

FCC Test Report (2.4GHz WLAN)

Report No.: RFBARR-WTW-P21100969

FCC ID: RAS-MT7902

Test Model: MT7902

Received Date: 2021/10/28

Test Date: 2021/10/28 ~ 2022/1/19

Issued Date: 2022/1/28

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



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Table of Contents

Release Control Record	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information.....	7
3.1 General Description of EUT (2.4GHz WLAN)	7
3.2 Description of Test Modes	9
3.2.1 Test Mode Applicability and Tested Channel Detail	10
3.3 Duty Cycle of Test Signal	12
3.4 Description of Support Units	14
3.4.1 Configuration of System under Test	15
3.5 General Description of Applied Standards and References	16
4 Test Types and Results	17
4.1 Radiated Emission and Bandedge Measurement.....	17
4.1.1 Limits of Radiated Emission and Bandedge Measurement	17
4.1.2 Test Instruments	18
4.1.3 Test Procedures.....	20
4.1.4 Deviation from Test Standard	21
4.1.5 Test Setup.....	21
4.1.6 EUT Operating Conditions.....	22
4.1.7 Test Results	23
4.2 Conducted Emission Measurement	54
4.2.1 Limits of Conducted Emission Measurement	54
4.2.2 Test Instruments	54
4.2.3 Test Procedures.....	55
4.2.4 Deviation from Test Standard	55
4.2.5 Test Setup.....	55
4.2.6 EUT Operating Conditions.....	55
4.2.7 Test Results	56
4.3 6dB Bandwidth Measurement	58
4.3.1 Limits of 6dB Bandwidth Measurement.....	58
4.3.2 Test Setup.....	58
4.3.3 Test Instruments	58
4.3.4 Test Procedure	58
4.3.5 Deviation from Test Standard	58
4.3.6 EUT Operating Conditions.....	58
4.3.7 Test Result.....	59
4.4 Conducted Output Power Measurement.....	62
4.4.1 Limits of Conducted Output Power Measurement	62
4.4.2 Test Setup.....	62
4.4.3 Test Instruments	62
4.4.4 Test Procedures.....	62
4.4.5 Deviation from Test Standard	62
4.4.6 EUT Operating Conditions.....	62
4.4.7 Test Results	63
4.5 Power Spectral Density Measurement.....	67
4.5.1 Limits of Power Spectral Density Measurement	67
4.5.2 Test Setup.....	67
4.5.3 Test Instruments	67
4.5.4 Test Procedure	67
4.5.5 Deviation from Test Standard	67
4.5.6 EUT Operating Condition	67

4.5.7 Test Results	68
4.6 Conducted Out of Band Emission Measurement	71
4.6.1 Limits of Conducted Out of Band Emission Measurement.....	71
4.6.2 Test Setup.....	71
4.6.3 Test Instruments	71
4.6.4 Test Procedure	71
4.6.5 Deviation from Test Standard	71
4.6.6 EUT Operating Condition	71
4.6.7 Test Results	71
5 Pictures of Test Arrangements.....	84
Annex A - Band-Edge Measurement.....	85
Appendix – Information of the Testing Laboratories	105

Release Control Record

Issue No.	Description	Date Issued
RFBARR-WTW-P21100969	Original release.	2022/1/28

1 Certificate of Conformity

Product: 1TX 11ax (WiFi6E) BW160 + BT/BLE Combo Card

Brand: MediaTek

Test Model: MT7902

Sample Status: Engineering sample

Applicant: MediaTek Inc.

Test Date: 2021/10/28 ~ 2022/1/19

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

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 EMC characteristics under the conditions specified in this report.

Prepared by : Vivian Huang , **Date:** 2022/1/28
Vivian Huang / Specialist

Approved by : Clark Lin , **Date:** 2022/1/28
Clark Lin / Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -14.75 dB at 0.52109 MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2483.50 MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

Note:

- For 2.4 GHz band compliance with rule 15.247(d) of the band-edge items, the test plots were recorded in Annex A.
- 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	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.9 dB
Conducted emissions	-	2.5 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.5 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (2.4GHz WLAN)

Product	1TX 11ax (WiFi6E) BW160 + BT/BLE Combo Card
Brand	MediaTek
Test Model	MT7902
Status of EUT	Engineering sample
Power Supply Rating	3.3 Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 150 Mbps VHT20/40: up to 200 Mbps 802.11ax: up to 286.8 Mbps
Operating Frequency	2.412 ~ 2.472 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 13 802.11n (HT40), VHT40, 802.11ax (HE40): 9
Output Power	331.894 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. There are Bluetooth and WLAN (2.4GHz & 5GHz & 5.9GHz & 6GHz) technology used for the EUT.
2. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (5GHz or 5.9GHz)	Bluetooth
2	WLAN (6GHz)	Bluetooth

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

3. The EUT have four HW SKU as following table:

SKU	Sample	Difference
1	Diversity version A	1. Version A & B are also same PCB with layout change. 2. The difference is adding/removing MOSFET components in GPIO bus for function optional.
2	Diversity version B	
3	1 TX only version A	
4	1 TX only version B	

Note: From the above HW SKUs, the worse case was found in **SKU 1**. Therefore only the test data of the SKU was recorded in this report.

4. The antennas provided to the EUT, please refer to the following table:

Antenna Set No	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	Chain0	PSA	RFMTA340718EMLB302	3.18	2.4~2.4835	PIFA	ipex(MHF)	200
				4.92	5.15~5.895			
	Chain1 (only DiversitySample)	PSA	RFMTA340718EMLB302	3.18	2.4~2.4835	PIFA	ipex(MHF)	200
				4.92	5.15~5.895			
2	Chain0	PSA	RFMTA311020EMMB301	1.71	2.4~2.4835	PIFA	ipex(MHF)	200
				4.82	5.15~5.895			
				4.76	5.925~6.425			
				4.29	6.425~6.525			
				4.61	6.525~6.875			
	Chain1 (only DiversitySample)	PSA	RFMTA311020EMMB301	4.09	6.875~7.125	PIFA	ipex(MHF)	200
				1.71	2.4~2.4835			
				4.82	5.15~5.895			
				4.76	5.925~6.425			
				4.29	6.425~6.525			

Note:

1. From the above transmission chains, the worse case was found in transmission on Chain 0 for 1TX diversity sample. Therefore only the test data of the mode was recorded in this report.
2. The Bluetooth technology will fix transmission on Chain 0.
3. Max. gain was selected for the final test.

5. The EUT incorporates a SISO function:

2.4GHz Band					
MODULATION MODE	TX & RX CONFIGURATION		SISO mode	Beamforming mode	
802.11b	1TX Diversity or 1TX	1RX	Support	Not Support	
802.11g	1TX Diversity or 1TX	1RX	Support	Not Support	
802.11n (HT20)	1TX Diversity or 1TX	1RX	Support	Not Support	
802.11n (HT40)	1TX Diversity or 1TX	1RX	Support	Not Support	
VHT20	1TX Diversity or 1TX	1RX	Support	Not Support	
VHT40	1TX Diversity or 1TX	1RX	Support	Not Support	
802.11ax (HE20)	1TX Diversity or 1TX	1RX	Support	Not Support	
802.11ax (HE40)	1TX Diversity or 1TX	1RX	Support	Not Support	
802.11ax (RU26/52/106/242/484)	1TX Diversity or 1TX	1RX	Support	Not Support	

Note:

1. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and VHT mode for 20MHz (40MHz), therefore the manufacturer will control the power for 802.11n/VHT mode is the same as the 802.11ax or more lower than it and investigated worst case to representative mode in test report.
2. For Partial RU, after pre-tested, only the worse cases were chosen for final test and presented in the test report. (Final test mode refer section 3.2.1)
6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.
7. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Description of Test Modes

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442		

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	8	2447
4	2427	9	2452
5	2432	10	2457
6	2437	11	2462
7	2442		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz & Bandedge Measurement

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-place**.

Radiated Emission Test (Above 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter	RU Configuration
802.11b	1 to 13	1, 6, 11, 12, 13	DSSS	DBPSK	1Mb/s	-
802.11g	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	6Mb/s	-
802.11ax (HE20)	1 to 13	1, 6, 11, 12, 13	OFDMA	BPSK	MCS0	-
802.11ax (HE40)	3 to 11	3, 6, 9, 10, 11	OFDMA	BPSK	MCS0	-
802.11ax (RU26)	1 to 13	1, 11, 12, 13	OFDMA	BPSK	MCS0	26/0, 26/8, 26/8, 26/8
802.11ax (RU52)	1 to 13	6	OFDMA	BPSK	MCS0	52/37
802.11ax (RU106)	1 to 13	1, 11, 12, 13	OFDMA	BPSK	MCS0	106/53, 106/54, 106/54, 106/54

Radiated Emission Test (Below 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11b	1 to 13	6	DSSS	DBPSK	1Mb/s

Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11b	1 to 13	6	DSSS	DBPSK	1Mb/s

Antenna Port Conducted Measurement:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, RU configurations and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE PARAMETER	RU Configuration
802.11b	1 to 13	1, 6, 11, 12, 13	DSSS	DBPSK	1Mb/s	-
802.11g	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	6Mb/s	-
VHT20 (output power only)	1 to 13	1, 6, 11, 12, 13	OFDM	BPSK	MCS0	-
VHT40 (output power only)	3 to 11	3, 6, 9, 10, 11	OFDM	BPSK	MCS0	-
802.11ax (HE20)	1 to 13	1, 6, 11, 12, 13	OFDMA	BPSK	MCS0	-
802.11ax (HE40)	3 to 11	3, 6, 9, 10, 11	OFDMA	BPSK	MCS0	-
802.11ax (RU26)	1 to 13	1, 11, 12, 13	OFDMA	BPSK	MCS0	26/0, 26/8, 26/8, 26/8
802.11ax (RU52)	1 to 13	6	OFDMA	BPSK	MCS0	52/37
802.11ax (RU106)	1 to 13	1, 11, 12, 13	OFDMA	BPSK	MCS0	106/53, 106/54, 106/54, 106/54

Test Condition:

Applicable to	Environmental Conditions	Input Power (System)	Tested By
RE _≥ 1G	25deg. C, 65%RH	120Vac, 60Hz	Carter Lin
RE _{<} 1G	23deg. C, 66%RH	120Vac, 60Hz	Carter Lin
PLC	25deg. C, 66%RH	120Vac, 60Hz	Sampson Chen
APCM	25deg. C, 60%RH	120Vac, 60Hz	Eric Peng

3.3 Duty Cycle of Test Signal

For Legacy mode:

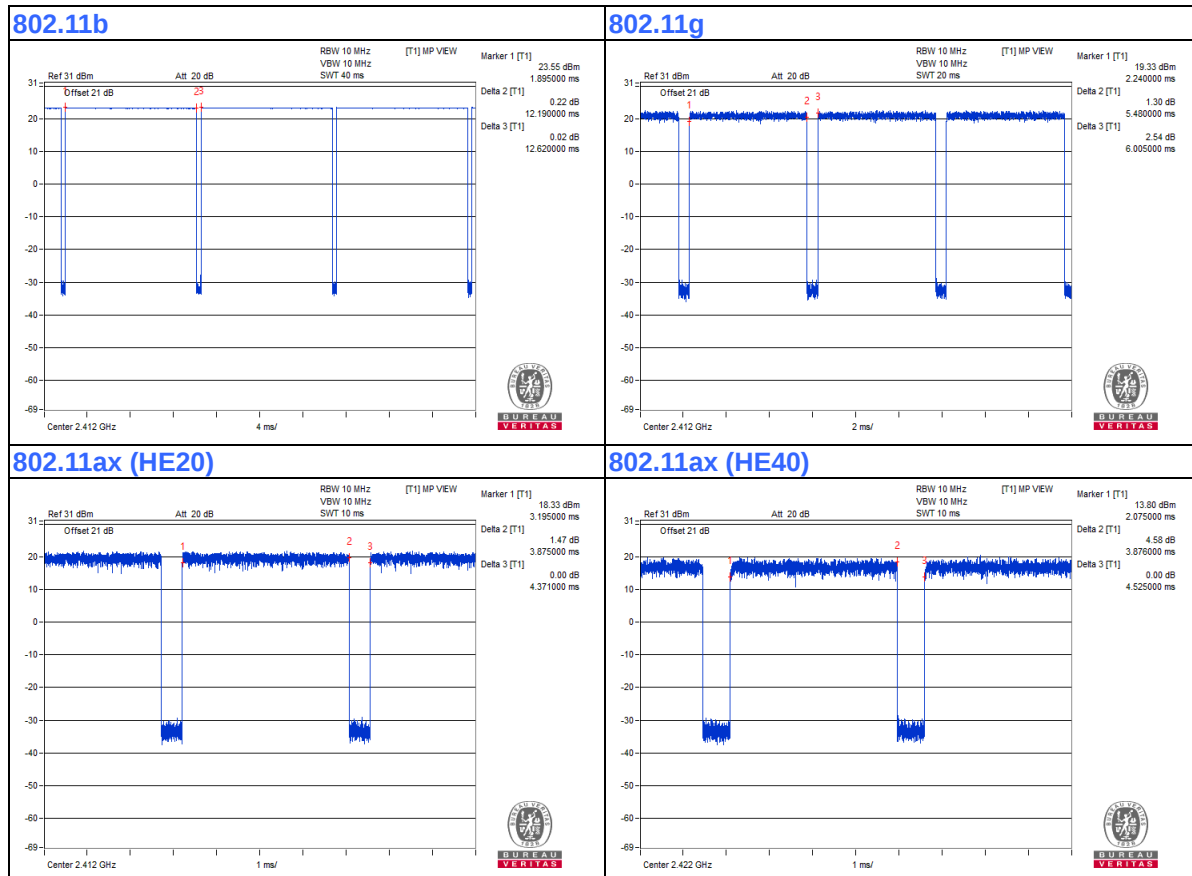
Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11b: Duty cycle = 12.19 ms/12.62 ms = 0.966, Duty factor = $10 * \log(1/\text{Duty cycle}) = 0.15 \text{ dB}$

802.11g: Duty cycle = 5.48 ms/6.005 ms = 0.913, Duty factor = $10 * \log(1/\text{Duty cycle}) = 0.40 \text{ dB}$

802.11ax (HE20): Duty cycle = 3.875 ms/4.371 ms = 0.887, Duty factor = $10 * \log(1/\text{Duty cycle}) = 0.52 \text{ dB}$

802.11ax (HE40): Duty cycle = 3.876 ms/4.525 ms = 0.857, Duty factor = $10 * \log(1/\text{Duty cycle}) = 0.67 \text{ dB}$



For RU mode:

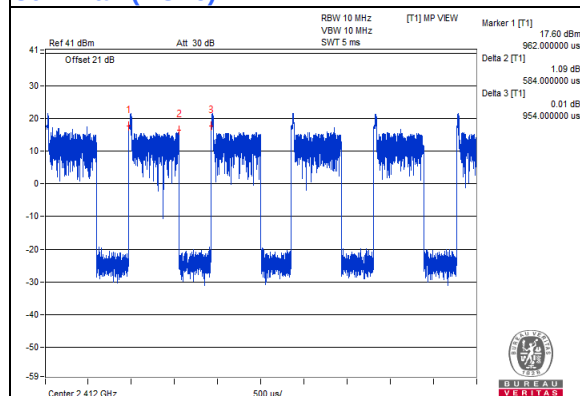
Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11ax (RU26): Duty cycle = 0.584 ms/0.954 ms = 0.612, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 2.13 \text{ dB}$

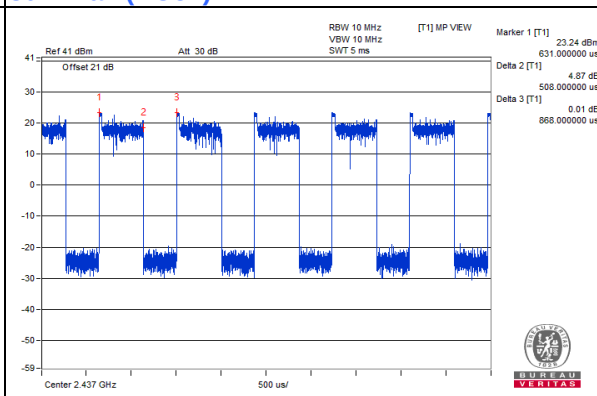
802.11ax (RU52): Duty cycle = 0.508 ms/0.868 ms = 0.585, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 2.33 \text{ dB}$

802.11ax (RU106): Duty cycle = 0.435 ms/0.809 ms = 0.538, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 2.69 \text{ dB}$

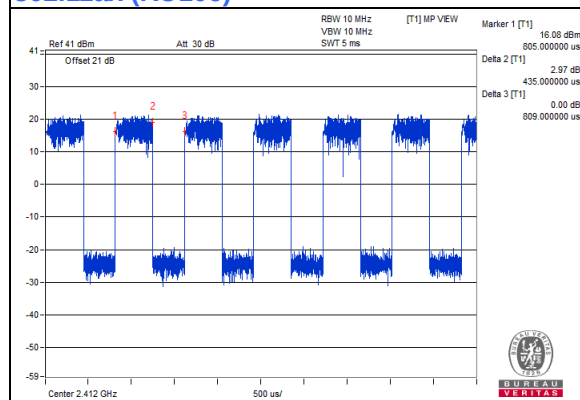
802.11ax (RU26)



802.11ax (RU52)



802.11ax (RU106)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E6440	F9LYQ32	FCC DoC	Provided by Lab
B.	Test Tool	MTK	NA	NA	NA	Supplied by applicant
C.	Adapter	Dell	LA65NS2-01	NA	NA	Provided by Lab

Note:

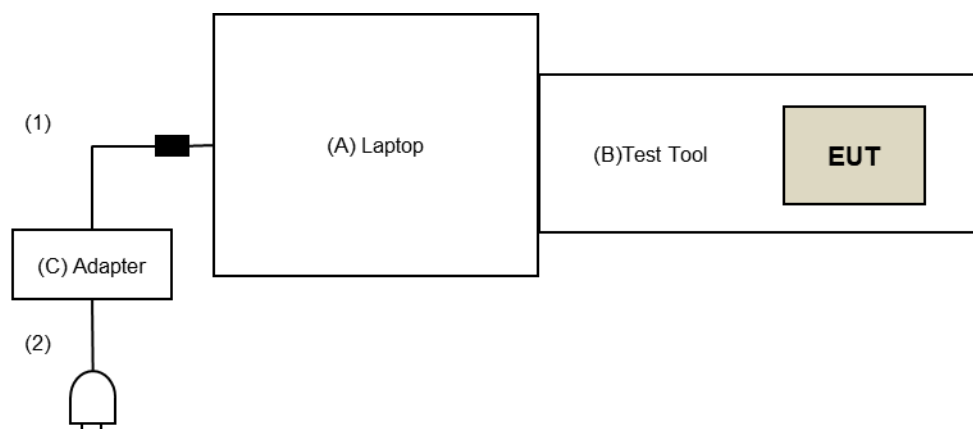
1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Cable	1	1.8	No	1	Provided by Lab
2.	AC Cable	1	1.8	No	0	Provided by Lab

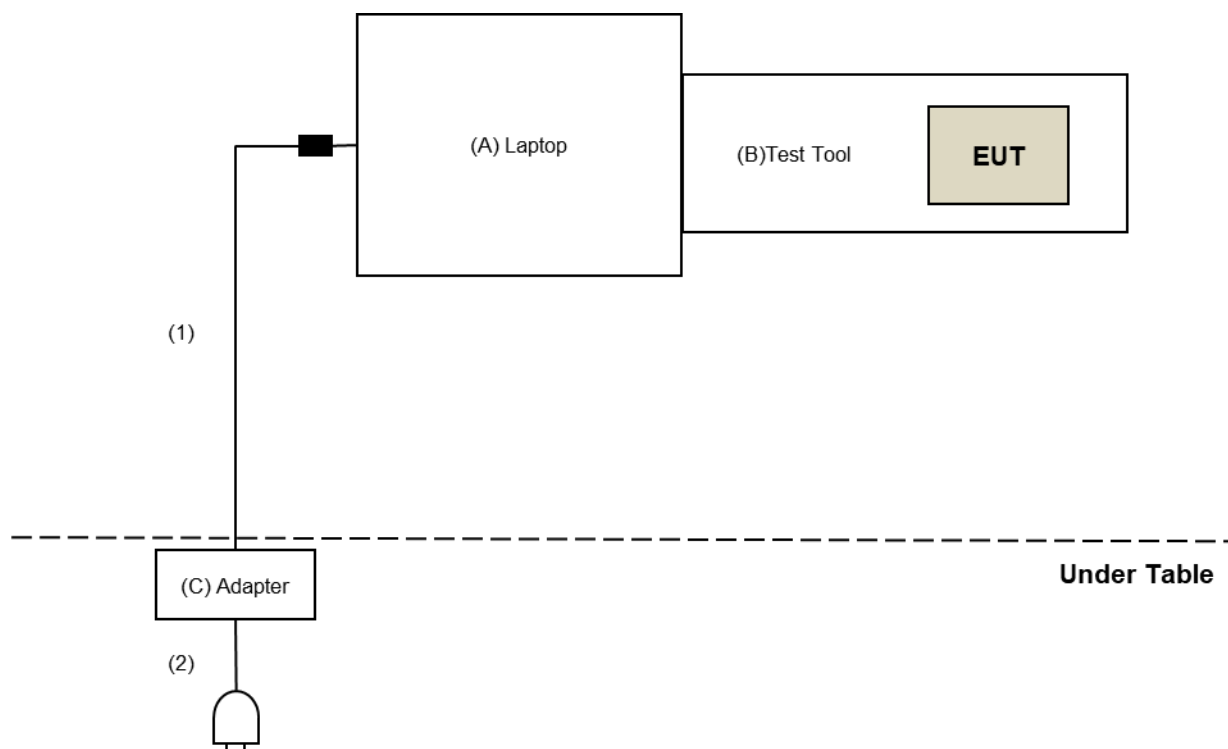
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

For AC Power Conducted Emission test:



For Radiated Emission test:



3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC Part 15, Subpart C (15.247)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 558074 D01 15.247 Meas Guidance v05r02

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB 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

Note:

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 1000MHz, 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 20dB under any condition of modulation.

4.1.2 Test Instruments

For Radiated Emission test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	2021/11/19	2022/11/18
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA
Pre_Amplifier EMCI	EMC001340	980142	2021/5/24	2022/5/23
LOOP ANTENNA Electro-Metrics	EM-6879	264	2021/3/5	2022/3/4
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2022/1/6	2023/1/5
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-002	2022/1/6	2023/1/5
Pre_Amplifier EMCI	EMC330N	980701	2021/3/10	2022/3/9
Trilog Broadband Antenna Schwarzbeck	VULB 9168	9168-406	2021/10/27	2022/10/26
RF Coaxial Cable COMMATE/PEWC	8D	966-4-1	2021/3/17	2022/3/16
RF Coaxial Cable COMMATE/PEWC	8D	966-4-2	2021/3/17	2022/3/16
RF Coaxial Cable COMMATE/PEWC	8D	966-4-3	2021/3/17	2022/3/16
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2022/1/10	2023/1/9
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC 12630 SE	980638	2021/4/7	2022/4/6
RF Cable-Frequency Range : 1-26.5GHz EMCI	EMC104-SM-SM-1200	160922	2021/12/24	2022/12/23
RF Coaxial Cable EMCI	EMC104-SM-SM-2000	180502	2021/4/26	2022/4/25
RF Coaxial Cable EMCI	EMC104-SM-SM-6000	210704	2021/11/9	2022/11/8
Pre_Amplifier EMCI	EMC184045SE	980387	2022/1/10	2023/1/9
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170519	2021/11/14	2022/11/13
RF Cable-Frequency range: 1-40GHz EMCI	EMC102-KM-KM-1200	160924	2022/1/10	2023/1/9
RF cable (40GHz) EMCI	EMC-KM-KM-4000	200214	2021/3/10	2022/3/9

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: 2022/1/19

For BandEdge test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Signal Analyzer Keysight	N9010A	MY56070348	2021/9/15	2022/9/14
MXE EMI Receiver KEYSIGHT	N9038B	MY60180019	2021/2/1	2022/1/31
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2020/11/22	2021/11/21
Pre_Amplifier EMC	EMC 12630 SE	980638	2021/4/7	2022/4/6
RF Cable-Frequency Range : 1-26.5GHz EMC	EMC104-SM-SM-1200	160922	2020/12/25	2021/12/24
RF Coaxial Cable EMC	EMC104-SM-SM-2000	180502	2021/4/26	2022/4/25
RF Coaxial Cable EMC	EMC104-SM-SM-6000	180418	2021/4/26	2022/4/25
Pre_Amplifier EMC	EMC184045SE	980387	2021/1/11	2022/1/10
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170519	2020/11/22	2021/11/21
RF Cable-Frequency range: 1-40GHz EMC	EMC102-KM-KM-1200	160924	2021/1/11	2022/1/10
RF cable (40GHz) EMC	EMC-KM-KM-4000	200214	2021/3/10	2022/3/9

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: 2021/10/28 ~ 2021/11/5

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	101516	2021/3/8	2022/3/7
Power Meter Anritsu	ML2495A	1529002	2021/6/21	2022/6/20
Pulse Power Sensor Anritsu	MA2411B	1339443	2021/5/31	2022/5/30
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2021/4/13	2022/4/12
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

NOTE:

1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: 2021/12/20 ~ 2022/1/18

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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.

Note:

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

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. 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.

Note:

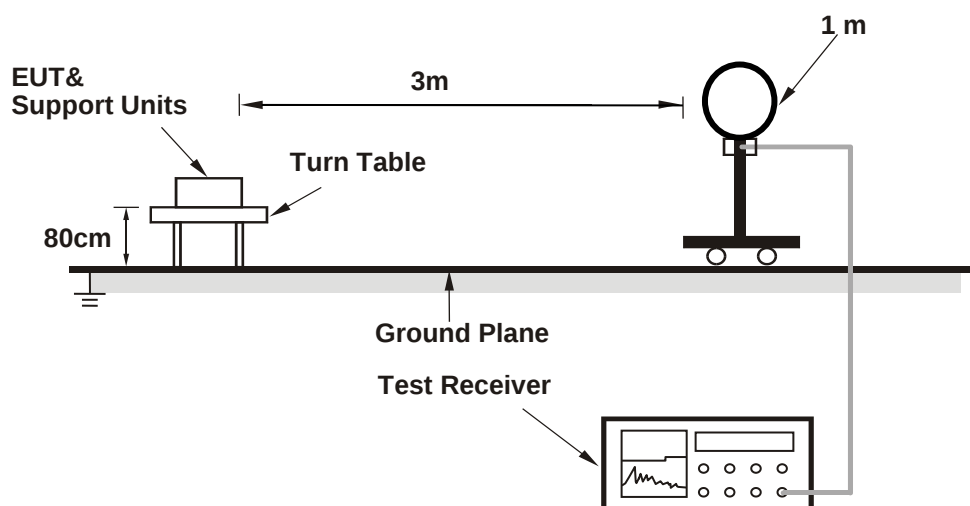
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

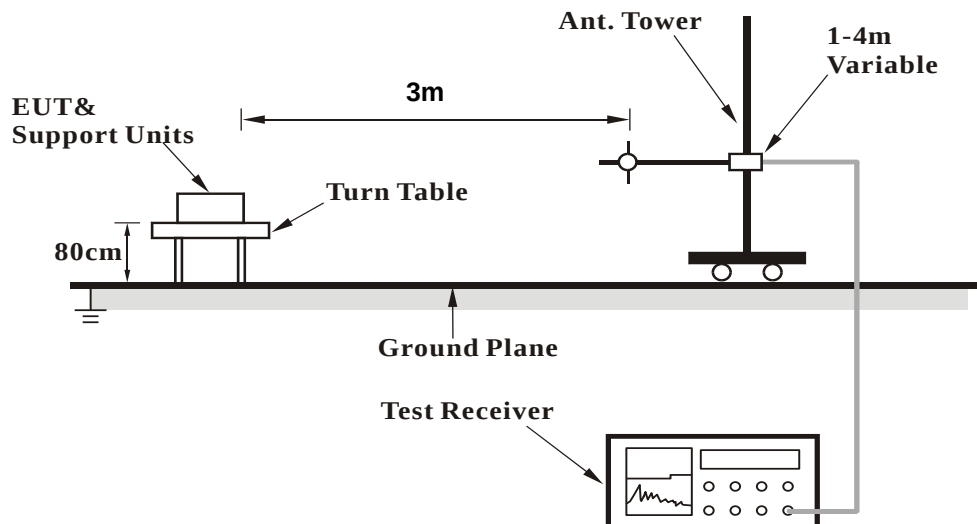
No deviation.

