

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBBQZ-WTW-P22110099

FCC ID: PY323100586

Product: BE19000 WiFi 7 Router

Brand: NETGEAR

Model No.: RS700

Received Date: 2023/2/14

Test Date: 2023/3/2 ~ 2023/5/5

Issued Date: 2023/5/24

Applicant and Manufacturer: NETGEAR, Inc.

Address: 350 East Plumeria Drive San Jose, CA 95134

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

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan

FCC Registration / 788550 / TW0003

Designation Number:

Approved by: _____

Jeremy Lin

Jeremy Lin / Project Engineer

, Date: _____

2023/5/24

This test report consists of 74 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by : Celine Chou / Senior Specialist



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record	4
1 Certificate.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Supplementary Information	6
3 General Information	7
3.1 General Description.....	7
3.2 Antenna Description of EUT.....	8
3.3 Channel List.....	9
3.4 Test Mode Applicability and Tested Channel Detail.....	10
3.5 Duty Cycle of Test Signal.....	11
3.6 Test Program Used and Operation Descriptions	13
3.7 Connection Diagram of EUT and Peripheral Devices	13
3.8 Configuration of Peripheral Devices and Cable Connections	13
4 Test Instruments	14
4.1 RF Output Power.....	14
4.2 Power Spectral Density	14
4.3 6 dB Bandwidth	14
4.4 Conducted Out of Band Emissions	14
4.5 AC Power Conducted Emissions	14
4.6 Unwanted Emissions below 1 GHz	15
4.7 Unwanted Emissions above 1 GHz.....	16
5 Limits of Test Items.....	17
5.1 RF Output Power.....	17
5.2 Power Spectral Density	17
5.3 6 dB Bandwidth	17
5.4 Conducted Out of Band Emissions	17
5.5 AC Power Conducted Emissions	17
5.6 Unwanted Emissions below 1 GHz	18
5.7 Unwanted Emissions above 1 GHz.....	18
6 Test Arrangements.....	19
6.1 RF Output Power.....	19
6.1.1 Test Setup	19
6.1.2 Test Procedure.....	19
6.2 Power Spectral Density	19
6.2.1 Test Setup	19
6.2.2 Test Procedure.....	19
6.3 6 dB Bandwidth	20
6.3.1 Test Setup	20
6.3.2 Test Procedure.....	20
6.4 Conducted Out of Band Emissions	20
6.4.1 Test Setup	20
6.4.2 Test Procedure.....	20
6.5 AC Power Conducted Emissions	21
6.5.1 Test Setup	21
6.5.2 Test Procedure.....	21
6.6 Unwanted Emissions below 1 GHz	22
6.6.1 Test Setup	22
6.6.2 Test Procedure.....	23
6.7 Unwanted Emissions above 1 GHz.....	24
6.7.1 Test Setup	24
6.7.2 Test Procedure.....	24
7 Test Results of Test Item	25

7.1	RF Output Power.....	25
7.2	Power Spectral Density	28
7.3	6 dB Bandwidth	31
7.4	Conducted Out of Band Emissions	33
7.5	AC Power Conducted Emissions	49
7.6	Unwanted Emissions below 1 GHz	53
7.7	Unwanted Emissions above 1 GHz.....	57
8	Pictures of Test Arrangements	73
9	Information of the Testing Laboratories	74

Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P22110099	Original release.	2023/5/24

1 Certificate

Product: BE19000 WiFi 7 Router

Brand: NETGEAR

Test Model: RS700

Sample Status: Engineering sample

Applicant: NETGEAR, Inc.

Test Date: 2023/3/2 ~ 2023/5/5

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

KDB 662911 D03 MIMO Antenna Gain Measurement v01

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 -9.19 dB at 0.47400 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.1 dB at 52.49 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	Antenna connector is ipex(MHF) not a standard connector.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 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	BE19000 WiFi 7 Router
Brand	NETGEAR
Test Model	RS700
Status of EUT	Engineering sample
Power Supply Rating	19 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 only 4096QAM for OFDMA in 11be EHT mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 600 Mbps VHT: up to 800 Mbps 802.11ax: up to 1147.1 Mbps 802.11be: up to 1376.4 Mbps
Operating Frequency	2412 ~ 2462 MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20), 802.11be (EHT20): 11 802.11n (HT40), VHT40, 802.11ax (HE40), 802.11be (EHT40): 7
Output Power	CDD Mode: 29.55 dBm (902.379 mW) Beamforming Mode: 29.55 dBm (902.379 mW)

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Part Number	Specification
Adapter 1	NETGEAR	AD200F10	332-11480-02	AC Input : 100-120 Vac, 50/60 Hz, 1.7 A DC Output : 19 Vdc, 3.16 A, 60 W DC Output Cable : 1.8 m non-shielded and without core
Adapter 2	NETGEAR	2AEC060K 1	332-11578-01	AC Input : 100-120 Vac, 50/60 Hz, 1.7 A DC Output : 19 Vdc, 3.16 A, 60 W DC Output Cable : 1.8 m non-shielded and without core
Ethernet Cable	NETGEAR	312-10147-01	-	2m non-shielded and without core

2. Simultaneously transmission condition.

Condition	Technology		
1	WLAN (2.4GHz)	WLAN (5GHz)	WLAN (6GHz)

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

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Type	Dipole
Connector Type	ipex(MHF)
Antenna Gain	Directional Gain (dBi)
2400~2483.5 MHz	6.06
5150~5250 MHz	5.99
5250~5350 MHz	6.05
5470~5725 MHz	6.03
5725~5850 MHz	6.06

* The detailed antenna information, please refer to the BV CPS report no.: RFBBQZ-WTW-P22110099-6.

2. The EUT incorporates a MIMO function:

Modulation Mode	Beamforming Mode	Tx & Rx Configuration	
802.11b	Not Support	4TX	4RX
802.11g	Not Support	4TX	4RX
802.11n (HT20)	Support	4TX	4RX
802.11n (HT40)	Support	4TX	4RX
VHT20	Support	4TX	4RX
VHT40	Support	4TX	4RX
802.11ax (HE20)	Support	4TX	4RX
802.11ax (HE40)	Support	4TX	4RX
802.11be (EHT20)	Support	4TX	4RX
802.11be (EHT40)	Support	4TX	4RX

Note:

1. 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.
2. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), VHT mode for 20 MHz (40 MHz), 802.11ax mode for 20 MHz (40 MHz), and 802.11be mode for 20 MHz (40 MHz), therefore the manufacturer will control the power for 802.11n/VHT/ax mode is the same as the 802.11be or more lower than it and investigated worst case to representative mode in test report.
3. For 802.11ax and 802.11be, the EUT not support Partial RU.

3.3 Channel List

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20), 802.11be (EHT20):

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), 802.11be (EHT40):

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:	EUT can be used in the following ways: XYZ 3-axis. Pre-scan in these ways and find the worst case as a representative test condition.
Worst Case:	X / Y / Z Worst Condition: Z Axis.

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	B	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g		1, 6, 11	BPSK	6Mb/s
		802.11be (EHT20)	CDD & Beamforming	1, 6, 11	BPSK	MCS0
		802.11be (EHT40)		3, 6, 9	BPSK	MCS0
Power Spectral Density / 6 dB Bandwidth / Conducted Out of Band Emissions	B	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g		1, 6, 11	BPSK	6Mb/s
		802.11be (EHT20)		1, 6, 11	BPSK	MCS0
		802.11be (EHT40)		3, 6, 9	BPSK	MCS0
AC Power Conducted Emissions	A, B	802.11be (EHT20)	CDD	6	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	A, B	802.11be (EHT20)	CDD	6	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	B	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g		1, 6, 11	BPSK	6Mb/s
		802.11be (EHT20)		1, 6, 11	BPSK	MCS0
		802.11be (EHT40)		3, 6, 9	BPSK	MCS0
EUT Configure Mode:	A	EUT powered by adapter 1				
	B	EUT powered by adapter 2				

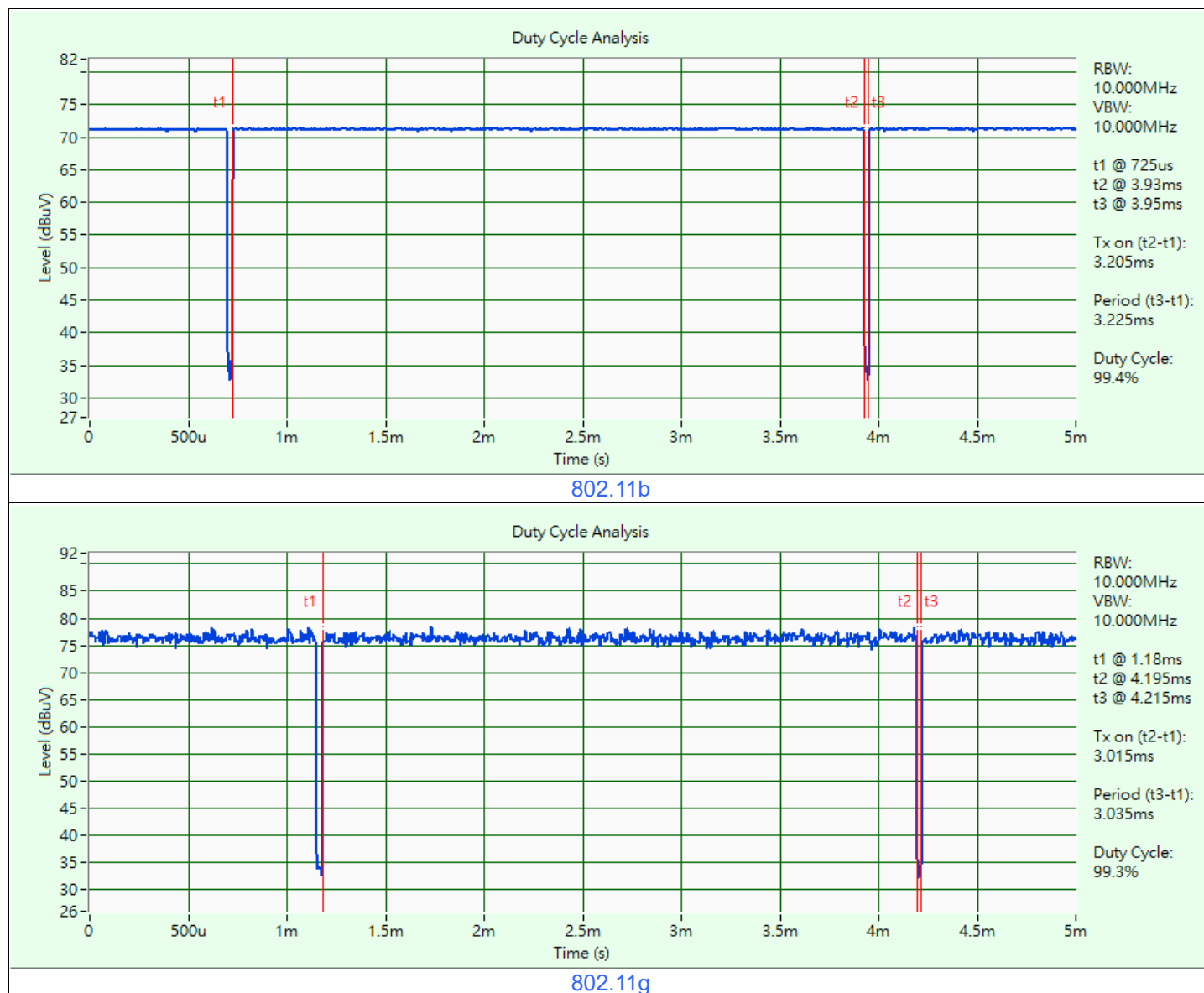
3.5 Duty Cycle of Test Signal

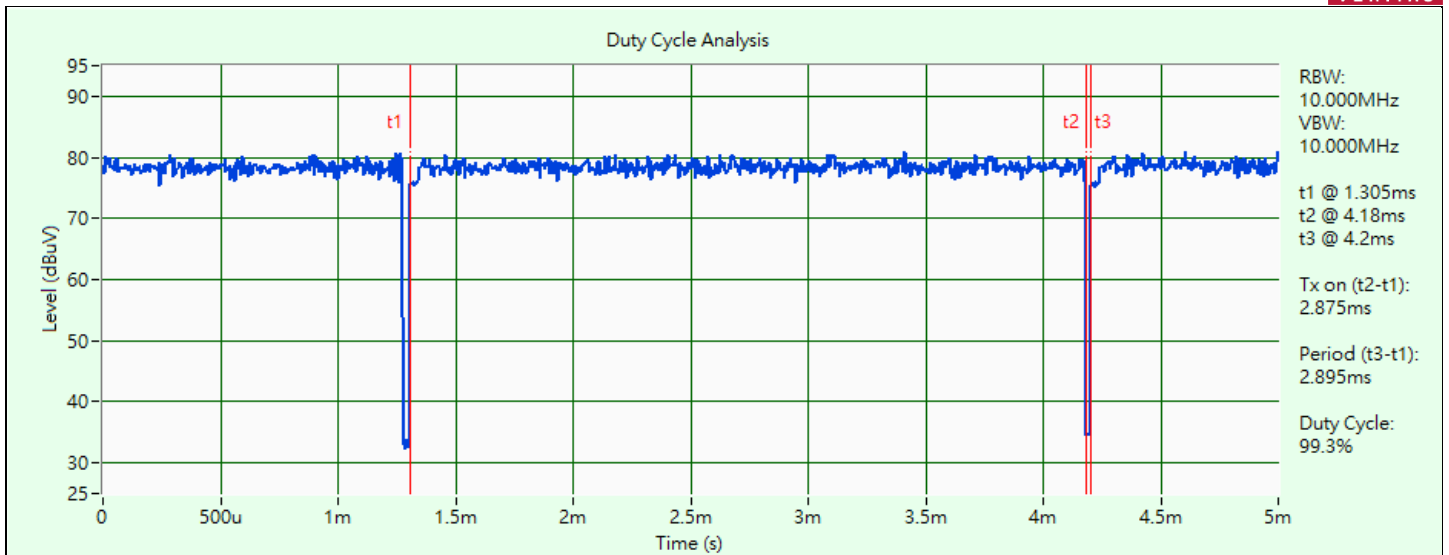
802.11b: Duty cycle = 3.205 ms / 3.225 ms x 100% = 99.4%

802.11g: Duty cycle = 3.015 ms / 3.035 ms x 100% = 99.3%

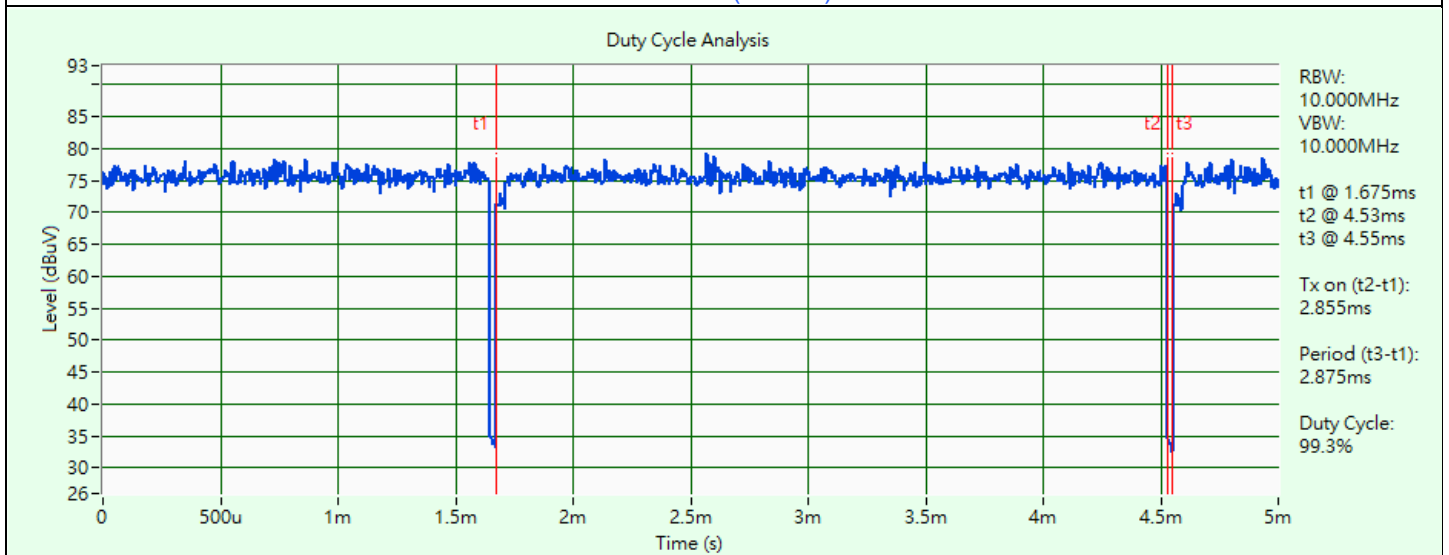
802.11be (EHT20): Duty cycle = 2.875 ms / 2.895 ms x 100% = 99.3%

802.11be (EHT40): Duty cycle = 2.855 ms / 2.875 ms x 100% = 99.3%





802.11be (EHT20)

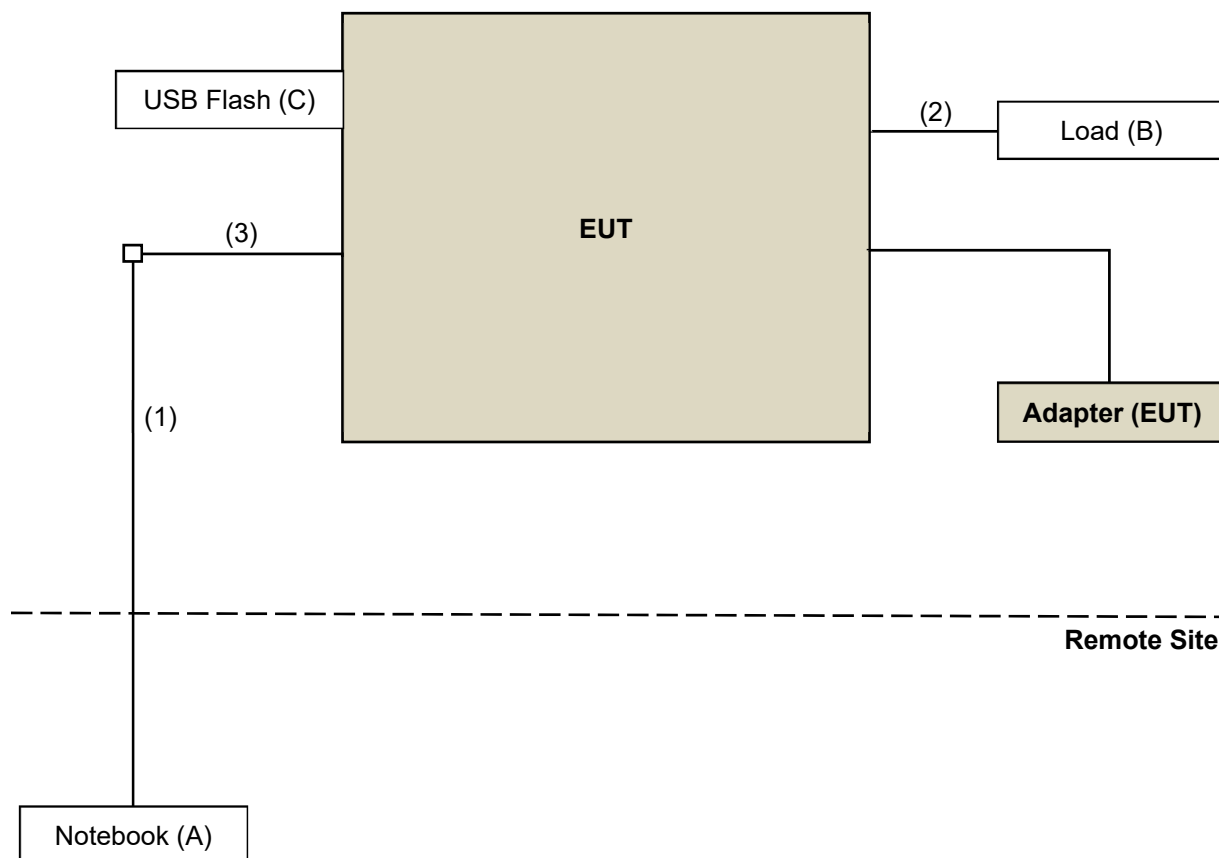


802.11be (EHT40)

3.6 Test Program Used and Operation Descriptions

Controlling software accessMTool_REL_3_2_1_5 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	Notebook	DELL	E5430	2RL3YW1	N/A	Provided by Lab
B	Load	N/A	N/A	N/A	N/A	Provided by Lab
C	USB Flash	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	LAN Cable	1	10	N	N	Provided by Lab
2	LAN Cable	5	1.5	N	N	Provided by Lab
3	Ethernet Cable	1	2.0	N	N	Accessory of EUT

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
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	2022/7/13	2023/7/12

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/4/20

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal and spectrum analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/4/20

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2023/3/23	2024/3/22
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2023/1/7	2024/1/6
Software BVADT	BVADT_Conf_ V7.3.7.4	N/A	N/A	N/A
Test Receiver Rohde&Schwarz	ESCI	100613	2022/12/5	2023/12/4
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2023/4/25 ~ 2023/5/5

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarbeck	VULB9168	9168-155	2022/10/21	2023/10/20
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Pre_Amplifier Agilent	8447D	2944A10631	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable WOKEN	8D-FB	Cable-CH4-01	2022/7/9	2023/7/8
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Test Receiver R&S	ESR3+	102782	2022/12/12	2023/12/11
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2023/5/5

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	9120D	9120D-408	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
		BBHA9170241	2022/10/20	2023/10/19
		BBHA9170243	2022/11/13	2023/11/12
Pre-Amplifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Pre_Amplifier KEYSIGHT	83017A	MY53270295	2022/5/14	2023/5/13
RF cable HUBER+SUHNER	Sucoflex 104	MY 13380+295012/04	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2022/7/9	2023/7/8
	EMC102-KM-KM-3000	150929	2022/7/9	2023/7/8
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2022/5/14	2023/5/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Test Receiver R&S	ESR3+	102782	2022/12/12	2023/12/11
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2023/3/2 ~ 2023/4/20

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

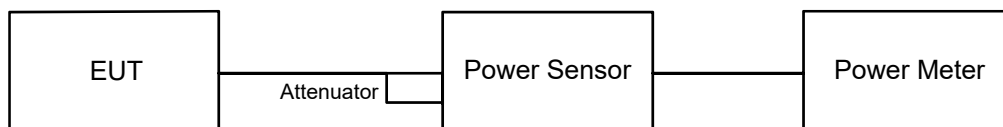
Notes:

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



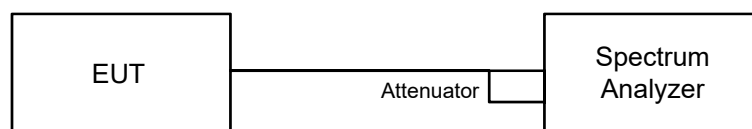
6.1.2 Test Procedure

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

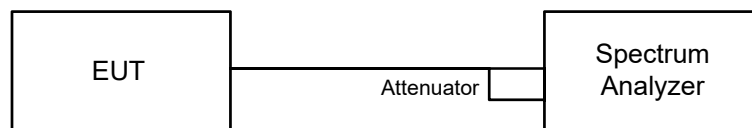


6.2.2 Test Procedure

- 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.
- l. 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

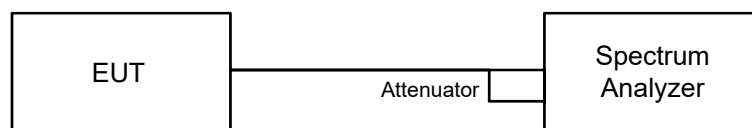


6.3.2 Test Procedure

- 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

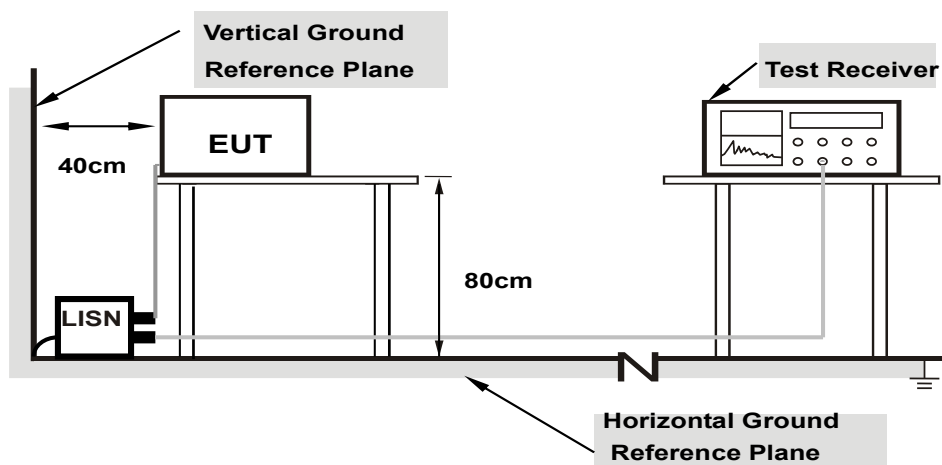
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

- 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

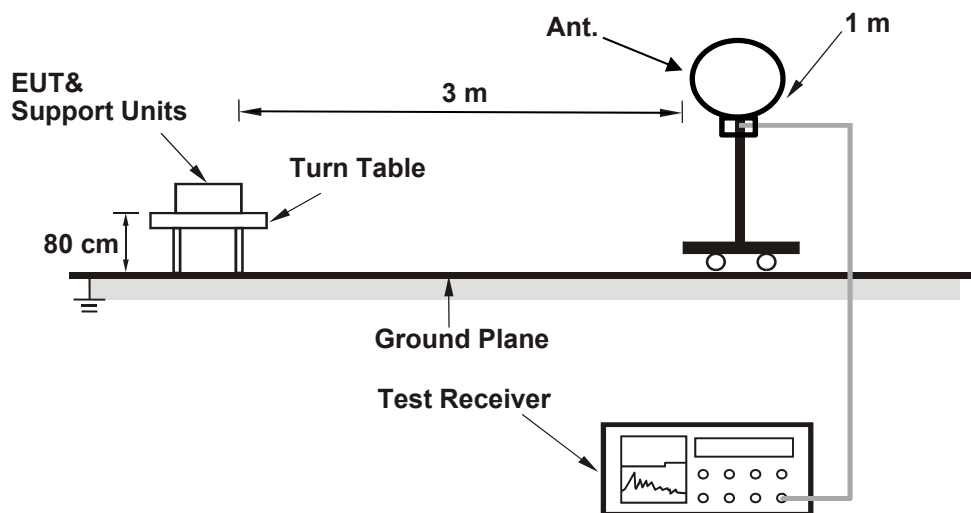
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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.

