TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart C (Section 15.247)**
Report No.:	RFBCKS-WTW-P23110556
FCC ID:	2ABLKGS5229XX
Product:	GigaSpire BLAST u6t
Brand:	Calix
Model No.:	u6txg GS5229XG
Series Model:	u6t GS5229E
Received Date:	2023/10/25
Test Date:	2023/11/17 ~ 2023/12/8
Issued Date:	2024/1/23
Applicant:	Calix Inc.
Address:	1035 N. McDowell Blvd. Petaluma, CA94954 U.S.A.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

Approved by: _____ , **Date:** 2024/1/23

Wen Yu / Assistant Manager

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Prepared by : Phoenix Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P23110556	Original release.	2024/1/23

1 Certificate

Product:	GigaSpire BLAST u6t
Brand:	Calix
Test Model:	u6txg GS5229XG
Series Model:	u6t GS5229E
Sample Status:	Engineering sample
Applicant:	Calix Inc.
Test Date:	2023/11/17 ~ 2023/12/8
Standard:	47 CFR FCC Part 15, Subpart C (Section 15.247)
Measurement procedure:	ANSI C63.10-2013 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 -2.23 dB at 25.22656 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.4 dB at 250.02 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 2390.00 and 2483.50 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
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	GigaSpire BLAST u6t
Brand	Calix
Test Model	u6txg GS5229XG
Series Model	u6t GS5229E
Status of EUT	Engineering sample
Power Supply Rating	12 Vdc from power adapter or UPS
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: 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7
Output Power	**CDD Mode:** 983.234 mW (29.93 dBm) **Beamforming Mode:** 975.315 mW (29.89 dBm)

Note:

1. The EUT has below model names, more detailed information as below table.

Model	u6t GS5229E	u6txg GS5229XG
WiFi bands	2.4 / 5 GHz	2.4 / 5 GHz
WiFi version	WiFi 6	WiFi 6
Configuration	Dual band 2x2 (2.4 GHz) + 4x4 (5 GHz)	Dual band 2x2 (2.4 GHz) + 4x4 (5 GHz)
WAN ports	10GE	XGS PON
LAN/WAN	10GE	10GE
LAN ports	4 x GE	4 x GE
USB	1 x 2.0	1 x 2.0
LED	Single pin hole tri-color LED	Single pin hole tri-color LED
POTS	2	2
Other buttons	Reset and WPS	Reset and WPS
UPS Connector	8 pin UPS connector	8 pin UPS connector
Supporting Ambient Temperature	0 to 40℃	0 to 40℃
Desktop and Wall Mount	Required	Required

2. The EUT has two heatsink types as below table.

Type	Description
1st	HEATSPREADER, MAIN, LCS7
2nd	HEATSPREADER, MAIN, TYPE2, LCS7

3. The EUT has two transformer sources as below table.

Item	1st Transformer	2nd Transformer
PN	76.1S220.005	76.1S602.007
Vendor	UDE	HDT

4. The EUT uses following accessories.

AC Adapter 1		
Brand	Model	Specification
AMIGO	AMS157-1203000FU	AC Input : 100-240 V~, 50/60 Hz, 1 A DC Output : 12 V ⎓ 3.0 A Specification : 1.45 m
AC Adapter 2		
Brand	Model	Specification
MOSO	MS-V3000R120-036L0-US	AC Input : 100-240 V~, 50/60 Hz, 1.0 A DC Output : 12 V ⎓ 3.0 A Specification : 1.535 m

5. There are WLAN (2.4 GHz) and WLAN (5 GHz) technology used for the EUT.

6. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4 GHz)	WLAN (5 GHz)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.		

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	RF Chain No.	Antenna Net Gain (dBi)	Frequency Gange (GHz)	Antenna Type	Connector Type
2G1	Chain 0	3.69	2.4~2.4835	Dipole	ipex(MHF)
2G2	Chain 1	3.63	2.4~2.4835	Dipole	ipex(MHF)
5G1	Chain 0	3.96	5.15~5.25	Dipole	ipex(MHF)
		3.96	5.25~5.35	Dipole	ipex(MHF)
		3.90	5.47~5.725	Dipole	ipex(MHF)
		3.06	5.725~5.85	Dipole	ipex(MHF)
5G2	Chain 1	4.63	5.15~5.25	Dipole	ipex(MHF)
		4.28	5.25~5.35	Dipole	ipex(MHF)
		5.02	5.47~5.725	Dipole	ipex(MHF)
		4.27	5.725~5.85	Dipole	ipex(MHF)
5G3	Chain 2	3.06	5.15~5.25	Dipole	ipex(MHF)
		2.25	5.25~5.35	Dipole	ipex(MHF)
		1.91	5.47~5.725	Dipole	ipex(MHF)
		3.57	5.725~5.85	Dipole	ipex(MHF)
5G4	Chain 3	3.18	5.15~5.25	Dipole	ipex(MHF)
		3.45	5.25~5.35	Dipole	ipex(MHF)
		4.60	5.47~5.725	Dipole	ipex(MHF)
		3.72	5.725~5.85	Dipole	ipex(MHF)

2. The directional gain table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Connector Type
2.4~2.4835	5.84	Dipole	ipex(MHF)
5.15 ~ 5.25	6.11	Dipole	ipex(MHF)
5.25 ~ 5.35	5.43	Dipole	ipex(MHF)
5.47 ~ 5.725	6.89	Dipole	ipex(MHF)
5.725 ~ 5.85	4.94	Dipole	ipex(MHF)

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

4. 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.

3.3 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

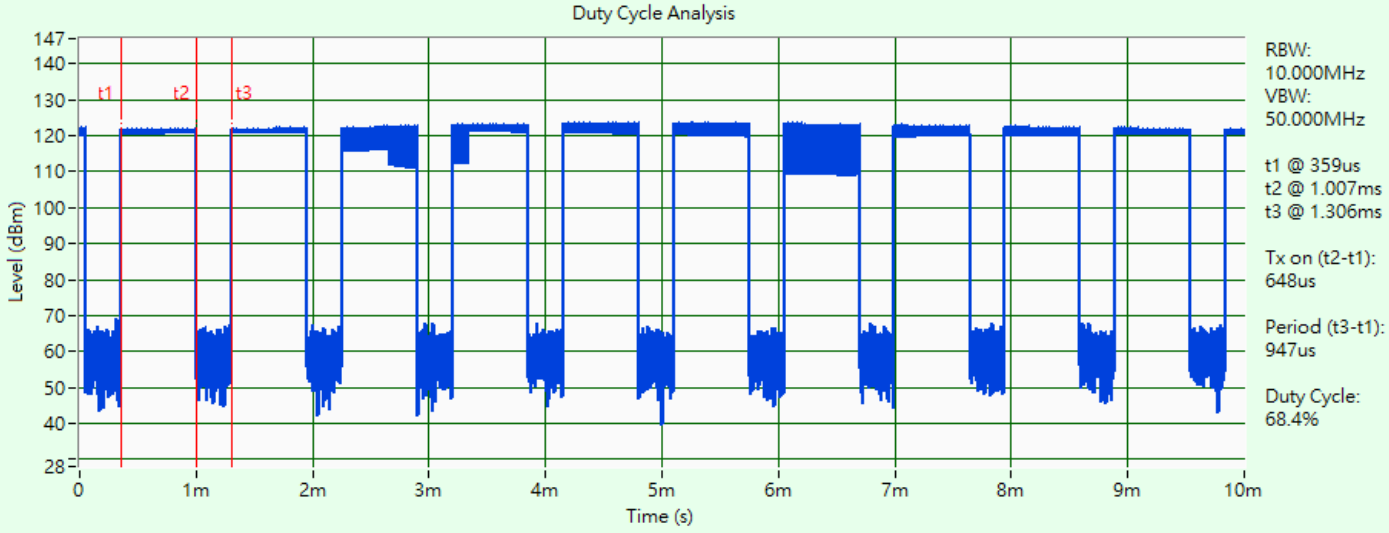
Pre-Scan:	1. The Power Supply has the following models: Adapter 1 (AMS157-1203000FU) / Adapter 2 (MS-V3000R120-036L0-US) / UPS. Pre-scan these models of Power Supply and find the worst case as a representative test condition. 2. The device has the following models: u6t GS5229E / u6txg GS5229XG. Pre-scan these models of device and find the worst case as a representative test condition. 3. The device has the Heatsink following types: Type 1 / Type 2. Pre-scan these models of device and find the worst case as a representative test condition. 4. The device has the LAN Transformer following sources: Main / Second. Pre-scan these sources of device and find the worst case as a representative test condition. 5. 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: ➢ Unwanted Emission Below 1GHz: Adapter 1 (AMS157-1203000FU); ➢ AC Power Conducted Emissions: UPS 2. The device worst model condition: u6t GS5229E 3. The device worst heatsink condition: Type 2 4. LAN Transformer Worst Condition: Main source

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

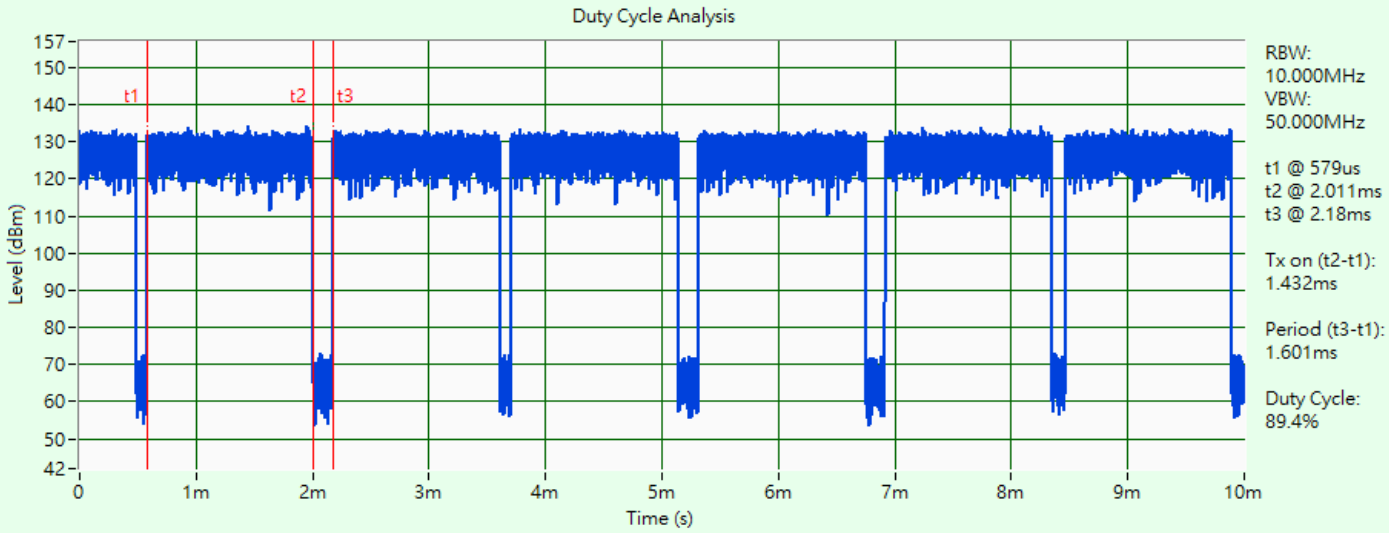
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11n (HT20)	CDD & Beamforming	1, 6, 11	BPSK	MCS0
	802.11n (HT40)	CDD & Beamforming	3, 6, 9	BPSK	MCS0
	VHT20	CDD & Beamforming	1, 6, 11	BPSK	MCS0
	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	802.11b	CDD	6	DBPSK	1Mb/s
Unwanted Emissions below 1 GHz	802.11b	CDD	6	DBPSK	1Mb/s
Unwanted Emissions above 1 GHz	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
	802.11g	CDD	1, 6, 11	BPSK	6Mb/s
	802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
	802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
Note: Partial RU (resource unit) mechanism is not supported.					

3.5 Duty Cycle of Test Signal

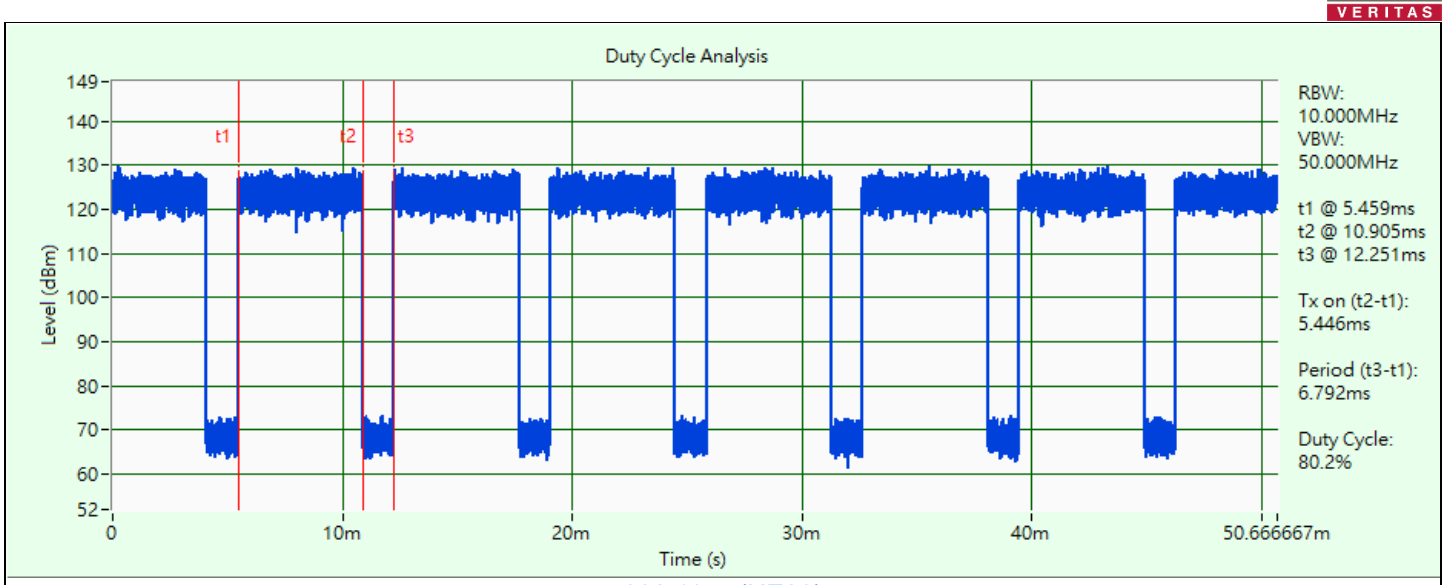
802.11b: Duty cycle = 0.648 ms / 0.947 ms x 100% = 68.4%, duty factor = 10 * log (1/Duty cycle) = 1.65 dB
802.11g: Duty cycle = 1.432 ms / 1.601 ms x 100% = 89.4%, duty factor = 10 * log (1/Duty cycle) = 0.48 dB
802.11ax (HE20): Duty cycle = 5.446 ms / 6.792 ms x 100% = 80.2%, duty factor = 10 * log (1/Duty cycle) = 0.96 dB
802.11ax (HE40): Duty cycle = 5.447 ms / 6.81 ms x 100% = 80.0%, duty factor = 10 * log (1/Duty cycle) = 0.97 dB



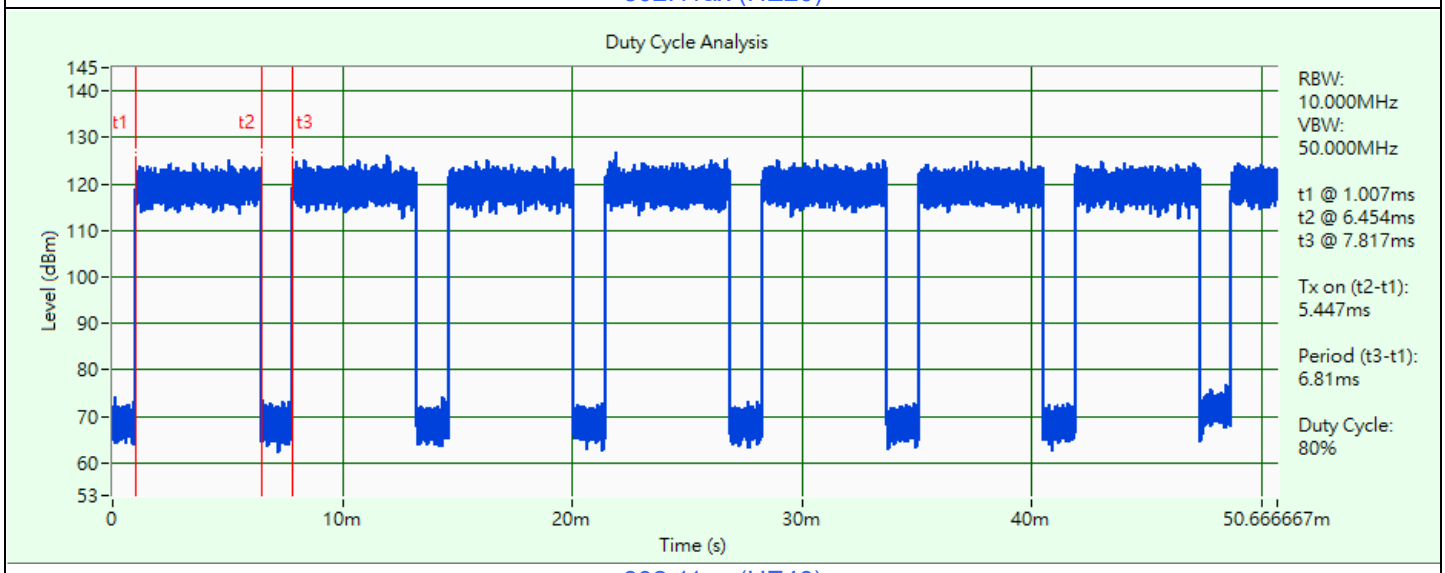
802.11b



802.11g



802.11ax (HE20)



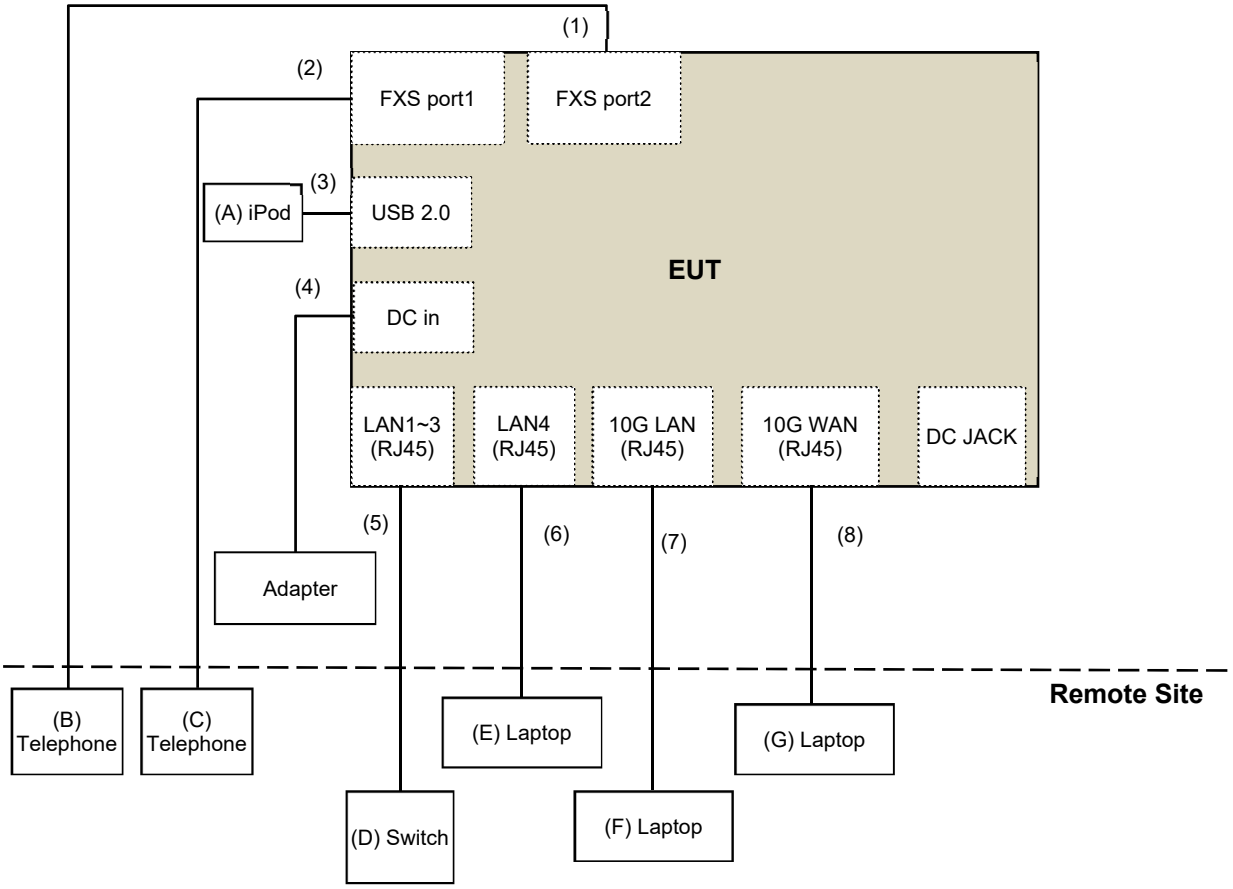
802.11ax (HE40)

