

# TEST REPORT

## CERTIFICATE OF CONFORMITY

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

**Report No.:** RFBBQZ-WTW-P24080648

**FCC ID:** PY324400641

**Product:** Orbi Router, Orbi Satellite

**Brand:** NETGEAR

**Model No.:** RBE371

**Series Model:** RBE370

**Received Date:** 2024/10/24

**Test Date:** 2025/2/7 ~ 2025/3/28

**Issued Date:** 2025/5/20

**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., Kwei Shan Dist., Taoyuan City 33383, Taiwan

**FCC Registration / Designation Number:** 788550 / TW0003

**Approved by:** Jeremy Lin, **Date:** 2025/5/20  
Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist



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## Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P24080648	Original release.	2025/5/20

## 1 Certificate

**Product:** Orbi Router, Orbi Satellite

**Brand:** NETGEAR

**Test Model:** RBE371

**Series Model:** RBE370

**Sample Status:** Engineering sample

**Applicant and  
Manufacturer:** NETGEAR, Inc.

**Test Date:** 2025/2/7 ~ 2025/3/28

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

**Measurement** ANSI C63.10-2013

**procedure:**

KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

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

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -12.22 dB at 0.18200 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.7 dB at 36.79 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 2390.00 MHz and 2487.60 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:

Parameter	Specification	Uncertainty (±)
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	Orbi Router, Orbi Satellite
Brand	NETGEAR
Test Model	RBE371
Series Model	RBE370
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	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 300 Mbps VHT: up to 400 Mbps 802.11ax: up to 573.5 Mbps 802.11be: up to 688.2 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	847.322 mW (29.28 dBm)

Note:

1. All models are listed as below.

Product Description	Model	Difference
Orbi Router	RBE371	DFS mode: Master mode NAND Flash 512 MB 2.5G Ethernet port *1 2.5G Internet port *1
Orbi Satellite	RBE370	DFS mode: Mesh mode NAND Flash 256 MB 2.5G Ethernet port *1

\*RBE371 and RBE370 share same PCB/layout/antenna design.

2. The EUT uses following accessories.

AC Adapter 1	Brand	NETGEAR
	Model	ADS-18FQC-12 12018E
	Part Number	332-11762-01
	AC Input	100-240 Vac, 50/60 Hz, 0.7 A
	DC Output	12 Vdc, 1.5 A
	DC Output Cable	1.8 m non-shielded and without core
AC Adapter 2	Brand	NETGEAR
	Model	2AAJ018FC
	Part Number	332-11757-01
	AC Input	100-240 Vac, 50/60 Hz, 0.6 A
	DC Output	12 Vdc, 1.5 A
	DC Output Cable	1.85 m non-shielded and without core
Ethernet Cable	Brand	NETGEAR
	Signal Line	1.97 m non-shielded and without core

3. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4 GHz)	WLAN (5 GHz / 5.9 GHz)

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

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	5.95
5150~5250 MHz	6.02
5250~5350 MHz	6.06
5470~5725 MHz	6.09
5725~5850 MHz	6.12

\*The detailed antenna information, please refer to the BV CPS Directional Gain Measurement Report no.: RFBBQZ-WTW-P24080648-5.

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:

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

### 3.3 Channel List

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20), 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. For Unwanted Emission (below 1GHz) and AC Power Conducted Emissions items: AC Adapter 1 and AC Adapter 2. Pre-scan these modes and find the worst case as a representative test condition. 2. 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 Worst Condition: AC Adapter 2 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	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	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	B	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
6 dB Bandwidth / Conducted Out of Band Emissions	B	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	A, B	802.11b	CDD	6	DBPSK	1Mb/s
Unwanted Emissions below 1 GHz	A, B	802.11b	CDD	6	DBPSK	1Mb/s
Unwanted Emissions above 1 GHz	B	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
EUT Configure Mode:	A	EUT (Model: RBE370) powered by AC Adapter 2				
	B	EUT (Model: RBE371) powered by AC Adapter 2				

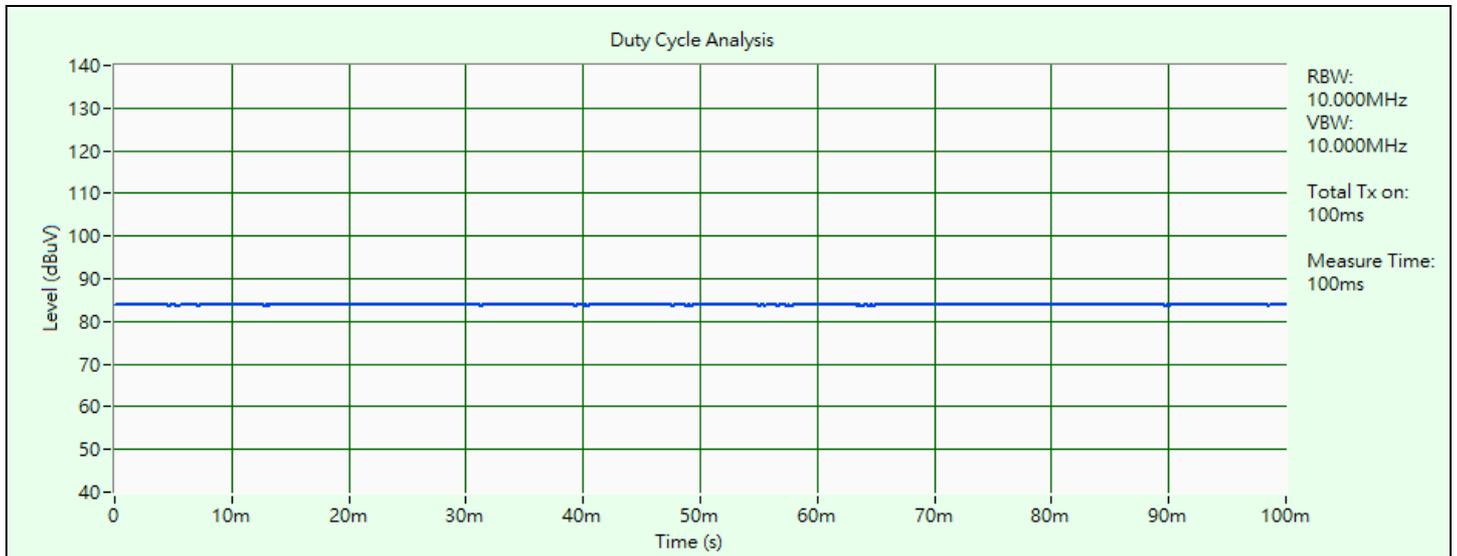
### 3.5 Duty Cycle of Test Signal

**802.11b:** Duty cycle = 100 ms / 100 ms x 100% = 100.0%

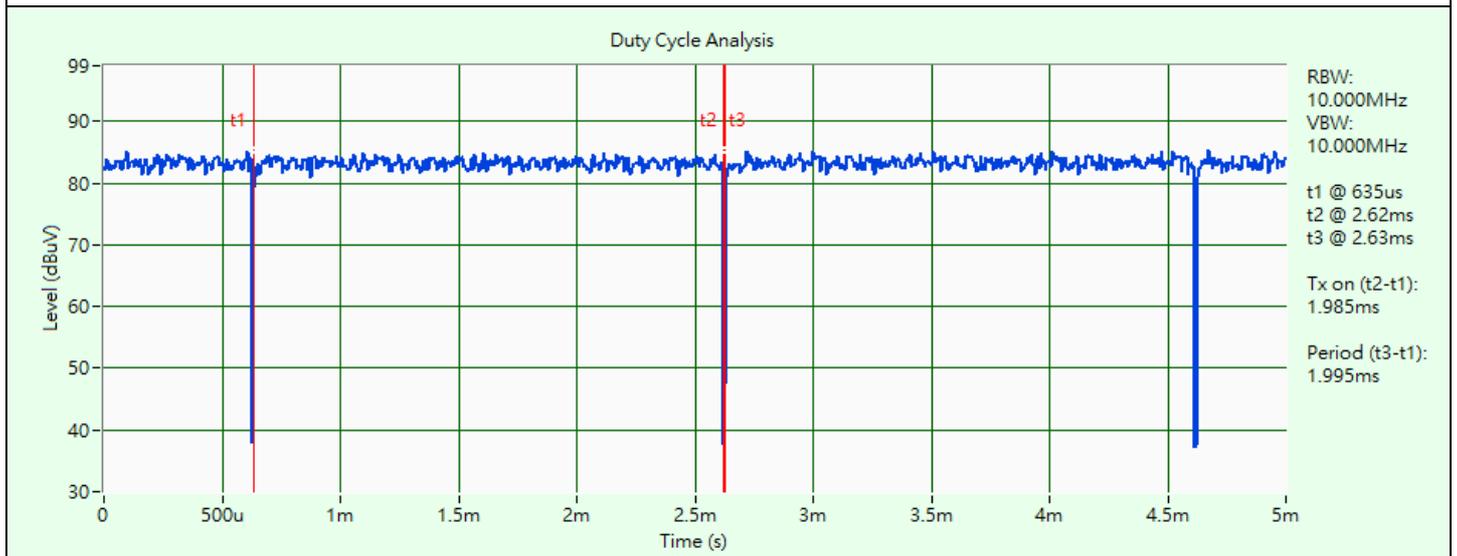
**802.11g:** Duty cycle = 1.985 ms / 1.995 ms x 100% = 99.5%

**802.11be (EHT20):** Duty cycle = 5.48 ms / 5.62 ms x 100% = 97.5%, duty factor = 10 \* log (1/Duty cycle) = 0.11 dB

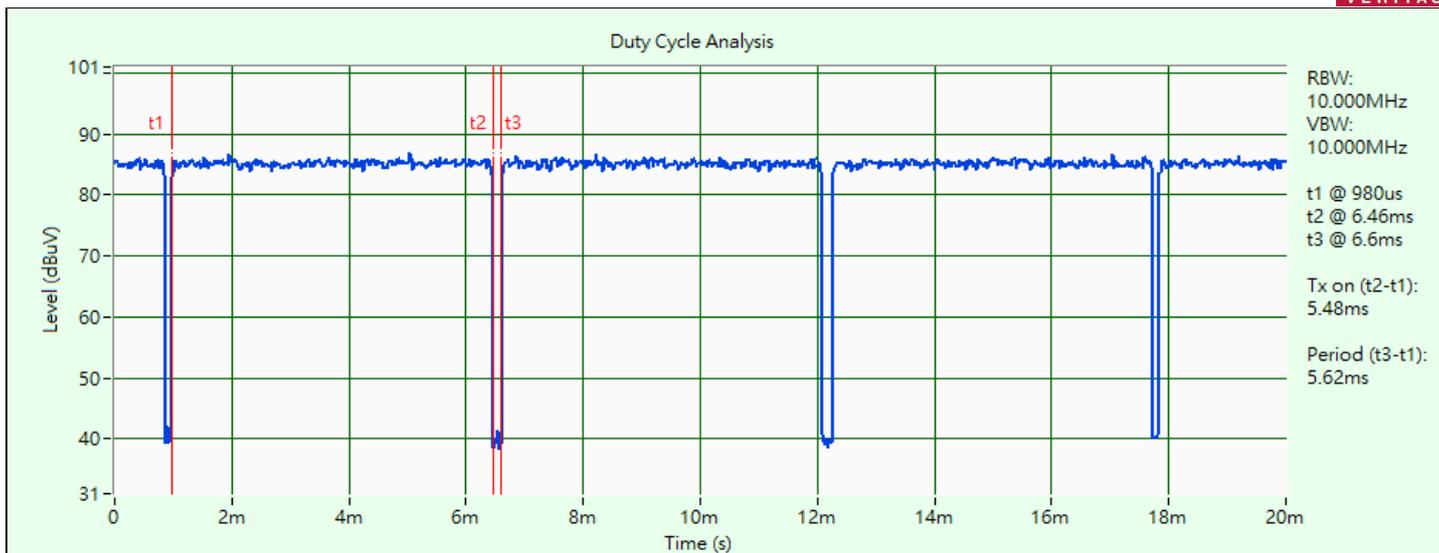
**802.11be (EHT40):** Duty cycle = 5.48 ms / 5.52 ms x 100% = 99.3%



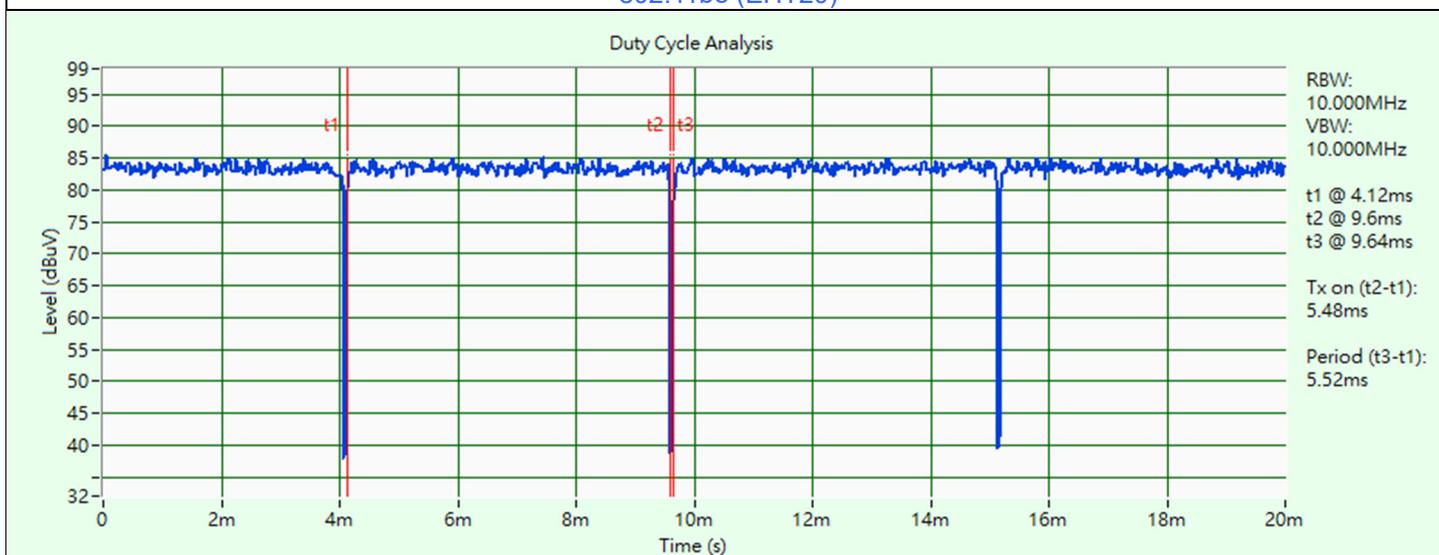
802.11b



802.11g



802.11be (EHT20)



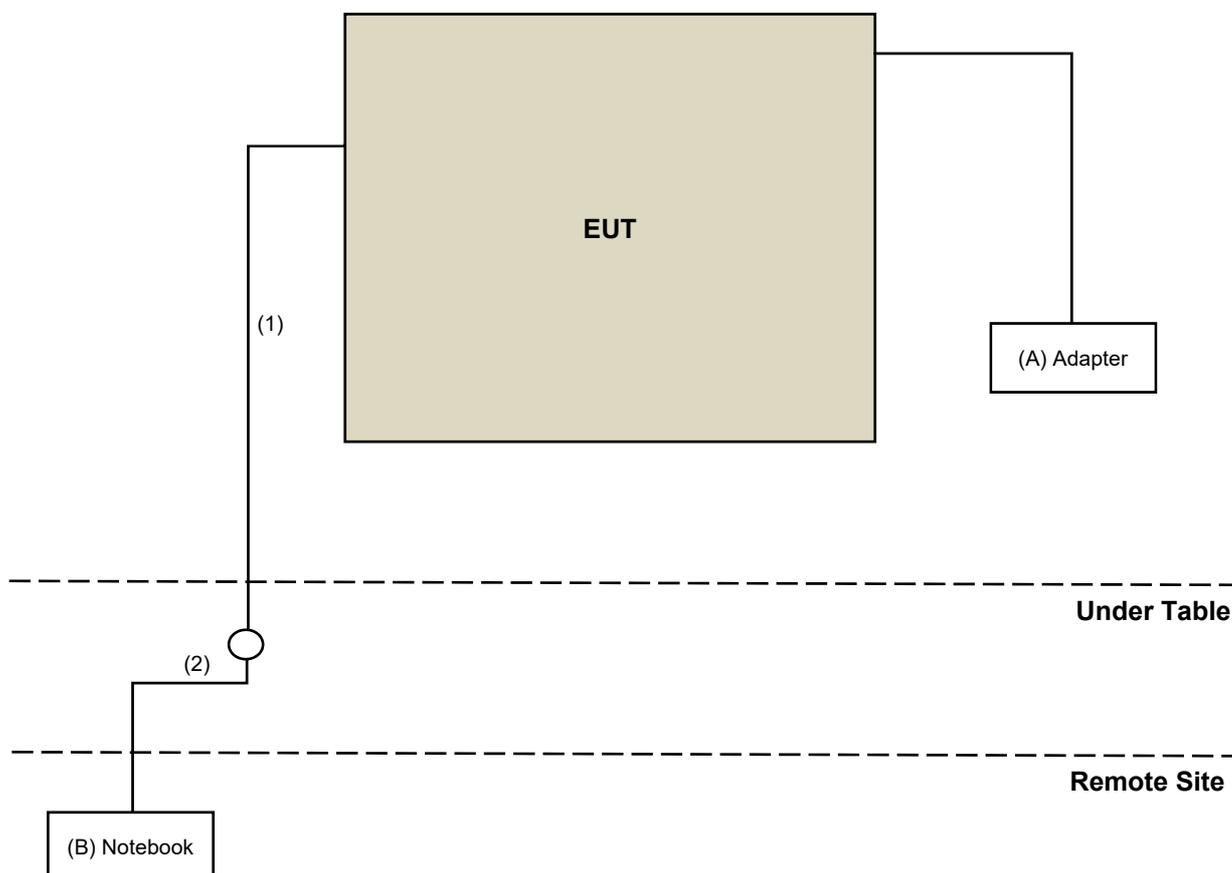
802.11be (EHT40)

### 3.6 Test Program Used and Operation Descriptions

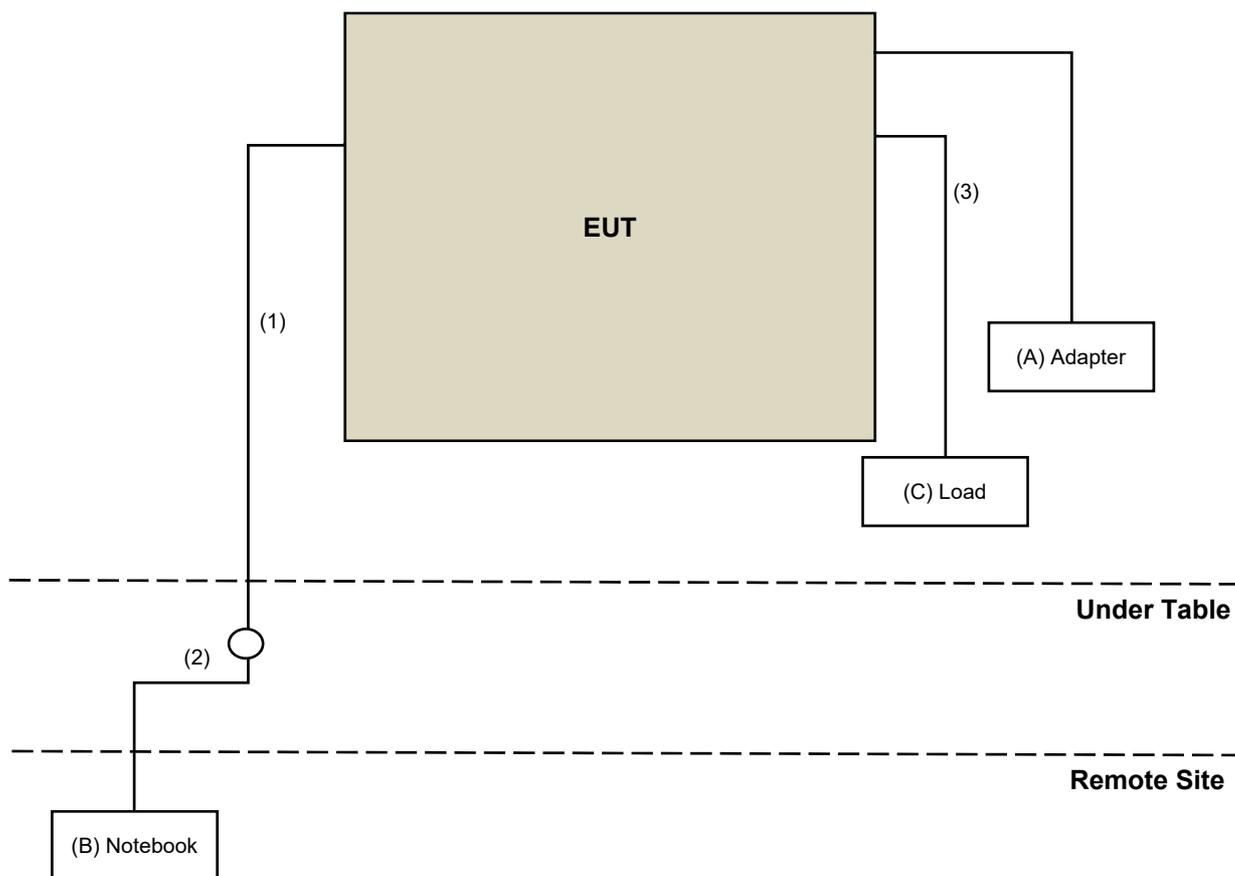
Controlling software QSPR Version 5.0-00202 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