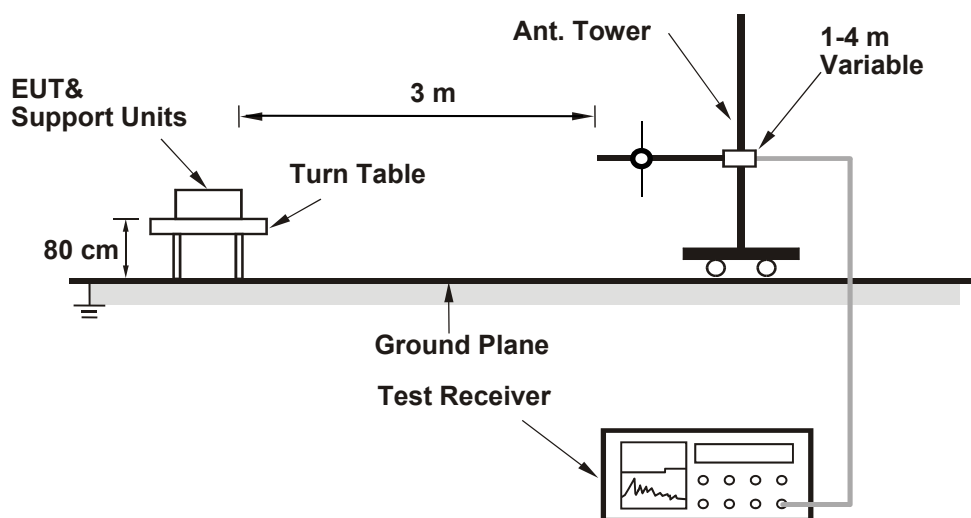
6.6 Unwanted Emissions below 1 GHz

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

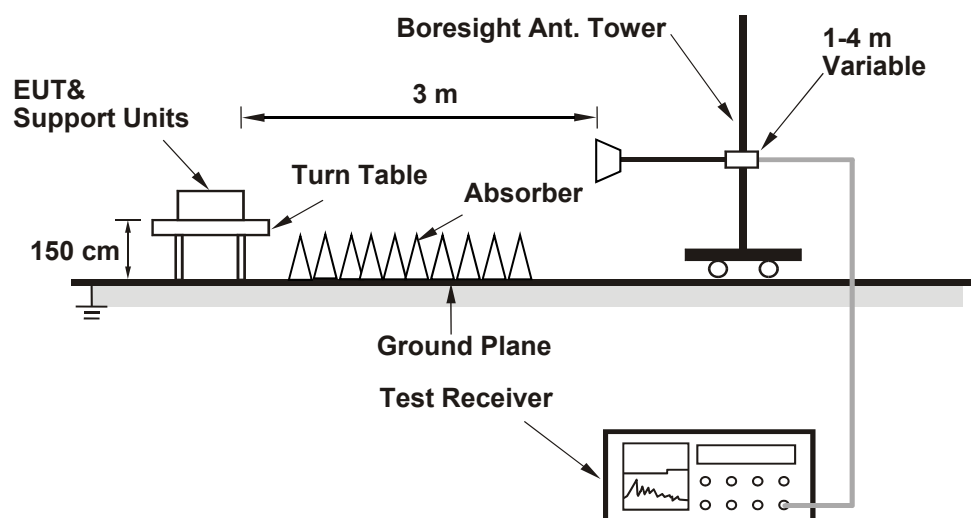
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the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

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	23.29	23.52	23.02	23.23	849.035	29.29	30	Pass
6	2437	23.02	23.39	22.85	23.45	832.782	29.21	30	Pass
11	2462	23.05	23.45	22.78	23.02	813.264	29.10	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2 dBi < 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	Chain 2	Chain 3				
1	2412	22.85	23.35	22.87	23.12	807.783	29.07	30	Pass
6	2437	22.87	23.45	22.91	23.22	820.28	29.14	30	Pass
11	2462	21.05	21.69	20.77	21.12	523.739	27.19	30	Pass

Notes:

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

802.11be (EHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	22.87	23.32	22.95	22.98	804.277	29.05	30	Pass
6	2437	23.62	23.44	23.46	23.61	902.379	29.55	30	Pass
11	2462	19.82	20.08	19.54	19.78	382.809	25.83	30	Pass

Notes:

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

802.11be (EHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	22.82	23.42	22.72	23.02	798.727	29.02	30	Pass
6	2437	21.09	20.97	21.02	21.07	507.966	27.06	30	Pass
9	2452	17.45	17.85	16.72	19.92	261.708	24.18	30	Pass

Notes:

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

802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	22.87	23.32	22.95	22.98	804.277	29.05	29.94	Pass
6	2437	23.62	23.44	23.46	23.61	902.379	29.55	29.94	Pass
11	2462	19.82	20.08	19.54	19.78	382.809	25.83	29.94	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 6.06 dBi > 6 dBi, so the output power limit shall be reduced to $30-(6.06-6) = 29.94$ dBm.

802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	22.82	23.42	22.72	23.02	798.727	29.02	29.94	Pass
6	2437	21.09	20.97	21.02	21.07	507.966	27.06	29.94	Pass
9	2452	17.45	17.85	16.72	19.92	261.708	24.18	29.94	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 6.06 dBi > 6 dBi, so the output power limit shall be reduced to $30-(6.06-6) = 29.94$ dBm.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
1	2412	-7.54	-7.53	-7.80	-7.56	-1.59	7.94	Pass
6	2437	-7.86	-7.87	-8.06	-8.05	-1.94	7.94	Pass
11	2462	-8.65	-8.16	-8.45	-7.47	-2.14	7.94	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 6.06 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94$ dBm/3kHz.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
1	2412	-13.12	-12.93	-13.28	-12.92	-7.04	7.94	Pass
6	2437	-13.17	-13.01	-12.79	-12.99	-6.97	7.94	Pass
11	2462	-15.28	-15.31	-15.19	-14.90	-9.15	7.94	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 6.06 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (6.06 - 6) = 7.94$ dBm/3kHz.

802.11be (EHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
1	2412	-10.72	-10.61	-10.52	-10.35	-4.53	7.94	Pass
6	2437	-10.47	-10.56	-10.02	-10.07	-4.25	7.94	Pass
11	2462	-14.31	-14.10	-14.45	-14.69	-8.36	7.94	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 6.06 dBi > 6 dBi, so the power density limit shall be reduced to $8-(6.06-6) = 7.94$ dBm/3kHz.

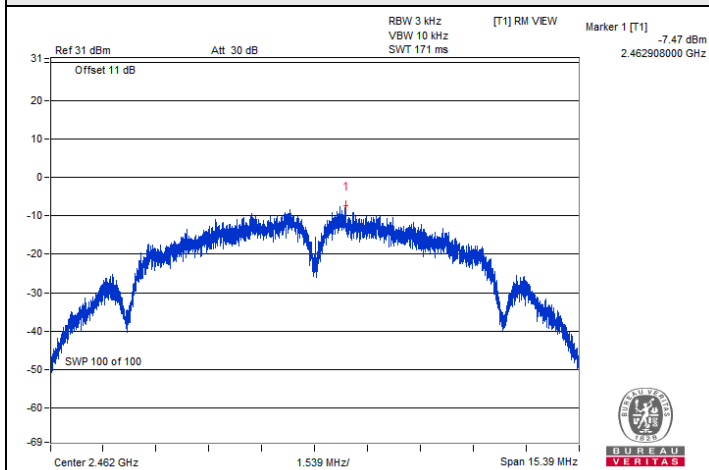
802.11be (EHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
3	2422	-16.69	-16.70	-17.05	-16.65	-10.75	7.94	Pass
6	2437	-20.64	-20.74	-20.38	-20.70	-14.59	7.94	Pass
9	2452	-22.89	-22.66	-22.51	-22.69	-16.66	7.94	Pass

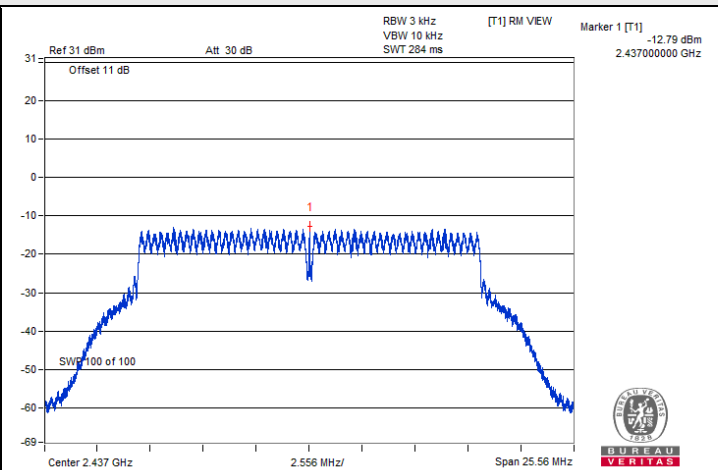
Notes:

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 6.06 dBi > 6 dBi, so the power density limit shall be reduced to $8-(6.06-6) = 7.94$ dBm/3kHz.

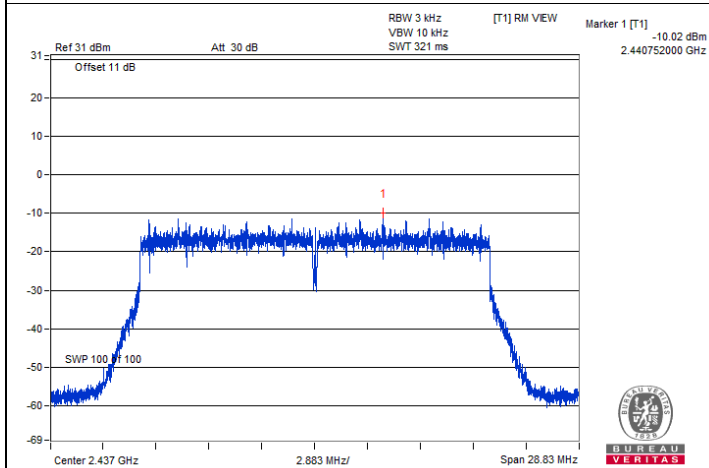
Spectrum Plot of Maximum Value



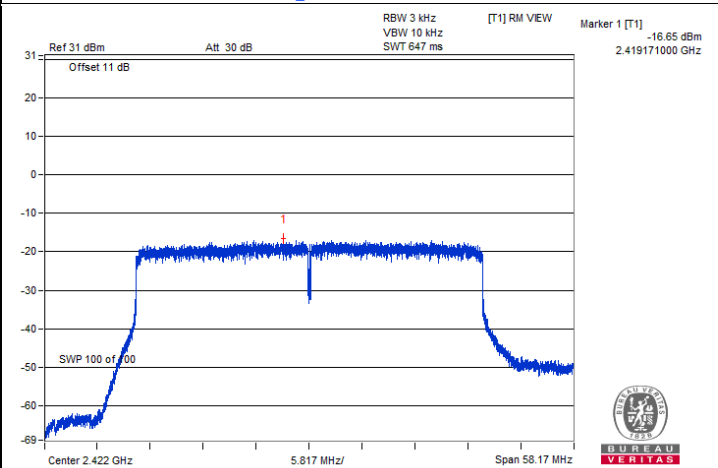
802.11b / Chain 3 : CH 11



802.11g / Chain 2 : CH 6



802.11be (EHT20) / Chain 2 : CH 6



802.11be (EHT40) / Chain 3 : CH 3

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	7.15	7.14	7.12	7.12	0.5	Pass
6	2437	7.11	7.13	7.10	7.13	0.5	Pass
11	2462	7.12	7.13	7.12	7.11	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	16.41	16.40	16.40	16.39	0.5	Pass
6	2437	16.42	16.41	16.42	16.43	0.5	Pass
11	2462	16.41	16.42	16.42	16.41	0.5	Pass

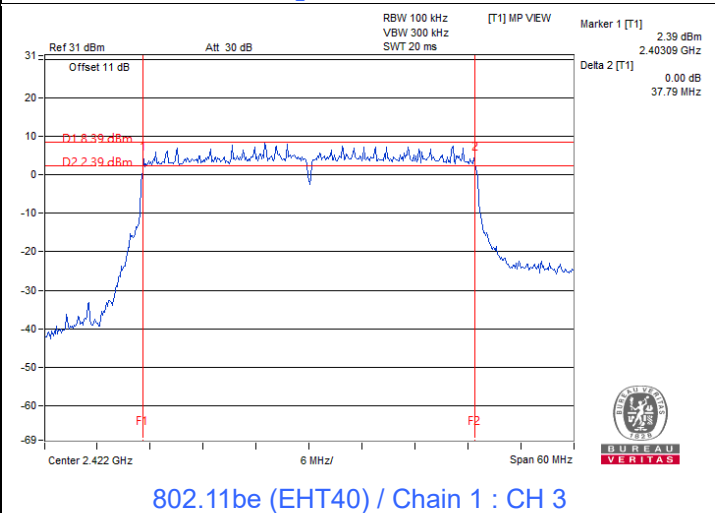
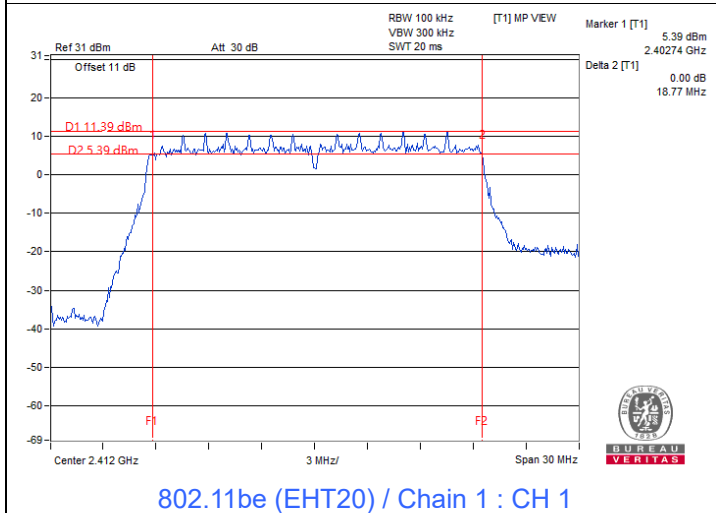
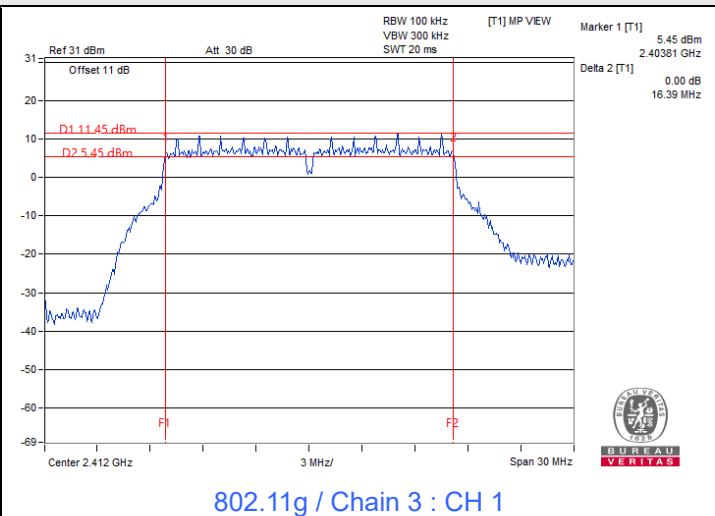
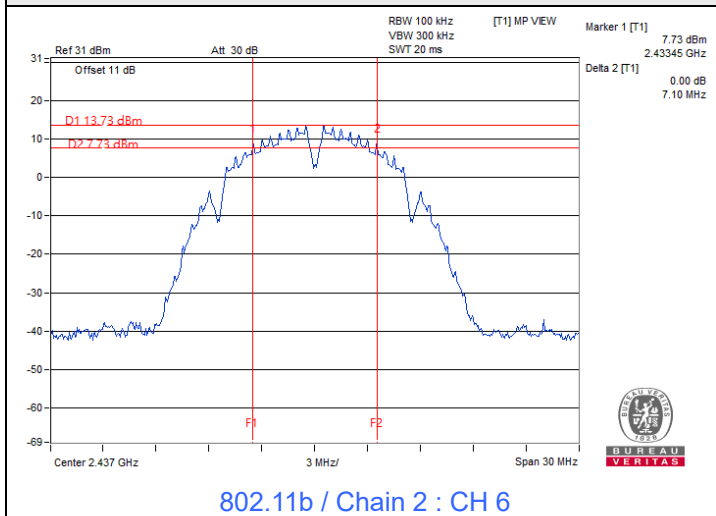
802.11be (EHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	18.85	18.77	18.92	18.93	0.5	Pass
6	2437	18.98	19.00	18.94	19.05	0.5	Pass
11	2462	18.92	18.95	18.89	18.89	0.5	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	37.83	37.79	37.90	37.97	0.5	Pass
6	2437	38.04	37.93	37.93	37.98	0.5	Pass
9	2452	37.91	38.07	37.94	37.86	0.5	Pass

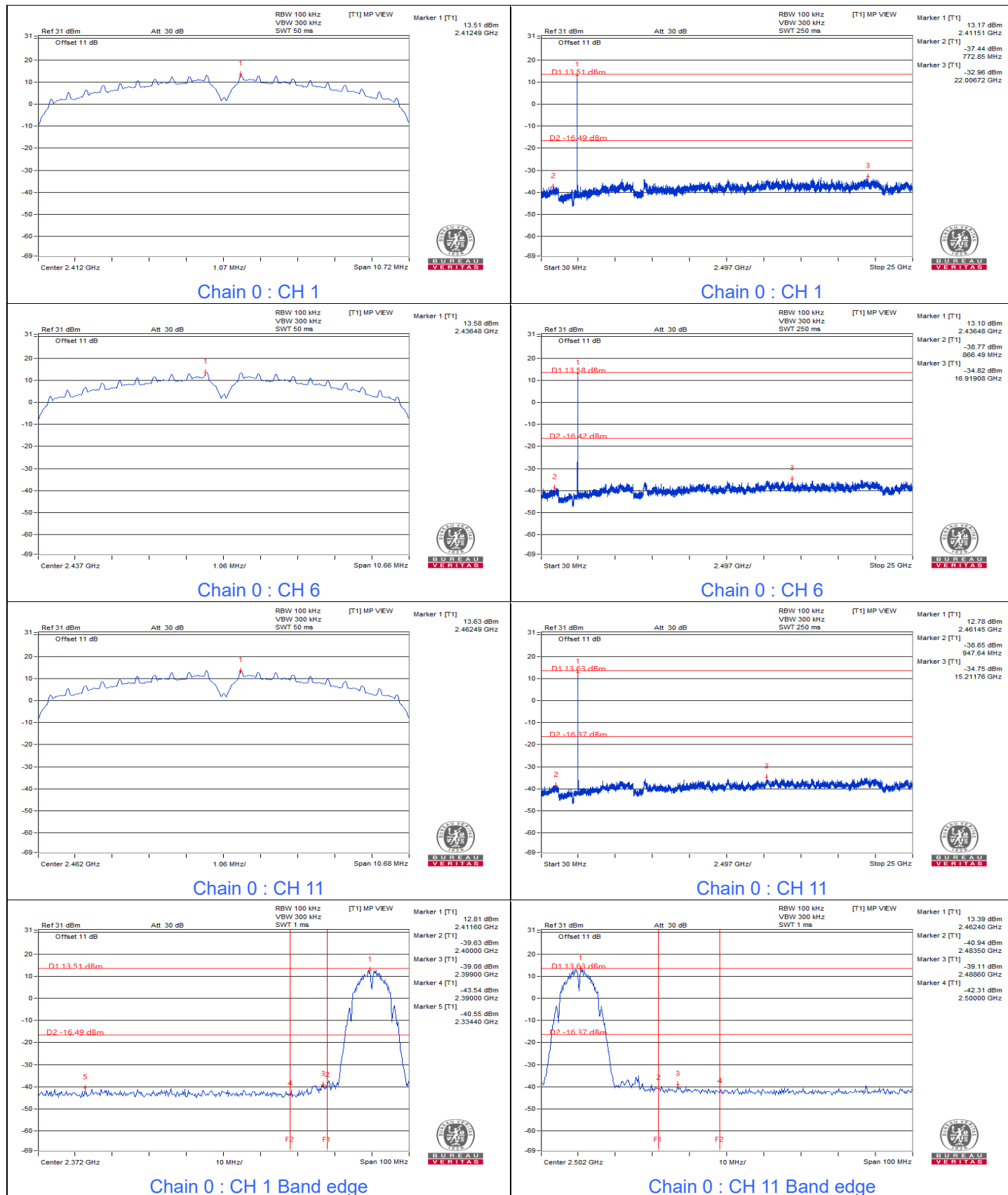
Spectrum Plot of Minimum Value

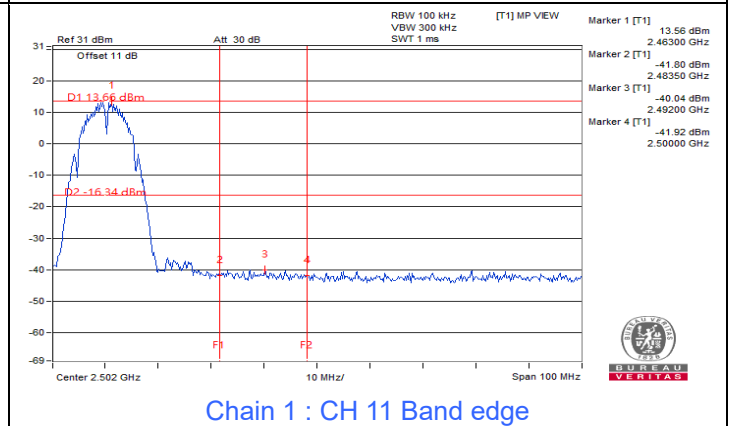
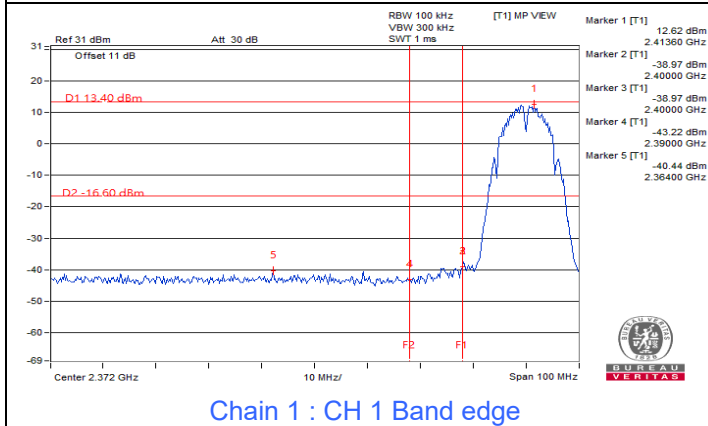
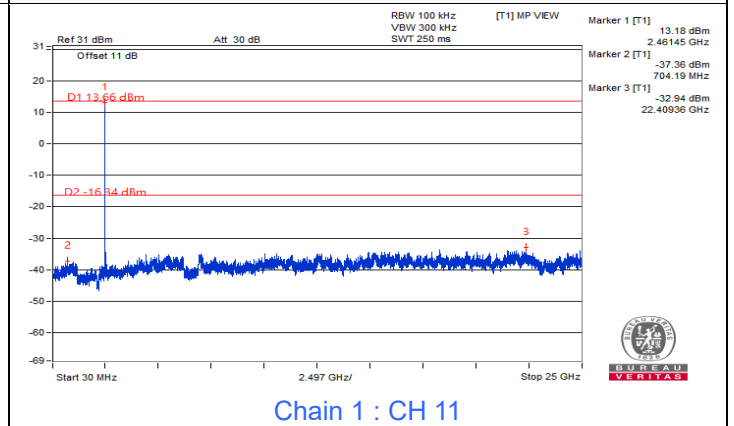
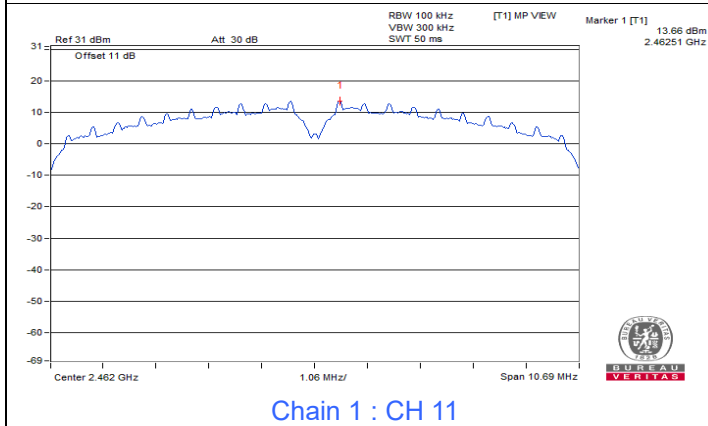
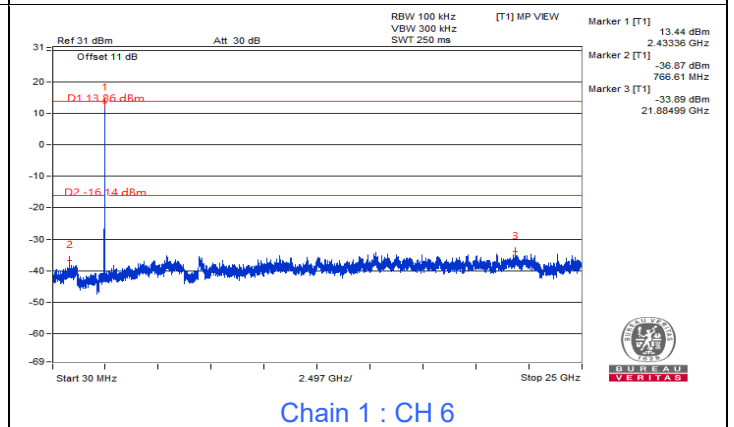
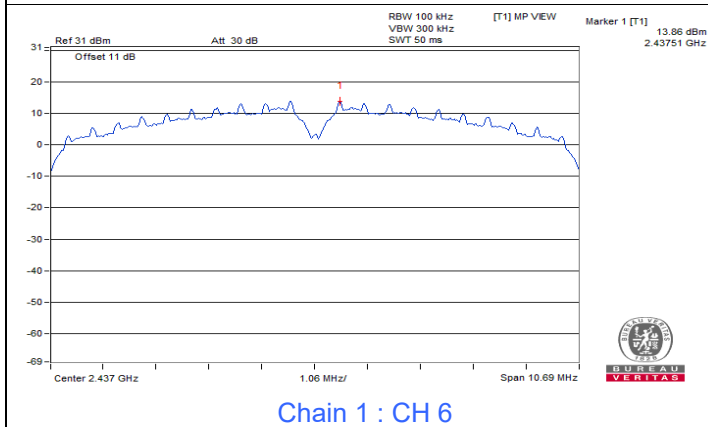
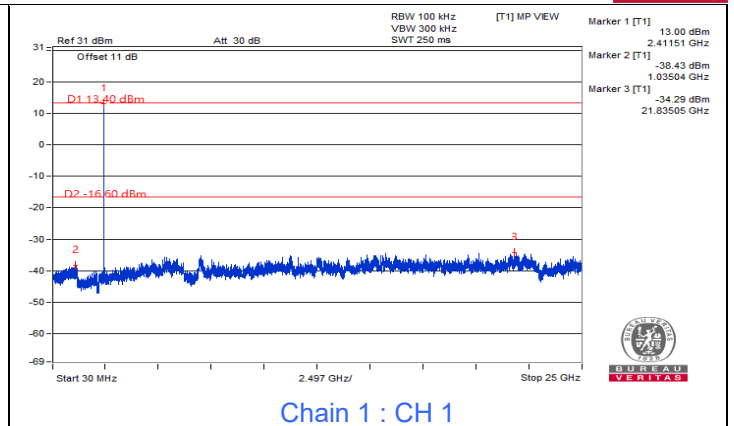
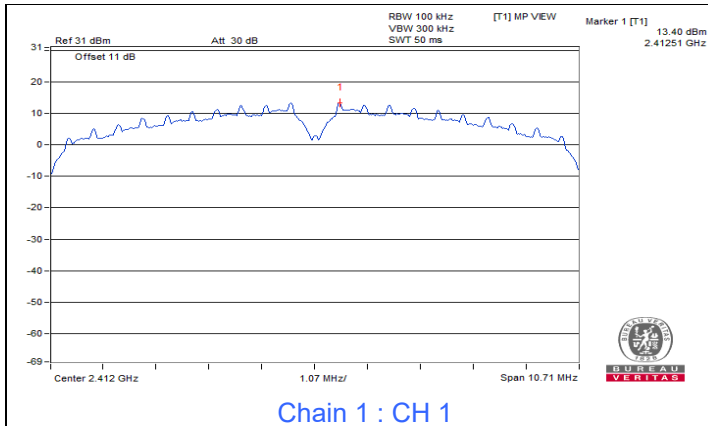


