TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBCKS-WTW-P22080716-1
FCC ID:	NKR-WNXL11BWL
Model No.:	WNXL11BWL
Received Date:	2022/8/24
Test Date:	2022/8/29 ~ 2022/9/21
Issued Date:	2022/10/3
Applicant:	Wistron NeWeb Corp.
Address:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

Approved by: _____ , **Date:** 2022/10/3

May Chen / Manager

This test report consists of 151 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by : Cherry Chuo / Specialist

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P22080716-1	Original release.	2022/10/3

1 Certificate

Product:	AP
Brand:	WNC, Comcast, Cox, Charter
Test Model:	WNXL11BWL
Sample Status:	Engineering sample
Applicant:	Wistron NeWeb Corp.
Test Date:	2022/8/29 ~ 2022/9/21
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -17.43 dB at 0.15000 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.9 dB at 35.65 MHz
15.407(b) (1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 5150.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.1 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.0 dB
	18 GHz ~ 40 GHz	5.3 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	AP
Brand	WNC, Comcast, Cox, Charter
Test Model	WNXL11BWL
Status of EUT	Engineering sample
Power Supply Rating	Refer to Note
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9 Mbps
Operating Frequency	5180 ~ 5240 MHz 5745 ~ 5825 MHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 9 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 4 802.11ac (VHT80), 802.11ax (HE80): 2
Output Power	**CDD Mode** 5.18 GHz ~ 5.24 GHz : 668.69 mW (28.25 dBm) 5.745 GHz ~ 5.825 GHz : 995.527 mW (29.98 dBm) **Beamforming Mode** 5.18 GHz ~ 5.24 GHz : 628.268 mW (27.98 dBm) 5.745 GHz ~ 5.825 GHz : 755.118 mW (28.78 dBm)
EUT Category	Indoor Access Point

Note:

1. The EUT contains certified WWAN module which FCC ID: XMR201906EM06A (Brand: QUECTEL; Model: EM06-A)
2. The EUT uses following accessories.

AC Adapter 1		
Brand	Model	Specification
EPS3	ML36-7120300-A1	AC Input : 100-120V, 50/60Hz, 1A DC Output : 12V, 0.3A DC Output Cable : 1.8m Plug : US
AC Adapter 2		
Brand	Model	Specification
EPS3	NBC36G120300VU	AC Input : 100-120V, 50/60Hz, 1A DC Output : 12V, 0.3A DC Output Cable : 1.8m Plug : US

3. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3
WLAN 2.4GHz + BT-LE	WLAN 5GHz (Low Band)	WLAN 5GHz (High Band)

4. Simultaneously transmission condition.

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

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
2G ANT	Chain 0	WNC	XLE	4.00	2.4~2.4835	Dipole	ipex(MHF)
	Chain 1	WNC	XLE	3.20	2.4~2.4835	Dipole	ipex(MHF)
5GL ANT	Chain 0	WNC	XLE	4.60	5.15~5.35	Dipole	ipex(MHF)
	Chain 1	WNC	XLE	4.70	5.15~5.35	Dipole	ipex(MHF)
5GH ANT	Chain 0	WNC	XLE	4.90	5.47~5850	Dipole	ipex(MHF)
	Chain 1	WNC	XLE	4.50	5.47~5850	Dipole	ipex(MHF)
	Chain 2	WNC	XLE	5.00	5.47~5850	Dipole	ipex(MHF)
	Chain 3	WNC	XLE	4.80	5.47~5850	Dipole	ipex(MHF)
BLE ANT	Chain 0	WNC	XLE	4.10	2.4~2.4835	PCB	ipex(MHF)

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

The directional antenna gain, please refer to the following table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.4835	3.63	Dipole	i-pex(MHF)
5.15~5.24	5.68		
5.725~5.85	4.89		
Note: Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.			

2. The EUT incorporates a MIMO function:

5 GHz Band (Low Band)		
Modulation Mode	**TX & RX Configuration**	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX
5 GHz Band (High Band)		
Modulation Mode	**TX & RX Configuration**	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX

Note:
1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz) and 802.11ax mode for 20 MHz (40MHz, 80 MHz), therefore the manufacturer will control the power for 802.11n/ac mode is the same as the 802.11ax or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
42	5210 MHz

FOR 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The AC Adapter has the following models: EPS3 ML36-7120300-A1/ EPS3 NBC36G120300VU. Pre-scan these models of AC Adapters and find the worst case as a representative test condition.
Worst Case:	1. AC Adapter Worst Condition:EPS3 ML36-7120300-A1 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11a	CDD	36, 40, 48	BPSK	6Mb/s
		802.11n (HT20)	CDD & Beamforming	36, 40, 48	BPSK	MCS0
		802.11n (HT40)	CDD & Beamforming	38, 46	BPSK	MCS0
		802.11ac (VHT20)	CDD & Beamforming	36, 40, 48	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	38, 46	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	42	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42	BPSK	MCS0
	B	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11n (HT20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0
		802.11n (HT40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ac (VHT20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	155	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	49, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	155	BPSK	MCS0
Power Spectral Density	A	802.11a	CDD	36, 40, 48	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46	BPSK	MCS0

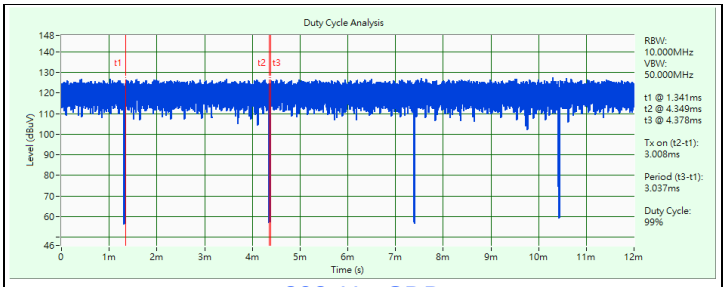
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
		802.11ax (HE80)	CDD & Beamforming	42	BPSK	MCS0
	B	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	155	BPSK	MCS0
6 dB Bandwidth	B	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	155	BPSK	MCS0
Occupied Bandwidth	A	802.11a	CDD	36, 40, 48	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46,	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42	BPSK	MCS0
	B	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	155	BPSK	MCS0
Frequency Stability	A	802.11a	-	36	un-modulation	-
	B	802.11a	-	149	un-modulation	-
AC Power Conducted Emissions	A	802.11a	CDD	48	BPSK	6Mb/s
	B	802.11ax (HE40)	CDD	159	BPSK	MCS0
Unwanted Emissions below 1 GHz	A	802.11a	CDD	48	BPSK	6Mb/s
	B	802.11ax (HE40)	CDD	159	BPSK	MCS0
Unwanted Emissions above 1 GHz	A	802.11a	CDD	36, 40, 48	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42	BPSK	MCS0
	B	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
		802.11ax (HE40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	155	BPSK	MCS0
EUT Configure Mode:	A	5GHz Low Band 2Tx				
	B	5GHz High Band 4Tx				
Note: Only support Full RU for OFDMA.						

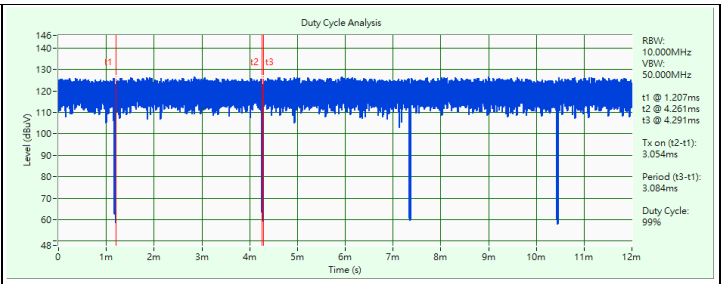
3.5 Duty Cycle of Test Signal

Mode A

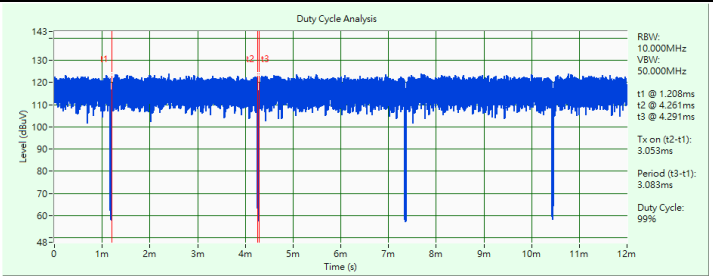
802.11a CDD: Duty cycle = 3.008 ms / 3.037 ms x 100% = 99.0%
802.11ax (HE20) CDD: Duty cycle = 3.054 ms / 3.084 ms x 100% = 99.0%
802.11ax (HE40) CDD: Duty cycle = 3.053 ms / 3.083 ms x 100% = 99.0%
802.11ax (HE80) CDD: Duty cycle = 3.048 ms / 3.077 ms x 100% = 99.1%
802.11ax (HE20) Beamforming: Duty cycle = 2.912 ms / 3.197 ms x 100% = 91.1%, duty factor = 10 * log (1/Duty cycle) = 0.41 dB
802.11ax (HE40) Beamforming: Duty cycle = 4.565 ms / 4.855 ms x 100% = 94.0%, duty factor = 10 * log (1/Duty cycle) = 0.27 dB
802.11ax (HE80) Beamforming: Duty cycle = 4.116 ms / 4.459 ms x 100% = 92.3%, duty factor = 10 * log (1/Duty cycle) = 0.35 dB



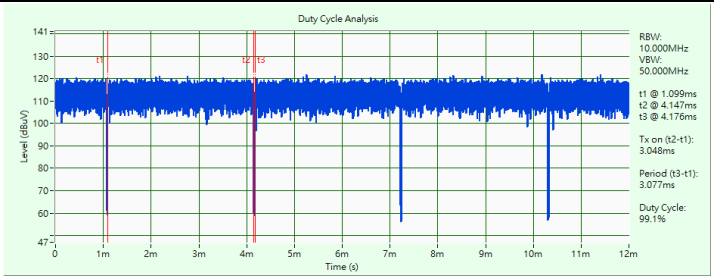
802.11a CDD



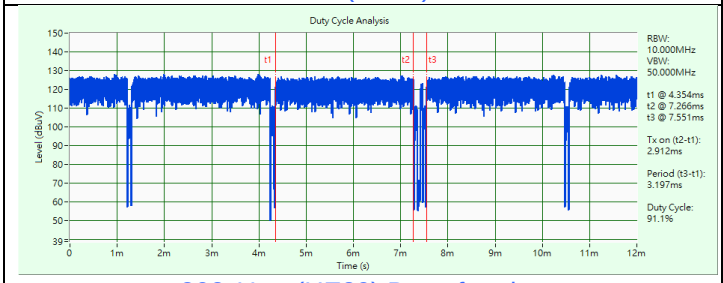
802.11ax (HE20) CDD



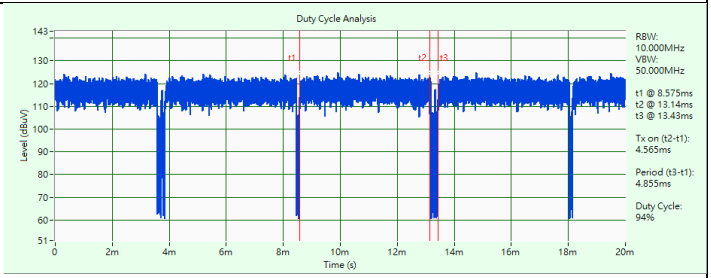
802.11ax (HE40) CDD



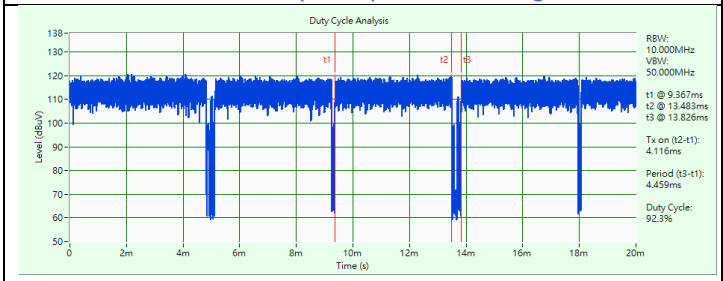
802.11ax (HE80) CDD



802.11ax (HE20) Beamforming



802.11ax (HE40) Beamforming

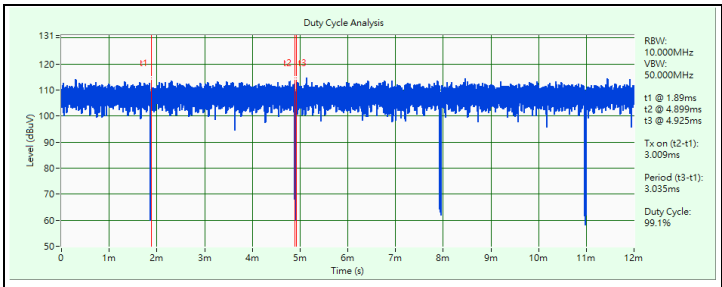


802.11ax (HE80) Beamforming

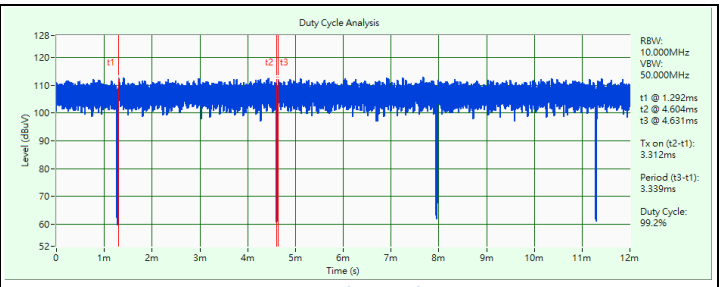
Mode B

Duty cycle of test signal is >= 98 %, duty factor is not required.
Duty cycle of test signal is < 98 %, duty factor shall be considered.

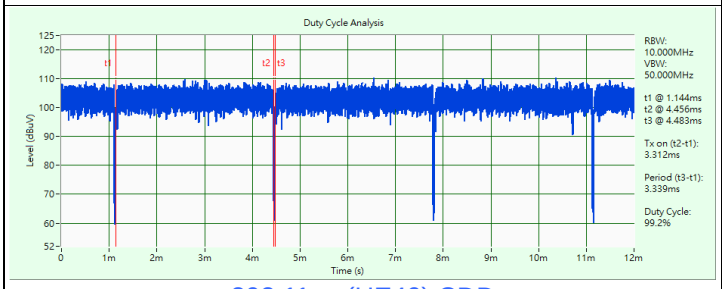
802.11a CDD: Duty cycle = 3.009 ms / 3.035 ms x 100% = 99.1%
802.11ax (HE20) CDD: Duty cycle = 3.312 ms / 3.339 ms x 100% = 99.2%
802.11ax (HE40) CDD: Duty cycle = 3.312 ms / 3.339 ms x 100% = 99.2%
802.11ax (HE80) CDD: Duty cycle = 3.166 ms / 3.193 ms x 100% = 99.2%
802.11ax (HE20) Beamforming: Duty cycle = 2.913 ms / 3.167 ms x 100% = 92.0%, duty factor = 10 * log (1/Duty cycle) = 0.36 dB
802.11ax (HE40) Beamforming: Duty cycle = 4.617 ms / 4.934 ms x 100% = 93.6%, duty factor = 10 * log (1/Duty cycle) = 0.29 dB
802.11ax (HE80) Beamforming: Duty cycle = 4.116 ms / 4.38 ms x 100% = 94.0%, duty factor = 10 * log (1/Duty cycle) = 0.27 dB



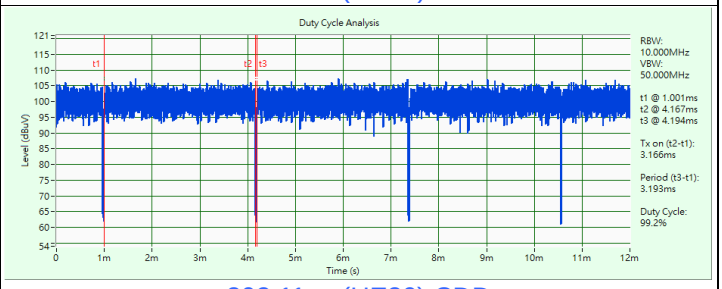
802.11a CDD



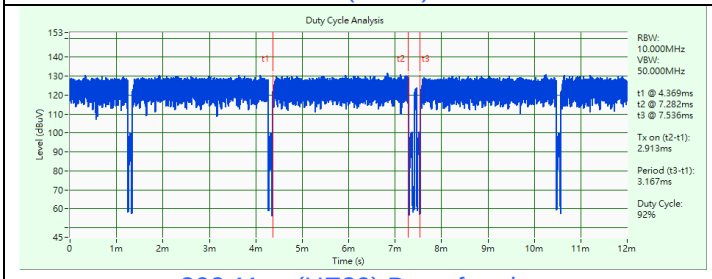
802.11ax (HE20) CDD



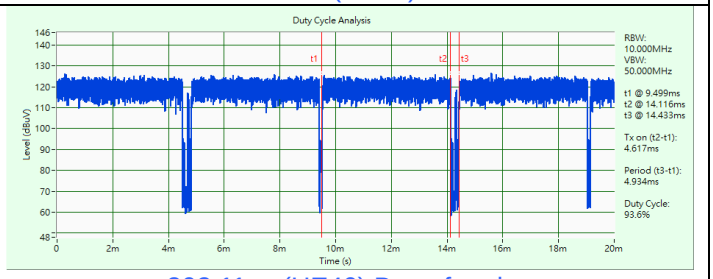
802.11ax (HE40) CDD



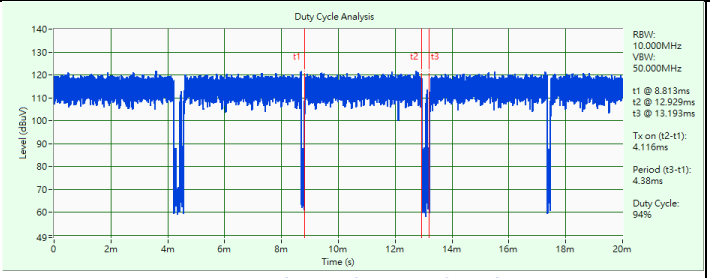
802.11ax (HE80) CDD



802.11ax (HE20) Beamforming



802.11ax (HE40) Beamforming

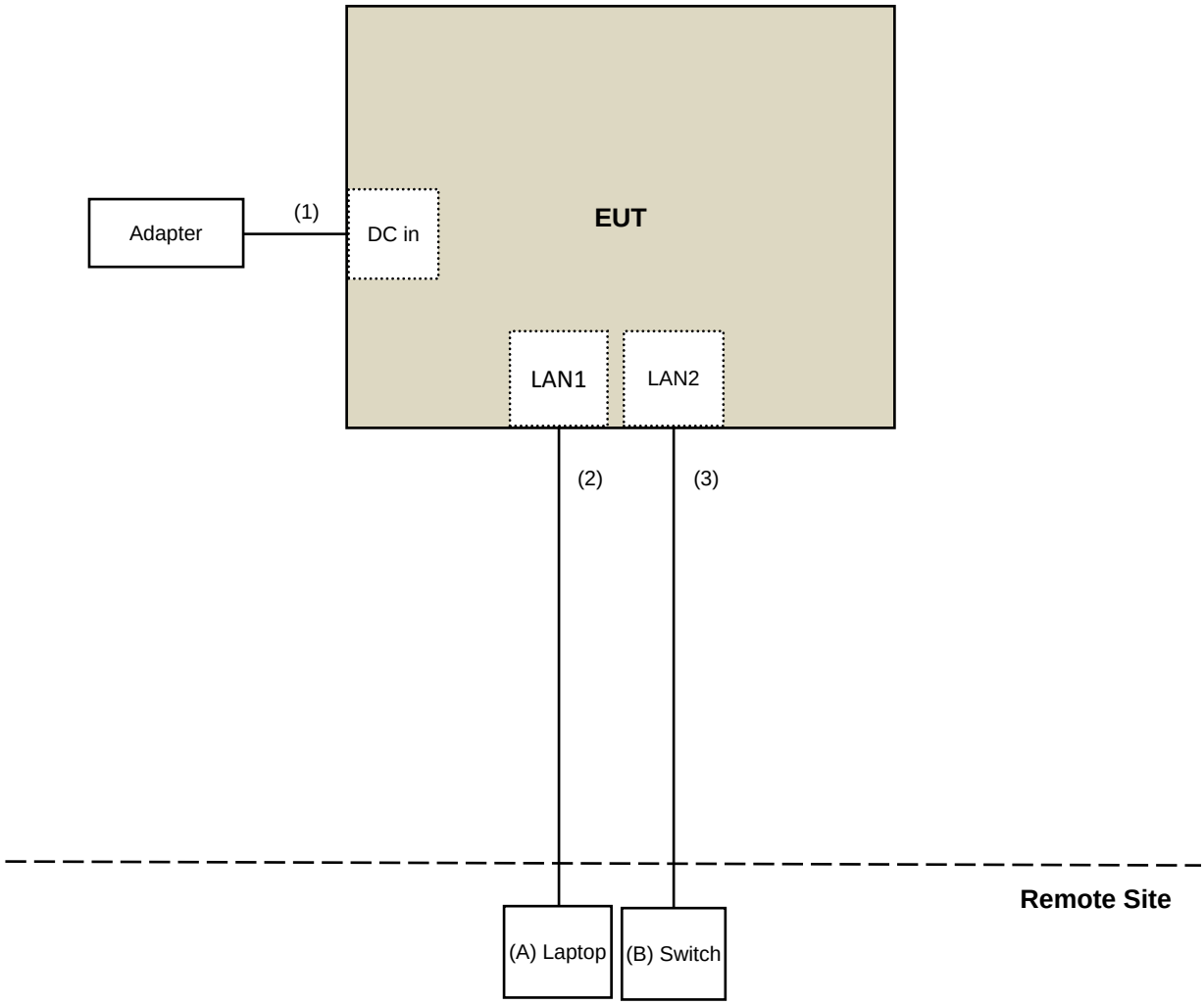


802.11ax (HE80) Beamforming

3.6 Test Program Used and Operation Descriptions

Controlling software (accessMTool_REL_3_2_1_5) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Dell	P92G	BM6Q4P2	N/A	Provided by Lab
B	Switch	D-Link	DGS-1005D	DR8WC92000523	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.8	No	0	Supplied by applicant
2	RJ-45 Cable	1	10	No	0	Provided by Lab
3	RJ-45 Cable	1	10	No	0	Provided by Lab

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Power Meter Anritsu	ML2495A	1529002	2022/6/22	2023/6/21
Pulse Power Sensor Anritsu	MA2411B	1726434	2022/6/22	2023/6/21
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/9/7 ~ 2022/9/19

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101516	2022/3/7	2023/3/6

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/9/7 ~ 2022/9/19

4.3 6 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101516	2022/3/7	2023/3/6

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/9/19

4.4 Occupied Bandwidth

Refer to section 4.2 to get information of the instruments.

4.5 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Source GOOD WILL	6905S	1991551	N/A	N/A
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101516	2022/3/7	2023/3/6
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	2022/1/14	2023/1/13
True RMS Clamp Meter Fluke	325	31130711WS	2022/6/9	2023/6/8

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/9/7 ~ 2022/9/19

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohms Terminator	50	3	2021/10/27	2022/10/26
Fixed attenuator STI	STI02-2200-10	005	2022/8/24	2023/8/23
LISN R&S	ESH3-Z5	848773/004	2021/10/29	2022/10/28
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2022/8/24	2023/8/23
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A
TEST RECEIVER R&S	ESCS 30	847124/029	2021/10/13	2022/10/12

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2022/9/21

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bilog Antenna Schwarzbeck	VULB 9168	9168-0942	2021/10/26	2022/10/25
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-01	2022/1/10	2023/1/9
LOOP ANTENNA Electro-Metrics	EM-6879	264	2022/3/18	2023/3/17
Pre_Amplifier EMCI	EMC001340	980142	2022/6/2	2023/6/1
Pre_Amplifier(20M-3G) EMCI	EMC330N	980852	2022/3/28	2023/3/27
RF Coaxial Cable COMMATE/PEWC	8D	966-6-1	2022/4/25	2023/4/24
		966-6-2	2022/4/25	2023/4/24
		966-6-3	2022/4/25	2023/4/24
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2022/1/6	2023/1/5
		LOOPCAB-002	2022/1/6	2023/1/5
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer Keysight	N9020B	MY60112410	2022/3/13	2023/3/12
Test Receiver KEYSIGHT	N9038A	MY59050100	2022/6/20	2023/6/19

Notes:

1. The test was performed in 966 Chamber No. 6.
2. Tested Date: 2022/9/20 ~ 2022/9/21

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-2035	2021/11/14	2022/11/13
	BBHA 9170	BBHA9170519	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC12630SE	980385	2022/8/15	2023/8/14
	EMC184045SE	980387	2022/1/10	2023/1/9
RF Cable EMCI	EMC104-SM-SM-1300	210205	2022/5/10	2023/5/9
RF Cable-Frequency range: 1-40GHz EMCI	EMC102-KM-KM-1200	160924	2022/1/10	2023/1/9
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2022/3/8	2023/3/7
	EMC101G-KM-KM-10000	210708	2021/11/9	2022/11/8
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer Keysight	N9020B	MY60112410	2022/3/13	2023/3/12
Test Receiver KEYSIGHT	N9038A	MY59050100	2022/6/20	2023/6/19

Notes:

1. The test was performed in 966 Chamber No. 6.
2. Tested Date: 2022/8/29 ~ 2022/9/20

5 Limits of Test Items

5.1 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250 mW (24 dBm)

Operation Band	Limit
U-NII-3	1 Watt (30 dBm)

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

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

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

5.2 Power Spectral Density

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/ MHz
	Fixed point-to-point Access Point	
	Indoor Access Point	
	Mobile and Portable client device	11 dBm/ MHz

Operation Band	Limit
U-NII-3	30 dBm/ 500 kHz

5.3 6 dB Bandwidth

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.4 Occupied Bandwidth

The results are for reference only.

5.5 Frequency Stability

The frequency of the carrier signal shall be maintained within band of operation.

5.6 AC Power Conducted Emissions

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

Notes:

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

5.7 Unwanted Emissions below 1 GHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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

Notes:

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

5.8 Unwanted Emissions above 1 GHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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

Notes:

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

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3 m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2 (dBµV/m) *1 PK: 105.2 (dBµV/m) *2 PK: 110.8 (dBµV/m) *3 PK: 122.2 (dBµV/m) *4

*1 beyond 75 MHz or more above of the band edge.

*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

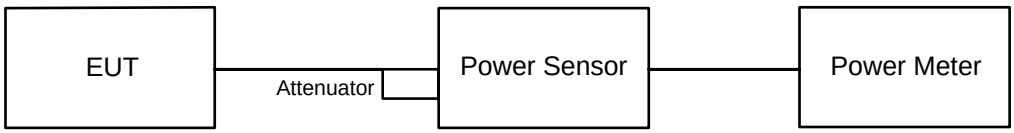
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ µV/m, where P is the eirp (Watts).

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

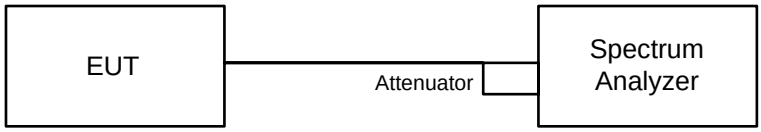


6.1.2 Test Procedure

Method PM is 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 and set the detector to average. Duty factor is not added to measured value.

6.2 Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-1

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Record the max value

For specified measurement bandwidth 1 MHz:
Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
g. Record the max value and add 10 log (1/duty cycle).

For specified measurement bandwidth 500 kHz:
Method SA-1

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz)

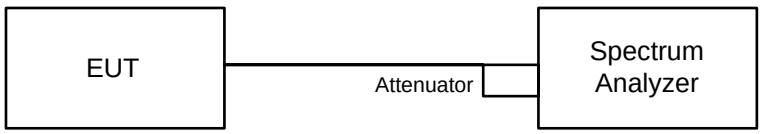
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Record the max value

For specified measurement bandwidth 500 kHz:
Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
h. Record the max value and add 10 log (1/duty cycle).

6.3 6 dB Bandwidth

6.3.1 Test Setup

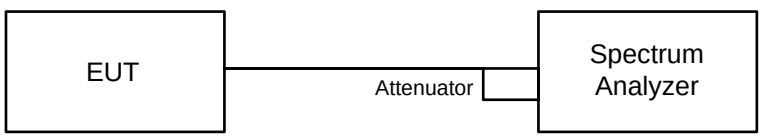


6.3.2 Test Procedure

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

6.4 Occupied Bandwidth

6.4.1 Test Setup

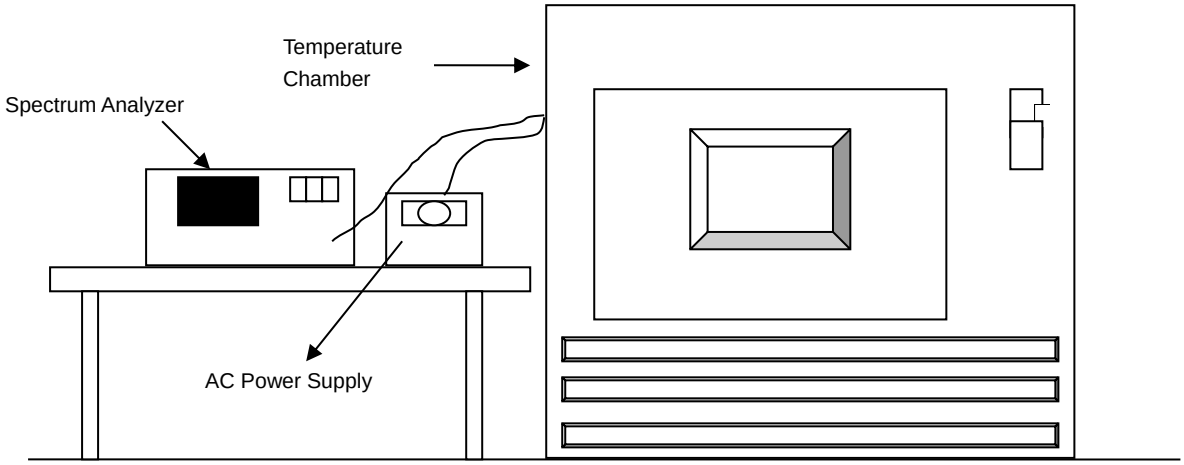


6.4.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

6.5 Frequency Stability

6.5.1 Test Setup

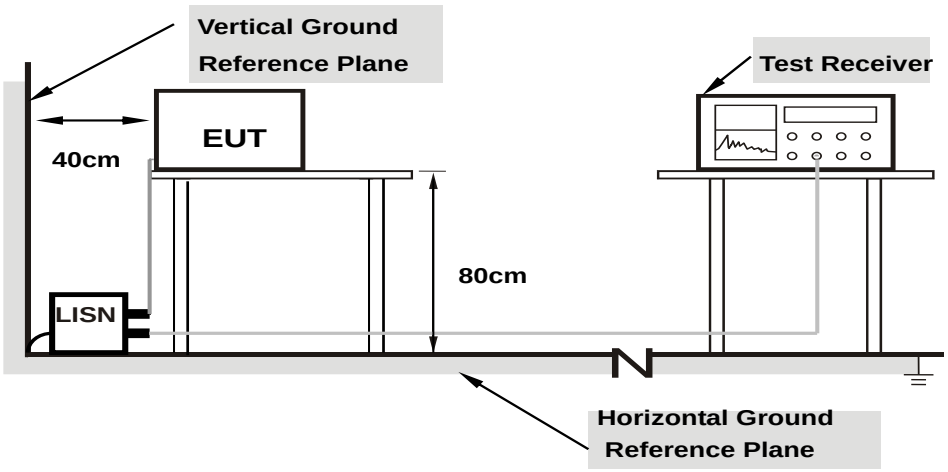


6.5.2 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

6.6 AC Power Conducted Emissions

6.6.1 Test Setup



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

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

6.6.2 Test Procedure

a. The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.

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

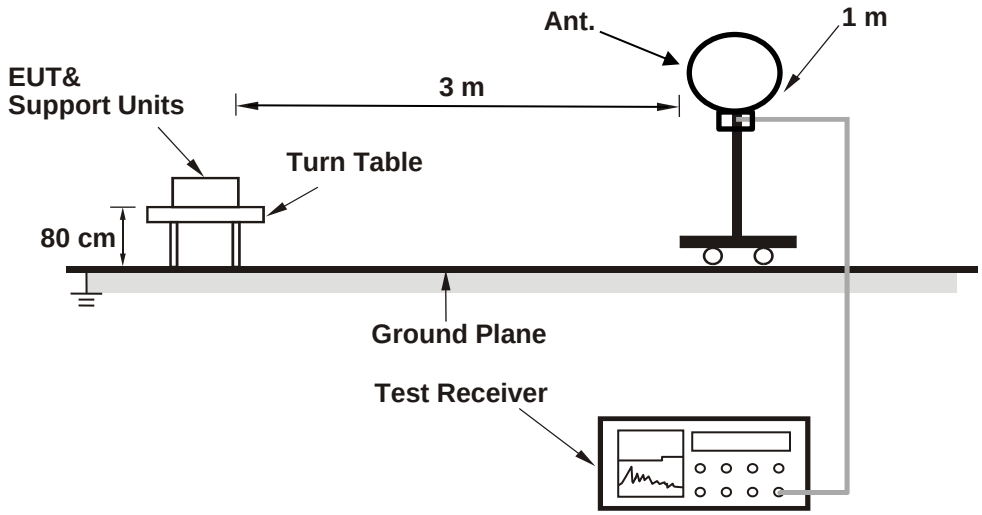
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

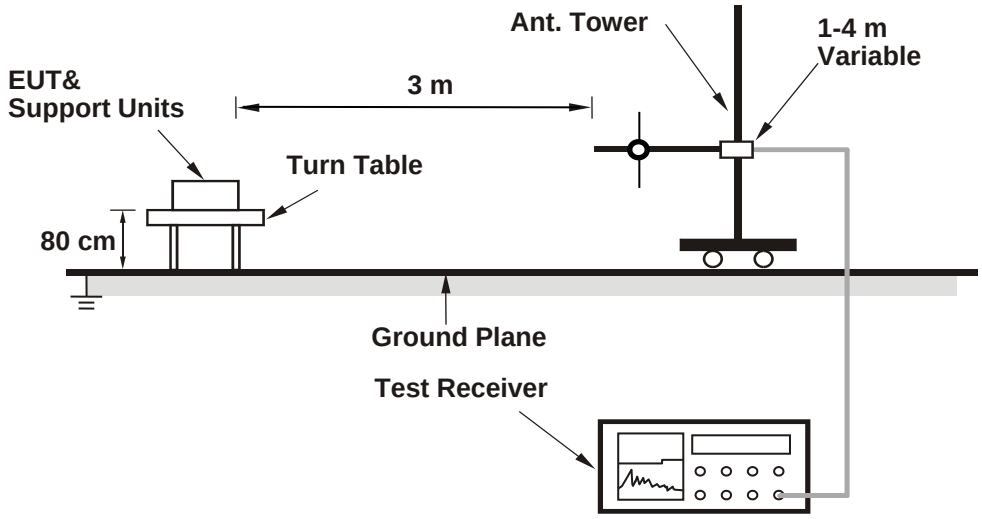
6.7 Unwanted Emissions below 1 GHz

6.7.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.7.2 Test Procedure

For Radiated emission below 30 MHz

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

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

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

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

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

Notes:

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

For Radiated emission above 30 MHz

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

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

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

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

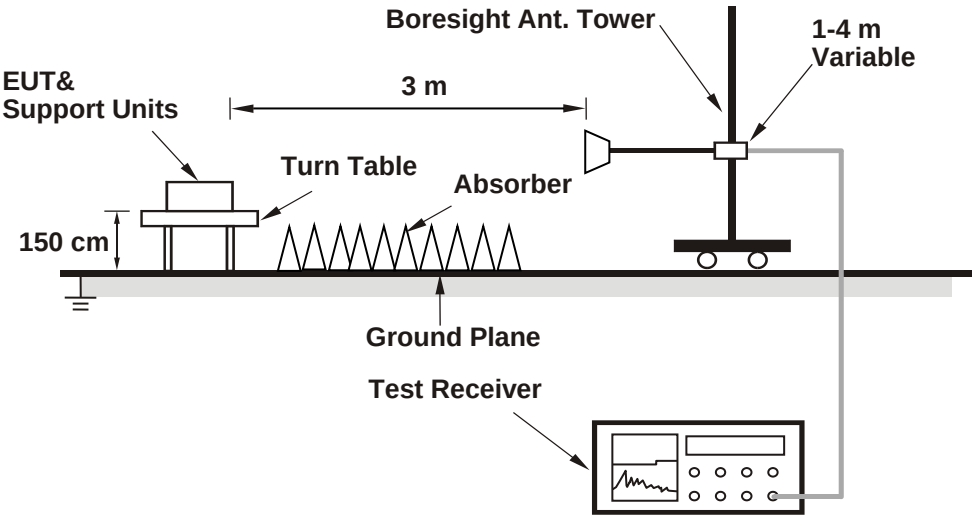
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



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

6.8.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

Mode A

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 62% RH	Tested By:	Eric Peng

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	20.83	21.05	248.41	23.95	30	Pass
40	5200	24.28	24.54	552.363	27.42	30	Pass
48	5240	25.11	25.37	668.69	28.25	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	20.13	20.35	211.431	23.25	30	Pass
40	5200	23.19	23.53	433.873	26.37	30	Pass
48	5240	24.76	24.81	601.918	27.80	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	18.86	18.96	155.618	21.92	30	Pass
46	5230	23.49	23.92	469.961	26.72	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	20.29	20.52	219.625	23.42	30	Pass
40	5200	23.37	23.69	451.154	26.54	30	Pass
48	5240	24.92	24.96	623.785	27.95	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	19.03	19.11	161.454	22.08	30	Pass
46	5230	23.65	24.11	489.372	26.90	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	17.93	18.15	127.4	21.05	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	20.49	20.75	230.794	23.63	30	Pass
40	5200	23.64	23.97	480.666	26.82	30	Pass
48	5240	25.16	25.22	660.755	28.20	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	19.24	19.33	169.65	22.30	30	Pass
46	5230	23.87	24.33	514.8	27.12	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	18.18	18.41	135.108	21.31	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.7 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	19.96	20.28	205.743	23.13	30	Pass
40	5200	23.23	23.22	420.272	26.24	30	Pass
48	5240	24.39	24.58	561.867	27.50	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	18.73	18.74	149.462	21.75	30	Pass
46	5230	23.15	23.19	414.987	26.18	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	20.17	20.49	215.936	23.34	30	Pass
40	5200	23.50	23.48	446.716	26.50	30	Pass
48	5240	24.63	24.83	594.491	27.74	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	18.96	19.00	158.137	21.99	30	Pass
46	5230	23.39	23.45	439.582	26.43	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	17.97	18.04	126.341	21.02	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	20.40	20.69	226.867	23.56	30	Pass
40	5200	23.74	23.73	472.64	26.75	30	Pass
48	5240	24.87	25.07	628.268	27.98	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	19.19	19.27	167.513	22.24	30	Pass
46	5230	23.64	23.72	466.711	26.69	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	18.23	18.31	134.291	21.28	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.

