

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Report No.: RFBFBE-WTW-P22090890
FCC ID: I88EX7710-B0
Product: AX11000 WiFi 6E 10G Ethernet Gateway
Brand: ZYXEL
Model No.: EX7710-B0
Received Date: 2022/12/1
Test Date: 2022/12/8 ~ 2023/1/31
Issued Date: 2023/2/17

Applicant: Zyxel Communications Corporation

Address: No.2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

FCC Registration / 723255 / TW2022

Designation Number:

Approved by: _____

May Chen / Manager

Date: _____

2023/2/17

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Prepared by : Vivian Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBFBE-WTW-P22090890	Original release.	2023/2/17

1 Certificate

Product: AX11000 WiFi 6E 10G Ethernet Gateway

Brand: ZYXEL

Test Model: EX7710-B0

Sample Status: Engineering sample

Applicant: Zyxel Communications Corporation

Test Date: 2022/12/8 ~ 2023/1/31

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 -15.28 dB at 0.48594 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.3 dB at 203.49, 499.99 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 2390.00 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 (±)
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.5 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.1 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.0 dB
	18 GHz ~ 40 GHz	5.3 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	AX11000 WiFi 6E 10G Ethernet Gateway
Brand	ZYXEL
Test Model	EX7710-B0
CPU Model No.	BCM4912
RF Chip Model No.	2.4G Chip Model: BCM6715 5G Chip Model: BCM6715 6G Chip Model: BCM6715
FW Version	V5.18(ACAK.0)b5_20221215
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 600 Mbps VHT: up to 800 Mbps 802.11ax: up to 1147.1 Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20): 11 802.11n (HT40), 802.11ax (HE40): 7
Output Power	CDD Mode: 998.031 mW (29.99 dBm) Beamforming Mode: 803.165 mW (29.05 dBm)
Accessory Device	- AC Adapter x1, Brand: APD, Model: WA-42F12FU - Ethernet Cable x1 (1m, Unshielded)

Note:

1. The EUT power needs to be supplied from a power adapter, the information is as below table:

AC Adapter 1			
Brand	Model	Specification	The housing color
APD	WA-42F12FU	AC Input: 100-240Vac, 50/60Hz, 1.2A Max. DC Output: 12Vdc, 3.5A DC Output Cable: Unshielded, 1.5m, without core bonded Manufacturer: ASIAN POWER DEVICES INC.	Black / White

2. The EUT has three radios as following table:

Radio 1	Radio 2	Radio 3
WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz

3. 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.

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.

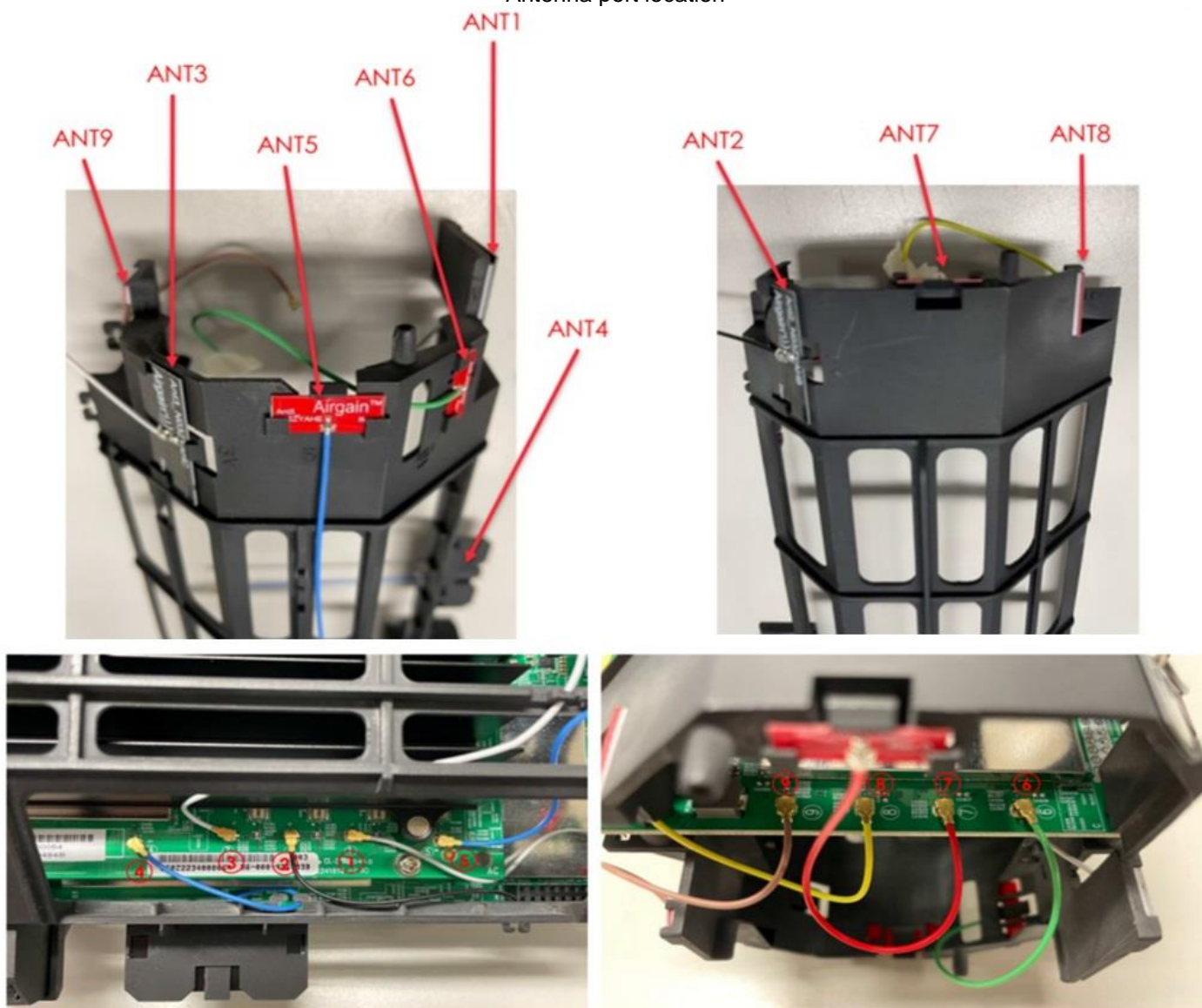
3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Part Number	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length
Ant1_Dual-band	2.4G Chain 2 5G Chain 2	Airgain	N03ZYAHA- PK1-G110U	3.8	2.4~2.4835GHz	Dipole	ipex(MHF)	110mm
				3.6	5.15~5.25GHz			
				4.1	5.25~5.35GHz			
				3.7	5.47~5.725GHz			
				4.2	5.725~5.85GHz			
Ant2_Dual-band	2.4G Chain 1 5G Chain 1	Airgain	N03ZYAHB- PK1-B135U	4.6	2.4~2.4835GHz	Dipole	ipex(MHF)	135mm
				5.3	5.15~5.25GHz			
				5.0	5.25~5.35GHz			
				4.9	5.47~5.725GHz			
				5.2	5.725~5.85GHz			
Ant3_Dual-band	2.4G Chain 0 5G Chain 0	Airgain	N03ZYAHC- PK1-W195U	3.4	2.4~2.4835GHz	Dipole	ipex(MHF)	195mm
				5.2	5.15~5.25GHz			
				5.3	5.25~5.35GHz			
				4.8	5.47~5.725GHz			
				4.2	5.725~5.85GHz			
Ant4	2.4G Chain 3	Airgain	N03ZYAHD- PK1-A90U	5.0	2.4~2.4835GHz	Dipole	ipex(MHF)	90mm
Ant5_5GHz	5G Chain 3	Airgain	N02ZYAHE- PK1-A105U	4.5	5.15~5.25GHz	Dipole	ipex(MHF)	105mm
				4.1	5.25~5.35GHz			
				4.3	5.47~5.725GHz			
				4.6	5.725~5.85GHz			
Ant6_6GHz	6G Chain 3	Airgain	N06ZYAHF- PK1-E100U	5.9	5.925~6.425GHz	Dipole	ipex(MHF)	100m
				5.9	6.425~6.525GHz			
				5.9	6.525~6.875GHz			
				4.8	6.875~7.125GHz			
Ant7_6GHz	6G Chain 2	Airgain	N06ZYAHG- PK1-R95U	5.6	5.925~6.425GHz	Dipole	ipex(MHF)	95mm
				5.5	6.425~6.525GHz			
				5.4	6.525~6.875GHz			
Ant8_6GHz	6G Chain 1	Airgain	N06ZYAHH- PK1-Y75U	5.7	6.875~7.125GHz	Dipole	ipex(MHF)	75mm
				5.7	5.925~6.425GHz			
				5.9	6.425~6.525GHz			
Ant9_6GHz	6G Chain 0	Airgain	N06ZYAHJ- PK1-P75U	6.0	6.525~6.875GHz	Dipole	ipex(MHF)	75mm
				5.9	6.875~7.125GHz			
				4.7	5.925~6.425GHz			
				3.7	6.425~6.525GHz			
				4.0	6.525~6.875GHz			
				4.0	6.875~7.125GHz			

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

* Antenna port location



2. The directional antenna gain, please refer to the following table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.4835	6.91	Dipole	ipex(MHF)

Note: Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement. More detailed information, please refer to antenna specification.

3. The EUT incorporates a MIMO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	4TX	4RX
802.11g	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
VHT20	4TX	4RX
VHT40	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX

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 20MHz (40MHz), VHT mode for 20MHz (40MHz) and 802.11ax mode for 20MHz (40MHz), therefore the manufacturer will control the power for 802.11n / VHT mode is the same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

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

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

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

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

3.4 Power Setting

Power Setting					
Channel	802.11b CDD	802.11g CDD	VHT20 CDD	Channel	VHT40 CDD
1	80	78	88	3	82
6	96	96	95	6	82
11	82	80	72	9	72

Power Setting							
Channel	802.11ax (HE20) CDD	Channel	802.11ax (HE40) CDD	Channel	VHT20 Beamforming	Channel	VHT40 Beamforming
1	88	3	82	1	88	3	82
6	95	6	82	6	92	6	82
11	72	9	72	11	72	9	72

Power Setting			
Channel	802.11ax (HE20) Beamforming	Channel	802.11ax (HE40) Beamforming
1	88	3	82
6	91	6	82
11	72	9	72

3.5 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).
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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
	VHT20	CDD & Beamforming	1, 6, 11	BPSK	MCS0
	VHT40	CDD & Beamforming	3, 6, 9	BPSK	MCS0
	802.11ax (HE20)	CDD & Beamforming	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD & Beamforming	3, 6, 9	BPSK	MCS0
6 dB Bandwidth / Conducted Out of Band Emissions / Power Spectral Density	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
AC Power Conducted Emissions	802.11ax (HE20)	CDD	6	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ax (HE20)	CDD	6	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0

Note: Partial RU (resource unit) configurations are not supported.

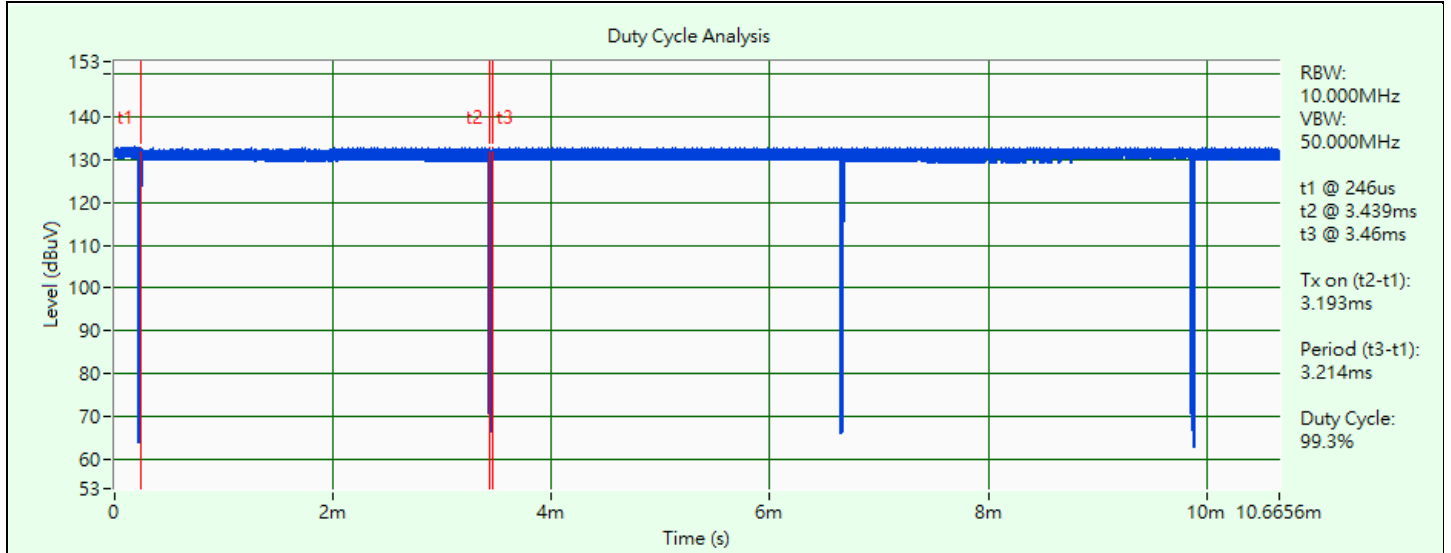
3.6 Duty Cycle of Test Signal

802.11b: Duty cycle = 3.193 ms / 3.214 ms x 100% = 99.3%

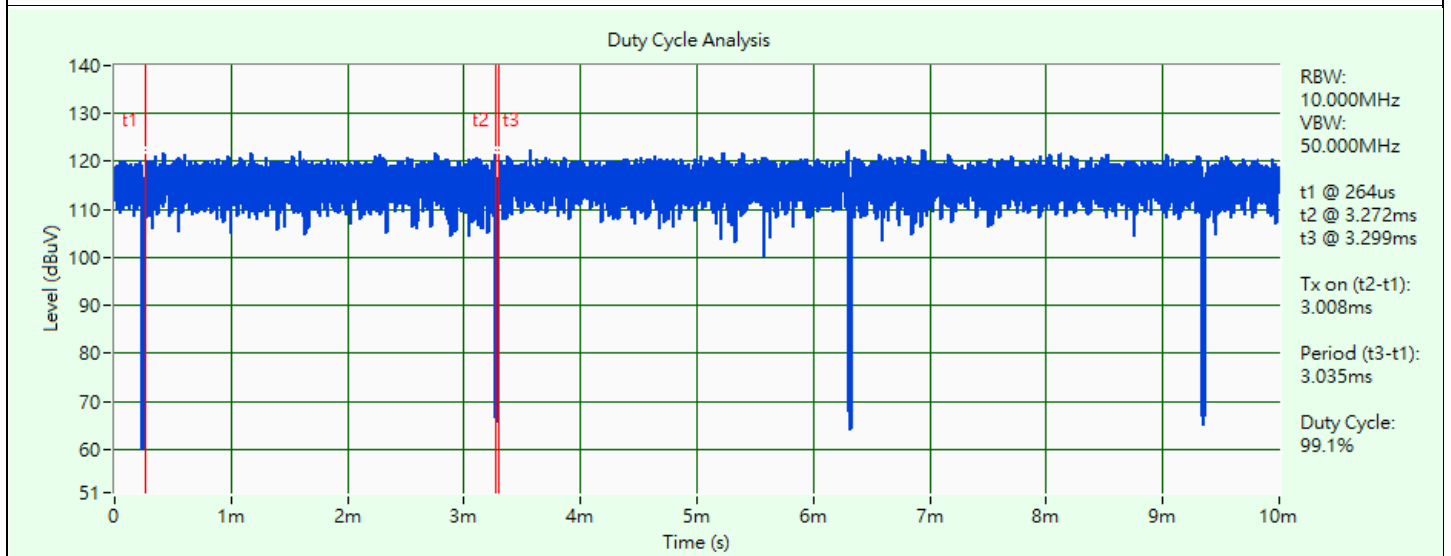
802.11g: Duty cycle = 3.008 ms / 3.035 ms x 100% = 99.1%

802.11ax (HE20): Duty cycle = 3.313 ms / 3.339 ms x 100% = 99.2%

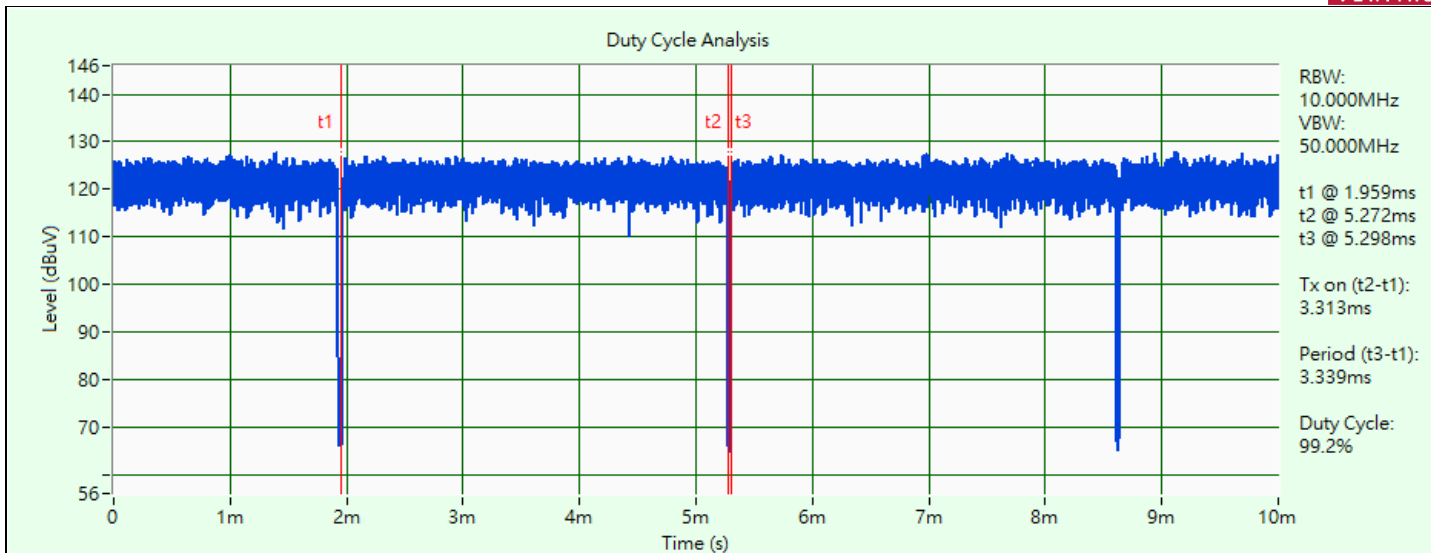
802.11ax (HE40): Duty cycle = 3.312 ms / 3.338 ms x 100% = 99.2%



802.11b



802.11g



802.11ax (HE20)

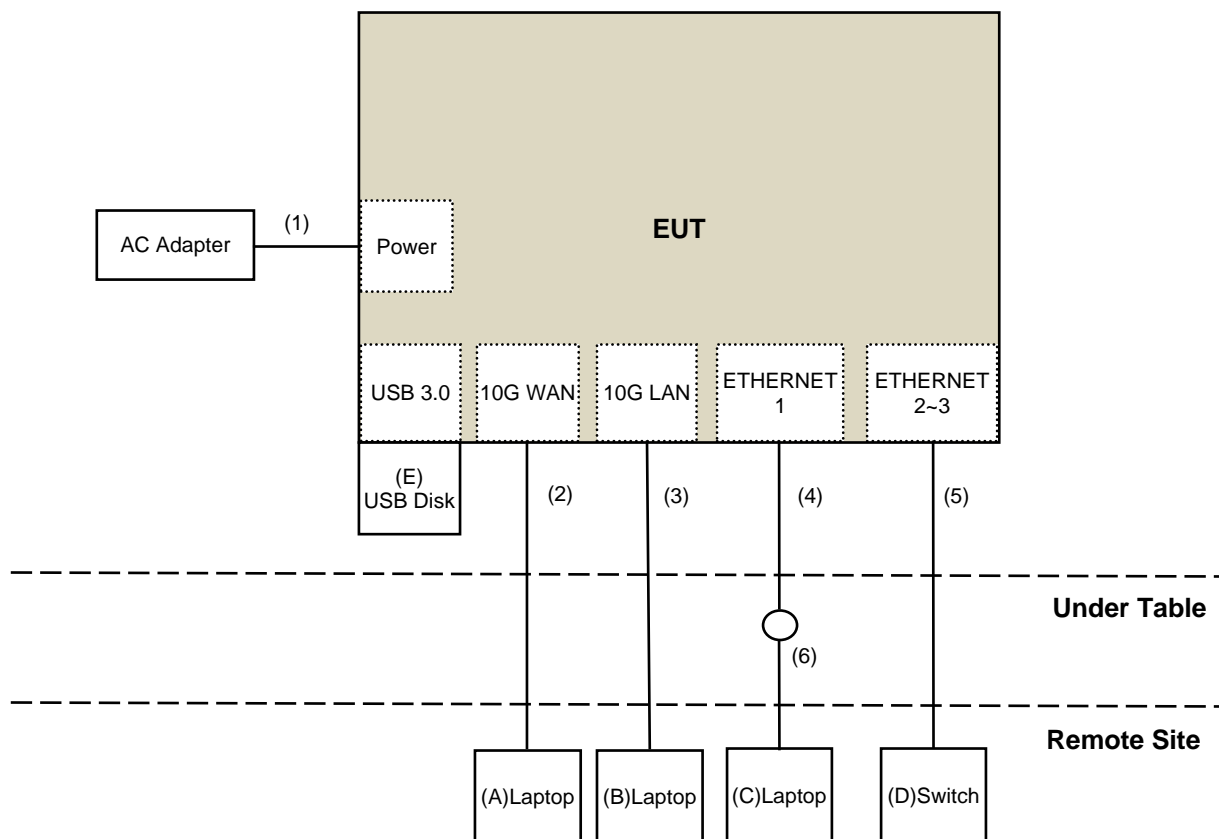


802.11ax (HE40)

3.7 Test Program Used and Operation Descriptions

Controlling software (accessMTool_REL_3_2_1_3) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.8 Connection Diagram of EUT and Peripheral Devices



3.9 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Lenovo	20U5S01X00 L14	PF-28LKK7	N/A	Provided by Lab
B	Laptop	Lenovo	20U5S01X00 L14	PF-1ANPYA	N/A	Provided by Lab
C	Laptop	HP	TPN-Q186	5CD8212YYK	DoC	Provided by Lab
D	Switch	D-Link	DGS-1005D	DR8WC92000523	N/A	Provided by Lab
E	USB Disk	SanDisk	BM181225896Z	N/A	N/A	Provided by Lab

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

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Power Meter Anritsu	ML2495A	1529002	2022/6/22	2023/6/21
Pulse Power Sensor Anritsu	MA2411B	1726434	2022/6/22	2023/6/21
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2023/1/16

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer Keysight	N9020B	MY60112409	2022/3/11	2023/3/10

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2023/1/16

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	N/A	EMC-01	2022/9/27	2023/9/26
Fixed attenuator STI	STI02-2200-10	005	2022/8/24	2023/8/23
LISN R&S	ESH3-Z5	848773/004	2022/10/18	2023/10/17
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2022/8/24	2023/8/23
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A
TEST RECEIVER R&S	ESCS 30	847124/029	2022/10/14	2023/10/13

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2023/1/3

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bilog Antenna Schwarzbeck	VULB 9168	9168-0942	2022/10/20	2023/10/19
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-01	2022/12/28	2023/12/27
LOOP ANTENNA Electro-Metrics	EM-6879	264	2022/3/18	2023/3/17
Pre_Amplifier EMCI	EMC001340	980142	2022/6/2	2023/6/1
Pre_Amplifier(20M-3G) EMCI	EMC330N	980852	2022/3/28	2023/3/27
RF Coaxial Cable COMMATE/PEWC	8D	966-6-1	2022/4/25	2023/4/24
		966-6-2	2022/4/25	2023/4/24
		966-6-3	2022/4/25	2023/4/24
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2022/1/6	2023/1/5
		LOOPCAB-002	2022/12/19	2023/12/18
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer Keysight	N9020B	MY60112410	2022/3/13	2023/3/12
Test Receiver KEYSIGHT	N9038A	MY59050100	2022/6/20	2023/6/19

Notes:

1. The test was performed in 966 Chamber No. 6.
2. Tested Date: 2022/12/30

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-2035	2022/11/13	2023/11/12
	BBHA 9170	BBHA9170519	2022/11/13	2023/11/12
Pre_Amplifier EMCI	EMC12630SE	980385	2022/8/15	2023/8/14
	EMC184045SE	980387	2022/1/10 2022/12/28	2023/1/9 2023/12/27
RF Cable EMCI	EMC104-SM-SM-1300	210205	2022/5/10	2023/5/9
RF Cable-Frequency range: 1- 40GHz EMCI	EMC102-KM-KM-1200	160924	2022/1/10	2023/1/9
			2022/12/28	2023/12/27
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2022/3/8	2023/3/7
	EMC101G-KM-KM-10000	210708	2022/11/4	2023/11/3
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer Keysight	N9020B	MY60112410	2022/3/13	2023/3/12
Test Receiver KEYSIGHT	N9038A	MY59050100	2022/6/20	2023/6/19

Notes:

1. The test was performed in 966 Chamber No. 6.
2. Tested Date: 2022/12/8 ~ 2023/1/31

5 Limits of Test Items

5.1 RF Output Power

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

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

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

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

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

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

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

5.5 AC Power Conducted Emissions

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

Notes:

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

5.6 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.7 Unwanted Emissions above 1 GHz

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

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

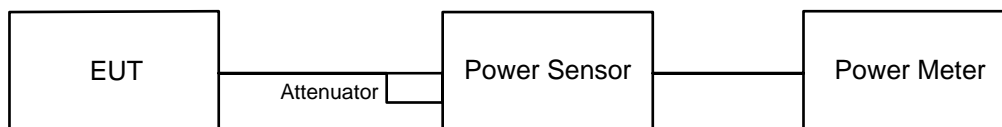
Notes:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



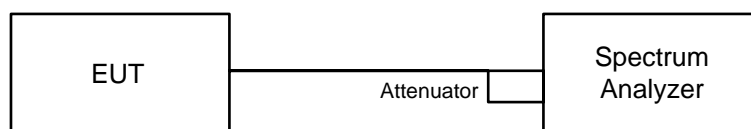
6.1.2 Test Procedure

Average Power:

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

6.2 Power Spectral Density

6.2.1 Test Setup

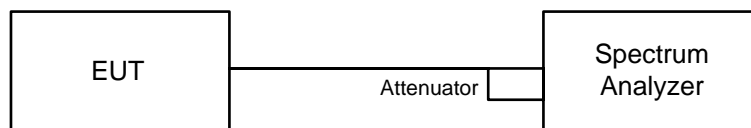


6.2.2 Test Procedure

- a. Measure the duty cycle (x).
- b. Set instrument center frequency to DTS channel center frequency.
- c. Set span to at least 1.5 times the OBW.
- d. Set RBW to: 3 kHz.
- e. Set VBW $\geq 3 \times$ RBW.
- f. Detector = power averaging (RMS) or sample detector (when RMS not available).
- g. Ensure that the number of measurement points in the sweep $\geq 2 \times$ span/RBW.
- h. Sweep time = auto couple.
- i. Do not use sweep triggering. Allow sweep to "free run".
- j. Employ trace averaging (RMS) mode over a minimum of 100 traces.
- k. Use the peak marker function to determine the maximum amplitude level.
- l. Note: If Duty cycle < 98%, Add $10 \log (1/x)$, where x is the duty cycle measured in step (a), to the measured PSD to compute the average PSD during the actual transmission time.