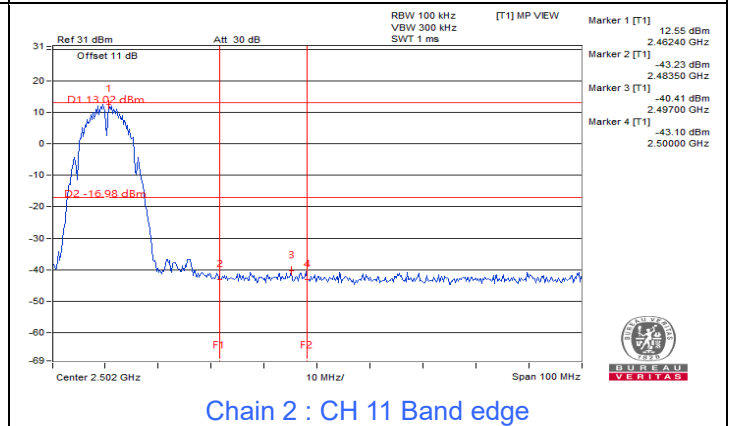
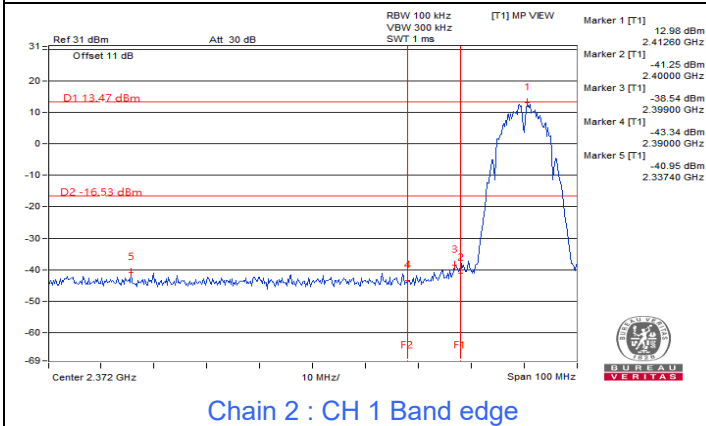
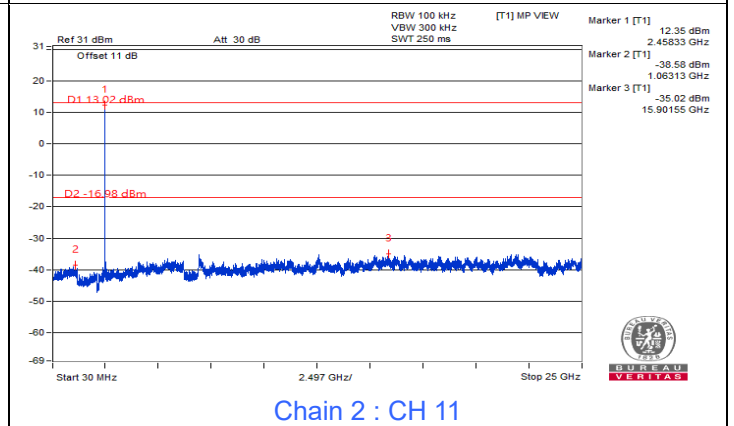
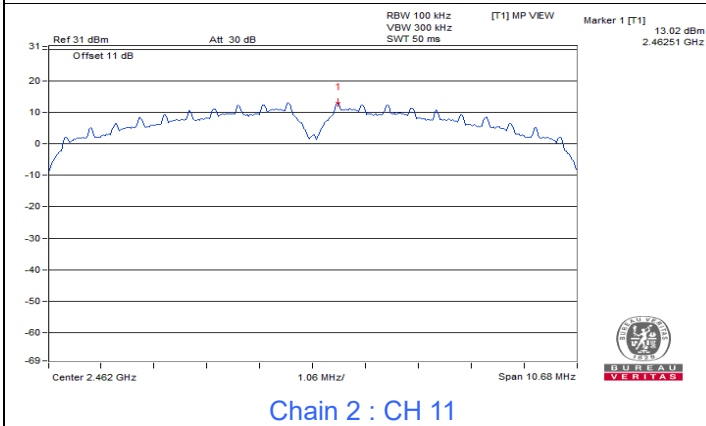
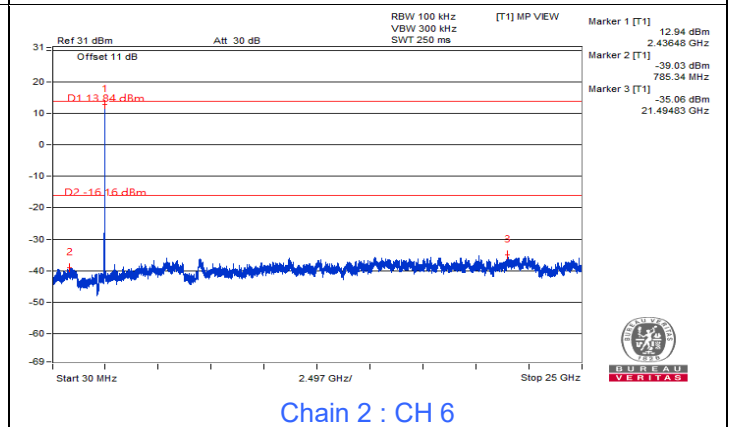
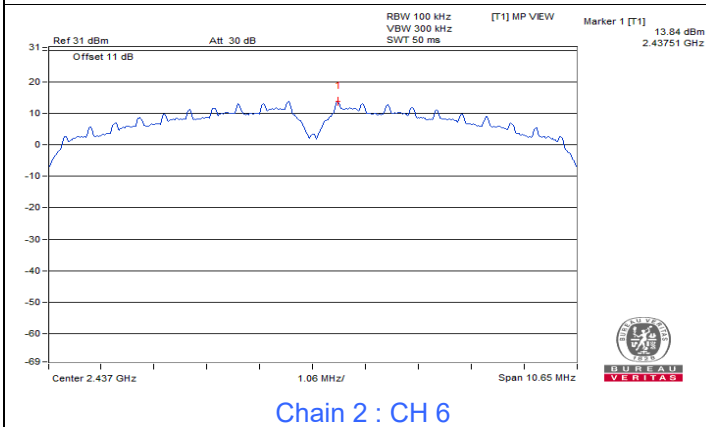
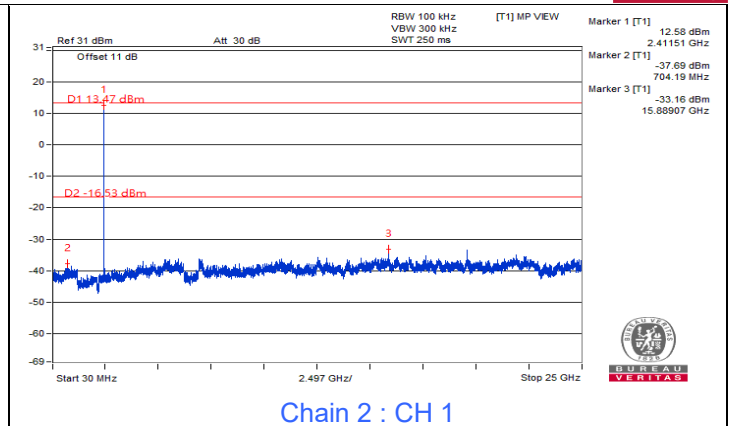
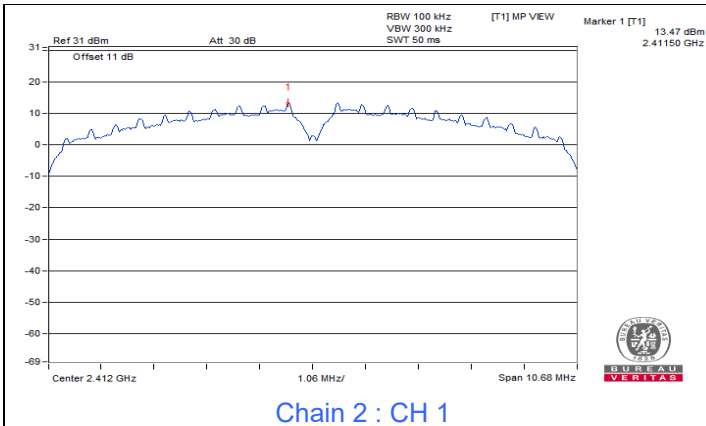
7.4 Conducted Out of Band Emissions

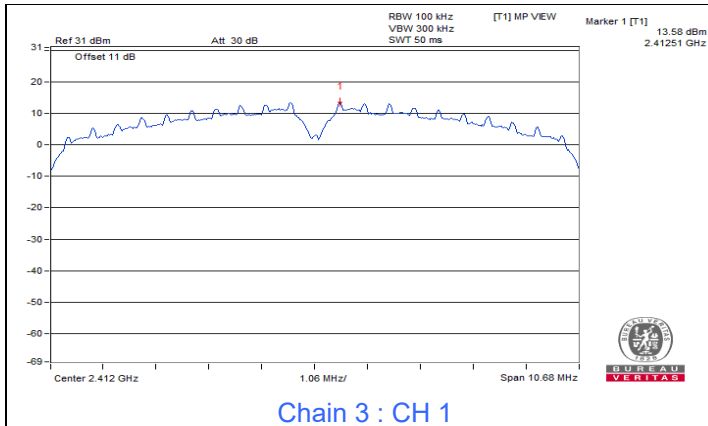
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyoung Wang
--------------	----------------	---------------------------	--------------	------------	---------------

802.11b

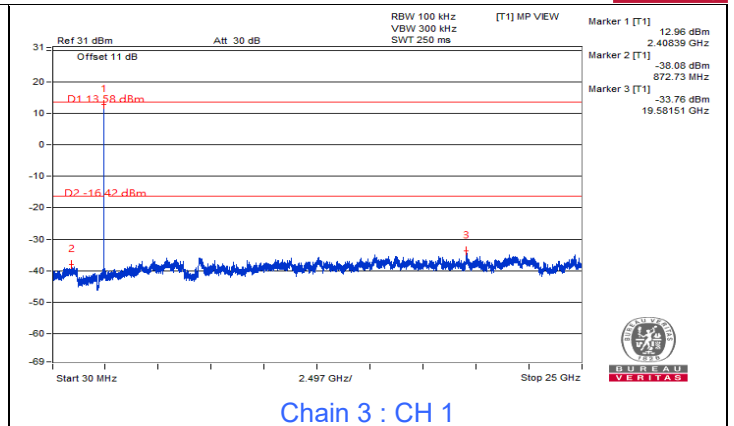




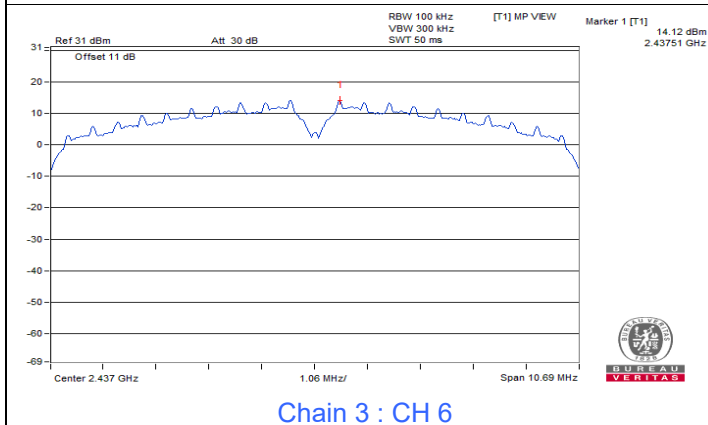




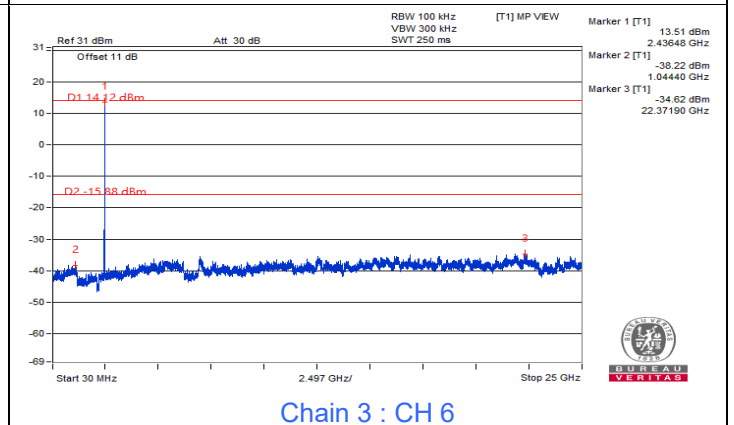
Chain 3 : CH 1



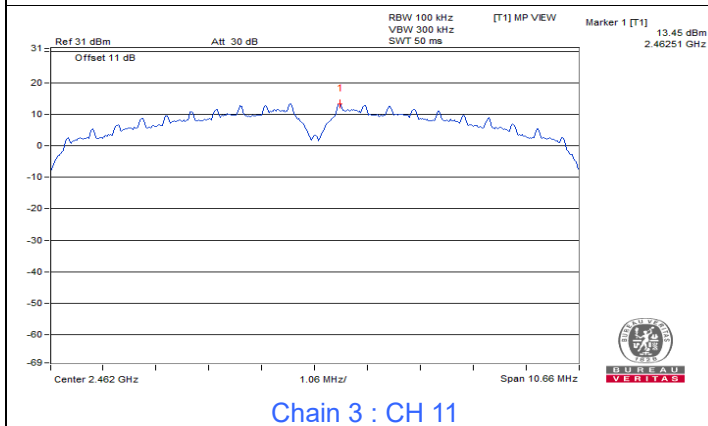
Chain 3 : CH 1



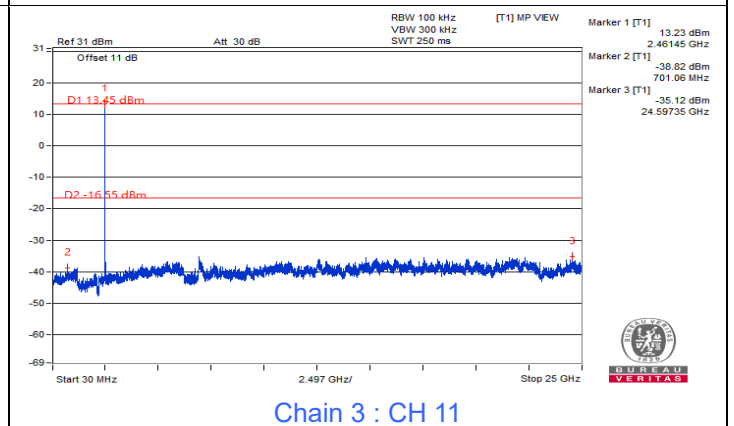
Chain 3 : CH 6



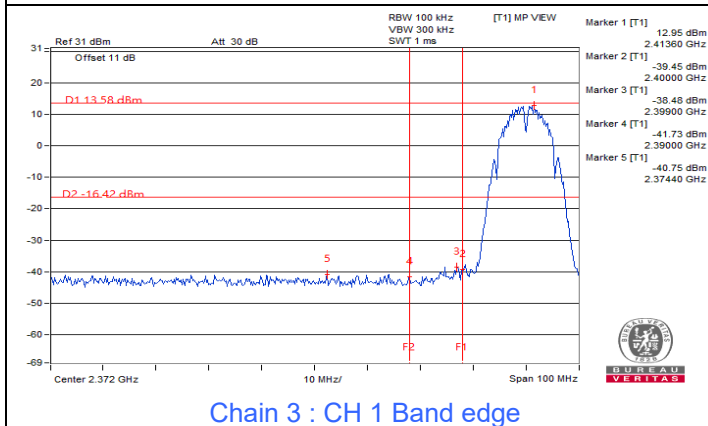
Chain 3 : CH 6



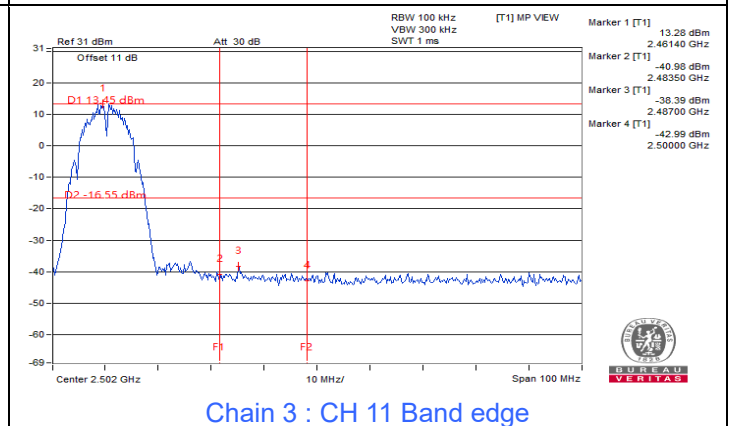
Chain 3 : CH 11



Chain 3 : CH 11

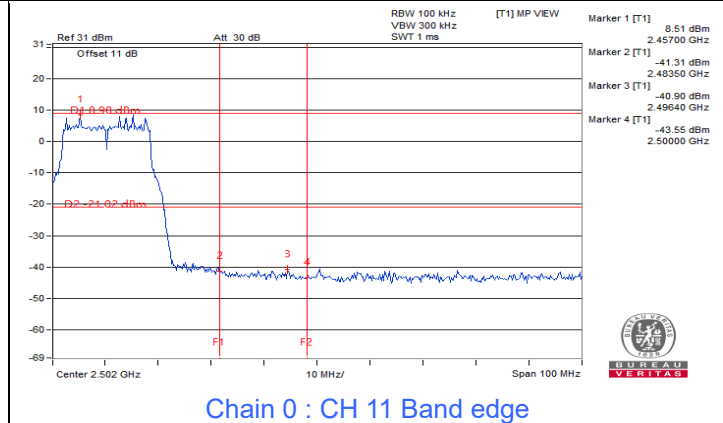
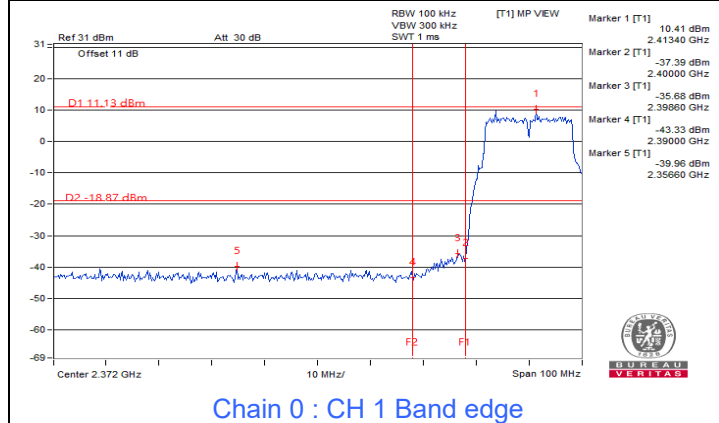
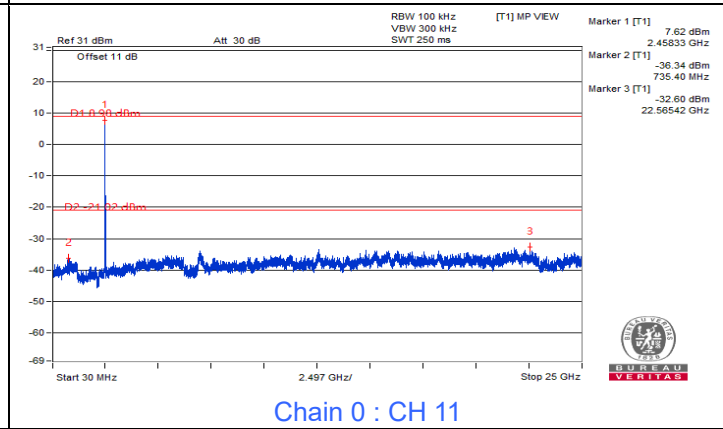
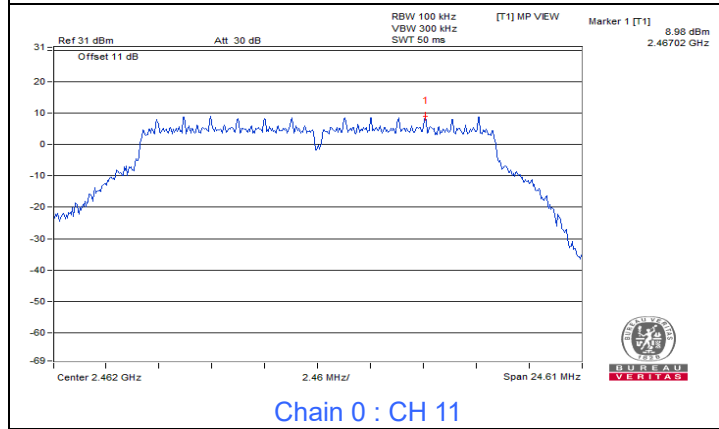
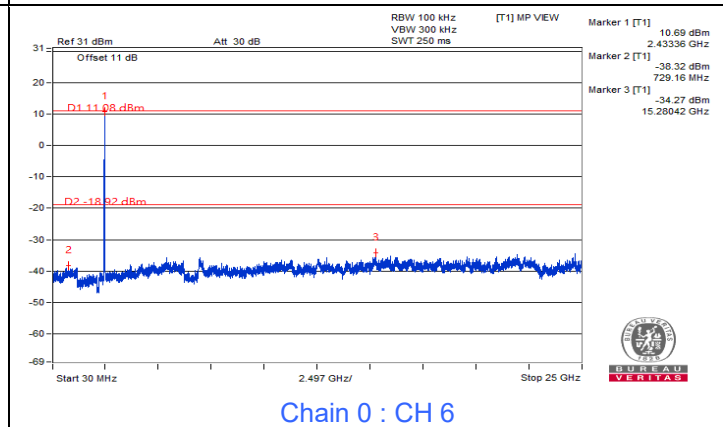
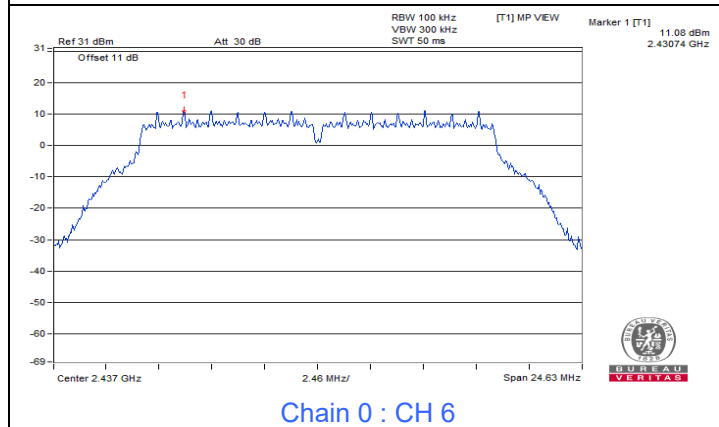
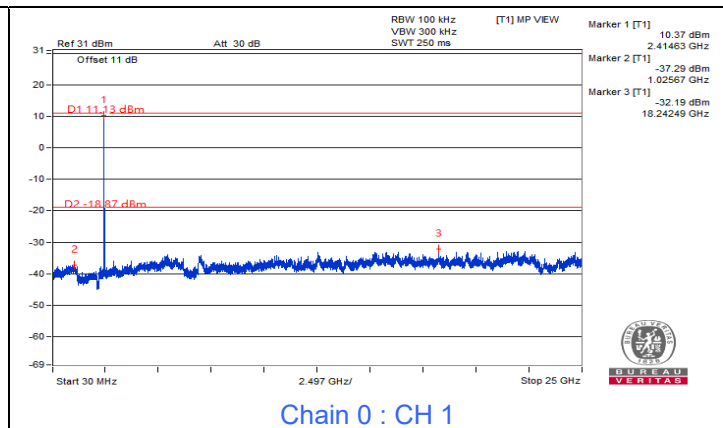
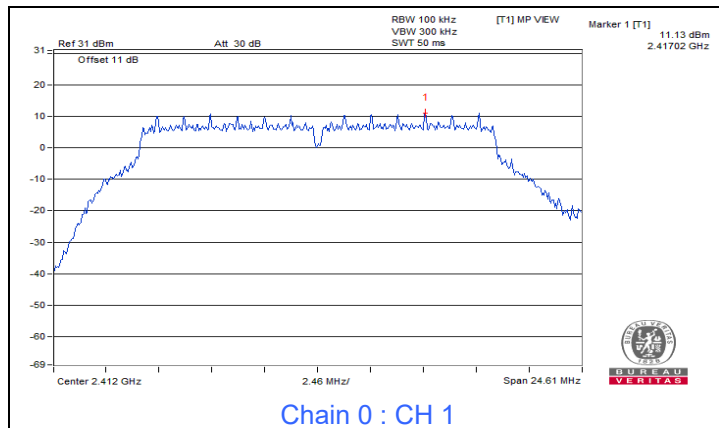


