TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBCKS-WTW-P22080716A-1
FCC ID:	NKR-WNXL11BWL
Product:	AP
Brand:	WNC, Comcast, Cox, Charter
Model No.:	WNXL11BWL
Received Date:	2022/8/24
Test Date:	2022/9/2 ~ 2022/10/5
Issued Date:	2023/1/11
Applicant:	Wistron NeWeb Corp.
Address:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

Approved by: _____ , **Date:** **2023/1/11**

May Chen / Manager

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Prepared by : Vito Lung / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P22080716A-1	Original release.	2023/1/11

1 Certificate

Product:	AP
Brand:	WNC, Comcast, Cox, Charter
Test Model:	WNXL11BWL
Sample Status:	Engineering sample
Applicant:	Wistron NeWeb Corp.
Test Date:	2022/9/2 ~ 2022/10/5
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)(1/2)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	NA	Refer to Note 1 below
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -17.53 dB at 0.15000 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.6 dB at 35.29 MHz
15.407(b) (1/2/3/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 5350.00, 5470.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

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

2.1 Measurement Uncertainty

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

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

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

2.2 Supplementary Information

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

3 General Information

3.1 General Description of EUT

Product	AP
Brand	WNC, Comcast, Cox, Charter
Test Model	WNXL11BWL
Status of EUT	Engineering sample
Power Supply Rating	Refer to Note
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 3466.7 Mbps 802.11ax: up to 4803.9 Mbps
Operating Frequency	5.26 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** 5.26 GHz ~ 5.32 GHz : 249.441 mW (23.97 dBm) 5.5 GHz ~ 5.72 GHz : 247.587 mW (23.94 dBm) **Beamforming Mode** 5.26 GHz ~ 5.32 GHz : 246.341 mW (23.92 dBm) 5.5 GHz ~ 5.72 GHz : 188.653 mW (22.76 dBm)

Note:

1. This report is prepared for FCC class II change. The difference compared with the Report No.: RFBCKS-WTW-P22080716-1 as the following:
   - Add DFS band <5250~5350 MHz & 5470~5725 MHz> by software.
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 contains certified WWAN module which FCC ID: XMR201906EM06A (Brand: QUECTEL; Model: EM06-A)
4. There are WLAN, Bluetooth and WWAN technology used for the EUT.
5. The EUT uses following accessories.

AC Adapter 1		
Brand	Model	Specification
EPS3	ML36-7120300-A1	AC Input : 100-120V, 50/60Hz, 1A DC Output : 12V, 3.0A DC Output Cable : 1.8m Plug : US
AC Adapter 2		
Brand	Model	Specification
EPS3	NBC36G120300VU	AC Input : 100-120V, 50/60Hz, 1A DC Output : 12V, 3.0A DC Output Cable : 1.8m Plug : US

6. The EUT has below radios as following table:

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

7. Simultaneously transmission condition.

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

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

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

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

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

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.4835	3.63	Dipole	i-pex(MHF)
5.15~5.25	5.68		
5.25~5.35	5.59		
5.47~5.725	4.19		
5.725~5.85	4.89		
Note: Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.			

2. The EUT incorporates a MIMO function:

5 GHz Band (Low Band)		
Modulation Mode	**TX & RX Configuration**	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX
5 GHz Band (High Band)		
Modulation Mode	**TX & RX Configuration**	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ac (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 the same as the 802.11ax or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

FOR 5260 ~ 5320MHz

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

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		

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

Channel	Frequency
114	5570 MHz

3.4 Test Mode Applicability and Tested Channel Detail

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

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		802.11n (HT20)	CDD & Beamforming	52, 60, 64	BPSK	MCS0
		802.11n (HT40)	CDD & Beamforming	54, 62	BPSK	MCS0
		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
		802.11ax (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
	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11n (HT20)	CDD & Beamforming	100, 116, 140, 144	BPSK	MCS0
		802.11n (HT40)	CDD & Beamforming	102, 110, 134, 142	BPSK	MCS0
		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
		802.11ac (VHT160)	CDD & Beamforming	114	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
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0

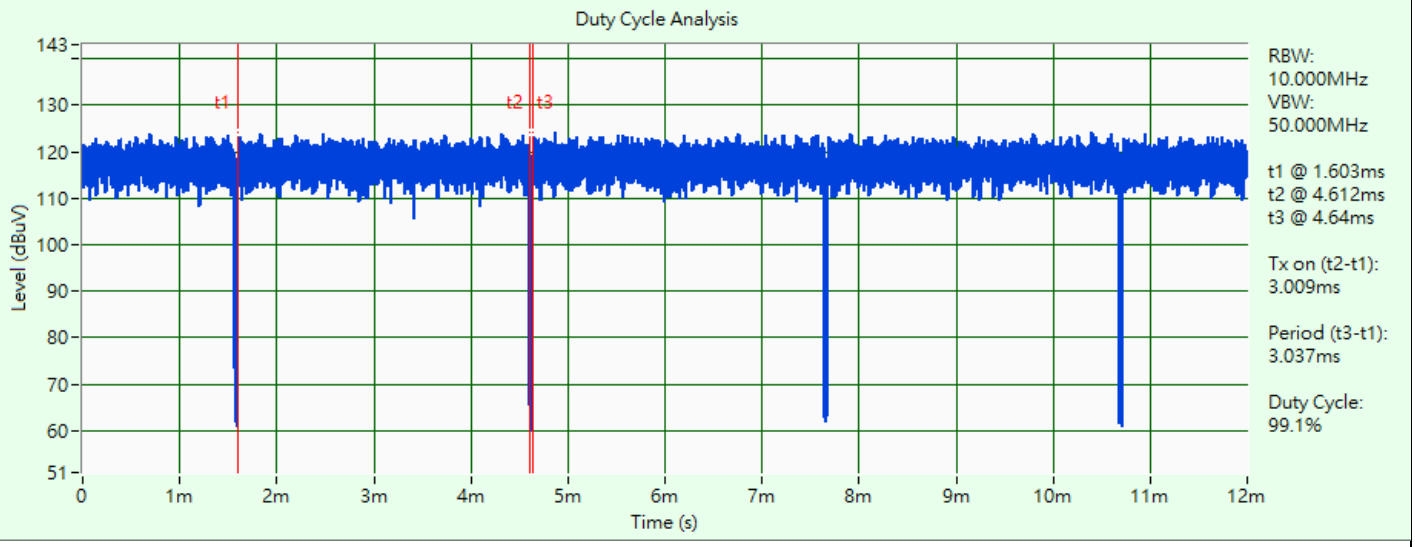
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26dB Bandwidth / Power Spectral Density / Occupied Bandwidth	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	52, 60, 64	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	54, 62	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	58	BPSK	MCS0
	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	106, 122, 138	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0
6dB Bandwidth	B	11a 5G	CDD	144	BPSK	6Mb/s
		11ax20 5G	CDD	144	BPSK	MCS0
		11ax40 5G	CDD	142	BPSK	MCS0
		11ax80 5G	CDD	138	BPSK	MCS0
		11ax160 5G	CDD	114	BPSK	MCS0
Frequency Stability	A	802.11a	-	52	un-modulation	-
	B	802.11a	-	100	un-modulation	-
AC Power Conducted Emissions	A	802.11ax (HE20)	CDD	52	BPSK	MCS0
	B	802.11ax (HE80)	CDD	122	BPSK	MCS0
Unwanted Emissions below 1 GHz	A	802.11ax (HE20)	CDD	52	BPSK	MCS0
	B	802.11ax (HE80)	CDD	122	BPSK	MCS0

Unwanted Emissions above 1 GHz	A	802.11a	CDD	52, 60, 64	BPSK	6Mb/s
		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
	B	802.11a	CDD	100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	106, 122, 138	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0
EUT Configure Mode:	A	5G Low Band 2Tx				
	B	5G High Band 4Tx				
Note: Only support Full RU for OFDMA.						

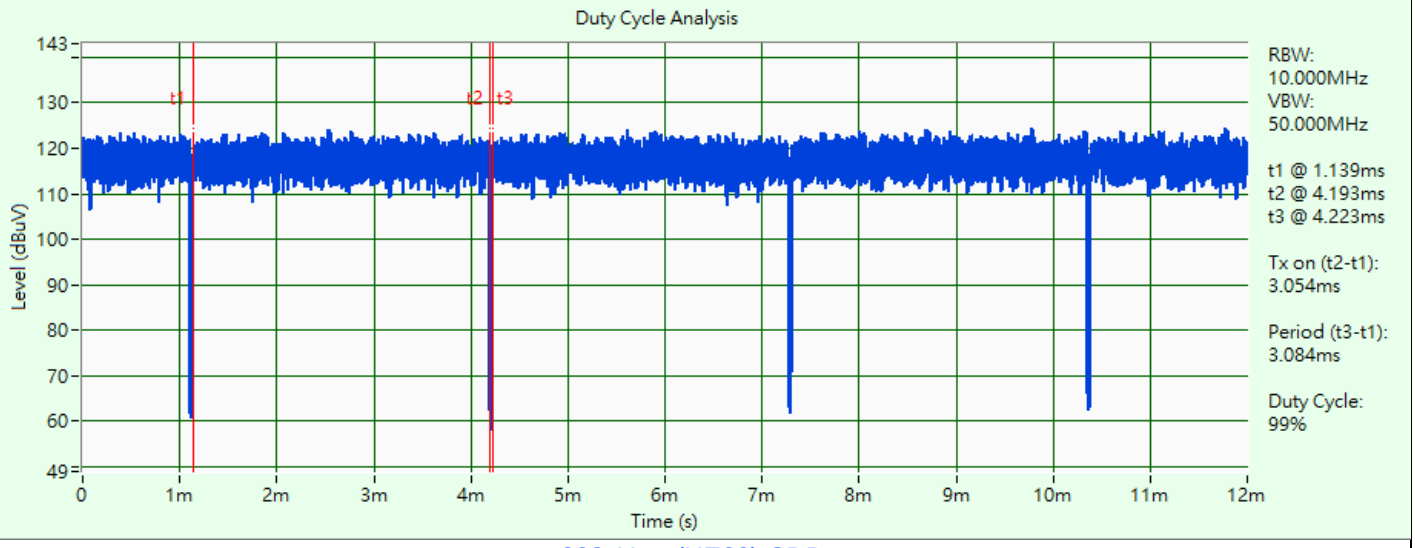
3.5 Duty Cycle of Test Signal

Mode A

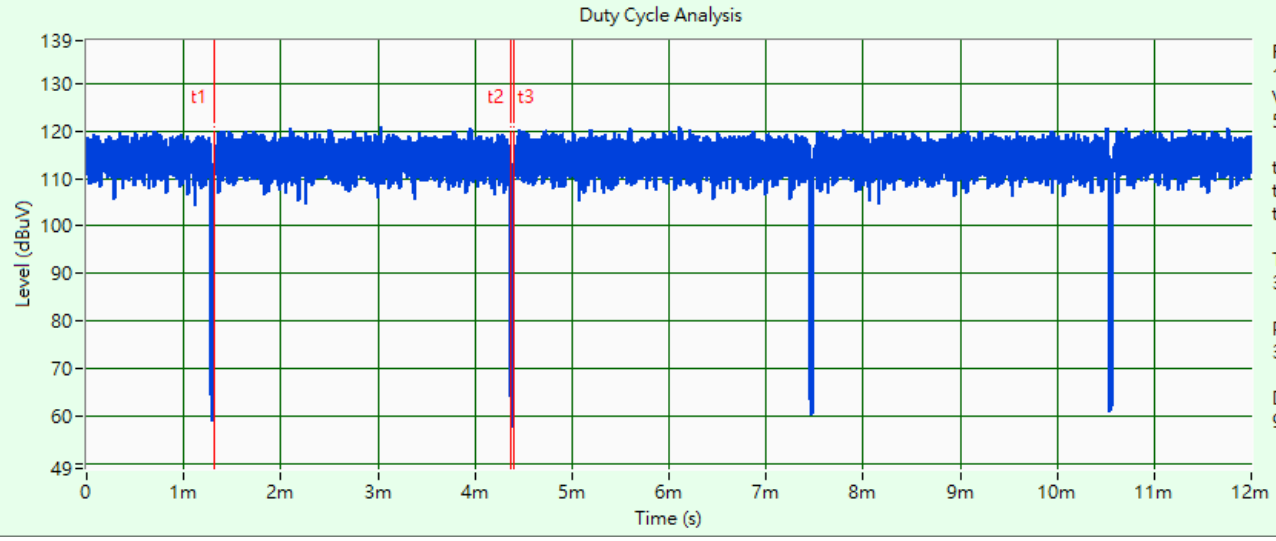
802.11a CDD: Duty cycle = 3.009 ms / 3.037 ms x 100% = 99.1%
802.11ax (HE20) CDD: Duty cycle = 3.054 ms / 3.084 ms x 100% = 99.0%
802.11ax (HE40) CDD: Duty cycle = 3.054 ms / 3.082 ms x 100% = 99.1%
802.11ax (HE80) CDD: Duty cycle = 3.048 ms / 3.077 ms x 100% = 99.1%
802.11ax (HE20) Beamforming: Duty cycle = 2.912 ms / 3.197 ms x 100% = 91.1%, duty factor = 10 * log (1/Duty cycle) = 0.41 dB
802.11ax (HE40) Beamforming: Duty cycle = 4.565 ms / 4.855 ms x 100% = 94.0%, duty factor = 10 * log (1/Duty cycle) = 0.27 dB
802.11ax (HE80) Beamforming: Duty cycle = 4.116 ms / 4.459 ms x 100% = 92.3%, duty factor = 10 * log (1/Duty cycle) = 0.35 dB



