

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBBQZ-WTW-P24020177

FCC ID: PY324100620

Product: NIGHTHAWK BE12000 WiFi 7 Router

Brand: NETGEAR

Model No.: RS500

Received Date: 2024/2/16

Test Date: 2024/6/5 ~ 2024/6/17

Issued Date: 2024/7/9

Applicant: 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

, Date: _____

2024/7/9

Jeremy Lin / Project Engineer

This test report consists of 65 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 : Lena Wang / 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	15
4.6 Unwanted Emissions below 1 GHz	16
4.7 Unwanted Emissions above 1 GHz.....	17
5 Limits of Test Items.....	18
5.1 RF Output Power	18
5.2 Power Spectral Density	18
5.3 6 dB Bandwidth	18
5.4 Conducted Out of Band Emissions	18
5.5 AC Power Conducted Emissions	18
5.6 Unwanted Emissions below 1 GHz	19
5.7 Unwanted Emissions above 1 GHz.....	19
6 Test Arrangements.....	20
6.1 RF Output Power	20
6.1.1 Test Setup	20
6.1.2 Test Procedure.....	20
6.2 Power Spectral Density	20
6.2.1 Test Setup	20
6.2.2 Test Procedure.....	20
6.3 6 dB Bandwidth	21
6.3.1 Test Setup	21
6.3.2 Test Procedure.....	21
6.4 Conducted Out of Band Emissions	21
6.4.1 Test Setup	21
6.4.2 Test Procedure.....	21
6.5 AC Power Conducted Emissions	22
6.5.1 Test Setup	22
6.5.2 Test Procedure.....	22
6.6 Unwanted Emissions below 1 GHz	23
6.6.1 Test Setup	23
6.6.2 Test Procedure.....	24
6.7 Unwanted Emissions above 1 GHz.....	25
6.7.1 Test Setup	25
6.7.2 Test Procedure.....	25
7 Test Results of Test Item	26



7.1	RF Output Power	26
7.2	Power Spectral Density	28
7.3	6 dB Bandwidth	30
7.4	Conducted Out of Band Emissions	32
7.5	AC Power Conducted Emissions	40
7.6	Unwanted Emissions below 1 GHz	42
7.7	Unwanted Emissions above 1 GHz.....	44
8	Pictures of Test Arrangements	64
9	Information of the Testing Laboratories	65



Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P24020177	Original Release	2024/7/9

1 Certificate

Product: NIGHTHAWK BE12000 WiFi 7 Router
Brand: NETGEAR
Test Model: RS500
Sample Status: Engineering Sample
Applicant: NETGEAR, INC.
Test Date: 2024/6/5 ~ 2024/6/17
Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Measurement procedure: ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -17.28 dB at 0.17800 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.3 dB at 35.82 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 2483.50, 2483.90, 2484.10, 2485.90 and 2486.30 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) (±)
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 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	NIGHTHAWK BE12000 WiFi 7 Router
Brand	NETGEAR
Test Model	RS500
Status of EUT	Engineering Sample
Power Supply Rating	12 Vdc from adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	Up to 688 Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
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	900.644 mW (29.55 dBm)

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Part Number	Specification
AC Adapter 1	NETGEAR	ADS-45FIC-12 12042E	332-11664-02	AC Input : 100-240V ~ 50/60Hz 1.5A DC Output : 12.0V 3.5A 42.0W DC Output Cable : 1.8M / 0core Plug : US, EU, AU Manufacturer: VIETNAM HONOR HIGH TECH COMPANY LIMITED
AC Adapter 2	NETGEAR	AD2150M20	332-11500-05	AC Input : 100-240V ~ 50/60 Hz 1.0A DC Output : 12V 3.5A 42.0W DC Output Cable : 1.8M / 0core Plug : US, EU, AU Manufacturer: PI ELECTRONICS (VIETNAM) COMPANY LIMITED
AC Adapter 3	NETGEAR	AD2150F10	332-11494-02	AC Input : 100-120V ~ 50/60Hz 1.0A DC Output : 12V 3.5A DC Output Cable : 1.8M / 0core Plug : US Manufacturer: PI ELECTRONICS (VIETNAM) COMPANY LIMITED
Ethernet Cable	NETGEAR	N/A	-	Signal Line : 1.95M

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 EUT has two DR filters and the characteristics of the DR filter are the same and meet the pin-for-pin compatible. After pre-scanning, the first DR filter is used as the final test.

DR Filter	Description
1st DR Filter	DFJ6610CA30 (SY01166101J91F31C)
2nd DR Filter	DFJ6610DA30 (SY01166101J91H41C)

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

3.2 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	3.71
5150~5250 MHz	6.02
5250~5350 MHz	6.09
5470~5725 MHz	6.16
5725~5850 MHz	6.27

*The detailed antenna information, please refer to the BV CPS Directional Gain Measurement Report no.: RFBBQZ-WTW-P24020177-6.

2. The EUT incorporates a MIMO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	2TX	2RX
802.11g	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
VHT20	2TX	2RX
VHT40	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11be (EHT20)	2TX	2RX
802.11be (EHT40)	2TX	2RX

Note:

- All of modulation mode support beamforming function except 802.11b/g modulation mode.
- 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.
- 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 same as the 802.11be mode or lower than it and investigated worst case to representative mode in test report.
- For 802.11ax/be, the EUT not support Partial RU (resource unit) reduction mechanisms.

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:	1. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. AC Adapter 1 and AC Adapter 2 and AC Adapter 3 Worst Condition: AC Adapter 3 2. The EUT is designed to be positioned on the Z-Plane only.

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

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

Note: Partial RU (resource unit), channel puncturing and bandwidth reduction mechanisms are not supported.

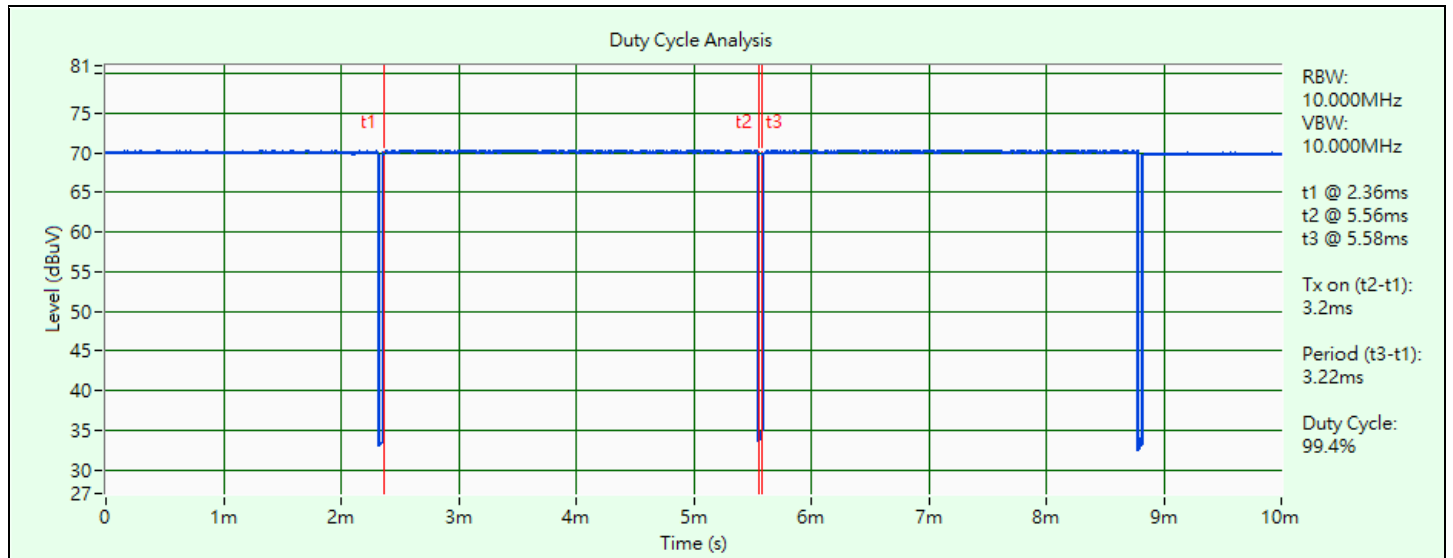
3.5 Duty Cycle of Test Signal

802.11b: Duty cycle = 3.2 ms / 3.22 ms x 100% = 99.4%

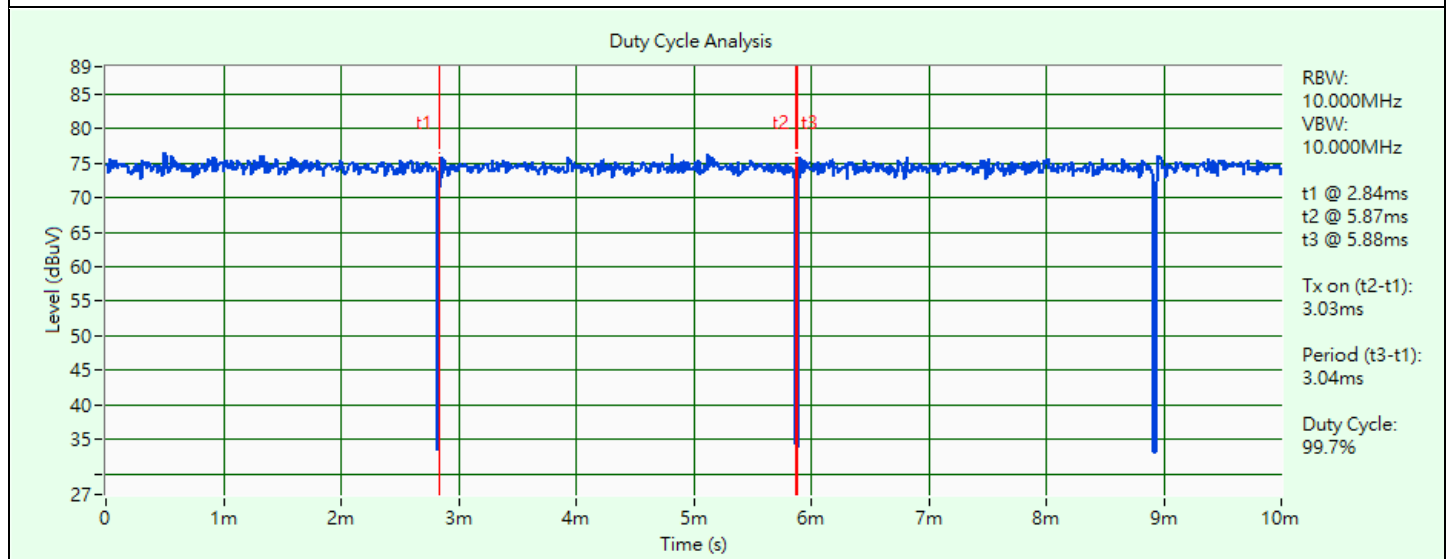
802.11g: Duty cycle = 3.03 ms / 3.04 ms x 100% = 99.7%

802.11be (EHT20): Duty cycle = 2.88 ms / 2.9 ms x 100% = 99.3%

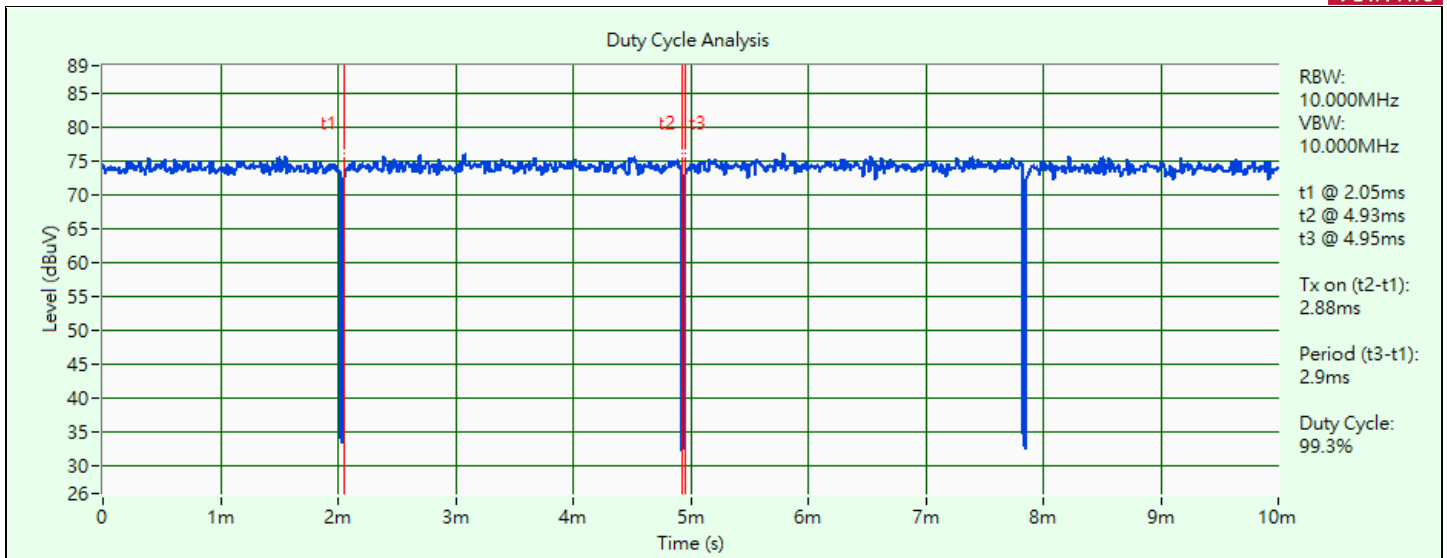
802.11be (EHT40): Duty cycle = 2.86 ms / 2.88 ms x 100% = 99.3%



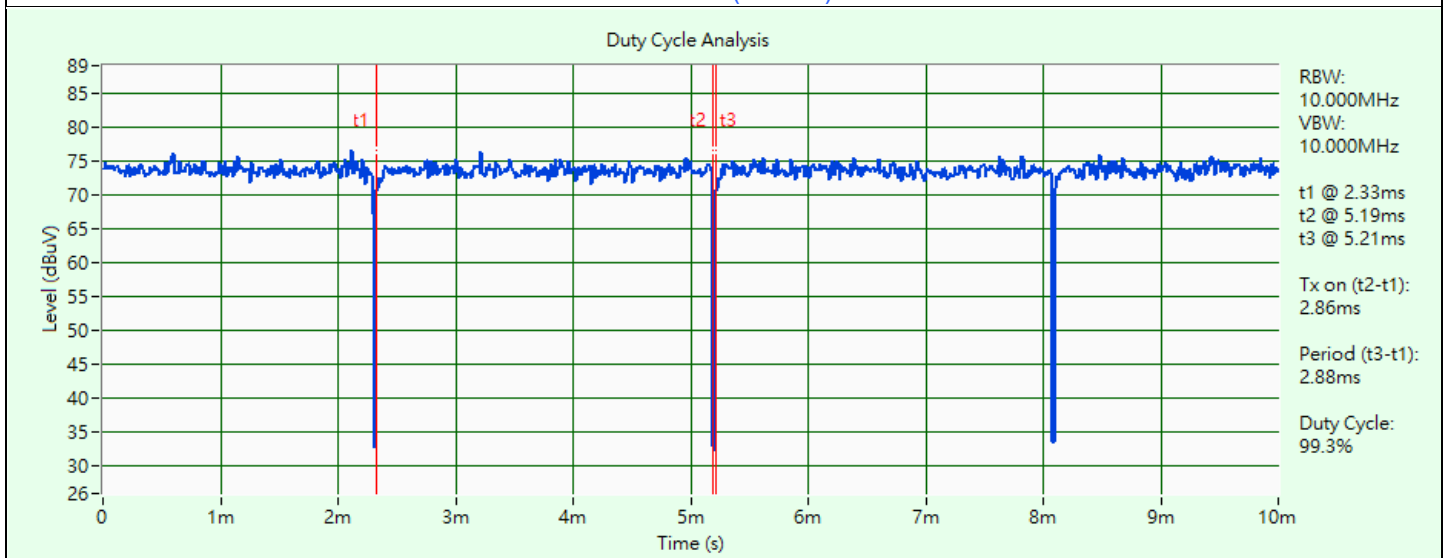
802.11b



802.11g



802.11be (EHT20)

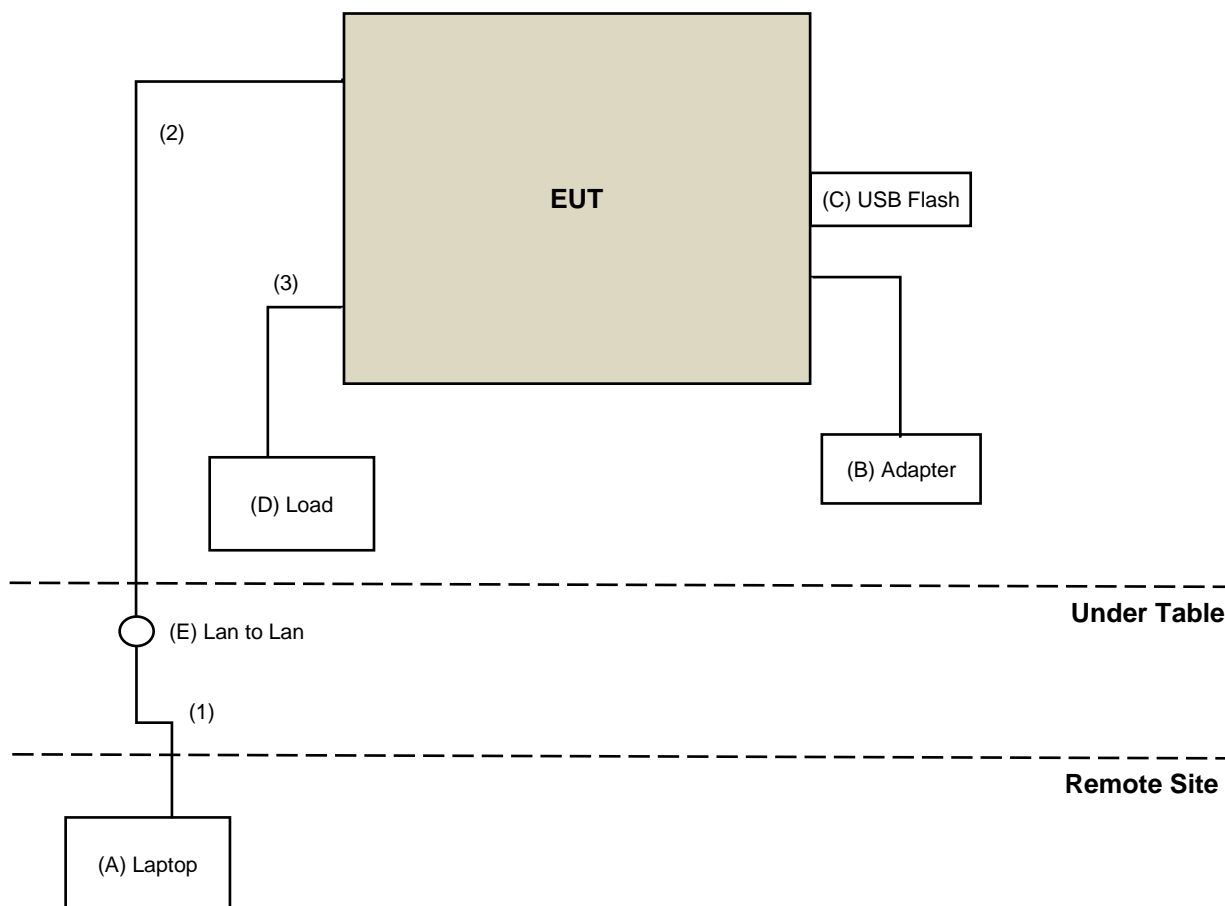


802.11be (EHT40)