### 3.7 Connection Diagram of EUT and Peripheral Devices

Test Mode A



Test Mode B



**3.8 Configuration of Peripheral Devices and Cable Connections**

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	NETGEAR	2AAJ018FC	N/A	N/A	Supplied by applicant
B	Notebook	DELL	E5430	2RL3YW1	N/A	Provided by Lab
C	Load	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	1.97	N	0	Supplied by applicant
2	RJ-45 Cable	1	10	N	0	Provided by Lab
3	RJ-45 Cable	1	1.5	N	0	Provided by Lab

## 4 Test Instruments

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

### 4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000538	2024/4/29	2025/4/28
Wideband Power Sensor Keysight	N1923A	MY58200003	2024/6/17	2025/6/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/3/28

### 4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101504	2024/6/18	2025/6/17
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/3/28

### 4.3 6 dB Bandwidth

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

### 4.4 Conducted Out of Band Emissions

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

#### 4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2024/11/28	2025/11/27
	E1-011280	05	2024/11/28	2025/11/27
	E1-011311	09	2024/11/28	2025/11/27
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESCI	100613	2024/11/25	2025/11/24
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2025/1/5	2026/1/4
LISN R&S	ENV216	101826	2024/3/25	2025/3/24
	ESH3-Z5	100311	2024/9/5	2025/9/4
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2025/1/5	2026/1/4
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2025/3/5

#### 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	2024/10/14	2025/10/13
EMI Test Receiver R&S	ESR3	102782	2024/12/10	2025/12/9
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
Preamplifier Agilent	8447D	2944A10631	2024/5/1	2025/4/30
Preamplifier EMCI	EMC001340	980201	2024/9/24	2025/9/23
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2024/7/6	2025/7/5
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: 2025/3/4

#### 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	2024/12/10	2025/12/9
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2024/11/10	2025/11/9
	BBHA 9170	9170-480	2024/11/10	2025/11/9
		BBHA9170241	2024/10/18	2025/10/17
		BBHA9170243	2024/11/10	2025/11/9
Preamplifier EMCI	EMC 184045	980116	2024/9/24	2025/9/23
Preamplifier Keysight	83017A	MY53270295	2024/5/1	2025/4/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2024/5/1	2025/4/30
		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: 2025/2/7 ~ 2025/3/13

## 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  $\geq 40$  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

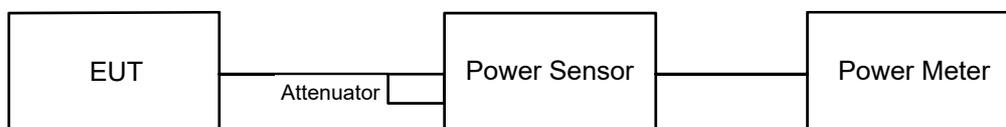
Notes:

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



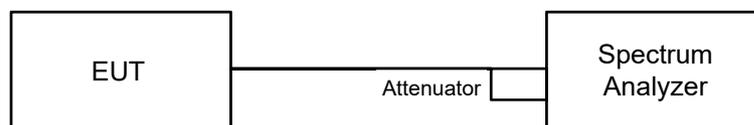
#### 6.1.2 Test Procedure

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



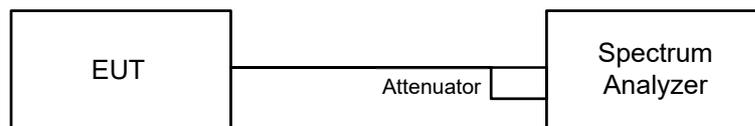
#### 6.2.2 Test Procedure

- 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

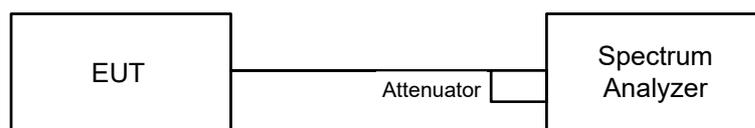


#### 6.3.2 Test Procedure

- 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

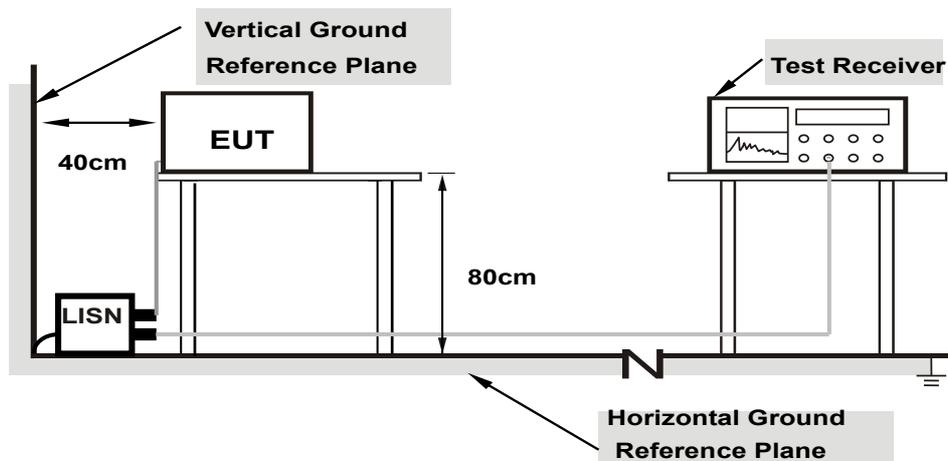
- Set the RBW = 100 kHz.
- Set the VBW  $\geq 300$  kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

##### MEASUREMENT PROCEDURE OOB

- Set RBW = 100 kHz.
- Set VBW  $\geq 300$  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

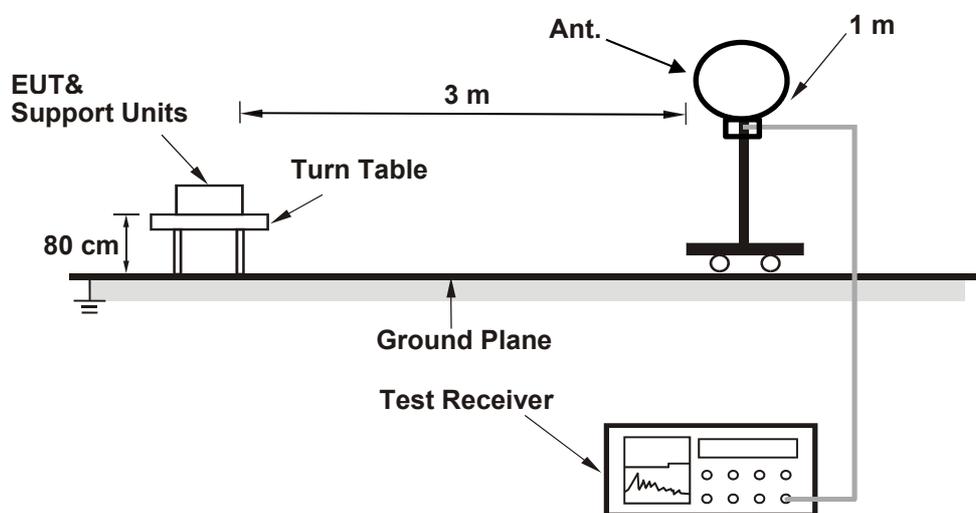
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

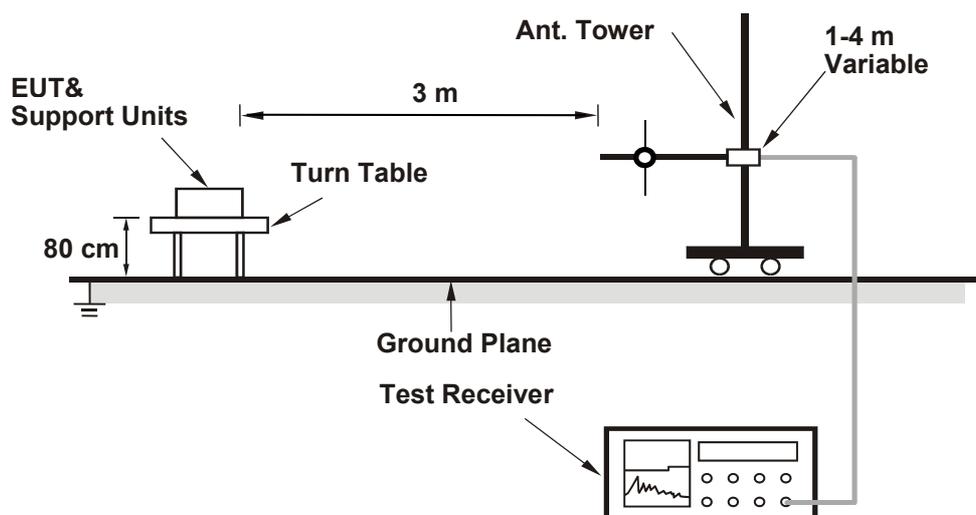
## 6.6 Unwanted Emissions below 1 GHz

### 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

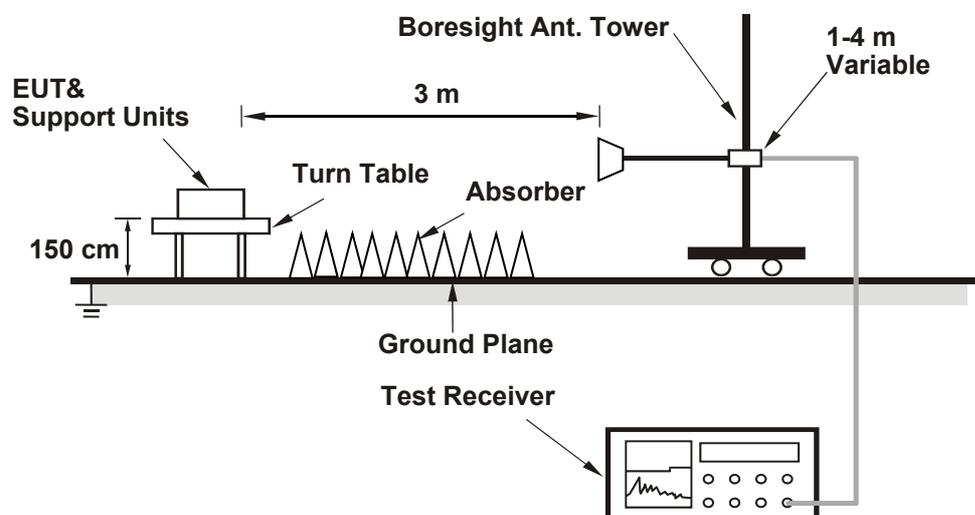
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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:	Ivan Tseng
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#### 802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	25.95	26.34	824.077	29.16	30	Pass
6	2437	26.23	26.31	847.322	29.28	30	Pass
11	2462	25.24	25.75	710.032	28.51	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.24 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	24.01	23.66	484.041	26.85	30	Pass
6	2437	25.46	25.68	721.389	28.58	30	Pass
11	2462	22.76	23.92	435.403	26.39	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.24 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	24.15	23.78	498.797	26.98	30	Pass
6	2437	24.42	24.51	559.182	27.48	30	Pass
11	2462	22.82	24.02	443.774	26.47	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.24 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	22.79	22.98	388.717	25.90	30	Pass
6	2437	23.54	23.98	475.978	26.78	30	Pass
9	2452	22.15	21.75	313.683	24.96	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.24 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				
1	2412	24.15	23.78	498.797	26.98	30	Pass
6	2437	24.42	24.51	559.182	27.48	30	Pass
11	2462	22.82	24.02	443.774	26.47	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 5.95 dBi < 6 dBi, so the output power limit shall not be reduced.

### 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				
3	2422	22.79	22.98	388.717	25.90	30	Pass
6	2437	23.54	23.98	475.978	26.78	30	Pass
9	2452	22.15	21.75	313.683	24.96	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 5.95 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:	Ivan Tseng
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### 802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-2.12	-1.80	1.05	8	Pass
6	2437	-1.89	-1.82	1.16	8	Pass
11	2462	-2.45	-2.11	0.73	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 5.95 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	-7.18	-7.34	-4.25	8	Pass
6	2437	-5.23	-5.19	-2.20	8	Pass
11	2462	-8.20	-7.11	-4.61	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 5.95 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11be (EHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1				
1	2412	-10.09	-10.22	0.11	-7.14	8	Pass
6	2437	-9.97	-9.91	0.11	-6.93	8	Pass
11	2462	-10.95	-10.04	0.11	-7.46	8	Pass

#### Notes:

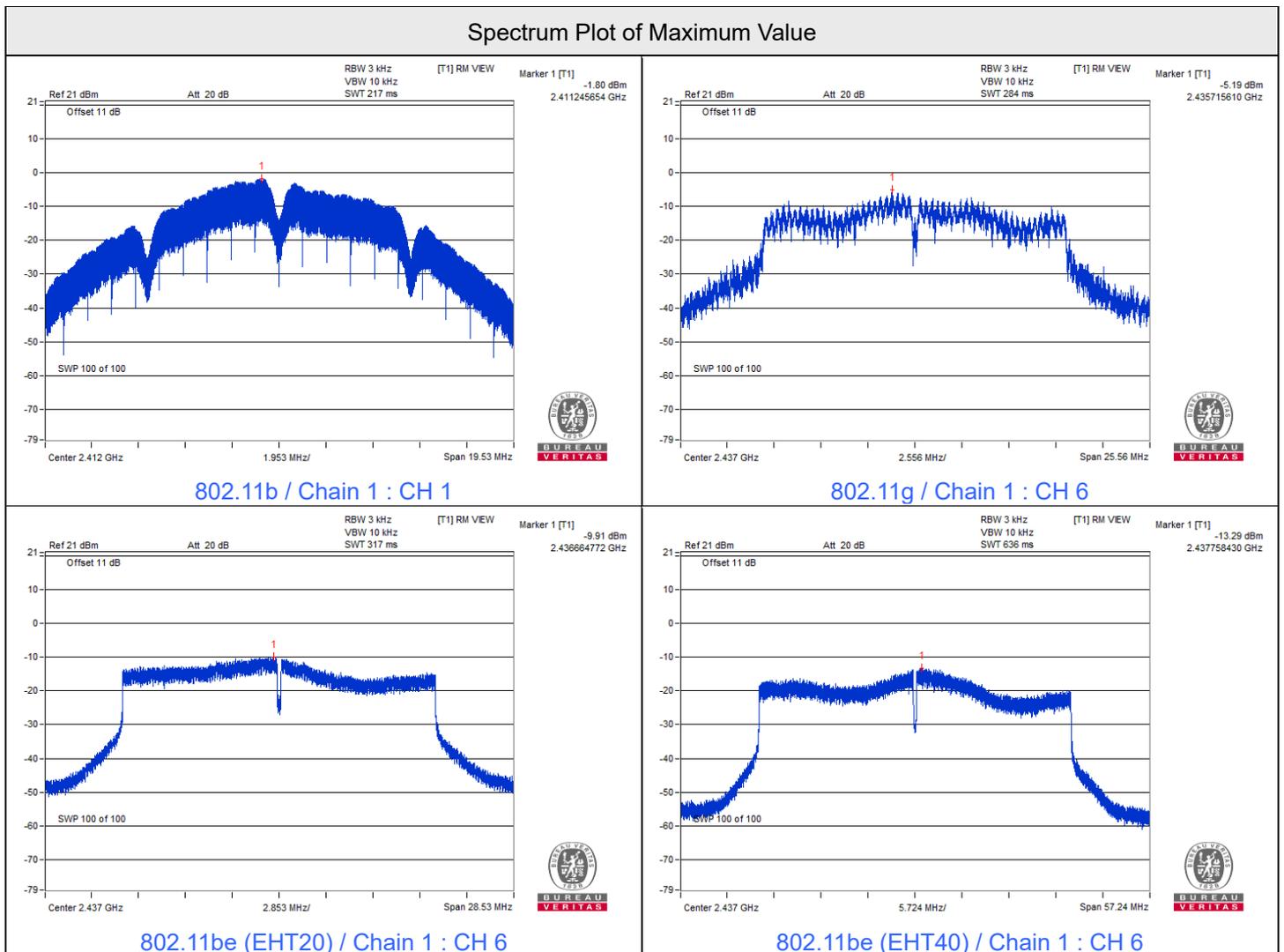
1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 5.95 dBi < 6 dBi, so the power density 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	-14.14	-13.96	-11.04	8	Pass
6	2437	-13.65	-13.29	-10.46	8	Pass
9	2452	-14.95	-15.21	-12.07	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 5.95 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:	Ivan Tseng
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#### 802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	7.09	7.18	0.5	Pass
6	2437	8.07	7.13	0.5	Pass
11	2462	7.66	8.59	0.5	Pass

#### 802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	15.08	15.09	0.5	Pass
6	2437	15.10	15.13	0.5	Pass
11	2462	15.11	13.89	0.5	Pass

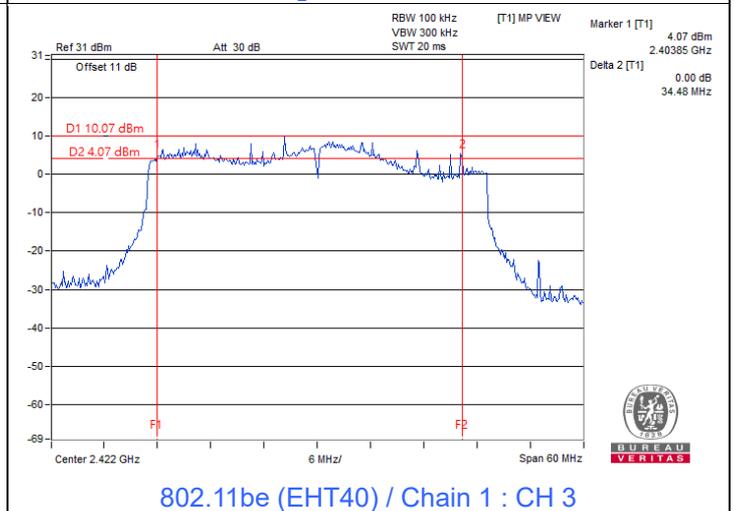
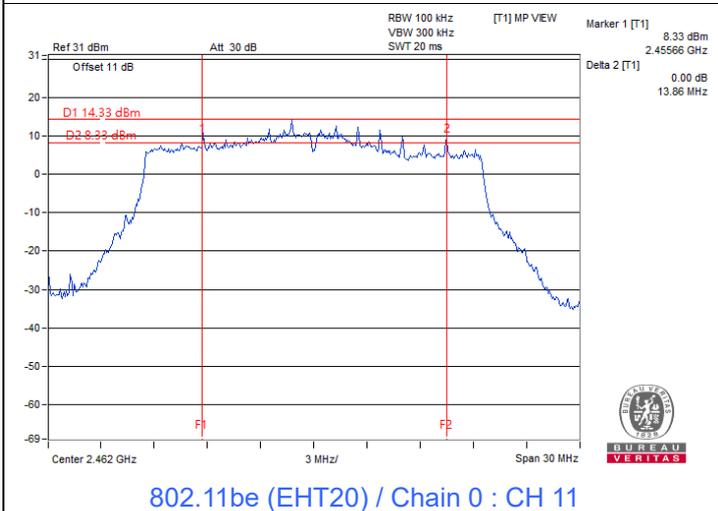
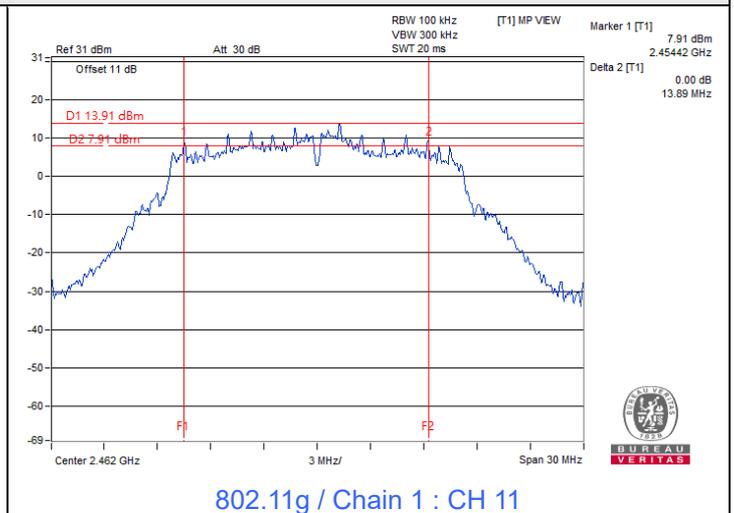
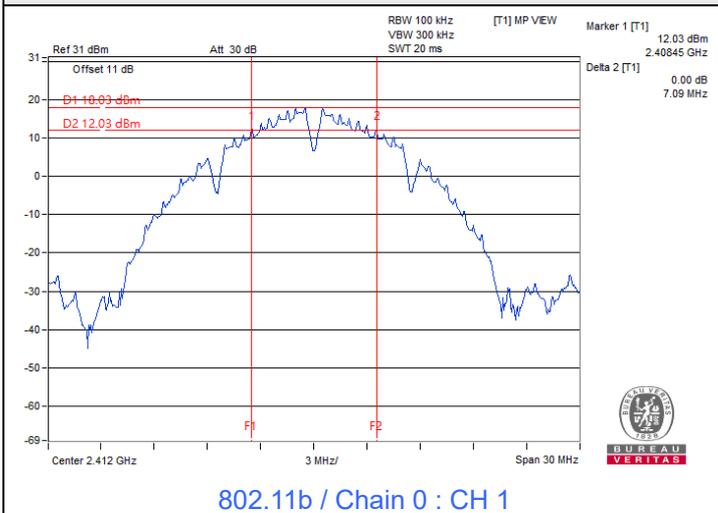
#### 802.11be (EHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	15.14	15.09	0.5	Pass
6	2437	15.07	15.10	0.5	Pass
11	2462	13.86	15.16	0.5	Pass