4.1.5 Test Setup

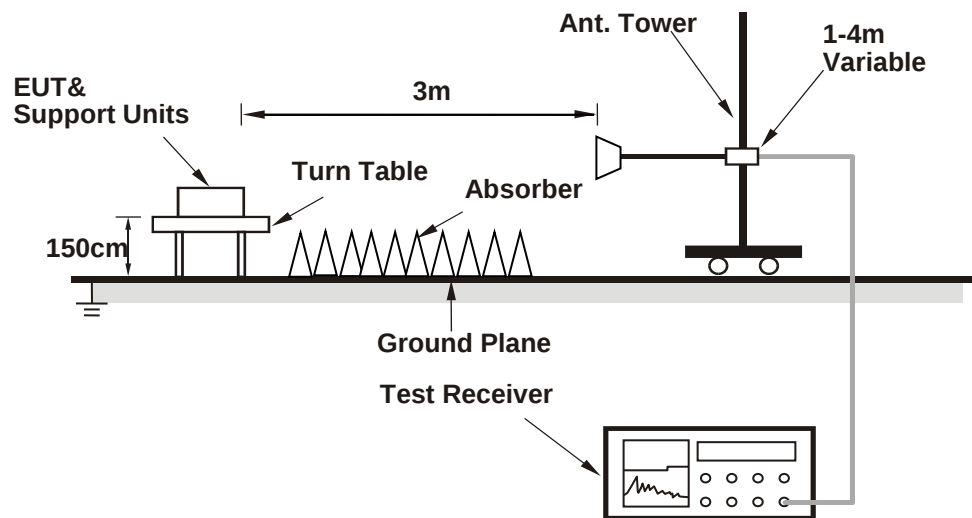
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- a. Placed the EUT on the testing table.
- b. Controlling software (MT7902 QA 0.0.2.82) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

RF Mode	TX 802.11b	Channel	CH 1 : 2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2388.24	59.1 PK	74.0	-14.9	3.03 H	54	63.6	-4.5
2	2388.24	52.9 AV	54.0	-1.1	3.03 H	54	57.4	-4.5
3	*2412.00	112.4 PK			3.03 H	54	116.9	-4.5
4	*2412.00	110.3 AV			3.03 H	54	114.8	-4.5
5	4824.00	44.3 PK	74.0	-29.7	2.09 H	66	44.3	0.0
6	4824.00	41.3 AV	54.0	-12.7	2.09 H	66	41.3	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2385.19	57.5 PK	74.0	-16.5	2.30 V	4	62.0	-4.5
2	2385.19	51.0 AV	54.0	-3.0	2.30 V	4	55.5	-4.5
3	*2412.00	109.6 PK			2.30 V	4	114.1	-4.5
4	*2412.00	107.6 AV			2.30 V	4	112.1	-4.5
5	4824.00	44.3 PK	74.0	-29.7	3.50 V	80	44.3	0.0
6	4824.00	42.8 AV	54.0	-11.2	3.50 V	80	42.8	0.0

Remarks:

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

RF Mode	TX 802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.7 PK	74.0	-14.3	2.98 H	44	64.2	-4.5
2	2390.00	53.1 AV	54.0	-0.9	2.98 H	44	57.6	-4.5
3	*2437.00	114.2 PK			2.98 H	44	118.7	-4.5
4	*2437.00	112.4 AV			2.98 H	44	116.9	-4.5
5	2483.50	59.5 PK	74.0	-14.5	2.98 H	44	64.0	-4.5
6	2483.50	52.9 AV	54.0	-1.1	2.98 H	44	57.4	-4.5
7	4874.00	47.0 PK	74.0	-27.0	2.14 H	70	47.2	-0.2
8	4874.00	44.1 AV	54.0	-9.9	2.14 H	70	44.3	-0.2
9	7311.00	54.9 PK	74.0	-19.1	3.56 H	96	48.7	6.2
10	7311.00	51.2 AV	54.0	-2.8	3.56 H	96	45.0	6.2

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	58.2 PK	74.0	-15.8	1.21 V	250	62.7	-4.5
2	2390.00	51.4 AV	54.0	-2.6	1.21 V	250	55.9	-4.5
3	*2437.00	111.6 PK			1.21 V	250	116.1	-4.5
4	*2437.00	109.7 AV			1.21 V	250	114.2	-4.5
5	2483.50	57.3 PK	74.0	-16.7	1.21 V	250	61.8	-4.5
6	2483.50	47.6 AV	54.0	-6.4	1.21 V	250	52.1	-4.5
7	4874.00	46.4 PK	74.0	-27.6	3.52 V	58	46.6	-0.2
8	4874.00	44.8 AV	54.0	-9.2	3.52 V	58	45.0	-0.2
9	7311.00	51.8 PK	74.0	-22.2	3.73 V	317	45.6	6.2
10	7311.00	47.8 AV	54.0	-6.2	3.73 V	317	41.6	6.2

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.

RF Mode	TX 802.11b	Channel	CH 11 : 2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	111.9 PK			2.86 H	79	116.4	-4.5
2	*2462.00	109.9 AV			2.86 H	79	114.4	-4.5
3	2487.32	59.6 PK	74.0	-14.4	2.86 H	79	64.1	-4.5
4	2487.32	52.7 AV	54.0	-1.3	2.86 H	79	57.2	-4.5
5	4924.00	44.6 PK	74.0	-29.4	2.11 H	56	44.6	0.0
6	4924.00	41.8 AV	54.0	-12.2	2.11 H	56	41.8	0.0
7	7386.00	52.2 PK	74.0	-21.8	3.54 H	85	45.7	6.5
8	7386.00	48.7 AV	54.0	-5.3	3.54 H	85	42.2	6.5
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	105.1 PK			1.22 V	262	109.6	-4.5
2	*2462.00	102.9 AV			1.22 V	262	107.4	-4.5
3	2483.50	56.9 PK	74.0	-17.1	1.22 V	262	61.4	-4.5
4	2483.50	46.8 AV	54.0	-7.2	1.22 V	262	51.3	-4.5
5	4924.00	44.7 PK	74.0	-29.3	3.50 V	72	44.7	0.0
6	4924.00	43.1 AV	54.0	-10.9	3.50 V	72	43.1	0.0
7	7386.00	49.2 PK	74.0	-24.8	3.70 V	323	42.7	6.5
8	7386.00	45.4 AV	54.0	-8.6	3.70 V	323	38.9	6.5

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.

RF Mode	TX 802.11b	Channel	CH 12 : 2467 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2467.00	113.7 PK			2.81 H	82	118.2	-4.5
2	*2467.00	110.8 AV			2.81 H	82	115.3	-4.5
3	2487.32	60.3 PK	74.0	-13.7	2.81 H	82	64.8	-4.5
4	2487.32	52.3 AV	54.0	-1.7	2.81 H	82	56.8	-4.5
5	4934.00	46.7 PK	74.0	-27.3	2.10 H	70	46.7	0.0
6	4934.00	44.0 AV	54.0	-10.0	2.10 H	70	44.0	0.0
7	7401.00	54.7 PK	74.0	-19.3	3.51 H	108	48.2	6.5
8	7401.00	51.1 AV	54.0	-2.9	3.51 H	108	44.6	6.5
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	*2467.00	106.4 PK			1.17 V	120	110.9	-4.5
2	*2467.00	104.4 AV			1.17 V	120	108.9	-4.5
3	2483.50	54.3 PK	74.0	-19.7	1.17 V	120	58.8	-4.5
4	2483.50	45.8 AV	54.0	-8.2	1.17 V	120	50.3	-4.5
5	4934.00	44.7 PK	74.0	-29.3	3.46 V	70	44.7	0.0
6	4934.00	43.1 AV	54.0	-10.9	3.46 V	70	43.1	0.0
7	7401.00	48.7 PK	74.0	-25.3	3.68 V	332	42.2	6.5
8	7401.00	45.1 AV	54.0	-8.9	3.68 V	332	38.6	6.5

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.

RF Mode	TX 802.11b	Channel	CH 13 : 2472 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2472.00	109.3 PK			2.83 H	83	113.8	-4.5
2	*2472.00	106.5 AV			2.83 H	83	111.0	-4.5
3	2483.50	58.0 PK	74.0	-16.0	2.83 H	83	62.5	-4.5
4	2483.50	53.8 AV	54.0	-0.2	2.83 H	83	58.3	-4.5
5	4944.00	41.5 PK	74.0	-32.5	2.18 H	82	41.4	0.1
6	4944.00	37.4 AV	54.0	-16.6	2.18 H	82	37.3	0.1
7	7416.00	48.7 PK	74.0	-25.3	3.59 H	104	42.2	6.5
8	7416.00	45.1 AV	54.0	-8.9	3.59 H	104	38.6	6.5
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	*2472.00	101.6 PK			1.16 V	120	106.1	-4.5
2	*2472.00	99.6 AV			1.16 V	120	104.1	-4.5
3	2483.50	57.7 PK	74.0	-16.3	1.16 V	120	62.2	-4.5
4	2483.50	48.2 AV	54.0	-5.8	1.16 V	120	52.7	-4.5
5	4944.00	41.2 PK	74.0	-32.8	3.52 V	58	41.1	0.1
6	4944.00	37.1 AV	54.0	-16.9	3.52 V	58	37.0	0.1
7	7416.00	43.2 PK	74.0	-30.8	3.75 V	315	36.7	6.5
8	7416.00	39.7 AV	54.0	-14.3	3.75 V	315	33.2	6.5

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.
6. The Band-edge measurements was follow ANSI C63.10 Section 11.13.3.

RF Mode	TX 802.11g	Channel	CH 1 : 2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	70.0 PK	74.0	-4.0	3.07 H	55	74.5	-4.5
2	2390.00	53.4 AV	54.0	-0.6	3.07 H	55	57.9	-4.5
3	*2412.00	111.4 PK			3.07 H	55	115.9	-4.5
4	*2412.00	103.3 AV			3.07 H	55	107.8	-4.5
5	4824.00	41.5 PK	74.0	-32.5	2.14 H	83	41.5	0.0
6	4824.00	37.4 AV	54.0	-16.6	2.14 H	83	37.4	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.0 PK	74.0	-7.0	1.00 V	93	71.5	-4.5
2	2390.00	50.3 AV	54.0	-3.7	1.00 V	93	54.8	-4.5
3	*2412.00	107.8 PK			1.00 V	93	112.3	-4.5
4	*2412.00	99.7 AV			1.00 V	93	104.2	-4.5
5	4824.00	41.2 PK	74.0	-32.8	3.51 V	56	41.2	0.0
6	4824.00	36.9 AV	54.0	-17.1	3.51 V	56	36.9	0.0

Remarks:

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

RF Mode	TX 802.11g	Channel	CH 6 : 2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.1 PK	74.0	-6.9	3.08 H	42	71.6	-4.5
2	2390.00	51.6 AV	54.0	-2.4	3.08 H	42	56.1	-4.5
3	*2437.00	116.4 PK			3.08 H	42	120.9	-4.5
4	*2437.00	106.0 AV			3.08 H	42	110.5	-4.5
5	2483.50	66.7 PK	74.0	-7.3	3.08 H	42	71.2	-4.5
6	2483.50	51.7 AV	54.0	-2.3	3.08 H	42	56.2	-4.5
7	4874.00	41.8 PK	74.0	-32.2	2.18 H	81	42.0	-0.2
8	4874.00	37.8 AV	54.0	-16.2	2.18 H	81	38.0	-0.2
9	7311.00	49.1 PK	74.0	-24.9	3.60 H	114	42.9	6.2
10	7311.00	45.2 AV	54.0	-8.8	3.60 H	114	39.0	6.2

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	68.4 PK	74.0	-5.6	1.21 V	126	72.9	-4.5
2	2390.00	50.7 AV	54.0	-3.3	1.21 V	126	55.2	-4.5
3	*2437.00	110.3 PK			1.21 V	126	114.8	-4.5
4	*2437.00	100.5 AV			1.21 V	126	105.0	-4.5
5	2483.50	67.4 PK	74.0	-6.6	1.21 V	126	71.9	-4.5
6	2483.50	48.8 AV	54.0	-5.2	1.21 V	126	53.3	-4.5
7	4874.00	41.6 PK	74.0	-32.4	3.55 V	49	41.8	-0.2
8	4874.00	37.4 AV	54.0	-16.6	3.55 V	49	37.6	-0.2
9	7311.00	43.5 PK	74.0	-30.5	3.80 V	316	37.3	6.2
10	7311.00	39.9 AV	54.0	-14.1	3.80 V	316	33.7	6.2

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.

RF Mode	TX 802.11g	Channel	CH 11 : 2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	111.8 PK			2.83 H	78	116.3	-4.5
2	*2462.00	103.8 AV			2.83 H	78	108.3	-4.5
3	2483.50	64.7 PK	74.0	-9.3	2.83 H	78	69.2	-4.5
4	2483.50	53.2 AV	54.0	-0.8	2.83 H	78	57.7	-4.5
5	4924.00	40.9 PK	74.0	-33.1	2.14 H	76	40.9	0.0
6	4924.00	37.0 AV	54.0	-17.0	2.14 H	76	37.0	0.0
7	7386.00	48.4 PK	74.0	-25.6	3.61 H	93	41.9	6.5
8	7386.00	45.1 AV	54.0	-8.9	3.61 H	93	38.6	6.5
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	105.9 PK			1.00 V	94	110.4	-4.5
2	*2462.00	97.8 AV			1.00 V	94	102.3	-4.5
3	2483.50	61.5 PK	74.0	-12.5	1.00 V	94	66.0	-4.5
4	2483.50	48.7 AV	54.0	-5.3	1.00 V	94	53.2	-4.5
5	4924.00	41.4 PK	74.0	-32.6	3.56 V	70	41.4	0.0
6	4924.00	37.3 AV	54.0	-16.7	3.56 V	70	37.3	0.0
7	7386.00	43.3 PK	74.0	-30.7	3.78 V	308	36.8	6.5
8	7386.00	39.6 AV	54.0	-14.4	3.78 V	308	33.1	6.5

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.

RF Mode	TX 802.11g	Channel	CH 12 : 2467 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2467.00	111.5 PK			2.82 H	81	116.0	-4.5
2	*2467.00	103.1 AV			2.82 H	81	107.6	-4.5
3	2487.61	69.1 PK	74.0	-4.9	2.82 H	81	73.6	-4.5
4	2487.61	53.3 AV	54.0	-0.7	2.82 H	81	57.8	-4.5
5	4934.00	41.4 PK	74.0	-32.6	2.13 H	84	41.4	0.0
6	4934.00	37.4 AV	54.0	-16.6	2.13 H	84	37.4	0.0
7	7401.00	49.0 PK	74.0	-25.0	3.64 H	117	42.5	6.5
8	7401.00	45.2 AV	54.0	-8.8	3.64 H	117	38.7	6.5
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	*2467.00	103.6 PK			1.18 V	117	108.1	-4.5
2	*2467.00	95.7 AV			1.18 V	117	100.2	-4.5
3	2483.50	56.7 PK	74.0	-17.3	1.18 V	117	61.2	-4.5
4	2483.50	45.4 AV	54.0	-8.6	1.18 V	117	49.9	-4.5
5	4934.00	40.8 PK	74.0	-33.2	3.55 V	65	40.8	0.0
6	4934.00	36.9 AV	54.0	-17.1	3.55 V	65	36.9	0.0
7	7401.00	43.5 PK	74.0	-30.5	3.70 V	305	37.0	6.5
8	7401.00	39.8 AV	54.0	-14.2	3.70 V	305	33.3	6.5

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.

RF Mode	TX 802.11g	Channel	CH 13 : 2472 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2472.00	105.4 PK			2.83 H	82	109.9	-4.5
2	*2472.00	96.9 AV			2.83 H	82	101.4	-4.5
3	2483.50	57.6 PK	74.0	-16.4	2.83 H	82	62.1	-4.5
4	2483.50	53.9 AV	54.0	-0.1	2.83 H	82	58.4	-4.5
5	4944.00	39.6 PK	74.0	-34.4	2.15 H	67	39.5	0.1
6	4944.00	35.3 AV	54.0	-18.7	2.15 H	67	35.2	0.1
7	7416.00	47.3 PK	74.0	-26.7	3.64 H	118	40.8	6.5
8	7416.00	43.4 AV	54.0	-10.6	3.64 H	118	36.9	6.5
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	*2472.00	97.6 PK			1.00 V	119	102.1	-4.5
2	*2472.00	89.3 AV			1.00 V	119	93.8	-4.5
3	2483.50	54.5 PK	74.0	-19.5	1.00 V	119	59.0	-4.5
4	2483.50	46.1 AV	54.0	-7.9	1.00 V	119	50.6	-4.5
5	4944.00	38.7 PK	74.0	-35.3	3.47 V	54	38.6	0.1
6	4944.00	34.4 AV	54.0	-19.6	3.47 V	54	34.3	0.1
7	7416.00	40.1 PK	74.0	-33.9	3.69 V	326	33.6	6.5
8	7416.00	36.7 AV	54.0	-17.3	3.69 V	326	30.2	6.5

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.
6. The Band-edge measurements was follow ANSI C63.10 Section 11.13.3.

RF Mode	TX 802.11ax (HE20)	Channel	CH 1 : 2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2389.18	69.0 PK	74.0	-5.0	3.04 H	54	73.5	-4.5
2	2389.18	51.4 AV	54.0	-2.6	3.04 H	54	55.9	-4.5
3	*2412.00	113.5 PK			3.04 H	54	118.0	-4.5
4	*2412.00	102.4 AV			3.04 H	54	106.9	-4.5
5	4824.00	41.2 PK	74.0	-32.8	2.09 H	94	41.2	0.0
6	4824.00	37.4 AV	54.0	-16.6	2.09 H	94	37.4	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2388.98	68.2 PK	74.0	-5.8	1.00 V	95	72.7	-4.5
2	2388.98	50.4 AV	54.0	-3.6	1.00 V	95	54.9	-4.5
3	*2412.00	108.4 PK			1.00 V	95	112.9	-4.5
4	*2412.00	98.5 AV			1.00 V	95	103.0	-4.5
5	4824.00	41.0 PK	74.0	-33.0	3.58 V	73	41.0	0.0
6	4824.00	36.9 AV	54.0	-17.1	3.58 V	73	36.9	0.0

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 6 : 2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.3 PK	74.0	-6.7	2.85 H	75	71.8	-4.5
2	2390.00	51.8 AV	54.0	-2.2	2.85 H	75	56.3	-4.5
3	*2437.00	115.7 PK			2.85 H	75	120.2	-4.5
4	*2437.00	105.1 AV			2.85 H	75	109.6	-4.5
5	2483.50	66.5 PK	74.0	-7.5	2.85 H	75	71.0	-4.5
6	2483.50	51.2 AV	54.0	-2.8	2.85 H	75	55.7	-4.5
7	4874.00	41.2 PK	74.0	-32.8	2.11 H	79	41.4	-0.2
8	4874.00	37.2 AV	54.0	-16.8	2.11 H	79	37.4	-0.2
9	7311.00	49.2 PK	74.0	-24.8	3.62 H	117	43.0	6.2
10	7311.00	45.4 AV	54.0	-8.6	3.62 H	117	39.2	6.2

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	68.6 PK	74.0	-5.4	1.06 V	106	73.1	-4.5
2	2390.00	50.8 AV	54.0	-3.2	1.06 V	106	55.3	-4.5
3	*2437.00	109.8 PK			1.06 V	106	114.3	-4.5
4	*2437.00	99.8 AV			1.06 V	106	104.3	-4.5
5	2483.50	67.1 PK	74.0	-6.9	1.06 V	106	71.6	-4.5
6	2483.50	48.8 AV	54.0	-5.2	1.06 V	106	53.3	-4.5
7	4874.00	40.5 PK	74.0	-33.5	3.52 V	60	40.7	-0.2
8	4874.00	36.6 AV	54.0	-17.4	3.52 V	60	36.8	-0.2
9	7311.00	43.7 PK	74.0	-30.3	3.65 V	313	37.5	6.2
10	7311.00	40.3 AV	54.0	-13.7	3.65 V	313	34.1	6.2

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 11 : 2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	113.9 PK			2.88 H	77	118.4	-4.5
2	*2462.00	102.7 AV			2.88 H	77	107.2	-4.5
3	2483.50	71.2 PK	74.0	-2.8	2.88 H	77	75.7	-4.5
4	2483.50	53.8 AV	54.0	-0.2	2.88 H	77	58.3	-4.5
5	4924.00	41.4 PK	74.0	-32.6	2.15 H	85	41.4	0.0
6	4924.00	37.3 AV	54.0	-16.7	2.15 H	85	37.3	0.0
7	7386.00	48.6 PK	74.0	-25.4	3.69 H	126	42.1	6.5
8	7386.00	44.9 AV	54.0	-9.1	3.69 H	126	38.4	6.5
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	108.2 PK			1.00 V	92	112.7	-4.5
2	*2462.00	96.9 AV			1.00 V	92	101.4	-4.5
3	2483.50	67.2 PK	74.0	-6.8	1.00 V	92	71.7	-4.5
4	2483.50	49.2 AV	54.0	-4.8	1.00 V	92	53.7	-4.5
5	4924.00	40.7 PK	74.0	-33.3	3.50 V	64	40.7	0.0
6	4924.00	36.5 AV	54.0	-17.5	3.50 V	64	36.5	0.0
7	7386.00	43.4 PK	74.0	-30.6	3.72 V	303	36.9	6.5
8	7386.00	40.0 AV	54.0	-14.0	3.72 V	303	33.5	6.5

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 12 : 2467 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2467.00	113.5 PK			2.84 H	80	118.0	-4.5
2	*2467.00	101.3 AV			2.84 H	80	105.8	-4.5
3	2486.32	66.7 PK	74.0	-7.3	2.84 H	80	71.2	-4.5
4	2486.32	53.0 AV	54.0	-1.0	2.84 H	80	57.5	-4.5
5	4934.00	40.6 PK	74.0	-33.4	2.15 H	72	40.6	0.0
6	4934.00	36.9 AV	54.0	-17.1	2.15 H	72	36.9	0.0
7	7401.00	49.8 PK	74.0	-24.2	3.62 H	111	43.3	6.5
8	7401.00	45.7 AV	54.0	-8.3	3.62 H	111	39.2	6.5
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	*2467.00	106.2 PK			1.00 V	121	110.7	-4.5
2	*2467.00	95.9 AV			1.00 V	121	100.4	-4.5
3	2486.58	58.8 PK	74.0	-15.2	1.00 V	121	63.3	-4.5
4	2486.58	47.6 AV	54.0	-6.4	1.00 V	121	52.1	-4.5
5	4934.00	40.4 PK	74.0	-33.6	3.52 V	64	40.4	0.0
6	4934.00	36.6 AV	54.0	-17.4	3.52 V	64	36.6	0.0
7	7401.00	43.9 PK	74.0	-30.1	3.75 V	301	37.4	6.5
8	7401.00	40.3 AV	54.0	-13.7	3.75 V	301	33.8	6.5

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 13 : 2472 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2472.00	107.1 PK			2.86 H	83	111.6	-4.5
2	*2472.00	98.0 AV			2.86 H	83	102.5	-4.5
3	2483.50	59.0 PK	74.0	-15.0	2.86 H	83	63.5	-4.5
4	2483.50	53.6 AV	54.0	-0.4	2.86 H	83	58.1	-4.5
5	4944.00	39.9 PK	74.0	-34.1	2.10 H	59	39.8	0.1
6	4944.00	35.5 AV	54.0	-18.5	2.10 H	59	35.4	0.1
7	7416.00	47.5 PK	74.0	-26.5	3.68 H	119	41.0	6.5
8	7416.00	43.5 AV	54.0	-10.5	3.68 H	119	37.0	6.5
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	*2472.00	103.2 PK			1.01 V	119	107.7	-4.5
2	*2472.00	93.3 AV			1.01 V	119	97.8	-4.5
3	2483.50	56.7 PK	74.0	-17.3	1.01 V	119	61.2	-4.5
4	2483.50	48.3 AV	54.0	-5.7	1.01 V	119	52.8	-4.5
5	4944.00	38.8 PK	74.0	-35.2	3.52 V	66	38.7	0.1
6	4944.00	34.2 AV	54.0	-19.8	3.52 V	66	34.1	0.1
7	7416.00	40.1 PK	74.0	-33.9	3.69 V	318	33.6	6.5
8	7416.00	36.4 AV	54.0	-17.6	3.69 V	318	29.9	6.5

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.
6. The Band-edge measurements was follow ANSI C63.10 Section 11.13.3.

RF Mode	TX 802.11ax (HE40)	Channel	CH 3 : 2422 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2388.75	66.5 PK	74.0	-7.5	3.02 H	55	71.0	-4.5
2	2388.75	52.8 AV	54.0	-1.2	3.02 H	55	57.3	-4.5
3	*2422.00	109.1 PK			3.02 H	55	113.6	-4.5
4	*2422.00	99.1 AV			3.02 H	55	103.6	-4.5
5	4844.00	40.1 PK	74.0	-33.9	2.20 H	59	40.3	-0.2
6	4844.00	36.4 AV	54.0	-17.6	2.20 H	59	36.6	-0.2
7	7266.00	49.6 PK	74.0	-24.4	3.62 H	113	43.5	6.1
8	7266.00	45.4 AV	54.0	-8.6	3.62 H	113	39.3	6.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.5 PK	74.0	-9.5	1.00 V	95	69.0	-4.5
2	2390.00	52.4 AV	54.0	-1.6	1.00 V	95	56.9	-4.5
3	*2422.00	106.2 PK			1.00 V	95	110.7	-4.5
4	*2422.00	95.0 AV			1.00 V	95	99.5	-4.5
5	4844.00	39.9 PK	74.0	-34.1	3.56 V	67	40.1	-0.2
6	4844.00	36.2 AV	54.0	-17.8	3.56 V	67	36.4	-0.2
7	7266.00	43.6 PK	74.0	-30.4	3.74 V	313	37.5	6.1
8	7266.00	39.8 AV	54.0	-14.2	3.74 V	313	33.7	6.1

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 6 : 2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.4 PK	74.0	-8.6	2.66 H	74	69.9	-4.5
2	2390.00	53.1 AV	54.0	-0.9	2.66 H	74	57.6	-4.5
3	*2437.00	108.8 PK			2.66 H	74	113.3	-4.5
4	*2437.00	99.4 AV			2.66 H	74	103.9	-4.5
5	2483.50	65.2 PK	74.0	-8.8	2.66 H	74	69.7	-4.5
6	2483.50	51.0 AV	54.0	-3.0	2.66 H	74	55.5	-4.5
7	4874.00	40.8 PK	74.0	-33.2	2.12 H	61	41.0	-0.2
8	4874.00	37.0 AV	54.0	-17.0	2.12 H	61	37.2	-0.2
9	7311.00	49.4 PK	74.0	-24.6	3.63 H	118	43.2	6.2
10	7311.00	45.5 AV	54.0	-8.5	3.63 H	118	39.3	6.2

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	64.1 PK	74.0	-9.9	1.04 V	110	68.6	-4.5
2	2390.00	52.2 AV	54.0	-1.8	1.04 V	110	56.7	-4.5
3	*2437.00	106.5 PK			1.04 V	110	111.0	-4.5
4	*2437.00	95.2 AV			1.04 V	110	99.7	-4.5
5	2483.50	63.5 PK	74.0	-10.5	1.04 V	110	68.0	-4.5
6	2483.50	50.0 AV	54.0	-4.0	1.04 V	110	54.5	-4.5
7	4874.00	40.5 PK	74.0	-33.5	3.47 V	71	40.7	-0.2
8	4874.00	36.8 AV	54.0	-17.2	3.47 V	71	37.0	-0.2
9	7311.00	43.9 PK	74.0	-30.1	3.72 V	306	37.7	6.2
10	7311.00	40.3 AV	54.0	-13.7	3.72 V	306	34.1	6.2

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 9 : 2452 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2452.00	110.5 PK			2.62 H	74	115.0	-4.5
2	*2452.00	100.0 AV			2.62 H	74	104.5	-4.5
3	2490.07	65.9 PK	74.0	-8.1	2.62 H	74	70.4	-4.5
4	2490.07	53.3 AV	54.0	-0.7	2.62 H	74	57.8	-4.5
5	4904.00	41.0 PK	74.0	-33.0	2.17 H	65	41.1	-0.1
6	4904.00	37.2 AV	54.0	-16.8	2.17 H	65	37.3	-0.1
7	7356.00	49.7 PK	74.0	-24.3	3.59 H	122	43.4	6.3
8	7356.00	45.7 AV	54.0	-8.3	3.59 H	122	39.4	6.3
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	105.2 PK			1.00 V	93	109.7	-4.5
2	*2452.00	93.5 AV			1.00 V	93	98.0	-4.5
3	2487.82	63.4 PK	74.0	-10.6	1.00 V	93	67.9	-4.5
4	2487.82	50.1 AV	54.0	-3.9	1.00 V	93	54.6	-4.5
5	4904.00	40.5 PK	74.0	-33.5	3.49 V	73	40.6	-0.1
6	4904.00	36.5 AV	54.0	-17.5	3.49 V	73	36.6	-0.1
7	7356.00	44.2 PK	74.0	-29.8	3.78 V	291	37.9	6.3
8	7356.00	40.5 AV	54.0	-13.5	3.78 V	291	34.2	6.3

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 10 : 2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2457.00	110.9 PK			2.88 H	82	115.4	-4.5
2	*2457.00	99.1 AV			2.88 H	82	103.6	-4.5
3	2483.50	64.6 PK	74.0	-9.4	2.88 H	82	69.1	-4.5
4	2483.50	53.0 AV	54.0	-1.0	2.88 H	82	57.5	-4.5
5	4914.00	40.4 PK	74.0	-33.6	2.16 H	58	40.5	-0.1
6	4914.00	36.8 AV	54.0	-17.2	2.16 H	58	36.9	-0.1
7	7371.00	49.7 PK	74.0	-24.3	3.62 H	117	43.3	6.4
8	7371.00	45.6 AV	54.0	-8.4	3.62 H	117	39.2	6.4
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	*2457.00	102.8 PK			1.01 V	121	107.3	-4.5
2	*2457.00	92.4 AV			1.01 V	121	96.9	-4.5
3	2483.50	60.3 PK	74.0	-13.7	1.01 V	121	64.8	-4.5
4	2483.50	47.2 AV	54.0	-6.8	1.01 V	121	51.7	-4.5
5	4914.00	40.7 PK	74.0	-33.3	3.48 V	49	40.8	-0.1
6	4914.00	37.0 AV	54.0	-17.0	3.48 V	49	37.1	-0.1
7	7371.00	43.7 PK	74.0	-30.3	3.79 V	294	37.3	6.4
8	7371.00	40.0 AV	54.0	-14.0	3.79 V	294	33.6	6.4

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 11 : 2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	106.5 PK			2.88 H	81	111.0	-4.5
2	*2462.00	95.2 AV			2.88 H	81	99.7	-4.5
3	2483.50	59.3 PK	74.0	-14.7	2.88 H	81	63.8	-4.5
4	2483.50	53.7 AV	54.0	-0.3	2.88 H	81	58.2	-4.5
5	4924.00	39.6 PK	74.0	-34.4	2.09 H	67	39.6	0.0
6	4924.00	35.2 AV	54.0	-18.8	2.09 H	67	35.2	0.0
7	7386.00	47.8 PK	74.0	-26.2	3.68 H	131	41.3	6.5
8	7386.00	43.9 AV	54.0	-10.1	3.68 H	131	37.4	6.5
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	99.3 PK			1.01 V	118	103.8	-4.5
2	*2462.00	88.8 AV			1.01 V	118	93.3	-4.5
3	2483.50	56.7 PK	74.0	-17.3	1.01 V	118	61.2	-4.5
4	2483.50	48.1 AV	54.0	-5.9	1.01 V	118	52.6	-4.5
5	4924.00	38.5 PK	74.0	-35.5	3.55 V	77	38.5	0.0
6	4924.00	34.1 AV	54.0	-19.9	3.55 V	77	34.1	0.0
7	7386.00	40.0 PK	74.0	-34.0	3.73 V	310	33.5	6.5
8	7386.00	36.4 AV	54.0	-17.6	3.73 V	310	29.9	6.5

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.
6. The Band-edge measurements was follow ANSI C63.10 Section 11.13.3.

