FCC Test Report

Report No.:	RF181001C06
FCC ID:	A4RG020A
Model Name:	G020A
Received Date:	Oct. 01, 2018
Test Date:	Nov. 01 ~ Nov. 22, 2018
Issued Date:	Dec. 18, 2018
Applicant:	Google LLC
Address:	1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location (1):	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
Test Location (2):	E-2, No. 1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number (1):	788550 / TW0003
FCC Registration / Designation Number (2):	723255 / TW2022

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This report should not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

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Release Control Record

Issue No.	Description	Date Issued
RF181001C06	Original release	Dec. 18, 2018

1 Certificate of Conformity

Product: Smartphone

Model Name: G020A

Sample Status: Identical Prototype

Applicant: Google LLC

Test Date: Nov. 01 ~ 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 : Pettie Chen , **Date:** Dec. 18, 2018
Pettie Chen / 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 -12.74dB at 0.50000MHz.
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 2483.50, 2483.53MHz.
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) (±)
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	G020A
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	320.547mW
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

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

Maximum Tune-up Power Mode				
Band		TX Antenna	WWAN Function	Body-Worn/Hotspot
WLAN	2.4G	Ant 0+1	WWAN-Off	Body-Worn/Hotspot

3.2 Description of Test Modes

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

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≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

Note: 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:

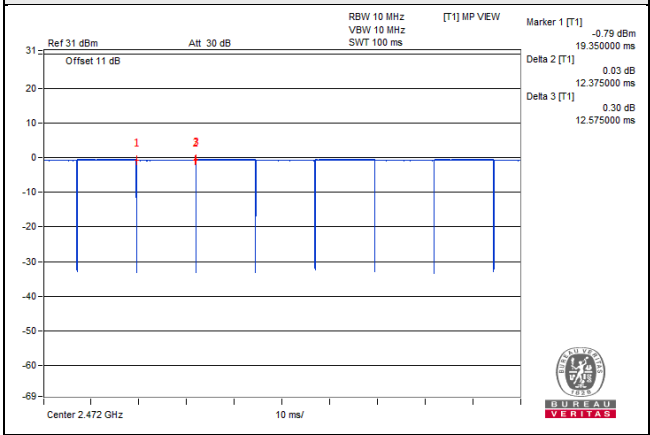
Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	23 deg. C, 67% RH	120Vac, 60Hz	Rey Chen
RE<1G	23 deg. C, 68% RH	120Vac, 60Hz	Andy Ho
PLC	25 deg. C, 68% RH	120Vac, 60Hz	Jones Chang
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Chris Lin

3.3 Duty Cycle of Test Signal

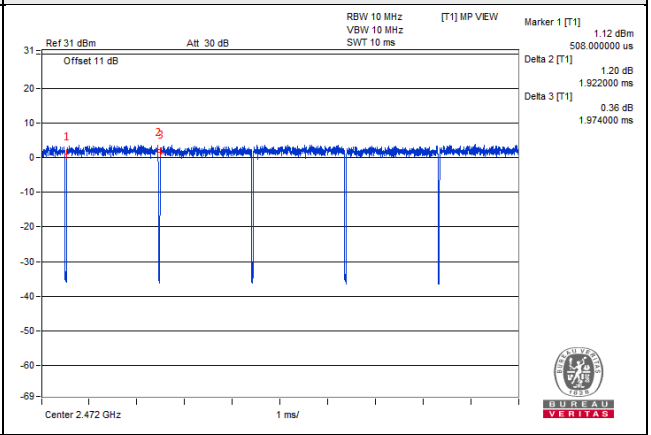
802.11b: Duty cycle of test signal is ≥ 98%.
802.11g, 802.11n (HT20): Duty cycle of test signal is < 98%.

802.11b: Duty cycle = 12.375/12.575 = 0.984
802.11g: Duty cycle = 1.922/1.974 = 0.975, Duty factor = 10 * log (1/0.975) = 0.12
802.11n (HT20): Duty cycle = 2.045/2.097 = 0.975, Duty factor = 10 * log (1/0.975) = 0.11

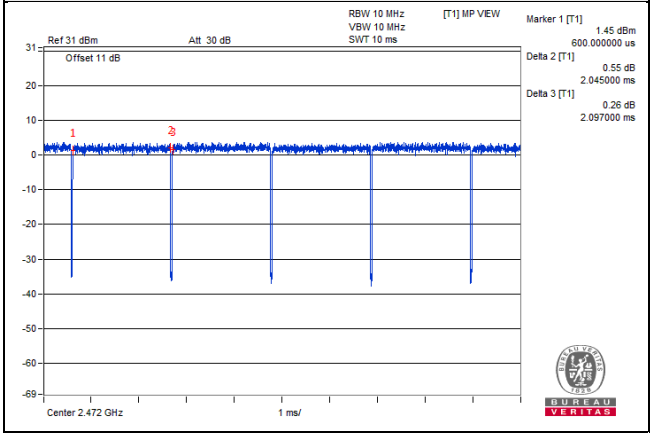
802.11b



802.11g



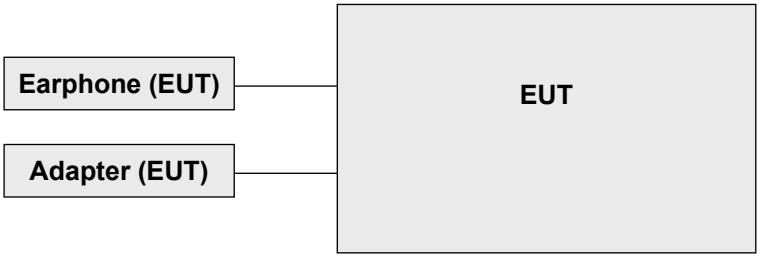
802.11n (HT20)



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 and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 3.
4. The CANADA Site Registration No. is 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:

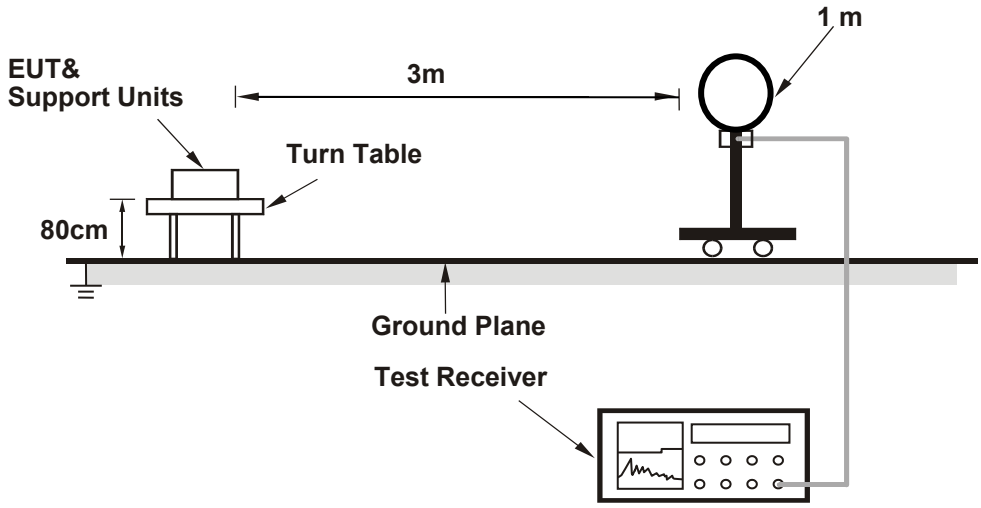
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

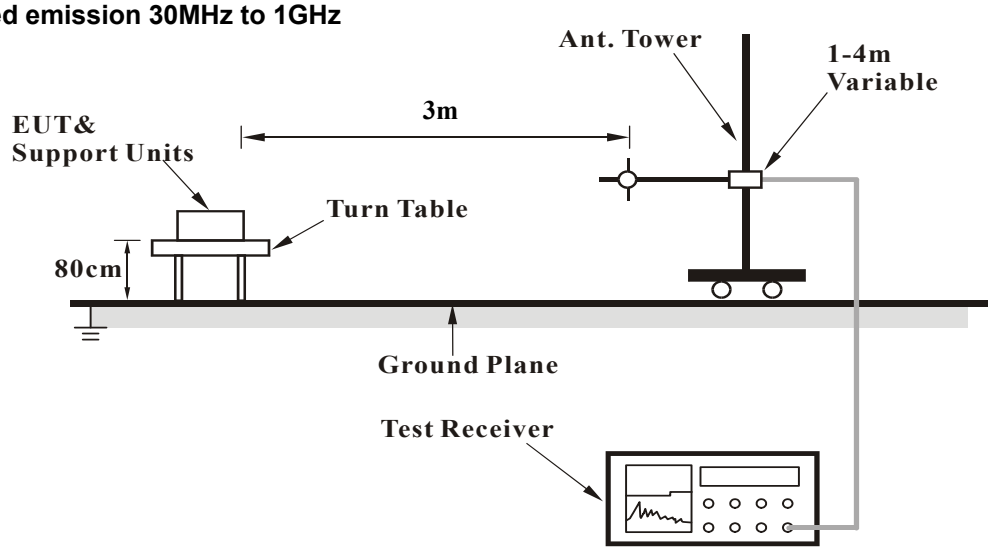
No deviation.

4.1.5 Test Setup

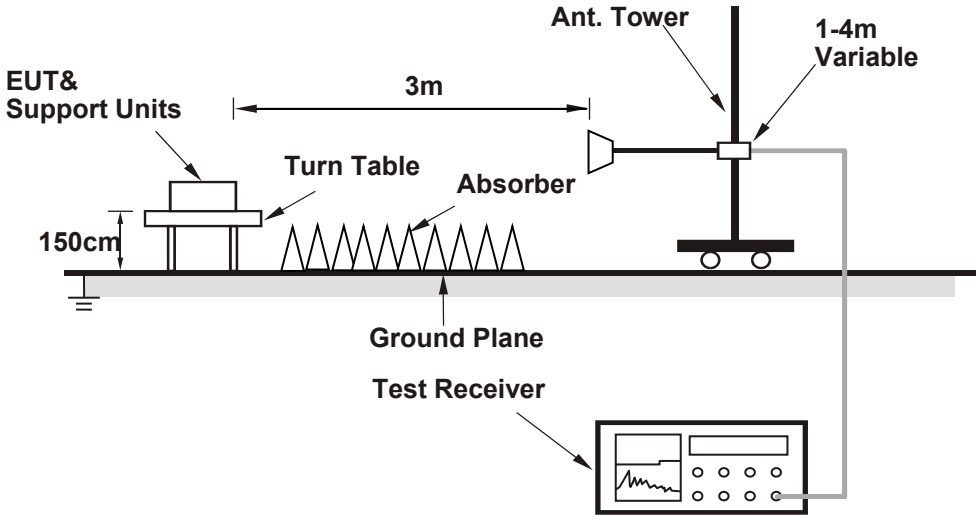
For Radiated emission below 30MHz



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	Duty Cycle (%)	RBW (PK)	VBW (PK)	RBW (Avg)	VBW (Avg)
802.11b	98.4	1MHz	3MHz	1MHz	10Hz
802.11g	97.5	1MHz	3MHz	1MHz	1kHz
802.11n(HT20)	97.5	1MHz	3MHz	1MHz	1kHz

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results for Fundamental and Harmonic above 1GHz

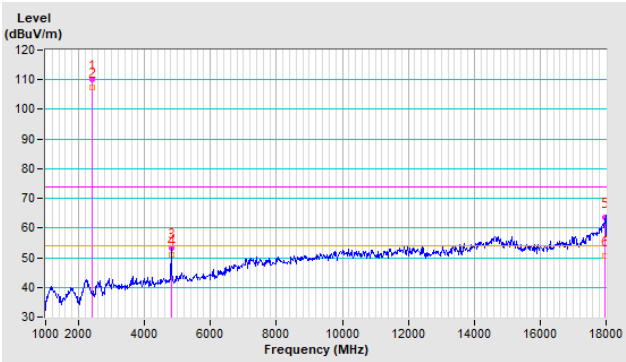
802.11b

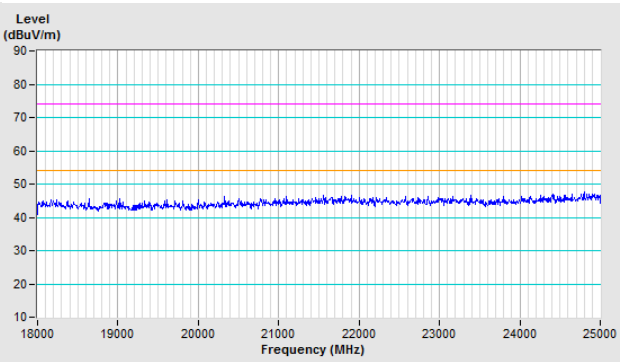
CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2412.00	109.9 PK			2.30 H	186	112.6	-2.7
2	*2412.00	107.5 AV			2.30 H	186	110.2	-2.7
3	4824.00	53.2 PK	74.0	-20.8	1.49 H	213	51.6	1.6
4	4824.00	50.8 AV	54.0	-3.2	1.49 H	213	49.2	1.6
5	17966.00	63.7 PK	74.0	-10.3	1.09 H	243	42.4	21.3
6	17966.00	50.7 AV	54.0	-3.3	1.09 H	243	29.4	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



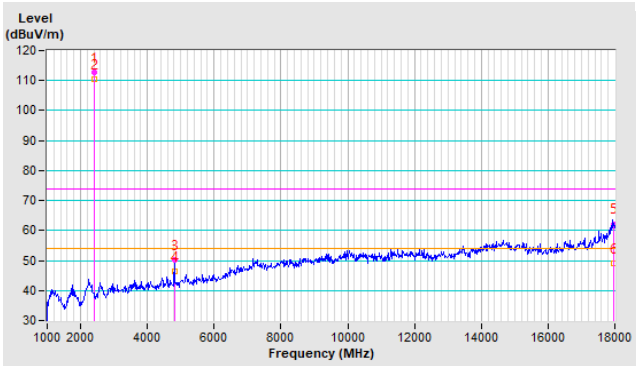


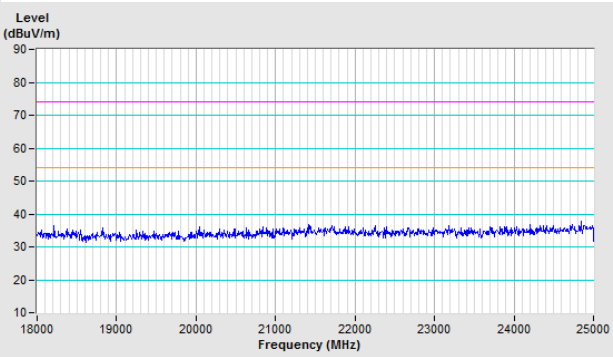
CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	112.9 PK			1.13 V	106	115.6	-2.7
2	*2412.00	110.4 AV			1.13 V	106	113.1	-2.7
3	4824.00	50.1 PK	74.0	-23.9	1.44 V	162	48.5	1.6
4	4824.00	46.5 AV	54.0	-7.5	1.44 V	162	44.9	1.6
5	17982.15	62.2 PK	74.0	-11.8	1.57 V	113	40.6	21.6
6	17982.15	48.9 AV	54.0	-5.1	1.57 V	113	27.3	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



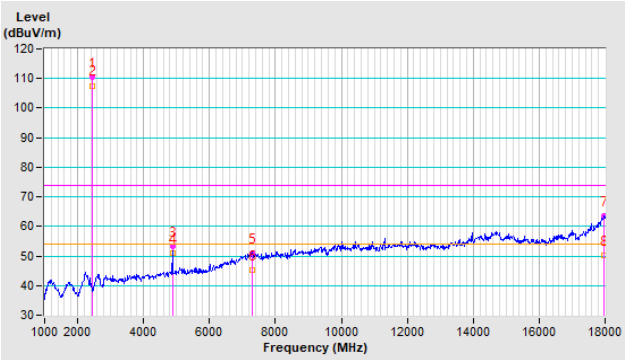


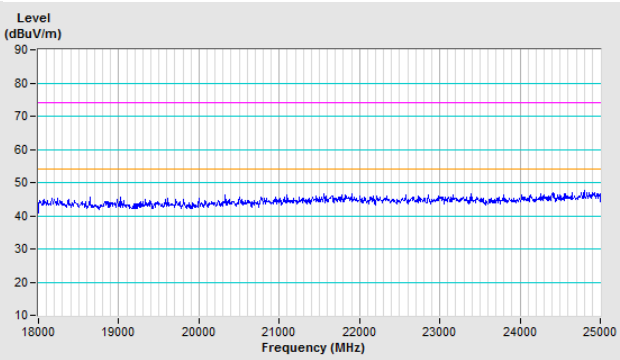
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	110.5 PK			2.60 H	185	113.5	-3.0
2	*2437.00	107.6 AV			2.60 H	185	110.6	-3.0
3	4874.00	53.3 PK	74.0	-20.7	1.58 H	215	51.7	1.6
4	4874.00	50.9 AV	54.0	-3.1	1.58 H	215	49.3	1.6
5	7311.00	51.1 PK	74.0	-22.9	1.97 H	98	43.4	7.7
6	7311.00	45.1 AV	54.0	-8.9	1.97 H	98	37.4	7.7
7	17976.62	63.4 PK	74.0	-10.6	1.14 H	143	41.9	21.5
8	17976.62	50.1 AV	54.0	-3.9	1.14 H	143	28.6	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



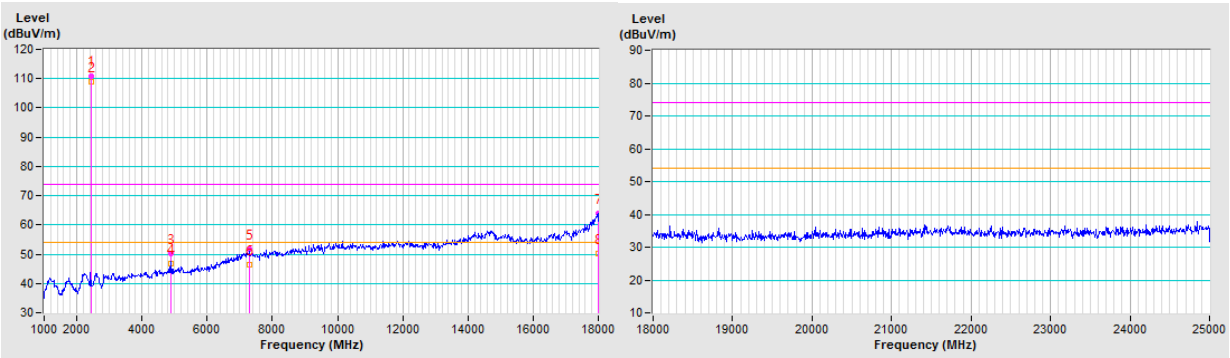


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.0 PK			1.67 V	81	114.0	-3.0
2	*2437.00	108.8 AV			1.67 V	81	111.8	-3.0
3	4874.00	50.2 PK	74.0	-23.8	1.44 V	142	48.6	1.6
4	4874.00	46.7 AV	54.0	-7.3	1.44 V	142	45.1	1.6
5	7311.00	51.8 PK	74.0	-22.2	1.87 V	185	44.1	7.7
6	7311.00	46.5 AV	54.0	-7.5	1.87 V	185	38.8	7.7
7	17994.90	63.9 PK	74.0	-10.1	1.54 V	217	42.1	21.8
8	17994.90	50.3 AV	54.0	-3.7	1.54 V	217	28.5	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

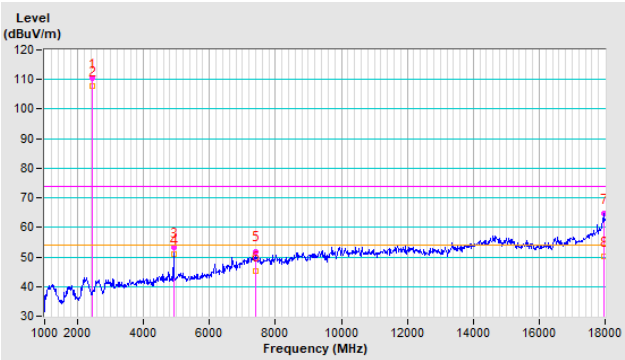


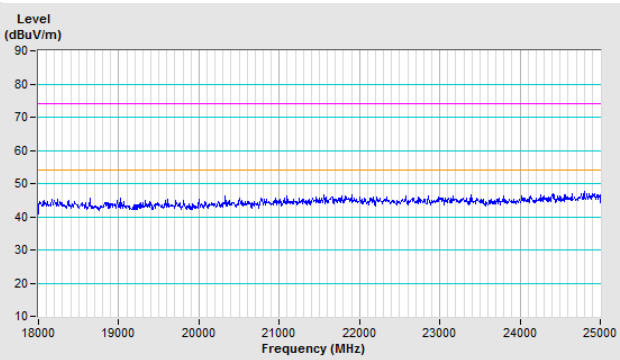
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	110.6 PK			2.65 H	157	113.6	-3.0
2	*2462.00	107.7 AV			2.65 H	157	110.7	-3.0
3	4924.00	53.4 PK	74.0	-20.6	1.54 H	227	51.7	1.7
4	4924.00	50.9 AV	54.0	-3.1	1.54 H	227	49.2	1.7
5	7386.00	51.9 PK	74.0	-22.1	2.02 H	88	44.0	7.9
6	7386.00	45.2 AV	54.0	-8.8	2.02 H	88	37.3	7.9
7	17960.47	64.6 PK	74.0	-9.4	1.10 H	243	43.3	21.3
8	17960.47	50.2 AV	54.0	-3.8	1.10 H	243	28.9	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



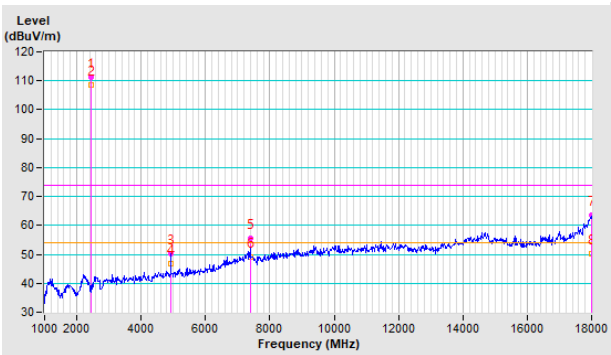


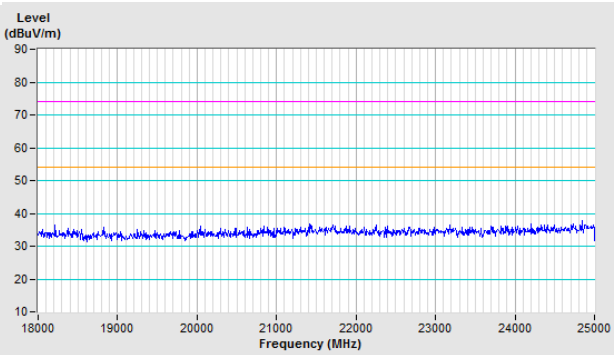
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	111.1 PK			1.31 V	105	114.1	-3.0
2	*2462.00	108.5 AV			1.31 V	105	111.5	-3.0
3	4924.00	50.1 PK	74.0	-23.9	1.48 V	157	48.4	1.7
4	4924.00	46.8 AV	54.0	-7.2	1.48 V	157	45.1	1.7
5	7386.00	55.6 PK	74.0	-18.4	1.83 V	190	47.7	7.9
6	7386.00	49.2 AV	54.0	-4.8	1.83 V	190	41.3	7.9
7	17996.60	63.7 PK	74.0	-10.3	1.57 V	174	41.8	21.9
8	17996.60	50.1 AV	54.0	-3.9	1.57 V	174	28.2	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



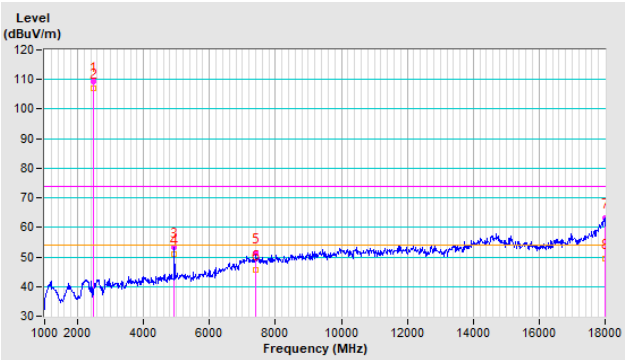


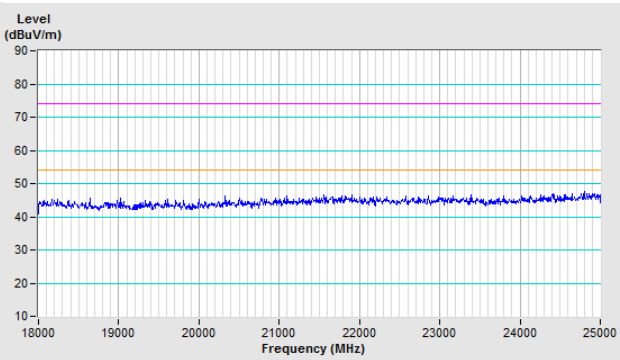
CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	109.3 PK			2.18 H	190	112.2	-2.9
2	*2467.00	106.9 AV			2.18 H	190	109.8	-2.9
3	4934.00	53.2 PK	74.0	-20.8	1.60 H	237	51.4	1.8
4	4934.00	50.8 AV	54.0	-3.2	1.60 H	237	49.0	1.8
5	7401.00	51.2 PK	74.0	-22.8	2.00 H	95	43.3	7.9
6	7401.00	45.6 AV	54.0	-8.4	2.00 H	95	37.7	7.9
7	17992.35	63.2 PK	74.0	-10.8	1.09 H	98	41.4	21.8
8	17992.35	49.3 AV	54.0	-4.7	1.09 H	98	27.5	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



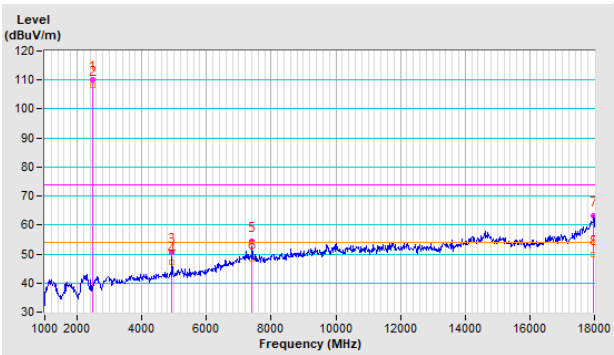


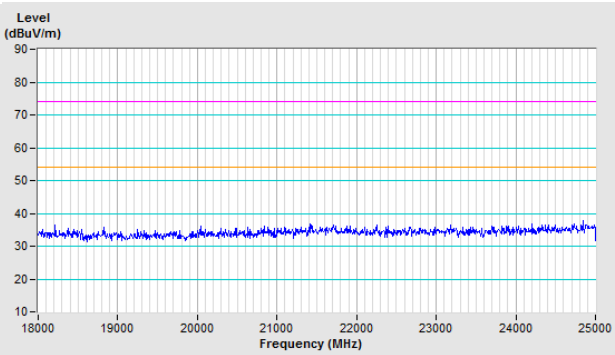
CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	110.0 PK			1.41 V	82	112.9	-2.9
2	*2467.00	108.2 AV			1.41 V	82	111.1	-2.9
3	4934.00	50.7 PK	74.0	-23.3	1.49 V	158	48.9	1.8
4	4934.00	47.2 AV	54.0	-6.8	1.49 V	158	45.4	1.8
5	7401.00	54.5 PK	74.0	-19.5	1.79 V	182	46.6	7.9
6	7401.00	48.3 AV	54.0	-5.7	1.79 V	182	40.4	7.9
7	17954.53	63.0 PK	74.0	-11.0	1.50 V	319	41.9	21.1
8	17954.53	49.8 AV	54.0	-4.2	1.50 V	319	28.7	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



