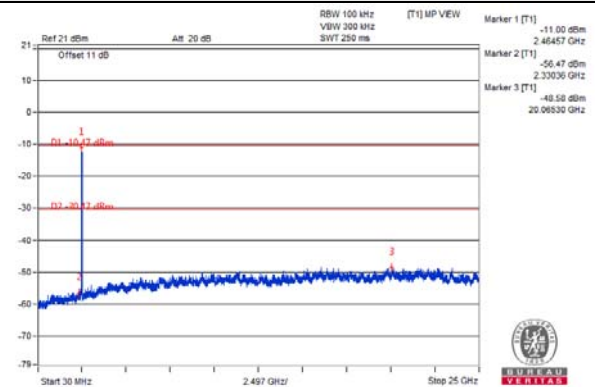
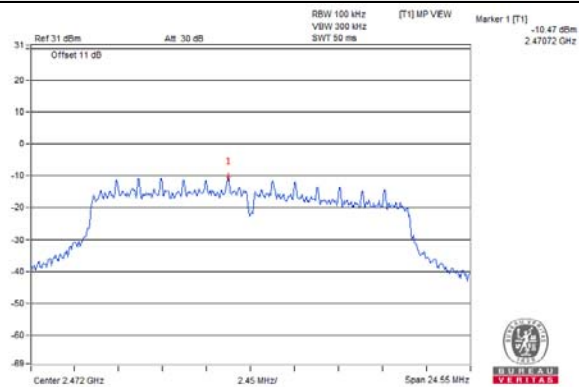
CH 11



