

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Report No.: RFBDDZ-WTW-P25050228-2
FCC ID: 2BNGH-B5438
Product: Board
Brand: N/A
Model No.: B5438
Received Date: 2025/5/12
Test Date: 2025/6/24 ~ 2025/6/29
Issued Date: 2025/7/24
Applicant: Harris Hill Products Inc
Address: 200 Park Ave South #1112 New York US 10003
Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories
Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / 788550 / TW0003
Designation Number:

Approved by: _____

Jeremy Lin

Jeremy Lin / Project Engineer

, Date: _____

2025/7/24

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Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBDDZ-WTW-P25050228-2	Original release.	2025/7/24

1 Certificate

Product: Board

Brand: N/A

Test Model: B5438

Sample Status: Engineering sample

Applicant: Harris Hill Products Inc

Test Date: 2025/6/24 ~ 2025/6/29

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

Measurement ANSI C63.10-2013

procedure: KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -15.36 dB at 0.64600 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -8.5 dB at 937.92 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.5 dB at 2390.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.95 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 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	Board
Brand	N/A
Test Model	B5438
Status of EUT	Engineering sample
Power Supply Rating	19Vdc
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: 11.0 / 5.5 / 2.0 / 1.0 Mbps 802.11g: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11n: up to 300 Mbps VHT: up to 400 Mbps 802.11ax: up to 573.5 Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
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	238.005 mW (23.77 dBm)

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
Power Adapter	Chicony	A18-045N2A	AC Input : 100-240V, 1.4A, 50-60Hz (3pin, 0.9m) DC Output : 19V, 2.37A, 45W (1.45m, with a core)

2. There are Bluetooth and WLAN (2.4 GHz & 5 GHz) technology used for the EUT.
3. Bluetooth & WLAN 2.4G & WLAN 5G technology can transmit at same time.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
BT	-	Advanced Wireless & Antenna INC.	ABF8P-100000A	2.99	2.4 GHz ~ 2.4835 GHz	Dipole	ipex(MHF)
WIFI	0	Advanced Wireless & Antenna INC	ABF8P-100001A	2.11	2.4 GHz ~ 2.4835 GHz	Dipole	ipex(MHF)
				2.86	5.15 GHz ~ 5.85 GHz	Dipole	ipex(MHF)
	1		ABF8P-100002A	2.57	2.4 GHz ~ 2.4835 GHz	Dipole	ipex(MHF)
				2.41	5.15 GHz ~ 5.85 GHz	Dipole	ipex(MHF)

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

2. The EUT incorporates a MIMO function:

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

Note:

- The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), VHT mode for 20 MHz (40 MHz) and 802.11ax mode for 20 MHz (40 MHz). Therefore, the investigated worst case is the representative mode in test report.
- The EUT does not use channel puncturing and bandwidth reduction.

3.3 Channel List

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

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

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

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

3.4 Test Mode Applicability and Tested Channel Detail

Worst Case:	1. Lying
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Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11n (HT20)	CDD	1, 6, 11	BPSK	MCS0
	802.11n (HT40)	CDD	3, 6, 9	BPSK	MCS0
	VHT20	CDD	1, 6, 11	BPSK	MCS0
	VHT40	CDD	3, 6, 9	BPSK	MCS0
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
Power Spectral Density	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
6 dB Bandwidth / Conducted Out of Band Emissions	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
AC Power Conducted Emissions	802.11b	CDD	6	DBPSK	1Mb/s
Unwanted Emissions below 1 GHz	802.11b	CDD	6	DBPSK	1Mb/s
Unwanted Emissions above 1 GHz	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0

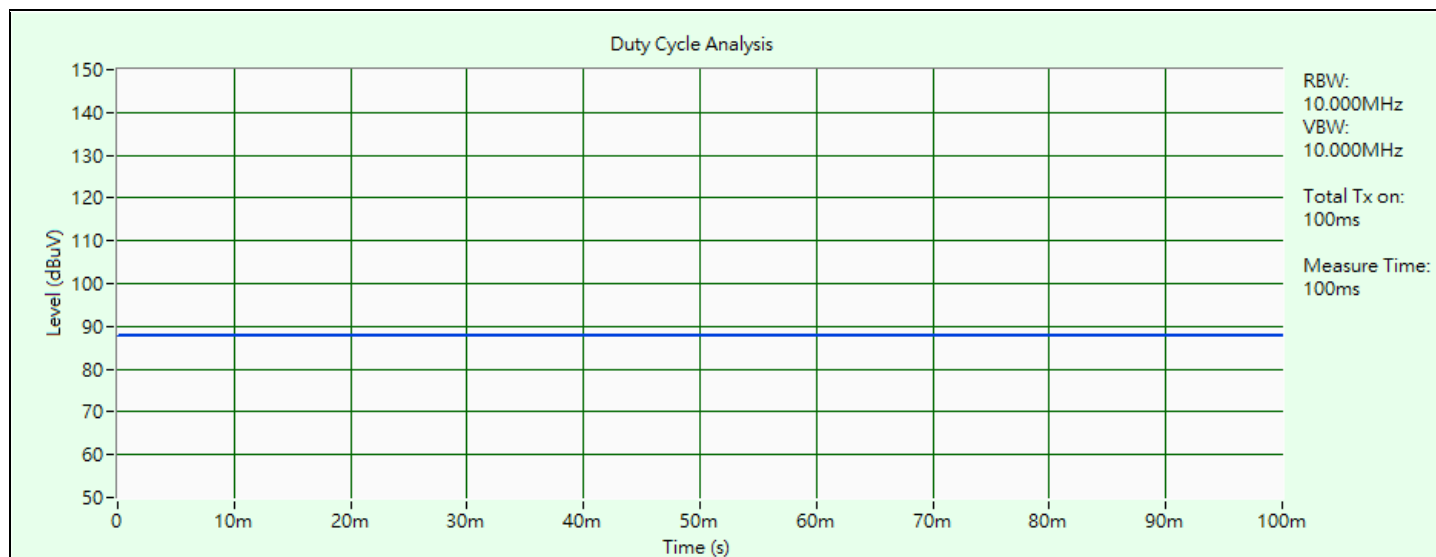
3.5 Duty Cycle of Test Signal

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

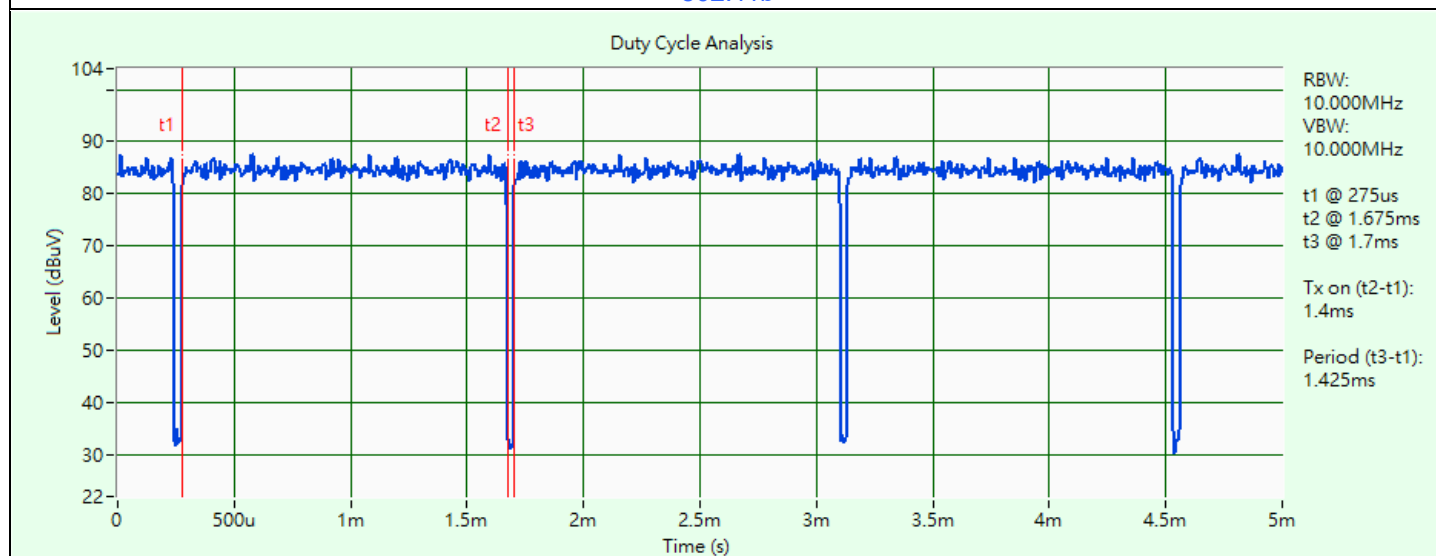
802.11g: Duty cycle = 1.4 ms / 1.425 ms x 100% = 98.2%

802.11ax (HE20): Duty cycle = 1.02 ms / 1.045 ms x 100% = 97.6%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.11 \text{ dB}$

802.11ax (HE40): Duty cycle = 3.9 ms / 4.78 ms x 100% = 81.6%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.88 \text{ dB}$

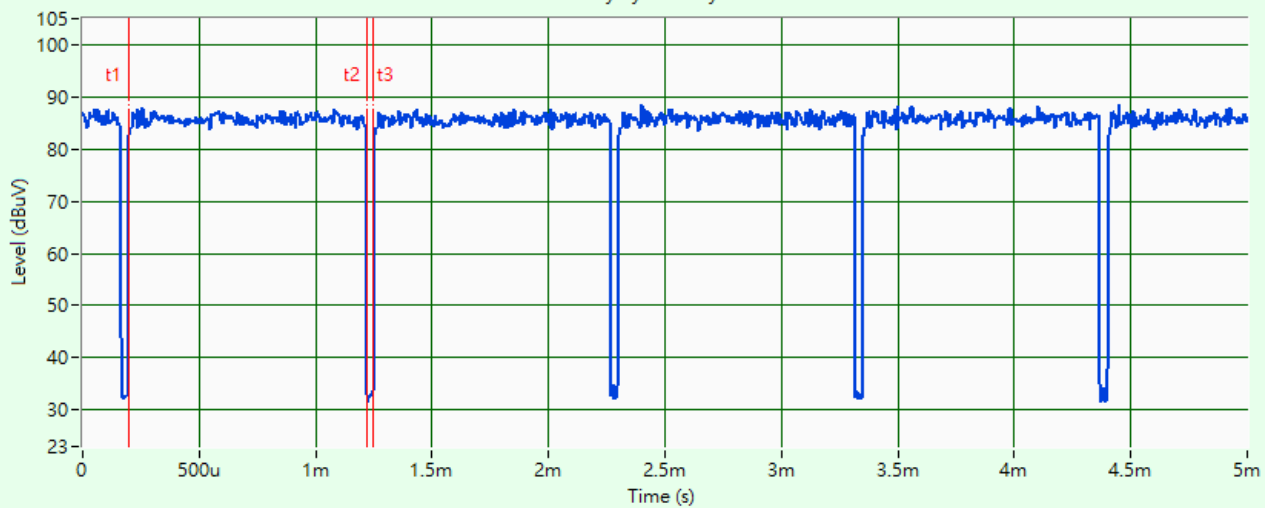


802.11b



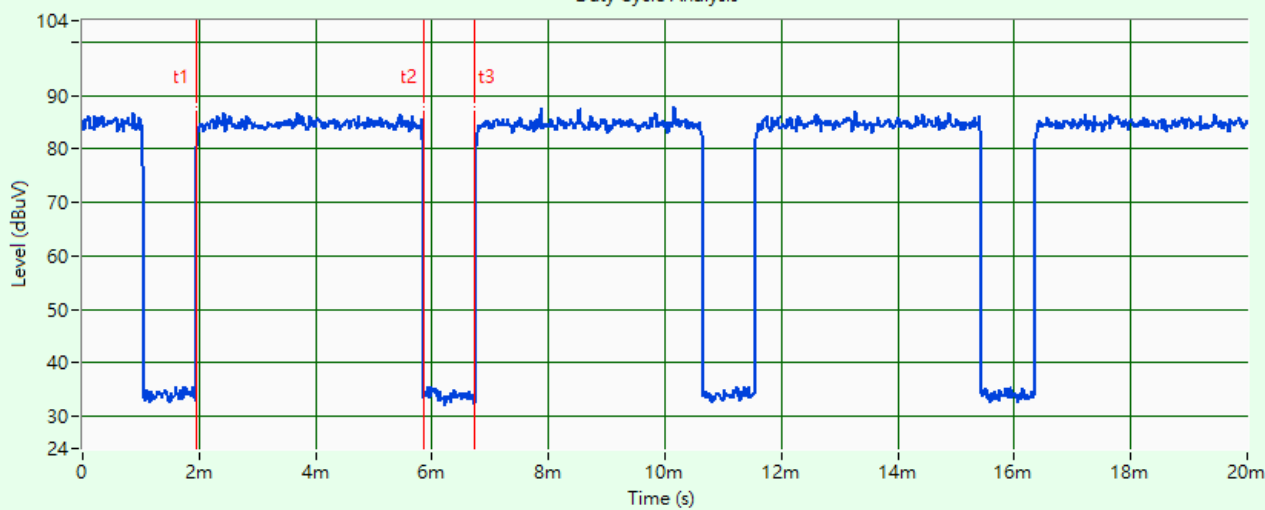
802.11g

Duty Cycle Analysis



802.11ax (HE20)

Duty Cycle Analysis



802.11ax (HE40)

3.6 Test Program Used and Operation Descriptions

Controlling software adb_4.2.2 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



Under Table

Remote Site

3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Lenovo	L470	PF0TALPX	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB typeC to A Cable	1	1	Y	N	Provided by Lab

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
Peak Power Analyzer Keysight	8990B	MY51000485	2025/1/20	2026/1/19
Wideband Power Sensor Keysight	N1923A	MY58020002	2025/1/21	2026/1/20
		MY58140009	2025/1/21	2026/1/20

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/6/29

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
Signal & Spectrum Analyzer R&S	FSV3044	101504	2025/6/18	2026/6/17
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/6/29

4.3 6 dB Bandwidth

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

4.4 Conducted Out of Band Emissions

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

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2024/11/28	2025/11/27
	E1-011280	05	2024/11/28	2025/11/27
	E1-011311	09	2024/11/28	2025/11/27
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESR3	102783	2024/12/17	2025/12/16
Fixed Attenuator STI	BNC5W10dB	PAD-COND2-01	2024/8/25	2025/8/24
LISN R&S	ESH2-Z5	100100	2025/3/5	2026/3/4
	ESH3-Z5	100312	2024/9/9	2025/9/8
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2024/8/25	2025/8/24
Software BVADT	BVADT_Conf_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2025/6/25

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-472	2024/10/14	2025/10/13
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Agilent	N9038A	MY51210203	2024/8/27	2025/8/26
Preamplifier EMCI	EMC 330H	980112	2024/9/24	2025/9/23
	EMC001340	980201	2024/9/24	2025/9/23
RF Coaxial Cable Woken	8D-FB	Cable-Ch10-01	2024/9/24	2025/9/23
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2025/6/25

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	7	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2024/11/10	2025/11/9
	BBHA 9170	148	2024/11/10	2025/11/9
MXE EMI Receiver Agilent	N9038A	MY51210203	2024/8/27	2025/8/26
Preamplifier EMCI	EMC 012645	980115	2024/9/24	2025/9/23
	EMC 184045	980116	2024/9/24	2025/9/23
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
	EMC104-SM-SM- 8000+3000	171005	2024/9/24	2025/9/23
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	2024/9/24	2025/9/23
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2025/6/24

5 Limits of Test Items

5.1 RF Output Power

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

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

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

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

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

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

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

5.5 AC Power Conducted Emissions

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

Notes:

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

5.6 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.7 Unwanted Emissions above 1 GHz

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

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

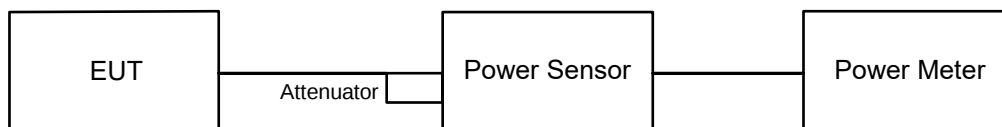
Notes:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



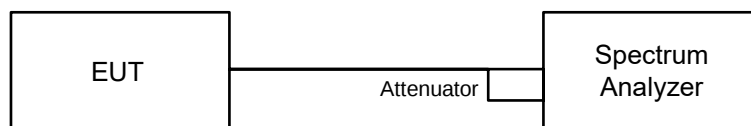
6.1.2 Test Procedure

Average Power:

