TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart C (Section 15.247)**
Report No.:	RFBCUN-WTW-P23080475
FCC ID:	H8NNCM2000B2
Product:	5G Home Router
Brand:	ASKEY
Model No.:	NCM2000B2-D299
Received Date:	2023/8/23
Test Date:	2023/8/23 ~ 2023/9/8
Issued Date:	2023/10/25
Applicant:	ASKEY COMPUTER CORP.
Address:	10F, No. 119, Jiankang Rd., Zhonghe Dist., New Taipei City, Taiwan
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., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Approved by: Jeremy Lin , **Date:** **2023/10/25**

Jeremy Lin / Project Engineer

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Prepared by : Pettie Chen / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCUN-WTW-P23080475	Original release.	2023/10/25

1 Certificate

Product:	5G Home Router
Brand:	ASKEY
Test Model:	NCM2000B2-D299
Sample Status:	Engineering sample
Applicant:	ASKEY COMPUTER CORP.
Test Date:	2023/8/23 ~ 2023/9/8
Standard:	47 CFR FCC Part 15, Subpart C (Section 15.247)
Measurement procedure:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02 KDB 662911 D01 Multiple Transmitter Output v02r01

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.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -13.94 dB at 0.15000 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -5.1 dB at 47.46 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.3 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	Antenna connector is Ipex not a standard connector.

Note: 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	Specification	Expanded Uncertainty (k=2) (±)
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.95 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	5G Home Router
Brand	ASKEY
Test Model	NCM2000B2-D299
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	Up to 573.5Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 13 802.11n (HT40), VHT40, 802.11ax (HE40): 9
Output Power	CDD Mode: 894.966 mW (29.52 dBm) Beamforming Mode: 644.598 (28.09 dBm)

Note:

1. The EUT uses following accessories.

RJ45 Cable		
Brand	Model	Specification
TLE TUNG-LI	M20483	Signal Line: 1.5m

2. The EUT consumes power from the following adapter.

Adapter	
Brand	MASS POWER
Model	S024-1E120200VU-H
Input Power	100-240Vac~50/60Hz, 0.6A
Output Power	12.0Vdc, 2.0A
Power Line	1.5m cable without core attached on adapter

3. 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 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Frequency Range	Gain (dBi)	Antenna Type	Connector Type
11	2400 ~ 2483.5 MHz	5.6	PCB	Ipex
	5180 ~ 5240 MHz	5.1	PCB	Ipex
	5260 ~ 5320 MHz	5.6	PCB	Ipex
	5745 ~ 5825 MHz	4.3	PCB	Ipex
12	2400 ~ 2483.5 MHz	4.1	PCB	Ipex
	5180 ~ 5240 MHz	5.3	PCB	Ipex
	5260 ~ 5320 MHz	6	PCB	Ipex
	5745 ~ 5825 MHz	6.1	PCB	Ipex
1	703 ~ 960 MHz	3.2	FPC	Ipex
	1710 ~ 2690 MHz	4.0	FPC	Ipex
7	703 ~ 960 MHz	2.2	FPC	Ipex
	1710 ~ 2690 MHz	3.3	FPC	Ipex
0	3300 ~ 4200 MHz	6.5	PCB	Ipex
6	3300 ~ 4200 MHz	4.4	PCB	Ipex

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The EUT incorporates a MIMO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	2TX	2RX
802.11g	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
VHT20	2TX	2RX
VHT40	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX

Note:
1. All of modulation mode support beamforming function except 802.11b/g modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz) and VHT mode for 20 MHz (40 MHz) and 802.11ax mode for 20 MHz (40 MHz), therefore the manufacturer will control the power for 802.11n/VHT mode is same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report.
4. The EUT device modulation technique OFDMA does not support partial RUs (resource units) and channel puncturing/bandwidth reduction mechanisms.

3.3 Channel List

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20):

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

7 channels are provided for 802.11n (HT40), VHT40, 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
3	2422 MHz	7	2442 MHz
4	2427 MHz	8	2447 MHz
5	2432 MHz	9	2452 MHz
6	2437 MHz		

3.4 Test Mode Applicability and Tested Channel Detail

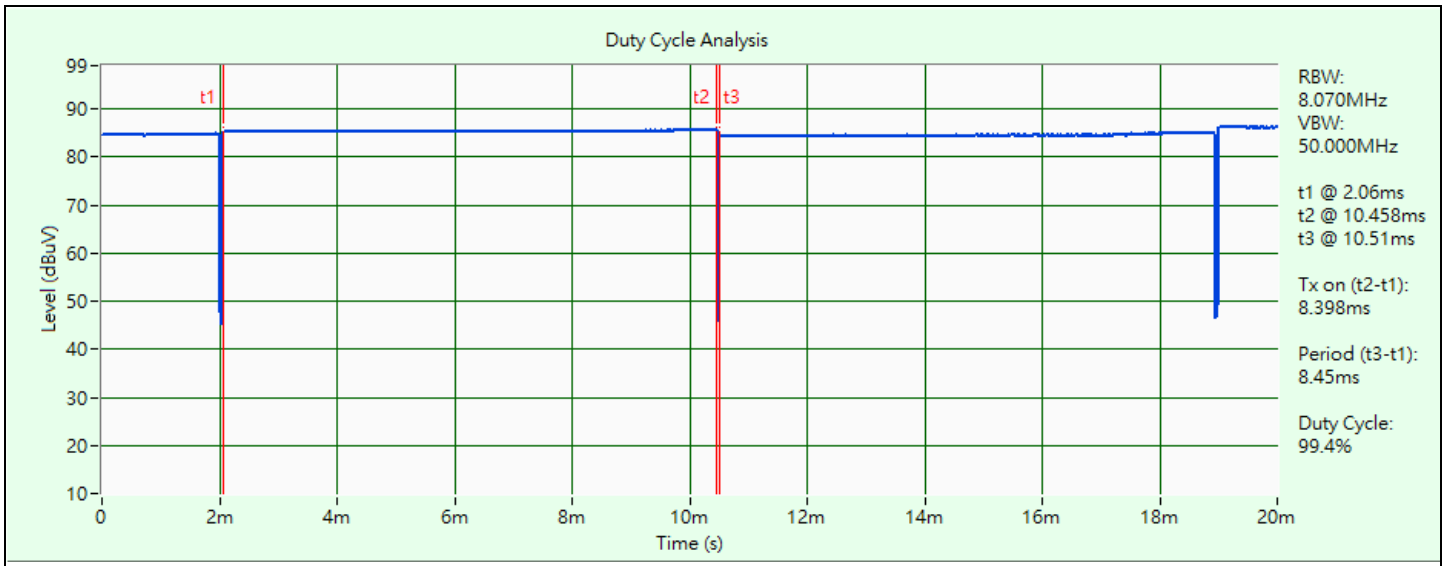
Worst Case:	The EUT is designed to be positioned on the Z-axis only.

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

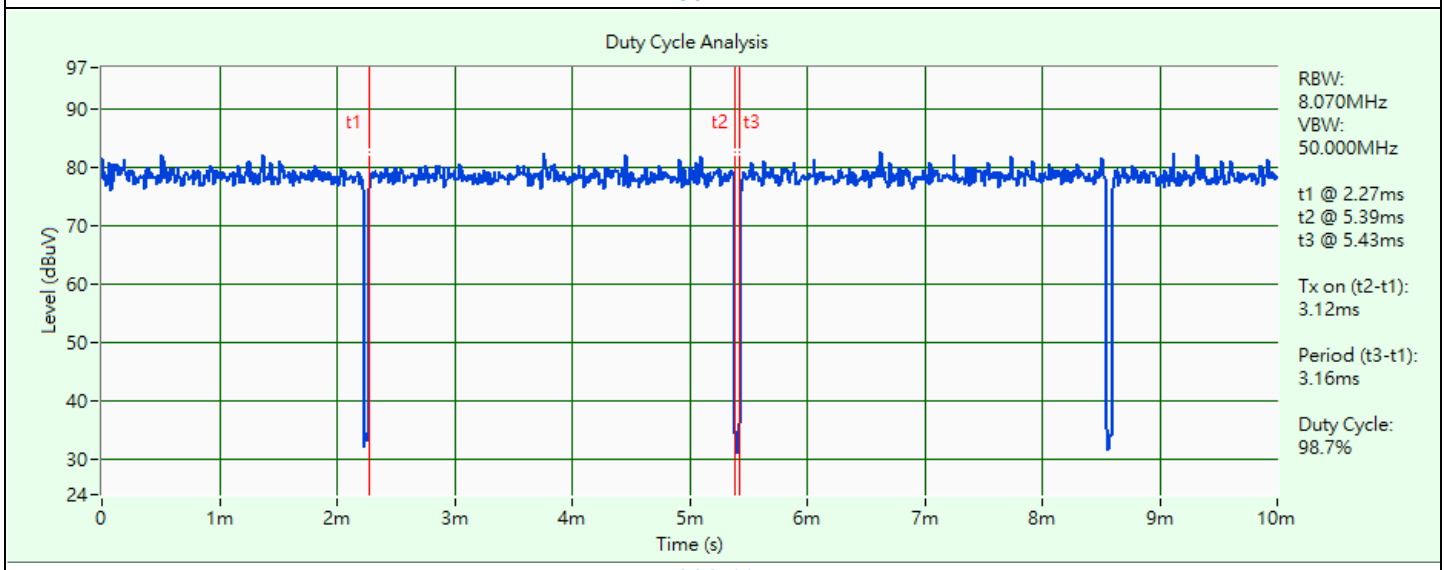
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	802.11b	CDD/ Beamforming	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD/ Beamforming	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD/ Beamforming	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD/ Beamforming	3, 6, 9	BPSK	MCS0
Power Spectral Density / 6 dB Bandwidth / Conducted Out of Band Emissions	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
AC Power Conducted Emissions	802.11ax (HE20)	CDD	6	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ax (HE20)	CDD	6	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0

3.5 Duty Cycle of Test Signal

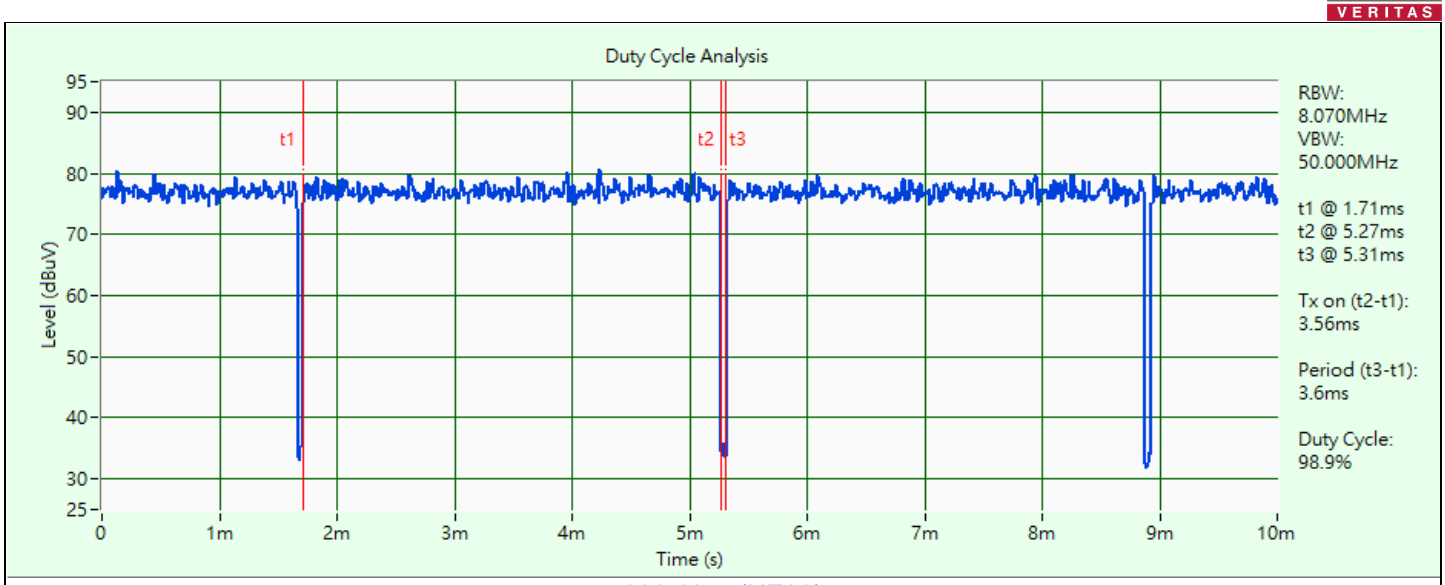
802.11b: Duty cycle = 8.398 ms / 8.45 ms x 100% = 99.4%
802.11g: Duty cycle = 3.12 ms / 3.16 ms x 100% = 98.7%
802.11ax (HE20): Duty cycle = 3.56 ms / 3.6 ms x 100% = 98.9%
802.11ax (HE40): Duty cycle = 3.55 ms / 3.59 ms x 100% = 98.9%



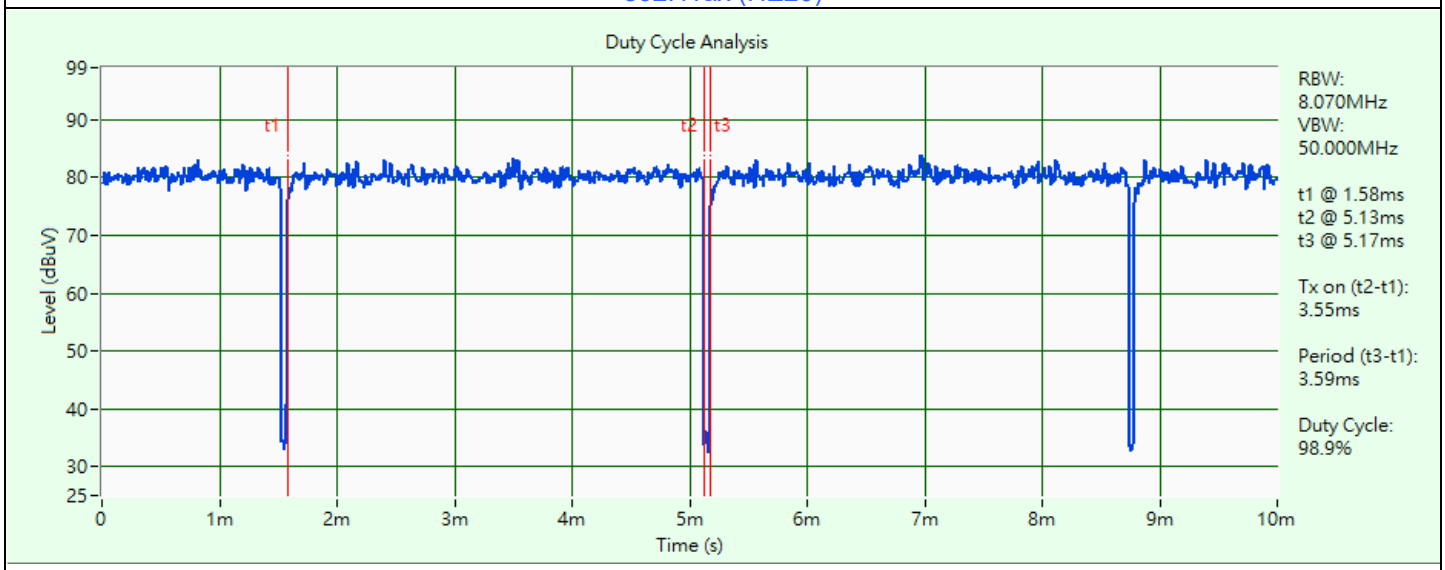
802.11b



802.11g



802.11ax (HE20)

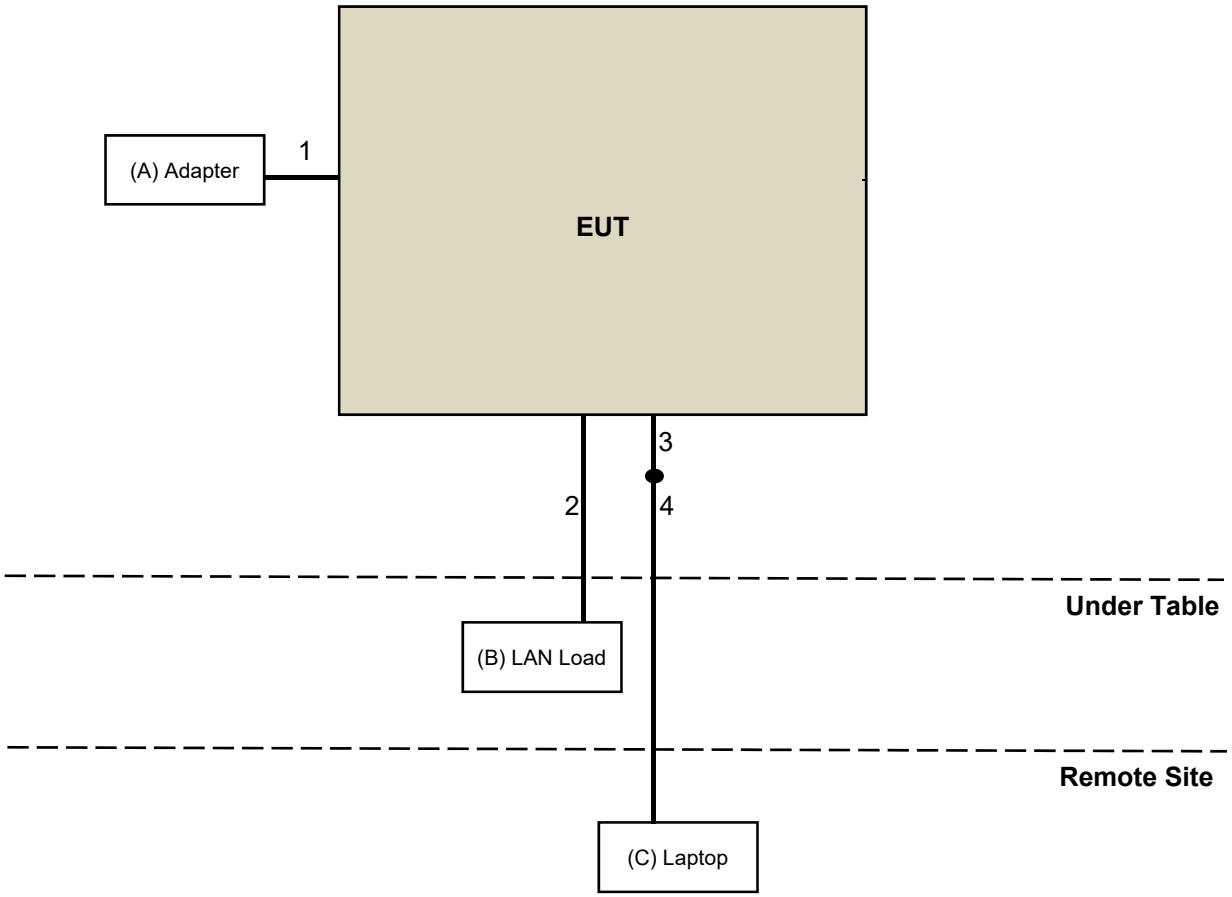


802.11ax (HE40)

3.6 Test Program Used and Operation Descriptions

Controlling software (MT7915 QA 0.0.2.33) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Adapter	MASS POWER	S024-1E120200VU-H	NA	NA	Supplied by applicant
B.	LAN Load	BV	LP-4	NA	NA	Provided by Lab
C.	Laptop	DELL	Inspiron 14R	8LRKKW1	NA	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Cable	1	1.5	N	0	Accessory of EUT
2.	RJ45 Cable	1	1.8	N	0	Provided by Lab
3.	RJ45 Cable	1	1.5	Y	0	Accessory of EUT
4.	RJ45 Cable	1	10	N	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000485	2023/1/19	2024/1/18
Wideband Power Sensor Keysight	N1923A	MY58020002	2023/1/18	2024/1/17
		MY58140009	2023/1/18	2024/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/8

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/8

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
EMI Test Receiver R&S	ESCI	100613	2022/12/5	2023/12/4
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2023/1/7	2024/1/6
LISN R&S	ENV216	101826	2023/3/23	2024/3/22
	ESH3-Z5	100311	2022/9/12	2023/9/11
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2023/1/7	2024/1/6
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2023/8/30

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-472	2022/10/21	2023/10/20
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/1/3	2024/1/2
Loop Antenna Electro-Metrics	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
MXE EMI Receiver Keysight	N9038A	MY55420137	2023/5/3	2024/5/2
Preamplifier EMCI	EMC 330H	980112	2022/10/1	2023/9/30
	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable Woken	8D-FB	Cable-Ch10-01	2022/10/1	2023/9/30
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/8/30

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	7	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/1/3	2024/1/2
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2022/11/13	2023/11/12
	BBHA 9170	148	2022/11/13	2023/11/12
MXE EMI Receiver Keysight	N9038A	MY55420137	2023/5/3	2024/5/2
Notch Filter Micro-Tronics	BRM17690	004	2023/1/11	2024/1/10
	BRM50716	060	2023/1/11	2024/1/10
Preamplifier EMCI	EMC 012645	980115	2022/10/1	2023/9/30
	EMC 184045	980116	2022/10/1	2023/9/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
	EMC104-SM-SM-8000+3000	171005	2022/10/1	2023/9/30
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	2022/10/1	2023/9/30
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/8/23 ~ 2023/8/24

5 Limits of Test Items

5.1 RF Output Power

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

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

Below 30 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

5.5 AC Power Conducted Emissions

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

Notes:

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 0.50 MHz.