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	Laptop	DELL	E5430	2RL3YW1	N/A	Provided by Lab
B	Adapter	NETGEAR	AD2150F10	N/A	N/A	Accessory of EUT
C	USB Flash	SanDisk	N/A	N/A	N/A	Provided by Lab
D	Load	N/A	N/A	N/A	N/A	Provided by Lab
E	Lan to Lan	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	N	N	Provided by Lab
2	RJ-45 Cable	1	1.95	N	N/A	Accessory of EUT
3	RJ-45 Cable	4	1.5	N	N	Provided by Lab

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000485	2024/1/21	2025/1/20
Wideband Power Sensor Keysight	N1923A	MY58020002	2024/1/18	2025/1/17
		MY58140009	2024/1/18	2025/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/6/17

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101105	2024/2/27	2025/2/26
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/6/17

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
50 ohm terminal resistance HUBER+SUHNER	E1-011315	13	2023/11/22	2024/11/21
50 ohm terminal resistance	E1-011279	04	2023/11/22	2024/11/21
	E1-011280	05	2023/11/22	2024/11/21
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2023/11/7	2024/11/6
EMI Test Receiver R&S	ESCI	100613	2023/12/4	2024/12/3
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2024/1/6	2025/1/5
LISN R&S	ENV216	101826	2024/3/25	2025/3/24
	ESH3-Z5	100311	2023/9/6	2024/9/5
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2024/1/6	2025/1/5
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2023/8/31	2024/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2024/6/5

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 Schwarzbeck	VULB 9168	9168-155	2023/10/13	2024/10/12
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2024/5/1	2025/4/30
Preamplifier EMCI	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
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: 2024/6/6

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
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
	BBHA 9170	9170-480	2023/11/12	2024/11/11
		BBHA9170241	2023/10/16	2024/10/15
		BBHA9170243	2023/11/12	2024/11/11
Preamplifier EMCI	EMC 184045	980116	2023/9/27	2024/9/26
Preamplifier Keysight	83017A	MY53270295	2024/5/1	2025/4/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2024/5/1	2025/4/30
	Sucoflex 104	MY 13380+295012/04	2024/5/1	2025/4/30
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
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: 2024/6/7

5 Limits of Test Items

5.1 RF Output Power

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

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

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

5.5 AC Power Conducted Emissions

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

Notes:

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

5.6 Unwanted Emissions below 1 GHz

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

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

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

5.7 Unwanted Emissions above 1 GHz

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

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

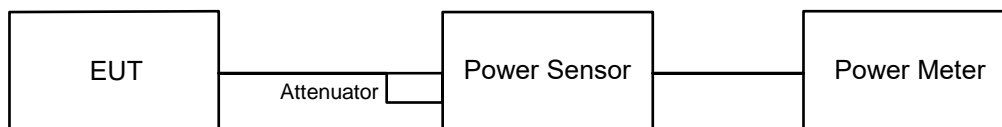
Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



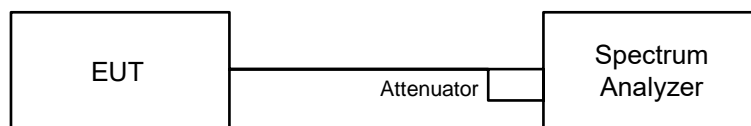
6.1.2 Test Procedure

Average Power:

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

6.2 Power Spectral Density

6.2.1 Test Setup



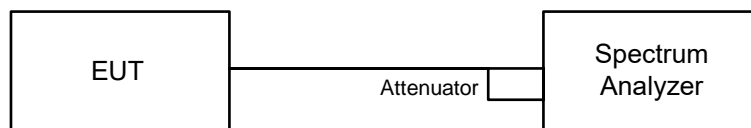
6.2.2 Test Procedure

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

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

6.3 6 dB Bandwidth

6.3.1 Test Setup

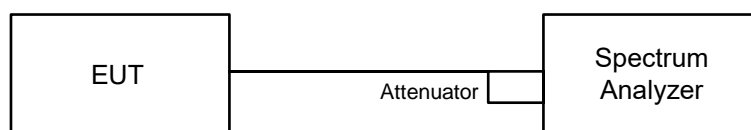


6.3.2 Test Procedure

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

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

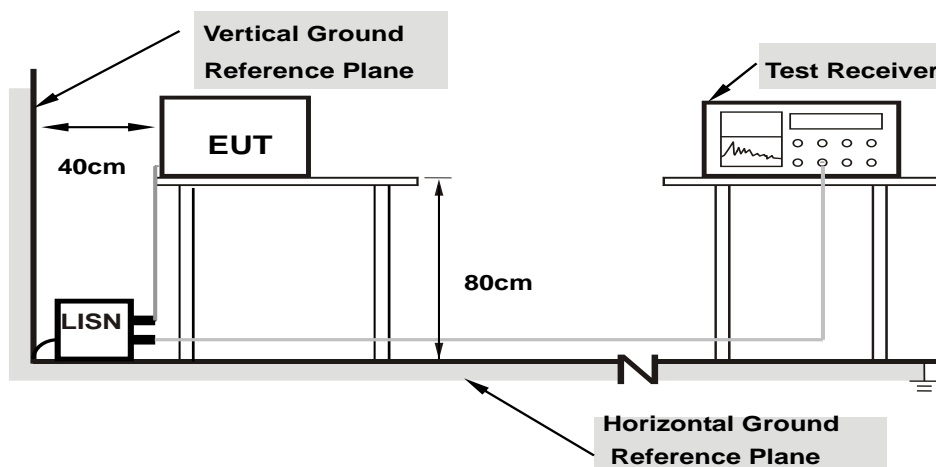
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

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

6.5 AC Power Conducted Emissions

6.5.1 Test Setup



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

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

6.5.2 Test Procedure

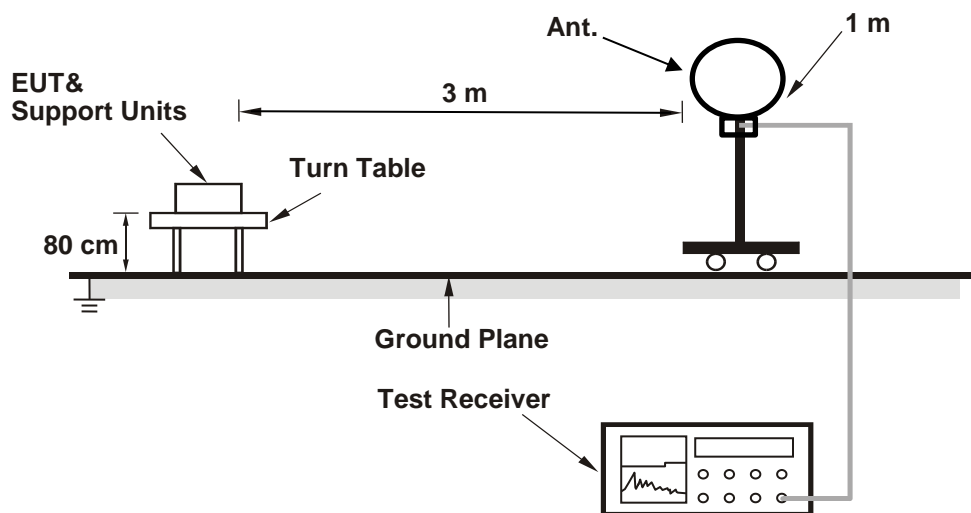
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

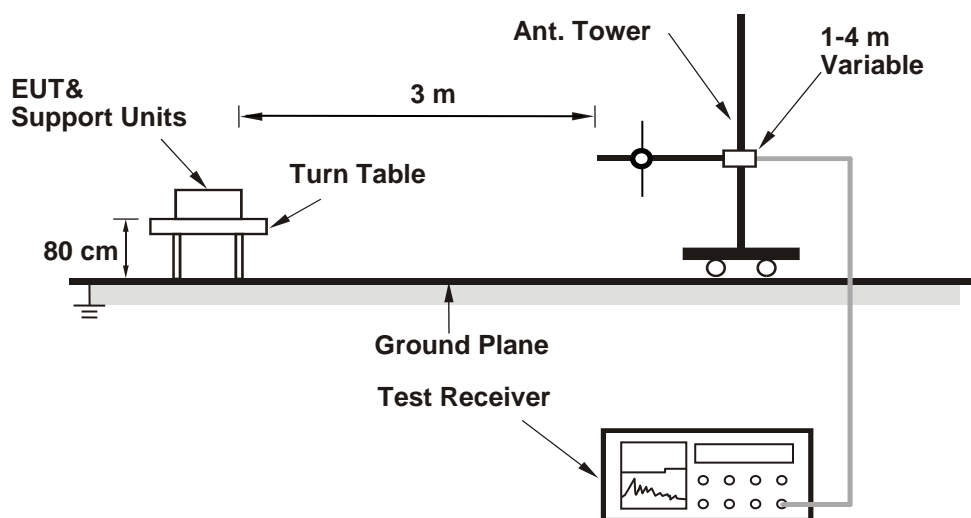
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

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

For Radiated emission above 30 MHz

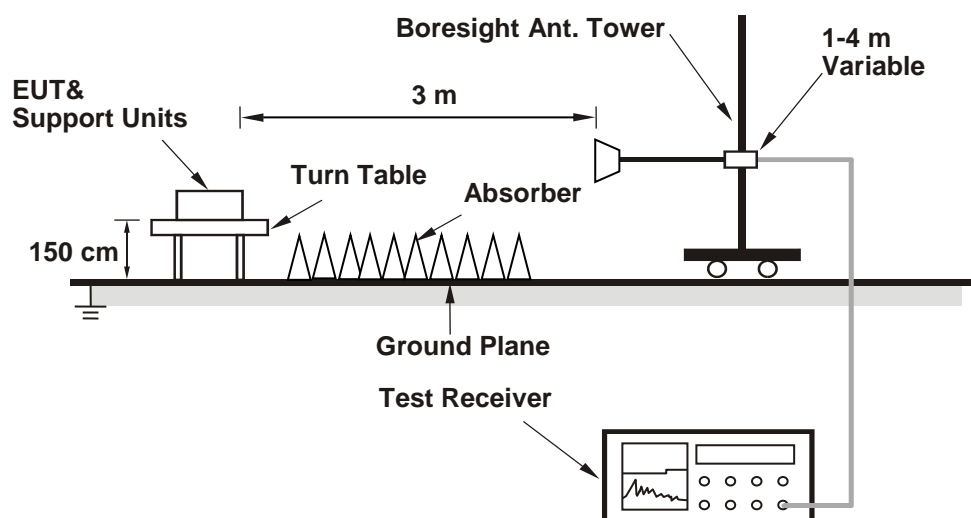
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

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

CDD Mode

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.49	26.58	900.644	29.55	30	Pass
6	2437	26.38	26.41	872.032	29.41	30	Pass
11	2462	24.39	24.23	539.639	27.32	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 1.44 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				
1	2412	26.20	26.42	855.4	29.32	30	Pass
6	2437	25.96	25.57	755.036	28.78	30	Pass
11	2462	22.42	22.43	349.567	25.44	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 1.44 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				
1	2412	26.17	26.30	840.579	29.25	30	Pass
6	2437	24.74	25.79	677.167	28.31	30	Pass
11	2462	20.94	20.75	243.015	23.86	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 1.44 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				
3	2422	25.63	25.90	754.64	28.78	30	Pass
6	2437	22.40	22.25	341.66	25.34	30	Pass
9	2452	20.66	20.79	236.363	23.74	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 1.44 dBi < 6 dBi, so the output power limit shall not be reduced.

Beamforming Mode

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				
1	2412	26.17	26.30	840.579	29.25	30	Pass
6	2437	24.74	25.79	677.167	28.31	30	Pass
11	2462	20.94	20.75	243.015	23.86	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 3.71 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				
3	2422	25.63	25.90	754.64	28.78	30	Pass
6	2437	22.40	22.25	341.66	25.34	30	Pass
9	2452	20.66	20.79	236.363	23.74	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 3.71 dBi < 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

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

802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-4.53	-4.06	-1.28	8	Pass
6	2437	-4.48	-4.39	-1.42	8	Pass
11	2462	-5.86	-6.15	-2.99	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.71 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-8.86	-8.82	-5.83	8	Pass
6	2437	-9.20	-9.96	-6.55	8	Pass
11	2462	-12.74	-12.77	-9.74	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.71 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11be (EHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-10.26	-10.35	-7.29	8	Pass
6	2437	-11.61	-11.90	-8.74	8	Pass
11	2462	-15.83	-15.94	-12.87	8	Pass

Notes:

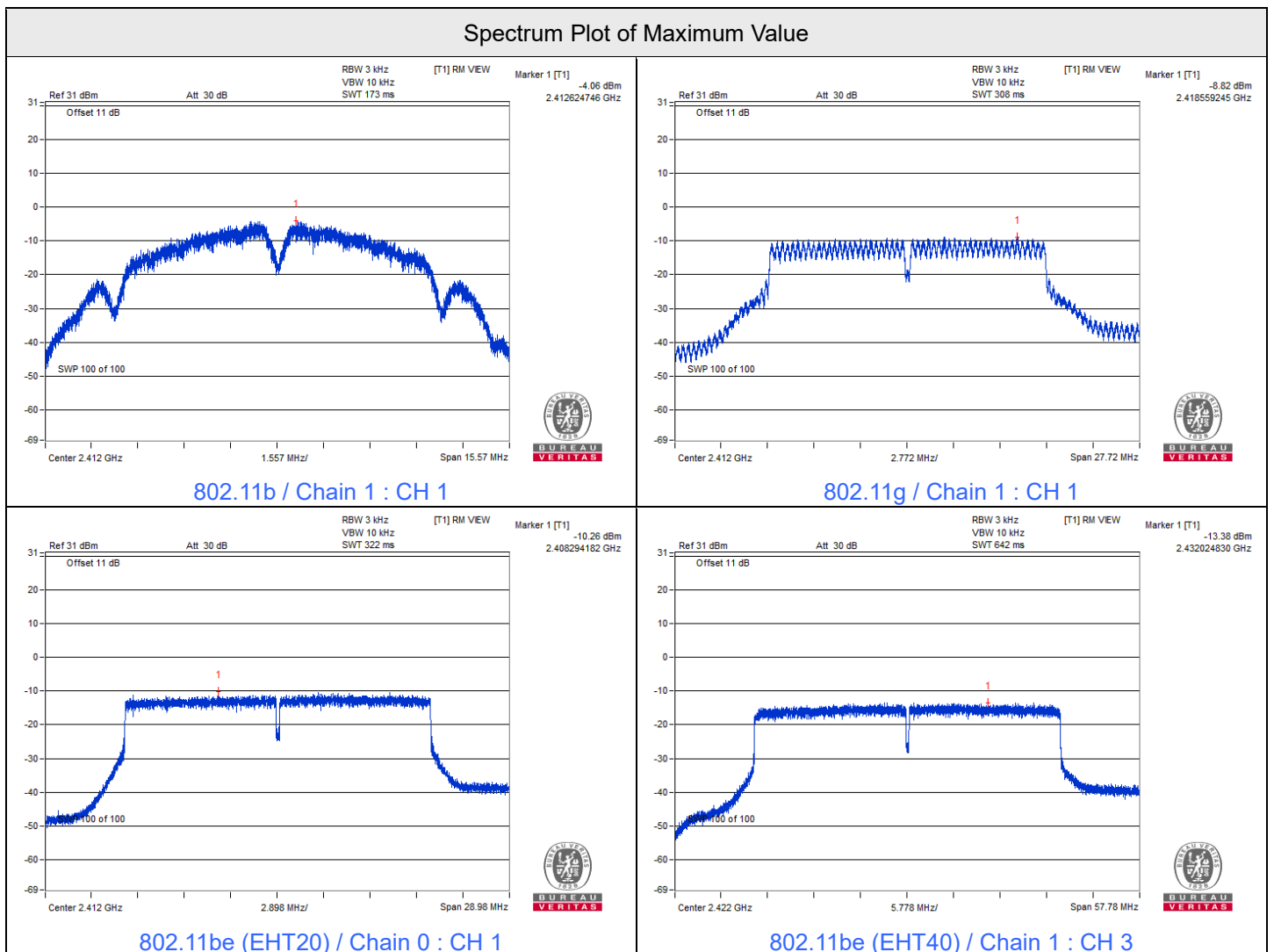
1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.71 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11be (EHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
3	2422	-13.63	-13.38	-10.49	8	Pass
6	2437	-16.84	-16.98	-13.90	8	Pass
9	2452	-18.62	-17.02	-14.74	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 3.71 dBi < 6 dBi, so the power density limit shall not be reduced.