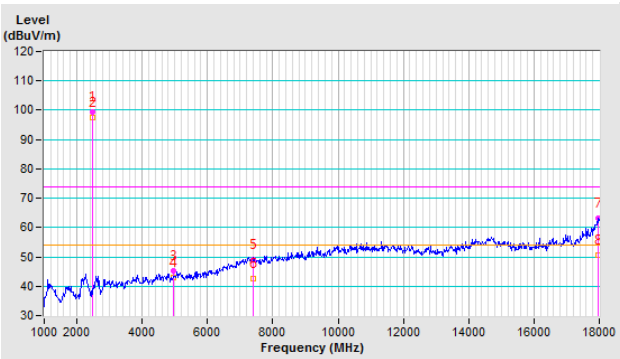


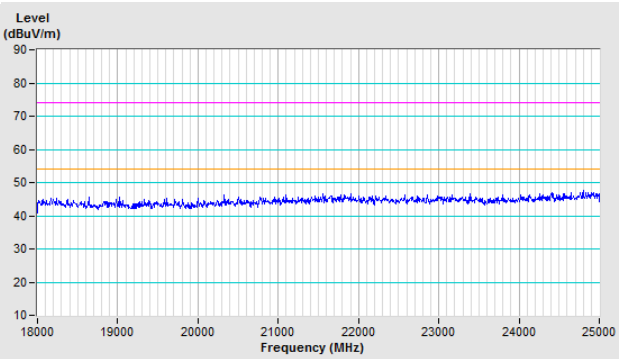
CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	99.5 PK			2.15 H	302	102.4	-2.9
2	*2472.00	97.5 AV			2.15 H	302	100.4	-2.9
3	4944.00	45.3 PK	74.0	-28.7	1.62 H	248	43.4	1.9
4	4944.00	43.0 AV	54.0	-11.0	1.62 H	248	41.1	1.9
5	7416.00	48.9 PK	74.0	-25.1	2.06 H	93	40.9	8.0
6	7416.00	42.6 AV	54.0	-11.4	2.06 H	93	34.6	8.0
7	17960.90	63.1 PK	74.0	-10.9	1.45 H	141	41.8	21.3
8	17960.90	50.5 AV	54.0	-3.5	1.45 H	141	29.2	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



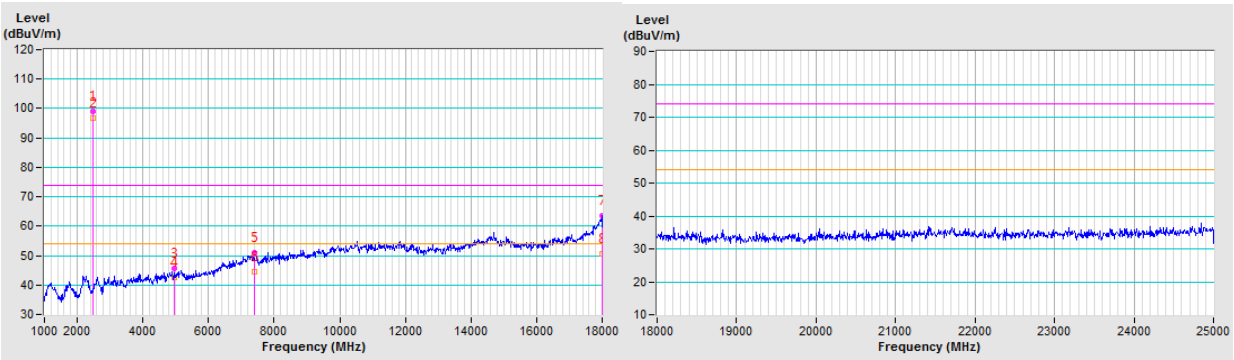


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	99.1 PK			1.24 V	127	102.0	-2.9
2	*2472.00	96.6 AV			1.24 V	127	99.5	-2.9
3	4944.00	45.7 PK	74.0	-28.3	1.47 V	155	43.8	1.9
4	4944.00	42.4 AV	54.0	-11.6	1.47 V	155	40.5	1.9
5	7416.00	50.8 PK	74.0	-23.2	1.82 V	183	42.8	8.0
6	7416.00	44.5 AV	54.0	-9.5	1.82 V	183	36.5	8.0
7	17983.00	63.6 PK	74.0	-10.4	1.46 V	224	42.0	21.6
8	17983.00	50.6 AV	54.0	-3.4	1.46 V	224	29.0	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



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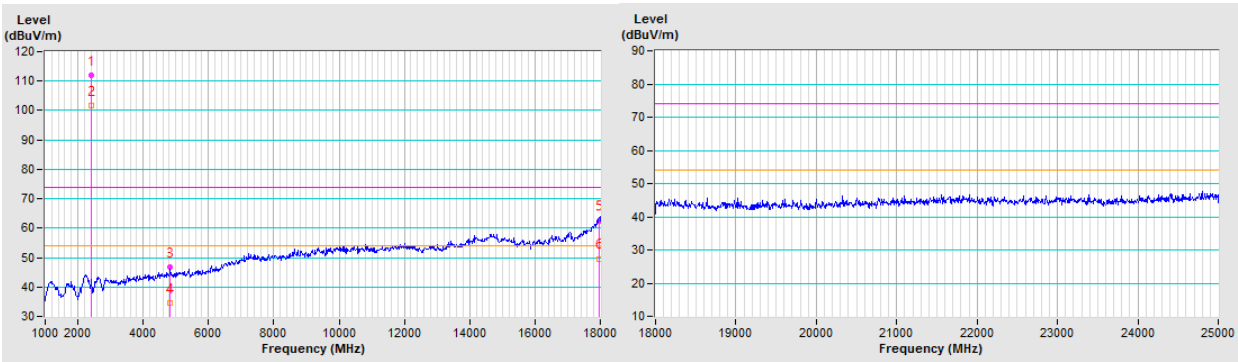
CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2412.00	112.1 PK			2.42 H	117	114.8	-2.7
2	*2412.00	101.6 AV			2.42 H	117	104.3	-2.7
3	4824.00	46.6 PK	74.0	-27.4	1.76 H	353	45.0	1.6
4	4824.00	34.7 AV	54.0	-19.3	1.76 H	353	33.1	1.6
5	17972.37	62.6 PK	74.0	-11.4	1.10 H	156	41.2	21.4
6	17972.37	49.6 AV	54.0	-4.4	1.10 H	156	28.2	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

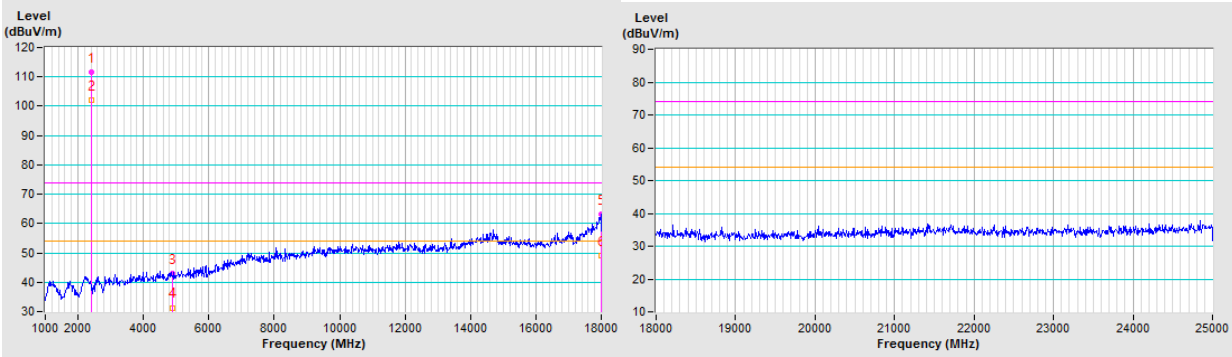


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	111.6 PK			1.52 V	81	114.3	-2.7
2	*2412.00	101.9 AV			1.52 V	81	104.6	-2.7
3	4824.00	42.8 PK	74.0	-31.2	1.42 V	337	41.2	1.6
4	4824.00	31.3 AV	54.0	-22.7	1.42 V	337	29.7	1.6
5	17991.50	63.2 PK	74.0	-10.8	1.55 V	201	41.4	21.8
6	17991.50	49.2 AV	54.0	-4.8	1.55 V	201	27.4	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

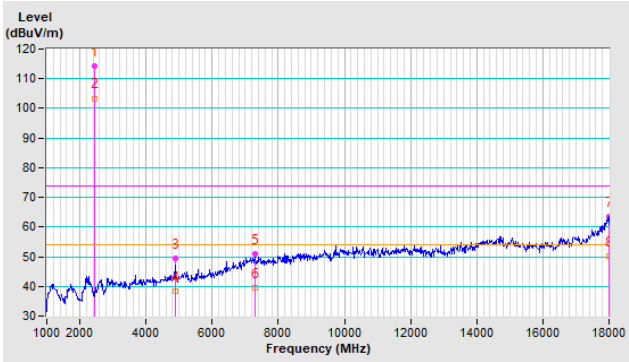


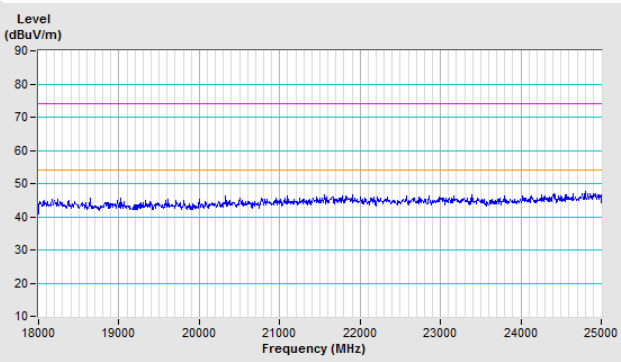
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	114.2 PK			2.43 H	115	117.2	-3.0
2	*2437.00	103.4 AV			2.43 H	115	106.4	-3.0
3	4874.00	49.3 PK	74.0	-24.7	1.80 H	347	47.7	1.6
4	4874.00	38.3 AV	54.0	-15.7	1.80 H	347	36.7	1.6
5	7311.00	50.8 PK	74.0	-23.2	1.62 H	250	43.1	7.7
6	7311.00	39.4 AV	54.0	-14.6	1.62 H	250	31.7	7.7
7	17997.45	63.4 PK	74.0	-10.6	1.13 H	216	41.5	21.9
8	17997.45	50.3 AV	54.0	-3.7	1.13 H	216	28.4	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



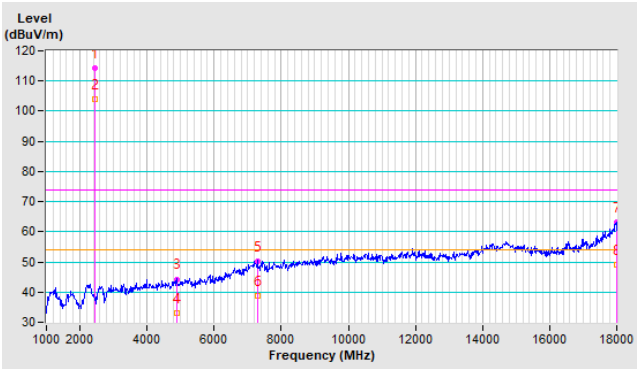


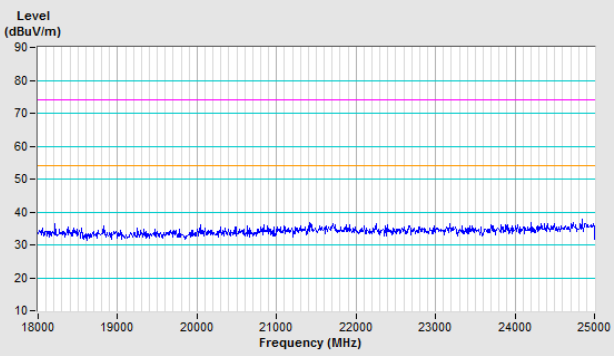
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	114.2 PK			1.27 V	69	117.2	-3.0
2	*2437.00	104.0 AV			1.27 V	69	107.0	-3.0
3	4874.00	44.3 PK	74.0	-29.7	1.43 V	330	42.7	1.6
4	4874.00	33.0 AV	54.0	-21.0	1.43 V	330	31.4	1.6
5	7311.00	50.3 PK	74.0	-23.7	2.11 V	181	42.6	7.7
6	7311.00	38.7 AV	54.0	-15.3	2.11 V	181	31.0	7.7
7	17994.47	63.3 PK	74.0	-10.7	1.60 V	194	41.5	21.8
8	17994.47	49.1 AV	54.0	-4.9	1.60 V	194	27.3	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



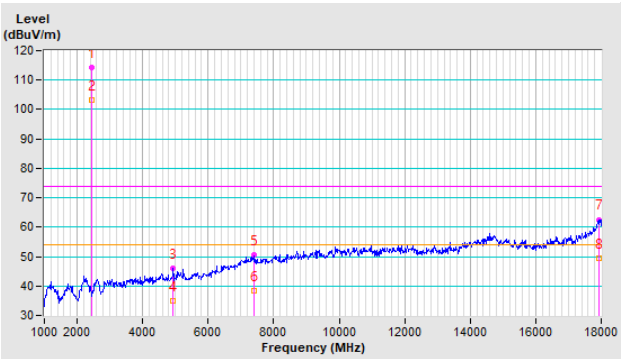


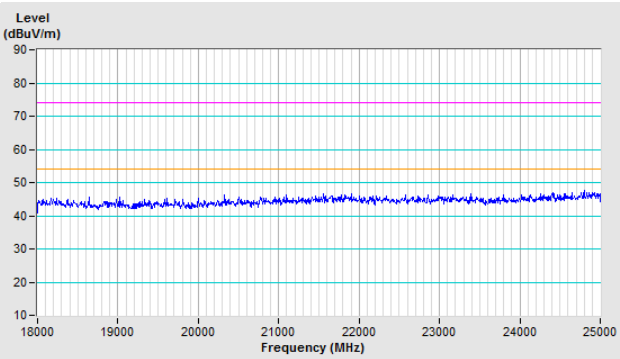
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.1 PK			2.39 H	119	117.1	-3.0
2	*2462.00	103.1 AV			2.39 H	119	106.1	-3.0
3	4924.00	46.0 PK	74.0	-28.0	1.68 H	360	44.3	1.7
4	4924.00	35.1 AV	54.0	-18.9	1.68 H	360	33.4	1.7
5	7386.00	50.6 PK	74.0	-23.4	1.77 H	354	42.7	7.9
6	7386.00	38.4 AV	54.0	-15.6	1.77 H	354	30.5	7.9
7	17943.05	62.6 PK	74.0	-11.4	1.21 H	301	41.8	20.8
8	17943.05	49.4 AV	54.0	-4.6	1.21 H	301	28.6	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



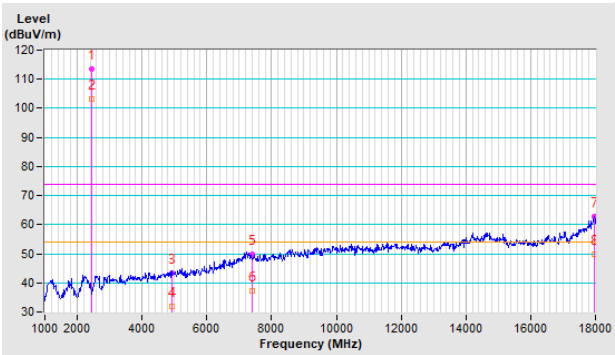


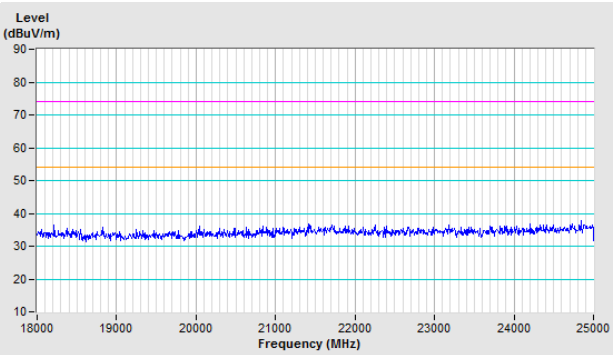
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.4 PK			1.01 V	106	116.4	-3.0
2	*2462.00	103.2 AV			1.01 V	106	106.2	-3.0
3	4924.00	43.4 PK	74.0	-30.6	1.38 V	334	41.7	1.7
4	4924.00	31.9 AV	54.0	-22.1	1.38 V	334	30.2	1.7
5	7386.00	49.8 PK	74.0	-24.2	2.17 V	196	41.9	7.9
6	7386.00	37.3 AV	54.0	-16.7	2.17 V	196	29.4	7.9
7	17980.03	62.9 PK	74.0	-11.1	1.53 V	212	41.4	21.5
8	17980.03	49.7 AV	54.0	-4.3	1.53 V	212	28.2	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



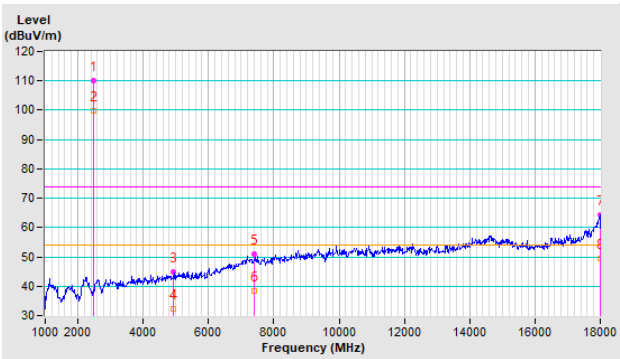


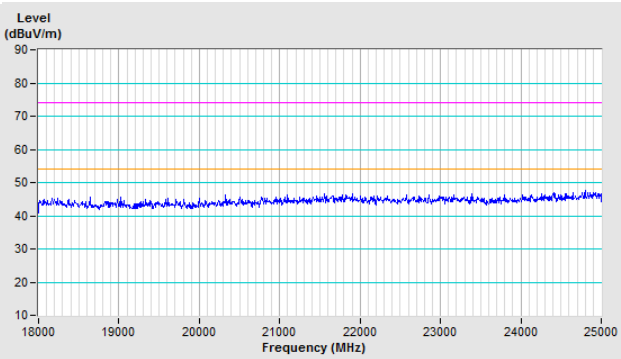
CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	110.0 PK			2.67 H	118	112.9	-2.9
2	*2467.00	99.9 AV			2.67 H	118	102.8	-2.9
3	4934.00	44.8 PK	74.0	-29.2	1.60 H	165	43.0	1.8
4	4934.00	32.1 AV	54.0	-21.9	1.60 H	165	30.3	1.8
5	7401.00	51.0 PK	74.0	-23.0	1.61 H	107	43.1	7.9
6	7401.00	38.3 AV	54.0	-15.7	1.61 H	107	30.4	7.9
7	17983.42	64.2 PK	74.0	-9.8	1.17 H	231	42.6	21.6
8	17983.42	49.3 AV	54.0	-4.7	1.17 H	231	27.7	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



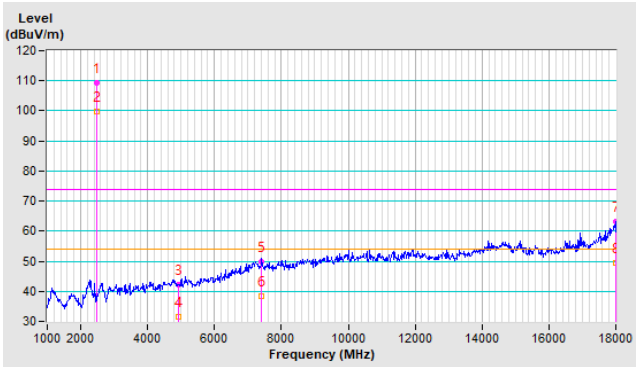


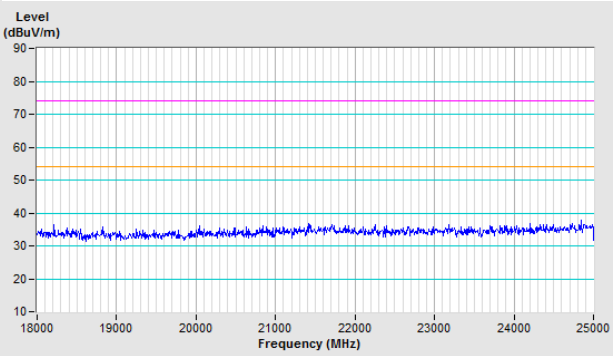
CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	109.4 PK			1.05 V	68	112.3	-2.9
2	*2467.00	99.6 AV			1.05 V	68	102.5	-2.9
3	4934.00	42.3 PK	74.0	-31.7	1.43 V	337	40.5	1.8
4	4934.00	31.6 AV	54.0	-22.4	1.43 V	337	29.8	1.8
5	7401.00	49.7 PK	74.0	-24.3	2.18 V	195	41.8	7.9
6	7401.00	38.4 AV	54.0	-15.6	2.18 V	195	30.5	7.9
7	17992.35	63.2 PK	74.0	-10.8	1.56 V	200	41.4	21.8
8	17992.35	49.3 AV	54.0	-4.7	1.56 V	200	27.5	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



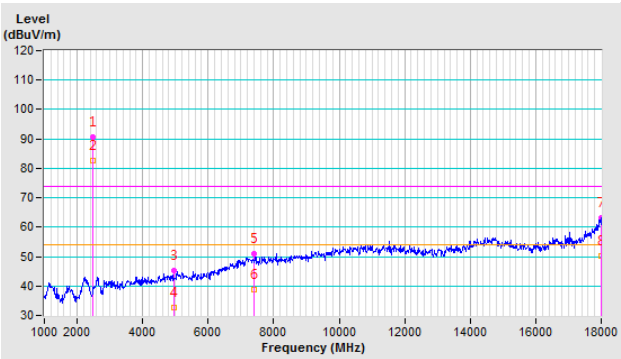


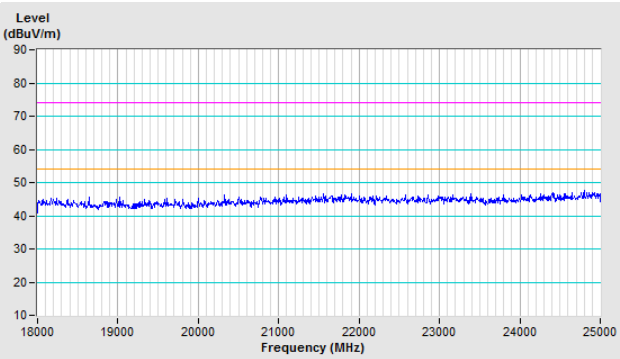
CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	90.5 PK			1.00 H	59	93.4	-2.9
2	*2472.00	82.5 AV			1.00 H	59	85.4	-2.9
3	4944.00	45.3 PK	74.0	-28.7	1.57 H	156	43.4	1.9
4	4944.00	32.5 AV	54.0	-21.5	1.57 H	156	30.6	1.9
5	7416.00	51.1 PK	74.0	-22.9	1.56 H	117	43.1	8.0
6	7416.00	38.7 AV	54.0	-15.3	1.56 H	117	30.7	8.0
7	17997.45	63.1 PK	74.0	-10.9	1.39 H	317	41.2	21.9
8	17997.45	50.1 AV	54.0	-3.9	1.39 H	317	28.2	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



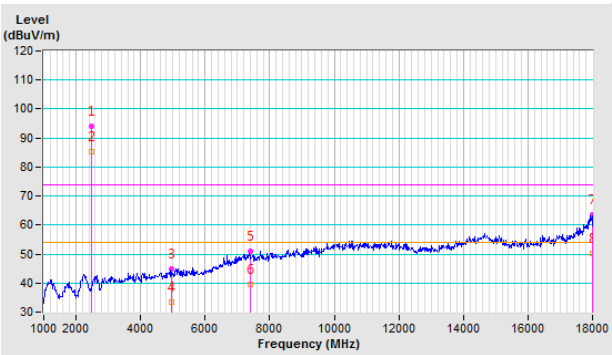


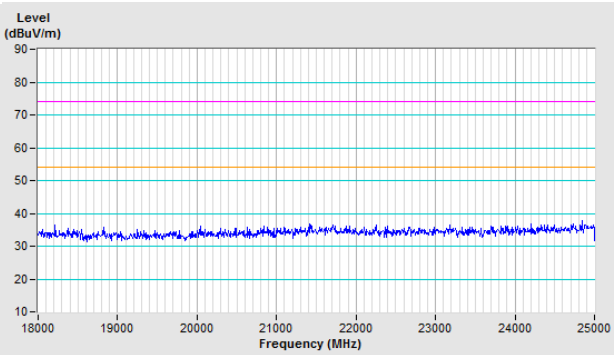
CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	94.2 PK			1.67 V	72	97.1	-2.9
2	*2472.00	85.3 AV			1.67 V	72	88.2	-2.9
3	4944.00	45.0 PK	74.0	-29.0	1.48 V	345	43.1	1.9
4	4944.00	33.3 AV	54.0	-20.7	1.48 V	345	31.4	1.9
5	7416.00	50.9 PK	74.0	-23.1	2.15 V	206	42.9	8.0
6	7416.00	39.6 AV	54.0	-14.4	2.15 V	206	31.6	8.0
7	17985.55	63.5 PK	74.0	-10.5	1.37 V	201	41.9	21.6
8	17985.55	50.1 AV	54.0	-3.9	1.37 V	201	28.5	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





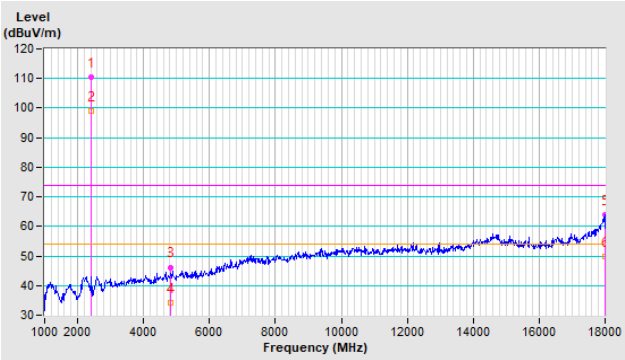
802.11n (HT20)

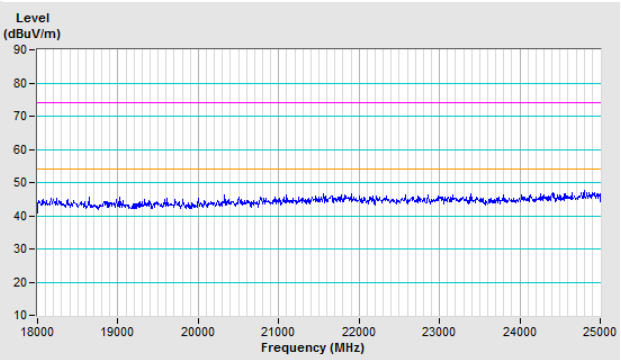
CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2412.00	110.4 PK			2.44 H	133	113.1	-2.7
2	*2412.00	99.0 AV			2.44 H	133	101.7	-2.7
3	4824.00	46.2 PK	74.0	-27.8	1.81 H	327	44.6	1.6
4	4824.00	34.1 AV	54.0	-19.9	1.81 H	327	32.5	1.6
5	17985.12	63.8 PK	74.0	-10.2	1.53 H	257	42.2	21.6
6	17985.12	49.8 AV	54.0	-4.2	1.53 H	257	28.2	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



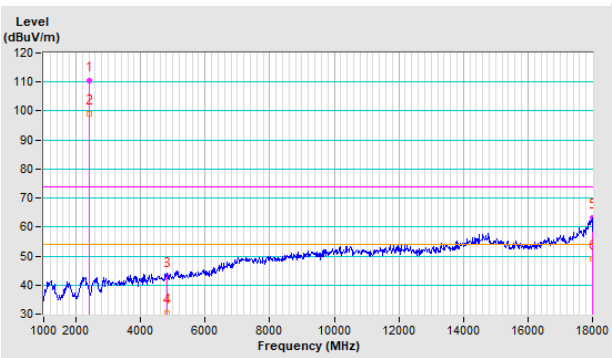


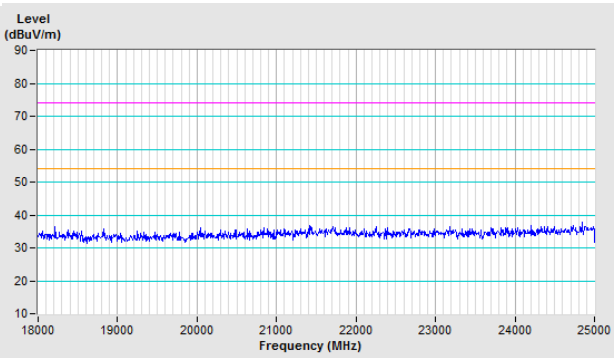
CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	110.5 PK			1.52 V	84	113.2	-2.7
2	*2412.00	99.1 AV			1.52 V	84	101.8	-2.7
3	4824.00	43.1 PK	74.0	-30.9	1.41 V	340	41.5	1.6
4	4824.00	30.4 AV	54.0	-23.6	1.41 V	340	28.8	1.6
5	17989.37	63.1 PK	74.0	-10.9	1.55 V	209	41.4	21.7
6	17989.37	49.1 AV	54.0	-4.9	1.55 V	209	27.4	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