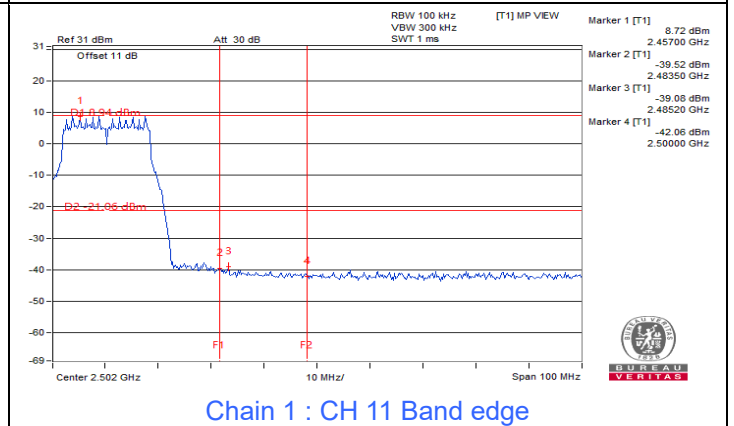
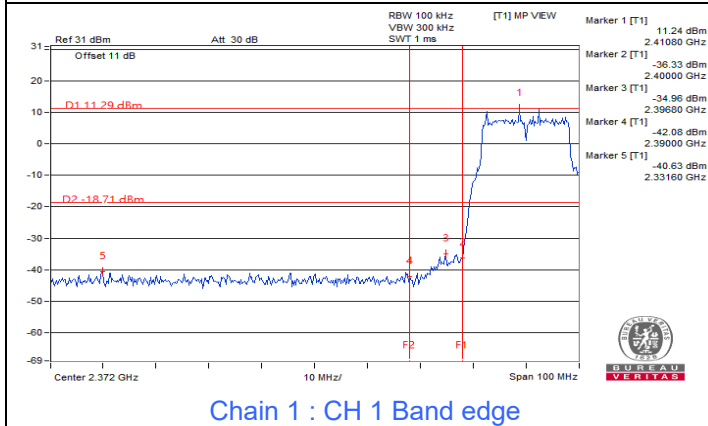
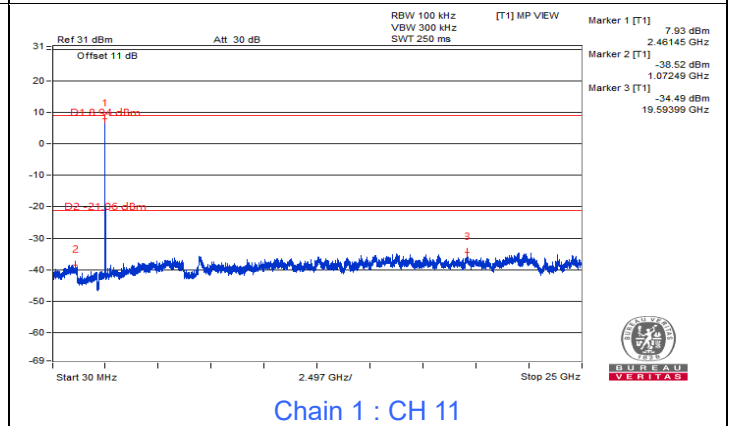
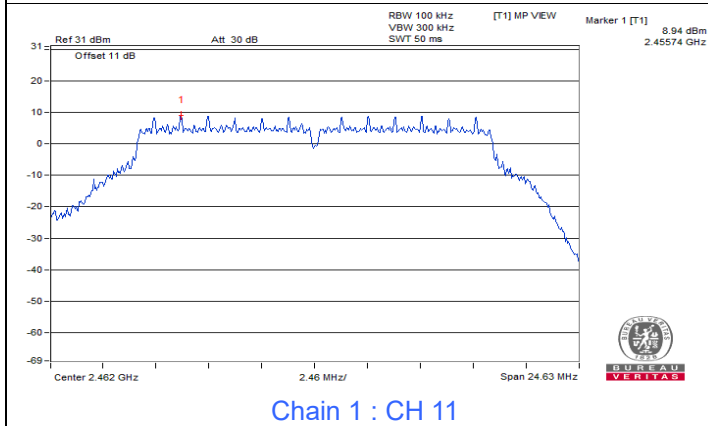
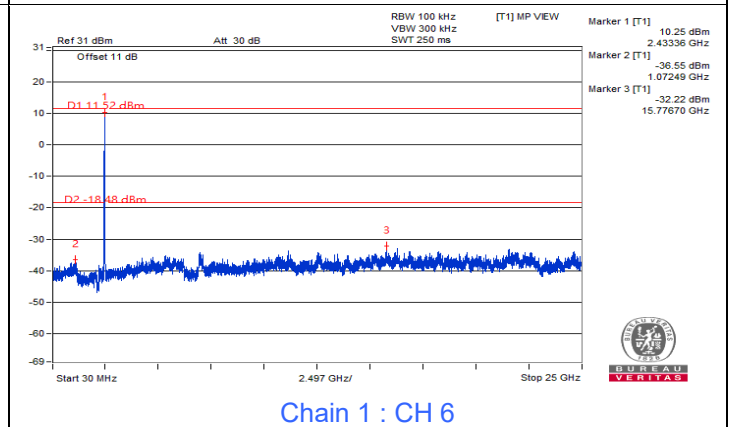
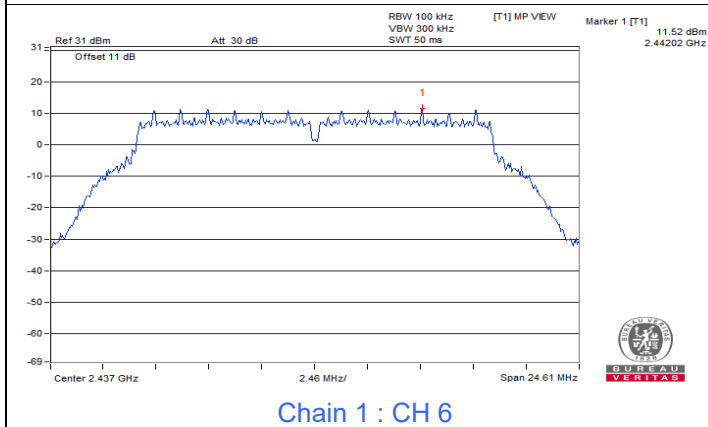
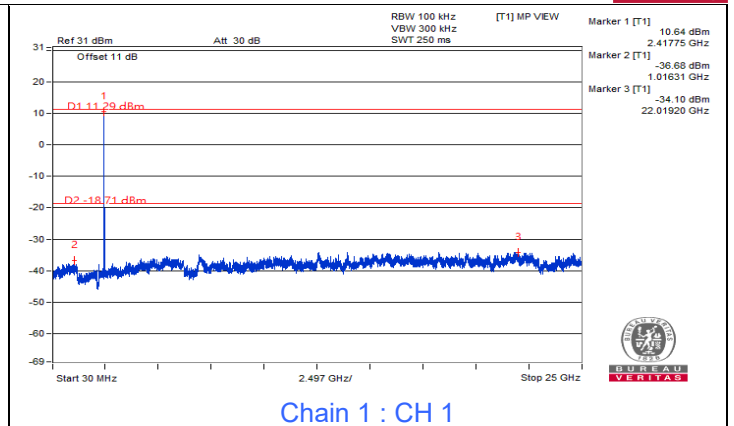
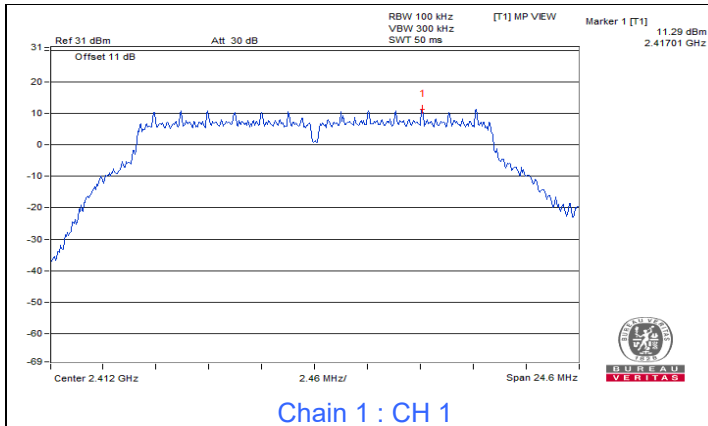
Chain 3 : CH 1 Band edge

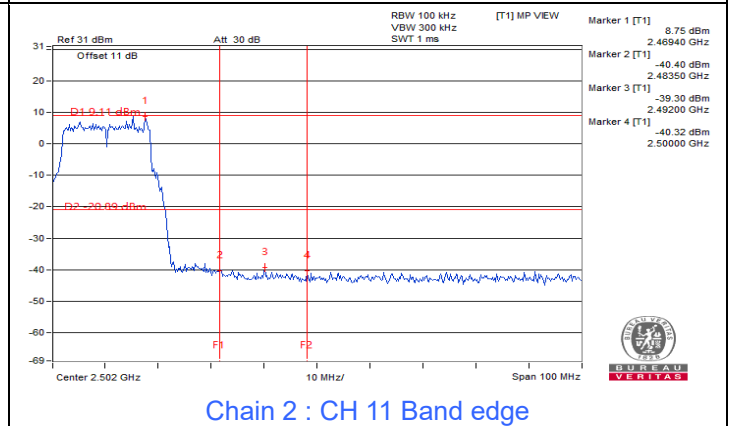
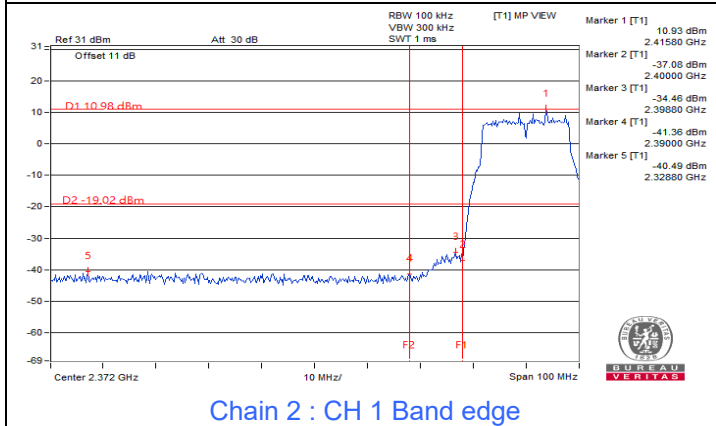
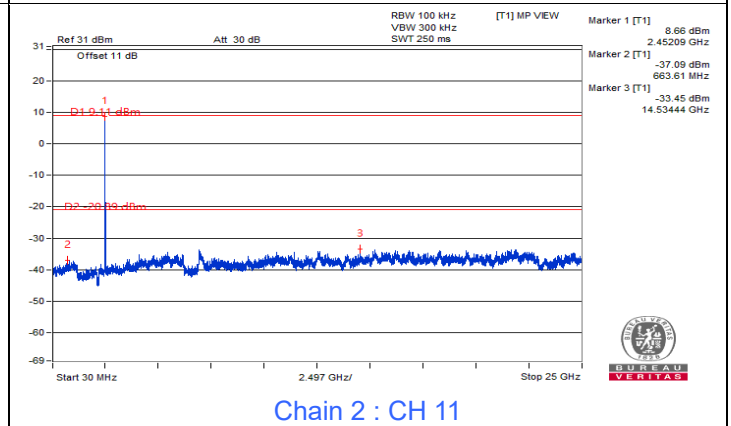
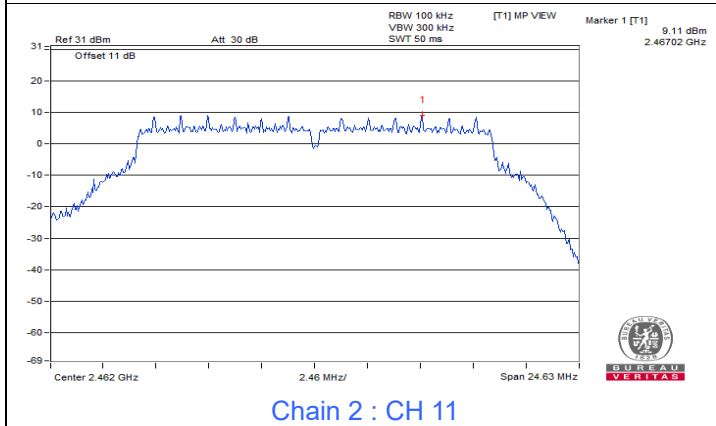
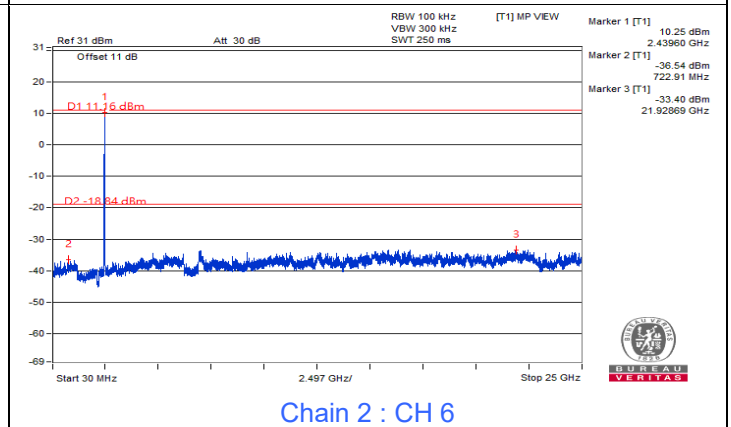
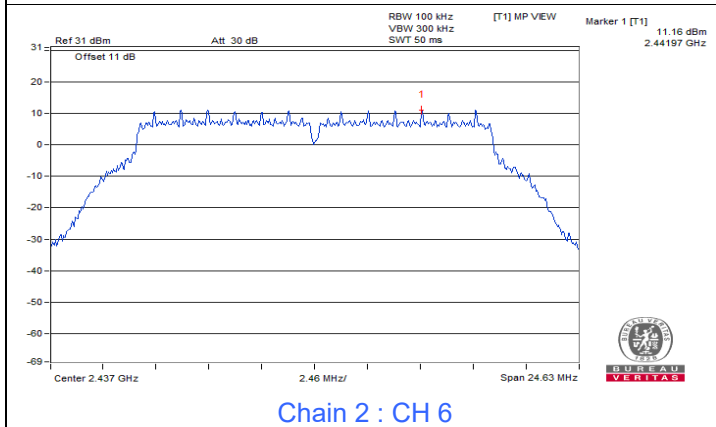
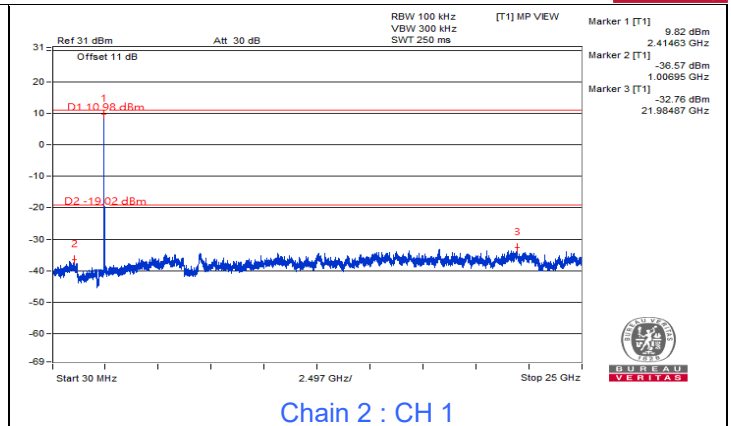
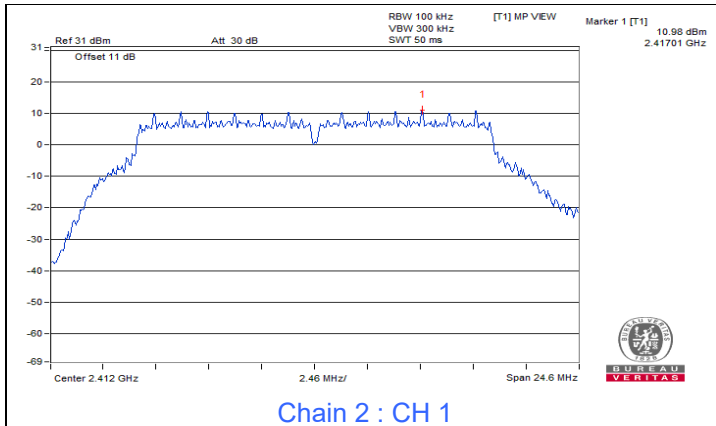


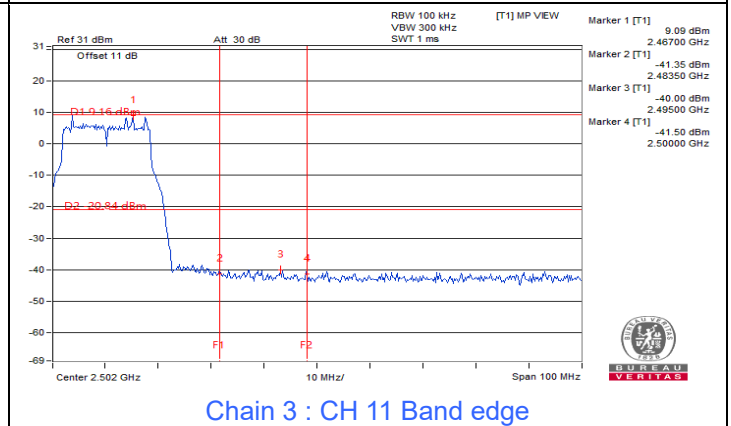
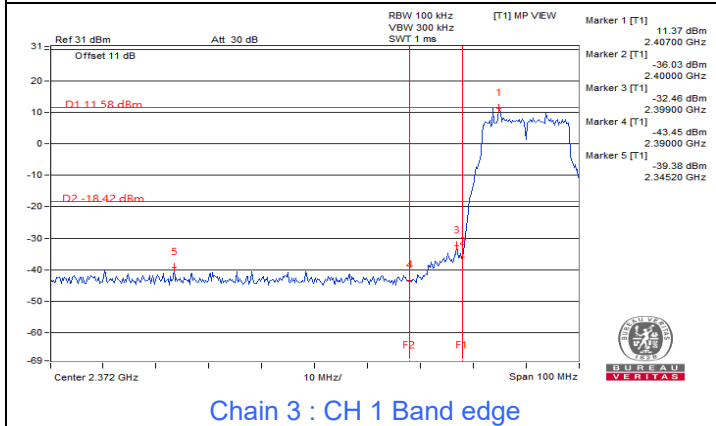
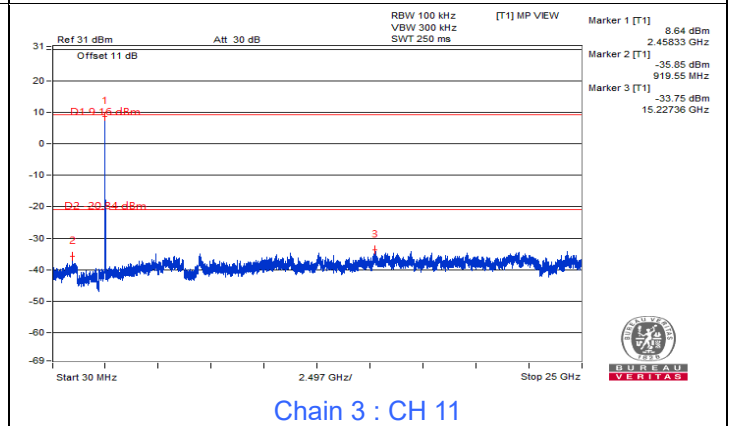
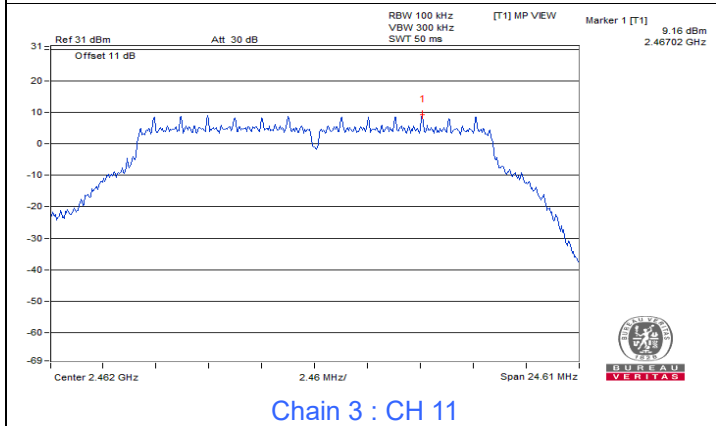
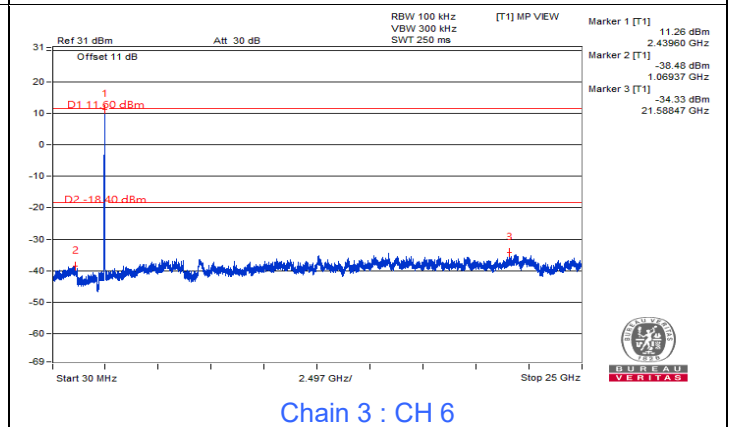
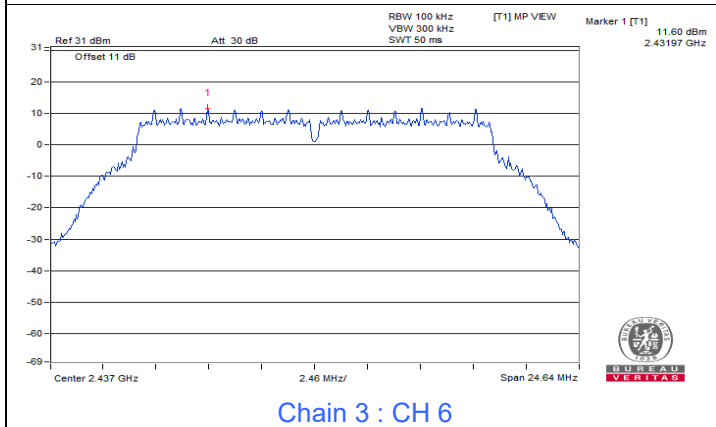
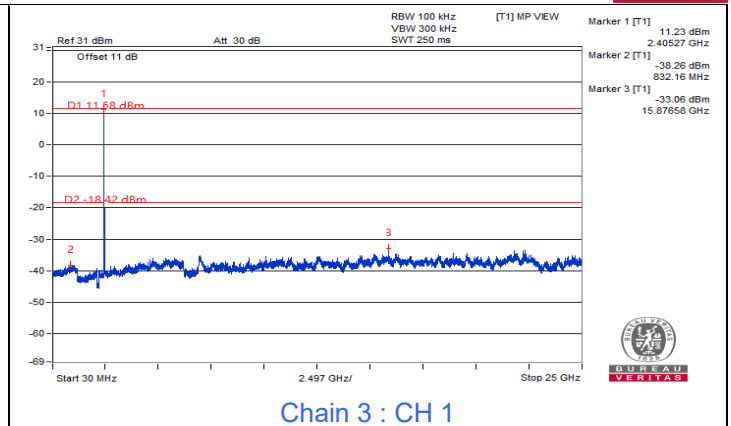
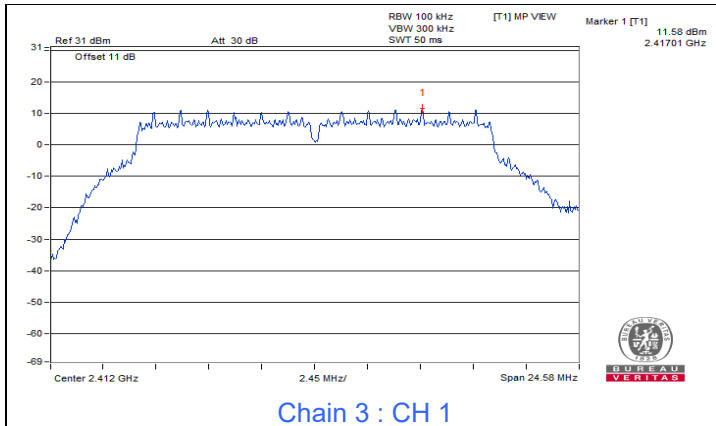
Chain 3 : CH 11 Band edge

