

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Report No.: RFBDBO-WTW-P25110436
FCC ID: YG79X327915
Product: G.hn over Coax with WiFi 6 AX1800 Router
Brand: ZINWELL
Model No.: PWM-9832
Received Date: 2025/11/19
Test Date: 2026/1/6 ~ 2026/1/22
Issued Date: 2026/3/6
Applicant: ZINWELL Corporation
Address: 7F., No.512, Yuanshan Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories
Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / 198487 / TW2021
Designation Number:

Approved by: _____

Jeremy Lin

Jeremy Lin / Project Engineer

, Date: _____

2026/3/6

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Prepared by : Annie Chang / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBDBO-WTW-P25110436	Original release.	2026/3/6

1 Certificate

Product: G.hn over Coax with WiFi 6 AX1800 Router

Brand: ZINWELL

Test Model: PWM-9832

Sample Status: Mass product

Applicant: ZINWELL Corporation

Test Date: 2026/1/6 ~ 2026/1/22

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

Measurement ANSI C63.10-2020

procedure: KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -4.39 dB at 0.43159 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.4 dB at 750.01 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 2390.00 MHz 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	-	960 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.7 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	3.24 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.55 dB
	30 MHz ~ 1 GHz	5.77 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 6 GHz	4.71 dB
	6 GHz ~ 18 GHz	5.3 dB
	18 GHz ~ 40 GHz	4.98 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	G.hn over Coax with WiFi 6 AX1800 Router
Brand	ZINWELL
Test Model	PWM-9832
Status of EUT	Mass product
Power Supply Rating	12Vdc from Adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	Up to 573.5 Mbps
Operating Frequency	2.412 GHz ~ 2.462 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20): 11 802.11n (HT40), 802.11ax (HE40): 7
Output Power	996.638 mW (29.99 dBm)

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter 1	MASS POWER	S024-1D120200VU	AC Input: 100-240Vac, 50/60Hz, 0.6A (2pin wall-mount) DC Output: 12.0V, 2.0A (1.5m, without core)
AC Adapter 2	LUCENT TRANS	1A76-LDDB	AC Input: 100-240Vac, 50-60Hz, 600mA (2pin wall-mount) DC Output: 12.0V, 2.0A (1.5m, without core)
RJ45 cable	-	-	1.0m

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

3. WLAN (2.4 GHz) and WLAN (5 GHz) technology can not transmit at same time.

4. The EUT does not support Partial RU technology.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Gain (dBi)	Frequency range (GHz)	Antenna Type	Connector Type	*Cable Length
ANT 1	0	INPAQ	RFPCA302708IMLB702	3.56	2.4 ~ 2.4835	PCB	ipex(MHF)	80mm
	0	INPAQ	RFPCA302708IMLB702	4.43	5.15 ~ 5.85	PCB	ipex(MHF)	80mm
ANT 2	2	INPAQ	RFPCA272307IM5B701	4.65	5.15 ~ 5.85	PCB	ipex(MHF)	70mm
ANT 3	1	INPAQ	RFPCA302706IMLB701	4.49	2.4 ~ 2.4835	PCB	ipex(MHF)	60mm
	1	INPAQ	RFPCA302706IMLB701	5.27	5.15 ~ 5.85	PCB	ipex(MHF)	60mm

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

2. The EUT incorporates a MIMO function:

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

Note:

The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz) and 802.11ax mode for 20 MHz (40 MHz). Therefore the investigated worst case is the representative mode in test report.

3.3 Channel List

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

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

7 channels are provided for 802.11n (HT40), 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. EUT can be used in the following ways: Lying/ Standing. Pre-scan these ways and find the worst case as a representative test condition. 2. For Unwanted Emission below/ above 1 GHz has EUT with AC Adapter (Model:1A76-LDDB) / EUT with AC Adapter (Model:S024-1D120200VU) mode of power supply. Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. Lying/ Standing Worst Condition: Standing. 2. For Unwanted Emission below/above 1 GHz EUT with AC Adapter (Model:1A76-LDDB) mode is the worst case of power supply.

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g	CDD	1, 6, 11	BPSK	6Mb/s
		802.11n (HT20)	CDD	1, 6, 11	BPSK	MCS0
		802.11n (HT40)	CDD	3, 6, 9	BPSK	MCS0
		802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
		802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
Power Spectral Density	A	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g	CDD	1, 6, 11	BPSK	6Mb/s
		802.11n (HT20)	CDD	1, 6, 11	BPSK	MCS0
		802.11n (HT40)	CDD	3, 6, 9	BPSK	MCS0
		802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
		802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
6 dB Bandwidth / Conducted Out of Band Emissions	A	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g	CDD	1, 6, 11	BPSK	6Mb/s
		802.11n (HT20)	CDD	1, 6, 11	BPSK	MCS0
		802.11n (HT40)	CDD	3, 6, 9	BPSK	MCS0
		802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
		802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
AC Power Conducted Emissions	A	802.11n (HT20)	CDD	6	BPSK	MCS0
	B	802.11n (HT20)	CDD	6	BPSK	MCS0
Unwanted Emissions below 1 GHz	A	802.11n (HT20)	CDD	6	BPSK	MCS0
Unwanted Emissions above 1 GHz	A	802.11b	CDD	1, 6, 11	DBPSK	1Mb/s
		802.11g	CDD	1, 6, 11	BPSK	6Mb/s
		802.11n (HT20)	CDD	1, 6, 11	BPSK	MCS0
		802.11n (HT40)	CDD	3, 6, 9	BPSK	MCS0
		802.11ax (HE20)	CDD	1, 6, 11	BPSK	MCS0
		802.11ax (HE40)	CDD	3, 6, 9	BPSK	MCS0
EUT Configure Mode:	A	EUT with AC Adapter (Model:1A76-LDDB)				
	B	EUT with AC Adapter (Model:S024-1D120200VU)				

3.5 Duty Cycle of Test Signal

802.11b: Duty cycle = 16.212 ms / 16.264 ms x 100% = 99.7%

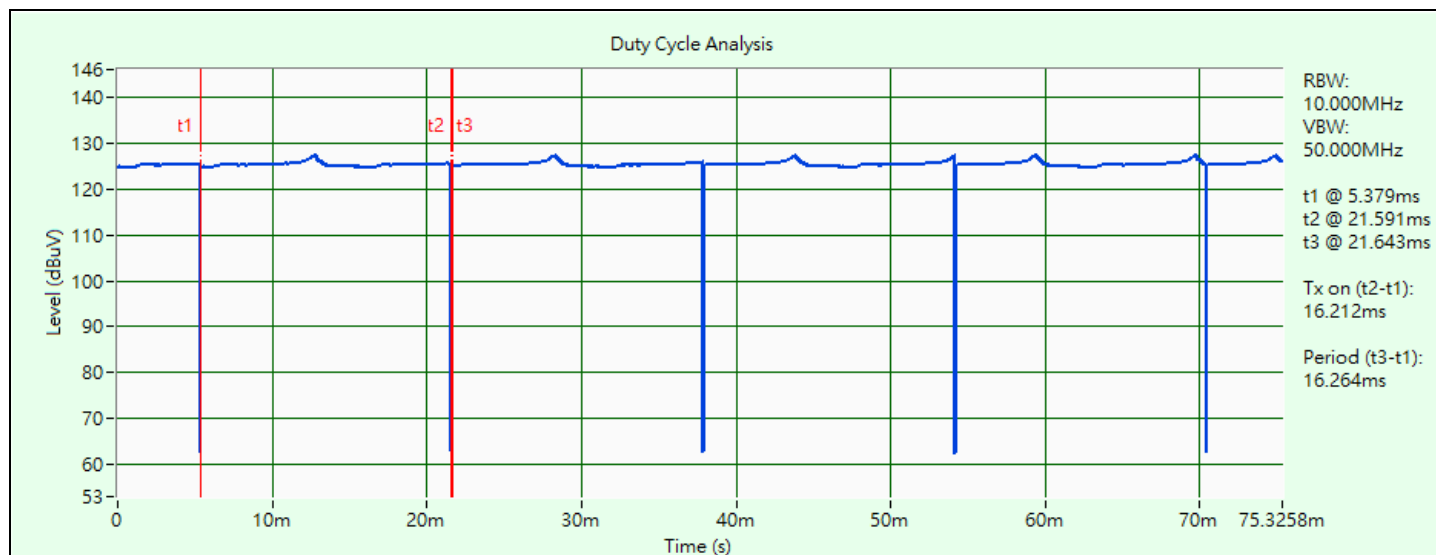
802.11g: Duty cycle = 2.699 ms / 2.754 ms x 100% = 98.0%

802.11n (HT20): Duty cycle = 4.971 ms / 5.025 ms x 100% = 98.9%

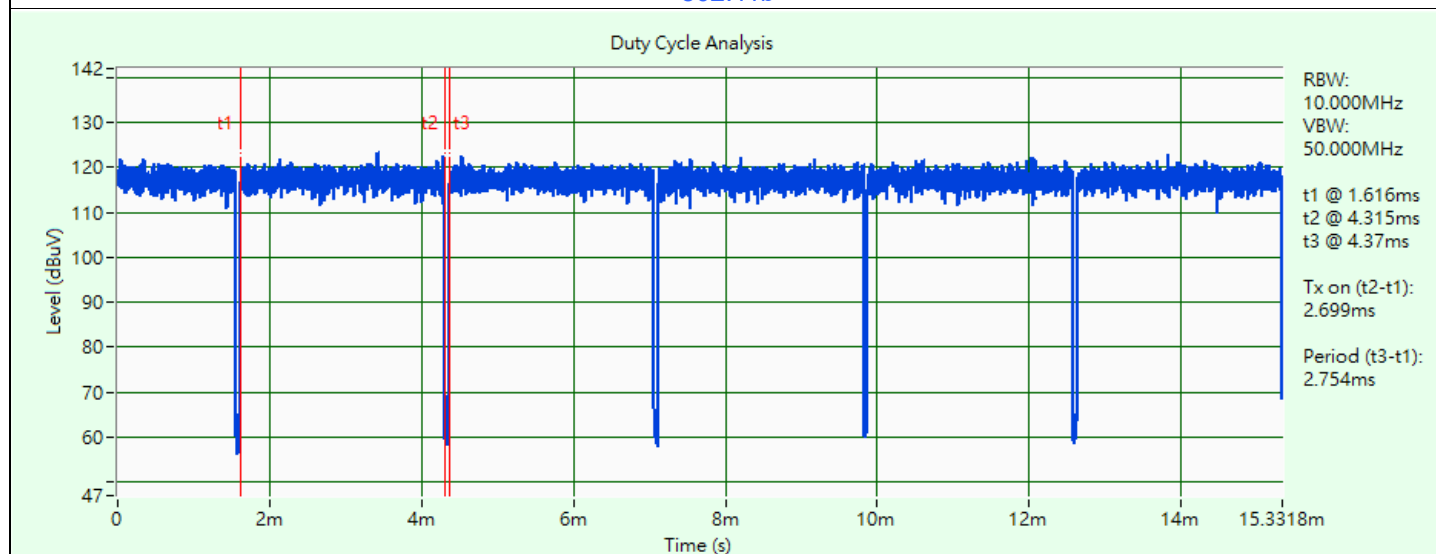
802.11n (HT40): Duty cycle = 4.788 ms / 4.842 ms x 100% = 98.9%

802.11ax (HE20): Duty cycle = 3.786 ms / 3.84 ms x 100% = 98.6%

802.11ax (HE40): Duty cycle = 3.784 ms / 3.834 ms x 100% = 98.7%

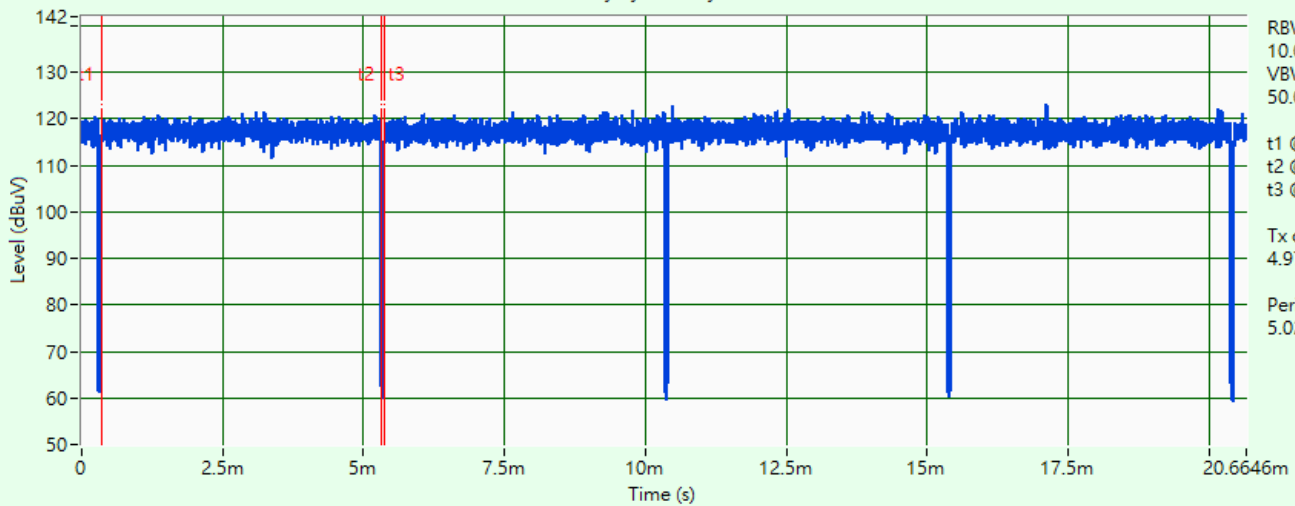


802.11b



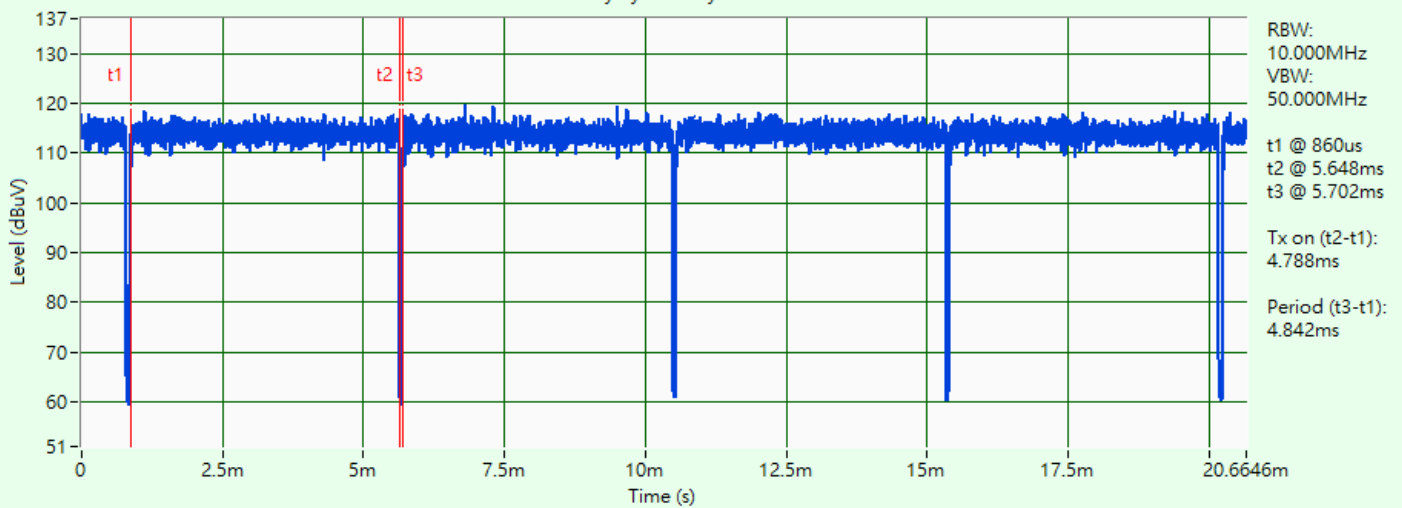
802.11g

Duty Cycle Analysis



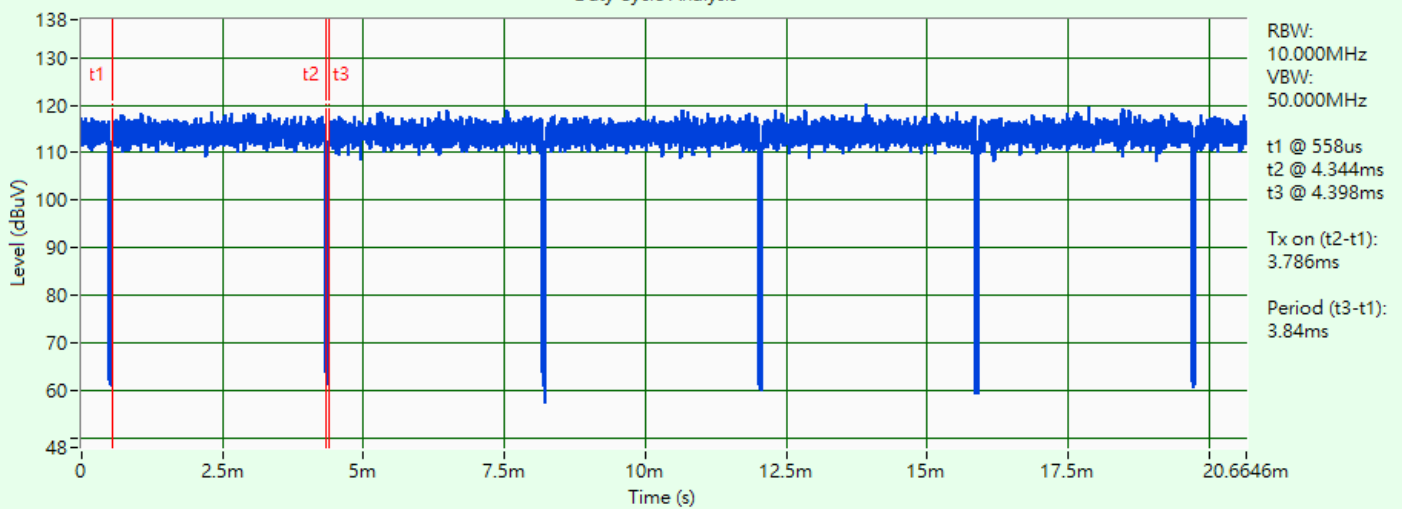
802.11n (HT20)

Duty Cycle Analysis

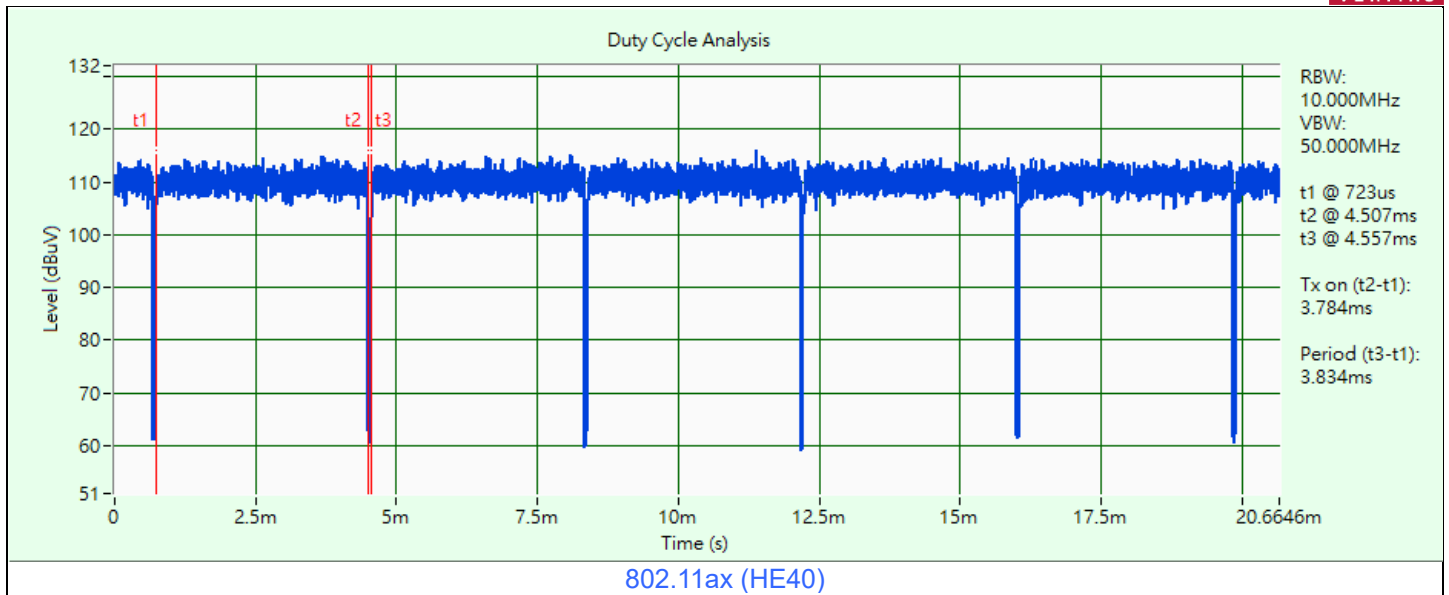


802.11n (HT40)

Duty Cycle Analysis



802.11ax (HE20)

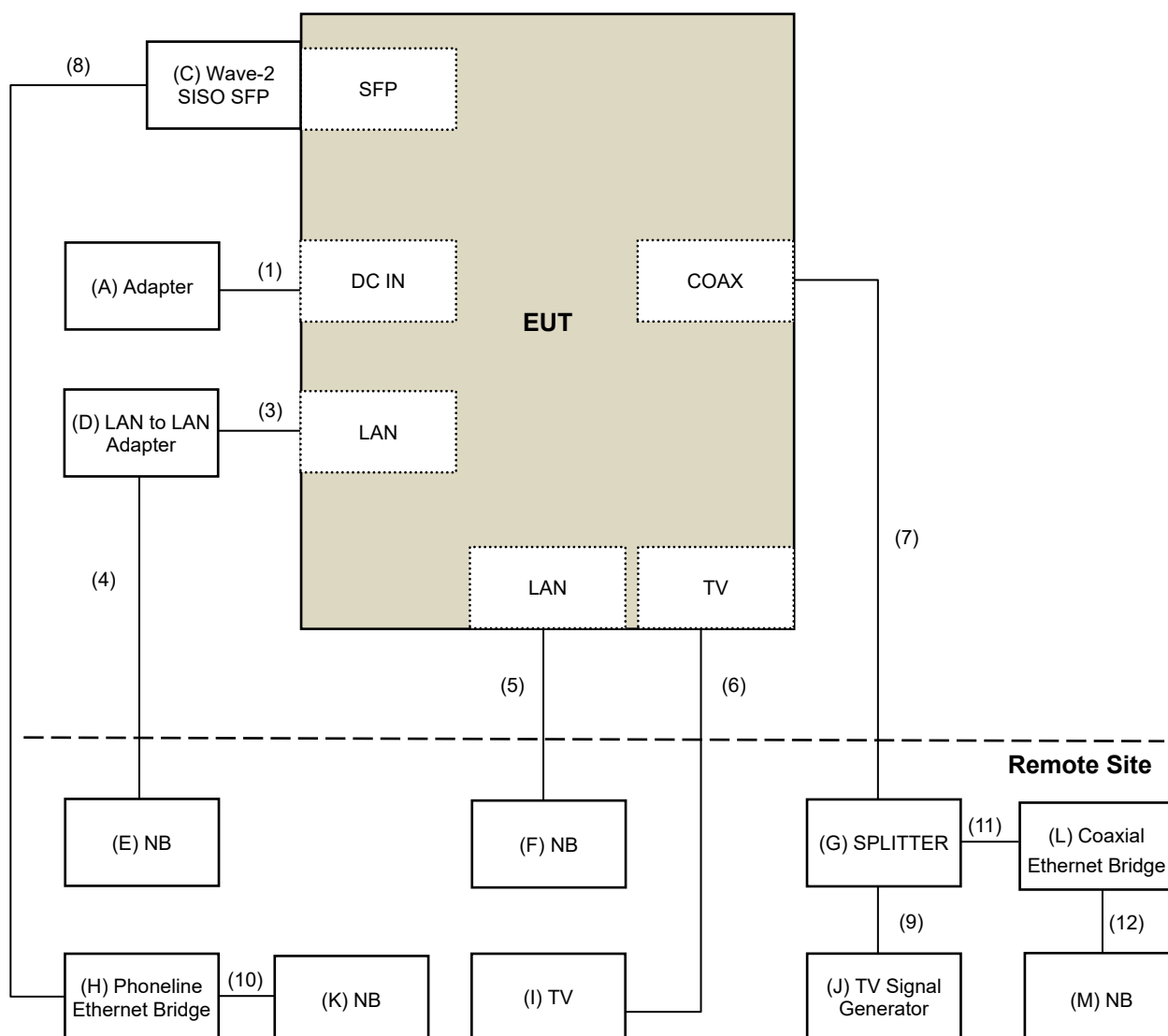


3.6 Test Program Used and Operation Descriptions

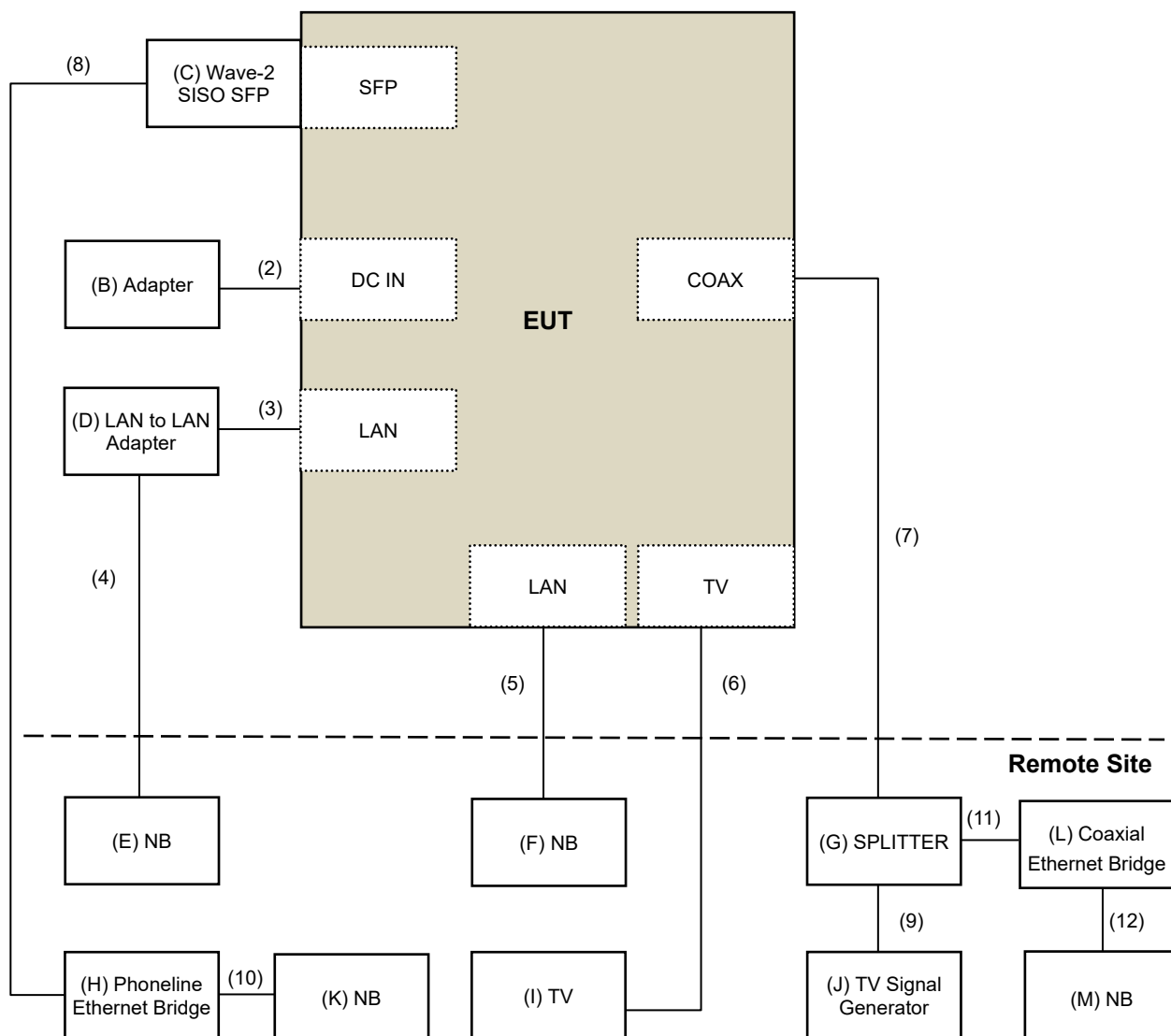
Controlling software (package_Ulv2.13_DLLv5.11_20191004-alpha-RSSI -DFS) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode B