5.6 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30 dB 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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.7 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

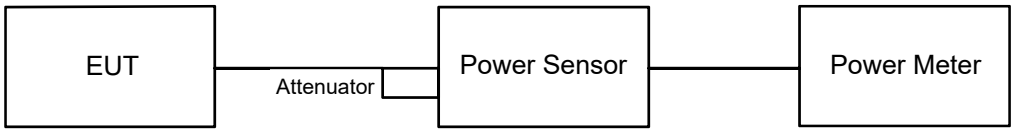
Notes:

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 1000 MHz, 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 20 dB under any condition of modulation.

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

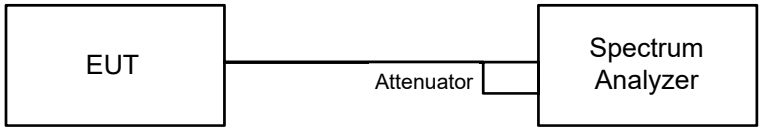


6.1.2 Test Procedure

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

6.2 Power Spectral Density

6.2.1 Test Setup



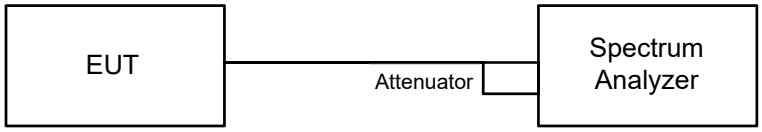
6.2.2 Test Procedure

a. Measure the duty cycle (x).
b. Set instrument center frequency to DTS channel center frequency.
c. Set span to at least 1.5 times the OBW.
d. Set RBW to: 3 kHz.
e. Set VBW ≥3 x RBW.
f. Detector = power averaging (RMS) or sample detector (when RMS not available).
g. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
h. Sweep time = auto couple.
i. Do not use sweep triggering. Allow sweep to “free run”.
j. Employ trace averaging (RMS) mode over a minimum of 100 traces.
k. Use the peak marker function to determine the maximum amplitude level.

Note: If Duty cycle < 98%, Add 10 log (1/x), where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time.

6.3 6 dB Bandwidth

6.3.1 Test Setup

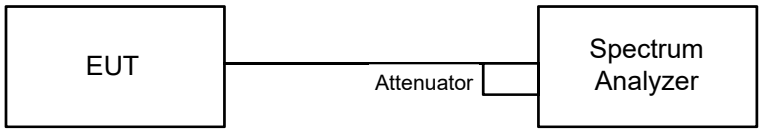


6.3.2 Test Procedure

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

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

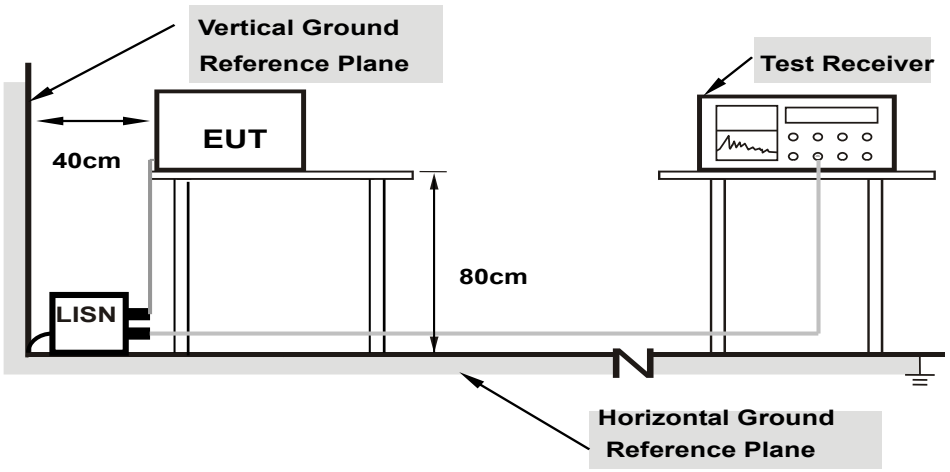
a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep = auto couple.
e. Trace Mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum amplitude level.

6.5 AC Power Conducted Emissions

6.5.1 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).

6.5.2 Test Procedure

a. The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH of coupling impedance for the measuring instrument.

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

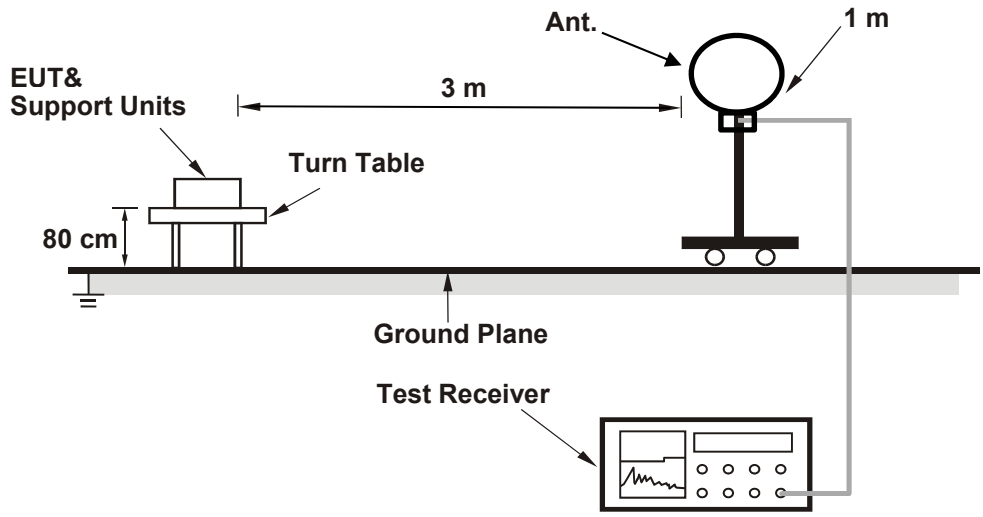
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

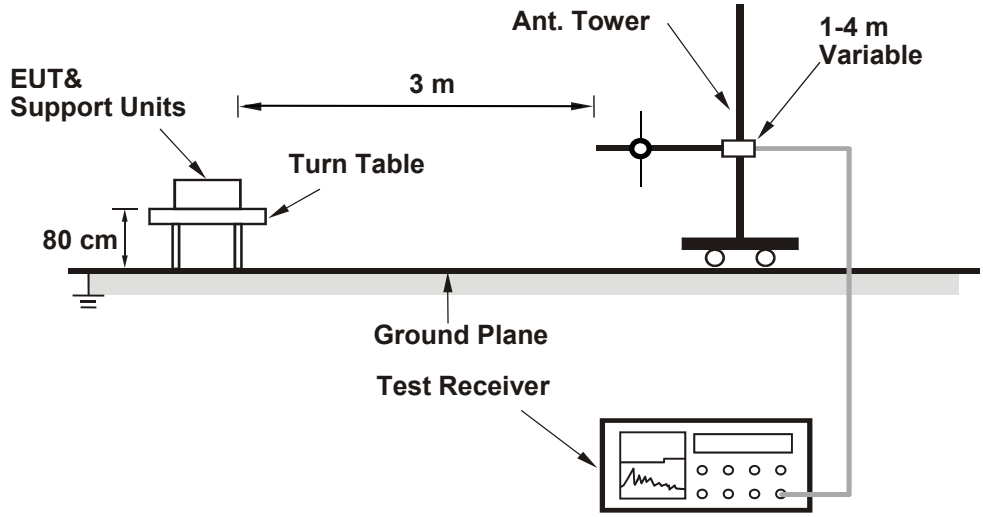
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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. 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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.

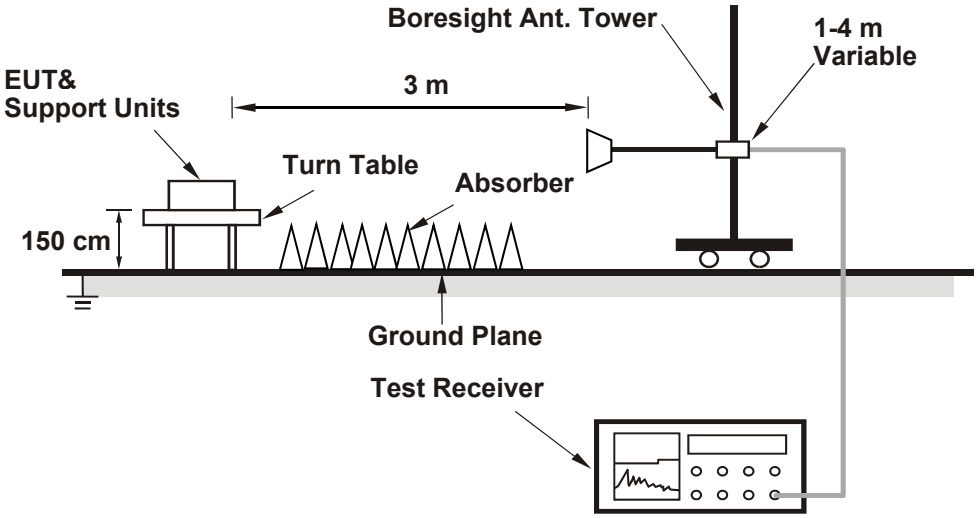
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters 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 peak and average detects 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.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10 Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11b CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.11	26.44	848.874	29.29	30	Pass
6	2437	26.29	26.58	880.586	29.45	30	Pass
11	2462	26.26	26.52	871.414	29.40	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11g CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	22.07	22.42	335.647	25.26	30	Pass
6	2437	26.32	26.64	889.866	29.49	30	Pass
11	2462	20.62	20.98	240.659	23.81	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	20.85	21.18	252.839	24.03	30	Pass
6	2437	26.35	26.66	894.966	29.52	30	Pass
11	2462	19.79	20.13	198.318	22.97	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	20.88	21.24	255.507	24.07	30	Pass
6	2437	21.15	21.48	270.921	24.33	30	Pass
9	2452	19.66	19.98	192.01	22.83	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	20.85	21.18	252.839	24.03	28.11	Pass
6	2437	24.93	25.23	644.598	28.09	28.11	Pass
11	2462	19.79	20.13	198.318	22.97	28.11	Pass

Notes:

1. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
2. The directional gain is 7.89 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.89-6) = 28.11 dBm.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	20.88	21.24	255.507	24.07	28.11	Pass
6	2437	21.15	21.48	270.921	24.33	28.11	Pass
9	2452	19.66	19.98	192.01	22.83	28.11	Pass

Notes:

1. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
2. The directional gain is 7.89 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.89-6) = 28.11 dBm.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-6.41	-6.02	-3.20	6.11	Pass
6	2437	-6.30	-5.91	-3.09	6.11	Pass
11	2462	-6.37	-5.93	-3.13	6.11	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. The directional gain is 7.89 dBi > 6 dBi, so the power density limit shall be reduced to 8-(7.89-6) = 6.11 dBm/3kHz.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-12.18	-11.64	-8.89	6.11	Pass
6	2437	-8.81	-8.63	-5.71	6.11	Pass
11	2462	-14.08	-13.91	-10.98	6.11	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. The directional gain is 7.89 dBi > 6 dBi, so the power density limit shall be reduced to 8-(7.89-6) = 6.11 dBm/3kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-15.31	-14.78	-12.03	6.11	Pass
6	2437	-10.74	-10.17	-7.44	6.11	Pass
11	2462	-16.69	-15.92	-13.28	6.11	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. The directional gain is 7.89 dBi > 6 dBi, so the power density limit shall be reduced to 8-(7.89-6) = 6.11 dBm/3kHz.

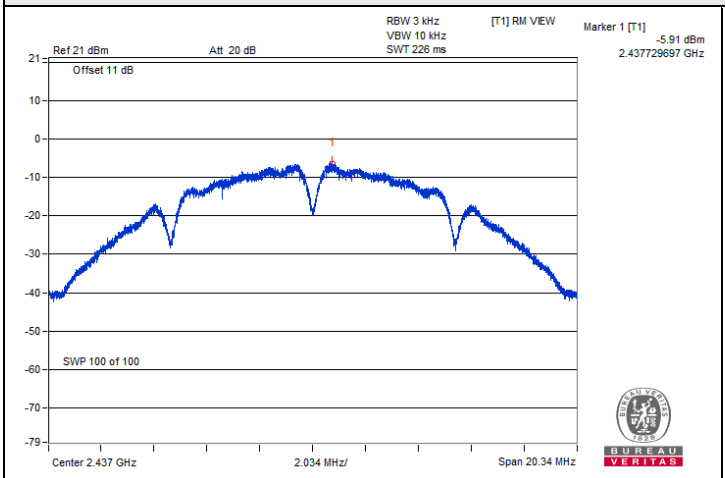
802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
3	2422	-17.53	-16.11	-13.75	6.11	Pass
6	2437	-17.27	-17.21	-14.23	6.11	Pass
9	2452	-18.96	-18.75	-15.84	6.11	Pass

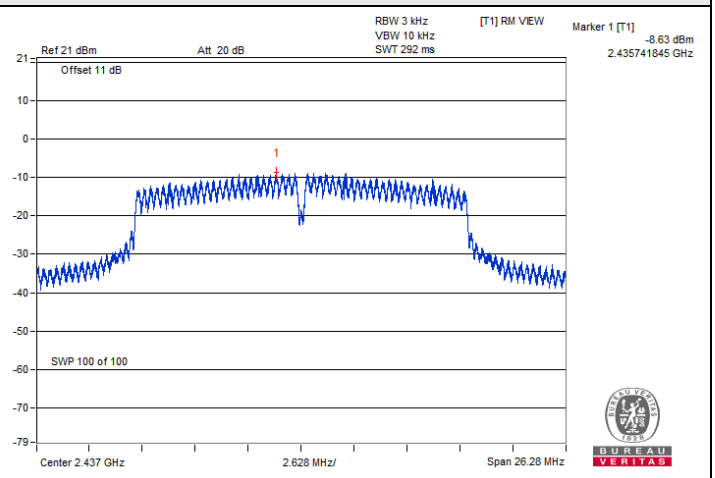
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$)^2 / 2]
3. The directional gain is 7.89 dBi > 6 dBi, so the power density limit shall be reduced to 8-(7.89-6) = 6.11 dBm/3kHz.

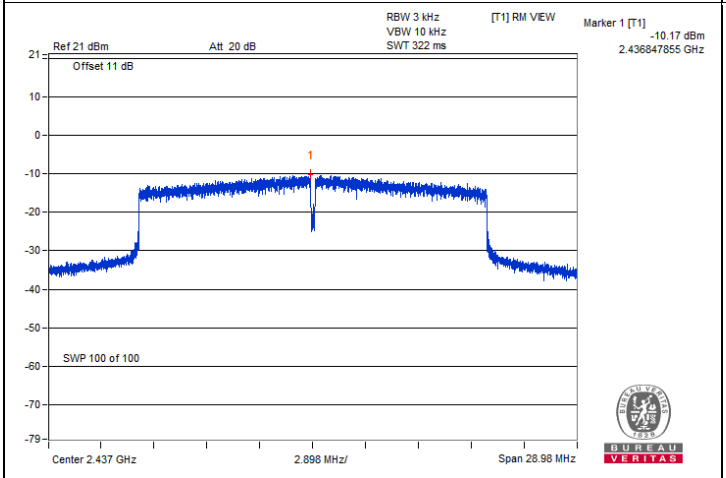
Spectrum Plot of Maximum Value



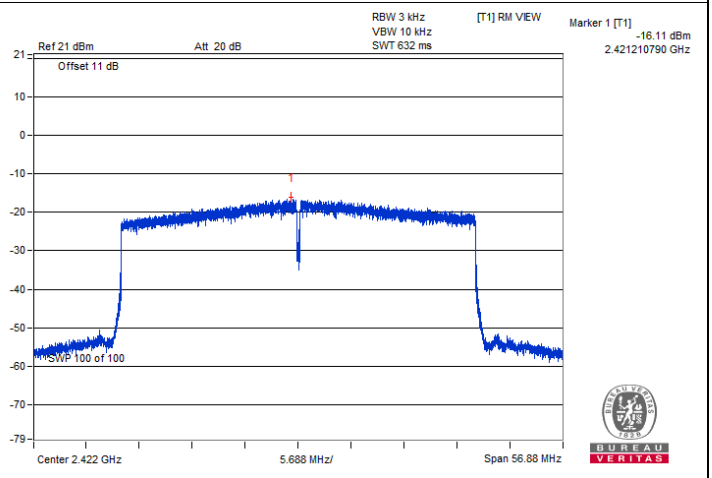
802.11b / Chain 1 : CH 6



802.11g / Chain 1 : CH 6



802.11ax (HE20) / Chain 1 : CH 6



802.11ax (HE40) / Chain 1 : CH 3

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	8.10	8.58	0.5	Pass
6	2437	8.63	8.58	0.5	Pass
11	2462	8.58	8.57	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	15.17	15.76	0.5	Pass
6	2437	15.41	15.18	0.5	Pass
11	2462	15.57	15.75	0.5	Pass

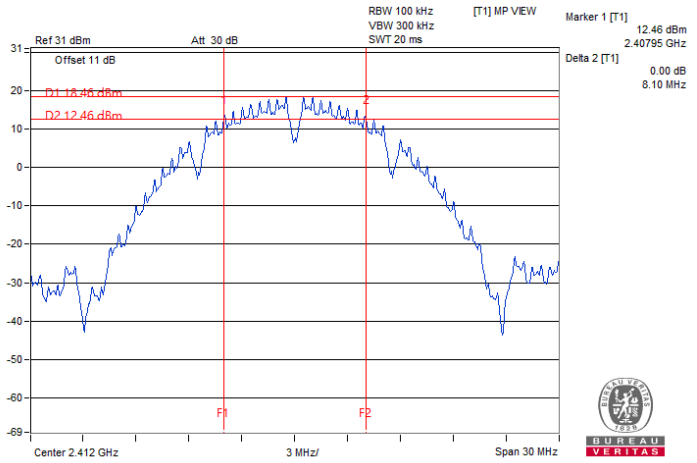
802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	17.68	18.55	0.5	Pass
6	2437	18.07	17.75	0.5	Pass
11	2462	19.04	18.85	0.5	Pass

