FCC Test Report

Report No.:	RF171116C22E
FCC ID:	2AGPT-PLR3
Test Model:	2AGPT-PLR3
Received Date:	Mar. 30, 2020
Test Date:	Apr. 23, 2020 ~ Jul. 19, 2021
Issued Date:	Jul. 29, 2021
Applicant:	SolarEdge Technologies Ltd
Address:	1 HaMada Street Herzeliya 4673335
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF171116C22E	Original Release	Jul. 29, 2021

1 Certificate of Conformity

Product:	Linux communication board
Brand:	SolarEdge
Test Model:	2AGPT-PLR3
Sample Status:	Mass-production
Applicant:	SolarEdge Technologies Ltd
Test Date:	Apr. 23, 2020 ~ Jul. 19, 2021
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 : Lena Wang , **Date:** Jul. 29, 2021

Lena Wang / Specialist

Approved by : , **Date:** Jul. 29, 2021

Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -7.76 dB at 0.42370 MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1 dB at 4924.00 MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is RPSMA not a standard connector.

Note:

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

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Linux communication board
Brand	SolarEdge
Test Model	2AGPT-PLR3
Sample Status	Mass-production
Power Supply Rating	16Vdc
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 65Mbps
Operating Frequency	2412~2462MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20): 11
Output Power	155.955 mW (Mode A) 12.417 mW (Mode B)
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Antenna
Cable Supplied	NA

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

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

2. The EUT uses following antennas.

Ant. No.	Brand	Model	Ant. Gain (dBi) without Cable Loss	Frequency Range (GHz)	Ant. Type	Connecter Type	Cable Loss (dB)	Cable Length
1	ACX	AT3216 -A2R8HAA	0.5	2.4~2.5	Chip	N/A	N/A	N/A
2	solaredge	AS4032-1	5	2.4~2.5	Dipole	RPSMA	-2.2	133cm

3. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

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

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Dipole Ant.
B	√	√	√	√	Chip Ant.

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

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

Note:

1. The antenna had been pre-tested on the positioned of each 3 axis. The worst cases were found when positioned on Z-plane.
2. "-"means no effect.

Radiated Emission Test (Above 1GHz):

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

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

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

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B	802.11b	1 to 11	11	DSSS	DBPSK	1.0	-

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

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

Test Condition:

Applicable to	Environmental Conditions	Input Power (system)	Tested by
RE≥1G	20 deg. C, 69% RH 25 deg. C, 66% RH	120Vac, 60Hz	Adair Peng
RE<1G	20 deg. C, 69% RH 25 deg. C, 66% RH	120Vac, 60Hz	Adair Peng
PLC	25 deg. C, 75% RH	120Vac, 60Hz	Adair Peng
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Chris Lin

3.3 Duty Cycle of Test Signal

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

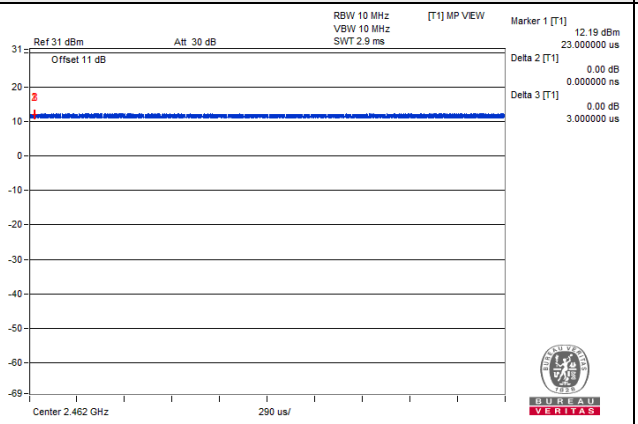
Mode A

802.11b: Duty cycle > 98%

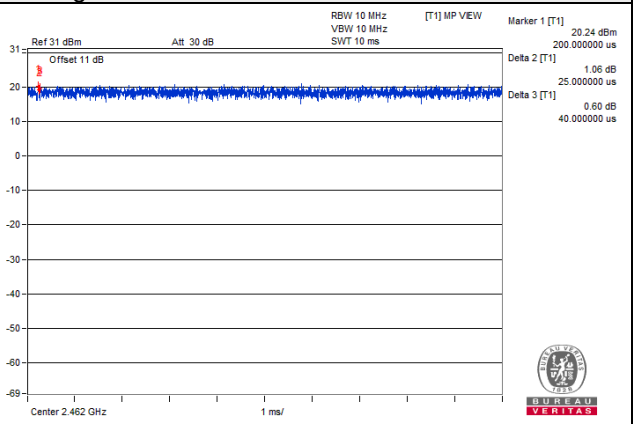
802.11g: Duty cycle > 98%

802.11n (HT20): Duty cycle > 98%

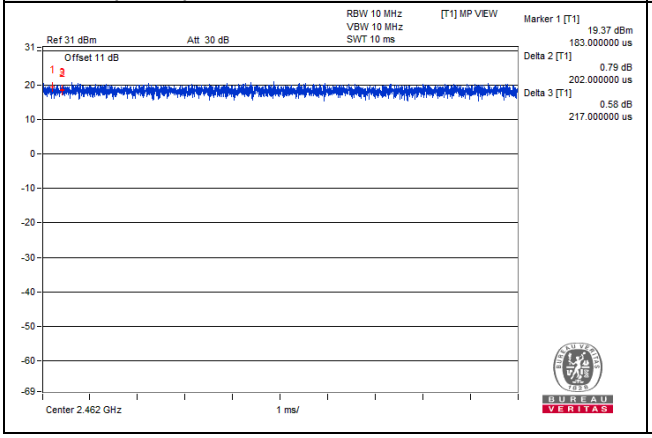
802.11b



802.11g



802.11n (HT20)



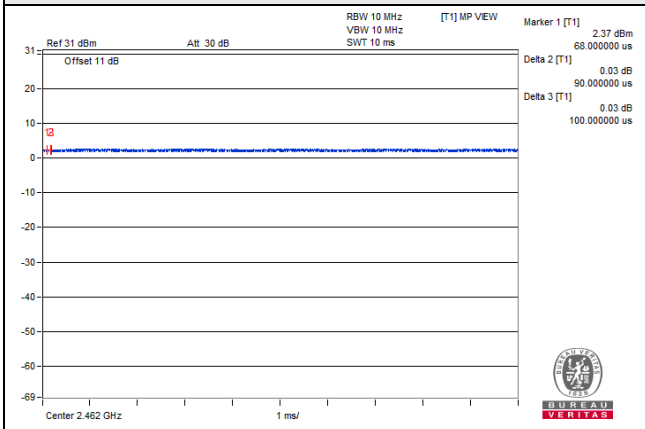
Mode B

802.11b: Duty cycle > 98%

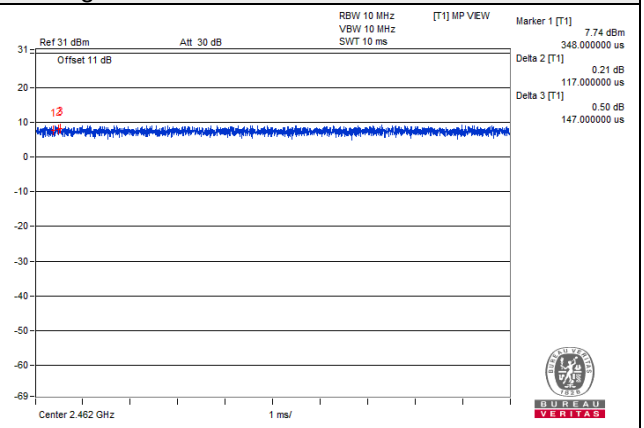
802.11g: Duty cycle > 98%

802.11n (HT20): Duty cycle > 98%

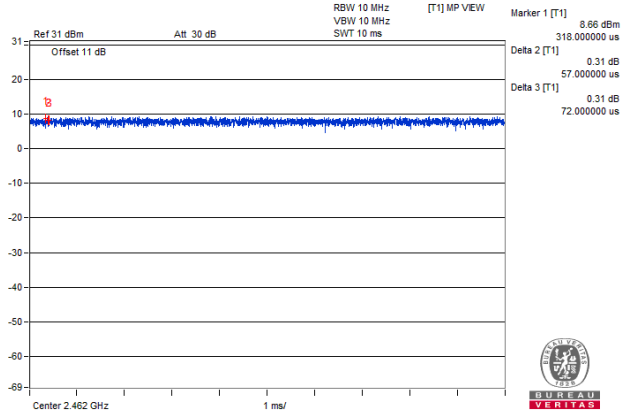
802.11b



802.11g



802.11n (HT20)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

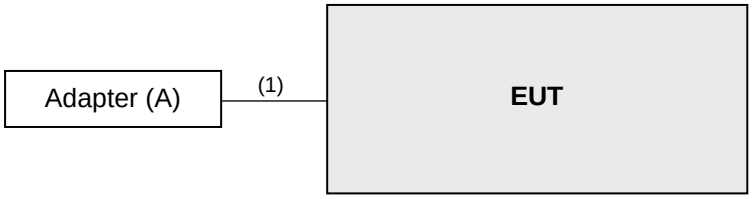
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Adapter	N/A	EPU15-105	NA	NA	Provided by manufacturer

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Power Cable	1	1.8	N	0	Provided by Client

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:

Test Standard:

FCC Part 15, Subpart C (15.247)

ANSI C63.10-2013

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

References Test Guidance:

KDB 558074 D01 Meas Guidance v05r02

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 ROHDE & SCHWARZ	ESR3	102579	Jul. 07, 2019	Jul. 06, 2020
			Jul. 07, 2020	Jul. 06, 2021
			Jul. 05, 2021	Jul. 04, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jun. 10, 2019	Jun. 08, 2020
			Jun. 09, 2020	Jun. 08, 2021
			Jun. 07, 2021	Jun. 06, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 11, 2019	Nov. 10, 2020
			Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	9120D	209	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
Loop Antenna EMCI	EM-6879	269	Sep. 16, 2019	Sep. 15, 2020
			Sep. 17, 2020	Sep. 16, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 23, 2020	Mar. 22, 2021
			Mar. 22, 2021	Mar. 21, 2022
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8000	Cable-CH3-03 (309224+170907)	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
Software BV ADT	ADT_Radiated_V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	Jul. 18, 2019	Jul. 12, 2020
			Jul. 13, 2020	Jul. 12, 2021
			Jul. 12, 2021	Jul. 11, 2022

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.

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:

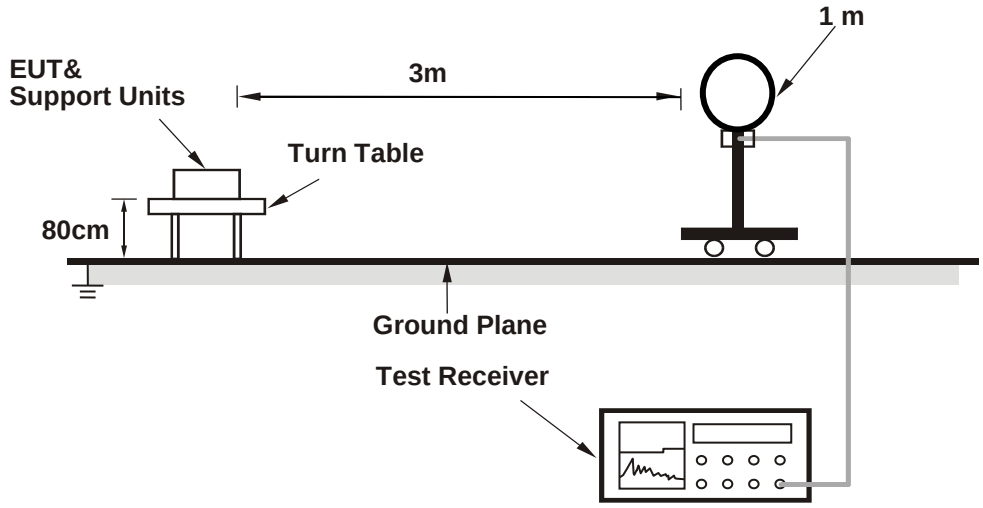
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

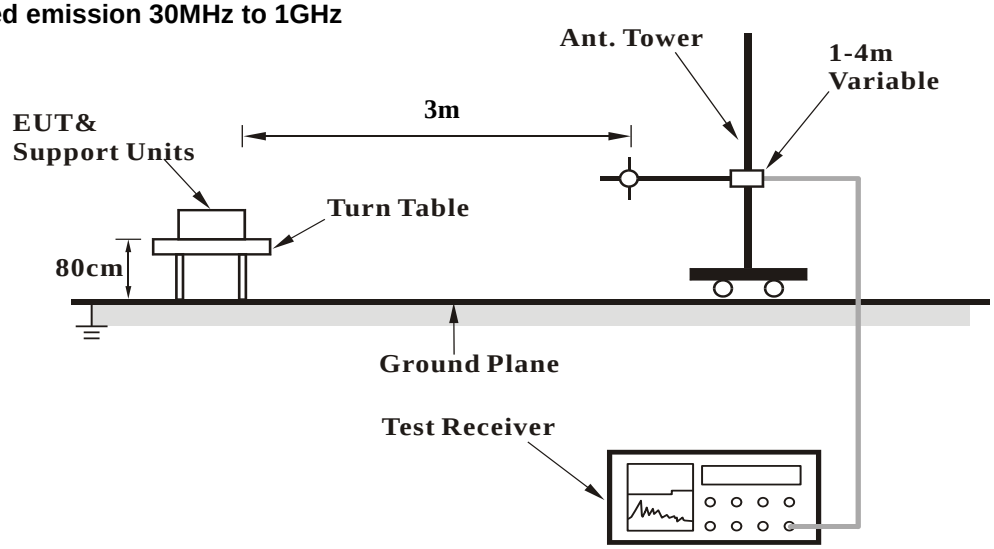
No deviation.

4.1.5 Test Setup

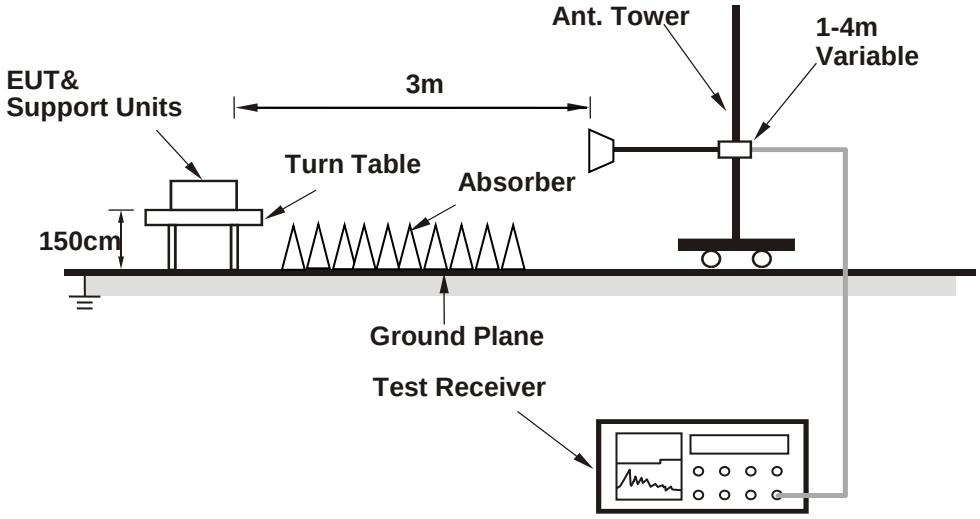
For Radiated emission below 30MHz



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).

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Above 1 GHz Data：

Mode A

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.3 PK	74.0	-17.7	1.35 H	49	24.0	32.3
2	2390.00	44.3 AV	54.0	-9.7	1.35 H	49	12.0	32.3
3	*2412.00	87.1 PK			1.35 H	49	54.8	32.3
4	*2412.00	83.1 AV			1.35 H	49	50.8	32.3
5	4824.00	50.8 PK	74.0	-23.2	1.59 H	50	47.4	3.4
6	4824.00	46.6 AV	54.0	-7.4	1.59 H	50	43.2	3.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.3 PK	74.0	-17.7	1.87 V	198	24.0	32.3
2	2390.00	44.4 AV	54.0	-9.6	1.87 V	198	12.1	32.3
3	*2412.00	96.2 PK			1.87 V	198	63.9	32.3
4	*2412.00	92.2 AV			1.87 V	198	59.9	32.3
5	4824.00	55.6 PK	74.0	-18.4	1.70 V	353	52.2	3.4
6	4824.00	52.8 AV	54.0	-1.2	1.70 V	353	49.4	3.4

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	86.8 PK			1.56 H	54	54.5	32.3
2	*2437.00	82.8 AV			1.56 H	54	50.5	32.3
3	4874.00	52.3 PK	74.0	-21.7	1.53 H	119	48.6	3.7
4	4874.00	48.8 AV	54.0	-5.2	1.53 H	119	45.1	3.7
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	92.9 PK			1.96 V	342	60.6	32.3
2	*2437.00	89.0 AV			1.96 V	342	56.7	32.3
3	4874.00	55.7 PK	74.0	-18.3	1.61 V	347	52.0	3.7
4	4874.00	52.8 AV	54.0	-1.2	1.61 V	347	49.1	3.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	86.8 PK			1.64 H	56	54.4	32.4
2	*2462.00	82.9 AV			1.64 H	56	50.5	32.4
3	2483.50	56.7 PK	74.0	-17.3	1.64 H	56	24.3	32.4
4	2483.50	44.5 AV	54.0	-9.5	1.64 H	56	12.1	32.4
5	4924.00	51.3 PK	74.0	-22.7	1.61 H	101	47.5	3.8
6	4924.00	49.0 AV	54.0	-5.0	1.61 H	101	45.2	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	94.3 PK			2.25 V	145	61.9	32.4
2	*2462.00	90.3 AV			2.25 V	145	57.9	32.4
3	2483.50	56.9 PK	74.0	-17.1	2.25 V	145	24.5	32.4
4	2483.50	44.6 AV	54.0	-9.4	2.25 V	145	12.2	32.4
5	4924.00	55.8 PK	74.0	-18.2	2.03 V	349	52.0	3.8
6	4924.00	53.0 AV	54.0	-1.0	2.03 V	349	49.2	3.8

REMARKS:

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

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.0 PK	74.0	-12.0	1.18 H	46	29.7	32.3
2	2390.00	46.7 AV	54.0	-7.3	1.18 H	46	14.4	32.3
3	*2412.00	96.4 PK			1.18 H	46	64.1	32.3
4	*2412.00	85.5 AV			1.18 H	46	53.2	32.3
5	4824.00	61.6 PK	74.0	-12.4	1.31 H	49	58.2	3.4
6	4824.00	45.6 AV	54.0	-8.4	1.31 H	49	42.2	3.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.2 PK	74.0	-1.8	2.00 V	96	39.9	32.3
2	2390.00	52.3 AV	54.0	-1.7	2.00 V	96	20.0	32.3
3	*2412.00	104.4 PK			2.00 V	96	72.1	32.3
4	*2412.00	94.1 AV			2.00 V	96	61.8	32.3
5	4824.00	65.8 PK	74.0	-8.2	1.94 V	10	62.4	3.4
6	4824.00	50.3 AV	54.0	-3.7	1.94 V	10	46.9	3.4