#### 802.11be (EHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	35.13	34.48	0.5	Pass
6	2437	35.17	34.98	0.5	Pass
9	2452	35.21	35.46	0.5	Pass

### Spectrum Plot of Minimum Value



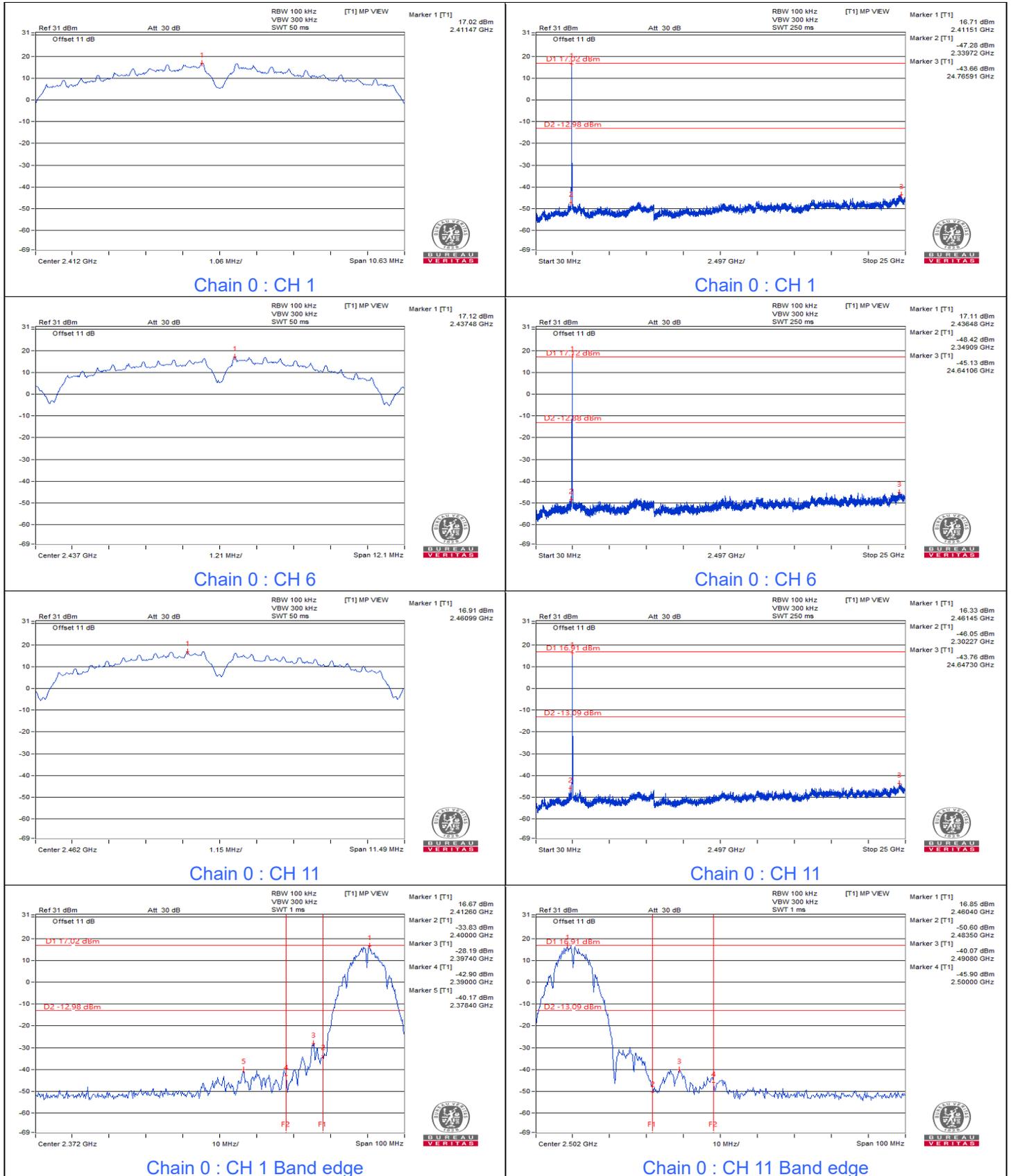


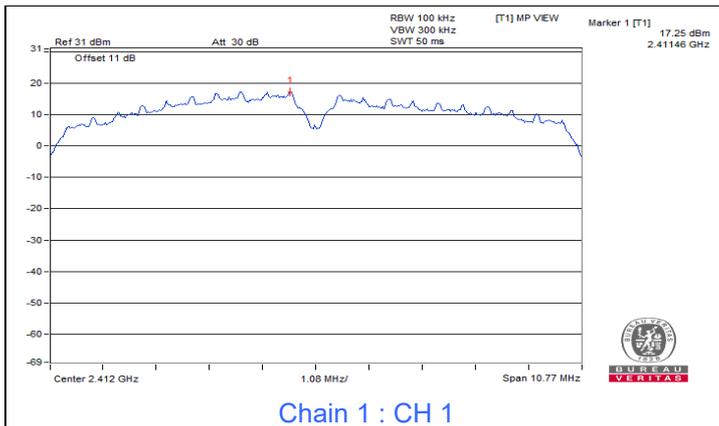
BUREAU VERITAS

### 7.4 Conducted Out of Band Emissions

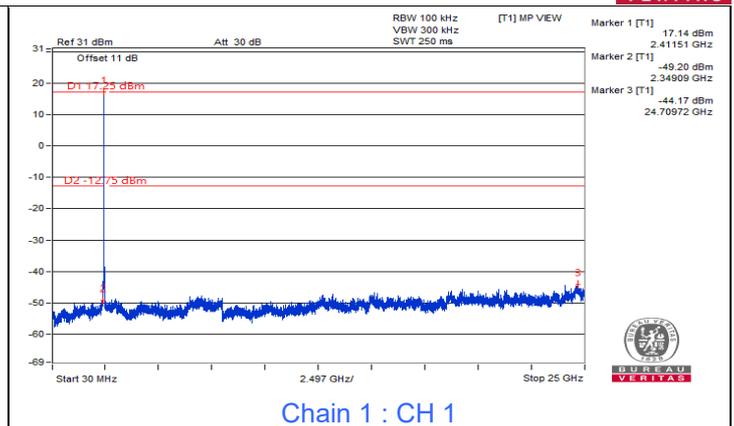
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng
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#### 802.11b

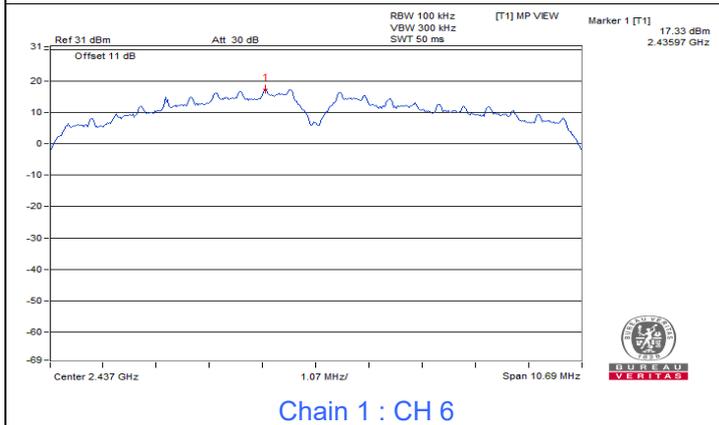




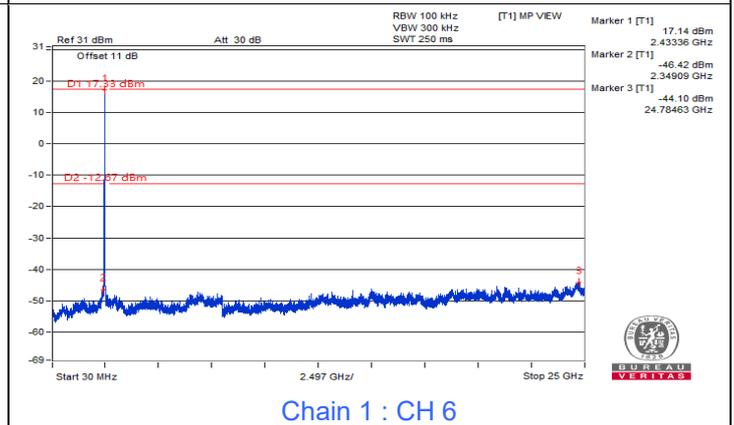
Chain 1 : CH 1



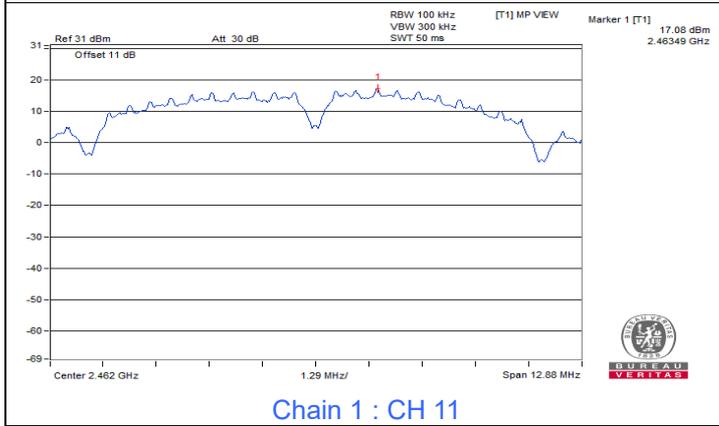
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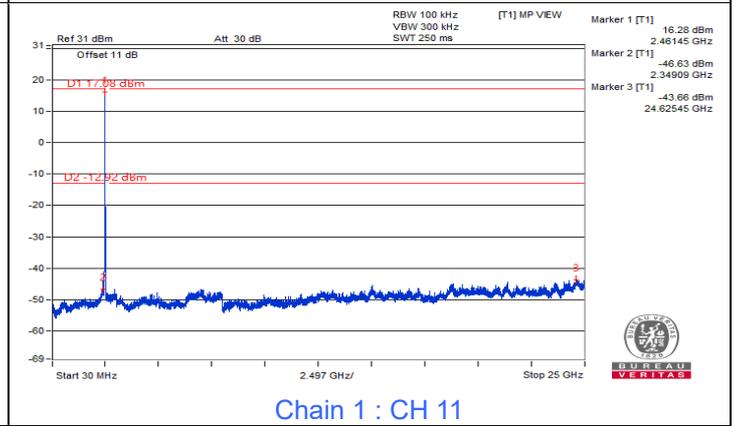
Chain 1 : CH 6



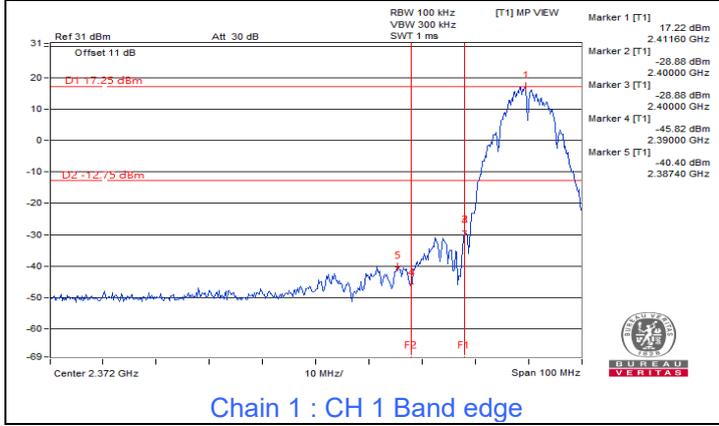
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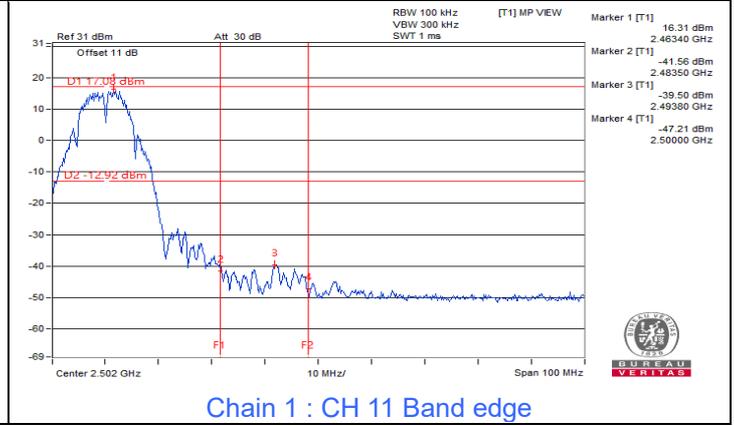
Chain 1 : CH 11



Chain 1 : CH 11



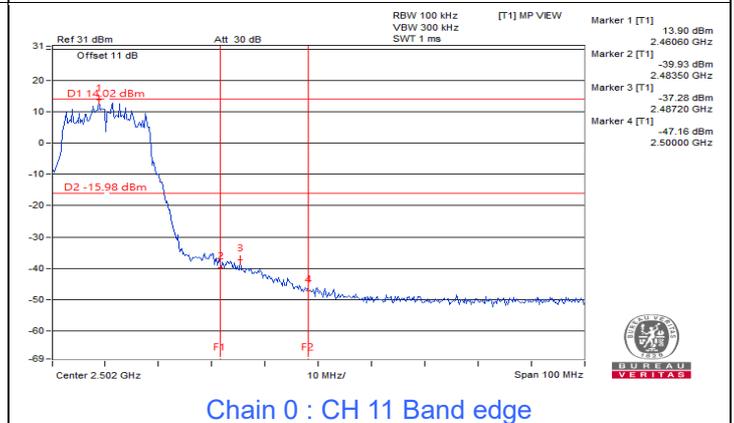
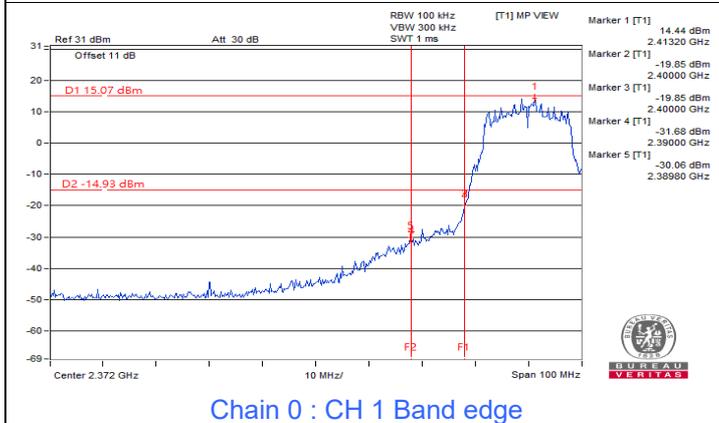
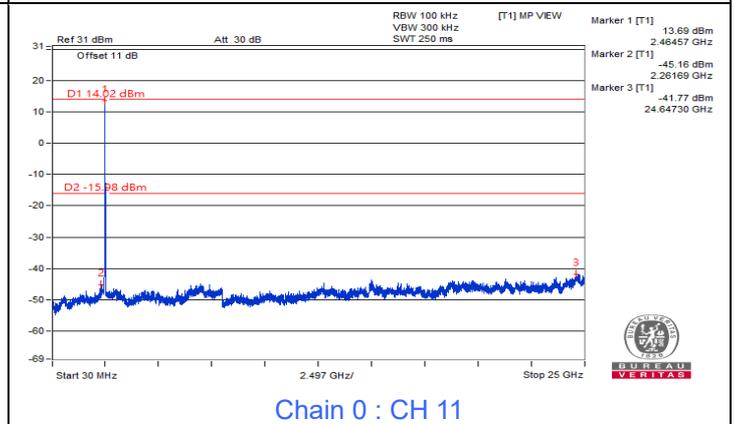
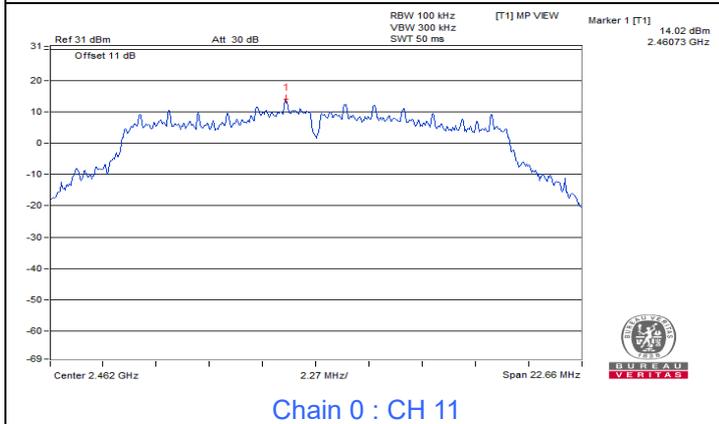
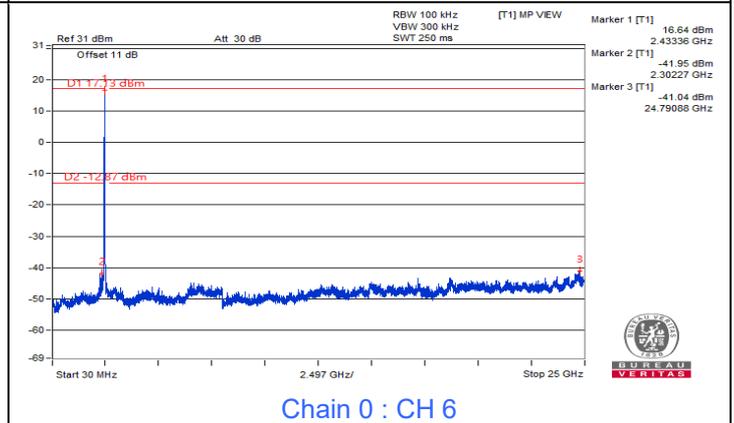
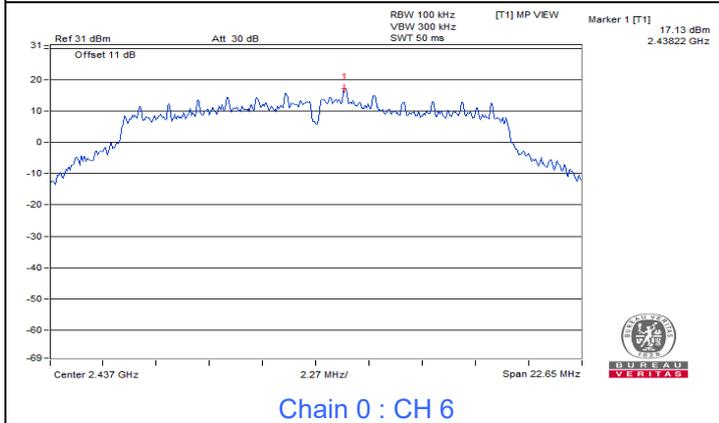
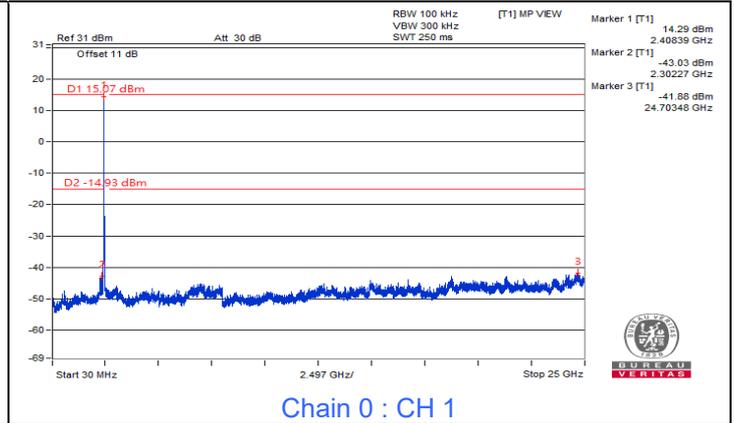
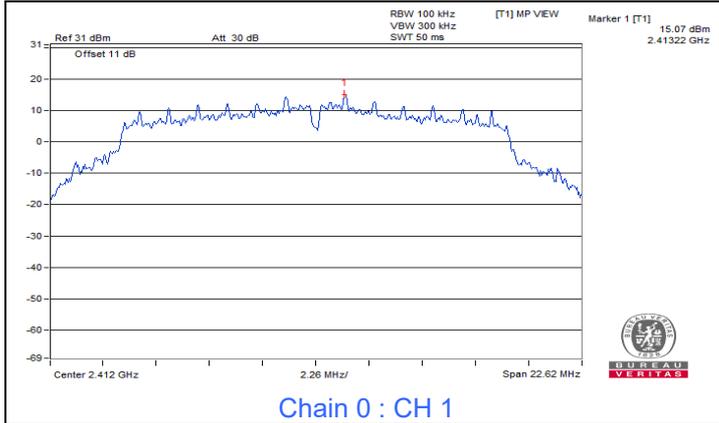
Chain 1 : CH 1 Band edge