RF Mode	TX 20MHz Preamble 802.11ax (RU26)	Channel	CH 1 : 2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.7 PK	74.0	-0.3	3.01 H	89	78.2	-4.5
2	2390.00	53.2 AV	54.0	-0.8	3.01 H	89	57.7	-4.5
3	*2412.00	120.5 PK			3.01 H	89	125.0	-4.5
4	*2412.00	111.5 AV			3.01 H	89	116.0	-4.5
5	4824.00	43.3 PK	74.0	-30.7	1.91 H	72	43.3	0.0
6	4824.00	33.0 AV	54.0	-21.0	1.91 H	72	33.0	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2388.00	66.6 PK	74.0	-7.4	2.30 V	9	71.1	-4.5
2	2388.00	47.1 AV	54.0	-6.9	2.30 V	9	51.6	-4.5
3	2390.00	61.3 PK	74.0	-12.7	2.30 V	9	65.8	-4.5
4	2390.00	47.5 AV	54.0	-6.5	2.30 V	9	52.0	-4.5
5	*2412.00	116.2 PK			2.30 V	9	120.7	-4.5
6	*2412.00	107.4 AV			2.30 V	9	111.9	-4.5
7	4824.00	40.4 PK	74.0	-33.6	3.89 V	70	40.4	0.0
8	4824.00	30.9 AV	54.0	-23.1	3.89 V	70	30.9	0.0

Remarks:

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

RF Mode	TX 20MHz Preamble 802.11ax (RU26)	Channel	CH 11 : 2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	120.4 PK			2.85 H	81	124.9	-4.5
2	*2462.00	111.5 AV			2.85 H	81	116.0	-4.5
3	2483.50	73.2 PK	74.0	-0.8	2.85 H	81	77.7	-4.5
4	2483.50	51.7 AV	54.0	-2.3	2.85 H	81	56.2	-4.5
5	4924.00	42.9 PK	74.0	-31.1	1.90 H	71	42.9	0.0
6	4924.00	33.5 AV	54.0	-20.5	1.90 H	71	33.5	0.0
7	7386.00	55.2 PK	74.0	-18.8	3.56 H	83	48.7	6.5
8	7386.00	46.2 AV	54.0	-7.8	3.56 H	83	39.7	6.5
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	114.6 PK			2.32 V	235	119.1	-4.5
2	*2462.00	105.6 AV			2.32 V	235	110.1	-4.5
3	2483.50	67.2 PK	74.0	-6.8	2.32 V	235	71.7	-4.5
4	2483.50	49.3 AV	54.0	-4.7	2.32 V	235	53.8	-4.5
5	4924.00	39.5 PK	74.0	-34.5	3.94 V	73	39.5	0.0
6	4924.00	29.3 AV	54.0	-24.7	3.94 V	73	29.3	0.0
7	7386.00	52.4 PK	74.0	-21.6	1.78 V	45	45.9	6.5
8	7386.00	43.7 AV	54.0	-10.3	1.78 V	45	37.2	6.5

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.

RF Mode	TX 20MHz Preamble 802.11ax (RU26)	Channel	CH 12 : 2467 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2467.00	120.1 PK			2.81 H	81	124.6	-4.5
2	*2467.00	110.2 AV			2.81 H	81	114.7	-4.5
3	2483.50	73.4 PK	74.0	-0.6	2.81 H	81	77.9	-4.5
4	2483.50	51.1 AV	54.0	-2.9	2.81 H	81	55.6	-4.5
5	4934.00	40.5 PK	74.0	-33.5	1.86 H	80	40.5	0.0
6	4934.00	31.1 AV	54.0	-22.9	1.86 H	80	31.1	0.0
7	7401.00	51.1 PK	74.0	-22.9	3.55 H	94	44.6	6.5
8	7401.00	42.8 AV	54.0	-11.2	3.55 H	94	36.3	6.5
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	*2467.00	113.9 PK			2.03 V	242	118.4	-4.5
2	*2467.00	104.9 AV			2.03 V	242	109.4	-4.5
3	2483.50	60.9 PK	74.0	-13.1	2.03 V	242	65.4	-4.5
4	2483.50	49.8 AV	54.0	-4.2	2.03 V	242	54.3	-4.5
5	4934.00	38.9 PK	74.0	-35.1	3.89 V	70	38.9	0.0
6	4934.00	27.9 AV	54.0	-26.1	3.89 V	70	27.9	0.0
7	7401.00	52.1 PK	74.0	-21.9	1.75 V	51	45.6	6.5
8	7401.00	40.2 AV	54.0	-13.8	1.75 V	51	33.7	6.5

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.

RF Mode	TX 20MHz Preamble 802.11ax (RU26)	Channel	CH 13 : 2472 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2472.00	107.0 PK			2.83 H	81	111.5	-4.5
2	*2472.00	97.0 AV			2.83 H	81	101.5	-4.5
3	2483.50	73.3 PK	74.0	-0.7	2.83 H	81	77.8	-4.5
4	2483.50	50.9 AV	54.0	-3.1	2.83 H	81	55.4	-4.5
5	4944.00	30.4 PK	74.0	-43.6	1.84 H	74	30.3	0.1
6	4944.00	28.1 AV	54.0	-25.9	1.84 H	74	28.0	0.1
7	7416.00	45.1 PK	74.0	-28.9	3.56 H	90	38.6	6.5
8	7416.00	34.5 AV	54.0	-19.5	3.56 H	90	28.0	6.5
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	*2472.00	101.6 PK			1.97 V	238	106.1	-4.5
2	*2472.00	92.0 AV			1.97 V	238	96.5	-4.5
3	2483.50	66.5 PK	74.0	-7.5	1.97 V	238	71.0	-4.5
4	2483.50	48.3 AV	54.0	-5.7	1.97 V	238	52.8	-4.5
5	4944.00	38.4 PK	74.0	-35.6	3.89 V	84	38.3	0.1
6	4944.00	27.5 AV	54.0	-26.5	3.89 V	84	27.4	0.1
7	7416.00	42.3 PK	74.0	-31.7	1.70 V	57	35.8	6.5
8	7416.00	31.1 AV	54.0	-22.9	1.70 V	57	24.6	6.5

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.

RF Mode	TX 20MHz Preamble 802.11ax (RU52)	Channel	CH 6 : 2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	70.5 PK	74.0	-3.5	2.99 H	83	75.0	-4.5
2	2390.00	52.5 AV	54.0	-1.5	2.99 H	83	57.0	-4.5
3	*2437.00	120.5 PK			2.99 H	83	125.0	-4.5
4	*2437.00	112.2 AV			2.99 H	83	116.7	-4.5
5	2483.50	67.6 PK	74.0	-6.4	2.99 H	83	72.1	-4.5
6	2483.50	50.0 AV	54.0	-4.0	2.99 H	83	54.5	-4.5
7	4874.00	44.7 PK	74.0	-29.3	1.91 H	70	44.9	-0.2
8	4874.00	37.0 AV	54.0	-17.0	1.91 H	70	37.2	-0.2
9	7311.00	60.8 PK	74.0	-13.2	2.70 H	97	54.6	6.2
10	7311.00	52.2 AV	54.0	-1.8	2.70 H	97	46.0	6.2
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	67.6 PK	74.0	-6.4	1.69 V	248	72.1	-4.5
2	2390.00	47.9 AV	54.0	-6.1	1.69 V	248	52.4	-4.5
3	*2437.00	119.9 PK			1.69 V	248	124.4	-4.5
4	*2437.00	109.6 AV			1.69 V	248	114.1	-4.5
5	2483.50	66.4 PK	74.0	-7.6	1.69 V	248	70.9	-4.5
6	2483.50	47.3 AV	54.0	-6.7	1.69 V	248	51.8	-4.5
7	4874.00	43.0 PK	74.0	-31.0	3.82 V	63	43.2	-0.2
8	4874.00	35.3 AV	54.0	-18.7	3.82 V	63	35.5	-0.2
9	7311.00	61.1 PK	74.0	-12.9	3.73 V	47	54.9	6.2
10	7311.00	51.4 AV	54.0	-2.6	3.73 V	47	45.2	6.2

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.

RF Mode	TX 20MHz Preamble 802.11ax (RU106)	Channel	CH 1 : 2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	69.8 PK	74.0	-4.2	3.02 H	86	74.3	-4.5
2	2390.00	53.8 AV	54.0	-0.2	3.02 H	86	58.3	-4.5
3	*2412.00	115.1 PK			3.02 H	86	119.6	-4.5
4	*2412.00	104.5 AV			3.02 H	86	109.0	-4.5
5	4824.00	44.6 PK	74.0	-29.4	1.89 H	85	44.6	0.0
6	4824.00	37.0 AV	54.0	-17.0	1.89 H	85	37.0	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	1.87 V	356	69.4	-4.5
2	2390.00	49.4 AV	54.0	-4.6	1.87 V	356	53.9	-4.5
3	*2412.00	111.1 PK			1.87 V	356	115.6	-4.5
4	*2412.00	101.3 AV			1.87 V	356	105.8	-4.5
5	4824.00	38.8 PK	74.0	-35.2	4.00 V	68	38.8	0.0
6	4824.00	28.9 AV	54.0	-25.1	4.00 V	68	28.9	0.0

Remarks:

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

RF Mode	TX 20MHz Preamble 802.11ax (RU106)	Channel	CH 11 : 2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	113.7 PK			2.88 H	80	118.2	-4.5
2	*2462.00	104.2 AV			2.88 H	80	108.7	-4.5
3	2483.50	69.7 PK	74.0	-4.3	2.88 H	80	74.2	-4.5
4	2483.50	53.3 AV	54.0	-0.7	2.88 H	80	57.8	-4.5
5	4924.00	43.1 PK	74.0	-30.9	1.90 H	83	43.1	0.0
6	4924.00	33.9 AV	54.0	-20.1	1.90 H	83	33.9	0.0
7	7386.00	55.1 PK	74.0	-18.9	3.60 H	78	48.6	6.5
8	7386.00	46.3 AV	54.0	-7.7	3.60 H	78	39.8	6.5
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	110.4 PK			1.71 V	239	114.9	-4.5
2	*2462.00	100.8 AV			1.71 V	239	105.3	-4.5
3	2483.50	68.3 PK	74.0	-5.7	1.71 V	239	72.8	-4.5
4	2483.50	49.4 AV	54.0	-4.6	1.71 V	239	53.9	-4.5
5	4924.00	39.4 PK	74.0	-34.6	3.89 V	75	39.4	0.0
6	4924.00	29.3 AV	54.0	-24.7	3.89 V	75	29.3	0.0
7	7386.00	52.8 PK	74.0	-21.2	1.80 V	60	46.3	6.5
8	7386.00	44.2 AV	54.0	-9.8	1.80 V	60	37.7	6.5

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.

RF Mode	TX 20MHz Preamble 802.11ax (RU106)	Channel	CH 12 : 2467 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2467.00	113.4 PK			2.86 H	79	117.9	-4.5
2	*2467.00	102.3 AV			2.86 H	79	106.8	-4.5
3	2483.50	73.6 PK	74.0	-0.4	2.86 H	79	78.1	-4.5
4	2483.50	51.2 AV	54.0	-2.8	2.86 H	79	55.7	-4.5
5	4934.00	42.8 PK	74.0	-31.2	1.87 H	76	42.8	0.0
6	4934.00	33.2 AV	54.0	-20.8	1.87 H	76	33.2	0.0
7	7401.00	55.6 PK	74.0	-18.4	3.51 H	88	49.1	6.5
8	7401.00	46.3 AV	54.0	-7.7	3.51 H	88	39.8	6.5
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	*2467.00	107.5 PK			2.01 V	241	112.0	-4.5
2	*2467.00	97.3 AV			2.01 V	241	101.8	-4.5
3	2483.50	61.2 PK	74.0	-12.8	2.01 V	241	65.7	-4.5
4	2483.50	48.4 AV	54.0	-5.6	2.01 V	241	52.9	-4.5
5	4934.00	38.9 PK	74.0	-35.1	4.00 V	69	38.9	0.0
6	4934.00	29.0 AV	54.0	-25.0	4.00 V	69	29.0	0.0
7	7401.00	52.4 PK	74.0	-21.6	1.80 V	52	45.9	6.5
8	7401.00	43.5 AV	54.0	-10.5	1.80 V	52	37.0	6.5

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.

RF Mode	TX 20MHz Preamble 802.11ax (RU106)	Channel	CH 13 : 2472 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Carter Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2472.00	106.7 PK			2.78 H	78	111.2	-4.5
2	*2472.00	95.4 AV			2.78 H	78	99.9	-4.5
3	2483.50	73.1 PK	74.0	-0.9	2.78 H	78	77.6	-4.5
4	2483.50	53.4 AV	54.0	-0.6	2.78 H	78	57.9	-4.5
5	4944.00	43.1 PK	74.0	-30.9	1.88 H	63	43.0	0.1
6	4944.00	33.6 AV	54.0	-20.4	1.88 H	63	33.5	0.1
7	7416.00	55.1 PK	74.0	-18.9	3.56 H	76	48.6	6.5
8	7416.00	46.3 AV	54.0	-7.7	3.56 H	76	39.8	6.5
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	*2472.00	101.3 PK			1.95 V	240	105.8	-4.5
2	*2472.00	91.3 AV			1.95 V	240	95.8	-4.5
3	2483.50	65.5 PK	74.0	-8.5	1.95 V	240	70.0	-4.5
4	2483.50	49.8 AV	54.0	-4.2	1.95 V	240	54.3	-4.5
5	4944.00	39.8 PK	74.0	-34.2	3.97 V	65	39.7	0.1
6	4944.00	29.5 AV	54.0	-24.5	3.97 V	65	29.4	0.1
7	7416.00	52.2 PK	74.0	-21.8	1.75 V	51	45.7	6.5
8	7416.00	43.6 AV	54.0	-10.4	1.75 V	51	37.1	6.5

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.

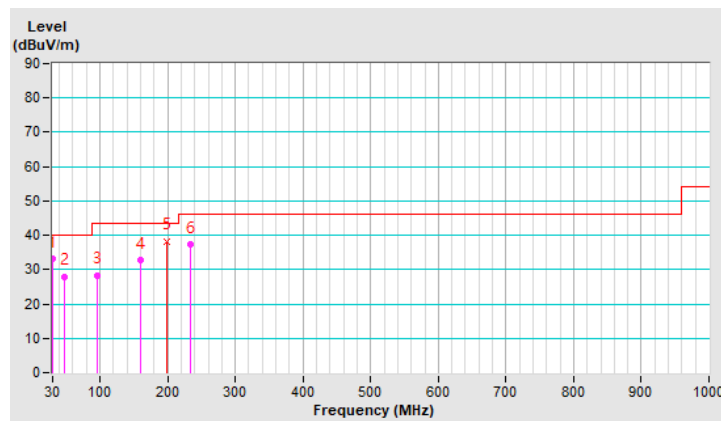
Below 1GHz Data:

RF Mode	TX 802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Input Power	120Vac, 60Hz	Environmental Conditions	23 °C, 66 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.53	33.0 QP	40.0	-7.0	1.00 H	143	46.7	-13.7
2	48.11	28.0 QP	40.0	-12.0	1.00 H	267	40.6	-12.6
3	95.10	28.4 QP	43.5	-15.1	1.00 H	261	46.0	-17.6
4	159.24	32.7 QP	43.5	-10.8	1.00 H	257	44.7	-12.0
5	199.23	38.3 QP	43.5	-5.2	1.00 H	289	53.4	-15.1
6	232.88	37.5 QP	46.0	-8.5	1.50 H	219	51.6	-14.1

Remarks:

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

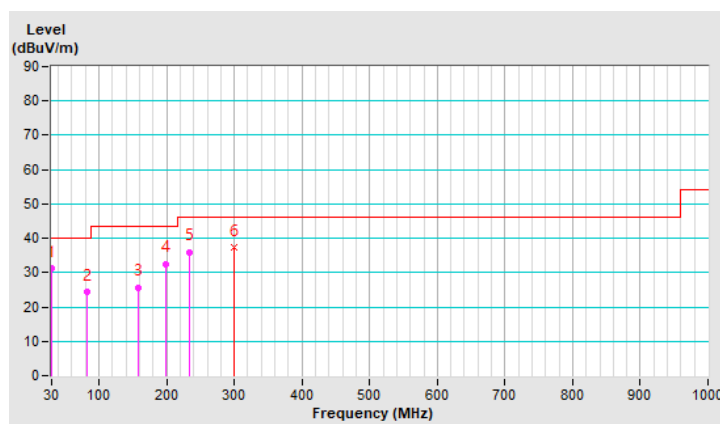


RF Mode	TX 802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Input Power	120Vac, 60Hz	Environmental Conditions	23 °C, 66 % RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.29	31.3 QP	40.0	-8.7	1.00 V	206	44.9	-13.6
2	83.20	24.5 QP	40.0	-15.5	1.50 V	258	42.5	-18.0
3	158.29	25.7 QP	43.5	-17.8	1.00 V	248	37.7	-12.0
4	199.72	32.6 QP	43.5	-10.9	2.00 V	243	47.7	-15.1
5	233.02	36.0 QP	46.0	-10.0	1.00 V	291	50.1	-14.1
6	298.79	37.3 QP	46.0	-8.7	1.00 V	142	48.3	-11.0

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 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 0.50MHz.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	2021/10/13	2022/10/12
LISN R&S	ESH3-Z5	848773/004	2021/10/29	2022/10/28
LISN R & S	ESH3-Z5	835239/001	2021/3/26	2022/3/25
50 ohms Terminator NA	50	3	2021/10/27	2022/10/26
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2021/9/25	2022/9/24
Fixed attenuator STI	STI02-2200-10	005	2021/8/27	2022/8/26
Software BVADT	BVADT_Cond_V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
- 3 Tested Date: 2022/1/12

4.2.3 Test Procedures

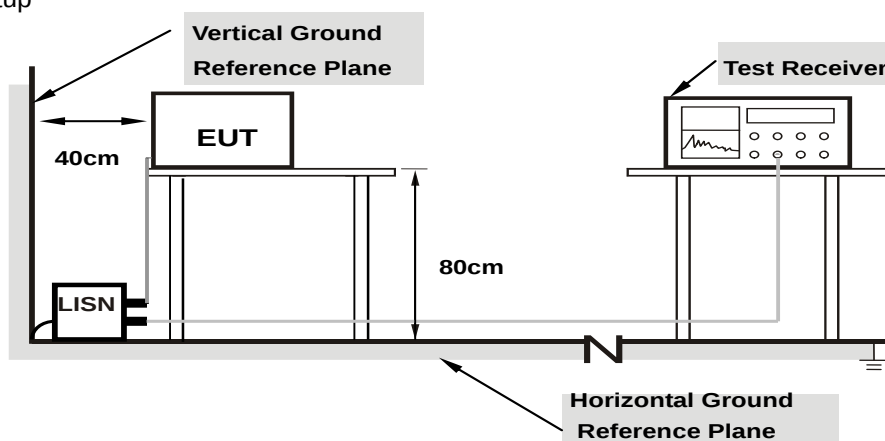
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 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).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

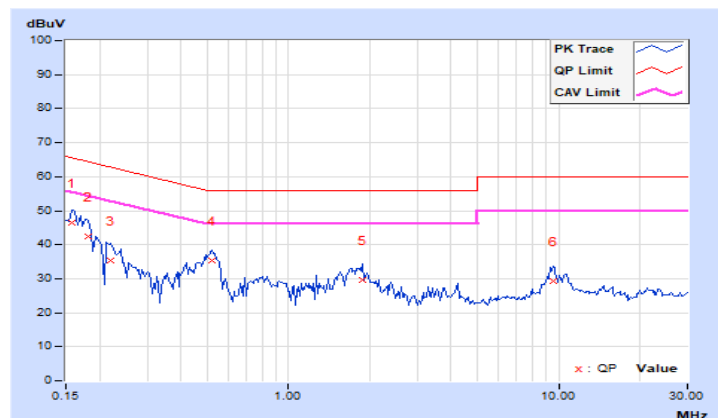
4.2.7 Test Results

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	10.05	36.38	27.52	46.43	37.57	65.58	55.58	-19.15	-18.01
2	0.18125	10.05	32.38	21.43	42.43	31.48	64.43	54.43	-22.00	-22.95
3	0.22031	10.05	25.26	12.69	35.31	22.74	62.81	52.81	-27.50	-30.07
4	0.52109	10.07	25.28	16.45	35.35	26.52	56.00	46.00	-20.65	-19.48
5	1.87891	10.15	19.54	10.61	29.69	20.76	56.00	46.00	-26.31	-25.24
6	9.58594	10.59	18.55	12.80	29.14	23.39	60.00	50.00	-30.86	-26.61

Remarks:

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

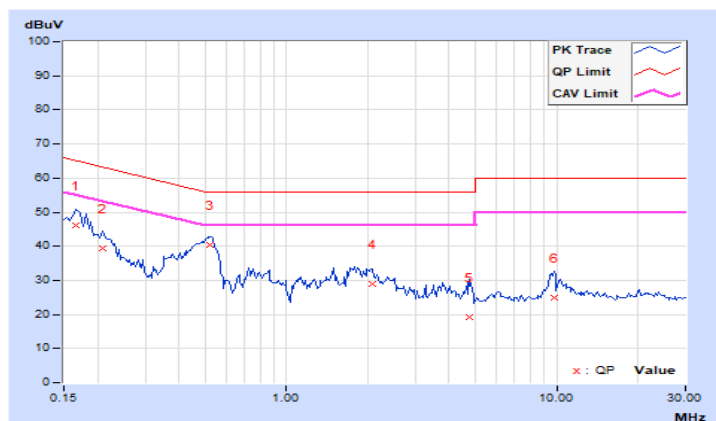


RF Mode	TX 802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Sampson Chen		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	10.02	36.13	25.54	46.15	35.56	65.18	55.18	-19.03	-19.62
2	0.20859	10.03	29.49	19.75	39.52	29.78	63.26	53.26	-23.74	-23.48
3	0.52109	10.04	30.34	21.21	40.38	31.25	56.00	46.00	-15.62	-14.75
4	2.07813	10.13	18.90	10.49	29.03	20.62	56.00	46.00	-26.97	-25.38
5	4.78125	10.25	9.08	0.69	19.33	10.94	56.00	46.00	-36.67	-35.06
6	9.83594	10.48	14.36	7.82	24.84	18.30	60.00	50.00	-35.16	-31.70

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

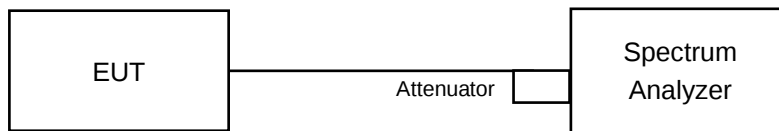


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.3.7 Test Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	8.08	0.5	Pass
6	2437	10.14	0.5	Pass
11	2462	8.08	0.5	Pass
12	2467	8.1	0.5	Pass
13	2472	8.08	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	15.34	0.5	Pass
6	2437	15.42	0.5	Pass
11	2462	15.21	0.5	Pass
12	2467	15.09	0.5	Pass
13	2472	15.47	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	18.5	0.5	Pass
6	2437	16.06	0.5	Pass
11	2462	15.85	0.5	Pass
12	2467	17.68	0.5	Pass
13	2472	18.26	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	36.17	0.5	Pass
6	2437	37.17	0.5	Pass
9	2452	36.68	0.5	Pass
10	2457	36.15	0.5	Pass
11	2462	36.8	0.5	Pass

802.11ax (RU26)

RU Configuration	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
26/0	1	2412	2.15	0.5	Pass
26/8	11	2462	2.14	0.5	Pass
26/8	12	2467	2.13	0.5	Pass
26/8	13	2472	2.1	0.5	Pass

802.11ax (RU52)

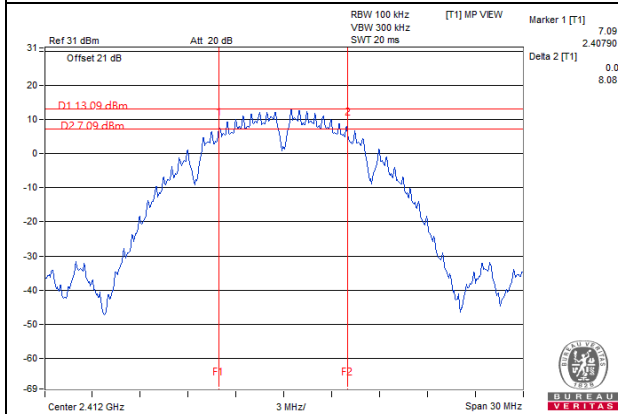
RU Configuration	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
52/37	6	2437	17.14	0.5	Pass

802.11ax (RU106)

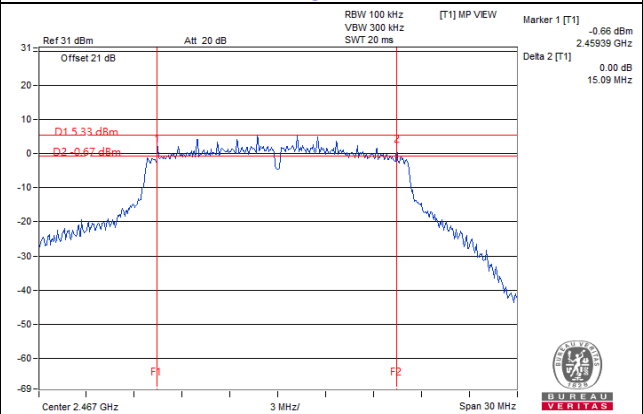
RU Configuration	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
106/53	1	2412	17.21	0.5	Pass
106/54	11	2462	17.21	0.5	Pass
106/54	12	2467	17.2	0.5	Pass
106/54	13	2472	17.2	0.5	Pass

Spectrum Plot of Worst Value

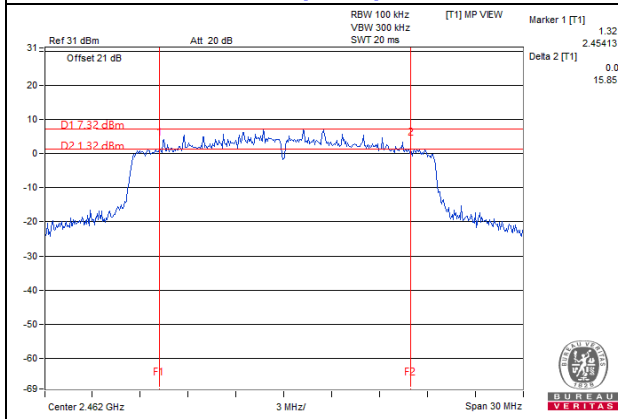
802.11b / CH1



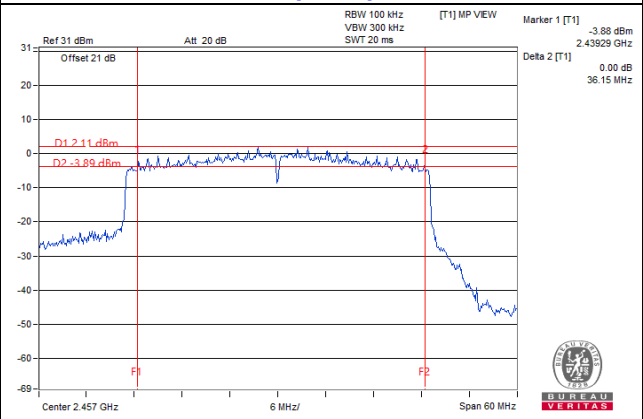
802.11g / CH12



802.11ax (HE20) / CH11

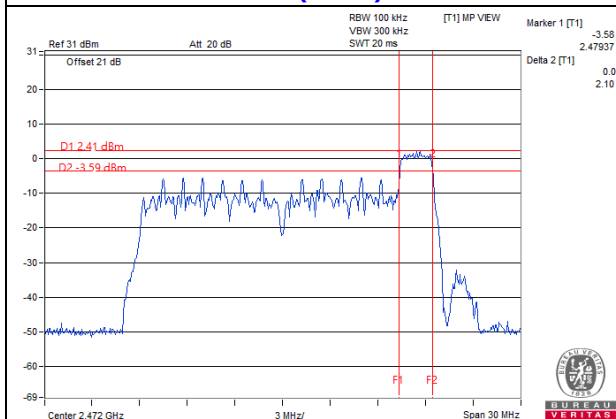


802.11ax (HE40) / CH10

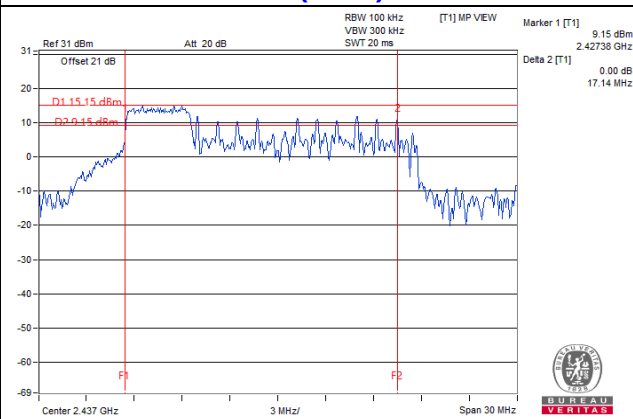


Spectrum Plot of Worst Value

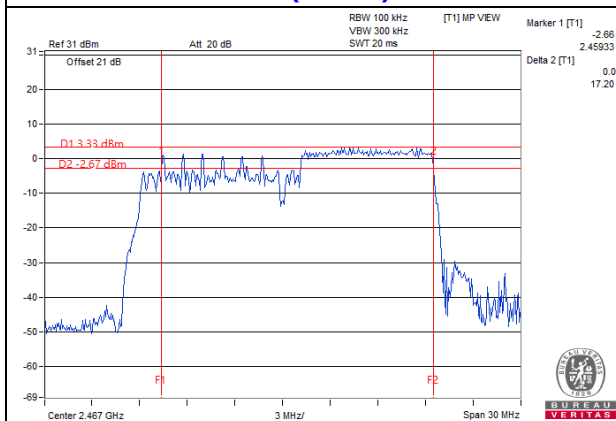
802.11ax (RU26) / CH13



802.11ax (RU52) / CH6



802.11ax (RU106) / CH12

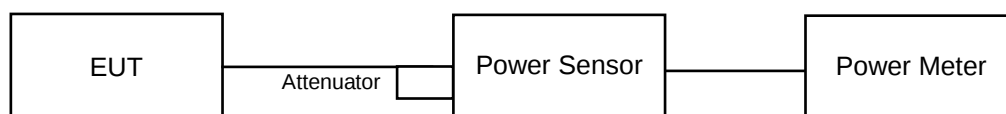


4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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

Average power 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.