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	95.1 PK			1.35 H	51	62.8	32.3
2	*2437.00	84.9 AV			1.35 H	51	52.6	32.3
3	4874.00	63.8 PK	74.0	-10.2	1.71 H	66	60.1	3.7
4	4874.00	47.8 AV	54.0	-6.2	1.71 H	66	44.1	3.7
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	103.3 PK			2.24 V	145	71.0	32.3
2	*2437.00	93.3 AV			2.24 V	145	61.0	32.3
3	4874.00	68.4 PK	74.0	-5.6	2.28 V	22	64.7	3.7
4	4874.00	52.5 AV	54.0	-1.5	2.28 V	22	48.8	3.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	95.2 PK			1.04 H	49	62.8	32.4
2	*2462.00	84.7 AV			1.04 H	49	52.3	32.4
3	2483.50	65.0 PK	74.0	-9.0	1.04 H	49	32.6	32.4
4	2483.50	47.5 AV	54.0	-6.5	1.04 H	49	15.1	32.4
5	4924.00	61.9 PK	74.0	-12.1	1.39 H	99	58.1	3.8
6	4924.00	46.5 AV	54.0	-7.5	1.39 H	99	42.7	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.0 PK			2.19 V	147	70.6	32.4
2	*2462.00	92.2 AV			2.19 V	147	59.8	32.4
3	2483.50	72.6 PK	74.0	-1.4	2.19 V	147	40.2	32.4
4	2483.50	52.4 AV	54.0	-1.6	2.19 V	147	20.0	32.4
5	4924.00	66.2 PK	74.0	-7.8	2.10 V	68	62.4	3.8
6	4924.00	50.8 AV	54.0	-3.2	2.10 V	68	47.0	3.8

REMARKS:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.0 PK	74.0	-12.0	1.20 H	46	29.7	32.3
2	2390.00	46.7 AV	54.0	-7.3	1.20 H	46	14.4	32.3
3	*2412.00	96.3 PK			1.20 H	46	64.0	32.3
4	*2412.00	85.0 AV			1.20 H	46	52.7	32.3
5	4824.00	59.5 PK	74.0	-14.5	1.57 H	75	56.1	3.4
6	4824.00	45.5 AV	54.0	-8.5	1.57 H	75	42.1	3.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.3 PK	74.0	-2.7	1.95 V	108	39.0	32.3
2	2390.00	52.4 AV	54.0	-1.6	1.95 V	108	20.1	32.3
3	*2412.00	104.9 PK			1.95 V	108	72.6	32.3
4	*2412.00	93.1 AV			1.95 V	108	60.8	32.3
5	4824.00	63.8 PK	74.0	-10.2	2.12 V	11	60.4	3.4
6	4824.00	49.7 AV	54.0	-4.3	2.12 V	11	46.3	3.4

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	95.3 PK			1.35 H	56	63.0	32.3
2	*2437.00	83.9 AV			1.35 H	56	51.6	32.3
3	4874.00	62.3 PK	74.0	-11.7	1.54 H	63	58.6	3.7
4	4874.00	47.4 AV	54.0	-6.6	1.54 H	63	43.7	3.7
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	103.2 PK			1.77 V	40	70.9	32.3
2	*2437.00	92.1 AV			1.77 V	40	59.8	32.3
3	4874.00	67.2 PK	74.0	-6.8	1.83 V	350	63.5	3.7
4	4874.00	52.7 AV	54.0	-1.3	1.83 V	350	49.0	3.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	96.9 PK			1.33 H	52	64.5	32.4
2	*2462.00	85.3 AV			1.33 H	52	52.9	32.4
3	2483.50	65.0 PK	74.0	-9.0	1.33 H	52	32.6	32.4
4	2483.50	48.2 AV	54.0	-5.8	1.33 H	52	15.8	32.4
5	4924.00	61.0 PK	74.0	-13.0	1.53 H	63	57.2	3.8
6	4924.00	46.1 AV	54.0	-7.9	1.53 H	63	42.3	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.3 PK			1.69 V	258	70.9	32.4
2	*2462.00	91.6 AV			1.69 V	258	59.2	32.4
3	2483.50	72.4 PK	74.0	-1.6	1.69 V	258	40.0	32.4
4	2483.50	52.7 AV	54.0	-1.3	1.69 V	258	20.3	32.4
5	4924.00	65.5 PK	74.0	-8.5	1.48 V	345	61.7	3.8
6	4924.00	50.6 AV	54.0	-3.4	1.48 V	345	46.8	3.8

REMARKS:

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

Mode B

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.1 PK	74.0	-16.9	2.22 H	179	24.8	32.3
2	2390.00	44.4 AV	54.0	-9.6	2.22 H	179	12.1	32.3
3	*2412.00	84.2 PK			2.22 H	179	51.9	32.3
4	*2412.00	80.1 AV			2.22 H	179	47.8	32.3
5	4824.00	55.1 PK	74.0	-18.9	3.95 H	220	51.7	3.4
6	4824.00	52.4 AV	54.0	-1.6	3.95 H	220	49.0	3.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.3 PK	74.0	-16.7	3.34 V	108	25.0	32.3
2	2390.00	44.9 AV	54.0	-9.1	3.34 V	108	12.6	32.3
3	*2412.00	87.7 PK			3.34 V	108	55.4	32.3
4	*2412.00	83.9 AV			3.34 V	108	51.6	32.3
5	4824.00	55.0 PK	74.0	-19.0	2.92 V	178	51.6	3.4
6	4824.00	52.0 AV	54.0	-2.0	2.92 V	178	48.6	3.4

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	81.6 PK			1.33 H	15	49.3	32.3
2	*2437.00	77.6 AV			1.33 H	15	45.3	32.3
3	4874.00	55.2 PK	74.0	-18.8	3.98 H	226	51.5	3.7
4	4874.00	52.5 AV	54.0	-1.5	3.98 H	226	48.8	3.7
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	85.5 PK			2.74 V	95	53.2	32.3
2	*2437.00	81.6 AV			2.74 V	95	49.3	32.3
3	4874.00	54.7 PK	74.0	-19.3	3.88 V	205	51.0	3.7
4	4874.00	52.3 AV	54.0	-1.7	3.88 V	205	48.6	3.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	82.1 PK			2.12 H	178	49.7	32.4
2	*2462.00	77.4 AV			2.12 H	178	45.0	32.4
3	2483.50	56.7 PK	74.0	-17.3	2.12 H	178	24.3	32.4
4	2483.50	44.1 AV	54.0	-9.9	2.12 H	178	11.7	32.4
5	4924.00	55.9 PK	74.0	-18.1	4.00 H	222	52.1	3.8
6	4924.00	53.0 AV	54.0	-1.0	4.00 H	222	49.2	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	85.7 PK			2.67 V	96	53.3	32.4
2	*2462.00	81.7 AV			2.67 V	96	49.3	32.4
3	2483.50	56.8 PK	74.0	-17.2	2.67 V	96	24.4	32.4
4	2483.50	44.3 AV	54.0	-9.7	2.67 V	96	11.9	32.4
5	4924.00	55.5 PK	74.0	-18.5	3.40 V	208	51.7	3.8
6	4924.00	52.8 AV	54.0	-1.2	3.40 V	208	49.0	3.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.1 PK	74.0	-12.9	2.21 H	178	28.8	32.3
2	2390.00	46.1 AV	54.0	-7.9	2.21 H	178	13.8	32.3
3	*2412.00	90.3 PK			2.21 H	178	58.0	32.3
4	*2412.00	79.5 AV			2.21 H	178	47.2	32.3
5	4824.00	63.2 PK	74.0	-10.8	3.95 H	220	59.8	3.4
6	4824.00	48.4 AV	54.0	-5.6	3.95 H	220	45.0	3.4
7	#7236.00	68.8 PK	74.0	-5.2	2.06 H	142	58.2	10.6
8	#7236.00	52.9 AV	54.0	-1.1	2.06 H	142	42.3	10.6
9	12060.00	61.6 PK	74.0	-12.4	1.89 H	2	44.1	17.5
10	12060.00	48.0 AV	54.0	-6.0	1.89 H	2	30.5	17.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	2.70 V	173	34.0	32.3
2	2390.00	48.0 AV	54.0	-6.0	2.70 V	173	15.7	32.3
3	*2412.00	92.6 PK			3.13 V	163	60.3	32.3
4	*2412.00	81.8 AV			3.13 V	163	49.5	32.3
5	4824.00	63.8 PK	74.0	-10.2	4.00 V	190	60.4	3.4
6	4824.00	49.7 AV	54.0	-4.3	4.00 V	190	46.3	3.4
7	#7236.00	64.9 PK	74.0	-9.1	2.05 V	271	54.3	10.6
8	#7236.00	49.7 AV	54.0	-4.3	2.05 V	271	39.1	10.6
9	12060.00	68.4 PK	74.0	-5.6	2.52 V	166	50.9	17.5
10	12060.00	51.7 AV	54.0	-2.3	2.52 V	166	34.2	17.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	89.5 PK			2.15 H	178	57.2	32.3
2	*2437.00	79.2 AV			2.15 H	178	46.9	32.3
3	4874.00	65.4 PK	74.0	-8.6	3.99 H	228	61.7	3.7
4	4874.00	51.0 AV	54.0	-3.0	3.99 H	228	47.3	3.7
5	7311.00	70.1 PK	74.0	-3.9	2.13 H	142	59.6	10.5
6	7311.00	52.9 AV	54.0	-1.1	2.13 H	142	42.4	10.5
7	12185.00	61.0 PK	74.0	-13.0	2.13 H	353	43.9	17.1
8	12185.00	47.0 AV	54.0	-7.0	2.13 H	353	29.9	17.1
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	92.1 PK			2.13 V	130	59.8	32.3
2	*2437.00	81.4 AV			2.13 V	130	49.1	32.3
3	4874.00	66.4 PK	74.0	-7.6	3.99 V	187	62.7	3.7
4	4874.00	51.6 AV	54.0	-2.4	3.99 V	187	47.9	3.7
5	7311.00	66.3 PK	74.0	-7.7	2.66 V	204	55.8	10.5
6	7311.00	50.7 AV	54.0	-3.3	2.66 V	204	40.2	10.5
7	12185.00	67.0 PK	74.0	-7.0	2.69 V	169	49.9	17.1
8	12185.00	51.2 AV	54.0	-2.8	2.69 V	169	34.1	17.1

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	88.6 PK			2.09 H	180	56.2	32.4
2	*2462.00	78.3 AV			2.09 H	180	45.9	32.4
3	2483.50	59.0 PK	74.0	-15.0	2.09 H	180	26.6	32.4
4	2483.50	44.8 AV	54.0	-9.2	2.09 H	180	12.4	32.4
5	4924.00	66.7 PK	74.0	-7.3	3.97 H	222	62.9	3.8
6	4924.00	51.8 AV	54.0	-2.2	3.97 H	222	48.0	3.8
7	7386.00	69.7 PK	74.0	-4.3	2.16 H	142	59.3	10.4
8	7386.00	52.6 AV	54.0	-1.4	2.16 H	142	42.2	10.4
9	12310.00	61.8 PK	74.0	-12.2	1.99 H	1	44.2	17.6
10	12310.00	47.7 AV	54.0	-6.3	1.99 H	1	30.1	17.6
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	91.6 PK			2.16 V	131	59.2	32.4
2	*2462.00	80.7 AV			2.16 V	131	48.3	32.4
3	2483.50	63.7 PK	74.0	-10.3	2.16 V	131	31.3	32.4
4	2483.50	46.1 AV	54.0	-7.9	2.16 V	131	13.7	32.4
5	4924.00	64.6 PK	74.0	-9.4	3.97 V	194	60.8	3.8
6	4924.00	51.0 AV	54.0	-3.0	3.97 V	194	47.2	3.8
7	7386.00	66.9 PK	74.0	-7.1	2.64 V	202	56.5	10.4
8	7386.00	51.7 AV	54.0	-2.3	2.64 V	202	41.3	10.4
9	12310.00	67.4 PK	74.0	-6.6	2.66 V	168	49.8	17.6
10	12310.00	51.6 AV	54.0	-2.4	2.66 V	168	34.0	17.6

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.0 PK	74.0	-11.0	2.02 H	182	30.7	32.3
2	2390.00	46.8 AV	54.0	-7.2	2.02 H	182	14.5	32.3
3	*2412.00	90.3 PK			2.02 H	182	58.0	32.3
4	*2412.00	79.3 AV			2.02 H	182	47.0	32.3
5	4824.00	61.1 PK	74.0	-12.9	3.94 H	218	57.7	3.4
6	4824.00	47.8 AV	54.0	-6.2	3.94 H	218	44.4	3.4
7	#7236.00	68.2 PK	74.0	-5.8	2.07 H	142	57.6	10.6
8	#7236.00	52.6 AV	54.0	-1.4	2.07 H	142	42.0	10.6
9	12060.00	61.5 PK	74.0	-12.5	2.05 H	359	44.0	17.5
10	12060.00	47.5 AV	54.0	-6.5	2.05 H	359	30.0	17.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.8 PK	74.0	-9.2	2.68 V	174	32.5	32.3
2	2390.00	49.6 AV	54.0	-4.4	2.68 V	174	17.3	32.3
3	*2412.00	92.9 PK			2.68 V	174	60.6	32.3
4	*2412.00	81.8 AV			2.68 V	174	49.5	32.3
5	4824.00	61.0 PK	74.0	-13.0	4.00 V	188	57.6	3.4
6	4824.00	48.9 AV	54.0	-5.1	4.00 V	188	45.5	3.4
7	#7236.00	65.1 PK	74.0	-8.9	1.99 V	266	54.5	10.6
8	#7236.00	49.6 AV	54.0	-4.4	1.99 V	266	39.0	10.6
9	12060.00	67.0 PK	74.0	-7.0	1.95 V	126	49.5	17.5
10	12060.00	51.7 AV	54.0	-2.3	1.95 V	126	34.2	17.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	91.2 PK			2.16 H	178	58.9	32.3
2	*2437.00	79.0 AV			2.16 H	178	46.7	32.3
3	4874.00	63.7 PK	74.0	-10.3	3.98 H	227	60.0	3.7
4	4874.00	51.0 AV	54.0	-3.0	3.98 H	227	47.3	3.7
5	7311.00	68.5 PK	74.0	-5.5	1.89 H	143	58.0	10.5
6	7311.00	52.7 AV	54.0	-1.3	1.89 H	143	42.2	10.5
7	12185.00	61.1 PK	74.0	-12.9	2.09 H	12	44.0	17.1
8	12185.00	47.4 AV	54.0	-6.6	2.09 H	12	30.3	17.1
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	92.4 PK			2.15 V	128	60.1	32.3
2	*2437.00	81.8 AV			2.15 V	128	49.5	32.3
3	4874.00	64.5 PK	74.0	-9.5	3.98 V	187	60.8	3.7
4	4874.00	51.9 AV	54.0	-2.1	3.98 V	187	48.2	3.7
5	7311.00	64.2 PK	74.0	-9.8	2.77 V	185	53.7	10.5
6	7311.00	50.5 AV	54.0	-3.5	2.77 V	185	40.0	10.5
7	12185.00	65.4 PK	74.0	-8.6	2.76 V	171	48.3	17.1
8	12185.00	51.0 AV	54.0	-3.0	2.76 V	171	33.9	17.1

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	91.0 PK			2.12 H	180	58.6	32.4
2	*2462.00	79.5 AV			2.12 H	180	47.1	32.4
3	2483.50	59.9 PK	74.0	-14.1	2.12 H	180	27.5	32.4
4	2483.50	46.0 AV	54.0	-8.0	2.12 H	180	13.6	32.4
5	4924.00	66.0 PK	74.0	-8.0	4.00 H	220	62.2	3.8
6	4924.00	52.3 AV	54.0	-1.7	4.00 H	220	48.5	3.8
7	7386.00	67.9 PK	74.0	-6.1	3.53 H	156	57.5	10.4
8	7386.00	52.7 AV	54.0	-1.3	3.53 H	156	42.3	10.4
9	12310.00	62.0 PK	74.0	-12.0	1.89 H	3	44.4	17.6
10	12310.00	48.0 AV	54.0	-6.0	1.89 H	3	30.4	17.6
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	92.4 PK			2.16 V	132	60.0	32.4
2	*2462.00	81.6 AV			2.16 V	132	49.2	32.4
3	2483.50	65.1 PK	74.0	-8.9	2.16 V	132	32.7	32.4
4	2483.50	48.9 AV	54.0	-5.1	2.16 V	132	16.5	32.4
5	4924.00	65.3 PK	74.0	-8.7	3.87 V	190	61.5	3.8
6	4924.00	51.9 AV	54.0	-2.1	3.87 V	190	48.1	3.8
7	7386.00	65.6 PK	74.0	-8.4	2.75 V	185	55.2	10.4
8	7386.00	51.4 AV	54.0	-2.6	2.75 V	185	41.0	10.4
9	12310.00	67.8 PK	74.0	-6.2	2.79 V	173	50.2	17.6
10	12310.00	51.8 AV	54.0	-2.2	2.79 V	173	34.2	17.6

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

9 kHz ~ 30 MHz Data:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

Mode A

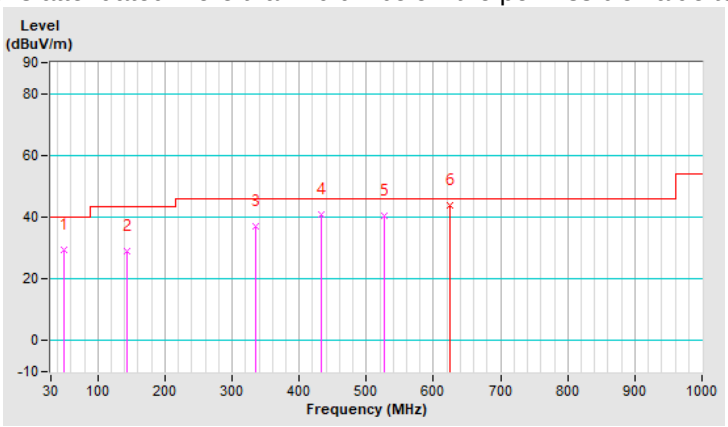
802.11b

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	49.68	29.3 QP	40.0	-10.7	2.00 H	15	38.1	-8.8
2	143.87	28.9 QP	43.5	-14.6	2.00 H	116	37.7	-8.8
3	335.06	37.1 QP	46.0	-8.9	1.00 H	177	43.4	-6.3
4	432.06	40.9 QP	46.0	-5.1	2.00 H	207	44.0	-3.1
5	527.65	40.3 QP	46.0	-5.7	1.49 H	178	41.1	-0.8
6	624.00	43.8 QP	46.0	-2.2	1.49 H	237	42.4	1.4

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

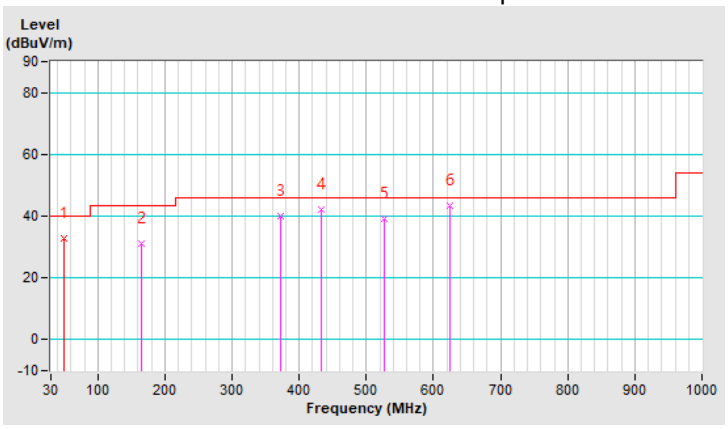


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	50.41	32.7 QP	40.0	-7.3	1.00 V	243	41.4	-8.7
2	164.96	31.3 QP	43.5	-12.2	1.00 V	184	40.0	-8.7
3	373.01	40.1 QP	46.0	-5.9	1.00 V	124	45.3	-5.2
4	432.06	42.2 QP	46.0	-3.8	1.49 V	59	45.3	-3.1
5	527.65	39.3 QP	46.0	-6.7	1.00 V	87	40.1	-0.8
6	624.65	43.4 QP	46.0	-2.6	1.00 V	213	42.0	1.4

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
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.