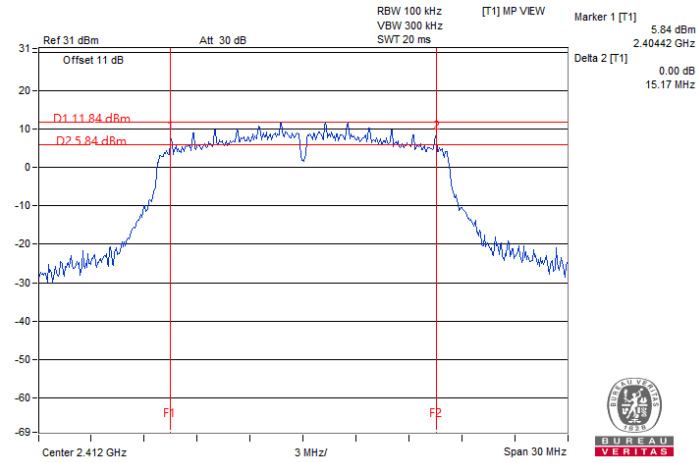
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	37.29	35.06	0.5	Pass
6	2437	37.65	36.16	0.5	Pass
9	2452	37.30	35.88	0.5	Pass

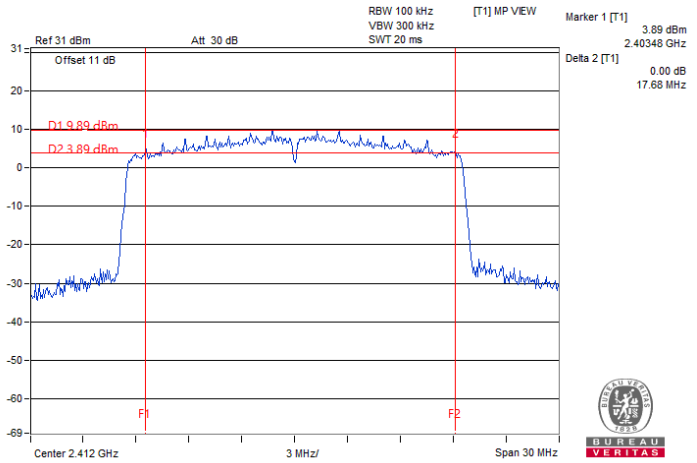
Spectrum Plot of Minimum Value



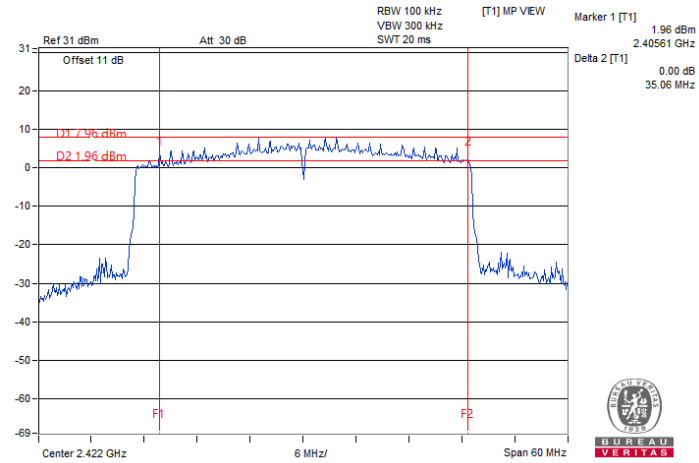
802.11b / Chain 0 : CH 1



802.11g / Chain 0 : CH 1



802.11ax (HE20) / Chain 0 : CH 1

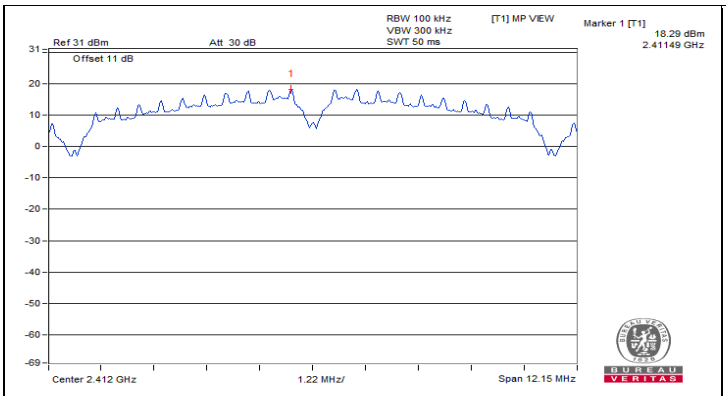


802.11ax (HE40) / Chain 1 : CH 3

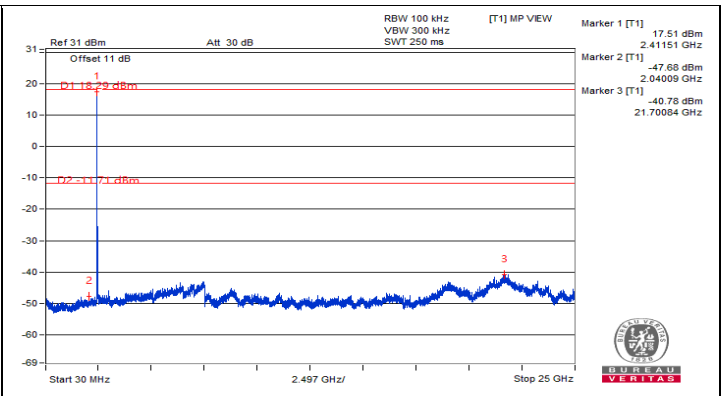
7.4 Conducted Out of Band Emissions

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

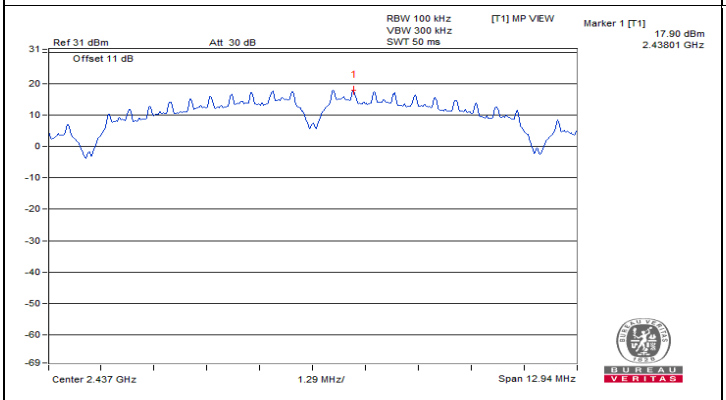
802.11b



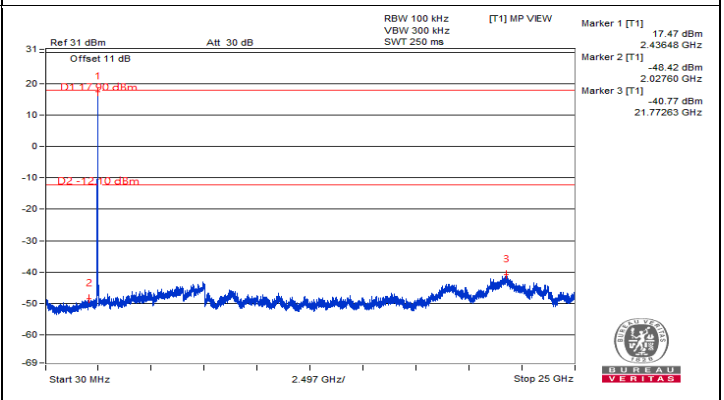
Chain 0 : CH 1



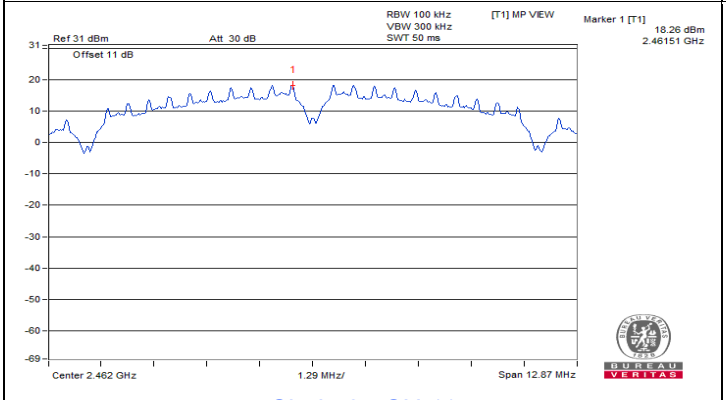
Chain 0 : CH 1



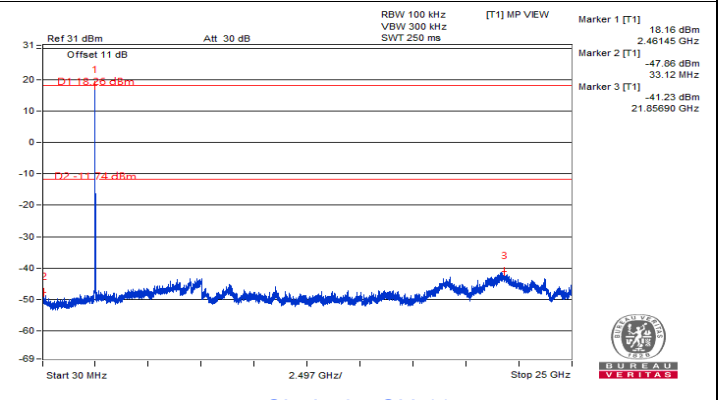
Chain 0 : CH 6



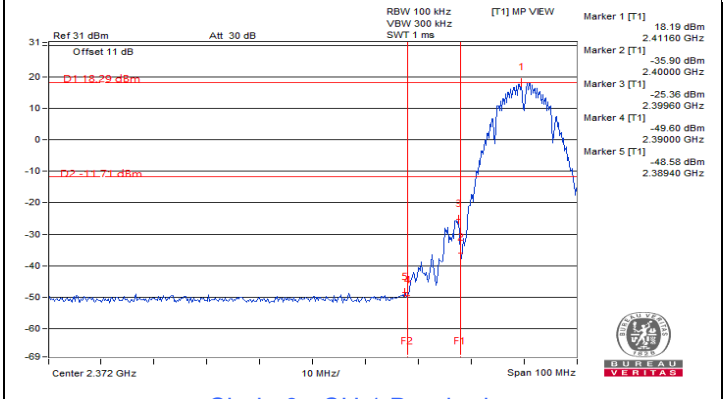
Chain 0 : CH 6



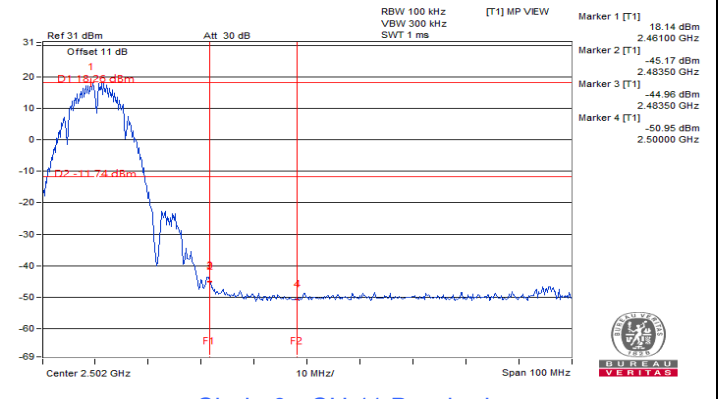
Chain 0 : CH 11



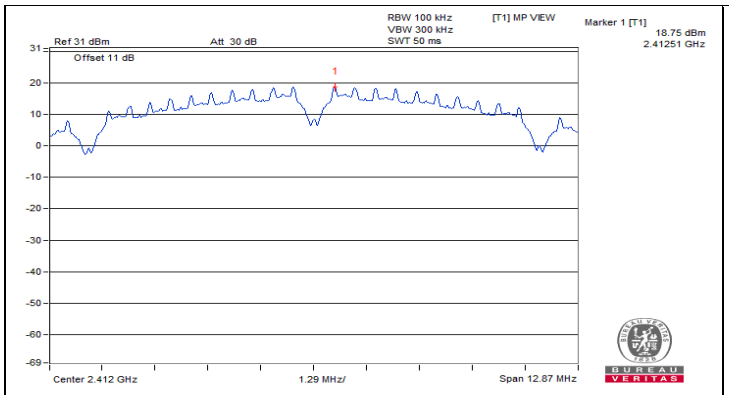
Chain 0 : CH 11



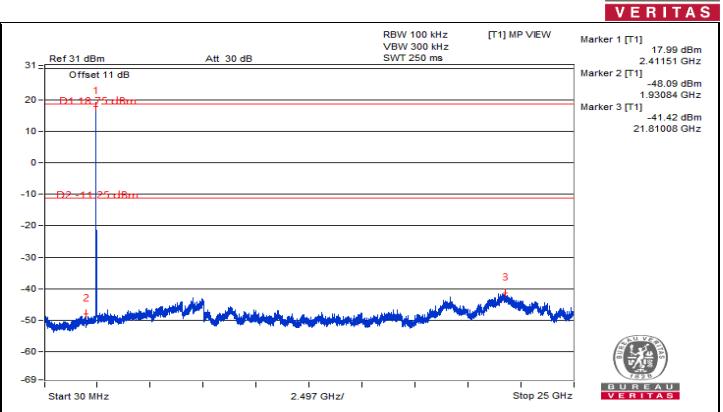
Chain 0 : CH 1 Band edge



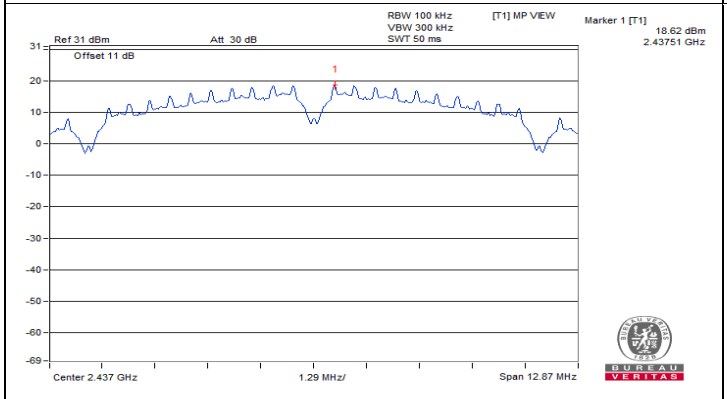
Chain 0 : CH 11 Band edge



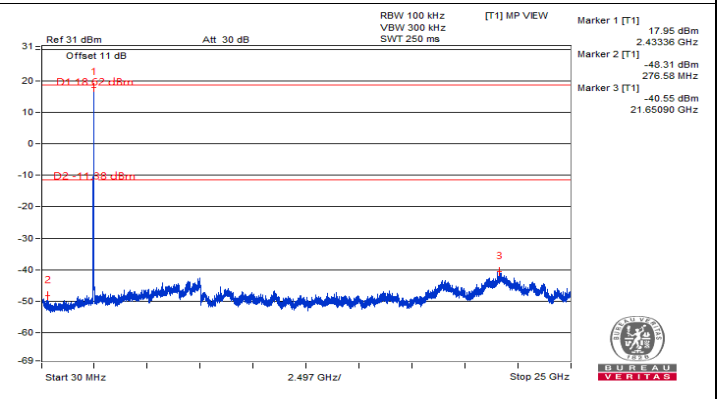
Chain 1 : CH 1



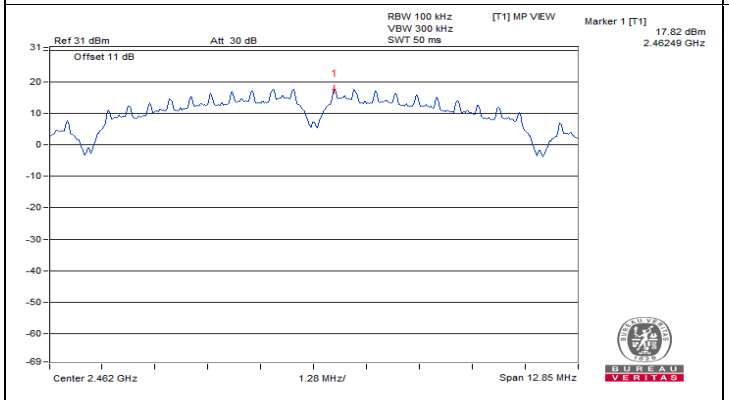
Chain 1 : CH 1



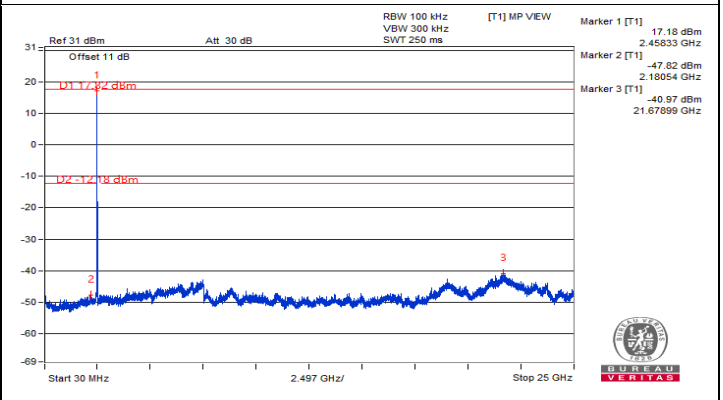
Chain 1 : CH 6



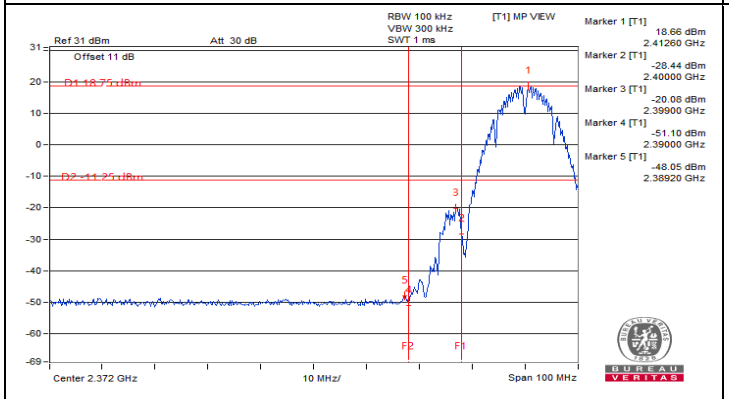