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

FOR PEAK POWER

802.11b

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	274.789	24.39	30	Pass
6	2437	331.894	25.21	30	Pass
11	2462	224.905	23.52	30	Pass
12	2467	177.828	22.50	30	Pass
13	2472	76.736	18.85	30	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	272.27	24.35	30	Pass
6	2437	297.167	24.73	30	Pass
11	2462	234.963	23.71	30	Pass
12	2467	118.85	20.75	30	Pass
13	2472	52.723	17.22	30	Pass

VHT20

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	280.543	24.48	30	Pass
6	2437	279.254	24.46	30	Pass
11	2462	210.378	23.23	30	Pass
12	2467	141.579	21.51	30	Pass
13	2472	73.79	18.68	30	Pass

VHT40

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	162.93	22.12	30	Pass
6	2437	196.789	22.94	30	Pass
9	2452	176.604	22.47	30	Pass
10	2457	120.226	20.80	30	Pass
11	2462	64.714	18.11	30	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	296.483	24.72	30	Pass
6	2437	299.226	24.76	30	Pass
11	2462	222.331	23.47	30	Pass
12	2467	147.571	21.69	30	Pass
13	2472	77.446	18.89	30	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	172.584	22.37	30	Pass
6	2437	207.491	23.17	30	Pass
9	2452	182.81	22.62	30	Pass
10	2457	126.183	21.01	30	Pass
11	2462	66.988	18.26	30	Pass

802.11ax (RU26)

RU Configuration	Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
26/0	1	2412	283.139	24.52	30	Pass
26/8	11	2462	265.461	24.24	30	Pass
26/8	12	2467	247.172	23.93	30	Pass
26/8	13	2472	37.411	15.73	30	Pass

802.11ax (RU52)

RU Configuration	Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
52/37	6	2437	292.415	24.66	30	Pass

802.11ax (RU106)

RU Configuration	Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
106/53	1	2412	261.216	24.17	30	Pass
106/54	11	2462	263.027	24.20	30	Pass
106/54	12	2467	191.867	22.83	30	Pass
106/54	13	2472	103.992	20.17	30	Pass

FOR AVERAGE POWER

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	167.494	22.24
6	2437	274.789	24.39
11	2462	129.122	21.11
12	2467	107.647	20.32
13	2472	42.954	16.33

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	69.663	18.43
6	2437	141.906	21.52
11	2462	72.778	18.62
12	2467	36.644	15.64
13	2472	12.794	11.07

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	55.335	17.43
6	2437	110.154	20.42
11	2462	63.096	18.00
12	2467	39.628	15.98
13	2472	23.174	13.65

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
3	2422	50.119	17.00
6	2437	61.376	17.88
9	2452	53.951	17.32
10	2457	35.975	15.56
11	2462	17.061	12.32

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	57.677	17.61
6	2437	115.878	20.64
11	2462	66.222	18.21
12	2467	42.462	16.28
13	2472	23.55	13.72

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
3	2422	52	17.16
6	2437	63.387	18.02
9	2452	55.208	17.42
10	2457	37.239	15.71
11	2462	17.418	12.41

802.11ax (RU26)

RU Configuration	Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
26/0	1	2412	64.863	18.12
26/8	11	2462	53.827	17.31
26/8	12	2467	37.757	15.77
26/8	13	2472	4.436	6.47

802.11ax (RU52)

RU Configuration	Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
52/37	6	2437	183.654	22.64

802.11ax (RU106)

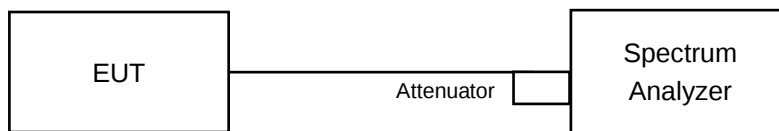
RU Configuration	Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
106/53	1	2412	44.668	16.50
106/54	11	2462	45.92	16.62
106/54	12	2467	23.988	13.80
106/54	13	2472	12.218	10.87

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6

4.5.7 Test Results

802.11b

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
1	2412	0.06	8.00	Pass
6	2437	0.10	8.00	Pass
11	2462	-1.19	8.00	Pass
12	2467	-1.58	8.00	Pass
13	2472	-4.98	8.00	Pass

802.11g

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
1	2412	-6.71	8.00	Pass
6	2437	-2.55	8.00	Pass
11	2462	-5.62	8.00	Pass
12	2467	-8.16	8.00	Pass
13	2472	-11.78	8.00	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
1	2412	-7.56	8.00	Pass
6	2437	-4.72	8.00	Pass
11	2462	-6.94	8.00	Pass
12	2467	-9.29	8.00	Pass
13	2472	-11.88	8.00	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
3	2422	-11.91	8.00	Pass
6	2437	-10.45	8.00	Pass
9	2452	-11.52	8.00	Pass
10	2457	-12.09	8.00	Pass
11	2462	-16.01	8.00	Pass

802.11ax (RU26)

RU Configuration	Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
26/0	1	2412	0.90	8.00	Pass
26/8	11	2462	0.94	8.00	Pass
26/8	12	2467	-1.11	8.00	Pass
26/8	13	2472	-11.02	8.00	Pass

802.11ax (RU52)

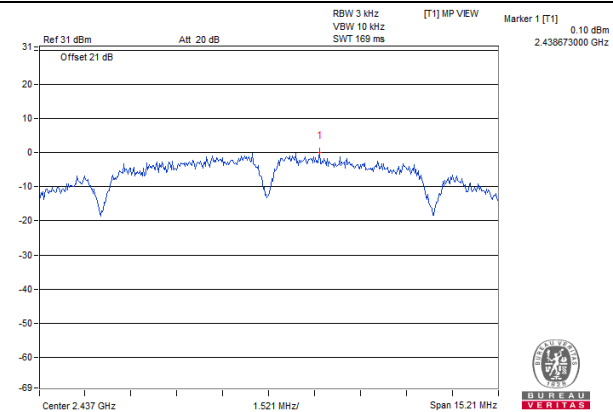
RU Configuration	Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
52/37	6	2437	2.42	8.00	Pass

802.11ax (RU106)

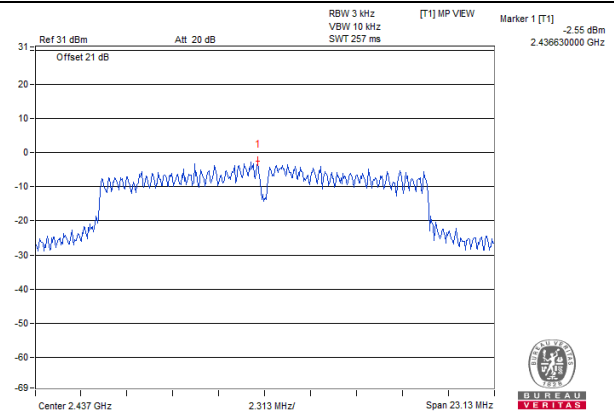
RU Configuration	Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
106/53	1	2412	-7.04	8.00	Pass
106/54	11	2462	-6.28	8.00	Pass
106/54	12	2467	-8.48	8.00	Pass
106/54	13	2472	-10.99	8.00	Pass

Spectrum Plot of Worst Value

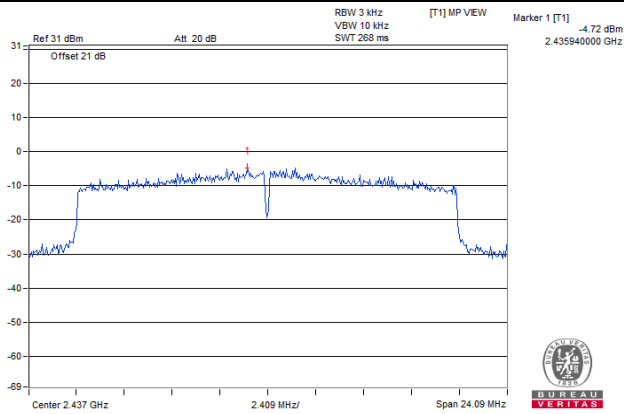
802.11b / CH6



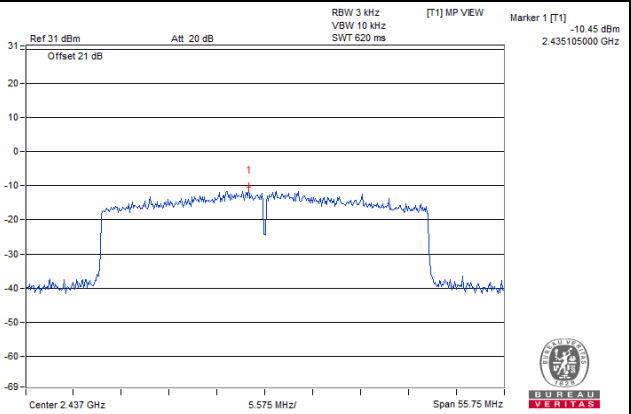
802.11g / CH6



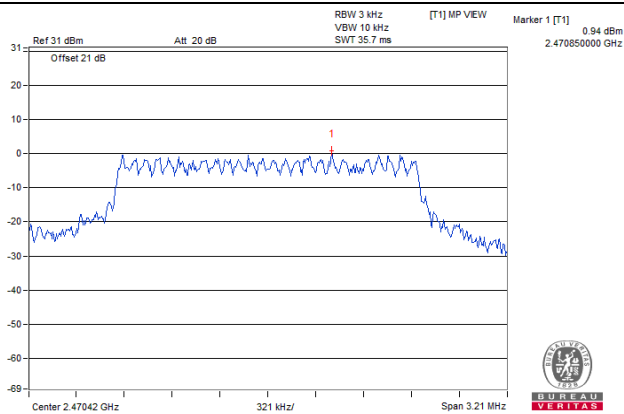
802.11ax (HE20) / CH6



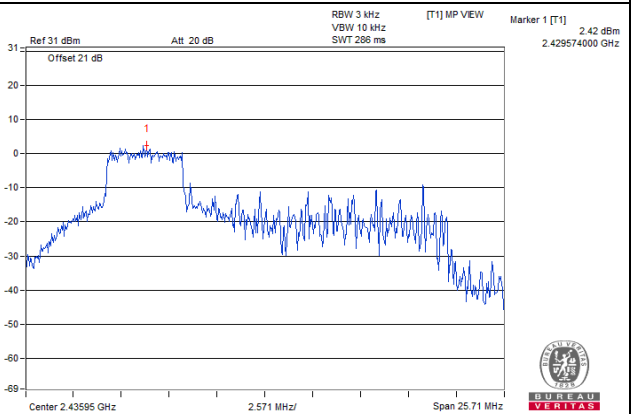
802.11ax (HE40) / CH6



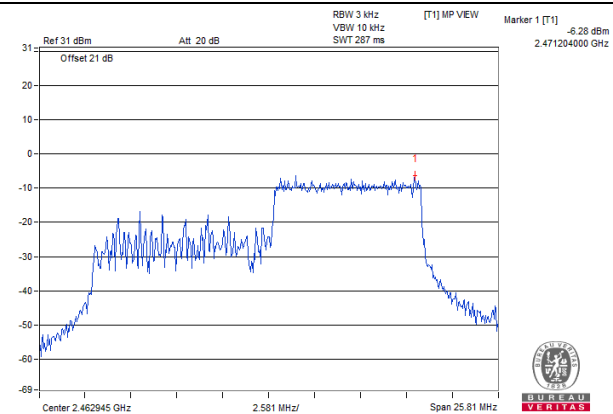
802.11ax (RU26) / CH11



802.11ax (RU52) / CH6



802.11ax (RU106) / CH11

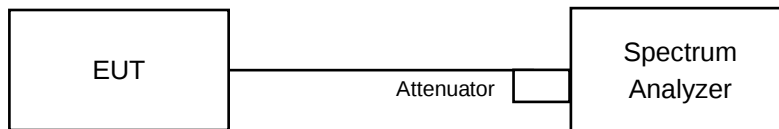


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

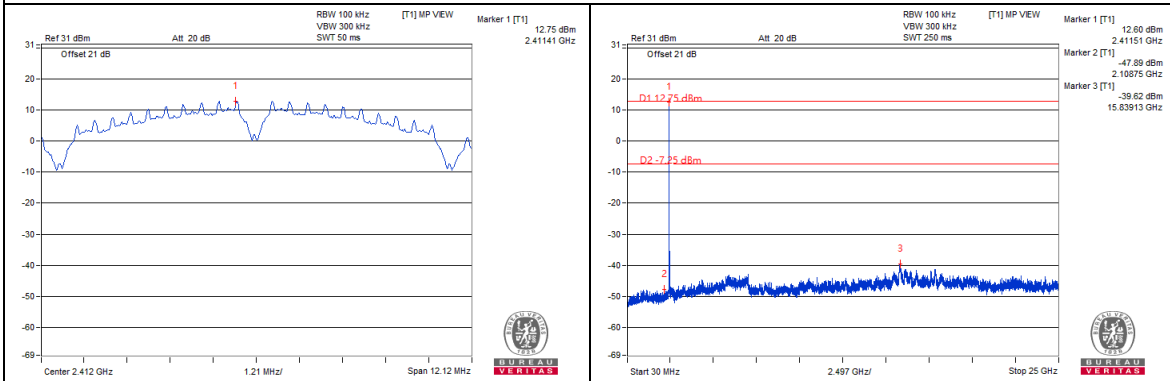
Same as Item 4.3.6

4.6.7 Test Results

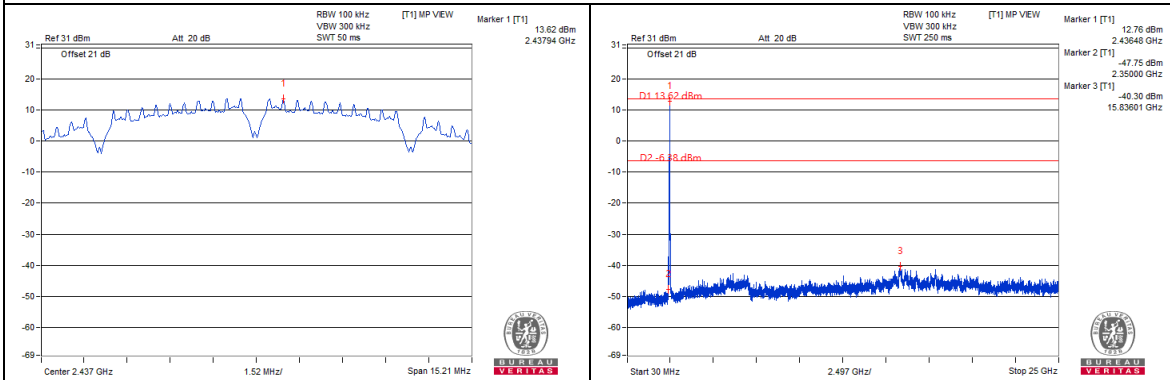
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

802.11b

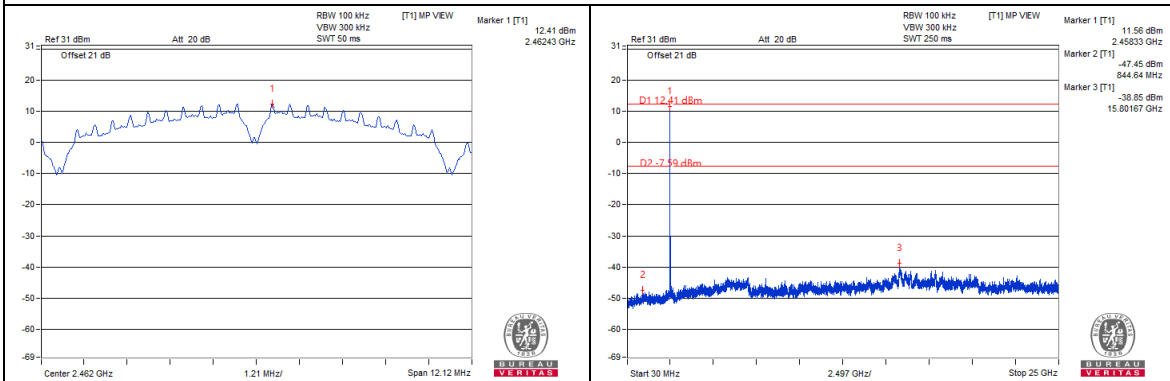
CH 1



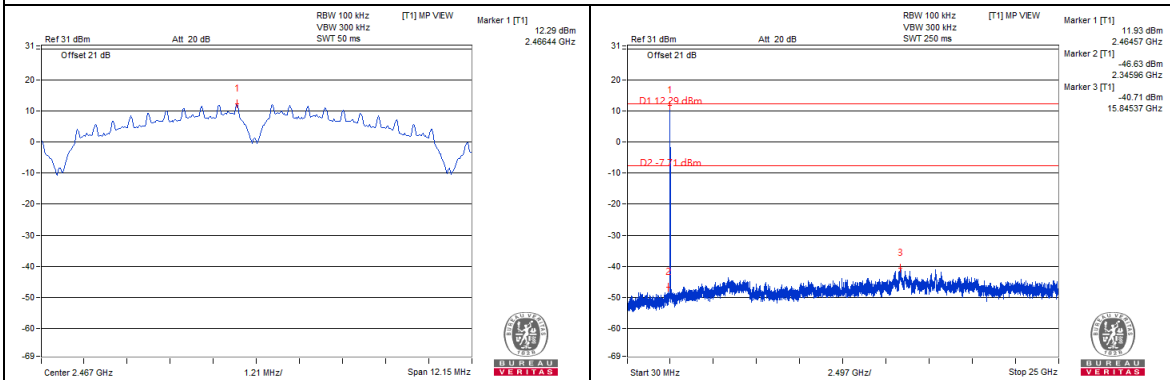
CH 6



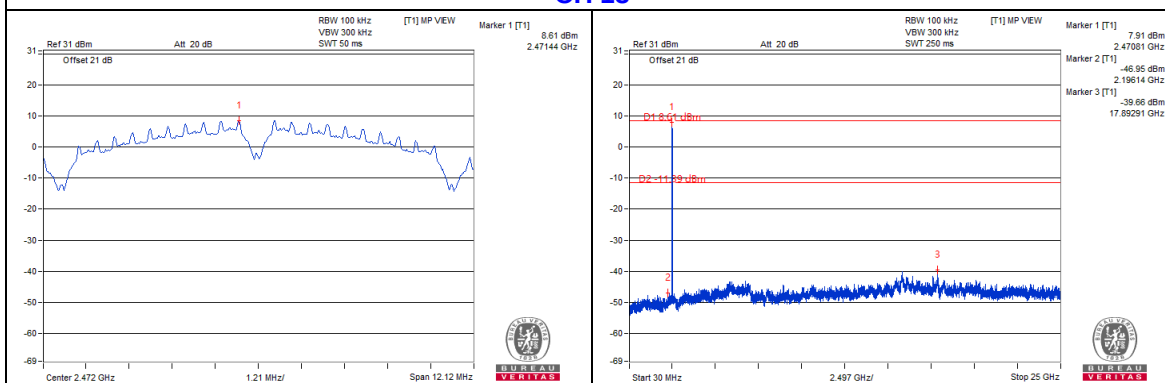
CH 11



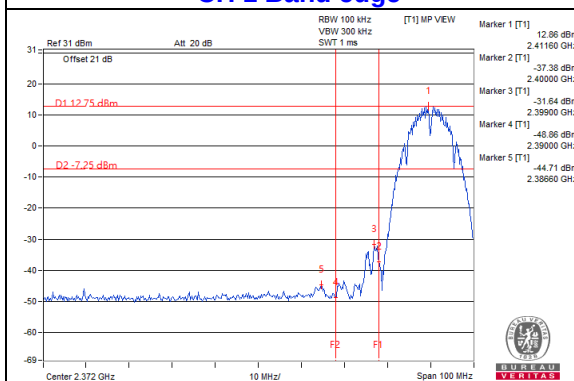
CH 12



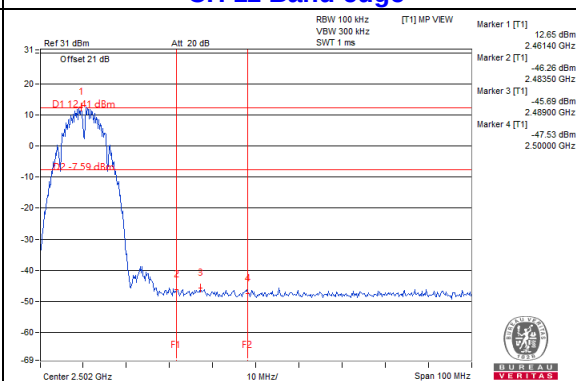
CH 13



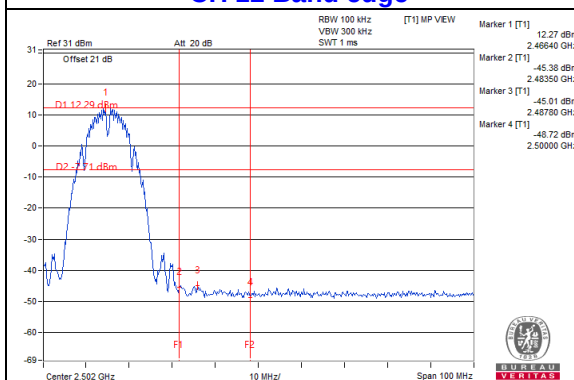
CH 1 Band edge



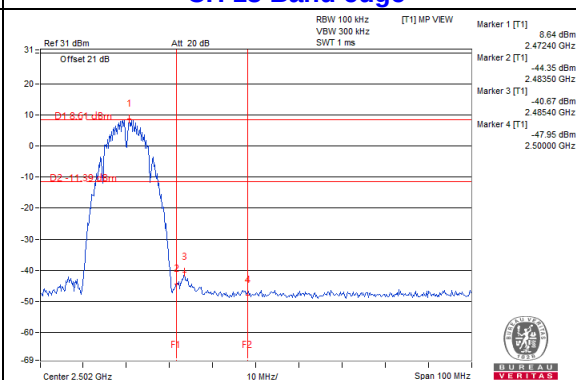
CH 11 Band edge



CH 12 Band edge

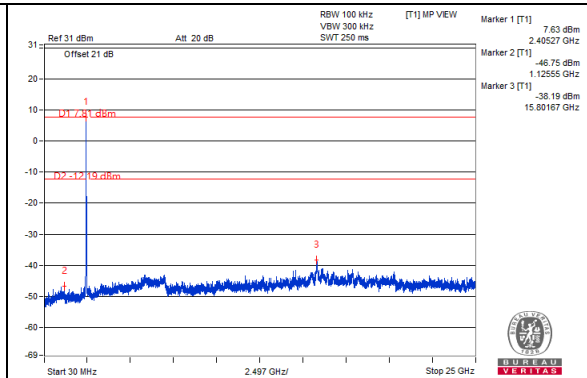
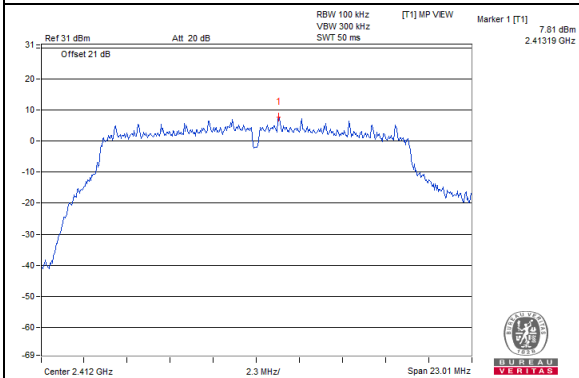


CH 13 Band edge

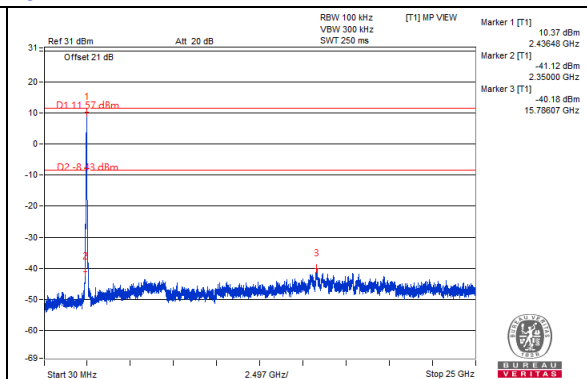
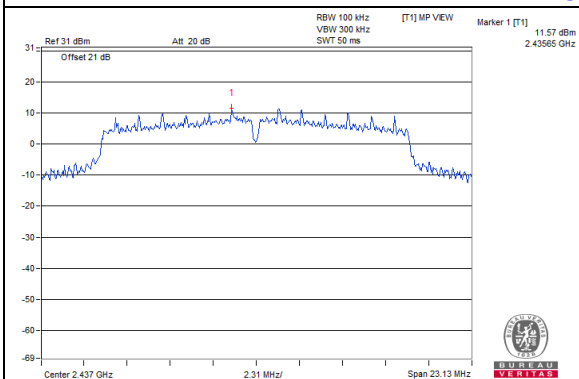