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

6.2 Power Spectral Density

6.2.1 Test Setup



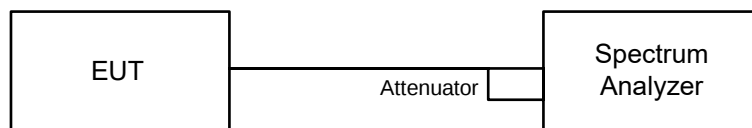
6.2.2 Test Procedure

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

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

6.3 6 dB Bandwidth

6.3.1 Test Setup

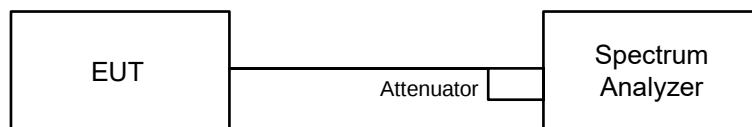


6.3.2 Test Procedure

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

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

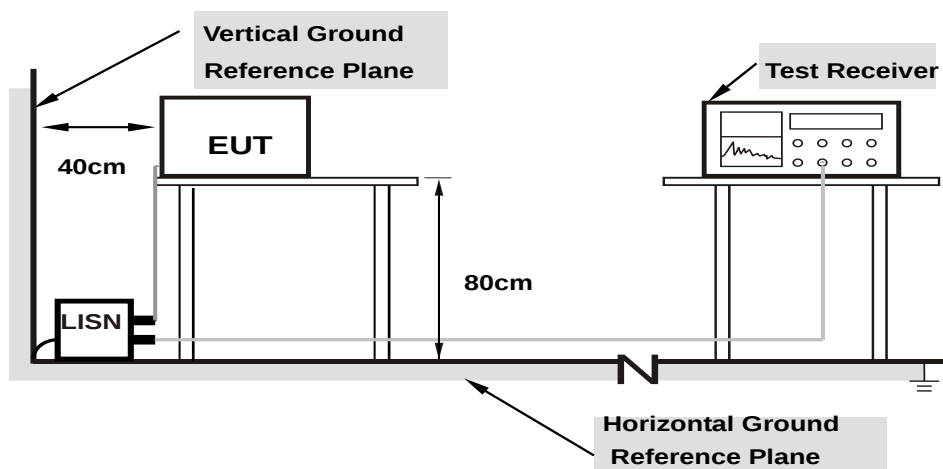
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

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

6.5 AC Power Conducted Emissions

6.5.1 Test Setup



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

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

6.5.2 Test Procedure

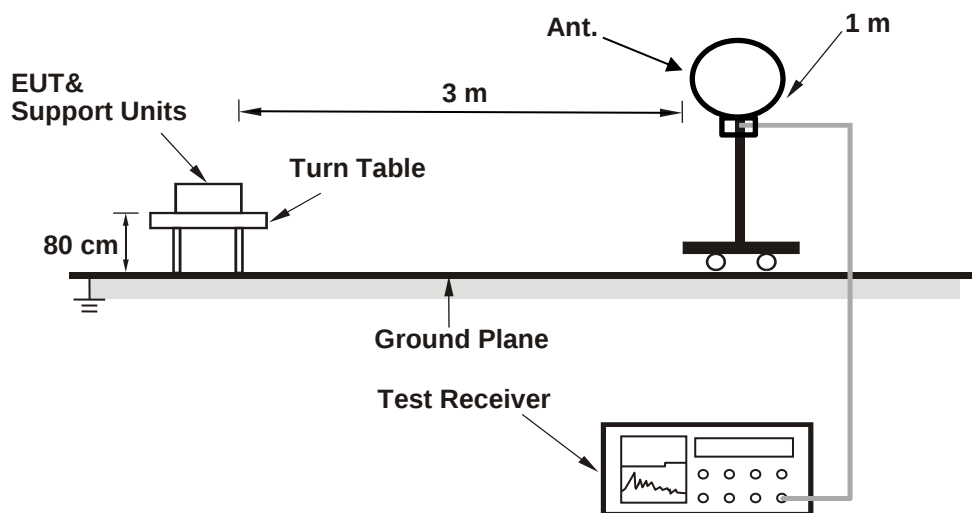
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

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

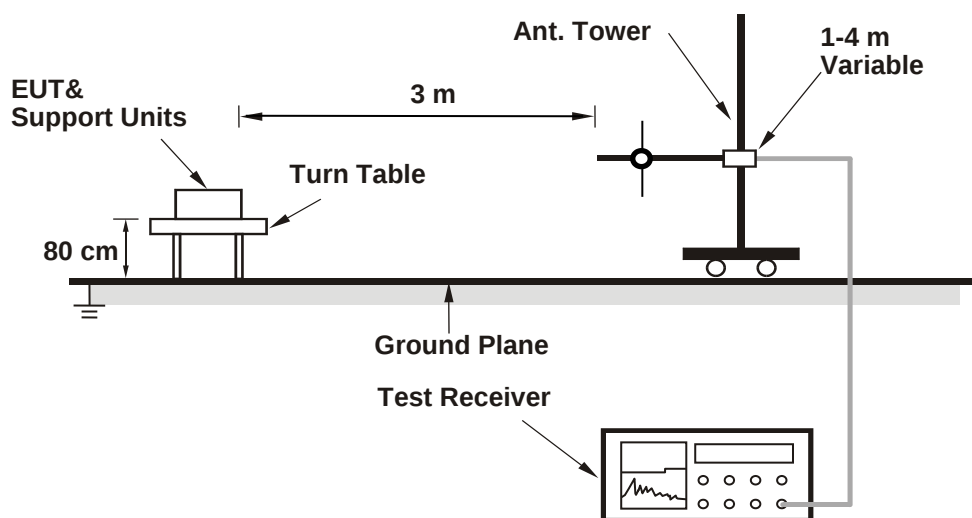
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

For Radiated emission below 30 MHz

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

Notes:

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

For Radiated emission above 30 MHz

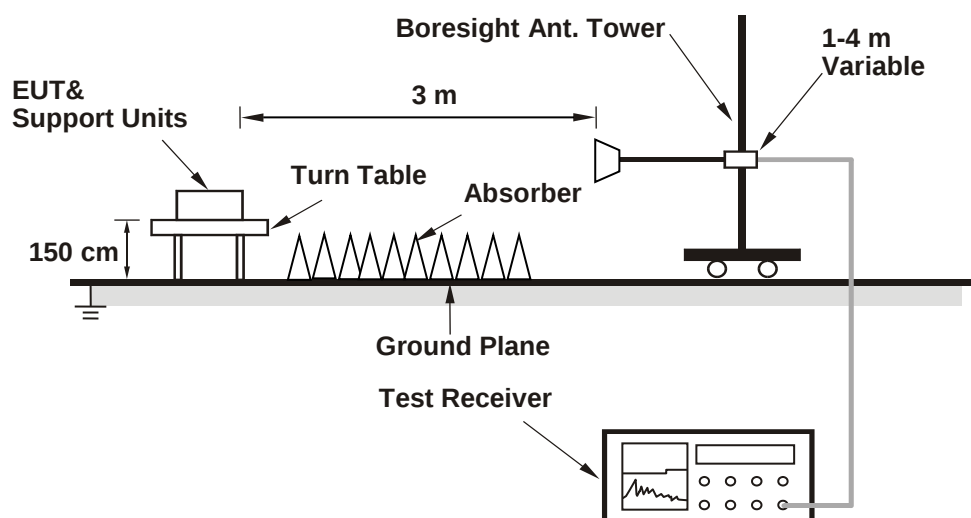
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the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

Notes:

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

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

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

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

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

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	19.95	19.97	198.167	22.97	30	Pass
6	2437	20.56	20.89	236.507	23.74	30	Pass
11	2462	20.53	20.97	238.005	23.77	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	16.52	16.66	91.219	19.60	30	Pass
6	2437	19.04	19.13	162.014	22.10	30	Pass
11	2462	17.47	17.49	111.952	20.49	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	17.52	17.51	112.857	20.53	30	Pass
6	2437	18.49	18.80	146.49	21.66	30	Pass
11	2462	17.38	17.37	109.277	20.39	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	15.77	15.82	75.952	18.81	30	Pass
6	2437	17.28	17.30	107.16	20.30	30	Pass
9	2452	13.98	14.11	50.767	17.06	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	17.58	17.59	114.691	20.60	30	Pass
6	2437	18.52	18.89	148.568	21.72	30	Pass
11	2462	17.42	17.48	111.184	20.46	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	15.82	15.91	77.189	18.88	30	Pass
6	2437	17.32	17.36	108.401	20.35	30	Pass
9	2452	14.08	14.17	51.707	17.14	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	17.61	17.63	115.62	20.63	30	Pass
6	2437	18.59	18.93	150.44	21.77	30	Pass
11	2462	17.49	17.52	112.598	20.52	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	15.89	15.93	77.989	18.92	30	Pass
6	2437	17.37	17.39	109.403	20.39	30	Pass
9	2452	14.15	14.21	52.365	17.19	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 2.57 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

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

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-13.64	-13.70	-10.66	8	Pass
6	2437	-12.62	-12.36	-9.48	8	Pass
11	2462	-12.98	-12.83	-9.89	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 5.35 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-16.15	-15.69	-12.90	8	Pass
6	2437	-14.09	-14.01	-11.04	8	Pass
11	2462	-15.50	-16.01	-12.74	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 5.35 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1					
1	2412	-17.97	-16.72	0.11	-14.29	-14.18	8	Pass
6	2437	-16.25	-16.75	0.11	-13.48	-13.37	8	Pass
11	2462	-17.59	-17.72	0.11	-14.64	-14.53	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 5.35 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

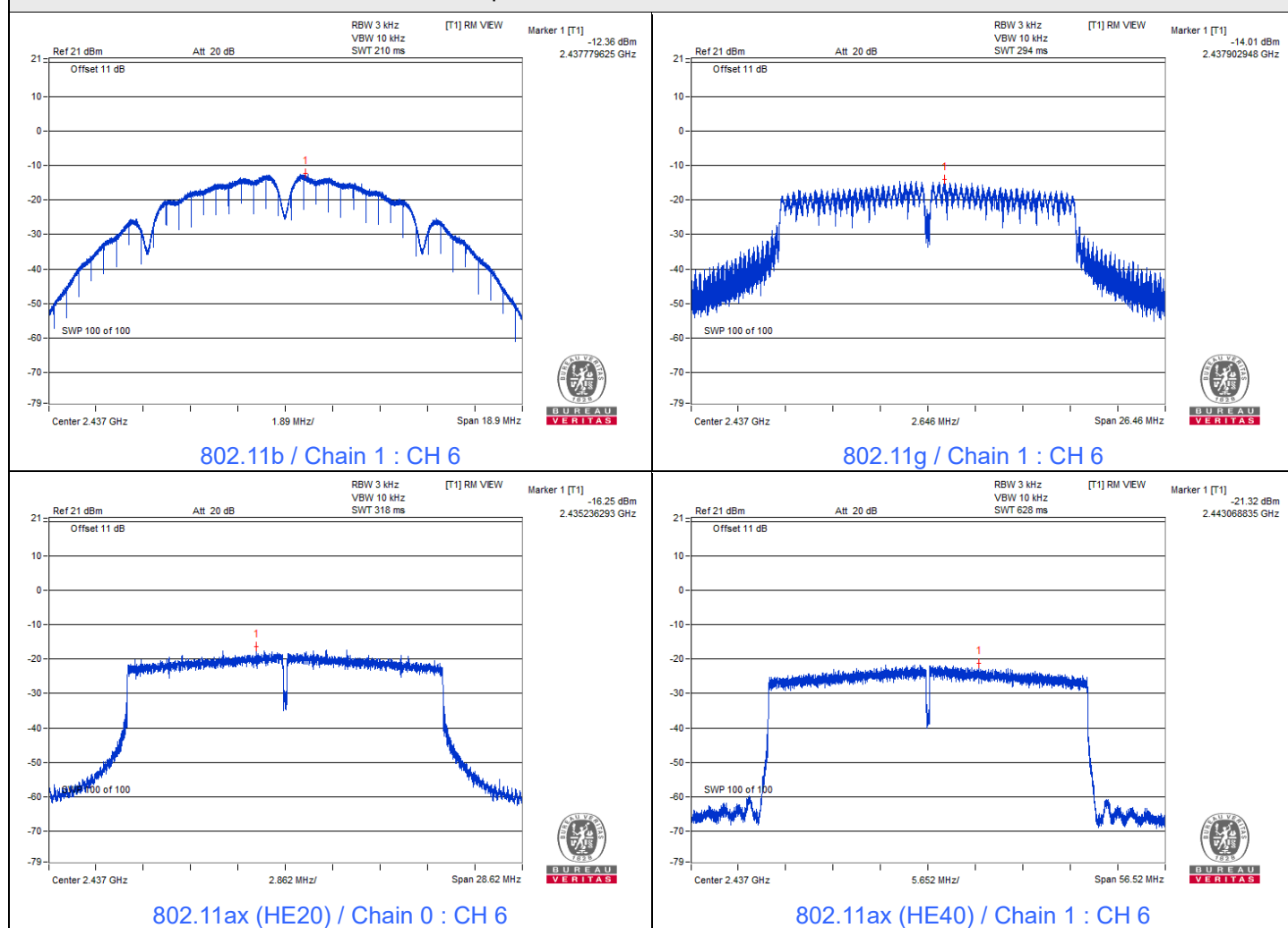
802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Conducted PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1					
3	2422	-23.81	-23.42	0.88	-20.60	-19.72	8	Pass
6	2437	-21.68	-21.32	0.88	-18.49	-17.61	8	Pass
9	2452	-24.69	-25.24	0.88	-21.95	-21.07	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 5.35 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value



7.3 6 dB Bandwidth

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

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	8.13	8.13	0.5	Pass
6	2437	8.13	8.13	0.5	Pass
11	2462	8.13	8.13	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	15.21	15.18	0.5	Pass
6	2437	15.82	15.52	0.5	Pass
11	2462	15.40	15.55	0.5	Pass

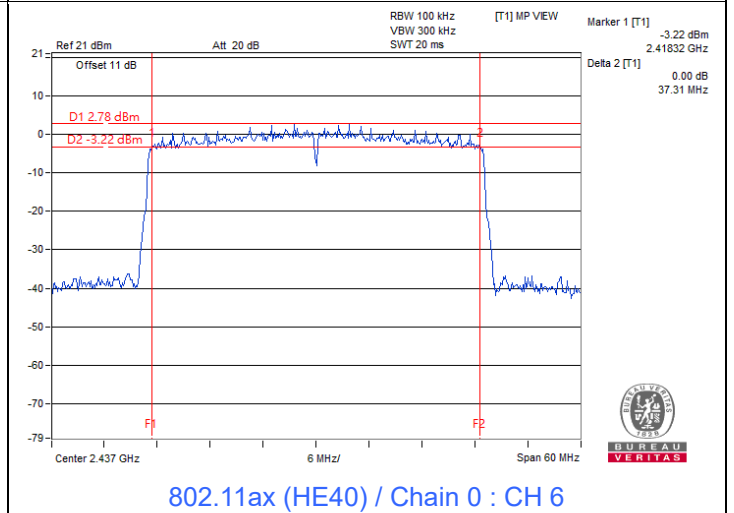
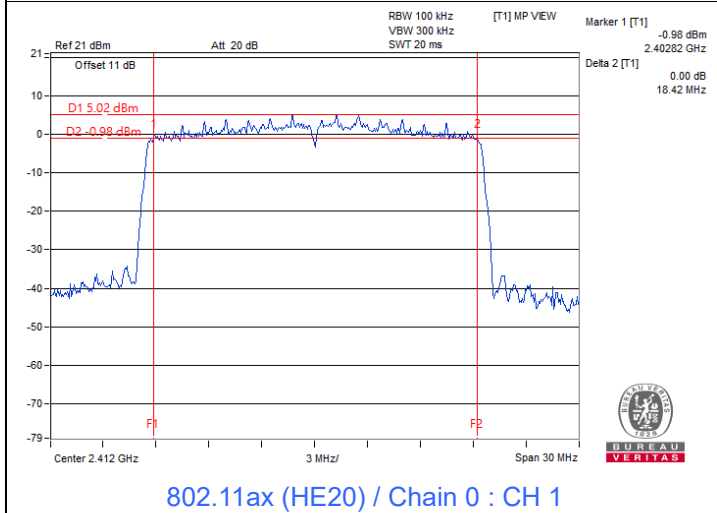
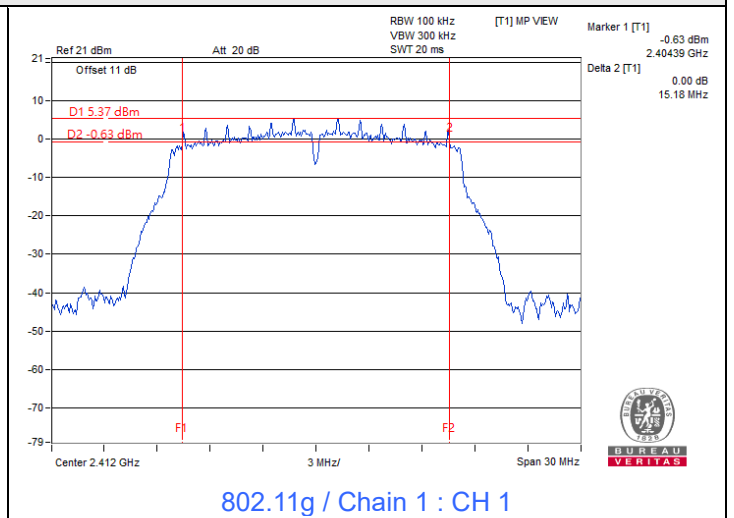
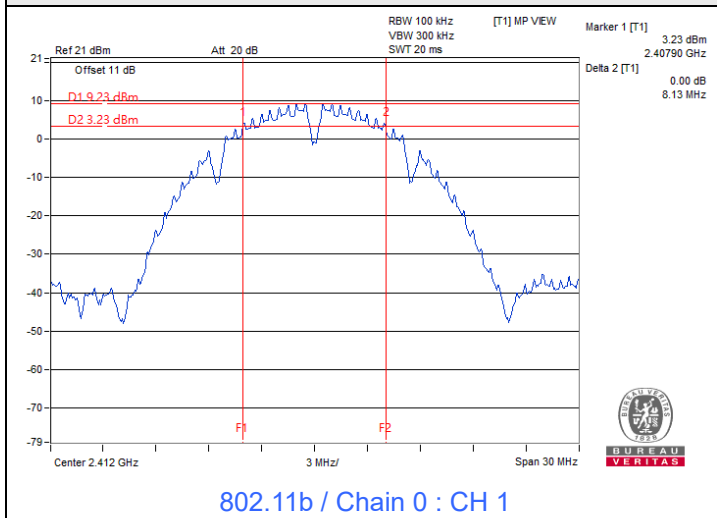
802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	18.42	18.44	0.5	Pass
6	2437	18.58	18.69	0.5	Pass
11	2462	18.77	18.73	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	37.33	37.63	0.5	Pass
6	2437	37.31	37.68	0.5	Pass
9	2452	37.65	37.39	0.5	Pass