Mode B

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chilin Lee

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.26	22.60	22.21	22.28	729.192	28.63	30	Pass
157	5785	22.77	21.87	21.79	21.81	645.763	28.10	30	Pass
165	5825	22.41	21.41	21.39	21.26	583.918	27.66	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.23	22.50	22.36	22.24	727.887	28.62	30	Pass
157	5785	22.79	21.85	21.98	21.82	653.032	28.15	30	Pass
165	5825	22.63	21.43	21.49	21.71	611.407	27.86	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	23.92	22.83	23.01	23.43	858.75	29.34	30	Pass
159	5795	24.45	23.03	23.09	23.43	903.518	29.56	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.41	22.66	22.53	22.41	757.023	28.79	30	Pass
157	5785	22.95	22.03	22.15	22.00	679.378	28.32	30	Pass
165	5825	22.82	21.60	21.67	21.88	637.032	28.04	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	24.07	22.99	23.20	23.62	893.411	29.51	30	Pass
159	5795	24.61	23.19	23.27	23.61	939.456	29.73	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	24.02	23.57	23.54	23.60	934.888	29.71	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.70	22.87	22.74	22.62	798.807	29.02	30	Pass
157	5785	23.18	22.31	22.37	22.28	719.813	28.57	30	Pass
165	5825	23.05	21.86	21.94	22.14	675.295	28.29	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	24.34	23.22	23.43	23.82	942.821	29.74	30	Pass
159	5795	24.85	23.46	23.50	23.88	995.527	29.98	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	24.27	23.81	23.77	23.81	986.405	29.94	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.60	22.24	22.32	21.85	673.181	28.28	30	Pass
157	5785	22.29	22.05	22.14	21.81	645.145	28.10	30	Pass
165	5825	21.60	21.38	21.46	20.96	546.645	27.38	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	22.41	21.85	22.23	22.28	663.443	28.22	30	Pass
159	5795	22.58	22.01	22.21	22.20	672.289	28.28	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.88	22.51	22.56	22.14	716.31	28.55	30	Pass
157	5785	22.45	22.29	22.37	22.00	676.299	28.30	30	Pass
165	5825	21.84	21.64	21.72	21.16	577.849	27.62	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	22.67	22.08	22.51	22.50	702.429	28.47	30	Pass
159	5795	22.80	22.23	22.50	22.40	709.263	28.51	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	20.85	20.39	20.87	20.44	463.857	26.66	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.09	22.76	22.77	22.39	755.118	28.78	30	Pass
157	5785	22.79	22.50	22.53	22.27	715.652	28.55	30	Pass
165	5825	22.13	21.94	21.93	21.43	614.57	27.89	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	22.96	22.34	22.74	22.73	744.524	28.72	30	Pass
159	5795	23.00	22.53	22.71	22.66	749.726	28.75	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	21.10	20.60	21.15	20.67	490.638	26.91	30	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Mode A

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 62% RH	Tested By:	Eric Peng

802.11a CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
36	5180	6.51	5.79	9.18	17.00	Pass
40	5200	6.49	5.73	9.14	17.00	Pass
48	5240	6.57	5.83	9.23	17.00	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
36	5180	6.03	5.86	8.96	17.00	Pass
40	5200	6.13	5.85	9.00	17.00	Pass
48	5240	6.18	5.80	9.00	17.00	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
38	5190	3.03	3.31	6.18	17.00	Pass
46	5230	7.46	8.03	10.76	17.00	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
42	5210	-0.73	-0.31	2.50	17.00	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
36	5180	6.29	6.90	0.41	10.03	17.00	Pass
40	5200	9.54	9.95	0.41	13.17	17.00	Pass
48	5240	10.51	11.28	0.41	14.33	17.00	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
38	5190	2.12	2.28	0.27	5.48	17.00	Pass
46	5230	6.46	6.77	0.27	9.90	17.00	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

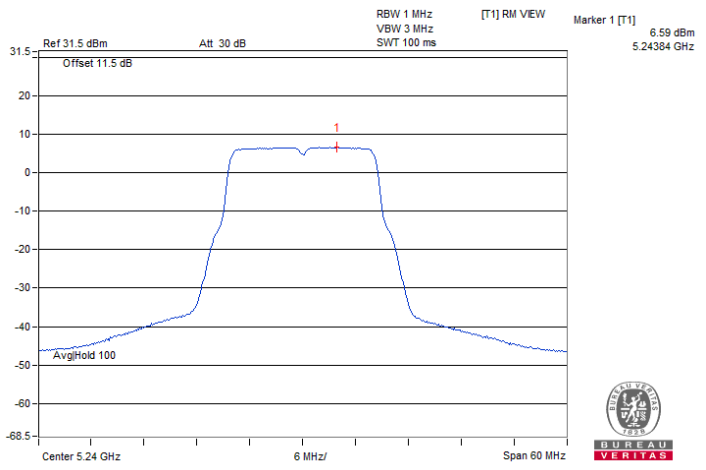
802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
42	5210	-1.47	-1.67	0.35	1.79	17.00	Pass

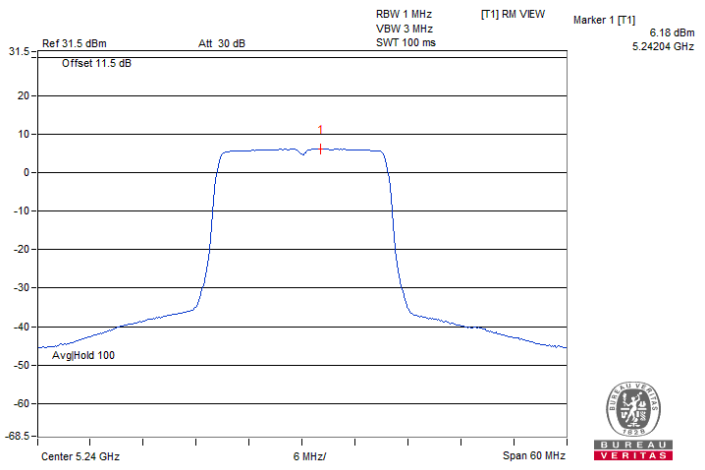
Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value

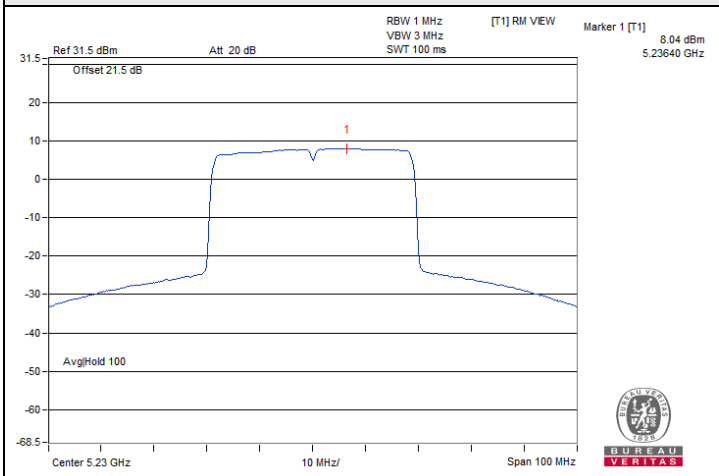


802.11a CDD / Chain0 : CH 48

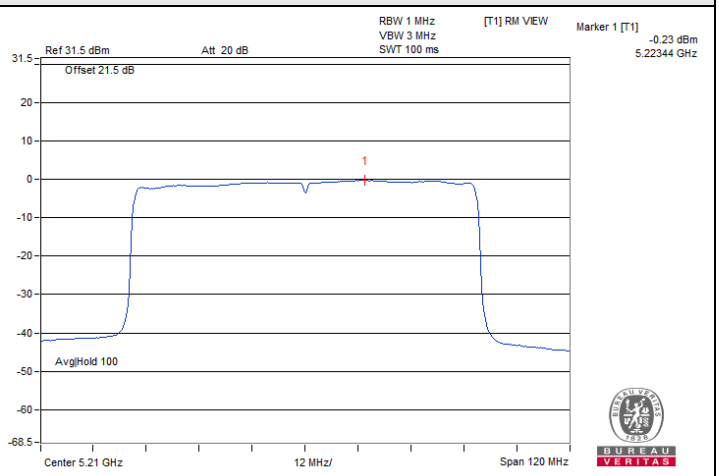


802.11ax (HE20) CDD / Chain0 : CH 48

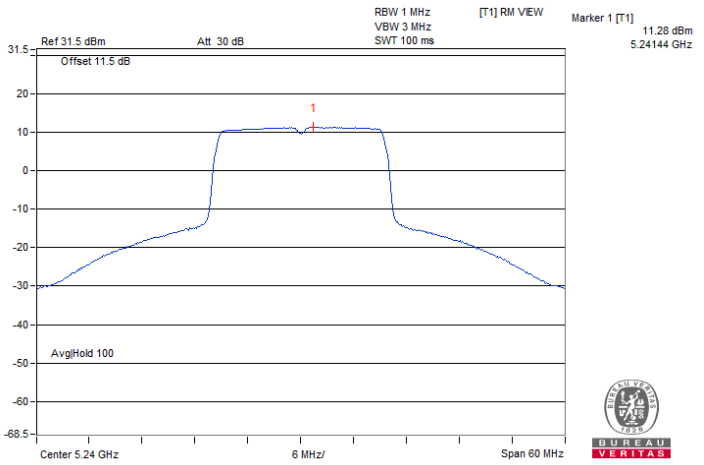
Spectrum Plot of Maximum Value



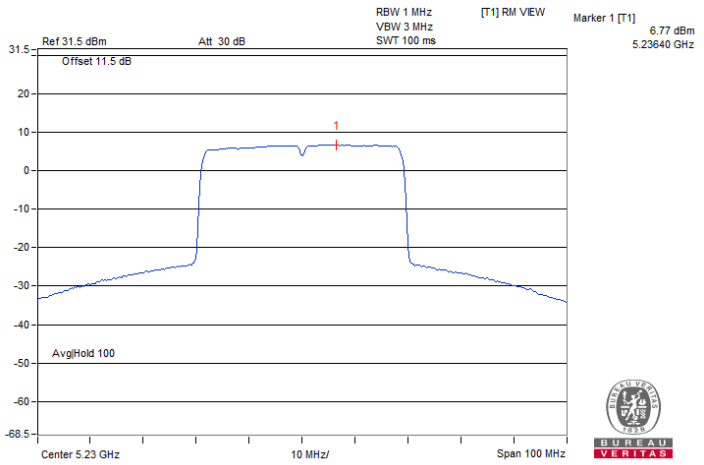
802.11ax (HE40) CDD / Chain1 : CH 46



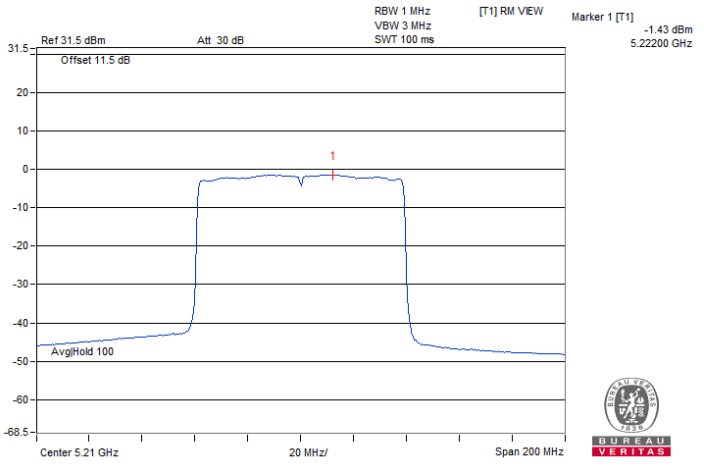
802.11ax (HE80) CDD / Chain1 : CH 42



802.11ax (HE20) Beamforming / Chain1 : CH 48



802.11ax (HE40) Beamforming / Chain1 : CH 46



802.11ax (HE80) Beamforming / Chain0 : CH 42

Mode B

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chilin Lee

802.11a CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	4.08	3.57	3.34	3.09	9.56	11.78	30	Pass
157	5785	3.81	3.38	3.14	2.40	9.23	11.45	30	Pass
165	5825	3.54	2.83	2.88	2.40	8.95	11.17	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	3.68	3.16	2.97	2.61	9.14	11.36	30	Pass
157	5785	3.40	2.46	2.80	2.12	8.74	10.96	30	Pass
165	5825	3.38	2.21	2.65	2.37	8.7	10.92	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	1.87	1.37	1.35	1.50	7.55	9.77	30	Pass
159	5795	2.32	1.43	1.07	1.01	7.51	9.73	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-0.77	-1.23	-1.22	-1.95	4.75	6.97	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
149	5745	3.45	3.59	3.43	2.75	9.34	0.36	11.92	30	Pass
157	5785	3.57	3.43	3.27	2.97	9.34	0.36	11.92	30	Pass
165	5825	3.11	2.91	2.75	2.34	8.81	0.36	11.39	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
151	5755	0.75	0.63	0.32	0.56	6.59	0.29	9.10	30	Pass
159	5795	1.09	0.66	0.47	0.66	6.75	0.29	9.26	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

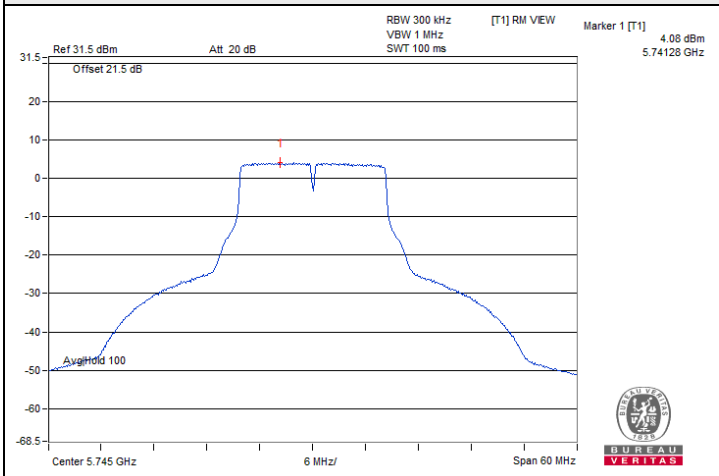
802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
155	5775	-3.94	-3.79	-4.08	-4.51	1.95	0.27	4.44	30	Pass

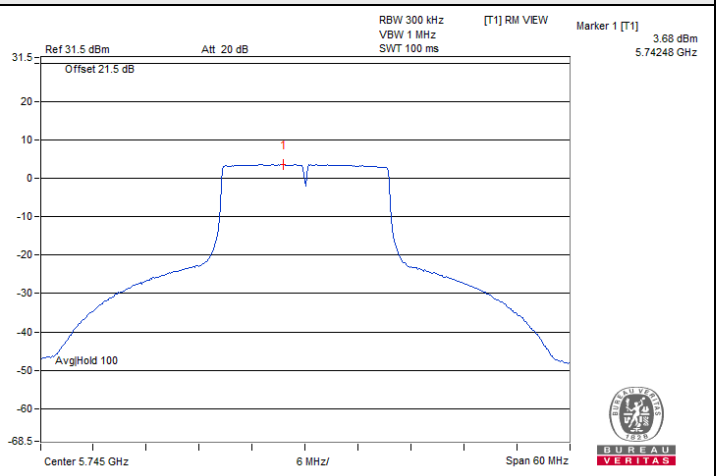
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 4.89 dBi < 6 dBi, so the power density limit shall not be reduced.

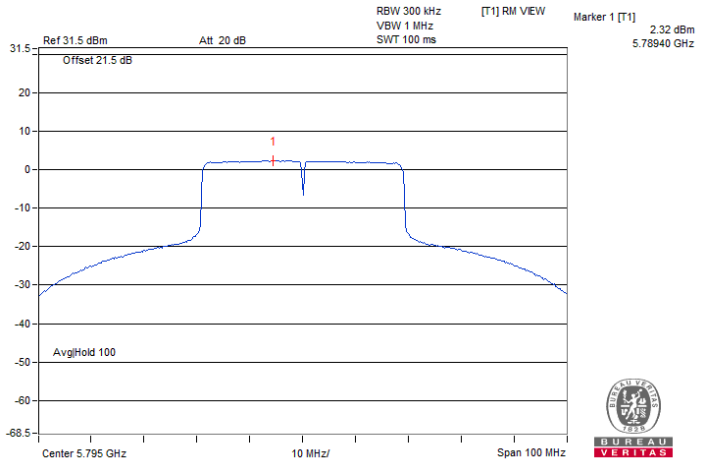
Spectrum Plot of Maximum Value



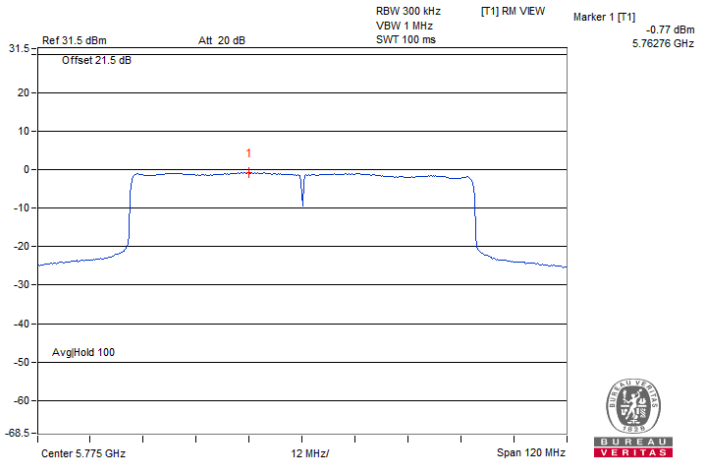
802.11a CDD / Chain0 : CH 149



802.11ax (HE20) CDD / Chain0 : CH 149

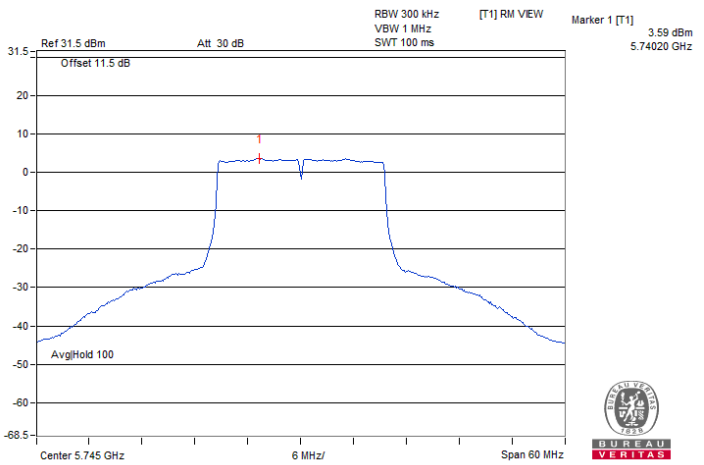


802.11ax (HE40) CDD / Chain0 : CH 159

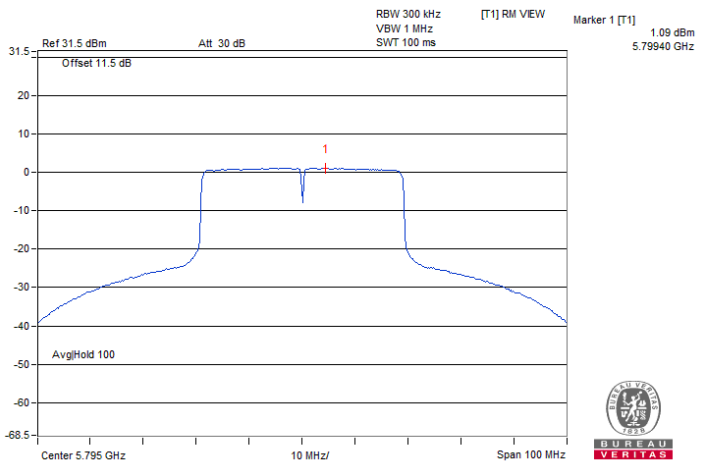


802.11ax (HE80) CDD / Chain0 : CH 155

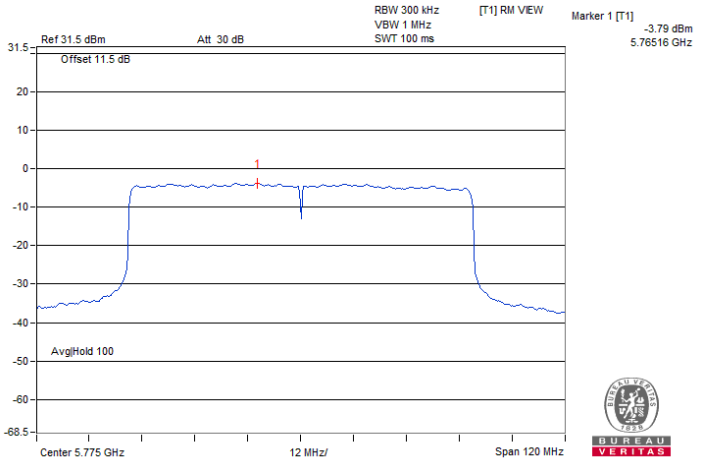
Spectrum Plot of Maximum Value



802.11ax (HE20) Beamforming / Chain1 : CH 149



802.11ax (HE40) Beamforming / Chain0 : CH 159



802.11ax (HE80) Beamforming / Chain1 : CH 155

7.3 6 dB Bandwidth

Mode B

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chilin Lee

802.11a CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.35	16.35	16.35	16.35	0.5	Pass
157	5785	16.32	16.33	16.32	16.35	0.5	Pass
165	5825	16.34	16.35	16.36	16.36	0.5	Pass

802.11ax (HE20) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	18.93	18.99	18.93	18.93	0.5	Pass
157	5785	18.97	18.72	18.84	18.81	0.5	Pass
165	5825	18.88	18.89	18.79	18.85	0.5	Pass

802.11ax (HE40) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	37.63	37.64	37.67	37.80	0.5	Pass
159	5795	37.58	37.26	37.71	37.53	0.5	Pass

802.11ax (HE80) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	77.17	78.08	76.68	76.09	0.5	Pass

802.11ax (HE20) Beamforming

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	18.95	18.79	18.78	18.96	0.5	Pass
157	5785	18.94	18.80	18.92	18.99	0.5	Pass
165	5825	18.87	18.83	18.94	18.88	0.5	Pass

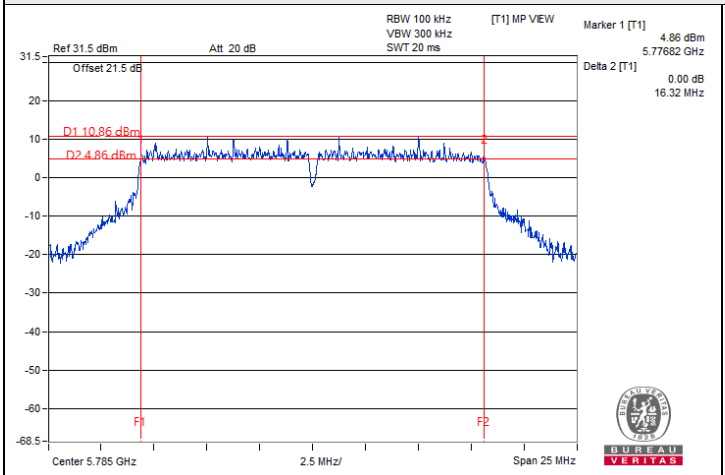
802.11ax (HE40) Beamforming

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	37.77	37.41	37.54	37.76	0.5	Pass
159	5795	37.66	37.73	37.63	37.66	0.5	Pass

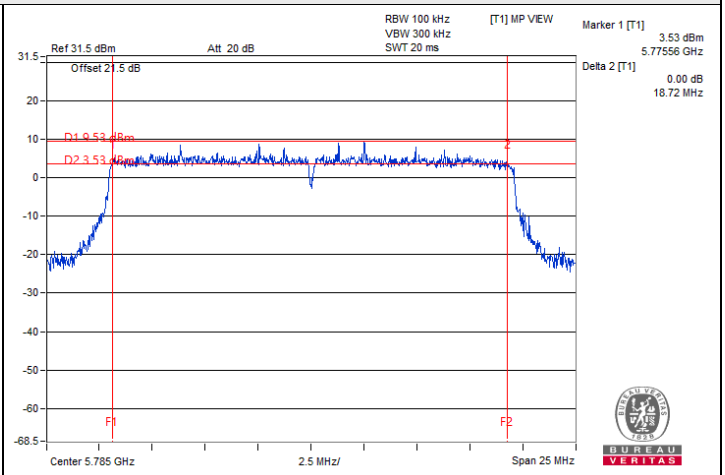
802.11ax (HE80) Beamforming

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	77.01	77.01	77.33	77.27	0.5	Pass

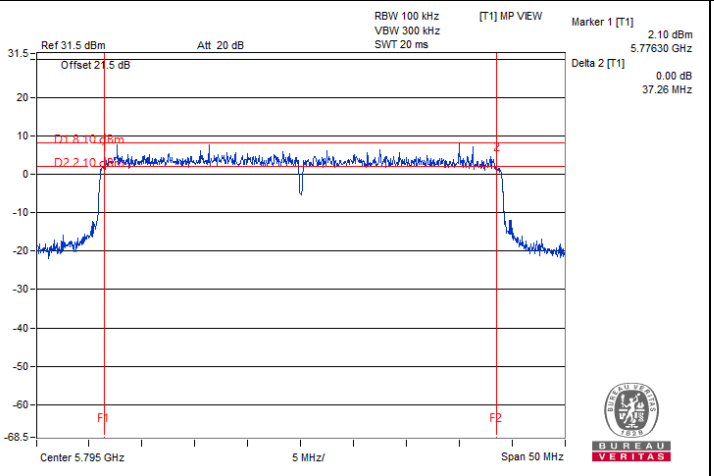
Spectrum Plot of Minimum Value



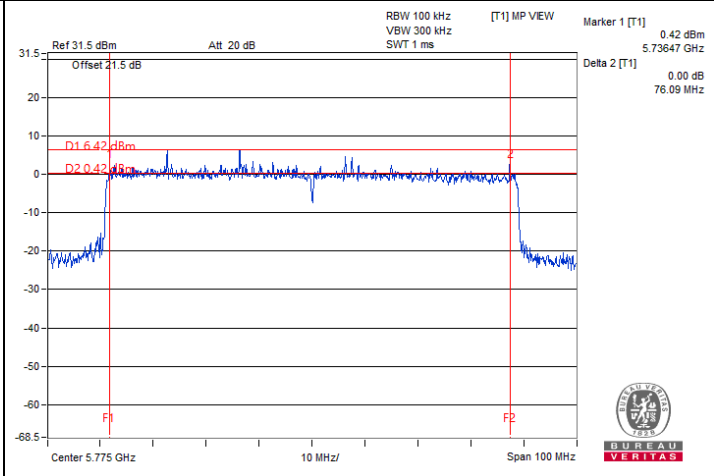
802.11a CDD / Chain0 : CH 157



802.11ax (HE20) CDD / Chain1 : CH 157

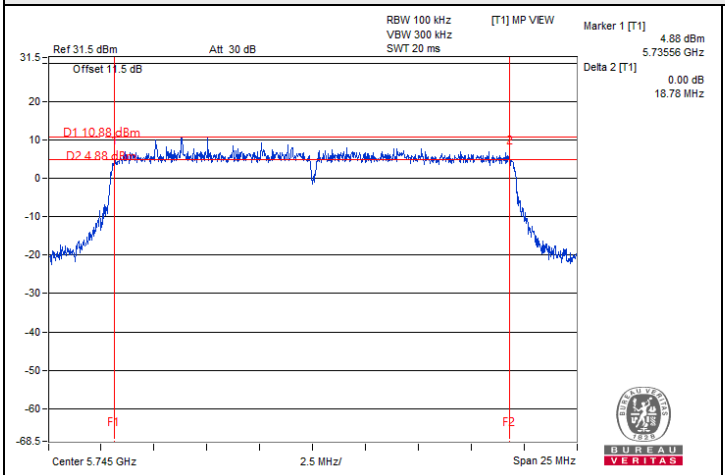


802.11ax (HE40) CDD / Chain1 : CH 159

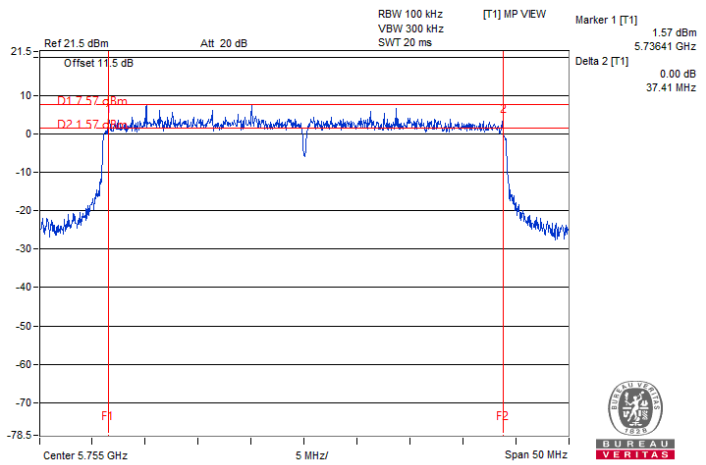


802.11ax (HE80) CDD / Chain3 : CH 155

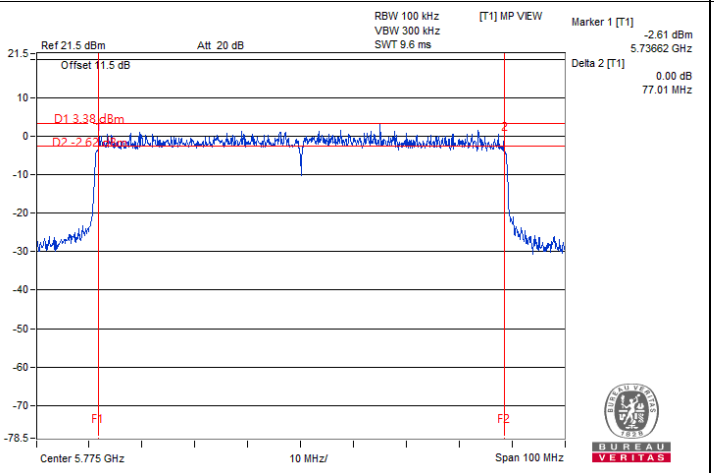
Spectrum Plot of Minimum Value



802.11ax (HE20) Beamforming / Chain2 : CH 149



802.11ax (HE40) Beamforming / Chain1 : CH 151



802.11ax (HE80) Beamforming / Chain0 : CH 155

7.4 Occupied Bandwidth

Mode A

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 62% RH	Tested By:	Eric Peng

802.11a CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.86	16.80
40	5200	17.46	17.94
48	5240	17.10	17.04

802.11ax (HE20) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.08	19.02
40	5200	19.14	19.20
48	5240	19.08	19.08

802.11ax (HE40) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.80	37.62
46	5230	37.80	37.80

802.11ax (HE80) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	76.80	77.04

802.11ax (HE20) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.02	19.02
40	5200	19.14	19.08
48	5240	19.20	19.20

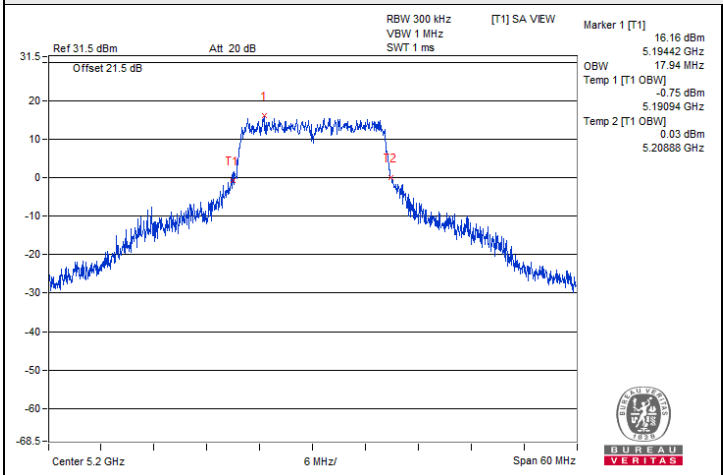
802.11ax (HE40) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.68	37.80
46	5230	37.80	37.80

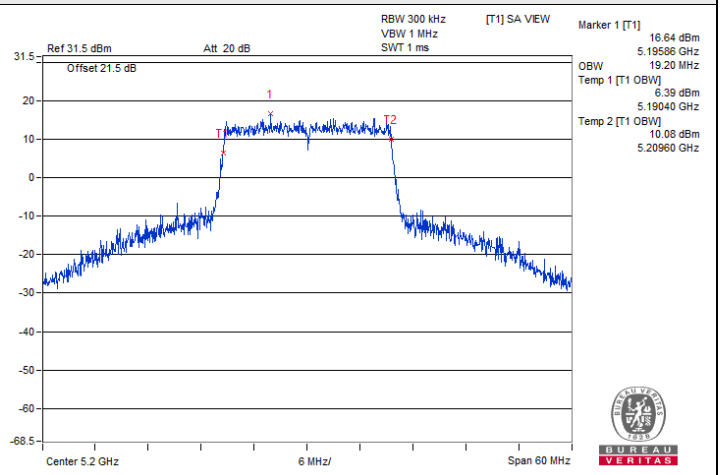
802.11ax (HE80) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.04	76.80

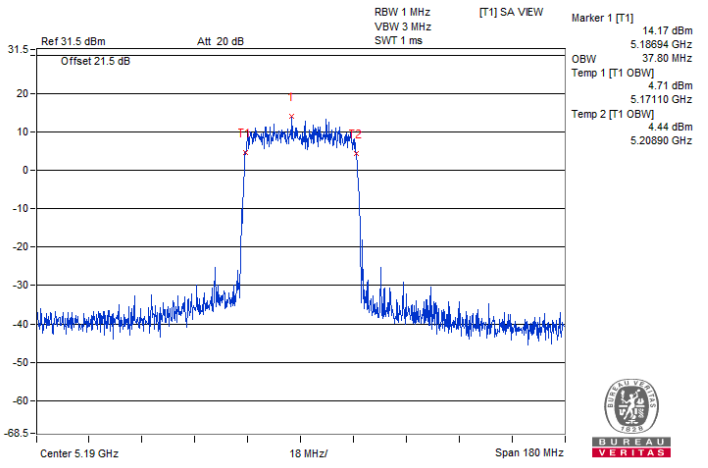
Spectrum Plot of Maximum Value



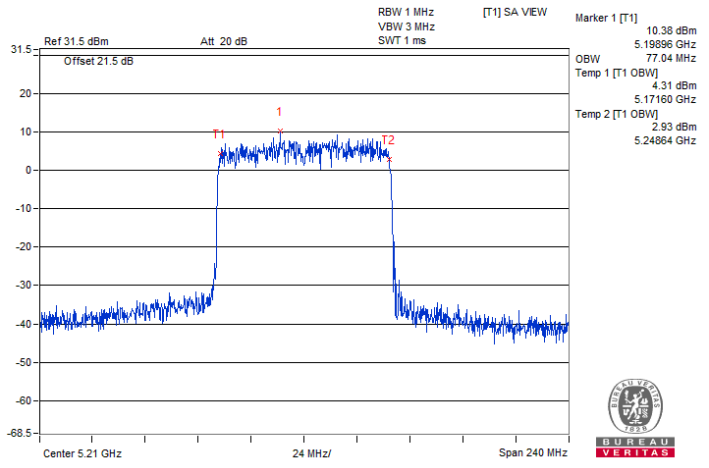
802.11a CDD / Chain1 : CH 40



802.11ax (HE20) CDD / Chain1 : CH 40

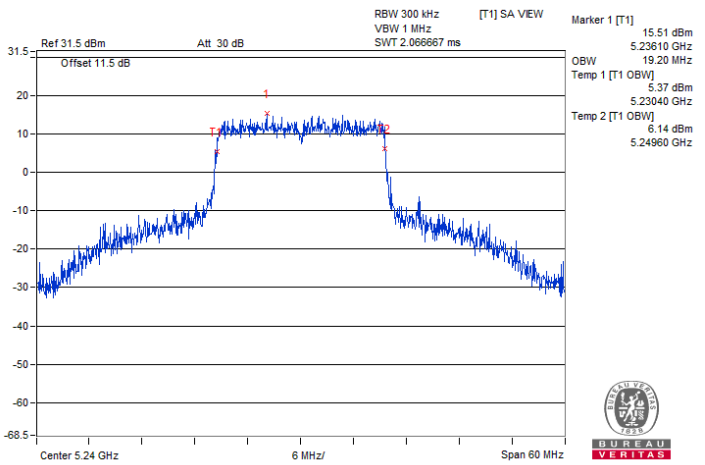


802.11ax (HE40) CDD / Chain0 : CH 38

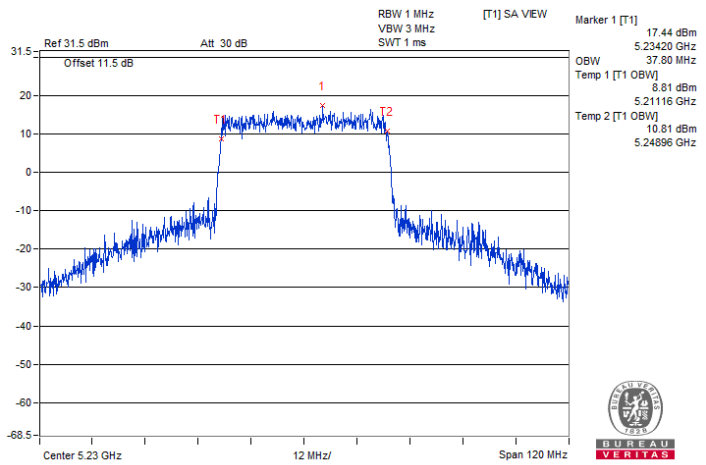


802.11ax (HE80) CDD / Chain1 : CH 42

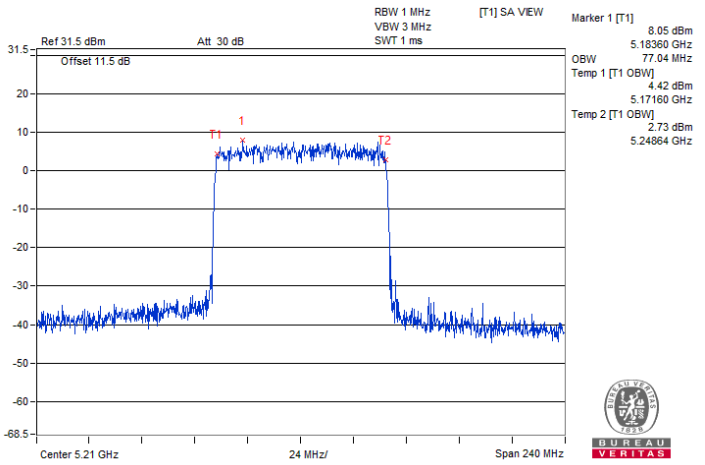
Spectrum Plot of Maximum Value



802.11ax (HE20) Beamforming / Chain0 : CH 48

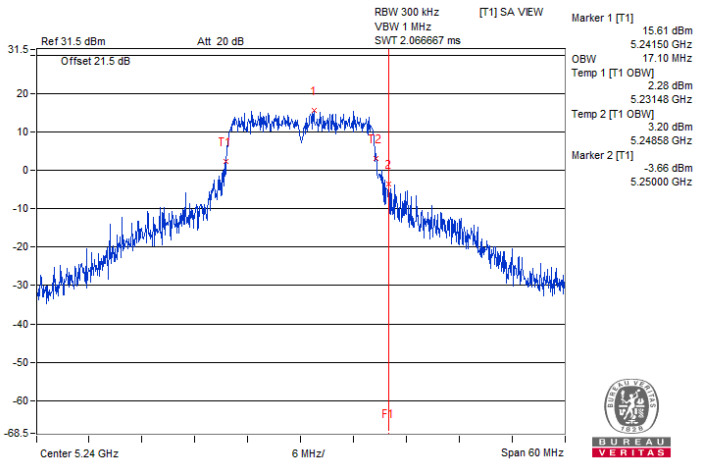


802.11ax (HE40) Beamforming / Chain0 : CH 46

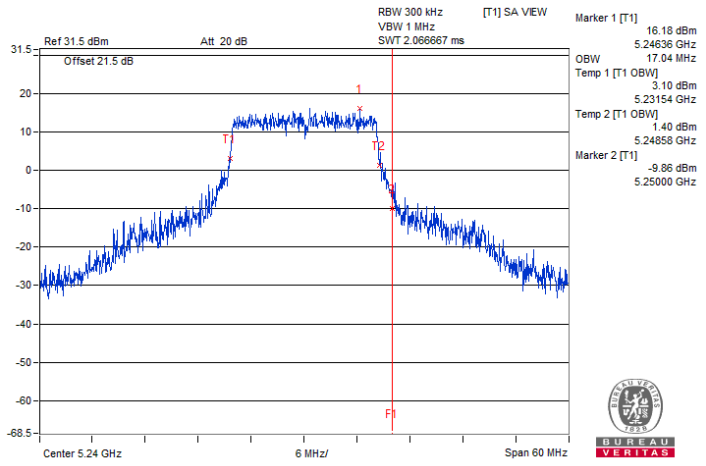


802.11ax (HE80) Beamforming / Chain0 : CH 42

Spectrum Plot for nearby DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)