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	LUCENT TRANS	1A76-LDDB	N/A	N/A	Supplied by applicant
B	Adapter	MASS POWER	S024-1D120200VU	N/A	N/A	Supplied by applicant
C	Wave-2 SISO SFP	ZINWELL	zGhn-3100C	N/A	DoC	Supplied by applicant
D	LAN to LAN Adapter	BV	BV	N/A	N/A	Provided by Lab
E	NB	Lenovo	IdeaPad 5 15ITL05	N/A	N/A	Provided by Lab
F	NB	Lenovo	IdeaPad 5 15ITL05	N/A	N/A	Provided by Lab
G	SPLITTER	ZINWELL	MSG-2	N/A	N/A	Supplied by applicant
H	Phoneline Ethernet Bridge	ZINWELL	PLM-9702	N/A	DoC	Supplied by applicant
I	TV	SHARP	LC-32LD166K	N/A	N/A	Provided by Lab
J	TV Signal Generator	BSK	SDG-3000	N/A	N/A	Provided by Lab
K	NB	Dell	P90F	N/A	N/A	Provided by Lab
L	Coaxial Ethernet Bridge	ZINWELL	PLM-9802	N/A	DoC	Supplied by applicant
M	NB	Dell	P90F	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC cable	1	1.5	N	0	Supplied by applicant
2	DC cable	1	1.5	N	0	Supplied by applicant
3	LAN cable	1	1	N	0	Supplied by applicant
4	RJ45 cable	1	10	N	0	Provided by Lab
5	RJ45 cable	1	10	N	0	Provided by Lab
6	Coaxial cable	1	10	Y	0	Provided by Lab
7	Coaxial cable	1	10	Y	0	Provided by Lab
8	RJ11 cable	1	10	N	0	Provided by Lab
9	Coaxial cable	1	1.5	Y	0	Provided by Lab
10	RJ45 cable	1	1	N	0	Provided by Lab
11	Coaxial cable	1	1.5	Y	0	Provided by Lab
12	RJ45 cable	1	1	N	0	Provided by Lab

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-20	00800A1K01A-20-02	2025/5/23	2026/5/22
Pulse Power Sensor Anritsu	MA2411B	1339443	2025/5/28	2026/5/27
RF Power Meter Anritsu	ML2495A	1529002	2025/6/3	2026/6/2
Wideband Power Sensor Keysight	N1923A	MY58020002	2025/1/21	2026/1/20

Notes:

1. The test was performed in Linkou - Oven
2. Tested Date: 2026/1/12

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-20	00800A1K01A-20-02	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030A	MY54490260	2025/7/24	2026/7/23
Signal Analyzer R&S	FSV40	101544	2025/7/1	2026/6/30
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Linkou - Oven
2. Tested Date: 2026/1/12

4.3 6 dB Bandwidth

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

4.4 Conducted Out of Band Emissions

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

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance LYNICS	0900510	E1-01-305	2025/2/20	2026/2/19
		E1-01-306	2025/4/16	2026/4/15
DC LISN R&S	ESH3-Z6	100219	2025/7/10	2026/7/9
		844950/018	2025/7/10	2026/7/9
Diode Pulse Limiter Schwarzbeck	VTSD 9561 F-N	01631	2025/5/2	2026/5/1
EMI Test Receiver R&S	EPL 1000	101064	2025/4/17	2026/4/16
		101065	2025/4/22	2026/4/21
	ESR3	102412	2025/12/23	2026/12/22
High Pass Filter EMCI	150HPF-ME	114005	2025/5/2	2026/5/1
		114006	2025/5/2	2026/5/1
	150HPF-MF	113009	2025/5/2	2026/5/1
High Voltage Probe Schwarzbeck	TK9420	00982	2025/12/3	2026/12/2
LISN R&S	ENV216	101195	2025/7/18	2026/7/17
		101196	2025/5/19	2026/5/18
		101197	2025/7/4	2026/7/3
LISN Schwarzbeck	NNLK 8121	8121-731	2025/6/10	2026/6/9
		8121-00759	2025/8/12	2026/8/11
		8121-808	2025/4/23	2026/4/22
	NNLK 8129	00624	2025/10/9	2026/10/8
		8129229	2025/10/14	2026/10/13
	NSLK 8128	8128-244	2025/11/11	2026/11/10
Passive Voltage Probe R&S	ESH2-Z3	100073	2025/5/26	2026/5/25
RF Coaxial Cable PEWC	5D-FB	Cable-CO5-01	2025/1/17	2026/1/16
Software BVADT	Cond_V7.4.1.0	N/A	N/A	N/A

Notes:

1. The test was performed in Linkou Conduction 5.
2. Tested Date: 2026/1/9

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2025/9/17	2026/9/16
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2025/5/28	2026/5/27
	CDNE-M3	00091	2025/3/20	2026/3/19
MXE EMI Receiver Agilent	N9038A	MY51210114	2025/2/10	2026/2/9
Preamplifier Agilent	8447D	2944A11064	2025/2/14	2026/2/13
Radiating Loop Antenna TESEQ	RLA 6120-20	80002	2025/7/29	2026/7/28
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2025/6/24	2026/6/23
Signal Analyzer R&S	FSV40	101544	2025/7/1	2026/6/30
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2026/1/22

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight antenna tower fixture BV	BAF-02	6	N/A	N/A
High Pass Filter Wainwright	WHK 3.1/18G-10SS	SN 8	2025/5/22	2026/5/21
Horn Antenna EMCO	3115	00028257	2025/11/9	2026/11/8
Horn Antenna ETS-Lindgren	3117-PA	00215857	2025/11/9	2026/11/8
Horn Antenna Schwarzbeck	BBHA 9170	212	2025/10/28	2026/10/27
		BBHA9170190	2025/11/9	2026/11/8
MXE EMI Receiver Agilent	N9038A	MY51210114	2025/2/10	2026/2/9
Notch Filter Micro-Tronics	BRC50703-01	010	2025/5/22	2026/5/21
	BRM17690	005	2025/5/22	2026/5/21
Preamplifier EMCI	EMC0126545	980076	2025/2/14	2026/2/13
	EMC184045B	980175	2025/8/23	2026/8/22
		980235	2025/2/14	2026/2/13
Preamplifier HP	8449B	3008A01201	2025/2/14	2026/2/13
RF Coaxial Cable EMCI	EMC104	190801	2025/7/4	2026/7/3
		190804	2025/7/4	2026/7/3
RF Coaxial Cable EMEC	EM102-KMKM-100	02	2025/7/4	2026/7/3
RF Coaxial Cable HUBER+SUHNER	SF-104	Cable-CH6-01	2025/7/4	2026/7/3
Signal Analyzer R&S	FSV40	101042	2025/9/19	2026/9/18
		101544	2025/7/1	2026/6/30
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2026/1/6 ~ 2026/1/7

5 Limits of Test Items

5.1 RF Output Power

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

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

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

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

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

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

Below 20 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

5.5 AC Power Conducted Emissions

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

Notes:

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

5.6 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

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

Notes:

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

5.7 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

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

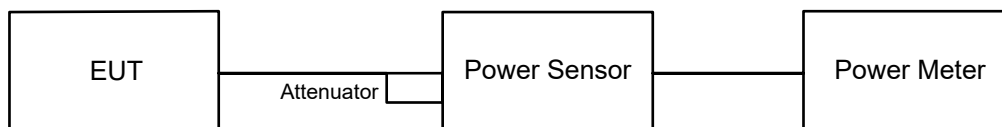
Notes:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



6.1.2 Test Procedure

Peak Power:

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

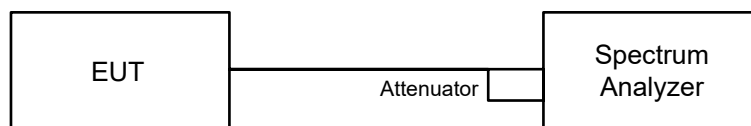
The power meter video bandwidth is greater than or equal to the DTS bandwidth and use a fast responding diode detector.

Average Power:

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

6.2 Power Spectral Density

6.2.1 Test Setup

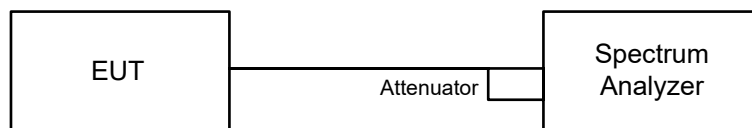


6.2.2 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span > 1.5 times the DTS bandwidth.
- Set the RBW to: 3 kHz.
- Set the VBW $\geq 3 \times$ RBW.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

6.3 6 dB Bandwidth

6.3.1 Test Setup

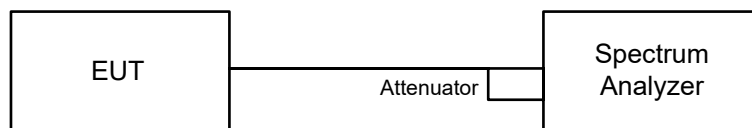


6.3.2 Test Procedure

- a. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- b. Set the VBW $\geq [3 \times \text{RBW}]$.
- c. Detector = peak.
- d. Trace mode = max-hold.
- e. Sweep = No faster than coupled (auto) time.
- f. Allow the trace to stabilize.
- g. Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB down amplitude” value, then it shall be as close as possible to this value.

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

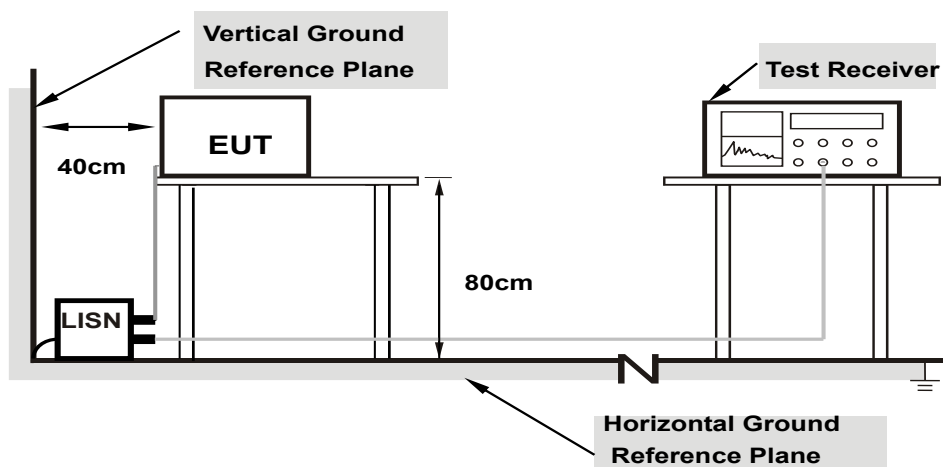
- Set instrument center frequency to DTS channel center frequency.
- Set the span to ≥ 1.5 times the DTS bandwidth.
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum PSD level.

MEASUREMENT PROCEDURE OOBE

- Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.
- Set RBW = 100 kHz.
- Set VBW ≥ 300 kHz.
- Detector = peak.
- Sweep = No faster than coupled (auto) time.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

6.5 AC Power Conducted Emissions

6.5.1 Test Setup



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

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

6.5.2 Test Procedure

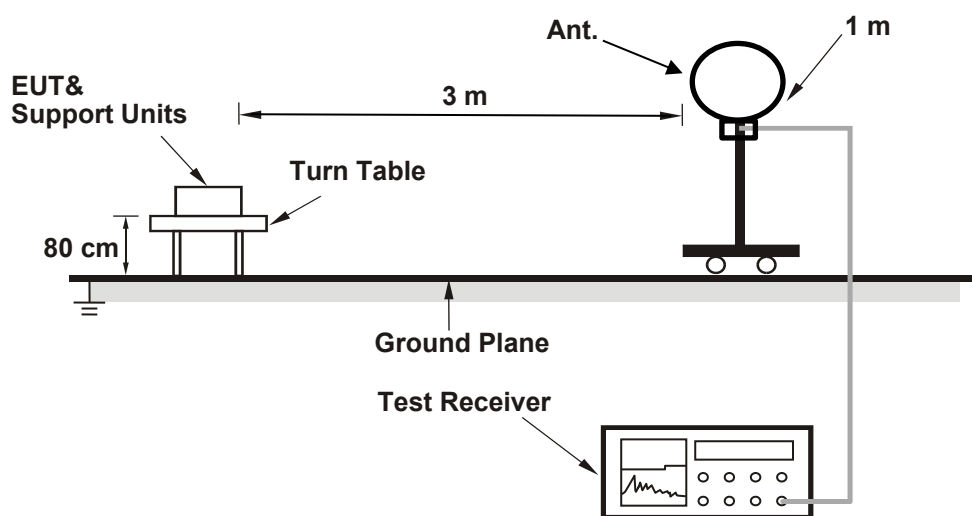
- Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

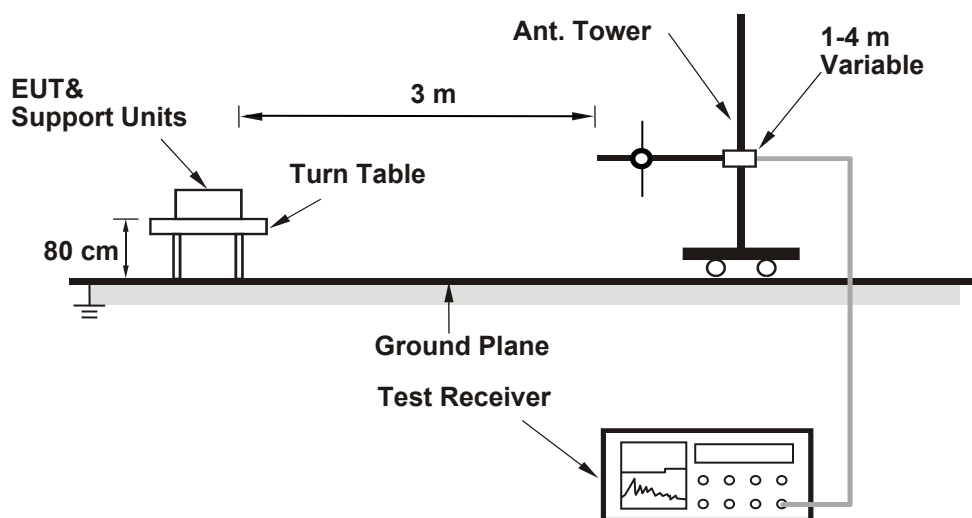
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

For Radiated emission below 30 MHz

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

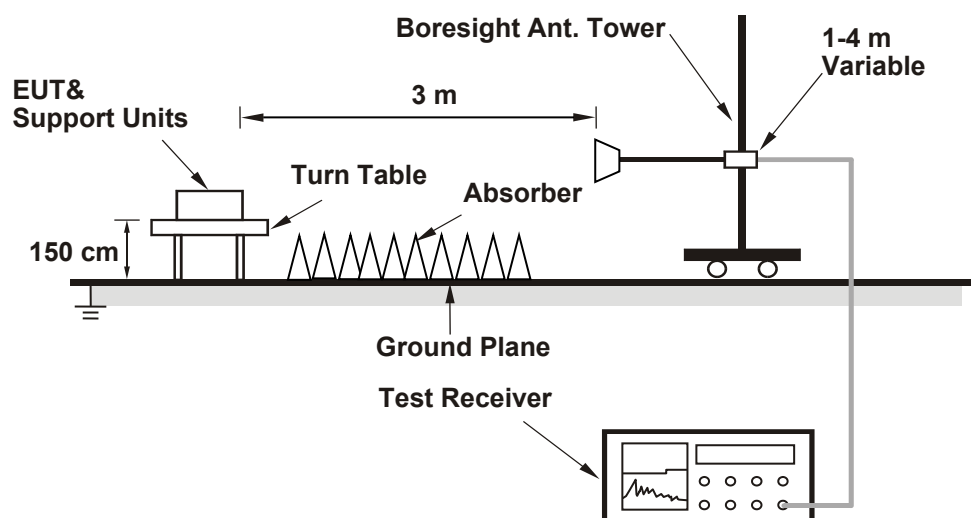
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequencies less than or equal to 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 (however, peak detector measurements may be used to determine compliance with QP requirements).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

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

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Ian Chang
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For Peak Power

802.11b

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	12.43	13.16	38.2	15.82	30	Pass
6	2437	10.64	12.14	27.956	14.46	30	Pass
11	2462	14.82	15.94	69.603	18.43	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.49 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11g

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.20	26.00	814.977	29.11	30	Pass
6	2437	26.69	27.14	984.266	29.93	30	Pass
11	2462	25.50	26.02	754.758	28.78	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.49 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	26.65	27.14	979.988	29.91	30	Pass
6	2437	26.76	27.18	996.638	29.99	30	Pass
11	2462	26.59	27.10	968.898	29.86	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.49 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	23.25	23.98	461.383	26.64	30	Pass
6	2437	26.09	26.63	866.7	29.38	30	Pass
9	2452	26.59	27.01	958.38	29.82	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.49 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
1	2412	24.05	24.60	542.5	27.34	30	Pass
6	2437	23.81	24.41	516.494	27.13	30	Pass
11	2462	23.57	24.16	488.125	26.89	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.49 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
3	2422	23.43	23.98	470.327	26.72	30	Pass
6	2437	23.83	24.40	516.969	27.13	30	Pass
9	2452	23.62	24.09	486.593	26.87	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. The maximum gain is 4.49 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

For Average Power

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	10.04	10.76	22.005	13.43
6	2437	8.23	9.73	16.05	12.05
11	2462	12.42	13.54	40.053	16.03

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	17.85	17.60	118.498	20.74
6	2437	19.47	19.95	187.367	22.73
11	2462	18.08	18.40	133.452	21.25

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	19.02	19.55	169.957	22.30
6	2437	19.22	19.80	179.06	22.53
11	2462	19.04	19.63	172.001	22.36

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	16.11	16.17	82.232	19.15
6	2437	18.35	18.94	146.734	21.67
9	2452	18.55	18.96	150.319	21.77

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	15.70	16.27	79.518	19.00
6	2437	15.96	16.49	84.011	19.24
11	2462	15.86	16.45	82.705	19.18

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	15.70	16.30	79.811	19.02
6	2437	15.92	16.44	83.14	19.20
9	2452	16.00	16.48	84.274	19.26

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Ian Chang
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802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-13.94	-10.65	-8.98	6.95	Pass
6	2437	-14.21	-12.91	-10.50	6.95	Pass
11	2462	-9.60	-9.84	-6.71	6.95	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2]$
3. The directional gain is 7.05 dBi > 6 dBi, so the power density limit shall be reduced to $8-(7.05-6) = 6.95$ dBm/3kHz.

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-7.43	-6.04	-3.67	6.95	Pass
6	2437	-5.32	-5.71	-2.50	6.95	Pass
11	2462	-5.91	-5.52	-2.70	6.95	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2]$
3. The directional gain is 7.05 dBi > 6 dBi, so the power density limit shall be reduced to $8-(7.05-6) = 6.95$ dBm/3kHz.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-6.60	-6.77	-3.67	6.95	Pass
6	2437	-6.66	-6.83	-3.73	6.95	Pass
11	2462	-6.46	-5.90	-3.16	6.95	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2]$
3. The directional gain is 7.05 dBi > 6 dBi, so the power density limit shall be reduced to $8-(7.05-6) = 6.95$ dBm/3kHz.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
3	2422	-11.23	-11.76	-8.48	6.95	Pass
6	2437	-8.88	-10.43	-6.58	6.95	Pass
9	2452	-9.98	-8.80	-6.34	6.95	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 7.05 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (7.05 - 6) = 6.95$ dBm/3kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
1	2412	-9.69	-10.05	-6.86	6.95	Pass
6	2437	-10.60	-10.00	-7.28	6.95	Pass
11	2462	-10.98	-10.53	-7.74	6.95	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 7.05 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (7.05 - 6) = 6.95$ dBm/3kHz.

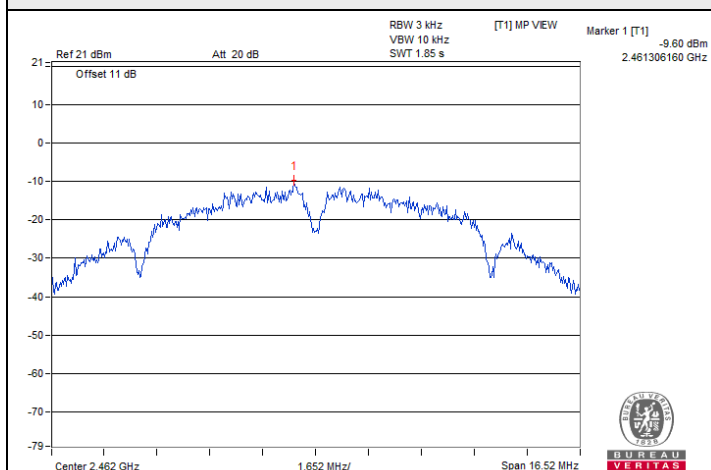
802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
		Chain 0	Chain 1			
3	2422	-14.58	-12.99	-10.70	6.95	Pass
6	2437	-13.18	-12.50	-9.82	6.95	Pass
9	2452	-12.80	-12.54	-9.66	6.95	Pass

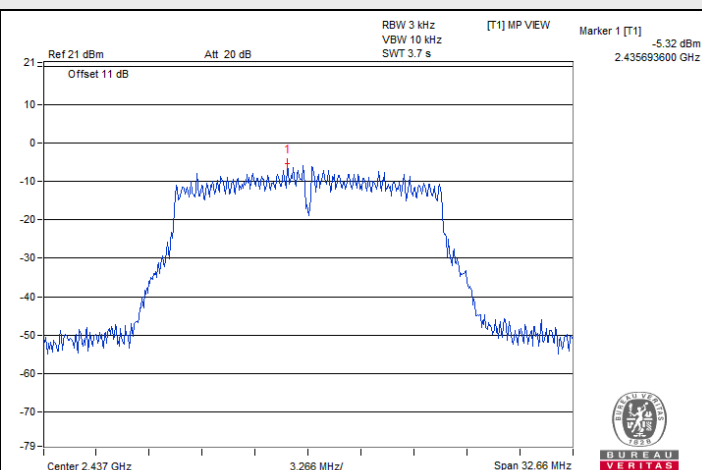
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. The directional gain is 7.05 dBi > 6 dBi, so the power density limit shall be reduced to $8 - (7.05 - 6) = 6.95$ dBm/3kHz.

