

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10-2013

Report No.: RFBCKS-WTW-P21123397

FCC ID: 2AAAS-BB02

Model No.: BB02

Received Date: 2021/12/10

Test Date: 2021/12/29 ~ 2022/2/17

Issued Date: 2022/6/30

Applicant: Vivint. Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 723255 / TW2022

Designation Number:

Approved by: _____



May Chen / Manager

Date: _____

2022/6/30

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Prepared by : Vivian Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P21123397	Original release.	2022/6/30

1 Certificate

Product: Vivint Air Tower

Brand: Vivint, Inc.

Test Model: BB02

Sample Status: Engineering sample

Applicant: Vivint, Inc.

Test Date: 2021/12/29 ~ 2022/2/17

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10-2013

Measurement 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)	6dB 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 -4.72 dB at 0.45078 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.8 dB at 64.10 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
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	30 MHz ~ 1 GHz	5.4 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	Vivint Air Tower
Brand	Vivint, Inc.
Test Model	BB02
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 VHT20/40 mode 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 400 Mbps 802.11ax: up to 573.5 Mbps
Operating Frequency	2412 ~ 2462 MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7
Output Power	CDD mode: 939.878 mW Beamforming mode: 939.878 mW

Note:

1. The EUT has below radios as following table:

Radio 1	Radio 2
WLAN (2.4GHz / 5GHz Low Band / 5GHz Scanning (only RX))	WLAN (5GHz High Band / 5GHz Scanning (only RX)) & Bluetooth

2. Simultaneously transmission condition.

Condition	Technology		
1	WLAN 2.4GHz	WLAN 5GHz (Low Band)	WLAN 5GHz (High Band)
2	WLAN 5GHz (Low Band)	WLAN 5GHz (High Band)	Bluetooth

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

3. The EUT must be supplied with a power adapter and the following different models could be chosen:

No	Brand	Model No.	Spec.
1	HONOTO	ADS-24FUD-12 12024EPCU	AC Input : 100-240V, 50/60Hz, 0.6A DC Output : 12V, 2A DC Output Cable : Unshielded, 1.51m
2	ZB-Power	ZB-H120020A-88	AC Input : 100-240V, 50/60Hz, 0.6A DC Output : 12V, 2.0A DC output Cable : Unshielded, 1.51m

4. The EUT has below source items as following table:

Source Item	3.3V to 1.0V DC/DC converter	Package	PCB Board	E-CAP
G01(A)	AU1(RT5789BGJ8F)	SOT23	PCB A	Main Source
G01(B)	AU1(RT5789BGJ8F)	SOT23	PCB A	2 nd Source
G02	AU1(RT5789BGJ8F)	SOT23	PCB B	2 nd Source
G03	AU11 (JWH5276)	QFN	PCB B	2 nd Source

Note: PCB A(48WHVA11.SGD) and PCB B(48WHVA11.0GA) Layout different with Package, adding Colay-out for QFN.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	RF Chain No.	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
5G1	0	WHVA1	4.5	5.15~5.35 (Scanning, RX only)	PIFA	None
5G2	1	WHVA1	4.5	5.47~5.85 (Scanning, RX only)	PIFA	None
ANT 2 (2a)	2G	48XKAB18	3.5	2.4~2.4835	Dipole	ipex(MHF)
	5GL		3.1	5.15~5.35		
ANT 2 (2b)	5GH	48XKAB18	3.6	5.47~5.85	Dipole	ipex(MHF)
ANT 3 (3a)	2G	48XKAB19	2.7	2.4~2.4835	Dipole	ipex(MHF)
	5GL		3.7	5.15~5.35		
ANT 3 (3b)	BT	48XKAB19	2.9	2.4~2.4835 (BT)	Dipole	ipex(MHF)
	5GH		3.5	5.47~5.85		

*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2. The EUT incorporates a MIMO function:

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

Note:

- All of modulation mode support beamforming function except 802.11b/g modulation mode.
- The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
- The modulation and bandwidth are similar for 802.11n mode for 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 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, 802.11n (HT20), VHT20 and 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 and 802.11ax (HE40):

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

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The AC Adapter has the following models: Brand: HONOTO, Model: ADS-24FUD-12 12024EPCU / Brand: ZB-Power, Model: ZB-H120020A-88. Pre-scan these models of AC Adapters and find the worst case as a representative test condition. 2. For RE Below 1GHz has the following source items :G01(A) / G01(B) / G02 / G03.Pre-scan these source items and find the worst case as a representative test condition.
Worst Case:	1. AC Adapter Worst Condition: Brand: HONOTO, Model: ADS-24FUD-12 12024EPCU 2. Source items for RE Below 1GHz Worst Condition:G01(A) 3. Data Rate Worst Condition: 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).

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

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

Test Item	EUT Configure Mode	Mode	Singal Mode	Tested Channel	Modulation	Data Rate Parameter
AC Power Conducted Emissions	A	802.11g	CDD	6	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	A	802.11g	CDD	6	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	A	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
RF Output Power	A	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
6dB Bandwidth \ Power Spectral Density \ Conducted Out of Band Emissions	A	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
EUT Configure Mode:	A	EUT with AC adapter				

3.5 Duty Cycle of Test Signal

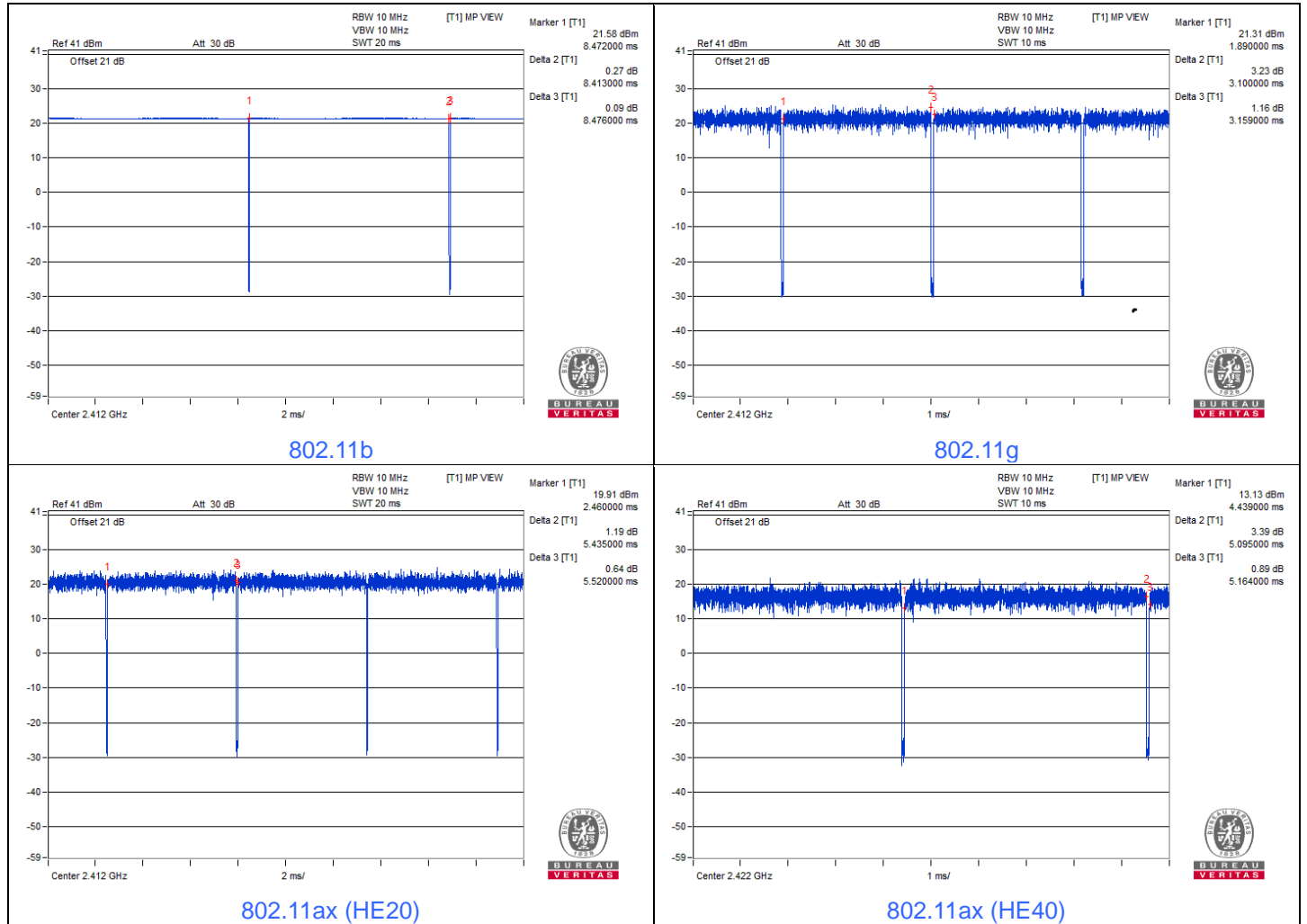
Duty cycle of test signal is $\geq 98\%$, duty factor is not required.
 Duty cycle of test signal is $< 98\%$, duty factor shall be considered.

802.11b: Duty cycle = $8.413 \text{ ms} / 8.476 \text{ ms} = 99.3\%$

802.11g: Duty cycle = $3.1 \text{ ms} / 3.159 \text{ ms} = 98.1\%$

802.11ax (HE20): Duty cycle = $5.435 \text{ ms} / 5.52 \text{ ms} = 98.5\%$

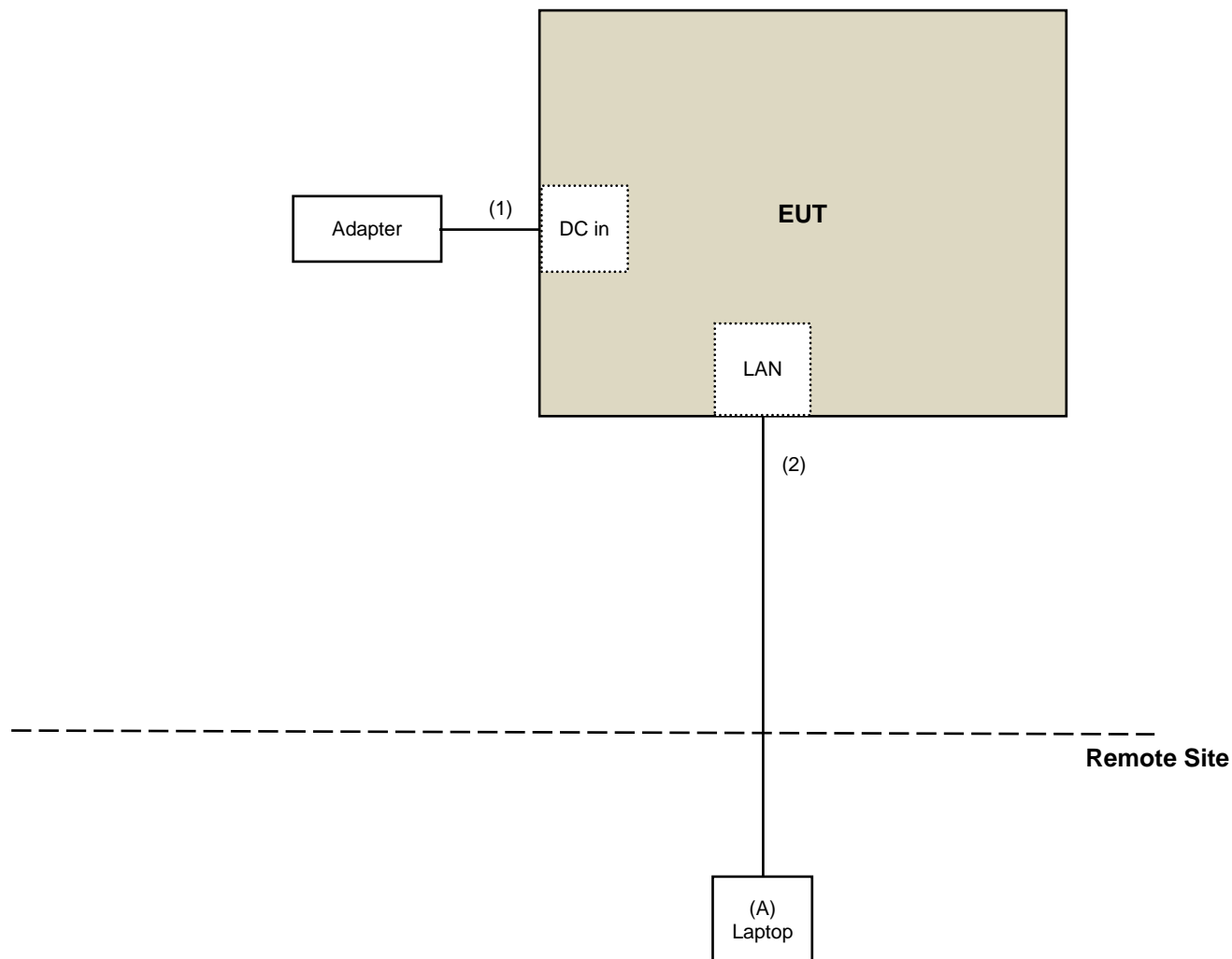
802.11ax (HE40): Duty cycle = $5.095 \text{ ms} / 5.164 \text{ ms} = 98.7\%$



3.6 Test Program Used and Operation Descriptions

Controlling software (package_Ulv2.13_DLLv5.11_20191004-alpha-RSSI -DFS) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5520	8Y4DMQ1	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.51	No	0	Supplied by applicant
2	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
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2021/4/13	2022/4/12
Power Meter Anritsu	ML2495A	1529002	2021/6/21	2022/6/20
Pulse Power Sensor Anritsu	MA2411B	1339443	2021/5/31	2022/5/30
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA
Spectrum Analyzer R&S	FSV40	101516	2021/3/8	2022/3/7

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2021/12/29

4.2 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.3 6dB Bandwidth

Refer to section 4.1 to get information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.1 to get information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohms Terminator	50	3	2021/10/27	2022/10/26
Fixed attenuator STI	STI02-2200-10	005	2021/8/27	2022/8/26
LISN R&S	ESH3-Z5	848773/004	2021/10/29	2022/10/28
LISN R & S	ESH3-Z5	835239/001	2021/3/26	2022/3/25
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2021/9/25	2022/9/24
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A
TEST RECEIVER R&S	ESCS 30	847124/029	2021/10/13	2022/10/12

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2021/12/30

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	2021/9/23	2022/9/22
Pre_Amplifier Mini-Circuits	ZFL-1000VH2	QA0838008	2021/10/19	2022/10/18
RF Coaxial Cable COMMATE/PEWC	8D	966-3-1	2021/3/16	2022/3/15
		966-3-2	2021/3/16	2022/3/15
		966-3-3	2021/3/16	2022/3/15
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer KEYSIGHT	N9030B	MY57142938	2021/4/26	2022/4/25
Test Receiver KEYSIGHT	N9038A	MY59050100	2021/5/3	2022/5/2
Trilog Broadband Antenna Schwarzbeck	VULB 9168	9168-361	2021/10/26	2022/10/25
Pre_Amplifier EMCI	EMC001340	980142	2021/5/24	2022/5/23
Loop Antenna TESEQ	HLA 6121	45745	2021/7/21	2022/7/20
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2021/1/7	2022/1/6
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-002	2021/1/7	2022/1/6

Notes:

1. The test was performed in 966 Chamber No. 3.
2. Tested Date: 2021/12/30

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Horn Antenna Schwarzbeck	BBHA9120-D	9120D-406	2021/11/14	2022/11/13
	BBHA 9170	BBHA9170519	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC12630SE	980384	2022/1/10	2023/1/9
	EMC184045SE	980387	2022/1/10	2023/1/9
RF Cable EMCI	EMC104-SM-SM-6000	210201	2021/5/13	2022/5/12
RF cable (40GHz) EMCI	EMC-KM-KM-4000	200214	2021/3/10	2022/3/9
RF Cable-Frequency range: 1- 40GHz EMCI	EMC102-KM-KM-1200	160924	2022/1/10	2023/1/9
RF Coaxial Cable EMCI	EMC104-SM-SM-1500	180504	2021/4/26	2022/4/25
	EMC104-SM-SM-2000	180601	2021/6/8	2022/6/7
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer KEYSIGHT	N9030B	MY57142938	2021/4/26	2022/4/25
Spectrum Analyzer Keysight	N9030A	MY54490679	2021/7/9	2022/7/8
Test Receiver KEYSIGHT	N9038A	MY59050100	2021/5/3	2022/5/2

Notes:

1. The test was performed in 966 Chamber No. 3.
2. Tested Date: 2022/2/17

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 6dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

Below 20 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 20 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 20 dB below the highest level of the desired power:

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

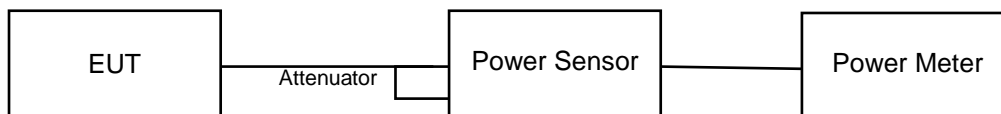
Notes:

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

Peak Power:

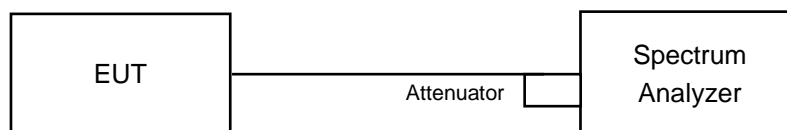
A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

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

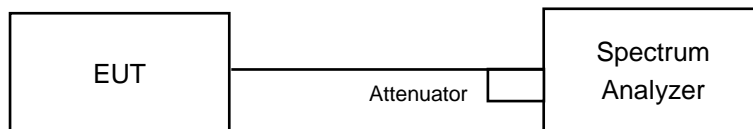


6.2.2 Test Procedure

- a. Set analyzer center frequency to DTS channel center frequency.
- b. Set the span to 1.5 times the DTS bandwidth.
- c. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d. Set the VBW $\geq 3 \times \text{RBW}$.
- e. Detector = peak.
- f. Sweep time = auto couple.
- g. Trace mode = max hold.
- h. Allow trace to fully stabilize.
- i. Use the peak marker function to determine the maximum amplitude level within the RBW.

6.3 6dB Bandwidth

6.3.1 Test Setup

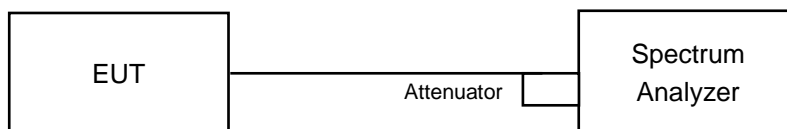


6.3.2 Test Procedure

- 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

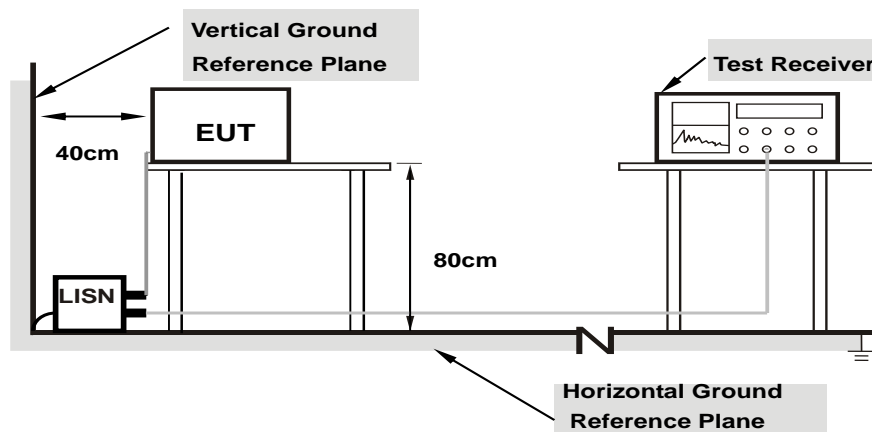
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

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 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.