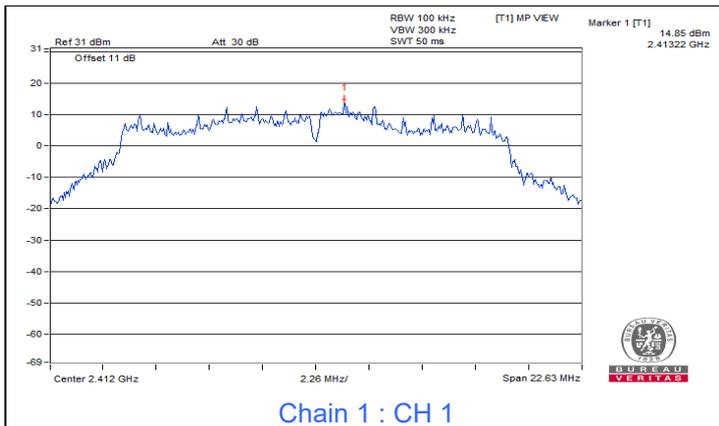


Chain 1 : CH 11 Band edge

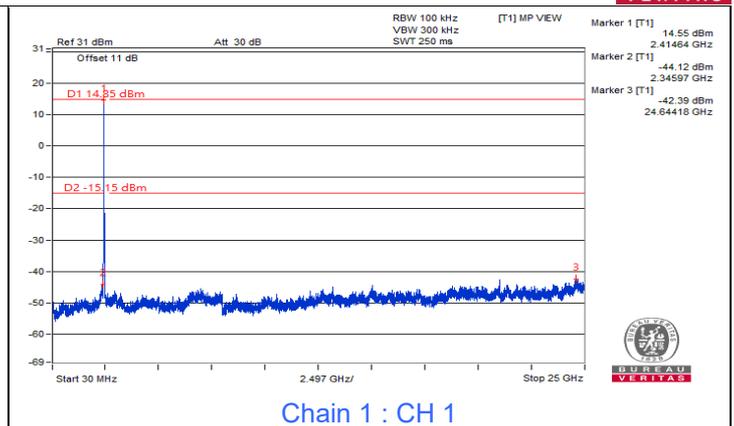


802.11g

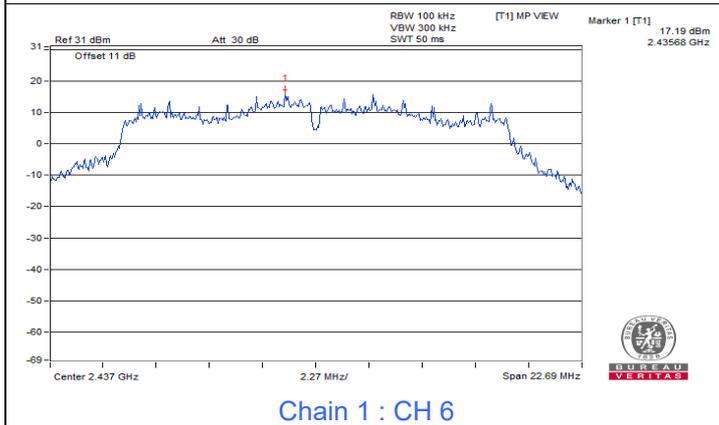




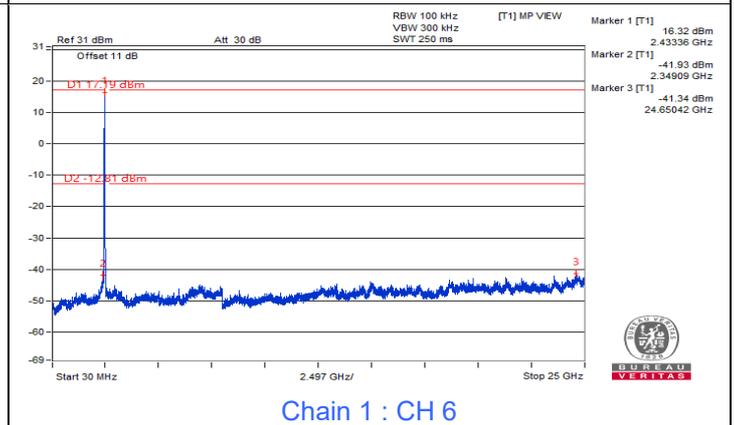
Chain 1 : CH 1



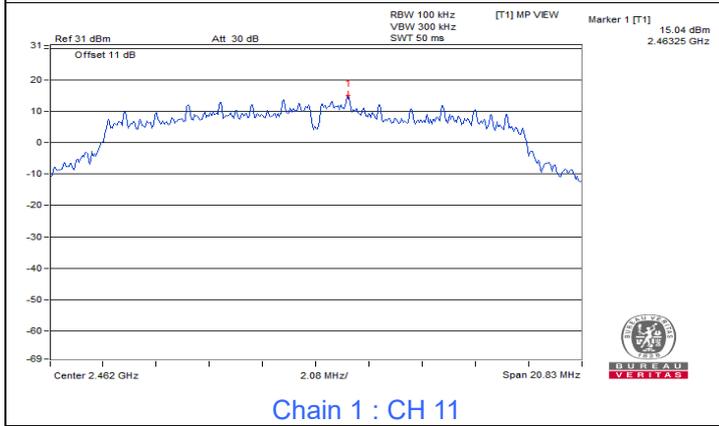
Chain 1 : CH 1



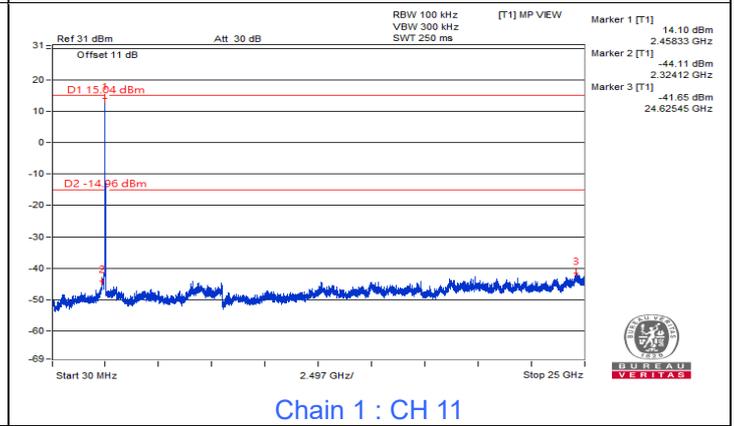
Chain 1 : CH 6



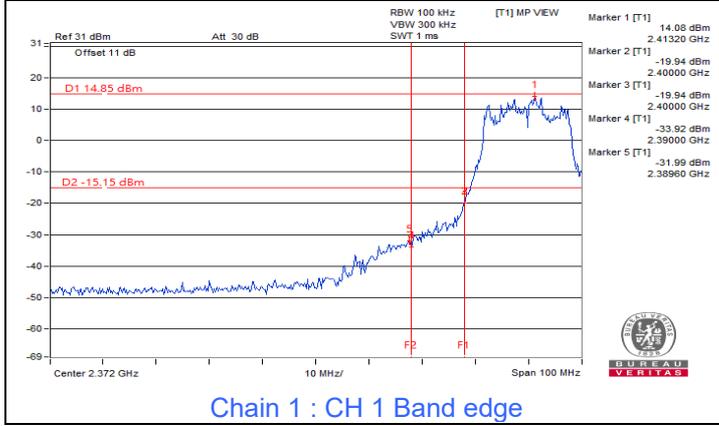
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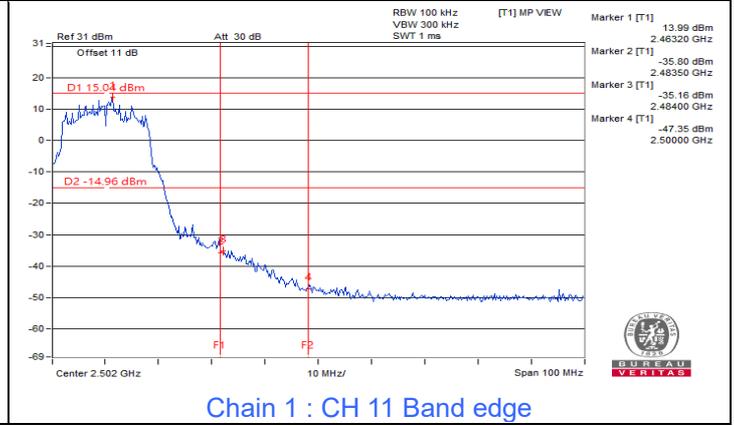
Chain 1 : CH 11



Chain 1 : CH 11



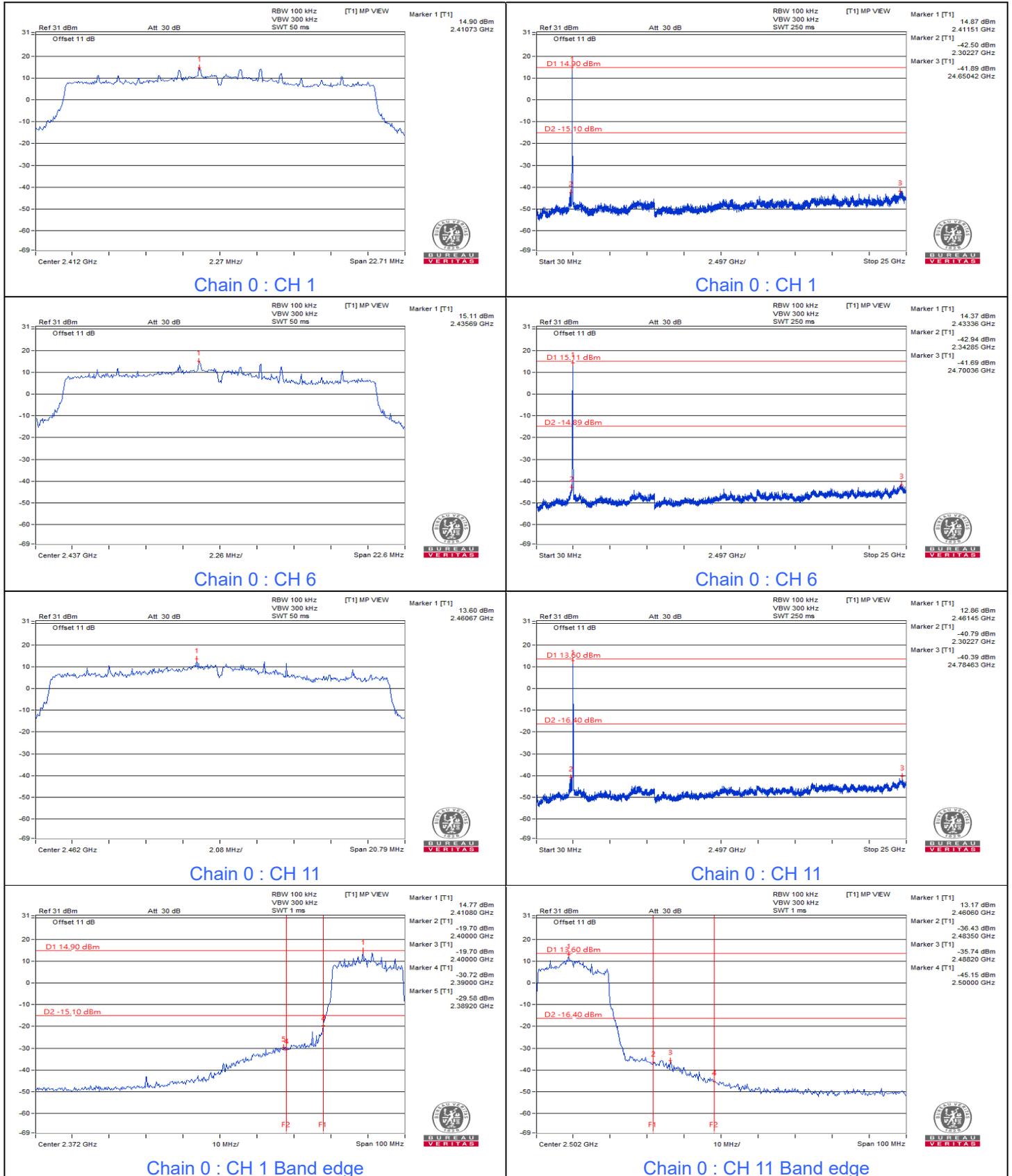
Chain 1 : CH 1 Band edge

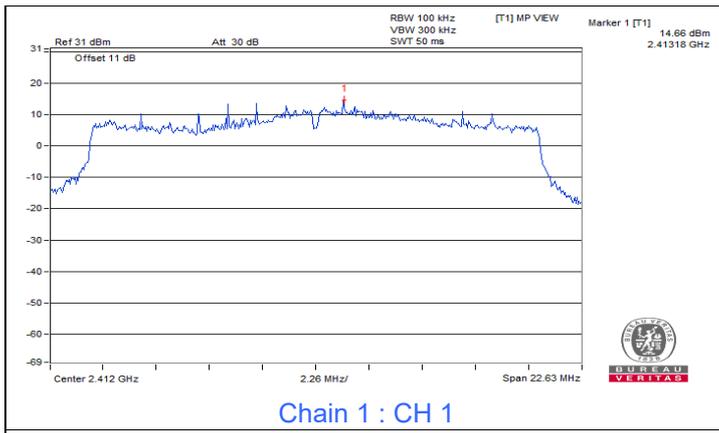


Chain 1 : CH 11 Band edge

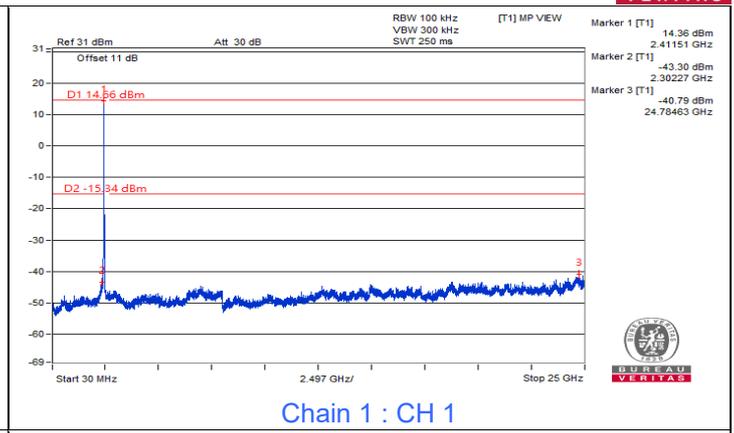


### 802.11be (EHT20)

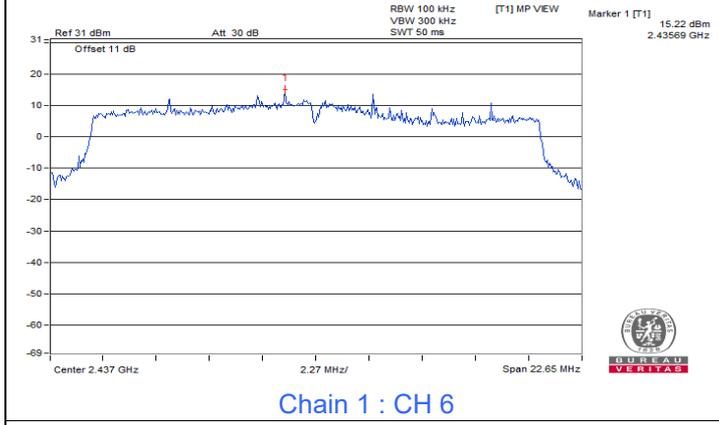




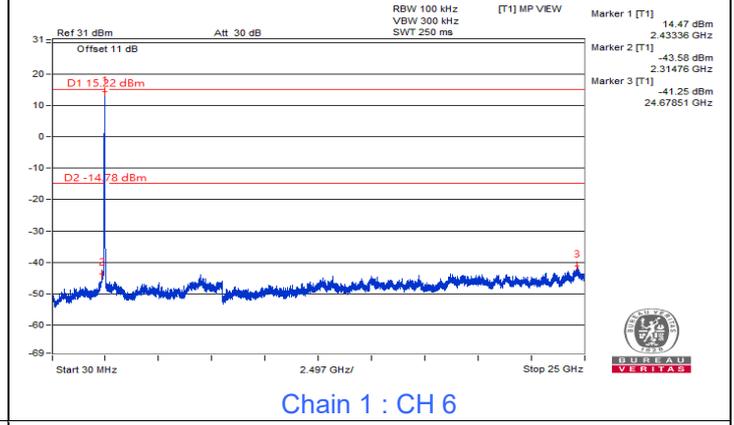
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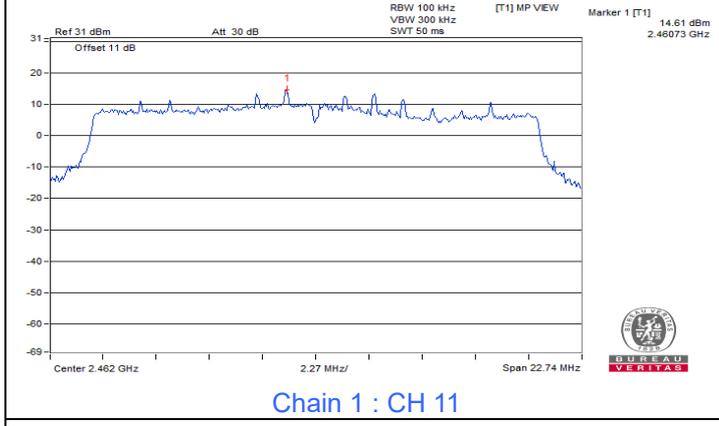
Chain 1 : CH 1