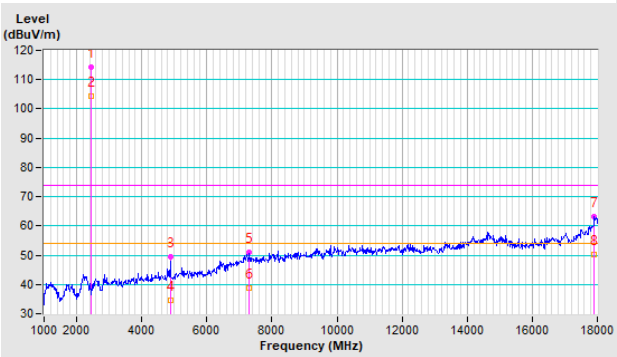


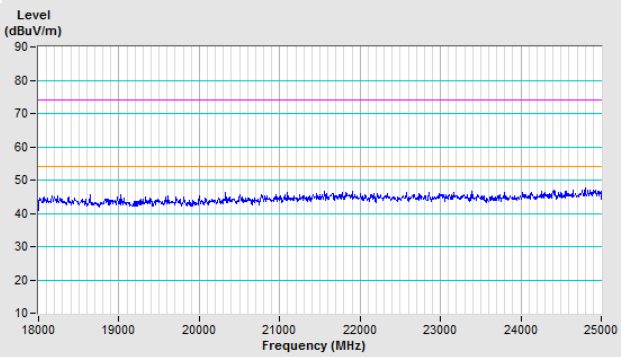
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	114.3 PK			2.41 H	133	117.3	-3.0
2	*2437.00	104.2 AV			2.41 H	133	107.2	-3.0
3	4874.00	49.3 PK	74.0	-24.7	1.85 H	335	47.7	1.6
4	4874.00	34.4 AV	54.0	-19.6	1.85 H	335	32.8	1.6
5	7311.00	50.8 PK	74.0	-23.2	1.64 H	254	43.1	7.7
6	7311.00	38.9 AV	54.0	-15.1	1.64 H	254	31.2	7.7
7	17898.00	63.0 PK	74.0	-11.0	1.12 H	215	42.9	20.1
8	17898.00	50.1 AV	54.0	-3.9	1.12 H	215	30.0	20.1

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



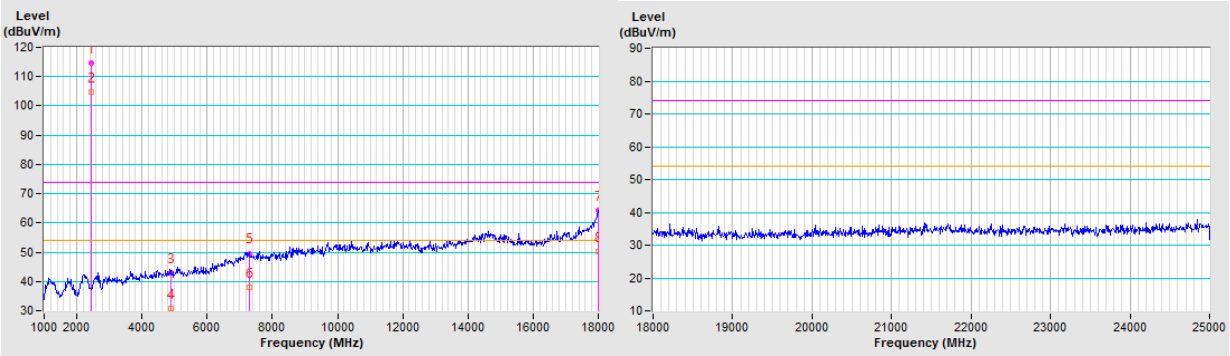


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	114.8 PK			1.31 V	81	117.8	-3.0
2	*2437.00	104.7 AV			1.31 V	81	107.7	-3.0
3	4874.00	42.8 PK	74.0	-31.2	1.41 V	344	41.2	1.6
4	4874.00	30.8 AV	54.0	-23.2	1.41 V	344	29.2	1.6
5	7311.00	49.6 PK	74.0	-24.4	2.16 V	176	41.9	7.7
6	7311.00	38.1 AV	54.0	-15.9	2.16 V	176	30.4	7.7
7	18000.00	64.3 PK	74.0	-9.7	1.51 V	215	42.4	21.9
8	18000.00	50.1 AV	54.0	-3.9	1.51 V	215	28.2	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

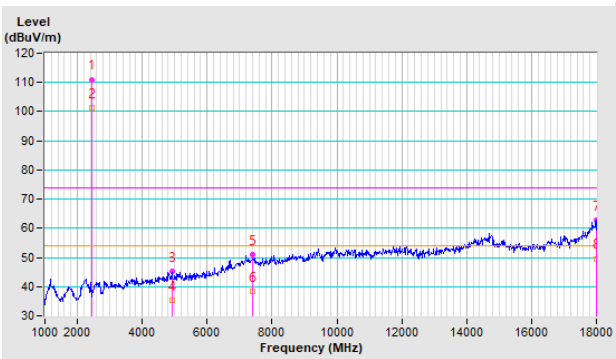


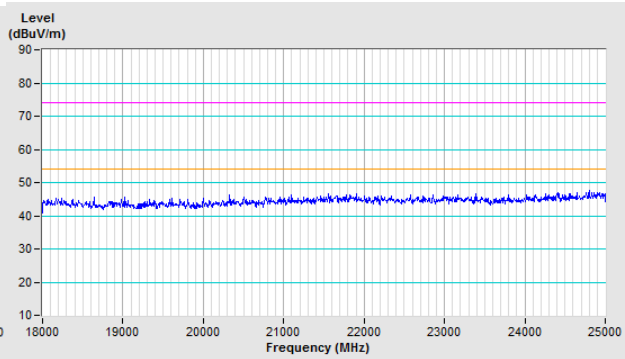
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	111.0 PK			2.37 H	194	114.0	-3.0
2	*2462.00	101.2 AV			2.37 H	194	104.2	-3.0
3	4924.00	45.3 PK	74.0	-28.7	1.72 H	355	43.6	1.7
4	4924.00	35.4 AV	54.0	-18.6	1.72 H	355	33.7	1.7
5	7386.00	50.8 PK	74.0	-23.2	1.77 H	348	42.9	7.9
6	7386.00	38.5 AV	54.0	-15.5	1.77 H	348	30.6	7.9
7	17988.10	62.7 PK	74.0	-11.3	1.09 H	243	41.0	21.7
8	17988.10	49.6 AV	54.0	-4.4	1.09 H	243	27.9	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



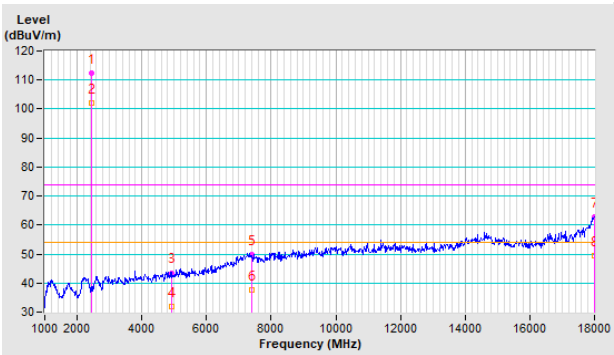


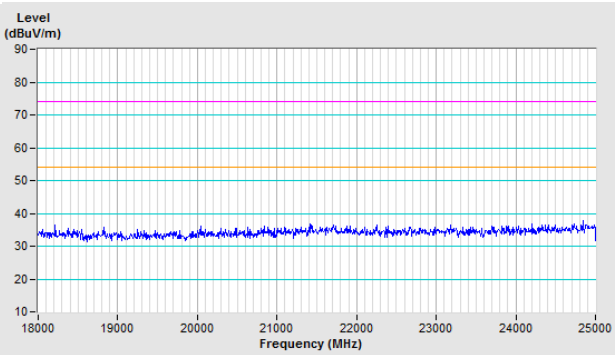
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.5 PK			1.15 V	92	115.5	-3.0
2	*2462.00	102.1 AV			1.15 V	92	105.1	-3.0
3	4924.00	43.5 PK	74.0	-30.5	1.46 V	332	41.8	1.7
4	4924.00	31.9 AV	54.0	-22.1	1.46 V	332	30.2	1.7
5	7386.00	49.9 PK	74.0	-24.1	2.14 V	188	42.0	7.9
6	7386.00	37.7 AV	54.0	-16.3	2.14 V	188	29.8	7.9
7	18000.00	62.7 PK	74.0	-11.3	1.52 V	190	40.8	21.9
8	18000.00	49.3 AV	54.0	-4.7	1.52 V	190	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



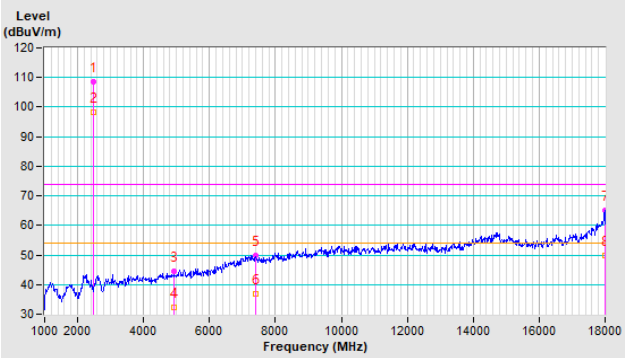


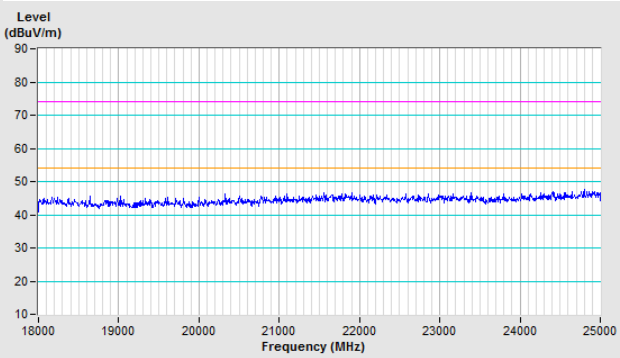
CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2467.00	108.6 PK			2.49 H	102	111.5	-2.9
2	*2467.00	98.4 AV			2.49 H	102	101.3	-2.9
3	4934.00	44.6 PK	74.0	-29.4	1.52 H	141	42.8	1.8
4	4934.00	32.2 AV	54.0	-21.8	1.52 H	141	30.4	1.8
5	7401.00	49.9 PK	74.0	-24.1	1.65 H	137	42.0	7.9
6	7401.00	37.0 AV	54.0	-17.0	1.65 H	137	29.1	7.9
7	17995.33	64.9 PK	74.0	-9.1	1.03 H	136	43.0	21.9
8	17995.33	49.7 AV	54.0	-4.3	1.03 H	136	27.8	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



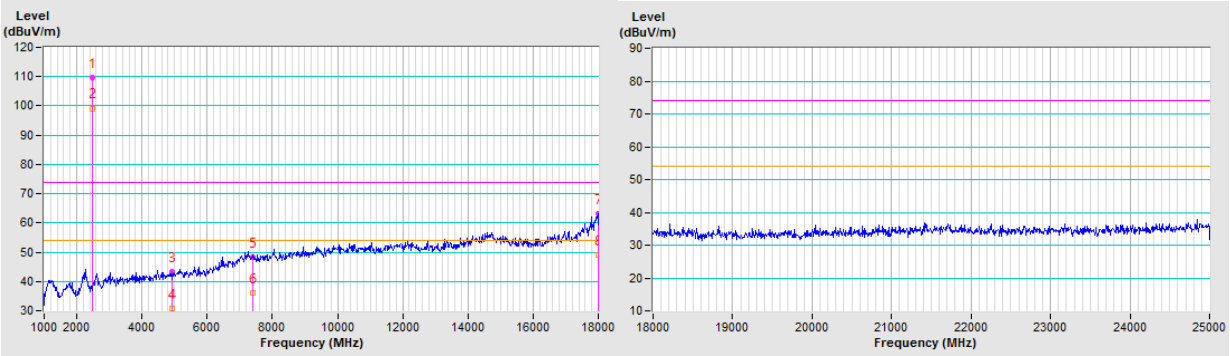


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	109.6 PK			1.46 V	108	112.5	-2.9
2	*2467.00	99.2 AV			1.46 V	108	102.1	-2.9
3	4934.00	43.2 PK	74.0	-30.8	1.38 V	343	41.4	1.8
4	4934.00	30.7 AV	54.0	-23.3	1.38 V	343	28.9	1.8
5	7401.00	48.2 PK	74.0	-25.8	2.13 V	196	40.3	7.9
6	7401.00	36.2 AV	54.0	-17.8	2.13 V	196	28.3	7.9
7	17996.17	63.0 PK	74.0	-11.0	1.55 V	186	41.1	21.9
8	17996.17	49.1 AV	54.0	-4.9	1.55 V	186	27.2	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

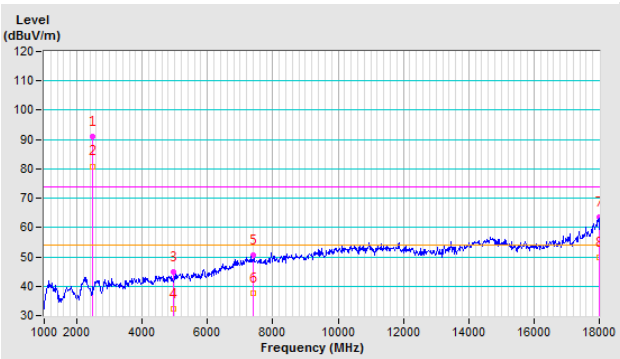


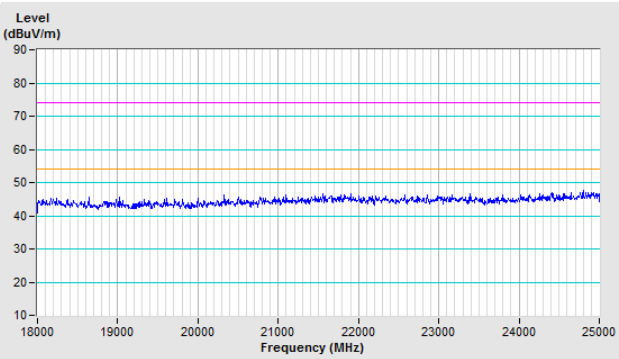
CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2472.00	90.9 PK			1.24 H	159	93.8	-2.9
2	*2472.00	80.9 AV			1.24 H	159	83.8	-2.9
3	4944.00	44.9 PK	74.0	-29.1	1.53 H	148	43.0	1.9
4	4944.00	32.4 AV	54.0	-21.6	1.53 H	148	30.5	1.9
5	7416.00	50.7 PK	74.0	-23.3	1.69 H	135	42.7	8.0
6	7416.00	37.6 AV	54.0	-16.4	1.69 H	135	29.6	8.0
7	17991.10	63.4 PK	74.0	-10.6	1.37 H	215	41.6	21.8
8	17991.10	49.9 AV	54.0	-4.1	1.37 H	215	28.1	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



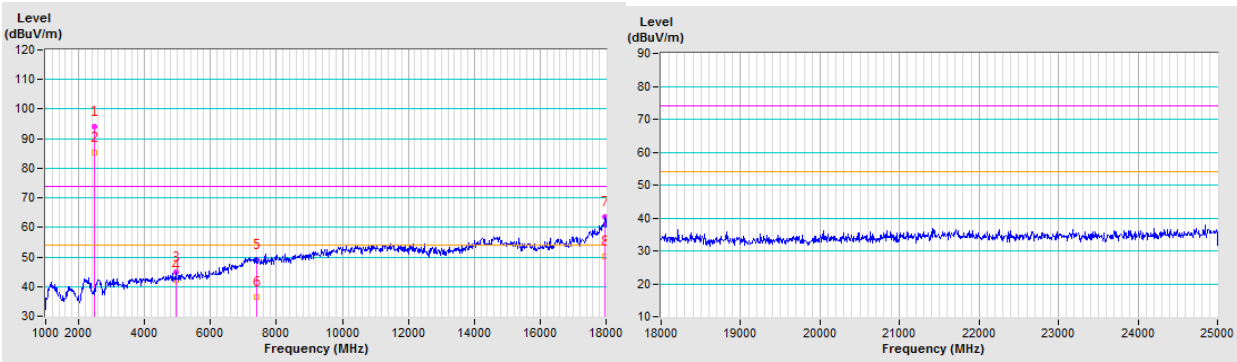


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	94.1 PK			1.77 V	61	97.0	-2.9
2	*2472.00	85.2 AV			1.77 V	61	88.1	-2.9
3	4944.00	45.0 PK	74.0	-29.0	1.48 V	345	43.1	1.9
4	4944.00	42.3 AV	54.0	-11.7	1.48 V	345	40.4	1.9
5	7416.00	48.9 PK	74.0	-25.1	2.15 V	206	40.9	8.0
6	7416.00	36.6 AV	54.0	-17.4	2.15 V	206	28.6	8.0
7	17980.03	63.4 PK	74.0	-10.6	1.23 V	249	41.9	21.5
8	17980.03	50.1 AV	54.0	-3.9	1.23 V	249	28.6	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



4.1.8 Test Results for Bandedge above 1GHz

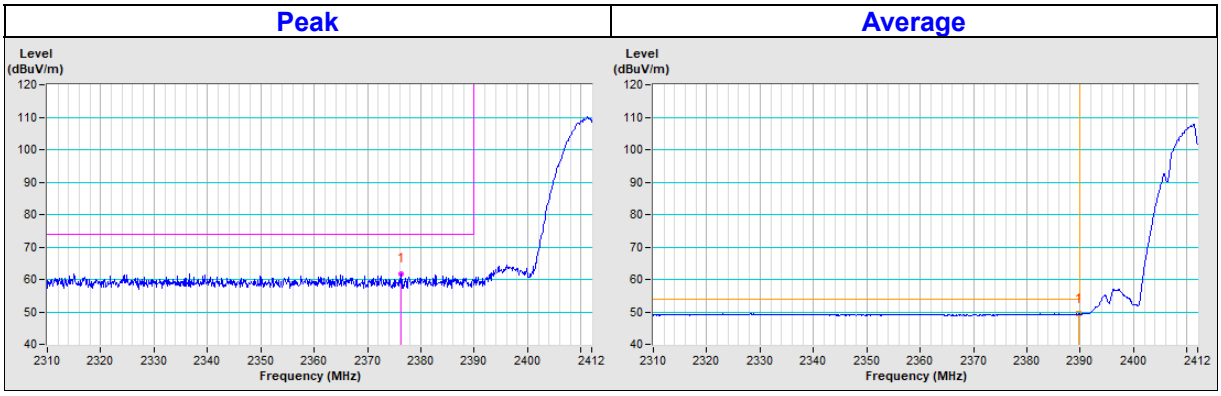
802.11b

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

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	2376.28	61.7 PK	74.0	-12.3	1.49 H	213	64.3	-2.6
AV.1	2389.70	49.4 AV	54.0	-4.6	2.30 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

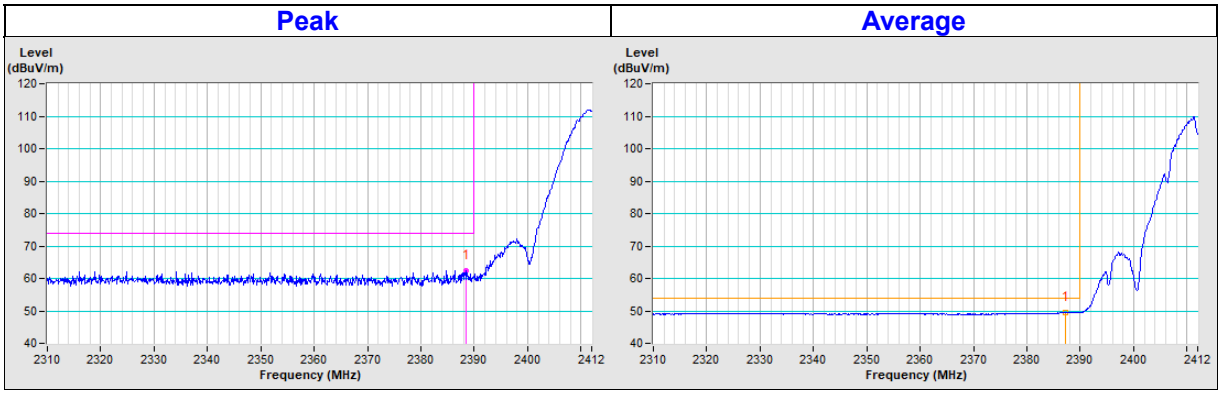


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2412MHz		

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	2388.38	62.5 PK	74.0	-11.5	1.13 V	106	65.2	-2.7
AV.1	2387.31	49.6 AV	54.0	-4.4	1.13 V	106	52.3	-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

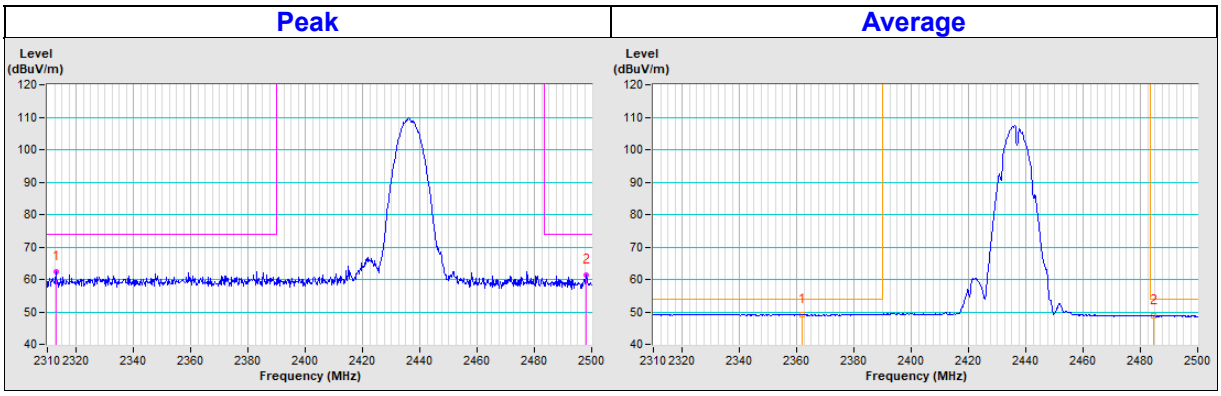


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2500MHz		

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	2313.07	62.4 PK	74.0	-11.6	2.60 H	185	64.9	-2.5
PK.2	2498.10	61.5 PK	74.0	-12.5	2.60 H	185	64.4	-2.9
AV.1	2362.03	49.3 AV	54.0	-4.7	2.60 H	185	51.9	-2.6
AV.2	2484.70	48.8 AV	54.0	-5.2	2.60 H	185	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

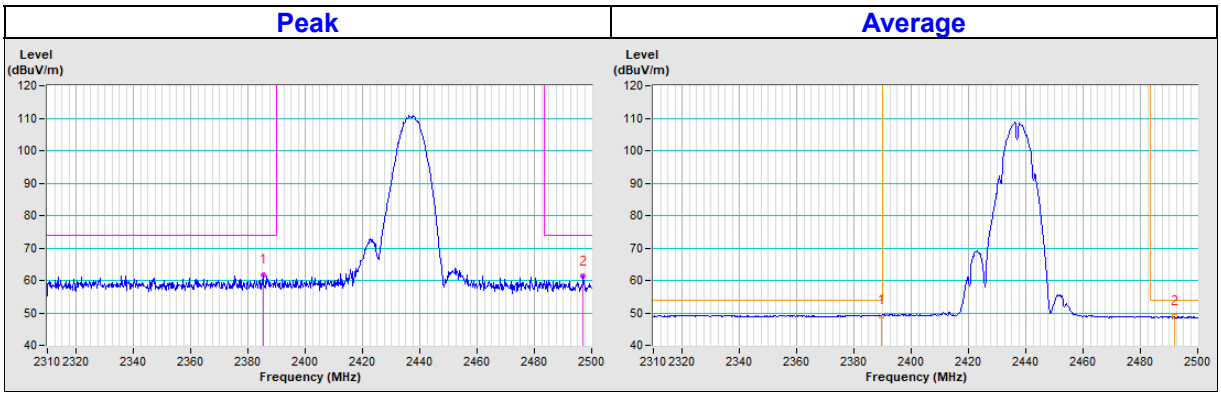


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2500MHz		

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	2385.30	61.7 PK	74.0	-12.3	1.67 V	81	64.4	-2.7
PK.2	2496.98	61.2 PK	74.0	-12.8	1.67 V	81	64.1	-2.9
AV.1	2389.55	49.3 AV	54.0	-4.7	1.67 V	81	52.0	-2.7
AV.2	2491.80	48.8 AV	54.0	-5.2	1.67 V	81	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

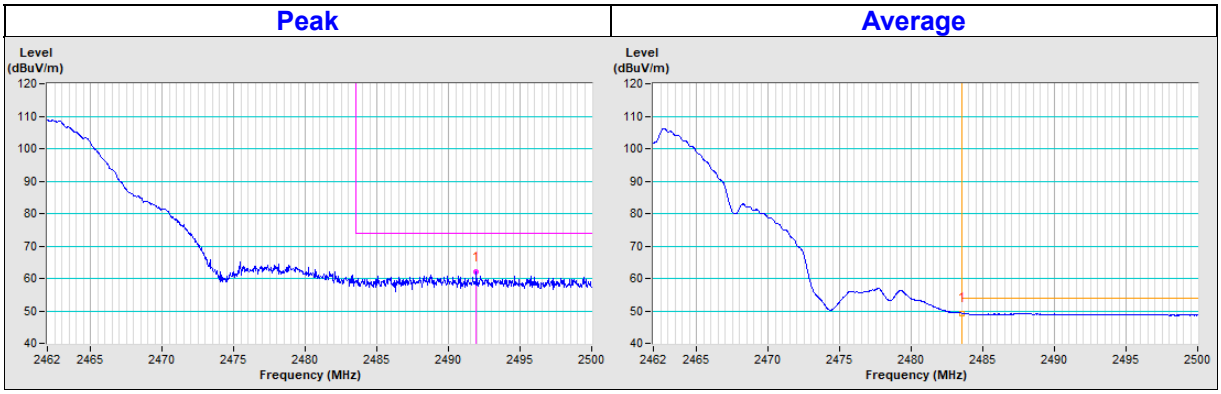


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2491.96	61.9 PK	74.0	-12.1	2.65 H	157	64.8	-2.9
AV.1	2483.57	49.2 AV	54.0	-4.8	2.65 H	157	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

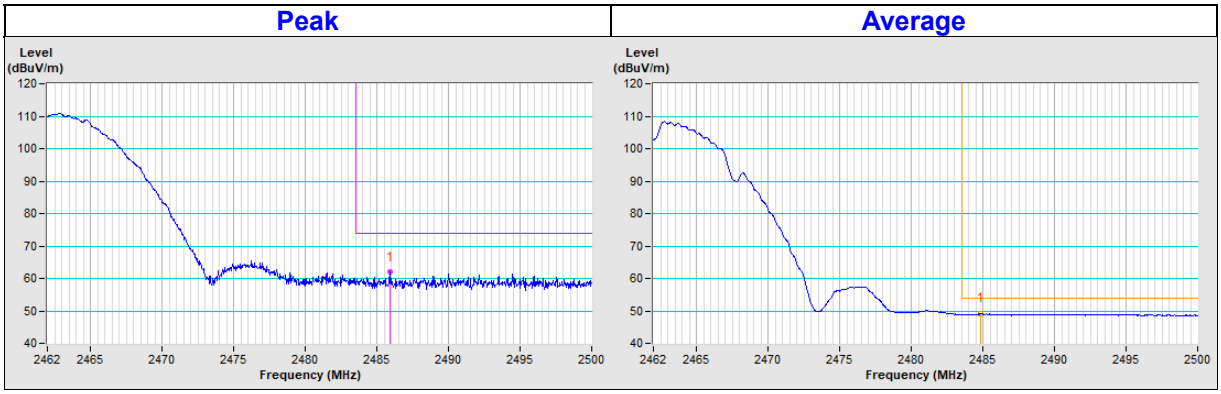


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2485.91	61.9 PK	74.0	-12.1	1.31 V	105	64.8	-2.9
AV.1	2484.85	49.1 AV	54.0	-4.9	1.31 V	105	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