802.11g

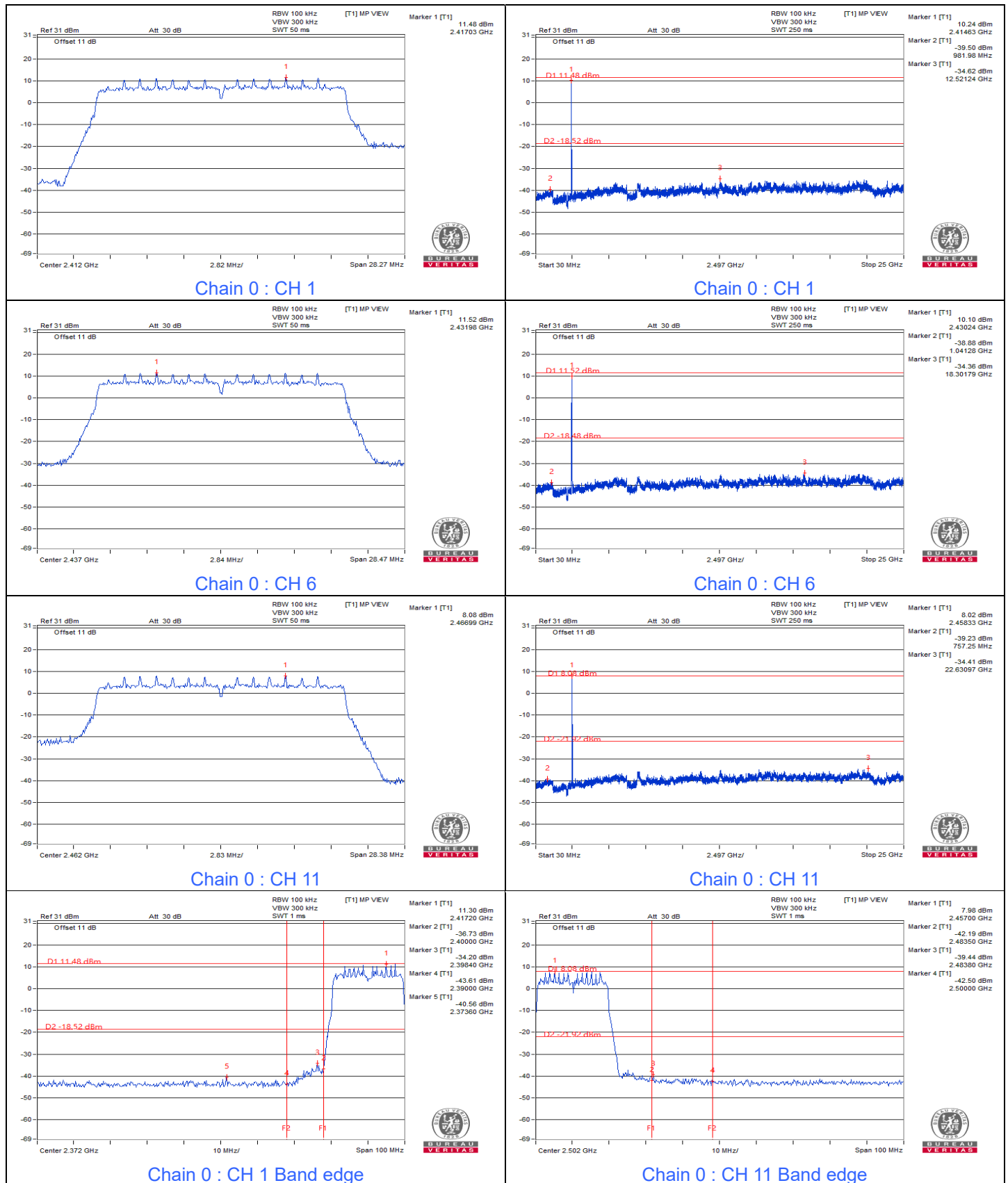


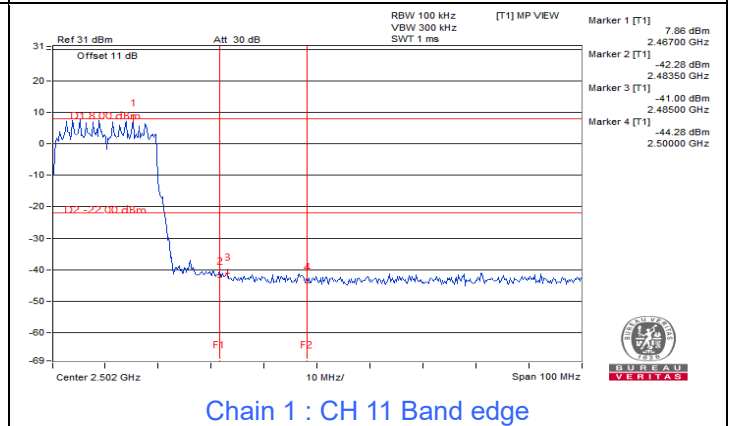
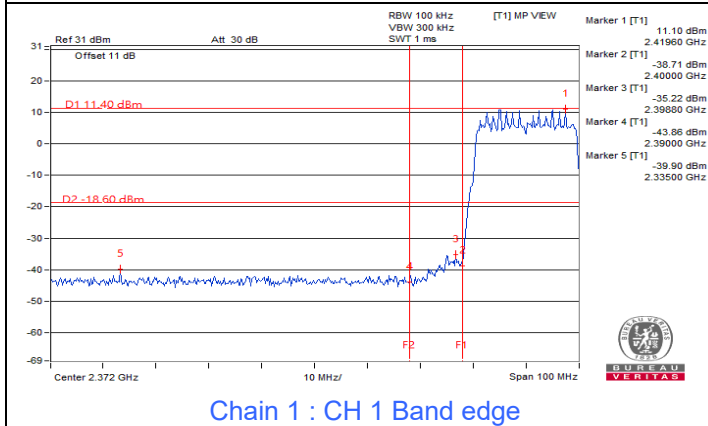
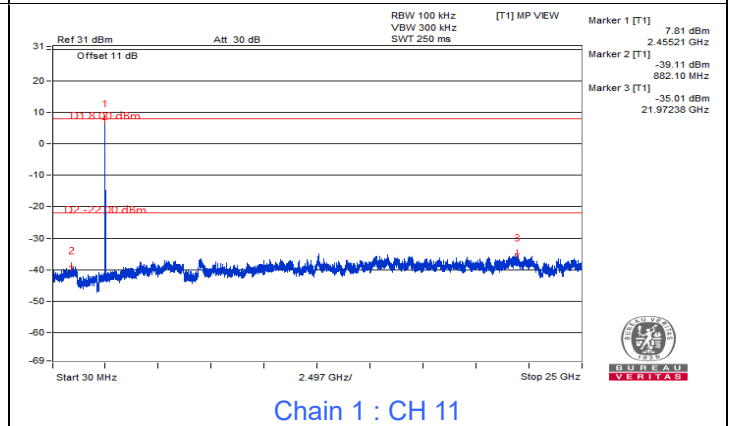
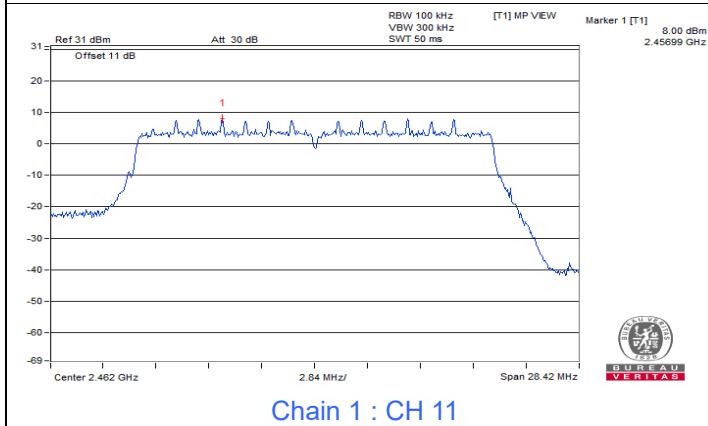
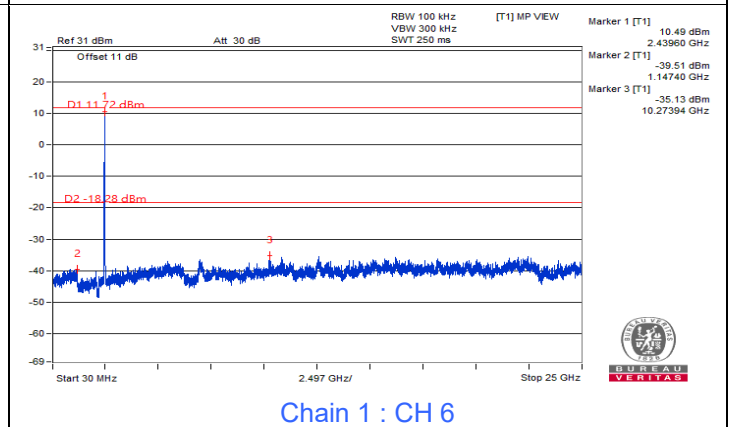
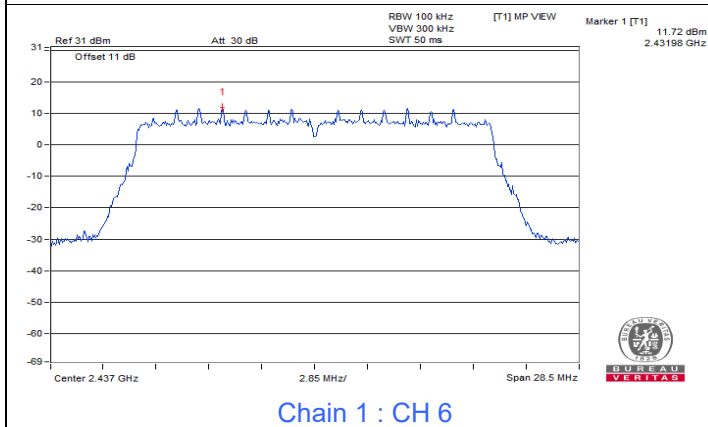
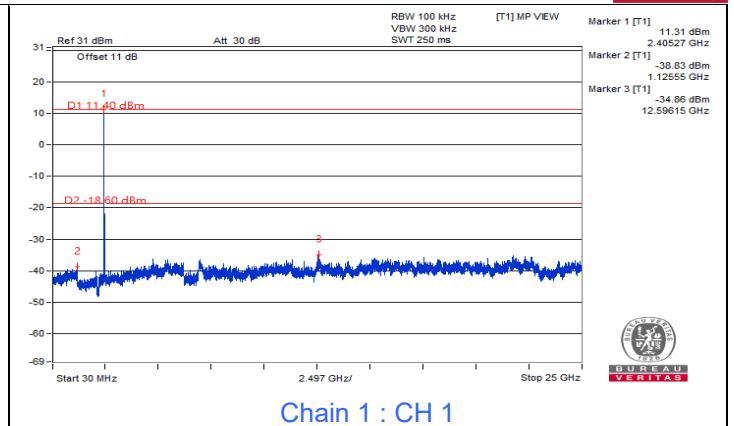
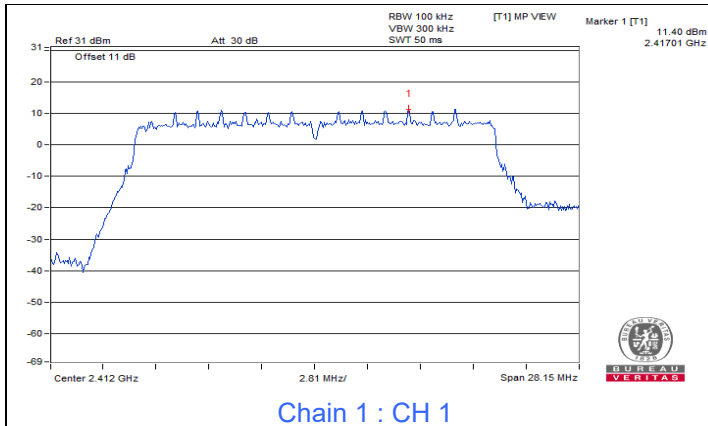


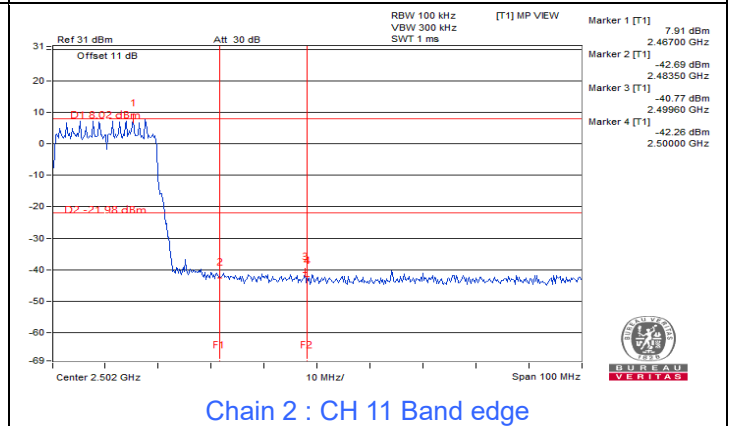
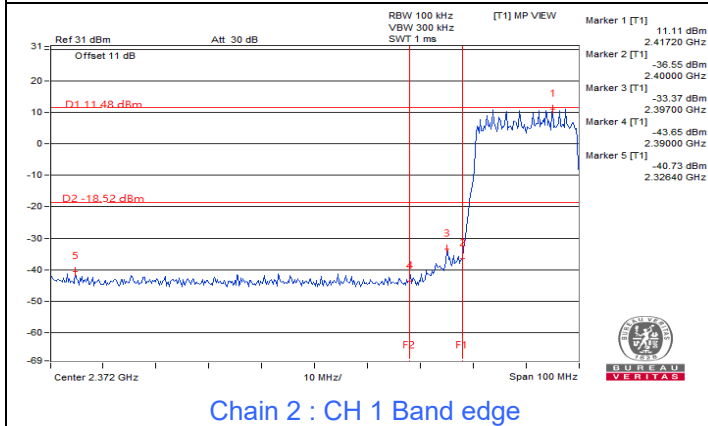
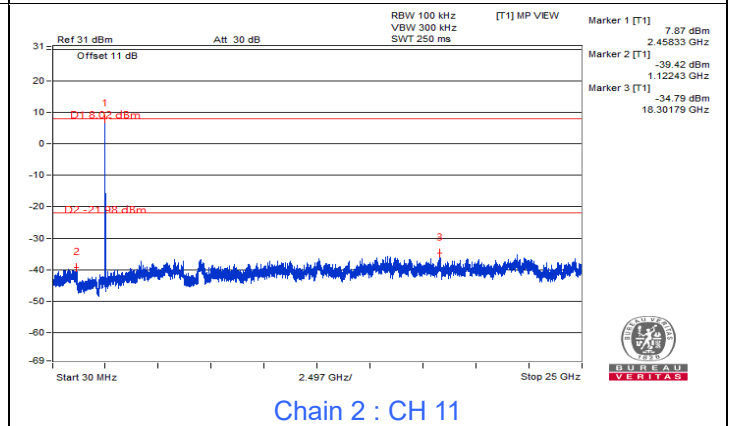
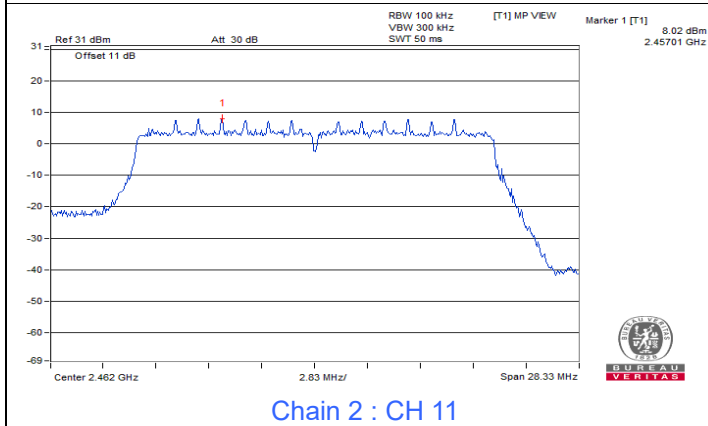
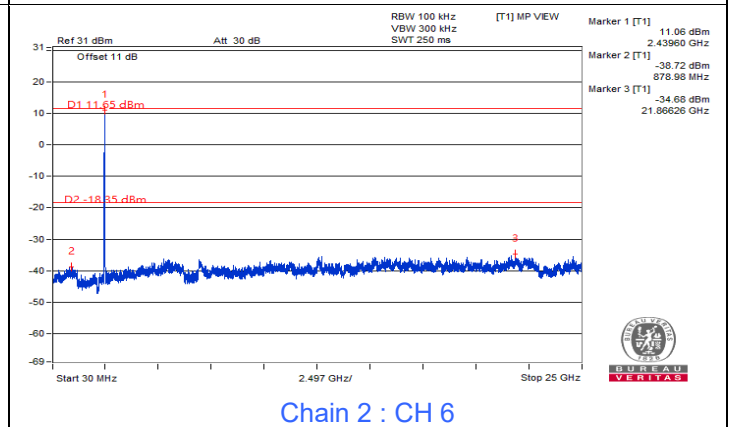
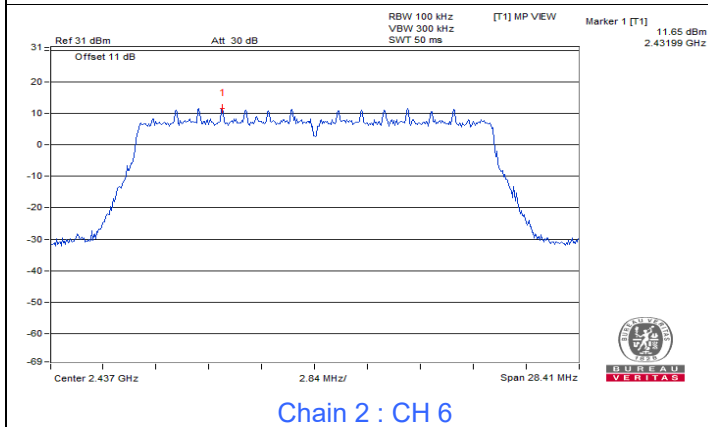
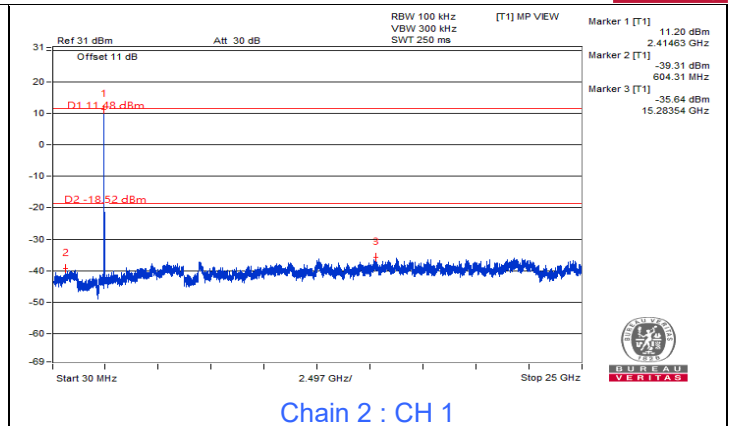
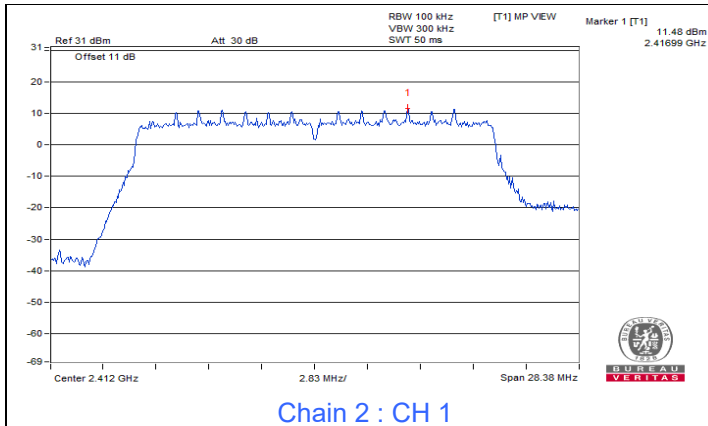


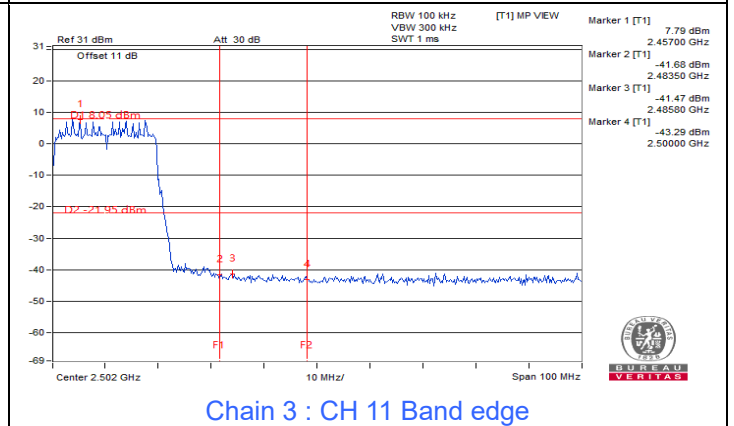
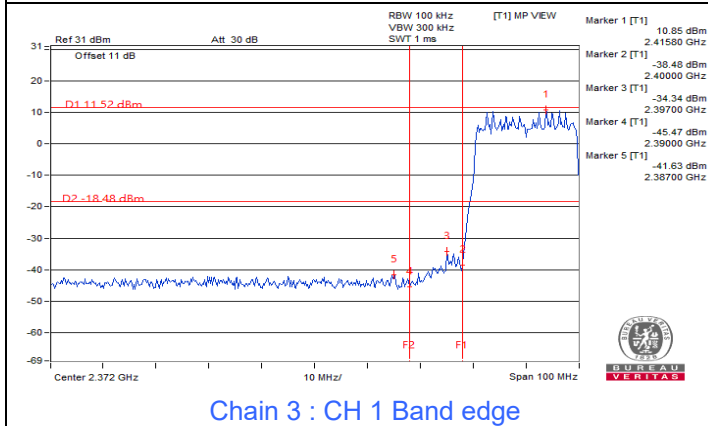
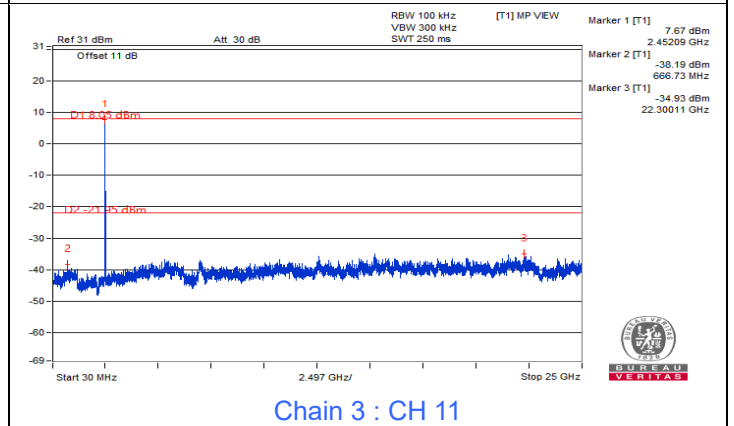
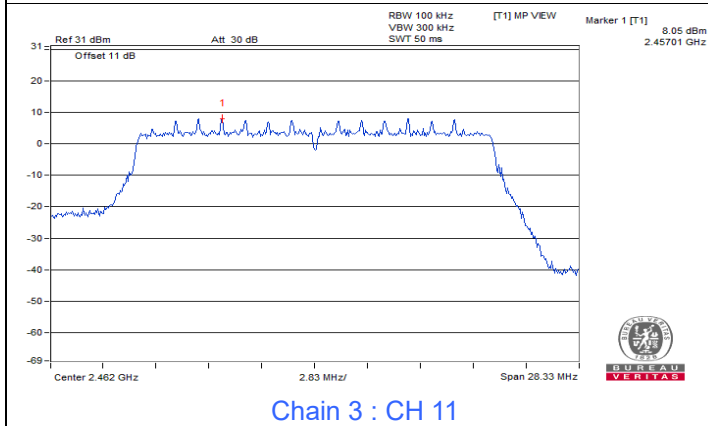
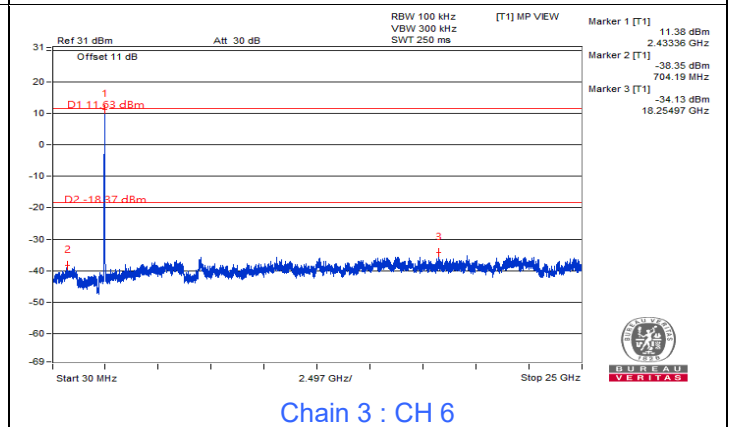
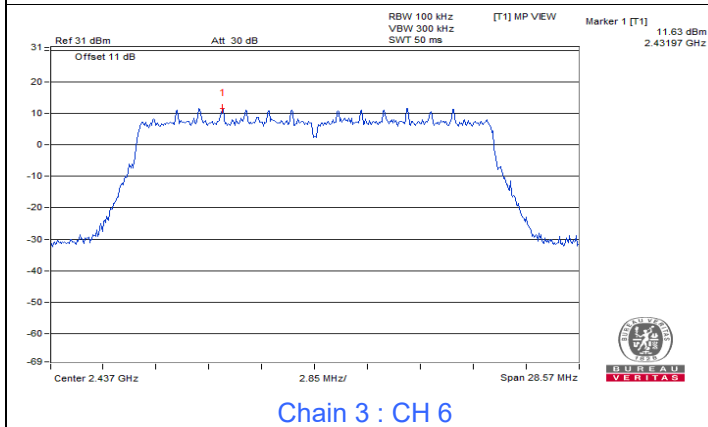
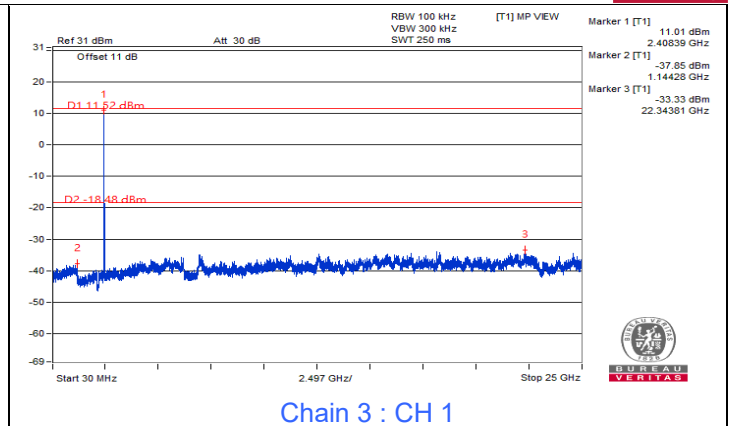
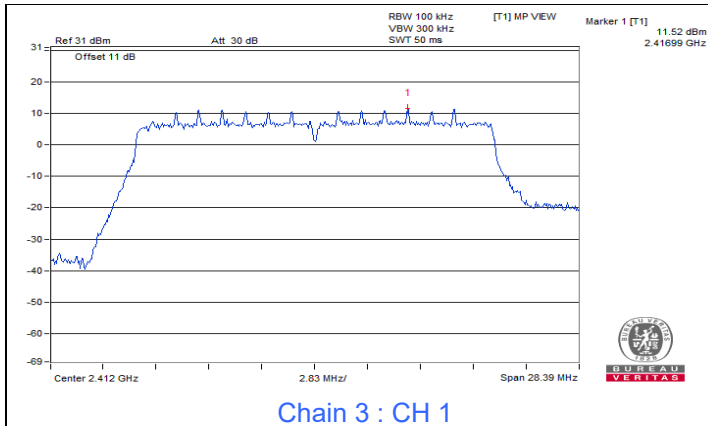


802.11be (EHT20)