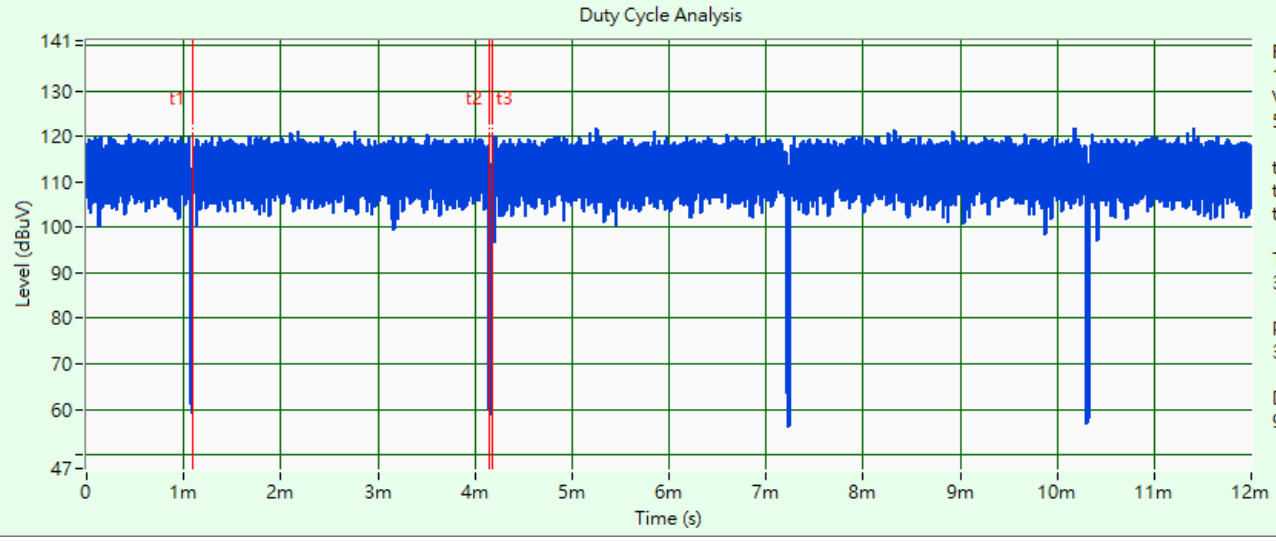
802.11a CDD



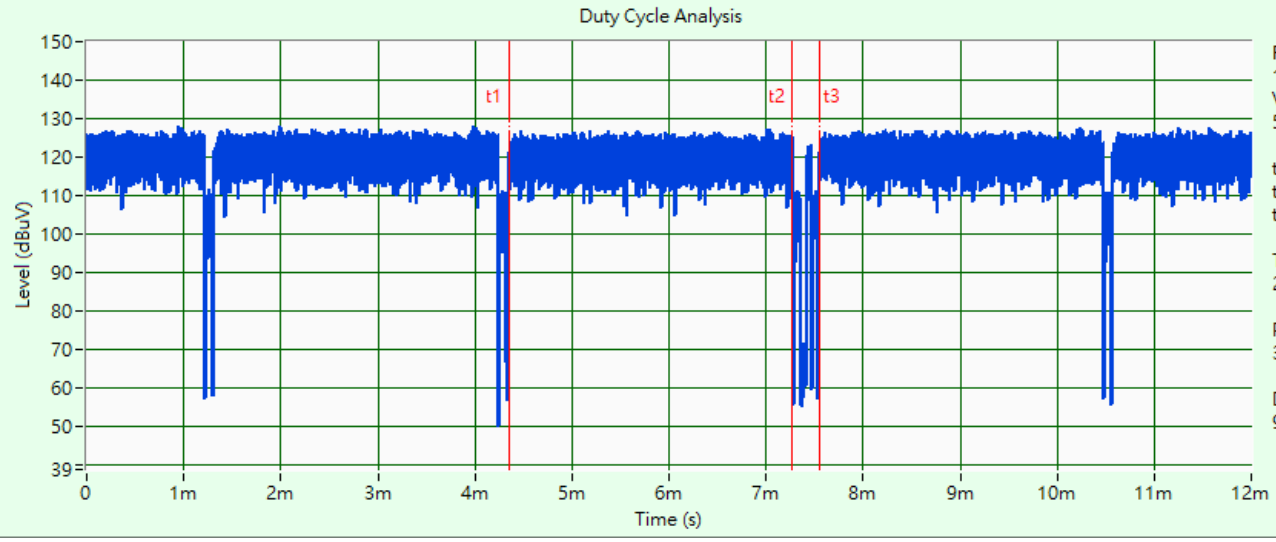
802.11ax (HE20) CDD



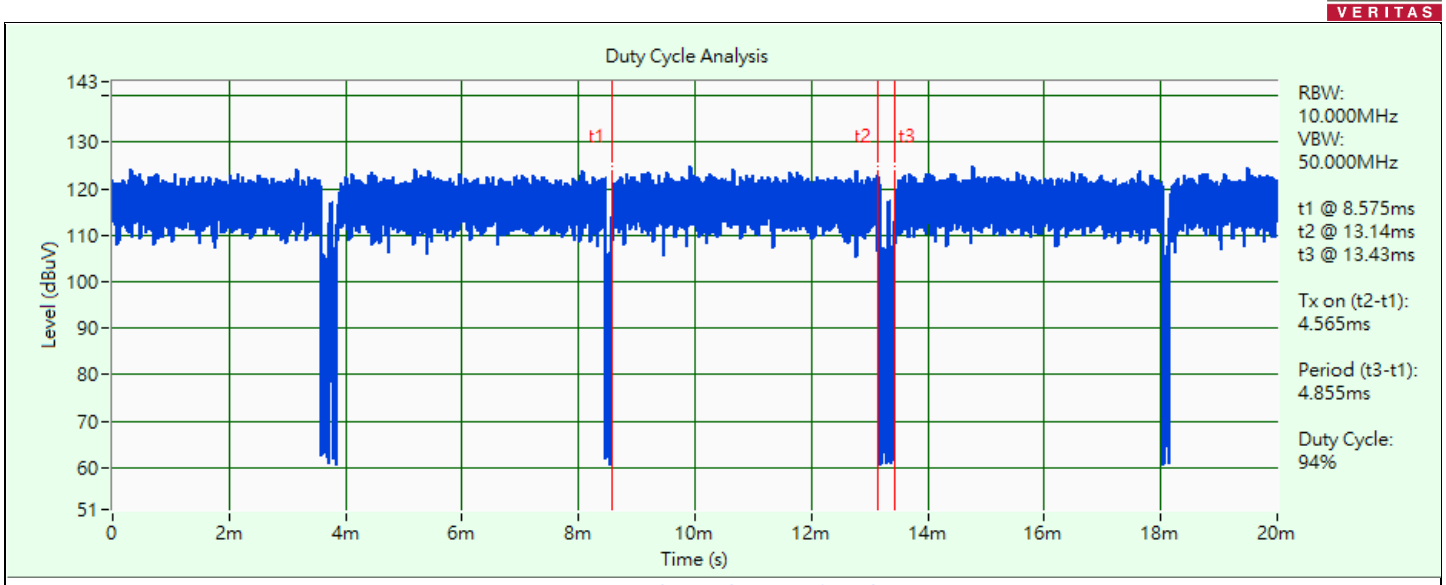
802.11ax (HE40) CDD



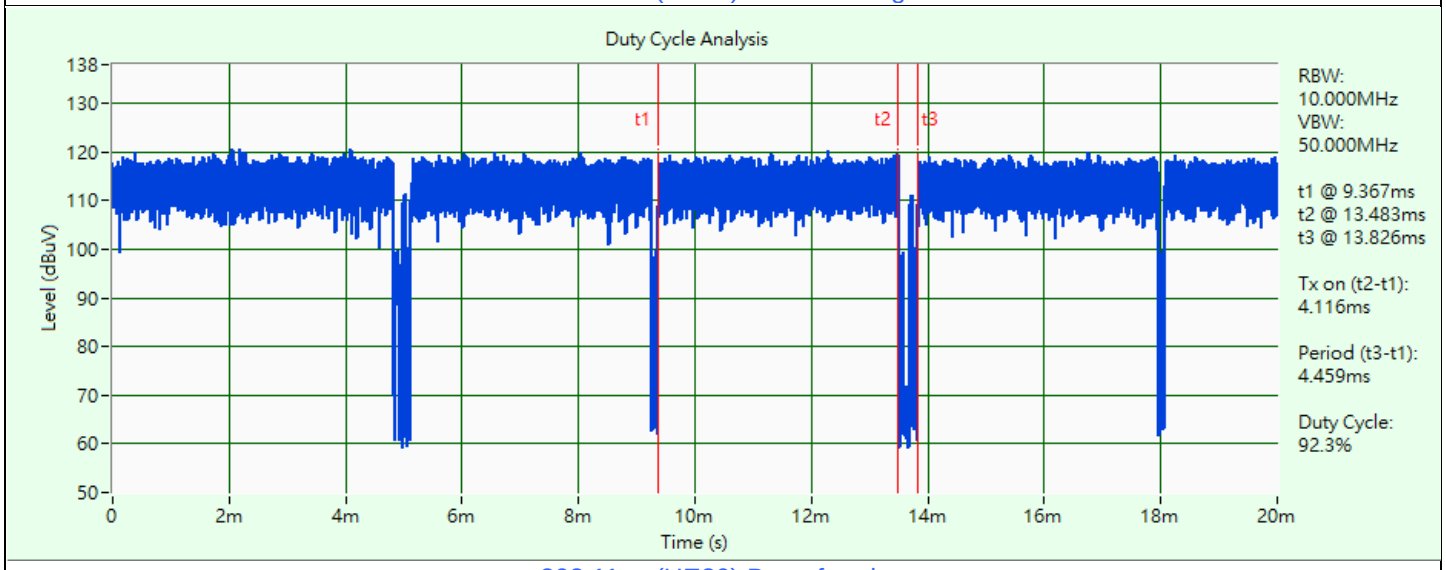
802.11ax (HE80) CDD



802.11ax (HE20) Beamforming



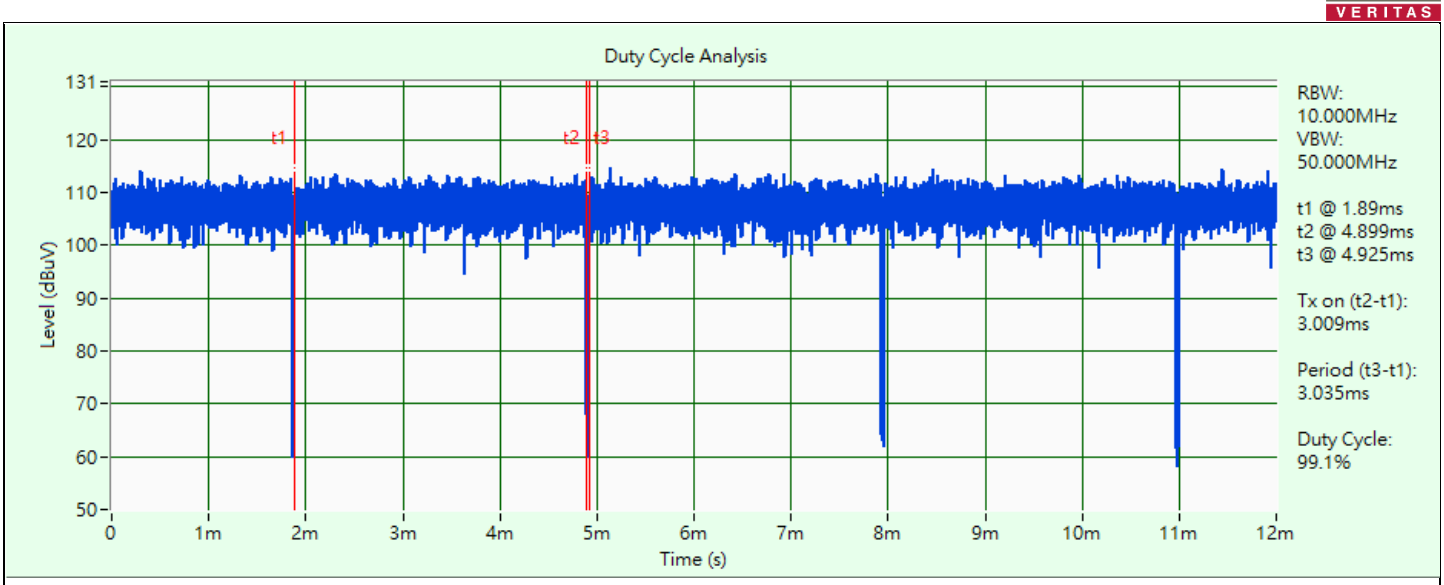
802.11ax (HE40) Beamforming



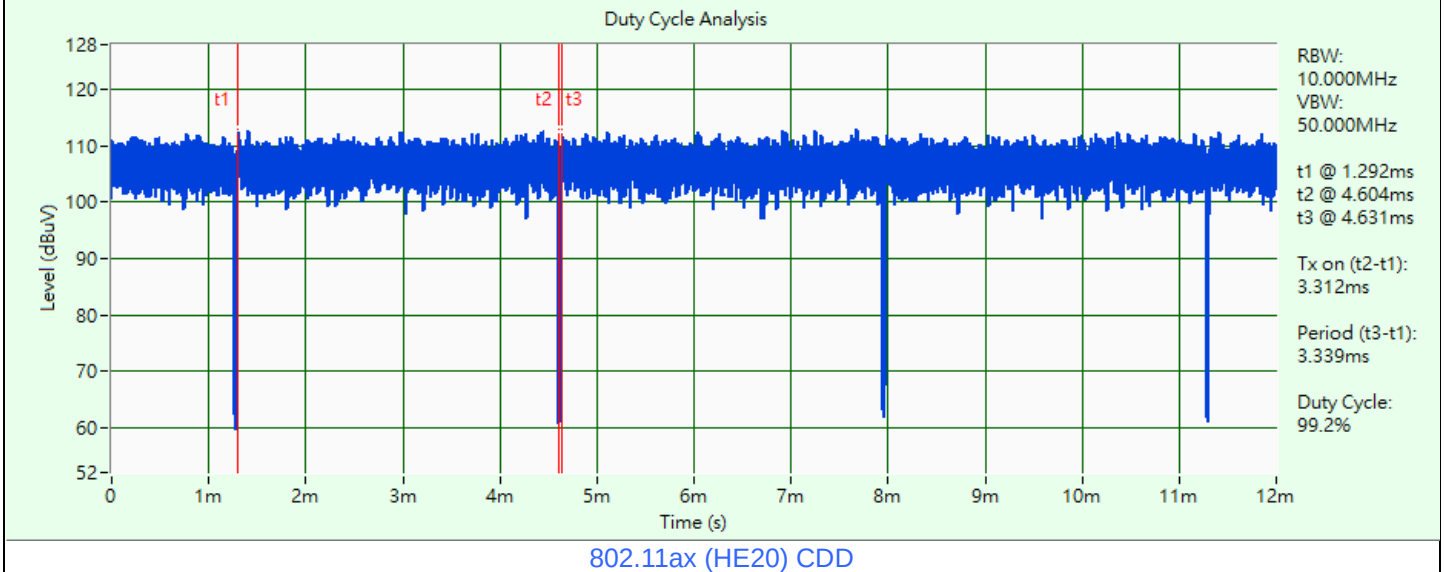
802.11ax (HE80) Beamforming

Mode B

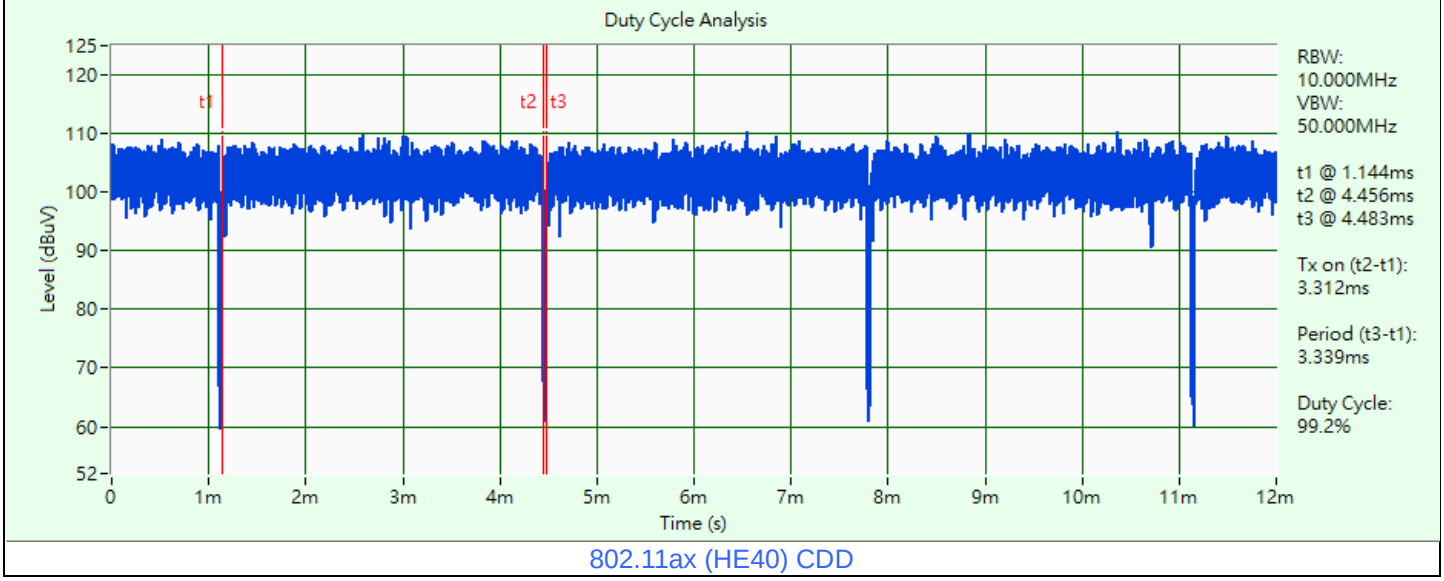
802.11a CDD: Duty cycle = 3.009 ms / 3.035 ms x 100% = 99.1%
802.11ax (HE20) CDD: Duty cycle = 3.312 ms / 3.339 ms x 100% = 99.2%
802.11ax (HE40) CDD: Duty cycle = 3.312 ms / 3.339 ms x 100% = 99.2%
802.11ax (HE80) CDD: Duty cycle = 3.166 ms / 3.193 ms x 100% = 99.2%
802.11ax (HE160) CDD: Duty cycle = 2.997 ms / 3.027 ms x 100% = 99.0%
802.11ax (HE20) Beamforming: Duty cycle = 2.913 ms / 3.167 ms x 100% = 92.0%, duty factor = 10 * log (1/Duty cycle) = 0.36 dB
802.11ax (HE40) Beamforming: Duty cycle = 4.617 ms / 4.934 ms x 100% = 93.6%, duty factor = 10 * log (1/Duty cycle) = 0.29 dB
802.11ax (HE80) Beamforming: Duty cycle = 4.116 ms / 4.38 ms x 100% = 94.0%, duty factor = 10 * log (1/Duty cycle) = 0.27 dB
802.11ax (HE160) Beamforming: Duty cycle = 5.145 ms / 5.541 ms x 100% = 92.9%, duty factor = 10 * log (1/Duty cycle) = 0.32 dB