3.6 Test Program Used and Operation Descriptions

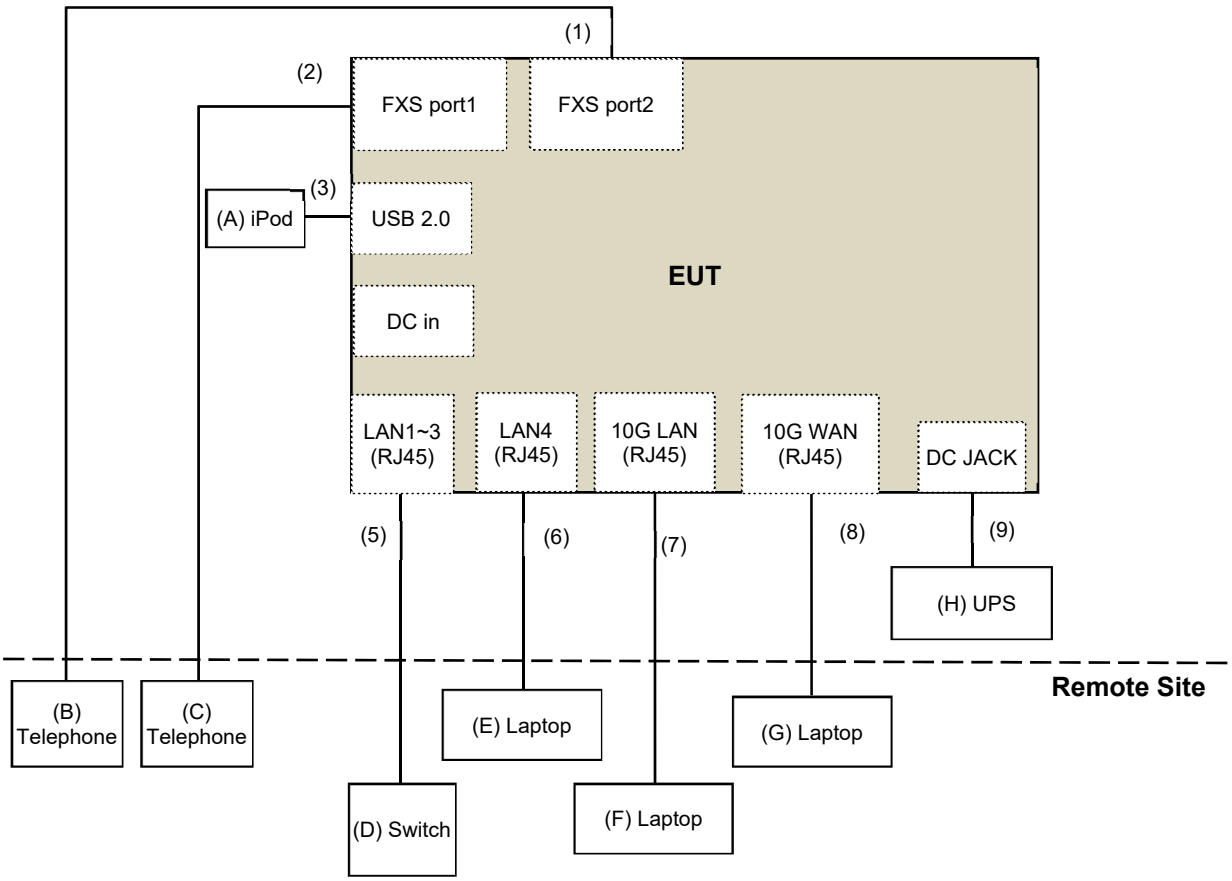
Controlling software (qdart_conn.win.1.0_installer_00097.1) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emission test:



For AC Power Conducted Emission test:



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	iPod shuffle (2G bytes)	Apple	A1373	CC4DN25WDFDM	N/A	Provided by Lab
B	Telephone	WONDER	WD-303	7C17KA 04011	N/A	Provided by Lab
C	Telephone	Romeo	TE-812	97280903	N/A	Provided by Lab
D	Switch	D-Link	DGS-1005D	DR8WC92000523	N/A	Provided by Lab
E	Laptop	DELL	E5430	4YV4VY1	DoC	Provided by Lab
F	Laptop	DELL	E5430	HYV4VY1	DoC	Provided by Lab
G	Laptop	DELL	E6420	H62T3R1	DoC	Provided by Lab
H	UPS	CyberPower	DTC36U12V3-G	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-11 Cable	1	10	No	0	Provided by Lab
2	RJ-11 Cable	1	10	No	0	Provided by Lab
3	USB Cable	1	0.1	Yes	0	Provided by Lab
4	DC Cable	1	1.45	No	0	Supplied by applicant
5	RJ-45 Cable	3	10	No	0	Provided by Lab
6	RJ-45 Cable	1	10	No	0	Provided by Lab
7	RJ-45 Cable	1	10	No	0	Provided by Lab
8	RJ-45 Cable	1	10	No	0	Provided by Lab
9	DC Cable	1	2.5	No	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
Power Meter Anritsu	ML2495A	1529002	2023/6/17	2024/6/16
Pulse Power Sensor Anritsu	MA2411B	1726434	2023/6/19	2024/6/18

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2023/12/8

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
MXA Signal Analyzer Keysight	N9020B	MY60112409	2023/2/18	2024/2/17
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: 2023/12/8

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance 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	2023/7/1	2024/6/30
LISN R&S	ESH3-Z5	835239/001	2023/4/6	2024/4/5
		848773/004	2023/10/13	2024/10/12
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2023/7/1	2024/6/30
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: 2023/12/6

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	2023/9/7	2024/9/6
Loop Antenna Electro-Metrics	EM-6879	264	2023/2/21	2024/2/20
MXE EMI Receiver Agilent	N9038A	MY50010156	2023/6/13	2024/6/12
Preamplifier EMCI	EMC330N	980852	2023/2/20	2024/2/19
	EMC001340	980142	2023/5/8	2024/5/7
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2022/12/19	2023/12/18
		LOOPCAB-002	2022/12/19	2023/12/18
RF Coaxial Cable PEWC	8D	966-3-2	2023/2/17	2024/2/16
		966-3-3	2023/2/17	2024/2/16
		966-4-1	2023/2/18	2024/2/17
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: 2023/12/5

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
MXE EMI Receiver Agilent	N9038A	MY50010156	2023/6/13	2024/6/12
Preamplifier EMCI	EMC12630SE	980384	2023/8/9	2024/8/8
	EMC184045SE	980387	2023/8/9	2024/8/8
PXA Signal Analyzer Keysight	N9030B	MY57142938	2023/4/6	2024/4/5
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2023/2/20	2024/2/19
	EMC102-KM-KM-1200	160924	2023/8/9	2024/8/8
	EMC104-SM-SM-1500	180504	2023/3/27	2024/3/26
	EMC104-SM-SM-2000	180601	2023/6/2	2024/6/1
	EMC104-SM-SM-6000	210201	2023/5/8	2024/5/7
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: 2023/11/17 ~ 2023/12/4

5 Limits of Test Items

5.1 RF Output Power

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

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

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

5.5 AC Power Conducted Emissions

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

Notes:

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

5.6 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.7 Unwanted Emissions above 1 GHz

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

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

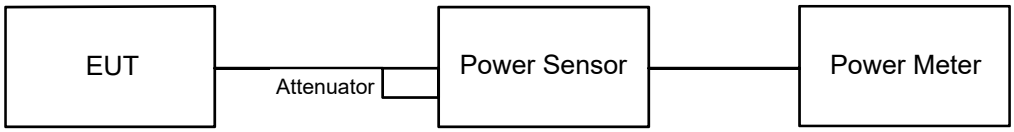
Notes:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

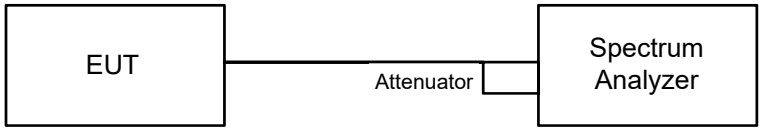


6.1.2 Test Procedure

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

6.2 Power Spectral Density

6.2.1 Test Setup



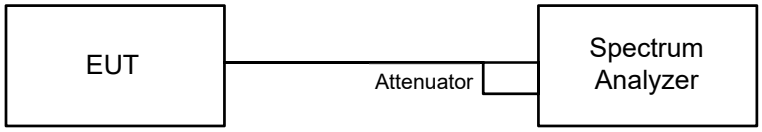
6.2.2 Test Procedure

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

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

6.3 6 dB Bandwidth

6.3.1 Test Setup

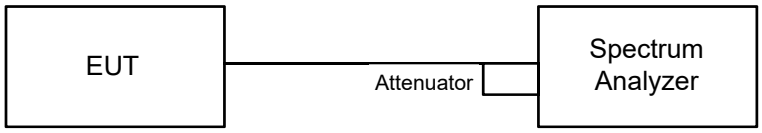


6.3.2 Test Procedure

a. Set resolution bandwidth (RBW) = 100 kHz.
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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

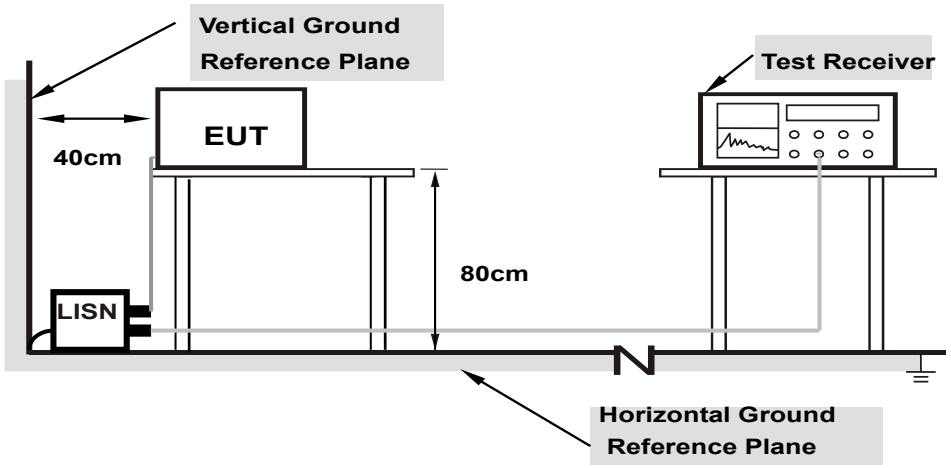
a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep = auto couple.
e. Trace Mode = max hold.
f. Allow trace to fully stabilize.
g. 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

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

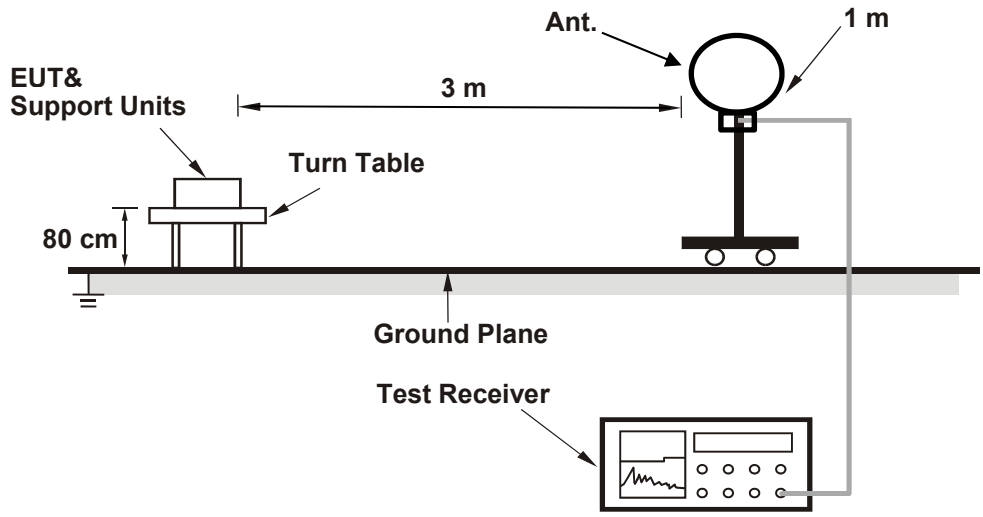
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

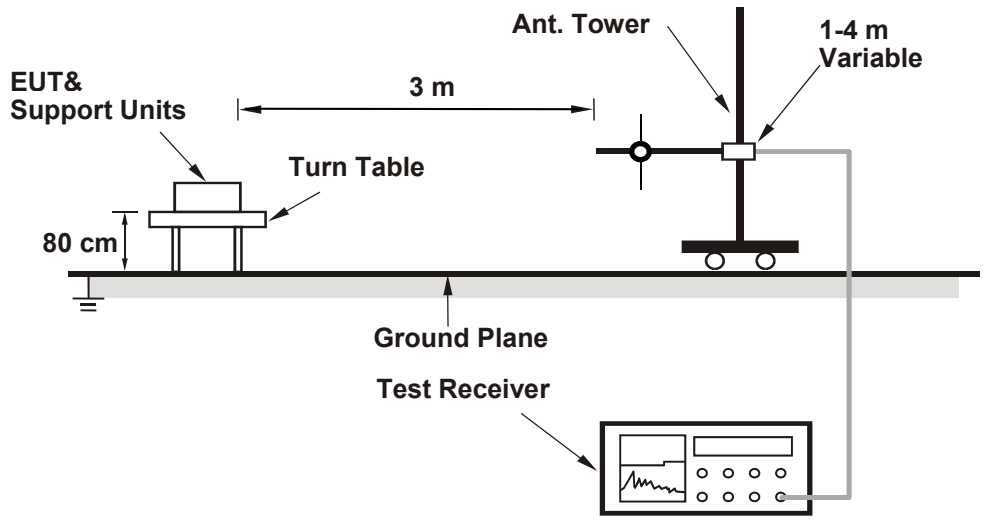
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

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

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

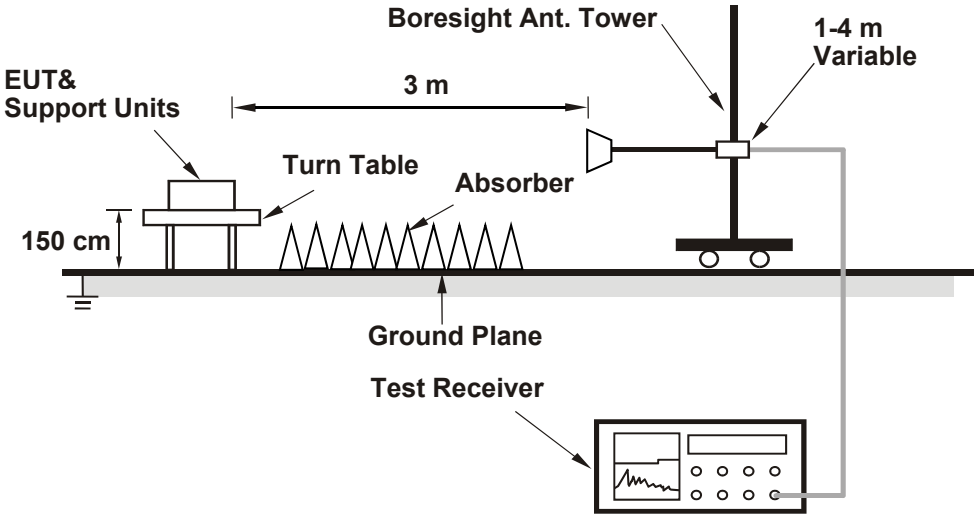
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

a. 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.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to 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:

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

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 60% RH	Tested By:	Louis Yang

802.11b CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.51	26.15	859.811	29.34	30	Pass
6	2437	27.02	26.81	983.234	29.93	30	Pass
11	2462	24.74	24.23	562.702	27.50	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11g CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	24.23	24.06	519.533	27.16	30	Pass
6	2437	26.55	26.81	931.589	29.69	30	Pass
11	2462	22.21	22.68	351.694	25.46	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	23.34	23.64	446.981	26.50	30	Pass
6	2437	26.51	26.62	906.911	29.58	30	Pass
11	2462	22.56	22.92	376.186	25.75	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	19.36	19.81	182.017	22.60	30	Pass
6	2437	21.41	21.85	291.465	24.65	30	Pass
9	2452	19.90	20.09	199.818	23.01	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT20 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	23.47	23.77	460.563	26.63	30	Pass
6	2437	26.63	26.80	938.887	29.73	30	Pass
11	2462	22.75	23.02	388.812	25.90	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT40 CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	19.52	20.00	189.536	22.78	30	Pass
6	2437	21.57	21.95	300.224	24.77	30	Pass
9	2452	20.03	20.25	206.619	23.15	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	23.62	23.95	478.457	26.80	30	Pass
6	2437	26.78	26.98	975.315	29.89	30	Pass
11	2462	22.95	23.16	404.256	26.07	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	19.65	20.12	195.059	22.90	30	Pass
6	2437	21.75	22.06	310.318	24.92	30	Pass
9	2452	20.16	20.42	213.907	23.30	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	23.34	23.64	446.981	26.50	30	Pass
6	2437	26.51	26.62	906.911	29.58	30	Pass
11	2462	22.56	22.92	376.186	25.75	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.84 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	19.36	19.81	182.017	22.60	30	Pass
6	2437	21.41	21.85	291.465	24.65	30	Pass
9	2452	19.90	20.09	199.818	23.01	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.84 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT20 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	23.47	23.77	460.563	26.63	30	Pass
6	2437	26.63	26.80	938.887	29.73	30	Pass
11	2462	22.75	23.02	388.812	25.90	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.84 dBi < 6 dBi, so the output power limit shall not be reduced.

VHT40 Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	19.52	20.00	189.536	22.78	30	Pass
6	2437	21.57	21.95	300.224	24.77	30	Pass
9	2452	20.03	20.25	206.619	23.15	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.84 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	23.62	23.95	478.457	26.80	30	Pass
6	2437	26.78	26.98	975.315	29.89	30	Pass
11	2462	22.95	23.16	404.256	26.07	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.84 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	19.65	20.12	195.059	22.90	30	Pass
6	2437	21.75	22.06	310.318	24.92	30	Pass
9	2452	20.16	20.42	213.907	23.30	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. The directional gain is 5.84 dBi < 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 60% RH	Tested By:	Louis Yang

802.11b

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1				
1	2412	-4.18	-4.89	1.65	0.14	8	Pass
6	2437	-4.86	-3.78	1.65	0.37	8	Pass
11	2462	-6.43	-6.36	1.65	-1.74	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 5.84 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1				
1	2412	-10.11	-9.29	0.48	-6.19	8	Pass
6	2437	-7.31	-6.63	0.48	-3.46	8	Pass
11	2462	-10.76	-10.69	0.48	-7.23	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 5.84 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1				
1	2412	-16.78	-19.23	0.96	-13.86	8	Pass
6	2437	-12.86	-14.88	0.96	-9.78	8	Pass
11	2462	-20.23	-17.44	0.96	-14.65	8	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 5.84 dBi < 6 dBi, so the power density limit shall not be reduced.

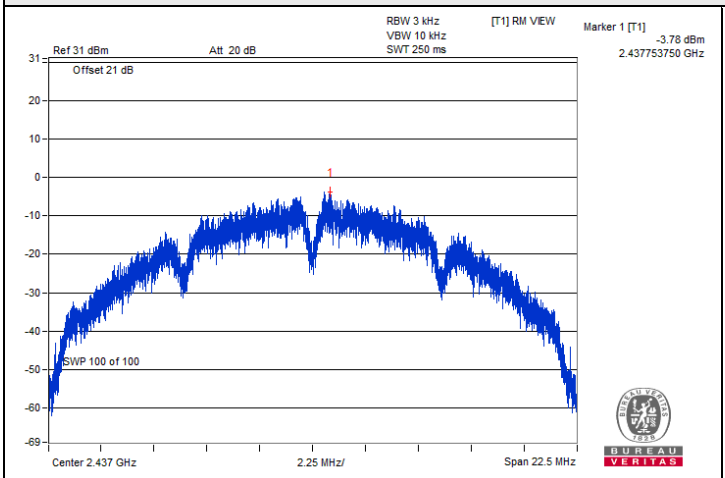
802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)		Duty Factor (dB)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1				
3	2422	-22.11	-20.87	0.97	-17.47	8	Pass
6	2437	-16.84	-18.66	0.97	-13.68	8	Pass
9	2452	-18.57	-21.06	0.97	-15.66	8	Pass

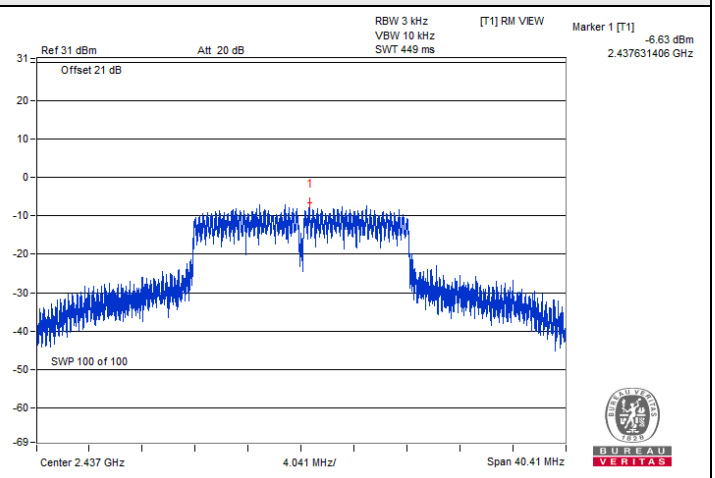
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. The directional gain is 5.84 dBi < 6 dBi, so the power density limit shall not be reduced.