Mode B

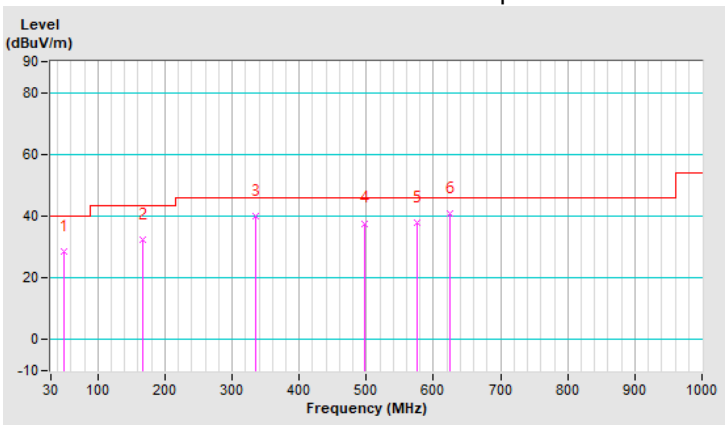
802.11b

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	49.68	28.5 QP	40.0	-11.5	1.49 H	292	37.3	-8.8
2	166.36	32.4 QP	43.5	-11.1	1.49 H	220	41.1	-8.7
3	335.06	40.1 QP	46.0	-5.9	1.00 H	193	46.4	-6.3
4	498.13	37.7 QP	46.0	-8.3	1.49 H	285	39.2	-1.5
5	575.45	38.0 QP	46.0	-8.0	1.49 H	198	37.6	0.4
6	624.65	40.9 QP	46.0	-5.1	1.00 H	192	39.5	1.4

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

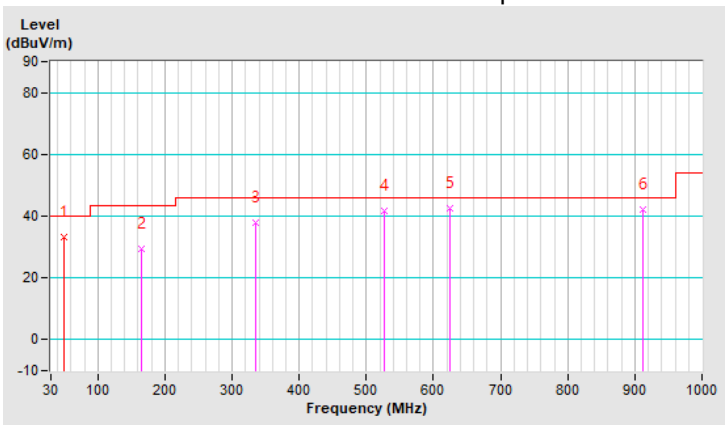


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	50.41	33.1 QP	40.0	-6.9	1.00 V	324	41.8	-8.7
2	164.96	29.3 QP	43.5	-14.2	1.00 V	16	38.0	-8.7
3	335.06	38.0 QP	46.0	-8.0	1.49 V	175	44.3	-6.3
4	527.65	41.8 QP	46.0	-4.2	1.00 V	343	42.6	-0.8
5	624.65	42.5 QP	46.0	-3.5	1.00 V	103	41.1	1.4
6	912.84	42.3 QP	46.0	-3.7	1.00 V	127	37.4	4.9

REMARKS:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 11, 2019	Dec. 10, 2020
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2019	Sep. 04, 2020
LISN/AMN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 27, 2020	Mar. 26, 2021
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ENV216	101196	Apr. 20, 2020	Apr. 19, 2021
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-12040.
4. Test Date: 2020/4/25

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.

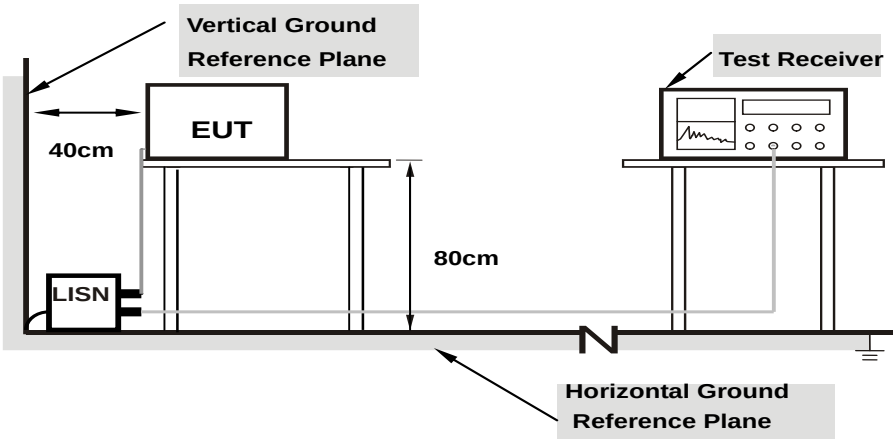
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

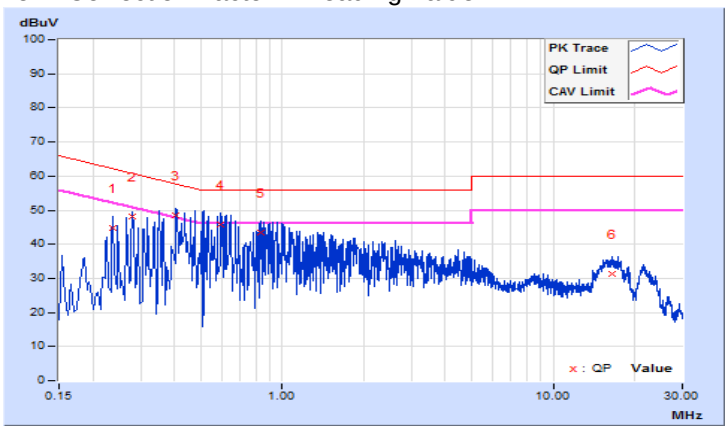
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23℃, 67%RH
Test Mode	Mode A		

Phase Of Power : Line (L)										
No	Frequency	Correction Factor	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
	(MHz)	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.23602	9.63	35.23	17.37	44.86	27.00	62.24	52.24	-17.38	-25.24
2	0.27903	9.63	38.45	21.57	48.08	31.20	60.84	50.84	-12.76	-19.64
3	0.40415	9.65	38.78	20.99	48.43	30.64	57.77	47.77	-9.34	-17.13
4	0.59183	9.66	36.08	18.34	45.74	28.00	56.00	46.00	-10.26	-18.00
5	0.83034	9.67	33.79	16.59	43.46	26.26	56.00	46.00	-12.54	-19.74
6	16.43906	9.90	21.57	11.87	31.47	21.77	60.00	50.00	-28.53	-28.23

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

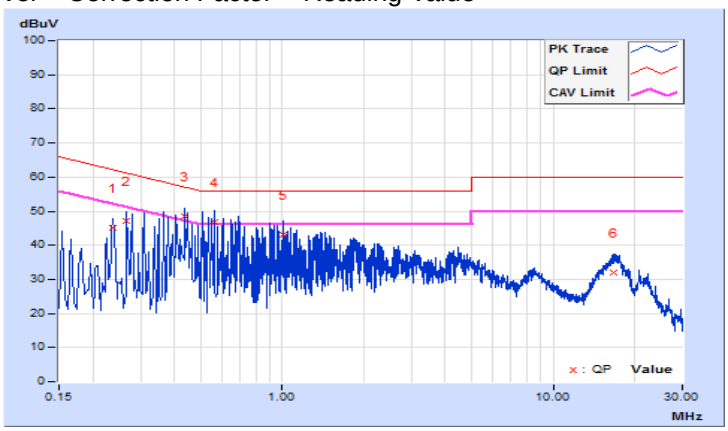


Frequency Range	150kHz ~ 30MHz	Detector Function & Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23℃, 67%RH
Test Mode	Mode A		

Phase Of Power : Neutral (N)										
No	Frequency	Correction Factor	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
	(MHz)	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.23602	9.65	35.43	18.58	45.08	28.23	62.24	52.24	-17.16	-24.01
2	0.26730	9.65	37.41	19.11	47.06	28.76	61.20	51.20	-14.14	-22.44
3	0.43543	9.67	38.94	24.47	48.61	34.14	57.15	47.15	-8.54	-13.01
4	0.56055	9.68	37.18	19.77	46.86	29.45	56.00	46.00	-9.14	-16.55
5	1.01020	9.70	33.56	17.19	43.26	26.89	56.00	46.00	-12.74	-19.11
6	16.80660	10.00	21.91	13.88	31.91	23.88	60.00	50.00	-28.09	-26.12

Remarks:

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

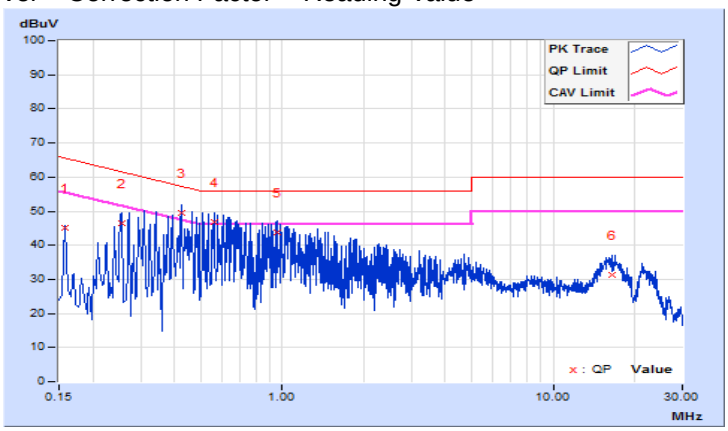


Frequency Range	150kHz ~ 30MHz	Detector Function & Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23℃, 67%RH
Test Mode	Mode B		

Phase Of Power : Line (L)										
No	Frequency	Correction Factor	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
	(MHz)	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	9.63	35.35	19.41	44.98	29.04	65.58	55.58	-20.60	-26.54
2	0.25526	9.63	36.85	19.86	46.48	29.49	61.58	51.58	-15.10	-22.09
3	**0.42370**	**9.65**	**39.97**	**22.85**	**49.62**	**32.50**	**57.38**	**47.38**	**-7.76**	**-14.88**
4	0.56055	9.66	37.18	19.76	46.84	29.42	56.00	46.00	-9.16	-16.58
5	0.95546	9.68	34.13	17.34	43.81	27.02	56.00	46.00	-12.19	-18.98
6	16.40778	9.90	21.54	11.97	31.44	21.87	60.00	50.00	-28.56	-28.13

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

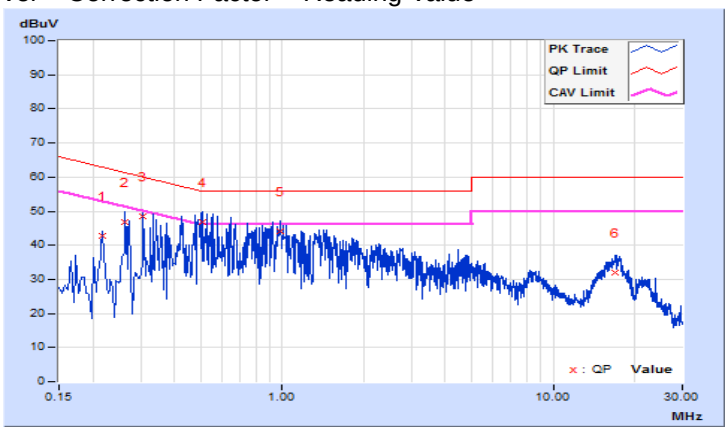


Frequency Range	150kHz ~ 30MHz	Detector Function & Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23℃, 67%RH
Test Mode	Mode B		

Phase Of Power : Neutral (N)										
No	Frequency	Correction Factor	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
	(MHz)	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.21647	9.64	32.97	17.14	42.61	26.78	62.95	52.95	-20.34	-26.17
2	0.26339	9.65	37.14	19.04	46.79	28.69	61.32	51.32	-14.53	-22.63
3	0.30640	9.66	38.71	21.82	48.37	31.48	60.07	50.07	-11.70	-18.59
4	0.50972	9.68	37.07	18.62	46.75	28.30	56.00	46.00	-9.25	-17.70
5	0.98674	9.70	34.53	16.85	44.23	26.55	56.00	46.00	-11.77	-19.45
6	16.89653	10.00	22.14	13.86	32.14	23.86	60.00	50.00	-27.86	-26.14

Remarks:

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

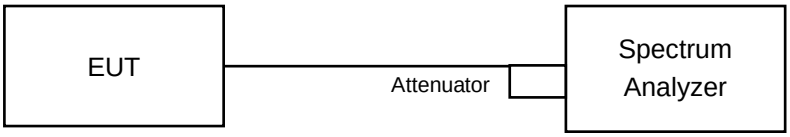


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

4.3.5 Deviation fromTest Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Mode A

802.11b

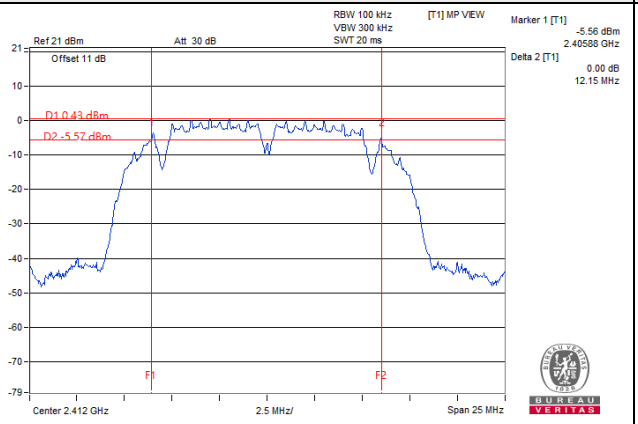
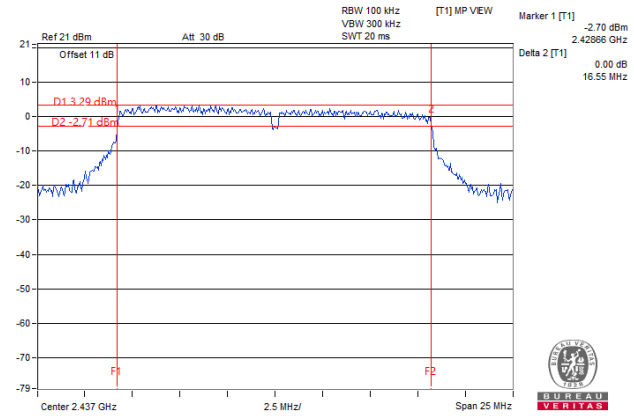
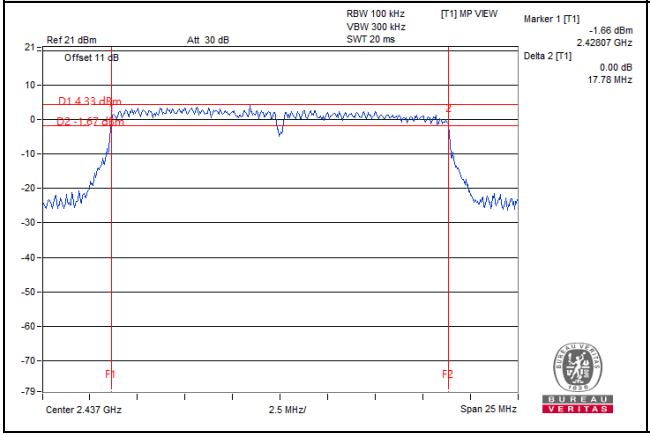
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	12.15	0.5	Pass
6	2437	12.18	0.5	Pass
11	2462	12.18	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.57	0.5	Pass
6	2437	16.55	0.5	Pass
11	2462	16.57	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.83	0.5	Pass
6	2437	17.78	0.5	Pass
11	2462	17.78	0.5	Pass

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

Mode B

802.11b

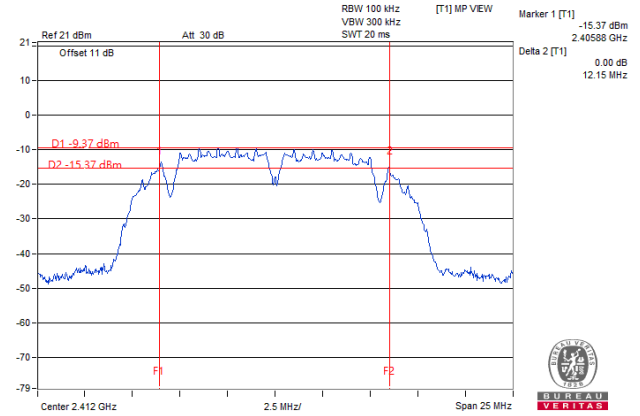
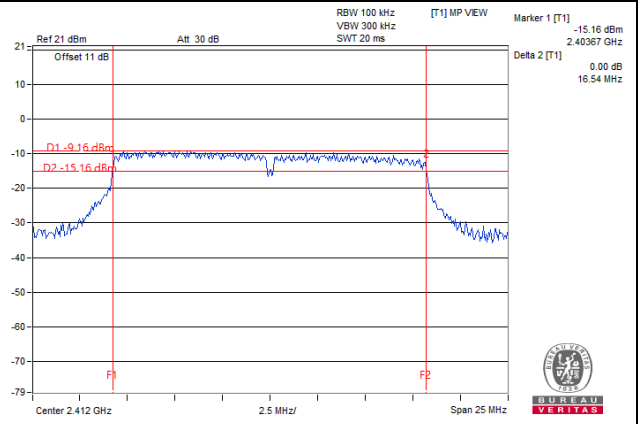
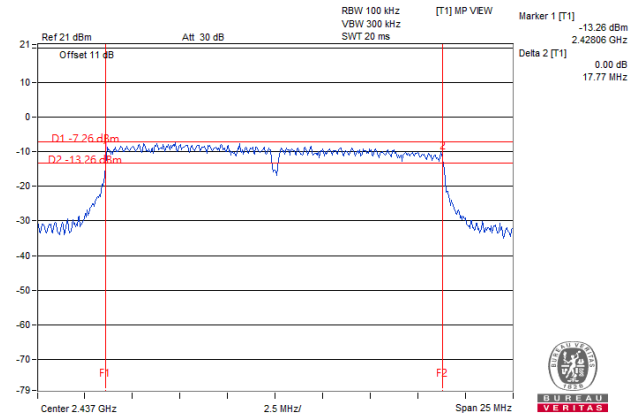
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	12.15	0.5	Pass
6	2437	12.18	0.5	Pass
11	2462	12.18	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.54	0.5	Pass
6	2437	16.61	0.5	Pass
11	2462	16.59	0.5	Pass

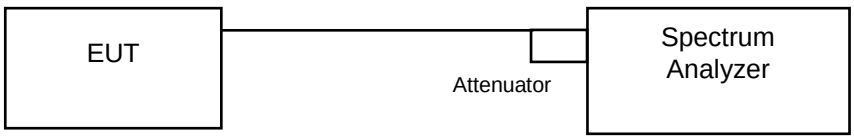
802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.78	0.5	Pass
6	2437	17.77	0.5	Pass
11	2462	17.77	0.5	Pass

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

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1 % to 5 % of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.4.4 Deviation from Test Standard

No deviation.