802.11g

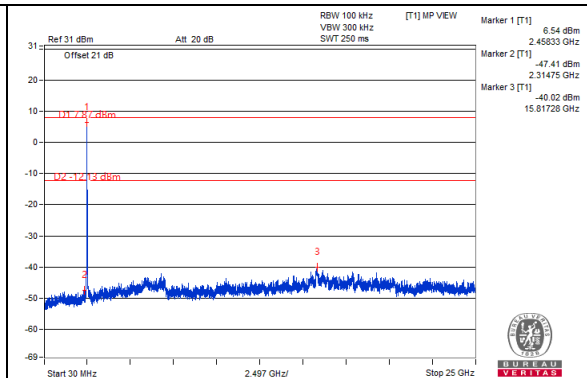
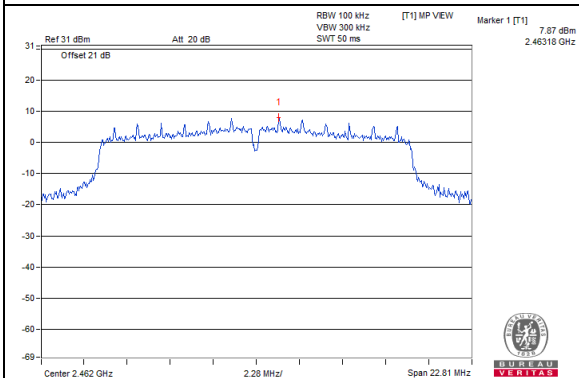
CH 1



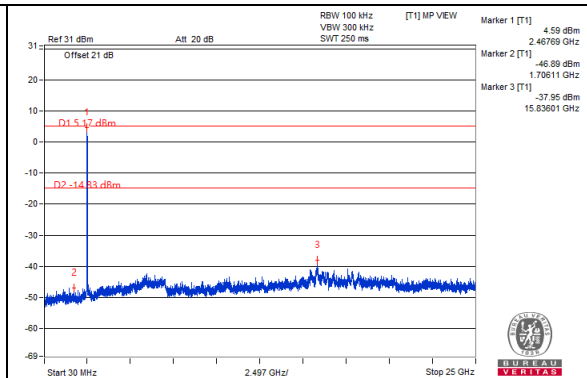
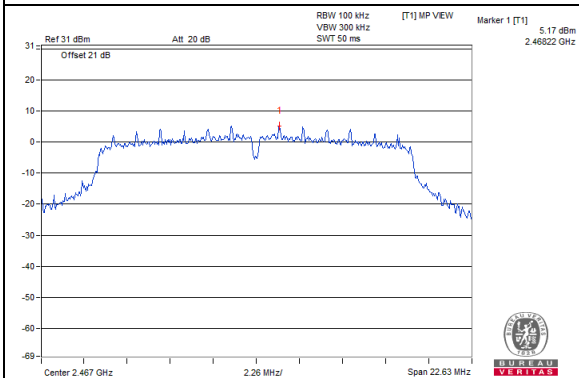
CH 6



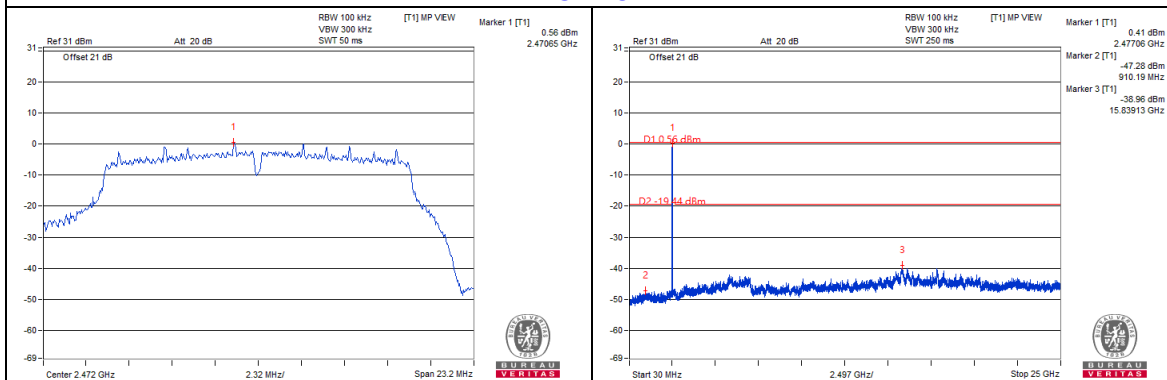
CH 11



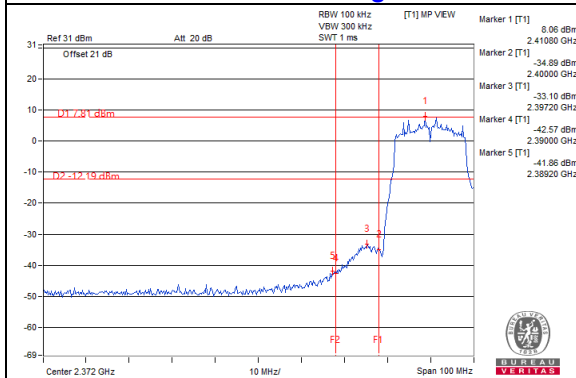
CH 12



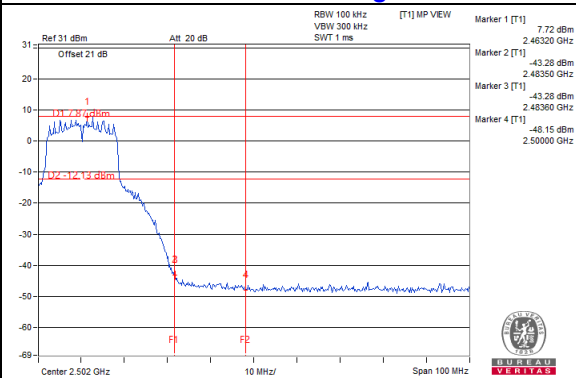
CH 13



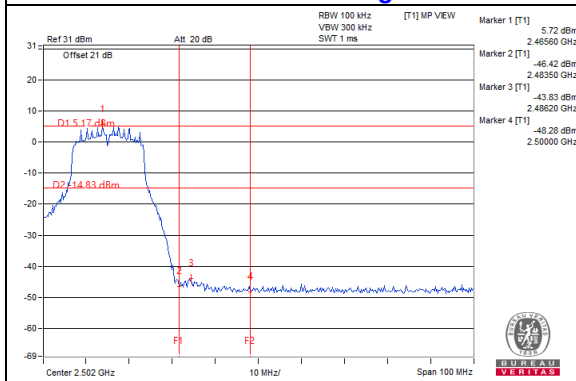
CH 1 Band edge



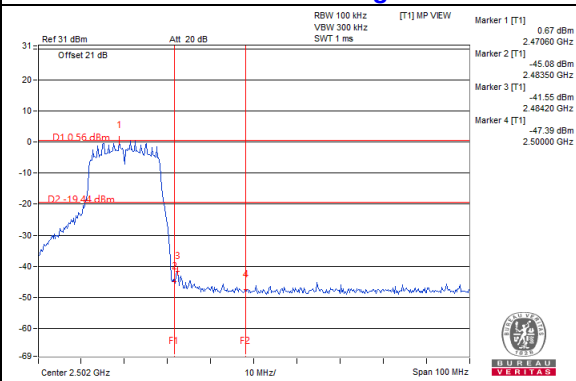
CH 11 Band edge



CH 12 Band edge

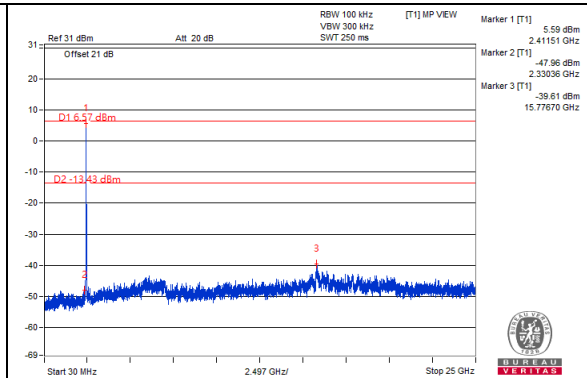
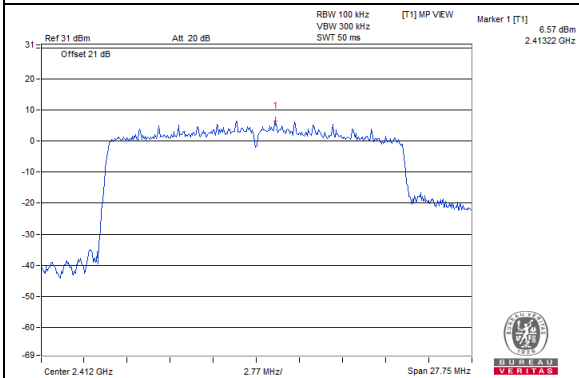


CH 13 Band edge

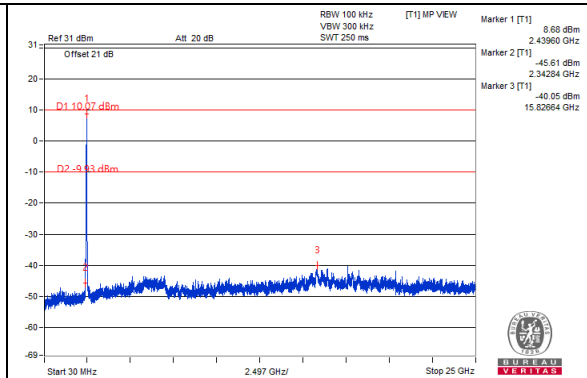
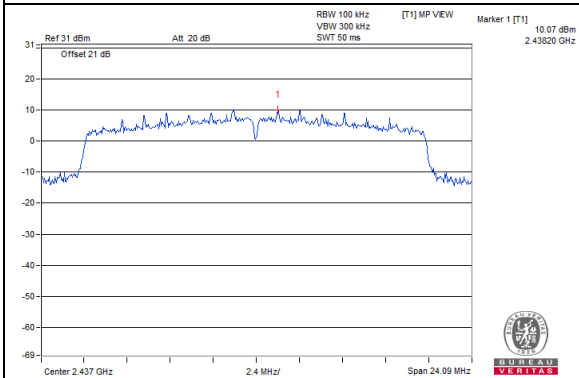


802.11ax (HE20)

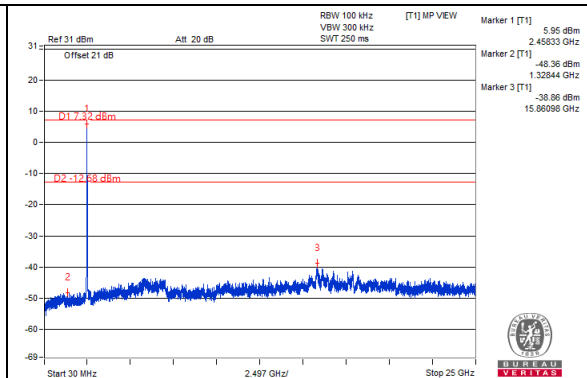
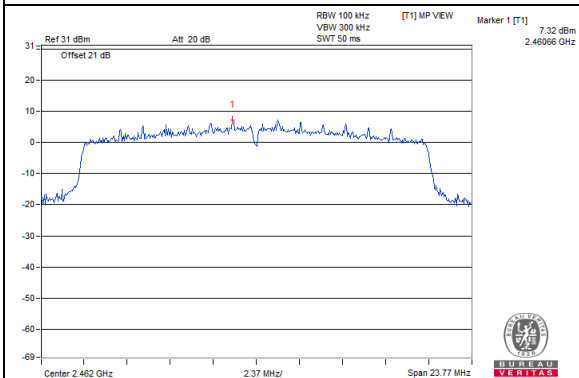
CH 1



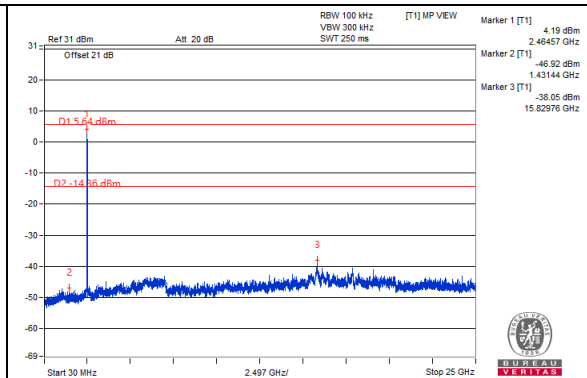
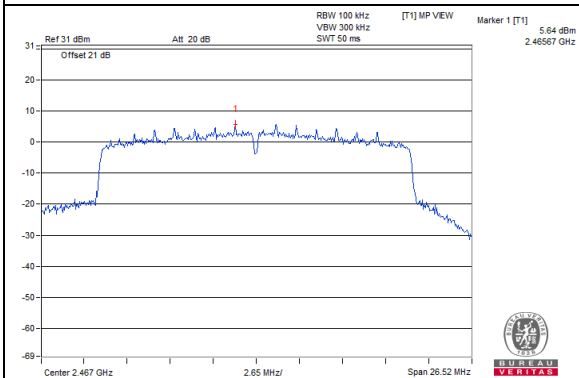
CH 6



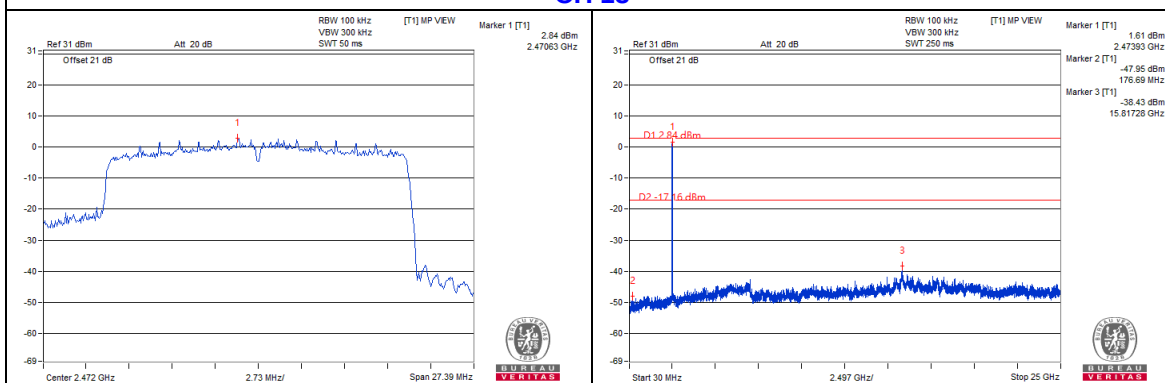
CH 11



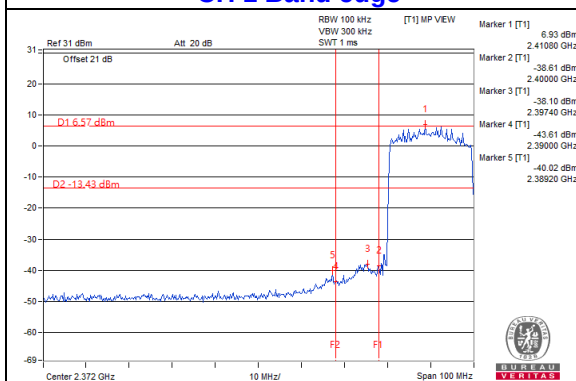
CH 12



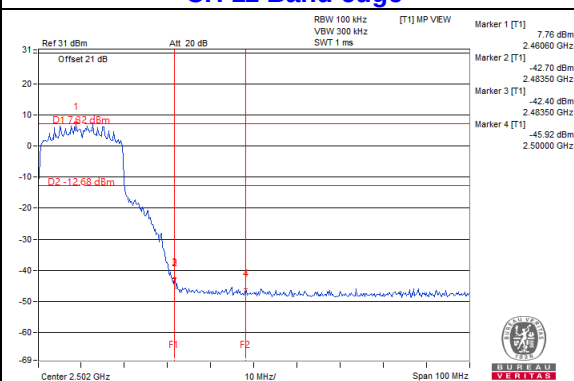
CH 13



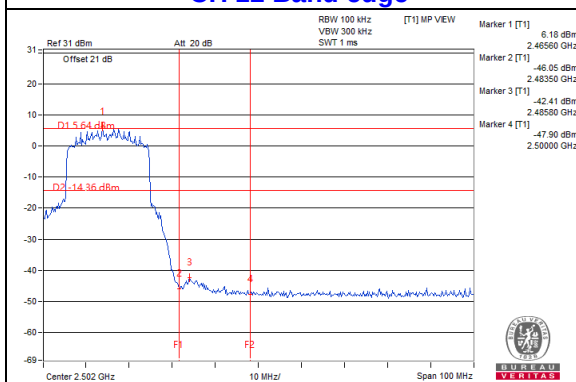
CH 1 Band edge



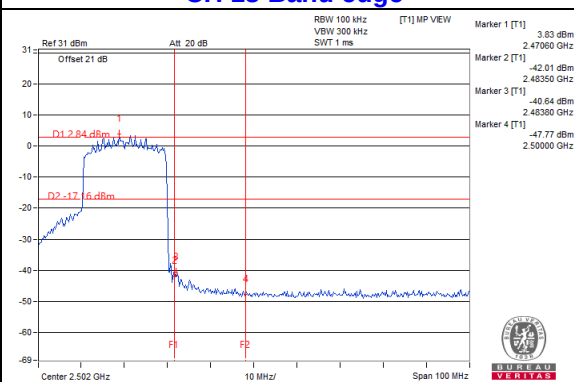
CH 11 Band edge



CH 12 Band edge

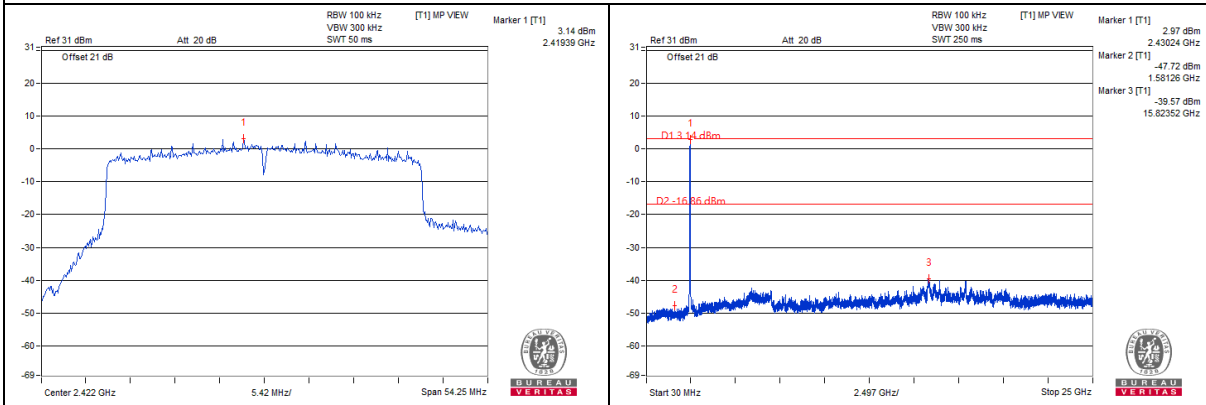


CH 13 Band edge

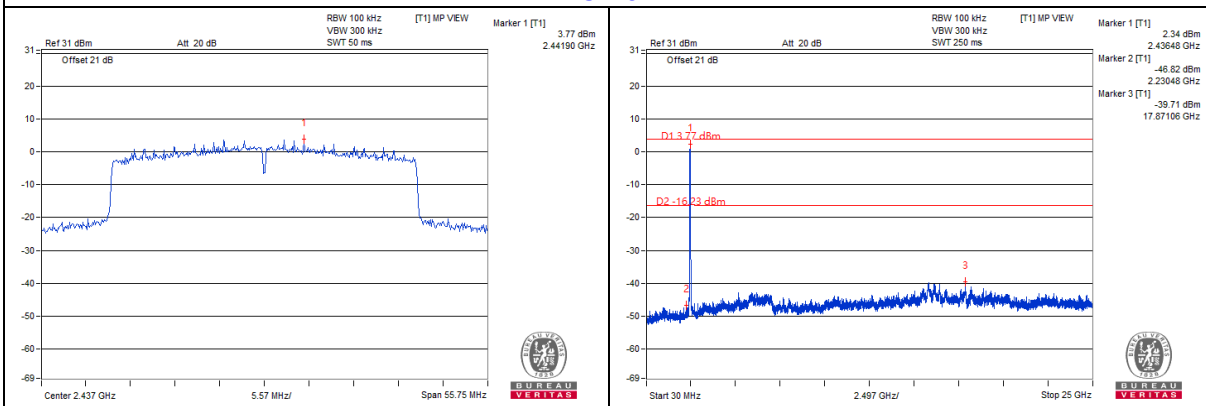


802.11ax (HE40)

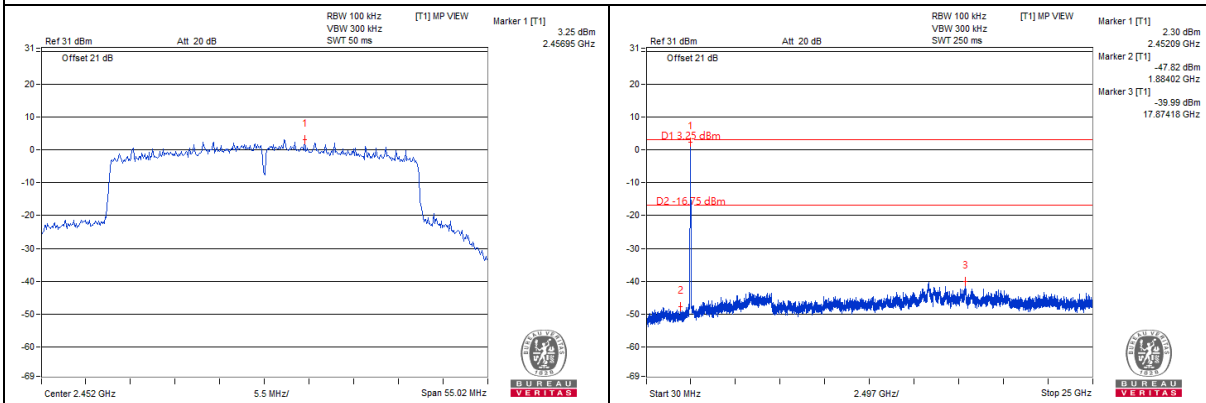
CH 3



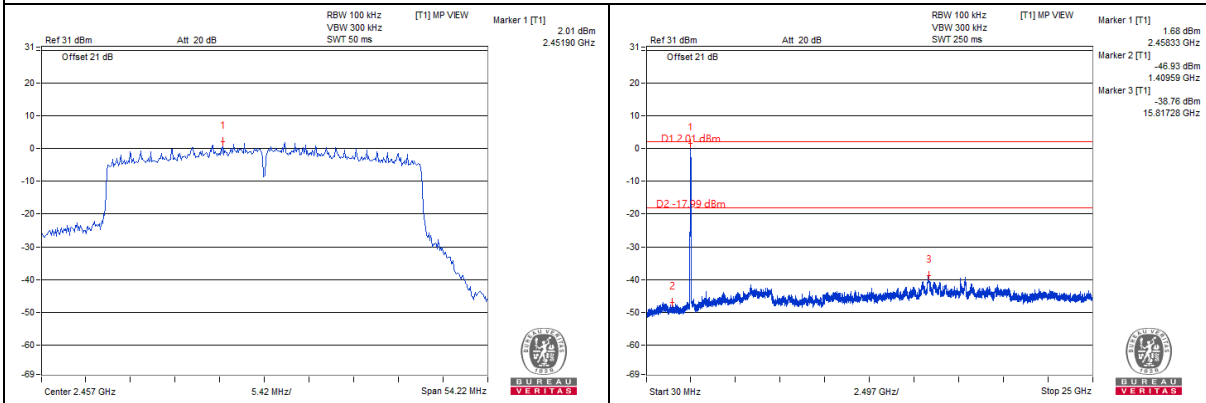
CH 6



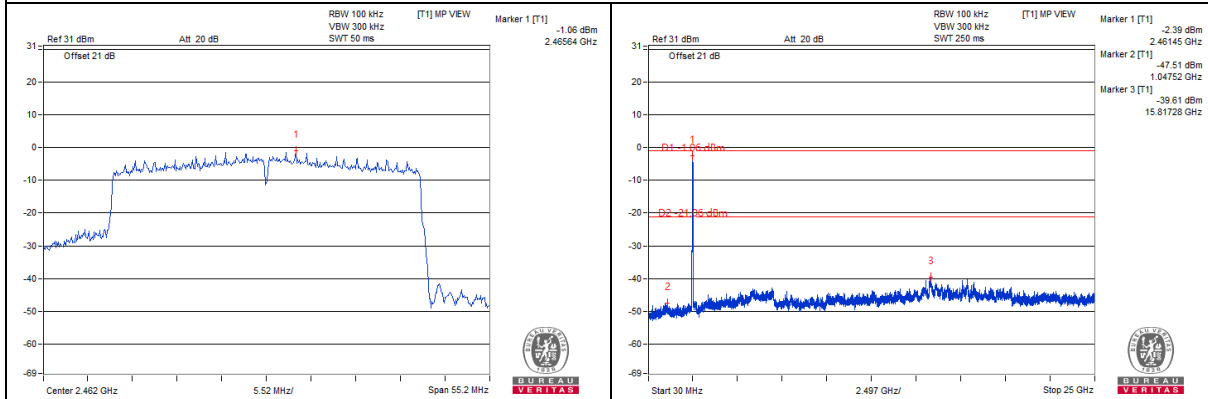
CH 9



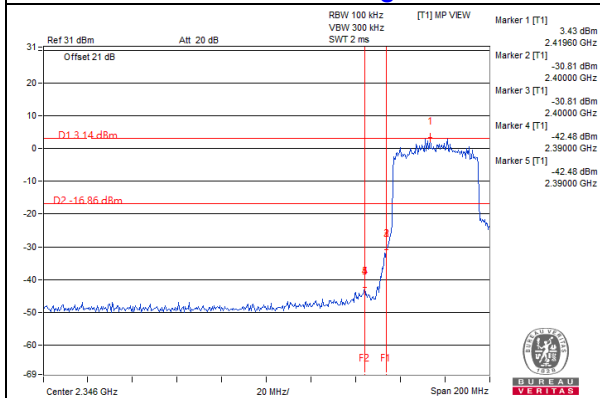
CH 10



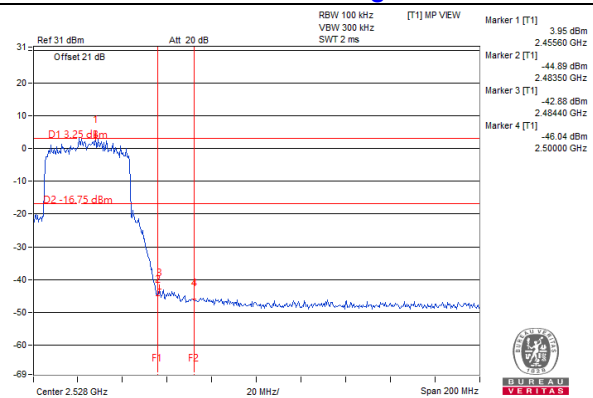
CH 11



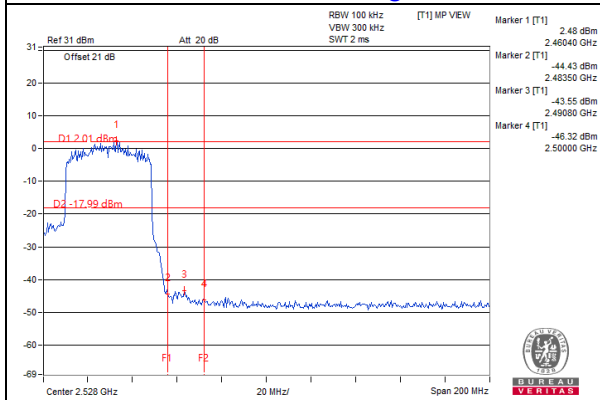
CH 3 Band edge



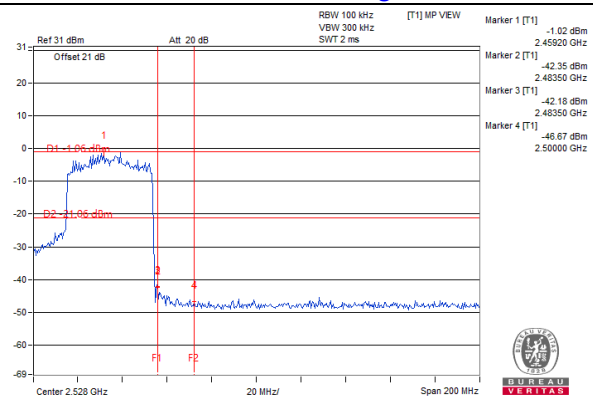
CH 9 Band edge



CH 10 Band edge

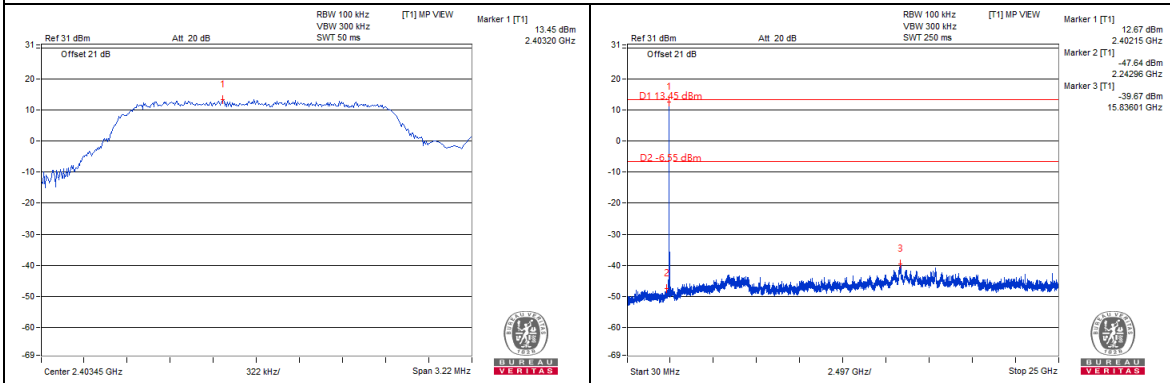


CH 11 Band edge

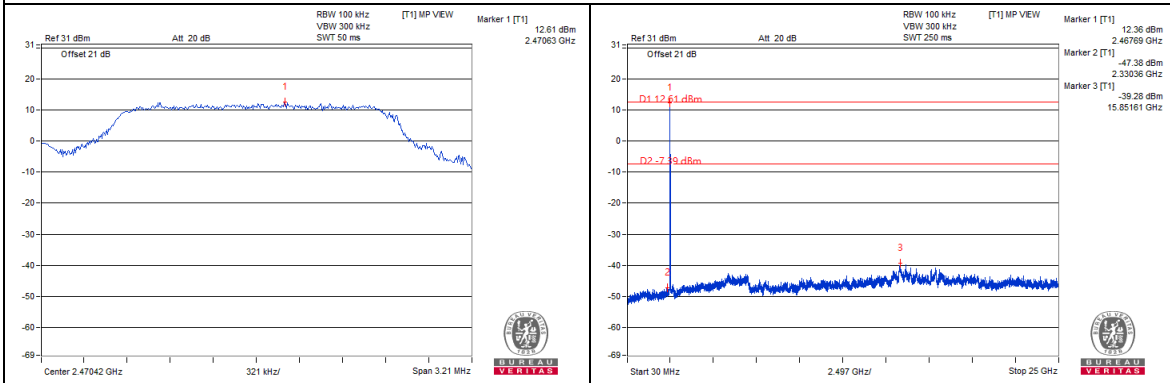


802.11ax (RU26)