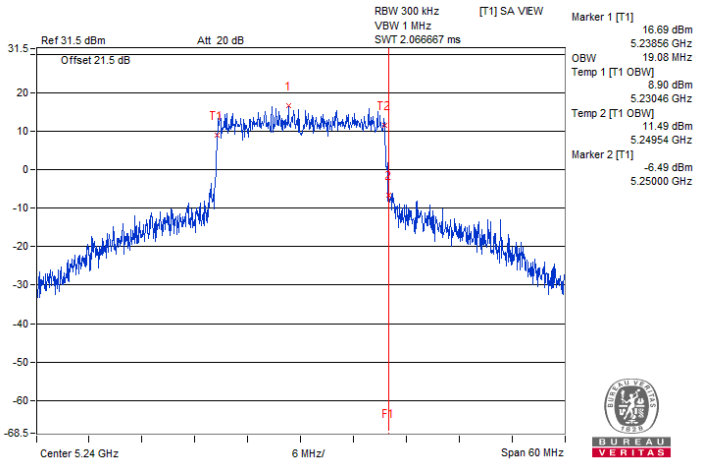
802.11a CDD / Chain 0 : CH 48



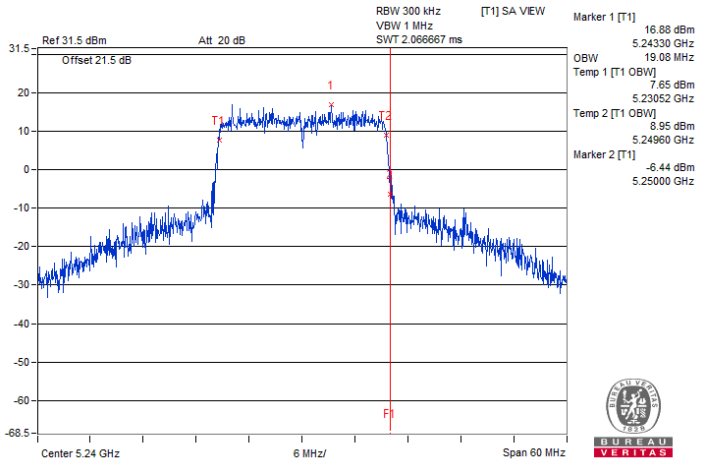
802.11a CDD / Chain 1 : CH 48

Spectrum Plot for nearby DFS band

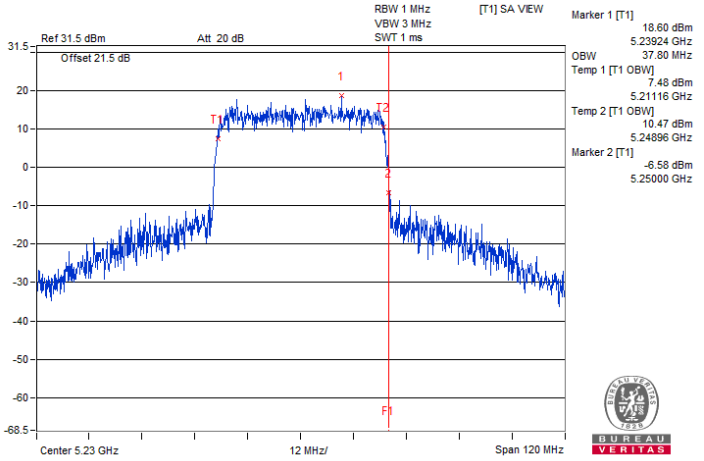
(DFS is required, if 99% OCP straddle into U-NII-2A band)



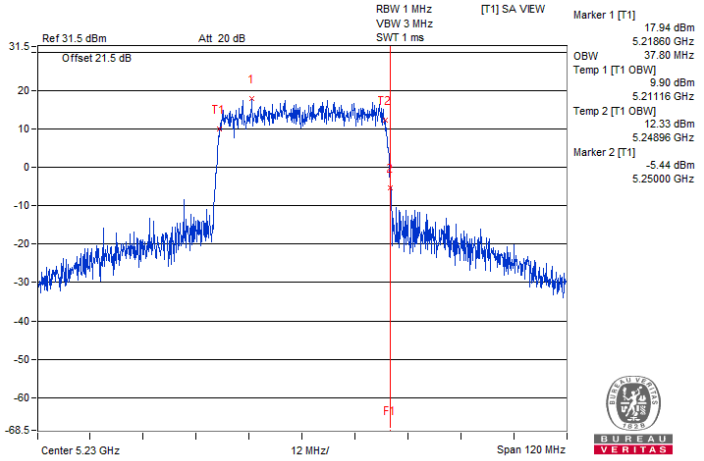
802.11ax (HE20) CDD / Chain 0 : CH 48



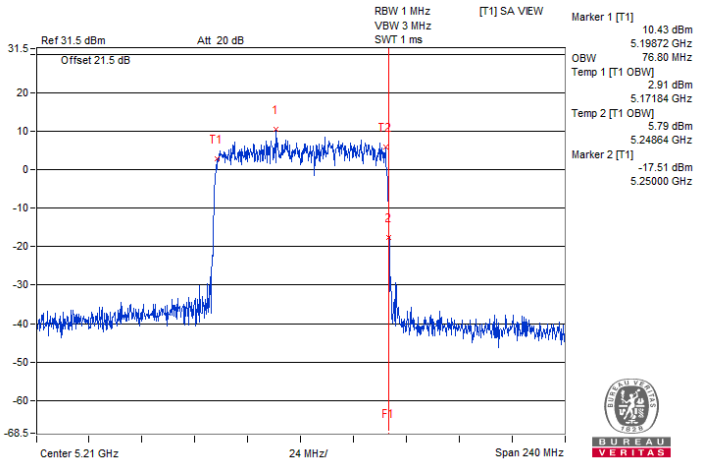
802.11ax (HE20) CDD / Chain 1 : CH 48



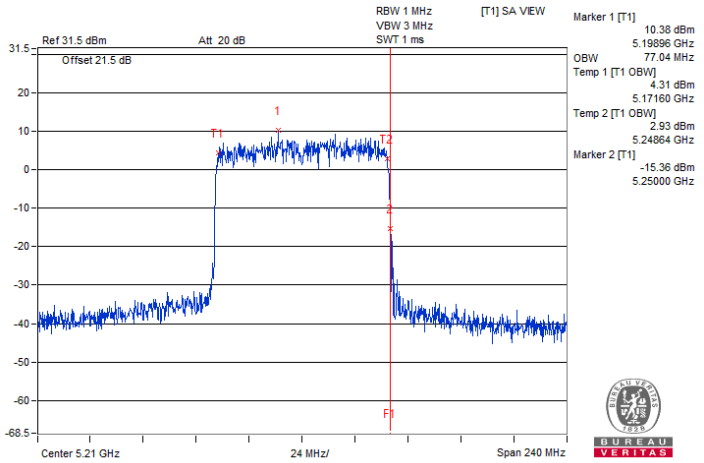
802.11ax (HE40) CDD / Chain 0 : CH 46



802.11ax (HE40) CDD / Chain 1 : CH 46



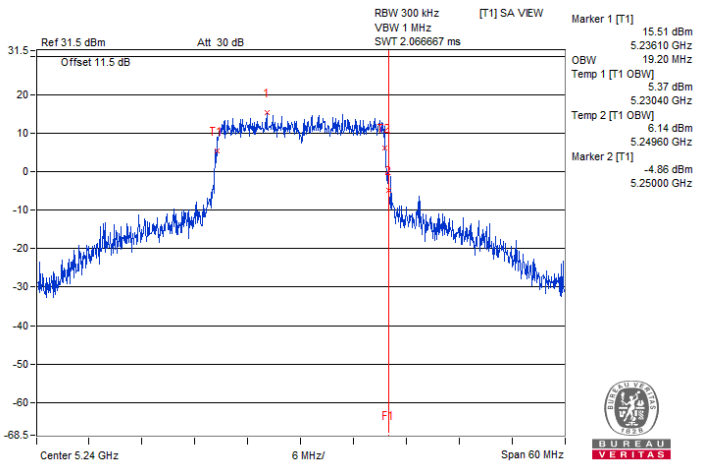
802.11ax (HE80) CDD / Chain 0 : CH 42



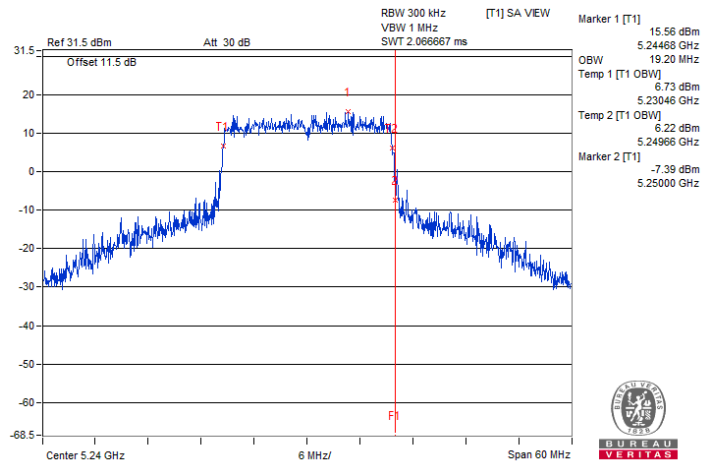
802.11ax (HE80) CDD / Chain 1 : CH 42

Spectrum Plot for nearby DFS band

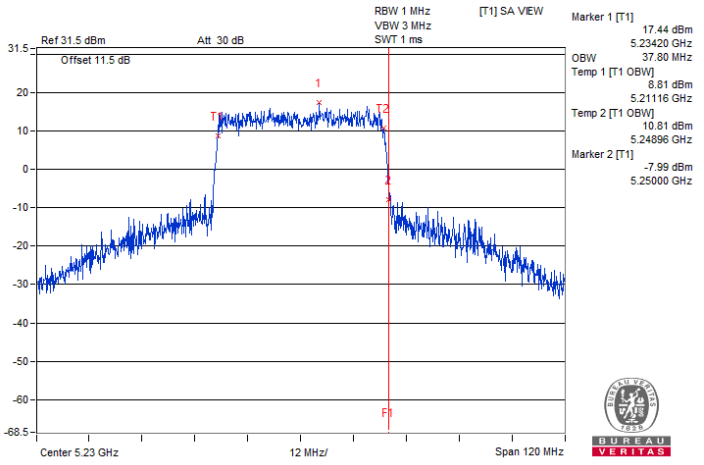
(DFS is required, if 99% OCP straddle into U-NII-2A band)



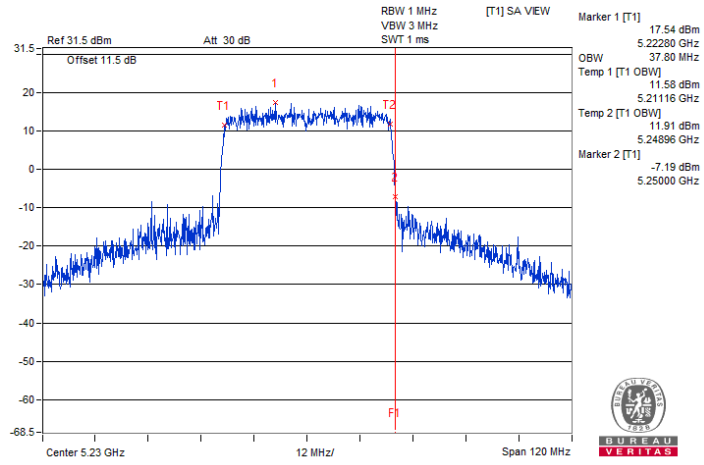
802.11ax (HE20) Beamforming / Chain 0 : CH 48



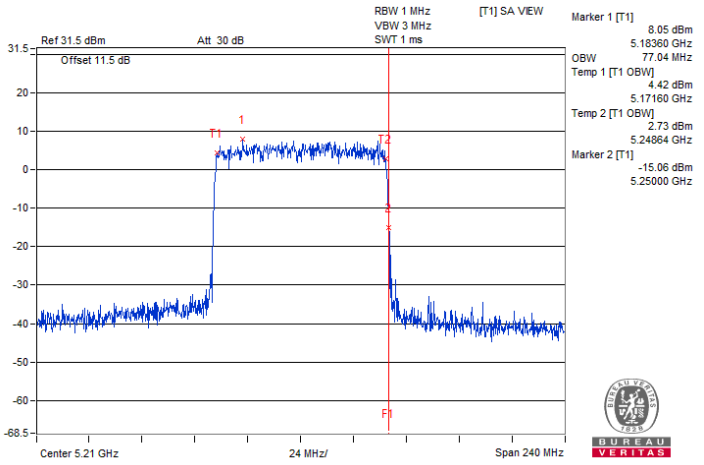
802.11ax (HE20) Beamforming / Chain 1 : CH 48



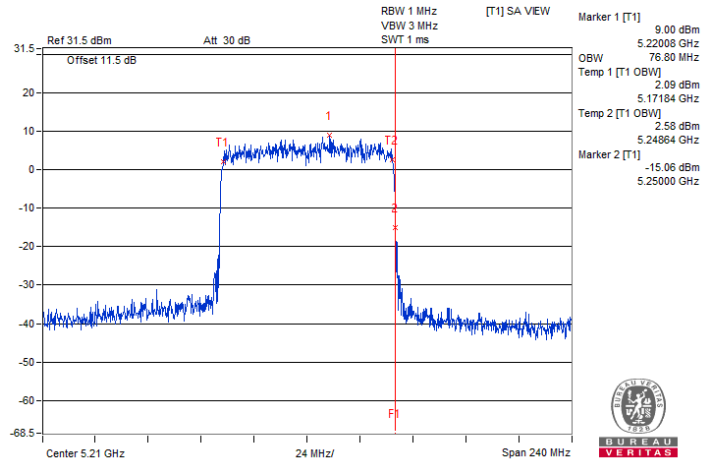
802.11ax (HE40) Beamforming / Chain 0 : CH 46



802.11ax (HE40) Beamforming / Chain 1 : CH 46



802.11ax (HE80) Beamforming / Chain 0 : CH 42



802.11ax (HE80) Beamforming / Chain 1 : CH 42

Mode B

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chilin Lee

802.11a CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
149	5745	16.80	16.74	16.86	16.74
157	5785	17.22	16.80	16.98	16.98
165	5825	16.92	16.86	16.98	16.92

802.11ax (HE20) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
149	5745	19.14	19.08	19.14	19.20
157	5785	19.08	19.14	19.08	19.20
165	5825	19.20	19.08	19.02	19.08

802.11ax (HE40) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
151	5755	38.40	38.04	38.16	38.04
159	5795	38.28	38.16	38.10	38.16

802.11ax (HE80) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
155	5775	78.00	77.28	77.52	77.52

802.11ax (HE20) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
149	5745	19.08	19.02	19.02	19.02
157	5785	19.14	19.14	19.14	19.08
165	5825	19.14	19.02	19.14	19.08

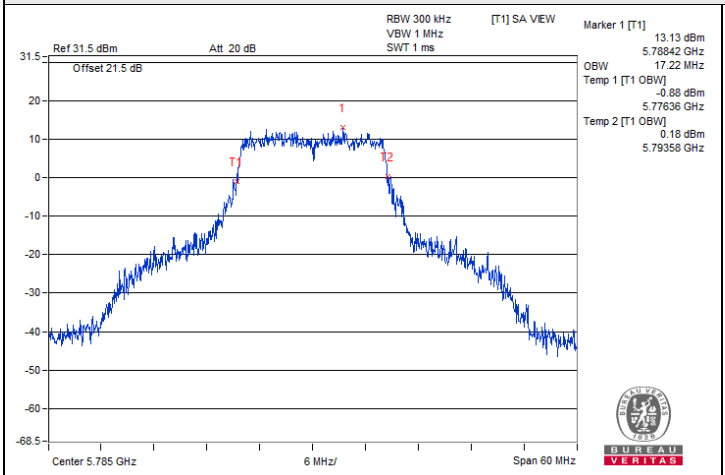
802.11ax (HE40) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
151	5755	38.16	37.80	38.04	38.04
159	5795	38.16	38.04	38.28	38.28

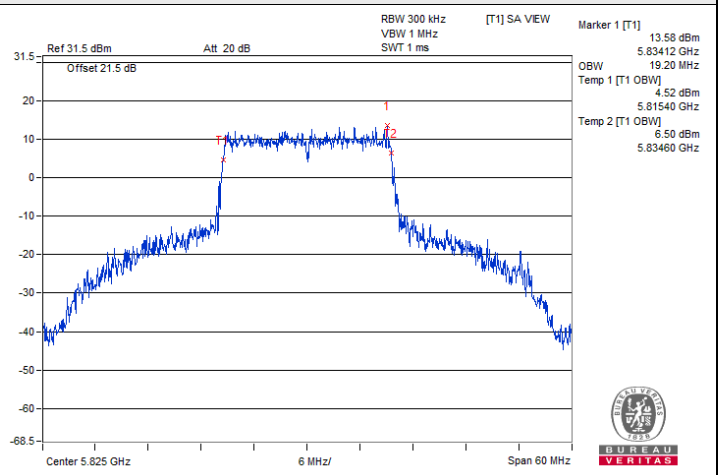
802.11ax (HE80) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
155	5775	77.04	77.28	77.28	77.52

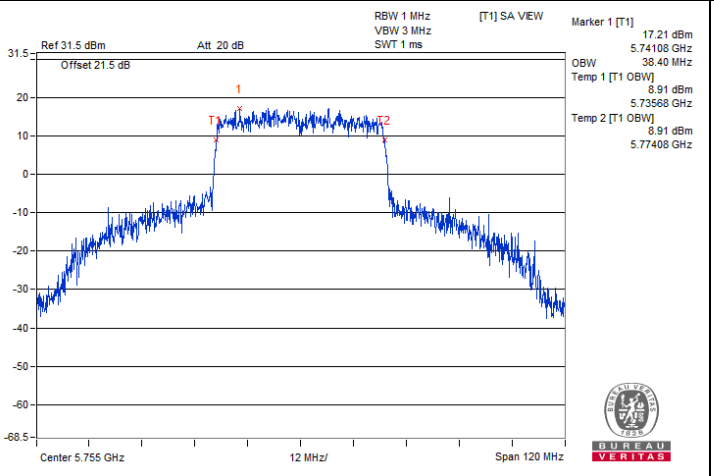
Spectrum Plot of Maximum Value



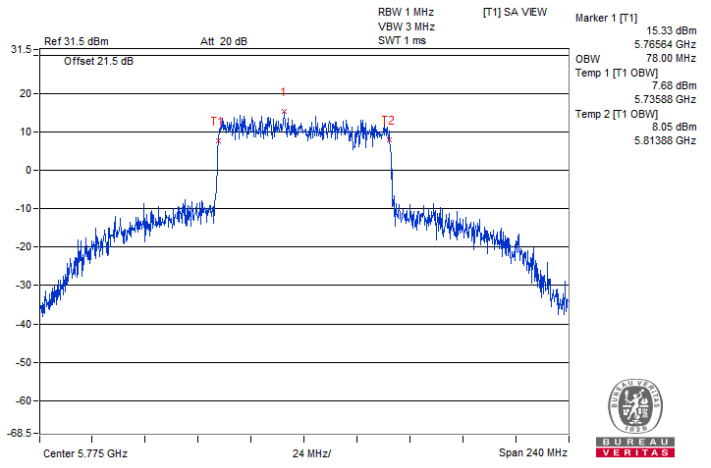
802.11a CDD / Chain0 : CH 157



802.11ax (HE20) CDD / Chain0 : CH 165

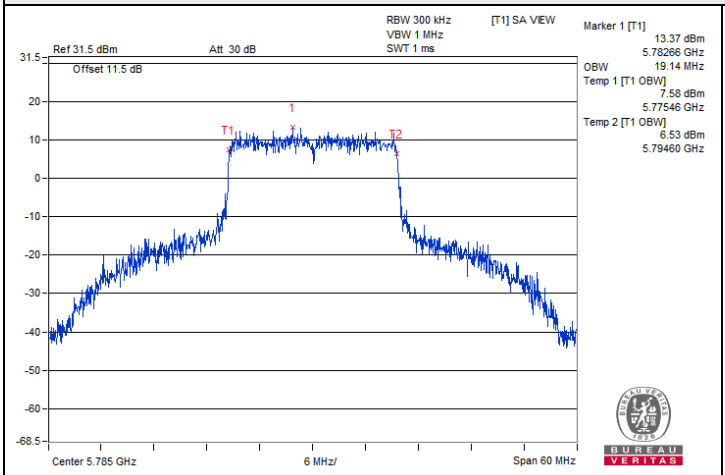


802.11ax (HE40) CDD / Chain0 : CH 151

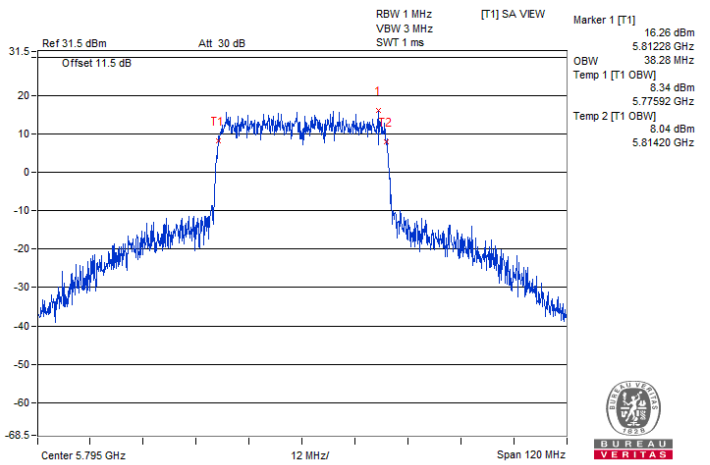


802.11ax (HE80) CDD / Chain0 : CH 155

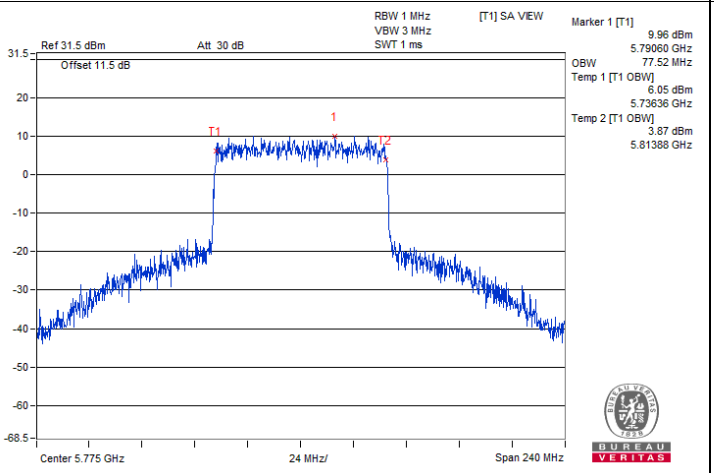
Spectrum Plot of Maximum Value



802.11ax (HE20) Beamforming / Chain0 : CH 157



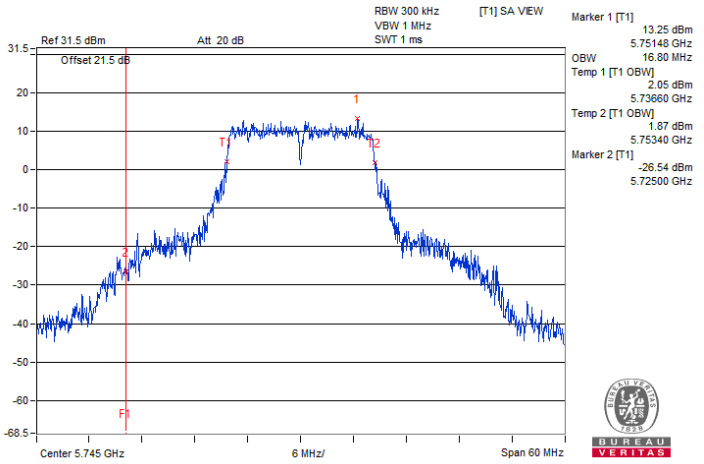
802.11ax (HE40) Beamforming / Chain2 : CH 159



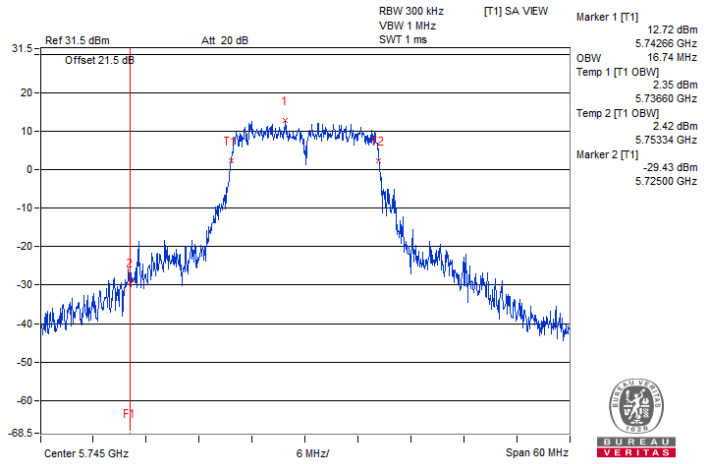
802.11ax (HE80) Beamforming / Chain3 : CH 155

Spectrum Plot for nearby DFS band

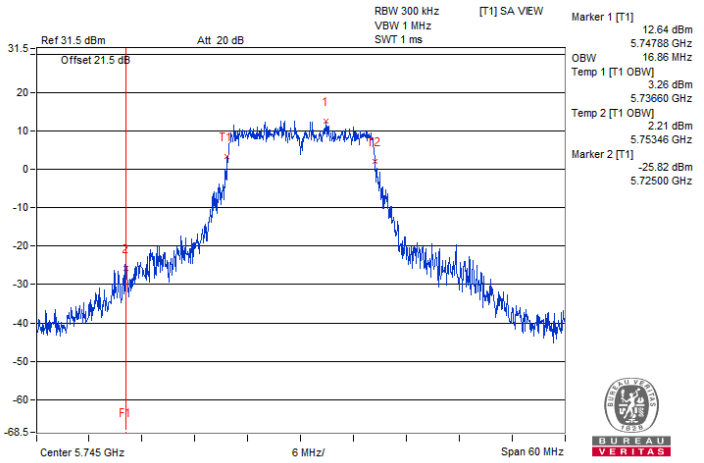
(DFS is required, if 99% OCP straddle into U-NII-2C band)



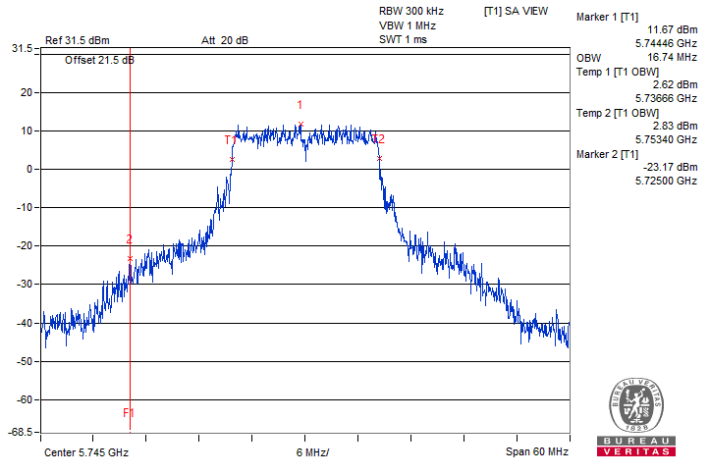
802.11a CDD / Chain 0 : CH 149



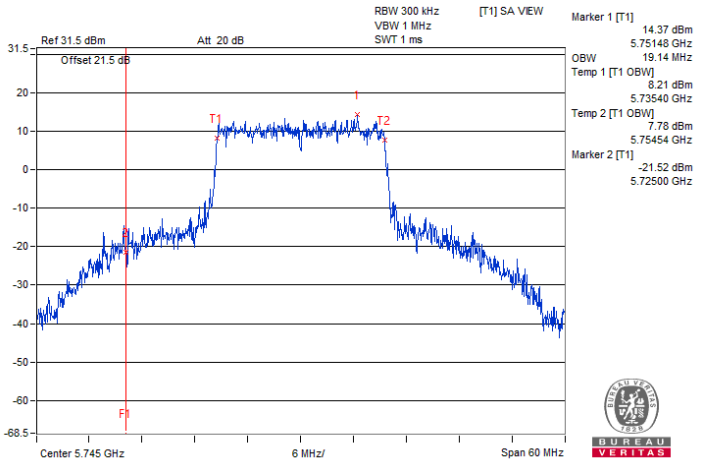
802.11a CDD / Chain 1 : CH 149



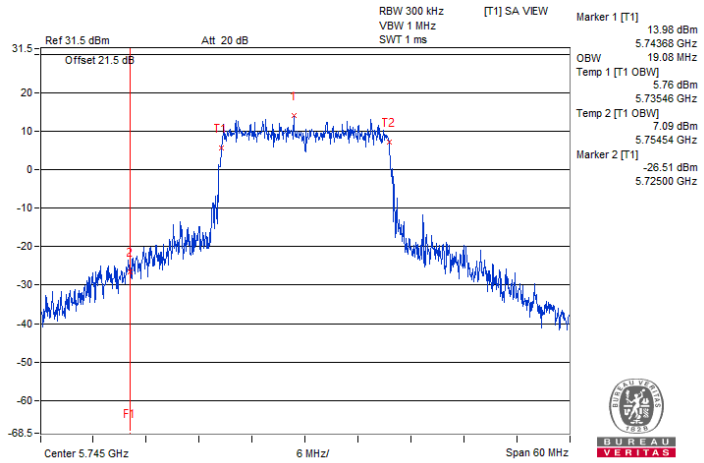
802.11a CDD / Chain 2 : CH 149



802.11a CDD / Chain 3 : CH 149



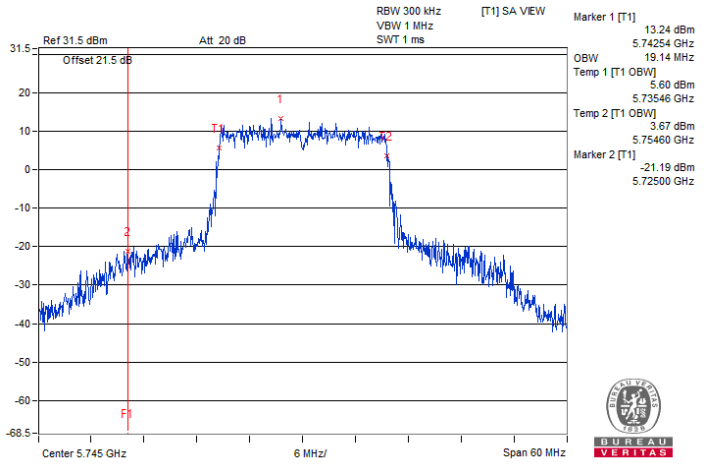
802.11ax (HE20) CDD / Chain 0 : CH 149



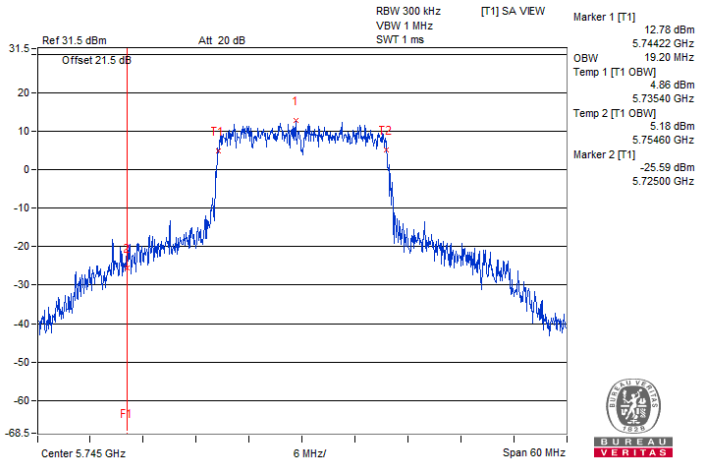
802.11ax (HE20) CDD / Chain 1 : CH 149

Spectrum Plot for nearby DFS band

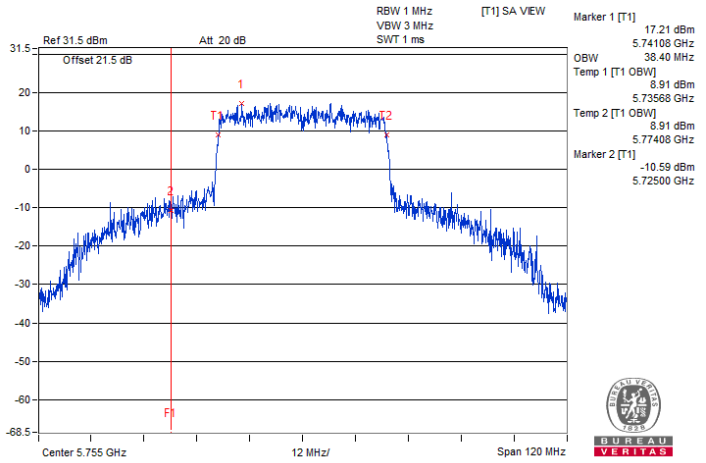
(DFS is required, if 99% OCP straddle into U-NII-2C band)



