

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Report No.: RFBEDV-WTW-P25060155

FCC ID: G95-CGA437C

Product: Cable Gateway Docsis 3.1

Brand: Vantiva

Model No.: CGA437CVBV5

Series Model: CGA437CXXXX (where every x can be any alpha numeric symbol from A to Z, or number from 0 to 9 or blank, which are all for marketing purposes only)

Received Date: 2025/5/15

Test Date: 2025/5/15 ~ 2025/6/18

Issued Date: 2025/7/11

Applicant: Vantiva USA LLC

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003 for Test Location(1)

Designation Number: 281270 / TW0032 for Test Location(2)

Approved by:

Jeremy Lin

Jeremy Lin / Project Engineer

Date:

2025/7/11

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Prepared by : Celine Chou / Senior Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P25060155	Original release.	2025/7/11

1 Certificate

Product: Cable Gateway Docsis 3.1

Brand: Vantiva

Test Model: CGA437CVBV5

Series Model: CGA437CXXXX (where every x can be any alpha numeric symbol from A to Z, or number from 0 to 9 or blank, which are all for marketing purposes only)

Sample Status: Engineering sample

Applicant: Vantiva USA LLC

Test Date: 2025/5/15 ~ 2025/6/18

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Measurement ANSI C63.10-2013

procedure: 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 -14.90 dB at 0.39000 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -6.6 dB at 46.49 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

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) (±)
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.00 dB
	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 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	Cable Gateway Docsis 3.1
Brand	Vantiva
Test Model	CGA437CVBV5
Series Model	CGA437CXXXX (where every x can be any alpha numeric symbol from A to Z, or number from 0 to 9 or blank, which are all for marketing purposes only)
Status of EUT	Engineering sample
Power Supply Rating	12 Vdc 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 573.5 Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40):7
Output Power	679.834 mW (28.32 dBm)

Note:

1. All models are listed as below.

Brand	Model No.	Difference description
Vantiva	CGA437CVBV5 (main tested model)	for marketing purposes only
	CGA437CXXXX (where every x can be any alpha numeric symbol from A to Z, or number from 0 to 9 or blank)	

2. The EUT uses following accessories.

AC Adapter 1	Brand	HONOTO
	Model	ADS-36LE-12 12030EPCU-L
	AC Input	100-120 Vac; 50/60 Hz; 0.8 A
	DC Output	12 Vdc, 2.5 A
	DC Output Cable	1.2 m, without Core
	Manufacturer	SHENZHEN HONOR ELECTRONIC CO., LTD

3. There are WLAN (2.4 GHz & 5 GHz) technology used for the EUT.

4. Simultaneously transmission combination.

Combination	Technology	
1	WLAN (2.4 GHz)	WLAN (5 GHz)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. 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.

Ant. No.	Ant. port	Ant. Net Gain (dBi)	Frequency Range	Antenna Type	Connector Type
DB-1	0	2.47	2400~2483.5 MHz	PCB	Murata
	1	4.59	5150~5250 MHz		
	1	4.50	5250~5350 MHz		
	1	5.37	5470~5725 MHz		
	1	4.87	5725~5850 MHz		
DB-2	1	4.11	2400~2483.5 MHz	PCB	Murata
	0	4.97	5150~5250 MHz		
	0	4.71	5250~5350 MHz		
	0	4.69	5470~5725 MHz		
	0	3.91	5725~5850 MHz		

Antenna Gain	Directional Gain (dBi)
2400~2483.5 MHz	3.72
5150~5250 MHz	4.32
5250~5350 MHz	4.51
5470~5725 MHz	6.08
5725~5850 MHz	5.53

* 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), VHT mode for 20 MHz (40 MHz) and 802.11ax mode for 20 MHz (40 MHz). Therefore the investigated worst case is the representative mode in test report

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

Pre-Scan:	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).
Worst Case:	The EUT is designed to be positioned on the Standing Mode 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	1, 2, 6, 10,11	DBPSK	1Mb/s
	802.11g	CDD	1, 2, 6, 10,11	BPSK	6Mb/s
	802.11ax (HE20)	CDD & Beamforming	1, 2, 6, 10,11	BPSK	MCS0
	802.11ax (HE40)	CDD & Beamforming	3, 4, 6, 8, 9	BPSK	MCS0
Power Spectral Density	802.11b	CDD	1, 2, 6, 10,11	DBPSK	1Mb/s
	802.11g	CDD	1, 2, 6, 10,11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 2, 6, 10,11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 4, 6, 8, 9	BPSK	MCS0
6 dB Bandwidth / Conducted Out of Band Emissions	802.11b	CDD	1, 2, 6, 10,11	DBPSK	1Mb/s
	802.11g	CDD	1, 2, 6, 10,11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 2, 6, 10,11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 4, 6, 8, 9	BPSK	MCS0
AC Power Conducted Emissions	802.11b	CDD	2	DBPSK	1Mb/s
Unwanted Emissions below 1 GHz	802.11b	CDD	2	DBPSK	1Mb/s
Unwanted Emissions above 1 GHz	802.11b	CDD	1, 2, 6, 10,11	DBPSK	1Mb/s
	802.11g	CDD	1, 2, 6, 10,11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 2, 6, 10,11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 4, 6, 8, 9	BPSK	MCS0

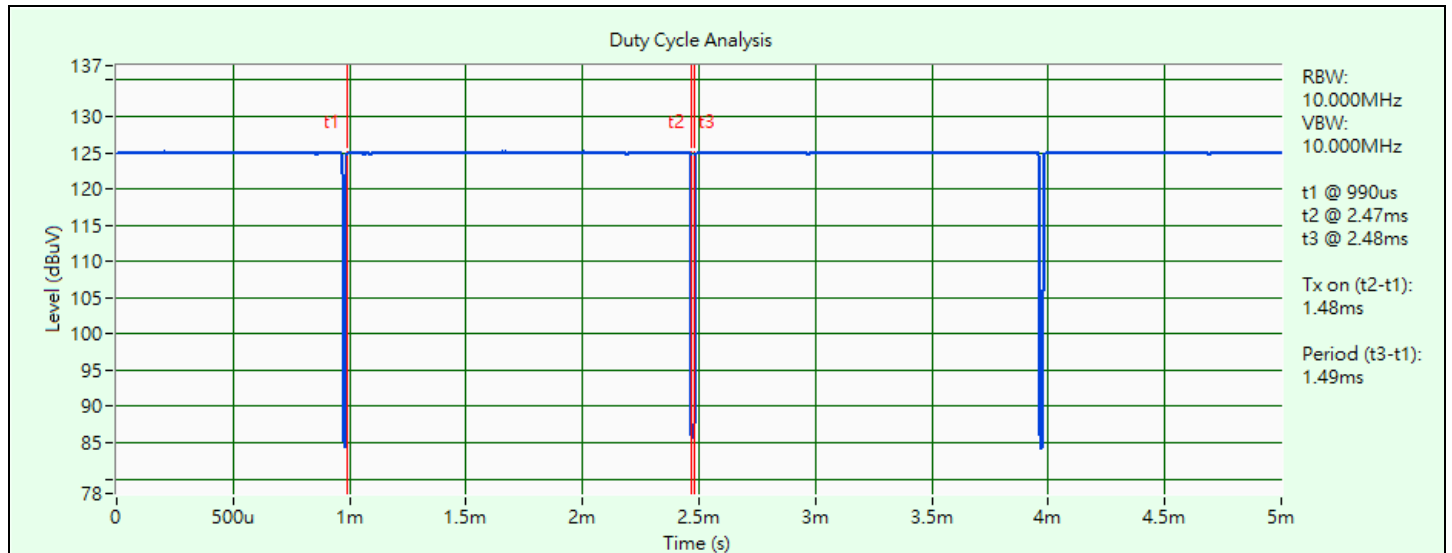
3.5 Duty Cycle of Test Signal

802.11b: Duty cycle = 1.48 ms / 1.49 ms x 100% = 99.3%

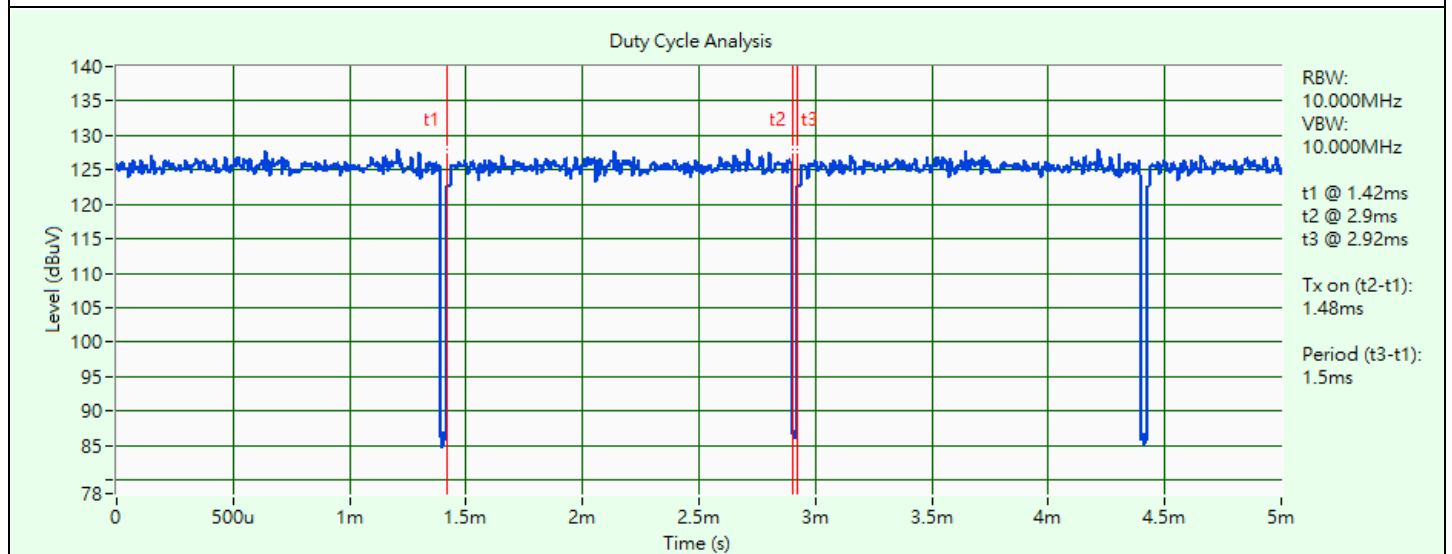
802.11g: Duty cycle = 1.48 ms / 1.5 ms x 100% = 98.7%

802.11ax (HE20): Duty cycle = 1.155 ms / 1.175 ms x 100% = 98.3%

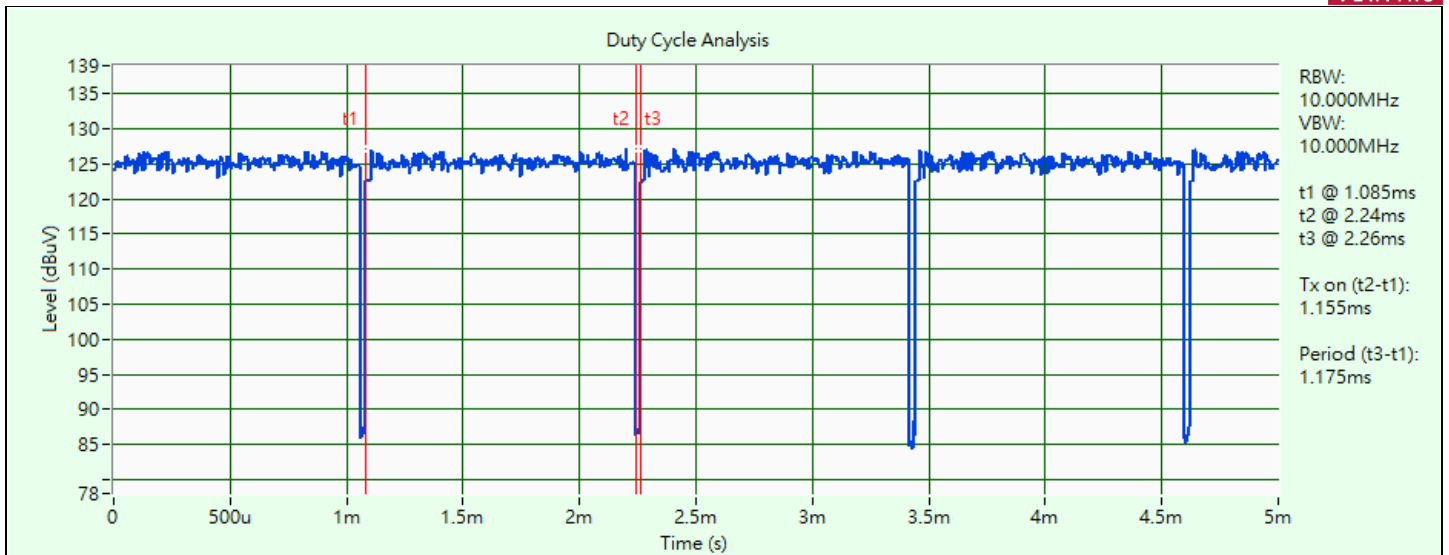
802.11ax (HE40): Duty cycle = 1.21 ms / 1.23 ms x 100% = 98.4%



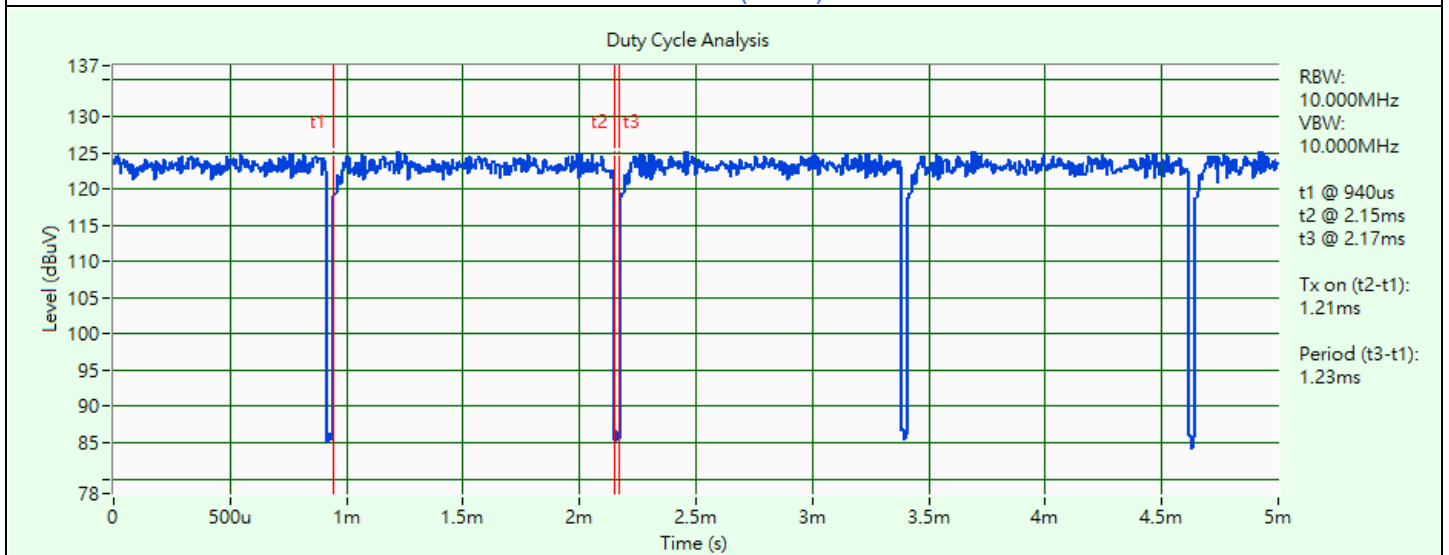
802.11b



802.11g



802.11ax (HE20)

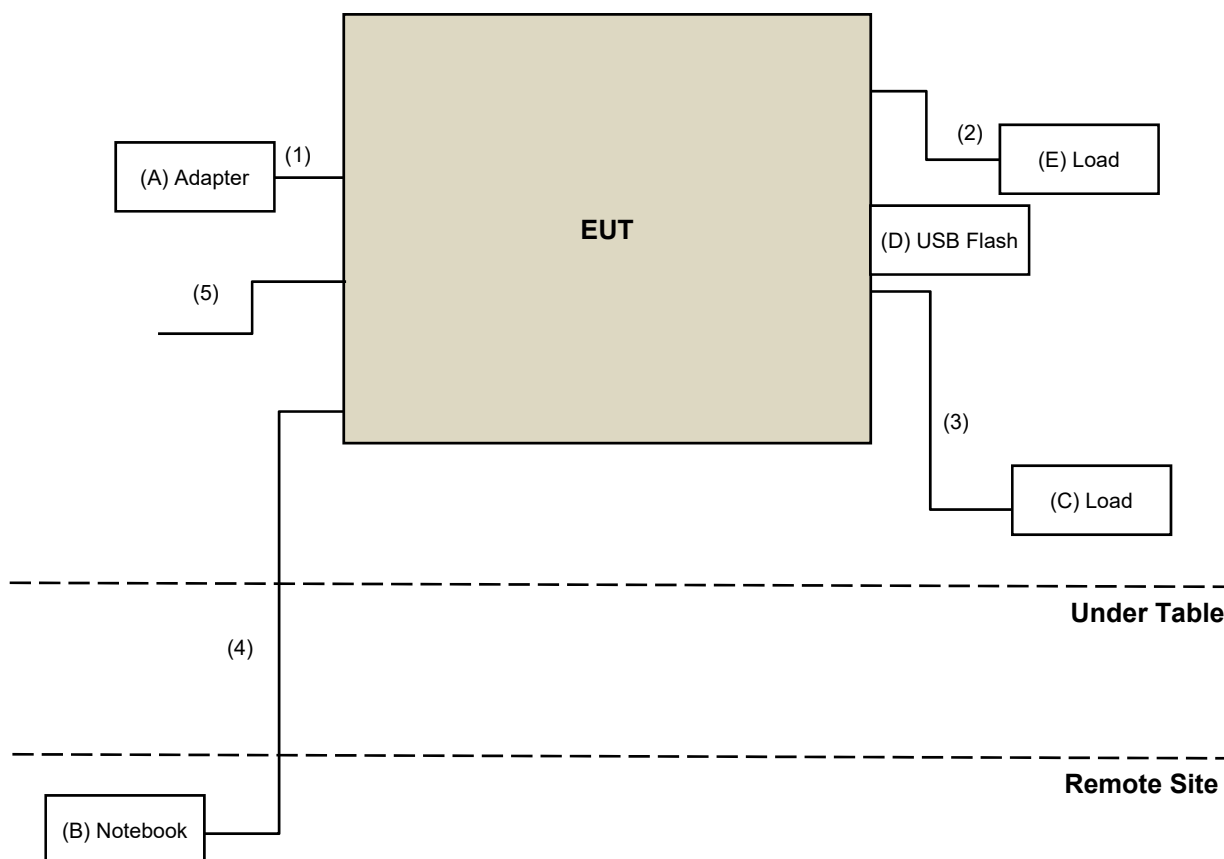


802.11ax (HE40)

3.6 Test Program Used and Operation Descriptions

Controlling software accessMtool version 3.3.0.6 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	HONOTO	ADS-36LE-12 12030EPCU-L	N/A	N/A	Supplied by applicant
B	Notebook	Lenovo	L470	PF11CSQA	N/A	Provided by Lab
C	Load	N/A	N/A	N/A	N/A	Provided by Lab
D	USB Flash	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
E	Load	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.2	Yes	0	Supplied by applicant
2	RJ-11 Cable	1	1.5	No	0	Provided by Lab
3	RJ-45 Cable	2	1.5	No	0	Provided by Lab
4	RJ-45 Cable	1	6	No	0	Provided by Lab
5	Coaxial Cable	1	1.8	No	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
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
Peak Power Analyzer Keysight	8990B	MY51000485	2025/1/20	2026/1/19
Wideband Power Sensor Keysight	N1923A	MY58020002	2025/1/21	2026/1/20
		MY58140009	2025/1/21	2026/1/20

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/6/18

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
Signal & Spectrum Analyzer R&S	FSV3044	101504	2025/6/18	2026/6/17
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: 2025/6/18

4.3 6 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2024/11/28	2025/11/27
	E1-011280	05	2024/11/28	2025/11/27
	E1-011311	09	2024/11/28	2025/11/27
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESR3	102783	2024/12/17	2025/12/16
Fixed Attenuator STI	BNC5W10dB	PAD-COND2-01	2024/8/25	2025/8/24
LISN R&S	ESH2-Z5	100100	2025/3/5	2026/3/4
	ESH3-Z5	100312	2024/9/9	2025/9/8
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2024/8/25	2025/8/24
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2025/6/17

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1213	2024/10/14	2025/10/13
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Keysight	N9038B	MY60180019	2025/1/15	2026/1/14
Preamplifier EMCI	EMC330N	980782	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMCCFD400-NM-NM-500	201233	2025/1/14	2026/1/13
	EMCCFD400-NM-NM-3000	201235	2025/1/14	2026/1/13
	EMCCFD400-NM-NM-9000	201236(with PAD)	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2025/6/17

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna RFSPIN	DRH18-E	210103A18E	2024/11/10	2025/11/9
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2024/11/10	2025/11/9
MXE EMI Receiver Keysight	N9038B	MY60180019	2025/1/15	2026/1/14
Preamplifier EMCI	EMC118A45SE	980808	2024/12/26	2025/12/25
	EMC184045SE	980788	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2025/1/14	2026/1/13
	EMC101G-KM-KM-3000	201258	2025/1/14	2026/1/13
	EMC101G-KM-KM-5000	201261	2025/1/14	2026/1/13
	EMC104-SM-SM-1000	210102	2025/1/14	2026/1/13
	EMC104-SM-SM-3000	201231	2025/1/14	2026/1/13
	EMC104-SM-SM-9000	201243	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2025/5/15 ~ 2025/6/16

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

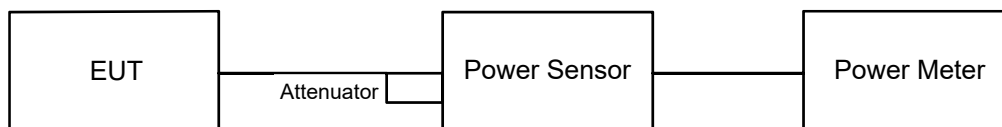
Notes:

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



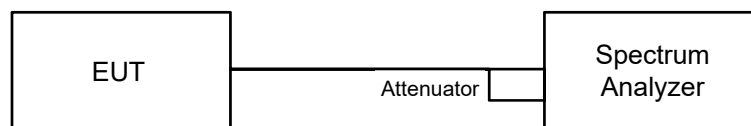
6.1.2 Test Procedure

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



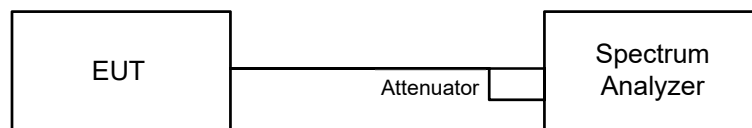
6.2.2 Test Procedure

- 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 $\geq 3 \times$ RBW.
- f. Detector = power averaging (RMS) or sample detector (when RMS not available).
- g. Ensure that the number of measurement points in the sweep $\geq 2 \times$ 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

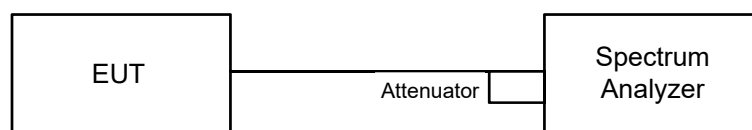


6.3.2 Test Procedure

- Set resolution bandwidth (RBW) = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

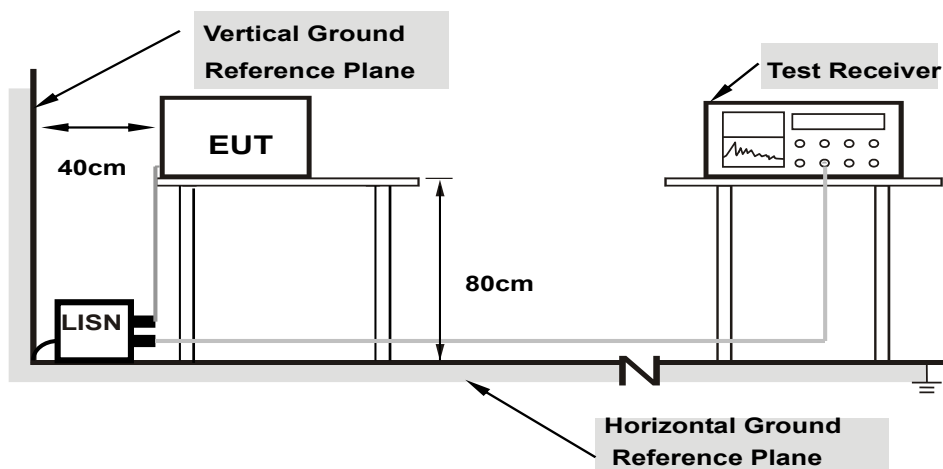
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

- Set RBW = 100 kHz.
- Set VBW ≥ 300 kHz.
- Detector = peak.
- Sweep = auto couple.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

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

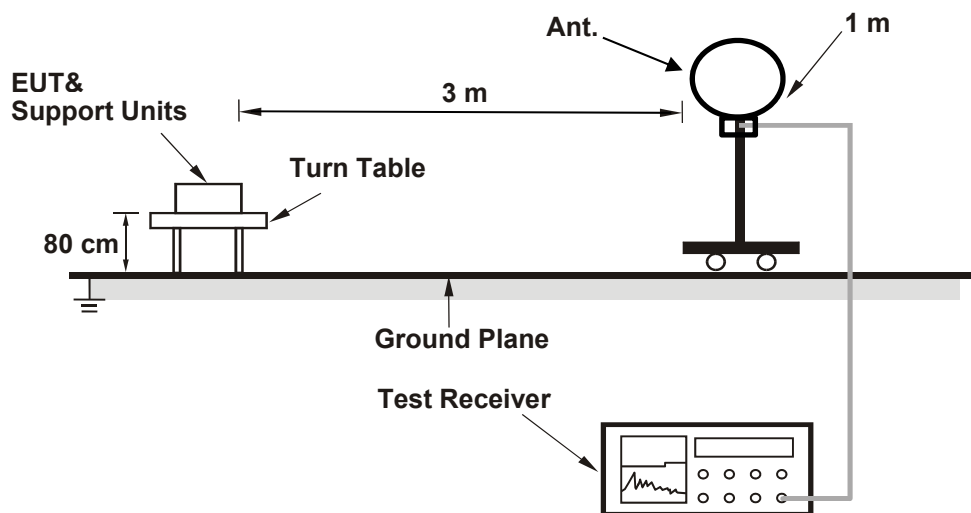
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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.

