

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Report No.: RFBAMQ-WTW-P24050205-3
FCC ID: UXX-S5A435A
Product: Ruggedized 5G Router
Brand: Ericsson
Model No.: S5A435A
Received Date: 2024/5/9
Test Date: 2024/5/20 ~ 2024/6/27
Issued Date: 2024/7/29
Applicant: Ericsson Enterprise Solutions, Inc.
Address: 1100 West Idaho Street ,Boise ,ID 83702 USA
Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory
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FCC Registration / 723255 / TW2022
Designation Number:

Approved by: _____

May Chen / Manager

, Date: _____

2024/7/29

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Prepared by : Claire Kuan / Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBAMQ-WTW-P24050205-3	Original release.	2024/7/29

1 Certificate

Product: Ruggedized 5G Router

Brand: Ericsson

Test Model: S5A435A

Sample Status: Engineering sample

Applicant: Ericsson Enterprise Solutions, Inc.

Test Date: 2024/5/20 ~ 2024/6/27

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 -11.73 dB at 0.34531 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.7 dB at 40.31 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 2390.00 and 2483.50 MHz
15.203	Antenna Requirement	Pass	Antenna connector is R-SMA 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	-	1.1 dB
Power Spectral Density	-	1.3 dB
6 dB Bandwidth	-	1050.00 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.6 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.4 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	Ruggedized 5G Router
Brand	Ericsson
Test Model	S5A435A
Status of EUT	Engineering sample
Power Supply Rating	12 Vdc or 24 Vdc
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 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	CDD Mode: 438.789 mW (26.42 dBm) Beamforming Mode: 431.796 mW (26.35 dBm)

Note:

1. The EUT uses following accessories.

Item	Brand	SKU	length
DC cable 4PIN	Cradlepoint	170864-000	3m

2. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3
WLAN (2.4GHz + 5GHz)	WWAN (5G nR + LTE + WCDMA)	GPS

3. The EUT contains certified WWAN module which FCC ID: RI7FN990A28HP.

4. Simultaneously transmission condition.

Condition	Technology
1	Wi-Fi 2.4GHz + Wi-Fi 5GHz + WWAN (5G nR or LTE or 3G)

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

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.

For WLAN							
Ant Set.	RF Chain No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
1	Chain 0 Chain 1	CRADLEPOINT, INC.	CP01	5.74	2.4~2.4835	Monopole	R-SMA
				4.40	5.15~5.25		
				4.63	5.25~5.35		
				5.60	5.47~5.725		
				5.19	5.725~5.85		
2	Chain 0 Chain 1	CRADLEPOINT, INC.	170836-000	2.47	2.4~2.4835	Dipole	R-SMA
				2.18	5.15~5.25		
				2.19	5.25~5.35		
				2.14	5.47~5.725		
				2.47	5.725~5.85		
3	Chain 0 (MIMO 1)	TAOGLAS	MA530.A.CG.003	2.60	2.4~2.4835	Monopole	R-SMA
	Chain 1 (MIMO 2)			0.00	5.15~5.85		
				1.80	2.4~2.4835		
				0.50	5.15~5.85		

For WWAN							
Ant Set.	RF Chain No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
1	Chain 0	TAOGLAS	MA1504_AK_001	-2.70	6.17~6.98	Monopole	SMA
				-2.00	6.98~8.24		
				-0.10	8.24~9.6		
				1.50	1.427~1.518		
				2.70	1.71~1.88		
				2.50	1.85~1.99		
				3.30	1.92~2.17		
				4.50	2.3~2.69		
				1.30	3.3~5		
				2.30	5.15-5.925		
	Chain 1	TAOGLAS	MA1504_AK_001	-4.00	6.17~6.98	Monopole	SMA
				-1.60	6.98~8.24		
				1.20	8.24~9.60		
				2.10	1.427~1.518		
				2.40	1.71~1.88		
				2.90	1.85~1.99		
				1.60	1.92~2.17		
				1.50	2.3~2.69		
				1.00	3.3~5		
				2.00	5.15-5.925		
	Chain 2	TAOGLAS	MA1504_AK_001	-3.80	6.17~6.98	Monopole	SMA
				-3.50	6.98~8.24		
				-0.60	8.24~9.6		
				2.30	1.427~1.518		
				2.30	1.71~1.88		
				1.70	1.85~1.99		
				2.70	1.92~2.17		
				4.10	2.3~2.69		
				1.60	3.3~5		
				2.30	5.15~5.925		
	Chain 3	TAOGLAS	MA1504_AK_001	-3.60	6.17~6.98	Monopole	SMA
				-2.30	6.98~8.24		
				1.80	8.24~9.6		
				1.10	1.427~1.518		
				2.60	1.71~1.88		
				2.90	1.85~1.99		
				2.10	1.92~2.17		
				1.80	2.3~2.69		
				-0.20	3.3~5		
				2.40	5.15~5.925		

For WWAN							
Ant Set.	RF Chain No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
2	Chain 0 Chain 1 Chain 2 Chain 3	CRADLEPOINT, INC.	170801-000	1.42	6.19~7.9	Dipole	SMA
				0.88	1.445~1.515		
				2.69	1.71~2.7		
				4.13	3.4~3.7		
				4.29	5.15~5.925		
For GPS							
1	GPS	Taoglas	AA.162	30	1.562~1.612	Dipole	SMA

* 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:

1. All of modulation mode support beamforming function except 802.11b/g modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), VHT mode for 20 MHz (40 MHz), 802.11ax mode for 20 MHz (40 MHz) therefore the manufacturer will control the power for 802.11n/VHT mode is same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

11 channels are provided for 802.11b, 802.11g, 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

Pre-Scan:	1. The Power Supply has the following models: DC Cable (170864-000) / Adapter (KSA-36W-120300D5) / Adapter (WA-36N12R). Pre-scan these models of AC Adapters and find the worst case as a representative test condition. 2. EUT's Antenna (EUT) can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. Power Supply Worst Condition: Adapter (WA-36N12R) 2. X-axis/ Y-axis/ Z-axis Worst Condition: Mode A: Monopole Antenna ->Y-Axis; Mode B: EUT->X-Axis

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	-	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g	CDD	1, 6, 11	BPSK	6Mb/s
		802.11n (HT20)	CDD & Beamforming	1, 6, 11	BPSK	MCS0
		802.11n (HT40)	CDD & Beamforming	3, 6, 9	BPSK	MCS0
		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
Power Spectral Density / 6 dB Bandwidth / Conducted Out of Band Emissions	-	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g	CDD	1, 6, 11	BPSK	6Mb/s
		802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
		802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
AC Power Conducted Emissions	A	802.11g	CDD	6	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	A, B	802.11g	CDD	6	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	A, B	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	Antenna model: CP01				
	B	Antenna model: 170836-000				
Note: Partial RU (resource unit) mechanism is not supported.						

3.5 Duty Cycle of Test Signal

802.11b: Duty cycle = 2.625 ms / 2.637 ms x 100% = 99.5%

802.11g: Duty cycle = 0.433 ms / 0.449 ms x 100% = 96.4%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.16 \text{ dB}$

802.11n (HT20): Duty cycle = 3.787 ms / 3.803 ms x 100% = 99.6%

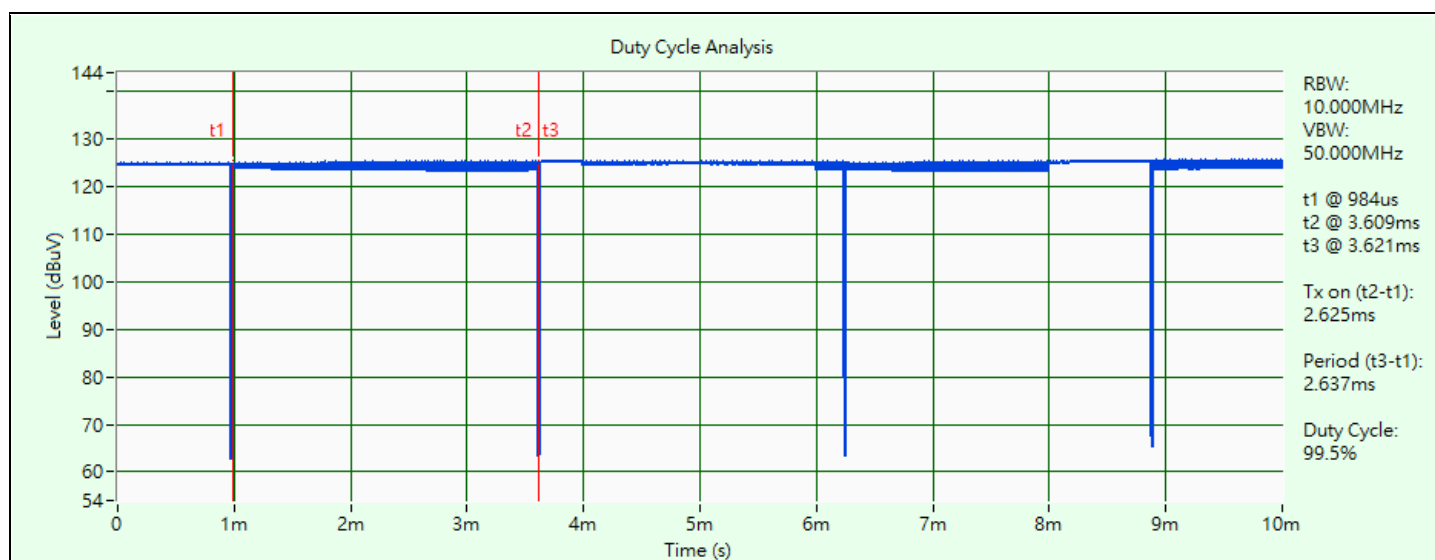
802.11n (HT40): Duty cycle = 3.928 ms / 3.943 ms x 100% = 99.6%

VHT20: Duty cycle = 3.787 ms / 3.803 ms x 100% = 99.6%

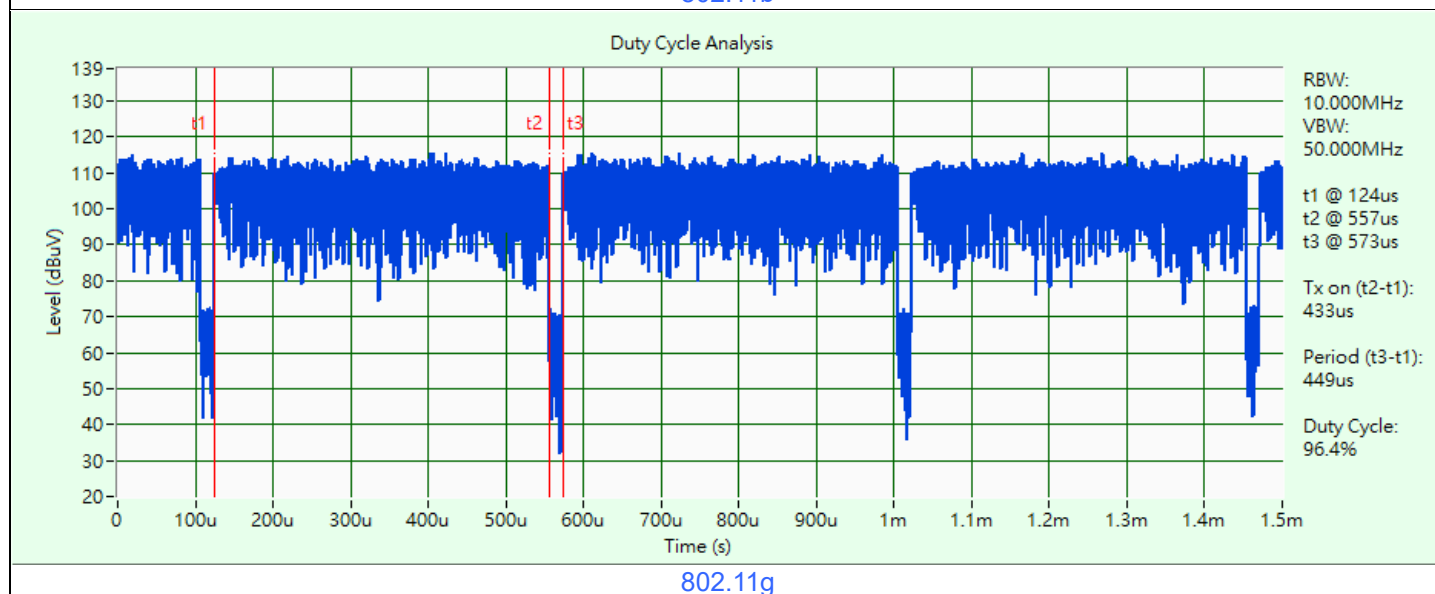
VHT40: Duty cycle = 3.928 ms / 3.943 ms x 100% = 99.6%

802.11ax (HE20): Duty cycle = 3.787 ms / 3.803 ms x 100% = 99.6%

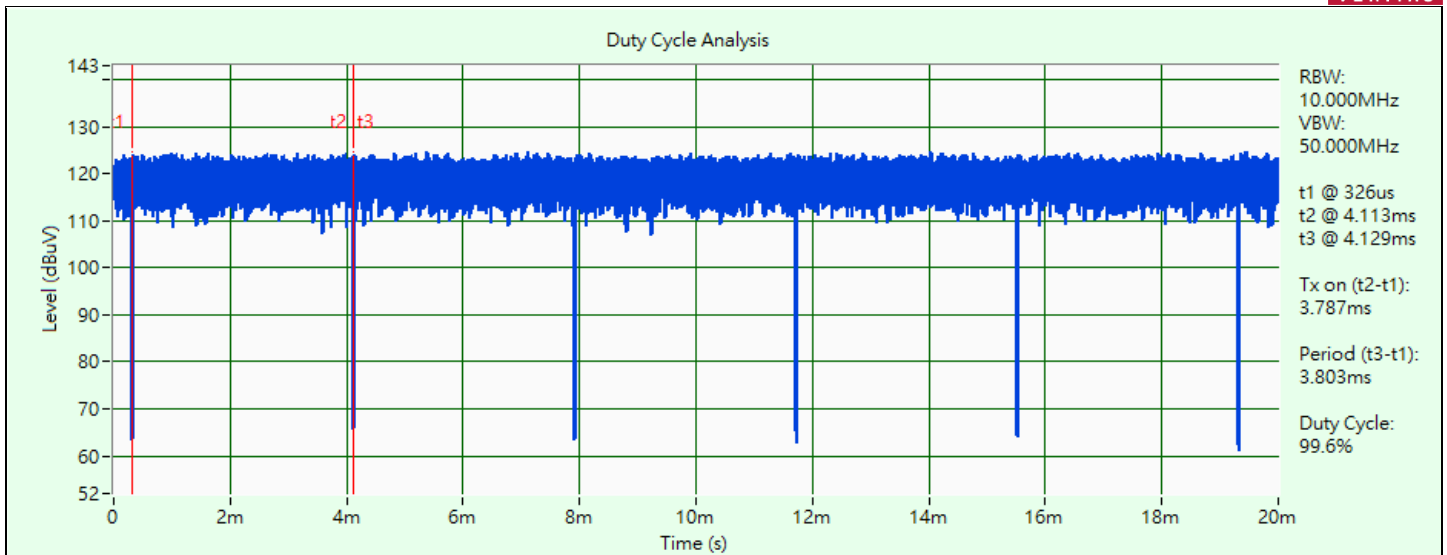
802.11ax (HE40): Duty cycle = 3.928 ms / 3.943 ms x 100% = 99.6%



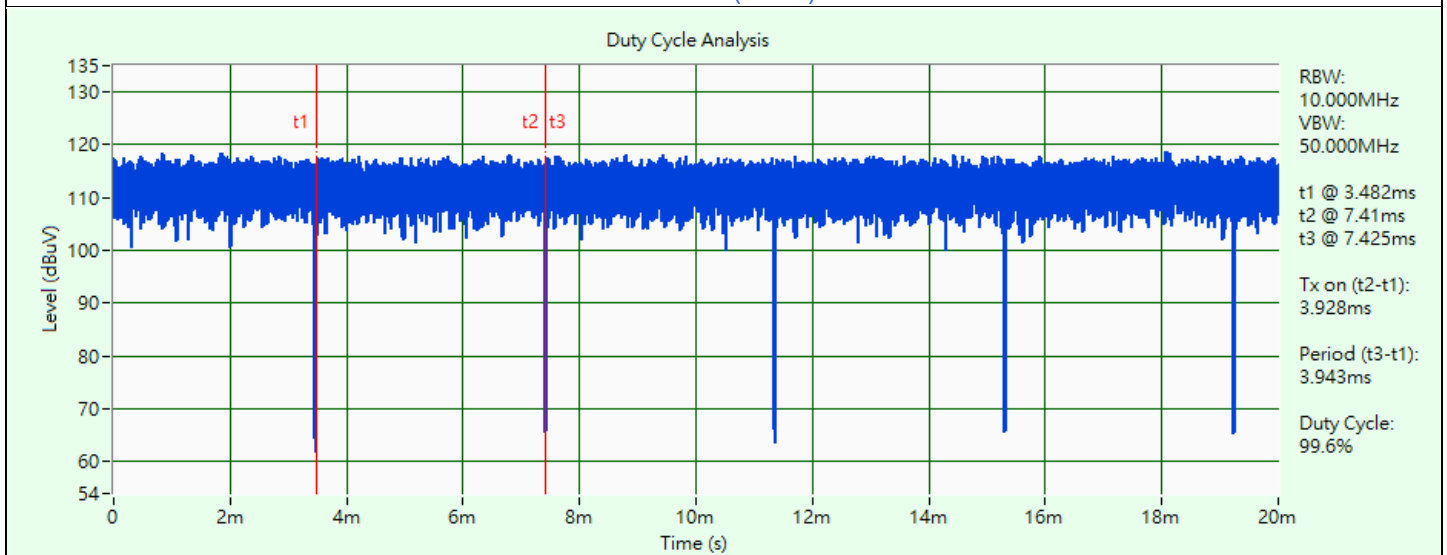
802.11b



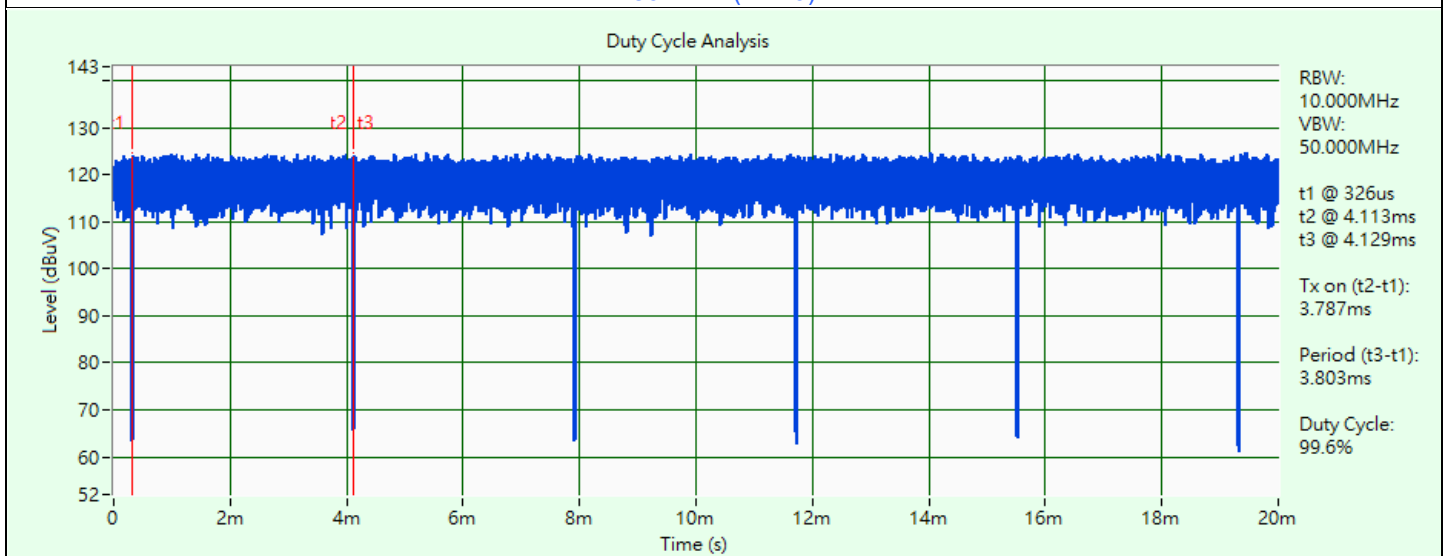
802.11g



802.11n (HT20)

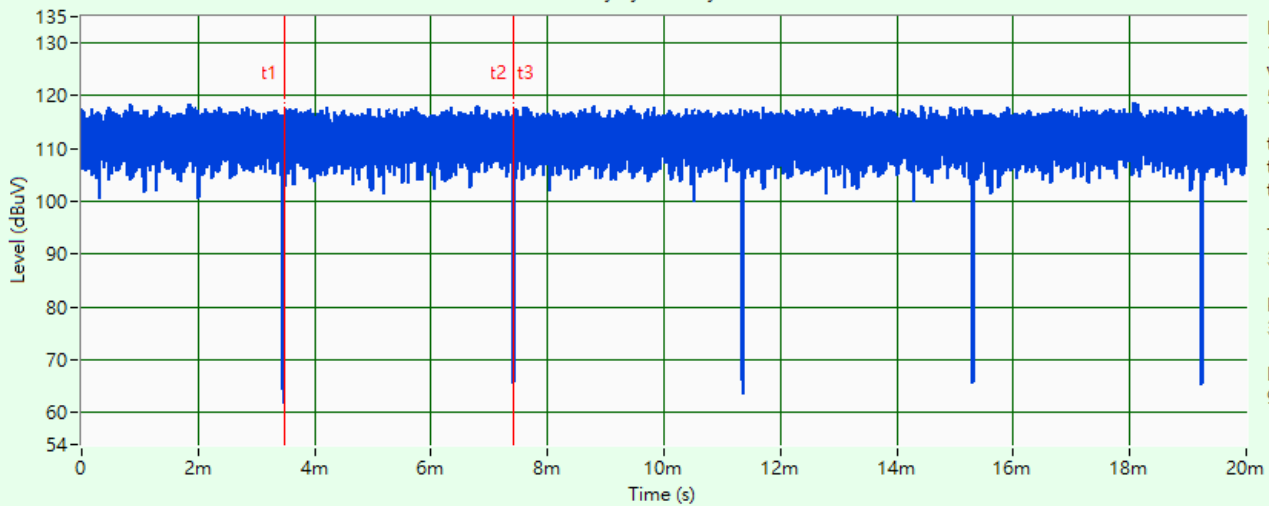


802.11n (HT40)



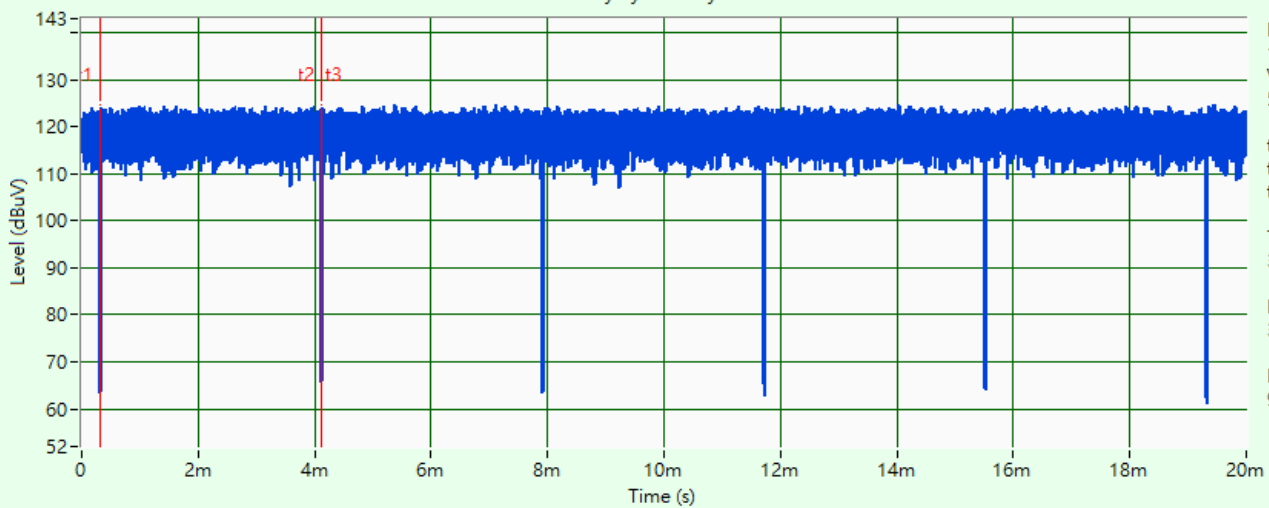
VHT20

Duty Cycle Analysis



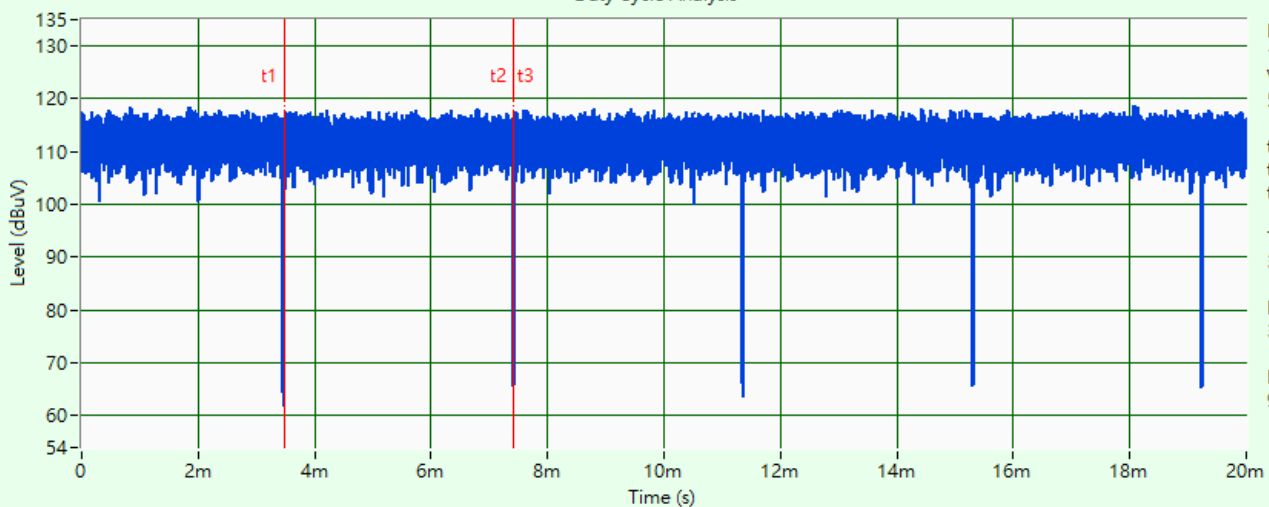
VHT40

Duty Cycle Analysis



802.11ax (HE20)

Duty Cycle Analysis



802.11ax (HE40)

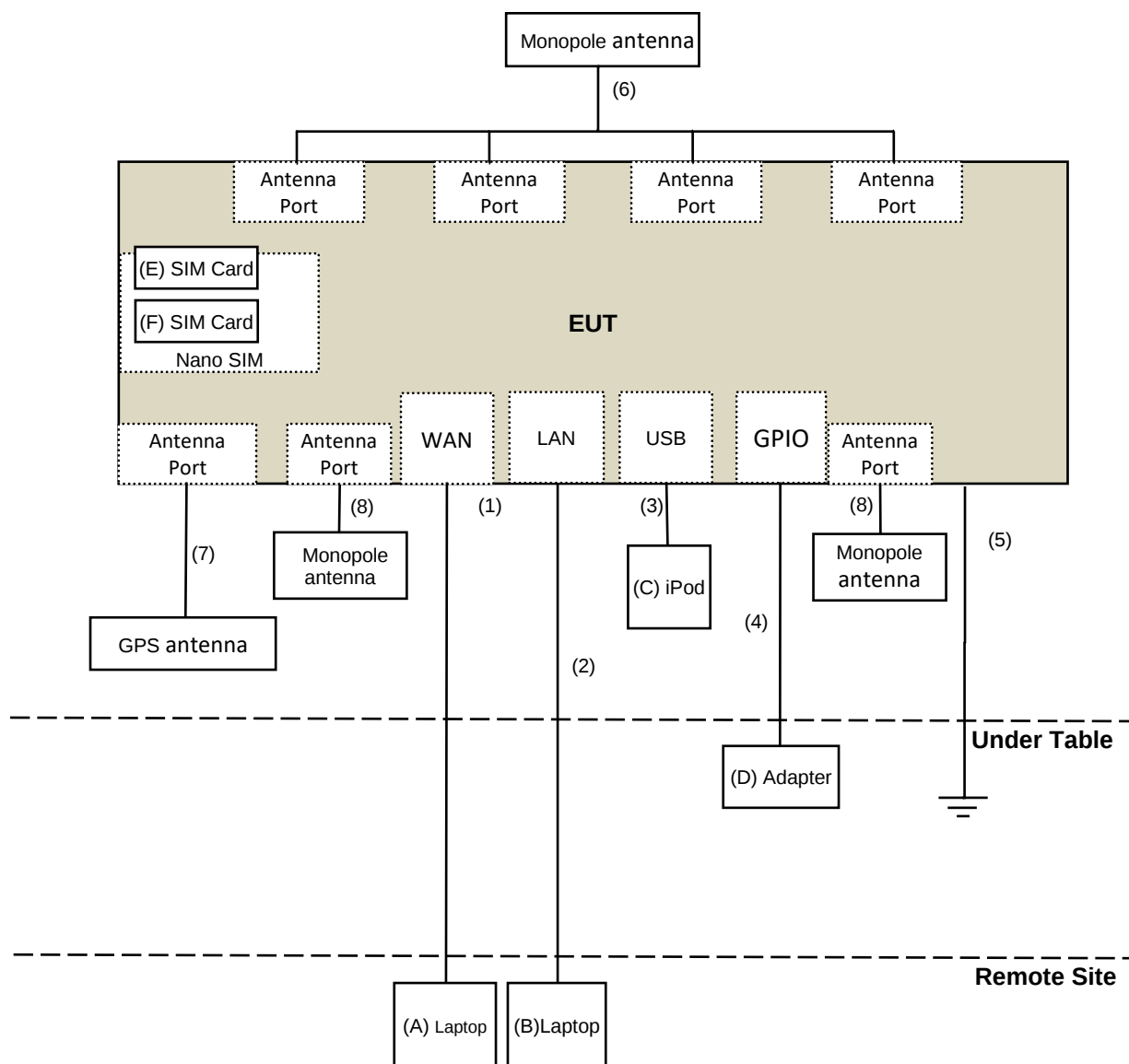
3.6 Test Program Used and Operation Descriptions

Controlling software (qdart_conn.win.1.0_installer_00089.1) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

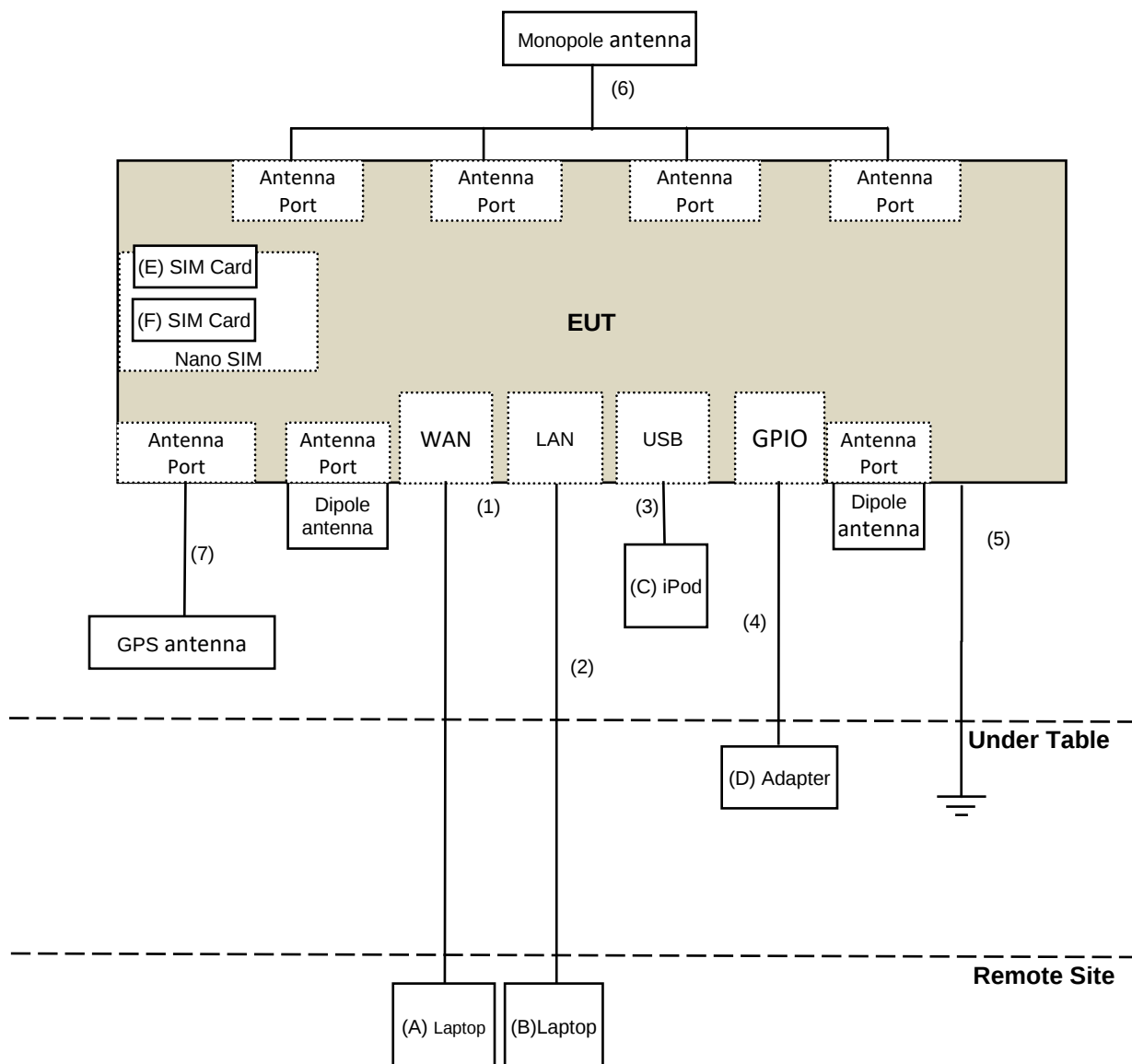
3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emissions test :

