TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBCKS-WTW-P23040515A-1
FCC ID:	2AWHPR231
Product:	Starlink Router
Brand:	SPACEX
Model No.:	UTR-231
Received Date:	2023/4/25
Test Date:	2023/6/17 ~ 2023/8/3
Issued Date:	2023/8/16
Applicant:	Space Exploration Technologies Corp. (SPACEX)
Address:	1 Rocket Rd., Hawthorne, CA 90250 USA
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:** 2023/8/16

Wen Yu / Assistant Manager

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Prepared by : Phoenix Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P23040515A-1	Original release.	2023/8/16

1 Certificate

Product:	Starlink Router
Brand:	SPACEX
Test Model:	UTR-231
Sample Status:	Engineering sample
Applicant:	Space Exploration Technologies Corp. (SPACEX)
Test Date:	2023/6/17 ~ 2023/8/3
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)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 15.407(a)(2) 15.407(a)(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 -14.20 dB at 0.48984 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.2 dB at 67.92 MHz
15.407(b) (1/10) 15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 5353.50, 5725.00 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	5.5 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 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	Starlink Router
Brand	SPACEX
Test Model	UTR-231
Status of EUT	Engineering sample
Power Supply Rating	30 Vdc from power adapter
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 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 3466.7 Mbps 802.11ax: up to 4803.9 Mbps
Operating Frequency	5.25 GHz ~ 5.32 GHz 5.5 GHz ~ 5.72 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 16 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 8 802.11ac (VHT80), 802.11ax (HE80): 4 802.11ac (VHT160), 802.11ax (HE160): 1
Output Power	**CDD Mode:** 5.25 GHz ~ 5.32 GHz : 249.726 mW (23.97 dBm) 5.5 GHz ~ 5.72 GHz : 242.891 mW (23.85 dBm) 5.745 GHz ~ 5.825 GHz : 35.379 mW (15.49 dBm) **Beamforming Mode:** 5.25 GHz ~ 5.32 GHz : 249.726 mW (23.97 dBm) 5.5 GHz ~ 5.72 GHz : 211.579 mW (23.25 dBm) 5.745 GHz ~ 5.825 GHz : 35.379 mW (15.49 dBm)
EUT Category	Indoor Access Point

Note:

1. This report is prepared for FCC class II change. The difference compared with the Report No.: RFBCKS-WTW-P23040515-1 as the following:
   - ◆ Add DFS band <5.26 ~ 5.32 GHz, 5.50 ~ 5.72 GHz> by software.
   - ◆ Enabling bandwidth 160 MHz mode.
2. According to above conditions, for DFS band all of test items need to be performed and all data was verified to meet the requirements.
3. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3
WLAN (2.4GHz)	WLAN 5GHz (Low)	WLAN 5GHz (High)

4. Simultaneously transmission condition.

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

5. The EUT uses following accessories.

AC Adapter 1		
Brand	Model	Specification
STARLINK	UTP-231L	AC Input : 100-240V~, 1.6A, 50/60Hz DC Output : 30V-, 2.0A (Total Max 60W) LPS DC Output Cable : 1.5 m, No core no shieled Plug : FCC

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
2G1	Ant1	SPACEX	UTR-231	4.26	2.4~2.4835	PIFA	ipex(MHF)
2G2	Ant2			4.13	2.4~2.4835	PIFA	ipex(MHF)
2G3	Ant3			3.14	2.4~2.4835	PIFA	ipex(MHF)
2G4	Ant4			3.92	2.4~2.4835	PIFA	ipex(MHF)
5L1	Ant1	SPACEX	UTR-231	2.86	5.15~5.25	PIFA	ipex(MHF)
				4.20	5.25~5.35		
5L2	Ant2			2.28	5.15~5.25	PIFA	ipex(MHF)
				1.04	5.25~5.35		
5L3	Ant3			1.29	5.15~5.25	PIFA	ipex(MHF)
				1.68	5.25~5.35		
5L4	Ant4			1.53	5.15~5.25	PIFA	ipex(MHF)
				1.51	5.25~5.35		
5H1	Ant1	SPACEX	UTR-231	4.02	5.47~5.725	PIFA	ipex(MHF)
				4.23	5.725~5.85		
5H2	Ant2			4.02	5.47~5.725	PIFA	ipex(MHF)
				3.72	5.725~5.85		
5H3	Ant3			3.04	5.47~5.725	PIFA	ipex(MHF)
				3.93	5.725~5.85		
5H4	Ant4			4.90	5.47~5.725	PIFA	ipex(MHF)
				3.27	5.725~5.85		

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

2. The directional gain table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Connector Type
2.4~2.4835	5.81	PIFA	ipex(MHF)
5.15 ~ 5.25	6.21	PIFA	ipex(MHF)
5.25 ~ 5.35	5.06	PIFA	ipex(MHF)
5.47 ~ 5.725	6.61	PIFA	ipex(MHF)
5.725 ~ 5.85	6.14	PIFA	ipex(MHF)

3. The EUT incorporates a MIMO function:

5 GHz 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
802.11ac (VHT160)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
802.11ax (HE160)	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, 160 MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160 MHz) therefore the manufacturer will control the power for 802.11n/ac mode is same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

FOR 5250 ~ 5320 MHz

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

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

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

Channel	Frequency
58	5290 MHz

1 straddle channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency
50	5250 MHz

FOR 5500 ~ 5720 MHz

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	138	5690 MHz
122	5610 MHz		

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 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).
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition:Z-axis

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62	BPSK	MCS0
		802.11ax (HE80)	CDD	58	BPSK	MCS0
		802.11ax (HE160)	CDD	50	BPSK	MCS0
	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	106, 122, 138	BPSK	MCS0
6 dB Bandwidth	B	802.11a	CDD	144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	144	BPSK	MCS0
		802.11ax (HE40)	CDD	142	BPSK	MCS0
		802.11ax (HE80)	CDD	138	BPSK	MCS0
RF Output Power	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		802.11ac (VHT20)	CDD & Beamforming	52, 60, 64	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	54, 62	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	58	BPSK	MCS0
		802.11ac (VHT160)	CDD & Beamforming	50	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	52, 60, 64	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	54, 62	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	58	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	50	BPSK	MCS0

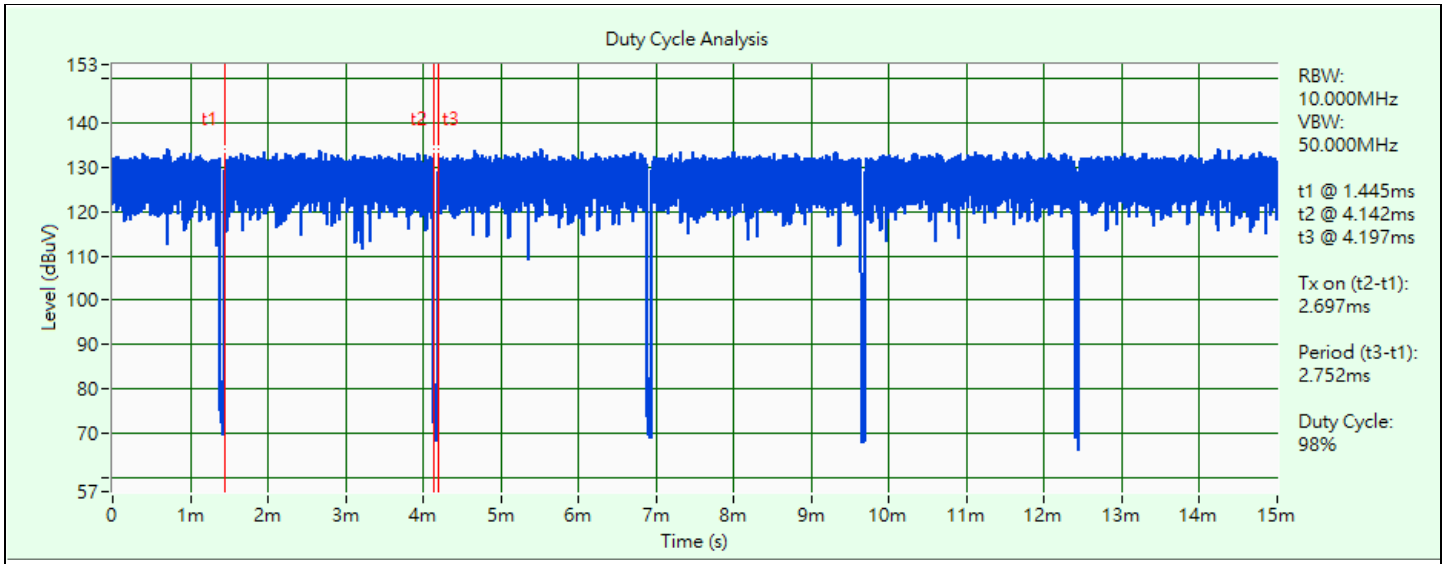
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11ac (VHT20)	CDD & Beamforming	100, 116, 140, 144	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	102, 110, 134, 142	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	106, 122, 138	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	106, 122, 138	BPSK	MCS0
Power Spectral Density / Occupied Bandwidth	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62	BPSK	MCS0
		802.11ax (HE80)	CDD	58	BPSK	MCS0
		802.11ax (HE160)	CDD	50	BPSK	MCS0
	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	106, 122, 138	BPSK	MCS0
Frequency Stability	A	802.11a	-	52	unmodulated	-
	B	802.11a	-	100	unmodulated	-
AC Power Conducted Emissions	A	802.11ax (HE20)	CDD	64	BPSK	MCS0
	B	802.11ax (HE40)	CDD	134	BPSK	MCS0
Unwanted Emissions below 1 GHz	A	802.11ax (HE20)	CDD	64	BPSK	MCS0
	B	802.11ax (HE40)	CDD	134	BPSK	MCS0

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Unwanted Emissions above 1 GHz	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62	BPSK	MCS0
		802.11ax (HE80)	CDD	58	BPSK	MCS0
		802.11ax (HE160)	CDD	50	BPSK	MCS0
	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	106, 122, 138	BPSK	MCS0
EUT Configure Mode:	A	5G Low Band Chip Model: MT7976A				
	B	5G High Band Chip Model: MT7975AN				
Note: Partial RU (resource unit) mechanism is not supported.						

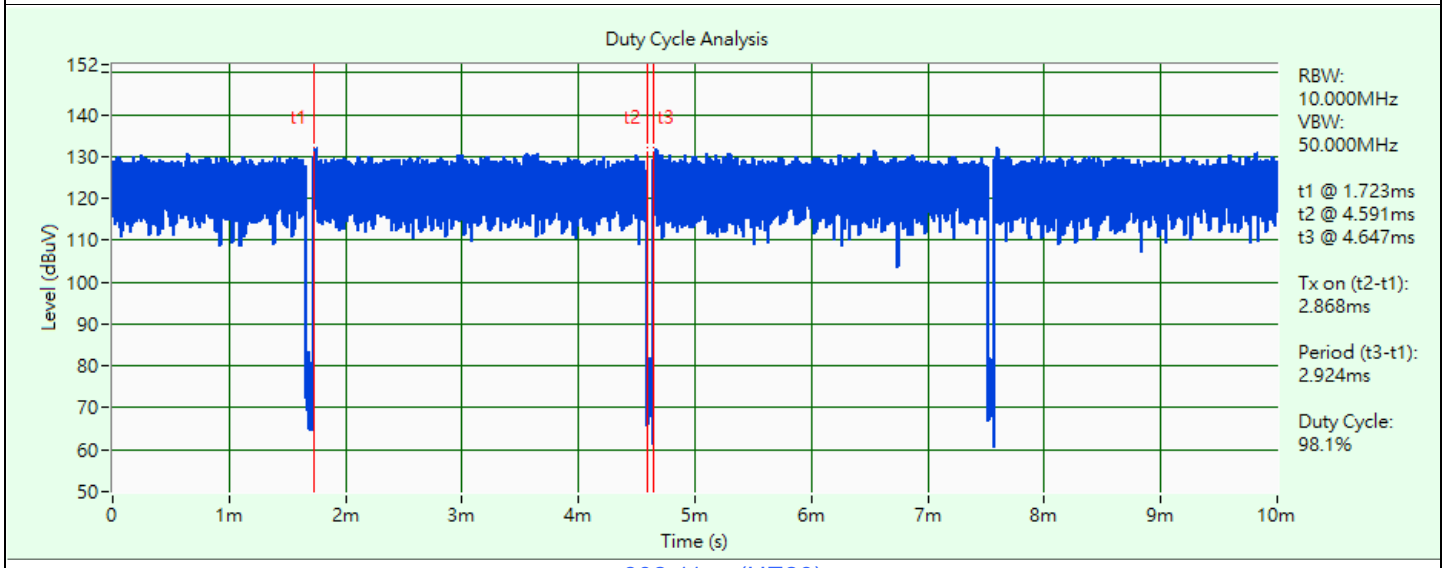
3.5 Duty Cycle of Test Signal

Mode A

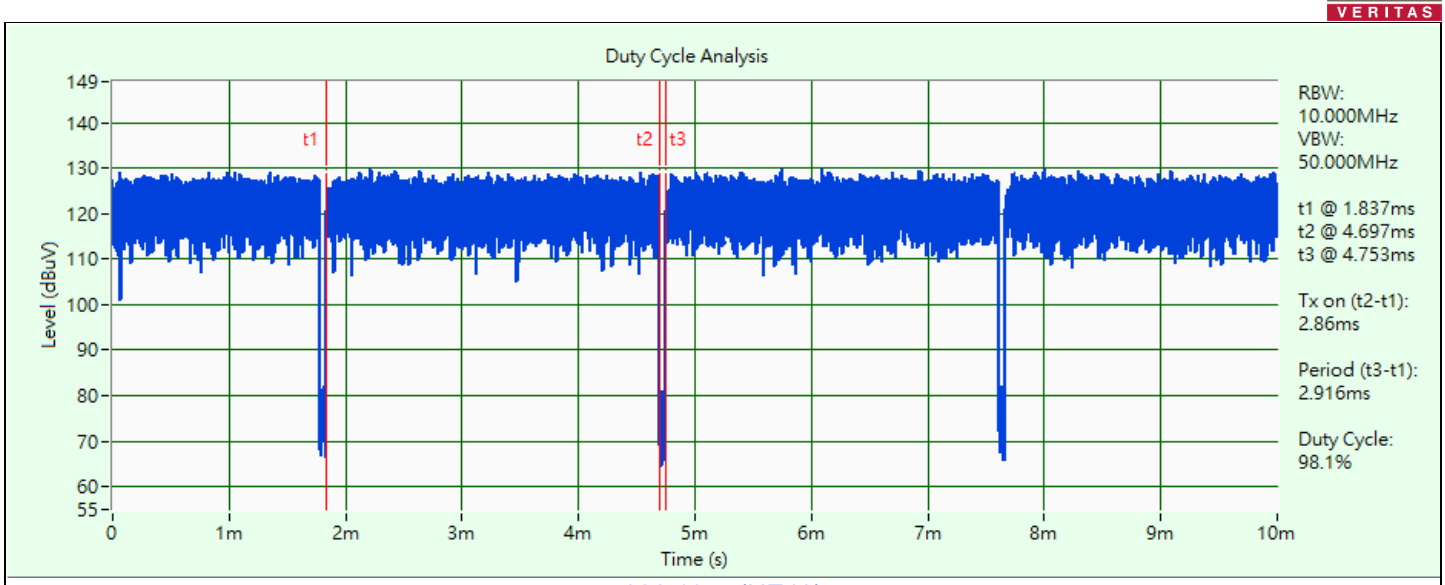
802.11a: Duty cycle = 2.697 ms / 2.752 ms x 100% = 98.0%
802.11ax (HE20): Duty cycle = 2.868 ms / 2.924 ms x 100% = 98.1%
802.11ax (HE40): Duty cycle = 2.86 ms / 2.916 ms x 100% = 98.1%
802.11ax (HE80): Duty cycle = 1.847 ms / 1.903 ms x 100% = 97.1%, duty factor = 10 * log (1/Duty cycle) = 0.13 dB
802.11ax (HE160): Duty cycle = 1.401 ms / 1.457 ms x 100% = 96.2%, duty factor = 10 * log (1/Duty cycle) = 0.17 dB



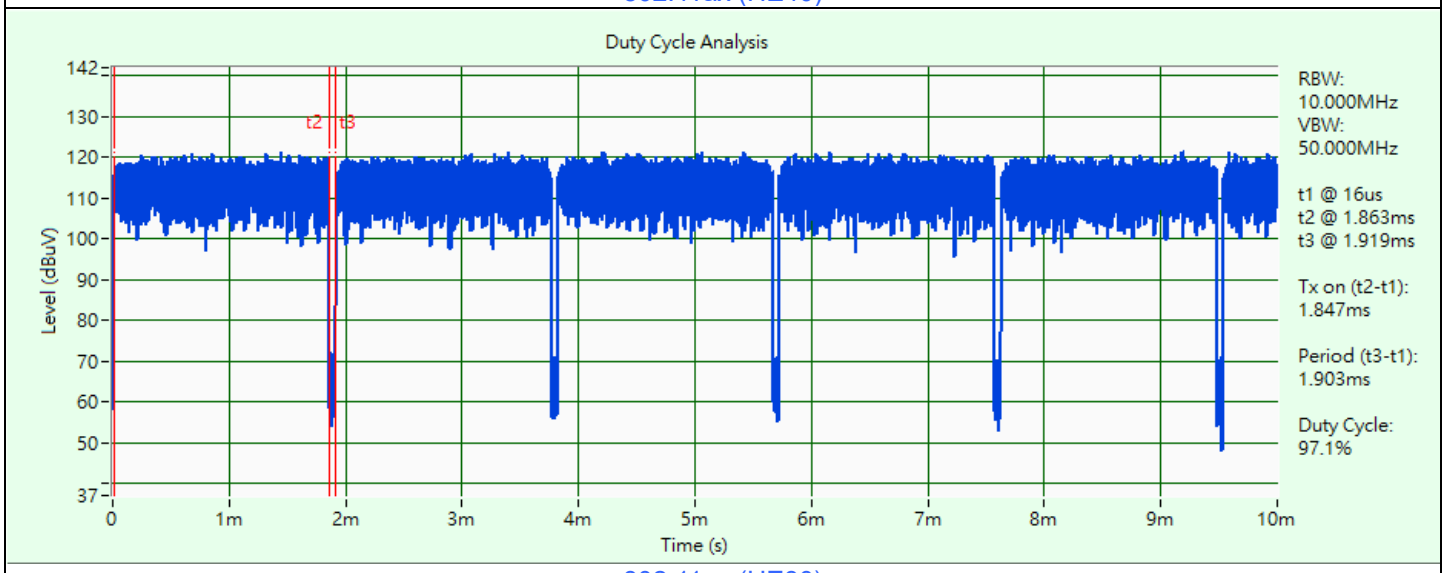
802.11a



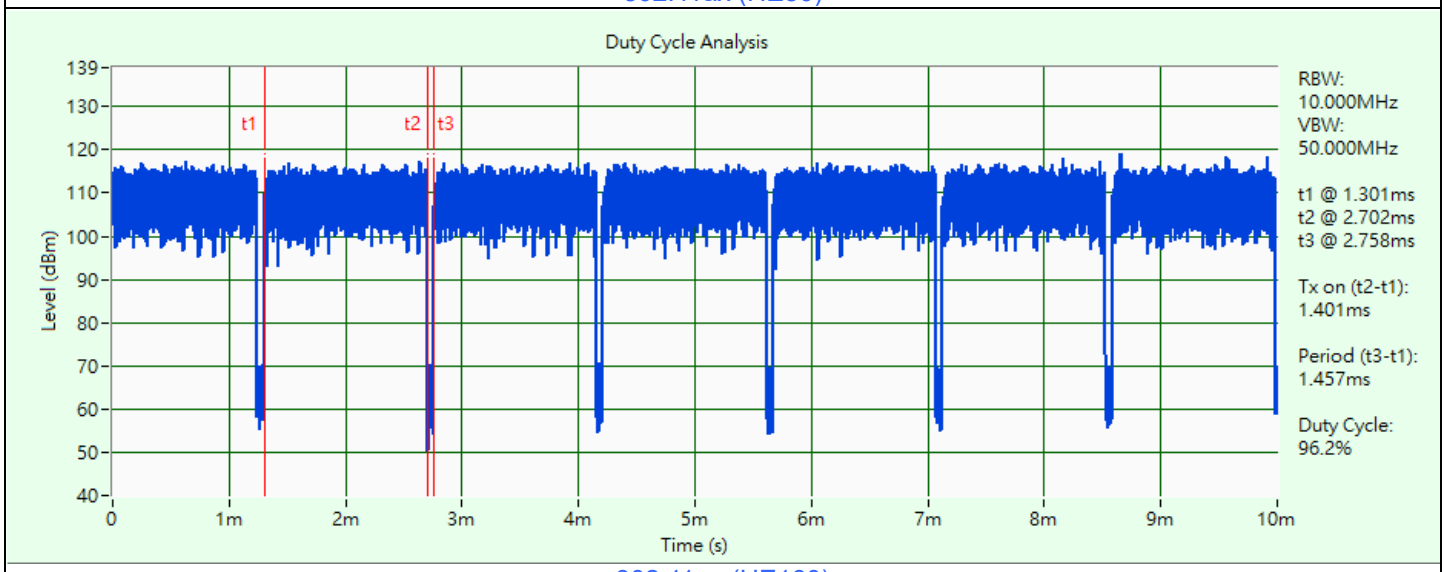
802.11ax (HE20)



802.11ax (HE40)



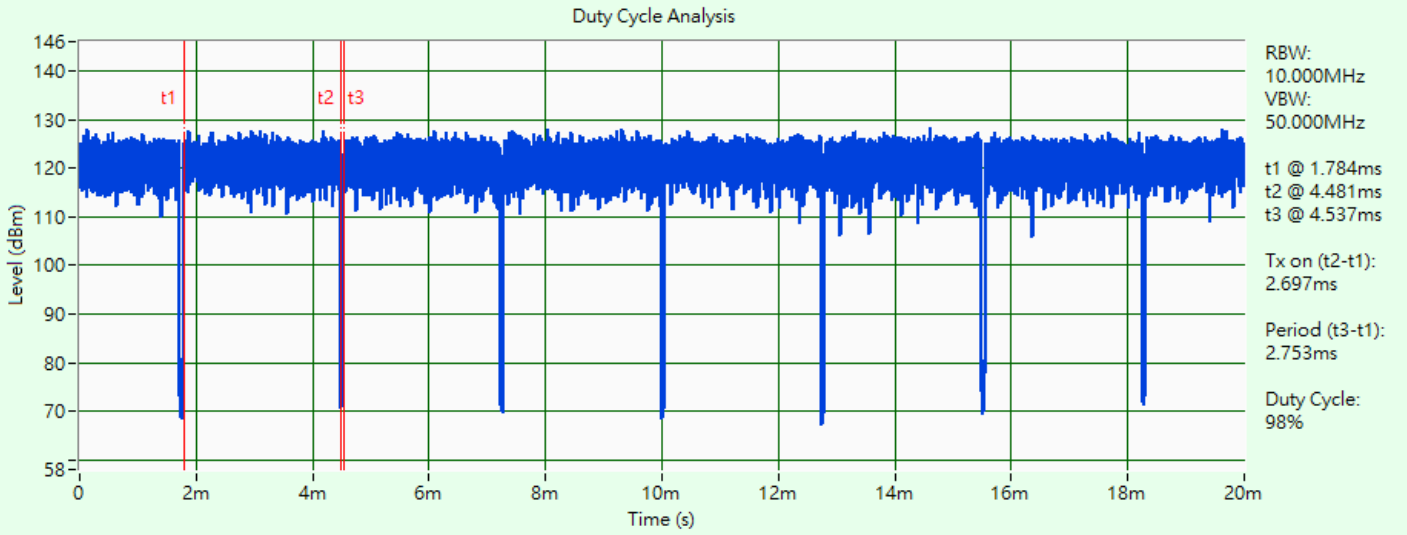
802.11ax (HE80)



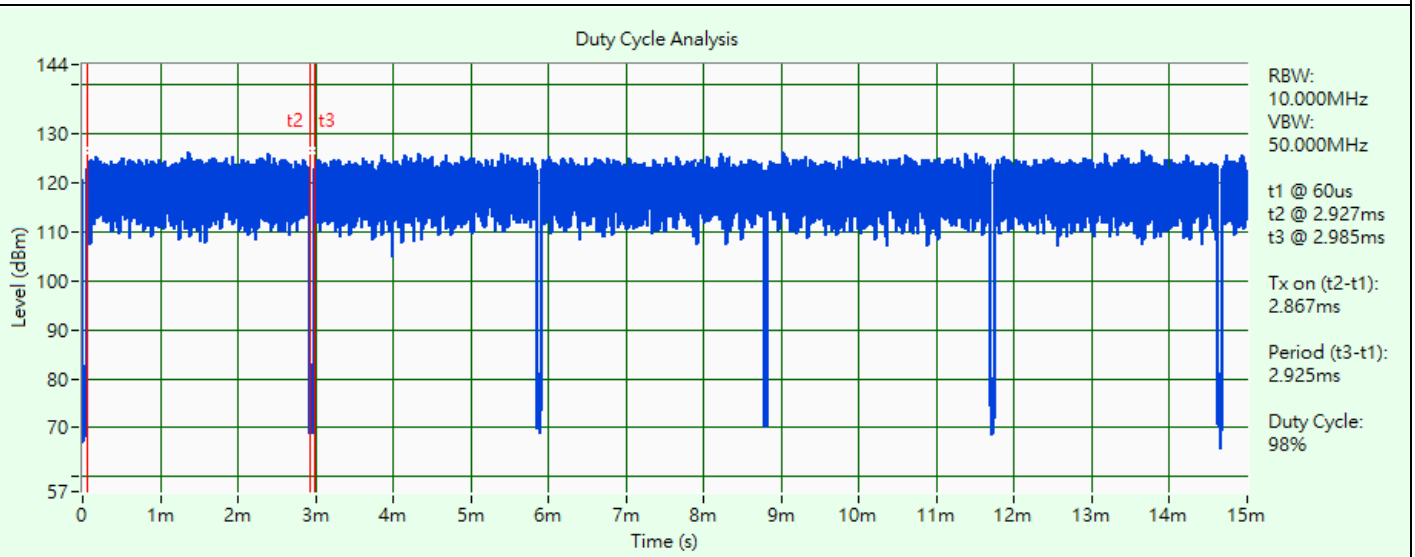
802.11ax (HE160)

Mode B

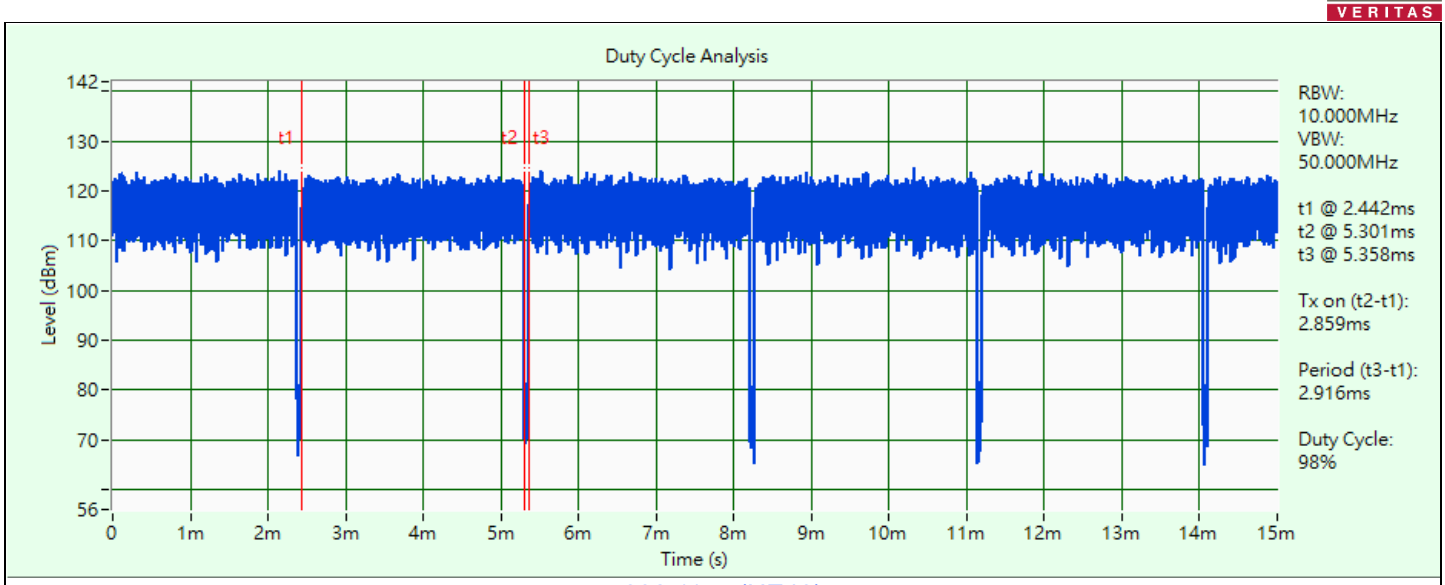
802.11a: Duty cycle = 2.697 ms / 2.753 ms x 100% = 98.0%
802.11ax (HE20): Duty cycle = 2.867 ms / 2.925 ms x 100% = 98.0%
802.11ax (HE40): Duty cycle = 2.859 ms / 2.916 ms x 100% = 98.0%
802.11ax (HE80): Duty cycle = 1.848 ms / 1.904 ms x 100% = 97.1%, duty factor = 10 * log (1/Duty cycle) = 0.13 dB



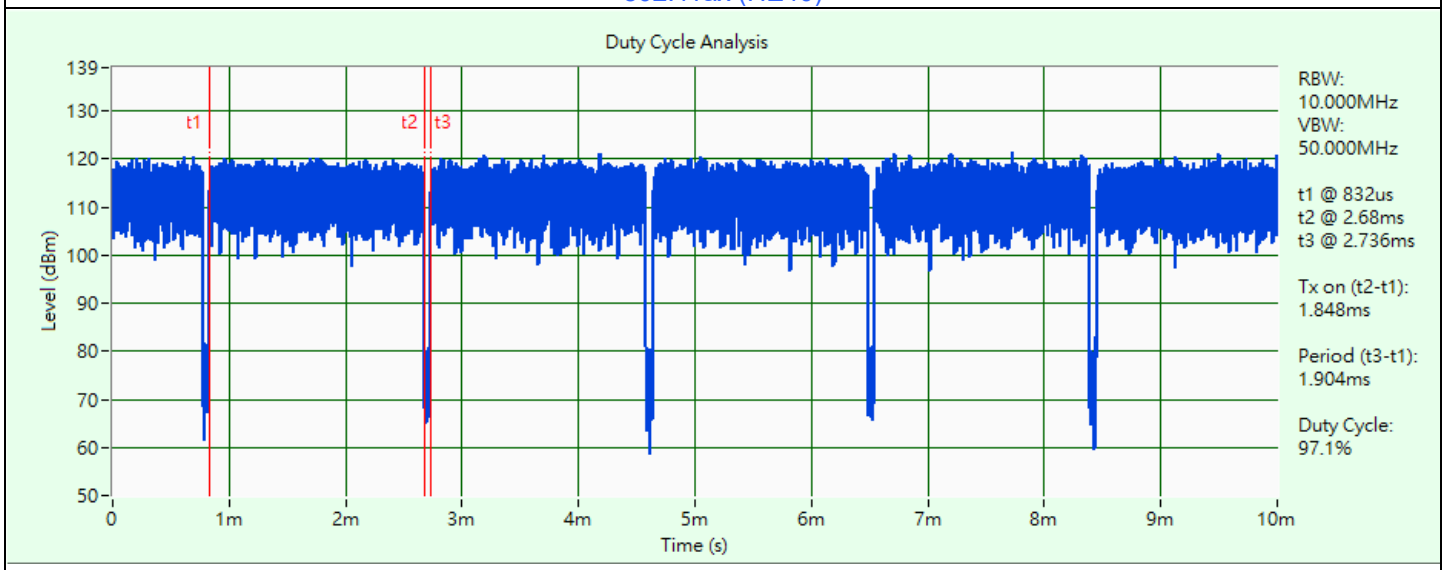
802.11a



802.11ax (HE20)



802.11ax (HE40)

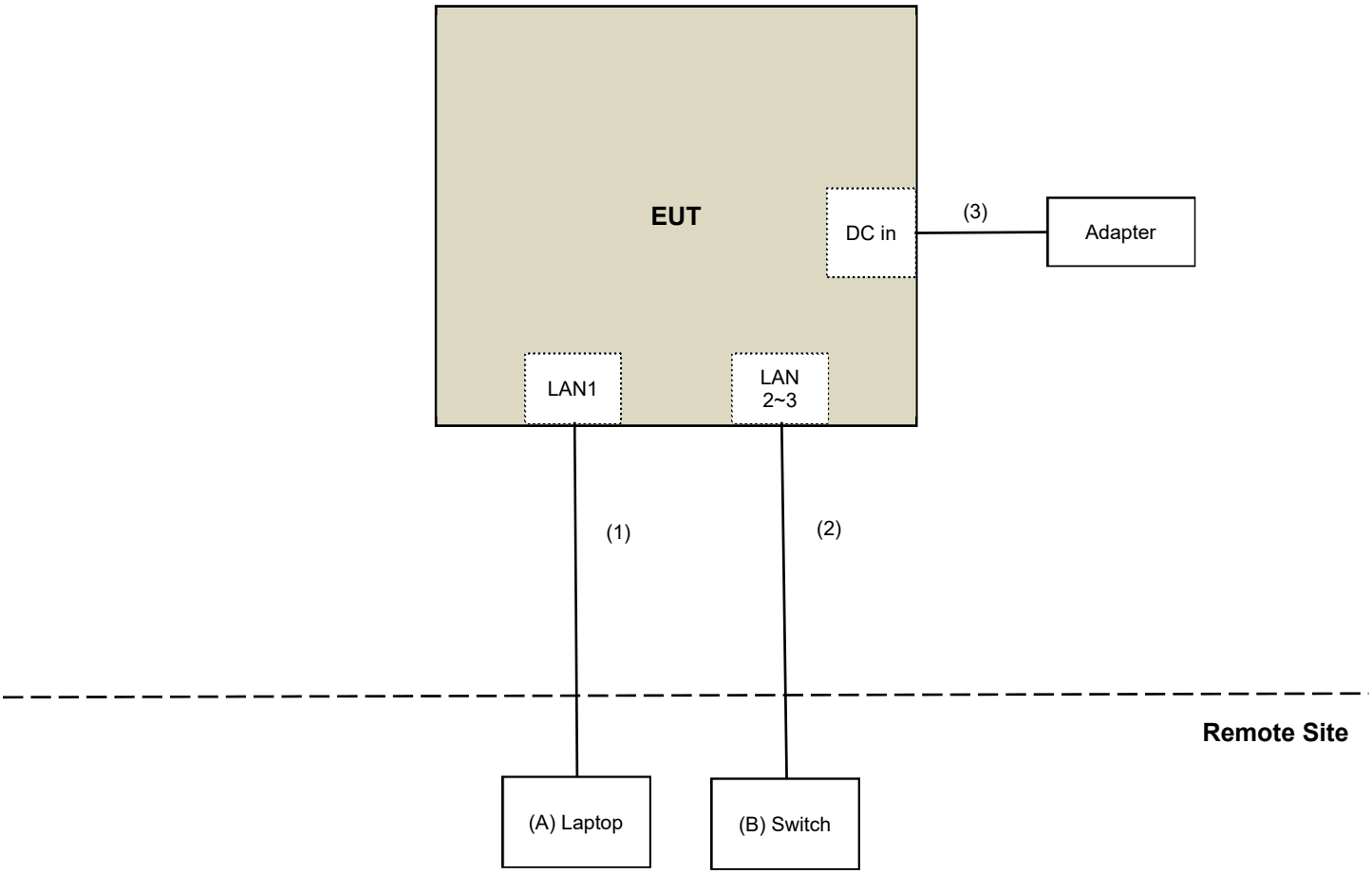


802.11ax (HE80)

3.6 Test Program Used and Operation Descriptions

Controlling software (QATool_UIv2.88_DLLv6.93_ap_2022.01.04(V14)c) 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	Lenovo	20U5S01X00 L14	PF-1ANPYA	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	RJ45 Cable	1	10	No	0	Provided by Lab
2	RJ45 Cable	2	10	No	0	Provided by Lab
3	DC Cable	1	1.5	No	0	Supplied by applicant

4 Test Instruments

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

4.1 26 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	MDCS18N-10	MDCS18N-10-01	2023/3/27	2024/3/26
MXA Signal Analyzer Keysight	N9020B	MY60112409	2023/2/18	2024/2/17
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: 2023/7/25

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	MDCS18N-10	MDCS18N-10-01	2023/3/27	2024/3/26
MXA Signal Analyzer Keysight	N9020B	MY60112409	2023/2/18	2024/2/17
Power Meter Anritsu	ML2495A	1529002	2023/6/17	2024/6/16
Pulse Power Sensor Anritsu	MA2411B	1726434	2023/6/19	2024/6/18
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: 2023/7/25

4.3 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get information of the instruments.

4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Source GOOD WILL	6905S	1991551	N/A	N/A
Fixed Attenuator Woken	MDCS18N-10	MDCS18N-10-01	2023/3/27	2024/3/26
MXA Signal Analyzer Keysight	N9020B	MY60112409	2023/2/18	2024/2/17
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	2022/12/26	2023/12/25
True RMS Clamp Meter FLUKE	325	31130711WS	2023/6/8	2024/6/7

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2023/7/25

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	N/A	EMC-01	2022/9/27	2023/9/26
EMI Test Receiver R&S	ESCS 30	847124/029	2022/10/14	2023/10/13
Fixed Attenuator STI	STI02-2200-10	005	2023/7/1	2024/6/30
LISN R&S	ESH3-Z5	848773/004	2022/10/18	2023/10/17
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2023/7/1	2024/6/30
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2023/8/3

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-406	2022/10/21	2023/10/20
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2022/12/28	2023/12/27
Loop Antenna Electro-Metrics	EM-6879	264	2023/2/21	2024/2/20
MXA Signal Analyzer Keysight	N9020B	MY60112408	2023/3/6	2024/3/5
MXE EMI Receiver Keysight	N9038A	MY59050100	2023/6/13	2024/6/12
Preamplifier Agilent	8447D	2944A10636	2023/3/12	2024/3/11
Preamplifier EMCI	EMC330N	980701	2023/2/18	2024/2/17
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2022/12/19	2023/12/18
		LOOPCAB-002	2022/12/19	2023/12/18
RF Coaxial Cable PEWC	8D	966-4-1	2023/2/18	2024/2/17
		966-4-2	2023/2/18	2024/2/17
		966-4-3	2023/2/18	2024/2/17
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2023/8/3

4.9 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-783	2022/11/13	2023/11/12
	BBHA 9170	9170-739	2022/11/13	2023/11/12
MXA Signal Analyzer Keysight	N9020B	MY60112408	2023/3/6	2024/3/5
Preamplifier EMCI	EMC12630SE	980688	2022/10/4	2023/10/3
	EMC184045SE	980387	2022/12/28	2023/12/27
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2023/2/20	2024/2/19
	EMC102-KM-KM-1200	160924	2022/12/28	2023/12/27
	EMC104-SM-SM-1200	160922	2022/12/15	2023/12/14
	EMC104-SM-SM-2000	180502	2023/3/27	2024/3/26
	EMC104-SM-SM-6000	210704	2022/11/4	2023/11/3
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2023/6/17 ~ 2023/8/3

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 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	250mW (24 dBm)

Operation Band	Limit
U-NII-2A	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

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.

5.3 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-2A	11 dBm/MHz
U-NII-2C	11 dBm/MHz
U-NII-3	30 dBm/500 kHz

5.4 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.

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 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.

5.8 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).

5.9 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)

For transmitters operating in the 5.15-5.25 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.25-5.35 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.47-5.725 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
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.		

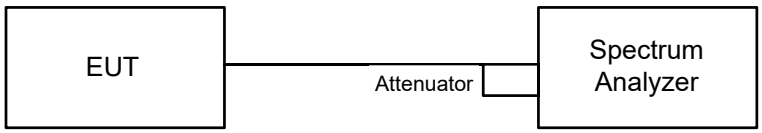
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup



6.1.2 Test Procedure

a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6.2 RF Output Power

6.2.1 Test Setup

For channel straddling:

6.2.2 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.

For channel straddling 5.725 GHz:

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

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

For channel straddling 5.25 GHz:

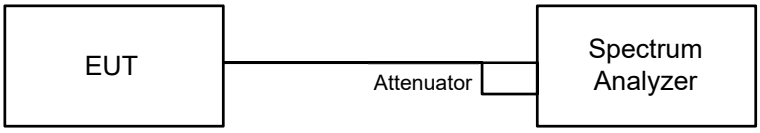
Method SA-2

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.)Sweep time = auto, trigger set to “free run”.
d. Trace average at least 100 traces in power averaging mode.
e. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
f. Record the max value and add 10 log (1/duty cycle).

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 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

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

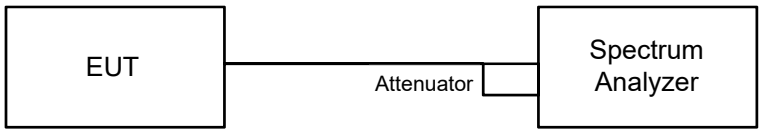
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500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

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).

6.4 6 dB Bandwidth

6.4.1 Test Setup

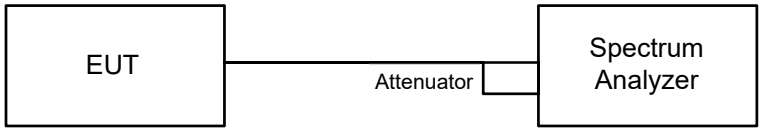


6.4.2 Test Procedure

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.

6.5 Occupied Bandwidth

6.5.1 Test Setup

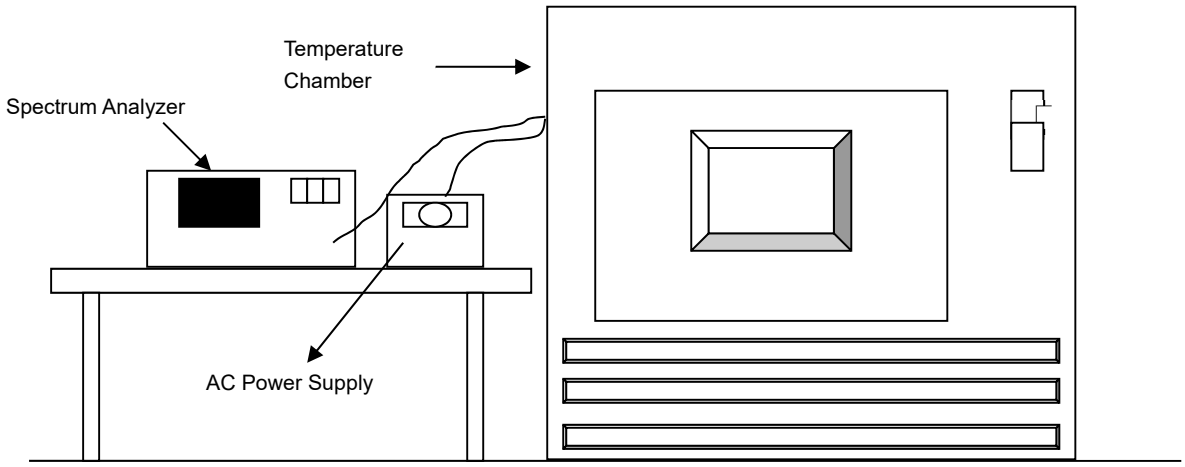


6.5.2 Test Procedure

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.