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		
1	2412	7.09	7.11	0.5	Pass
6	2437	7.11	7.11	0.5	Pass
11	2462	7.13	7.12	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	16.42	16.42	0.5	Pass
6	2437	16.44	16.44	0.5	Pass
11	2462	16.43	16.43	0.5	Pass

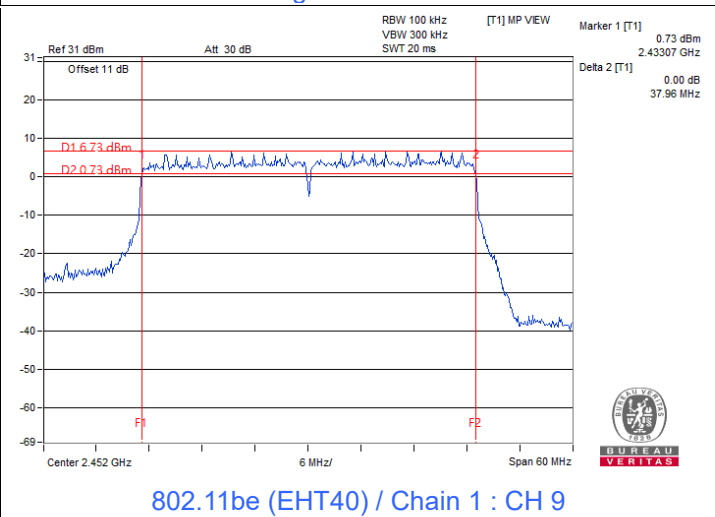
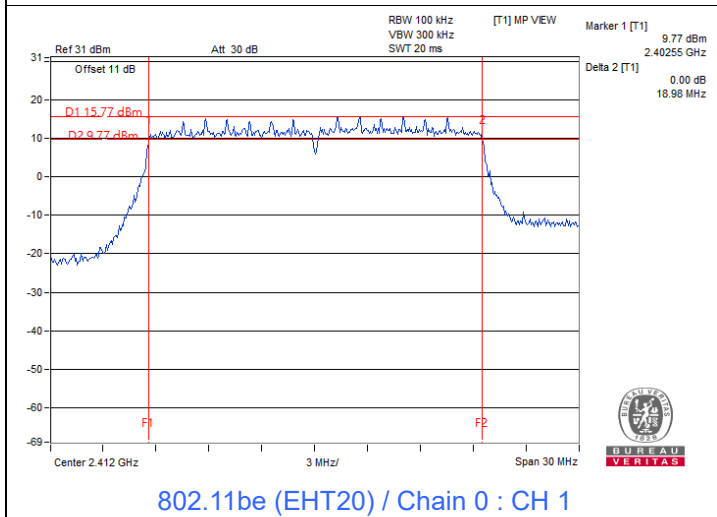
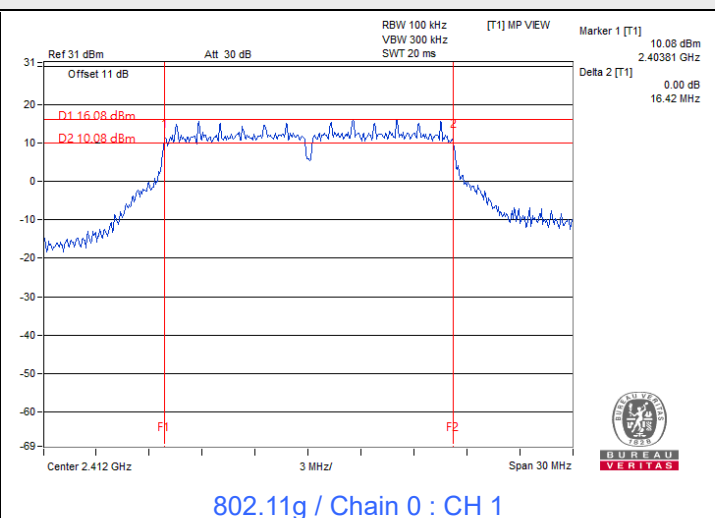
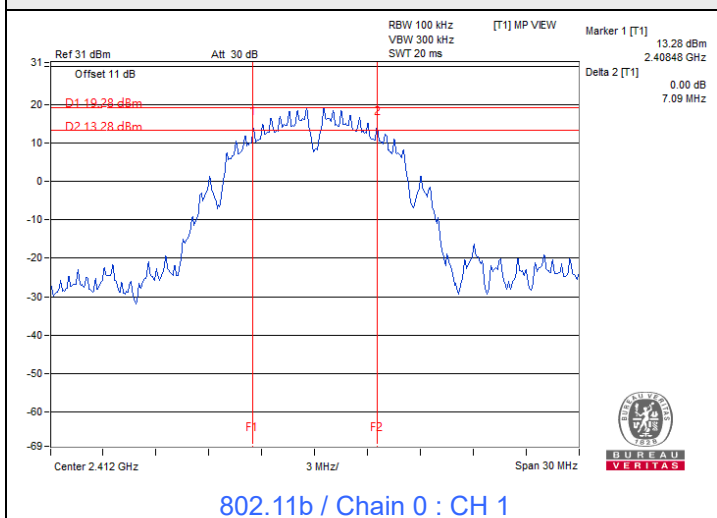
802.11be (EHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	18.98	18.98	0.5	Pass
6	2437	19.05	19.02	0.5	Pass
11	2462	19.02	19.08	0.5	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	38.03	38.05	0.5	Pass
6	2437	38.24	38.12	0.5	Pass
9	2452	38.04	37.96	0.5	Pass

Spectrum Plot of Minimum Value



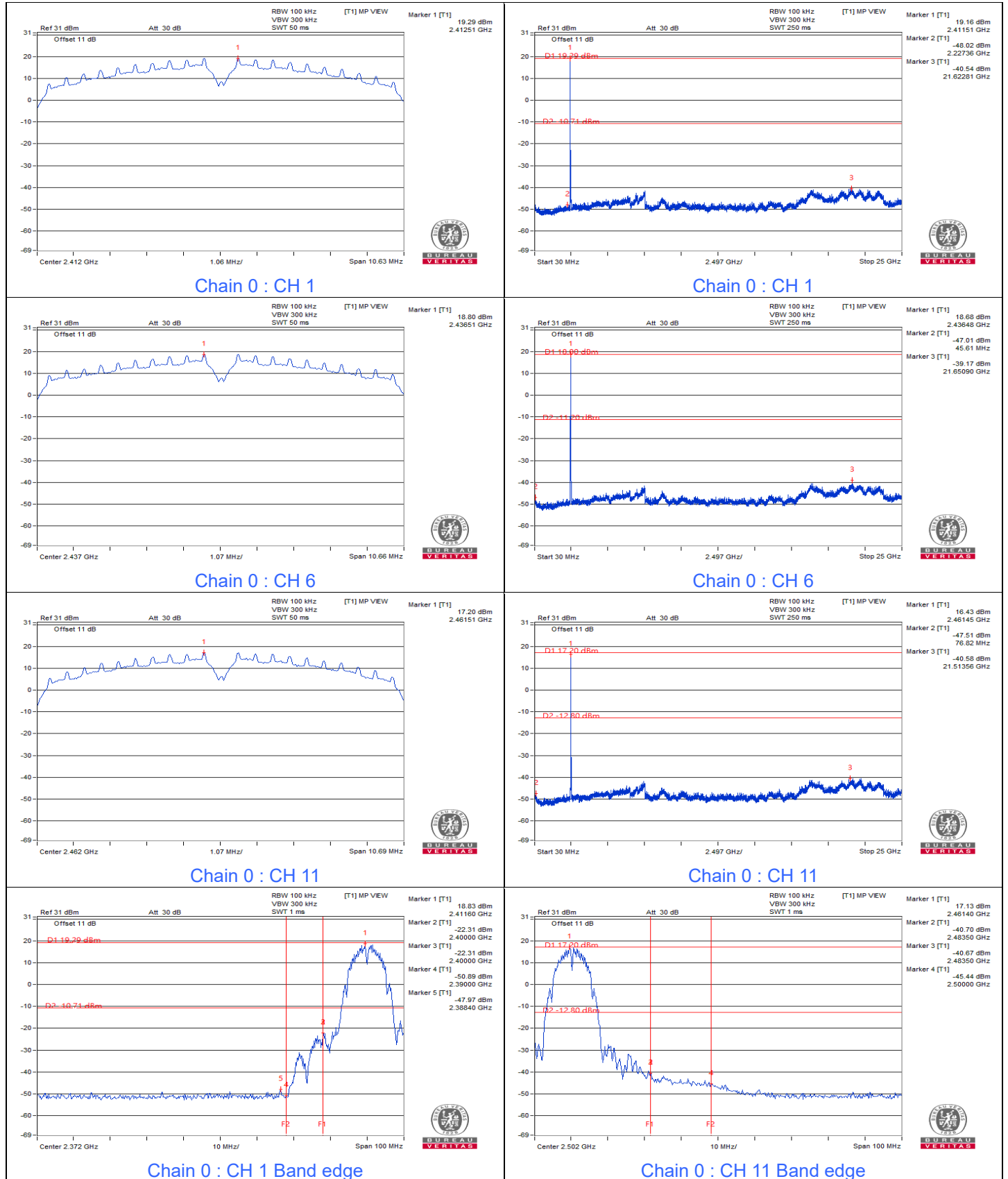


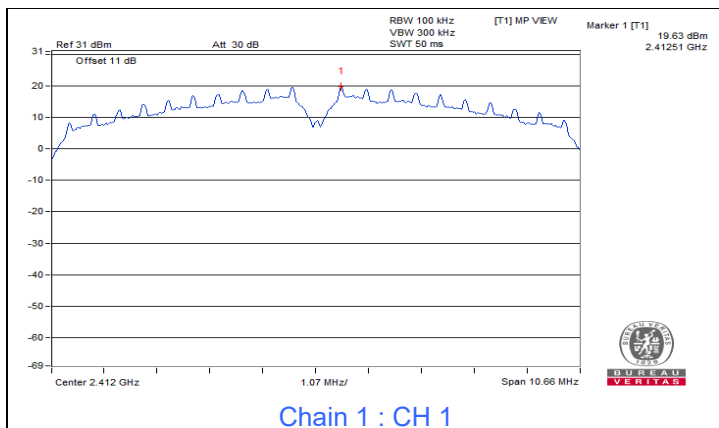
BUREAU VERITAS

7.4 Conducted Out of Band Emissions

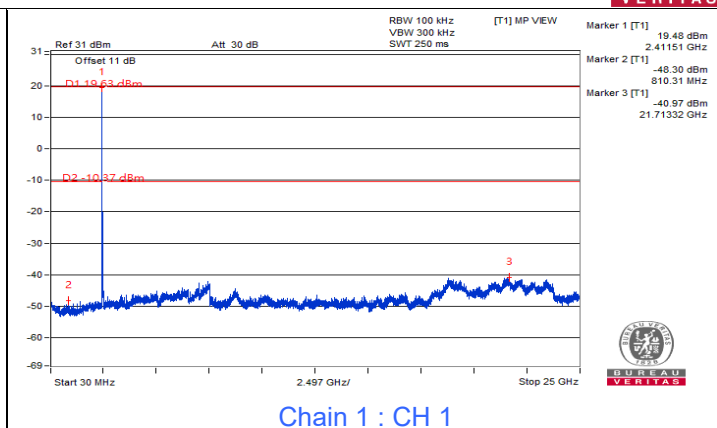
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11b