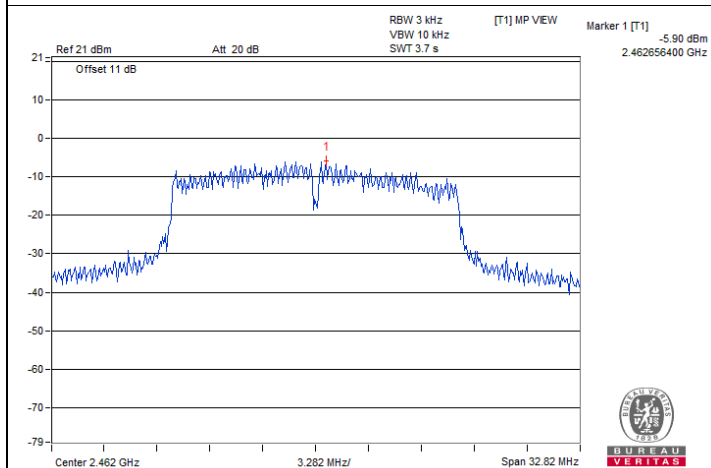
Spectrum Plot of Maximum Value



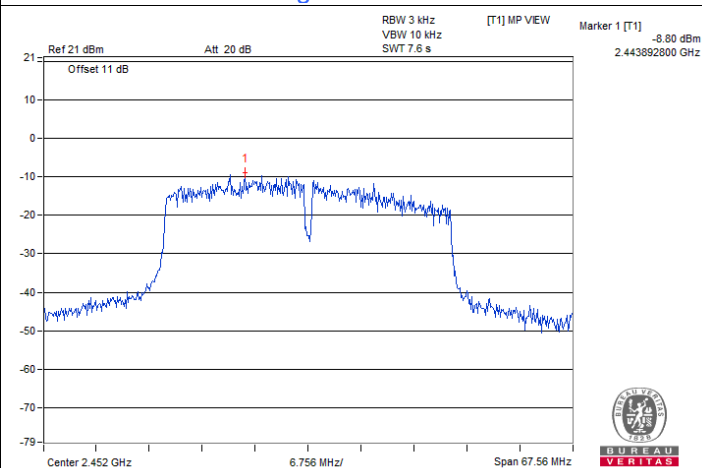
802.11b / Chain 0: CH 11



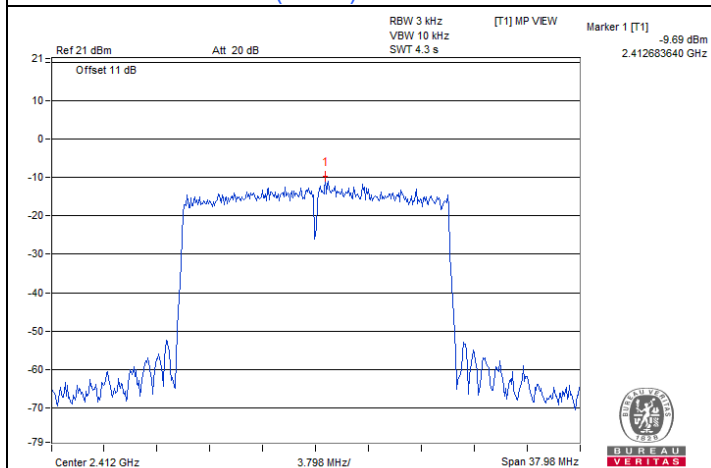
802.11g / Chain 0: CH 6



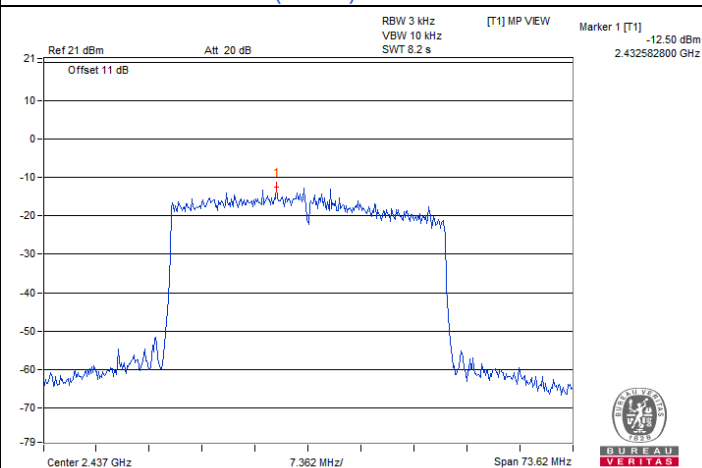
802.11n (HT20) / Chain 1: CH 11



802.11n (HT40) / Chain 1: CH 9



802.11ax (HE20) / Chain 0: CH 1



802.11ax (HE40) / Chain 1: CH 6

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Ian Chang
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802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	8.25	8.24	0.5	Pass
6	2437	8.25	8.25	0.5	Pass
11	2462	8.26	8.25	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	16.27	16.24	0.5	Pass
6	2437	16.33	16.01	0.5	Pass
11	2462	16.08	16.01	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	17.41	17.02	0.5	Pass
6	2437	17.51	17.19	0.5	Pass
11	2462	17.25	16.41	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	35.76	34.70	0.5	Pass
6	2437	35.94	33.24	0.5	Pass
9	2452	35.74	33.78	0.5	Pass

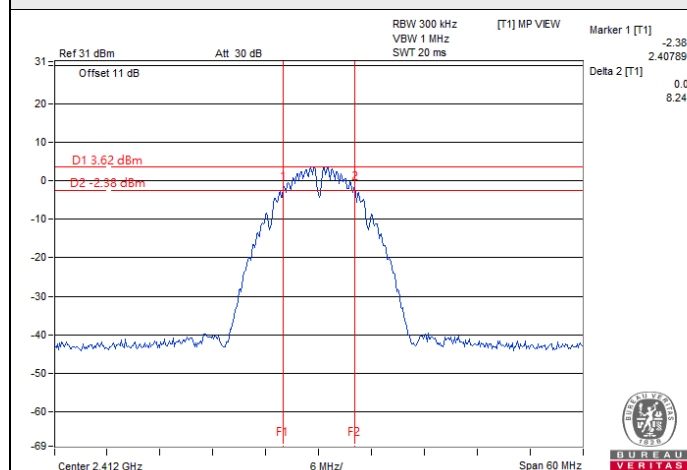
802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
1	2412	18.99	18.96	0.5	Pass
6	2437	19.01	18.97	0.5	Pass
11	2462	18.84	18.75	0.5	Pass

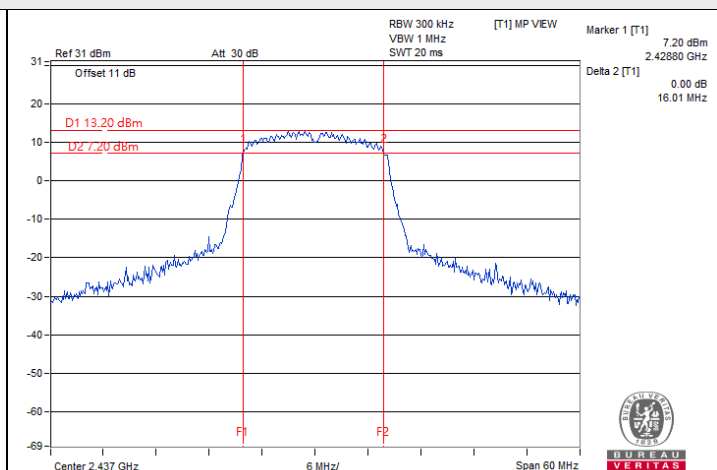
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
3	2422	37.83	36.57	0.5	Pass
6	2437	37.68	36.81	0.5	Pass
9	2452	37.62	34.24	0.5	Pass

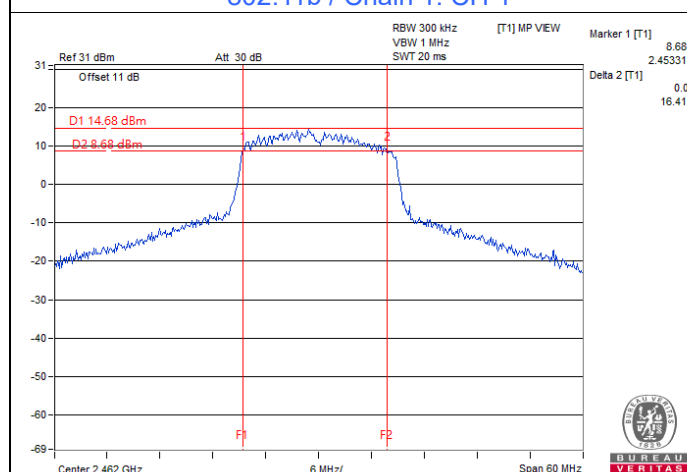
Spectrum Plot of Minimum Value



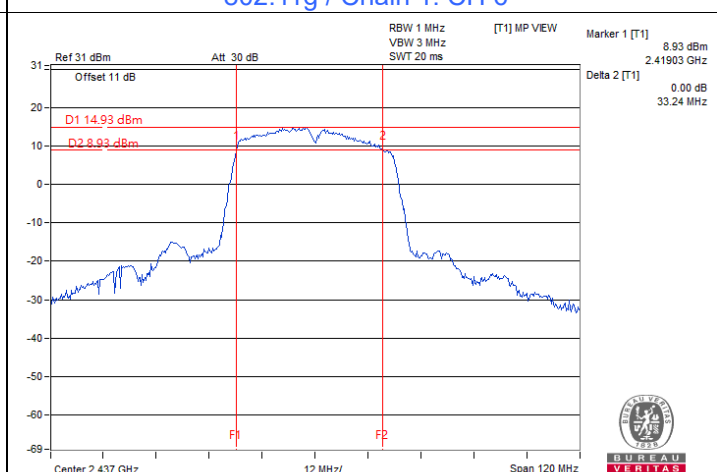
802.11b / Chain 1: CH 1



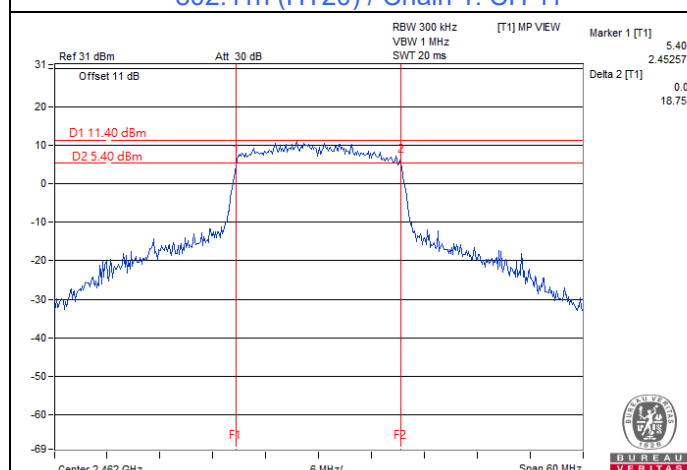
802.11g / Chain 1: CH 6



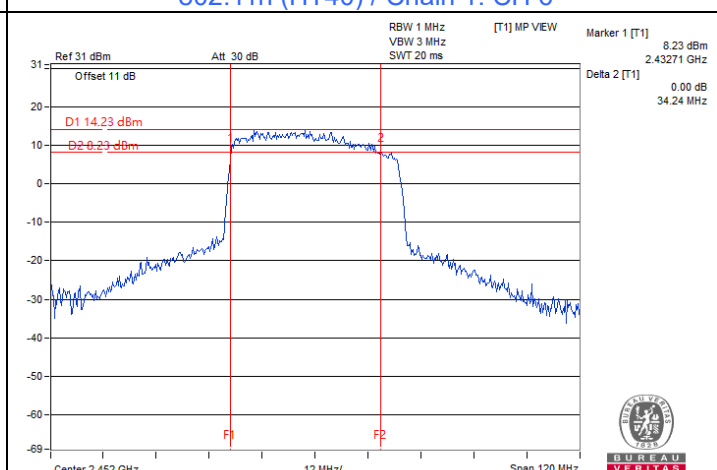
802.11n (HT20) / Chain 1: CH 11



802.11n (HT40) / Chain 1: CH 6



802.11ax (HE20) / Chain 1: CH 11

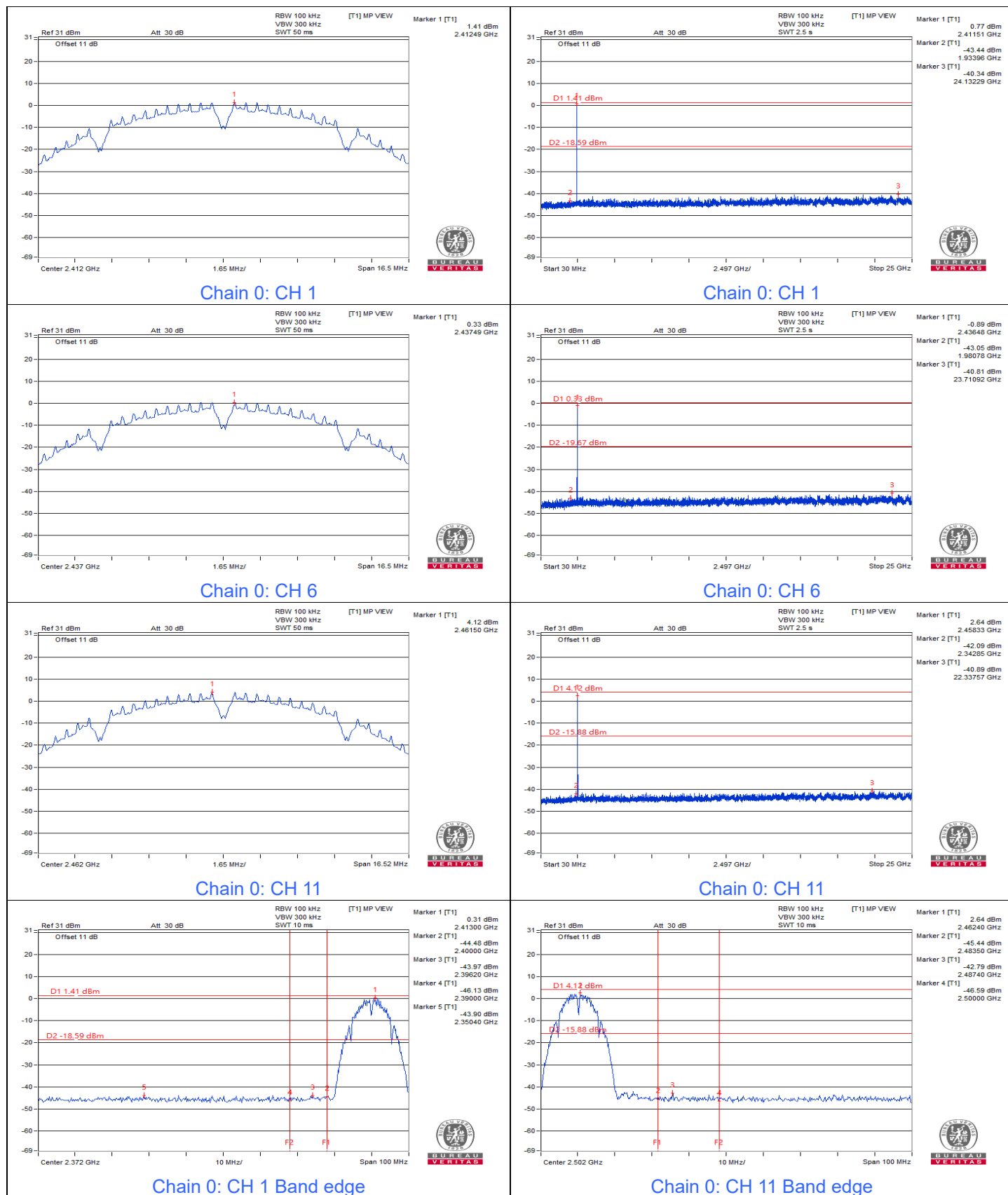


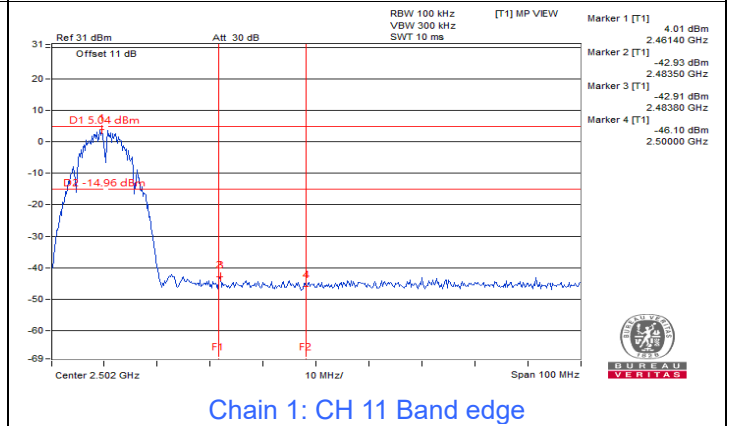
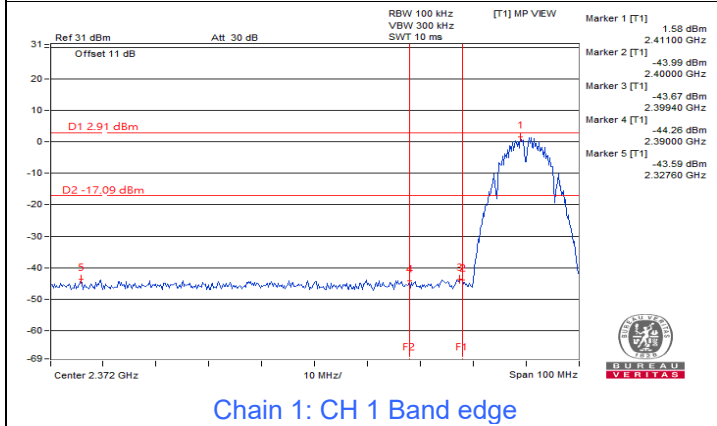
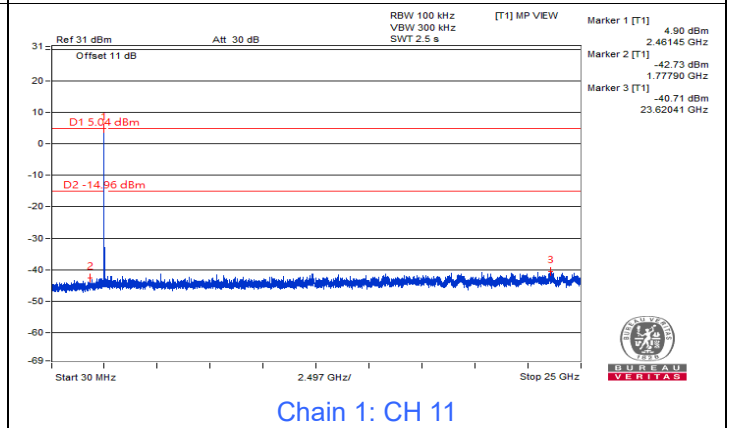
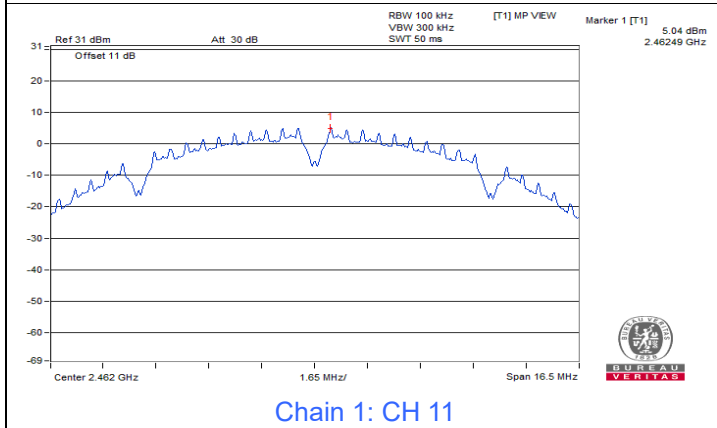
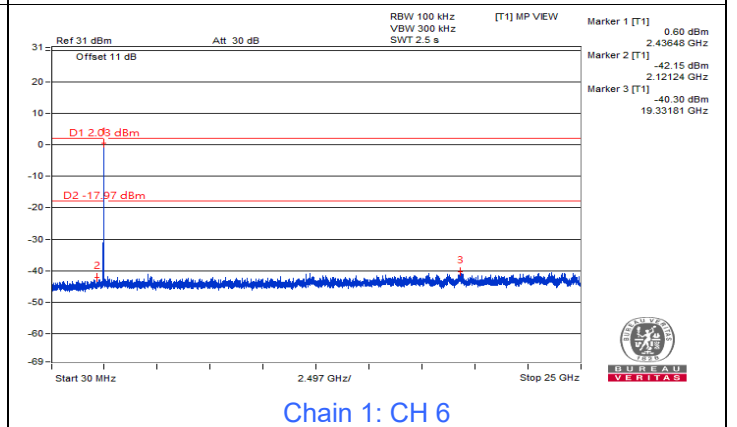
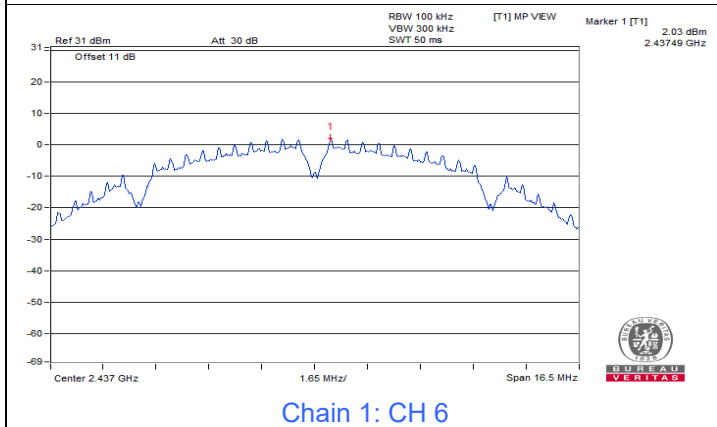
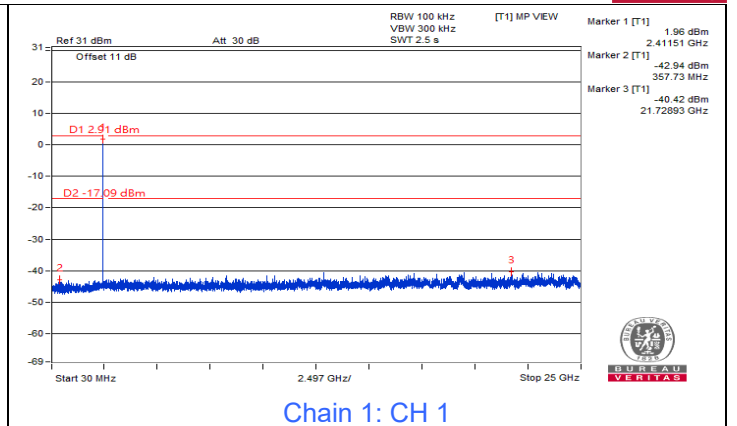
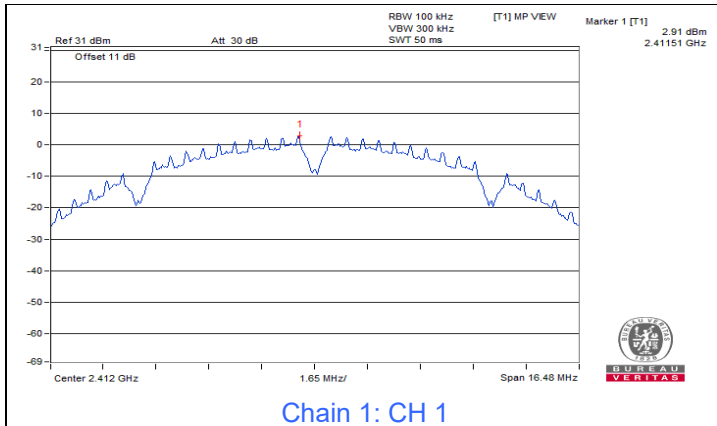
802.11ax (HE40) / Chain 1: CH 9