6.3 6 dB Bandwidth

6.3.1 Test Setup

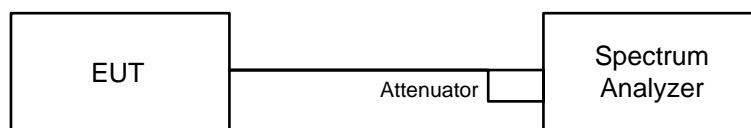


6.3.2 Test Procedure

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

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

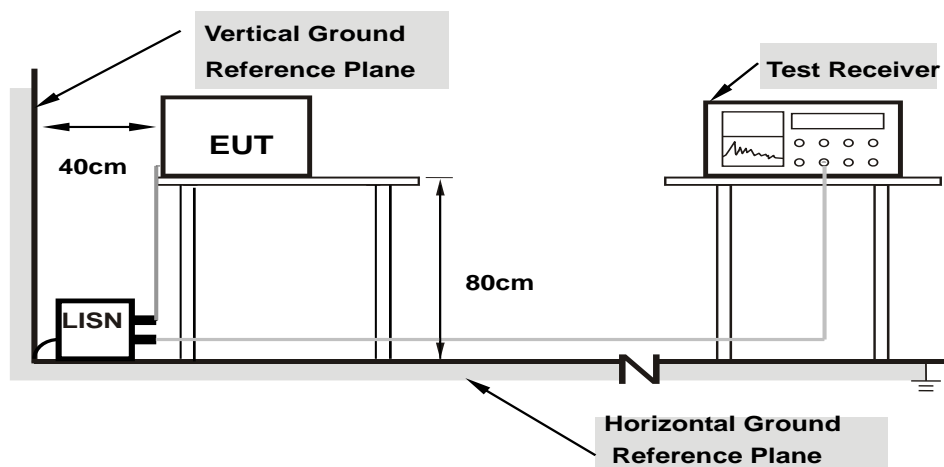
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE 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

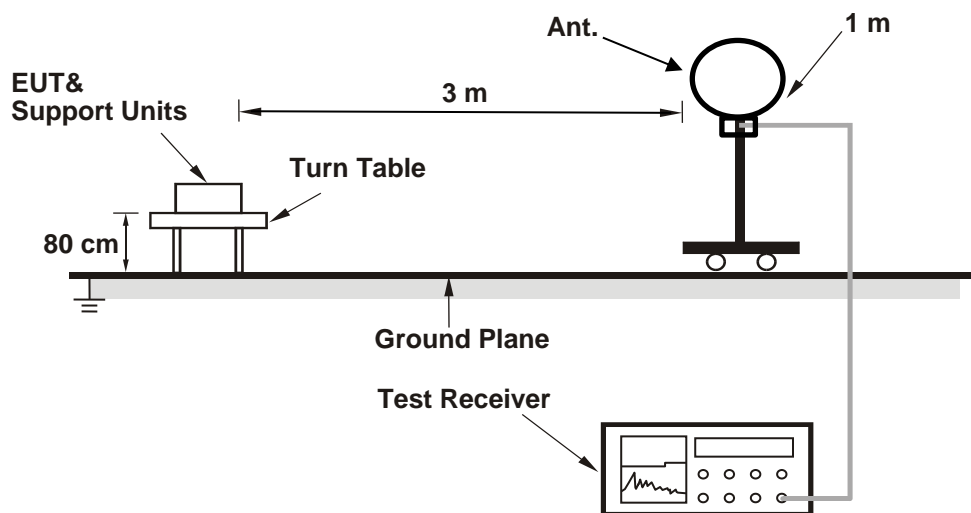
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

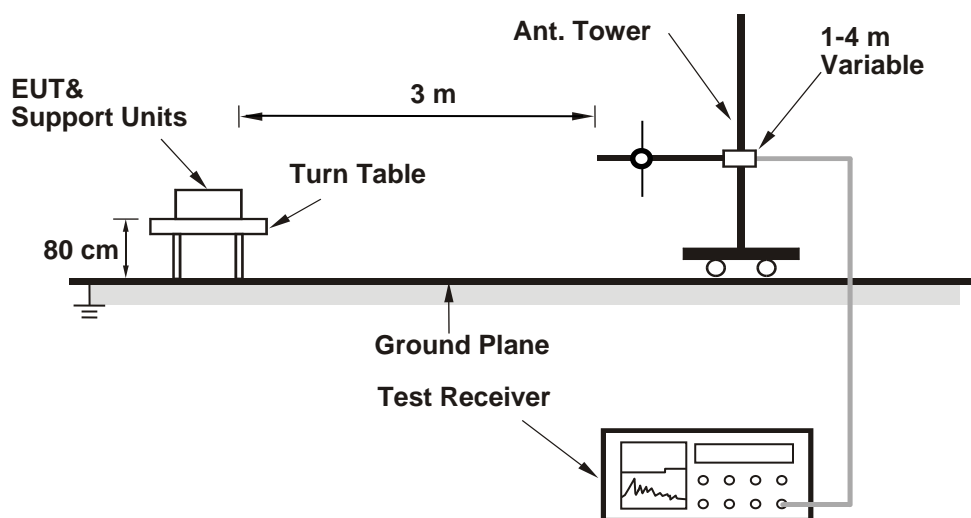
6.6 Unwanted Emissions below 1 GHz

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

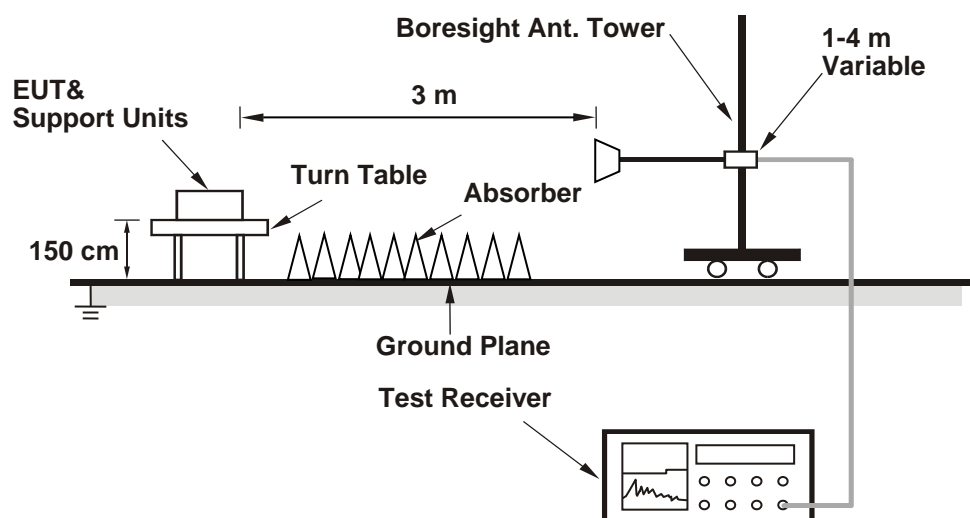
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the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

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	20.58	20.03	19.94	20.07	415.234	26.18	30	Pass
6	2437	24.25	23.92	23.90	23.80	998.031	29.99	30	Pass
11	2462	21.11	20.26	20.35	20.53	456.664	26.60	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11g CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	19.05	19.22	18.55	18.46	305.673	24.85	30	Pass
6	2437	24.12	24.28	23.43	23.93	993.608	29.97	30	Pass
11	2462	19.61	19.49	18.77	19.32	341.174	25.33	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT20 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	21.42	21.46	20.54	21.20	523.7	27.19	30	Pass
6	2437	23.86	23.94	23.15	23.78	936.282	29.71	30	Pass
11	2462	17.07	17.27	16.52	17.08	200.192	23.01	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT40 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	20.53	19.88	19.77	20.11	407.661	26.10	30	Pass
6	2437	20.99	20.28	20.04	20.58	447.476	26.51	30	Pass
9	2452	18.02	17.32	17.12	17.67	227.34	23.57	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	21.71	21.75	20.83	21.44	558.251	27.47	30	Pass
6	2437	24.13	24.22	23.37	24.04	993.845	29.97	30	Pass
11	2462	17.36	17.50	16.81	17.30	212.361	23.27	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	20.80	20.11	20.06	20.36	432.825	26.36	30	Pass
6	2437	21.24	20.54	20.33	20.80	474.407	26.76	30	Pass
9	2452	18.27	17.61	17.39	17.92	241.591	23.83	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT20 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	21.42	21.46	20.54	21.20	523.7	27.19	29.09	Pass
6	2437	23.14	23.20	22.44	23.05	792.217	28.99	29.09	Pass
11	2462	17.07	17.27	16.52	17.08	200.192	23.01	29.09	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 6.91 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (6.91 - 6) = 29.09$ dBm.

VHT40 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	20.53	19.88	19.77	20.11	407.661	26.10	29.09	Pass
6	2437	20.99	20.28	20.04	20.58	447.476	26.51	29.09	Pass
9	2452	18.02	17.32	17.12	17.67	227.34	23.57	29.09	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 6.91 dBi > 6 dBi, so the output power limit shall be reduced to $30-(6.91-6) = 29.09$ dBm.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	21.71	21.75	20.83	21.44	558.251	27.47	29.09	Pass
6	2437	23.22	23.29	22.45	23.10	803.165	29.05	29.09	Pass
11	2462	17.36	17.50	16.81	17.30	212.361	23.27	29.09	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 6.91 dBi > 6 dBi, so the output power limit shall be reduced to $30-(6.91-6) = 29.09$ dBm.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	20.80	20.11	20.06	20.36	432.825	26.36	29.09	Pass
6	2437	21.24	20.54	20.33	20.80	474.407	26.76	29.09	Pass
9	2452	18.27	17.61	17.39	17.92	241.591	23.83	29.09	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 6.91 dBi > 6 dBi, so the output power limit shall be reduced to $30-(6.91-6) = 29.09$ dBm.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Katina Lu
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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	Chain 2	Chain 3			
1	2412	-11.57	-12.13	-12.13	-11.24	-5.73	7.09	Pass
6	2437	-7.50	-8.54	-8.34	-7.98	-2.05	7.09	Pass
11	2462	-10.37	-11.63	-11.78	-10.54	-5.01	7.09	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 6.91 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (6.91 - 6) = 7.09$ dBm/3kHz.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
1	2412	-15.84	-15.72	-16.41	-16.39	-10.06	7.09	Pass
6	2437	-10.90	-11.46	-11.30	-11.10	-5.16	7.09	Pass
11	2462	-16.11	-15.59	-16.38	-15.94	-9.97	7.09	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 6.91 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (6.91 - 6) = 7.09$ dBm/3kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
1	2412	-14.99	-14.33	-14.51	-12.85	-8.07	7.09	Pass
6	2437	-12.02	-11.83	-12.06	-11.11	-5.72	7.09	Pass
11	2462	-16.47	-17.31	-17.55	-18.02	-11.28	7.09	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 6.91 dBi > 6 dBi, so the power density limit shall be reduced to $8-(6.91-6) = 7.09$ dBm/3kHz.

802.11ax (HE40)

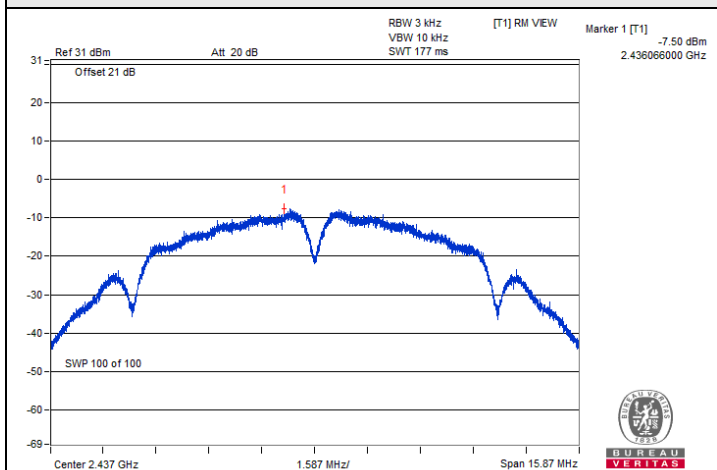
Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)				Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
3	2422	-18.08	-15.64	-18.84	-18.45	-11.54	7.09	Pass
6	2437	-18.01	-18.49	-18.51	-17.87	-12.19	7.09	Pass
9	2452	-18.84	-20.65	-21.75	-21.35	-14.48	7.09	Pass

Notes:

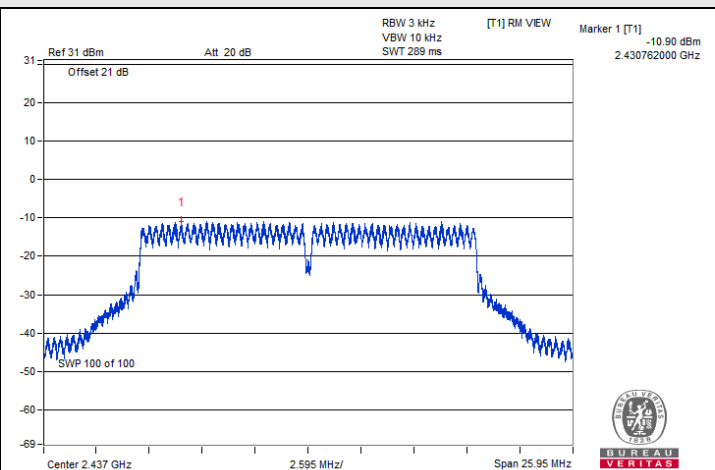
1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 6.91 dBi > 6 dBi, so the power density limit shall be reduced to $8-(6.91-6) = 7.09$ dBm/3kHz.



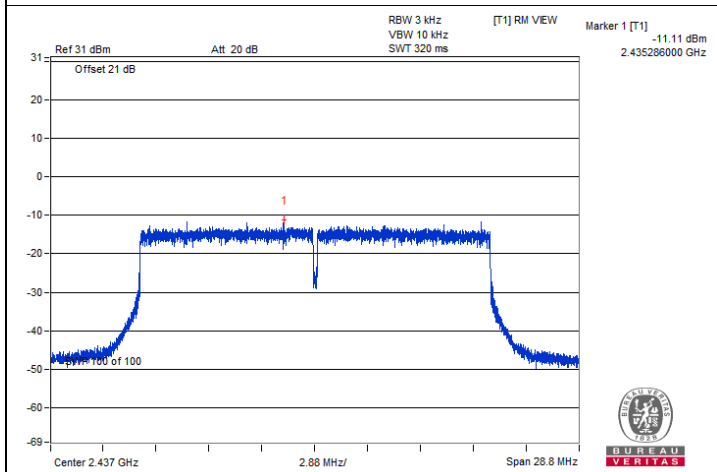
Spectrum Plot of Maximum Value



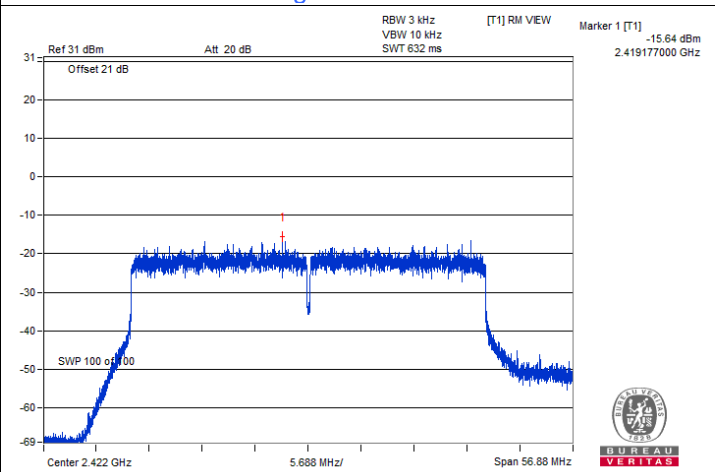
802.11b / Chain 0 : CH 6



802.11g / Chain 0 : CH 6



802.11ax (HE20) / Chain 3 : CH 6



802.11ax (HE40) / Chain 1 : CH 3

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Katina Lu
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802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	7.12	7.10	7.10	7.09	0.5	Pass
6	2437	7.11	7.07	7.10	7.11	0.5	Pass
11	2462	7.11	7.09	7.07	7.10	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	16.40	16.41	16.42	16.43	0.5	Pass
6	2437	16.42	16.43	16.44	16.45	0.5	Pass
11	2462	16.43	16.43	16.44	16.44	0.5	Pass

802.11ax (HE20)

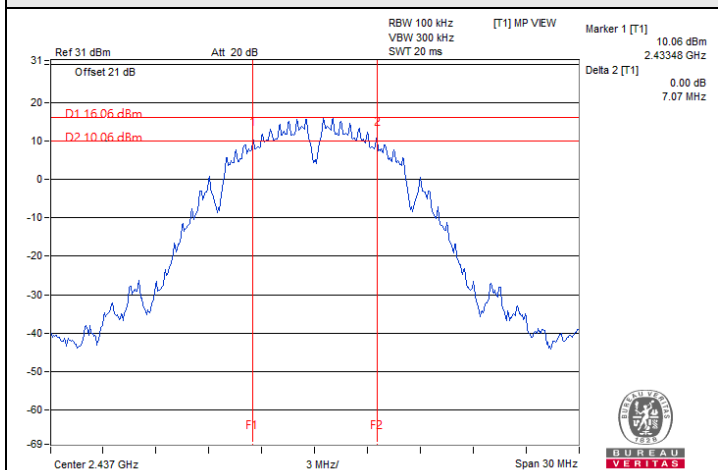
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	18.95	18.98	19.00	18.99	0.5	Pass
6	2437	19.04	19.02	19.04	19.05	0.5	Pass
11	2462	19.00	19.03	18.97	19.03	0.5	Pass

802.11ax (HE40)

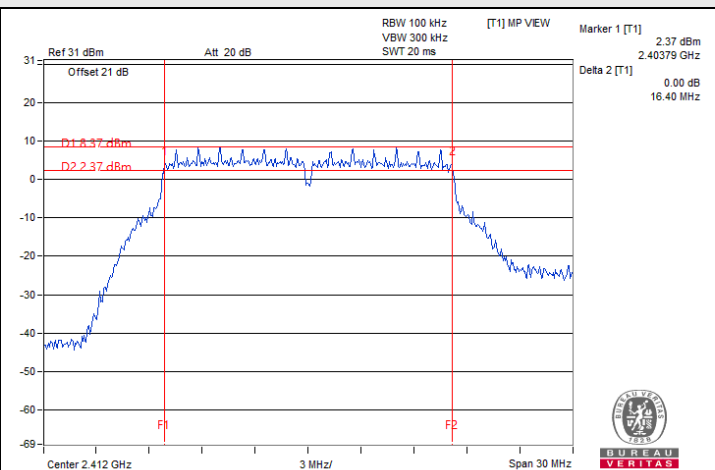
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	37.83	37.93	37.95	37.55	0.5	Pass
6	2437	38.15	38.00	37.95	37.90	0.5	Pass
9	2452	37.75	37.93	38.01	37.90	0.5	Pass