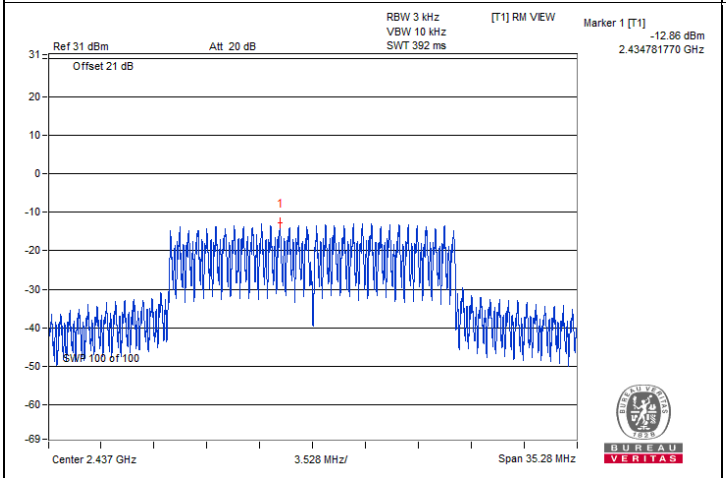
Spectrum Plot of Maximum Value



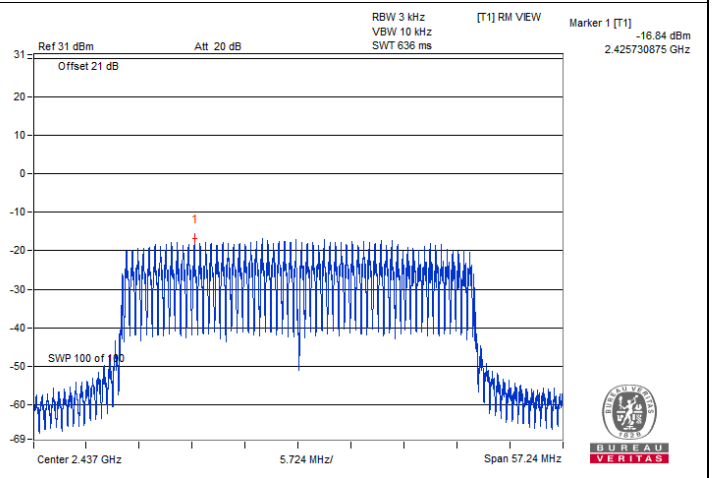
802.11b / Chain 1 : CH 6



802.11g / Chain 1 : CH 6



802.11ax (HE20) / Chain 0 : CH 6



802.11ax (HE40) / Chain 0 : CH 6

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 60% RH	Tested By:	Louis Yang

802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	8.11	8.12	0.5	Pass
6	2437	9.08	9.11	0.5	Pass
11	2462	8.11	8.11	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	16.35	16.34	0.5	Pass
6	2437	16.35	16.03	0.5	Pass
11	2462	16.37	16.38	0.5	Pass

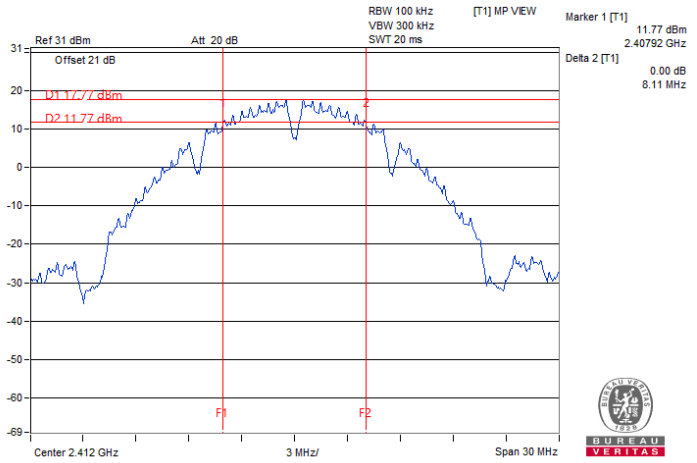
802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	18.90	18.77	0.5	Pass
6	2437	18.92	18.46	0.5	Pass
11	2462	19.00	18.86	0.5	Pass

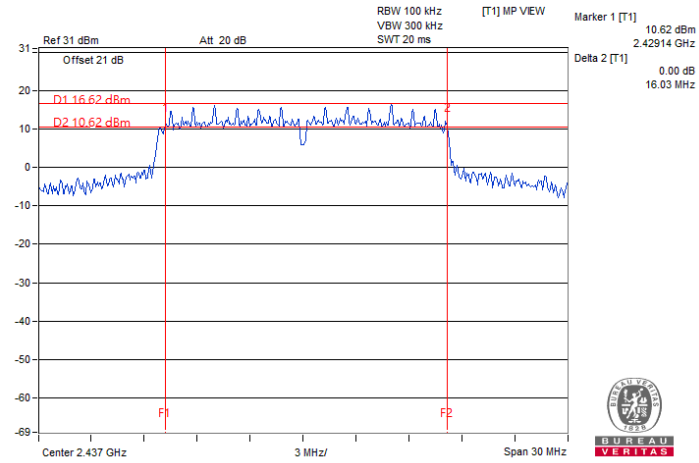
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	37.86	37.98	0.5	Pass
6	2437	37.96	38.15	0.5	Pass
9	2452	38.13	38.04	0.5	Pass

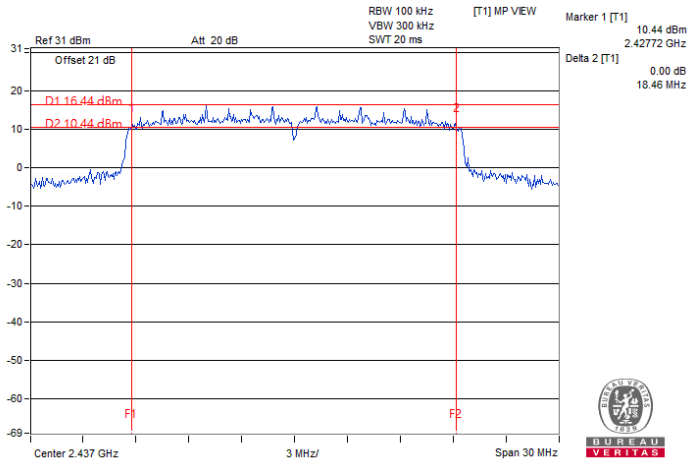
Spectrum Plot of Minimum Value



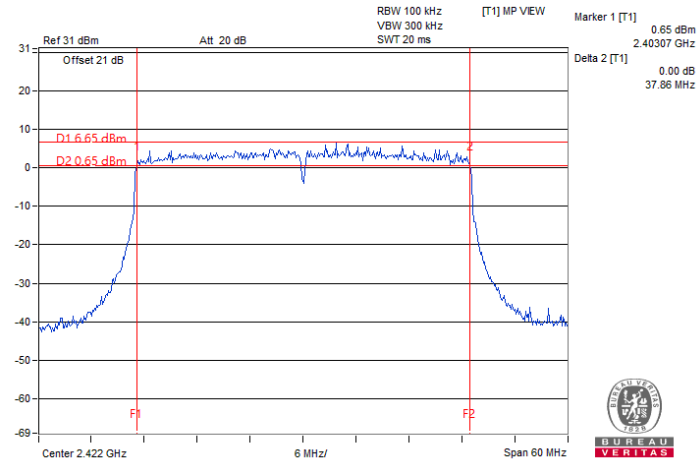
802.11b / Chain 0 : CH 1



802.11g / Chain 1 : CH 6



802.11ax (HE20) / Chain 1 : CH 6

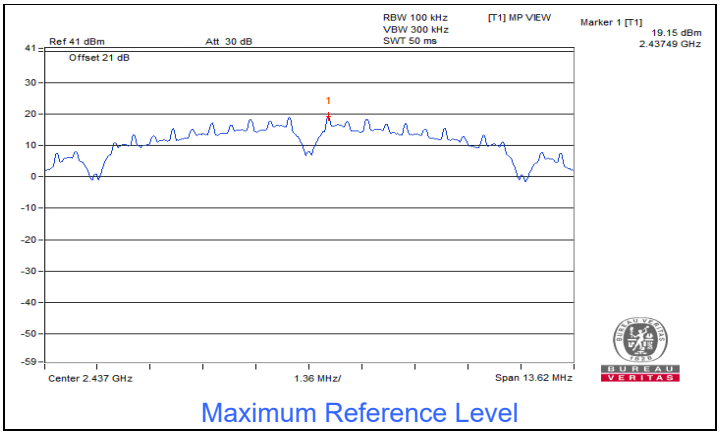


802.11ax (HE40) / Chain 0 : CH 3

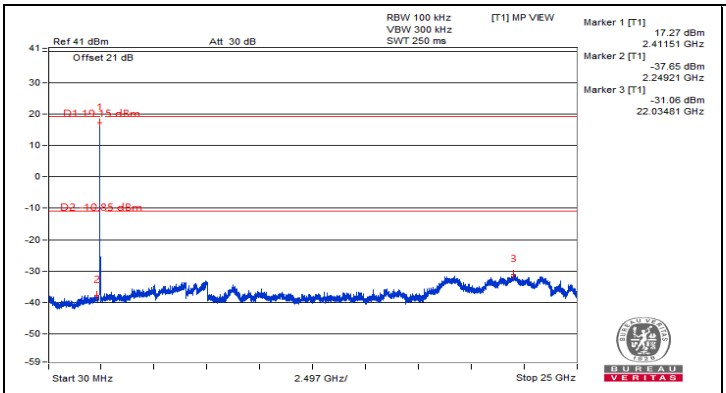
7.4 Conducted Out of Band Emissions

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 60% RH	Tested By:	Louis Yang