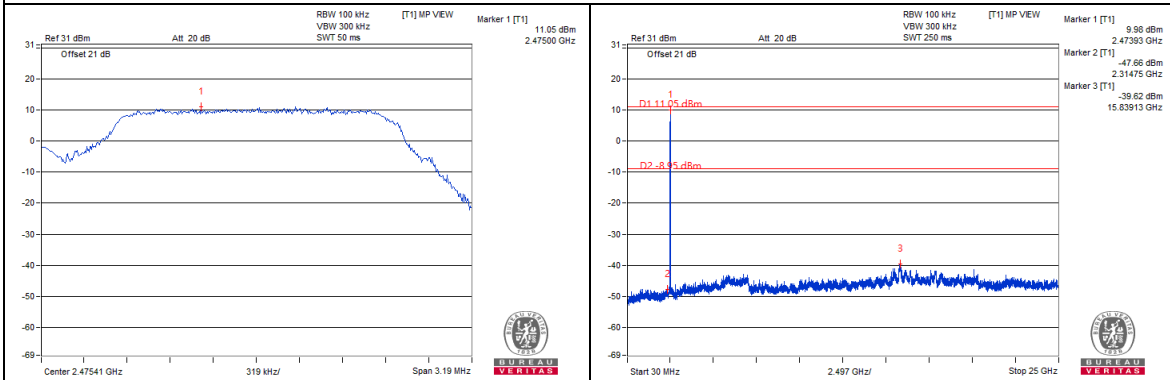
CH 1



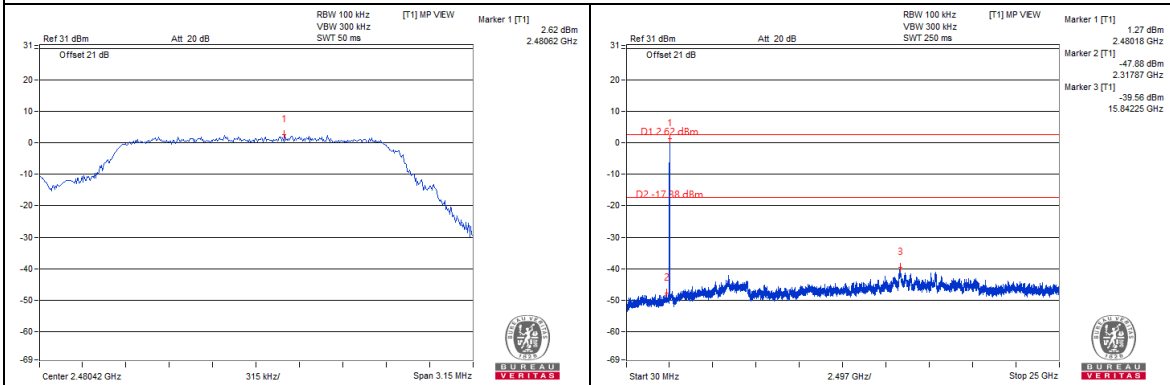
CH 11



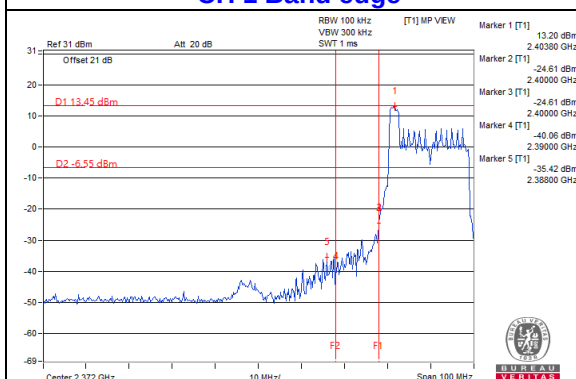
CH 12



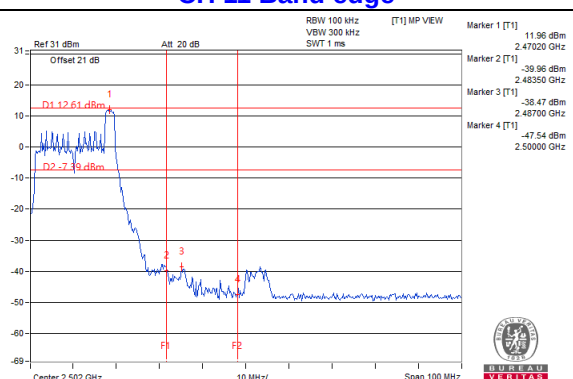
CH 13



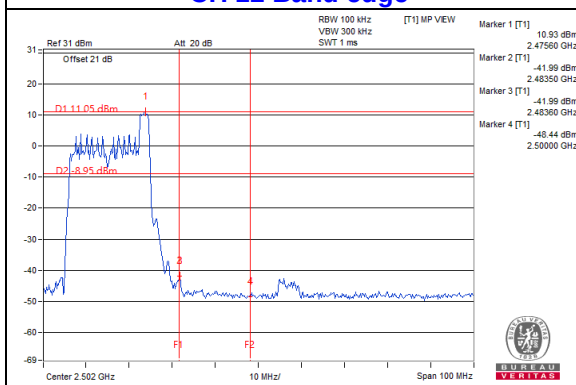
CH 1 Band edge



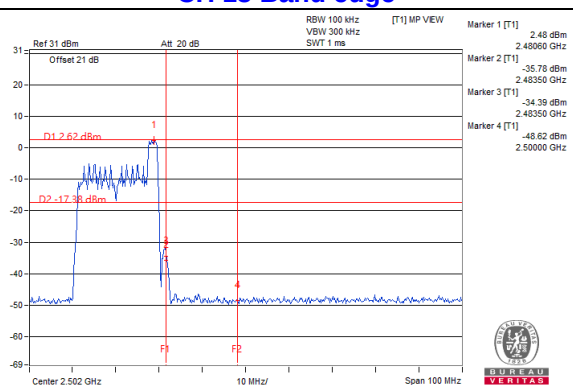
CH 11 Band edge



CH 12 Band edge

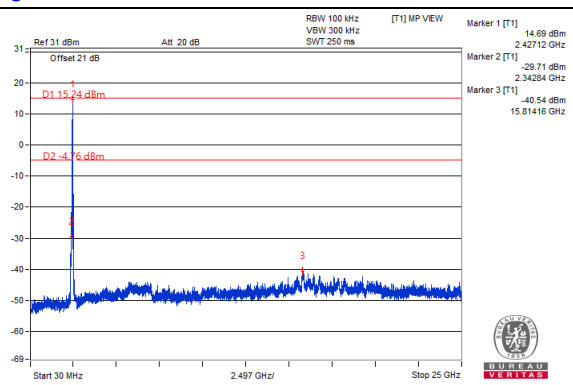
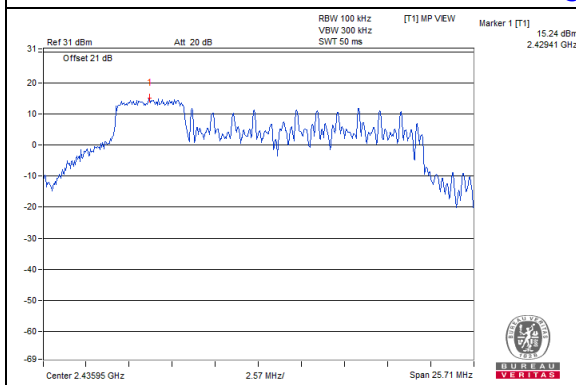


CH 13 Band edge



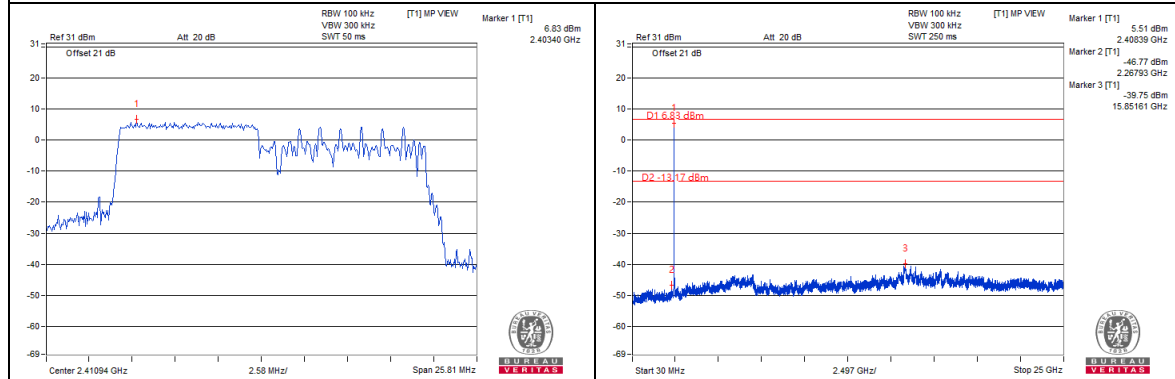
802.11ax (RU52)

CH 6

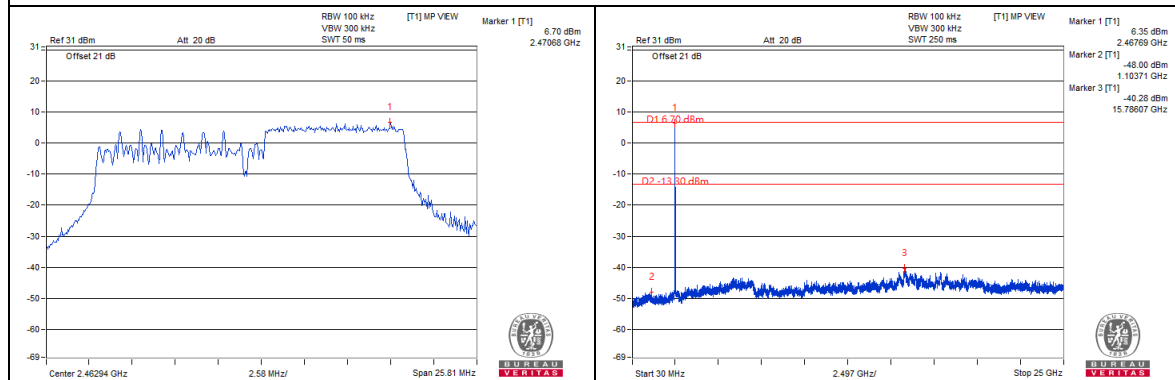


802.11ax (RU106)