7.4 Conducted Out of Band Emissions

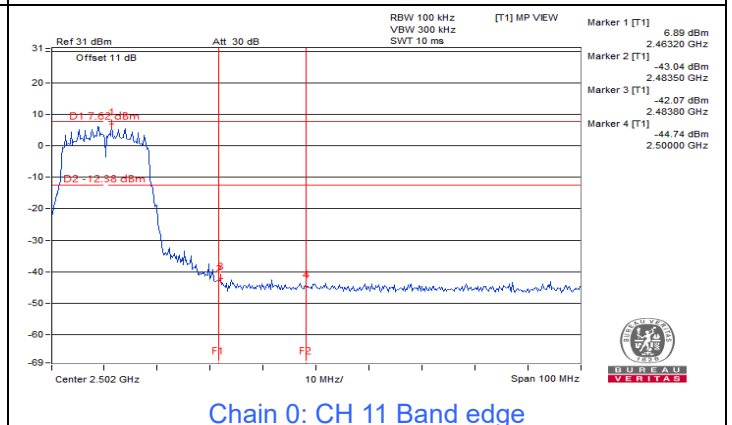
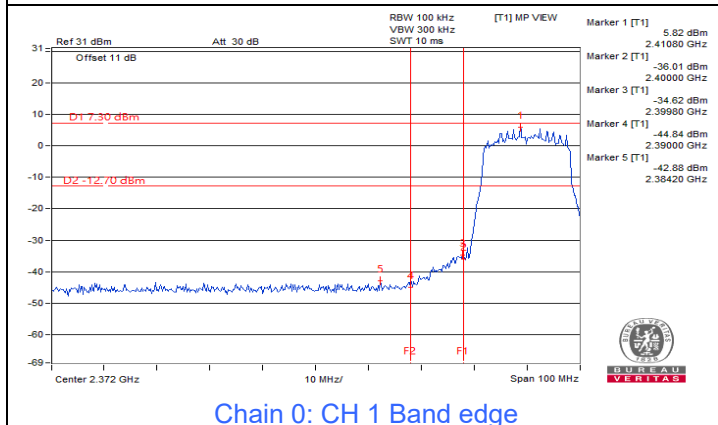
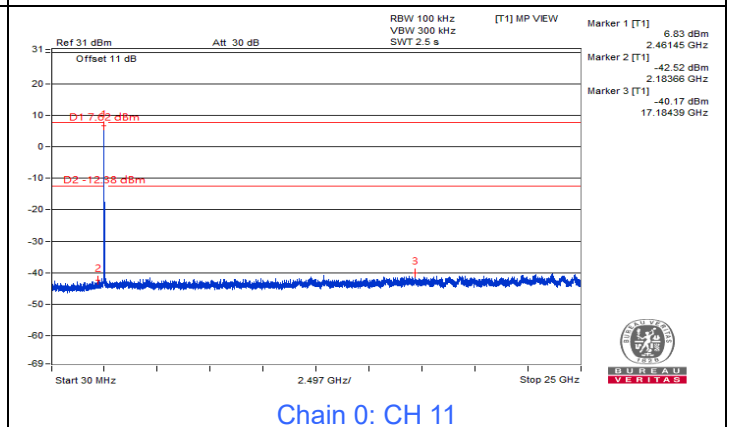
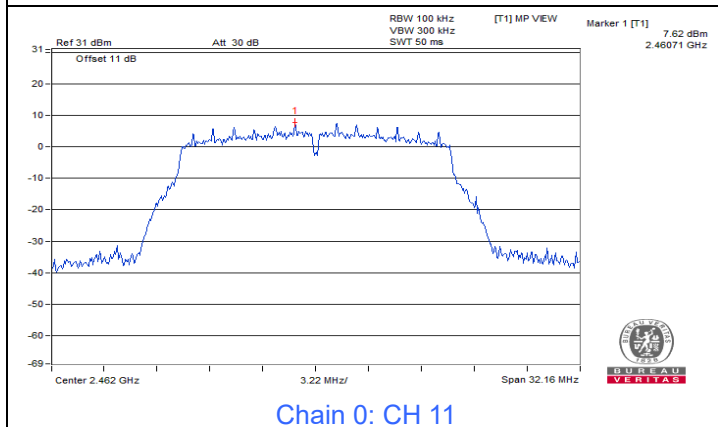
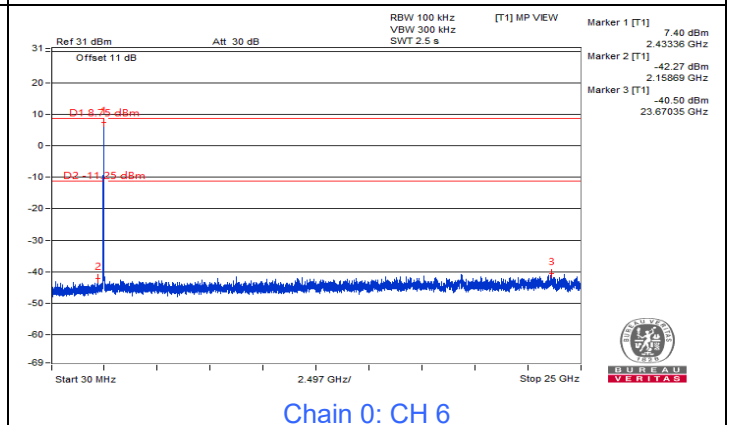
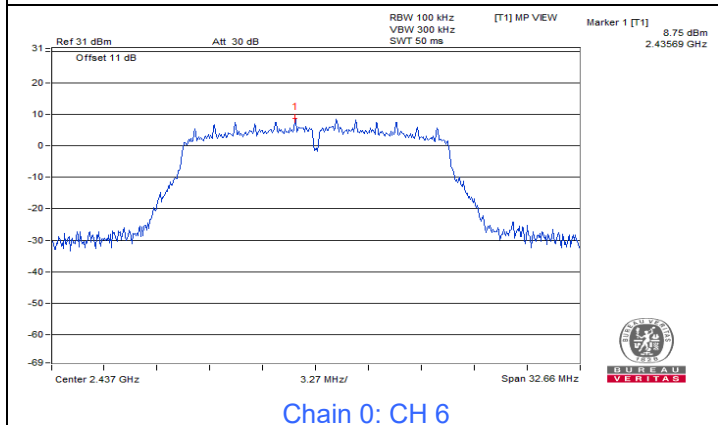
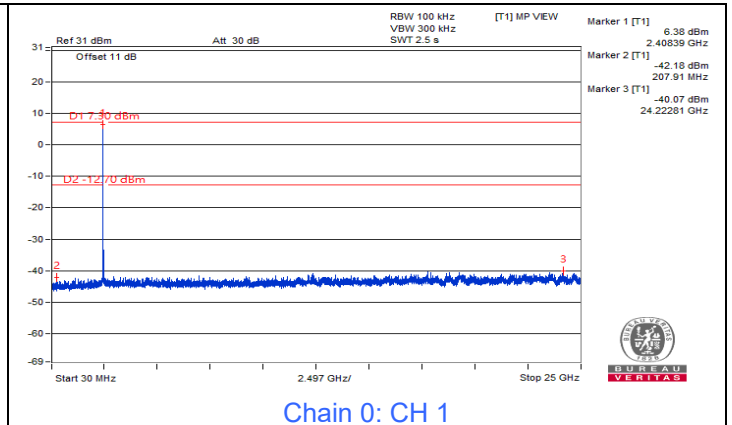
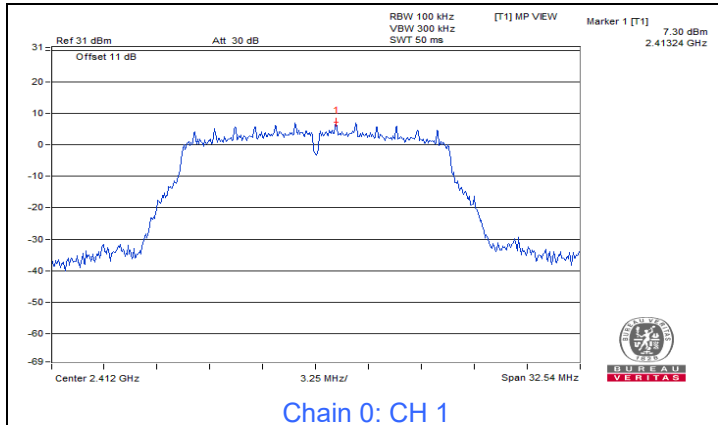
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Ian Chang
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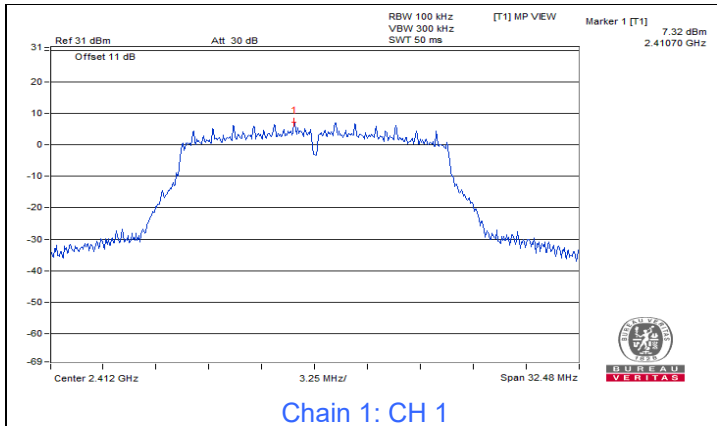
802.11b



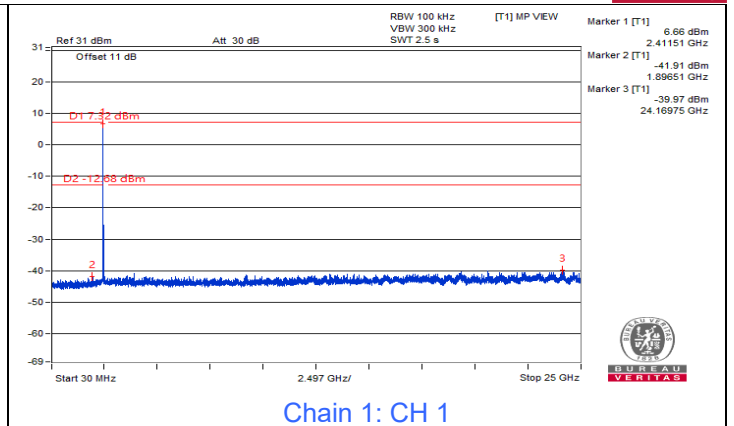


802.11g

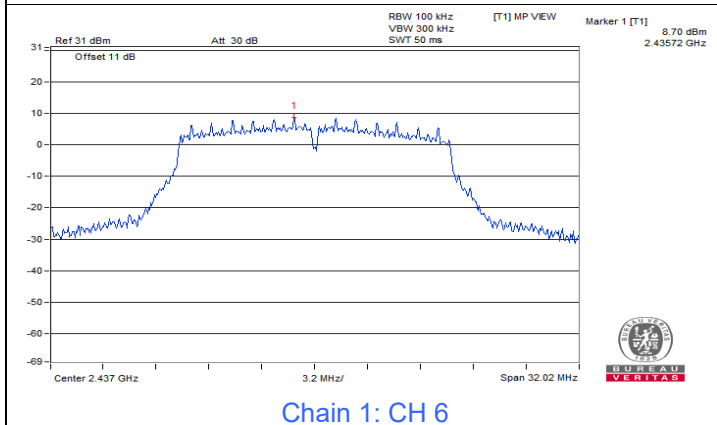




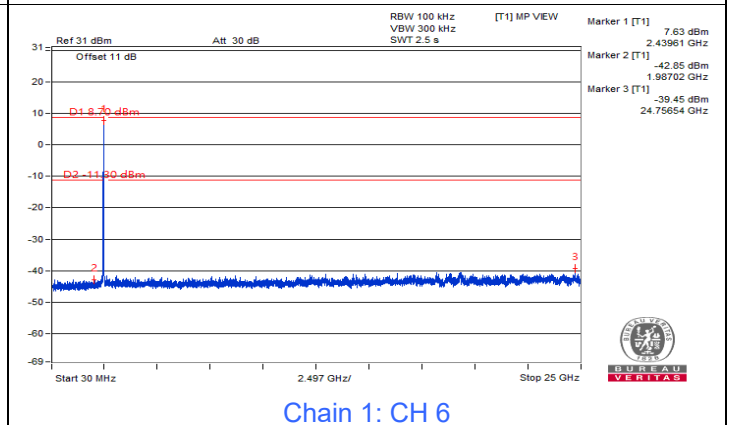
Chain 1: CH 1



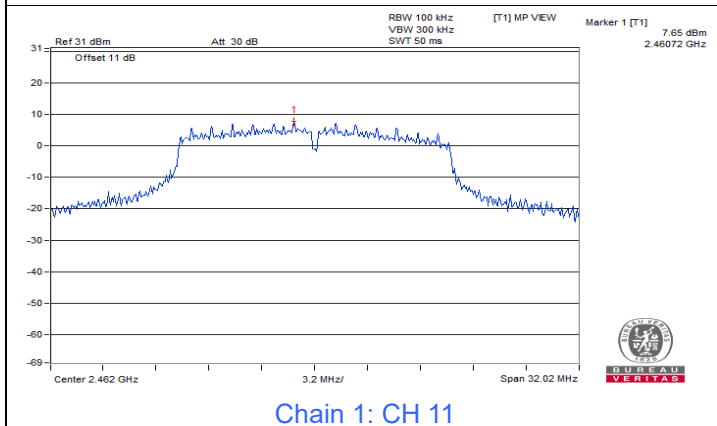
Chain 1: CH 1



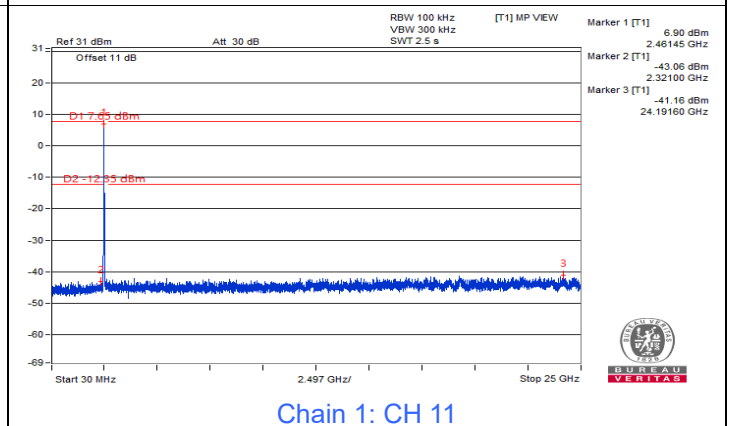
Chain 1: CH 6



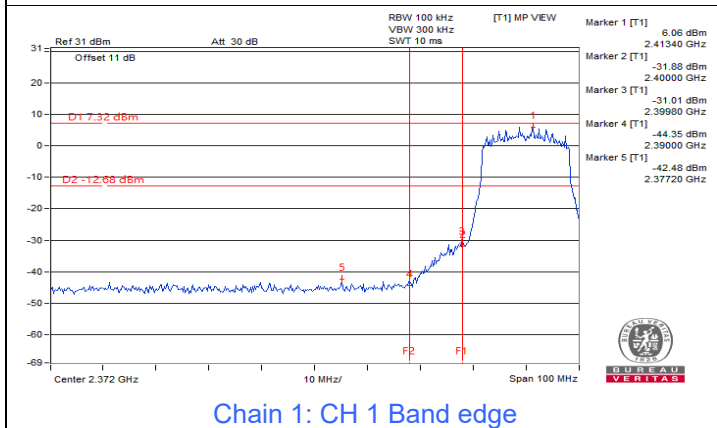
Chain 1: CH 6



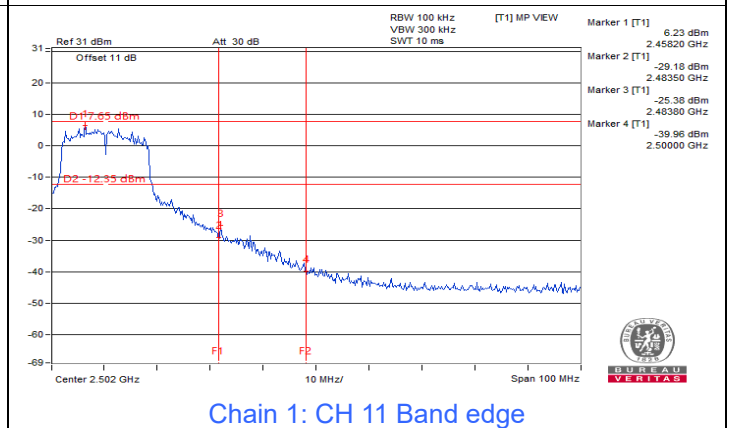
Chain 1: CH 11



Chain 1: CH 11



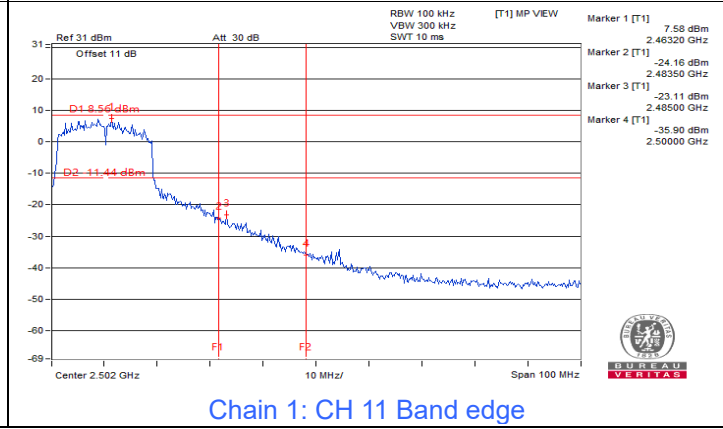
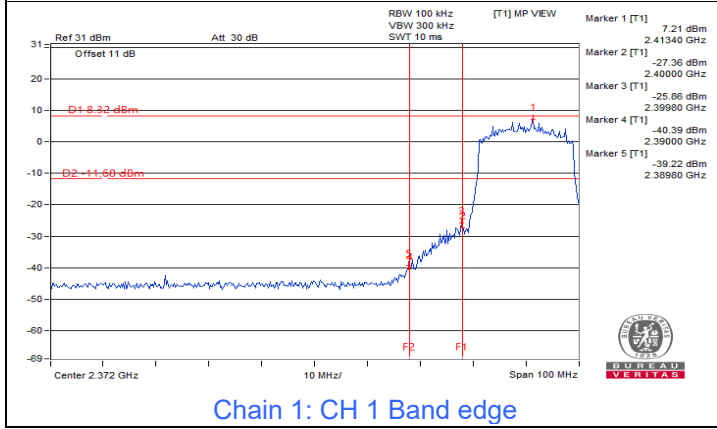
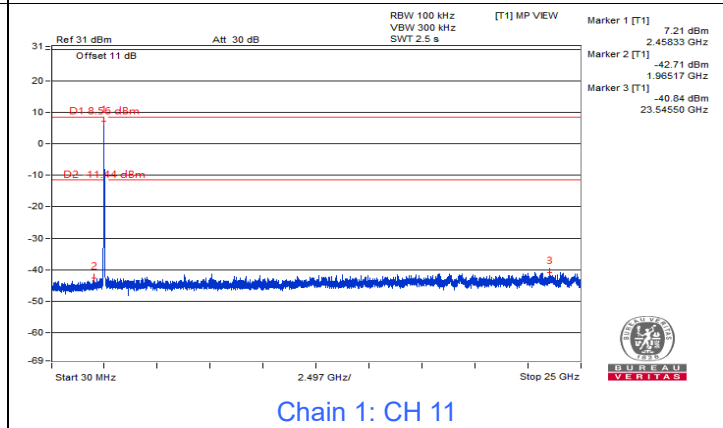
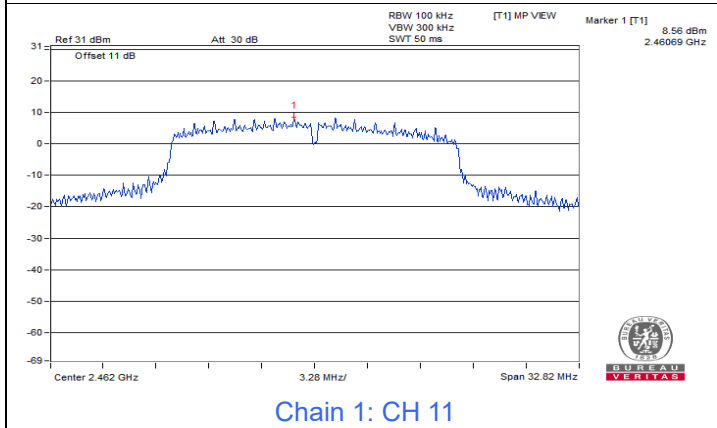
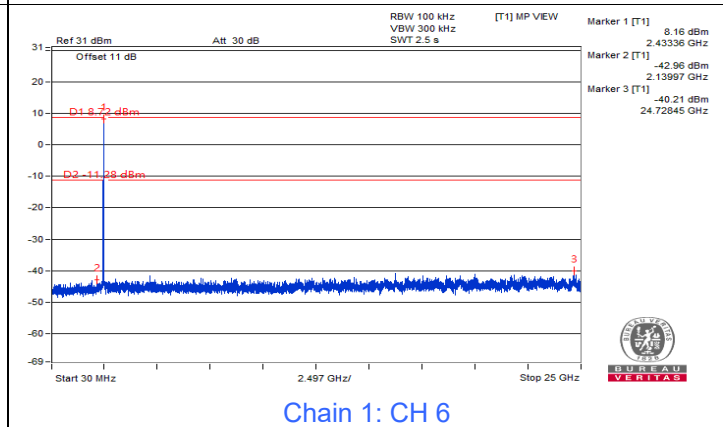
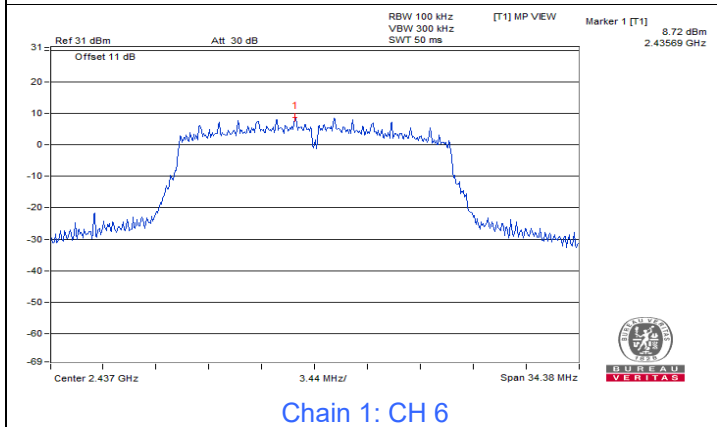
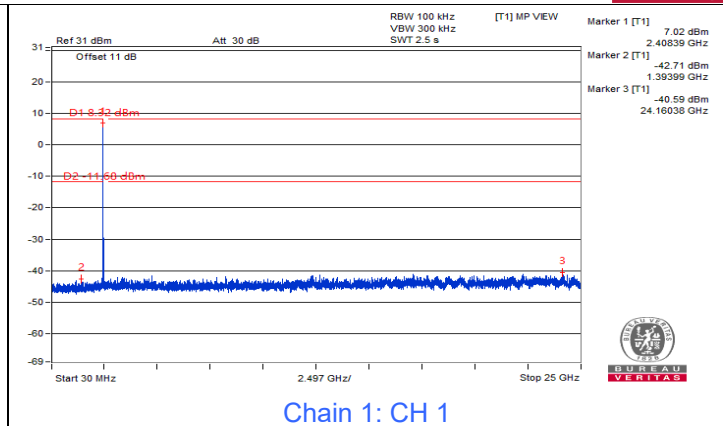
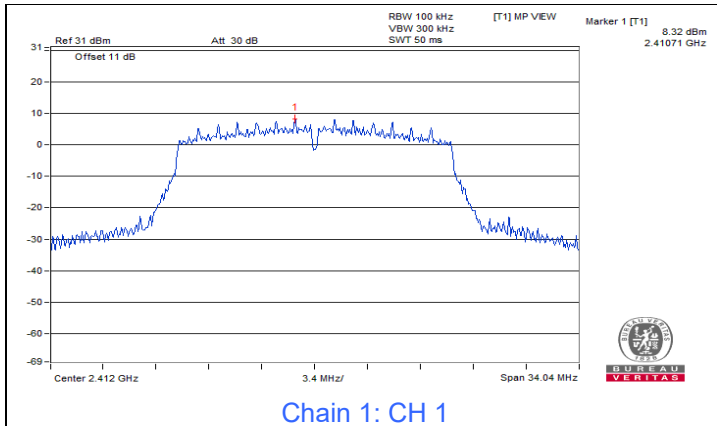
Chain 1: CH 1 Band edge