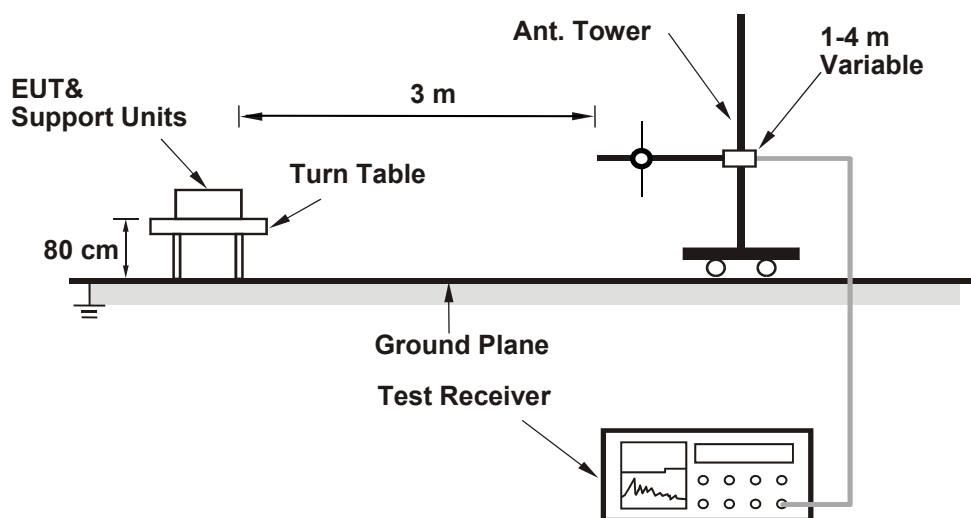
6.6 Unwanted Emissions below 1 GHz

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

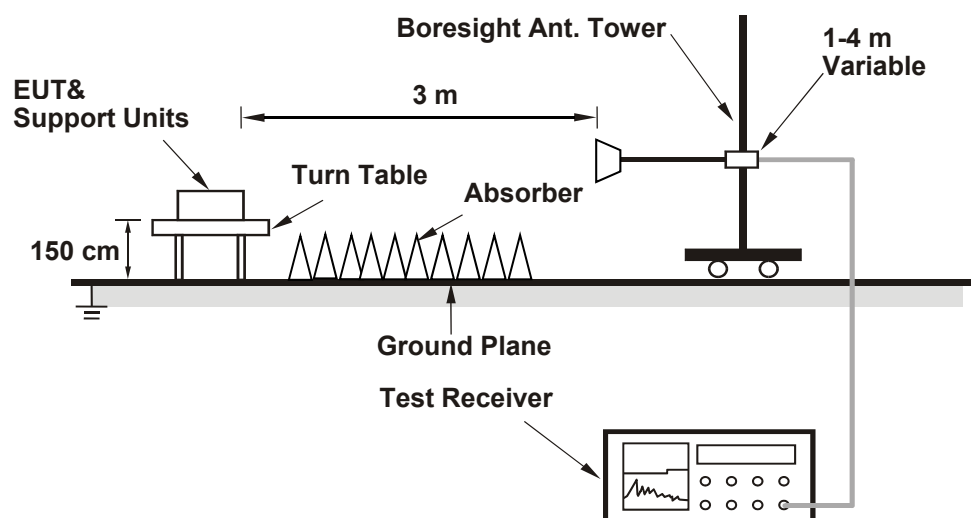
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- 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:

- 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.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
- 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:	Jisyoung Wang / Gary Lin
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802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	25.42	25.16	676.433	28.30	30	Pass
2	2417	25.49	25.13	679.834	28.32	30	Pass
6	2437	25.40	25.16	674.832	28.29	30	Pass
10	2457	25.32	25.05	660.298	28.20	30	Pass
11	2462	25.37	25.01	661.307	28.20	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.11 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	19.47	19.21	171.880	22.35	30	Pass
2	2417	21.91	21.64	301.120	24.79	30	Pass
6	2437	24.71	24.42	572.495	27.58	30	Pass
10	2457	20.89	20.61	237.824	23.76	30	Pass
11	2462	19.72	19.35	179.856	22.55	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.11 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	18.28	17.93	129.385	21.12	30	Pass
2	2417	21.19	20.71	249.283	23.97	30	Pass
6	2437	24.87	24.68	600.667	27.79	30	Pass
10	2457	20.76	20.49	231.068	23.64	30	Pass
11	2462	18.22	17.97	129.036	21.11	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.11 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	16.59	16.38	89.055	19.50	30	Pass
4	2427	17.61	17.37	112.252	20.50	30	Pass
6	2437	19.82	19.58	186.722	22.71	30	Pass
8	2447	18.90	18.64	150.739	21.78	30	Pass
9	2452	18.16	17.81	125.858	21.00	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.11 dBi $\leq$ 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	18.28	17.93	129.385	21.12	30	Pass
2	2417	21.19	20.71	249.283	23.97	30	Pass
6	2437	24.87	24.68	600.667	27.79	30	Pass
10	2457	20.76	20.49	231.068	23.64	30	Pass
11	2462	18.22	17.97	129.036	21.11	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 3.72 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

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	16.59	16.38	89.055	19.50	30	Pass
4	2427	17.61	17.37	112.252	20.50	30	Pass
6	2437	19.82	19.58	186.722	22.71	30	Pass
8	2447	18.90	18.64	150.739	21.78	30	Pass
9	2452	18.16	17.81	125.858	21.00	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 3.72 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang / Gary Lin
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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	-4.98	-5.05	-2.00	8	Pass
2	2417	-4.91	-5.06	-1.97	8	Pass
6	2437	-5.07	-5.03	-2.04	8	Pass
10	2457	-5.15	-5.09	-2.11	8	Pass
11	2462	-5.05	-5.24	-2.13	8	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 is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.72 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

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	-13.87	-15.18	-11.47	8	Pass
2	2417	-11.79	-12.72	-9.22	8	Pass
6	2437	-8.52	-8.92	-5.71	8	Pass
10	2457	-13.18	-13.40	-10.28	8	Pass
11	2462	-13.73	-14.47	-11.07	8	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 is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.72 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

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	-17.22	-16.32	-13.74	8	Pass
2	2417	-14.09	-12.47	-10.19	8	Pass
6	2437	-9.71	-10.15	-6.91	8	Pass
10	2457	-14.12	-13.55	-10.82	8	Pass
11	2462	-16.77	-16.57	-13.66	8	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 is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.72 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

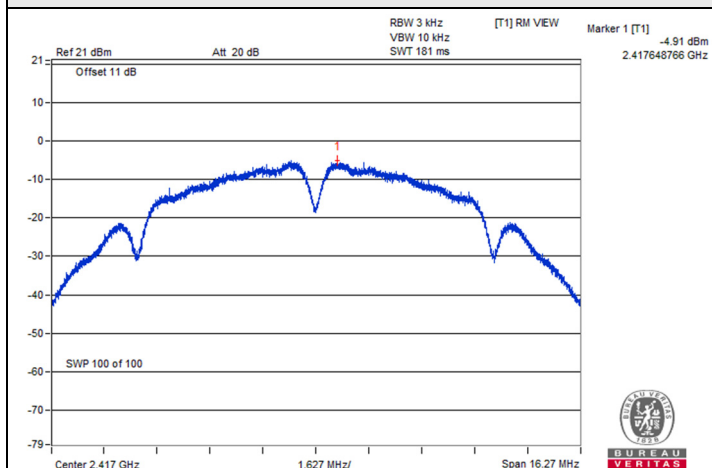
802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
3	2422	-21.17	-21.28	-18.21	8	Pass
4	2427	-20.68	-19.86	-17.24	8	Pass
6	2437	-17.83	-18.07	-14.94	8	Pass
8	2447	-18.98	-18.84	-15.90	8	Pass
9	2452	-19.49	-19.20	-16.33	8	Pass

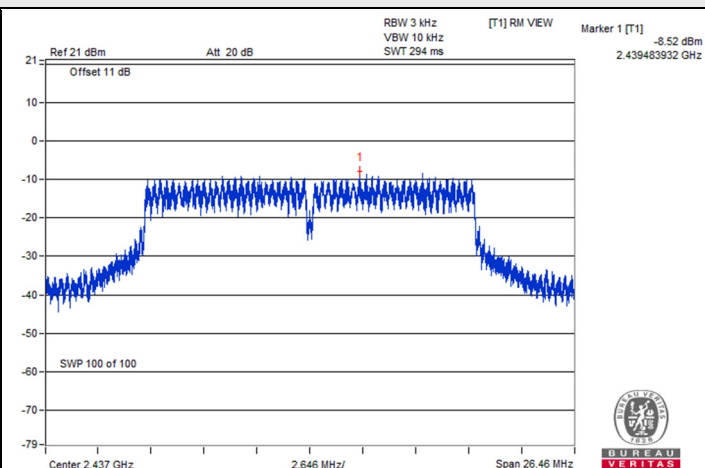
Notes:

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 is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.72 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

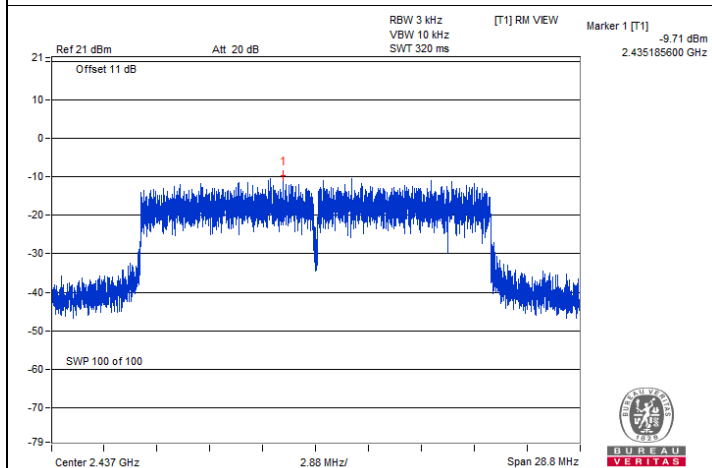
Spectrum Plot of Maximum Value



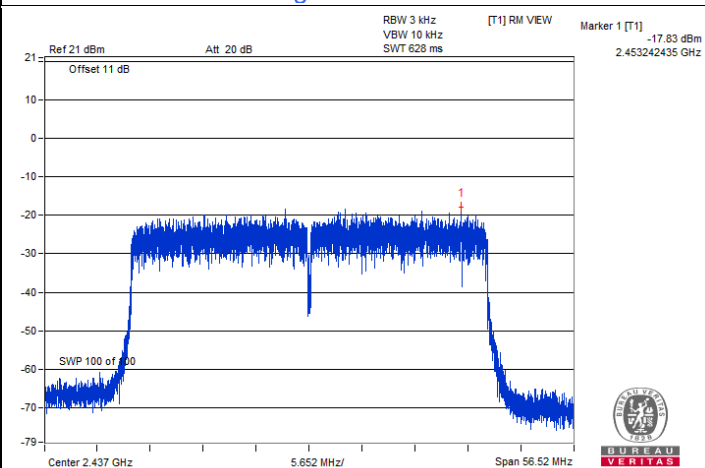
802.11b / Chain 0 : CH 2



802.11g / Chain 0 : CH 6



802.11ax (HE20) / Chain 0 : CH 6



802.11ax (HE40) / Chain 0 : CH 6

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang / Gary Lin
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802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	7.07	7.11	0.5	Pass
2	2417	7.11	7.12	0.5	Pass
6	2437	7.09	7.09	0.5	Pass
10	2457	7.07	7.11	0.5	Pass
11	2462	7.09	7.12	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	16.44	16.38	0.5	Pass
2	2417	16.39	16.42	0.5	Pass
6	2437	16.41	16.35	0.5	Pass
10	2457	16.43	16.41	0.5	Pass
11	2462	16.43	16.39	0.5	Pass

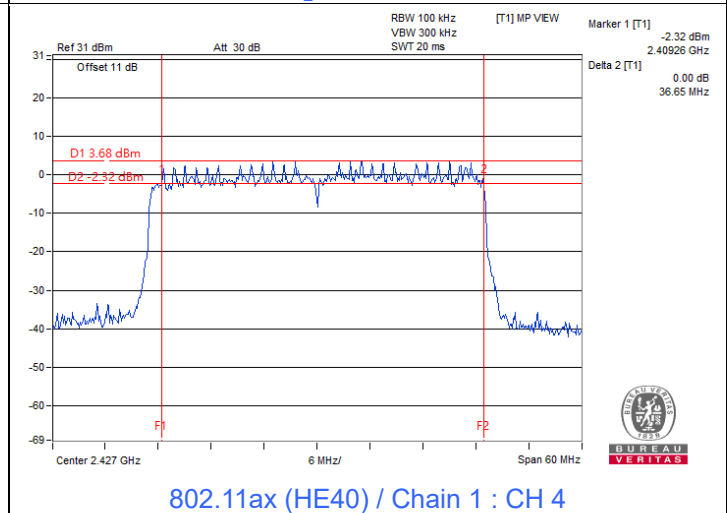
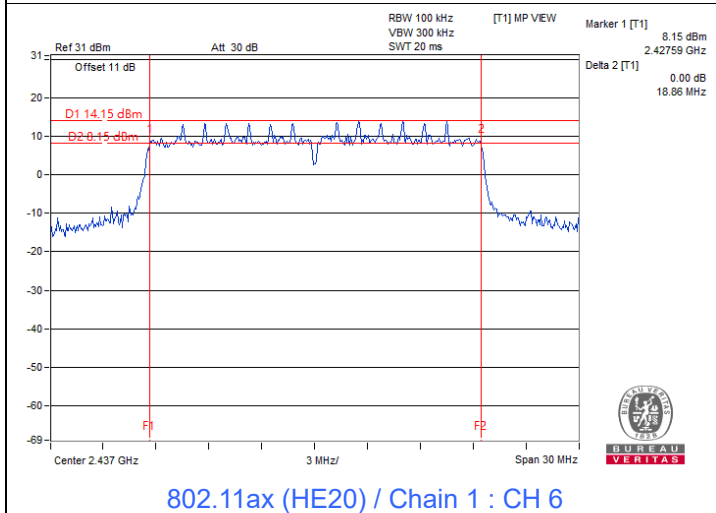
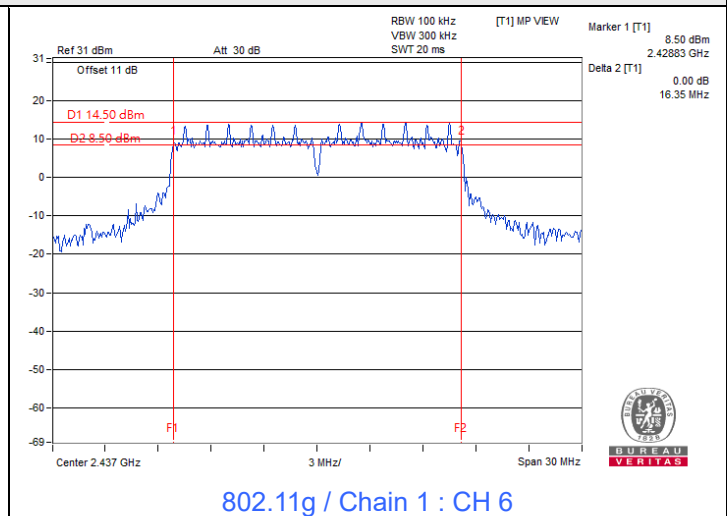
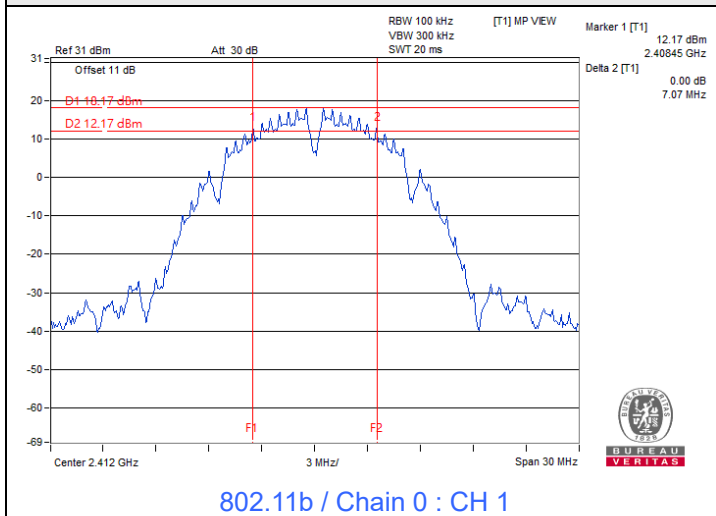
802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	18.96	18.87	0.5	Pass
2	2417	19.01	18.88	0.5	Pass
6	2437	18.99	18.86	0.5	Pass
10	2457	18.93	18.96	0.5	Pass
11	2462	19.04	18.87	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	37.50	37.07	0.5	Pass
4	2427	37.75	36.65	0.5	Pass
6	2437	37.73	36.65	0.5	Pass
8	2447	37.72	37.15	0.5	Pass
9	2452	37.74	37.27	0.5	Pass

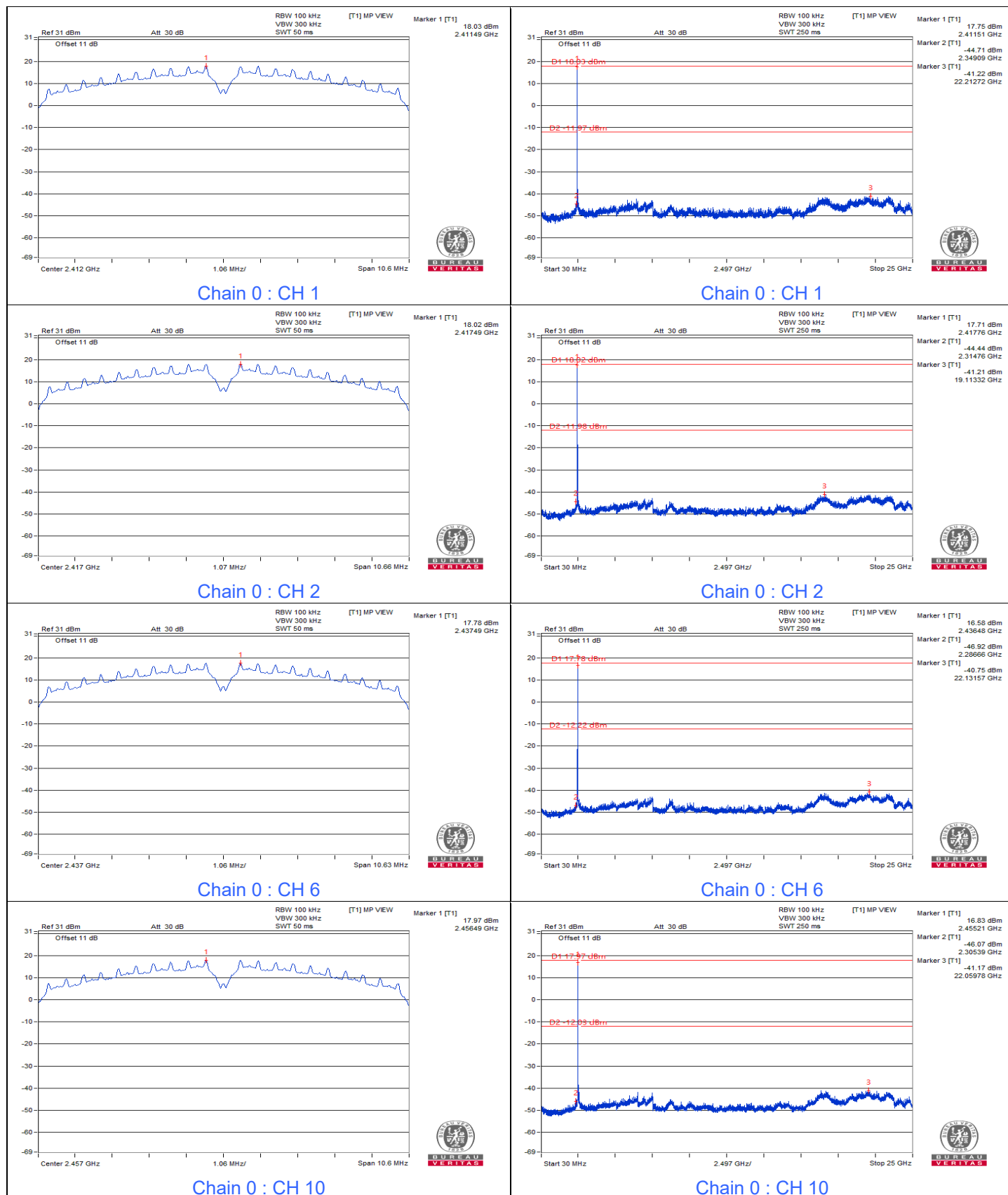
Spectrum Plot of Minimum Value

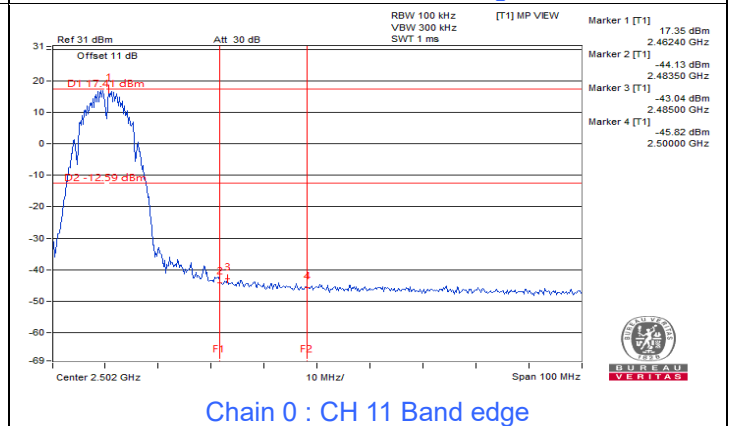
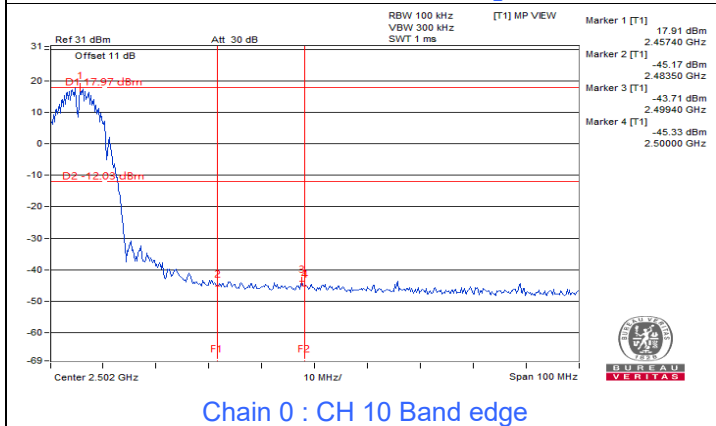
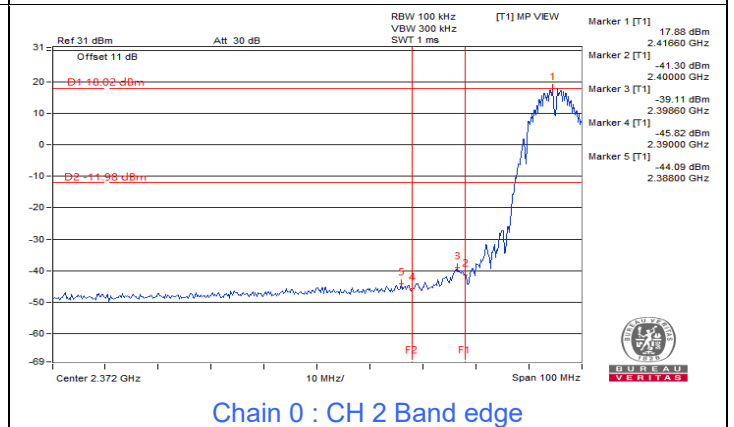
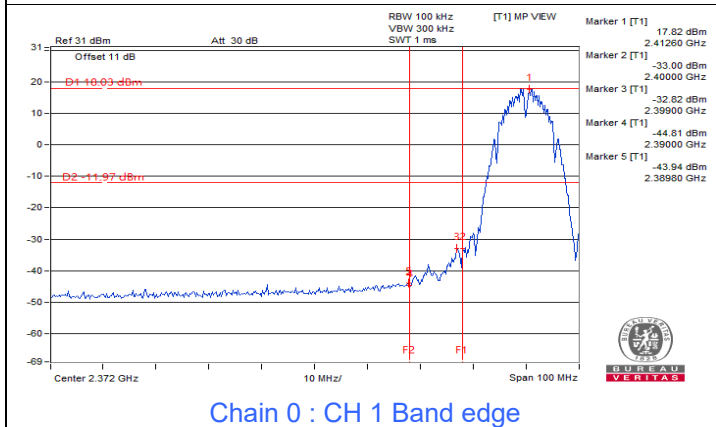
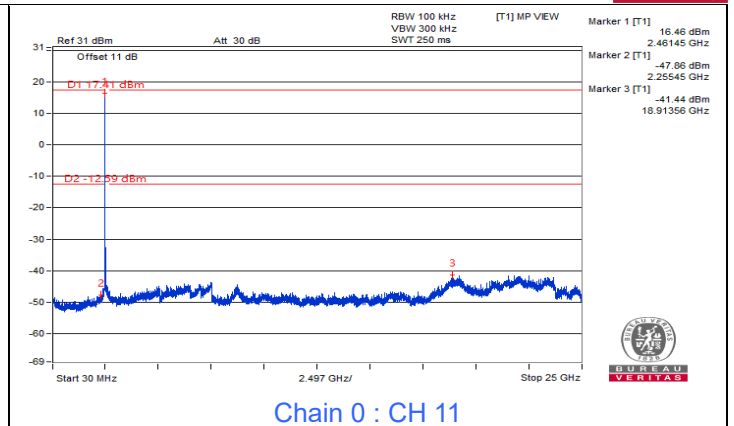
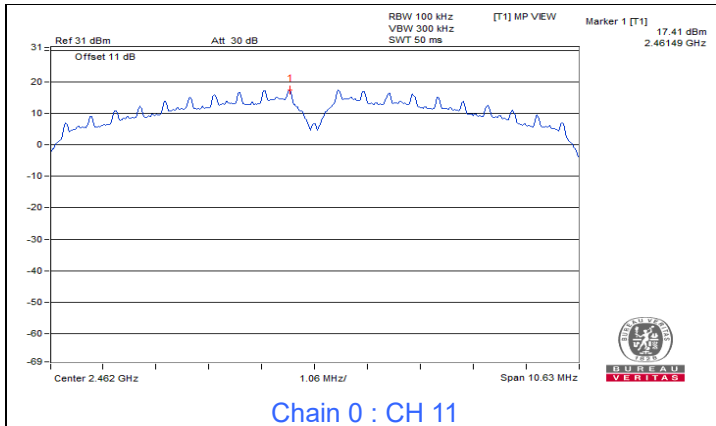


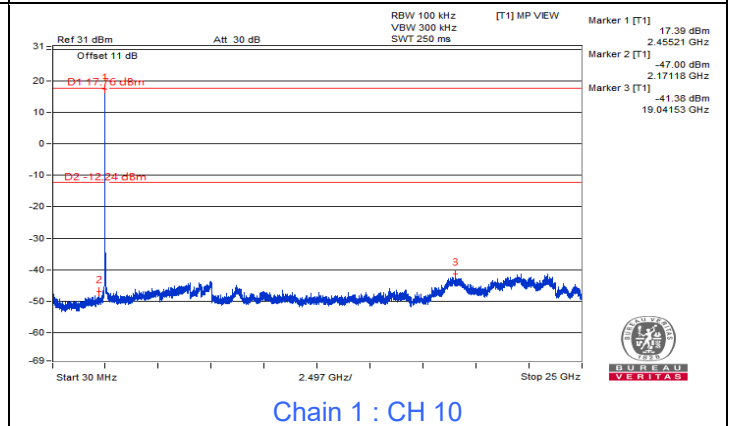
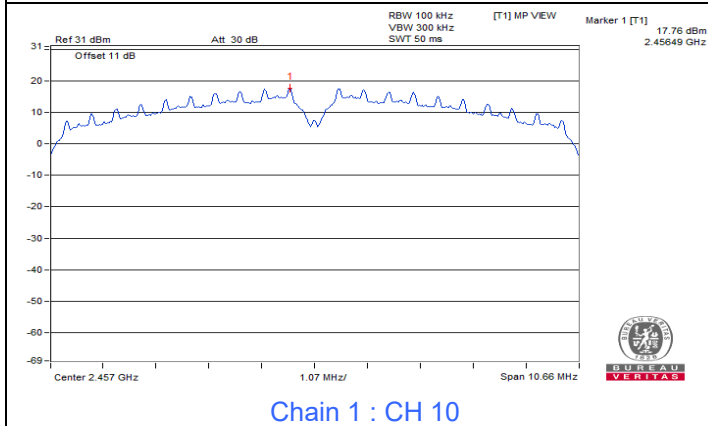
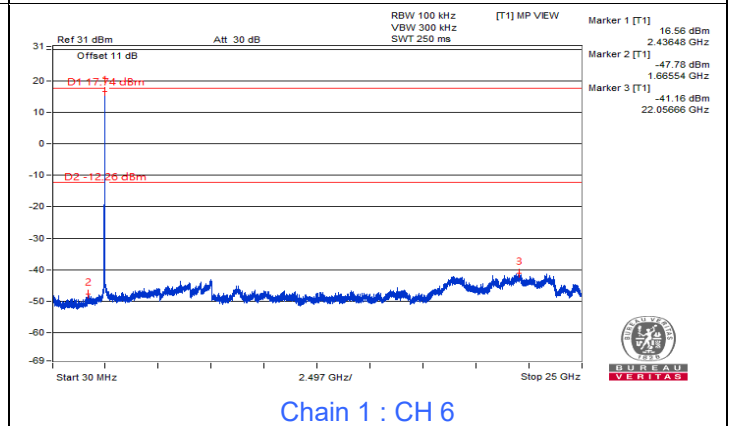
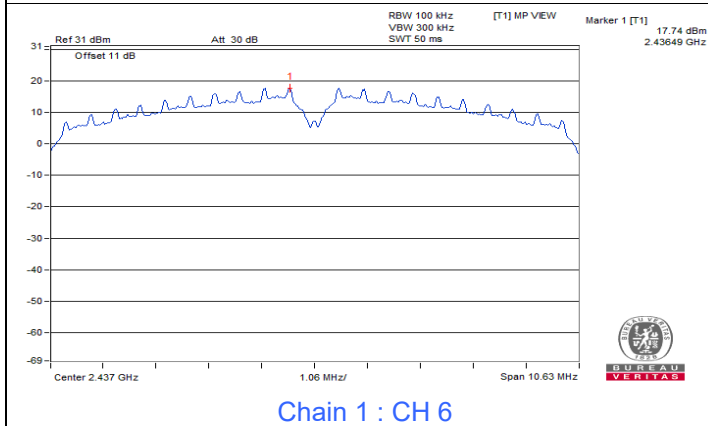
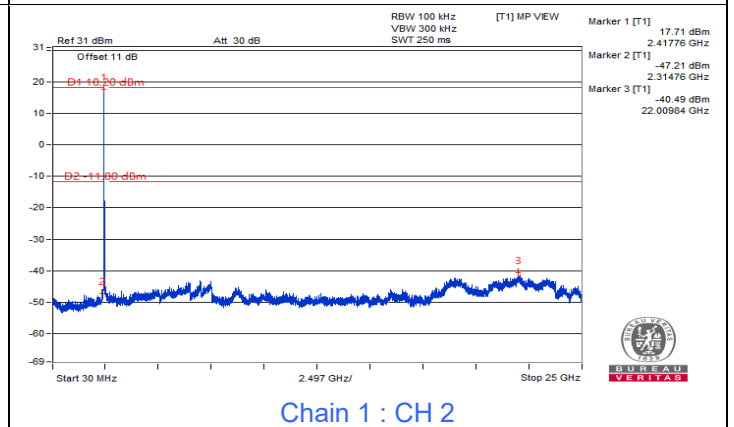
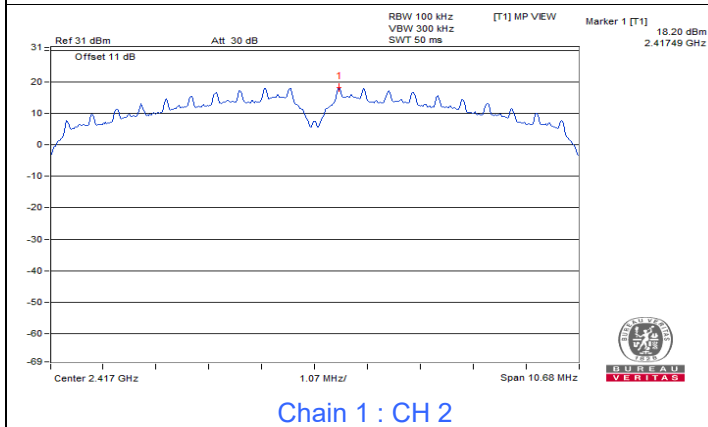
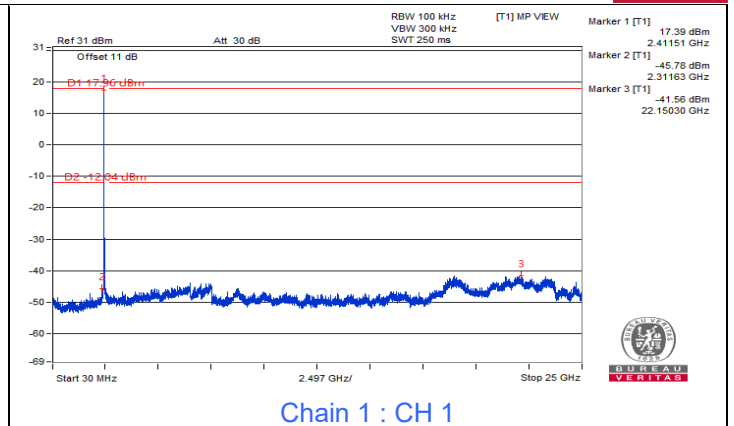
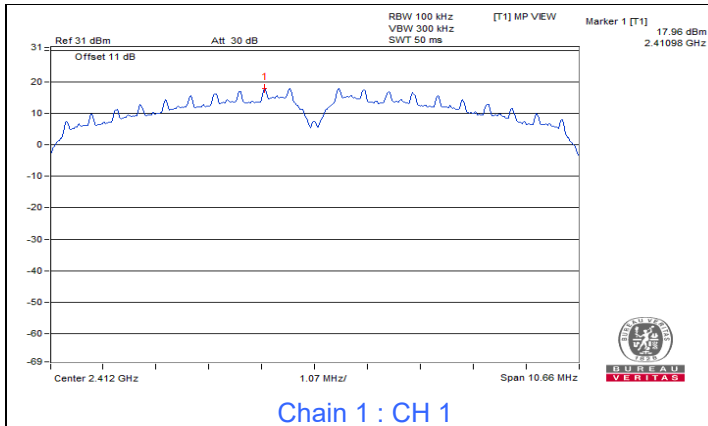
7.4 Conducted Out of Band Emissions