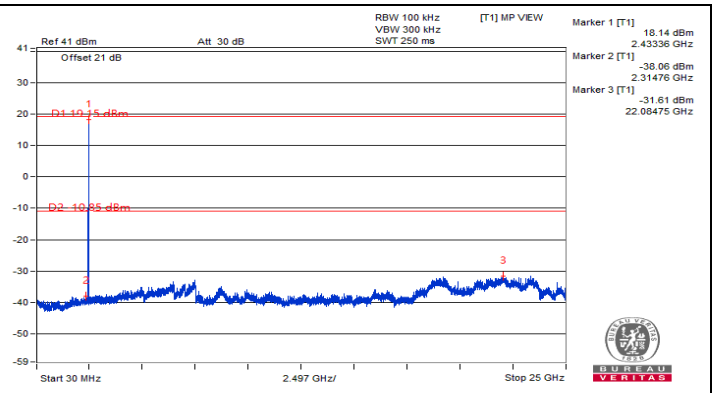
802.11b



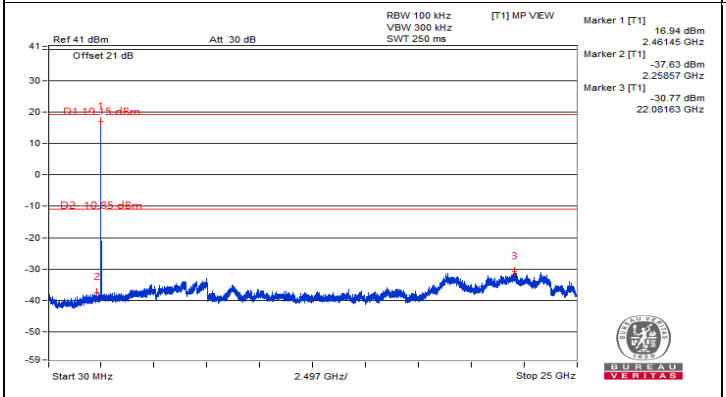
Maximum Reference Level



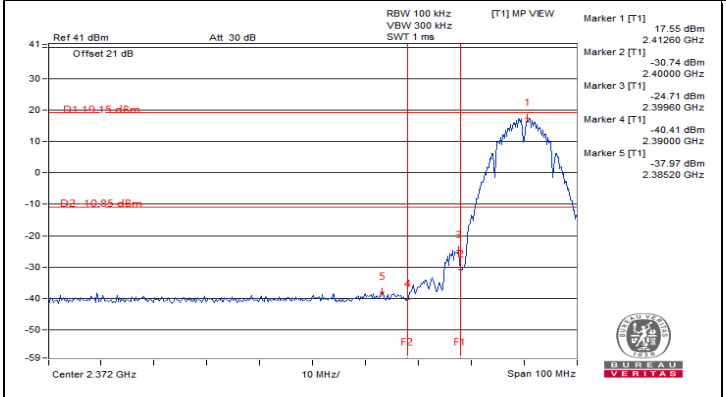
Chain 0 : CH 1



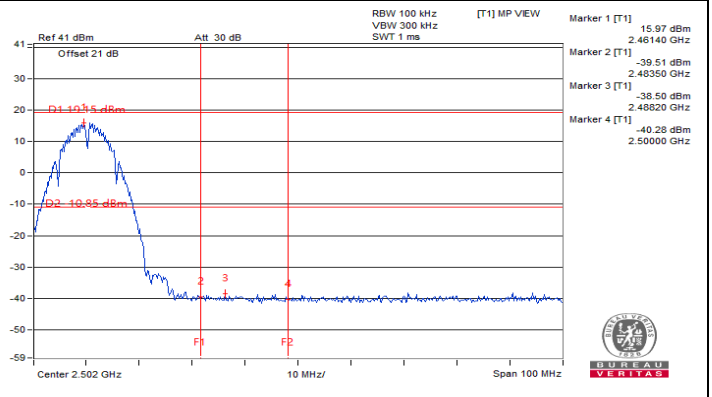
Chain 0 : CH 6



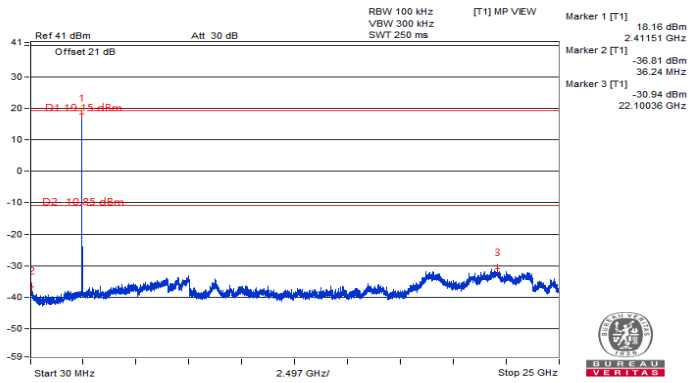
Chain 0 : CH 11



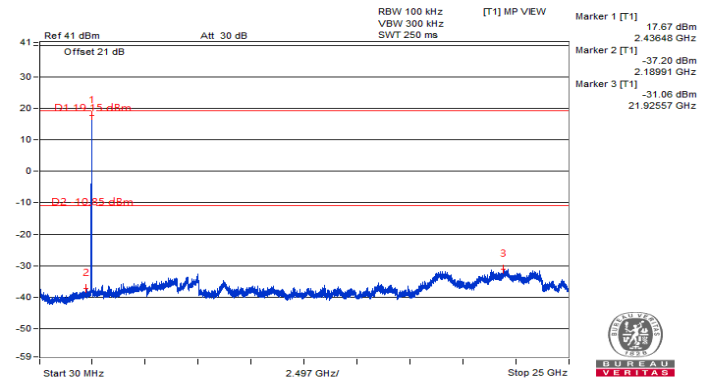
Chain 0 : CH 1 Band edge



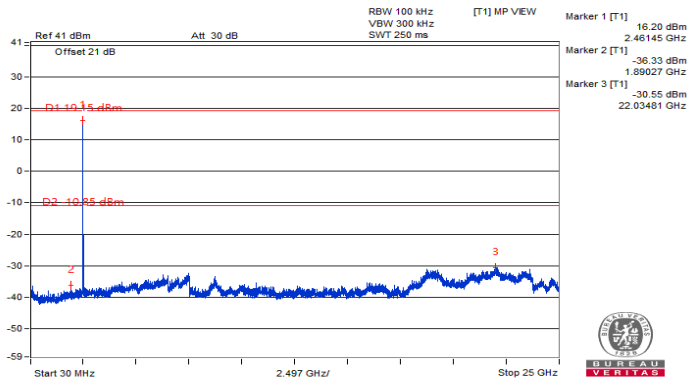
Chain 0 : CH 11 Band edge



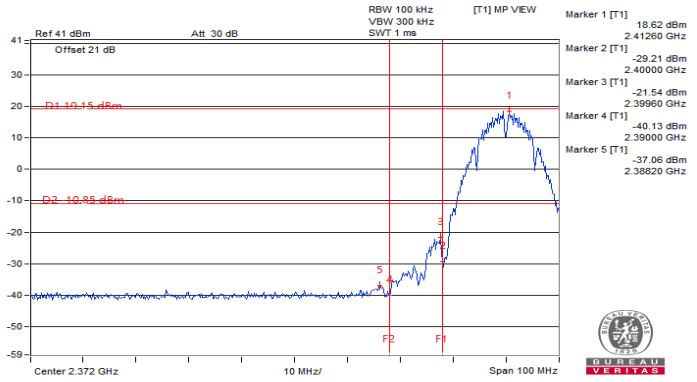
Chain 1 : CH 1



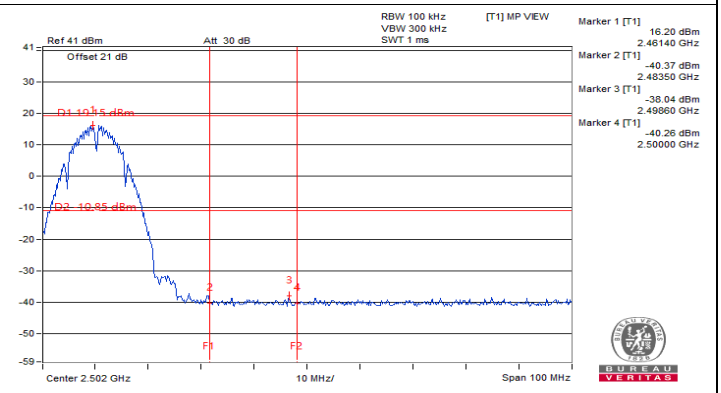
Chain 1 : CH 6



Chain 1 : CH 11

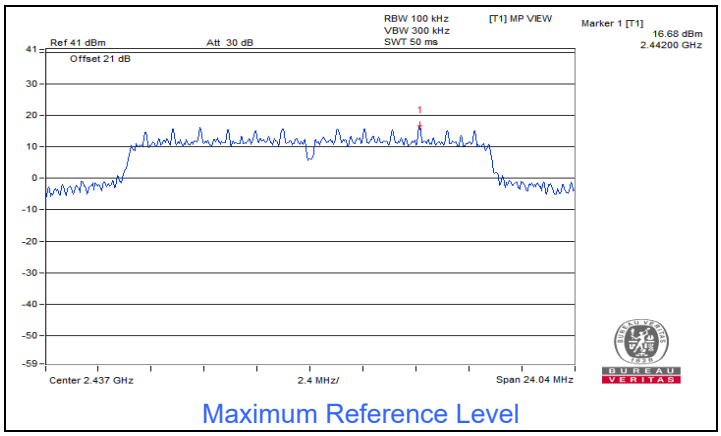


Chain 1 : CH 1 Band edge

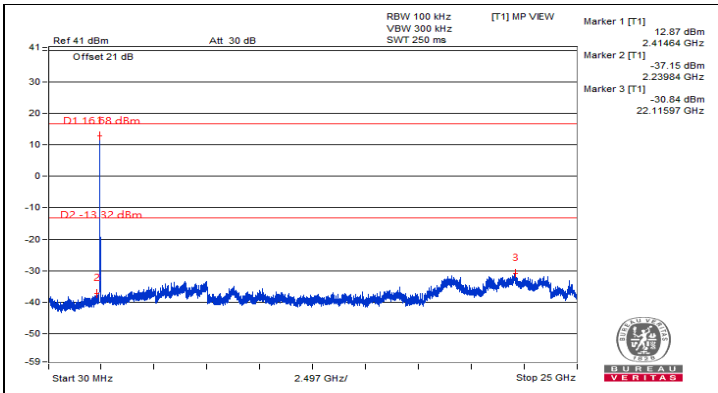


Chain 1 : CH 11 Band edge

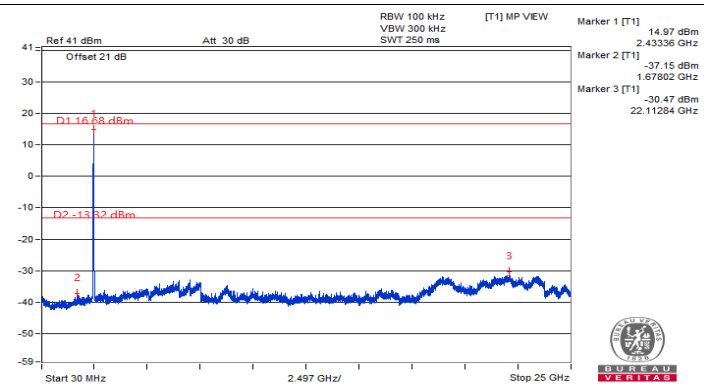
802.11g



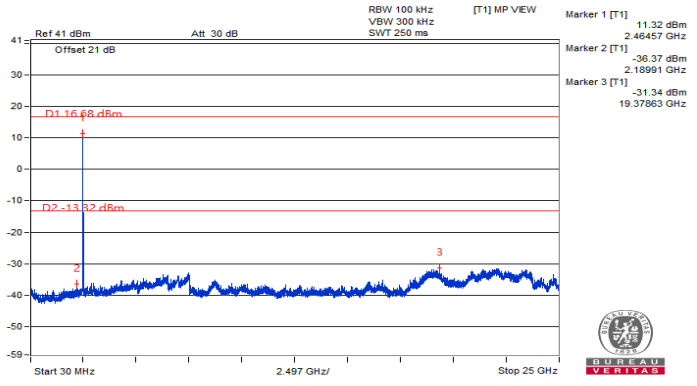
Maximum Reference Level



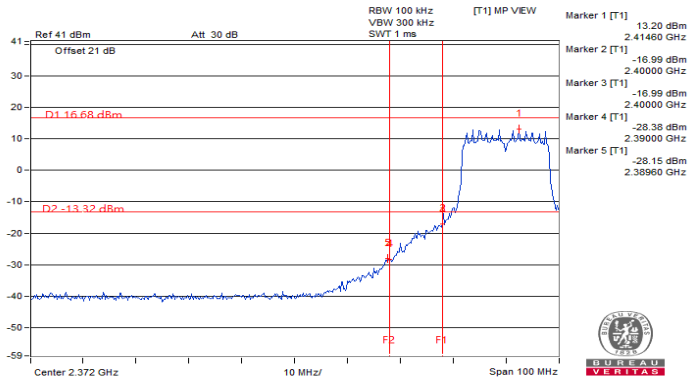
Chain 0 : CH 1



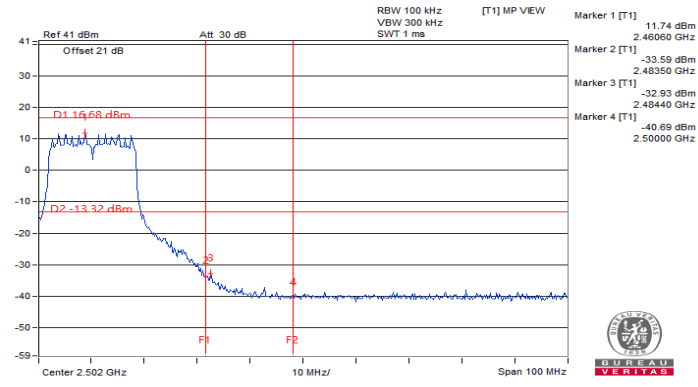
Chain 0 : CH 6



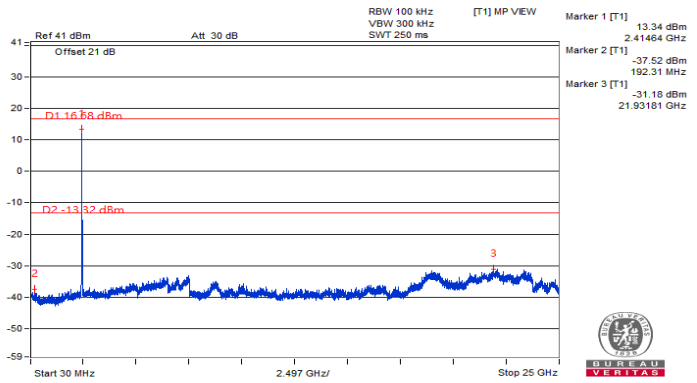
Chain 0 : CH 11



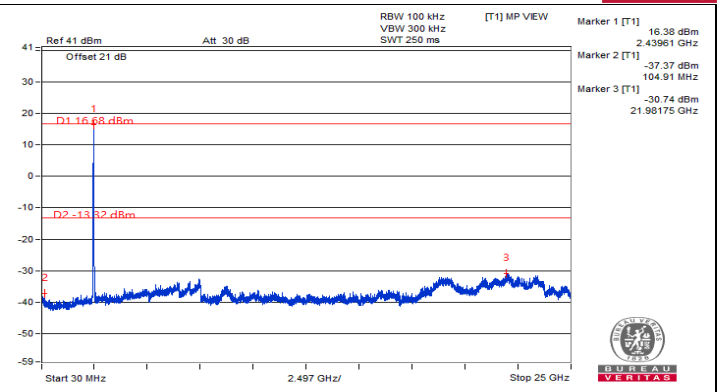
Chain 0 : CH 1 Band edge



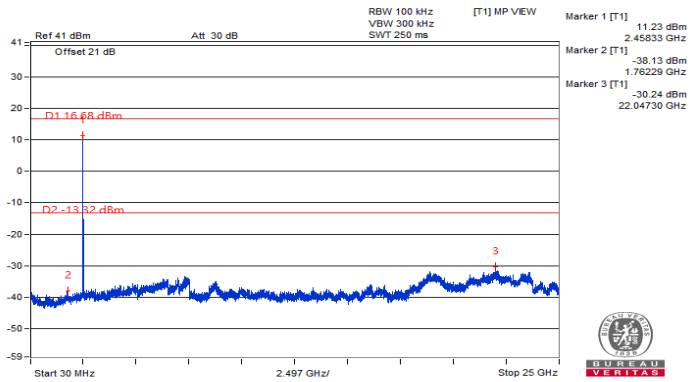
Chain 0 : CH 11 Band edge



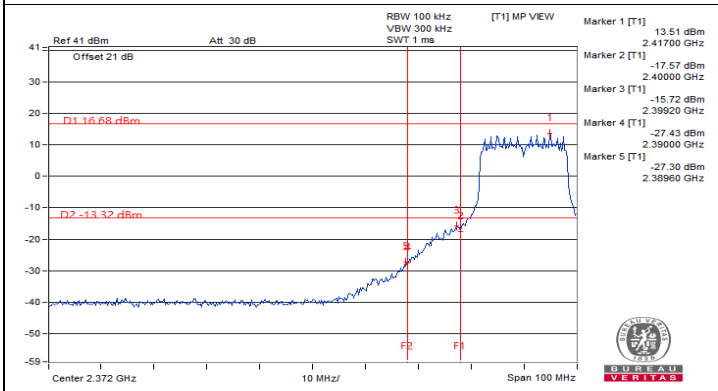
Chain 1 : CH 1



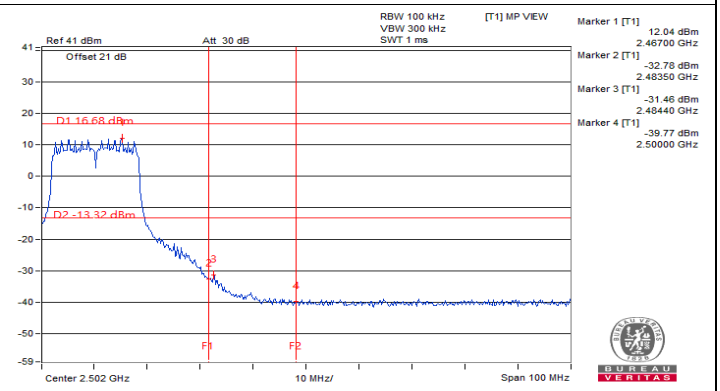
Chain 1 : CH 6



Chain 1 : CH 11

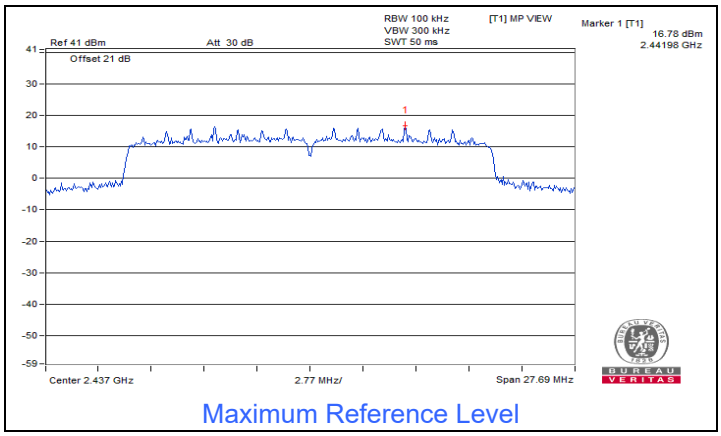


Chain 1 : CH 1 Band edge

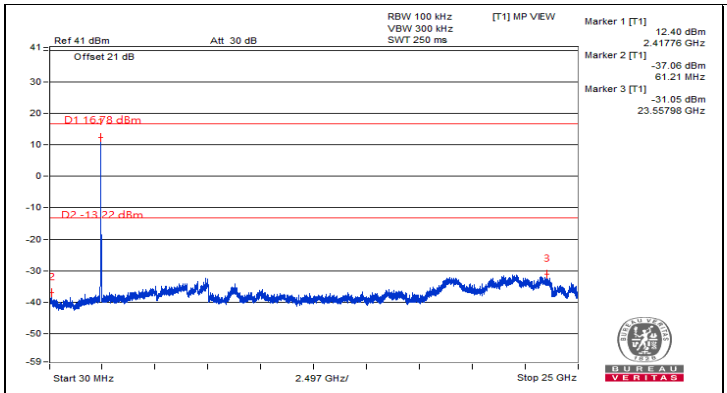


Chain 1 : CH 11 Band edge

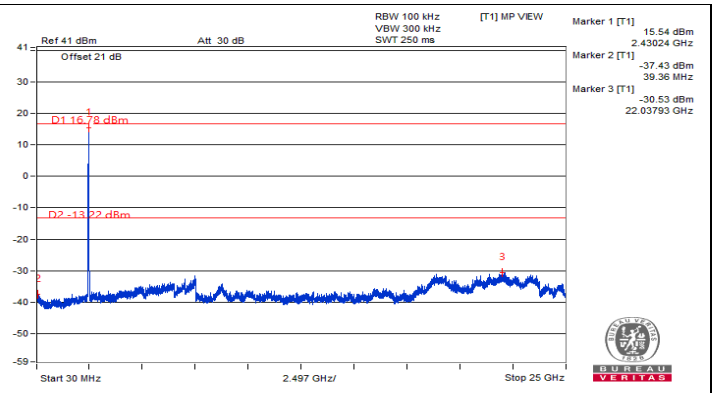
802.11ax (HE20)



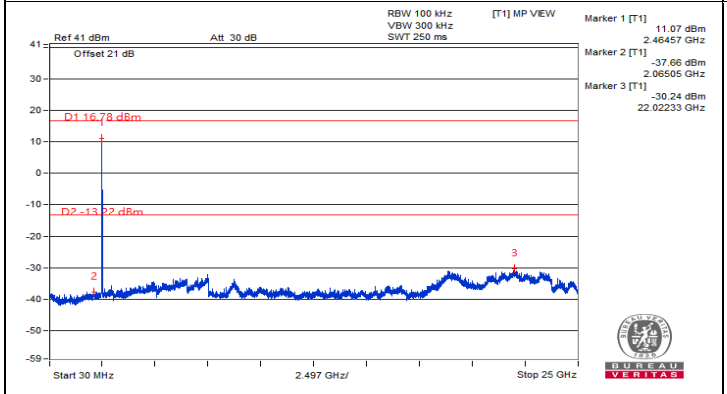
Maximum Reference Level



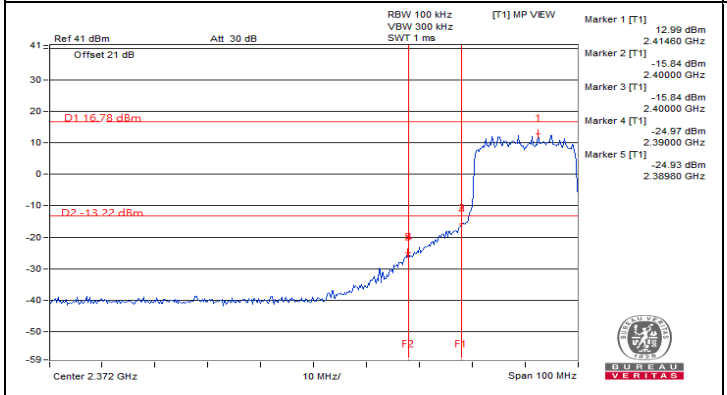
Chain 0 : CH 1



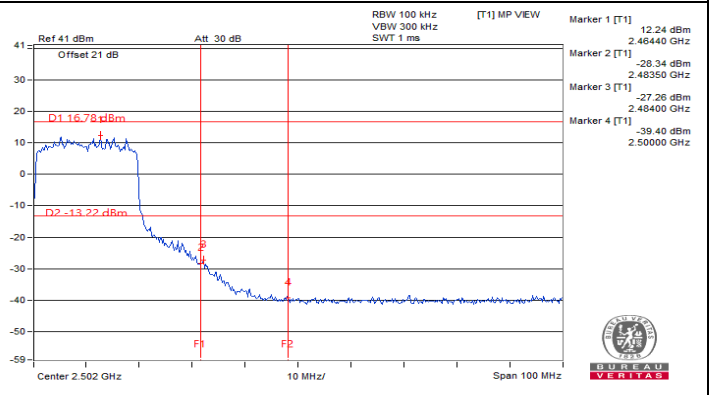
Chain 0 : CH 6



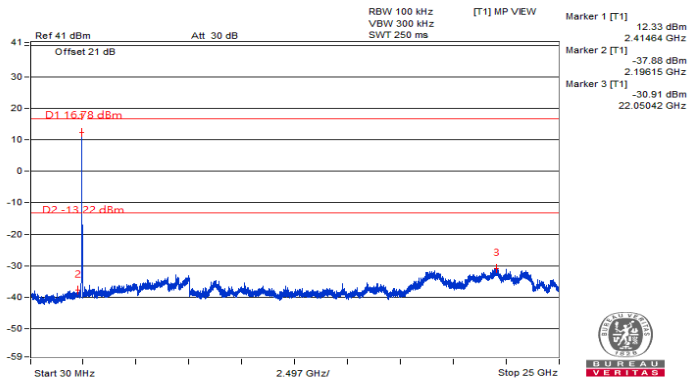
Chain 0 : CH 11



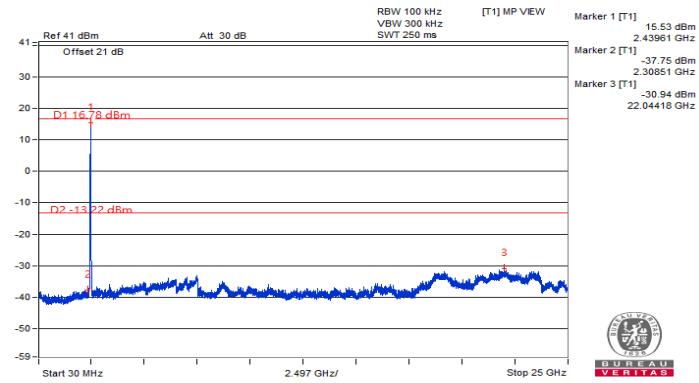
Chain 0 : CH 1 Band edge



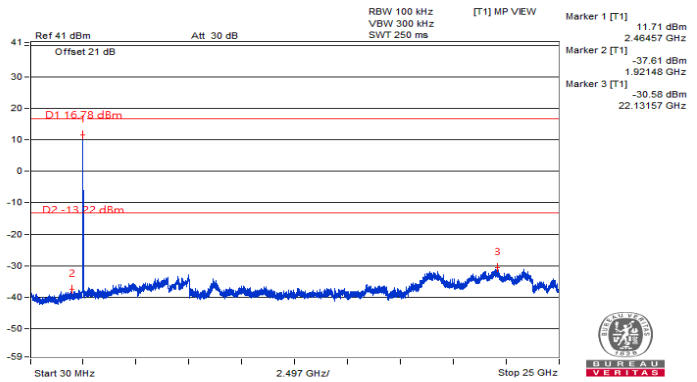
Chain 0 : CH 11 Band edge



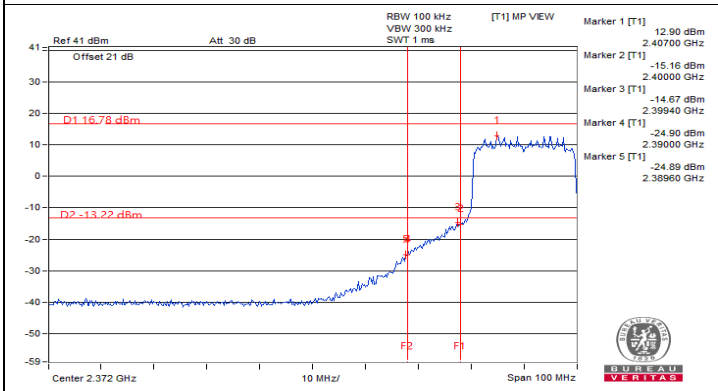
Chain 1 : CH 1



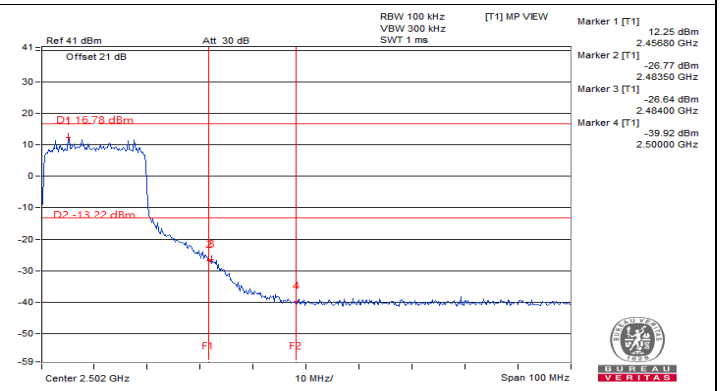
Chain 1 : CH 6



Chain 1 : CH 11

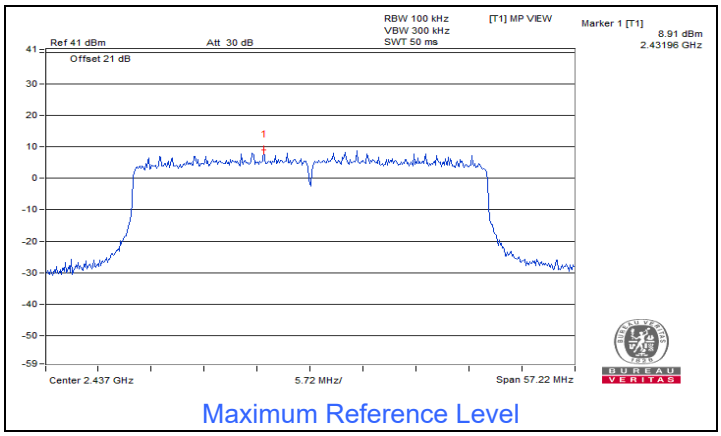


Chain 1 : CH 1 Band edge

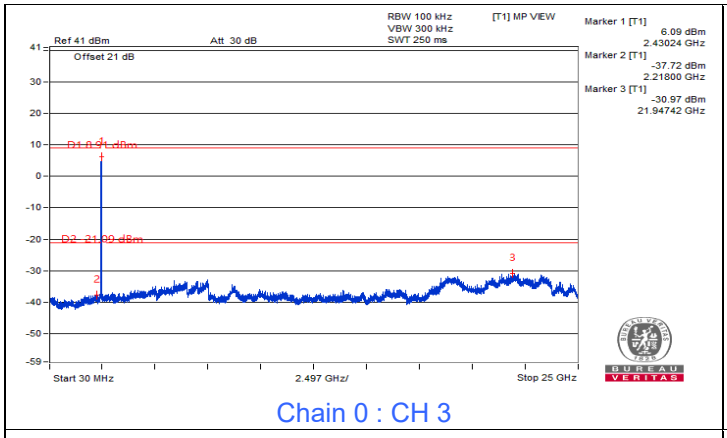


Chain 1 : CH 11 Band edge

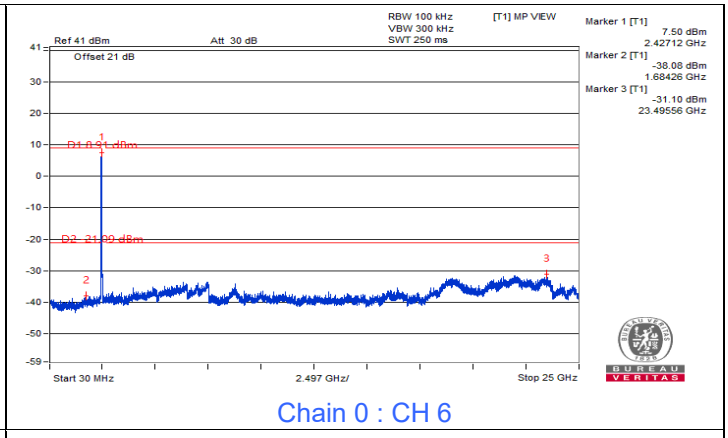
802.11ax (HE40)