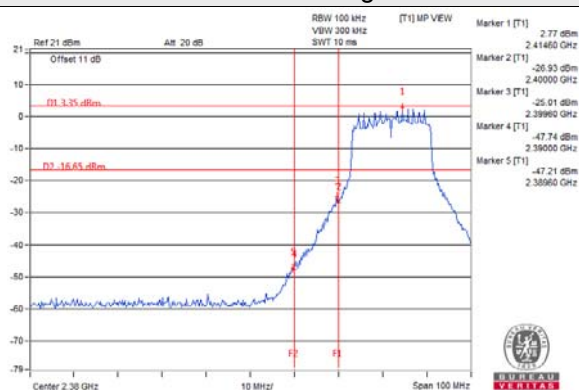
CH 12



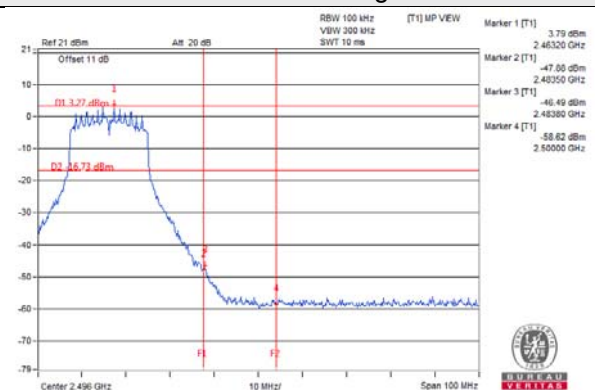
CH 13



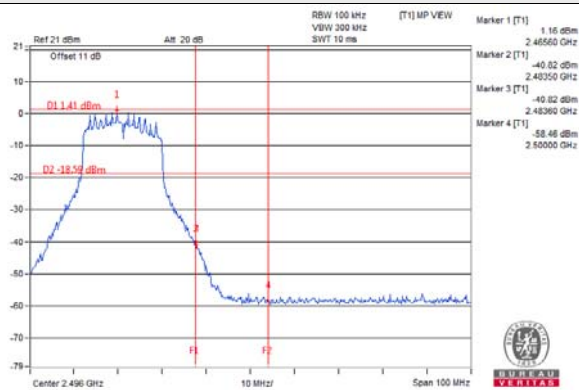
CH 1 Band edge



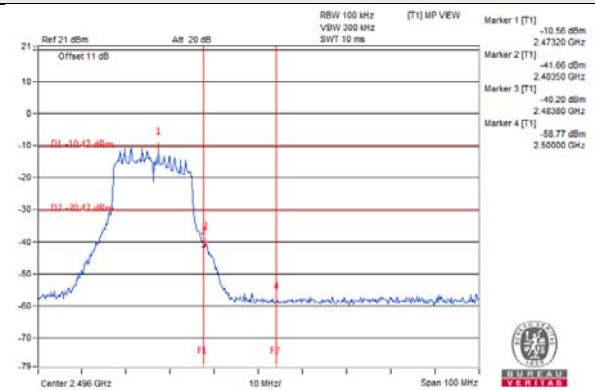
CH 11 Band edge



CH 12 Band edge

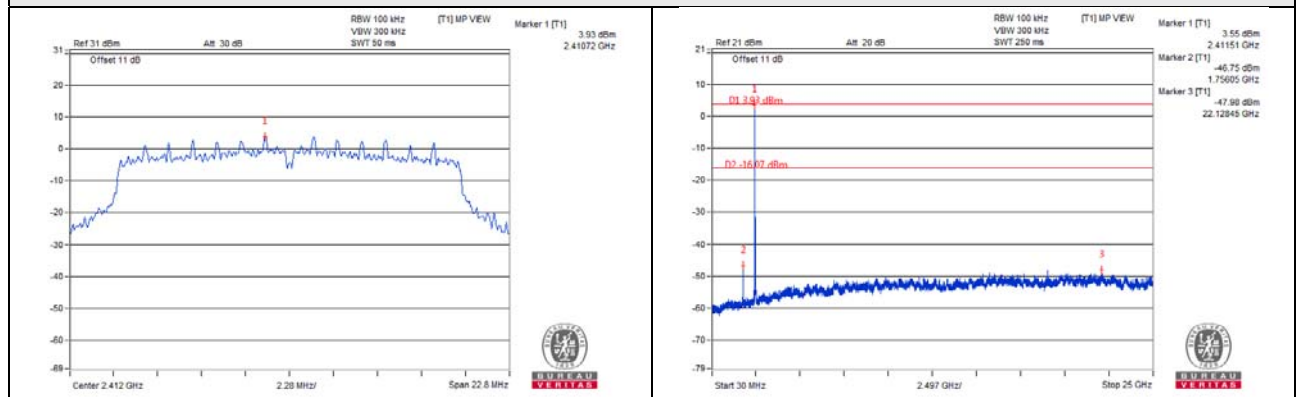


CH 13 Band edge

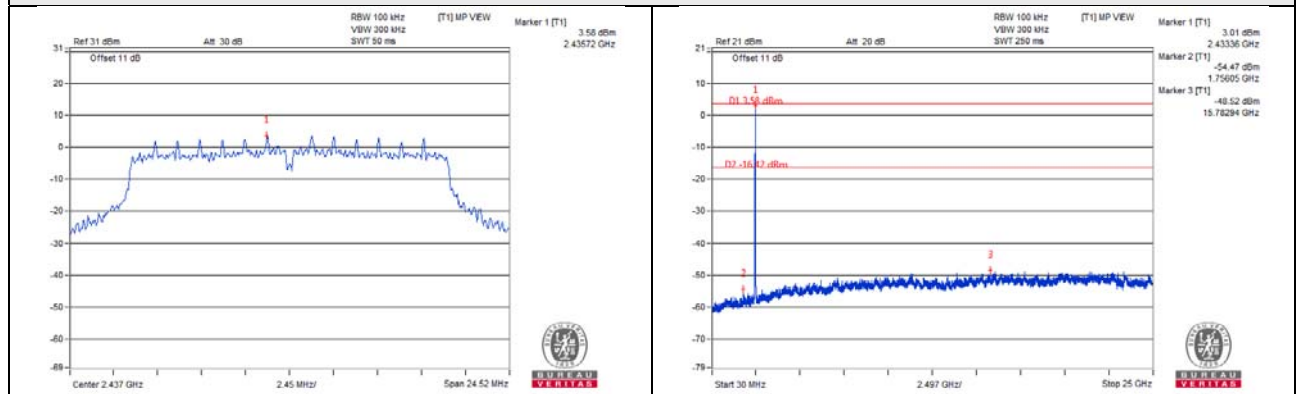


802.11n (HT20)_Chain 1