Chain 1 : CH 6



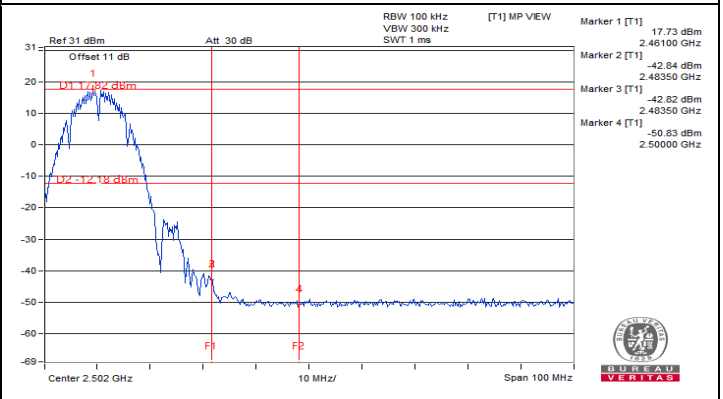
Chain 1 : CH 11



Chain 1 : CH 11

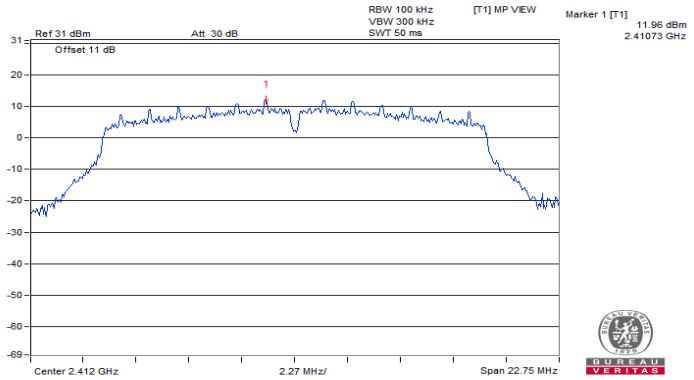


Chain 1 : CH 1 Band edge

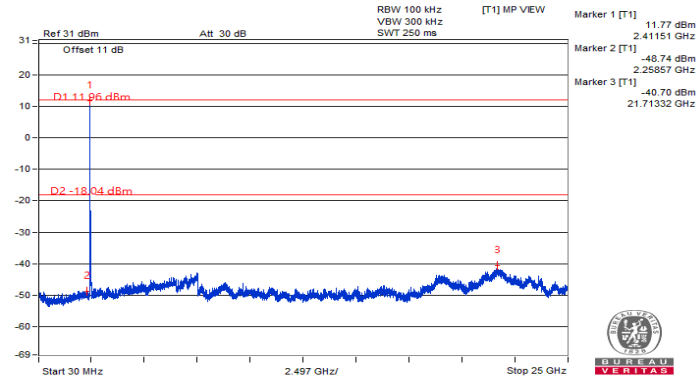


Chain 1 : CH 11 Band edge

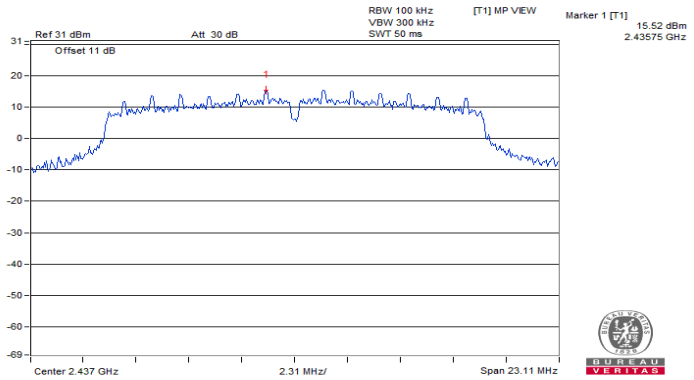
802.11g



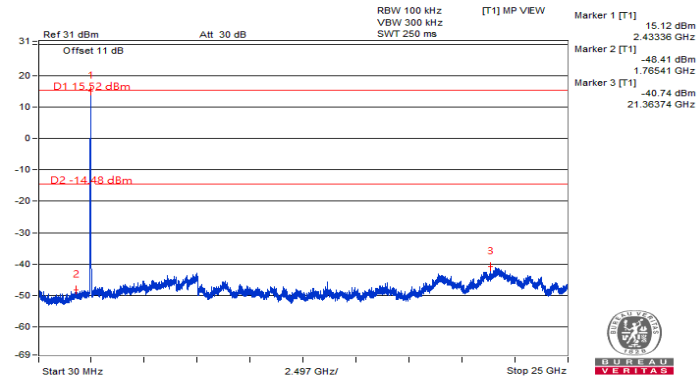
Chain 0 : CH 1



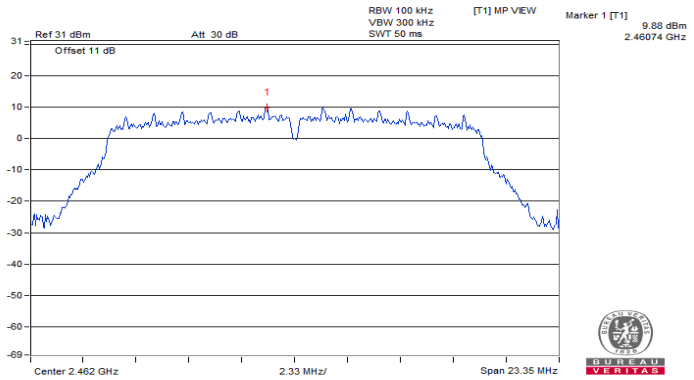
Chain 0 : CH 1



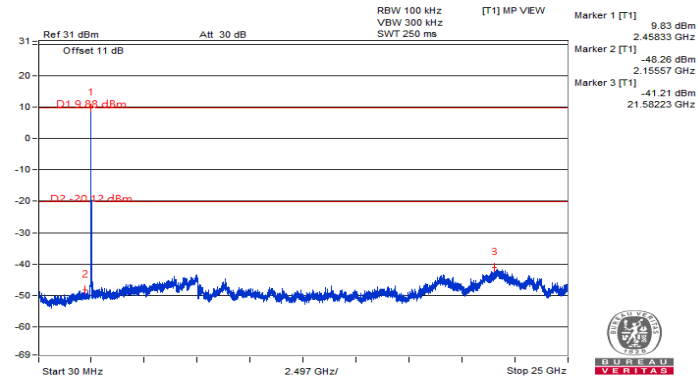
Chain 0 : CH 6



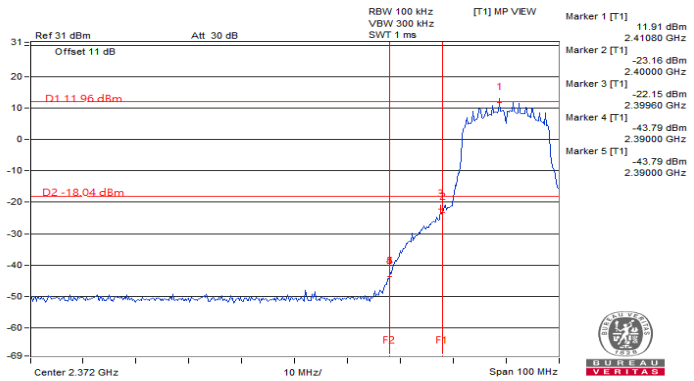
Chain 0 : CH 6



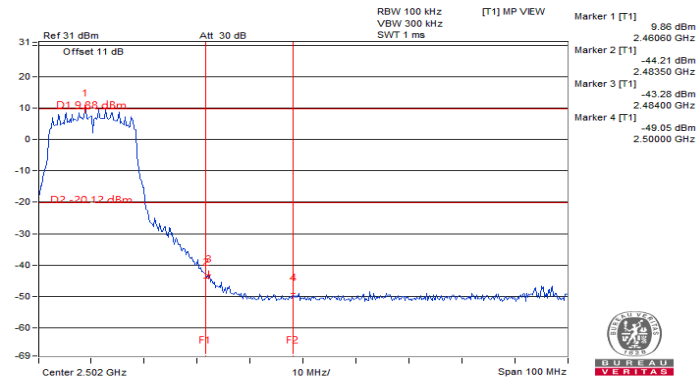
Chain 0 : CH 11



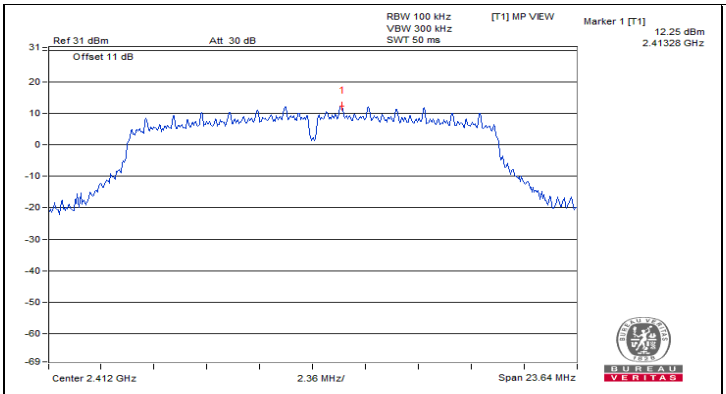
Chain 0 : CH 11



Chain 0 : CH 1 Band edge



Chain 0 : CH 11 Band edge



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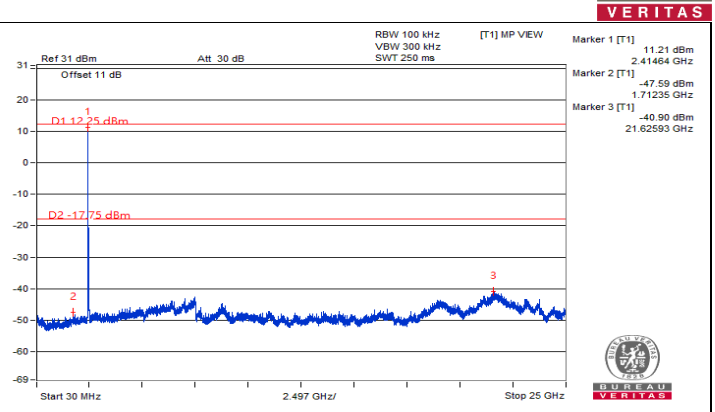
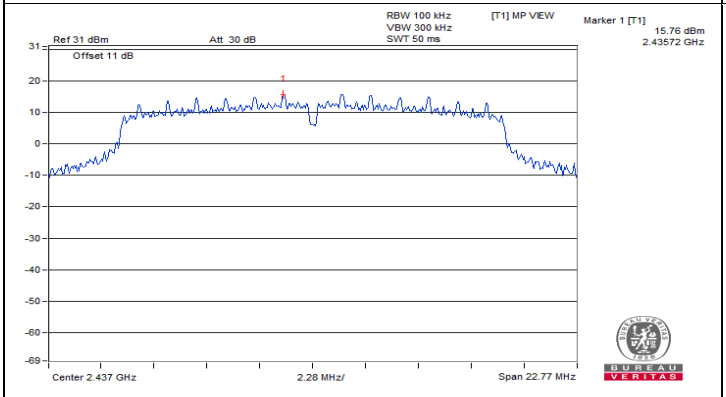
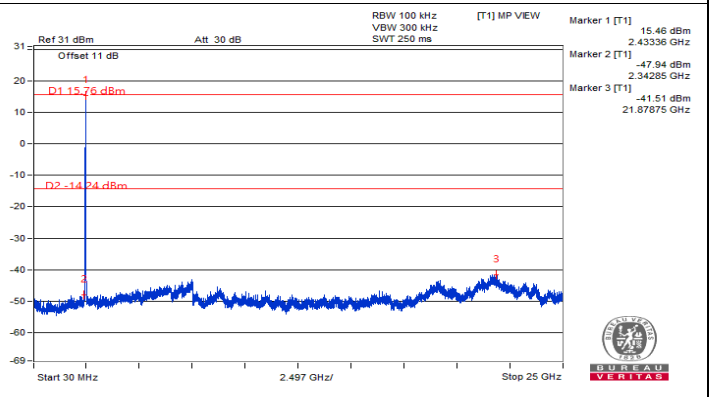


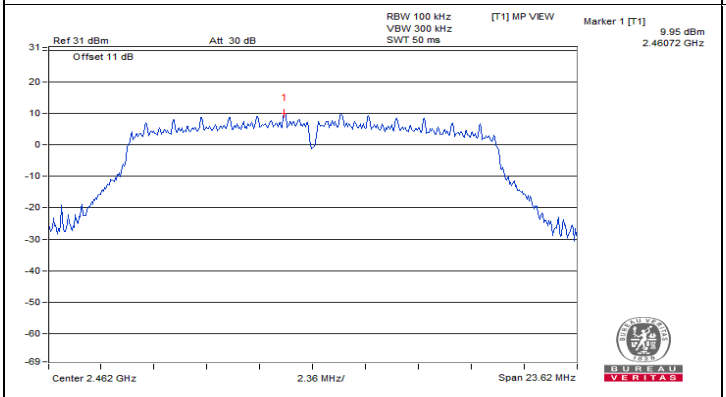
Chain 1 : CH 1



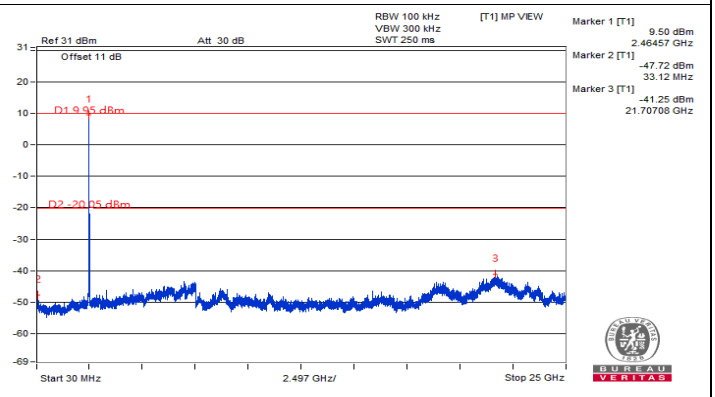
Chain 1 : CH 6



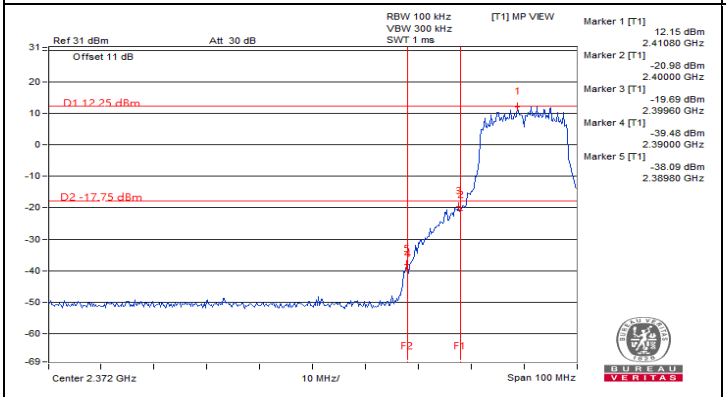
Chain 1 : CH 6



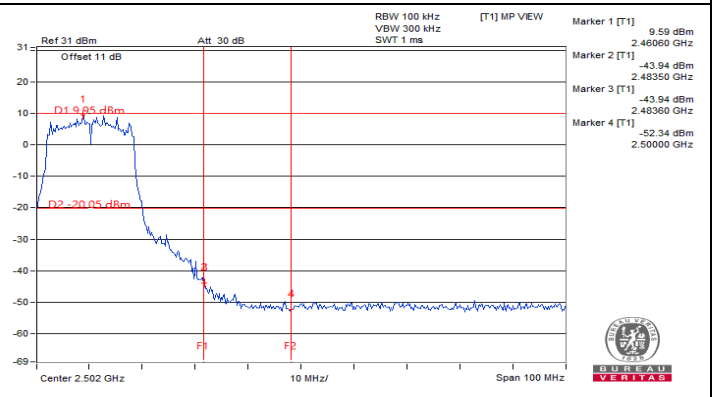
Chain 1 : CH 11



Chain 1 : CH 11

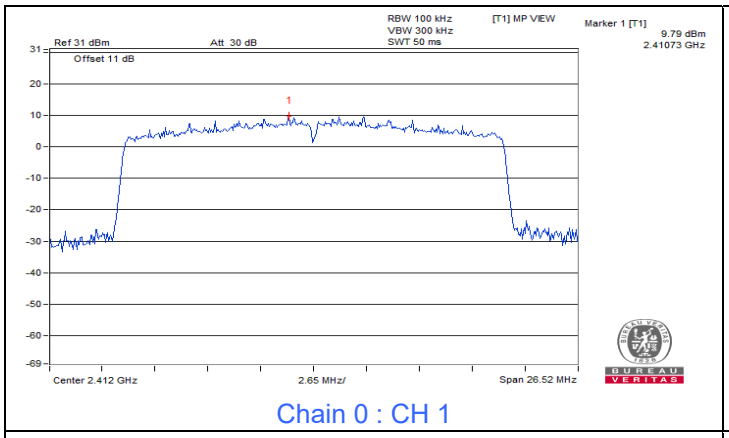


Chain 1 : CH 1 Band edge

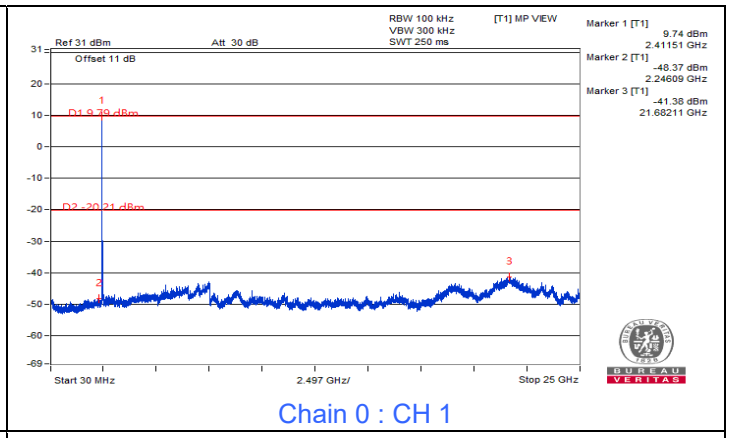


Chain 1 : CH 11 Band edge

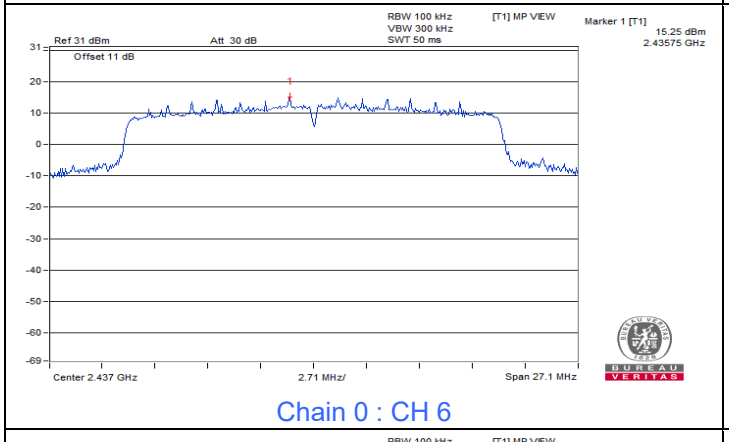
802.11ax (HE20)