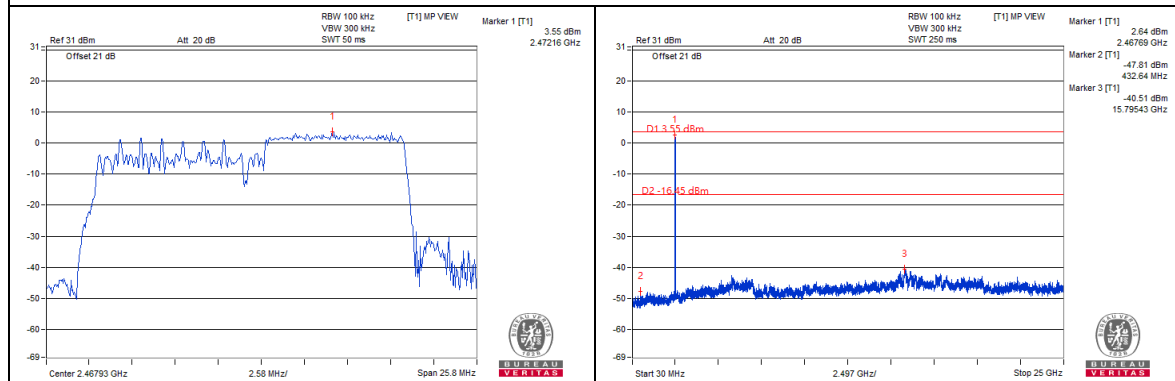
CH 1



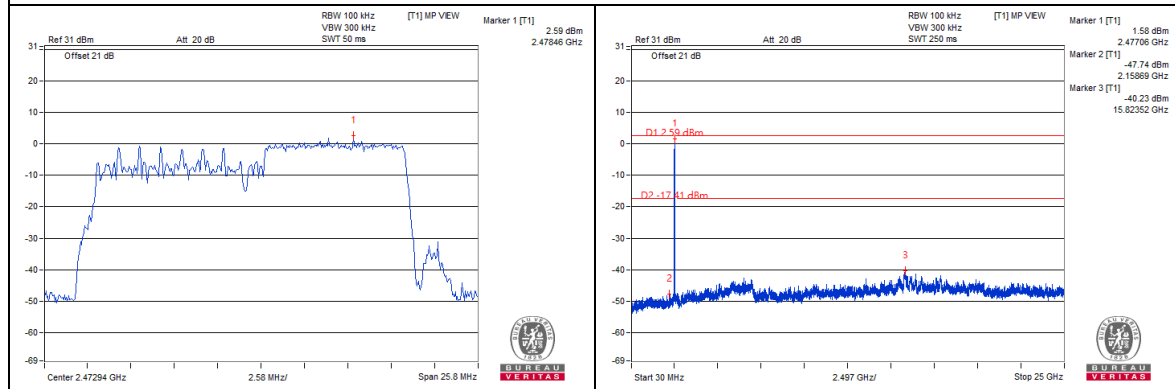
CH 11



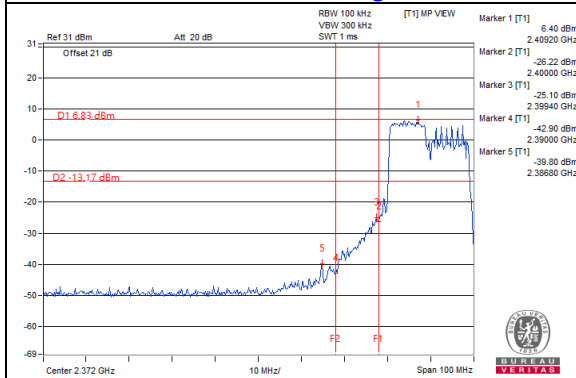
CH 12



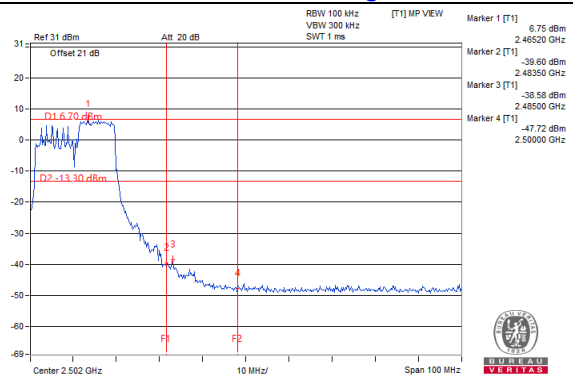
CH 13



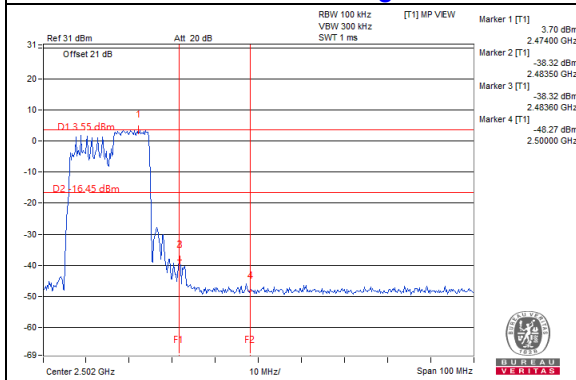
CH 1 Band edge



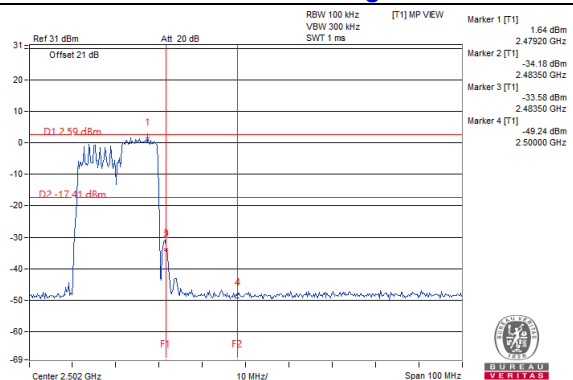
CH 11 Band edge



CH 12 Band edge



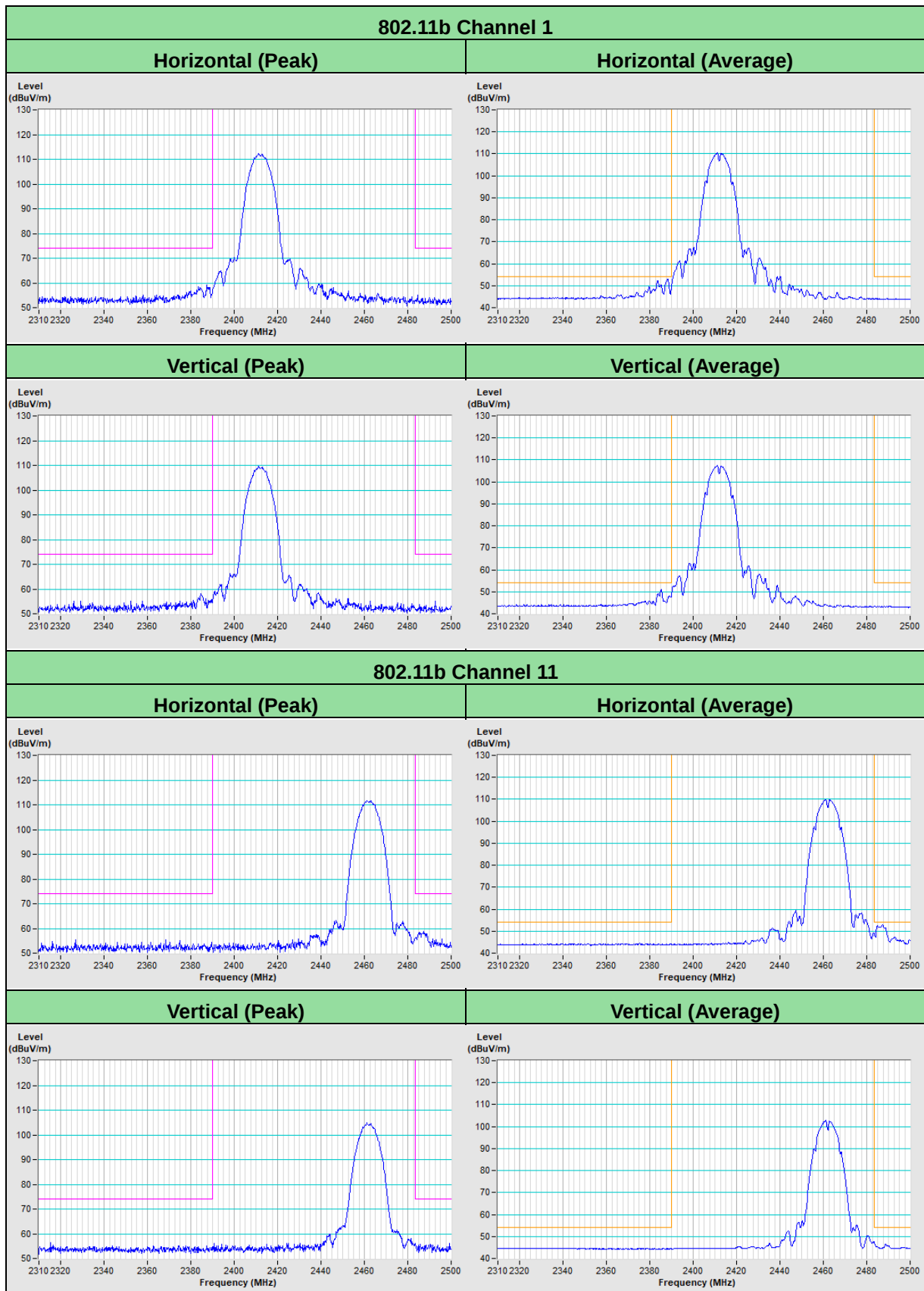
CH 13 Band edge

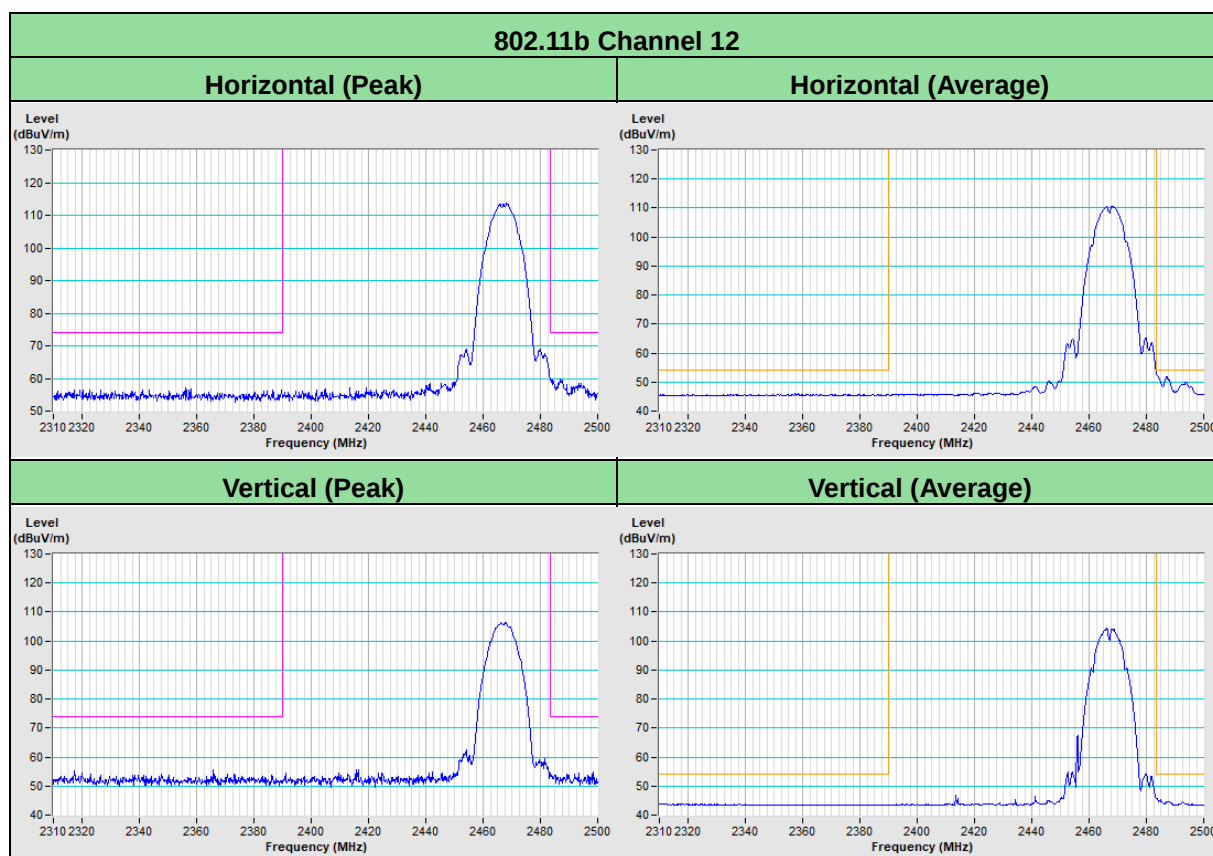


5 Pictures of Test Arrangements

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

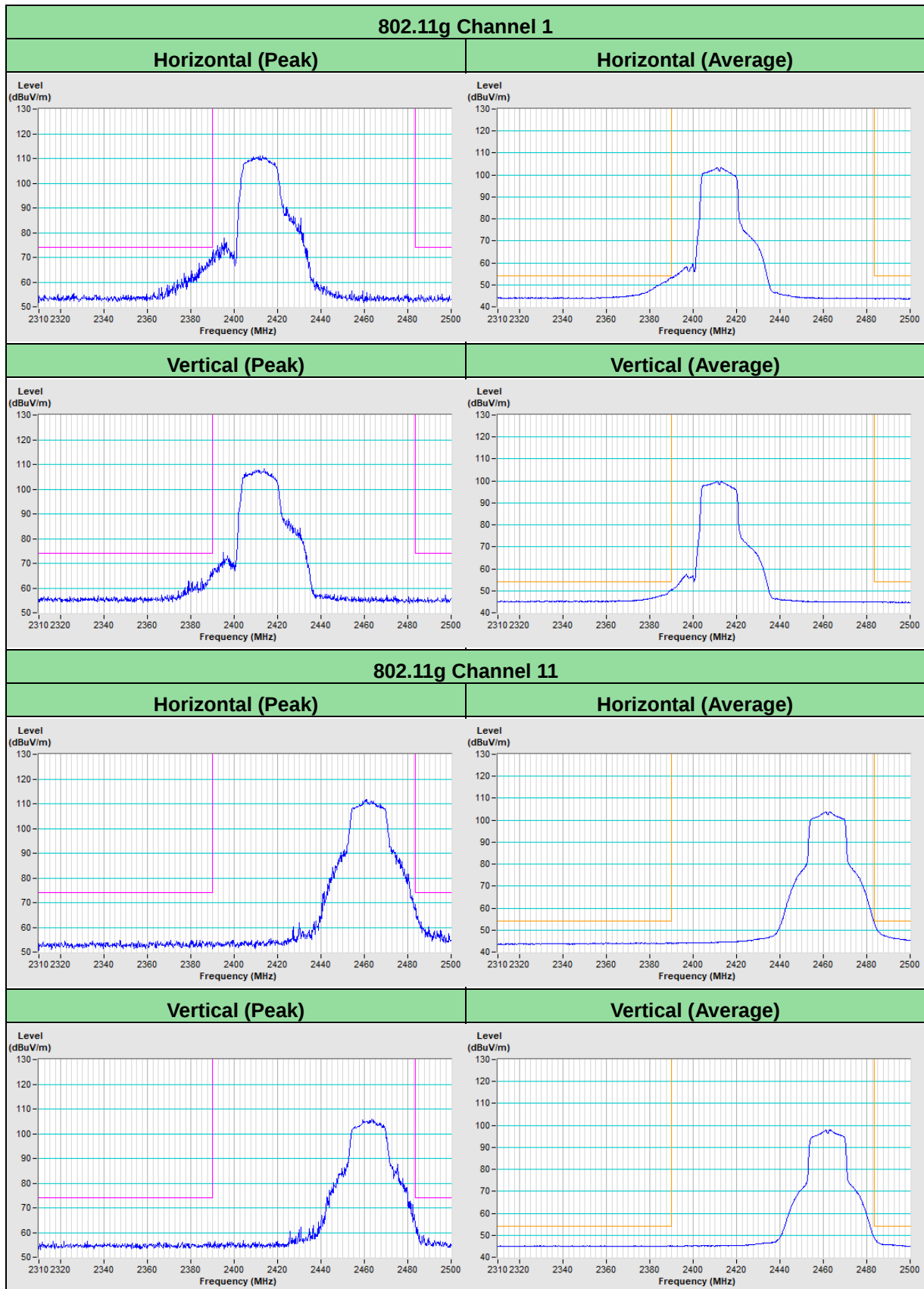
Annex A - Band-Edge Measurement

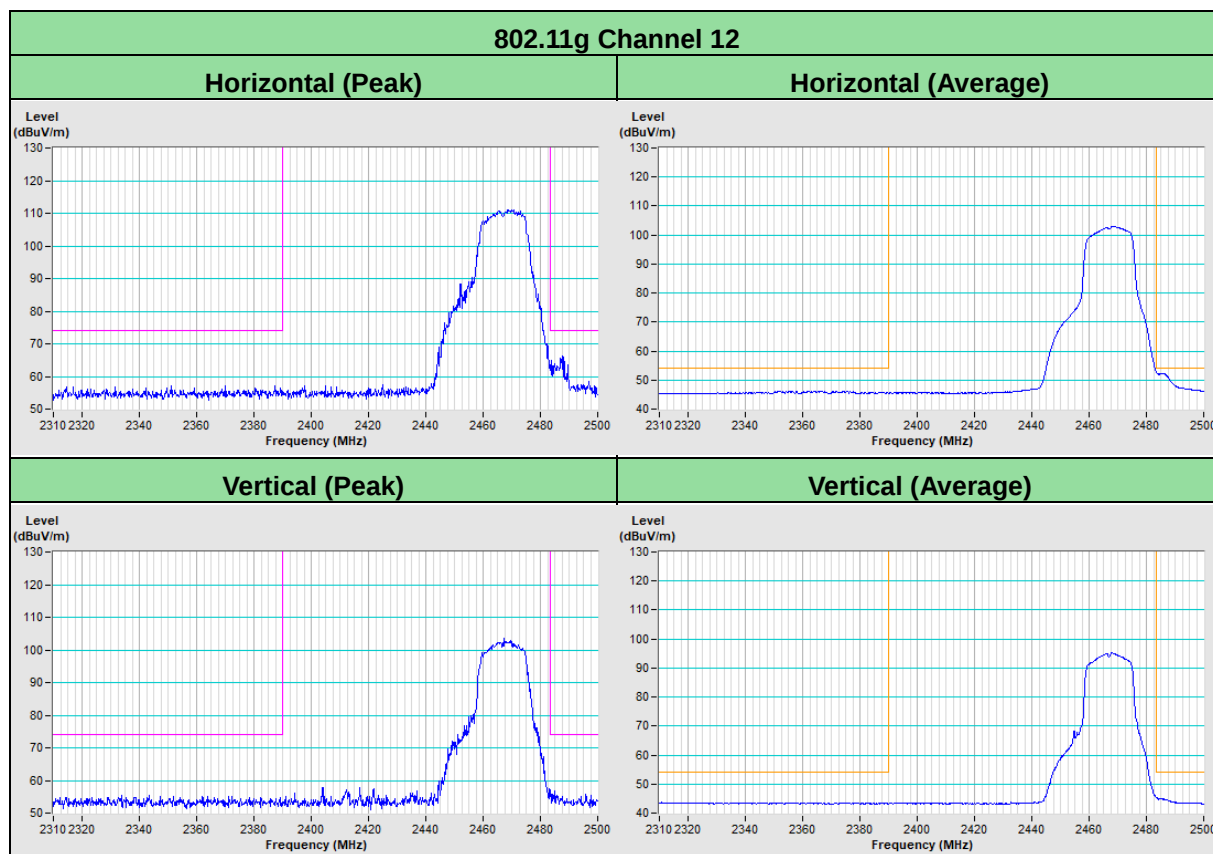


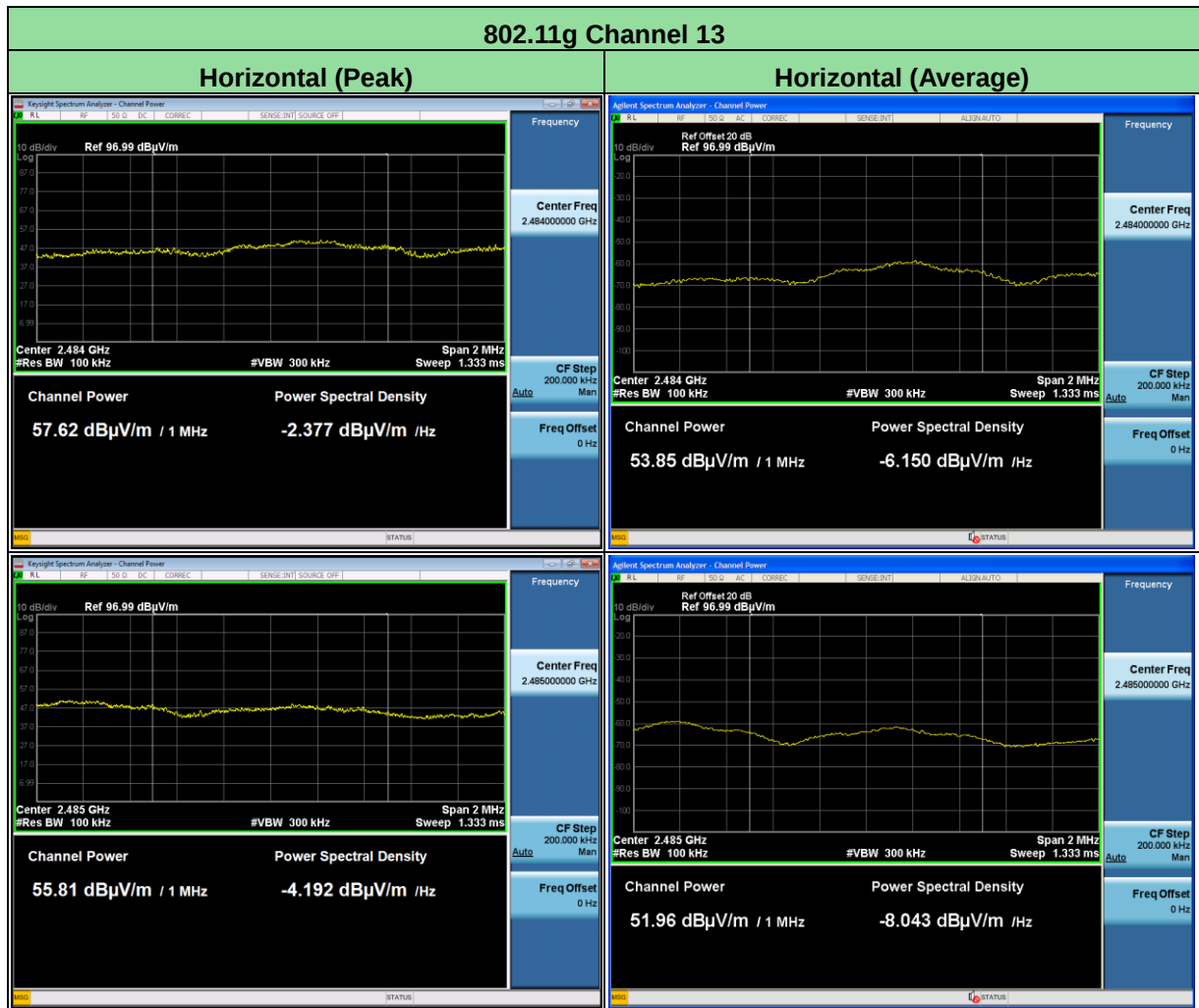


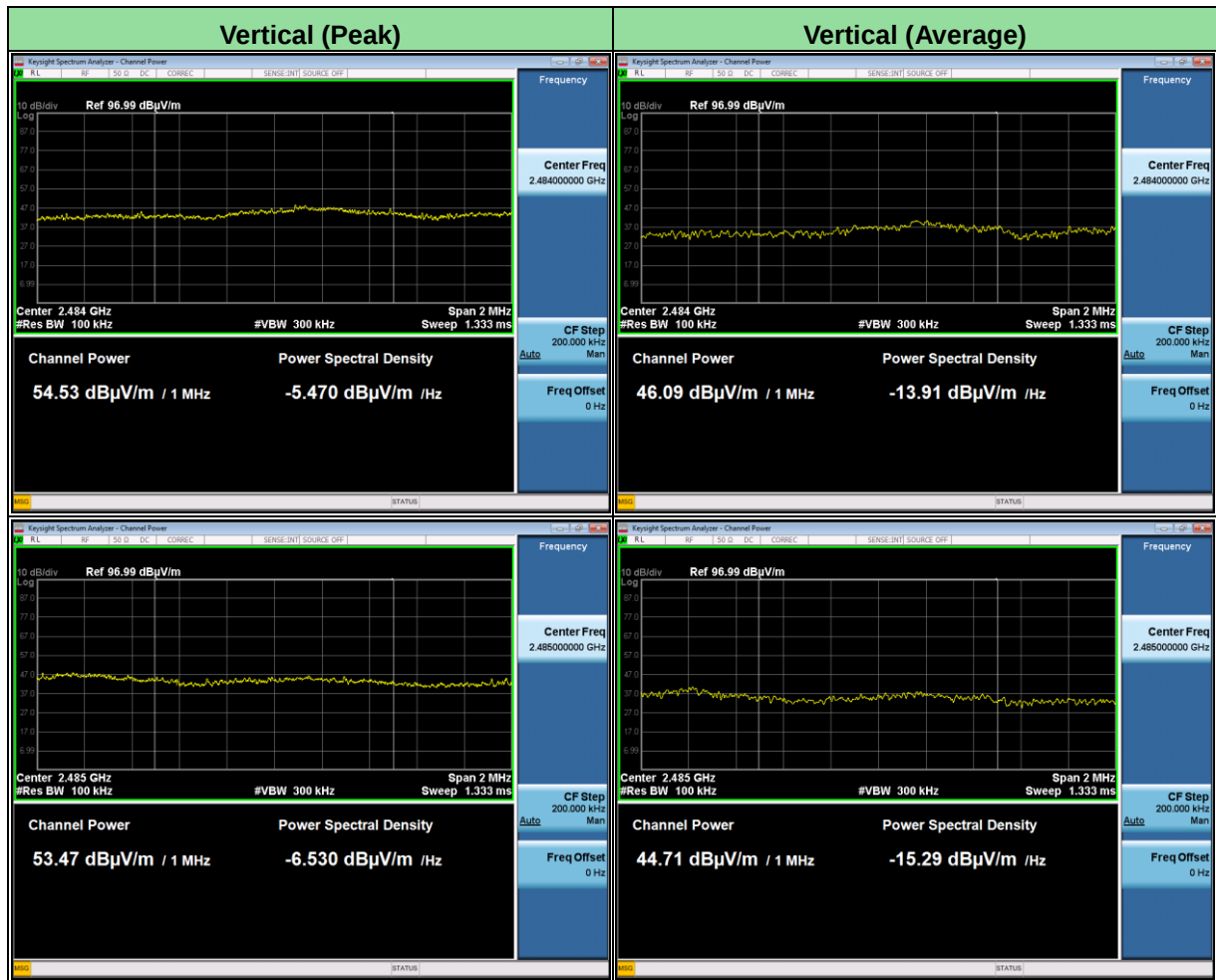


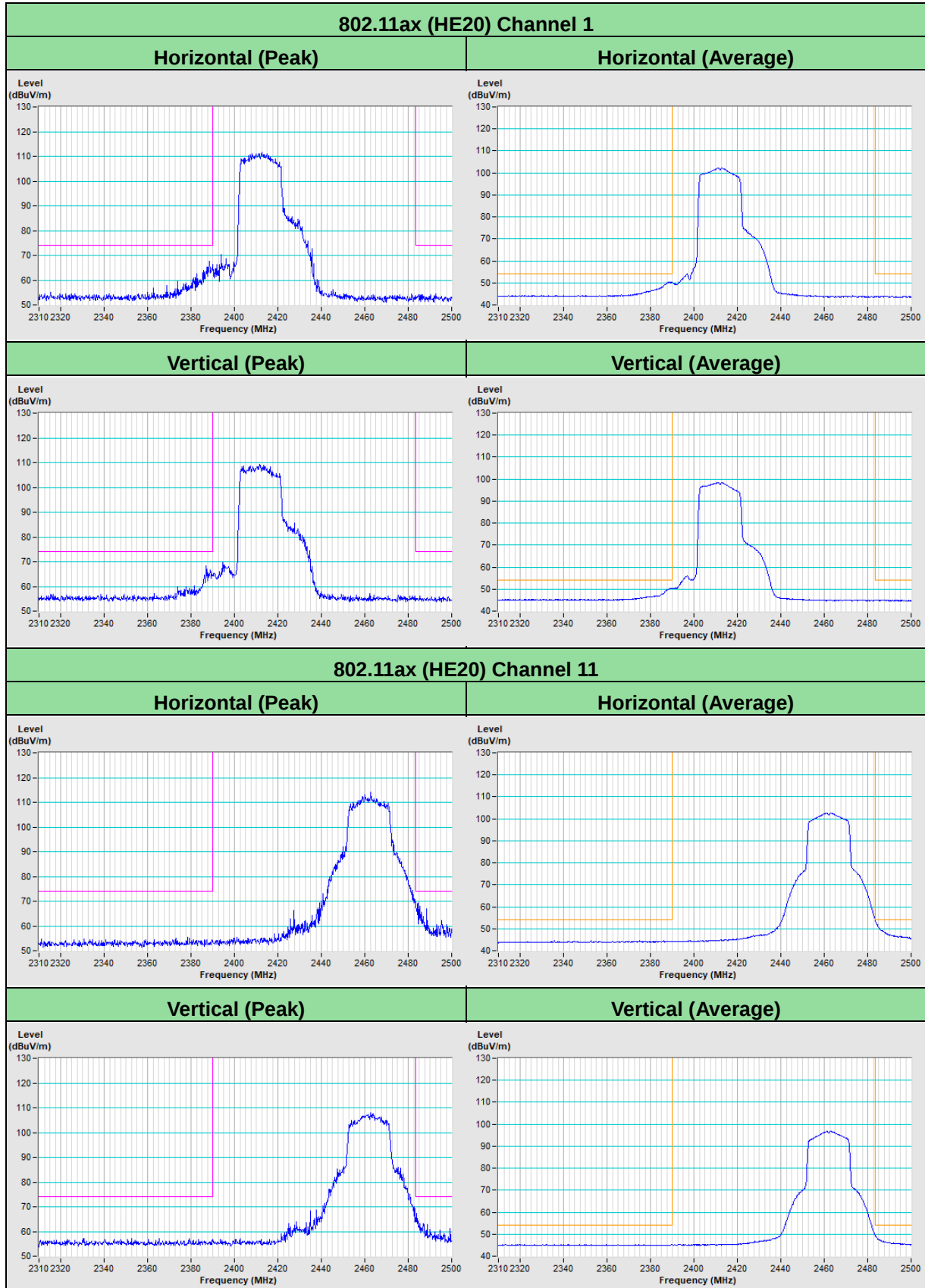


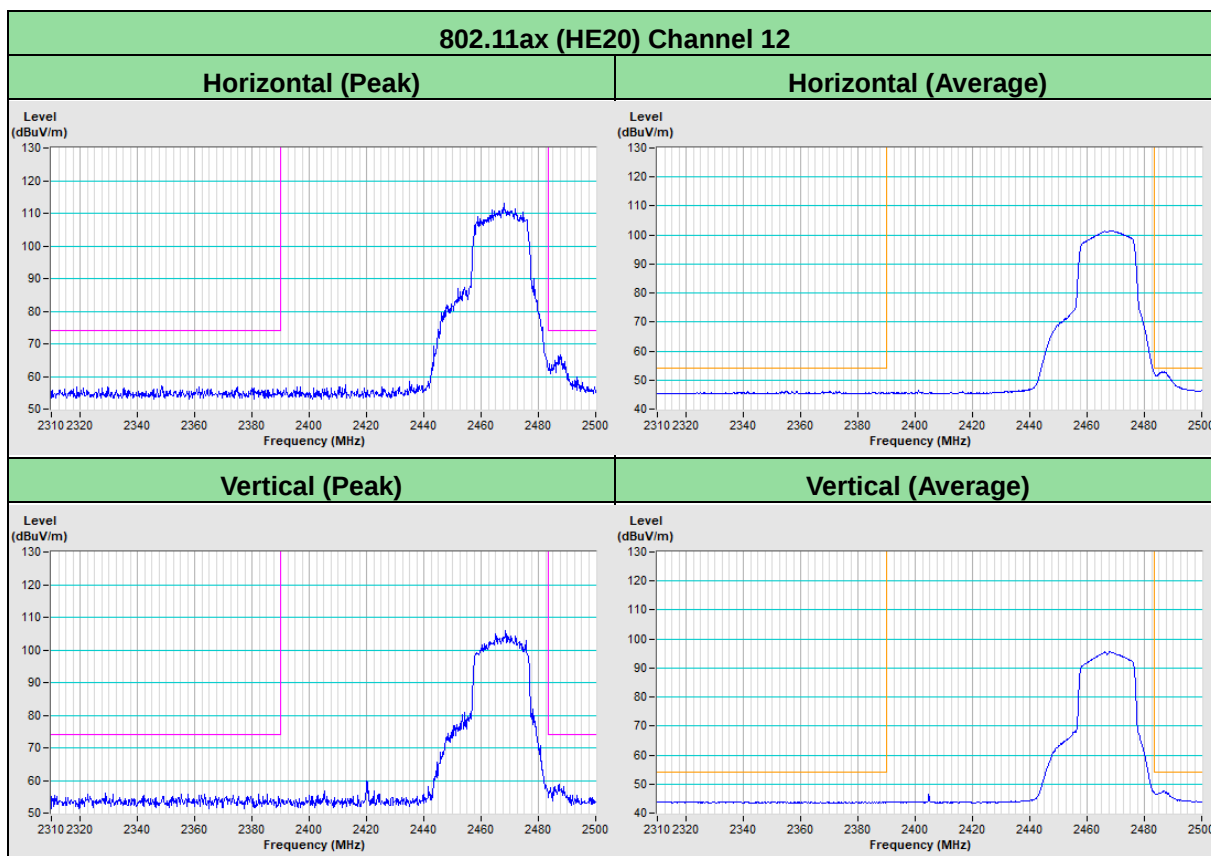


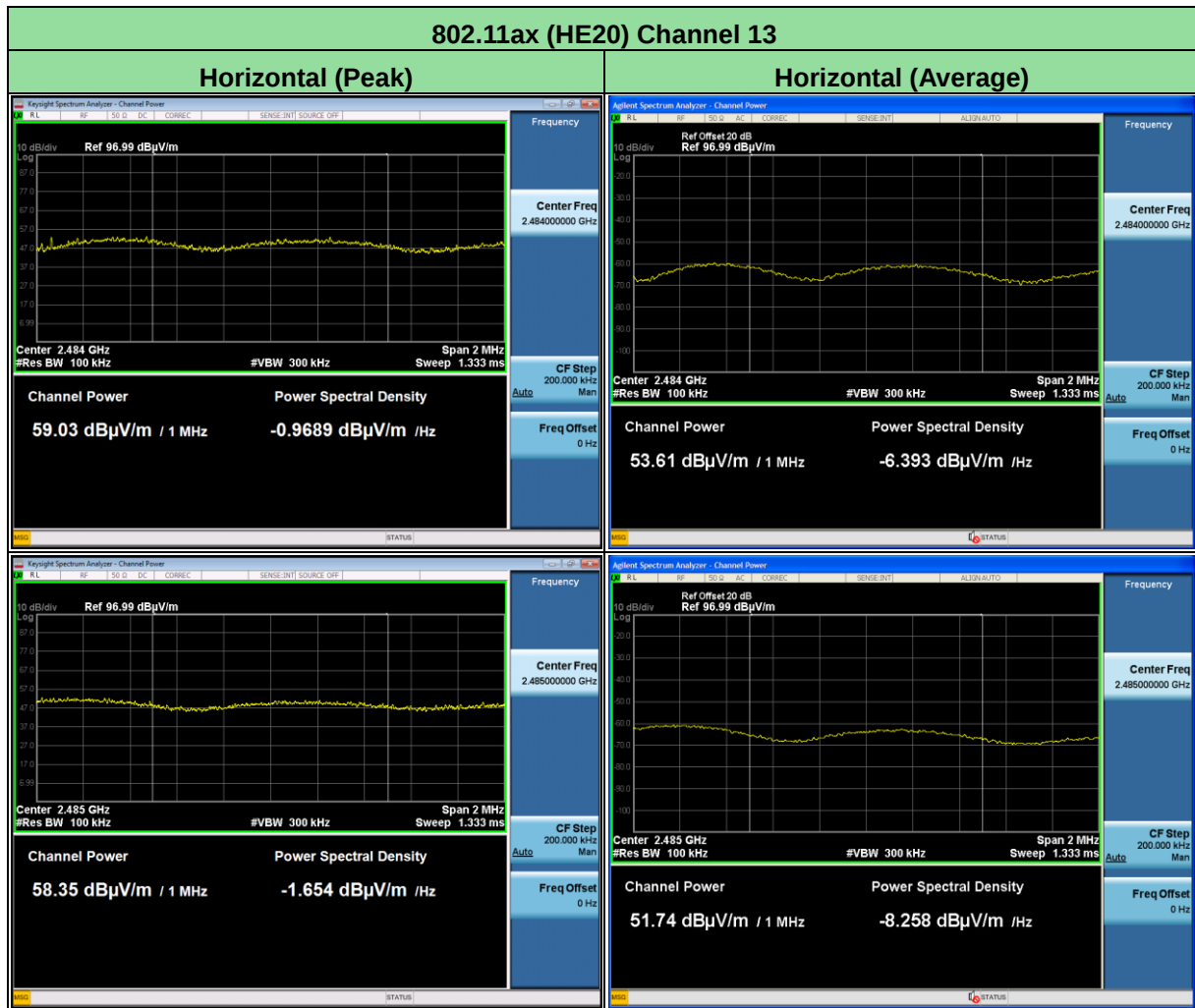


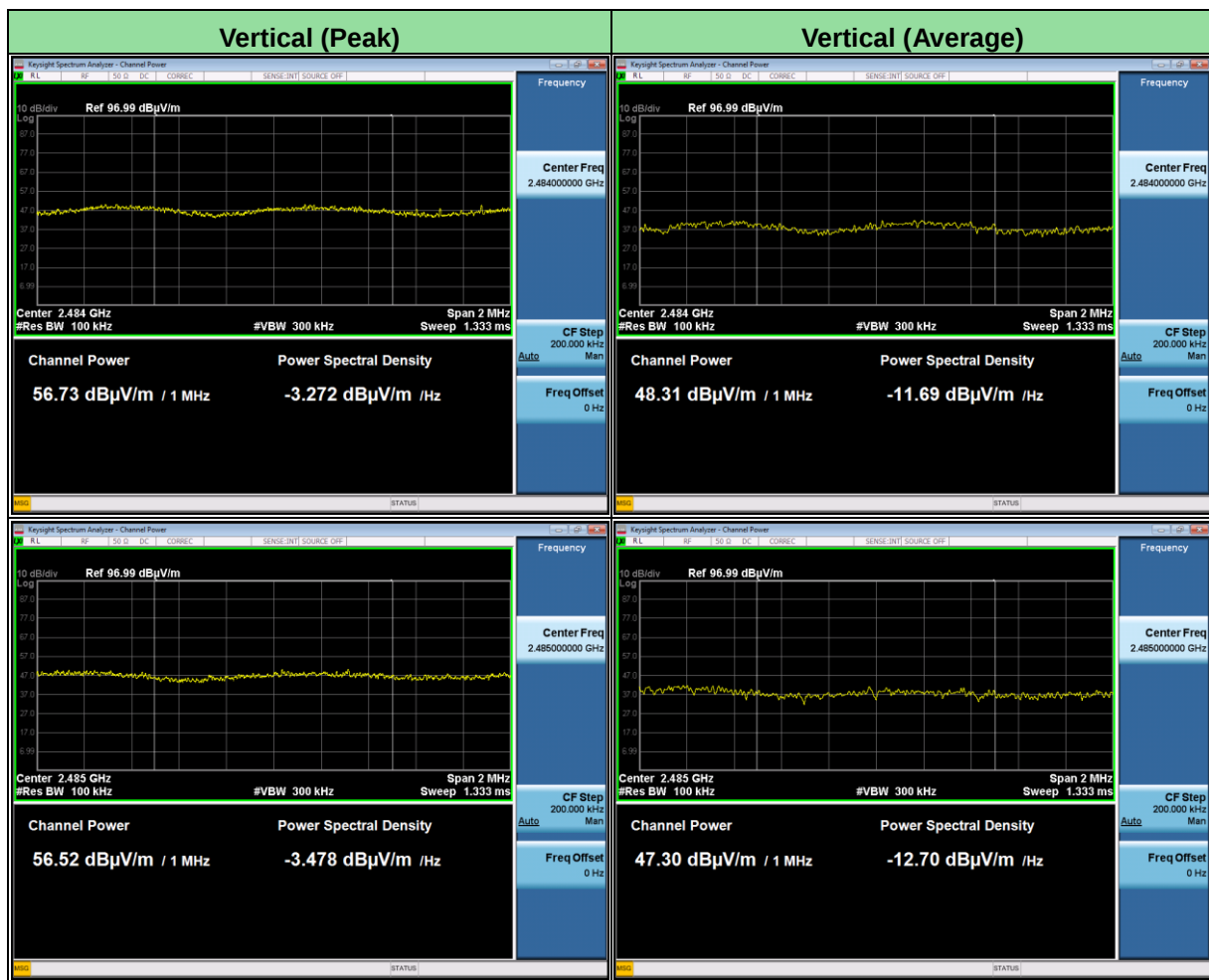


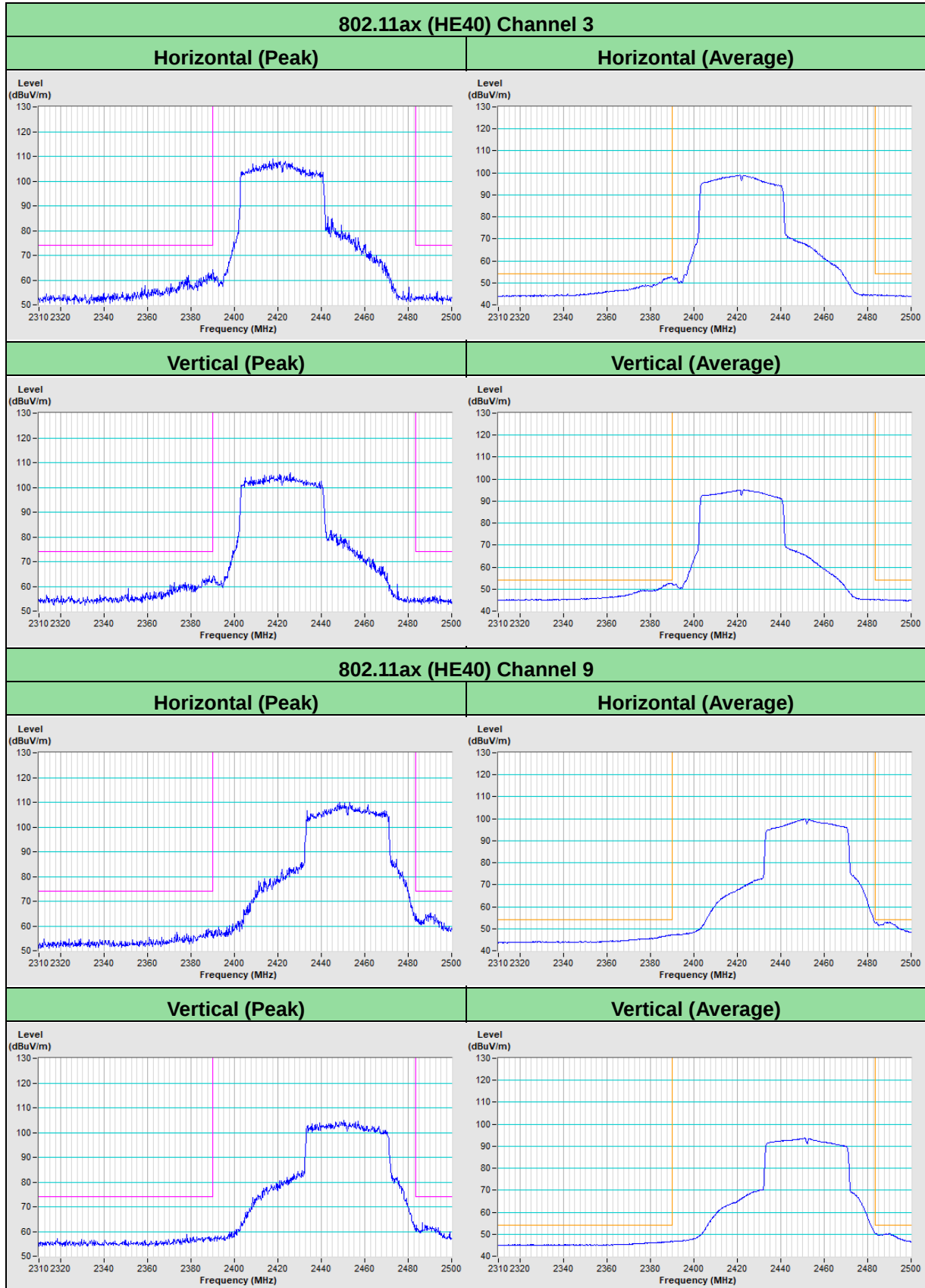


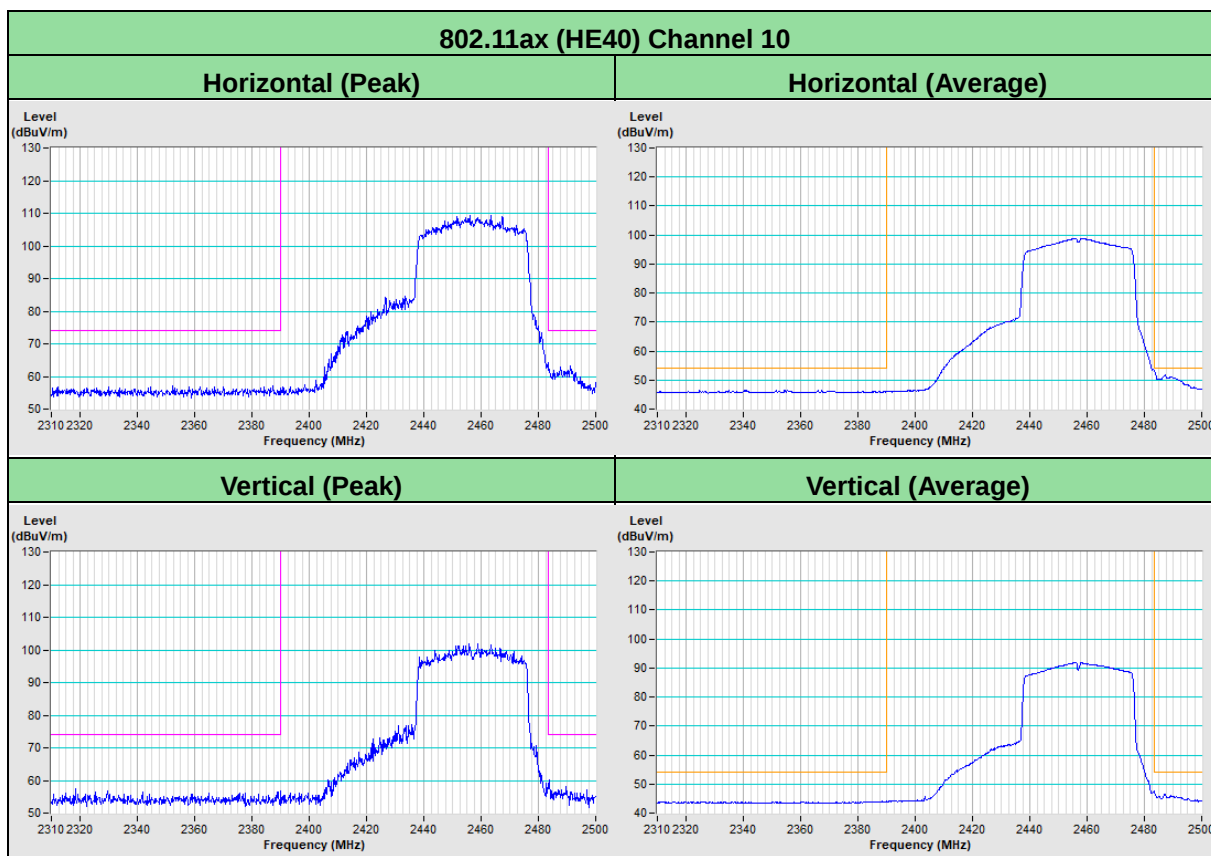


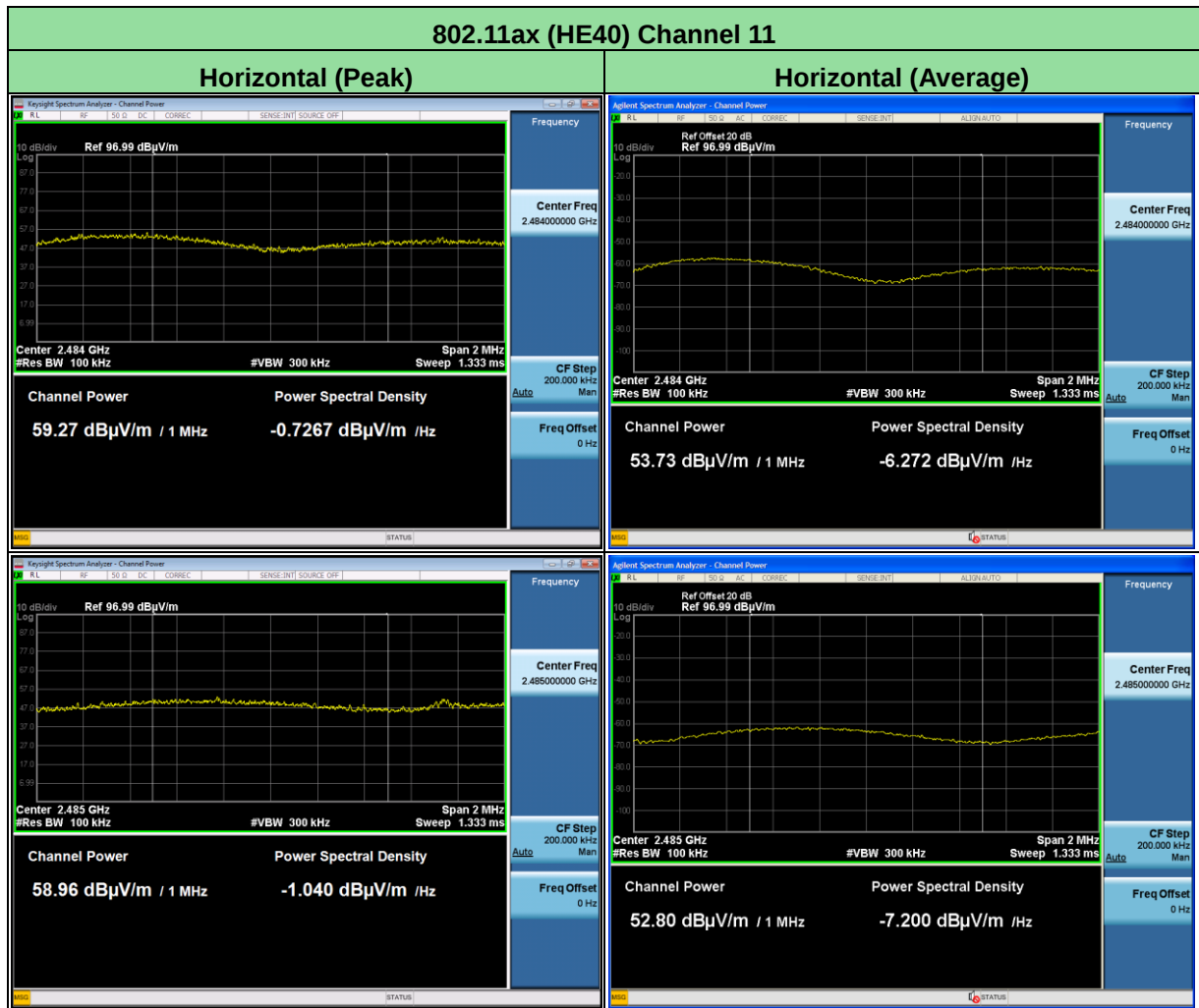