6.6 Frequency Stability

6.6.1 Test Setup

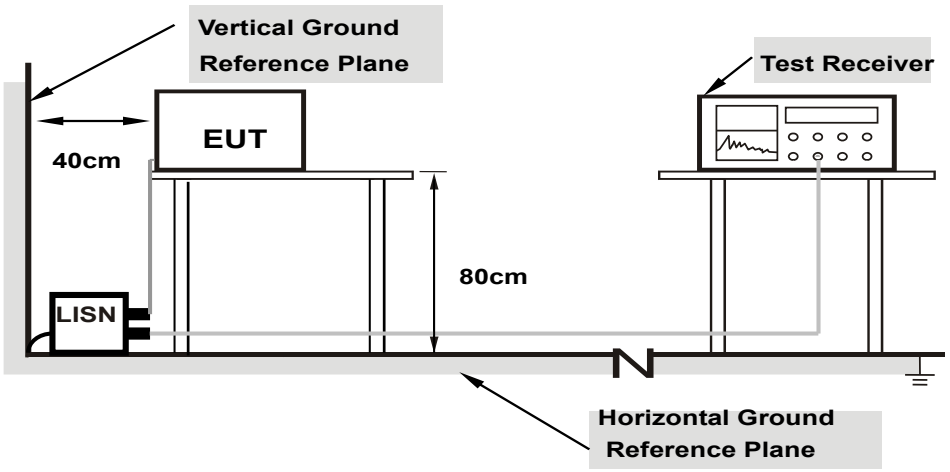


6.6.2 Test Procedure

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.

6.7 AC Power Conducted Emissions

6.7.1 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).

6.7.2 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.

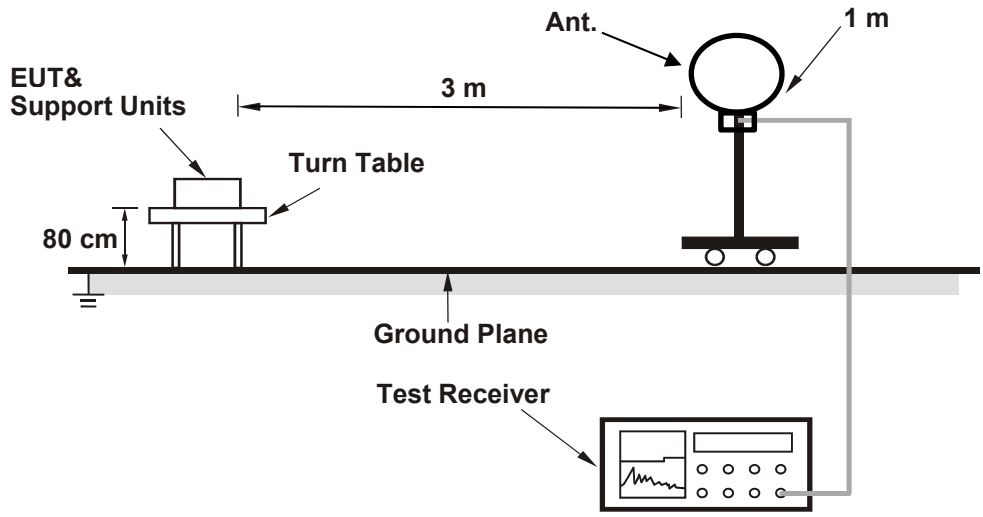
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

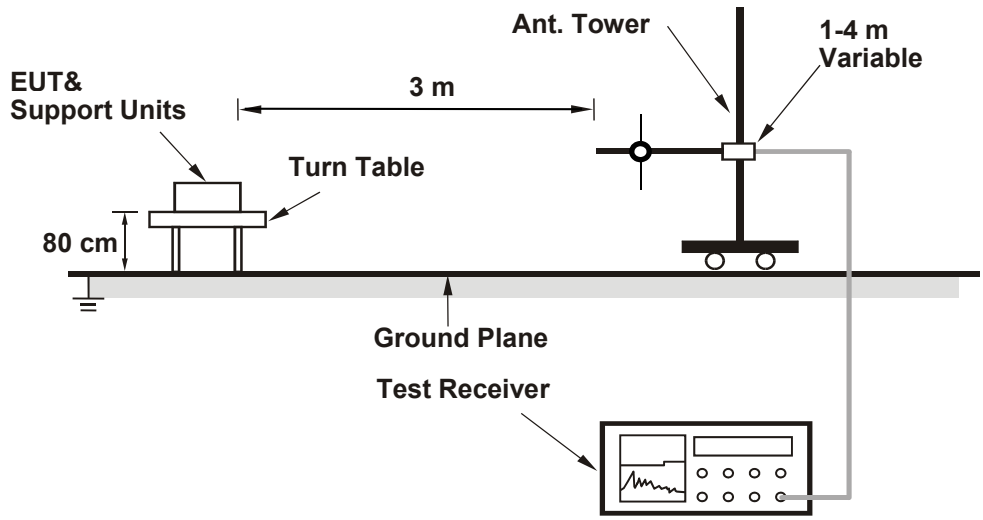
6.8 Unwanted Emissions below 1 GHz

6.8.1 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).

6.8.2 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.

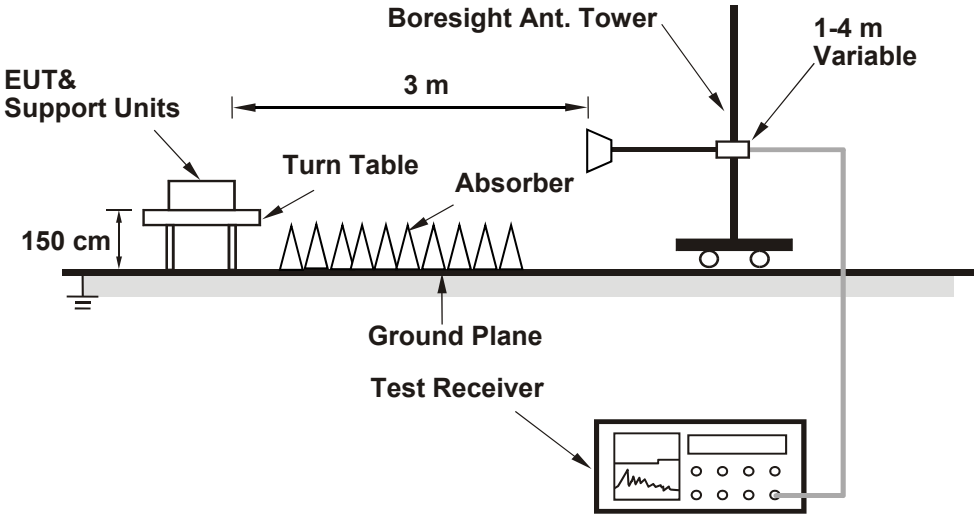
e. The test-receiver system was set to Quasi-peak(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP), Average detection (AV), Peak detection (PK) at frequency (30MHz to 1 GHz).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 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 26 dB Bandwidth

Mode A

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

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	20.64	20.89	20.60	20.21
60	5300	22.33	26.12	22.52	22.10
64	5320	20.62	19.36	23.20	21.32

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	20.21	24.05	>	24
60	5300	22.10	24.44	>	24
64	5320	19.36	23.86	<	24

Note: For U-NII-2A Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	21.28	21.19	21.49	21.16
60	5300	22.09	22.01	23.50	21.68
64	5320	22.47	21.52	22.66	21.28

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.16	24.25	>	24
60	5300	21.68	24.36	>	24
64	5320	21.28	24.27	>	24

Note: For U-NII-2A Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	39.52	39.43	39.48	39.49
62	5310	39.57	39.73	40.27	39.78

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	39.43	26.95	>	24
62	5310	39.57	26.97	>	24

Note: For U-NII-2A Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	86.71	80.38	86.21	80.61

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	80.38	30.05	>	24

Note: For U-NII-2A Band output power limitation is determined based on 26dBc bandwidth.

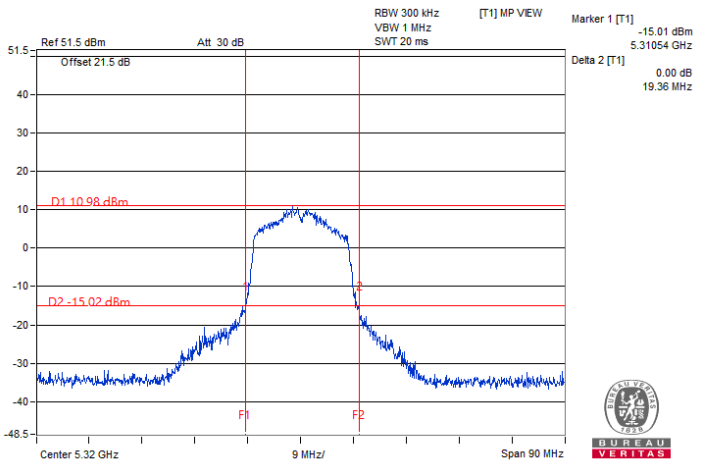
802.11ax (HE160)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	84.03	82.49	82.22	82.62
50 (U-NII-2A)	5250	82.29	82.11	82.31	82.03

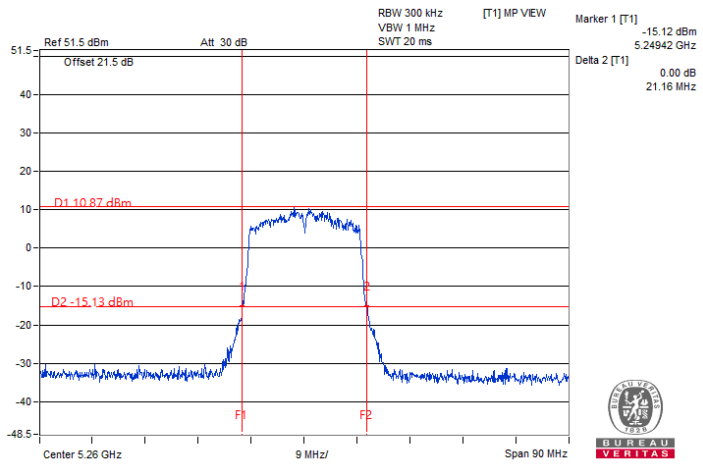
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
50 (U-NII-2A)	5250	82.03	30.13	>	24

Note: For U-NII-2A Band output power limitation is determined based on 26dBc bandwidth.

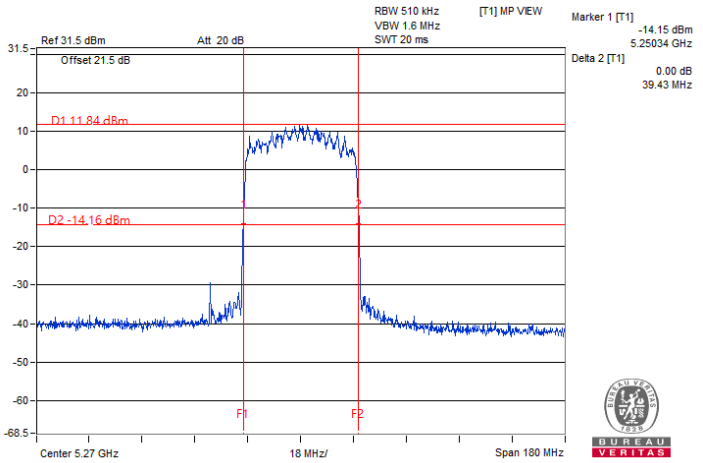
Spectrum Plot of Minimum Value



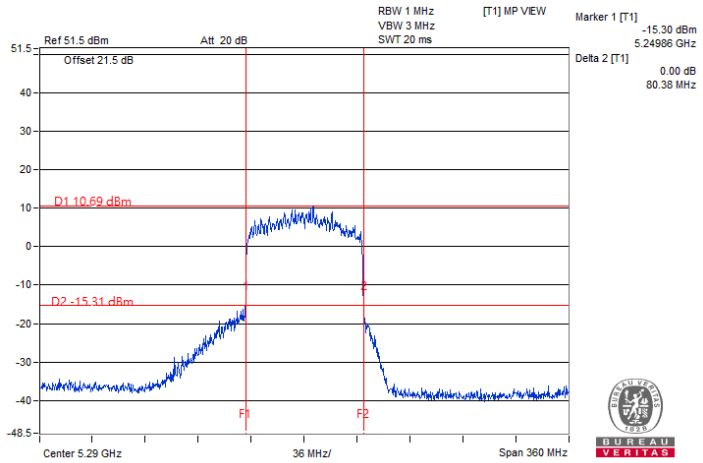
802.11a / Chain 1 : CH 64



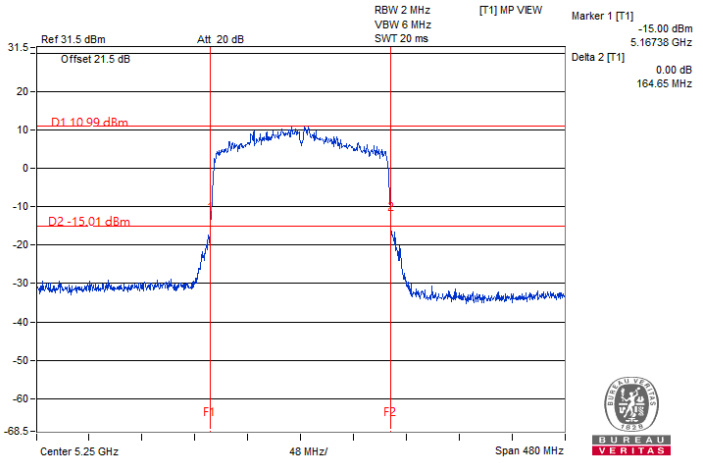
802.11ax (HE20) / Chain 3 : CH 52



802.11ax (HE40) / Chain 1 : CH 54



802.11ax (HE80) / Chain 1 : CH 58



802.11ax (HE160) / Chain 3 : CH 50 (U-NII-2A)

Notes:

1. For U-NII-1 straddle channel = 5250 MHz - Marker 1
2. For U-NII-2A straddle channel = Marker 1 + Delta 2 - 5250 MHz

Mode B

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

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	19.85	19.88	19.86	19.95
116	5580	19.95	19.91	19.53	19.76
140	5700	19.92	19.63	19.90	19.94
144 (U-NII-2C)	5720	14.90	14.62	14.69	14.69
144 (U-NII-3)	5720	5.01	4.93	4.92	4.84

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
100	5500	19.85	23.97	<	24
116	5580	19.53	23.9	<	24
140	5700	19.63	23.92	<	24
144 (U-NII-2C)	5720	14.62	22.64	<	24

Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	21.82	21.44	21.57	21.40
116	5580	21.76	21.96	21.00	21.54
140	5700	21.56	21.71	21.67	22.03
144 (U-NII-2C)	5720	15.56	15.56	15.43	15.92
144 (U-NII-3)	5720	5.51	5.90	5.66	5.60

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
100	5500	21.40	24.3	>	24
116	5580	21.00	24.22	>	24
140	5700	21.56	24.33	>	24
144 (U-NII-2C)	5720	15.43	22.88	<	24

Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	39.67	39.48	39.79	39.65
110	5550	39.71	39.62	39.63	39.68
134	5670	39.51	39.55	39.56	39.67
142 (U-NII-2C)	5710	35.08	35.11	35.04	35.20
142 (U-NII-3)	5710	5.11	5.10	5.14	5.08

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
102	5510	39.48	26.96 > 24
110	5550	39.62	26.97 > 24
134	5670	39.51	26.96 > 24
142 (U-NII-2C)	5710	35.04	26.44 > 24

Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

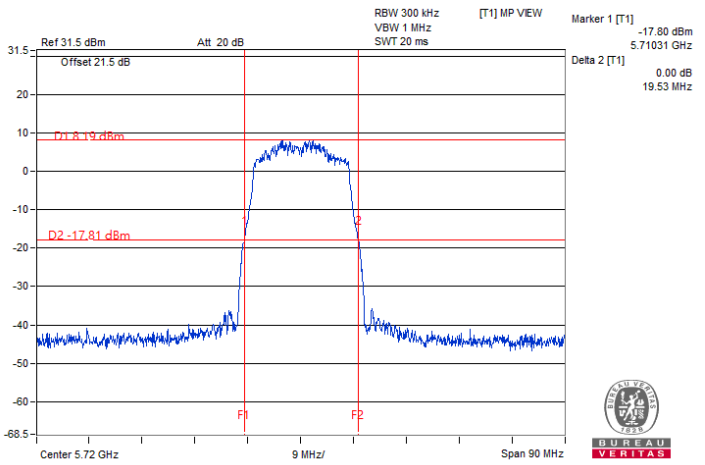
802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	80.29	80.11	80.49	80.24
122	5610	80.47	80.44	80.41	80.36
138 (U-NII-2C)	5690	75.21	75.13	75.19	75.11
138 (U-NII-3)	5690	5.09	5.16	5.43	5.20

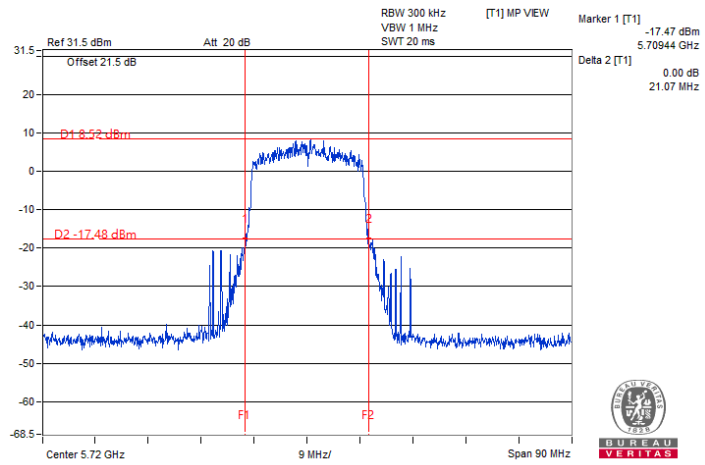
Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
106	5530	80.11	30.03 > 24
122	5610	80.36	30.05 > 24
138 (U-NII-2C)	5690	75.11	29.75 > 24

Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

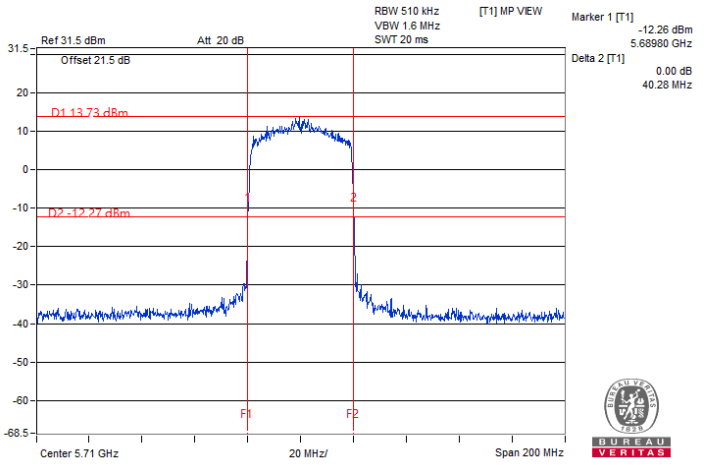
Spectrum Plot of Minimum Value



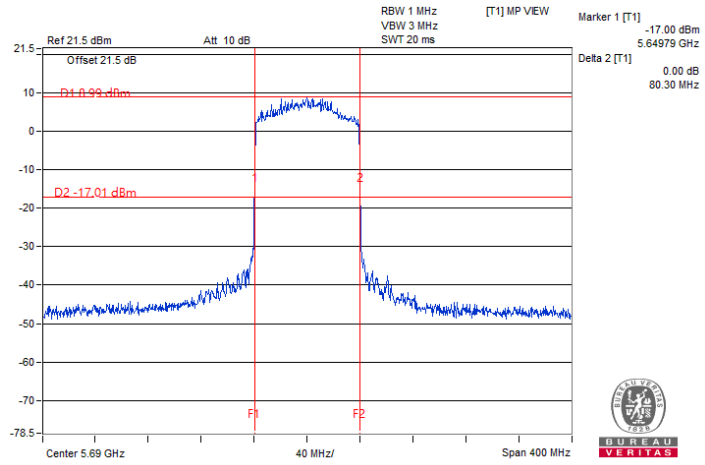
802.11a / Chain 3 : CH 144 (U-NII-3)



802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE40) / Chain 3 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)

Notes:

1. For U-NII-2C straddle channel = 5725 MHz - Marker 1
2. For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.2 RF Output Power

Mode A

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

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				
52	5260	18.35	17.84	18.06	17.43	248.513	23.95	24	Pass
60	5300	18.37	17.51	18.23	17.55	248.483	23.95	24	Pass
64	5320	18.11	17.87	18.00	17.21	241.647	23.83	23.86	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the directional gain is 4.2 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				
52	5260	18.24	17.79	17.66	17.36	239.593	23.79	24	Pass
60	5300	18.09	17.64	18.06	17.30	240.17	23.81	24	Pass
64	5320	18.12	17.91	17.89	17.18	240.422	23.81	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the directional gain is 4.2 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				
54	5270	18.12	18.01	17.72	17.29	240.84	23.82	24	Pass
62	5310	18.06	17.32	17.88	17.30	233.004	23.67	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the maximum gain is 4.2 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				
58	5290	17.83	17.27	17.32	16.81	215.932	23.34	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the maximum gain is 4.2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160) 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				
*50 (U-NII-1)	5250	12.75	12.79	13.30	11.91	77.739	18.91	30	Pass
*50 (U-NII-2A)	5250	11.36	12.56	12.27	11.22	64.287	18.08	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 2.86 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 4.2 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				
52	5260	18.40	17.98	17.86	17.46	248.802	23.96	24	Pass
60	5300	18.29	17.78	18.20	17.47	249.348	23.97	24	Pass
64	5320	18.29	18.08	18.04	17.35	249.726	23.97	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the directional gain is 4.2 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				
54	5270	18.28	18.18	17.88	17.41	249.52	23.97	24	Pass
62	5310	18.22	17.44	18.06	17.42	241.018	23.82	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the maximum gain is 4.2 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				
58	5290	18.10	17.50	17.60	17.02	228.694	23.59	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2A, the maximum gain is 4.2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE160) 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				
*50 (U-NII-1)	5250	12.75	12.79	13.30	11.91	77.739	18.91	30	Pass
*50 (U-NII-2A)	5250	11.36	12.56	12.27	11.22	64.287	18.08	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 2.86 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 4.2 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				
52	5260	18.24	17.79	17.66	17.36	239.593	23.79	24	Pass
60	5300	18.09	17.64	18.06	17.30	240.17	23.81	24	Pass
64	5320	18.12	17.91	17.89	17.18	240.422	23.81	24	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2A, the directional gain is 5.06 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				
54	5270	18.12	18.01	17.72	17.29	240.84	23.82	24	Pass
62	5310	18.06	17.32	17.88	17.30	233.004	23.67	24	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2A, the directional gain is 5.06 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				
58	5290	17.83	17.27	17.32	16.81	215.932	23.34	24	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2A, the directional gain is 5.06 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160) 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				
*50 (U-NII-1)	5250	12.75	12.79	13.30	11.91	77.739	18.91	29.79	Pass
*50 (U-NII-2A)	5250	11.36	12.56	12.27	11.22	64.287	18.08	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
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 6.21 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.21-6) = 29.79 dBm.
4. For U-NII-2A, the directional gain is 5.06 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				
52	5260	18.40	17.98	17.86	17.46	248.802	23.96	24	Pass
60	5300	18.29	17.78	18.20	17.47	249.348	23.97	24	Pass
64	5320	18.29	18.08	18.04	17.35	249.726	23.97	24	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2A, the directional gain is 5.06 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				
54	5270	18.28	18.18	17.88	17.41	249.52	23.97	24	Pass
62	5310	18.22	17.44	18.06	17.42	241.018	23.82	24	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2A, the directional gain is 5.06 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				
58	5290	18.10	17.50	17.60	17.02	228.694	23.59	24	Pass

Notes:

1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2A, the directional gain is 5.06 dBi < 6 dBi, so the output power limit shall not be reduced.

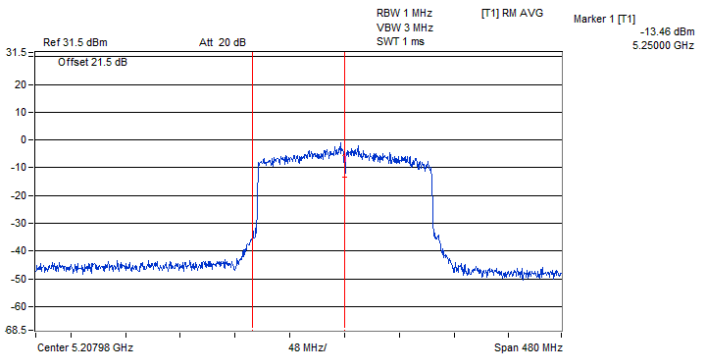
802.11ax (HE160) Beamforming

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				
*50 (U-NII-1)	5250	12.75	12.79	13.30	11.91	77.739	18.91	29.79	Pass
*50 (U-NII-2A)	5250	11.36	12.56	12.27	11.22	64.287	18.08	24	Pass

Notes:

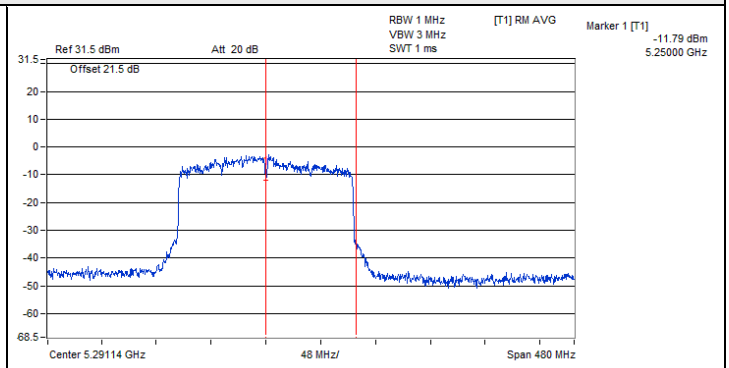
1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 6.21 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.21-6) = 29.79 dBm.
4. For U-NII-2A, the directional gain is 5.06 dBi < 6 dBi, so the output power limit shall not be reduced.

Spectrum Plot for channel straddling



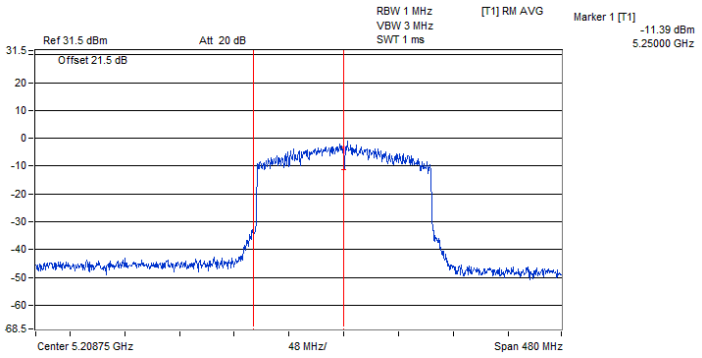
TX Channel Bandwidth 84.03 MHz Power 12.75 dBm

802.11ac (VHT160) CDD / Chain 0 : CH 50 (U-NII-1)



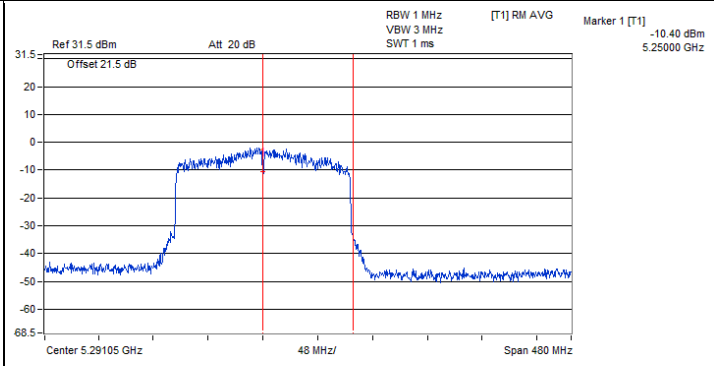
TX Channel Bandwidth 82.29 MHz Power 11.36 dBm

802.11ac (VHT160) CDD / Chain 0 : CH 50 (U-NII-2A)



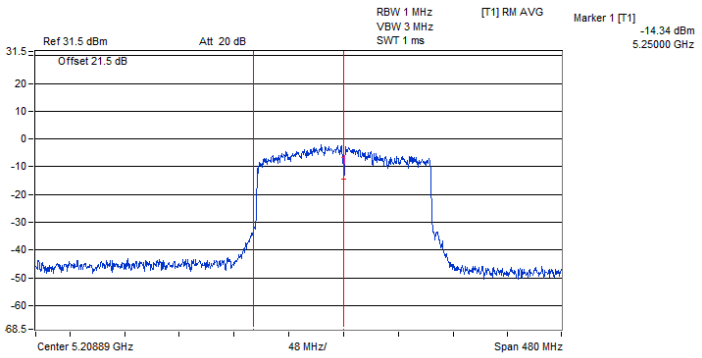
TX Channel Bandwidth 82.49 MHz Power 12.79 dBm

802.11ac (VHT160) CDD / Chain 1 : CH 50 (U-NII-1)



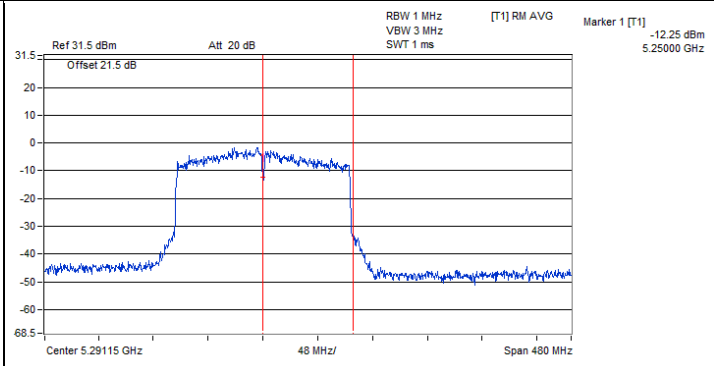
TX Channel Bandwidth 82.11 MHz Power 12.56 dBm

802.11ac (VHT160) CDD / Chain 1 : CH 50 (U-NII-2A)



TX Channel Bandwidth 82.22 MHz Power 13.3 dBm

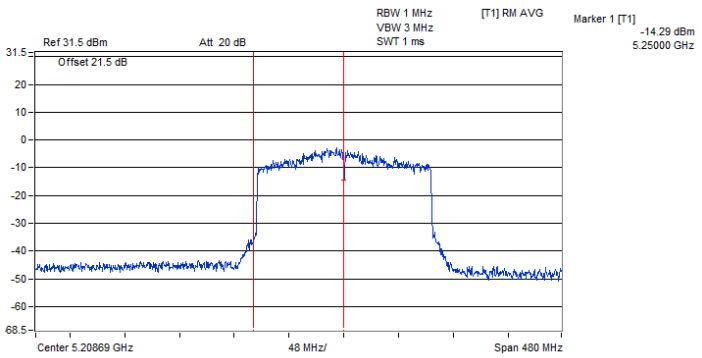
802.11ac (VHT160) CDD / Chain 2 : CH 50 (U-NII-1)



TX Channel Bandwidth 82.31 MHz Power 12.27 dBm

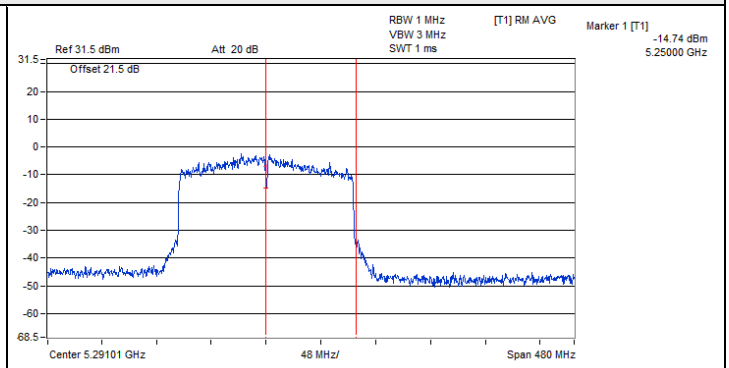
802.11ac (VHT160) CDD / Chain 2 : CH 50 (U-NII-2A)

Spectrum Plot for channel straddling



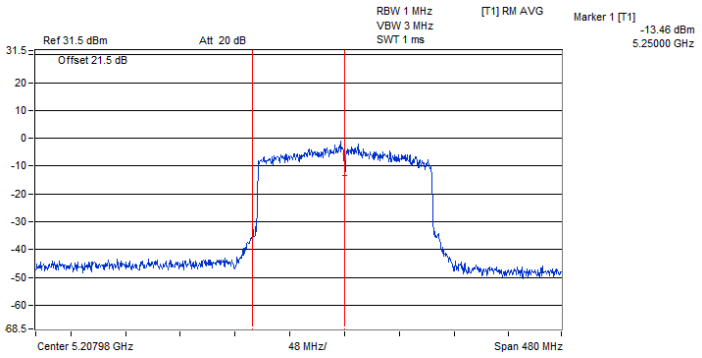
TX Channel Bandwidth 82.62 MHz Power 11.91 dBm

802.11ac (VHT160) CDD / Chain 3 : CH 50 (U-NII-1)



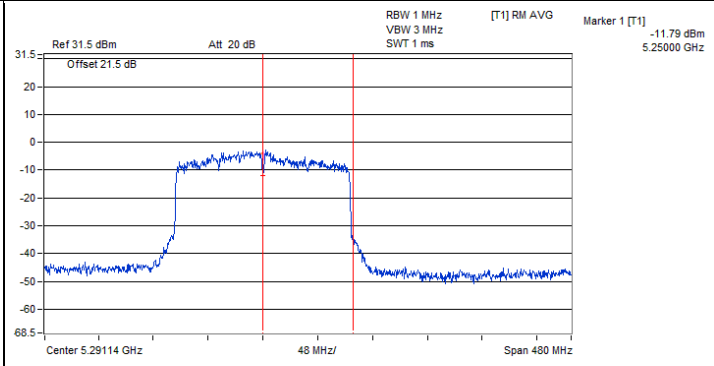
TX Channel Bandwidth 82.03 MHz Power 11.22 dBm

802.11ac (VHT160) CDD / Chain 3 : CH 50 (U-NII-2A)



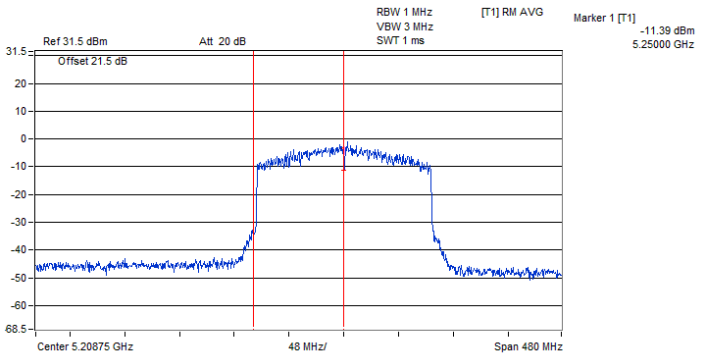
TX Channel Bandwidth 84.03 MHz Power 12.75 dBm

802.11ax (HE160) CDD / Chain 0 : CH 50 (U-NII-1)



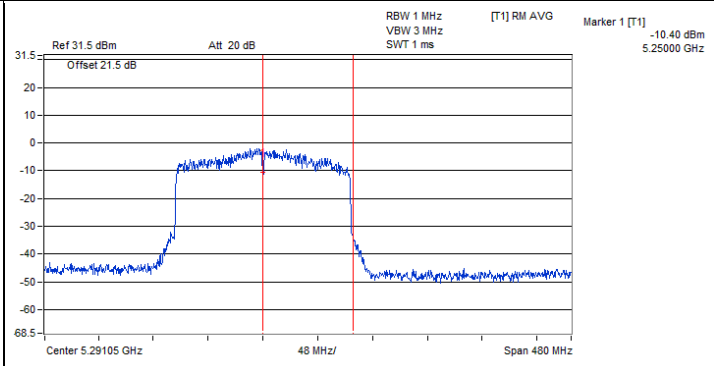
TX Channel Bandwidth 82.29 MHz Power 11.36 dBm

802.11ax (HE160) CDD / Chain 0 : CH 50 (U-NII-2A)



TX Channel Bandwidth 82.49 MHz Power 12.79 dBm

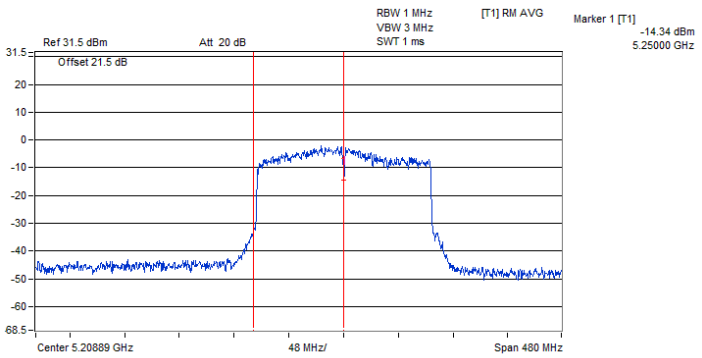
802.11ax (HE160) CDD / Chain 1 : CH 50 (U-NII-1)



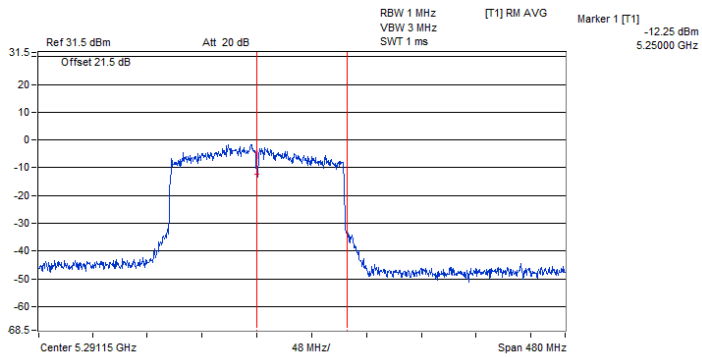
TX Channel Bandwidth 82.11 MHz Power 12.56 dBm

802.11ax (HE160) CDD / Chain 1 : CH 50 (U-NII-2A)

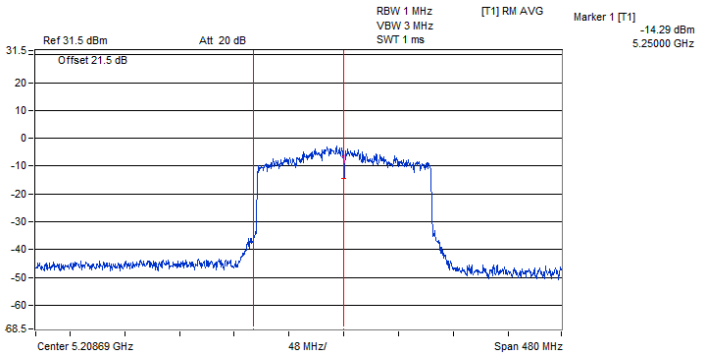
Spectrum Plot for channel straddling



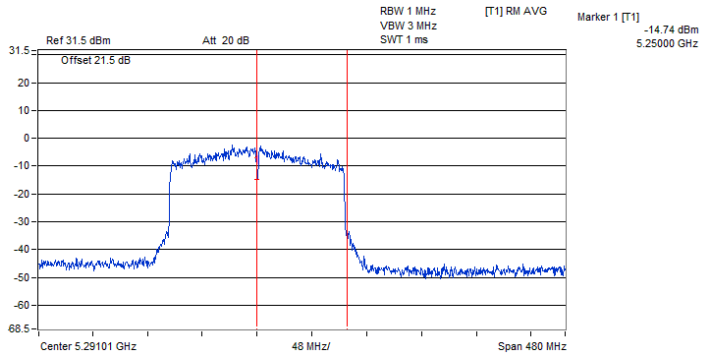
802.11ax (HE160) CDD / Chain 2 : CH 50 (U-NII-1)



802.11ax (HE160) CDD / Chain 2 : CH 50 (U-NII-2A)



802.11ax (HE160) CDD / Chain 3 : CH 50 (U-NII-1)



802.11ax (HE160) CDD / Chain 3 : CH 50 (U-NII-2A)

Mode B

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

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				
100	5500	16.47	16.77	17.47	16.82	195.825	22.92	23.97	Pass
116	5580	16.85	17.46	17.63	16.79	209.832	23.22	23.9	Pass
140	5700	16.69	16.65	17.52	16.74	196.604	22.94	23.92	Pass
*144 (U-NII-2C)	5720	15.31	15.28	17.33	16.37	165.118	22.18	22.64	Pass
*144 (U-NII-3)	5720	7.06	7.39	9.50	8.22	26.114	14.17	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the directional gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.23 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				
100	5500	16.93	17.12	17.74	17.04	210.852	23.24	24	Pass
116	5580	17.10	17.53	17.79	16.98	217.916	23.38	24	Pass
140	5700	17.05	17.04	17.81	17.02	212.026	23.26	24	Pass
*144 (U-NII-2C)	5720	14.96	15.64	16.93	16.62	163.214	22.13	22.88	Pass
*144 (U-NII-3)	5720	7.91	9.15	10.34	10.07	35.379	15.49	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the directional gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.23 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				
102	5510	17.02	17.39	17.93	17.49	223.369	23.49	24	Pass
110	5550	17.62	17.33	17.96	17.73	233.695	23.69	24	Pass
134	5670	17.55	17.41	18.11	17.64	234.757	23.71	24	Pass
*142 (U-NII-2C)	5710	17.35	16.74	16.49	17.25	199.185	22.99	24	Pass
*142 (U-NII-3)	5710	5.47	5.47	5.17	5.64	14	11.46	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the maximum gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 4.23 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				
106	5530	16.95	17.65	17.90	17.33	223.49	23.49	24	Pass
122	5610	17.32	17.86	18.08	17.21	231.916	23.65	24	Pass
*138 (U-NII-2C)	5690	16.54	17.95	16.97	16.71	210.295	23.23	24	Pass
*138 (U-NII-3)	5690	1.05	2.74	1.75	1.52	6.252	7.96	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the maximum gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 4.23 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				
100	5500	17.09	17.31	17.92	17.19	219.299	23.41	24	Pass
116	5580	17.34	17.75	18.01	17.27	230.341	23.62	24	Pass
140	5700	17.19	17.17	17.97	17.20	219.622	23.42	24	Pass
*144 (U-NII-2C)	5720	14.96	15.64	16.93	16.62	163.214	22.13	22.88	Pass
*144 (U-NII-3)	5720	7.91	9.15	10.34	10.07	35.379	15.49	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the directional gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.23 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				
102	5510	17.16	17.51	18.04	17.64	230.119	23.62	24	Pass
110	5550	17.78	17.52	18.07	17.84	241.407	23.83	24	Pass
134	5670	17.68	17.54	18.26	17.82	242.891	23.85	24	Pass
*142 (U-NII-2C)	5710	17.35	16.74	16.49	17.25	199.185	22.99	24	Pass
*142 (U-NII-3)	5710	5.47	5.47	5.17	5.64	14	11.46	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the maximum gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 4.23 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				
106	5530	17.15	17.85	18.10	17.53	234.023	23.69	24	Pass
122	5610	17.50	17.99	18.25	17.34	240.219	23.81	24	Pass
*138 (U-NII-2C)	5690	16.54	17.95	16.97	16.71	210.295	23.23	24	Pass
*138 (U-NII-3)	5690	1.05	2.74	1.75	1.52	6.252	7.96	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the maximum gain is 4.9 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 4.23 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				
100	5500	16.47	16.60	17.27	16.52	188.278	22.75	23.39	Pass
116	5580	16.60	16.93	17.25	16.51	192.886	22.85	23.39	Pass
140	5700	16.50	16.45	17.23	16.41	185.422	22.68	23.39	Pass
*144 (U-NII-2C)	5720	14.96	15.64	16.93	16.62	163.214	22.13	22.27	Pass
*144 (U-NII-3)	5720	7.91	9.15	10.34	10.07	35.379	15.49	29.86	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.61 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.61-6)].
4. For U-NII-3, the directional gain is 6.14 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.14-6) = 29.86 dBm.