4.4.5 EUT Operating Conditions

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

4.4.6 Test Results

Mode A

802.11b

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	13.91	Pass
6	2437	13.92	Pass
11	2462	13.92	Pass

802.11g

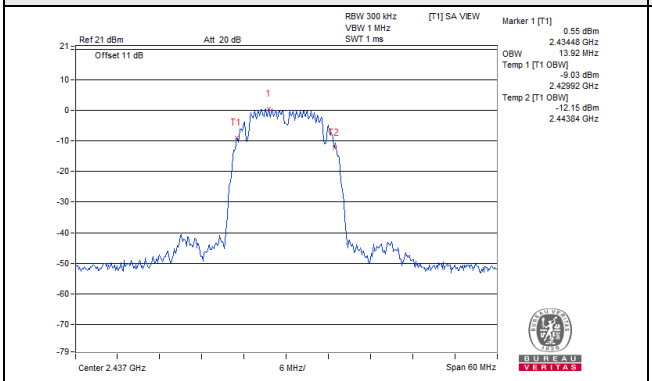
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	17.40	Pass
6	2437	17.64	Pass
11	2462	17.16	Pass

802.11n (HT20)

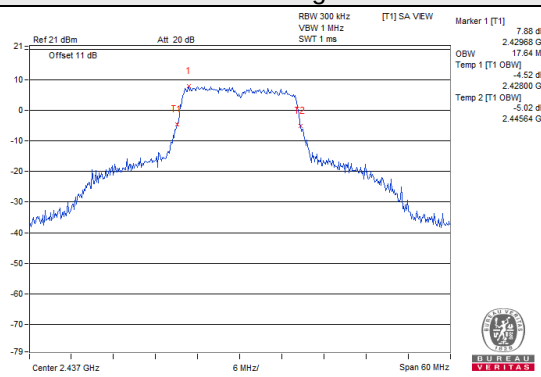
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	18.00	Pass
6	2437	18.00	Pass
11	2462	17.88	Pass

Spectrum Plot of Worst Value

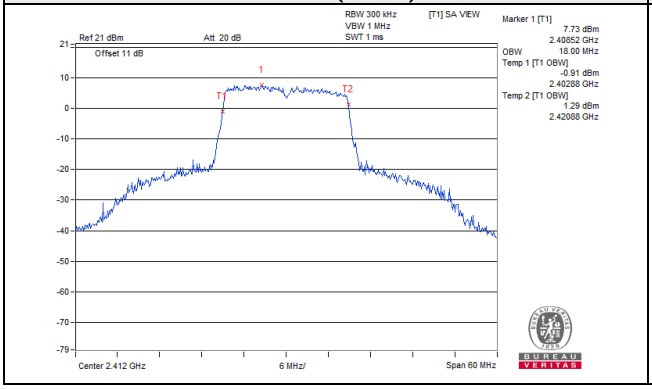
802.11b



802.11g



802.11n (HT20)



Mode B

802.11b

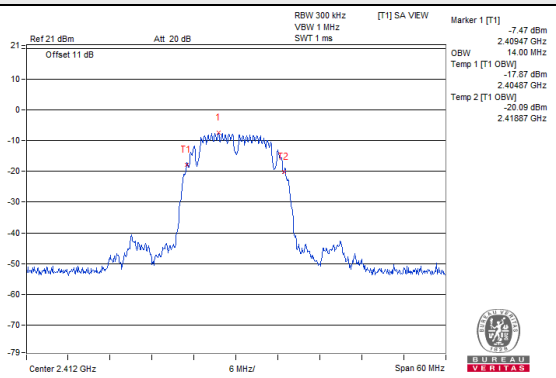
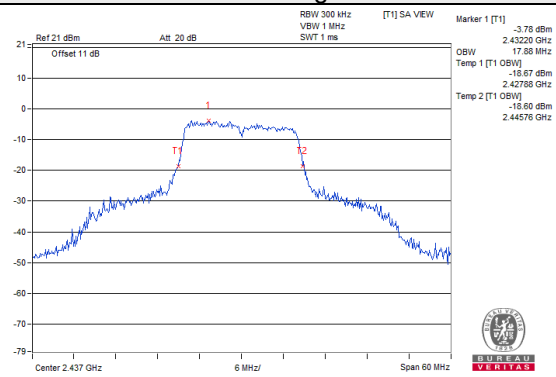
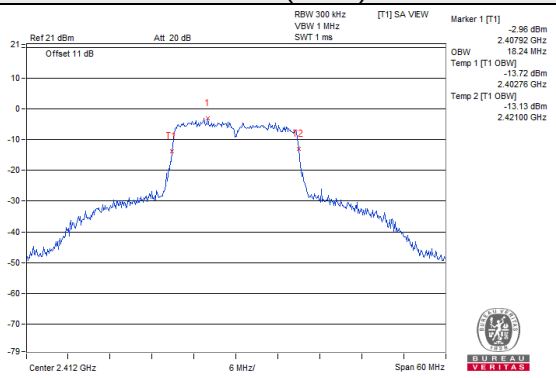
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	14.00	Pass
6	2437	13.92	Pass
11	2462	13.92	Pass

802.11g

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	17.64	Pass
6	2437	17.88	Pass
11	2462	17.52	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	18.24	Pass
6	2437	18.24	Pass
11	2462	18.24	Pass

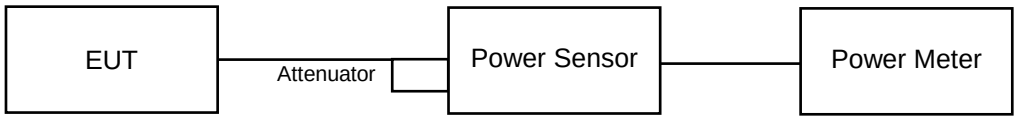
Spectrum Plot of Worst Value	
802.11b	802.11g
	
802.11n (HT20)	
	

4.5 Conducted Output Power Measurement

4.5.1 Limits of Conducted Output Power Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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.

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.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as item 4.3.6.

4.5.7 Test Results

Mode A

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	15.812	11.99	30	Pass
6	2437	11.092	10.45	30	Pass
11	2462	10.544	10.23	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	**155.955**	21.93	30	Pass
6	2437	155.597	21.92	30	Pass
11	2462	141.906	21.52	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	151.705	21.81	30	Pass
6	2437	155.597	21.92	30	Pass
11	2462	140.929	21.49	30	Pass

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	15.812	11.99	30	Pass
6	2437	11.092	10.45	30	Pass
11	2462	10.544	10.23	30	Pass

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	42.954	16.33	30	Pass
6	2437	44.771	16.51	30	Pass
11	2462	31.769	15.02	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	39.084	15.92	30	Pass
6	2437	40.832	16.11	30	Pass
11	2462	31.915	15.04	30	Pass

Mode B

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	3.855	5.86	30	Pass
6	2437	2.851	4.55	30	Pass
11	2462	2.606	4.16	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	11.858	10.74	30	Pass
6	2437	11.376	10.56	30	Pass
11	2462	11.194	10.49	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	11.83	10.73	30	Pass
6	2437	12.303	10.90	30	Pass
11	2462	**12.417**	10.94	30	Pass

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	2.056	3.13	30	Pass
6	2437	1.493	1.74	30	Pass
11	2462	1.352	1.31	30	Pass

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	3.614	5.58	30	Pass
6	2437	3.581	5.54	30	Pass
11	2462	3.097	4.91	30	Pass

802.11n (HT20)

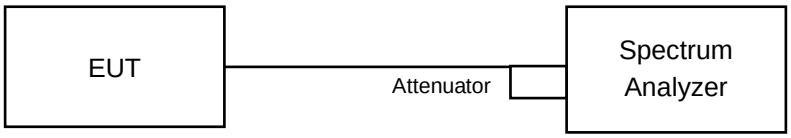
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	3.373	5.28	30	Pass
6	2437	3.75	5.74	30	Pass
11	2462	3.864	5.87	30	Pass

4.6 Power Spectral Density Measurement

4.6.1 Limits of Power Spectral Density Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

For Peak power
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.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Same as item 4.3.6

4.6.7 Test Results

Mode A

802.11b

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-14.83	8	Pass
6	2437	-16.56	8	Pass
11	2462	-16.81	8	Pass

802.11g

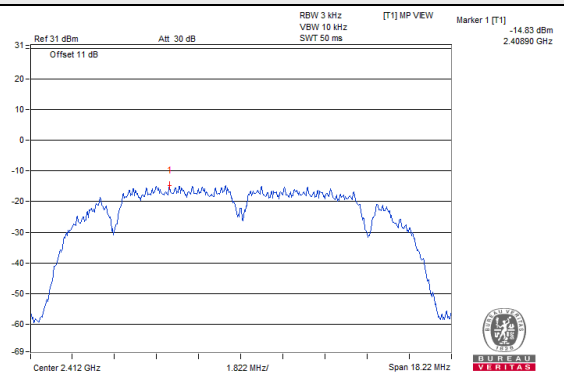
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-8.83	8	Pass
6	2437	-8.39	8	Pass
11	2462	-9.04	8	Pass

802.11n (HT20)

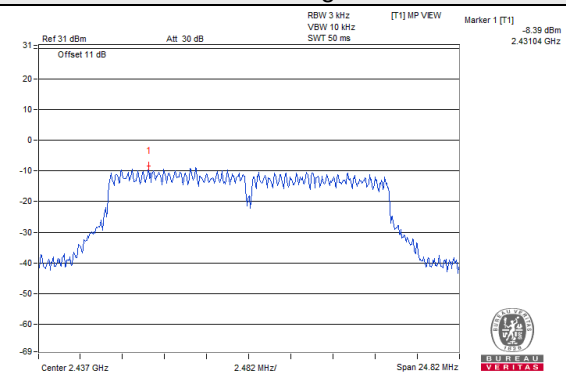
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-9.61	8	Pass
6	2437	-9.60	8	Pass
11	2462	-11.35	8	Pass

Spectrum Plot of Worst Value

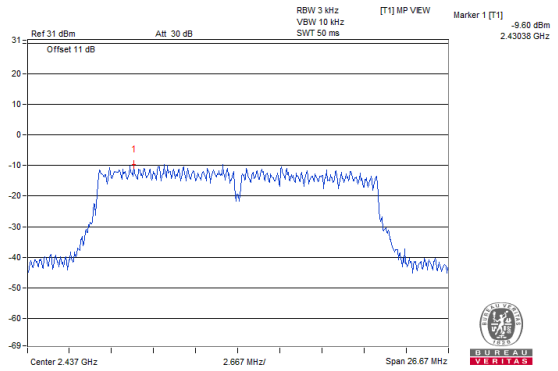
802.11b



802.11g



802.11n (HT20)



Mode B

802.11b

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-24.80	8	Pass
6	2437	-25.94	8	Pass
11	2462	-26.36	8	Pass

802.11g

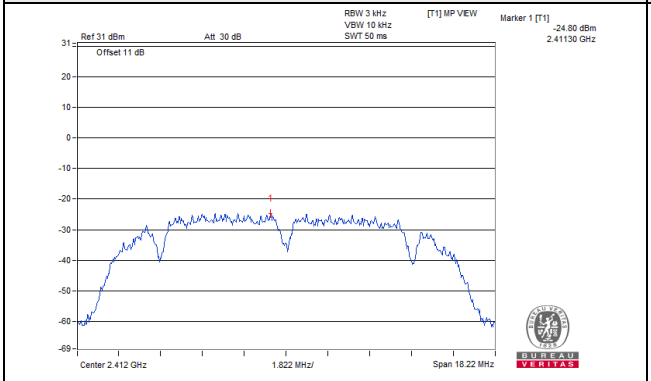
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-20.45	8	Pass
6	2437	-20.46	8	Pass
11	2462	-21.61	8	Pass

802.11n (HT20)

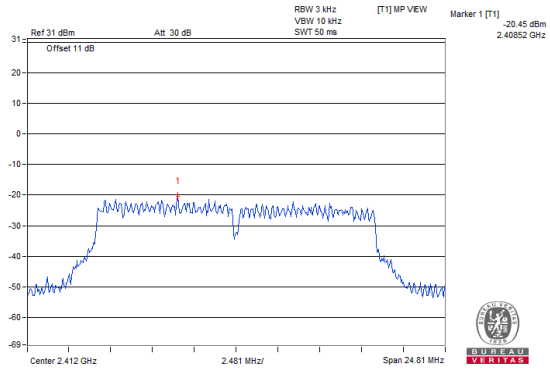
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-21.31	8	Pass
6	2437	-20.32	8	Pass
11	2462	-20.75	8	Pass

Spectrum Plot of Worst Value

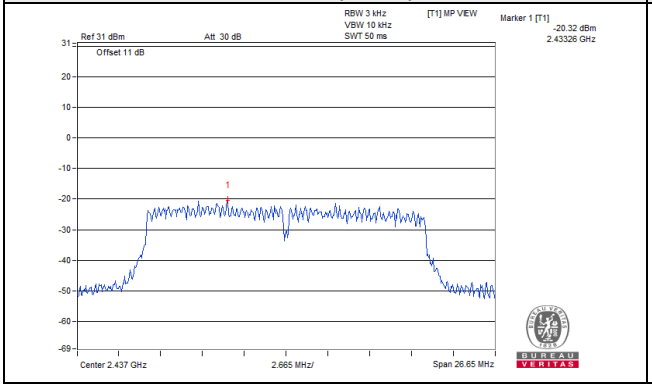
802.11b



802.11g



802.11n (HT20)

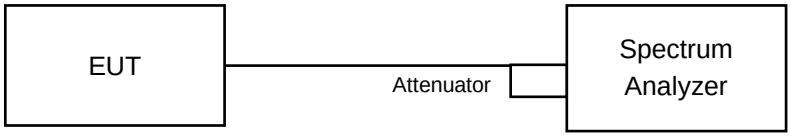


4.7 Conducted Out of Band Emission Measurement

4.7.1 Limits of Conducted Out of Band Emission Measurement

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

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

Same as item 4.3.6

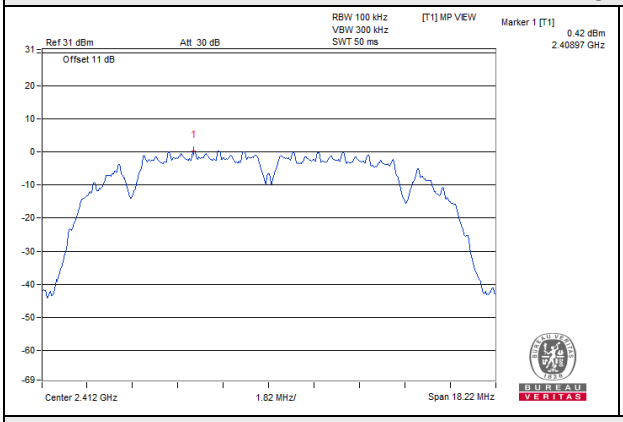
4.7.7 Test Results

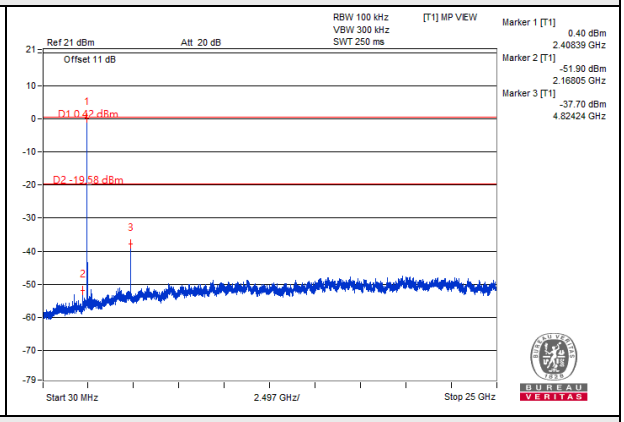
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