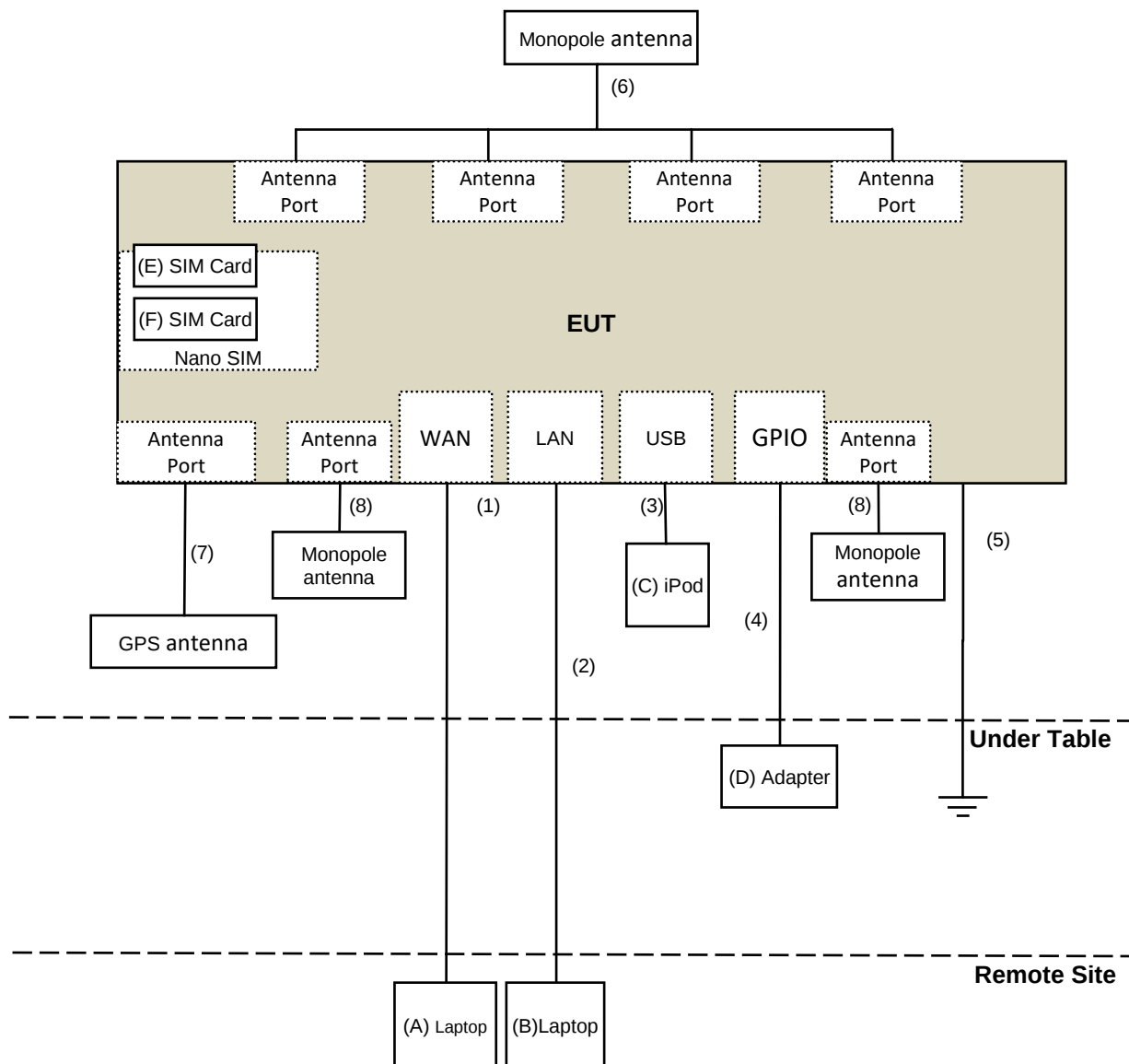
Mode A



Mode B



For AC Power Conducted Emission Test :
Mode A



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Lenovo	20U5S01X00 L14	PF-28LKK7	N/A	Provided by Lab
B	Laptop	Lenovo	20U5S01X00 L14	PF-1ANPYA	N/A	Provided by Lab
C	iPod	Apple	MC749TA/A	CC4DMFKUDFDM	N/A	Provided by Lab
D	AC Adapter	ADP	WA-36N12R	N/A	N/A	Supplied by applicant
E	SIM Card	Keysight	N/A	N/A	N/A	Provided by Lab
F	SIM Card	Keysight	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	No	0	Provided by Lab
2	RJ-45 Cable	1	10	No	0	Provided by Lab
3	USB Cable	1	0.1	YES	0	Provided by Lab
4	DC Cable	1	1.5	No	0	Supplied by applicant
5	GND Cable	1	1.5	No	0	Provided by Lab
6	RF Cable	1	5	YES	0	Supplied by applicant
7	RF Cable	1	2.8	Yes	0	Supplied by applicant
8	RF Cable	2	1.8	Yes	0	Supplied by applicant

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
Pulse Power Sensor Anritsu	MA2411B	1726434	2023/6/19	2024/6/18
RF Power Meter Anritsu	ML2495A	1529002	2023/6/17	2024/6/16

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/5/31

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
MXA Signal Analyzer Keysight	N9020B	MY60112408	2024/3/7	2025/3/6
Software	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/5/31

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 Telegartner	50 ohm	3	2023/10/20	2024/10/19
EMI Test Receiver R&S	ESCS 30	847124/029	2023/10/18	2024/10/17
Fixed Attenuator STI	STI02-2200-10	005	2024/2/19	2025/2/18
LISN R&S	ESH3-Z5	835239/001	2024/4/3	2025/4/2
		848773/004	2023/10/13	2024/10/12
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2024/2/19	2025/2/18
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2024/5/27

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
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-361	2023/10/13	2024/10/12
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	2024/2/17	2025/2/16
Loop Antenna Electro-Metrics	EM-6879	264	2024/2/23	2025/2/22
MXE EMI Receiver Keysight	N9038A	MY59050100	2023/6/13 2024/6/19	2024/6/12 2025/6/18
Preamplifier EMCI	EMC330N	980852	2024/2/17	2025/2/16
	EMC001340	980142	2024/2/19	2025/2/18
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2024/2/19	2025/2/18
		LOOPCAB-002	2024/2/19	2025/2/18
RF Coaxial Cable PEWC	8D	001	2024/2/16	2025/2/15
		966-3-2	2024/2/16	2025/2/15
		966-3-3	2024/2/16	2025/2/15
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 3.
2. Tested Date: 2024/5/28 ~ 2024/6/27

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	BBHA 9120D	9120D-406	2023/11/12	2024/11/11
	BBHA 9170	9170-739	2023/11/12	2024/11/11
Preamplifier EMCI	EMC12630SE	980384	2024/1/29	2025/1/28
	EMC184045SE	980387	2023/8/9	2024/8/8
PXA Signal Analyzer Keysight	N9030B	MY57142938	2024/3/20	2025/3/19
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2024/1/29	2025/1/28
	EMC102-KM-KM-4000	200214	2024/1/29	2025/1/28
	EMC104-SM-SM-1500	180504	2024/1/29	2025/1/28
	EMC104-SM-SM-2000	180601	2024/1/29	2025/1/28
	EMC104-SM-SM-6000	210201	2024/1/29	2025/1/28
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 3.
2. Tested Date: 2024/5/20 ~ 2024/5/27

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 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

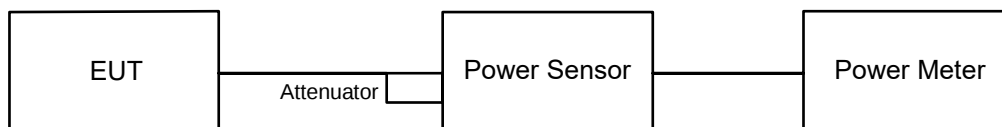
Notes:

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:

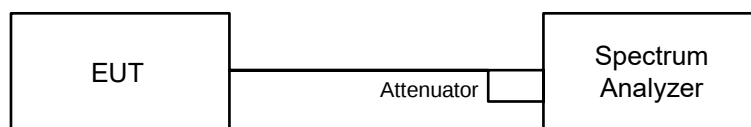
A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

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

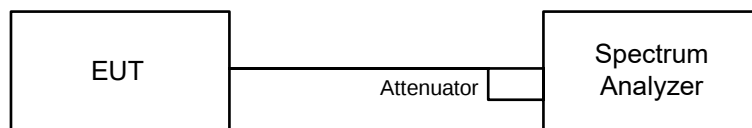


6.2.2 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to: 3 kHz.
- Set the VBW $\geq 3 \times$ RBW.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

6.3 6 dB Bandwidth

6.3.1 Test Setup

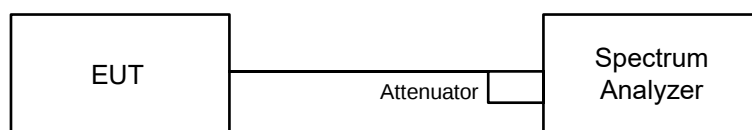


6.3.2 Test Procedure

- 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

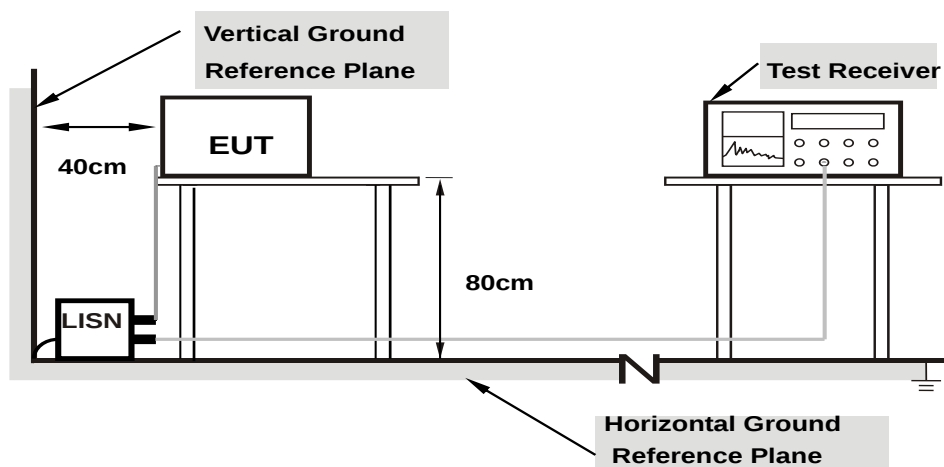
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

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

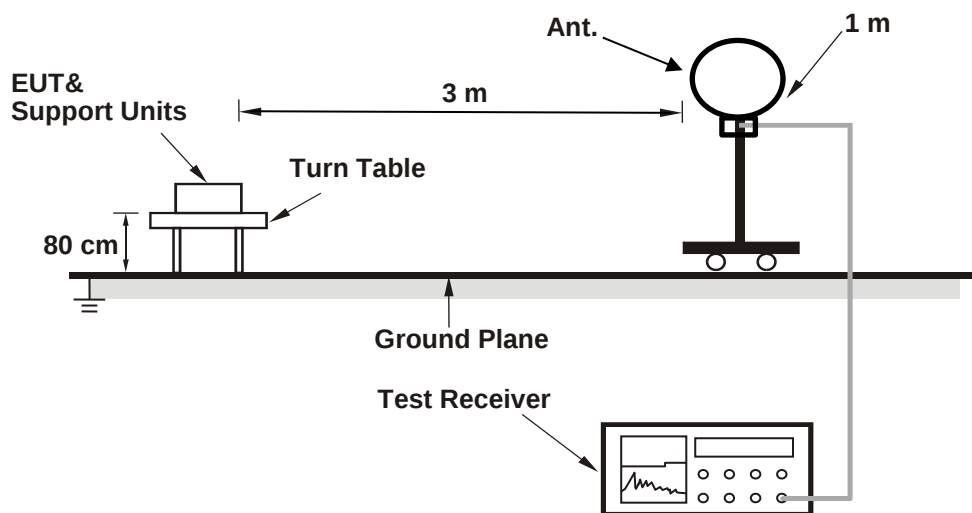
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

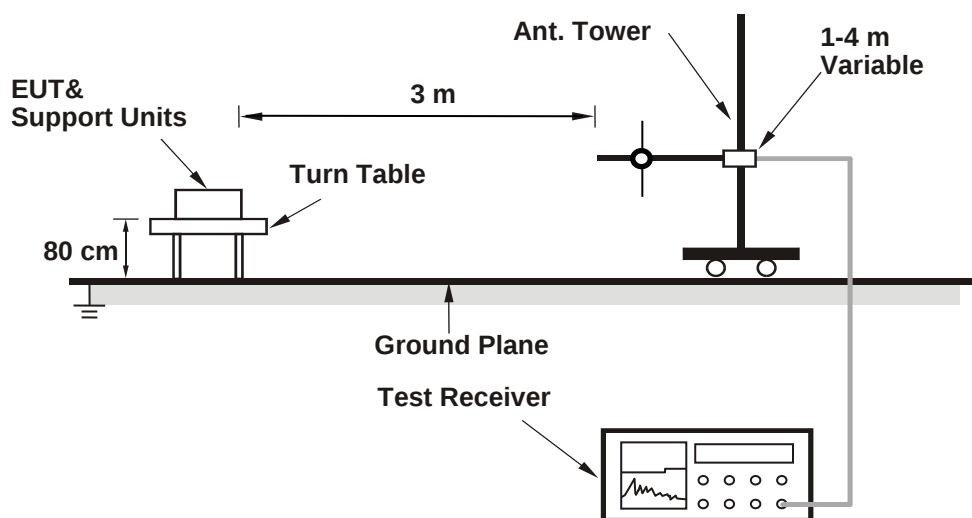
6.6 Unwanted Emissions below 1 GHz

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

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- 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.
- 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:

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

For Radiated emission above 30 MHz

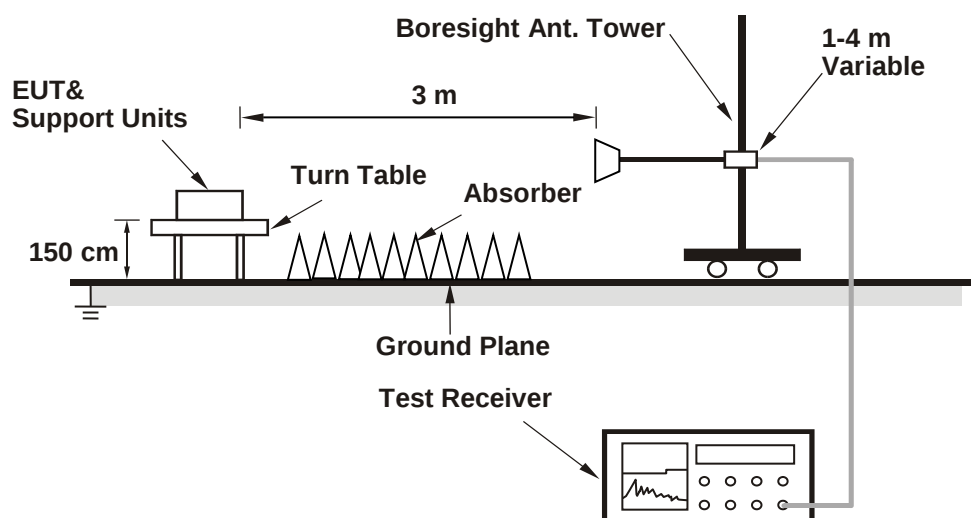
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
- 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:	12 Vdc	Environmental Conditions:	26°C, 63% RH	Tested By:	Katina Lu
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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	19.26	19.34	170.235	22.31	30	Pass
6	2437	22.28	22.51	347.282	25.41	30	Pass
11	2462	18.92	18.88	155.251	21.91	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

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	20.96	21.10	253.563	24.04	30	Pass
6	2437	23.27	23.55	438.789	26.42	30	Pass
11	2462	22.75	22.61	370.754	25.69	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) 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	17.55	17.34	111.085	20.46	30	Pass
6	2437	22.79	23.27	402.432	26.05	30	Pass
11	2462	11.42	11.84	29.143	14.65	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) 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	16.27	16.45	86.521	19.37	30	Pass
6	2437	16.95	16.80	97.408	19.89	30	Pass
9	2452	14.90	14.89	61.735	17.91	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

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	17.71	17.52	115.514	20.63	30	Pass
6	2437	22.90	23.44	415.785	26.19	30	Pass
11	2462	11.74	12.48	32.629	15.14	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

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	16.40	16.62	89.571	19.52	30	Pass
6	2437	17.10	16.93	100.604	20.03	30	Pass
9	2452	15.06	15.07	64.199	18.08	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

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	17.90	17.72	120.816	20.82	30	Pass
6	2437	23.08	23.59	431.796	26.35	30	Pass
11	2462	12.14	13.28	37.65	15.76	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

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	16.52	16.81	92.848	19.68	30	Pass
6	2437	17.24	17.08	104.017	20.17	30	Pass
9	2452	15.16	15.22	66.075	18.20	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 5.74 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) 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	17.55	17.34	111.085	20.46	27.25	Pass
6	2437	22.79	23.27	402.432	26.05	27.25	Pass
11	2462	11.42	11.84	29.143	14.65	27.25	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 8.75 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.75 - 6) = 27.25$ dBm.

802.11n (HT40) 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	16.27	16.45	86.521	19.37	27.25	Pass
6	2437	16.95	16.80	97.408	19.89	27.25	Pass
9	2452	14.90	14.89	61.735	17.91	27.25	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 8.75 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.75 - 6) = 27.25$ dBm.

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	17.71	17.52	115.514	20.63	27.25	Pass
6	2437	22.90	23.44	415.785	26.19	27.25	Pass
11	2462	11.74	12.48	32.629	15.14	27.25	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 8.75 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.75 - 6) = 27.25$ dBm.

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	16.40	16.62	89.571	19.52	27.25	Pass
6	2437	17.10	16.93	100.604	20.03	27.25	Pass
9	2452	15.06	15.07	64.199	18.08	27.25	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 8.75 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.75 - 6) = 27.25$ dBm.

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	17.90	17.72	120.816	20.82	27.25	Pass
6	2437	23.08	23.59	431.796	26.35	27.25	Pass
11	2462	12.14	13.28	37.65	15.76	27.25	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 8.75 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.75 - 6) = 27.25$ dBm.

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	16.52	16.81	92.848	19.68	27.25	Pass
6	2437	17.24	17.08	104.017	20.17	27.25	Pass
9	2452	15.16	15.22	66.075	18.20	27.25	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 8.75 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.75 - 6) = 27.25$ dBm.

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	17.26	17.44	108.673	20.36
6	2437	20.51	20.68	229.41	23.61
11	2462	16.87	16.87	97.281	19.88

802.11g CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	17.84	17.97	123.475	20.92
6	2437	20.69	20.61	232.3	23.66
11	2462	17.84	17.80	121.069	20.83

802.11n (HT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	12.21	12.49	34.376	15.36
6	2437	19.65	19.68	185.154	22.68
11	2462	11.21	11.63	27.768	14.44

802.11n (HT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	10.80	11.34	25.637	14.09
6	2437	12.12	12.05	32.325	15.10
9	2452	9.75	10.01	19.464	12.89

VHT20 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	12.33	12.62	35.381	15.49
6	2437	19.79	19.87	192.331	22.84
11	2462	11.37	12.11	29.964	14.77

VHT40 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	11.00	11.46	26.585	14.25
6	2437	12.24	12.19	33.307	15.23
9	2452	9.90	10.11	20.029	13.02

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	12.45	12.72	36.286	15.60
6	2437	19.91	20.02	198.411	22.98
11	2462	11.57	12.71	33.019	15.19

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	11.13	11.61	27.46	14.39
6	2437	12.35	12.31	34.201	15.34
9	2452	10.08	10.28	20.852	13.19

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	12.21	12.49	34.376	15.36
6	2437	19.65	19.68	185.154	22.68
11	2462	11.21	11.63	27.768	14.44

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	10.80	11.34	25.637	14.09
6	2437	12.12	12.05	32.325	15.10
9	2452	9.75	10.01	19.464	12.89

VHT20 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	12.33	12.62	35.381	15.49
6	2437	19.79	19.87	192.331	22.84
11	2462	11.37	12.11	29.964	14.77

VHT40 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	11.00	11.46	26.585	14.25
6	2437	12.24	12.19	33.307	15.23
9	2452	9.90	10.11	20.029	13.02

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	12.45	12.72	36.286	15.60
6	2437	19.91	20.02	198.411	22.98
11	2462	11.57	12.71	33.019	15.19

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	11.13	11.61	27.46	14.39
6	2437	12.35	12.31	34.201	15.34
9	2452	10.08	10.28	20.852	13.19

7.2 Power Spectral Density

Input Power:	12 Vdc	Environmental Conditions:	26°C, 63% RH	Tested By:	Katina Lu
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802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-5.59	-3.30	-1.29	5.25	Pass
6	2437	-2.34	-1.43	1.15	5.25	Pass
11	2462	-5.93	-4.85	-2.35	5.25	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. The directional gain is 8.75 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (8.75 - 6) = 5.25$ dBm/3kHz.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-4.12	-4.66	-1.37	5.25	Pass
6	2437	-2.68	-2.33	0.51	5.25	Pass
11	2462	-4.49	-3.65	-1.04	5.25	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. The directional gain is 8.75 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (8.75 - 6) = 5.25$ dBm/3kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-10.69	-10.87	-7.77	5.25	Pass
6	2437	-3.81	-3.29	-0.53	5.25	Pass
11	2462	-12.88	-12.52	-9.69	5.25	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. The directional gain is 8.75 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (8.75 - 6) = 5.25$ dBm/3kHz.

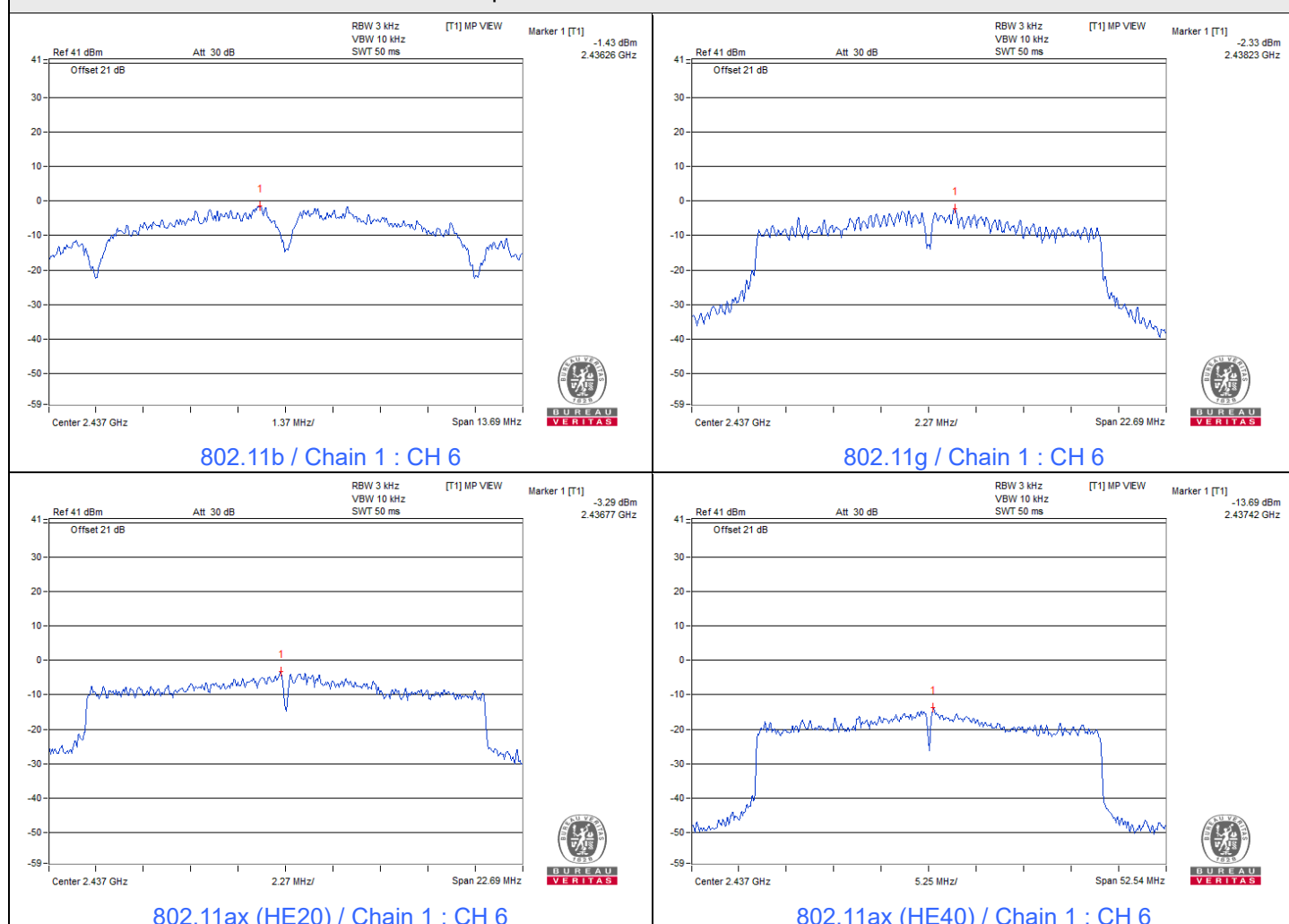
802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
3	2422	-15.68	-15.09	-12.36	5.25	Pass
6	2437	-14.26	-13.69	-10.96	5.25	Pass
9	2452	-16.25	-15.71	-12.96	5.25	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. The directional gain is 8.75 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (8.75 - 6) = 5.25$ dBm/3kHz.

Spectrum Plot of Maximum Value



7.3 6 dB Bandwidth

Input Power:	12 Vdc	Environmental Conditions:	26°C, 63% RH	Tested By:	Katina Lu
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802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	9.07	9.12	0.5	Pass
6	2437	9.08	9.13	0.5	Pass
11	2462	8.60	8.12	0.5	Pass

802.11g

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

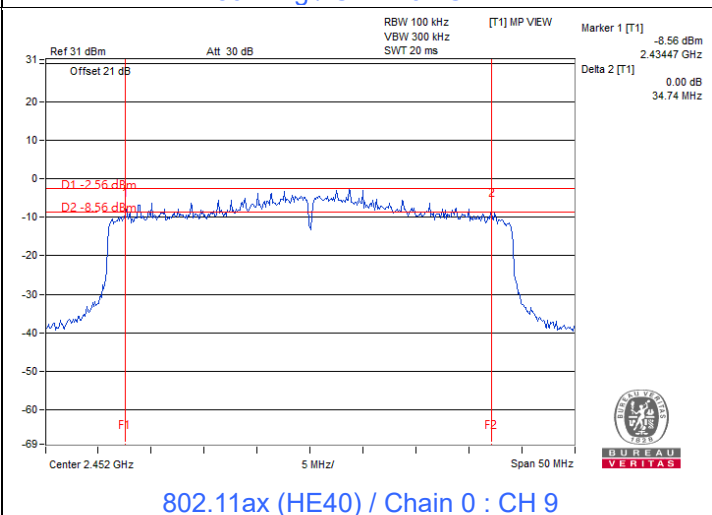
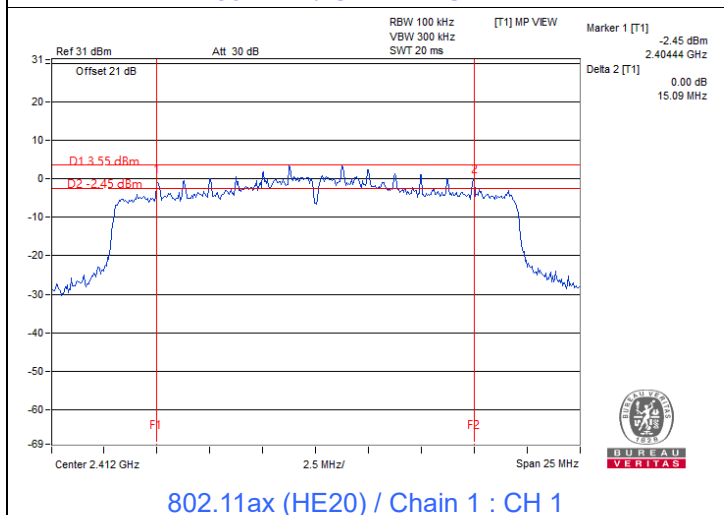
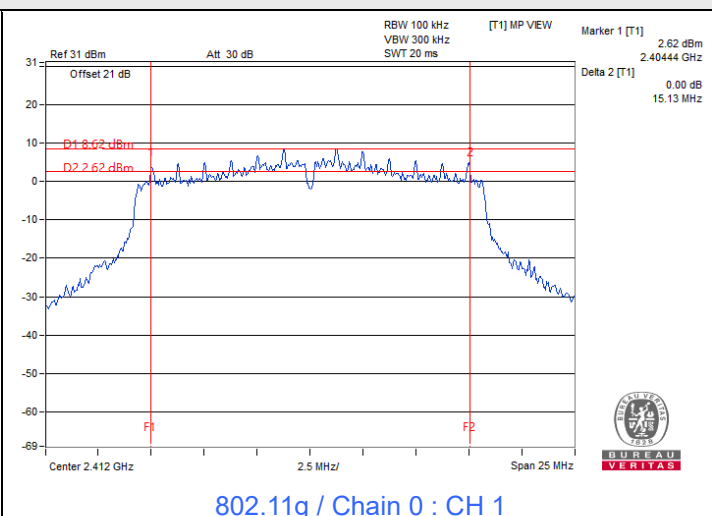
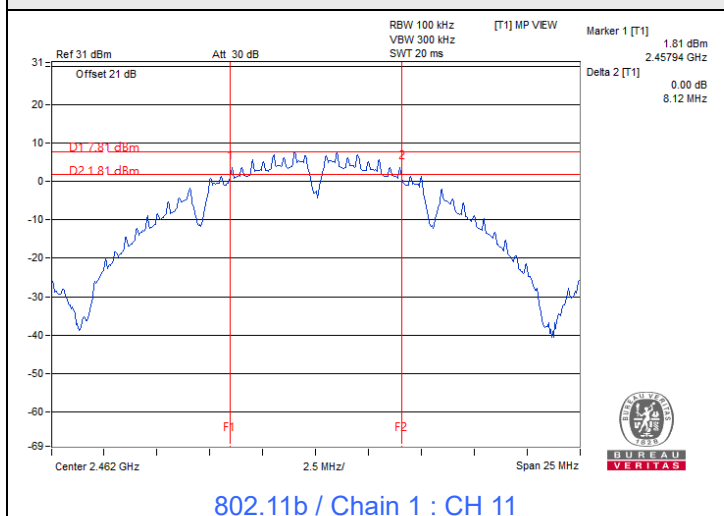
802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	15.10	15.09	0.5	Pass
6	2437	15.11	15.13	0.5	Pass
11	2462	15.14	15.12	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	35.04	35.03	0.5	Pass
6	2437	35.08	35.03	0.5	Pass
9	2452	34.74	35.09	0.5	Pass