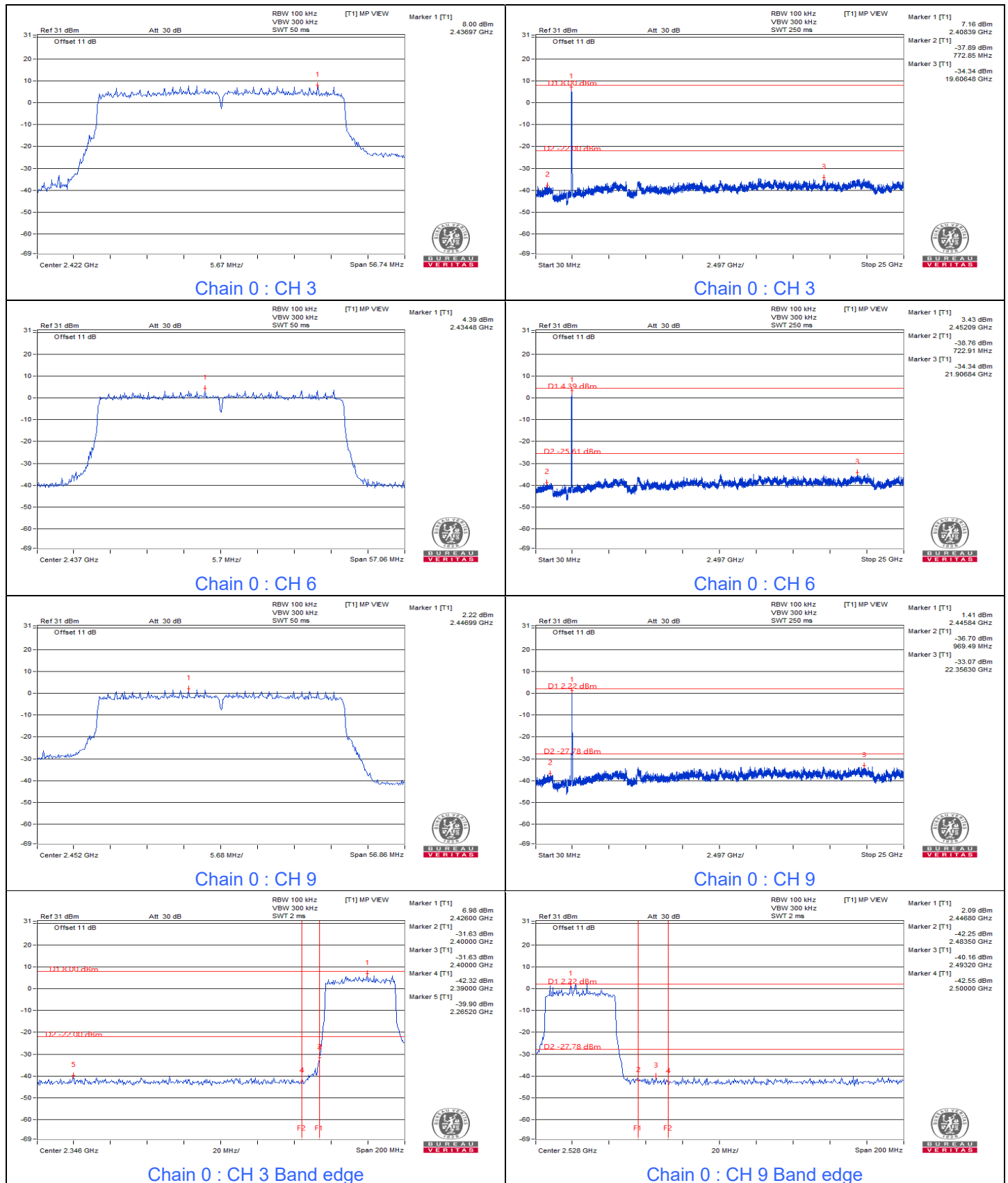


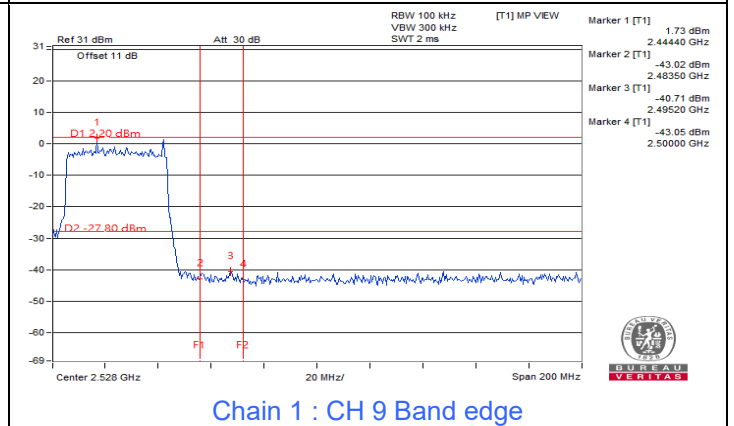
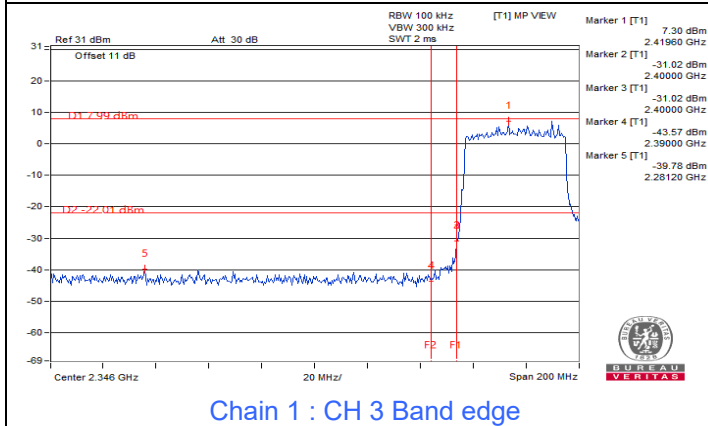
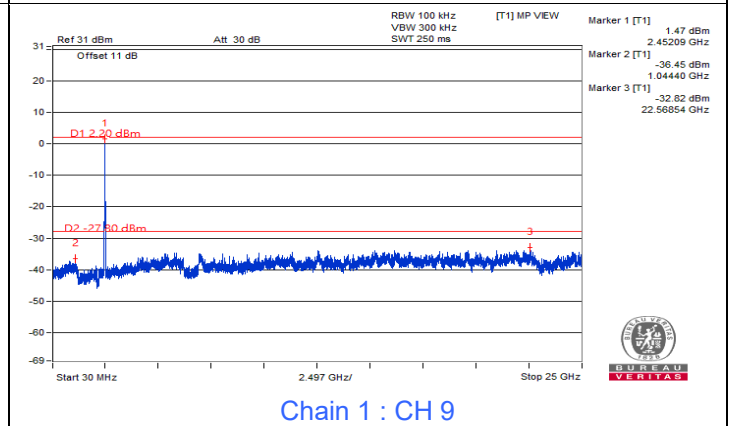
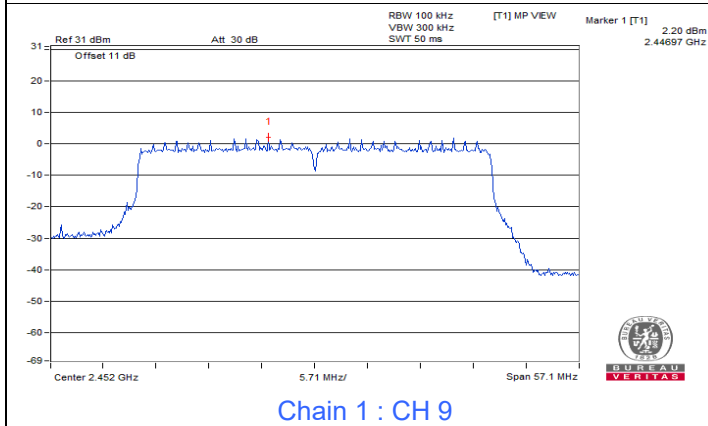
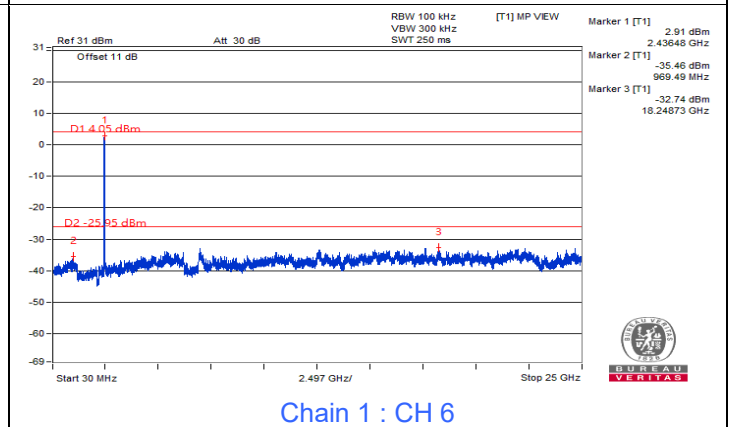
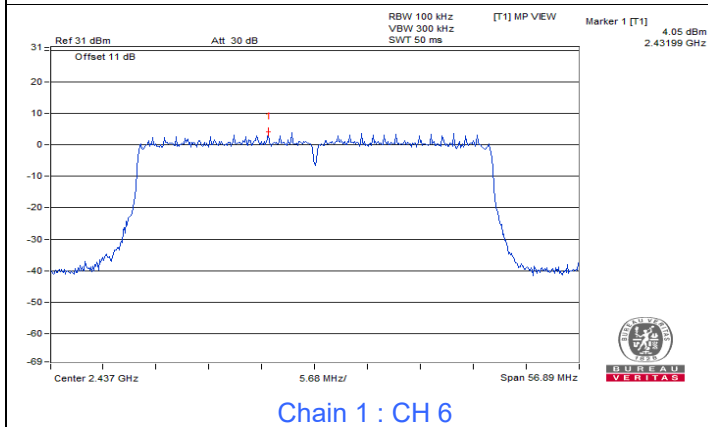
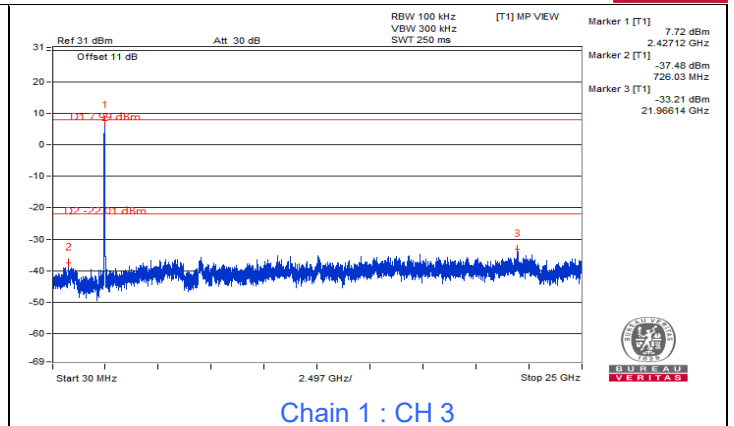
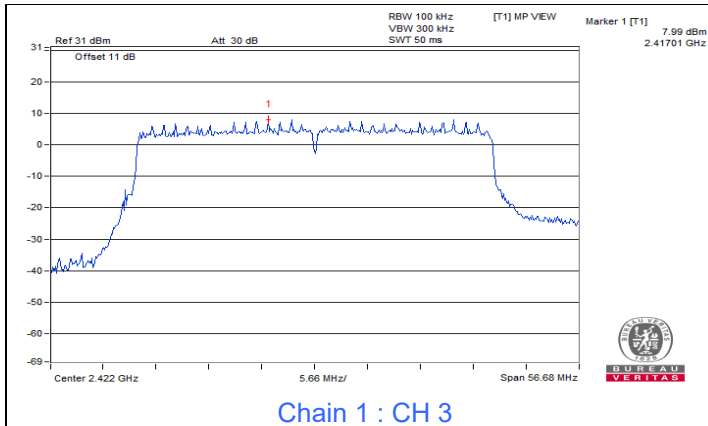


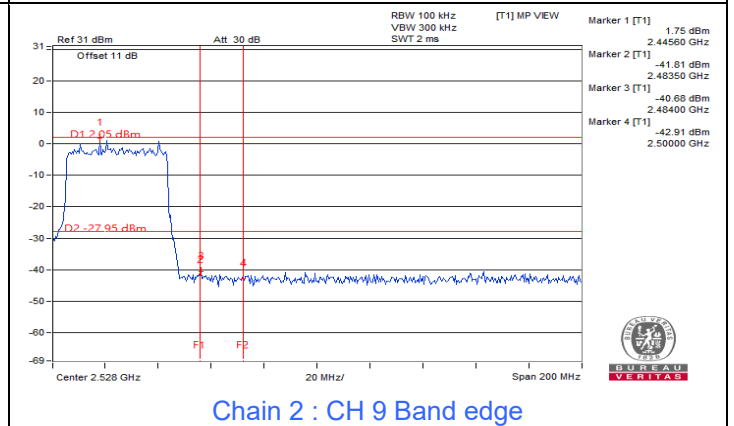
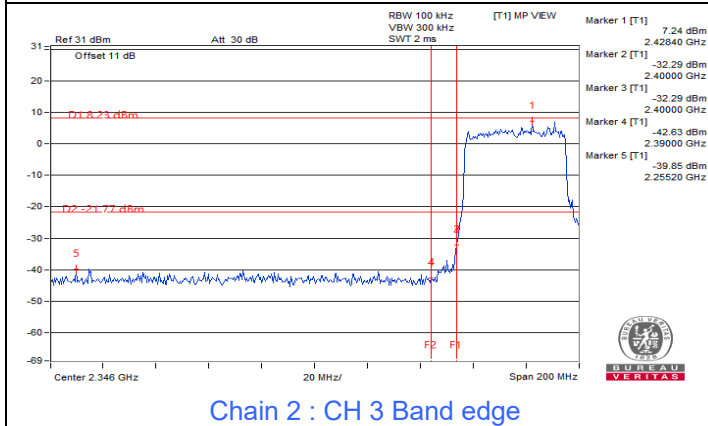
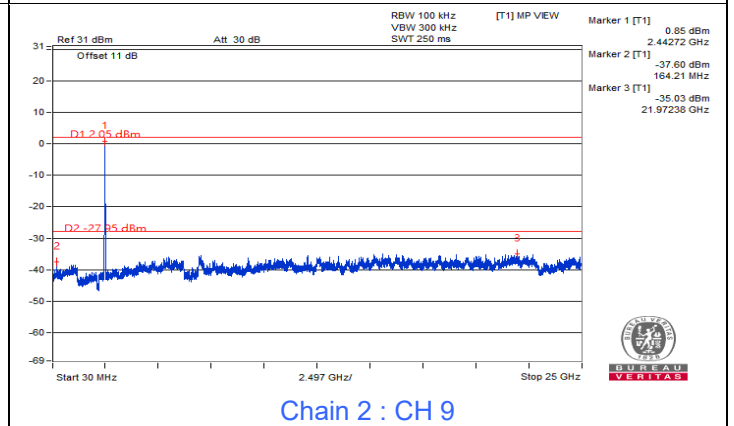
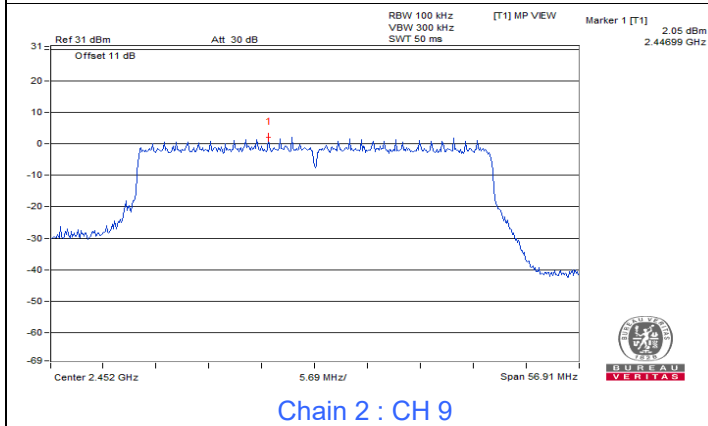
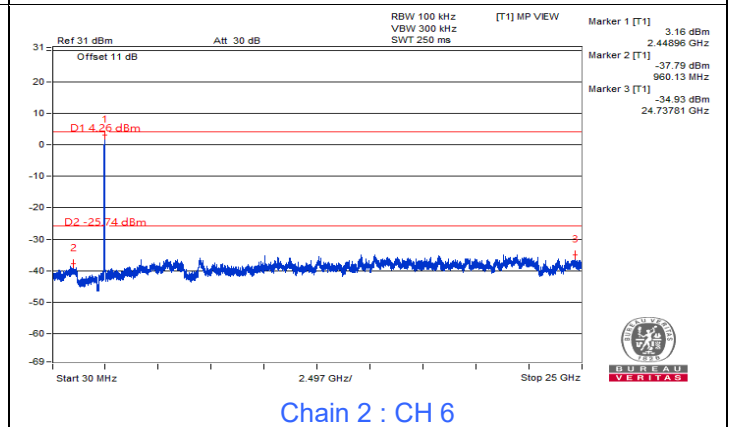
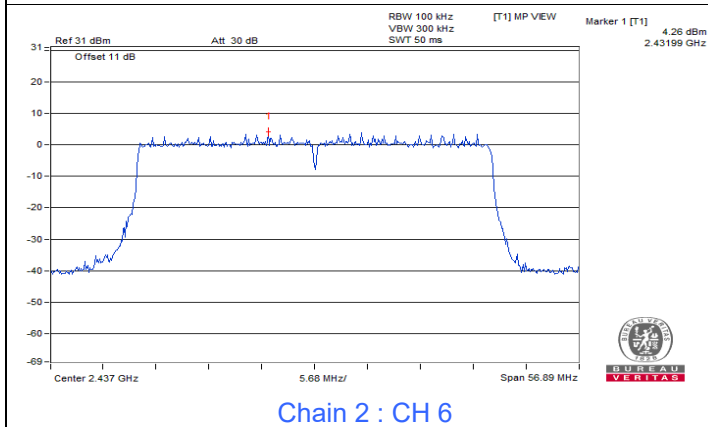
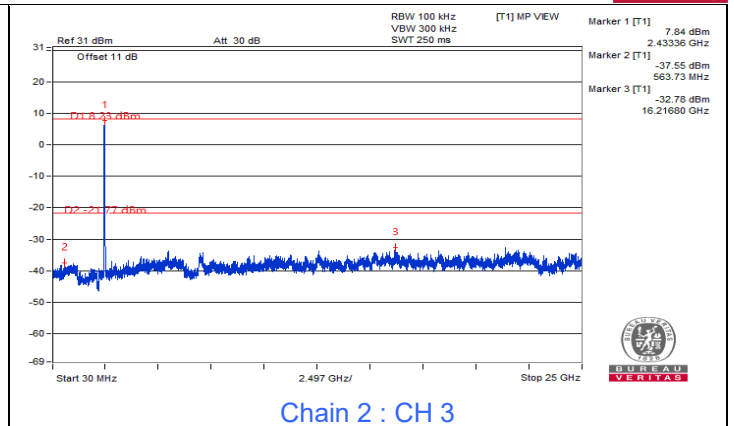
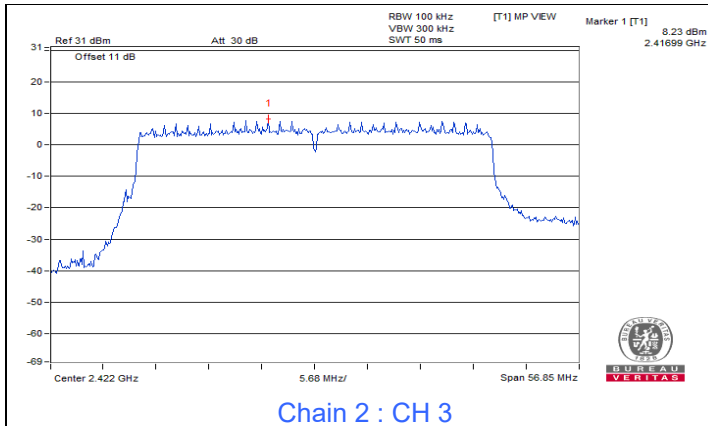


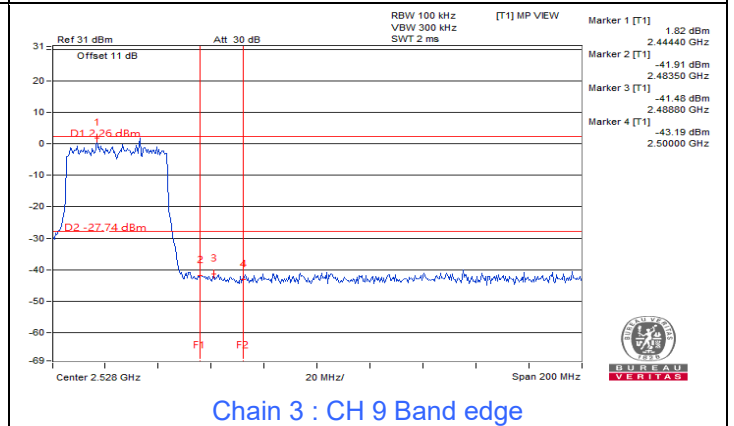
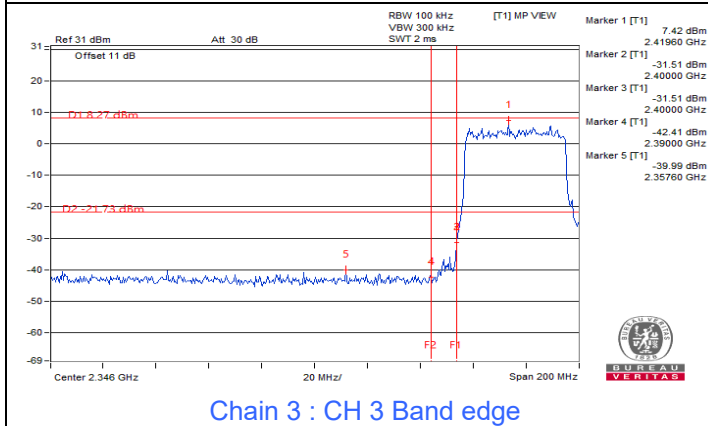
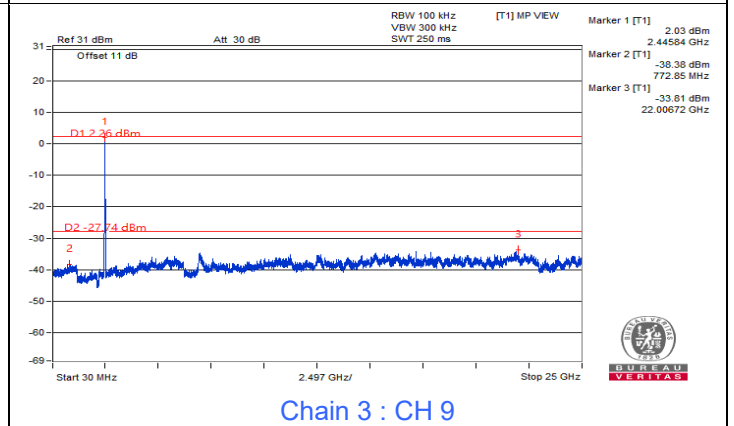
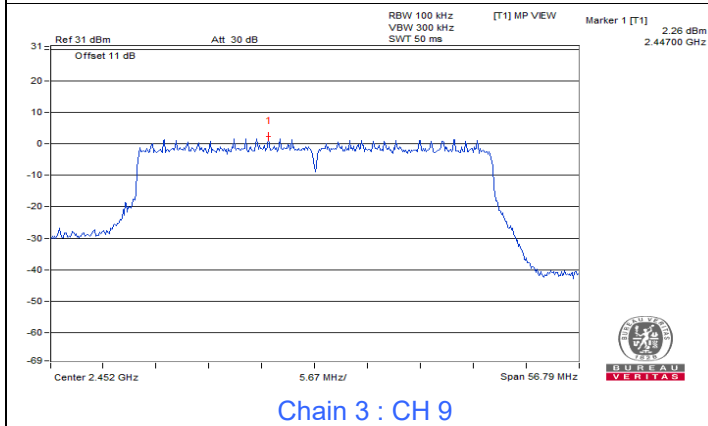
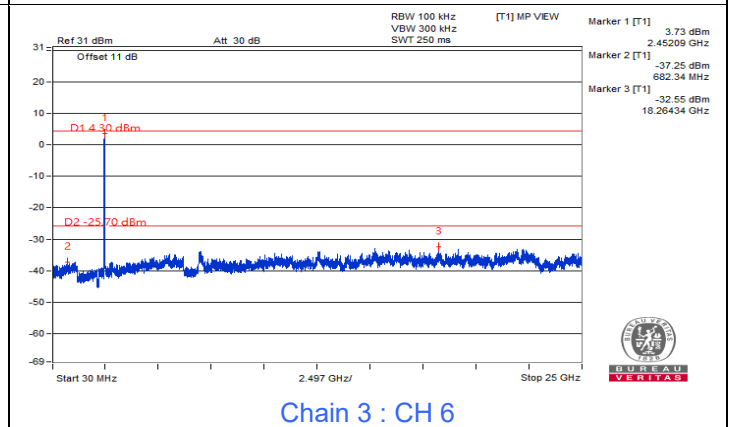
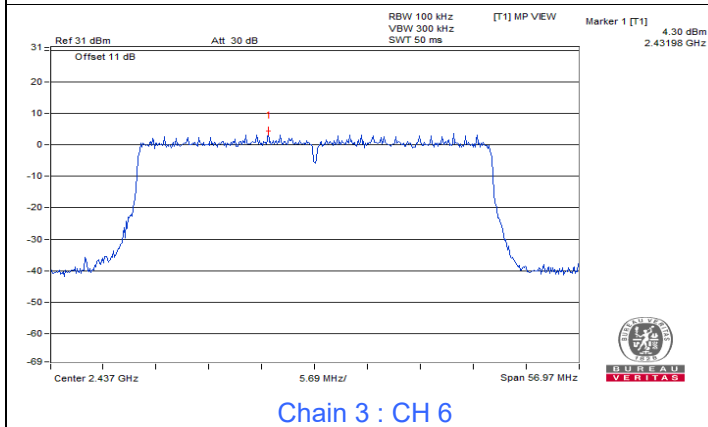
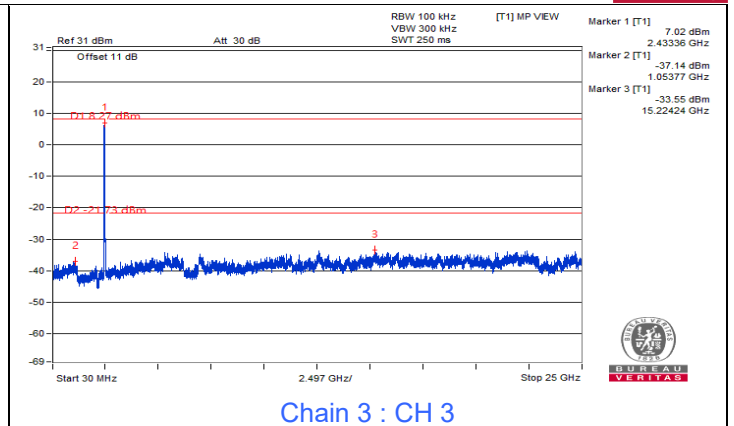
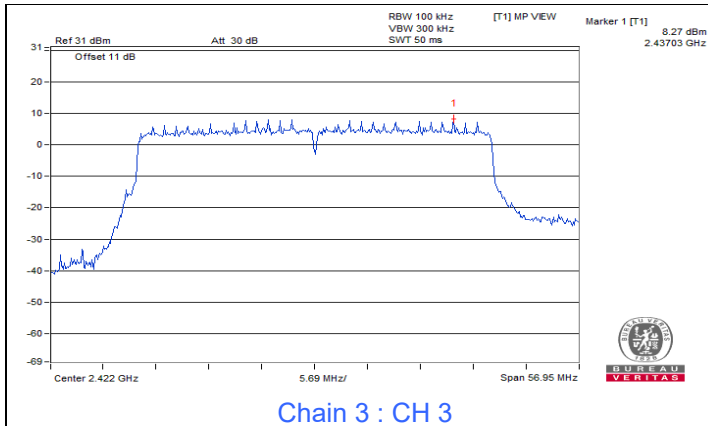


802.11be (EHT40)









7.5 AC Power Conducted Emissions

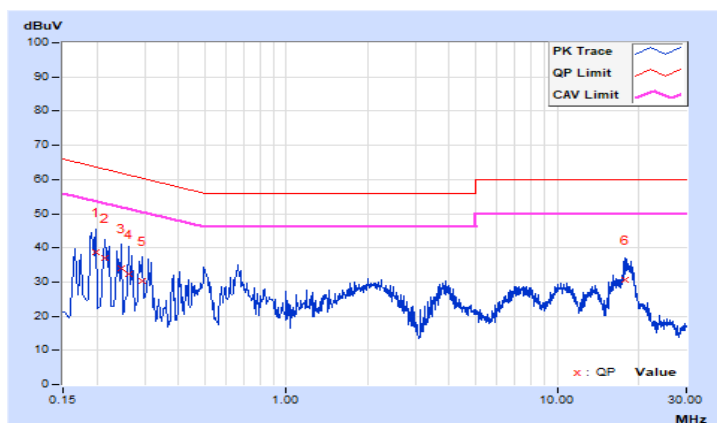
Test Mode A

RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 71% RH
Tested By	Luis Lee		

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	0.19800	9.70	29.02	10.80	38.72	20.50	63.69	53.69	-24.97	-33.19
2	0.21400	9.71	27.24	10.48	36.95	20.19	63.05	53.05	-26.10	-32.86
3	0.24600	9.72	24.17	11.28	33.89	21.00	61.89	51.89	-28.00	-30.89
4	0.26200	9.73	22.72	8.83	32.45	18.56	61.37	51.37	-28.92	-32.81
5	0.29400	9.74	20.57	10.05	30.31	19.79	60.41	50.41	-30.10	-30.62
6	17.81800	10.06	20.61	15.21	30.67	25.27	60.00	50.00	-29.33	-24.73