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				
102	5510	16.39	16.70	17.27	16.88	192.411	22.84	23.39	Pass
110	5550	17.06	16.73	17.28	17.10	202.656	23.07	23.39	Pass
134	5670	16.89	16.74	17.49	17.07	203.109	23.08	23.39	Pass
*142 (U-NII-2C)	5710	17.35	16.74	16.49	17.25	199.185	22.99	23.39	Pass
*142 (U-NII-3)	5710	5.47	5.47	5.17	5.64	14	11.46	29.86	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.61 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.61-6)].
4. For U-NII-3, the directional gain is 6.14 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.14-6) = 29.86 dBm.

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				
106	5530	16.43	16.87	17.35	16.65	193.158	22.86	23.39	Pass
122	5610	16.82	17.23	17.51	16.56	202.582	23.07	23.39	Pass
*138 (U-NII-2C)	5690	16.54	17.95	16.97	16.71	210.295	23.23	23.39	Pass
*138 (U-NII-3)	5690	1.05	2.74	1.75	1.52	6.252	7.96	29.86	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.61 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.61-6)].
4. For U-NII-3, the directional gain is 6.14 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.14-6) = 29.86 dBm.

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				
100	5500	16.54	16.66	17.35	16.56	191.041	22.81	23.39	Pass
116	5580	16.72	17.11	17.44	16.66	200.201	23.01	23.39	Pass
140	5700	16.64	16.55	17.36	16.56	191.057	22.81	23.39	Pass
*144 (U-NII-2C)	5720	14.96	15.64	16.93	16.62	163.214	22.13	22.27	Pass
*144 (U-NII-3)	5720	7.91	9.15	10.34	10.07	35.379	15.49	29.86	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.61 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.61-6)].
4. For U-NII-3, the directional gain is 6.14 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.14-6) = 29.86 dBm.

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				
102	5510	16.59	16.90	17.47	17.00	200.547	23.02	23.39	Pass
110	5550	17.22	16.91	17.47	17.29	211.24	23.25	23.39	Pass
134	5670	17.06	16.93	17.67	17.24	211.579	23.25	23.39	Pass
*142 (U-NII-2C)	5710	17.35	16.74	16.49	17.25	199.185	22.99	23.39	Pass
*142 (U-NII-3)	5710	5.47	5.47	5.17	5.64	14	11.46	29.86	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.61 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.61-6)].
4. For U-NII-3, the directional gain is 6.14 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.14-6) = 29.86 dBm.

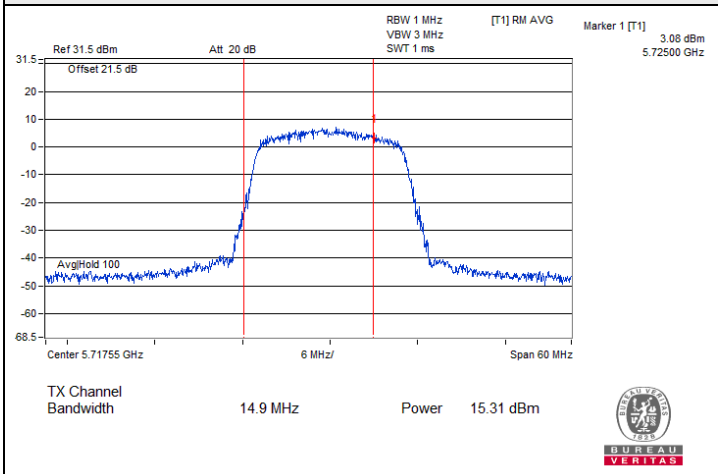
802.11ax (HE80) Beamforming

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				
106	5530	16.61	17.03	17.54	16.83	201.23	23.04	23.39	Pass
122	5610	16.92	17.35	17.65	16.70	208.513	23.19	23.39	Pass
*138 (U-NII-2C)	5690	16.54	17.95	16.97	16.71	210.295	23.23	23.39	Pass
*138 (U-NII-3)	5690	1.05	2.74	1.75	1.52	6.252	7.96	29.86	Pass

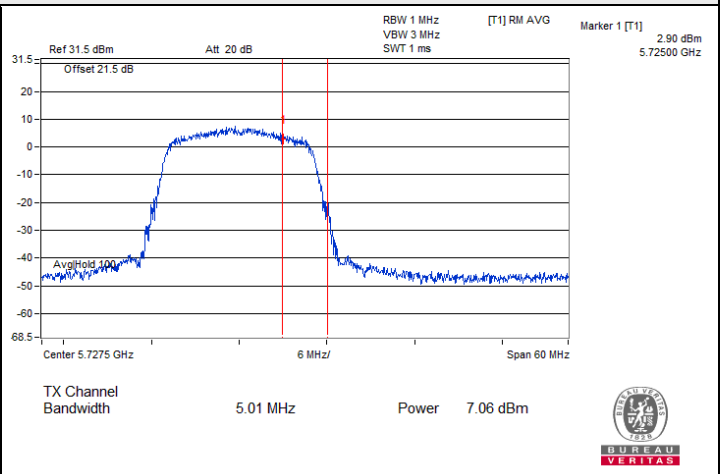
Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.61 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.61-6)].
4. For U-NII-3, the directional gain is 6.14 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.14-6) = 29.86 dBm.

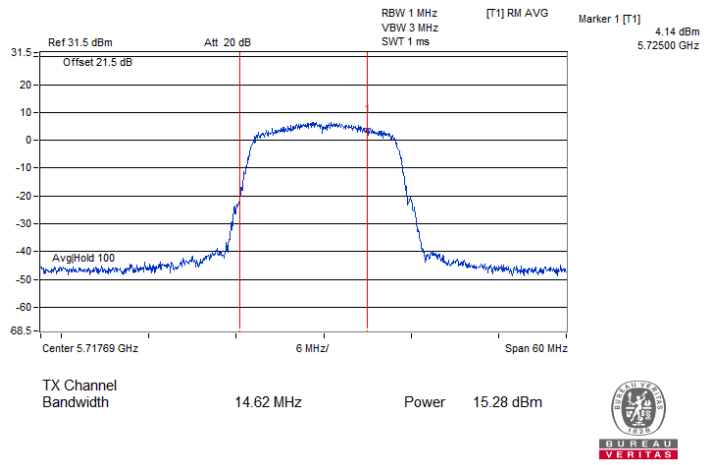
Spectrum Plot for channel straddling



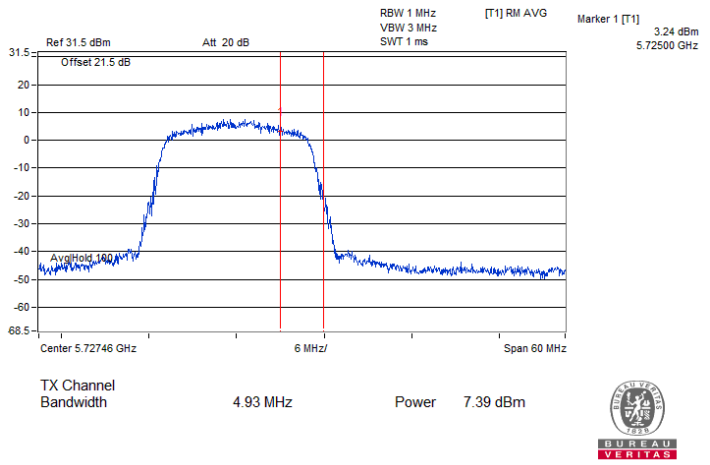
802.11a CDD / Chain 0 : CH 144 (U-NII-2C)



802.11a CDD / Chain 0 : CH 144 (U-NII-3)

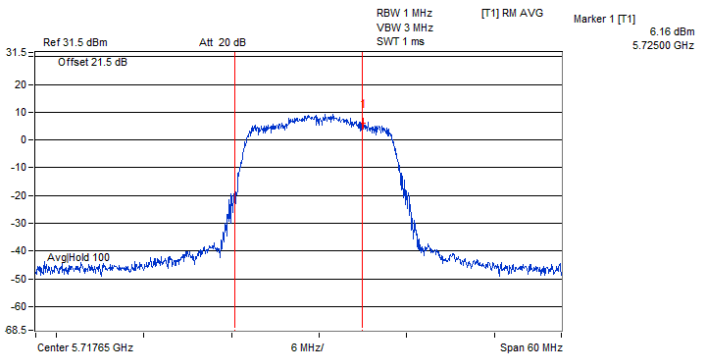


802.11a CDD / Chain 1 : CH 144 (U-NII-2C)



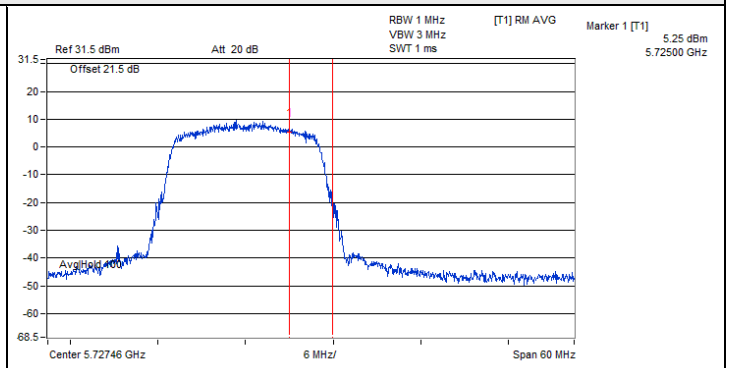
802.11a CDD / Chain 1 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



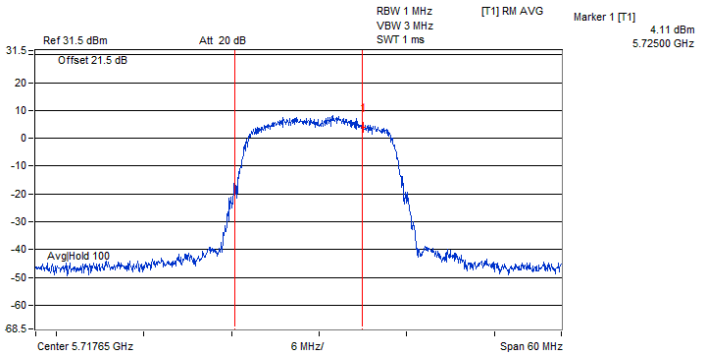
TX Channel Bandwidth 14.69 MHz Power 17.33 dBm

802.11a CDD / Chain 2 : CH 144 (U-NII-2C)



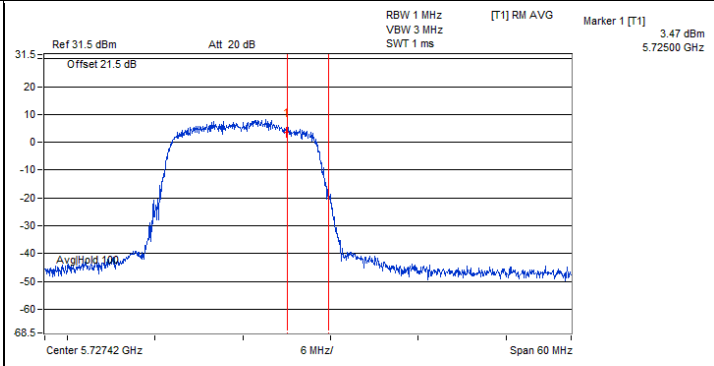
TX Channel Bandwidth 4.92 MHz Power 9.5 dBm

802.11a CDD / Chain 2 : CH 144 (U-NII-3)



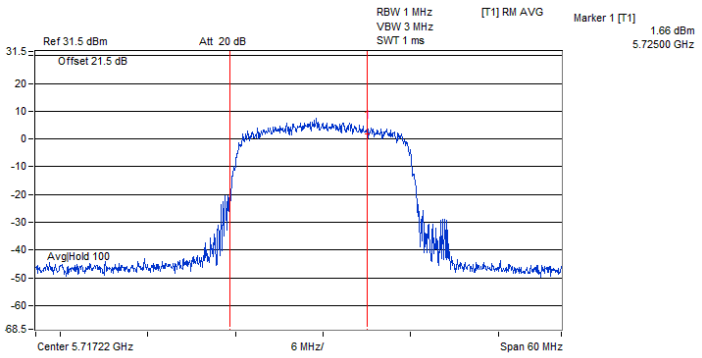
TX Channel Bandwidth 14.69 MHz Power 16.37 dBm

802.11a CDD / Chain 3 : CH 144 (U-NII-2C)



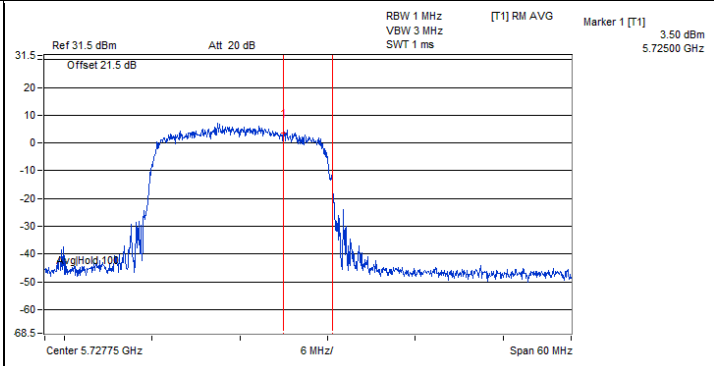
TX Channel Bandwidth 4.84 MHz Power 8.22 dBm

802.11a CDD / Chain 3 : CH 144 (U-NII-3)



TX Channel Bandwidth 15.56 MHz Power 14.96 dBm

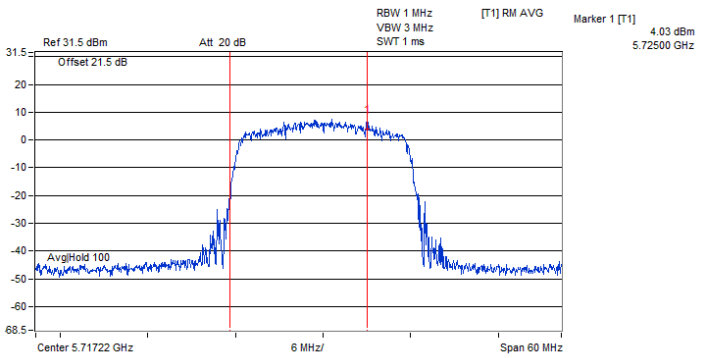
802.11ac (VHT20) CDD / Chain 0 : CH 144 (U-NII-2C)



TX Channel Bandwidth 5.51 MHz Power 7.91 dBm

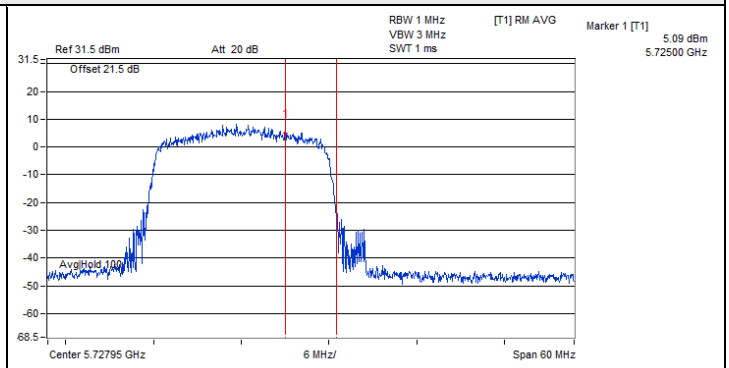
802.11ac (VHT20) CDD / Chain 0 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



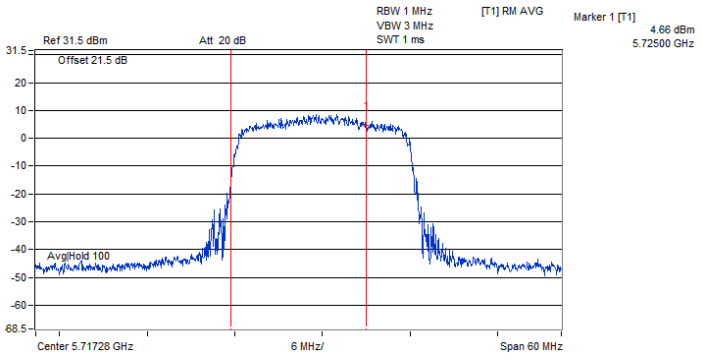
TX Channel Bandwidth 15.56 MHz Power 15.64 dBm

802.11ac (VHT20) CDD / Chain 1 : CH 144 (U-NII-2C)



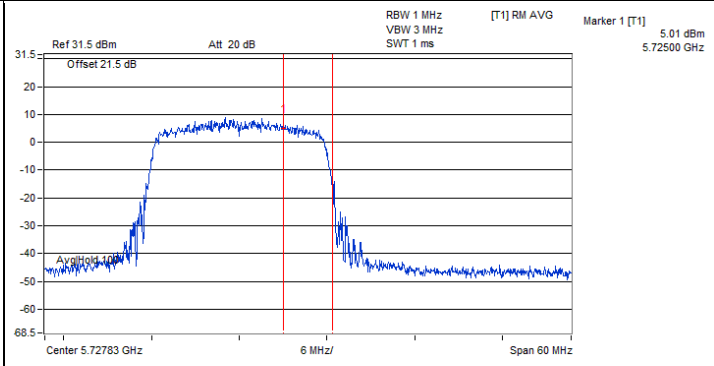
TX Channel Bandwidth 5.9 MHz Power 9.15 dBm

802.11ac (VHT20) CDD / Chain 1 : CH 144 (U-NII-3)



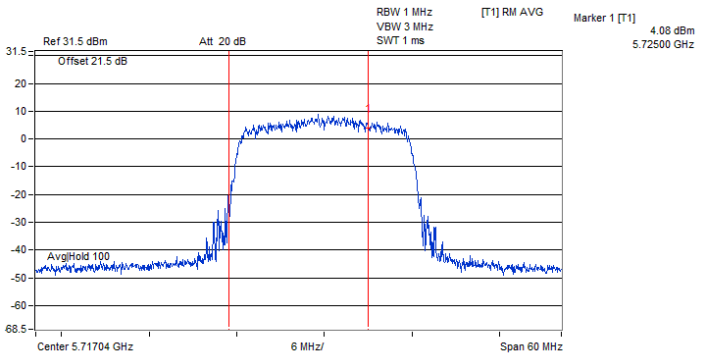
TX Channel Bandwidth 15.43 MHz Power 16.93 dBm

802.11ac (VHT20) CDD / Chain 2 : CH 144 (U-NII-2C)



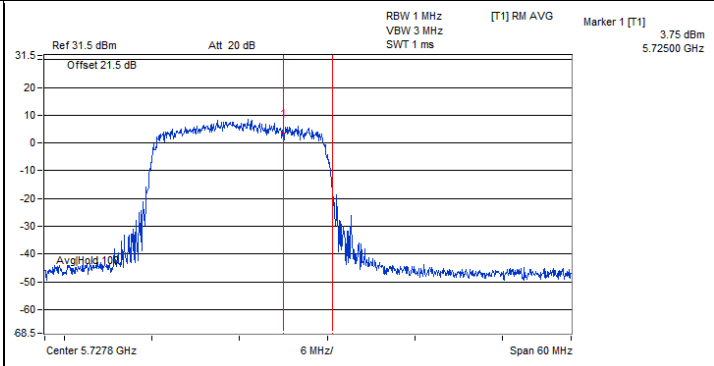
TX Channel Bandwidth 5.66 MHz Power 10.34 dBm

802.11ac (VHT20) CDD / Chain 2 : CH 144 (U-NII-3)



TX Channel Bandwidth 15.92 MHz Power 16.62 dBm

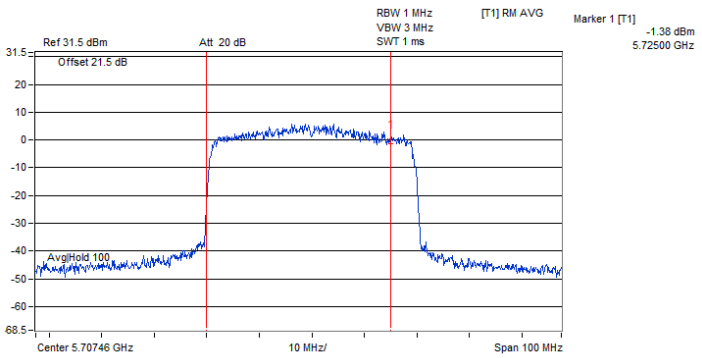
802.11ac (VHT20) CDD / Chain 3 : CH 144 (U-NII-2C)



TX Channel Bandwidth 5.6 MHz Power 10.07 dBm

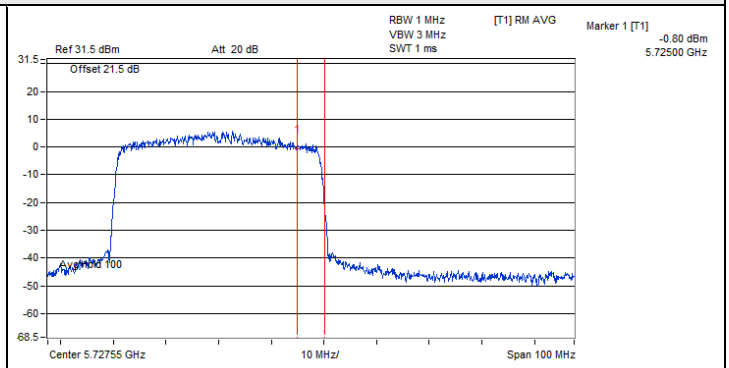
802.11ac (VHT20) CDD / Chain 3 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



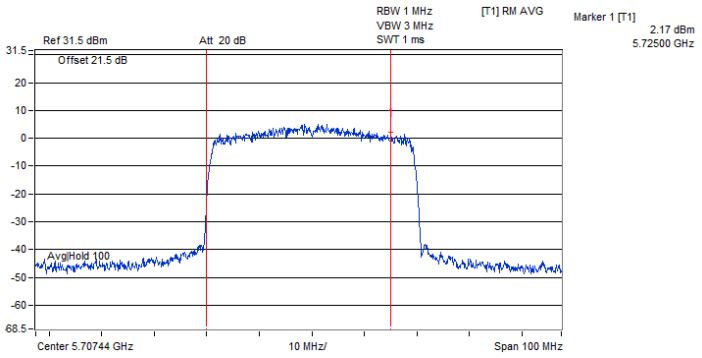
TX Channel Bandwidth 35.08 MHz Power 17.35 dBm

802.11ac (VHT40) CDD / Chain 0 : CH 142 (U-NII-2C)



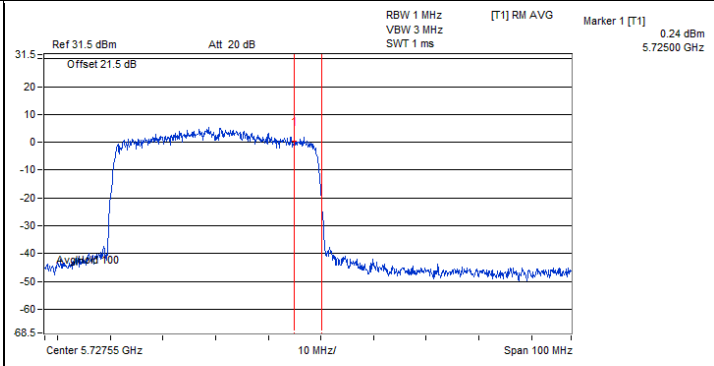
TX Channel Bandwidth 5.11 MHz Power 5.47 dBm

802.11ac (VHT40) CDD / Chain 0 : CH 142 (U-NII-3)



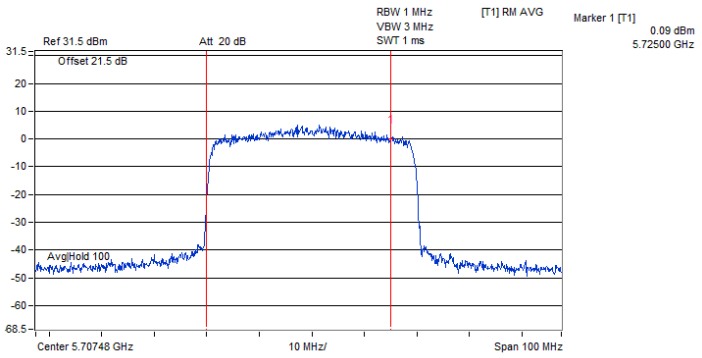
TX Channel Bandwidth 35.11 MHz Power 16.74 dBm

802.11ac (VHT40) CDD / Chain 1 : CH 142 (U-NII-2C)



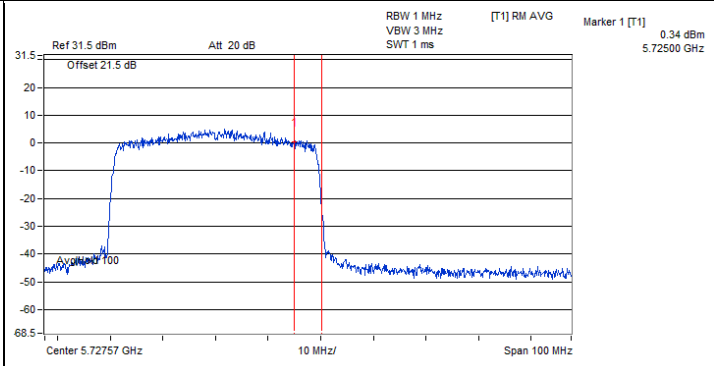
TX Channel Bandwidth 5.1 MHz Power 5.47 dBm

802.11ac (VHT40) CDD / Chain 1 : CH 142 (U-NII-3)



TX Channel Bandwidth 35.04 MHz Power 16.49 dBm

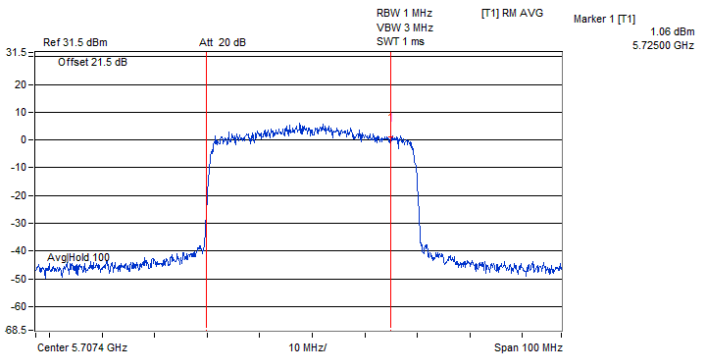
802.11ac (VHT40) CDD / Chain 2 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.14 MHz Power 5.17 dBm

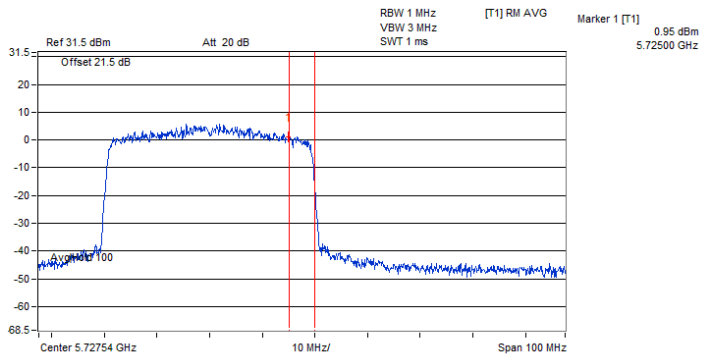
802.11ac (VHT40) CDD / Chain 2 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



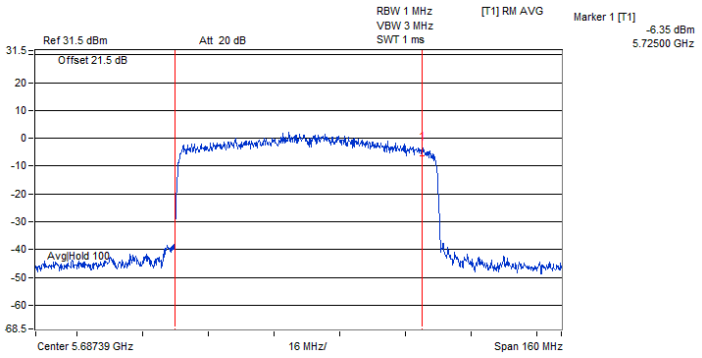
TX Channel Bandwidth 35.2 MHz Power 17.25 dBm

802.11ac (VHT40) CDD / Chain 3 : CH 142 (U-NII-2C)



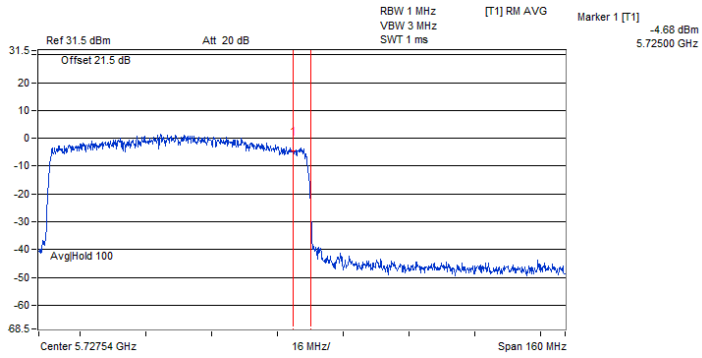
TX Channel Bandwidth 5.08 MHz Power 5.64 dBm

802.11ac (VHT40) CDD / Chain 3 : CH 142 (U-NII-3)



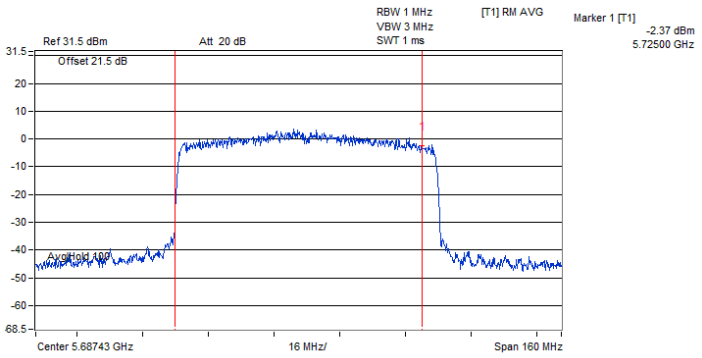
TX Channel Bandwidth 75.21 MHz Power 16.54 dBm

802.11ac (VHT80) CDD / Chain 0 : CH 138 (U-NII-2C)



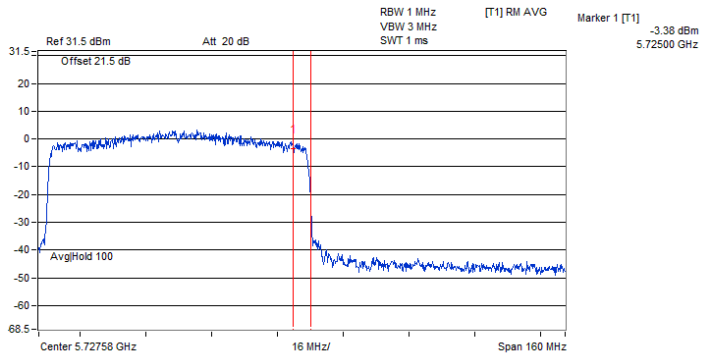
TX Channel Bandwidth 5.09 MHz Power 1.05 dBm

802.11ac (VHT80) CDD / Chain 0 : CH 138 (U-NII-3)



TX Channel Bandwidth 75.13 MHz Power 17.95 dBm

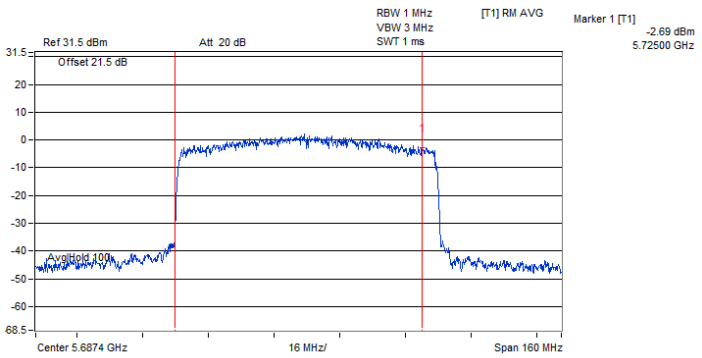
802.11ac (VHT80) CDD / Chain 1 : CH 138 (U-NII-2C)



TX Channel Bandwidth 5.16 MHz Power 2.74 dBm

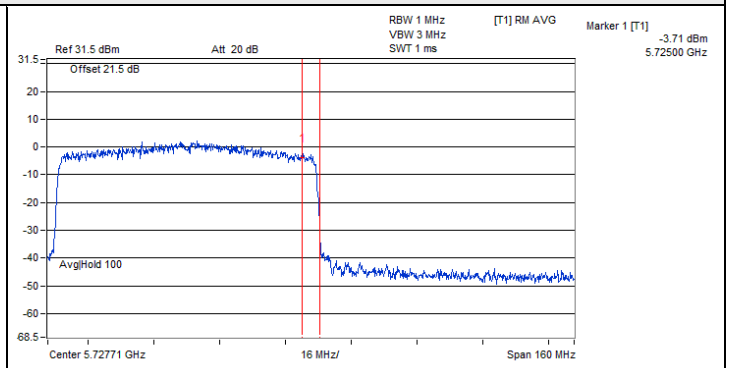
802.11ac (VHT80) CDD / Chain 1 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



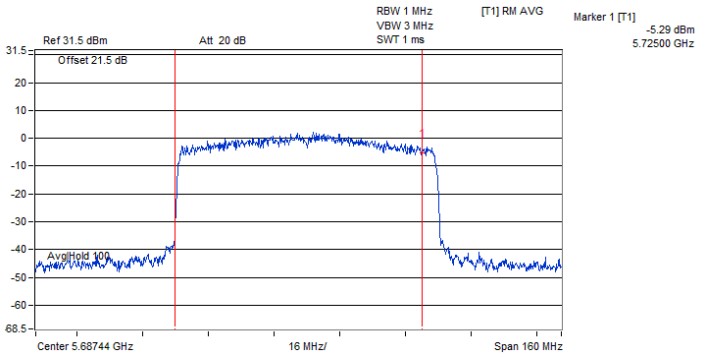
TX Channel Bandwidth 75.19 MHz Power 16.97 dBm

802.11ac (VHT80) CDD / Chain 2 : CH 138 (U-NII-2C)



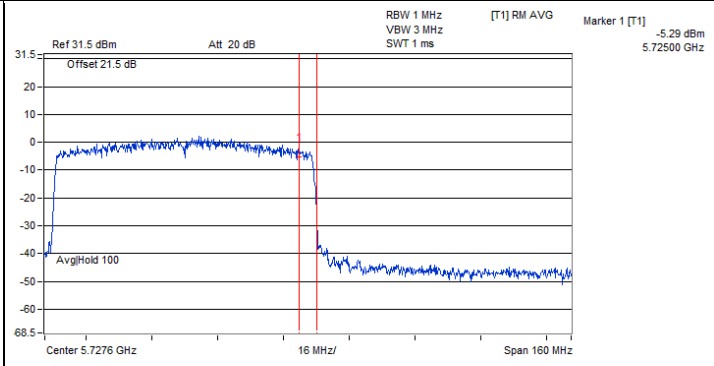
TX Channel Bandwidth 5.43 MHz Power 1.75 dBm

802.11ac (VHT80) CDD / Chain 2 : CH 138 (U-NII-3)



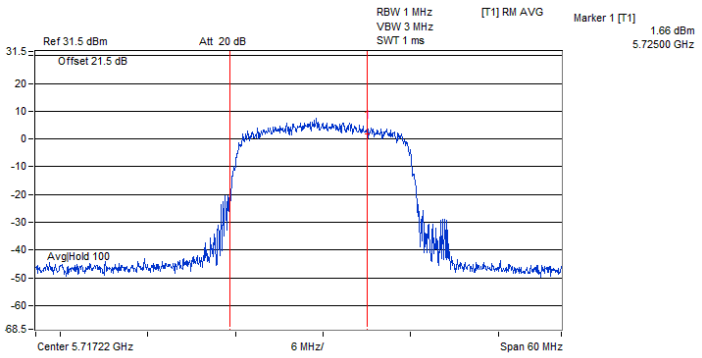
TX Channel Bandwidth 75.11 MHz Power 16.71 dBm

802.11ac (VHT80) CDD / Chain 3 : CH 138 (U-NII-2C)



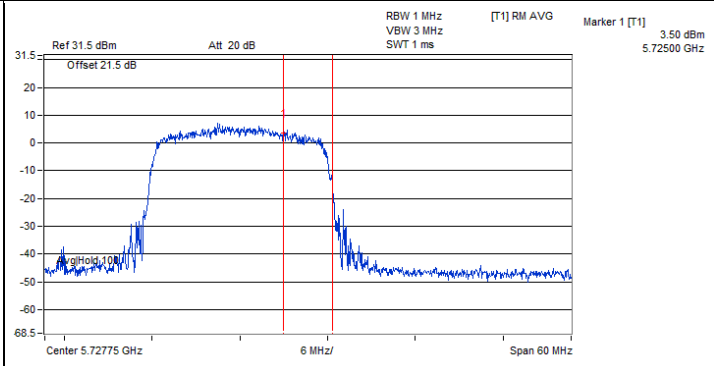
TX Channel Bandwidth 5.2 MHz Power 1.52 dBm

802.11ac (VHT80) CDD / Chain 3 : CH 138 (U-NII-3)



TX Channel Bandwidth 15.56 MHz Power 14.96 dBm

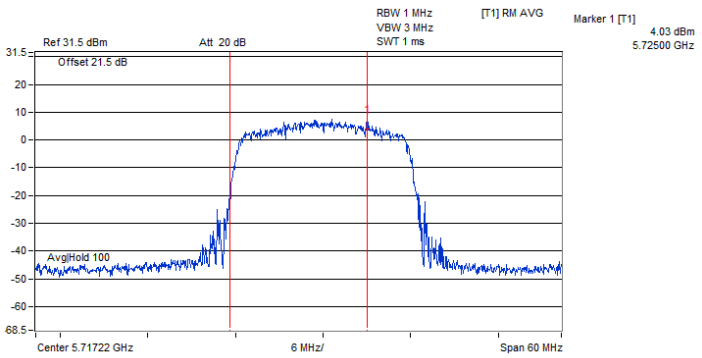
802.11ax (HE20) CDD / Chain 0 : CH 144 (U-NII-2C)



TX Channel Bandwidth 5.51 MHz Power 7.91 dBm

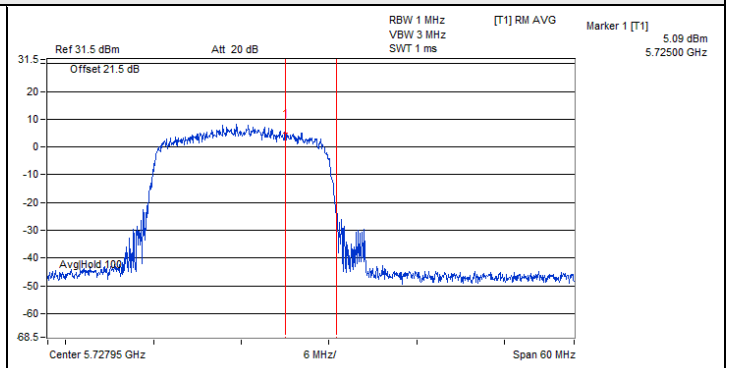
802.11ax (HE20) CDD / Chain 0 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



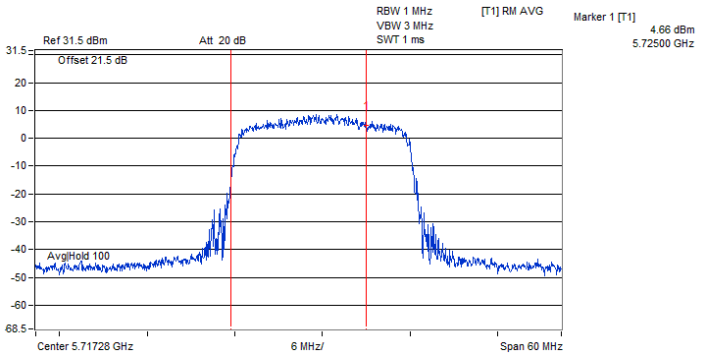
TX Channel Bandwidth 15.56 MHz Power 15.64 dBm

802.11ax (HE20) CDD / Chain 1 : CH 144 (U-NII-2C)



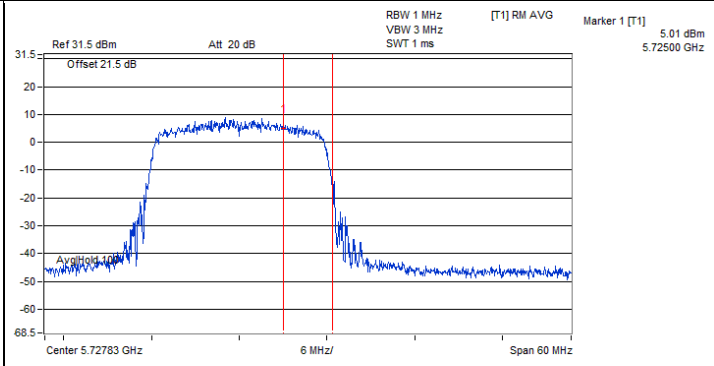
TX Channel Bandwidth 5.9 MHz Power 9.15 dBm