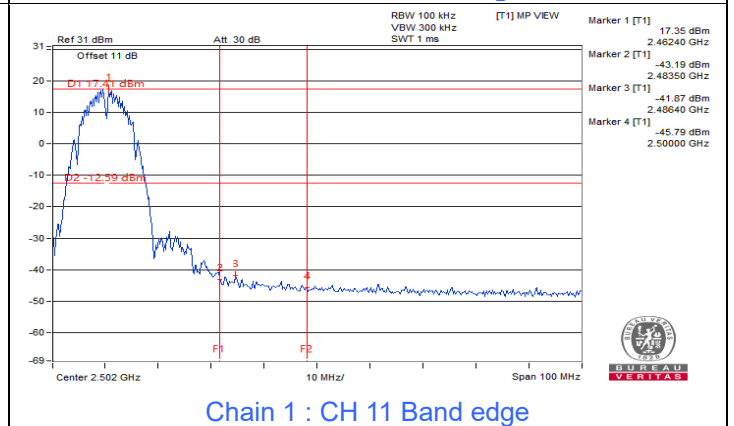
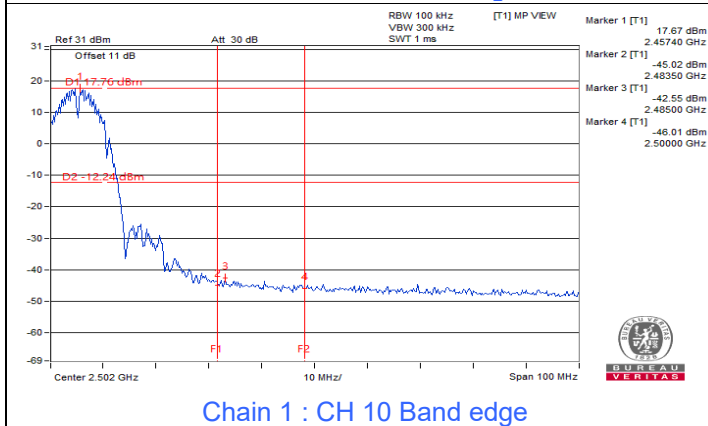
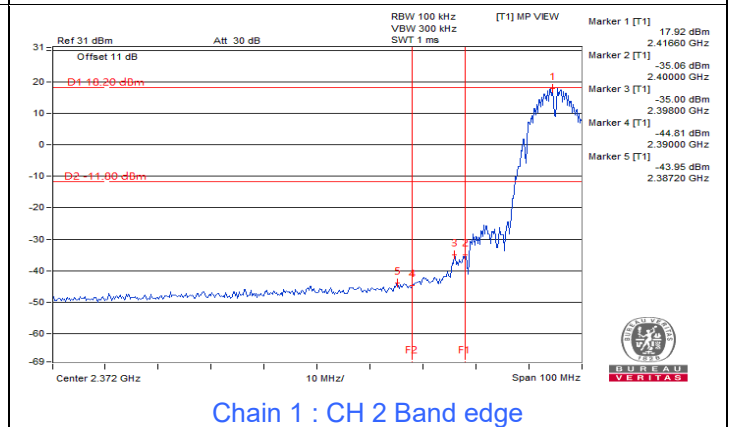
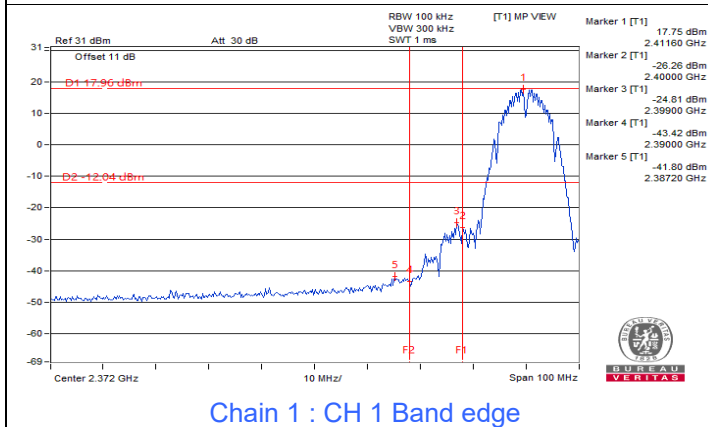
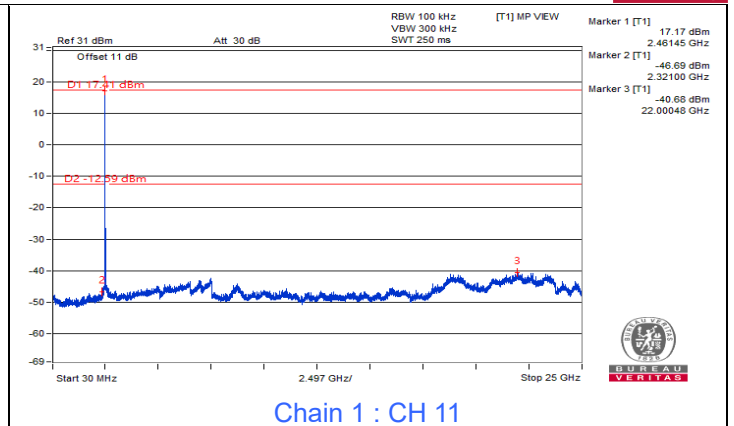
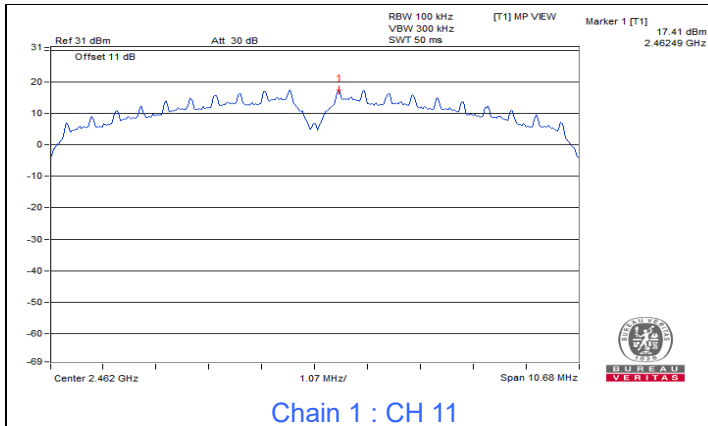
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyoung Wang / Gary Lin
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802.11b

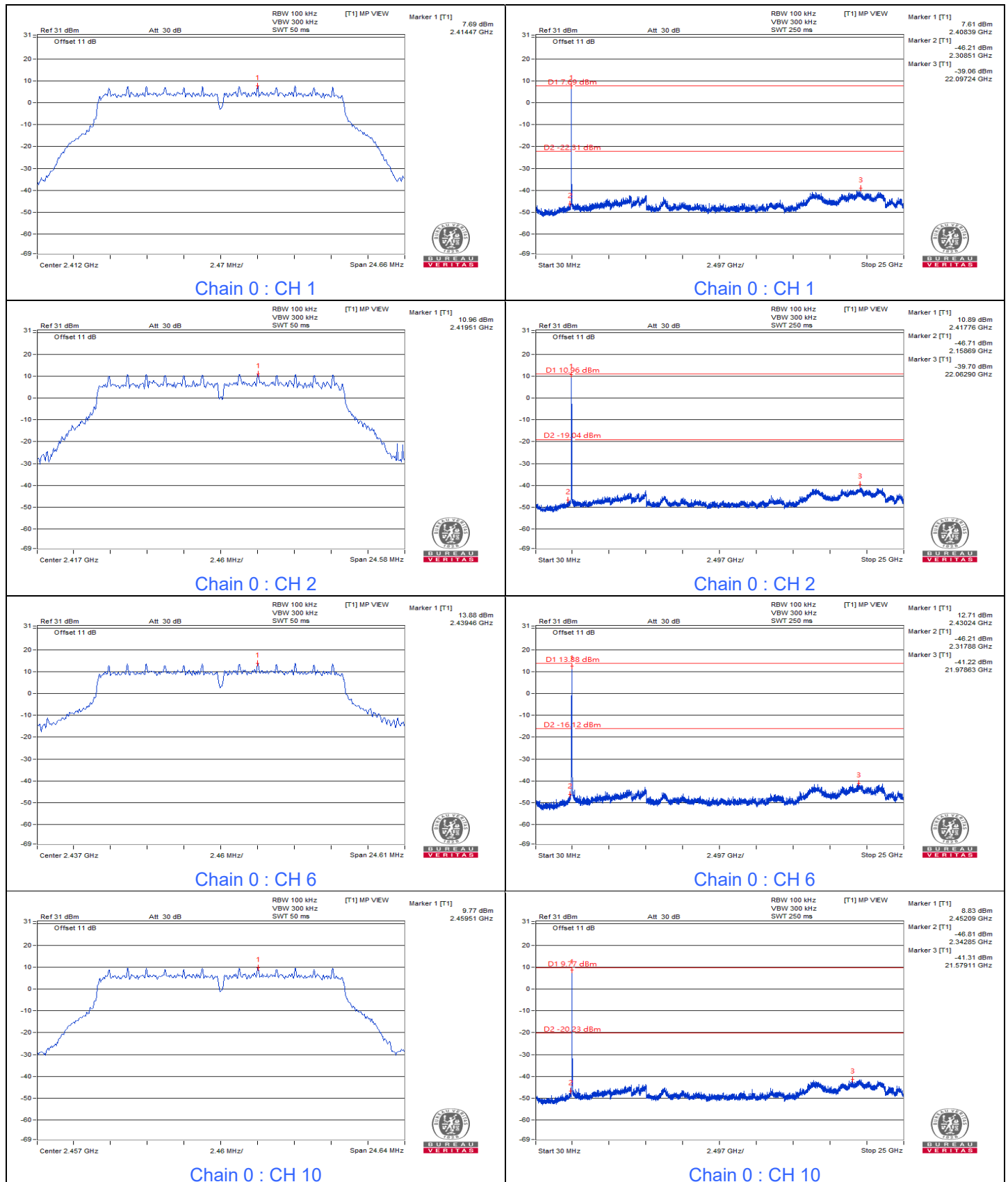


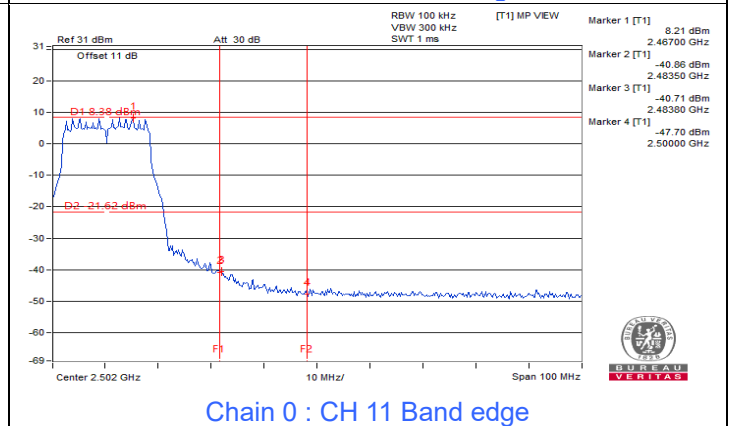
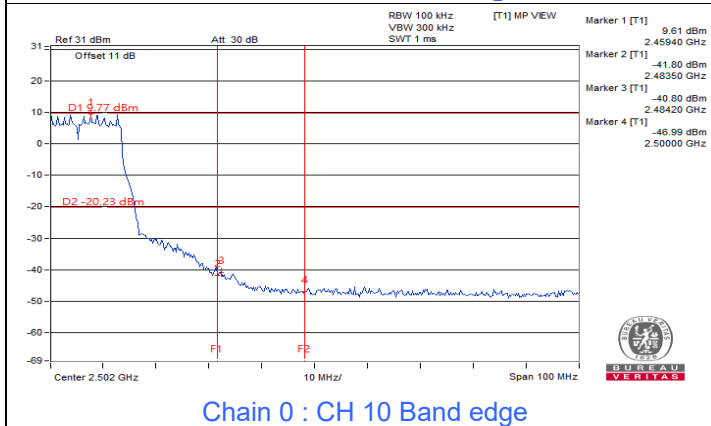
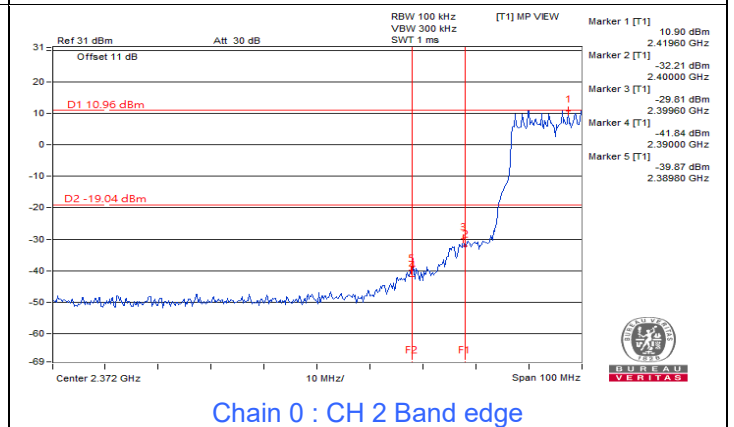
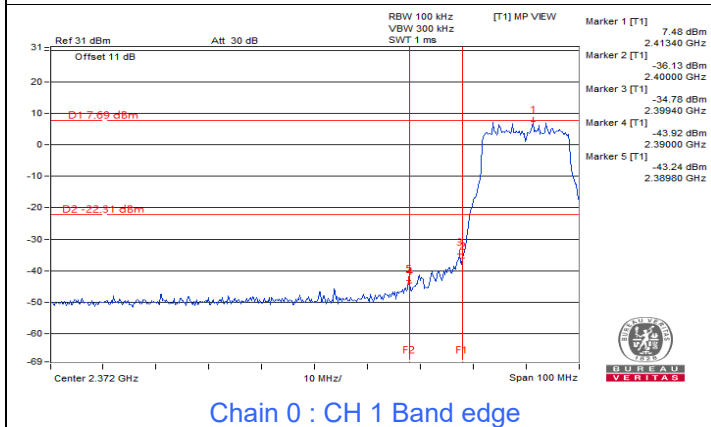
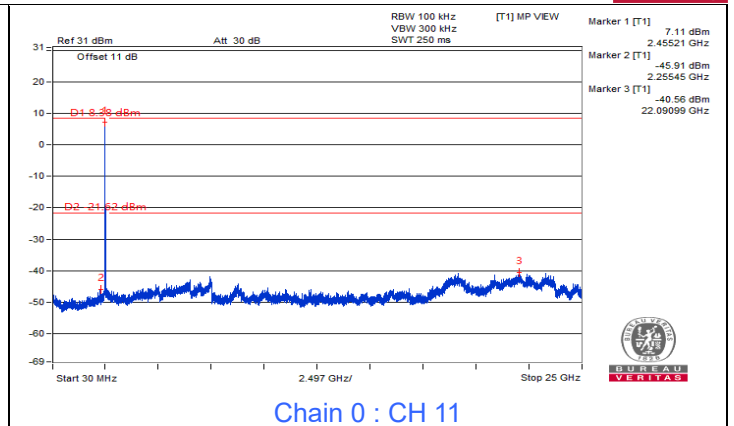
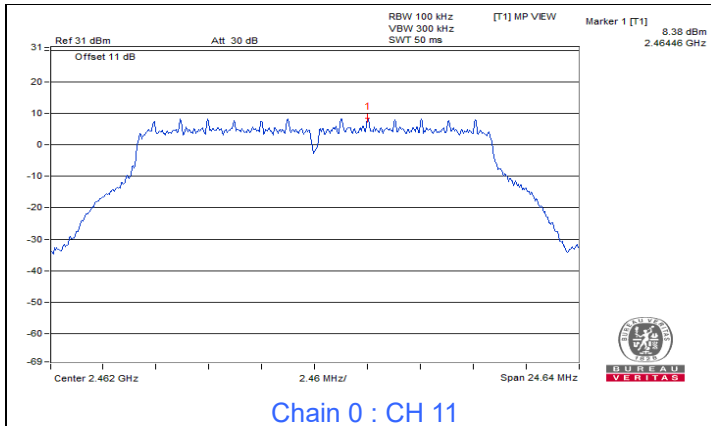


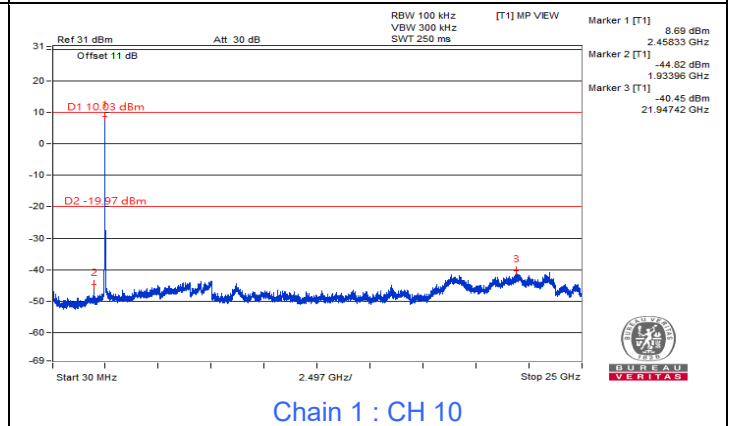
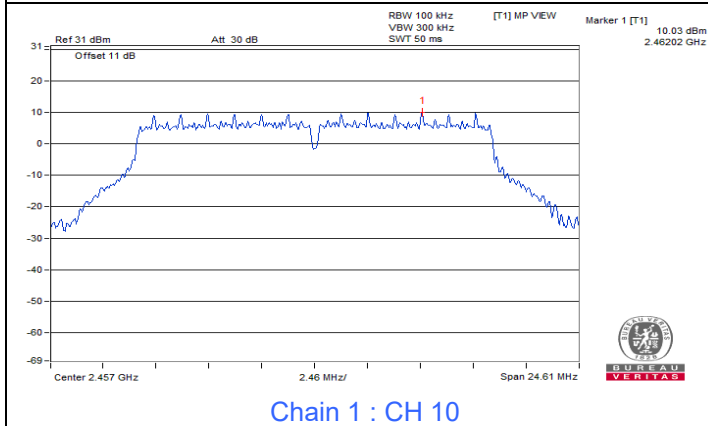
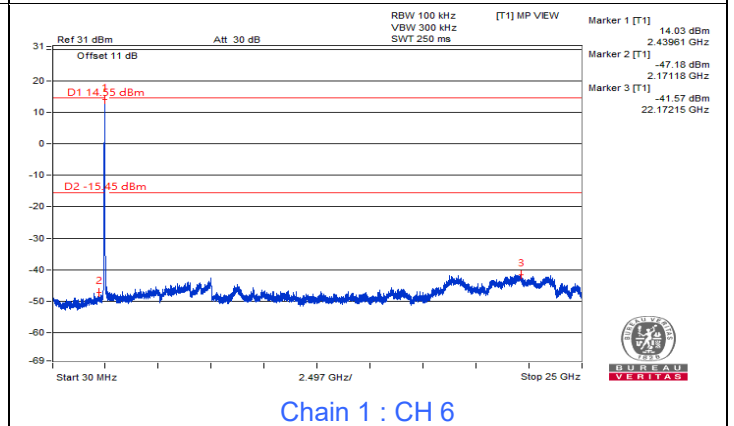
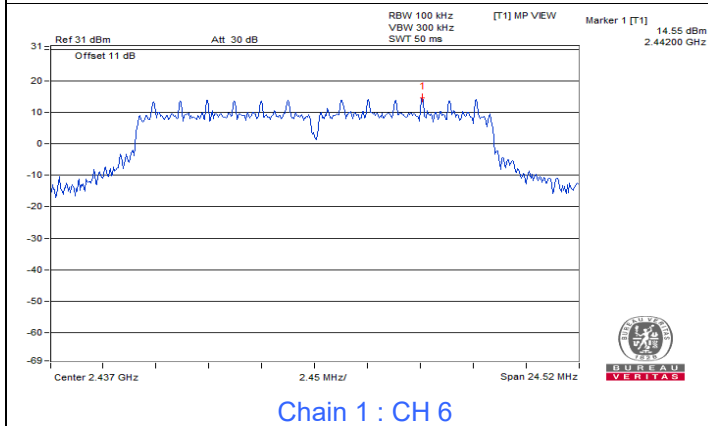
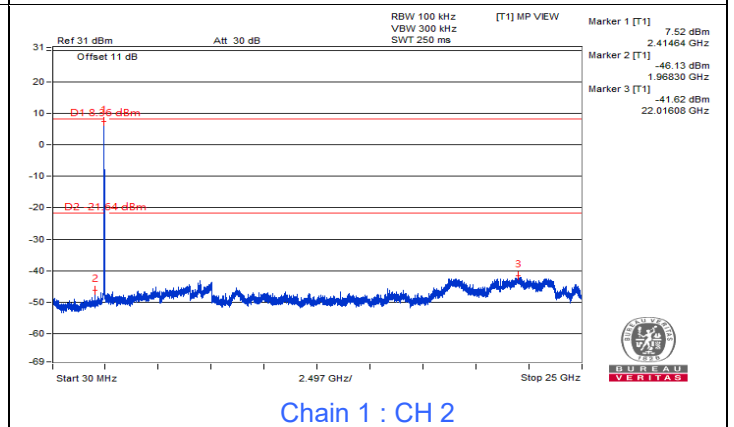
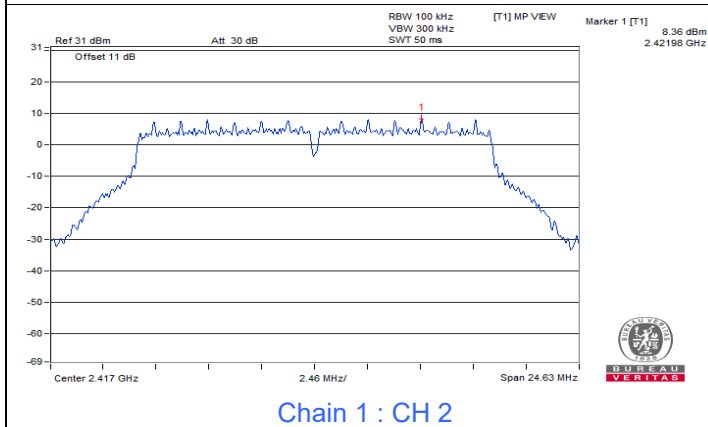
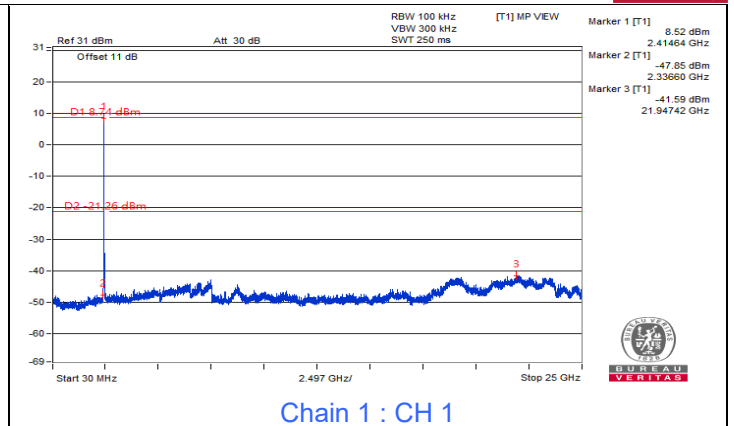
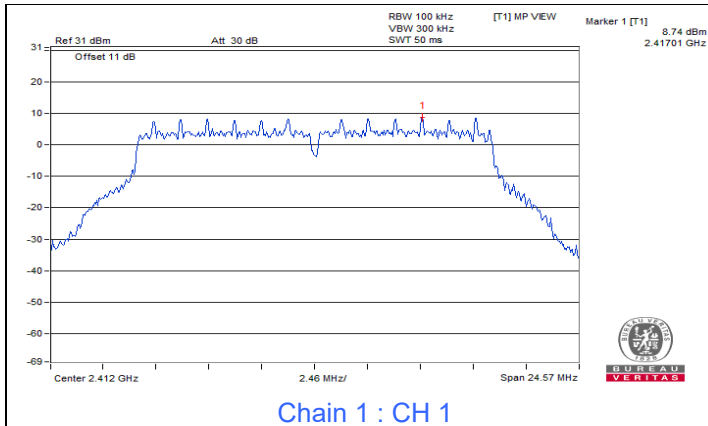


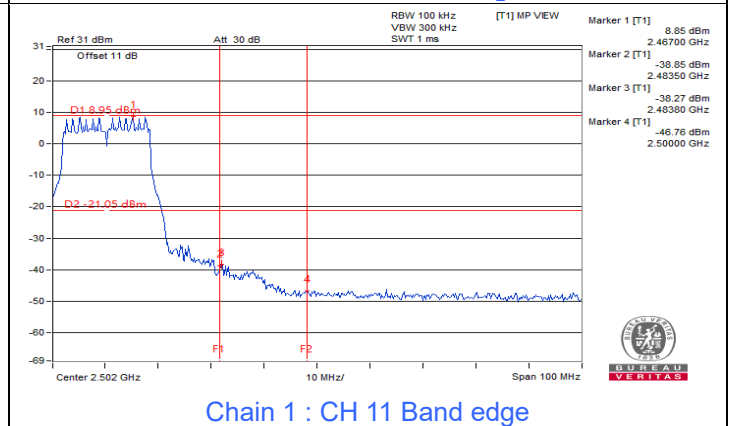
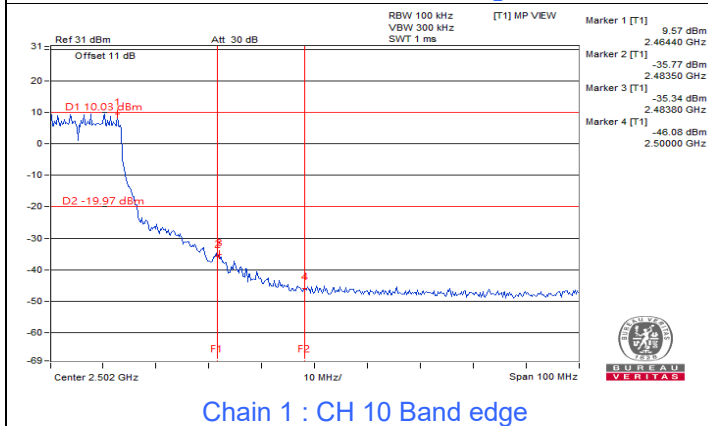
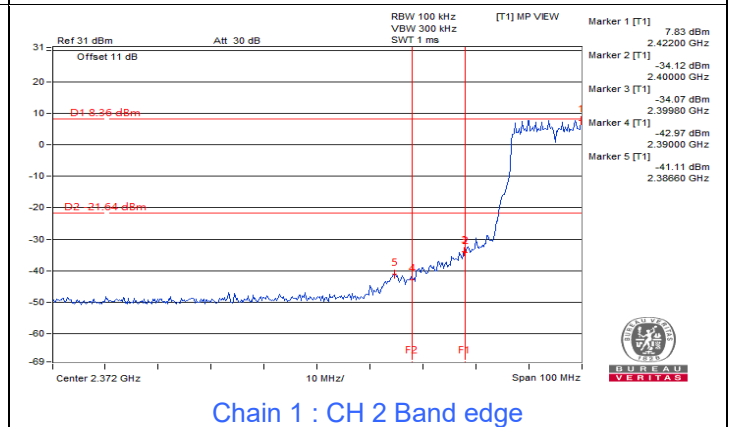
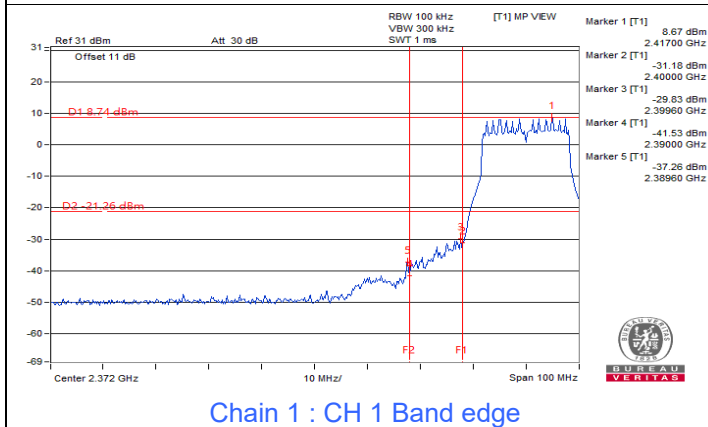
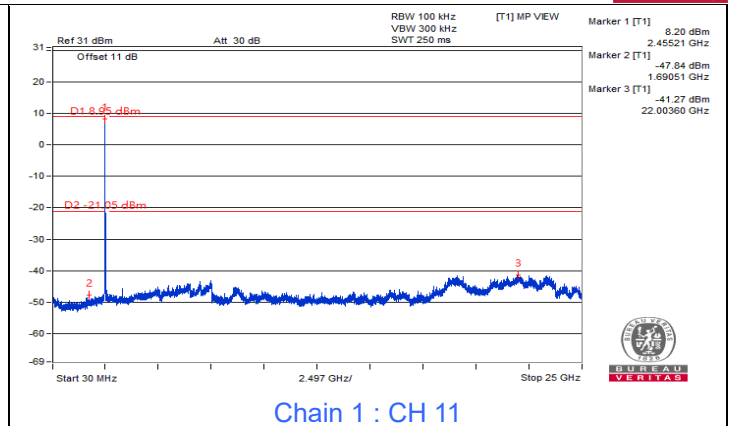
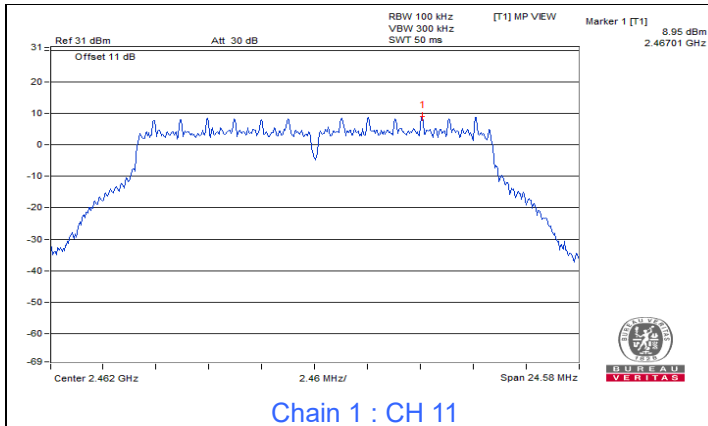