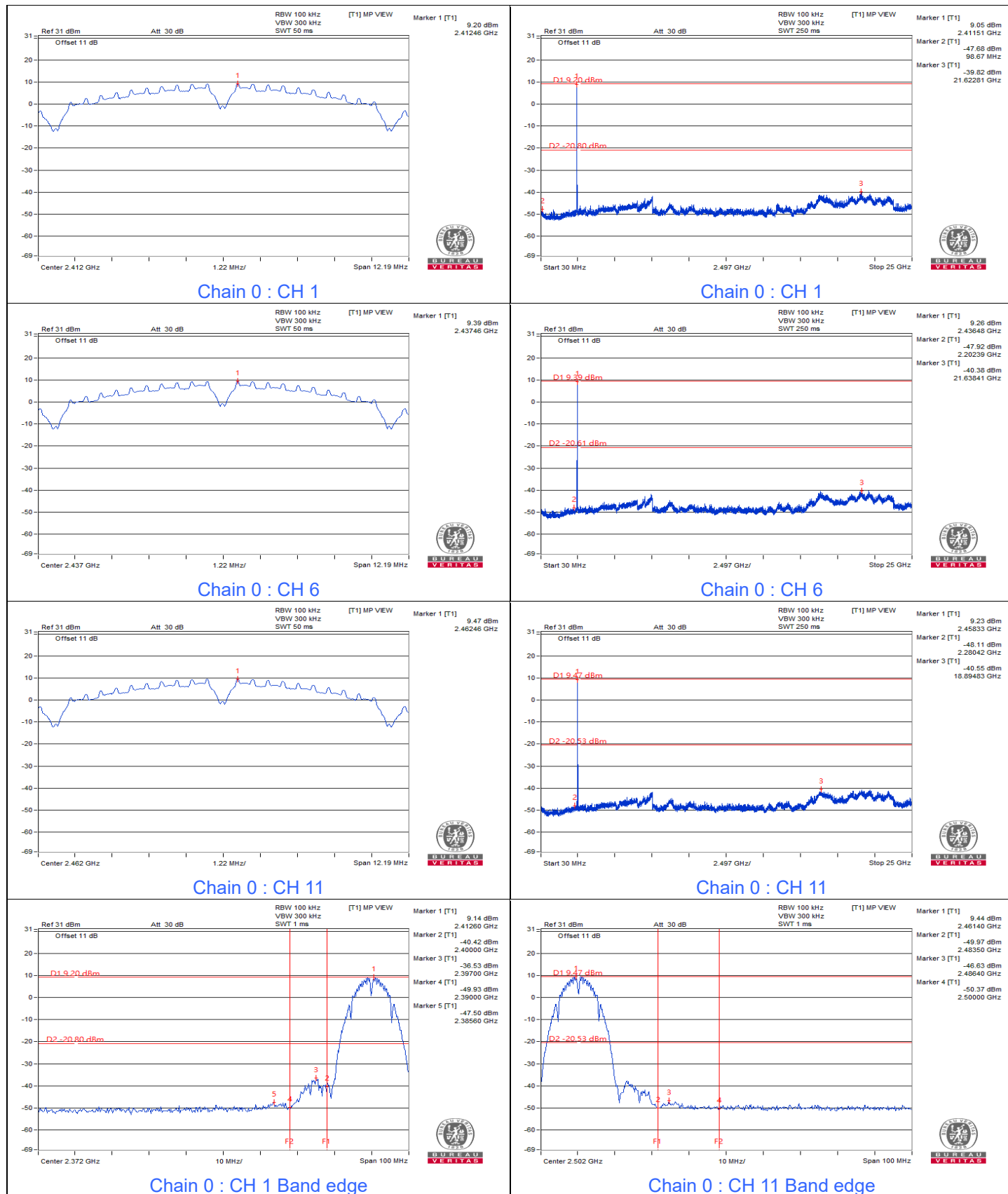
Spectrum Plot of Minimum Value

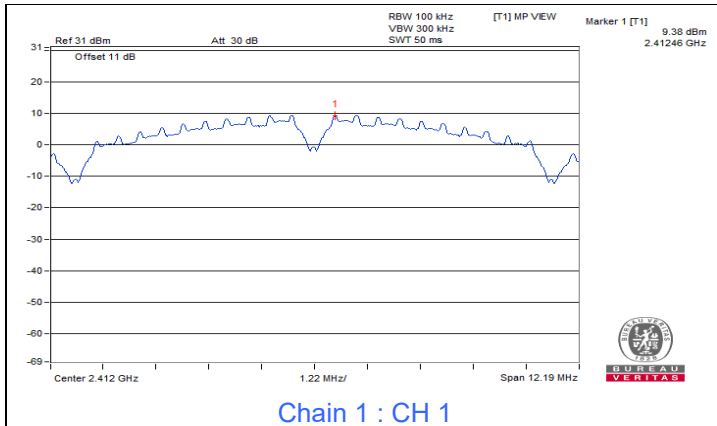


7.4 Conducted Out of Band Emissions

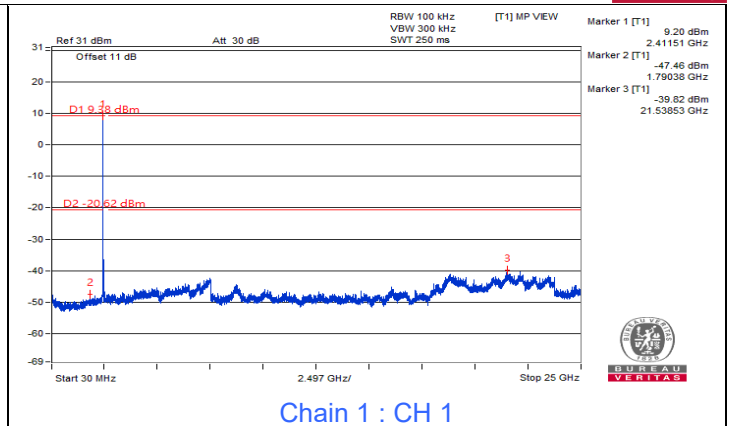
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin
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802.11b