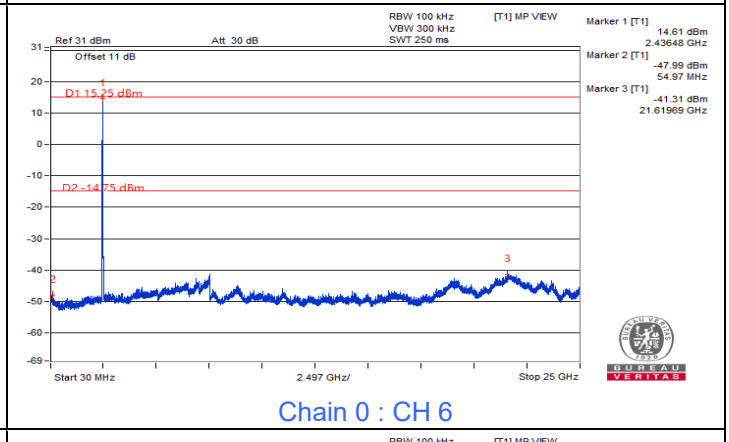
Chain 0 : CH 1



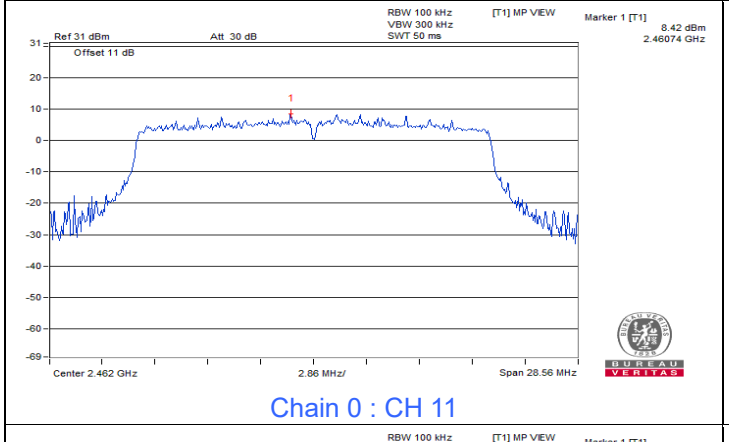
Chain 0 : CH 1



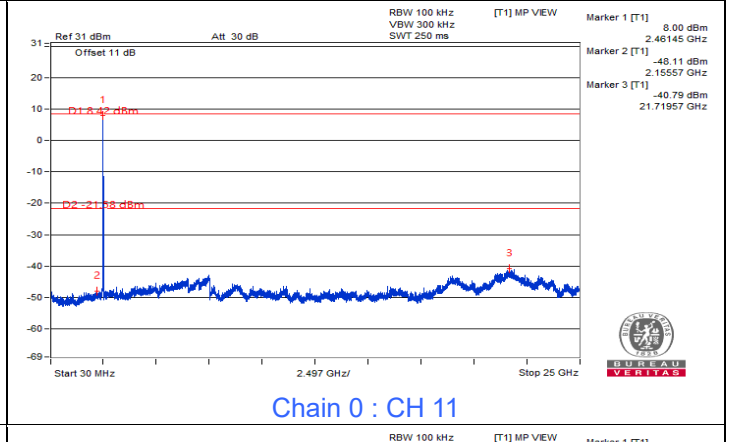
Chain 0 : CH 6



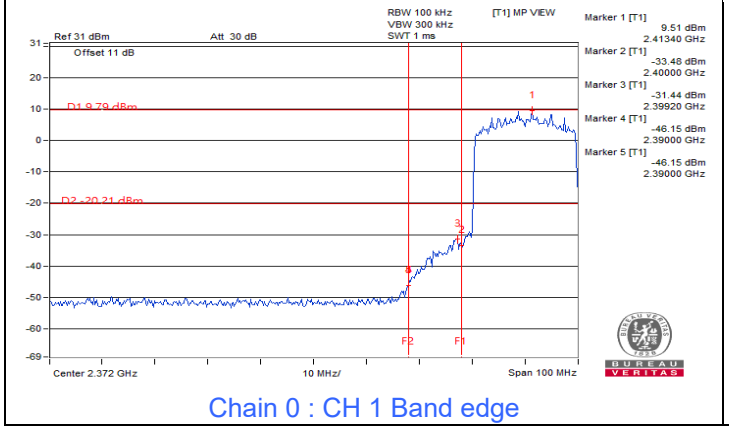
Chain 0 : CH 6



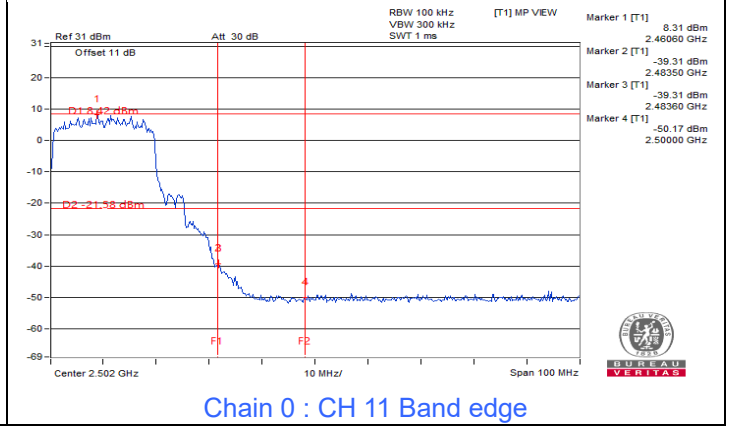
Chain 0 : CH 11



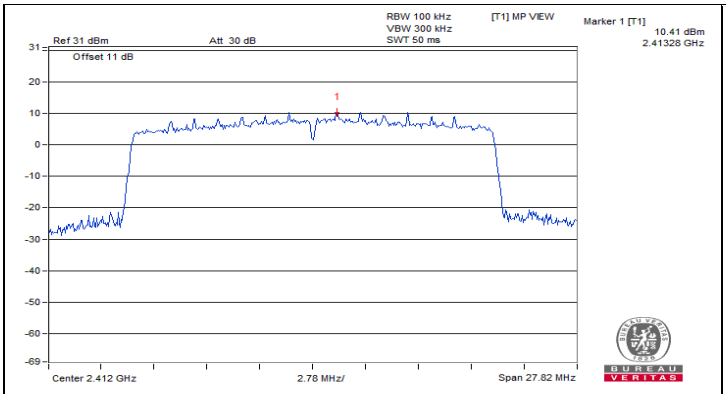
Chain 0 : CH 11



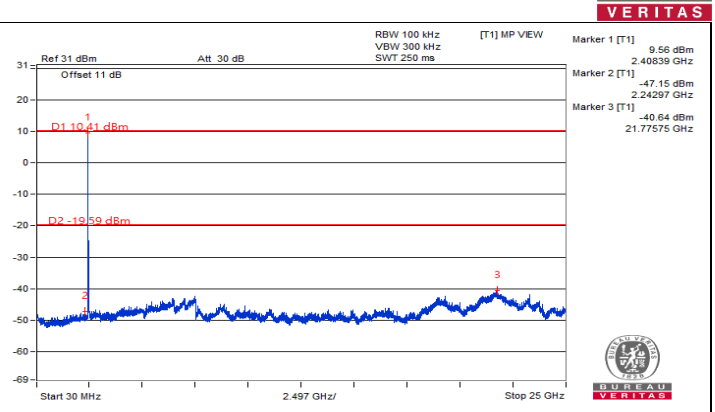
Chain 0 : CH 1 Band edge



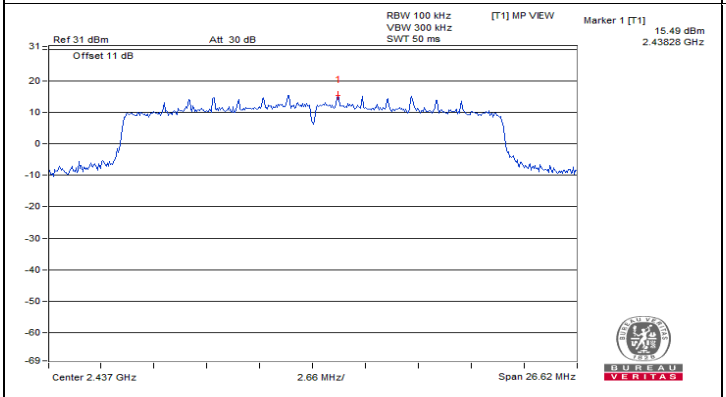
Chain 0 : CH 11 Band edge



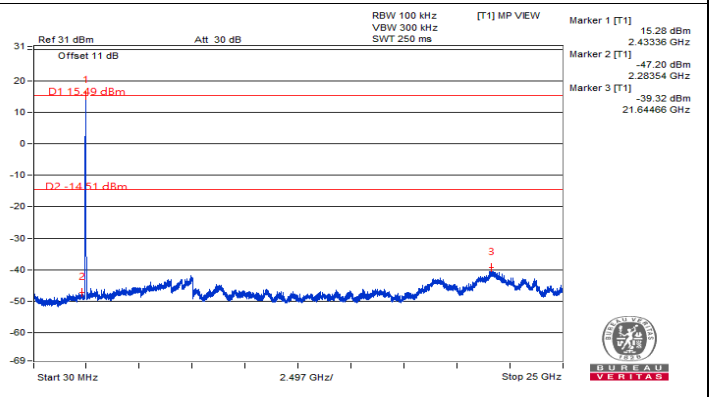
Chain 1 : CH 1



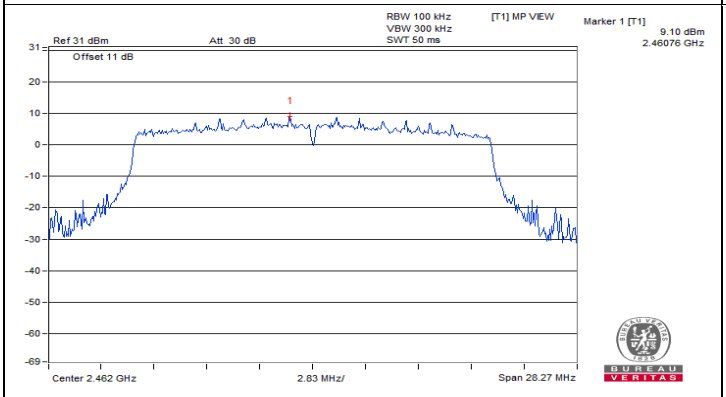
Chain 1 : CH 1



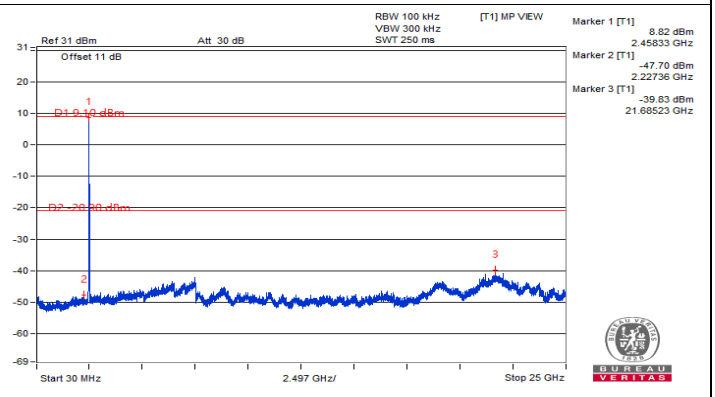
Chain 1 : CH 6



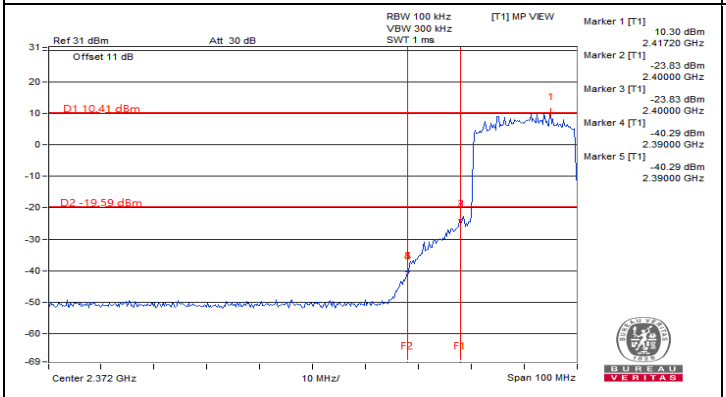
Chain 1 : CH 6



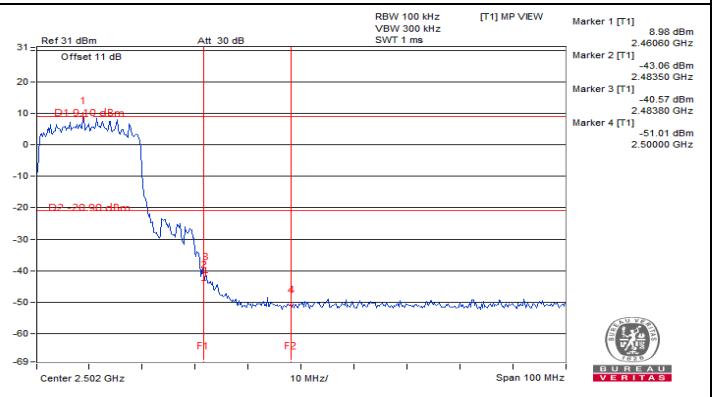
Chain 1 : CH 11



Chain 1 : CH 11

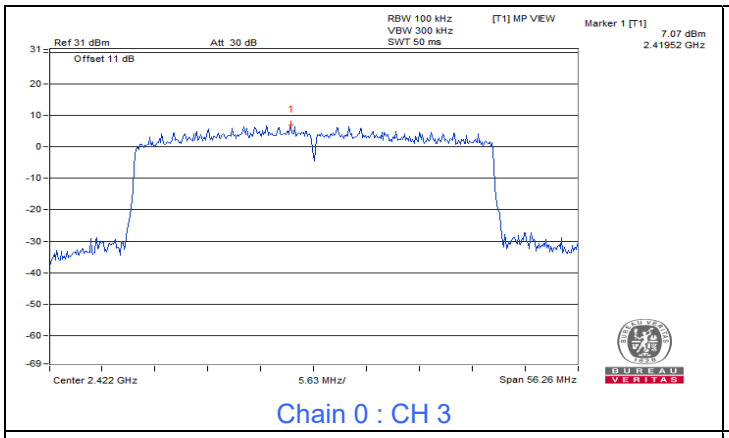


Chain 1 : CH 1 Band edge

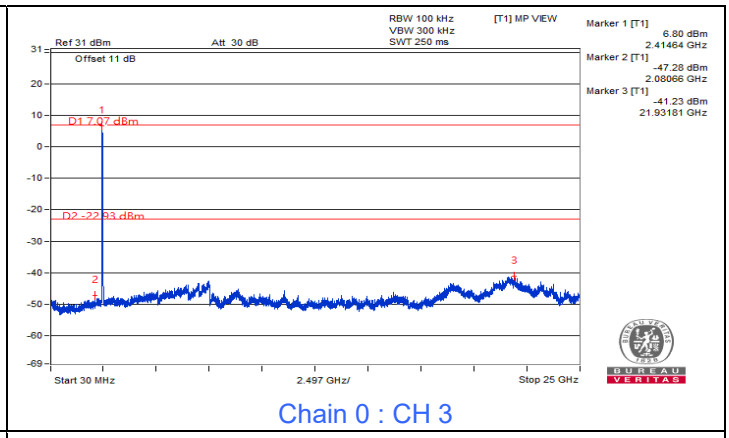


Chain 1 : CH 11 Band edge

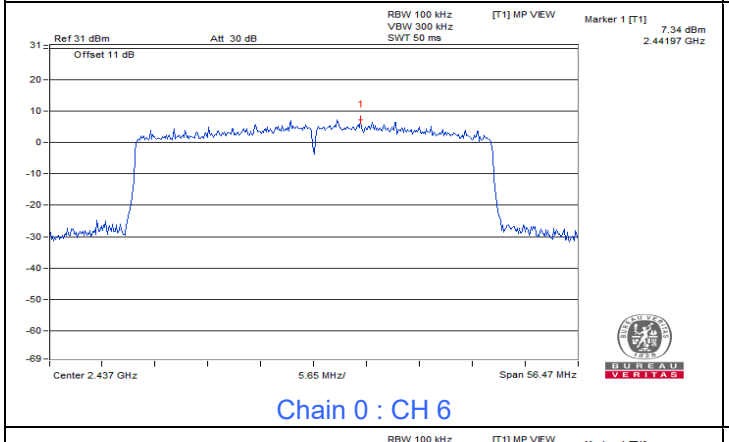
802.11ax (HE40)