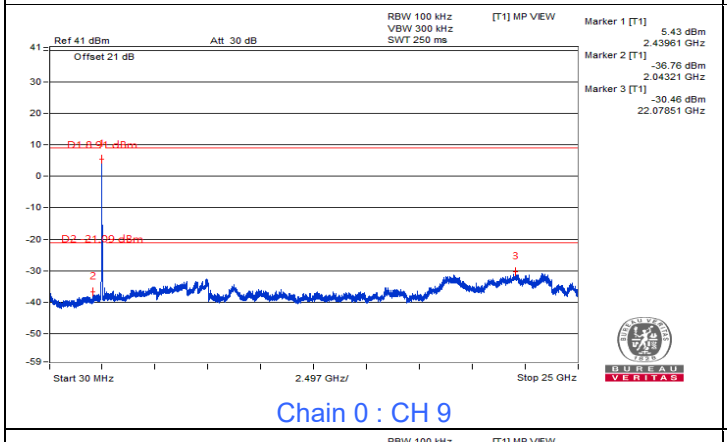
Maximum Reference Level



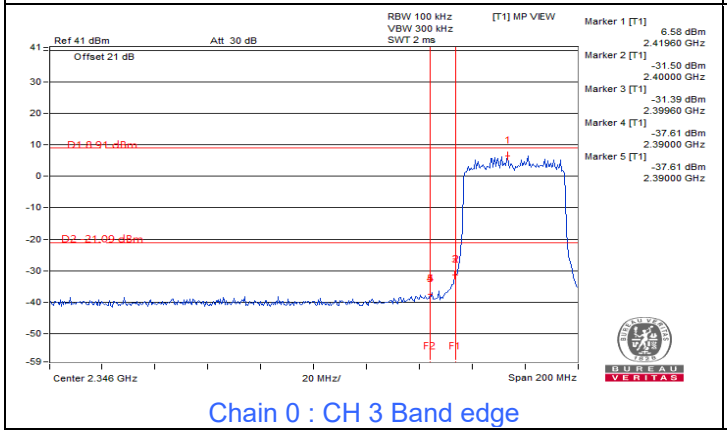
Chain 0 : CH 3



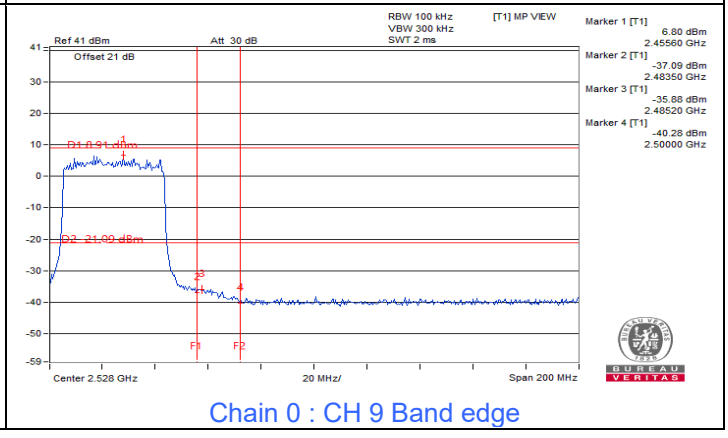
Chain 0 : CH 6



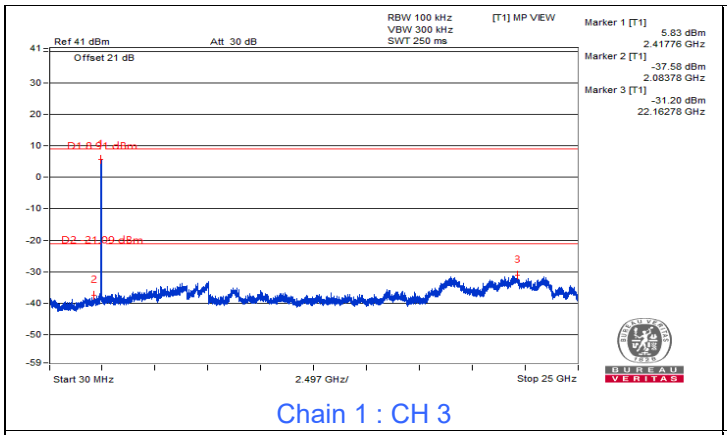
Chain 0 : CH 9



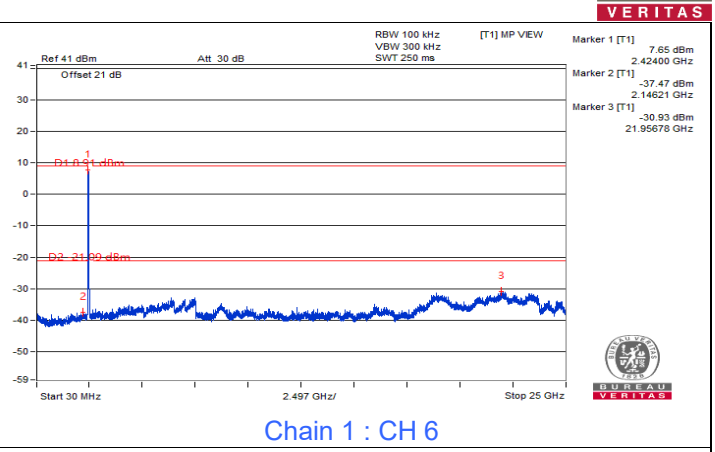
Chain 0 : CH 3 Band edge



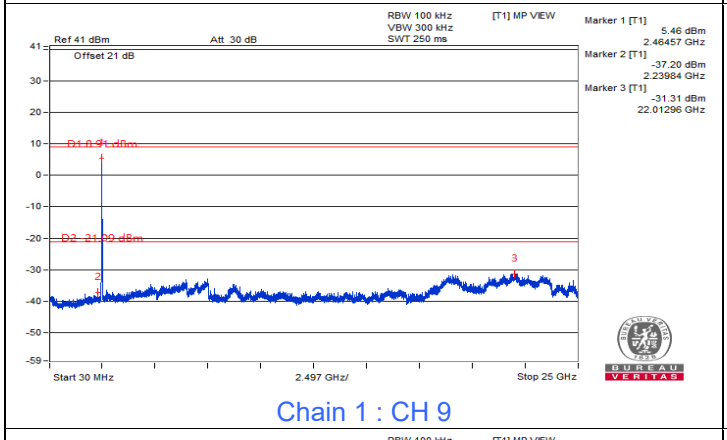
Chain 0 : CH 9 Band edge



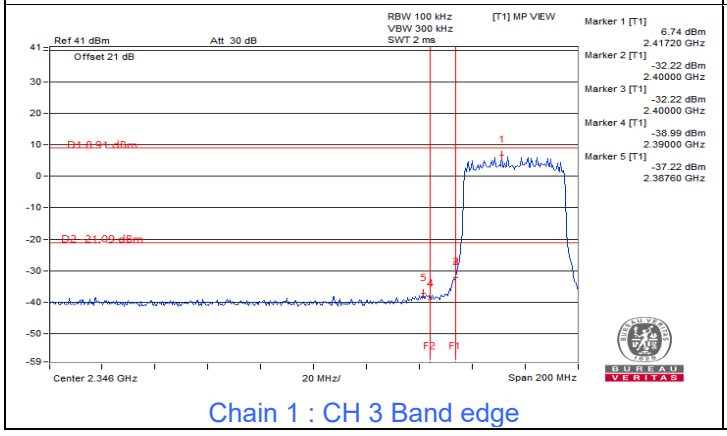
Chain 1 : CH 3



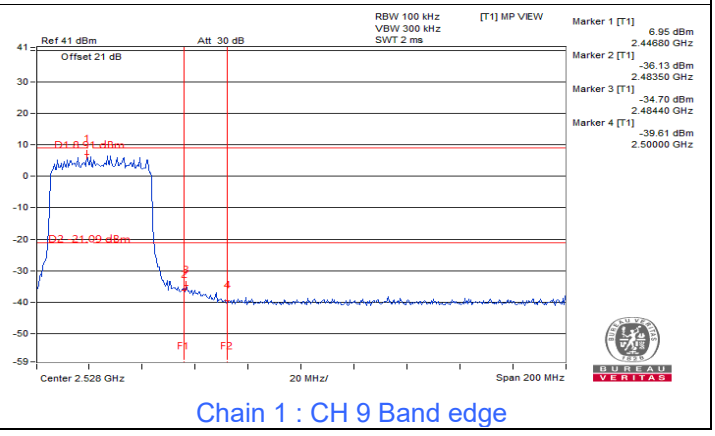
Chain 1 : CH 6



Chain 1 : CH 9



Chain 1 : CH 3 Band edge



Chain 1 : CH 9 Band edge

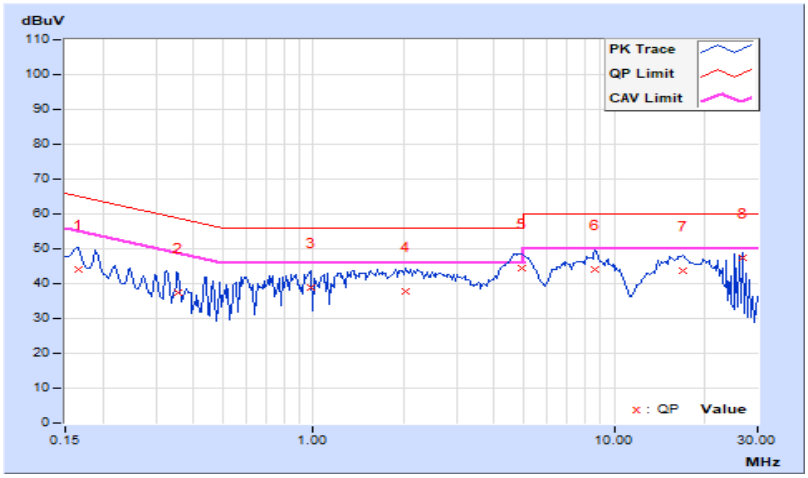
7.5 AC Power Conducted Emissions

RF Mode	802.11b	**Channel**	CH 6：2437 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	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	0.16562	9.94	34.07	31.16	44.01	41.10	65.18	55.18	-21.17	-14.08
2	0.35703	9.95	27.36	25.27	37.31	35.22	58.80	48.80	-21.49	-13.58
3	0.98203	9.99	28.92	23.19	38.91	33.18	56.00	46.00	-17.09	-12.82
4	2.02344	10.03	27.58	15.82	37.61	25.85	56.00	46.00	-18.39	-20.15
5	4.91406	10.26	34.21	29.17	44.47	39.43	56.00	46.00	-11.53	-6.57
6	8.68359	10.54	33.46	28.19	44.00	38.73	60.00	50.00	-16.00	-11.27
7	16.92188	11.15	32.45	27.87	43.60	39.02	60.00	50.00	-16.40	-10.98
8	26.75391	11.65	35.94	35.48	47.59	47.13	60.00	50.00	-12.41	-2.87

Remarks:

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

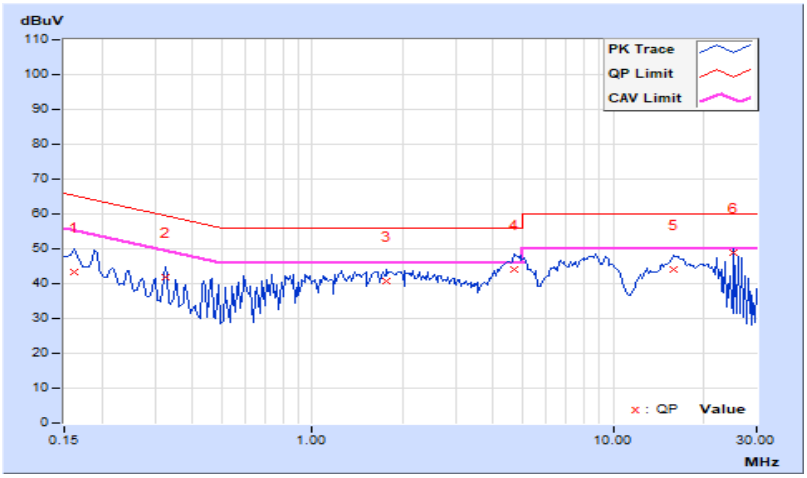


RF Mode	802.11b	**Channel**	CH 6：2437 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	21°C, 66% RH
Tested By	Louis Yang		

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	0.16172	10.00	33.50	30.85	43.50	40.85	65.38	55.38	-21.88	-14.53
2	0.32578	10.01	31.69	31.30	41.70	41.31	59.56	49.56	-17.86	-8.25
3	1.76563	10.08	30.57	23.64	40.65	33.72	56.00	46.00	-15.35	-12.28
4	4.66797	10.27	33.84	28.34	44.11	38.61	56.00	46.00	-11.89	-7.39
5	15.91406	10.93	33.04	28.48	43.97	39.41	60.00	50.00	-16.03	-10.59
6	**25.22656**	**11.27**	**37.61**	**36.50**	**48.88**	**47.77**	**60.00**	**50.00**	**-11.12**	**-2.23**

Remarks:

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



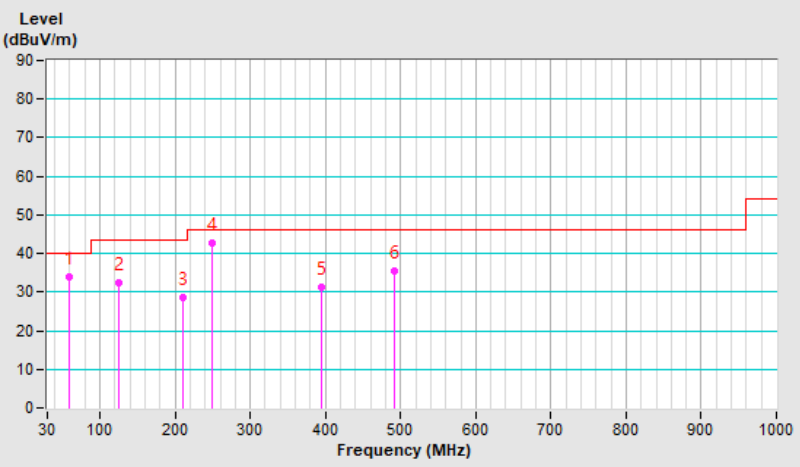
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11b	**Channel**	CH 6：2437 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	28°C, 76% 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	59.27	34.0 QP	40.0	-6.0	3.00 H	132	42.6	-8.6
2	125.01	32.4 QP	43.5	-11.1	1.00 H	58	41.9	-9.5
3	209.45	28.7 QP	43.5	-14.8	1.00 H	299	39.9	-11.2
4	**250.02**	**42.6 QP**	**46.0**	**-3.4**	**1.00 H**	**265**	**51.6**	**-9.0**
5	394.55	31.2 QP	46.0	-14.8	1.00 H	69	36.0	-4.8
6	491.87	35.6 QP	46.0	-10.4	2.00 H	205	37.9	-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.

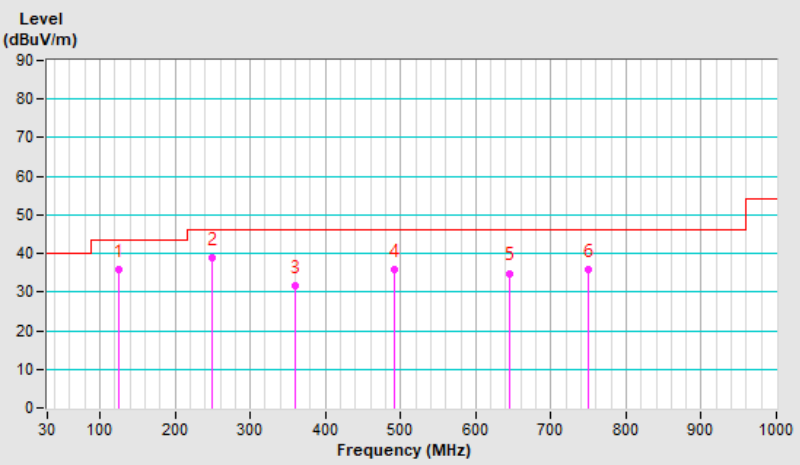


RF Mode	802.11b	Channel	CH 6：2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	28°C, 76% RH
Tested By	Louis Yang		

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	125.01	35.9 QP	43.5	-7.6	1.00 V	309	45.4	-9.5
2	250.00	38.7 QP	46.0	-7.3	1.00 V	152	47.7	-9.0
3	360.29	31.5 QP	46.0	-14.5	1.00 V	288	37.0	-5.5
4	491.84	35.8 QP	46.0	-10.2	2.00 V	259	38.1	-2.3
5	644.37	34.9 QP	46.0	-11.1	3.00 V	360	33.9	1.0
6	750.01	35.7 QP	46.0	-10.3	1.00 V	110	32.7	3.0

Remarks:

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



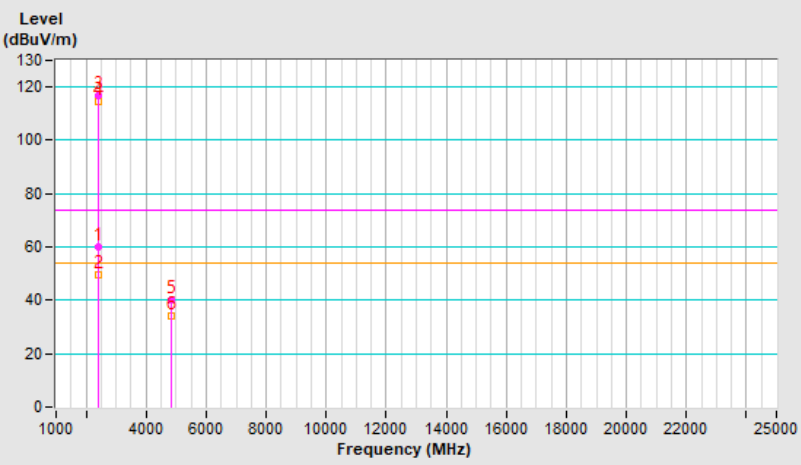
7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11b	**Channel**	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Willy Lin		

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	60.1 PK	74.0	-13.9	3.45 H	360	62.3	-2.2
2	2390.00	49.5 AV	54.0	-4.5	3.45 H	360	51.7	-2.2
3	*2412.00	116.8 PK			3.45 H	360	119.1	-2.3
4	*2412.00	114.4 AV			3.45 H	360	116.7	-2.3
5	4824.00	40.0 PK	74.0	-34.0	1.49 H	203	38.0	2.0
6	4824.00	34.3 AV	54.0	-19.7	1.49 H	203	32.3	2.0

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.

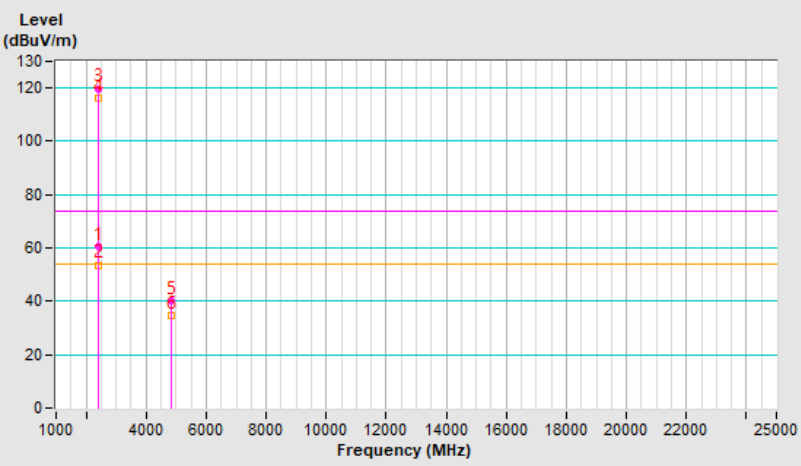


RF Mode	802.11b	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	60.6 PK	74.0	-13.4	1.46 V	208	62.8	-2.2
2	2390.00	53.7 AV	54.0	-0.3	1.46 V	208	55.9	-2.2
3	*2412.00	119.8 PK			1.46 V	208	122.1	-2.3
4	*2412.00	116.3 AV			1.46 V	208	118.6	-2.3
5	4824.00	40.2 PK	74.0	-33.8	2.64 V	4	38.2	2.0
6	4824.00	34.6 AV	54.0	-19.4	2.64 V	4	32.6	2.0

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.

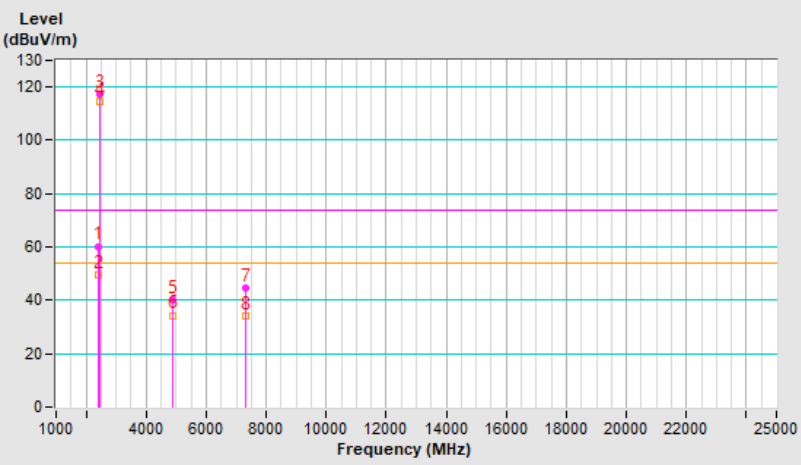


RF Mode	802.11b	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	3.48 H	360	62.5	-2.2
2	2390.00	49.7 AV	54.0	-4.3	3.48 H	360	51.9	-2.2
3	*2437.00	117.1 PK			3.48 H	360	119.3	-2.2
4	*2437.00	114.4 AV			3.48 H	360	116.6	-2.2
5	4874.00	40.1 PK	74.0	-33.9	1.48 H	210	38.2	1.9
6	4874.00	34.4 AV	54.0	-19.6	1.48 H	210	32.5	1.9
7	7311.00	44.4 PK	74.0	-29.6	1.54 H	298	36.5	7.9
8	7311.00	34.2 AV	54.0	-19.8	1.54 H	298	26.3	7.9

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.

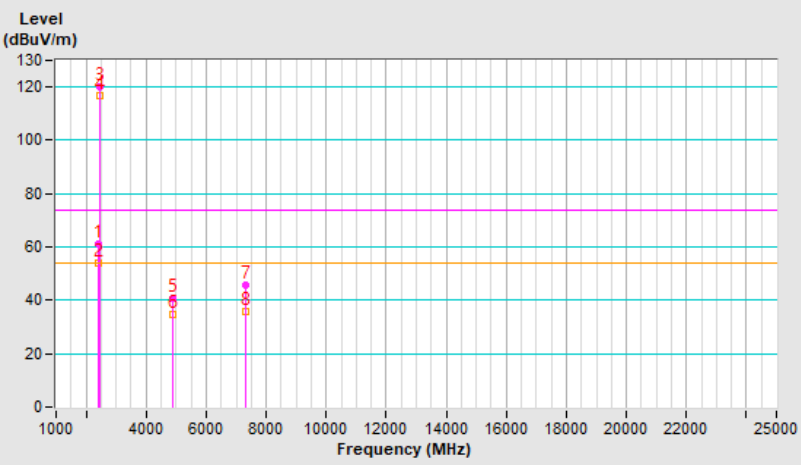


RF Mode	802.11b	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.0 PK	74.0	-13.0	1.46 V	208	63.2	-2.2
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.46 V**	**208**	**56.1**	**-2.2**
3	*2437.00	119.9 PK			1.46 V	208	122.1	-2.2
4	*2437.00	116.6 AV			1.46 V	208	118.8	-2.2
5	4874.00	40.5 PK	74.0	-33.5	2.66 V	10	38.6	1.9
6	4874.00	34.7 AV	54.0	-19.3	2.66 V	10	32.8	1.9
7	7311.00	45.8 PK	74.0	-28.2	1.50 V	360	37.9	7.9
8	7311.00	35.7 AV	54.0	-18.3	1.50 V	360	27.8	7.9

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.

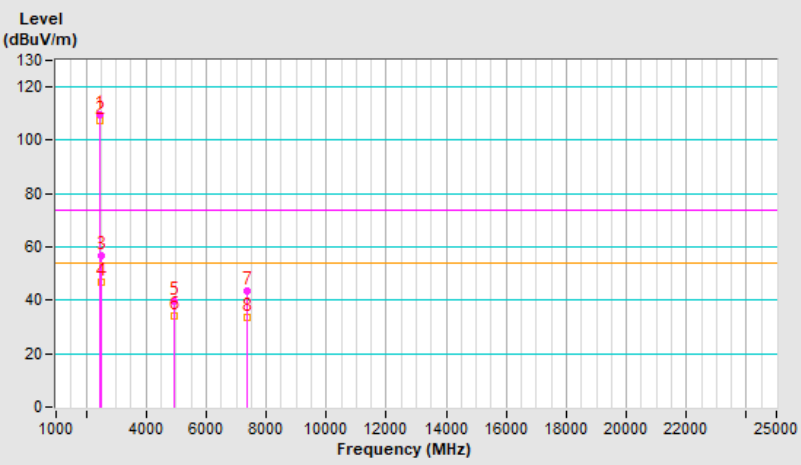


RF Mode	802.11b	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.6 PK			1.48 H	161	111.7	-2.1
2	*2462.00	107.2 AV			1.48 H	161	109.3	-2.1
3	2490.30	56.6 PK	74.0	-17.4	1.48 H	161	58.8	-2.2
4	2490.30	46.7 AV	54.0	-7.3	1.48 H	161	48.9	-2.2
5	4924.00	39.8 PK	74.0	-34.2	1.46 H	206	37.8	2.0
6	4924.00	34.1 AV	54.0	-19.9	1.46 H	206	32.1	2.0
7	7386.00	43.3 PK	74.0	-30.7	1.61 H	293	35.5	7.8
8	7386.00	33.5 AV	54.0	-20.5	1.61 H	293	25.7	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.