802.11g

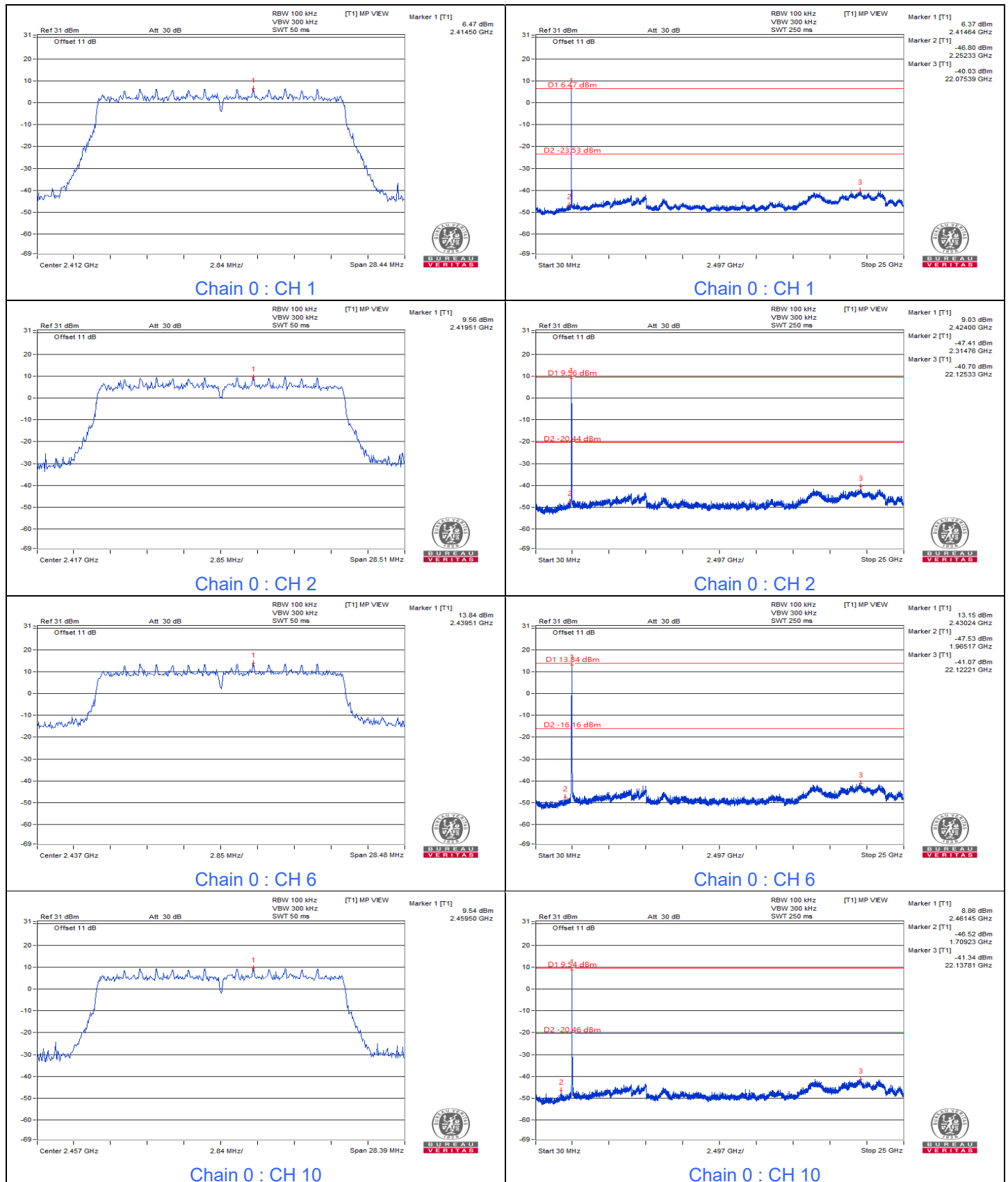


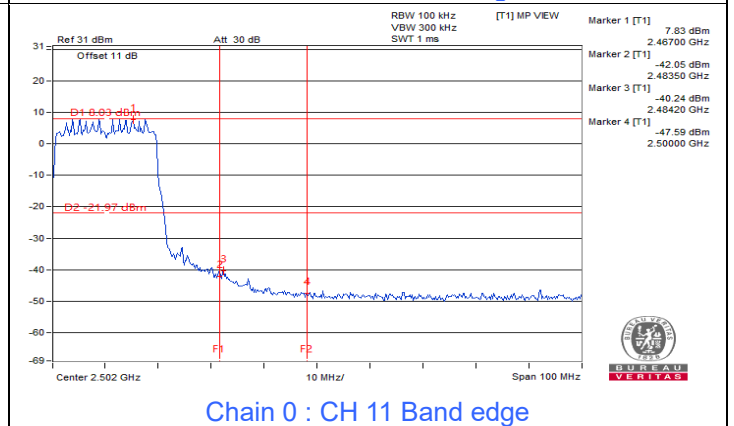
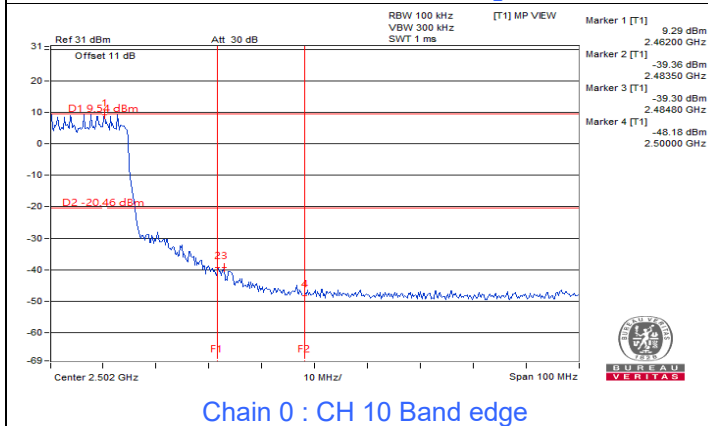
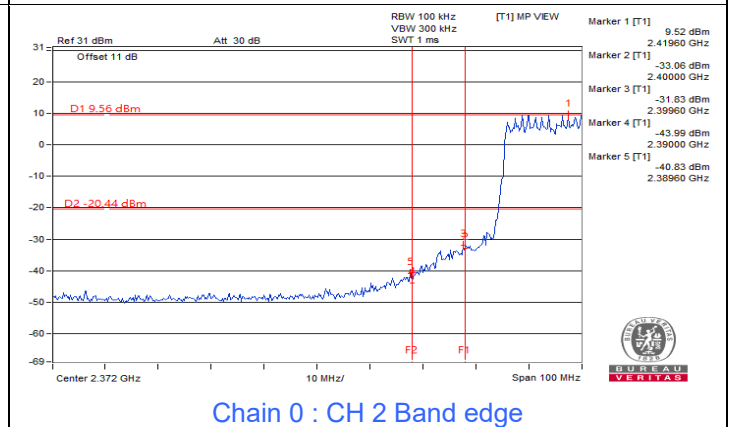
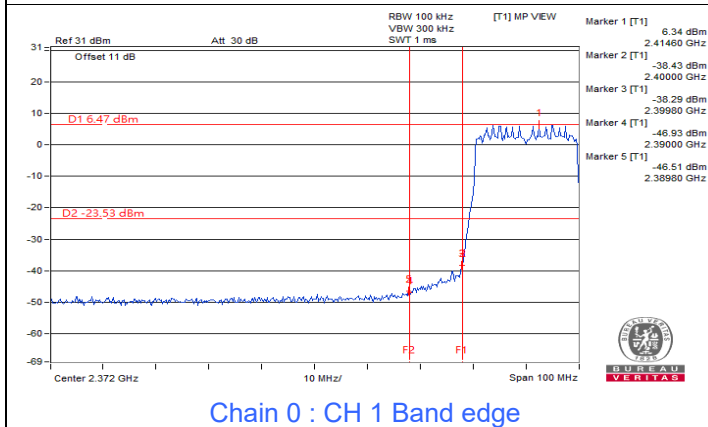
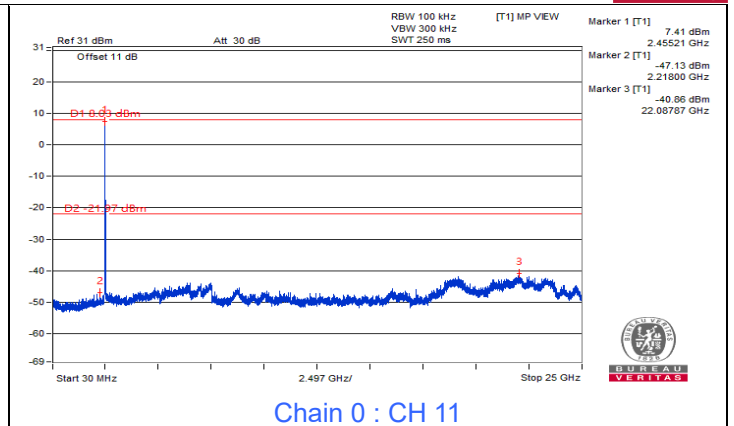
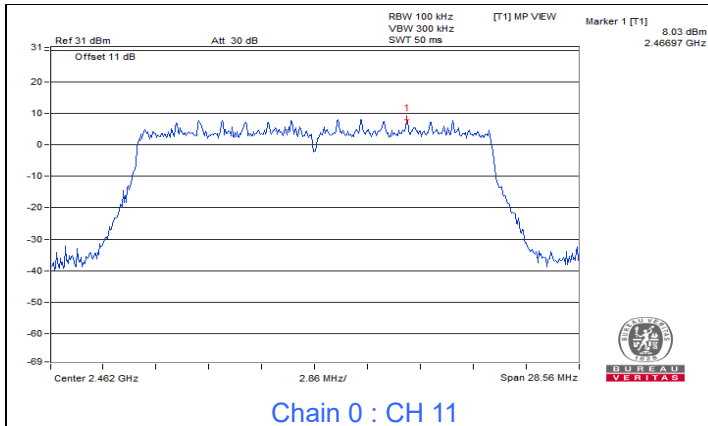


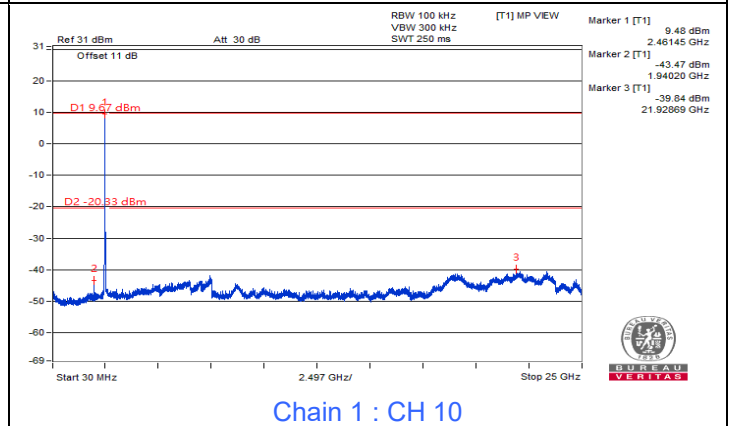
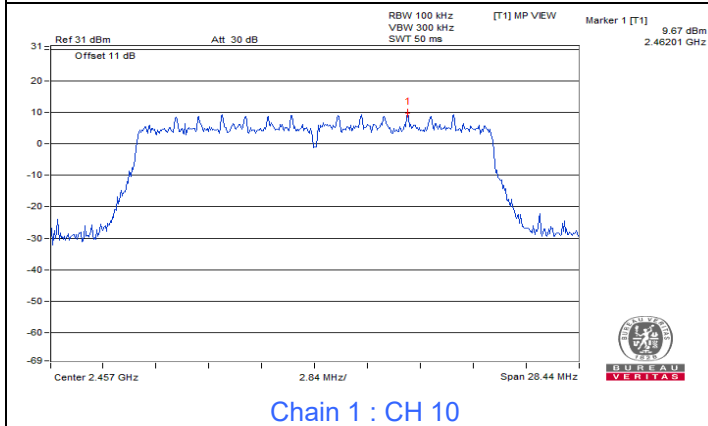
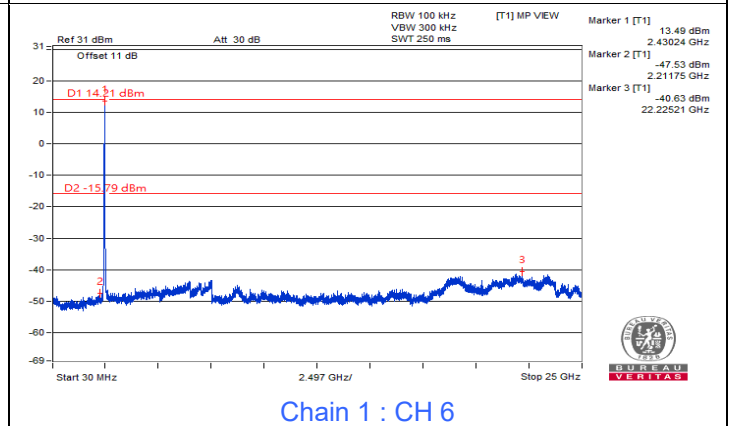
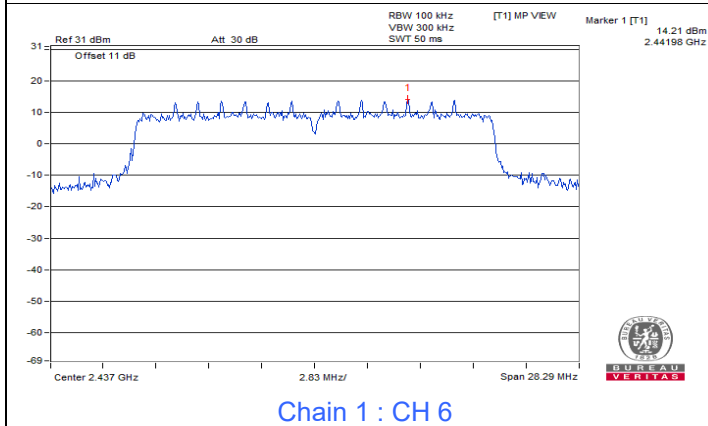
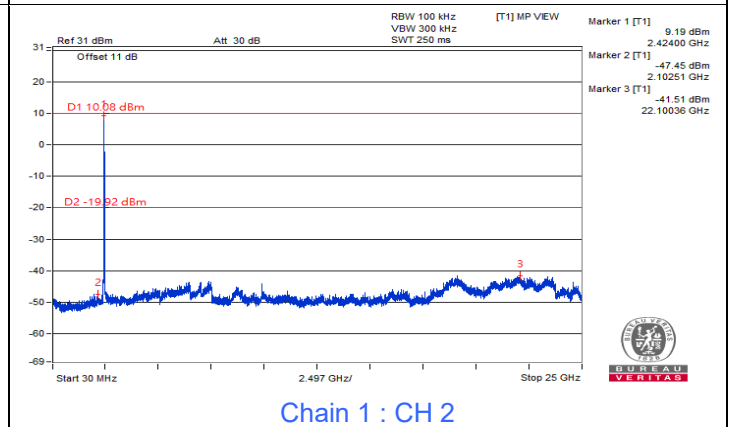
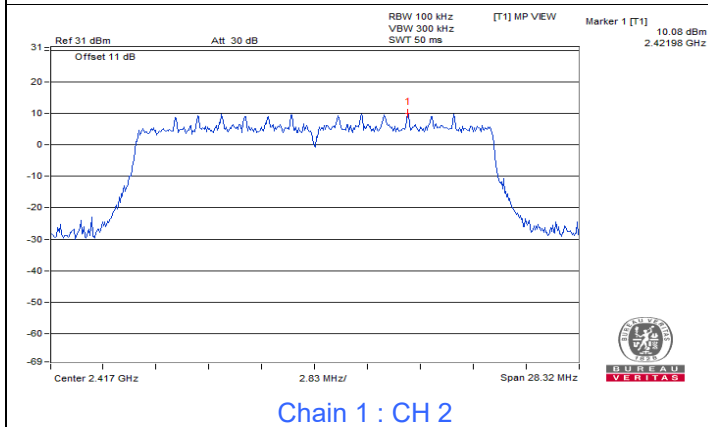
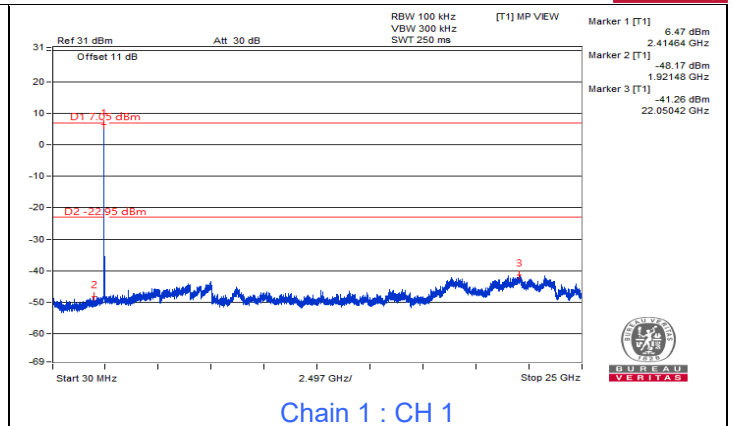
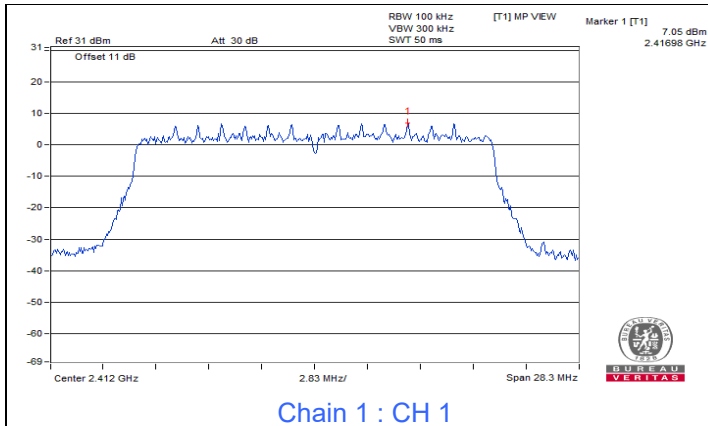


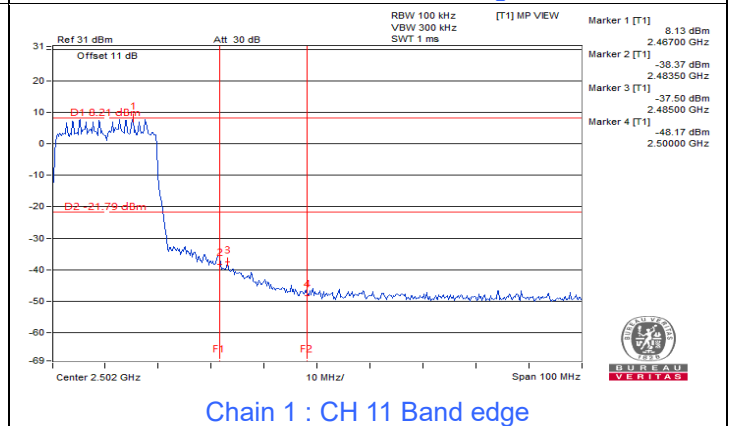
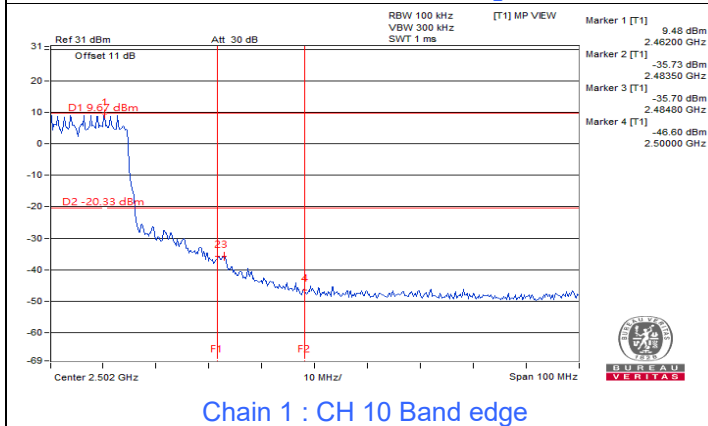
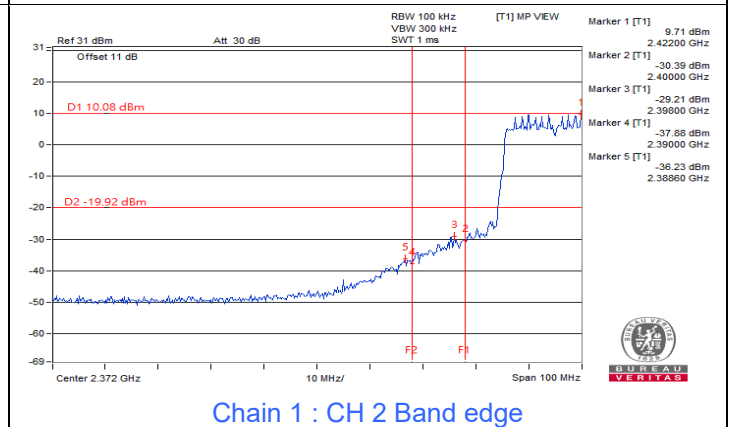
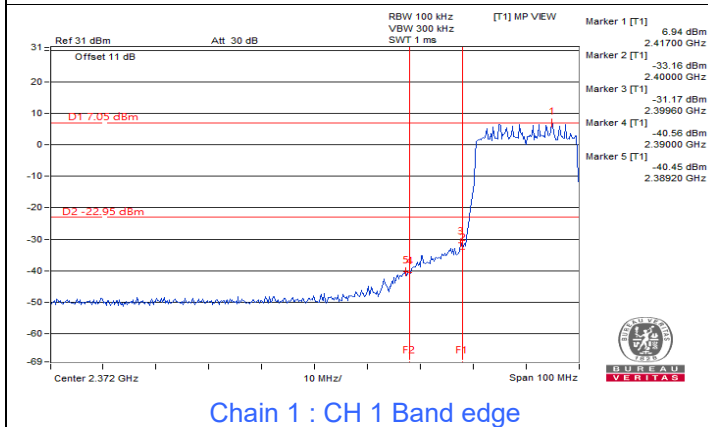
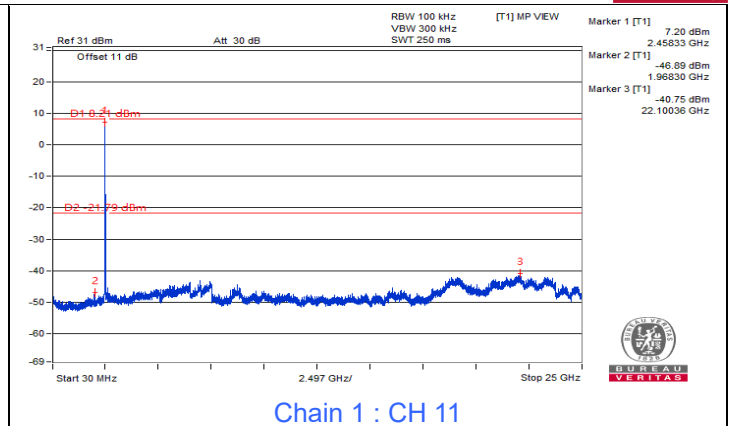
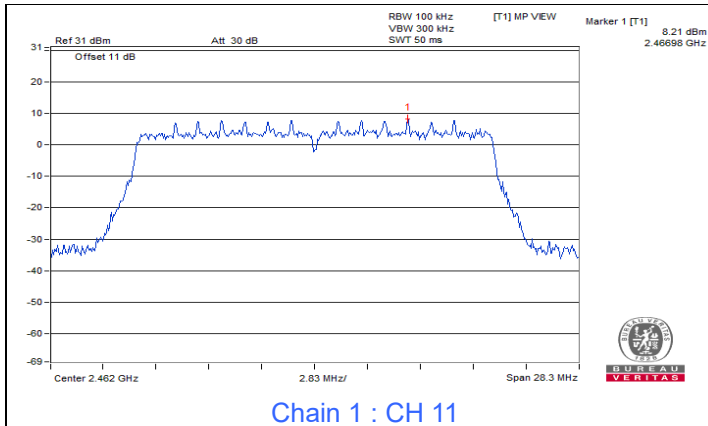


802.11ax (HE20)

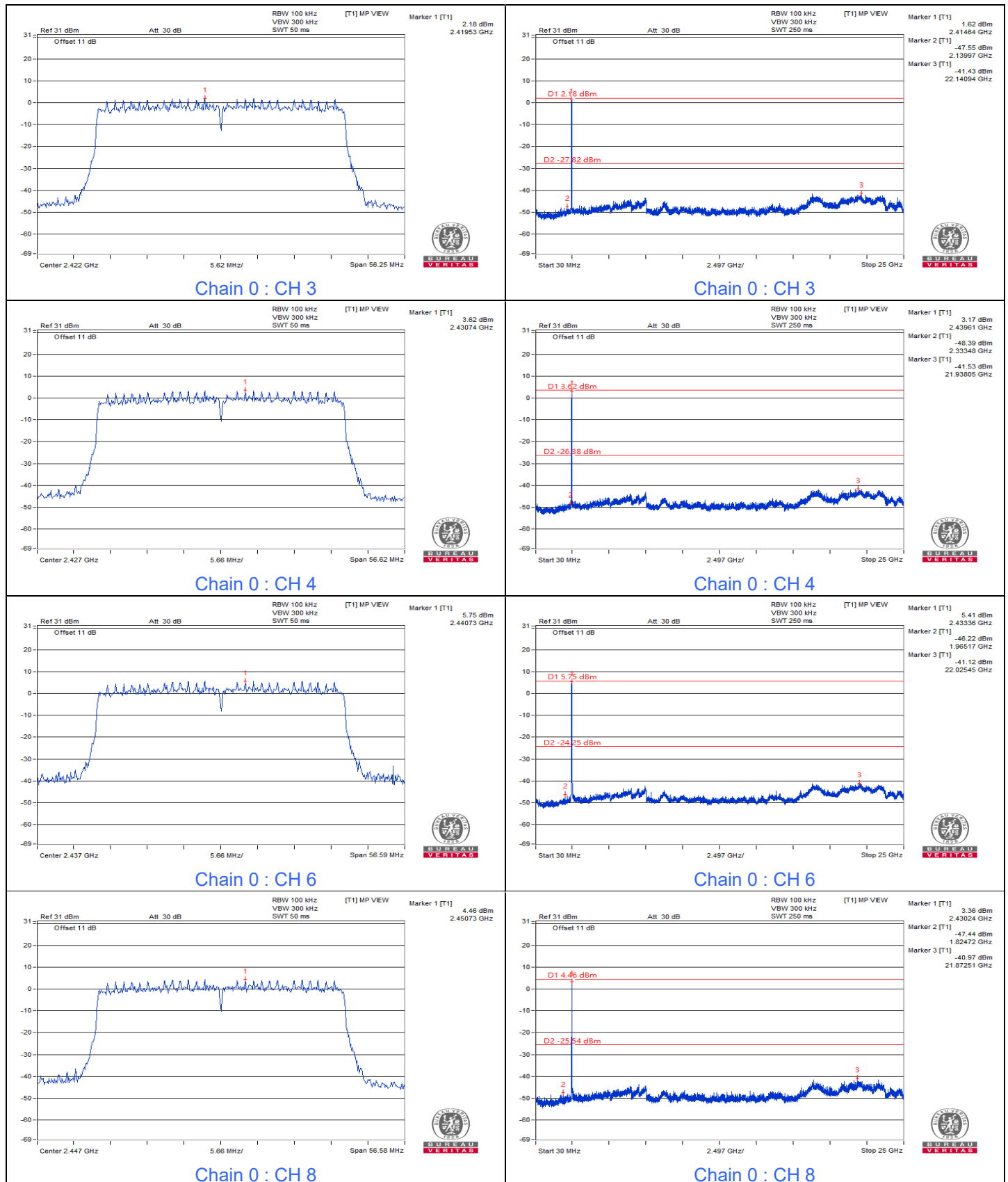


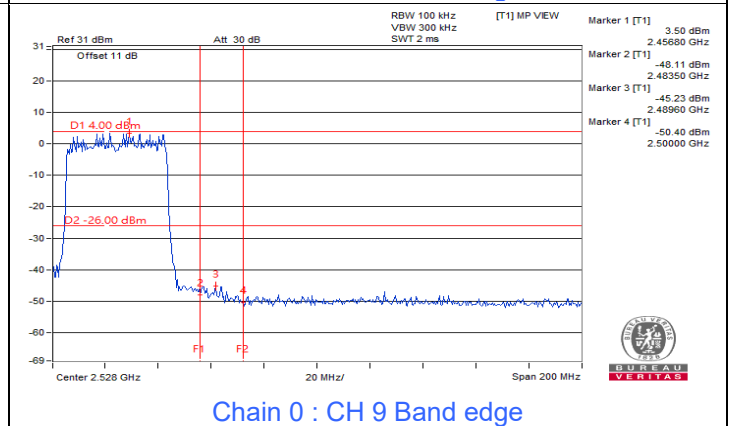
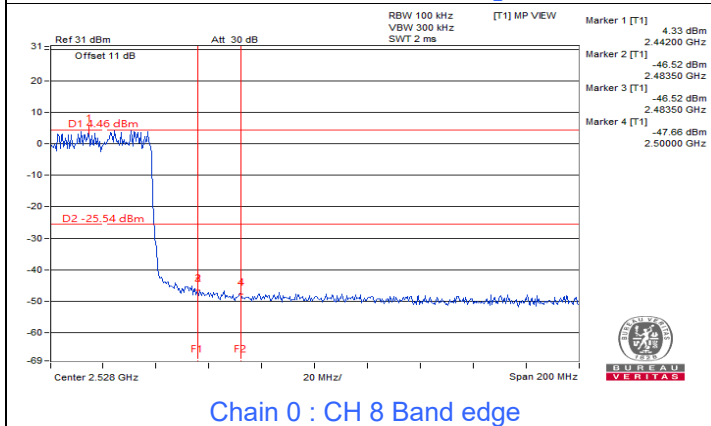
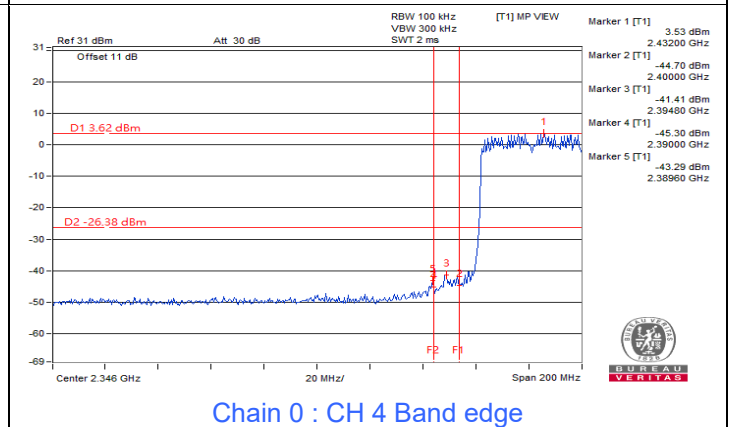
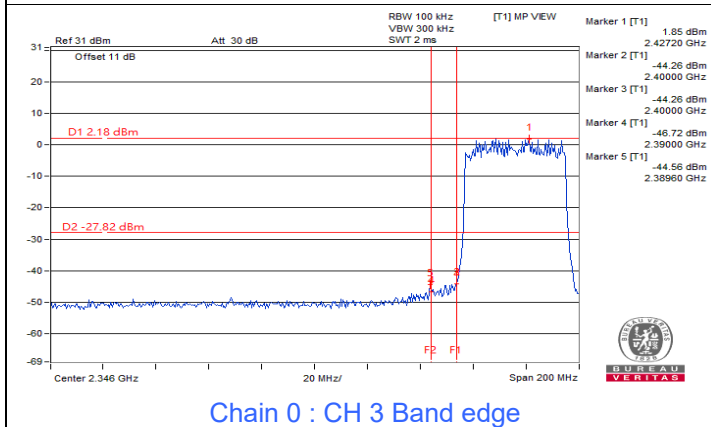
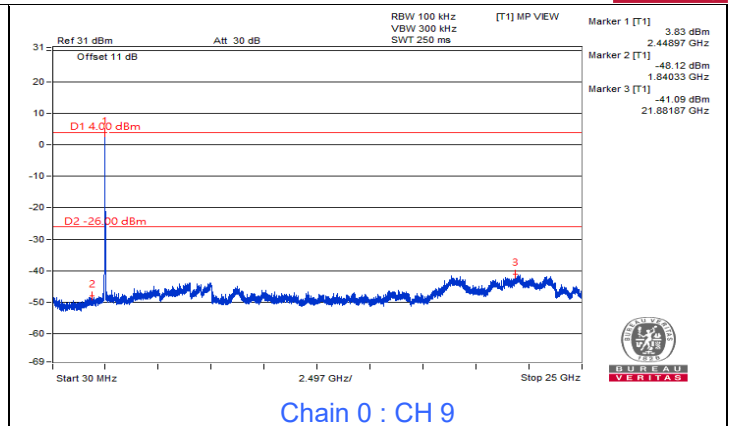
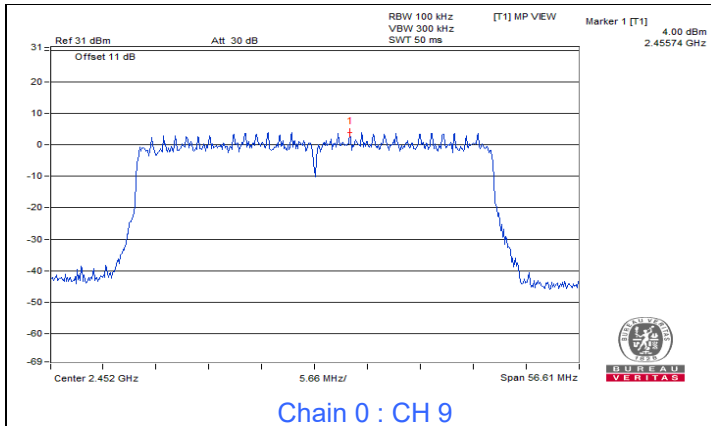