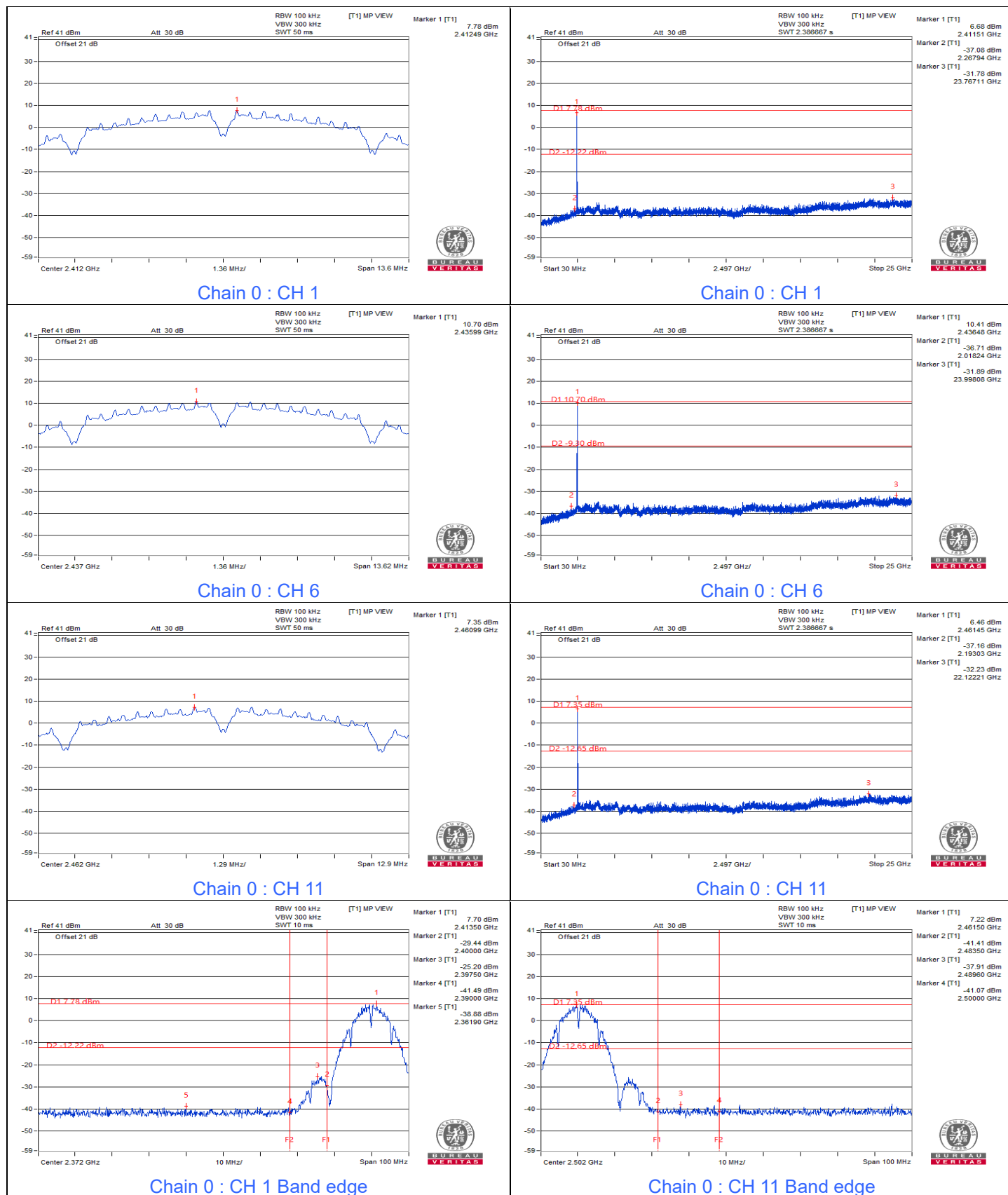
Spectrum Plot of Minimum Value

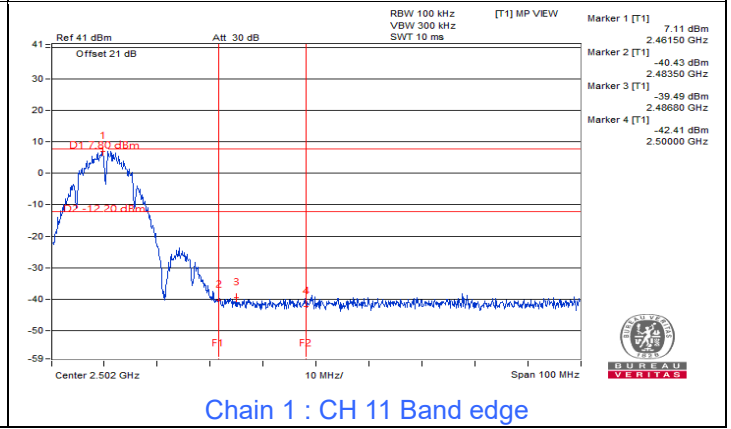
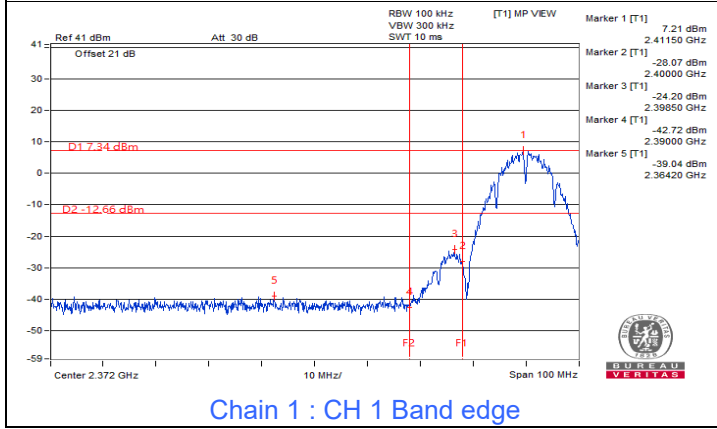
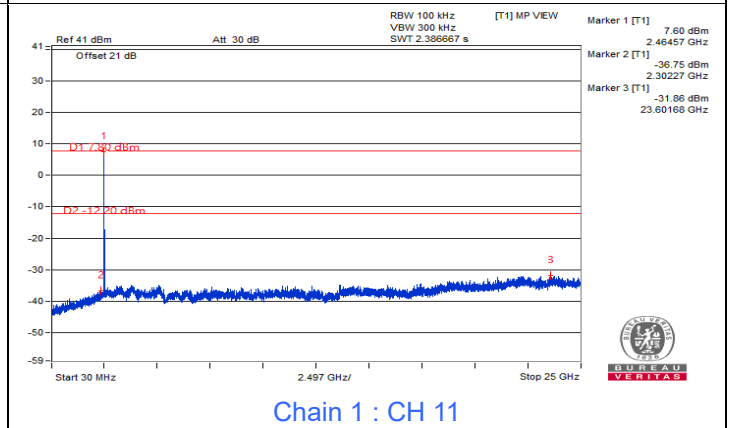
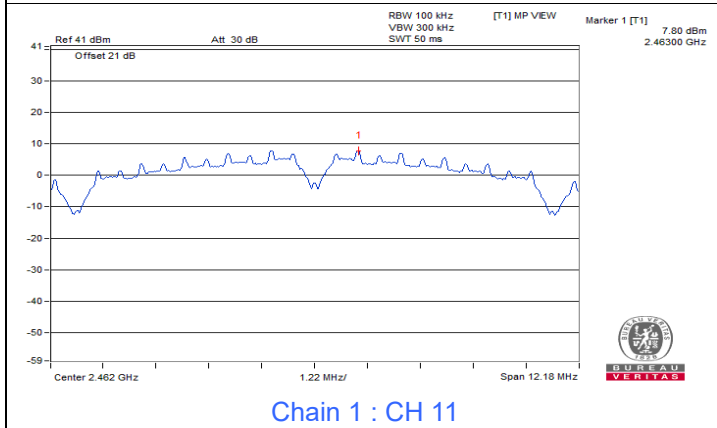
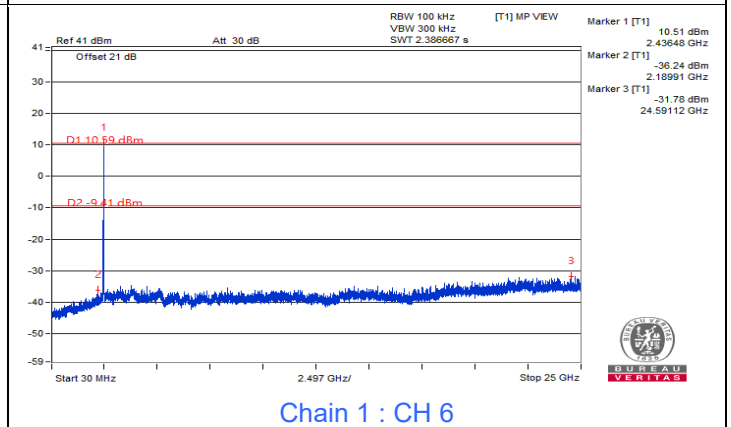
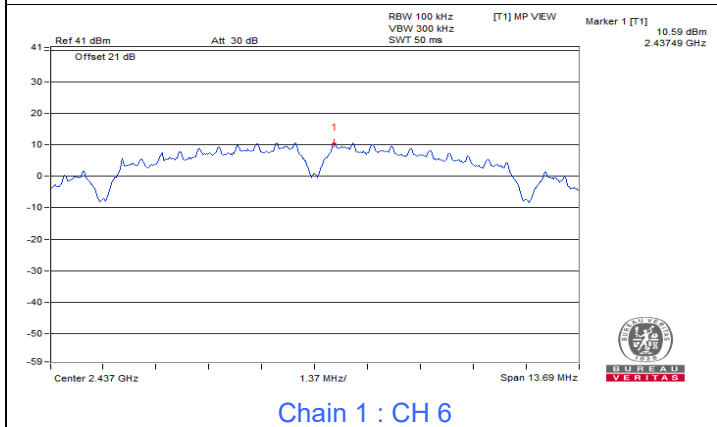
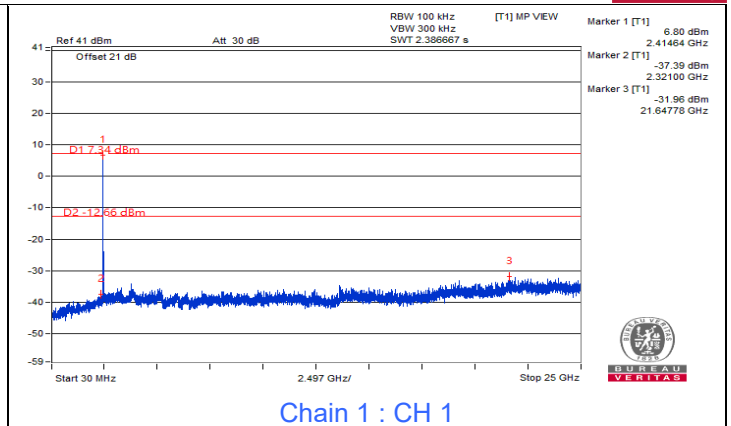
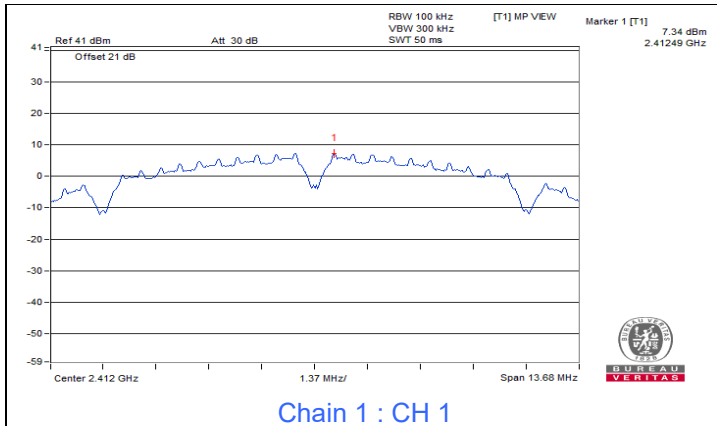


7.4 Conducted Out of Band Emissions

Input Power:	12 Vdc	Environmental Conditions:	26°C, 63% RH	Tested By:	Katina Lu
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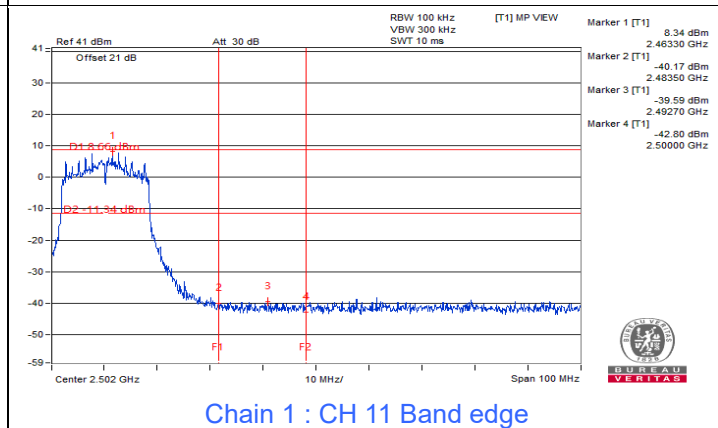
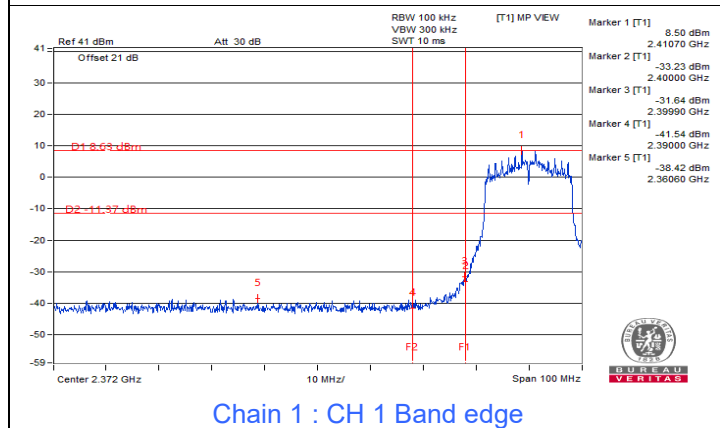
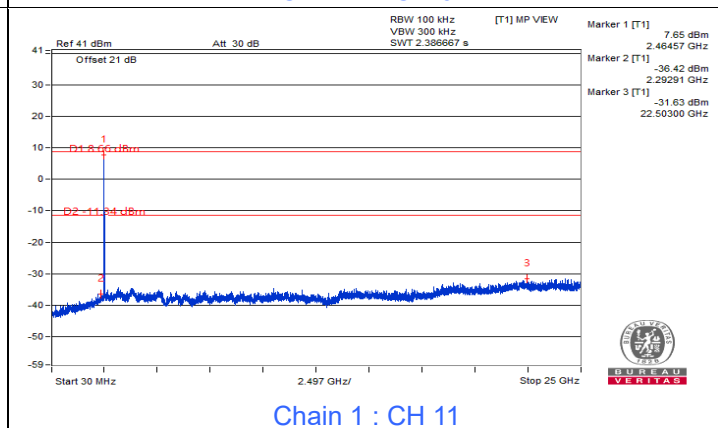
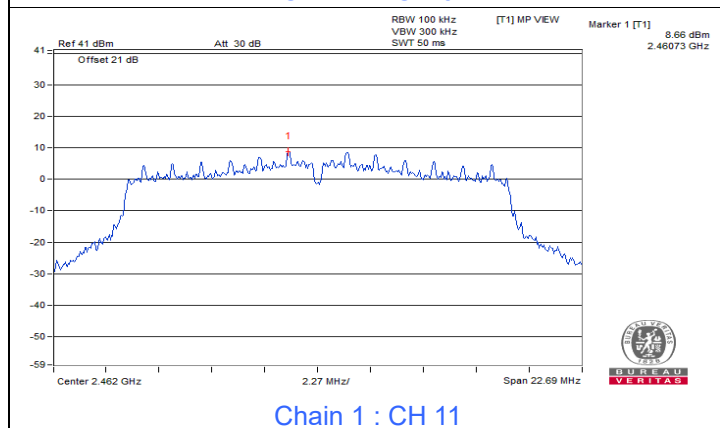
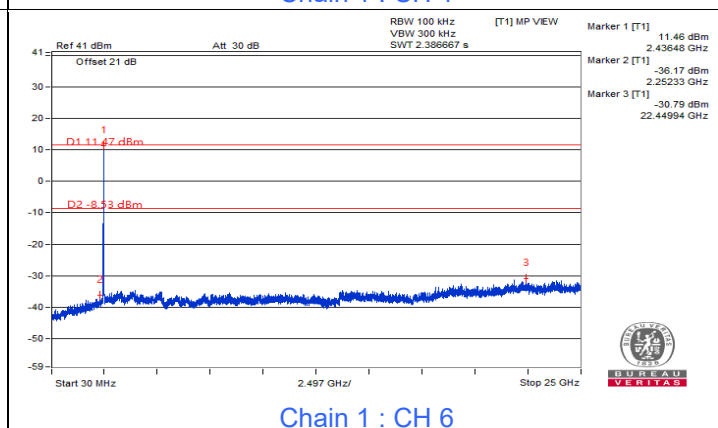
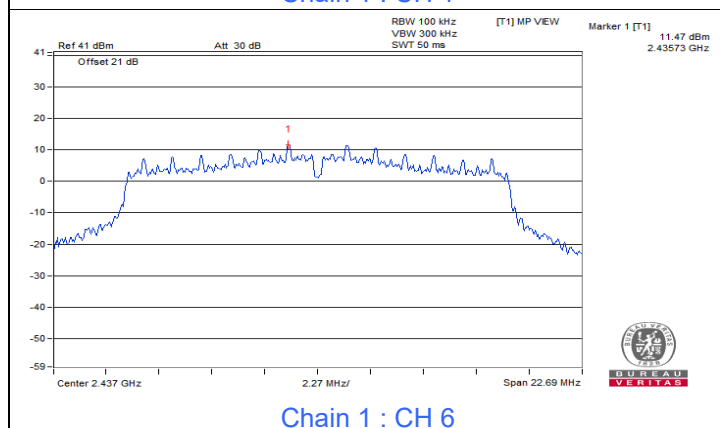
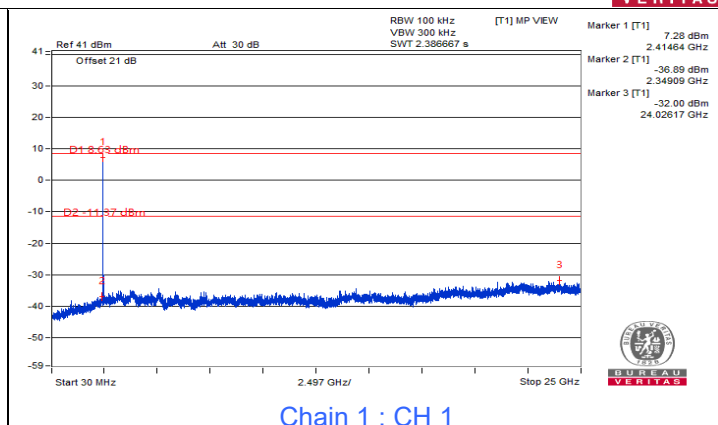
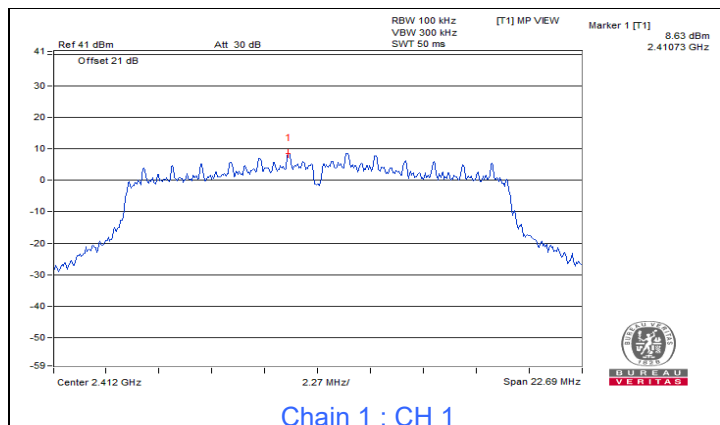
802.11b



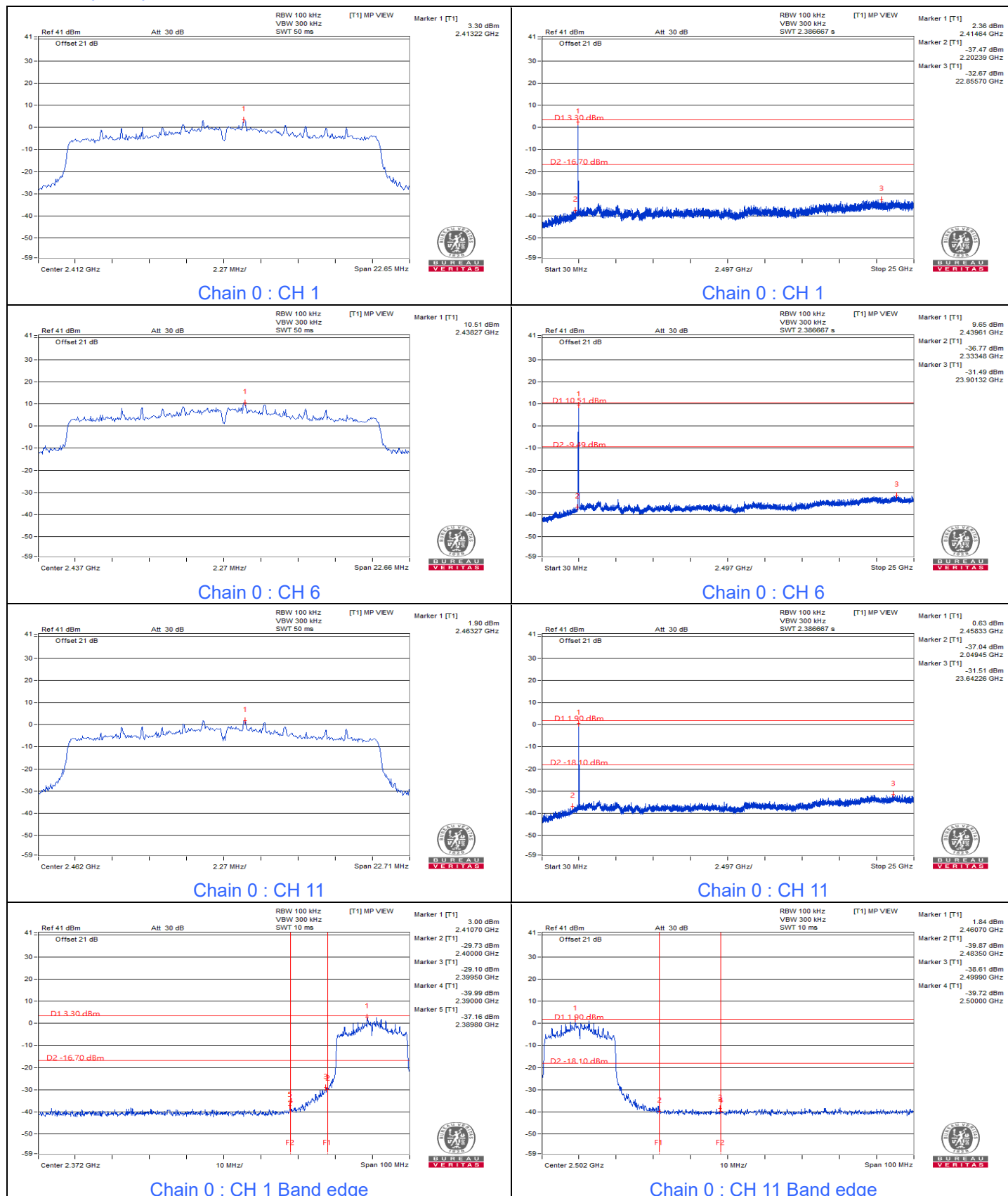


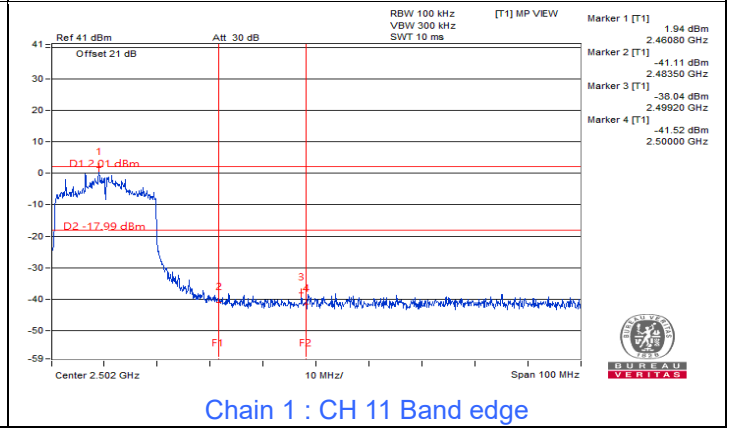
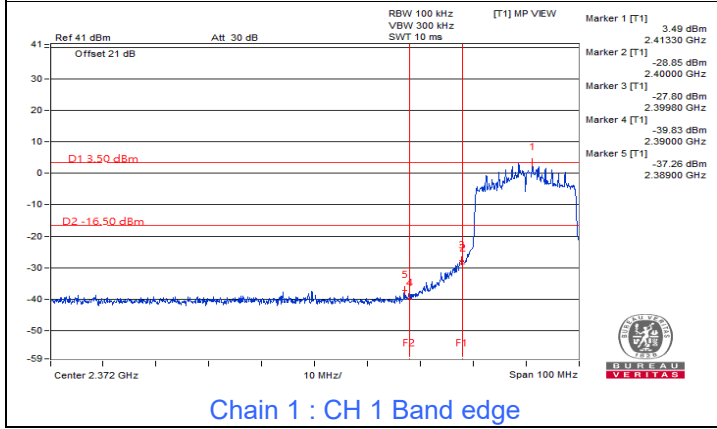
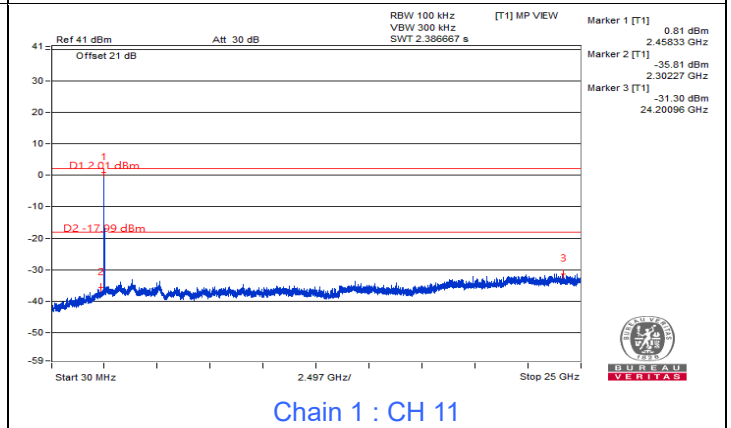
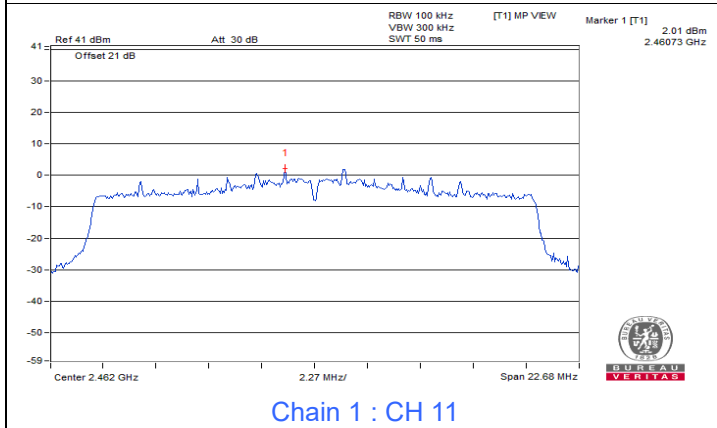
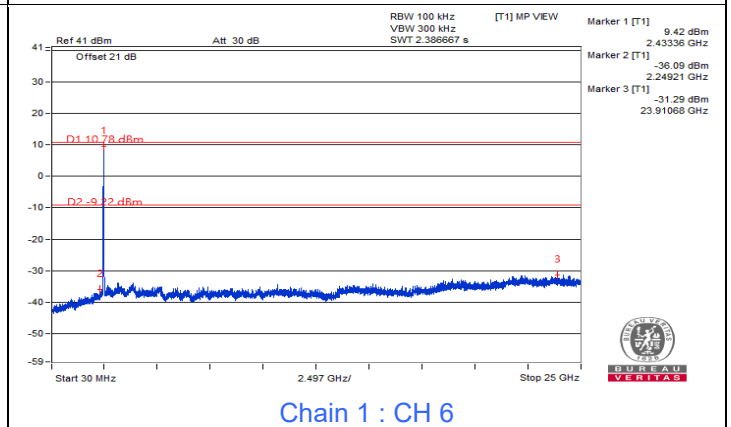
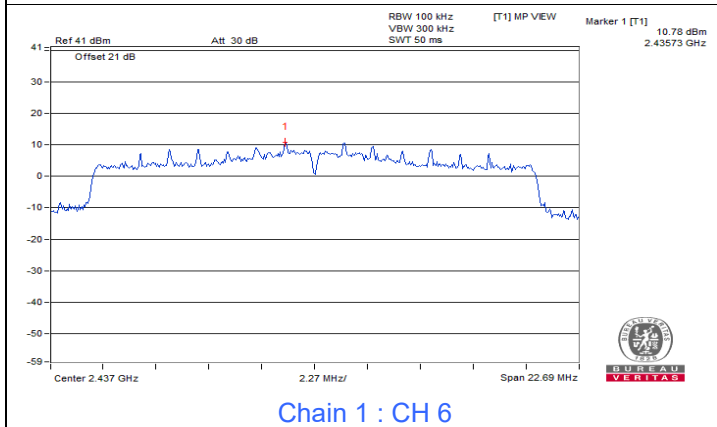
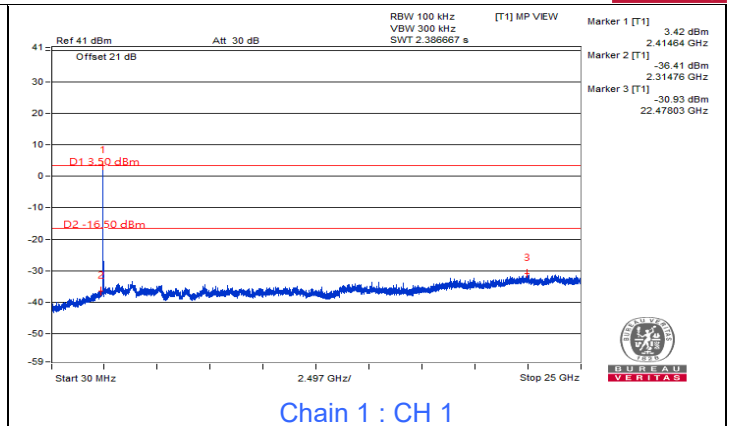
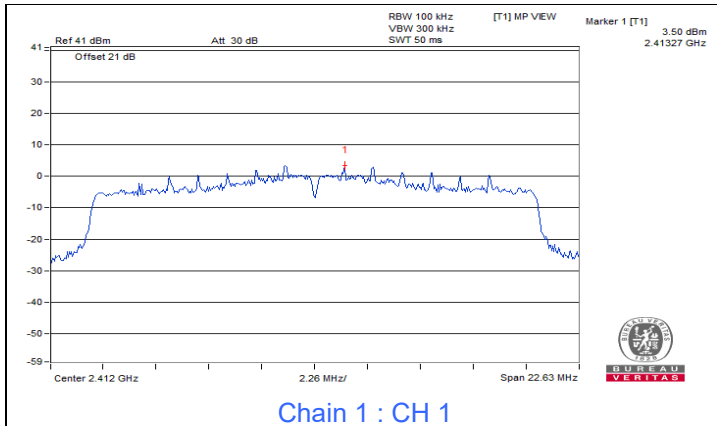
802.11g