Chain 1: CH 11 Band edge

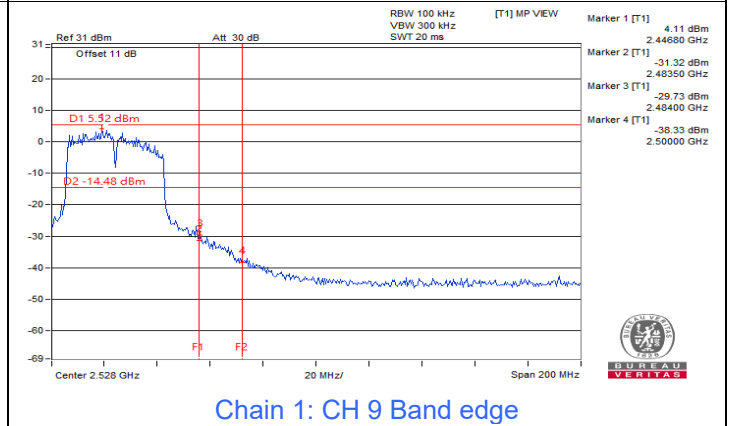
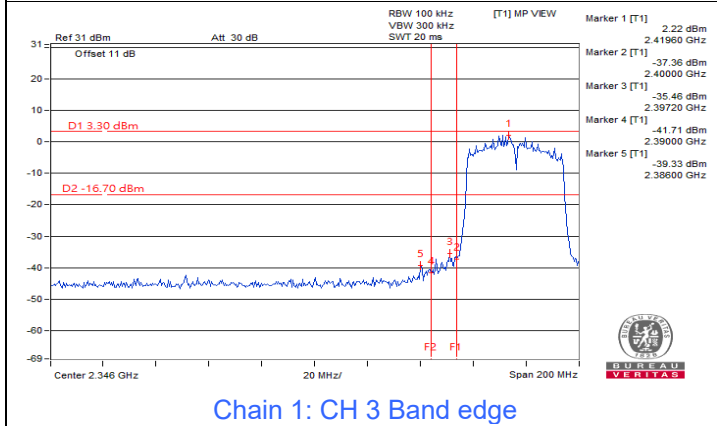
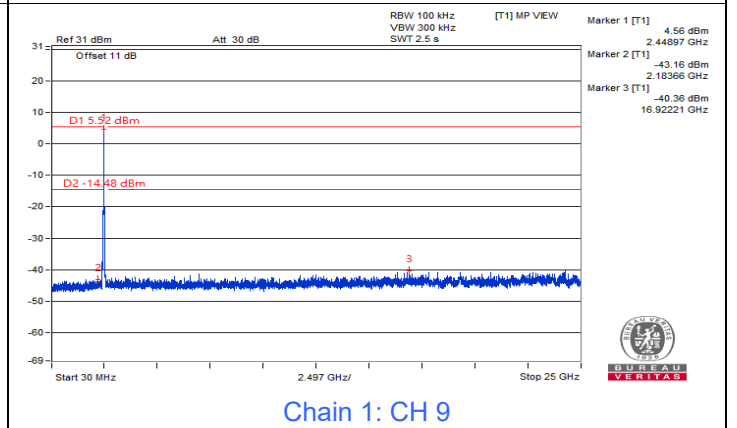
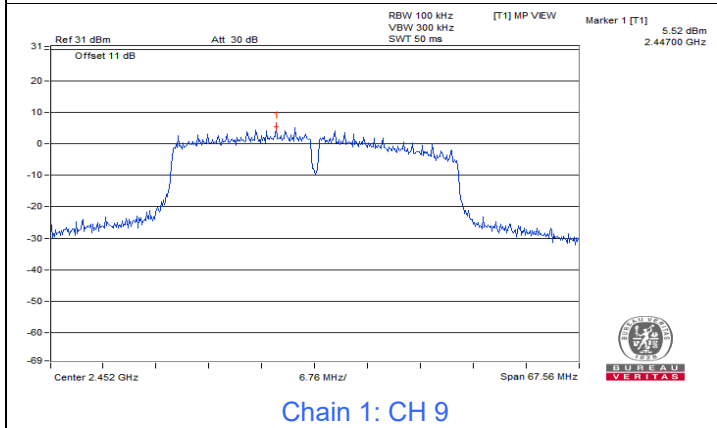
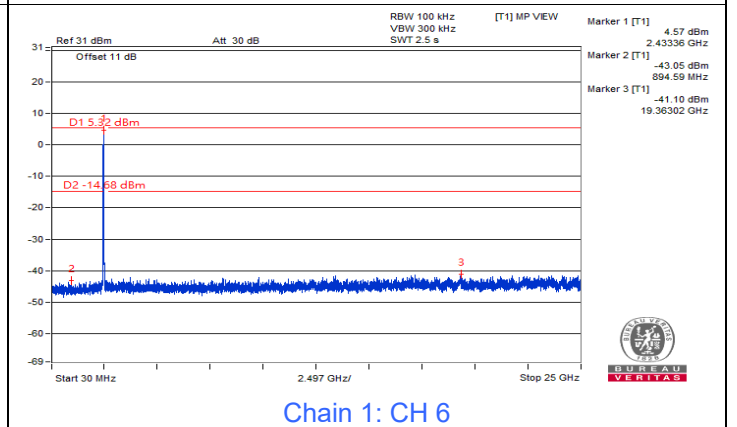
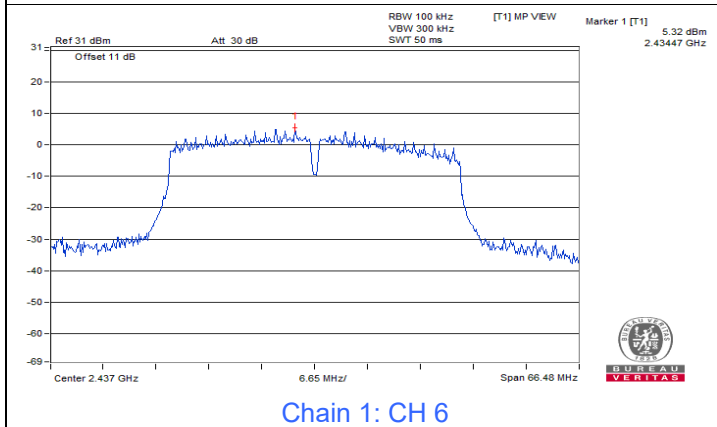
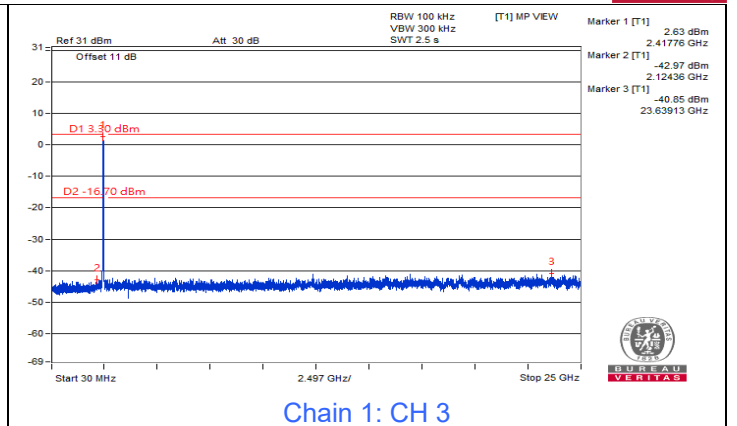
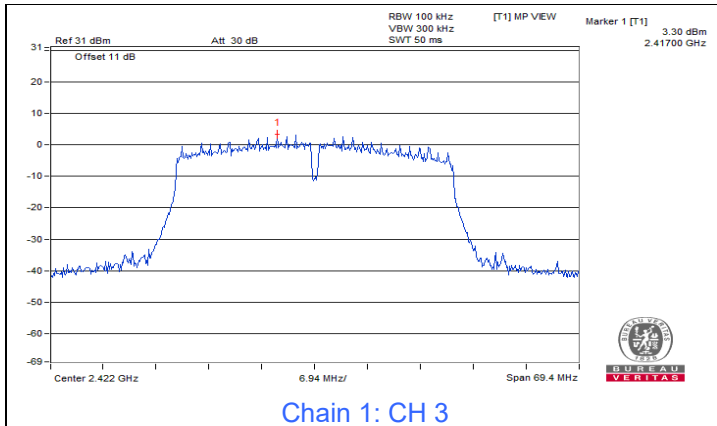
802.11n (HT20)





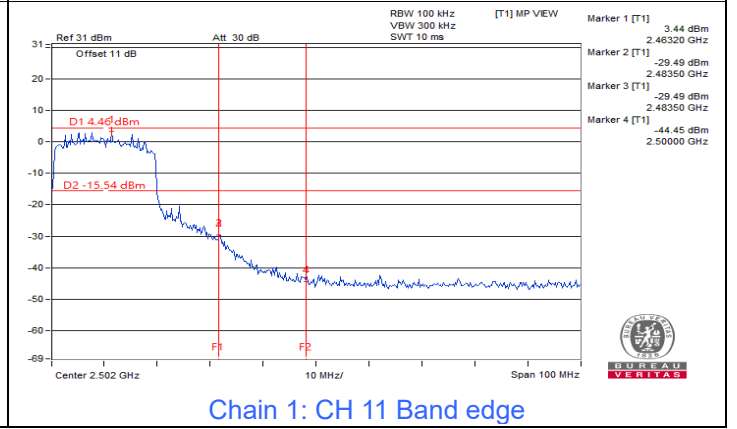
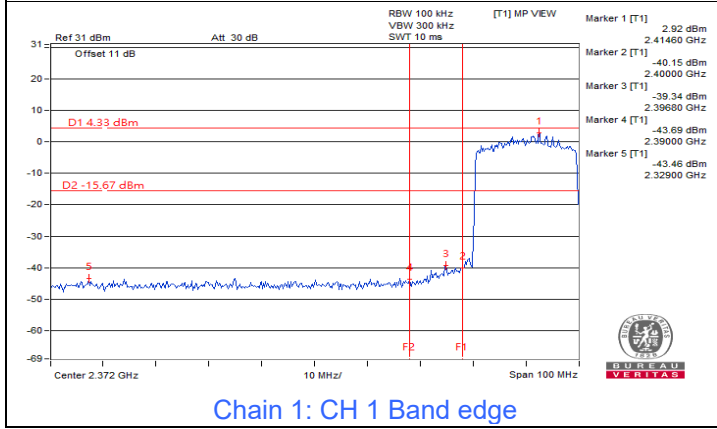
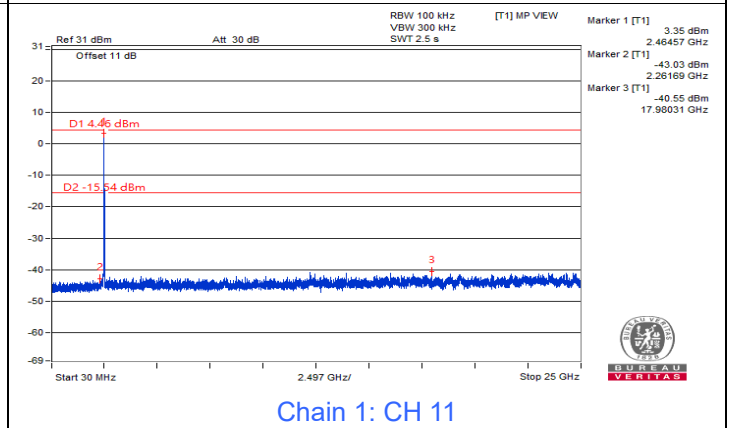
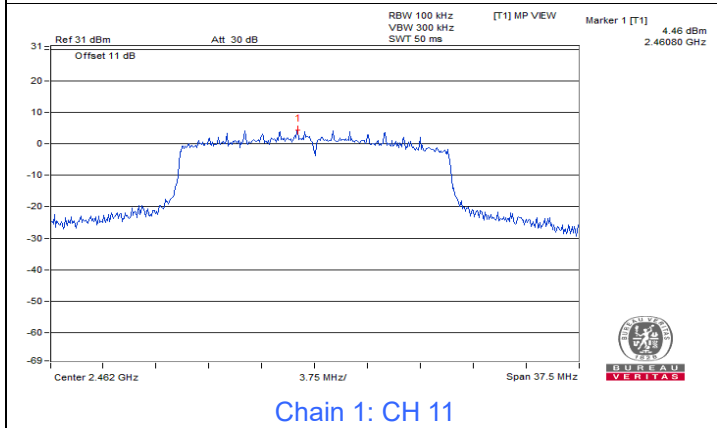
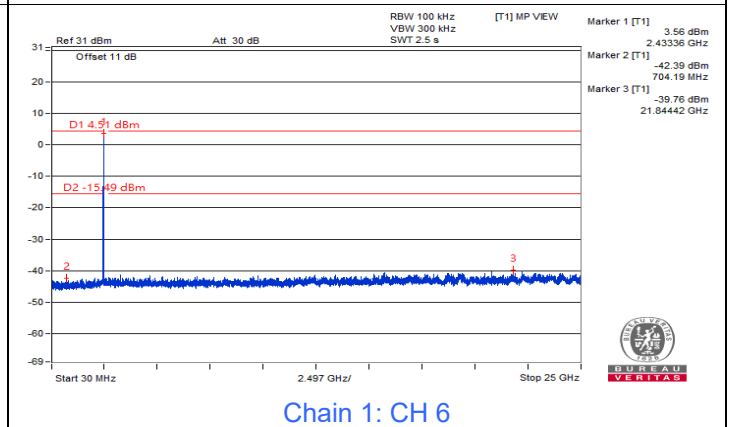
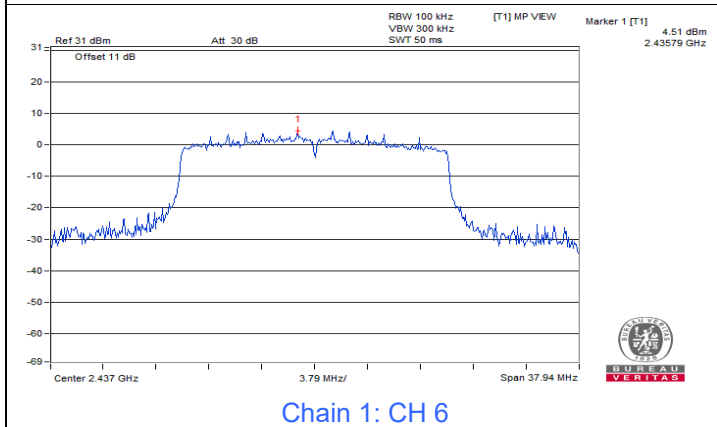
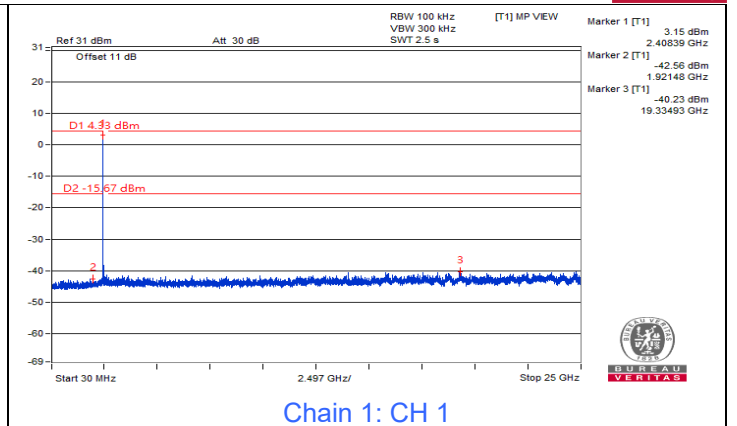
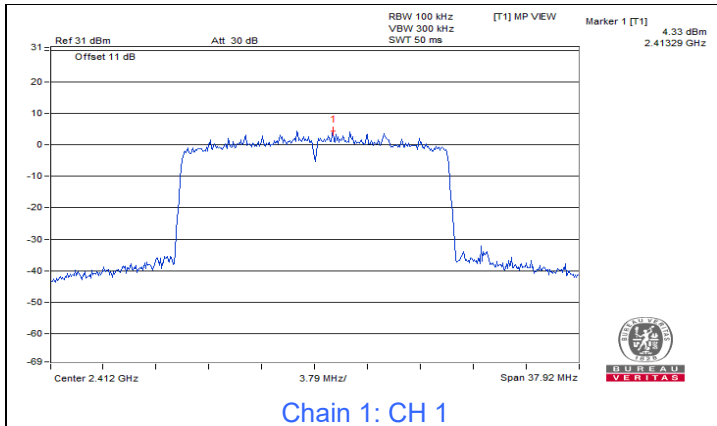
802.11n (HT40)



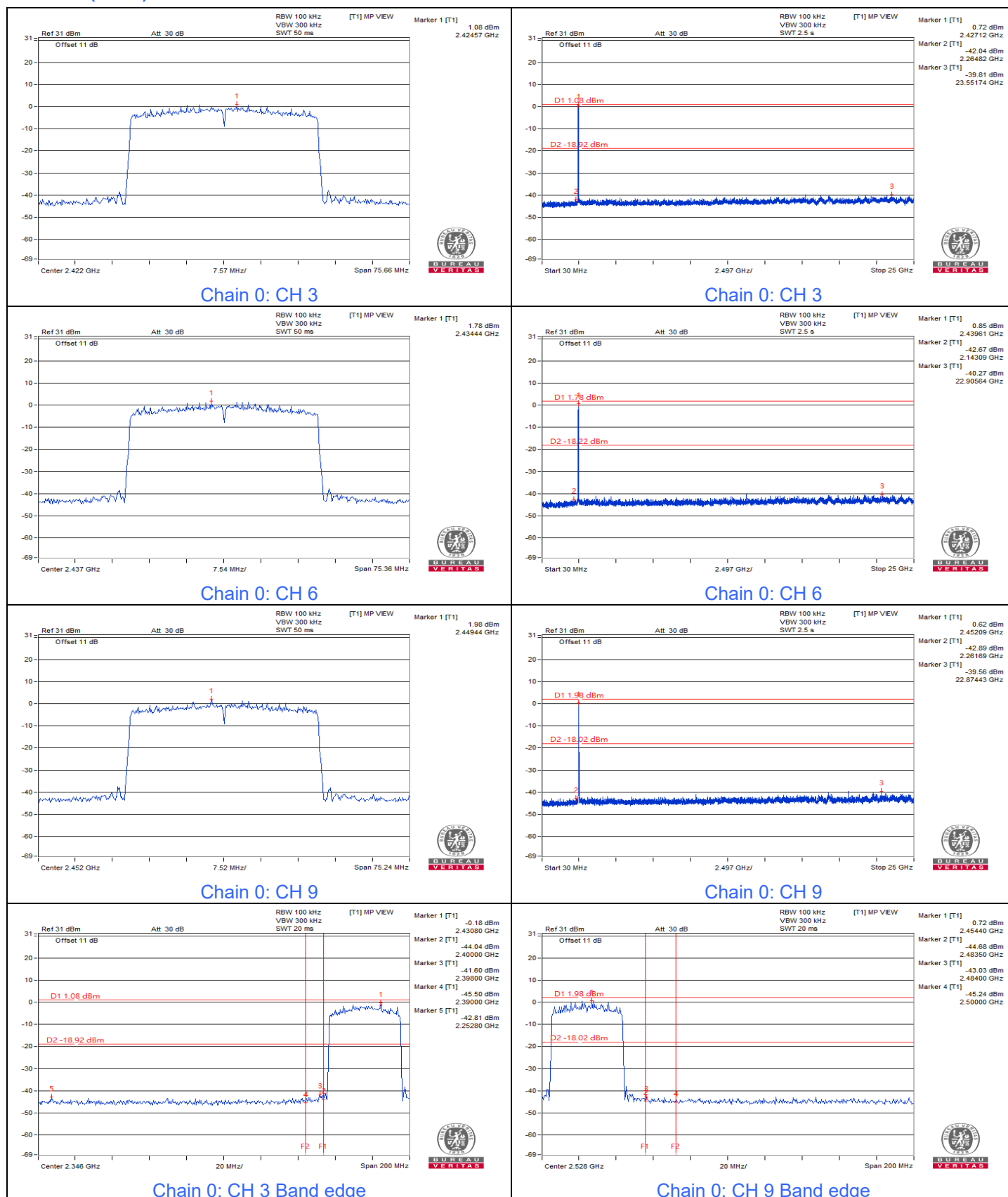


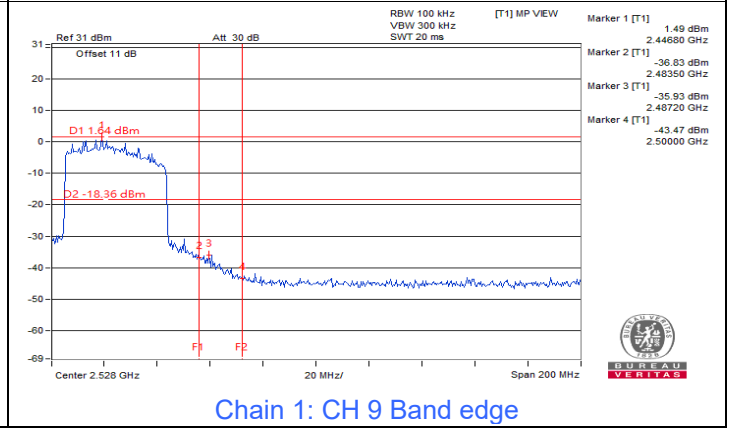
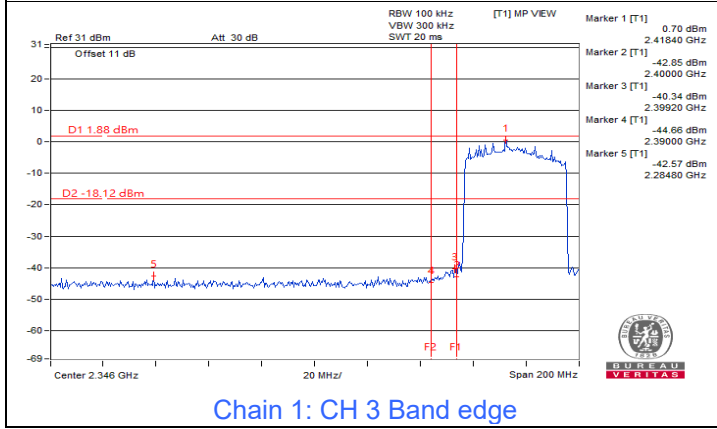
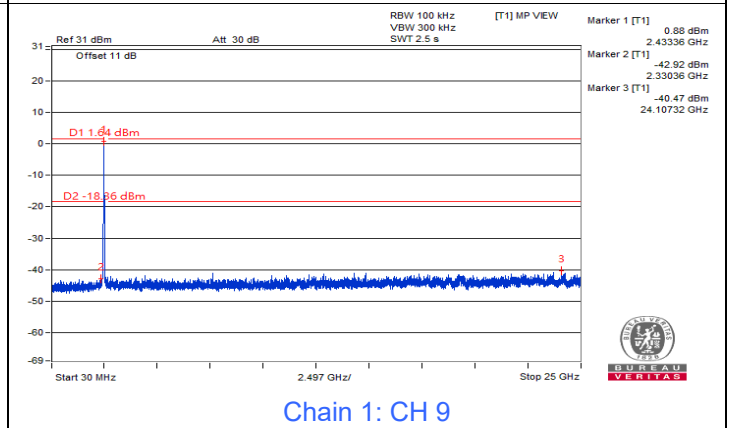
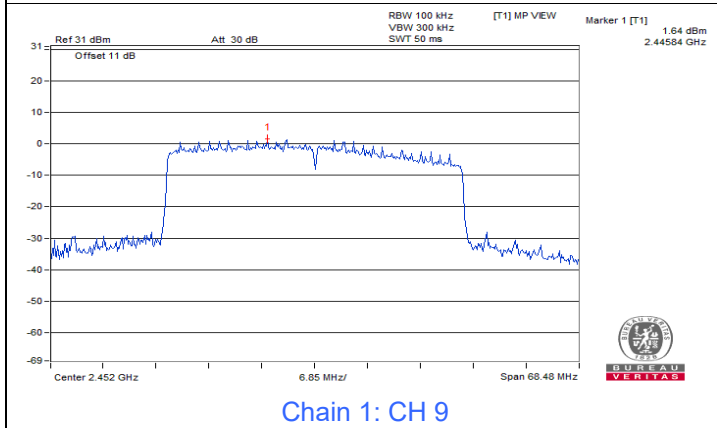
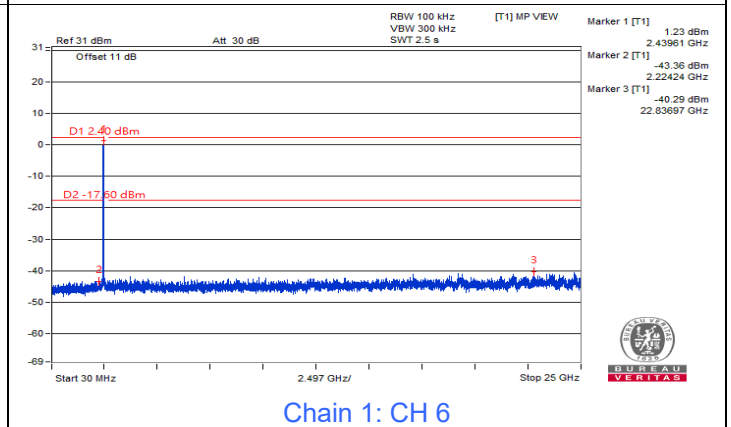
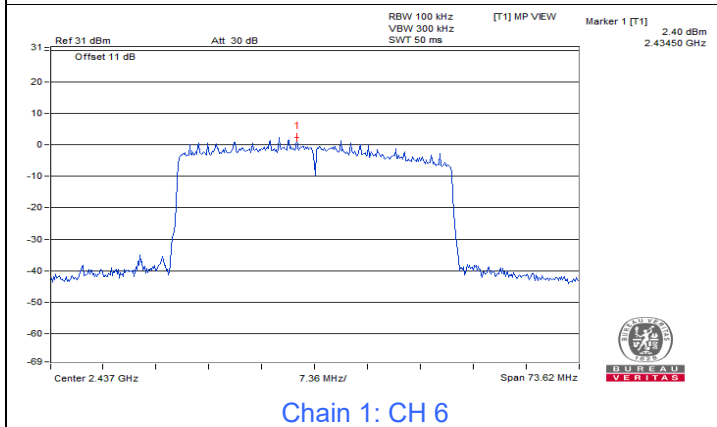
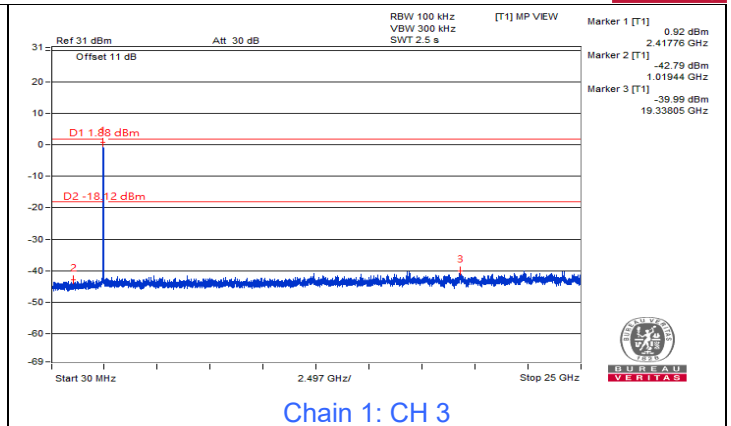
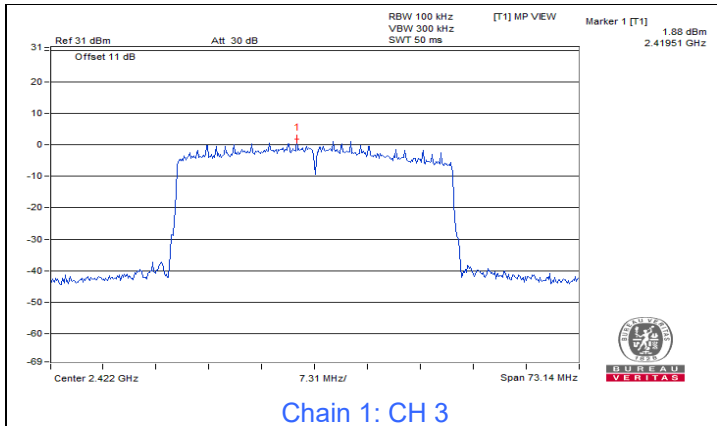
802.11ax (HE20)