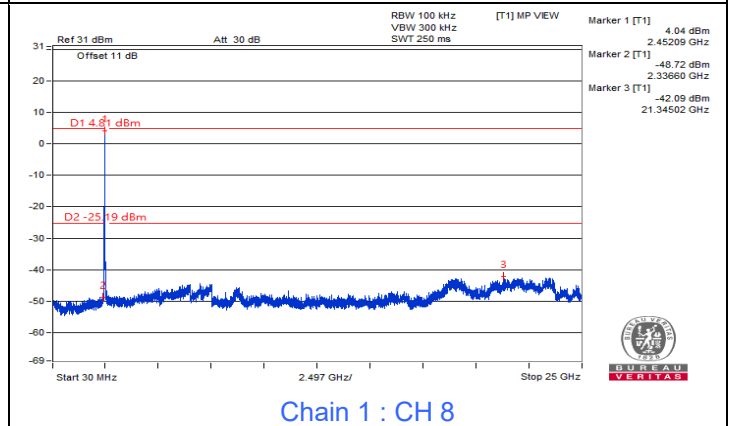
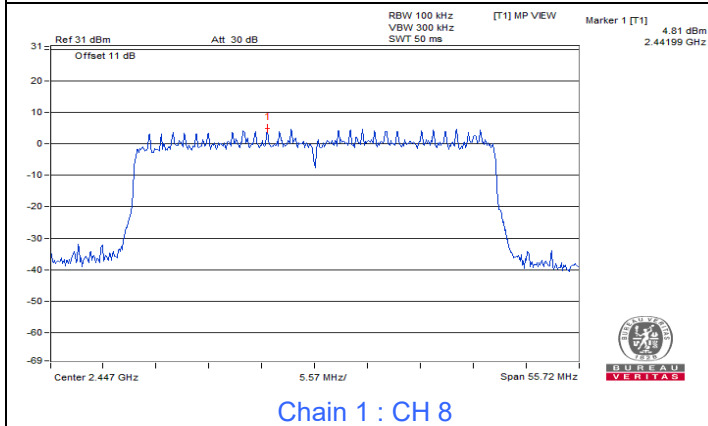
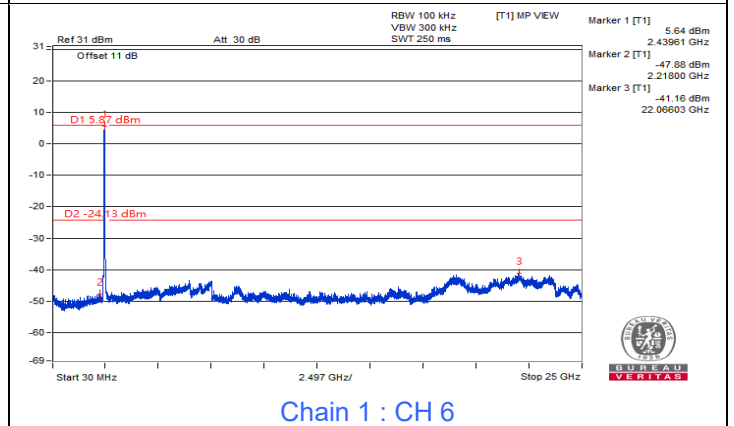
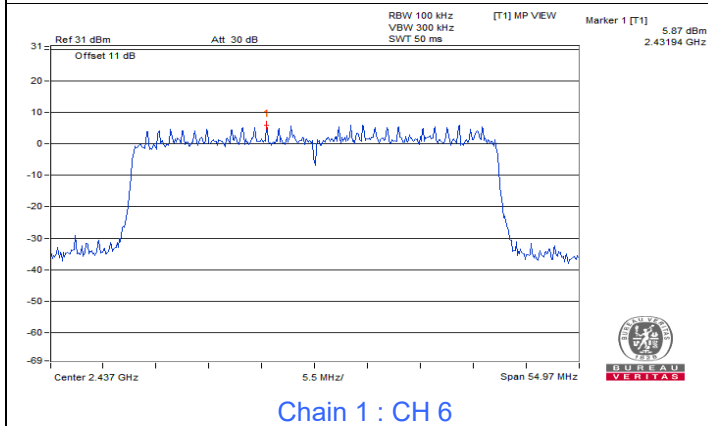
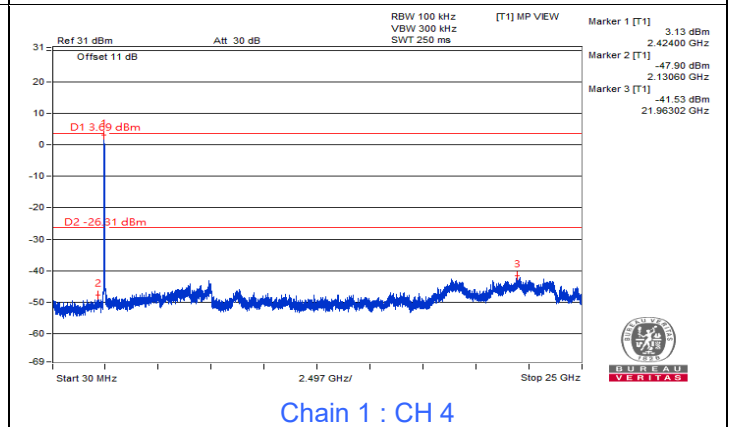
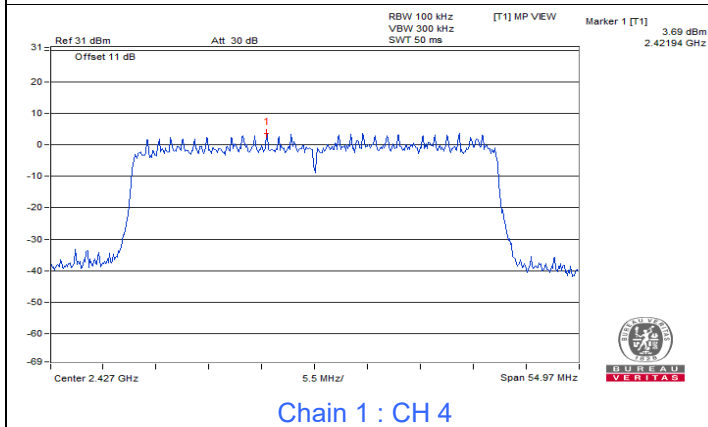
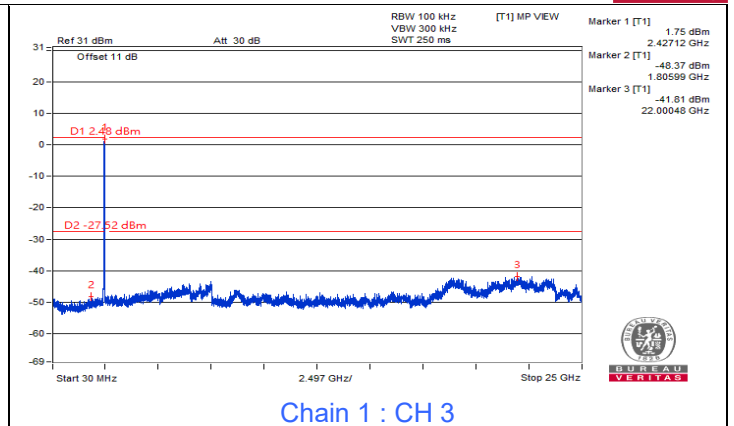
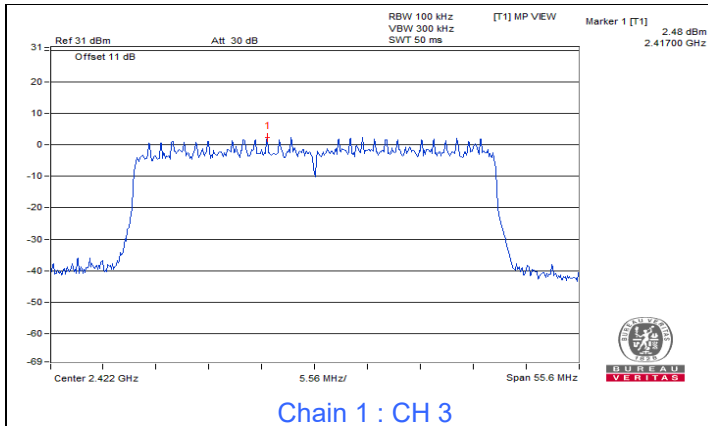


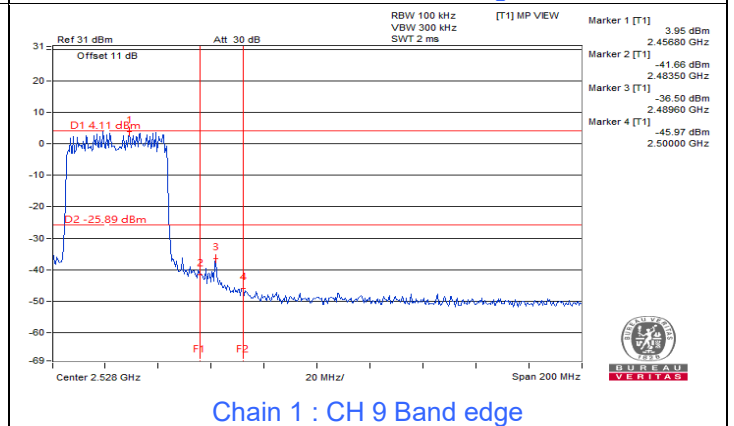
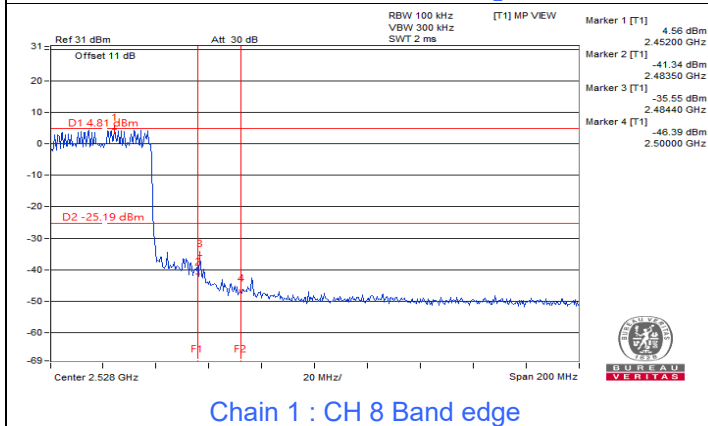
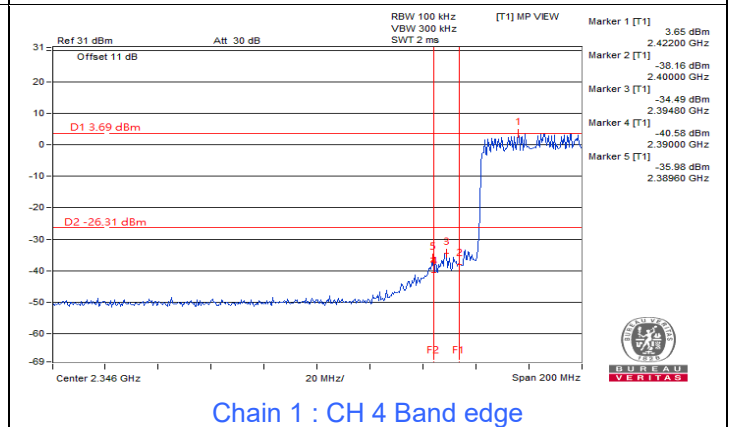
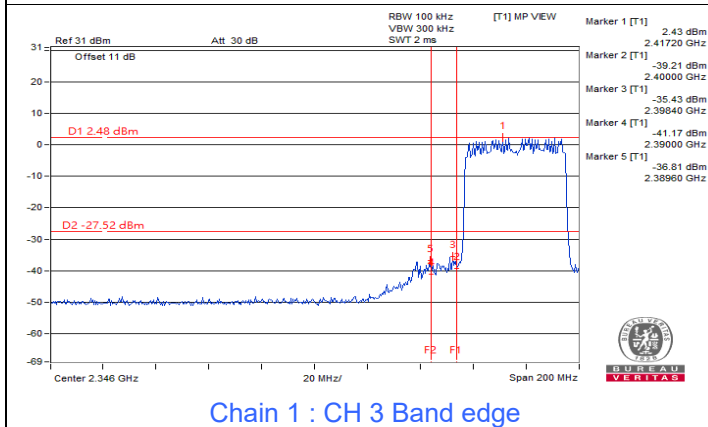
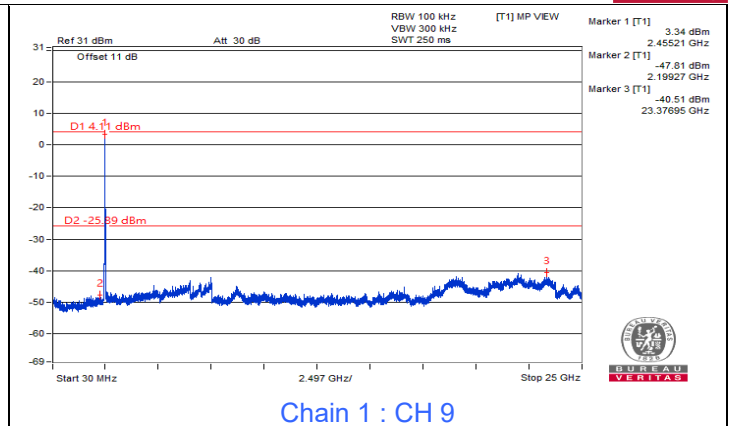
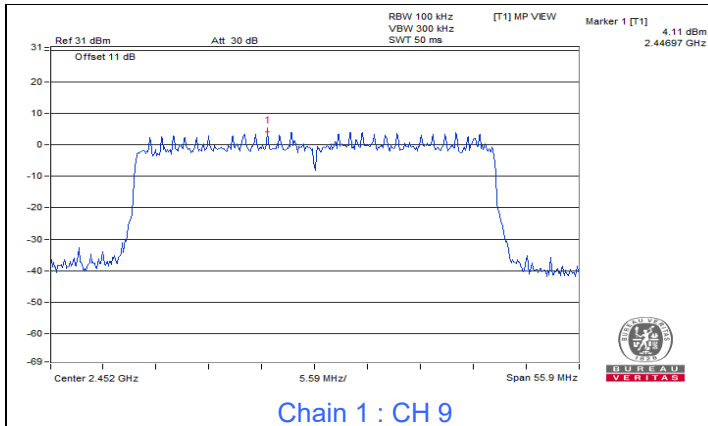


802.11ax (HE40)









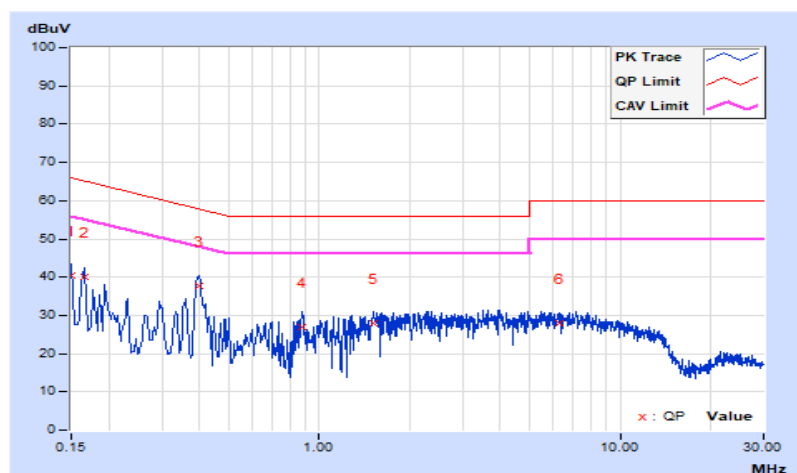
7.5 AC Power Conducted Emissions

RF Mode	802.11b	Channel	CH 2 : 2417 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	22 °C, 71% RH
Tested By	Thomas Cheng		

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	0.15000	10.29	29.96	14.17	40.25	24.46	66.00	56.00	-25.75	-31.54
2	0.16579	10.30	29.92	14.07	40.22	24.37	65.17	55.17	-24.95	-30.80
3	0.39759	10.36	27.32	20.40	37.68	30.76	57.90	47.90	-20.22	-17.14
4	0.88200	10.42	16.65	6.12	27.07	16.54	56.00	46.00	-28.93	-29.46
5	1.51000	10.47	17.55	6.62	28.02	17.09	56.00	46.00	-27.98	-28.91
6	6.27000	10.60	17.18	6.02	27.78	16.62	60.00	50.00	-32.22	-33.38

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

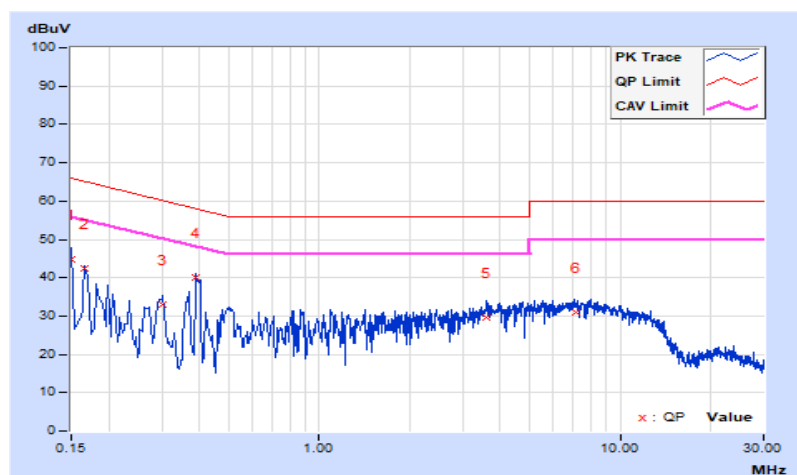


RF Mode	802.11b	Channel	CH 2 : 2417 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 71% RH
Tested By	Thomas Cheng		

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	10.34	34.40	18.05	44.74	28.39	66.00	56.00	-21.26	-27.61
2	0.16600	10.34	31.95	15.82	42.29	26.16	65.16	55.16	-22.87	-29.00
3	0.30151	10.38	22.75	18.31	33.13	28.69	60.20	50.20	-27.07	-21.51
4	0.39000	10.39	29.70	22.77	40.09	33.16	58.06	48.06	-17.97	-14.90
5	3.60600	10.61	19.11	8.99	29.72	19.60	56.00	46.00	-26.28	-26.40
6	7.10600	10.69	20.37	10.98	31.06	21.67	60.00	50.00	-28.94	-28.33

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



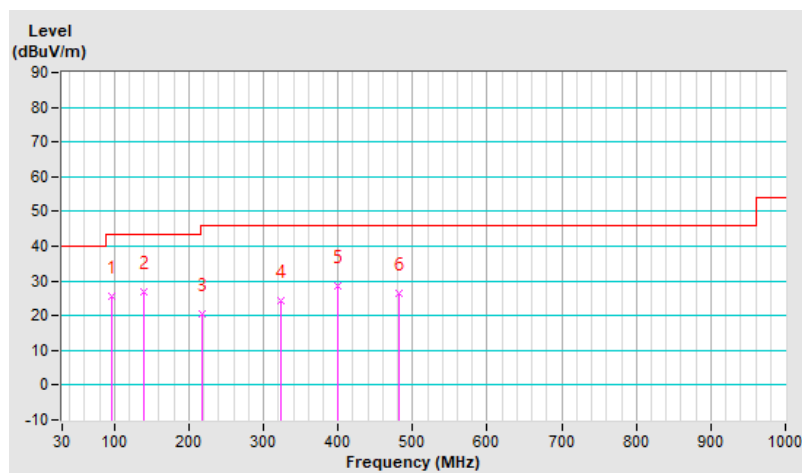
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11b	Channel	CH 2 : 2417 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Karl Lee		

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	96.93	25.6 QP	43.5	-17.9	1.53 H	229	43.4	-17.8
2	139.61	26.8 QP	43.5	-16.7	1.76 H	155	40.0	-13.2
3	217.21	20.5 QP	46.0	-25.5	2.05 H	146	36.7	-16.2
4	323.91	24.4 QP	46.0	-21.6	1.85 H	112	35.6	-11.2
5	399.57	28.4 QP	46.0	-17.6	1.60 H	217	38.0	-9.6
6	482.02	26.3 QP	46.0	-19.7	1.13 H	29	33.8	-7.5

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.

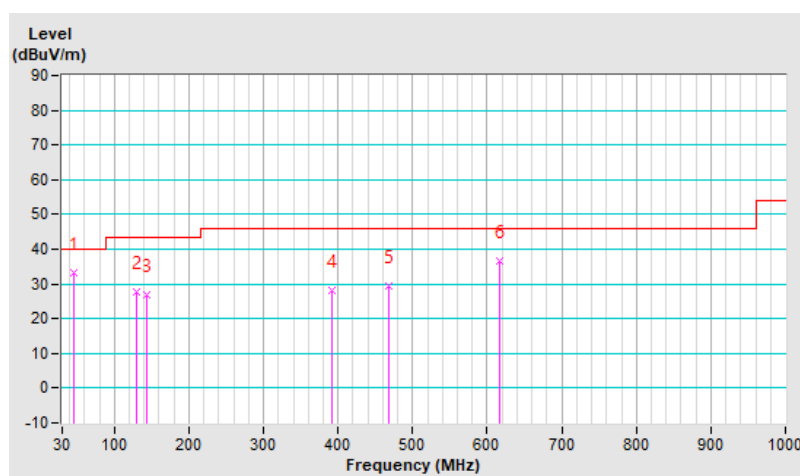


RF Mode	802.11b	Channel	CH 2 : 2417 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Karl Lee		

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	46.49	33.4 QP	40.0	-6.6	1.53 V	281	46.4	-13.0
2	129.91	27.9 QP	43.5	-15.6	1.55 V	271	42.0	-14.1
3	143.49	26.9 QP	43.5	-16.6	1.69 V	325	39.7	-12.8
4	390.84	28.1 QP	46.0	-17.9	2.21 V	154	37.9	-9.8
5	468.44	29.3 QP	46.0	-16.7	1.89 V	29	37.0	-7.7
6	616.85	36.6 QP	46.0	-9.4	2.06 V	41	40.9	-4.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	62.1 PK	74.0	-11.9	2.18 H	282	30.3	31.8
2	2390.00	51.6 AV	54.0	-2.4	2.18 H	282	19.8	31.8
3	*2412.00	116.9 PK			2.18 H	282	85.1	31.8
4	*2412.00	113.6 AV			2.18 H	282	81.8	31.8
5	4824.00	53.9 PK	74.0	-20.1	1.17 H	285	50.9	3.0
6	4824.00	47.6 AV	54.0	-6.4	1.17 H	285	44.6	3.0
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	2390.00	61.0 PK	74.0	-13.0	1.82 V	209	29.2	31.8
2	2390.00	50.2 AV	54.0	-3.8	1.82 V	209	18.4	31.8
3	*2412.00	116.7 PK			1.82 V	209	84.9	31.8
4	*2412.00	112.4 AV			1.82 V	209	80.6	31.8
5	4824.00	53.2 PK	74.0	-20.8	1.52 V	192	50.2	3.0
6	4824.00	46.8 AV	54.0	-7.2	1.52 V	192	43.8	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 2 : 2417 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	23 °C, 67% RH
Tested By	Karl Lee		

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	62.1 PK	74.0	-11.9	2.21 H	292	30.3	31.8
2	2390.00	48.4 AV	54.0	-5.6	2.21 H	292	16.6	31.8
3	*2417.00	117.9 PK			2.21 H	292	86.1	31.8
4	*2417.00	114.7 AV			2.21 H	292	82.9	31.8
5	4834.00	53.4 PK	74.0	-20.6	1.17 H	285	50.5	2.9
6	4834.00	47.1 AV	54.0	-6.9	1.17 H	285	44.2	2.9
7	7251.00	60.0 PK	74.0	-14.0	1.31 H	194	51.4	8.6
8	7251.00	51.1 AV	54.0	-2.9	1.31 H	194	42.5	8.6
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	61.6 PK	74.0	-12.4	1.68 V	214	29.8	31.8
2	2390.00	49.3 AV	54.0	-4.7	1.68 V	214	17.5	31.8
3	*2417.00	116.9 PK			1.68 V	214	85.1	31.8
4	*2417.00	113.5 AV			1.68 V	214	81.7	31.8
5	4834.00	52.6 PK	74.0	-21.4	1.48 V	194	49.7	2.9
6	4834.00	46.4 AV	54.0	-7.6	1.48 V	194	43.5	2.9
7	7251.00	59.2 PK	74.0	-14.8	1.53 V	127	50.6	8.6
8	7251.00	50.3 AV	54.0	-3.7	1.53 V	127	41.7	8.6

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, 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	23 °C, 67% RH
Tested By	Karl Lee		

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	118.1 PK			2.15 H	260	86.3	31.8
2	*2437.00	114.8 AV			2.15 H	260	83.0	31.8
3	4874.00	51.8 PK	74.0	-22.2	1.17 H	292	48.8	3.0
4	4874.00	43.0 AV	54.0	-11.0	1.17 H	292	40.0	3.0
5	7311.00	59.6 PK	74.0	-14.4	1.21 H	225	51.0	8.6
6	7311.00	50.1 AV	54.0	-3.9	1.21 H	225	41.5	8.6
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	*2437.00	116.8 PK			1.77 V	217	85.0	31.8
2	*2437.00	113.6 AV			1.77 V	217	81.8	31.8
3	4874.00	51.2 PK	74.0	-22.8	1.52 V	188	48.2	3.0
4	4874.00	42.7 AV	54.0	-11.3	1.52 V	188	39.7	3.0
5	7311.00	58.8 PK	74.0	-15.2	1.47 V	126	50.2	8.6
6	7311.00	49.2 AV	54.0	-4.8	1.47 V	126	40.6	8.6

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, the limit was restricted at the RF Output Power.