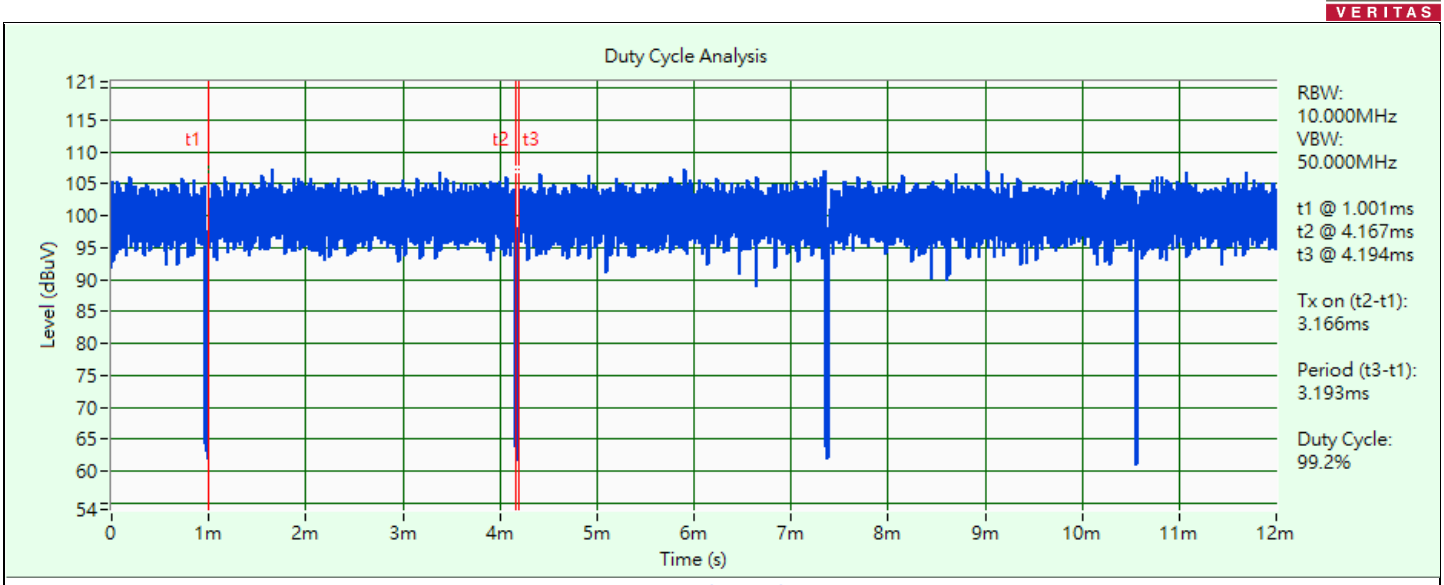
802.11a CDD



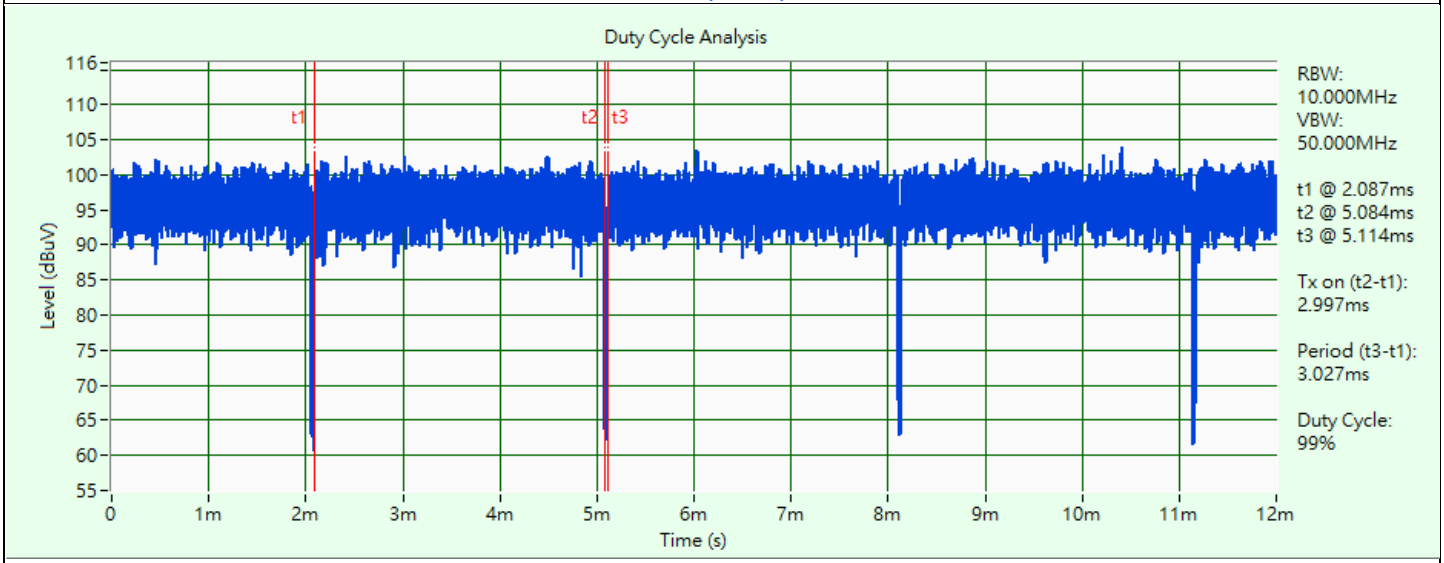
802.11ax (HE20) CDD



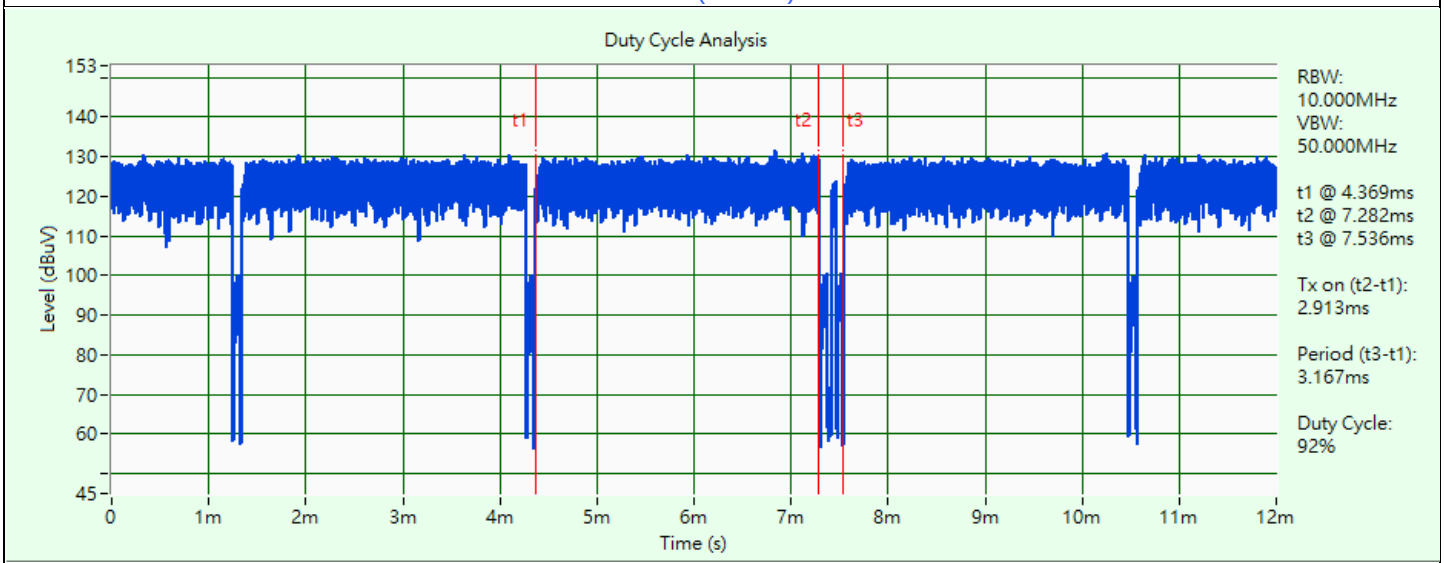
802.11ax (HE40) CDD



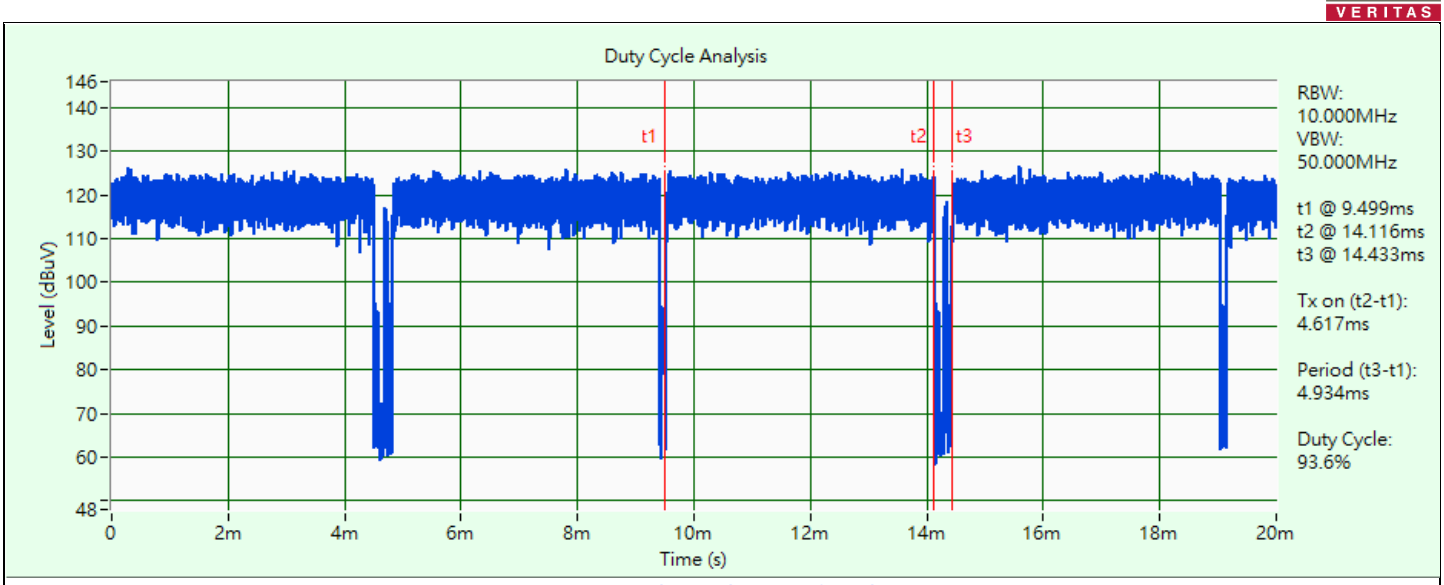
802.11ax (HE80) CDD



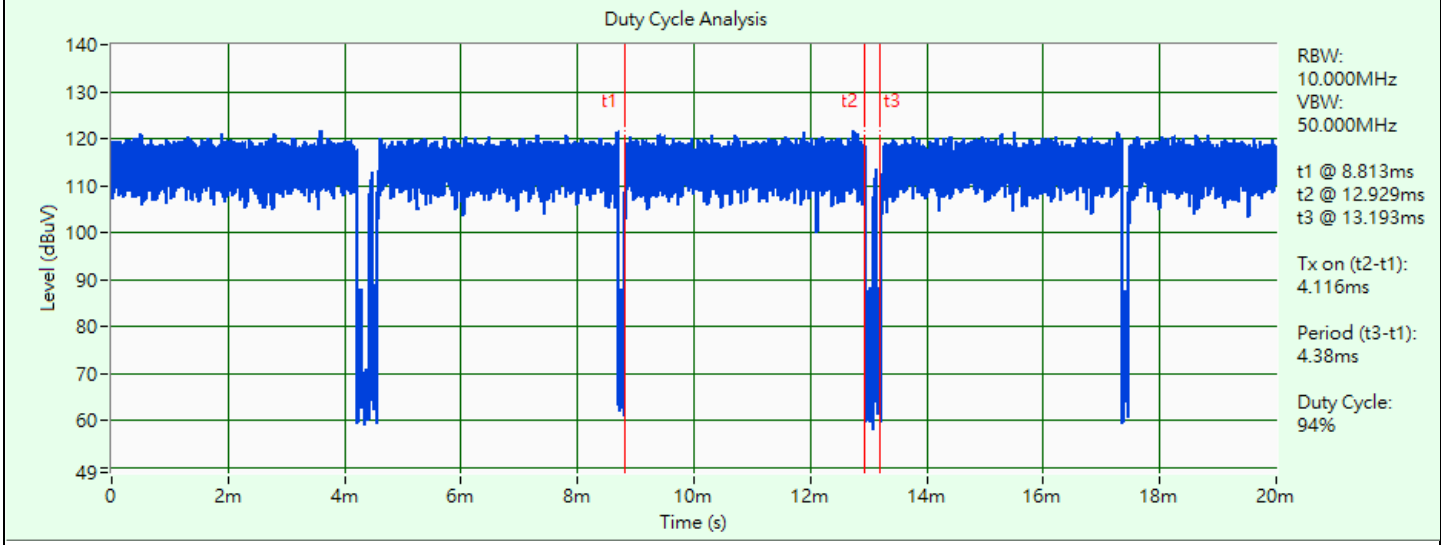
802.11ax (HE160) CDD



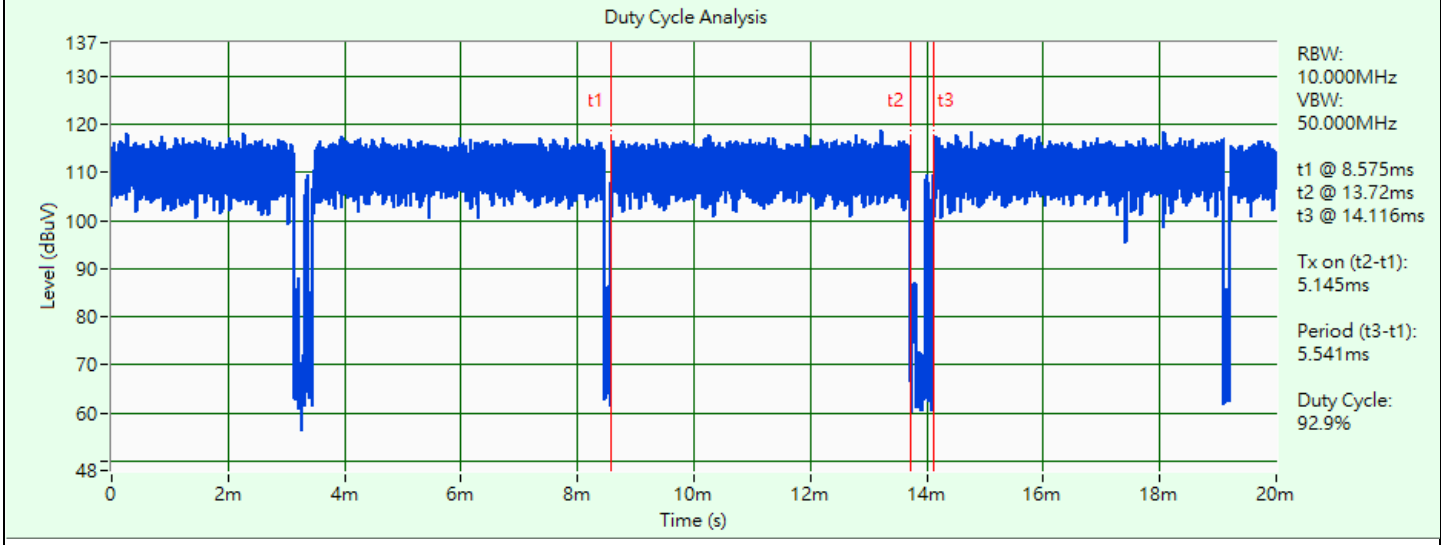
802.11ax (HE20) Beamforming



802.11ax (HE40) Beamforming



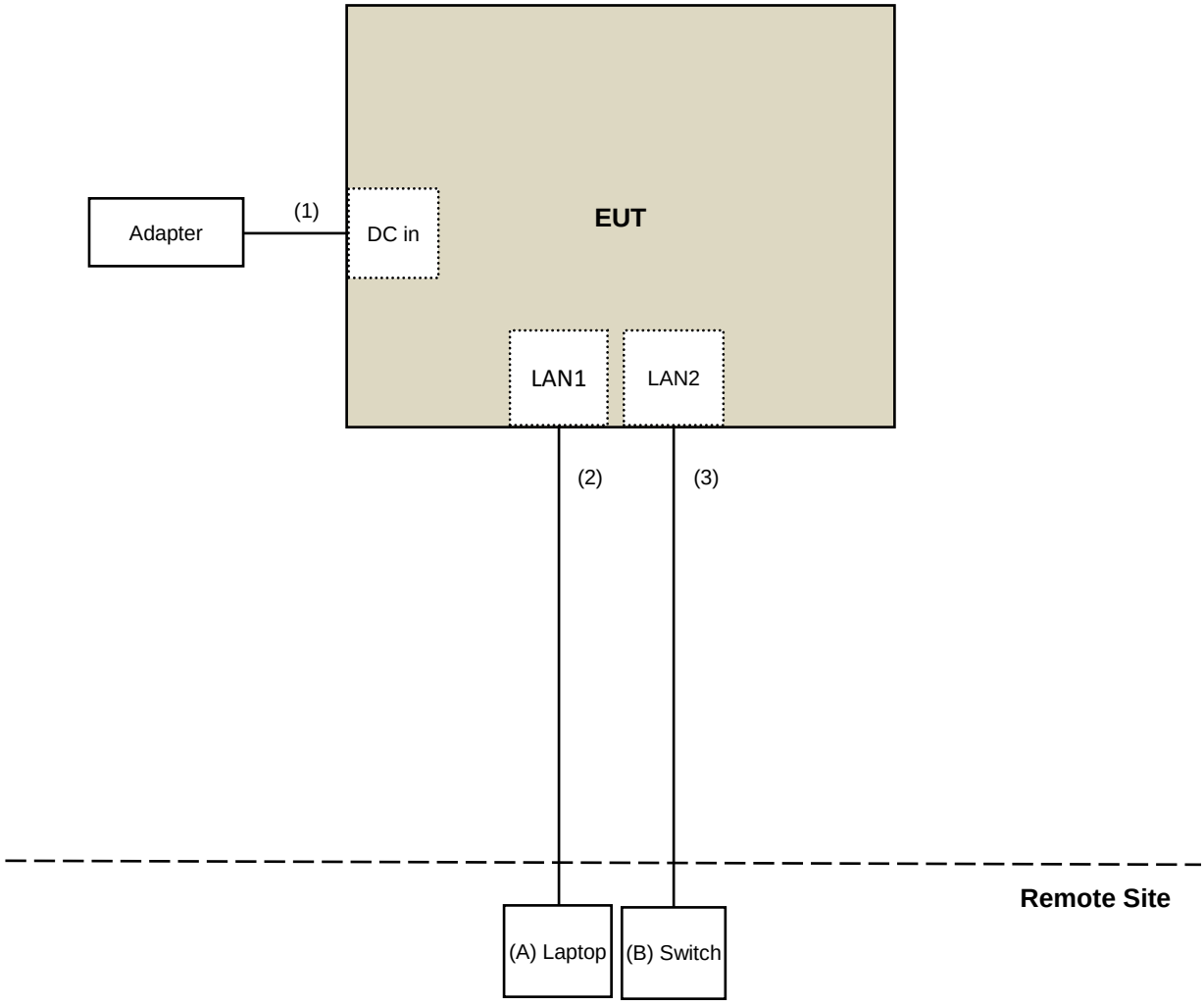
802.11ax (HE80) Beamforming



802.11ax (HE160) Beamforming

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

3.6 Connection Diagram of EUT and Peripheral Devices



3.7 Configuration of Peripheral Devices and Cable Connections

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

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

4 Test Instruments

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

4.1 26 dB Bandwidth

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

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/10/3 ~ 2022/10/5

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Power Meter Anritsu	ML2495A	1529002	2022/6/22	2023/6/21
Pulse Power Sensor Anritsu	MA2411B	1726434	2022/6/22	2023/6/21
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101516	2022/3/7	2023/3/6

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/10/3 ~ 2022/10/5

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
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2022/4/5	2023/4/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101516	2022/3/7	2023/3/6
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	2022/1/14	2023/1/13
True RMS Clamp Meter Fluke	325	31130711WS	2022/6/9	2023/6/8

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2022/10/3 ~ 2022/10/5

4.7 AC Power Conducted Emissions

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

Notes:

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

4.8 Unwanted Emissions below 1 GHz

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

Notes:

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

4.9 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-2035	2021/11/14	2022/11/13
	BBHA 9170	BBHA9170519	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC12630SE	980385	2022/8/15	2023/8/14