802.11ax (HE20) CDD / Chain 1 : CH 144 (U-NII-3)



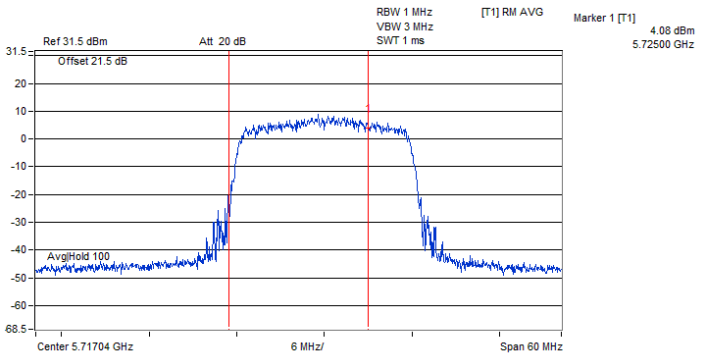
TX Channel Bandwidth 15.43 MHz Power 16.93 dBm

802.11ax (HE20) CDD / Chain 2 : CH 144 (U-NII-2C)



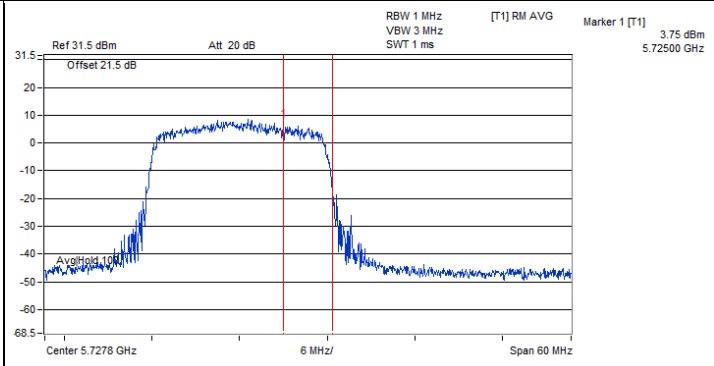
TX Channel Bandwidth 5.66 MHz Power 10.34 dBm

802.11ax (HE20) CDD / Chain 2 : CH 144 (U-NII-3)



TX Channel Bandwidth 15.92 MHz Power 16.62 dBm

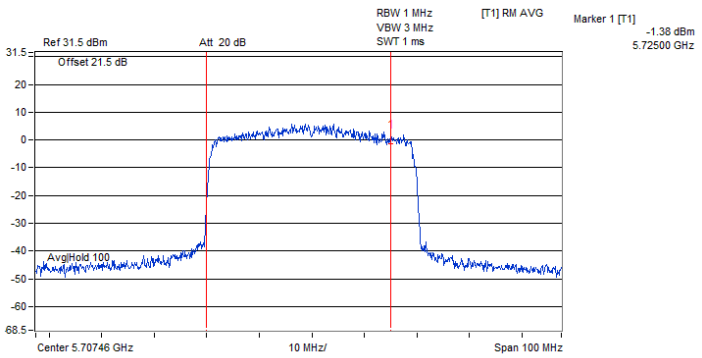
802.11ax (HE20) CDD / Chain 3 : CH 144 (U-NII-2C)



TX Channel Bandwidth 5.6 MHz Power 10.07 dBm

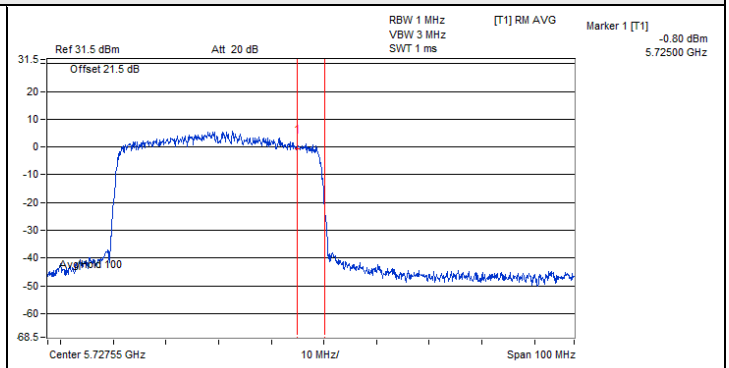
802.11ax (HE20) CDD / Chain 3 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



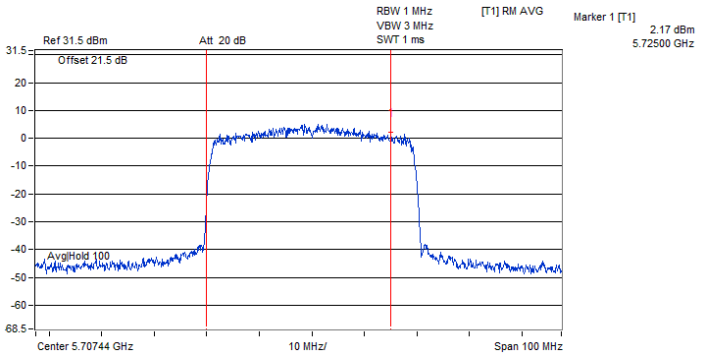
TX Channel Bandwidth 35.08 MHz Power 17.35 dBm

802.11ax (HE40) CDD / Chain 0 : CH 142 (U-NII-2C)



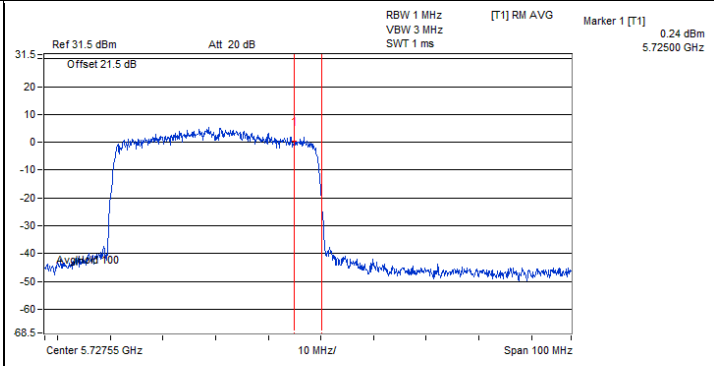
TX Channel Bandwidth 5.11 MHz Power 5.47 dBm

802.11ax (HE40) CDD / Chain 0 : CH 142 (U-NII-3)



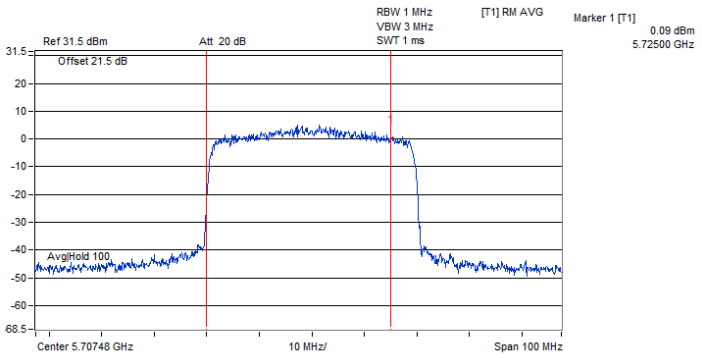
TX Channel Bandwidth 35.11 MHz Power 16.74 dBm

802.11ax (HE40) CDD / Chain 1 : CH 142 (U-NII-2C)



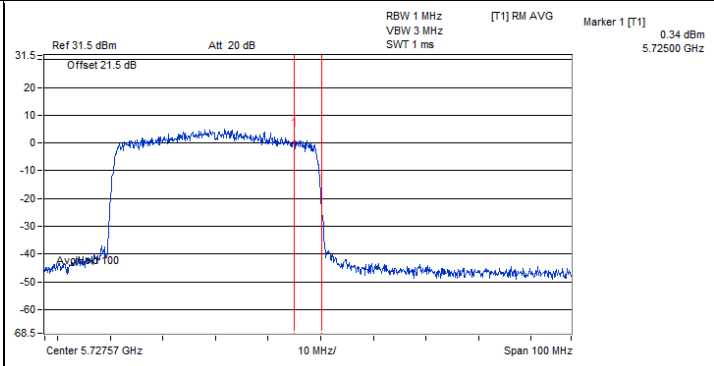
TX Channel Bandwidth 5.1 MHz Power 5.47 dBm

802.11ax (HE40) CDD / Chain 1 : CH 142 (U-NII-3)



TX Channel Bandwidth 35.04 MHz Power 16.49 dBm

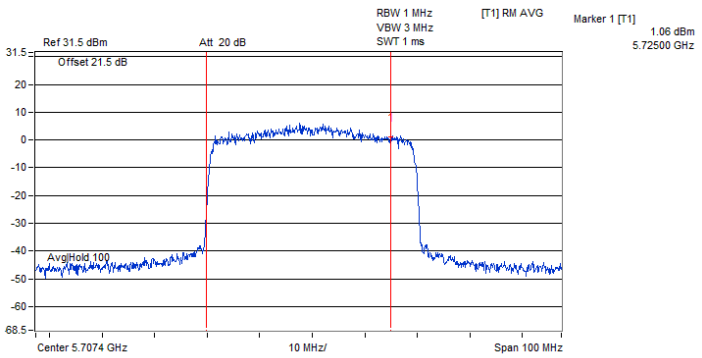
802.11ax (HE40) CDD / Chain 2 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.14 MHz Power 5.17 dBm

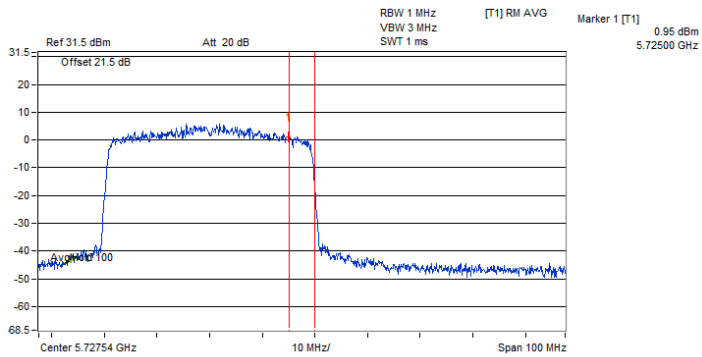
802.11ax (HE40) CDD / Chain 2 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



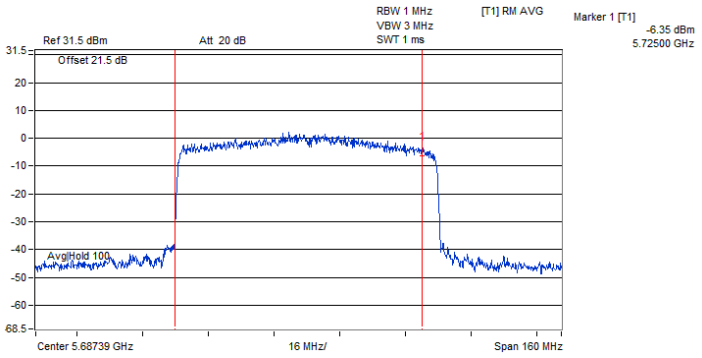
TX Channel Bandwidth 35.2 MHz Power 17.25 dBm

802.11ax (HE40) CDD / Chain 3 : CH 142 (U-NII-2C)



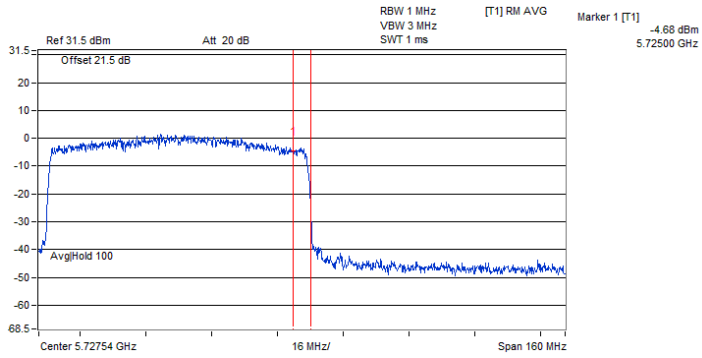
TX Channel Bandwidth 5.08 MHz Power 5.64 dBm

802.11ax (HE40) CDD / Chain 3 : CH 142 (U-NII-3)



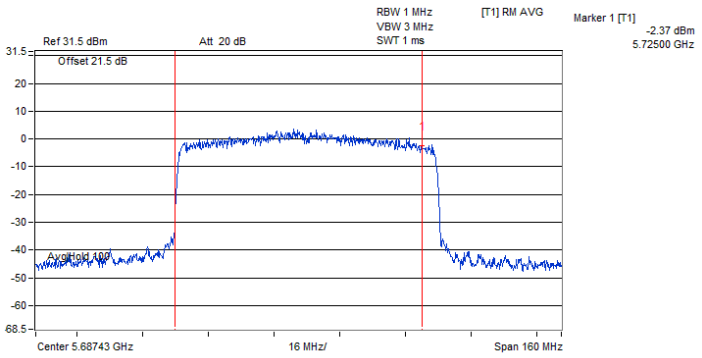
TX Channel Bandwidth 75.21 MHz Power 16.54 dBm

802.11ax (HE80) CDD / Chain 0 : CH 138 (U-NII-2C)



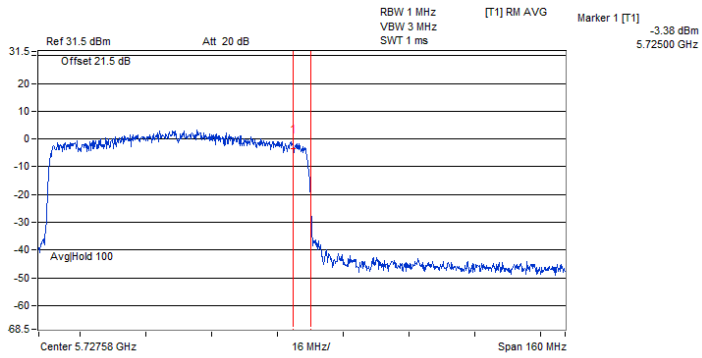
TX Channel Bandwidth 5.09 MHz Power 1.05 dBm

802.11ax (HE80) CDD / Chain 0 : CH 138 (U-NII-3)



TX Channel Bandwidth 75.13 MHz Power 17.95 dBm

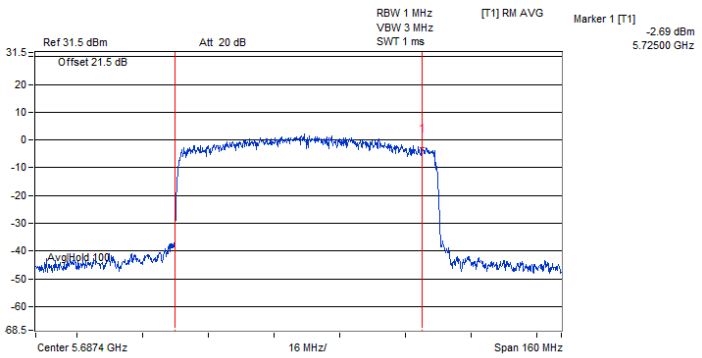
802.11ax (HE80) CDD / Chain 1 : CH 138 (U-NII-2C)



TX Channel Bandwidth 5.16 MHz Power 2.74 dBm

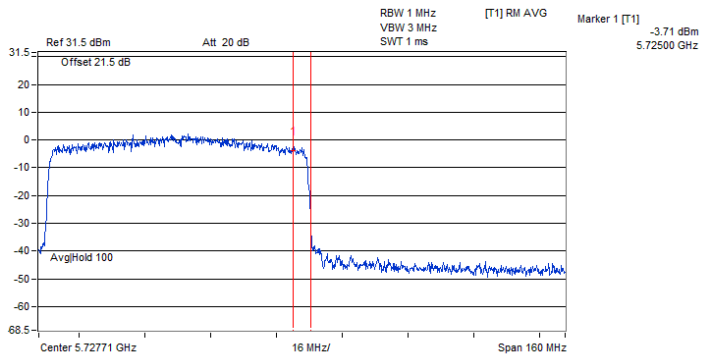
802.11ax (HE80) CDD / Chain 1 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



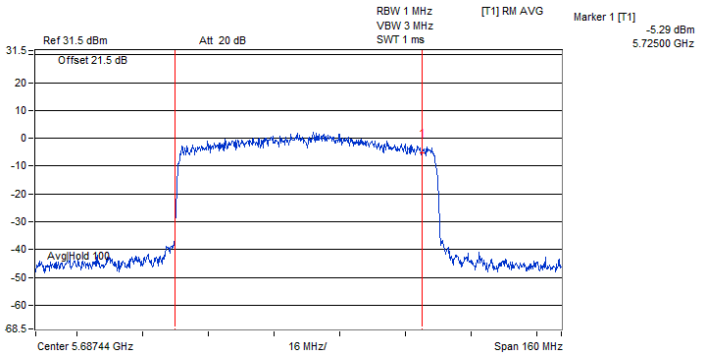
TX Channel Bandwidth 75.19 MHz Power 16.97 dBm

802.11ax (HE80) CDD / Chain 2 : CH 138 (U-NII-2C)



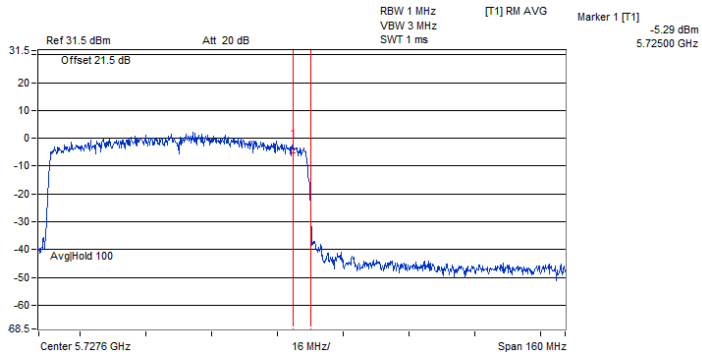
TX Channel Bandwidth 5.43 MHz Power 1.75 dBm

802.11ax (HE80) CDD / Chain 2 : CH 138 (U-NII-3)



TX Channel Bandwidth 75.11 MHz Power 16.71 dBm

802.11ax (HE80) CDD / Chain 3 : CH 138 (U-NII-2C)



TX Channel Bandwidth 5.2 MHz Power 1.52 dBm

802.11ax (HE80) CDD / Chain 3 : CH 138 (U-NII-3)

7.3 Power Spectral Density

Mode A

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

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
52	5260	3.67	3.97	4.63	4.51	10.23	11	Pass
60	5300	3.30	4.51	4.16	4.67	10.21	11	Pass
64	5320	3.90	3.33	4.40	4.23	10.00	11	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-2A, the directional gain is 5.06 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
52	5260	4.69	4.21	4.83	4.50	10.58	11	Pass
60	5300	4.61	4.62	4.37	4.40	10.52	11	Pass
64	5320	3.72	4.61	4.81	3.18	10.15	11	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-2A, the directional gain is 5.06 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
54	5270	3.17	3.40	2.89	2.21	8.96	11	Pass
62	5310	3.09	3.18	2.77	2.03	8.81	11	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-2A, the directional gain is 5.06 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE80)

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	Chain 2	Chain 3				
58	5290	-2.05	-0.91	-1.76	-2.11	0.13	4.47	11	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-2A, the directional gain is 5.06 dBi < 6 dBi, so the power density limit shall not be reduced.

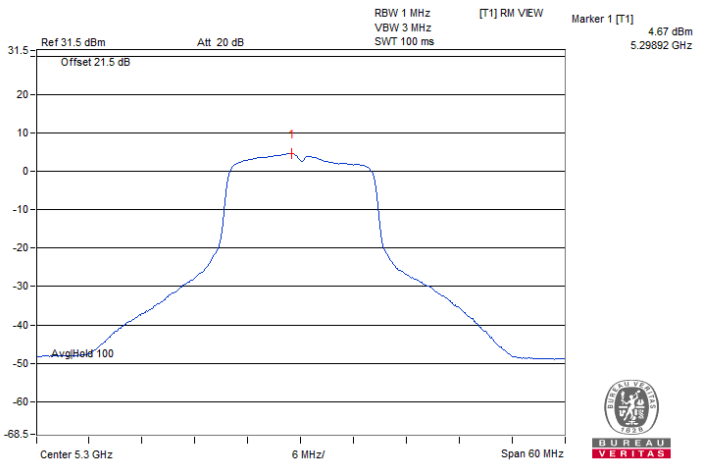
802.11ax (HE160)

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	Chain 2	Chain 3				
50 (U-NII-1)	5250	-5.33	-3.08	-4.26	-4.85	0.17	1.89	16.79	Pass
50 (U-NII-2A)	5250	-4.61	-3.15	-4.55	-5.21	0.17	1.88	11	Pass

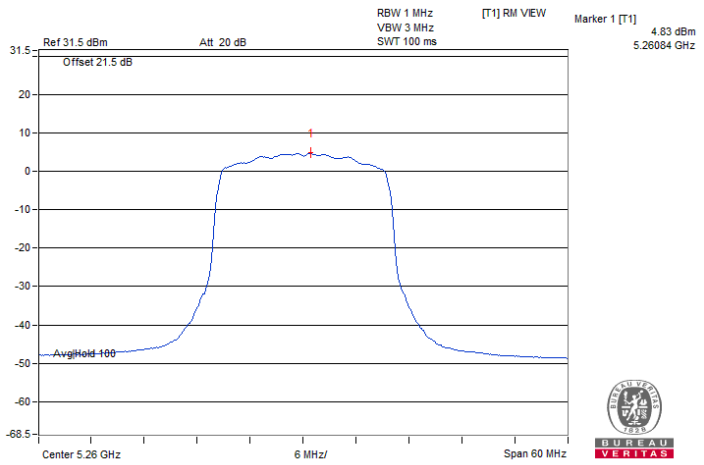
Notes:

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 6.21 dBi > 6dBi, so the power density limit shall be reduced to 17-(6.21-6) = 16.79 dBm/MHz.
4. For U-NII-2A, the directional gain is 5.06 dBi < 6 dBi, so the power density limit shall not be reduced.

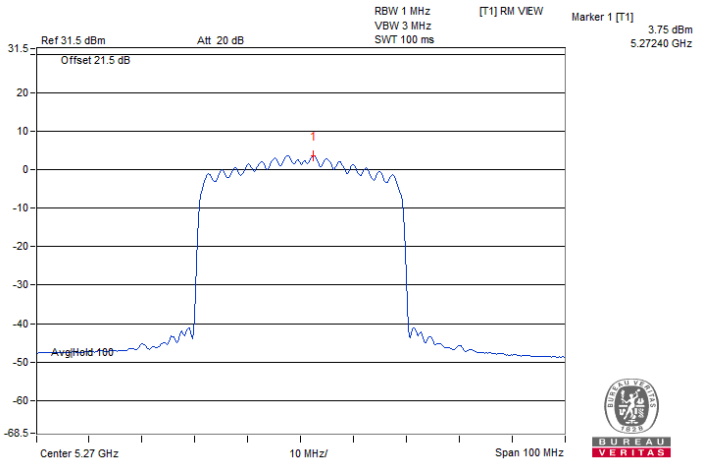
Spectrum Plot of Maximum Value



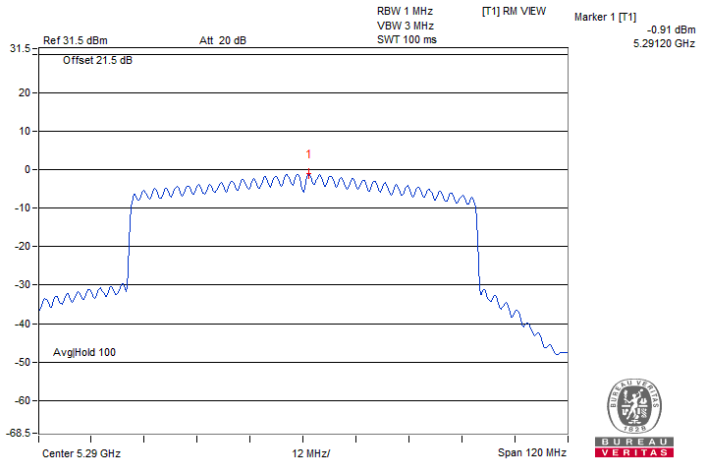
802.11a / Chain 3 : CH 60



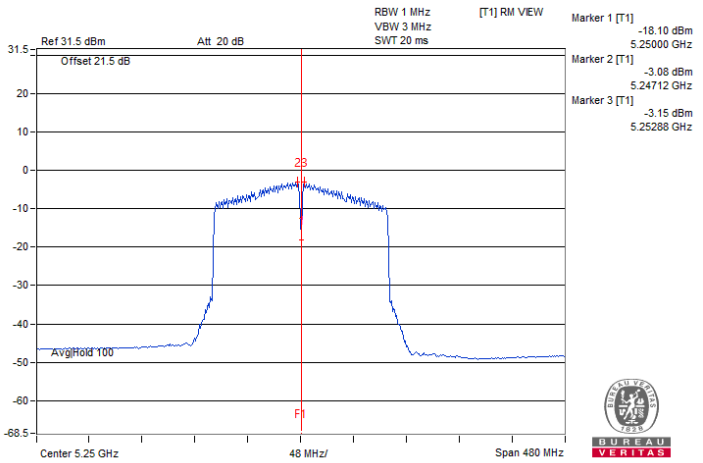
802.11ax (HE20) / Chain 2 : CH 52



802.11ax (HE40) / Chain 1 : CH 54



802.11ax (HE80) / Chain 1 : CH 58



802.11ax (HE160) / Chain 1 : CH 50 (U-NII-1)

Mode B

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

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
100	5500	3.82	4.25	4.82	4.43	10.37	10.39	Pass
116	5580	3.71	4.61	4.65	3.82	10.24	10.39	Pass
140	5700	3.77	3.84	4.67	3.72	10.04	10.39	Pass
144 (U-NII-2C)	5720	3.81	4.08	4.88	4.01	10.24	10.39	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-2C, the directional gain is 6.61 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.61-6) = 10.39 dBm/MHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
100	5500	3.81	4.01	4.62	3.86	10.11	10.39	Pass
116	5580	4.00	4.30	4.40	4.03	10.21	10.39	Pass
140	5700	3.73	3.64	4.34	3.52	9.84	10.39	Pass
144 (U-NII-2C)	5720	3.71	3.76	4.54	3.77	9.98	10.39	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-2C, the directional gain is 6.61 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.61-6) = 10.39 dBm/MHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
102	5510	2.14	2.51	3.09	2.25	8.53	10.39	Pass
110	5550	2.46	2.32	3.00	2.61	8.63	10.39	Pass
134	5670	3.26	2.56	3.66	2.46	9.03	10.39	Pass
142 (U-NII-2C)	5710	1.93	2.45	3.13	2.05	8.44	10.39	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-2C, the directional gain is 6.61 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.61-6) = 10.39 dBm/MHz.

802.11ax (HE80)

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	Chain 2	Chain 3				
106	5530	-1.54	-0.89	-0.35	-1.07	0.13	5.21	10.39	Pass
122	5610	-0.25	-0.22	0.07	-0.59	0.13	5.91	10.39	Pass
138 (U-NII-2C)	5690	-0.52	-0.62	-0.11	-0.11	0.13	5.82	10.39	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-2C, the directional gain is 6.61 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.61-6) = 10.39 dBm/MHz.

802.11a

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				
144 (U-NII-3)	5720	-6.86	-6.80	-6.10	-7.21	-0.7	1.52	29.86	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 6.14 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.14-6) = 29.86 dBm/500kHz.

802.11ax (HE20)

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				
144 (U-NII-3)	5720	-7.33	-7.30	-6.57	-6.93	-1	1.22	29.86	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 6.14 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.14-6) = 29.86 dBm/500kHz.

802.11ax (HE40)

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				
142 (U-NII-3)	5710	-7.43	-6.37	-5.73	-6.88	-0.54	1.68	29.86	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 6.14 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.14-6) = 29.86 dBm/500kHz.

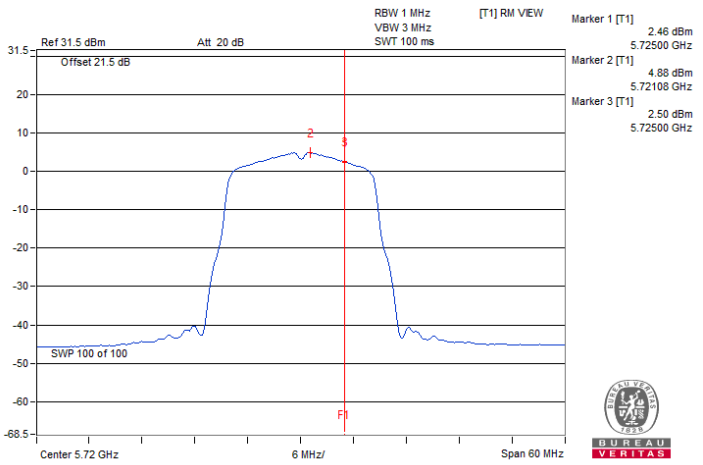
802.11ax (HE80)

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					
138 (U-NII-3)	5690	-10.60	-9.96	-9.85	-9.87	-4.04	0.13	-1.69	29.86	Pass

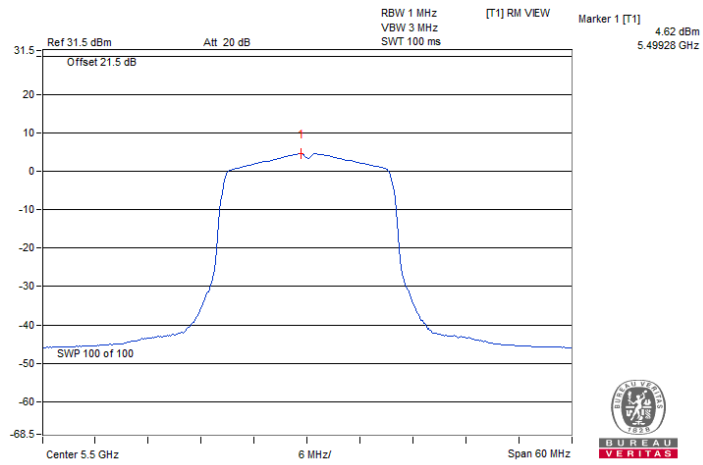
Notes:

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 6.14 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.14-6) = 29.86 dBm/500kHz.

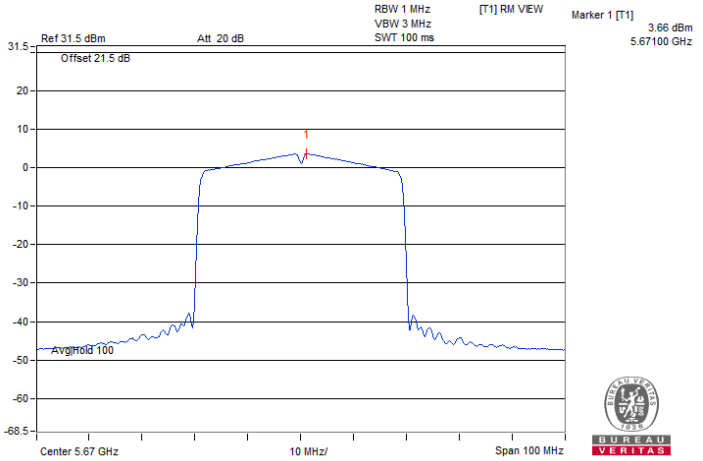
Spectrum Plot of Maximum Value



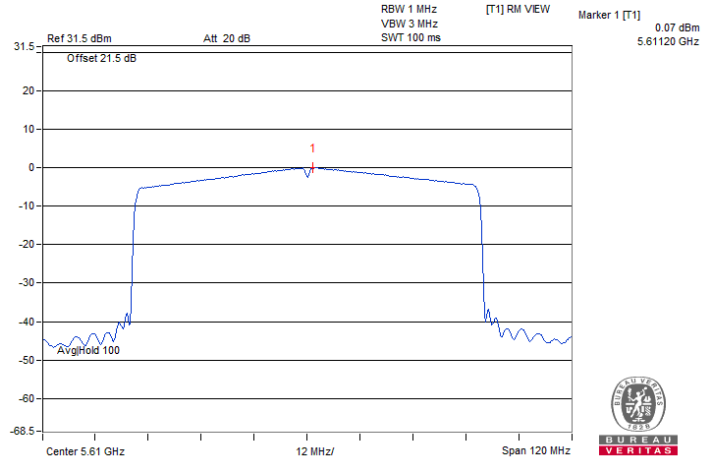
802.11a / Chain 2 : CH 144 (U-NII-2C)



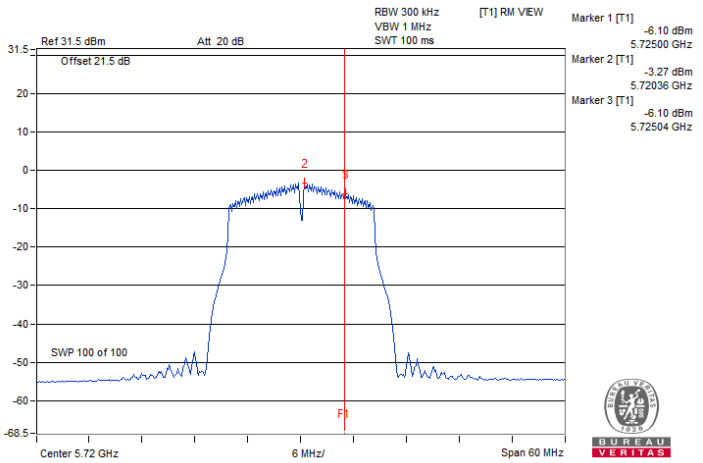
802.11ax (HE20) / Chain 2 : CH 100



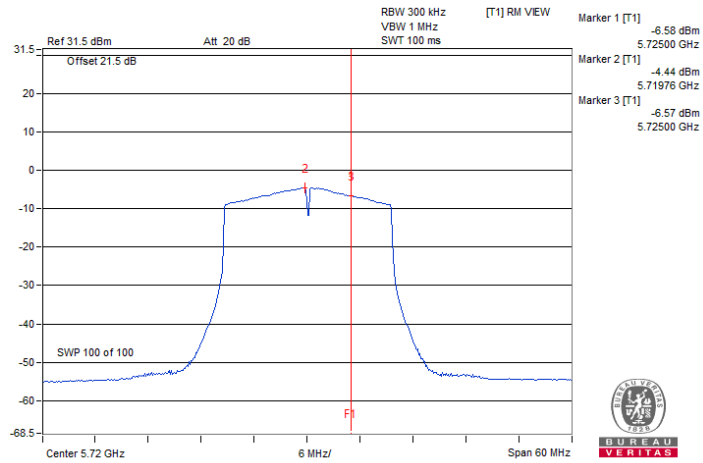
802.11ax (HE40) / Chain 2 : CH 134



802.11ax (HE80) / Chain 2 : CH 122

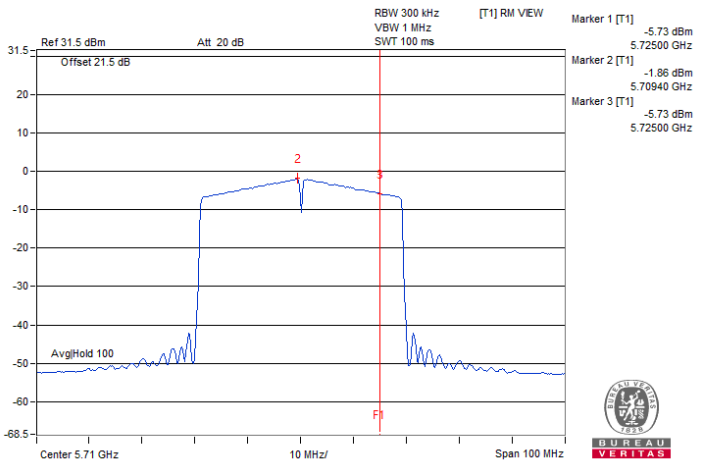


802.11a / Chain 2 : CH 144 (U-NII-3)

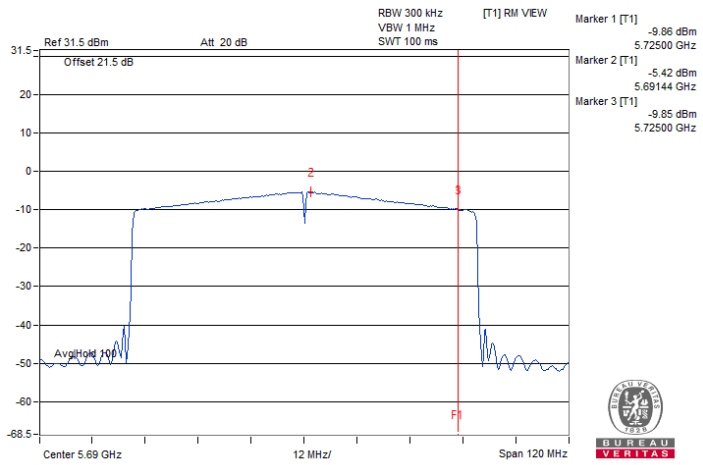


802.11ax (HE20) / Chain 2 : CH 144 (U-NII-3)

Spectrum Plot of Maximum Value



802.11ax (HE40) / Chain 2 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 2 : CH 138 (U-NII-3)

7.4 6 dB Bandwidth

Mode B

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

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
144 (U-NII-3)	5720	2.60	2.56	2.58	1.32	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
144 (U-NII-3)	5720	3.85	3.75	3.10	4.15	0.5	Pass

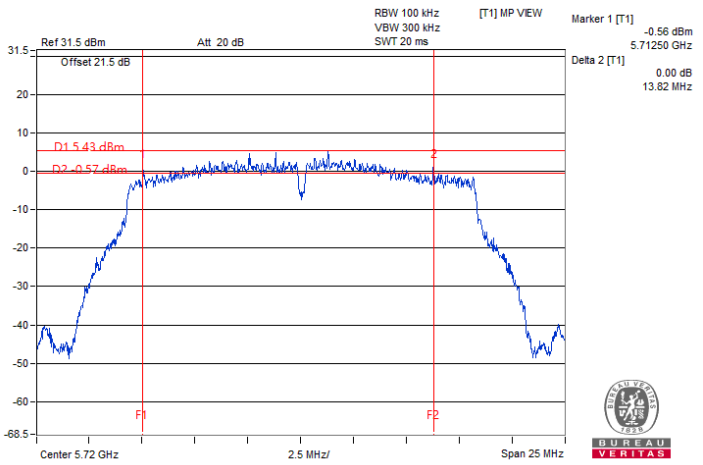
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
142 (U-NII-3)	5710	2.52	2.76	1.41	1.37	0.5	Pass

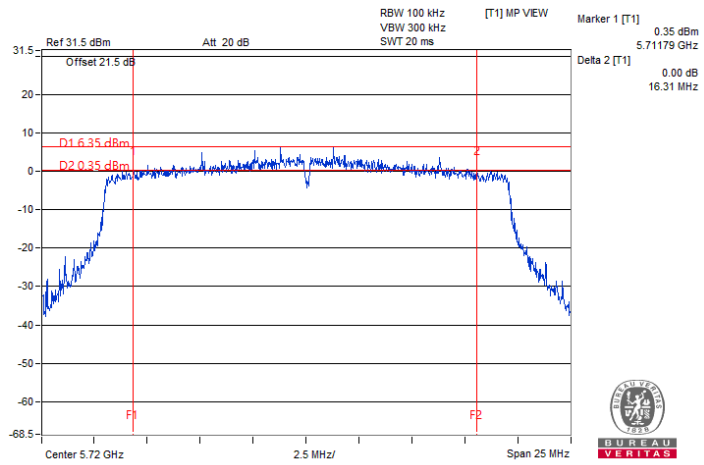
802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
138 (U-NII-3)	5690	3.11	1.93	2.52	2.31	0.5	Pass

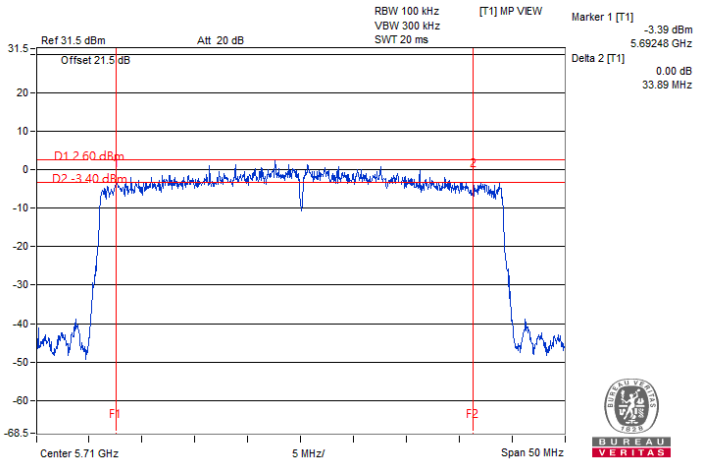
Spectrum Plot of Minimum Value



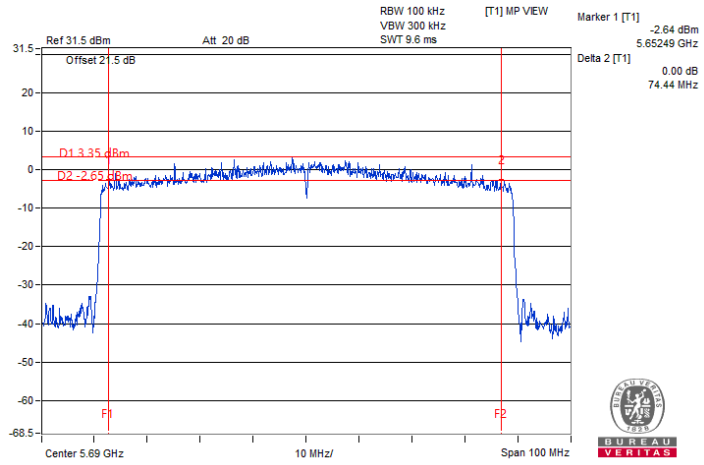
802.11a / Chain 3 : CH 144 (U-NII-3)



802.11ax (HE20) / Chain 2 : CH 144 (U-NII-3)



802.11ax (HE40) / Chain 3 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)

Note: For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.5 Occupied Bandwidth

Mode A

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

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	16.44	16.62	16.56	16.38
60	5300	16.50	16.74	16.56	16.38
64	5320	16.44	16.32	16.50	16.56

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	18.84	18.84	18.90	18.84
60	5300	18.90	18.84	18.96	18.90
64	5320	18.84	18.90	18.84	18.84

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	37.56	37.08	37.56	37.44
62	5310	37.32	37.32	37.44	37.32