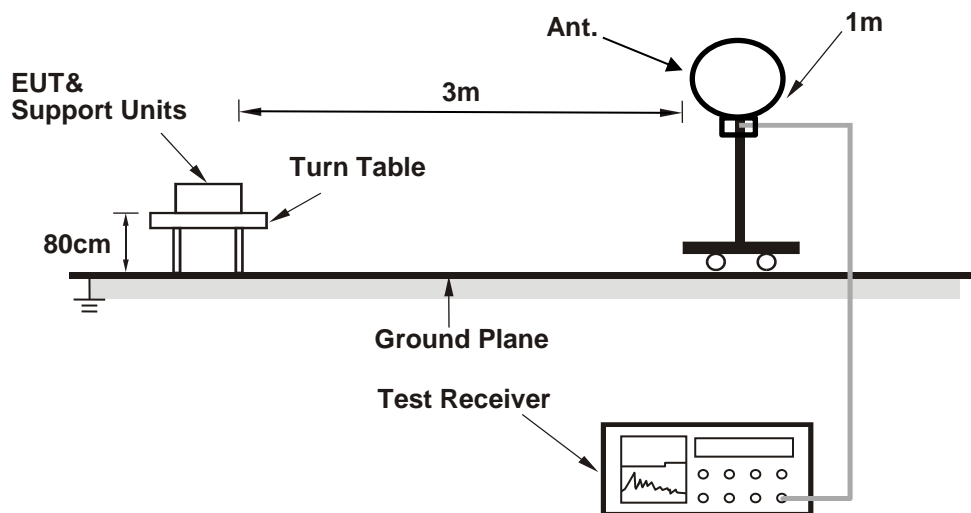
Note:

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.

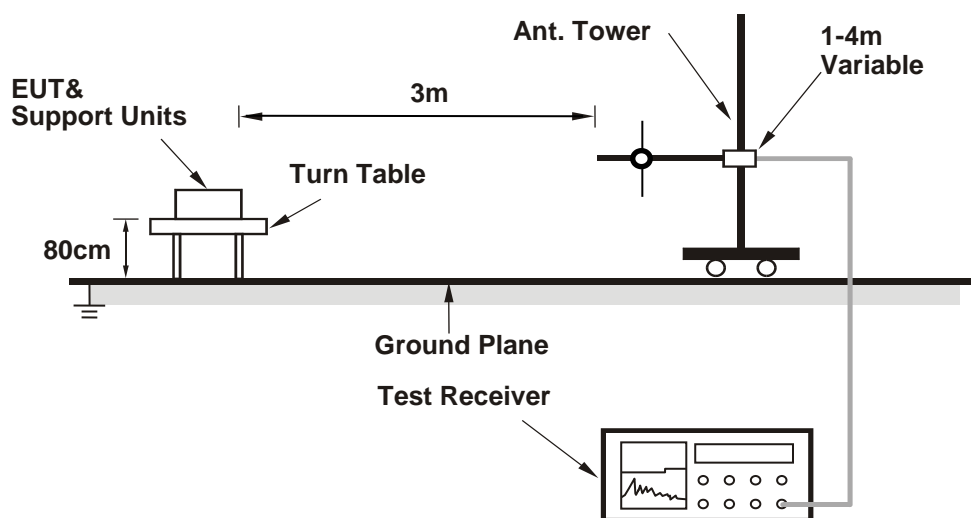
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.
2. 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.

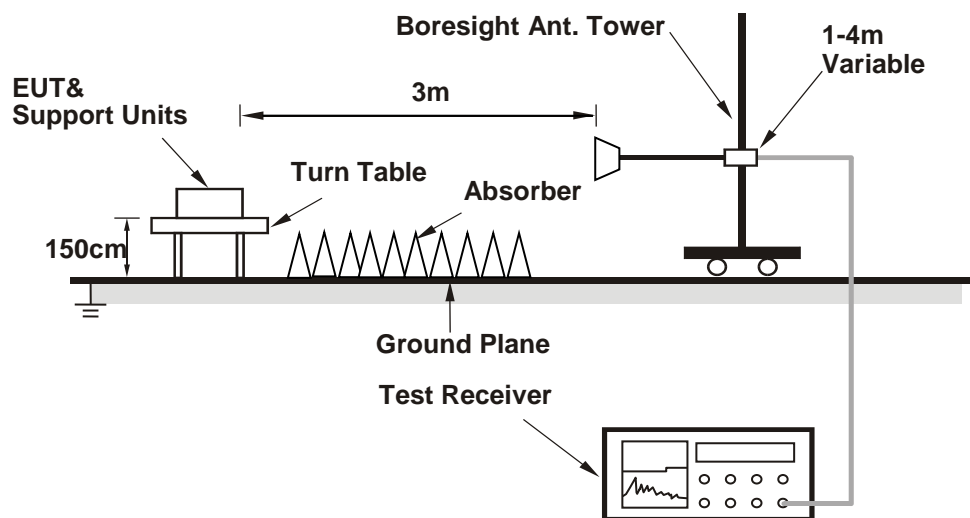
Notes:

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 Radiated emission above 1 GHz



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) at frequency above 1 GHz.
- 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:	Leon Dai
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For Peak Power

802.11b CDD

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	21.77	21.90	305.196	24.85	30	Pass
6	2437	25.21	25.21	663.789	28.22	30	Pass
11	2462	24.44	24.42	554.665	27.44	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.5 dBi.

802.11g CDD

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.36	26.41	870.036	29.40	30	Pass
6	2437	26.73	26.71	939.791	29.73	30	Pass
11	2462	26.38	26.51	882.224	29.46	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.5 dBi.

VHT20 CDD

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.15	26.04	813.888	29.11	30	Pass
6	2437	26.22	26.28	843.413	29.26	30	Pass
11	2462	25.57	25.59	722.822	28.59	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.5 dBi.

VHT40 CDD

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	24.52	24.63	573.541	27.59	30	Pass
6	2437	26.01	26.15	811.122	29.09	30	Pass
9	2452	25.44	25.29	688.01	28.38	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.5 dBi.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.26	26.12	831.929	29.20	30	Pass
6	2437	26.66	26.78	939.878	29.73	30	Pass
11	2462	25.79	25.87	765.682	28.84	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.5 dBi.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	24.79	24.87	608.203	27.84	30	Pass
6	2437	26.15	26.32	840.646	29.25	30	Pass
9	2452	25.92	25.90	779.886	28.92	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.5 dBi.

VHT20 Beamforming

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.15	26.04	813.888	29.11	29.88	Pass
6	2437	26.22	26.28	843.413	29.26	29.88	Pass
11	2462	25.57	25.59	722.822	28.59	29.88	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. The directional gain is 6.12 dBi.

VHT40 Beamforming

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	24.52	24.63	573.541	27.59	29.88	Pass
6	2437	26.01	26.15	811.122	29.09	29.88	Pass
9	2452	25.44	25.29	688.01	28.38	29.88	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. The directional gain is 6.12 dBi.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.26	26.12	831.929	29.20	29.88	Pass
6	2437	26.66	26.78	939.878	29.73	29.88	Pass
11	2462	25.79	25.87	765.682	28.84	29.88	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. The directional gain is 6.12 dBi.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	24.79	24.87	608.203	27.84	29.88	Pass
6	2437	26.15	26.32	840.646	29.25	29.88	Pass
9	2452	25.92	25.90	779.886	28.92	29.88	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. The directional gain is 6.12 dBi.

For Average Power

802.11b CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	19.33	19.47	174.215	22.41
6	2437	23.27	23.24	423.187	26.27
11	2462	22.24	22.13	330.799	25.20

802.11g CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	19.64	19.78	187.105	22.72
6	2437	24.30	24.28	537.07	27.30
11	2462	19.90	19.66	190.239	22.79

VHT20 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	18.11	18.08	128.983	21.11
6	2437	23.05	23.35	418.108	26.21
11	2462	17.82	17.66	118.879	20.75

VHT40 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	16.42	16.47	88.214	19.46
6	2437	19.05	19.53	170.095	22.31
9	2452	17.33	17.01	104.31	20.18

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	18.23	18.21	132.749	21.23
6	2437	23.39	23.52	443.178	26.47
11	2462	18.10	17.87	125.8	21.00

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	16.67	16.70	93.225	19.70
6	2437	19.37	19.88	183.772	22.64
9	2452	17.65	17.09	109.379	20.39

VHT20 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	18.11	18.08	128.983	21.11
6	2437	23.05	23.35	418.108	26.21
11	2462	17.82	17.66	118.879	20.75

VHT40 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	16.42	16.47	88.214	19.46
6	2437	19.05	19.53	170.095	22.31
9	2452	17.33	17.01	104.31	20.18

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	18.23	18.21	132.749	21.23
6	2437	23.39	23.52	443.178	26.47
11	2462	18.10	17.87	125.8	21.00

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	16.67	16.70	93.225	19.70
6	2437	19.37	19.88	183.772	22.64
9	2452	17.65	17.09	109.379	20.39

7.2 Power Spectral Density

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

Chan.	Chan. Freq.	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
	(MHz)	Chain 0	Chain 1			
1	2412	-3.36	-3.43	-0.38	7.88	Pass
6	2437	0.64	0.34	3.50	7.88	Pass
11	2462	-0.87	-0.69	2.23	7.88	Pass

Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- The directional gain is 6.12 dBi.

802.11g

Chan.	Chan. Freq.	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
	(MHz)	Chain 0	Chain 1			
1	2412	-5.08	-5.35	-2.20	7.88	Pass
6	2437	-1.20	-0.54	2.15	7.88	Pass
11	2462	-5.45	-5.56	-2.49	7.88	Pass

Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- The directional gain is 6.12 dBi.

802.11ax (HE20)

Chan.	Chan. Freq.	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
	(MHz)	Chain 0	Chain 1			
1	2412	-7.96	-7.90	-4.92	7.88	Pass
6	2437	-2.35	-2.40	0.64	7.88	Pass
11	2462	-5.44	-7.97	-3.51	7.88	Pass

Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- The directional gain is 6.12 dBi.

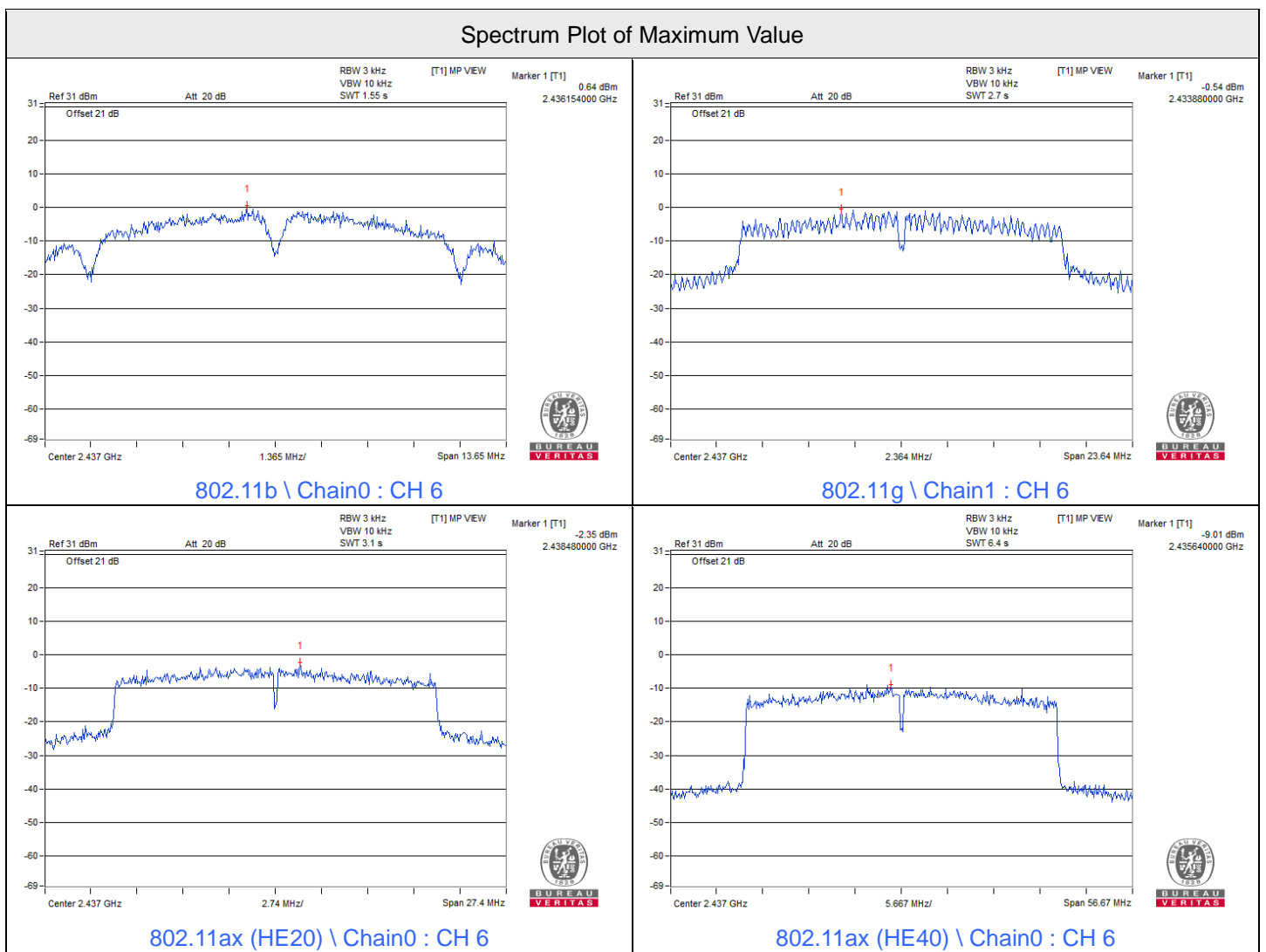


802.11ax (HE40)

Chan.	Chan. Freq.	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
	(MHz)	Chain 0	Chain 1			
3	2422	-11.61	-10.69	-8.12	7.88	Pass
6	2437	-9.01	-9.44	-6.21	7.88	Pass
9	2452	-9.43	-10.85	-7.07	7.88	Pass

Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- The directional gain is 6.12 dBi.



7.3 6dB Bandwidth

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

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	8.1	8.12	0.5	Pass
6	2437	9.1	9.03	0.5	Pass
11	2462	9.07	8.1	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	15.49	15.44	0.5	Pass
6	2437	16.36	15.76	0.5	Pass
11	2462	15.18	15.18	0.5	Pass

802.11ax (HE20)

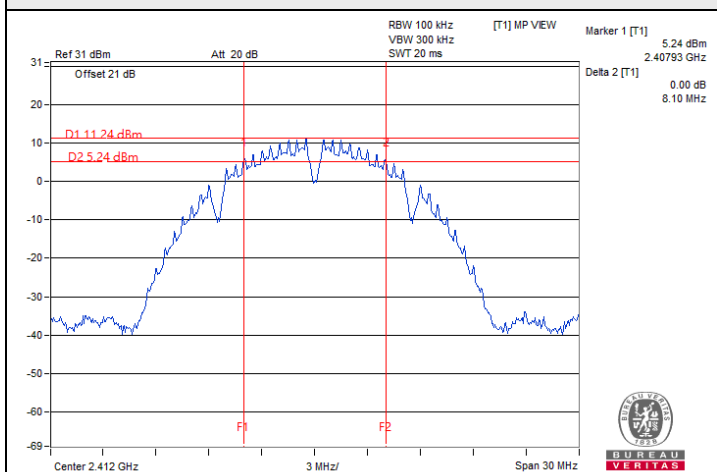
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	18.49	18.21	0.5	Pass
6	2437	18.27	18.43	0.5	Pass
11	2462	18.41	18.66	0.5	Pass

802.11ax (HE40)

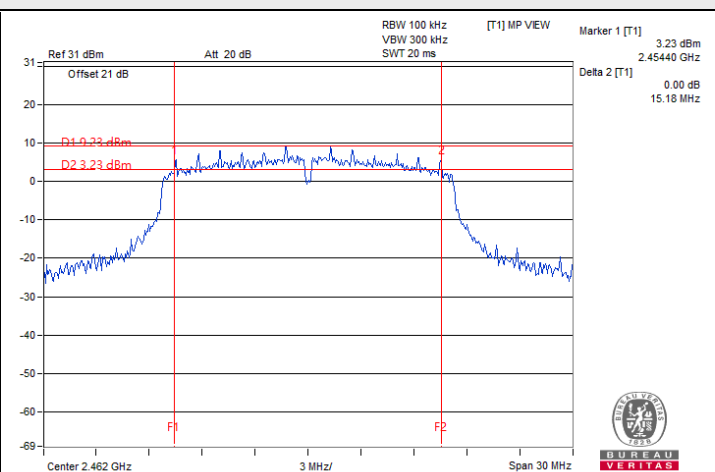
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	37.49	36.67	0.5	Pass
6	2437	37.78	35.86	0.5	Pass
9	2452	37.75	37.01	0.5	Pass