	EMC184045SE	980387	2022/1/10	2023/1/9
RF Cable EMCI	EMC104-SM-SM-1300	210205	2022/5/10	2023/5/9
RF Cable-Frequency range: 1-40GHz EMCI	EMC102-KM-KM-1200	160924	2022/1/10	2023/1/9
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2022/3/8	2023/3/7
	EMC101G-KM-KM-10000	210708	2021/11/9	2022/11/8
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer Keysight	N9020B	MY60112410	2022/3/13	2023/3/12
Test Receiver KEYSIGHT	N9038A	MY59050100	2022/6/20	2023/6/19

Notes:

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

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

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

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

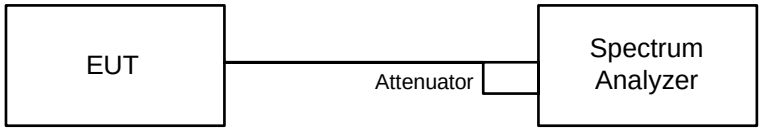
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

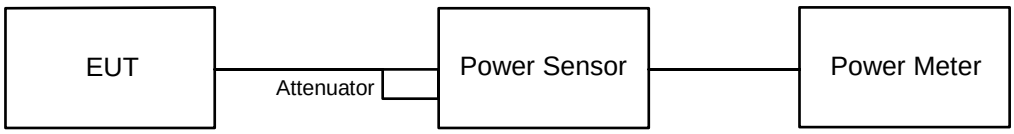


6.1.2 Test Procedure

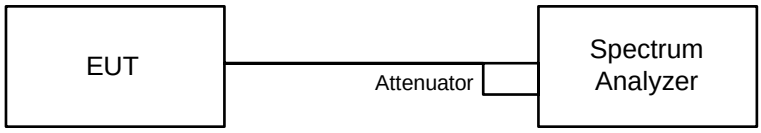
a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement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

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:

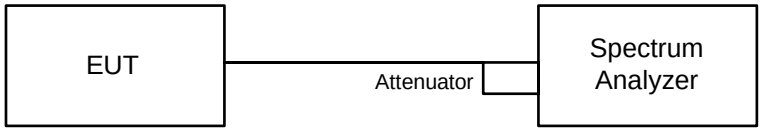
Method SA-2

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

For specified measurement bandwidth 1 MHz:
Method SA-2

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

For specified measurement bandwidth 500 kHz:
Method SA-1

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

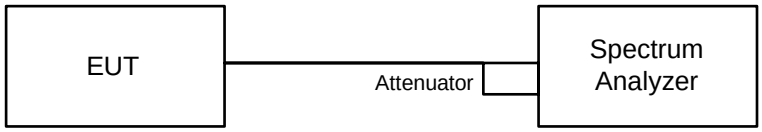
For specified measurement bandwidth 500 kHz:

Method SA-2

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

6.4 6 dB Bandwidth

6.4.1 Test Setup

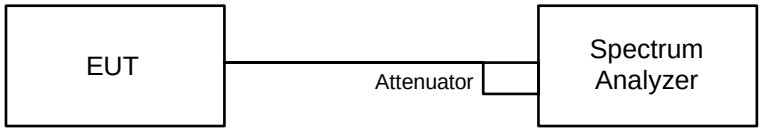


6.4.2 Test Procedure

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

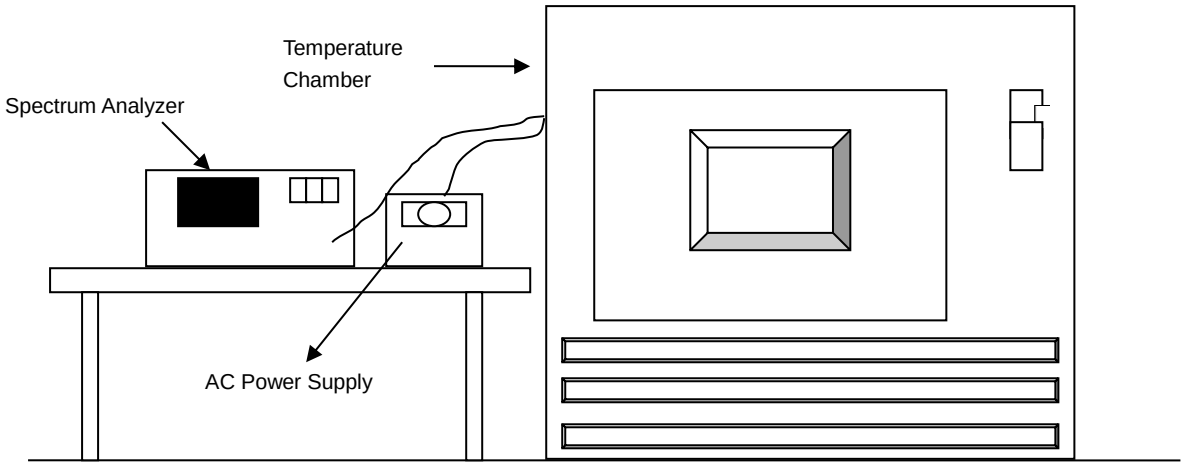


6.5.2 Test Procedure

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

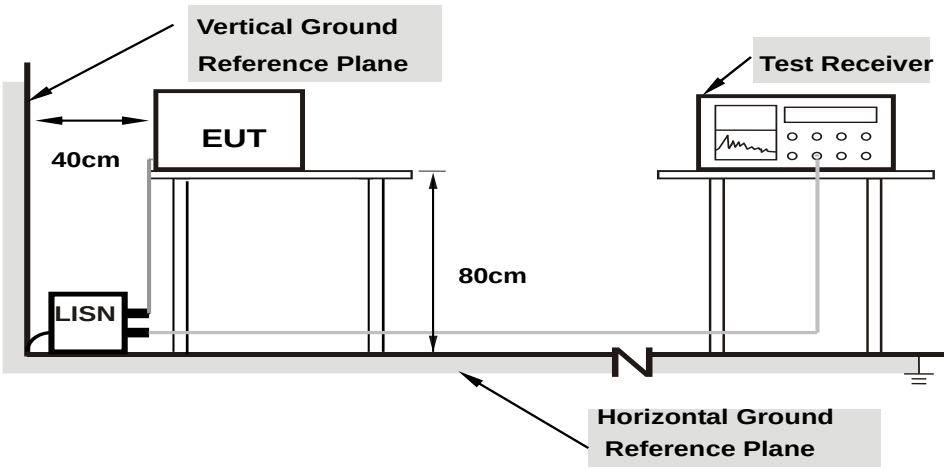


6.6.2 Test Procedure

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.

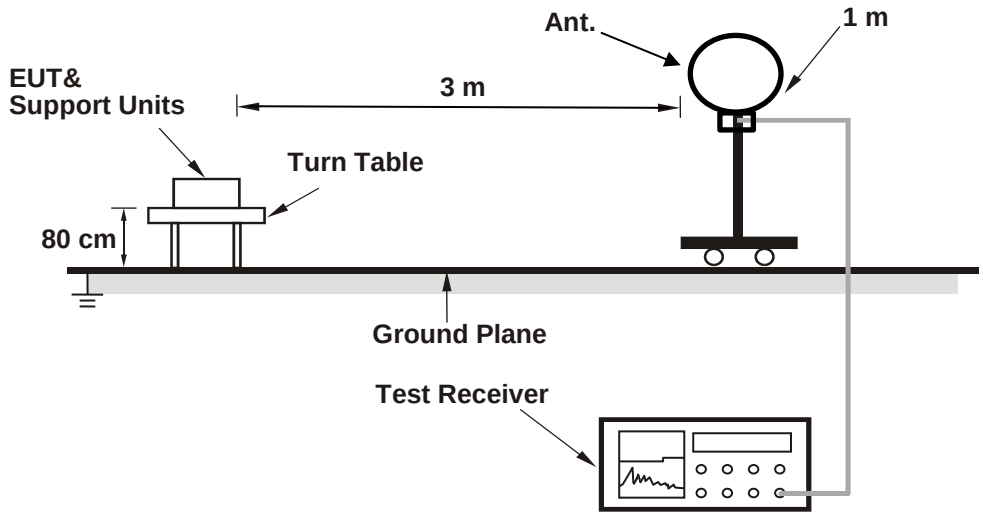
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

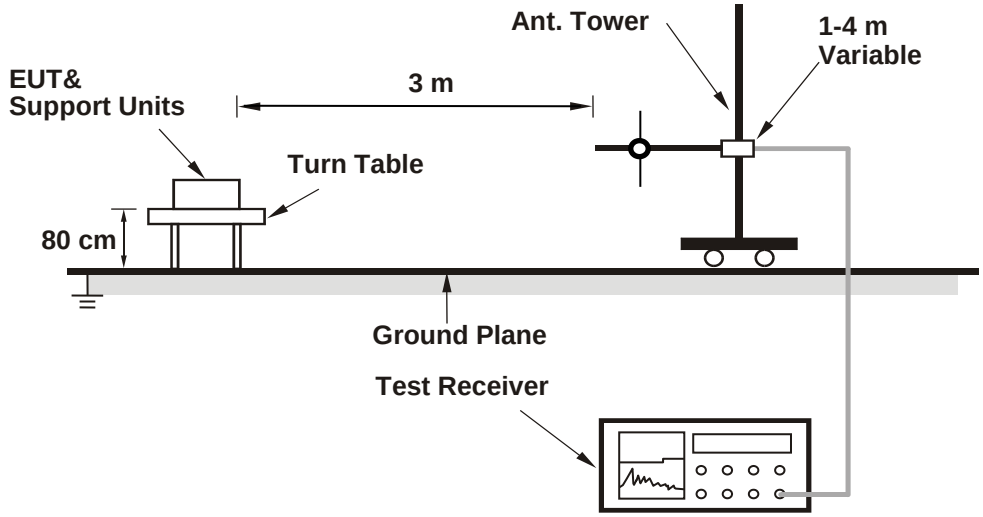
6.8 Unwanted Emissions below 1 GHz

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.