802.11ax (HE40)





7.5 AC Power Conducted Emissions

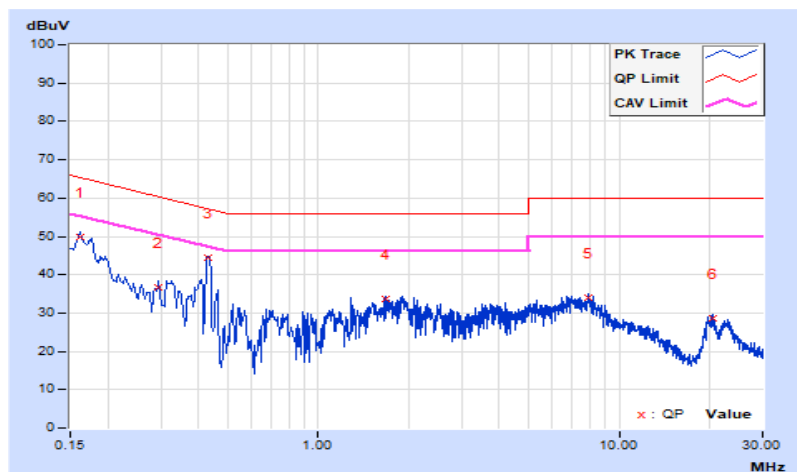
Mode A

RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Jed Wu		

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	0.16139	10.12	39.70	17.16	49.82	27.28	65.39	55.39	-15.57	-28.11
2	0.29471	10.18	26.68	13.30	36.86	23.48	60.39	50.39	-23.53	-26.91
3	0.43159	10.24	34.04	32.59	44.28	42.83	57.22	47.22	-12.94	-4.39
4	1.68112	10.38	23.32	13.63	33.70	24.01	56.00	46.00	-22.30	-21.99
5	7.87067	10.67	23.40	14.67	34.07	25.34	60.00	50.00	-25.93	-24.66
6	20.58534	10.94	17.64	11.18	28.58	22.12	60.00	50.00	-31.42	-27.88

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

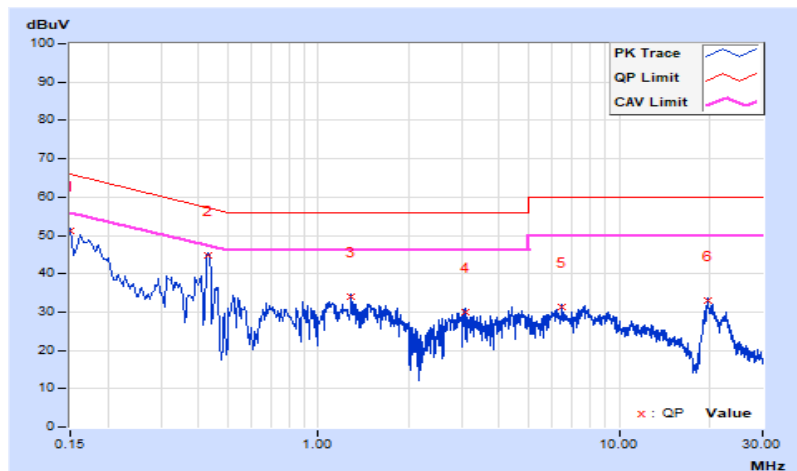


RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.10	41.04	19.95	51.14	30.05	66.00	56.00	-14.86	-25.95
2	0.42896	10.17	34.70	30.89	44.87	41.06	57.27	47.27	-12.40	-6.21
3	1.28611	10.23	23.66	15.35	33.89	25.58	56.00	46.00	-22.11	-20.42
4	3.06770	10.33	19.50	11.03	29.83	21.36	56.00	46.00	-26.17	-24.64
5	6.45880	10.50	20.88	11.60	31.38	22.10	60.00	50.00	-28.62	-27.90
6	19.79922	10.87	22.10	12.63	32.97	23.50	60.00	50.00	-27.03	-26.50

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



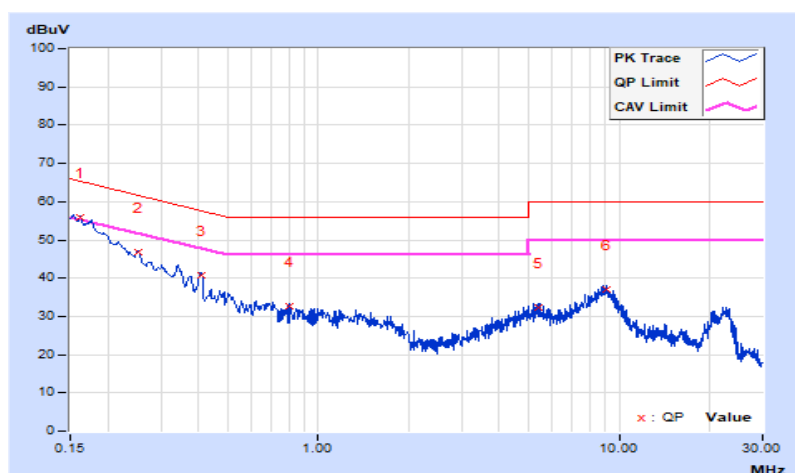
Mode B

RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Jed Wu		

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	0.16173	10.12	45.72	30.51	55.84	40.63	65.37	55.37	-9.53	-14.74
2	0.25126	10.16	36.64	26.31	46.80	36.47	61.72	51.72	-14.92	-15.25
3	0.40694	10.23	30.58	28.72	40.81	38.95	57.71	47.71	-16.90	-8.76
4	0.80506	10.30	22.34	17.30	32.64	27.60	56.00	46.00	-23.36	-18.40
5	5.42239	10.56	21.61	15.51	32.17	26.07	60.00	50.00	-27.83	-23.93
6	9.03615	10.73	26.31	21.24	37.04	31.97	60.00	50.00	-22.96	-18.03

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

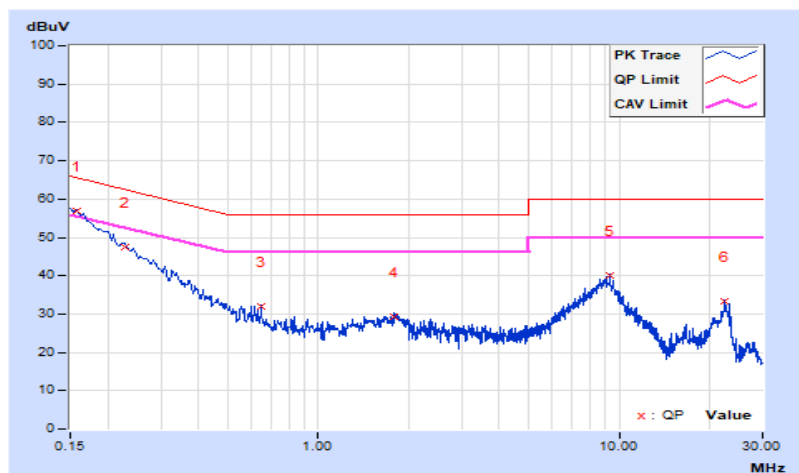


RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Jed Wu		

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	0.15719	10.10	46.66	27.71	56.76	37.81	65.61	55.61	-8.85	-17.80
2	0.22822	10.13	37.37	18.10	47.50	28.23	62.51	52.51	-15.01	-24.28
3	0.64471	10.19	21.92	17.96	32.11	28.15	56.00	46.00	-23.89	-17.85
4	1.77890	10.27	18.92	13.10	29.19	23.37	56.00	46.00	-26.81	-22.63
5	9.31383	10.65	29.31	21.42	39.96	32.07	60.00	50.00	-20.04	-17.93
6	22.28662	10.87	22.53	12.41	33.40	23.28	60.00	50.00	-26.60	-26.72

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



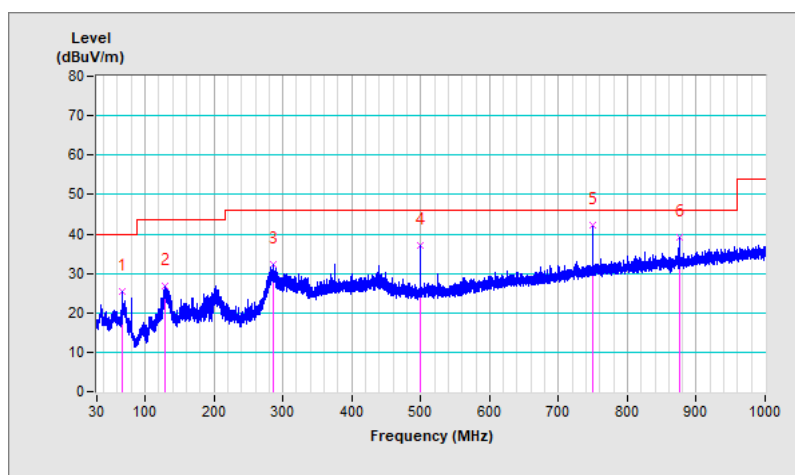
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 73.8% RH
Tested By	Jed Wu		

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	66.57	25.5 QP	40.0	-14.5	1.89 H	72	35.4	-9.9
2	129.34	26.8 QP	43.5	-16.7	1.45 H	238	36.3	-9.5
3	285.23	32.2 QP	46.0	-13.8	1.21 H	127	38.2	-6.0
4	500.01	37.2 QP	46.0	-8.8	1.37 H	237	38.5	-1.3
5	750.01	42.1 QP	46.0	-3.9	1.52 H	123	37.4	4.7
6	874.95	39.0 QP	46.0	-7.0	1.64 H	148	32.3	6.7

Remarks:

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

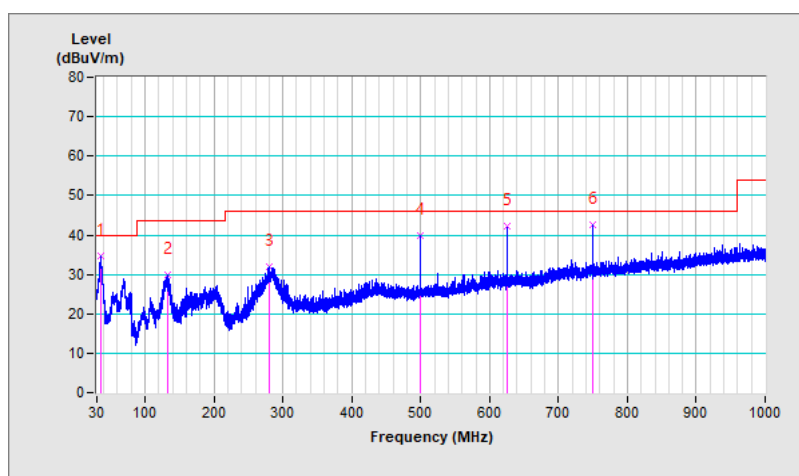


RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 73.8% RH
Tested By	Jed Wu		

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	35.24	34.7 QP	40.0	-5.3	1.38 V	150	44.8	-10.1
2	132.54	29.8 QP	43.5	-13.7	1.54 V	151	39.0	-9.2
3	280.77	32.1 QP	46.0	-13.9	1.23 V	183	38.2	-6.1
4	500.01	39.8 QP	46.0	-6.2	1.72 V	251	41.1	-1.3
5	624.96	42.1 QP	46.0	-3.9	1.12 V	117	40.1	2.0
6	750.01	42.6 QP	46.0	-3.4	1.98 V	123	37.9	4.7

Remarks:

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



7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	54.6 PK	74.0	-19.4	1.53 H	228	55.2	-0.6
2	2390.00	42.7 AV	54.0	-11.3	1.53 H	228	43.3	-0.6
3	*2412.00	102.7 PK			1.53 H	228	103.2	-0.5
4	*2412.00	100.9 AV			1.53 H	228	101.4	-0.5
5	4824.00	55.6 PK	74.0	-18.4	2.00 H	273	48.4	7.2
6	4824.00	52.5 AV	54.0	-1.5	2.00 H	273	45.3	7.2
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	54.2 PK	74.0	-19.8	3.75 V	64	54.8	-0.6
2	2390.00	42.3 AV	54.0	-11.7	3.75 V	64	42.9	-0.6
3	*2412.00	100.7 PK			3.75 V	64	101.2	-0.5
4	*2412.00	98.8 AV			3.75 V	64	99.3	-0.5
5	4824.00	52.9 PK	74.0	-21.1	3.37 V	7	45.7	7.2
6	4824.00	48.2 AV	54.0	-5.8	3.37 V	7	41.0	7.2

Remarks:

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

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	103.6 PK			1.75 H	232	103.9	-0.3
2	*2437.00	101.8 AV			1.75 H	232	102.1	-0.3
3	4874.00	56.5 PK	74.0	-17.5	2.22 H	277	49.1	7.4
4	4874.00	53.4 AV	54.0	-0.6	2.22 H	277	46.0	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	101.6 PK			3.53 V	68	101.9	-0.3
2	*2437.00	99.7 AV			3.53 V	68	100.0	-0.3
3	4874.00	53.8 PK	74.0	-20.2	3.15 V	11	46.4	7.4
4	4874.00	49.1 AV	54.0	-4.9	3.15 V	11	41.7	7.4

Remarks:

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

RF Mode	802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	103.8 PK			1.17 H	178	104.0	-0.2
2	*2462.00	102.0 AV			1.17 H	178	102.2	-0.2
3	2483.50	55.1 PK	74.0	-18.9	1.17 H	178	55.1	0.0
4	2483.50	43.9 AV	54.0	-10.1	1.17 H	178	43.9	0.0
5	4924.00	55.8 PK	74.0	-18.2	1.18 H	289	48.3	7.5
6	4924.00	53.0 AV	54.0	-1.0	1.18 H	289	45.5	7.5
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	101.8 PK			2.95 V	14	102.0	-0.2
2	*2462.00	99.9 AV			2.95 V	14	100.1	-0.2
3	2483.50	54.7 PK	74.0	-19.3	2.95 V	14	54.7	0.0
4	2483.50	43.5 AV	54.0	-10.5	2.95 V	14	43.5	0.0
5	4924.00	54.0 PK	74.0	-20.0	2.57 V	317	46.5	7.5
6	4924.00	49.3 AV	54.0	-4.7	2.57 V	317	41.8	7.5

Remarks:

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

RF Mode	802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	69.1 PK	74.0	-4.9	1.31 H	230	69.7	-0.6
2	2390.00	53.2 AV	54.0	-0.8	1.31 H	230	53.8	-0.6
3	*2412.00	112.5 PK			1.31 H	230	113.0	-0.5
4	*2412.00	103.5 AV			1.31 H	230	104.0	-0.5
5	4824.00	64.5 PK	74.0	-9.5	1.55 H	270	57.3	7.2
6	4824.00	52.3 AV	54.0	-1.7	1.55 H	270	45.1	7.2
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	67.7 PK	74.0	-6.3	3.53 V	66	68.3	-0.6
2	2390.00	50.8 AV	54.0	-3.2	3.53 V	66	51.4	-0.6
3	*2412.00	110.5 PK			3.53 V	66	111.0	-0.5
4	*2412.00	101.4 AV			3.53 V	66	101.9	-0.5
5	4824.00	61.8 PK	74.0	-12.2	3.15 V	9	54.6	7.2
6	4824.00	48.0 AV	54.0	-6.0	3.15 V	9	40.8	7.2

Remarks:

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

RF Mode	802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	113.0 PK			1.17 H	214	113.3	-0.3
2	*2437.00	104.0 AV			1.17 H	214	104.3	-0.3
3	4874.00	63.0 PK	74.0	-11.0	1.41 H	286	55.6	7.4
4	4874.00	52.3 AV	54.0	-1.7	1.41 H	286	44.9	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	111.0 PK			3.39 V	82	111.3	-0.3
2	*2437.00	101.9 AV			3.39 V	82	102.2	-0.3
3	4874.00	61.7 PK	74.0	-12.3	3.01 V	25	54.3	7.4
4	4874.00	47.9 AV	54.0	-6.1	3.01 V	25	40.5	7.4

Remarks:

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

RF Mode	802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	113.5 PK			1.28 H	230	113.7	-0.2
2	*2462.00	104.5 AV			1.28 H	230	104.7	-0.2
3	2483.50	72.6 PK	74.0	-1.4	1.28 H	230	72.6	0.0
4	2483.50	52.9 AV	54.0	-1.1	1.28 H	230	52.9	0.0
5	4924.00	64.1 PK	74.0	-9.9	1.41 H	286	56.6	7.5
6	4924.00	52.1 AV	54.0	-1.9	1.41 H	286	44.6	7.5
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	111.5 PK			3.50 V	98	111.7	-0.2
2	*2462.00	102.4 AV			3.50 V	98	102.6	-0.2
3	2483.50	72.1 PK	74.0	-1.9	3.50 V	98	72.1	0.0
4	2483.50	52.4 AV	54.0	-1.6	3.50 V	98	52.4	0.0
5	4924.00	62.8 PK	74.0	-11.2	3.12 V	41	55.3	7.5
6	4924.00	47.7 AV	54.0	-6.3	3.12 V	41	40.2	7.5

Remarks:

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

RF Mode	802.11n (HT20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.9 PK	74.0	-1.1	1.48 H	235	73.5	-0.6
2	2390.00	53.8 AV	54.0	-0.2	1.48 H	235	54.4	-0.6
3	*2412.00	112.7 PK			1.48 H	235	113.2	-0.5
4	*2412.00	103.8 AV			1.48 H	235	104.3	-0.5
5	4824.00	62.5 PK	74.0	-11.5	1.55 H	283	55.3	7.2
6	4824.00	51.2 AV	54.0	-2.8	1.55 H	283	44.0	7.2
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	71.0 PK	74.0	-3.0	3.48 V	69	71.6	-0.6
2	2390.00	52.2 AV	54.0	-1.8	3.48 V	69	52.8	-0.6
3	*2412.00	110.7 PK			3.48 V	69	111.2	-0.5
4	*2412.00	101.7 AV			3.48 V	69	102.2	-0.5
5	4824.00	59.9 PK	74.0	-14.1	3.11 V	13	52.7	7.2
6	4824.00	47.0 AV	54.0	-7.0	3.11 V	13	39.8	7.2

Remarks:

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

RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	113.3 PK			1.44 H	235	113.6	-0.3
2	*2437.00	104.4 AV			1.44 H	235	104.7	-0.3
3	4874.00	63.0 PK	74.0	-11.0	1.41 H	286	55.6	7.4
4	4874.00	51.0 AV	54.0	-3.0	1.41 H	286	43.6	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	111.4 PK			3.45 V	63	111.7	-0.3
2	*2437.00	102.2 AV			3.45 V	63	102.5	-0.3
3	4874.00	60.4 PK	74.0	-13.6	3.07 V	17	53.0	7.4
4	4874.00	46.8 AV	54.0	-7.2	3.07 V	17	39.4	7.4

Remarks:

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

RF Mode	802.11n (HT20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	112.2 PK			1.28 H	199	112.4	-0.2
2	*2462.00	103.4 AV			1.28 H	199	103.6	-0.2
3	2483.50	71.4 PK	74.0	-2.6	1.28 H	199	71.4	0.0
4	2483.50	53.8 AV	54.0	-0.2	1.28 H	199	53.8	0.0
5	4924.00	62.8 PK	74.0	-11.2	1.30 H	291	55.3	7.5
6	4924.00	51.2 AV	54.0	-2.8	1.30 H	291	43.7	7.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.2 PK			3.42 V	60	110.4	-0.2
2	*2462.00	101.2 AV			3.42 V	60	101.4	-0.2
3	2483.50	70.3 PK	74.0	-3.7	3.42 V	60	70.3	0.0
4	2483.50	52.2 AV	54.0	-1.8	3.42 V	60	52.2	0.0
5	4924.00	60.2 PK	74.0	-13.8	3.04 V	20	52.7	7.5
6	4924.00	47.0 AV	54.0	-7.0	3.04 V	20	39.5	7.5

Remarks:

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

RF Mode	802.11n (HT40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.8 PK	74.0	-8.2	1.48 H	237	66.4	-0.6
2	2390.00	53.4 AV	54.0	-0.6	1.48 H	237	54.0	-0.6
3	*2422.00	106.9 PK			1.48 H	237	107.3	-0.4
4	*2422.00	97.1 AV			1.48 H	237	97.5	-0.4
5	4844.00	57.7 PK	74.0	-16.3	1.54 H	284	50.3	7.4
6	4844.00	46.0 AV	54.0	-8.0	1.54 H	284	38.6	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.8 PK	74.0	-10.2	3.50 V	62	64.4	-0.6
2	2390.00	51.5 AV	54.0	-2.5	3.50 V	62	52.1	-0.6
3	*2422.00	104.9 PK			3.50 V	62	105.3	-0.4
4	*2422.00	95.0 AV			3.50 V	62	95.4	-0.4
5	4844.00	55.0 PK	74.0	-19.0	3.11 V	13	47.6	7.4
6	4844.00	41.7 AV	54.0	-12.3	3.11 V	13	34.3	7.4

Remarks:

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

RF Mode	802.11n (HT40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.8 PK			1.47 H	235	109.1	-0.3
2	*2437.00	99.7 AV			1.47 H	235	100.0	-0.3
3	4874.00	59.2 PK	74.0	-14.8	1.42 H	290	51.8	7.4
4	4874.00	45.9 AV	54.0	-8.1	1.42 H	290	38.5	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	106.8 PK			3.45 V	61	107.1	-0.3
2	*2437.00	97.6 AV			3.45 V	61	97.9	-0.3
3	4874.00	56.5 PK	74.0	-17.5	3.06 V	14	49.1	7.4
4	4874.00	41.6 AV	54.0	-12.4	3.06 V	14	34.2	7.4

Remarks:

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

RF Mode	802.11n (HT40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	107.7 PK			1.52 H	201	107.9	-0.2
2	*2452.00	98.5 AV			1.52 H	201	98.7	-0.2
3	2483.50	70.0 PK	74.0	-4.0	1.52 H	201	70.0	0.0
4	2483.50	53.2 AV	54.0	-0.8	1.52 H	201	53.2	0.0
5	4904.00	56.7 PK	74.0	-17.3	2.01 H	279	49.3	7.4
6	4904.00	46.2 AV	54.0	-7.8	2.01 H	279	38.8	7.4
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	105.7 PK			3.45 V	61	105.9	-0.2
2	*2452.00	96.4 AV			3.45 V	61	96.6	-0.2
3	2483.50	68.1 PK	74.0	-5.9	3.45 V	61	68.1	0.0
4	2483.50	52.2 AV	54.0	-1.8	3.45 V	61	52.2	0.0
5	4904.00	54.0 PK	74.0	-20.0	3.08 V	14	46.6	7.4
6	4904.00	41.9 AV	54.0	-12.1	3.08 V	14	34.5	7.4

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	63.6 PK	74.0	-10.4	1.31 H	230	64.2	-0.6
2	2390.00	48.8 AV	54.0	-5.2	1.31 H	230	49.4	-0.6
3	*2412.00	112.4 PK			1.31 H	230	112.9	-0.5
4	*2412.00	100.7 AV			1.31 H	230	101.2	-0.5
5	4824.00	61.4 PK	74.0	-12.6	2.00 H	279	54.2	7.2
6	4824.00	48.4 AV	54.0	-5.6	2.00 H	279	41.2	7.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	62.0 PK	74.0	-12.0	3.52 V	66	62.6	-0.6
2	2390.00	47.6 AV	54.0	-6.4	3.52 V	66	48.2	-0.6
3	*2412.00	110.4 PK			3.52 V	66	110.9	-0.5
4	*2412.00	98.6 AV			3.52 V	66	99.1	-0.5
5	4824.00	58.7 PK	74.0	-15.3	3.15 V	10	51.5	7.2
6	4824.00	44.1 AV	54.0	-9.9	3.15 V	10	36.9	7.2