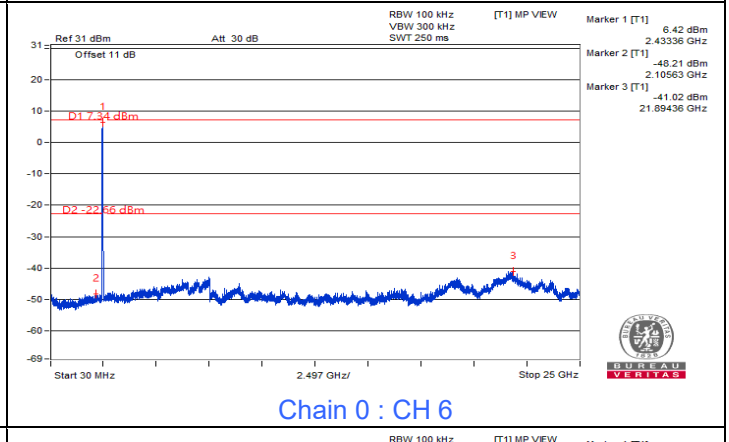
Chain 0 : CH 3



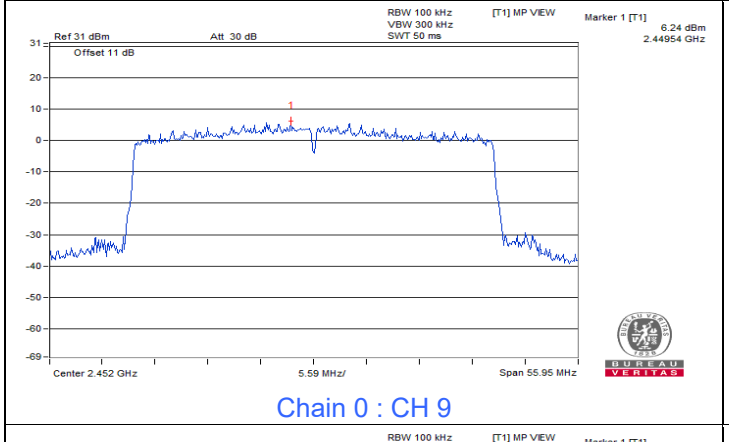
Chain 0 : CH 3



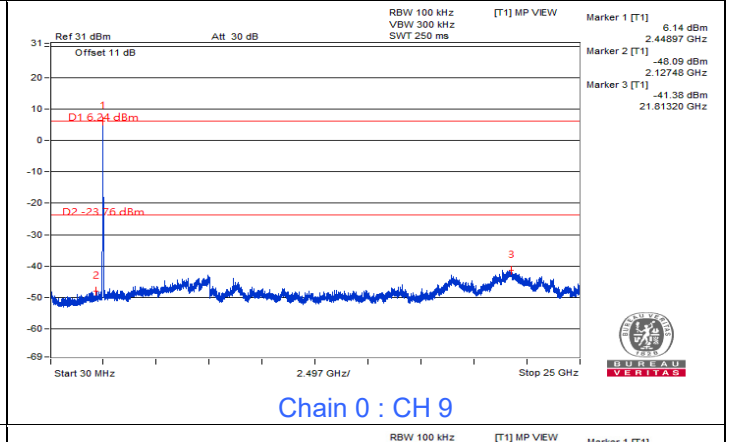
Chain 0 : CH 6



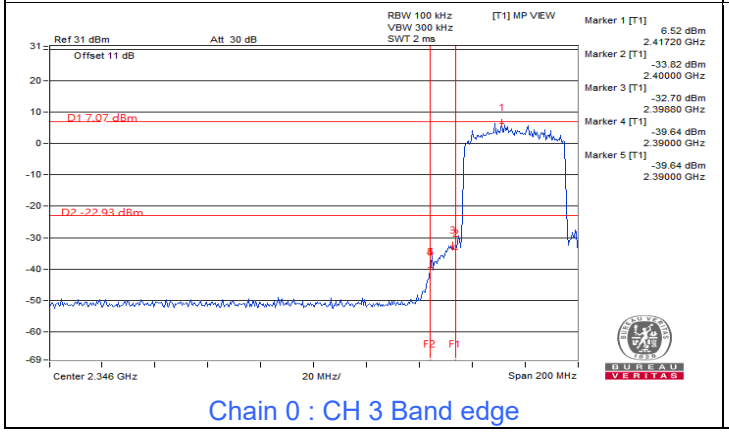
Chain 0 : CH 6



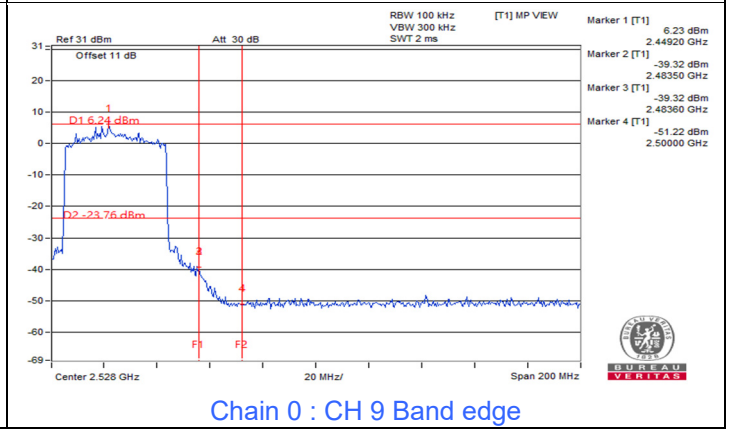
Chain 0 : CH 9



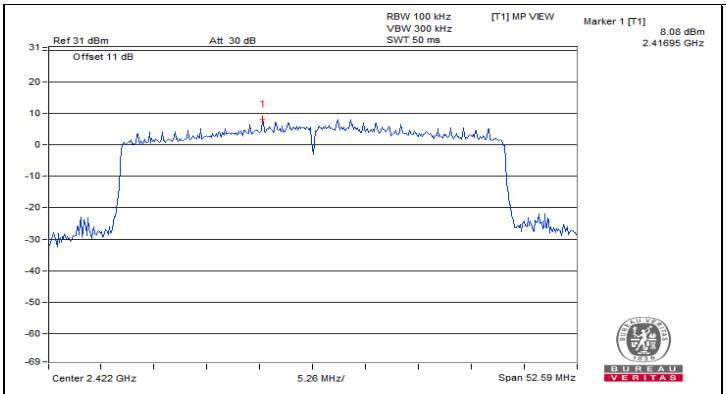
Chain 0 : CH 9



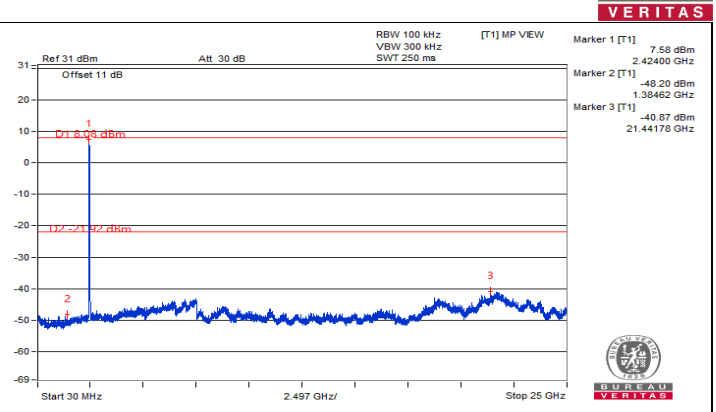
Chain 0 : CH 3 Band edge



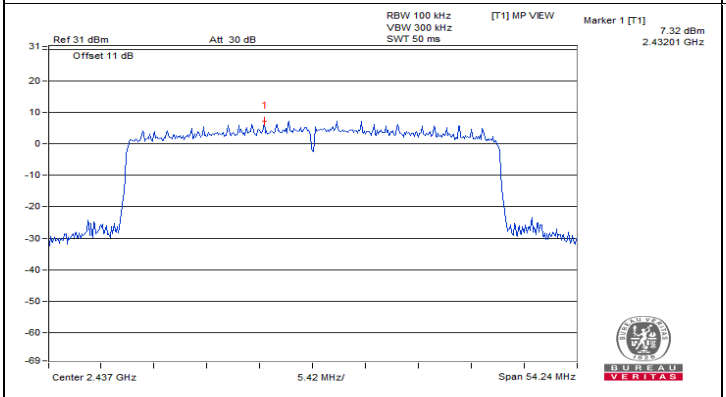
Chain 0 : CH 9 Band edge



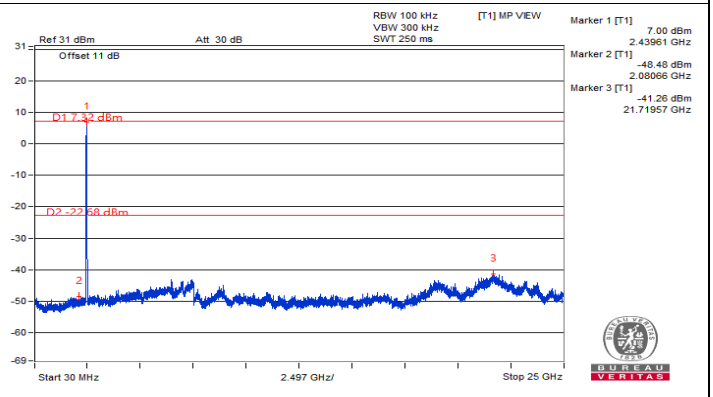
Chain 1 : CH 3



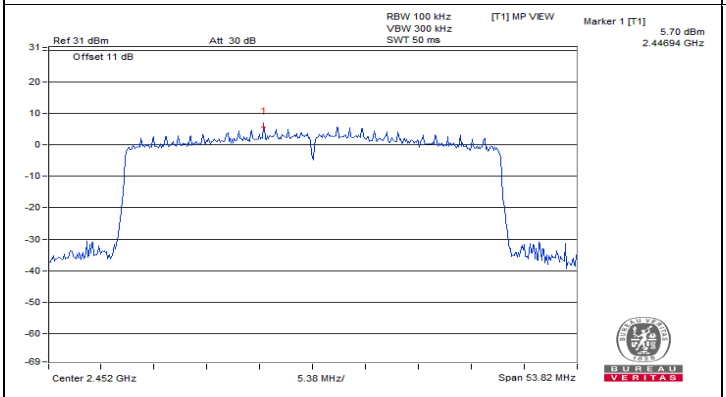
Chain 1 : CH 3



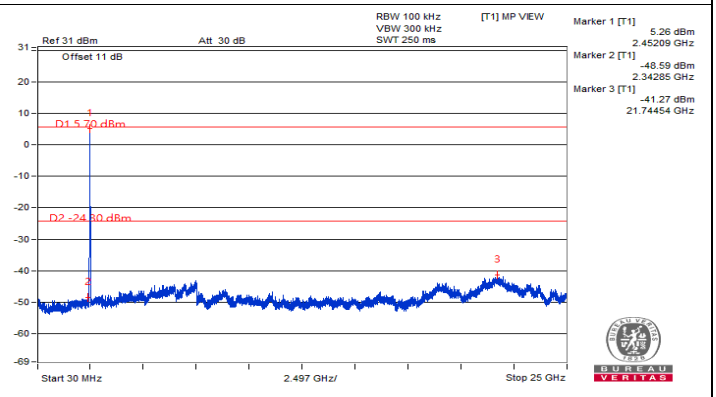
Chain 1 : CH 6



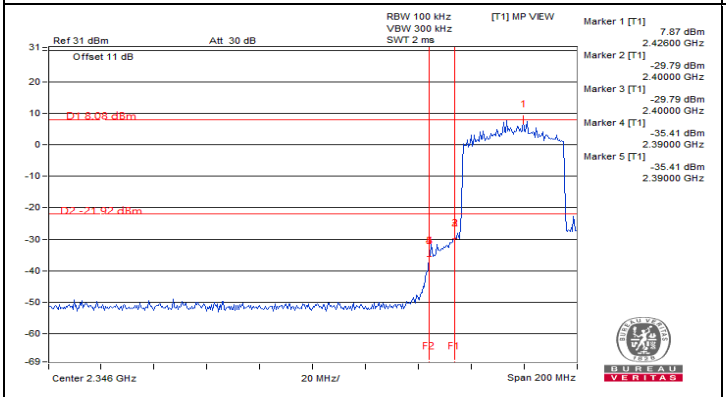
Chain 1 : CH 6



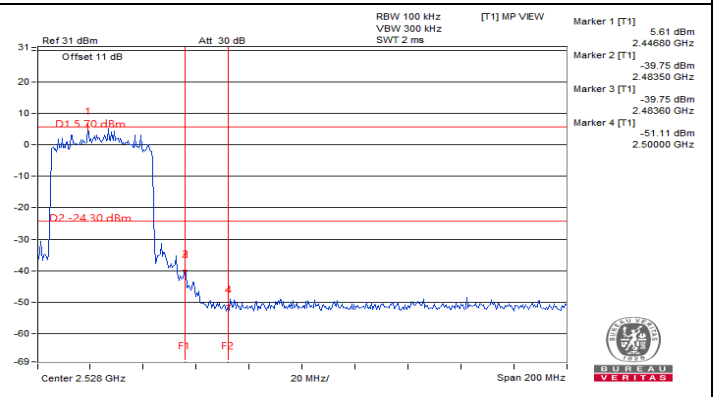
Chain 1 : CH 9



Chain 1 : CH 9



Chain 1 : CH 3 Band edge



Chain 1 : CH 9 Band edge

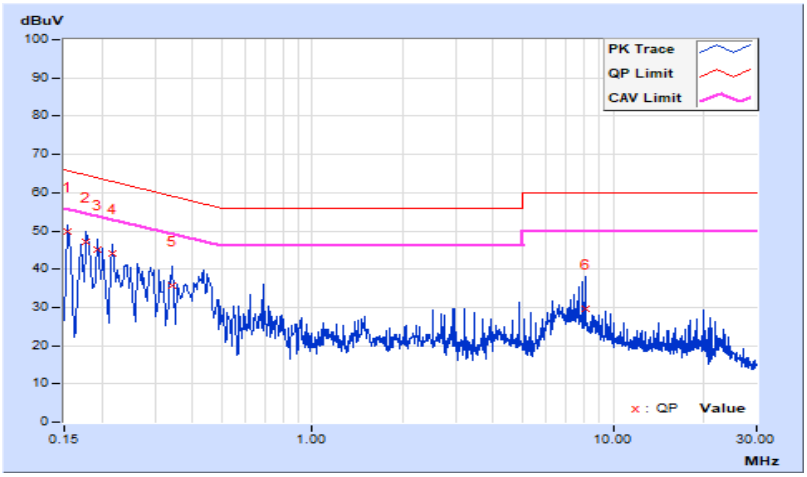
7.5 AC Power Conducted Emissions

RF Mode	802.11ax (HE20)	**Channel**	CH 6：2437 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Rex Wang		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15400	9.66	40.15	23.21	49.81	32.87	65.78	55.78	-15.97	-22.91
2	0.17800	9.68	37.38	22.52	47.06	32.20	64.58	54.58	-17.52	-22.38
3	0.19400	9.70	35.46	21.36	45.16	31.06	63.86	53.86	-18.70	-22.80
4	0.21800	9.71	34.24	21.14	43.95	30.85	62.89	52.89	-18.94	-22.04
5	0.34200	9.76	25.98	13.26	35.74	23.02	59.15	49.15	-23.41	-26.13
6	8.06600	10.00	19.62	7.16	29.62	17.16	60.00	50.00	-30.38	-32.84

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

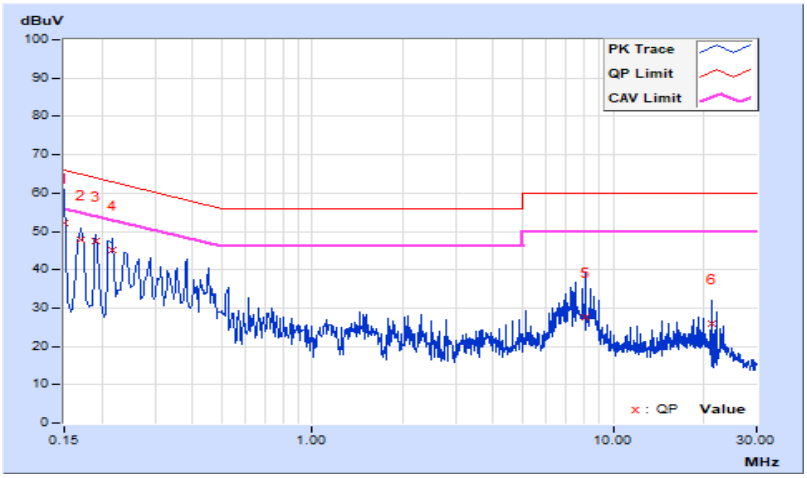


RF Mode	802.11ax (HE20)	**Channel**	CH 6：2437 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Rex Wang		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	**0.15000**	**9.66**	**42.40**	**22.42**	**52.06**	**32.08**	**66.00**	**56.00**	**-13.94**	**-23.92**
2	0.17000	9.68	38.14	21.96	47.82	31.64	64.96	54.96	-17.14	-23.32
3	0.19000	9.69	37.67	21.84	47.36	31.53	64.04	54.04	-16.68	-22.51
4	0.21800	9.71	35.54	24.18	45.25	33.89	62.89	52.89	-17.64	-19.00
5	8.12200	10.03	17.60	6.04	27.63	16.07	60.00	50.00	-32.37	-33.93
6	21.25000	10.16	15.65	3.04	25.81	13.20	60.00	50.00	-34.19	-36.80

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



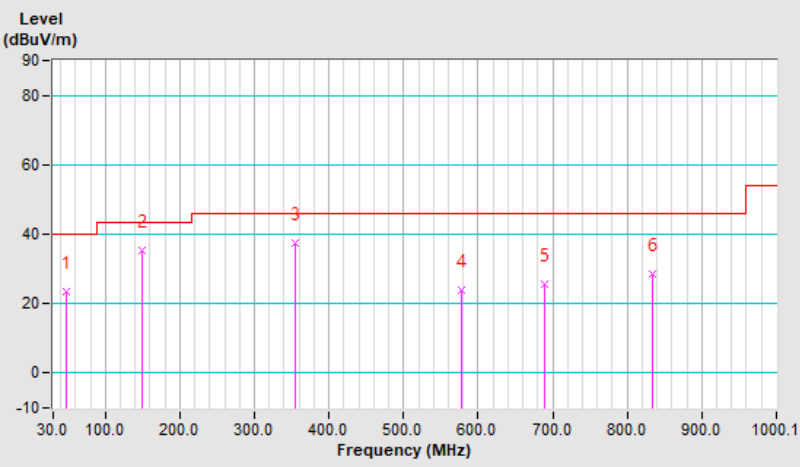
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE20)	**Channel**	CH 6：2437 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 68% RH
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	47.46	23.5 QP	40.0	-16.5	1.00 H	101	35.8	-12.3
2	148.35	35.2 QP	43.5	-8.3	2.00 H	86	47.6	-12.4
3	354.98	37.5 QP	46.0	-8.5	1.00 H	137	48.1	-10.6
4	577.14	24.1 QP	46.0	-21.9	1.00 H	18	30.0	-5.9
5	689.67	25.5 QP	46.0	-20.5	2.00 H	234	29.4	-3.9
6	834.21	28.6 QP	46.0	-17.4	1.00 H	186	30.2	-1.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

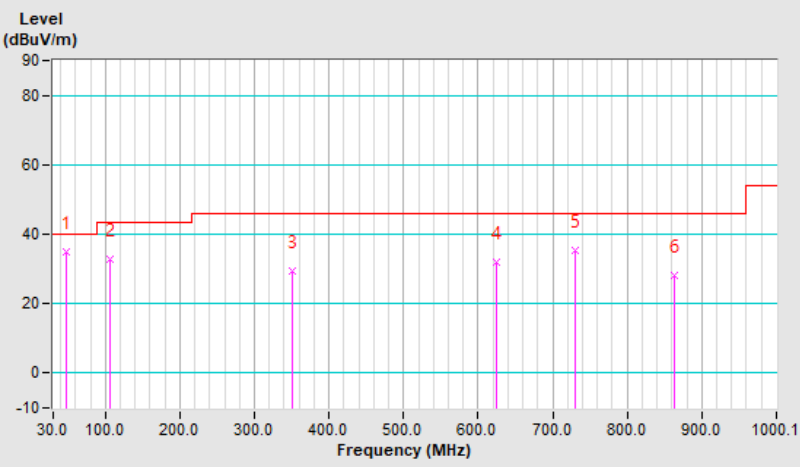


RF Mode	802.11ax (HE20)	Channel	CH 6：2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 68% RH
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**47.46**	**34.9 QP**	**40.0**	**-5.1**	**1.50 V**	**2**	**47.2**	**-12.3**
2	106.64	32.6 QP	43.5	-10.9	1.00 V	203	48.2	-15.6
3	351.10	29.6 QP	46.0	-16.4	2.00 V	101	40.4	-10.8
4	624.67	32.1 QP	46.0	-13.9	2.00 V	8	36.9	-4.8
5	729.44	35.2 QP	46.0	-10.8	1.50 V	168	38.2	-3.0
6	863.32	28.1 QP	46.0	-17.9	1.00 V	284	29.6	-1.5

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11b	**Channel**	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	2387.00	52.5 PK	74.0	-21.5	2.35 H	111	18.4	34.1
2	2387.00	45.5 AV	54.0	-8.5	2.35 H	111	11.4	34.1
3	*2412.00	109.1 PK			2.35 H	111	74.9	34.2
4	*2412.00	107.1 AV			2.35 H	111	72.9	34.2
5	4824.00	50.8 PK	74.0	-23.2	1.97 H	191	53.0	-2.2
6	4824.00	40.6 AV	54.0	-13.4	1.97 H	191	42.8	-2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	2387.00	59.0 PK	74.0	-15.0	2.61 V	124	24.9	34.1
2	2387.00	53.1 AV	54.0	-0.9	2.61 V	124	19.0	34.1
3	*2412.00	119.1 PK			2.61 V	124	84.9	34.2
4	*2412.00	117.1 AV			2.61 V	124	82.9	34.2
5	4824.00	50.9 PK	74.0	-23.1	1.13 V	264	53.1	-2.2
6	4824.00	41.1 AV	54.0	-12.9	1.13 V	264	43.3	-2.2

Remarks:

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

RF Mode	802.11b	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.8 PK			2.35 H	98	74.5	34.3
2	*2437.00	106.8 AV			2.35 H	98	72.5	34.3
3	4874.00	50.9 PK	74.0	-23.1	2.14 H	221	53.0	-2.1
4	4874.00	39.9 AV	54.0	-14.1	2.14 H	221	42.0	-2.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	118.8 PK			2.33 V	110	84.5	34.3
2	*2437.00	116.8 AV			2.33 V	110	82.5	34.3
3	4874.00	51.1 PK	74.0	-22.9	1.56 V	260	53.2	-2.1
4	4874.00	40.1 AV	54.0	-13.9	1.56 V	260	42.2	-2.1

Remarks:

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

RF Mode	802.11b	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	107.0 PK			2.35 H	100	72.6	34.4
2	*2462.00	105.0 AV			2.35 H	100	70.6	34.4
3	2483.50	51.3 PK	74.0	-22.7	2.35 H	100	16.9	34.4
4	2483.50	42.5 AV	54.0	-11.5	2.35 H	100	8.1	34.4
5	4924.00	51.1 PK	74.0	-22.9	2.38 H	163	53.3	-2.2
6	4924.00	40.4 AV	54.0	-13.6	2.38 H	163	42.6	-2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	118.7 PK			2.27 V	117	84.3	34.4
2	*2462.00	116.7 AV			2.27 V	117	82.3	34.4
3	2483.50	59.5 PK	74.0	-14.5	2.27 V	117	25.1	34.4
4	2483.50	53.2 AV	54.0	-0.8	2.27 V	117	18.8	34.4
5	4924.00	51.9 PK	74.0	-22.1	3.04 V	58	54.1	-2.2
6	4924.00	40.8 AV	54.0	-13.2	3.04 V	58	43.0	-2.2

Remarks:

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

RF Mode	802.11g	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	57.6 PK	74.0	-16.4	2.31 H	112	23.5	34.1
2	2390.00	43.9 AV	54.0	-10.1	2.31 H	112	9.8	34.1
3	*2412.00	107.2 PK			2.31 H	112	73.0	34.2
4	*2412.00	99.2 AV			2.31 H	112	65.0	34.2
5	4824.00	50.7 PK	74.0	-23.3	1.65 H	62	52.9	-2.2
6	4824.00	40.3 AV	54.0	-13.7	1.65 H	62	42.5	-2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.4 PK	74.0	-8.6	2.34 V	121	31.3	34.1
2	2390.00	52.6 AV	54.0	-1.4	2.34 V	121	18.5	34.1
3	*2412.00	117.2 PK			2.34 V	121	83.0	34.2
4	*2412.00	109.2 AV			2.34 V	121	75.0	34.2
5	4824.00	51.6 PK	74.0	-22.4	1.90 V	186	53.8	-2.2
6	4824.00	40.6 AV	54.0	-13.4	1.90 V	186	42.8	-2.2

Remarks:

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

RF Mode	802.11g	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	52.8 PK	74.0	-21.2	2.55 H	85	18.7	34.1
2	2390.00	40.8 AV	54.0	-13.2	2.55 H	85	6.7	34.1
3	*2437.00	112.7 PK			2.55 H	85	78.4	34.3
4	*2437.00	104.7 AV			2.55 H	85	70.4	34.3
5	2483.50	56.9 PK	74.0	-17.1	2.55 H	85	22.5	34.4
6	2483.50	42.4 AV	54.0	-11.6	2.55 H	85	8.0	34.4
7	4874.00	51.2 PK	74.0	-22.8	2.95 H	117	53.3	-2.1
8	4874.00	41.1 AV	54.0	-12.9	2.95 H	117	43.2	-2.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	64.7 PK	74.0	-9.3	2.07 V	117	30.6	34.1
2	2390.00	47.8 AV	54.0	-6.2	2.07 V	117	13.7	34.1
3	*2437.00	122.8 PK			2.07 V	117	88.5	34.3
4	*2437.00	114.8 AV			2.07 V	117	80.5	34.3
5	2483.50	67.8 PK	74.0	-6.2	2.07 V	117	33.4	34.4
6	2483.50	53.0 AV	54.0	-1.0	2.07 V	117	18.6	34.4
7	4874.00	51.7 PK	74.0	-22.3	3.53 V	76	53.8	-2.1
8	4874.00	41.3 AV	54.0	-12.7	3.53 V	76	43.4	-2.1