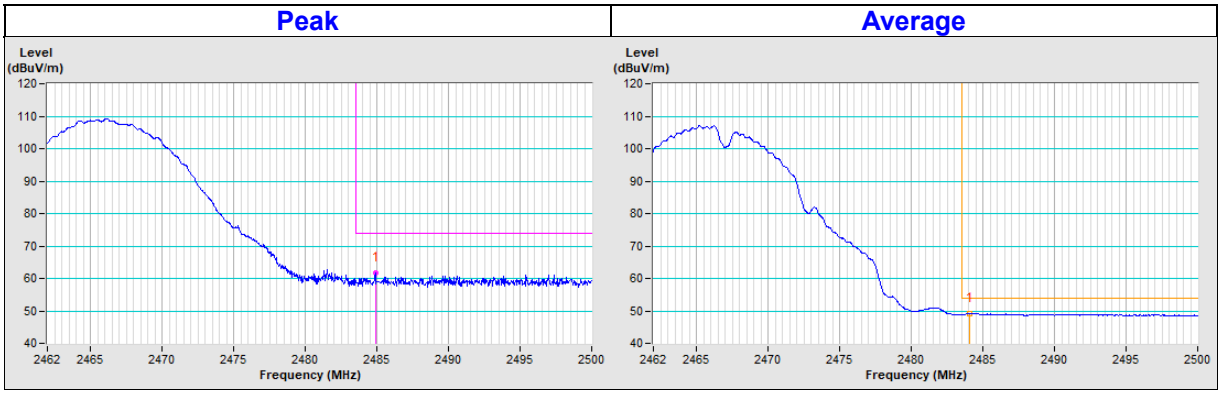


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2484.89	61.7 PK	74.0	-12.3	2.18 H	190	64.7	-3.0
AV.1	2484.05	49.2 AV	54.0	-4.8	2.18 H	190	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

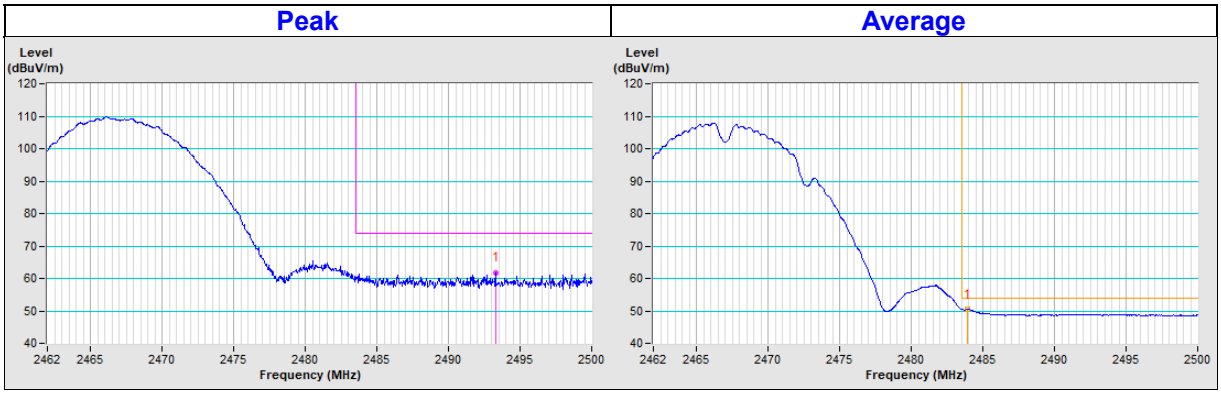


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2493.30	61.7 PK	74.0	-12.3	1.41 V	82	64.6	-2.9
AV.1	2483.95	50.4 AV	54.0	-3.6	1.41 V	82	53.4	-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

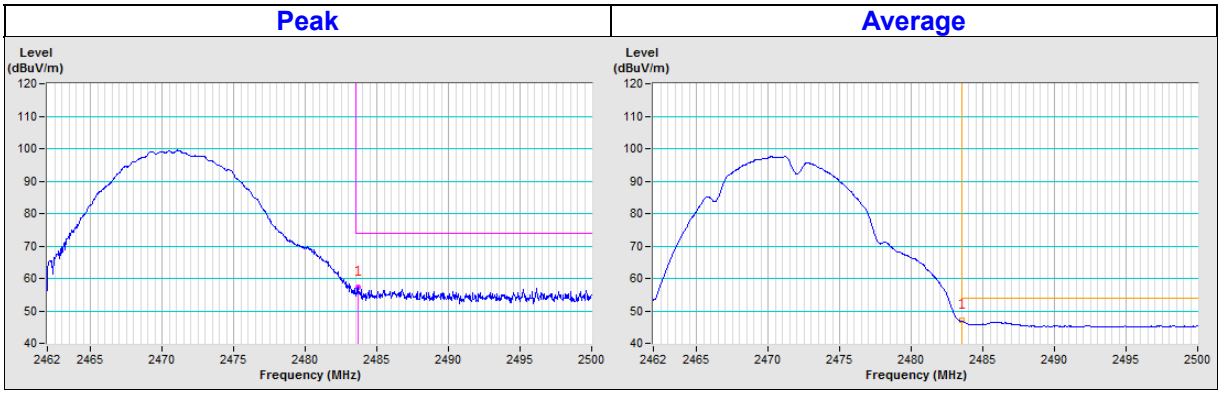


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.67	57.2 PK	74.0	-16.8	2.15 H	302	60.2	-3.0
AV.1	2483.54	47.0 AV	54.0	-7.0	2.15 H	302	50.0	-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

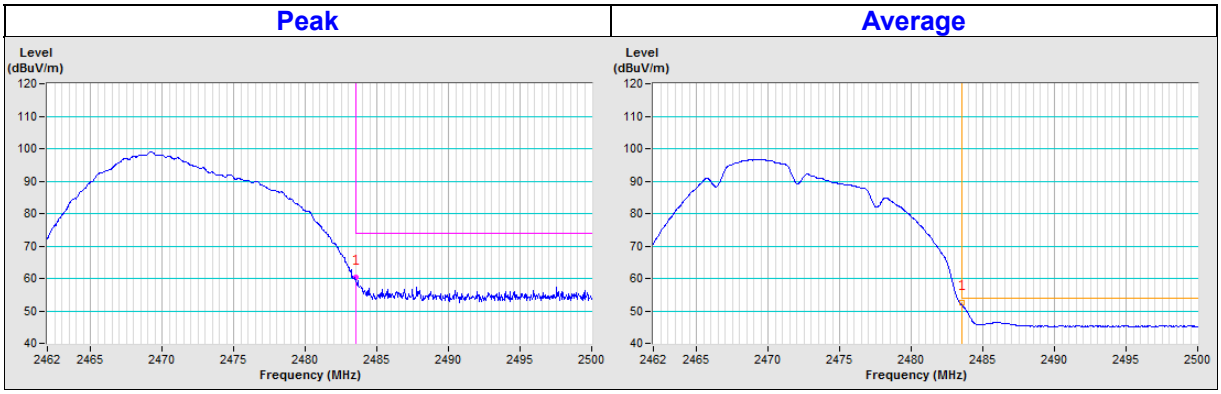


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.50	60.4 PK	74.0	-13.6	1.24 V	127	63.4	-3.0
AV.1	**2483.50**	**52.5 AV**	**54.0**	**-1.5**	**1.24 V**	**127**	**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



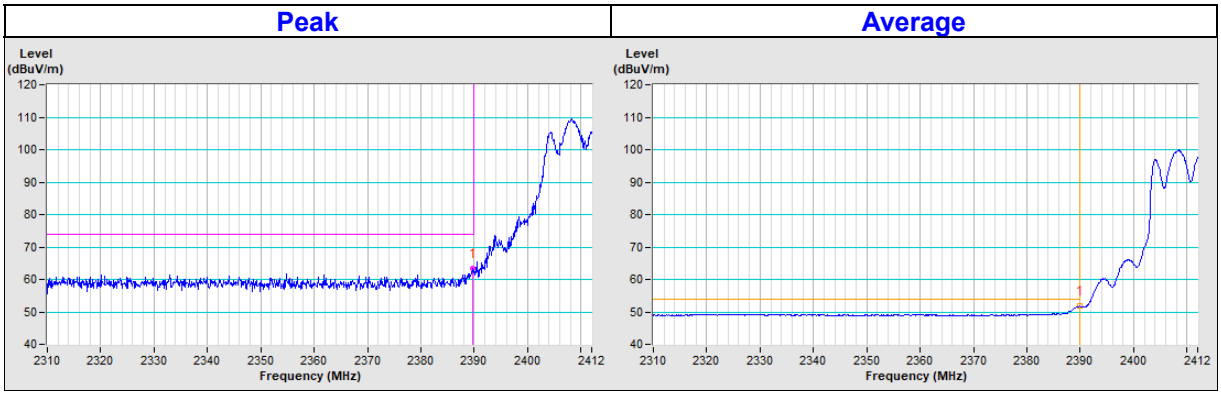
802.11g

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

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	2389.67	63.3 PK	74.0	-10.7	2.42 H	117	66.0	-2.7
AV.1	2390.00	51.7 AV	54.0	-2.3	2.42 H	117	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

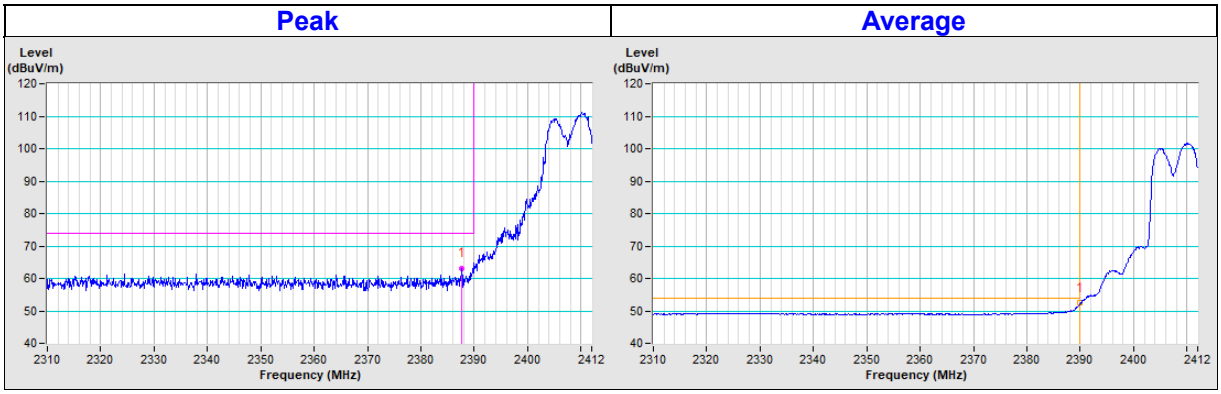


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2412MHz		

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	2387.69	63.0 PK	74.0	-11.0	1.52 V	81	65.7	-2.7
AV.1	2390.00	52.4 AV	54.0	-1.6	1.52 V	81	55.1	-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

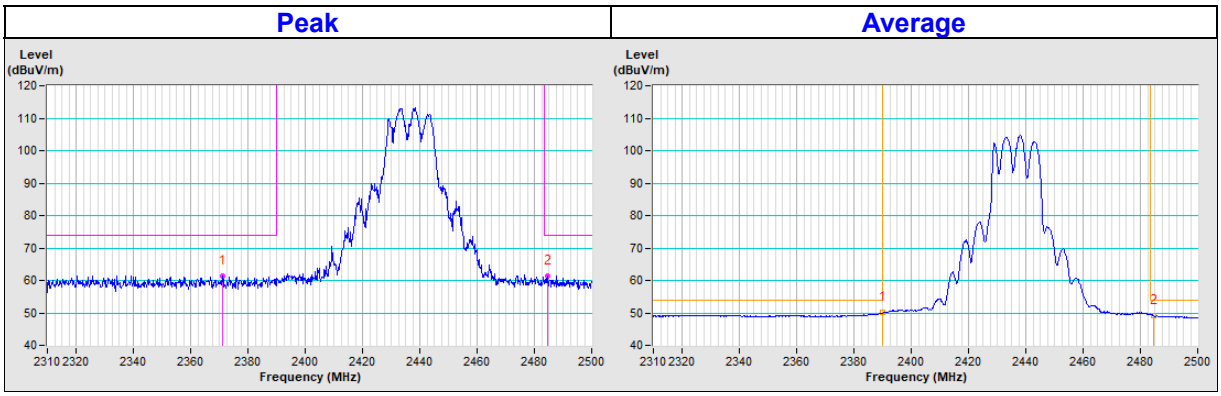


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2500MHz		

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	2370.97	61.3 PK	74.0	-12.7	2.43 H	115	63.9	-2.6
PK.2	2484.44	61.3 PK	74.0	-12.7	2.43 H	115	64.3	-3.0
AV.1	2390.00	50.1 AV	54.0	-3.9	2.43 H	115	52.8	-2.7
AV.2	2484.50	49.3 AV	54.0	-4.7	2.43 H	115	52.3	-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

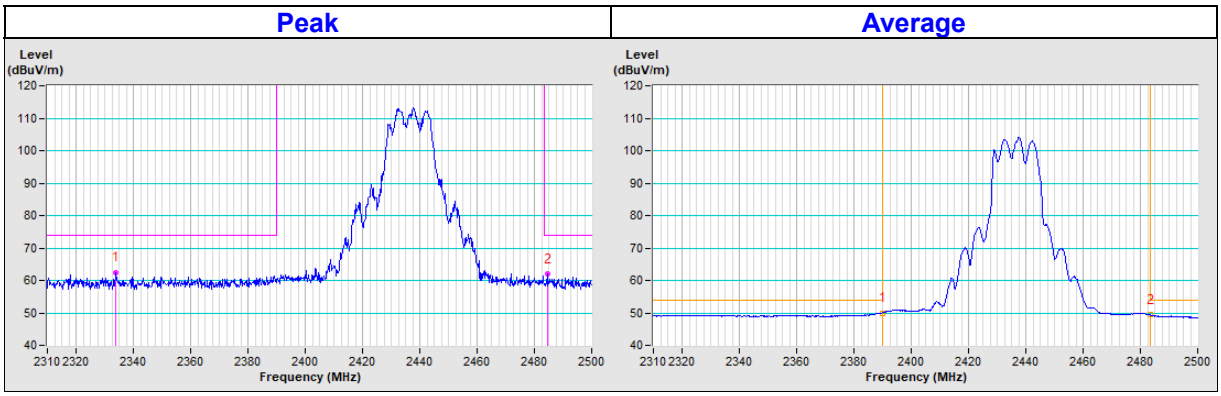


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2500MHz		

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	2333.97	62.4 PK	74.0	-11.6	1.27 V	69	64.9	-2.5
PK.2	2484.47	61.9 PK	74.0	-12.1	1.27 V	69	64.9	-3.0
AV.1	2390.00	50.0 AV	54.0	-4.0	1.27 V	69	52.7	-2.7
AV.2	2483.50	49.4 AV	54.0	-4.6	1.27 V	69	52.4	-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

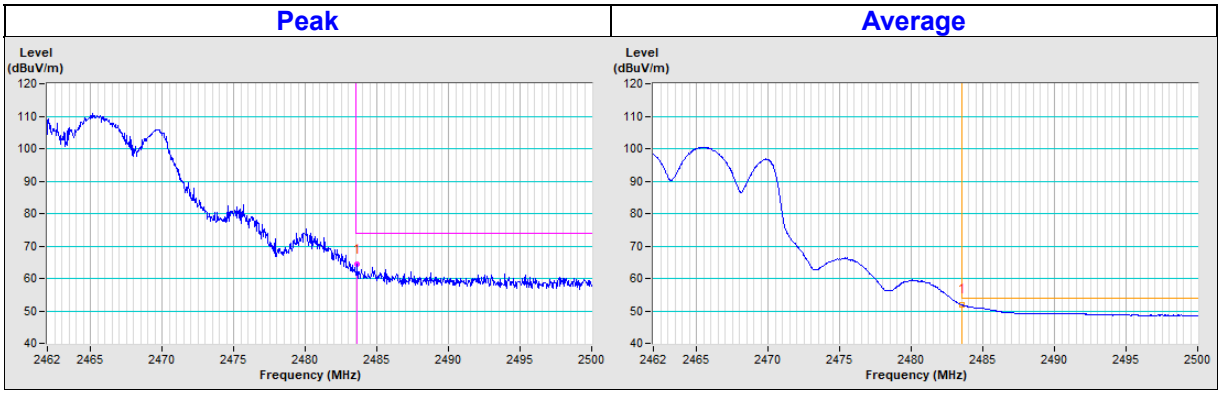


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.65	64.3 PK	74.0	-9.7	2.39 H	119	67.3	-3.0
AV.1	2483.52	51.8 AV	54.0	-2.2	2.39 H	119	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



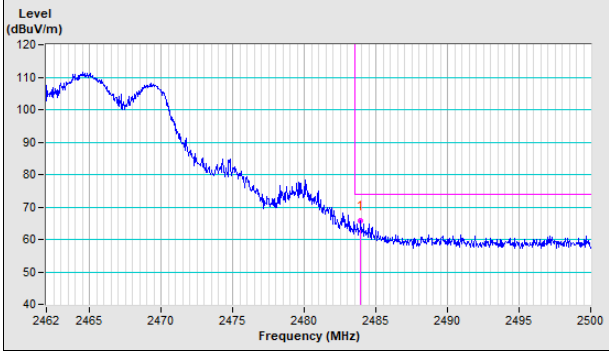
CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.93	65.6 PK	74.0	-8.4	1.01 V	106	68.6	-3.0
AV.1	2483.66	52.4 AV	54.0	-1.6	1.01 V	106	55.4	-3.0

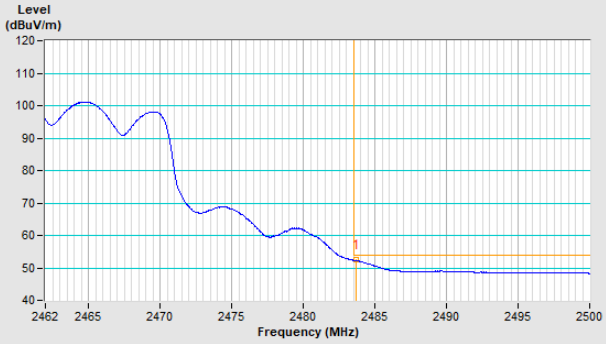
Remarks:

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

Peak



Average

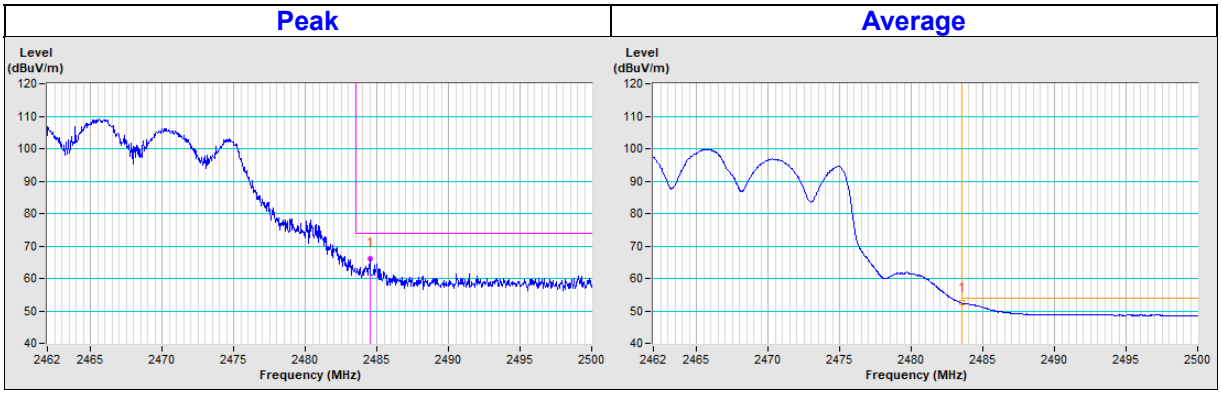


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2484.52	66.2 PK	74.0	-7.8	2.67 H	118	69.2	-3.0
AV.1	2483.50	52.4 AV	54.0	-1.6	2.67 H	118	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

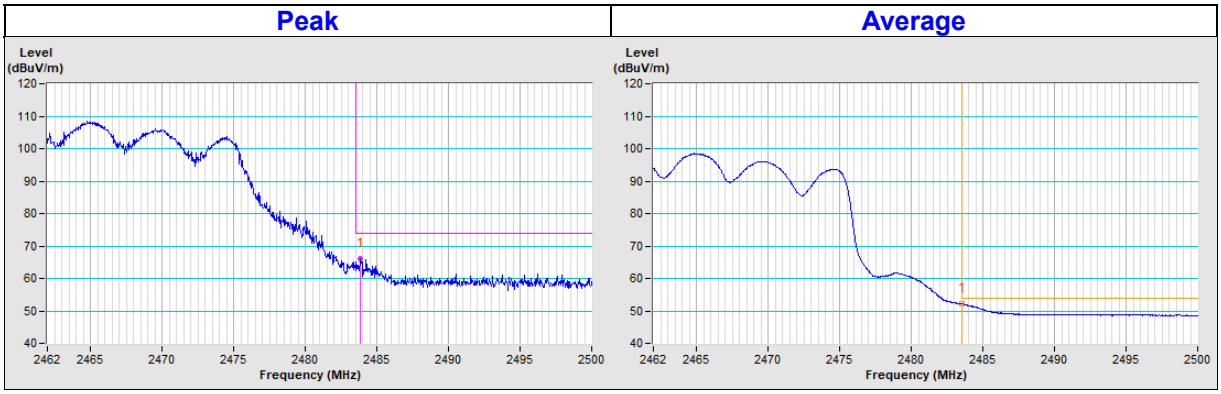


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	66.1 PK	74.0	-7.9	1.05 V	68	69.1	-3.0
AV.1	2483.50	52.3 AV	54.0	-1.7	1.05 V	68	55.3	-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

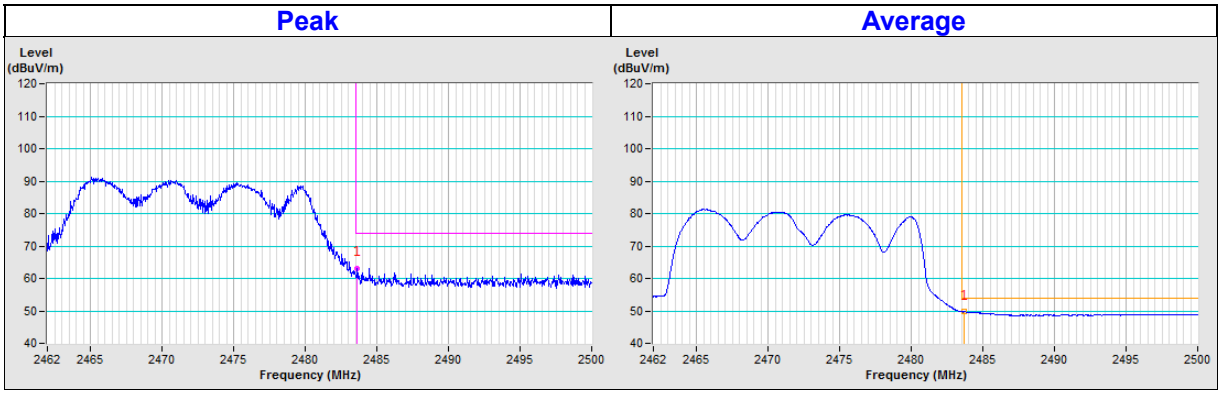


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.64	63.2 PK	74.0	-10.8	1.00 H	59	70.1	-6.9
AV.1	2483.73	49.7 AV	54.0	-4.3	1.00 H	59	52.7	-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

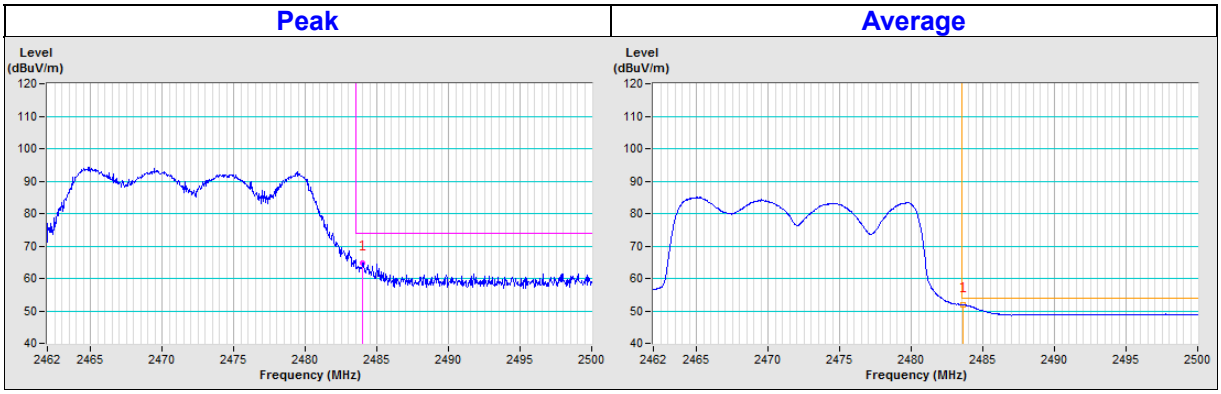


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2484.00	64.9 PK	74.0	-9.1	1.67 V	72	67.9	-3.0
AV.1	2483.61	51.9 AV	54.0	-2.1	1.67 V	72	58.8	-6.9

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



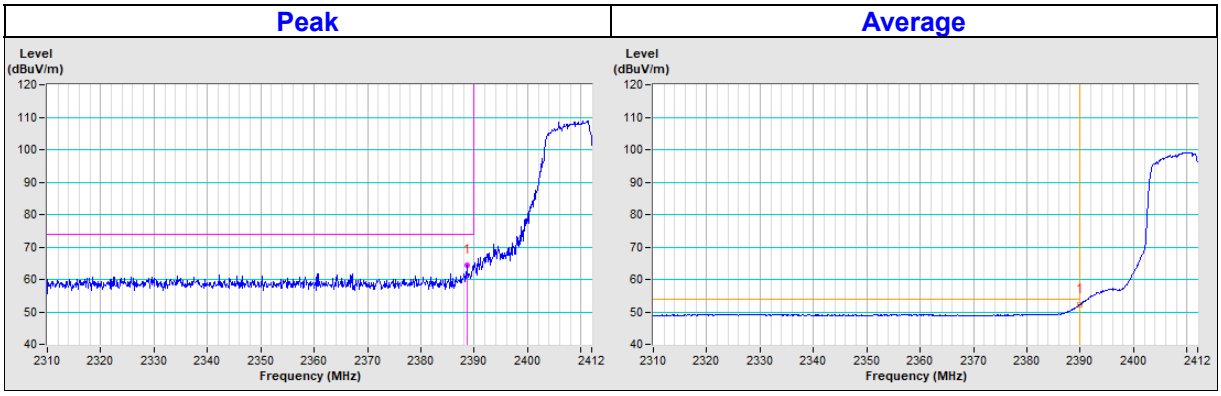
802.11n (HT20)

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

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	2388.57	64.4 PK	74.0	-9.6	2.44 H	133	67.1	-2.7
AV.1	2390.00	52.3 AV	54.0	-1.7	2.44 H	133	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

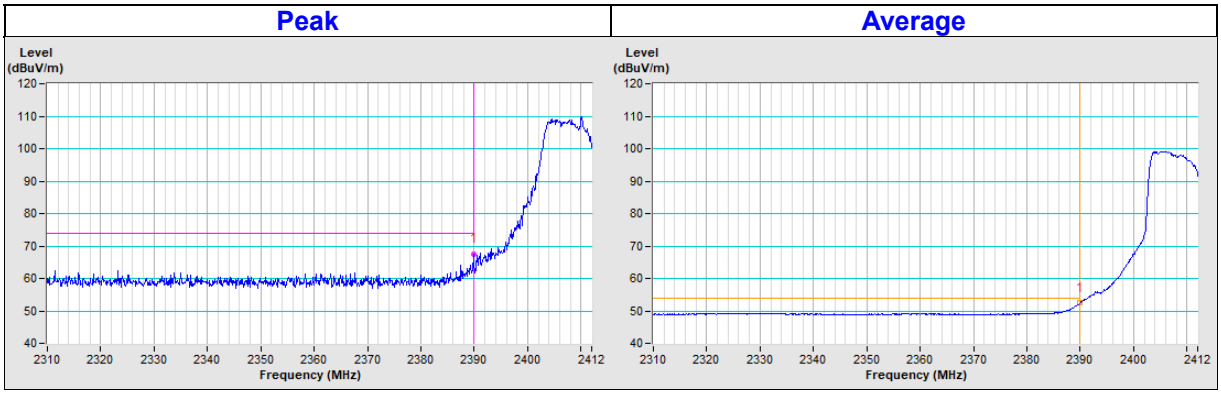


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2412MHz		

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	2389.85	67.4 PK	74.0	-6.6	1.52 V	84	70.1	-2.7
AV.1	2390.00	52.4 AV	54.0	-1.6	1.52 V	84	55.1	-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