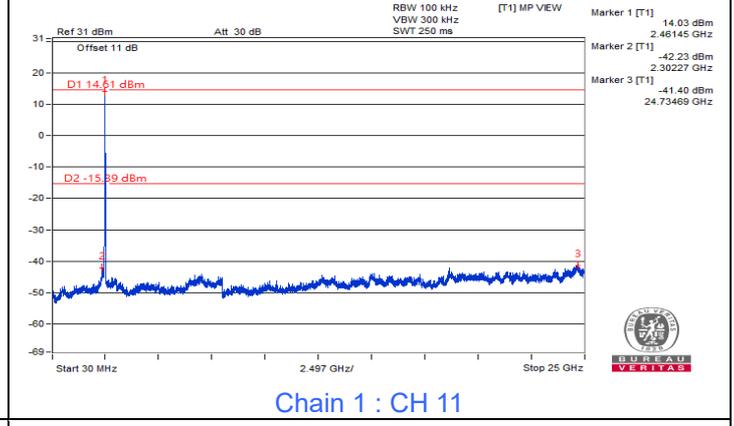
Chain 1 : CH 6



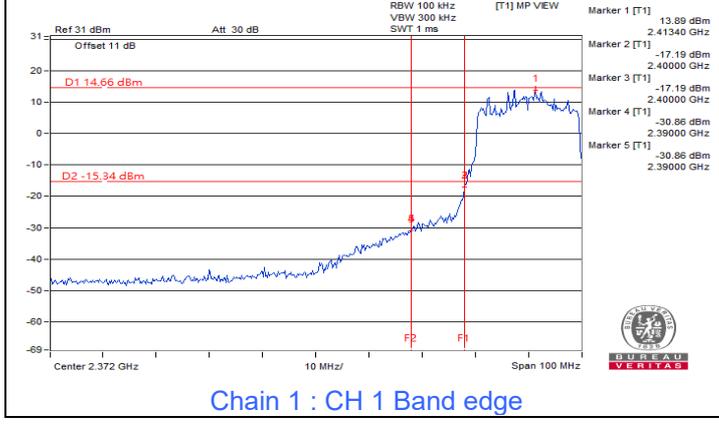
Chain 1 : CH 6



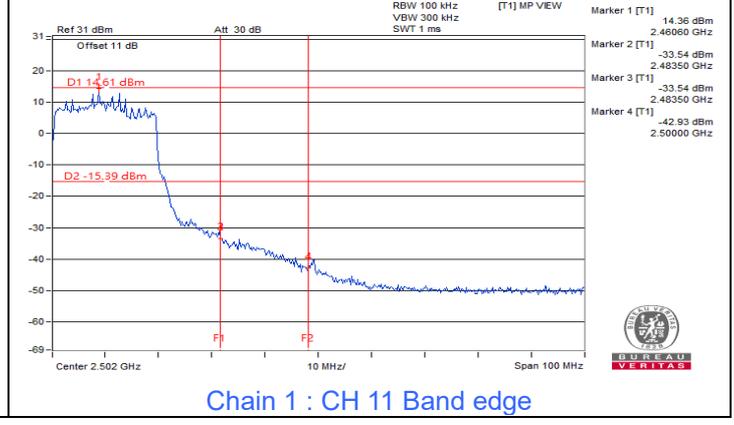
Chain 1 : CH 11



Chain 1 : CH 11

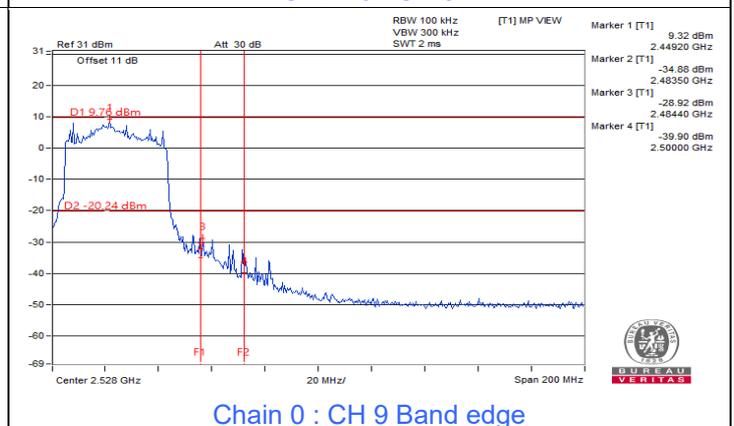
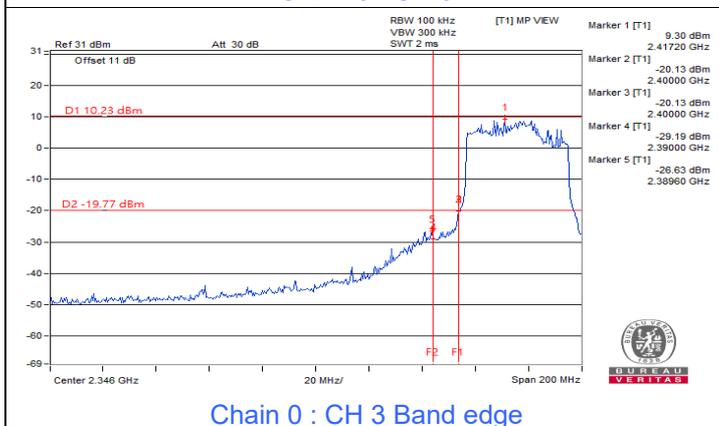
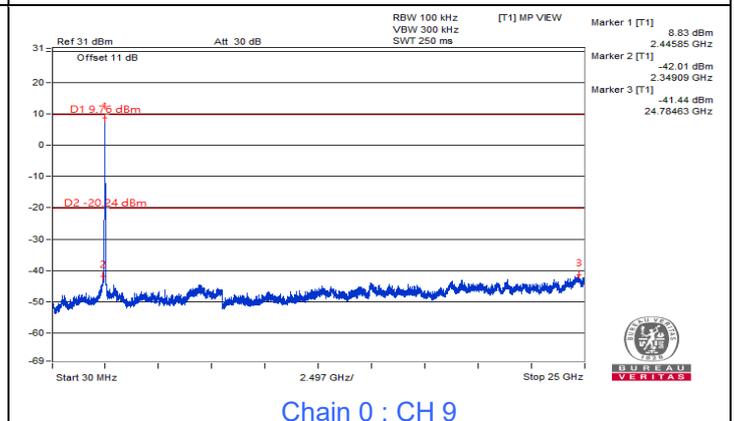
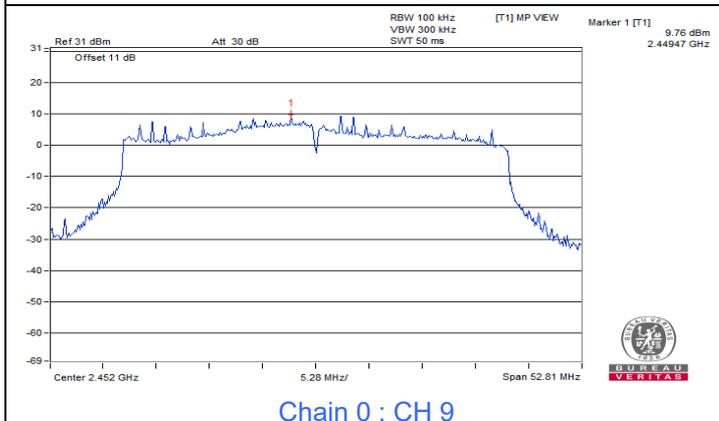
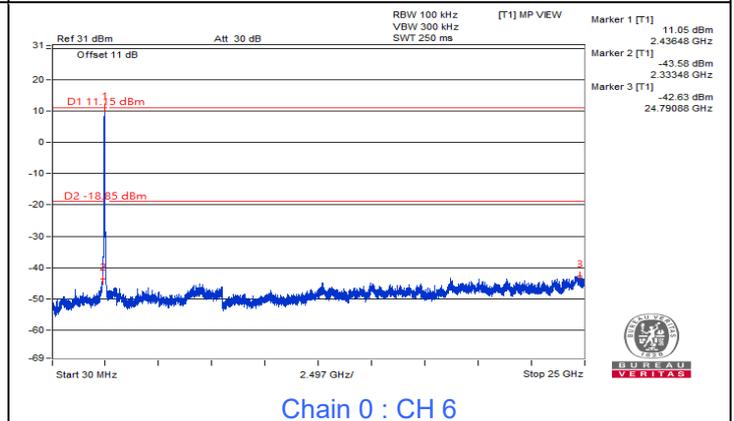
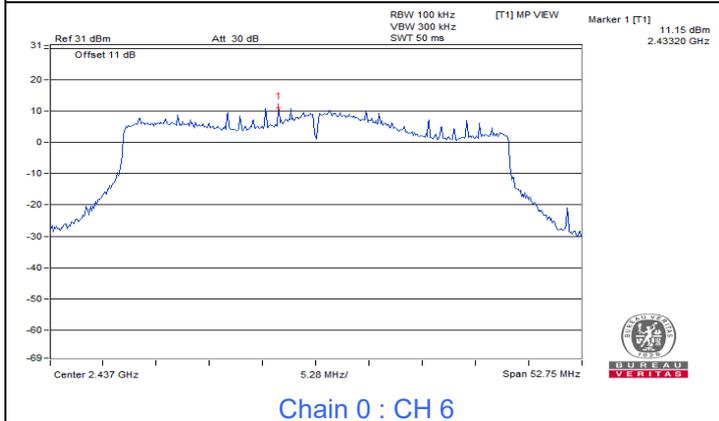
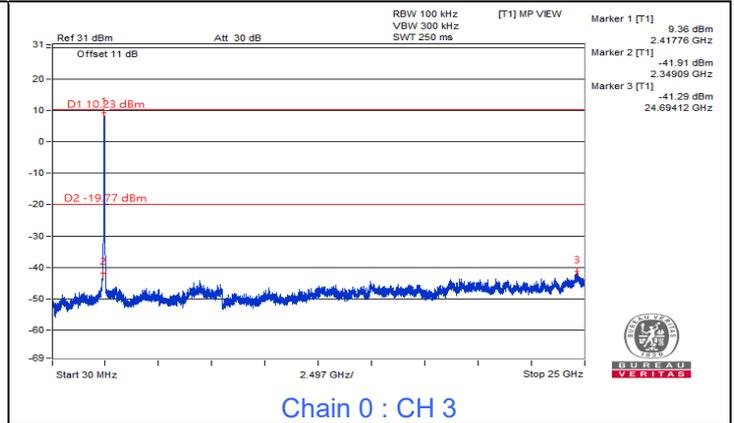
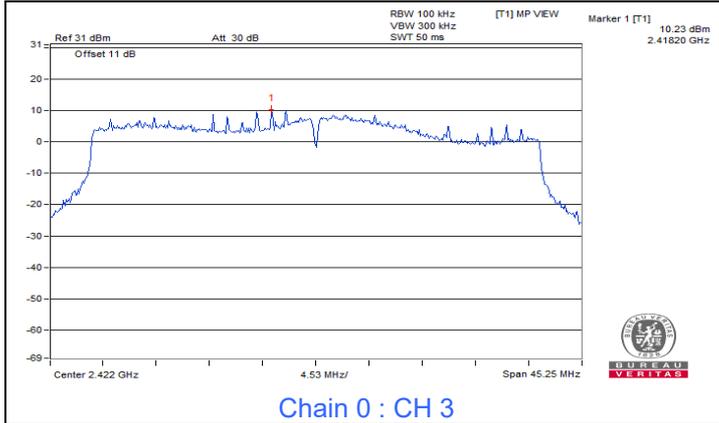


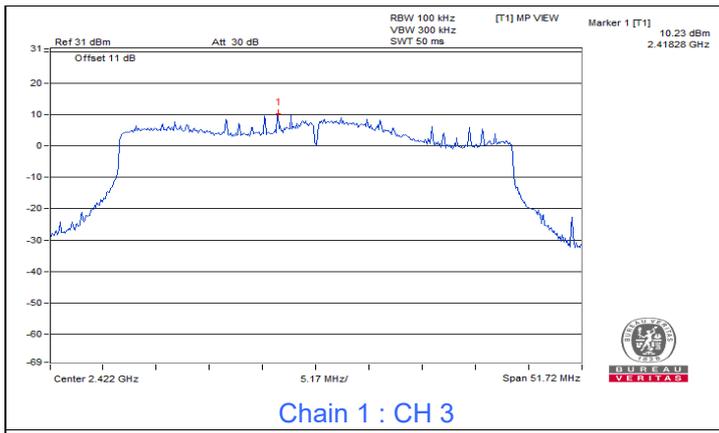
Chain 1 : CH 1 Band edge



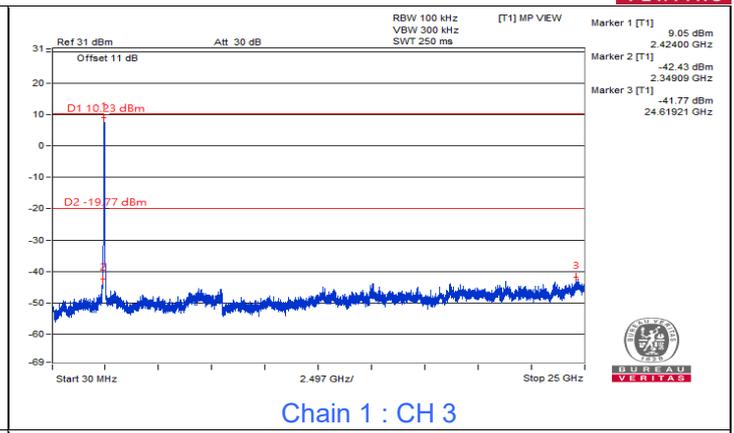
Chain 1 : CH 11 Band edge

802.11be (EHT40)

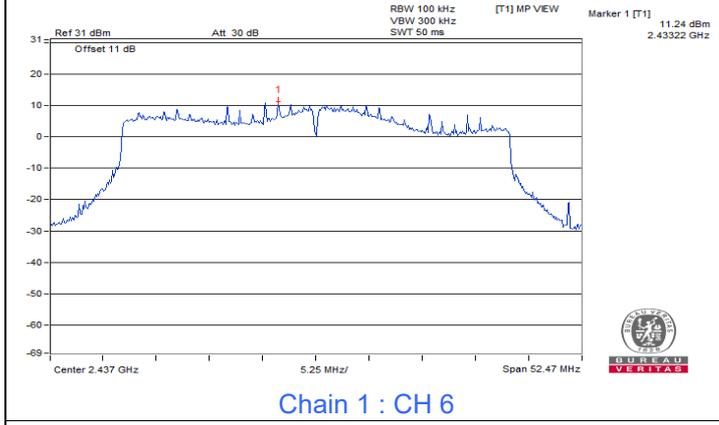




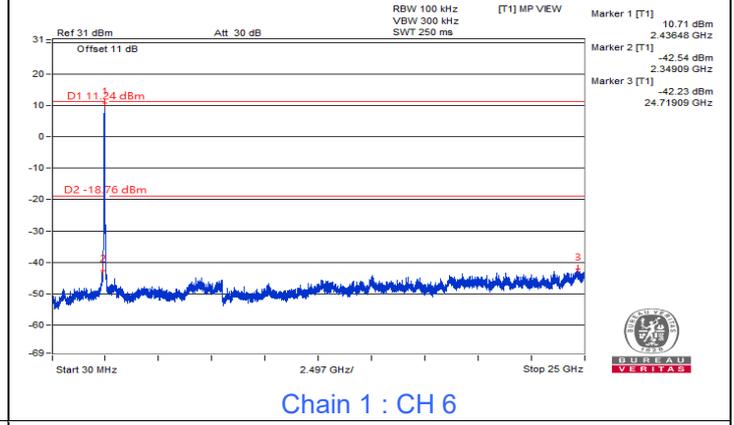
Chain 1 : CH 3



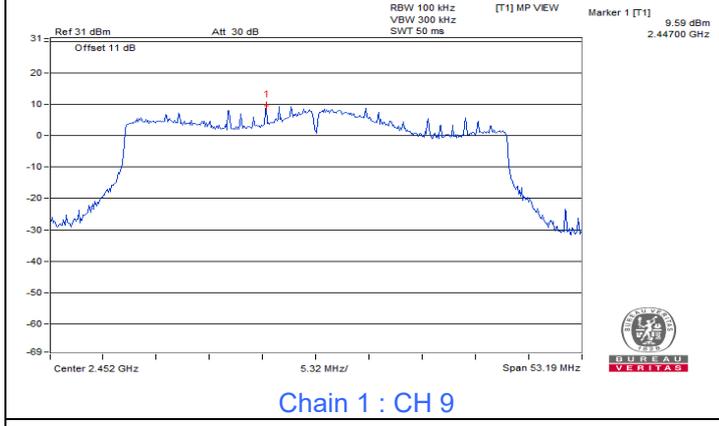
Chain 1 : CH 3



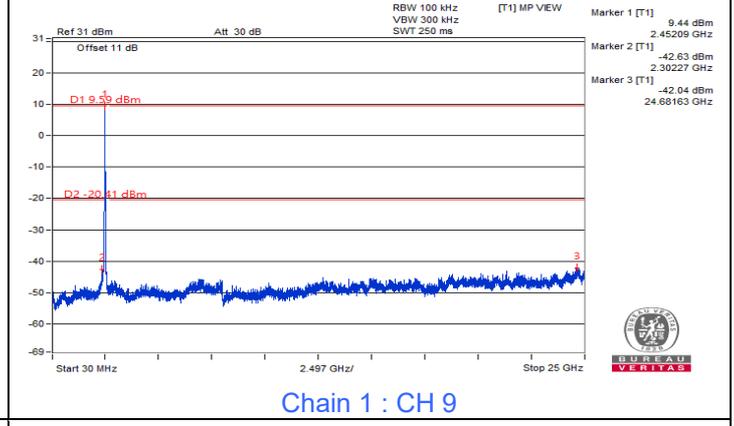
Chain 1 : CH 6



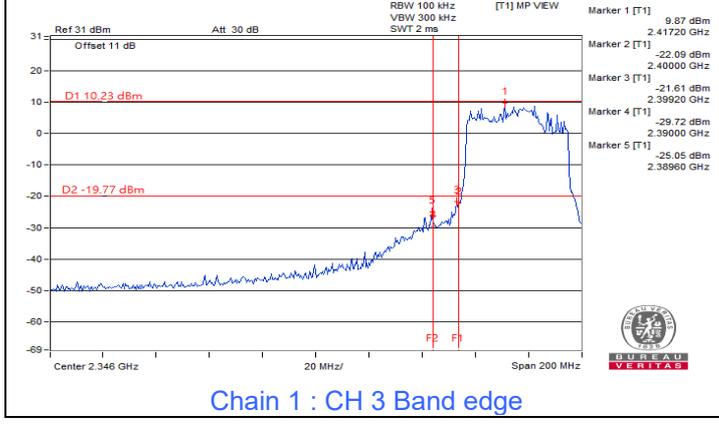
Chain 1 : CH 6



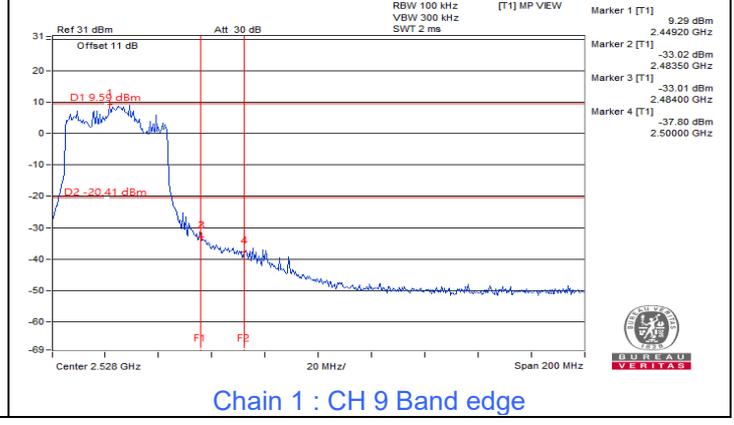
Chain 1 : CH 9



Chain 1 : CH 9



Chain 1 : CH 3 Band edge



Chain 1 : CH 9 Band edge

## 7.5 AC Power Conducted Emissions

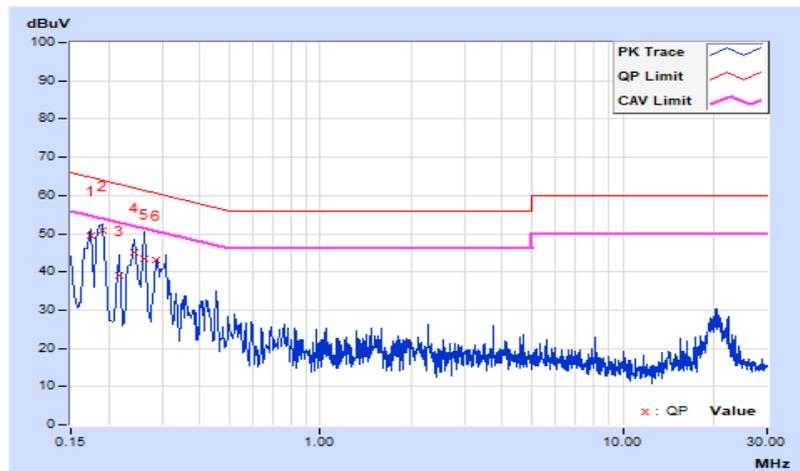
### Test Mode A

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 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	0.17400	9.69	39.82	29.07	49.51	38.76	64.77	54.77	-15.26	-16.01
2	0.19000	9.68	41.13	29.05	50.81	38.73	64.04	54.04	-13.23	-15.31
3	0.21800	9.68	29.53	13.41	39.21	23.09	62.89	52.89	-23.68	-29.80
4	0.24200	9.69	35.59	25.34	45.28	35.03	62.03	52.03	-16.75	-17.00
5	0.26200	9.69	33.59	19.96	43.28	29.65	61.37	51.37	-18.09	-21.72
6	0.28830	9.69	33.27	22.28	42.96	31.97	60.57	50.57	-17.61	-18.60