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	112.1 PK			1.33 H	228	112.4	-0.3
2	*2437.00	100.4 AV			1.33 H	228	100.7	-0.3
3	4874.00	61.1 PK	74.0	-12.9	2.02 H	277	53.7	7.4
4	4874.00	48.1 AV	54.0	-5.9	2.02 H	277	40.7	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	110.1 PK			3.50 V	68	110.4	-0.3
2	*2437.00	98.3 AV			3.50 V	68	98.6	-0.3
3	4874.00	58.5 PK	74.0	-15.5	3.12 V	12	51.1	7.4
4	4874.00	43.9 AV	54.0	-10.1	3.12 V	12	36.5	7.4

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	112.6 PK			1.29 H	230	112.8	-0.2
2	*2462.00	100.9 AV			1.29 H	230	101.1	-0.2
3	2483.50	64.8 PK	74.0	-9.2	1.29 H	230	64.8	0.0
4	2483.50	51.0 AV	54.0	-3.0	1.29 H	230	51.0	0.0
5	4924.00	61.6 PK	74.0	-12.4	1.98 H	275	54.1	7.5
6	4924.00	48.6 AV	54.0	-5.4	1.98 H	275	41.1	7.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.6 PK			3.46 V	64	110.8	-0.2
2	*2462.00	98.8 AV			3.46 V	64	99.0	-0.2
3	2483.50	64.4 PK	74.0	-9.6	3.46 V	64	64.4	0.0
4	2483.50	50.6 AV	54.0	-3.4	3.46 V	64	50.6	0.0
5	4924.00	59.0 PK	74.0	-15.0	3.08 V	16	51.5	7.5
6	4924.00	44.4 AV	54.0	-9.6	3.08 V	16	36.9	7.5

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.4 PK	74.0	-9.6	1.31 H	230	65.0	-0.6
2	2390.00	50.9 AV	54.0	-3.1	1.31 H	230	51.5	-0.6
3	*2422.00	108.4 PK			1.31 H	230	108.8	-0.4
4	*2422.00	96.8 AV			1.31 H	230	97.2	-0.4
5	4844.00	57.4 PK	74.0	-16.6	2.01 H	280	50.0	7.4
6	4844.00	44.5 AV	54.0	-9.5	2.01 H	280	37.1	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.5 PK	74.0	-12.5	3.53 V	65	62.1	-0.6
2	2390.00	47.1 AV	54.0	-6.9	3.53 V	65	47.7	-0.6
3	*2422.00	106.4 PK			3.53 V	65	106.8	-0.4
4	*2422.00	94.7 AV			3.53 V	65	95.1	-0.4
5	4844.00	54.7 PK	74.0	-19.3	3.14 V	10	47.3	7.4
6	4844.00	40.2 AV	54.0	-13.8	3.14 V	10	32.8	7.4

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	109.6 PK			1.28 H	230	109.9	-0.3
2	*2437.00	98.0 AV			1.28 H	230	98.3	-0.3
3	4874.00	58.6 PK	74.0	-15.4	1.98 H	282	51.2	7.4
4	4874.00	45.7 AV	54.0	-8.3	1.98 H	282	38.3	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	107.6 PK			3.50 V	66	107.9	-0.3
2	*2437.00	95.9 AV			3.50 V	66	96.2	-0.3
3	4874.00	55.9 PK	74.0	-18.1	3.11 V	9	48.5	7.4
4	4874.00	41.4 AV	54.0	-12.6	3.11 V	9	34.0	7.4

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25.2 °C, 71.8% RH
Tested By	Jed Wu		

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	108.7 PK			1.27 H	230	108.9	-0.2
2	*2452.00	97.1 AV			1.27 H	230	97.3	-0.2
3	2483.50	64.1 PK	74.0	-9.9	1.27 H	230	64.1	0.0
4	2483.50	52.0 AV	54.0	-2.0	1.27 H	230	52.0	0.0
5	4904.00	57.7 PK	74.0	-16.3	1.99 H	281	50.3	7.4
6	4904.00	44.8 AV	54.0	-9.2	1.99 H	281	37.4	7.4
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	106.7 PK			3.49 V	65	106.9	-0.2
2	*2452.00	95.0 AV			3.49 V	65	95.2	-0.2
3	2483.50	62.0 PK	74.0	-12.0	3.49 V	65	62.0	0.0
4	2483.50	49.1 AV	54.0	-4.9	3.49 V	65	49.1	0.0
5	4904.00	55.0 PK	74.0	-19.0	3.12 V	10	47.6	7.4
6	4904.00	40.5 AV	54.0	-13.5	3.12 V	10	33.1	7.4

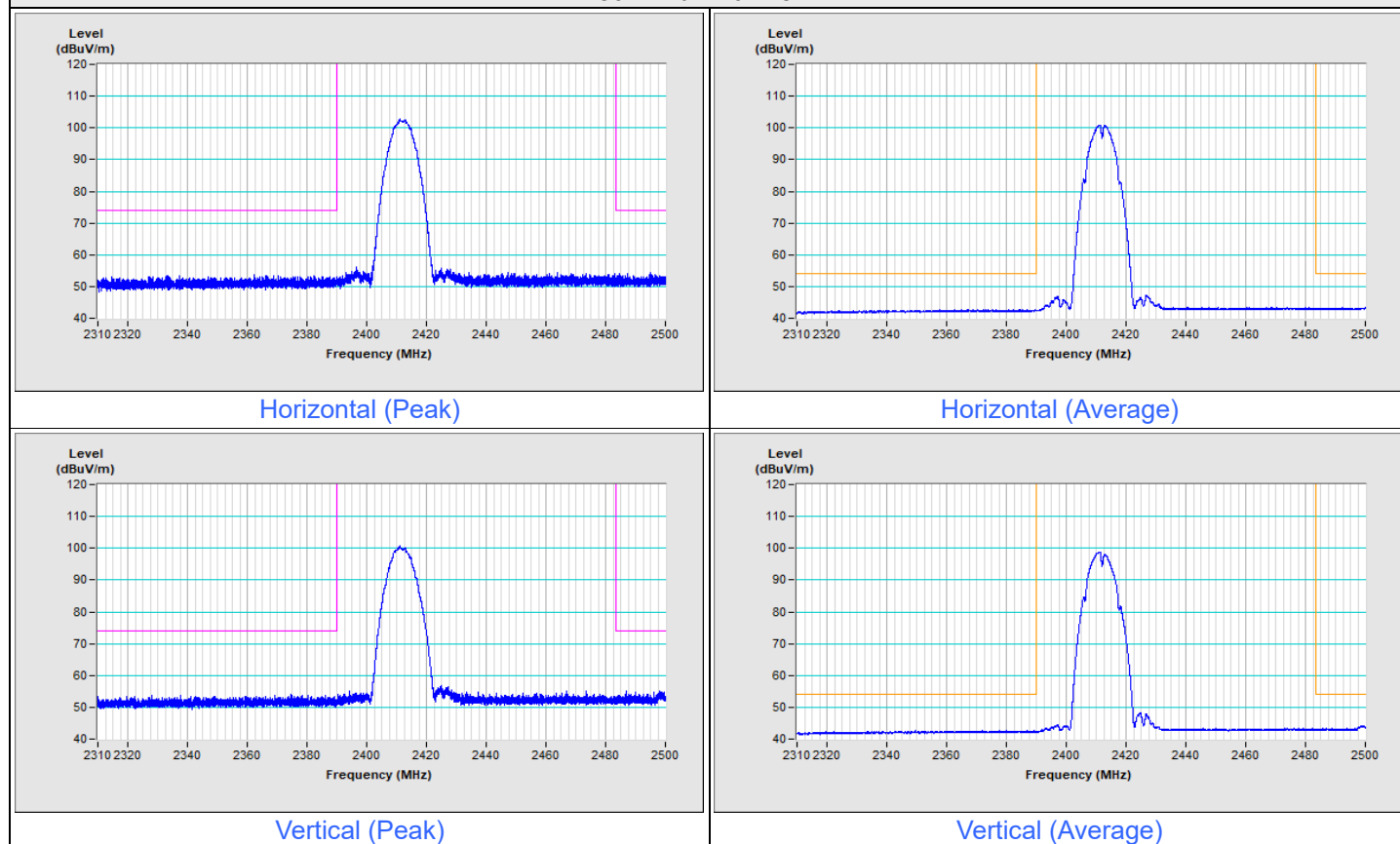
Remarks:

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

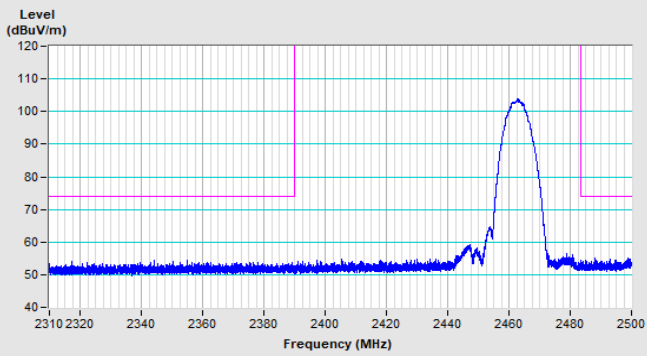
Plot of Band Edge

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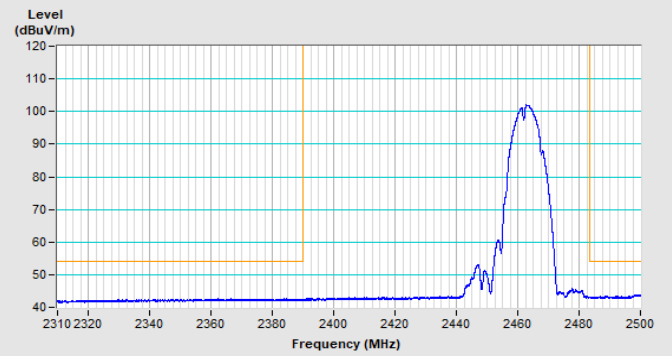
802.11b Channel 1



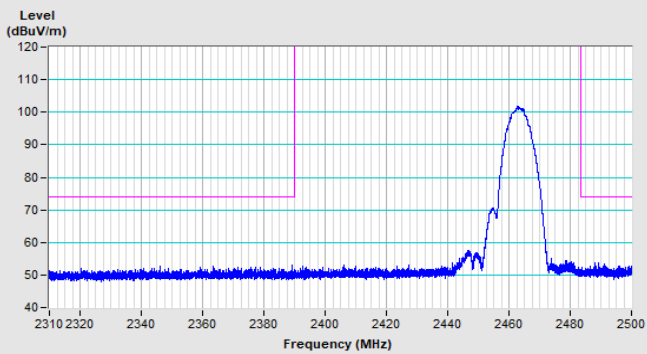
802.11b Channel 11



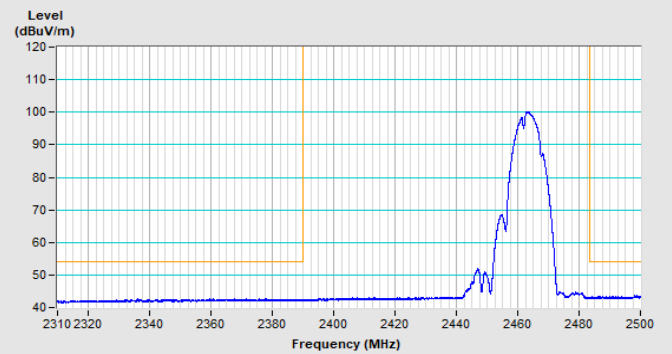
Horizontal (Peak)



Horizontal (Average)



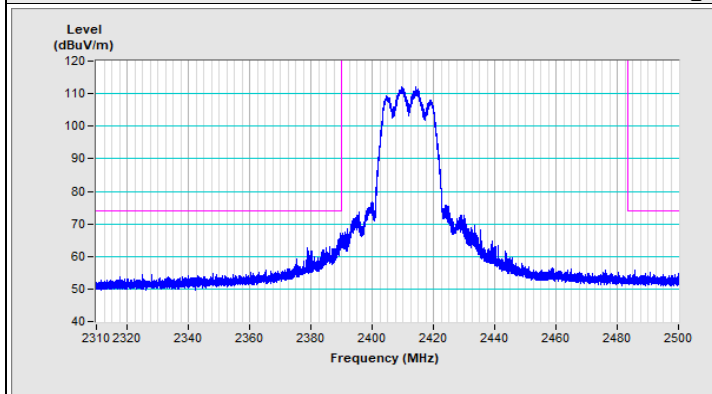
Vertical (Peak)



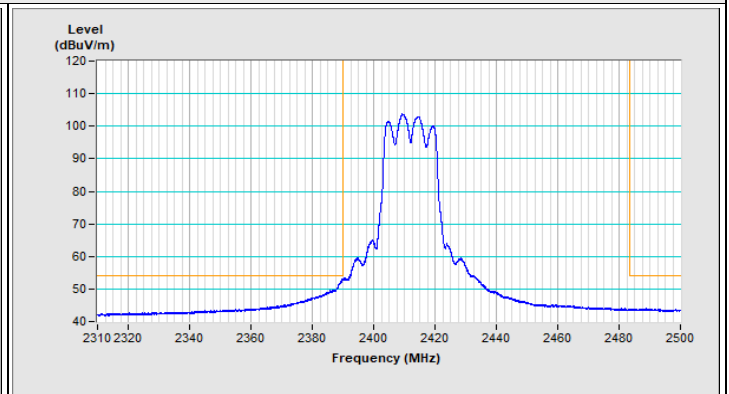
Vertical (Average)

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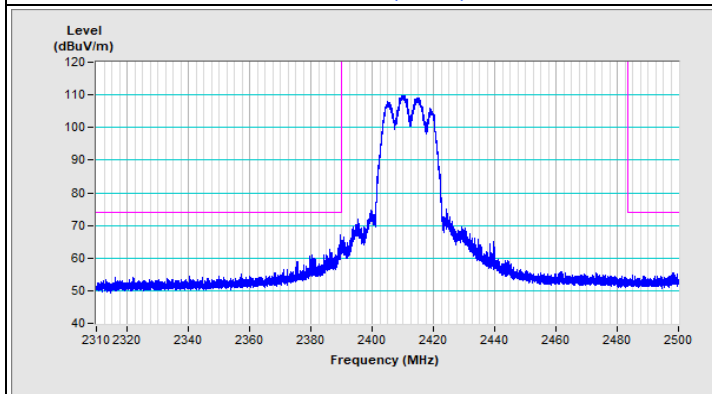
802.11g Channel 1



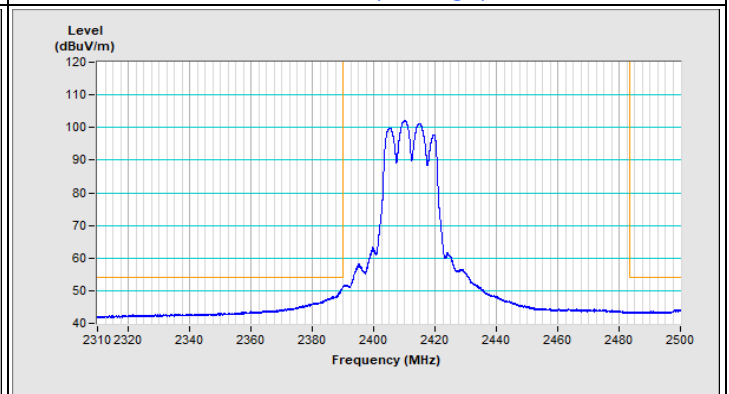
Horizontal (Peak)



Horizontal (Average)

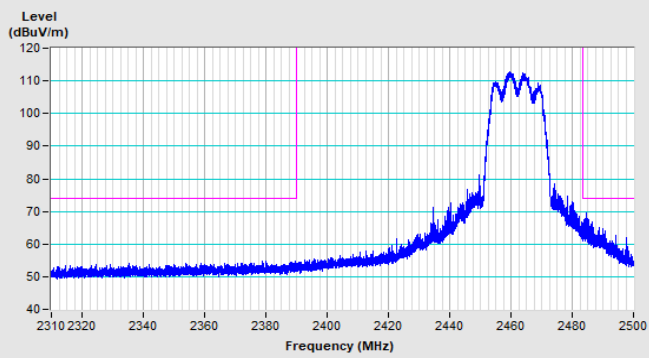


Vertical (Peak)

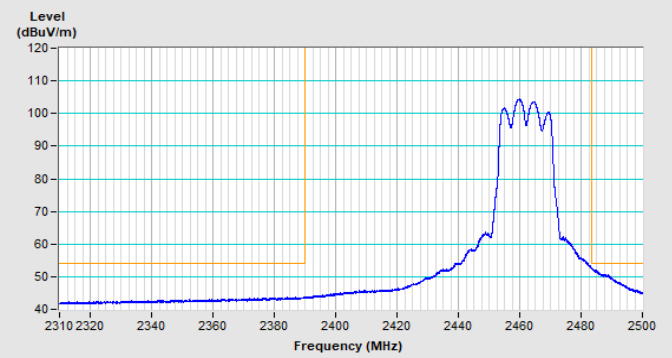


Vertical (Average)

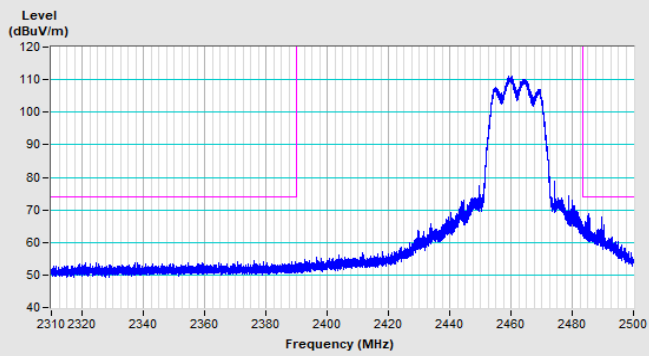
802.11g Channel 11



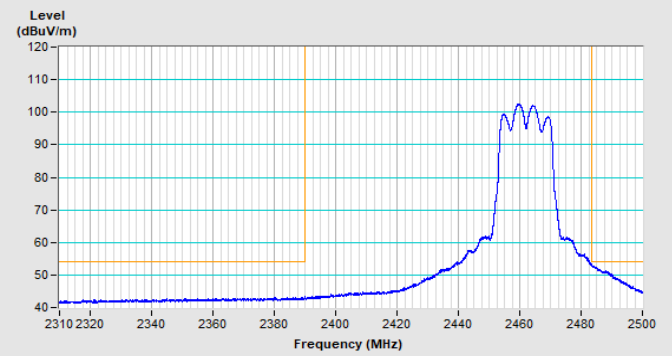
Horizontal (Peak)



Horizontal (Average)



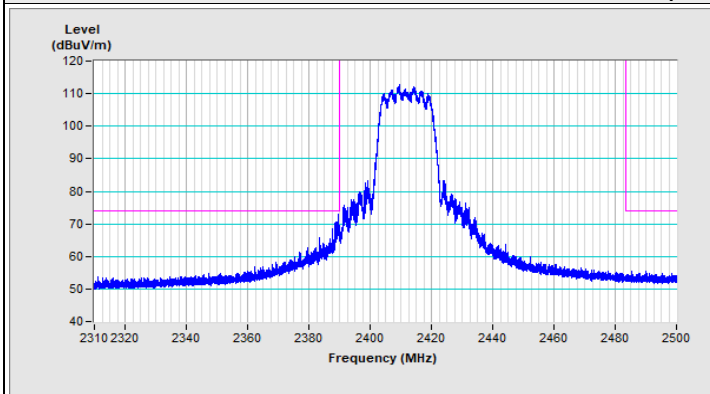
Vertical (Peak)



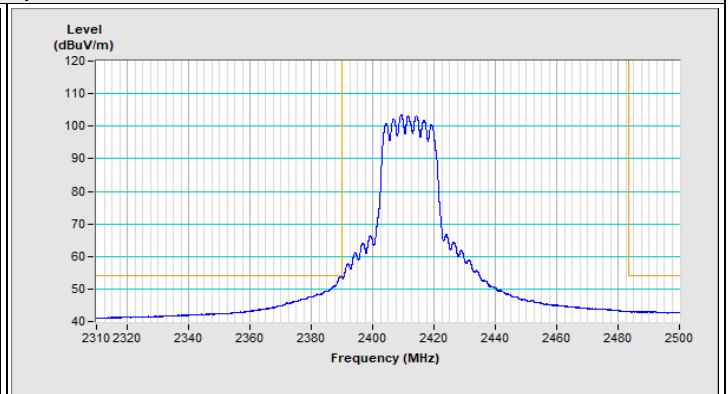
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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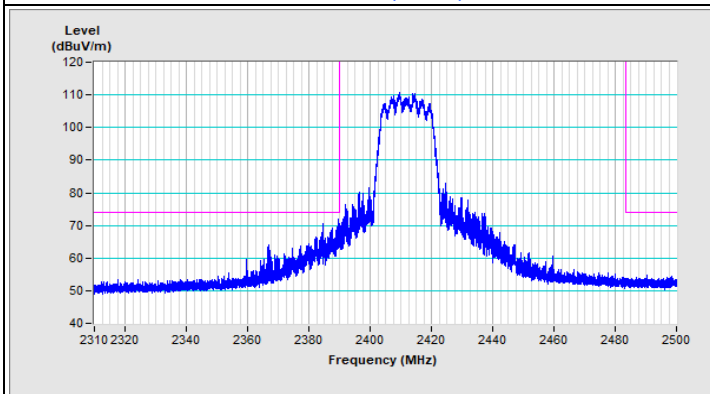
802.11n (HT20) Channel 1



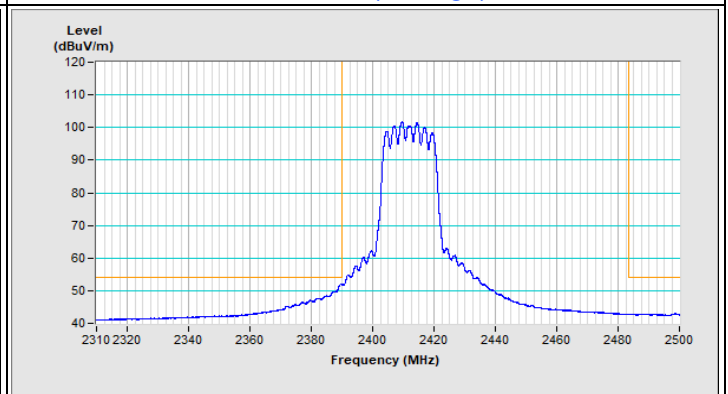
Horizontal (Peak)



Horizontal (Average)

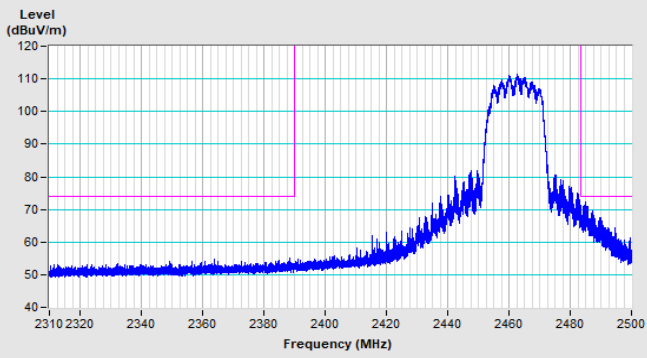


Vertical (Peak)

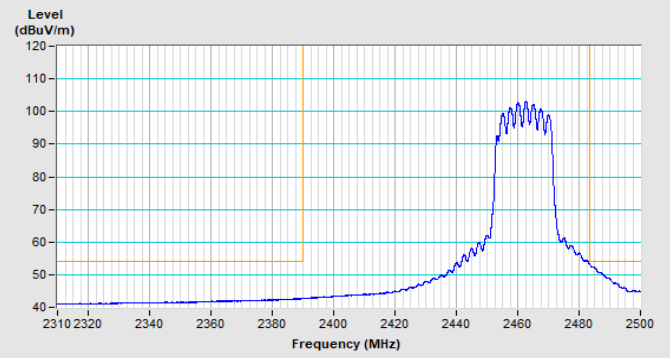


Vertical (Average)

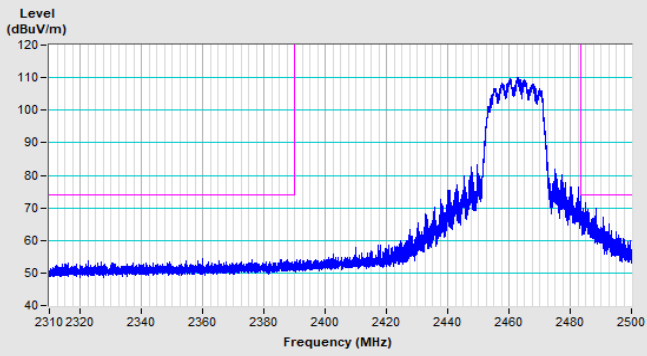
802.11n (HT20) Channel 11



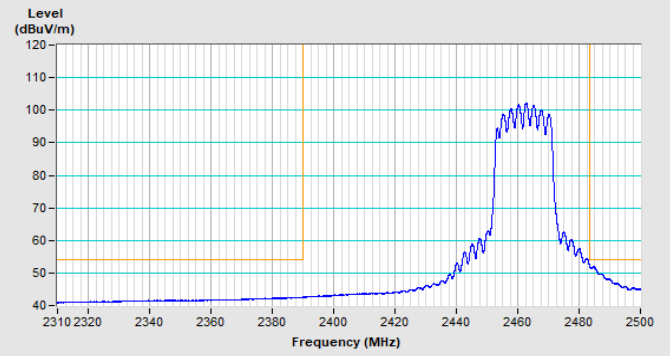
Horizontal (Peak)