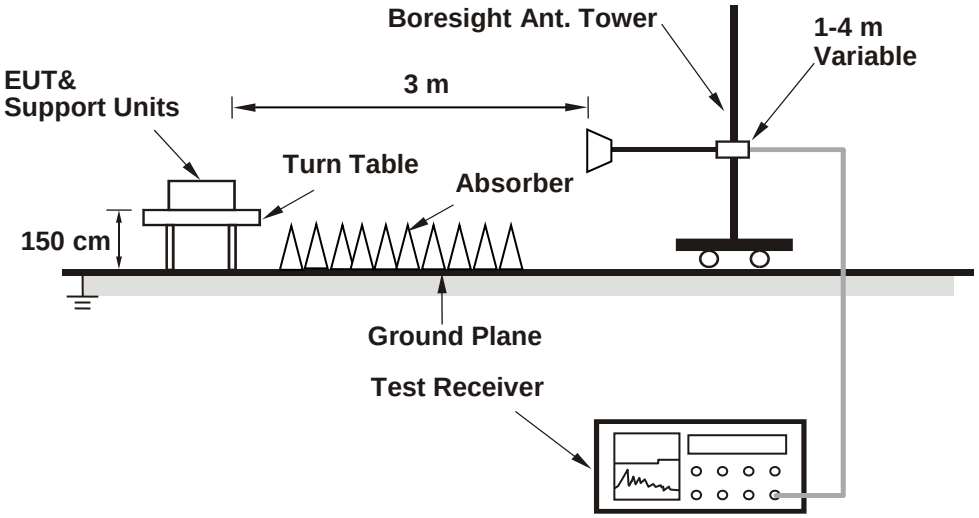
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.9 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:	John Peng

802.11a CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.47	21.71
60	5300	21.44	21.68
64	5320	21.40	21.59

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.47	24.31	>	24
60	5300	21.44	24.31	>	24
64	5320	21.40	24.3	>	24

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

802.11ax (HE20) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.73	21.73
60	5300	21.76	21.82
64	5320	21.71	21.76

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.73	24.37	>	24
60	5300	21.76	24.37	>	24
64	5320	21.71	24.36	>	24

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

802.11ax (HE40) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	40.75	40.86
62	5310	40.85	40.92

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	40.75	27.1	>	24
62	5310	40.85	27.11	>	24

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

802.11ax (HE80) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	81.69	81.74

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	81.69	30.12	>	24

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

802.11ax (HE20) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.66	21.49
60	5300	21.49	21.63
64	5320	21.73	21.39

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.49	24.32	>	24
60	5300	21.49	24.32	>	24
64	5320	21.39	24.3	>	24

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

802.11ax (HE40) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.53	43.24
62	5310	40.88	40.79

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	41.53	27.18	>	24
62	5310	40.79	27.1	>	24

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

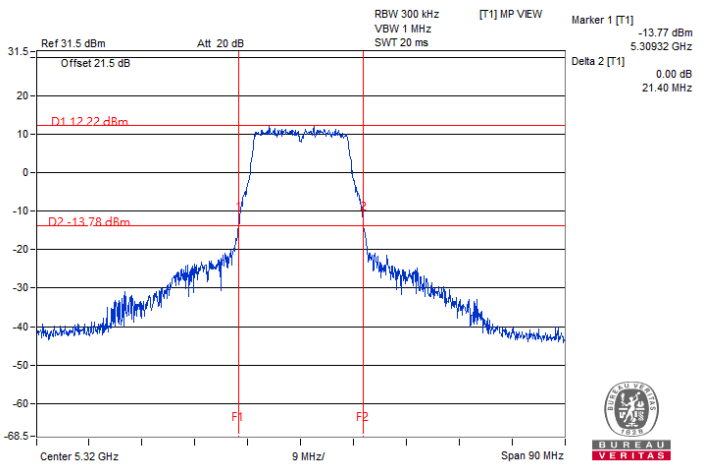
802.11ax (HE80) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	81.82	81.63

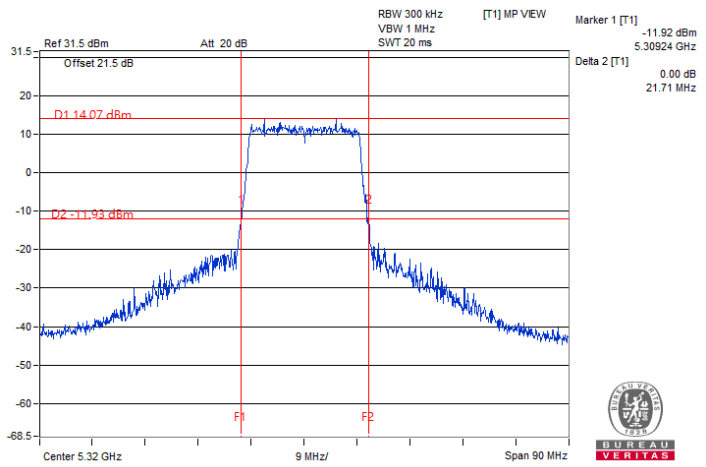
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	81.63	30.11	>	24

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

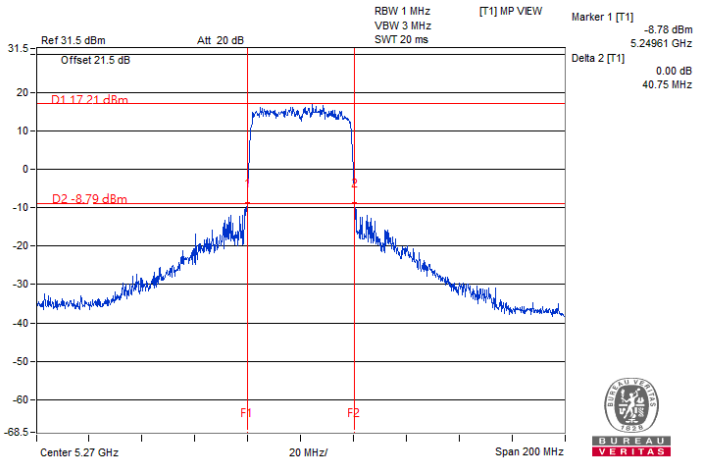
Spectrum Plot of Minimum Value



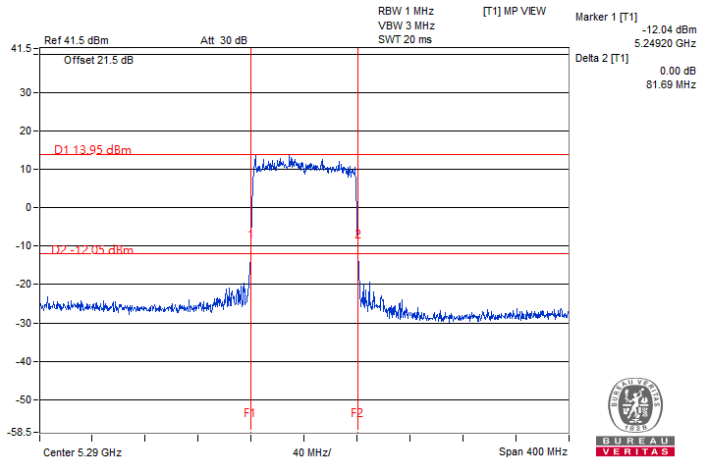
802.11a CDD / Chain0 : CH 64



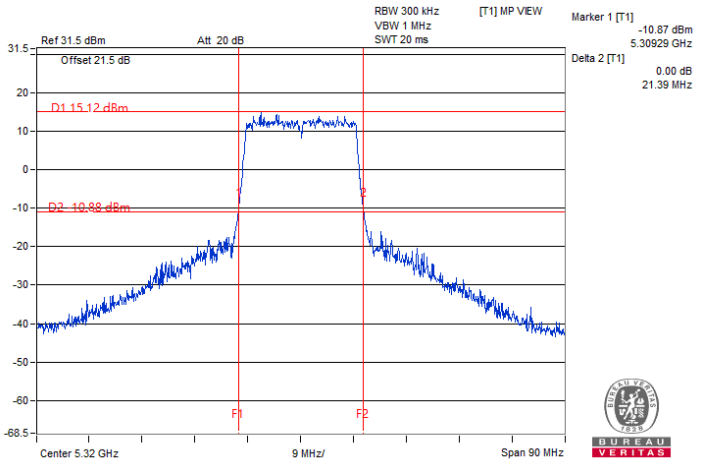
802.11ax (HE20) CDD / Chain0 : CH 64



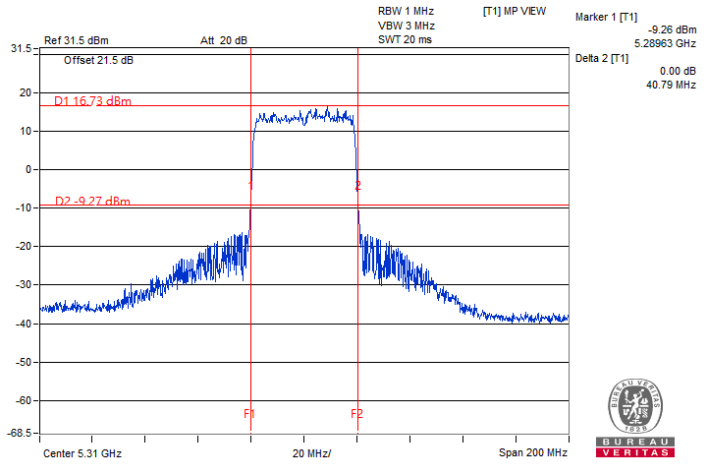
802.11ax (HE40) CDD / Chain0 : CH 54



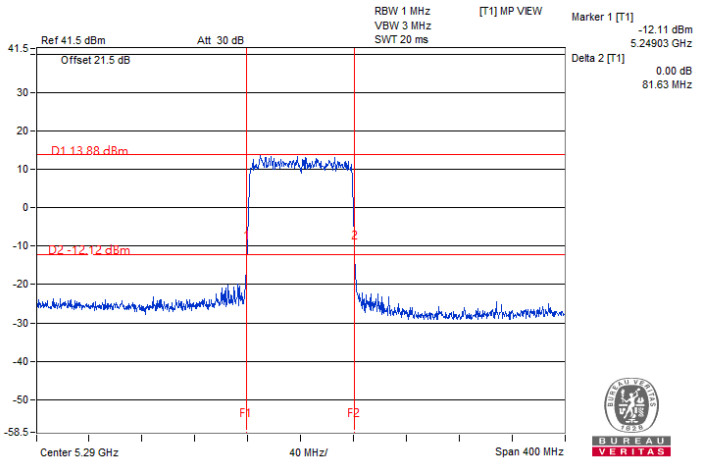
802.11ax (HE80) CDD / Chain0 : CH 58



802.11ax (HE20) Beamforming / Chain1 : CH 64



802.11ax (HE40) Beamforming / Chain1 : CH 62

Spectrum Plot of Minimum Value	
 802.11ax (HE80) Beamforming / Chain1 : CH 58	

Mode B

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

802.11a CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	24.09	22.58	23.33	24.69
116	5580	24.28	22.24	22.32	22.30
140	5700	21.53	21.37	21.53	21.56
144 (U-NII-2C)	5720	16.30	16.05	17.03	15.94

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
100	5500	22.58	24.53	>	24
116	5580	22.24	24.47	>	24
140	5700	21.37	24.29	>	24
144 (U-NII-2C)	5720	15.94	23.02	<	24

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

802.11ax (HE20) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	24.22	24.48	23.32	24.12
116	5580	26.74	24.43	23.34	22.41
140	5700	21.83	21.56	21.33	21.72
144 (U-NII-2C)	5720	16.36	15.91	16.11	16.23

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
100	5500	23.32	24.67	>	24
116	5580	22.41	24.5	>	24
140	5700	21.33	24.28	>	24
144 (U-NII-2C)	5720	15.91	23.01	<	24

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

802.11ax (HE40) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	41.84	42.30	45.78	48.36
110	5550	42.84	42.95	42.16	45.92
134	5670	41.96	45.94	44.23	44.59
142 (U-NII-2C)	5710	35.98	35.89	35.78	36.83

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
102	5510	41.84	27.21 > 24
110	5550	42.16	27.24 > 24
134	5670	41.96	27.22 > 24
142 (U-NII-2C)	5710	35.78	26.53 > 24

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

802.11ax (HE80) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.04	82.95	82.75	87.16
122	5610	86.63	86.60	83.05	85.15
138 (U-NII-2C)	5690	77.50	75.76	76.43	75.93

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
106	5530	82.75	30.17 > 24
122	5610	83.05	30.19 > 24
138 (U-NII-2C)	5690	75.76	29.79 > 24

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

802.11ax (HE160) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	167.95	168.07	167.61	167.75

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
114	5570	167.61	33.24 > 24

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

802.11ax (HE20) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	28.38	22.20	24.94	24.21
116	5580	23.04	25.27	23.97	23.65
140	5700	21.59	21.70	21.61	21.91
144 (U-NII-2C)	5720	17.13	16.23	17.83	15.81

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
100	5500	22.20	24.46	>	24
116	5580	23.04	24.62	>	24
140	5700	21.59	24.34	>	24
144 (U-NII-2C)	5720	15.81	22.98	<	24

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

802.11ax (HE40) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	42.45	43.93	44.43	45.93
110	5550	42.28	42.44	43.51	47.86
134	5670	43.69	41.54	47.83	47.83
142 (U-NII-2C)	5710	36.85	35.89	45.45	36.03

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
102	5510	42.45	27.27	>	24
110	5550	42.28	27.26	>	24
134	5670	41.54	27.18	>	24
142 (U-NII-2C)	5710	35.89	26.54	>	24

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

802.11ax (HE80) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	88.21	90.88	83.08	83.71
122	5610	84.17	82.79	82.56	87.14
138 (U-NII-2C)	5690	76.39	75.87	76.06	75.96

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
106	5530	83.08	30.19 > 24
122	5610	82.56	30.16 > 24
138 (U-NII-2C)	5690	75.87	29.8 > 24

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

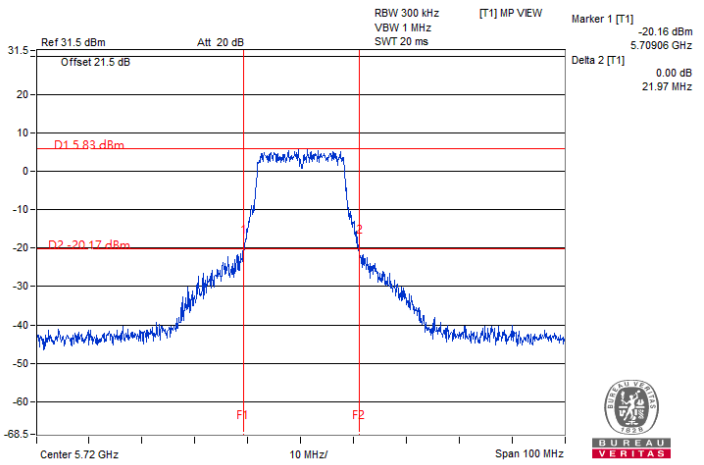
802.11ax (HE160) Beamforming

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	166.33	167.77	167.38	166.23

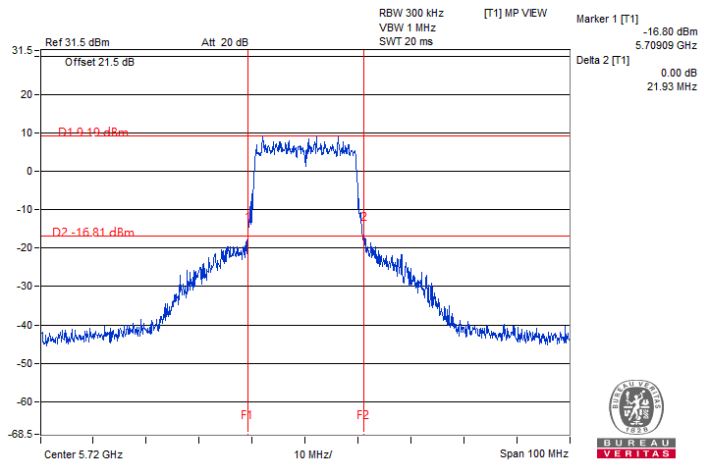
Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
114	5570	166.23	33.2 > 24

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

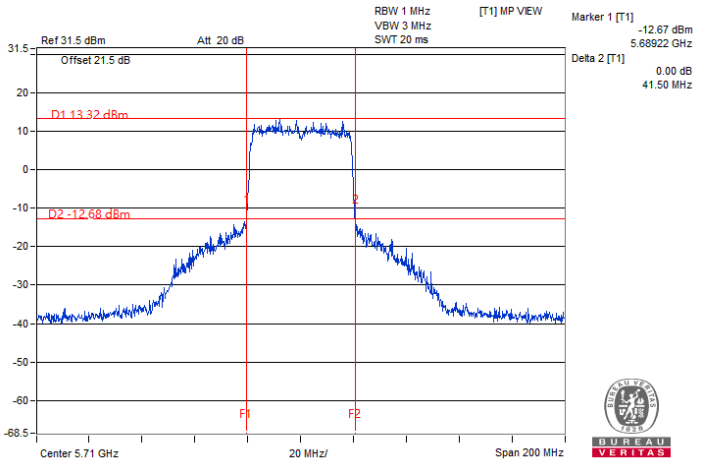
Spectrum Plot of Minimum Value



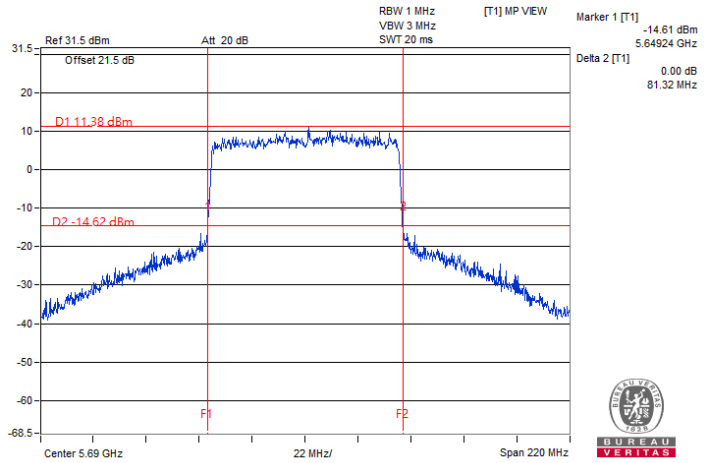
802.11a CDD / Chain3 : CH 144 (U-NII-2C)