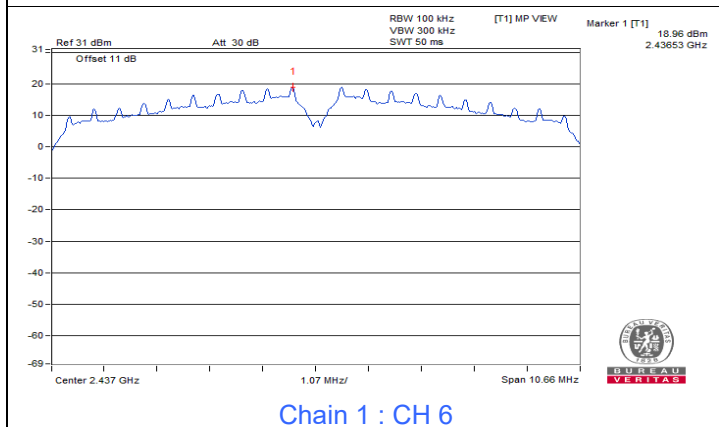




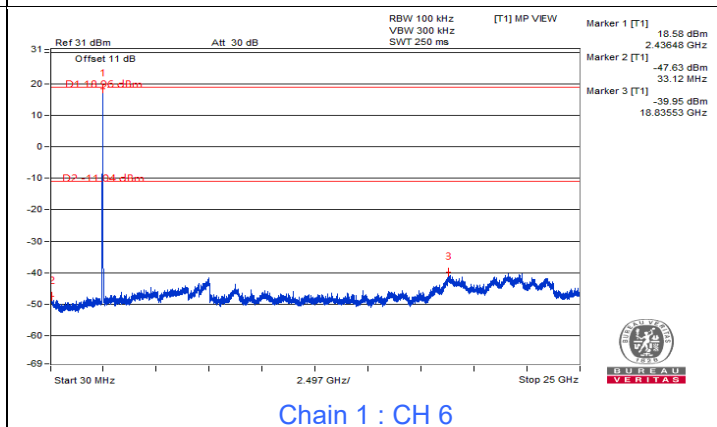
Chain 1 : CH 1



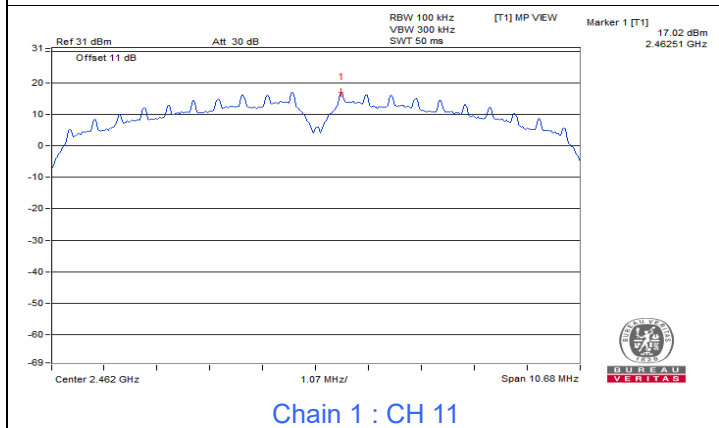
Chain 1 : CH 1



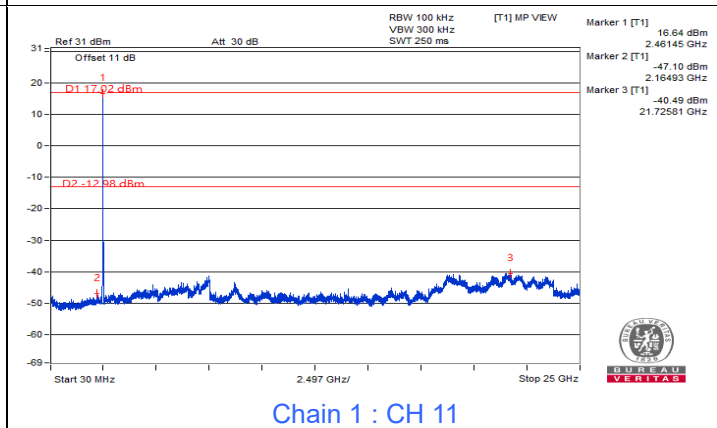
Chain 1 : CH 6



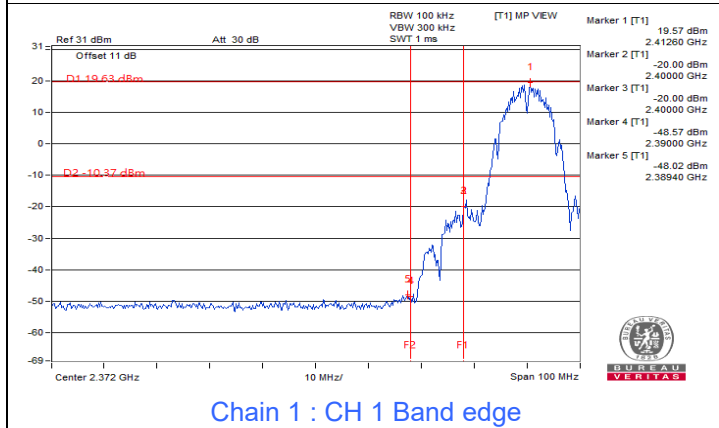
Chain 1 : CH 6



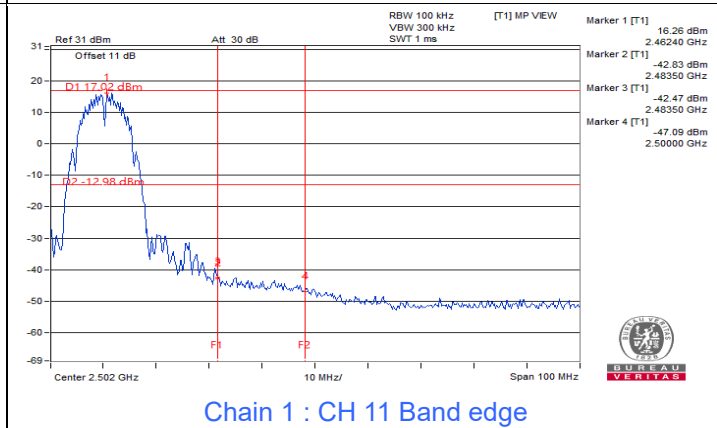
Chain 1 : CH 11



Chain 1 : CH 11



Chain 1 : CH 1 Band edge

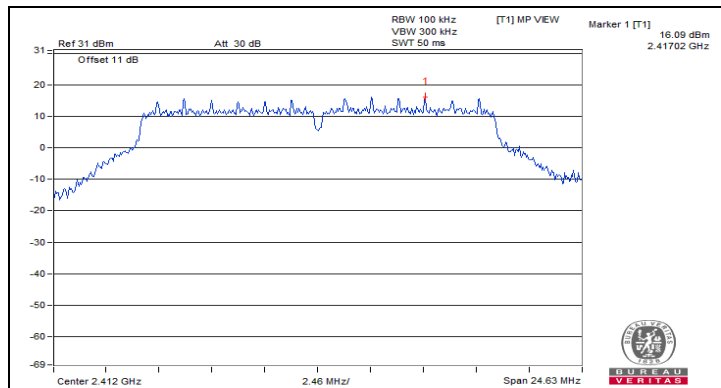


Chain 1 : CH 11 Band edge

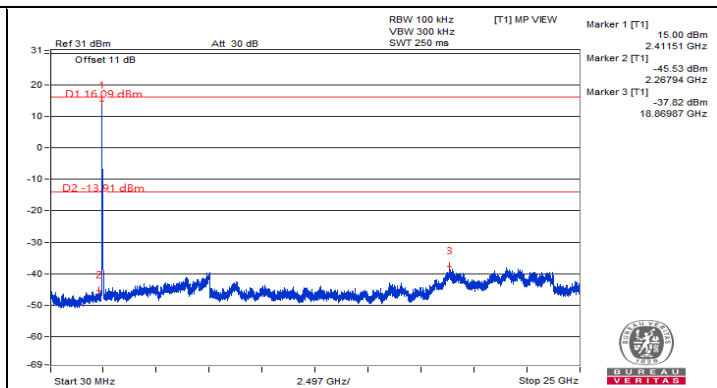


BUREAU VERITAS

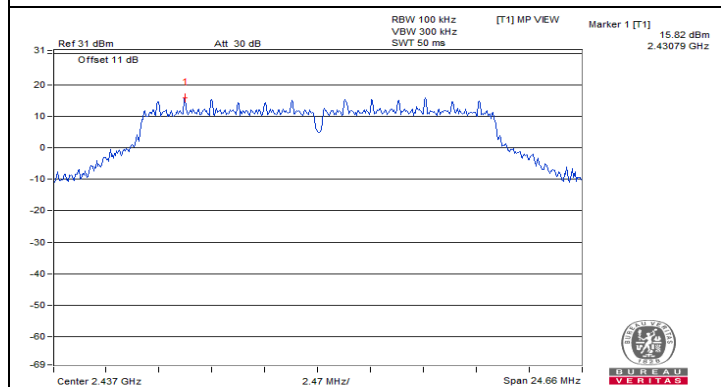
802.11g



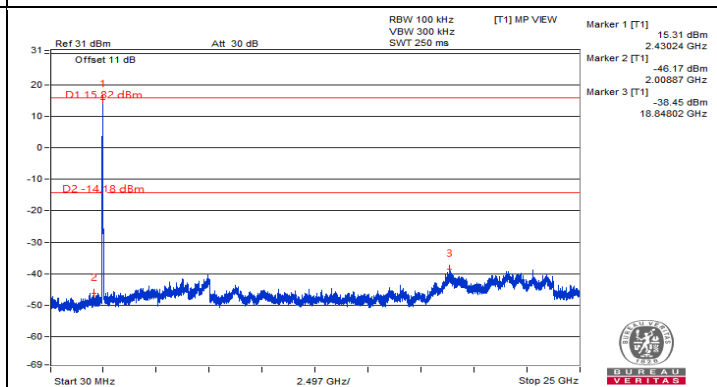
Chain 0 : CH 1



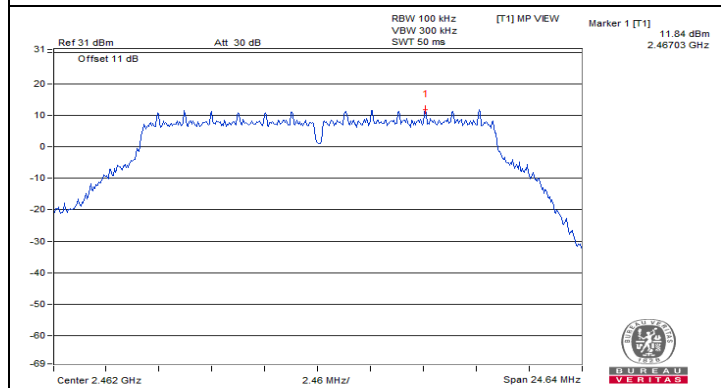
Chain 0 : CH 1



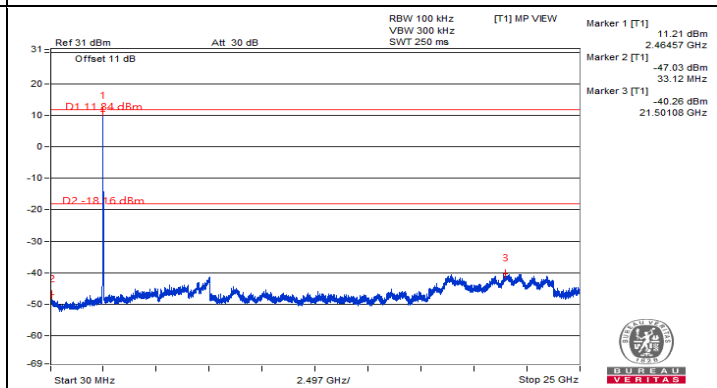
Chain 0 : CH 6



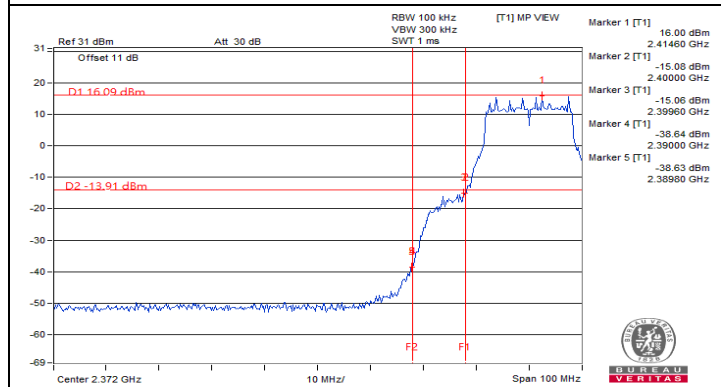
Chain 0 : CH 6



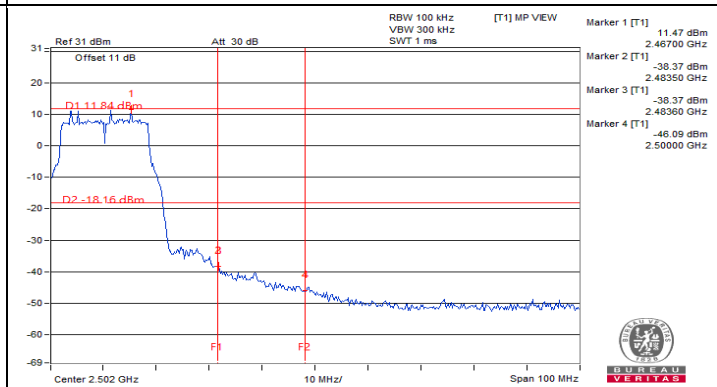
Chain 0 : CH 11



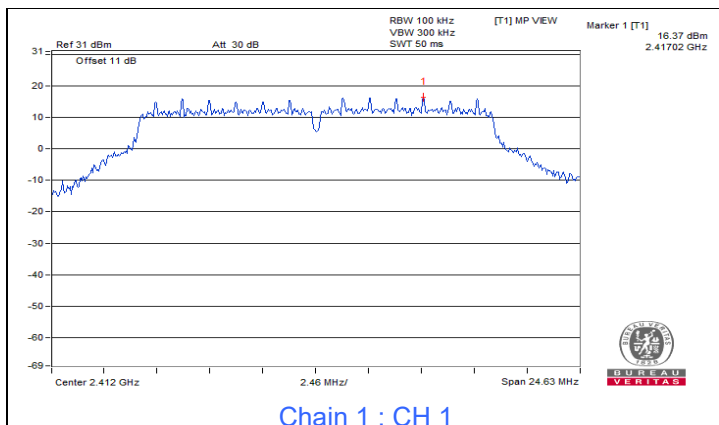
Chain 0 : CH 11



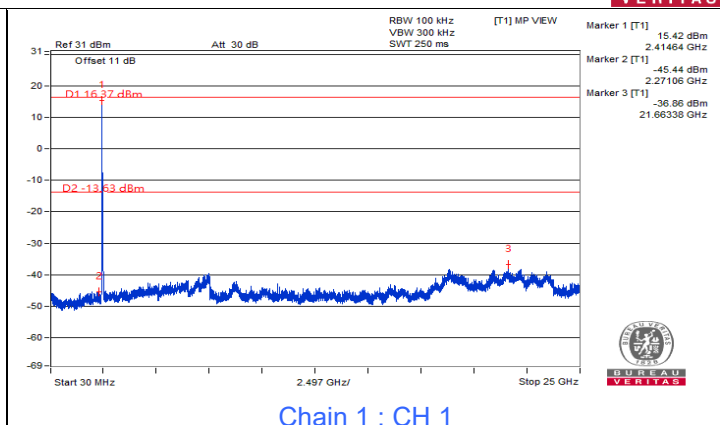
Chain 0 : CH 1 Band edge



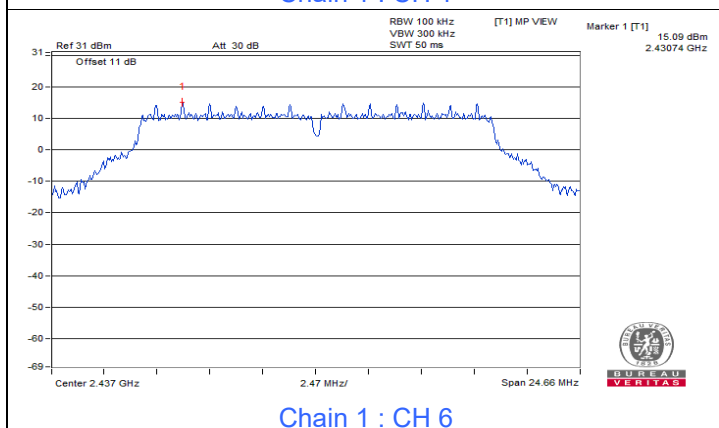
Chain 0 : CH 11 Band edge



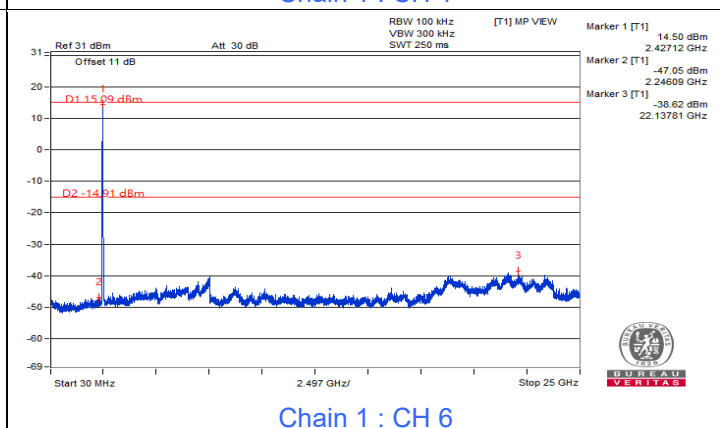