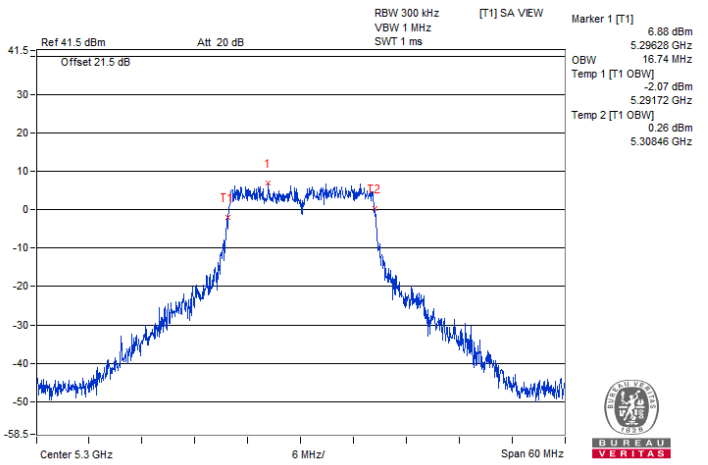
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	76.80	76.80	77.04	77.28

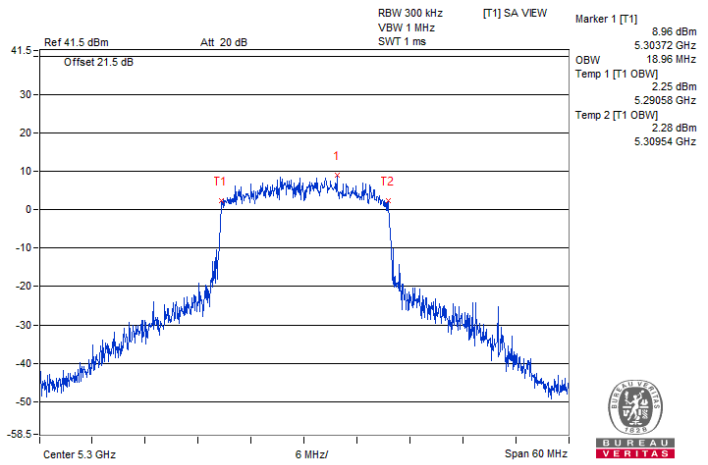
802.11ax (HE160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	77.76	77.76	78.24	78.24
50 (U-NII-2A)	5250	77.76	77.28	77.76	77.76

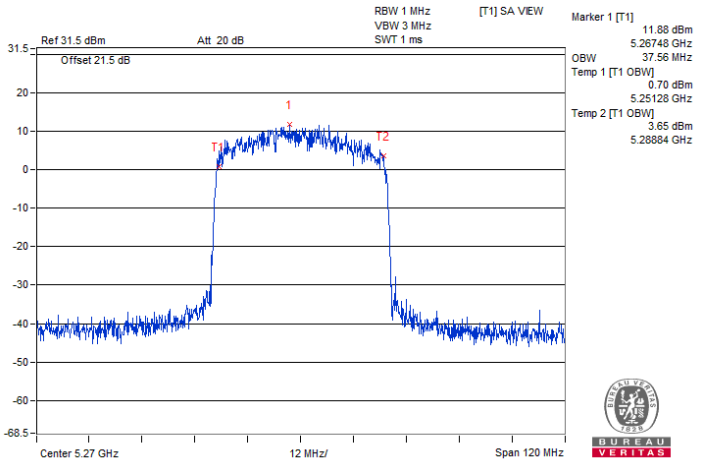
Spectrum Plot of Maximum Value



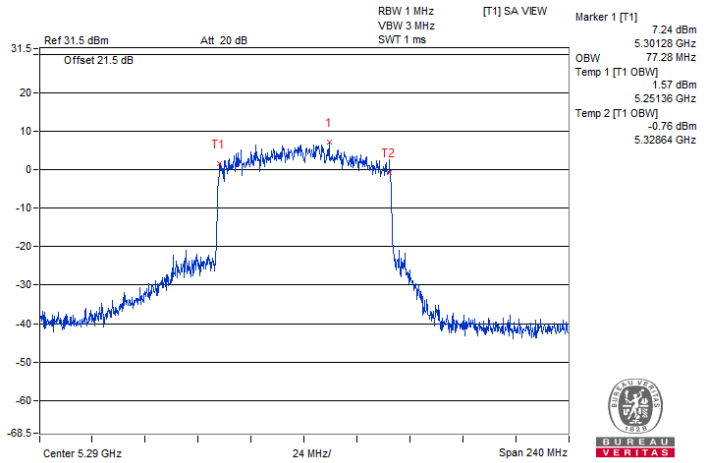
802.11a / Chain 1 : CH 60



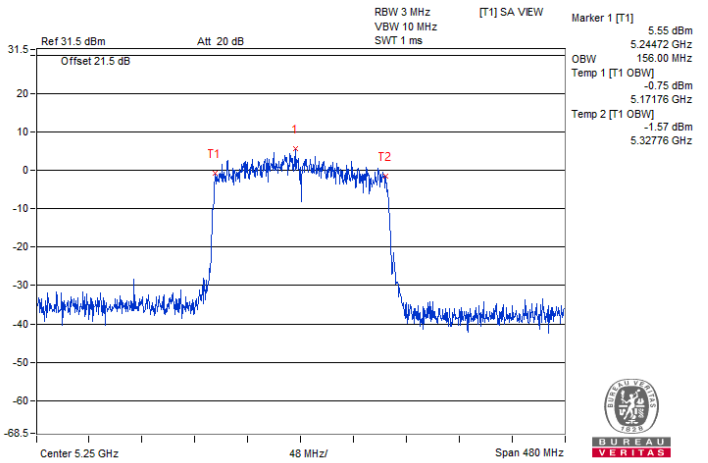
802.11ax (HE20) / Chain 2 : CH 60



802.11ax (HE40) / Chain 0 : CH 54



802.11ax (HE80) / Chain 3 : CH 58



802.11ax (HE160) / Chain 2 : CH 50 (U-NII-1)

Notes:

1. For U-NII-1 straddle channel = 5250 MHz - Temp 1
2. For U-NII-2A straddle channel = Temp 1 + Delta 2 - 5250 MHz

Mode B

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

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	16.38	16.38	16.32	16.32
116	5580	16.38	16.38	16.32	16.32
140	5700	16.44	16.38	16.38	16.38
144 (U-NII-2C)	5720	13.10	13.10	13.10	13.10
144 (U-NII-3)	5720	3.22	3.28	3.28	3.22

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	18.90	18.90	18.90	18.96
116	5580	18.84	18.90	18.84	18.90
140	5700	18.84	18.90	18.78	18.90
144 (U-NII-2C)	5720	14.36	14.36	14.36	14.42
144 (U-NII-3)	5720	4.42	4.48	4.54	4.42

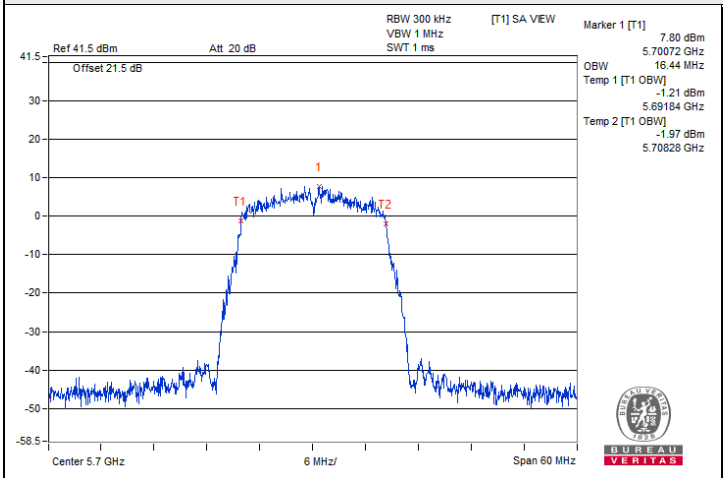
802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	37.56	37.56	37.68	37.68
110	5550	37.68	37.56	37.68	37.56
134	5670	37.68	37.68	37.56	37.80
142 (U-NII-2C)	5710	33.72	33.60	33.72	33.72
142 (U-NII-3)	5710	3.84	3.84	3.72	3.84

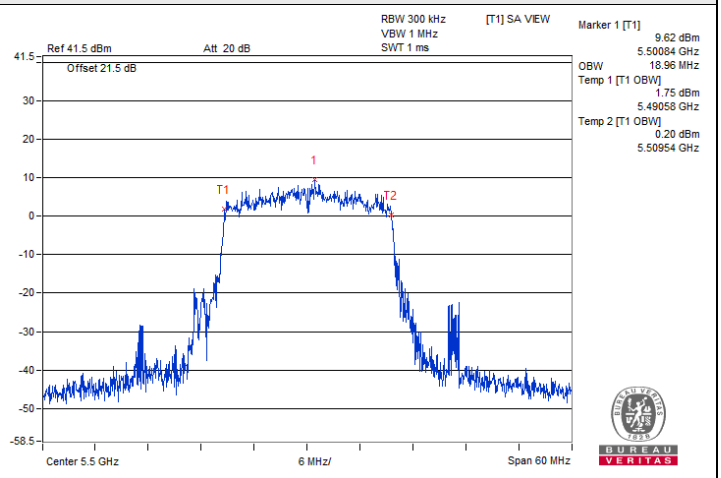
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	76.56	76.56	76.56	76.32
122	5610	76.56	76.56	76.80	76.56
138 (U-NII-2C)	5690	73.40	73.40	73.40	73.40
138 (U-NII-3)	5690	3.16	3.16	3.40	3.40

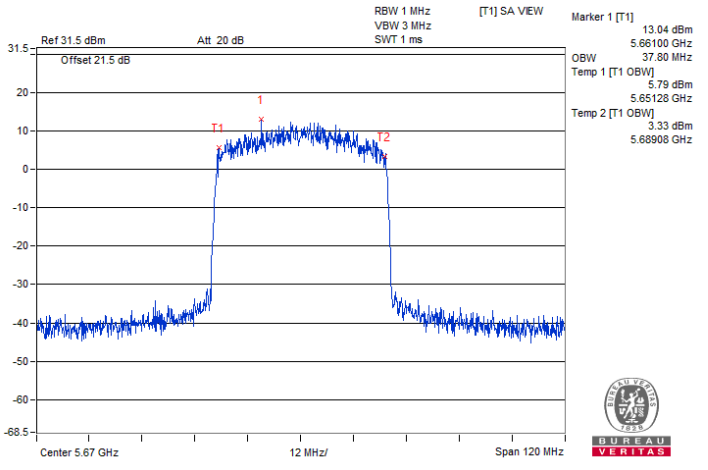
Spectrum Plot of Maximum Value



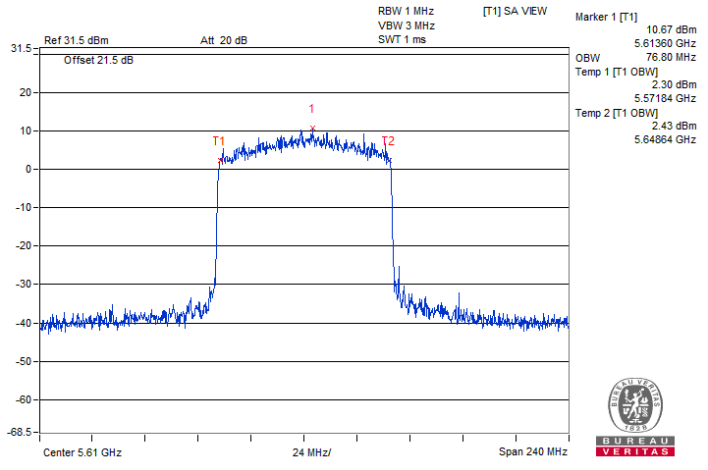
802.11a / Chain 0 : CH 140



802.11ax (HE20) / Chain 3 : CH 100



802.11ax (HE40) / Chain 3 : CH 134



802.11ax (HE80) / Chain 2 : CH 122

7.6 Frequency Stability

Mode A

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

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5260 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
50	120	5260.0094	Pass	5260.0082	Pass	5260.0103	Pass	5260.0079	Pass
40	120	5259.9802	Pass	5259.9812	Pass	5259.9795	Pass	5259.9794	Pass
30	120	5259.9758	Pass	5259.9733	Pass	5259.9756	Pass	5259.9768	Pass
20	120	5259.9873	Pass	5259.9838	Pass	5259.9877	Pass	5259.9828	Pass
10	120	5259.9991	Pass	5259.9989	Pass	5259.9983	Pass	5260.0001	Pass
0	120	5259.9969	Pass	5259.9939	Pass	5259.9963	Pass	5259.9969	Pass
-10	120	5260.0119	Pass	5260.0122	Pass	5260.0137	Pass	5260.0159	Pass
-20	120	5260.0176	Pass	5260.0133	Pass	5260.0128	Pass	5260.0158	Pass
-30	120	5260.0213	Pass	5260.0219	Pass	5260.0239	Pass	5260.0233	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5260 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	5259.9844	Pass	5259.9853	Pass	5259.9853	Pass	5259.9852	Pass
	120	5259.9873	Pass	5259.9838	Pass	5259.9877	Pass	5259.9828	Pass
	102	5259.9811	Pass	5259.9857	Pass	5259.9812	Pass	5259.9842	Pass

Mode B

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

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5500 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
50	120	5500.025	Pass	5500.0237	Pass	5500.0204	Pass	5500.0249	Pass
40	120	5500.0105	Pass	5500.0061	Pass	5500.0098	Pass	5500.0097	Pass
30	120	5500.0004	Pass	5500.0033	Pass	5500.0002	Pass	5500.0015	Pass
20	120	5500.0125	Pass	5500.0143	Pass	5500.0128	Pass	5500.0132	Pass
10	120	5499.9754	Pass	5499.9751	Pass	5499.973	Pass	5499.975	Pass
0	120	5500.0065	Pass	5500.0088	Pass	5500.0114	Pass	5500.0065	Pass
-10	120	5499.9726	Pass	5499.973	Pass	5499.9745	Pass	5499.9713	Pass
-20	120	5499.9731	Pass	5499.9741	Pass	5499.9735	Pass	5499.9767	Pass
-30	120	5499.9824	Pass	5499.9845	Pass	5499.9811	Pass	5499.9805	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5500 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	5500.0236	Pass	5500.0246	Pass	5500.0246	Pass	5500.0244	Pass
	120	5500.0125	Pass	5500.0143	Pass	5500.0128	Pass	5500.0132	Pass
	102	5500.0203	Pass	5500.0195	Pass	5500.0203	Pass	5500.018	Pass

7.7 AC Power Conducted Emissions

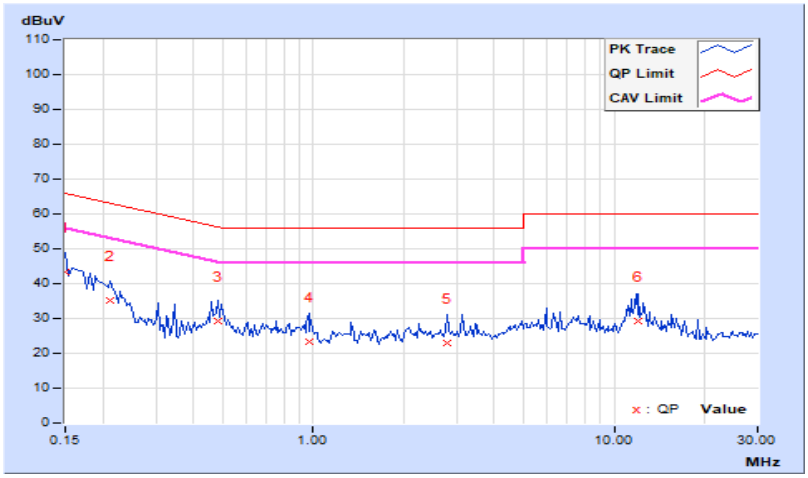
Mode A

RF Mode	802.11ax (HE20)	**Channel**	CH 64：5320 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**	24°C, 66% 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	9.96	33.27	20.83	43.23	30.79	66.00	56.00	-22.77	-25.21
2	0.21250	9.95	25.12	14.58	35.07	24.53	63.11	53.11	-28.04	-28.58
3	0.48203	9.97	19.30	10.63	29.27	20.60	56.30	46.30	-27.03	-25.70
4	0.97031	10.00	13.17	6.76	23.17	16.76	56.00	46.00	-32.83	-29.24
5	2.78516	10.11	12.67	5.68	22.78	15.79	56.00	46.00	-33.22	-30.21
6	12.05078	10.77	18.64	13.33	29.41	24.10	60.00	50.00	-30.59	-25.90

Remarks:

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

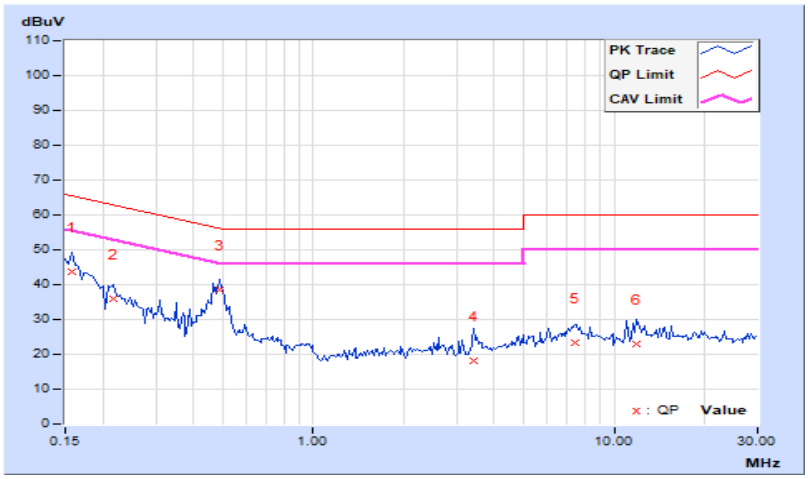


RF Mode	802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 66% RH
Tested By	Sampson Chen		

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	0.15781	10.00	33.65	19.45	43.65	29.45	65.58	55.58	-21.93	-26.13
2	0.21641	10.00	25.83	17.07	35.83	27.07	62.96	52.96	-27.13	-25.89
3	**0.48984**	**10.02**	**28.51**	**21.95**	**38.53**	**31.97**	**56.17**	**46.17**	**-17.64**	**-14.20**
4	3.43359	10.21	7.92	-2.82	18.13	7.39	56.00	46.00	-37.87	-38.61
5	7.37500	10.48	12.86	6.81	23.34	17.29	60.00	50.00	-36.66	-32.71
6	11.88281	10.73	12.40	5.85	23.13	16.58	60.00	50.00	-36.87	-33.42

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



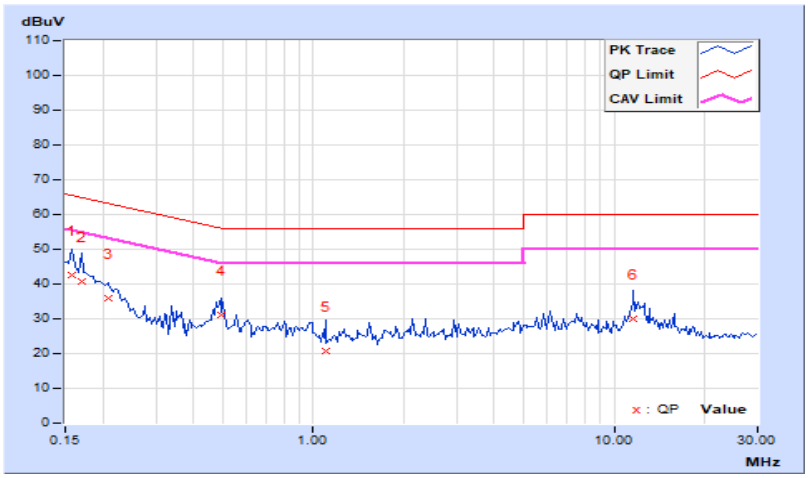
Mode B

RF Mode	802.11ax (HE40)	**Channel**	CH 134：5670 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**	24°C, 66% RH
Tested By	Sampson Chen		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15781	9.95	32.50	20.78	42.45	30.73	65.58	55.58	-23.13	-24.85
2	0.16953	9.95	30.75	19.69	40.70	29.64	64.98	54.98	-24.28	-25.34
3	0.20859	9.95	25.97	13.81	35.92	23.76	63.26	53.26	-27.34	-29.50
4	0.49375	9.97	21.04	12.01	31.01	21.98	56.10	46.10	-25.09	-24.12
5	1.09766	10.00	10.89	4.52	20.89	14.52	56.00	46.00	-35.11	-31.48
6	11.57031	10.74	19.26	13.73	30.00	24.47	60.00	50.00	-30.00	-25.53

Remarks:

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

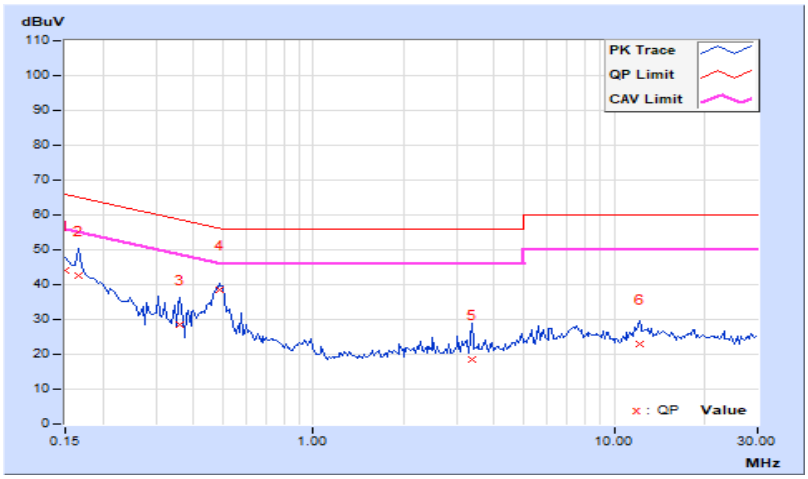


RF Mode	802.11ax (HE40)	**Channel**	CH 134：5670 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	24°C, 66% RH
Tested By	Sampson Chen		

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	10.00	33.90	19.17	43.90	29.17	66.00	56.00	-22.10	-26.83
2	0.16562	10.00	32.68	18.20	42.68	28.20	65.18	55.18	-22.50	-26.98
3	0.36094	10.01	18.51	6.37	28.52	16.38	58.71	48.71	-30.19	-32.33
4	0.48594	10.02	28.51	21.61	38.53	31.63	56.24	46.24	-17.71	-14.61
5	3.36719	10.21	8.41	-2.56	18.62	7.65	56.00	46.00	-37.38	-38.35
6	12.13281	10.74	12.13	6.37	22.87	17.11	60.00	50.00	-37.13	-32.89

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



7.8 Unwanted Emissions below 1 GHz

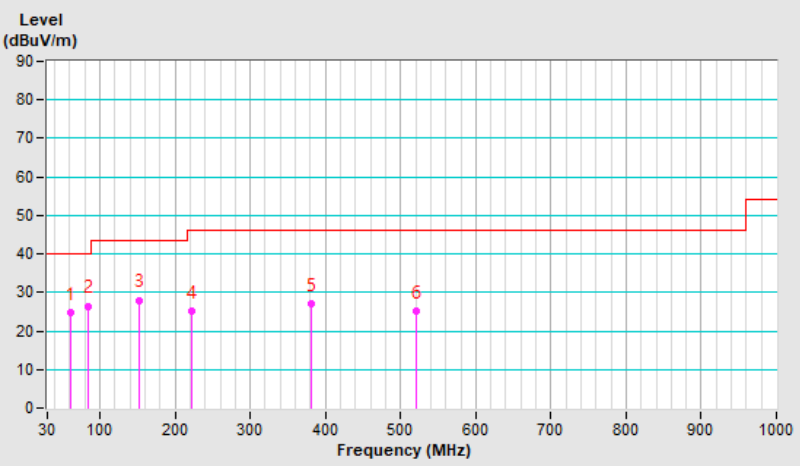
Mode A

RF Mode	802.11ax (HE20)	**Channel**	CH 64：5320 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	26°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	61.51	24.9 QP	40.0	-15.1	1.00 H	257	39.0	-14.1
2	83.70	26.5 QP	40.0	-13.5	1.50 H	250	45.1	-18.6
3	151.67	28.0 QP	43.5	-15.5	1.50 H	260	41.0	-13.0
4	221.44	25.3 QP	46.0	-20.7	1.50 H	267	41.9	-16.6
5	381.72	27.1 QP	46.0	-18.9	1.50 H	157	37.5	-10.4
6	520.36	25.3 QP	46.0	-20.7	1.00 H	157	32.5	-7.2

Remarks:

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

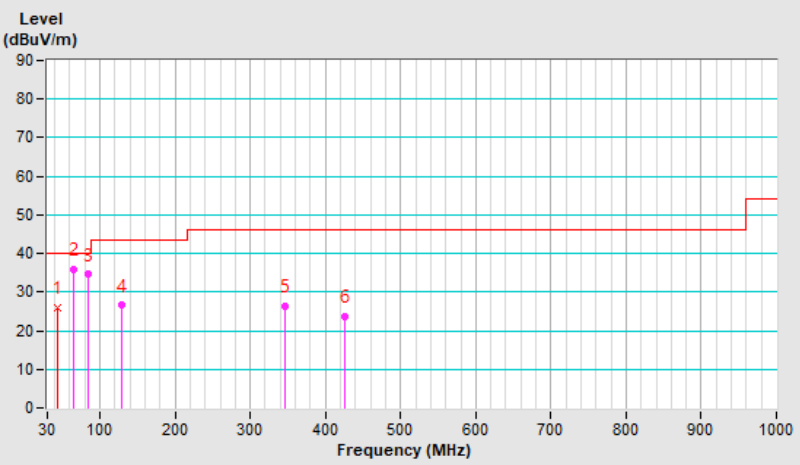


RF Mode	802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 67% RH
Tested By	Sampson Chen		

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	43.98	26.1 QP	40.0	-13.9	2.00 V	5	39.4	-13.3
2	65.01	36.0 QP	40.0	-4.0	1.50 V	341	50.5	-14.5
3	84.09	34.6 QP	40.0	-5.4	2.00 V	128	53.3	-18.7
4	129.63	26.6 QP	43.5	-16.9	3.00 V	341	40.8	-14.2
5	345.40	26.5 QP	46.0	-19.5	2.00 V	176	38.1	-11.6
6	426.42	23.8 QP	46.0	-22.2	1.00 V	80	32.8	-9.0

Remarks:

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



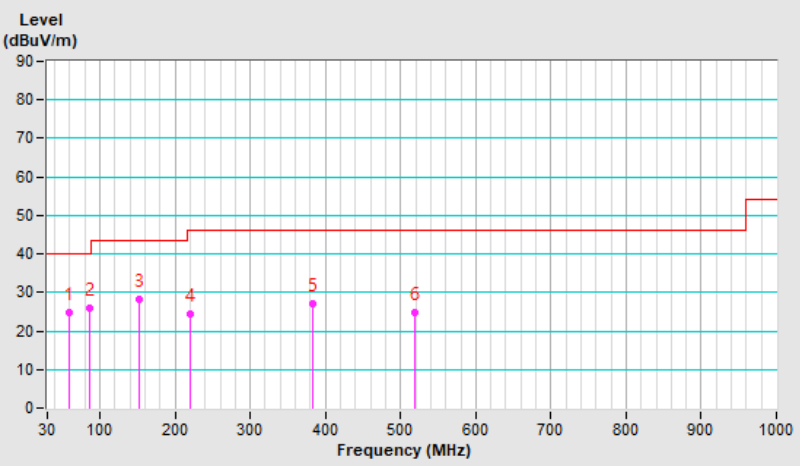
Mode B

RF Mode	802.11ax (HE40)	Channel	CH 134：5670 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°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	59.46	24.6 QP	40.0	-15.4	2.00 H	256	38.3	-13.7
2	85.36	25.8 QP	40.0	-14.2	3.00 H	248	44.6	-18.8
3	153.04	28.3 QP	43.5	-15.2	1.00 H	263	41.4	-13.1
4	220.78	24.4 QP	46.0	-21.6	3.00 H	263	41.0	-16.6
5	383.01	27.2 QP	46.0	-18.8	2.00 H	167	37.6	-10.4
6	519.07	24.9 QP	46.0	-21.1	1.50 H	160	32.1	-7.2

Remarks:

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

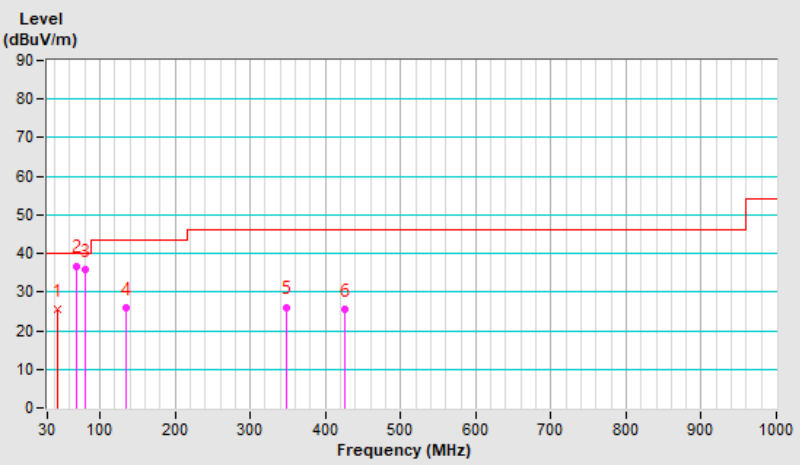


RF Mode	802.11ax (HE40)	Channel	CH 134：5670 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	26°C, 67% RH
Tested By	Sampson Chen		

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	44.43	25.5 QP	40.0	-14.5	3.00 V	17	38.7	-13.2
2	**67.92**	**36.8 QP**	**40.0**	**-3.2**	**1.50 V**	**340**	**51.8**	**-15.0**
3	81.39	35.7 QP	40.0	-4.3	1.50 V	130	54.1	-18.4
4	134.63	26.0 QP	43.5	-17.5	1.00 V	349	39.7	-13.7
5	347.19	26.1 QP	46.0	-19.9	1.00 V	170	37.6	-11.5
6	425.05	25.6 QP	46.0	-20.4	2.00 V	86	34.6	-9.0

Remarks:

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



7.9 Unwanted Emissions above 1 GHz

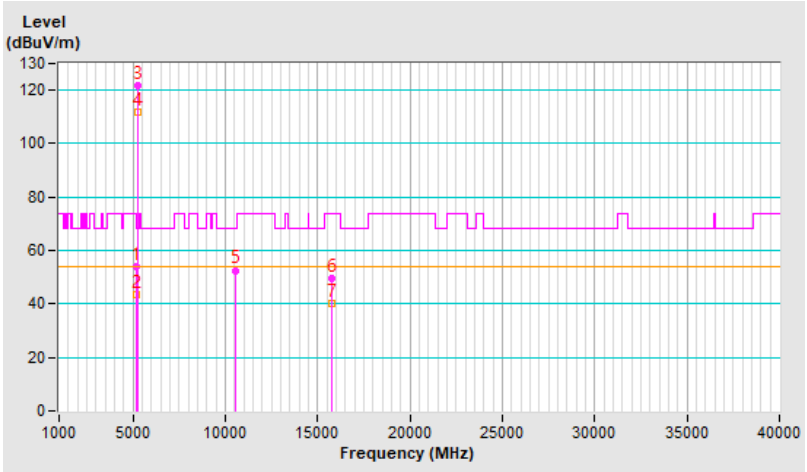
Mode A

RF Mode	802.11a	**Channel**	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5144.80	54.2 PK	74.0	-19.8	1.00 H	106	48.6	5.6
2	5144.80	43.7 AV	54.0	-10.3	1.00 H	106	38.1	5.6
3	*5260.00	121.8 PK			1.00 H	106	116.6	5.2
4	*5260.00	111.9 AV			1.00 H	106	106.7	5.2
5	#10520.00	52.6 PK	68.2	-15.6	3.64 H	104	36.6	16.0
6	15780.00	49.7 PK	74.0	-24.3	1.63 H	226	33.0	16.7
7	15780.00	40.0 AV	54.0	-14.0	1.63 H	226	23.3	16.7

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

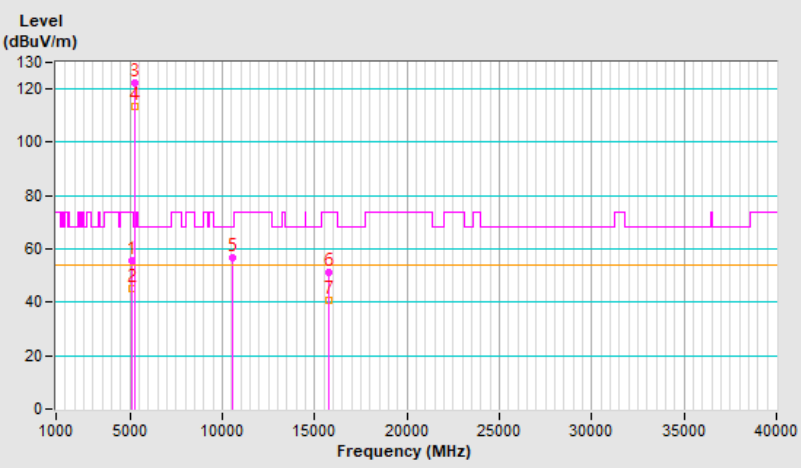


RF Mode	802.11a	Channel	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5141.40	55.8 PK	74.0	-18.2	1.18 V	22	50.2	5.6
2	5141.40	45.0 AV	54.0	-9.0	1.18 V	22	39.4	5.6
3	*5260.00	122.4 PK			1.18 V	22	117.2	5.2
4	*5260.00	113.2 AV			1.18 V	22	108.0	5.2
5	#10520.00	56.7 PK	68.2	-11.5	1.80 V	176	40.7	16.0
6	15780.00	51.4 PK	74.0	-22.6	1.67 V	343	34.7	16.7
7	15780.00	40.7 AV	54.0	-13.3	1.67 V	343	24.0	16.7

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

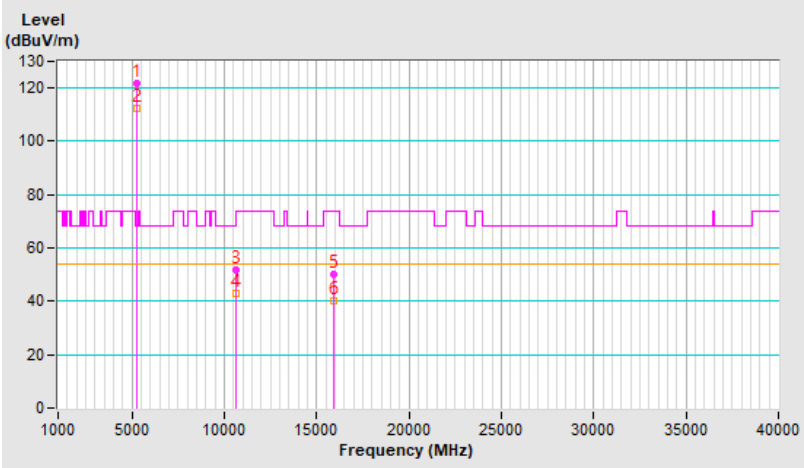


RF Mode	802.11a	Channel	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	121.9 PK			1.06 H	112	116.7	5.2
2	*5300.00	112.2 AV			1.06 H	112	107.0	5.2
3	10600.00	52.0 PK	74.0	-22.0	3.63 H	104	36.2	15.8
4	10600.00	42.8 AV	54.0	-11.2	3.63 H	104	27.0	15.8
5	15900.00	50.3 PK	74.0	-23.7	1.70 H	237	33.9	16.4
6	15900.00	40.3 AV	54.0	-13.7	1.70 H	237	23.9	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.

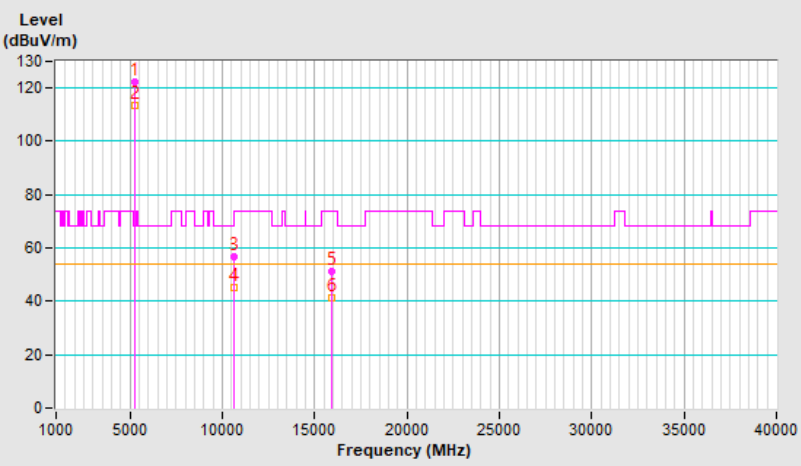


RF Mode	802.11a	Channel	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	122.3 PK			1.17 V	13	117.1	5.2
2	*5300.00	113.2 AV			1.17 V	13	108.0	5.2
3	10600.00	56.5 PK	74.0	-17.5	1.77 V	179	40.7	15.8
4	10600.00	45.1 AV	54.0	-8.9	1.77 V	179	29.3	15.8
5	15900.00	51.3 PK	74.0	-22.7	1.67 V	348	34.9	16.4
6	15900.00	41.1 AV	54.0	-12.9	1.67 V	348	24.7	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.

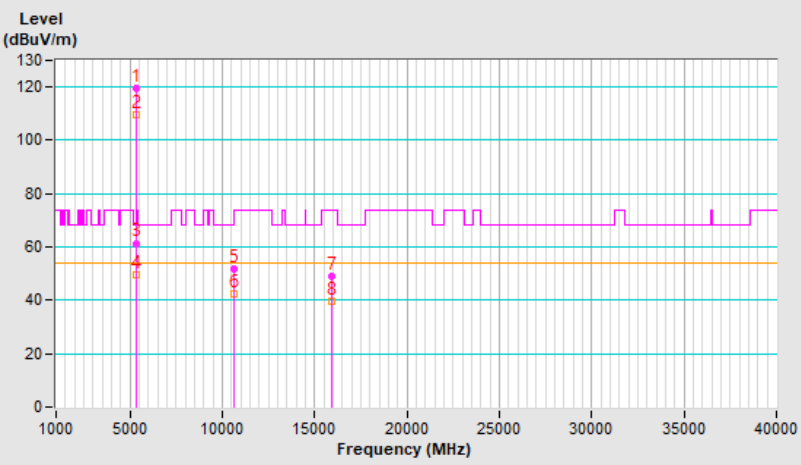


RF Mode	802.11a	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	119.5 PK			2.13 H	181	114.2	5.3
2	*5320.00	109.5 AV			2.13 H	181	104.2	5.3
3	5350.00	61.4 PK	74.0	-12.6	2.13 H	181	55.9	5.5
4	5350.00	49.5 AV	54.0	-4.5	2.13 H	181	44.0	5.5
5	10640.00	51.6 PK	74.0	-22.4	3.72 H	107	35.6	16.0
6	10640.00	42.5 AV	54.0	-11.5	3.72 H	107	26.5	16.0
7	15960.00	49.2 PK	74.0	-24.8	1.64 H	236	32.3	16.9
8	15960.00	39.7 AV	54.0	-14.3	1.64 H	236	22.8	16.9

Remarks:

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

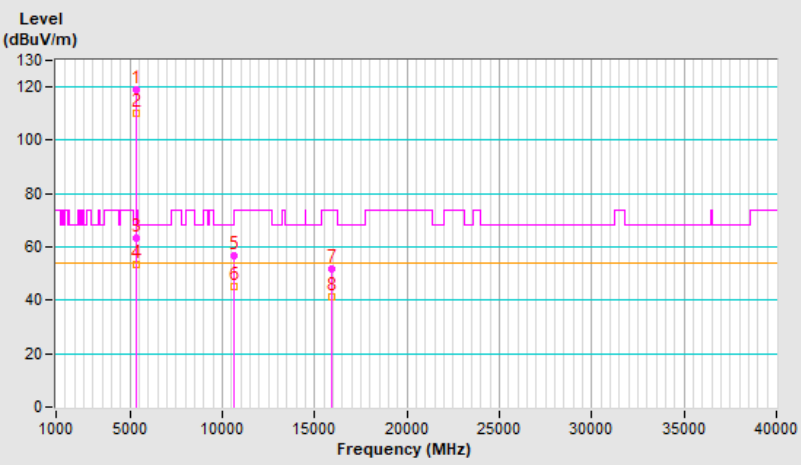


RF Mode	802.11a	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	119.2 PK			1.12 V	3	113.9	5.3
2	*5320.00	110.1 AV			1.12 V	3	104.8	5.3
3	5350.00	63.4 PK	74.0	-10.6	1.12 V	3	57.9	5.5
4	5350.00	53.6 AV	54.0	-0.4	1.12 V	3	48.1	5.5
5	10640.00	56.7 PK	74.0	-17.3	1.75 V	161	40.7	16.0
6	10640.00	45.2 AV	54.0	-8.8	1.75 V	161	29.2	16.0
7	15960.00	51.8 PK	74.0	-22.2	1.66 V	356	34.9	16.9
8	15960.00	41.5 AV	54.0	-12.5	1.66 V	356	24.6	16.9

Remarks:

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

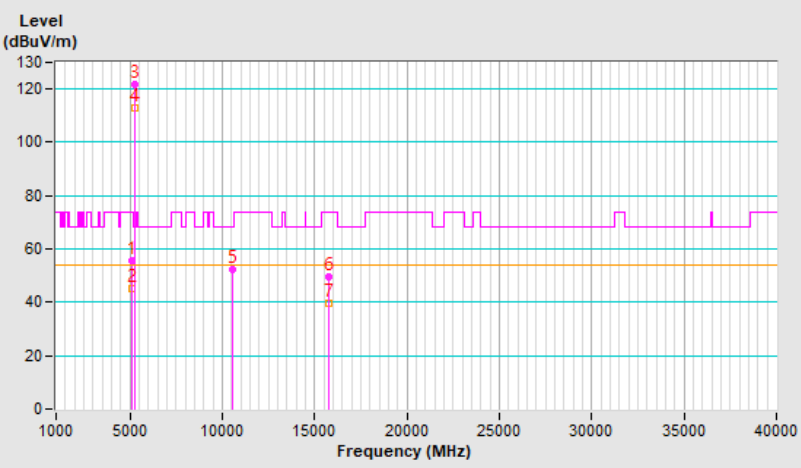


RF Mode	802.11ax (HE20)	Channel	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5144.50	55.6 PK	74.0	-18.4	1.03 H	96	50.0	5.6
2	5144.50	45.1 AV	54.0	-8.9	1.03 H	96	39.5	5.6
3	*5260.00	121.9 PK			1.03 H	96	116.7	5.2
4	*5260.00	112.8 AV			1.03 H	96	107.6	5.2
5	#10520.00	52.3 PK	68.2	-15.9	3.66 H	98	36.3	16.0
6	15780.00	49.6 PK	74.0	-24.4	1.72 H	231	32.9	16.7
7	15780.00	39.6 AV	54.0	-14.4	1.72 H	231	22.9	16.7

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

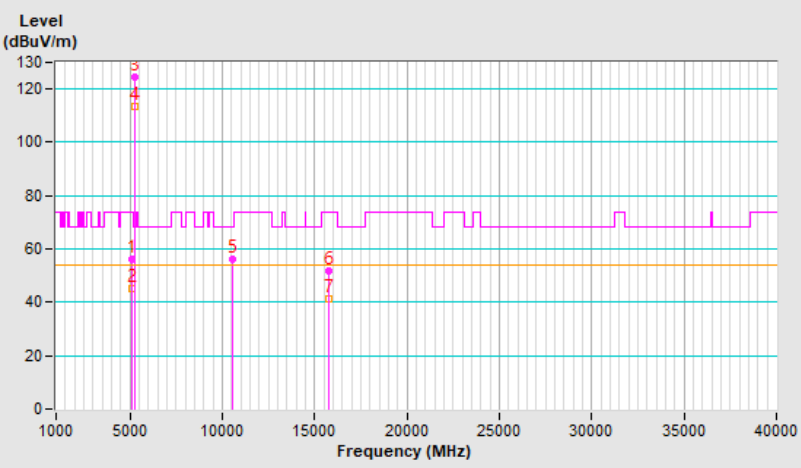


RF Mode	802.11ax (HE20)	Channel	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5139.60	56.3 PK	74.0	-17.7	1.14 V	3	50.7	5.6
2	5139.60	45.2 AV	54.0	-8.8	1.14 V	3	39.6	5.6
3	*5260.00	124.4 PK			1.14 V	3	119.2	5.2
4	*5260.00	113.2 AV			1.14 V	3	108.0	5.2
5	#10520.00	56.3 PK	68.2	-11.9	1.70 V	187	40.3	16.0
6	15780.00	51.6 PK	74.0	-22.4	1.65 V	346	34.9	16.7
7	15780.00	41.3 AV	54.0	-12.7	1.65 V	346	24.6	16.7

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

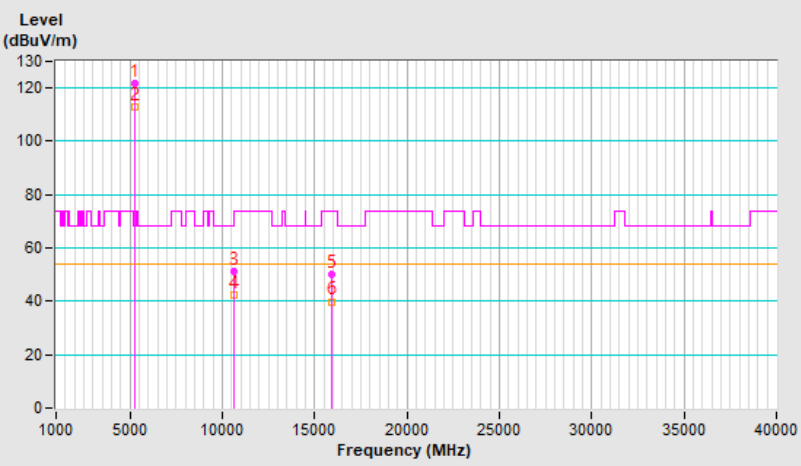


RF Mode	802.11ax (HE20)	Channel	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	121.9 PK			1.09 H	90	116.7	5.2
2	*5300.00	112.9 AV			1.09 H	90	107.7	5.2
3	10600.00	51.4 PK	74.0	-22.6	3.66 H	104	35.6	15.8
4	10600.00	42.2 AV	54.0	-11.8	3.66 H	104	26.4	15.8
5	15900.00	49.9 PK	74.0	-24.1	1.72 H	251	33.5	16.4
6	15900.00	39.9 AV	54.0	-14.1	1.72 H	251	23.5	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.