Horizontal (Average)



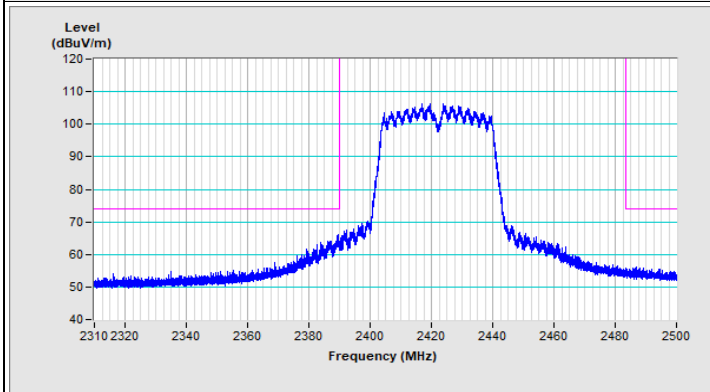
Vertical (Peak)



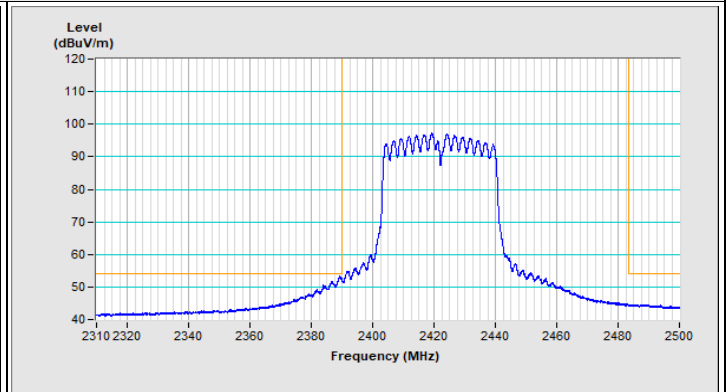
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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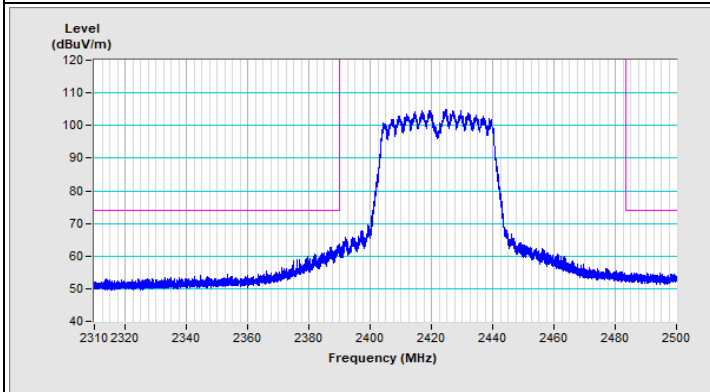
802.11n (HT40) Channel 3



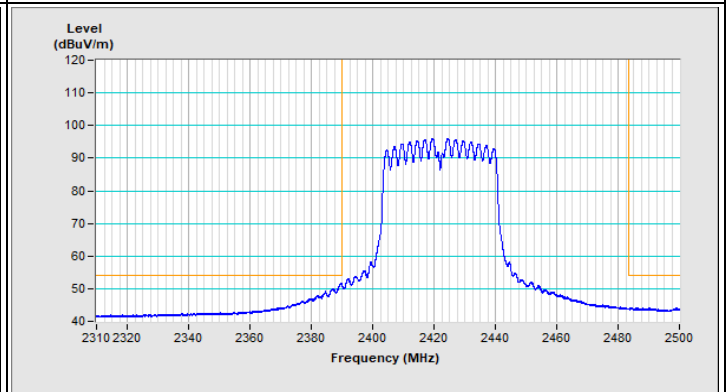
Horizontal (Peak)



Horizontal (Average)

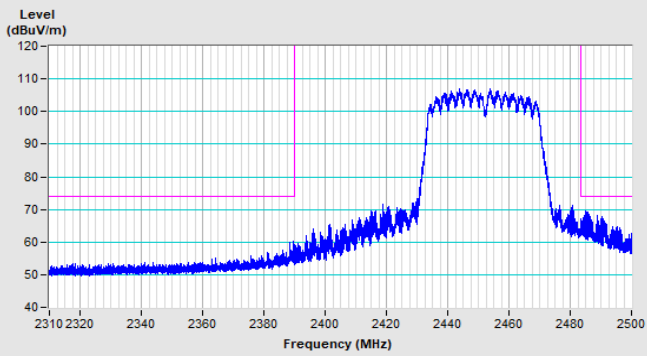


Vertical (Peak)

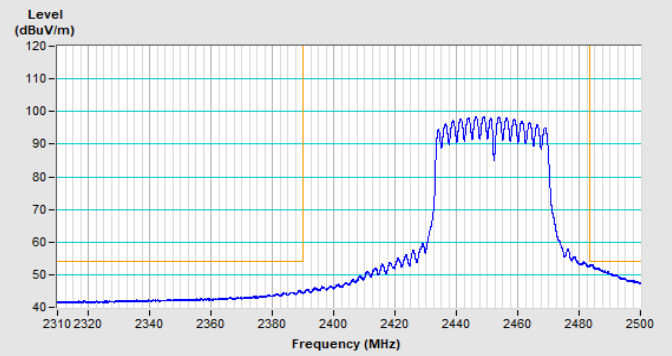


Vertical (Average)

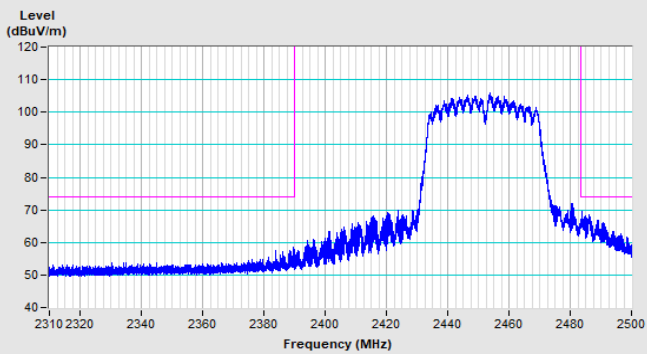
802.11n (HT40) Channel 9



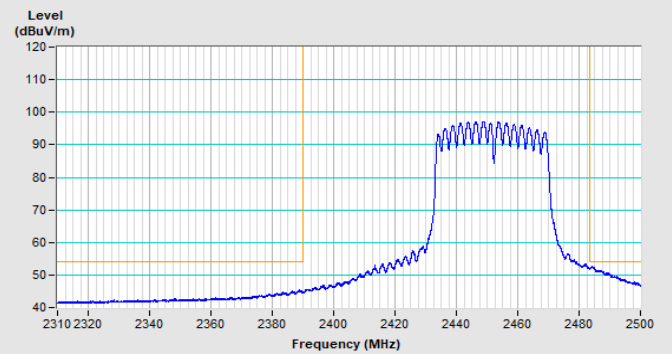
Horizontal (Peak)



Horizontal (Average)



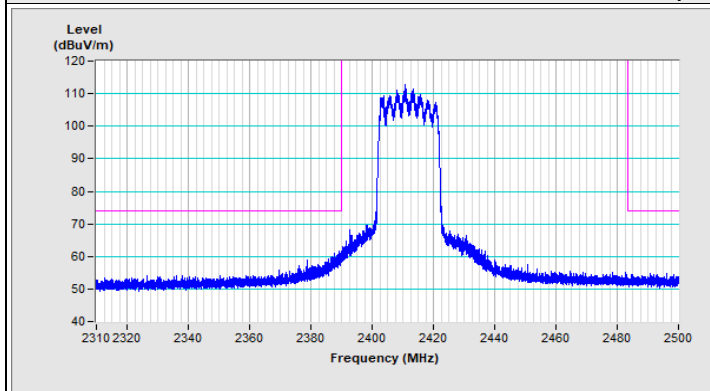
Vertical (Peak)



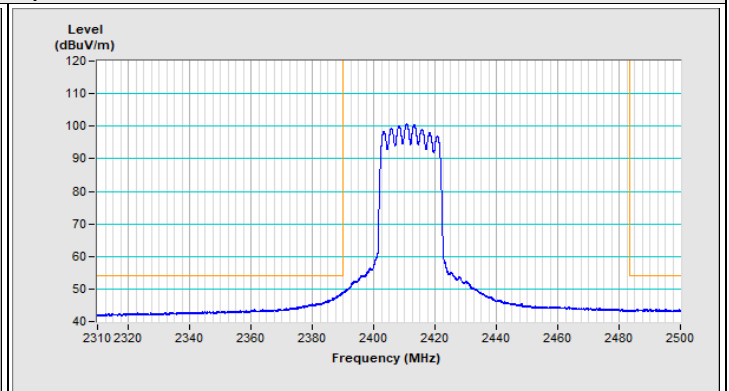
Vertical (Average)

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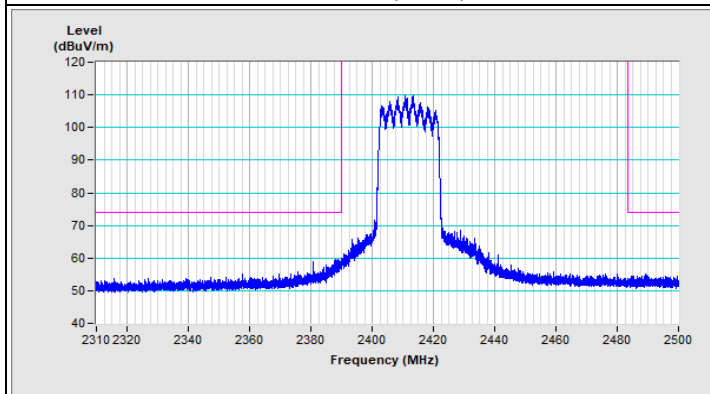
802.11ax (HE20) Channel 1



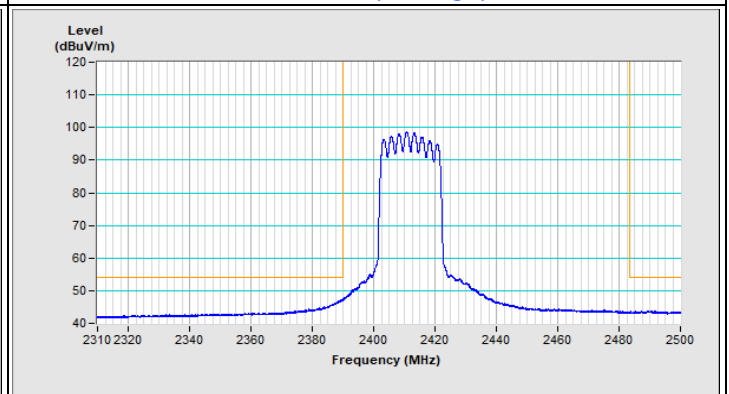
Horizontal (Peak)



Horizontal (Average)

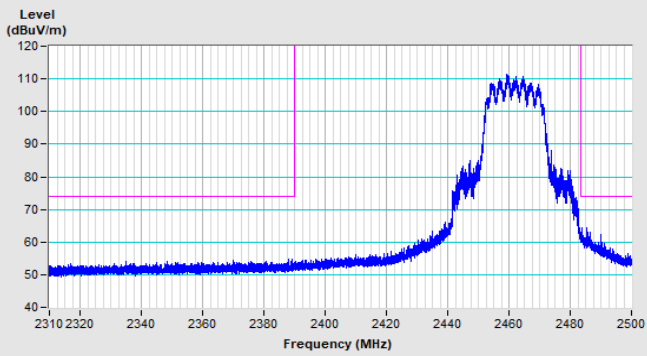


Vertical (Peak)

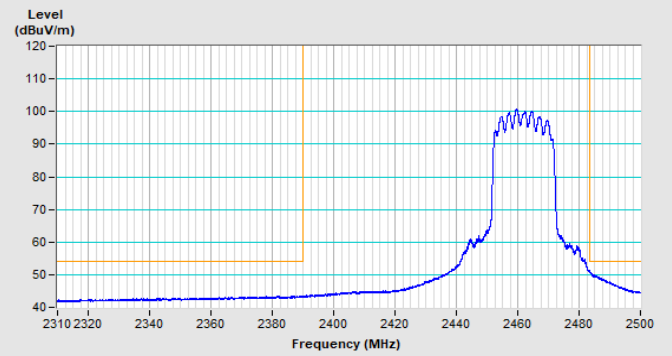


Vertical (Average)

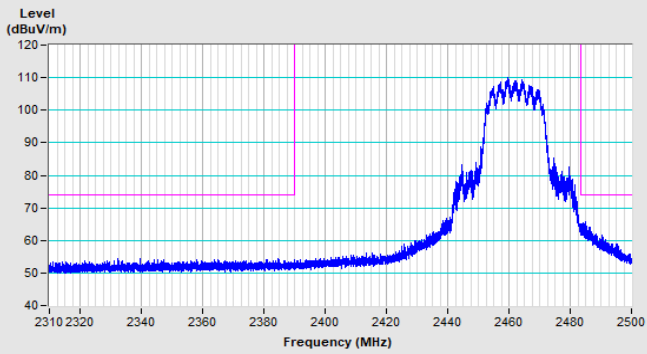
802.11ax (HE20) Channel 11



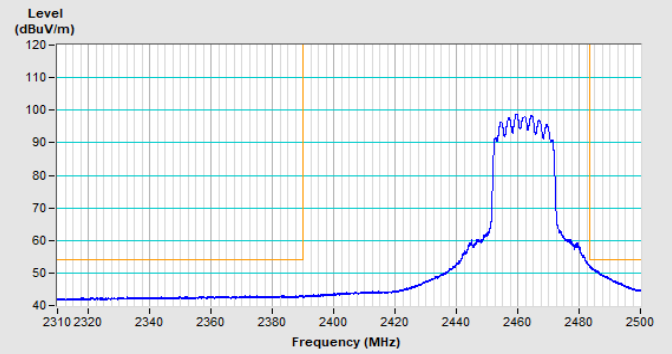
Horizontal (Peak)



Horizontal (Average)



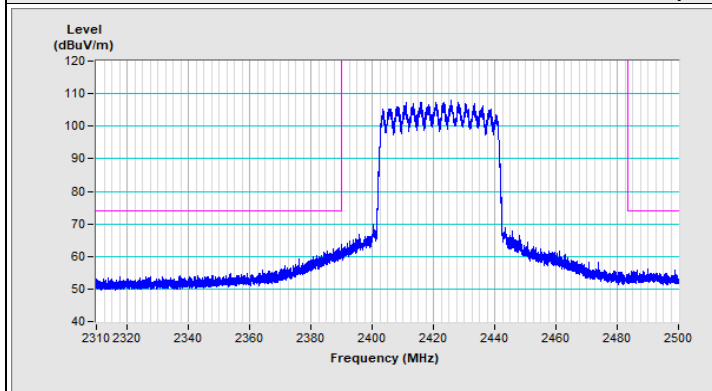
Vertical (Peak)



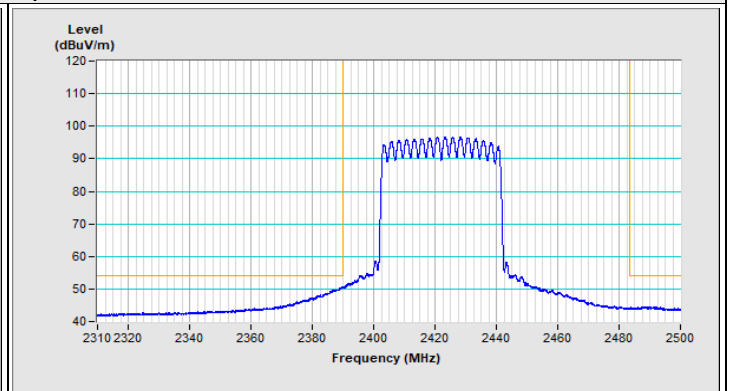
Vertical (Average)

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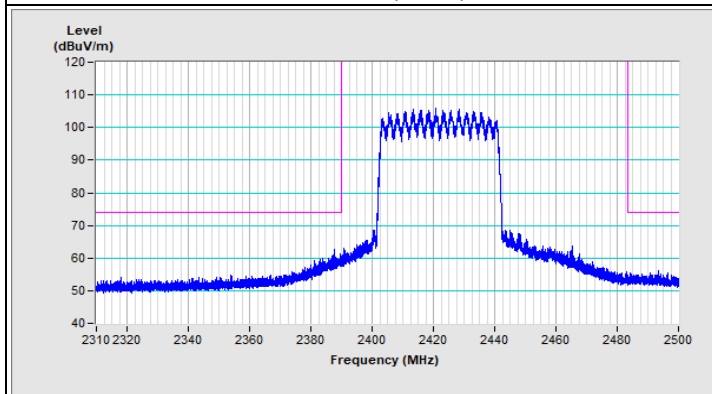
802.11ax (HE40) Channel 3



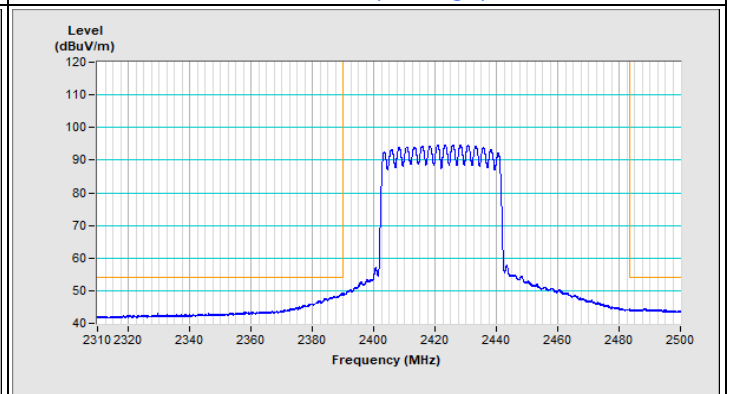
Horizontal (Peak)



Horizontal (Average)

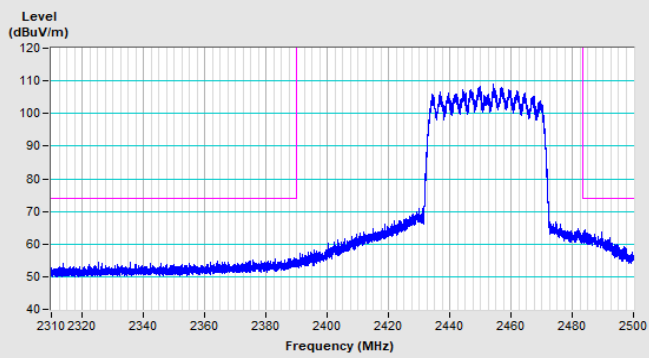


Vertical (Peak)

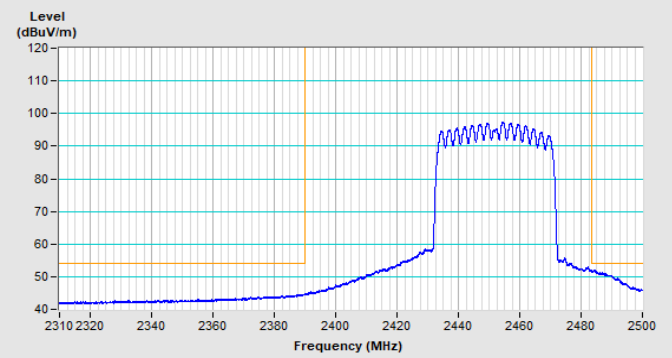


Vertical (Average)

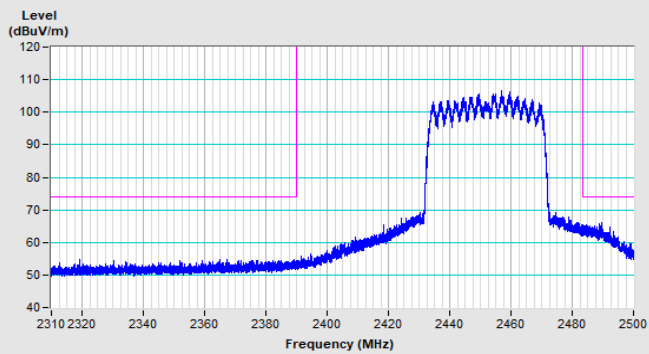
802.11ax (HE40) Channel 9



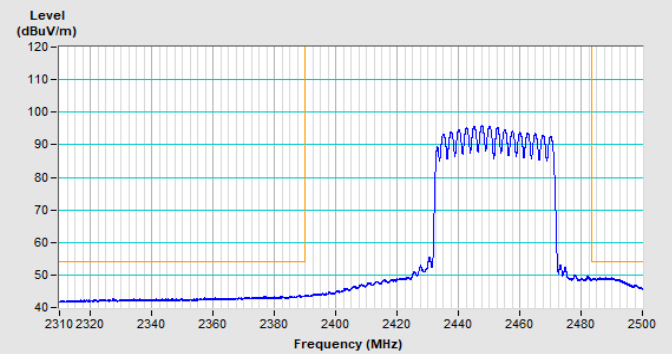
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

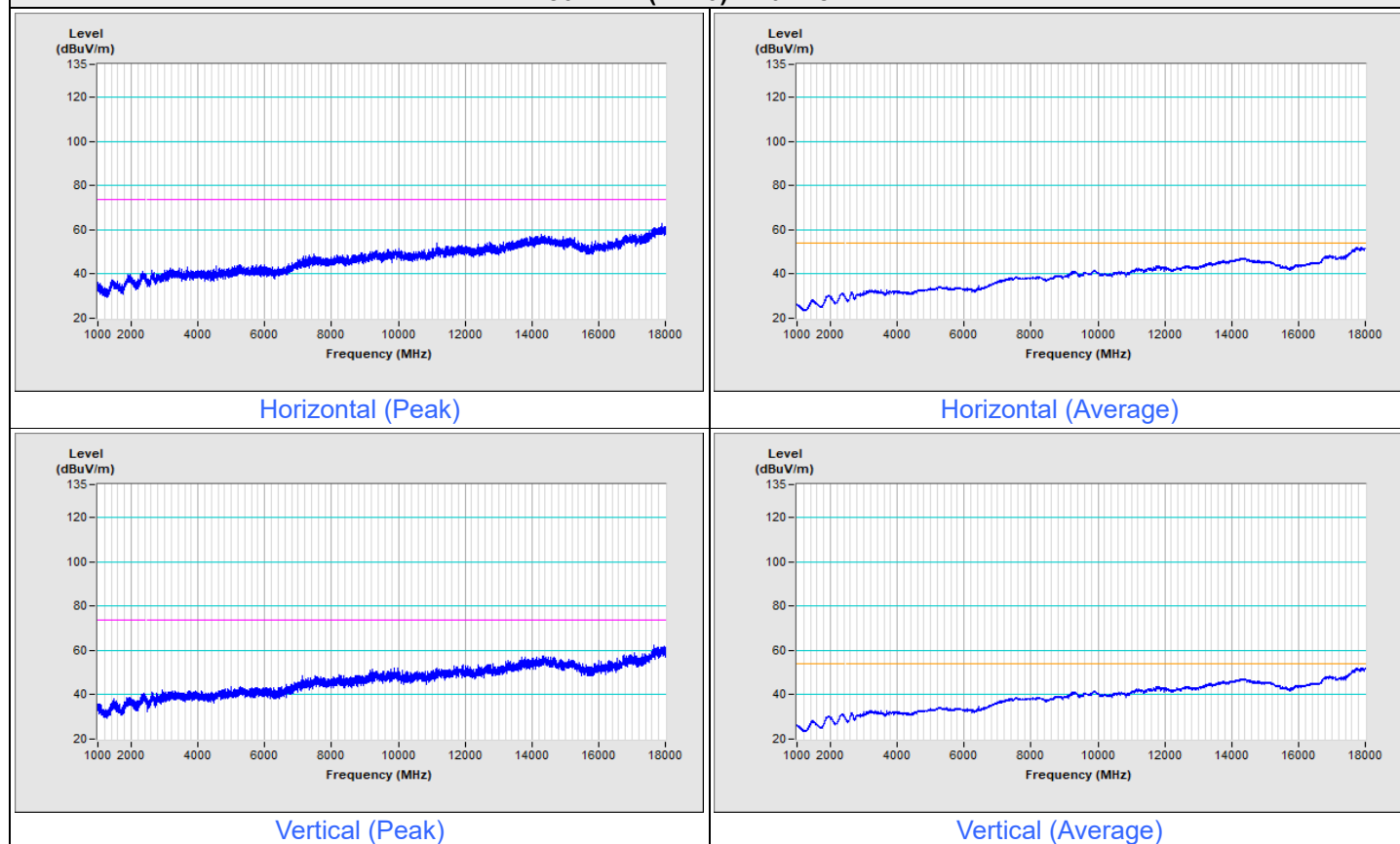


Vertical (Average)

Plot of Other Emission

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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802.11n (HT20) Channel 11



Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

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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