Remarks:

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

RF Mode	802.11g	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	105.9 PK			2.51 H	84	71.5	34.4
2	*2462.00	97.9 AV			2.51 H	84	63.5	34.4
3	2483.50	57.2 PK	74.0	-16.8	2.51 H	84	22.8	34.4
4	2483.50	42.5 AV	54.0	-11.5	2.51 H	84	8.1	34.4
5	4924.00	51.1 PK	74.0	-22.9	1.02 H	83	53.3	-2.2
6	4924.00	40.4 AV	54.0	-13.6	1.02 H	83	42.6	-2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	116.1 PK			2.30 V	117	81.7	34.4
2	*2462.00	108.1 AV			2.30 V	117	73.7	34.4
3	2483.50	69.8 PK	74.0	-4.2	2.30 V	117	35.4	34.4
4	2483.50	52.6 AV	54.0	-1.4	2.30 V	117	18.2	34.4
5	4924.00	51.6 PK	74.0	-22.4	1.91 V	346	53.8	-2.2
6	4924.00	41.1 AV	54.0	-12.9	1.91 V	346	43.3	-2.2

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	64.4 PK	74.0	-9.6	2.52 H	304	30.3	34.1
2	2390.00	48.4 AV	54.0	-5.6	2.52 H	304	14.3	34.1
3	*2412.00	109.6 PK			2.52 H	304	75.4	34.2
4	*2412.00	99.5 AV			2.52 H	304	65.3	34.2
5	4824.00	50.6 PK	74.0	-23.4	2.08 H	267	52.8	-2.2
6	4824.00	41.1 AV	54.0	-12.9	2.08 H	267	43.3	-2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	68.9 PK	74.0	-5.1	2.61 V	123	34.8	34.1
2	2390.00	52.9 AV	54.0	-1.1	2.61 V	123	18.8	34.1
3	*2412.00	117.3 PK			2.61 V	123	83.1	34.2
4	*2412.00	107.2 AV			2.61 V	123	73.0	34.2
5	4824.00	51.7 PK	74.0	-22.3	1.27 V	71	53.9	-2.2
6	4824.00	41.8 AV	54.0	-12.2	1.27 V	71	44.0	-2.2

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	54.0 PK	74.0	-20.0	2.45 H	281	19.9	34.1
2	2390.00	42.1 AV	54.0	-11.9	2.45 H	281	8.0	34.1
3	*2437.00	115.1 PK			2.45 H	281	80.8	34.3
4	*2437.00	105.0 AV			2.45 H	281	70.7	34.3
5	2483.50	55.9 PK	74.0	-18.1	2.45 H	281	21.5	34.4
6	2483.50	43.1 AV	54.0	-10.9	2.45 H	281	8.7	34.4
7	4874.00	50.7 PK	74.0	-23.3	3.06 H	20	52.8	-2.1
8	4874.00	40.3 AV	54.0	-13.7	3.06 H	20	42.4	-2.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.6 PK	74.0	-15.4	2.56 V	125	24.5	34.1
2	2390.00	46.4 AV	54.0	-7.6	2.56 V	125	12.3	34.1
3	*2437.00	122.6 PK			2.56 V	125	88.3	34.3
4	*2437.00	112.5 AV			2.56 V	125	78.2	34.3
5	2483.50	68.0 PK	74.0	-6.0	2.56 V	125	33.6	34.4
6	2483.50	52.9 AV	54.0	-1.1	2.56 V	125	18.5	34.4
7	4874.00	51.2 PK	74.0	-22.8	2.55 V	293	53.3	-2.1
8	4874.00	40.8 AV	54.0	-13.2	2.55 V	293	42.9	-2.1

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.1 PK			2.62 H	176	74.7	34.4
2	*2462.00	99.0 AV			2.62 H	176	64.6	34.4
3	2483.50	65.1 PK	74.0	-8.9	2.62 H	176	30.7	34.4
4	2483.50	48.2 AV	54.0	-5.8	2.62 H	176	13.8	34.4
5	4924.00	50.7 PK	74.0	-23.3	1.40 H	255	52.9	-2.2
6	4924.00	40.7 AV	54.0	-13.3	1.40 H	255	42.9	-2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.0 PK			2.49 V	121	82.6	34.4
2	*2462.00	106.9 AV			2.49 V	121	72.5	34.4
3	2483.50	72.3 PK	74.0	-1.7	2.49 V	121	37.9	34.4
4	2483.50	53.0 AV	54.0	-1.0	2.49 V	121	18.6	34.4
5	4924.00	51.2 PK	74.0	-22.8	3.28 V	332	53.4	-2.2
6	4924.00	41.3 AV	54.0	-12.7	3.28 V	332	43.5	-2.2

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 3：2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.6 PK	74.0	-10.4	2.43 H	302	29.5	34.1
2	2390.00	49.1 AV	54.0	-4.9	2.43 H	302	15.0	34.1
3	*2422.00	105.8 PK			2.43 H	302	71.6	34.2
4	*2422.00	95.4 AV			2.43 H	302	61.2	34.2
5	4844.00	51.3 PK	74.0	-22.7	3.12 H	152	53.4	-2.1
6	4844.00	41.5 AV	54.0	-12.5	3.12 H	152	43.6	-2.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	68.7 PK	74.0	-5.3	1.47 V	139	34.6	34.1
2	2390.00	53.2 AV	54.0	-0.8	1.47 V	139	19.1	34.1
3	*2422.00	115.5 PK			1.47 V	139	81.3	34.2
4	*2422.00	104.6 AV			1.47 V	139	70.4	34.2
5	4844.00	52.5 PK	74.0	-21.5	2.32 V	165	54.6	-2.1
6	4844.00	42.2 AV	54.0	-11.8	2.32 V	165	44.3	-2.1

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	2.41 H	293	22.4	34.1
2	2390.00	42.0 AV	54.0	-12.0	2.41 H	293	7.9	34.1
3	*2437.00	108.3 PK			2.41 H	293	74.0	34.3
4	*2437.00	95.8 AV			2.41 H	293	61.5	34.3
5	2483.50	54.3 PK	74.0	-19.7	2.41 H	293	19.9	34.4
6	2483.50	43.1 AV	54.0	-10.9	2.41 H	293	8.7	34.4
7	4874.00	45.8 PK	74.0	-28.2	1.65 H	178	53.4	-7.6
8	4874.00	36.0 AV	54.0	-18.0	1.65 H	178	43.6	-7.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	64.5 PK	74.0	-9.5	2.58 V	118	30.4	34.1
2	2390.00	49.7 AV	54.0	-4.3	2.58 V	118	15.6	34.1
3	*2437.00	116.5 PK			2.58 V	118	82.2	34.3
4	*2437.00	105.9 AV			2.58 V	118	71.6	34.3
5	2483.50	70.3 PK	74.0	-3.7	2.58 V	118	35.9	34.4
6	**2483.50**	**53.7 AV**	**54.0**	**-0.3**	**2.58 V**	**118**	**19.3**	**34.4**
7	4874.00	52.5 PK	74.0	-21.5	1.53 V	235	54.6	-2.1
8	4874.00	42.4 AV	54.0	-11.6	1.53 V	235	44.5	-2.1

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 9：2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 71.3% RH
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	107.3 PK			2.33 H	272	72.9	34.4
2	*2452.00	96.8 AV			2.33 H	272	62.4	34.4
3	2483.50	65.8 PK	74.0	-8.2	2.33 H	272	31.4	34.4
4	2483.50	48.3 AV	54.0	-5.7	2.33 H	272	13.9	34.4
5	4904.00	51.7 PK	74.0	-22.3	1.52 H	332	53.7	-2.0
6	4904.00	41.1 AV	54.0	-12.9	1.52 H	332	43.1	-2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	115.3 PK			1.37 V	138	80.9	34.4
2	*2452.00	104.1 AV			1.37 V	138	69.7	34.4
3	2483.50	72.4 PK	74.0	-1.6	1.37 V	138	38.0	34.4
4	2483.50	53.5 AV	54.0	-0.5	1.37 V	138	19.1	34.4
5	4904.00	52.7 PK	74.0	-21.3	2.34 V	169	54.7	-2.0
6	4904.00	42.2 AV	54.0	-11.8	2.34 V	169	44.2	-2.0

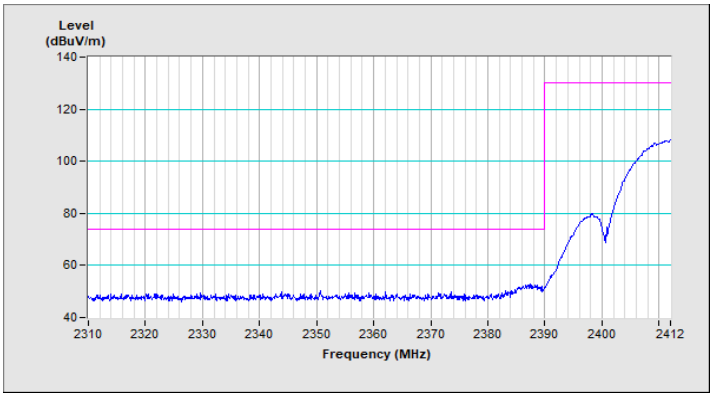
Remarks:

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

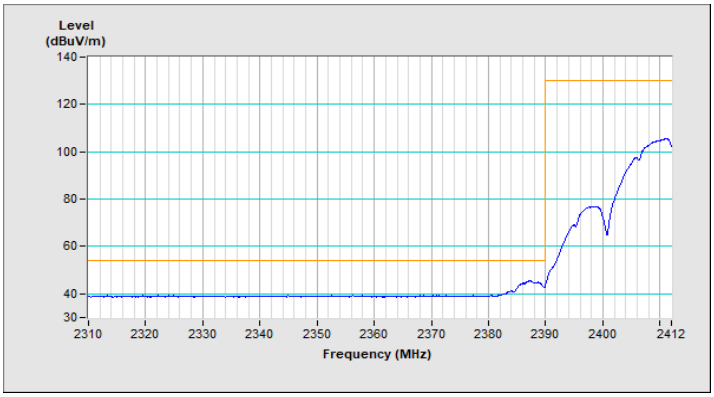
Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

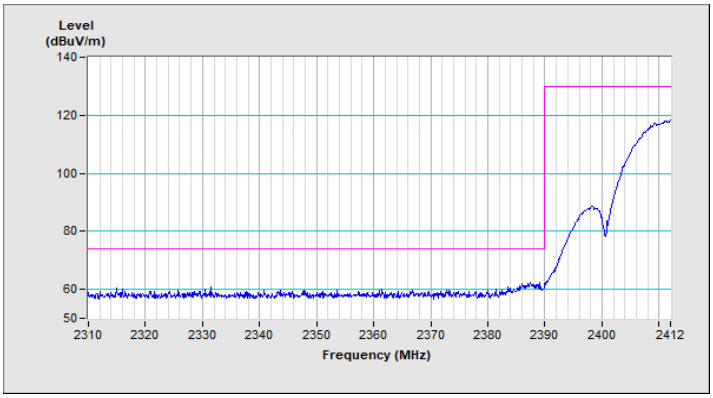
802.11b Channel 1



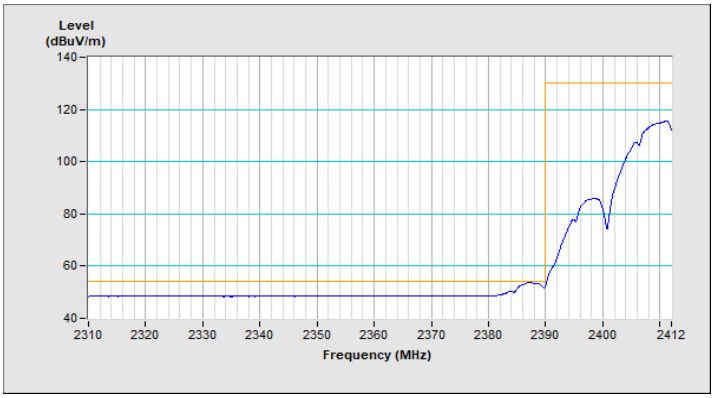
Horizontal (Peak)



Horizontal (Average)

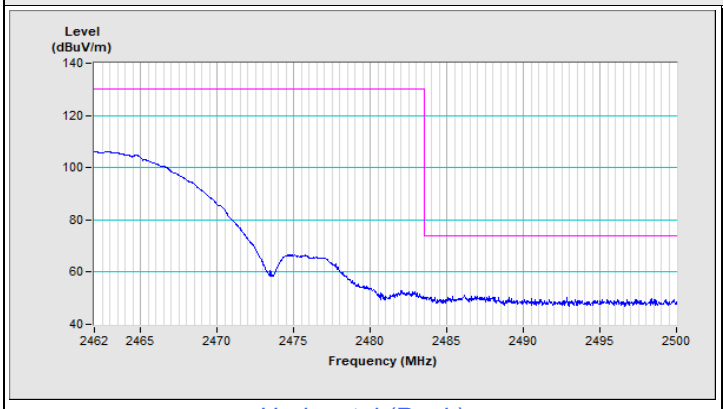


Vertical (Peak)

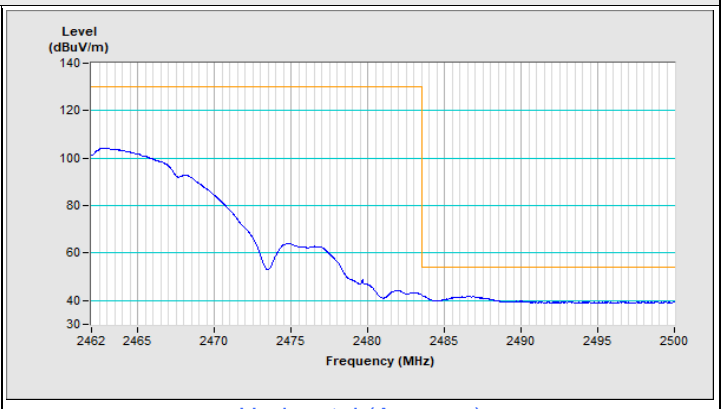


Vertical (Average)

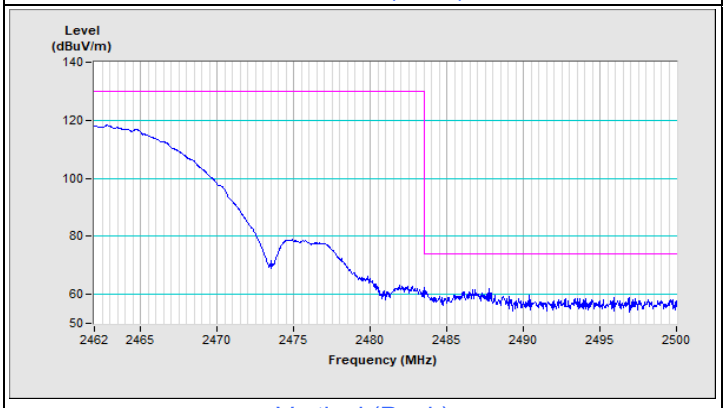
802.11b Channel 11



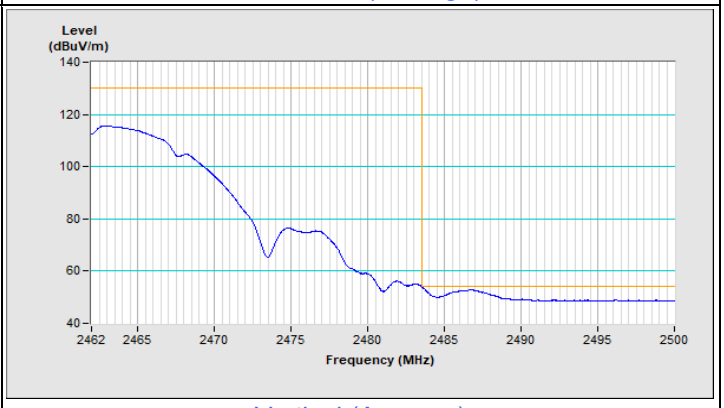
Horizontal (Peak)



Horizontal (Average)



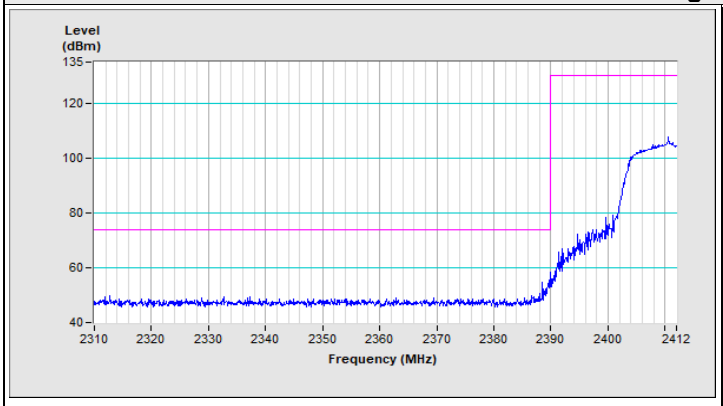
Vertical (Peak)



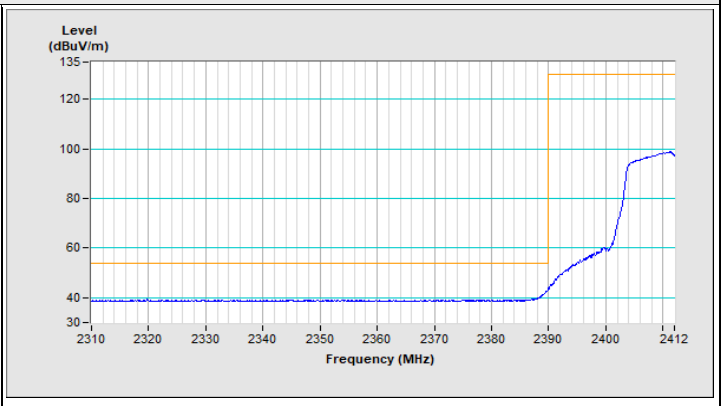
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

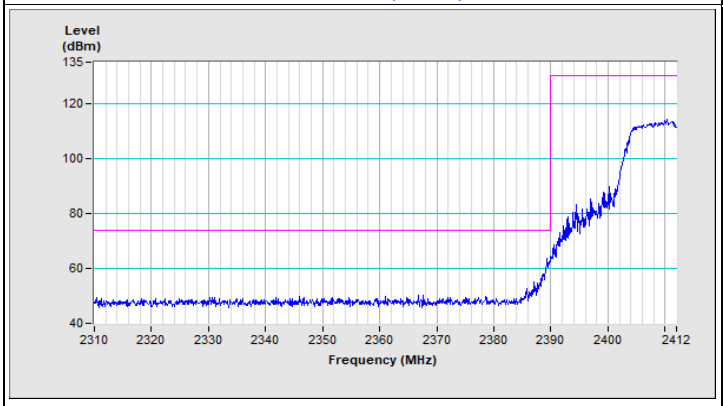
802.11g Channel 1



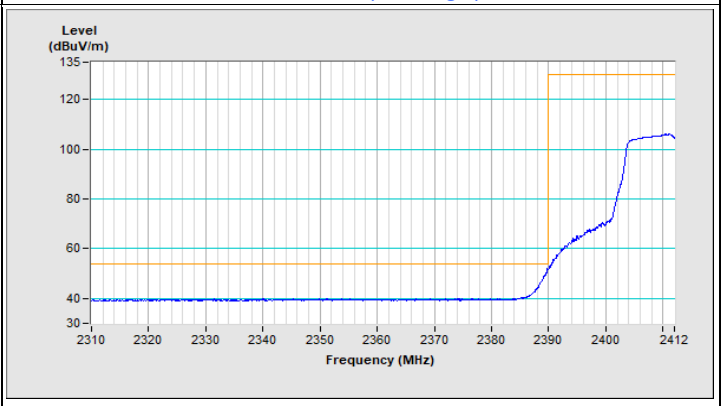
Horizontal (Peak)