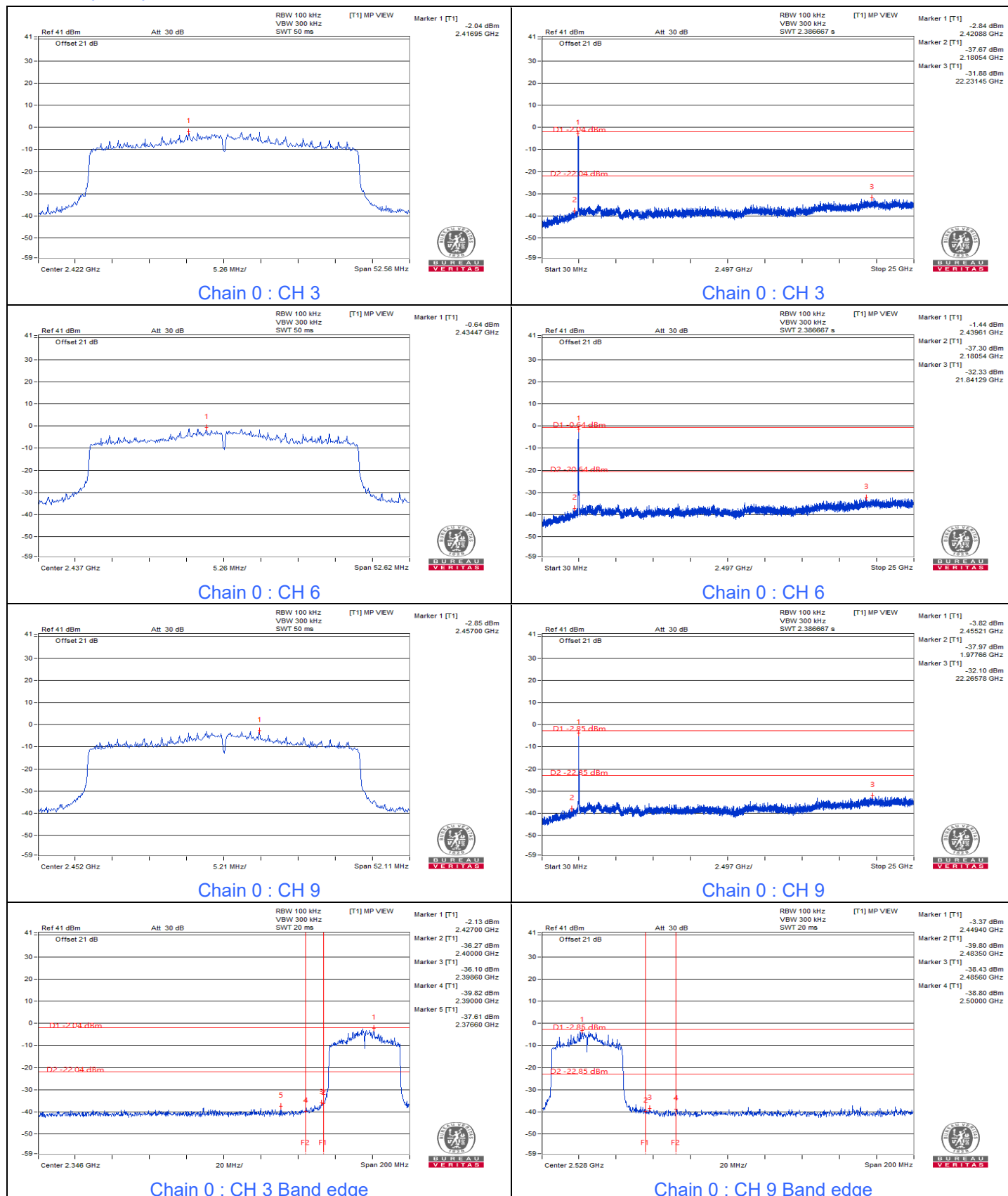


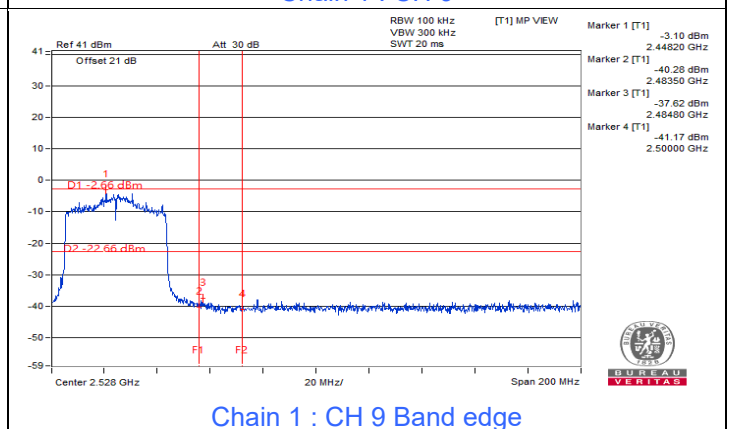
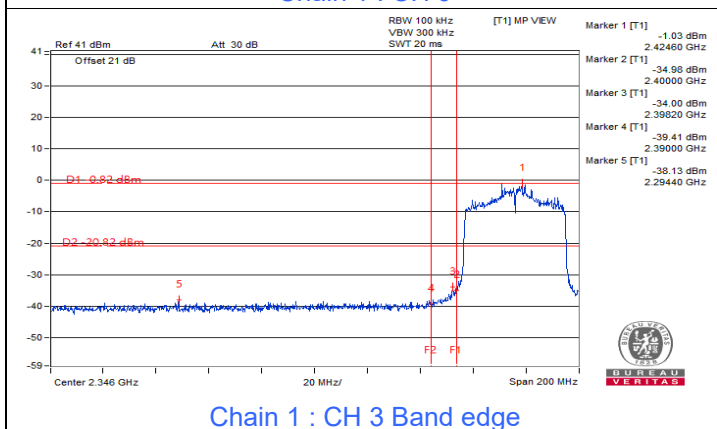
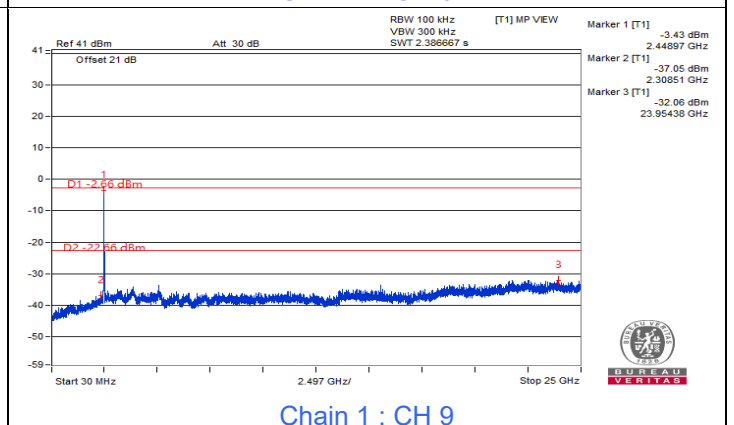
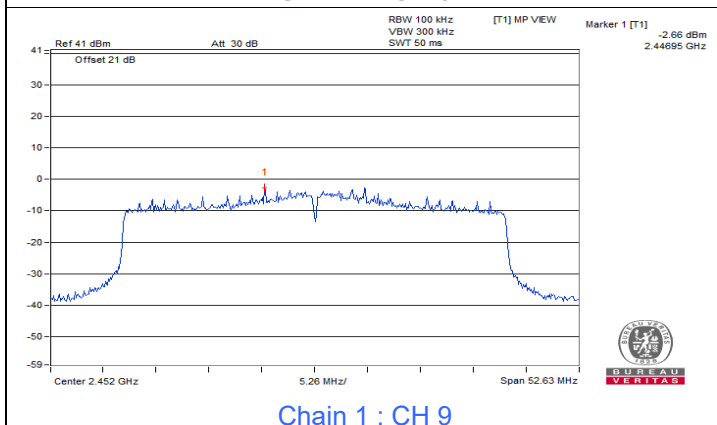
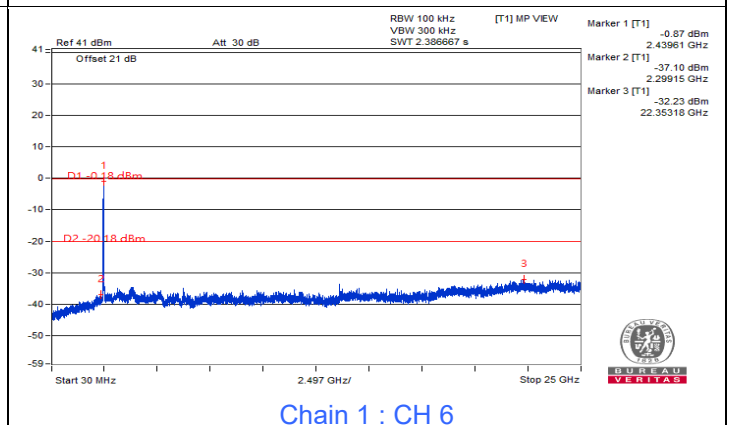
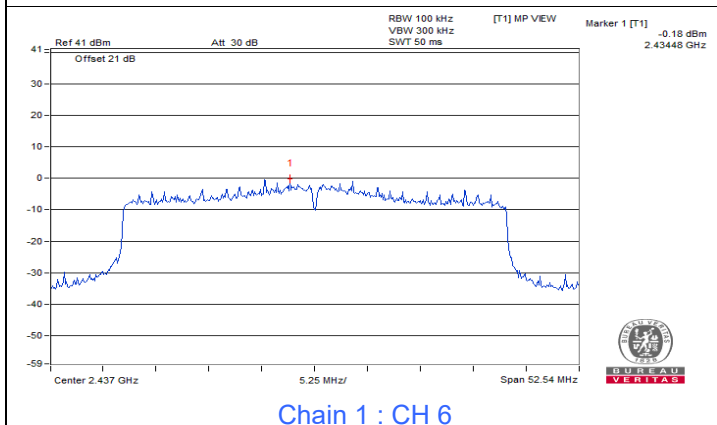
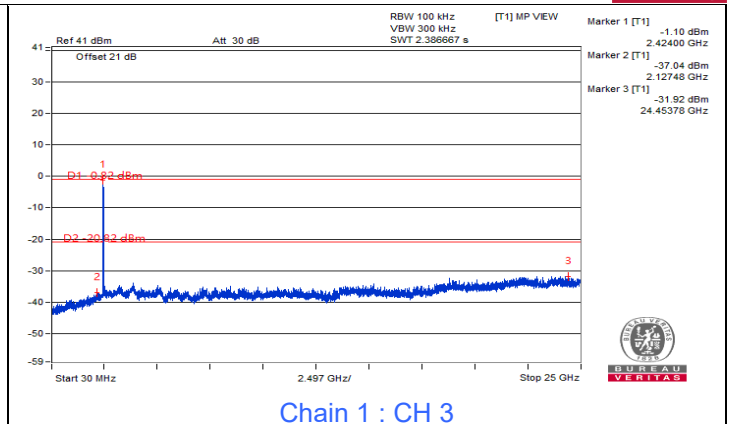
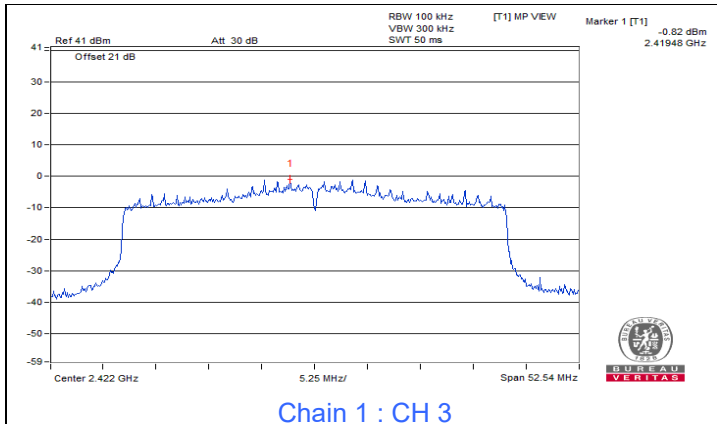
802.11ax (HE20)





802.11ax (HE40)





7.5 AC Power Conducted Emissions

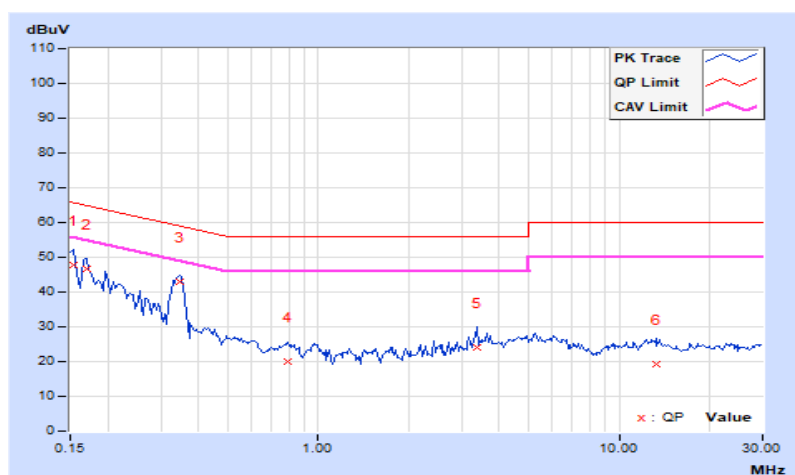
Mode A

RF Mode	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	21 °C, 66 % RH
Tested By	Louis Yang		

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	0.15391	9.94	37.81	16.63	47.75	26.57	65.79	55.79	-18.04	-29.22
2	0.16953	9.94	36.79	21.03	46.73	30.97	64.98	54.98	-18.25	-24.01
3	0.34531	9.95	33.19	27.39	43.14	37.34	59.07	49.07	-15.93	-11.73
4	0.79453	9.98	10.20	2.31	20.18	12.29	56.00	46.00	-35.82	-33.71
5	3.36328	10.15	13.79	3.62	23.94	13.77	56.00	46.00	-32.06	-32.23
6	13.32813	10.89	8.31	3.14	19.20	14.03	60.00	50.00	-40.80	-35.97

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

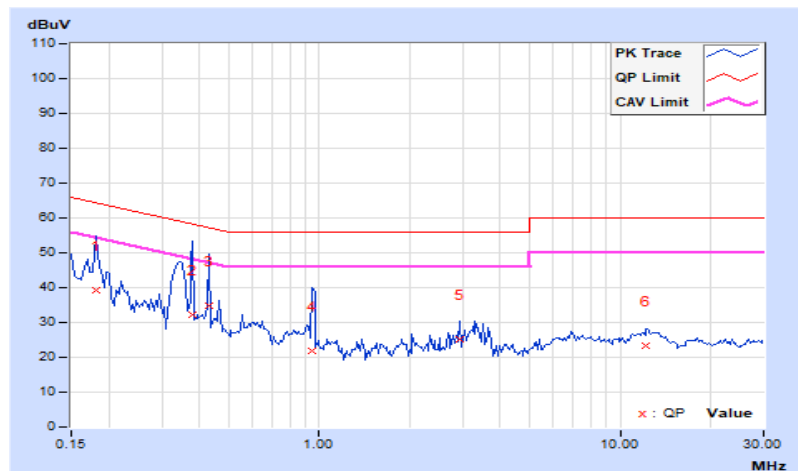


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21 °C, 66 % RH
Tested By	Louis Yang		

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	0.18125	10.01	29.39	12.59	39.40	22.60	64.43	54.43	-25.03	-31.83
2	0.38047	10.02	22.28	10.99	32.30	21.01	58.27	48.27	-25.97	-27.26
3	0.43125	10.02	24.91	11.66	34.93	21.68	57.23	47.23	-22.30	-25.55
4	0.95078	10.04	11.97	3.83	22.01	13.87	56.00	46.00	-33.99	-32.13
5	2.93750	10.15	15.19	4.10	25.34	14.25	56.00	46.00	-30.66	-31.75
6	12.23438	10.71	12.61	7.37	23.32	18.08	60.00	50.00	-36.68	-31.92

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

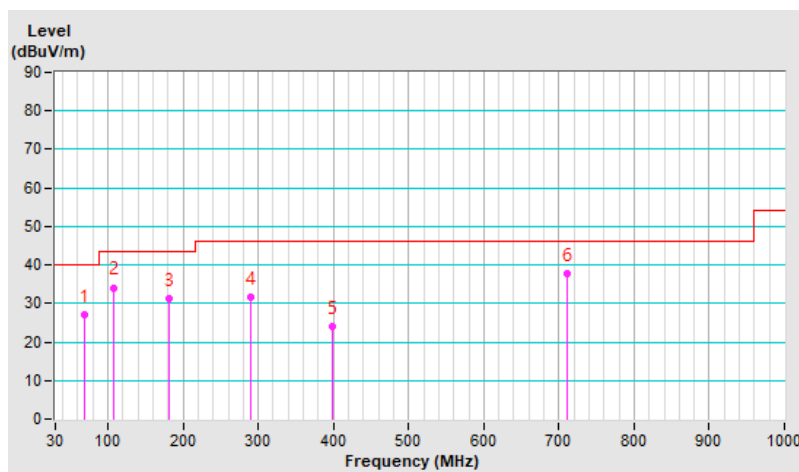
Mode A

RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 67 % RH
Tested By	Louis Yang		

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	69.42	27.0 QP	40.0	-13.0	3.00 H	261	42.0	-15.0
2	107.98	34.1 QP	43.5	-9.4	2.50 H	253	49.6	-15.5
3	182.18	31.1 QP	43.5	-12.4	1.50 H	239	45.5	-14.4
4	289.30	31.8 QP	46.0	-14.2	1.00 H	245	43.8	-12.0
5	398.49	23.9 QP	46.0	-22.1	2.50 H	290	33.1	-9.2
6	711.88	37.8 QP	46.0	-8.2	1.50 H	25	40.1	-2.3

Remarks:

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

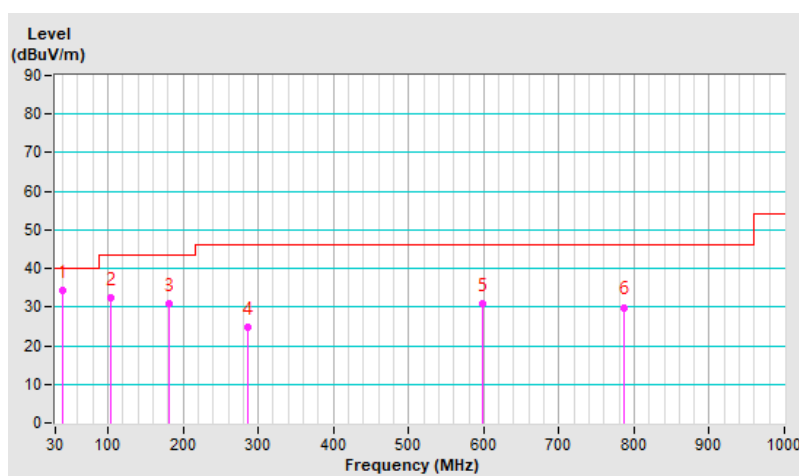


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 67 % RH
Tested By	Louis Yang		

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	39.11	34.3 QP	40.0	-5.7	1.00 V	358	47.3	-13.0
2	104.25	32.4 QP	43.5	-11.1	1.00 V	256	48.6	-16.2
3	182.28	30.9 QP	43.5	-12.6	1.00 V	306	45.3	-14.4
4	286.97	24.9 QP	46.0	-21.1	1.00 V	211	37.0	-12.1
5	598.42	30.9 QP	46.0	-15.1	1.50 V	3	35.3	-4.4
6	786.00	29.9 QP	46.0	-16.1	2.50 V	5	31.0	-1.1

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 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.



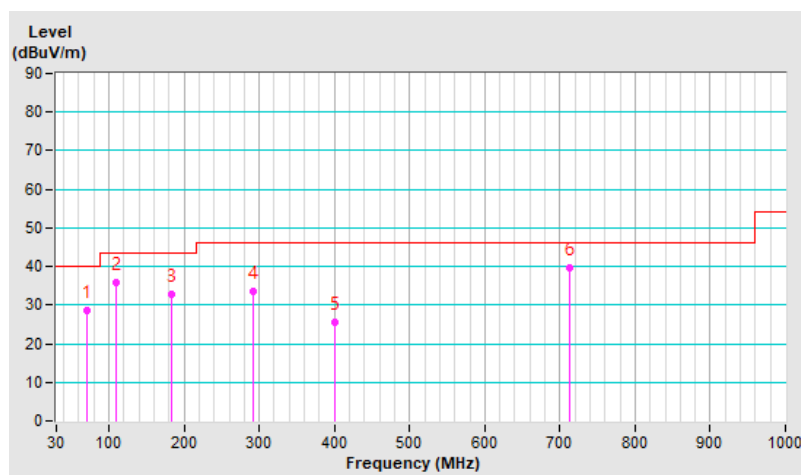
Mode B

RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 67 % RH
Tested By	Louis Yang		

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	70.62	28.7 QP	40.0	-11.3	3.00 H	263	43.8	-15.1
2	109.78	35.9 QP	43.5	-7.6	2.50 H	255	51.3	-15.4
3	184.08	32.8 QP	43.5	-10.7	1.50 H	241	47.4	-14.6
4	291.20	33.6 QP	46.0	-12.4	1.00 H	247	45.6	-12.0
5	400.59	25.4 QP	46.0	-20.6	2.50 H	292	34.6	-9.2
6	713.78	39.6 QP	46.0	-6.4	1.50 H	27	41.9	-2.3

Remarks:

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

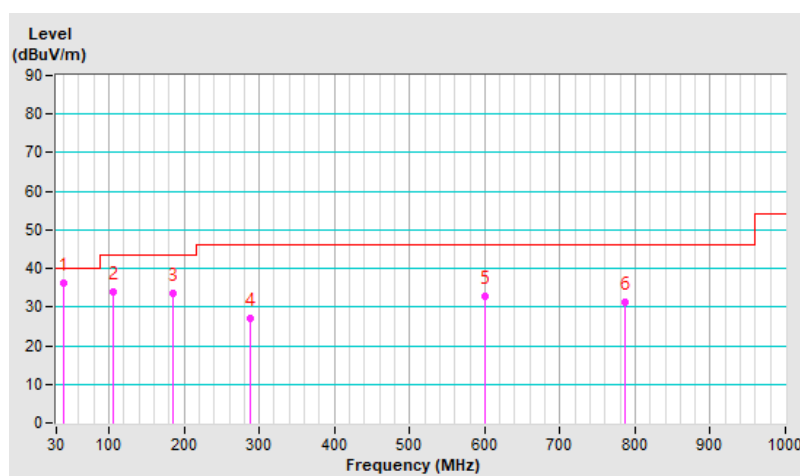


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 67 % RH
Tested By	Louis Yang		

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	40.31	36.3 QP	40.0	-3.7	1.00 V	360	49.4	-13.1
2	105.95	34.0 QP	43.5	-9.5	1.00 V	257	49.9	-15.9
3	184.38	33.5 QP	43.5	-10.0	1.00 V	308	48.2	-14.7
4	288.77	26.9 QP	46.0	-19.1	1.00 V	213	38.9	-12.0
5	600.02	32.8 QP	46.0	-13.2	1.50 V	1	37.1	-4.3
6	787.50	31.4 QP	46.0	-14.6	2.50 V	1	32.5	-1.1

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 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

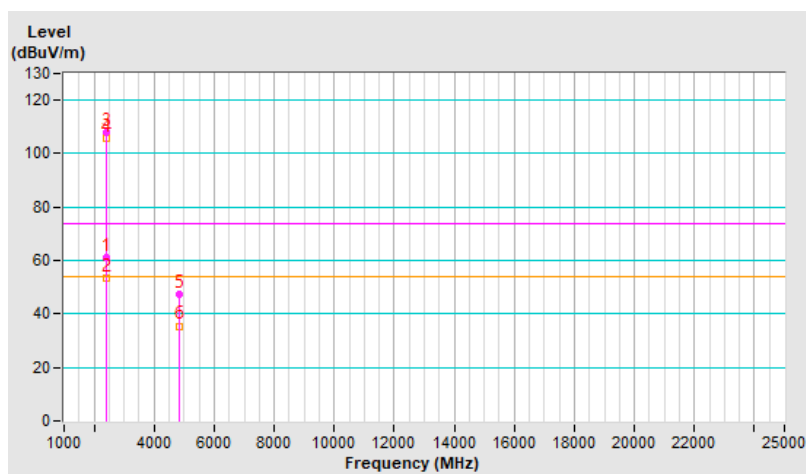
Mode A

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 (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	61.2 PK	74.0	-12.8	1.83 H	71	63.5	-2.3
2	2390.00	53.3 AV	54.0	-0.7	1.83 H	71	55.6	-2.3
3	*2412.00	108.1 PK			1.83 H	71	110.4	-2.3
4	*2412.00	105.6 AV			1.83 H	71	107.9	-2.3
5	4824.00	47.3 PK	74.0	-26.7	1.22 H	236	45.4	1.9
6	4824.00	35.5 AV	54.0	-18.5	1.22 H	236	33.6	1.9

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, the limit was restricted at the RF Output Power.

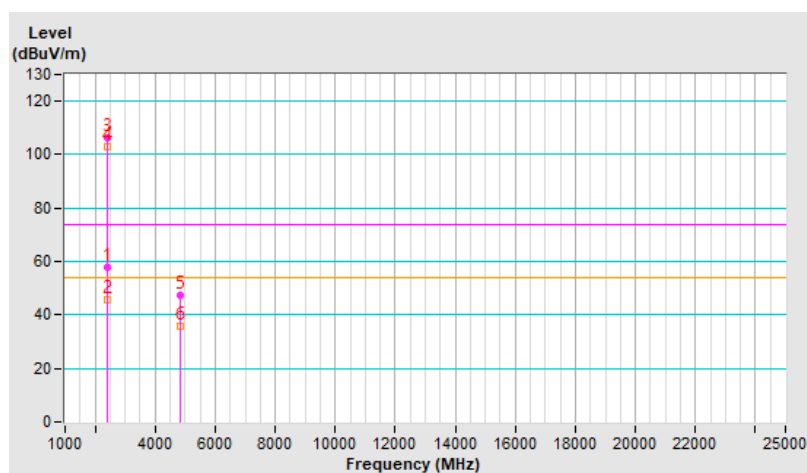


RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	57.6 PK	74.0	-16.4	2.27 V	360	59.9	-2.3
2	2390.00	45.5 AV	54.0	-8.5	2.27 V	360	47.8	-2.3
3	*2412.00	106.4 PK			2.27 V	360	108.7	-2.3
4	*2412.00	103.2 AV			2.27 V	360	105.5	-2.3
5	4824.00	47.3 PK	74.0	-26.7	1.16 V	232	45.4	1.9
6	4824.00	35.6 AV	54.0	-18.4	1.16 V	232	33.7	1.9

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, the limit was restricted at the RF Output Power.

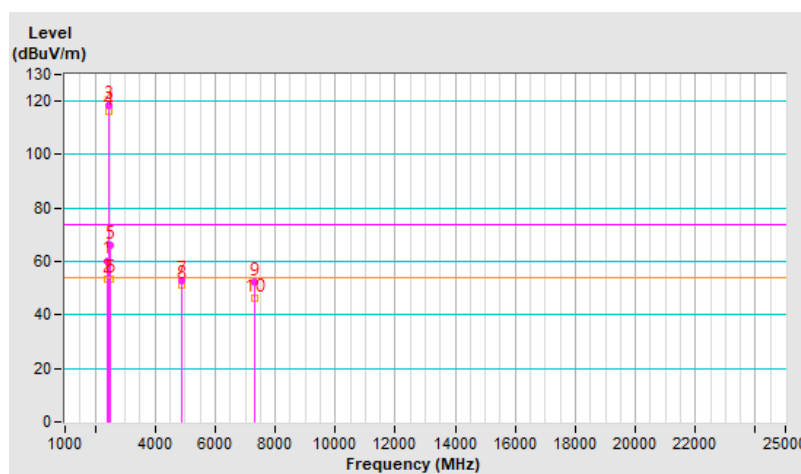


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	2.17 H	52	62.6	-2.3
2	2390.00	53.6 AV	54.0	-0.4	2.17 H	52	55.9	-2.3
3	*2437.00	118.3 PK			2.17 H	52	120.4	-2.1
4	*2437.00	116.0 AV			2.17 H	52	118.1	-2.1
5	2483.50	66.3 PK	74.0	-7.7	2.17 H	52	68.5	-2.2
6	2483.50	53.4 AV	54.0	-0.6	2.17 H	52	55.6	-2.2
7	4874.00	52.7 PK	74.0	-21.3	1.55 H	240	50.8	1.9
8	4874.00	51.4 AV	54.0	-2.6	1.55 H	240	49.5	1.9
9	7311.00	52.3 PK	74.0	-21.7	1.45 H	225	44.7	7.6
10	7311.00	46.1 AV	54.0	-7.9	1.45 H	225	38.5	7.6

Remarks:

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

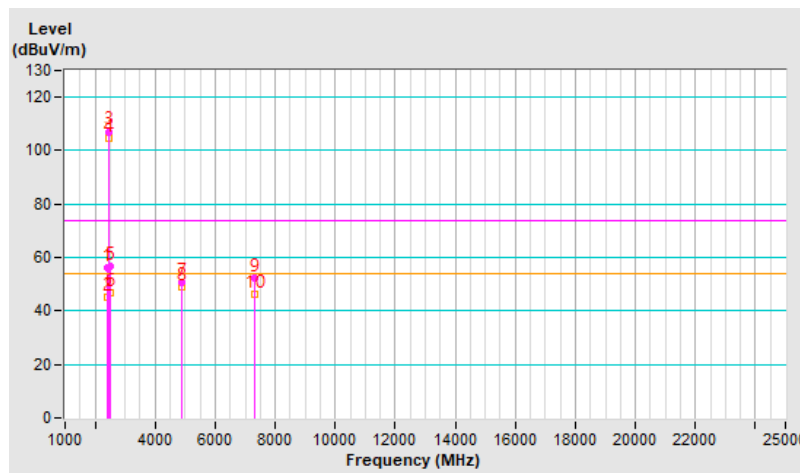


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	56.1 PK	74.0	-17.9	1.14 V	13	58.4	-2.3
2	2390.00	45.2 AV	54.0	-8.8	1.14 V	13	47.5	-2.3
3	*2437.00	107.1 PK			1.14 V	13	109.2	-2.1
4	*2437.00	104.8 AV			1.14 V	13	106.9	-2.1
5	2483.50	56.8 PK	74.0	-17.2	1.14 V	13	59.0	-2.2
6	2483.50	47.0 AV	54.0	-7.0	1.14 V	13	49.2	-2.2
7	4874.00	50.6 PK	74.0	-23.4	1.20 V	242	48.7	1.9
8	4874.00	49.0 AV	54.0	-5.0	1.20 V	242	47.1	1.9
9	7311.00	52.3 PK	74.0	-21.7	1.47 V	233	44.7	7.6
10	7311.00	46.2 AV	54.0	-7.8	1.47 V	233	38.6	7.6

Remarks:

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

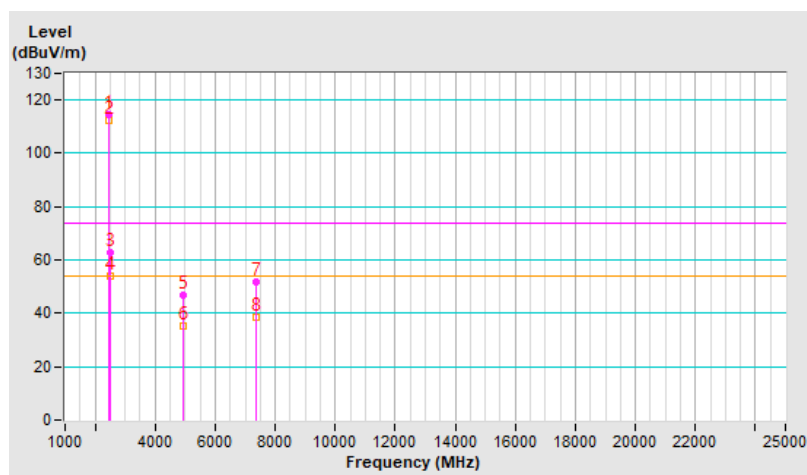


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	114.8 PK			2.24 H	63	117.0	-2.2
2	*2462.00	112.5 AV			2.24 H	63	114.7	-2.2
3	2483.50	62.6 PK	74.0	-11.4	2.24 H	63	64.8	-2.2
4	2483.50	53.8 AV	54.0	-0.2	2.24 H	63	56.0	-2.2
5	4924.00	47.0 PK	74.0	-27.0	1.22 H	238	44.9	2.1
6	4924.00	35.2 AV	54.0	-18.8	1.22 H	238	33.1	2.1
7	7386.00	51.9 PK	74.0	-22.1	1.47 H	288	43.9	8.0
8	7386.00	38.4 AV	54.0	-15.6	1.47 H	288	30.4	8.0

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.

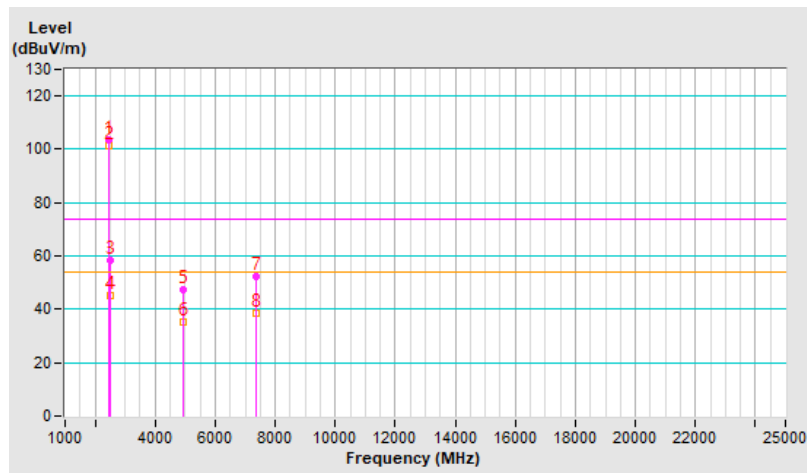


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	103.6 PK			1.10 V	357	105.8	-2.2
2	*2462.00	101.3 AV			1.10 V	357	103.5	-2.2
3	2483.50	58.4 PK	74.0	-15.6	1.10 V	357	60.6	-2.2
4	2483.50	45.4 AV	54.0	-8.6	1.10 V	357	47.6	-2.2
5	4924.00	47.1 PK	74.0	-26.9	1.14 V	253	45.0	2.1
6	4924.00	35.2 AV	54.0	-18.8	1.14 V	253	33.1	2.1
7	7386.00	52.2 PK	74.0	-21.8	1.43 V	313	44.2	8.0
8	7386.00	38.6 AV	54.0	-15.4	1.43 V	313	30.6	8.0

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.

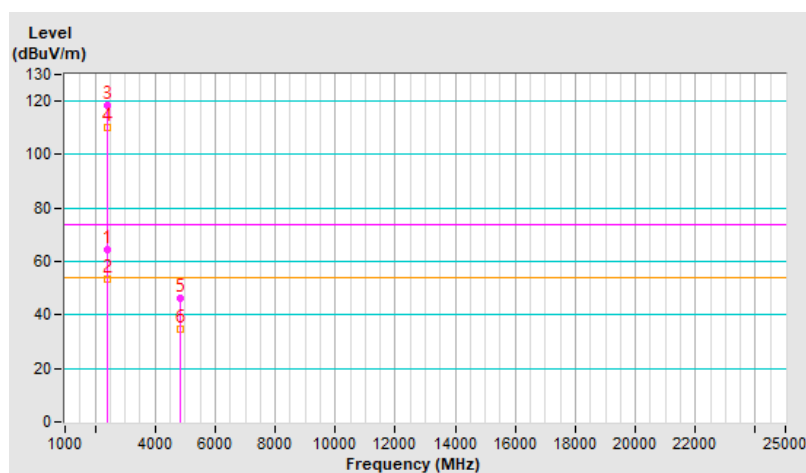


RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.5 PK	74.0	-9.5	2.10 H	59	66.8	-2.3
2	2390.00	53.4 AV	54.0	-0.6	2.10 H	59	55.7	-2.3
3	*2412.00	118.2 PK			2.10 H	59	120.5	-2.3
4	*2412.00	110.4 AV			2.10 H	59	112.7	-2.3
5	4824.00	46.5 PK	74.0	-27.5	1.19 H	228	44.6	1.9
6	4824.00	34.9 AV	54.0	-19.1	1.19 H	228	33.0	1.9

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, the limit was restricted at the RF Output Power.

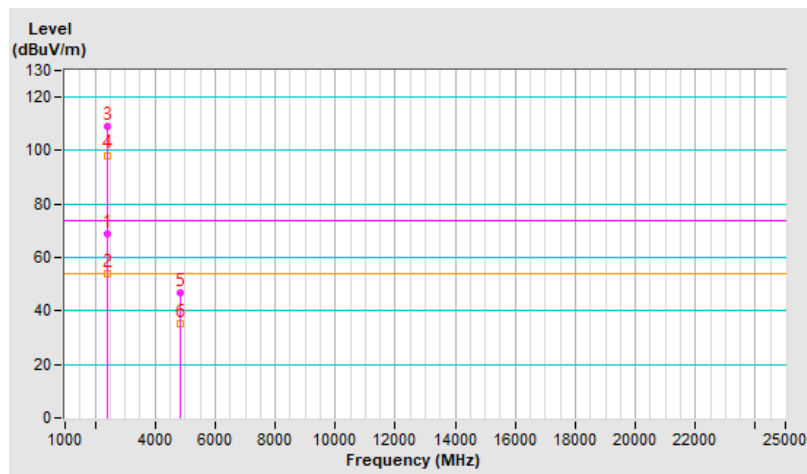


RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	68.6 PK	74.0	-5.4	1.16 V	360	70.9	-2.3
2	2390.00	53.8 AV	54.0	-0.2	1.16 V	360	56.1	-2.3
3	*2412.00	109.2 PK			1.16 V	360	111.5	-2.3
4	*2412.00	98.3 AV			1.16 V	360	100.6	-2.3
5	4824.00	47.0 PK	74.0	-27.0	1.21 V	236	45.1	1.9
6	4824.00	35.2 AV	54.0	-18.8	1.21 V	236	33.3	1.9

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, the limit was restricted at the RF Output Power.