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

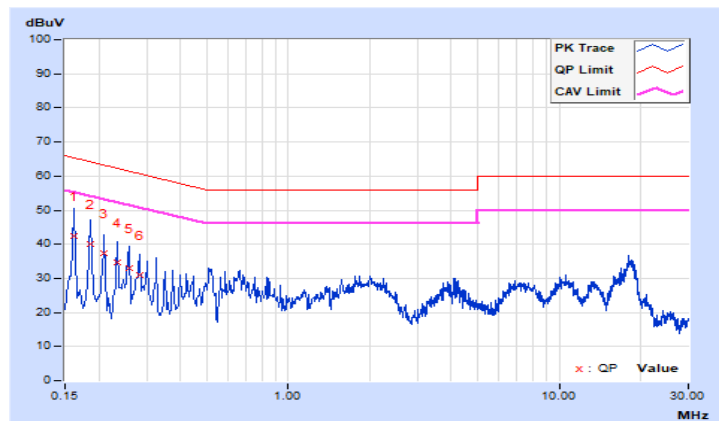


RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 71% RH
Tested By	Luis Lee		

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	0.16200	9.67	32.86	16.84	42.53	26.51	65.36	55.36	-22.83	-28.85
2	0.18600	9.69	30.39	14.15	40.08	23.84	64.21	54.21	-24.13	-30.37
3	0.21000	9.70	27.59	10.46	37.29	20.16	63.21	53.21	-25.92	-33.05
4	0.23400	9.71	25.10	11.54	34.81	21.25	62.31	52.31	-27.50	-31.06
5	0.25800	9.72	23.32	10.07	33.04	19.79	61.50	51.50	-28.46	-31.71
6	0.28200	9.73	21.15	8.38	30.88	18.11	60.76	50.76	-29.88	-32.65

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



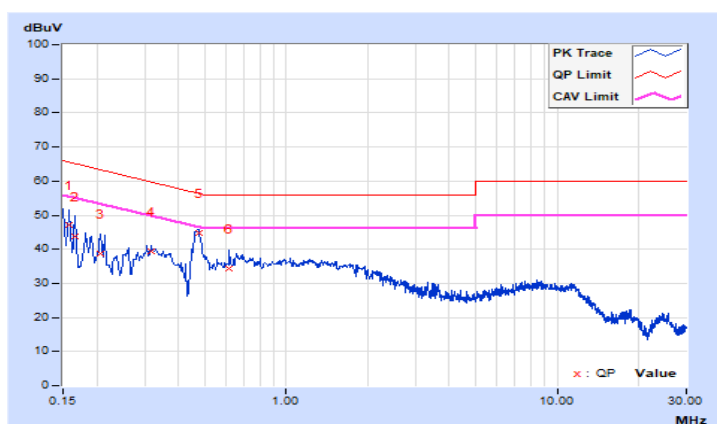
Test Mode B

RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 70% RH
Tested By	Luis Lee		

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	0.15800	9.67	37.44	21.38	47.11	31.05	65.57	55.57	-18.46	-24.52
2	0.16600	9.67	34.14	19.42	43.81	29.09	65.16	55.16	-21.35	-26.07
3	0.20600	9.70	29.18	19.19	38.88	28.89	63.37	53.37	-24.49	-24.48
4	0.31800	9.75	29.48	22.11	39.23	31.86	59.76	49.76	-20.53	-17.90
5	0.47400	9.80	35.06	27.45	44.86	37.25	56.44	46.44	-11.58	-9.19
6	0.61800	9.81	24.47	17.88	34.28	27.69	56.00	46.00	-21.72	-18.31

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

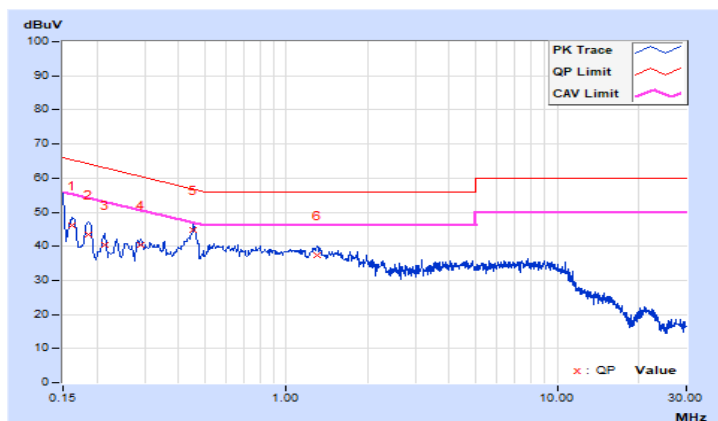


RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 70% RH
Tested By	Luis Lee		

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	0.16200	9.67	36.33	23.99	46.00	33.66	65.36	55.36	-19.36	-21.70
2	0.18519	9.69	33.62	23.96	43.31	33.65	64.25	54.25	-20.94	-20.60
3	0.21400	9.70	30.68	22.47	40.38	32.17	63.05	53.05	-22.67	-20.88
4	0.28982	9.73	30.60	24.21	40.33	33.94	60.53	50.53	-20.20	-16.59
5	0.45400	9.78	35.04	26.03	44.82	35.81	56.80	46.80	-11.98	-10.99
6	1.29400	9.85	27.55	22.01	37.40	31.86	56.00	46.00	-18.60	-14.14

Remarks:

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



7.6 Unwanted Emissions below 1 GHz

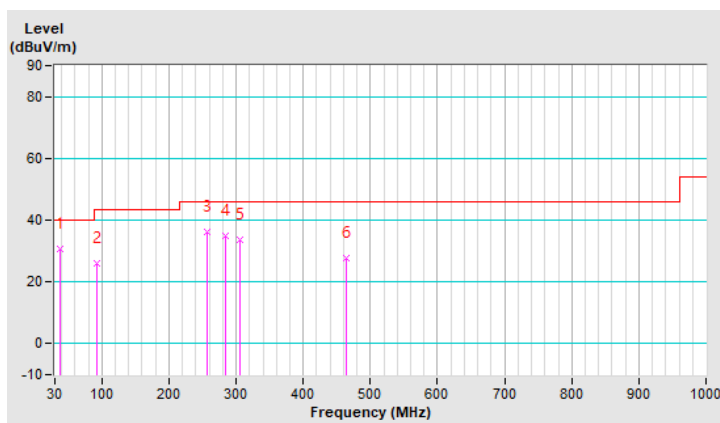
Test Mode A

RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Luis 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	38.43	30.7 QP	40.0	-9.3	1.01 H	157	40.3	-9.6
2	91.86	25.9 QP	43.5	-17.6	1.01 H	101	40.1	-14.2
3	257.74	36.3 QP	46.0	-9.7	1.50 H	324	45.2	-8.9
4	284.45	35.0 QP	46.0	-11.0	1.50 H	251	42.7	-7.7
5	305.54	33.6 QP	46.0	-12.4	1.50 H	167	40.8	-7.2
6	464.39	27.6 QP	46.0	-18.4	1.01 H	283	32.1	-4.5

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 emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

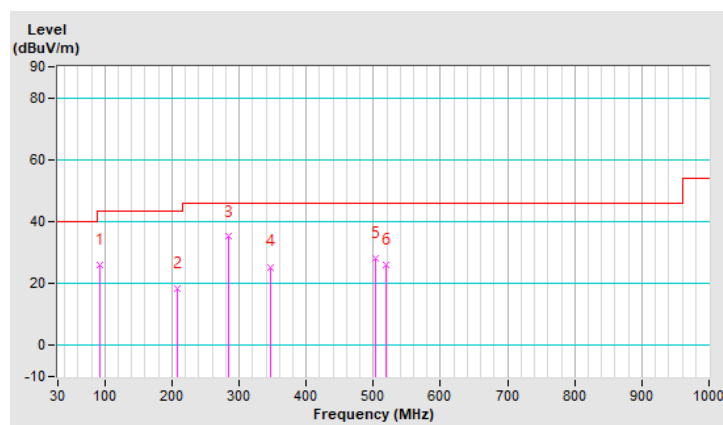


RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Luis Lee		

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	91.86	26.2 QP	43.5	-17.3	1.00 V	114	40.4	-14.2
2	207.13	18.2 QP	43.5	-25.3	1.49 V	0	29.5	-11.3
3	284.45	35.1 QP	46.0	-10.9	1.49 V	261	42.8	-7.7
4	346.30	25.4 QP	46.0	-20.6	1.49 V	89	32.2	-6.8
5	502.35	28.3 QP	46.0	-17.7	1.00 V	351	32.4	-4.1
6	519.22	26.0 QP	46.0	-20.0	1.00 V	4	29.7	-3.7

Remarks:

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



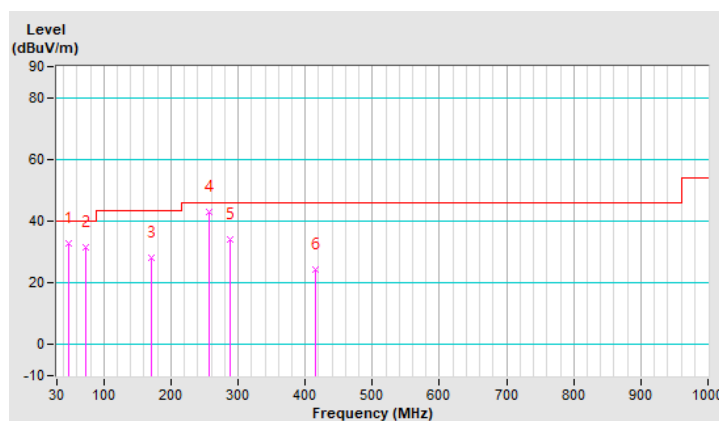
Test Mode B

RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Luis 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	46.87	32.7 QP	40.0	-7.3	1.49 H	94	41.6	-8.9
2	73.58	31.6 QP	40.0	-8.4	2.00 H	333	43.0	-11.4
3	170.58	28.2 QP	43.5	-15.3	2.00 H	238	37.2	-9.0
4	257.74	42.8 QP	46.0	-3.2	1.00 H	77	51.7	-8.9
5	287.26	34.2 QP	46.0	-11.8	1.00 H	323	41.9	-7.7
6	415.19	24.3 QP	46.0	-21.7	2.00 H	304	29.9	-5.6

Remarks:

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

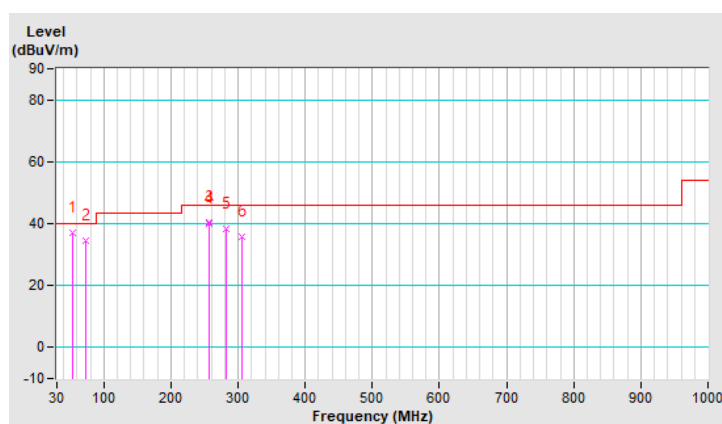


RF Mode	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Luis Lee		

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	52.49	36.9 QP	40.0	-3.1	1.01 V	331	45.7	-8.8
2	73.58	34.3 QP	40.0	-5.7	1.01 V	6	45.7	-11.4
3	256.33	40.6 QP	46.0	-5.4	1.51 V	16	49.6	-9.0
4	257.74	40.2 QP	46.0	-5.8	2.00 V	359	49.1	-8.9
5	283.04	38.3 QP	46.0	-7.7	1.51 V	155	46.1	-7.8
6	305.54	35.6 QP	46.0	-10.4	1.51 V	227	42.8	-7.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be 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 (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	59.6 PK	74.0	-14.4	2.87 H	346	24.7	34.9
2	2390.00	47.4 AV	54.0	-6.6	2.87 H	346	12.5	34.9
3	*2412.00	121.2 PK			2.87 H	346	86.3	34.9
4	*2412.00	118.7 AV			2.87 H	346	83.8	34.9
5	4824.00	51.5 PK	74.0	-22.5	1.29 H	317	38.0	13.5
6	4824.00	41.0 AV	54.0	-13.0	1.29 H	317	27.5	13.5
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	2390.00	59.9 PK	74.0	-14.1	3.00 V	120	25.0	34.9
2	2390.00	47.8 AV	54.0	-6.2	3.00 V	120	12.9	34.9
3	*2412.00	121.4 PK			3.00 V	120	86.5	34.9
4	*2412.00	118.9 AV			3.00 V	120	84.0	34.9
5	4824.00	51.7 PK	74.0	-22.3	1.54 V	272	38.2	13.5
6	4824.00	42.6 AV	54.0	-11.4	1.54 V	272	29.1	13.5

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 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	121.2 PK			2.92 H	346	86.5	34.7
2	*2437.00	118.7 AV			2.92 H	346	84.0	34.7
3	2483.50	62.9 PK	74.0	-11.1	2.92 H	346	28.2	34.7
4	2483.50	52.1 AV	54.0	-1.9	2.92 H	346	17.4	34.7
5	4874.00	51.1 PK	74.0	-22.9	1.22 H	320	37.8	13.3
6	4874.00	39.8 AV	54.0	-14.2	1.22 H	320	26.5	13.3
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	121.6 PK			3.16 V	119	86.9	34.7
2	*2437.00	119.2 AV			3.16 V	119	84.5	34.7
3	2483.50	64.8 PK	74.0	-9.2	3.16 V	119	30.1	34.7
4	2483.50	53.3 AV	54.0	-0.7	3.16 V	119	18.6	34.7
5	4874.00	51.3 PK	74.0	-22.7	1.59 V	210	38.0	13.3
6	4874.00	40.8 AV	54.0	-13.2	1.59 V	210	27.5	13.3

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.
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 (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	120.0 PK			2.82 H	341	85.3	34.7
2	*2462.00	117.5 AV			2.82 H	341	82.8	34.7
3	2483.50	64.7 PK	74.0	-9.3	2.82 H	341	30.0	34.7
4	2483.50	52.7 AV	54.0	-1.3	2.82 H	341	18.0	34.7
5	4924.00	50.8 PK	74.0	-23.2	1.15 H	309	37.7	13.1
6	4924.00	37.3 AV	54.0	-16.7	1.15 H	309	24.2	13.1
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	*2462.00	121.3 PK			3.17 V	201	86.6	34.7
2	*2462.00	119.0 AV			3.17 V	201	84.3	34.7
3	2483.50	65.1 PK	74.0	-8.9	3.17 V	201	30.4	34.7
4	2483.50	53.9 AV	54.0	-0.1	3.17 V	201	19.2	34.7
5	4924.00	51.1 PK	74.0	-22.9	1.55 V	211	38.0	13.1
6	4924.00	37.8 AV	54.0	-16.2	1.55 V	211	24.7	13.1

Remarks:

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

RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	62.2 PK	74.0	-11.8	1.96 H	153	27.3	34.9
2	2390.00	48.9 AV	54.0	-5.1	1.96 H	153	14.0	34.9
3	*2412.00	122.9 PK			1.96 H	153	88.0	34.9
4	*2412.00	113.3 AV			1.96 H	153	78.4	34.9
5	4824.00	51.0 PK	74.0	-23.0	1.15 H	308	37.5	13.5
6	4824.00	38.0 AV	54.0	-16.0	1.15 H	308	24.5	13.5
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	2390.00	71.2 PK	74.0	-2.8	2.00 V	54	36.3	34.9
2	2390.00	53.4 AV	54.0	-0.6	2.00 V	54	18.5	34.9
3	*2412.00	123.4 PK			2.00 V	54	88.5	34.9
4	*2412.00	114.0 AV			2.00 V	54	79.1	34.9
5	4824.00	51.3 PK	74.0	-22.7	1.55 V	275	37.8	13.5
6	4824.00	38.5 AV	54.0	-15.5	1.55 V	275	25.0	13.5

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	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	122.0 PK			1.88 H	345	87.3	34.7
2	*2437.00	112.5 AV			1.88 H	345	77.8	34.7
3	2483.50	67.0 PK	74.0	-7.0	1.88 H	345	32.3	34.7
4	2483.50	52.4 AV	54.0	-1.6	1.88 H	345	17.7	34.7
5	4874.00	50.8 PK	74.0	-23.2	1.19 H	311	37.5	13.3
6	4874.00	37.9 AV	54.0	-16.1	1.19 H	311	24.6	13.3
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	123.0 PK			2.29 V	54	88.3	34.7
2	*2437.00	113.7 AV			2.29 V	54	79.0	34.7
3	2483.50	72.9 PK	74.0	-1.1	2.29 V	54	38.2	34.7
4	2483.50	53.7 AV	54.0	-0.3	2.29 V	54	19.0	34.7
5	4874.00	50.9 PK	74.0	-23.1	1.59 V	271	37.6	13.3
6	4874.00	38.1 AV	54.0	-15.9	1.59 V	271	24.8	13.3

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.
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 (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	117.9 PK			1.85 H	319	83.2	34.7
2	*2462.00	108.7 AV			1.85 H	319	74.0	34.7
3	2483.50	64.6 PK	74.0	-9.4	1.85 H	319	29.9	34.7
4	2483.50	52.3 AV	54.0	-1.7	1.85 H	319	17.6	34.7
5	4924.00	50.4 PK	74.0	-23.6	1.19 H	316	37.3	13.1
6	4924.00	37.3 AV	54.0	-16.7	1.19 H	316	24.2	13.1
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	*2462.00	119.6 PK			2.28 V	56	84.9	34.7
2	*2462.00	110.0 AV			2.28 V	56	75.3	34.7
3	2483.50	67.2 PK	74.0	-6.8	2.28 V	56	32.5	34.7
4	2483.50	53.7 AV	54.0	-0.3	2.28 V	56	19.0	34.7
5	4924.00	50.6 PK	74.0	-23.4	1.58 V	205	37.5	13.1
6	4924.00	37.6 AV	54.0	-16.4	1.58 V	205	24.5	13.1

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	802.11be (EHT20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	65.6 PK	74.0	-8.4	1.85 H	308	30.7	34.9
2	2390.00	52.1 AV	54.0	-1.9	1.85 H	308	17.2	34.9
3	*2412.00	124.9 PK			1.85 H	308	90.0	34.9
4	*2412.00	112.7 AV			1.85 H	308	77.8	34.9
5	4824.00	51.0 PK	74.0	-23.0	1.13 H	305	37.5	13.5
6	4824.00	38.0 AV	54.0	-16.0	1.13 H	305	24.5	13.5
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	2390.00	65.8 PK	74.0	-8.2	2.35 V	44	30.9	34.9
2	2390.00	53.4 AV	54.0	-0.6	2.35 V	44	18.5	34.9
3	*2412.00	126.2 PK			2.35 V	44	91.3	34.9
4	*2412.00	113.8 AV			2.35 V	44	78.9	34.9
5	4824.00	51.1 PK	74.0	-22.9	1.59 V	278	37.6	13.5
6	4824.00	38.1 AV	54.0	-15.9	1.59 V	278	24.6	13.5

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	802.11be (EHT20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	121.7 PK			2.09 H	108	87.0	34.7
2	*2437.00	110.2 AV			2.09 H	108	75.5	34.7
3	2483.50	66.0 PK	74.0	-8.0	2.09 H	108	31.3	34.7
4	2483.50	52.4 AV	54.0	-1.6	2.09 H	108	17.7	34.7
5	4874.00	50.6 PK	74.0	-23.4	1.18 H	321	37.3	13.3
6	4874.00	37.6 AV	54.0	-16.4	1.18 H	321	24.3	13.3
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	122.9 PK			2.13 V	48	88.2	34.7
2	*2437.00	111.5 AV			2.13 V	48	76.8	34.7
3	2483.50	70.5 PK	74.0	-3.5	2.13 V	48	35.8	34.7
4	2483.50	53.8 AV	54.0	-0.2	2.13 V	48	19.1	34.7
5	4874.00	50.8 PK	74.0	-23.2	1.52 V	282	37.5	13.3
6	4874.00	37.8 AV	54.0	-16.2	1.52 V	282	24.5	13.3

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11be (EHT20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	119.7 PK			2.41 H	113	85.0	34.7
2	*2462.00	107.9 AV			2.41 H	113	73.2	34.7
3	2483.50	65.7 PK	74.0	-8.3	2.41 H	113	31.0	34.7
4	2483.50	52.3 AV	54.0	-1.7	2.41 H	113	17.6	34.7
5	4924.00	50.3 PK	74.0	-23.7	1.08 H	315	37.2	13.1
6	4924.00	37.3 AV	54.0	-16.7	1.08 H	315	24.2	13.1
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	*2462.00	121.3 PK			2.33 V	42	86.6	34.7
2	*2462.00	109.5 AV			2.33 V	42	74.8	34.7
3	2483.50	67.8 PK	74.0	-6.2	2.33 V	42	33.1	34.7
4	2483.50	53.7 AV	54.0	-0.3	2.33 V	42	19.0	34.7
5	4924.00	50.6 PK	74.0	-23.4	1.52 V	275	37.5	13.1
6	4924.00	37.6 AV	54.0	-16.4	1.52 V	275	24.5	13.1

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	802.11be (EHT40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	59.9 PK	74.0	-14.1	2.40 H	350	25.0	34.9
2	2390.00	47.4 AV	54.0	-6.6	2.40 H	350	12.5	34.9
3	*2422.00	119.9 PK			2.40 H	350	85.0	34.9
4	*2422.00	107.9 AV			2.40 H	350	73.0	34.9
5	2483.50	64.7 PK	74.0	-9.3	2.40 H	350	30.0	34.7
6	2483.50	51.9 AV	54.0	-2.1	2.40 H	350	17.2	34.7
7	4844.00	50.6 PK	74.0	-23.4	1.15 H	302	37.2	13.4
8	4844.00	37.5 AV	54.0	-16.5	1.15 H	302	24.1	13.4
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	60.2 PK	74.0	-13.8	2.46 V	42	25.3	34.9
2	2390.00	48.3 AV	54.0	-5.7	2.46 V	42	13.4	34.9
3	*2422.00	121.7 PK			2.46 V	42	86.8	34.9
4	*2422.00	109.3 AV			2.46 V	42	74.4	34.9
5	2483.50	66.6 PK	74.0	-7.4	2.46 V	42	31.9	34.7
6	2483.50	53.8 AV	54.0	-0.2	2.46 V	42	19.1	34.7
7	4844.00	50.9 PK	74.0	-23.1	1.59 V	277	37.5	13.4
8	4844.00	37.8 AV	54.0	-16.2	1.59 V	277	24.4	13.4

Remarks:

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

RF Mode	802.11be (EHT40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	117.7 PK			2.36 H	123	83.0	34.7
2	*2437.00	104.9 AV			2.36 H	123	70.2	34.7
3	2483.50	35.4 PK	74.0	-38.6	2.36 H	123	32.2	3.2
4	2483.50	21.2 AV	54.0	-32.8	2.36 H	123	18.0	3.2
5	4874.00	50.5 PK	74.0	-23.5	1.32 H	315	37.2	13.3
6	4874.00	37.8 AV	54.0	-16.2	1.32 H	315	24.5	13.3
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	119.5 PK			1.89 V	73	84.8	34.7
2	*2437.00	106.2 AV			1.89 V	73	71.5	34.7
3	2484.90	70.9 PK	74.0	-3.1	1.89 V	73	36.2	34.7
4	2484.90	53.6 AV	54.0	-0.4	1.89 V	73	18.9	34.7
5	4874.00	50.8 PK	74.0	-23.2	1.62 V	249	37.5	13.3
6	4874.00	38.0 AV	54.0	-16.0	1.62 V	249	24.7	13.3

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11be (EHT40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

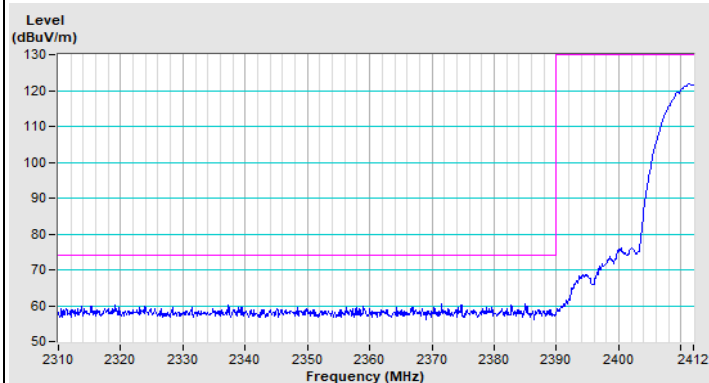
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	114.9 PK			2.73 H	129	80.2	34.7
2	*2452.00	102.7 AV			2.73 H	129	68.0	34.7
3	2483.50	64.2 PK	74.0	-9.8	2.73 H	129	29.5	34.7
4	2483.50	52.3 AV	54.0	-1.7	2.73 H	129	17.6	34.7
5	4904.00	50.6 PK	74.0	-23.4	1.22 H	311	37.3	13.3
6	4904.00	37.5 AV	54.0	-16.5	1.22 H	311	24.2	13.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	116.7 PK			2.28 V	40	82.0	34.7
2	*2452.00	103.7 AV			2.28 V	40	69.0	34.7
3	2483.50	66.6 PK	74.0	-7.4	2.28 V	40	31.9	34.7
4	2483.50	53.8 AV	54.0	-0.2	2.28 V	40	19.1	34.7
5	4904.00	50.9 PK	74.0	-23.1	1.58 V	278	37.6	13.3
6	4904.00	37.7 AV	54.0	-16.3	1.58 V	278	24.4	13.3

Remarks:

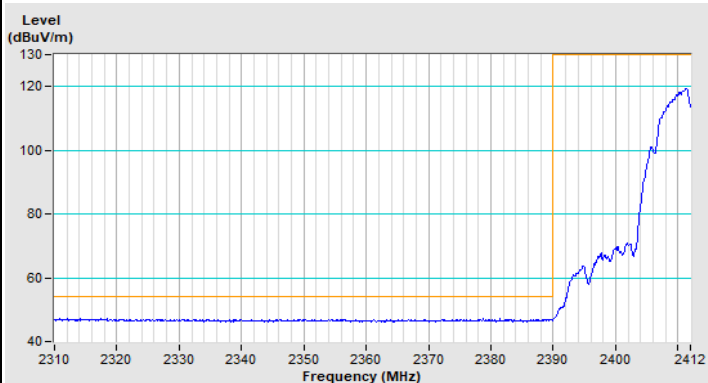
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