Mode A

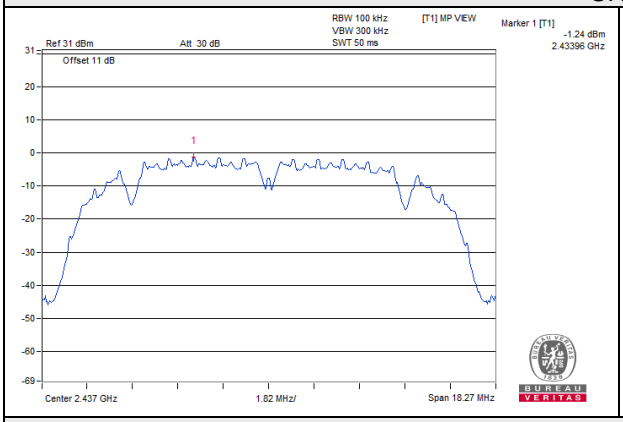
802.11b

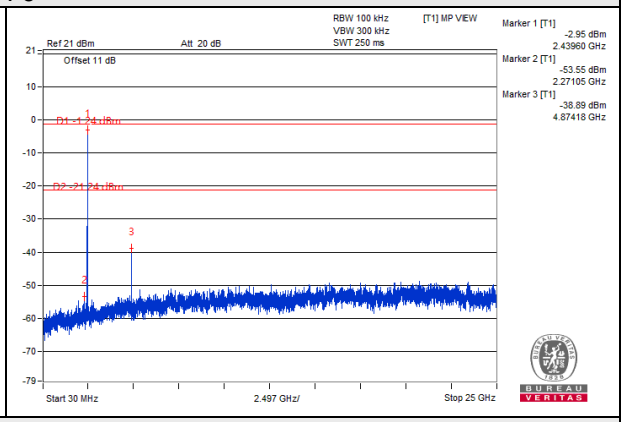
CH 1



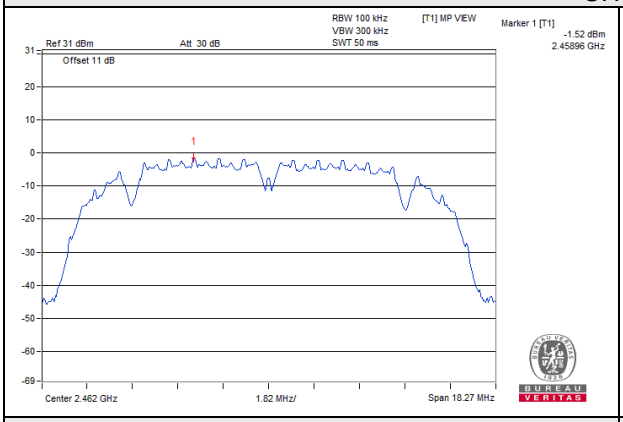


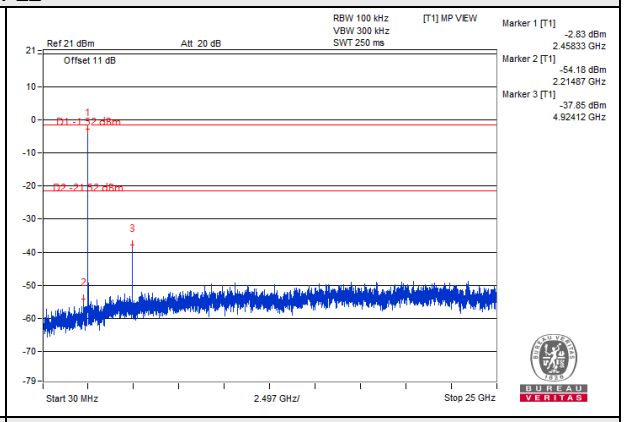
CH 6



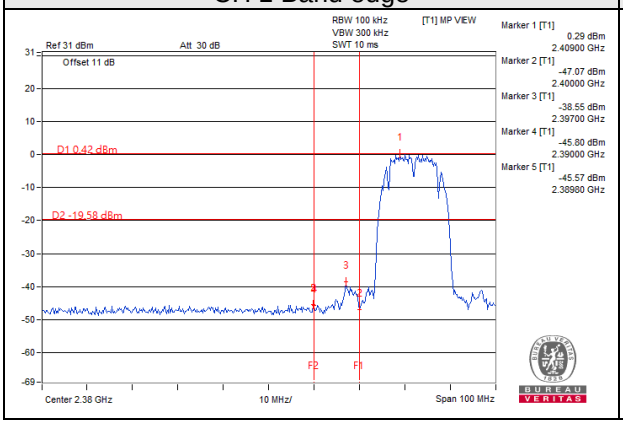


CH 11

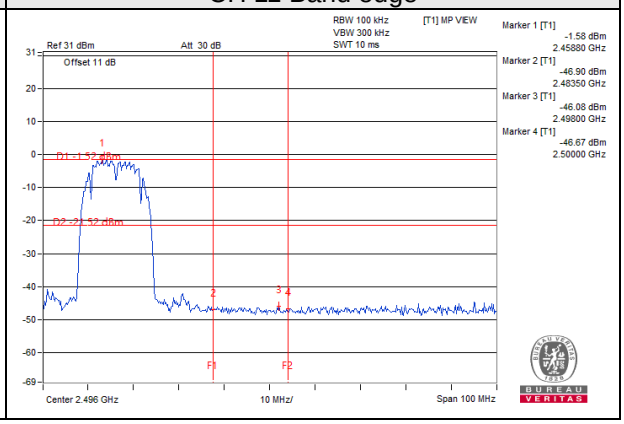




CH 1 Band edge

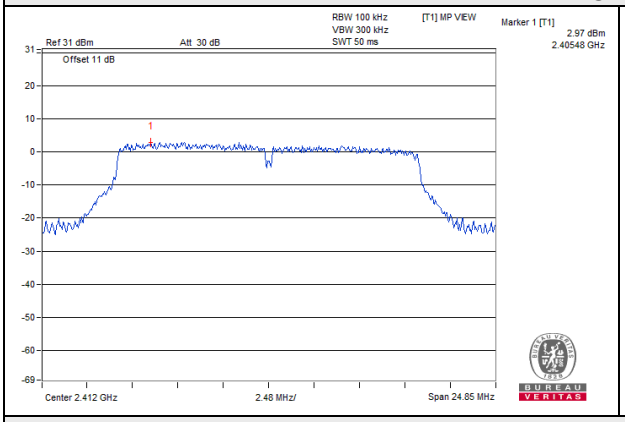


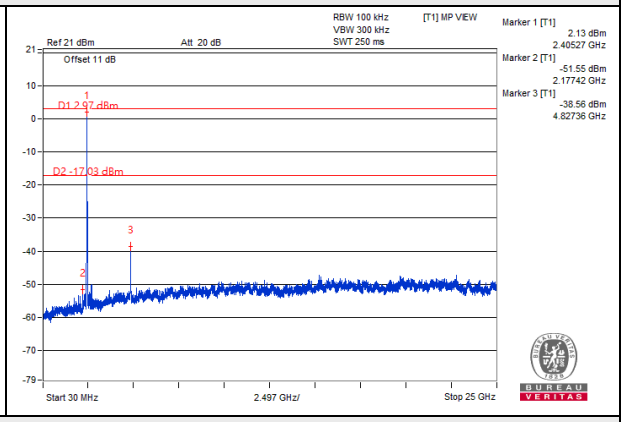
CH 11 Band edge



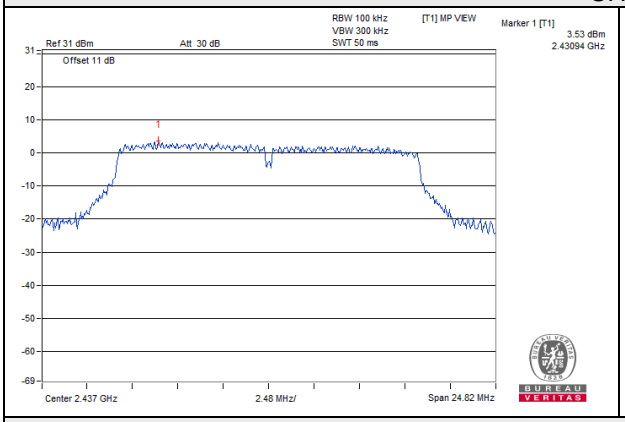
802.11g

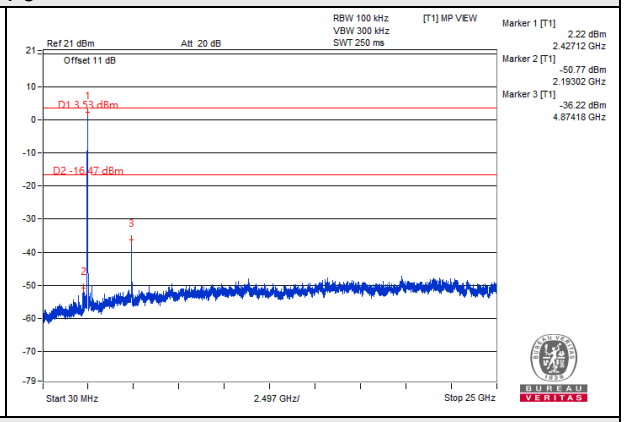
CH 1



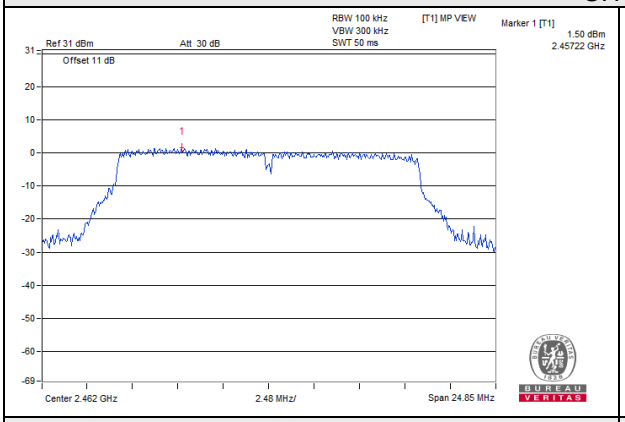


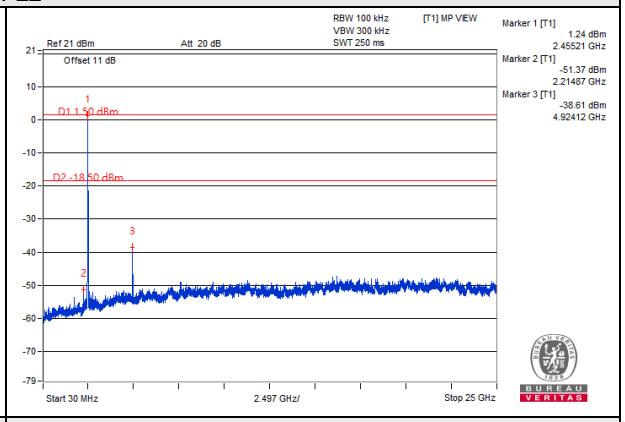
CH 6



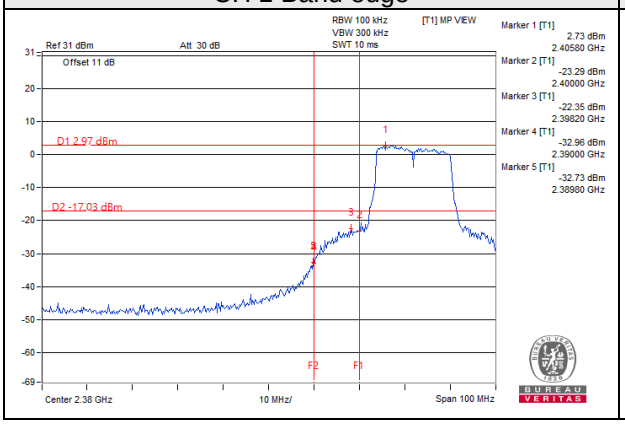


CH 11

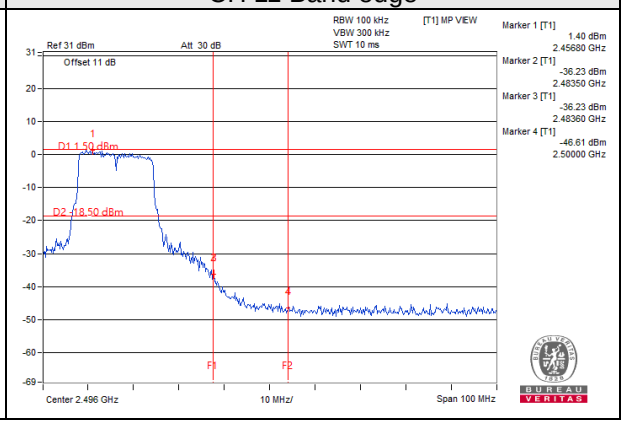




CH 1 Band edge

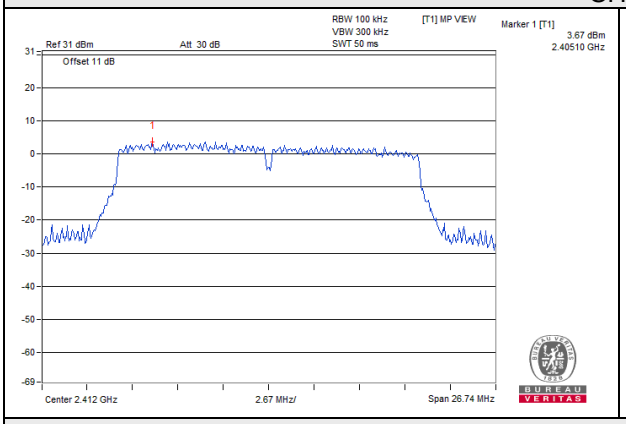


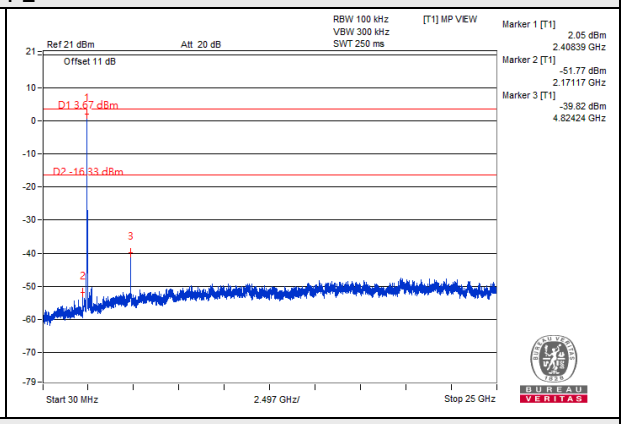
CH 11 Band edge



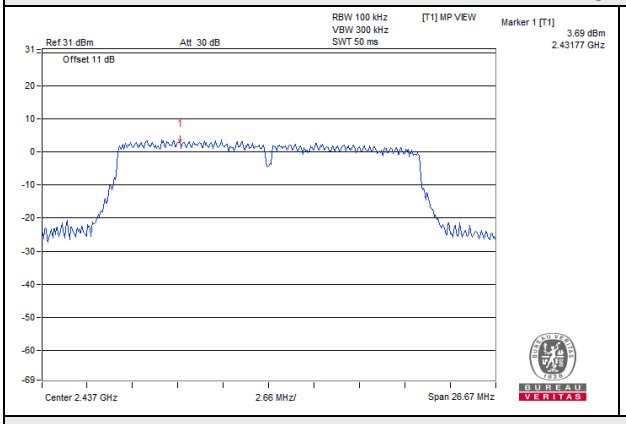
802.11n (HT20)