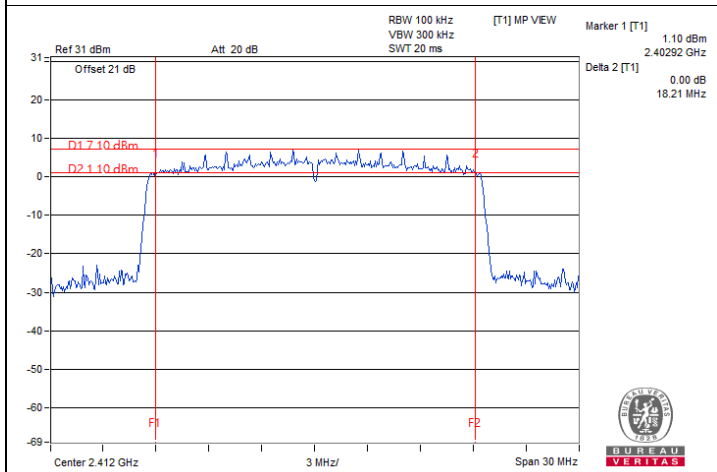
Spectrum Plot of Minimum Value



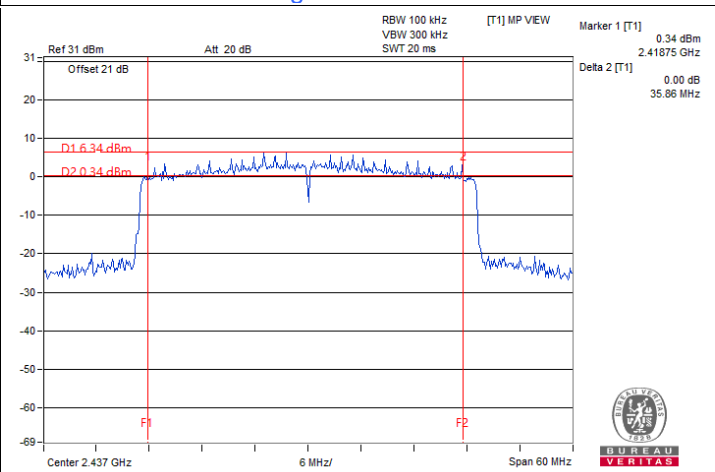
802.11b \ Chain0 : CH 1



802.11g \ Chain0 : CH 11



802.11ax (HE20) \ Chain1 : CH 1



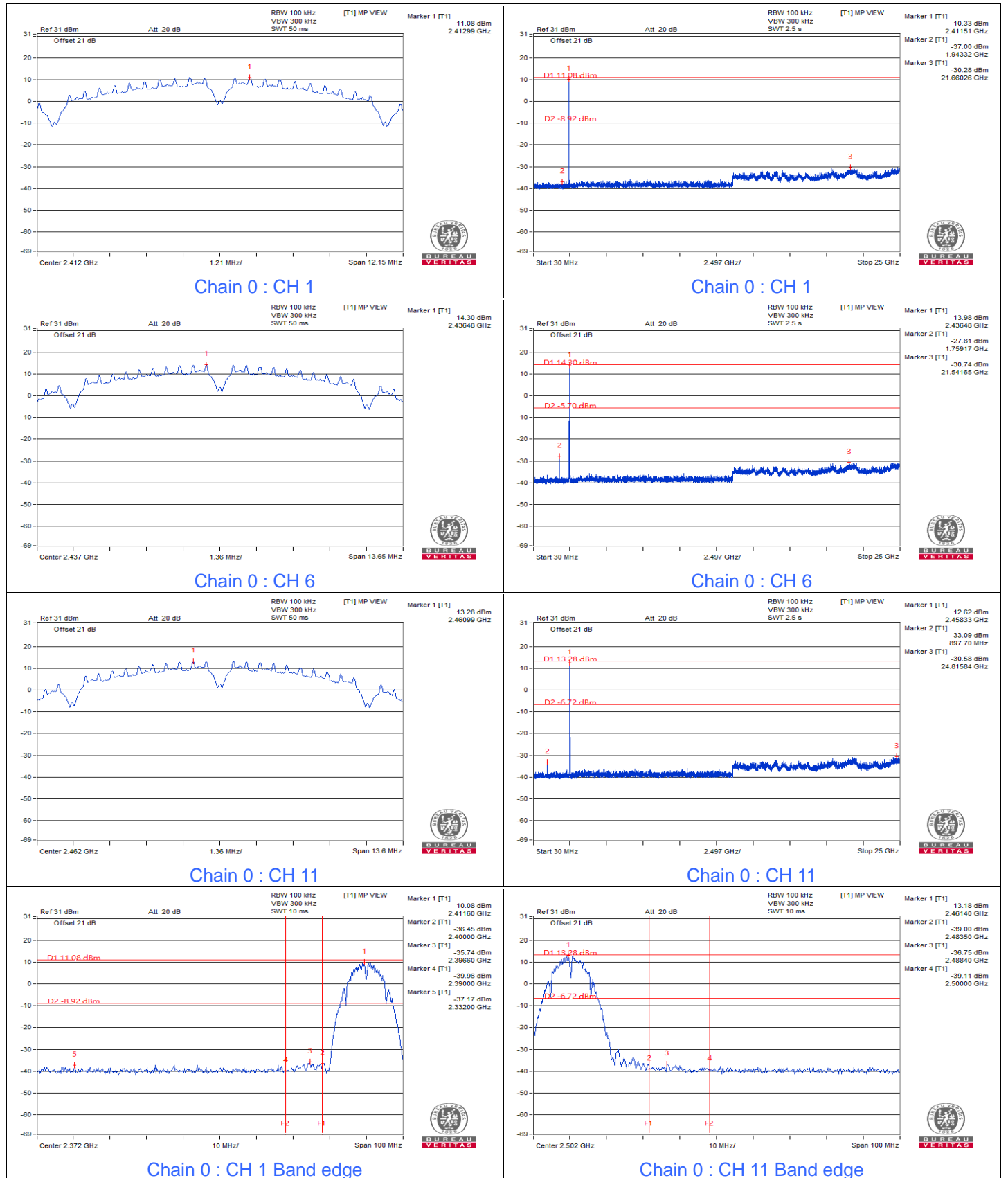
802.11ax (HE40) \ Chain1 : CH 6

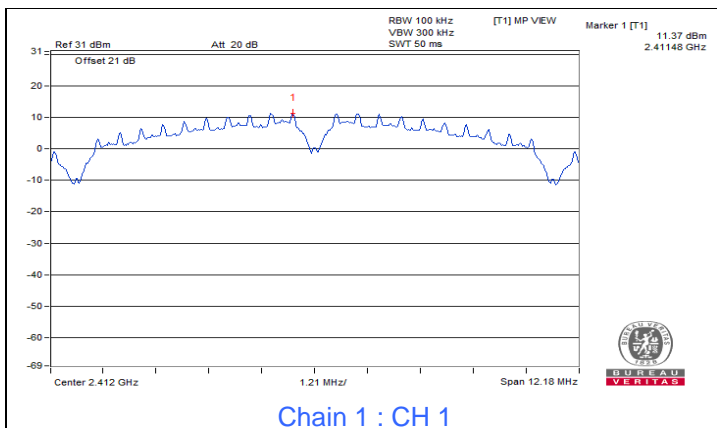


7.4 Conducted Out of Band Emissions

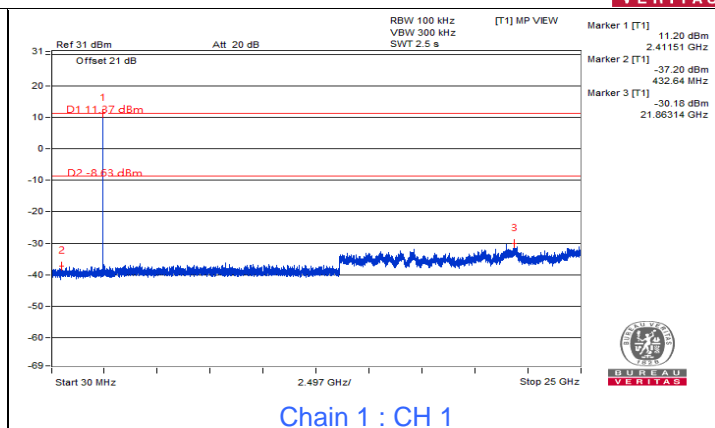
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25 °C, 60 % RH	Tested By:	Leon Dai
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802.11b