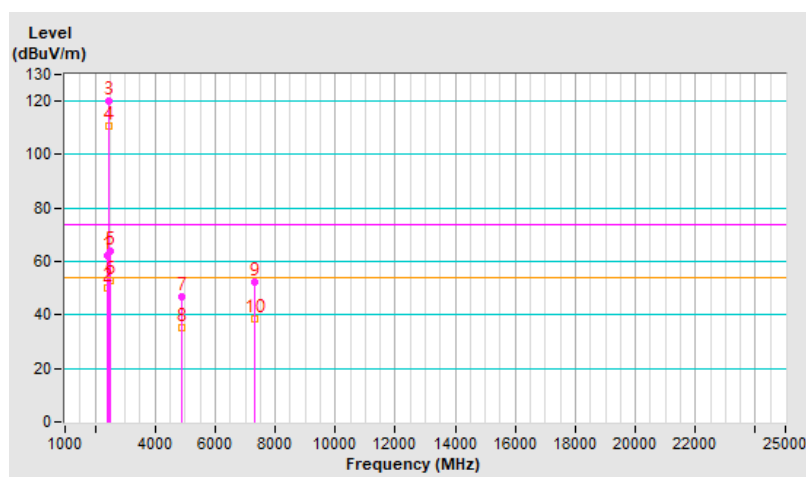


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	62.1 PK	74.0	-11.9	2.17 H	63	64.4	-2.3
2	2390.00	50.0 AV	54.0	-4.0	2.17 H	63	52.3	-2.3
3	*2437.00	120.2 PK			2.17 H	63	122.3	-2.1
4	*2437.00	110.5 AV			2.17 H	63	112.6	-2.1
5	2483.50	63.9 PK	74.0	-10.1	2.17 H	63	66.1	-2.2
6	2483.50	52.7 AV	54.0	-1.3	2.17 H	63	54.9	-2.2
7	4874.00	46.9 PK	74.0	-27.1	1.21 H	239	45.0	1.9
8	4874.00	35.2 AV	54.0	-18.8	1.21 H	239	33.3	1.9
9	7311.00	52.3 PK	74.0	-21.7	1.46 H	285	44.7	7.6
10	7311.00	38.6 AV	54.0	-15.4	1.46 H	285	31.0	7.6

Remarks:

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

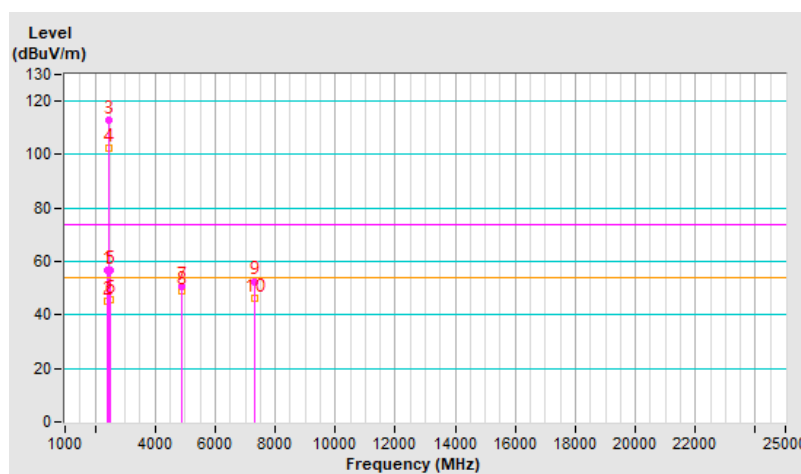


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	56.5 PK	74.0	-17.5	1.12 V	360	58.8	-2.3
2	2390.00	45.2 AV	54.0	-8.8	1.12 V	360	47.5	-2.3
3	*2437.00	113.1 PK			1.12 V	360	115.2	-2.1
4	*2437.00	102.4 AV			1.12 V	360	104.5	-2.1
5	2483.50	56.6 PK	74.0	-17.4	1.12 V	360	58.8	-2.2
6	2483.50	45.9 AV	54.0	-8.1	1.12 V	360	48.1	-2.2
7	4874.00	50.8 PK	74.0	-23.2	1.24 V	228	48.9	1.9
8	4874.00	49.1 AV	54.0	-4.9	1.24 V	228	47.2	1.9
9	7311.00	52.6 PK	74.0	-21.4	1.44 V	233	45.0	7.6
10	7311.00	46.5 AV	54.0	-7.5	1.44 V	233	38.9	7.6

Remarks:

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

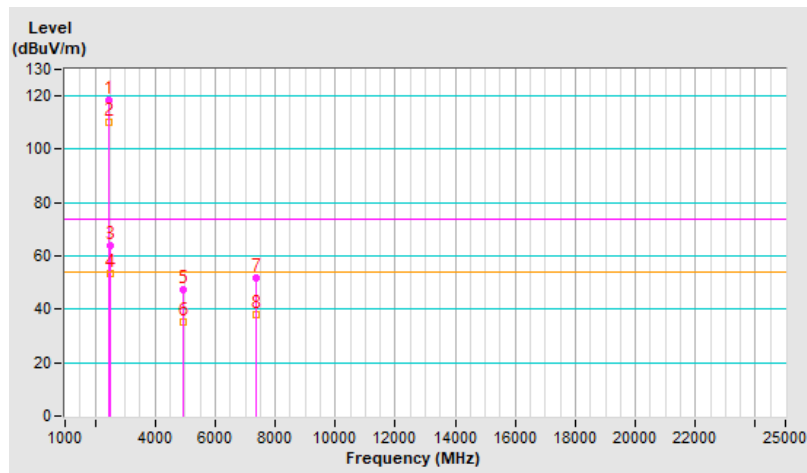


RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	118.5 PK			2.19 H	55	120.7	-2.2
2	*2462.00	110.3 AV			2.19 H	55	112.5	-2.2
3	2483.50	64.0 PK	74.0	-10.0	2.19 H	55	66.2	-2.2
4	2483.50	53.2 AV	54.0	-0.8	2.19 H	55	55.4	-2.2
5	4924.00	47.1 PK	74.0	-26.9	1.22 H	240	45.0	2.1
6	4924.00	35.4 AV	54.0	-18.6	1.22 H	240	33.3	2.1
7	7386.00	51.8 PK	74.0	-22.2	1.49 H	286	43.8	8.0
8	7386.00	38.1 AV	54.0	-15.9	1.49 H	286	30.1	8.0

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.

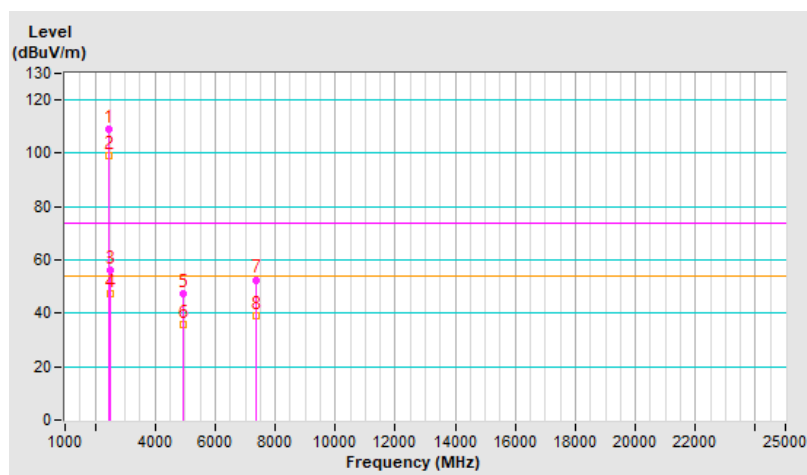


RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	109.3 PK			1.13 V	360	111.5	-2.2
2	*2462.00	99.1 AV			1.13 V	360	101.3	-2.2
3	2483.50	56.1 PK	74.0	-17.9	1.13 V	360	58.3	-2.2
4	2483.50	47.1 AV	54.0	-6.9	1.13 V	360	49.3	-2.2
5	4924.00	47.3 PK	74.0	-26.7	1.14 V	267	45.2	2.1
6	4924.00	35.6 AV	54.0	-18.4	1.14 V	267	33.5	2.1
7	7386.00	52.6 PK	74.0	-21.4	1.45 V	292	44.6	8.0
8	7386.00	39.1 AV	54.0	-14.9	1.45 V	292	31.1	8.0

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.

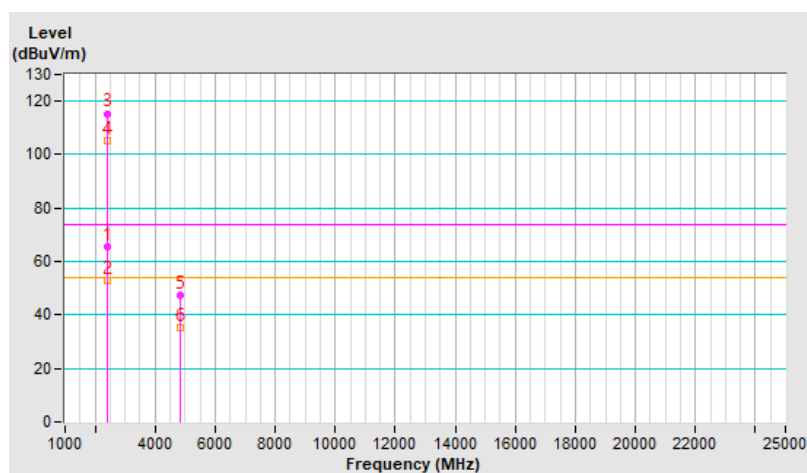


RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.3 PK	74.0	-8.7	2.07 H	62	67.6	-2.3
2	2390.00	53.1 AV	54.0	-0.9	2.07 H	62	55.4	-2.3
3	*2412.00	115.4 PK			2.07 H	62	117.7	-2.3
4	*2412.00	105.1 AV			2.07 H	62	107.4	-2.3
5	4824.00	47.1 PK	74.0	-26.9	1.26 H	247	45.2	1.9
6	4824.00	35.3 AV	54.0	-18.7	1.26 H	247	33.4	1.9

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, the limit was restricted at the RF Output Power.

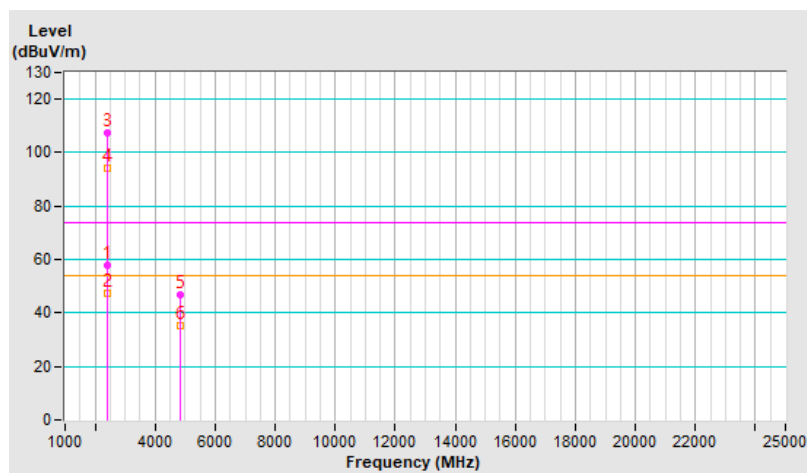


RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	57.8 PK	74.0	-16.2	2.28 V	360	60.1	-2.3
2	2390.00	47.4 AV	54.0	-6.6	2.28 V	360	49.7	-2.3
3	*2412.00	107.2 PK			2.28 V	360	109.5	-2.3
4	*2412.00	94.3 AV			2.28 V	360	96.6	-2.3
5	4824.00	46.8 PK	74.0	-27.2	1.16 V	236	44.9	1.9
6	4824.00	35.1 AV	54.0	-18.9	1.16 V	236	33.2	1.9

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, the limit was restricted at the RF Output Power.

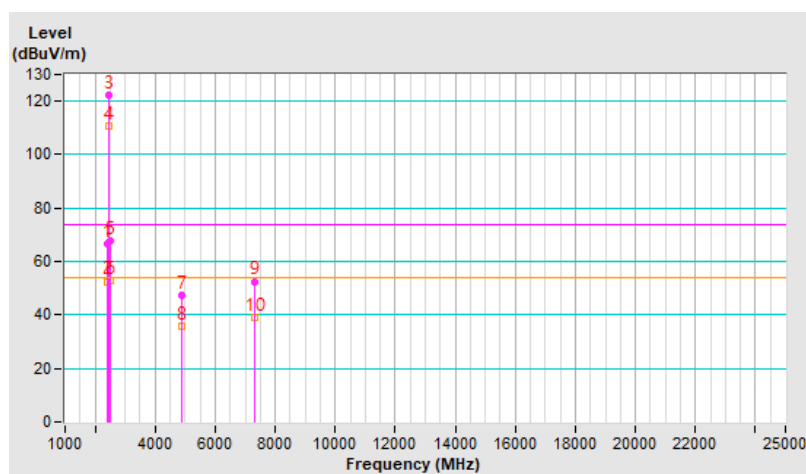


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	66.5 PK	74.0	-7.5	2.18 H	62	68.8	-2.3
2	2390.00	52.6 AV	54.0	-1.4	2.18 H	62	54.9	-2.3
3	*2437.00	122.2 PK			2.18 H	62	124.3	-2.1
4	*2437.00	110.9 AV			2.18 H	62	113.0	-2.1
5	2483.50	67.7 PK	74.0	-6.3	2.18 H	62	69.9	-2.2
6	2483.50	53.0 AV	54.0	-1.0	2.18 H	62	55.2	-2.2
7	4874.00	47.4 PK	74.0	-26.6	1.18 H	242	45.5	1.9
8	4874.00	35.6 AV	54.0	-18.4	1.18 H	242	33.7	1.9
9	7311.00	52.6 PK	74.0	-21.4	1.42 H	298	45.0	7.6
10	7311.00	38.9 AV	54.0	-15.1	1.42 H	298	31.3	7.6

Remarks:

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

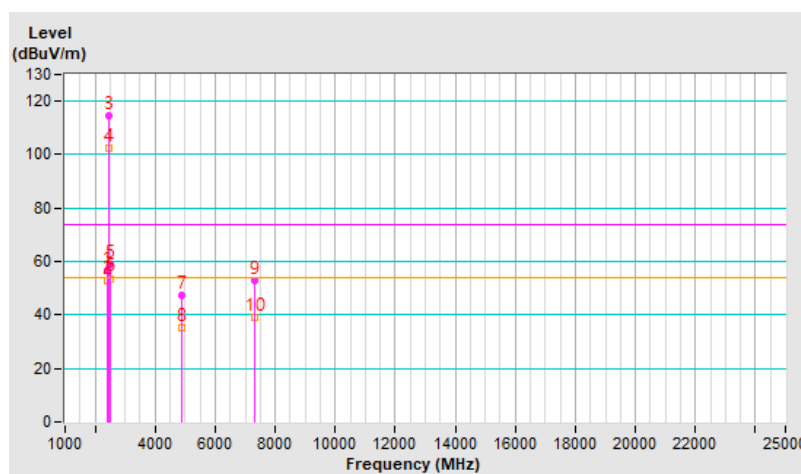


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	56.5 PK	74.0	-17.5	1.16 V	18	58.8	-2.3
2	2390.00	52.7 AV	54.0	-1.3	1.16 V	18	55.0	-2.3
3	*2437.00	114.5 PK			1.16 V	18	116.6	-2.1
4	*2437.00	102.3 AV			1.16 V	18	104.4	-2.1
5	2483.50	58.9 PK	74.0	-15.1	1.16 V	18	61.1	-2.2
6	2483.50	53.7 AV	54.0	-0.3	1.16 V	18	55.9	-2.2
7	4874.00	47.1 PK	74.0	-26.9	1.13 V	263	45.2	1.9
8	4874.00	35.4 AV	54.0	-18.6	1.13 V	263	33.5	1.9
9	7311.00	52.9 PK	74.0	-21.1	1.47 V	287	45.3	7.6
10	7311.00	39.2 AV	54.0	-14.8	1.47 V	287	31.6	7.6

Remarks:

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

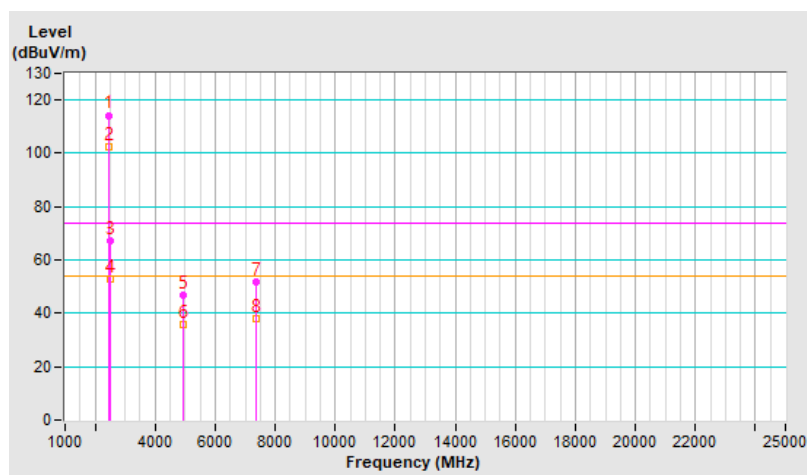


RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	114.3 PK			2.19 H	60	116.5	-2.2
2	*2462.00	102.3 AV			2.19 H	60	104.5	-2.2
3	2483.50	67.2 PK	74.0	-6.8	2.19 H	60	69.4	-2.2
4	2483.50	52.7 AV	54.0	-1.3	2.19 H	60	54.9	-2.2
5	4924.00	47.0 PK	74.0	-27.0	1.22 H	240	44.9	2.1
6	4924.00	35.6 AV	54.0	-18.4	1.22 H	240	33.5	2.1
7	7386.00	52.0 PK	74.0	-22.0	1.42 H	296	44.0	8.0
8	7386.00	38.2 AV	54.0	-15.8	1.42 H	296	30.2	8.0

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.

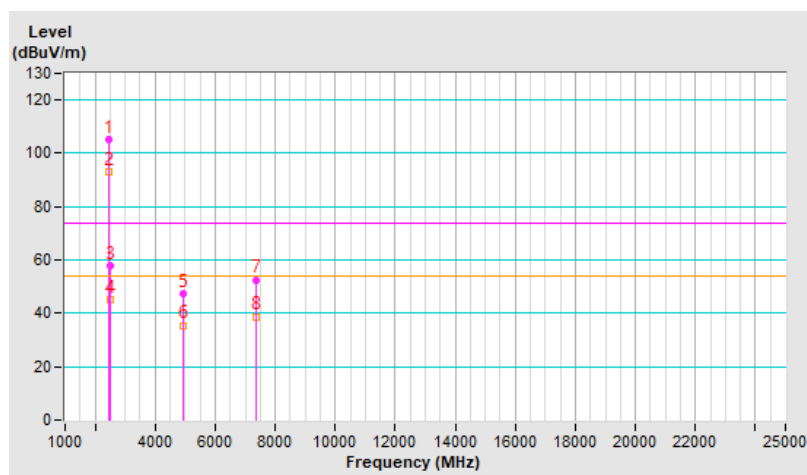


RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	105.4 PK			1.12 V	360	107.6	-2.2
2	*2462.00	93.0 AV			1.12 V	360	95.2	-2.2
3	2483.50	58.0 PK	74.0	-16.0	1.12 V	360	60.2	-2.2
4	2483.50	45.4 AV	54.0	-8.6	1.12 V	360	47.6	-2.2
5	4924.00	47.2 PK	74.0	-26.8	1.19 V	259	45.1	2.1
6	4924.00	35.5 AV	54.0	-18.5	1.19 V	259	33.4	2.1
7	7386.00	52.6 PK	74.0	-21.4	1.51 V	295	44.6	8.0
8	7386.00	38.8 AV	54.0	-15.2	1.51 V	295	30.8	8.0

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.

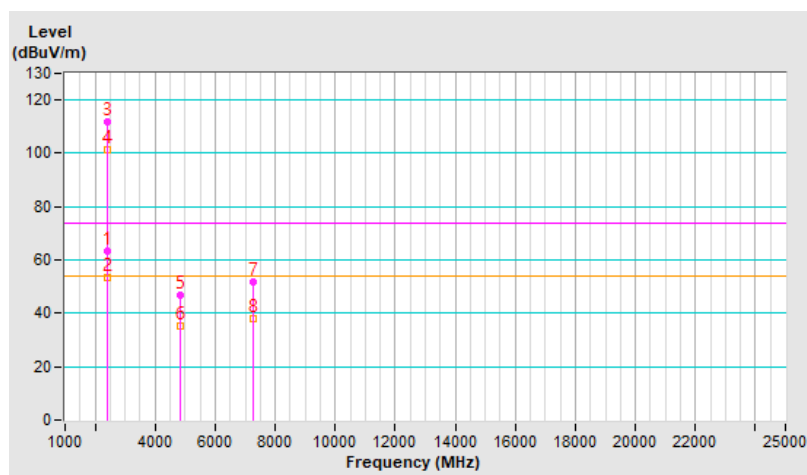


RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.5 PK	74.0	-10.5	2.03 H	63	65.8	-2.3
2	2390.00	53.2 AV	54.0	-0.8	2.03 H	63	55.5	-2.3
3	*2422.00	111.8 PK			2.03 H	63	113.9	-2.1
4	*2422.00	101.3 AV			2.03 H	63	103.4	-2.1
5	4844.00	47.0 PK	74.0	-27.0	1.18 H	254	45.1	1.9
6	4844.00	35.1 AV	54.0	-18.9	1.18 H	254	33.2	1.9
7	7266.00	51.8 PK	74.0	-22.2	1.41 H	271	44.0	7.8
8	7266.00	38.2 AV	54.0	-15.8	1.41 H	271	30.4	7.8

Remarks:

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

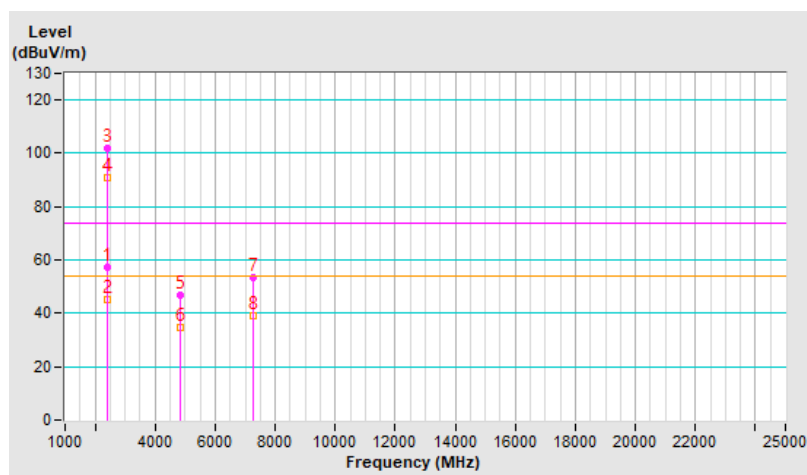


RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	57.1 PK	74.0	-16.9	1.09 V	360	59.4	-2.3
2	2390.00	45.3 AV	54.0	-8.7	1.09 V	360	47.6	-2.3
3	*2422.00	102.0 PK			1.09 V	360	104.1	-2.1
4	*2422.00	90.8 AV			1.09 V	360	92.9	-2.1
5	4844.00	46.6 PK	74.0	-27.4	1.13 V	234	44.7	1.9
6	4844.00	34.9 AV	54.0	-19.1	1.13 V	234	33.0	1.9
7	7266.00	53.2 PK	74.0	-20.8	1.47 V	308	45.4	7.8
8	7266.00	39.3 AV	54.0	-14.7	1.47 V	308	31.5	7.8

Remarks:

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

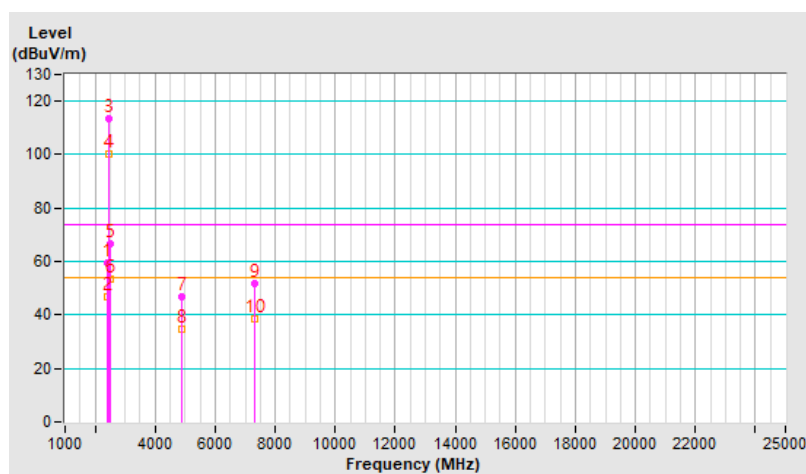


RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.4 PK	74.0	-14.6	2.19 H	65	61.7	-2.3
2	2390.00	47.0 AV	54.0	-7.0	2.19 H	65	49.3	-2.3
3	*2437.00	113.2 PK			2.19 H	65	115.3	-2.1
4	*2437.00	100.3 AV			2.19 H	65	102.4	-2.1
5	2483.50	66.5 PK	74.0	-7.5	2.19 H	65	68.7	-2.2
6	2483.50	53.2 AV	54.0	-0.8	2.19 H	65	55.4	-2.2
7	4874.00	46.7 PK	74.0	-27.3	1.18 H	239	44.8	1.9
8	4874.00	34.9 AV	54.0	-19.1	1.18 H	239	33.0	1.9
9	7311.00	52.0 PK	74.0	-22.0	1.49 H	300	44.4	7.6
10	7311.00	38.4 AV	54.0	-15.6	1.49 H	300	30.8	7.6

Remarks:

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

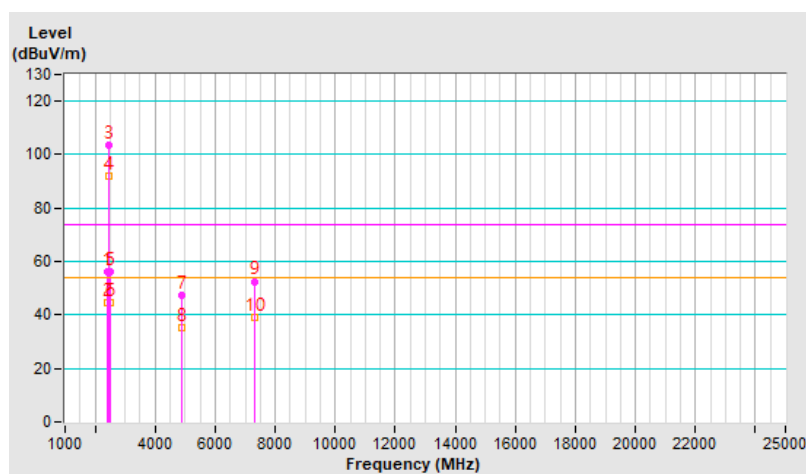


RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	56.1 PK	74.0	-17.9	1.14 V	14	58.4	-2.3
2	2390.00	44.8 AV	54.0	-9.2	1.14 V	14	47.1	-2.3
3	*2437.00	103.4 PK			1.14 V	14	105.5	-2.1
4	*2437.00	92.0 AV			1.14 V	14	94.1	-2.1
5	2483.50	56.0 PK	74.0	-18.0	1.14 V	14	58.2	-2.2
6	2483.50	44.6 AV	54.0	-9.4	1.14 V	14	46.8	-2.2
7	4874.00	47.3 PK	74.0	-26.7	1.18 V	245	45.4	1.9
8	4874.00	35.4 AV	54.0	-18.6	1.18 V	245	33.5	1.9
9	7311.00	52.6 PK	74.0	-21.4	1.49 V	306	45.0	7.6
10	7311.00	38.9 AV	54.0	-15.1	1.49 V	306	31.3	7.6

Remarks:

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

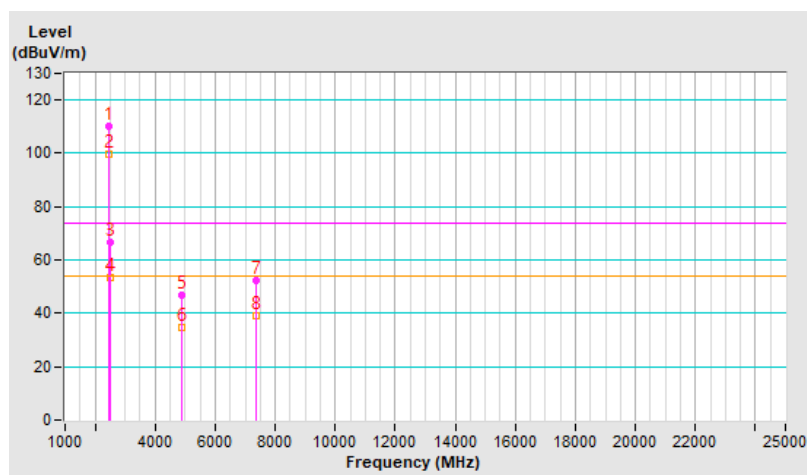


RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	109.9 PK			2.00 H	67	112.1	-2.2
2	*2452.00	99.7 AV			2.00 H	67	101.9	-2.2
3	2483.50	66.4 PK	74.0	-7.6	2.00 H	67	68.6	-2.2
4	2483.50	53.3 AV	54.0	-0.7	2.00 H	67	55.5	-2.2
5	4904.00	46.6 PK	74.0	-27.4	1.26 H	226	44.6	2.0
6	4904.00	34.9 AV	54.0	-19.1	1.26 H	226	32.9	2.0
7	7356.00	52.5 PK	74.0	-21.5	1.50 H	285	44.5	8.0
8	7356.00	39.0 AV	54.0	-15.0	1.50 H	285	31.0	8.0

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.

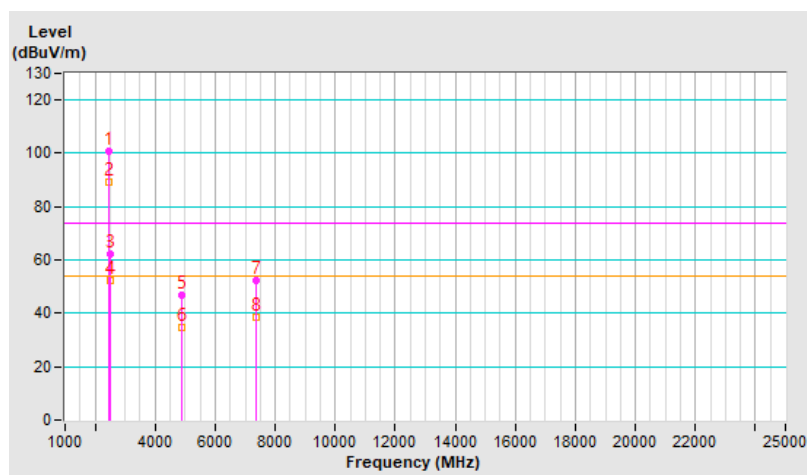


RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 74 % RH
Tested By	Louis Yang		

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	100.9 PK			1.17 V	360	103.1	-2.2
2	*2452.00	89.4 AV			1.17 V	360	91.6	-2.2
3	2483.50	62.3 PK	74.0	-11.7	1.17 V	360	64.5	-2.2
4	2483.50	52.5 AV	54.0	-1.5	1.17 V	360	54.7	-2.2
5	4904.00	46.8 PK	74.0	-27.2	1.14 V	249	44.8	2.0
6	4904.00	34.8 AV	54.0	-19.2	1.14 V	249	32.8	2.0
7	7356.00	52.1 PK	74.0	-21.9	1.52 V	312	44.1	8.0
8	7356.00	38.7 AV	54.0	-15.3	1.52 V	312	30.7	8.0

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.