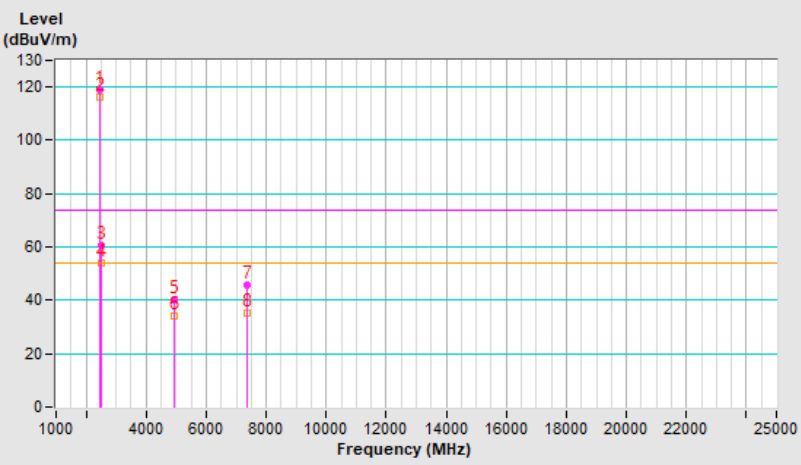


RF Mode	802.11b	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	119.1 PK			1.83 V	202	121.2	-2.1
2	*2462.00	116.2 AV			1.83 V	202	118.3	-2.1
3	2490.30	60.5 PK	74.0	-13.5	1.83 V	202	62.7	-2.2
4	2490.30	53.8 AV	54.0	-0.2	1.83 V	202	56.0	-2.2
5	4924.00	40.0 PK	74.0	-34.0	2.64 V	12	38.0	2.0
6	4924.00	34.2 AV	54.0	-19.8	2.64 V	12	32.2	2.0
7	7386.00	45.5 PK	74.0	-28.5	1.50 V	360	37.7	7.8
8	7386.00	35.3 AV	54.0	-18.7	1.50 V	360	27.5	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.

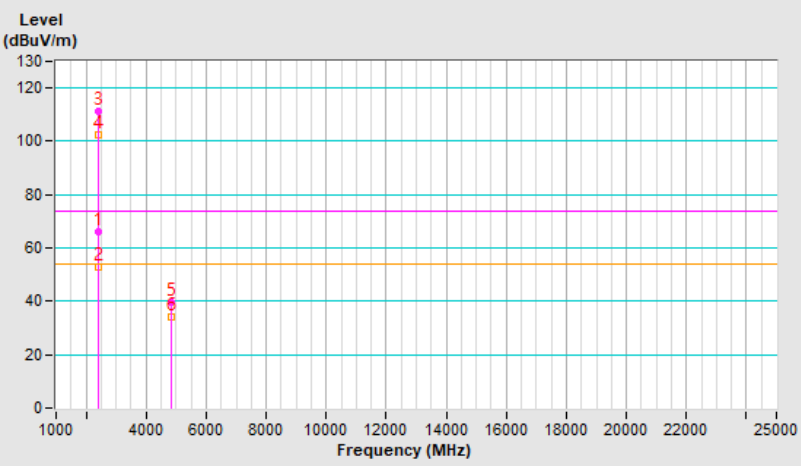


RF Mode	802.11g	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	66.3 PK	74.0	-7.7	2.06 H	308	68.5	-2.2
2	2390.00	53.0 AV	54.0	-1.0	2.06 H	308	55.2	-2.2
3	*2412.00	111.5 PK			2.06 H	308	113.8	-2.3
4	*2412.00	102.3 AV			2.06 H	308	104.6	-2.3
5	4824.00	39.7 PK	74.0	-34.3	1.48 H	190	37.7	2.0
6	4824.00	33.9 AV	54.0	-20.1	1.48 H	190	31.9	2.0

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.

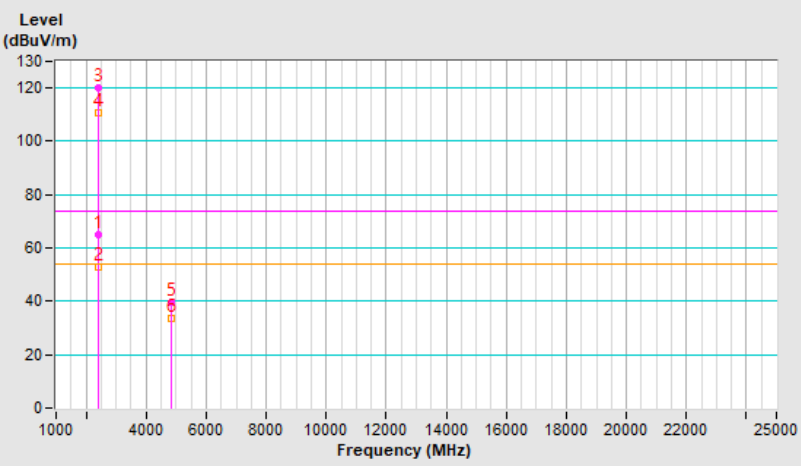


RF Mode	802.11g	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.1 PK	74.0	-8.9	1.47 V	202	67.3	-2.2
2	2390.00	52.9 AV	54.0	-1.1	1.47 V	202	55.1	-2.2
3	*2412.00	120.2 PK			1.47 V	202	122.5	-2.3
4	*2412.00	110.9 AV			1.47 V	202	113.2	-2.3
5	4824.00	39.8 PK	74.0	-34.2	2.69 V	7	37.8	2.0
6	4824.00	33.8 AV	54.0	-20.2	2.69 V	7	31.8	2.0

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.

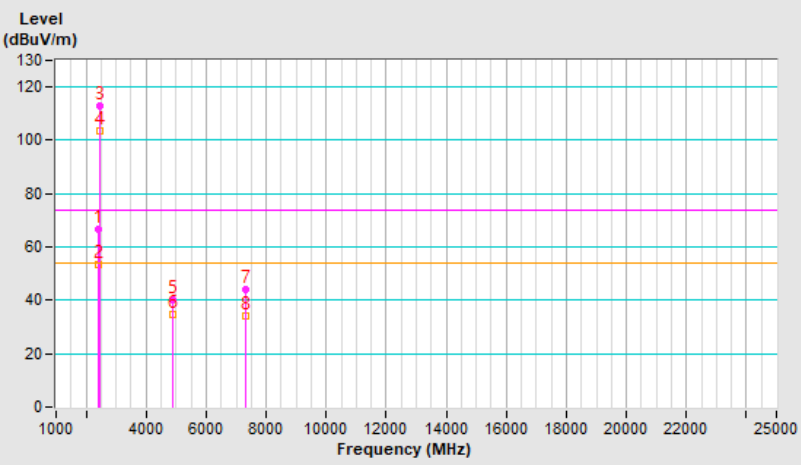


RF Mode	802.11g	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	66.8 PK	74.0	-7.2	2.06 H	307	69.0	-2.2
2	2390.00	53.3 AV	54.0	-0.7	2.06 H	307	55.5	-2.2
3	*2437.00	113.1 PK			2.06 H	307	115.3	-2.2
4	*2437.00	103.5 AV			2.06 H	307	105.7	-2.2
5	4874.00	40.2 PK	74.0	-33.8	1.54 H	198	38.3	1.9
6	4874.00	34.6 AV	54.0	-19.4	1.54 H	198	32.7	1.9
7	7311.00	44.2 PK	74.0	-29.8	1.55 H	293	36.3	7.9
8	7311.00	34.2 AV	54.0	-19.8	1.55 H	293	26.3	7.9

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.

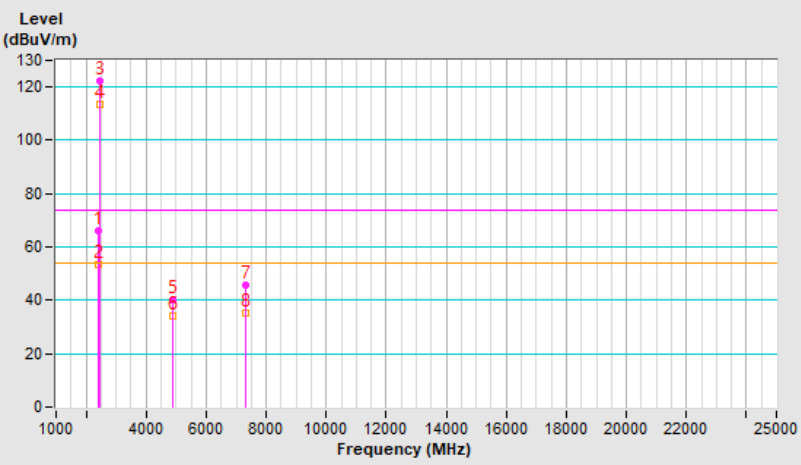


RF Mode	802.11g	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	1.48 V	192	68.5	-2.2
2	2390.00	53.6 AV	54.0	-0.4	1.48 V	192	55.8	-2.2
3	*2437.00	122.3 PK			1.48 V	192	124.5	-2.2
4	*2437.00	113.2 AV			1.48 V	192	115.4	-2.2
5	4874.00	40.2 PK	74.0	-33.8	2.75 V	18	38.3	1.9
6	4874.00	34.0 AV	54.0	-20.0	2.75 V	18	32.1	1.9
7	7311.00	45.5 PK	74.0	-28.5	1.49 V	360	37.6	7.9
8	7311.00	35.4 AV	54.0	-18.6	1.49 V	360	27.5	7.9

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.

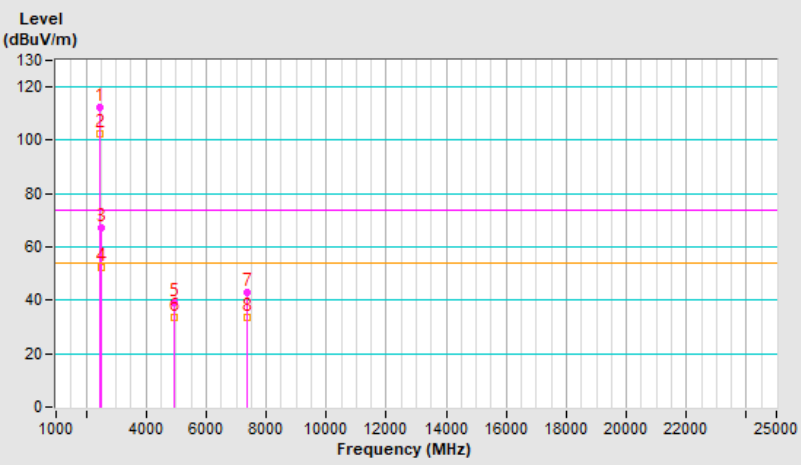


RF Mode	802.11g	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	112.2 PK			3.32 H	41	114.3	-2.1
2	*2462.00	102.6 AV			3.32 H	41	104.7	-2.1
3	2483.50	67.2 PK	74.0	-6.8	3.32 H	41	69.4	-2.2
4	2483.50	52.3 AV	54.0	-1.7	3.32 H	41	54.5	-2.2
5	4924.00	39.2 PK	74.0	-34.8	1.43 H	204	37.2	2.0
6	4924.00	33.5 AV	54.0	-20.5	1.43 H	204	31.5	2.0
7	7386.00	42.8 PK	74.0	-31.2	1.61 H	288	35.0	7.8
8	7386.00	33.5 AV	54.0	-20.5	1.61 H	288	25.7	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.

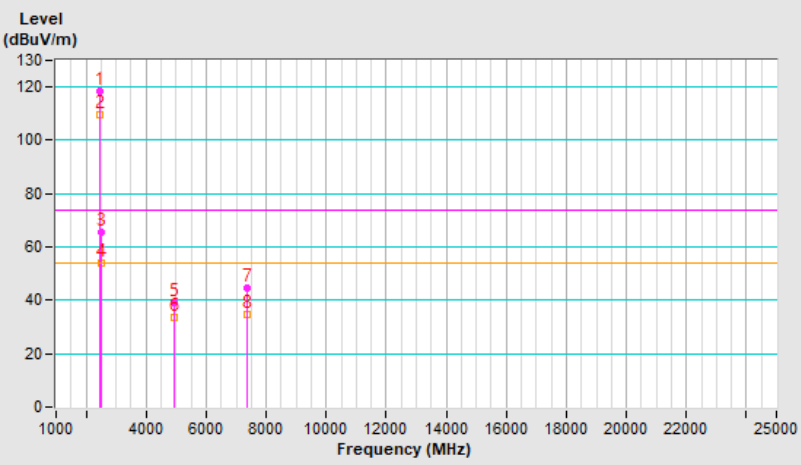


RF Mode	802.11g	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	118.3 PK			1.80 V	201	120.4	-2.1
2	*2462.00	109.5 AV			1.80 V	201	111.6	-2.1
3	2483.50	65.4 PK	74.0	-8.6	1.80 V	201	67.6	-2.2
4	2483.50	53.8 AV	54.0	-0.2	1.80 V	201	56.0	-2.2
5	4924.00	39.1 PK	74.0	-34.9	2.66 V	18	37.1	2.0
6	4924.00	33.4 AV	54.0	-20.6	2.66 V	18	31.4	2.0
7	7386.00	44.4 PK	74.0	-29.6	1.54 V	360	36.6	7.8
8	7386.00	34.7 AV	54.0	-19.3	1.54 V	360	26.9	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.

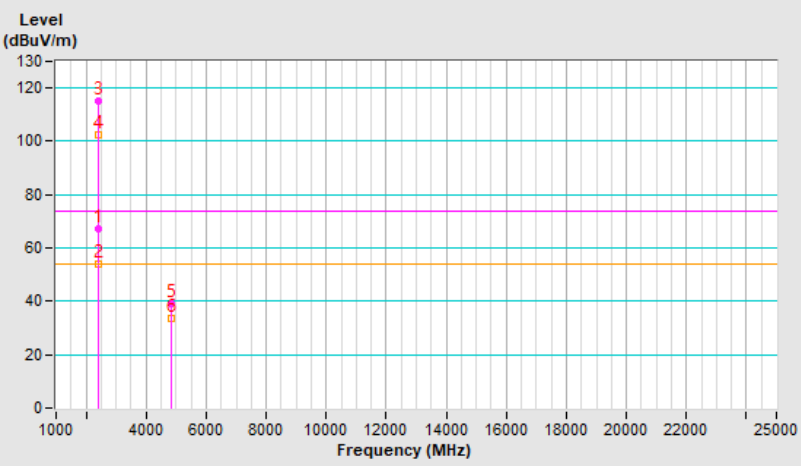


RF Mode	802.11ax (HE20)	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.4 PK	74.0	-6.6	1.61 H	312	69.6	-2.2
2	2390.00	53.8 AV	54.0	-0.2	1.61 H	312	56.0	-2.2
3	*2412.00	115.2 PK			1.61 H	312	117.5	-2.3
4	*2412.00	102.4 AV			1.61 H	312	104.7	-2.3
5	4824.00	39.3 PK	74.0	-34.7	1.51 H	186	37.3	2.0
6	4824.00	33.6 AV	54.0	-20.4	1.51 H	186	31.6	2.0

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.

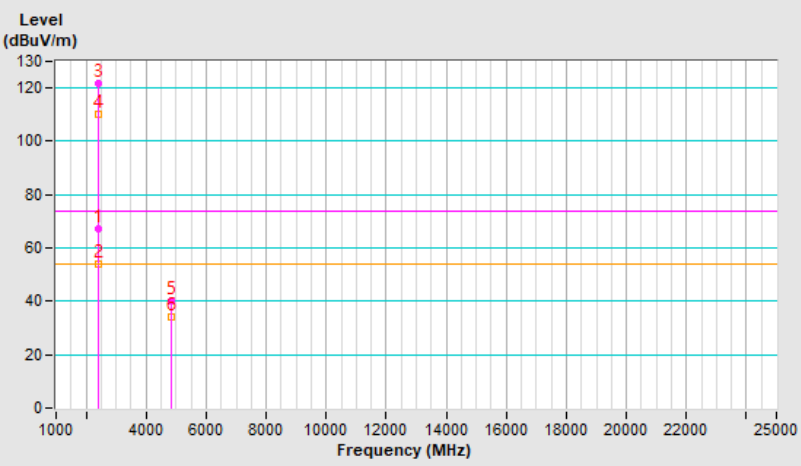


RF Mode	802.11ax (HE20)	Channel	CH 1：2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	67.1 PK	74.0	-6.9	1.48 V	203	69.3	-2.2
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.48 V**	**203**	**56.1**	**-2.2**
3	*2412.00	121.5 PK			1.48 V	203	123.8	-2.3
4	*2412.00	110.4 AV			1.48 V	203	112.7	-2.3
5	4824.00	40.0 PK	74.0	-34.0	2.66 V	12	38.0	2.0
6	4824.00	34.1 AV	54.0	-19.9	2.66 V	12	32.1	2.0

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.

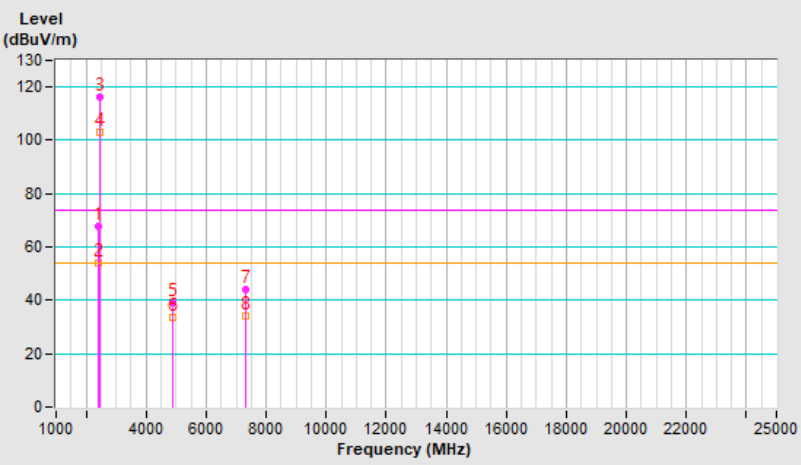


RF Mode	802.11ax (HE20)	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.9 PK	74.0	-6.1	1.62 H	301	70.1	-2.2
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.62 H**	**301**	**56.1**	**-2.2**
3	*2437.00	116.1 PK			1.62 H	301	118.3	-2.2
4	*2437.00	102.9 AV			1.62 H	301	105.1	-2.2
5	4874.00	39.2 PK	74.0	-34.8	1.49 H	211	37.3	1.9
6	4874.00	33.8 AV	54.0	-20.2	1.49 H	211	31.9	1.9
7	7311.00	44.2 PK	74.0	-29.8	1.57 H	291	36.3	7.9
8	7311.00	34.1 AV	54.0	-19.9	1.57 H	291	26.2	7.9

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.

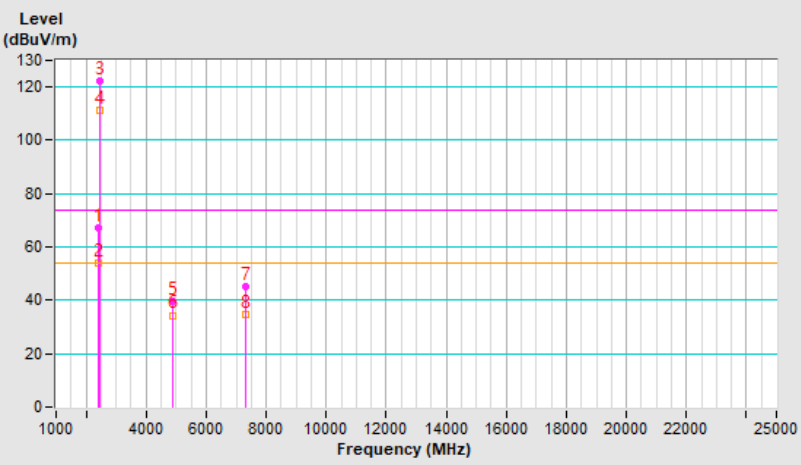


RF Mode	802.11ax (HE20)	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	67.4 PK	74.0	-6.6	1.46 V	187	69.6	-2.2
2	2390.00	53.8 AV	54.0	-0.2	1.46 V	187	56.0	-2.2
3	*2437.00	122.3 PK			1.46 V	187	124.5	-2.2
4	*2437.00	111.2 AV			1.46 V	187	113.4	-2.2
5	4874.00	39.8 PK	74.0	-34.2	2.65 V	7	37.9	1.9
6	4874.00	34.4 AV	54.0	-19.6	2.65 V	7	32.5	1.9
7	7311.00	45.0 PK	74.0	-29.0	1.61 V	360	37.1	7.9
8	7311.00	34.9 AV	54.0	-19.1	1.61 V	360	27.0	7.9

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.

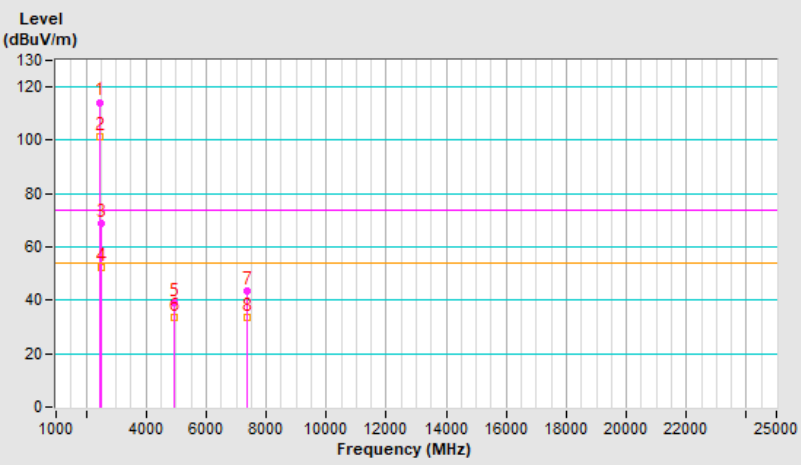


RF Mode	802.11ax (HE20)	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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			1.50 H	144	116.4	-2.1
2	*2462.00	101.4 AV			1.50 H	144	103.5	-2.1
3	2483.50	68.6 PK	74.0	-5.4	1.50 H	144	70.8	-2.2
4	2483.50	52.3 AV	54.0	-1.7	1.50 H	144	54.5	-2.2
5	4924.00	39.2 PK	74.0	-34.8	1.47 H	191	37.2	2.0
6	4924.00	33.5 AV	54.0	-20.5	1.47 H	191	31.5	2.0
7	7386.00	43.3 PK	74.0	-30.7	1.58 H	292	35.5	7.8
8	7386.00	33.6 AV	54.0	-20.4	1.58 H	292	25.8	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.