RF Mode	802.11b	Channel	CH 10 : 2457 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	23 °C, 67% RH
Tested By	Karl Lee		

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	2356.17	58.6 PK	74.0	-15.4	2.12 H	292	26.6	32.0
2	2356.17	47.0 AV	54.0	-7.0	2.12 H	292	15.0	32.0
3	*2457.00	116.7 PK			2.12 H	292	84.8	31.9
4	*2457.00	113.5 AV			2.12 H	292	81.6	31.9
5	2483.50	60.6 PK	74.0	-13.4	2.12 H	292	28.7	31.9
6	2483.50	48.7 AV	54.0	-5.3	2.12 H	292	16.8	31.9
7	4914.00	51.3 PK	74.0	-22.7	1.03 H	285	48.3	3.0
8	4914.00	40.8 AV	54.0	-13.2	1.03 H	285	37.8	3.0
9	7371.00	57.5 PK	74.0	-16.5	1.03 H	197	49.0	8.5
10	7371.00	46.2 AV	54.0	-7.8	1.03 H	197	37.7	8.5
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	2357.50	59.3 PK	74.0	-14.7	1.68 V	207	63.3	-4.0
2	2357.50	47.9 AV	54.0	-6.1	1.68 V	207	51.9	-4.0
3	*2457.00	115.4 PK			1.68 V	207	83.5	31.9
4	*2457.00	112.2 AV			1.68 V	207	80.3	31.9
5	2483.50	61.3 PK	74.0	-12.7	1.68 V	207	65.4	-4.1
6	2483.50	48.3 AV	54.0	-5.7	1.68 V	207	52.4	-4.1
7	4914.00	50.7 PK	74.0	-23.3	1.51 V	203	47.7	3.0
8	4914.00	40.2 AV	54.0	-13.8	1.51 V	203	37.2	3.0
9	7371.00	56.7 PK	74.0	-17.3	1.48 V	134	48.2	8.5
10	7371.00	45.3 AV	54.0	-8.7	1.48 V	134	36.8	8.5

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, 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	23 °C, 67% RH
Tested By	Karl Lee		

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	2362.82	58.7 PK	74.0	-15.3	2.29 H	290	26.7	32.0
2	2362.82	48.2 AV	54.0	-5.8	2.29 H	290	16.2	32.0
3	*2462.00	116.8 PK			2.29 H	290	84.9	31.9
4	*2462.00	113.6 AV			2.29 H	290	81.7	31.9
5	2483.50	62.1 PK	74.0	-11.9	2.29 H	290	30.2	31.9
6	2483.50	52.5 AV	54.0	-1.5	2.29 H	290	20.6	31.9
7	4924.00	51.1 PK	74.0	-22.9	1.10 H	182	48.1	3.0
8	4924.00	40.4 AV	54.0	-13.6	1.10 H	182	37.4	3.0
9	7386.00	57.6 PK	74.0	-16.4	1.16 H	225	48.9	8.7
10	7386.00	46.1 AV	54.0	-7.9	1.16 H	225	37.4	8.7
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	2360.73	58.5 PK	74.0	-15.5	1.73 V	211	26.5	32.0
2	2360.73	47.6 AV	54.0	-6.4	1.73 V	211	15.6	32.0
3	*2462.00	115.6 PK			1.73 V	211	83.7	31.9
4	*2462.00	112.3 AV			1.73 V	211	80.4	31.9
5	2483.50	61.1 PK	74.0	-12.9	1.73 V	211	29.2	31.9
6	2483.50	50.9 AV	54.0	-3.1	1.73 V	211	19.0	31.9
7	4924.00	50.2 PK	74.0	-23.8	1.48 V	189	47.2	3.0
8	4924.00	39.5 AV	54.0	-14.5	1.48 V	189	36.5	3.0
9	7386.00	57.1 PK	74.0	-16.9	1.50 V	132	48.4	8.7
10	7386.00	45.5 AV	54.0	-8.5	1.50 V	132	36.8	8.7

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, 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	23 °C, 67% RH
Tested By	Karl Lee		

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	72.0 PK	74.0	-2.0	2.18 H	282	40.2	31.8
2	2390.00	53.6 AV	54.0	-0.4	2.18 H	282	21.8	31.8
3	*2412.00	113.6 PK			2.18 H	282	81.8	31.8
4	*2412.00	102.1 AV			2.18 H	282	70.3	31.8
5	4824.00	50.0 PK	74.0	-24.0	1.17 H	285	47.0	3.0
6	4824.00	36.4 AV	54.0	-17.6	1.17 H	285	33.4	3.0
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	2390.00	70.9 PK	74.0	-3.1	1.82 V	209	39.1	31.8
2	2390.00	52.1 AV	54.0	-1.9	1.82 V	209	20.3	31.8
3	*2412.00	113.0 PK			1.82 V	209	81.2	31.8
4	*2412.00	101.3 AV			1.82 V	209	69.5	31.8
5	4824.00	49.5 PK	74.0	-24.5	1.52 V	192	46.5	3.0
6	4824.00	35.9 AV	54.0	-18.1	1.52 V	192	32.9	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 2 : 2417 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	23 °C, 67% RH
Tested By	Karl Lee		

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	73.4 PK	74.0	-0.6	2.21 H	292	41.6	31.8
2	2390.00	53.7 AV	54.0	-0.3	2.21 H	292	21.9	31.8
3	*2417.00	116.3 PK			2.21 H	292	84.5	31.8
4	*2417.00	105.1 AV			2.21 H	292	73.3	31.8
5	4834.00	50.4 PK	74.0	-23.6	1.17 H	285	47.5	2.9
6	4834.00	36.8 AV	54.0	-17.2	1.17 H	285	33.9	2.9
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	72.3 PK	74.0	-1.7	1.68 V	214	40.5	31.8
2	2390.00	52.9 AV	54.0	-1.1	1.68 V	214	21.1	31.8
3	*2417.00	115.8 PK			1.68 V	214	84.0	31.8
4	*2417.00	103.9 AV			1.68 V	214	72.1	31.8
5	4834.00	50.0 PK	74.0	-24.0	1.48 V	194	47.1	2.9
6	4834.00	36.5 AV	54.0	-17.5	1.48 V	194	33.6	2.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	67.6 PK	74.0	-6.4	2.15 H	260	35.8	31.8
2	2390.00	48.0 AV	54.0	-6.0	2.15 H	260	16.2	31.8
3	*2437.00	118.4 PK			2.15 H	260	86.6	31.8
4	*2437.00	107.3 AV			2.15 H	260	75.5	31.8
5	2483.50	70.6 PK	74.0	-3.4	2.15 H	260	38.7	31.9
6	2483.50	52.5 AV	54.0	-1.5	2.15 H	260	20.6	31.9
7	4874.00	51.0 PK	74.0	-23.0	1.17 H	292	48.0	3.0
8	4874.00	37.1 AV	54.0	-16.9	1.17 H	292	34.1	3.0
9	7311.00	58.1 PK	74.0	-15.9	1.21 H	225	49.5	8.6
10	7311.00	44.5 AV	54.0	-9.5	1.21 H	225	35.9	8.6
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	66.6 PK	74.0	-7.4	1.77 V	217	34.8	31.8
2	2390.00	49.2 AV	54.0	-4.8	1.77 V	217	17.4	31.8
3	*2437.00	118.4 PK			1.77 V	217	86.6	31.8
4	*2437.00	106.0 AV			1.77 V	217	74.2	31.8
5	2483.50	68.8 PK	74.0	-5.2	1.77 V	217	36.9	31.9
6	2483.50	50.3 AV	54.0	-3.7	1.77 V	217	18.4	31.9
7	4874.00	50.5 PK	74.0	-23.5	1.52 V	188	47.5	3.0
8	4874.00	36.6 AV	54.0	-17.4	1.52 V	188	33.6	3.0
9	7311.00	57.5 PK	74.0	-16.5	1.47 V	126	48.9	8.6
10	7311.00	43.8 AV	54.0	-10.2	1.47 V	126	35.2	8.6

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, the limit was restricted at the RF Output Power.

RF Mode	802.11g	Channel	CH 10 : 2457 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	23 °C, 67% RH
Tested By	Karl Lee		

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	*2457.00	113.7 PK			2.12 H	292	81.8	31.9
2	*2457.00	102.8 AV			2.12 H	292	70.9	31.9
3	2483.50	73.3 PK	74.0	-0.7	2.12 H	292	41.4	31.9
4	2483.50	51.5 AV	54.0	-2.5	2.12 H	292	19.6	31.9
5	4914.00	51.0 PK	74.0	-23.0	1.03 H	286	48.0	3.0
6	4914.00	36.3 AV	54.0	-17.7	1.03 H	286	33.3	3.0
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	*2457.00	112.8 PK			1.68 V	207	80.9	31.9
2	*2457.00	101.7 AV			1.68 V	207	69.8	31.9
3	2483.50	71.6 PK	74.0	-2.4	1.68 V	207	39.7	31.9
4	2483.50	49.9 AV	54.0	-4.1	1.68 V	207	18.0	31.9
5	4914.00	50.3 PK	74.0	-23.7	1.51 V	203	47.3	3.0
6	4914.00	35.5 AV	54.0	-18.5	1.51 V	203	32.5	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	113.1 PK			2.29 H	290	81.2	31.9
2	*2462.00	101.7 AV			2.29 H	290	69.8	31.9
3	2483.50	73.6 PK	74.0	-0.4	2.29 H	290	41.7	31.9
4	2483.50	52.5 AV	54.0	-1.5	2.29 H	290	20.6	31.9
5	4924.00	50.2 PK	74.0	-23.8	1.09 H	287	47.2	3.0
6	4924.00	36.6 AV	54.0	-17.4	1.09 H	287	33.6	3.0
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	*2462.00	112.3 PK			1.73 V	211	80.4	31.9
2	*2462.00	100.5 AV			1.73 V	211	68.6	31.9
3	2483.50	69.9 PK	74.0	-4.1	1.73 V	211	38.0	31.9
4	2483.50	49.7 AV	54.0	-4.3	1.73 V	211	17.8	31.9
5	4924.00	49.9 PK	74.0	-24.1	1.48 V	189	46.9	3.0
6	4924.00	36.2 AV	54.0	-17.8	1.48 V	189	33.2	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	69.4 PK	74.0	-4.6	2.18 H	285	37.6	31.8
2	2390.00	53.8 AV	54.0	-0.2	2.18 H	285	22.0	31.8
3	*2412.00	113.6 PK			2.18 H	285	81.8	31.8
4	*2412.00	99.7 AV			2.18 H	285	67.9	31.8
5	4824.00	49.7 PK	74.0	-24.3	1.17 H	285	46.7	3.0
6	4824.00	36.1 AV	54.0	-17.9	1.17 H	285	33.1	3.0
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	2390.00	68.8 PK	74.0	-5.2	1.82 V	209	37.0	31.8
2	2390.00	52.6 AV	54.0	-1.4	1.82 V	209	20.8	31.8
3	*2412.00	112.4 PK			1.82 V	209	80.6	31.8
4	*2412.00	98.6 AV			1.82 V	209	66.8	31.8
5	4824.00	49.5 PK	74.0	-24.5	1.52 V	192	46.5	3.0
6	4824.00	35.8 AV	54.0	-18.2	1.52 V	192	32.8	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 2 : 2417 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	23 °C, 67% RH
Tested By	Karl Lee		

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	70.5 PK	74.0	-3.5	2.21 H	292	38.7	31.8
2	2390.00	53.5 AV	54.0	-0.5	2.21 H	292	21.7	31.8
3	*2417.00	117.0 PK			2.21 H	292	85.2	31.8
4	*2417.00	103.2 AV			2.21 H	292	71.4	31.8
5	4834.00	50.1 PK	74.0	-23.9	1.17 H	285	47.2	2.9
6	4834.00	36.6 AV	54.0	-17.4	1.17 H	285	33.7	2.9
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	69.8 PK	74.0	-4.2	1.68 V	214	38.0	31.8
2	2390.00	52.2 AV	54.0	-1.8	1.68 V	214	20.4	31.8
3	*2417.00	115.7 PK			1.68 V	214	83.9	31.8
4	*2417.00	102.0 AV			1.68 V	214	70.2	31.8
5	4834.00	49.6 PK	74.0	-24.4	1.48 V	194	46.7	2.9
6	4834.00	36.1 AV	54.0	-17.9	1.48 V	194	33.2	2.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	68.1 PK	74.0	-5.9	2.15 H	260	36.3	31.8
2	2390.00	51.3 AV	54.0	-2.7	2.15 H	260	19.5	31.8
3	*2437.00	119.8 PK			2.15 H	260	88.0	31.8
4	*2437.00	106.3 AV			2.15 H	260	74.5	31.8
5	2483.50	70.8 PK	74.0	-3.2	2.15 H	260	38.9	31.9
6	2483.50	53.2 AV	54.0	-0.8	2.15 H	260	21.3	31.9
7	4874.00	51.6 PK	74.0	-22.4	1.17 H	292	48.6	3.0
8	4874.00	36.9 AV	54.0	-17.1	1.17 H	292	33.9	3.0
9	7311.00	57.2 PK	74.0	-16.8	1.00 H	225	48.6	8.6
10	7311.00	43.9 AV	54.0	-10.1	1.00 H	225	35.3	8.6
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	69.8 PK	74.0	-4.2	1.77 V	217	38.0	31.8
2	2390.00	51.3 AV	54.0	-2.7	1.77 V	217	19.5	31.8
3	*2437.00	118.9 PK			1.77 V	217	87.1	31.8
4	*2437.00	105.0 AV			1.77 V	217	73.2	31.8
5	2483.50	71.2 PK	74.0	-2.8	1.77 V	217	39.3	31.9
6	2483.50	51.9 AV	54.0	-2.1	1.77 V	217	20.0	31.9
7	4874.00	50.8 PK	74.0	-23.2	1.52 V	188	47.8	3.0
8	4874.00	36.1 AV	54.0	-17.9	1.52 V	188	33.1	3.0
9	7311.00	56.5 PK	74.0	-17.5	1.47 V	126	47.9	8.6
10	7311.00	43.1 AV	54.0	-10.9	1.47 V	126	34.5	8.6

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 10 : 2457 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	23 °C, 67% RH
Tested By	Karl Lee		

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	*2457.00	115.9 PK			2.12 H	292	84.0	31.9
2	*2457.00	102.1 AV			2.12 H	292	70.2	31.9
3	2483.50	72.8 PK	74.0	-1.2	2.12 H	292	40.9	31.9
4	2483.50	53.9 AV	54.0	-0.1	2.12 H	292	22.0	31.9
5	4914.00	50.7 PK	74.0	-23.3	1.03 H	286	47.7	3.0
6	4914.00	36.1 AV	54.0	-17.9	1.03 H	286	33.1	3.0
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	*2457.00	114.3 PK			1.68 V	207	82.4	31.9
2	*2457.00	100.8 AV			1.68 V	207	68.9	31.9
3	2483.50	70.5 PK	74.0	-3.5	1.68 V	207	38.6	31.9
4	2483.50	51.2 AV	54.0	-2.8	1.68 V	207	19.3	31.9
5	4914.00	50.5 PK	74.0	-23.5	1.51 V	203	47.5	3.0
6	4914.00	35.8 AV	54.0	-18.2	1.51 V	203	32.8	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	113.8 PK			2.29 H	290	81.9	31.9
2	*2462.00	100.2 AV			2.29 H	290	68.3	31.9
3	2483.50	71.4 PK	74.0	-2.6	2.29 H	290	39.5	31.9
4	2483.50	53.2 AV	54.0	-0.8	2.29 H	290	21.3	31.9
5	4924.00	49.9 PK	74.0	-24.1	1.09 H	287	46.9	3.0
6	4924.00	36.4 AV	54.0	-17.6	1.09 H	287	33.4	3.0
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	*2462.00	112.7 PK			1.73 V	211	80.8	31.9
2	*2462.00	98.9 AV			1.73 V	211	67.0	31.9
3	2483.50	71.0 PK	74.0	-3.0	1.73 V	211	39.1	31.9
4	2483.50	52.0 AV	54.0	-2.0	1.73 V	211	20.1	31.9
5	4924.00	49.8 PK	74.0	-24.2	1.48 V	189	46.8	3.0
6	4924.00	36.3 AV	54.0	-17.7	1.48 V	189	33.3	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	68.8 PK	74.0	-5.2	2.18 H	285	37.0	31.8
2	2390.00	53.8 AV	54.0	-0.2	2.18 H	285	22.0	31.8
3	*2422.00	109.0 PK			2.18 H	285	77.2	31.8
4	*2422.00	95.3 AV			2.18 H	285	63.5	31.8
5	2483.50	57.3 PK	74.0	-16.7	2.18 H	285	25.4	31.9
6	2483.50	46.2 AV	54.0	-7.8	2.18 H	285	14.3	31.9
7	4844.00	49.7 PK	74.0	-24.3	1.15 H	278	46.8	2.9
8	4844.00	36.2 AV	54.0	-17.8	1.15 H	278	33.3	2.9
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	65.2 PK	74.0	-8.8	1.82 V	209	33.4	31.8
2	2390.00	51.1 AV	54.0	-2.9	1.82 V	209	19.3	31.8
3	*2422.00	108.3 PK			1.82 V	209	76.5	31.8
4	*2422.00	94.2 AV			1.82 V	209	62.4	31.8
5	2483.50	57.3 PK	74.0	-16.7	1.82 V	209	25.4	31.9
6	2483.50	45.3 AV	54.0	-8.7	1.82 V	209	13.4	31.9
7	4844.00	49.3 PK	74.0	-24.7	1.52 V	192	46.4	2.9
8	4844.00	35.7 AV	54.0	-18.3	1.52 V	192	32.8	2.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 4 : 2427 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	23 °C, 67% RH
Tested By	Karl Lee		

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	66.8 PK	74.0	-7.2	2.21 H	292	35.0	31.8
2	2390.00	53.6 AV	54.0	-0.4	2.21 H	292	21.8	31.8
3	*2427.00	110.9 PK			2.21 H	292	79.1	31.8
4	*2427.00	97.3 AV			2.21 H	292	65.5	31.8
5	4854.00	49.9 PK	74.0	-24.1	1.20 H	293	46.9	3.0
6	4854.00	36.5 AV	54.0	-17.5	1.20 H	293	33.5	3.0
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	2390.00	66.1 PK	74.0	-7.9	1.68 V	217	34.3	31.8
2	2390.00	52.4 AV	54.0	-1.6	1.68 V	217	20.6	31.8
3	*2427.00	109.9 PK			1.68 V	217	78.1	31.8
4	*2427.00	96.1 AV			1.68 V	217	64.3	31.8
5	4854.00	49.7 PK	74.0	-24.3	1.48 V	194	46.7	3.0
6	4854.00	38.2 AV	54.0	-15.8	1.48 V	194	35.2	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	23 °C, 67% RH
Tested By	Karl Lee		

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	70.5 PK	74.0	-3.5	2.15 H	260	38.7	31.8
2	2390.00	53.5 AV	54.0	-0.5	2.15 H	260	21.7	31.8
3	*2437.00	114.0 PK			2.15 H	260	82.2	31.8
4	*2437.00	98.8 AV			2.15 H	260	67.0	31.8
5	2483.50	70.1 PK	74.0	-3.9	2.15 H	260	38.2	31.9
6	2483.50	52.5 AV	54.0	-1.5	2.15 H	260	20.6	31.9
7	4874.00	49.9 PK	74.0	-24.1	1.17 H	292	46.9	3.0
8	4874.00	36.1 AV	54.0	-17.9	1.17 H	292	33.1	3.0
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	2390.00	67.6 PK	74.0	-6.4	1.77 V	217	35.8	31.8
2	2390.00	52.2 AV	54.0	-1.8	1.77 V	217	20.4	31.8
3	*2437.00	112.3 PK			1.77 V	217	80.5	31.8
4	*2437.00	97.5 AV			1.77 V	217	65.7	31.8
5	2483.50	65.2 PK	74.0	-8.8	1.77 V	217	33.3	31.9
6	2483.50	50.3 AV	54.0	-3.7	1.77 V	217	18.4	31.9
7	4874.00	49.5 PK	74.0	-24.5	1.52 V	188	46.5	3.0
8	4874.00	35.7 AV	54.0	-18.3	1.52 V	188	32.7	3.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 8 : 2447 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	23 °C, 67% RH
Tested By	Karl Lee		

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	61.0 PK	74.0	-13.0	2.15 H	279	29.2	31.8
2	2390.00	46.6 AV	54.0	-7.4	2.15 H	279	14.8	31.8
3	*2447.00	111.9 PK			2.15 H	279	80.1	31.8
4	*2447.00	98.1 AV			2.15 H	279	66.3	31.8
5	2483.50	69.5 PK	74.0	-4.5	2.15 H	279	37.6	31.9
6	2483.50	53.8 AV	54.0	-0.2	2.15 H	279	21.9	31.9
7	4894.00	50.7 PK	74.0	-23.3	1.05 H	286	47.6	3.1
8	4894.00	36.0 AV	54.0	-18.0	1.05 H	286	32.9	3.1
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	59.9 PK	74.0	-14.1	1.68 V	207	28.1	31.8
2	2390.00	45.2 AV	54.0	-8.8	1.68 V	207	13.4	31.8
3	*2447.00	110.6 PK			1.68 V	207	78.8	31.8
4	*2447.00	96.7 AV			1.68 V	207	64.9	31.8
5	2483.50	66.0 PK	74.0	-8.0	1.68 V	207	34.1	31.9
6	2483.50	51.8 AV	54.0	-2.2	1.68 V	207	19.9	31.9
7	4894.00	50.3 PK	74.0	-23.7	1.51 V	203	47.2	3.1
8	4894.00	35.6 AV	54.0	-18.4	1.51 V	203	32.5	3.1

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	23 °C, 67% RH
Tested By	Karl Lee		

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	58.2 PK	74.0	-15.8	2.18 H	255	26.4	31.8
2	2390.00	44.8 AV	54.0	-9.2	2.18 H	255	13.0	31.8
3	*2452.00	111.2 PK			2.18 H	255	79.3	31.9
4	*2452.00	97.3 AV			2.18 H	255	65.4	31.9
5	2483.50	69.9 PK	74.0	-4.1	2.18 H	255	38.0	31.9
6	2483.50	53.9 AV	54.0	-0.1	2.18 H	255	22.0	31.9
7	4904.00	50.1 PK	74.0	-23.9	1.12 H	274	47.1	3.0
8	4904.00	36.5 AV	54.0	-17.5	1.12 H	274	33.5	3.0
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	2390.00	56.9 PK	74.0	-17.1	1.73 V	211	25.1	31.8
2	2390.00	44.8 AV	54.0	-9.2	1.73 V	211	13.0	31.8
3	*2452.00	109.9 PK			1.73 V	211	78.0	31.9
4	*2452.00	96.2 AV			1.73 V	211	64.3	31.9
5	2483.50	64.1 PK	74.0	-9.9	1.73 V	211	32.2	31.9
6	2483.50	51.8 AV	54.0	-2.2	1.73 V	211	19.9	31.9
7	4904.00	49.8 PK	74.0	-24.2	1.48 V	189	46.8	3.0
8	4904.00	36.2 AV	54.0	-17.8	1.48 V	189	33.2	3.0

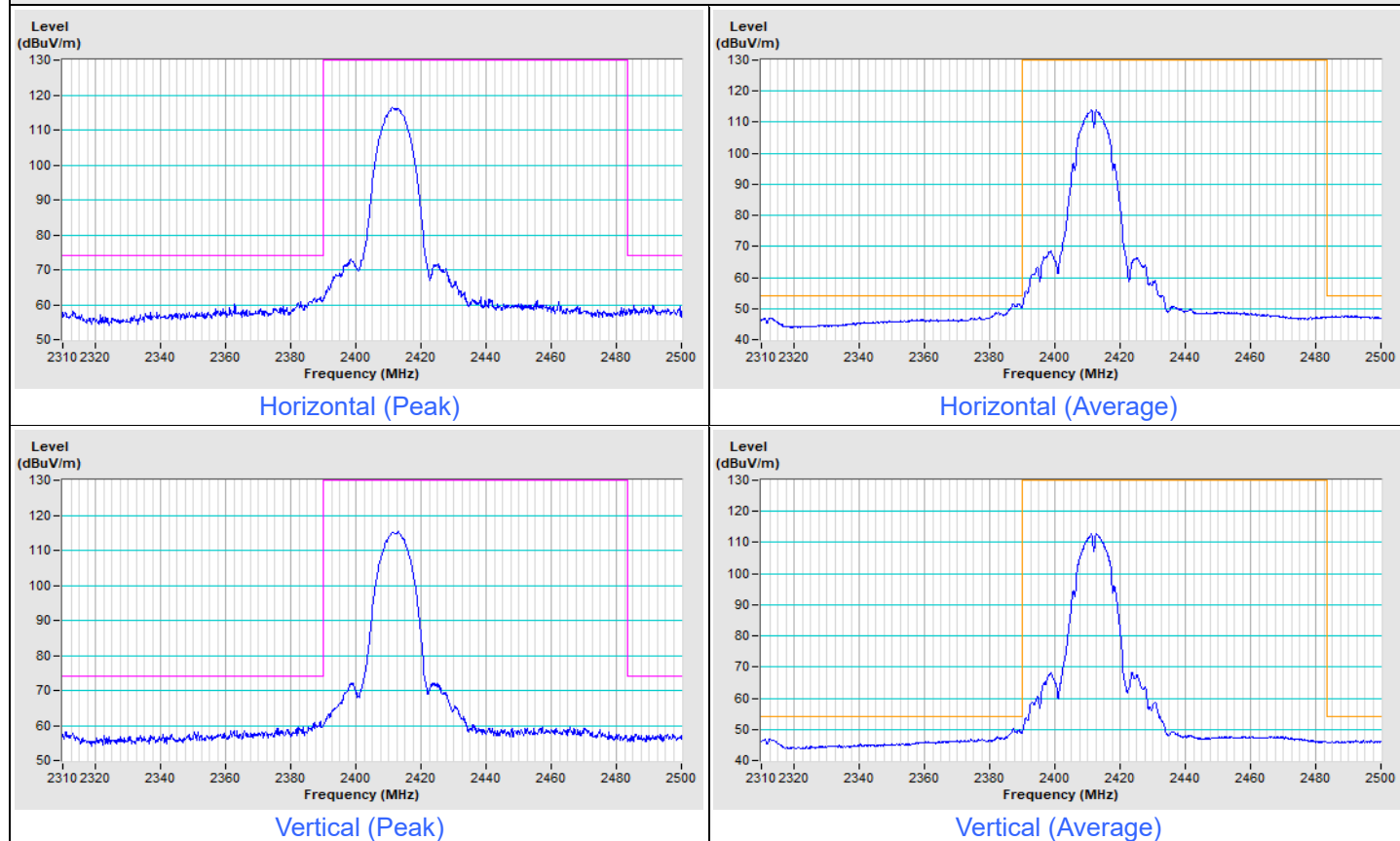
Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.

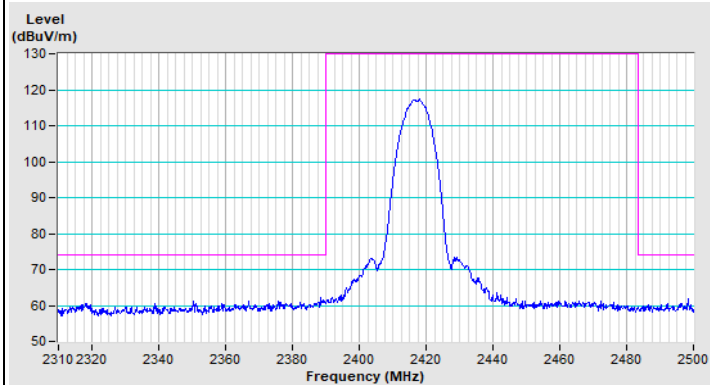
Plot of Band Edge

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
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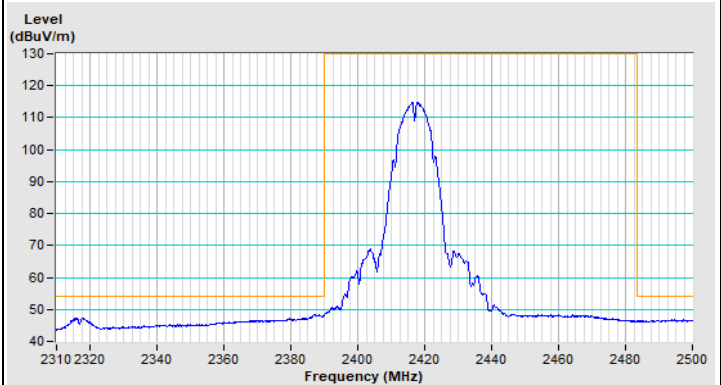
802.11b Channel 1



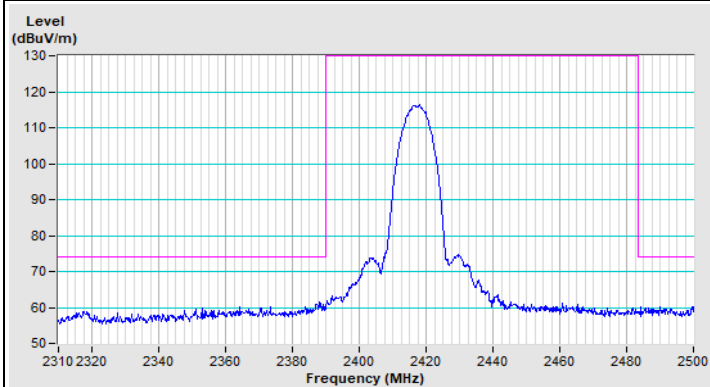
802.11b Channel 2



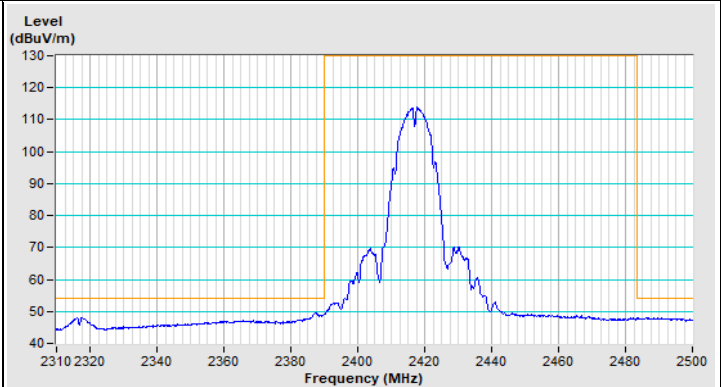
Horizontal (Peak)



Horizontal (Average)

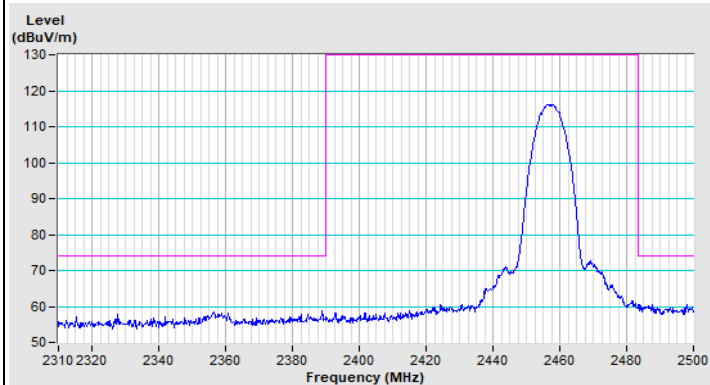


Vertical (Peak)