#### 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

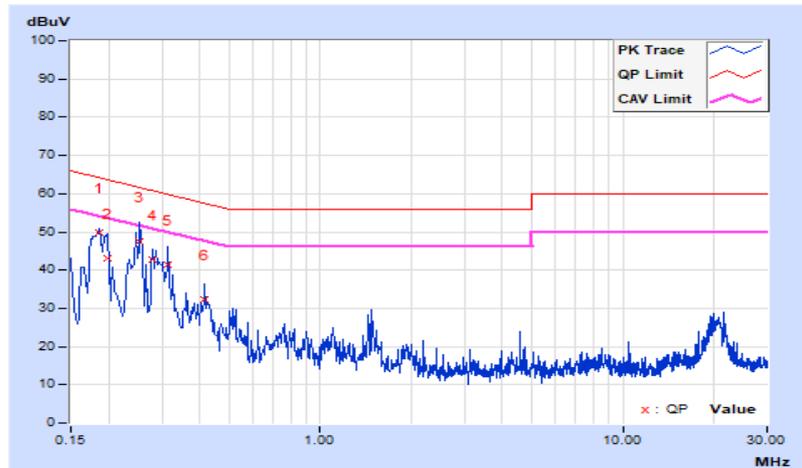


<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25 °C, 70 % RH
<b>Tested By</b>	Luis Lee		

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	0.18568	9.67	40.17	31.92	49.84	41.59	64.23	54.23	-14.39	-12.64
2	0.19780	9.67	33.54	20.56	43.21	30.23	63.70	53.70	-20.49	-23.47
3	0.25400	9.69	37.82	24.75	47.51	34.44	61.63	51.63	-14.12	-17.19
4	0.27800	9.69	32.91	16.30	42.60	25.99	60.88	50.88	-18.28	-24.89
5	0.31400	9.70	31.87	21.01	41.57	30.71	59.86	49.86	-18.29	-19.15
6	0.41400	9.73	22.52	11.66	32.25	21.39	57.57	47.57	-25.32	-26.18

**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



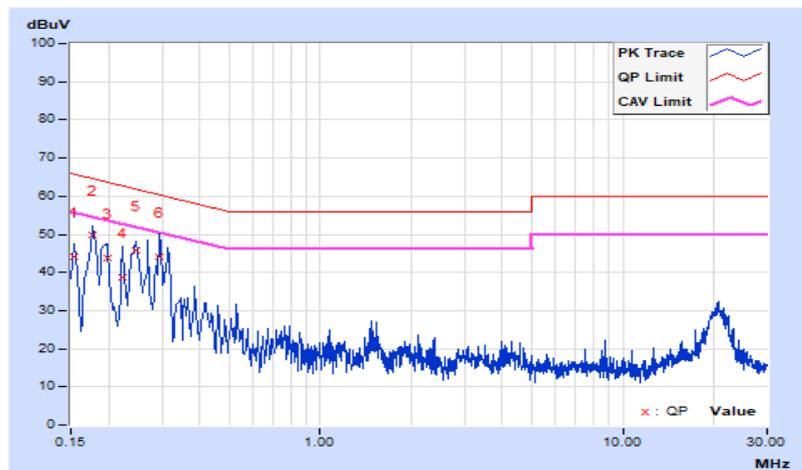
### Test Mode B

<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25 °C, 70 % RH
<b>Tested By</b>	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	0.15400	9.69	34.53	22.86	44.22	32.55	65.78	55.78	-21.56	-23.23
2	0.17800	9.68	40.27	32.00	49.95	41.68	64.58	54.58	-14.63	-12.90
3	0.19728	9.68	34.20	21.97	43.88	31.65	63.72	53.72	-19.84	-22.07
4	0.22200	9.68	29.03	13.84	38.71	23.52	62.74	52.74	-24.03	-29.22
5	0.24600	9.69	36.12	25.77	45.81	35.46	61.89	51.89	-16.08	-16.43
6	0.29400	9.69	34.55	24.00	44.24	33.69	60.41	50.41	-16.17	-16.72

#### 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

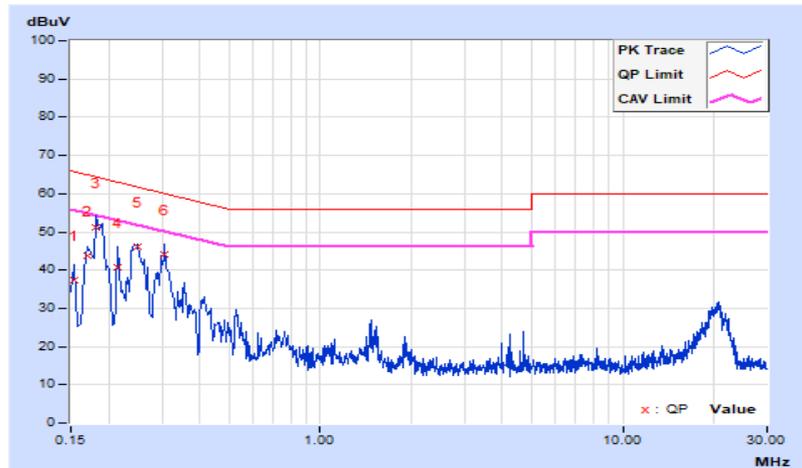


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 70 % RH
Tested By	Luis Lee		

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	0.15400	9.66	27.73	15.36	37.39	25.02	65.78	55.78	-28.39	-30.76
2	0.17000	9.66	34.17	23.75	43.83	33.41	64.96	54.96	-21.13	-21.55
<b>3</b>	<b>0.18200</b>	<b>9.67</b>	<b>41.64</b>	<b>32.50</b>	<b>51.31</b>	<b>42.17</b>	<b>64.39</b>	<b>54.39</b>	<b>-13.08</b>	<b>-12.22</b>
4	0.21400	9.67	31.15	16.03	40.82	25.70	63.05	53.05	-22.23	-27.35
5	0.24810	9.68	36.46	26.09	46.14	35.77	61.82	51.82	-15.68	-16.05
6	0.30600	9.70	34.33	22.07	44.03	31.77	60.08	50.08	-16.05	-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



## 7.6 Unwanted Emissions below 1 GHz

### Test Mode A

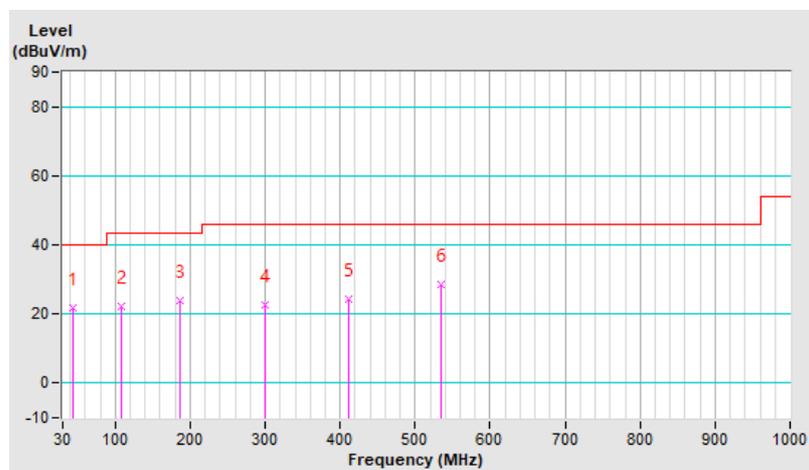
<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 69 % RH
<b>Tested By</b>	Luis Lee		

#### 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	44.55	21.6 QP	40.0	-18.4	1.50 H	164	30.7	-9.1
2	107.60	22.3 QP	43.5	-21.2	1.50 H	111	34.5	-12.2
3	186.17	23.9 QP	43.5	-19.6	1.50 H	283	34.4	-10.5
4	299.66	22.7 QP	46.0	-23.3	1.00 H	62	30.0	-7.3
5	412.18	24.4 QP	46.0	-21.6	1.50 H	16	29.8	-5.4
6	534.40	28.6 QP	46.0	-17.4	1.00 H	245	31.6	-3.0

#### Remarks:

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

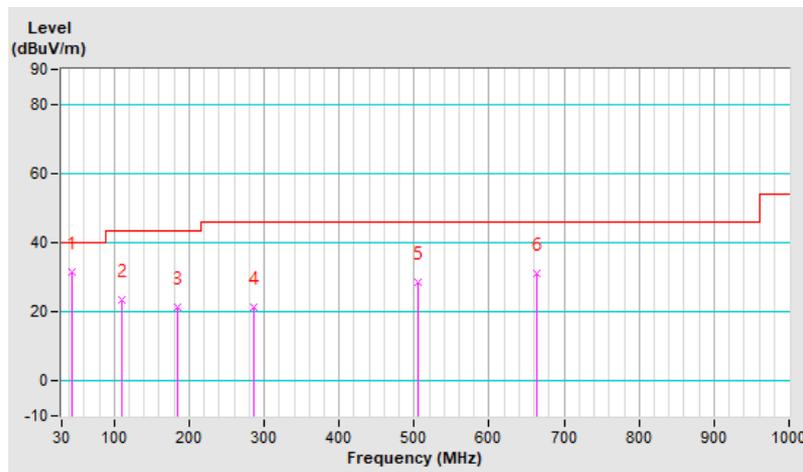


<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 69 % RH
<b>Tested By</b>	Luis Lee		

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	44.55	31.5 QP	40.0	-8.5	1.01 V	263	40.6	-9.1
2	110.51	23.6 QP	43.5	-19.9	1.01 V	247	35.5	-11.9
3	185.20	21.4 QP	43.5	-22.1	1.50 V	215	31.8	-10.4
4	286.08	21.3 QP	46.0	-24.7	1.50 V	122	28.8	-7.5
5	504.33	28.6 QP	46.0	-17.4	1.01 V	144	32.1	-3.5
6	664.38	31.1 QP	46.0	-14.9	1.50 V	85	31.1	0.0

**Remarks:**

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



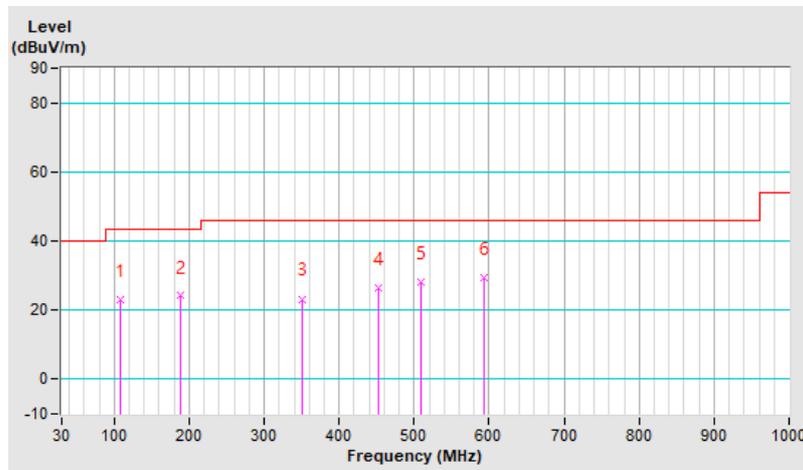
**Test Mode B**

<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 69 % RH
<b>Tested By</b>	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	108.57	23.1 QP	43.5	-20.4	1.50 H	277	35.2	-12.1
2	188.11	24.1 QP	43.5	-19.4	1.00 H	276	34.8	-10.7
3	351.07	23.3 QP	46.0	-22.7	1.50 H	347	29.8	-6.5
4	452.92	26.3 QP	46.0	-19.7	1.00 H	177	30.6	-4.3
5	508.21	28.2 QP	46.0	-17.8	1.00 H	173	31.6	-3.4
6	593.57	29.2 QP	46.0	-16.8	1.00 H	126	30.6	-1.4

**Remarks:**

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

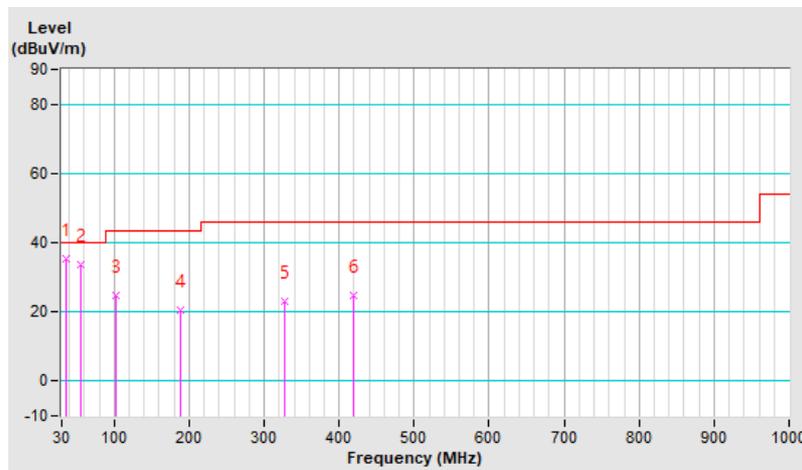


<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 69 % RH
<b>Tested By</b>	Luis Lee		

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	36.79	35.3 QP	40.0	-4.7	1.49 V	213	45.2	-9.9
2	56.19	33.7 QP	40.0	-6.3	1.00 V	219	42.8	-9.1
3	101.78	24.9 QP	43.5	-18.6	1.00 V	278	38.0	-13.1
4	189.08	20.6 QP	43.5	-22.9	1.49 V	72	31.5	-10.9
5	327.79	23.1 QP	46.0	-22.9	1.00 V	136	29.8	-6.7
6	418.97	24.8 QP	46.0	-21.2	1.49 V	316	30.0	-5.2

**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 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

<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 1 : 2412 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24 °C, 69 % RH
<b>Tested By</b>	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	2387.30	61.6 PK	74.0	-12.4	3.41 H	60	26.5	35.1
2	2387.30	51.3 AV	54.0	-2.7	3.41 H	60	16.2	35.1
3	*2412.00	110.2 PK			3.41 H	60	75.2	35.0
4	*2412.00	107.6 AV			3.41 H	60	72.6	35.0
5	4824.00	56.6 PK	74.0	-17.4	3.40 H	78	43.1	13.5
6	4824.00	52.0 AV	54.0	-2.0	3.40 H	78	38.5	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	2386.60	62.2 PK	74.0	-11.8	1.00 V	123	27.1	35.1
2	2386.60	53.8 AV	54.0	-0.2	1.00 V	123	18.7	35.1
3	*2412.00	115.4 PK			1.00 V	123	80.4	35.0
4	*2412.00	113.3 AV			1.00 V	123	78.3	35.0
5	4824.00	56.8 PK	74.0	-17.2	3.10 V	142	43.3	13.5
6	4824.00	52.8 AV	54.0	-1.2	3.10 V	142	39.3	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.



<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2437.00	112.0 PK			2.55 H	243	77.1	34.9
2	*2437.00	109.4 AV			2.55 H	243	74.5	34.9
3	4874.00	57.0 PK	74.0	-17.0	3.55 H	122	43.6	13.4
4	4874.00	52.9 AV	54.0	-1.1	3.55 H	122	39.5	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	*2437.00	115.0 PK			3.21 V	293	80.1	34.9
2	*2437.00	112.5 AV			3.21 V	293	77.6	34.9
3	4874.00	57.6 PK	74.0	-16.4	3.66 V	138	44.2	13.4
4	4874.00	53.8 AV	54.0	-0.2	3.66 V	138	40.4	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.



<b>RF Mode</b>	802.11b	<b>Channel</b>	CH 11 : 2462 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2462.00	109.3 PK			2.49 H	244	74.5	34.8
2	*2462.00	106.8 AV			2.49 H	244	72.0	34.8
3	2483.50	61.1 PK	74.0	-12.9	2.49 H	244	26.4	34.7
4	2483.50	51.9 AV	54.0	-2.1	2.49 H	244	17.2	34.7
5	4924.00	56.5 PK	74.0	-17.5	3.35 H	80	43.0	13.5
6	4924.00	51.6 AV	54.0	-2.4	3.35 H	80	38.1	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	*2462.00	113.9 PK			1.42 V	129	79.1	34.8
2	*2462.00	111.4 AV			1.42 V	129	76.6	34.8
3	2487.60	62.6 PK	74.0	-11.4	1.42 V	129	27.9	34.7
<b>4</b>	<b>2487.60</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.42 V</b>	<b>129</b>	<b>19.2</b>	<b>34.7</b>
5	4924.00	57.0 PK	74.0	-17.0	3.20 V	151	43.5	13.5
6	4924.00	52.1 AV	54.0	-1.9	3.20 V	151	38.6	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.

<b>RF Mode</b>	802.11g	<b>Channel</b>	CH 1 : 2412 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	2390.00	65.1 PK	74.0	-8.9	2.32 H	259	30.0	35.1
2	2390.00	51.6 AV	54.0	-2.4	2.32 H	259	16.5	35.1
3	*2412.00	110.4 PK			2.32 H	259	75.4	35.0
4	*2412.00	100.8 AV			2.32 H	259	65.8	35.0
5	4824.00	51.7 PK	74.0	-22.3	2.25 H	187	38.2	13.5
6	4824.00	38.7 AV	54.0	-15.3	2.25 H	187	25.2	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	2388.10	68.8 PK	74.0	-5.2	1.44 V	231	33.7	35.1
2	2388.10	53.6 AV	54.0	-0.4	1.44 V	231	18.5	35.1
3	*2412.00	114.4 PK			1.44 V	231	79.4	35.0
4	*2412.00	105.2 AV			1.44 V	231	70.2	35.0
5	4824.00	52.0 PK	74.0	-22.0	3.22 V	158	38.5	13.5
6	4824.00	38.9 AV	54.0	-15.1	3.22 V	158	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.



<b>RF Mode</b>	802.11g	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2437.00	113.7 PK			2.28 H	257	78.8	34.9
2	*2437.00	103.9 AV			2.28 H	257	69.0	34.9
3	4874.00	51.7 PK	74.0	-22.3	2.29 H	182	38.3	13.4
4	4874.00	38.9 AV	54.0	-15.1	2.29 H	182	25.5	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	*2437.00	117.4 PK			1.45 V	139	82.5	34.9
2	*2437.00	107.5 AV			1.45 V	139	72.6	34.9
3	4874.00	52.1 PK	74.0	-21.9	3.15 V	161	38.7	13.4
4	4874.00	39.2 AV	54.0	-14.8	3.15 V	161	25.8	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.



<b>RF Mode</b>	802.11g	<b>Channel</b>	CH 11 : 2462 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2462.00	109.7 PK			2.24 H	257	74.9	34.8
2	*2462.00	100.0 AV			2.24 H	257	65.2	34.8
3	2483.50	66.5 PK	74.0	-7.5	2.24 H	257	31.8	34.7
4	2483.50	52.5 AV	54.0	-1.5	2.24 H	257	17.8	34.7
5	4924.00	51.7 PK	74.0	-22.3	2.29 H	187	38.2	13.5
6	4924.00	38.6 AV	54.0	-15.4	2.29 H	187	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	*2462.00	114.0 PK			1.42 V	133	79.2	34.8
2	*2462.00	104.7 AV			1.42 V	133	69.9	34.8
3	2486.30	66.8 PK	74.0	-7.2	1.42 V	133	32.1	34.7
4	2486.30	53.5 AV	54.0	-0.5	1.42 V	133	18.8	34.7
5	4924.00	51.9 PK	74.0	-22.1	3.10 V	169	38.4	13.5
6	4924.00	38.8 AV	54.0	-15.2	3.10 V	169	25.3	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.