Chain 1 : CH 1



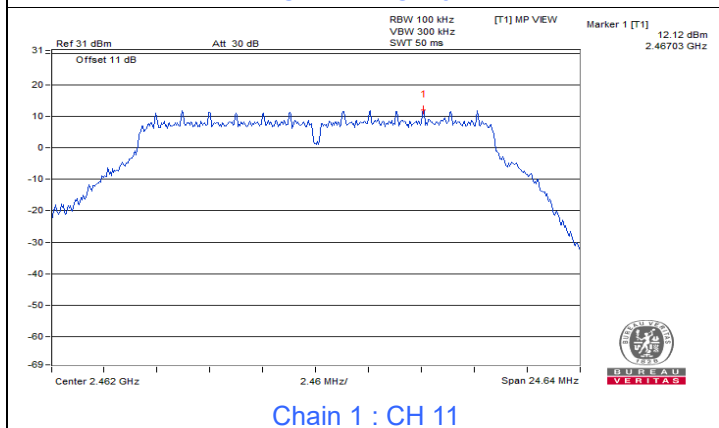
Chain 1 : CH 1



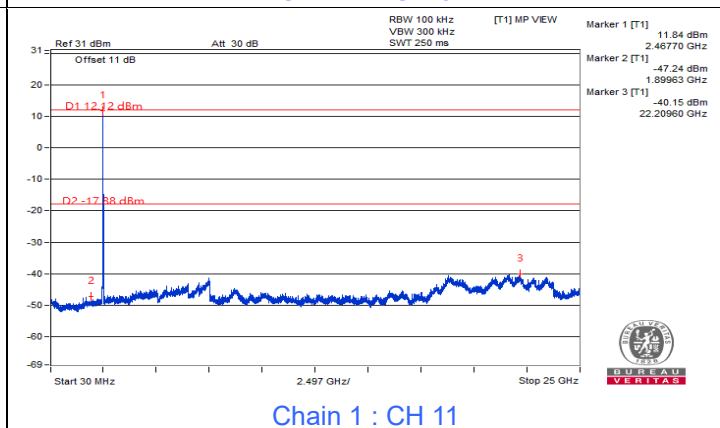
Chain 1 : CH 6



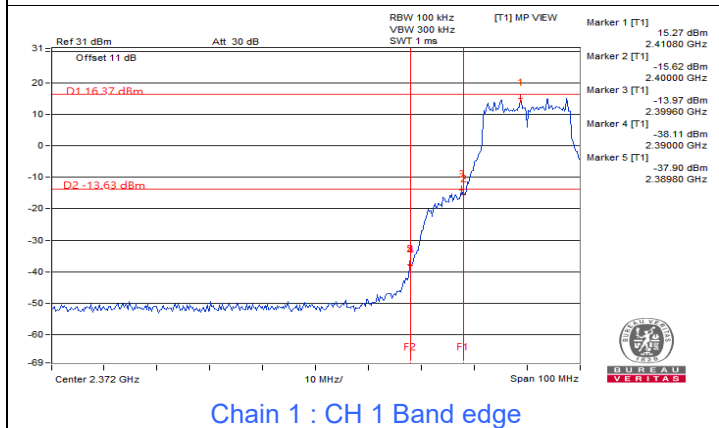
Chain 1 : CH 6



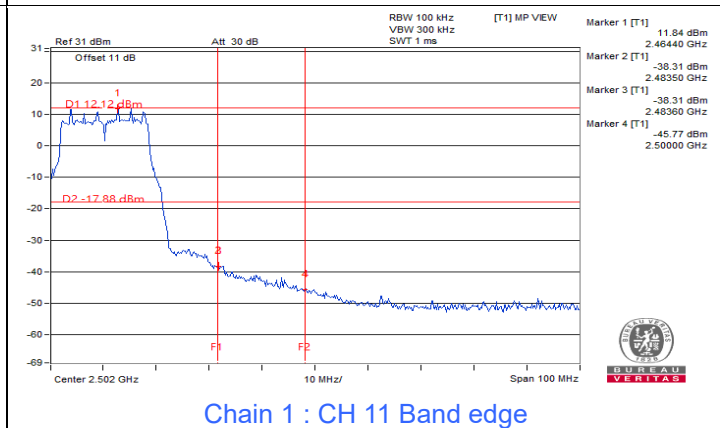
Chain 1 : CH 11



Chain 1 : CH 11



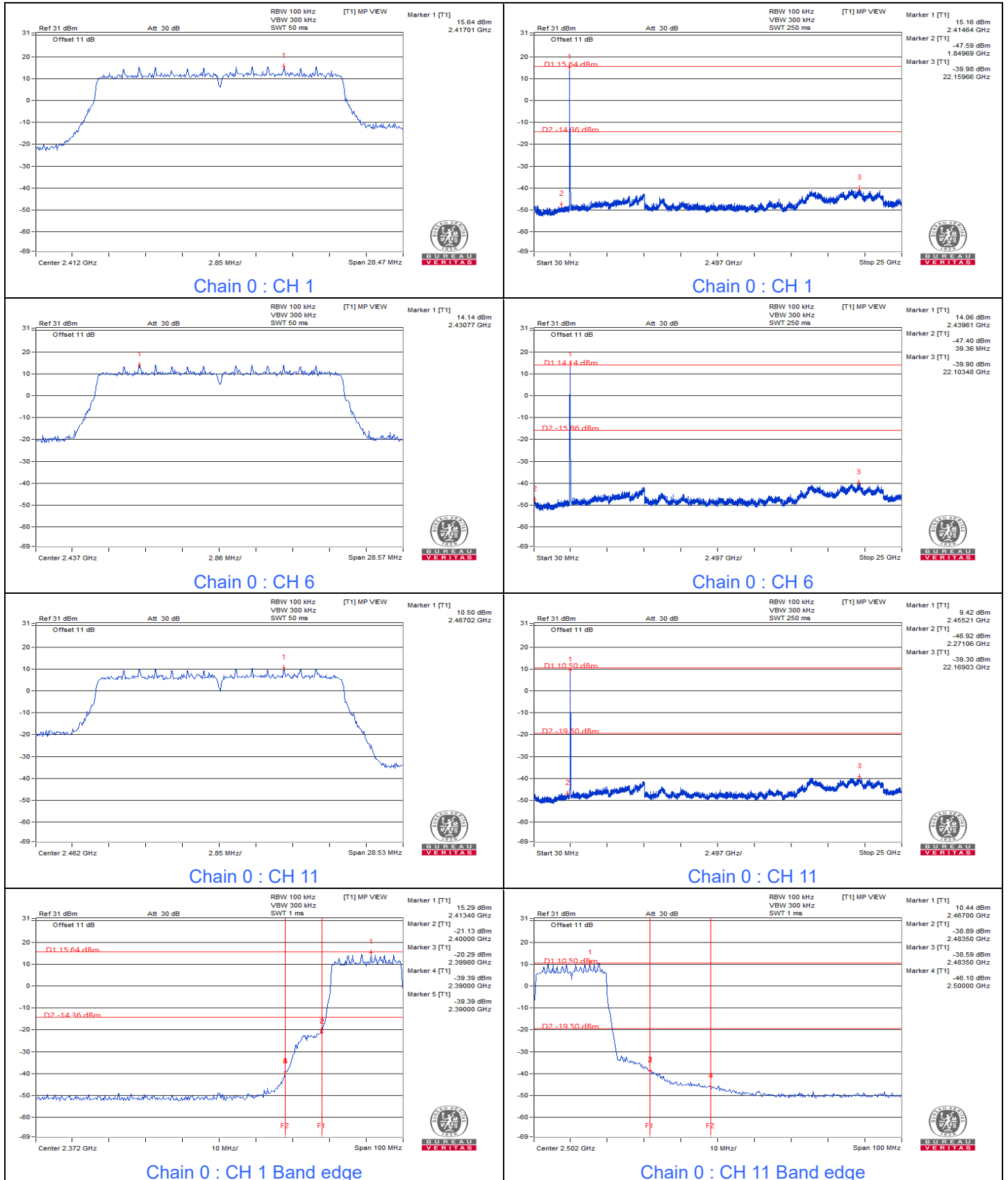
Chain 1 : CH 1 Band edge

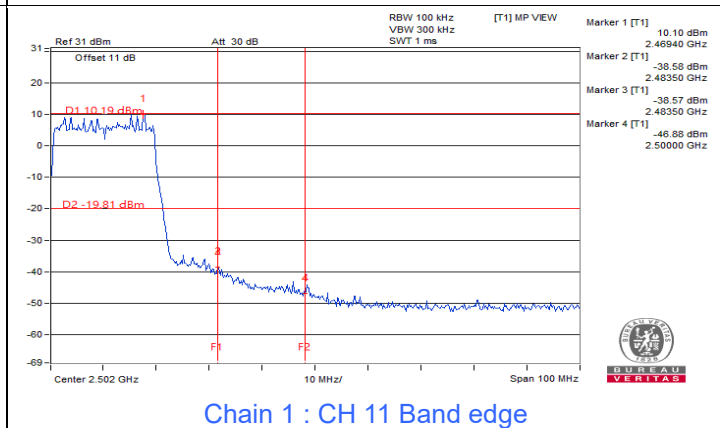
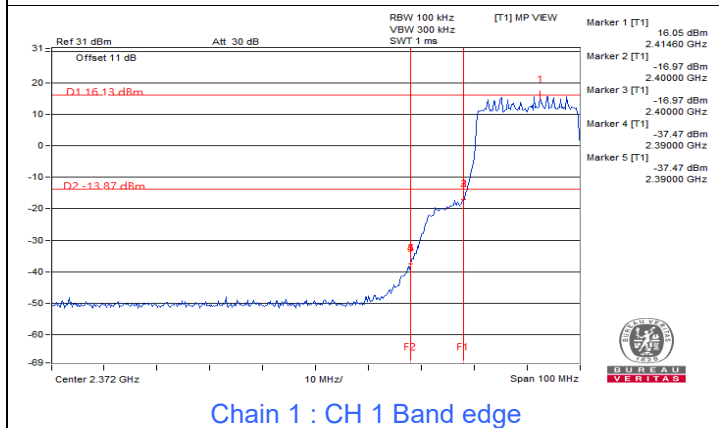
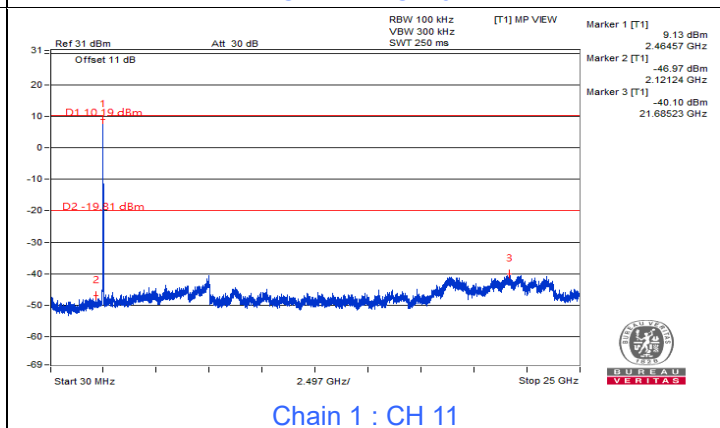
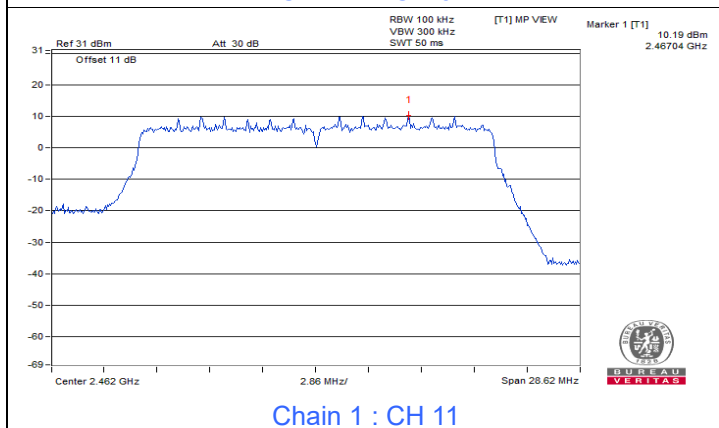
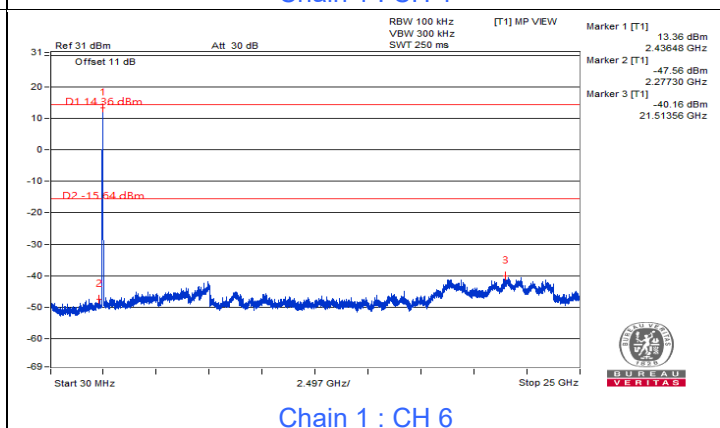
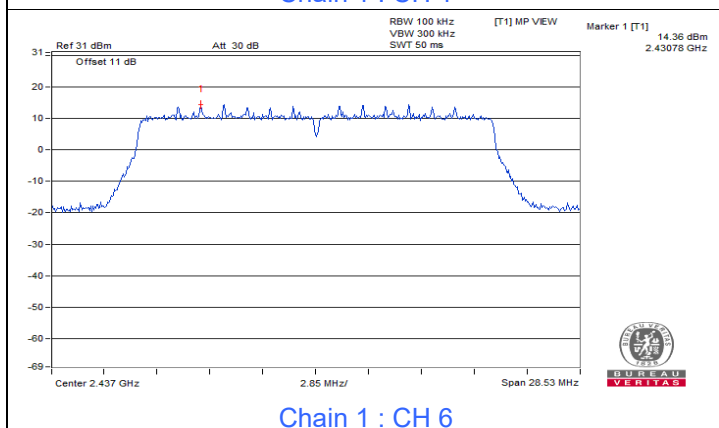
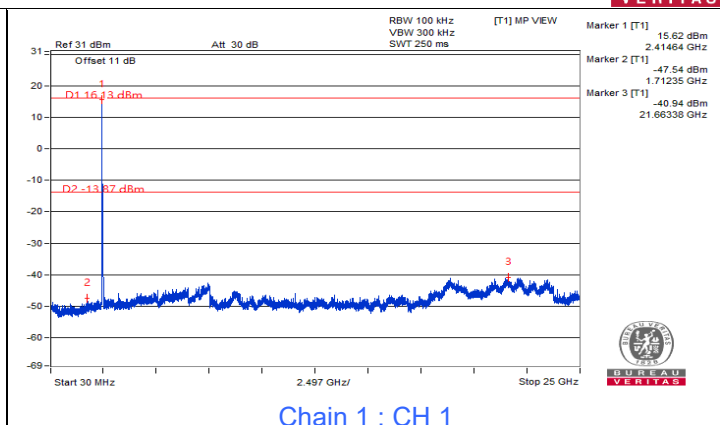
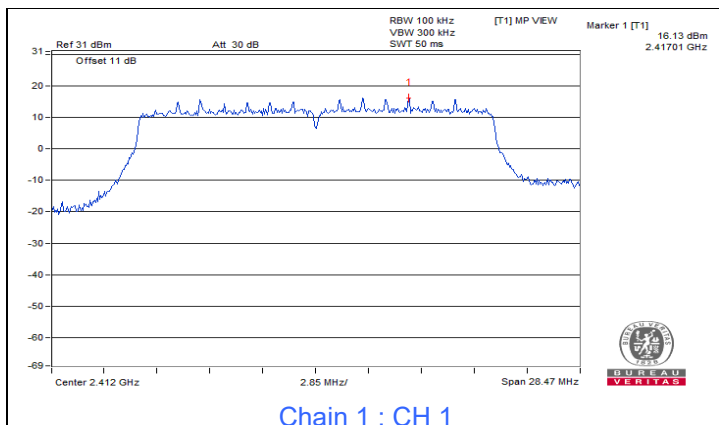


Chain 1 : CH 11 Band edge



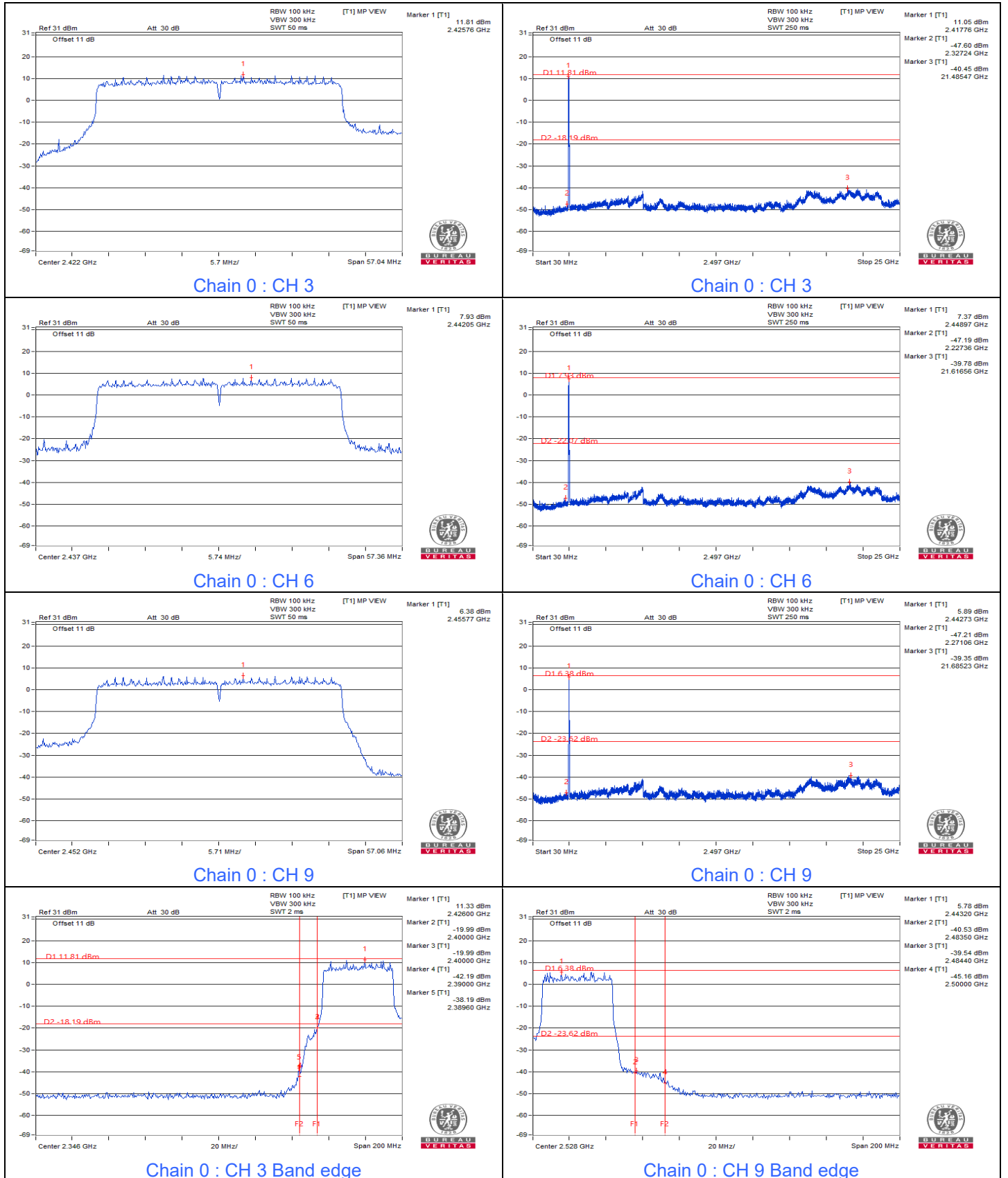
802.11be (EHT20)

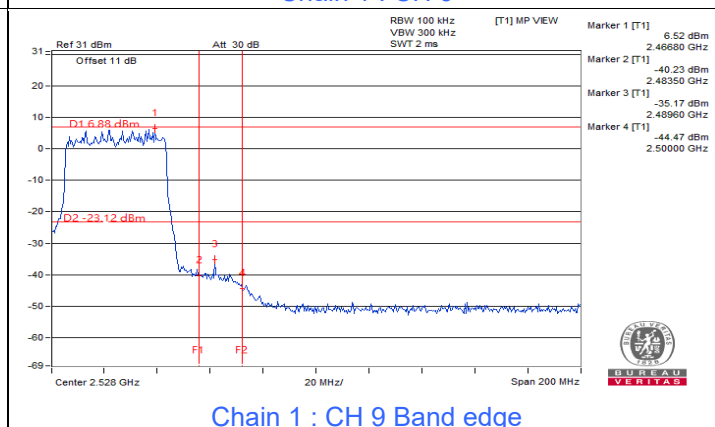
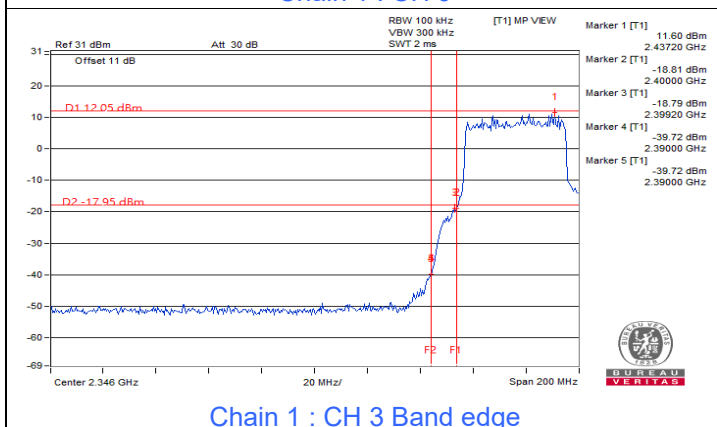
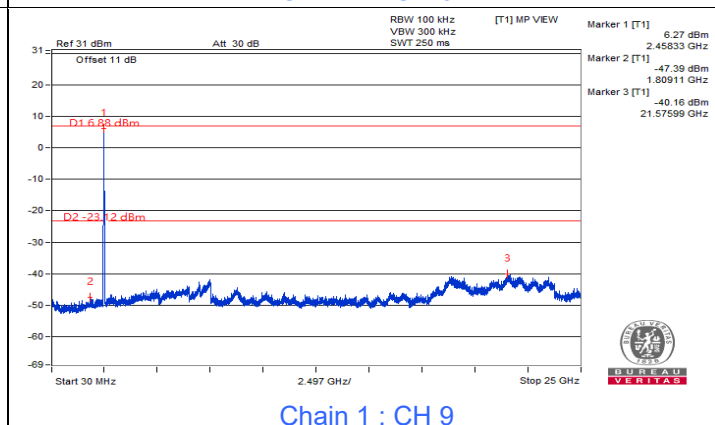
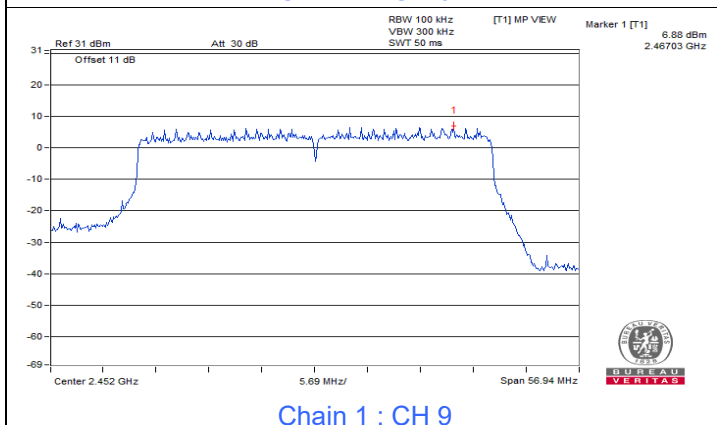
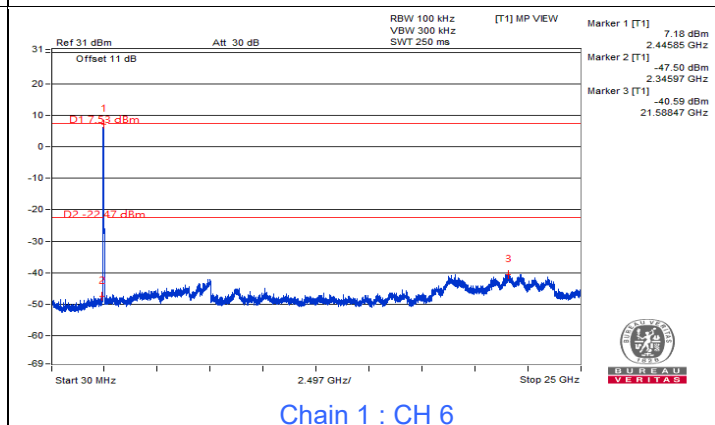
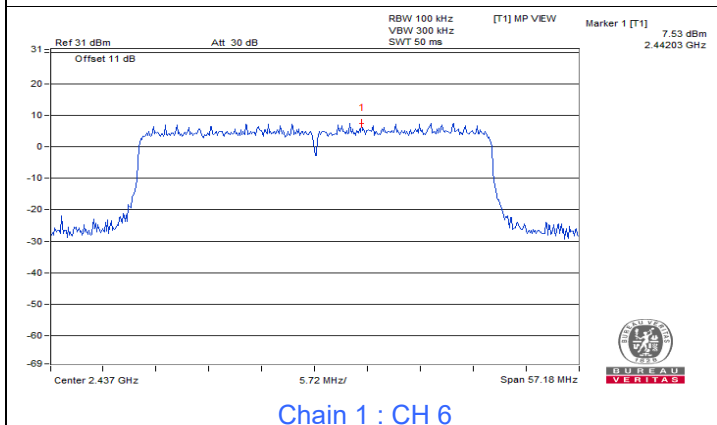
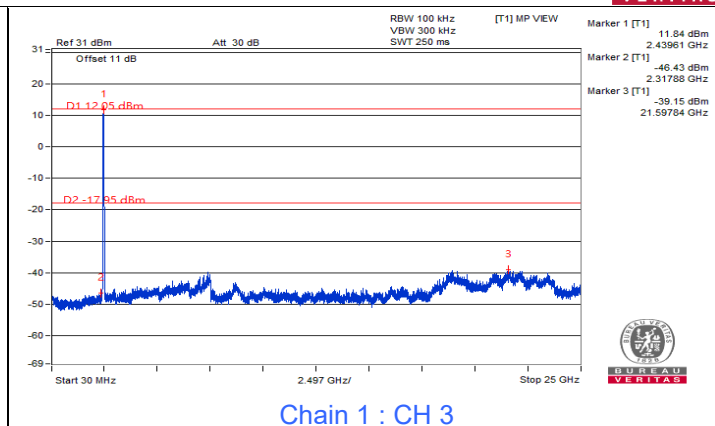
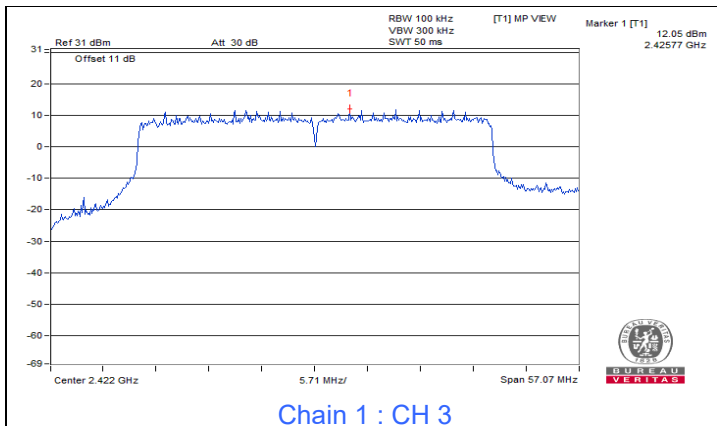