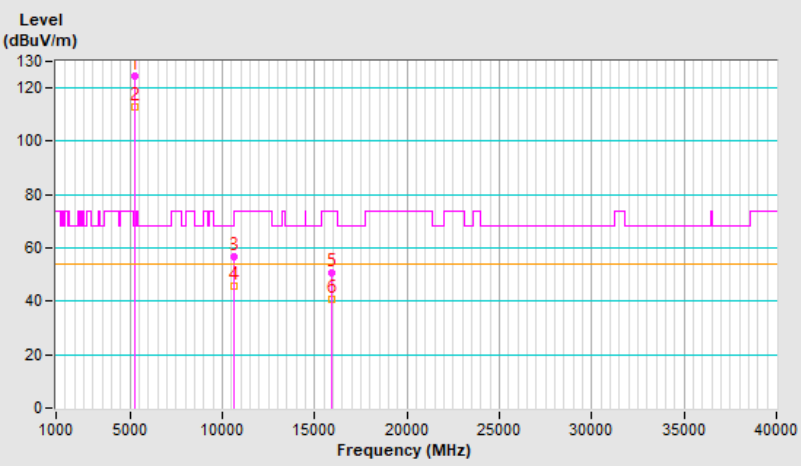


RF Mode	802.11ax (HE20)	Channel	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	124.5 PK			1.11 V	8	119.3	5.2
2	*5300.00	113.1 AV			1.11 V	8	107.9	5.2
3	10600.00	56.8 PK	74.0	-17.2	1.77 V	173	41.0	15.8
4	10600.00	45.5 AV	54.0	-8.5	1.77 V	173	29.7	15.8
5	15900.00	50.9 PK	74.0	-23.1	1.63 V	350	34.5	16.4
6	15900.00	40.5 AV	54.0	-13.5	1.63 V	350	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.

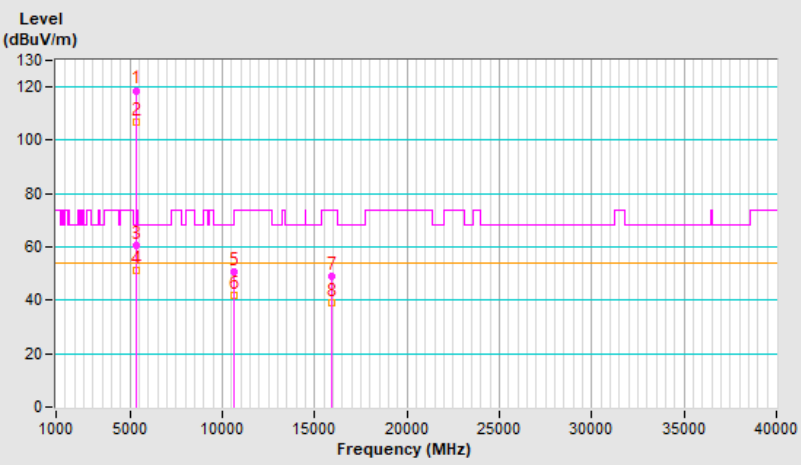


RF Mode	802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	118.7 PK			1.98 H	94	113.4	5.3
2	*5320.00	107.0 AV			1.98 H	94	101.7	5.3
3	5350.00	60.6 PK	74.0	-13.4	1.98 H	94	55.1	5.5
4	5350.00	51.0 AV	54.0	-3.0	1.98 H	94	45.5	5.5
5	10640.00	50.8 PK	74.0	-23.2	3.63 H	112	34.8	16.0
6	10640.00	41.8 AV	54.0	-12.2	3.63 H	112	25.8	16.0
7	15960.00	49.1 PK	74.0	-24.9	1.74 H	242	32.2	16.9
8	15960.00	39.1 AV	54.0	-14.9	1.74 H	242	22.2	16.9

Remarks:

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

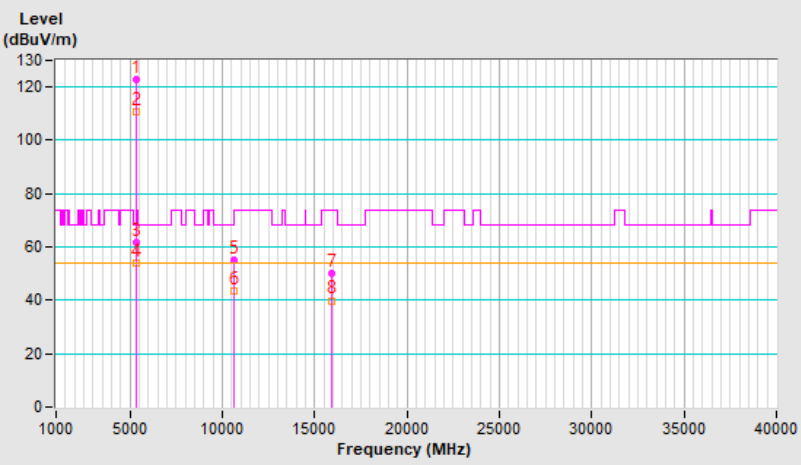


RF Mode	802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	122.7 PK			1.04 V	6	117.4	5.3
2	*5320.00	110.7 AV			1.04 V	6	105.4	5.3
3	5350.00	61.9 PK	74.0	-12.1	1.04 V	6	56.4	5.5
4	5350.00	53.8 AV	54.0	-0.2	1.04 V	6	48.3	5.5
5	10640.00	54.9 PK	74.0	-19.1	1.76 V	167	38.9	16.0
6	10640.00	43.3 AV	54.0	-10.7	1.76 V	167	27.3	16.0
7	15960.00	49.9 PK	74.0	-24.1	1.68 V	359	33.0	16.9
8	15960.00	39.9 AV	54.0	-14.1	1.68 V	359	23.0	16.9

Remarks:

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

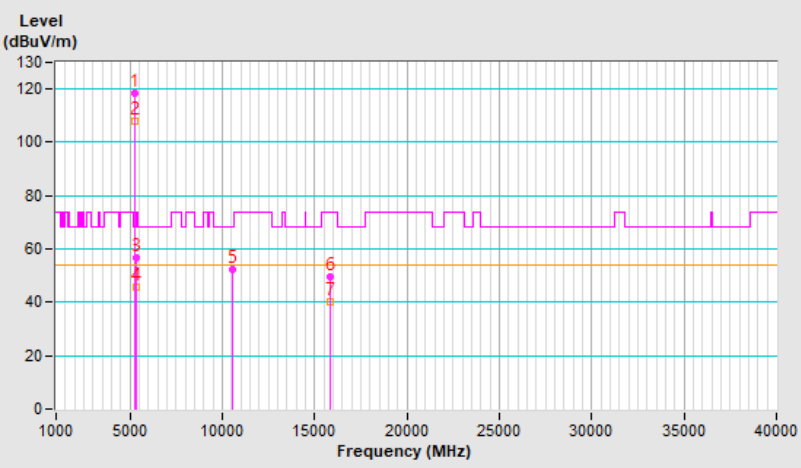


RF Mode	802.11ax (HE40)	Channel	CH 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	118.6 PK			1.99 H	207	113.4	5.2
2	*5270.00	107.7 AV			1.99 H	207	102.5	5.2
3	5353.25	56.5 PK	74.0	-17.5	1.99 H	207	51.0	5.5
4	5353.25	45.8 AV	54.0	-8.2	1.99 H	207	40.3	5.5
5	#10540.00	52.1 PK	68.2	-16.1	3.56 H	98	36.3	15.8
6	15810.00	49.6 PK	74.0	-24.4	1.73 H	205	32.9	16.7
7	15810.00	40.0 AV	54.0	-14.0	1.73 H	205	23.3	16.7

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

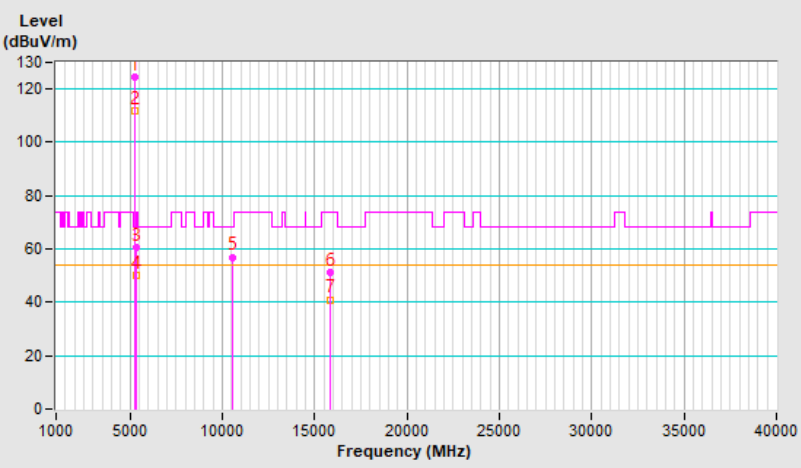


RF Mode	802.11ax (HE40)	Channel	CH 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	124.5 PK			2.17 V	5	119.3	5.2
2	*5270.00	111.9 AV			2.17 V	5	106.7	5.2
3	5350.00	60.8 PK	74.0	-13.2	2.17 V	5	55.3	5.5
4	5350.00	50.0 AV	54.0	-4.0	2.17 V	5	44.5	5.5
5	#10540.00	57.0 PK	68.2	-11.2	1.74 V	161	41.2	15.8
6	15810.00	51.4 PK	74.0	-22.6	1.67 V	338	34.7	16.7
7	15810.00	41.0 AV	54.0	-13.0	1.67 V	338	24.3	16.7

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

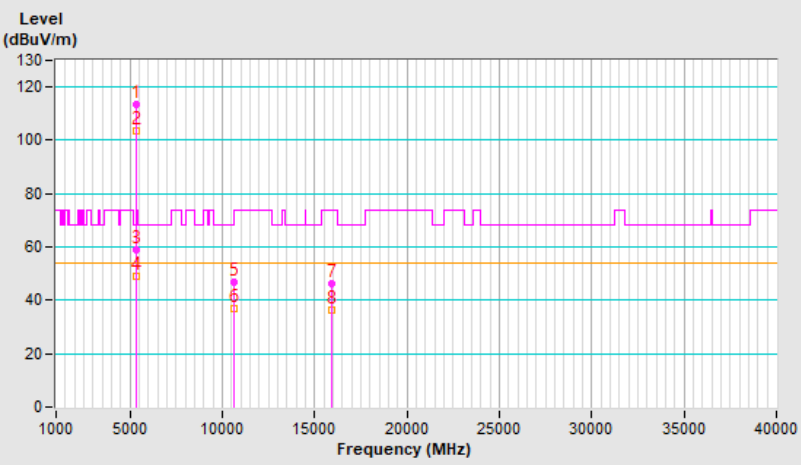


RF Mode	802.11ax (HE40)	Channel	CH 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	113.6 PK			1.87 H	197	108.4	5.2
2	*5310.00	103.6 AV			1.87 H	197	98.4	5.2
3	5350.00	59.0 PK	74.0	-15.0	1.87 H	197	53.5	5.5
4	5350.00	49.0 AV	54.0	-5.0	1.87 H	197	43.5	5.5
5	10620.00	47.0 PK	74.0	-27.0	3.55 H	84	31.1	15.9
6	10620.00	36.9 AV	54.0	-17.1	3.55 H	84	21.0	15.9
7	15930.00	46.4 PK	74.0	-27.6	1.67 H	203	29.8	16.6
8	15930.00	36.3 AV	54.0	-17.7	1.67 H	203	19.7	16.6

Remarks:

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

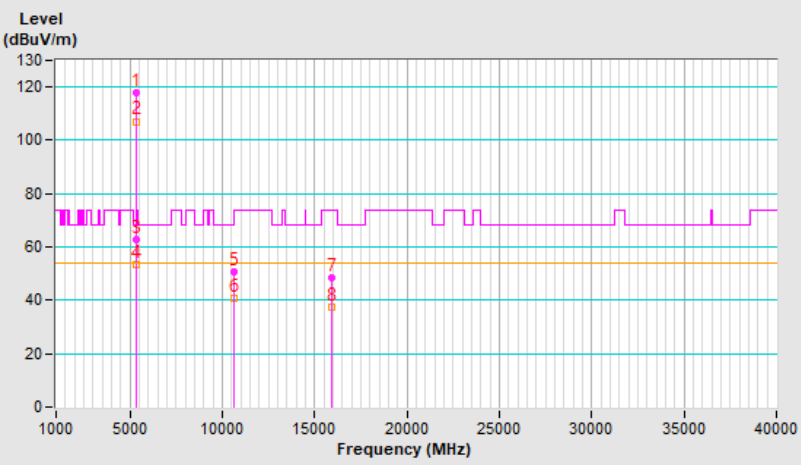


RF Mode	802.11ax (HE40)	Channel	CH 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	117.8 PK			2.36 V	4	112.6	5.2
2	*5310.00	107.1 AV			2.36 V	4	101.9	5.2
3	5350.00	62.9 PK	74.0	-11.1	2.36 V	4	57.4	5.5
4	5350.00	53.6 AV	54.0	-0.4	2.36 V	4	48.1	5.5
5	10620.00	50.9 PK	74.0	-23.1	1.69 V	167	35.0	15.9
6	10620.00	40.9 AV	54.0	-13.1	1.69 V	167	25.0	15.9
7	15930.00	48.2 PK	74.0	-25.8	1.60 V	1	31.6	16.6
8	15930.00	37.4 AV	54.0	-16.6	1.60 V	1	20.8	16.6

Remarks:

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

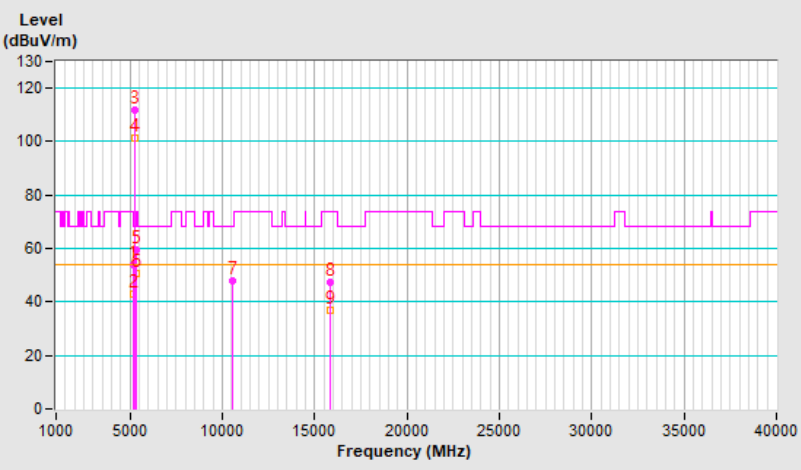


RF Mode	802.11ax (HE80)	Channel	CH 58：5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	53.9 PK	74.0	-20.1	1.92 H	100	48.3	5.6
2	5150.00	42.9 AV	54.0	-11.1	1.92 H	100	37.3	5.6
3	*5290.00	111.9 PK			1.92 H	100	106.7	5.2
4	*5290.00	101.1 AV			1.92 H	100	95.9	5.2
5	5350.00	59.7 PK	74.0	-14.3	1.92 H	100	54.2	5.5
6	5350.00	50.9 AV	54.0	-3.1	1.92 H	100	45.4	5.5
7	#10580.00	47.7 PK	68.2	-20.5	3.50 H	82	31.8	15.9
8	15870.00	47.3 PK	74.0	-26.7	1.75 H	233	30.8	16.5
9	15870.00	37.0 AV	54.0	-17.0	1.75 H	233	20.5	16.5

Remarks:

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

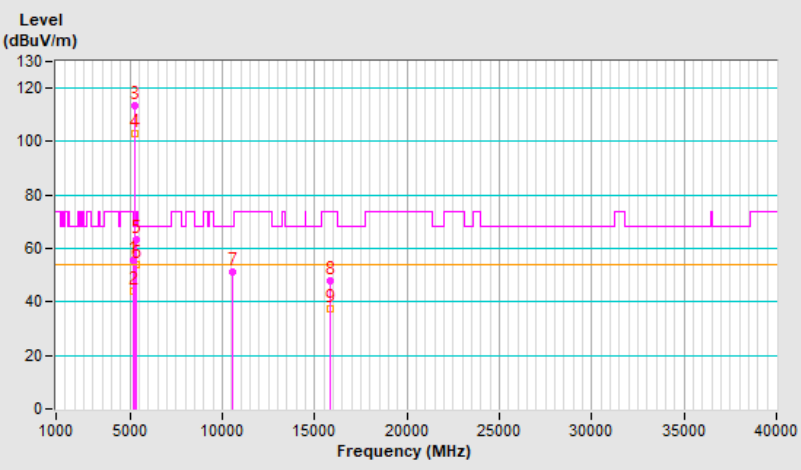


RF Mode	802.11ax (HE80)	**Channel**	CH 58：5290 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	55.7 PK	74.0	-18.3	2.13 V	3	50.1	5.6
2	5150.00	44.0 AV	54.0	-10.0	2.13 V	3	38.4	5.6
3	*5290.00	113.2 PK			2.13 V	3	108.0	5.2
4	*5290.00	103.1 AV			2.13 V	3	97.9	5.2
5	5353.50	63.5 PK	74.0	-10.5	2.13 V	3	58.0	5.5
6	**5353.50**	**53.9 AV**	**54.0**	**-0.1**	**2.13 V**	**3**	**48.4**	**5.5**
7	#10580.00	51.0 PK	68.2	-17.2	1.67 V	143	35.1	15.9
8	15870.00	47.9 PK	74.0	-26.1	1.57 V	24	31.4	16.5
9	15870.00	37.4 AV	54.0	-16.6	1.57 V	24	20.9	16.5

Remarks:

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

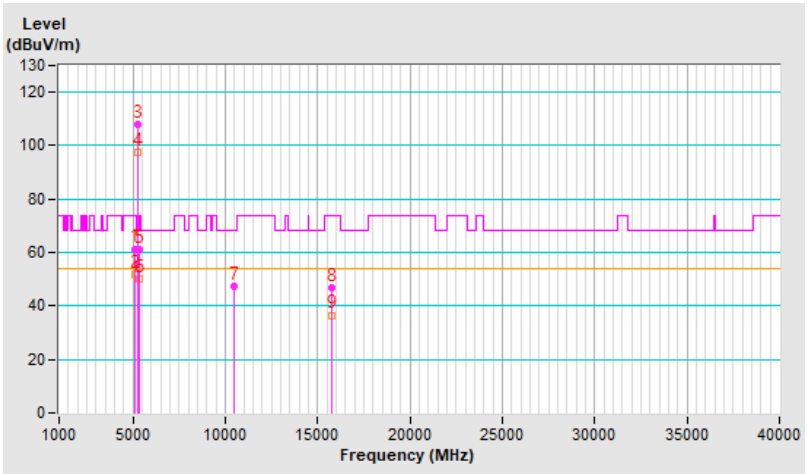


RF Mode	802.11ax (HE160)	Channel	CH 50：5250 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5142.50	61.4 PK	74.0	-12.6	1.88 H	96	55.8	5.6
2	5142.50	51.8 AV	54.0	-2.2	1.88 H	96	46.2	5.6
3	*5250.00	107.8 PK			1.88 H	96	102.6	5.2
4	*5250.00	97.7 AV			1.88 H	96	92.5	5.2
5	5355.10	61.0 PK	74.0	-13.0	1.88 H	96	55.5	5.5
6	5355.10	50.3 AV	54.0	-3.7	1.88 H	96	44.8	5.5
7	#10500.00	47.4 PK	68.2	-20.8	3.51 H	60	31.5	15.9
8	15750.00	46.8 PK	74.0	-27.2	1.70 H	236	30.2	16.6
9	15750.00	36.6 AV	54.0	-17.4	1.70 H	236	20.0	16.6

Remarks:

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

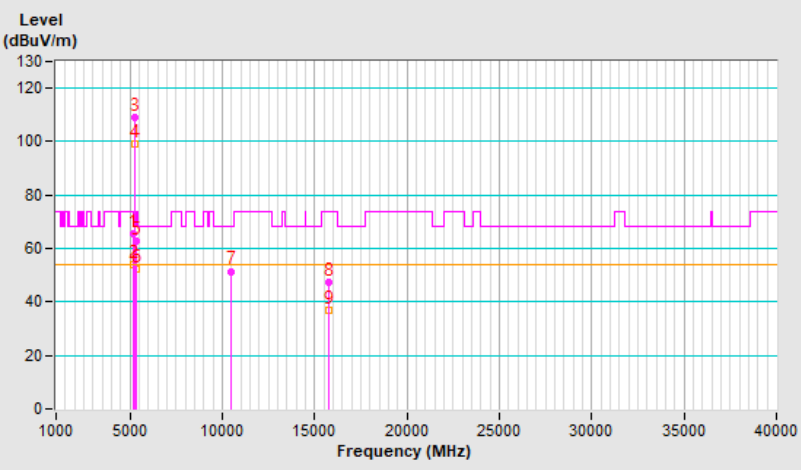


RF Mode	802.11ax (HE160)	Channel	CH 50：5250 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5146.30	65.4 PK	74.0	-8.6	1.05 V	2	59.8	5.6
2	5146.30	53.8 AV	54.0	-0.2	1.05 V	2	48.2	5.6
3	*5250.00	108.9 PK			1.05 V	2	103.7	5.2
4	*5250.00	99.3 AV			1.05 V	2	94.1	5.2
5	5356.00	62.7 PK	74.0	-11.3	1.05 V	2	57.2	5.5
6	5356.00	52.4 AV	54.0	-1.6	1.05 V	2	46.9	5.5
7	#10500.00	51.5 PK	68.2	-16.7	1.74 V	156	35.6	15.9
8	15750.00	47.4 PK	74.0	-26.6	1.63 V	15	30.8	16.6
9	15750.00	36.9 AV	54.0	-17.1	1.63 V	15	20.3	16.6

Remarks:

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



Plot of Band Edge

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

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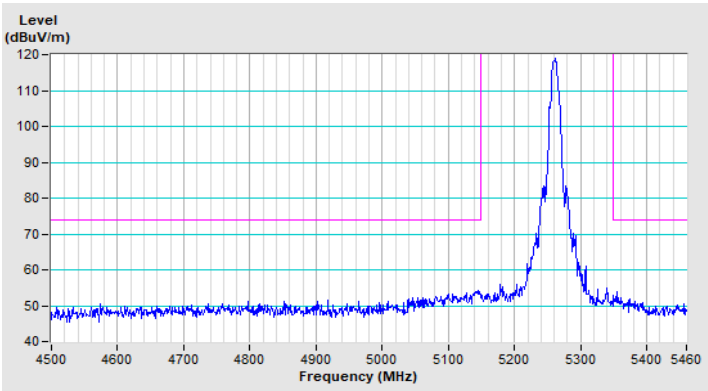
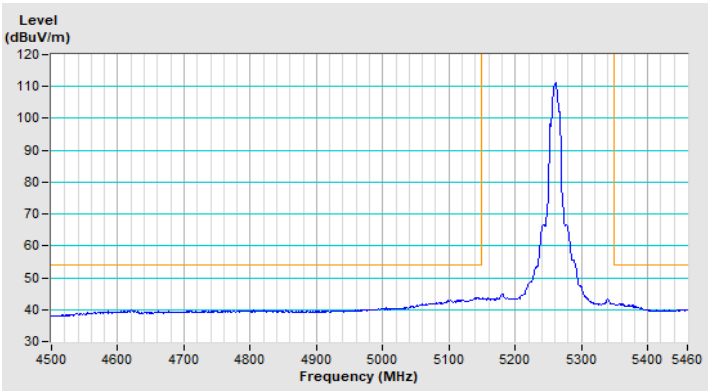
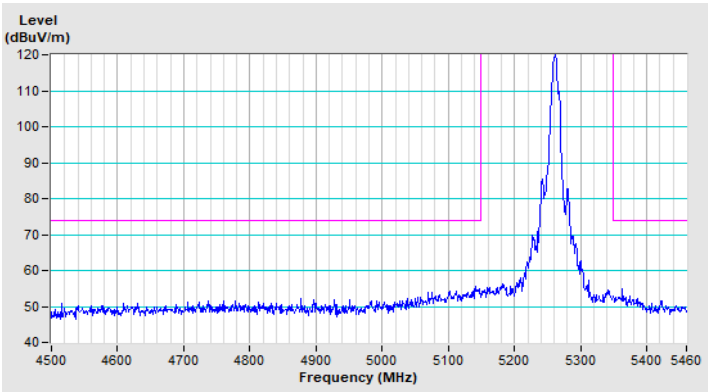


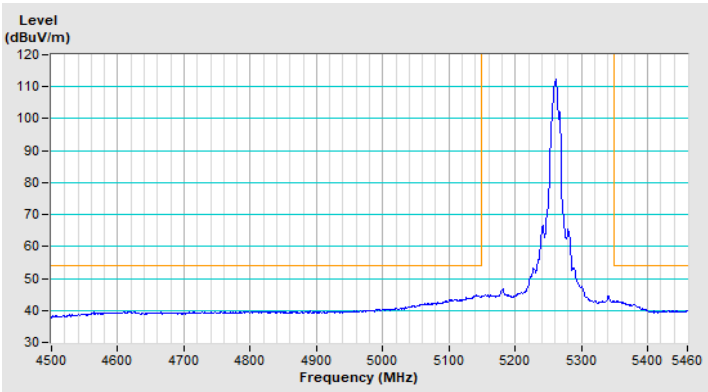
Horizontal (Peak)



Horizontal (Average)

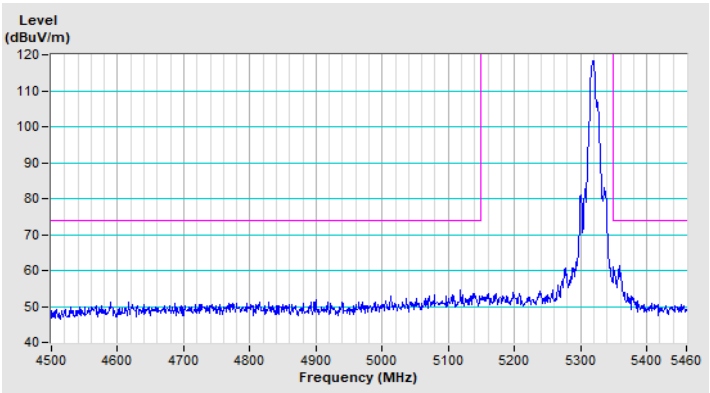


Vertical (Peak)

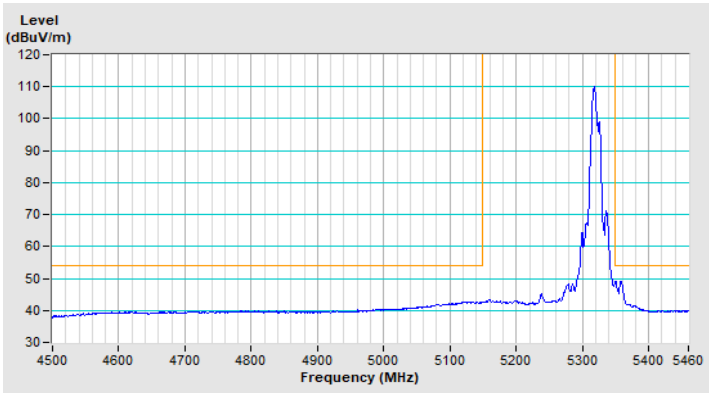


Vertical (Average)

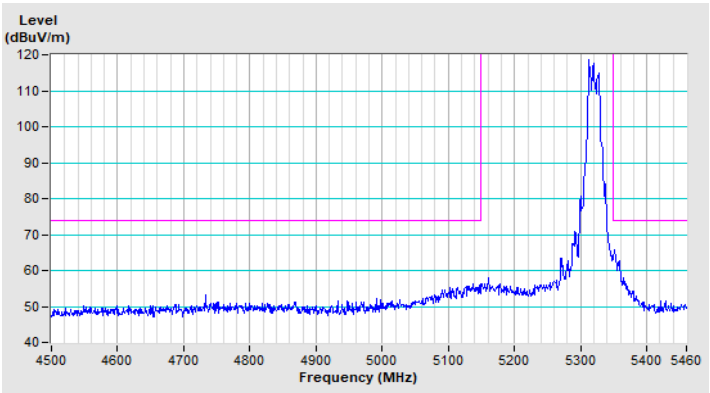
802.11a Channel 64



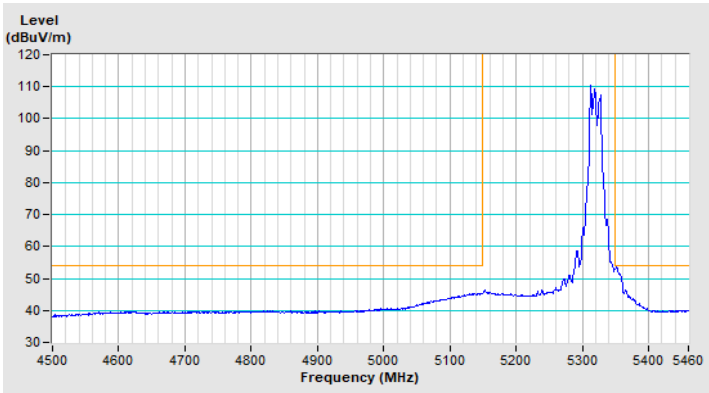
Horizontal (Peak)



Horizontal (Average)



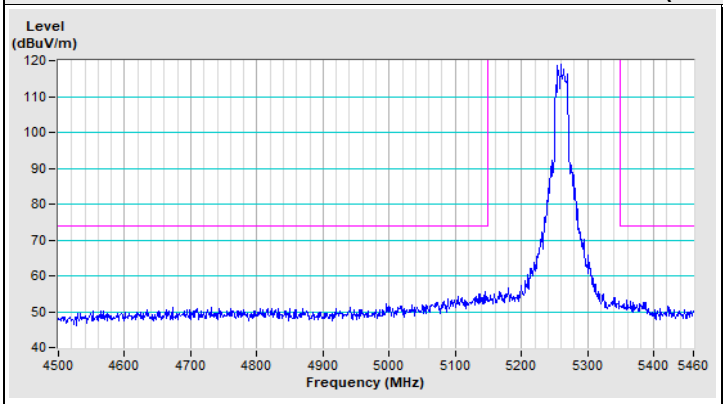
Vertical (Peak)



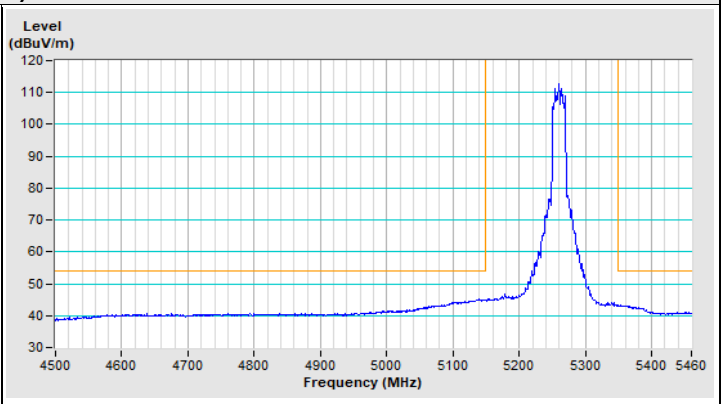
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

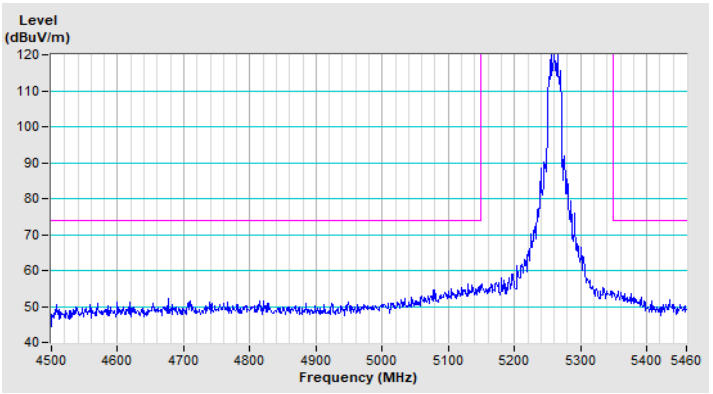
802.11ax (HE20) Channel 52



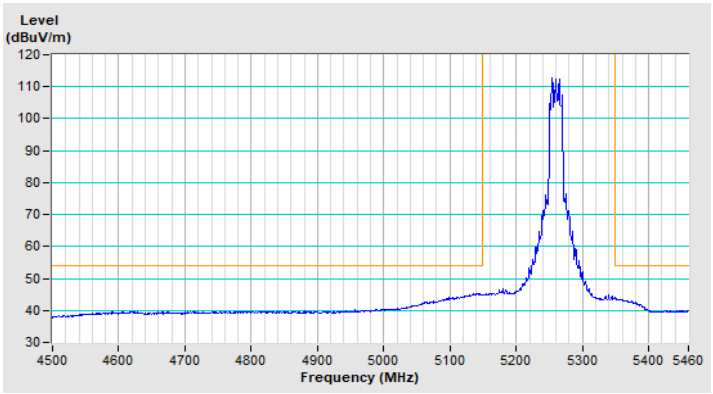
Horizontal (Peak)



Horizontal (Average)

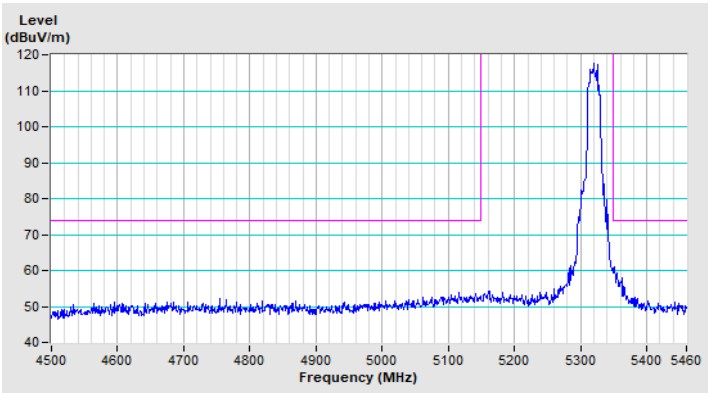


Vertical (Peak)

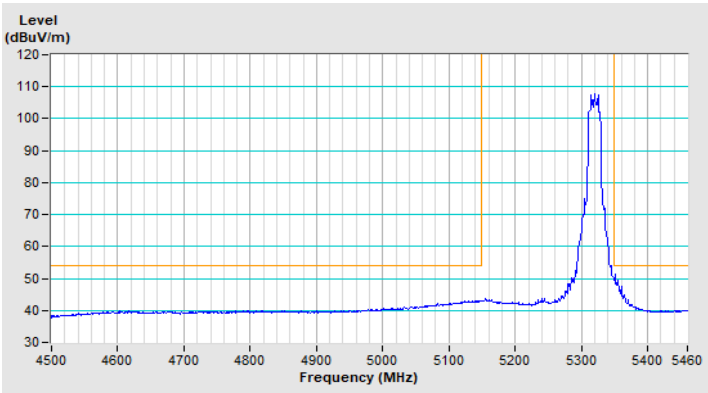


Vertical (Average)

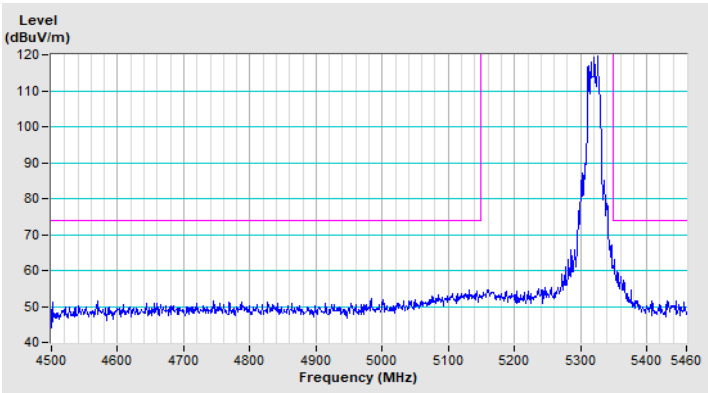
802.11ax (HE20) Channel 64



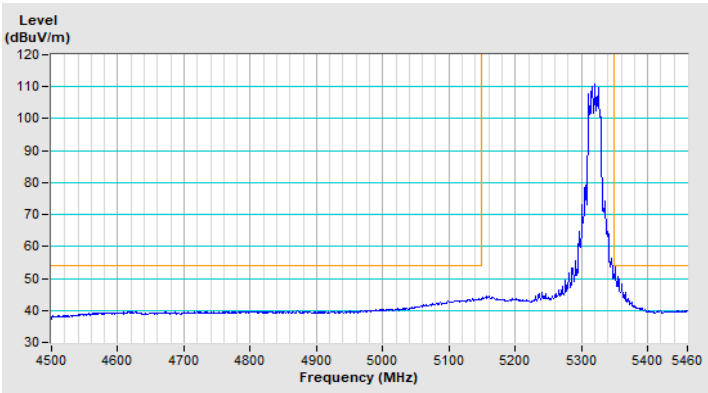
Horizontal (Peak)



Horizontal (Average)



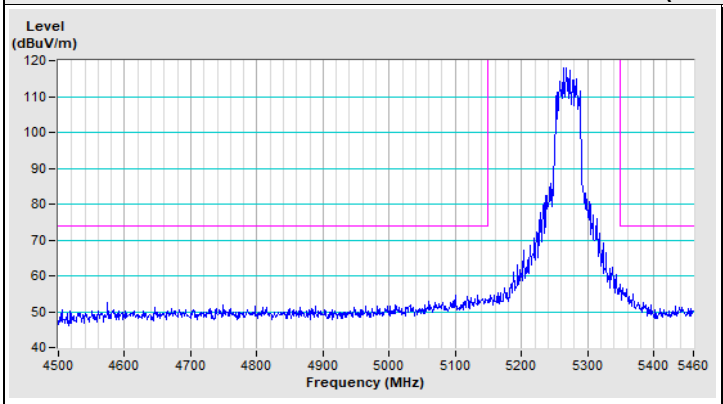
Vertical (Peak)



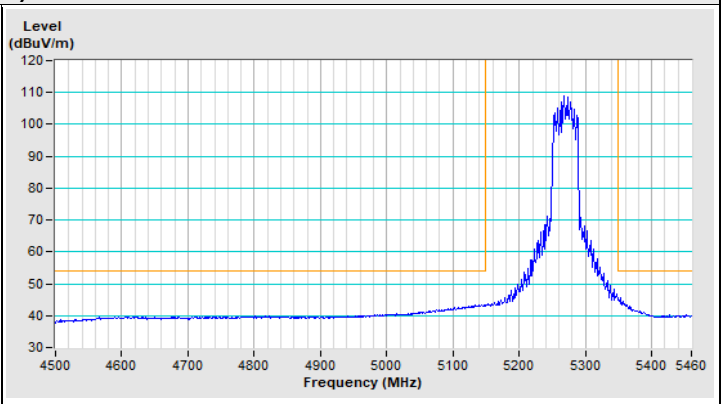
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