<b>RF Mode</b>	802.11be (EHT20)	<b>Channel</b>	CH 1 : 2412 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	2390.00	67.1 PK	74.0	-6.9	2.18 H	246	32.0	35.1
2	2390.00	51.7 AV	54.0	-2.3	2.18 H	246	16.6	35.1
3	*2412.00	112.5 PK			2.18 H	246	77.5	35.0
4	*2412.00	100.5 AV			2.18 H	246	65.5	35.0
5	4824.00	51.7 PK	74.0	-22.3	2.25 H	195	38.2	13.5
6	4824.00	38.7 AV	54.0	-15.3	2.25 H	195	25.2	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	70.3 PK	74.0	-3.7	1.60 V	116	35.2	35.1
2	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.60 V</b>	<b>116</b>	<b>18.8</b>	<b>35.1</b>
3	*2412.00	118.1 PK			1.60 V	116	83.1	35.0
4	*2412.00	105.7 AV			1.60 V	116	70.7	35.0
5	4824.00	51.9 PK	74.0	-22.1	3.15 V	159	38.4	13.5
6	4824.00	39.1 AV	54.0	-14.9	3.15 V	159	25.6	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.

<b>RF Mode</b>	802.11be (EHT20)	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2437.00	115.4 PK			2.24 H	241	80.5	34.9
2	*2437.00	104.0 AV			2.24 H	241	69.1	34.9
3	4874.00	51.7 PK	74.0	-22.3	2.29 H	189	38.3	13.4
4	4874.00	38.6 AV	54.0	-15.4	2.29 H	189	25.2	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	*2437.00	121.1 PK			2.38 V	170	86.2	34.9
2	*2437.00	109.6 AV			2.38 V	170	74.7	34.9
3	4874.00	51.9 PK	74.0	-22.1	3.18 V	165	38.5	13.4
4	4874.00	38.9 AV	54.0	-15.1	3.18 V	165	25.5	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.



<b>RF Mode</b>	802.11be (EHT20)	<b>Channel</b>	CH 11 : 2462 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2462.00	109.8 PK			2.22 H	257	75.0	34.8
2	*2462.00	98.2 AV			2.22 H	257	63.4	34.8
3	2483.50	66.2 PK	74.0	-7.8	2.22 H	257	31.5	34.7
4	2483.50	52.2 AV	54.0	-1.8	2.22 H	257	17.5	34.7
5	4924.00	51.5 PK	74.0	-22.5	2.29 H	182	38.0	13.5
6	4924.00	38.6 AV	54.0	-15.4	2.29 H	182	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	*2462.00	116.5 PK			1.41 V	128	81.7	34.8
2	*2462.00	104.2 AV			1.41 V	128	69.4	34.8
3	2483.50	67.1 PK	74.0	-6.9	1.41 V	128	32.4	34.7
4	2483.50	53.5 AV	54.0	-0.5	1.41 V	128	18.8	34.7
5	4924.00	51.7 PK	74.0	-22.3	3.14 V	169	38.2	13.5
6	4924.00	38.8 AV	54.0	-15.2	3.14 V	169	25.3	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.



<b>RF Mode</b>	802.11be (EHT40)	<b>Channel</b>	CH 3 : 2422 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	2390.00	66.9 PK	74.0	-7.1	2.24 H	242	31.8	35.1
2	2390.00	53.6 AV	54.0	-0.4	2.24 H	242	18.5	35.1
3	*2422.00	110.6 PK			2.24 H	242	75.6	35.0
4	*2422.00	98.2 AV			2.24 H	242	63.2	35.0
5	4844.00	51.5 PK	74.0	-22.5	2.29 H	188	38.1	13.4
6	4844.00	38.5 AV	54.0	-15.5	2.29 H	188	25.1	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	71.2 PK	74.0	-2.8	1.00 V	124	36.1	35.1
2	2390.00	53.8 AV	54.0	-0.2	1.00 V	124	18.7	35.1
3	*2422.00	115.6 PK			1.00 V	124	80.6	35.0
4	*2422.00	103.1 AV			1.00 V	124	68.1	35.0
5	4844.00	51.7 PK	74.0	-22.3	3.15 V	158	38.3	13.4
6	4844.00	38.7 AV	54.0	-15.3	3.15 V	158	25.3	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.



<b>RF Mode</b>	802.11be (EHT40)	<b>Channel</b>	CH 6 : 2437 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	2390.00	64.3 PK	74.0	-9.7	2.27 H	259	29.2	35.1
2	2390.00	50.1 AV	54.0	-3.9	2.27 H	259	15.0	35.1
3	*2437.00	109.9 PK			2.27 H	259	75.0	34.9
4	*2437.00	98.1 AV			2.27 H	259	63.2	34.9
5	2483.50	66.0 PK	74.0	-8.0	2.27 H	259	31.3	34.7
6	2483.50	51.9 AV	54.0	-2.1	2.27 H	259	17.2	34.7
7	4874.00	51.6 PK	74.0	-22.4	2.25 H	198	38.2	13.4
8	4874.00	38.7 AV	54.0	-15.3	2.25 H	198	25.3	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	68.7 PK	74.0	-5.3	1.09 V	117	33.6	35.1
2	2390.00	53.2 AV	54.0	-0.8	1.09 V	117	18.1	35.1
3	*2437.00	115.2 PK			1.09 V	117	80.3	34.9
4	*2437.00	103.0 AV			1.09 V	117	68.1	34.9
5	2483.50	69.7 PK	74.0	-4.3	1.09 V	117	35.0	34.7
6	2483.50	53.7 AV	54.0	-0.3	1.09 V	117	19.0	34.7
7	4874.00	51.8 PK	74.0	-22.2	3.19 V	166	38.4	13.4
8	4874.00	39.0 AV	54.0	-15.0	3.19 V	166	25.6	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.



<b>RF Mode</b>	802.11be (EHT40)	<b>Channel</b>	CH 9 : 2452 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23 °C, 66 % RH
<b>Tested By</b>	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	*2452.00	110.1 PK			2.26 H	256	75.2	34.9
2	*2452.00	97.5 AV			2.26 H	256	62.6	34.9
3	2483.50	66.9 PK	74.0	-7.1	2.26 H	256	32.2	34.7
4	2483.50	53.4 AV	54.0	-0.6	2.26 H	256	18.7	34.7
5	4904.00	51.7 PK	74.0	-22.3	2.29 H	182	38.2	13.5
6	4904.00	38.7 AV	54.0	-15.3	2.29 H	182	25.2	13.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

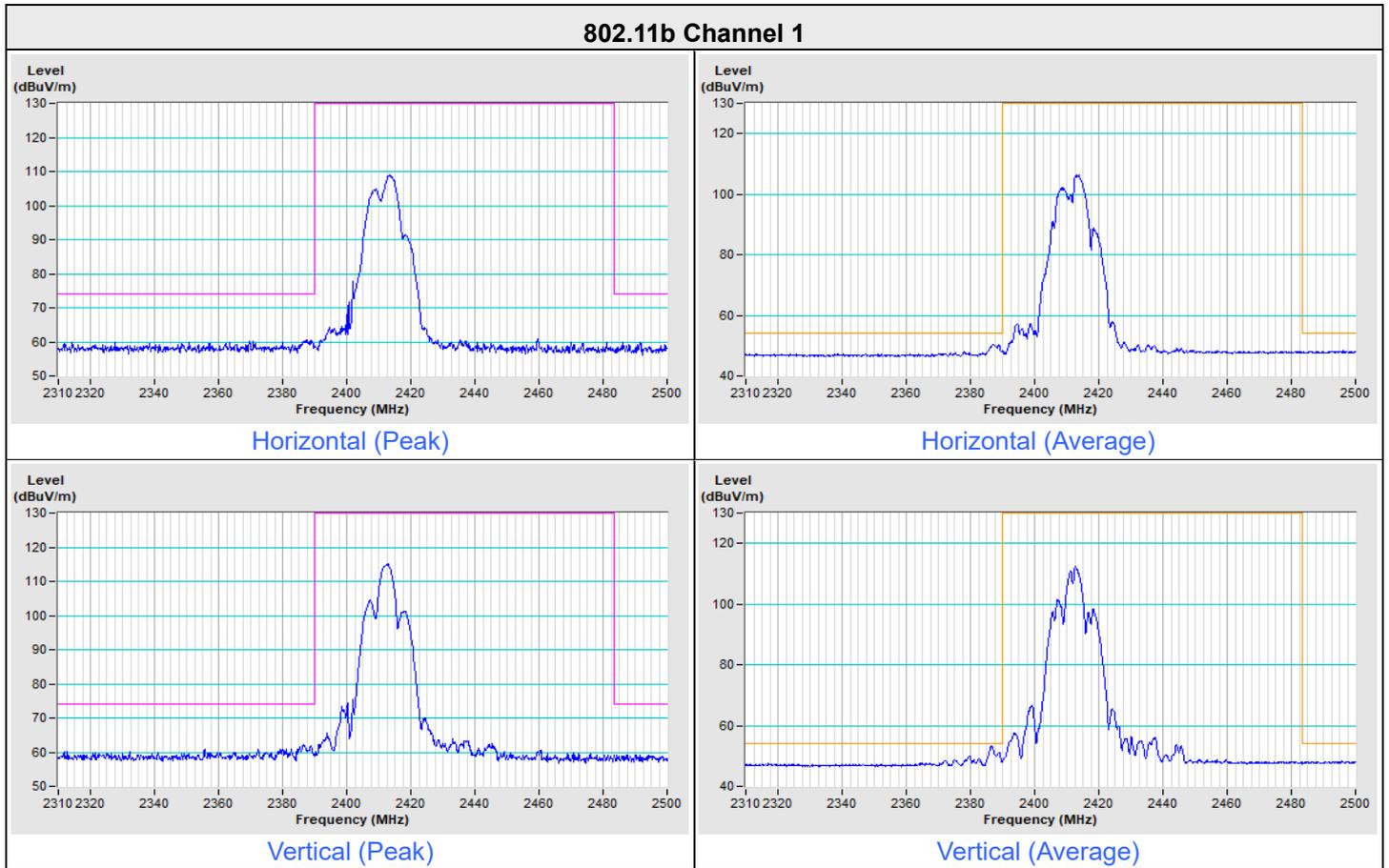
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	114.3 PK			1.10 V	158	79.4	34.9
2	*2452.00	102.0 AV			1.10 V	158	67.1	34.9
3	2493.10	70.2 PK	74.0	-3.8	1.10 V	158	35.4	34.8
4	2493.10	53.8 AV	54.0	-0.2	1.10 V	158	19.0	34.8
5	4904.00	51.9 PK	74.0	-22.1	3.16 V	154	38.4	13.5
6	4904.00	38.9 AV	54.0	-15.1	3.16 V	154	25.4	13.5

**Remarks:**

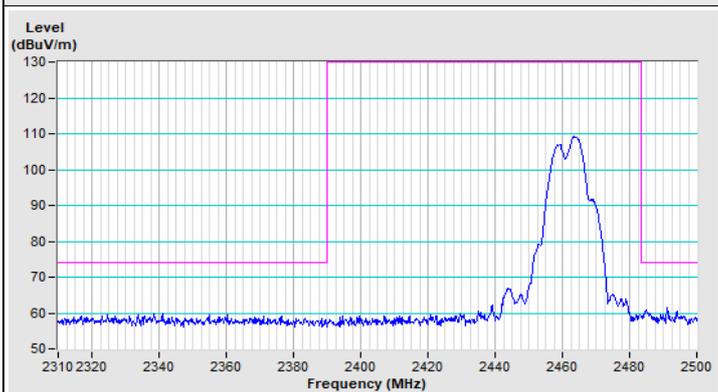
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency,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

### Plot of Band Edge

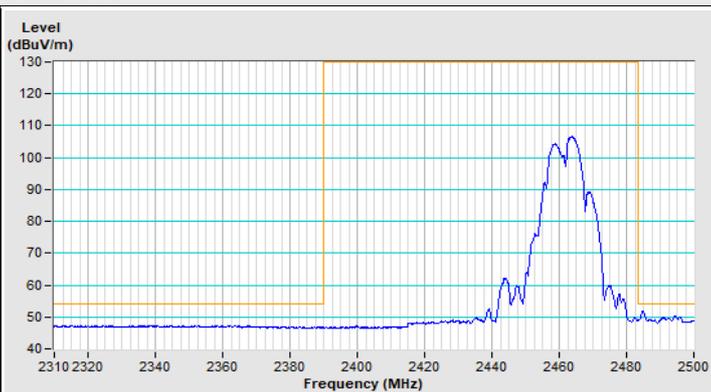
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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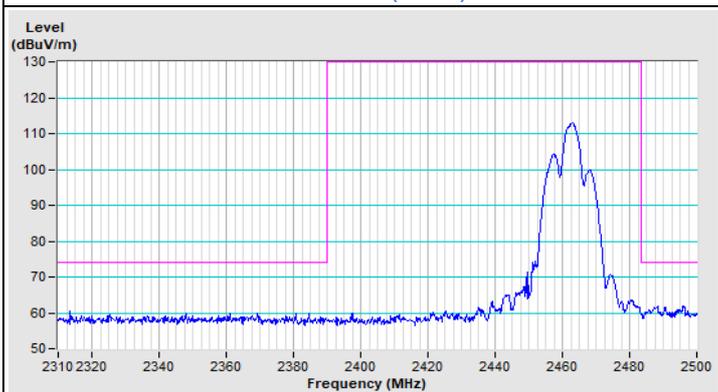
### 802.11b Channel 11



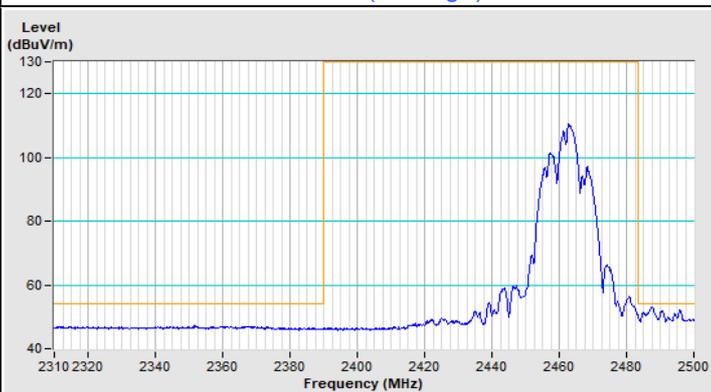
Horizontal (Peak)



Horizontal (Average)



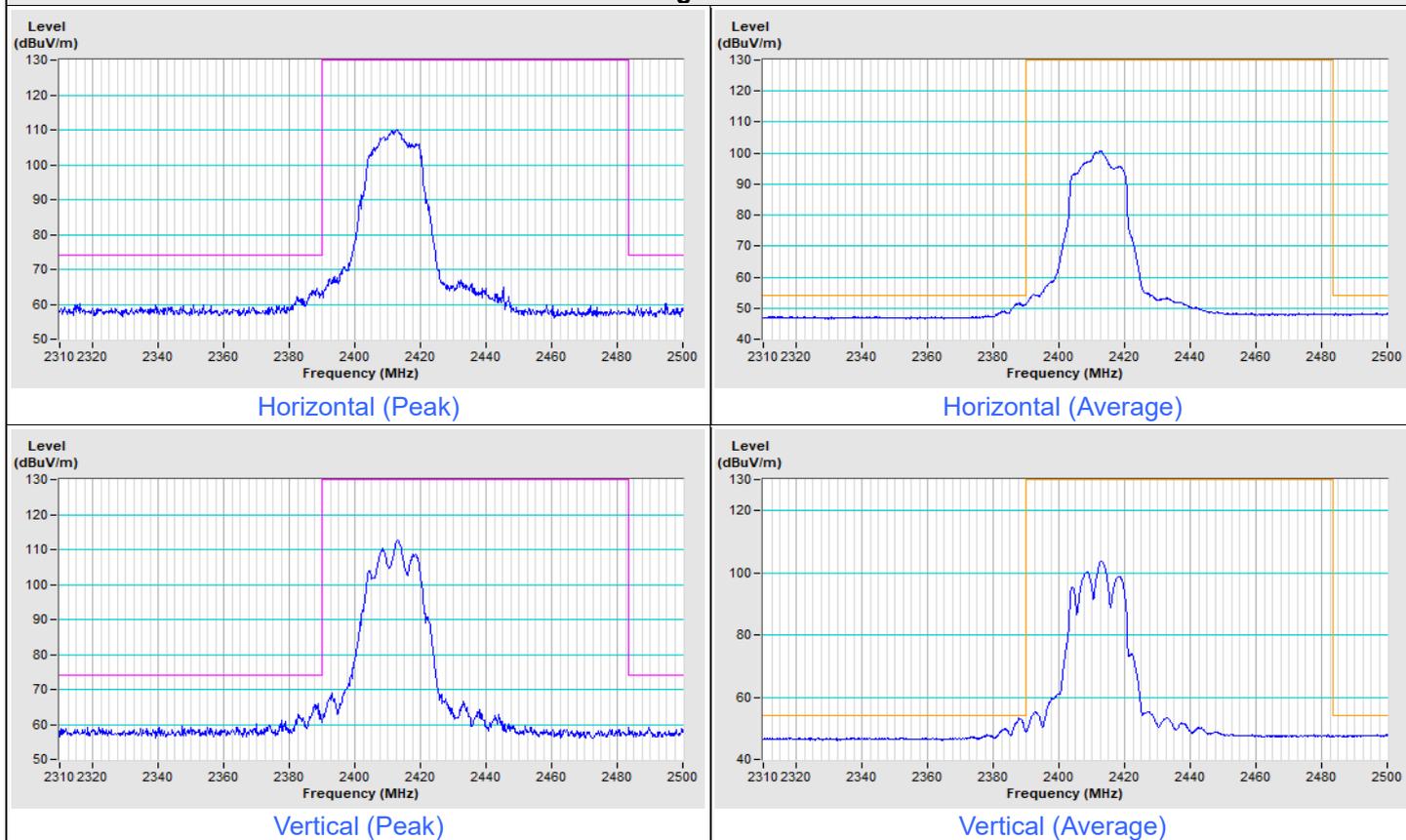
Vertical (Peak)



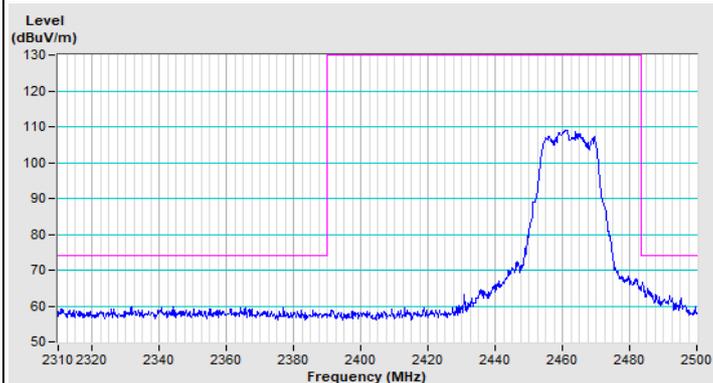
Vertical (Average)

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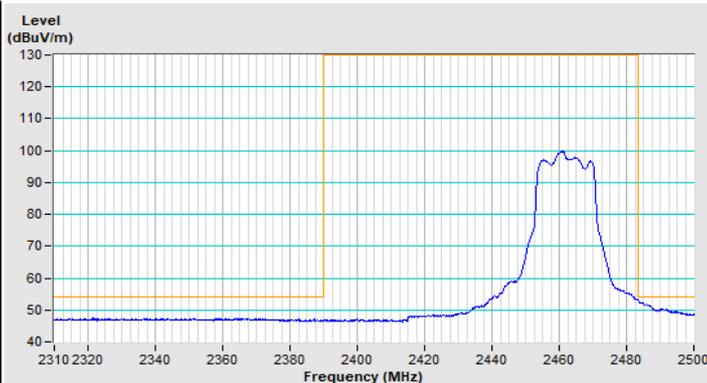
### 802.11g Channel 1