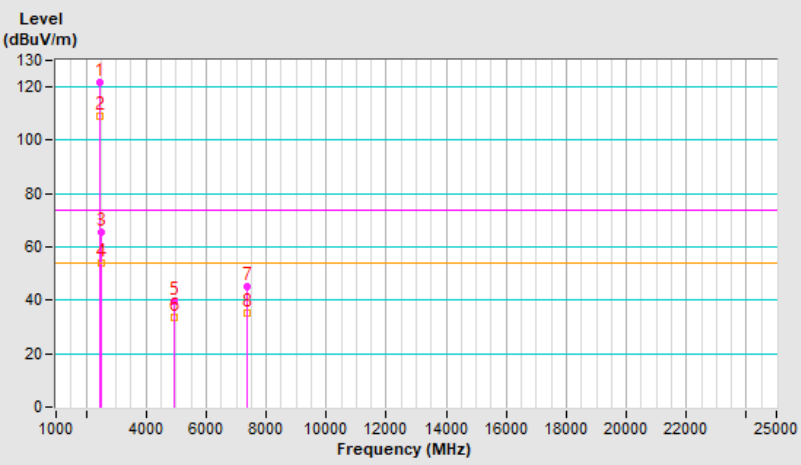


RF Mode	802.11ax (HE20)	Channel	CH 11：2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	121.6 PK			1.80 V	204	123.7	-2.1
2	*2462.00	109.3 AV			1.80 V	204	111.4	-2.1
3	2483.50	65.4 PK	74.0	-8.6	1.80 V	204	67.6	-2.2
4	2483.50	53.8 AV	54.0	-0.2	1.80 V	204	56.0	-2.2
5	4924.00	39.6 PK	74.0	-34.4	2.70 V	5	37.6	2.0
6	4924.00	33.6 AV	54.0	-20.4	2.70 V	5	31.6	2.0
7	7386.00	45.0 PK	74.0	-29.0	1.48 V	360	37.2	7.8
8	7386.00	35.1 AV	54.0	-18.9	1.48 V	360	27.3	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.

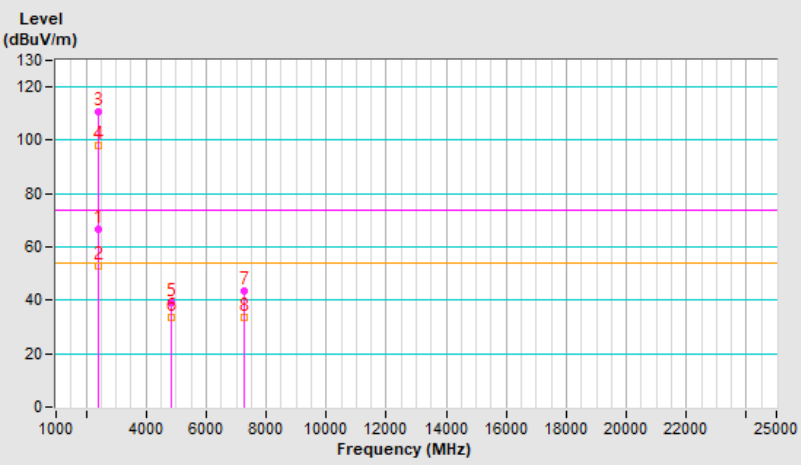


RF Mode	802.11ax (HE40)	Channel	CH 3：2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	66.7 PK	74.0	-7.3	1.85 H	312	68.9	-2.2
2	2390.00	52.8 AV	54.0	-1.2	1.85 H	312	55.0	-2.2
3	*2422.00	110.7 PK			1.85 H	312	112.9	-2.2
4	*2422.00	98.1 AV			1.85 H	312	100.3	-2.2
5	4844.00	38.9 PK	74.0	-35.1	1.43 H	191	36.9	2.0
6	4844.00	33.5 AV	54.0	-20.5	1.43 H	191	31.5	2.0
7	7266.00	43.5 PK	74.0	-30.5	1.65 H	278	35.5	8.0
8	7266.00	33.7 AV	54.0	-20.3	1.65 H	278	25.7	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.

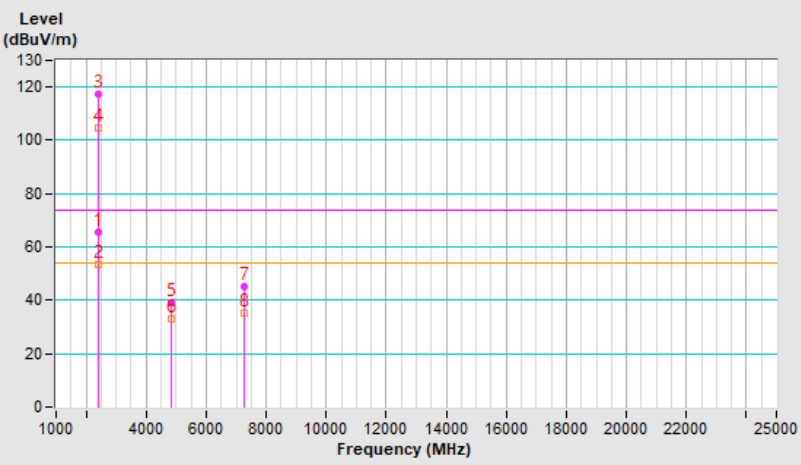


RF Mode	802.11ax (HE40)	Channel	CH 3：2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	65.6 PK	74.0	-8.4	1.48 V	206	67.8	-2.2
2	2390.00	53.5 AV	54.0	-0.5	1.48 V	206	55.7	-2.2
3	*2422.00	117.2 PK			1.48 V	206	119.4	-2.2
4	*2422.00	104.7 AV			1.48 V	206	106.9	-2.2
5	4844.00	38.9 PK	74.0	-35.1	2.70 V	13	36.9	2.0
6	4844.00	33.2 AV	54.0	-20.8	2.70 V	13	31.2	2.0
7	7266.00	45.4 PK	74.0	-28.6	1.46 V	360	37.4	8.0
8	7266.00	35.2 AV	54.0	-18.8	1.46 V	360	27.2	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.

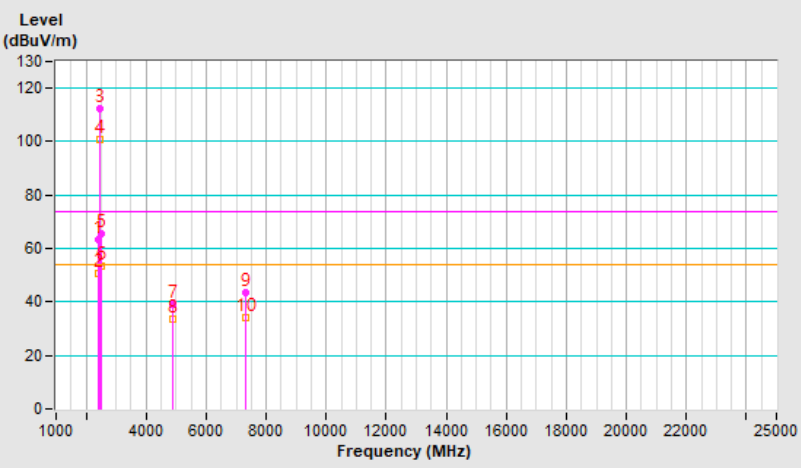


RF Mode	802.11ax (HE40)	Channel	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	63.4 PK	74.0	-10.6	1.81 H	301	65.6	-2.2
2	2390.00	50.6 AV	54.0	-3.4	1.81 H	301	52.8	-2.2
3	*2437.00	112.5 PK			1.81 H	301	114.7	-2.2
4	*2437.00	100.9 AV			1.81 H	301	103.1	-2.2
5	2483.50	65.3 PK	74.0	-8.7	1.81 H	301	67.5	-2.2
6	2483.50	53.4 AV	54.0	-0.6	1.81 H	301	55.6	-2.2
7	4874.00	39.0 PK	74.0	-35.0	1.48 H	184	37.1	1.9
8	4874.00	33.5 AV	54.0	-20.5	1.48 H	184	31.6	1.9
9	7311.00	43.6 PK	74.0	-30.4	1.59 H	284	35.7	7.9
10	7311.00	34.0 AV	54.0	-20.0	1.59 H	284	26.1	7.9

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.

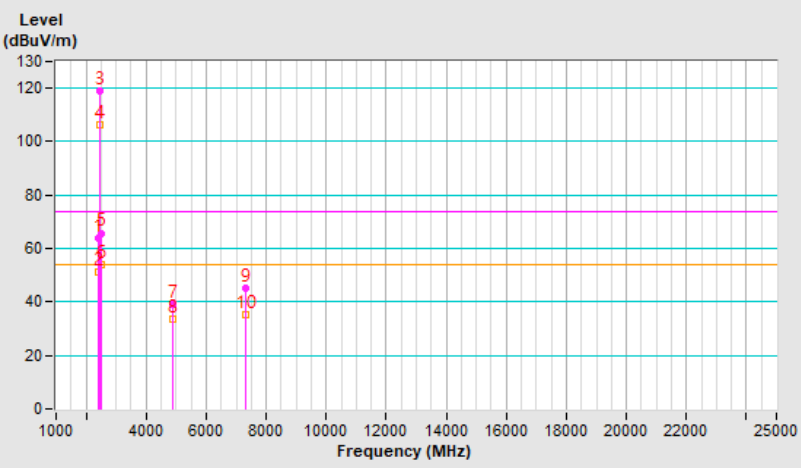


RF Mode	802.11ax (HE40)	**Channel**	CH 6：2437 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Willy Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	2390.00	64.1 PK	74.0	-9.9	1.40 V	216	66.3	-2.2
2	2390.00	51.4 AV	54.0	-2.6	1.40 V	216	53.6	-2.2
3	*2437.00	119.0 PK			1.40 V	216	121.2	-2.2
4	*2437.00	106.3 AV			1.40 V	216	108.5	-2.2
5	2483.50	65.8 PK	74.0	-8.2	1.40 V	216	68.0	-2.2
6	2483.50	53.8 AV	54.0	-0.2	1.40 V	216	56.0	-2.2
7	4874.00	39.3 PK	74.0	-34.7	2.73 V	8	37.4	1.9
8	4874.00	33.4 AV	54.0	-20.6	2.73 V	8	31.5	1.9
9	7311.00	45.4 PK	74.0	-28.6	1.52 V	360	37.5	7.9
10	7311.00	35.3 AV	54.0	-18.7	1.52 V	360	27.4	7.9

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.

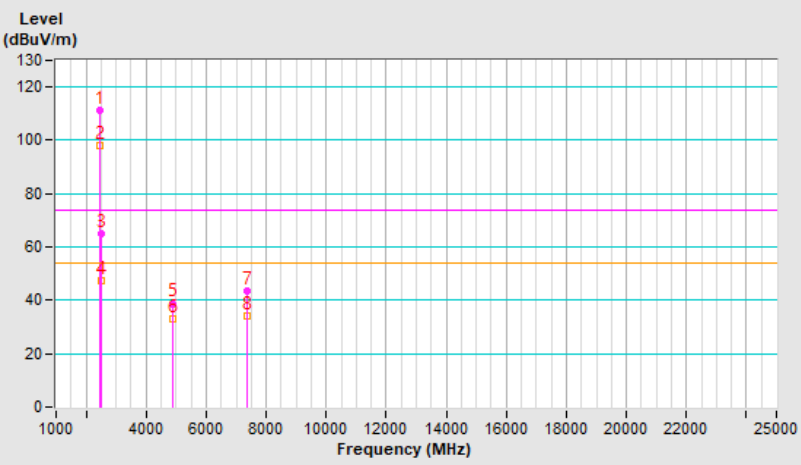


RF Mode	802.11ax (HE40)	Channel	CH 9：2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	111.2 PK			1.64 H	313	113.3	-2.1
2	*2452.00	98.1 AV			1.64 H	313	100.2	-2.1
3	2483.50	64.8 PK	74.0	-9.2	1.64 H	313	67.0	-2.2
4	2483.50	47.3 AV	54.0	-6.7	1.64 H	313	49.5	-2.2
5	4904.00	38.8 PK	74.0	-35.2	1.39 H	198	36.9	1.9
6	4904.00	33.2 AV	54.0	-20.8	1.39 H	198	31.3	1.9
7	7356.00	43.6 PK	74.0	-30.4	1.64 H	277	36.0	7.6
8	7356.00	33.9 AV	54.0	-20.1	1.64 H	277	26.3	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.

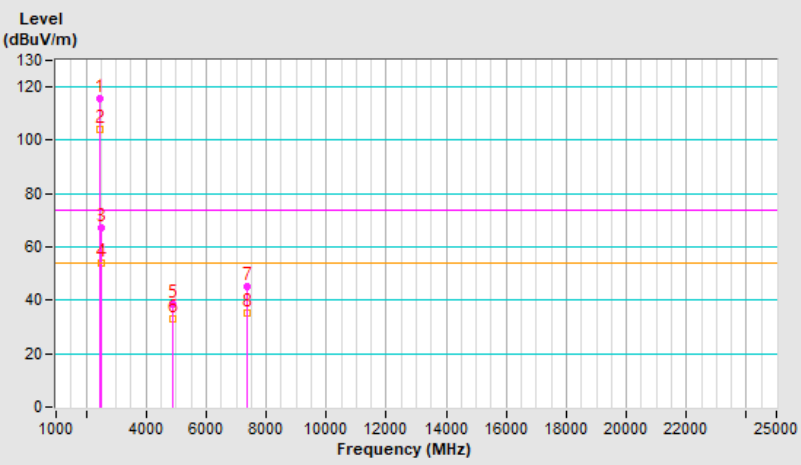


RF Mode	802.11ax (HE40)	Channel	CH 9：2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Willy Lin		

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	115.5 PK			1.80 V	206	117.6	-2.1
2	*2452.00	104.0 AV			1.80 V	206	106.1	-2.1
3	2483.50	67.3 PK	74.0	-6.7	1.80 V	206	69.5	-2.2
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**1.80 V**	**206**	**56.1**	**-2.2**
5	4904.00	38.5 PK	74.0	-35.5	2.70 V	8	36.6	1.9
6	4904.00	33.1 AV	54.0	-20.9	2.70 V	8	31.2	1.9
7	7356.00	45.4 PK	74.0	-28.6	1.46 V	360	37.8	7.6
8	7356.00	35.3 AV	54.0	-18.7	1.46 V	360	27.7	7.6

Remarks:

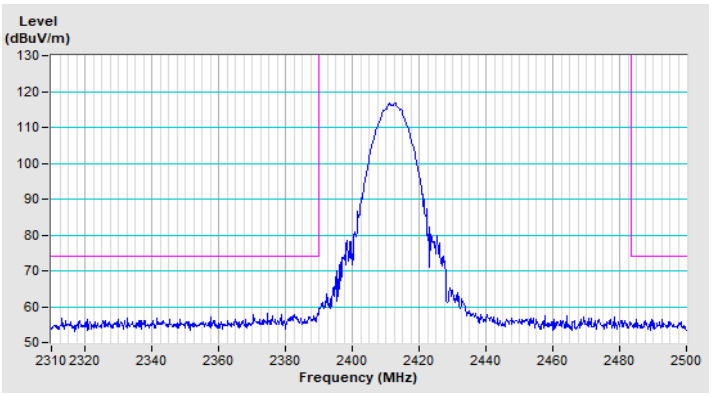
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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



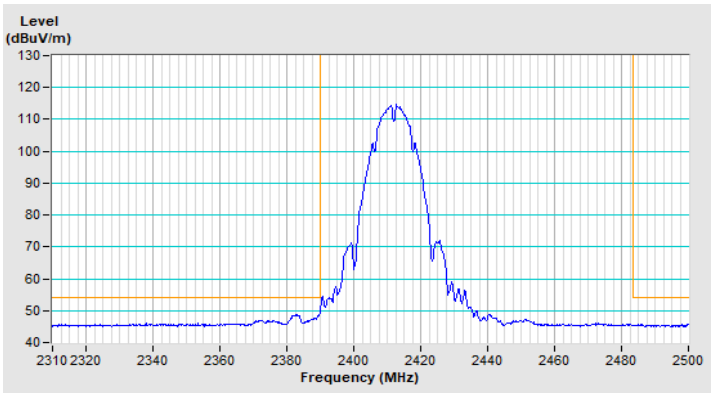
Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak

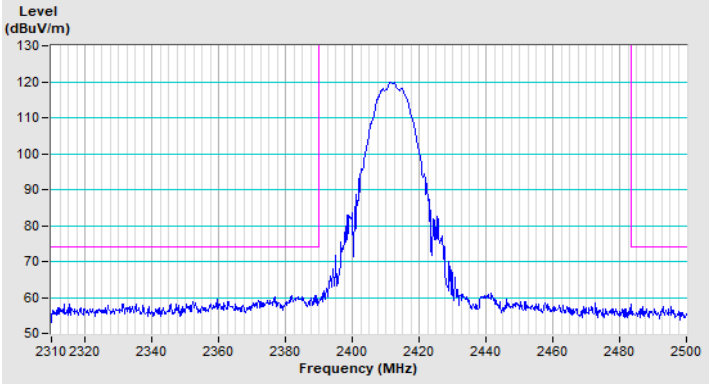
802.11b Channel 1



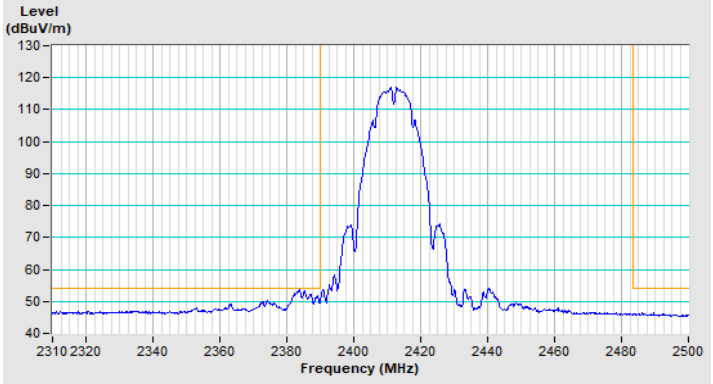
Horizontal (Peak)



Horizontal (Average)

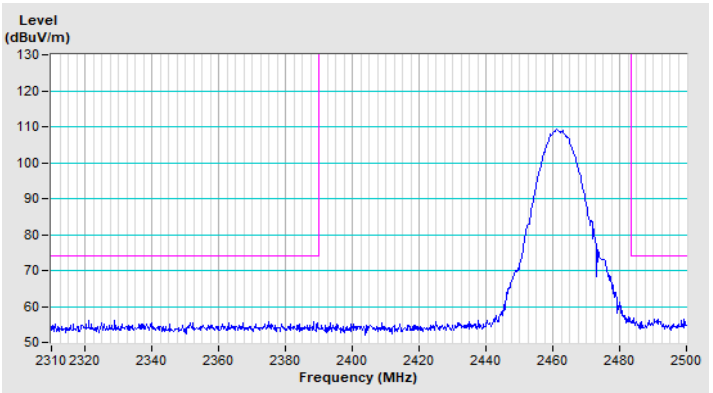


Vertical (Peak)

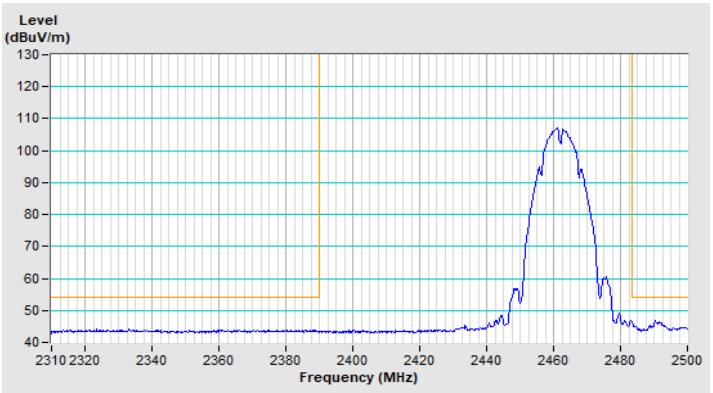


Vertical (Average)

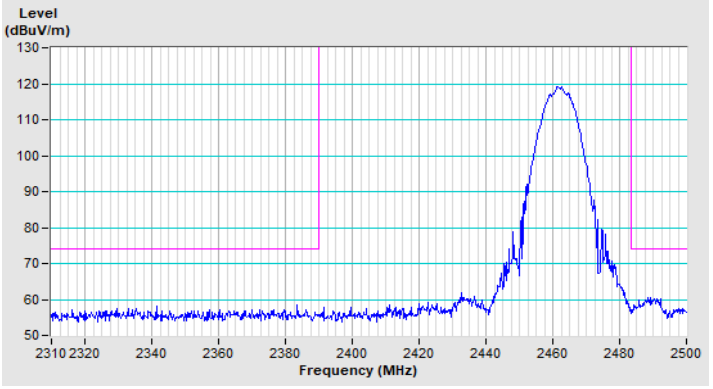
802.11b Channel 11



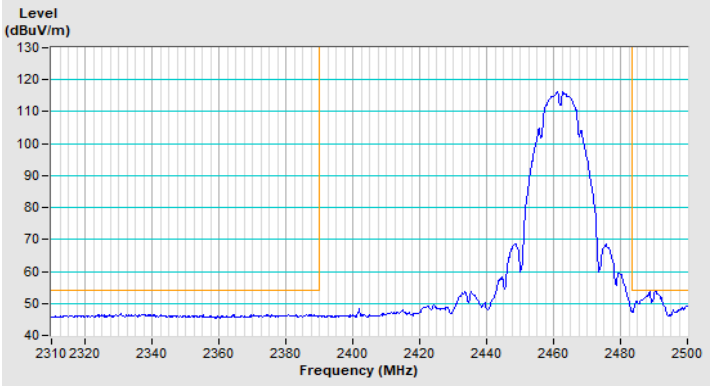
Horizontal (Peak)



Horizontal (Average)



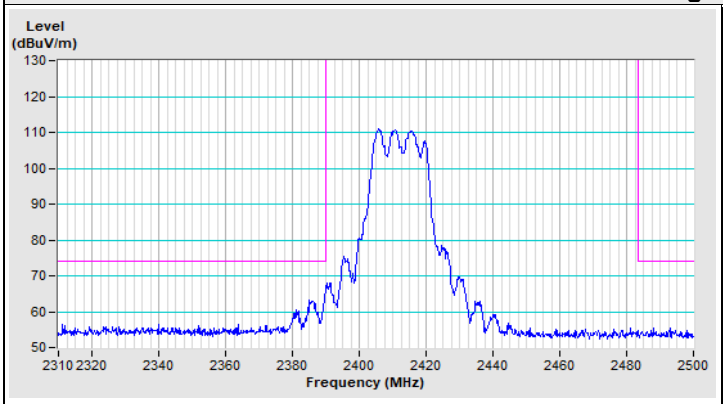
Vertical (Peak)