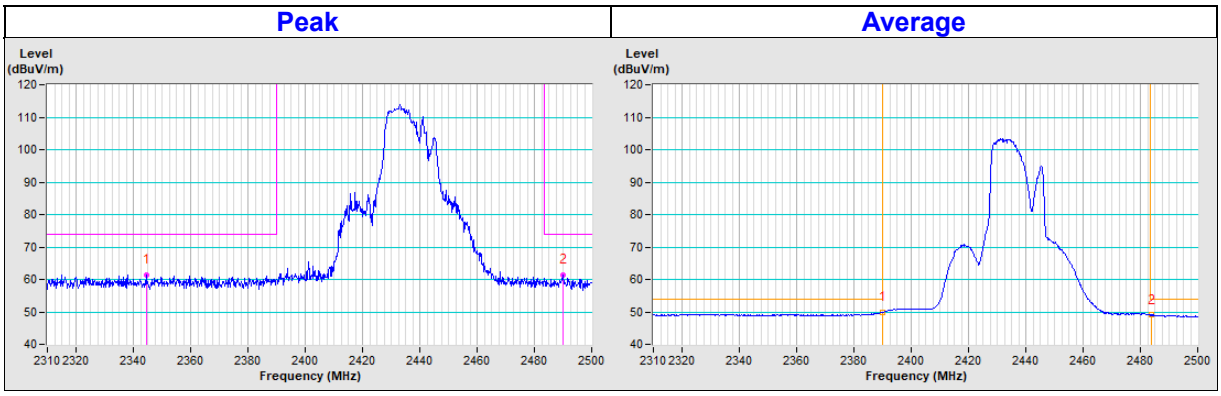


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2500MHz		

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	2344.53	61.5 PK	74.0	-12.5	2.41 H	133	64.0	-2.5
PK.2	2489.93	61.3 PK	74.0	-12.7	2.41 H	133	64.2	-2.9
AV.1	2390.00	49.9 AV	54.0	-4.1	2.41 H	133	52.6	-2.7
AV.2	2483.86	49.0 AV	54.0	-5.0	2.41 H	133	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

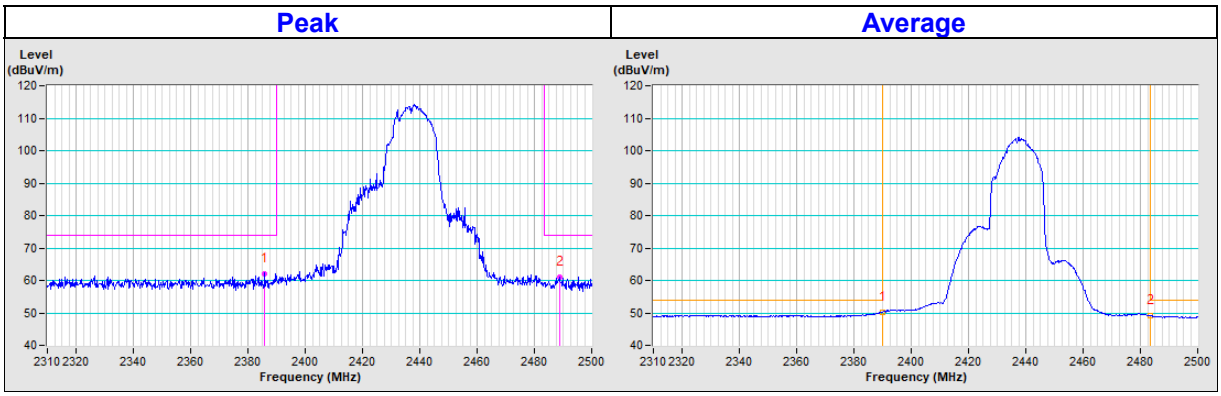


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2310MHz ~ 2500MHz		

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	2385.90	62.2 PK	74.0	-11.8	1.31 V	81	64.9	-2.7
PK.2	2488.76	61.1 PK	74.0	-12.9	1.31 V	81	64.0	-2.9
AV.1	#2390.18	50.3 AV	130.0	-79.7	1.31 V	81	53.0	-2.7
AV.2	2483.50	49.2 AV	54.0	-4.8	1.31 V	81	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

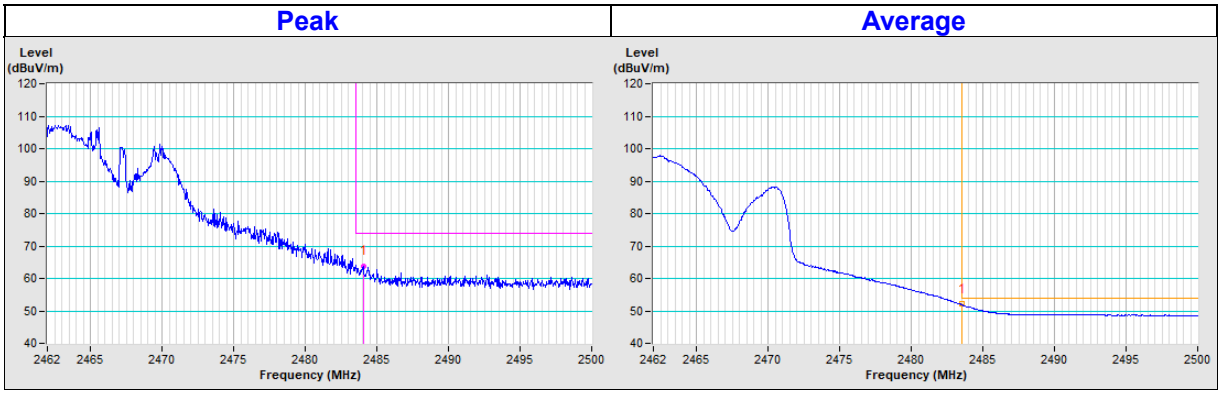


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2484.05	63.7 PK	74.0	-10.3	2.37 H	194	66.7	-3.0
AV.1	2483.50	52.1 AV	54.0	-1.9	2.37 H	194	55.1	-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

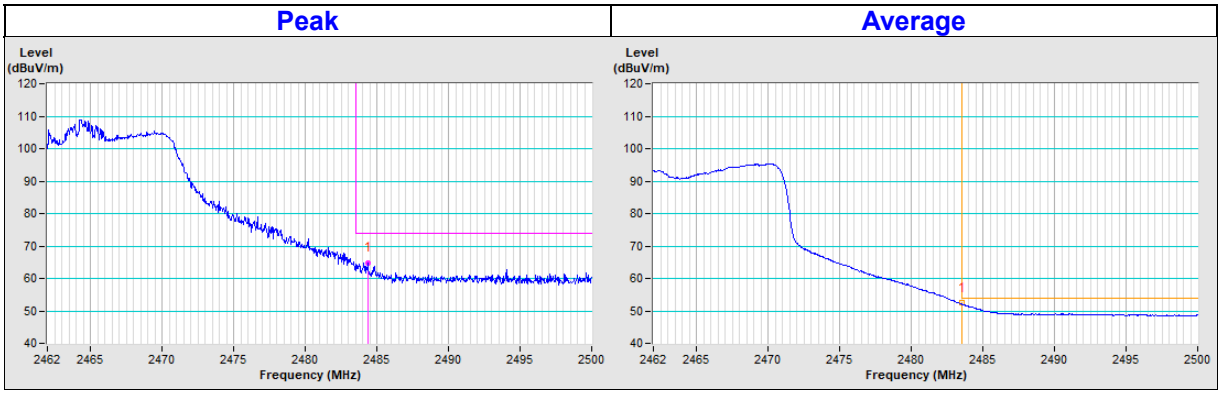


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2484.42	64.7 PK	74.0	-9.3	1.15 V	92	67.7	-3.0
AV.1	2483.50	52.4 AV	54.0	-1.6	1.15 V	92	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

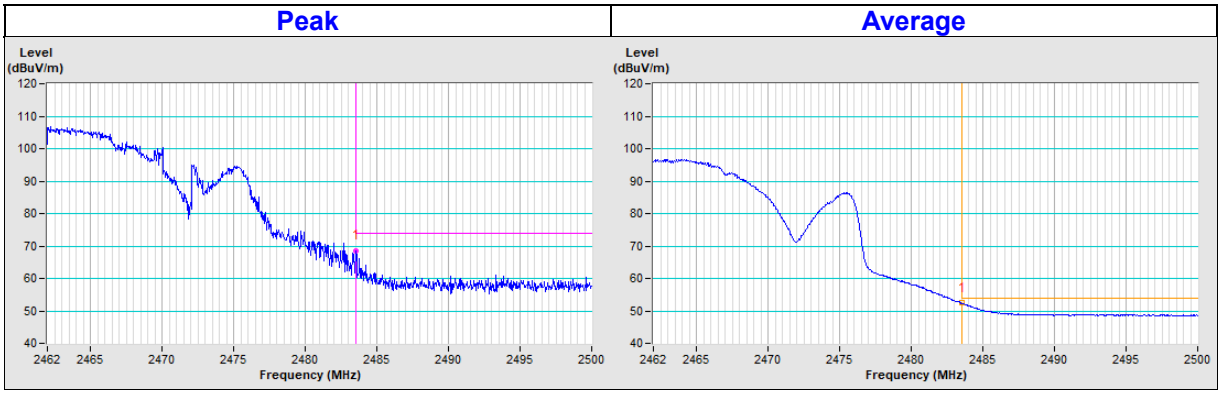


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.55	68.6 PK	74.0	-5.4	2.49 H	102	71.6	-3.0
AV.1	2483.50	52.4 AV	54.0	-1.6	2.49 H	102	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

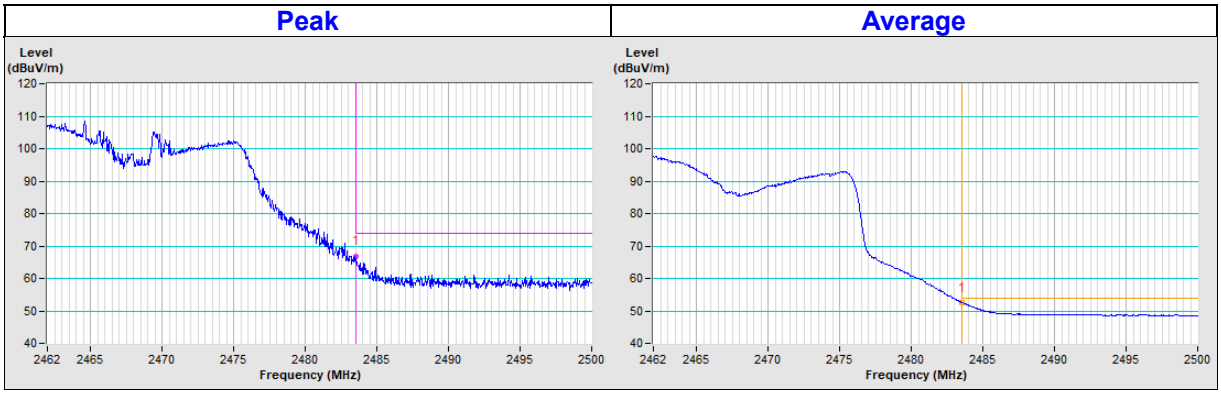


CHANNEL	TX Channel 12	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.50	66.7 PK	74.0	-7.3	1.46 V	108	69.7	-3.0
AV.1	2483.54	52.4 AV	54.0	-1.6	1.46 V	108	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

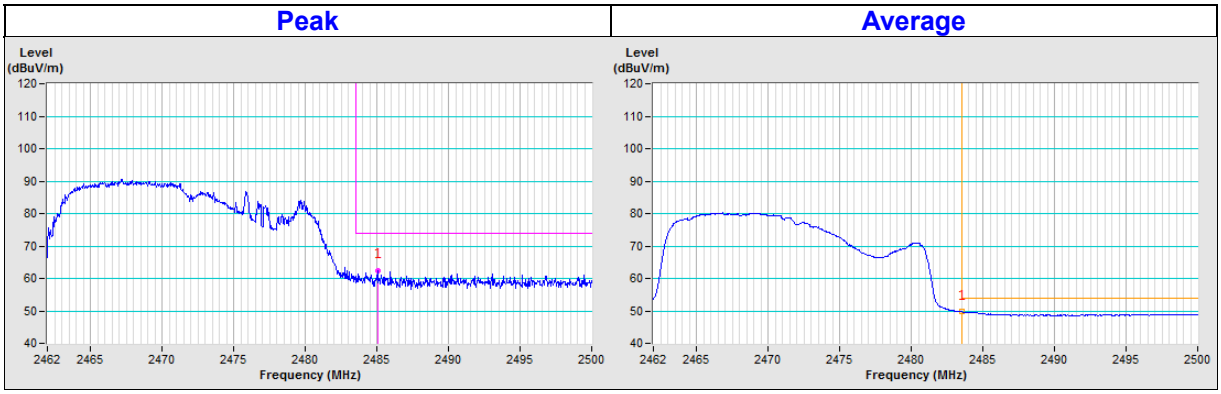


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2485.05	62.4 PK	74.0	-11.6	1.24 H	159	65.4	-3.0
AV.1	2483.54	49.7 AV	54.0	-4.3	1.24 H	159	52.7	-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

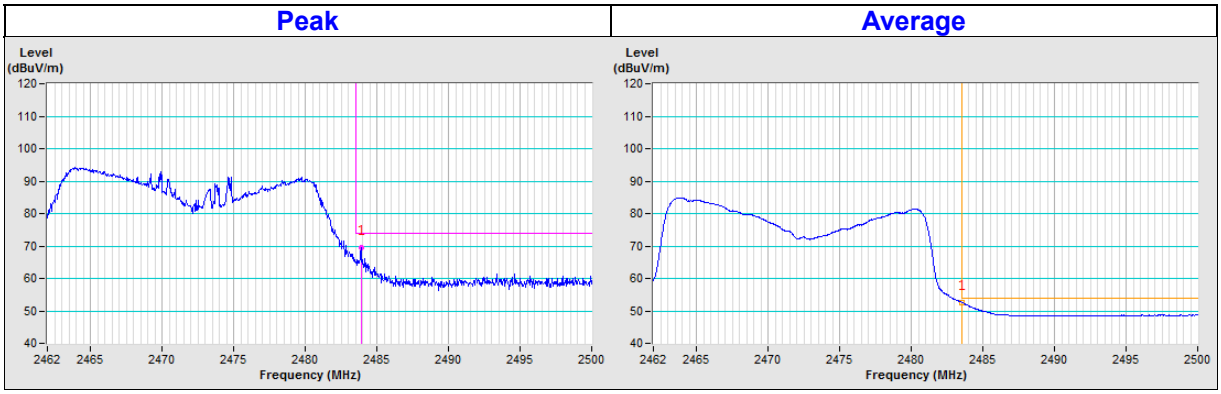


CHANNEL	TX Channel 13	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	2462MHz ~ 2500MHz		

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	2483.90	69.6 PK	74.0	-4.4	1.77 V	61	72.6	-3.0
AV.1	**2483.53**	**52.5 AV**	**54.0**	**-1.5**	**1.77 V**	**61**	**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



4.1.9 Test Results for below 1GHz

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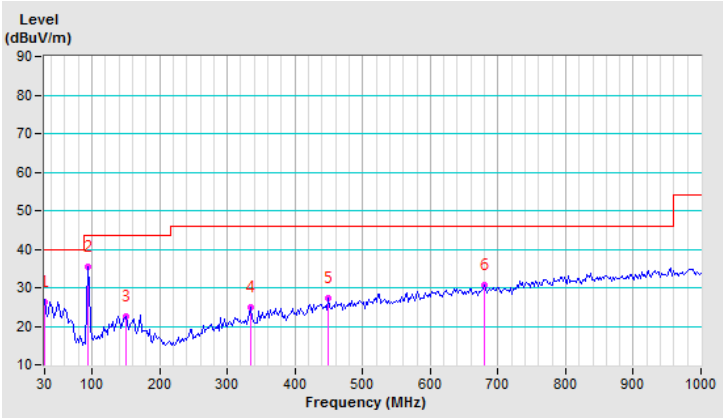
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	30.00	26.3 PK	40.0	-13.7	3.00 H	226	35.4	-9.1
2	94.02	35.4 PK	43.5	-8.1	3.00 H	241	48.6	-13.2
3	150.28	22.5 PK	43.5	-21.0	2.50 H	172	30.0	-7.5
4	334.58	25.0 PK	46.0	-21.0	2.50 H	301	30.8	-5.8
5	449.04	27.3 PK	46.0	-18.7	2.00 H	117	30.3	-3.0
6	679.90	30.7 PK	46.0	-15.3	1.00 H	302	29.1	1.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report
6. The PK detector measurement value is much smaller than the limit QP value, so the pass is determined

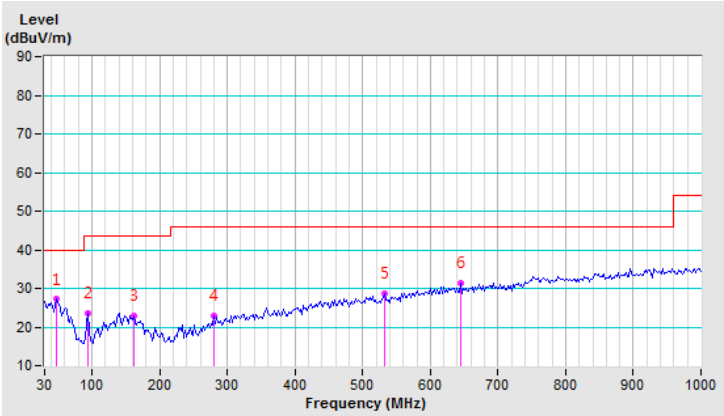


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	47.46	27.2 PK	40.0	-12.8	1.00 V	206	35.2	-8.0
2	94.02	23.7 PK	43.5	-19.8	1.00 V	115	36.9	-13.2
3	161.92	23.0 PK	43.5	-20.5	1.00 V	183	31.0	-8.0
4	280.26	22.9 PK	46.0	-23.1	1.50 V	247	30.5	-7.6
5	532.46	28.6 PK	46.0	-17.4	2.00 V	269	30.2	-1.6
6	644.98	31.5 PK	46.0	-14.5	2.00 V	238	30.3	1.2

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_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

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

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

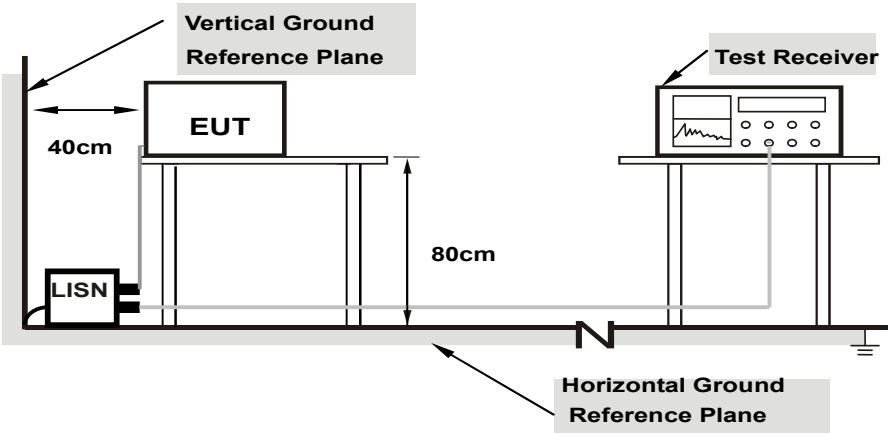
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

Worst-case data:

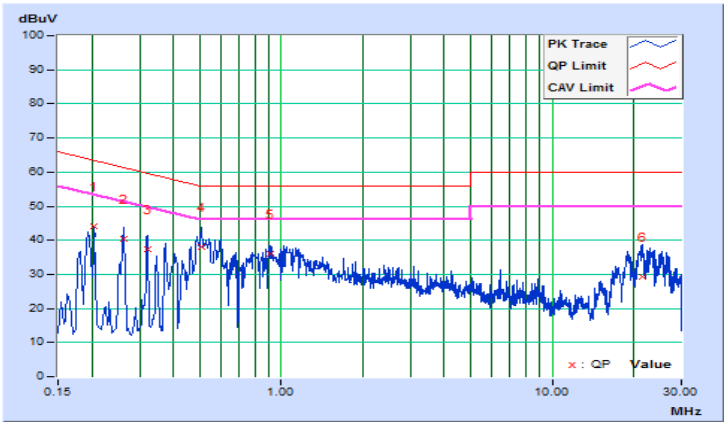
802.11g

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20474	9.72	34.42	13.20	44.14	22.92	63.42	53.42	-19.28	-30.50
2	0.26339	9.73	30.52	10.78	40.25	20.51	61.32	51.32	-21.07	-30.81
3	0.32187	9.74	27.79	5.66	37.53	15.40	59.66	49.66	-22.13	-34.26
4	0.50507	9.74	28.18	12.04	37.92	21.78	56.00	46.00	-18.08	-24.22
5	0.90655	9.69	26.23	10.25	35.92	19.94	56.00	46.00	-20.08	-26.06
6	21.47514	9.95	19.29	4.81	29.24	14.76	60.00	50.00	-30.76	-35.24

Remarks:

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

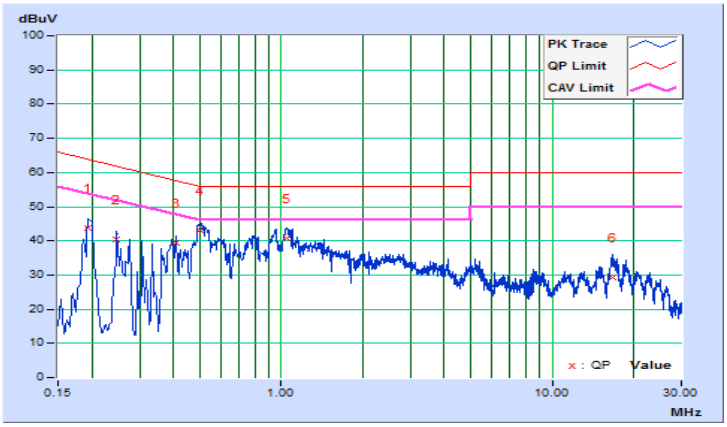


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19305	9.73	34.09	18.25	43.82	27.98	63.90	53.90	-20.08	-25.92
2	0.24775	9.73	30.57	12.84	40.30	22.57	61.83	51.83	-21.53	-29.26
3	0.40800	9.75	29.76	14.09	39.51	23.84	57.69	47.69	-18.18	-23.85
4	**0.50000**	**9.74**	**33.52**	**16.93**	**43.26**	**26.67**	**56.00**	**46.00**	**-12.74**	**-19.33**
5	1.04242	9.72	31.14	17.15	40.86	26.87	56.00	46.00	-15.14	-19.13
6	16.78314	10.04	19.39	11.50	29.43	21.54	60.00	50.00	-30.57	-28.46

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.

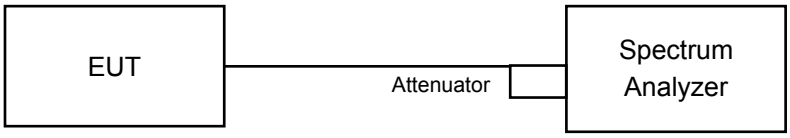


4.3 6dB Bandwidth Measurement

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

a. Set resolution bandwidth (RBW) = 100kHz.

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = peak.

c. Trace mode = max hold.

d. Sweep = auto couple.

e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.3.5 Deviation fromTest Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	9.07	9.01	0.5	Pass
6	2437	9.08	8.59	0.5	Pass
11	2462	8.60	8.59	0.5	Pass
12	2467	8.11	9.06	0.5	Pass
13	2472	8.11	8.12	0.5	Pass

802.11g

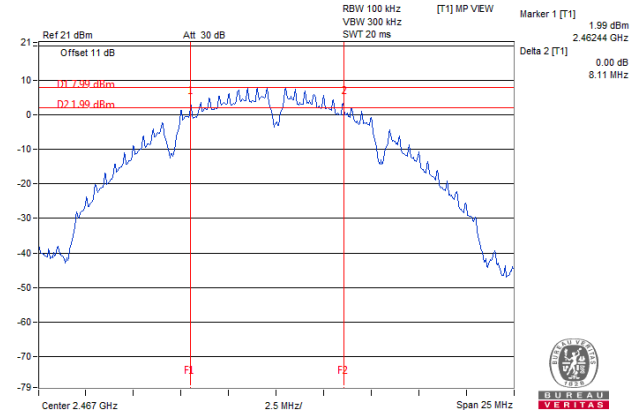
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	15.78	15.19	0.5	Pass
6	2437	15.79	16.32	0.5	Pass
11	2462	15.17	15.78	0.5	Pass
12	2467	15.38	16.11	0.5	Pass
13	2472	16.04	15.49	0.5	Pass

802.11n (HT20)

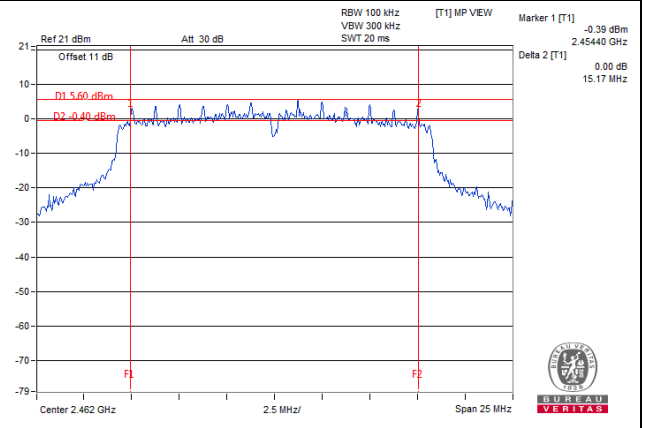
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.12	15.21	0.5	Pass
6	2437	16.33	16.58	0.5	Pass
11	2462	15.20	16.39	0.5	Pass
12	2467	16.02	16.56	0.5	Pass
13	2472	15.74	16.18	0.5	Pass

Spectrum Plot of Worst Value

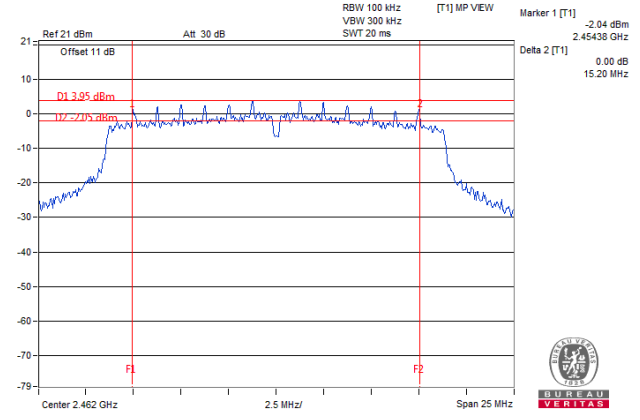
802.11b



802.11g



802.11n (HT20)



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

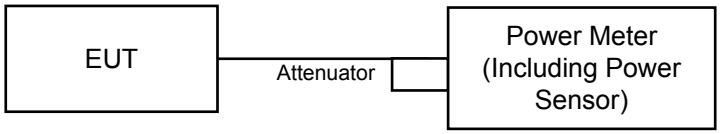
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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 (Including Power Sensor) KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	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

For Peak Power

Ant. 0 (SISO)

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	89.536	19.52	30.00	Pass
6	2437	81.470	19.11	30.00	Pass
11	2462	67.143	18.27	30.00	Pass
12	2467	66.527	18.23	30.00	Pass
13	2472	11.220	10.50	30.00	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	69.502	18.42	30.00	Pass
6	2437	138.038	21.40	30.00	Pass
11	2462	89.950	19.54	30.00	Pass
12	2467	46.345	16.66	30.00	Pass
13	2472	2.529	4.03	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	59.293	17.73	30.00	Pass
6	2437	152.757	21.84	30.00	Pass
11	2462	55.719	17.46	30.00	Pass
12	2467	40.365	16.06	30.00	Pass
13	2472	2.529	4.03	30.00	Pass

Ant. 1 (SISO)

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	92.470	19.66	30.00	Pass
6	2437	82.794	19.18	30.00	Pass
11	2462	70.958	18.51	30.00	Pass
12	2467	63.387	18.02	30.00	Pass
13	2472	11.015	10.42	30.00	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	76.913	18.86	30.00	Pass
6	2437	179.473	22.54	30.00	Pass
11	2462	76.384	18.83	30.00	Pass
12	2467	45.082	16.54	30.00	Pass
13	2472	2.477	3.94	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	56.494	17.52	30.00	Pass
6	2437	133.045	21.24	30.00	Pass
11	2462	55.463	17.44	30.00	Pass
12	2467	43.853	16.42	30.00	Pass
13	2472	2.851	4.55	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	184.947	22.67	30.00	Pass
6	2437	19.17	19.36	168.902	22.28	30.00	Pass
11	2462	18.36	18.67	142.170	21.53	30.00	Pass
12	2467	18.24	18.19	132.598	21.23	30.00	Pass
13	2472	10.56	10.49	22.571	13.54	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	18.61	18.93	150.774	21.78	30.00	Pass
6	2437	21.43	22.59	**320.547**	25.06	30.00	Pass
11	2462	19.71	19.02	173.340	22.39	30.00	Pass
12	2467	16.80	16.65	94.101	19.74	30.00	Pass
13	2472	4.12	4.05	5.123	7.10	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	17.92	17.56	118.960	20.75	30.00	Pass
6	2437	21.98	21.30	292.657	24.66	30.00	Pass
11	2462	17.58	17.59	114.692	20.60	30.00	Pass
12	2467	16.17	16.61	87.214	19.41	30.00	Pass
13	2472	4.08	4.58	5.430	7.35	30.00	Pass