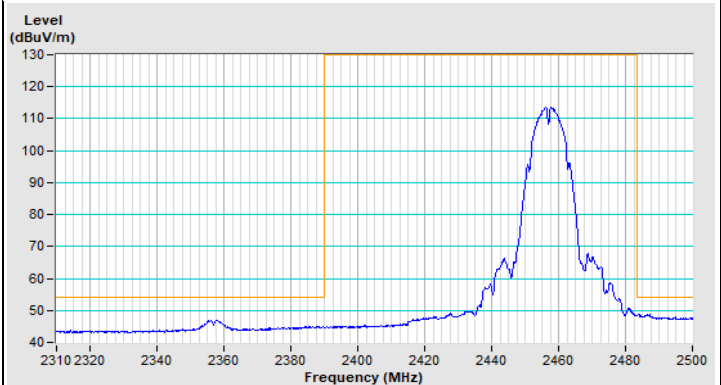


Vertical (Average)

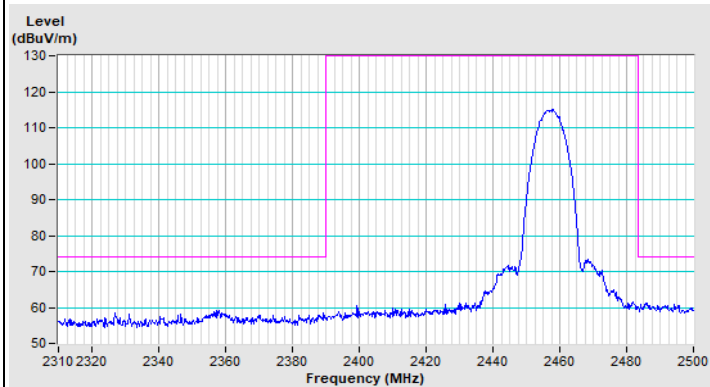
802.11b Channel 10



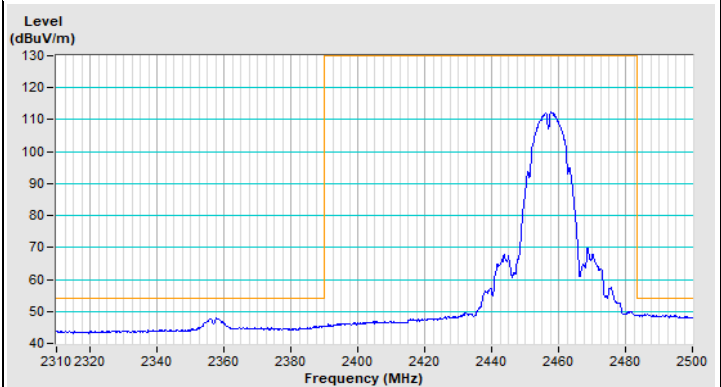
Horizontal (Peak)



Horizontal (Average)

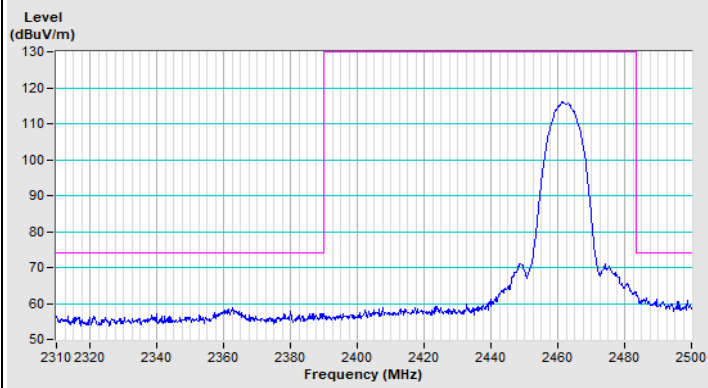


Vertical (Peak)

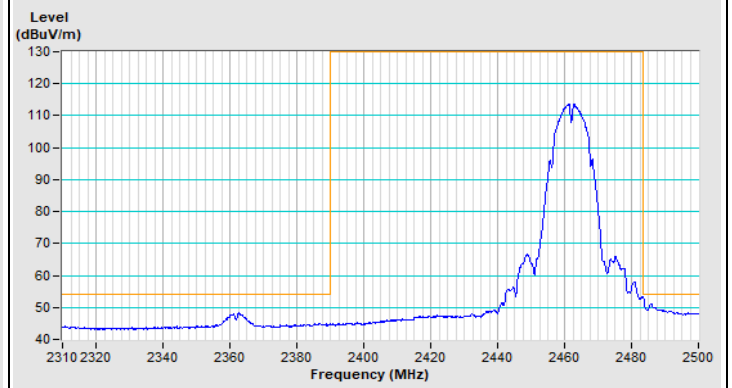


Vertical (Average)

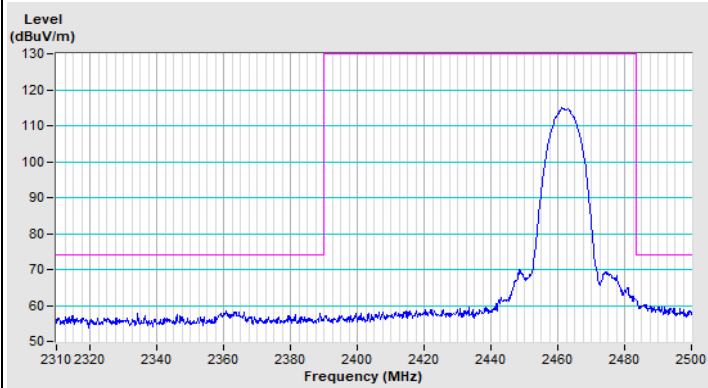
802.11b Channel 11



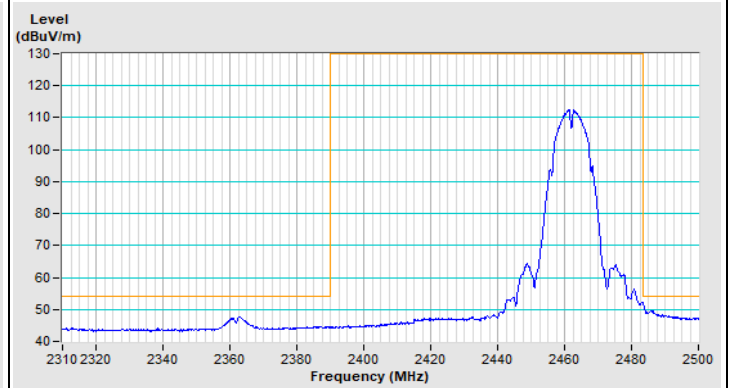
Horizontal (Peak)



Horizontal (Average)



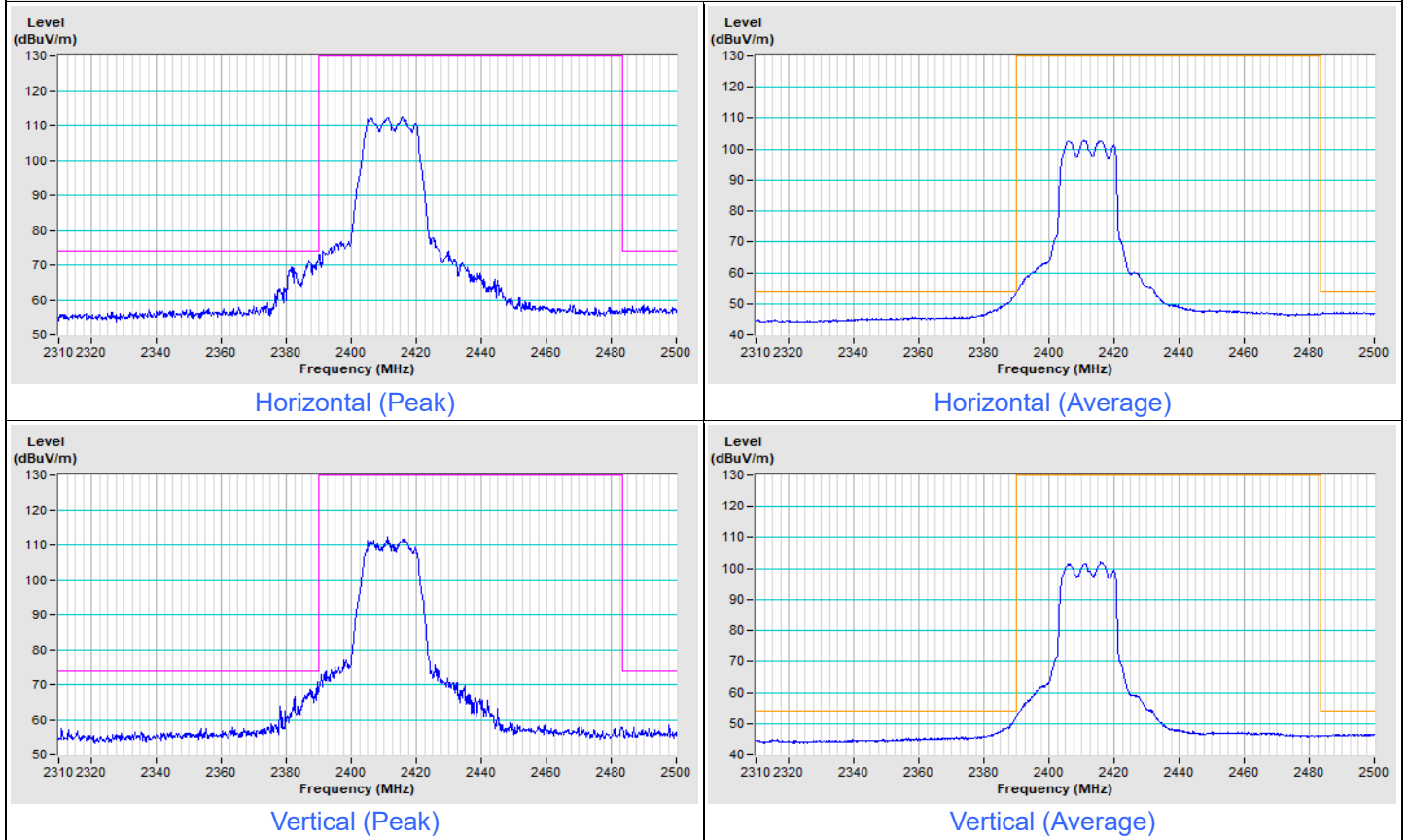
Vertical (Peak)



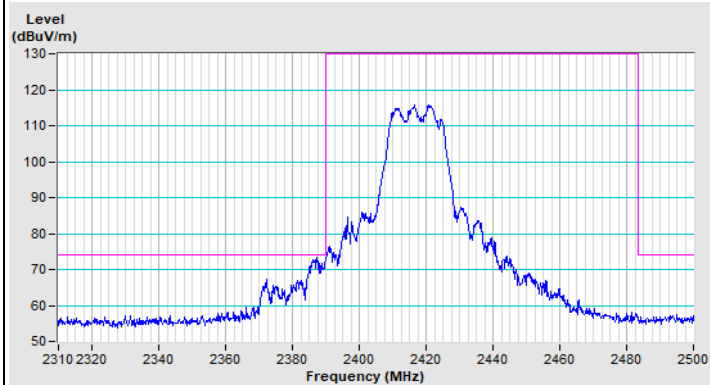
Vertical (Average)

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
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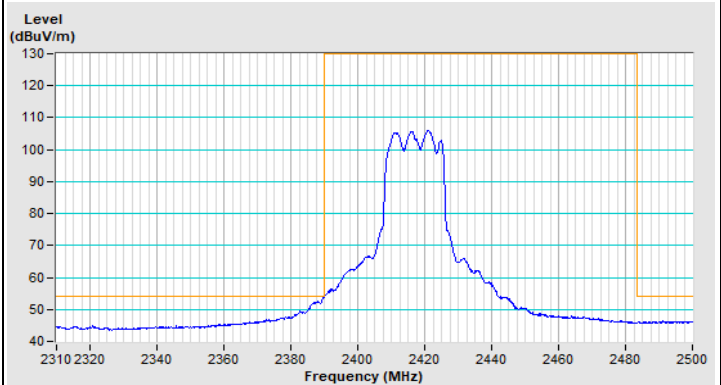
802.11g Channel 1



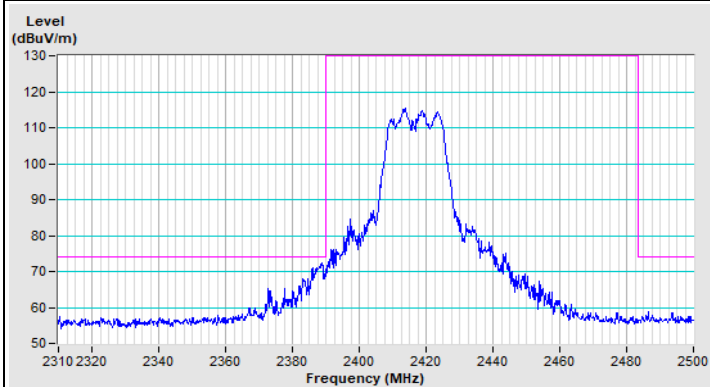
802.11g Channel 2



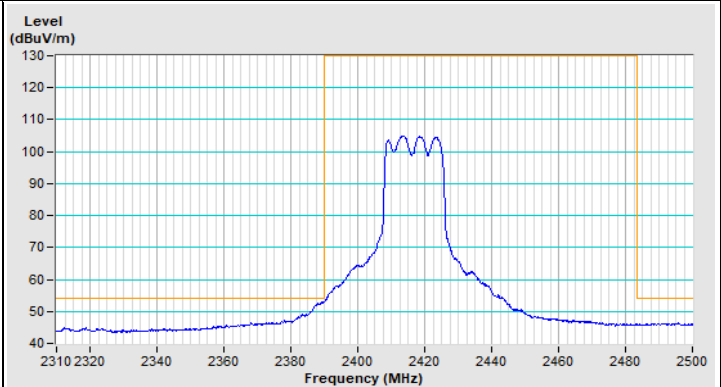
Horizontal (Peak)



Horizontal (Average)

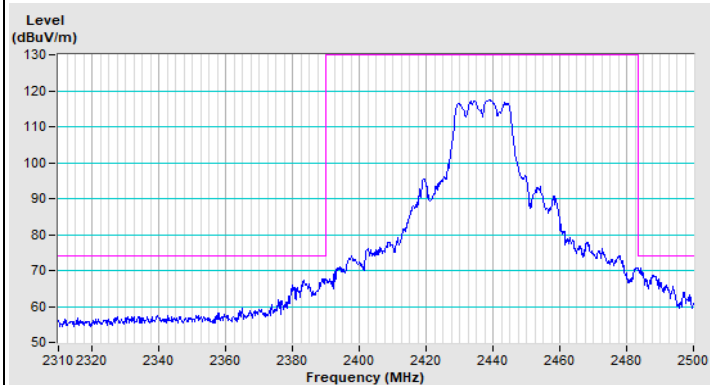


Vertical (Peak)

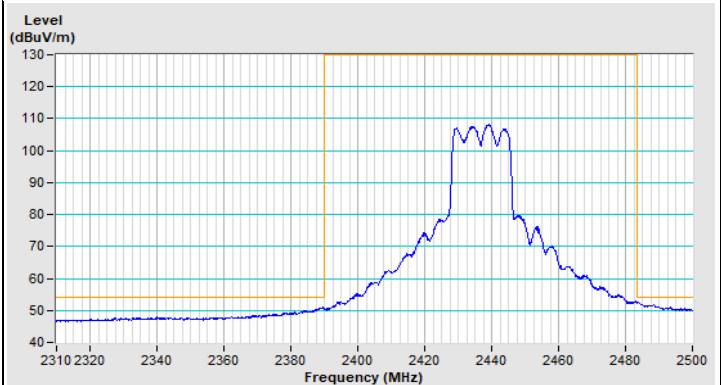


Vertical (Average)

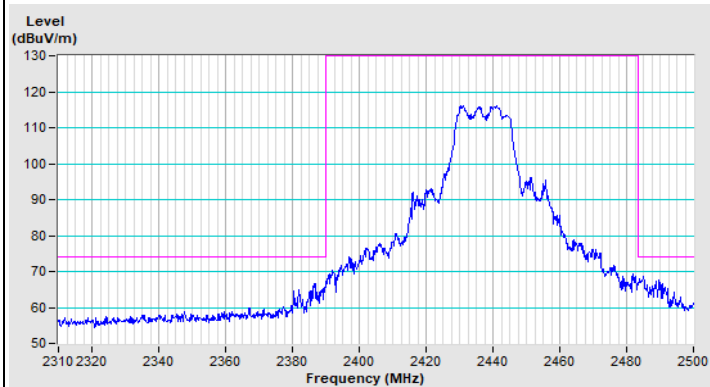
802.11g Channel 6



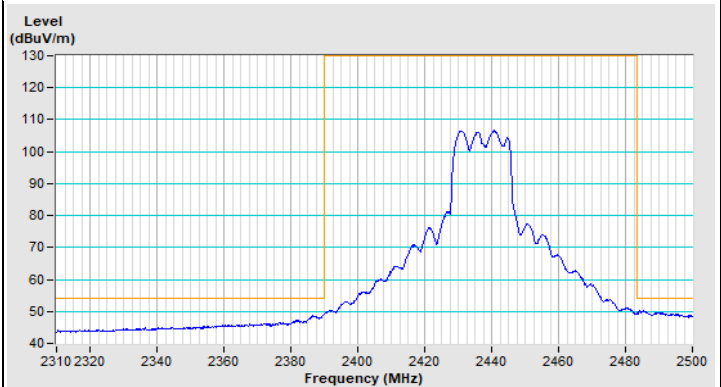
Horizontal (Peak)



Horizontal (Average)

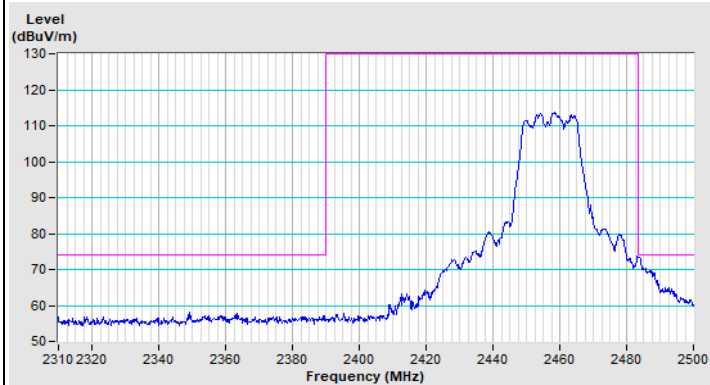


Vertical (Peak)

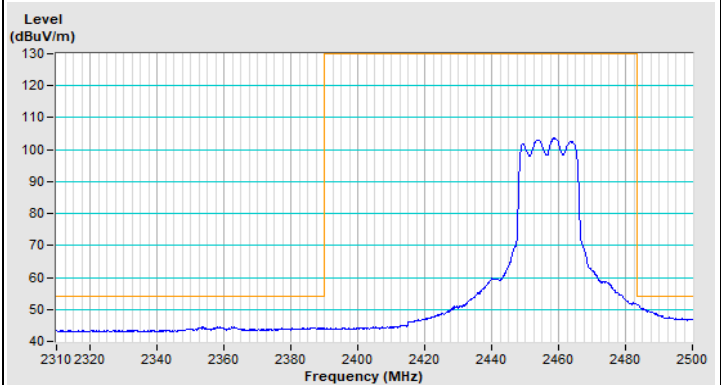


Vertical (Average)

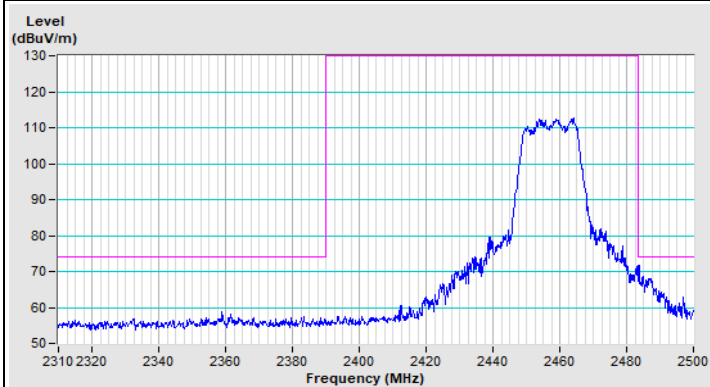
802.11g Channel 10



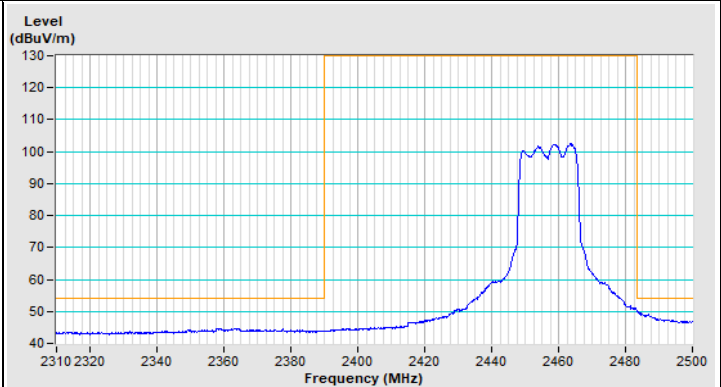
Horizontal (Peak)



Horizontal (Average)

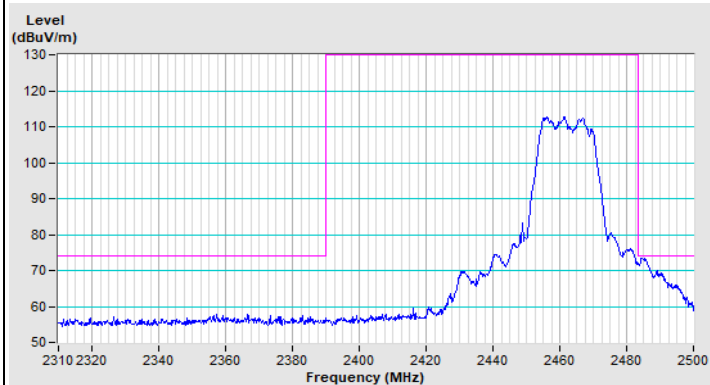


Vertical (Peak)

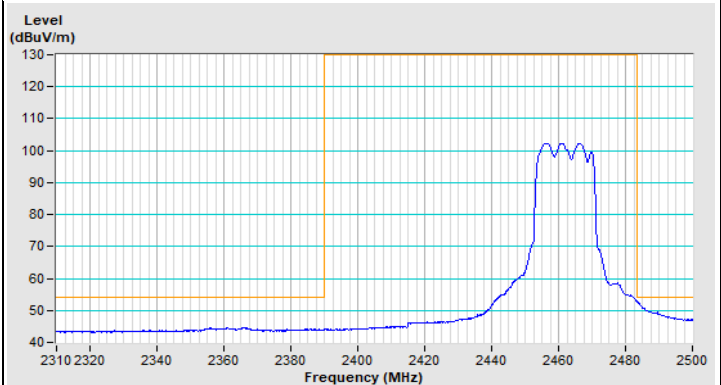


Vertical (Average)

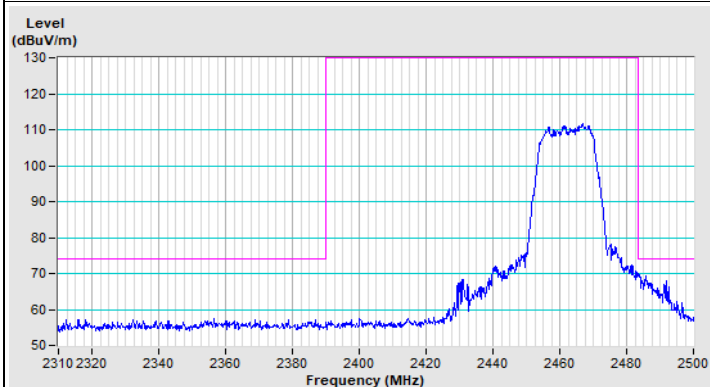
802.11g Channel 11



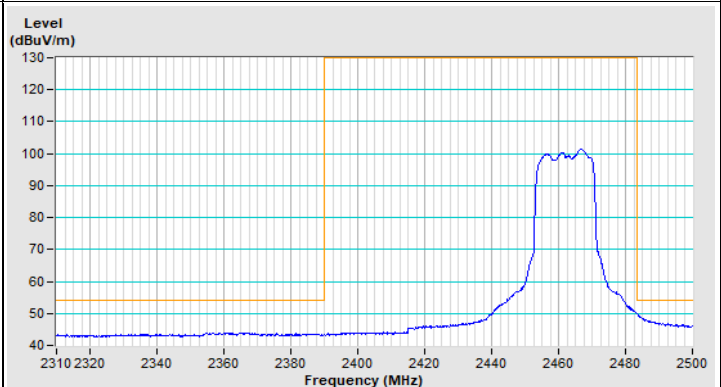
Horizontal (Peak)



Horizontal (Average)



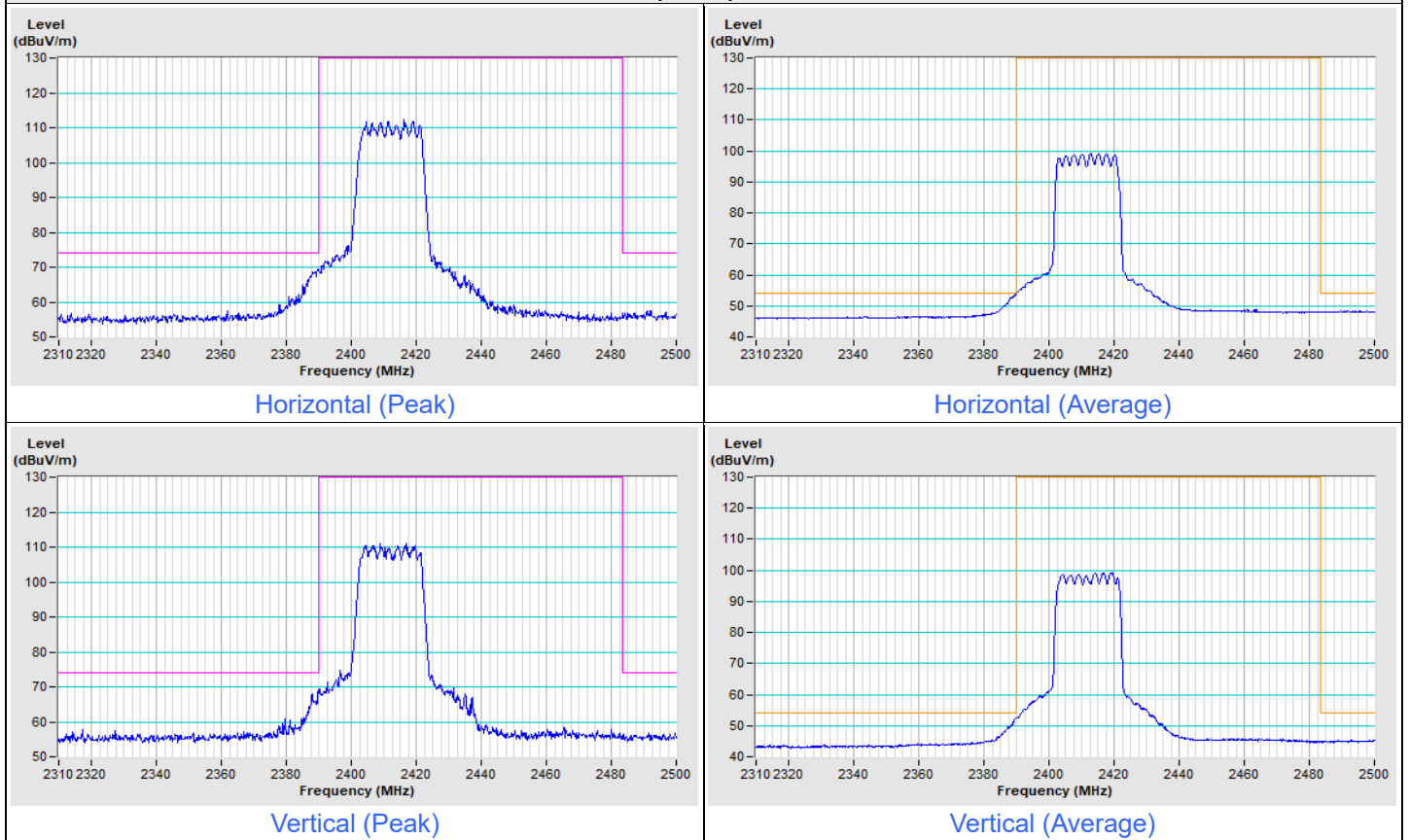
Vertical (Peak)



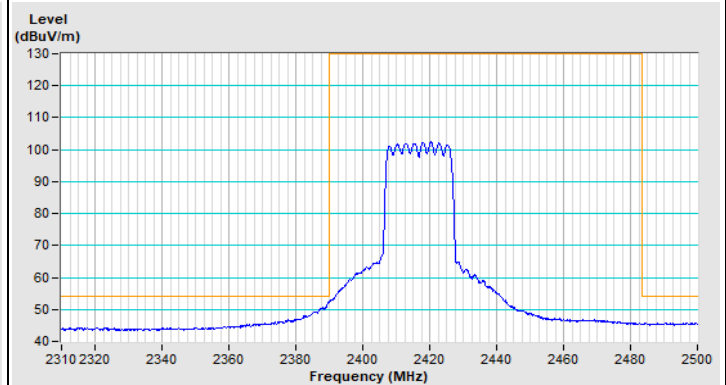
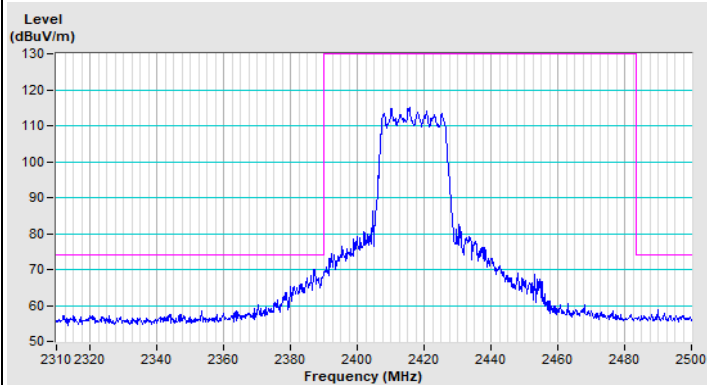
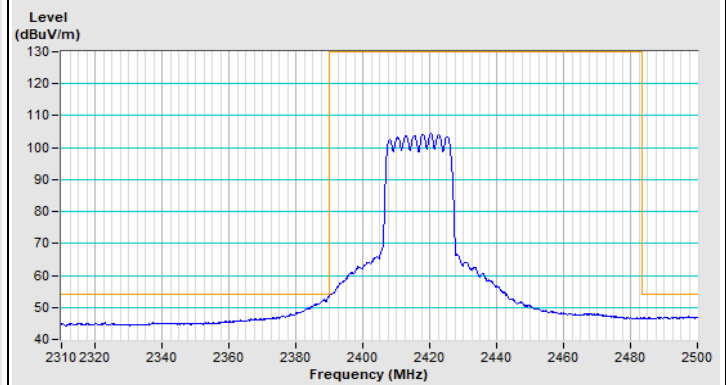
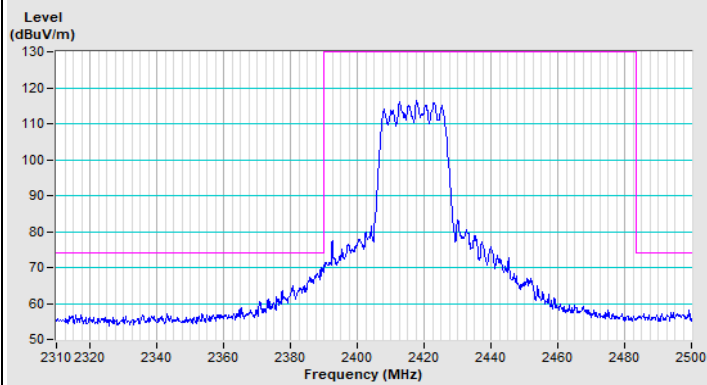
Vertical (Average)