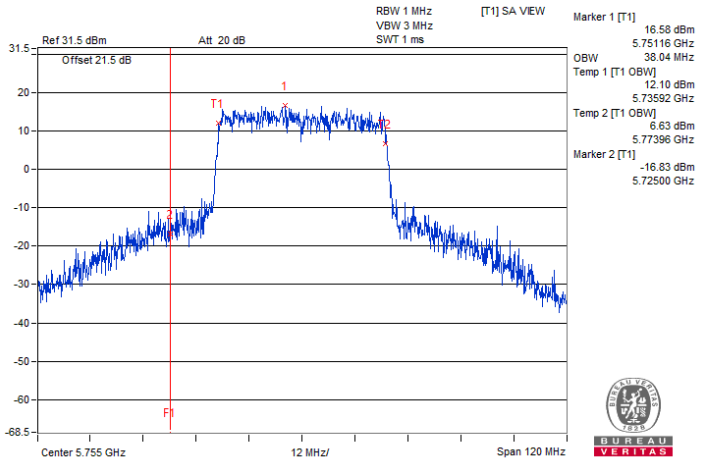
802.11ax (HE20) CDD / Chain 2 : CH 149



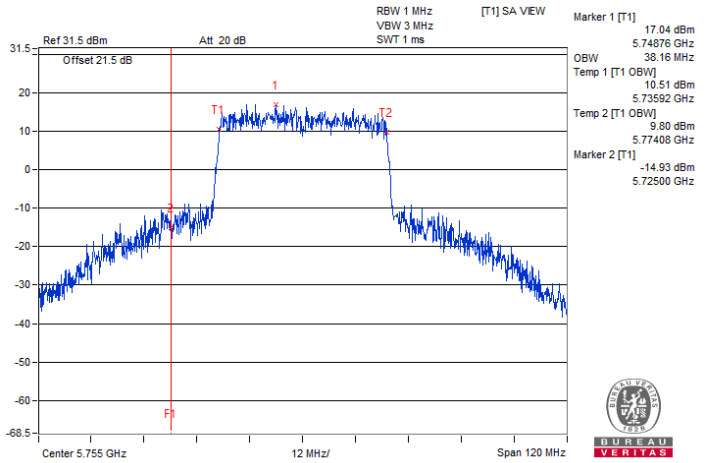
802.11ax (HE20) CDD / Chain 3 : CH 149



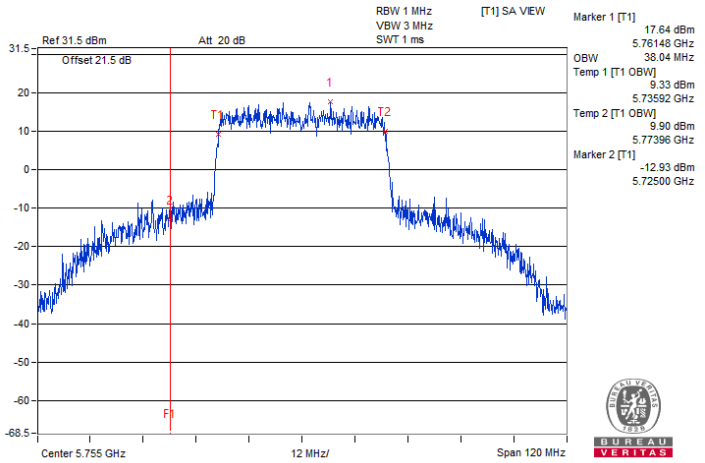
802.11ax (HE40) CDD / Chain 0 : CH 151



802.11ax (HE40) CDD / Chain 1 : CH 151



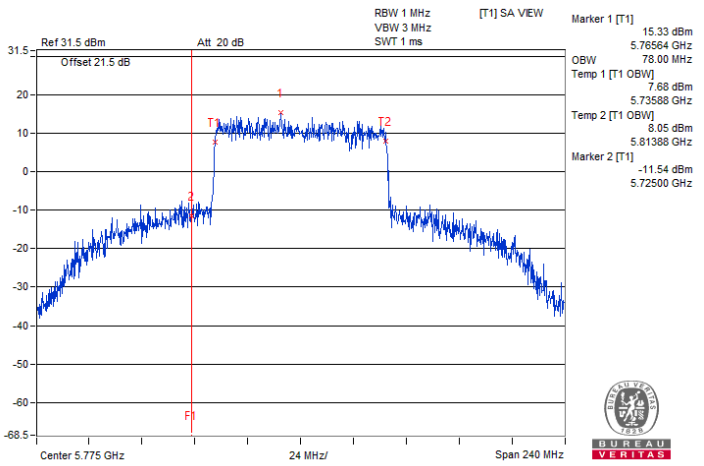
802.11ax (HE40) CDD / Chain 2 : CH 151



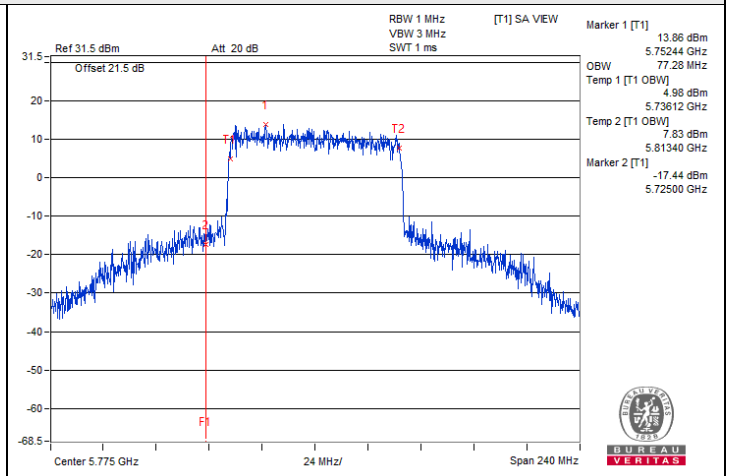
802.11ax (HE40) CDD / Chain 3 : CH 151

Spectrum Plot for nearby DFS band

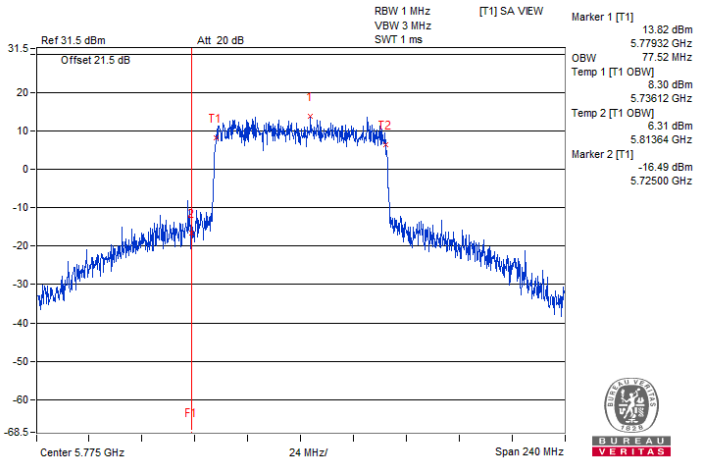
(DFS is required, if 99% OCP straddle into U-NII-2C band)



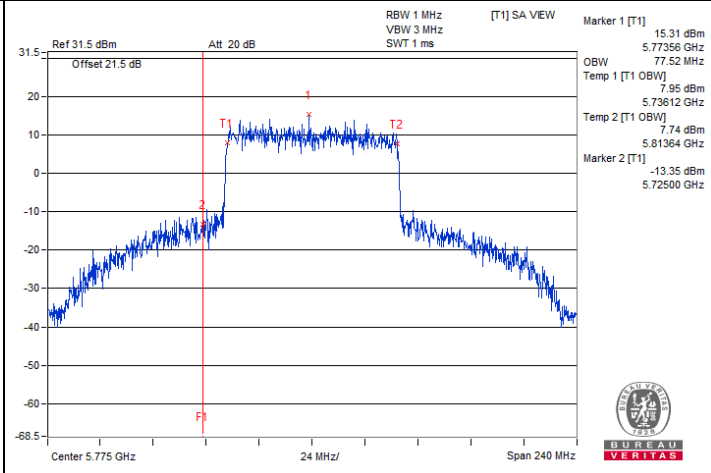
802.11ax (HE80) CDD / Chain 0 : CH 155



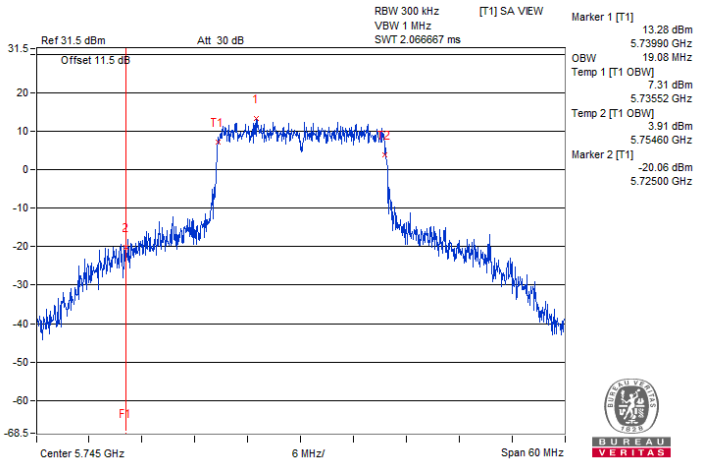
802.11ax (HE80) CDD / Chain 1 : CH 155



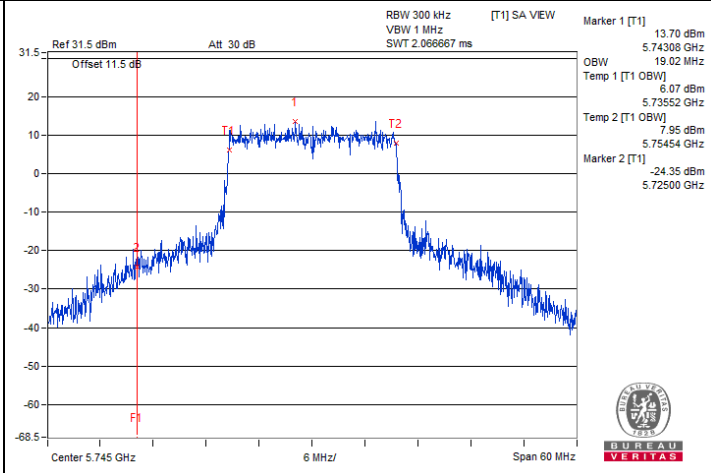
802.11ax (HE80) CDD / Chain 2 : CH 155



802.11ax (HE80) CDD / Chain 3 : CH 155



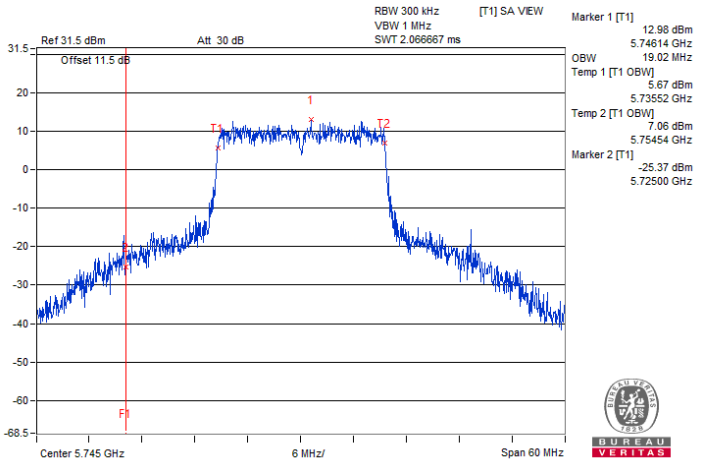
802.11ax (HE20) Beamforming / Chain 0 : CH 149



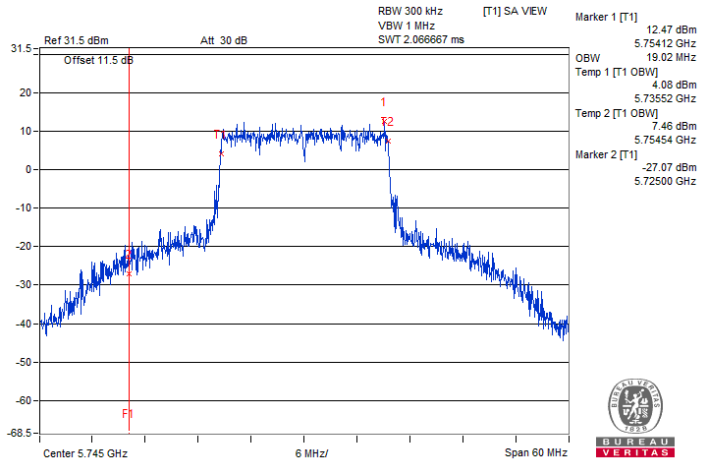
802.11ax (HE20) Beamforming / Chain 1 : CH 149

Spectrum Plot for nearby DFS band

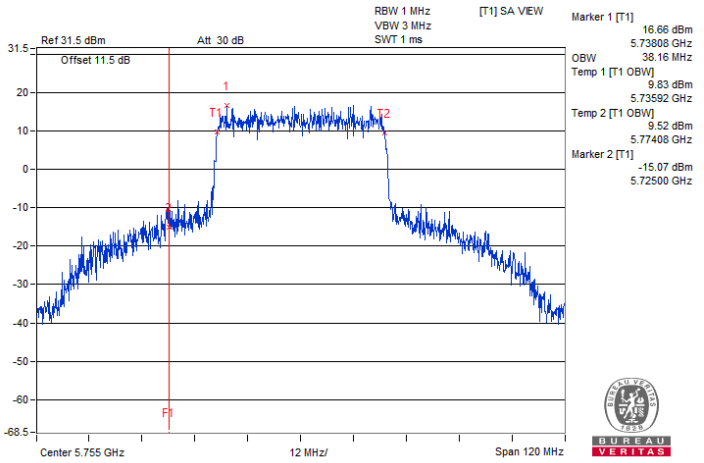
(DFS is required, if 99% OCP straddle into U-NII-2C band)



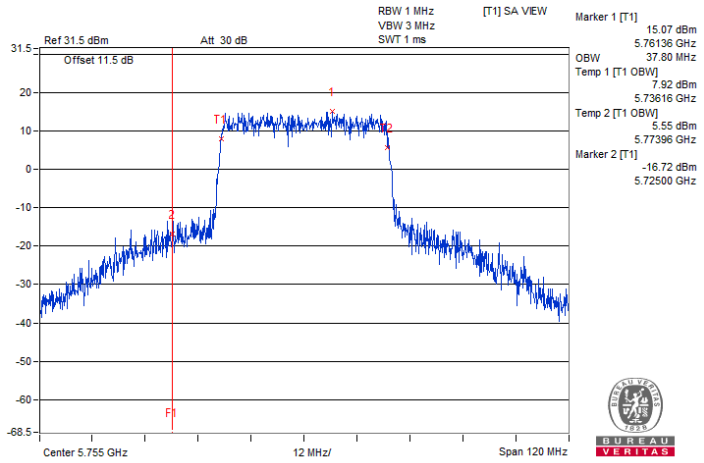
802.11ax (HE20) Beamforming / Chain 2 : CH 149



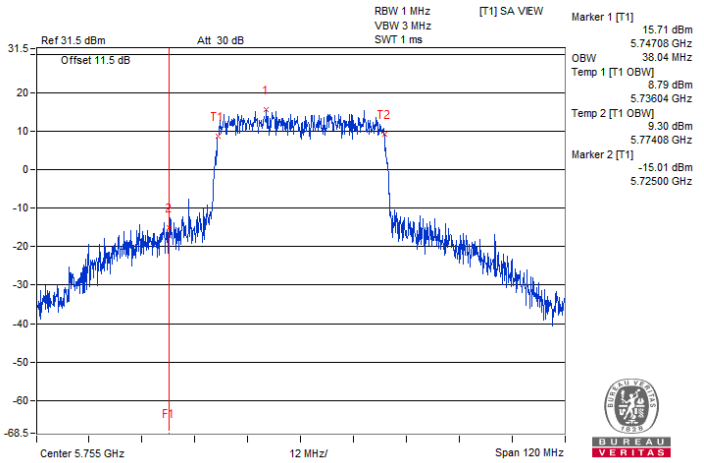
802.11ax (HE20) Beamforming / Chain 3 : CH 149



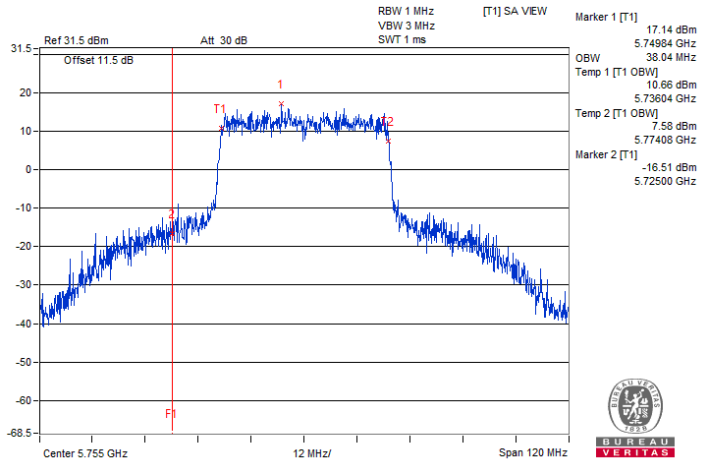
802.11ax (HE40) Beamforming / Chain 0 : CH 151



802.11ax (HE40) Beamforming / Chain 1 : CH 151



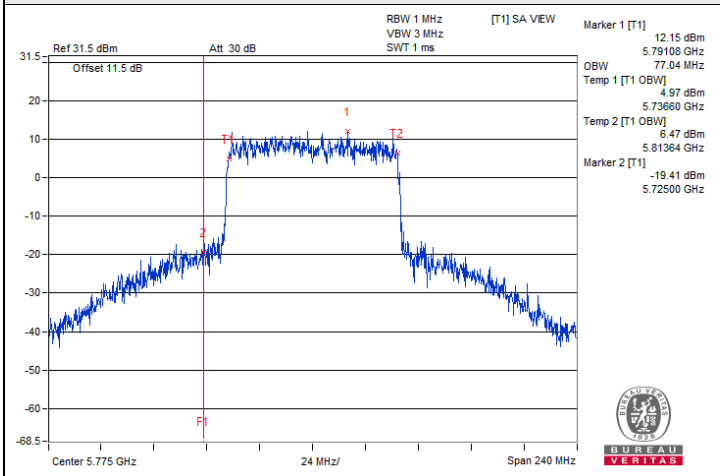
802.11ax (HE40) Beamforming / Chain 2 : CH 151



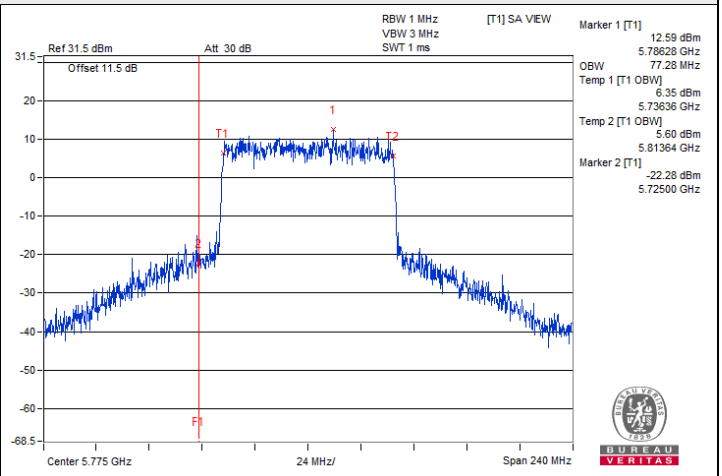
802.11ax (HE40) Beamforming / Chain 3 : CH 151

Spectrum Plot for nearby DFS band

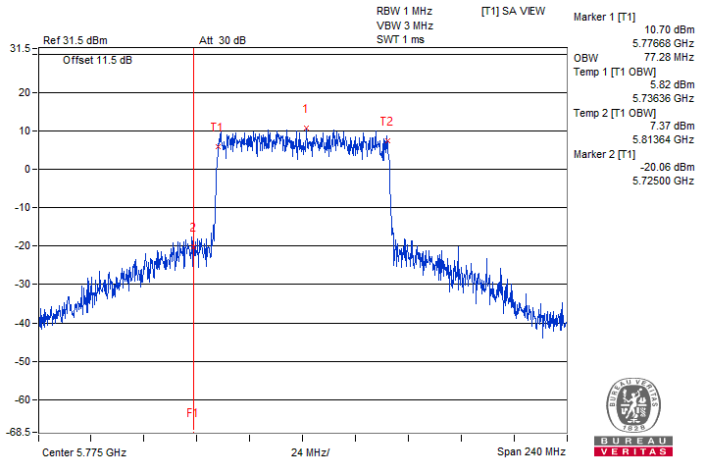
(DFS is required, if 99% OCP straddle into U-NII-2C band)



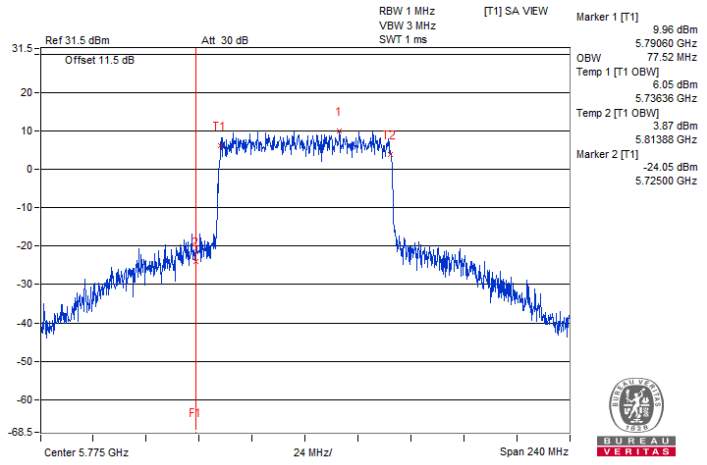
802.11ax (HE80) Beamforming / Chain 0 : CH 155



802.11ax (HE80) Beamforming / Chain 1 : CH 155



802.11ax (HE80) Beamforming / Chain 2 : CH 155



802.11ax (HE80) Beamforming / Chain 3 : CH 155

7.5 Frequency Stability

Mode A

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 62% RH	Tested By:	Eric Peng

802.11a

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	5180.014	Pass	5180.0128	Pass	5180.0149	Pass	5180.0139	Pass
30	120	5180.0119	Pass	5180.0078	Pass	5180.0113	Pass	5180.0112	Pass
20	120	5180.0025	Pass	5180.0052	Pass	5180.0022	Pass	5180.0049	Pass
10	120	5179.9772	Pass	5179.9737	Pass	5179.9775	Pass	5179.9779	Pass
0	120	5179.9888	Pass	5179.9886	Pass	5179.9931	Pass	5179.9898	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5179.9976	Pass	5179.9963	Pass	5179.9988	Pass	5179.9994	Pass
	120	5180.0025	Pass	5180.0052	Pass	5180.0022	Pass	5180.0049	Pass
	102	5180.0094	Pass	5180.0097	Pass	5180.0112	Pass	5180.0133	Pass

Mode B

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chilin Lee

802.11a

Frequency Stability Versus Temp.									
Operating Frequency: 5745 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	5744.9885	Pass	5744.9903	Pass	5744.9907	Pass	5744.991	Pass
30	120	5745.002	Pass	5745.0021	Pass	5745.007	Pass	5745.0053	Pass
20	120	5744.9868	Pass	5744.9891	Pass	5744.9865	Pass	5744.987	Pass
10	120	5745.0095	Pass	5745.0103	Pass	5745.006	Pass	5745.0104	Pass
0	120	5745.0111	Pass	5745.0136	Pass	5745.0135	Pass	5745.0108	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5745 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5744.9925	Pass	5744.9952	Pass	5744.9956	Pass	5744.9927	Pass
	120	5744.9868	Pass	5744.9891	Pass	5744.9865	Pass	5744.987	Pass
	102	5744.9942	Pass	5744.9935	Pass	5744.9898	Pass	5744.9894	Pass

7.6 AC Power Conducted Emissions

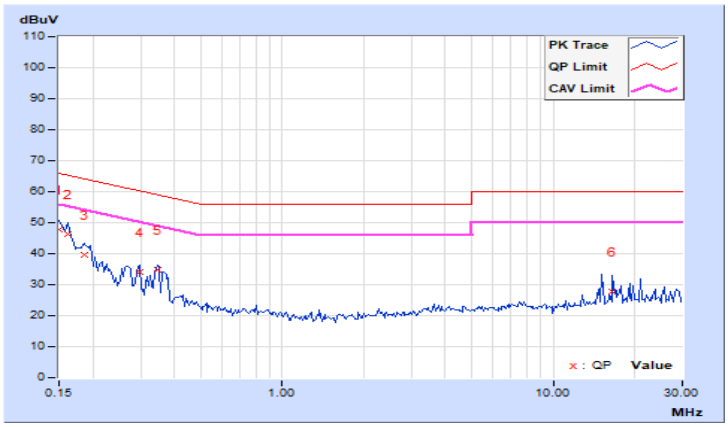
Mode A

RF Mode	TX 802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 68% 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	0.15000	9.95	37.70	20.06	47.65	30.01	66.00	56.00	-18.35	-25.99
2	0.16172	9.95	36.47	16.77	46.42	26.72	65.38	55.38	-18.96	-28.66
3	0.18516	9.96	29.70	10.11	39.66	20.07	64.25	54.25	-24.59	-34.18
4	0.29844	9.96	24.28	7.93	34.24	17.89	60.29	50.29	-26.05	-32.40
5	0.34531	9.96	25.04	15.27	35.00	25.23	59.07	49.07	-24.07	-23.84
6	16.55078	11.00	16.67	-3.19	27.67	7.81	60.00	50.00	-32.33	-42.19

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

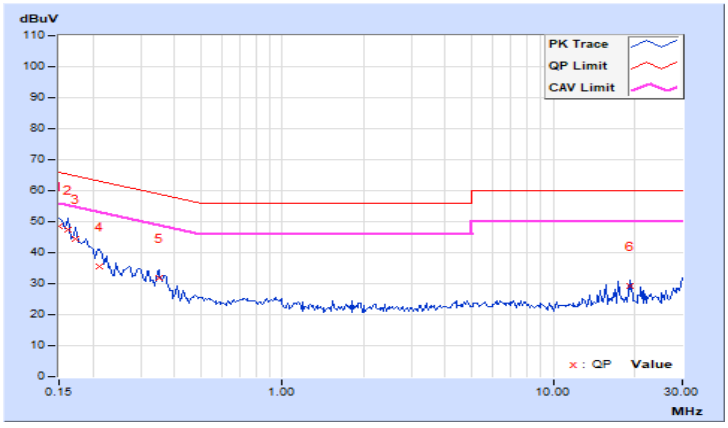


RF Mode	TX 802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 68% RH
Tested By	Sampson Chen		

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	0.15000	9.95	38.62	22.12	48.57	32.07	66.00	56.00	-17.43	-23.93
2	0.16172	9.95	37.57	18.56	47.52	28.51	65.38	55.38	-17.86	-26.87
3	0.17344	9.95	34.49	17.39	44.44	27.34	64.79	54.79	-20.35	-27.45
4	0.21250	9.96	25.78	10.25	35.74	20.21	63.11	53.11	-27.37	-32.90
5	0.34922	9.96	21.77	15.31	31.73	25.27	58.98	48.98	-27.25	-23.71
6	19.11328	10.94	18.26	-1.36	29.20	9.58	60.00	50.00	-30.80	-40.42

Remarks:

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



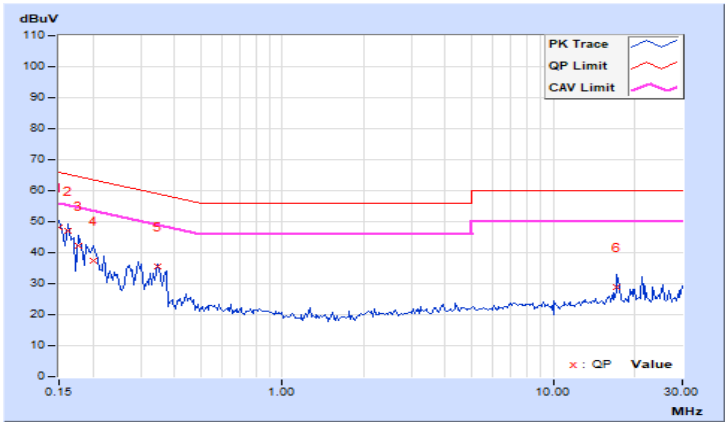
Mode B

RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 68% 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	0.15000	9.95	38.10	20.84	48.05	30.79	66.00	56.00	-17.95	-25.21
2	0.16172	9.95	37.16	17.57	47.11	27.52	65.38	55.38	-18.27	-27.86
3	0.17734	9.96	32.43	13.52	42.39	23.48	64.61	54.61	-22.22	-31.13
4	0.20078	9.96	27.43	10.05	37.39	20.01	63.58	53.58	-26.19	-33.57
5	0.34531	9.96	25.45	15.82	35.41	25.78	59.07	49.07	-23.66	-23.29
6	17.21875	11.04	17.70	1.88	28.74	12.92	60.00	50.00	-31.26	-37.08

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

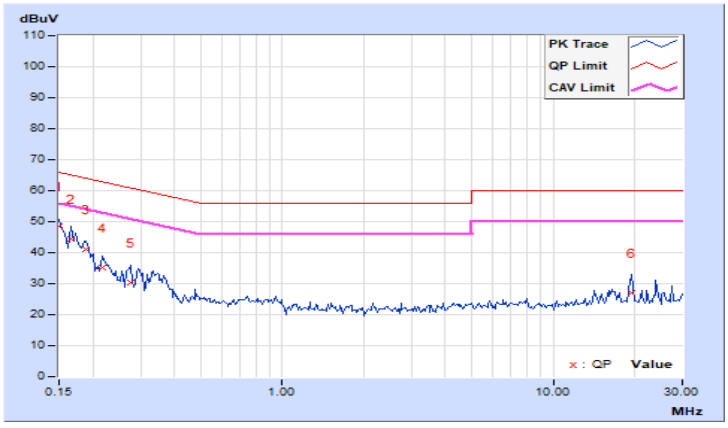


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 159：5795 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 68% RH
Tested By	Sampson Chen		

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	**0.15000**	**9.95**	**38.50**	**21.06**	**48.45**	**31.01**	**66.00**	**56.00**	**-17.55**	**-24.99**
2	0.16562	9.95	34.41	17.03	44.36	26.98	65.18	55.18	-20.82	-28.20
3	0.18906	9.96	31.25	13.06	41.21	23.02	64.08	54.08	-22.87	-31.06
4	0.21641	9.96	25.21	11.51	35.17	21.47	62.96	52.96	-27.79	-31.49
5	0.27500	9.96	20.47	9.21	30.43	19.17	60.97	50.97	-30.54	-31.80
6	19.53906	10.96	16.25	-2.29	27.21	8.67	60.00	50.00	-32.79	-41.33

Remarks:

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



7.7 Unwanted Emissions below 1 GHz

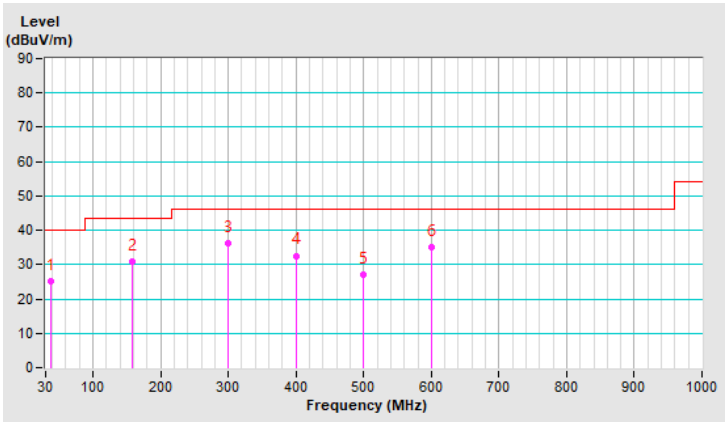
Mode A

RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	36.85	25.2 QP	40.0	-14.8	2.00 H	226	38.5	-13.3
2	158.39	30.8 QP	43.5	-12.7	2.00 H	95	43.2	-12.4
3	300.27	36.2 QP	46.0	-9.8	1.00 H	122	48.2	-12.0
4	399.67	32.6 QP	46.0	-13.4	2.00 H	163	42.2	-9.6
5	499.11	27.2 QP	46.0	-18.8	1.50 H	88	34.6	-7.4
6	600.38	35.1 QP	46.0	-10.9	1.50 H	45	39.7	-4.6

Remarks:

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

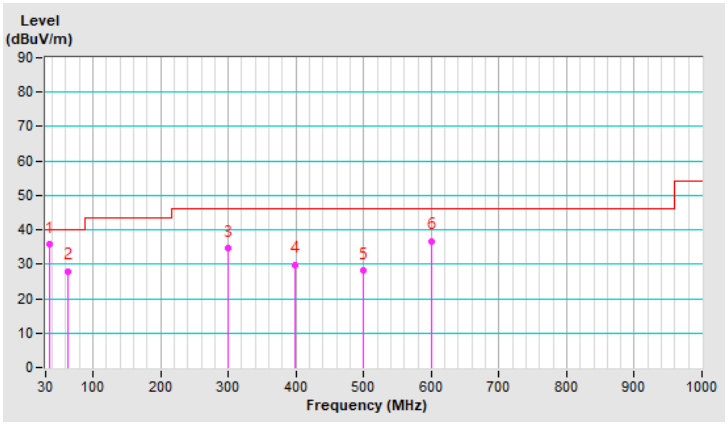


RF Mode	TX 802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	35.36	35.9 QP	40.0	-4.1	1.00 V	340	49.2	-13.3
2	63.85	28.0 QP	40.0	-12.0	1.00 V	269	41.3	-13.3
3	299.97	34.6 QP	46.0	-11.4	1.50 V	84	46.6	-12.0
4	399.50	29.9 QP	46.0	-16.1	1.00 V	196	39.5	-9.6
5	499.98	28.2 QP	46.0	-17.8	1.00 V	270	35.5	-7.3
6	600.24	36.8 QP	46.0	-9.2	1.00 V	104	41.5	-4.7

Remarks:

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



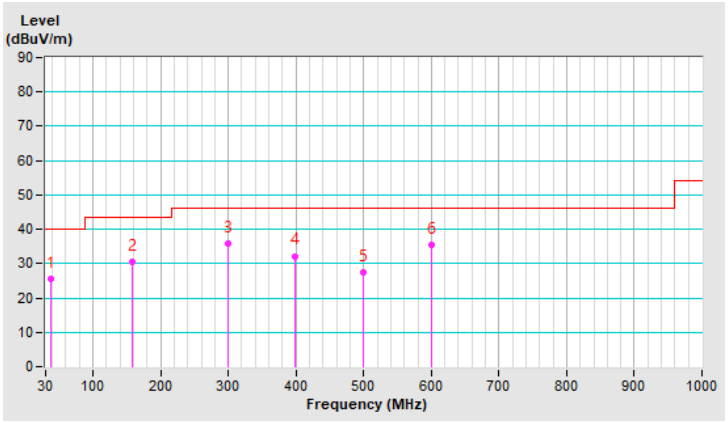
Mode B

RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	36.95	25.5 QP	40.0	-14.5	2.00 H	239	38.7	-13.2
2	158.33	30.5 QP	43.5	-13.0	2.00 H	97	42.9	-12.4
3	300.09	35.9 QP	46.0	-10.1	2.00 H	160	47.9	-12.0
4	399.56	32.2 QP	46.0	-13.8	1.00 H	117	41.8	-9.6
5	498.93	27.4 QP	46.0	-18.6	1.50 H	82	34.8	-7.4
6	600.59	35.4 QP	46.0	-10.6	2.00 H	57	40.0	-4.6

Remarks:

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

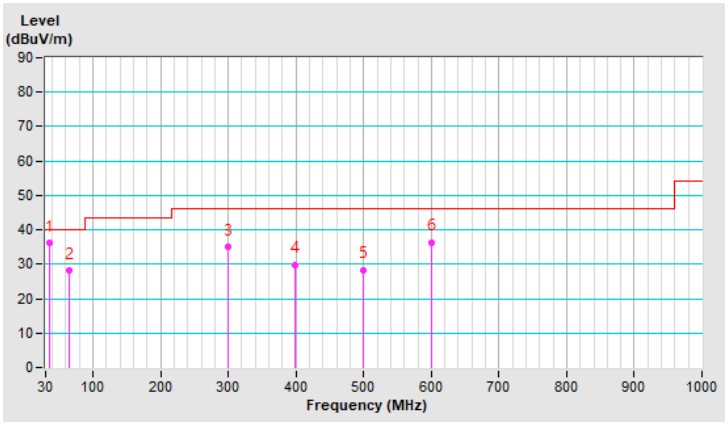


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 159：5795 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	**35.65**	**36.1 QP**	**40.0**	**-3.9**	**1.00 V**	**338**	**49.6**	**-13.5**
2	64.25	28.1 QP	40.0	-11.9	1.00 V	280	41.5	-13.4
3	300.02	35.1 QP	46.0	-10.9	1.50 V	92	47.1	-12.0
4	399.27	29.9 QP	46.0	-16.1	1.00 V	117	39.5	-9.6
5	499.89	28.4 QP	46.0	-17.6	1.00 V	280	35.7	-7.3
6	599.54	36.4 QP	46.0	-9.6	1.00 V	101	41.1	-4.7

Remarks:

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



7.8 Unwanted Emissions above 1 GHz

Mode A

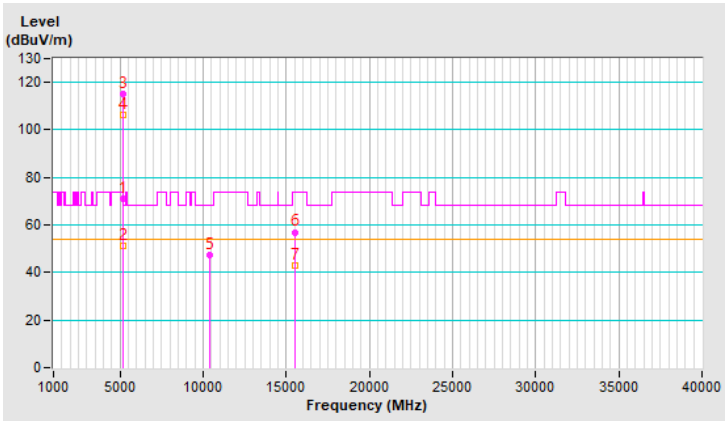
CDD

RF Mode	TX 802.11a	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	70.9 PK	74.0	-3.1	1.77 H	152	66.0	4.9
2	5150.00	51.0 AV	54.0	-3.0	1.77 H	152	46.1	4.9
3	*5180.00	115.3 PK			1.77 H	152	110.5	4.8
4	*5180.00	106.5 AV			1.77 H	152	101.7	4.8
5	#10360.00	47.4 PK	68.2	-20.8	1.58 H	181	31.4	16.0
6	15540.00	57.0 PK	74.0	-17.0	1.50 H	153	39.9	17.1
7	15540.00	42.7 AV	54.0	-11.3	1.50 H	153	25.6	17.1

Remarks:

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

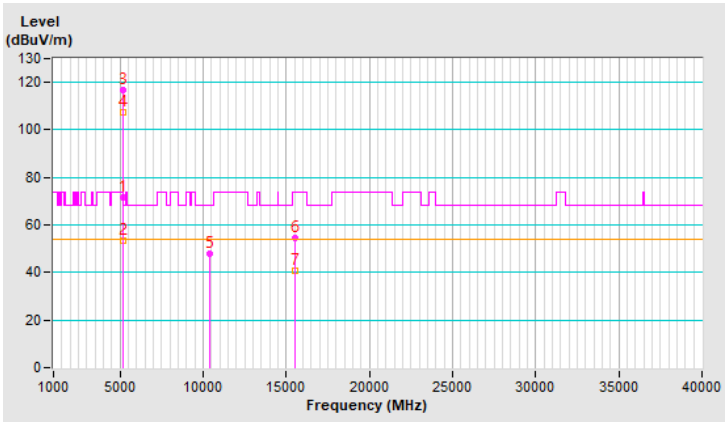


RF Mode	TX 802.11a	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	71.6 PK	74.0	-2.4	2.06 V	183	66.7	4.9
2	5150.00	53.3 AV	54.0	-0.7	2.06 V	183	48.4	4.9
3	*5180.00	117.0 PK			2.06 V	183	112.2	4.8
4	*5180.00	107.3 AV			2.06 V	183	102.5	4.8
5	#10360.00	47.9 PK	68.2	-20.3	1.35 V	262	31.9	16.0
6	15540.00	54.5 PK	74.0	-19.5	1.61 V	55	37.4	17.1
7	15540.00	40.6 AV	54.0	-13.4	1.61 V	55	23.5	17.1