For Average Power

Ant. 0 (SISO)

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	57.148	17.57
6	2437	59.020	17.71
11	2462	42.462	16.28
12	2467	41.591	16.19
13	2472	5.420	7.34

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	26.242	14.19
6	2437	51.404	17.11
11	2462	33.037	15.19
12	2467	14.757	11.69
13	2472	0.774	-1.11

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	22.856	13.59
6	2437	53.827	17.31
11	2462	22.961	13.61
12	2467	13.740	11.38
13	2472	0.762	-1.18

Ant. 1 (SISO)

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	56.624	17.53
6	2437	58.479	17.67
11	2462	42.073	16.24
12	2467	41.210	16.15
13	2472	5.200	7.16

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	26.002	14.15
6	2437	51.880	17.15
11	2462	32.734	15.15
12	2467	14.622	11.65
13	2472	0.771	-1.13

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	22.542	13.53
6	2437	52.602	17.21
11	2462	22.646	13.55
12	2467	13.552	11.32
13	2472	0.753	-1.23

Ant. 0 + 1 (MIMO)

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	17.64	17.72	117.232	20.69
6	2437	17.75	17.84	120.380	20.81
11	2462	16.32	16.41	86.607	19.38
12	2467	16.23	16.34	85.029	19.30
13	2472	7.26	7.22	10.593	10.25

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	14.25	14.46	54.532	17.37
6	2437	17.49	17.15	107.898	20.33
11	2462	15.25	15.41	68.251	18.34
12	2467	11.75	11.92	30.522	14.85
13	2472	-1.37	-1.29	1.473	1.68

802.11n (HT20)

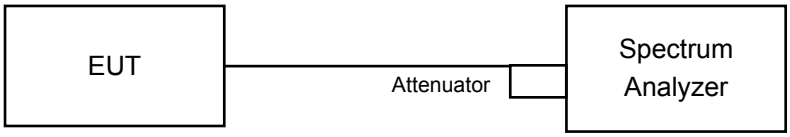
Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	13.63	13.82	47.166	16.74
6	2437	17.32	17.41	109.032	20.38
11	2462	13.73	13.84	47.815	16.80
12	2467	11.42	11.37	27.577	14.41
13	2472	-1.16	-1.17	1.529	1.85

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

a. Set analyzer center frequency to DTS channel center frequency.

b. Set the span to 1.5 times the DTS bandwidth.

c. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.

d. Set the VBW ≥ 3 × RBW.

e. Detector = peak.

f. Sweep time = auto couple.

g. Trace mode = max hold.

h. Allow trace to fully stabilize.

i. 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	-6.59	3.01	-3.58	8.00	Pass
	6	2437	-6.01	3.01	-3.00	8.00	Pass
	11	2462	-7.48	3.01	-4.47	8.00	Pass
	12	2467	-7.36	3.01	-4.35	8.00	Pass
	13	2472	-20.35	3.01	-17.34	8.00	Pass
1	1	2412	-4.79	3.01	-1.78	8.00	Pass
	6	2437	-4.81	3.01	-1.80	8.00	Pass
	11	2462	-7.57	3.01	-4.56	8.00	Pass
	12	2467	-6.62	3.01	-3.61	8.00	Pass
	13	2472	-18.67	3.01	-15.66	8.00	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2]$= 2.72dBi < 6dBi, 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	-13.07	3.01	-10.06	8.00	Pass
	6	2437	-12.03	3.01	-9.02	8.00	Pass
	11	2462	-10.52	3.01	-7.51	8.00	Pass
	12	2467	-14.50	3.01	-11.49	8.00	Pass
	13	2472	-27.30	3.01	-24.29	8.00	Pass
1	1	2412	-11.46	3.01	-8.45	8.00	Pass
	6	2437	-10.98	3.01	-7.97	8.00	Pass
	11	2462	-10.83	3.01	-7.82	8.00	Pass
	12	2467	-15.10	3.01	-12.09	8.00	Pass
	13	2472	-26.31	3.01	-23.30	8.00	Pass

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

802.11n (HT20)

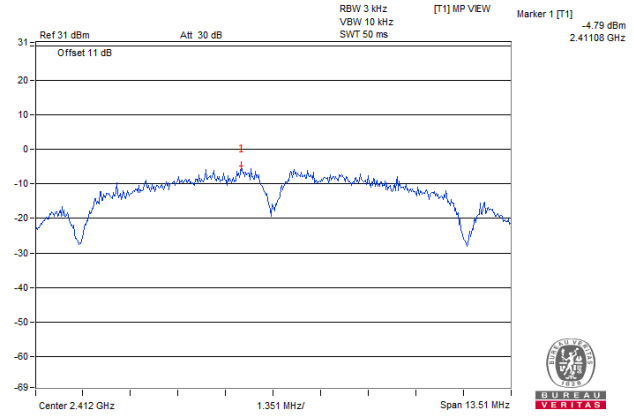
TX chain	Channel	Frequency (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-14.64	3.01	-11.63	8.00	Pass
	6	2437	-13.50	3.01	-10.49	8.00	Pass
	11	2462	-12.38	3.01	-9.37	8.00	Pass
	12	2467	-15.57	3.01	-12.56	8.00	Pass
	13	2472	-26.17	3.01	-23.16	8.00	Pass
1	1	2412	-12.84	3.01	-9.83	8.00	Pass
	6	2437	-12.88	3.01	-9.87	8.00	Pass
	11	2462	-13.15	3.01	-10.14	8.00	Pass
	12	2467	-15.00	3.01	-11.99	8.00	Pass
	13	2472	-26.59	3.01	-23.58	8.00	Pass

Note:

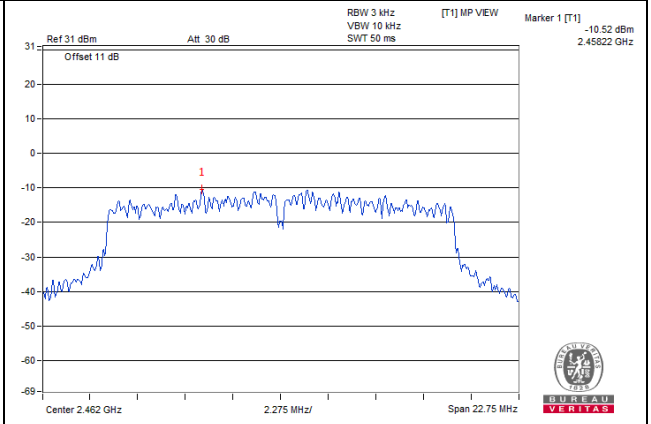
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2]$=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

Spectrum Plot of Worst Value

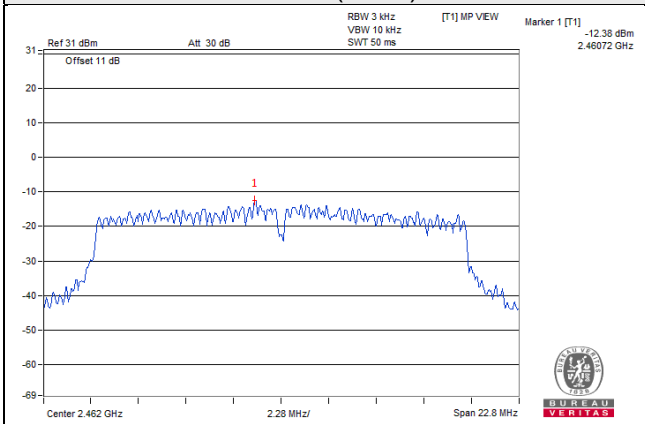
802.11b



802.11g



802.11n (HT20)

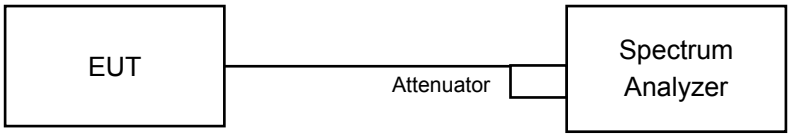


4.6 Conducted Out of Band Emission Measurement

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

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

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep = auto couple.
e. Trace Mode = max hold.
f. Allow trace to fully stabilize.
g. 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

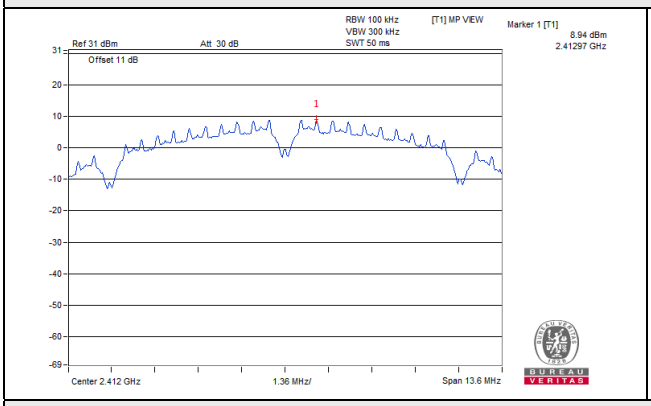
Same as item 4.3.6

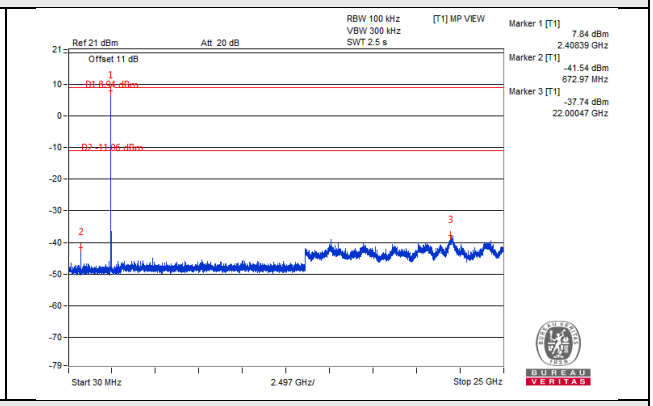
4.6.7 Test Results

The conducted emission test is performed on each TX port of operating mode without summing or adding 10log (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.