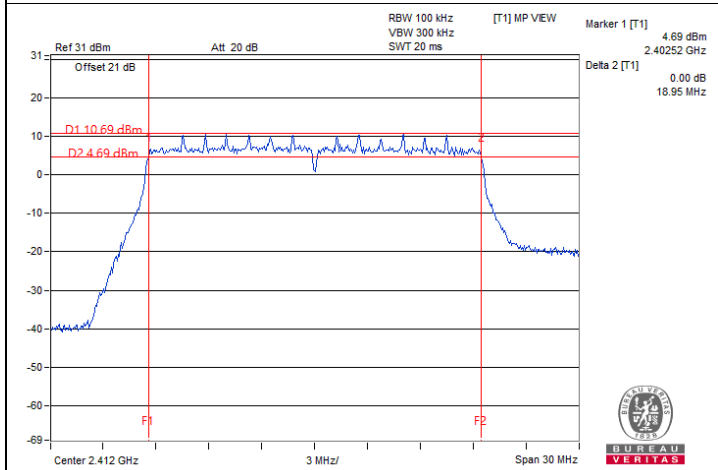
Spectrum Plot of Minimum Value



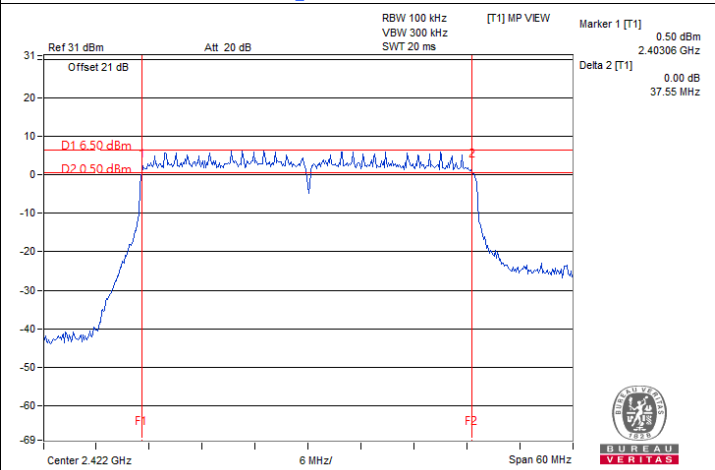
802.11b / Chain 1 : CH 6



802.11g / Chain 0 : CH 1



802.11ax (HE20) / Chain 0 : CH 1



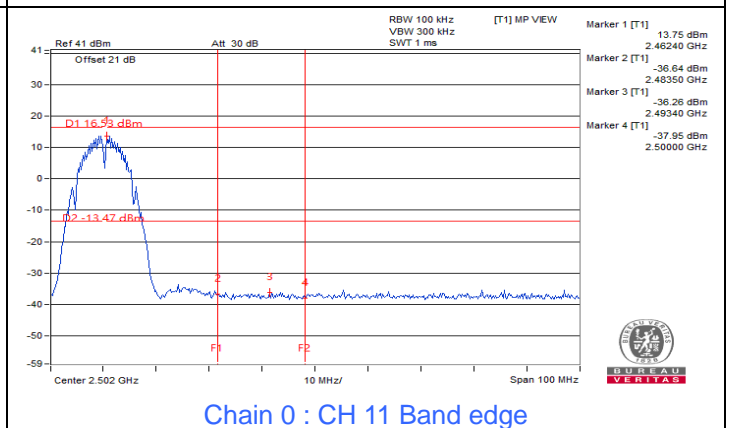
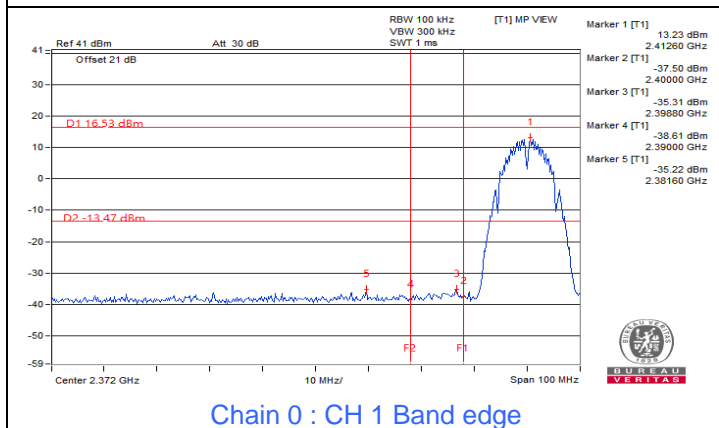
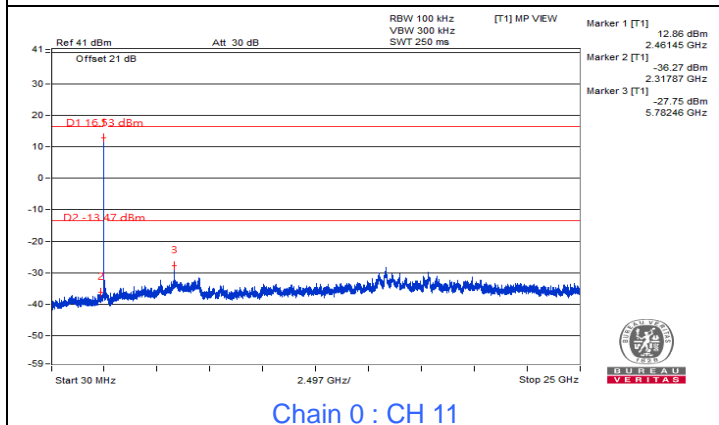
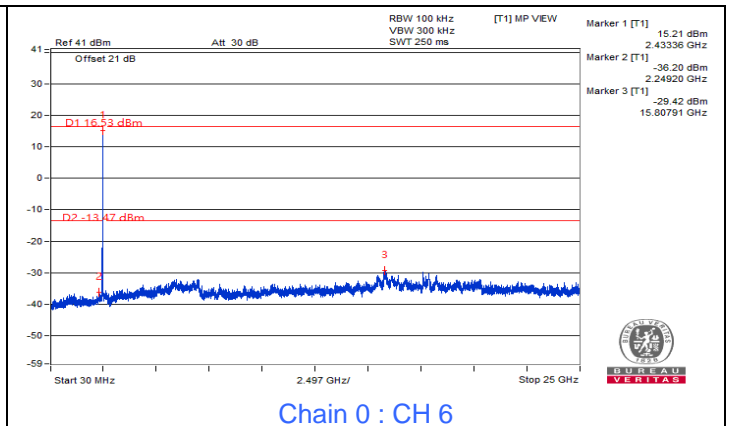
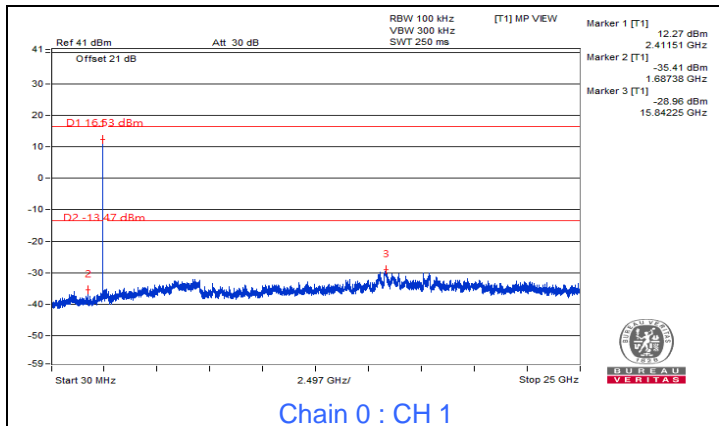
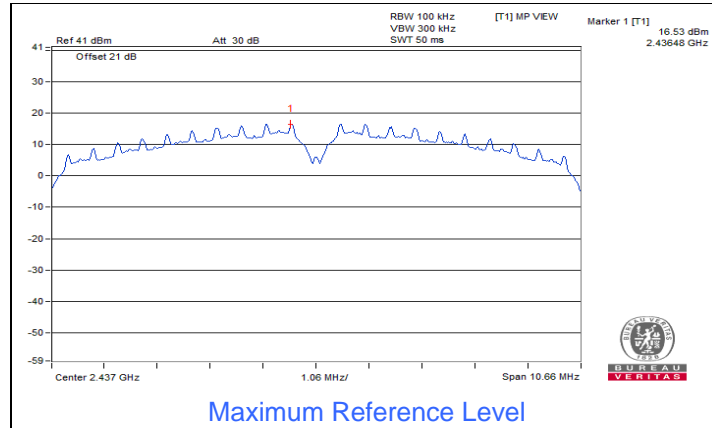
802.11ax (HE40) / Chain 3 : CH 3

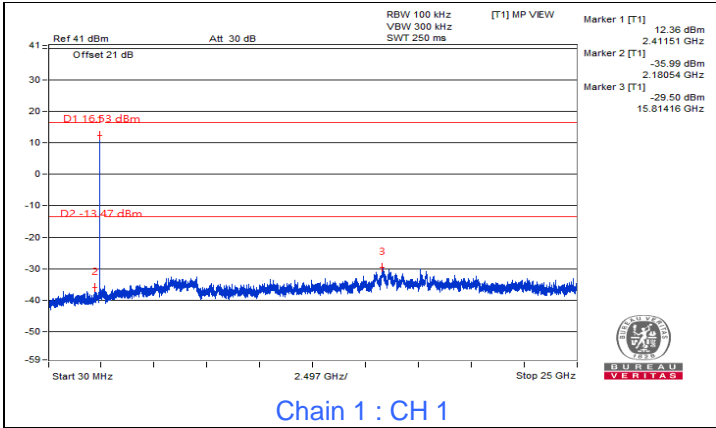


7.4 Conducted Out of Band Emissions

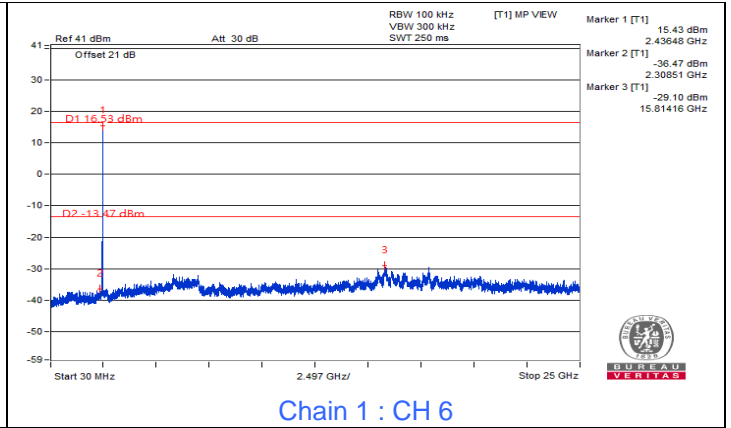
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Katina Lu
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802.11b

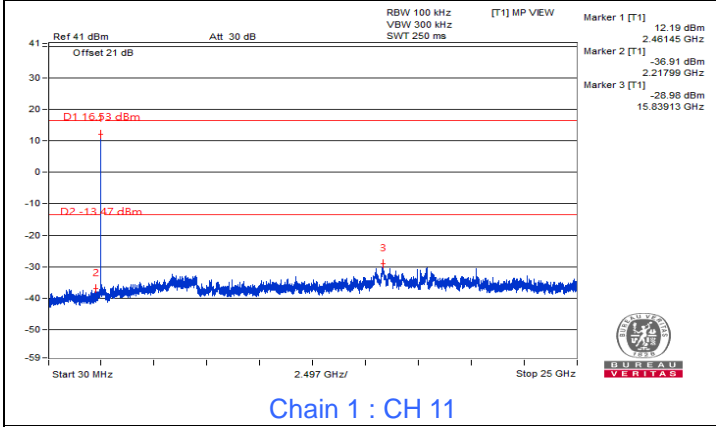




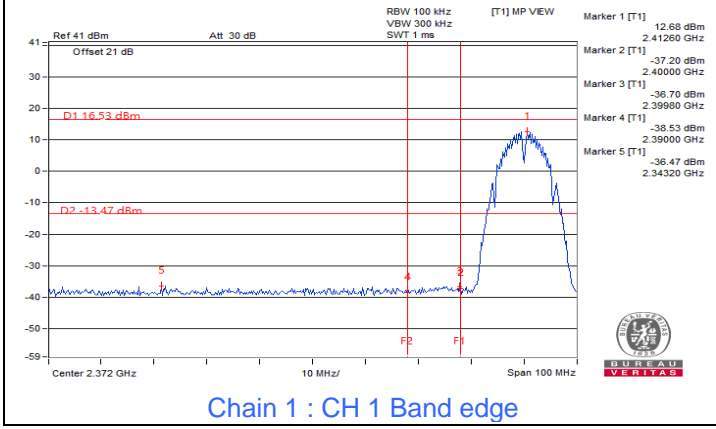
Chain 1 : CH 1



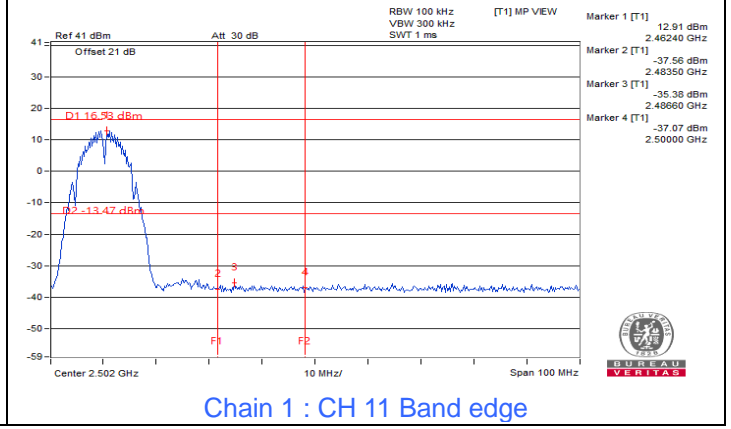
Chain 1 : CH 6



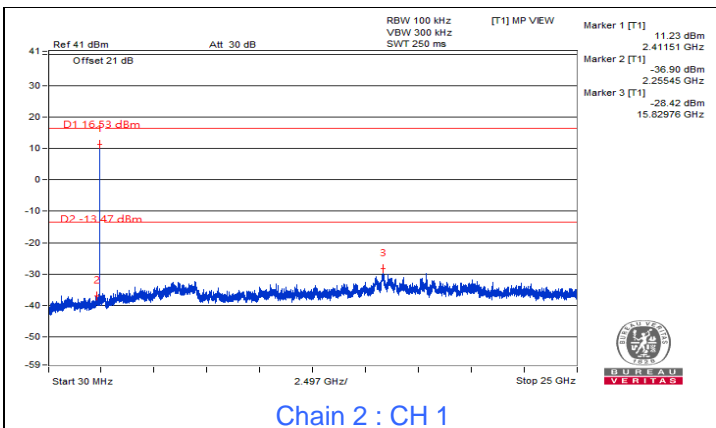
Chain 1 : CH 11



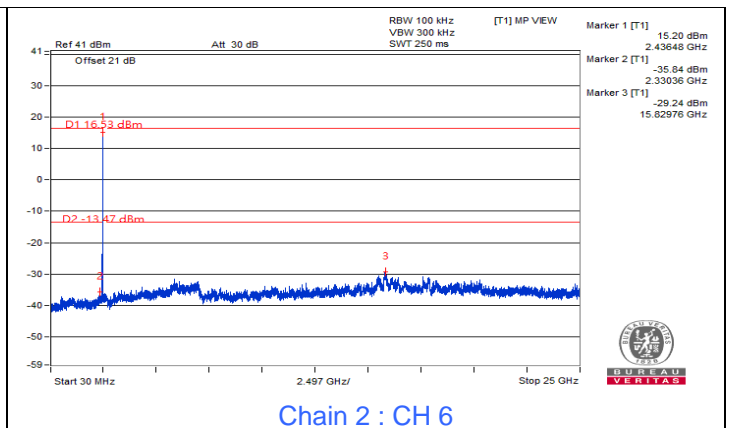
Chain 1 : CH 1 Band edge



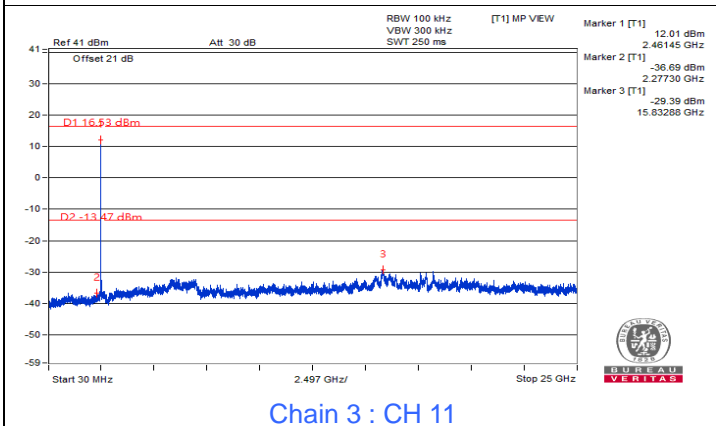
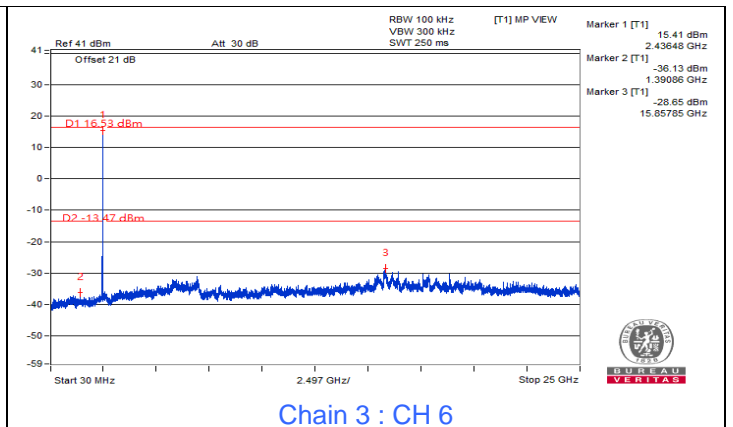
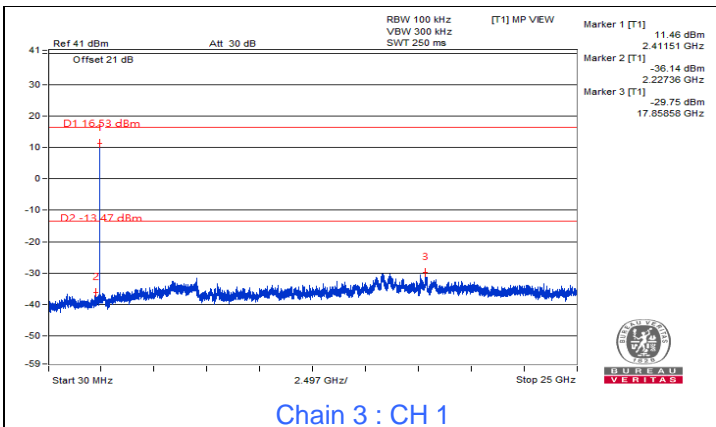
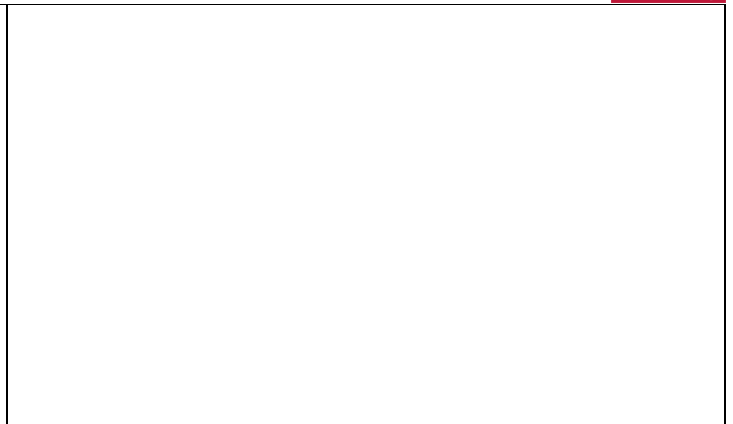
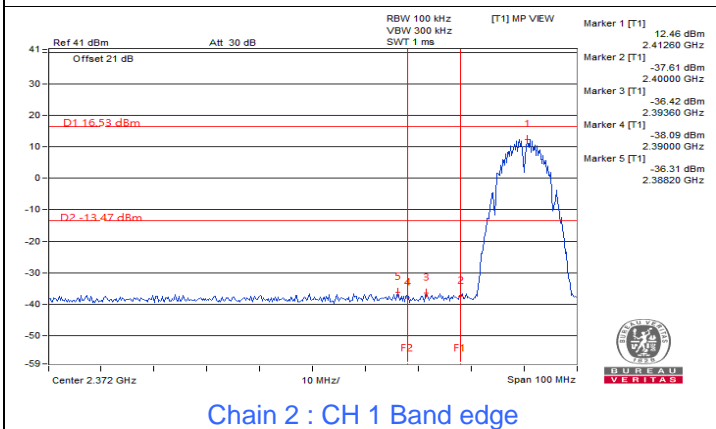
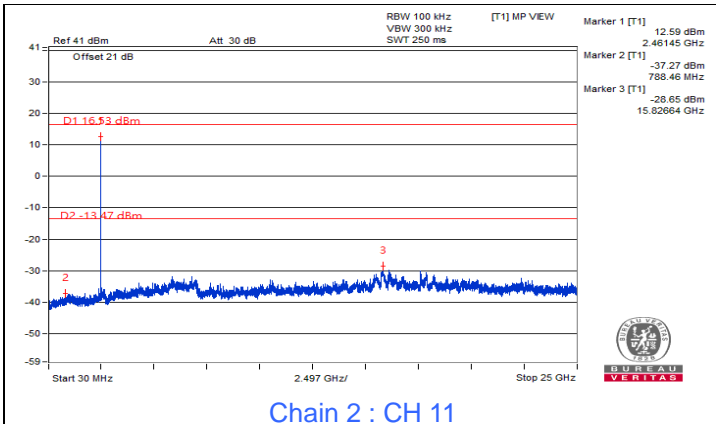
Chain 1 : CH 11 Band edge

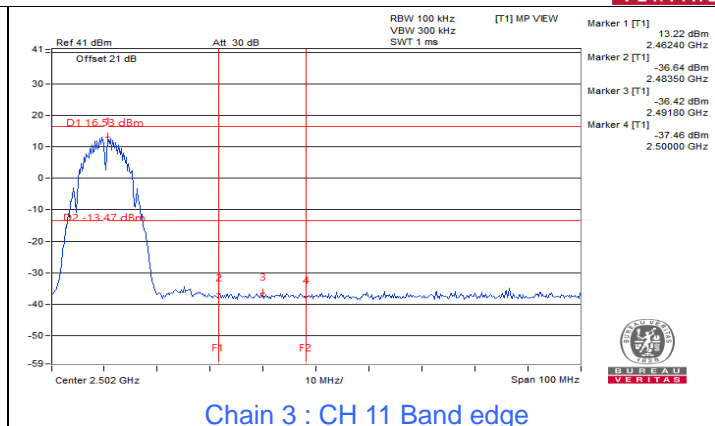
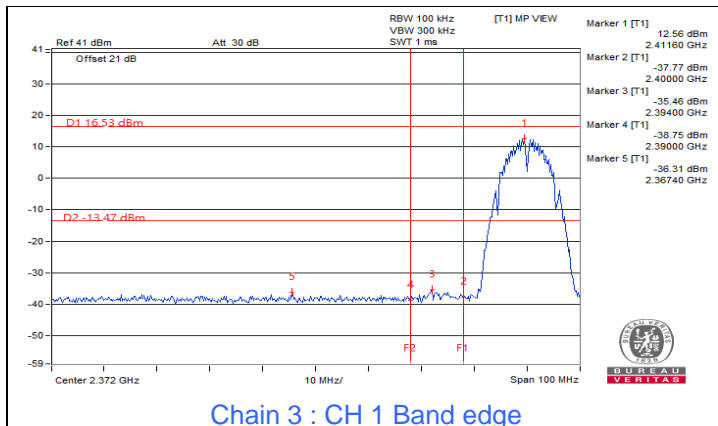


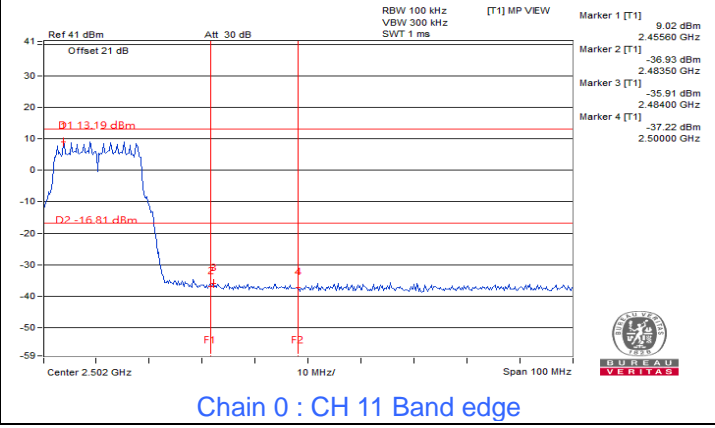
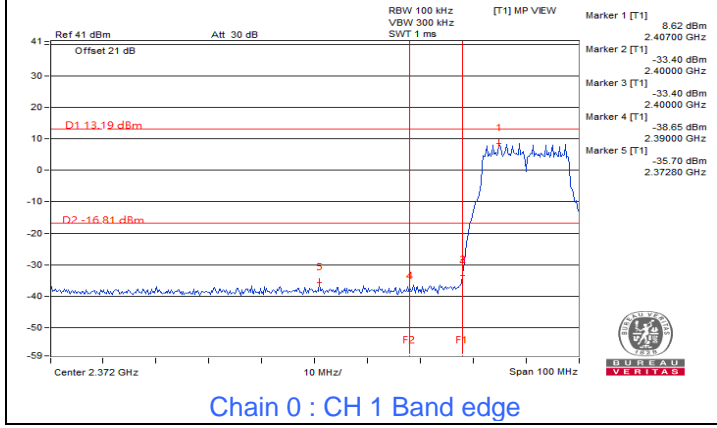
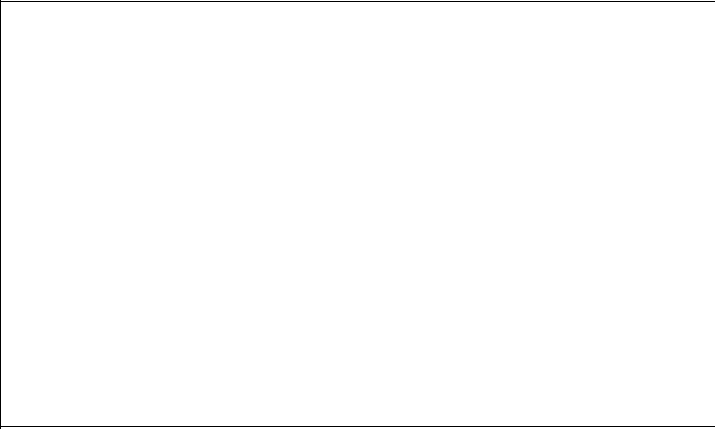
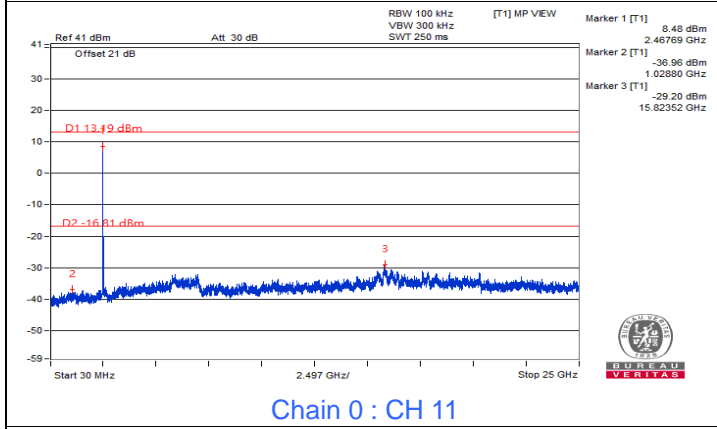
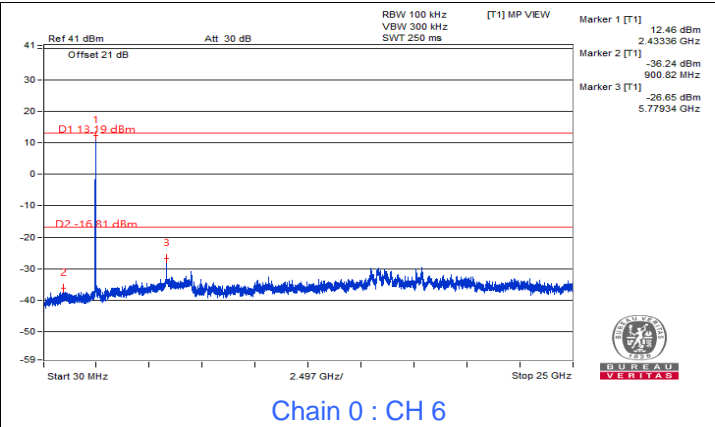
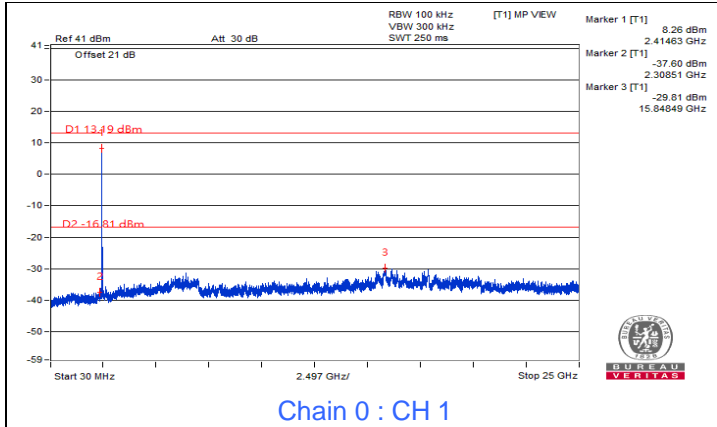
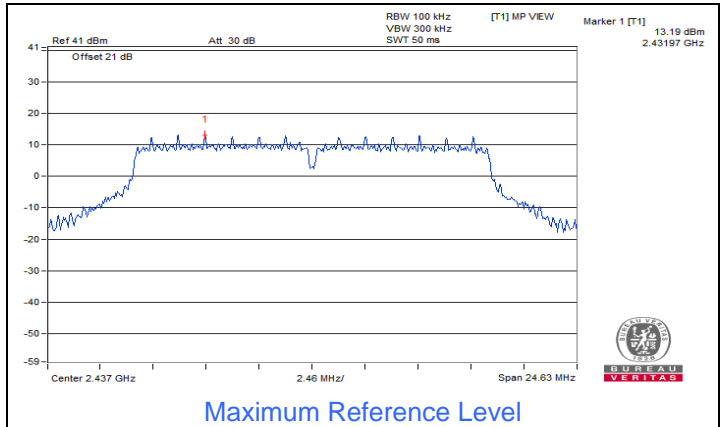
Chain 2 : CH 1