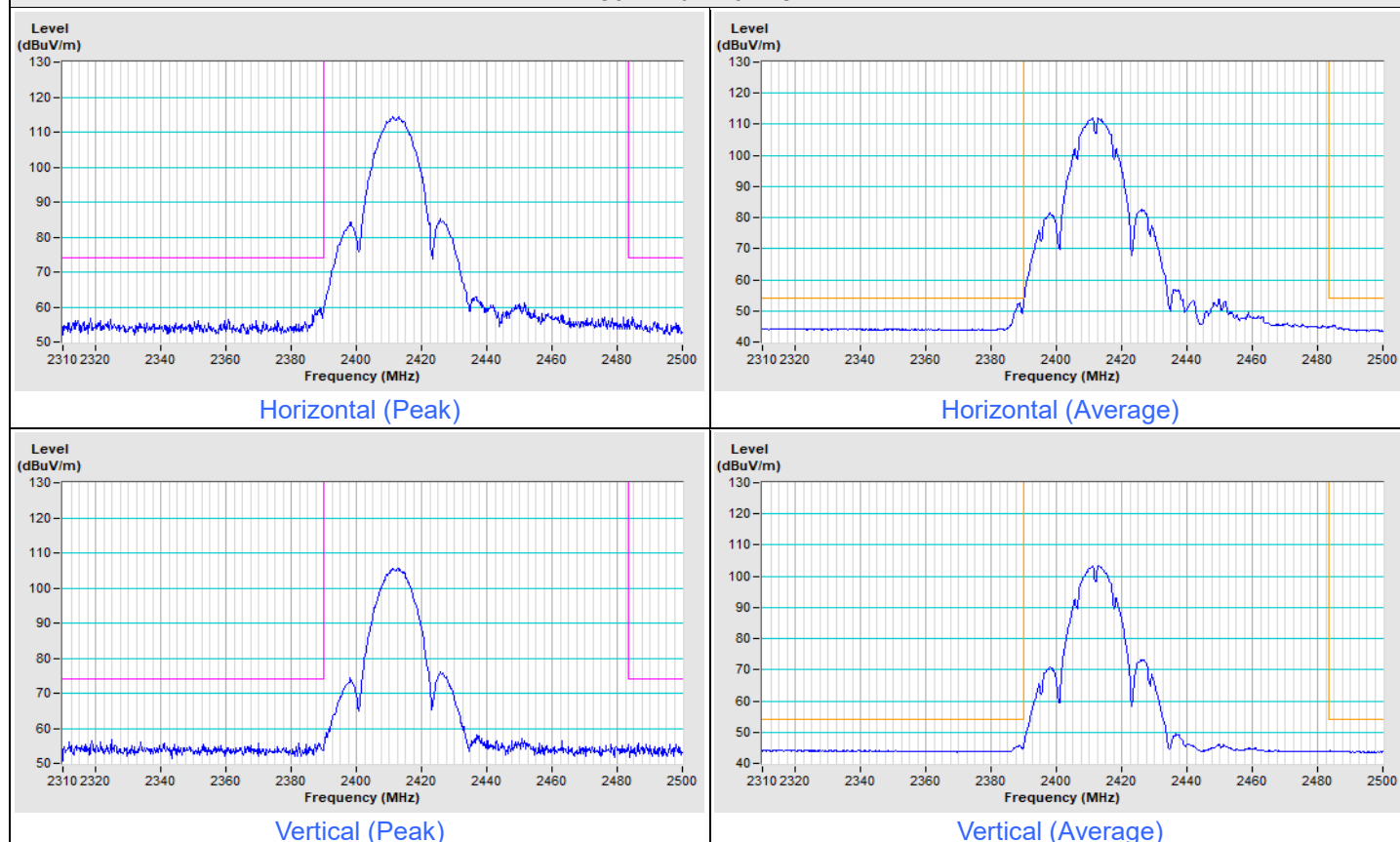


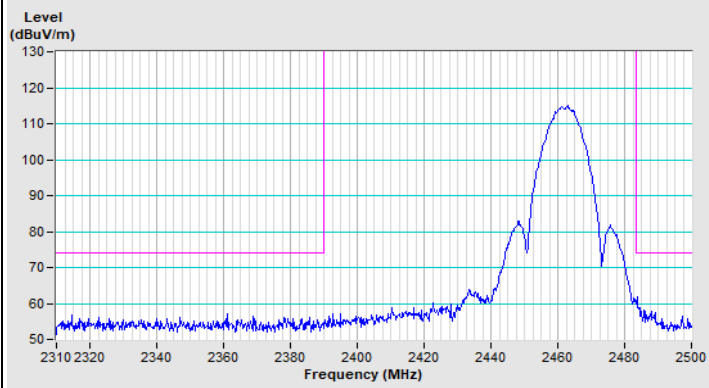
Plot of Band Edge

Mode A

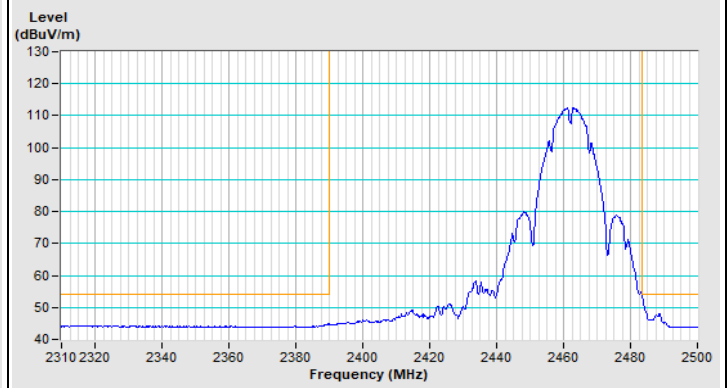
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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802.11b Channel 1

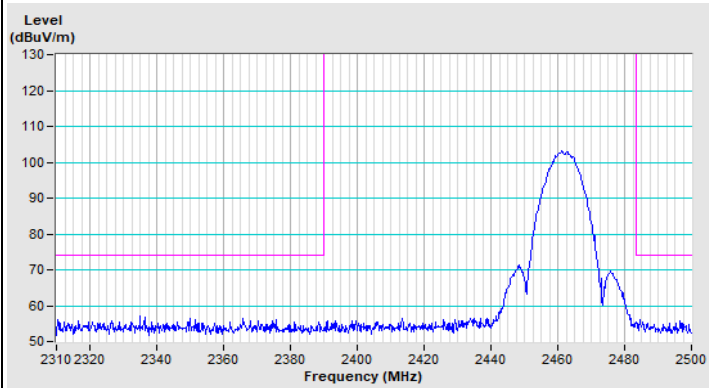


802.11b Channel 11

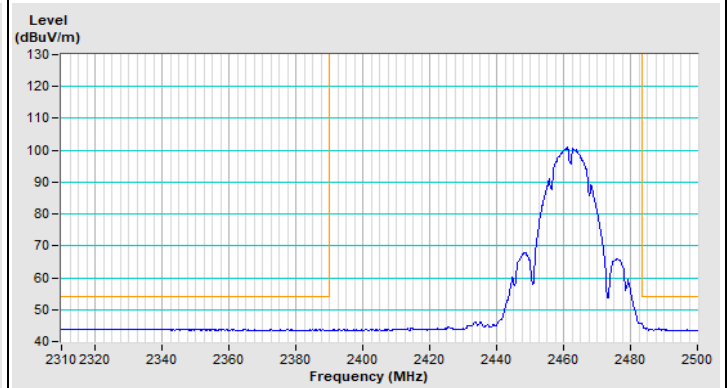
Horizontal (Peak)



Horizontal (Average)



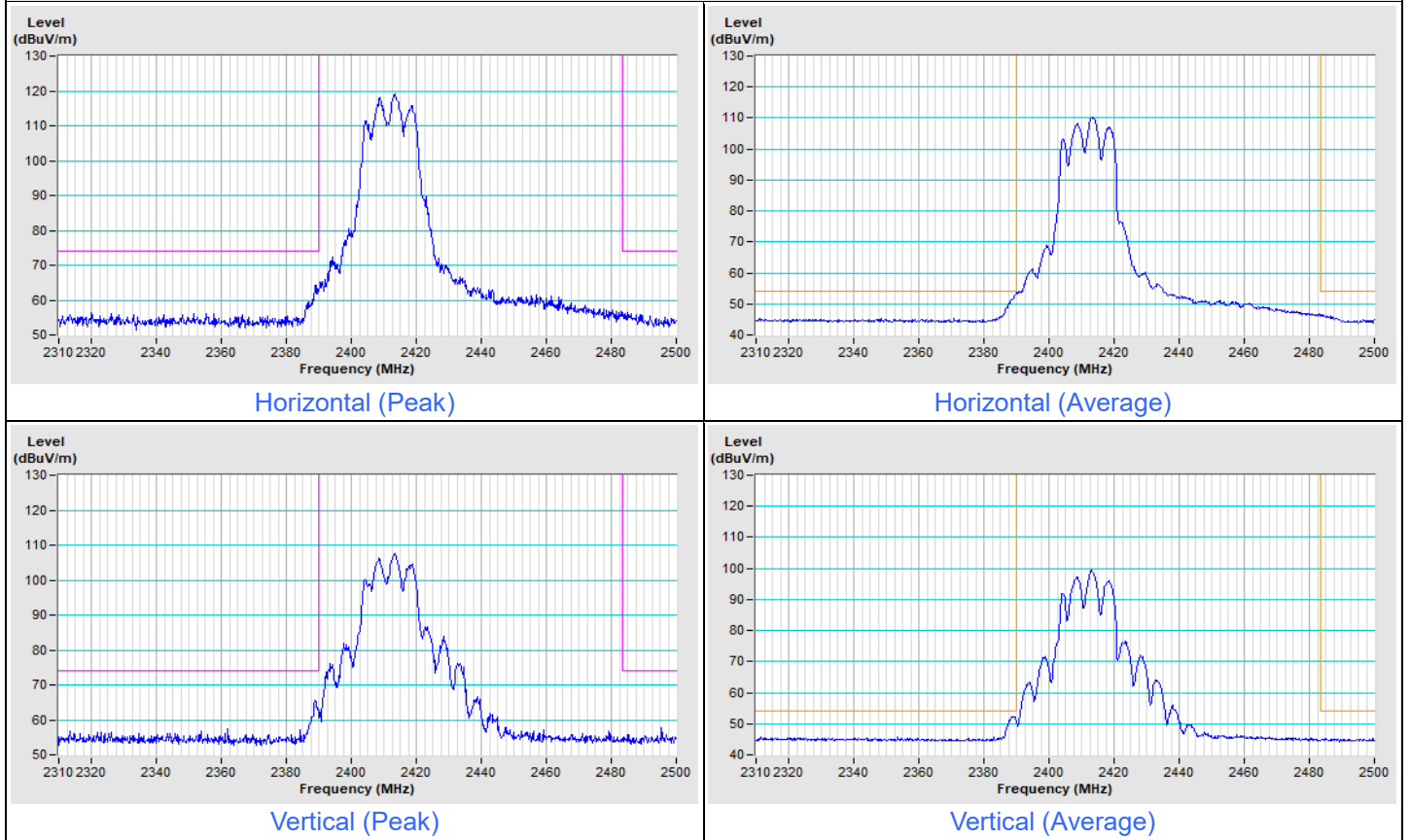
Vertical (Peak)



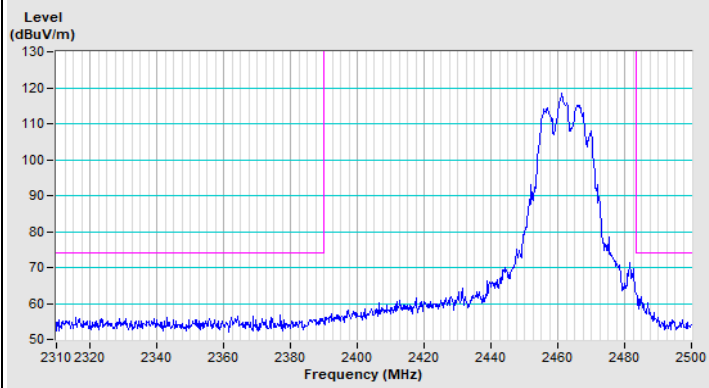
Vertical (Average)

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=3 kHz, DET=Peak
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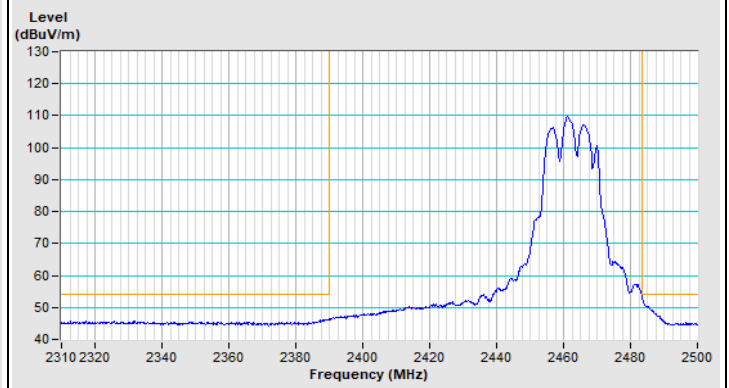
802.11g Channel 1



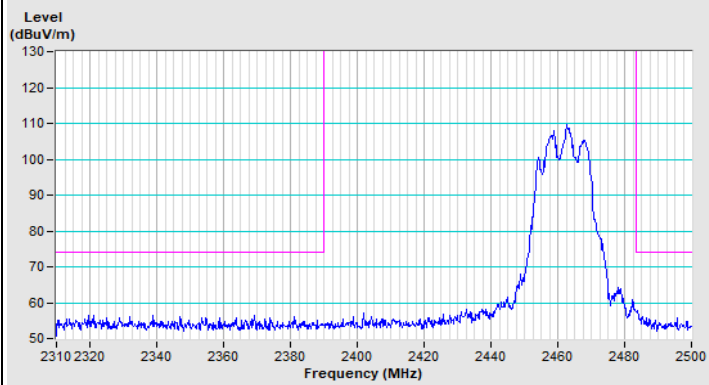
802.11g Channel 11



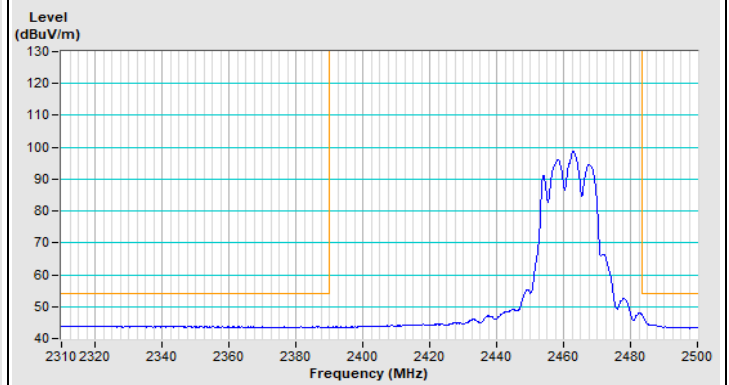
Horizontal (Peak)



Horizontal (Average)



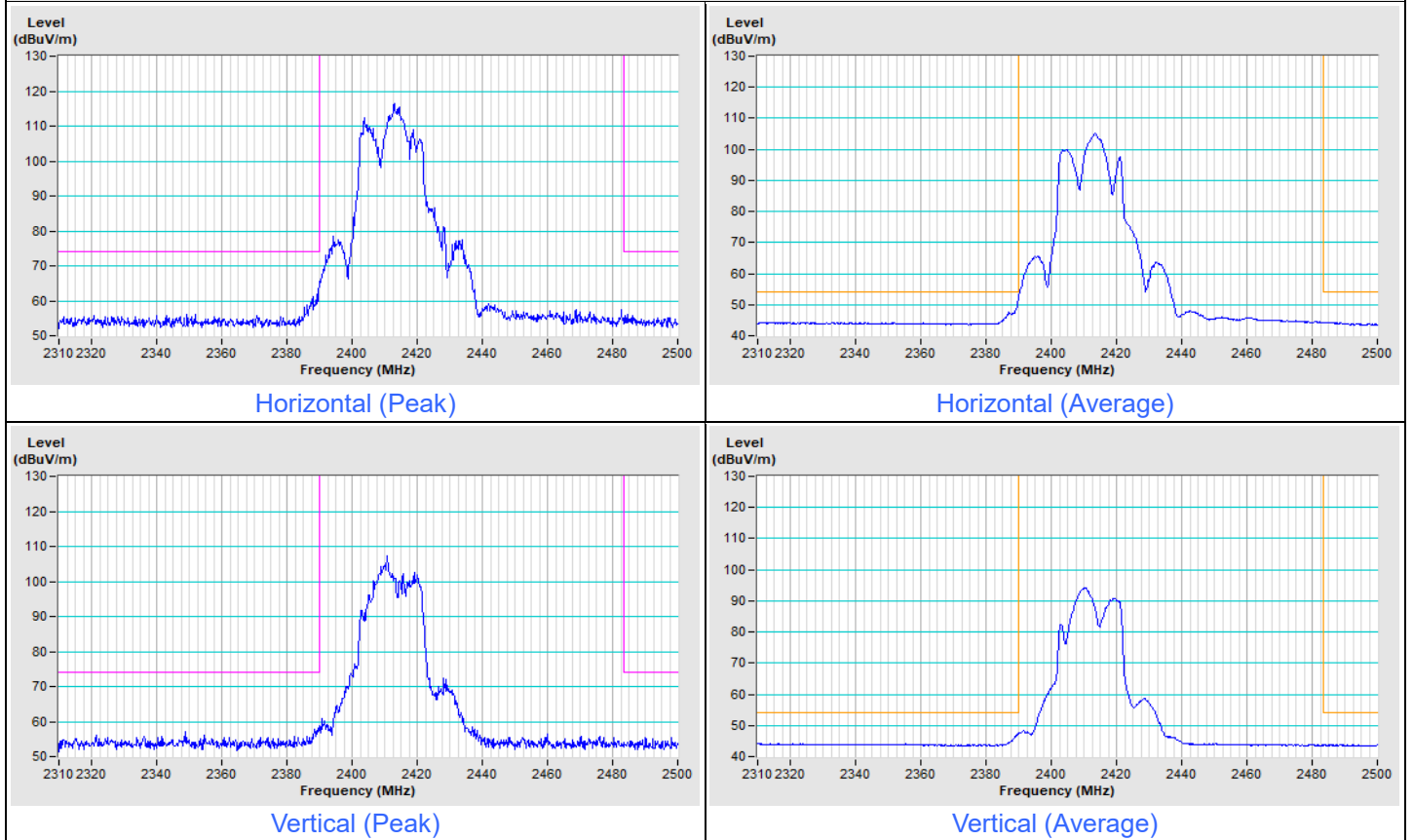
Vertical (Peak)



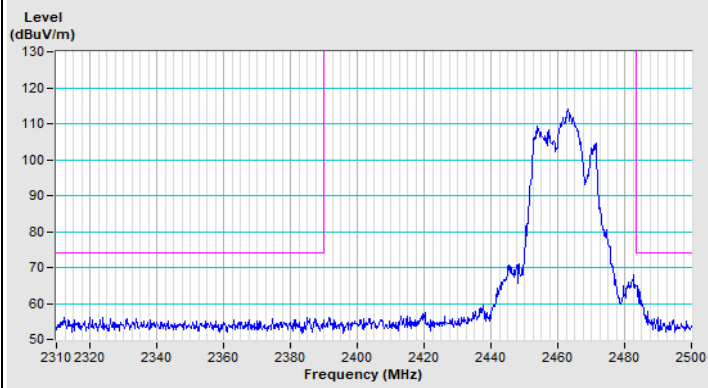
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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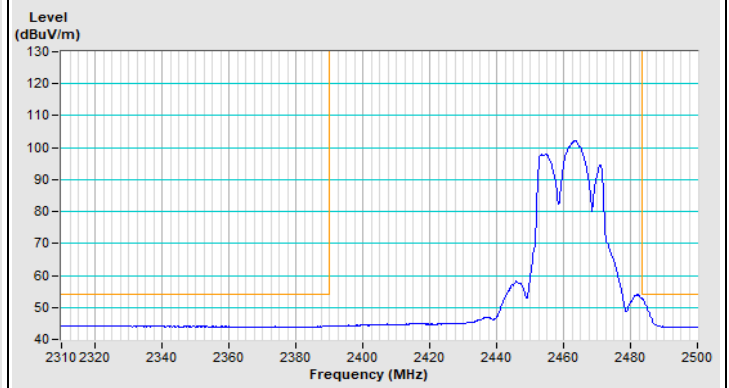
802.11ax (HE20) Channel 1



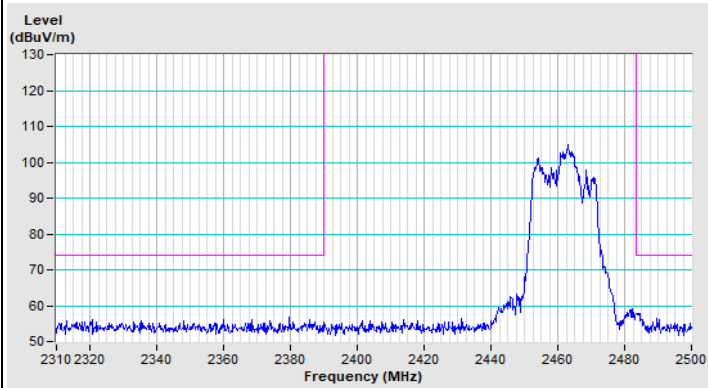
802.11ax (HE20) Channel 11



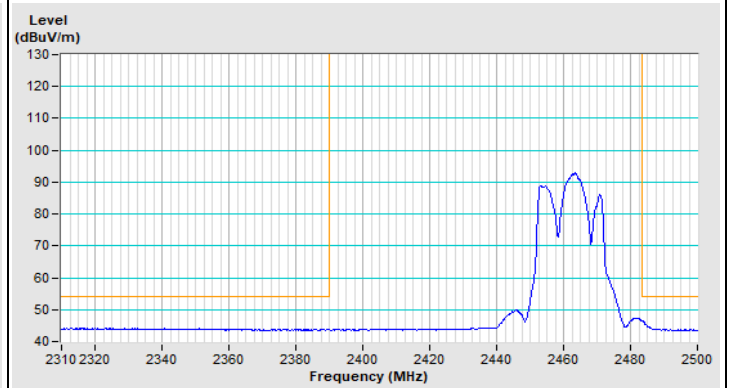
Horizontal (Peak)



Horizontal (Average)



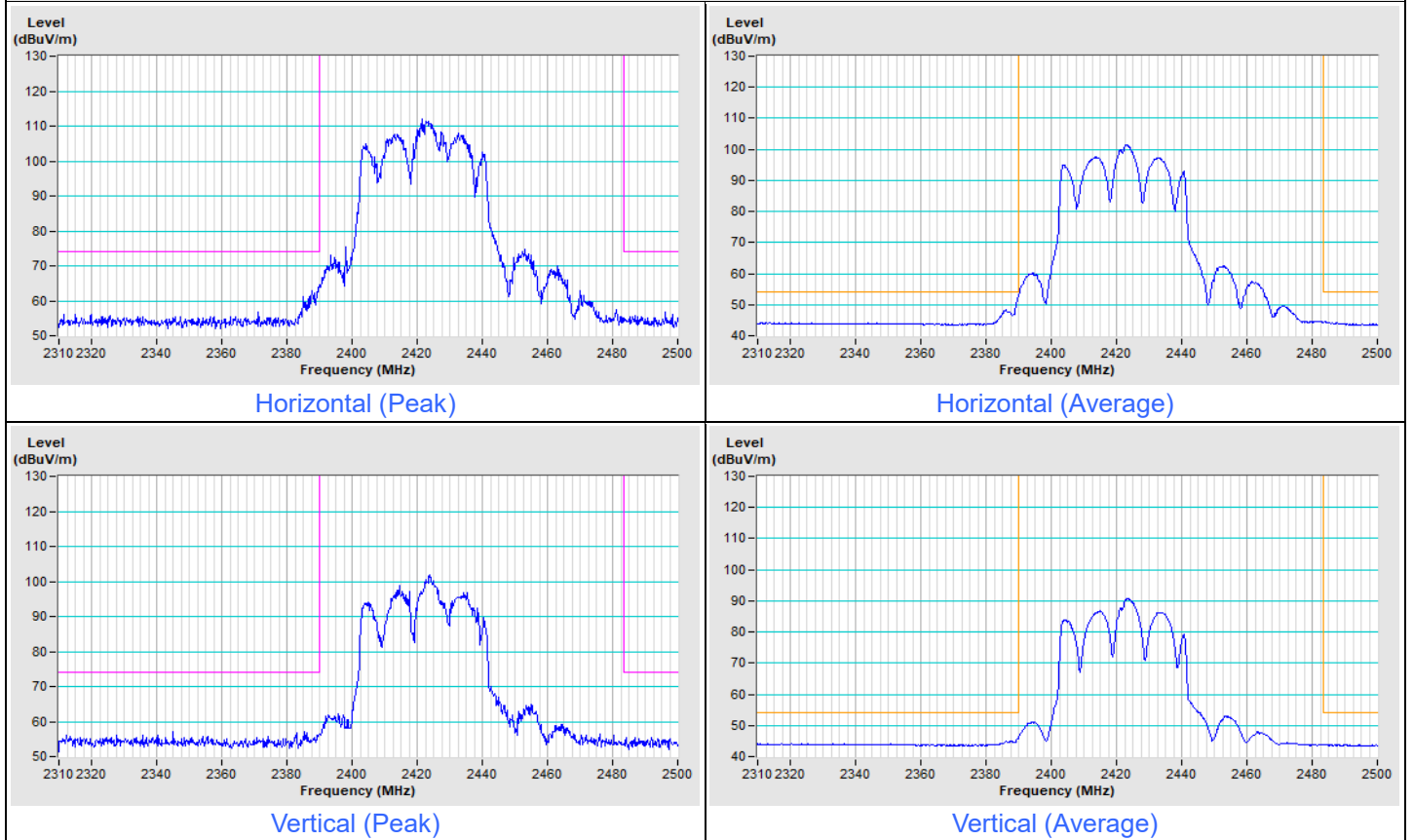
Vertical (Peak)



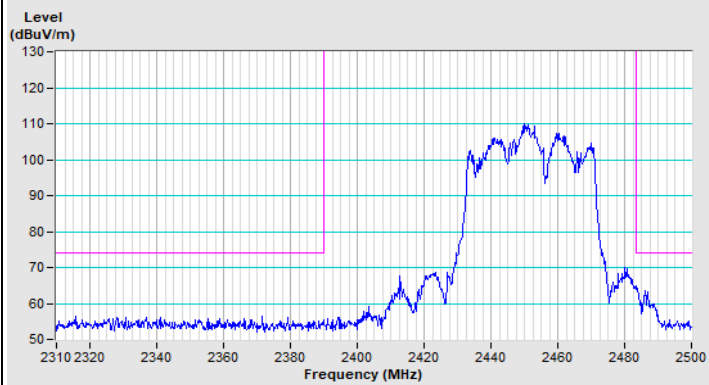
Vertical (Average)

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=10 Hz, DET=Peak
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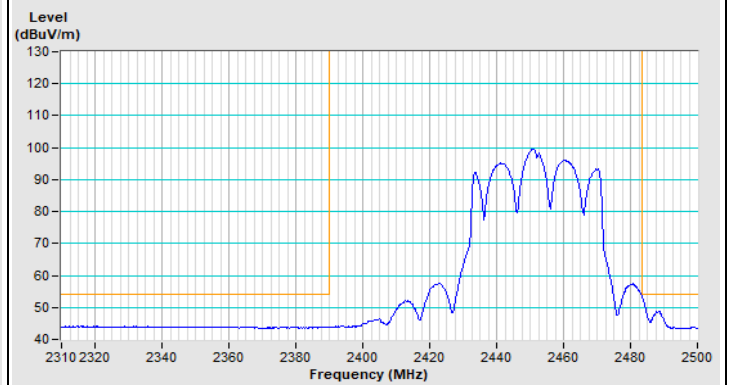
802.11ax (HE40) Channel 3



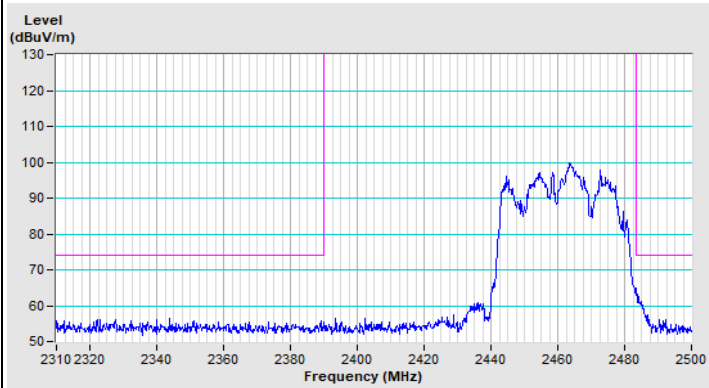
802.11ax (HE40) Channel 9



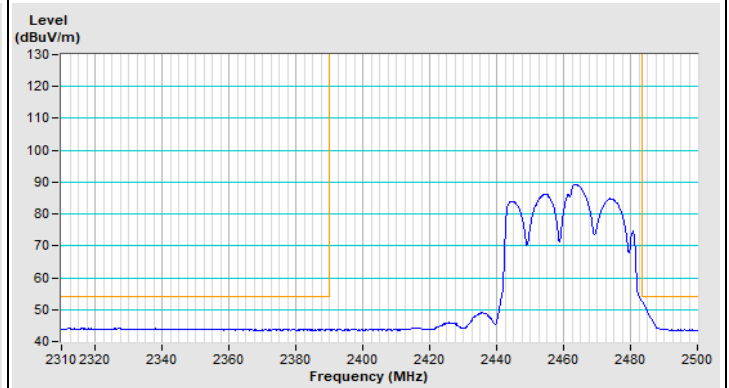
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

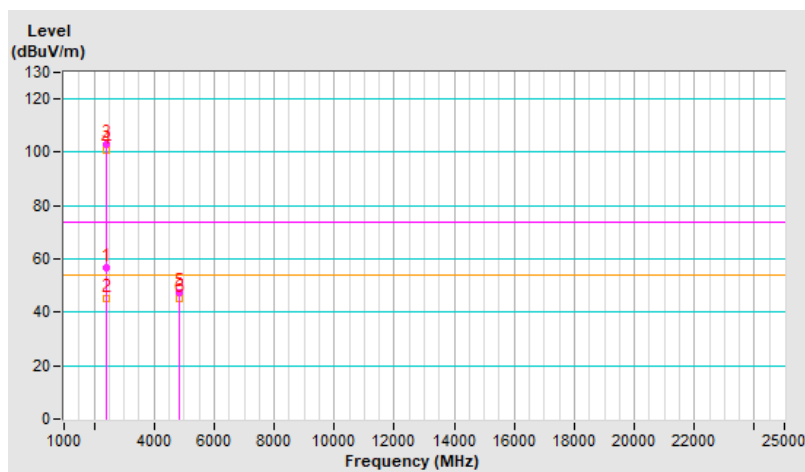
Mode B

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 (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	56.7 PK	74.0	-17.3	1.00 H	49	59.0	-2.3
2	2390.00	45.4 AV	54.0	-8.6	1.00 H	49	47.7	-2.3
3	*2412.00	103.1 PK			1.00 H	49	105.4	-2.3
4	*2412.00	100.6 AV			1.00 H	49	102.9	-2.3
5	4824.00	47.3 PK	74.0	-26.7	1.27 H	167	45.4	1.9
6	4824.00	45.3 AV	54.0	-8.7	1.27 H	167	43.4	1.9

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, the limit was restricted at the RF Output Power.

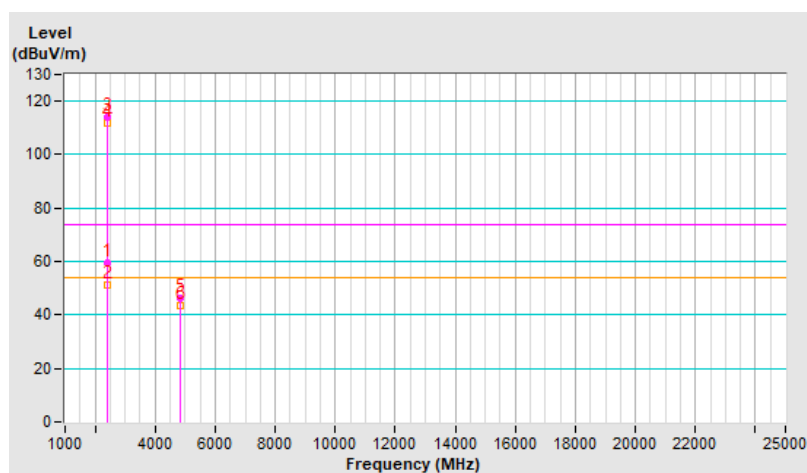


RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	59.4 PK	74.0	-14.6	2.61 V	359	61.7	-2.3
2	2390.00	51.3 AV	54.0	-2.7	2.61 V	359	53.6	-2.3
3	*2412.00	114.2 PK			2.61 V	359	116.5	-2.3
4	*2412.00	111.8 AV			2.61 V	359	114.1	-2.3
5	4824.00	46.1 PK	74.0	-27.9	1.17 V	179	44.2	1.9
6	4824.00	43.4 AV	54.0	-10.6	1.17 V	179	41.5	1.9

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, the limit was restricted at the RF Output Power.

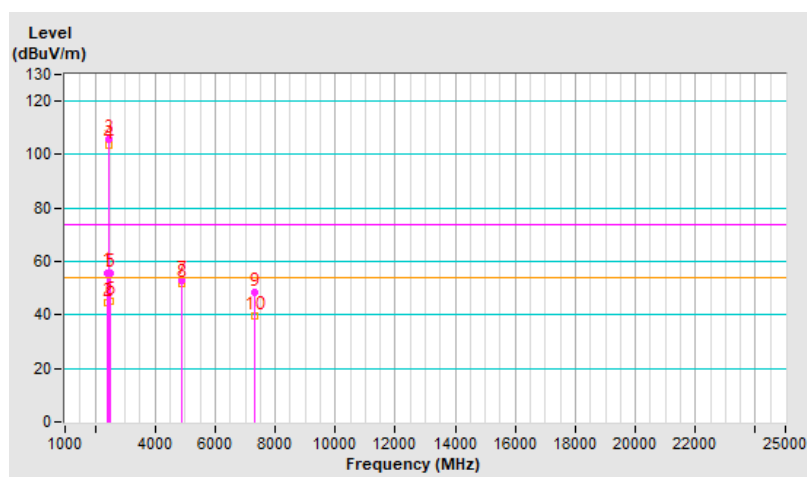


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	55.9 PK	74.0	-18.1	1.50 H	80	58.2	-2.3
2	2390.00	44.7 AV	54.0	-9.3	1.50 H	80	47.0	-2.3
3	*2437.00	105.6 PK			1.50 H	80	107.7	-2.1
4	*2437.00	103.4 AV			1.50 H	80	105.5	-2.1
5	2483.50	55.7 PK	74.0	-18.3	1.50 H	80	57.9	-2.2
6	2483.50	45.2 AV	54.0	-8.8	1.50 H	80	47.4	-2.2
7	4874.00	52.9 PK	74.0	-21.1	1.23 H	166	51.0	1.9
8	4874.00	51.9 AV	54.0	-2.1	1.23 H	166	50.0	1.9
9	7311.00	48.4 PK	74.0	-25.6	1.49 H	174	40.8	7.6
10	7311.00	39.4 AV	54.0	-14.6	1.49 H	174	31.8	7.6

Remarks:

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

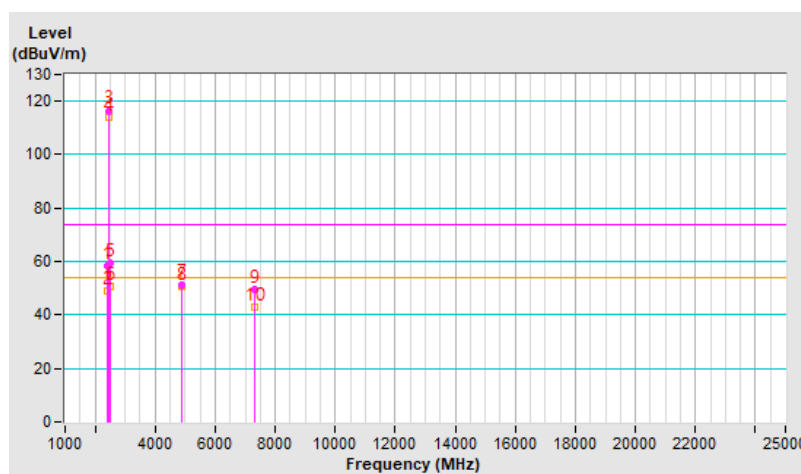


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	58.6 PK	74.0	-15.4	2.55 V	360	60.9	-2.3
2	2390.00	49.0 AV	54.0	-5.0	2.55 V	360	51.3	-2.3
3	*2437.00	116.5 PK			2.54 V	360	118.6	-2.1
4	*2437.00	114.2 AV			2.54 V	360	116.3	-2.1
5	2483.50	59.3 PK	74.0	-14.7	2.55 V	360	61.5	-2.2
6	2483.50	50.5 AV	54.0	-3.5	2.55 V	360	52.7	-2.2
7	4874.00	51.5 PK	74.0	-22.5	1.31 V	134	49.6	1.9
8	4874.00	50.8 AV	54.0	-3.2	1.31 V	134	48.9	1.9
9	7311.00	49.4 PK	74.0	-24.6	1.16 V	172	41.8	7.6
10	7311.00	43.1 AV	54.0	-10.9	1.16 V	172	35.5	7.6

Remarks:

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

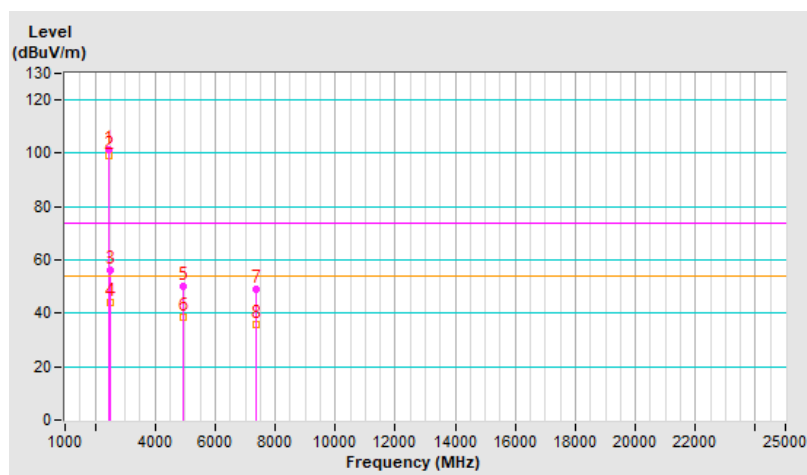


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	101.2 PK			1.17 H	86	103.4	-2.2
2	*2462.00	98.9 AV			1.17 H	86	101.1	-2.2
3	2483.50	56.4 PK	74.0	-17.6	1.17 H	86	58.6	-2.2
4	2483.50	44.3 AV	54.0	-9.7	1.17 H	86	46.5	-2.2
5	4924.00	50.1 PK	74.0	-23.9	1.23 H	165	48.0	2.1
6	4924.00	38.3 AV	54.0	-15.7	1.23 H	165	36.2	2.1
7	7386.00	49.2 PK	74.0	-24.8	1.07 H	130	41.2	8.0
8	7386.00	35.7 AV	54.0	-18.3	1.07 H	130	27.7	8.0

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.