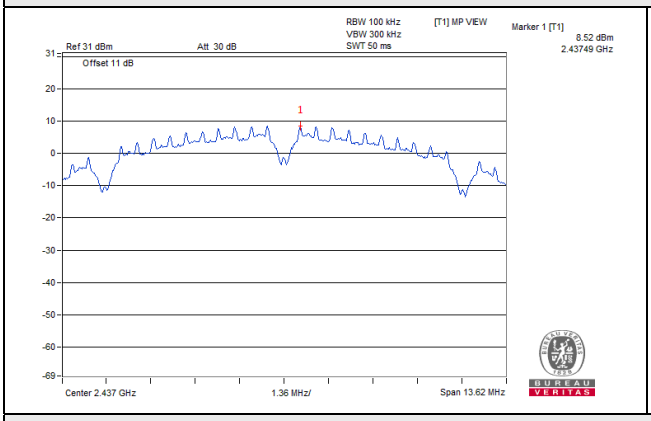
802.11b_Chain 0

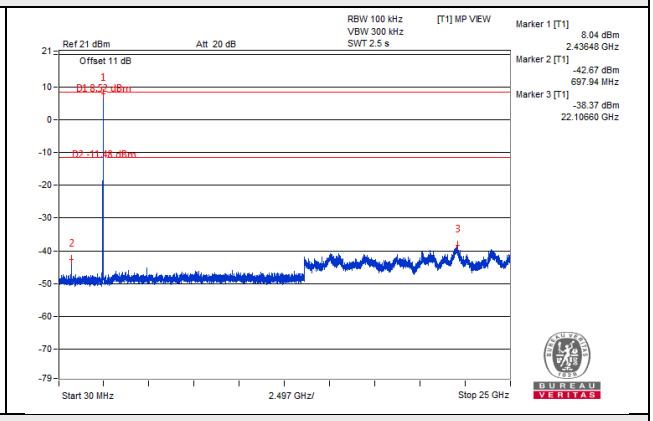
CH 1



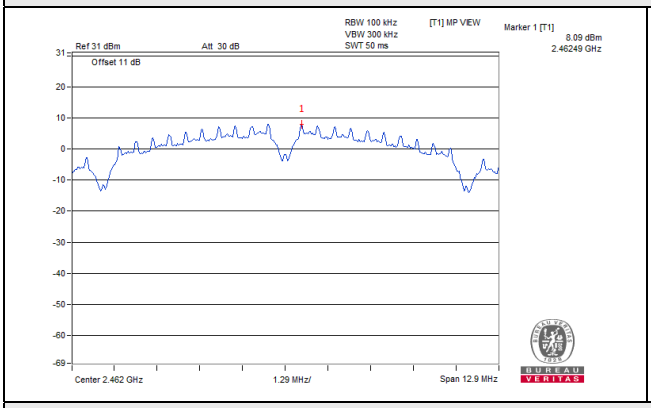


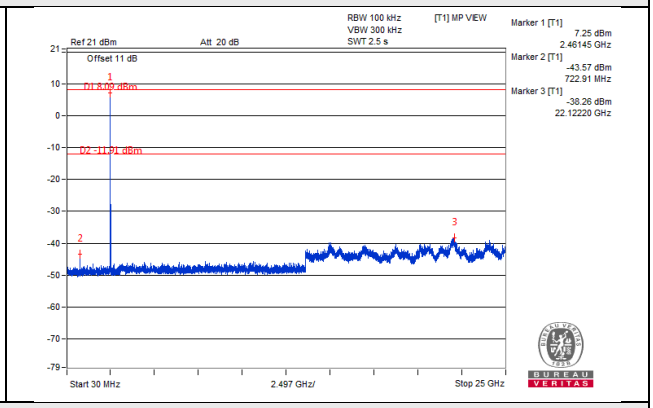
CH 6



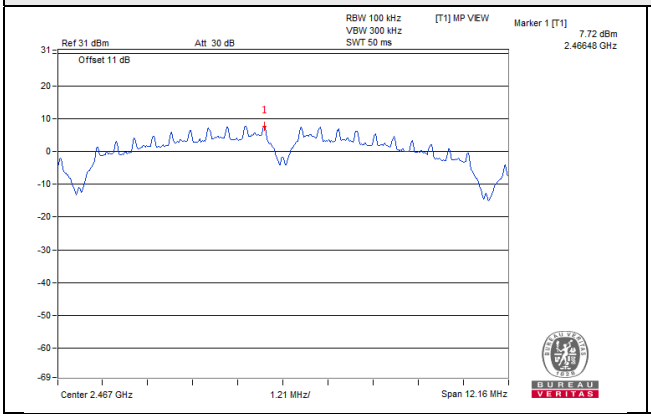


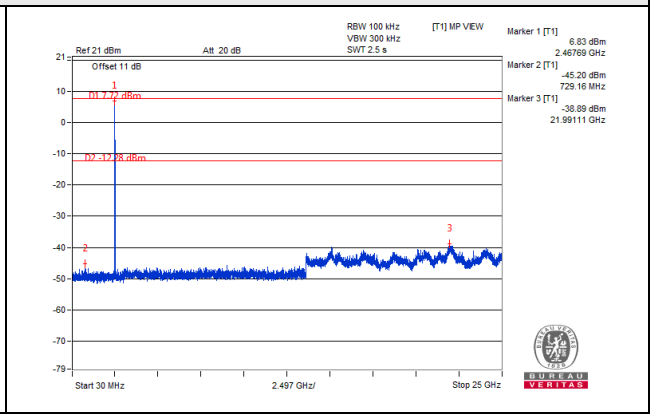
CH 11



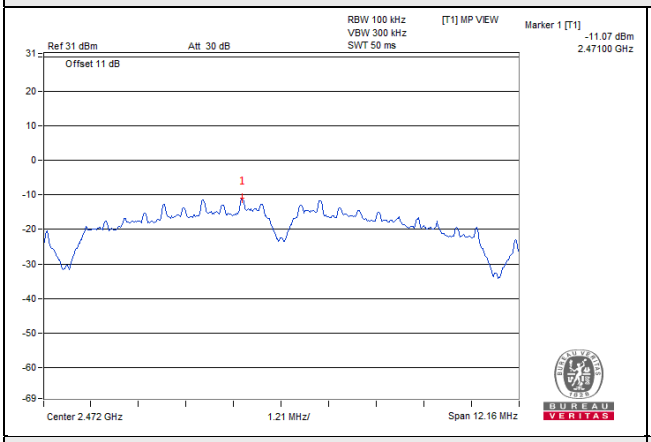


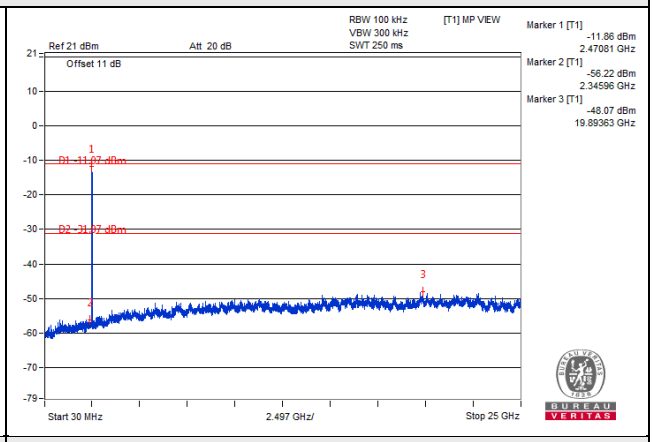
CH 12



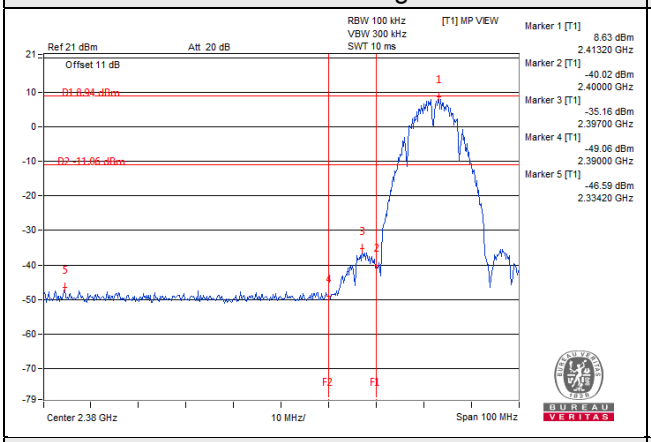


CH 13

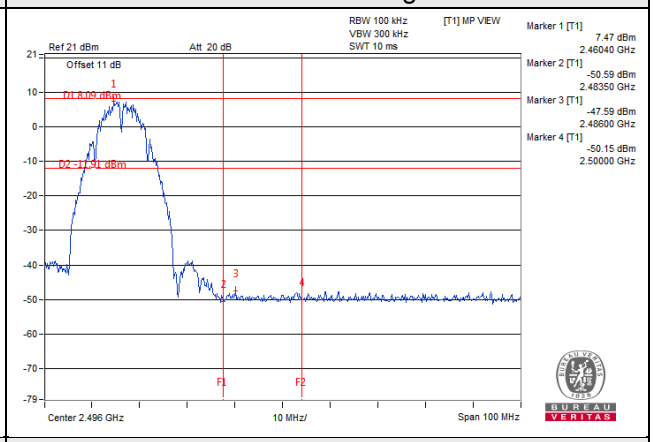




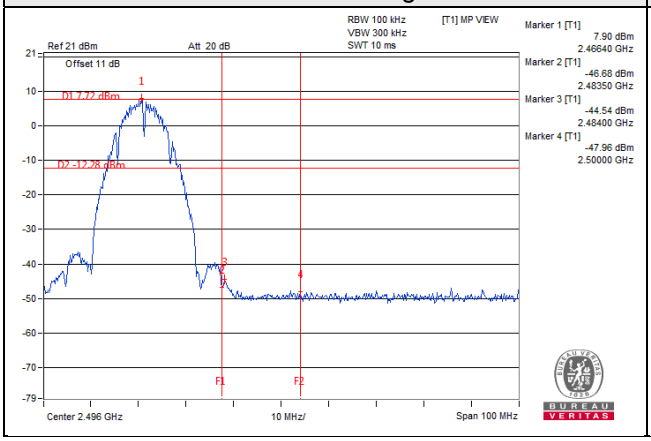
CH 1 Band edge



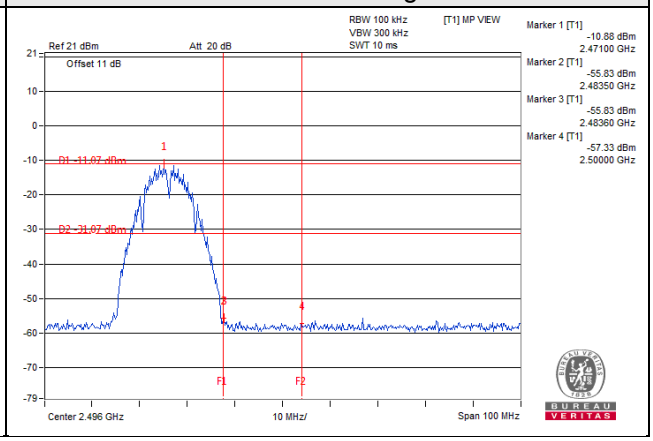
CH 11 Band edge



CH 12 Band edge

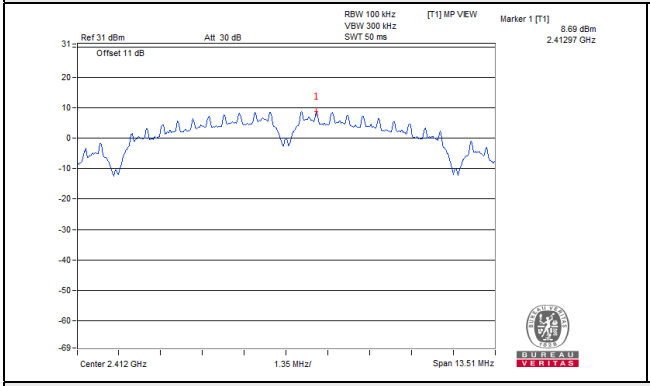


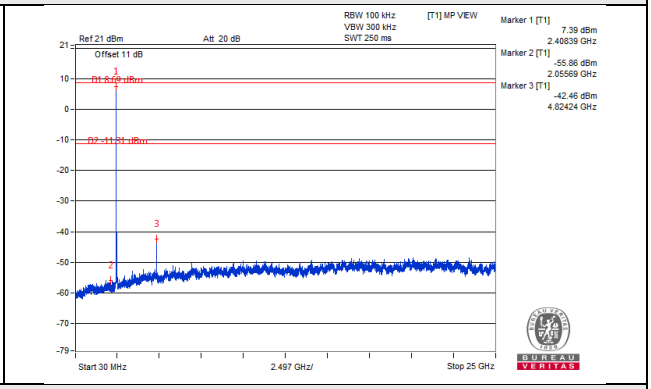
CH 13 Band edge



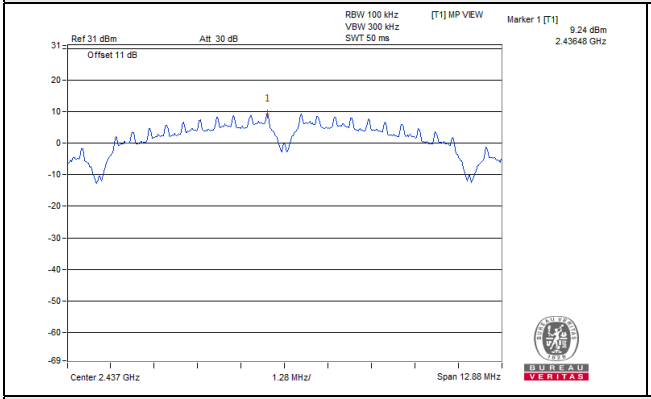
802.11b_Chain 1

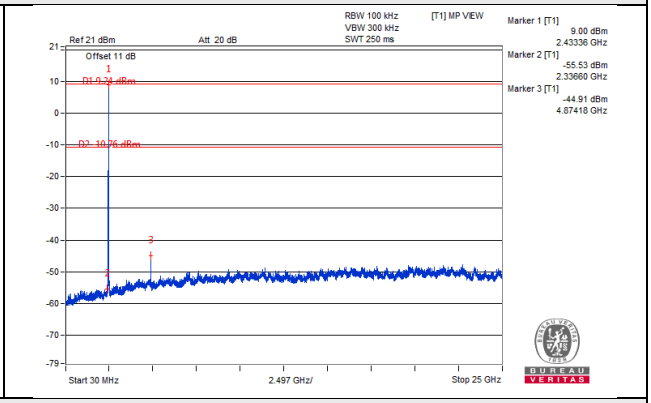
CH 1



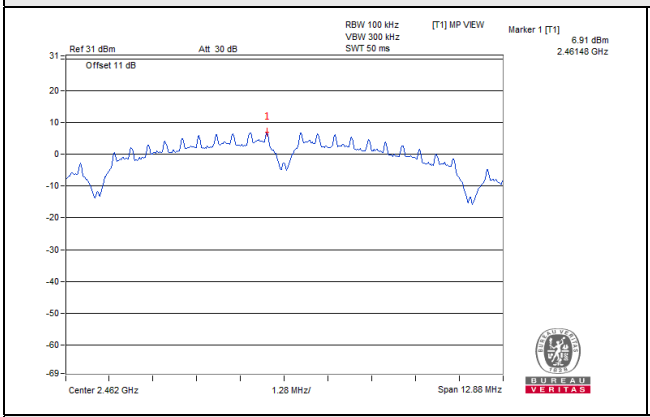


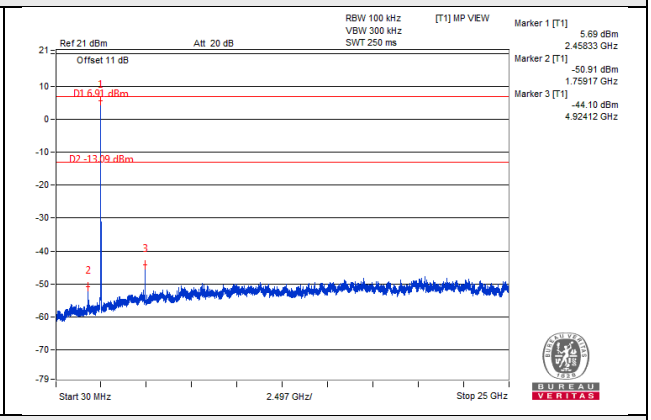
CH 6



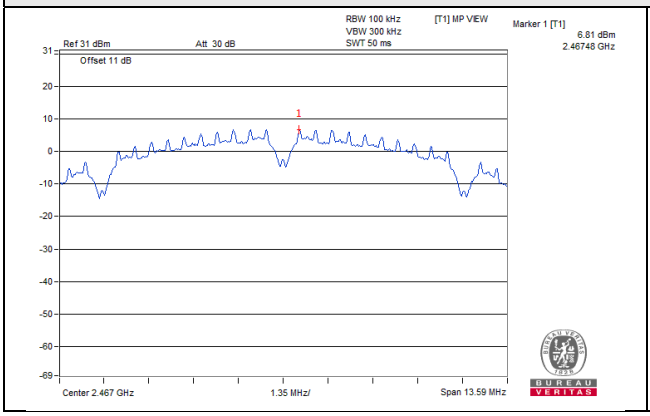


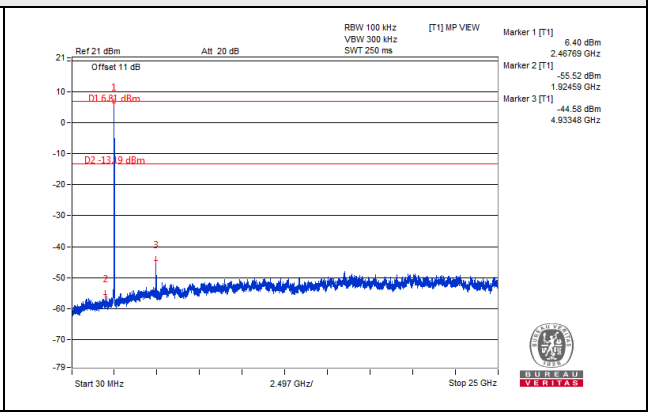
CH 11



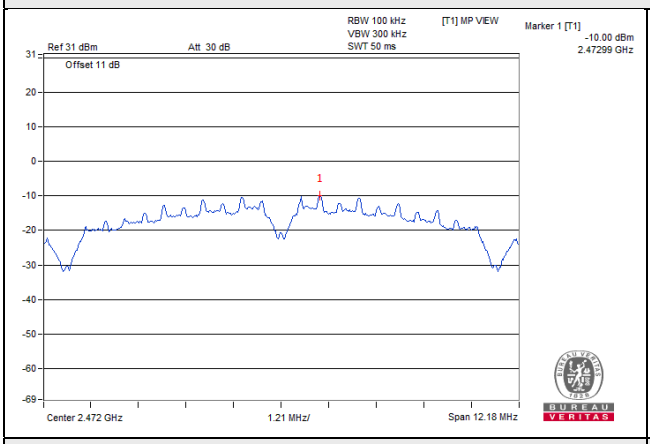


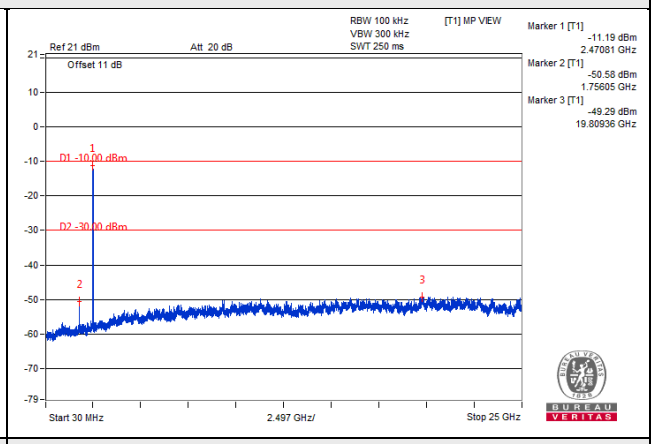
CH 12



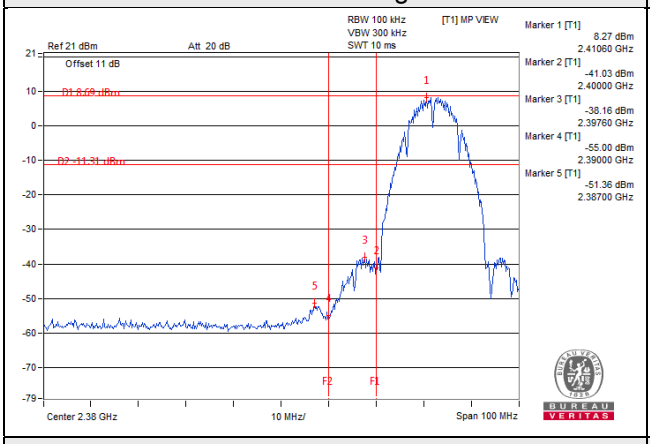


CH 13

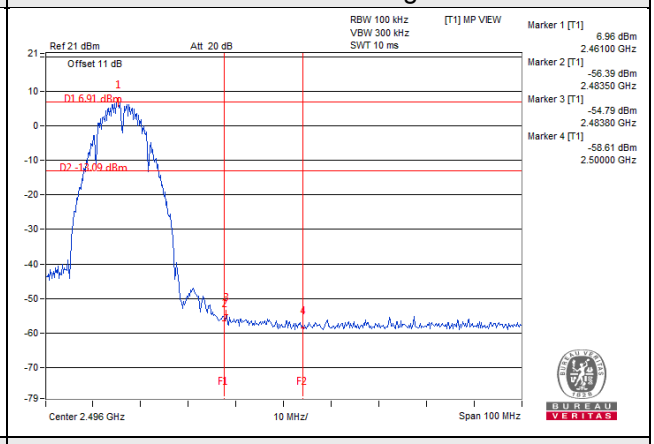




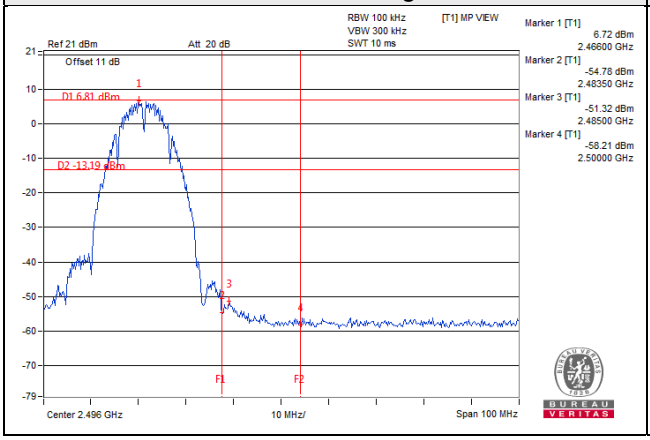
CH 1 Band edge



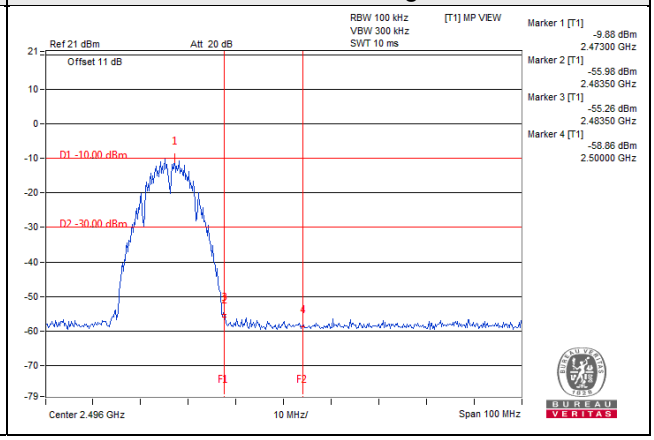
CH 11 Band edge



CH 12 Band edge

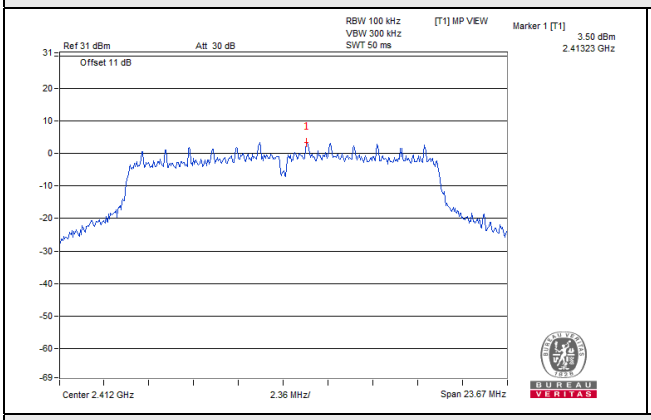


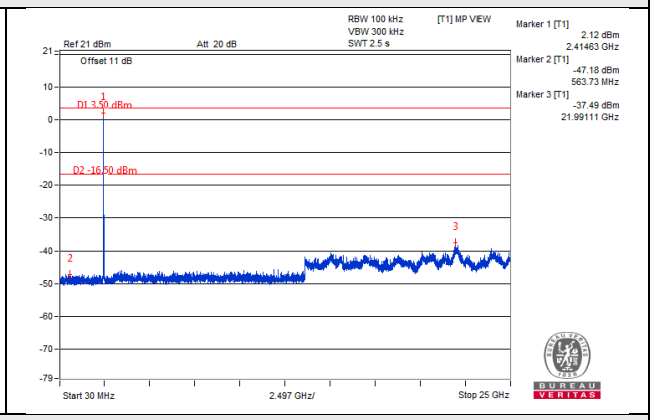
CH 13 Band edge



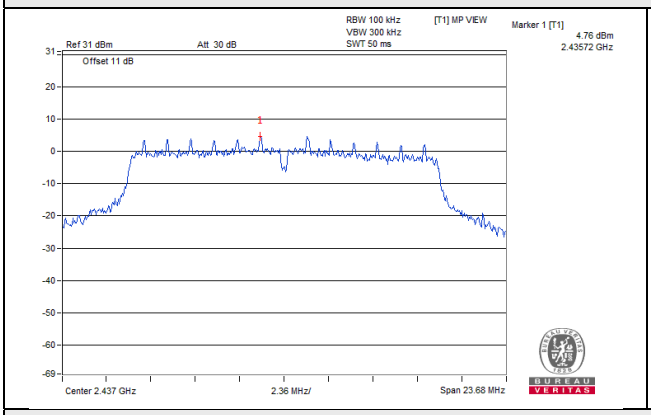
802.11g_Chain 0

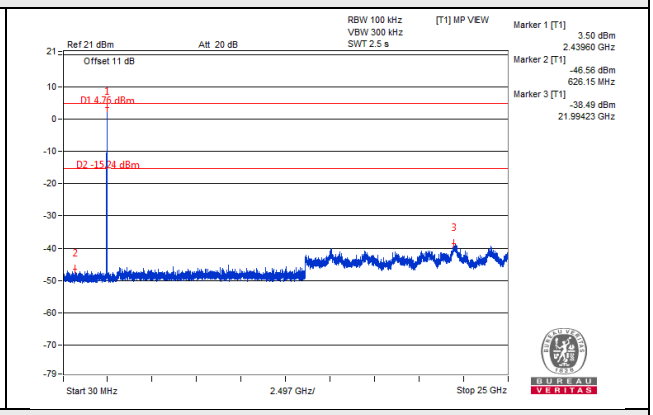
CH 1



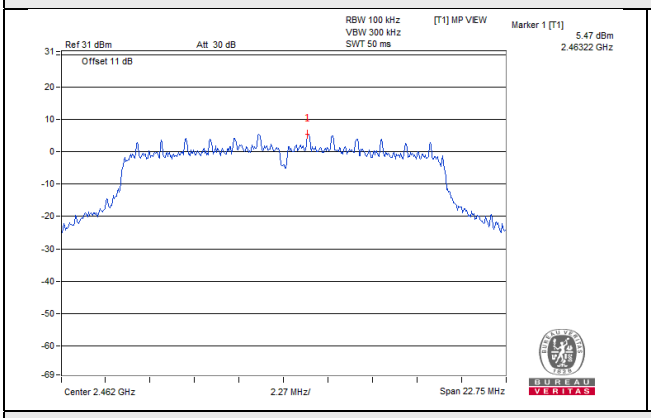


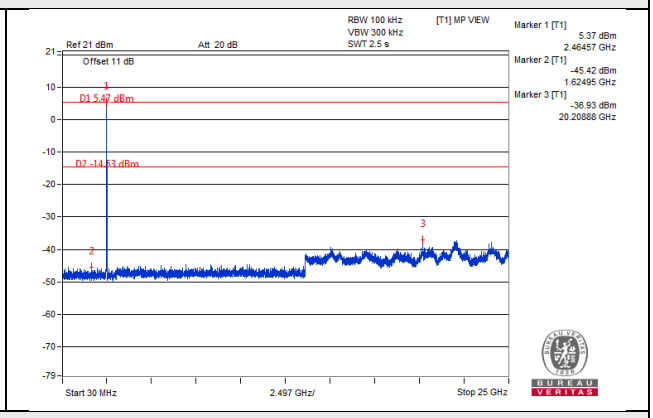
CH 6



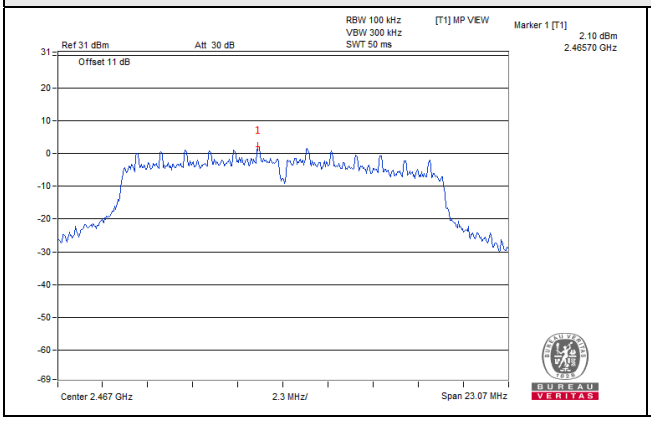


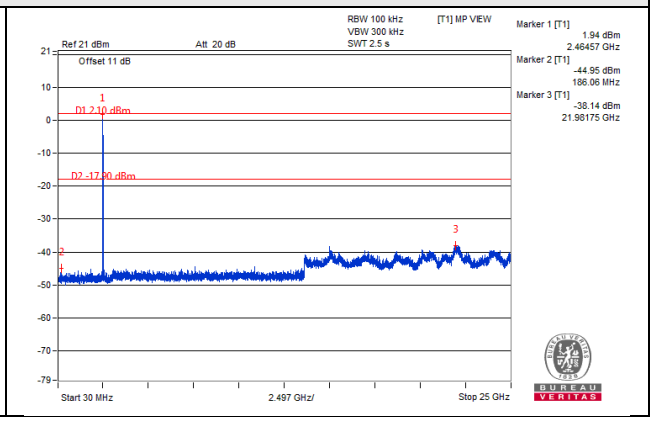
CH 11



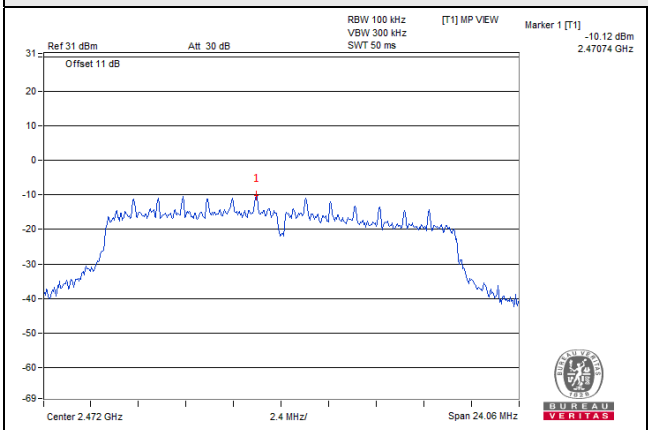


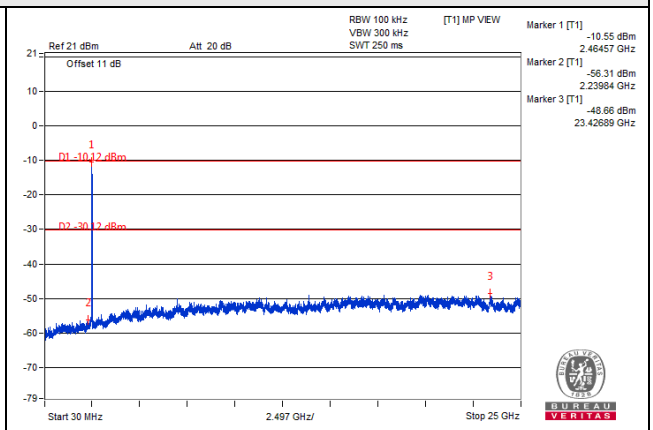
CH 12



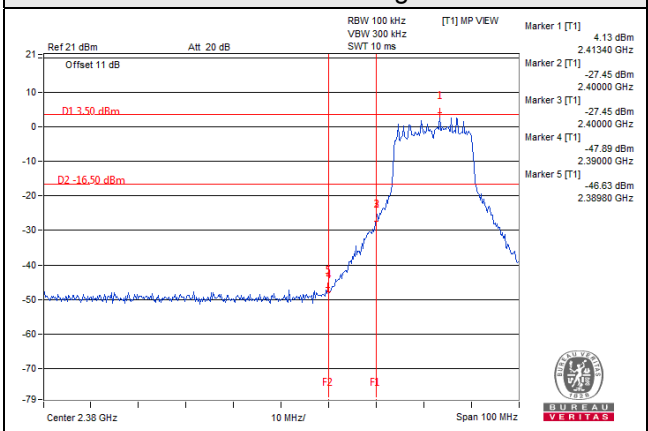


CH 13

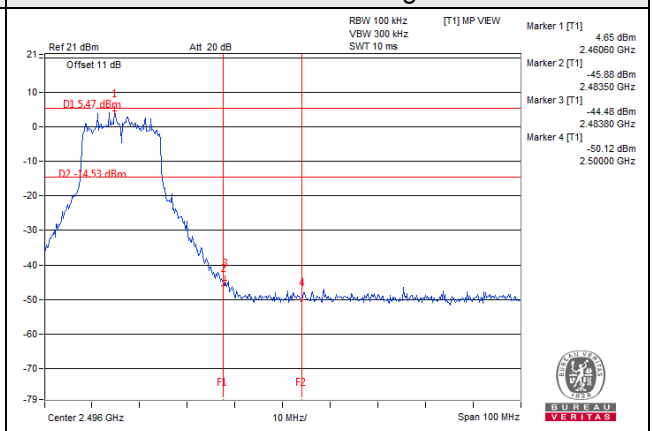




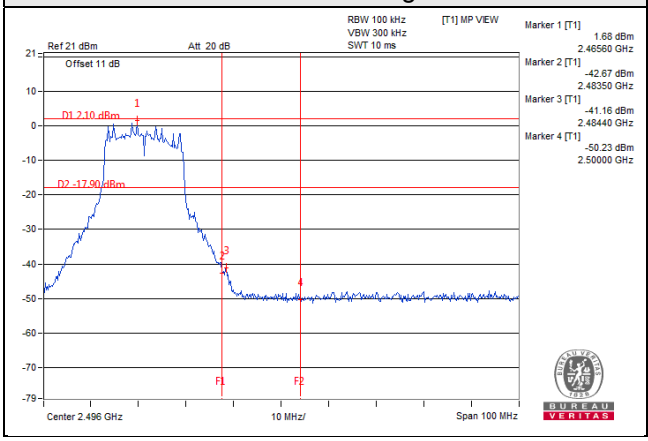
CH 1 Band edge



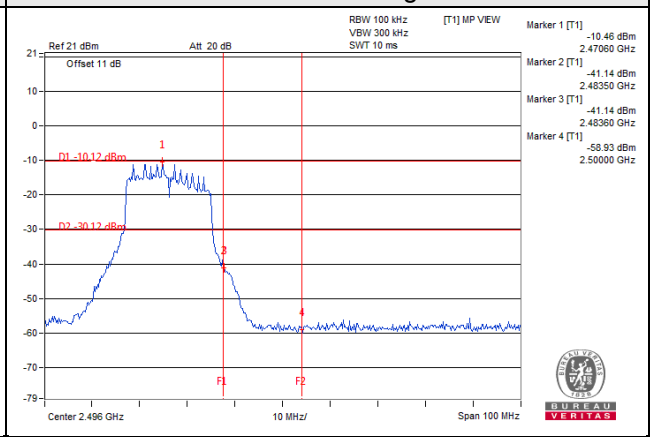
CH 11 Band edge



CH 12 Band edge

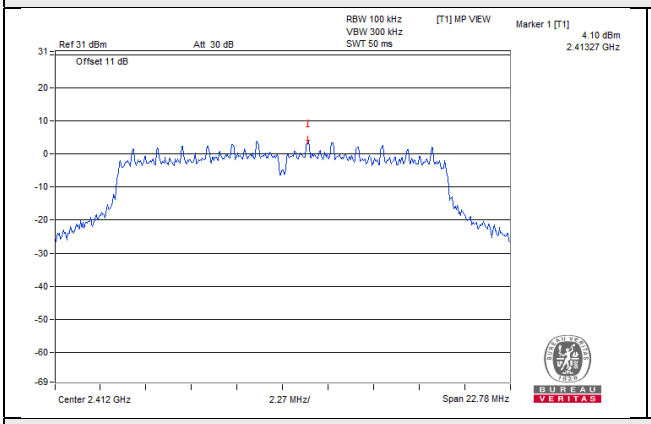


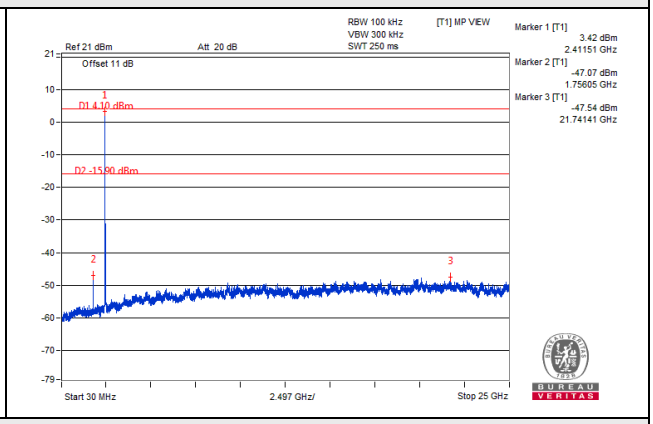
CH 13 Band edge



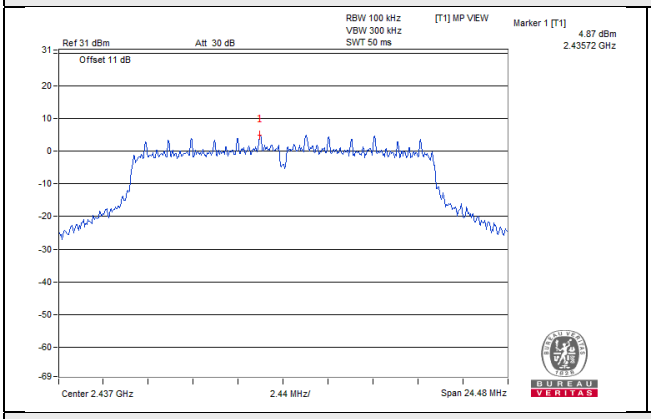
802.11g_Chain 1

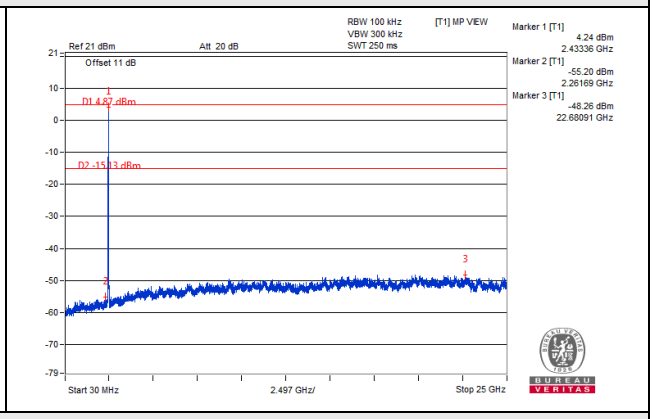
CH 1



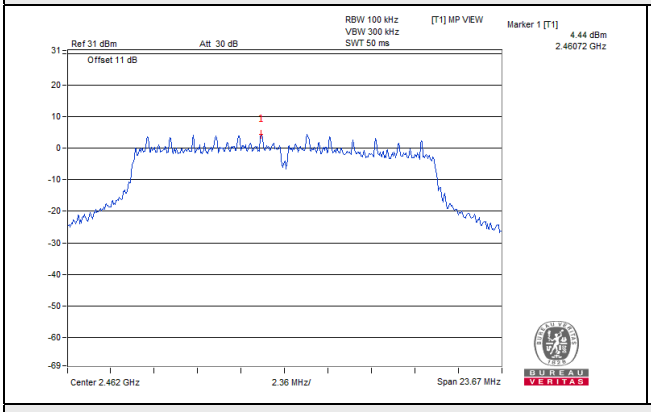


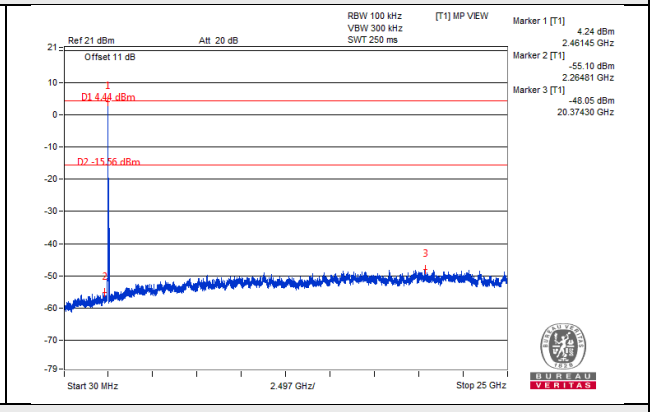