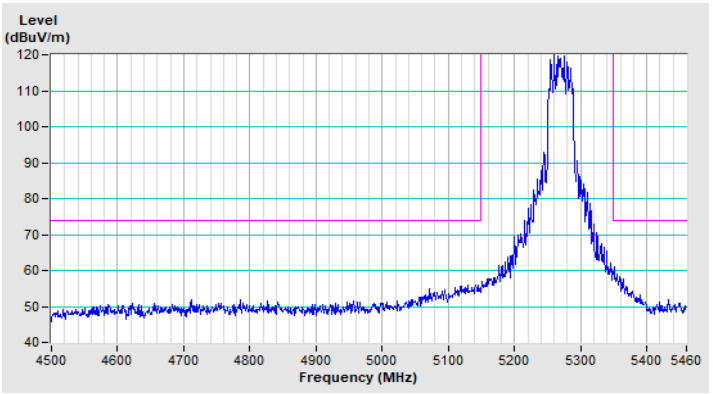
802.11ax (HE40) Channel 54



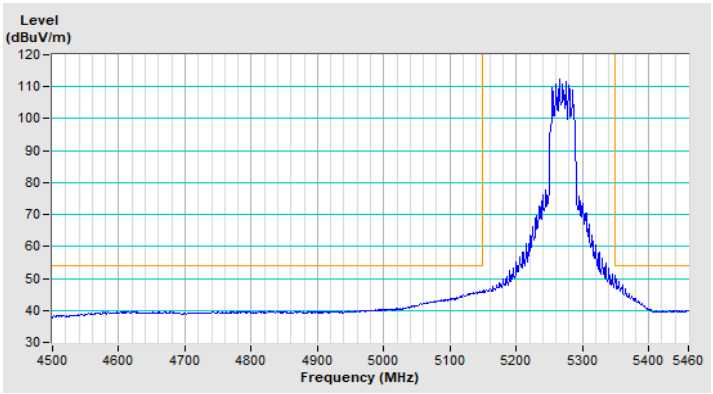
Horizontal (Peak)



Horizontal (Average)

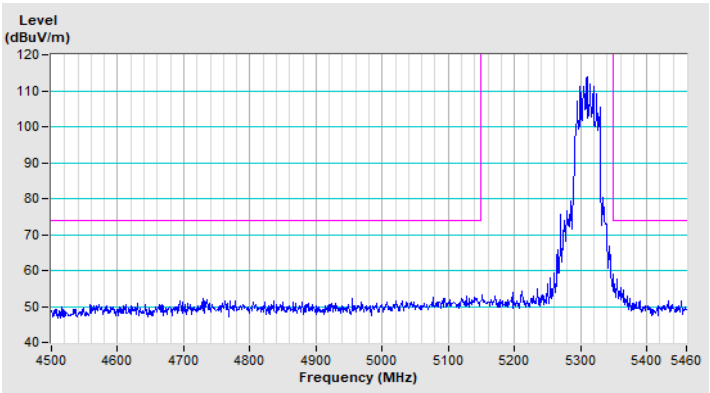


Vertical (Peak)

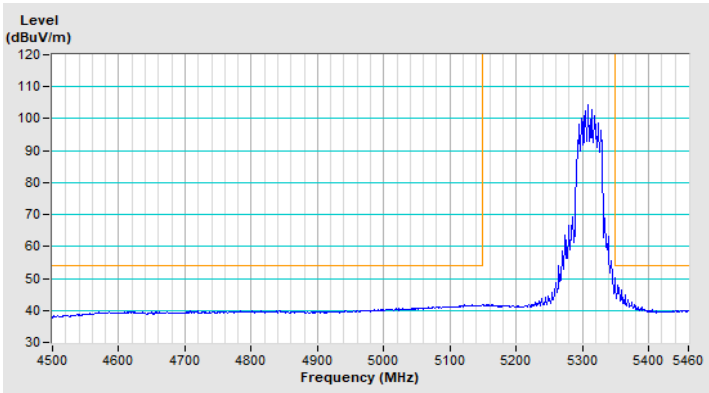


Vertical (Average)

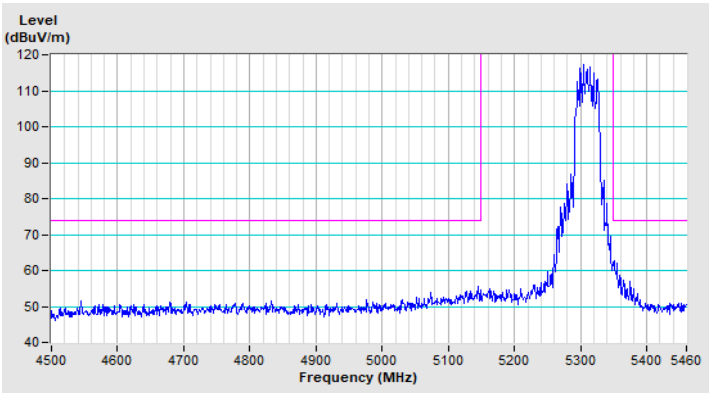
802.11ax (HE40) Channel 62



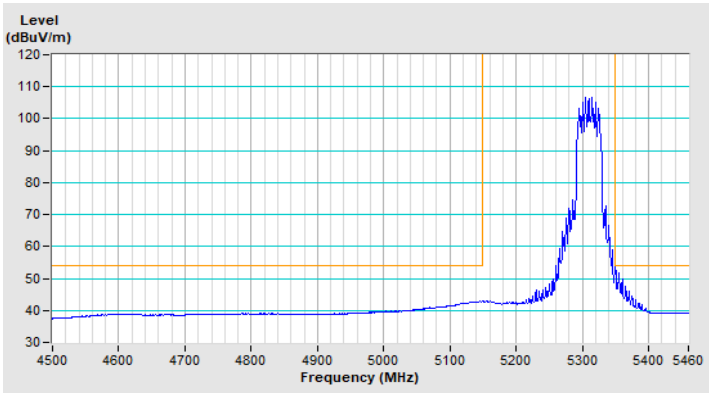
Horizontal (Peak)



Horizontal (Average)



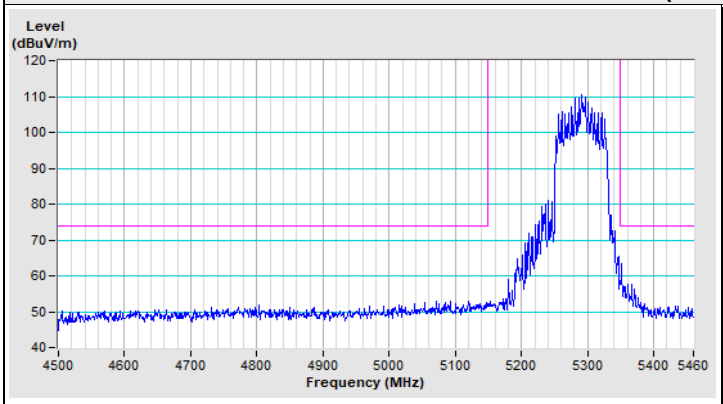
Vertical (Peak)



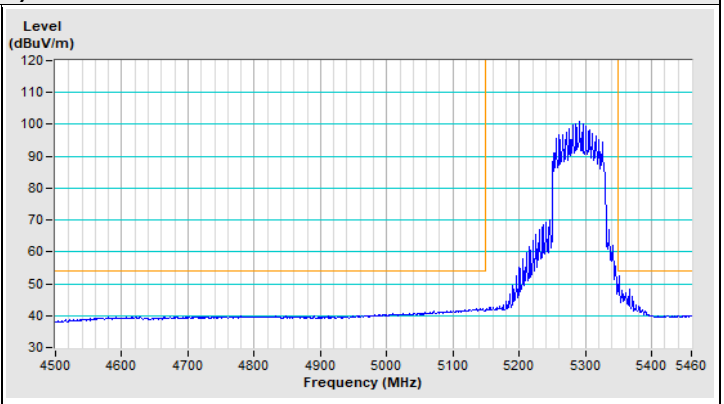
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

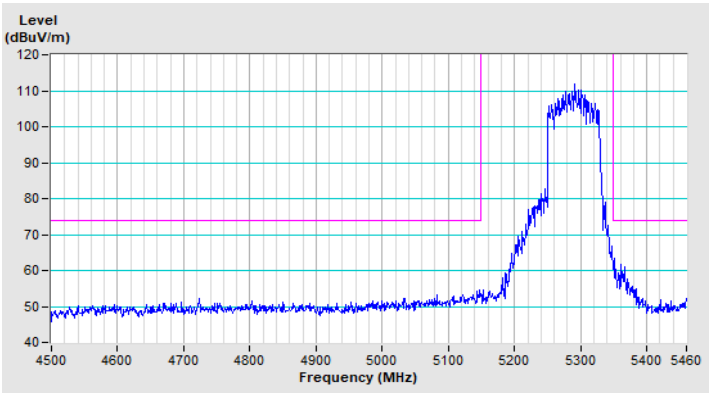
802.11ax (HE80) Channel 58



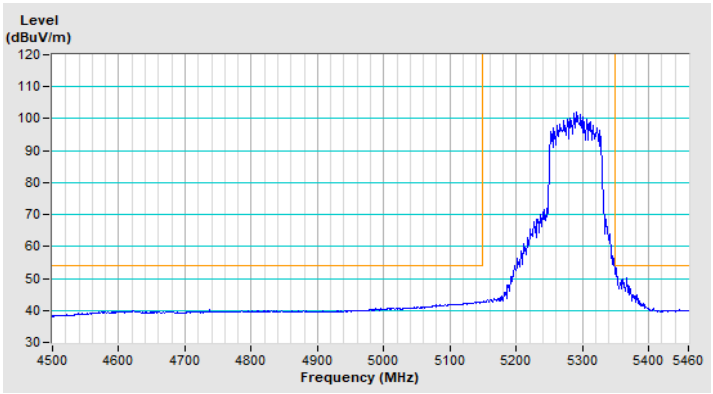
Horizontal (Peak)



Horizontal (Average)



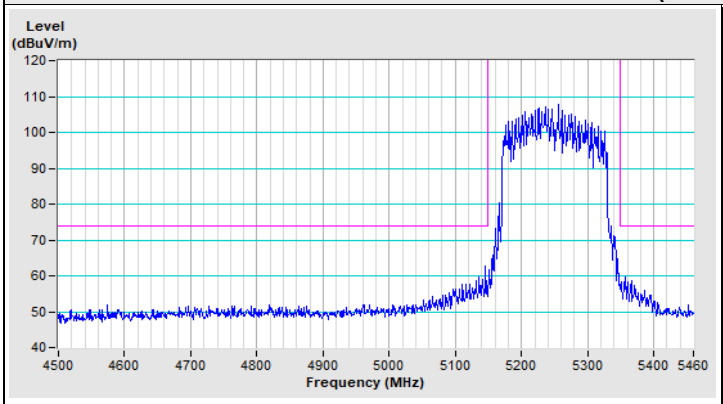
Vertical (Peak)



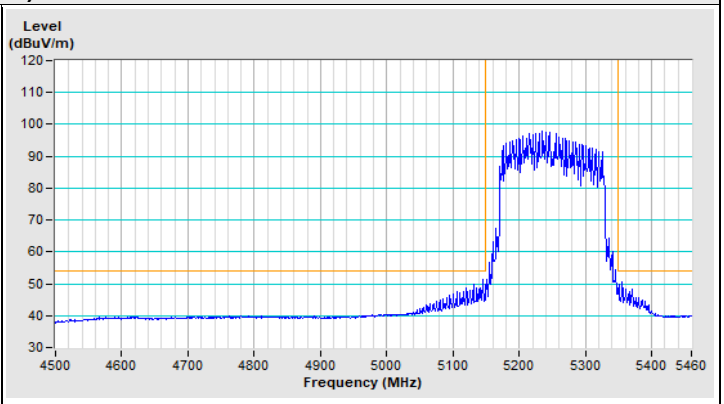
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

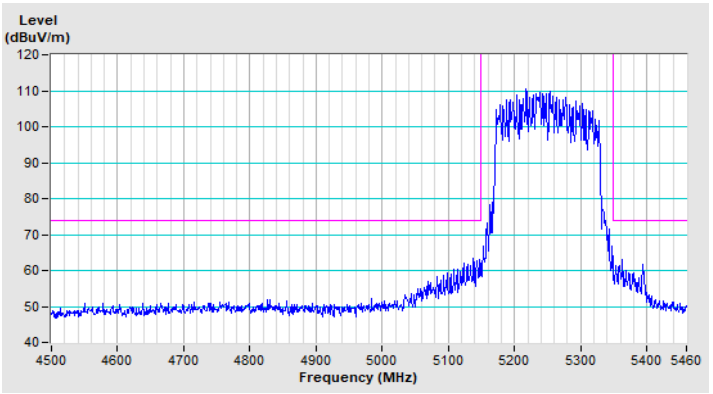
802.11ax (HE160) Channel 50



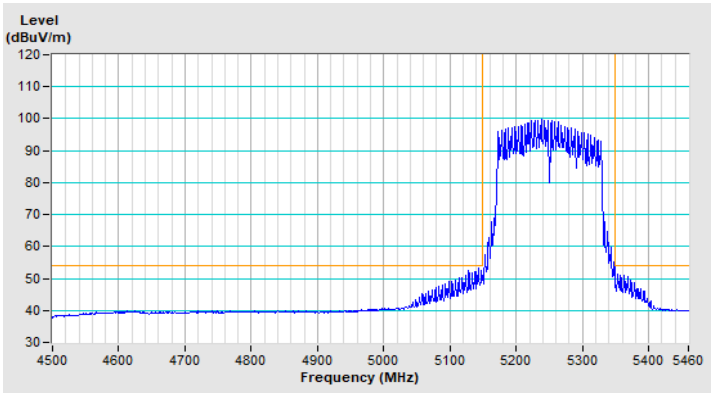
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

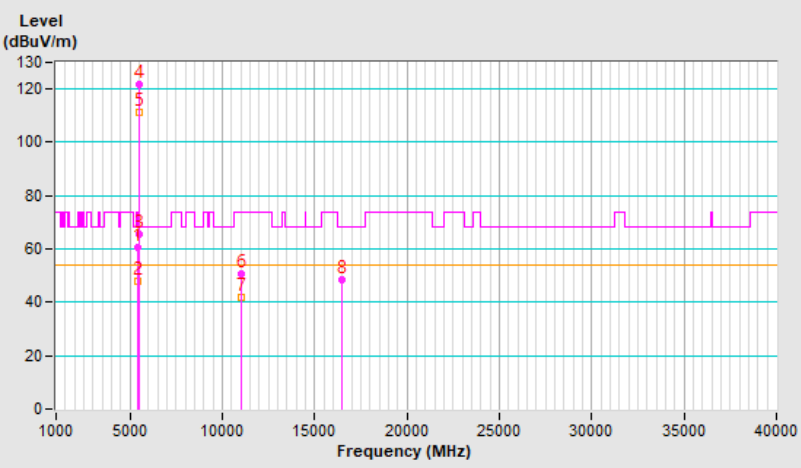
Mode B

RF Mode	802.11a	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5458.10	60.8 PK	74.0	-13.2	1.37 H	70	55.2	5.6
2	5458.10	47.8 AV	54.0	-6.2	1.37 H	70	42.2	5.6
3	#5470.00	65.3 PK	68.2	-2.9	1.37 H	70	59.7	5.6
4	*5500.00	121.9 PK			1.37 H	70	116.2	5.7
5	*5500.00	111.4 AV			1.37 H	70	105.7	5.7
6	11000.00	50.8 PK	74.0	-23.2	3.64 H	107	34.2	16.6
7	11000.00	41.8 AV	54.0	-12.2	3.64 H	107	25.2	16.6
8	#16500.00	48.6 PK	68.2	-19.6	1.73 H	237	29.8	18.8

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.

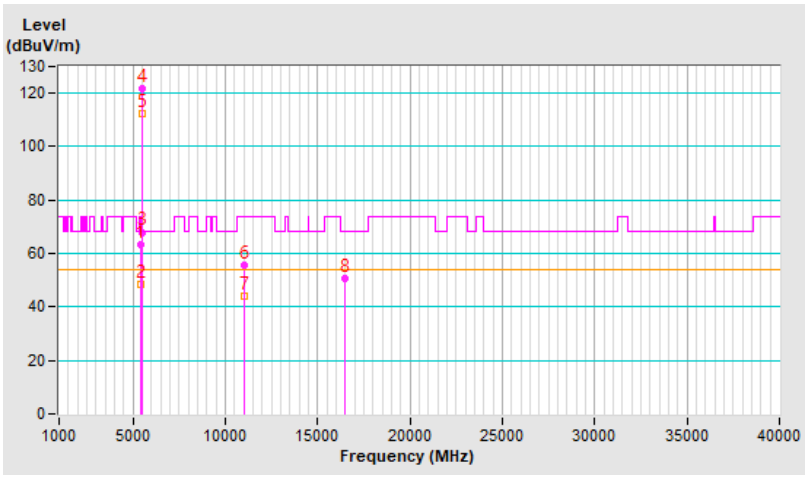


RF Mode	802.11a	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	63.5 PK	74.0	-10.5	1.01 V	324	57.9	5.6
2	5460.00	48.2 AV	54.0	-5.8	1.01 V	324	42.6	5.6
3	#5470.00	68.0 PK	68.2	-0.2	1.01 V	324	62.4	5.6
4	*5500.00	121.7 PK			1.01 V	324	116.0	5.7
5	*5500.00	112.1 AV			1.01 V	324	106.4	5.7
6	11000.00	55.7 PK	74.0	-18.3	1.86 V	165	39.1	16.6
7	11000.00	44.2 AV	54.0	-9.8	1.86 V	165	27.6	16.6
8	#16500.00	50.9 PK	68.2	-17.3	1.70 V	350	32.1	18.8

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.

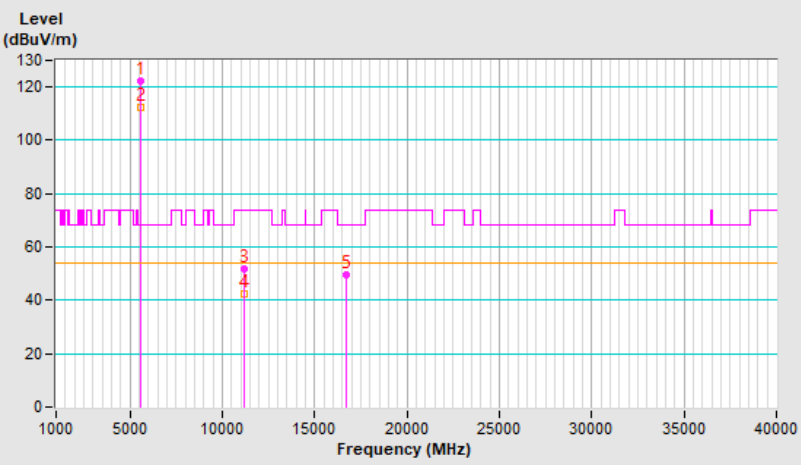


RF Mode	802.11a	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	122.4 PK			1.02 H	93	116.8	5.6
2	*5580.00	112.4 AV			1.02 H	93	106.8	5.6
3	11160.00	51.7 PK	74.0	-22.3	3.69 H	103	35.7	16.0
4	11160.00	42.3 AV	54.0	-11.7	3.69 H	103	26.3	16.0
5	#16740.00	49.5 PK	68.2	-18.7	1.68 H	249	28.6	20.9

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.

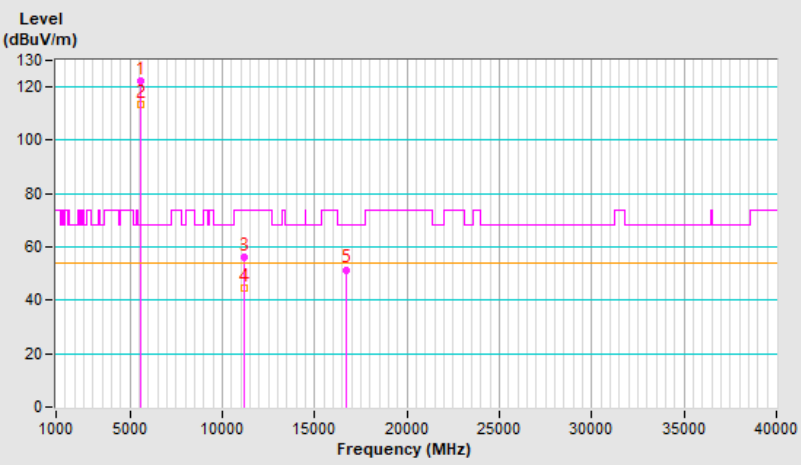


RF Mode	802.11a	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	122.4 PK			1.20 V	14	116.8	5.6
2	*5580.00	113.2 AV			1.20 V	14	107.6	5.6
3	11160.00	56.3 PK	74.0	-17.7	1.71 V	178	40.3	16.0
4	11160.00	44.7 AV	54.0	-9.3	1.71 V	178	28.7	16.0
5	#16740.00	51.5 PK	68.2	-16.7	1.61 V	336	30.6	20.9

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.

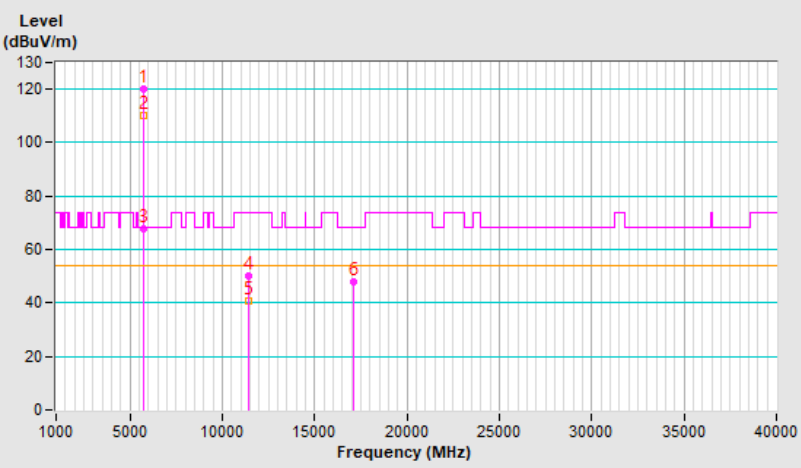


RF Mode	802.11a	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	119.9 PK			1.26 H	359	114.2	5.7
2	*5700.00	110.4 AV			1.26 H	359	104.7	5.7
3	#5725.00	67.7 PK	68.2	-0.5	1.26 H	359	61.9	5.8
4	11400.00	49.9 PK	74.0	-24.1	3.59 H	108	33.2	16.7
5	11400.00	40.8 AV	54.0	-13.2	3.59 H	108	24.1	16.7
6	#17100.00	47.9 PK	68.2	-20.3	1.66 H	221	26.3	21.6

Remarks:

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

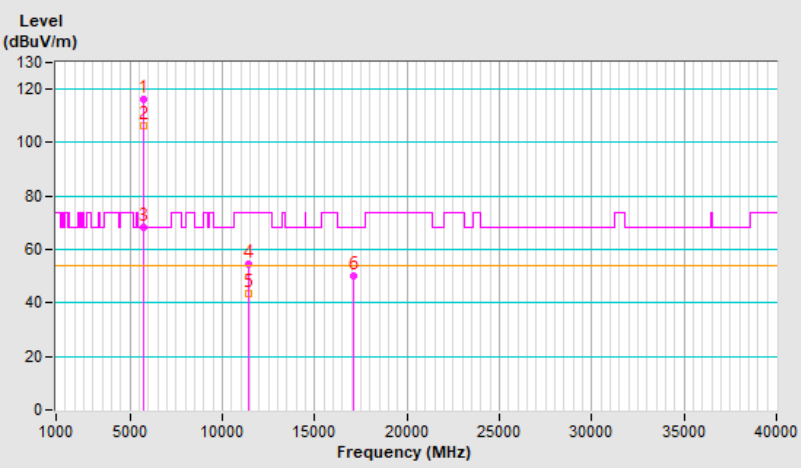


RF Mode	802.11a	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	116.3 PK			1.99 V	116	110.6	5.7
2	*5700.00	106.5 AV			1.99 V	116	100.8	5.7
3	**#5725.00**	**68.1 PK**	**68.2**	**-0.1**	**1.99 V**	**116**	**62.3**	**5.8**
4	11400.00	54.6 PK	74.0	-19.4	1.80 V	172	37.9	16.7
5	11400.00	43.4 AV	54.0	-10.6	1.80 V	172	26.7	16.7
6	#17100.00	50.2 PK	68.2	-18.0	1.85 V	349	28.6	21.6

Remarks:

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

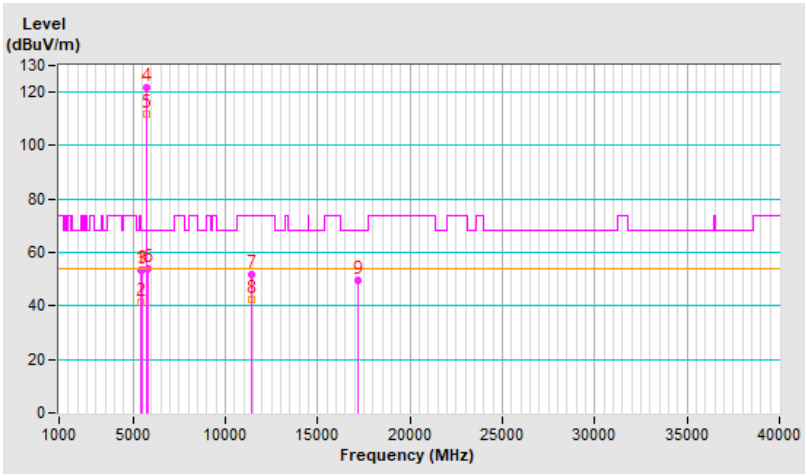


RF Mode	802.11a	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	53.3 PK	74.0	-20.7	1.06 H	81	47.7	5.6
2	5460.00	41.1 AV	54.0	-12.9	1.06 H	81	35.5	5.6
3	#5470.00	53.2 PK	68.2	-15.0	1.06 H	81	47.6	5.6
4	*5720.00	121.8 PK			1.06 H	81	116.0	5.8
5	*5720.00	111.9 AV			1.06 H	81	106.1	5.8
6	#5850.00	53.9 PK	68.2	-14.3	1.06 H	81	47.4	6.5
7	11440.00	51.6 PK	74.0	-22.4	3.62 H	85	34.8	16.8
8	11440.00	42.3 AV	54.0	-11.7	3.62 H	85	25.5	16.8
9	#17160.00	49.8 PK	68.2	-18.4	1.63 H	251	28.5	21.3

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.

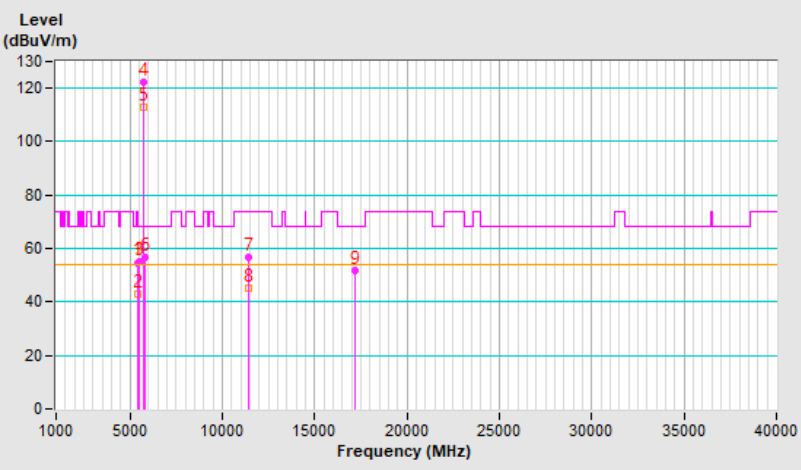


RF Mode	802.11a	**Channel**	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	54.8 PK	74.0	-19.2	1.25 V	17	49.2	5.6
2	5460.00	42.8 AV	54.0	-11.2	1.25 V	17	37.2	5.6
3	#5470.00	55.3 PK	68.2	-12.9	1.25 V	17	49.7	5.6
4	*5720.00	122.4 PK			1.25 V	17	116.6	5.8
5	*5720.00	113.1 AV			1.25 V	17	107.3	5.8
6	#5850.00	56.6 PK	68.2	-11.6	1.25 V	17	50.1	6.5
7	11440.00	56.9 PK	74.0	-17.1	1.80 V	181	40.1	16.8
8	11440.00	45.4 AV	54.0	-8.6	1.80 V	181	28.6	16.8
9	#17160.00	51.6 PK	68.2	-16.6	1.59 V	353	30.3	21.3

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.

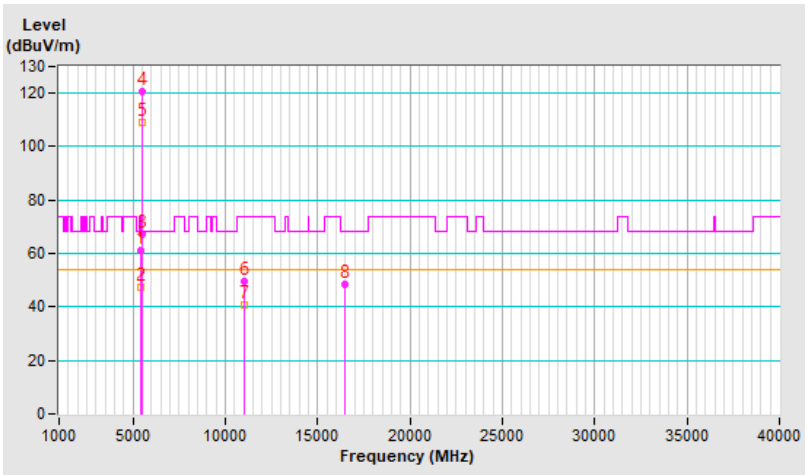


RF Mode	802.11ax (HE20)	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	1.24 H	48	55.3	5.6
2	5460.00	47.4 AV	54.0	-6.6	1.24 H	48	41.8	5.6
3	#5470.00	67.3 PK	68.2	-0.9	1.24 H	48	61.7	5.6
4	*5500.00	120.8 PK			1.24 H	48	115.1	5.7
5	*5500.00	109.1 AV			1.24 H	48	103.4	5.7
6	11000.00	49.8 PK	74.0	-24.2	3.58 H	114	33.2	16.6
7	11000.00	40.9 AV	54.0	-13.1	3.58 H	114	24.3	16.6
8	#16500.00	48.6 PK	68.2	-19.6	1.64 H	238	29.8	18.8

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.

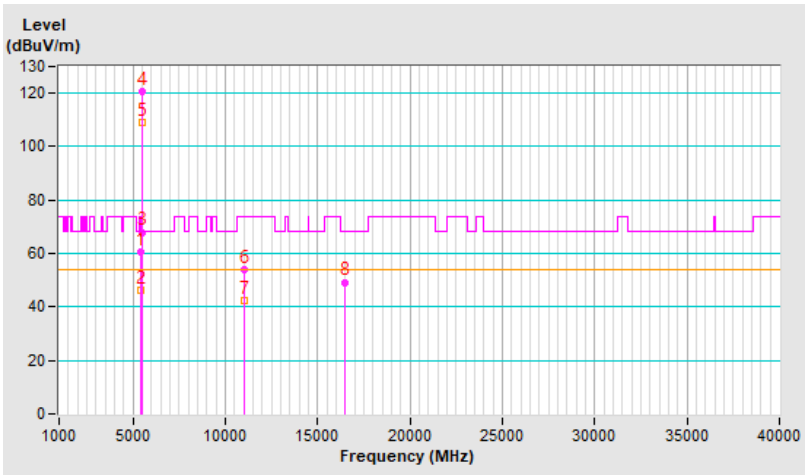


RF Mode	802.11ax (HE20)	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5459.70	60.8 PK	74.0	-13.2	1.00 V	25	55.2	5.6
2	5459.70	46.3 AV	54.0	-7.7	1.00 V	25	40.7	5.6
3	#5470.00	68.0 PK	68.2	-0.2	1.00 V	25	62.4	5.6
4	*5500.00	120.5 PK			1.00 V	25	114.8	5.7
5	*5500.00	108.9 AV			1.00 V	25	103.2	5.7
6	11000.00	53.8 PK	74.0	-20.2	1.77 V	173	37.2	16.6
7	11000.00	42.3 AV	54.0	-11.7	1.77 V	173	25.7	16.6
8	#16500.00	49.3 PK	68.2	-18.9	1.68 V	341	30.5	18.8

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.

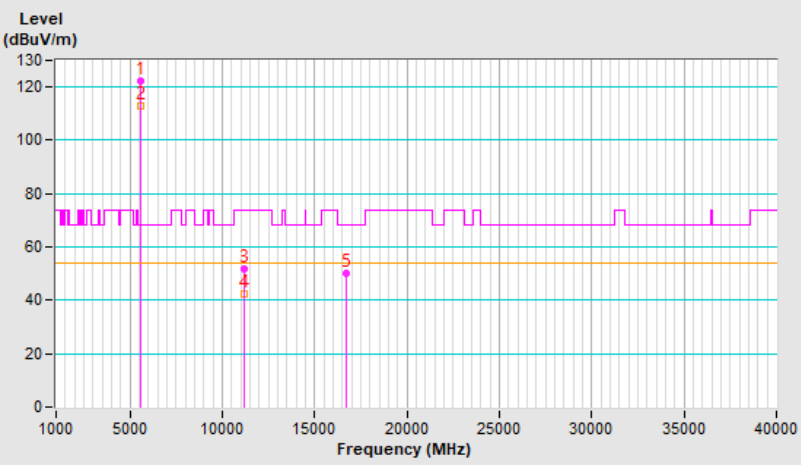


RF Mode	802.11ax (HE20)	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	122.1 PK			1.10 H	84	116.5	5.6
2	*5580.00	112.9 AV			1.10 H	84	107.3	5.6
3	11160.00	51.8 PK	74.0	-22.2	3.67 H	98	35.8	16.0
4	11160.00	42.4 AV	54.0	-11.6	3.67 H	98	26.4	16.0
5	#16740.00	50.2 PK	68.2	-18.0	1.67 H	241	29.3	20.9

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.

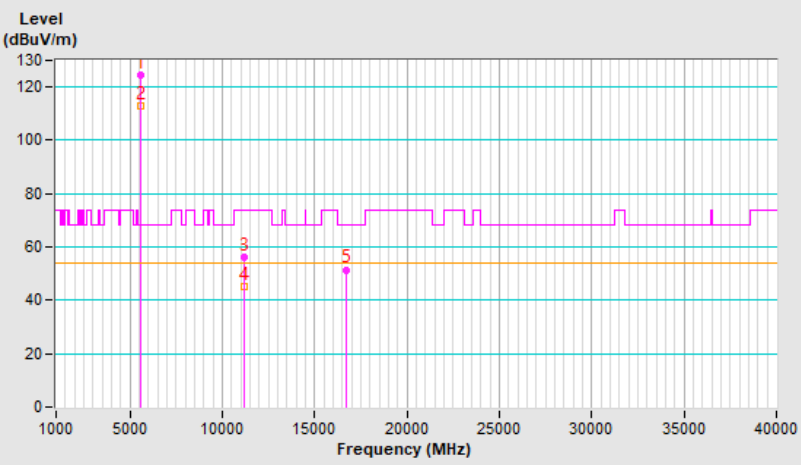


RF Mode	802.11ax (HE20)	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	124.4 PK			1.14 V	5	118.8	5.6
2	*5580.00	113.0 AV			1.14 V	5	107.4	5.6
3	11160.00	56.4 PK	74.0	-17.6	1.79 V	191	40.4	16.0
4	11160.00	45.1 AV	54.0	-8.9	1.79 V	191	29.1	16.0
5	#16740.00	51.5 PK	68.2	-16.7	1.66 V	345	30.6	20.9

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.

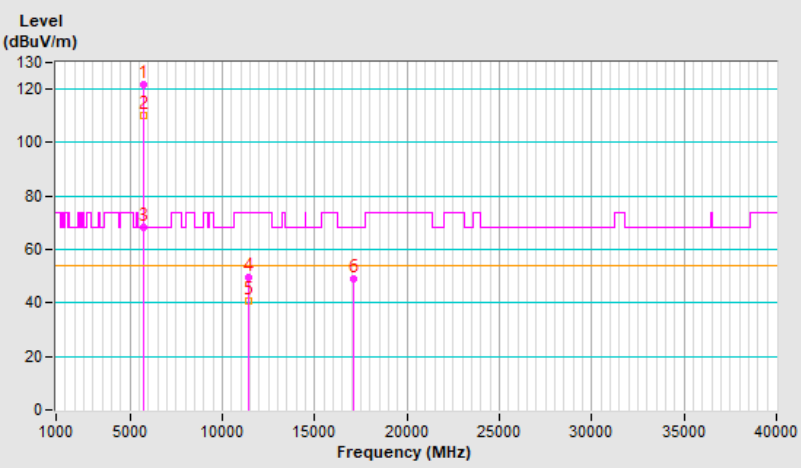


RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5700.00	121.6 PK			2.03 H	127	115.9	5.7
2	*5700.00	110.1 AV			2.03 H	127	104.4	5.7
3	**#5725.00**	**68.1 PK**	**68.2**	**-0.1**	**2.03 H**	**127**	**62.3**	**5.8**
4	11400.00	49.5 PK	74.0	-24.5	3.61 H	116	32.8	16.7
5	11400.00	40.5 AV	54.0	-13.5	3.61 H	116	23.8	16.7
6	#17100.00	49.0 PK	68.2	-19.2	1.72 H	248	27.4	21.6

Remarks:

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

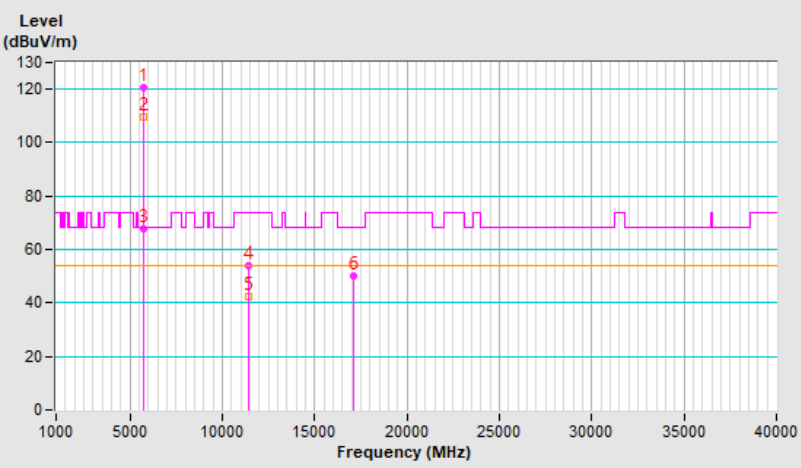


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	120.4 PK			1.24 V	318	114.7	5.7
2	*5700.00	109.5 AV			1.24 V	318	103.8	5.7
3	#5725.00	67.8 PK	68.2	-0.4	1.24 V	318	62.0	5.8
4	11400.00	54.0 PK	74.0	-20.0	1.82 V	205	37.3	16.7
5	11400.00	42.5 AV	54.0	-11.5	1.82 V	205	25.8	16.7
6	#17100.00	49.9 PK	68.2	-18.3	1.61 V	330	28.3	21.6

Remarks:

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

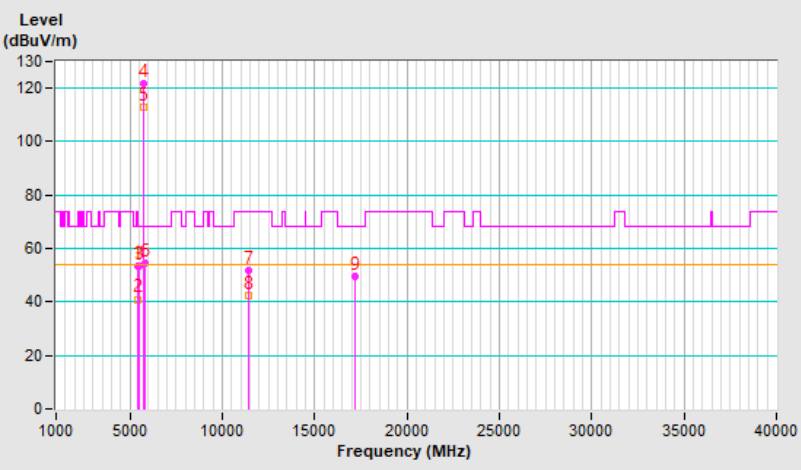


RF Mode	802.11ax (HE20)	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	53.7 PK	74.0	-20.3	1.03 H	105	48.1	5.6
2	5460.00	41.0 AV	54.0	-13.0	1.03 H	105	35.4	5.6
3	#5470.00	53.2 PK	68.2	-15.0	1.03 H	105	47.6	5.6
4	*5720.00	121.9 PK			1.03 H	105	116.1	5.8
5	*5720.00	112.9 AV			1.03 H	105	107.1	5.8
6	#5850.00	54.4 PK	68.2	-13.8	1.03 H	105	47.9	6.5
7	11440.00	52.0 PK	74.0	-22.0	3.65 H	94	35.2	16.8
8	11440.00	42.6 AV	54.0	-11.4	3.65 H	94	25.8	16.8
9	#17160.00	49.5 PK	68.2	-18.7	1.68 H	248	28.2	21.3

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.

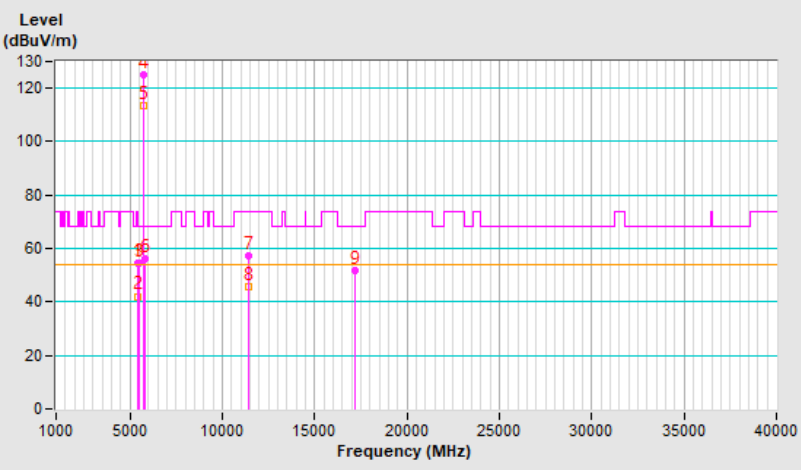


RF Mode	802.11ax (HE20)	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.4 PK	74.0	-19.6	1.18 V	1	48.8	5.6
2	5460.00	42.1 AV	54.0	-11.9	1.18 V	1	36.5	5.6
3	#5470.00	54.4 PK	68.2	-13.8	1.18 V	1	48.8	5.6
4	*5720.00	124.8 PK			1.18 V	1	119.0	5.8
5	*5720.00	113.2 AV			1.18 V	1	107.4	5.8
6	#5850.00	56.4 PK	68.2	-11.8	1.18 V	1	49.9	6.5
7	11440.00	57.1 PK	74.0	-16.9	1.80 V	184	40.3	16.8
8	11440.00	45.5 AV	54.0	-8.5	1.80 V	184	28.7	16.8
9	#17160.00	51.6 PK	68.2	-16.6	1.63 V	351	30.3	21.3

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.