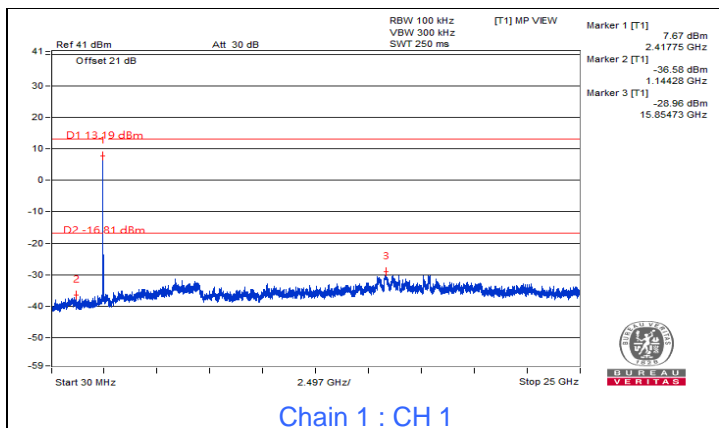


Chain 2 : CH 6

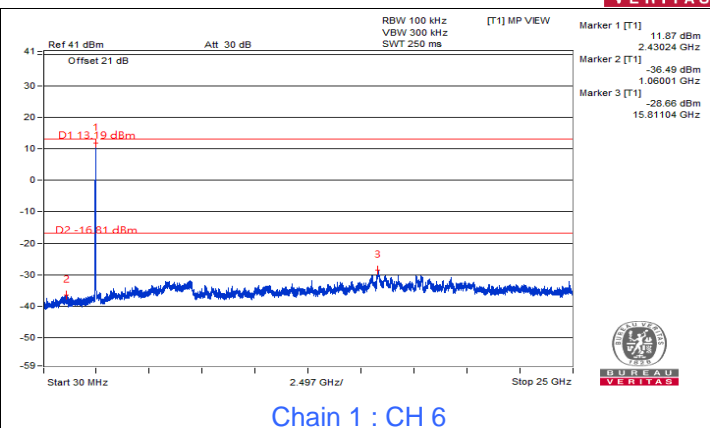




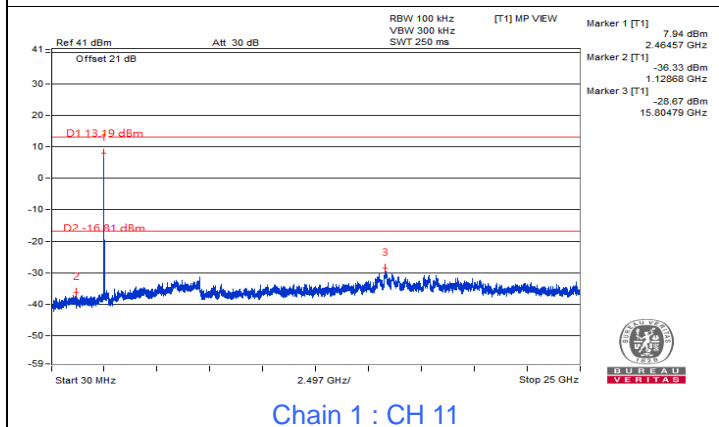




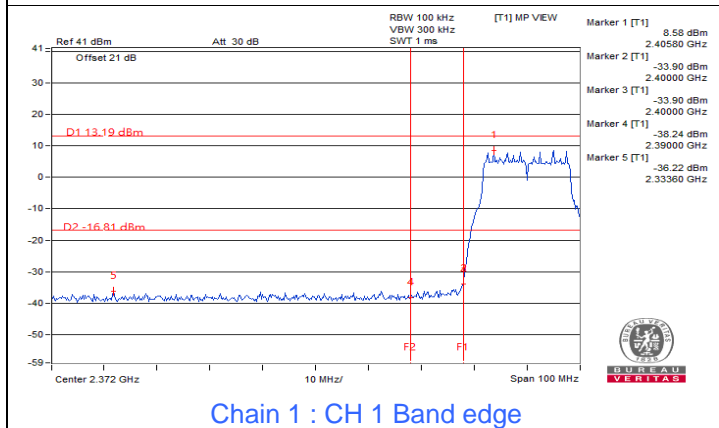
Chain 1 : CH 1



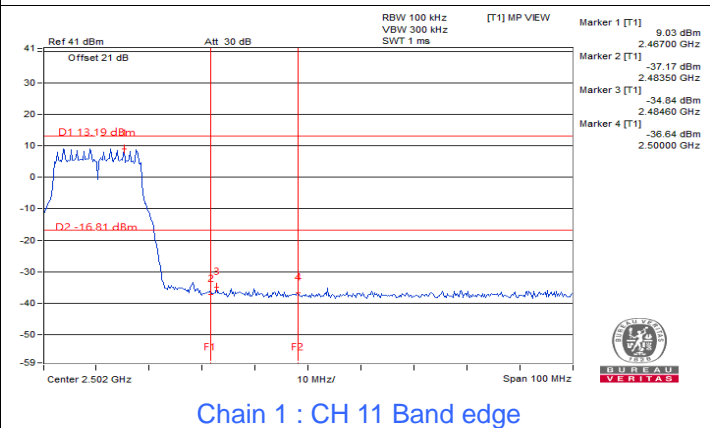
Chain 1 : CH 6



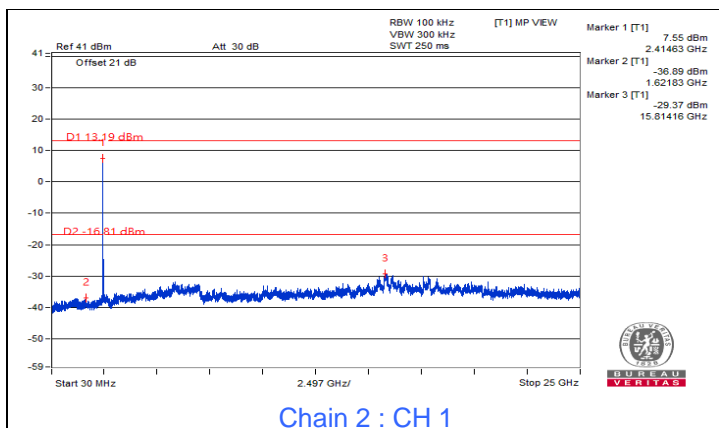
Chain 1 : CH 11



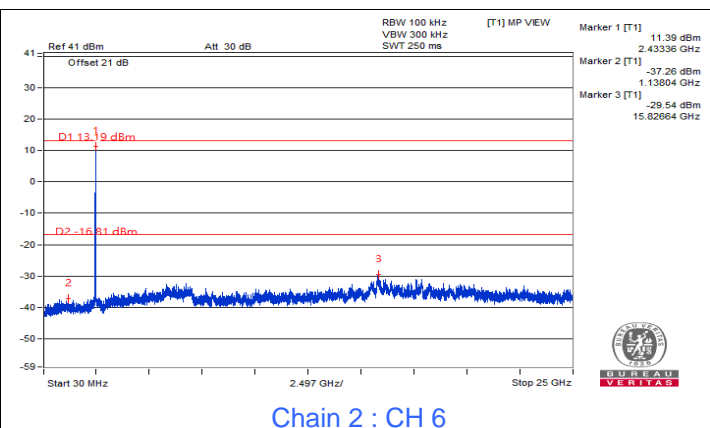
Chain 1 : CH 1 Band edge



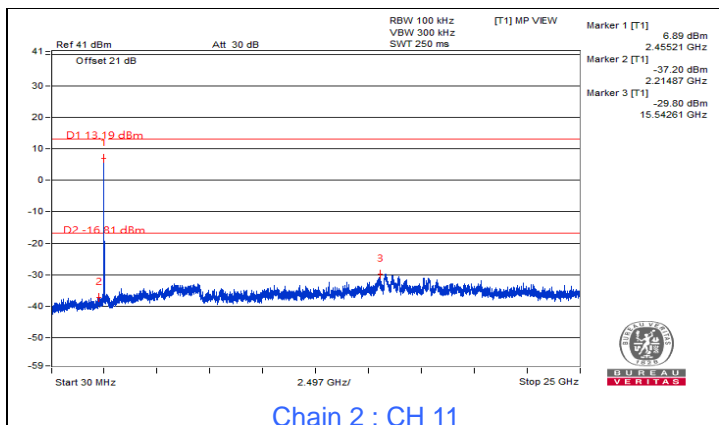
Chain 1 : CH 11 Band edge



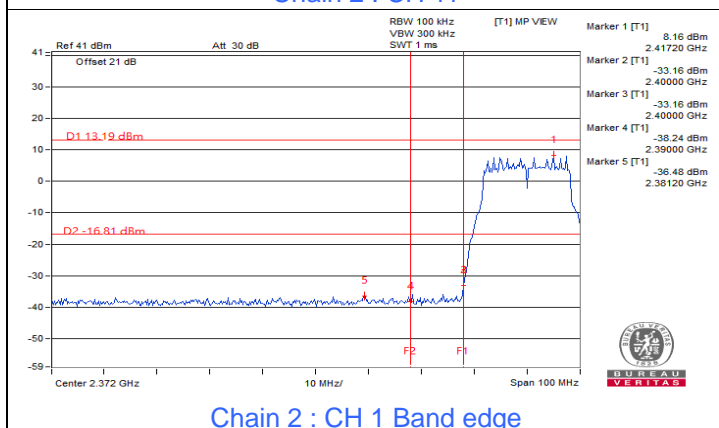
Chain 2 : CH 1



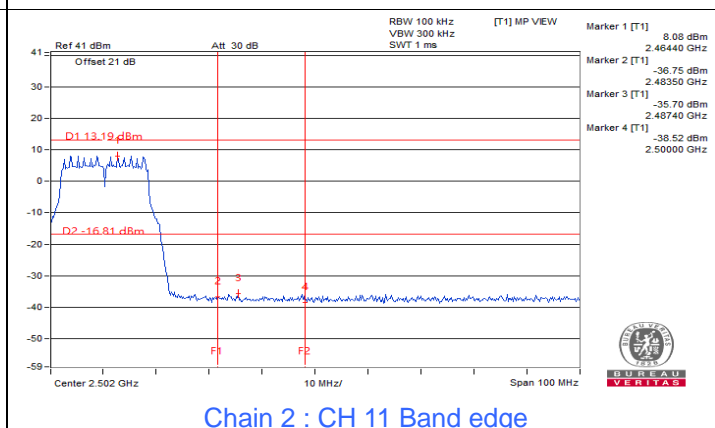
Chain 2 : CH 6



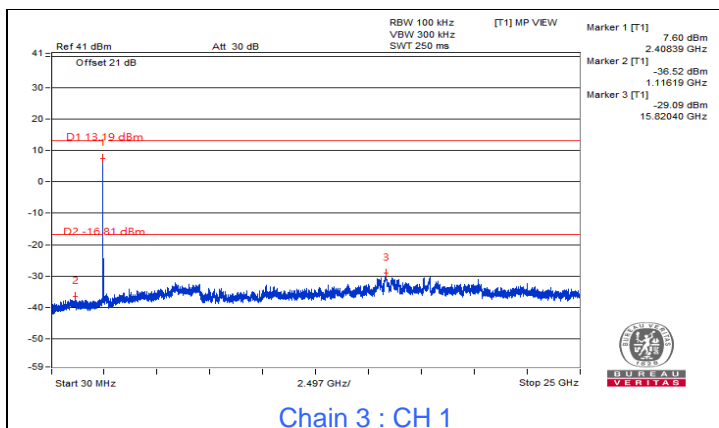
Chain 2 : CH 11



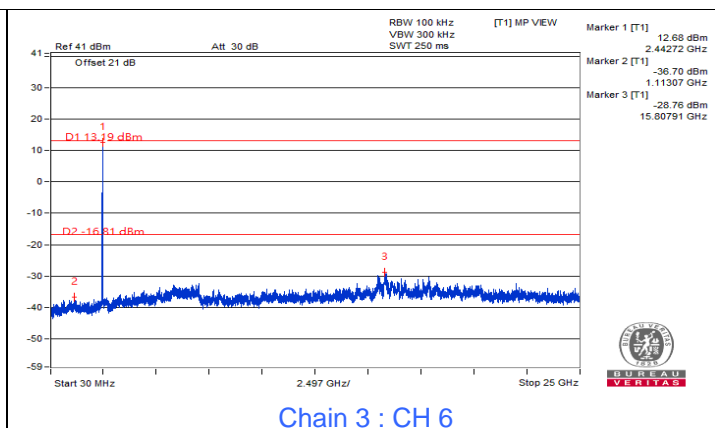
Chain 2 : CH 1 Band edge



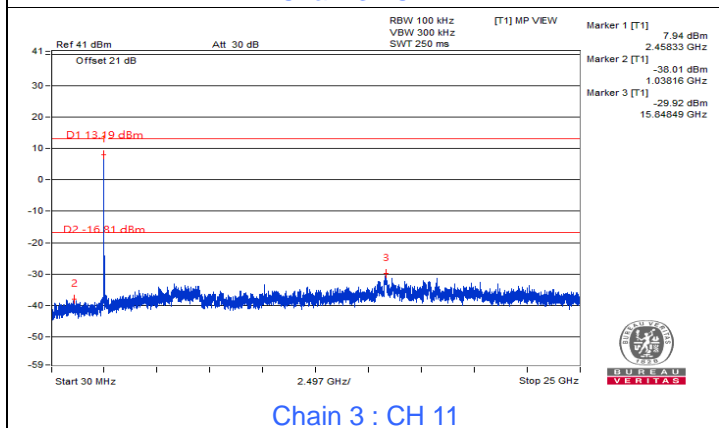
Chain 2 : CH 11 Band edge



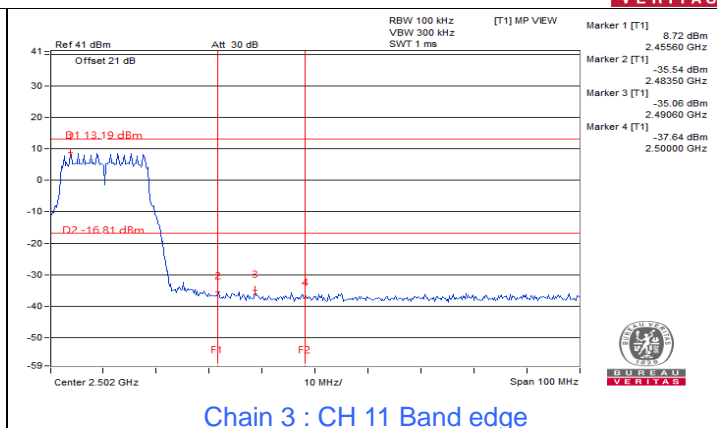
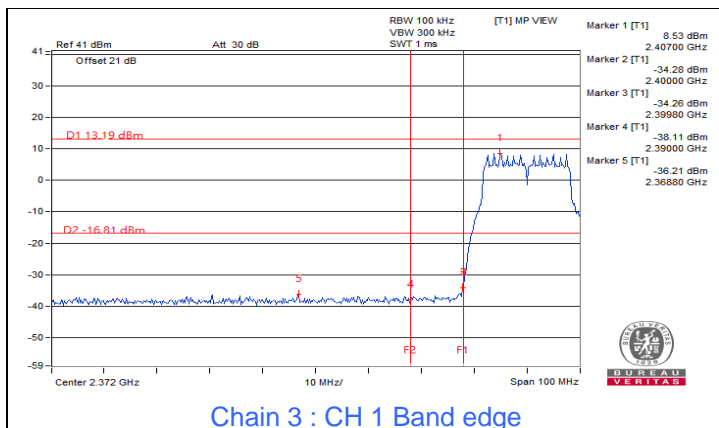
Chain 3 : CH 1



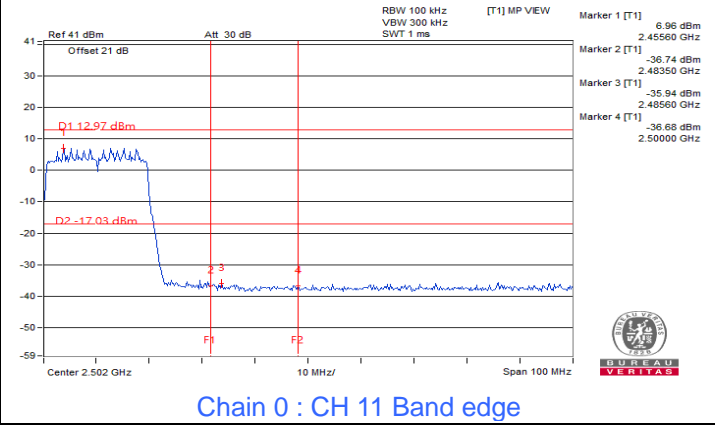
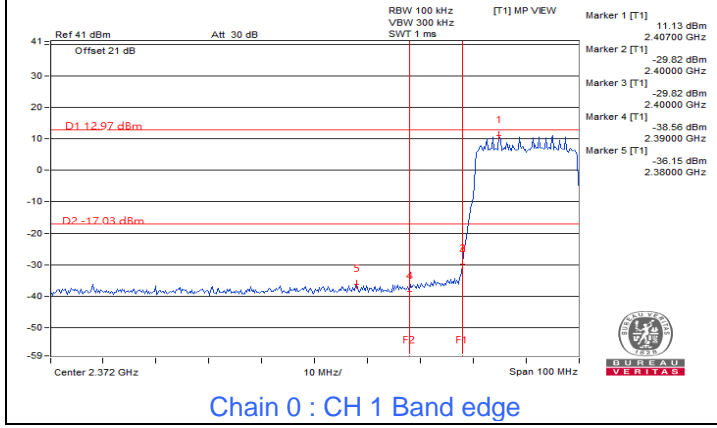
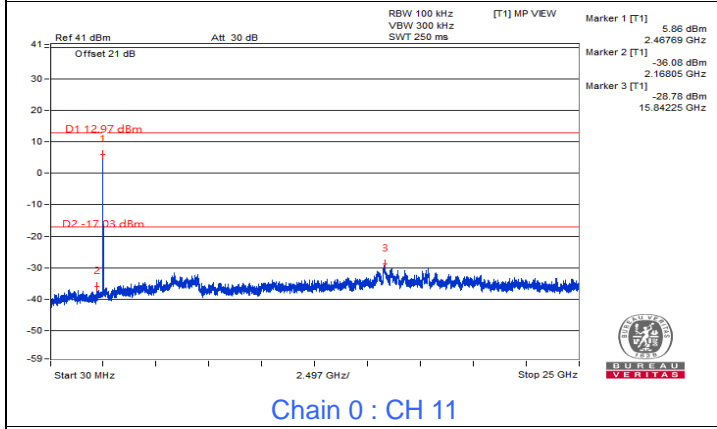
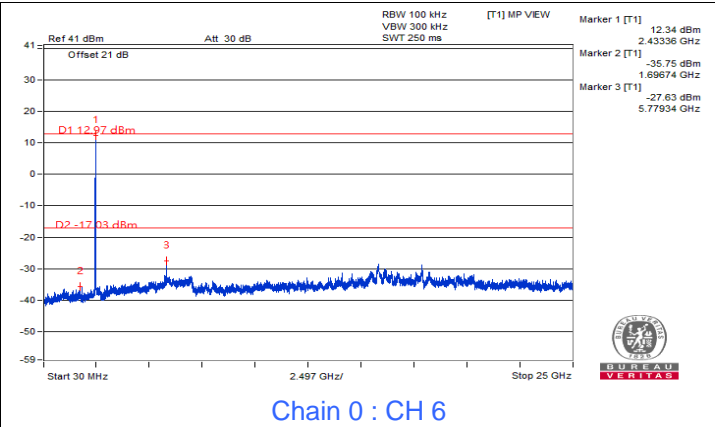
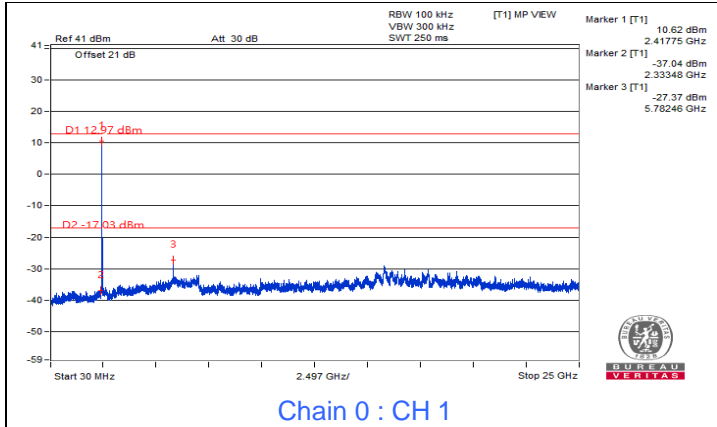
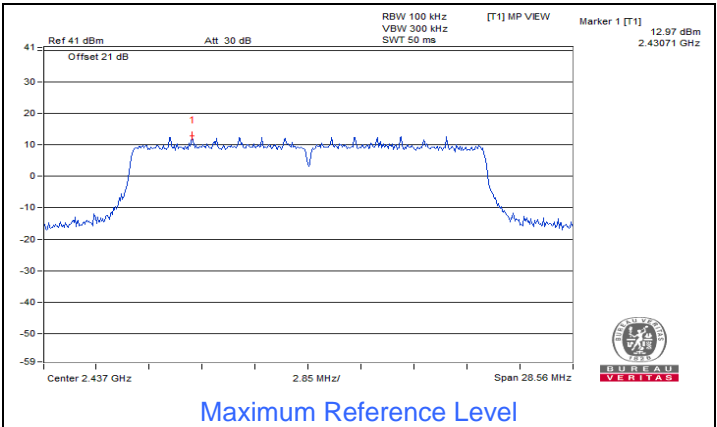
Chain 3 : CH 6

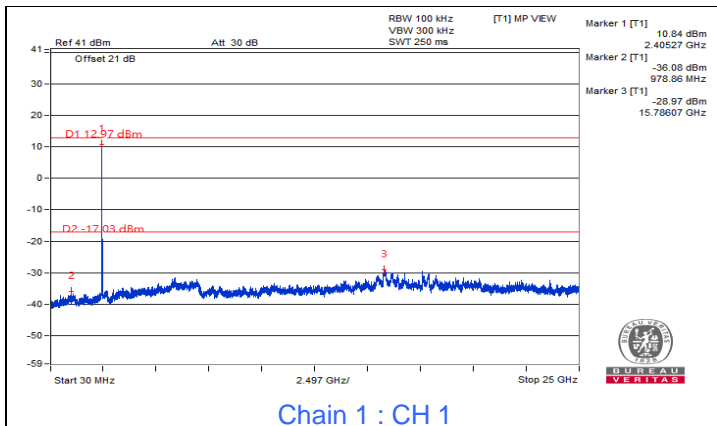


Chain 3 : CH 11

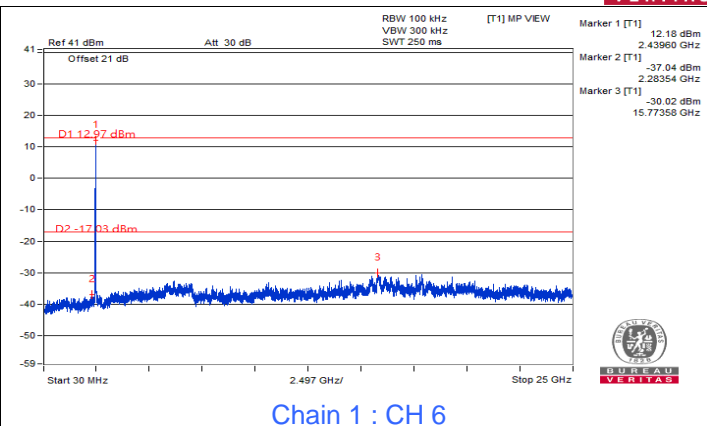


802.11ax (HE20)