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
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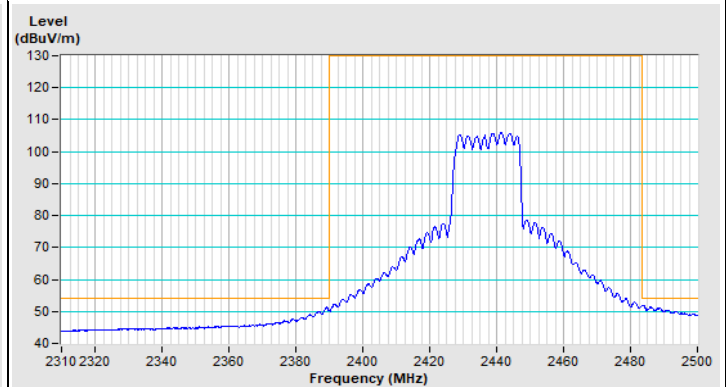
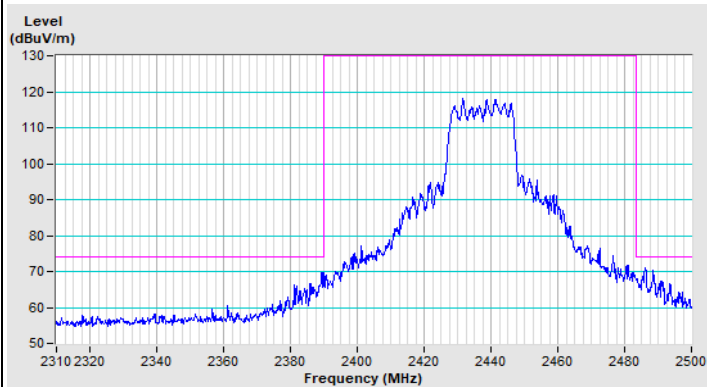
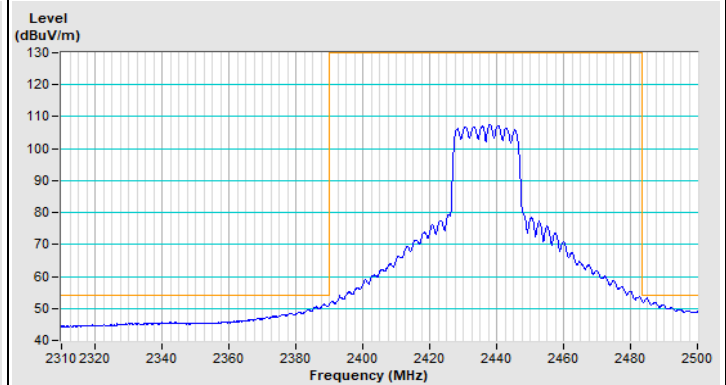
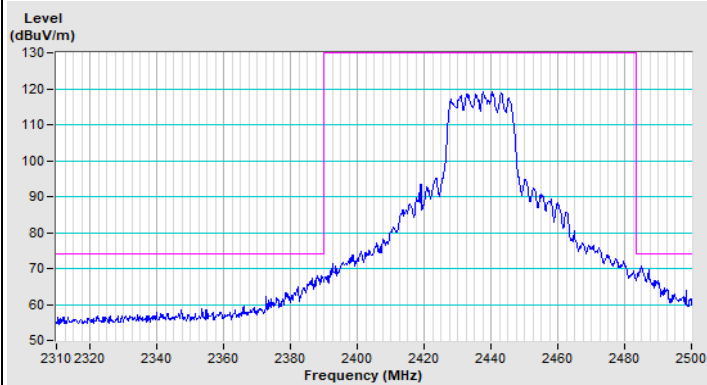
802.11ax (HE20) Channel 1



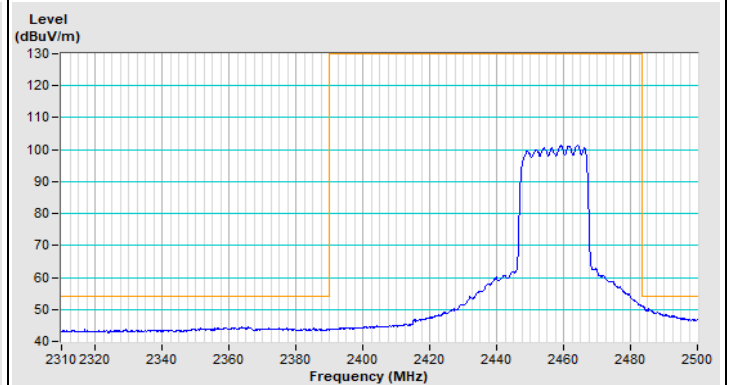
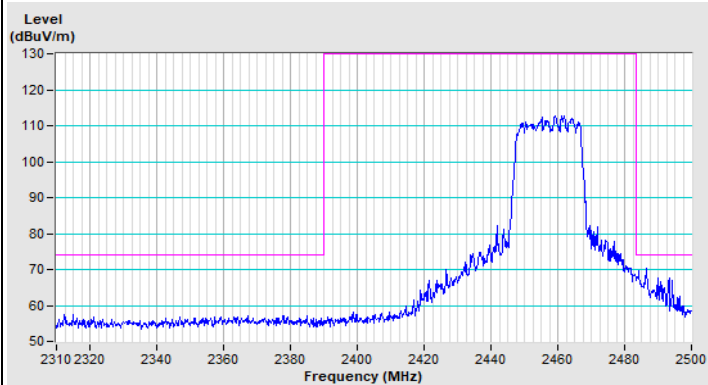
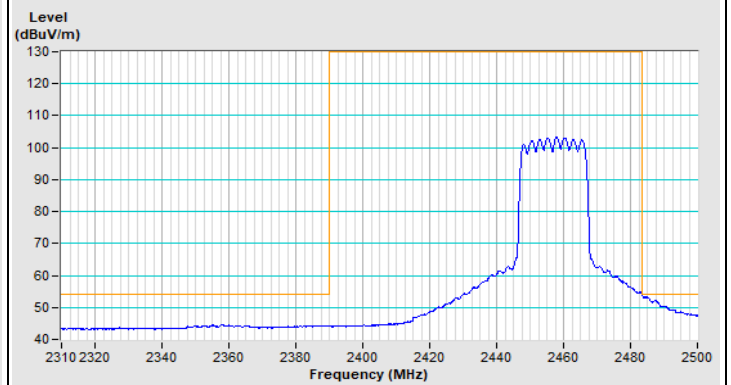
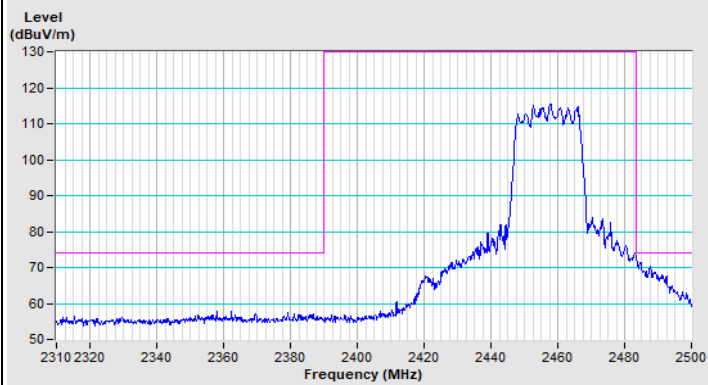
802.11ax (HE20) Channel 2



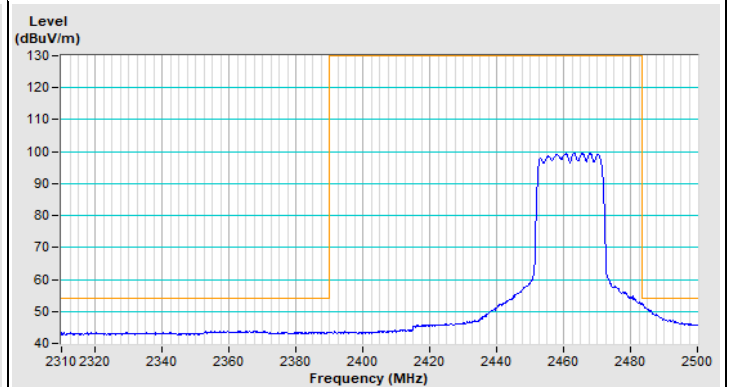
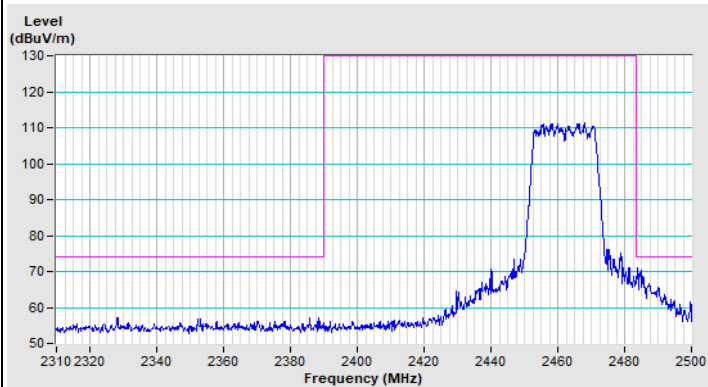
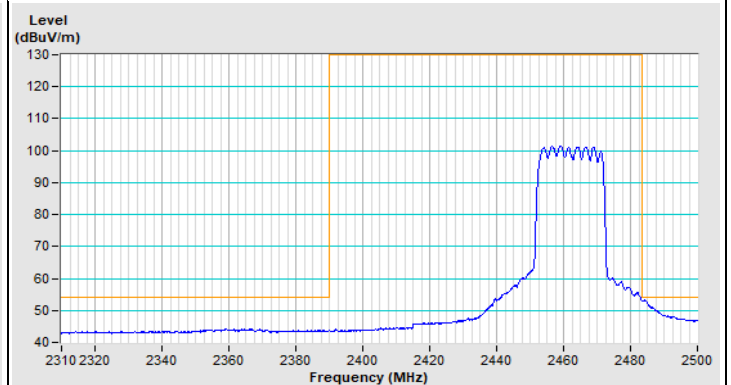
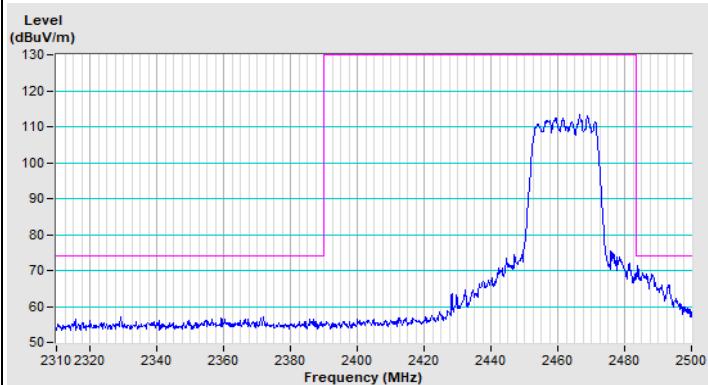
802.11ax (HE20) Channel 6



802.11ax (HE20) Channel 10

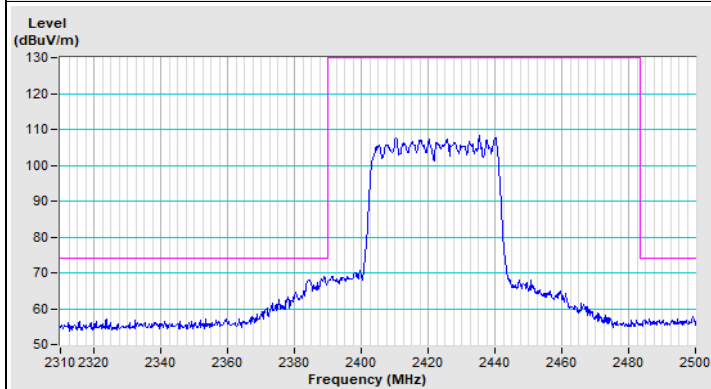


802.11ax (HE20) Channel 11

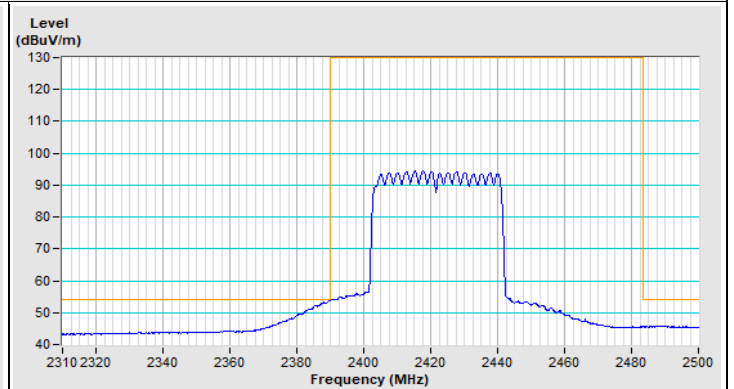


Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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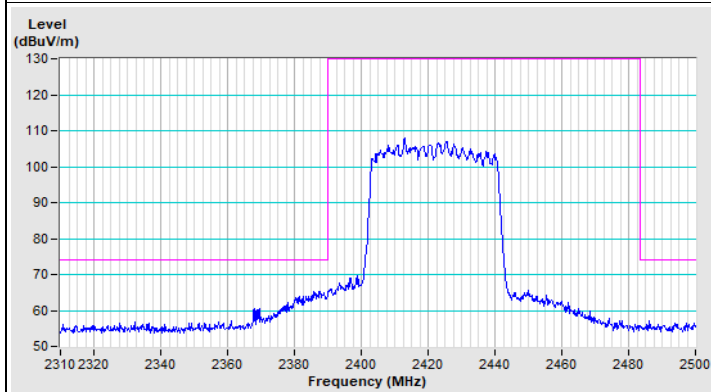
802.11ax (HE40) Channel 3



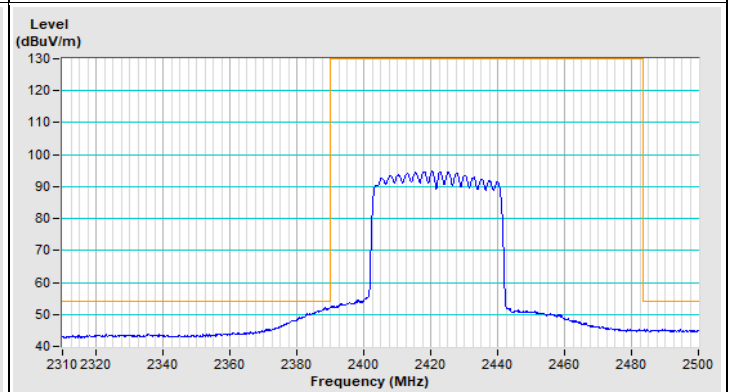
Horizontal (Peak)



Horizontal (Average)

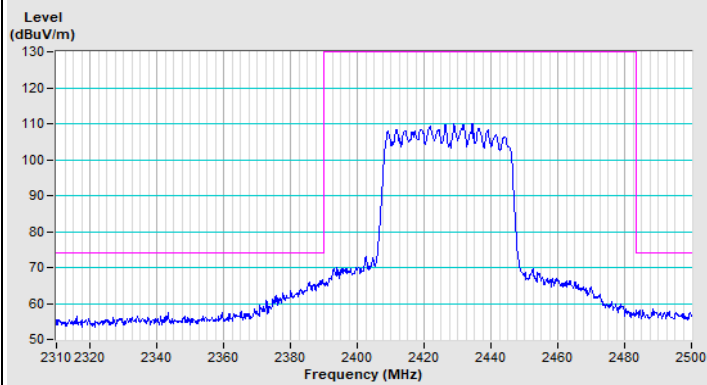


Vertical (Peak)

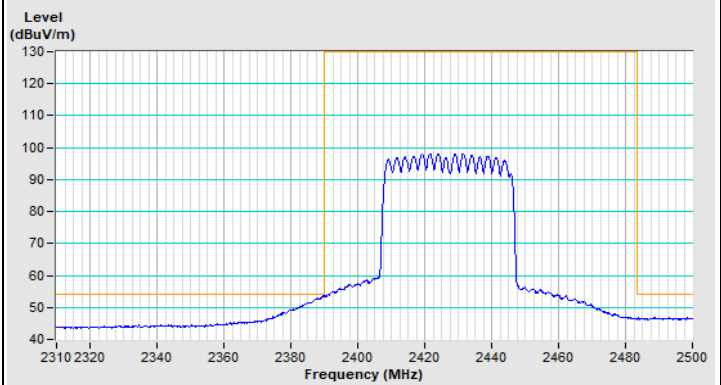


Vertical (Average)

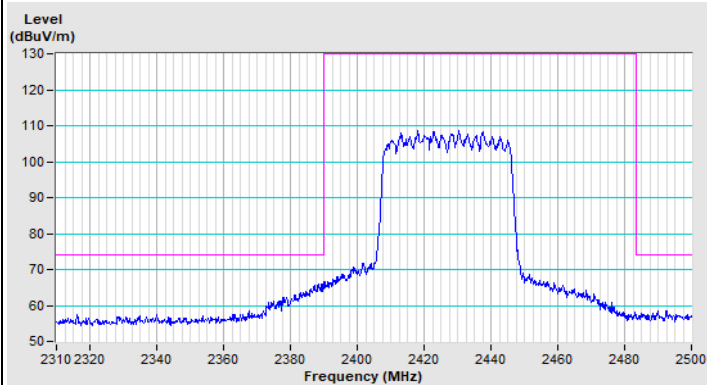
802.11ax (HE40) Channel 4



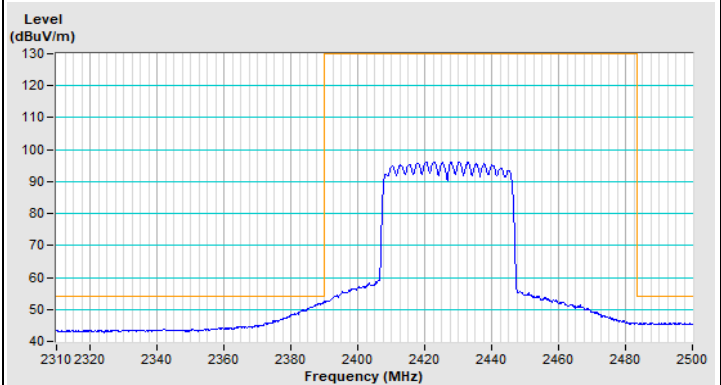
Horizontal (Peak)



Horizontal (Average)

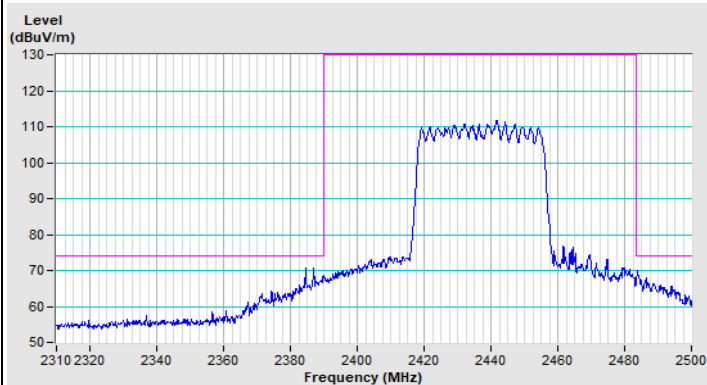


Vertical (Peak)

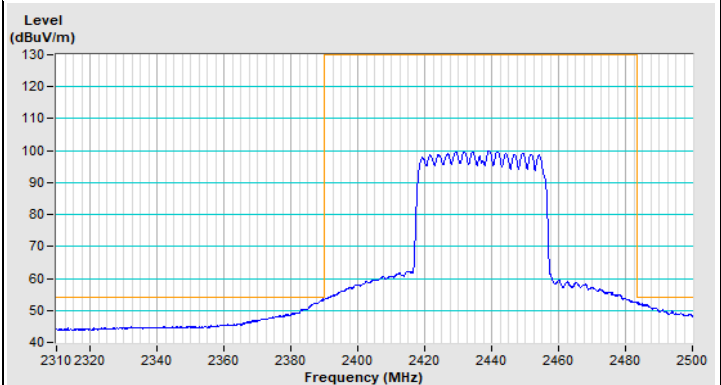


Vertical (Average)

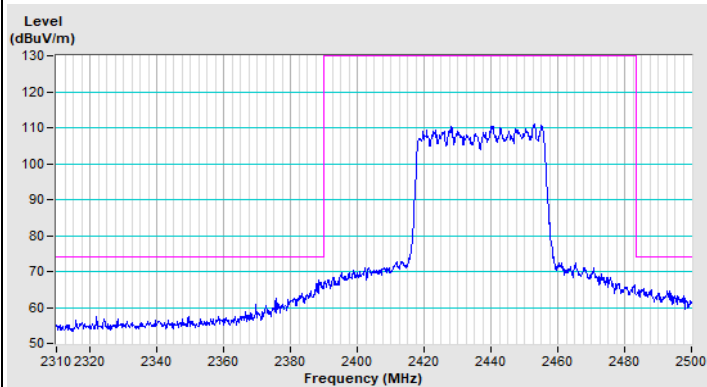
802.11ax (HE40) Channel 6



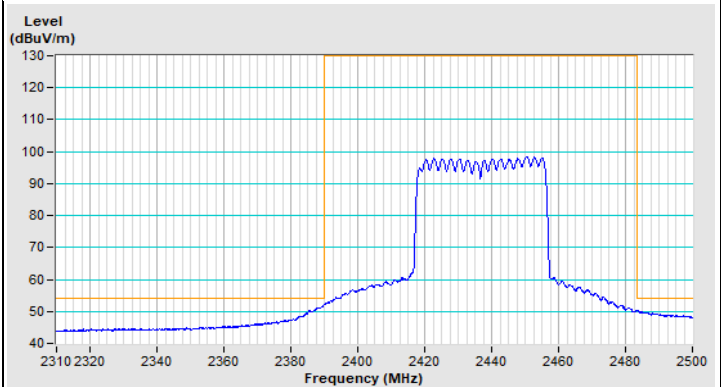
Horizontal (Peak)



Horizontal (Average)

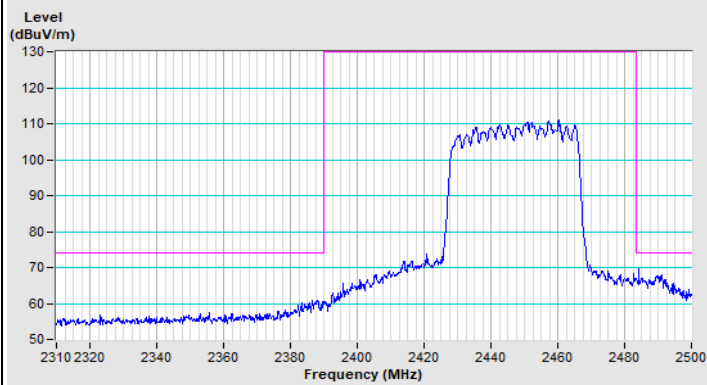


Vertical (Peak)

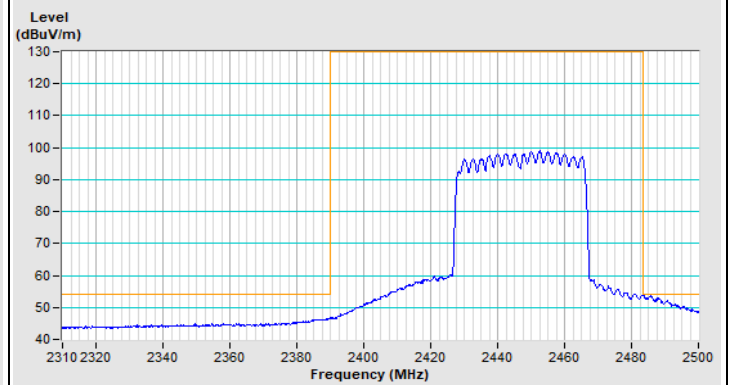


Vertical (Average)

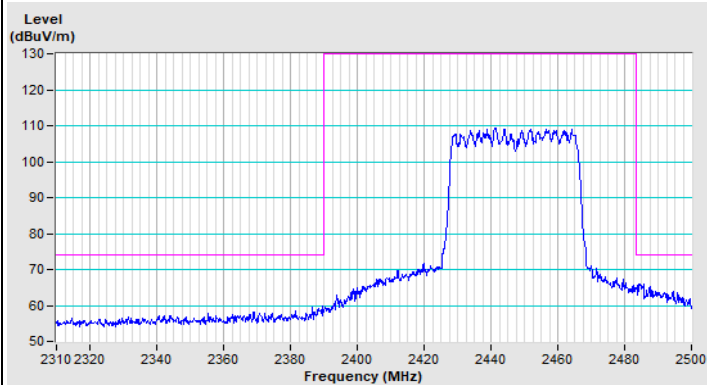
802.11ax (HE40) Channel 8



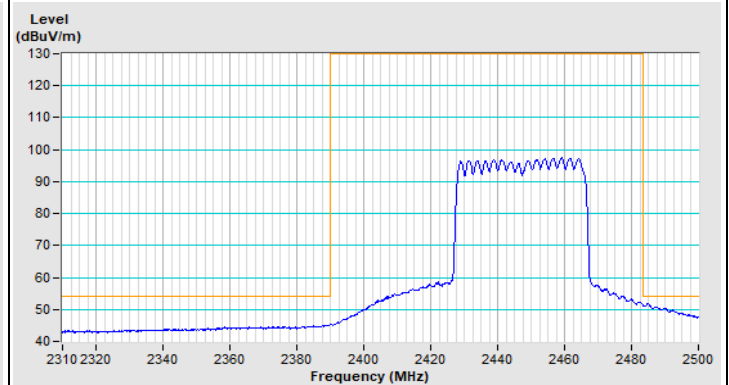
Horizontal (Peak)



Horizontal (Average)

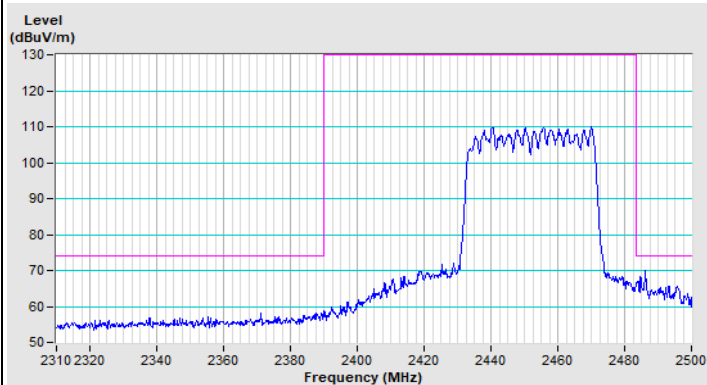


Vertical (Peak)

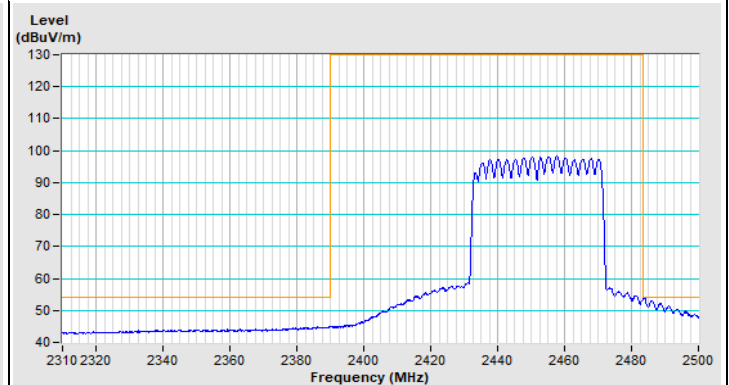


Vertical (Average)

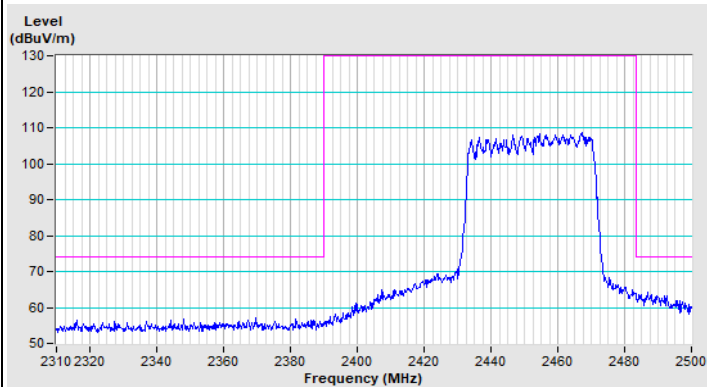
802.11ax (HE40) Channel 9



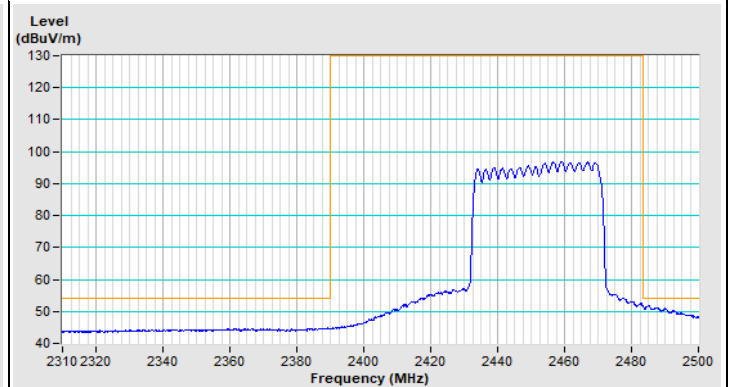
Horizontal (Peak)



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.

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

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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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