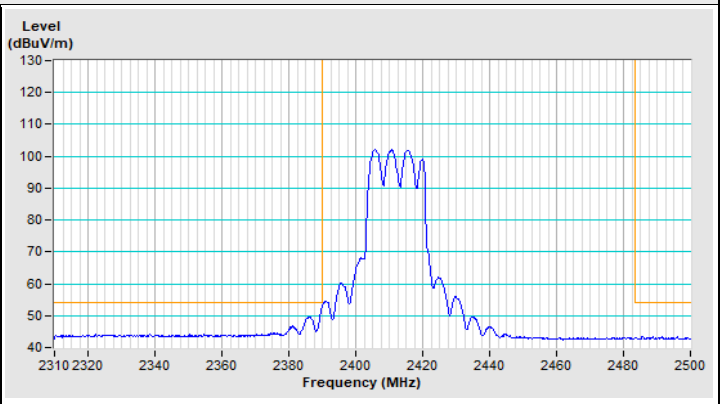
Vertical (Average)

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=1 kHz, DET=Peak

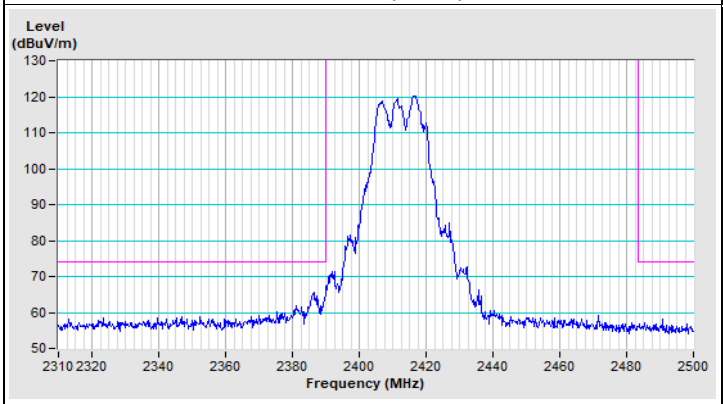
802.11g Channel 1



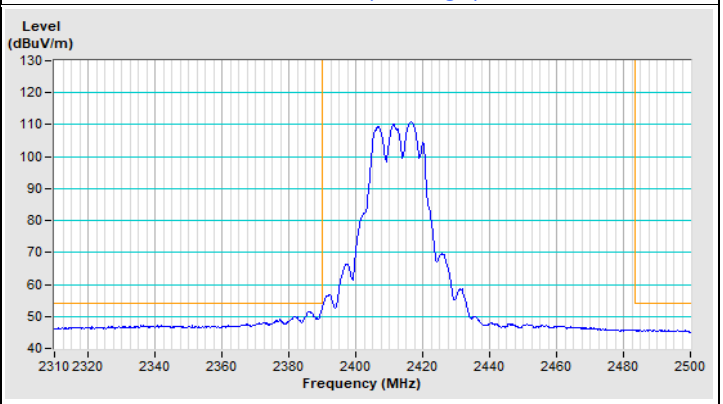
Horizontal (Peak)



Horizontal (Average)

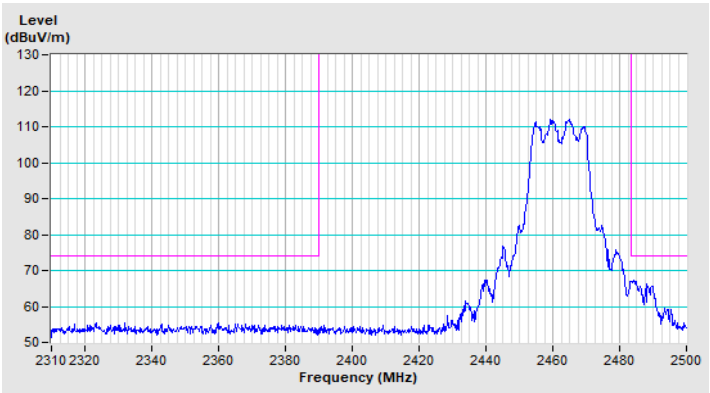


Vertical (Peak)

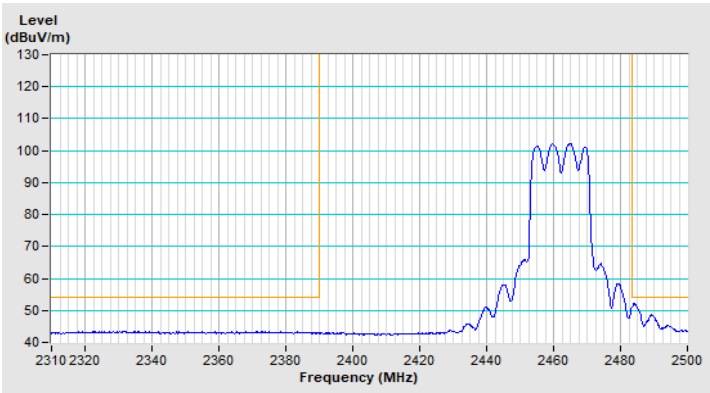


Vertical (Average)

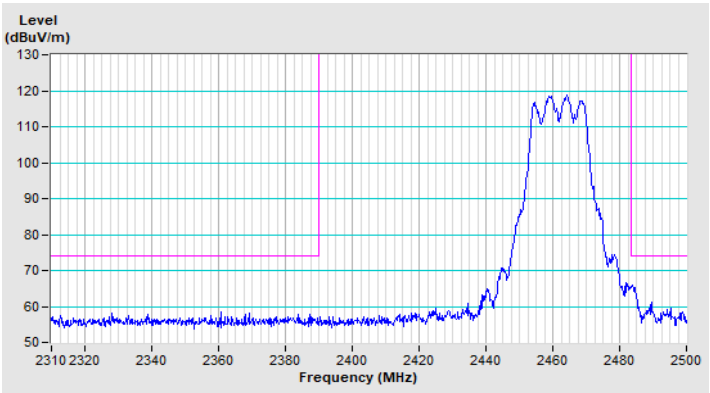
802.11g Channel 11



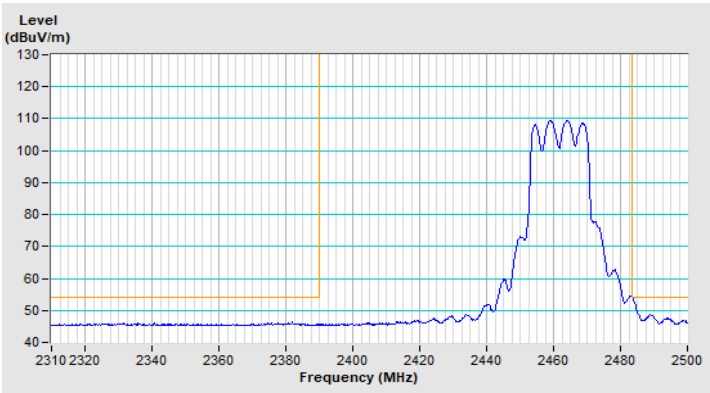
Horizontal (Peak)



Horizontal (Average)



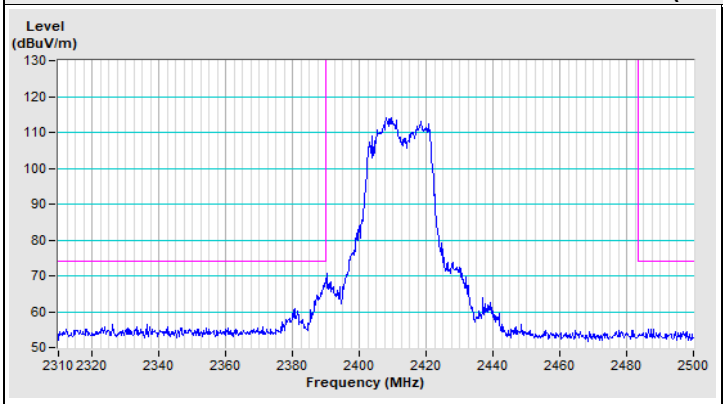
Vertical (Peak)



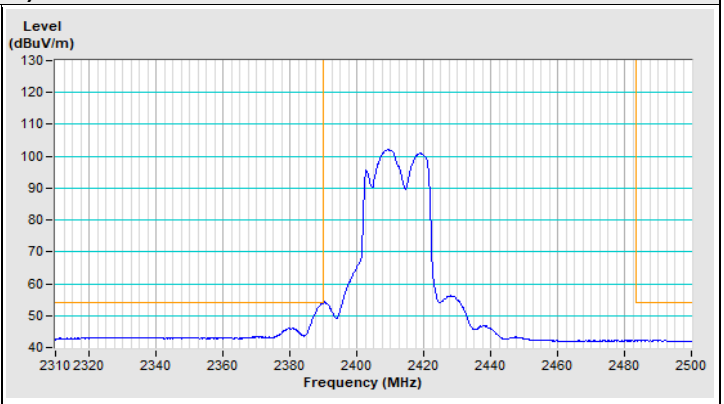
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak

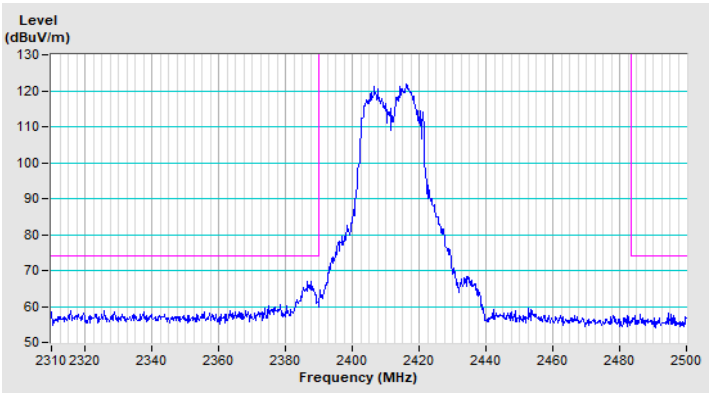
802.11ax (HE20) Channel 1



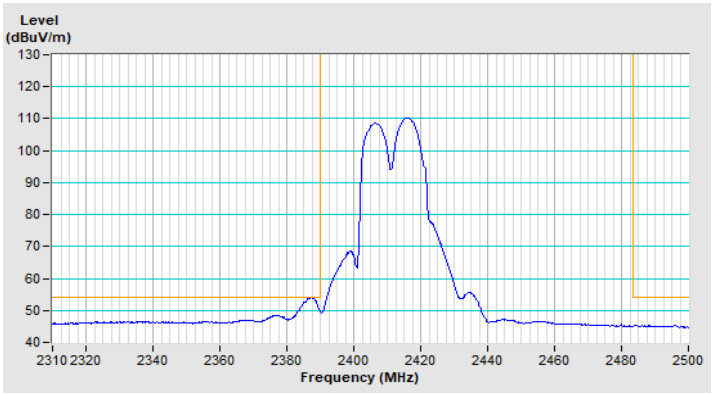
Horizontal (Peak)



Horizontal (Average)

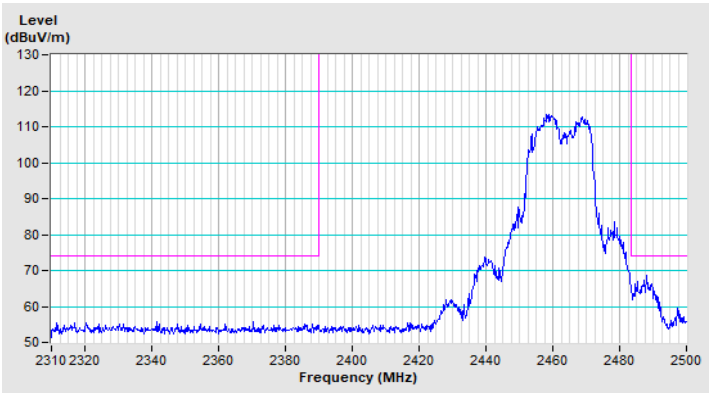


Vertical (Peak)

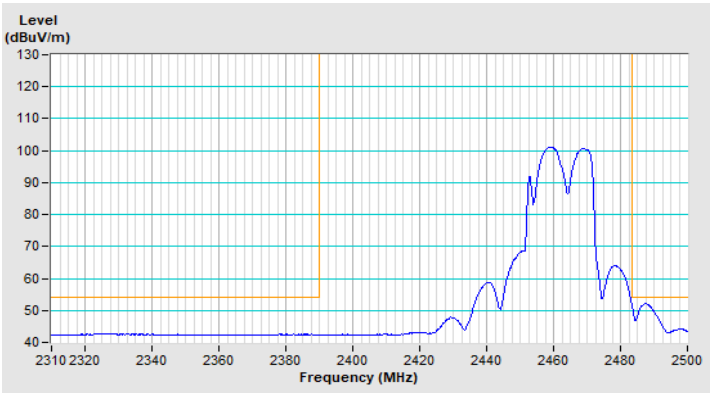


Vertical (Average)

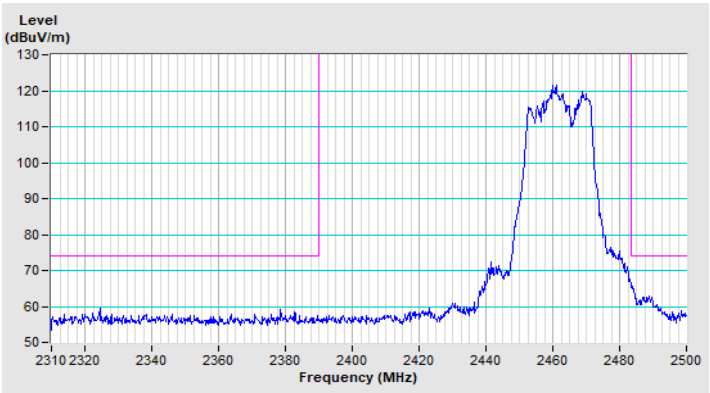
802.11ax (HE20) Channel 11



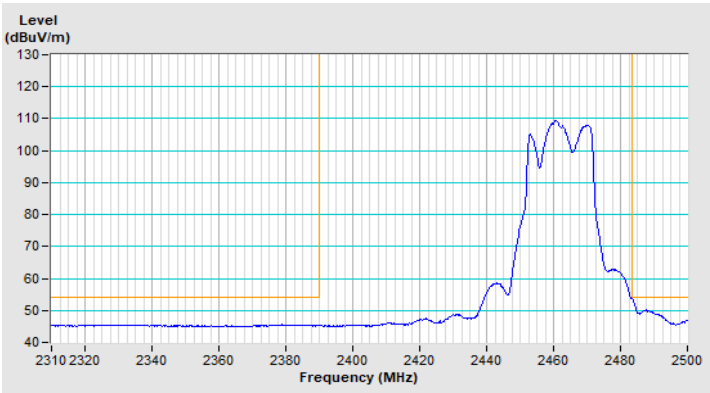
Horizontal (Peak)



Horizontal (Average)



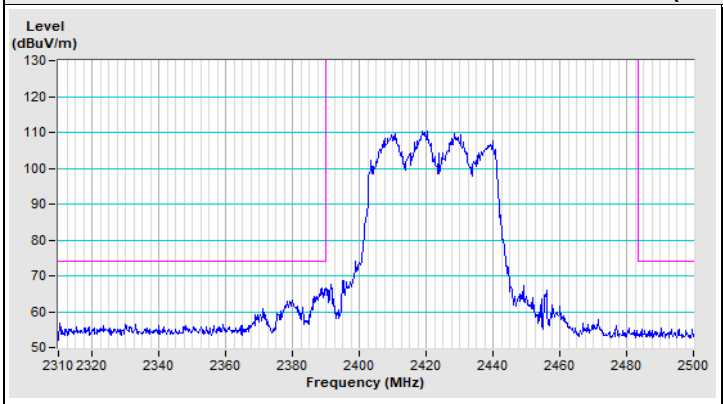
Vertical (Peak)



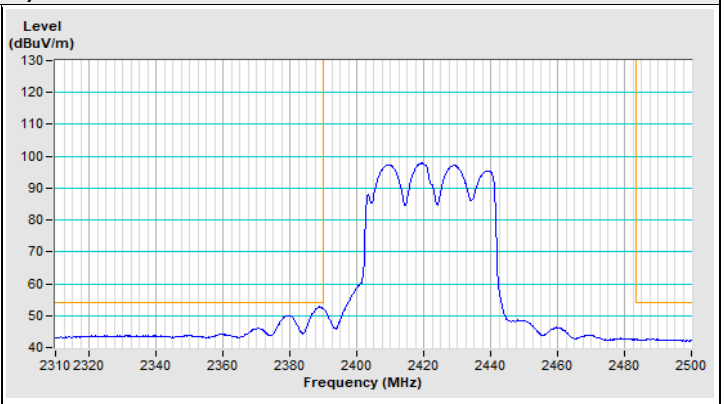
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=200 Hz, DET=Peak

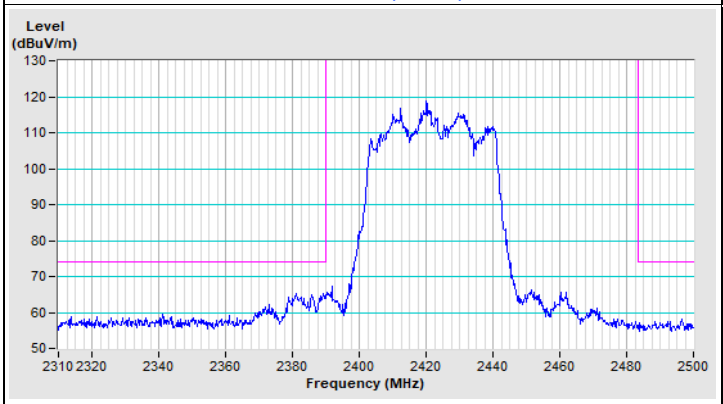
802.11ax (HE40) Channel 3



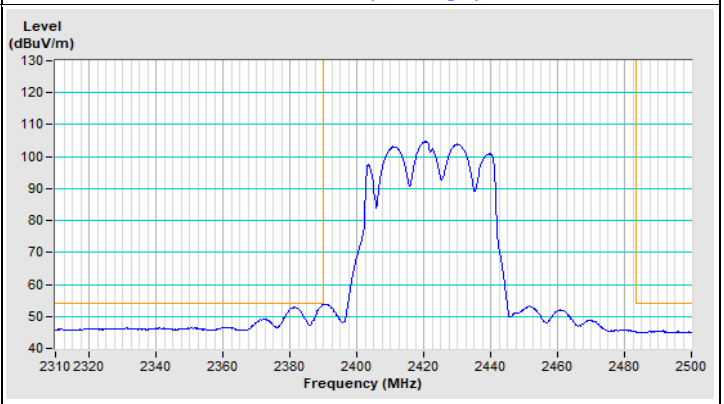
Horizontal (Peak)



Horizontal (Average)

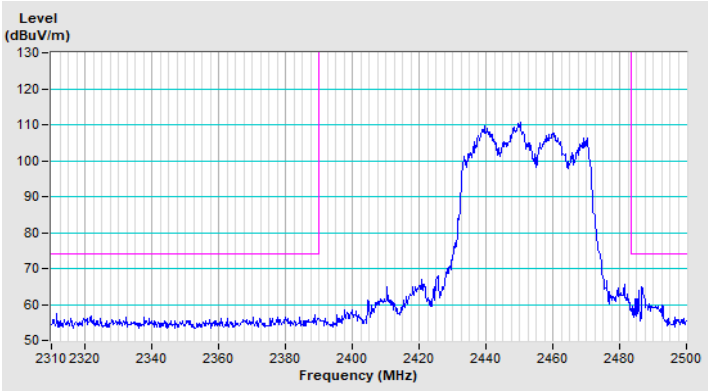


Vertical (Peak)

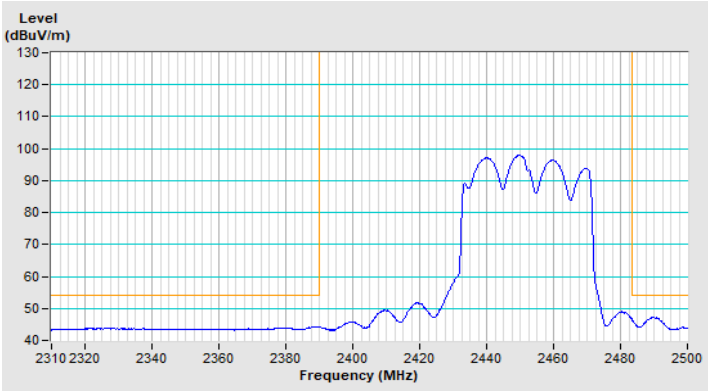


Vertical (Average)

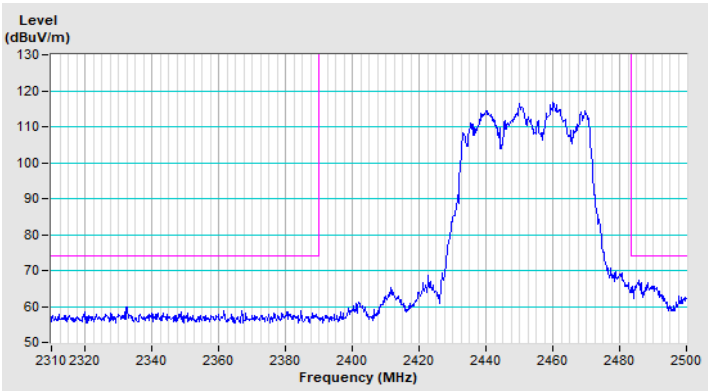
802.11ax (HE40) Channel 9



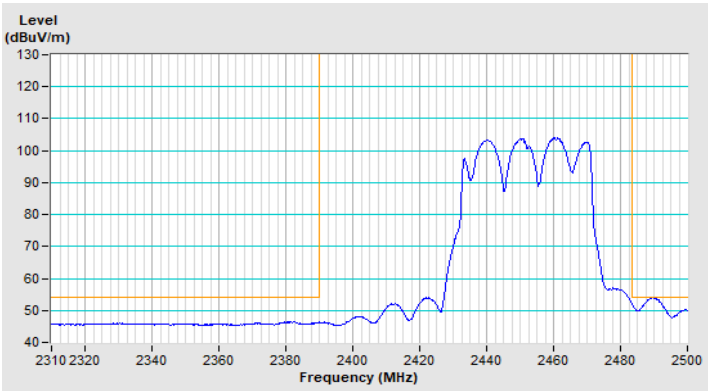
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@bureauveritas.com
Web Site: http://ee.bureauveritas.com.tw

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

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