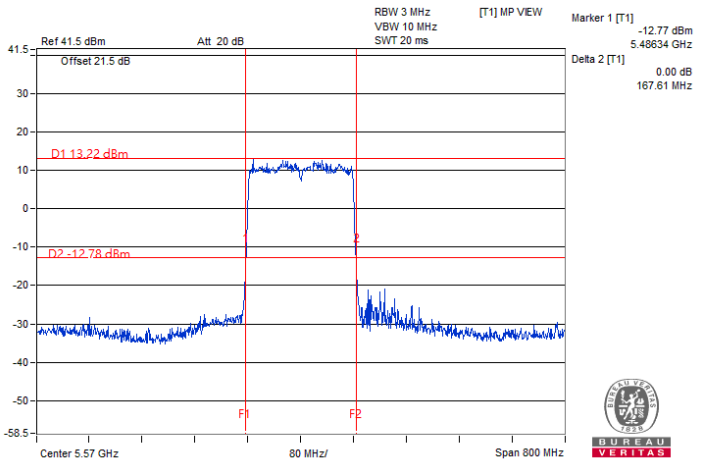
802.11ax (HE20) CDD / Chain1 : CH 144 (U-NII-2C)



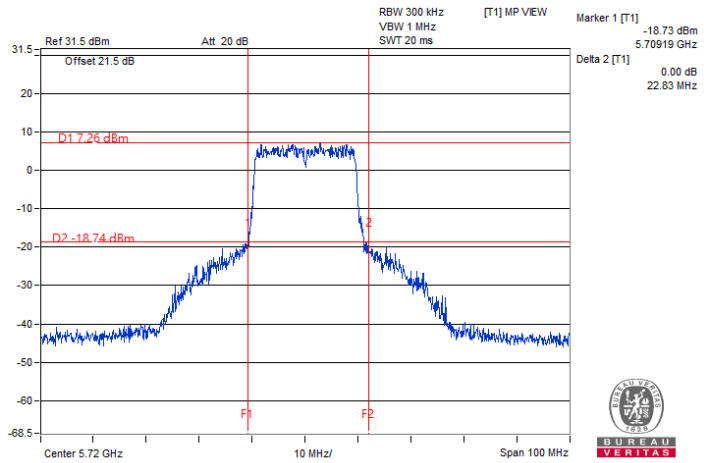
802.11ax (HE40) CDD / Chain2 : CH 142 (U-NII-2C)



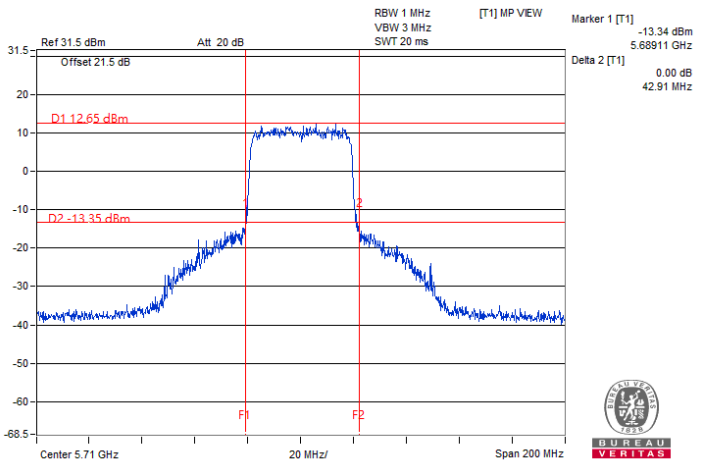
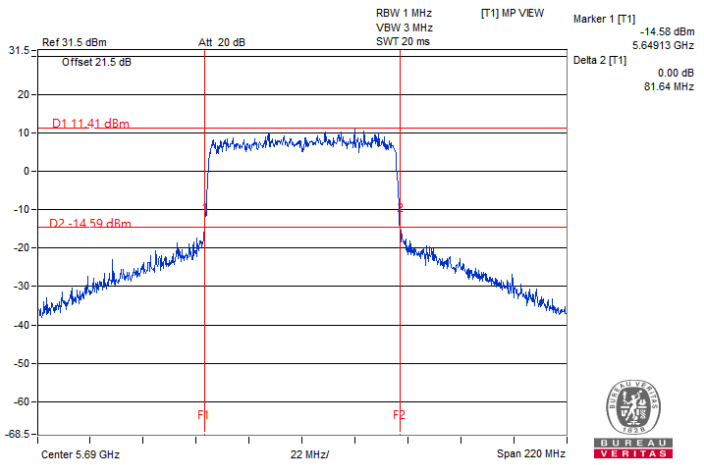
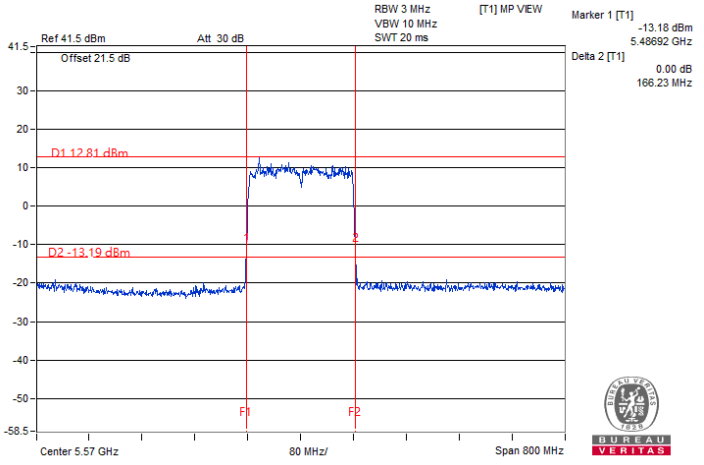
802.11ax (HE80) CDD / Chain1 : CH 138 (U-NII-2C)



802.11ax (HE160) CDD / Chain2 : CH 114



802.11ax (HE20) Beamforming / Chain3 : CH 144 (U-NII-2C)

Spectrum Plot of Minimum Value	
	
802.11ax (HE40) Beamforming / Chain1 : CH 142 (U-NII-2C)	802.11ax (HE80) Beamforming / Chain1 : CH 138 (U-NII-2C)
	
802.11ax (HE160) Beamforming / Chain3 : CH 114	

Notes:

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

7.2 RF Output Power

Mode A

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

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.56	20.73	232.067	23.66	24	Pass
60	5300	20.45	20.90	233.944	23.69	24	Pass
64	5320	20.83	21.02	247.533	23.94	24	Pass

Notes:

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

802.11n (HT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.66	21.06	244.056	23.87	24	Pass
60	5300	20.71	20.96	242.499	23.85	24	Pass
64	5320	20.56	20.79	233.713	23.69	24	Pass

Notes:

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

802.11n (HT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.87	20.75	241.03	23.82	24	Pass
62	5310	20.05	20.10	203.487	23.09	24	Pass

Notes:

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

802.11ac (VHT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.71	21.10	246.586	23.92	24	Pass
60	5300	20.75	20.99	244.453	23.88	24	Pass
64	5320	20.60	20.82	235.597	23.72	24	Pass

Notes:

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

802.11ac (VHT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.90	20.79	242.977	23.86	24	Pass
62	5310	20.09	20.13	205.133	23.12	24	Pass

Notes:

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

802.11ac (VHT80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	20.09	20.60	216.909	23.36	24	Pass

Notes:

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

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.76	21.15	249.441	23.97	24	Pass
60	5300	20.78	21.03	246.439	23.92	24	Pass
64	5320	20.63	20.89	238.355	23.77	24	Pass

Notes:

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

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.95	20.82	245.233	23.90	24	Pass
62	5310	20.12	20.17	206.794	23.16	24	Pass

Notes:

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

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	20.16	20.65	219.898	23.42	24	Pass

Notes:

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

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.17	20.65	220.137	23.43	24	Pass
60	5300	20.31	20.53	220.379	23.43	24	Pass
64	5320	20.12	20.46	213.975	23.30	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 5.59 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.31	20.45	218.316	23.39	24	Pass
62	5310	18.53	18.74	146.102	21.65	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 5.59 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				
52	5260	20.45	20.86	232.816	23.67	24	Pass
60	5300	20.54	20.78	232.914	23.67	24	Pass
64	5320	20.41	20.75	228.751	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 5.59 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				
54	5270	20.61	20.68	232.03	23.66	24	Pass
62	5310	18.82	18.99	155.458	21.92	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 5.59 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				
58	5290	19.16	19.49	171.334	22.34	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 5.59 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				
52	5260	20.69	21.11	246.341	23.92	24	Pass
60	5300	20.67	21.01	242.864	23.85	24	Pass
64	5320	20.59	20.89	237.295	23.75	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 5.59 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				
54	5270	20.71	20.90	240.787	23.82	24	Pass
62	5310	19.03	19.21	163.352	22.13	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 5.59 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				
58	5290	19.37	19.78	181.557	22.59	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 5.59 dBi < 6 dBi, so the output power limit shall not be reduced.

Mode B

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

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	16.40	16.89	16.03	15.78	170.448	22.32	24	Pass
116	5580	15.75	16.21	15.35	15.30	147.528	21.69	24	Pass
140	5700	16.41	16.44	15.53	15.37	157.97	21.99	24	Pass
*144 (U-NII-2C)	5720	15.17	15.46	14.72	14.02	122.924	20.90	23.02	Pass
*144 (U-NII-3)	5720	8.87	8.58	8.37	7.99	28.086	14.48	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	16.96	17.39	16.70	16.26	193.527	22.87	24	Pass
116	5580	16.83	16.95	16.18	16.32	182.09	22.60	24	Pass
140	5700	16.88	16.84	15.96	15.94	175.769	22.45	24	Pass
*144 (U-NII-2C)	5720	15.78	15.83	15.32	14.67	139.476	21.44	23.01	Pass
*144 (U-NII-3)	5720	10.31	10.59	9.83	9.42	40.561	16.08	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	17.66	18.05	17.38	17.01	227.107	23.56	24	Pass
110	5550	18.01	18.08	17.29	17.40	236.044	23.73	24	Pass
134	5670	18.11	18.08	17.17	17.18	233.342	23.68	24	Pass
*142 (U-NII-2C)	5710	17.24	17.58	17.25	16.19	204.925	23.12	24	Pass
*142 (U-NII-3)	5710	7.60	7.68	7.07	6.42	21.094	13.24	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	16.99	17.41	16.71	16.28	194.428	22.89	24	Pass
116	5580	16.86	16.98	16.21	16.35	183.352	22.63	24	Pass
140	5700	16.91	16.87	16.01	15.96	177.08	22.48	24	Pass
*144 (U-NII-2C)	5720	15.78	15.83	15.32	14.67	139.476	21.44	23.01	Pass
*144 (U-NII-3)	5720	10.31	10.59	9.83	9.42	40.561	16.08	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	17.69	18.08	17.37	17.06	228.409	23.59	24	Pass
110	5550	18.12	18.15	17.45	17.53	242.391	23.85	24	Pass
134	5670	18.18	18.16	17.35	17.31	239.381	23.79	24	Pass
*142 (U-NII-2C)	5710	17.24	17.58	17.25	16.19	204.925	23.12	24	Pass
*142 (U-NII-3)	5710	7.60	7.68	7.07	6.42	21.094	13.24	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	18.10	17.76	17.61	16.96	231.605	23.65	24	Pass
122	5610	18.28	17.79	17.70	17.29	239.879	23.80	24	Pass
*138 (U-NII-2C)	5690	17.91	17.61	17.53	16.45	220.259	23.43	24	Pass
*138 (U-NII-3)	5690	4.01	4.35	3.48	3.14	9.529	9.79	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 5 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				
114	5570	18.55	17.96	17.61	17.25	244.897	23.89	24	Pass

Notes:

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

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	17.02	17.45	16.73	16.30	195.696	22.92	24	Pass
116	5580	16.90	17.01	16.24	16.37	184.636	22.66	24	Pass
140	5700	16.93	16.90	16.03	15.99	178.101	22.51	24	Pass
*144 (U-NII-2C)	5720	15.78	15.83	15.32	14.67	139.476	21.44	23.01	Pass
*144 (U-NII-3)	5720	10.31	10.59	9.83	9.42	40.561	16.08	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	17.96	17.80	17.43	17.12	229.631	23.61	24	Pass
110	5550	18.01	17.90	17.99	17.59	245.263	23.90	24	Pass
134	5670	18.51	17.75	17.73	17.33	243.892	23.87	24	Pass
*142 (U-NII-2C)	5710	17.24	17.58	17.25	16.19	204.925	23.12	24	Pass
*142 (U-NII-3)	5710	7.60	7.68	7.07	6.42	21.094	13.24	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 5 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	18.15	17.80	17.65	17.00	233.898	23.69	24	Pass
122	5610	18.33	17.83	17.74	17.33	242.255	23.84	24	Pass
*138 (U-NII-2C)	5690	17.91	17.61	17.53	16.45	220.259	23.43	24	Pass
*138 (U-NII-3)	5690	4.01	4.35	3.48	3.14	9.529	9.79	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 5 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 5 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				
114	5570	18.60	18.00	17.66	17.30	247.587	23.94	24	Pass

Notes:

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

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	16.06	16.19	16.01	15.87	160.495	22.05	24	Pass
116	5580	15.87	16.27	16.08	15.93	160.726	22.06	24	Pass
140	5700	15.91	16.19	16.02	15.83	158.862	22.01	24	Pass
*144 (U-NII-2C)	5720	14.74	14.88	14.98	15.29	136.802	21.36	22.98	Pass
*144 (U-NII-3)	5720	9.59	9.90	9.61	10.13	41.658	16.20	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	14.43	14.74	14.52	14.38	113.248	20.54	24	Pass
110	5550	16.01	16.31	16.15	16.05	164.14	22.15	24	Pass
134	5670	15.99	16.29	16.30	16.03	165.024	22.18	24	Pass
*142 (U-NII-2C)	5710	15.39	15.42	15.17	15.41	146.477	21.66	24	Pass
*142 (U-NII-3)	5710	5.58	5.62	5.35	5.80	15.486	11.90	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	16.21	16.43	16.19	16.13	168.349	22.26	24	Pass
116	5580	16.10	16.46	16.30	16.17	169.055	22.28	24	Pass
140	5700	16.18	16.45	16.26	16.13	168.94	22.28	24	Pass
*144 (U-NII-2C)	5720	14.74	14.88	14.98	15.29	136.802	21.36	22.98	Pass
*144 (U-NII-3)	5720	9.59	9.90	9.61	10.13	41.658	16.20	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	14.71	14.95	14.79	14.61	119.878	20.79	24	Pass
110	5550	16.29	16.52	16.40	16.26	173.353	22.39	24	Pass
134	5670	16.27	16.52	16.50	16.28	174.369	22.41	24	Pass
*142 (U-NII-2C)	5710	15.39	15.42	15.17	15.41	146.477	21.66	24	Pass
*142 (U-NII-3)	5710	5.58	5.62	5.35	5.80	15.486	11.90	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	14.14	14.42	14.33	14.09	106.358	20.27	24	Pass
122	5610	16.43	16.56	16.53	16.30	176.88	22.48	24	Pass
*138 (U-NII-2C)	5690	15.73	15.59	15.40	15.28	151.148	21.79	24	Pass
*138 (U-NII-3)	5690	2.66	2.43	1.86	2.08	7.176	8.56	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 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				
114	5570	14.57	14.87	14.76	14.52	117.569	20.70	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-2C, the directional gain is 4.19 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				
100	5500	16.47	16.71	16.48	16.41	179.458	22.54	24	Pass
116	5580	16.44	16.73	16.58	16.41	180.404	22.56	24	Pass
140	5700	16.37	16.65	16.51	16.35	177.512	22.49	24	Pass
*144 (U-NII-2C)	5720	14.74	14.88	14.98	15.29	136.802	21.36	22.98	Pass
*144 (U-NII-3)	5720	9.59	9.90	9.61	10.13	41.658	16.20	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	14.94	15.21	15.02	14.90	127.05	21.04	24	Pass
110	5550	16.52	16.72	16.62	16.53	182.762	22.62	24	Pass
134	5670	16.57	16.79	16.72	16.52	185.011	22.67	24	Pass
*142 (U-NII-2C)	5710	15.39	15.42	15.17	15.41	146.477	21.66	24	Pass
*142 (U-NII-3)	5710	5.58	5.62	5.35	5.80	15.486	11.90	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	14.41	14.69	14.58	14.32	112.797	20.52	24	Pass
122	5610	16.71	16.86	16.77	16.60	188.653	22.76	24	Pass
*138 (U-NII-2C)	5690	15.73	15.59	15.40	15.28	151.148	21.79	24	Pass
*138 (U-NII-3)	5690	2.66	2.43	1.86	2.08	7.176	8.56	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 measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.89 dBi< 6 dBi, so the output power limit shall not be reduced.