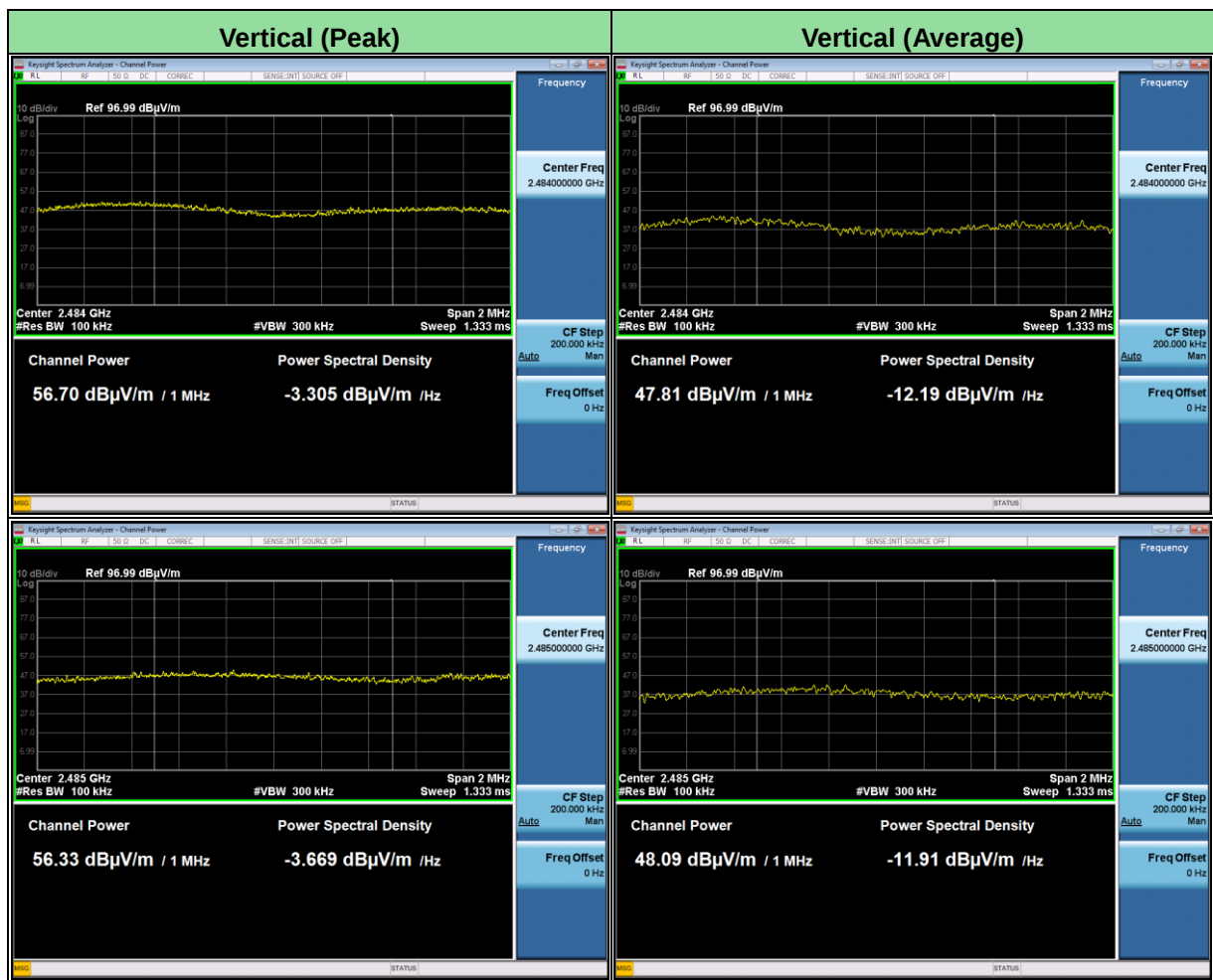


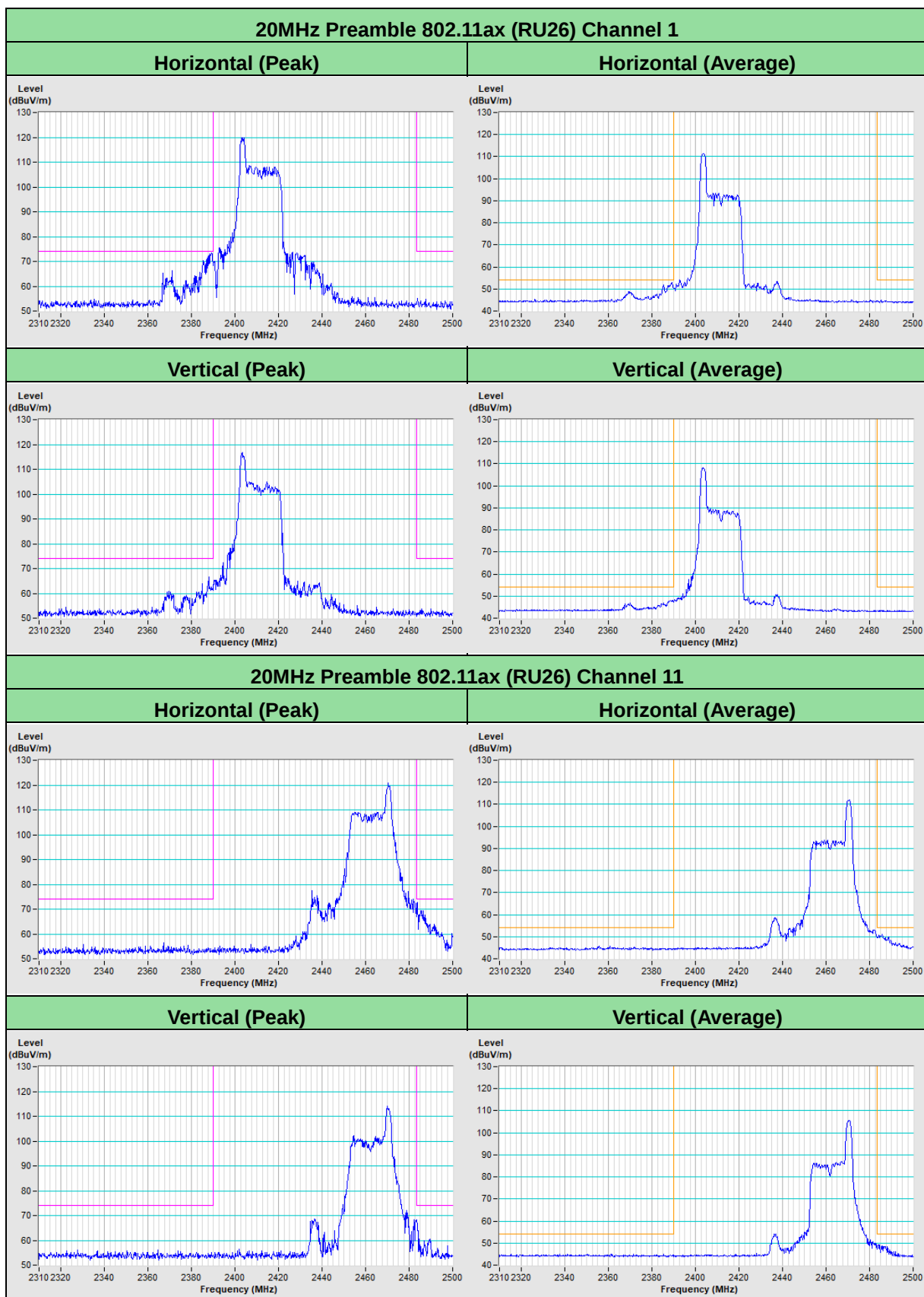


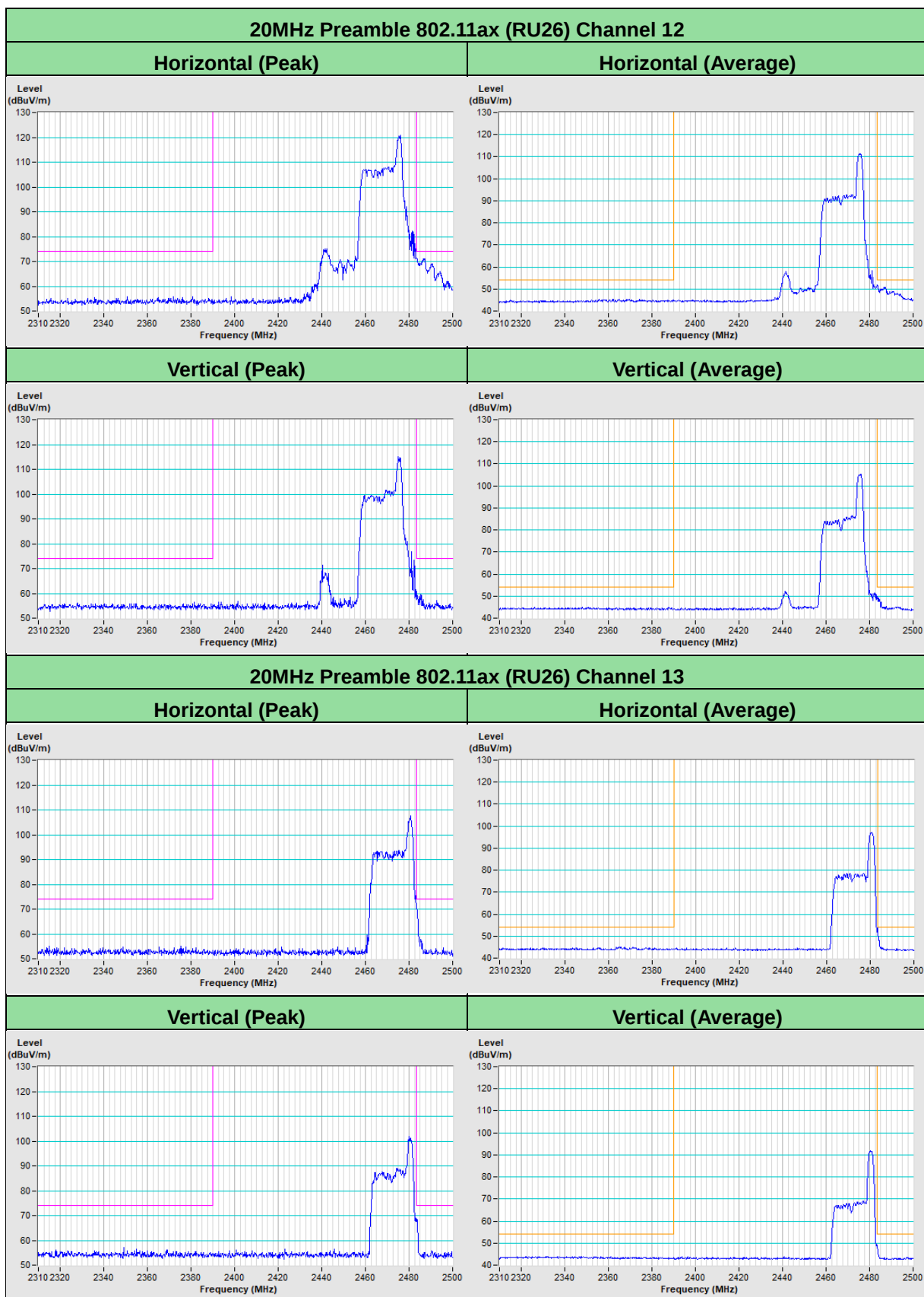






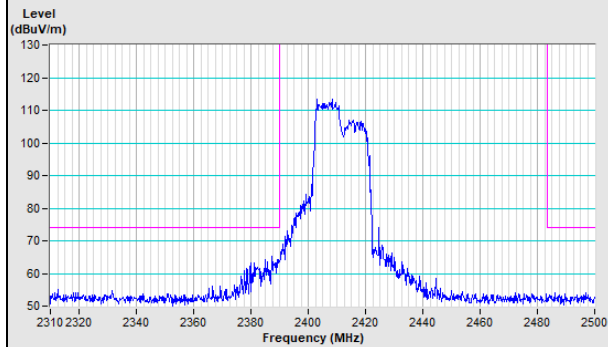




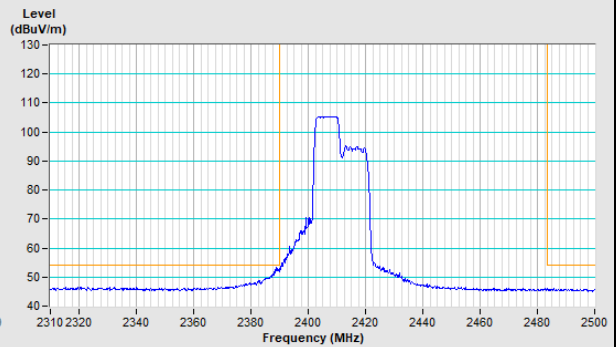


20MHz Preamble 802.11ax (RU106) Channel 1

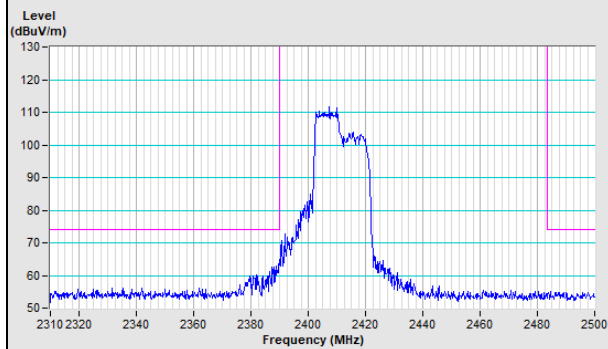
Horizontal (Peak)



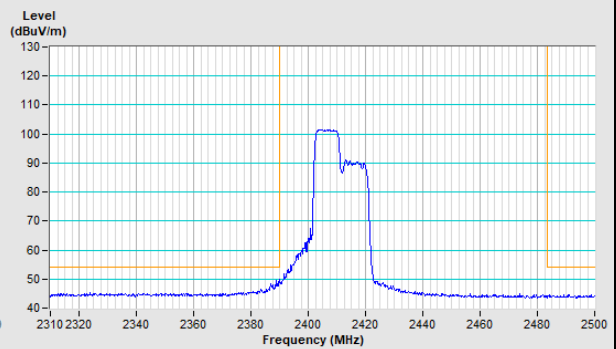
Horizontal (Average)



Vertical (Peak)

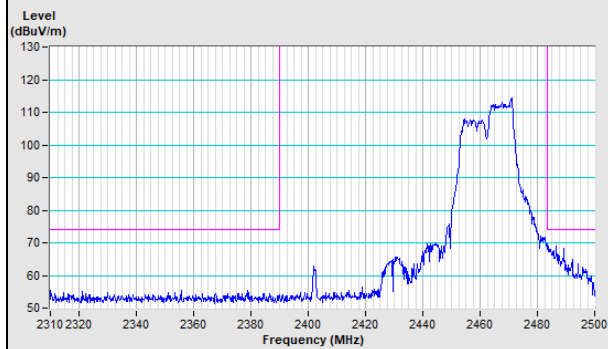


Vertical (Average)

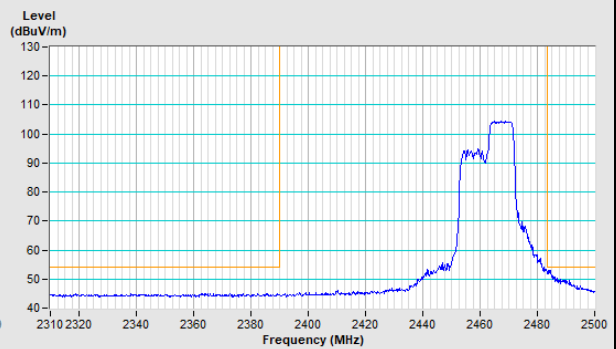


20MHz Preamble 802.11ax (RU106) Channel 11

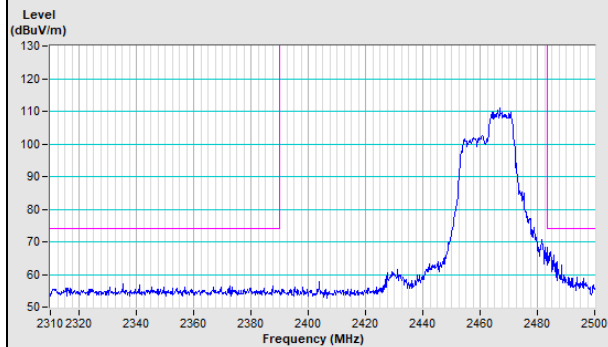
Horizontal (Peak)



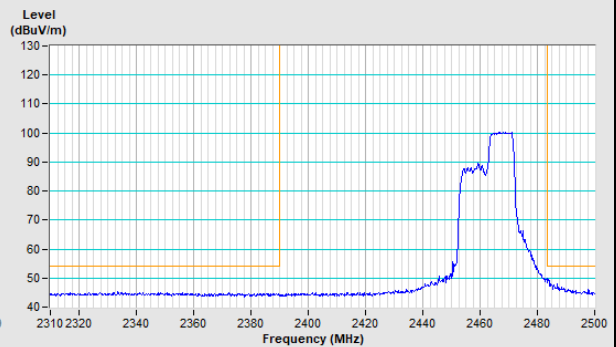
Horizontal (Average)

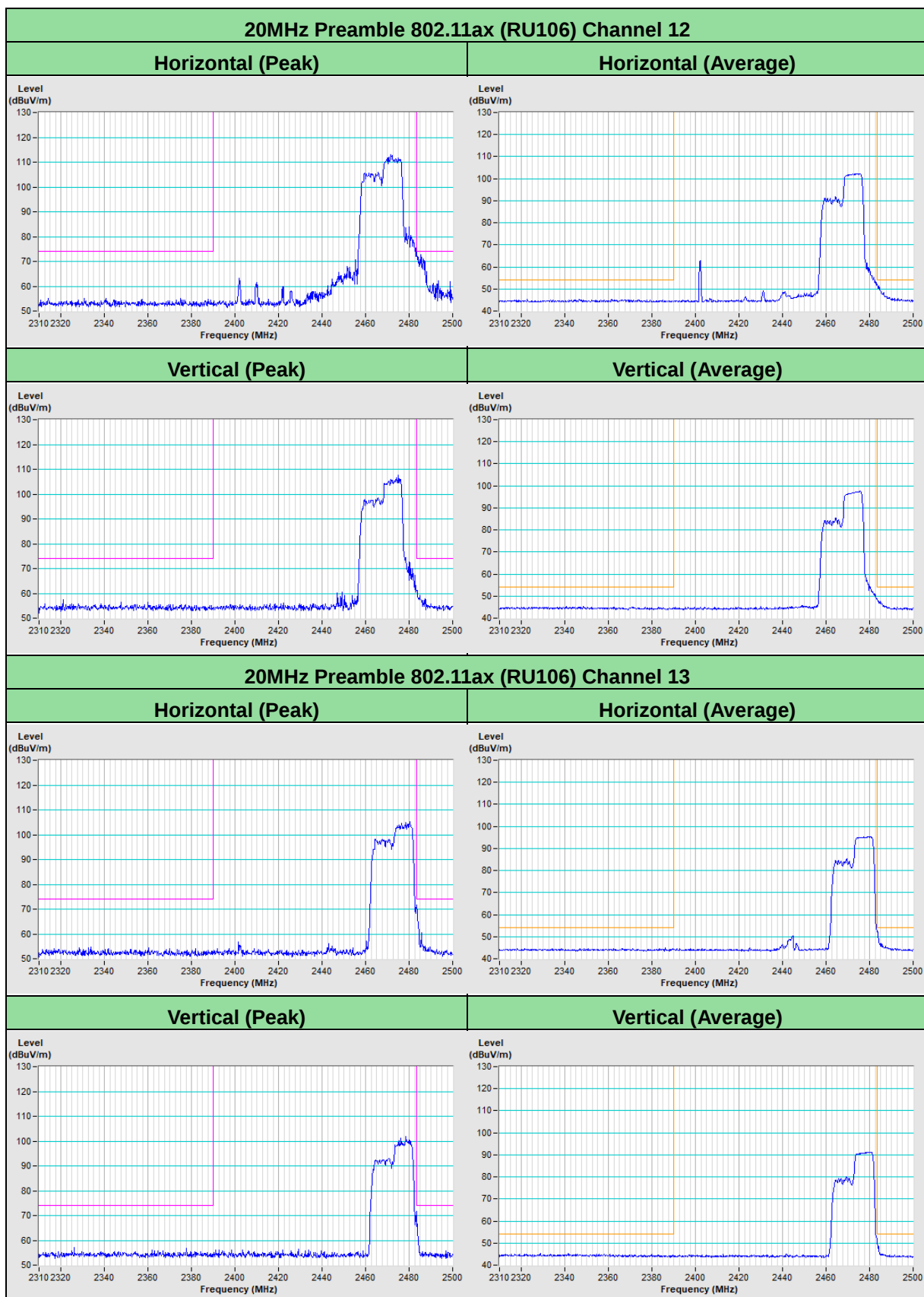


Vertical (Peak)



Vertical (Average)





Appendix – 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.

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Web Site: www.bureauveritas-adt.com

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

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