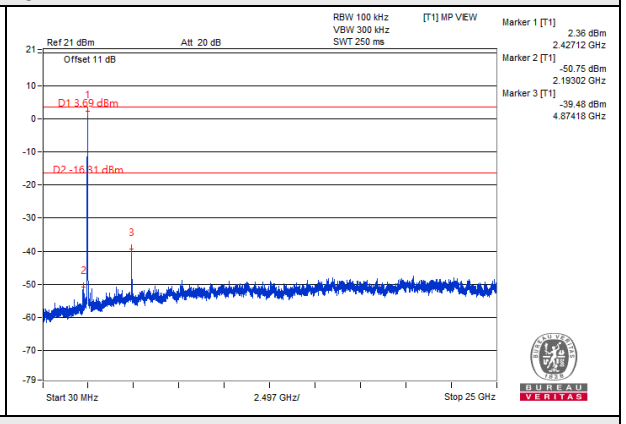
CH 1



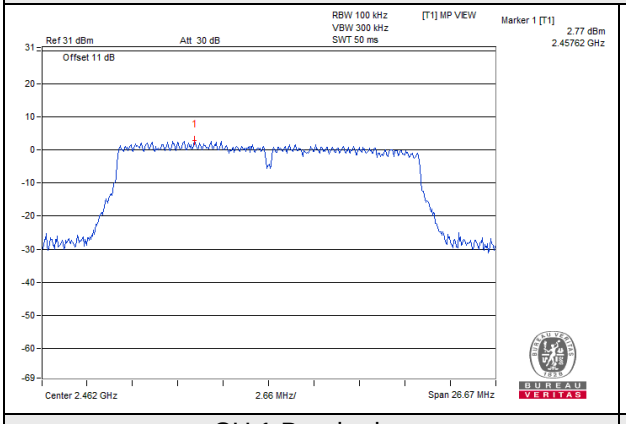


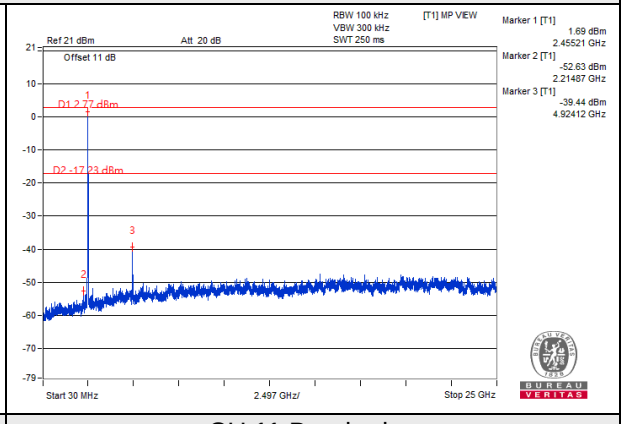
CH 6



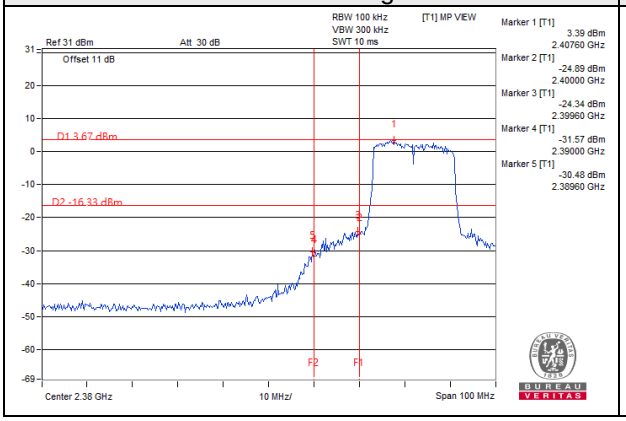


CH 11

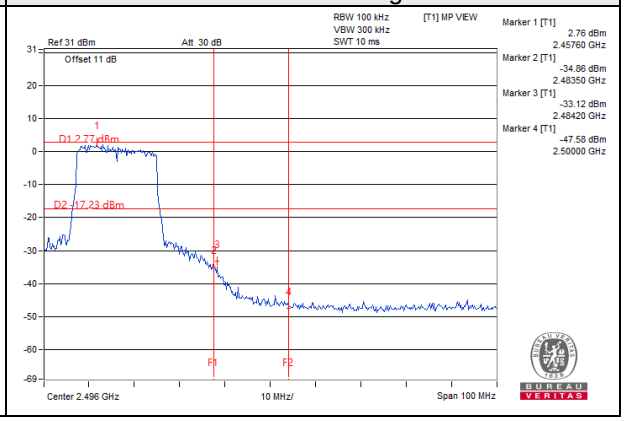




CH 1 Band edge



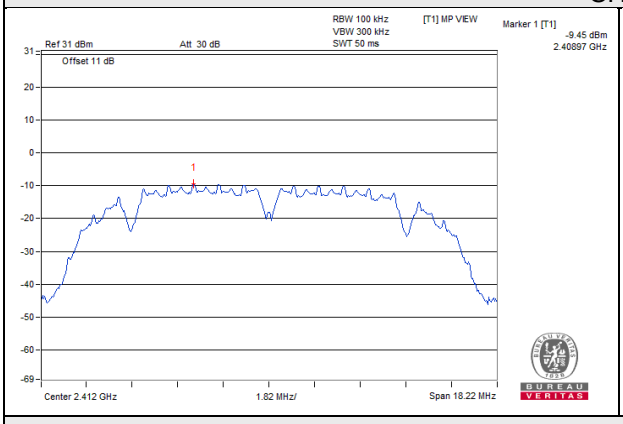
CH 11 Band edge

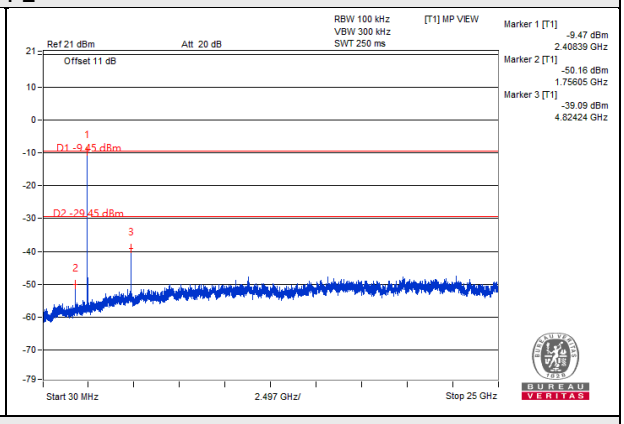


Mode B

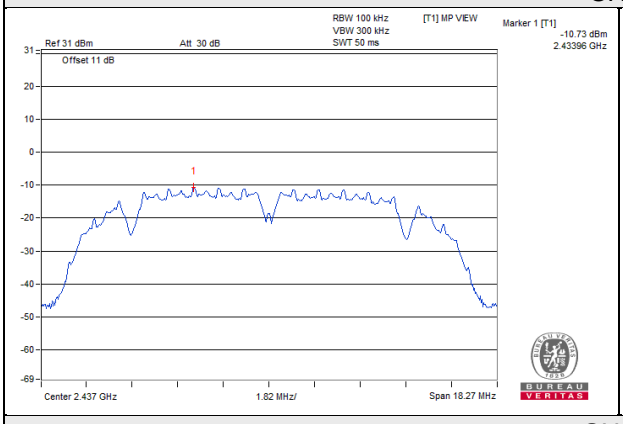
802.11b

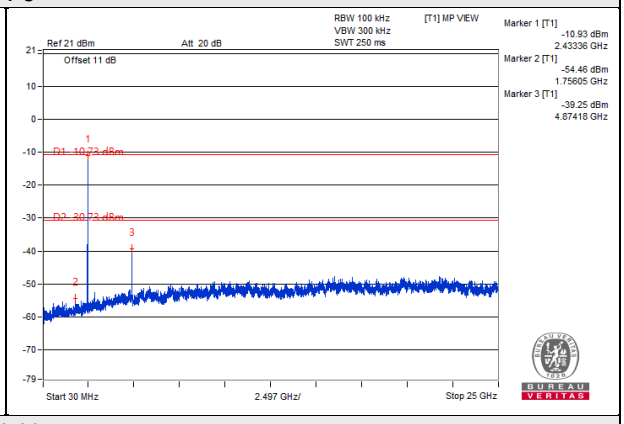
CH 1



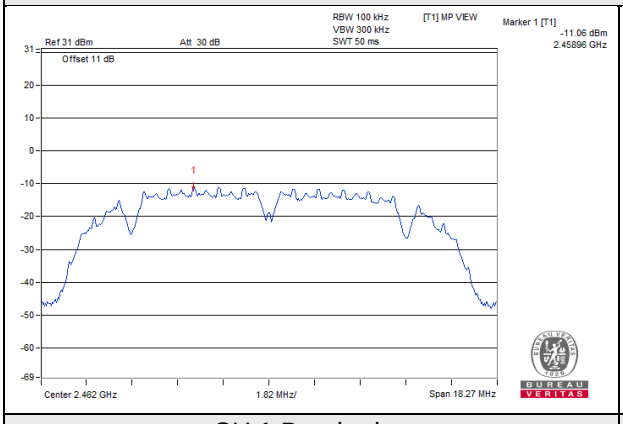


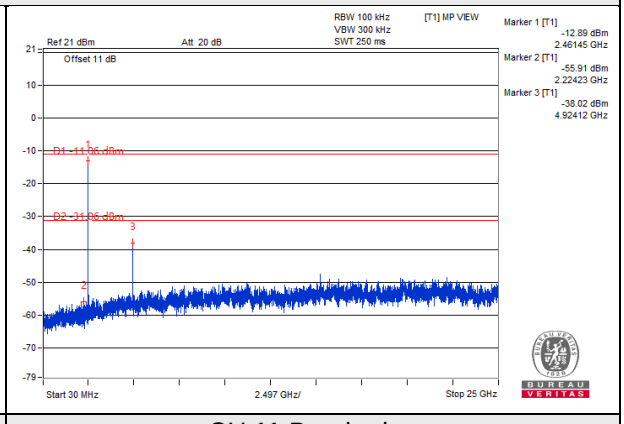
CH 6



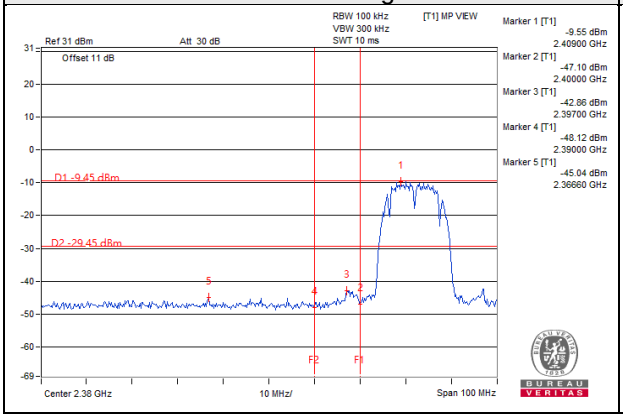


CH 11

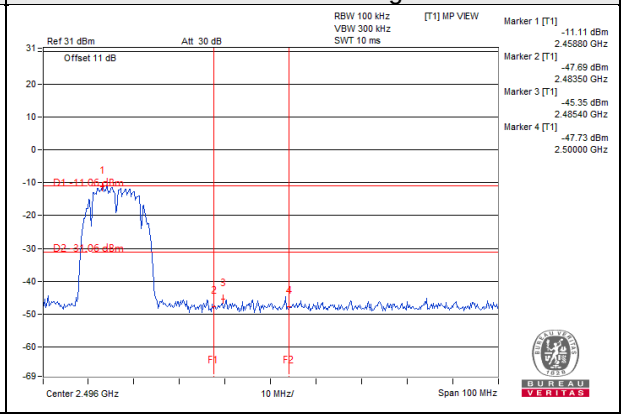




CH 1 Band edge

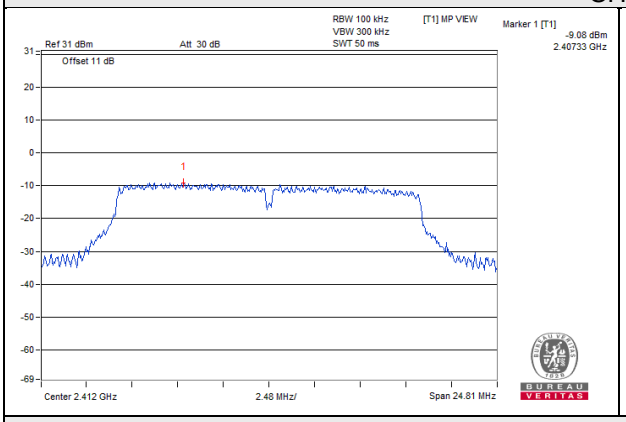


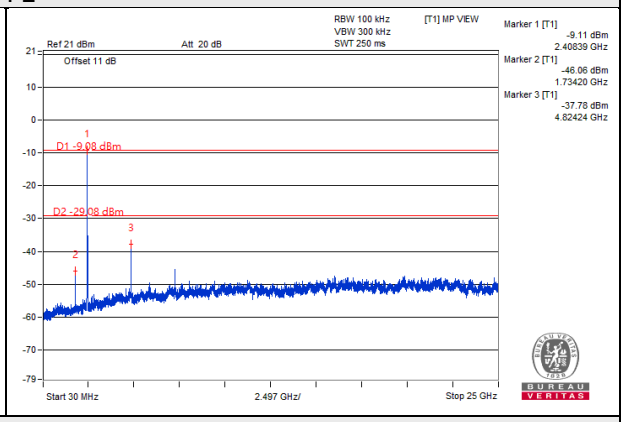
CH 11 Band edge



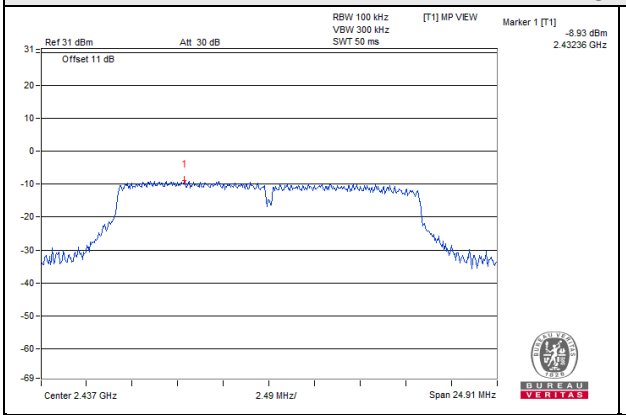
802.11g

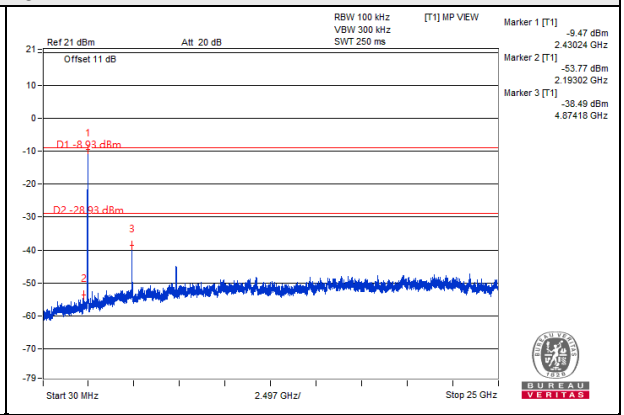
CH 1



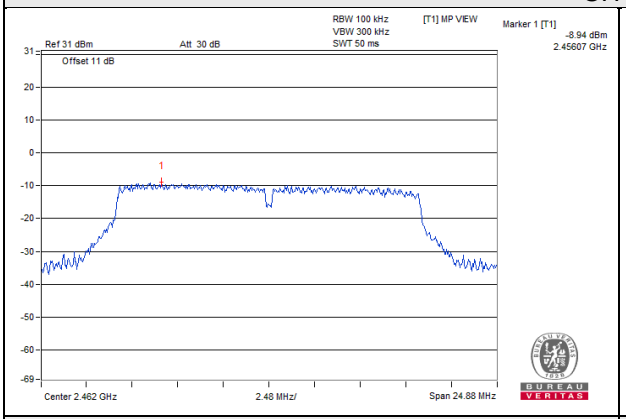


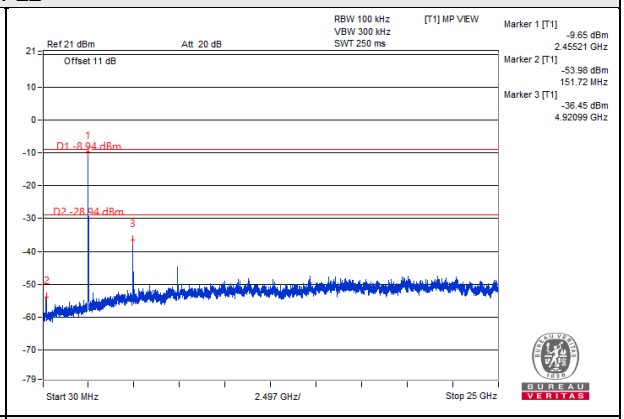
CH 6



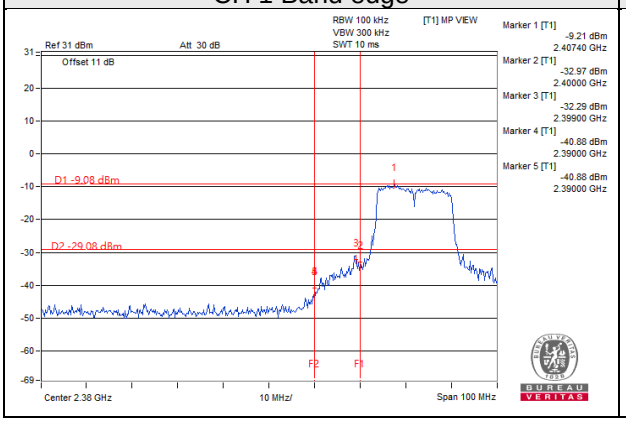


CH 11

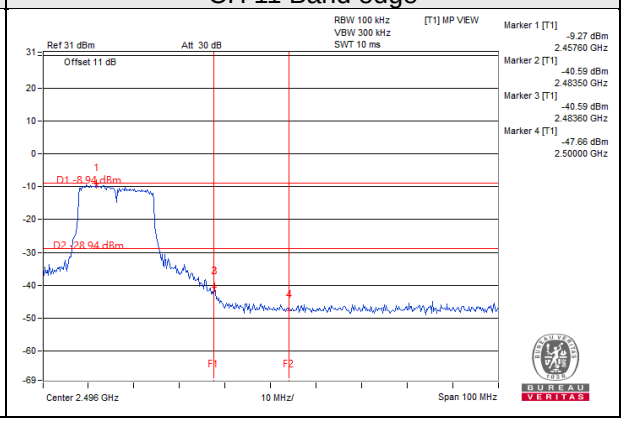




CH 1 Band edge

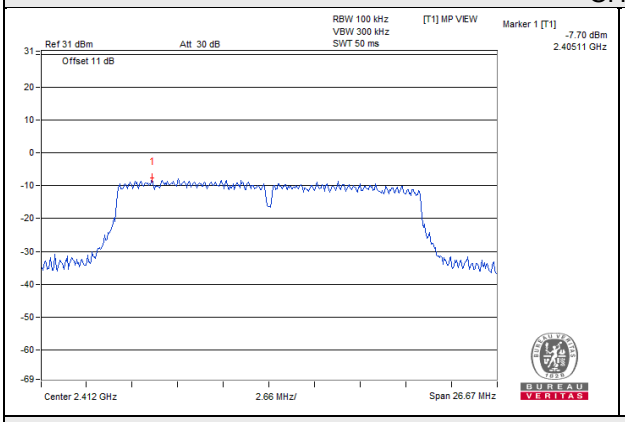


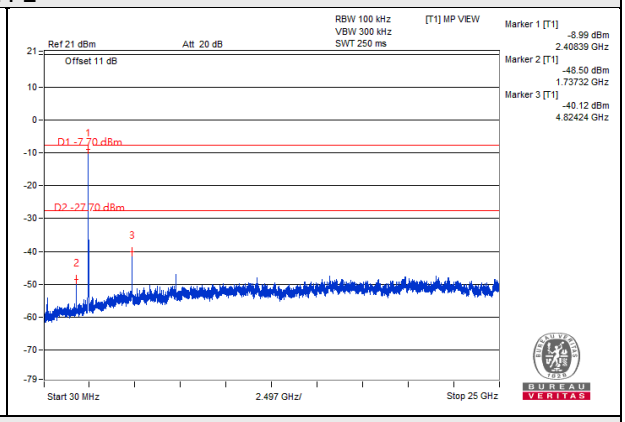
CH 11 Band edge



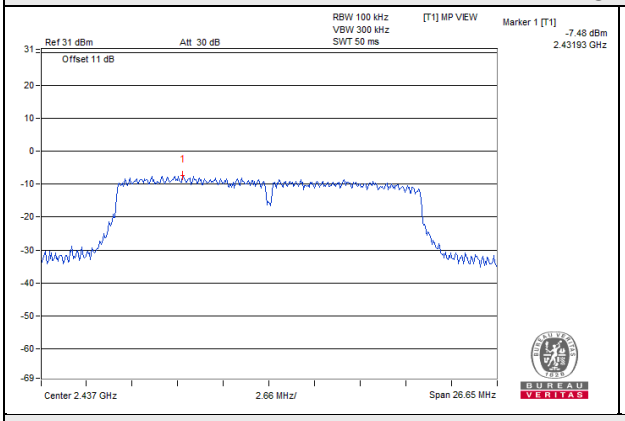
802.11n (HT20)