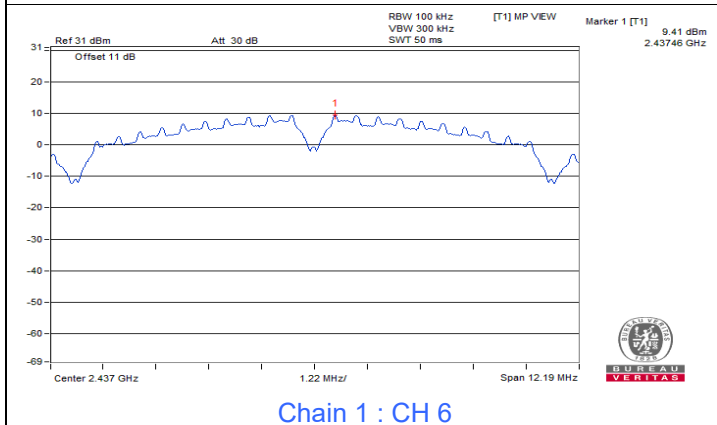




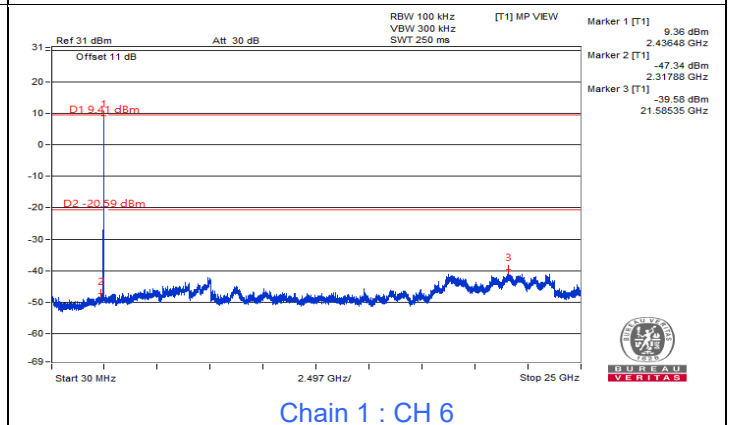
Chain 1 : CH 1



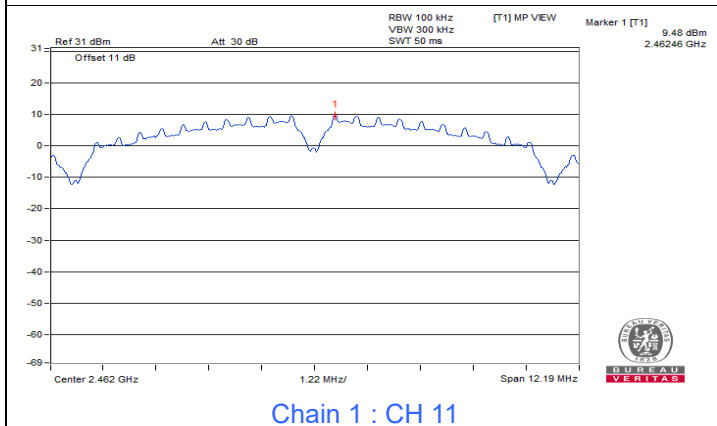
Chain 1 : CH 1



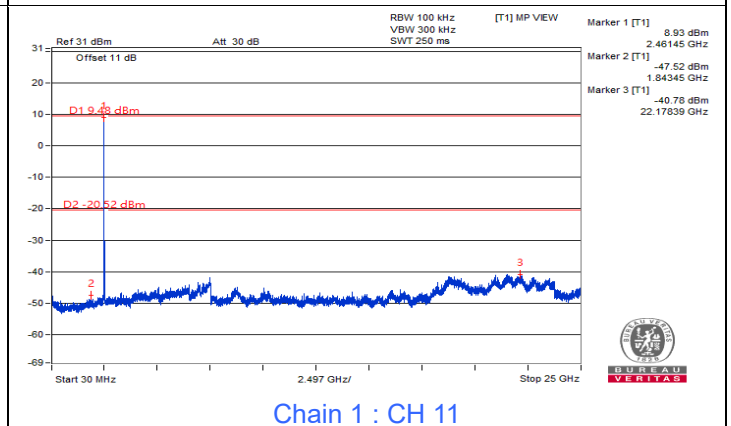
Chain 1 : CH 6



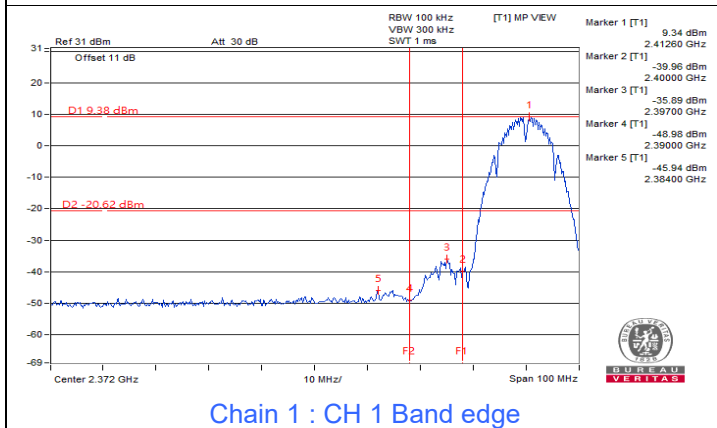
Chain 1 : CH 6



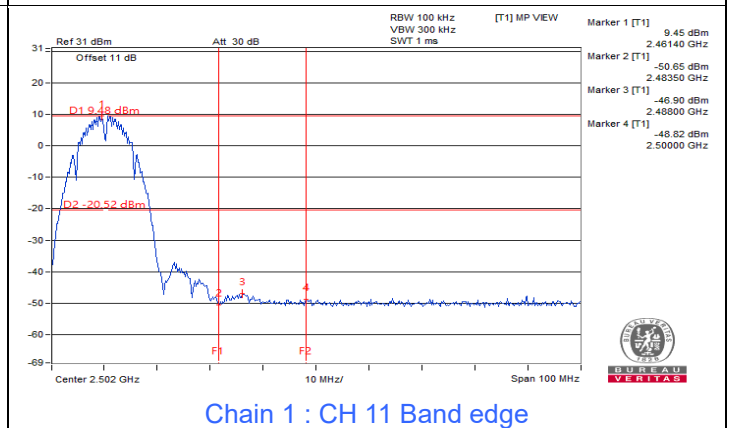
Chain 1 : CH 11



Chain 1 : CH 11

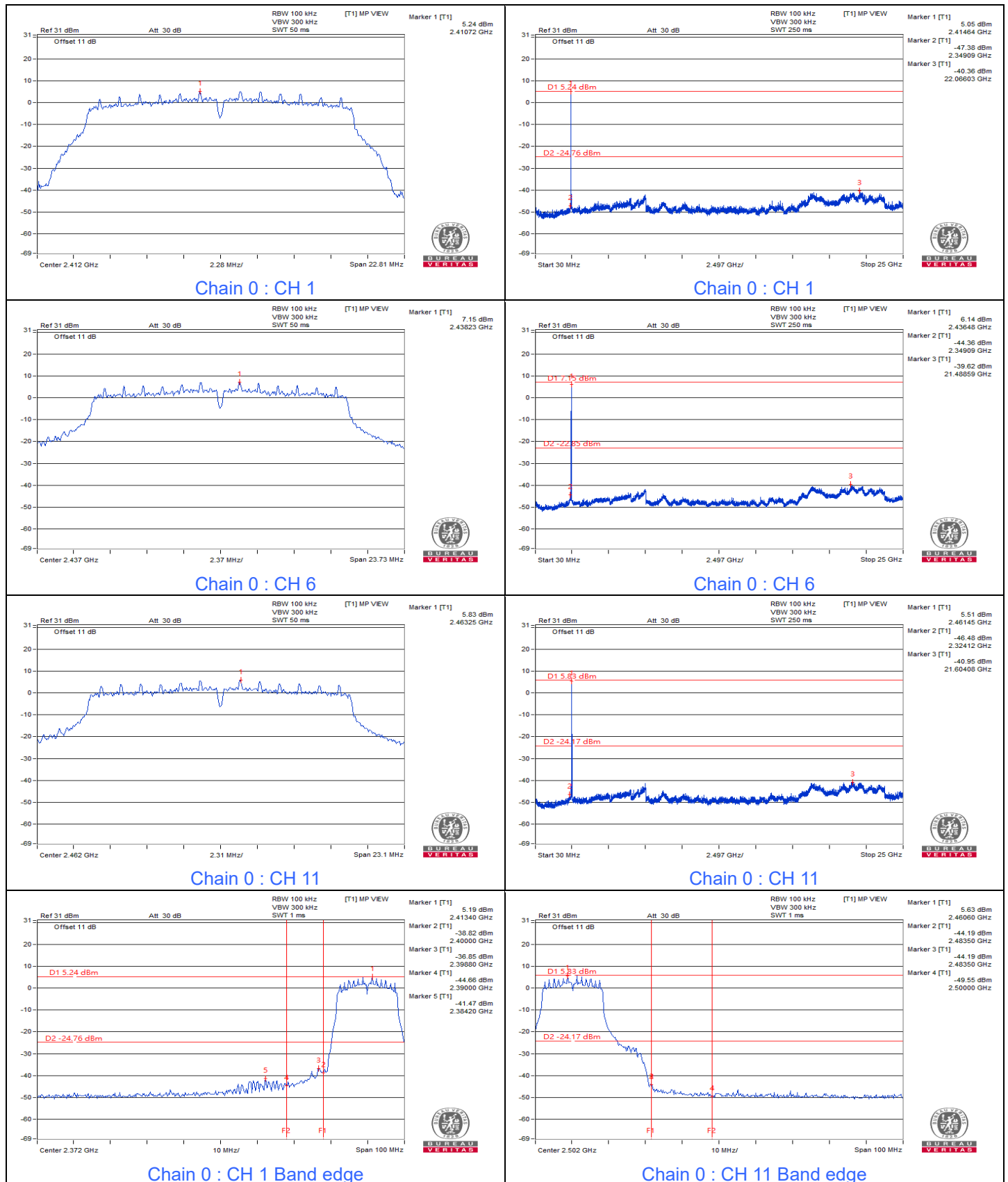


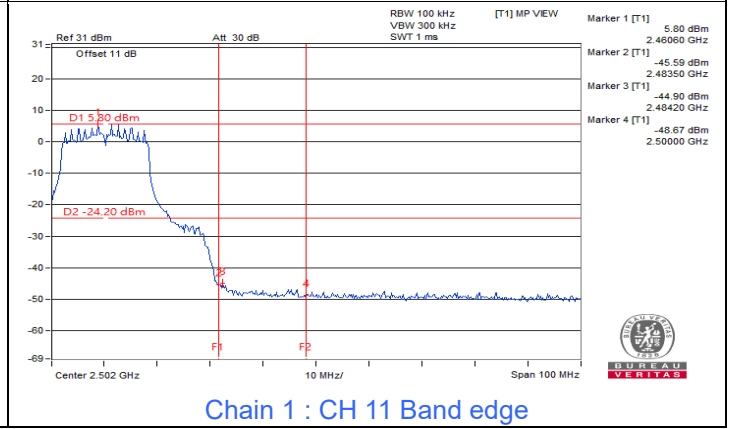
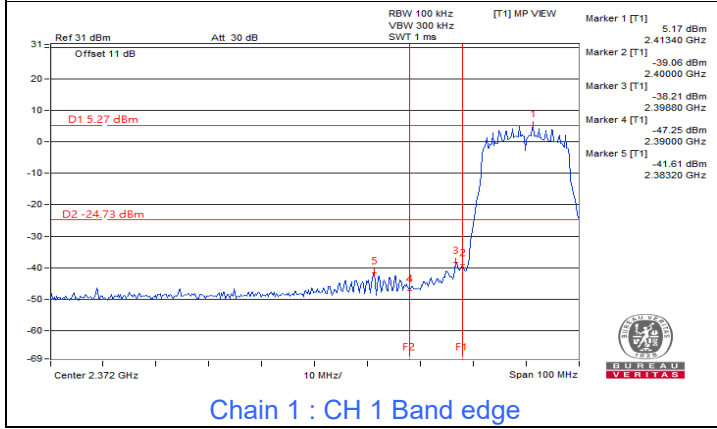
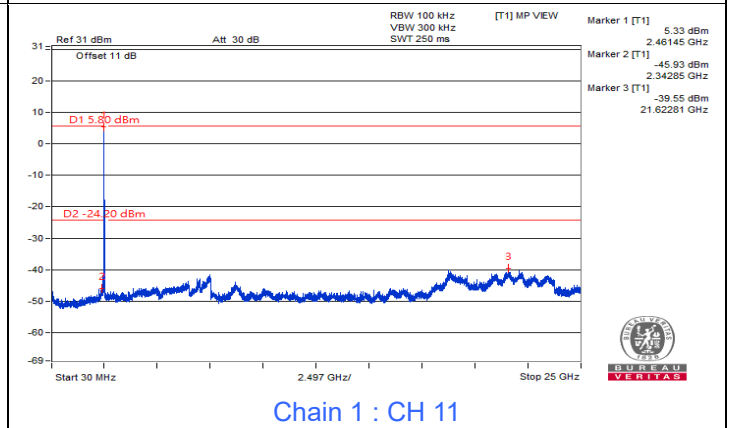
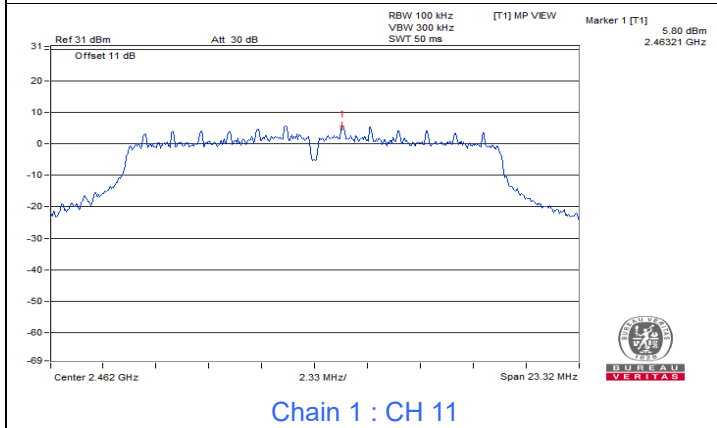
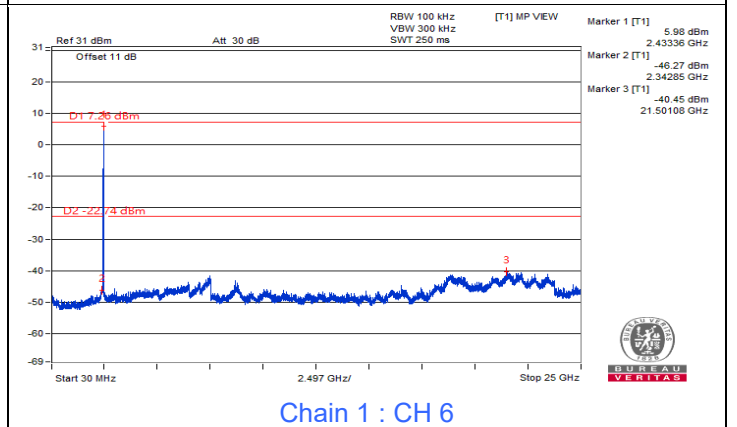
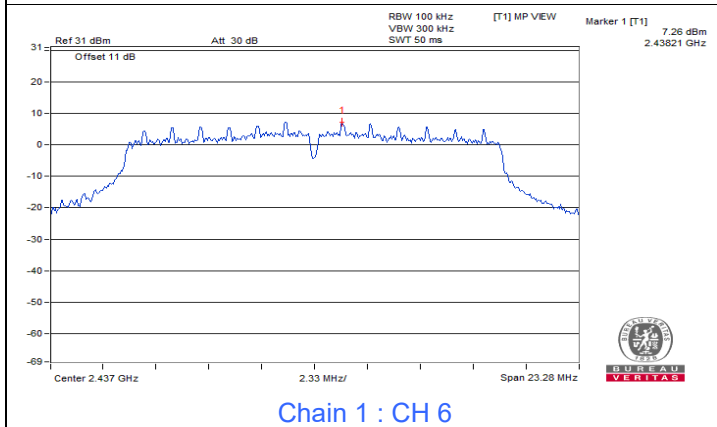
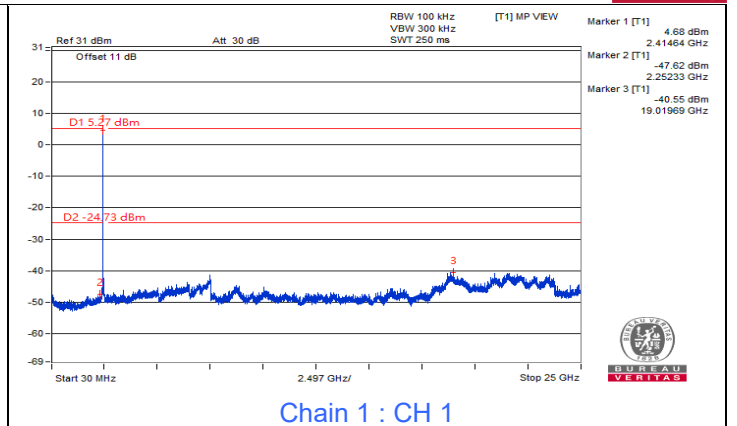
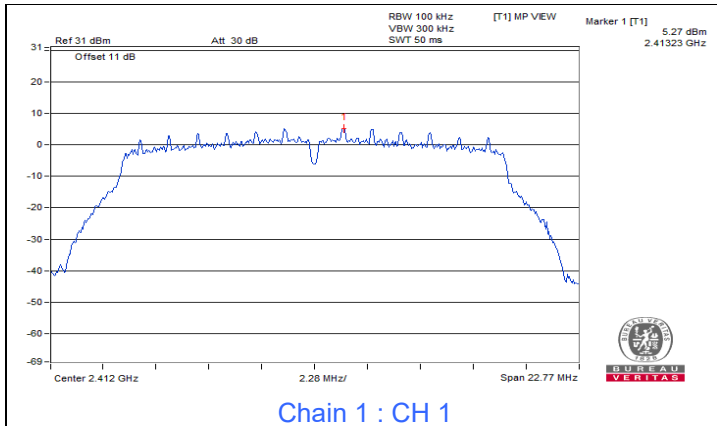
Chain 1 : CH 1 Band edge



Chain 1 : CH 11 Band edge

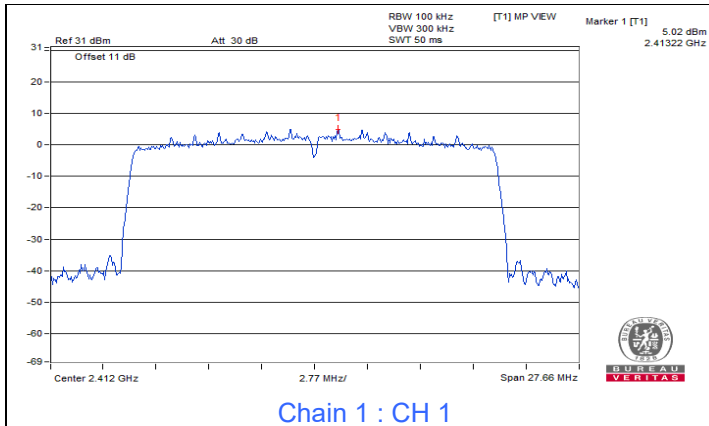
802.11g



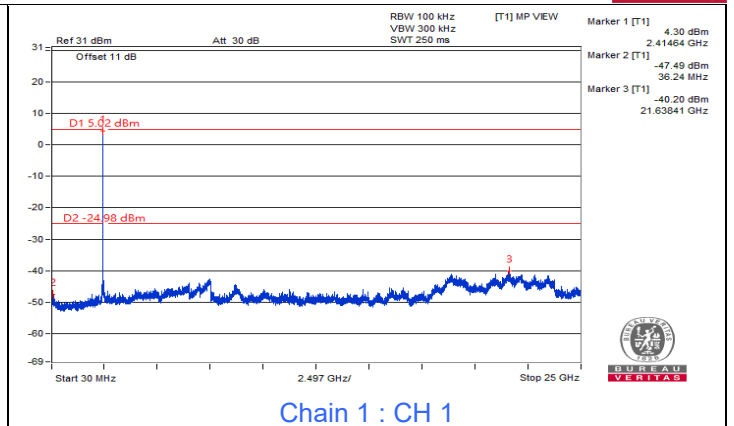


802.11ax (HE20)