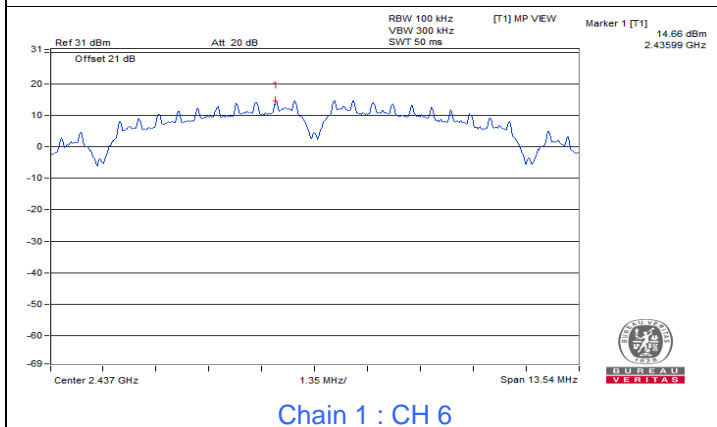




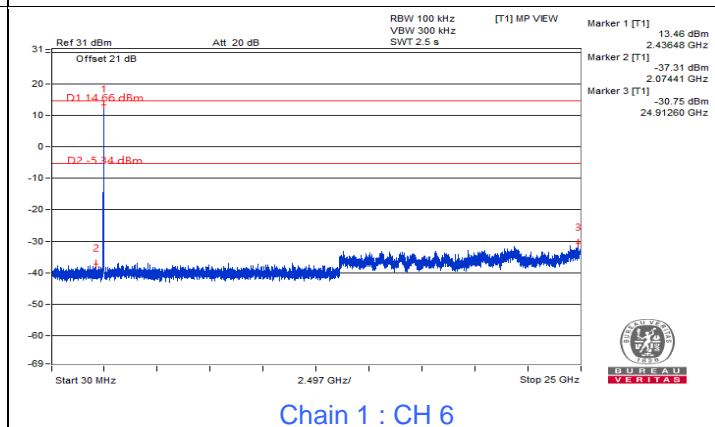
Chain 1 : CH 1



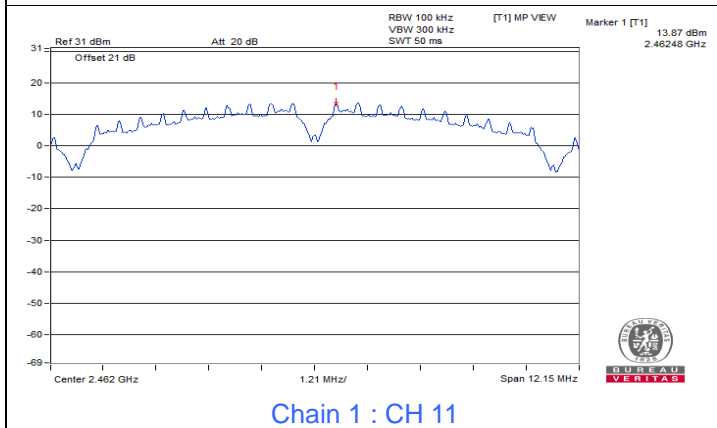
Chain 1 : CH 1



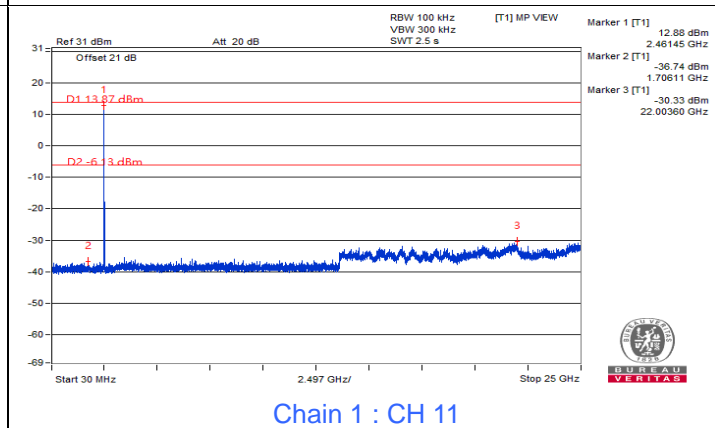
Chain 1 : CH 6



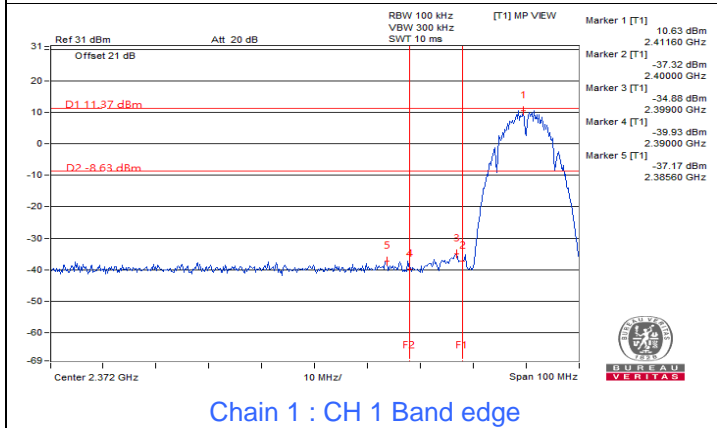
Chain 1 : CH 6



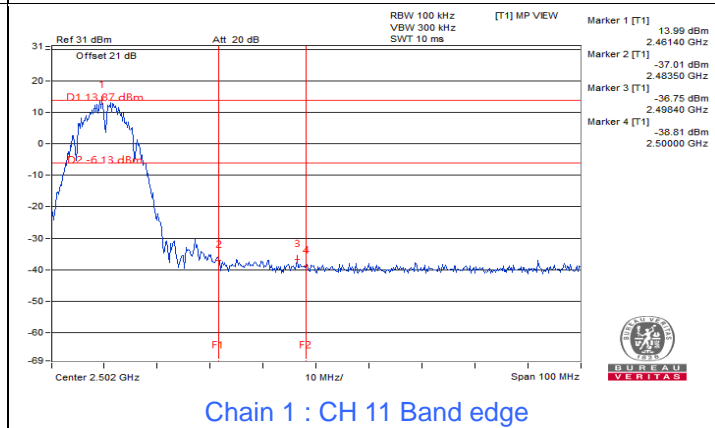
Chain 1 : CH 11



Chain 1 : CH 11



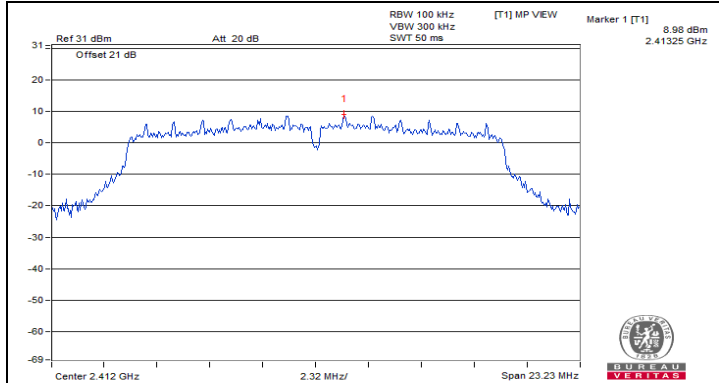
Chain 1 : CH 1 Band edge



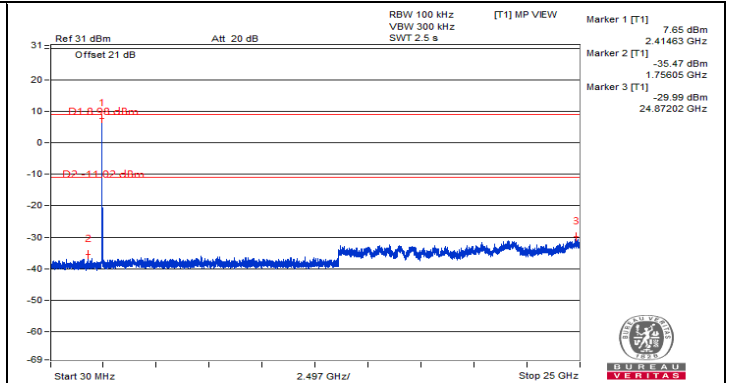
Chain 1 : CH 11 Band edge



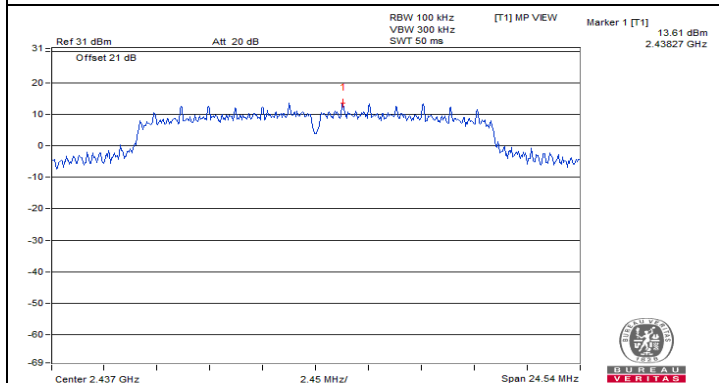
802.11g



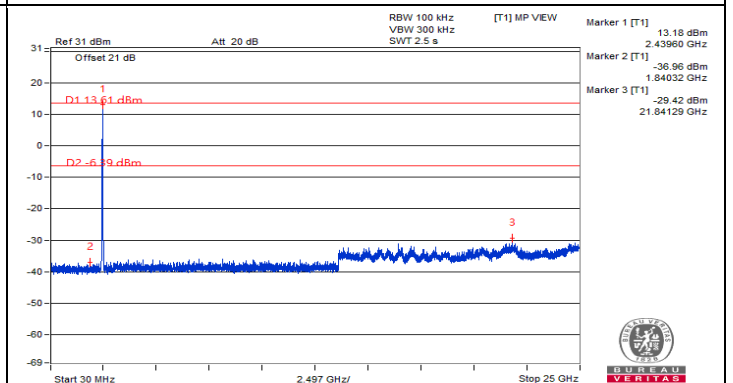
Chain 0 : CH 1



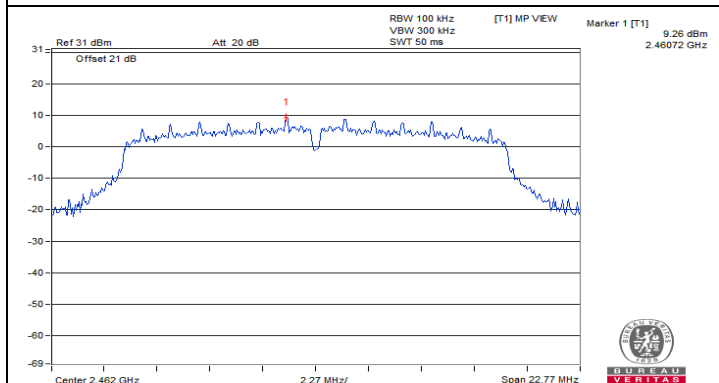
Chain 0 : CH 1



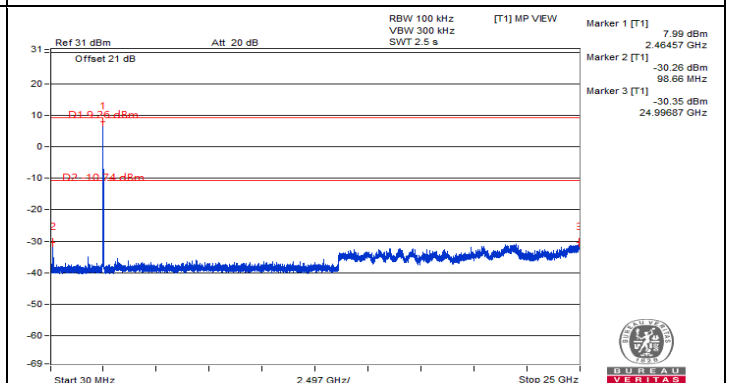
Chain 0 : CH 6



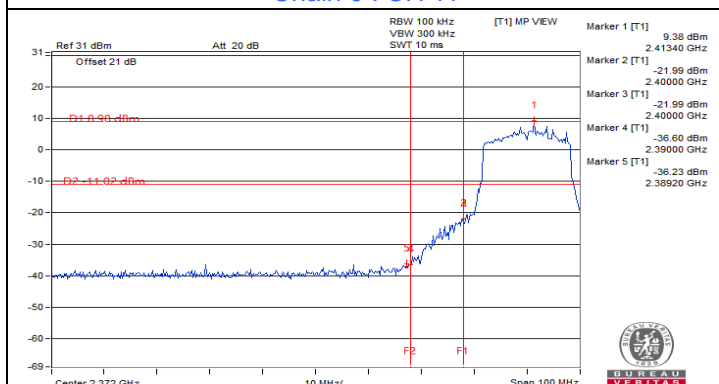
Chain 0 : CH 6



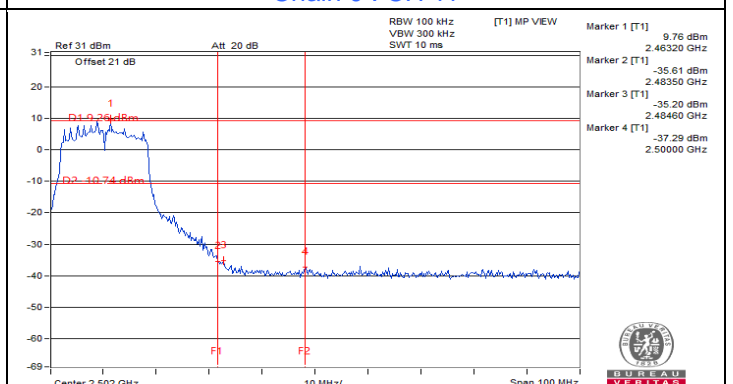
Chain 0 : CH 11



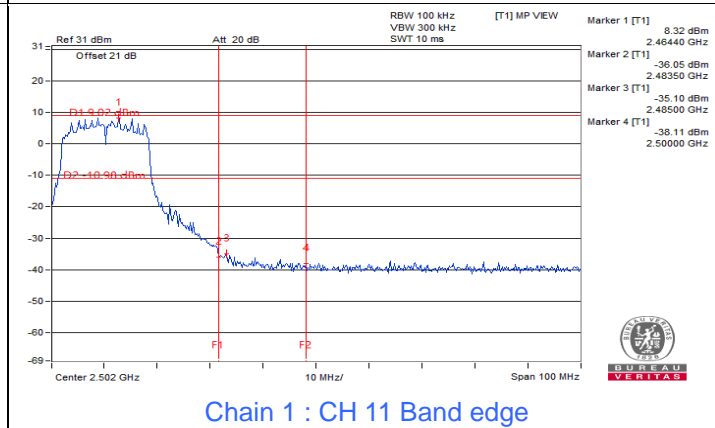
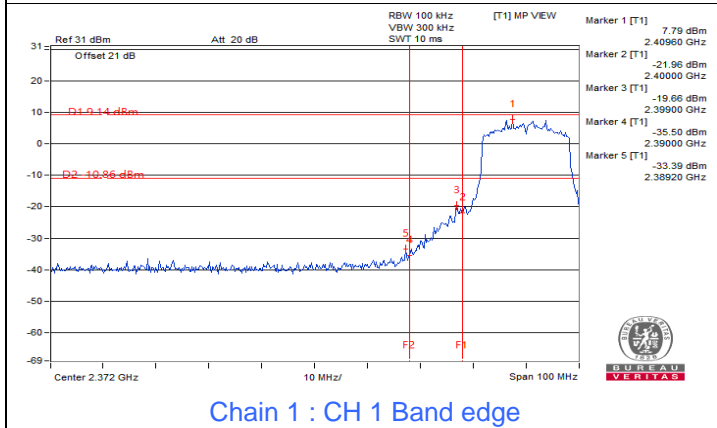
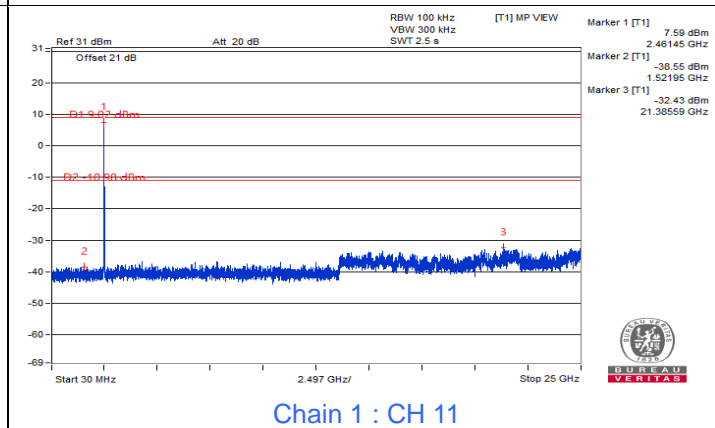
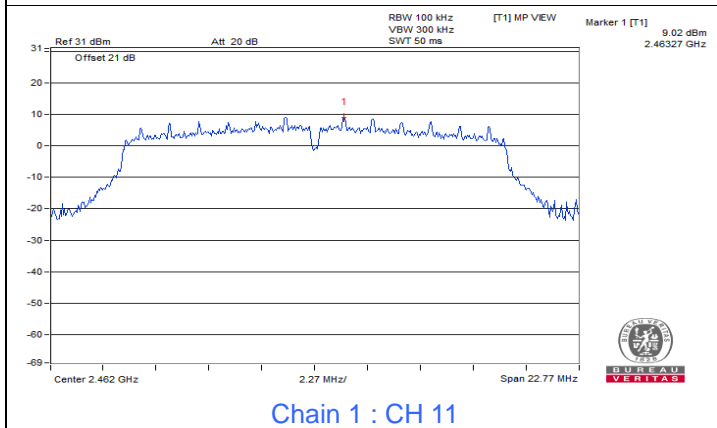
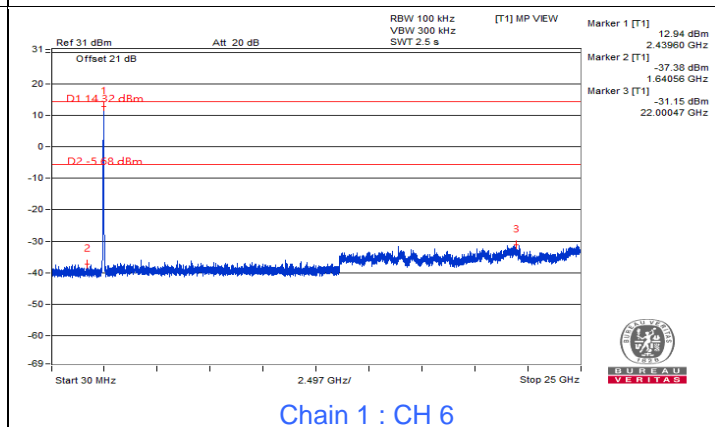
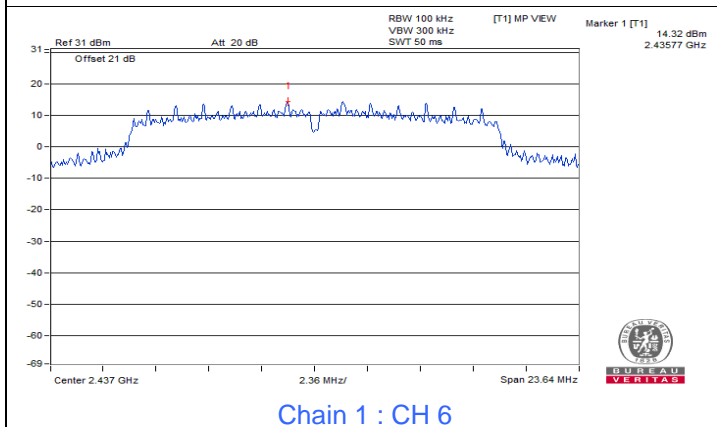
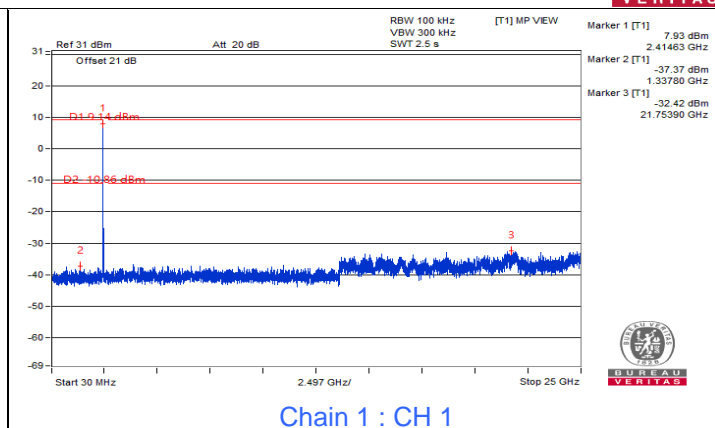
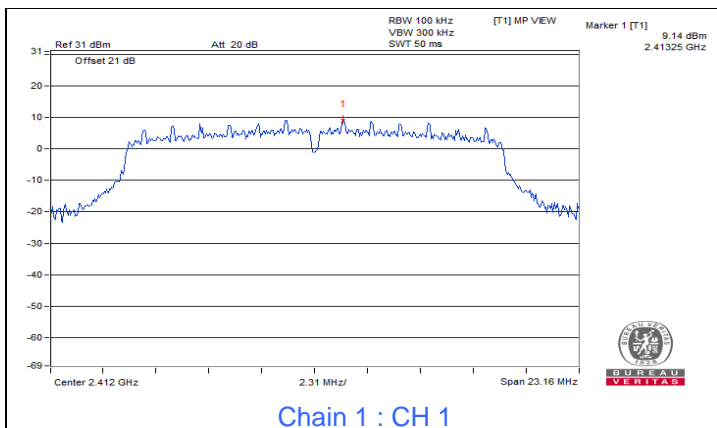
Chain 0 : CH 11



Chain 0 : CH 1 Band edge

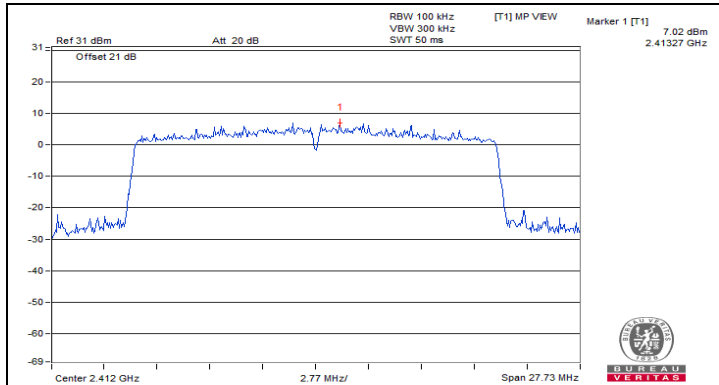


Chain 0 : CH 11 Band edge

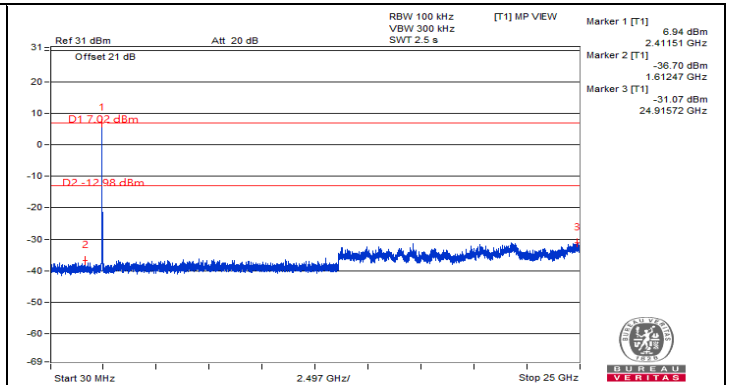




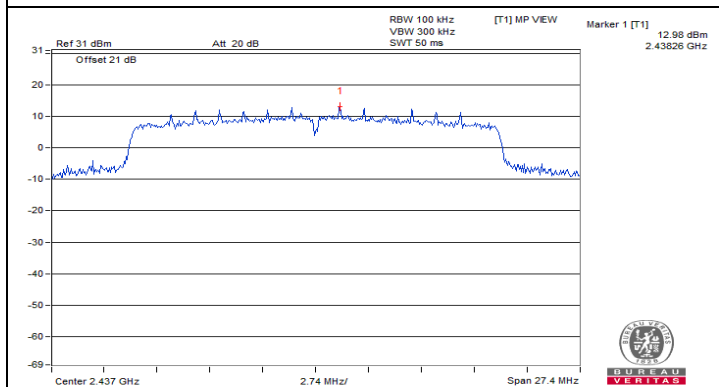
802.11ax (HE20)