802.11be (EHT40)





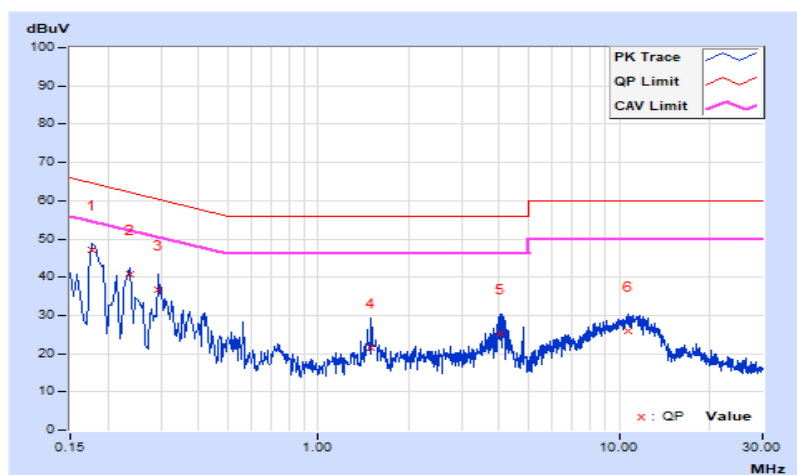
7.5 AC Power Conducted Emissions

RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	0.17800	9.72	37.38	27.41	47.10	37.13	64.58	54.58	-17.48	-17.45
2	0.23723	9.74	30.93	20.27	40.67	30.01	62.19	52.19	-21.52	-22.18
3	0.29400	9.77	26.80	14.97	36.57	24.74	60.41	50.41	-23.84	-25.67
4	1.49800	9.92	11.58	3.31	21.50	13.23	56.00	46.00	-34.50	-32.77
5	4.02200	10.03	15.30	4.07	25.33	14.10	56.00	46.00	-30.67	-31.90
6	10.72200	10.17	15.89	9.44	26.06	19.61	60.00	50.00	-33.94	-30.39

Remarks:

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

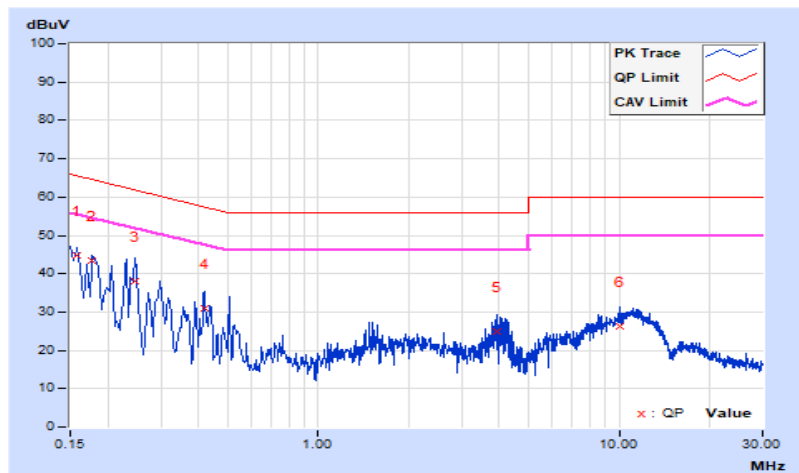


RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	0.15800	9.69	35.03	16.41	44.72	26.10	65.57	55.57	-20.85	-29.47
2	0.17800	9.70	33.64	27.60	43.34	37.30	64.58	54.58	-21.24	-17.28
3	0.24600	9.75	28.18	17.03	37.93	26.78	61.89	51.89	-23.96	-25.11
4	0.41800	9.87	21.04	13.96	30.91	23.83	57.49	47.49	-26.58	-23.66
5	3.93000	10.04	14.77	3.86	24.81	13.90	56.00	46.00	-31.19	-32.10
6	10.05400	10.23	16.04	9.53	26.27	19.76	60.00	50.00	-33.73	-30.24

Remarks:

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



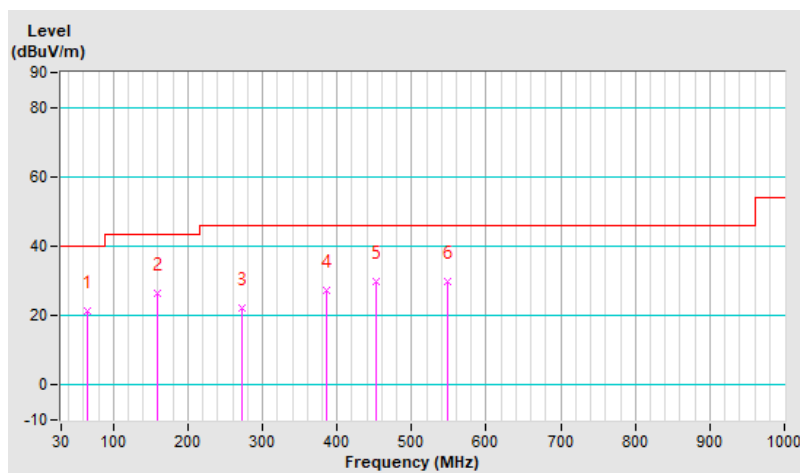
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
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	65.89	21.3 QP	40.0	-18.7	1.00 H	7	31.4	-10.1
2	159.01	26.6 QP	43.5	-16.9	1.50 H	244	35.1	-8.5
3	271.53	22.4 QP	46.0	-23.6	1.50 H	248	30.6	-8.2
4	385.02	27.5 QP	46.0	-18.5	1.00 H	260	33.4	-5.9
5	452.92	29.7 QP	46.0	-16.3	1.00 H	250	34.2	-4.5
6	548.95	29.8 QP	46.0	-16.2	1.50 H	96	32.7	-2.9

Remarks:

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

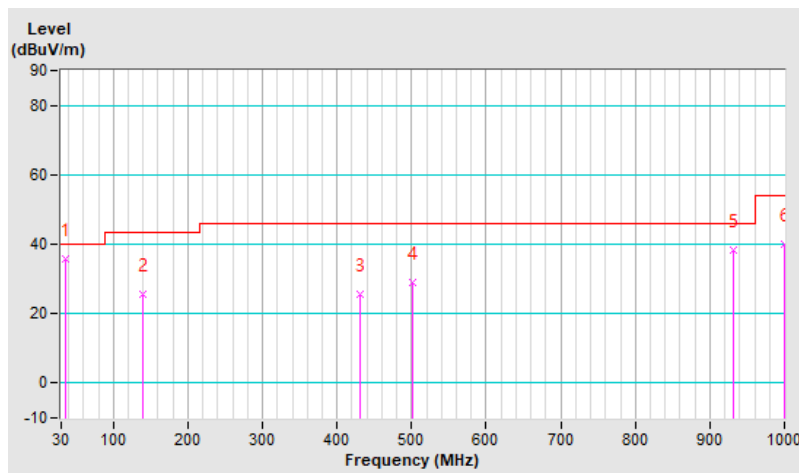


RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66 % RH
Tested By	Luis Lee		

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	35.82	35.7 QP	40.0	-4.3	1.00 V	248	45.6	-9.9
2	138.64	25.4 QP	43.5	-18.1	1.50 V	239	34.6	-9.2
3	431.58	25.5 QP	46.0	-20.5	1.50 V	359	30.4	-4.9
4	500.45	28.8 QP	46.0	-17.2	1.00 V	161	32.7	-3.9
5	932.10	38.4 QP	46.0	-7.6	1.00 V	255	33.2	5.2
6	1000.00	40.2 QP	54.0	-13.8	1.00 V	98	33.7	6.5

Remarks:

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



7.7 Unwanted Emissions above 1 GHz

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

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	60.1 PK	74.0	-13.9	2.42 H	160	25.2	34.9
2	2390.00	47.2 AV	54.0	-6.8	2.42 H	160	12.3	34.9
3	*2412.00	118.5 PK			2.42 H	160	83.5	35.0
4	*2412.00	116.1 AV			2.42 H	160	81.1	35.0
5	4824.00	50.7 PK	74.0	-23.3	1.82 H	220	37.2	13.5
6	4824.00	38.9 AV	54.0	-15.1	1.82 H	220	25.4	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	60.4 PK	74.0	-13.6	1.67 V	110	25.5	34.9
2	2390.00	47.4 AV	54.0	-6.6	1.67 V	110	12.5	34.9
3	*2412.00	120.1 PK			1.67 V	110	85.1	35.0
4	*2412.00	117.7 AV			1.67 V	110	82.7	35.0
5	4824.00	51.0 PK	74.0	-23.0	1.36 V	226	37.5	13.5
6	4824.00	39.2 AV	54.0	-14.8	1.36 V	226	25.7	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, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66 % RH
Tested By	TitanHSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	118.0 PK			2.38 H	159	83.0	35.0
2	*2437.00	116.0 AV			2.38 H	159	81.0	35.0
3	4874.00	50.7 PK	74.0	-23.3	1.95 H	229	37.0	13.7
4	4874.00	38.5 AV	54.0	-15.5	1.95 H	229	24.8	13.7

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	119.1 PK			1.97 V	108	84.1	35.0
2	*2437.00	116.6 AV			1.97 V	108	81.6	35.0
3	4874.00	50.9 PK	74.0	-23.1	1.35 V	229	37.2	13.7
4	4874.00	38.9 AV	54.0	-15.1	1.35 V	229	25.2	13.7

Remarks:

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



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

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	116.8 PK			2.40 H	161	81.6	35.2
2	*2462.00	114.2 AV			2.40 H	161	79.0	35.2
3	2483.50	63.8 PK	74.0	-10.2	2.40 H	161	28.7	35.1
4	2483.50	53.4 AV	54.0	-0.6	2.40 H	161	18.3	35.1
5	4924.00	50.4 PK	74.0	-23.6	1.80 H	225	36.8	13.6
6	4924.00	38.4 AV	54.0	-15.6	1.80 H	225	24.8	13.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.7 PK			1.93 V	111	82.5	35.2
2	*2462.00	115.3 AV			1.93 V	111	80.1	35.2
3	2483.50	64.1 PK	74.0	-9.9	1.93 V	111	29.0	35.1
4	2483.50	53.9 AV	54.0	-0.1	1.93 V	111	18.8	35.1
5	4924.00	50.8 PK	74.0	-23.2	1.32 V	230	37.2	13.6
6	4924.00	38.7 AV	54.0	-15.3	1.32 V	230	25.1	13.6

Remarks:

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



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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.4 PK	74.0	-10.6	2.43 H	159	28.5	34.9
2	2390.00	49.9 AV	54.0	-4.1	2.43 H	159	15.0	34.9
3	*2412.00	119.4 PK			2.43 H	159	84.4	35.0
4	*2412.00	110.0 AV			2.43 H	159	75.0	35.0
5	4824.00	50.3 PK	74.0	-23.7	1.99 H	228	36.8	13.5
6	4824.00	38.4 AV	54.0	-15.6	1.99 H	228	24.9	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	63.6 PK	74.0	-10.4	1.83 V	159	28.7	34.9
2	2390.00	50.1 AV	54.0	-3.9	1.83 V	159	15.2	34.9
3	*2412.00	120.0 PK			1.83 V	159	85.0	35.0
4	*2412.00	110.6 AV			1.83 V	159	75.6	35.0
5	4824.00	50.7 PK	74.0	-23.3	1.32 V	225	37.2	13.5
6	4824.00	39.0 AV	54.0	-15.0	1.32 V	225	25.5	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, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66 % RH
Tested By	TitanHSU		

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	117.8 PK			2.51 H	168	82.8	35.0
2	*2437.00	108.0 AV			2.51 H	168	73.0	35.0
3	2483.50	66.6 PK	74.0	-7.4	2.51 H	168	31.5	35.1
4	2483.50	52.7 AV	54.0	-1.3	2.51 H	168	17.6	35.1
5	4874.00	50.5 PK	74.0	-23.5	1.92 H	223	36.8	13.7
6	4874.00	38.6 AV	54.0	-15.4	1.92 H	223	24.9	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	118.8 PK			2.00 V	168	83.8	35.0
2	*2437.00	109.1 AV			2.00 V	168	74.1	35.0
3	2486.30	67.8 PK	74.0	-6.2	2.00 V	168	32.7	35.1
4	2486.30	53.9 AV	54.0	-0.1	2.00 V	168	18.8	35.1
5	4874.00	50.7 PK	74.0	-23.3	1.30 V	229	37.0	13.7
6	4874.00	38.9 AV	54.0	-15.1	1.30 V	229	25.2	13.7

Remarks:

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



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

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	116.2 PK			2.32 H	163	81.0	35.2
2	*2462.00	106.3 AV			2.32 H	163	71.1	35.2
3	2483.50	65.3 PK	74.0	-8.7	2.32 H	163	30.2	35.1
4	2483.50	53.1 AV	54.0	-0.9	2.32 H	163	18.0	35.1
5	4924.00	50.4 PK	74.0	-23.6	1.95 H	209	36.8	13.6
6	4924.00	38.6 AV	54.0	-15.4	1.95 H	209	25.0	13.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.0 PK			1.79 V	166	81.8	35.2
2	*2462.00	107.3 AV			1.79 V	166	72.1	35.2
3	2485.90	65.9 PK	74.0	-8.1	1.79 V	166	30.8	35.1
4	2485.90	53.9 AV	54.0	-0.1	1.79 V	166	18.8	35.1
5	4924.00	50.8 PK	74.0	-23.2	1.36 V	228	37.2	13.6
6	4924.00	39.0 AV	54.0	-15.0	1.36 V	228	25.4	13.6

Remarks:

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



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

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.4 PK	74.0	-9.6	2.33 H	167	29.5	34.9
2	2390.00	52.1 AV	54.0	-1.9	2.33 H	167	17.2	34.9
3	*2412.00	121.5 PK			2.33 H	167	86.5	35.0
4	*2412.00	109.0 AV			2.33 H	167	74.0	35.0
5	4824.00	50.5 PK	74.0	-23.5	1.99 H	225	37.0	13.5
6	4824.00	38.6 AV	54.0	-15.4	1.99 H	225	25.1	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	66.5 PK	74.0	-7.5	1.81 V	153	31.6	34.9
2	2390.00	53.4 AV	54.0	-0.6	1.81 V	153	18.5	34.9
3	*2412.00	122.4 PK			1.81 V	153	87.4	35.0
4	*2412.00	110.2 AV			1.81 V	153	75.2	35.0
5	4824.00	50.8 PK	74.0	-23.2	1.39 V	230	37.3	13.5
6	4824.00	38.9 AV	54.0	-15.1	1.39 V	230	25.4	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, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 66 % RH
Tested By	TitanHSU		