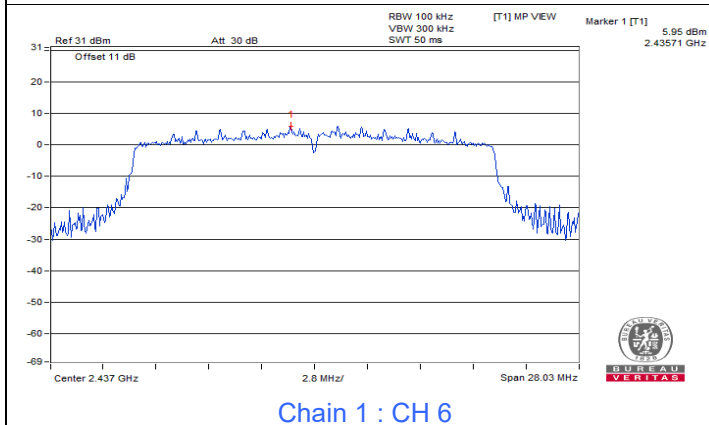




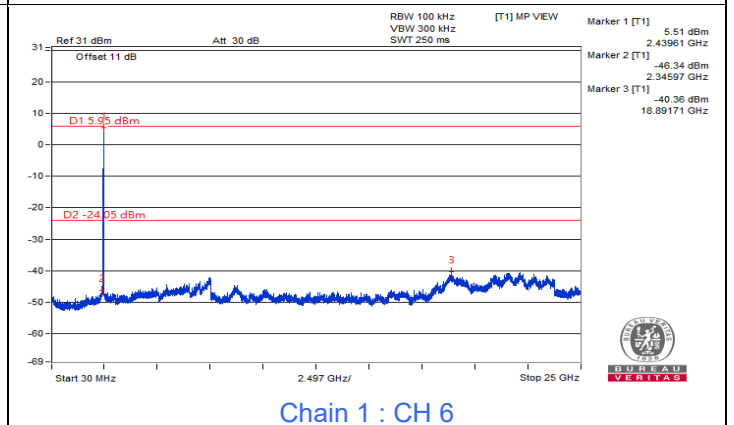
Chain 1 : CH 1



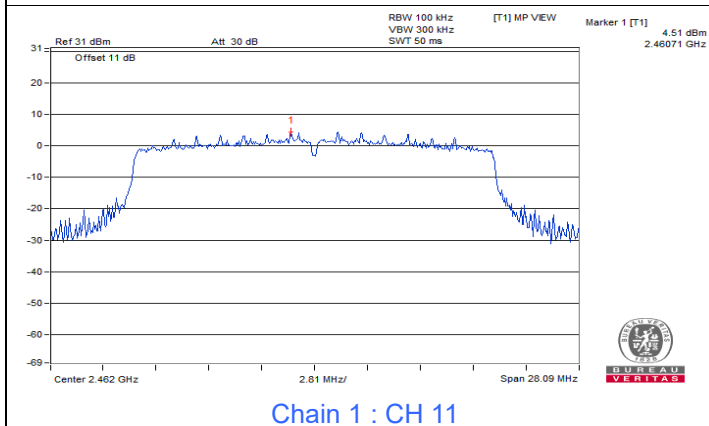
Chain 1 : CH 1



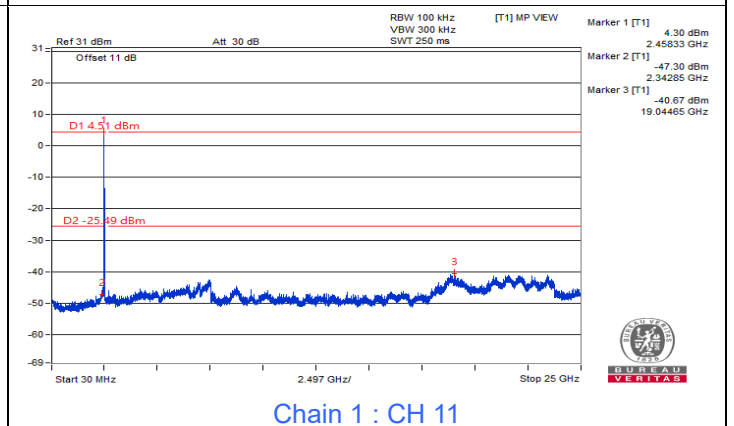
Chain 1 : CH 6



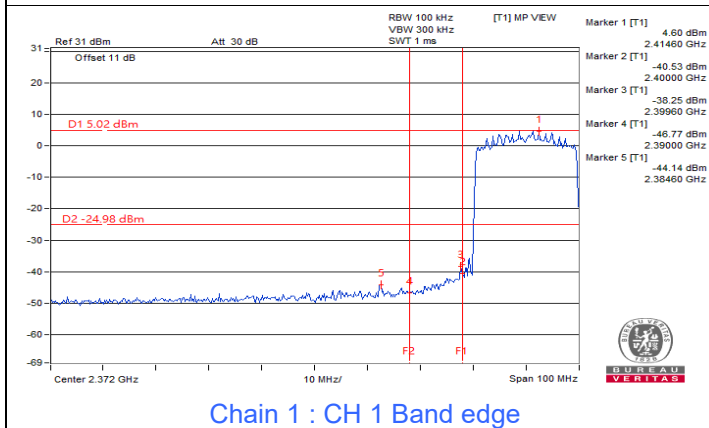
Chain 1 : CH 6



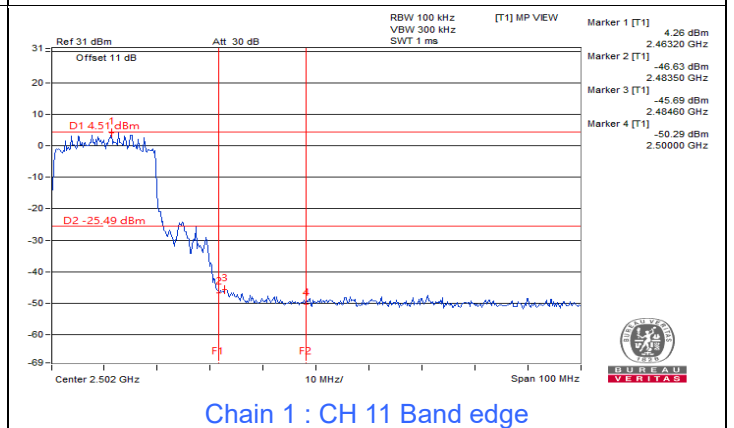
Chain 1 : CH 11



Chain 1 : CH 11



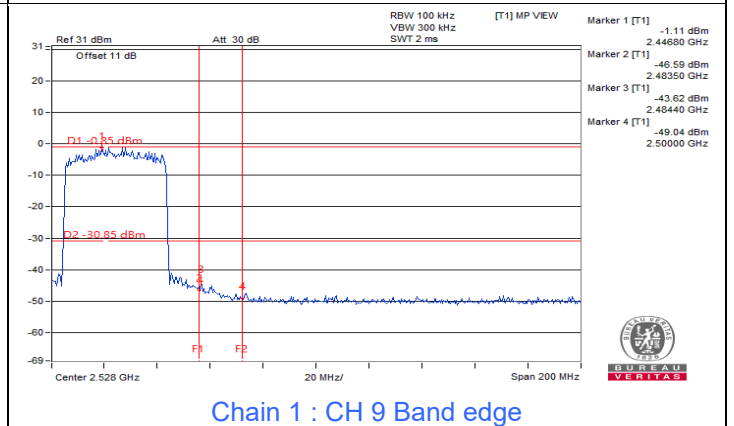
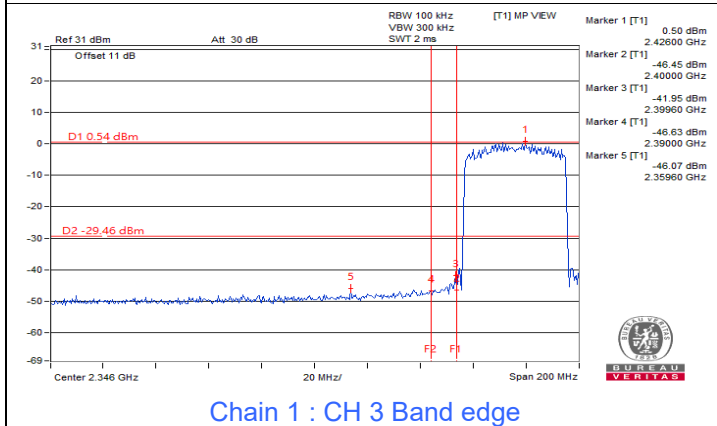
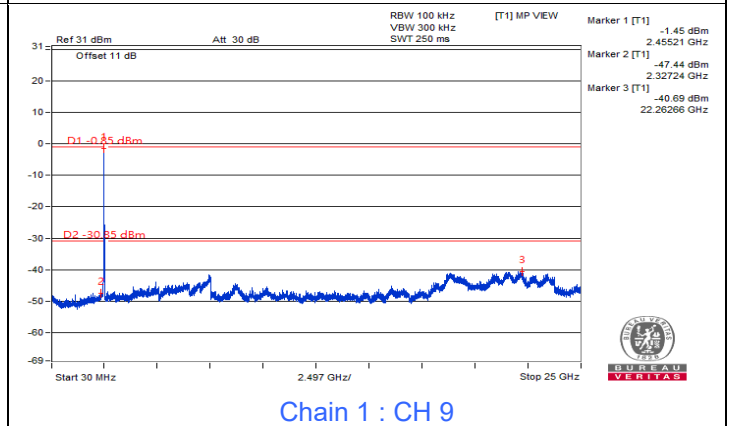
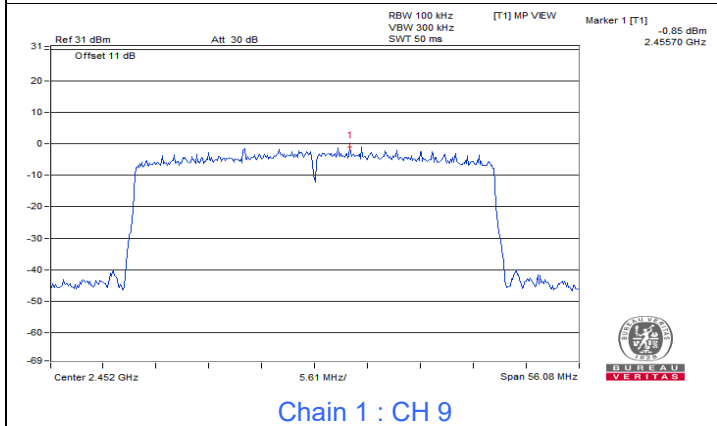
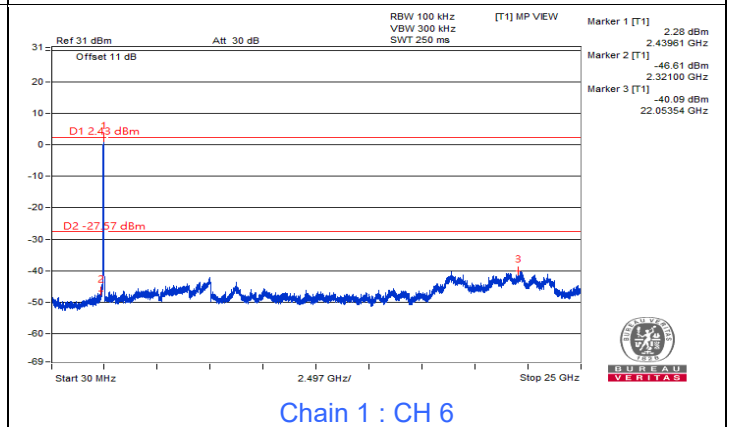
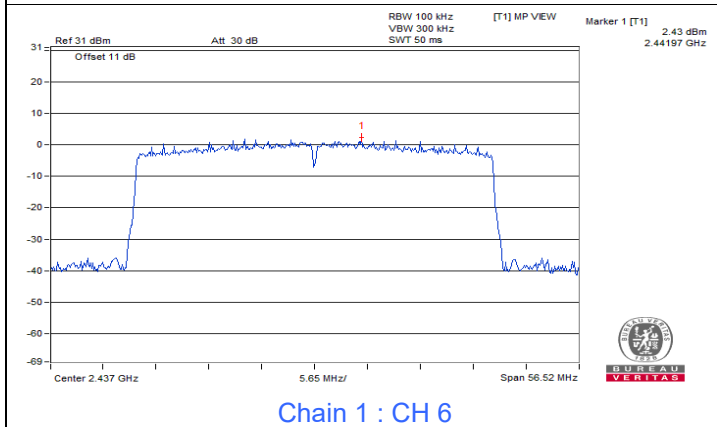
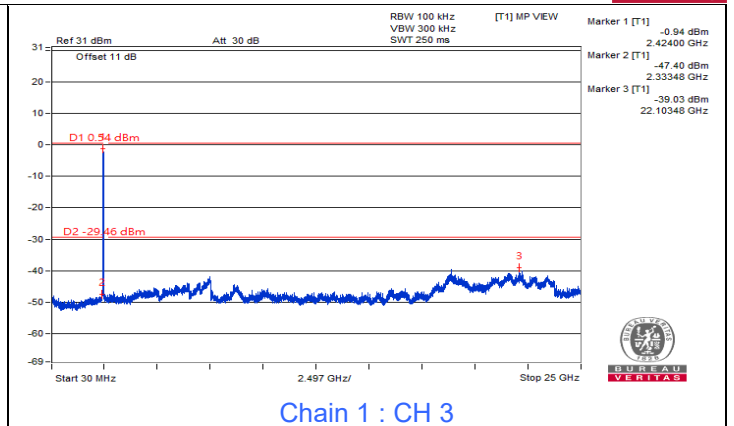
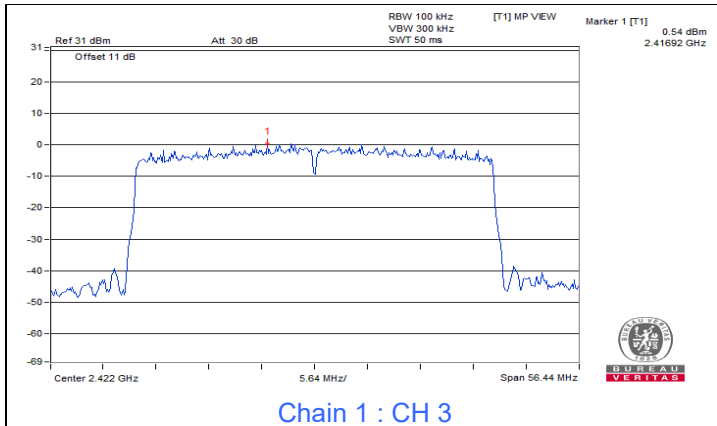
Chain 1 : CH 1 Band edge



Chain 1 : CH 11 Band edge

802.11ax (HE40)





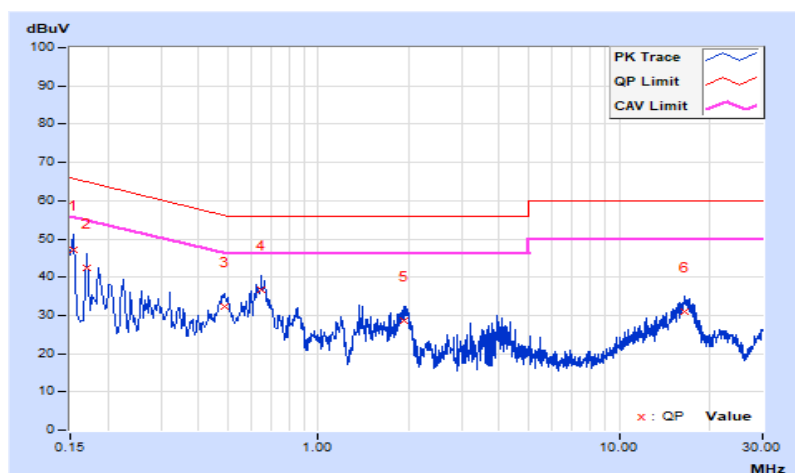
7.5 AC Power Conducted Emissions

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 71% RH
Tested By	Thomas Cheng		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.25	36.94	19.96	47.19	30.21	65.78	55.78	-18.59	-25.57
2	0.17000	10.25	32.13	18.19	42.38	28.44	64.96	54.96	-22.58	-26.52
3	0.48600	10.30	22.00	15.79	32.30	26.09	56.24	46.24	-23.94	-20.15
4	0.64600	10.31	26.32	20.33	36.63	30.64	56.00	46.00	-19.37	-15.36
5	1.93000	10.37	18.14	8.08	28.51	18.45	56.00	46.00	-27.49	-27.55
6	16.50600	10.55	20.45	10.67	31.00	21.22	60.00	50.00	-29.00	-28.78

Remarks:

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

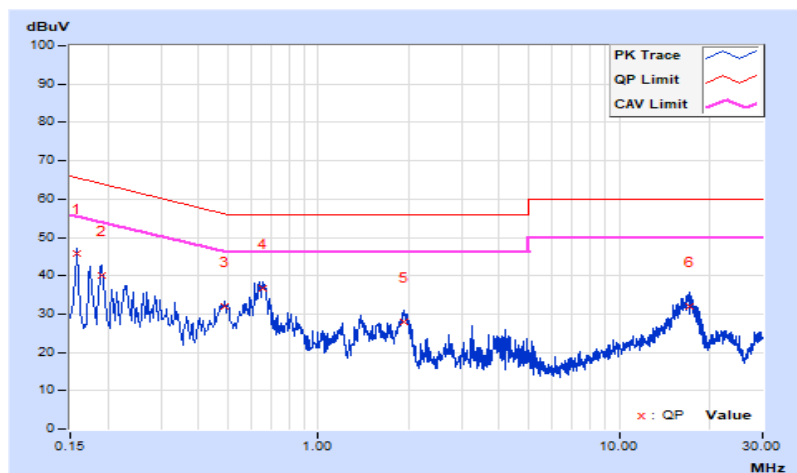


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24 °C, 71% RH
Tested By	Thomas Cheng		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15800	10.30	35.40	18.98	45.70	29.28	65.57	55.57	-19.87	-26.29
2	0.19000	10.30	29.69	17.28	39.99	27.58	64.04	54.04	-24.05	-26.46
3	0.49000	10.33	21.57	14.99	31.90	25.32	56.17	46.17	-24.27	-20.85
4	0.65400	10.34	26.20	19.64	36.54	29.98	56.00	46.00	-19.46	-16.02
5	1.93400	10.40	17.49	9.15	27.89	19.55	56.00	46.00	-28.11	-26.45
6	17.04600	10.75	21.33	10.87	32.08	21.62	60.00	50.00	-27.92	-28.38

Remarks:

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



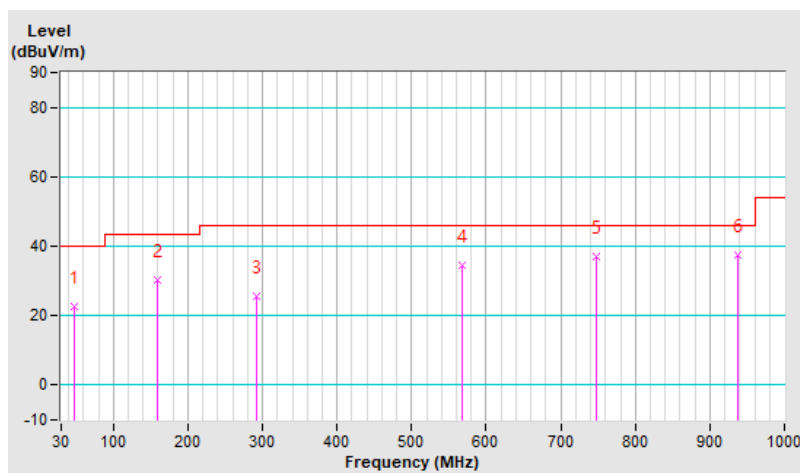
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65% RH
Tested By	Vincent 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	47.46	22.7 QP	40.0	-17.3	2.00 H	124	34.9	-12.2
2	159.98	30.2 QP	43.5	-13.3	2.00 H	357	42.4	-12.2
3	291.90	25.5 QP	46.0	-20.5	1.50 H	185	37.3	-11.8
4	567.38	34.6 QP	46.0	-11.4	1.00 H	248	40.2	-5.6
5	746.83	37.1 QP	46.0	-8.9	2.00 H	225	38.1	-1.0
6	937.92	37.5 QP	46.0	-8.5	1.00 H	231	37.1	0.4

Remarks:

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

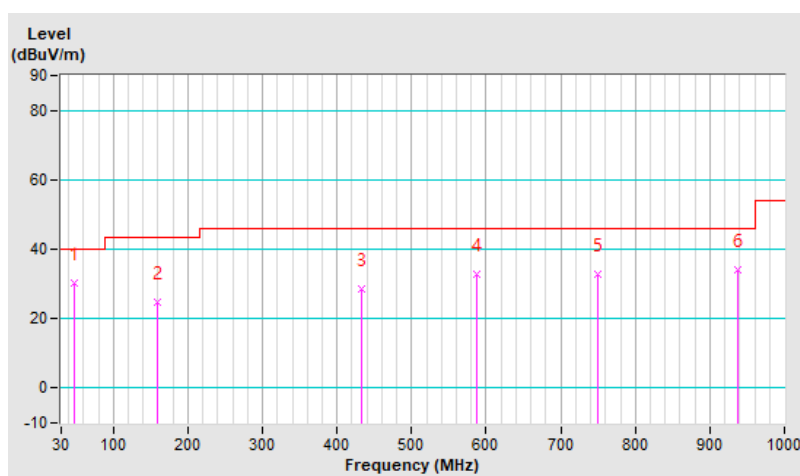


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65% RH
Tested By	Vincent Chen		

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	47.46	30.4 QP	40.0	-9.6	1.00 V	298	42.6	-12.2
2	159.98	24.8 QP	43.5	-18.7	1.50 V	96	37.0	-12.2
3	432.55	28.7 QP	46.0	-17.3	2.00 V	276	36.8	-8.1
4	587.75	32.7 QP	46.0	-13.3	1.00 V	2	37.7	-5.0
5	749.74	33.0 QP	46.0	-13.0	2.00 V	5	33.9	-0.9
6	937.92	34.0 QP	46.0	-12.0	1.50 V	20	33.6	0.4

Remarks:

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



7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	62.3 PK	74.0	-11.7	1.48 H	94	27.0	35.3
2	2390.00	51.0 AV	54.0	-3.0	1.48 H	94	15.7	35.3
3	*2412.00	114.3 PK			1.48 H	94	79.1	35.2
4	*2412.00	112.0 AV			1.48 H	94	76.8	35.2
5	4824.00	55.3 PK	74.0	-18.7	1.98 H	224	43.6	11.7
6	4824.00	42.1 AV	54.0	-11.9	1.98 H	224	30.4	11.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.5 PK	74.0	-12.5	1.07 V	101	26.2	35.3
2	2390.00	48.8 AV	54.0	-5.2	1.07 V	101	13.5	35.3
3	*2412.00	108.6 PK			1.07 V	101	73.4	35.2
4	*2412.00	106.1 AV			1.07 V	101	70.9	35.2
5	4824.00	55.1 PK	74.0	-18.9	2.76 V	183	43.4	11.7
6	4824.00	41.8 AV	54.0	-12.2	2.76 V	183	30.1	11.7

Remarks:

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

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent 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	*2437.00	113.9 PK			1.45 H	91	78.6	35.3
2	*2437.00	111.4 AV			1.45 H	91	76.1	35.3
3	4874.00	55.8 PK	74.0	-18.2	1.85 H	227	43.8	12.0
4	4874.00	42.7 AV	54.0	-11.3	1.85 H	227	30.7	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	107.8 PK			1.08 V	98	72.5	35.3
2	*2437.00	105.2 AV			1.08 V	98	69.9	35.3
3	4874.00	55.7 PK	74.0	-18.3	2.24 V	135	43.7	12.0
4	4874.00	42.4 AV	54.0	-11.6	2.24 V	135	30.4	12.0

Remarks:

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

RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	115.4 PK			1.47 H	81	80.2	35.2
2	*2462.00	113.0 AV			1.47 H	81	77.8	35.2
3	2483.50	63.9 PK	74.0	-10.1	1.47 H	81	28.7	35.2
4	2483.50	52.3 AV	54.0	-1.7	1.47 H	81	17.1	35.2
5	4924.00	55.5 PK	74.0	-18.5	1.86 H	227	43.5	12.0
6	4924.00	42.4 AV	54.0	-11.6	1.86 H	227	30.4	12.0
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	106.8 PK			1.00 V	106	71.6	35.2
2	*2462.00	104.2 AV			1.00 V	106	69.0	35.2
3	2483.50	63.0 PK	74.0	-11.0	1.00 V	106	27.8	35.2
4	2483.50	49.0 AV	54.0	-5.0	1.00 V	106	13.8	35.2
5	4924.00	55.2 PK	74.0	-18.8	2.97 V	143	43.2	12.0
6	4924.00	42.1 AV	54.0	-11.9	2.97 V	143	30.1	12.0

Remarks:

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

RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.3 PK	74.0	-0.7	1.45 H	84	38.0	35.3
2	2390.00	52.7 AV	54.0	-1.3	1.45 H	84	17.4	35.3
3	*2412.00	115.5 PK			1.45 H	84	80.3	35.2
4	*2412.00	105.6 AV			1.45 H	84	70.4	35.2
5	4824.00	52.5 PK	74.0	-21.5	2.27 H	169	40.8	11.7
6	4824.00	40.4 AV	54.0	-13.6	2.27 H	169	28.7	11.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	66.5 PK	74.0	-7.5	1.00 V	100	31.2	35.3
2	2390.00	48.7 AV	54.0	-5.3	1.00 V	100	13.4	35.3
3	*2412.00	108.4 PK			1.00 V	100	73.2	35.2
4	*2412.00	99.0 AV			1.00 V	100	63.8	35.2
5	4824.00	52.2 PK	74.0	-21.8	1.99 V	286	40.5	11.7
6	4824.00	40.1 AV	54.0	-13.9	1.99 V	286	28.4	11.7

Remarks:

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

RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	69.0 PK	74.0	-5.0	1.46 H	86	33.7	35.3
2	2390.00	53.5 AV	54.0	-0.5	1.46 H	86	18.2	35.3
3	*2437.00	118.2 PK			1.46 H	86	82.9	35.3
4	*2437.00	108.0 AV			1.46 H	86	72.7	35.3
5	2483.50	65.2 PK	74.0	-8.8	1.46 H	86	30.0	35.2
6	2483.50	51.3 AV	54.0	-2.7	1.46 H	86	16.1	35.2
7	4874.00	52.7 PK	74.0	-21.3	1.82 H	225	40.7	12.0
8	4874.00	40.5 AV	54.0	-13.5	1.82 H	225	28.5	12.0
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	62.0 PK	74.0	-12.0	1.00 V	114	26.7	35.3
2	2390.00	48.8 AV	54.0	-5.2	1.00 V	114	13.5	35.3
3	*2437.00	110.7 PK			1.00 V	114	75.4	35.3
4	*2437.00	101.3 AV			1.00 V	114	66.0	35.3
5	2483.50	61.8 PK	74.0	-12.2	1.00 V	114	26.6	35.2
6	2483.50	48.4 AV	54.0	-5.6	1.00 V	114	13.2	35.2
7	4874.00	52.5 PK	74.0	-21.5	2.46 V	232	40.5	12.0
8	4874.00	40.2 AV	54.0	-13.8	2.46 V	232	28.2	12.0

Remarks:

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

RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	116.7 PK			1.45 H	86	81.5	35.2
2	*2462.00	106.7 AV			1.45 H	86	71.5	35.2
3	2483.50	68.6 PK	74.0	-5.4	1.45 H	86	33.4	35.2
4	2483.50	53.3 AV	54.0	-0.7	1.45 H	86	18.1	35.2
5	4924.00	54.5 PK	74.0	-19.5	1.93 H	256	42.5	12.0
6	4924.00	40.2 AV	54.0	-13.8	1.93 H	256	28.2	12.0
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	109.4 PK			1.00 V	152	74.2	35.2
2	*2462.00	99.7 AV			1.00 V	152	64.5	35.2
3	2483.50	63.6 PK	74.0	-10.4	1.00 V	152	28.4	35.2
4	2483.50	49.4 AV	54.0	-4.6	1.00 V	152	14.2	35.2
5	4924.00	54.2 PK	74.0	-19.8	1.52 V	46	42.2	12.0
6	4924.00	39.9 AV	54.0	-14.1	1.52 V	46	27.9	12.0

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.4 PK	74.0	-0.6	1.44 H	84	38.1	35.3
2	2390.00	52.9 AV	54.0	-1.1	1.44 H	84	17.6	35.3
3	*2412.00	118.0 PK			1.44 H	84	82.8	35.2
4	*2412.00	105.2 AV			1.44 H	84	70.0	35.2
5	4824.00	54.4 PK	74.0	-19.6	1.46 H	224	42.7	11.7
6	4824.00	40.1 AV	54.0	-13.9	1.46 H	224	28.4	11.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.5 PK	74.0	-9.5	1.00 V	153	29.2	35.3
2	2390.00	48.8 AV	54.0	-5.2	1.00 V	153	13.5	35.3
3	*2412.00	111.5 PK			1.00 V	153	76.3	35.2
4	*2412.00	98.7 AV			1.00 V	153	63.5	35.2
5	4824.00	54.1 PK	74.0	-19.9	1.88 V	67	42.4	11.7
6	4824.00	40.0 AV	54.0	-14.0	1.88 V	67	28.3	11.7

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent 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	*2437.00	119.1 PK			1.43 H	85	83.8	35.3
2	*2437.00	106.4 AV			1.43 H	85	71.1	35.3
3	4874.00	54.5 PK	74.0	-19.5	2.21 H	169	42.5	12.0
4	4874.00	40.2 AV	54.0	-13.8	2.21 H	169	28.2	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	112.0 PK			1.01 V	153	76.7	35.3
2	*2437.00	99.3 AV			1.01 V	153	64.0	35.3
3	4874.00	54.4 PK	74.0	-19.6	1.93 V	287	42.4	12.0
4	4874.00	40.0 AV	54.0	-14.0	1.93 V	287	28.0	12.0

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.8 PK			1.43 H	84	82.6	35.2
2	*2462.00	105.0 AV			1.43 H	84	69.8	35.2
3	2483.50	71.5 PK	74.0	-2.5	1.43 H	84	36.3	35.2
4	2483.50	53.4 AV	54.0	-0.6	1.43 H	84	18.2	35.2
5	4924.00	54.6 PK	74.0	-19.4	2.24 H	139	42.6	12.0
6	4924.00	40.4 AV	54.0	-13.6	2.24 H	139	28.4	12.0
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	110.9 PK			1.00 V	153	75.7	35.2
2	*2462.00	98.0 AV			1.00 V	153	62.8	35.2
3	2483.50	62.0 PK	74.0	-12.0	1.00 V	153	26.8	35.2
4	2483.50	49.0 AV	54.0	-5.0	1.00 V	153	13.8	35.2
5	4924.00	54.4 PK	74.0	-19.6	1.32 V	269	42.4	12.0
6	4924.00	40.1 AV	54.0	-13.9	1.32 V	269	28.1	12.0

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.8 PK	74.0	-1.2	1.42 H	83	37.5	35.3
2	2390.00	53.5 AV	54.0	-0.5	1.42 H	83	18.2	35.3
3	*2422.00	114.2 PK			1.42 H	83	79.0	35.2
4	*2422.00	101.8 AV			1.42 H	83	66.6	35.2
5	4844.00	54.4 PK	74.0	-19.6	2.38 H	167	42.7	11.7
6	4844.00	40.2 AV	54.0	-13.8	2.38 H	167	28.5	11.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.8 PK	74.0	-10.2	1.00 V	100	28.5	35.3
2	2390.00	49.1 AV	54.0	-4.9	1.00 V	100	13.8	35.3
3	*2422.00	107.8 PK			1.00 V	100	72.6	35.2
4	*2422.00	95.1 AV			1.00 V	100	59.9	35.2
5	4844.00	54.1 PK	74.0	-19.9	1.63 V	278	42.4	11.7
6	4844.00	39.9 AV	54.0	-14.1	1.63 V	278	28.2	11.7

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.5 PK	74.0	-0.5	1.43 H	85	38.2	35.3
2	2390.00	52.7 AV	54.0	-1.3	1.43 H	85	17.4	35.3
3	*2437.00	115.2 PK			1.43 H	85	79.9	35.3
4	*2437.00	103.1 AV			1.43 H	85	67.8	35.3
5	2483.50	73.0 PK	74.0	-1.0	1.43 H	85	37.8	35.2
6	2483.50	52.9 AV	54.0	-1.1	1.43 H	85	17.7	35.2
7	4874.00	54.5 PK	74.0	-19.5	2.41 H	136	42.5	12.0
8	4874.00	40.5 AV	54.0	-13.5	2.41 H	136	28.5	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.1 PK	74.0	-8.9	1.00 V	112	29.8	35.3
2	2390.00	49.2 AV	54.0	-4.8	1.00 V	112	13.9	35.3
3	*2437.00	108.2 PK			1.00 V	112	72.9	35.3
4	*2437.00	96.2 AV			1.00 V	112	60.9	35.3
5	2483.50	67.9 PK	74.0	-6.1	1.00 V	112	32.7	35.2
6	2483.50	48.5 AV	54.0	-5.5	1.00 V	112	13.3	35.2
7	4874.00	54.3 PK	74.0	-19.7	2.10 V	225	42.3	12.0
8	4874.00	40.5 AV	54.0	-13.5	2.10 V	225	28.5	12.0

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6 °C, 70.3% RH
Tested By	vincent chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	112.7 PK			1.43 H	84	77.5	35.2
2	*2452.00	99.8 AV			1.43 H	84	64.6	35.2
3	2483.50	67.0 PK	74.0	-7.0	1.43 H	84	31.8	35.2
4	2483.50	53.1 AV	54.0	-0.9	1.43 H	84	17.9	35.2
5	4904.00	54.7 PK	74.0	-19.3	1.89 H	232	42.6	12.1
6	4904.00	40.5 AV	54.0	-13.5	1.89 H	232	28.4	12.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	104.9 PK			1.00 V	99	69.7	35.2
2	*2452.00	92.2 AV			1.00 V	99	57.0	35.2
3	2483.50	62.8 PK	74.0	-11.2	1.00 V	99	27.6	35.2
4	2483.50	49.9 AV	54.0	-4.1	1.00 V	99	14.7	35.2
5	4904.00	54.3 PK	74.0	-19.7	2.69 V	321	42.2	12.1
6	4904.00	40.2 AV	54.0	-13.8	2.69 V	321	28.1	12.1

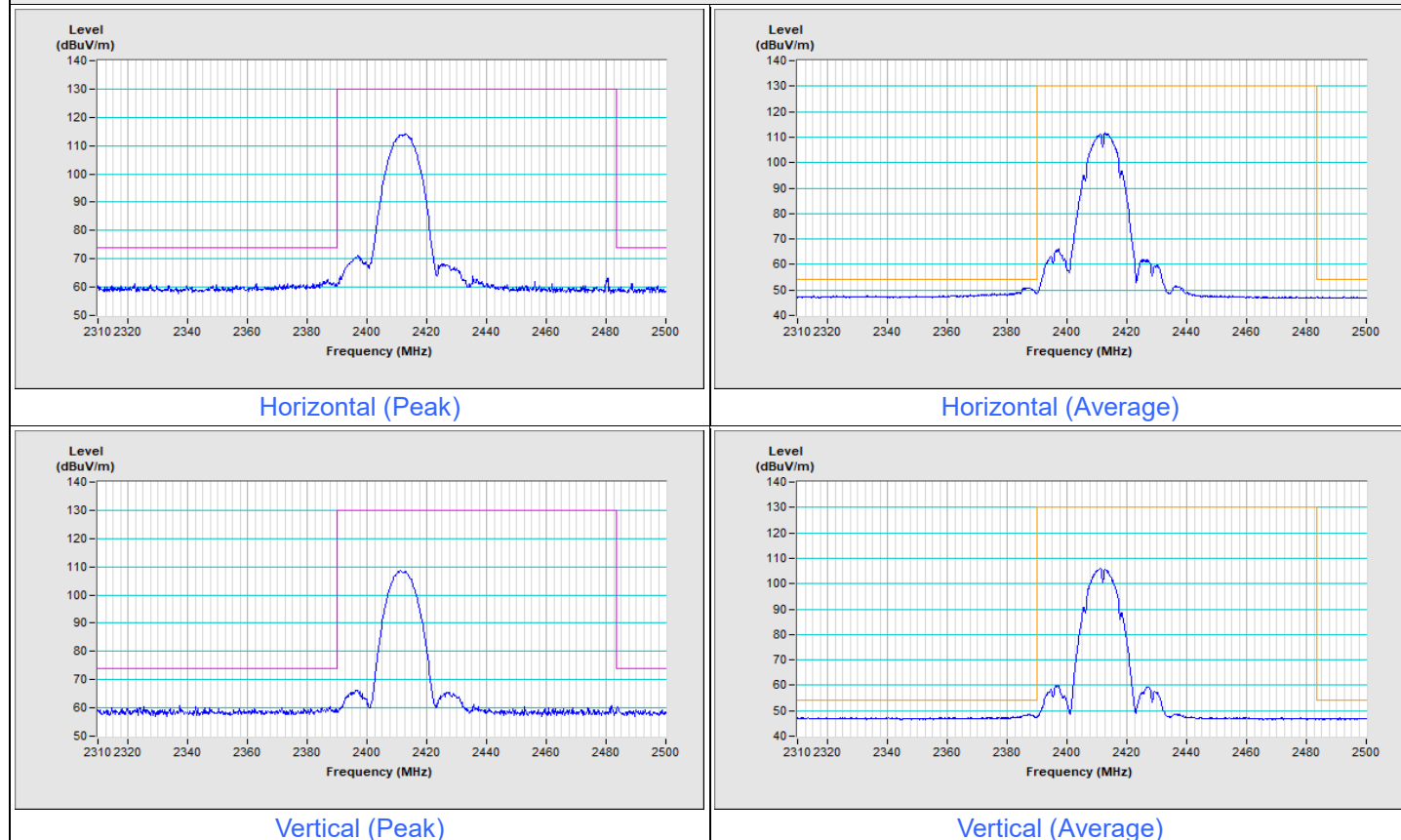
Remarks:

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

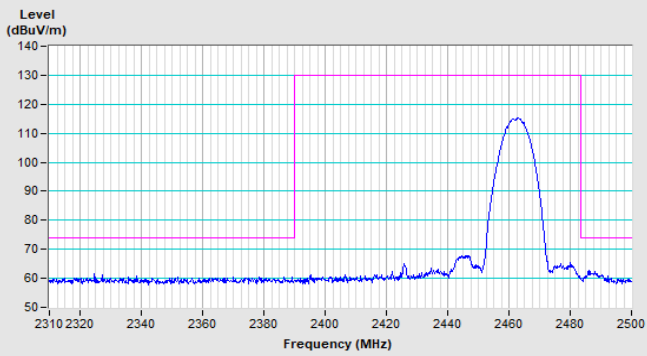
Plot of Band Edge

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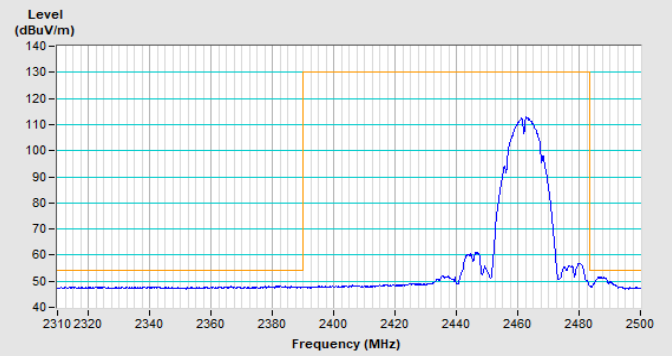
802.11b Channel 1



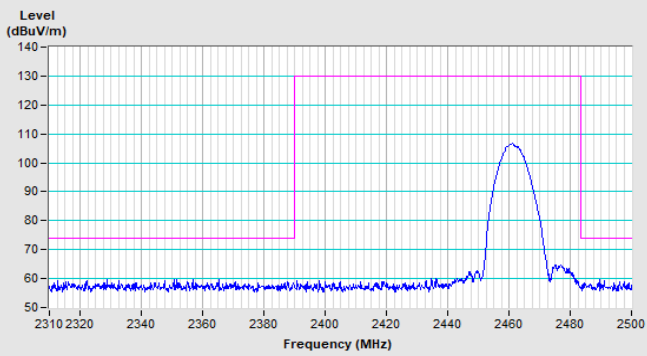
802.11b Channel 11



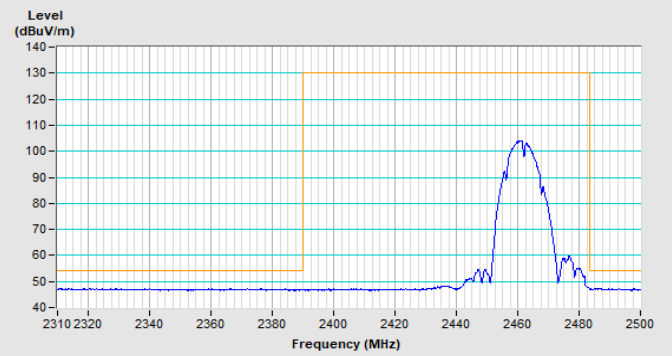
Horizontal (Peak)



Horizontal (Average)



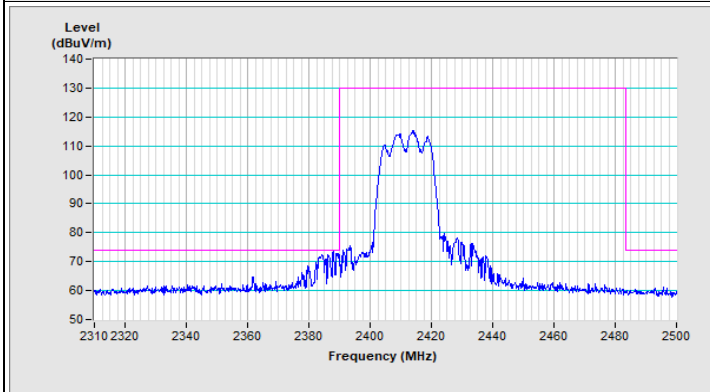
Vertical (Peak)



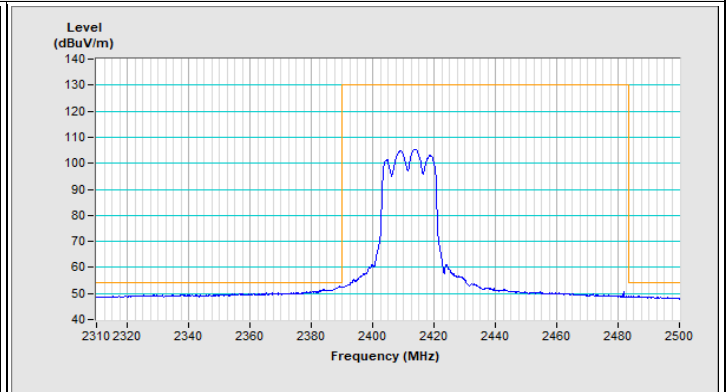
Vertical (Average)

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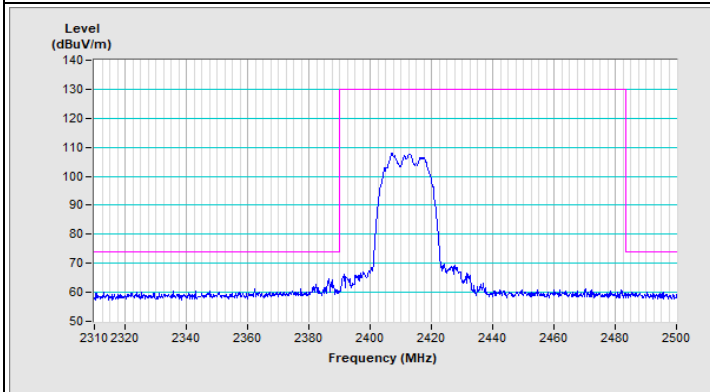
802.11g Channel 1



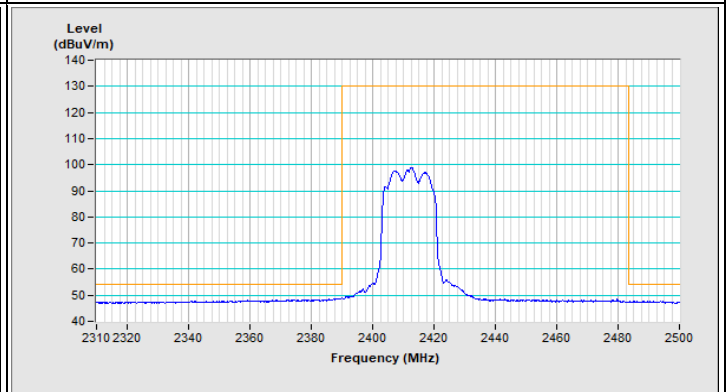
Horizontal (Peak)



Horizontal (Average)

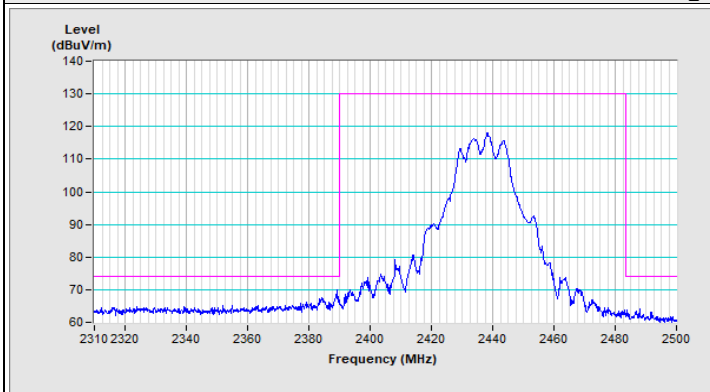


Vertical (Peak)

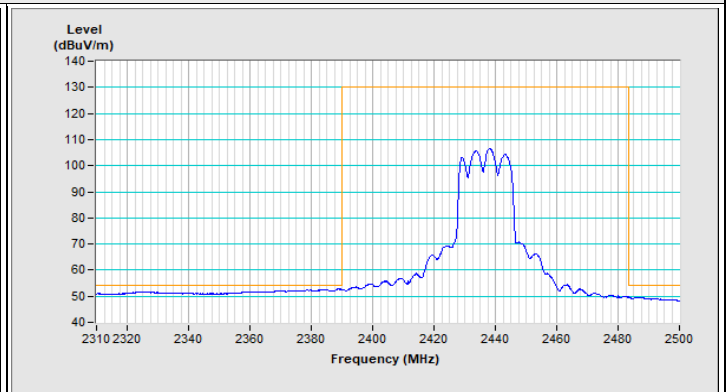


Vertical (Average)

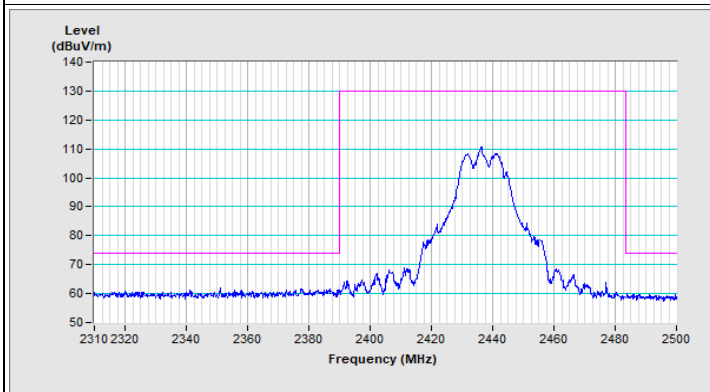
802.11g Channel 6



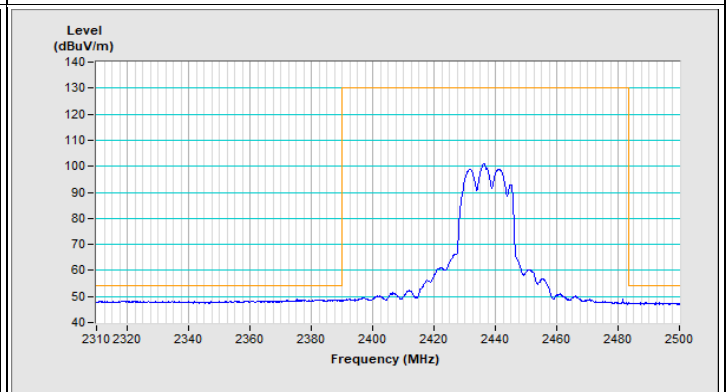
Horizontal (Peak)



Horizontal (Average)

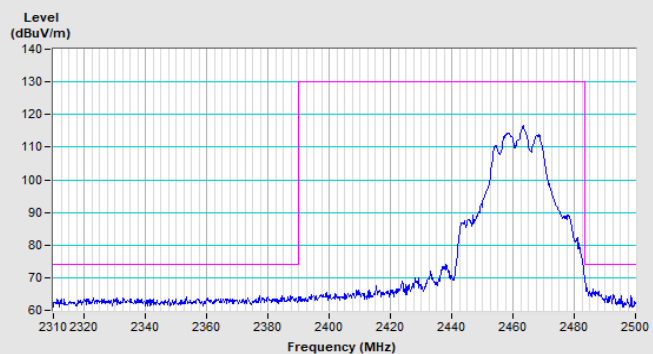


Vertical (Peak)

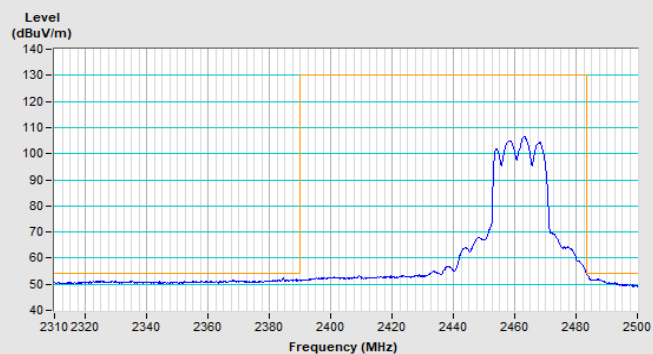


Vertical (Average)

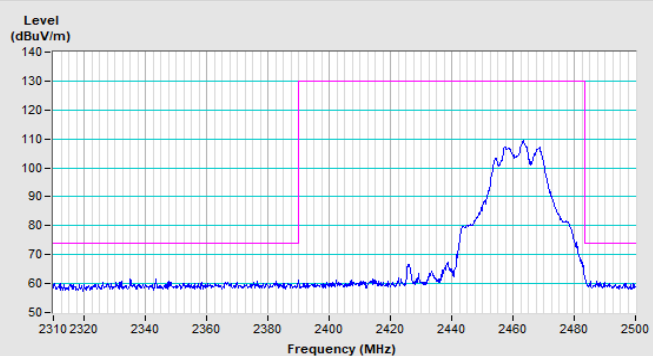
802.11g Channel 11



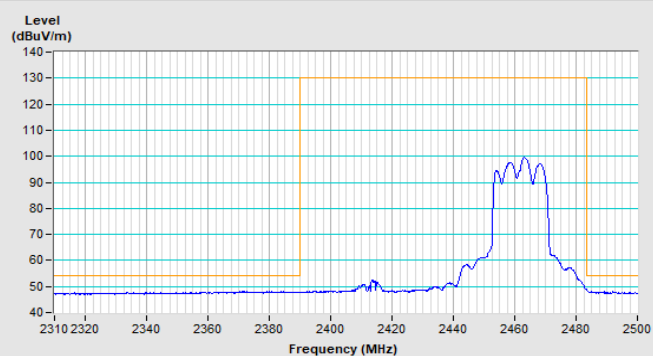
Horizontal (Peak)



Horizontal (Average)



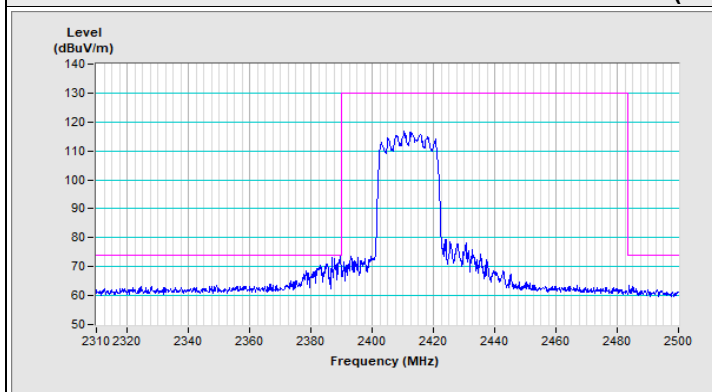
Vertical (Peak)