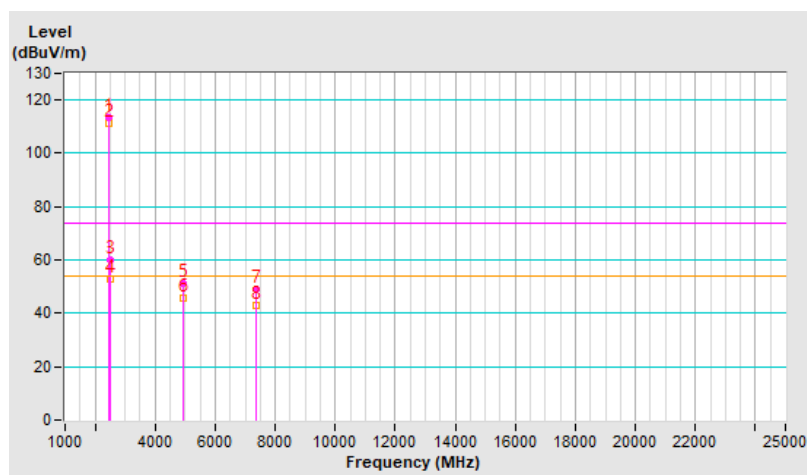


RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	113.7 PK			2.51 V	359	115.9	-2.2
2	*2462.00	111.3 AV			2.51 V	359	113.5	-2.2
3	2483.50	59.8 PK	74.0	-14.2	2.51 V	359	62.0	-2.2
4	2483.50	52.7 AV	54.0	-1.3	2.51 V	359	54.9	-2.2
5	4924.00	51.3 PK	74.0	-22.7	1.27 V	132	49.2	2.1
6	4924.00	45.8 AV	54.0	-8.2	1.27 V	132	43.7	2.1
7	7386.00	49.2 PK	74.0	-24.8	1.15 V	183	41.2	8.0
8	7386.00	42.9 AV	54.0	-11.1	1.15 V	183	34.9	8.0

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.

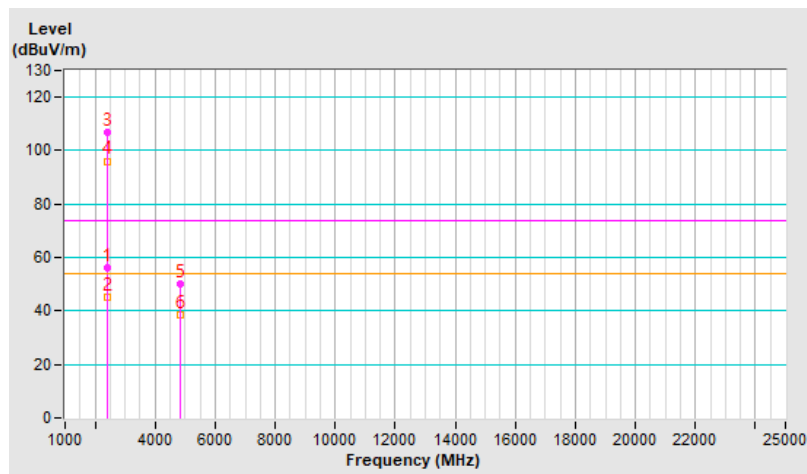


RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	56.2 PK	74.0	-17.8	1.27 H	93	58.5	-2.3
2	2390.00	44.9 AV	54.0	-9.1	1.27 H	93	47.2	-2.3
3	*2412.00	106.7 PK			1.27 H	93	109.0	-2.3
4	*2412.00	96.1 AV			1.27 H	93	98.4	-2.3
5	4824.00	50.1 PK	74.0	-23.9	1.21 H	168	48.2	1.9
6	4824.00	38.4 AV	54.0	-15.6	1.21 H	168	36.5	1.9

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, the limit was restricted at the RF Output Power.

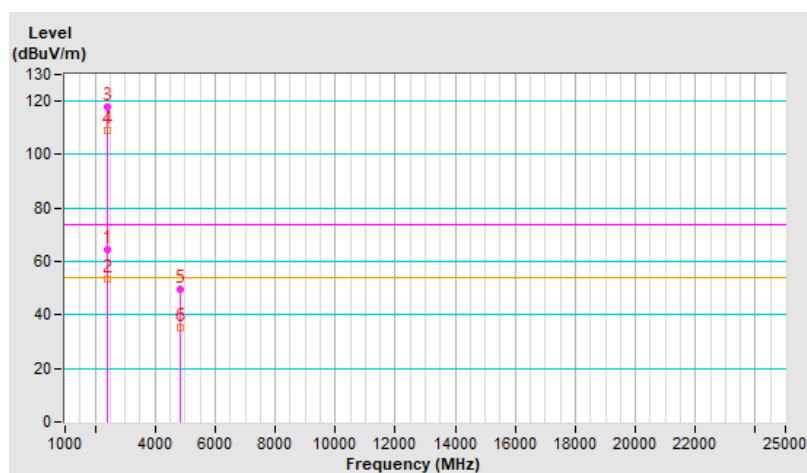


RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.2 PK	74.0	-9.8	2.62 V	336	66.5	-2.3
2	2390.00	53.2 AV	54.0	-0.8	2.62 V	336	55.5	-2.3
3	*2412.00	117.7 PK			2.62 V	336	120.0	-2.3
4	*2412.00	109.2 AV			2.62 V	336	111.5	-2.3
5	4824.00	49.8 PK	74.0	-24.2	1.17 V	135	47.9	1.9
6	4824.00	35.2 AV	54.0	-18.8	1.17 V	135	33.3	1.9

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, the limit was restricted at the RF Output Power.

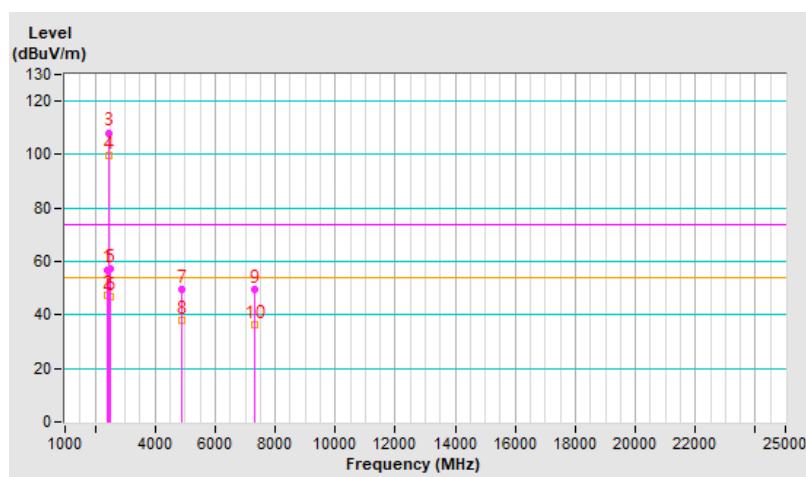


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	57.0 PK	74.0	-17.0	1.49 H	80	59.3	-2.3
2	2390.00	47.2 AV	54.0	-6.8	1.49 H	80	49.5	-2.3
3	*2437.00	108.2 PK			1.49 H	80	110.3	-2.1
4	*2437.00	99.9 AV			1.49 H	80	102.0	-2.1
5	2483.50	57.3 PK	74.0	-16.7	1.49 H	80	59.5	-2.2
6	2483.50	47.0 AV	54.0	-7.0	1.49 H	80	49.2	-2.2
7	4874.00	49.7 PK	74.0	-24.3	1.20 H	166	47.8	1.9
8	4874.00	38.1 AV	54.0	-15.9	1.20 H	166	36.2	1.9
9	7311.00	49.6 PK	74.0	-24.4	1.03 H	135	42.0	7.6
10	7311.00	36.1 AV	54.0	-17.9	1.03 H	135	28.5	7.6

Remarks:

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

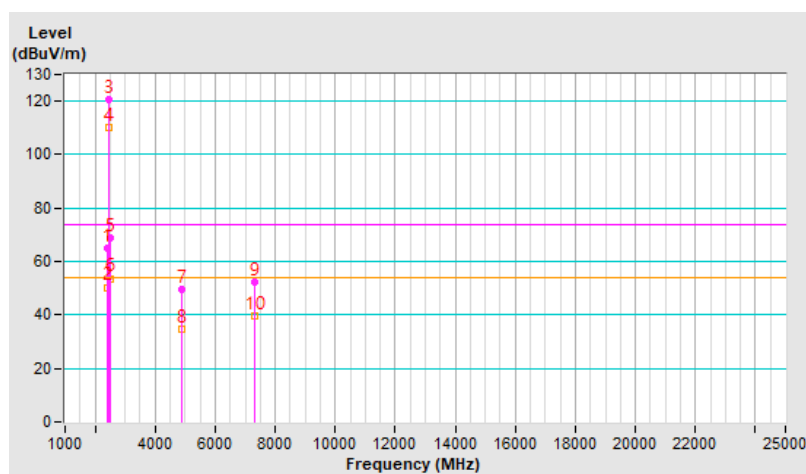


RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	65.2 PK	74.0	-8.8	2.58 V	358	67.5	-2.3
2	2390.00	50.4 AV	54.0	-3.6	2.58 V	358	52.7	-2.3
3	*2437.00	120.5 PK			2.58 V	358	122.6	-2.1
4	*2437.00	110.2 AV			2.58 V	358	112.3	-2.1
5	2483.50	69.0 PK	74.0	-5.0	2.58 V	358	71.2	-2.2
6	2483.50	53.7 AV	54.0	-0.3	2.58 V	358	55.9	-2.2
7	4874.00	49.5 PK	74.0	-24.5	1.12 V	135	47.6	1.9
8	4874.00	34.9 AV	54.0	-19.1	1.12 V	135	33.0	1.9
9	7311.00	52.2 PK	74.0	-21.8	3.89 V	189	44.6	7.6
10	7311.00	39.6 AV	54.0	-14.4	3.89 V	189	32.0	7.6

Remarks:

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

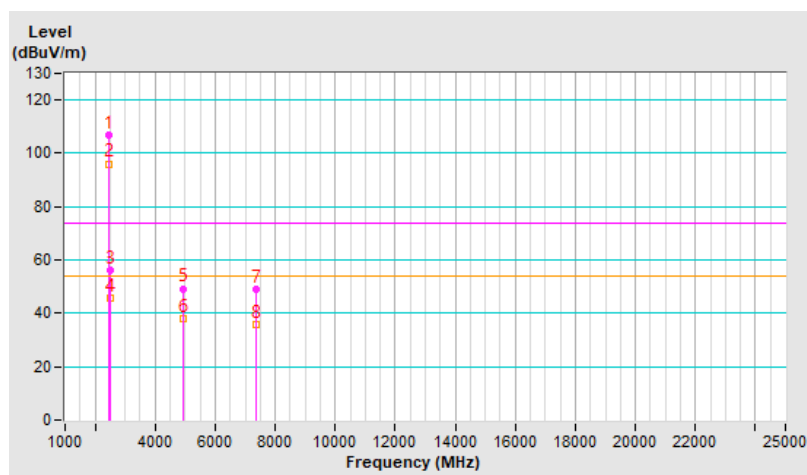


RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	106.6 PK			1.27 H	39	108.8	-2.2
2	*2462.00	96.1 AV			1.27 H	39	98.3	-2.2
3	2483.50	56.4 PK	74.0	-17.6	1.27 H	39	58.6	-2.2
4	2483.50	45.7 AV	54.0	-8.3	1.27 H	39	47.9	-2.2
5	4924.00	49.3 PK	74.0	-24.7	1.21 H	150	47.2	2.1
6	4924.00	37.8 AV	54.0	-16.2	1.21 H	150	35.7	2.1
7	7386.00	49.2 PK	74.0	-24.8	1.00 H	121	41.2	8.0
8	7386.00	35.8 AV	54.0	-18.2	1.00 H	121	27.8	8.0

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.

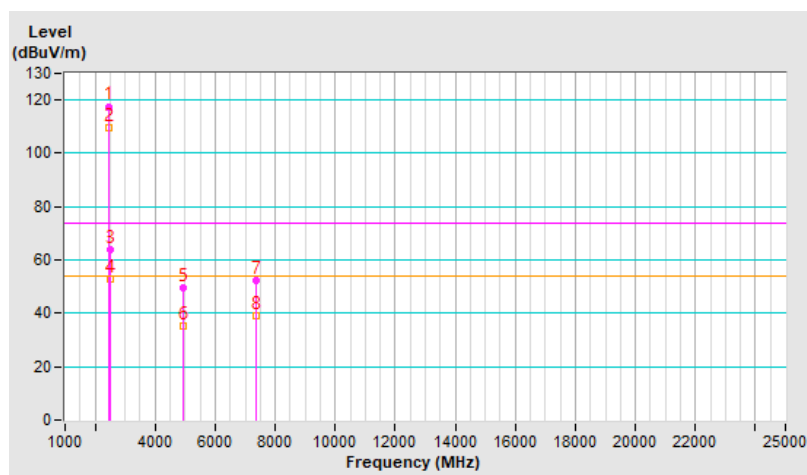


RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	117.6 PK			2.05 V	360	119.8	-2.2
2	*2462.00	109.7 AV			2.05 V	360	111.9	-2.2
3	2483.50	63.9 PK	74.0	-10.1	2.05 V	360	66.1	-2.2
4	2483.50	53.0 AV	54.0	-1.0	2.05 V	360	55.2	-2.2
5	4924.00	49.7 PK	74.0	-24.3	1.15 V	131	47.6	2.1
6	4924.00	35.1 AV	54.0	-18.9	1.15 V	131	33.0	2.1
7	7386.00	52.2 PK	74.0	-21.8	3.88 V	204	44.2	8.0
8	7386.00	39.3 AV	54.0	-14.7	3.88 V	204	31.3	8.0

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.

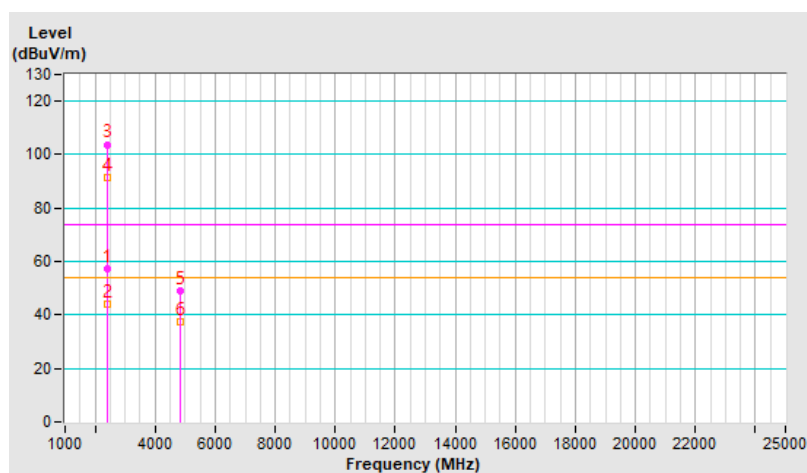


RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	57.1 PK	74.0	-16.9	1.50 H	93	59.4	-2.3
2	2390.00	44.1 AV	54.0	-9.9	1.50 H	93	46.4	-2.3
3	*2412.00	103.8 PK			1.50 H	93	106.1	-2.3
4	*2412.00	91.4 AV			1.50 H	93	93.7	-2.3
5	4824.00	48.9 PK	74.0	-25.1	1.21 H	149	47.0	1.9
6	4824.00	37.3 AV	54.0	-16.7	1.21 H	149	35.4	1.9

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, the limit was restricted at the RF Output Power.

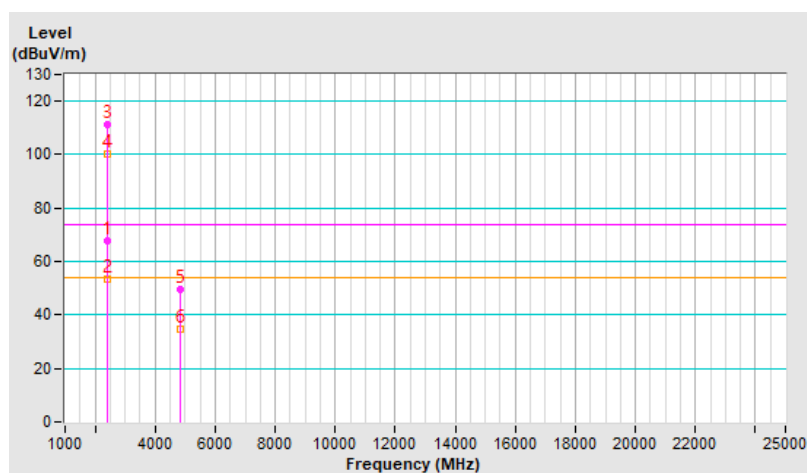


RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.6 PK	74.0	-6.4	2.62 V	359	69.9	-2.3
2	2390.00	53.4 AV	54.0	-0.6	2.62 V	359	55.7	-2.3
3	*2412.00	111.3 PK			2.62 V	359	113.6	-2.3
4	*2412.00	100.3 AV			2.62 V	359	102.6	-2.3
5	4824.00	49.8 PK	74.0	-24.2	1.19 V	146	47.9	1.9
6	4824.00	34.9 AV	54.0	-19.1	1.19 V	146	33.0	1.9

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, the limit was restricted at the RF Output Power.

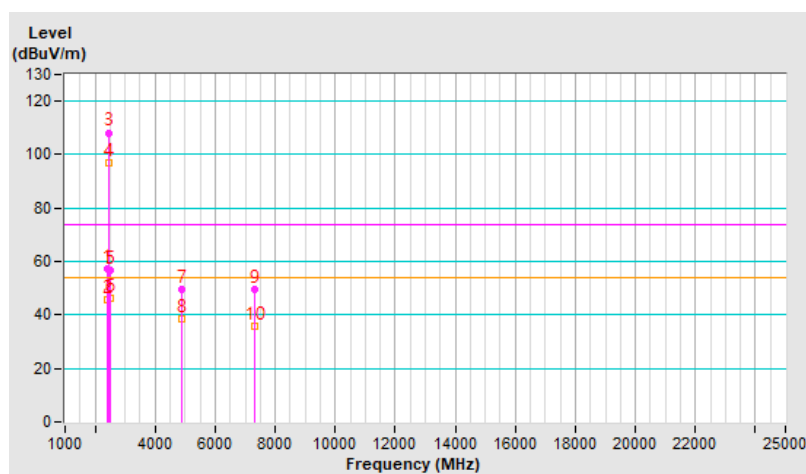


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	57.3 PK	74.0	-16.7	1.48 H	82	59.6	-2.3
2	2390.00	45.5 AV	54.0	-8.5	1.48 H	82	47.8	-2.3
3	*2437.00	108.2 PK			1.48 H	82	110.3	-2.1
4	*2437.00	96.7 AV			1.48 H	82	98.8	-2.1
5	2483.50	56.8 PK	74.0	-17.2	1.48 H	82	59.0	-2.2
6	2483.50	46.4 AV	54.0	-7.6	1.48 H	82	48.6	-2.2
7	4874.00	49.7 PK	74.0	-24.3	1.18 H	144	47.8	1.9
8	4874.00	38.3 AV	54.0	-15.7	1.18 H	144	36.4	1.9
9	7311.00	49.4 PK	74.0	-24.6	1.00 H	120	41.8	7.6
10	7311.00	35.8 AV	54.0	-18.2	1.00 H	120	28.2	7.6

Remarks:

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

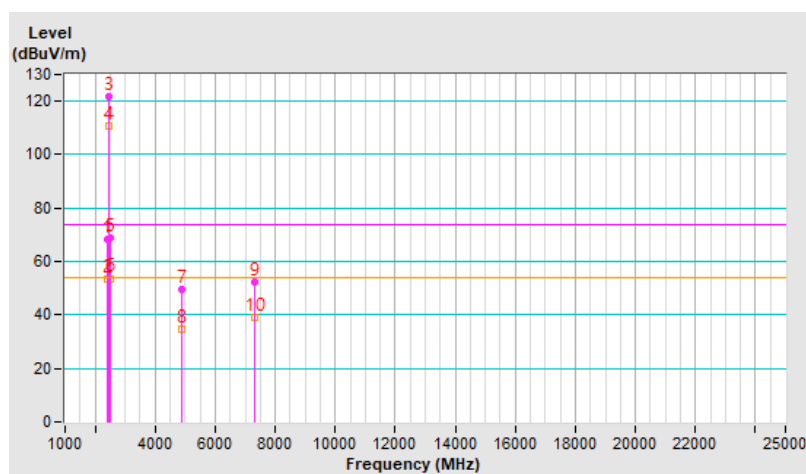


RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	68.3 PK	74.0	-5.7	2.57 V	360	70.6	-2.3
2	2390.00	53.2 AV	54.0	-0.8	2.57 V	360	55.5	-2.3
3	*2437.00	121.9 PK			2.57 V	360	124.0	-2.1
4	*2437.00	110.7 AV			2.57 V	360	112.8	-2.1
5	2483.50	68.6 PK	74.0	-5.4	2.57 V	360	70.8	-2.2
6	2483.50	53.7 AV	54.0	-0.3	2.57 V	360	55.9	-2.2
7	4874.00	49.7 PK	74.0	-24.3	1.21 V	147	47.8	1.9
8	4874.00	34.8 AV	54.0	-19.2	1.21 V	147	32.9	1.9
9	7311.00	52.3 PK	74.0	-21.7	3.92 V	211	44.7	7.6
10	7311.00	39.2 AV	54.0	-14.8	3.92 V	211	31.6	7.6

Remarks:

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

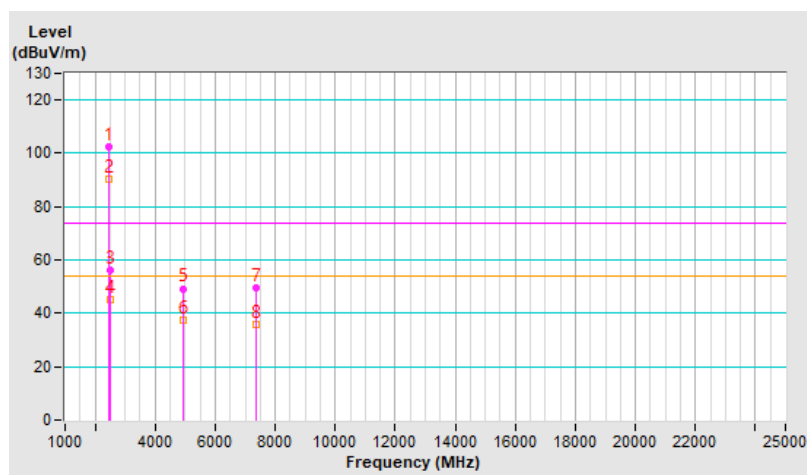


RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	102.2 PK			1.00 H	82	104.4	-2.2
2	*2462.00	90.3 AV			1.00 H	82	92.5	-2.2
3	2483.50	56.2 PK	74.0	-17.8	1.00 H	82	58.4	-2.2
4	2483.50	45.4 AV	54.0	-8.6	1.00 H	82	47.6	-2.2
5	4924.00	49.3 PK	74.0	-24.7	1.26 H	154	47.2	2.1
6	4924.00	37.6 AV	54.0	-16.4	1.26 H	154	35.5	2.1
7	7386.00	49.4 PK	74.0	-24.6	1.02 H	122	41.4	8.0
8	7386.00	35.9 AV	54.0	-18.1	1.02 H	122	27.9	8.0

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.

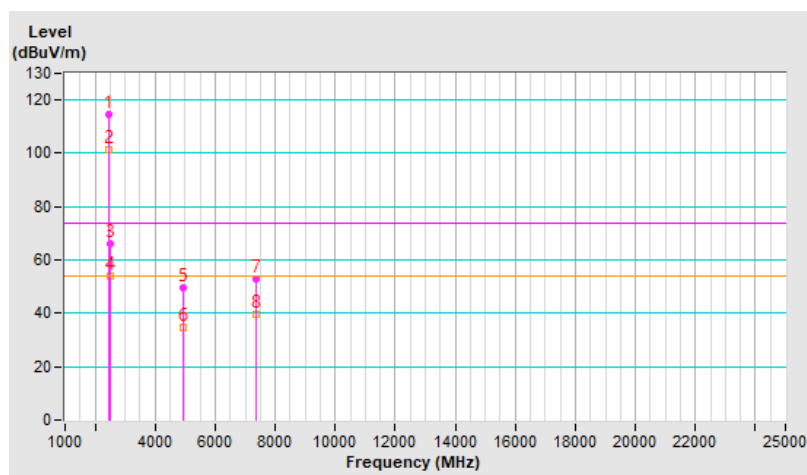


RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	114.5 PK			2.09 V	20	116.7	-2.2
2	*2462.00	101.4 AV			2.09 V	20	103.6	-2.2
3	2483.50	66.3 PK	74.0	-7.7	2.09 V	20	68.5	-2.2
4	2483.50	53.8 AV	54.0	-0.2	2.09 V	20	56.0	-2.2
5	4924.00	49.8 PK	74.0	-24.2	1.27 V	161	47.7	2.1
6	4924.00	34.8 AV	54.0	-19.2	1.27 V	161	32.7	2.1
7	7386.00	52.7 PK	74.0	-21.3	3.88 V	223	44.7	8.0
8	7386.00	39.4 AV	54.0	-14.6	3.88 V	223	31.4	8.0

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.

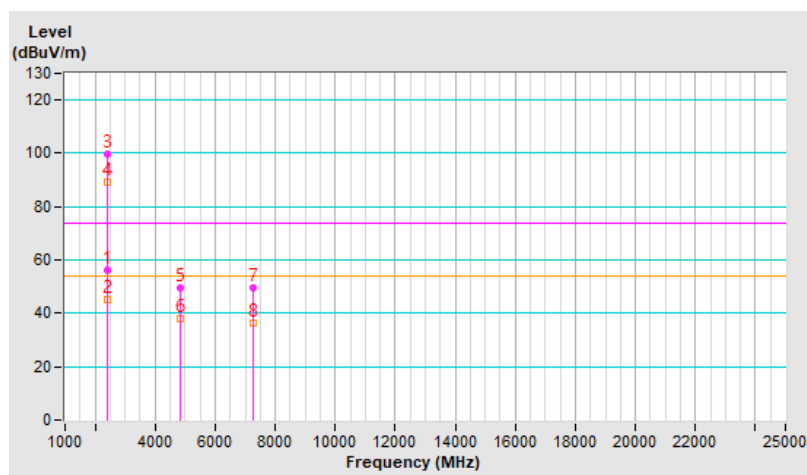


RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	56.4 PK	74.0	-17.6	2.68 H	92	58.7	-2.3
2	2390.00	44.9 AV	54.0	-9.1	2.68 H	92	47.2	-2.3
3	*2422.00	99.9 PK			2.68 H	92	102.0	-2.1
4	*2422.00	89.3 AV			2.68 H	92	91.4	-2.1
5	4844.00	49.7 PK	74.0	-24.3	1.23 H	147	47.8	1.9
6	4844.00	38.1 AV	54.0	-15.9	1.23 H	147	36.2	1.9
7	7266.00	49.6 PK	74.0	-24.4	1.00 H	130	41.8	7.8
8	7266.00	36.1 AV	54.0	-17.9	1.00 H	130	28.3	7.8

Remarks:

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

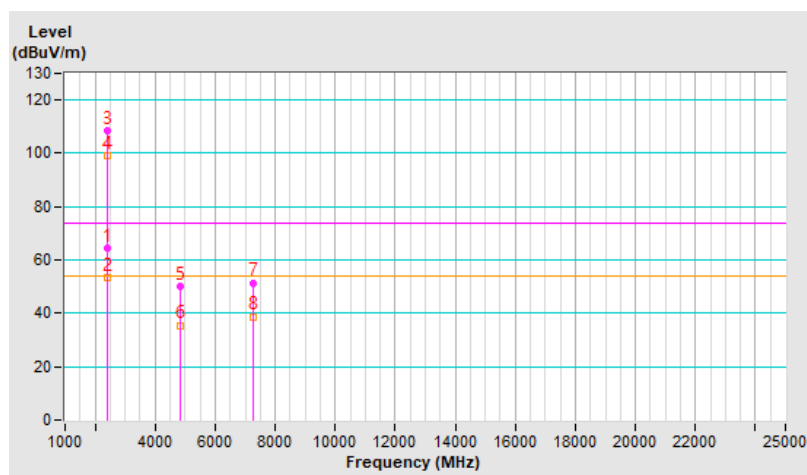


RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.2 PK	74.0	-9.8	2.62 V	6	66.5	-2.3
2	2390.00	53.4 AV	54.0	-0.6	2.62 V	6	55.7	-2.3
3	*2422.00	108.7 PK			2.62 V	6	110.8	-2.1
4	*2422.00	99.1 AV			2.62 V	6	101.2	-2.1
5	4844.00	50.2 PK	74.0	-23.8	1.18 V	145	48.3	1.9
6	4844.00	35.5 AV	54.0	-18.5	1.18 V	145	33.6	1.9
7	7266.00	51.5 PK	74.0	-22.5	3.90 V	210	43.7	7.8
8	7266.00	38.8 AV	54.0	-15.2	3.90 V	210	31.0	7.8

Remarks:

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

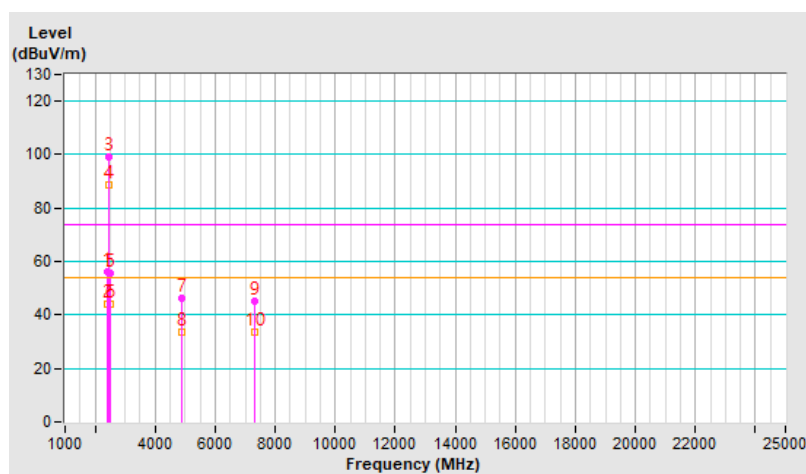


RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	56.0 PK	74.0	-18.0	2.04 H	1	58.3	-2.3
2	2390.00	44.2 AV	54.0	-9.8	2.04 H	1	46.5	-2.3
3	*2437.00	99.2 PK			2.04 H	1	101.3	-2.1
4	*2437.00	88.9 AV			2.04 H	1	91.0	-2.1
5	2483.50	55.8 PK	74.0	-18.2	2.04 H	1	58.0	-2.2
6	2483.50	44.3 AV	54.0	-9.7	2.04 H	1	46.5	-2.2
7	4874.00	46.5 PK	74.0	-27.5	1.21 H	168	44.6	1.9
8	4874.00	33.6 AV	54.0	-20.4	1.21 H	168	31.7	1.9
9	7311.00	45.4 PK	74.0	-28.6	1.04 H	134	37.8	7.6
10	7311.00	33.6 AV	54.0	-20.4	1.04 H	134	26.0	7.6

Remarks:

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

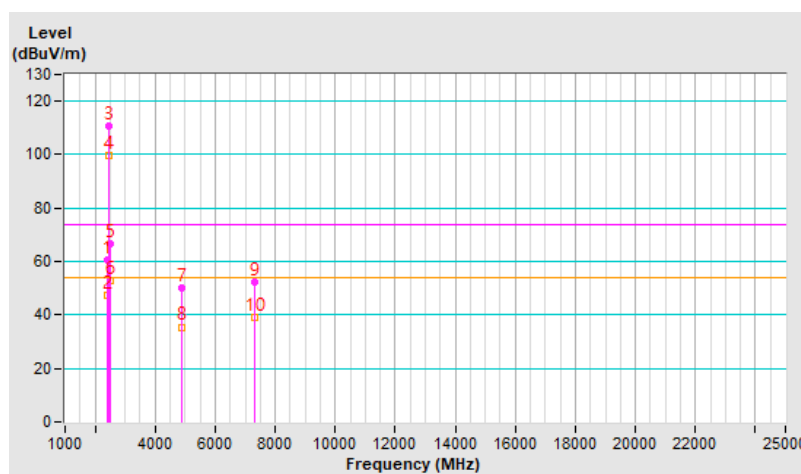


RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.4 PK	74.0	-13.6	2.55 V	360	62.7	-2.3
2	2390.00	47.6 AV	54.0	-6.4	2.55 V	360	49.9	-2.3
3	*2437.00	110.6 PK			2.55 V	360	112.7	-2.1
4	*2437.00	99.6 AV			2.55 V	360	101.7	-2.1
5	2483.50	66.8 PK	74.0	-7.2	2.55 V	360	69.0	-2.2
6	2483.50	52.7 AV	54.0	-1.3	2.55 V	360	54.9	-2.2
7	4874.00	50.0 PK	74.0	-24.0	1.17 V	135	48.1	1.9
8	4874.00	35.5 AV	54.0	-18.5	1.17 V	135	33.6	1.9
9	7311.00	52.4 PK	74.0	-21.6	3.86 V	219	44.8	7.6
10	7311.00	39.3 AV	54.0	-14.7	3.86 V	219	31.7	7.6

Remarks:

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

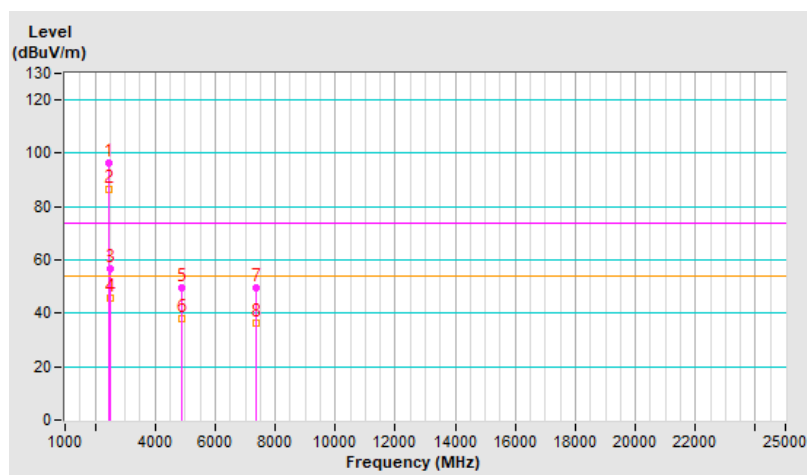


RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	96.5 PK			1.08 H	40	98.7	-2.2
2	*2452.00	86.7 AV			1.08 H	40	88.9	-2.2
3	2483.50	56.6 PK	74.0	-17.4	1.08 H	40	58.8	-2.2
4	2483.50	45.6 AV	54.0	-8.4	1.08 H	40	47.8	-2.2
5	4904.00	49.4 PK	74.0	-24.6	1.23 H	143	47.4	2.0
6	4904.00	38.2 AV	54.0	-15.8	1.23 H	143	36.2	2.0
7	7356.00	49.7 PK	74.0	-24.3	1.00 H	130	41.7	8.0
8	7356.00	36.1 AV	54.0	-17.9	1.00 H	130	28.1	8.0

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.