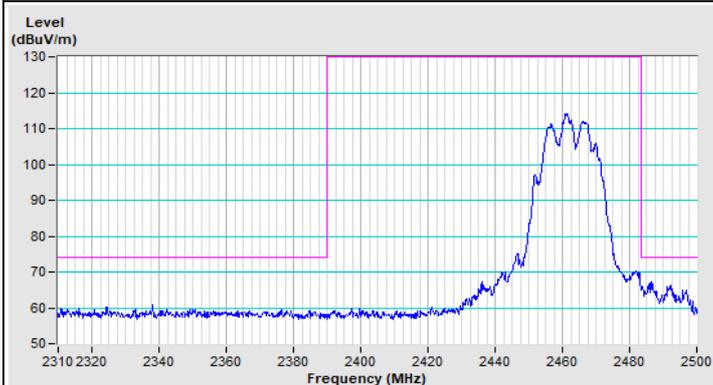
### 802.11g Channel 11



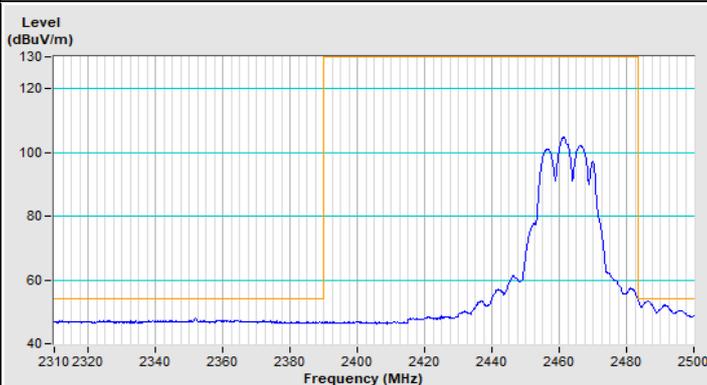
Horizontal (Peak)



Horizontal (Average)



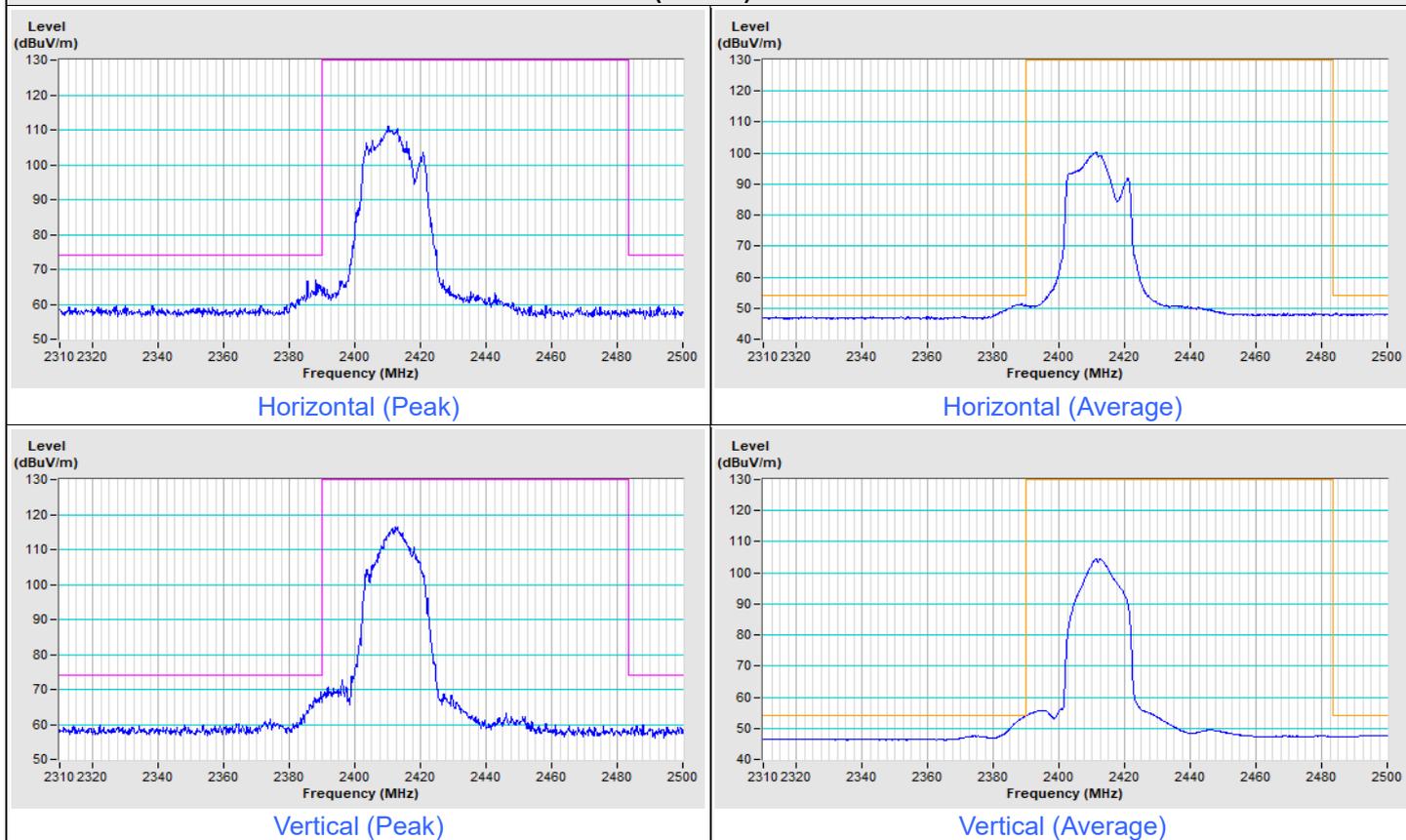
Vertical (Peak)



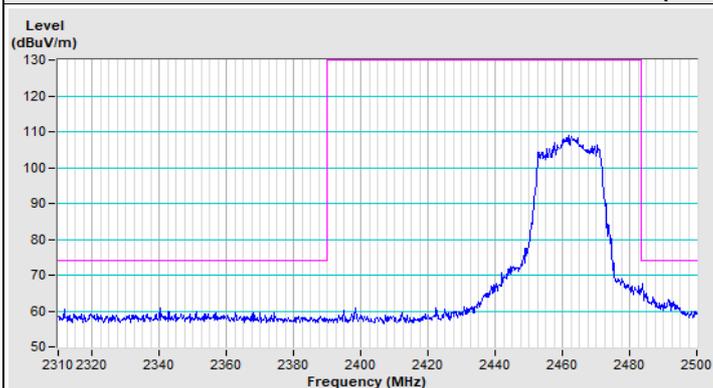
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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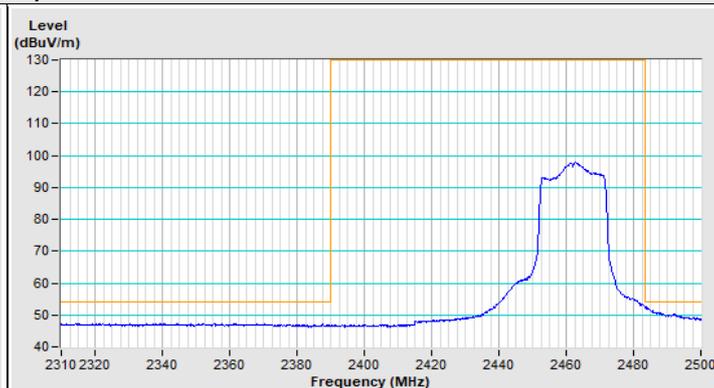
**802.11be (EHT20) Channel 1**



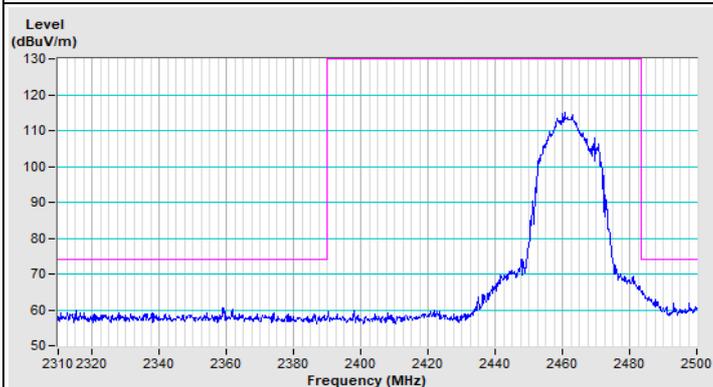
### 802.11be (EHT20) Channel 11



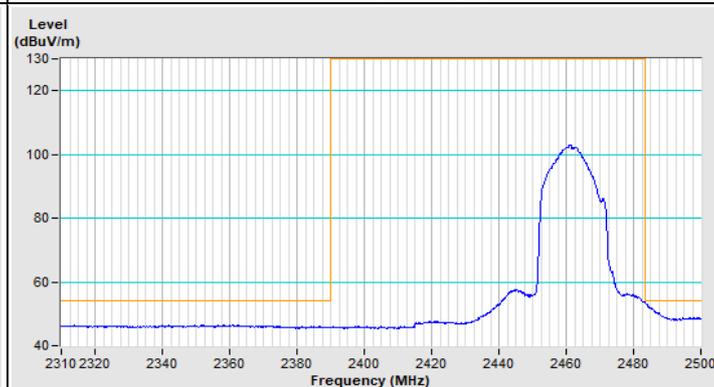
Horizontal (Peak)



Horizontal (Average)



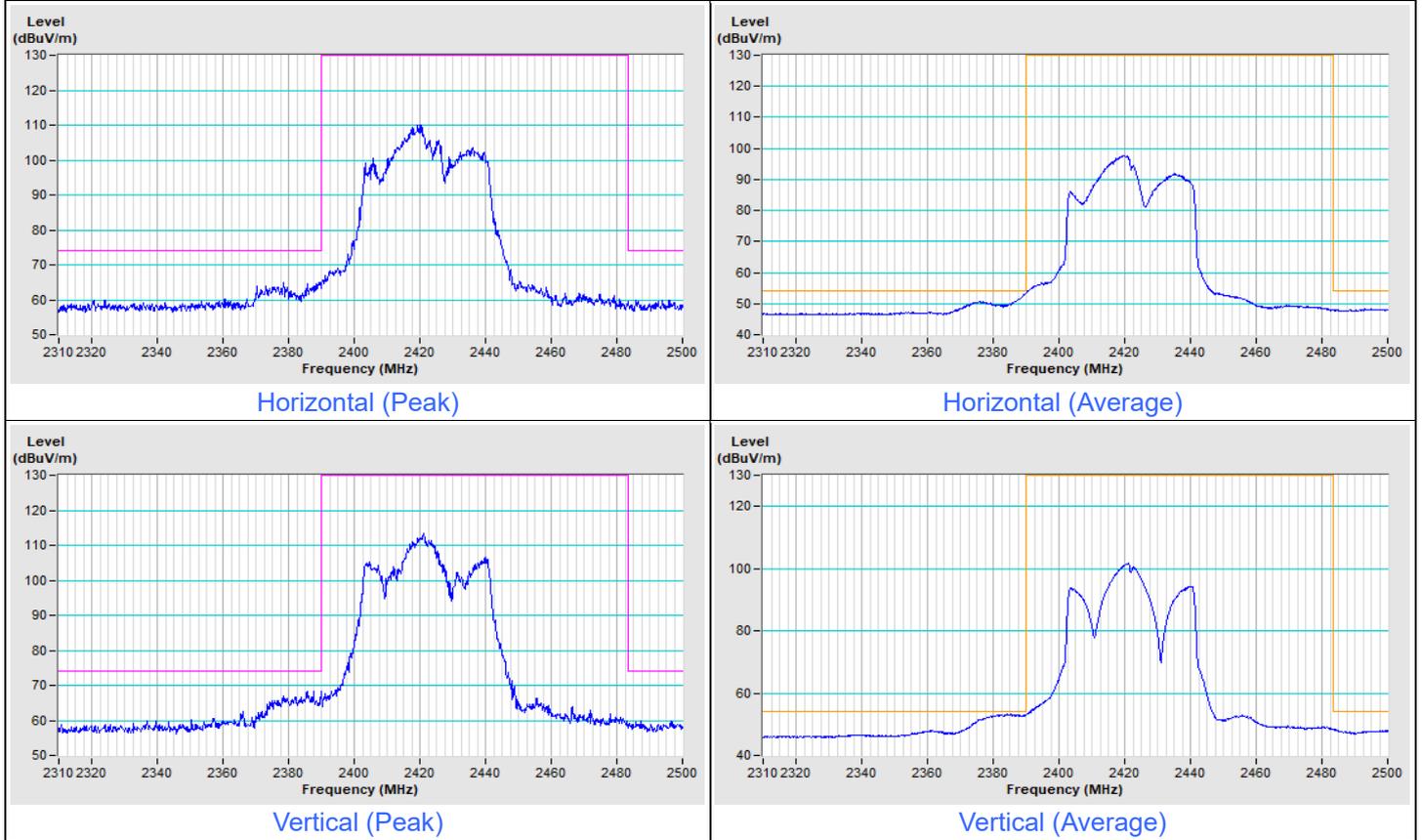
Vertical (Peak)



Vertical (Average)

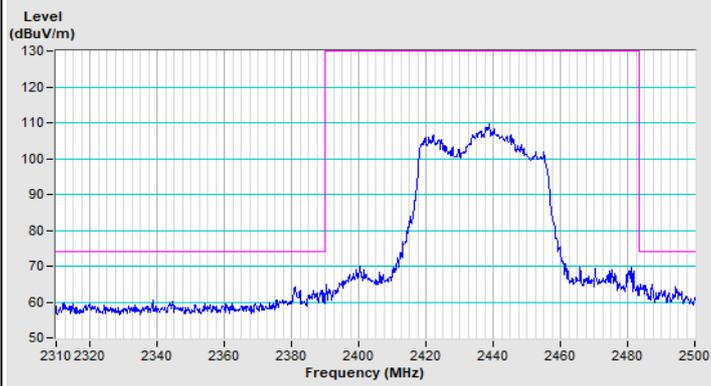
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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**802.11be (EHT40) Channel 3**

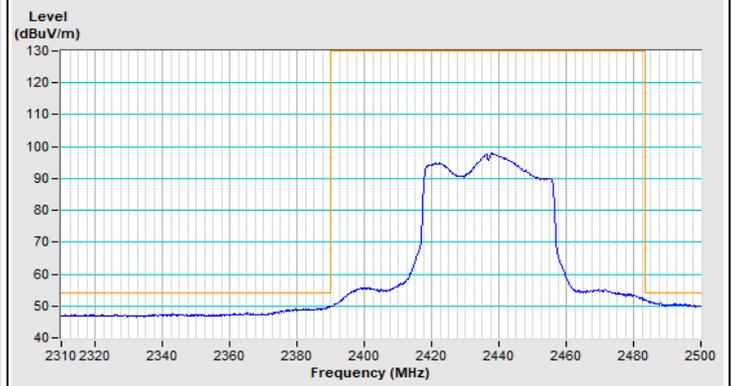




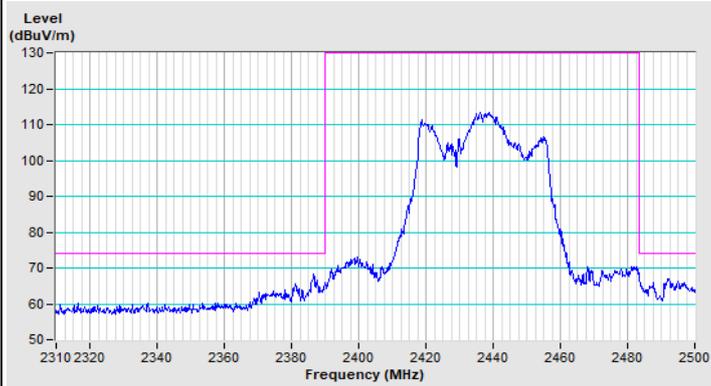
### 802.11be (EHT40) Channel 6



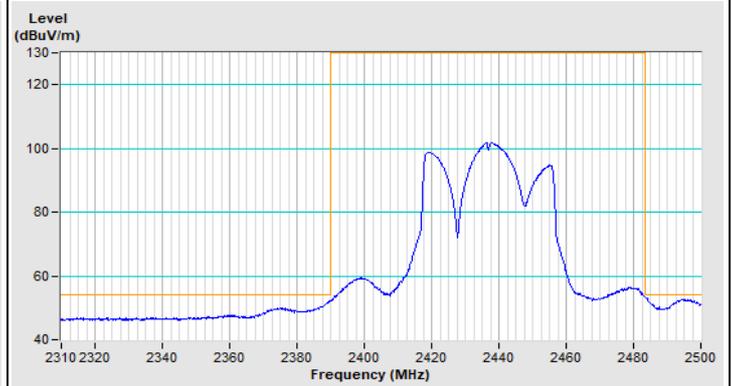
Horizontal (Peak)



Horizontal (Average)

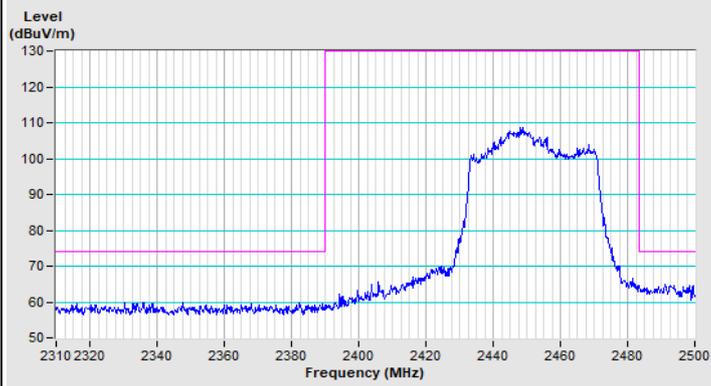


Vertical (Peak)

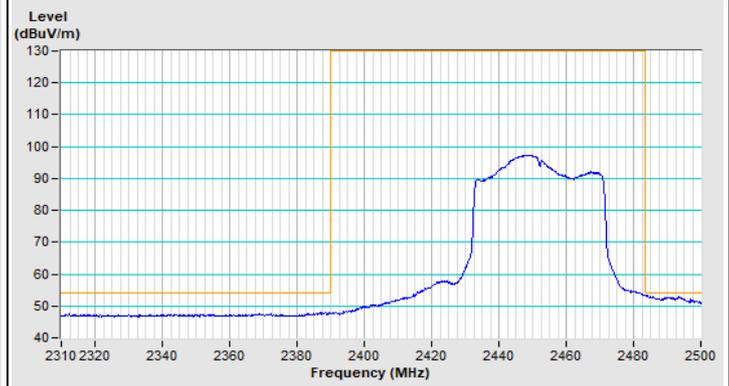


Vertical (Average)

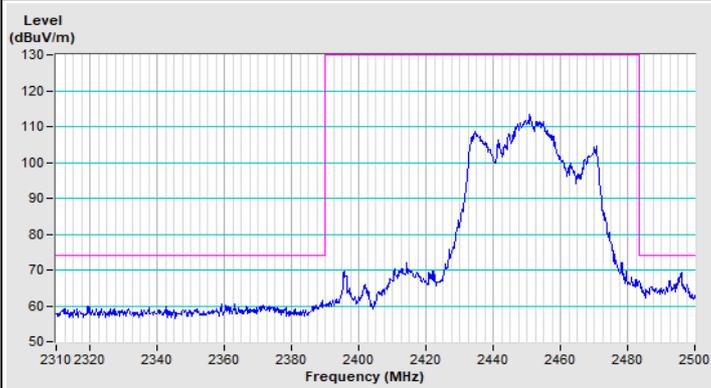
### 802.11be (EHT40) Channel 9



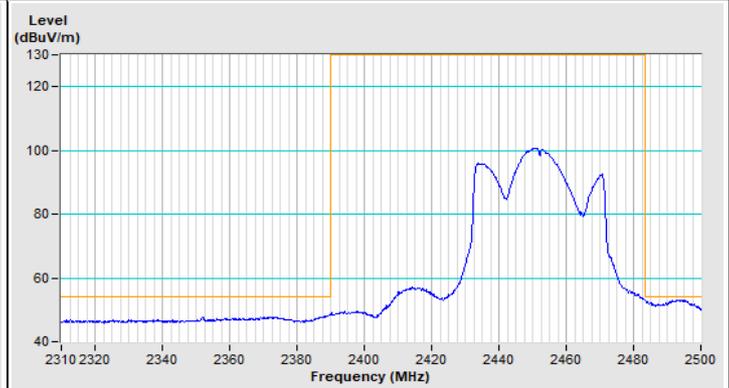
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

## 8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)



## 9 Information of the Testing Laboratories

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

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

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**Email:** [service.adt@bureauveritas.com](mailto: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.

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