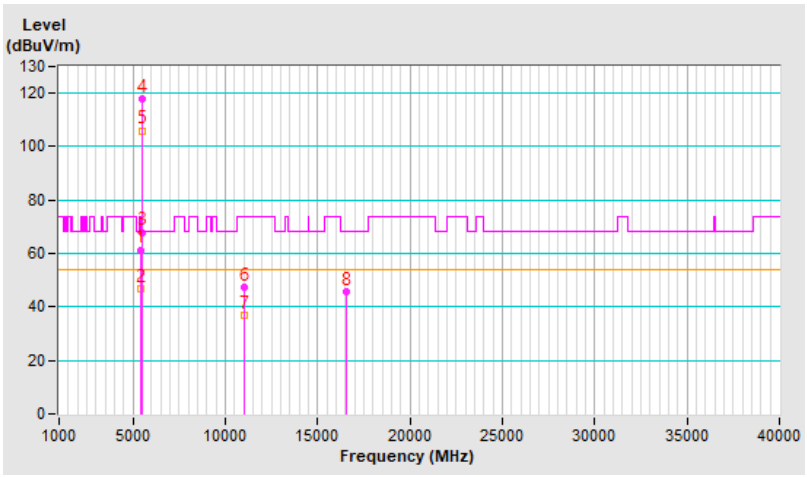


RF Mode	802.11ax (HE40)	Channel	CH 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.4 PK	74.0	-12.6	1.98 H	126	55.8	5.6
2	5460.00	47.0 AV	54.0	-7.0	1.98 H	126	41.4	5.6
3	#5467.00	68.0 PK	68.2	-0.2	1.98 H	126	62.4	5.6
4	*5510.00	117.9 PK			1.98 H	126	112.2	5.7
5	*5510.00	106.0 AV			1.98 H	126	100.3	5.7
6	11020.00	47.6 PK	74.0	-26.4	3.60 H	77	31.2	16.4
7	11020.00	36.8 AV	54.0	-17.2	3.60 H	77	20.4	16.4
8	#16530.00	45.7 PK	68.2	-22.5	1.68 H	206	26.5	19.2

Remarks:

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

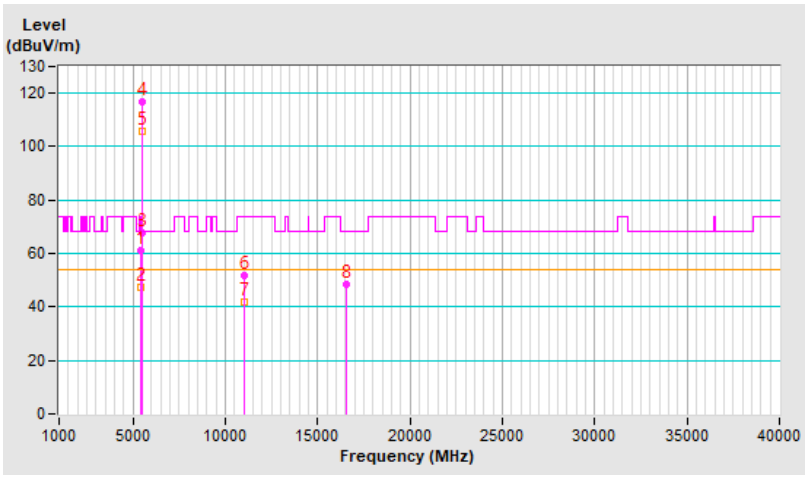


RF Mode	802.11ax (HE40)	Channel	CH 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5457.70	61.2 PK	74.0	-12.8	1.07 V	317	55.6	5.6
2	5457.70	47.2 AV	54.0	-6.8	1.07 V	317	41.6	5.6
3	#5467.70	67.9 PK	68.2	-0.3	1.07 V	317	62.3	5.6
4	*5510.00	116.8 PK			1.07 V	317	111.1	5.7
5	*5510.00	105.6 AV			1.07 V	317	99.9	5.7
6	11020.00	51.6 PK	74.0	-22.4	1.79 V	148	35.2	16.4
7	11020.00	41.9 AV	54.0	-12.1	1.79 V	148	25.5	16.4
8	#16530.00	48.6 PK	68.2	-19.6	1.64 V	2	29.4	19.2

Remarks:

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

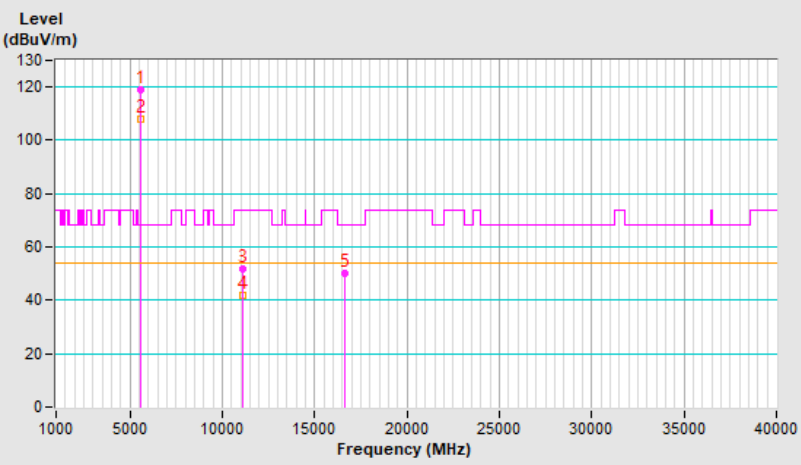


RF Mode	802.11ax (HE40)	Channel	CH 110：5550 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	118.9 PK			1.95 H	220	113.3	5.6
2	*5550.00	107.7 AV			1.95 H	220	102.1	5.6
3	11100.00	51.9 PK	74.0	-22.1	3.57 H	101	35.9	16.0
4	11100.00	41.6 AV	54.0	-12.4	3.57 H	101	25.6	16.0
5	#16650.00	50.2 PK	68.2	-18.0	1.64 H	230	29.7	20.5

Remarks:

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

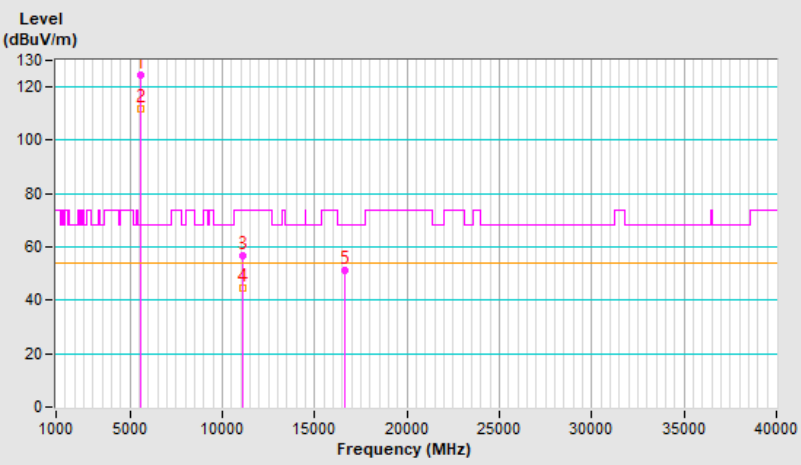


RF Mode	802.11ax (HE40)	Channel	CH 110：5550 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	124.4 PK			2.20 V	19	118.8	5.6
2	*5550.00	111.9 AV			2.20 V	19	106.3	5.6
3	11100.00	56.7 PK	74.0	-17.3	1.76 V	154	40.7	16.0
4	11100.00	44.8 AV	54.0	-9.2	1.76 V	154	28.8	16.0
5	#16650.00	51.3 PK	68.2	-16.9	1.71 V	358	30.8	20.5

Remarks:

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

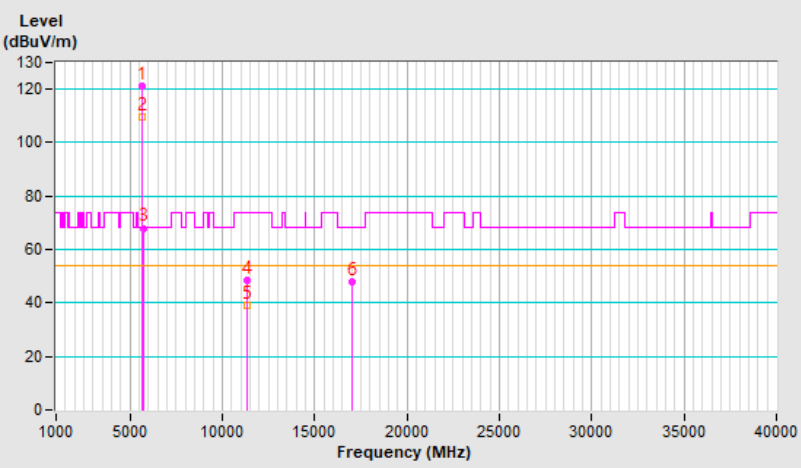


RF Mode	802.11ax (HE40)	**Channel**	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5670.00	121.4 PK			1.97 H	129	115.7	5.7
2	*5670.00	109.8 AV			1.97 H	129	104.1	5.7
3	#5725.00	68.0 PK	68.2	-0.2	1.97 H	129	62.2	5.8
4	11340.00	48.3 PK	74.0	-25.7	3.58 H	63	31.7	16.6
5	11340.00	38.9 AV	54.0	-15.1	3.58 H	63	22.3	16.6
6	#17010.00	48.0 PK	68.2	-20.2	1.64 H	215	25.9	22.1

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.

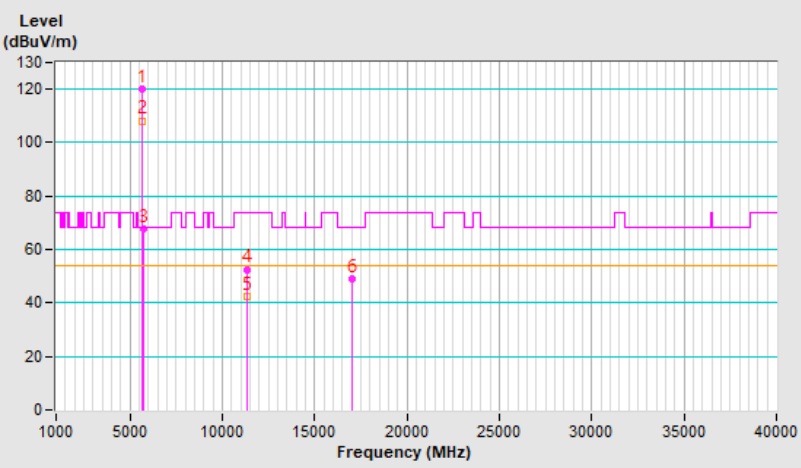


RF Mode	802.11ax (HE40)	Channel	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	120.1 PK			1.10 V	319	114.4	5.7
2	*5670.00	108.2 AV			1.10 V	319	102.5	5.7
3	#5725.00	67.7 PK	68.2	-0.5	1.10 V	319	61.9	5.8
4	11340.00	52.6 PK	74.0	-21.4	1.75 V	169	36.0	16.6
5	11340.00	42.3 AV	54.0	-11.7	1.75 V	169	25.7	16.6
6	#17010.00	49.2 PK	68.2	-19.0	1.56 V	12	27.1	22.1

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.

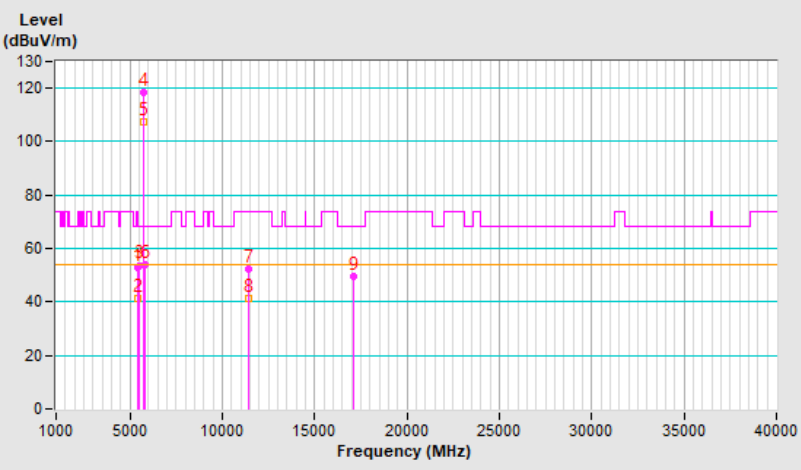


RF Mode	802.11ax (HE40)	Channel	CH 142：5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	52.7 PK	74.0	-21.3	1.94 H	210	47.1	5.6
2	5460.00	41.2 AV	54.0	-12.8	1.94 H	210	35.6	5.6
3	#5470.00	53.7 PK	68.2	-14.5	1.94 H	210	48.1	5.6
4	*5710.00	118.6 PK			1.94 H	210	112.9	5.7
5	*5710.00	107.5 AV			1.94 H	210	101.8	5.7
6	#5850.00	54.2 PK	68.2	-14.0	1.94 H	210	47.7	6.5
7	11420.00	52.3 PK	74.0	-21.7	3.54 H	92	35.6	16.7
8	11420.00	41.3 AV	54.0	-12.7	3.54 H	92	24.6	16.7
9	#17130.00	49.6 PK	68.2	-18.6	1.72 H	218	28.1	21.5

Remarks:

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

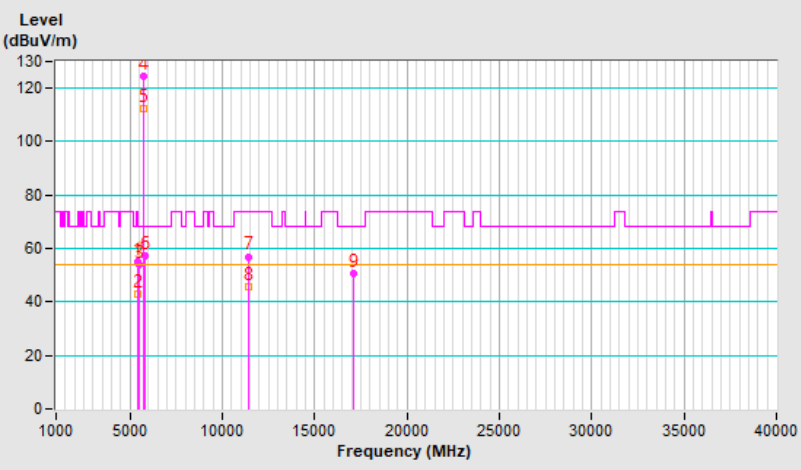


RF Mode	802.11ax (HE40)	Channel	CH 142 : 5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.1 PK	74.0	-18.9	2.19 V	19	49.5	5.6
2	5460.00	43.0 AV	54.0	-11.0	2.19 V	19	37.4	5.6
3	#5470.00	54.2 PK	68.2	-14.0	2.19 V	19	48.6	5.6
4	*5710.00	124.6 PK			2.19 V	19	118.9	5.7
5	*5710.00	112.1 AV			2.19 V	19	106.4	5.7
6	#5850.00	57.1 PK	68.2	-11.1	2.19 V	19	50.6	6.5
7	11420.00	57.0 PK	74.0	-17.0	1.78 V	153	40.3	16.7
8	11420.00	45.8 AV	54.0	-8.2	1.78 V	153	29.1	16.7
9	#17130.00	50.5 PK	68.2	-17.7	1.72 V	356	29.0	21.5

Remarks:

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

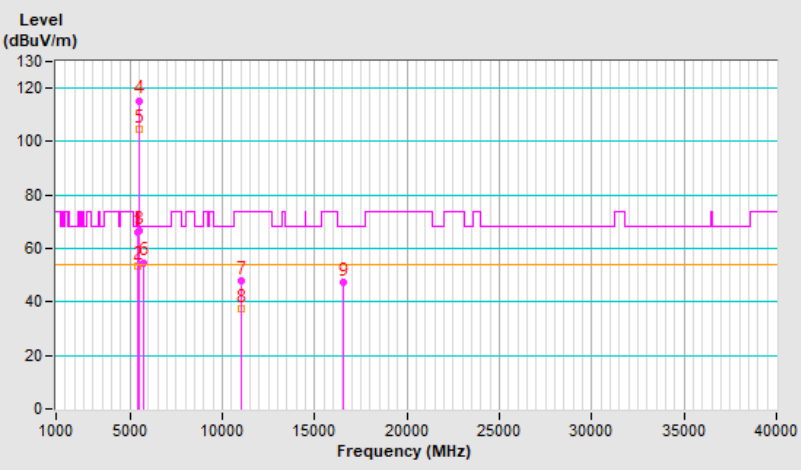


RF Mode	802.11ax (HE80)	Channel	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5453.80	66.1 PK	74.0	-7.9	2.03 H	229	60.5	5.6
2	5453.80	53.2 AV	54.0	-0.8	2.03 H	229	47.6	5.6
3	#5463.81	66.4 PK	68.2	-1.8	2.03 H	229	60.8	5.6
4	*5530.00	115.4 PK			2.03 H	229	109.8	5.6
5	*5530.00	104.6 AV			2.03 H	229	99.0	5.6
6	#5766.05	54.8 PK	68.2	-13.4	2.03 H	229	48.8	6.0
7	11060.00	47.8 PK	74.0	-26.2	3.52 H	77	31.6	16.2
8	11060.00	37.6 AV	54.0	-16.4	3.52 H	77	21.4	16.2
9	#16590.00	47.3 PK	68.2	-20.9	1.66 H	217	27.1	20.2

Remarks:

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

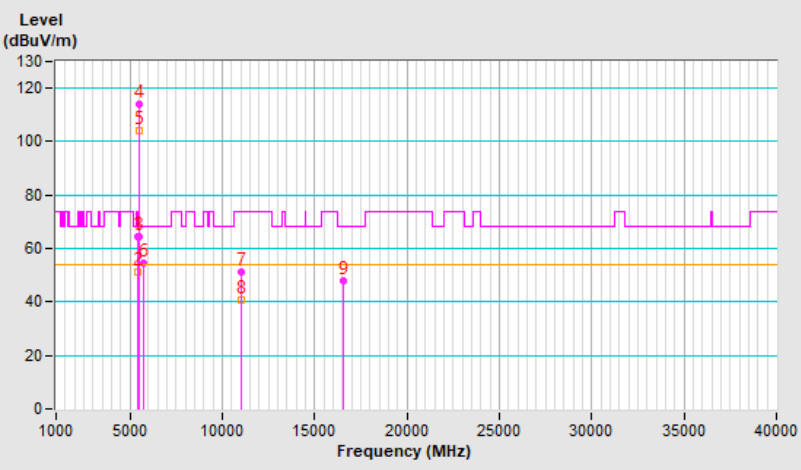


RF Mode	802.11ax (HE80)	Channel	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5453.87	64.7 PK	74.0	-9.3	1.00 V	330	59.1	5.6
2	5453.87	51.3 AV	54.0	-2.7	1.00 V	330	45.7	5.6
3	#5469.19	64.2 PK	68.2	-4.0	1.00 V	330	58.6	5.6
4	*5530.00	113.9 PK			1.00 V	330	108.3	5.6
5	*5530.00	103.9 AV			1.00 V	330	98.3	5.6
6	#5730.75	54.4 PK	68.2	-13.8	1.00 V	330	48.6	5.8
7	11060.00	51.1 PK	74.0	-22.9	1.76 V	143	34.9	16.2
8	11060.00	40.8 AV	54.0	-13.2	1.76 V	143	24.6	16.2
9	#16590.00	47.9 PK	68.2	-20.3	1.58 V	32	27.7	20.2

Remarks:

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

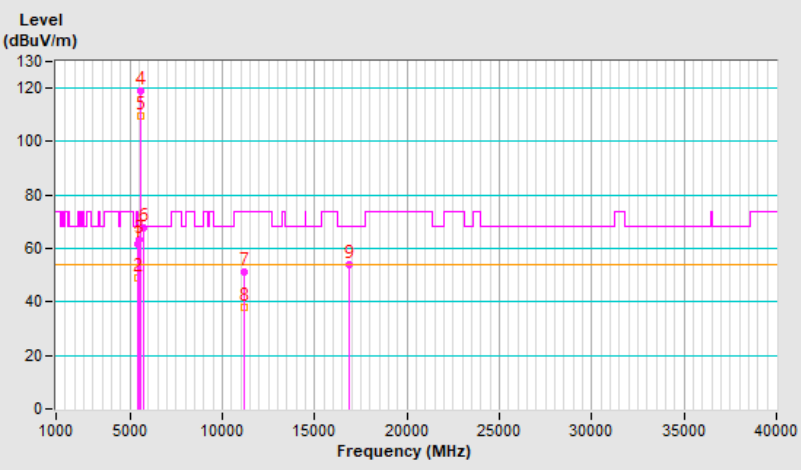


RF Mode	802.11ax (HE80)	Channel	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.9 PK	74.0	-12.1	2.17 H	231	56.3	5.6
2	5460.00	49.1 AV	54.0	-4.9	2.17 H	231	43.5	5.6
3	#5470.00	63.3 PK	68.2	-4.9	2.17 H	231	57.7	5.6
4	*5610.00	119.2 PK			2.17 H	231	113.5	5.7
5	*5610.00	109.5 AV			2.17 H	231	103.8	5.7
6	#5725.00	67.9 PK	68.2	-0.3	2.17 H	231	62.1	5.8
7	11220.00	51.1 PK	74.0	-22.9	1.21 H	0	35.1	16.0
8	11220.00	37.9 AV	54.0	-16.1	1.21 H	0	21.9	16.0
9	#16830.00	54.2 PK	68.2	-14.0	1.50 H	180	33.0	21.2

Remarks:

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

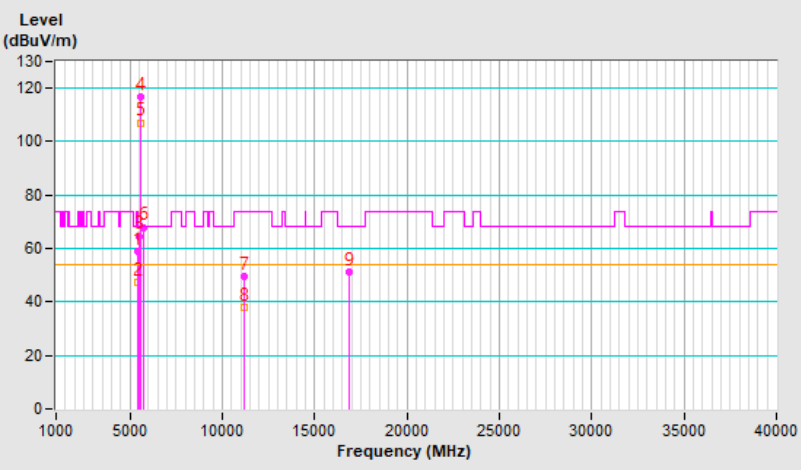


RF Mode	802.11ax (HE80)	Channel	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.1 PK	74.0	-14.9	1.24 V	311	53.5	5.6
2	5460.00	47.6 AV	54.0	-6.4	1.24 V	311	42.0	5.6
3	#5470.00	64.7 PK	68.2	-3.5	1.24 V	311	59.1	5.6
4	*5610.00	116.9 PK			1.24 V	311	111.2	5.7
5	*5610.00	107.1 AV			1.24 V	311	101.4	5.7
6	#5725.00	68.0 PK	68.2	-0.2	1.24 V	311	62.2	5.8
7	11220.00	49.8 PK	74.0	-24.2	1.72 V	10	33.8	16.0
8	11220.00	38.2 AV	54.0	-15.8	1.72 V	10	22.2	16.0
9	#16830.00	51.3 PK	68.2	-16.9	1.45 V	137	30.1	21.2

Remarks:

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

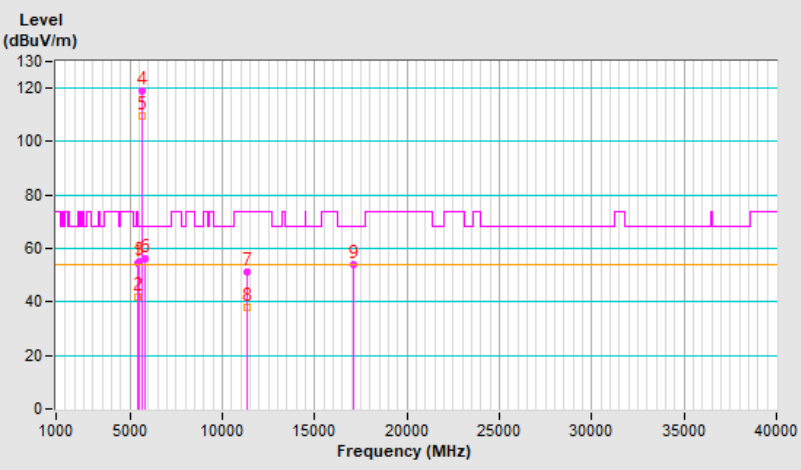


RF Mode	802.11ax (HE80)	Channel	CH 138：5690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.6 PK	74.0	-19.4	2.18 H	227	49.0	5.6
2	5460.00	41.8 AV	54.0	-12.2	2.18 H	227	36.2	5.6
3	#5470.00	55.0 PK	68.2	-13.2	2.18 H	227	49.4	5.6
4	*5690.00	119.1 PK			2.18 H	227	113.3	5.8
5	*5690.00	109.4 AV			2.18 H	227	103.6	5.8
6	#5850.00	56.0 PK	68.2	-12.2	2.18 H	227	49.5	6.5
7	11380.00	51.3 PK	74.0	-22.7	1.20 H	23	34.6	16.7
8	11380.00	38.0 AV	54.0	-16.0	1.20 H	23	21.3	16.7
9	#17070.00	54.1 PK	68.2	-14.1	1.43 H	189	32.4	21.7

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

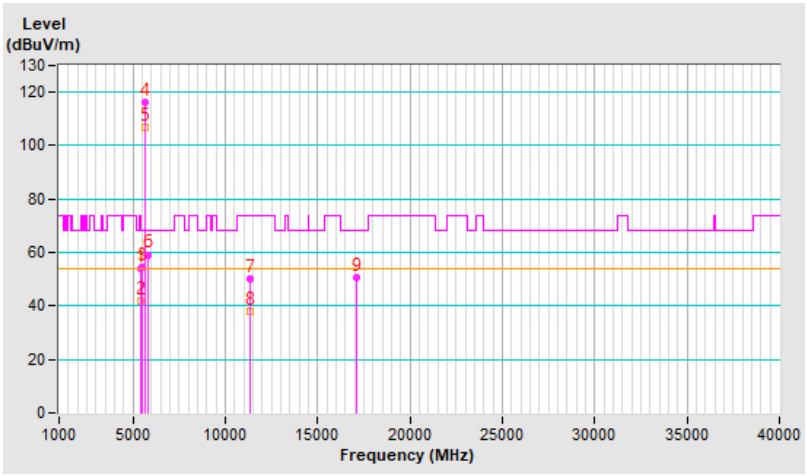


RF Mode	802.11ax (HE80)	**Channel**	CH 138：5690 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 66% RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5460.00	54.2 PK	74.0	-19.8	1.19 V	305	48.6	5.6
2	5460.00	42.0 AV	54.0	-12.0	1.19 V	305	36.4	5.6
3	#5470.00	54.4 PK	68.2	-13.8	1.19 V	305	48.8	5.6
4	*5690.00	116.3 PK			1.19 V	305	110.5	5.8
5	*5690.00	106.7 AV			1.19 V	305	100.9	5.8
6	#5850.00	59.2 PK	68.2	-9.0	1.19 V	305	52.7	6.5
7	11380.00	49.9 PK	74.0	-24.1	1.68 V	4	33.2	16.7
8	11380.00	38.2 AV	54.0	-15.8	1.68 V	4	21.5	16.7
9	#17070.00	50.6 PK	68.2	-17.6	1.47 V	137	28.9	21.7

Remarks:

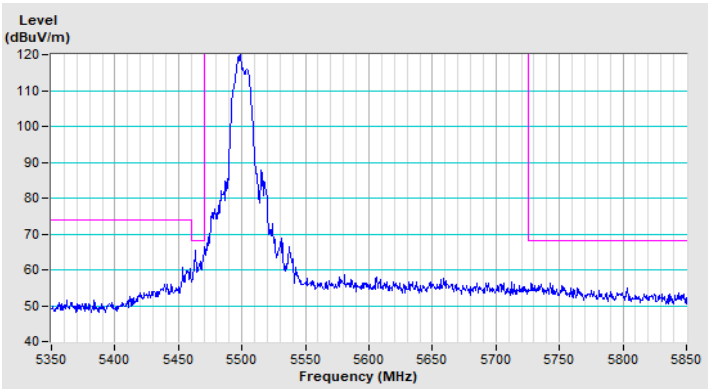
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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



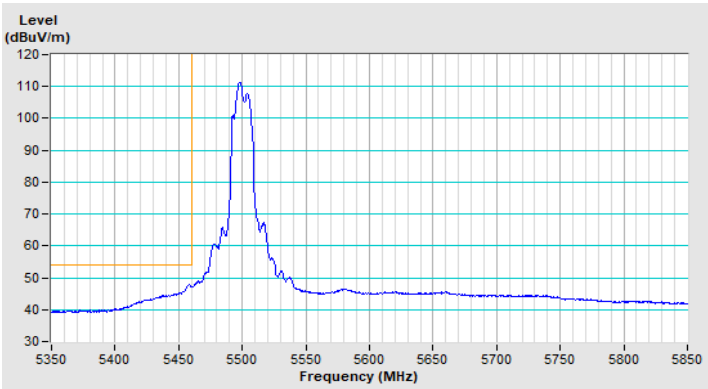
Plot of Band Edge

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

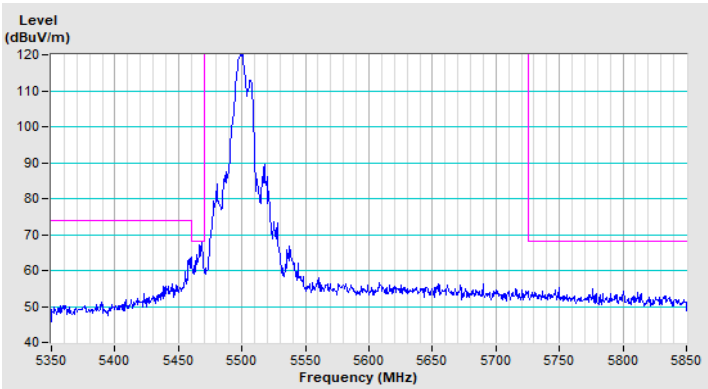
802.11a Channel 100



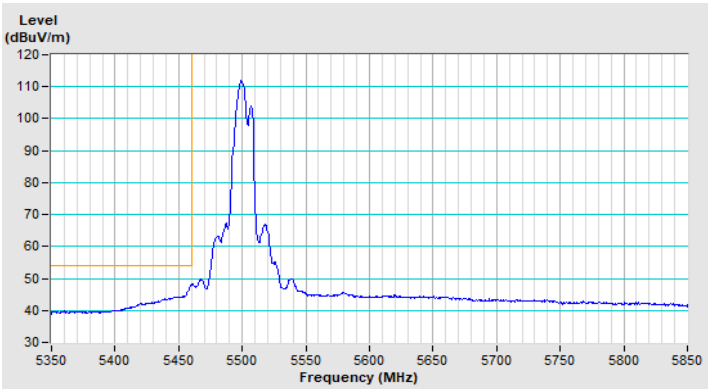
Horizontal (Peak)



Horizontal (Average)

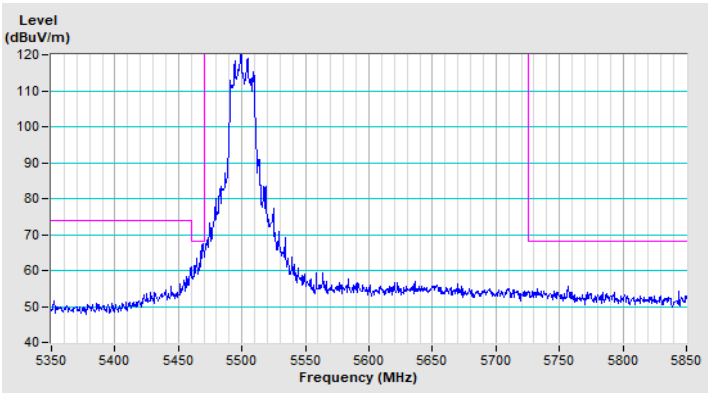


Vertical (Peak)

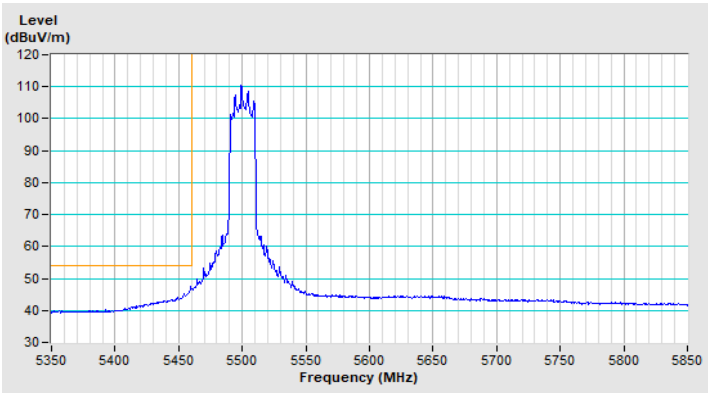


Vertical (Average)

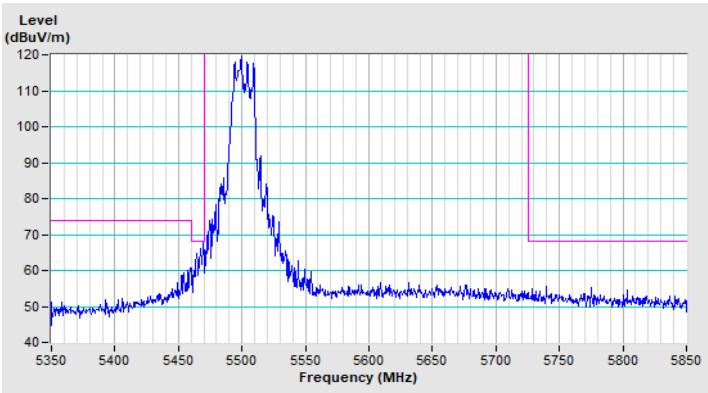
802.11ax (HE20) Channel 100



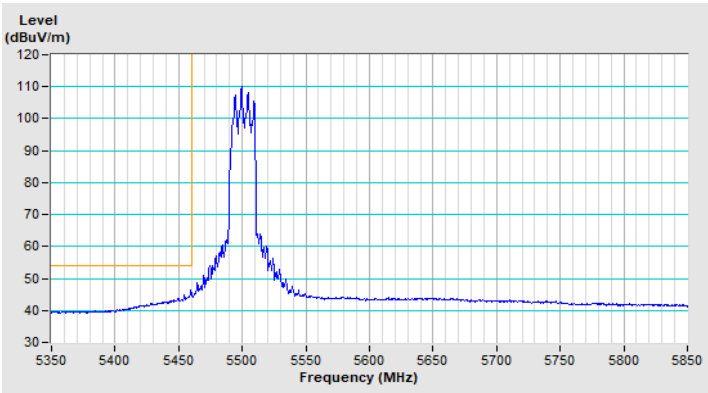
Horizontal (Peak)



Horizontal (Average)



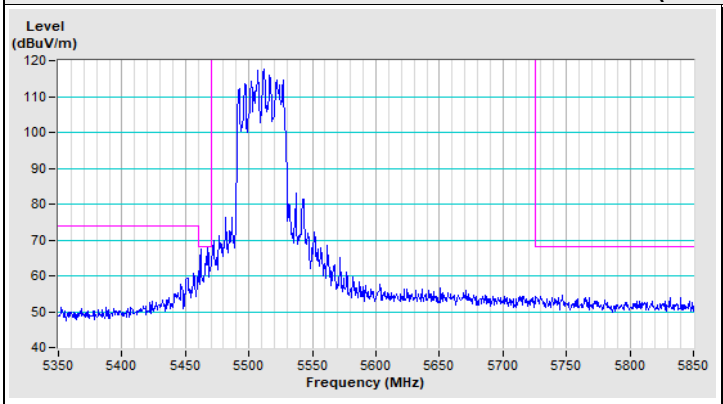
Vertical (Peak)



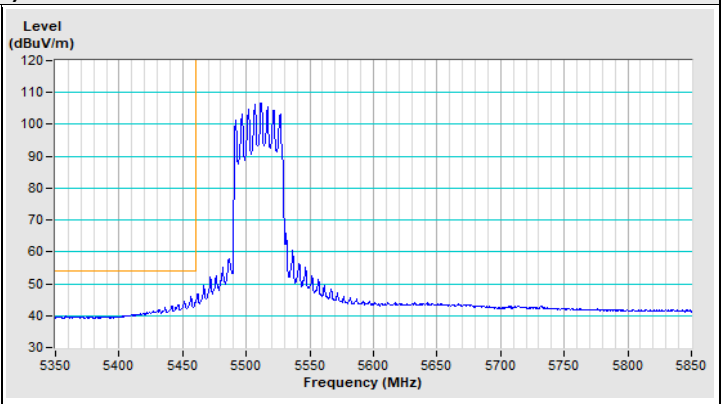
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak

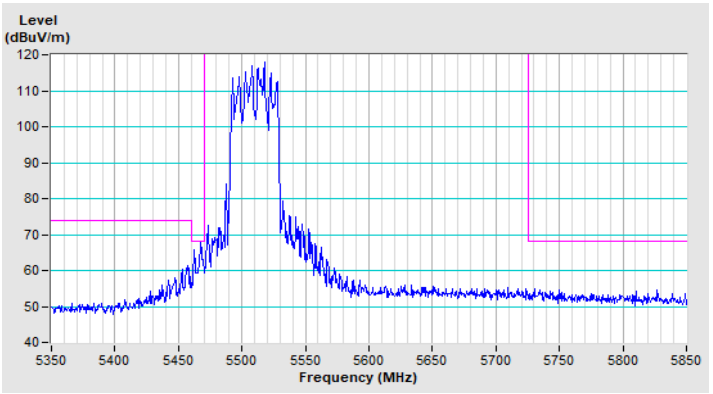
802.11ax (HE40) Channel 102



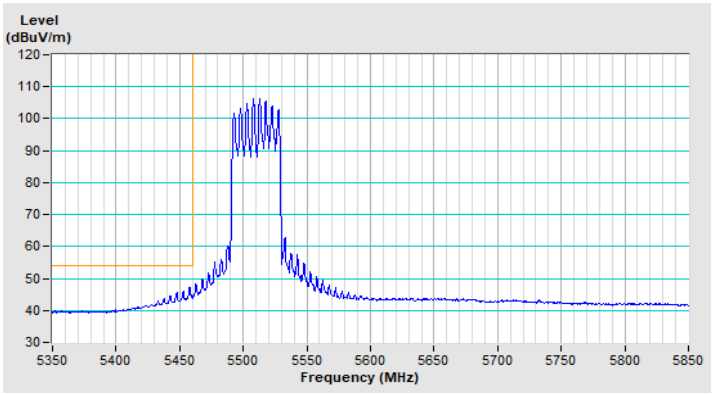
Horizontal (Peak)



Horizontal (Average)



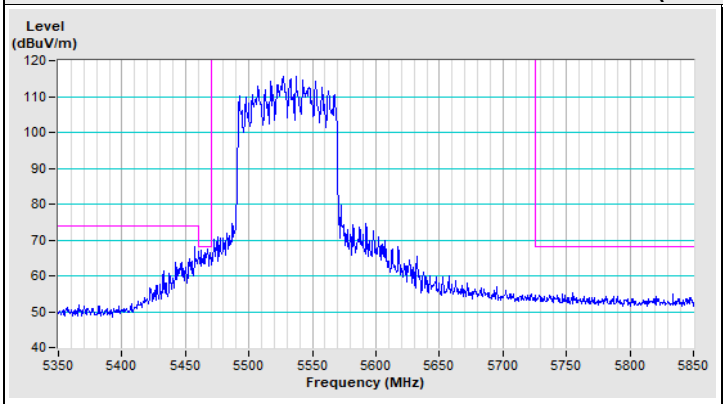
Vertical (Peak)



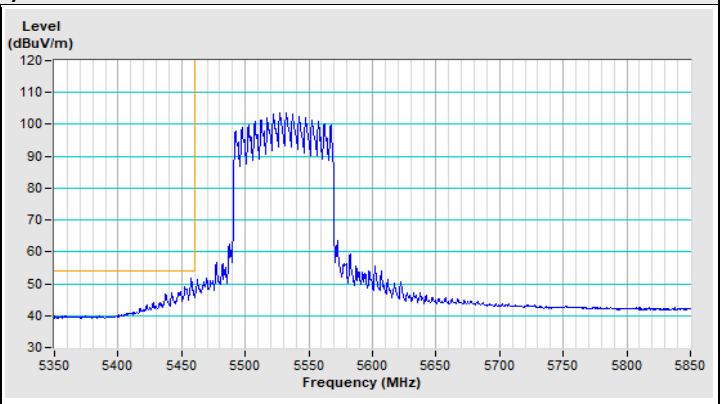
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

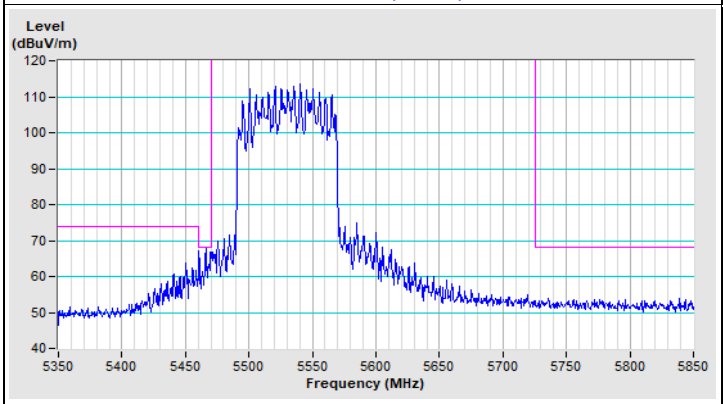
802.11ax (HE80) Channel 106



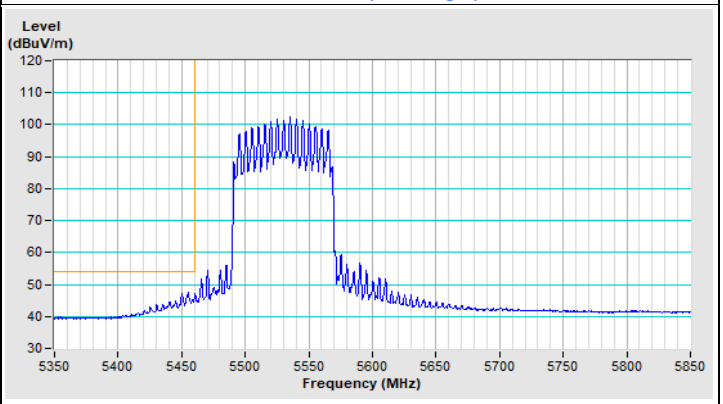
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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

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