Remarks:

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

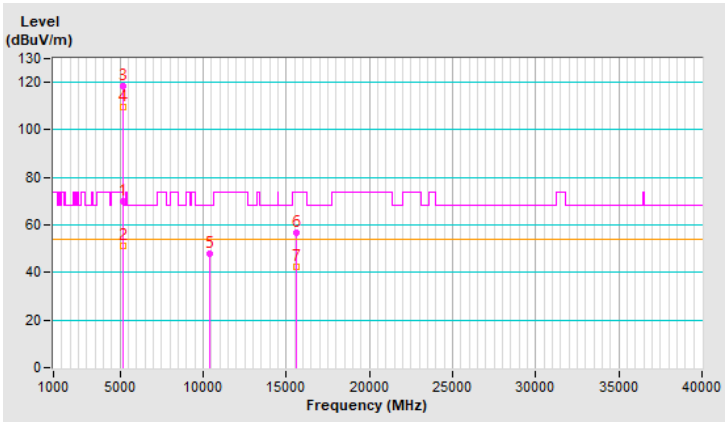


RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.7 PK	74.0	-4.3	1.79 H	153	64.8	4.9
2	5150.00	51.3 AV	54.0	-2.7	1.79 H	153	46.4	4.9
3	*5200.00	118.3 PK			1.79 H	153	113.5	4.8
4	*5200.00	109.4 AV			1.79 H	153	104.6	4.8
5	#10400.00	47.7 PK	68.2	-20.5	1.59 H	179	31.6	16.1
6	15600.00	56.7 PK	74.0	-17.3	1.53 H	163	39.6	17.1
7	15600.00	42.6 AV	54.0	-11.4	1.53 H	163	25.5	17.1

Remarks:

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

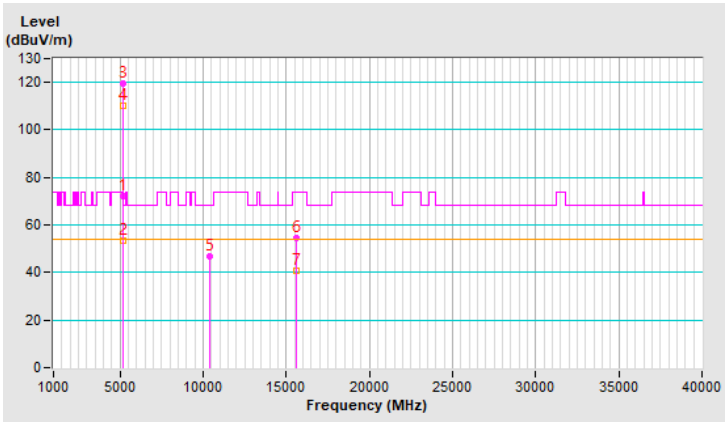


RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	72.3 PK	74.0	-1.7	2.14 V	183	67.4	4.9
2	5150.00	53.4 AV	54.0	-0.6	2.14 V	183	48.5	4.9
3	*5200.00	119.5 PK			2.14 V	183	114.7	4.8
4	*5200.00	110.1 AV			2.14 V	183	105.3	4.8
5	#10400.00	46.9 PK	68.2	-21.3	1.41 V	253	30.8	16.1
6	15600.00	54.3 PK	74.0	-19.7	1.63 V	42	37.2	17.1
7	15600.00	40.5 AV	54.0	-13.5	1.63 V	42	23.4	17.1

Remarks:

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

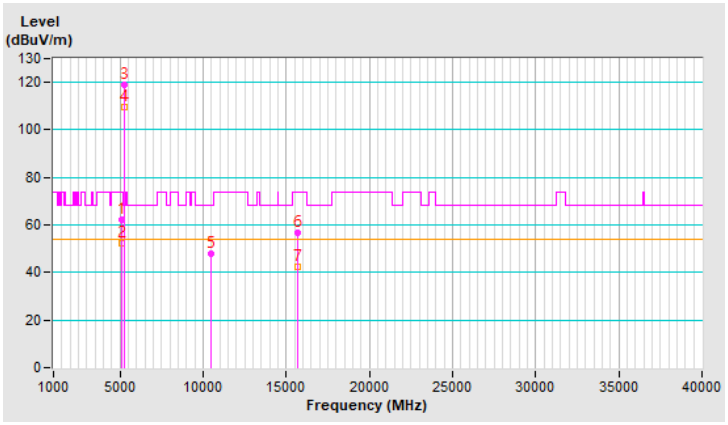


RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5144.50	62.0 PK	74.0	-12.0	1.82 H	152	57.1	4.9
2	5144.50	52.4 AV	54.0	-1.6	1.82 H	152	47.5	4.9
3	*5240.00	119.2 PK			1.82 H	152	114.6	4.6
4	*5240.00	109.8 AV			1.82 H	152	105.2	4.6
5	#10480.00	47.9 PK	68.2	-20.3	1.59 H	167	31.8	16.1
6	15720.00	56.8 PK	74.0	-17.2	1.47 H	154	40.4	16.4
7	15720.00	42.5 AV	54.0	-11.5	1.47 H	154	26.1	16.4

Remarks:

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

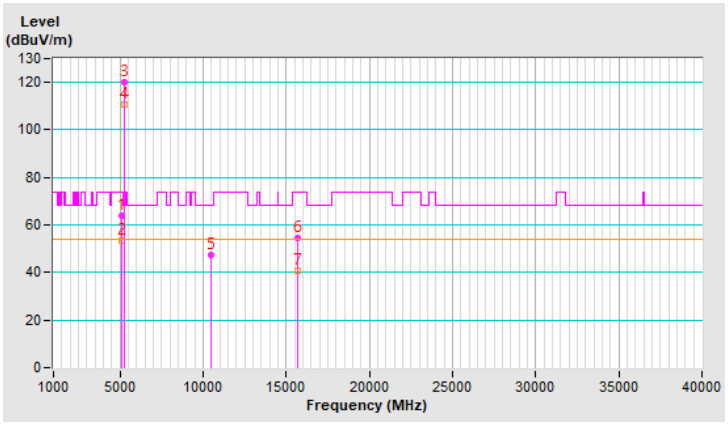


RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5144.50	63.8 PK	74.0	-10.2	2.17 V	178	58.9	4.9
2	5144.50	53.6 AV	54.0	-0.4	2.17 V	178	48.7	4.9
3	*5240.00	120.2 PK			2.17 V	178	115.6	4.6
4	*5240.00	110.8 AV			2.17 V	178	106.2	4.6
5	#10480.00	47.3 PK	68.2	-20.9	1.40 V	267	31.2	16.1
6	15720.00	54.5 PK	74.0	-19.5	1.62 V	41	38.1	16.4
7	15720.00	40.7 AV	54.0	-13.3	1.62 V	41	24.3	16.4

Remarks:

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

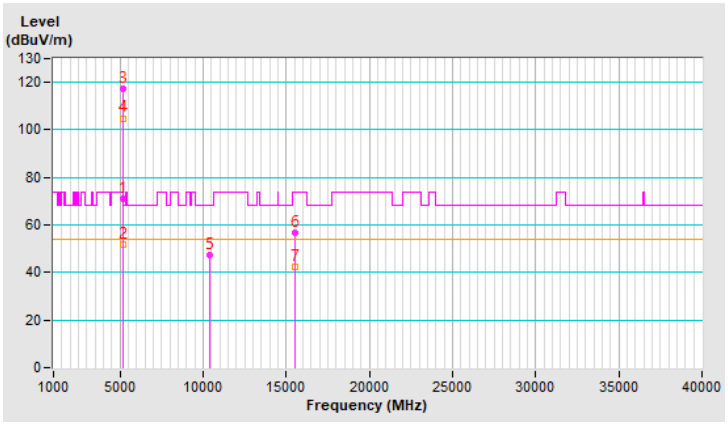


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	70.8 PK	74.0	-3.2	1.78 H	150	65.9	4.9
2	5150.00	52.0 AV	54.0	-2.0	1.78 H	150	47.1	4.9
3	*5180.00	117.3 PK			1.78 H	150	112.5	4.8
4	*5180.00	104.9 AV			1.78 H	150	100.1	4.8
5	#10360.00	47.4 PK	68.2	-20.8	1.63 H	177	31.4	16.0
6	15540.00	56.5 PK	74.0	-17.5	1.42 H	145	39.4	17.1
7	15540.00	42.3 AV	54.0	-11.7	1.42 H	145	25.2	17.1

Remarks:

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

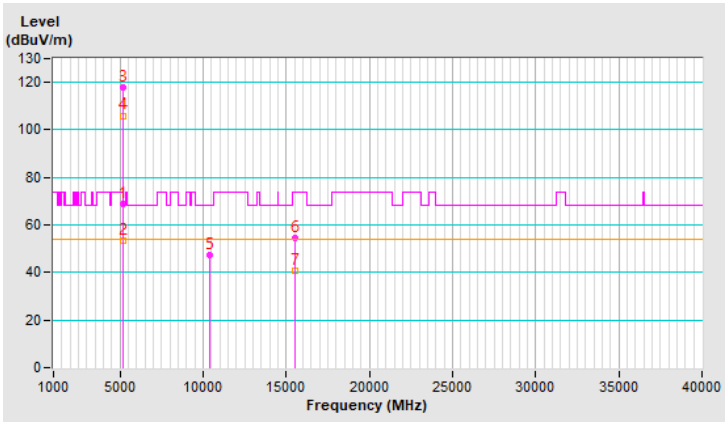


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	68.7 PK	74.0	-5.3	1.98 V	188	63.8	4.9
2	5150.00	53.4 AV	54.0	-0.6	1.98 V	188	48.5	4.9
3	*5180.00	118.1 PK			1.98 V	188	113.3	4.8
4	*5180.00	106.0 AV			1.98 V	188	101.2	4.8
5	#10360.00	47.3 PK	68.2	-20.9	1.41 V	264	31.3	16.0
6	15540.00	54.6 PK	74.0	-19.4	1.67 V	32	37.5	17.1
7	15540.00	40.8 AV	54.0	-13.2	1.67 V	32	23.7	17.1

Remarks:

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

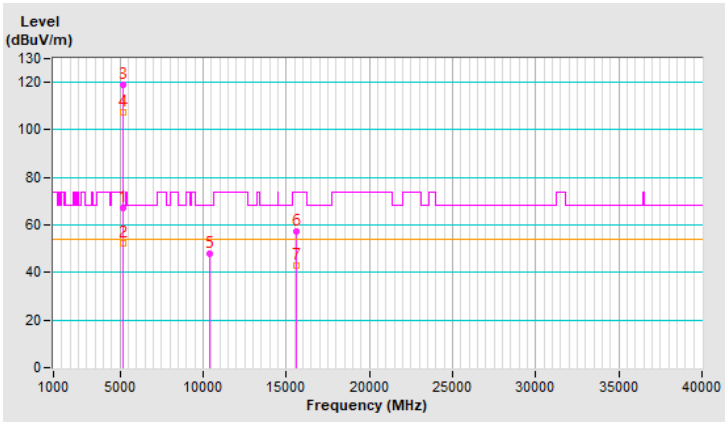


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	67.1 PK	74.0	-6.9	1.73 H	148	62.2	4.9
2	5150.00	52.4 AV	54.0	-1.6	1.73 H	148	47.5	4.9
3	*5200.00	119.1 PK			1.73 H	148	114.3	4.8
4	*5200.00	107.4 AV			1.73 H	148	102.6	4.8
5	#10400.00	47.8 PK	68.2	-20.4	1.62 H	170	31.7	16.1
6	15600.00	57.4 PK	74.0	-16.6	1.51 H	151	40.3	17.1
7	15600.00	42.9 AV	54.0	-11.1	1.51 H	151	25.8	17.1

Remarks:

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

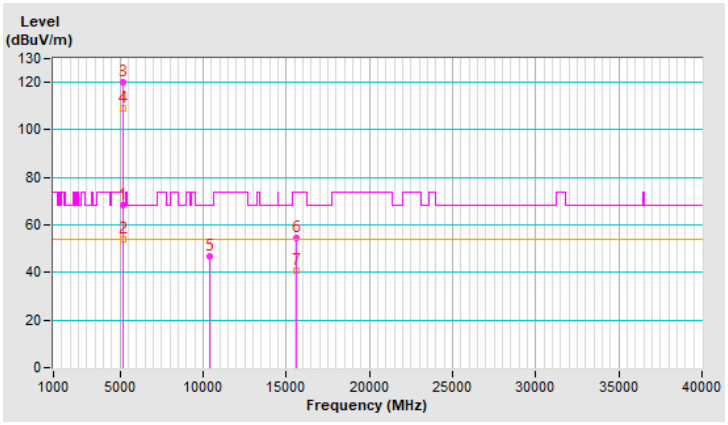


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	68.2 PK	74.0	-5.8	2.18 V	181	63.3	4.9
2	**5150.00**	**53.8 AV**	**54.0**	**-0.2**	**2.18 V**	**181**	**48.9**	**4.9**
3	*5200.00	120.2 PK			2.18 V	181	115.4	4.8
4	*5200.00	108.8 AV			2.18 V	181	104.0	4.8
5	#10400.00	47.0 PK	68.2	-21.2	1.46 V	267	30.9	16.1
6	15600.00	54.7 PK	74.0	-19.3	1.62 V	32	37.6	17.1
7	15600.00	40.9 AV	54.0	-13.1	1.62 V	32	23.8	17.1

Remarks:

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

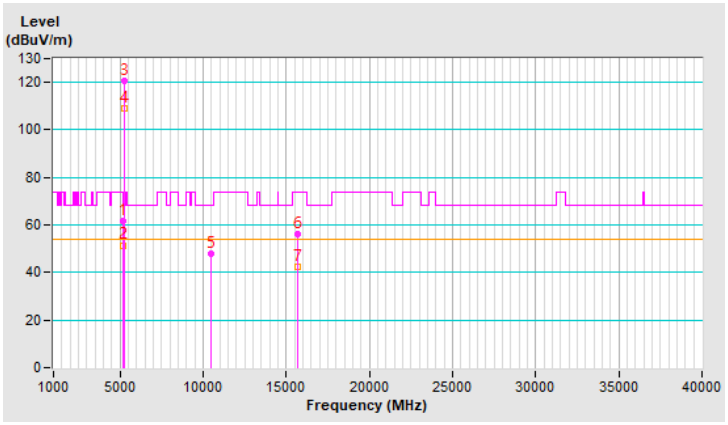


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5146.20	61.7 PK	74.0	-12.3	1.80 H	156	56.8	4.9
2	5146.20	51.5 AV	54.0	-2.5	1.80 H	156	46.6	4.9
3	*5240.00	120.5 PK			1.80 H	156	115.9	4.6
4	*5240.00	109.1 AV			1.80 H	156	104.5	4.6
5	#10480.00	48.1 PK	68.2	-20.1	1.64 H	156	32.0	16.1
6	15720.00	56.4 PK	74.0	-17.6	1.51 H	150	40.0	16.4
7	15720.00	42.3 AV	54.0	-11.7	1.51 H	150	25.9	16.4

Remarks:

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

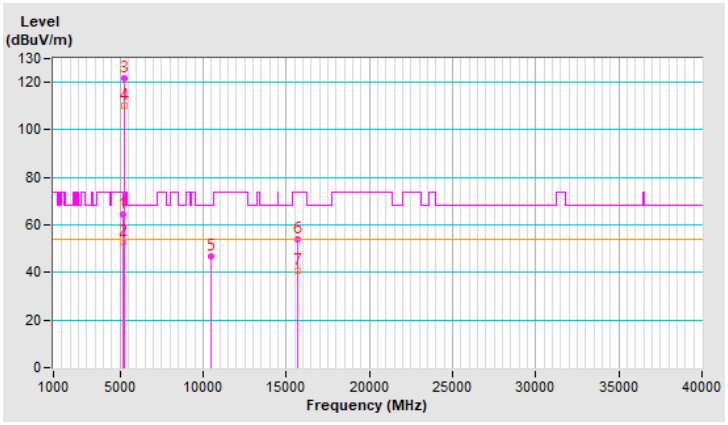


RF Mode	TX 802.11ax (HE20)	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5144.90	64.4 PK	74.0	-9.6	2.17 V	180	59.5	4.9
2	5144.90	53.0 AV	54.0	-1.0	2.17 V	180	48.1	4.9
3	*5240.00	121.5 PK			2.17 V	180	116.9	4.6
4	*5240.00	110.0 AV			2.17 V	180	105.4	4.6
5	#10480.00	46.8 PK	68.2	-21.4	1.42 V	261	30.7	16.1
6	15720.00	54.1 PK	74.0	-19.9	1.66 V	53	37.7	16.4
7	15720.00	40.5 AV	54.0	-13.5	1.66 V	53	24.1	16.4

Remarks:

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

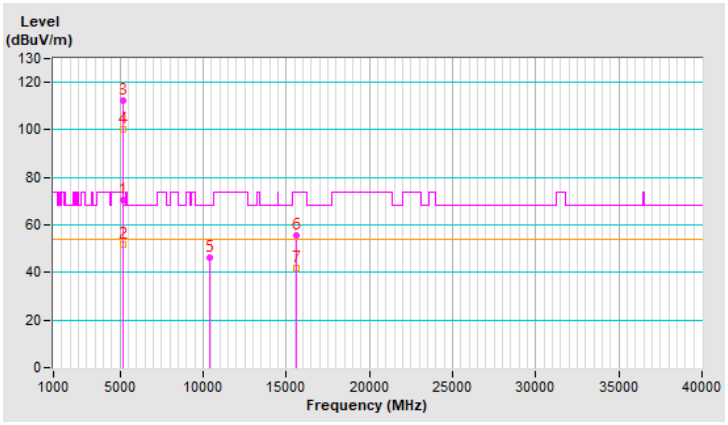


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	70.4 PK	74.0	-3.6	1.78 H	149	65.5	4.9
2	5150.00	51.6 AV	54.0	-2.4	1.78 H	149	46.7	4.9
3	*5190.00	112.5 PK			1.78 H	149	107.7	4.8
4	*5190.00	100.3 AV			1.78 H	149	95.5	4.8
5	#10380.00	46.2 PK	68.2	-22.0	1.65 H	148	30.2	16.0
6	15570.00	55.7 PK	74.0	-18.3	1.47 H	142	38.6	17.1
7	15570.00	41.7 AV	54.0	-12.3	1.47 H	142	24.6	17.1

Remarks:

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

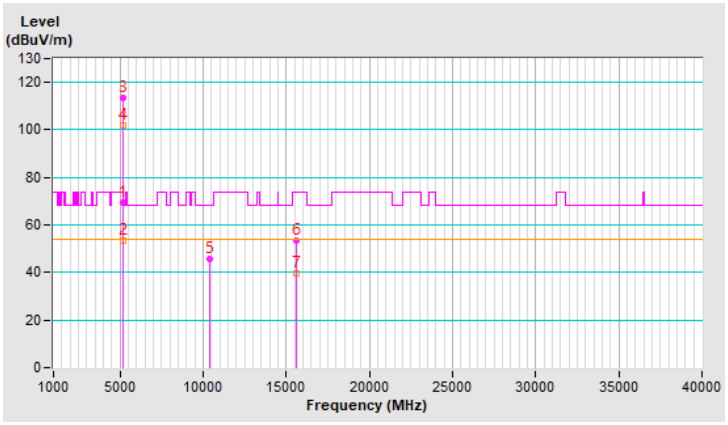


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	69.5 PK	74.0	-4.5	2.09 V	183	64.6	4.9
2	5150.00	53.6 AV	54.0	-0.4	2.09 V	183	48.7	4.9
3	*5190.00	113.3 PK			2.09 V	183	108.5	4.8
4	*5190.00	101.9 AV			2.09 V	183	97.1	4.8
5	#10380.00	45.8 PK	68.2	-22.4	1.44 V	258	29.8	16.0
6	15570.00	53.5 PK	74.0	-20.5	1.70 V	65	36.4	17.1
7	15570.00	39.5 AV	54.0	-14.5	1.70 V	65	22.4	17.1

Remarks:

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

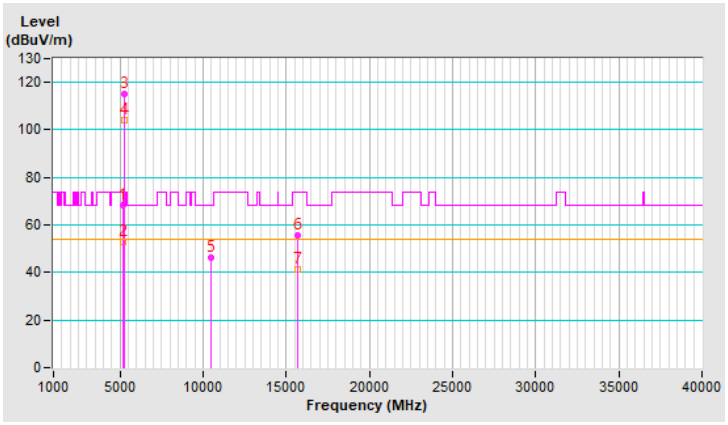


RF Mode	TX 802.11ax (HE40)	Channel	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5148.50	68.3 PK	74.0	-5.7	1.81 H	155	63.4	4.9
2	5148.50	52.7 AV	54.0	-1.3	1.81 H	155	47.8	4.9
3	*5230.00	115.3 PK			1.81 H	155	110.7	4.6
4	*5230.00	104.2 AV			1.81 H	155	99.6	4.6
5	#10460.00	46.4 PK	68.2	-21.8	1.65 H	165	30.4	16.0
6	15690.00	55.7 PK	74.0	-18.3	1.51 H	152	39.3	16.4
7	15690.00	41.3 AV	54.0	-12.7	1.51 H	152	24.9	16.4

Remarks:

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

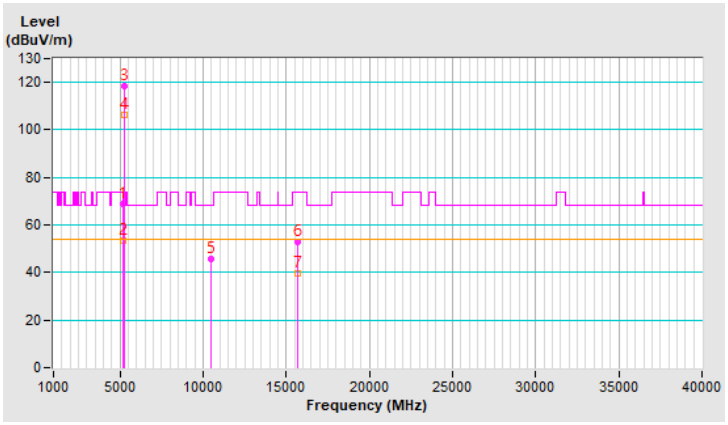


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5147.60	68.8 PK	74.0	-5.2	2.00 V	183	63.9	4.9
2	5147.60	53.3 AV	54.0	-0.7	2.00 V	183	48.4	4.9
3	*5230.00	118.2 PK			2.00 V	183	113.6	4.6
4	*5230.00	106.1 AV			2.00 V	183	101.5	4.6
5	#10460.00	45.6 PK	68.2	-22.6	1.42 V	276	29.6	16.0
6	15690.00	52.9 PK	74.0	-21.1	1.71 V	62	36.5	16.4
7	15690.00	39.7 AV	54.0	-14.3	1.71 V	62	23.3	16.4

Remarks:

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

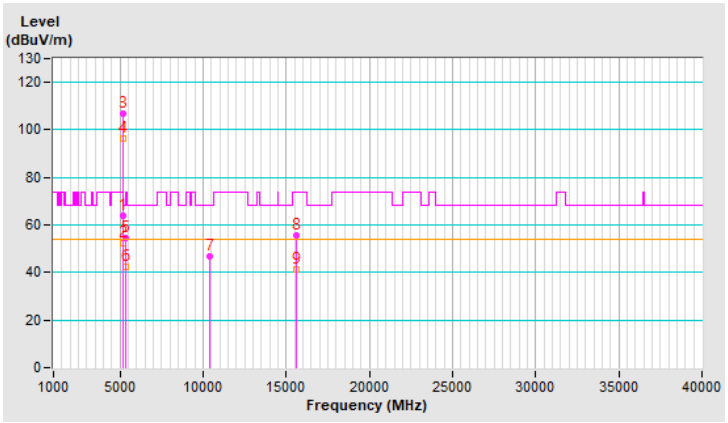


RF Mode	TX 802.11ax (HE80)	Channel	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.9 PK	74.0	-10.1	1.74 H	153	59.0	4.9
2	5150.00	52.3 AV	54.0	-1.7	1.74 H	153	47.4	4.9
3	*5210.00	106.9 PK			1.74 H	153	102.2	4.7
4	*5210.00	96.2 AV			1.74 H	153	91.5	4.7
5	5350.00	54.3 PK	74.0	-19.7	1.74 H	153	49.8	4.5
6	5350.00	42.3 AV	54.0	-11.7	1.74 H	153	37.8	4.5
7	#10420.00	46.7 PK	68.2	-21.5	1.63 H	157	30.6	16.1
8	15630.00	55.7 PK	74.0	-18.3	1.54 H	143	38.9	16.8
9	15630.00	41.5 AV	54.0	-12.5	1.54 H	143	24.7	16.8

Remarks:

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

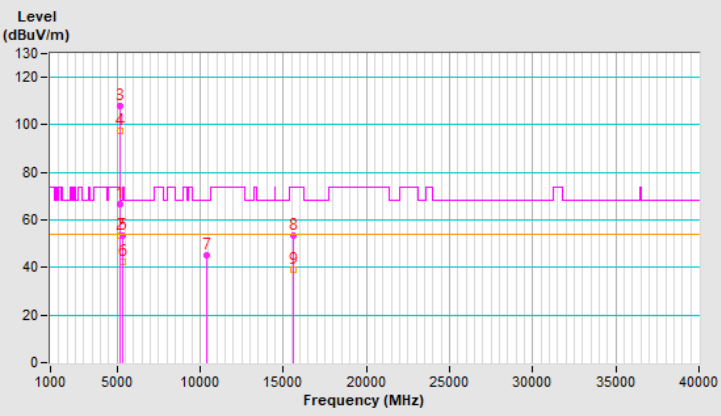


RF Mode	TX 802.11ax (HE80)	**Channel**	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	66.4 PK	74.0	-7.6	2.06 V	185	61.5	4.9
2	5150.00	53.6 AV	54.0	-0.4	2.06 V	185	48.7	4.9
3	*5210.00	107.9 PK			2.06 V	185	103.2	4.7
4	*5210.00	97.4 AV			2.06 V	185	92.7	4.7
5	5350.00	53.6 PK	74.0	-20.4	2.06 V	185	49.1	4.5
6	5350.00	42.5 AV	54.0	-11.5	2.06 V	185	38.0	4.5
7	#10420.00	45.1 PK	68.2	-23.1	1.41 V	263	29.0	16.1
8	15630.00	53.2 PK	74.0	-20.8	1.61 V	51	36.4	16.8
9	15630.00	38.9 AV	54.0	-15.1	1.61 V	51	22.1	16.8

Remarks:

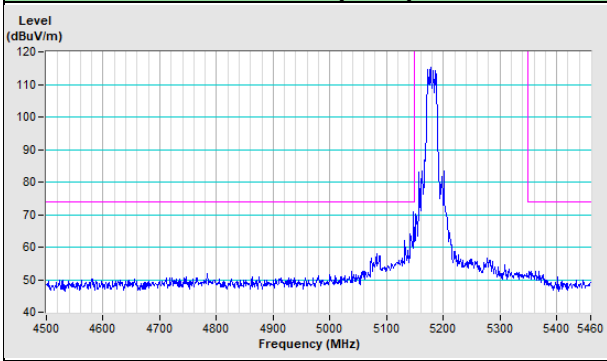
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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



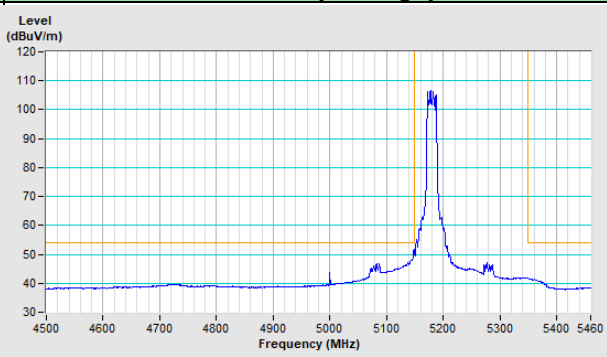
Mode A_Plot of Band Edge_ CDD

802.11a Channel 36

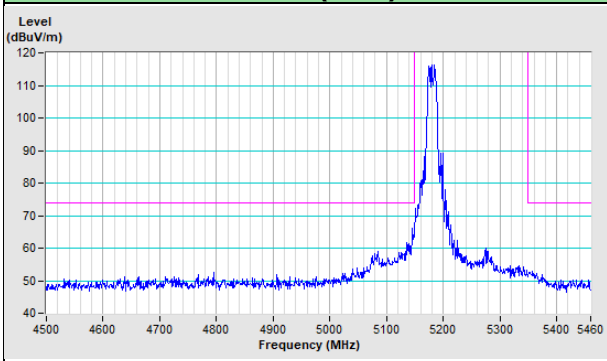
Horizontal (Peak)



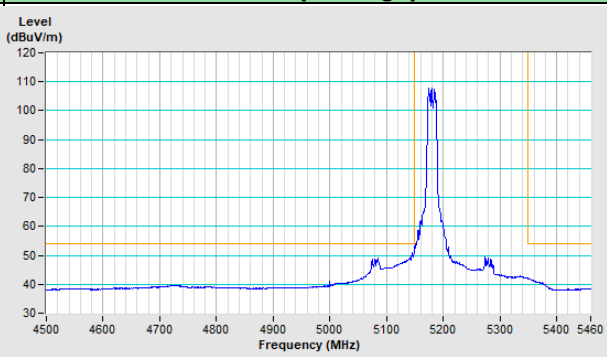
Horizontal (Average)



Vertical (Peak)

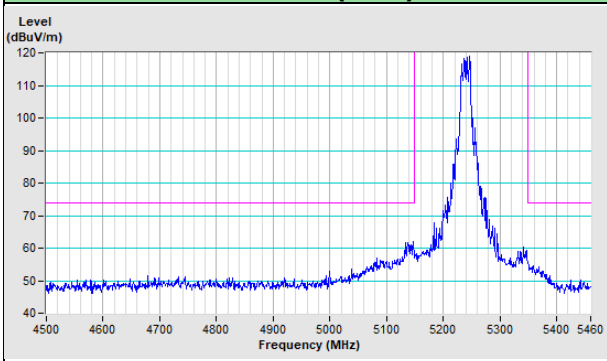


Vertical (Average)

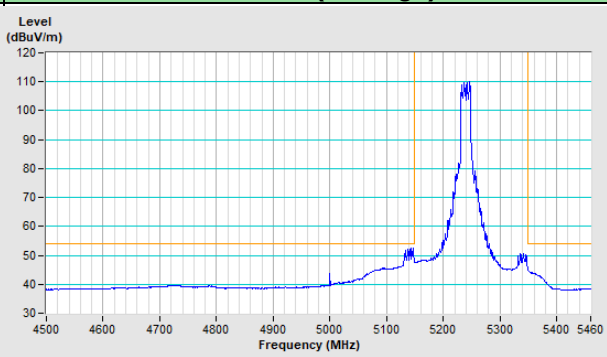


802.11a Channel 48

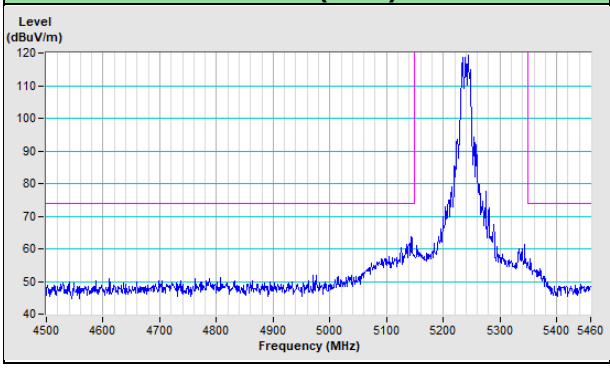
Horizontal (Peak)



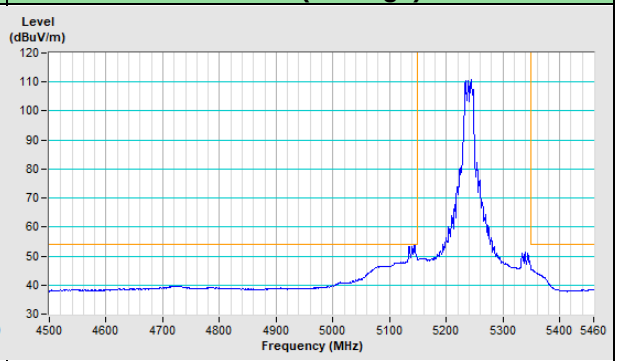
Horizontal (Average)



Vertical (Peak)

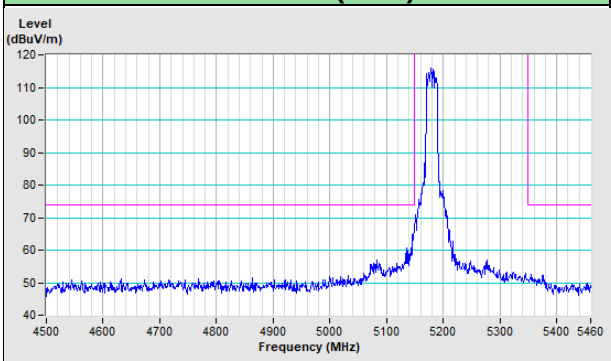


Vertical (Average)

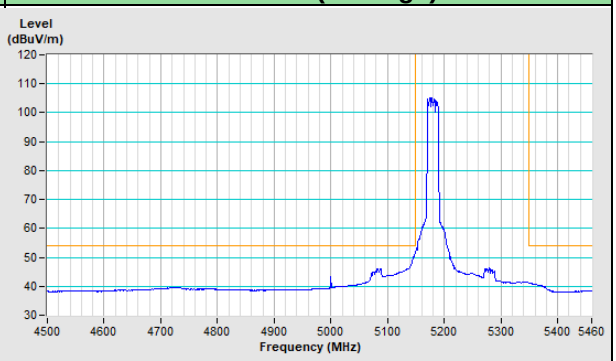


802.11ax (HE20) Channel 36

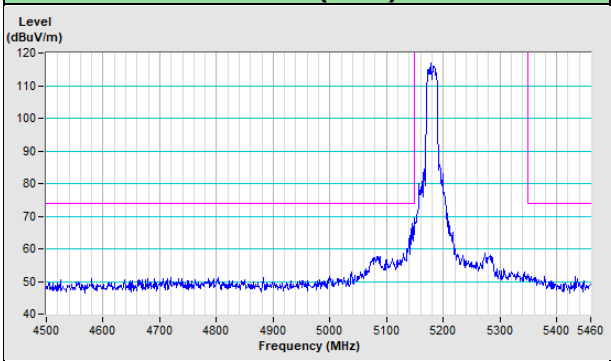
Horizontal (Peak)



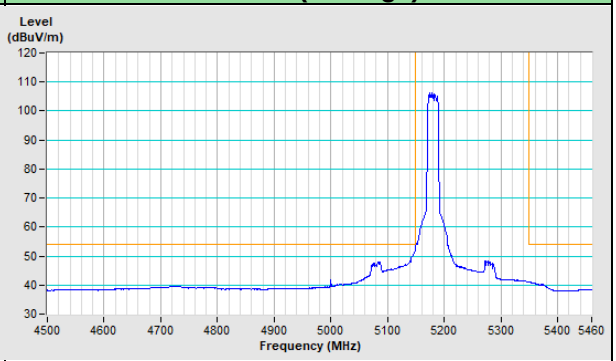
Horizontal (Average)



Vertical (Peak)

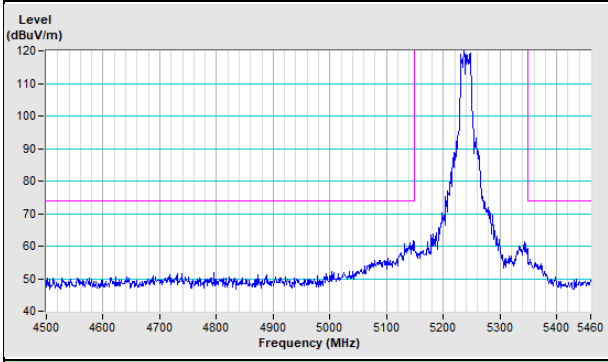


Vertical (Average)

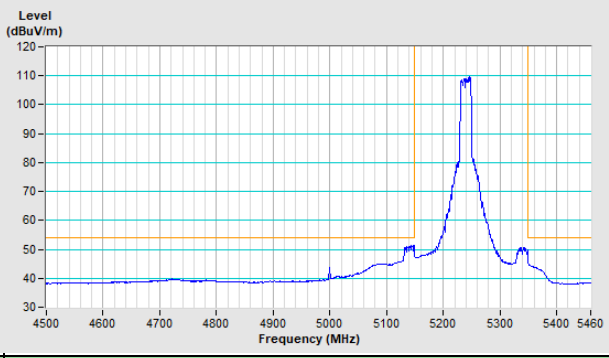


802.11ax (HE20) Channel 48

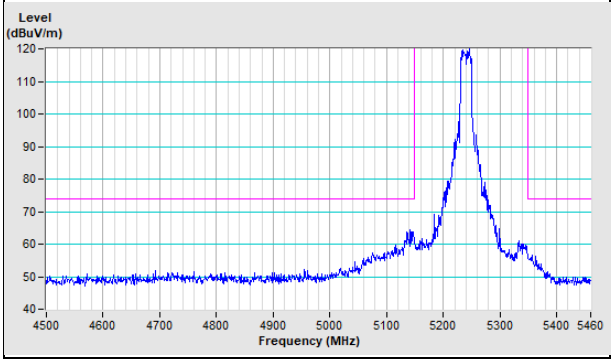
Horizontal (Peak)



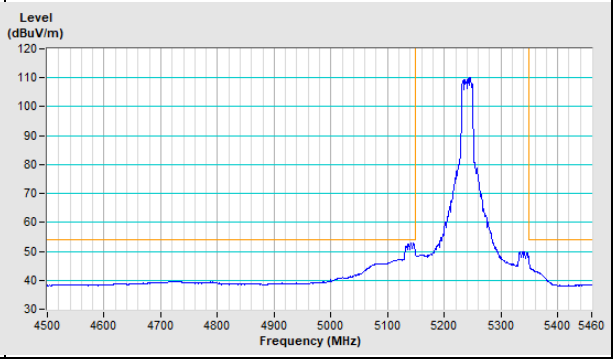
Horizontal (Average)