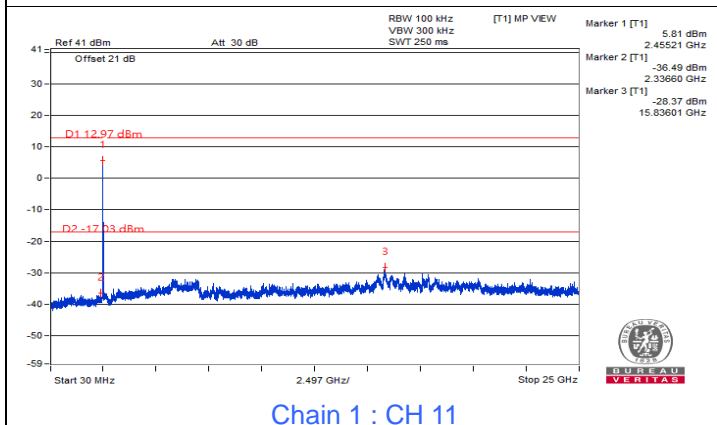




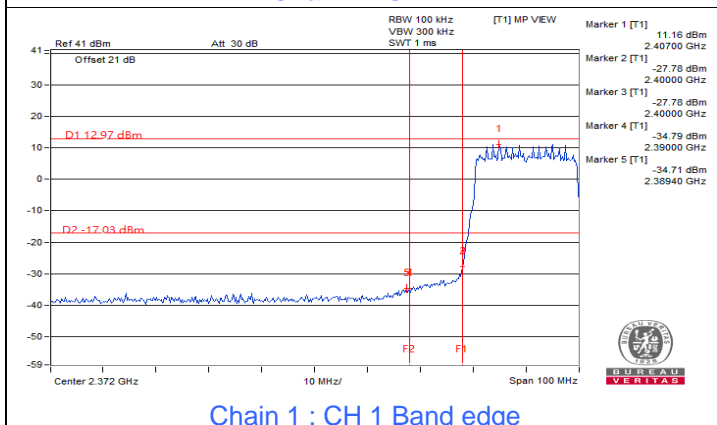
Chain 1 : CH 1



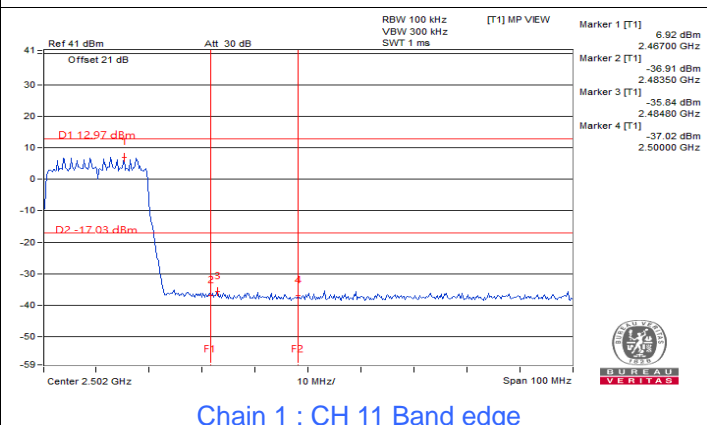
Chain 1 : CH 6



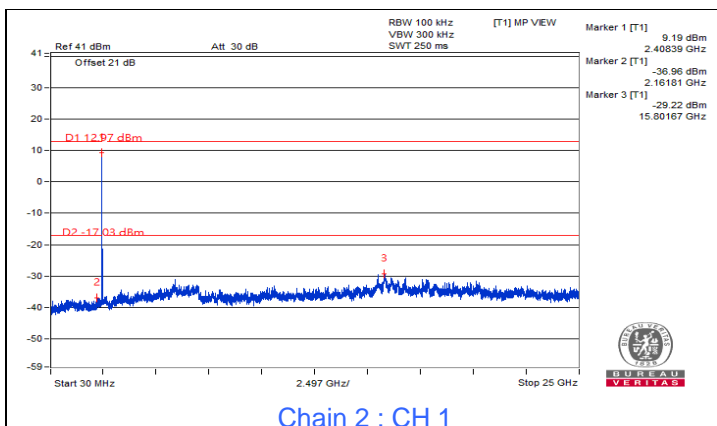
Chain 1 : CH 11



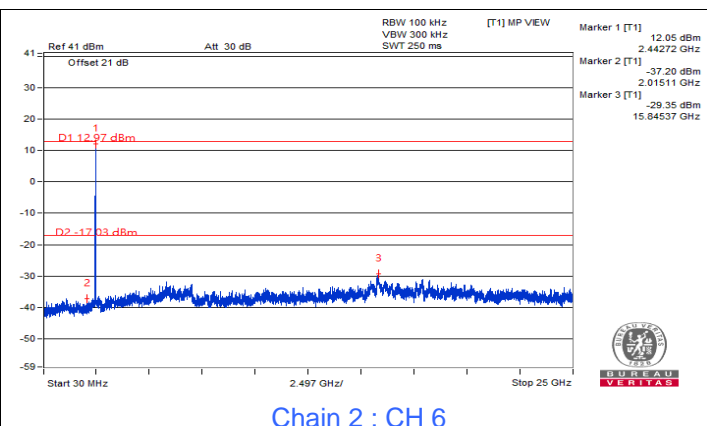
Chain 1 : CH 1 Band edge



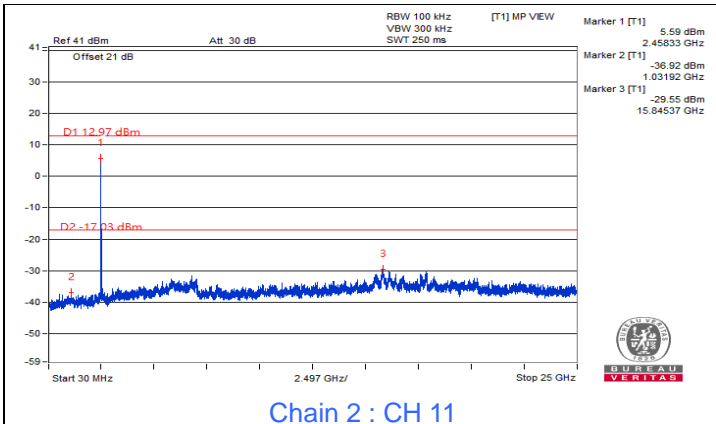
Chain 1 : CH 11 Band edge



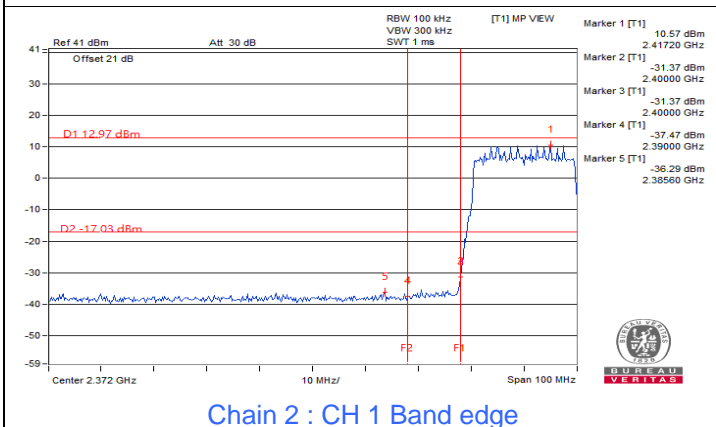
Chain 2 : CH 1



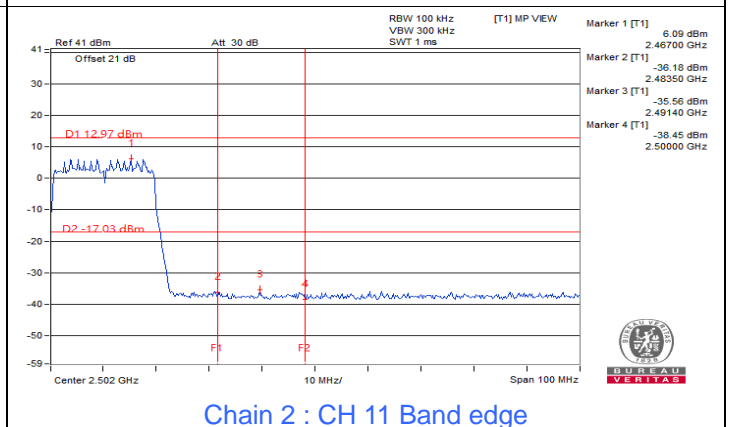
Chain 2 : CH 6



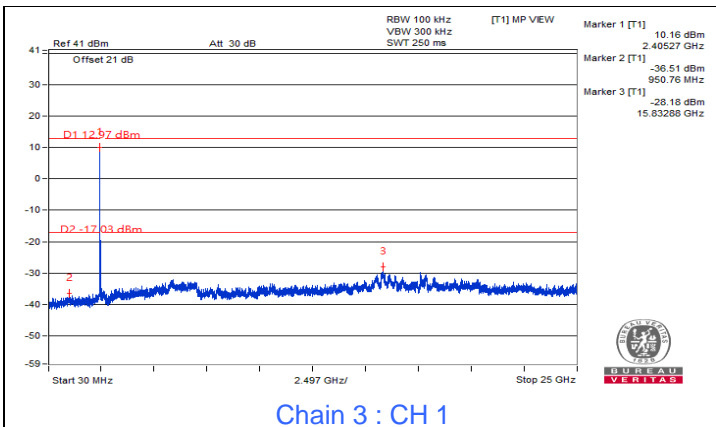
Chain 2 : CH 11



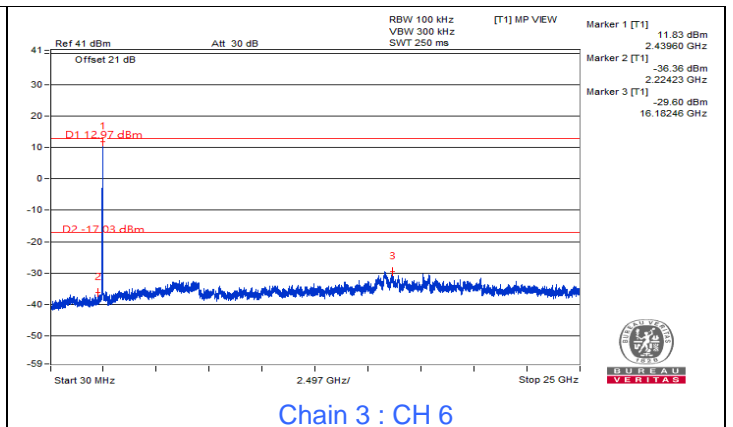
Chain 2 : CH 1 Band edge



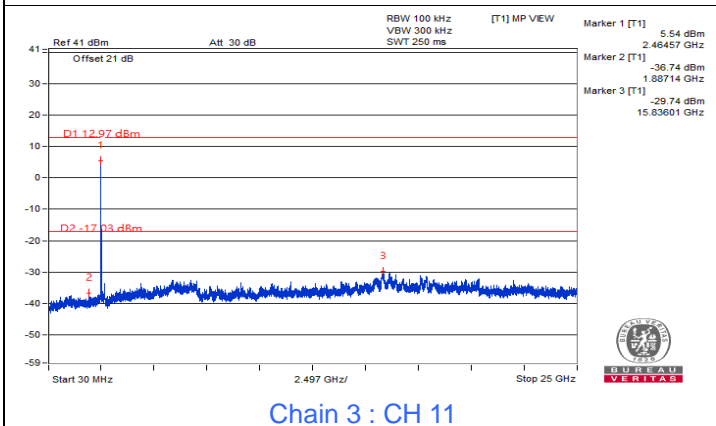
Chain 2 : CH 11 Band edge



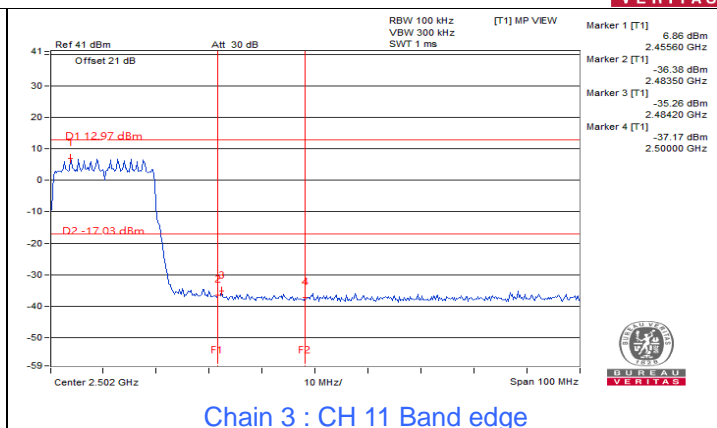
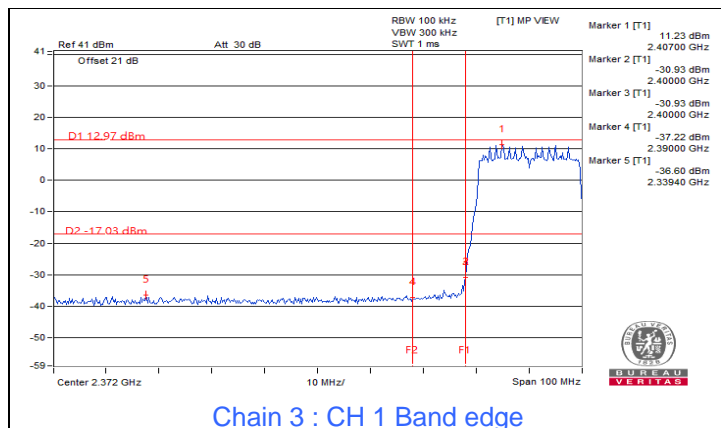
Chain 3 : CH 1



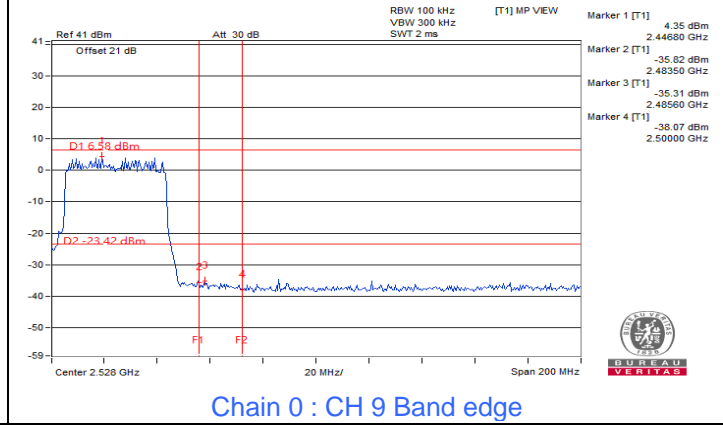
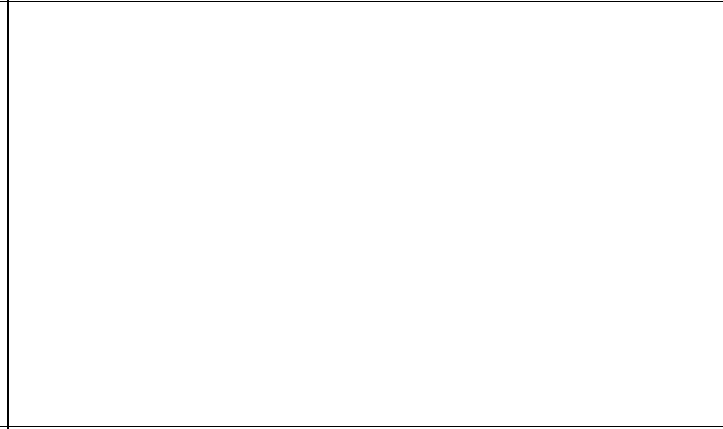
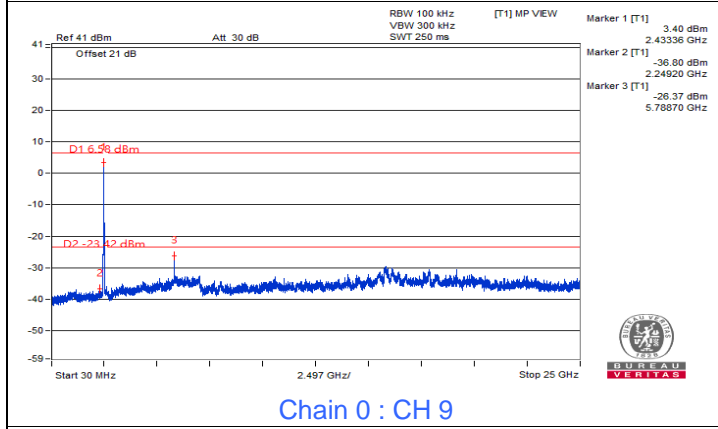
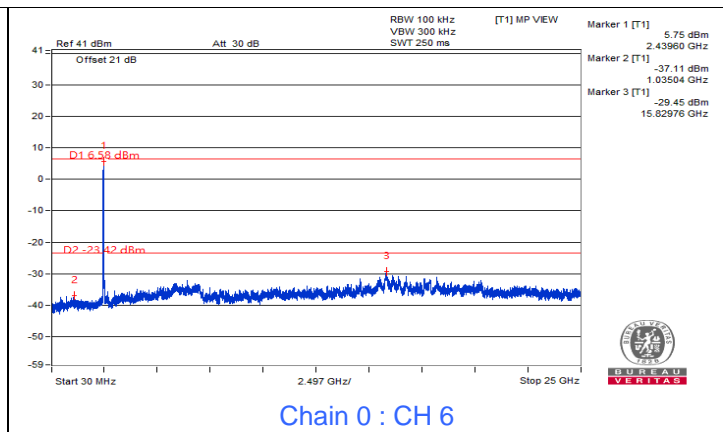
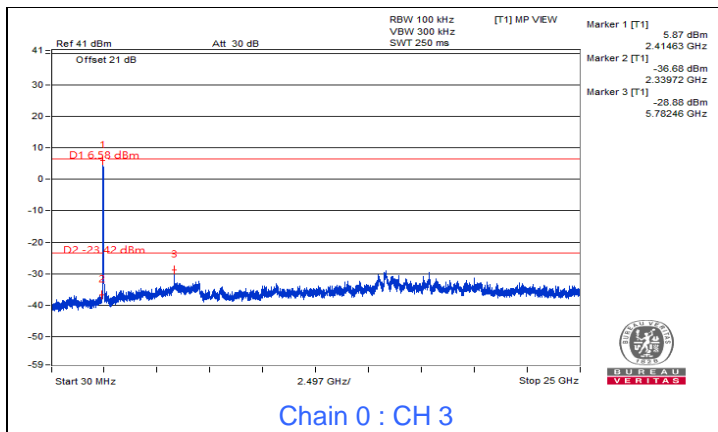
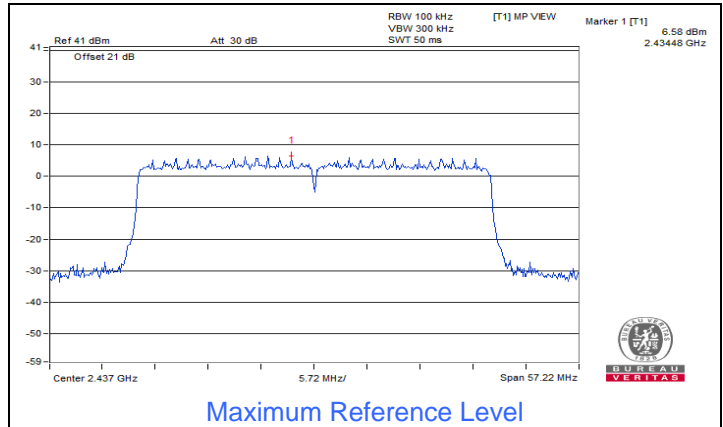
Chain 3 : CH 6

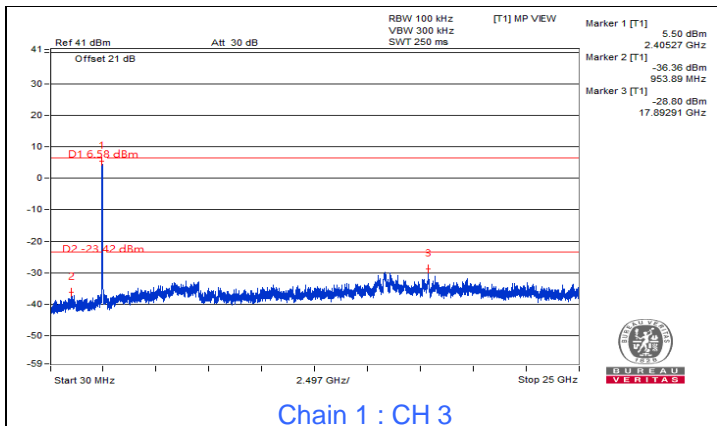


Chain 3 : CH 11

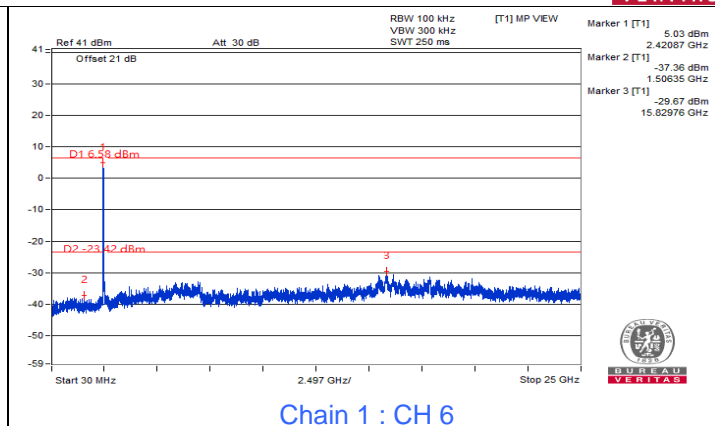


802.11ax (HE40)