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	119.0 PK			2.54 H	173	84.0	35.0
2	*2437.00	107.0 AV			2.54 H	173	72.0	35.0
3	2483.50	65.1 PK	74.0	-8.9	2.54 H	173	30.0	35.1
4	2483.50	53.1 AV	54.0	-0.9	2.54 H	173	18.0	35.1
5	4874.00	50.4 PK	74.0	-23.6	1.95 H	220	36.7	13.7
6	4874.00	38.7 AV	54.0	-15.3	1.95 H	220	25.0	13.7

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	120.1 PK			1.87 V	155	85.1	35.0
2	*2437.00	107.8 AV			1.87 V	155	72.8	35.0
3	2483.90	65.6 PK	74.0	-8.4	1.87 V	155	30.5	35.1
4	2483.90	53.8 AV	54.0	-0.2	1.87 V	155	18.7	35.1
5	4874.00	50.7 PK	74.0	-23.3	1.32 V	227	37.0	13.7
6	4874.00	39.0 AV	54.0	-15.0	1.32 V	227	25.3	13.7

Remarks:

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



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

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	116.2 PK			2.51 H	174	81.0	35.2
2	*2462.00	104.4 AV			2.51 H	174	69.2	35.2
3	2483.50	64.3 PK	74.0	-9.7	2.51 H	174	29.2	35.1
4	2483.50	52.7 AV	54.0	-1.3	2.51 H	174	17.6	35.1
5	4924.00	50.3 PK	74.0	-23.7	1.92 H	228	36.7	13.6
6	4924.00	38.4 AV	54.0	-15.6	1.92 H	228	24.8	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.5 PK			1.79 V	165	82.3	35.2
2	*2462.00	105.7 AV			1.79 V	165	70.5	35.2
3	2484.10	65.1 PK	74.0	-8.9	1.79 V	165	30.0	35.1
4	2484.10	53.9 AV	54.0	-0.1	1.79 V	165	18.8	35.1
5	4924.00	50.7 PK	74.0	-23.3	1.36 V	230	37.1	13.6
6	4924.00	38.8 AV	54.0	-15.2	1.36 V	230	25.2	13.6

Remarks:

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

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

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	60.7 PK	74.0	-13.3	2.53 H	172	25.8	34.9
2	2390.00	47.9 AV	54.0	-6.1	2.53 H	172	13.0	34.9
3	*2422.00	116.5 PK			2.53 H	172	81.5	35.0
4	*2422.00	105.2 AV			2.53 H	172	70.2	35.0
5	2483.50	65.6 PK	74.0	-8.4	2.53 H	172	30.5	35.1
6	2483.50	53.4 AV	54.0	-0.6	2.53 H	172	18.3	35.1
7	4844.00	50.2 PK	74.0	-23.8	1.89 H	229	36.6	13.6
8	4844.00	38.3 AV	54.0	-15.7	1.89 H	229	24.7	13.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.0 PK	74.0	-13.0	1.79 V	150	26.1	34.9
2	2390.00	50.6 AV	54.0	-3.4	1.79 V	150	15.7	34.9
3	*2422.00	117.6 PK			1.79 V	150	82.6	35.0
4	*2422.00	106.1 AV			1.79 V	150	71.1	35.0
5	2483.50	65.9 PK	74.0	-8.1	1.79 V	150	30.8	35.1
6	2483.50	53.9 AV	54.0	-0.1	1.79 V	150	18.8	35.1
7	4844.00	50.4 PK	74.0	-23.6	1.32 V	225	36.8	13.6
8	4844.00	38.6 AV	54.0	-15.4	1.32 V	225	25.0	13.6

Remarks:

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



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

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	114.0 PK			2.53 H	171	79.0	35.0
2	*2437.00	101.5 AV			2.53 H	171	66.5	35.0
3	2483.50	69.6 PK	74.0	-4.4	2.53 H	171	34.5	35.1
4	2483.50	53.3 AV	54.0	-0.7	2.53 H	171	18.2	35.1
5	4874.00	50.2 PK	74.0	-23.8	1.92 H	228	36.5	13.7
6	4874.00	38.5 AV	54.0	-15.5	1.92 H	228	24.8	13.7

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	115.4 PK			1.81 V	154	80.4	35.0
2	*2437.00	102.5 AV			1.81 V	154	67.5	35.0
3	2483.90	72.1 PK	74.0	-1.9	1.81 V	154	37.0	35.1
4	2483.90	53.9 AV	54.0	-0.1	1.81 V	154	18.8	35.1
5	4874.00	50.5 PK	74.0	-23.5	1.35 V	233	36.8	13.7
6	4874.00	38.7 AV	54.0	-15.3	1.35 V	233	25.0	13.7

Remarks:

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



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

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	113.0 PK			2.52 H	175	77.8	35.2
2	*2452.00	101.0 AV			2.52 H	175	65.8	35.2
3	2483.50	64.3 PK	74.0	-9.7	2.52 H	175	29.2	35.1
4	2483.50	52.3 AV	54.0	-1.7	2.52 H	175	17.2	35.1
5	4904.00	50.6 PK	74.0	-23.4	1.92 H	228	36.8	13.8
6	4904.00	38.6 AV	54.0	-15.4	1.92 H	228	24.8	13.8

Antenna Polarity & Test Distance : Vertical at 3 m

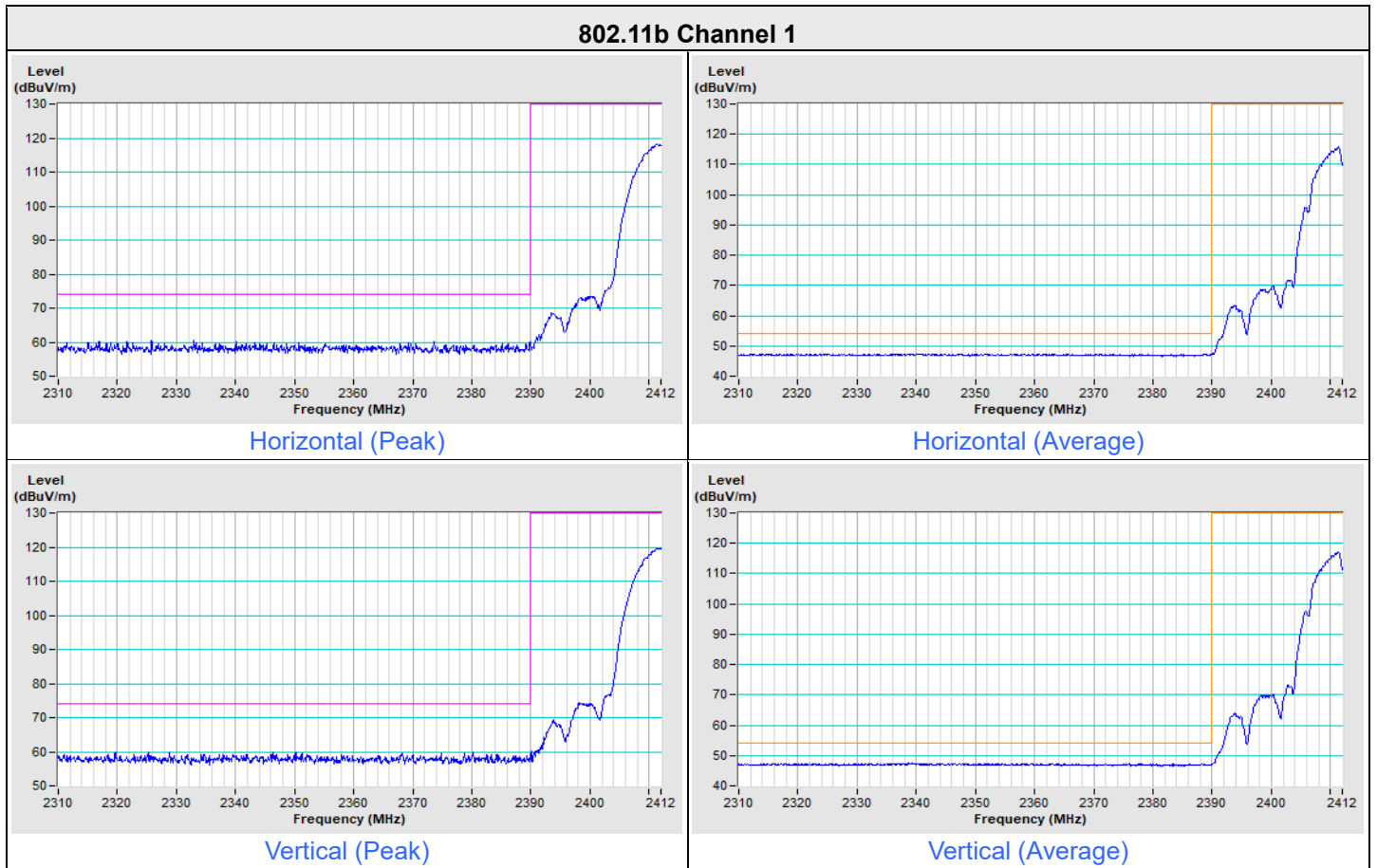
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	115.9 PK			1.90 V	116	80.7	35.2
2	*2452.00	103.2 AV			1.90 V	116	68.0	35.2
3	2483.50	66.3 PK	74.0	-7.7	1.90 V	116	31.2	35.1
4	2483.50	53.9 AV	54.0	-0.1	1.90 V	116	18.8	35.1
5	4904.00	50.8 PK	74.0	-23.2	1.32 V	239	37.0	13.8
6	4904.00	38.9 AV	54.0	-15.1	1.32 V	239	25.1	13.8

Remarks:

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

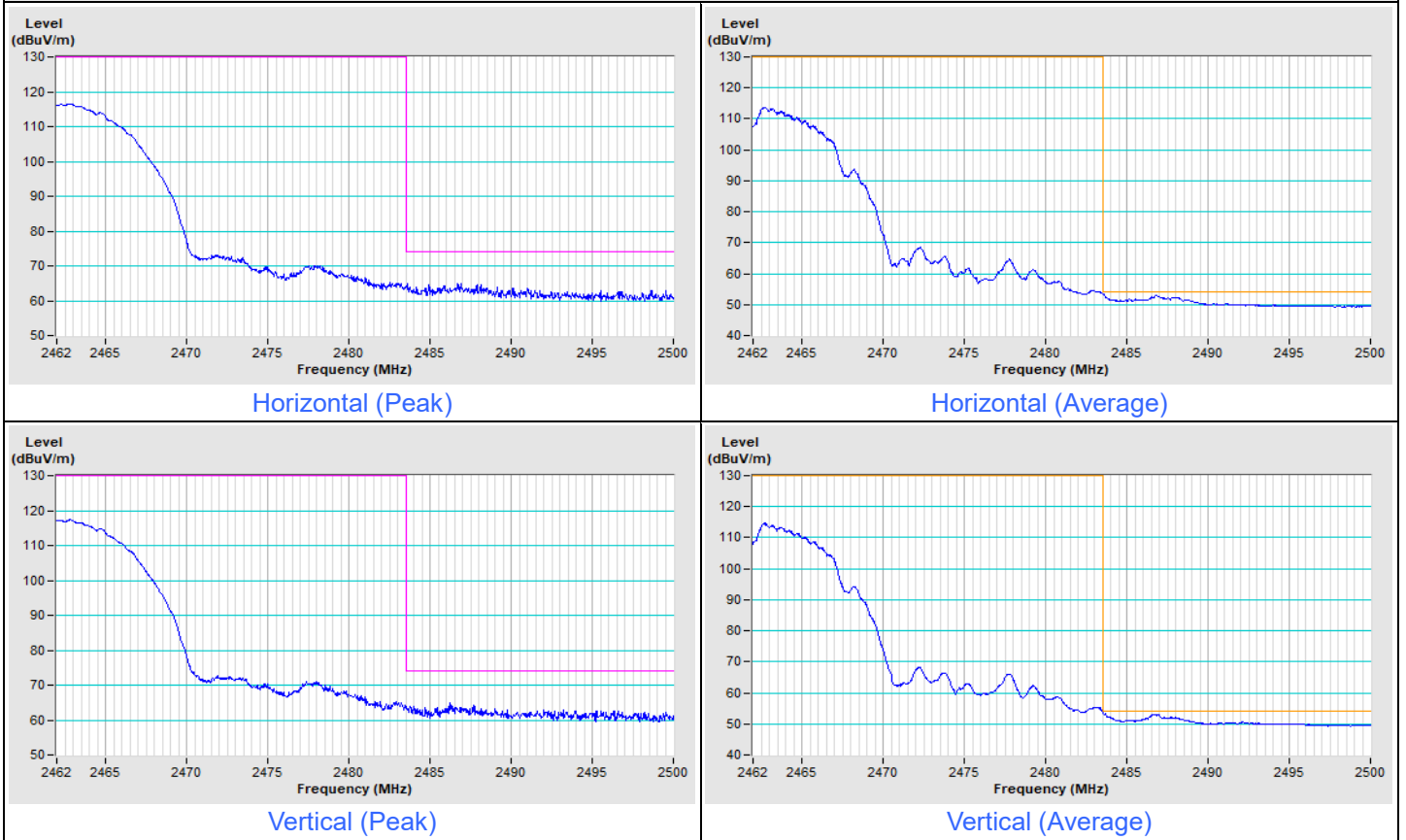
Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.412 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	----------------------	-------------------------------	--



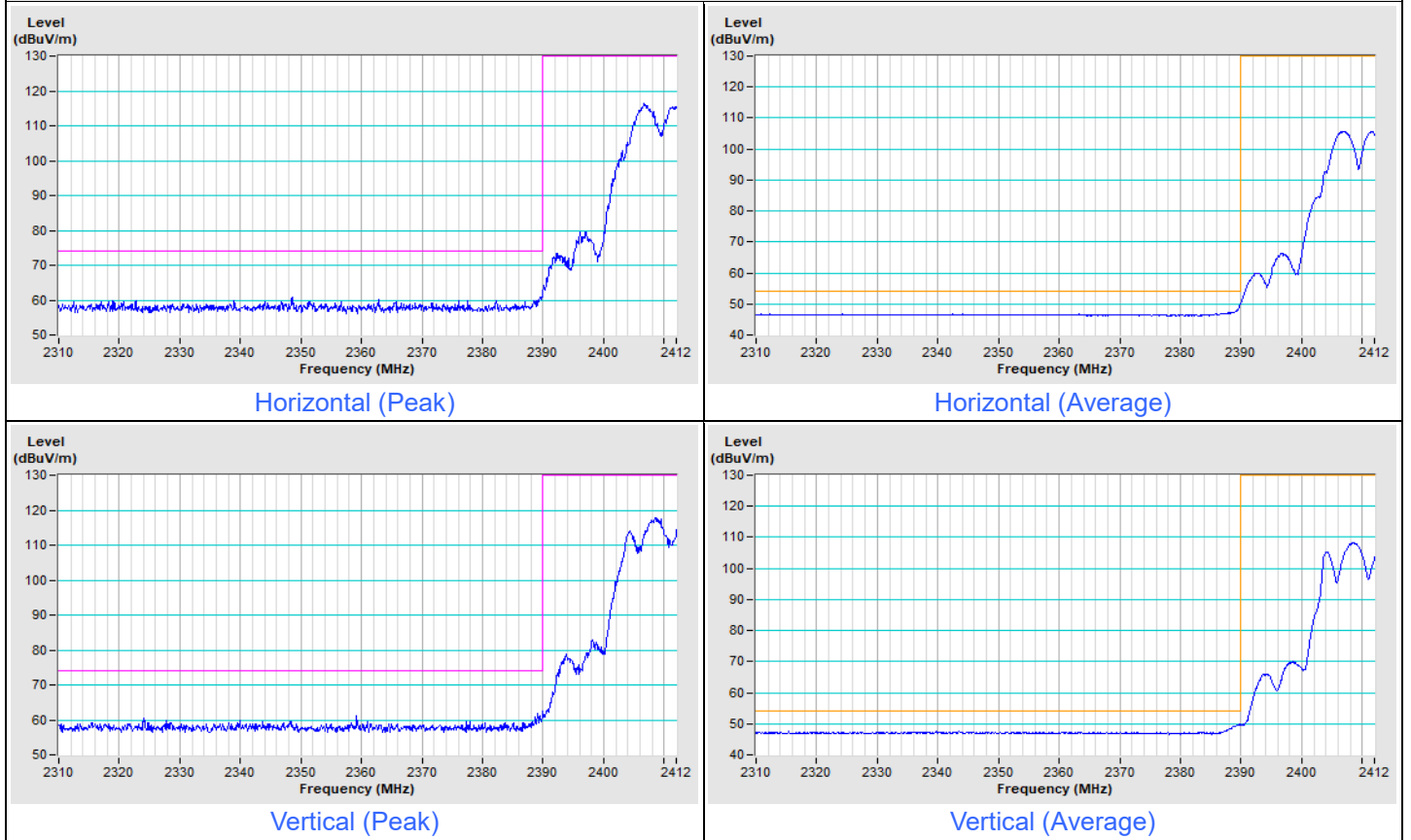
Frequency Range	2.462 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	---------------------	-------------------------------	--