CH 6



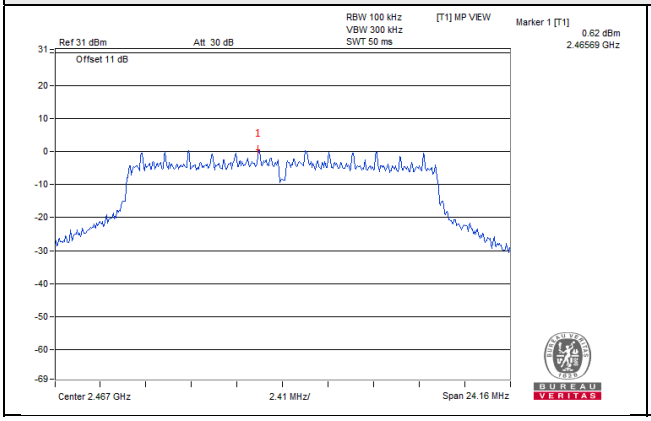


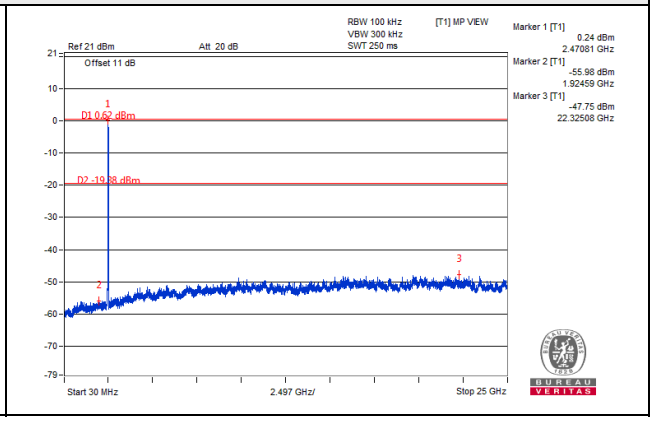
CH 11



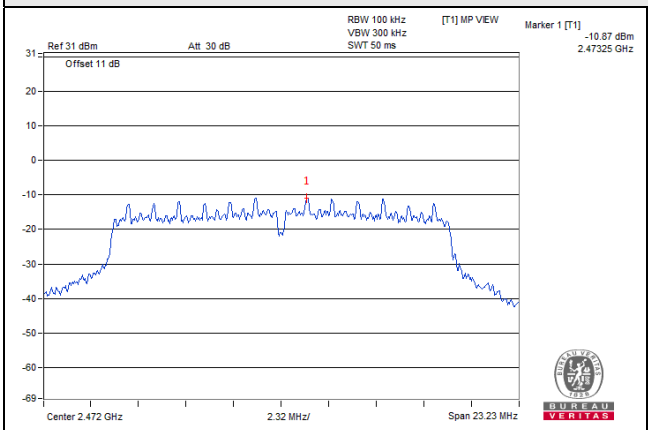


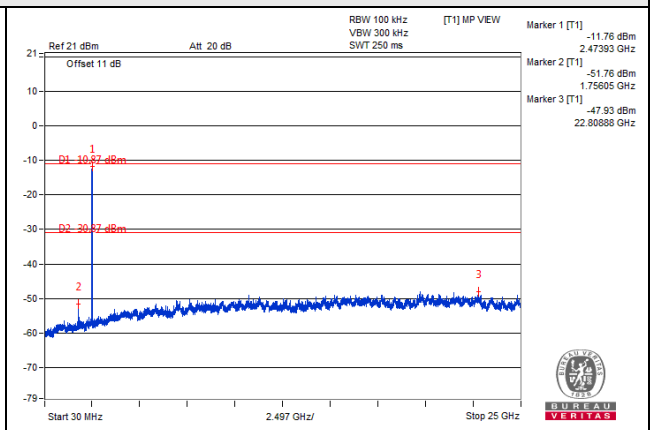
CH 12



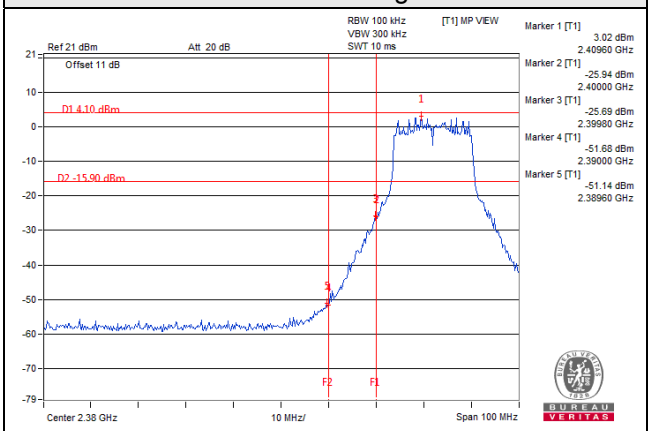


CH 13

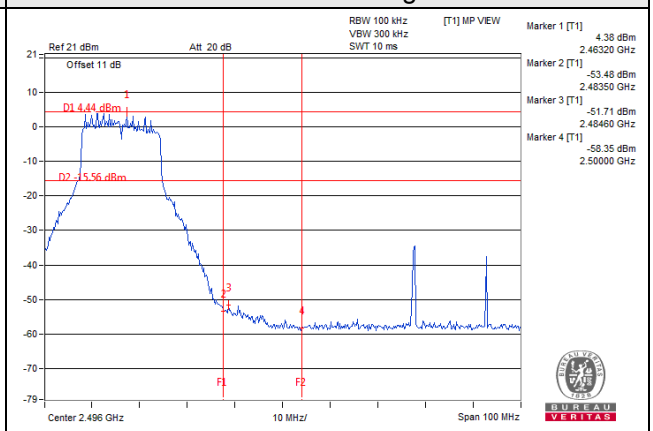




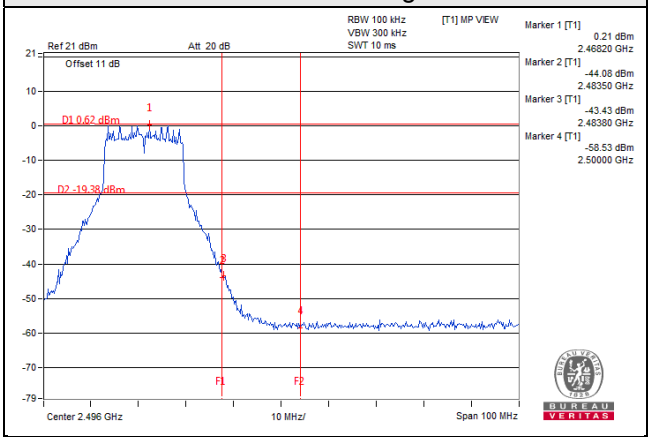
CH 1 Band edge



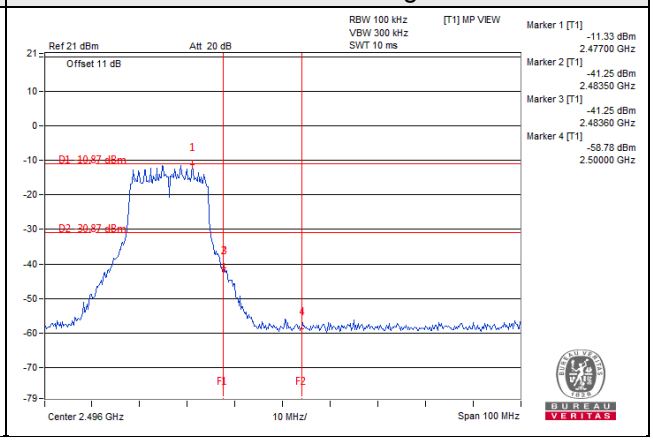
CH 11 Band edge



CH 12 Band edge

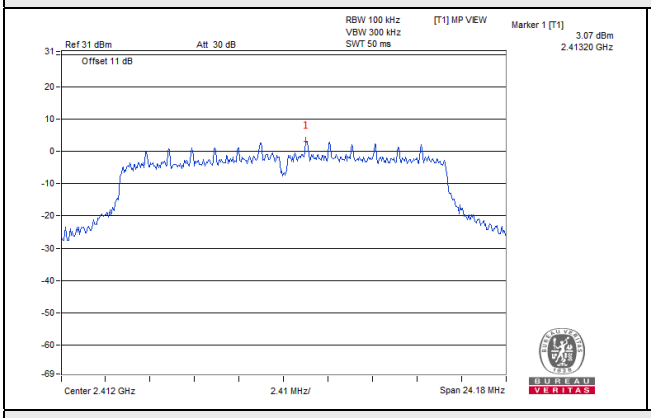


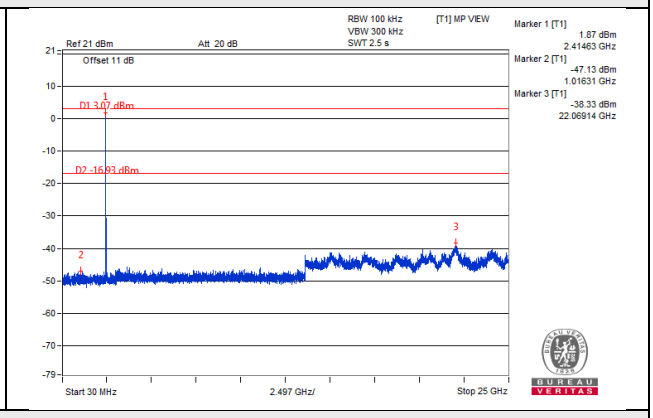
CH 13 Band edge



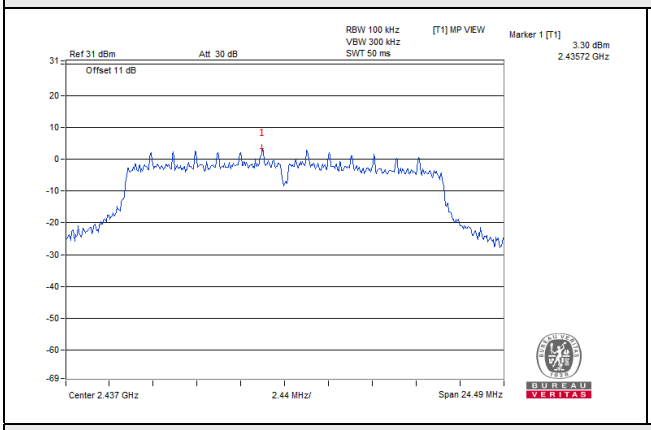
802.11n (HT20)_Chain 0

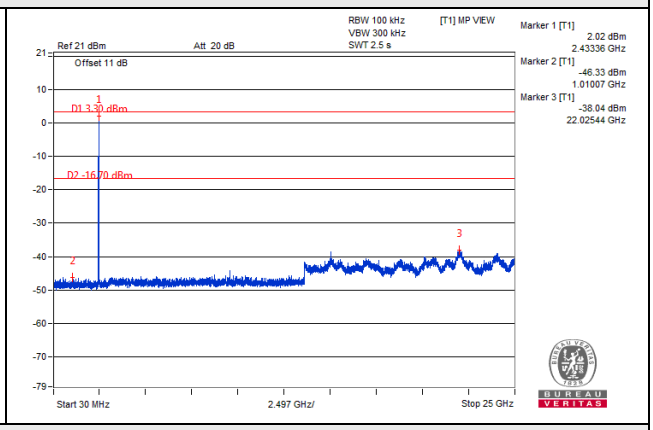
CH 1



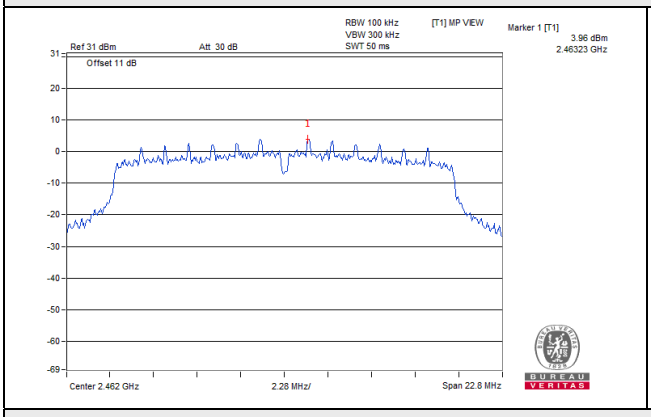


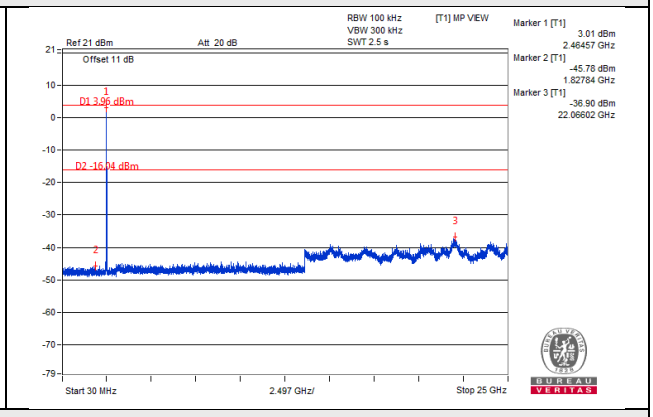
CH 6



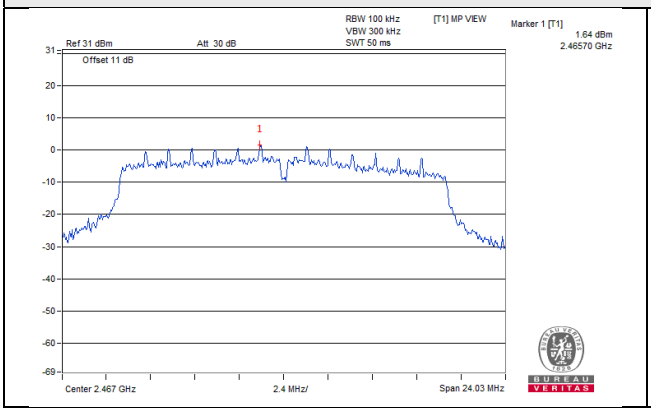


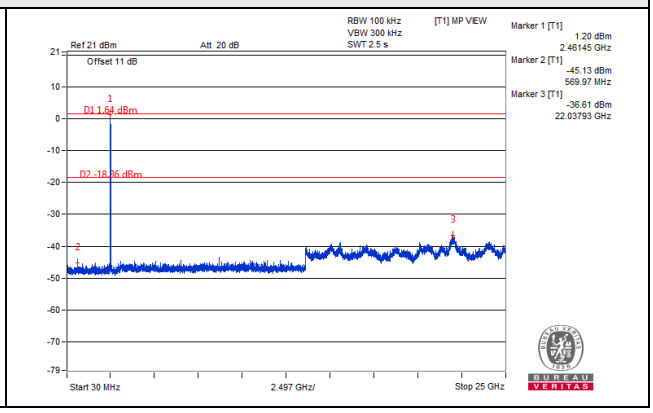
CH 11





CH 12





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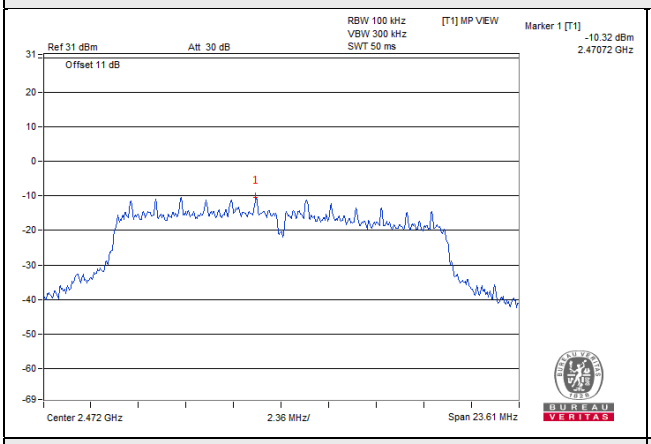
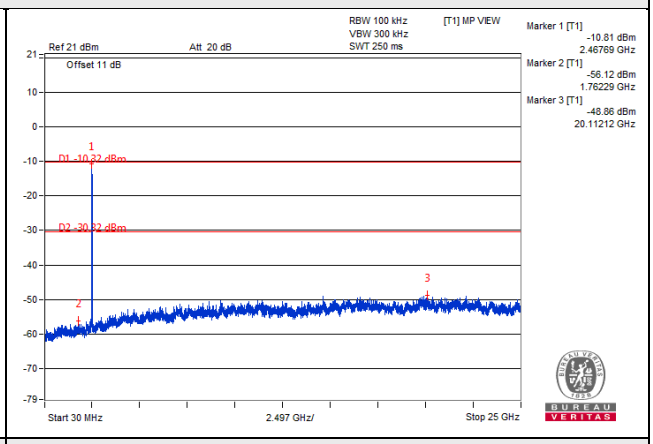
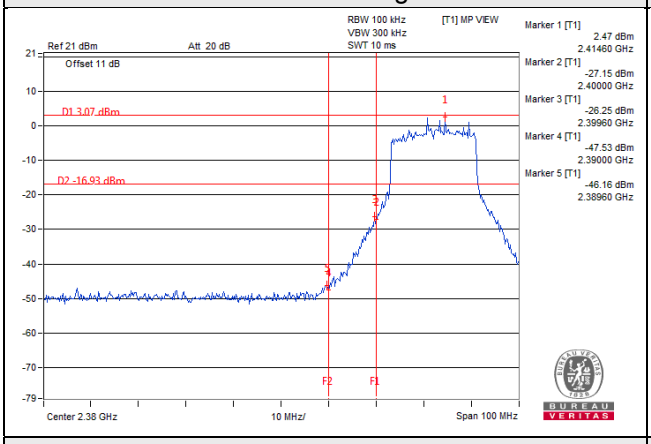
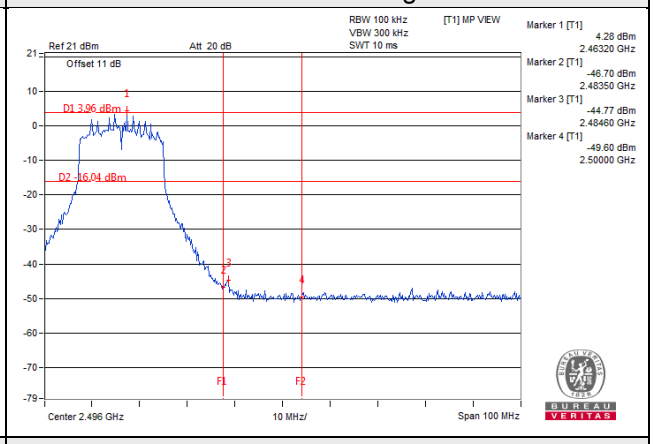




CH 1 Band edge



CH 11 Band edge



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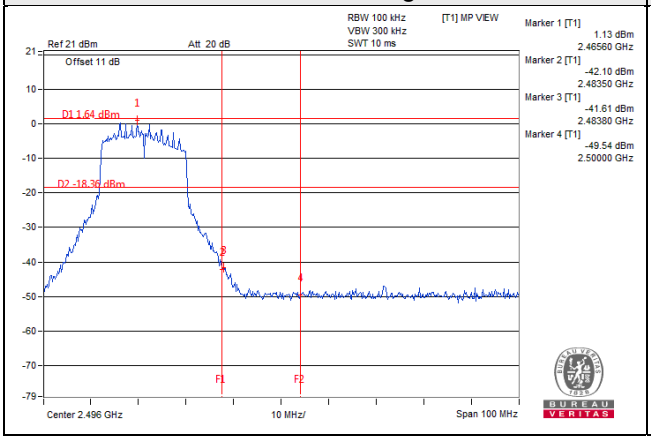

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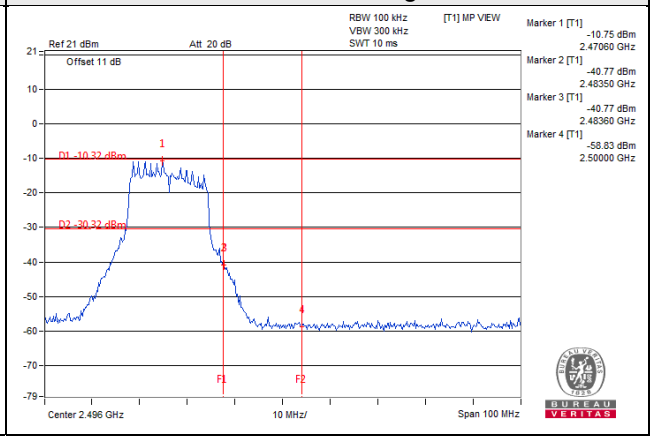
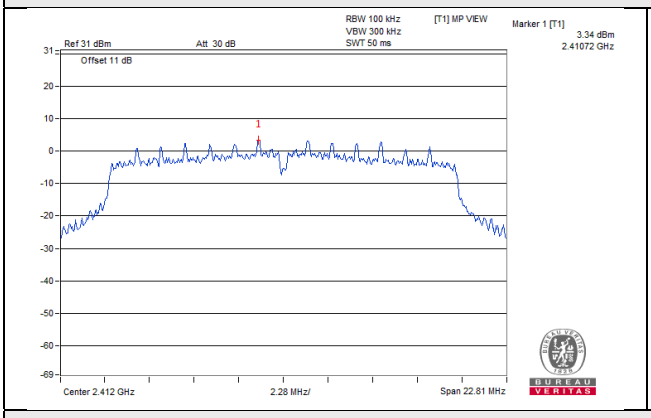
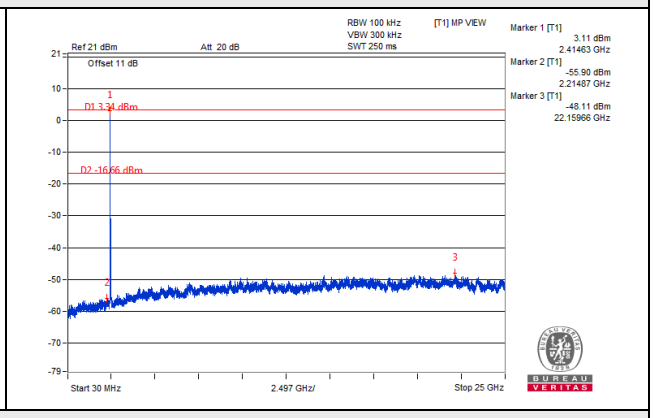


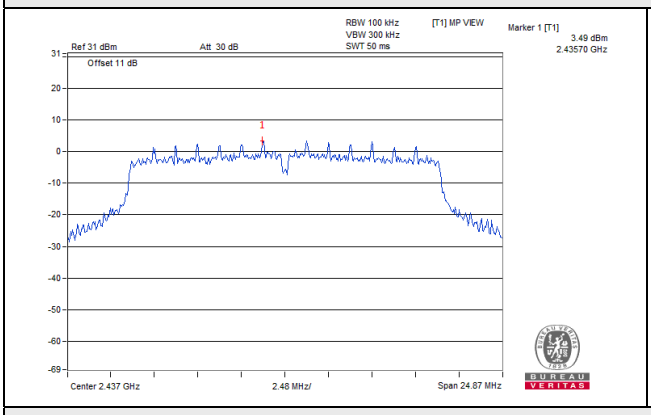
802.11n (HT20)_Chain 1

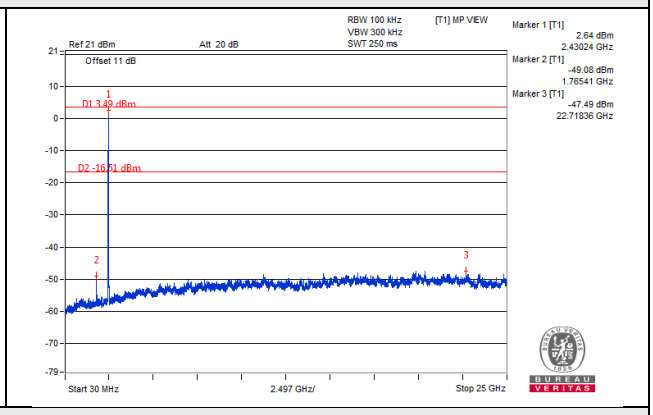
CH 1



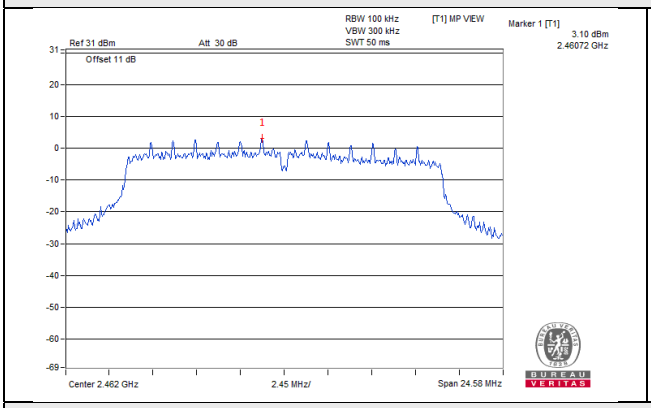


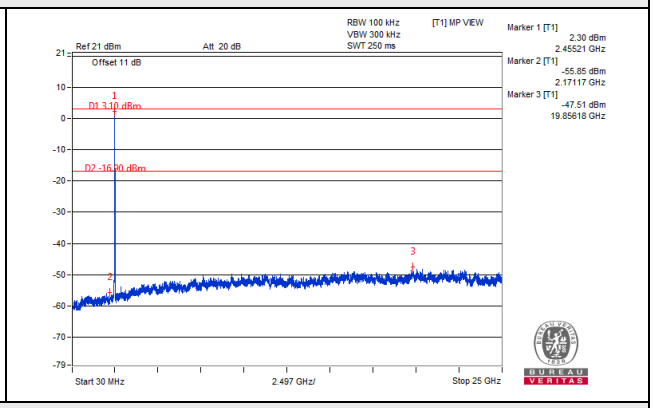
CH 6



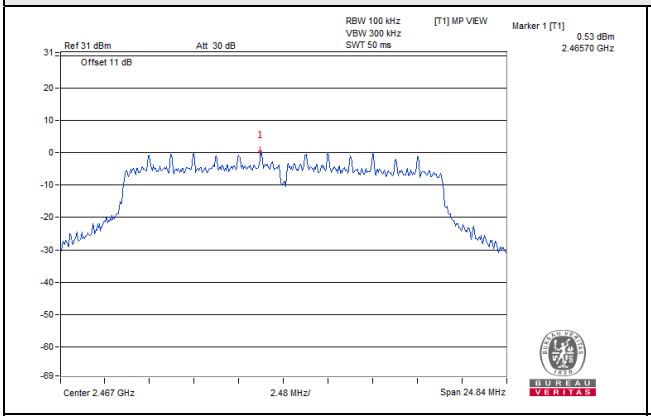


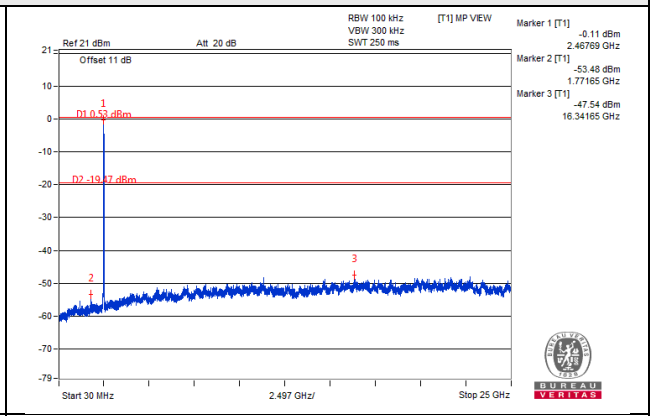
CH 11



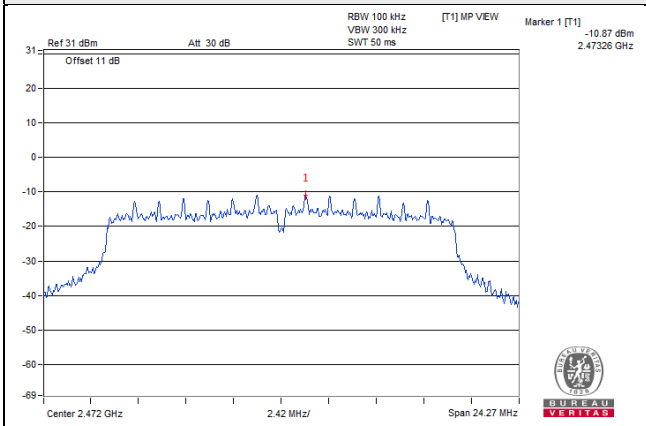


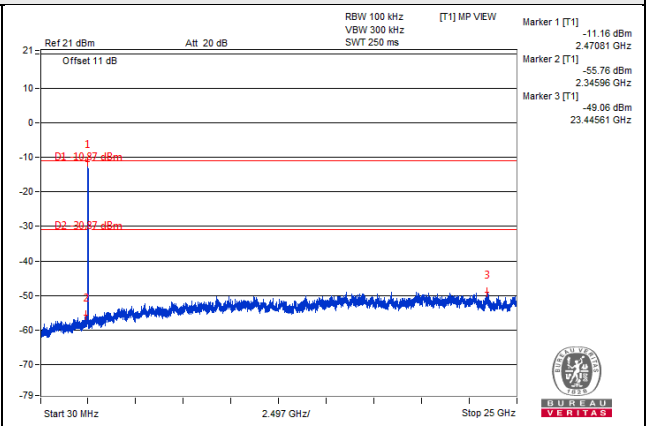
CH 12



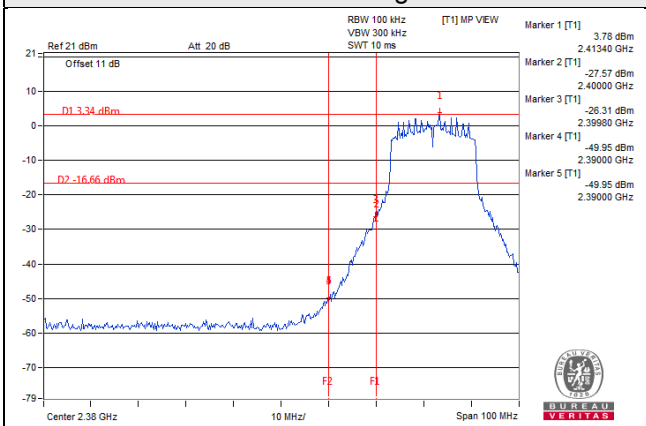


CH 13





CH 1 Band edge



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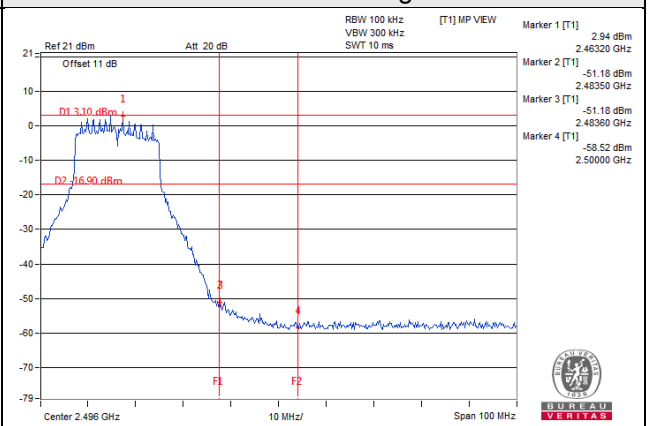
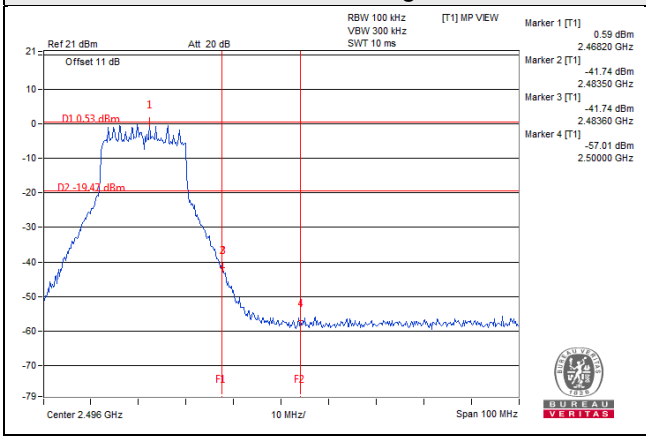


CH 12 Band edge



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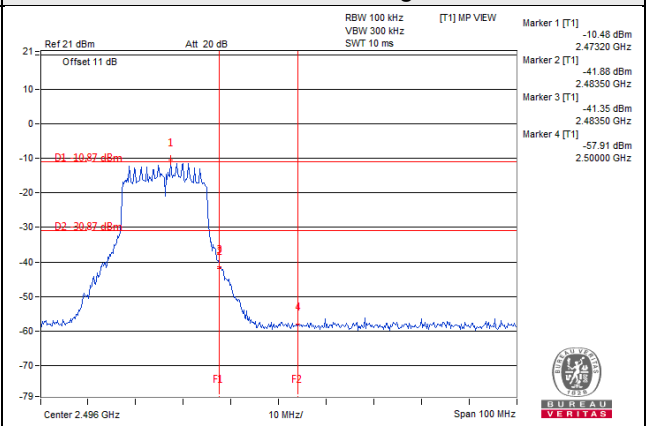

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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

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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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