Vertical (Peak)

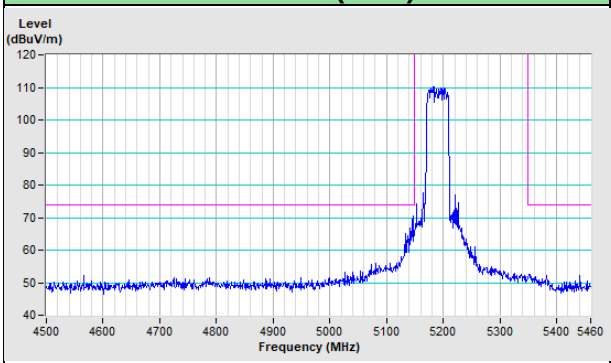


Vertical (Average)

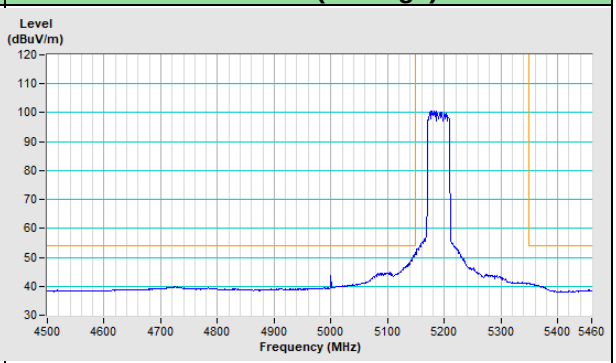


802.11ax (HE40) Channel 38

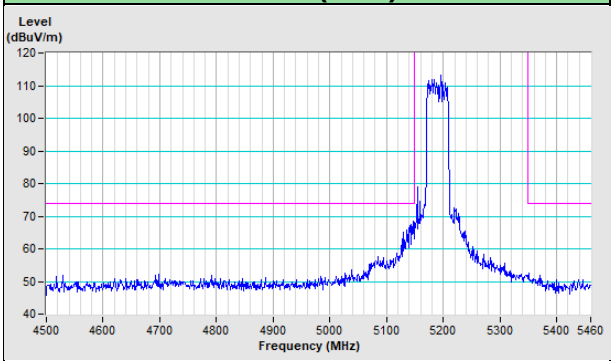
Horizontal (Peak)



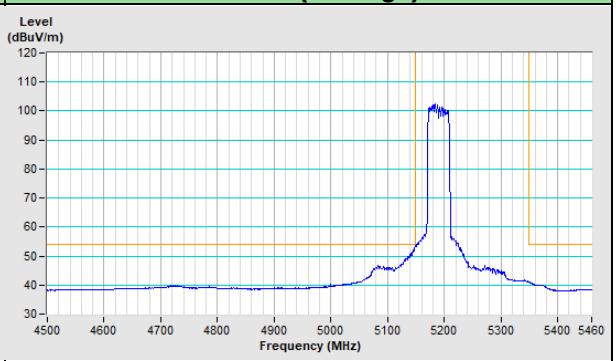
Horizontal (Average)



Vertical (Peak)

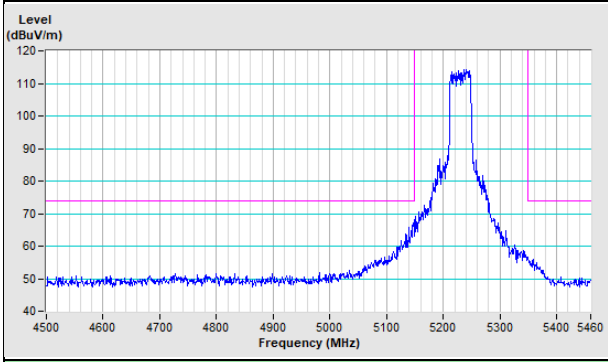


Vertical (Average)

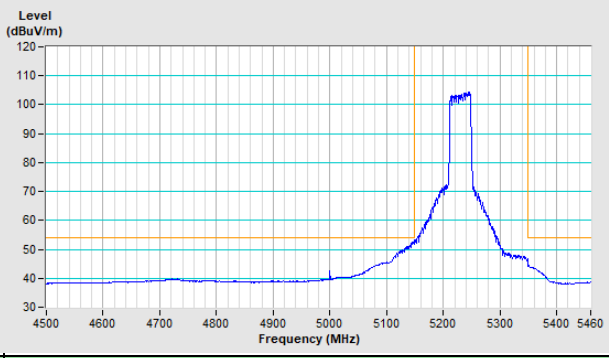


802.11ax (HE40) Channel 46

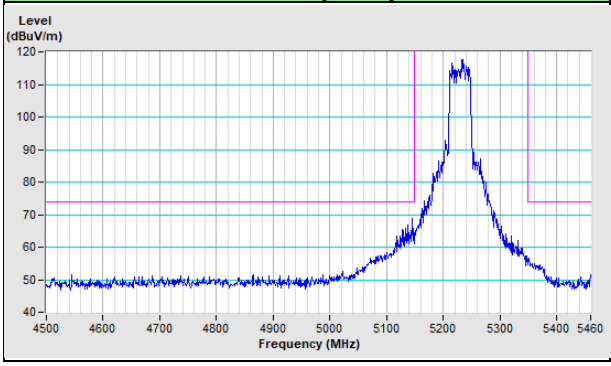
Horizontal (Peak)



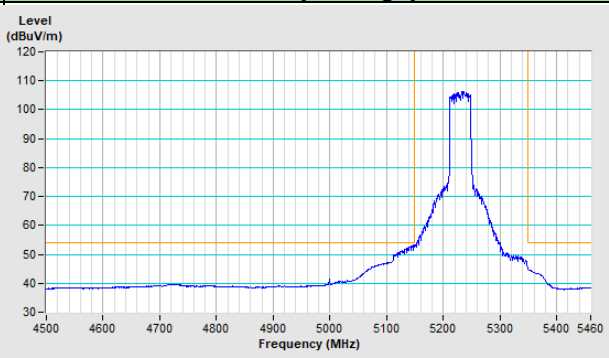
Horizontal (Average)

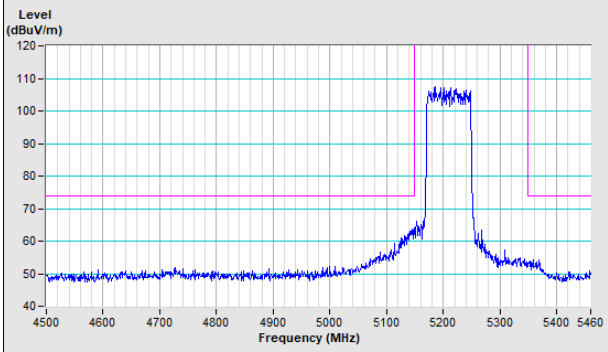
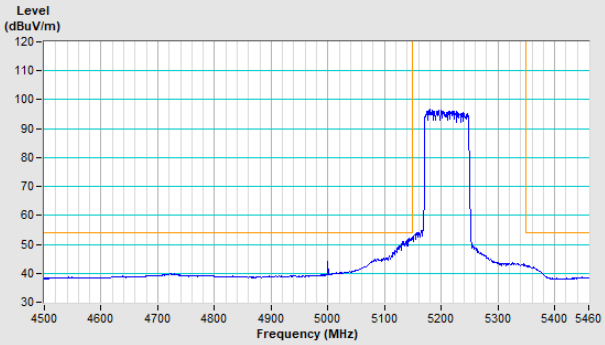
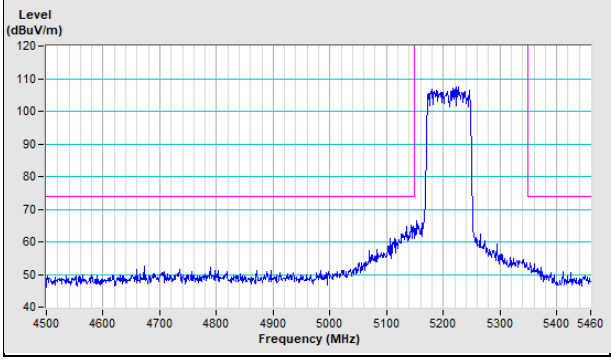
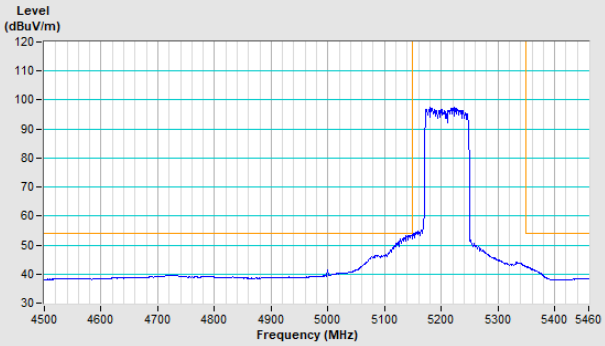


Vertical (Peak)



Vertical (Average)



802.11ax (HE80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

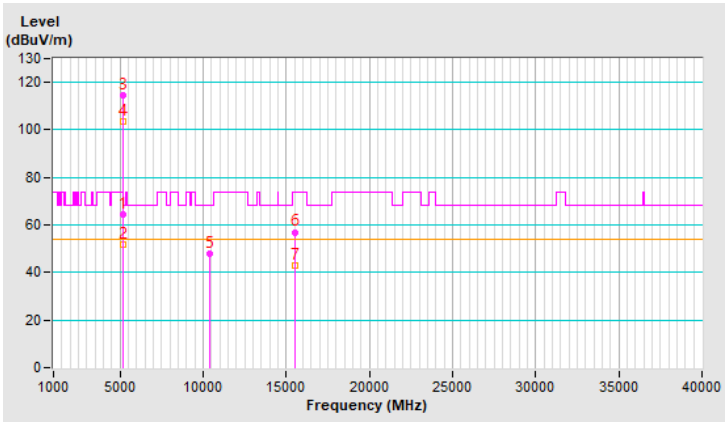
Beamforming

RF Mode	TX 802.11ax (HE20)	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.3 PK	74.0	-9.7	1.54 H	153	59.4	4.9
2	5150.00	52.0 AV	54.0	-2.0	1.54 H	153	47.1	4.9
3	*5180.00	114.6 PK			1.54 H	153	109.8	4.8
4	*5180.00	103.3 AV			1.54 H	153	98.5	4.8
5	#10360.00	47.7 PK	68.2	-20.5	1.62 H	191	31.7	16.0
6	15540.00	57.0 PK	74.0	-17.0	1.39 H	140	39.9	17.1
7	15540.00	42.8 AV	54.0	-11.2	1.39 H	140	25.7	17.1

Remarks:

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

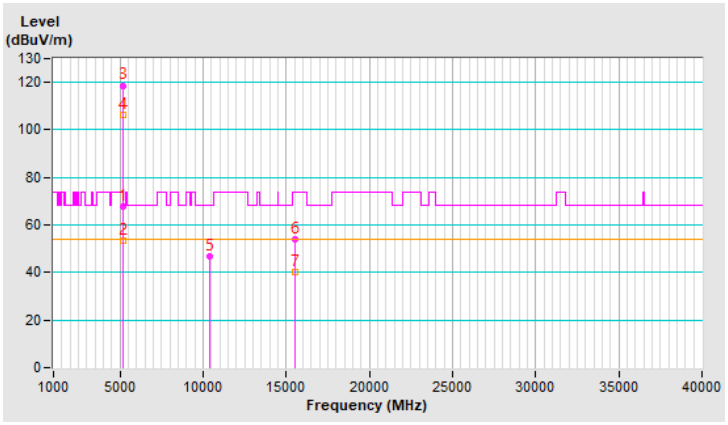


RF Mode	TX 802.11ax (HE20)	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.6 PK	74.0	-6.4	1.76 V	204	62.7	4.9
2	5150.00	53.2 AV	54.0	-0.8	1.76 V	204	48.3	4.9
3	*5180.00	118.7 PK			1.76 V	204	113.9	4.8
4	*5180.00	106.4 AV			1.76 V	204	101.6	4.8
5	#10360.00	47.0 PK	68.2	-21.2	1.36 V	259	31.0	16.0
6	15540.00	54.0 PK	74.0	-20.0	1.71 V	23	36.9	17.1
7	15540.00	40.3 AV	54.0	-13.7	1.71 V	23	23.2	17.1

Remarks:

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

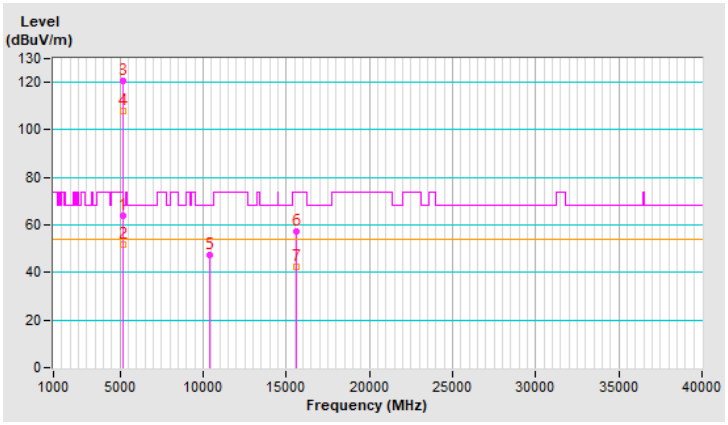


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	63.7 PK	74.0	-10.3	1.87 H	167	58.8	4.9
2	5150.00	51.6 AV	54.0	-2.4	1.87 H	167	46.7	4.9
3	*5200.00	120.6 PK			1.87 H	167	115.8	4.8
4	*5200.00	108.1 AV			1.87 H	167	103.3	4.8
5	#10400.00	47.4 PK	68.2	-20.8	1.59 H	179	31.3	16.1
6	15600.00	57.1 PK	74.0	-16.9	1.49 H	160	40.0	17.1
7	15600.00	42.6 AV	54.0	-11.4	1.49 H	160	25.5	17.1

Remarks:

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

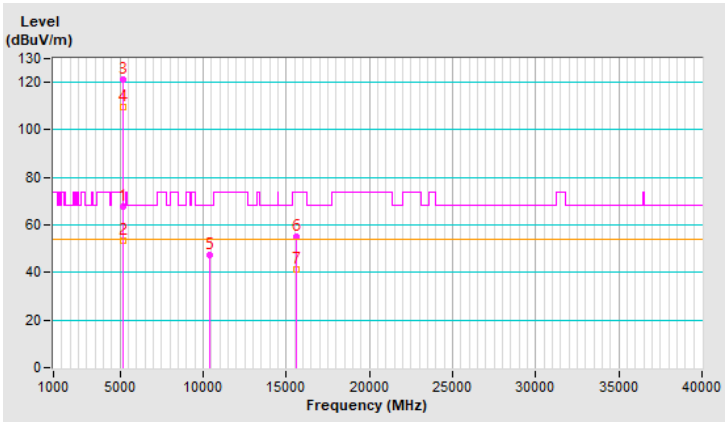


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	67.8 PK	74.0	-6.2	2.19 V	182	62.9	4.9
2	5150.00	53.3 AV	54.0	-0.7	2.19 V	182	48.4	4.9
3	*5200.00	121.4 PK			2.19 V	182	116.6	4.8
4	*5200.00	109.6 AV			2.19 V	182	104.8	4.8
5	#10400.00	47.6 PK	68.2	-20.6	1.42 V	274	31.5	16.1
6	15600.00	55.1 PK	74.0	-18.9	1.64 V	17	38.0	17.1
7	15600.00	41.2 AV	54.0	-12.8	1.64 V	17	24.1	17.1

Remarks:

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

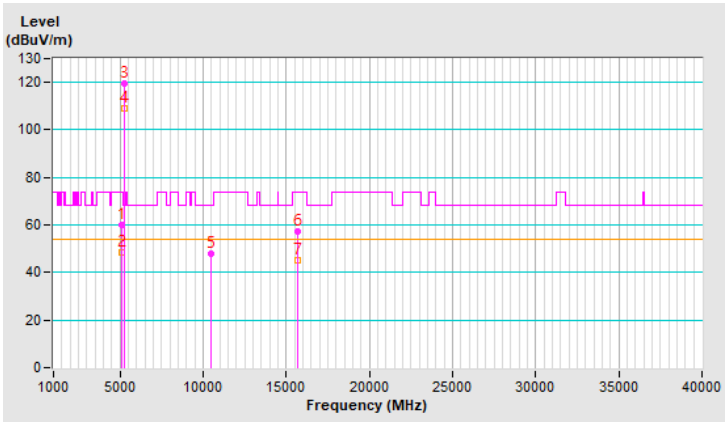


RF Mode	TX 802.11ax (HE20)	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5142.40	60.1 PK	74.0	-13.9	1.58 H	153	55.2	4.9
2	5142.40	48.4 AV	54.0	-5.6	1.58 H	153	43.5	4.9
3	*5240.00	119.6 PK			1.58 H	153	115.0	4.6
4	*5240.00	109.3 AV			1.58 H	153	104.7	4.6
5	#10480.00	48.1 PK	68.2	-20.1	1.73 H	149	32.0	16.1
6	15720.00	57.2 PK	74.0	-16.8	1.57 H	158	40.8	16.4
7	15720.00	45.0 AV	54.0	-9.0	1.57 H	158	28.6	16.4

Remarks:

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

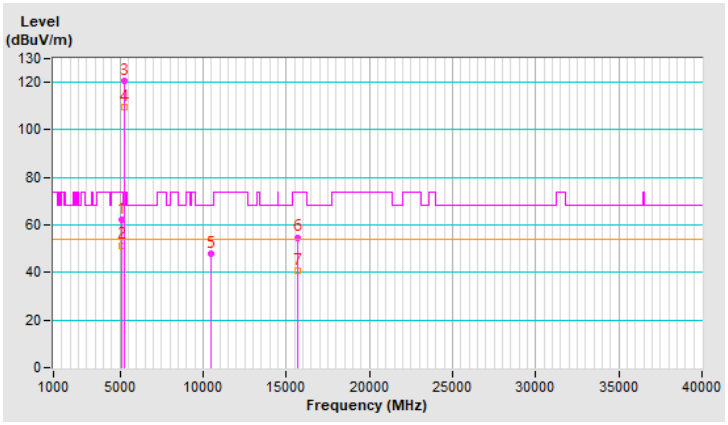


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5144.00	62.4 PK	74.0	-11.6	1.57 V	207	57.5	4.9
2	5144.00	51.5 AV	54.0	-2.5	1.57 V	207	46.6	4.9
3	*5240.00	120.7 PK			1.57 V	207	116.1	4.6
4	*5240.00	109.7 AV			1.57 V	207	105.1	4.6
5	#10480.00	47.9 PK	68.2	-20.3	1.56 V	89	31.8	16.1
6	15720.00	54.8 PK	74.0	-19.2	1.63 V	45	38.4	16.4
7	15720.00	40.8 AV	54.0	-13.2	1.63 V	45	24.4	16.4

Remarks:

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

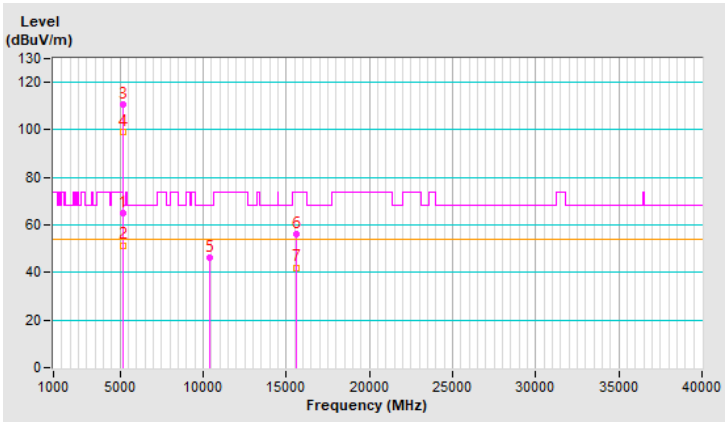


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	65.2 PK	74.0	-8.8	1.53 H	150	60.3	4.9
2	5150.00	51.5 AV	54.0	-2.5	1.53 H	150	46.6	4.9
3	*5190.00	110.8 PK			1.53 H	150	106.0	4.8
4	*5190.00	99.3 AV			1.53 H	150	94.5	4.8
5	#10380.00	46.3 PK	68.2	-21.9	1.65 H	148	30.3	16.0
6	15570.00	56.1 PK	74.0	-17.9	1.43 H	156	39.0	17.1
7	15570.00	42.1 AV	54.0	-11.9	1.43 H	156	25.0	17.1

Remarks:

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

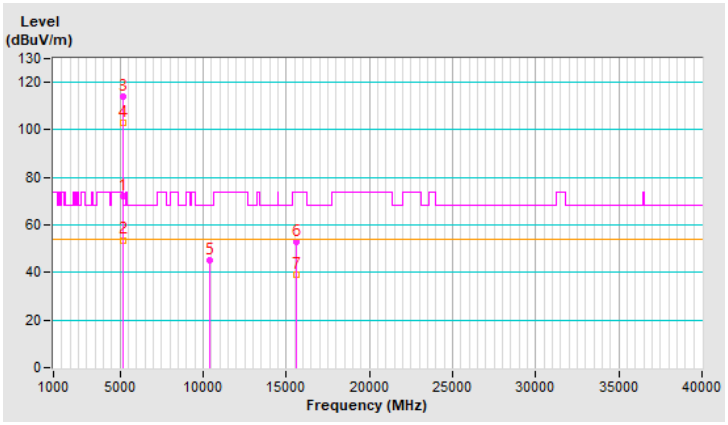


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	71.9 PK	74.0	-2.1	2.08 V	185	67.0	4.9
2	**5150.00**	**53.7 AV**	**54.0**	**-0.3**	**2.08 V**	**185**	**48.8**	**4.9**
3	*5190.00	114.2 PK			2.08 V	185	109.4	4.8
4	*5190.00	102.9 AV			2.08 V	185	98.1	4.8
5	#10380.00	45.2 PK	68.2	-23.0	1.50 V	251	29.2	16.0
6	15570.00	53.1 PK	74.0	-20.9	1.74 V	52	36.0	17.1
7	15570.00	39.0 AV	54.0	-15.0	1.74 V	52	21.9	17.1

Remarks:

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

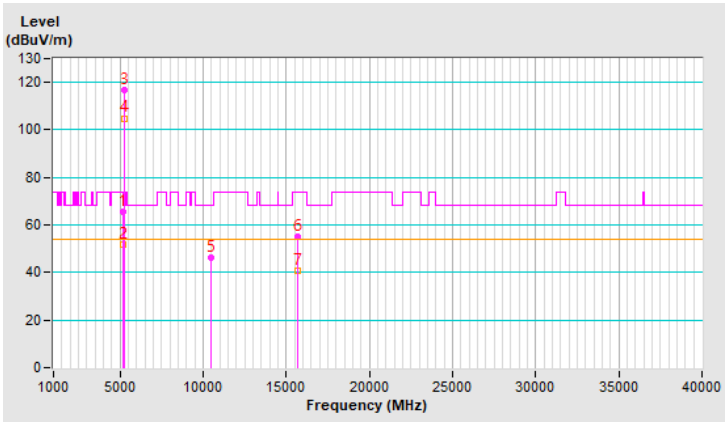


RF Mode	TX 802.11ax (HE40)	Channel	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.7 PK	74.0	-8.3	1.64 H	157	60.8	4.9
2	5150.00	52.0 AV	54.0	-2.0	1.64 H	157	47.1	4.9
3	*5230.00	116.8 PK			1.64 H	157	112.2	4.6
4	*5230.00	104.9 AV			1.64 H	157	100.3	4.6
5	#10460.00	46.4 PK	68.2	-21.8	1.66 H	179	30.4	16.0
6	15690.00	55.3 PK	74.0	-18.7	1.53 H	146	38.9	16.4
7	15690.00	40.9 AV	54.0	-13.1	1.53 H	146	24.5	16.4

Remarks:

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

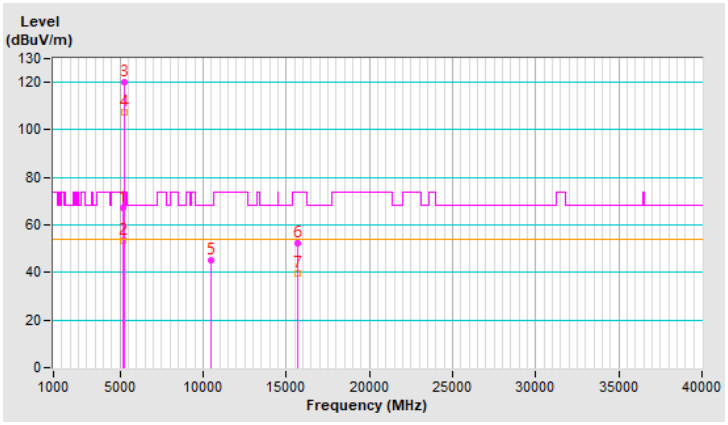


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	67.3 PK	74.0	-6.7	1.98 V	180	62.4	4.9
2	5150.00	53.5 AV	54.0	-0.5	1.98 V	180	48.6	4.9
3	*5230.00	120.2 PK			1.98 V	180	115.6	4.6
4	*5230.00	107.3 AV			1.98 V	180	102.7	4.6
5	#10460.00	45.2 PK	68.2	-23.0	1.39 V	286	29.2	16.0
6	15690.00	52.5 PK	74.0	-21.5	1.69 V	77	36.1	16.4
7	15690.00	39.4 AV	54.0	-14.6	1.69 V	77	23.0	16.4

Remarks:

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

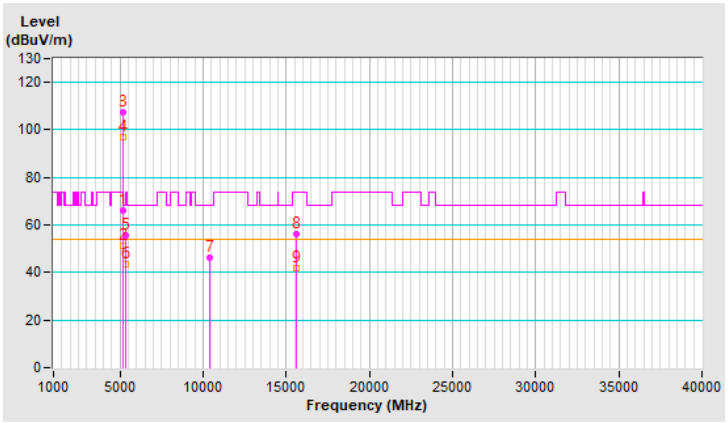


RF Mode	TX 802.11ax (HE80)	Channel	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.2 PK	74.0	-7.8	1.67 H	155	61.3	4.9
2	5150.00	51.2 AV	54.0	-2.8	1.67 H	155	46.3	4.9
3	*5210.00	107.6 PK			1.67 H	155	102.9	4.7
4	*5210.00	96.8 AV			1.67 H	155	92.1	4.7
5	5350.00	55.5 PK	74.0	-18.5	1.67 H	155	51.0	4.5
6	5350.00	43.6 AV	54.0	-10.4	1.67 H	155	39.1	4.5
7	#10420.00	46.3 PK	68.2	-21.9	1.66 H	146	30.2	16.1
8	15630.00	56.0 PK	74.0	-18.0	1.52 H	157	39.2	16.8
9	15630.00	41.8 AV	54.0	-12.2	1.52 H	157	25.0	16.8

Remarks:

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

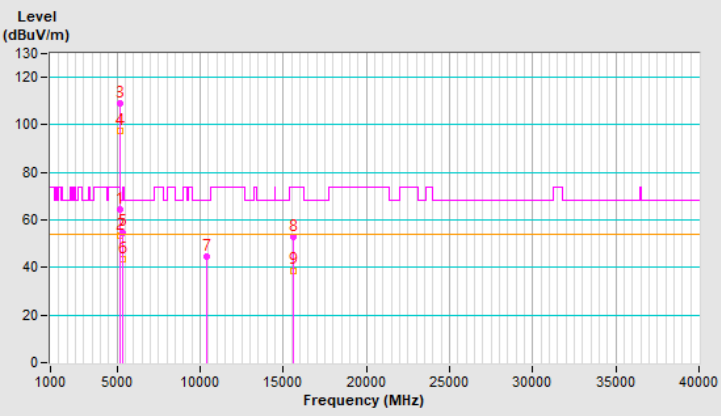


RF Mode	TX 802.11ax (HE80)	**Channel**	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	64.6 PK	74.0	-9.4	1.73 V	200	59.7	4.9
2	5150.00	53.4 AV	54.0	-0.6	1.73 V	200	48.5	4.9
3	*5210.00	108.8 PK			1.73 V	200	104.1	4.7
4	*5210.00	97.7 AV			1.73 V	200	93.0	4.7
5	5350.00	54.8 PK	74.0	-19.2	1.73 V	200	50.3	4.5
6	5350.00	43.3 AV	54.0	-10.7	1.73 V	200	38.8	4.5
7	#10420.00	44.7 PK	68.2	-23.5	1.38 V	264	28.6	16.1
8	15630.00	52.8 PK	74.0	-21.2	1.57 V	54	36.0	16.8
9	15630.00	38.8 AV	54.0	-15.2	1.57 V	54	22.0	16.8

Remarks:

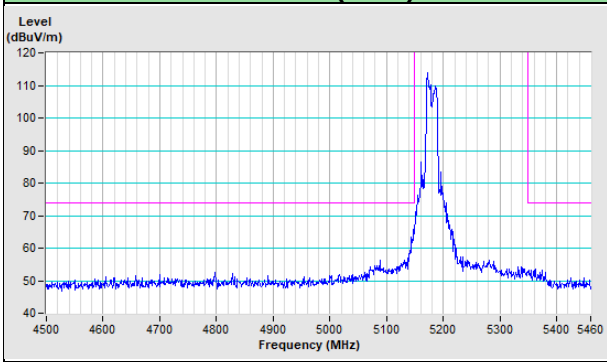
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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



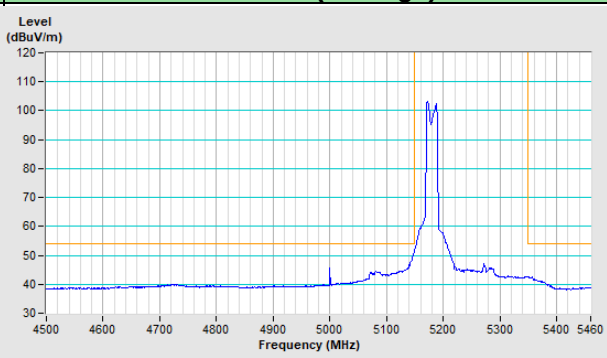
Mode A_Plot of Band Edge_ Beamforming

802.11ax (HE20) Channel 36

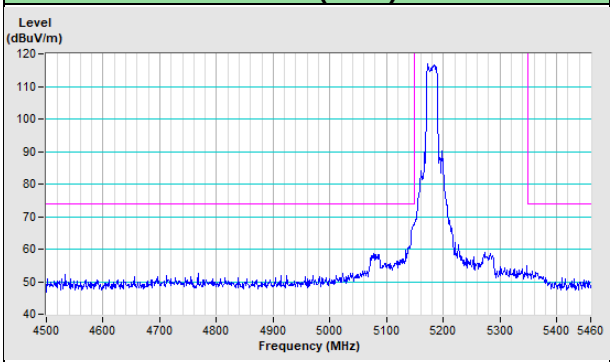
Horizontal (Peak)



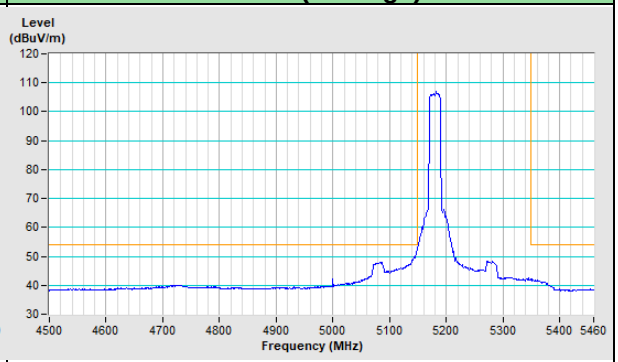
Horizontal (Average)



Vertical (Peak)

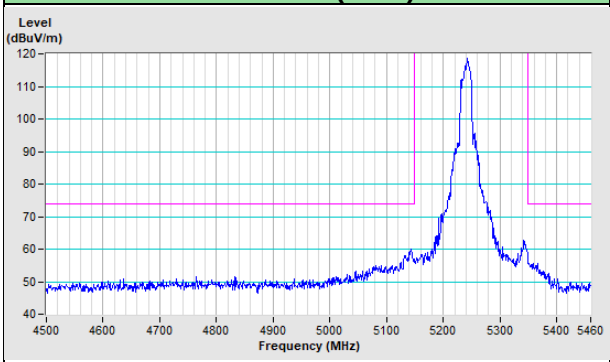


Vertical (Average)

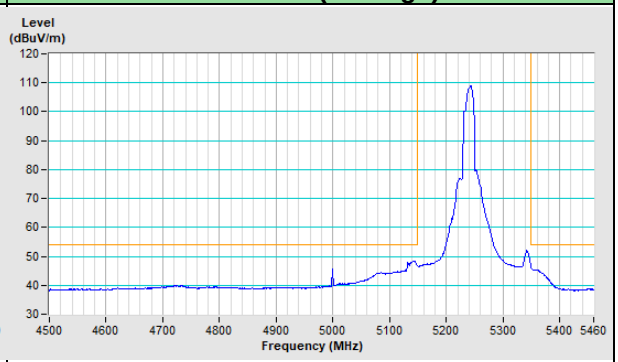


802.11ax (HE20) Channel 48

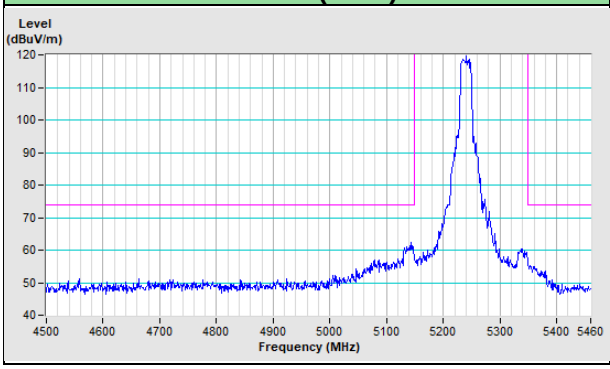
Horizontal (Peak)



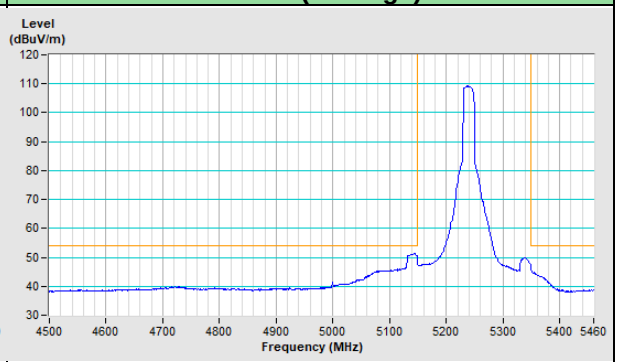
Horizontal (Average)



Vertical (Peak)

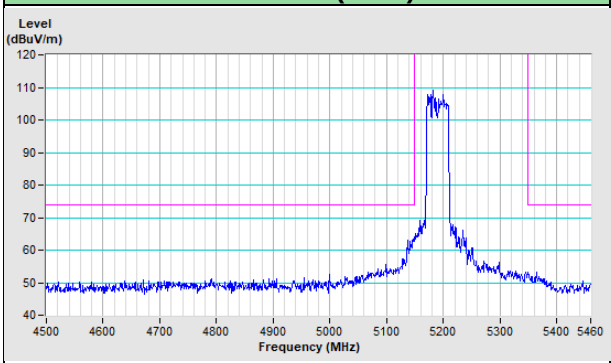


Vertical (Average)

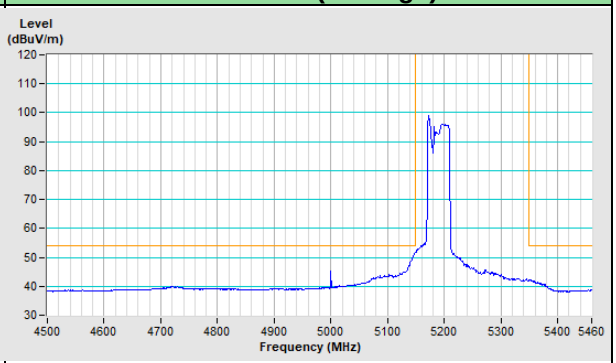


802.11ax (HE40) Channel 38

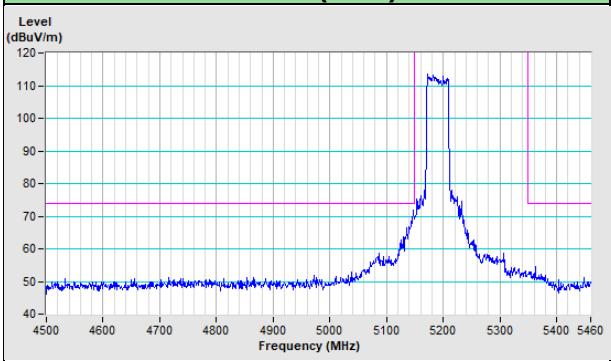
Horizontal (Peak)



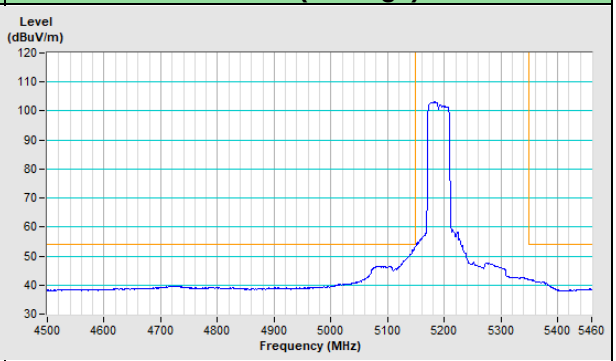
Horizontal (Average)



Vertical (Peak)

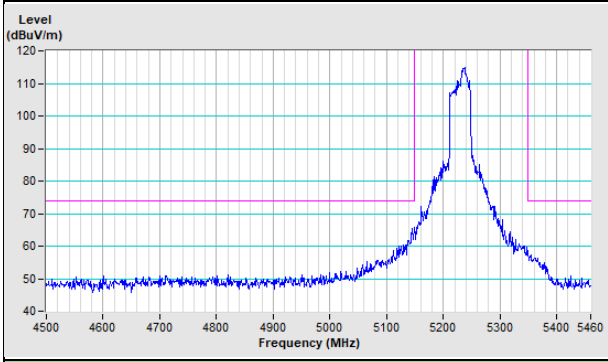


Vertical (Average)