Horizontal (Average)

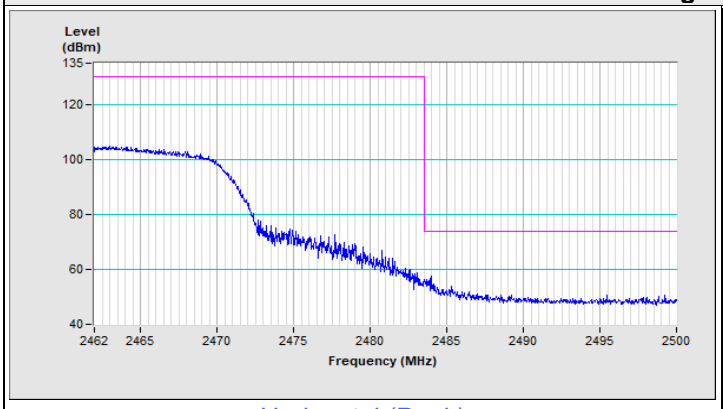


Vertical (Peak)

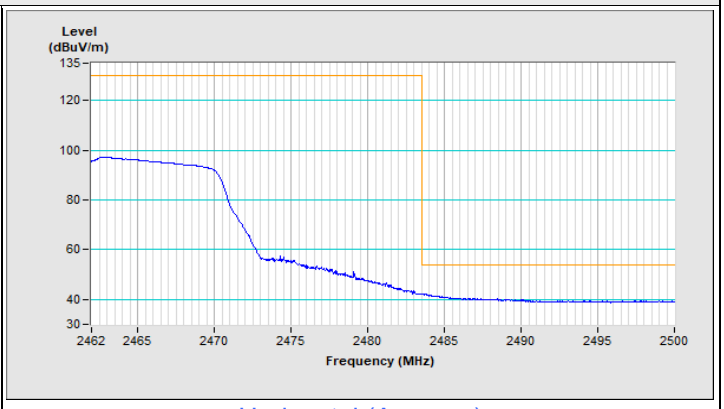


Vertical (Average)

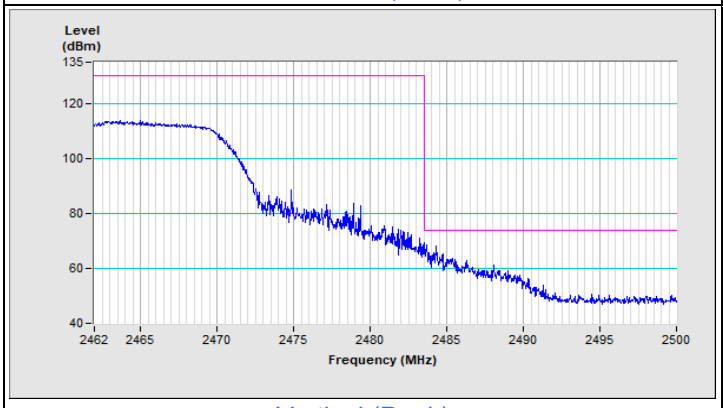
802.11g Channel 11



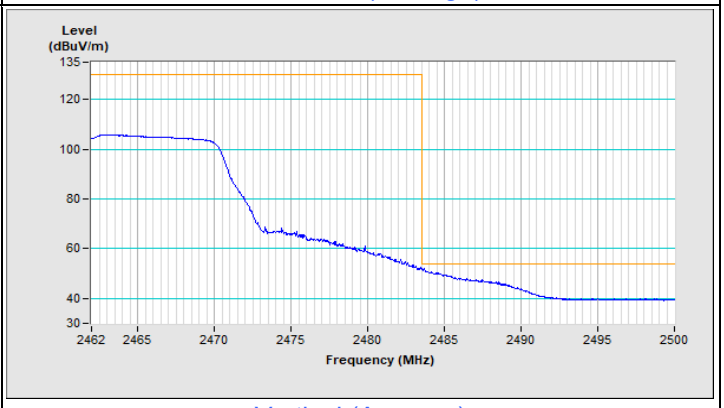
Horizontal (Peak)



Horizontal (Average)



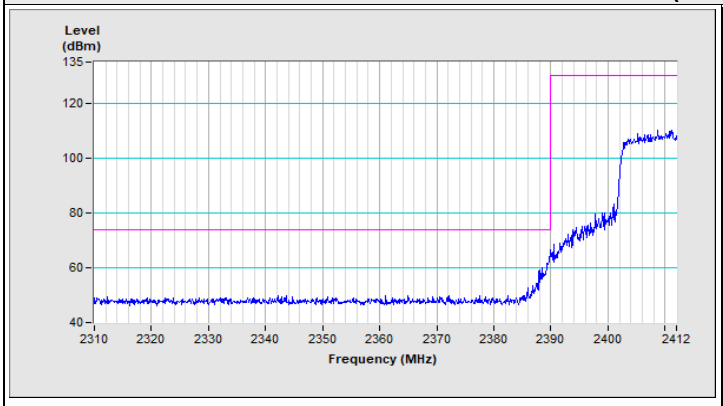
Vertical (Peak)



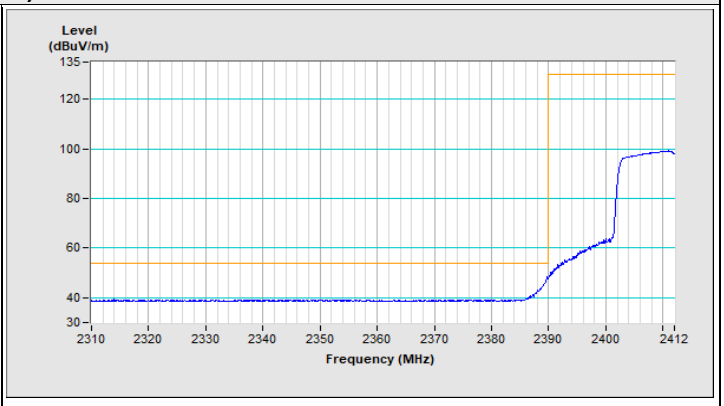
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

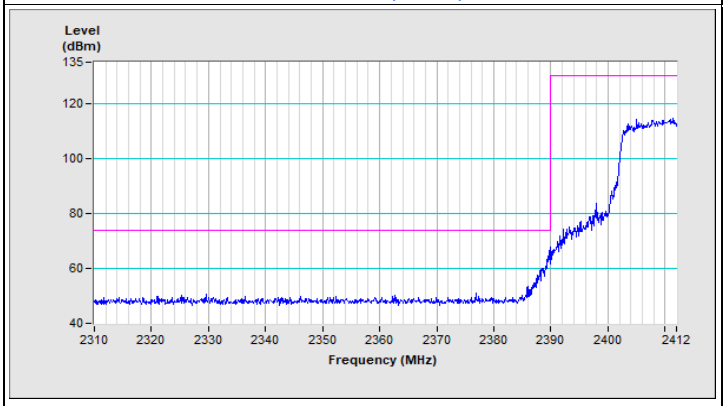
802.11ax (HE20) Channel 1



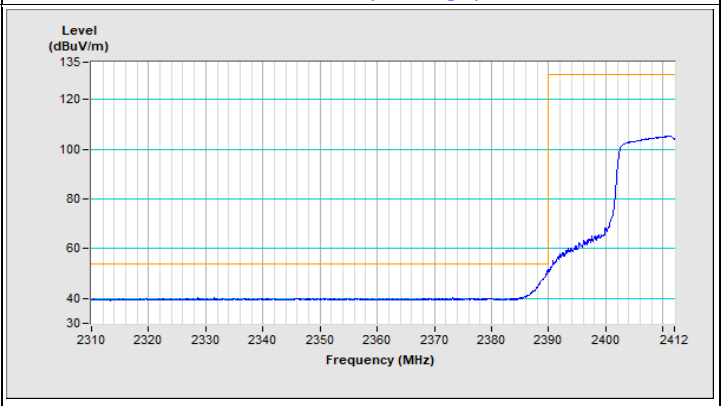
Horizontal (Peak)



Horizontal (Average)

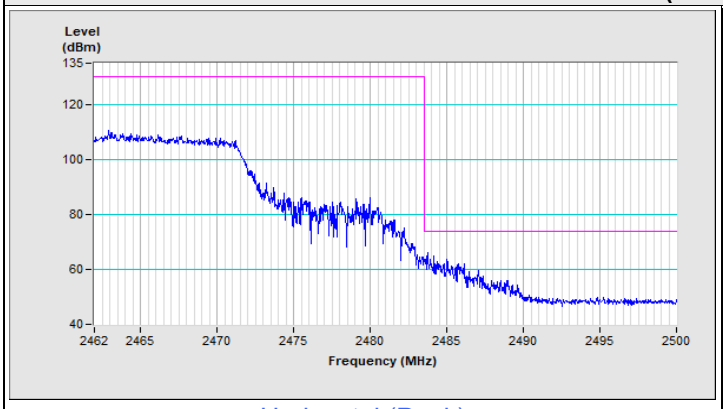


Vertical (Peak)

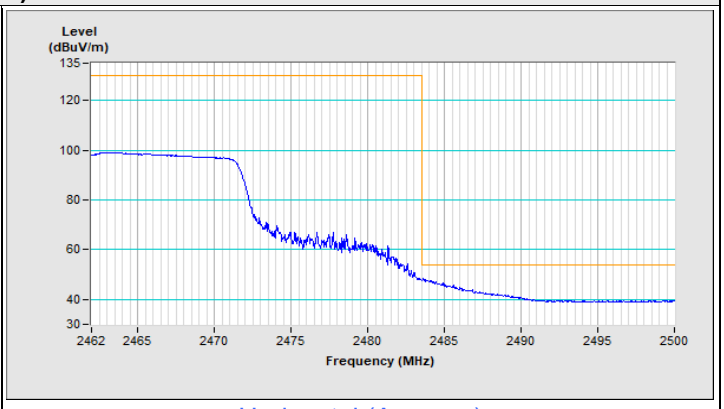


Vertical (Average)

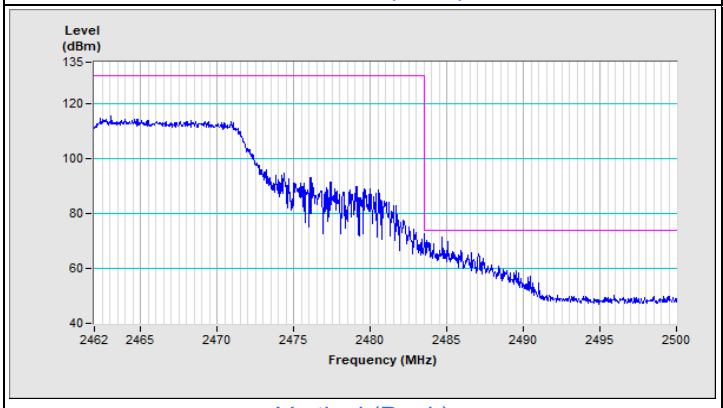
802.11ax (HE20) Channel 11



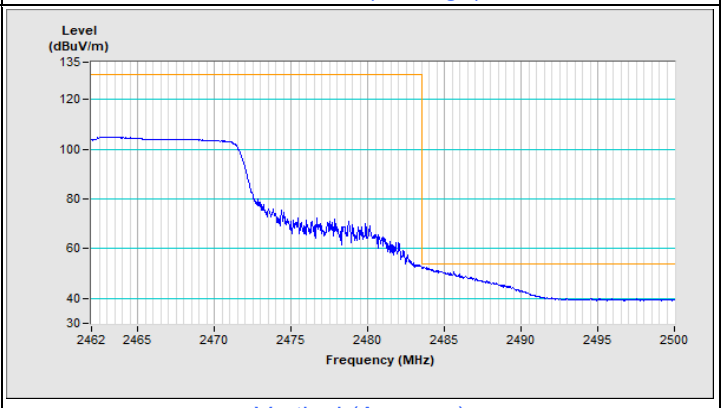
Horizontal (Peak)



Horizontal (Average)



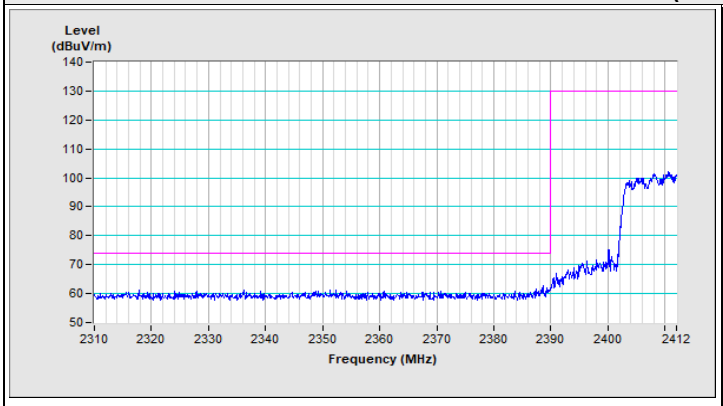
Vertical (Peak)



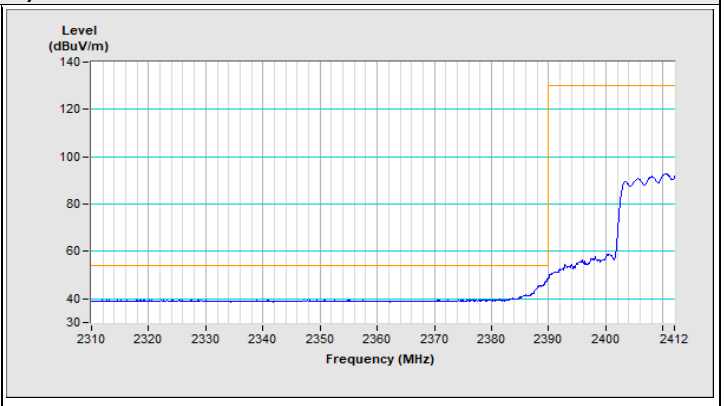
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

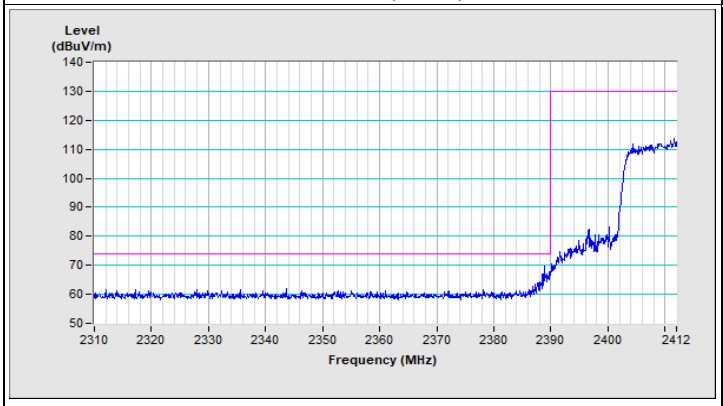
802.11ax (HE40) Channel 3



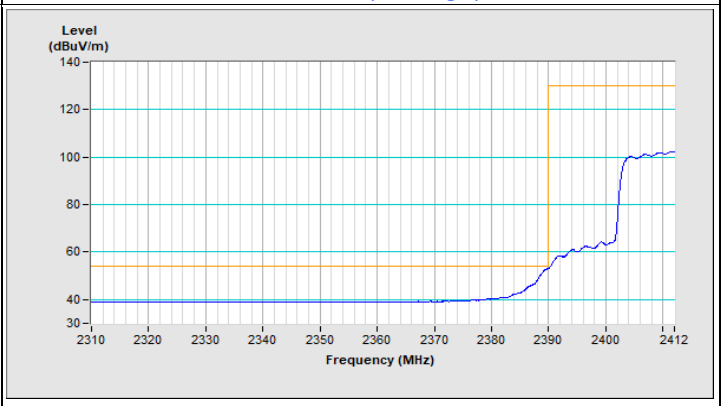
Horizontal (Peak)



Horizontal (Average)

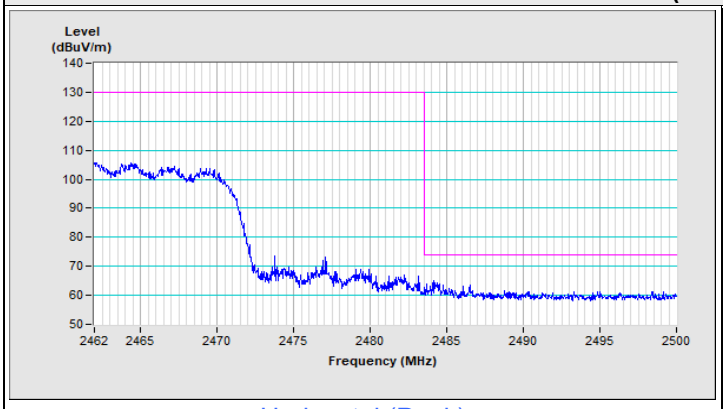


Vertical (Peak)

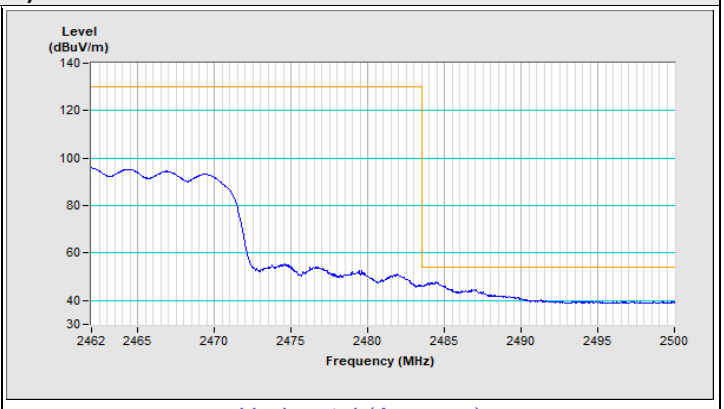


Vertical (Average)

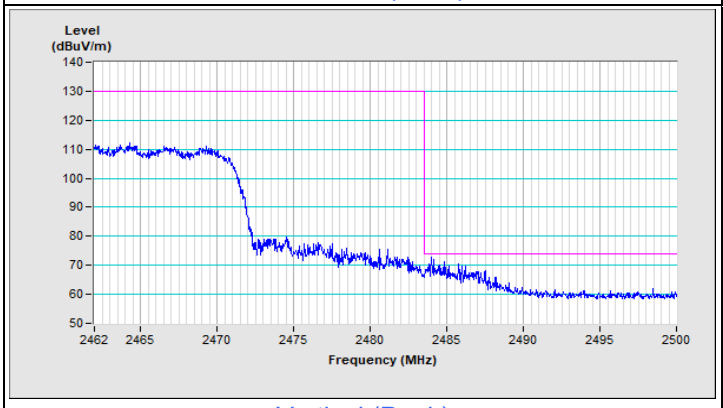
802.11ax (HE40) Channel 9



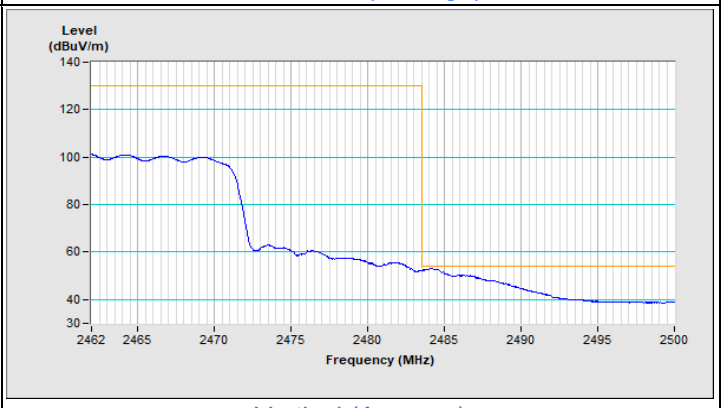
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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