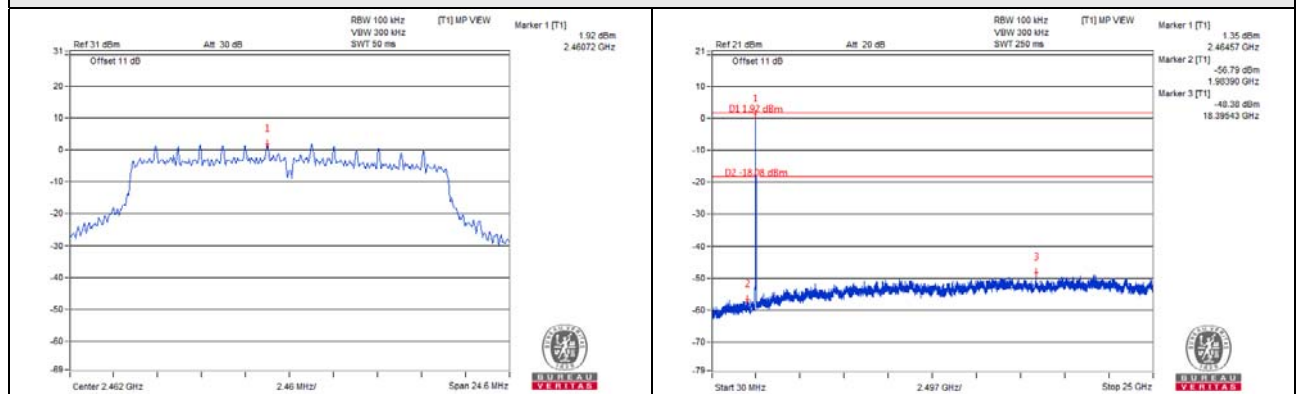
CH 1



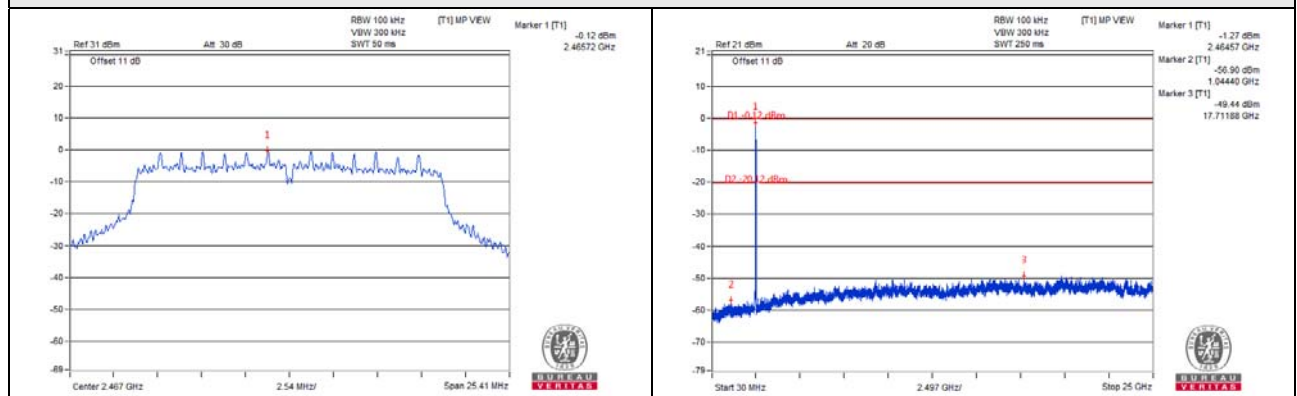
CH 6



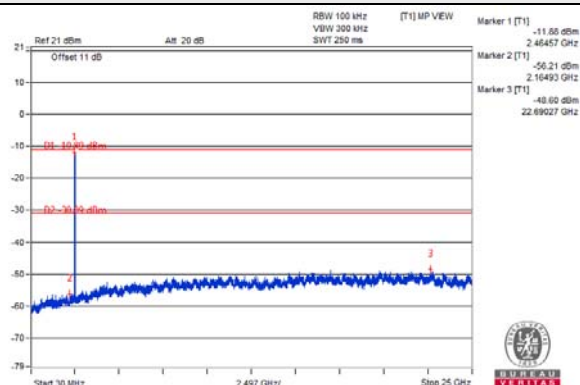
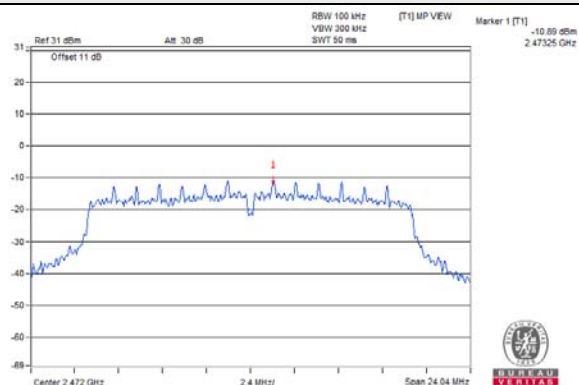
CH 11



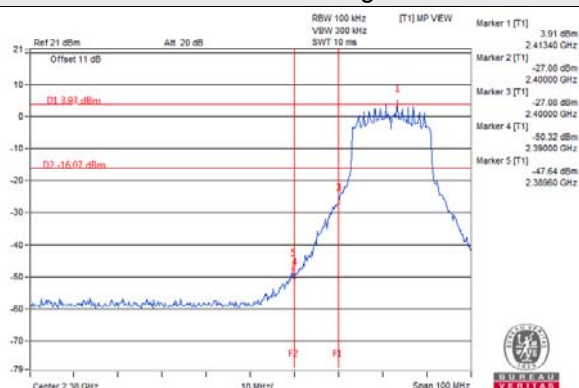
CH 12



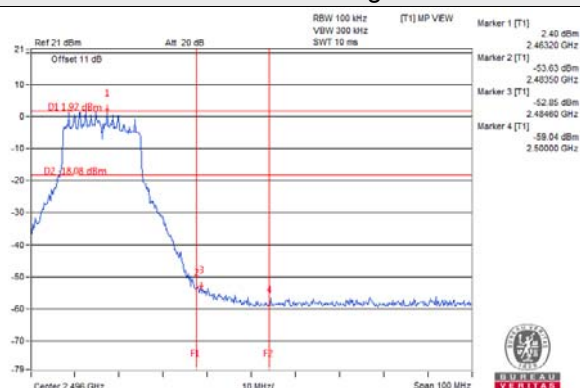
CH 13



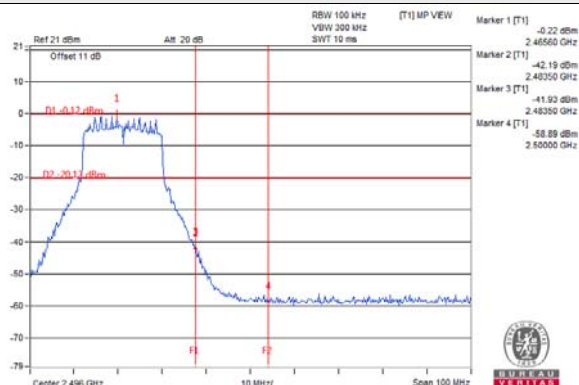
CH 1 Band edge



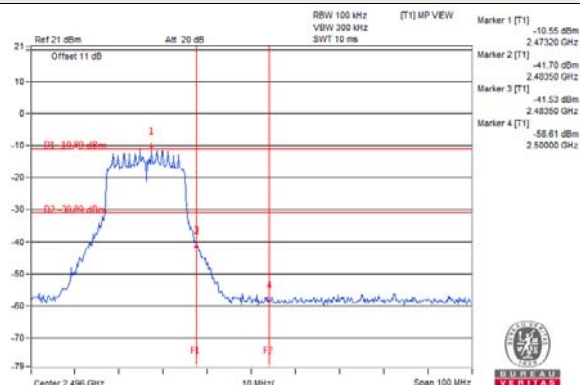
CH 11 Band edge



CH 12 Band edge



CH 13 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.

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

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Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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