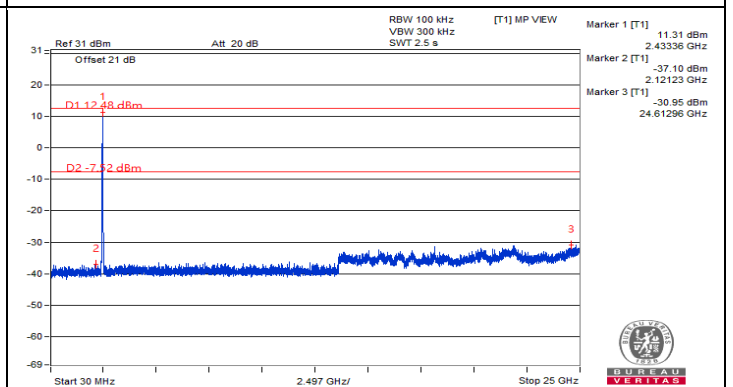
Chain 0 : CH 1



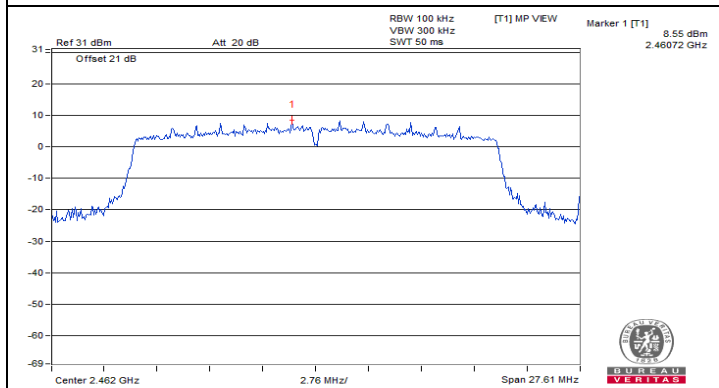
Chain 0 : CH 1



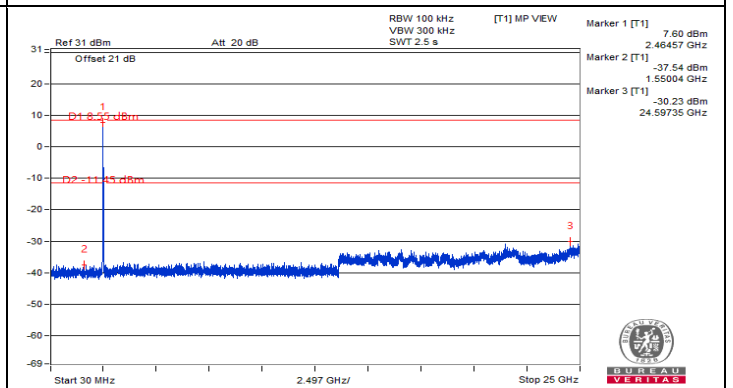
Chain 0 : CH 6



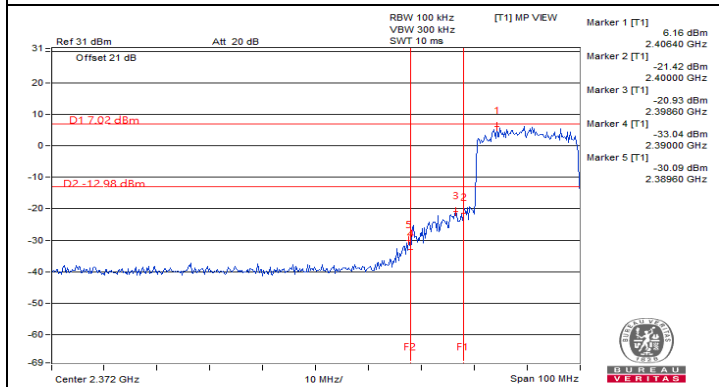
Chain 0 : CH 6



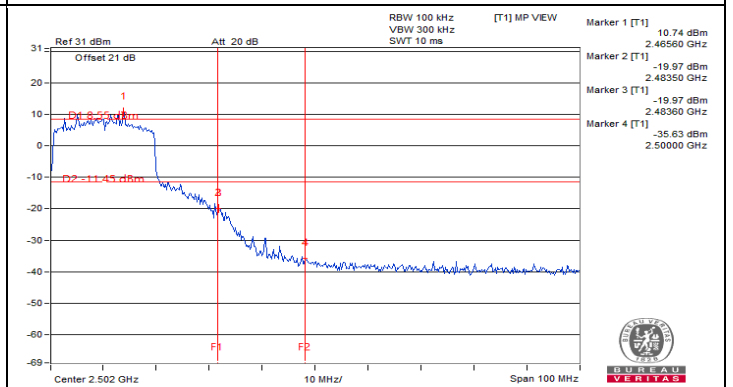
Chain 0 : CH 11



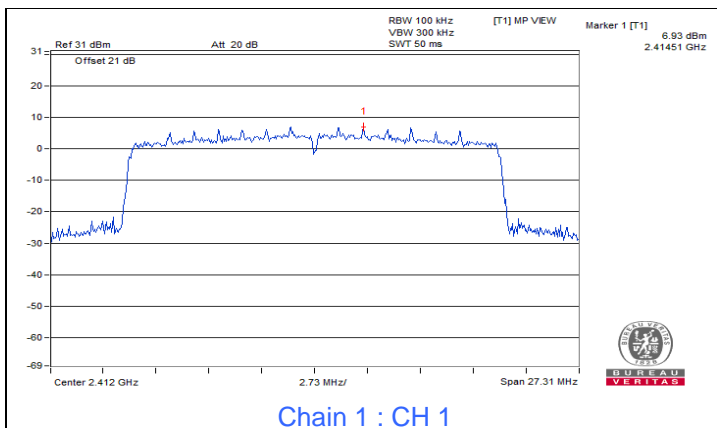
Chain 0 : CH 11



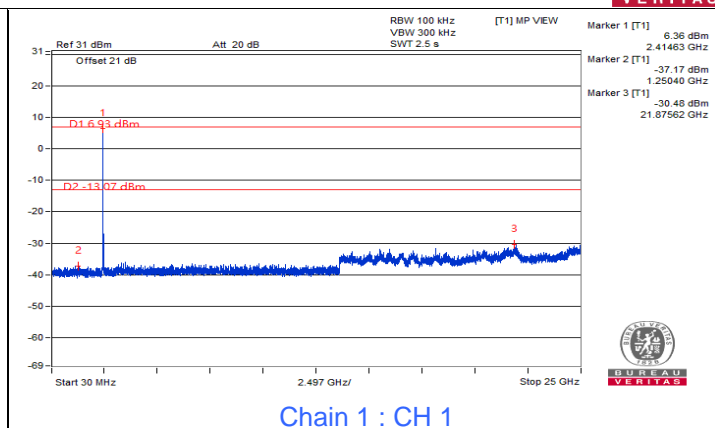
Chain 0 : CH 1 Band edge



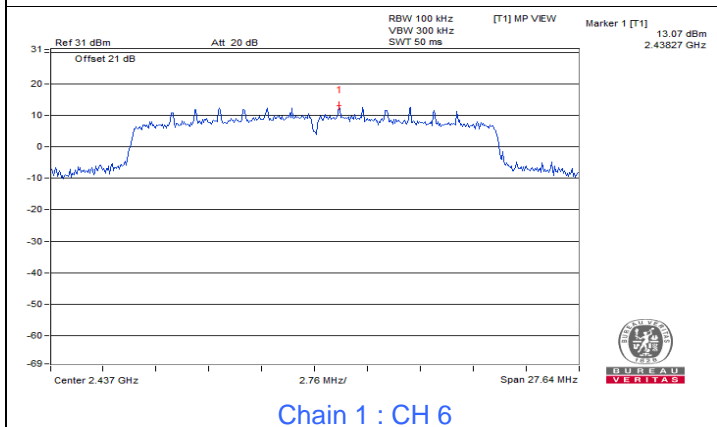
Chain 0 : CH 11 Band edge



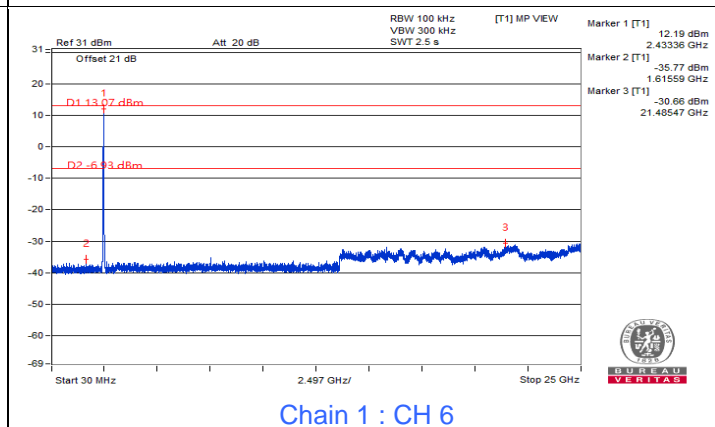
Chain 1 : CH 1



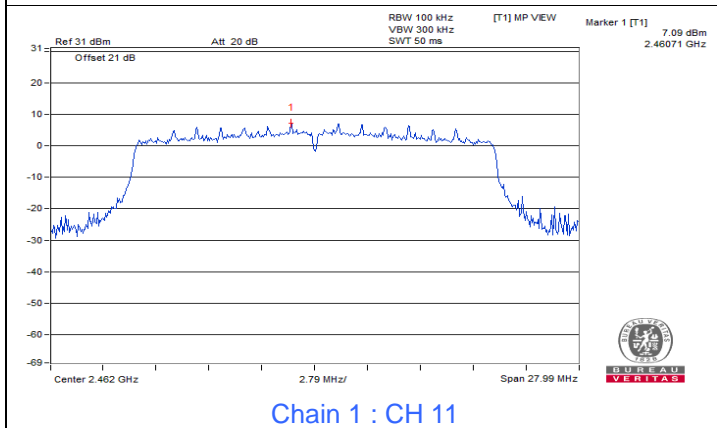
Chain 1 : CH 1



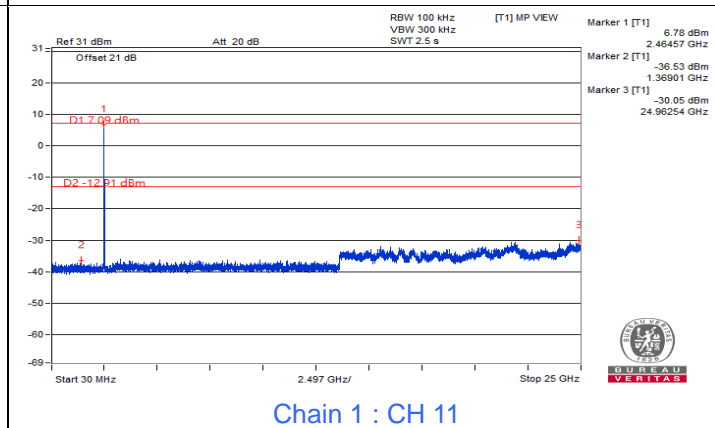
Chain 1 : CH 6



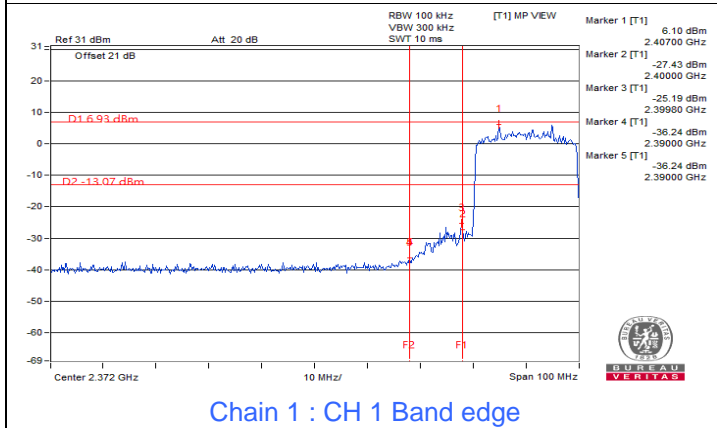
Chain 1 : CH 6



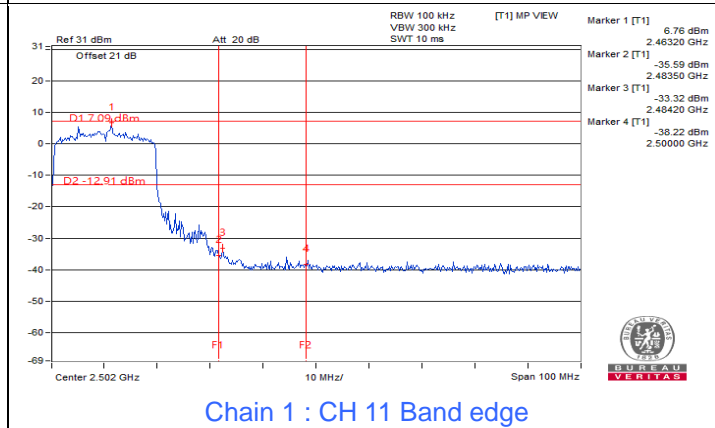
Chain 1 : CH 11



Chain 1 : CH 11



Chain 1 : CH 1 Band edge

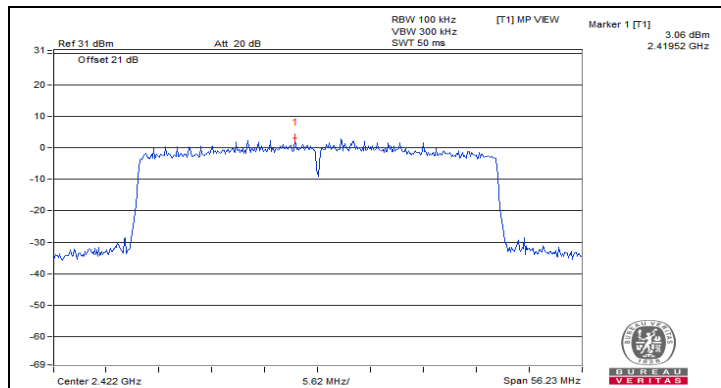


Chain 1 : CH 11 Band edge

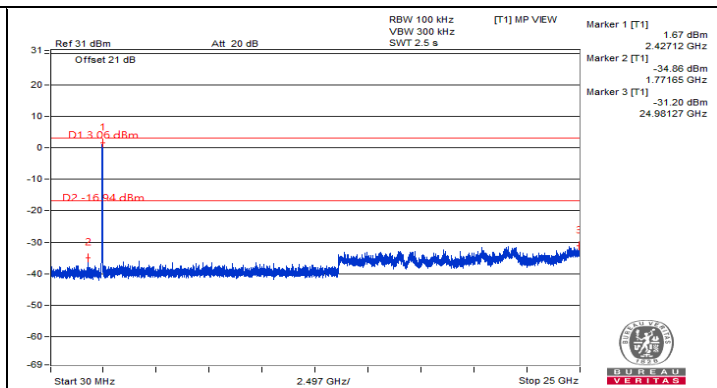


BUREAU VERITAS

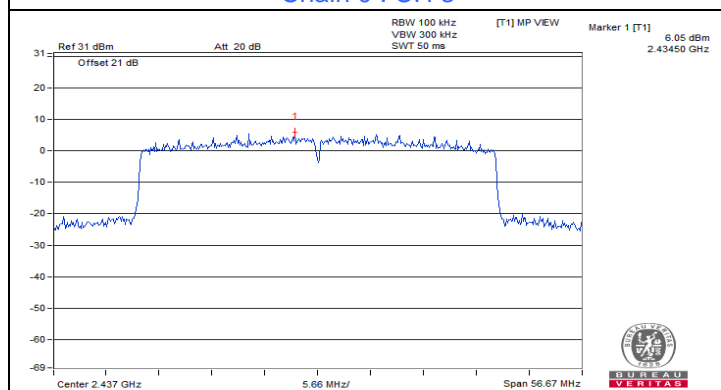
802.11ax (HE40)



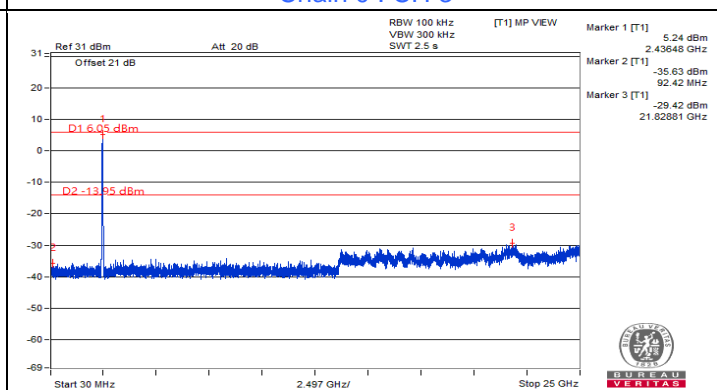
Chain 0 : CH 3



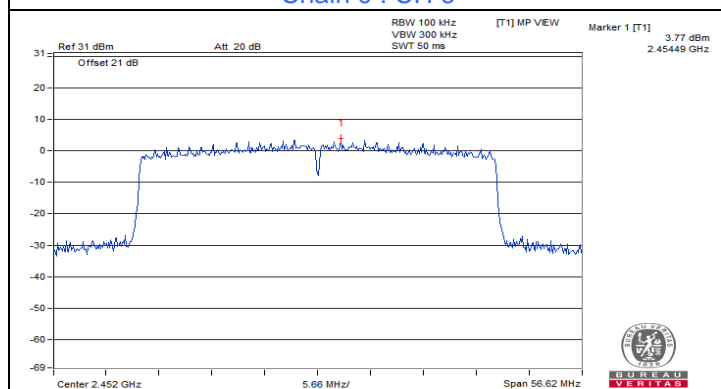
Chain 0 : CH 3



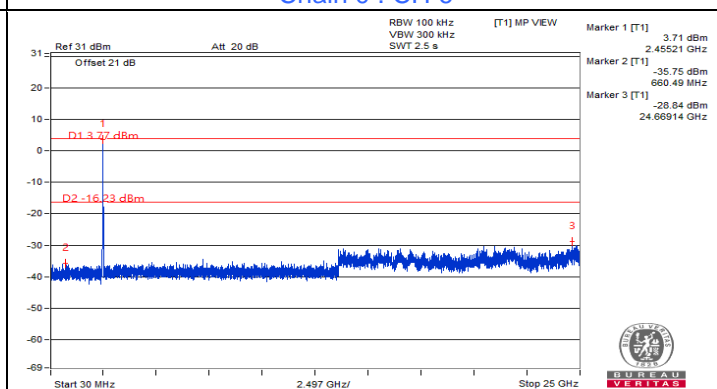
Chain 0 : CH 6



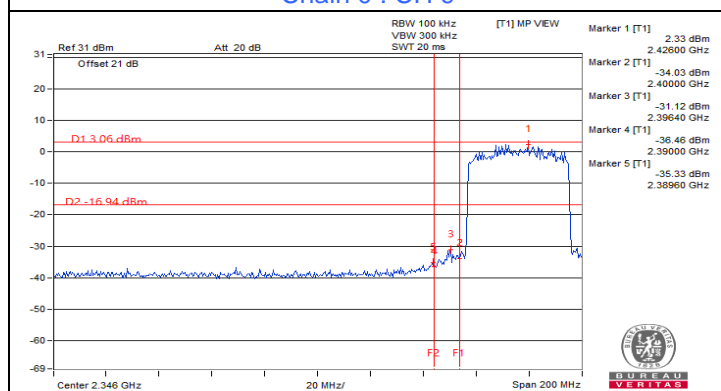
Chain 0 : CH 6



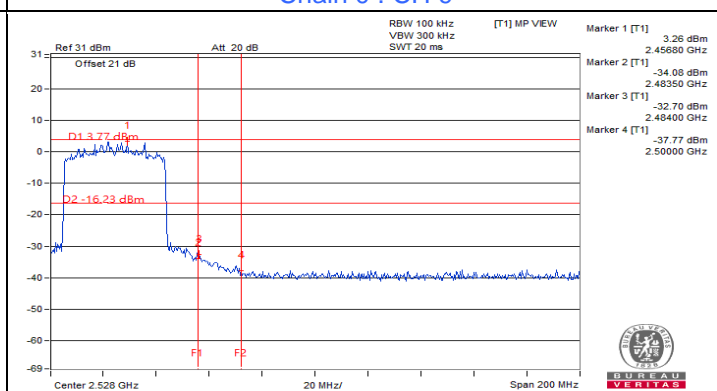
Chain 0 : CH 9



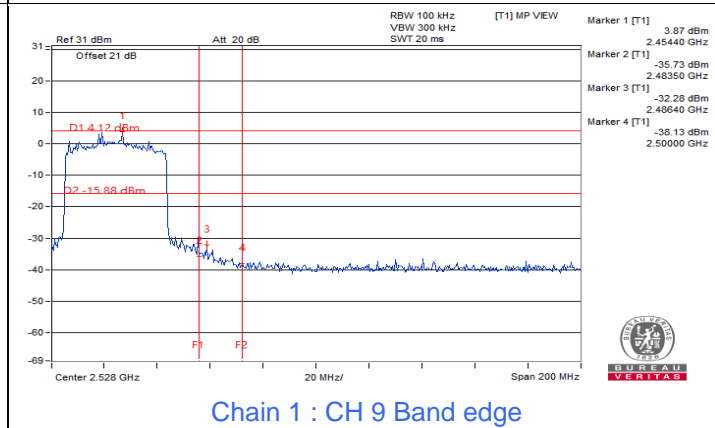
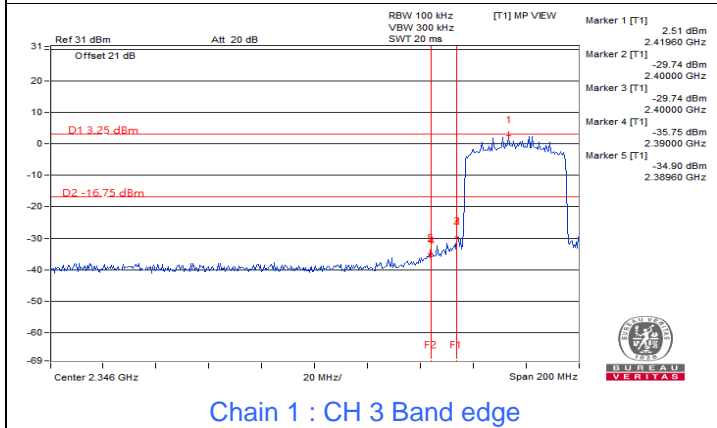
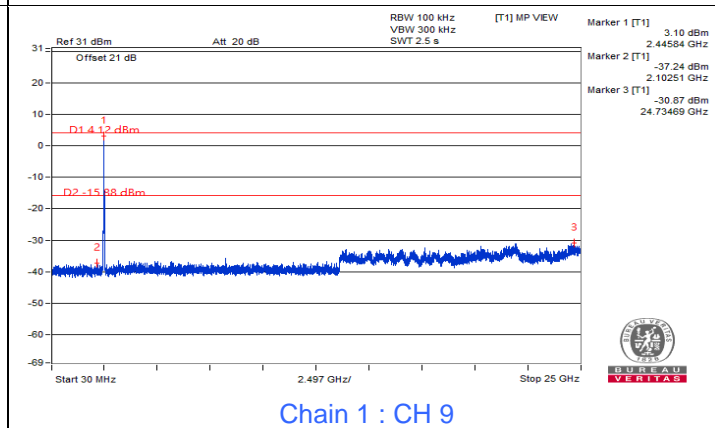
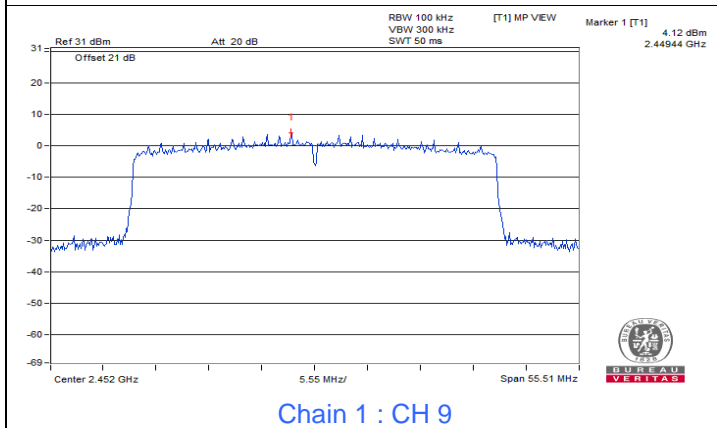
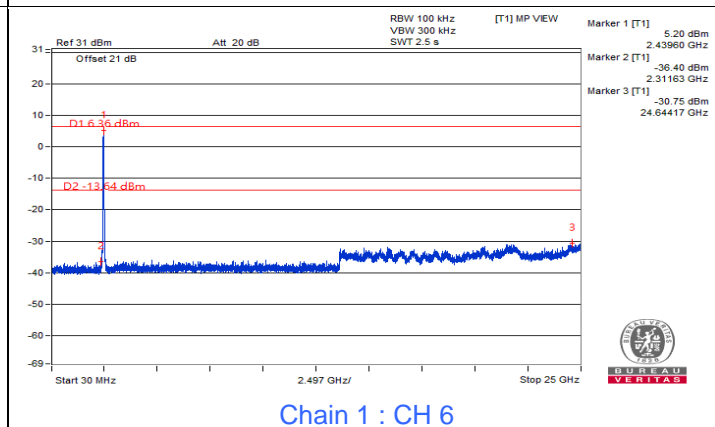
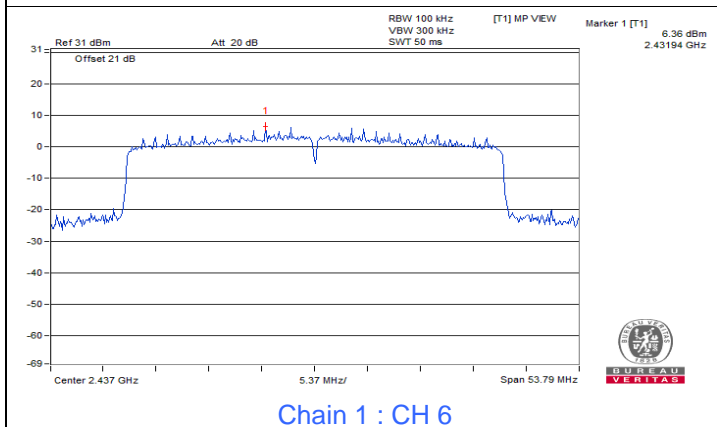
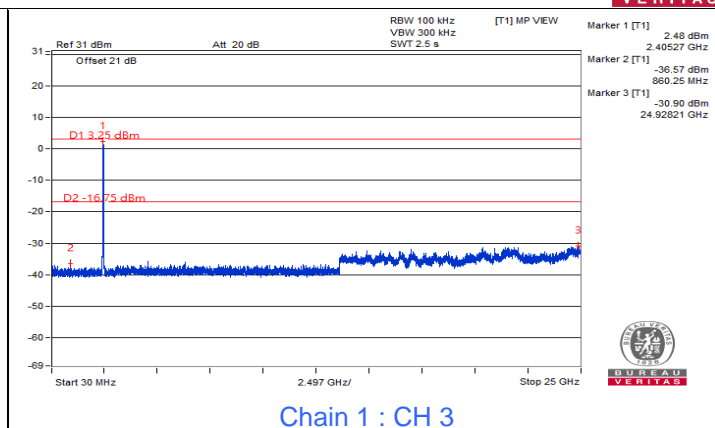
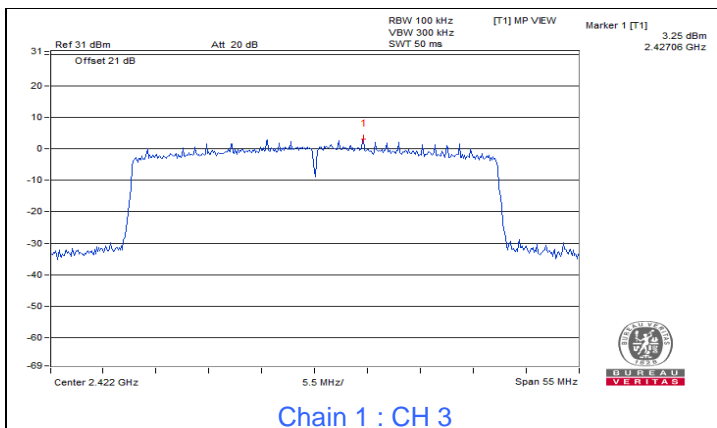
Chain 0 : CH 9



Chain 0 : CH 3 Band edge



Chain 0 : CH 9 Band edge



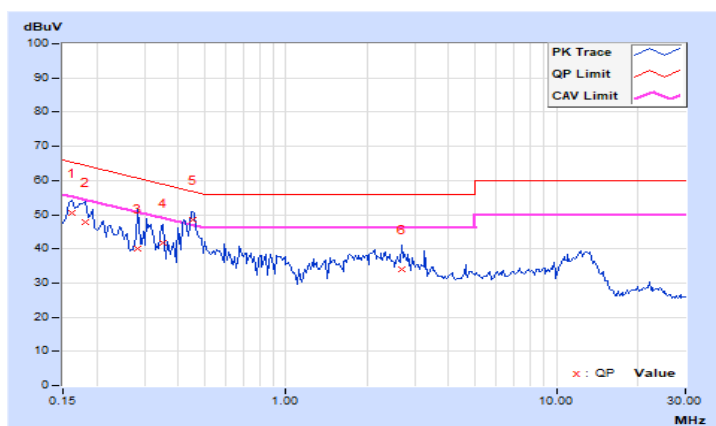
7.5 AC Power Conducted Emissions

RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 66 % 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	0.16172	10.07	40.37	27.62	50.44	37.69	65.38	55.38	-14.94	-17.69
2	0.18125	10.08	37.72	26.28	47.80	36.36	64.43	54.43	-16.63	-18.07
3	0.28281	10.09	29.96	21.25	40.05	31.34	60.73	50.73	-20.68	-19.39
4	0.35313	10.10	31.70	28.18	41.80	38.28	58.89	48.89	-17.09	-10.61
5	0.45078	10.11	38.46	32.03	48.57	42.14	56.86	46.86	-8.29	-4.72
6	2.67969	10.26	23.80	15.35	34.06	25.61	56.00	46.00	-21.94	-20.39

Remarks:

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

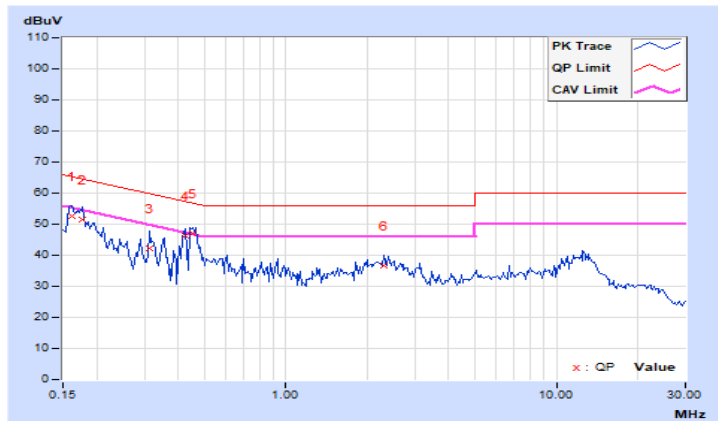


RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 66 % RH
Tested By	Sampson Chen		

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	0.16172	10.06	42.61	23.43	52.67	33.49	65.38	55.38	-12.71	-21.89
2	0.17734	10.07	41.38	22.46	51.45	32.53	64.61	54.61	-13.16	-22.08
3	0.31406	10.09	32.02	22.81	42.11	32.90	59.86	49.86	-17.75	-16.96
4	0.42734	10.10	36.25	25.29	46.35	35.39	57.30	47.30	-10.95	-11.91
5	0.45078	10.10	36.81	30.48	46.91	40.58	56.86	46.86	-9.95	-6.28
6	2.30859	10.24	26.61	17.54	36.85	27.78	56.00	46.00	-19.15	-18.22

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



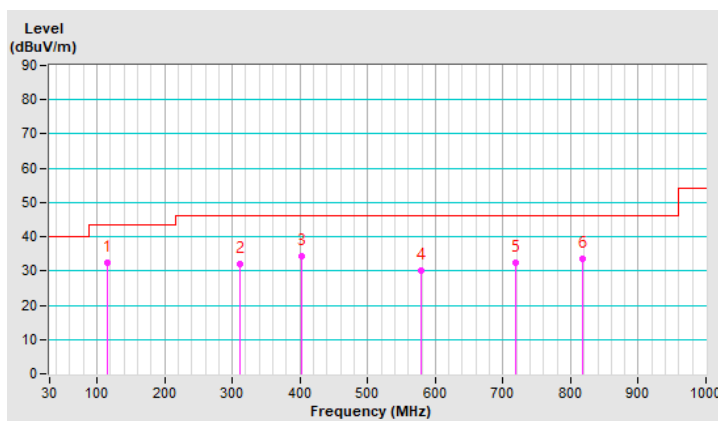
7.6 Unwanted Emissions below 1 GHz

RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °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	115.65	32.3 QP	43.5	-11.2	3.00 H	285	42.3	-10.0
2	312.05	31.9 QP	46.0	-14.1	1.00 H	166	37.9	-6.0
3	402.72	34.2 QP	46.0	-11.8	1.00 H	322	37.8	-3.6
4	579.31	29.9 QP	46.0	-16.1	3.00 H	10	29.0	0.9
5	718.38	32.3 QP	46.0	-13.7	2.00 H	360	28.8	3.5
6	817.28	33.6 QP	46.0	-12.4	1.00 H	313	28.1	5.5