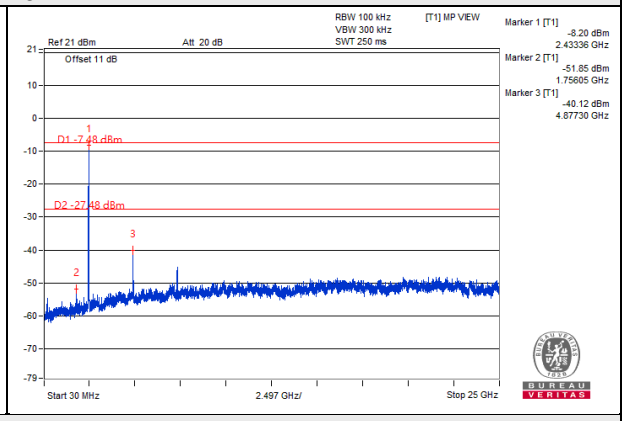
CH 1



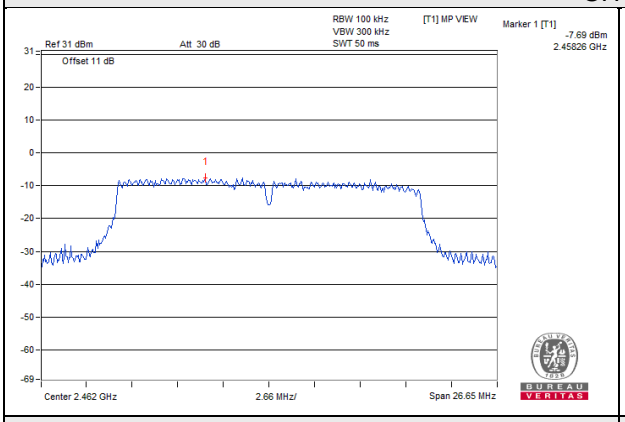


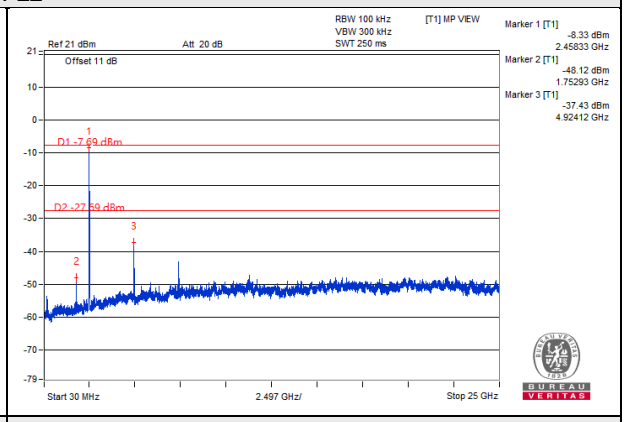
CH 6



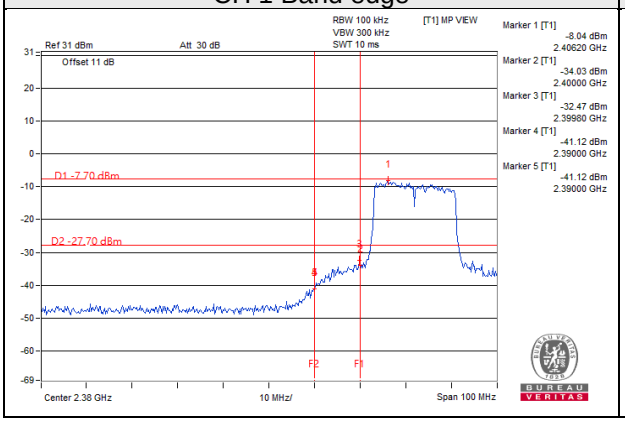


CH 11

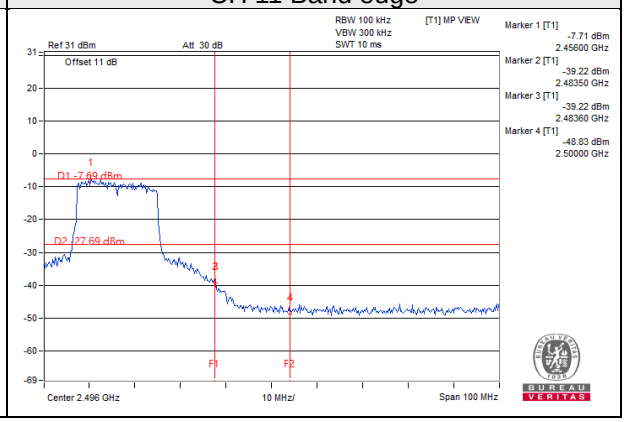




CH 1 Band edge



CH 11 Band edge



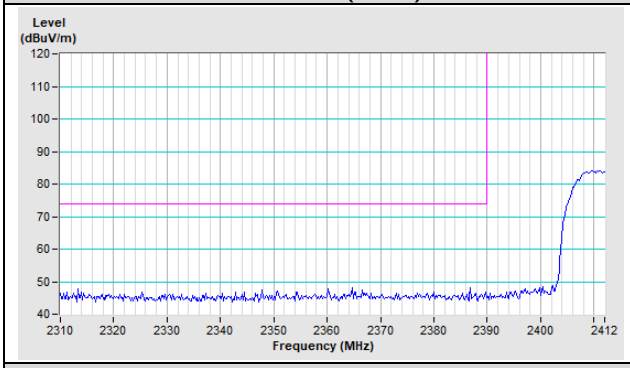
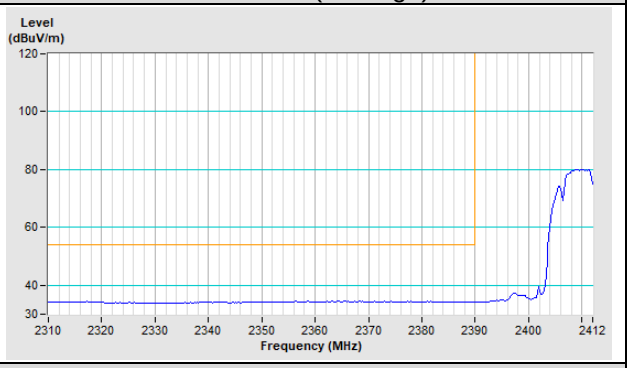
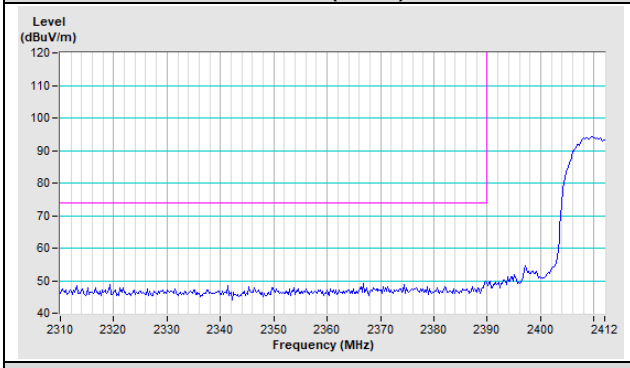
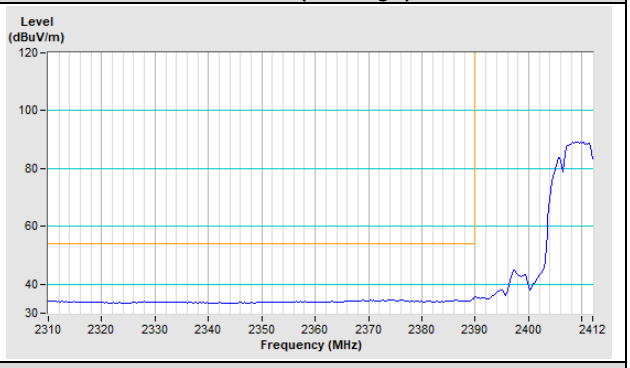
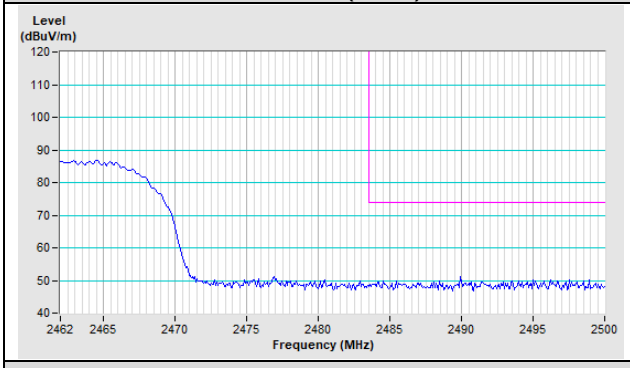
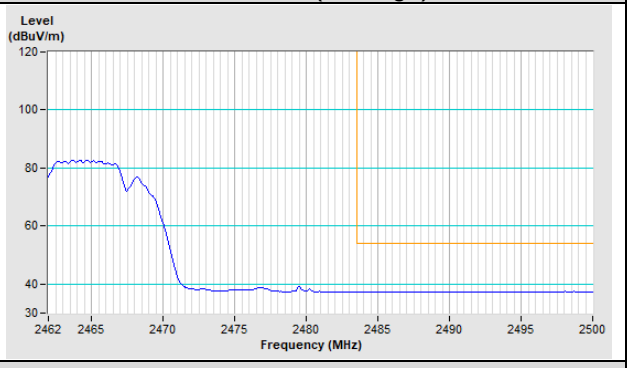
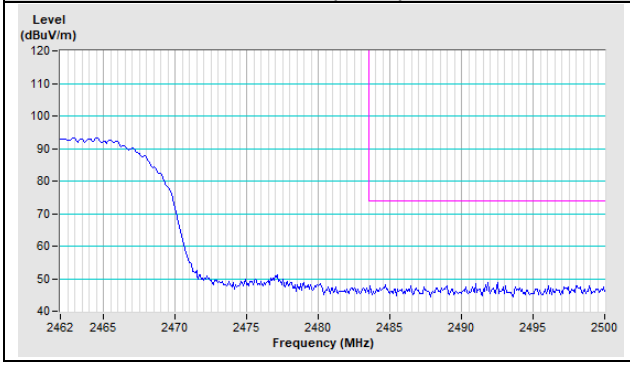
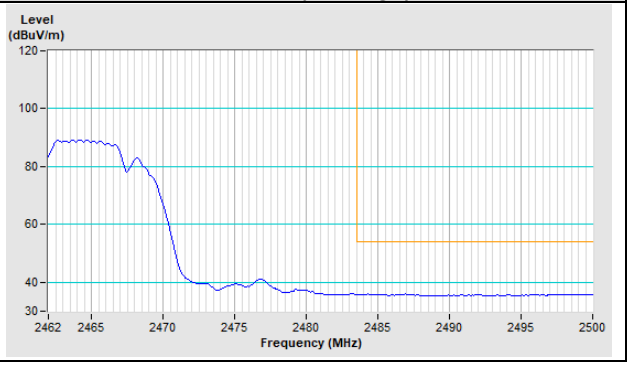
5 Pictures of Test Arrangements

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

Annex A- Band Edge Measurement

Mode A

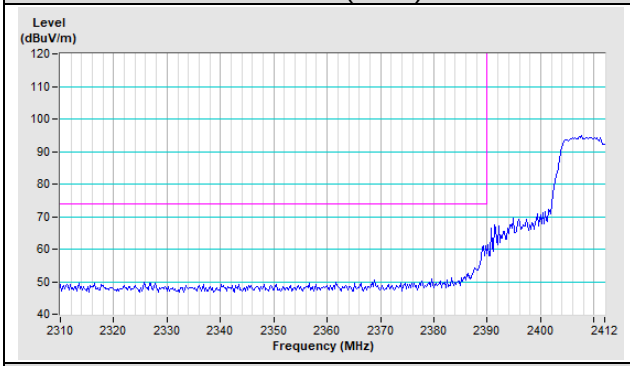
802.11b

Channel 1	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 11	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

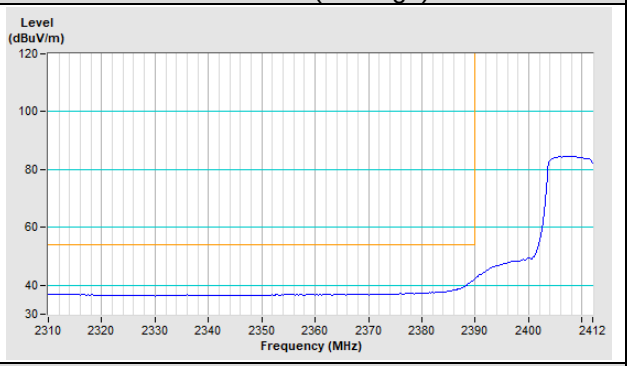
802.11g

Channel 1

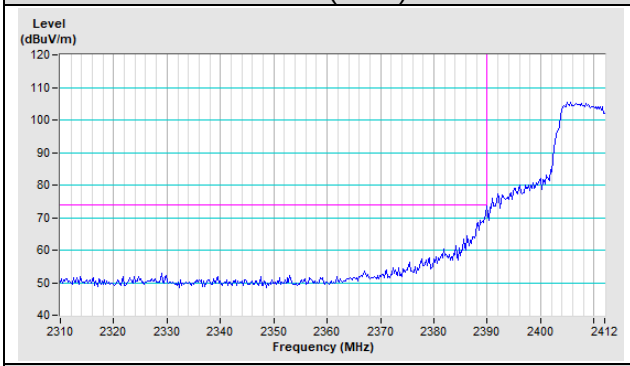
Horizontal (Peak)



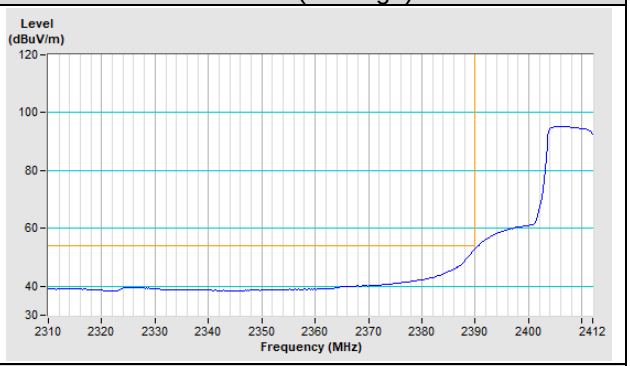
Horizontal (Average)



Vertical (Peak)

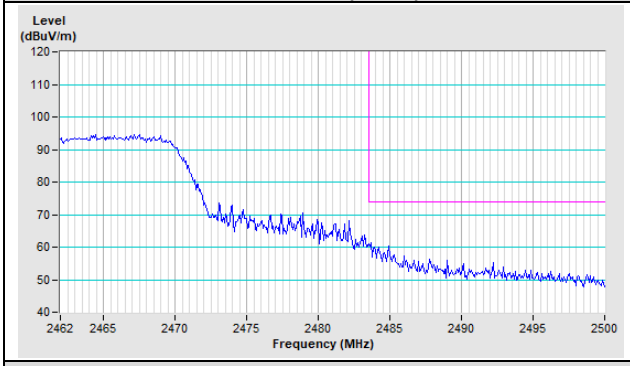


Vertical (Average)

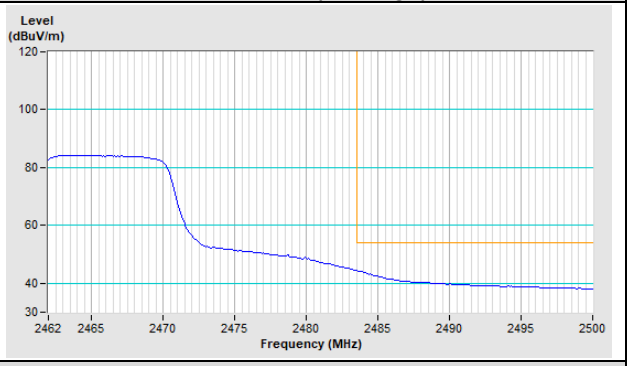


Channel 11

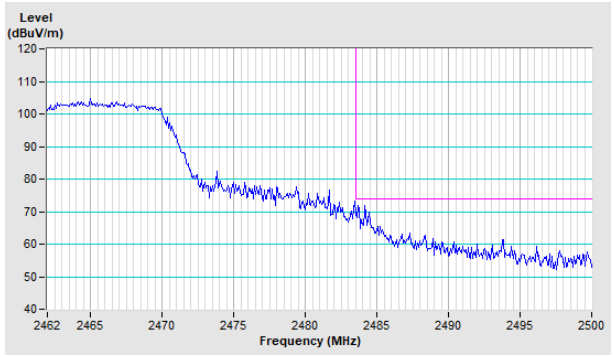
Horizontal (Peak)



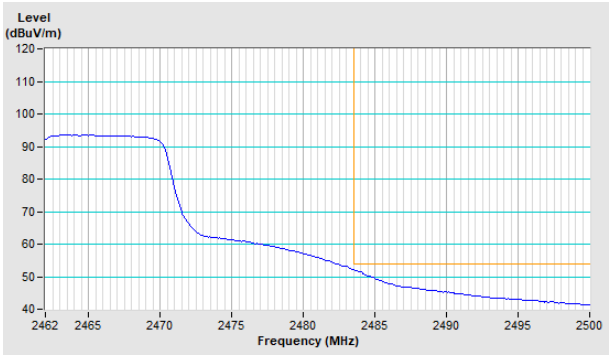
Horizontal (Average)



Vertical (Peak)



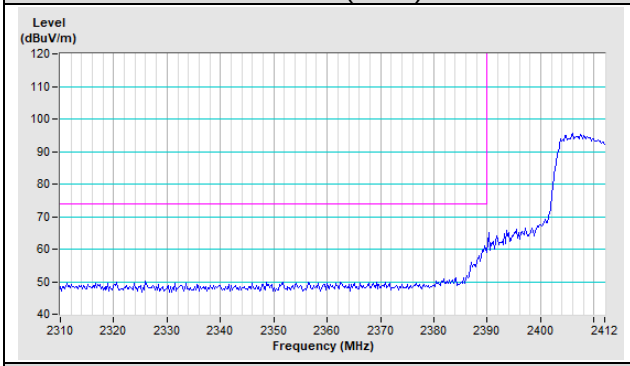
Vertical (Average)



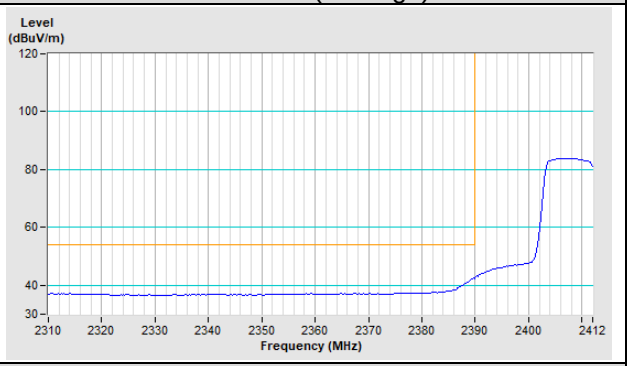
802.11n (HT20)

Channel 1

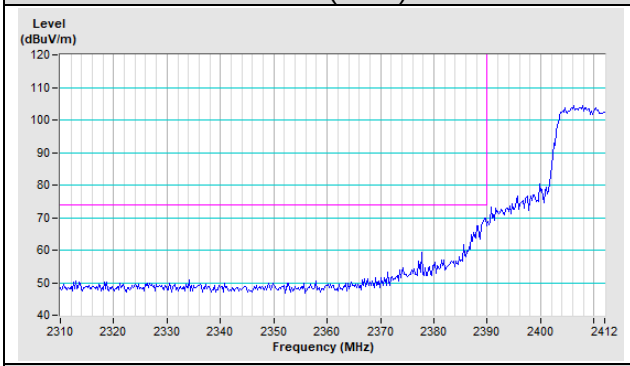
Horizontal (Peak)



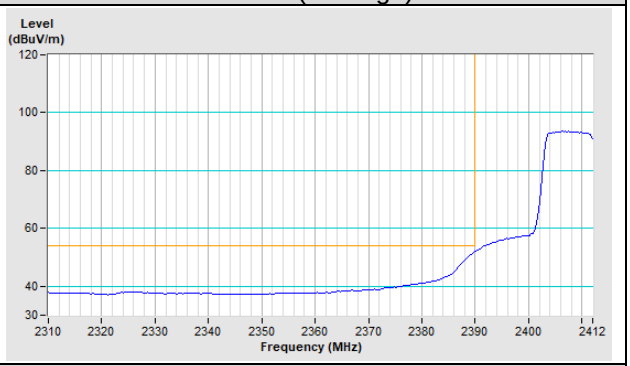
Horizontal (Average)



Vertical (Peak)

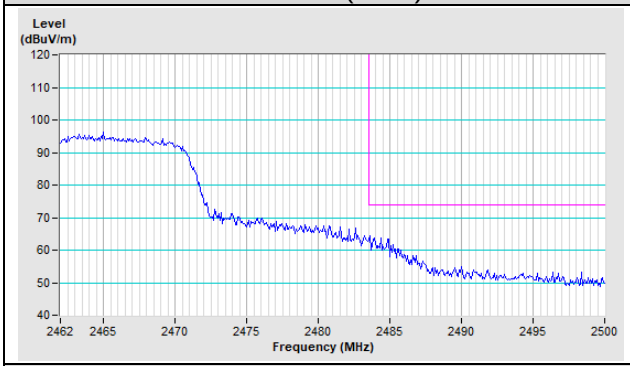


Vertical (Average)

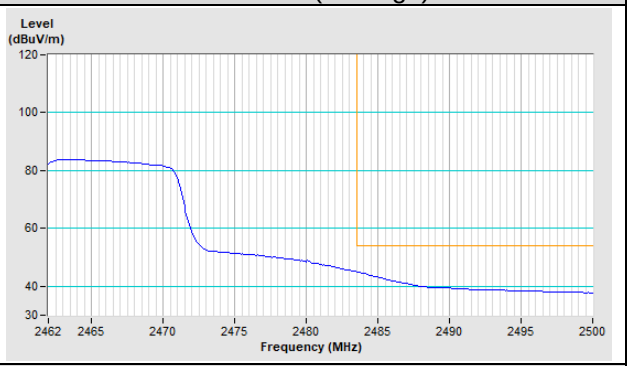


Channel 11

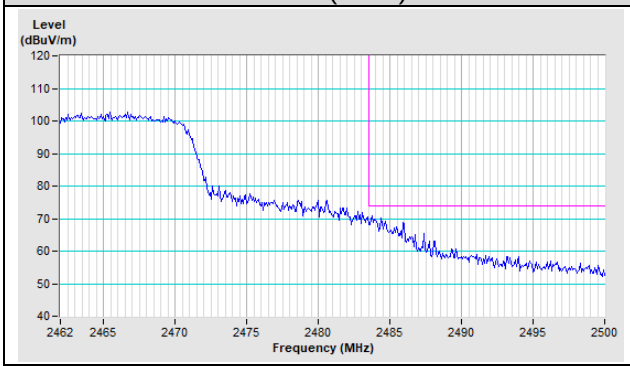
Horizontal (Peak)



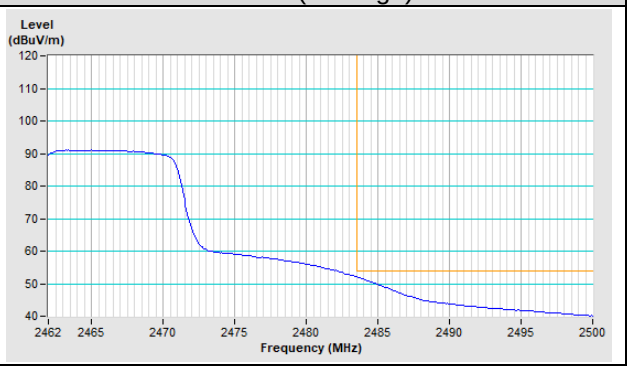
Horizontal (Average)