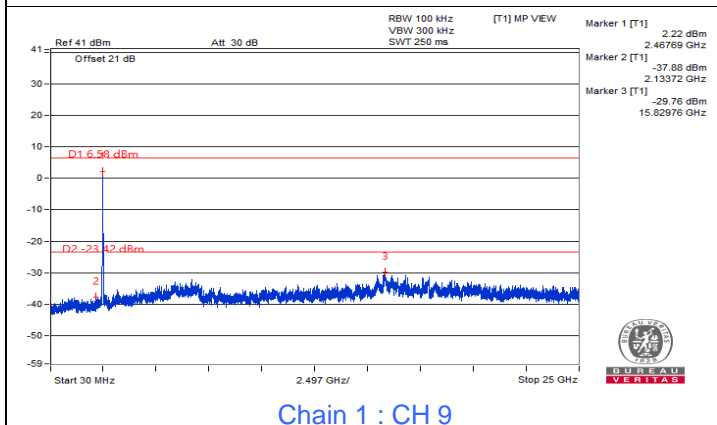




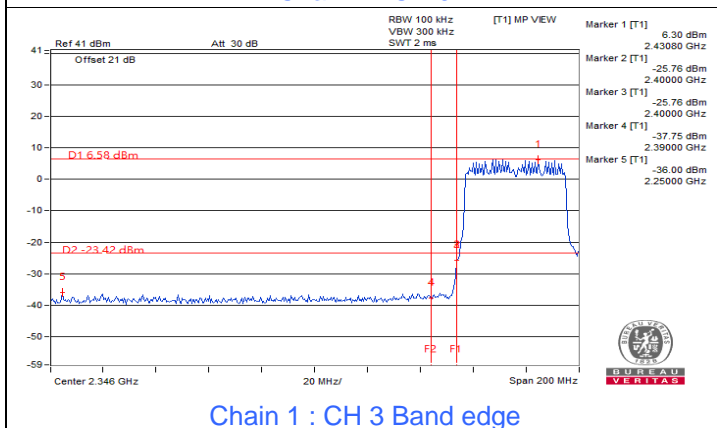
Chain 1 : CH 3



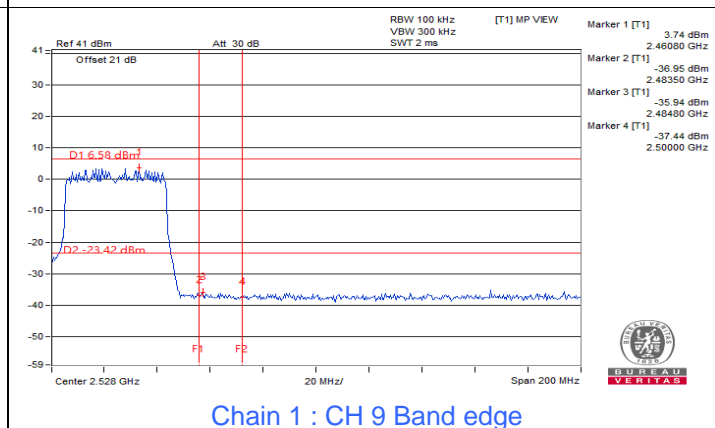
Chain 1 : CH 6



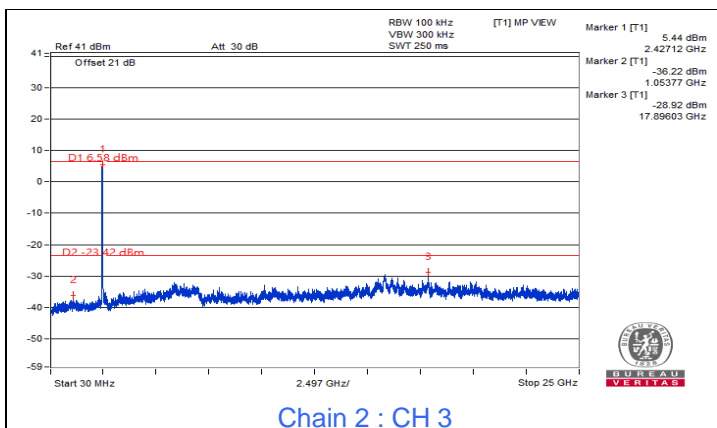
Chain 1 : CH 9



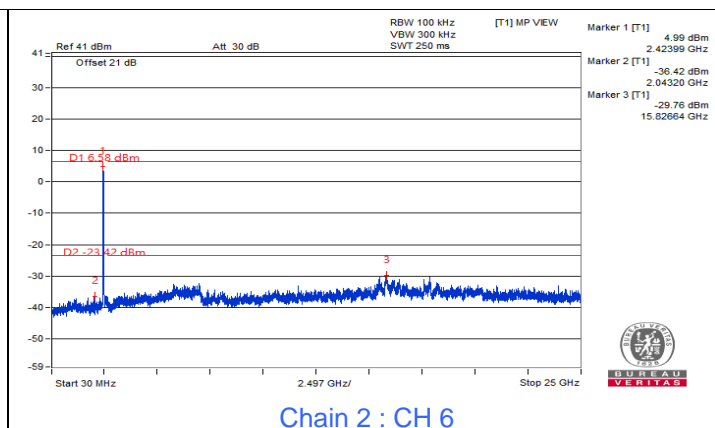
Chain 1 : CH 3 Band edge



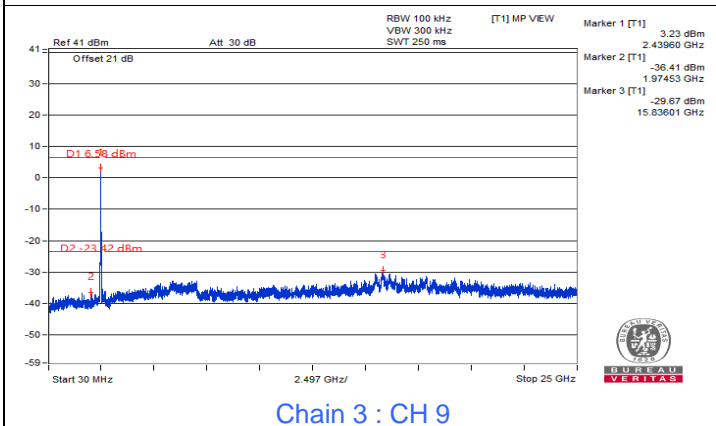
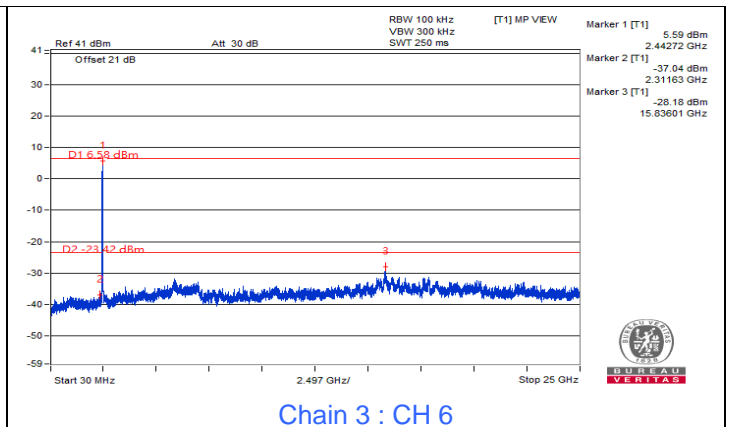
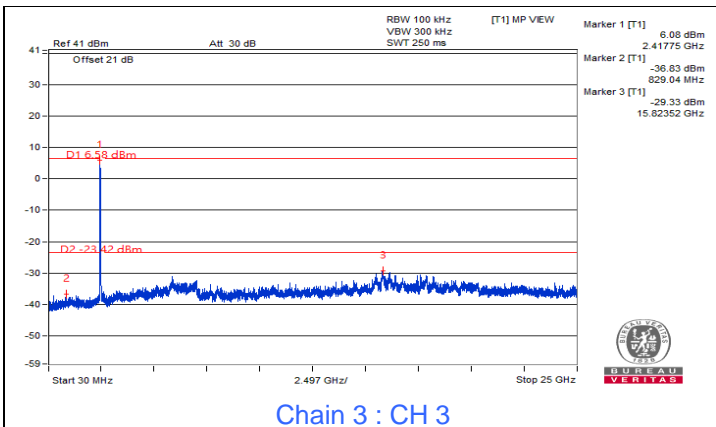
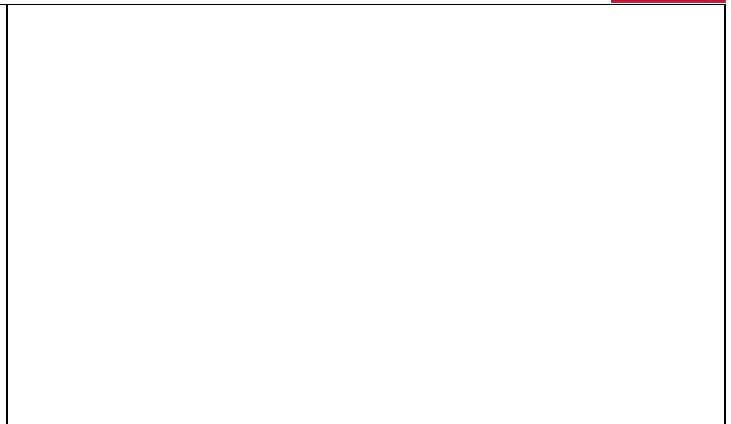
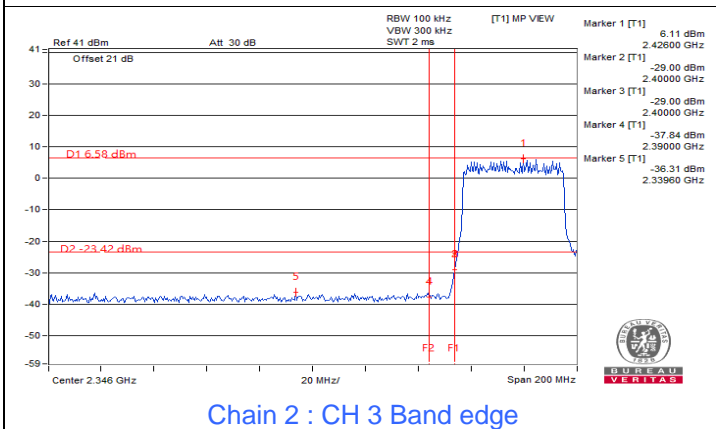
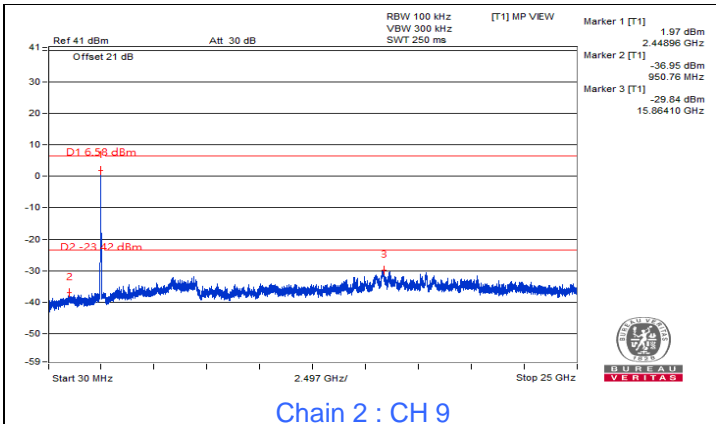
Chain 1 : CH 9 Band edge

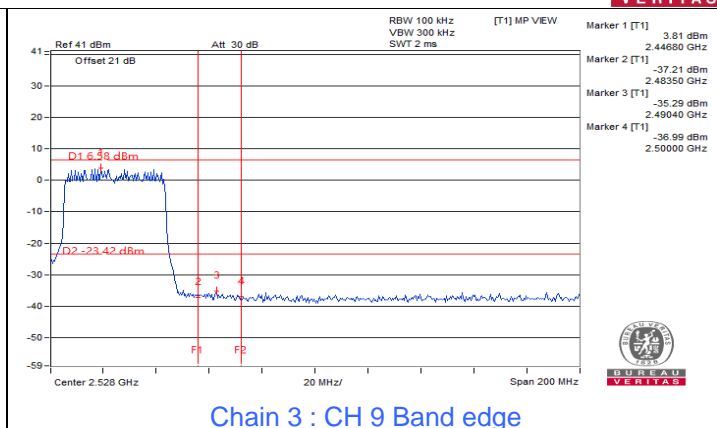
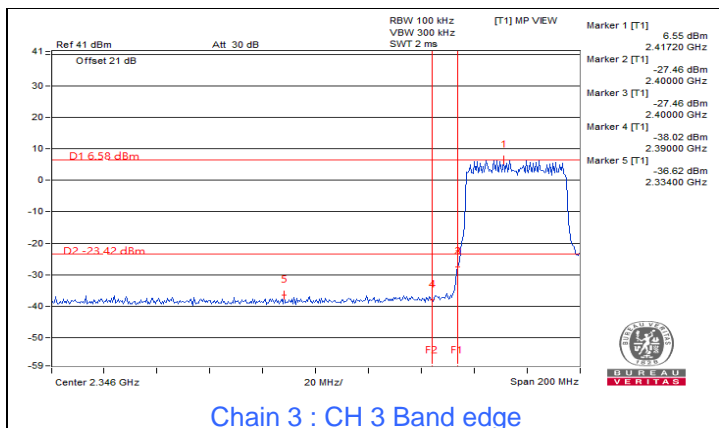


Chain 2 : CH 3



Chain 2 : CH 6





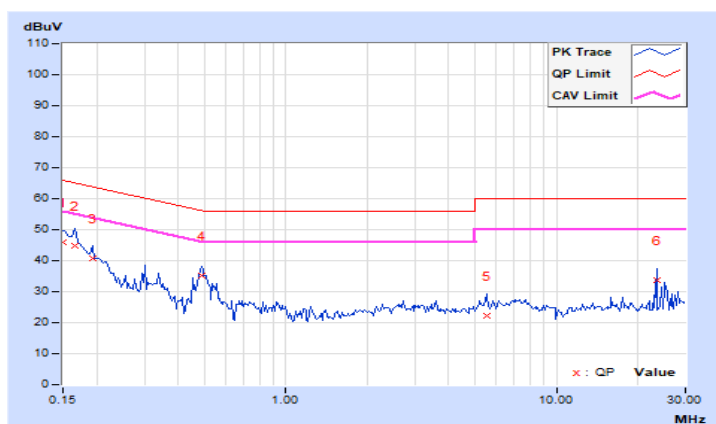
7.5 AC Power Conducted Emissions

RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Sampson Chen		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.95	35.88	19.22	45.83	29.17	66.00	56.00	-20.17	-26.83
2	0.16562	9.95	34.73	18.53	44.68	28.48	65.18	55.18	-20.50	-26.70
3	0.19297	9.96	30.81	14.89	40.77	24.85	63.91	53.91	-23.14	-29.06
4	0.48594	9.97	25.33	20.99	35.30	30.96	56.24	46.24	-20.94	-15.28
5	5.50391	10.30	12.08	5.46	22.38	15.76	60.00	50.00	-37.62	-34.24
6	23.59375	11.26	22.55	11.53	33.81	22.79	60.00	50.00	-26.19	-27.21

Remarks:

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

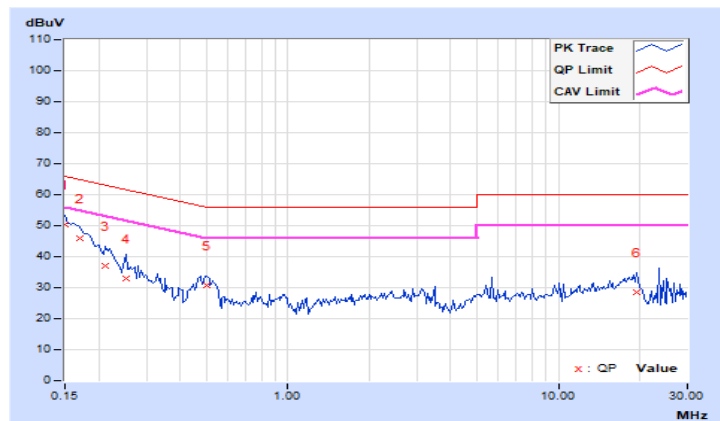


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Sampson Chen		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.95	40.45	23.01	50.40	32.96	66.00	56.00	-15.60	-23.04
2	0.16953	9.95	36.09	20.46	46.04	30.41	64.98	54.98	-18.94	-24.57
3	0.21250	9.96	27.07	11.73	37.03	21.69	63.11	53.11	-26.08	-31.42
4	0.25156	9.96	22.98	8.33	32.94	18.29	61.71	51.71	-28.77	-33.42
5	0.50156	9.97	20.71	13.88	30.68	23.85	56.00	46.00	-25.32	-22.15
6	19.38672	10.95	17.59	12.05	28.54	23.00	60.00	50.00	-31.46	-27.00

Remarks:

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



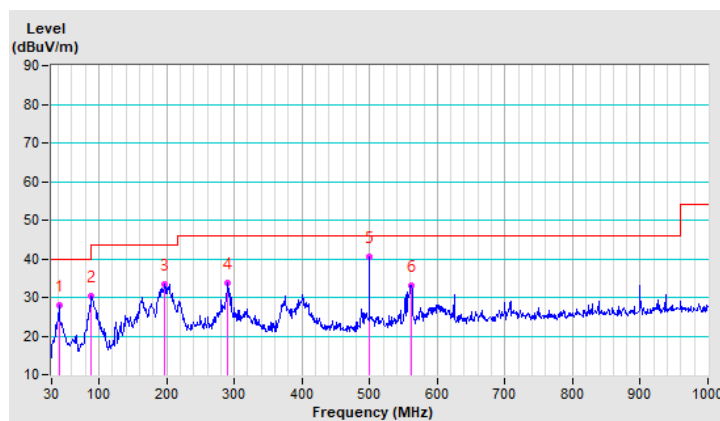
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Nick		

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	40.67	28.1 QP	40.0	-11.9	2.00 H	98	40.9	-12.8
2	89.03	30.3 QP	43.5	-13.2	2.00 H	289	48.7	-18.4
3	196.95	33.4 QP	43.5	-10.1	1.00 H	287	49.4	-16.0
4	290.60	33.8 QP	46.0	-12.2	1.00 H	226	46.2	-12.4
5	499.99	40.5 QP	46.0	-5.5	1.50 H	182	47.9	-7.4
6	560.81	33.1 QP	46.0	-12.9	3.00 H	1	39.4	-6.3

Remarks:

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

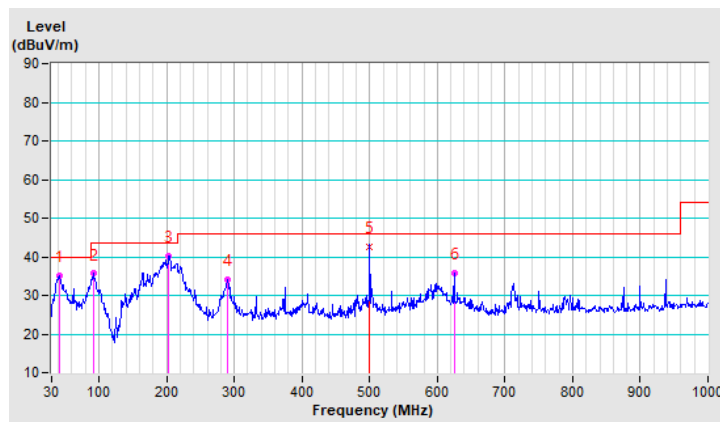


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Nick		

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	41.59	35.2 QP	40.0	-4.8	2.00 V	1	47.8	-12.6
2	91.36	35.6 QP	43.5	-7.9	1.50 V	305	53.9	-18.3
3	203.49	40.2 QP	43.5	-3.3	1.50 V	331	56.3	-16.1
4	290.56	34.1 QP	46.0	-11.9	1.50 V	189	46.5	-12.4
5	499.99	42.7 QP	46.0	-3.3	1.00 V	236	50.1	-7.4
6	624.98	35.9 QP	46.0	-10.1	1.00 V	220	40.6	-4.7

Remarks:

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



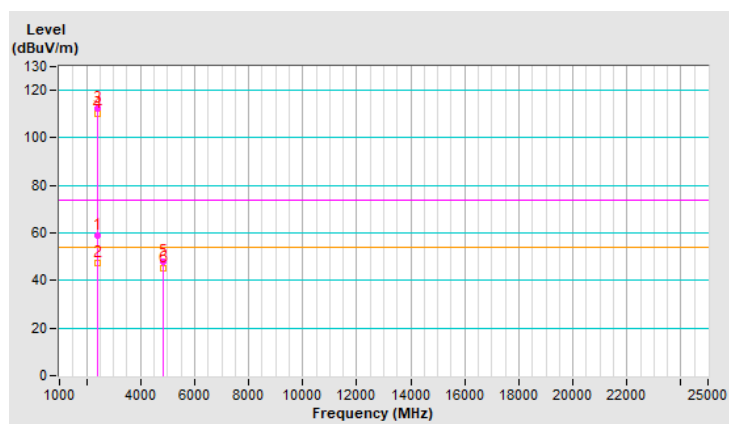
7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.9 PK	74.0	-15.1	1.29 H	23	59.9	-1.0
2	2390.00	47.3 AV	54.0	-6.7	1.29 H	23	48.3	-1.0
3	*2412.00	112.3 PK			1.29 H	23	113.3	-1.0
4	*2412.00	110.3 AV			1.29 H	23	111.3	-1.0
5	4824.00	47.9 PK	74.0	-26.1	1.23 H	19	43.6	4.3
6	4824.00	45.0 AV	54.0	-9.0	1.23 H	19	40.7	4.3

Remarks:

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

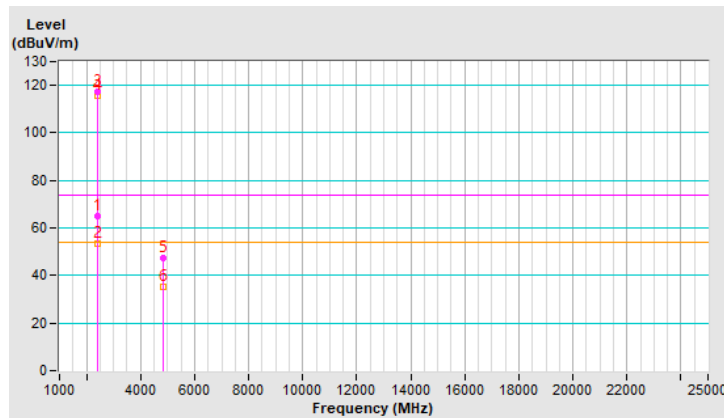


RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	2.13 V	355	65.9	-1.0
2	2390.00	53.2 AV	54.0	-0.8	2.13 V	355	54.2	-1.0
3	*2412.00	117.3 PK			2.13 V	355	118.3	-1.0
4	*2412.00	115.7 AV			2.13 V	355	116.7	-1.0
5	4824.00	47.6 PK	74.0	-26.4	2.31 V	1	43.3	4.3
6	4824.00	35.0 AV	54.0	-19.0	2.31 V	1	30.7	4.3

Remarks:

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



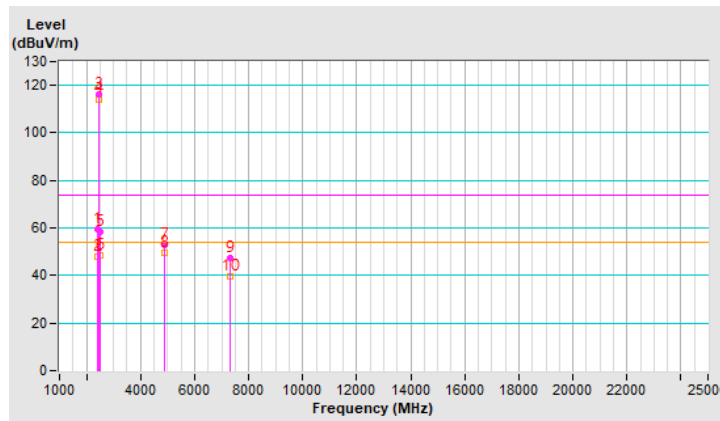
RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.4 PK	74.0	-14.6	1.24 H	33	60.4	-1.0
2	2390.00	48.0 AV	54.0	-6.0	1.24 H	33	49.0	-1.0
3	*2437.00	116.3 PK			1.24 H	33	117.2	-0.9
4	*2437.00	114.3 AV			1.24 H	33	115.2	-0.9
5	2483.50	58.6 PK	74.0	-15.4	1.24 H	33	59.5	-0.9
6	2483.50	48.3 AV	54.0	-5.7	1.24 H	33	49.2	-0.9
7	4874.00	53.1 PK	74.0	-20.9	1.22 H	21	48.8	4.3
8	4874.00	49.6 AV	54.0	-4.4	1.22 H	21	45.3	4.3
9	7311.00	47.3 PK	74.0	-26.7	1.23 H	28	37.0	10.3
10	7311.00	39.8 AV	54.0	-14.2	1.23 H	28	29.5	10.3

Remarks:

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

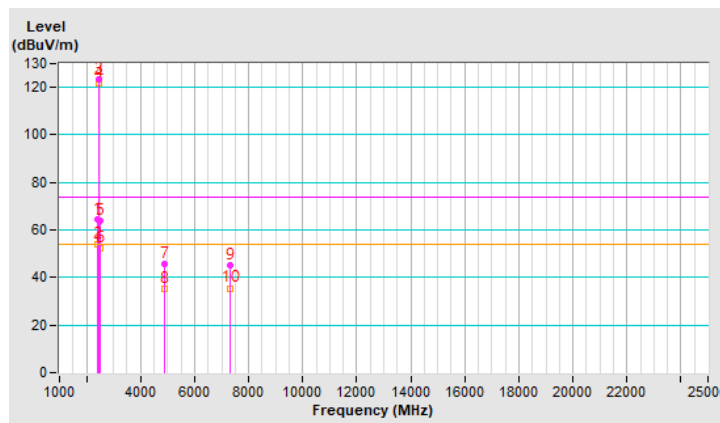


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.2 PK	74.0	-9.8	2.32 V	20	65.2	-1.0
2	2390.00	53.8 AV	54.0	-0.2	2.32 V	20	54.8	-1.0
3	*2437.00	123.4 PK			2.32 V	20	124.3	-0.9
4	*2437.00	121.5 AV			2.32 V	20	122.4	-0.9
5	2483.50	64.1 PK	74.0	-9.9	2.32 V	20	65.0	-0.9
6	2483.50	52.1 AV	54.0	-1.9	2.32 V	20	53.0	-0.9
7	4874.00	45.6 PK	74.0	-28.4	2.31 V	22	41.3	4.3
8	4874.00	35.4 AV	54.0	-18.6	2.31 V	22	31.1	4.3
9	7311.00	45.4 PK	74.0	-28.6	2.33 V	19	35.1	10.3
10	7311.00	35.5 AV	54.0	-18.5	2.33 V	19	25.2	10.3

Remarks:

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



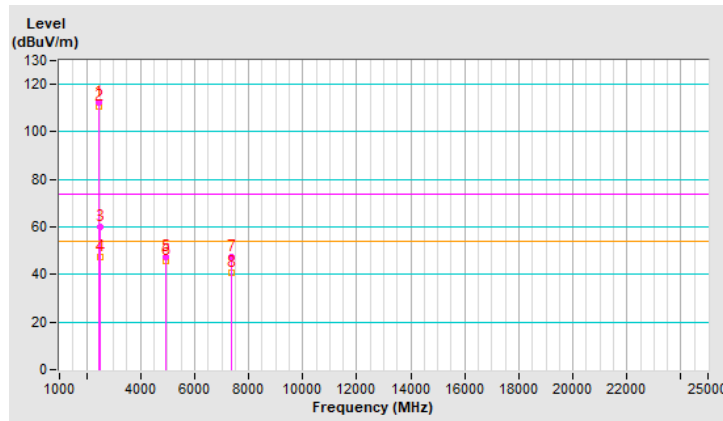
RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	112.2 PK			1.24 H	41	113.1	-0.9
2	*2462.00	110.5 AV			1.24 H	41	111.4	-0.9
3	2483.50	60.0 PK	74.0	-14.0	1.24 H	41	60.9	-0.9
4	2483.50	47.5 AV	54.0	-6.5	1.24 H	41	48.4	-0.9
5	4924.00	47.5 PK	74.0	-26.5	1.22 H	21	43.0	4.5
6	4924.00	45.8 AV	54.0	-8.2	1.22 H	21	41.3	4.5
7	7386.00	47.6 PK	74.0	-26.4	1.28 H	23	37.4	10.2
8	7386.00	40.5 AV	54.0	-13.5	1.28 H	23	30.3	10.2

Remarks:

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

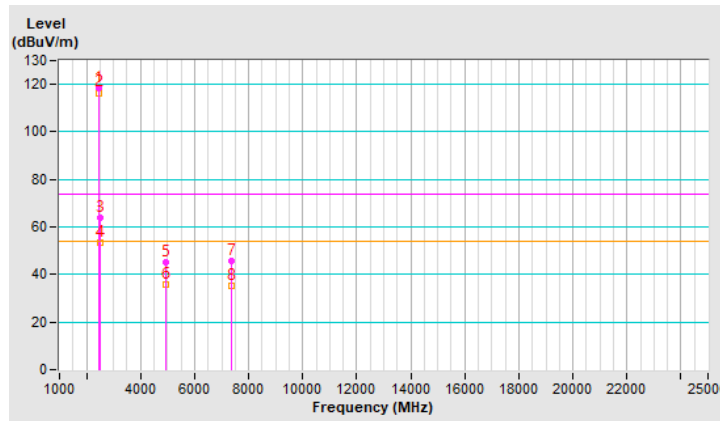


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	118.6 PK			2.32 V	34	119.5	-0.9
2	*2462.00	116.5 AV			2.32 V	34	117.4	-0.9
3	2483.50	64.0 PK	74.0	-10.0	2.32 V	34	64.9	-0.9
4	2483.50	53.5 AV	54.0	-0.5	2.32 V	34	54.4	-0.9
5	4924.00	45.3 PK	74.0	-28.7	2.31 V	22	40.8	4.5
6	4924.00	35.8 AV	54.0	-18.2	2.31 V	22	31.3	4.5
7	7386.00	45.8 PK	74.0	-28.2	2.23 V	28	35.6	10.2
8	7386.00	35.4 AV	54.0	-18.6	2.23 V	28	25.2	10.2

Remarks:

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



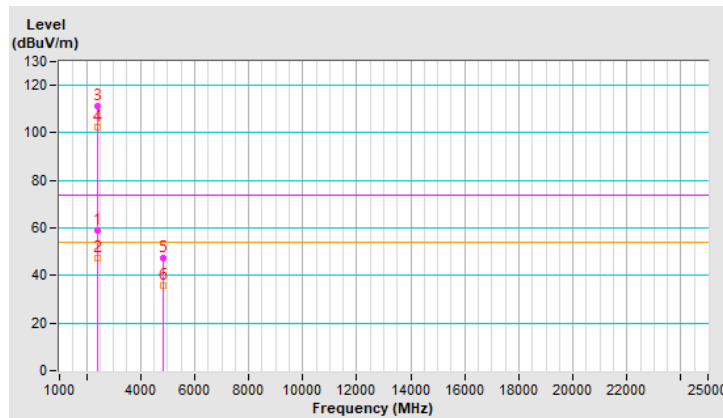
RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.0 PK	74.0	-15.0	1.21 H	45	60.0	-1.0
2	2390.00	47.2 AV	54.0	-6.8	1.21 H	45	48.2	-1.0
3	*2412.00	111.4 PK			1.21 H	45	112.4	-1.0
4	*2412.00	102.4 AV			1.21 H	45	103.4	-1.0
5	4824.00	47.5 PK	74.0	-26.5	1.22 H	25	43.2	4.3
6	4824.00	35.6 AV	54.0	-18.4	1.22 H	25	31.3	4.3

Remarks:

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

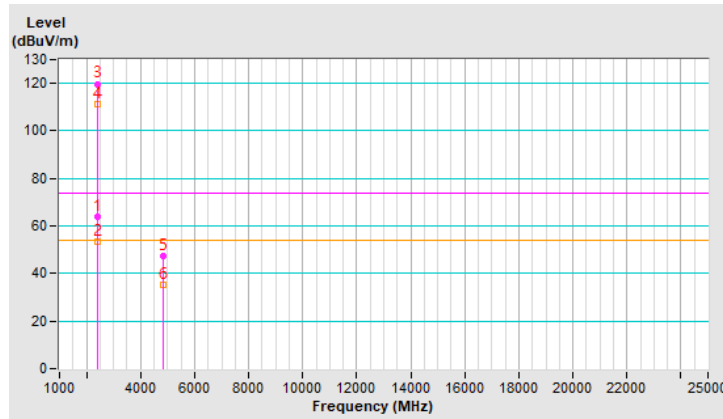


RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.1 PK	74.0	-9.9	2.32 V	20	65.1	-1.0
2	2390.00	53.5 AV	54.0	-0.5	2.32 V	20	54.5	-1.0
3	*2412.00	119.8 PK			2.32 V	20	120.8	-1.0
4	*2412.00	111.2 AV			2.32 V	20	112.2	-1.0
5	4824.00	47.3 PK	74.0	-26.7	2.21 V	28	43.0	4.3
6	4824.00	35.4 AV	54.0	-18.6	2.21 V	28	31.1	4.3

Remarks:

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



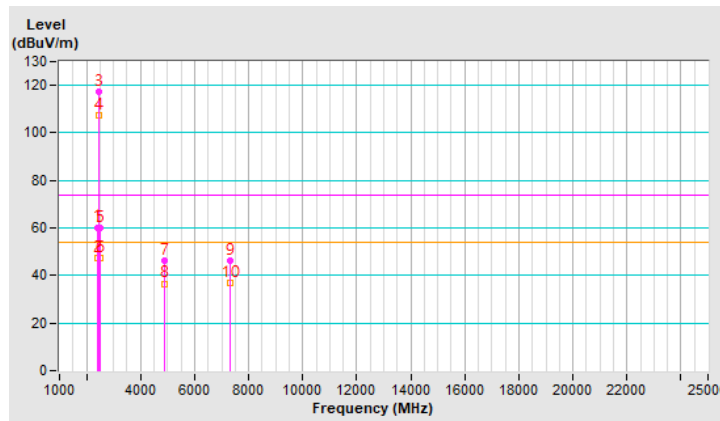
RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	1.34 H	50	61.3	-1.0
2	2390.00	47.2 AV	54.0	-6.8	1.34 H	50	48.2	-1.0
3	*2437.00	117.1 PK			1.34 H	50	118.0	-0.9
4	*2437.00	107.4 AV			1.34 H	50	108.3	-0.9
5	2483.50	60.0 PK	74.0	-14.0	1.34 H	50	60.9	-0.9
6	2483.50	47.6 AV	54.0	-6.4	1.34 H	50	48.5	-0.9
7	4874.00	46.5 PK	74.0	-27.5	1.28 H	14	42.2	4.3
8	4874.00	36.6 AV	54.0	-17.4	1.28 H	14	32.3	4.3
9	7311.00	46.5 PK	74.0	-27.5	1.22 H	20	36.2	10.3
10	7311.00	36.8 AV	54.0	-17.2	1.22 H	20	26.5	10.3

Remarks:

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

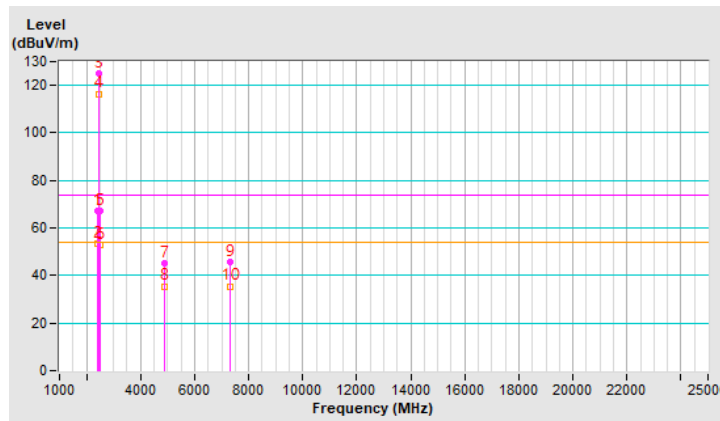


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	2.11 V	30	68.2	-1.0
2	2390.00	53.4 AV	54.0	-0.6	2.11 V	30	54.4	-1.0
3	*2437.00	125.2 PK			2.11 V	30	126.1	-0.9
4	*2437.00	116.5 AV			2.11 V	30	117.4	-0.9
5	2483.50	67.4 PK	74.0	-6.6	2.11 V	30	68.3	-0.9
6	2483.50	53.1 AV	54.0	-0.9	2.11 V	30	54.0	-0.9
7	4874.00	45.3 PK	74.0	-28.7	2.30 V	21	41.0	4.3
8	4874.00	35.5 AV	54.0	-18.5	2.30 V	21	31.2	4.3
9	7311.00	45.8 PK	74.0	-28.2	2.21 V	20	35.5	10.3
10	7311.00	35.5 AV	54.0	-18.5	2.21 V	20	25.2	10.3

Remarks:

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



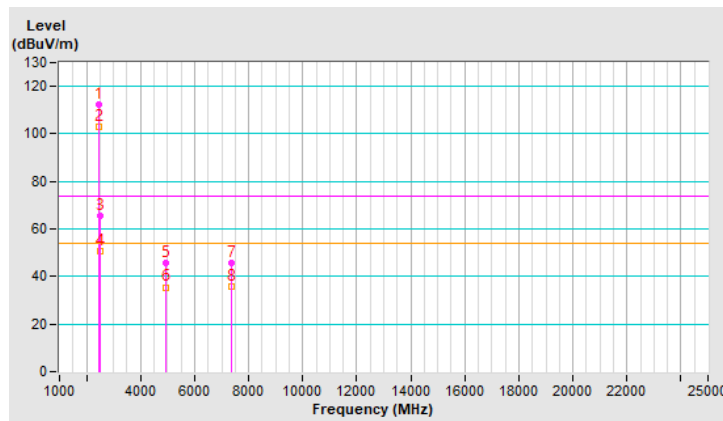
RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	112.2 PK			1.21 H	29	113.1	-0.9
2	*2462.00	103.1 AV			1.21 H	29	104.0	-0.9
3	2483.50	65.5 PK	74.0	-8.5	1.21 H	29	66.4	-0.9
4	2483.50	50.6 AV	54.0	-3.4	1.21 H	29	51.5	-0.9
5	4924.00	45.8 PK	74.0	-28.2	1.22 H	15	41.3	4.5
6	4924.00	35.5 AV	54.0	-18.5	1.22 H	15	31.0	4.5
7	7386.00	45.7 PK	74.0	-28.3	1.25 H	28	35.5	10.2
8	7386.00	35.6 AV	54.0	-18.4	1.25 H	28	25.4	10.2

Remarks:

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

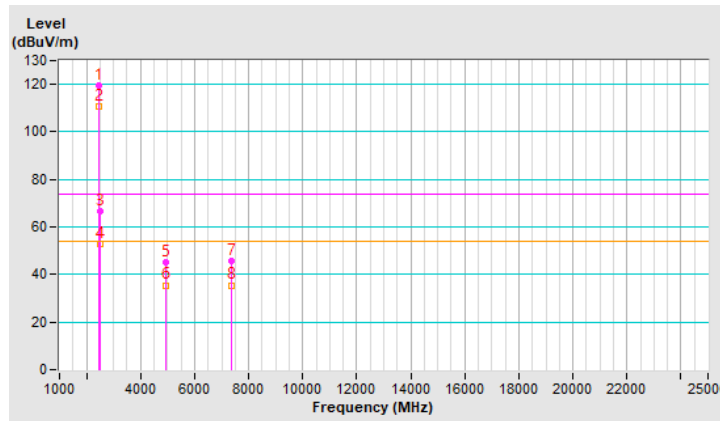


RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	119.4 PK			2.10 V	22	120.3	-0.9
2	*2462.00	110.6 AV			2.10 V	22	111.5	-0.9
3	2483.50	66.4 PK	74.0	-7.6	2.10 V	22	67.3	-0.9
4	2483.50	53.1 AV	54.0	-0.9	2.10 V	22	54.0	-0.9
5	4924.00	45.4 PK	74.0	-28.6	2.21 V	28	40.9	4.5
6	4924.00	35.5 AV	54.0	-18.5	2.21 V	28	31.0	4.5
7	7386.00	45.7 PK	74.0	-28.3	2.23 V	26	35.5	10.2
8	7386.00	35.5 AV	54.0	-18.5	2.23 V	26	25.3	10.2

Remarks:

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

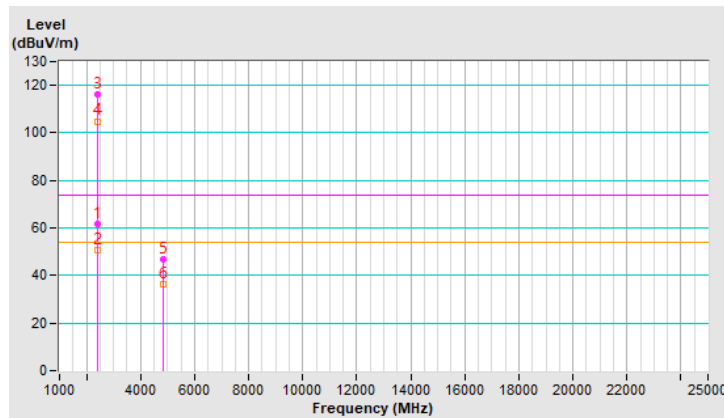


RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.7 PK	74.0	-12.3	1.79 H	337	62.7	-1.0
2	2390.00	50.5 AV	54.0	-3.5	1.79 H	337	51.5	-1.0
3	*2412.00	116.1 PK			1.79 H	337	117.1	-1.0
4	*2412.00	104.9 AV			1.79 H	337	105.9	-1.0
5	4824.00	46.8 PK	74.0	-27.2	1.71 H	333	42.5	4.3
6	4824.00	36.2 AV	54.0	-17.8	1.71 H	333	31.9	4.3

Remarks:

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

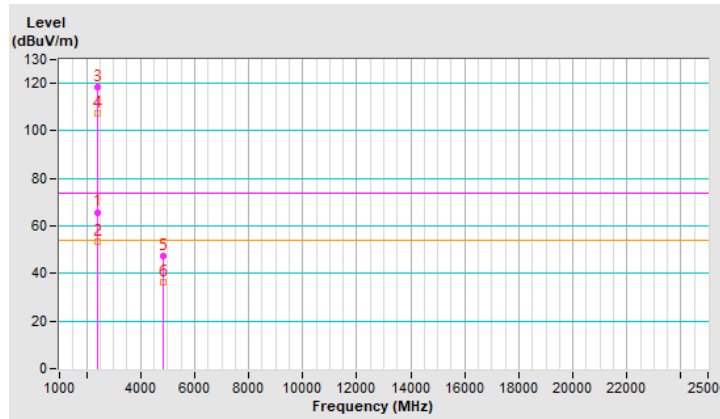


RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.8 PK	74.0	-8.2	1.86 V	229	66.8	-1.0
2	2390.00	53.5 AV	54.0	-0.5	1.86 V	229	54.5	-1.0
3	*2412.00	118.2 PK			1.86 V	229	119.2	-1.0
4	*2412.00	107.6 AV			1.86 V	229	108.6	-1.0
5	4824.00	47.3 PK	74.0	-26.7	2.21 V	28	43.0	4.3
6	4824.00	36.5 AV	54.0	-17.5	2.21 V	28	32.2	4.3

Remarks:

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



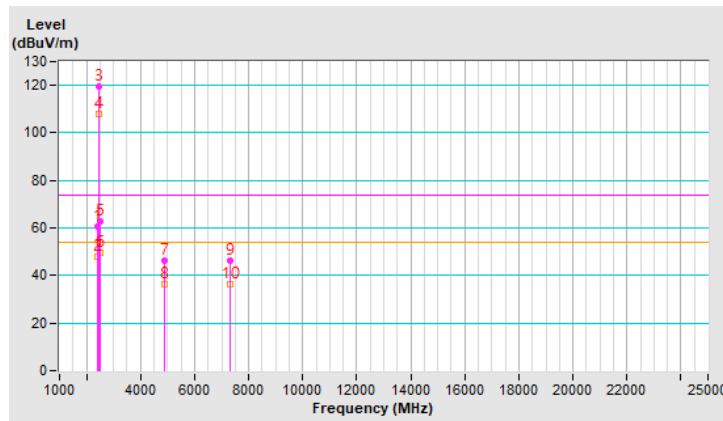
RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.6 PK	74.0	-13.4	1.07 H	3	61.6	-1.0
2	2390.00	47.8 AV	54.0	-6.2	1.07 H	3	48.8	-1.0
3	*2437.00	119.5 PK			1.07 H	3	120.4	-0.9
4	*2437.00	108.1 AV			1.07 H	3	109.0	-0.9
5	2483.50	62.8 PK	74.0	-11.2	1.07 H	3	63.7	-0.9
6	2483.50	49.4 AV	54.0	-4.6	1.07 H	3	50.3	-0.9
7	4874.00	46.5 PK	74.0	-27.5	1.20 H	2	42.2	4.3
8	4874.00	36.5 AV	54.0	-17.5	1.20 H	2	32.2	4.3
9	7311.00	46.1 PK	74.0	-27.9	1.25 H	22	35.8	10.3
10	7311.00	36.2 AV	54.0	-17.8	1.25 H	22	25.9	10.3

Remarks:

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

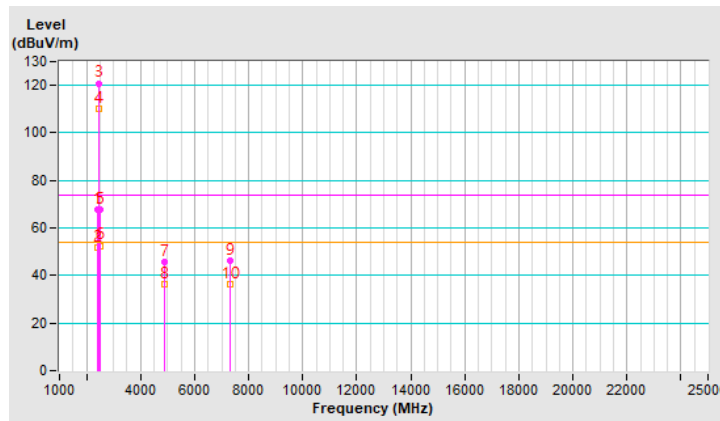


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.6 PK	74.0	-6.4	1.91 V	225	68.6	-1.0
2	2390.00	51.7 AV	54.0	-2.3	1.91 V	225	52.7	-1.0
3	*2437.00	120.9 PK			1.91 V	225	121.8	-0.9
4	*2437.00	110.3 AV			1.91 V	225	111.2	-0.9
5	2483.50	67.6 PK	74.0	-6.4	1.91 V	225	68.5	-0.9
6	2483.50	52.6 AV	54.0	-1.4	1.91 V	225	53.5	-0.9
7	4874.00	45.6 PK	74.0	-28.4	2.30 V	21	41.3	4.3
8	4874.00	36.1 AV	54.0	-17.9	2.30 V	21	31.8	4.3
9	7311.00	46.2 PK	74.0	-27.8	2.21 V	20	35.9	10.3
10	7311.00	36.2 AV	54.0	-17.8	2.21 V	20	25.9	10.3

Remarks:

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



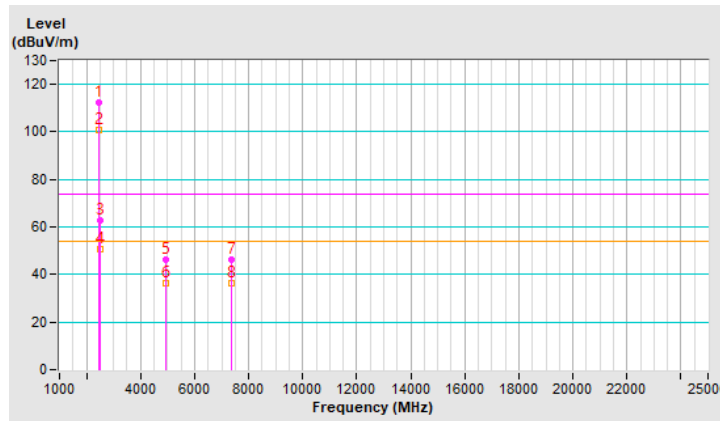
RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	112.5 PK			1.30 H	285	113.4	-0.9
2	*2462.00	100.6 AV			1.30 H	285	101.5	-0.9
3	2483.50	62.6 PK	74.0	-11.4	1.30 H	285	63.5	-0.9
4	2483.50	50.8 AV	54.0	-3.2	1.30 H	285	51.7	-0.9
5	4924.00	46.5 PK	74.0	-27.5	1.33 H	225	42.0	4.5
6	4924.00	36.5 AV	54.0	-17.5	1.33 H	225	32.0	4.5
7	7386.00	46.5 PK	74.0	-27.5	1.33 H	236	36.3	10.2
8	7386.00	36.4 AV	54.0	-17.6	1.33 H	236	26.2	10.2

Remarks:

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

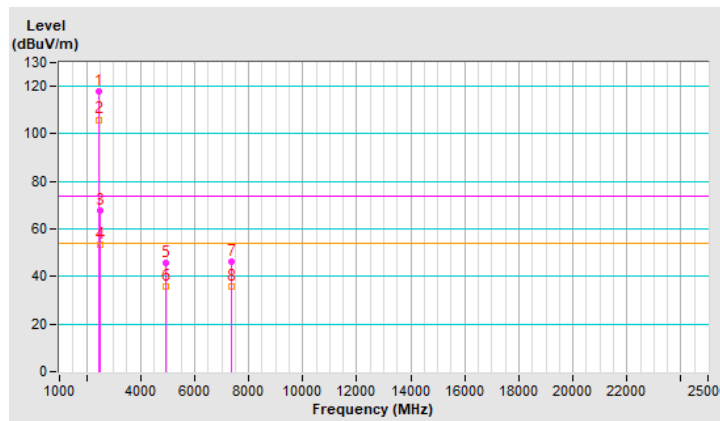


RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.7 PK			1.39 V	116	118.6	-0.9
2	*2462.00	106.0 AV			1.39 V	116	106.9	-0.9
3	2483.50	67.8 PK	74.0	-6.2	1.39 V	116	68.7	-0.9
4	2483.50	53.2 AV	54.0	-0.8	1.39 V	116	54.1	-0.9
5	4924.00	45.8 PK	74.0	-28.2	1.44 V	120	41.3	4.5
6	4924.00	35.6 AV	54.0	-18.4	1.44 V	120	31.1	4.5
7	7386.00	46.1 PK	74.0	-27.9	1.22 V	116	35.9	10.2
8	7386.00	35.8 AV	54.0	-18.2	1.22 V	116	25.6	10.2

Remarks:

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



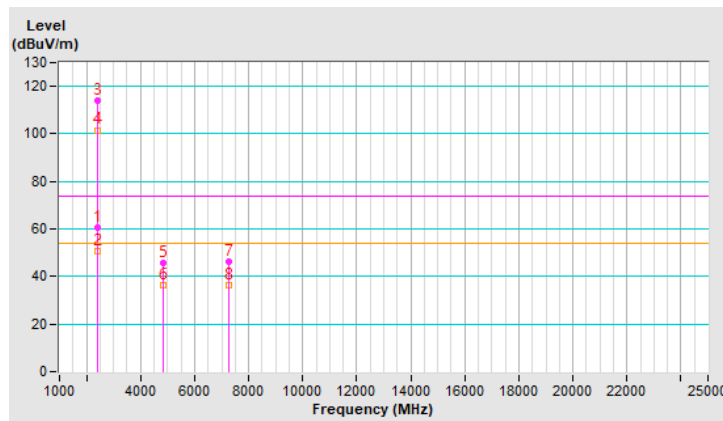
RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.8 PK	74.0	-13.2	1.97 H	286	61.8	-1.0
2	2390.00	50.5 AV	54.0	-3.5	1.97 H	286	51.5	-1.0
3	*2422.00	113.8 PK			1.97 H	286	114.8	-1.0
4	*2422.00	101.6 AV			1.97 H	286	102.6	-1.0
5	4844.00	45.6 PK	74.0	-28.4	1.82 H	252	41.3	4.3
6	4844.00	36.1 AV	54.0	-17.9	1.82 H	252	31.8	4.3
7	7266.00	46.4 PK	74.0	-27.6	1.99 H	241	36.0	10.4
8	7266.00	36.5 AV	54.0	-17.5	1.99 H	241	26.1	10.4

Remarks:

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

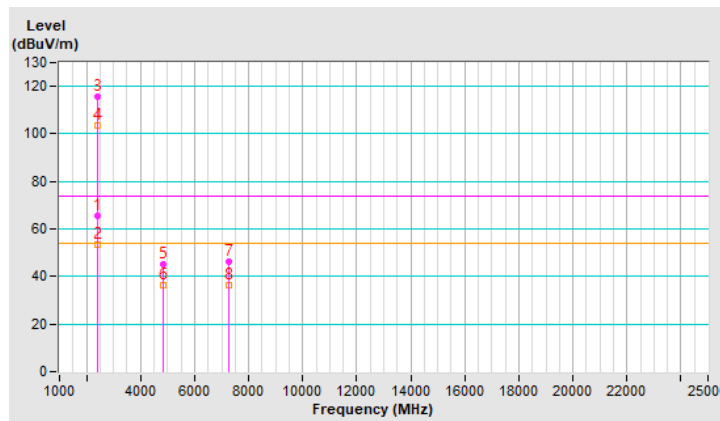


RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.7 PK	74.0	-8.3	1.86 V	229	66.7	-1.0
2	2390.00	53.5 AV	54.0	-0.5	1.86 V	229	54.5	-1.0
3	*2422.00	115.9 PK			1.86 V	229	116.9	-1.0
4	*2422.00	103.7 AV			1.86 V	229	104.7	-1.0
5	4844.00	45.2 PK	74.0	-28.8	1.82 V	221	40.9	4.3
6	4844.00	36.1 AV	54.0	-17.9	1.82 V	221	31.8	4.3
7	7266.00	46.1 PK	74.0	-27.9	1.91 V	215	35.7	10.4
8	7266.00	36.1 AV	54.0	-17.9	1.91 V	215	25.7	10.4