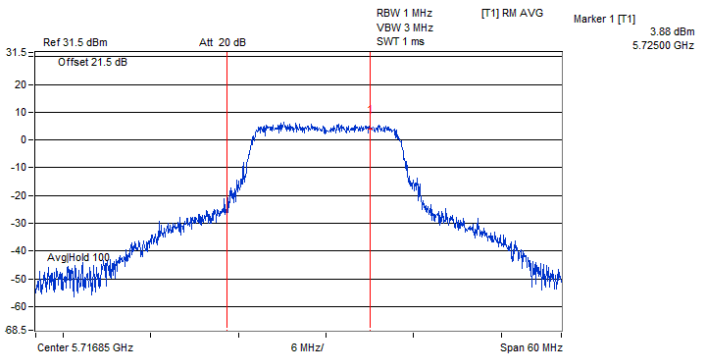
802.11ax (HE160) Beamforming

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				
114	5570	14.86	15.09	15.03	14.78	124.807	20.96	24	Pass

Notes:

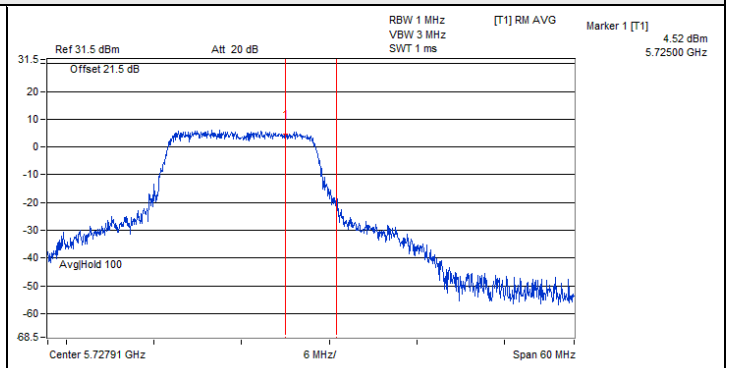
1. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
2. For U-NII-2C, the directional gain is 4.19 dBi < 6 dBi, so the output power limit shall not be reduced.

Spectrum Plot for channel straddling



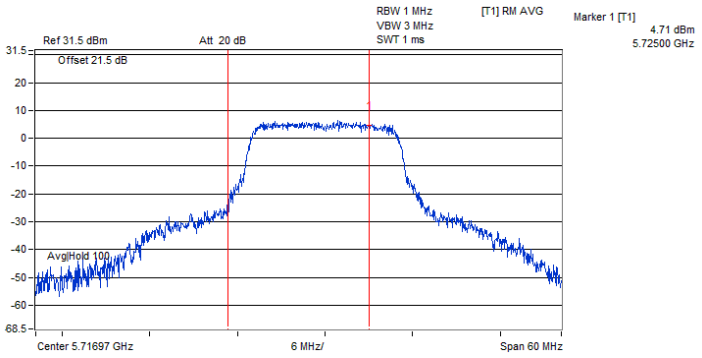
TX Channel Bandwidth 16.3 MHz Power 15.17 dBm

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



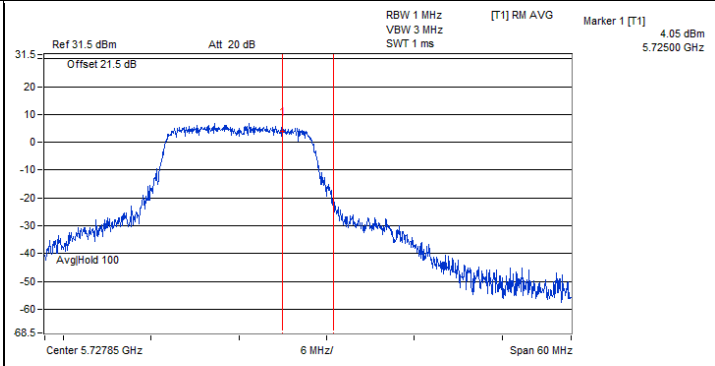
TX Channel Bandwidth 5.83 MHz Power 8.87 dBm

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



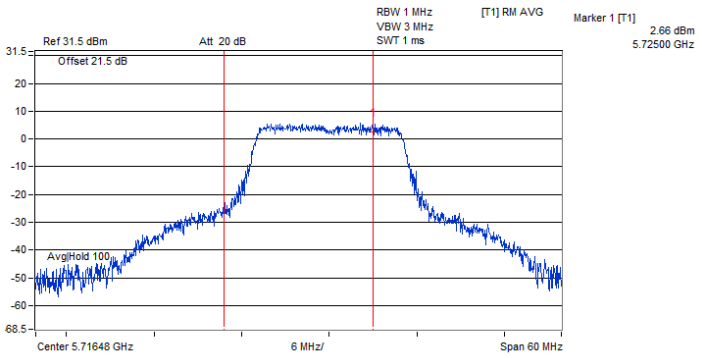
TX Channel Bandwidth 16.05 MHz Power 15.46 dBm

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



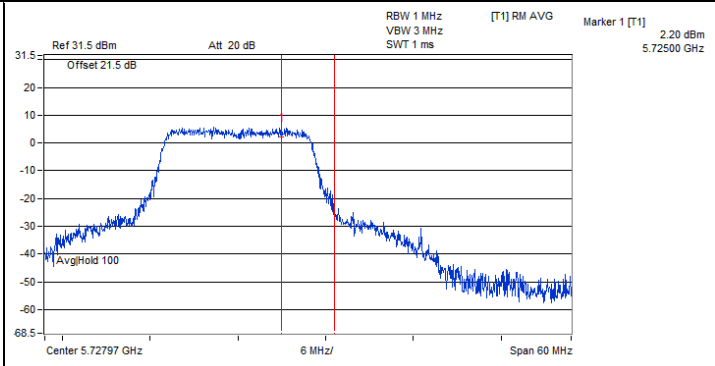
TX Channel Bandwidth 5.71 MHz Power 8.58 dBm

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



TX Channel Bandwidth 17.03 MHz Power 14.72 dBm

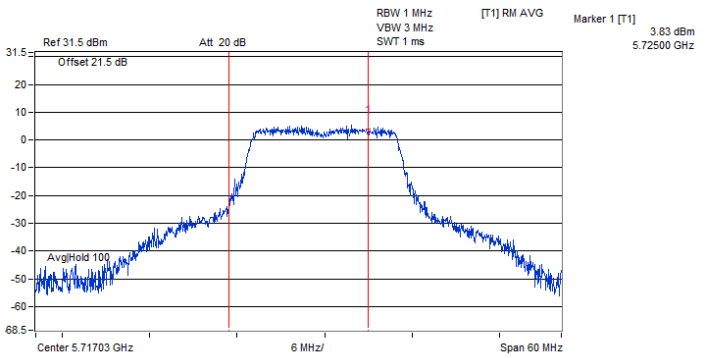
802.11a CDD / Chain 2 : CH 144 (U-NII-2C)



TX Channel Bandwidth 5.95 MHz Power 8.37 dBm

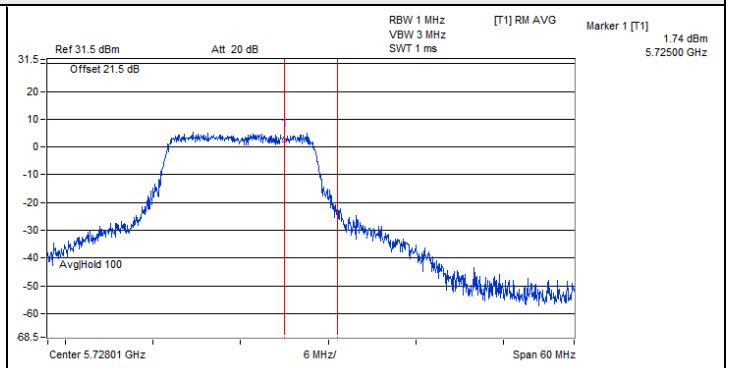
802.11a CDD / Chain 2 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



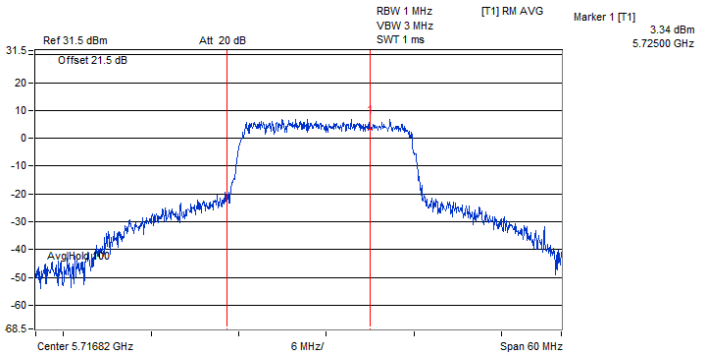
TX Channel Bandwidth 15.94 MHz Power 14.02 dBm

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



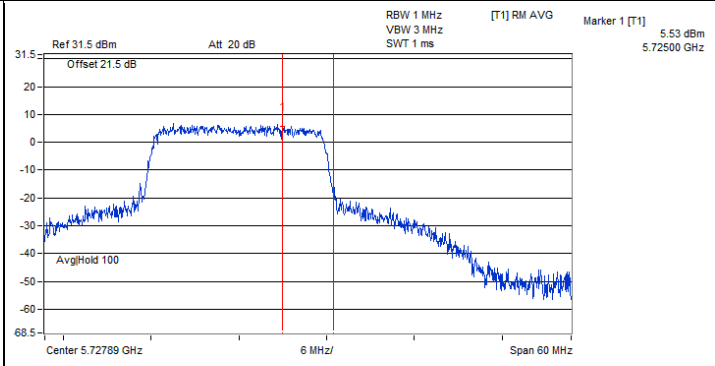
TX Channel Bandwidth 6.03 MHz Power 7.99 dBm

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



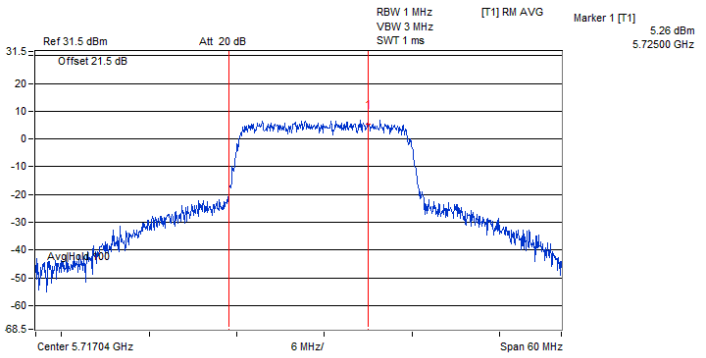
TX Channel Bandwidth 16.36 MHz Power 15.78 dBm

802.11n (HT20) CDD / Chain 0 : CH 144 (U-NII-2C)



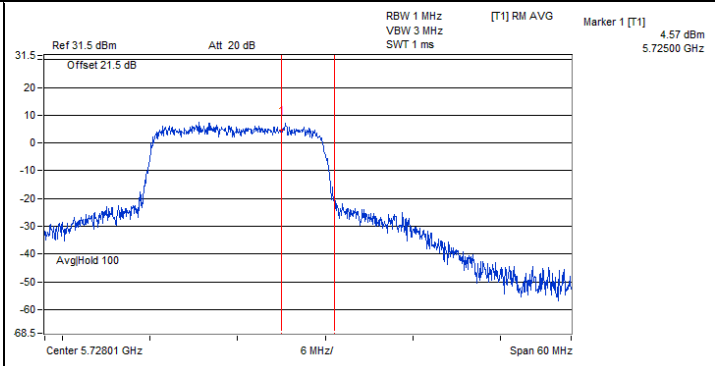
TX Channel Bandwidth 5.78 MHz Power 10.31 dBm

802.11n (HT20) CDD / Chain 0 : CH 144 (U-NII-3)



TX Channel Bandwidth 15.91 MHz Power 15.83 dBm

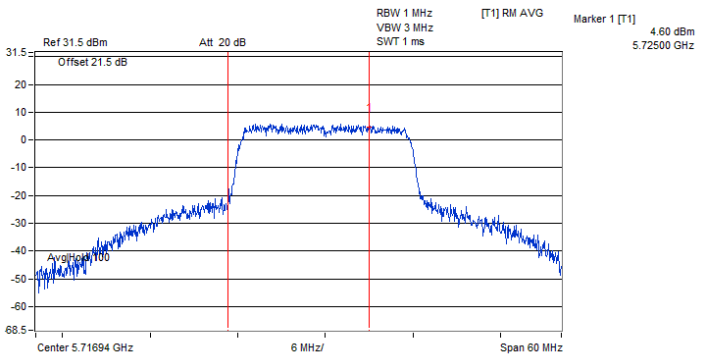
802.11n (HT20) CDD / Chain 1 : CH 144 (U-NII-2C)



TX Channel Bandwidth 6.02 MHz Power 10.59 dBm

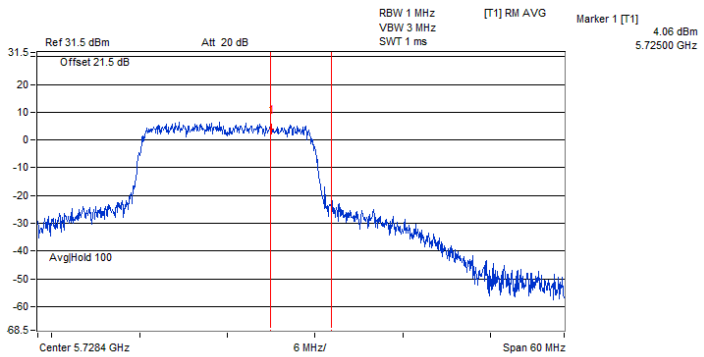
802.11n (HT20) CDD / Chain 1 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



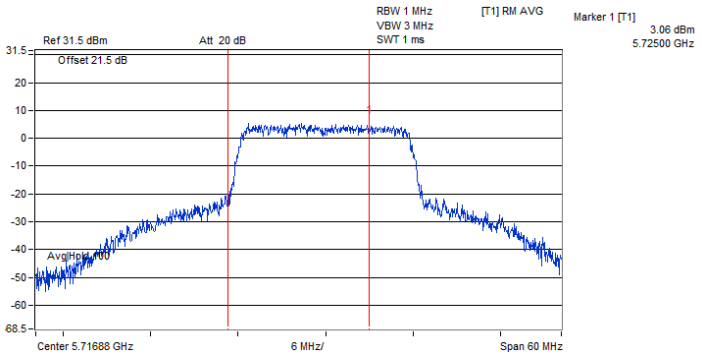
TX Channel Bandwidth 16.11 MHz Power 15.32 dBm

802.11n (HT20) CDD / Chain 2 : CH 144 (U-NII-2C)



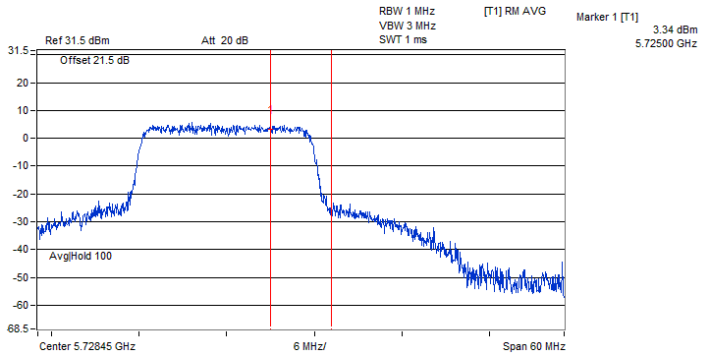
TX Channel Bandwidth 6.81 MHz Power 9.83 dBm

802.11n (HT20) CDD / Chain 2 : CH 144 (U-NII-3)



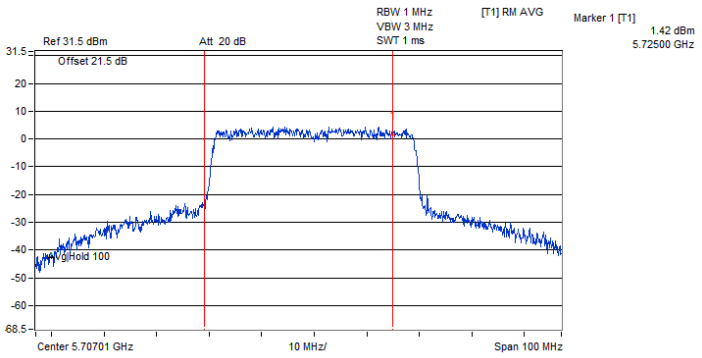
TX Channel Bandwidth 16.23 MHz Power 14.67 dBm

802.11n (HT20) CDD / Chain 3 : CH 144 (U-NII-2C)