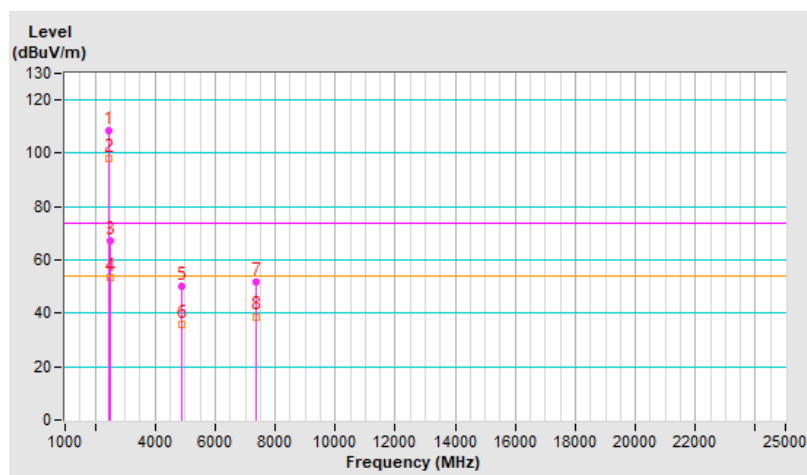


RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 72 % RH
Tested By	Louis Yang		

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	108.3 PK			2.11 V	23	110.5	-2.2
2	*2452.00	97.8 AV			2.11 V	23	100.0	-2.2
3	2483.50	67.0 PK	74.0	-7.0	2.11 V	23	69.2	-2.2
4	2483.50	53.2 AV	54.0	-0.8	2.11 V	23	55.4	-2.2
5	4904.00	50.1 PK	74.0	-23.9	1.16 V	123	48.1	2.0
6	4904.00	35.6 AV	54.0	-18.4	1.16 V	123	33.6	2.0
7	7356.00	51.8 PK	74.0	-22.2	3.92 V	215	43.8	8.0
8	7356.00	38.8 AV	54.0	-15.2	3.92 V	215	30.8	8.0

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.

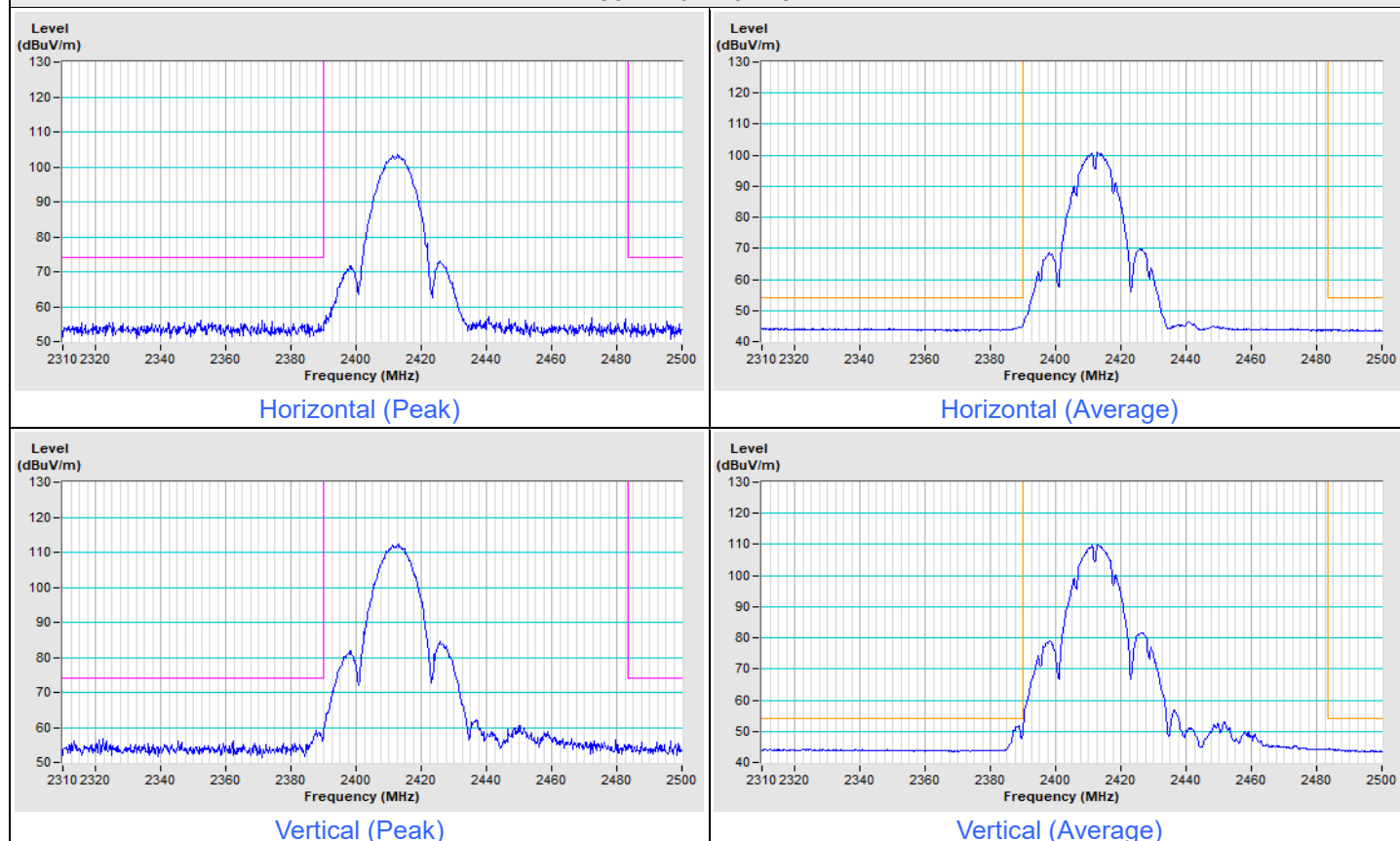


Plot of Band Edge

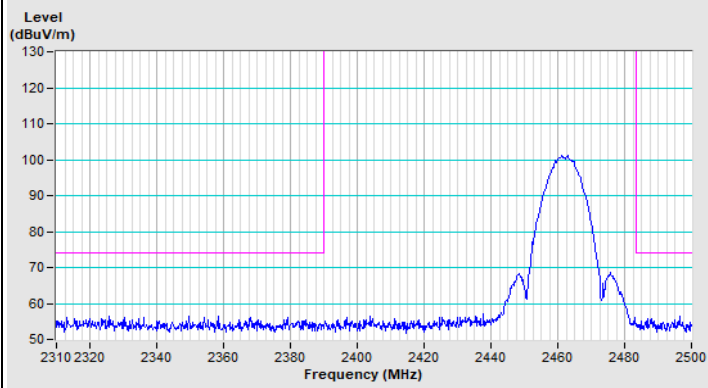
Mode B

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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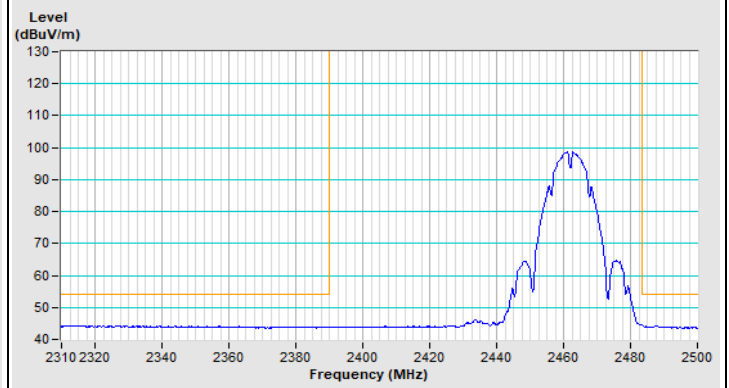
802.11b Channel 1



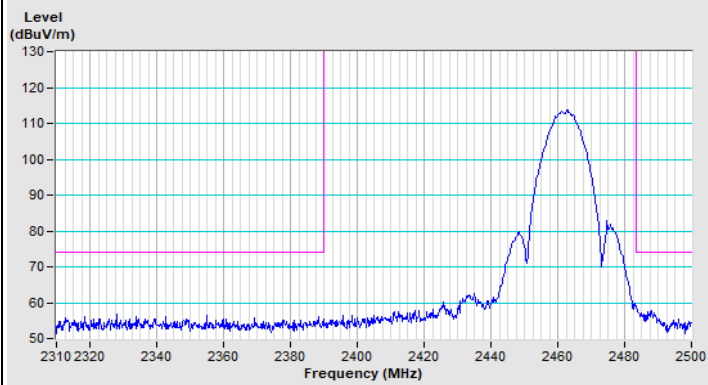
802.11b Channel 11



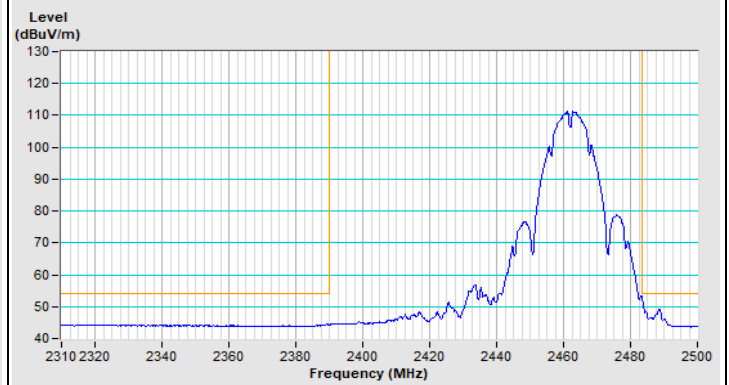
Horizontal (Peak)



Horizontal (Average)



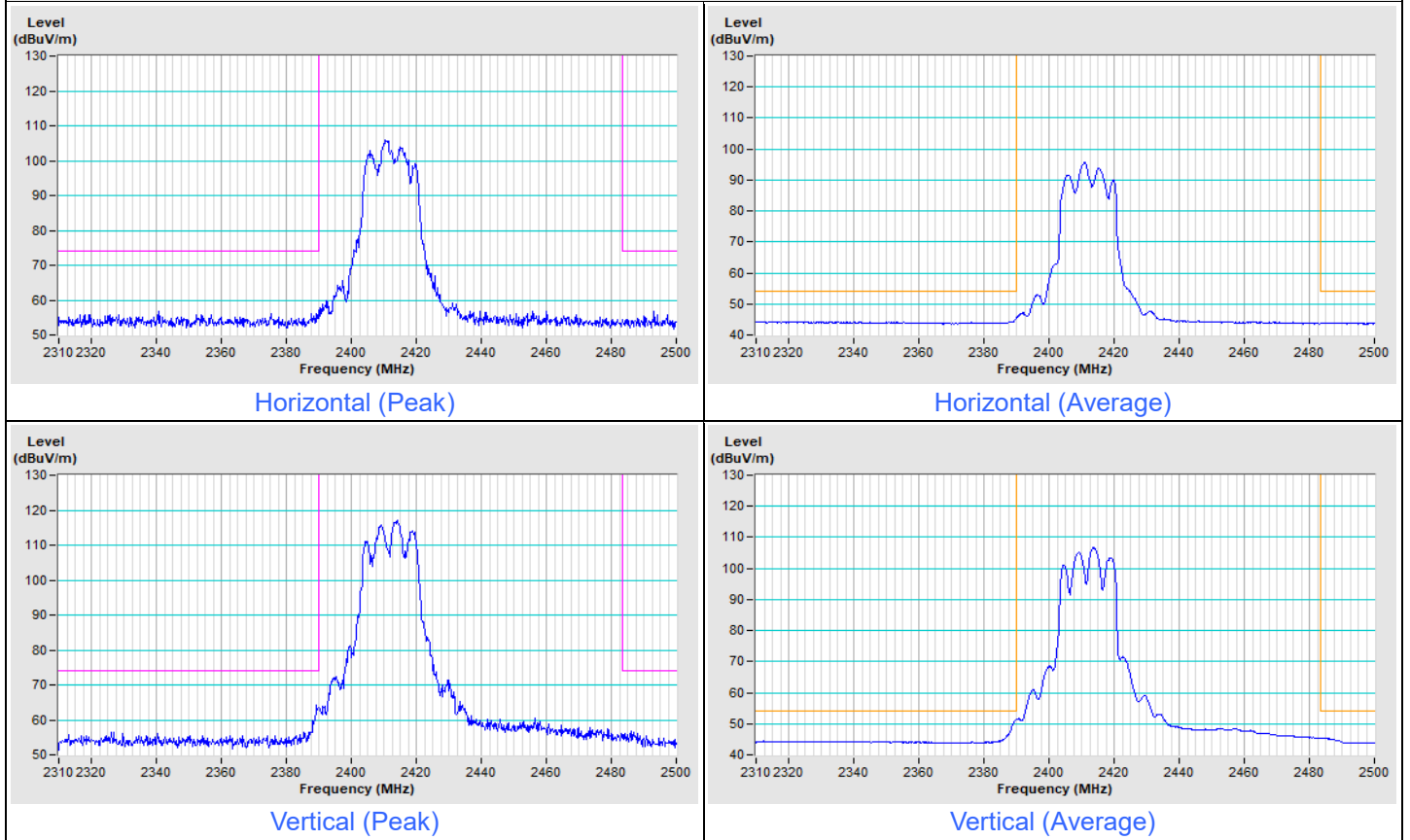
Vertical (Peak)

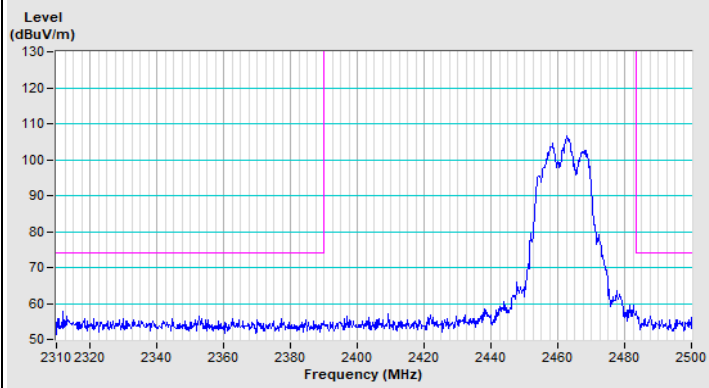


Vertical (Average)

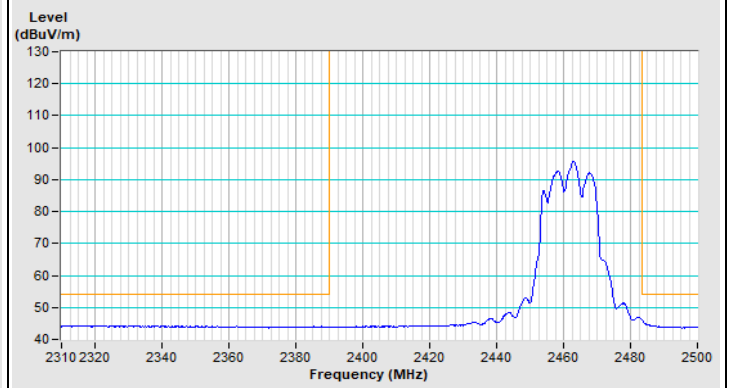
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
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802.11g Channel 1

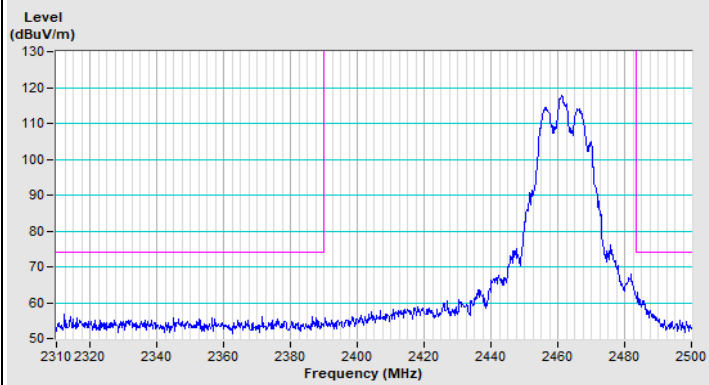


802.11g Channel 11

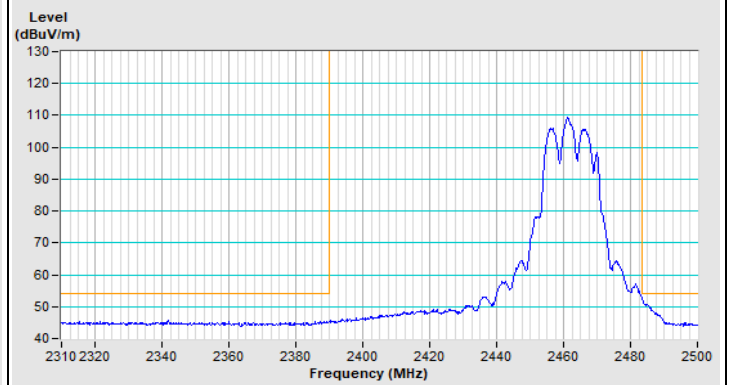
Horizontal (Peak)



Horizontal (Average)



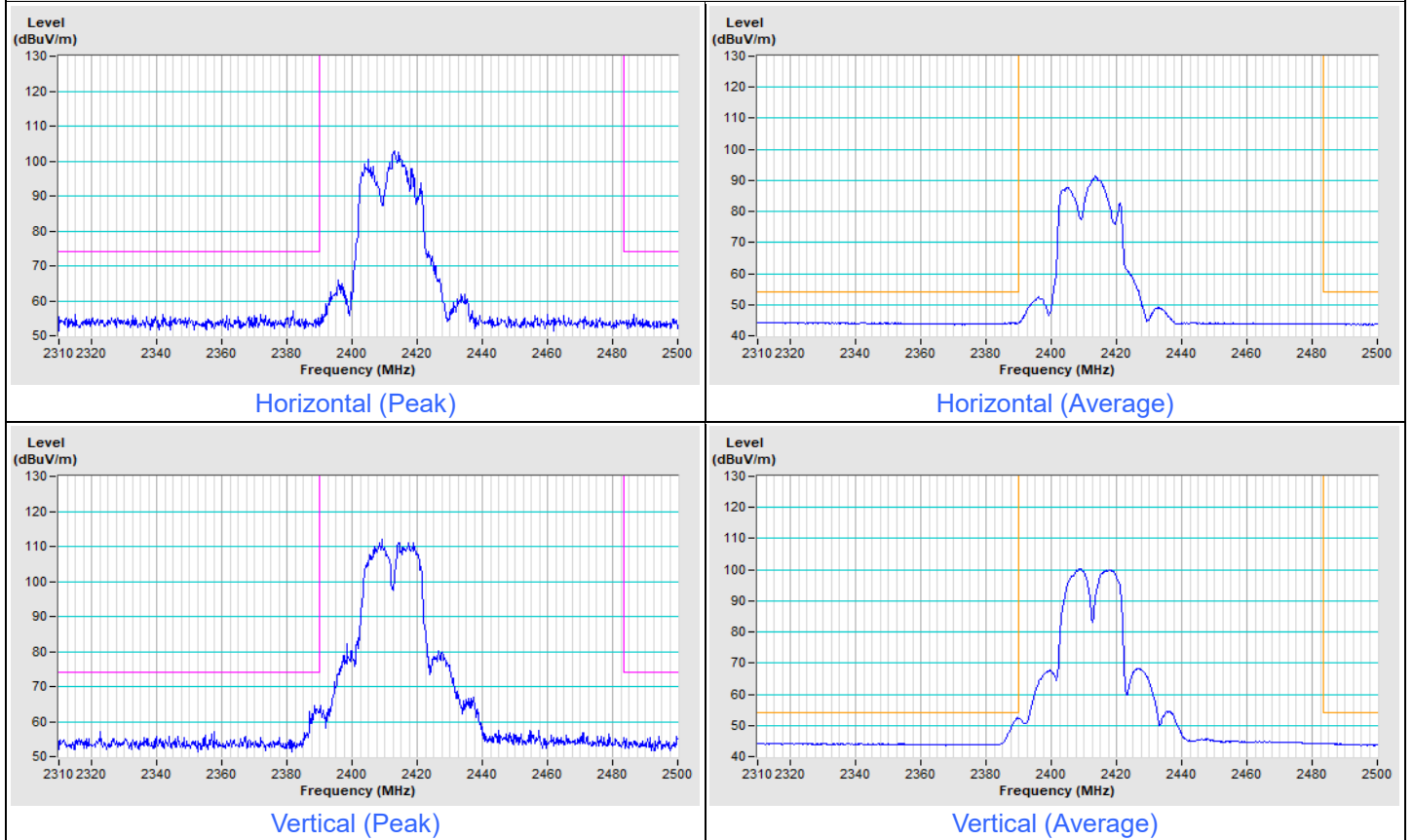
Vertical (Peak)



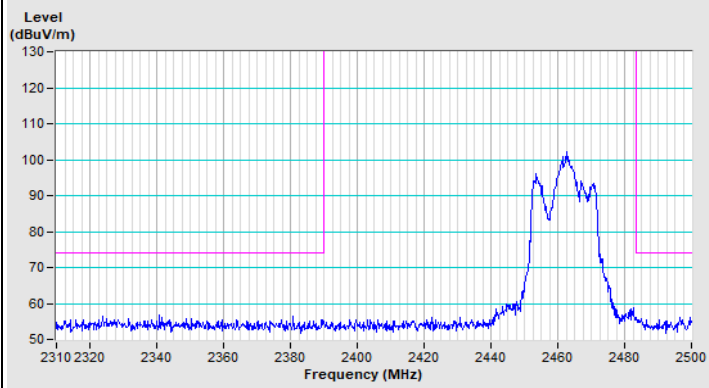
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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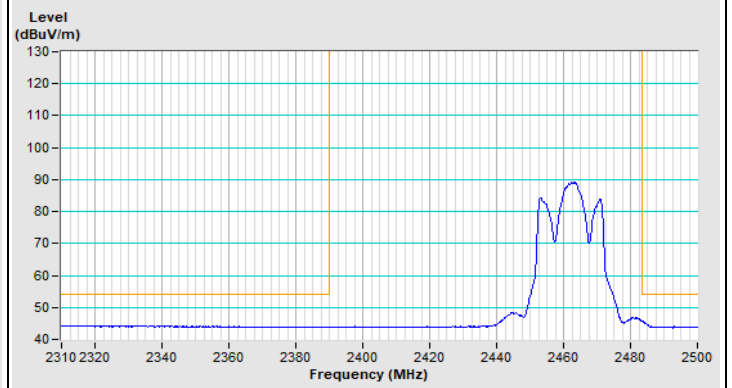
802.11ax (HE20) Channel 1



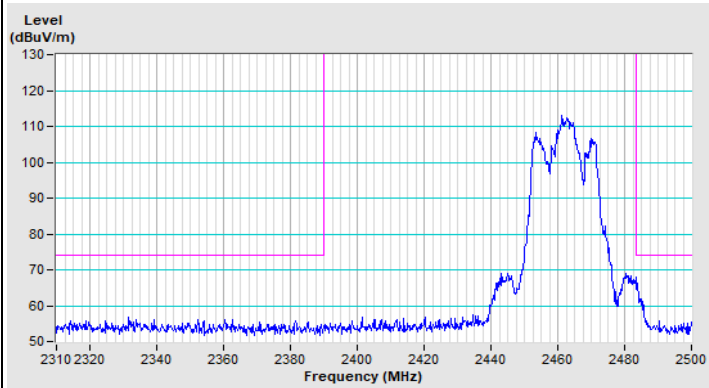
802.11ax (HE20) Channel 11



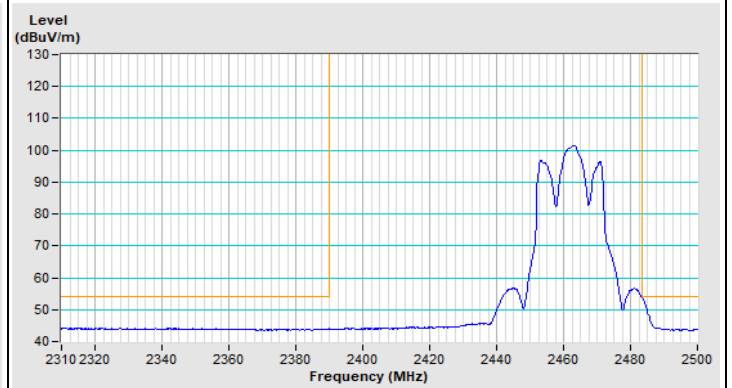
Horizontal (Peak)



Horizontal (Average)



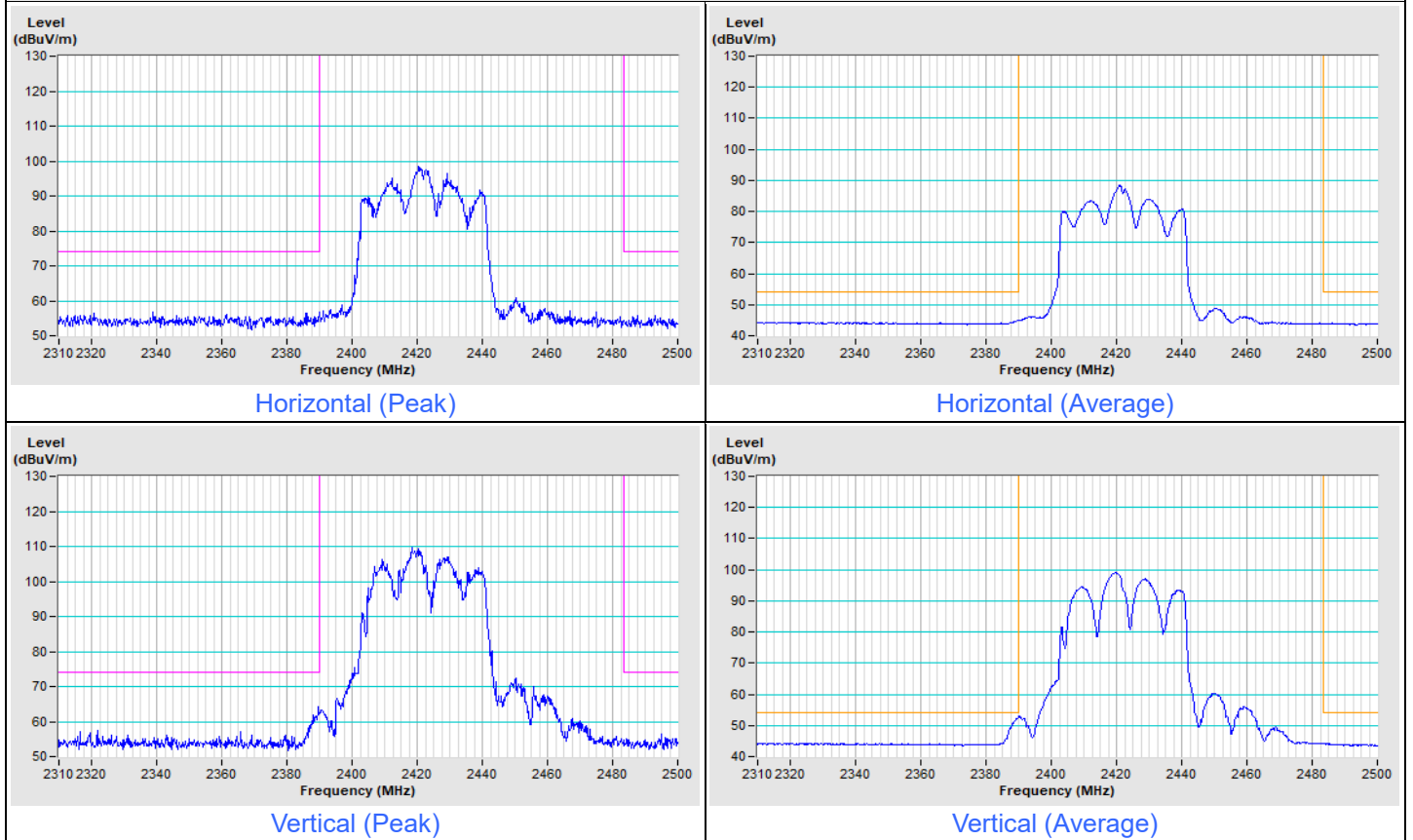
Vertical (Peak)



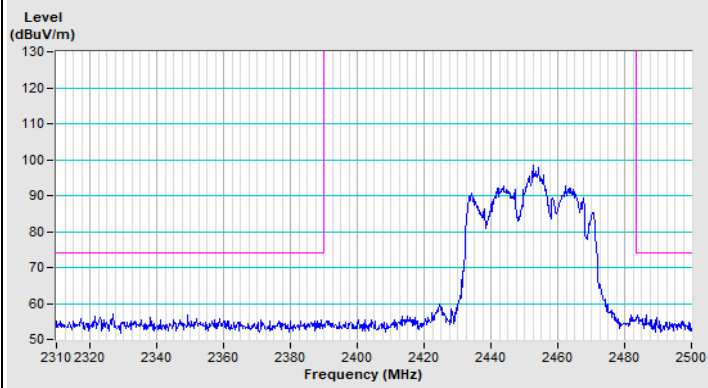
Vertical (Average)

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=10 Hz, DET=Peak
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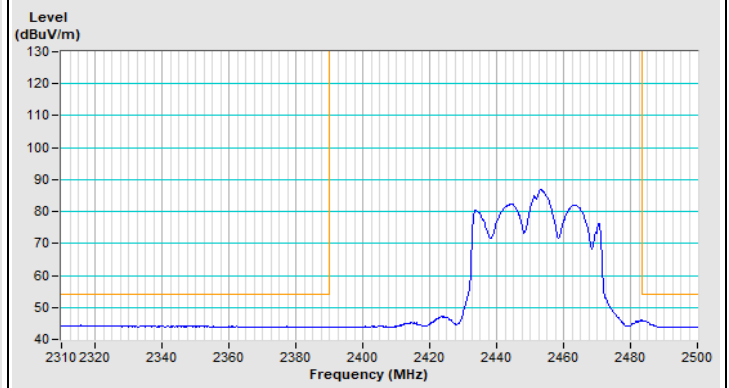
802.11ax (HE40) Channel 3



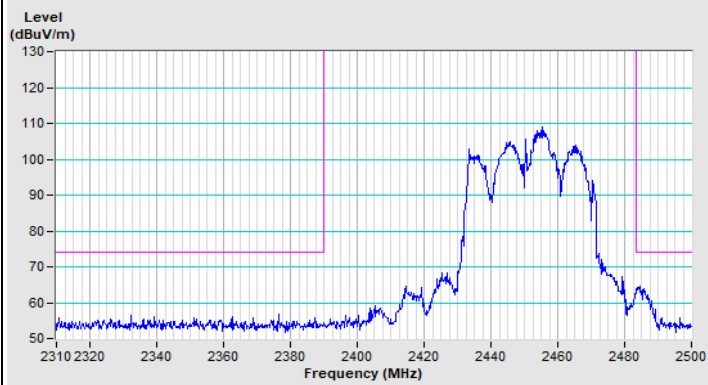
802.11ax (HE40) Channel 9



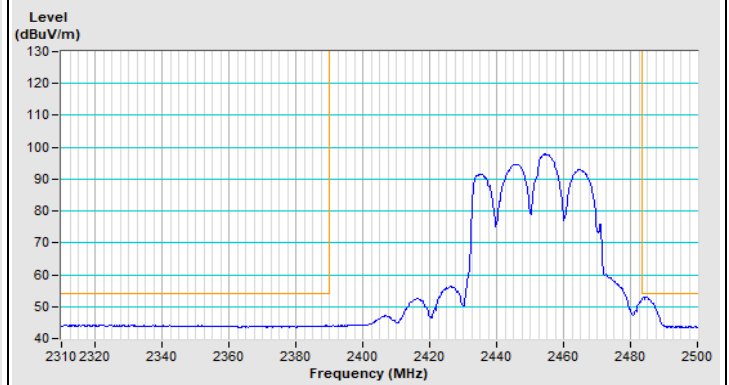
Horizontal (Peak)



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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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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