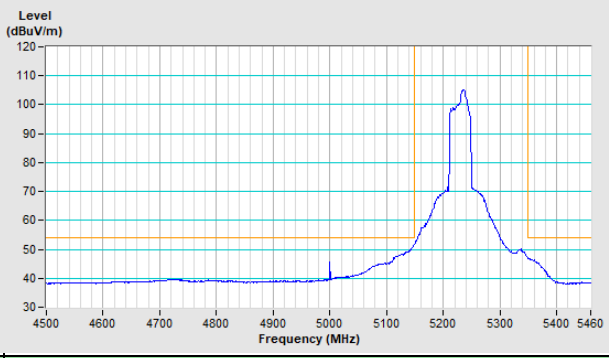


802.11ax (HE40) Channel 46

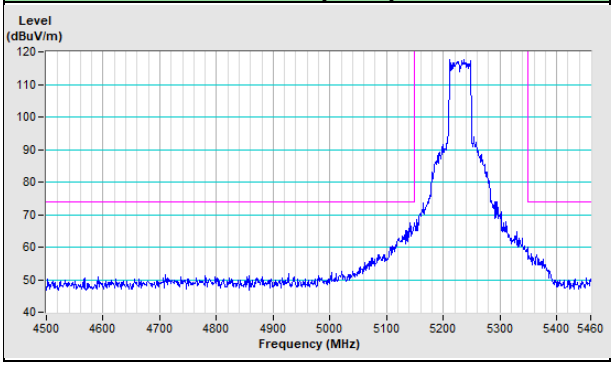
Horizontal (Peak)



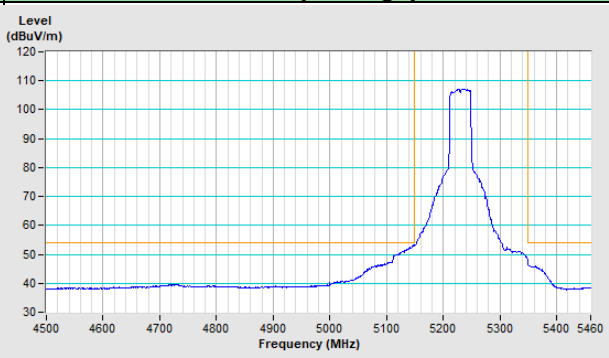
Horizontal (Average)

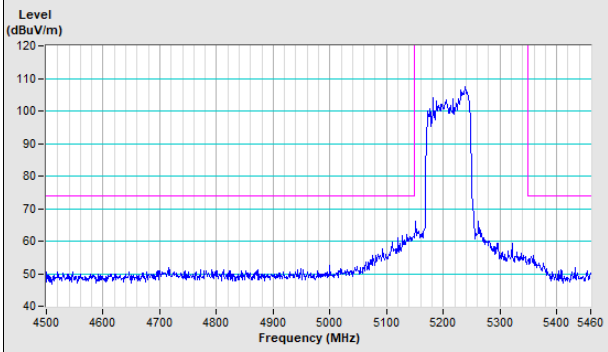
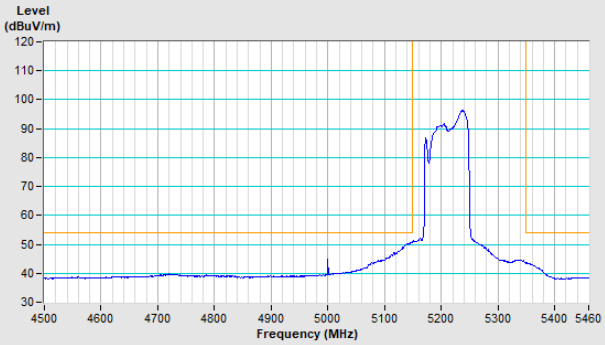
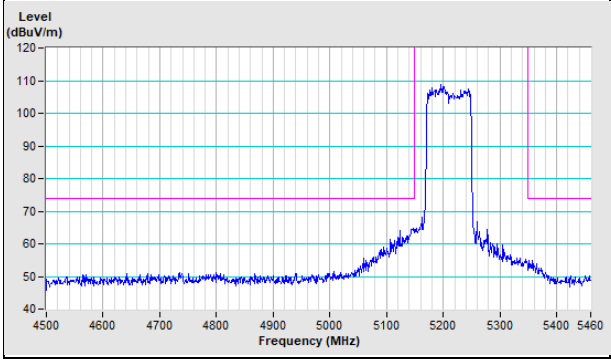
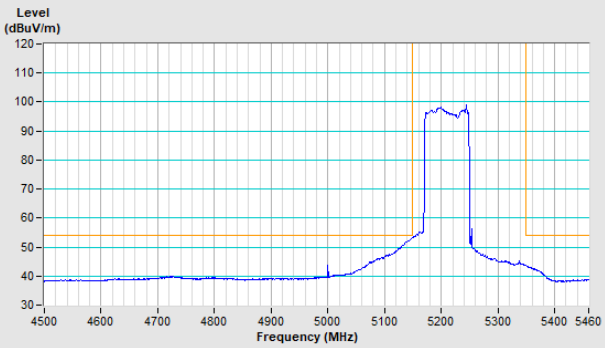


Vertical (Peak)



Vertical (Average)



802.11ax (HE80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

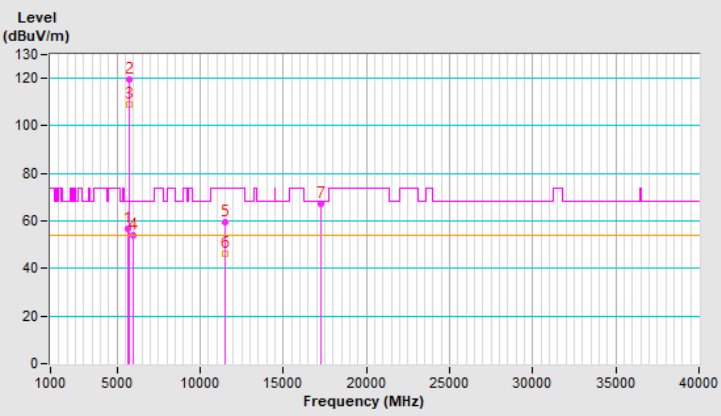
Mode B
CDD

RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5640.15	56.5 PK	68.2	-11.7	1.72 H	348	51.5	5.0
2	*5745.00	119.5 PK			1.72 H	348	114.0	5.5
3	*5745.00	109.2 AV			1.72 H	348	103.7	5.5
4	#5946.49	53.8 PK	68.2	-14.4	1.72 H	348	48.0	5.8
5	11490.00	59.4 PK	74.0	-14.6	1.36 H	324	42.1	17.3
6	11490.00	46.4 AV	54.0	-7.6	1.36 H	324	29.1	17.3
7	#17235.00	67.4 PK	68.2	-0.8	2.45 H	350	47.6	19.8

Remarks:

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

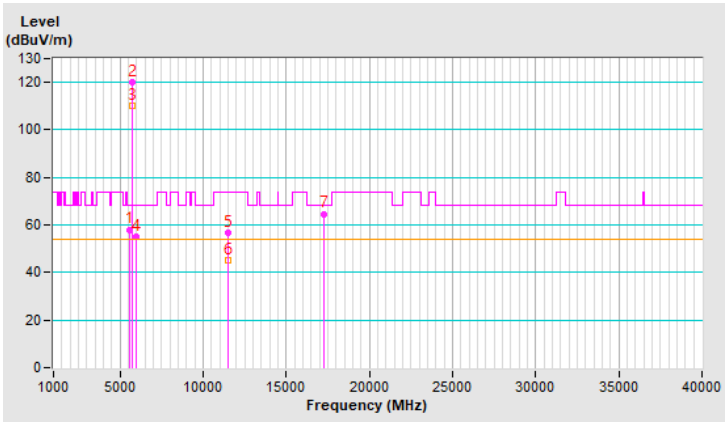


RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5550.53	58.1 PK	68.2	-10.1	1.50 V	34	52.9	5.2
2	*5745.00	120.1 PK			1.50 V	34	114.6	5.5
3	*5745.00	110.4 AV			1.50 V	34	104.9	5.5
4	#5949.94	55.3 PK	68.2	-12.9	1.50 V	34	49.5	5.8
5	11490.00	56.5 PK	74.0	-17.5	1.50 V	222	39.2	17.3
6	11490.00	45.3 AV	54.0	-8.7	1.50 V	222	28.0	17.3
7	#17235.00	64.7 PK	68.2	-3.5	3.30 V	36	44.9	19.8

Remarks:

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

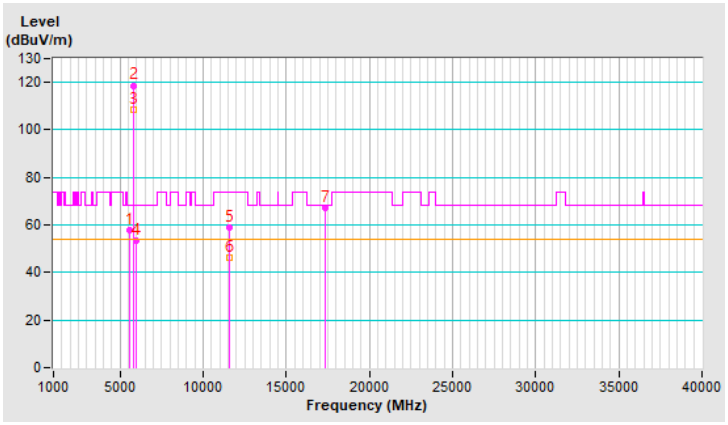


RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5587.38	57.7 PK	68.2	-10.5	1.58 H	3	52.6	5.1
2	*5785.00	118.7 PK			1.58 H	3	113.2	5.5
3	*5785.00	108.5 AV			1.58 H	3	103.0	5.5
4	#5956.74	53.4 PK	68.2	-14.8	1.58 H	3	47.6	5.8
5	11570.00	58.8 PK	74.0	-15.2	1.40 H	331	41.9	16.9
6	11570.00	46.1 AV	54.0	-7.9	1.40 H	331	29.2	16.9
7	#17355.00	67.3 PK	68.2	-0.9	3.20 H	335	46.9	20.4

Remarks:

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

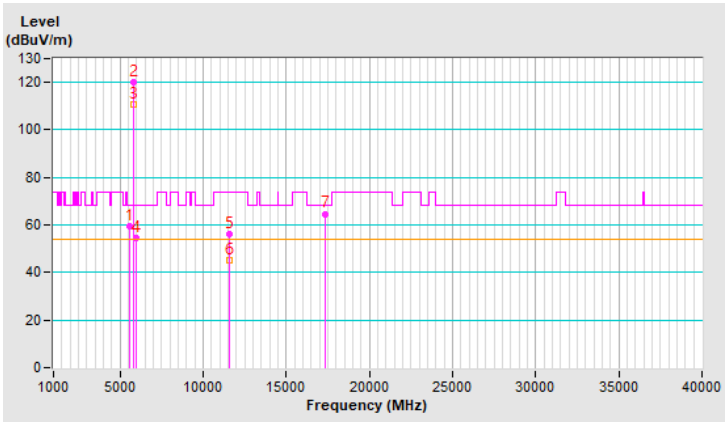


RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5588.89	59.3 PK	68.2	-8.9	1.26 V	26	54.2	5.1
2	*5785.00	120.2 PK			1.26 V	26	114.7	5.5
3	*5785.00	110.5 AV			1.26 V	26	105.0	5.5
4	#5949.20	54.4 PK	68.2	-13.8	1.26 V	26	48.6	5.8
5	11570.00	56.3 PK	74.0	-17.7	1.46 V	220	39.4	16.9
6	11570.00	44.9 AV	54.0	-9.1	1.46 V	220	28.0	16.9
7	#17355.00	64.7 PK	68.2	-3.5	3.25 V	36	44.3	20.4

Remarks:

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

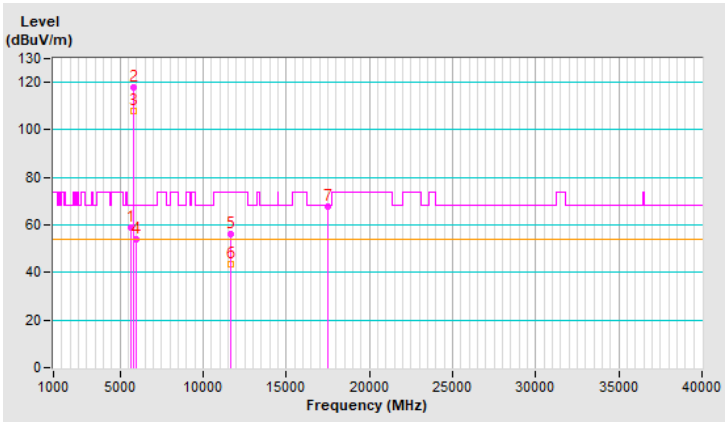


RF Mode	TX 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.62	58.7 PK	68.2	-9.5	1.56 H	349	53.6	5.1
2	*5825.00	117.8 PK			1.56 H	349	112.2	5.6
3	*5825.00	107.8 AV			1.56 H	349	102.2	5.6
4	#5934.42	53.8 PK	68.2	-14.4	1.56 H	349	48.0	5.8
5	11650.00	56.4 PK	74.0	-17.6	2.03 H	142	39.9	16.5
6	11650.00	43.6 AV	54.0	-10.4	2.03 H	142	27.1	16.5
7	#17475.00	67.5 PK	68.2	-0.7	3.08 H	332	45.6	21.9

Remarks:

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

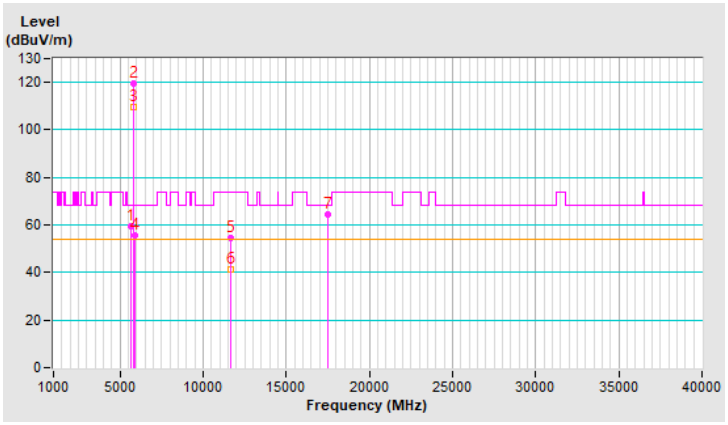


RF Mode	TX 802.11a	**Channel**	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5626.64	59.5 PK	68.2	-8.7	1.38 V	27	54.4	5.1
2	*5825.00	119.3 PK			1.38 V	27	113.7	5.6
3	*5825.00	109.7 AV			1.38 V	27	104.1	5.6
4	#5928.50	55.4 PK	68.2	-12.8	1.38 V	27	49.6	5.8
5	11650.00	54.6 PK	74.0	-19.4	1.70 V	201	38.1	16.5
6	11650.00	41.4 AV	54.0	-12.6	1.70 V	201	24.9	16.5
7	#17475.00	64.4 PK	68.2	-3.8	1.54 V	31	42.5	21.9

Remarks:

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

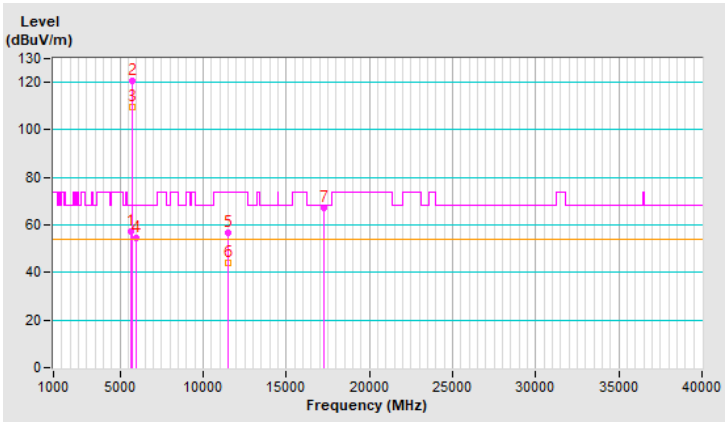


RF Mode	TX 802.11ax (HE20)	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5633.40	57.4 PK	68.2	-10.8	1.48 H	12	52.4	5.0
2	*5745.00	120.8 PK			1.48 H	12	115.3	5.5
3	*5745.00	109.8 AV			1.48 H	12	104.3	5.5
4	#5950.51	54.4 PK	68.2	-13.8	1.48 H	12	48.6	5.8
5	11490.00	56.5 PK	74.0	-17.5	2.03 H	129	39.2	17.3
6	11490.00	44.0 AV	54.0	-10.0	2.03 H	129	26.7	17.3
7	#17235.00	67.3 PK	68.2	-0.9	2.52 H	345	47.5	19.8

Remarks:

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

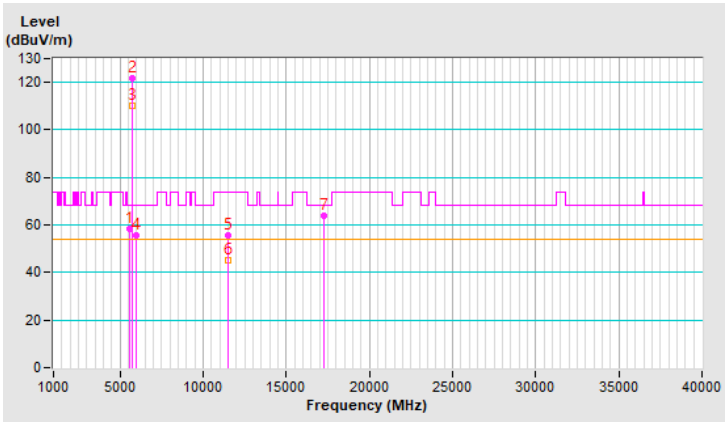


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5572.03	58.4 PK	68.2	-9.8	1.66 V	37	53.3	5.1
2	*5745.00	121.6 PK			1.66 V	37	116.1	5.5
3	*5745.00	110.3 AV			1.66 V	37	104.8	5.5
4	#5935.62	55.7 PK	68.2	-12.5	1.66 V	37	49.9	5.8
5	11490.00	55.8 PK	74.0	-18.2	1.47 V	202	38.5	17.3
6	11490.00	44.9 AV	54.0	-9.1	1.47 V	202	27.6	17.3
7	#17235.00	63.8 PK	68.2	-4.4	3.23 V	52	44.0	19.8

Remarks:

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

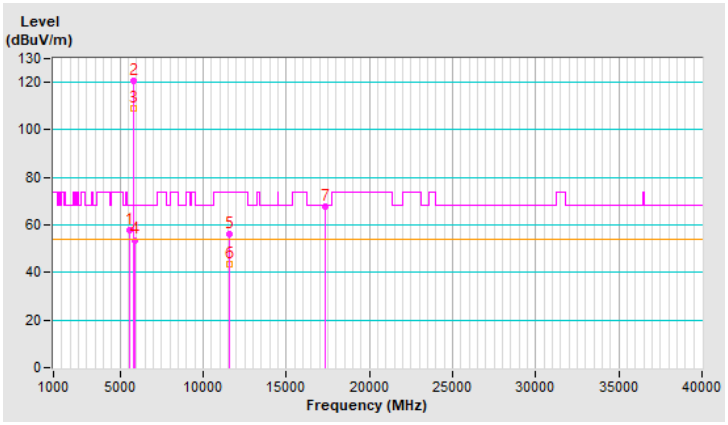


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5585.52	57.7 PK	68.2	-10.5	1.57 H	14	52.6	5.1
2	*5785.00	120.5 PK			1.57 H	14	115.0	5.5
3	*5785.00	109.2 AV			1.57 H	14	103.7	5.5
4	#5925.05	53.7 PK	68.2	-14.5	1.57 H	14	47.9	5.8
5	11570.00	56.4 PK	74.0	-17.6	2.01 H	150	39.5	16.9
6	11570.00	43.6 AV	54.0	-10.4	2.01 H	150	26.7	16.9
7	#17355.00	67.7 PK	68.2	-0.5	3.15 H	342	47.3	20.4

Remarks:

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

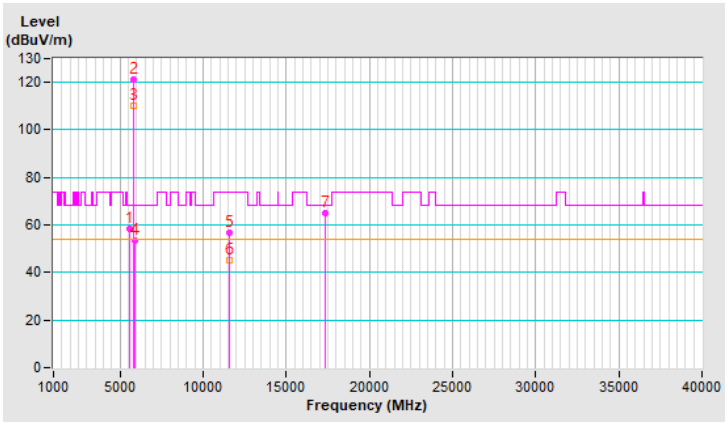


RF Mode	TX 802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5584.22	58.4 PK	68.2	-9.8	1.05 V	16	53.2	5.2
2	*5785.00	121.3 PK			1.05 V	16	115.8	5.5
3	*5785.00	110.1 AV			1.05 V	16	104.6	5.5
4	#5932.96	53.6 PK	68.2	-14.6	1.05 V	16	47.8	5.8
5	11570.00	56.6 PK	74.0	-17.4	1.54 V	222	39.7	16.9
6	11570.00	45.4 AV	54.0	-8.6	1.54 V	222	28.5	16.9
7	#17355.00	64.9 PK	68.2	-3.3	3.27 V	23	44.5	20.4

Remarks:

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

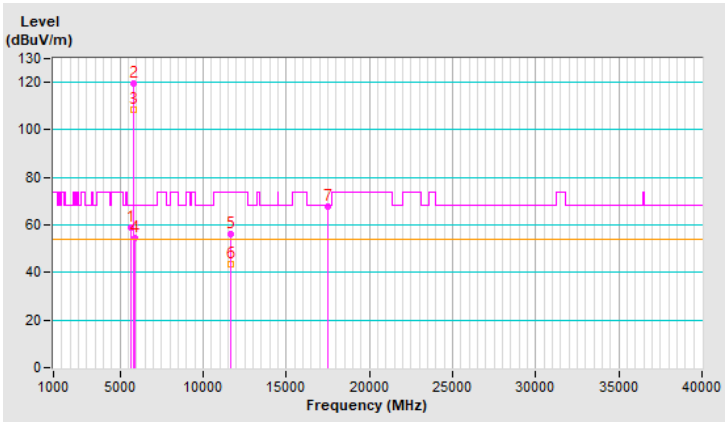


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5630.50	58.8 PK	68.2	-9.4	1.53 H	15	53.7	5.1
2	*5825.00	119.6 PK			1.53 H	15	114.0	5.6
3	*5825.00	108.7 AV			1.53 H	15	103.1	5.6
4	#5926.01	54.7 PK	68.2	-13.5	1.53 H	15	48.9	5.8
5	11650.00	56.4 PK	74.0	-17.6	1.98 H	143	39.9	16.5
6	11650.00	43.3 AV	54.0	-10.7	1.98 H	143	26.8	16.5
7	**#17475.00**	**67.9 PK**	**68.2**	**-0.3**	**3.08 H**	**332**	**46.0**	**21.9**

Remarks:

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

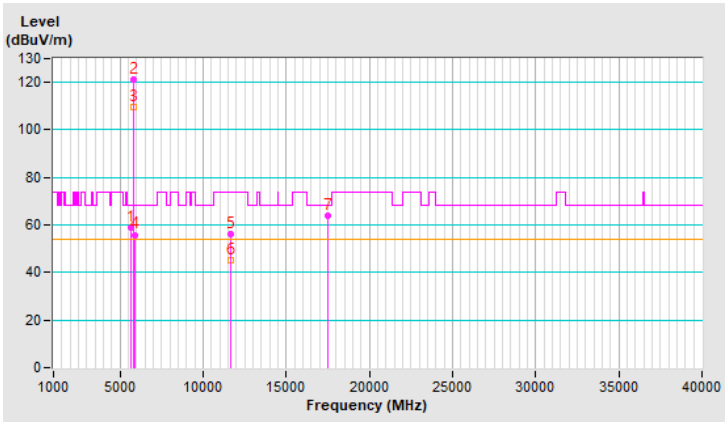


RF Mode	TX 802.11ax (HE20)	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5624.80	58.9 PK	68.2	-9.3	1.82 V	38	53.8	5.1
2	*5825.00	121.0 PK			1.82 V	38	115.4	5.6
3	*5825.00	109.8 AV			1.82 V	38	104.2	5.6
4	#5926.97	55.9 PK	68.2	-12.3	1.82 V	38	50.1	5.8
5	11650.00	56.2 PK	74.0	-17.8	1.52 V	212	39.7	16.5
6	11650.00	45.3 AV	54.0	-8.7	1.52 V	212	28.8	16.5
7	#17475.00	64.0 PK	68.2	-4.2	3.27 V	48	42.1	21.9

Remarks:

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

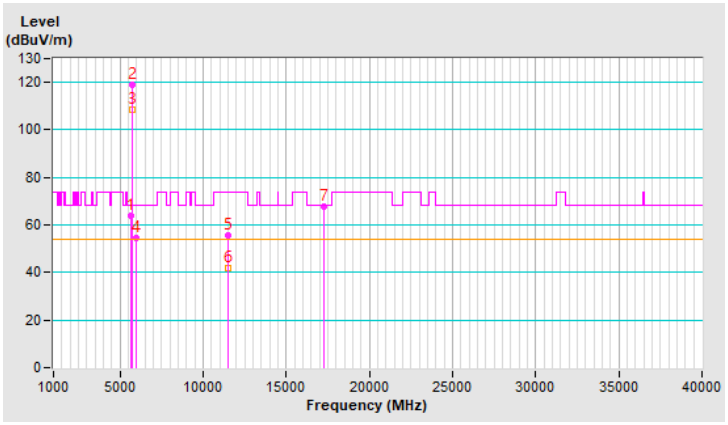


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5648.70	63.9 PK	68.2	-4.3	1.56 H	11	58.9	5.0
2	*5755.00	119.1 PK			1.56 H	11	113.6	5.5
3	*5755.00	108.4 AV			1.56 H	11	102.9	5.5
4	#5951.03	54.6 PK	68.2	-13.6	1.56 H	11	48.8	5.8
5	11510.00	55.4 PK	74.0	-18.6	1.95 H	123	38.1	17.3
6	11510.00	42.0 AV	54.0	-12.0	1.95 H	123	24.7	17.3
7	#17265.00	67.8 PK	68.2	-0.4	2.39 H	329	47.9	19.9

Remarks:

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

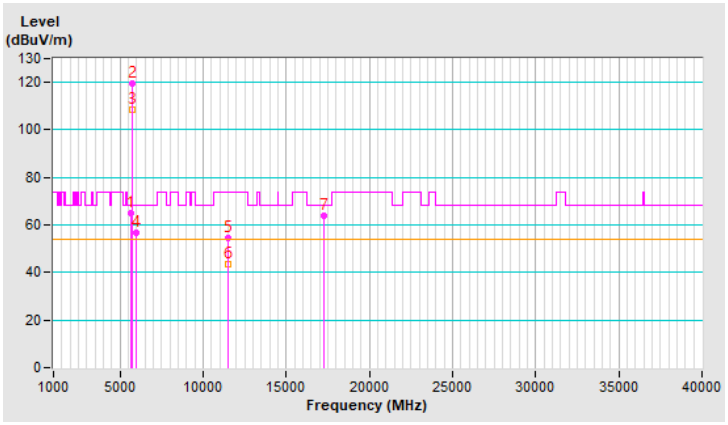


RF Mode	TX 802.11ax (HE40)	Channel	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5647.59	65.0 PK	68.2	-3.2	1.49 V	37	60.0	5.0
2	*5755.00	119.3 PK			1.49 V	37	113.8	5.5
3	*5755.00	108.7 AV			1.49 V	37	103.2	5.5
4	#5936.84	56.6 PK	68.2	-11.6	1.49 V	37	50.8	5.8
5	11510.00	54.7 PK	74.0	-19.3	1.43 V	224	37.4	17.3
6	11510.00	43.5 AV	54.0	-10.5	1.43 V	224	26.2	17.3
7	#17265.00	63.9 PK	68.2	-4.3	3.27 V	35	44.0	19.9

Remarks:

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

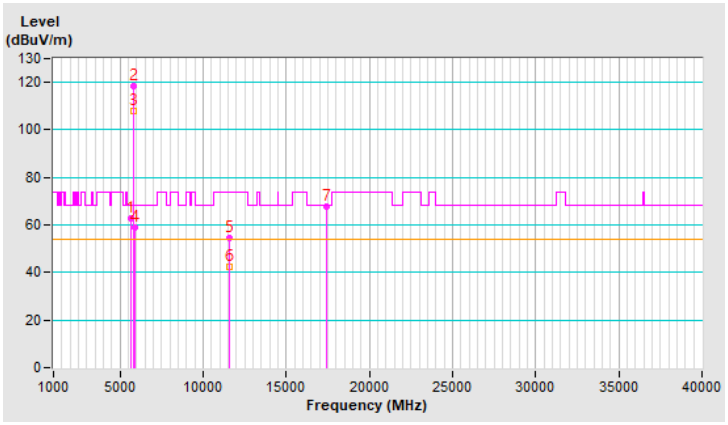


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5630.23	62.8 PK	68.2	-5.4	1.49 H	10	57.7	5.1
2	*5795.00	118.5 PK			1.49 H	10	113.0	5.5
3	*5795.00	107.9 AV			1.49 H	10	102.4	5.5
4	#5925.64	58.8 PK	68.2	-9.4	1.49 H	10	53.0	5.8
5	11590.00	54.6 PK	74.0	-19.4	1.97 H	143	37.8	16.8
6	11590.00	42.3 AV	54.0	-11.7	1.97 H	143	25.5	16.8
7	#17385.00	67.8 PK	68.2	-0.4	3.16 H	333	47.4	20.4

Remarks:

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

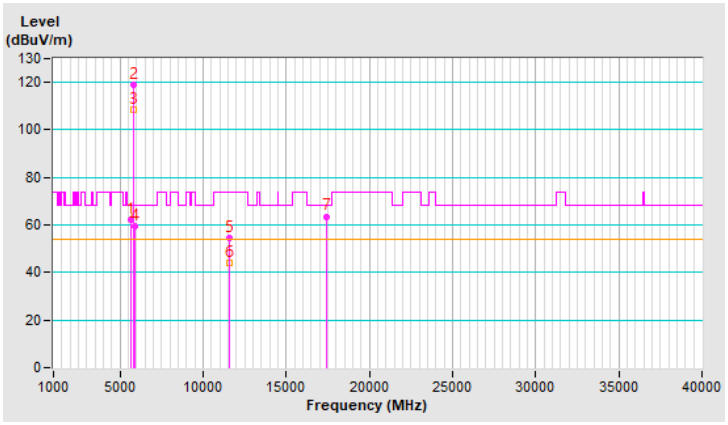


RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5622.45	62.2 PK	68.2	-6.0	1.81 V	37	57.1	5.1
2	*5795.00	118.9 PK			1.81 V	37	113.4	5.5
3	*5795.00	108.4 AV			1.81 V	37	102.9	5.5
4	#5927.68	59.5 PK	68.2	-8.7	1.81 V	37	53.7	5.8
5	11590.00	54.6 PK	74.0	-19.4	1.51 V	214	37.8	16.8
6	11590.00	44.2 AV	54.0	-9.8	1.51 V	214	27.4	16.8
7	#17385.00	63.6 PK	68.2	-4.6	3.25 V	37	43.2	20.4

Remarks:

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

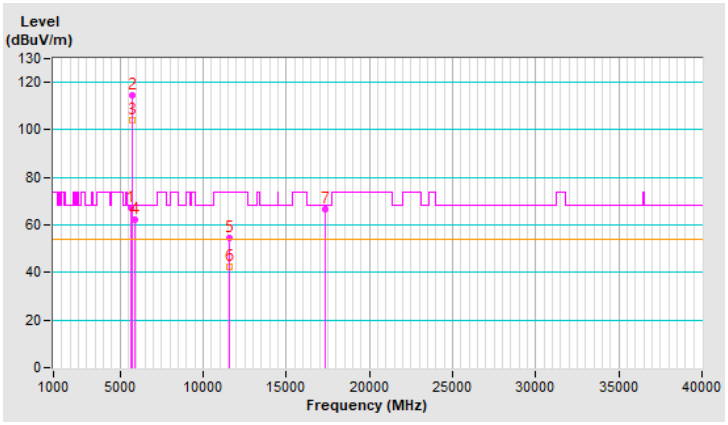


RF Mode	TX 802.11ax (HE80)	**Channel**	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5649.41	67.1 PK	68.2	-1.1	1.09 H	83	62.1	5.0
2	*5775.00	114.5 PK			1.09 H	83	109.0	5.5
3	*5775.00	103.9 AV			1.09 H	83	98.4	5.5
4	#5926.85	62.2 PK	68.2	-6.0	1.09 H	83	56.4	5.8
5	11550.00	54.5 PK	74.0	-19.5	1.96 H	136	37.5	17.0
6	11550.00	42.5 AV	54.0	-11.5	1.96 H	136	25.5	17.0
7	#17325.00	66.7 PK	68.2	-1.5	3.04 H	332	46.4	20.3

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

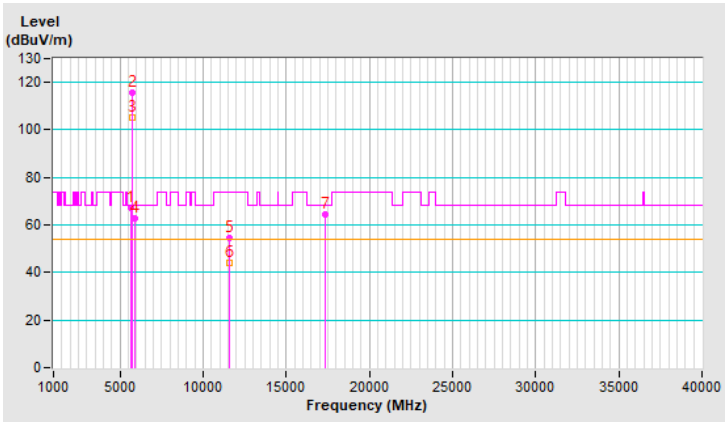


RF Mode	TX 802.11ax (HE80)	**Channel**	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°C, 68% RH
Tested By	Sampson Chen		

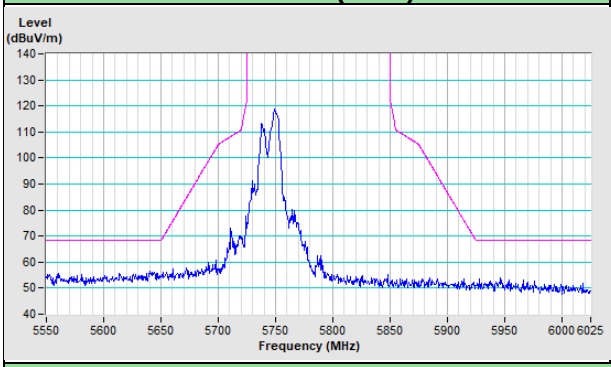
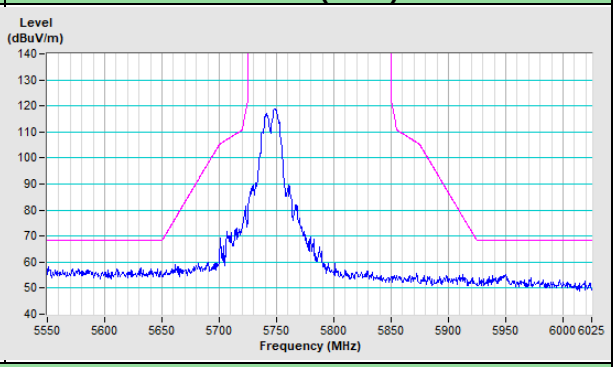
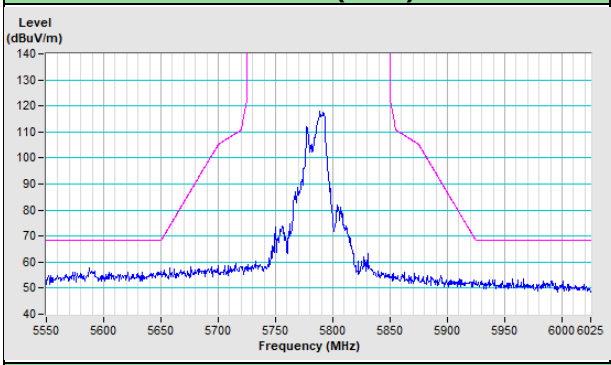
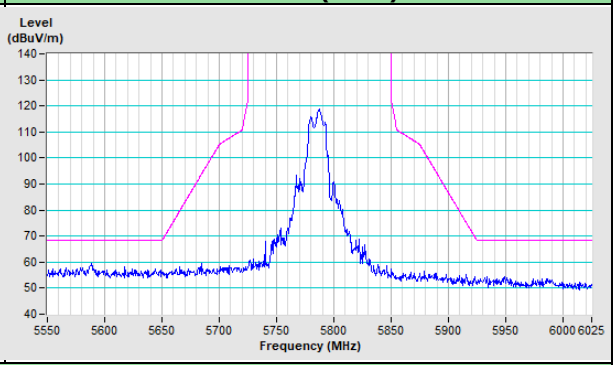
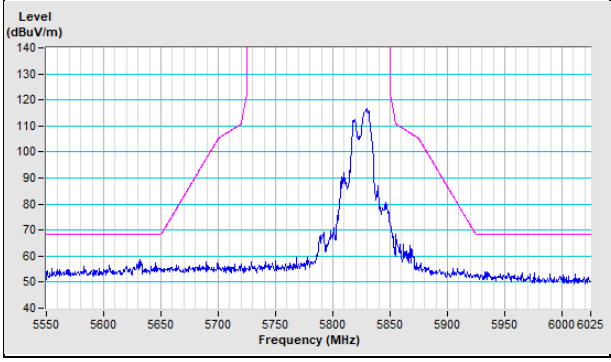
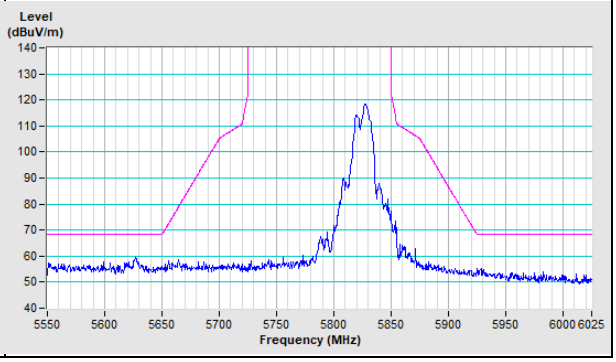
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5642.00	67.2 PK	68.2	-1.0	1.26 V	349	62.2	5.0
2	*5775.00	115.8 PK			1.26 V	349	110.3	5.5
3	*5775.00	105.2 AV			1.26 V	349	99.7	5.5
4	#5925.45	62.6 PK	68.2	-5.6	1.26 V	349	56.8	5.8
5	11550.00	54.5 PK	74.0	-19.5	1.45 V	205	37.5	17.0
6	11550.00	44.2 AV	54.0	-9.8	1.45 V	205	27.2	17.0
7	#17325.00	64.2 PK	68.2	-4.0	3.29 V	43	43.9	20.3