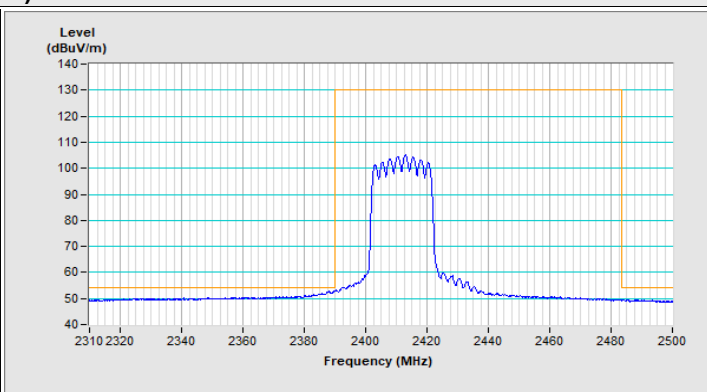
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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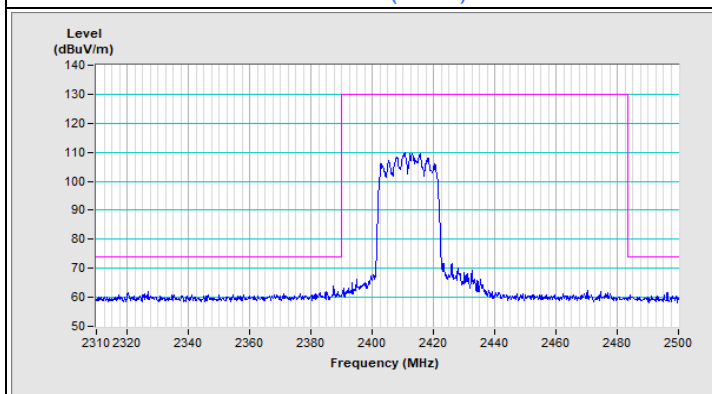
802.11ax (HE20) Channel 1



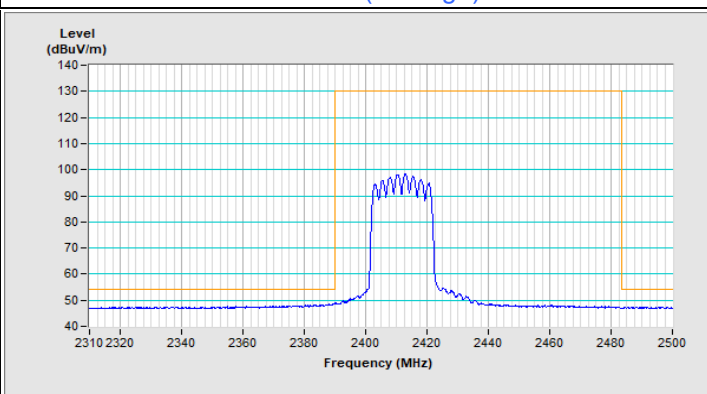
Horizontal (Peak)



Horizontal (Average)

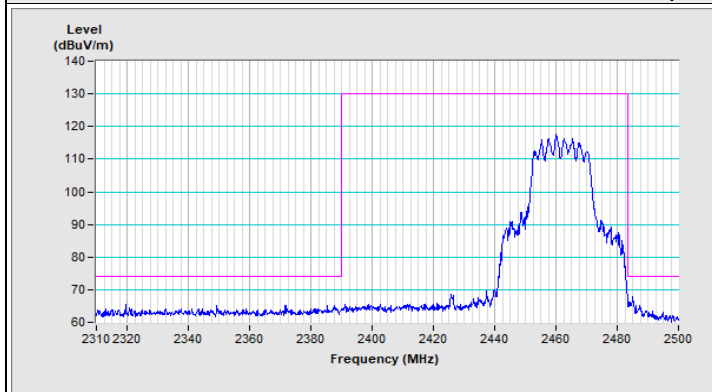


Vertical (Peak)

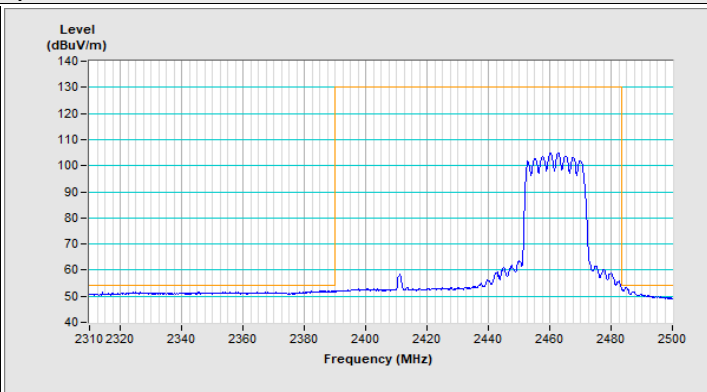


Vertical (Average)

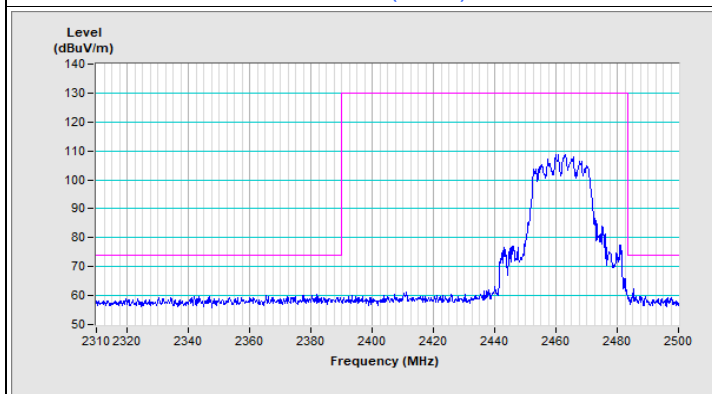
802.11ax (HE20) Channel 11



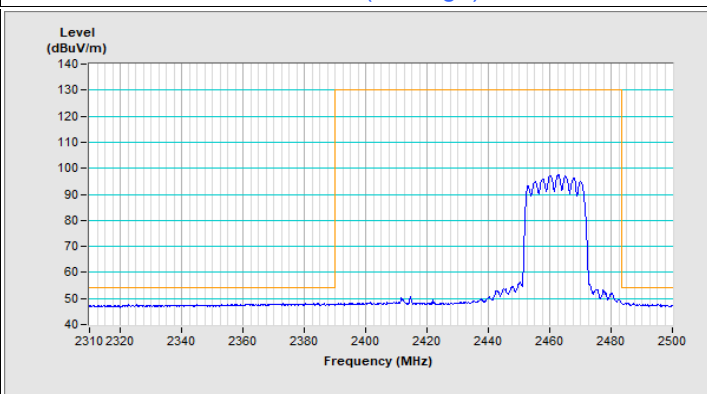
Horizontal (Peak)



Horizontal (Average)



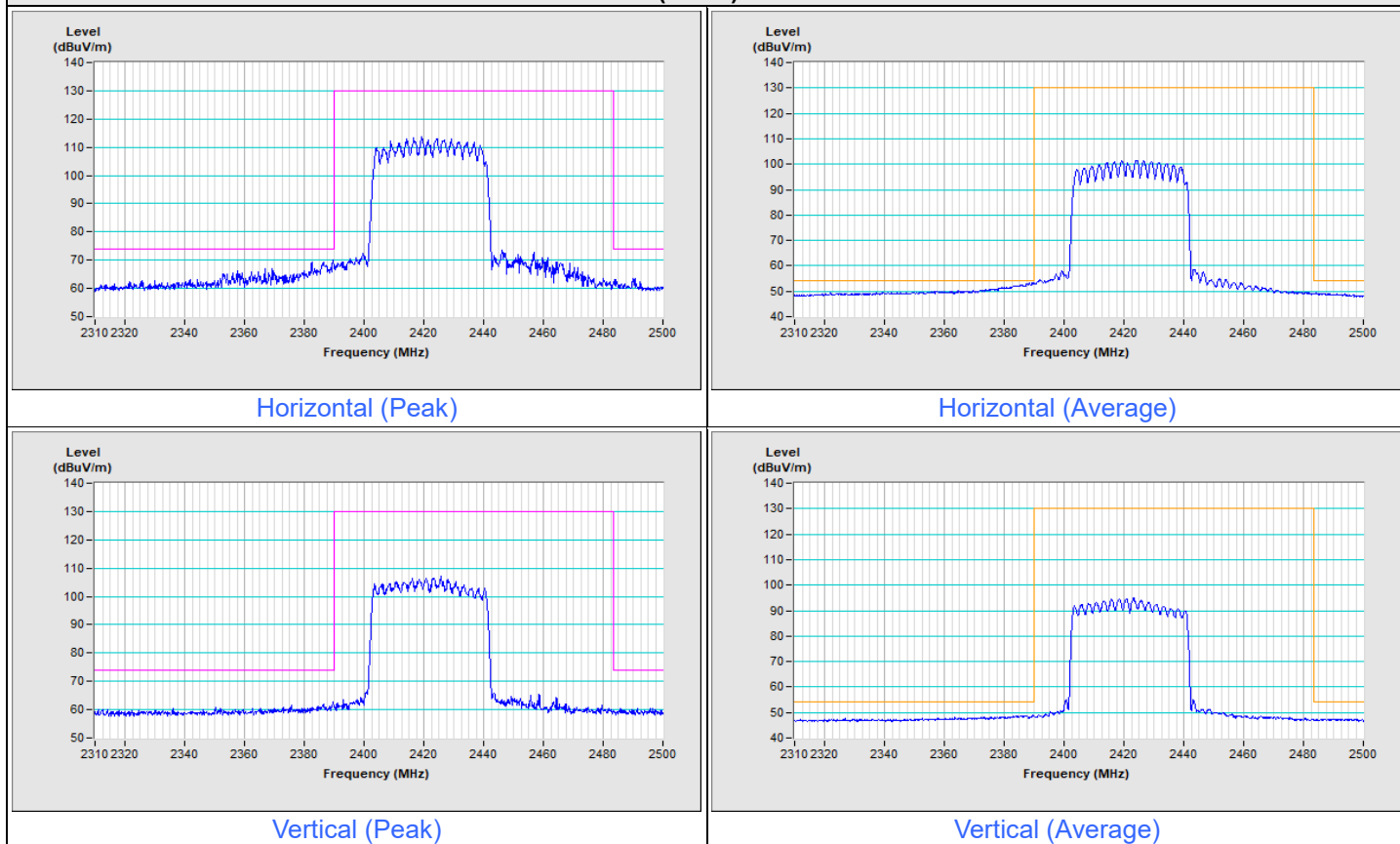
Vertical (Peak)



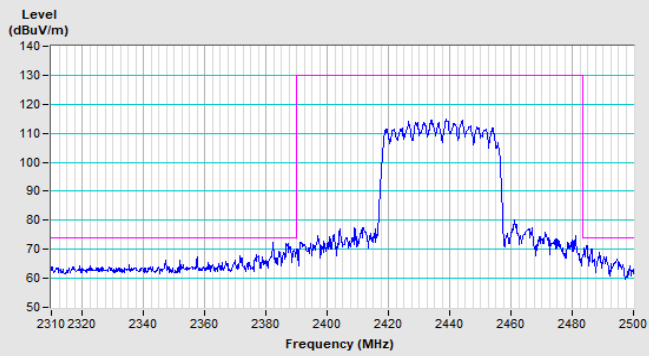
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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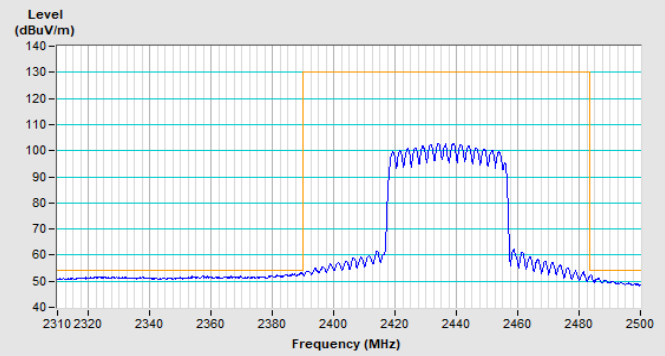
802.11ax (HE40) Channel 3



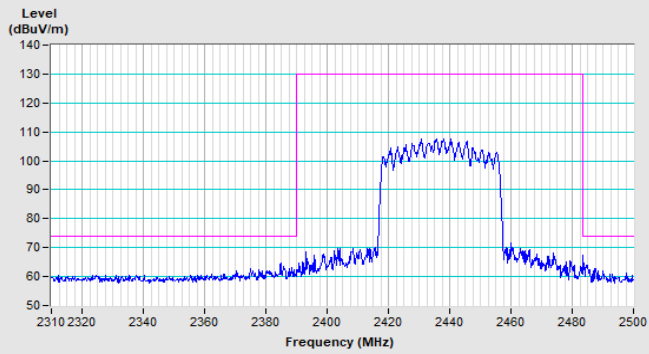
802.11ax (HE40) Channel 6



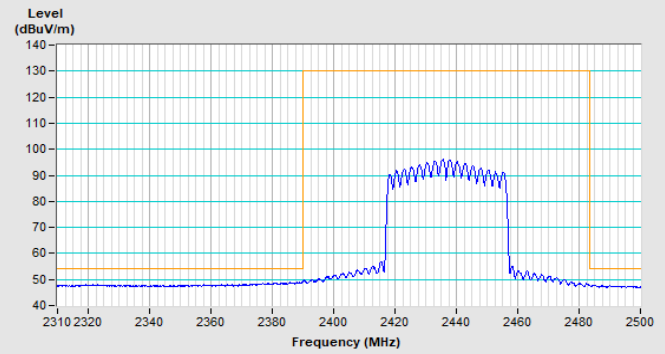
Horizontal (Peak)



Horizontal (Average)

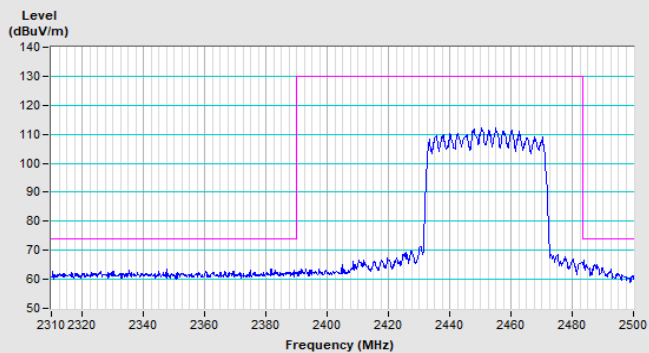


Vertical (Peak)

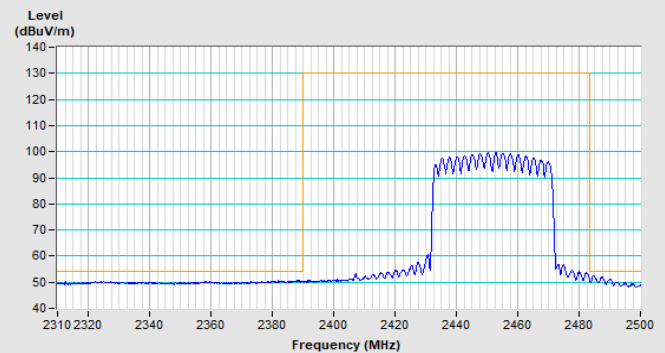


Vertical (Average)

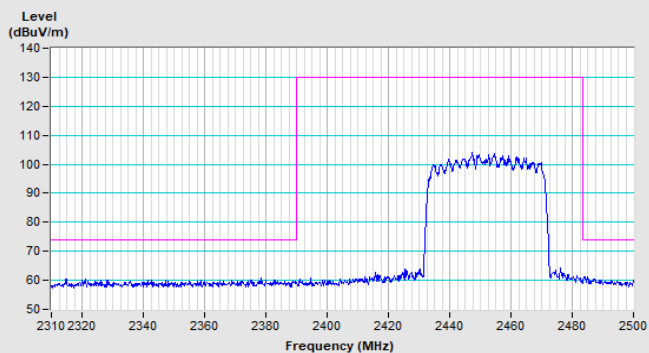
802.11ax (HE40) Channel 9



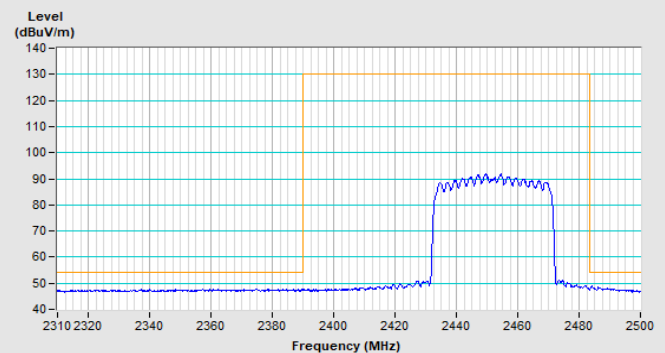
Horizontal (Peak)



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:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@bureauveritas.com

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

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

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