Vertical (Peak)



Vertical (Average)

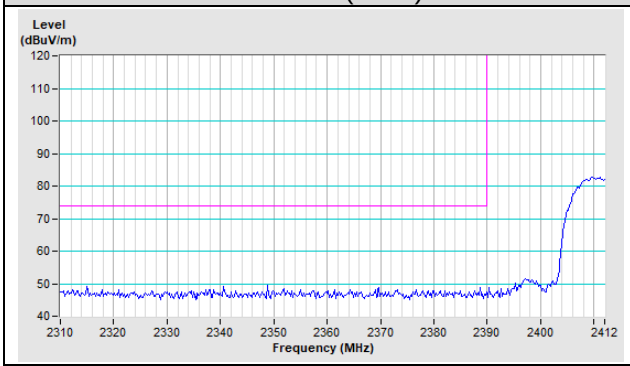


Mode B

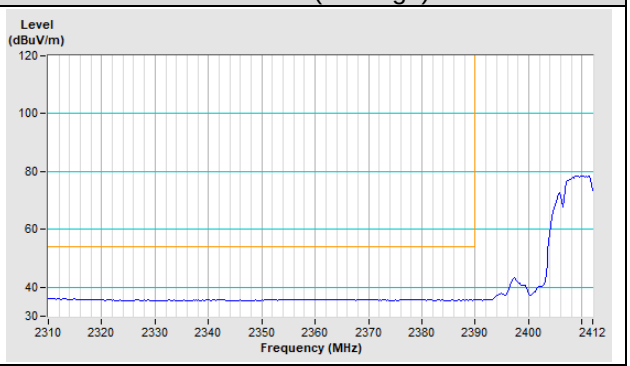
802.11b

Channel 1

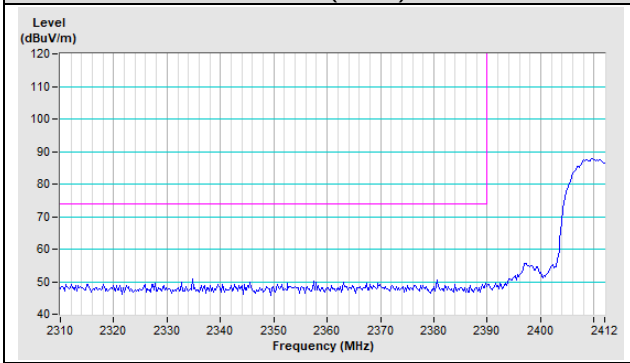
Horizontal (Peak)



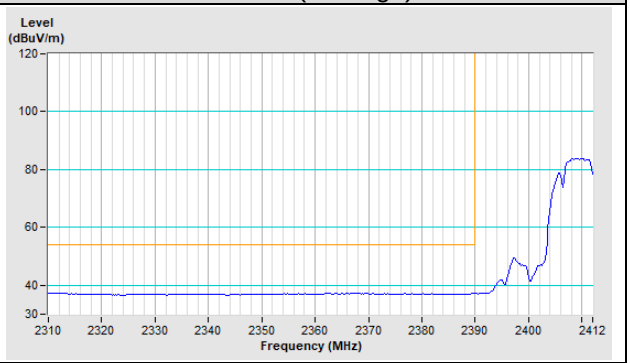
Horizontal (Average)



Vertical (Peak)

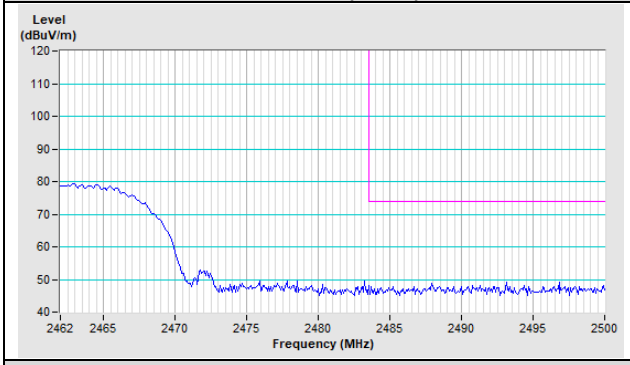


Vertical (Average)

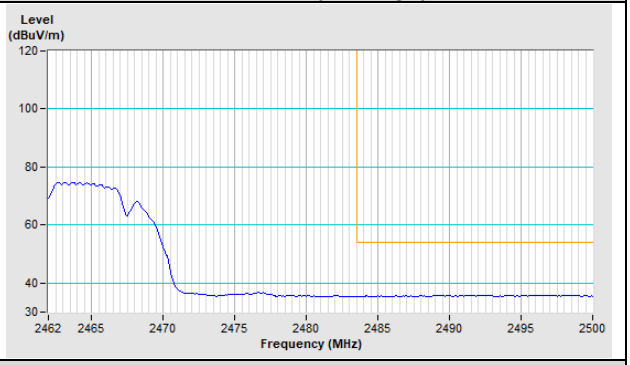


Channel 11

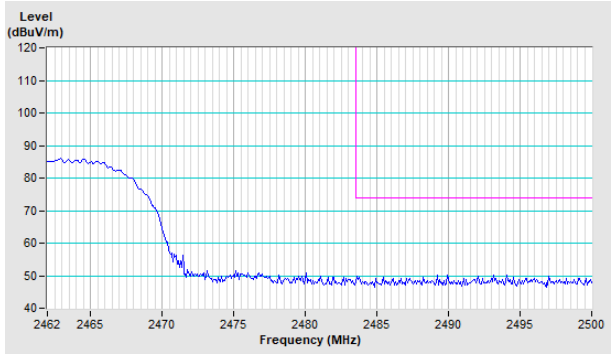
Horizontal (Peak)



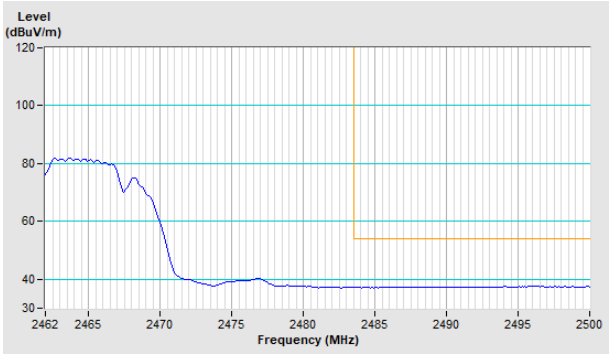
Horizontal (Average)



Vertical (Peak)



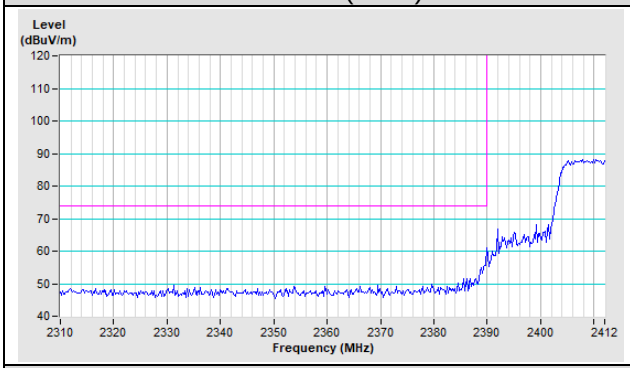
Vertical (Average)



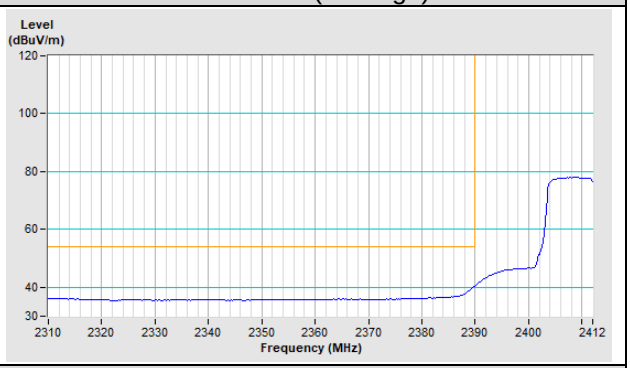
802.11g

Channel 1

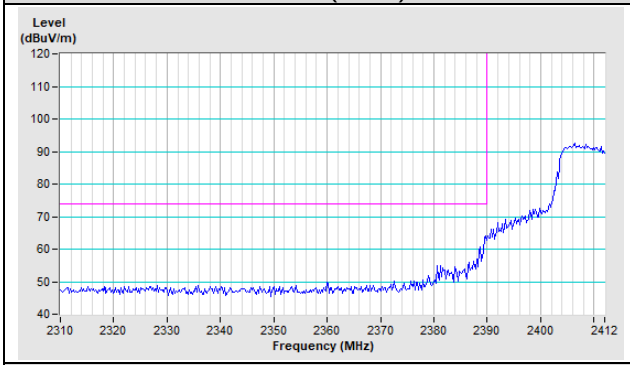
Horizontal (Peak)



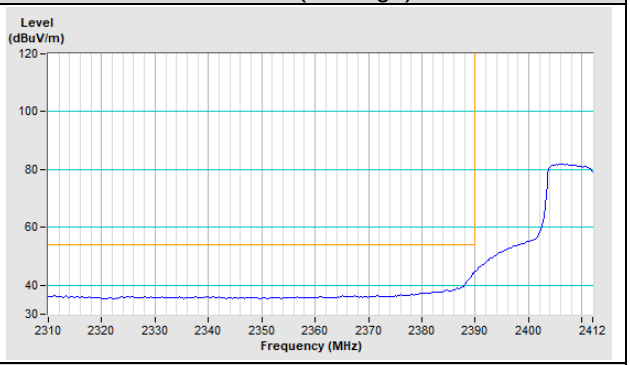
Horizontal (Average)



Vertical (Peak)

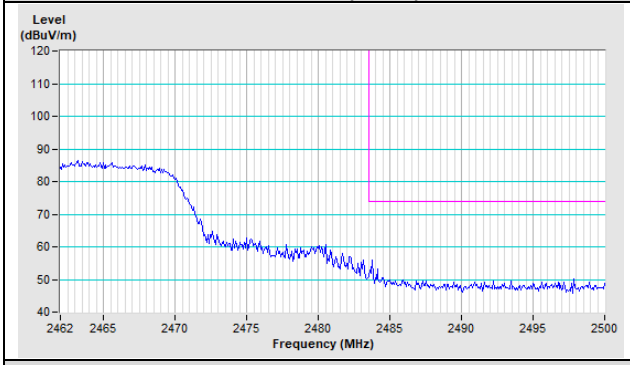


Vertical (Average)

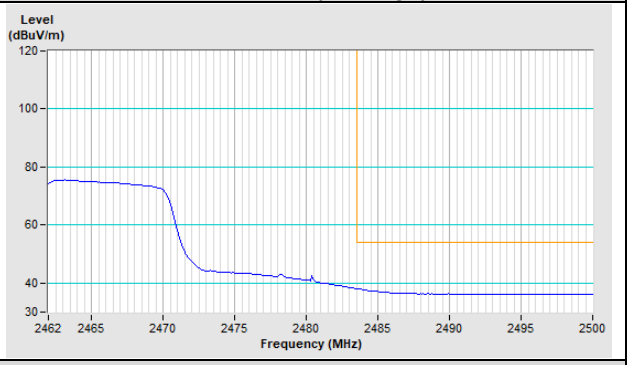


Channel 11

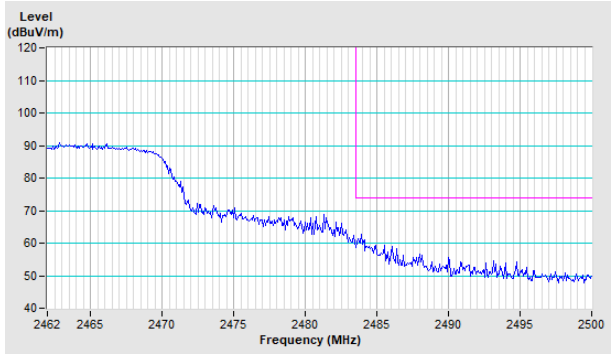
Horizontal (Peak)



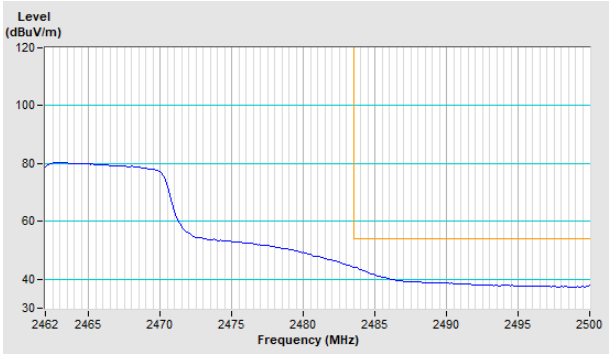
Horizontal (Average)



Vertical (Peak)



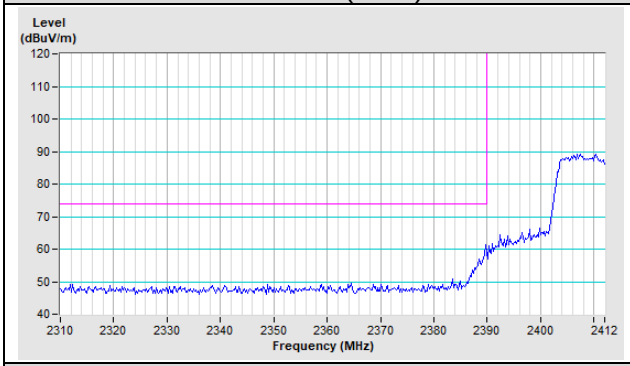
Vertical (Average)



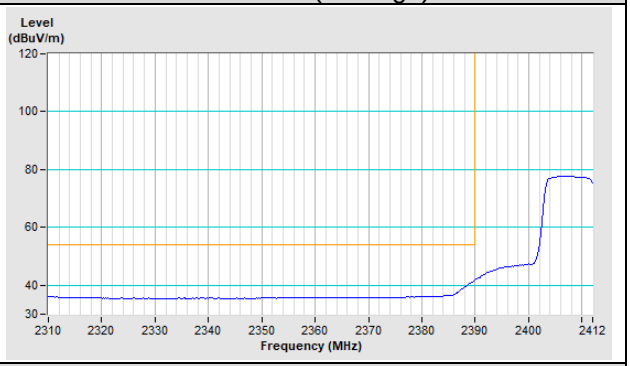
802.11n (HT20)

Channel 1

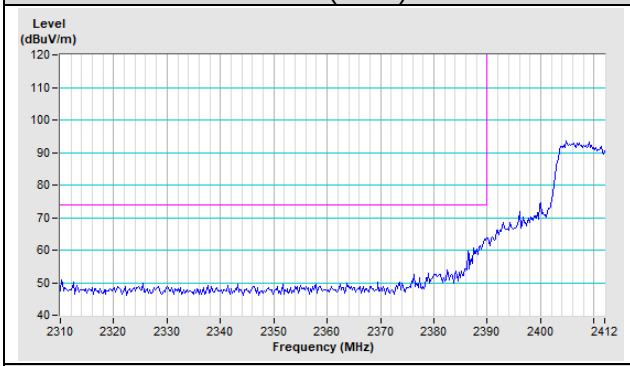
Horizontal (Peak)



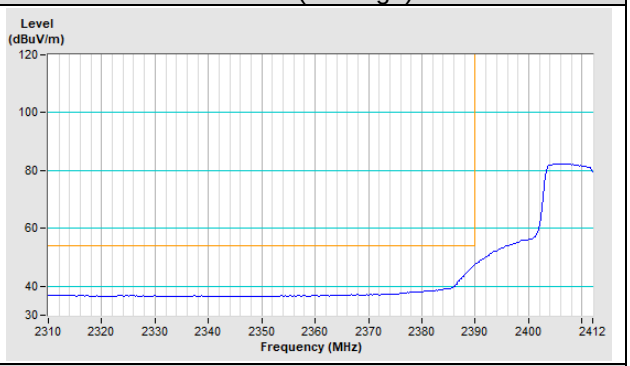
Horizontal (Average)



Vertical (Peak)

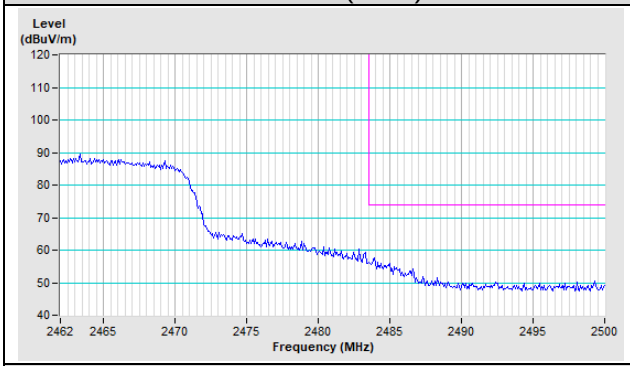


Vertical (Average)

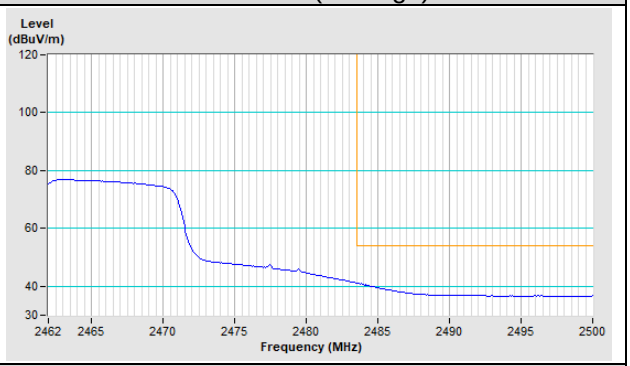


Channel 11

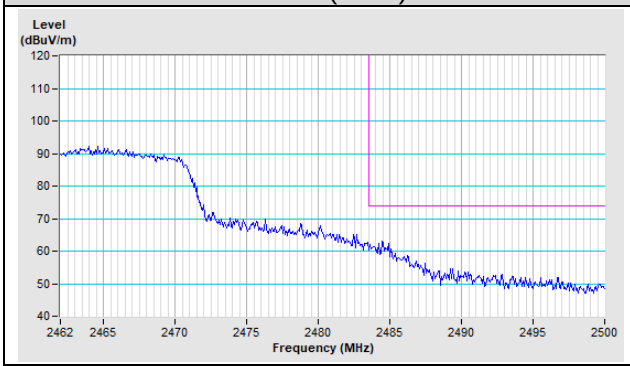
Horizontal (Peak)



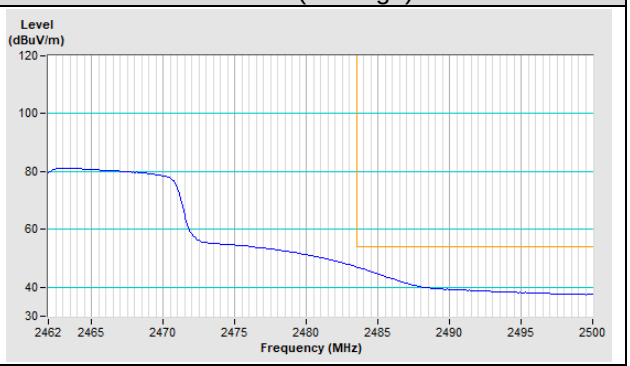
Horizontal (Average)



Vertical (Peak)



Vertical (Average)



Appendix – Information on the Testing Laboratories

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

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

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

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

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