Remarks:

1. Emission Level(dBUV/m) = Raw Value(dBUV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

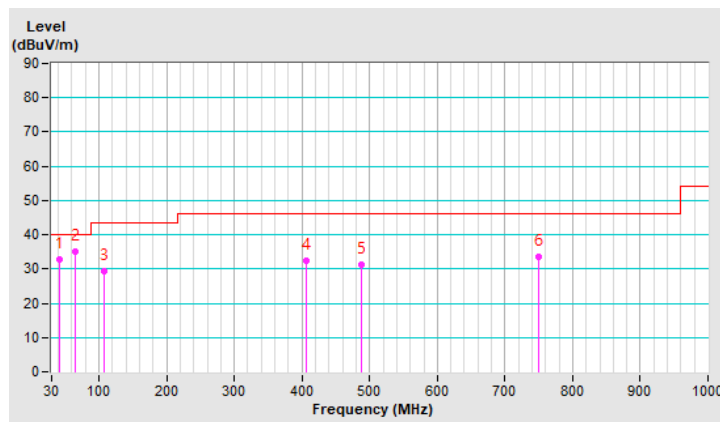


RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 69 % RH
Tested By	Sampson Chen		

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	42.49	32.8 QP	40.0	-7.2	1.50 V	360	41.0	-8.2
2	64.10	35.2 QP	40.0	-4.8	1.00 V	360	44.3	-9.1
3	108.35	29.3 QP	43.5	-14.2	1.00 V	258	40.1	-10.8
4	406.07	32.3 QP	46.0	-13.7	1.50 V	360	35.9	-3.6
5	487.84	31.2 QP	46.0	-14.8	1.50 V	247	32.4	-1.2
6	750.03	33.4 QP	46.0	-12.6	1.50 V	360	28.5	4.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



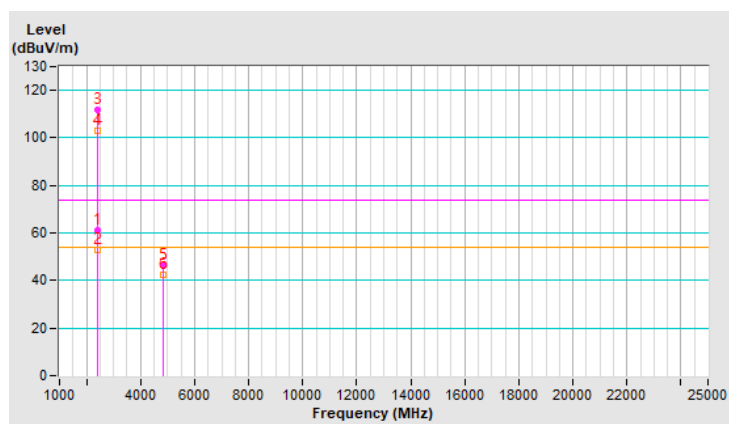
7.7 Unwanted Emissions above 1 GHz

RF Mode	TX 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	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.0 PK	74.0	-13.0	2.40 H	154	62.0	-1.0
2	2390.00	52.9 AV	54.0	-1.1	2.40 H	154	53.9	-1.0
3	*2412.00	111.8 PK			2.40 H	154	112.9	-1.1
4	*2412.00	102.8 AV			2.40 H	154	103.9	-1.1
5	4824.00	46.2 PK	74.0	-27.8	1.20 H	59	42.5	3.7
6	4824.00	42.5 AV	54.0	-11.5	1.20 H	59	38.8	3.7

Remarks:

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

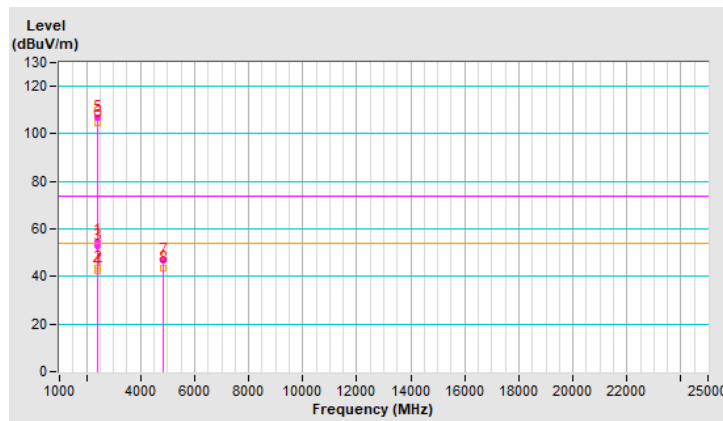


RF Mode	TX 802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	2385.80	54.8 PK	74.0	-19.2	1.72 V	312	55.8	-1.0
2	2385.80	43.5 AV	54.0	-10.5	1.72 V	312	44.5	-1.0
3	2390.00	52.7 PK	74.0	-21.3	1.72 V	312	53.7	-1.0
4	2390.00	42.6 AV	54.0	-11.4	1.72 V	312	43.6	-1.0
5	*2412.00	106.6 PK			1.72 V	313	107.7	-1.1
6	*2412.00	104.5 AV			1.72 V	313	105.6	-1.1
7	4824.00	46.6 PK	74.0	-27.4	2.46 V	264	42.9	3.7
8	4824.00	43.7 AV	54.0	-10.3	2.46 V	264	40.0	3.7

Remarks:

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



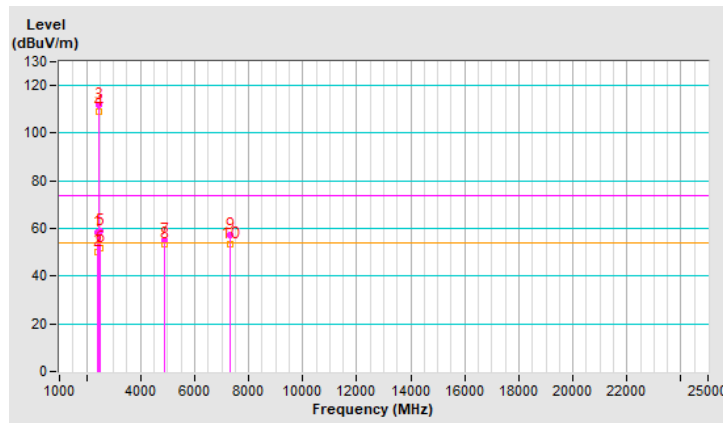
RF Mode	TX 802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	58.6 PK	74.0	-15.4	1.48 H	127	59.6	-1.0
2	2390.00	50.3 AV	54.0	-3.7	1.48 H	127	51.3	-1.0
3	*2437.00	111.6 PK			1.48 H	127	112.7	-1.1
4	*2437.00	109.1 AV			1.48 H	127	110.2	-1.1
5	2483.50	58.9 PK	74.0	-15.1	1.48 H	127	60.2	-1.3
6	2483.50	51.7 AV	54.0	-2.3	1.48 H	127	53.0	-1.3
7	4874.00	54.9 PK	74.0	-19.1	2.02 H	318	51.2	3.7
8	4874.00	53.4 AV	54.0	-0.6	2.02 H	318	49.7	3.7
9	7311.00	57.2 PK	74.0	-16.8	4.00 H	188	47.5	9.7
10	7311.00	53.5 AV	54.0	-0.5	4.00 H	188	43.8	9.7

Remarks:

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

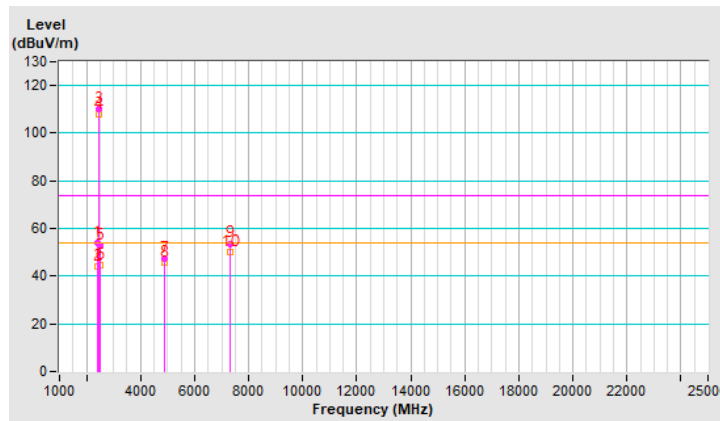


RF Mode	TX 802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	53.9 PK	74.0	-20.1	1.10 V	82	54.9	-1.0
2	2390.00	44.2 AV	54.0	-9.8	1.10 V	82	45.2	-1.0
3	*2437.00	109.9 PK			1.10 V	82	111.0	-1.1
4	*2437.00	107.8 AV			1.10 V	82	108.9	-1.1
5	2483.50	52.9 PK	74.0	-21.1	1.10 V	82	54.2	-1.3
6	2483.50	44.4 AV	54.0	-9.6	1.10 V	82	45.7	-1.3
7	4874.00	47.6 PK	74.0	-26.4	1.50 V	324	43.9	3.7
8	4874.00	45.5 AV	54.0	-8.5	1.50 V	324	41.8	3.7
9	7311.00	53.7 PK	74.0	-20.3	1.44 V	37	44.0	9.7
10	7311.00	50.1 AV	54.0	-3.9	1.44 V	37	40.4	9.7

Remarks:

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



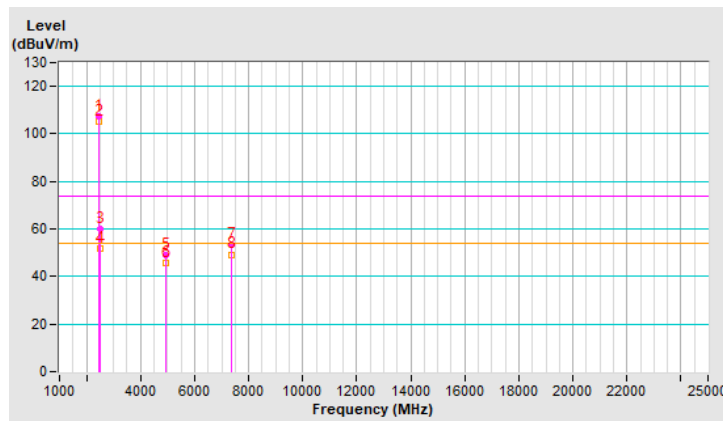
RF Mode	TX 802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	107.6 PK			2.40 H	154	108.8	-1.2
2	*2462.00	105.0 AV			2.40 H	154	106.2	-1.2
3	2483.50	59.8 PK	74.0	-14.2	2.40 H	154	61.1	-1.3
4	2483.50	51.9 AV	54.0	-2.1	2.40 H	154	53.2	-1.3
5	4924.00	48.8 PK	74.0	-25.2	1.99 H	318	45.0	3.8
6	4924.00	45.9 AV	54.0	-8.1	1.99 H	318	42.1	3.8
7	7386.00	53.2 PK	74.0	-20.8	1.99 H	195	43.3	9.9
8	7386.00	49.3 AV	54.0	-4.7	1.99 H	195	39.4	9.9

Remarks:

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

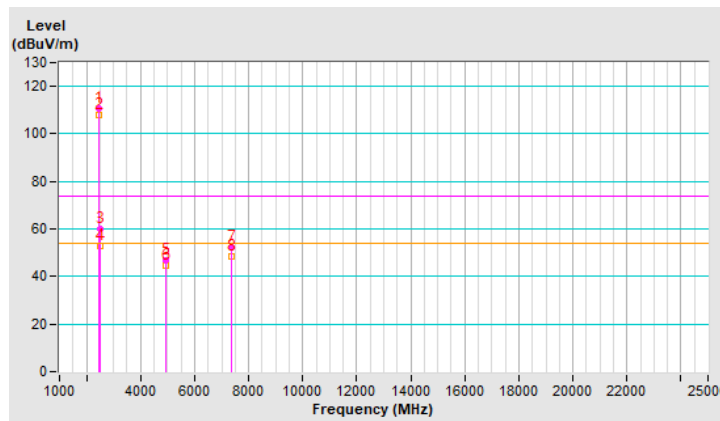


RF Mode	TX 802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	110.5 PK			1.72 V	312	111.7	-1.2
2	*2462.00	107.8 AV			1.72 V	312	109.0	-1.2
3	2483.50	59.9 PK	74.0	-14.1	1.72 V	312	61.2	-1.3
4	2483.50	52.9 AV	54.0	-1.1	1.72 V	312	54.2	-1.3
5	4924.00	46.9 PK	74.0	-27.1	1.82 V	333	43.1	3.8
6	4924.00	44.5 AV	54.0	-9.5	1.82 V	333	40.7	3.8
7	7386.00	52.3 PK	74.0	-21.7	1.32 V	36	42.4	9.9
8	7386.00	48.3 AV	54.0	-5.7	1.32 V	36	38.4	9.9

Remarks:

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



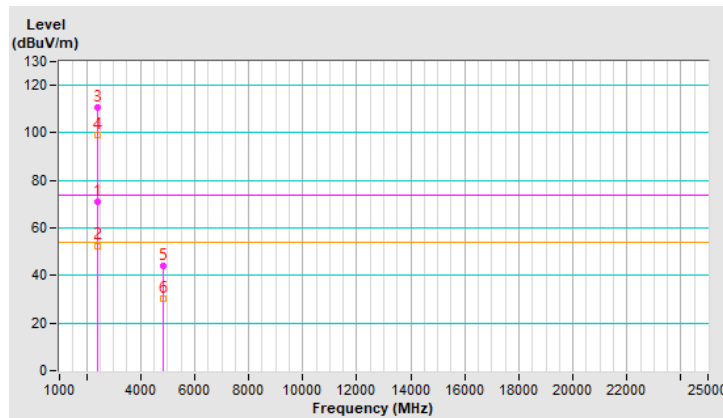
RF Mode	TX 802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Correction Factor (dB/m)
1	2390.00	70.9 PK	74.0	-3.1	2.16 H	138	71.9	-1.0
2	2390.00	52.6 AV	54.0	-1.4	2.16 H	138	53.6	-1.0
3	*2412.00	110.8 PK			2.16 H	138	111.9	-1.1
4	*2412.00	98.9 AV			2.16 H	138	100.0	-1.1
5	4824.00	43.8 PK	74.0	-30.2	2.04 H	58	40.1	3.7
6	4824.00	30.4 AV	54.0	-23.6	2.04 H	58	26.7	3.7

Remarks:

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



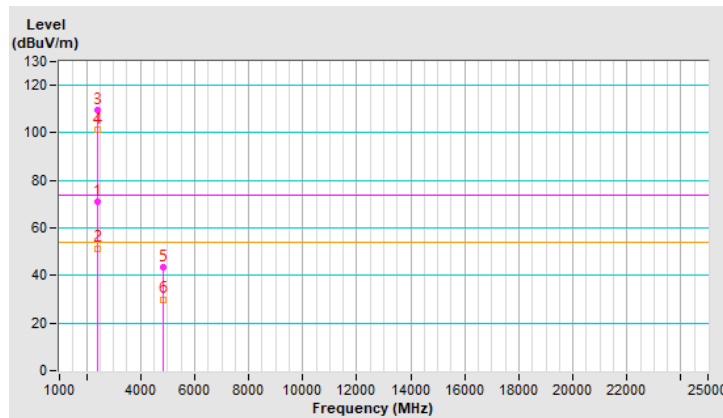
RF Mode	TX 802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	70.9 PK	74.0	-3.1	1.70 V	64	71.9	-1.0
2	2390.00	51.5 AV	54.0	-2.5	1.70 V	64	52.5	-1.0
3	*2412.00	109.7 PK			1.70 V	64	110.8	-1.1
4	*2412.00	101.3 AV			1.70 V	64	102.4	-1.1
5	4824.00	43.4 PK	74.0	-30.6	2.48 V	267	39.7	3.7
6	4824.00	30.0 AV	54.0	-24.0	2.48 V	267	26.3	3.7

Remarks:

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



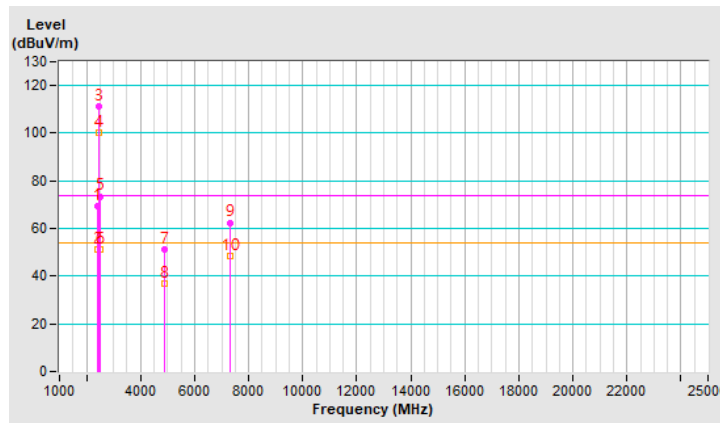
RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	69.6 PK	74.0	-4.4	1.48 H	126	70.6	-1.0
2	2390.00	51.1 AV	54.0	-2.9	1.48 H	126	52.1	-1.0
3	*2437.00	111.3 PK			1.48 H	126	112.4	-1.1
4	*2437.00	100.2 AV			1.48 H	126	101.3	-1.1
5	2483.50	73.5 PK	74.0	-0.5	1.48 H	126	74.8	-1.3
6	2483.50	51.3 AV	54.0	-2.7	1.48 H	126	52.6	-1.3
7	4874.00	51.1 PK	74.0	-22.9	1.00 H	322	47.4	3.7
8	4874.00	37.1 AV	54.0	-16.9	1.00 H	322	33.4	3.7
9	7311.00	62.5 PK	74.0	-11.5	1.00 H	322	52.8	9.7
10	7311.00	48.2 AV	54.0	-5.8	1.00 H	322	38.5	9.7

Remarks:

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

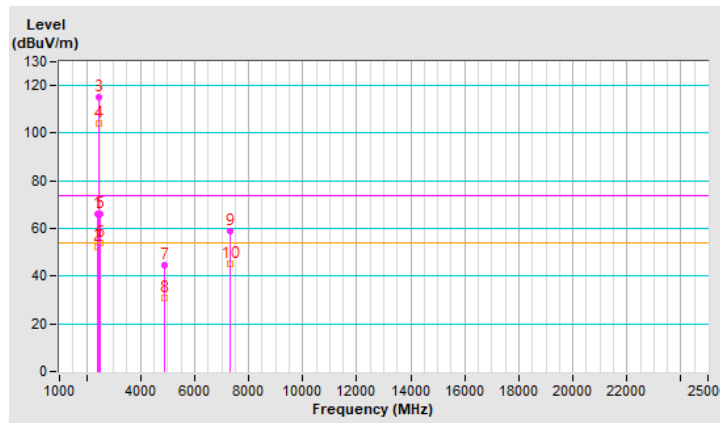


RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	66.2 PK	74.0	-7.8	1.54 V	301	67.2	-1.0
2	2390.00	52.1 AV	54.0	-1.9	1.54 V	301	53.1	-1.0
3	*2437.00	114.9 PK			1.54 V	301	116.0	-1.1
4	*2437.00	104.3 AV			1.54 V	301	105.4	-1.1
5	2483.50	65.9 PK	74.0	-8.1	1.54 V	301	67.2	-1.3
6	2483.50	53.8 AV	54.0	-0.2	1.54 V	301	55.1	-1.3
7	4874.00	44.6 PK	74.0	-29.4	3.21 V	329	40.9	3.7
8	4874.00	30.7 AV	54.0	-23.3	3.21 V	329	27.0	3.7
9	7311.00	58.9 PK	74.0	-15.1	2.73 V	35	49.2	9.7
10	7311.00	45.3 AV	54.0	-8.7	2.73 V	35	35.6	9.7

Remarks:

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



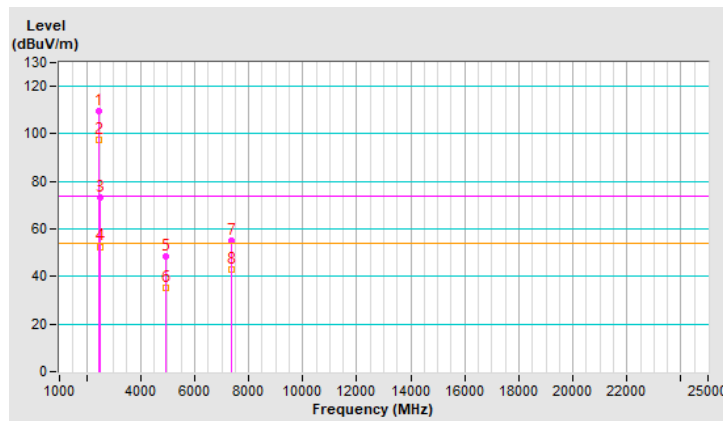
RF Mode	TX 802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.4 PK			2.28 H	137	110.6	-1.2
2	*2462.00	97.6 AV			2.28 H	137	98.8	-1.2
3	2483.50	73.4 PK	74.0	-0.6	2.28 H	137	74.7	-1.3
4	2483.50	52.6 AV	54.0	-1.4	2.28 H	137	53.9	-1.3
5	4924.00	48.5 PK	74.0	-25.5	1.99 H	320	44.7	3.8
6	4924.00	35.4 AV	54.0	-18.6	1.99 H	320	31.6	3.8
7	7386.00	55.3 PK	74.0	-18.7	1.93 H	194	45.4	9.9
8	7386.00	43.1 AV	54.0	-10.9	1.93 H	194	33.2	9.9

Remarks:

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

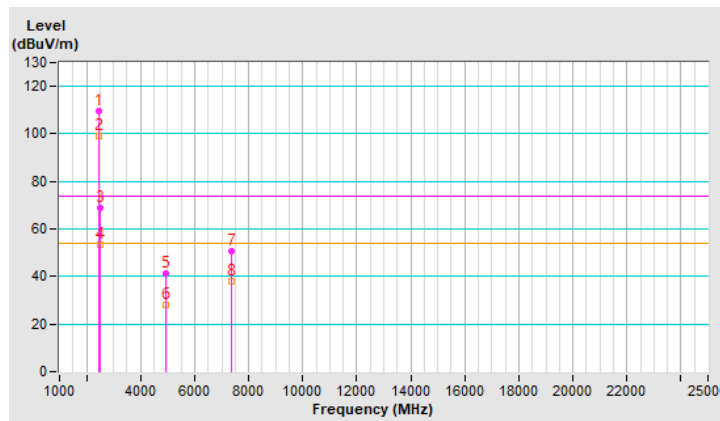


RF Mode	TX 802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	109.6 PK			1.60 V	302	110.8	-1.2
2	*2462.00	99.2 AV			1.60 V	302	100.4	-1.2
3	2483.50	68.8 PK	74.0	-5.2	1.60 V	302	70.1	-1.3
4	2483.50	53.4 AV	54.0	-0.6	1.60 V	302	54.7	-1.3
5	4924.00	41.5 PK	74.0	-32.5	2.18 V	306	37.7	3.8
6	4924.00	27.9 AV	54.0	-26.1	2.18 V	306	24.1	3.8
7	7386.00	50.7 PK	74.0	-23.3	2.70 V	33	40.8	9.9
8	7386.00	37.9 AV	54.0	-16.1	2.70 V	33	28.0	9.9

Remarks:

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



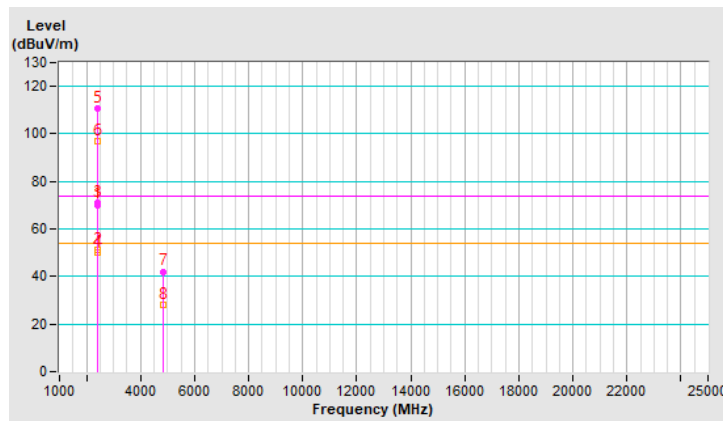
RF Mode	TX 802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	2389.30	70.2 PK	74.0	-3.8	2.19 H	156	71.2	-1.0
2	2389.30	51.4 AV	54.0	-2.6	2.19 H	156	52.4	-1.0
3	2390.00	71.1 PK	74.0	-2.9	2.19 H	156	72.1	-1.0
4	2390.00	50.2 AV	54.0	-3.8	2.19 H	156	51.2	-1.0
5	*2412.00	110.7 PK			2.19 H	156	111.8	-1.1
6	*2412.00	97.1 AV			2.19 H	156	98.2	-1.1
7	4824.00	42.1 PK	74.0	-31.9	2.01 H	60	38.4	3.7
8	4824.00	28.1 AV	54.0	-25.9	2.01 H	60	24.4	3.7

Remarks:

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

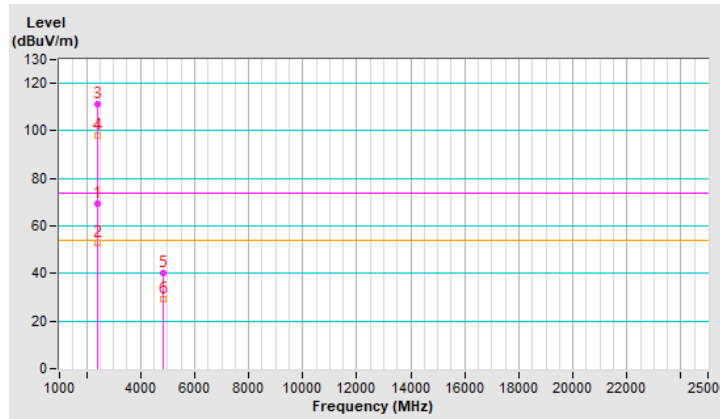


RF Mode	TX 802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	69.5 PK	74.0	-4.5	1.73 V	65	70.5	-1.0
2	2390.00	53.1 AV	54.0	-0.9	1.73 V	65	54.1	-1.0
3	*2412.00	111.0 PK			1.73 V	65	112.1	-1.1
4	*2412.00	98.1 AV			1.73 V	65	99.2	-1.1
5	4824.00	40.2 PK	74.0	-33.8	2.43 V	265	36.5	3.7
6	4824.00	29.1 AV	54.0	-24.9	2.43 V	265	25.4	3.7

Remarks:

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



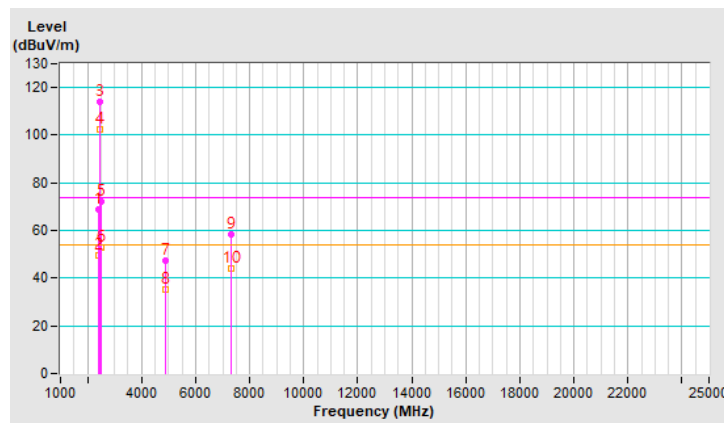
RF Mode	TX 802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	69.0 PK	74.0	-5.0	1.15 H	121	70.0	-1.0
2	2390.00	49.5 AV	54.0	-4.5	1.15 H	121	50.5	-1.0
3	*2437.00	114.0 PK			1.15 H	121	115.1	-1.1
4	*2437.00	102.6 AV			1.15 H	121	103.7	-1.1
5	2483.50	72.3 PK	74.0	-1.7	1.15 H	121	73.6	-1.3
6	2483.50	52.8 AV	54.0	-1.2	1.15 H	121	54.1	-1.3
7	4874.00	47.3 PK	74.0	-26.7	2.07 H	319	43.6	3.7
8	4874.00	35.2 AV	54.0	-18.8	2.07 H	319	31.5	3.7
9	7311.00	58.3 PK	74.0	-15.7	1.04 H	320	48.6	9.7
10	7311.00	43.8 AV	54.0	-10.2	1.04 H	320	34.1	9.7

Remarks:

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

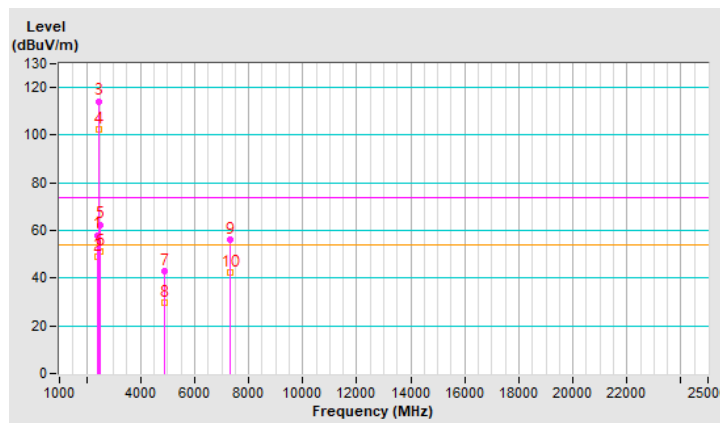


RF Mode	TX 802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	58.1 PK	74.0	-15.9	1.56 V	300	59.1	-1.0
2	2390.00	49.1 AV	54.0	-4.9	1.56 V	300	50.1	-1.0
3	*2437.00	114.3 PK			1.56 V	300	115.4	-1.1
4	*2437.00	102.6 AV			1.56 V	300	103.7	-1.1
5	2483.50	62.5 PK	74.0	-11.5	1.56 V	300	63.8	-1.3
6	2483.50	51.0 AV	54.0	-3.0	1.56 V	300	52.3	-1.3
7	4874.00	42.9 PK	74.0	-31.1	3.25 V	330	39.2	3.7
8	4874.00	29.9 AV	54.0	-24.1	3.25 V	330	26.2	3.7
9	7311.00	56.3 PK	74.0	-17.7	2.74 V	41	46.6	9.7
10	7311.00	42.6 AV	54.0	-11.4	2.74 V	41	32.9	9.7

Remarks:

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



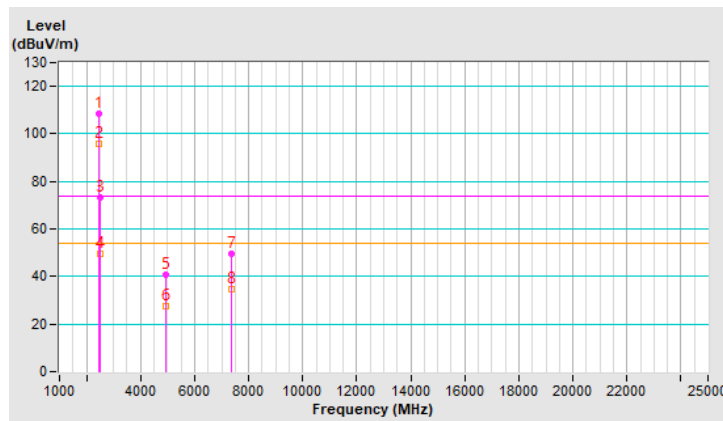
RF Mode	TX 802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	108.7 PK			1.71 H	139	109.9	-1.2
2	*2462.00	95.8 AV			1.71 H	139	97.0	-1.2
3	2483.50	73.2 PK	74.0	-0.8	1.71 H	139	74.5	-1.3
4	2483.50	49.8 AV	54.0	-4.2	1.71 H	139	51.1	-1.3
5	4924.00	40.9 PK	74.0	-33.1	1.96 H	322	37.1	3.8
6	4924.00	27.5 AV	54.0	-26.5	1.96 H	322	23.7	3.8
7	7386.00	49.7 PK	74.0	-24.3	1.81 H	193	39.8	9.9
8	7386.00	34.5 AV	54.0	-19.5	1.81 H	193	24.6	9.9

Remarks:

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

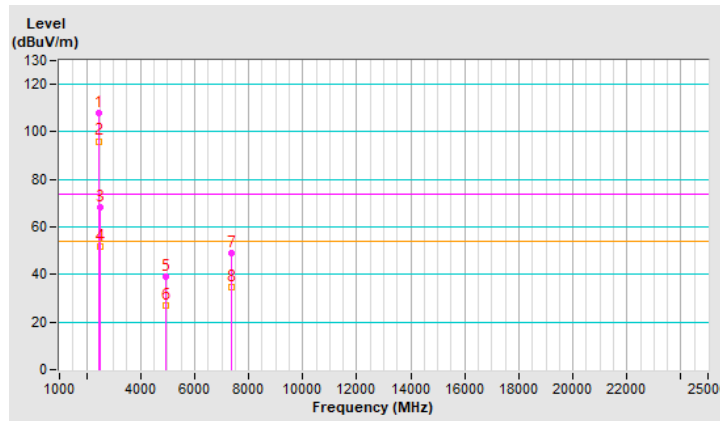


RF Mode	TX 802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	108.0 PK			1.72 V	43	109.2	-1.2
2	*2462.00	96.1 AV			1.72 V	43	97.3	-1.2
3	2483.50	68.2 PK	74.0	-5.8	1.72 V	43	69.5	-1.3
4	2483.50	51.7 AV	54.0	-2.3	1.72 V	43	53.0	-1.3
5	4924.00	39.1 PK	74.0	-34.9	2.22 V	44	35.3	3.8
6	4924.00	27.1 AV	54.0	-26.9	2.22 V	44	23.3	3.8
7	7386.00	49.0 PK	74.0	-25.0	2.65 V	40	39.1	9.9
8	7386.00	34.8 AV	54.0	-19.2	2.65 V	40	24.9	9.9

Remarks:

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

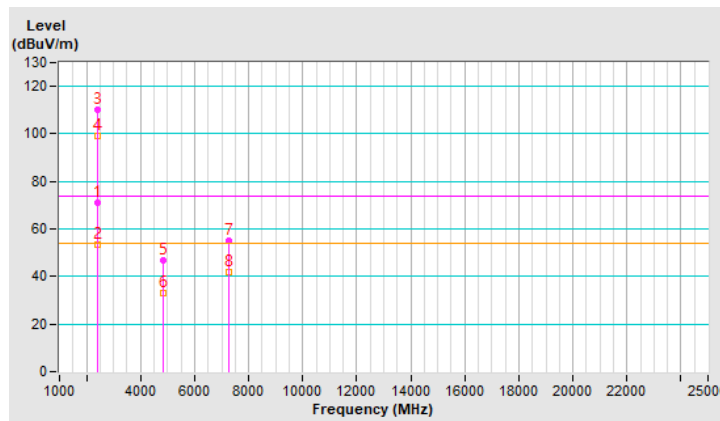


RF Mode	TX 802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	71.2 PK	74.0	-2.8	2.37 H	145	72.2	-1.0
2	2390.00	53.2 AV	54.0	-0.8	2.37 H	145	54.2	-1.0
3	*2422.00	110.2 PK			2.37 H	145	111.3	-1.1
4	*2422.00	99.1 AV			2.37 H	145	100.2	-1.1
5	4844.00	47.0 PK	74.0	-27.0	2.22 H	318	43.3	3.7
6	4844.00	33.1 AV	54.0	-20.9	2.22 H	318	29.4	3.7
7	7266.00	54.9 PK	74.0	-19.1	1.04 H	330	45.3	9.6
8	7266.00	41.8 AV	54.0	-12.2	1.04 H	330	32.2	9.6

Remarks:

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

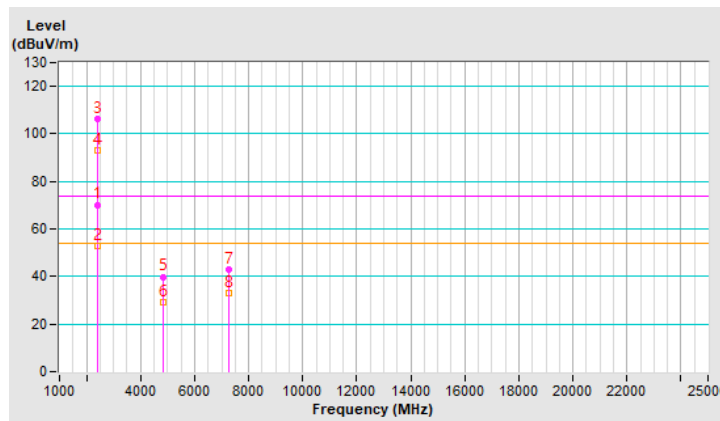


RF Mode	TX 802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	70.2 PK	74.0	-3.8	1.72 V	304	71.2	-1.0
2	2390.00	52.8 AV	54.0	-1.2	1.72 V	304	53.8	-1.0
3	*2422.00	106.1 PK			1.72 V	304	107.2	-1.1
4	*2422.00	93.2 AV			1.72 V	304	94.3	-1.1
5	4844.00	39.9 PK	74.0	-34.1	2.52 V	271	36.2	3.7
6	4844.00	29.4 AV	54.0	-24.6	2.52 V	271	25.7	3.7
7	7266.00	42.8 PK	74.0	-31.2	2.45 V	280	33.2	9.6
8	7266.00	33.0 AV	54.0	-21.0	2.45 V	280	23.4	9.6

Remarks:

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



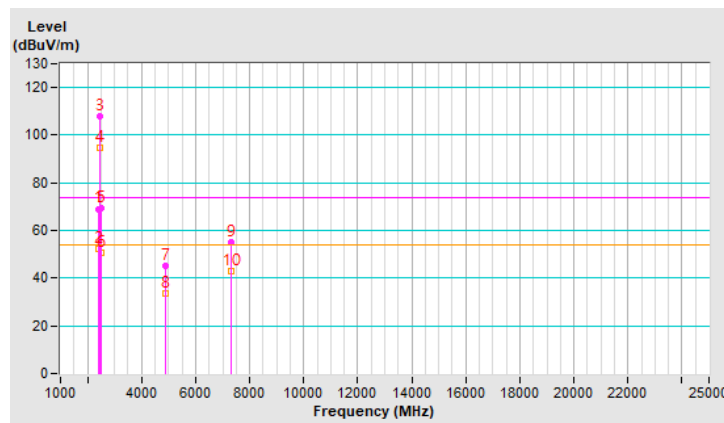
RF Mode	TX 802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Correction Factor (dB/m)
1	2390.00	69.1 PK	74.0	-4.9	2.43 H	117	70.1	-1.0
2	2390.00	52.1 AV	54.0	-1.9	2.43 H	117	53.1	-1.0
3	*2437.00	107.8 PK			2.43 H	117	108.9	-1.1
4	*2437.00	94.9 AV			2.43 H	117	96.0	-1.1
5	2483.50	69.3 PK	74.0	-4.7	2.43 H	117	70.6	-1.3
6	2483.50	50.6 AV	54.0	-3.4	2.43 H	117	51.9	-1.3
7	4874.00	45.4 PK	74.0	-28.6	2.02 H	318	41.7	3.7
8	4874.00	33.4 AV	54.0	-20.6	2.02 H	318	29.7	3.7
9	7311.00	55.3 PK	74.0	-18.7	1.00 H	322	45.6	9.7
10	7311.00	43.1 AV	54.0	-10.9	1.00 H	322	33.4	9.7

Remarks:

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

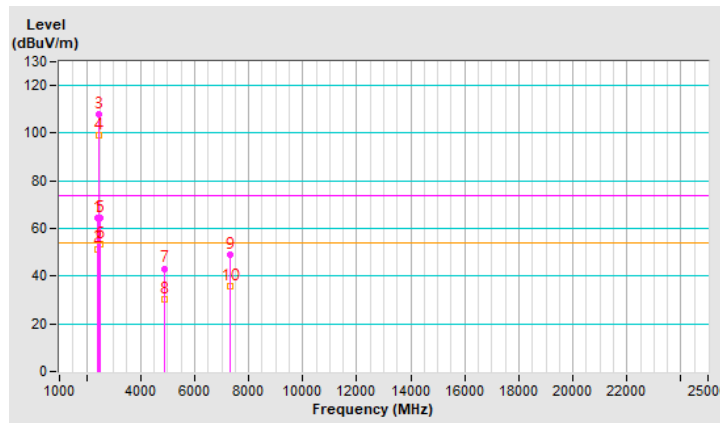


RF Mode	TX 802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	64.3 PK	74.0	-9.7	1.51 V	302	65.3	-1.0
2	2390.00	51.5 AV	54.0	-2.5	1.51 V	302	52.5	-1.0
3	*2437.00	107.9 PK			1.51 V	302	109.0	-1.1
4	*2437.00	99.2 AV			1.51 V	302	100.3	-1.1
5	2483.50	64.5 PK	74.0	-9.5	1.51 V	302	65.8	-1.3
6	2483.50	53.4 AV	54.0	-0.6	1.51 V	302	54.7	-1.3
7	4874.00	43.2 PK	74.0	-30.8	3.22 V	327	39.5	3.7
8	4874.00	30.1 AV	54.0	-23.9	3.22 V	327	26.4	3.7
9	7311.00	49.2 PK	74.0	-24.8	2.67 V	37	39.5	9.7
10	7311.00	35.9 AV	54.0	-18.1	2.67 V	37	26.2	9.7

Remarks:

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



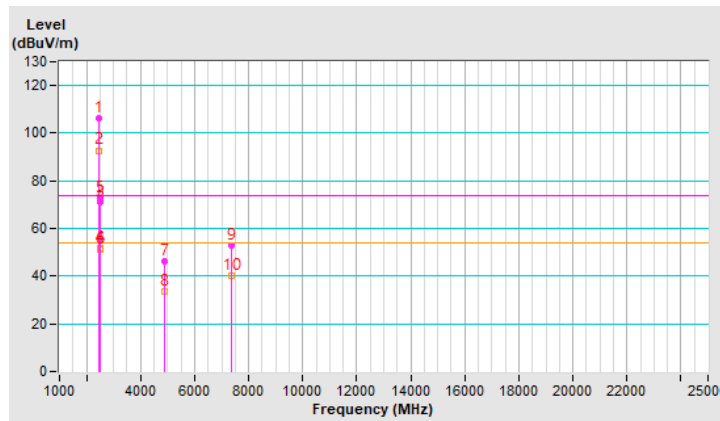
RF Mode	TX 802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	106.1 PK			1.85 H	142	107.3	-1.2
2	*2452.00	92.8 AV			1.85 H	142	94.0	-1.2
3	2483.50	70.8 PK	74.0	-3.2	1.85 H	142	72.1	-1.3
4	2483.50	51.7 AV	54.0	-2.3	1.85 H	142	53.0	-1.3
5	2484.30	72.7 PK	74.0	-1.3	1.85 H	142	74.0	-1.3
6	2484.30	51.4 AV	54.0	-2.6	1.85 H	142	52.7	-1.3
7	4904.00	46.5 PK	74.0	-27.5	2.18 H	323	42.8	3.7
8	4904.00	33.5 AV	54.0	-20.5	2.18 H	323	29.8	3.7
9	7356.00	52.9 PK	74.0	-21.1	1.67 H	189	43.1	9.8
10	7356.00	40.2 AV	54.0	-13.8	1.67 H	189	30.4	9.8

Remarks:

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



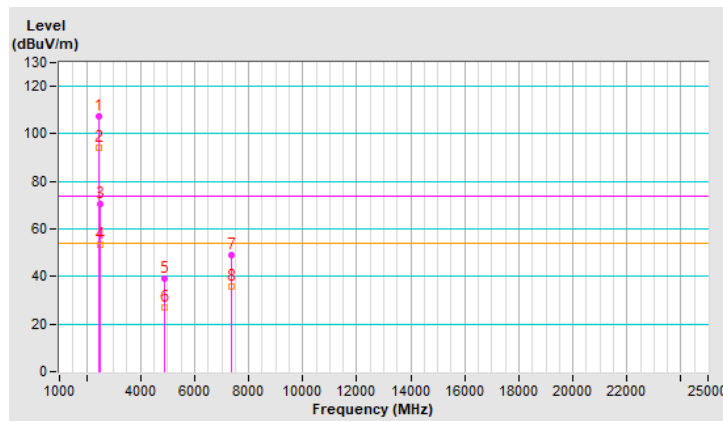
RF Mode	TX 802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 67 % RH
Tested By	Ryan Du		

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	107.2 PK			1.73 V	304	108.4	-1.2
2	*2452.00	94.0 AV			1.73 V	304	95.2	-1.2
3	2483.50	70.5 PK	74.0	-3.5	1.73 V	304	71.8	-1.3
4	2483.50	53.4 AV	54.0	-0.6	1.73 V	304	54.7	-1.3
5	4904.00	39.2 PK	74.0	-34.8	2.23 V	46	35.5	3.7
6	4904.00	27.1 AV	54.0	-26.9	2.23 V	46	23.4	3.7
7	7356.00	48.8 PK	74.0	-25.2	2.69 V	40	39.0	9.8
8	7356.00	35.7 AV	54.0	-18.3	2.69 V	40	25.9	9.8

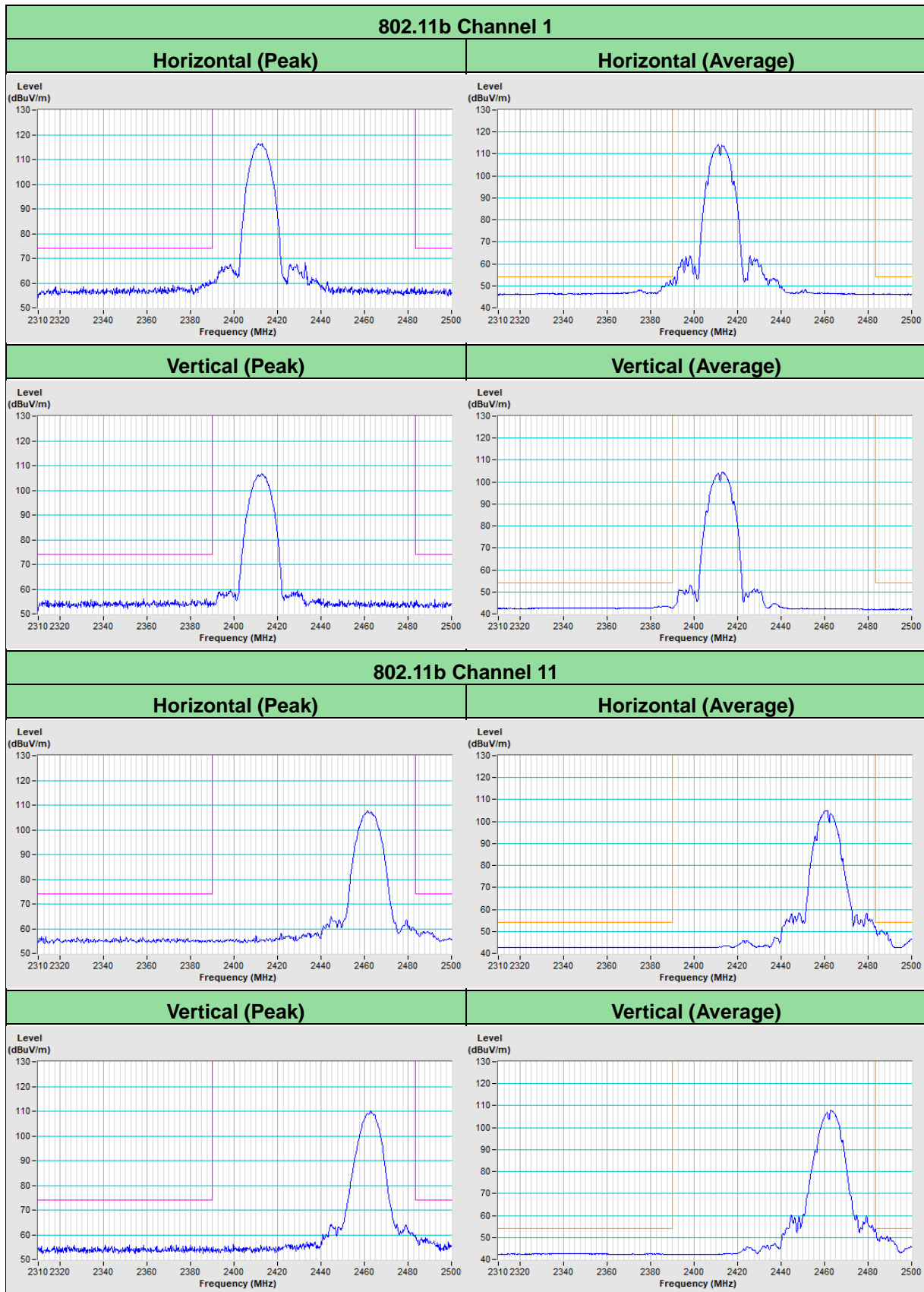
Remarks:

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



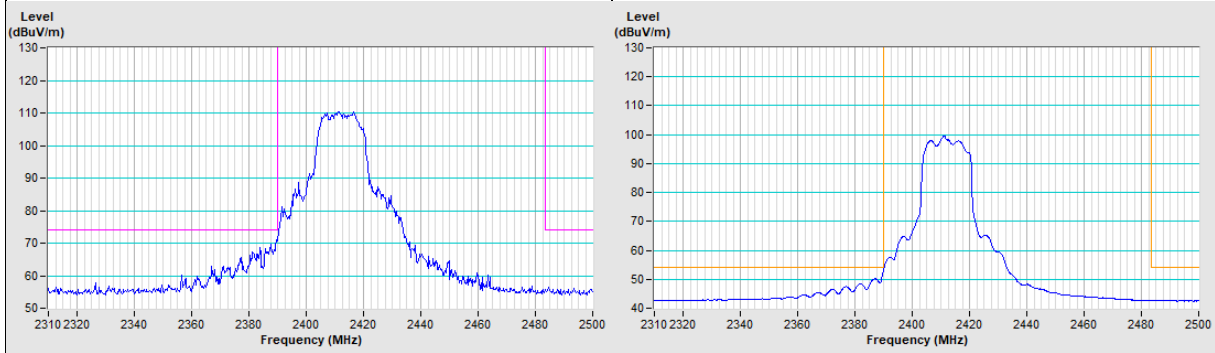


Plot of Band Edge

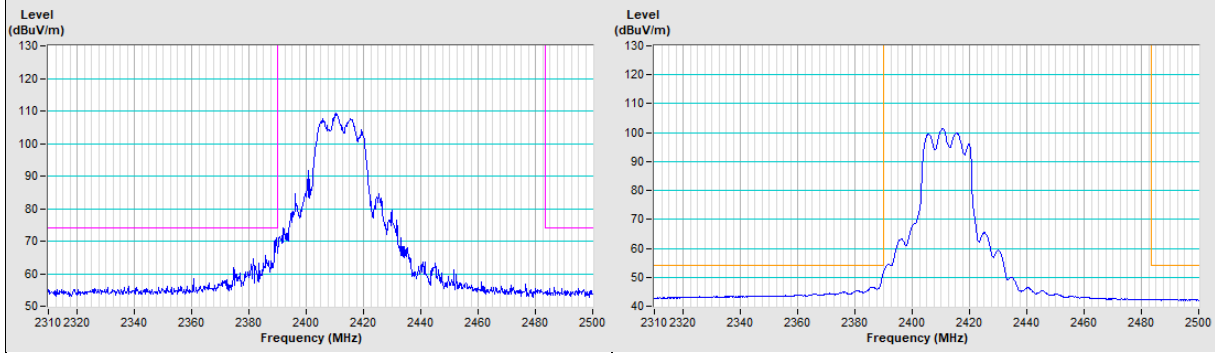


802.11g Channel 1

Horizontal (Peak)	Horizontal (Average)
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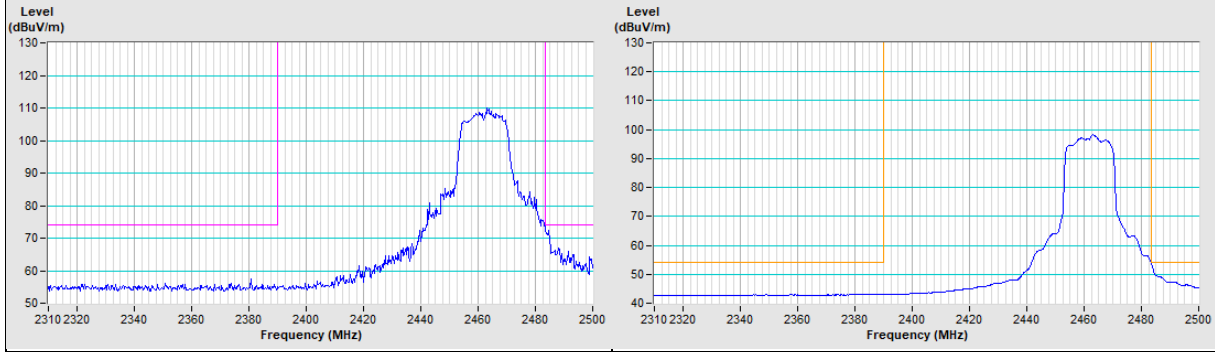


Vertical (Peak)	Vertical (Average)
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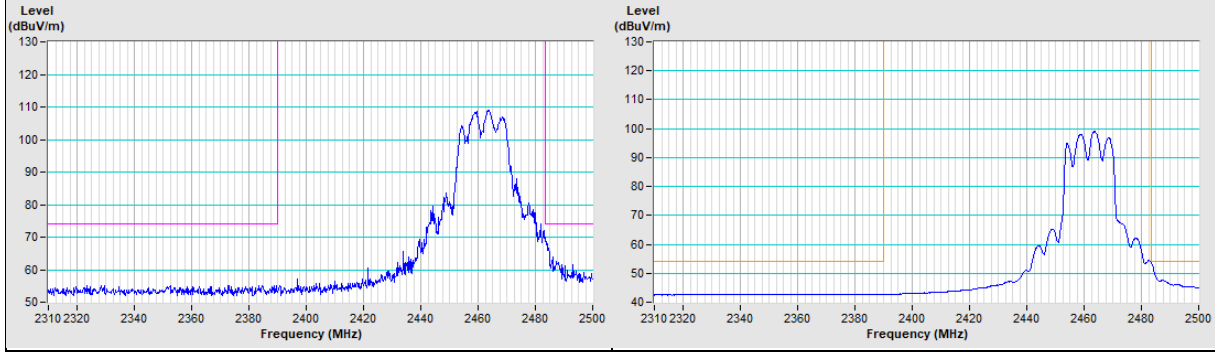


802.11g Channel 11

Horizontal (Peak)	Horizontal (Average)
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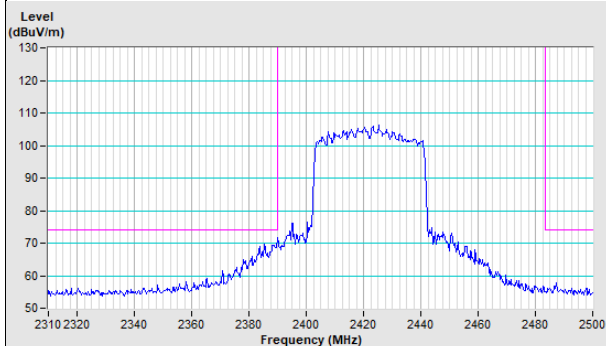


Vertical (Peak)	Vertical (Average)
------------------------	---------------------------

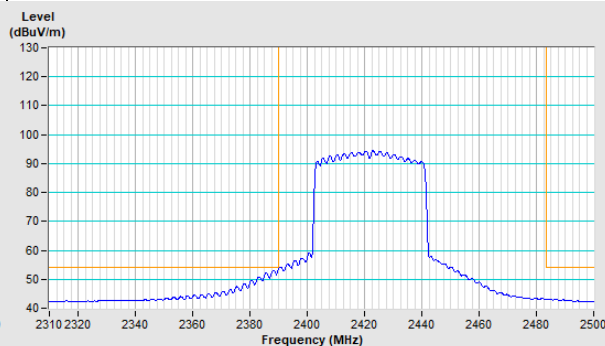


802.11ax (HE40) Channel 3

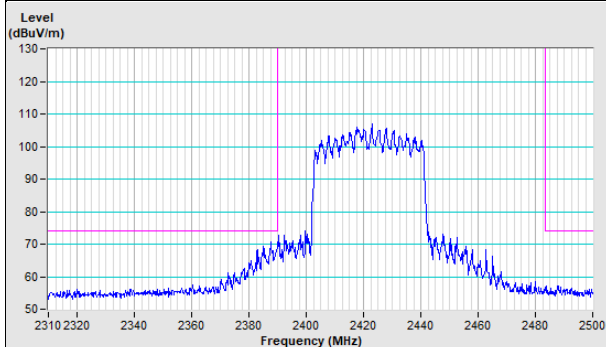
Horizontal (Peak)



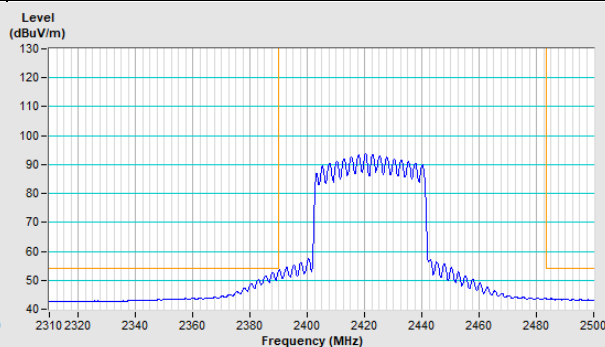
Horizontal (Average)



Vertical (Peak)

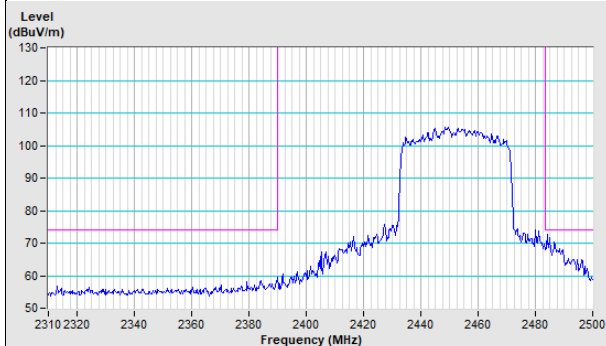


Vertical (Average)

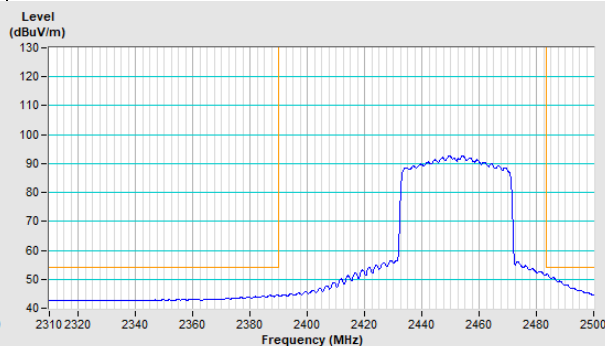


802.11ax (HE40) Channel 9

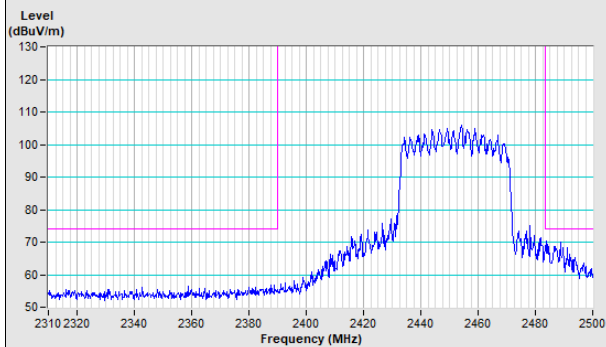
Horizontal (Peak)



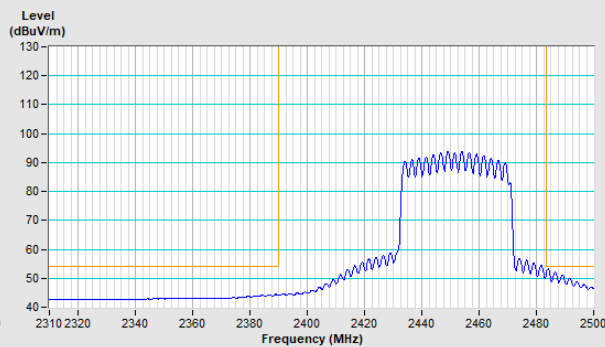
Horizontal (Average)



Vertical (Peak)



Vertical (Average)



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

9 Information of the Testing Laboratories

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

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

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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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