Plot of Band Edge

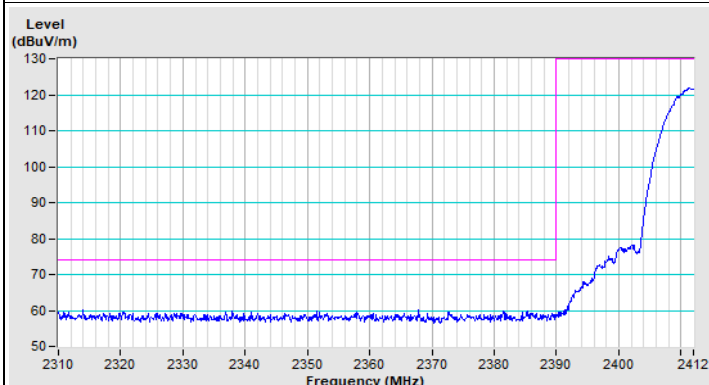
802.11b Channel 1



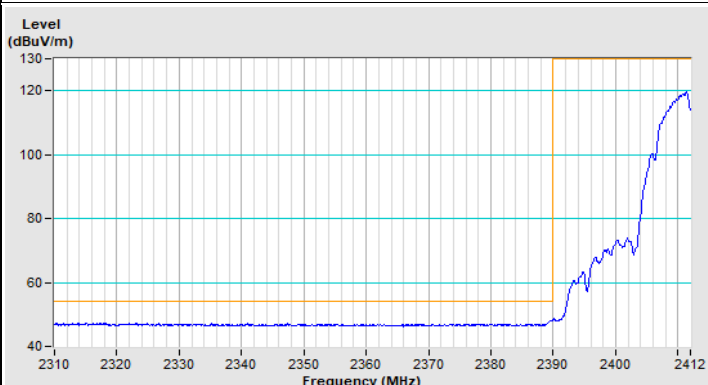
Horizontal (Peak)



Horizontal (Average)

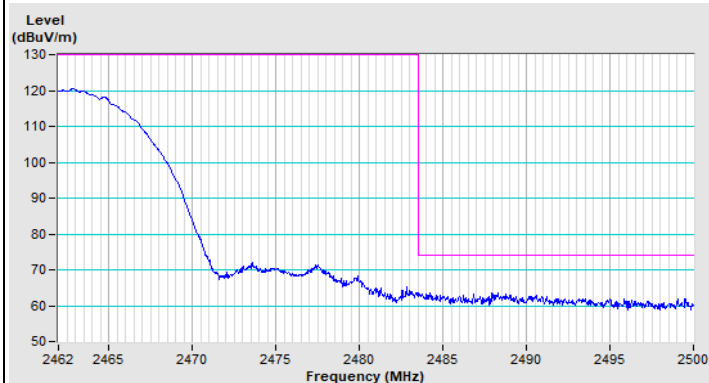


Vertical (Peak)

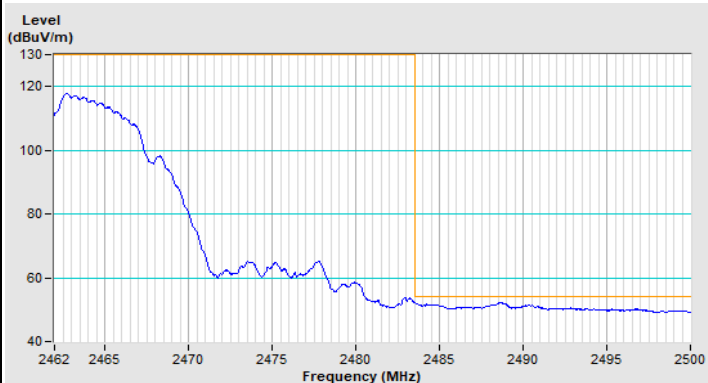


Vertical (Average)

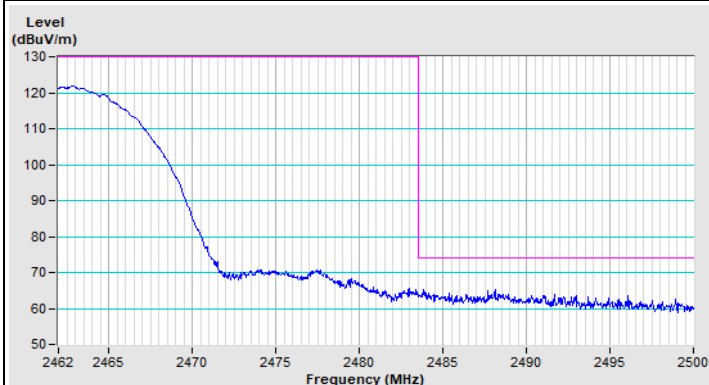
802.11b Channel 11



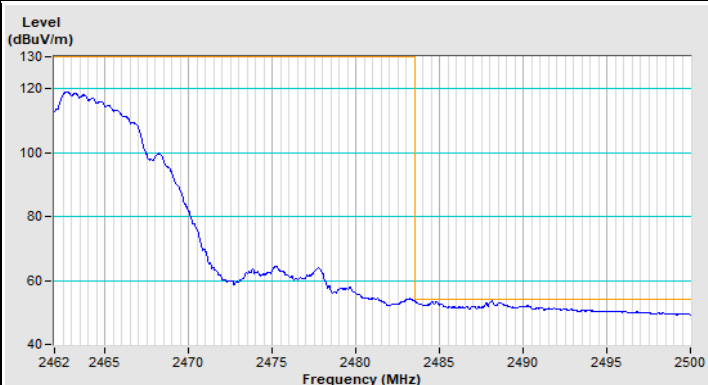
Horizontal (Peak)



Horizontal (Average)

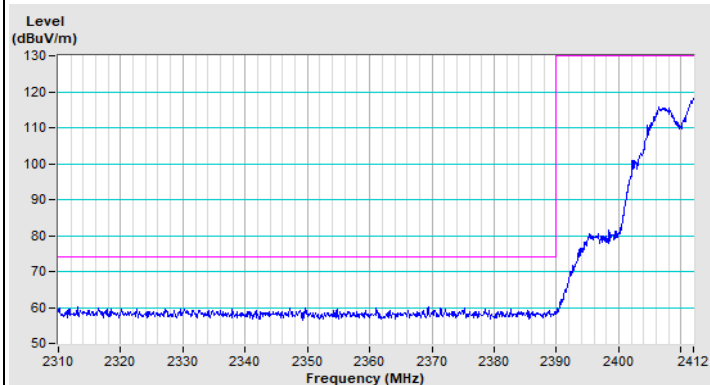


Vertical (Peak)

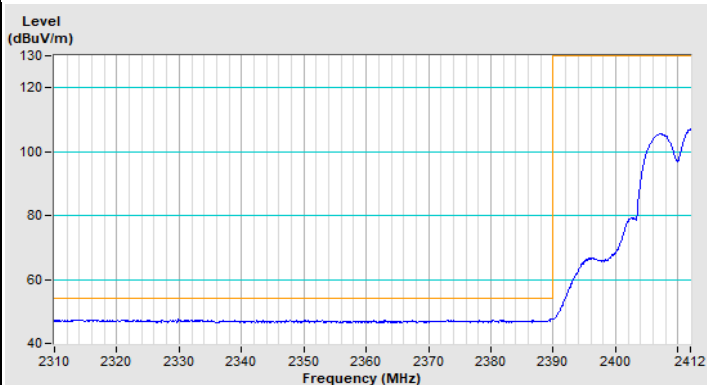


Vertical (Average)

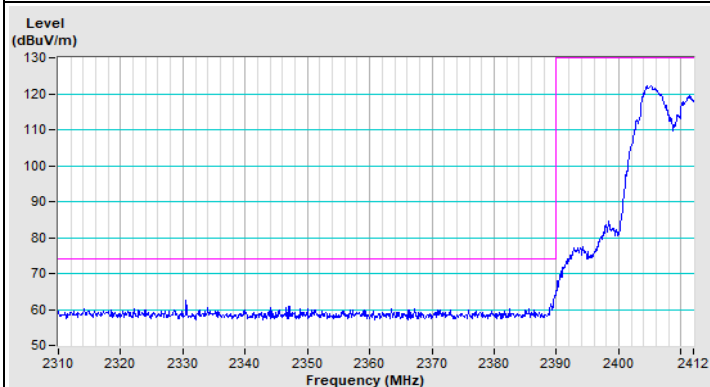
802.11g Channel 1



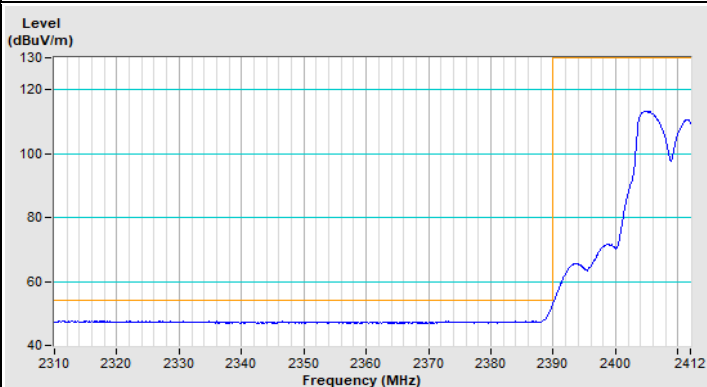
Horizontal (Peak)



Horizontal (Average)

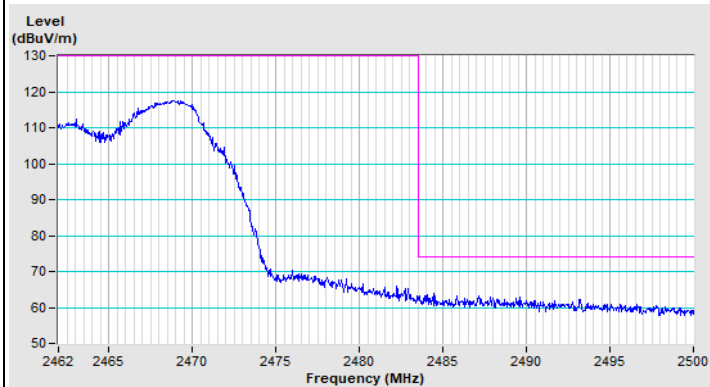


Vertical (Peak)

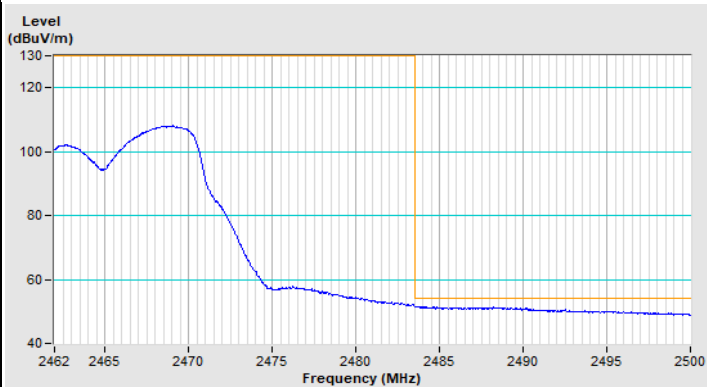


Vertical (Average)

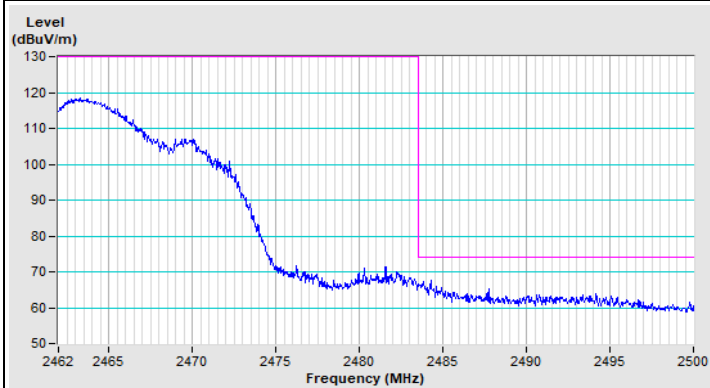
802.11g Channel 11



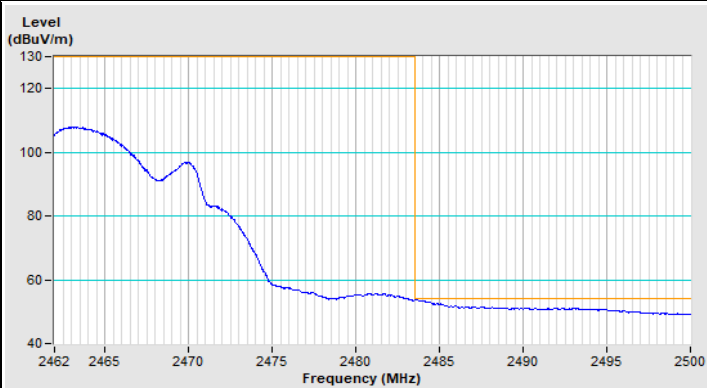
Horizontal (Peak)



Horizontal (Average)

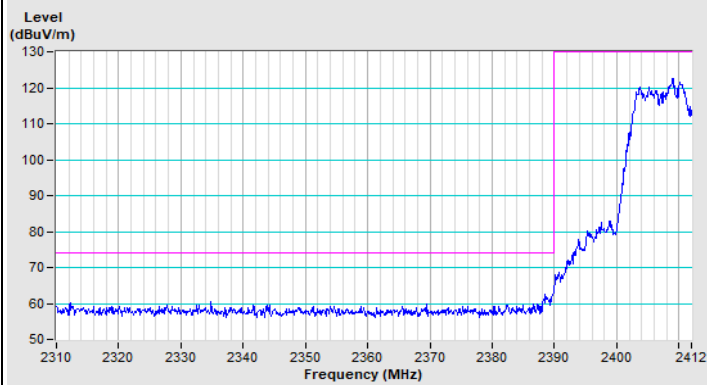


Vertical (Peak)

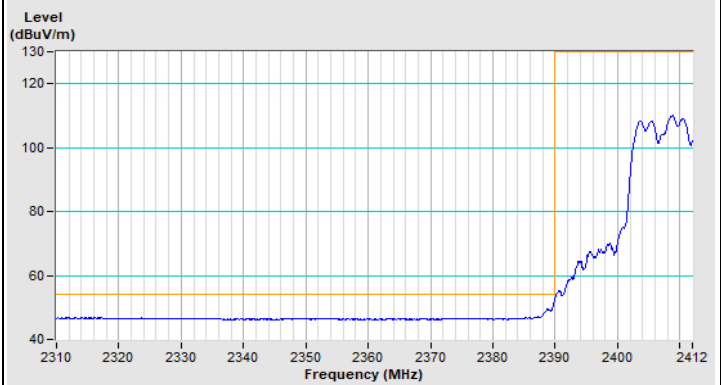


Vertical (Average)

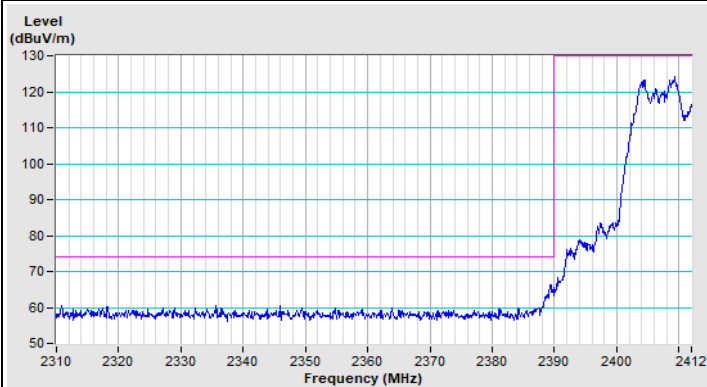
802.11be (EHT20) Channel 1



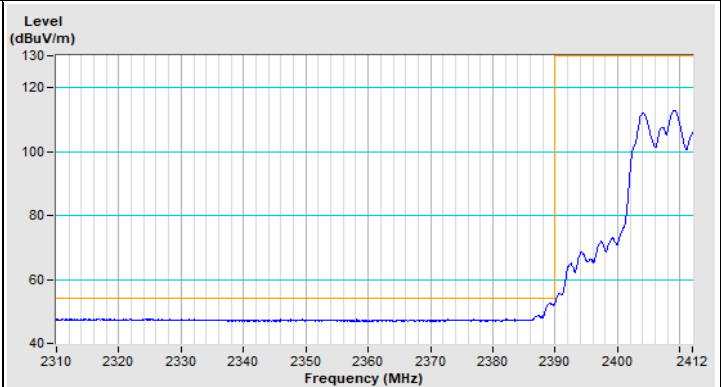
Horizontal (Peak)



Horizontal (Average)

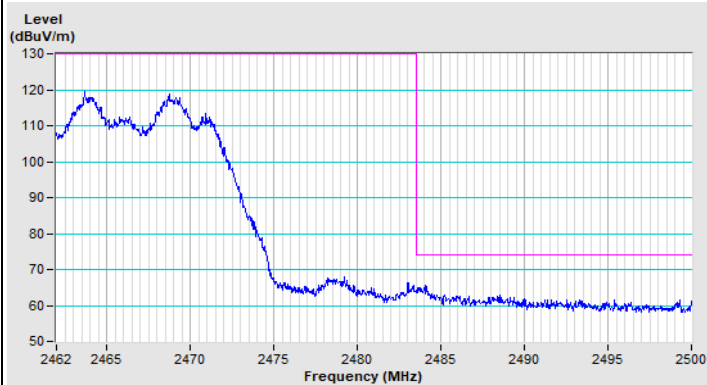


Vertical (Peak)

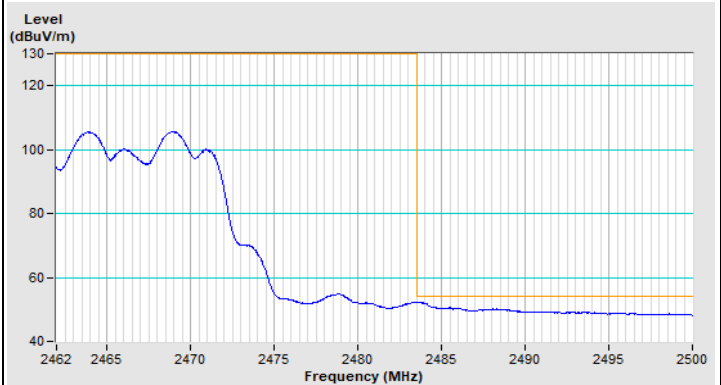


Vertical (Average)

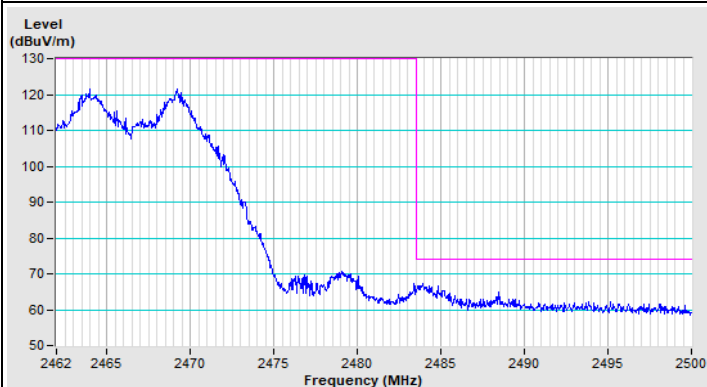
802.11be (EHT20) Channel 11



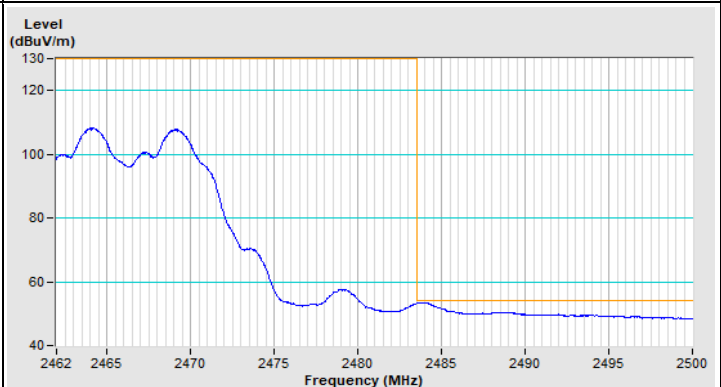
Horizontal (Peak)



Horizontal (Average)

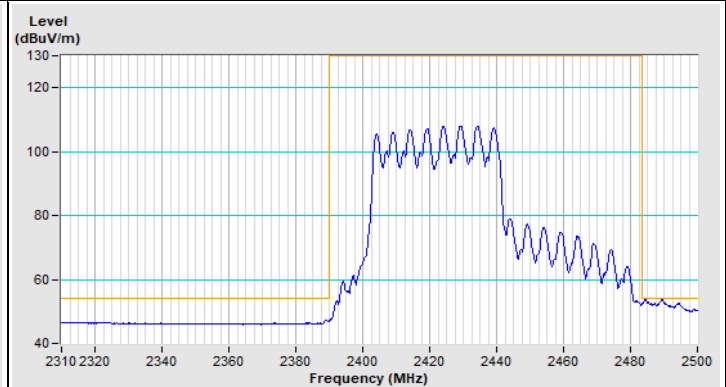
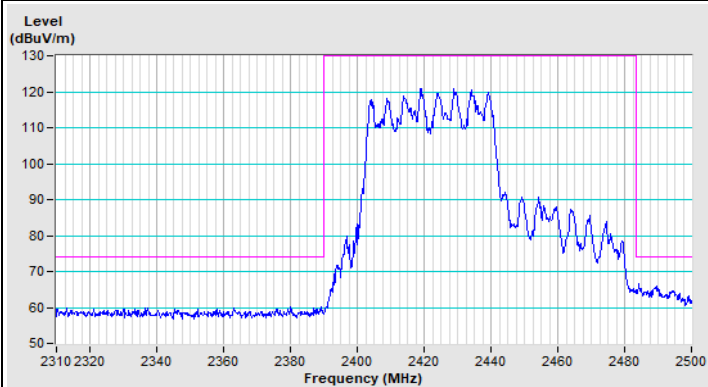
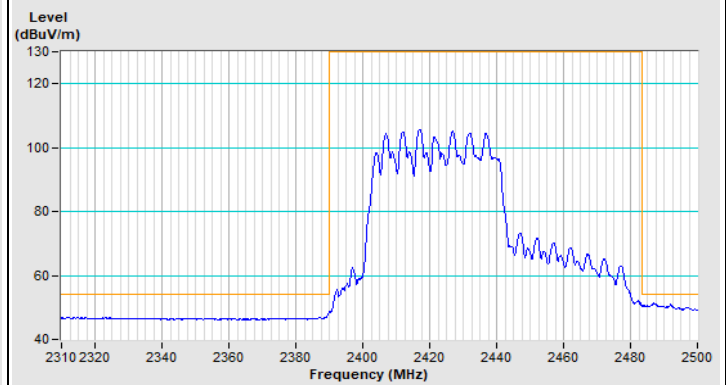
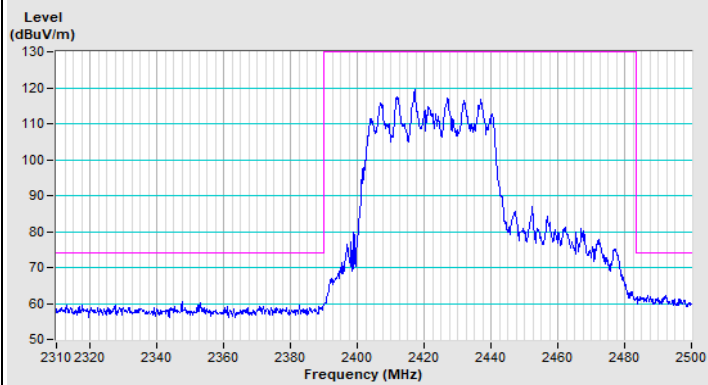


Vertical (Peak)

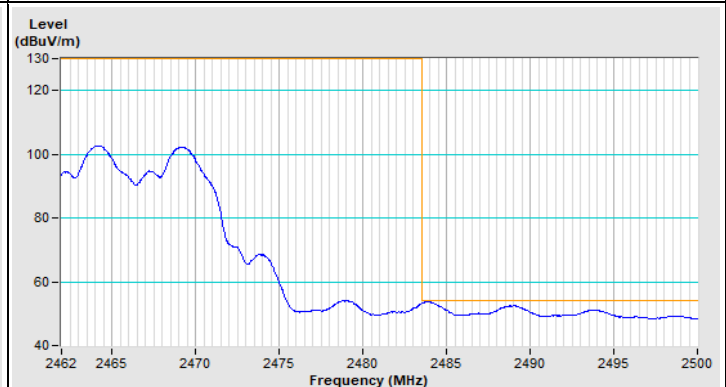
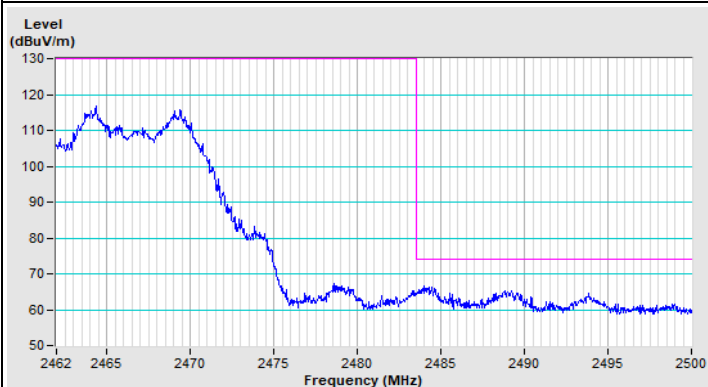
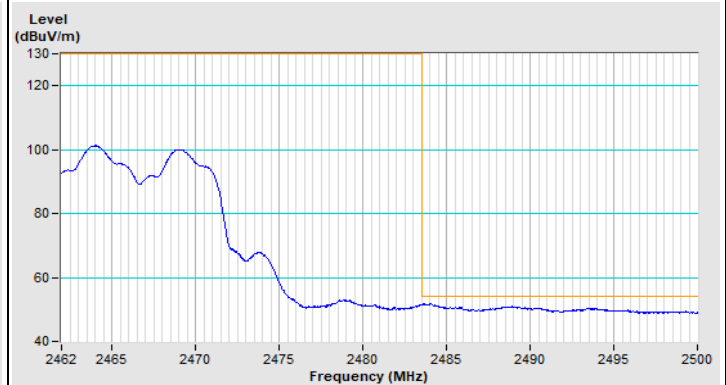
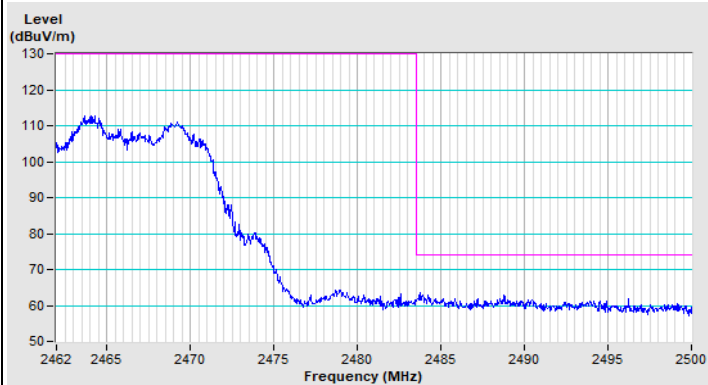


Vertical (Average)

802.11be (EHT40) Channel 3



802.11be (EHT40) Channel 9



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:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

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

--- END ---