Remarks:

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



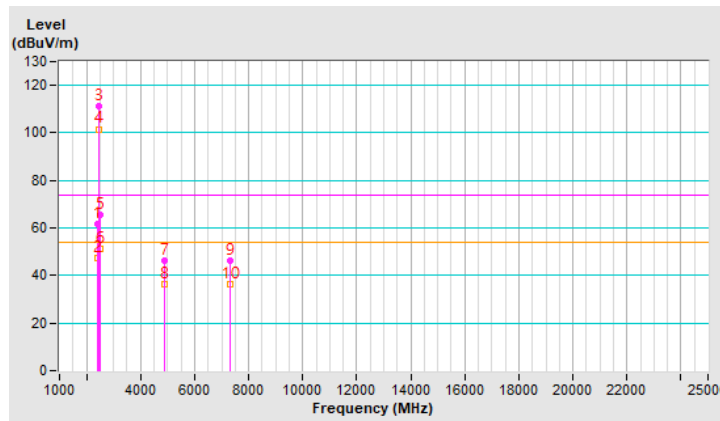
RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.6 PK	74.0	-12.4	2.07 H	290	62.6	-1.0
2	2390.00	47.5 AV	54.0	-6.5	2.07 H	290	48.5	-1.0
3	*2437.00	111.1 PK			2.07 H	290	112.0	-0.9
4	*2437.00	101.6 AV			2.07 H	290	102.5	-0.9
5	2483.50	65.3 PK	74.0	-8.7	2.07 H	290	66.2	-0.9
6	2483.50	51.1 AV	54.0	-2.9	2.07 H	290	52.0	-0.9
7	4874.00	46.5 PK	74.0	-27.5	2.11 H	272	42.2	4.3
8	4874.00	36.5 AV	54.0	-17.5	2.11 H	272	32.2	4.3
9	7311.00	46.5 PK	74.0	-27.5	1.96 H	271	36.2	10.3
10	7311.00	36.2 AV	54.0	-17.8	1.96 H	271	25.9	10.3

Remarks:

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

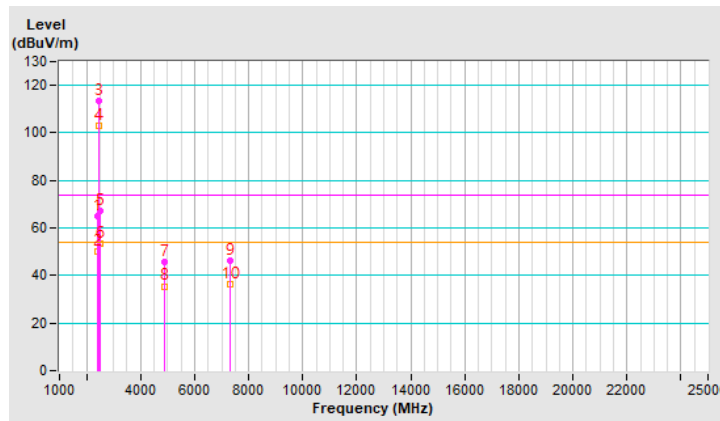


RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.8 PK	74.0	-9.2	1.91 V	225	65.8	-1.0
2	2390.00	50.1 AV	54.0	-3.9	1.91 V	225	51.1	-1.0
3	*2437.00	113.7 PK			1.91 V	225	114.6	-0.9
4	*2437.00	103.1 AV			1.91 V	225	104.0	-0.9
5	2483.50	67.3 PK	74.0	-6.7	1.91 V	225	68.2	-0.9
6	2483.50	53.2 AV	54.0	-0.8	1.91 V	225	54.1	-0.9
7	4874.00	45.6 PK	74.0	-28.4	1.99 V	212	41.3	4.3
8	4874.00	35.5 AV	54.0	-18.5	1.99 V	212	31.2	4.3
9	7311.00	46.1 PK	74.0	-27.9	2.15 V	21	35.8	10.3
10	7311.00	36.2 AV	54.0	-17.8	2.15 V	21	25.9	10.3

Remarks:

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



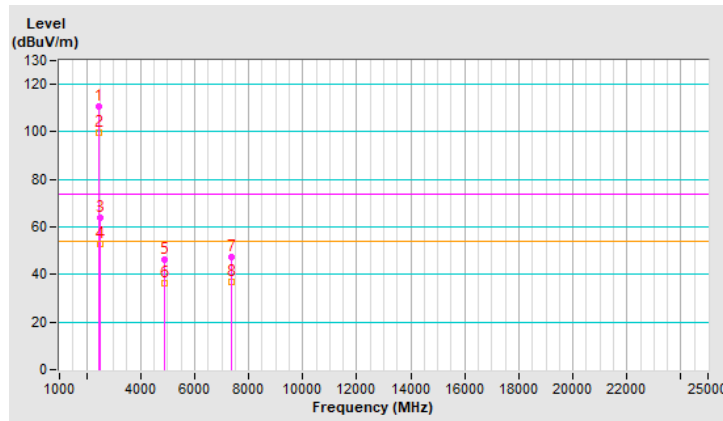
RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	110.5 PK			1.94 H	255	111.3	-0.8
2	*2452.00	99.5 AV			1.94 H	255	100.3	-0.8
3	2483.50	64.1 PK	74.0	-9.9	1.94 H	255	65.0	-0.9
4	2483.50	52.7 AV	54.0	-1.3	1.94 H	255	53.6	-0.9
5	4904.00	46.2 PK	74.0	-27.8	1.99 H	271	41.8	4.4
6	4904.00	36.5 AV	54.0	-17.5	1.99 H	271	32.1	4.4
7	7356.00	47.1 PK	74.0	-26.9	2.01 H	266	36.8	10.3
8	7356.00	36.9 AV	54.0	-17.1	2.01 H	266	26.6	10.3

Remarks:

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

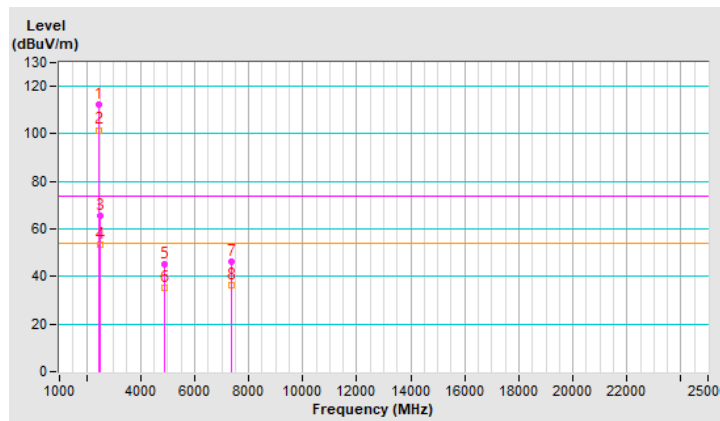


RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Sampson Chen		

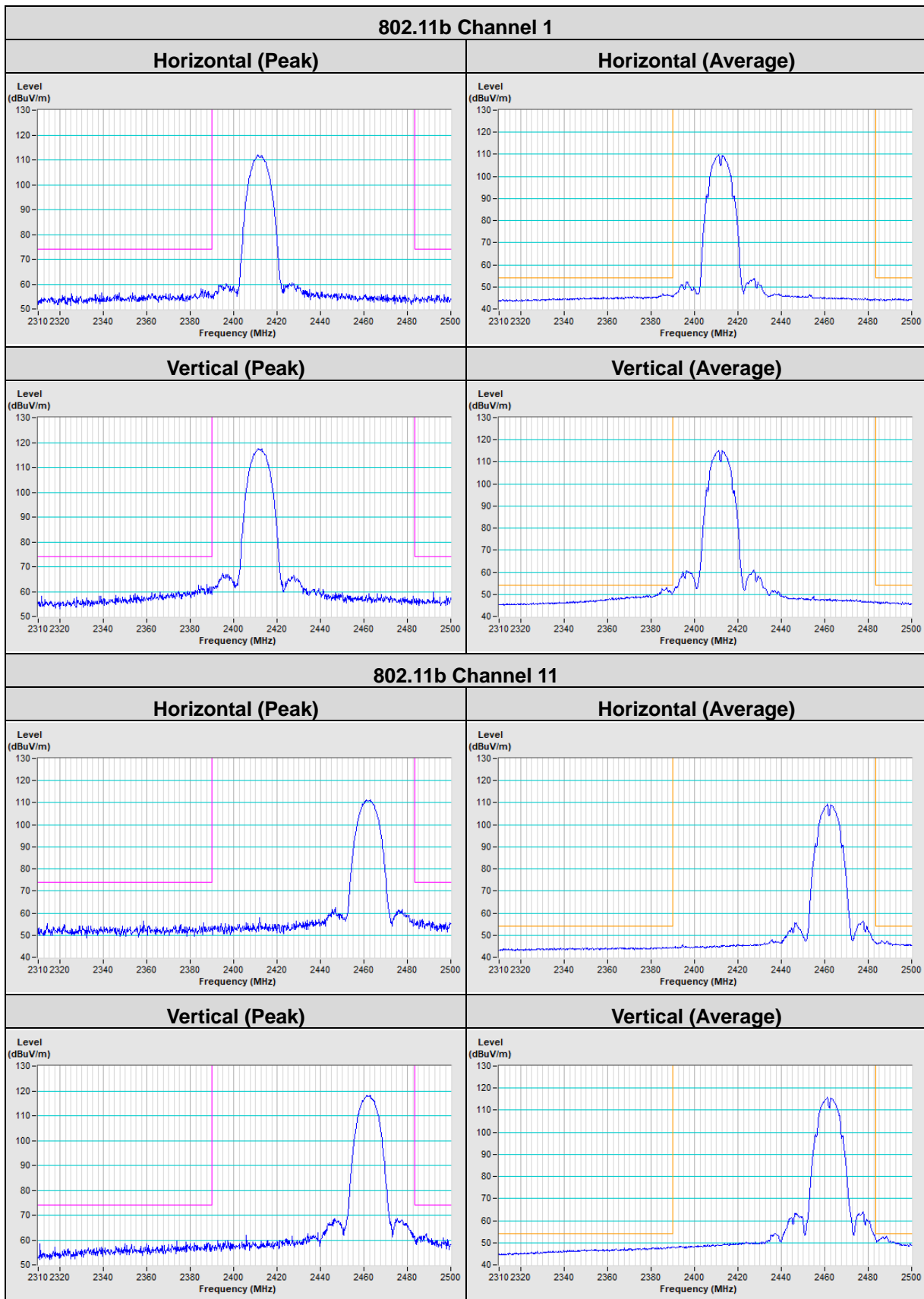
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	112.4 PK			1.89 V	234	113.2	-0.8
2	*2452.00	101.6 AV			1.89 V	234	102.4	-0.8
3	2483.50	65.6 PK	74.0	-8.4	1.89 V	234	66.5	-0.9
4	2483.50	53.2 AV	54.0	-0.8	1.89 V	234	54.1	-0.9
5	4904.00	45.3 PK	74.0	-28.7	1.92 V	212	40.9	4.4
6	4904.00	35.2 AV	54.0	-18.8	1.92 V	212	30.8	4.4
7	7356.00	46.5 PK	74.0	-27.5	2.00 V	233	36.2	10.3
8	7356.00	36.2 AV	54.0	-17.8	2.00 V	233	25.9	10.3

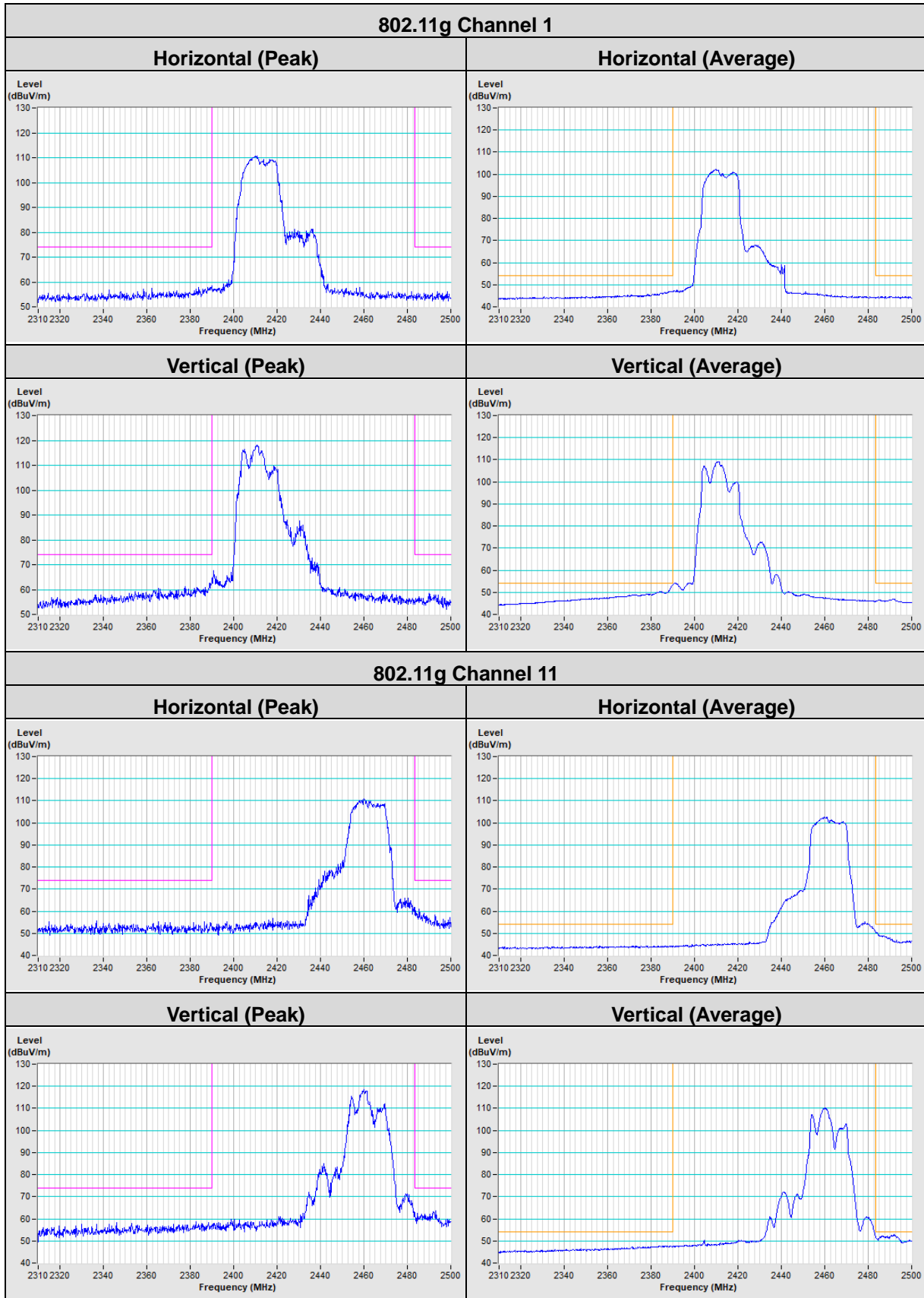
Remarks:

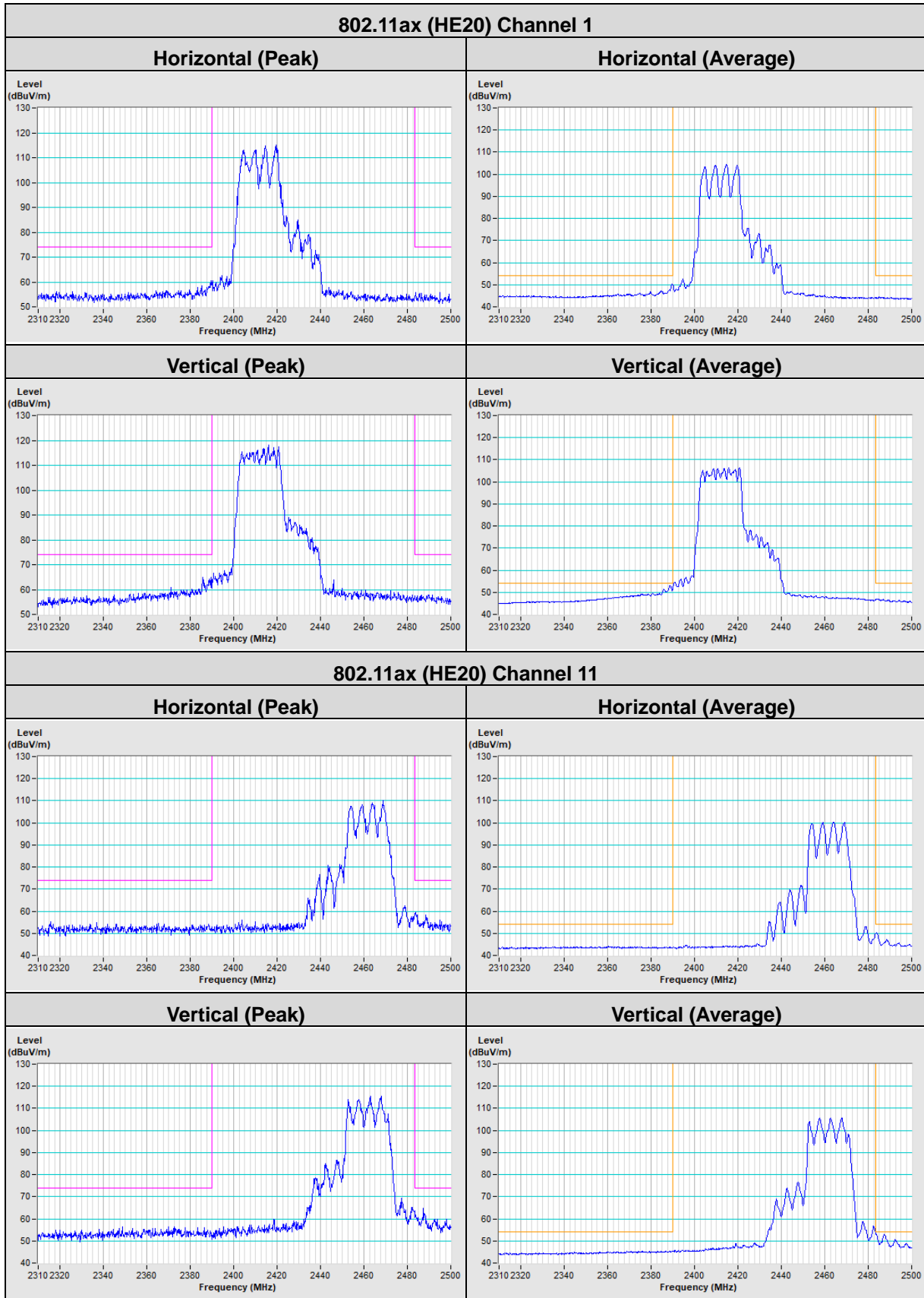
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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



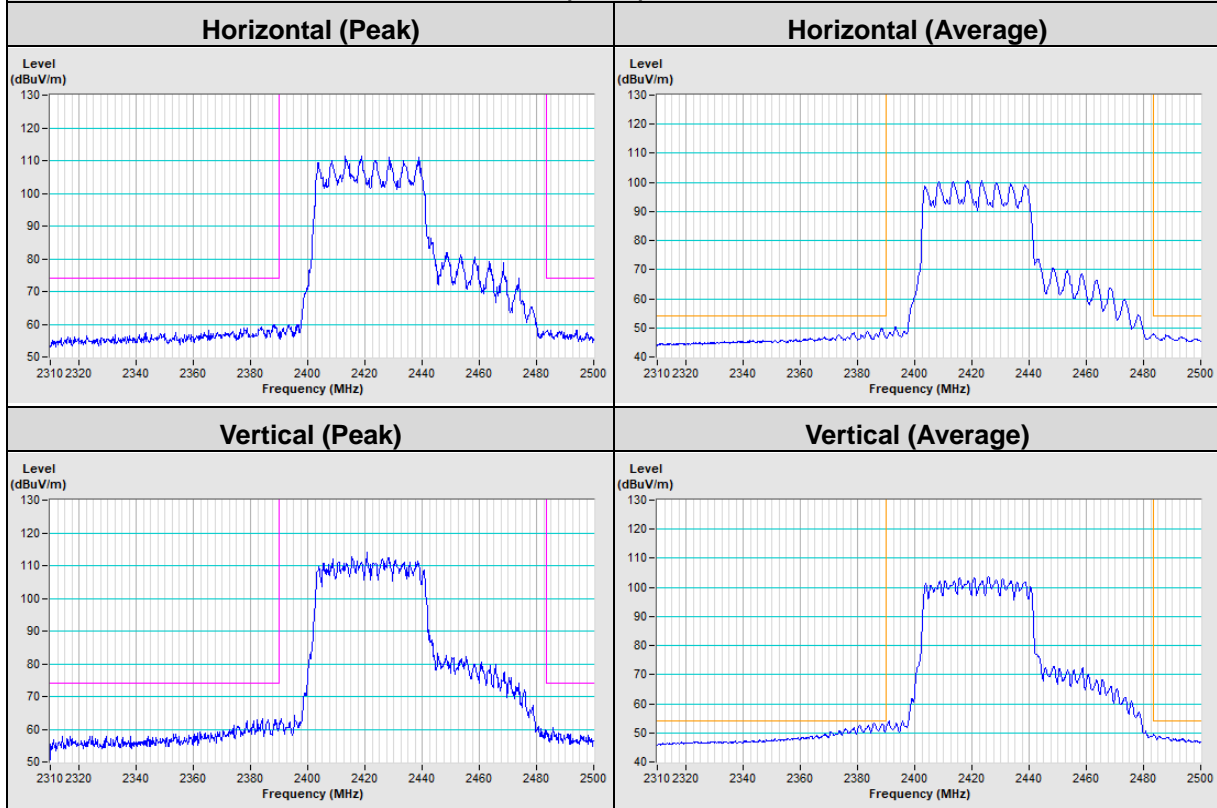
Plot of Band Edge



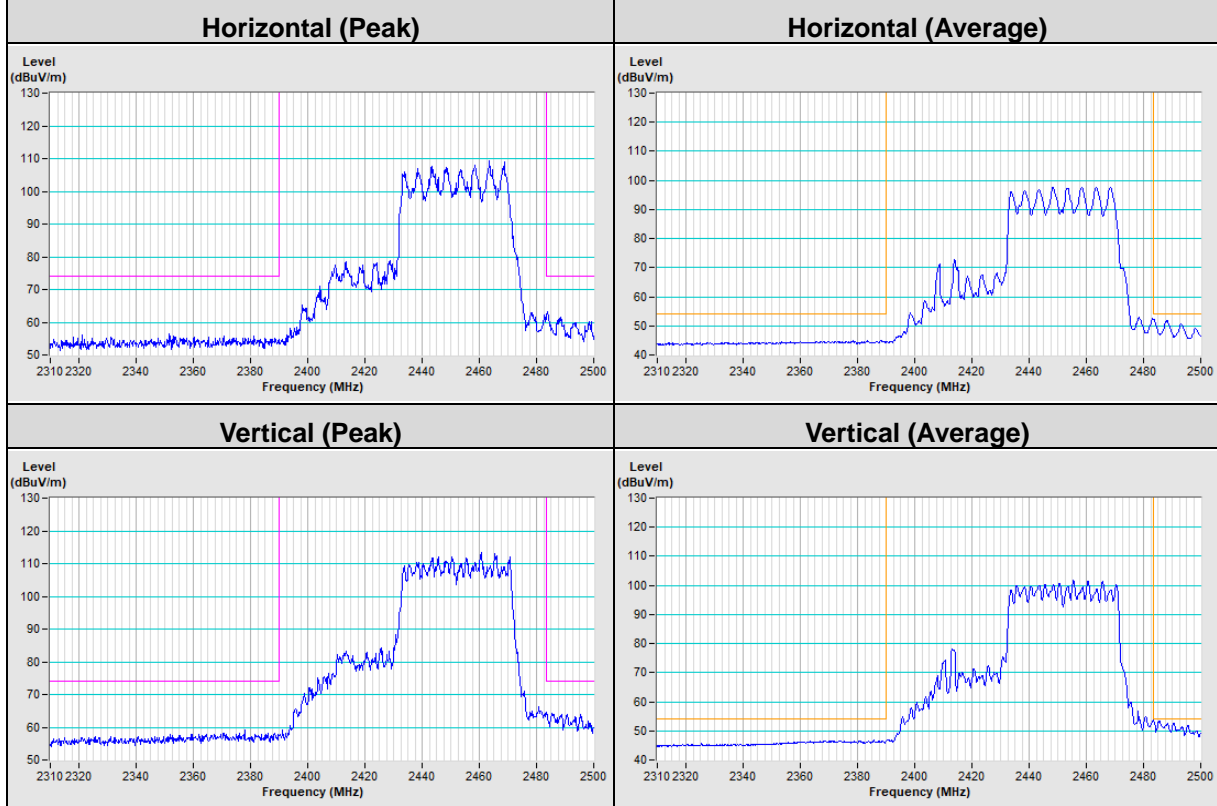




802.11ax (HE40) Channel 3



802.11ax (HE40) 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.

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