802.11b Channel 11



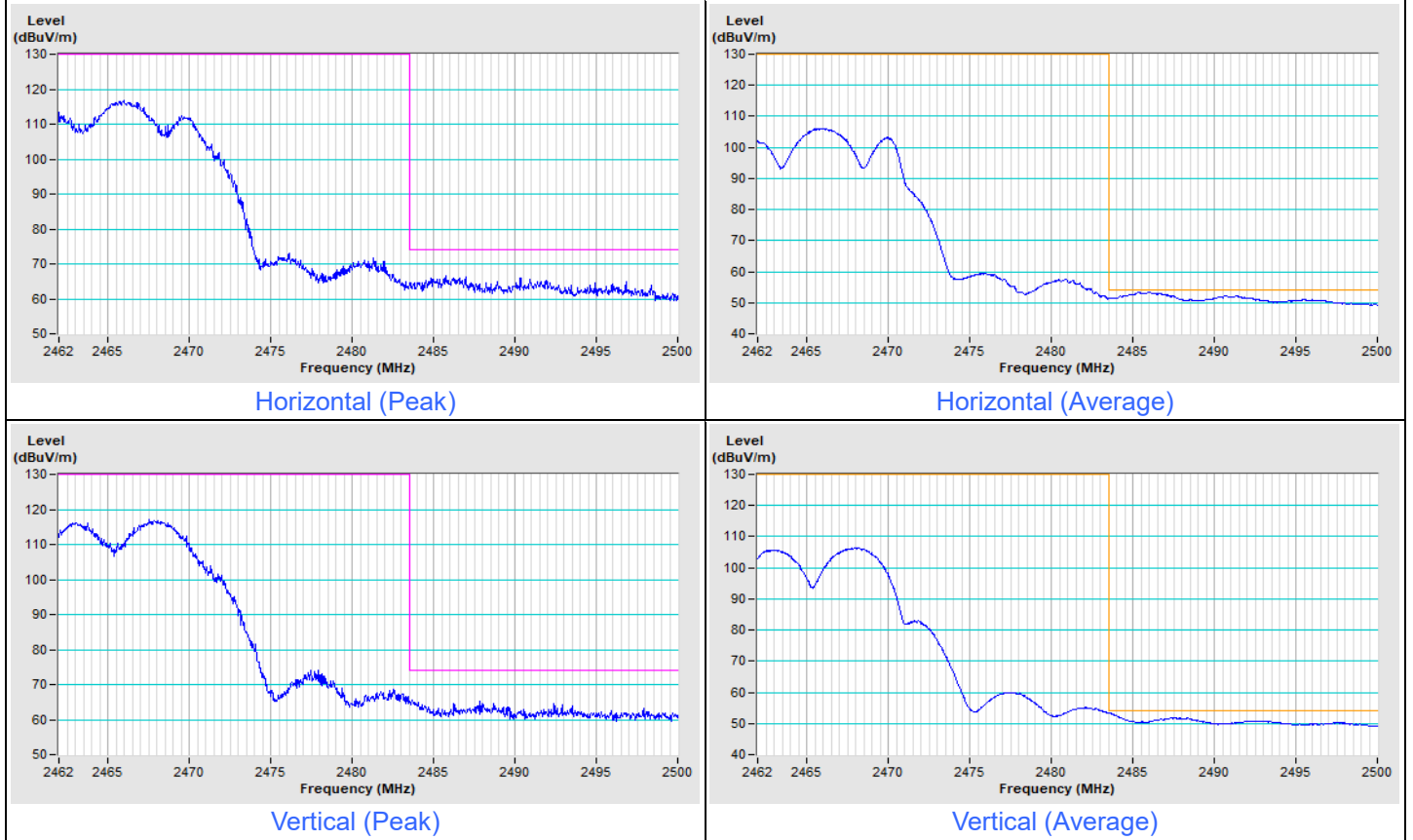
Frequency Range	2.31 GHz ~ 2.412 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	----------------------	-------------------------------	--

802.11g Channel 1



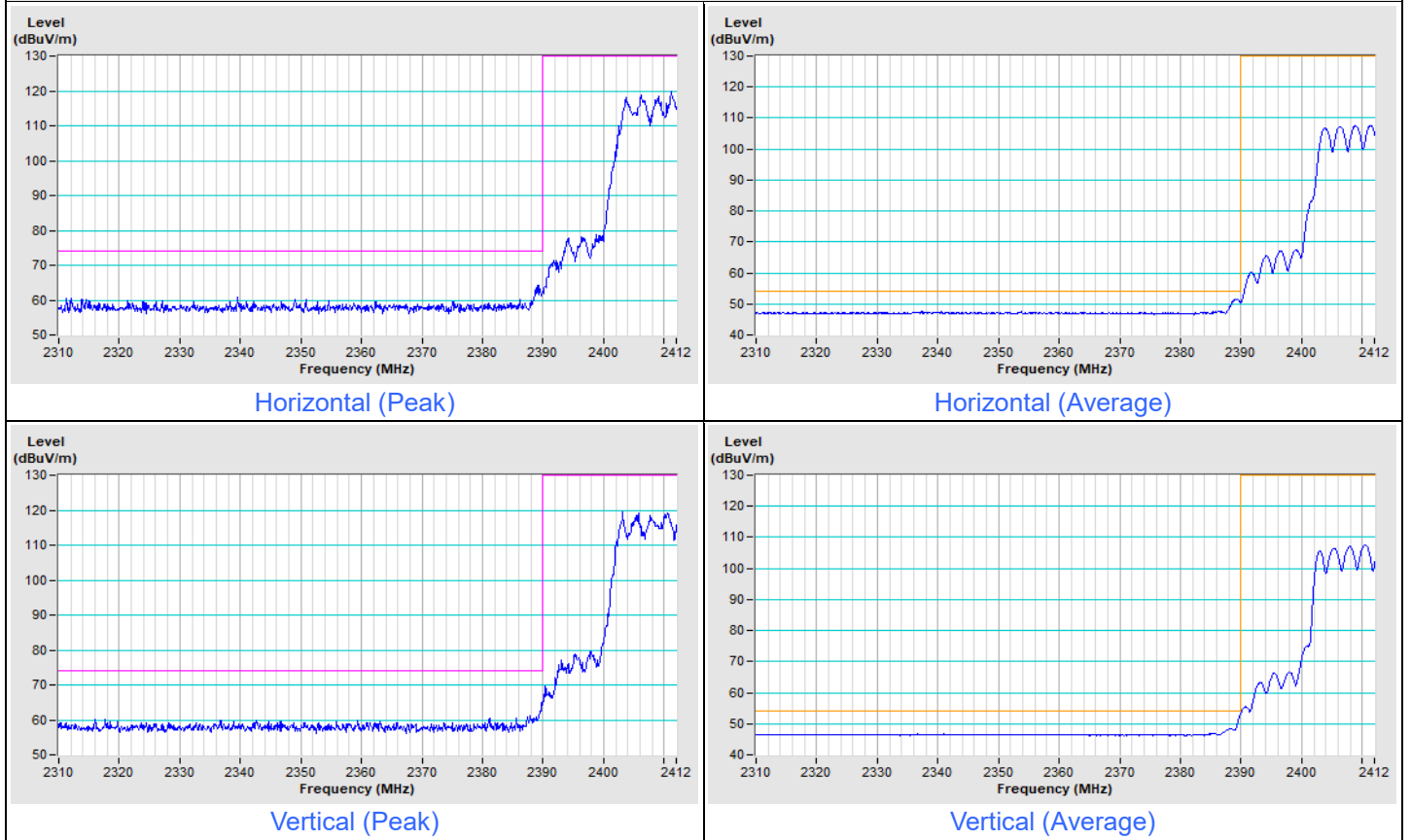
Frequency Range	2.462 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	---------------------	-------------------------------	--

802.11g Channel 11



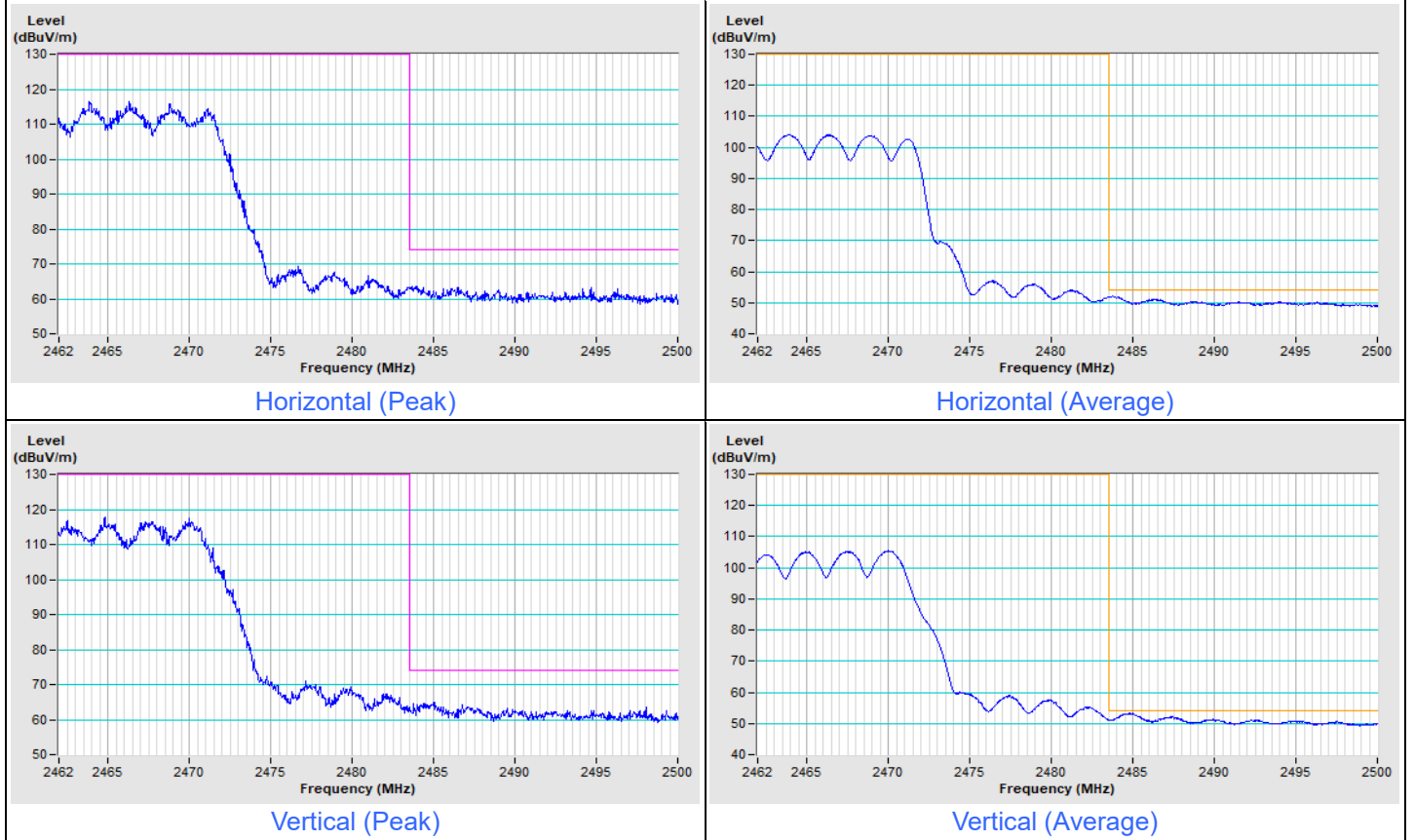
Frequency Range	2.31 GHz ~ 2.412 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	----------------------	-------------------------------	--

802.11be (EHT20) Channel 1



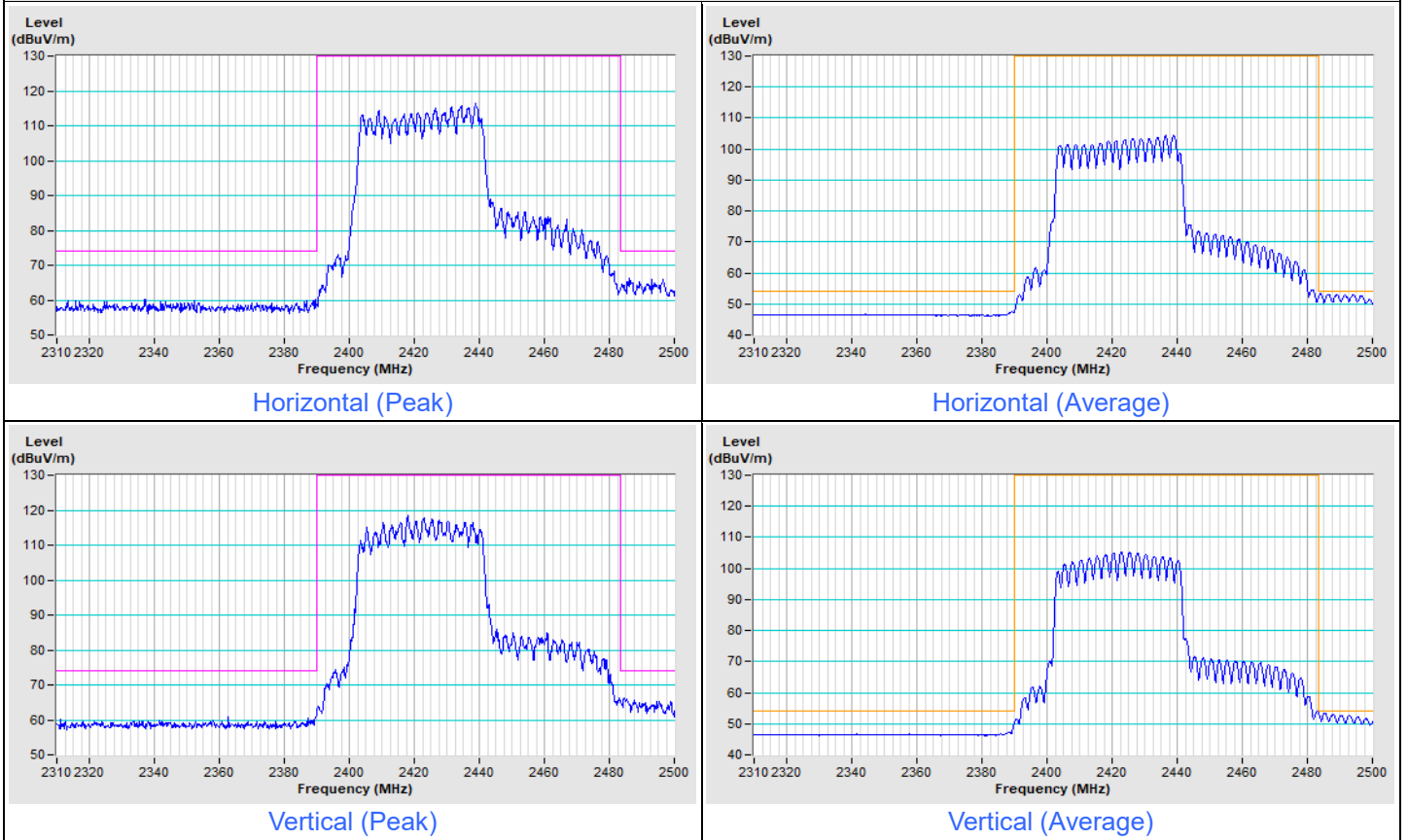
Frequency Range	2.462 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	---------------------	-------------------------------	--

802.11be (EHT20) Channel 11



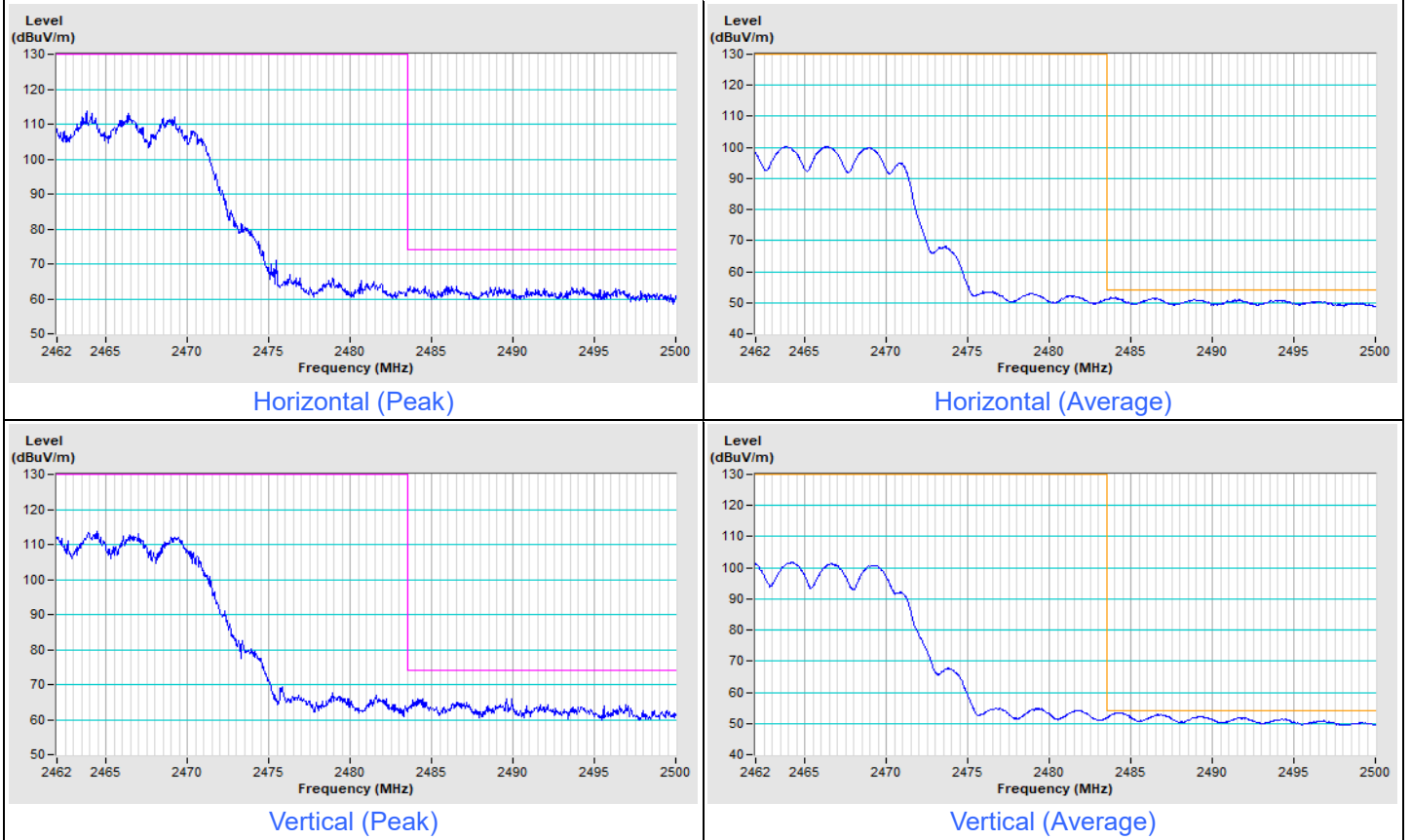
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	--------------------	-------------------------------	--

802.11be (EHT40) Channel 3



Frequency Range	2.462 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
-----------------	---------------------	-------------------------------	--

802.11be (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 ---