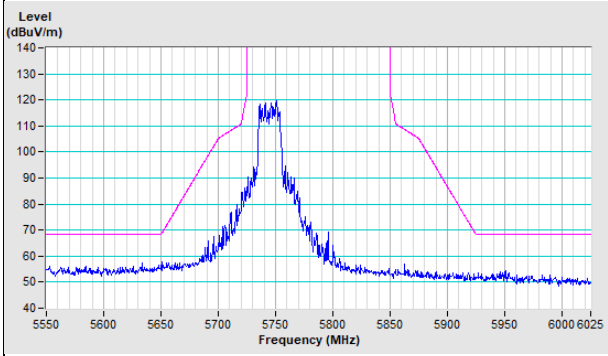
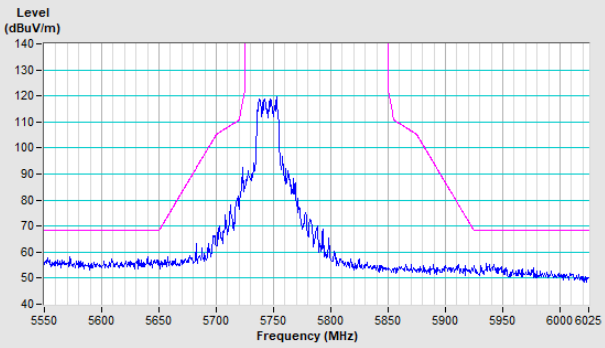
Remarks:

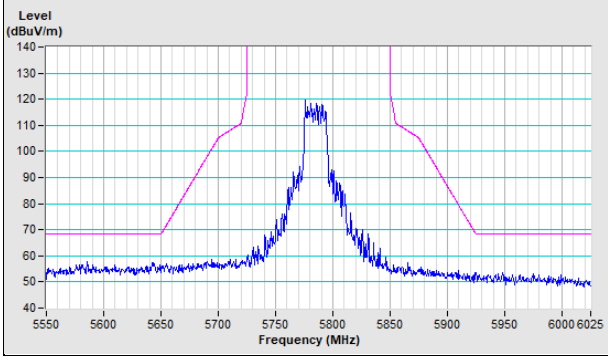
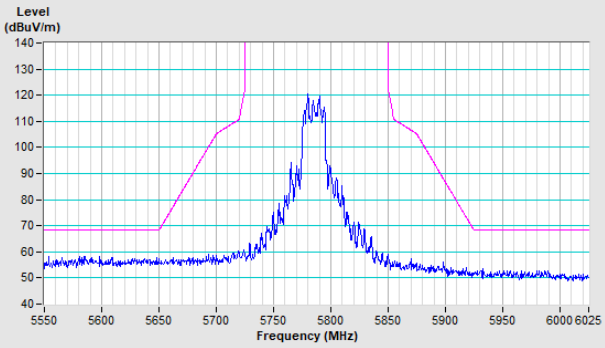
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

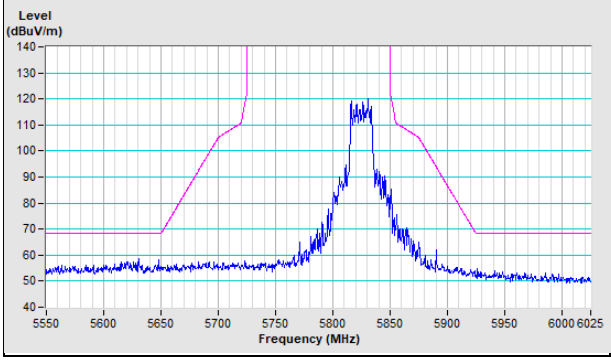
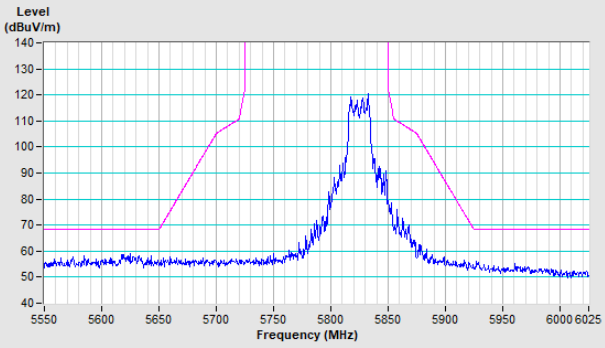


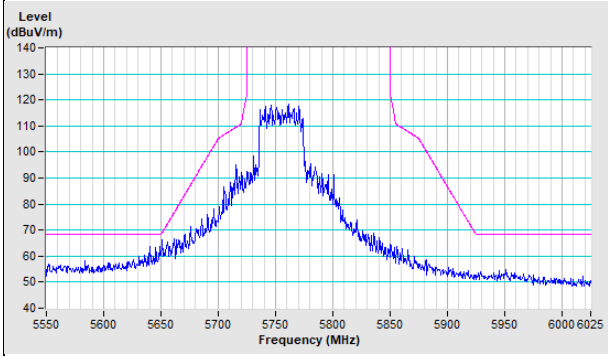
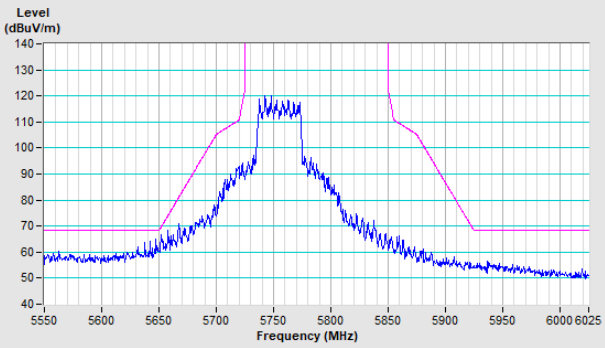
Mode B_Plot of Band Edge_CDD

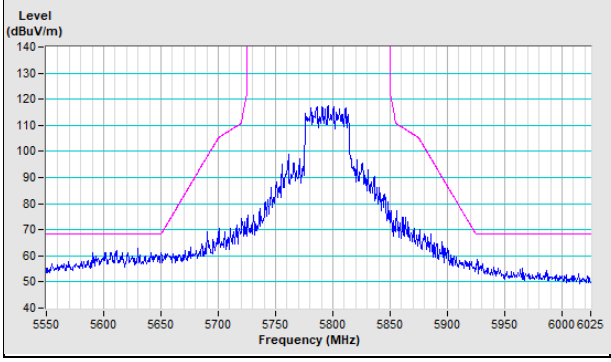
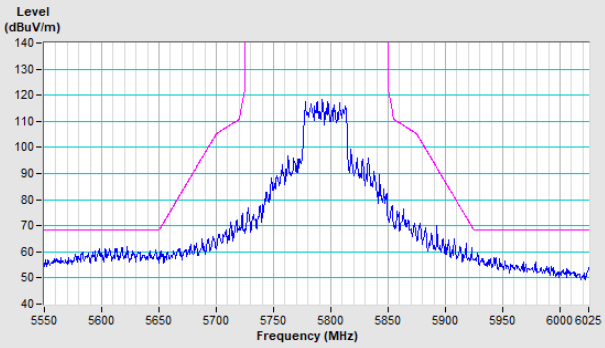
802.11a Channel 149	
Horizontal (Peak)	Vertical (Peak)
	
802.11a Channel 157	
Horizontal (Peak)	Vertical (Peak)
	
802.11a Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

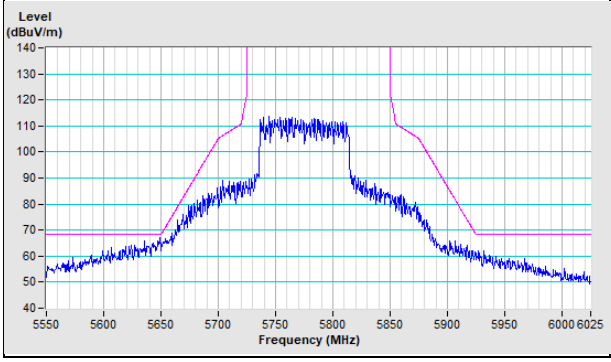
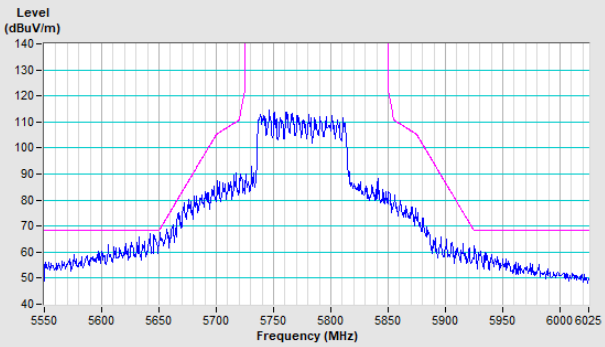
802.11ax (HE20) Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE40) Channel 151	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE40) Channel 159	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE80) Channel 155	
Horizontal (Peak)	Vertical (Peak)
	

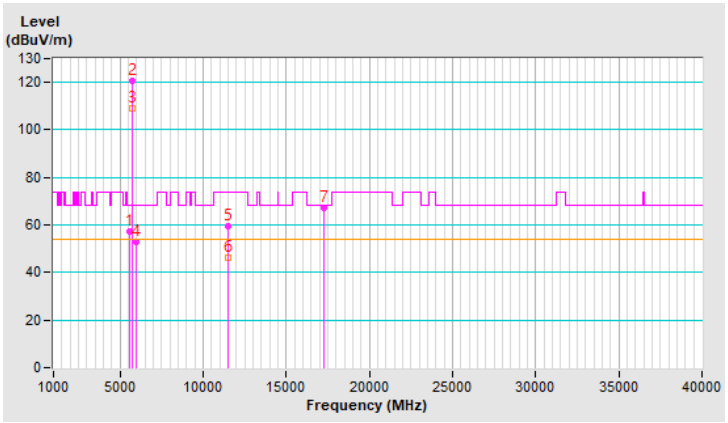
Beamforming

RF Mode	TX 802.11ax (HE20)	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5553.06	57.1 PK	68.2	-11.1	1.47 H	30	51.9	5.2
2	*5745.00	120.7 PK			1.47 H	30	115.2	5.5
3	*5745.00	109.0 AV			1.47 H	30	103.5	5.5
4	#5936.18	52.9 PK	68.2	-15.3	1.47 H	30	47.1	5.8
5	11490.00	59.7 PK	74.0	-14.3	1.50 H	335	42.4	17.3
6	11490.00	46.5 AV	54.0	-7.5	1.50 H	335	29.2	17.3
7	#17235.00	67.2 PK	68.2	-1.0	3.44 H	295	47.4	19.8

Remarks:

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

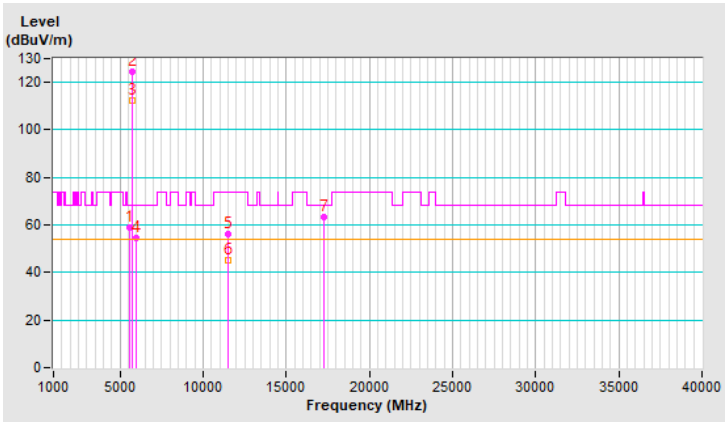


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5551.75	59.0 PK	68.2	-9.2	1.50 V	45	53.8	5.2
2	*5745.00	124.7 PK			1.50 V	45	119.2	5.5
3	*5745.00	112.5 AV			1.50 V	45	107.0	5.5
4	#5950.66	54.5 PK	68.2	-13.7	1.50 V	45	48.7	5.8
5	11490.00	56.4 PK	74.0	-17.6	1.51 V	311	39.1	17.3
6	11490.00	45.3 AV	54.0	-8.7	1.51 V	311	28.0	17.3
7	#17235.00	63.1 PK	68.2	-5.1	1.61 V	27	43.3	19.8

Remarks:

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

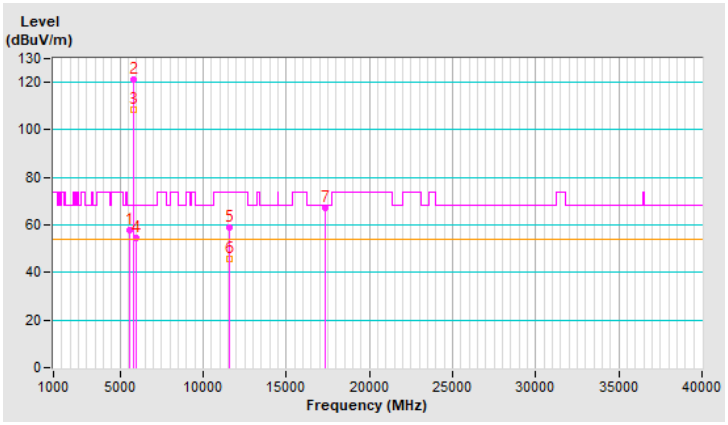


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5580.29	57.9 PK	68.2	-10.3	1.68 H	326	52.7	5.2
2	*5785.00	121.4 PK			1.68 H	326	115.9	5.5
3	*5785.00	108.7 AV			1.68 H	326	103.2	5.5
4	#5979.89	54.4 PK	68.2	-13.8	1.68 H	326	48.5	5.9
5	11570.00	58.9 PK	74.0	-15.1	2.01 H	145	42.0	16.9
6	11570.00	45.6 AV	54.0	-8.4	2.01 H	145	28.7	16.9
7	#17355.00	67.4 PK	68.2	-0.8	2.56 H	318	47.0	20.4

Remarks:

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

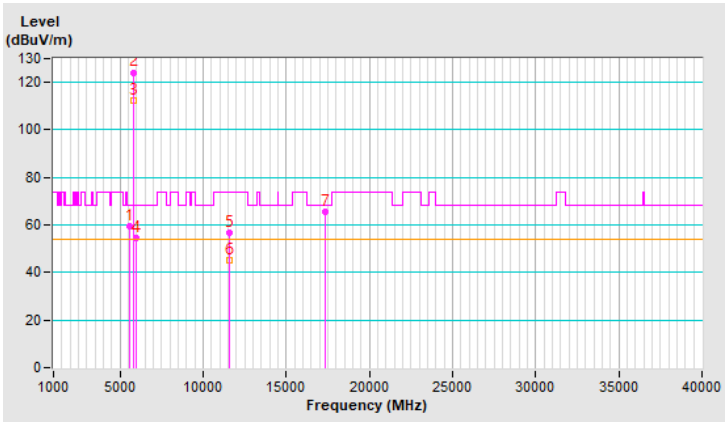


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5581.44	59.3 PK	68.2	-8.9	1.20 V	44	54.1	5.2
2	*5785.00	124.2 PK			1.20 V	44	118.7	5.5
3	*5785.00	112.2 AV			1.20 V	44	106.7	5.5
4	#5981.38	54.3 PK	68.2	-13.9	1.20 V	44	48.4	5.9
5	11570.00	56.5 PK	74.0	-17.5	1.57 V	237	39.6	16.9
6	11570.00	45.4 AV	54.0	-8.6	1.57 V	237	28.5	16.9
7	#17355.00	65.4 PK	68.2	-2.8	3.25 V	35	45.0	20.4

Remarks:

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

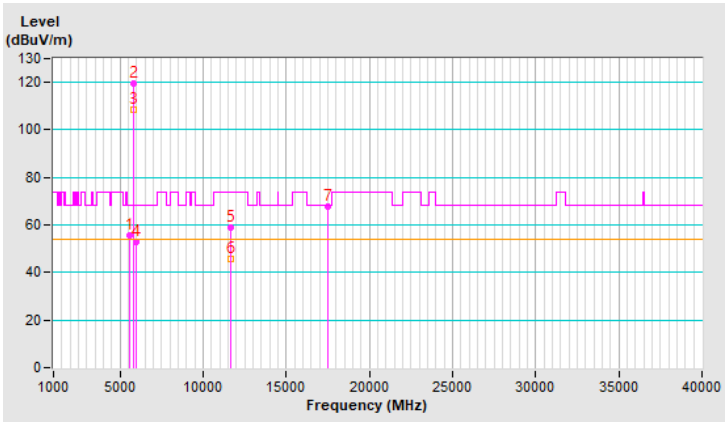


RF Mode	TX 802.11ax (HE20)	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5616.06	55.8 PK	68.2	-12.4	1.62 H	88	50.7	5.1
2	*5825.00	119.7 PK			1.62 H	88	114.1	5.6
3	*5825.00	108.5 AV			1.62 H	88	102.9	5.6
4	#5956.53	53.0 PK	68.2	-15.2	1.62 H	88	47.2	5.8
5	11650.00	59.1 PK	74.0	-14.9	1.91 H	134	42.6	16.5
6	11650.00	45.9 AV	54.0	-8.1	1.91 H	134	29.4	16.5
7	#17475.00	67.9 PK	68.2	-0.3	1.52 H	310	46.0	21.9

Remarks:

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

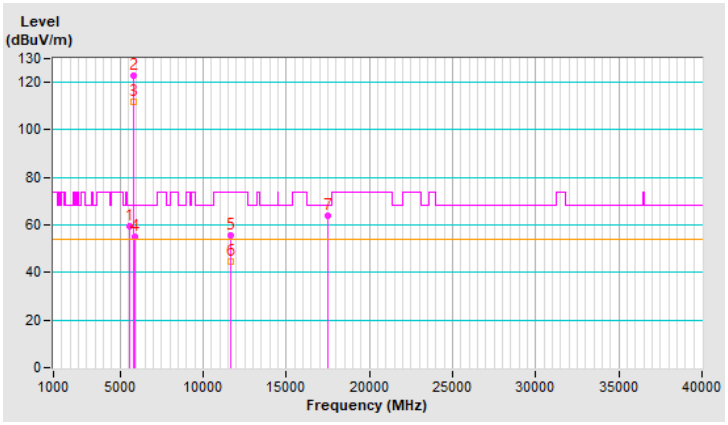


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 510 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5576.35	59.5 PK	68.2	-8.7	1.04 V	37	54.3	5.2
2	*5825.00	122.9 PK			1.04 V	37	117.3	5.6
3	*5825.00	111.6 AV			1.04 V	37	106.0	5.6
4	#5927.33	55.0 PK	68.2	-13.2	1.04 V	37	49.2	5.8
5	11650.00	55.6 PK	74.0	-18.4	1.48 V	214	39.1	16.5
6	11650.00	44.8 AV	54.0	-9.2	1.48 V	214	28.3	16.5
7	#17475.00	63.7 PK	68.2	-4.5	3.32 V	56	41.8	21.9

Remarks:

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

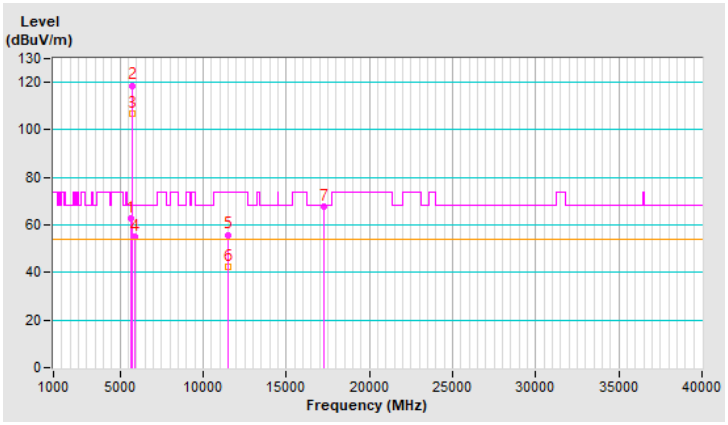


RF Mode	TX 802.11ax (HE40)	Channel	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5643.52	62.7 PK	68.2	-5.5	1.50 H	35	57.7	5.0
2	*5755.00	118.7 PK			1.50 H	35	113.2	5.5
3	*5755.00	107.0 AV			1.50 H	35	101.5	5.5
4	#5925.18	55.2 PK	68.2	-13.0	1.50 H	35	49.4	5.8
5	11510.00	55.9 PK	74.0	-18.1	1.93 H	134	38.6	17.3
6	11510.00	42.3 AV	54.0	-11.7	1.93 H	134	25.0	17.3
7	#17265.00	67.8 PK	68.2	-0.4	2.58 H	316	47.9	19.9

Remarks:

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

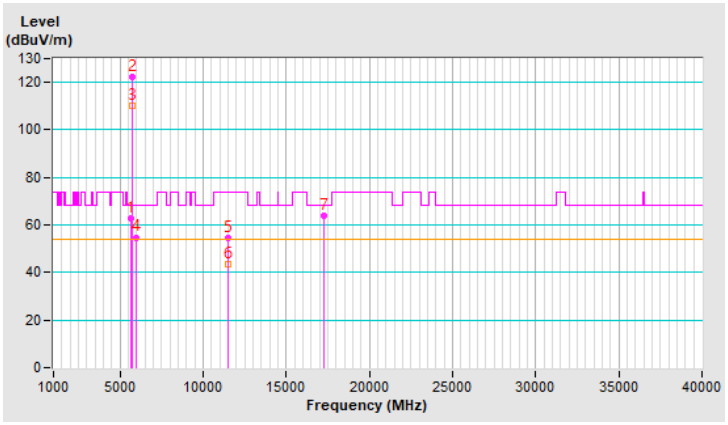


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5648.48	62.6 PK	68.2	-5.6	1.31 V	44	57.6	5.0
2	*5755.00	122.2 PK			1.31 V	44	116.7	5.5
3	*5755.00	110.3 AV			1.31 V	44	104.8	5.5
4	#5939.84	54.8 PK	68.2	-13.4	1.31 V	44	49.0	5.8
5	11510.00	54.6 PK	74.0	-19.4	1.41 V	212	37.3	17.3
6	11510.00	43.3 AV	54.0	-10.7	1.41 V	212	26.0	17.3
7	#17265.00	63.8 PK	68.2	-4.4	3.25 V	34	43.9	19.9

Remarks:

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

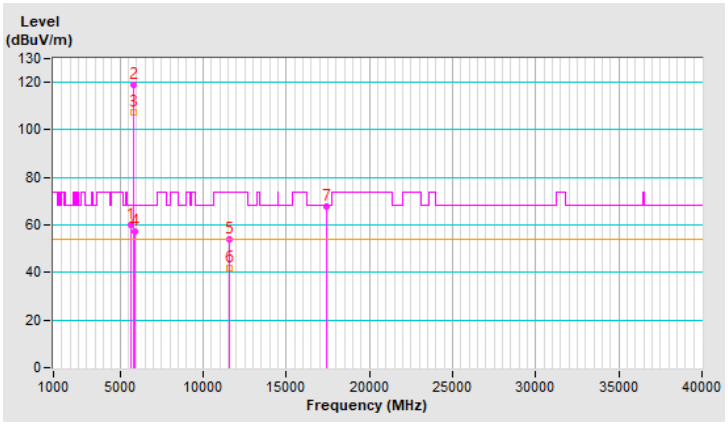


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5618.72	59.8 PK	68.2	-8.4	1.78 H	13	54.7	5.1
2	*5795.00	119.1 PK			1.78 H	13	113.6	5.5
3	*5795.00	107.5 AV			1.78 H	13	102.0	5.5
4	#5927.33	57.2 PK	68.2	-11.0	1.78 H	13	51.4	5.8
5	11590.00	54.2 PK	74.0	-19.8	2.02 H	134	37.4	16.8
6	11590.00	41.9 AV	54.0	-12.1	2.02 H	134	25.1	16.8
7	#17385.00	67.5 PK	68.2	-0.7	2.55 H	317	47.1	20.4

Remarks:

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

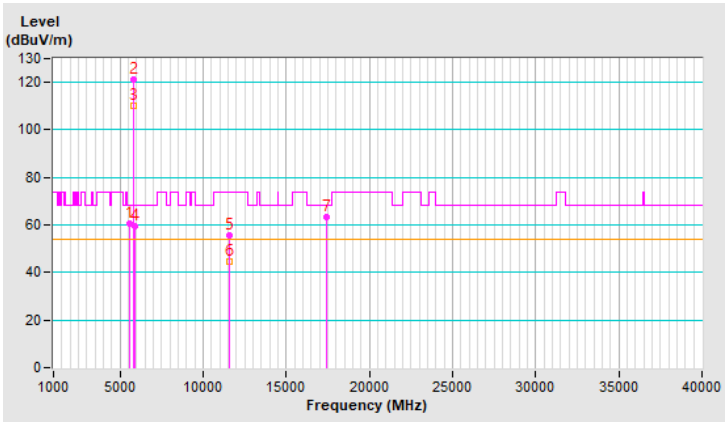


RF Mode	TX 802.11ax (HE40)	**Channel**	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5593.02	60.4 PK	68.2	-7.8	1.40 V	36	55.3	5.1
2	*5795.00	121.4 PK			1.40 V	36	115.9	5.5
3	*5795.00	109.9 AV			1.40 V	36	104.4	5.5
4	#5926.70	59.3 PK	68.2	-8.9	1.40 V	36	53.5	5.8
5	11590.00	55.4 PK	74.0	-18.6	1.49 V	212	38.6	16.8
6	11590.00	44.7 AV	54.0	-9.3	1.49 V	212	27.9	16.8
7	#17385.00	63.4 PK	68.2	-4.8	3.25 V	27	43.0	20.4

Remarks:

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

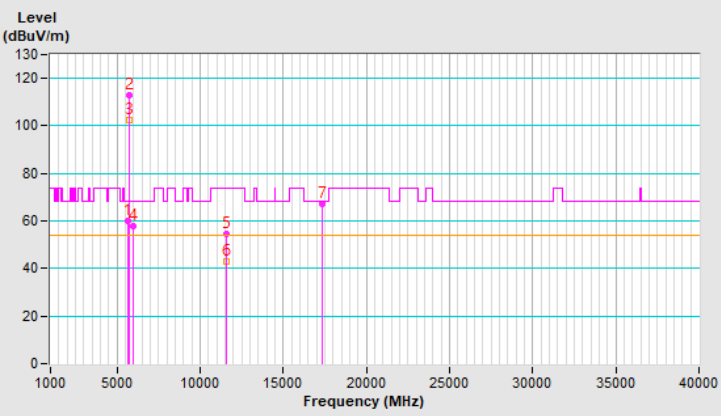


RF Mode	TX 802.11ax (HE80)	**Channel**	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 68% RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5678.00	60.2 PK	68.2	-8.0	1.65 H	317	55.1	5.1
2	*5775.00	113.0 PK			1.65 H	317	107.5	5.5
3	*5775.00	102.2 AV			1.65 H	317	96.7	5.5
4	#5943.62	57.9 PK	68.2	-10.3	1.65 H	317	52.1	5.8
5	11550.00	54.7 PK	74.0	-19.3	1.90 H	134	37.7	17.0
6	11550.00	42.9 AV	54.0	-11.1	1.90 H	134	25.9	17.0
7	#17325.00	67.2 PK	68.2	-1.0	3.08 H	339	46.9	20.3

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

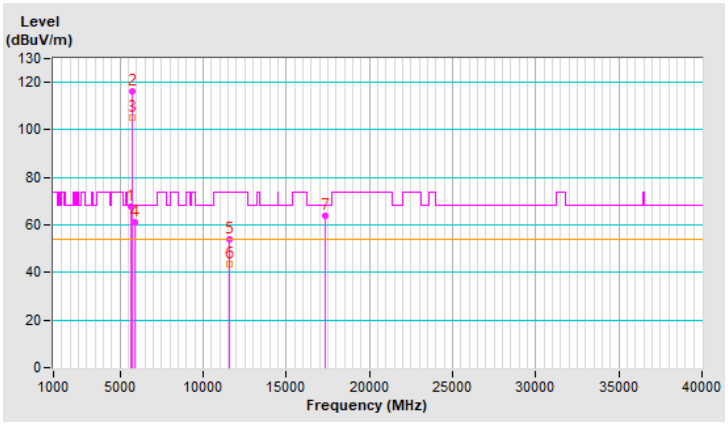


RF Mode	TX 802.11ax (HE80)	Channel	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Sampson Chen		

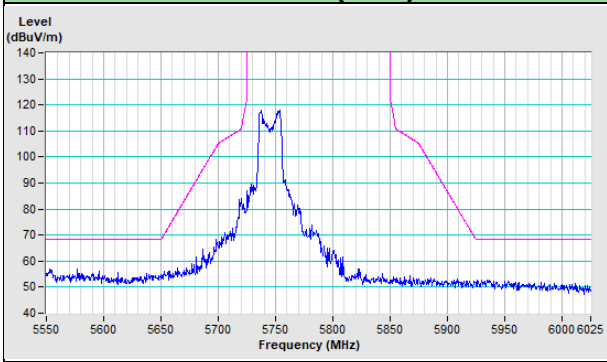
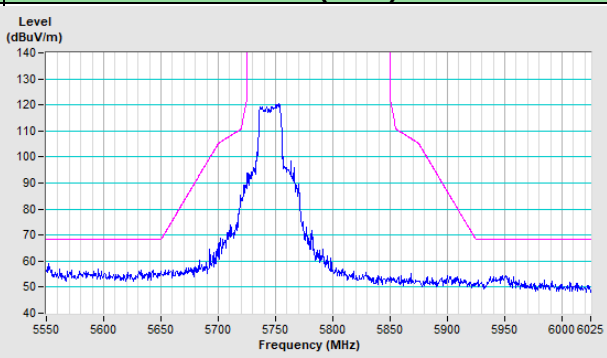
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5626.28	67.6 PK	68.2	-0.6	1.18 V	38	62.5	5.1
2	*5775.00	116.4 PK			1.18 V	38	110.9	5.5
3	*5775.00	105.1 AV			1.18 V	38	99.6	5.5
4	#5927.71	61.2 PK	68.2	-7.0	1.18 V	38	55.4	5.8
5	11550.00	54.1 PK	74.0	-19.9	1.41 V	204	37.1	17.0
6	11550.00	43.7 AV	54.0	-10.3	1.41 V	204	26.7	17.0
7	#17325.00	64.0 PK	68.2	-4.2	3.25 V	45	43.7	20.3

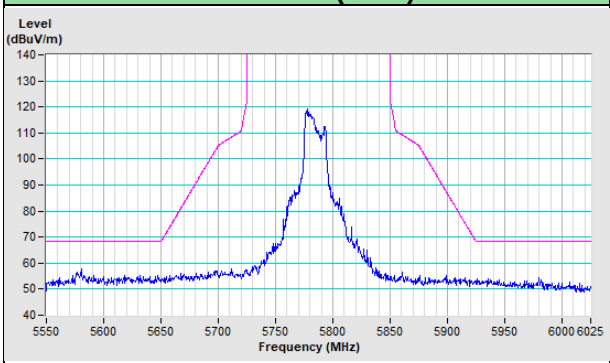
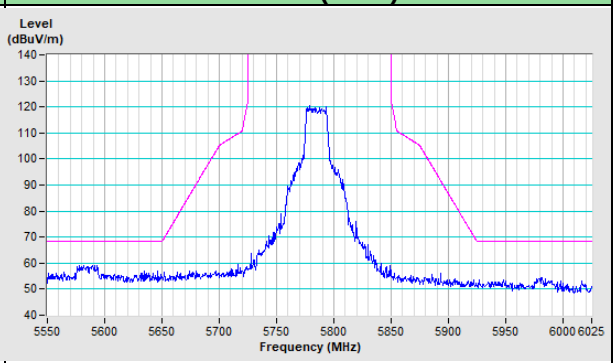
Remarks:

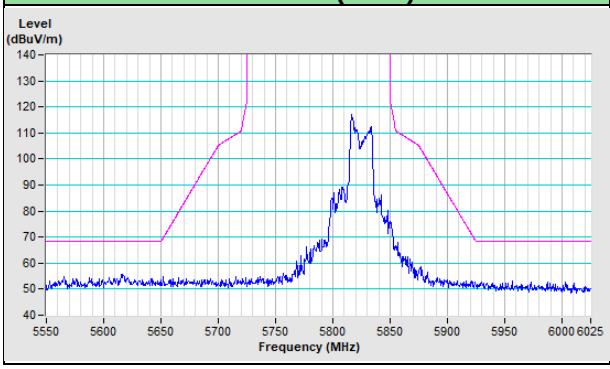
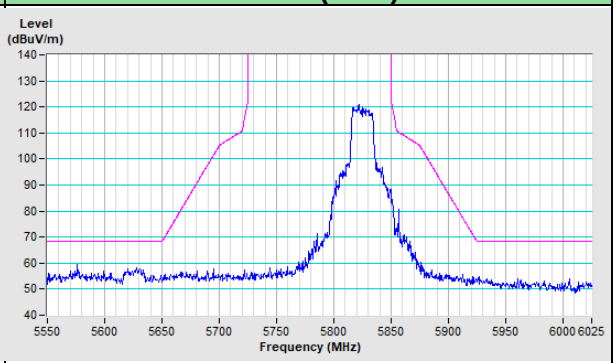
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

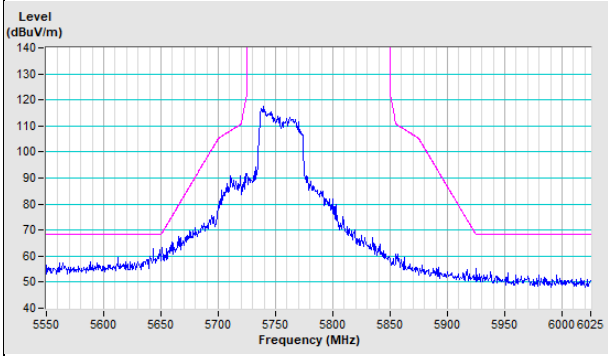
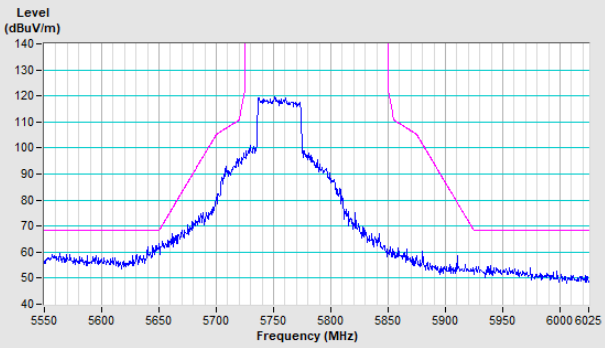


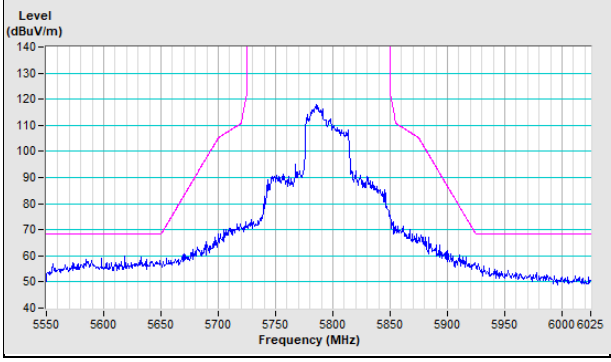
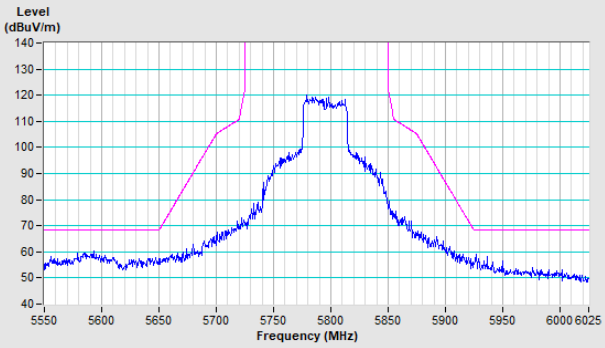
Mode B_Plot of Band Edge_ Beamforming

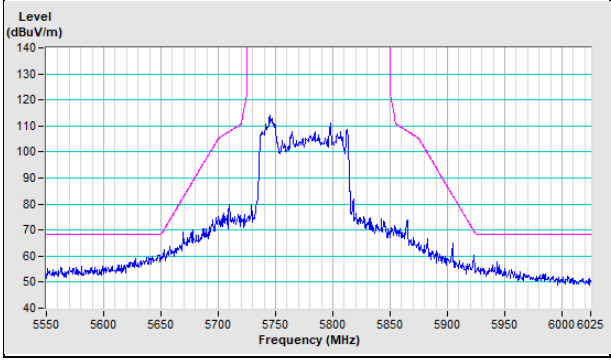
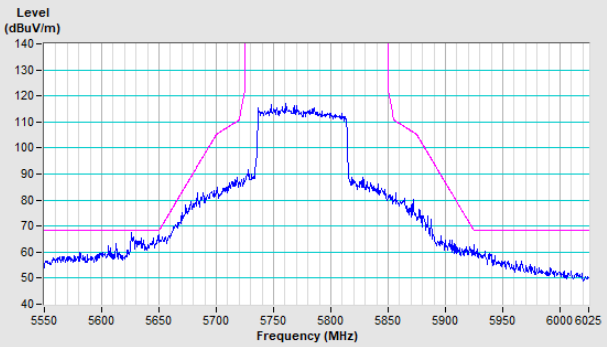
802.11ax (HE20) Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE40) Channel 151	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE40) Channel 159	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE80) Channel 155	
Horizontal (Peak)	Vertical (Peak)
	

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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

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

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

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

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

--- END ---