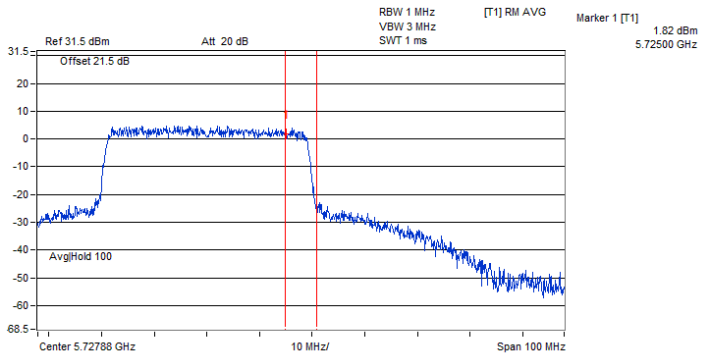
TX Channel Bandwidth 6.91 MHz Power 9.42 dBm

802.11n (HT20) CDD / Chain 3 : CH 144 (U-NII-3)



TX Channel Bandwidth 35.98 MHz Power 17.24 dBm

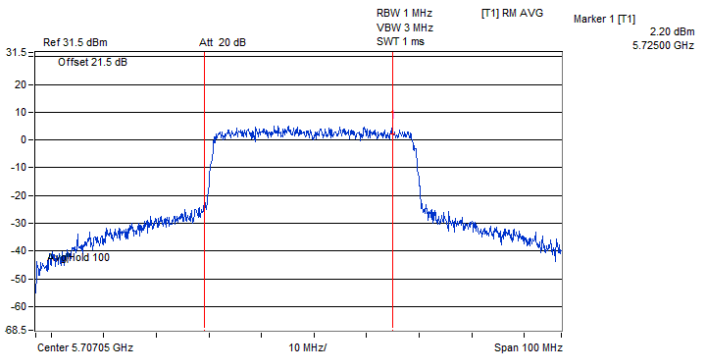
802.11n (HT40) CDD / Chain 0 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.77 MHz Power 7.6 dBm

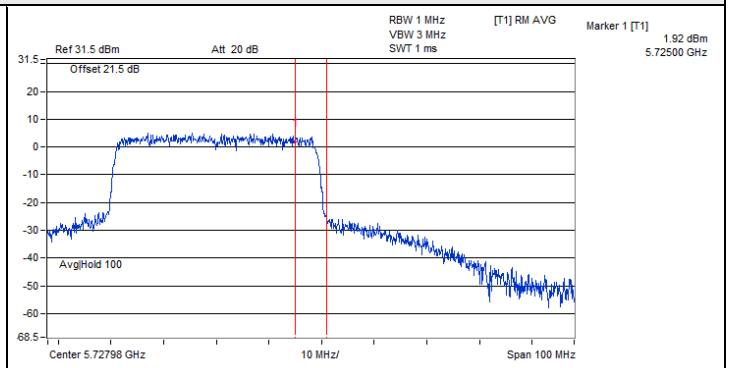
802.11n (HT40) CDD / Chain 0 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



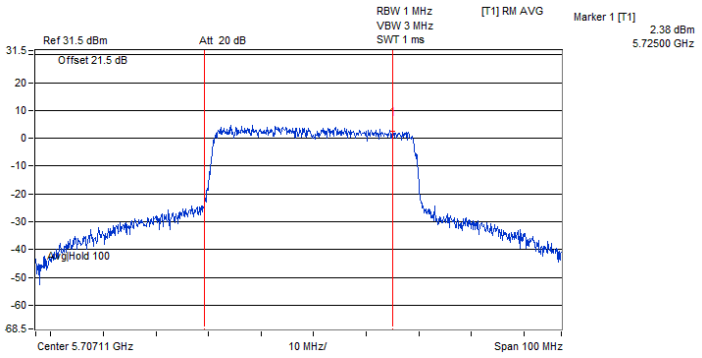
TX Channel Bandwidth 35.89 MHz Power 17.58 dBm

802.11n (HT40) CDD / Chain 1 : CH 142 (U-NII-2C)



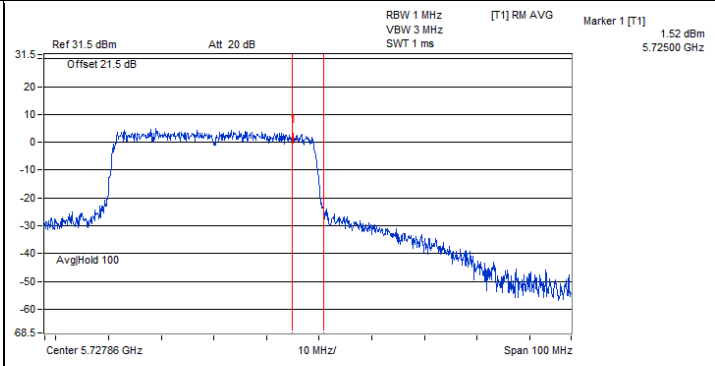
TX Channel Bandwidth 5.97 MHz Power 7.68 dBm

802.11n (HT40) CDD / Chain 1 : CH 142 (U-NII-3)



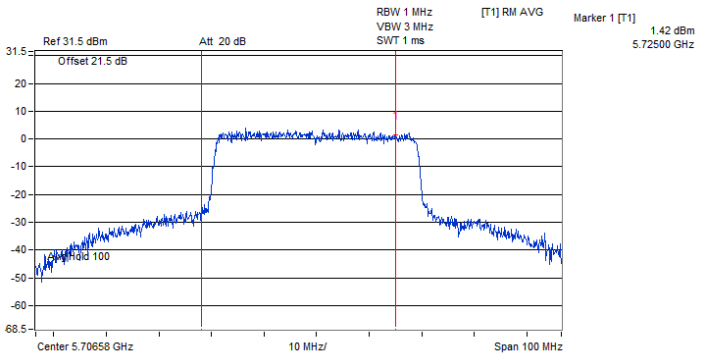
TX Channel Bandwidth 35.78 MHz Power 17.25 dBm

802.11n (HT40) CDD / Chain 2 : CH 142 (U-NII-2C)



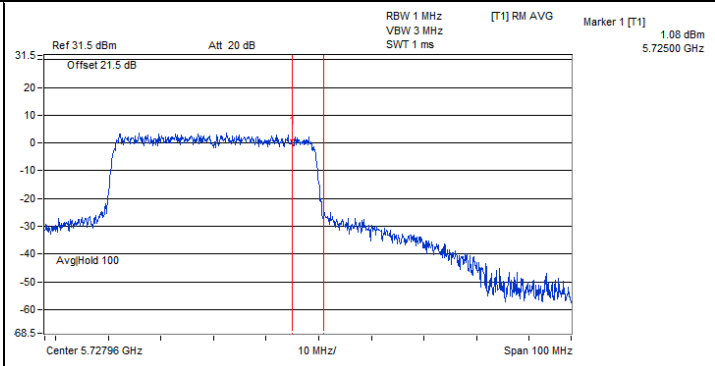
TX Channel Bandwidth 5.72 MHz Power 7.07 dBm

802.11n (HT40) CDD / Chain 2 : CH 142 (U-NII-3)



TX Channel Bandwidth 36.83 MHz Power 16.19 dBm

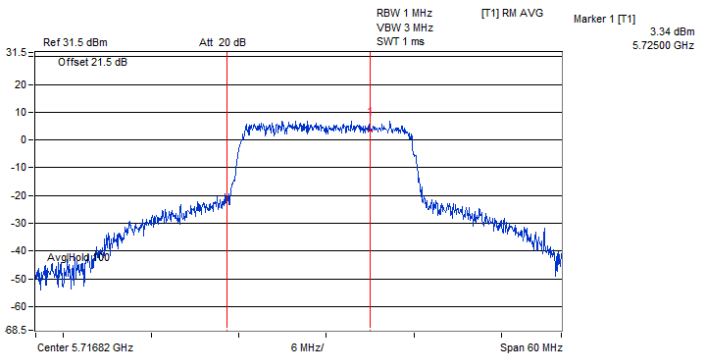
802.11n (HT40) CDD / Chain 3 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.93 MHz Power 6.42 dBm

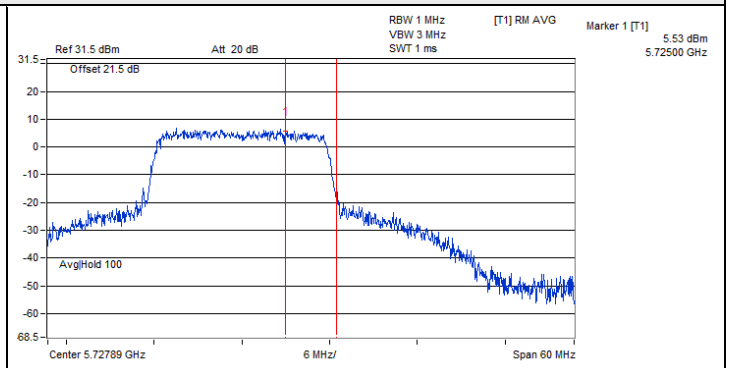
802.11n (HT40) CDD / Chain 3 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



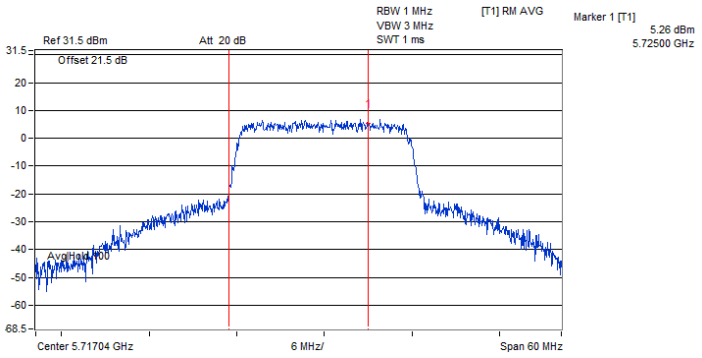
TX Channel Bandwidth 16.36 MHz Power 15.78 dBm

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



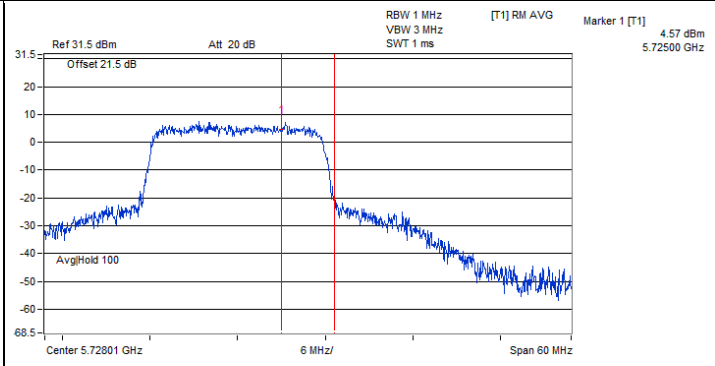
TX Channel Bandwidth 5.78 MHz Power 10.31 dBm

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



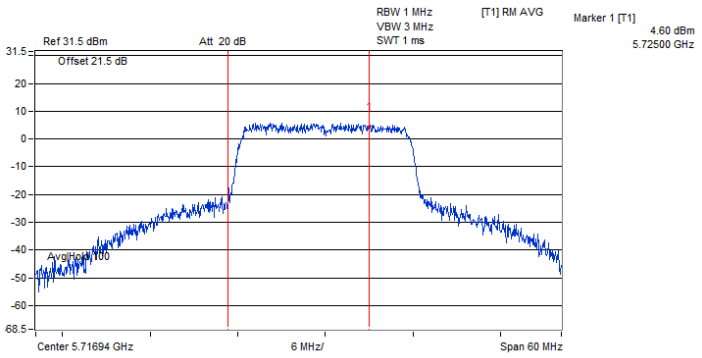
TX Channel Bandwidth 15.91 MHz Power 15.83 dBm

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



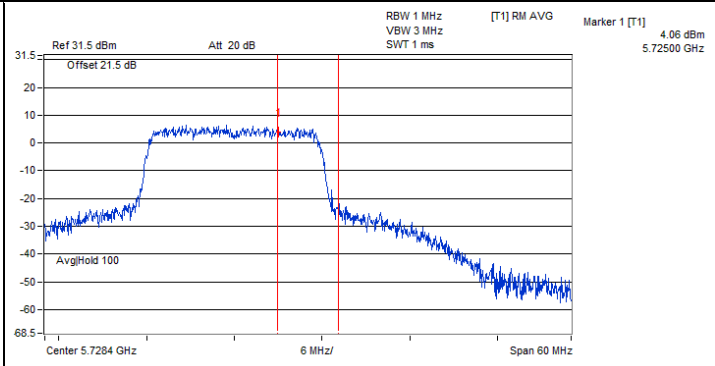
TX Channel Bandwidth 6.02 MHz Power 10.59 dBm

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



TX Channel Bandwidth 16.11 MHz Power 15.32 dBm

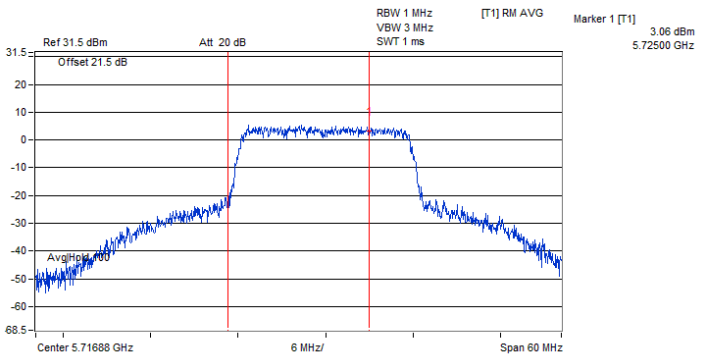
802.11ac (VHT20) CDD / Chain 2 : CH 144 (U-NII-2C)



TX Channel Bandwidth 6.81 MHz Power 9.83 dBm

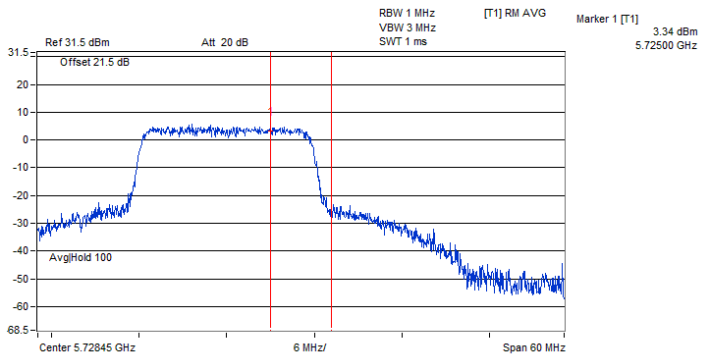
802.11ac (VHT20) CDD / Chain 2 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



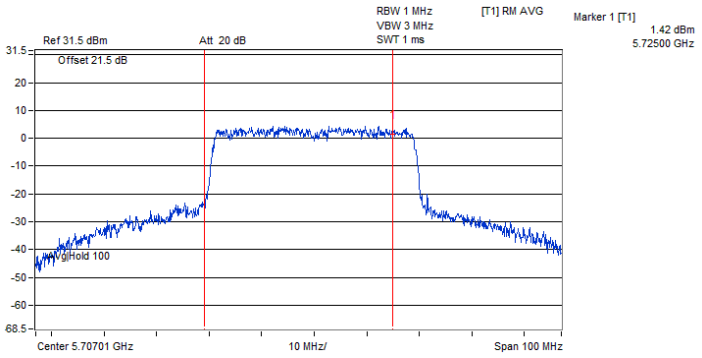
TX Channel Bandwidth 16.23 MHz Power 14.67 dBm

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



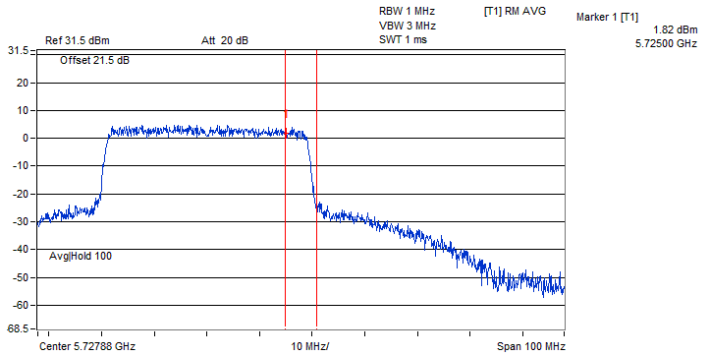
TX Channel Bandwidth 6.91 MHz Power 9.42 dBm

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



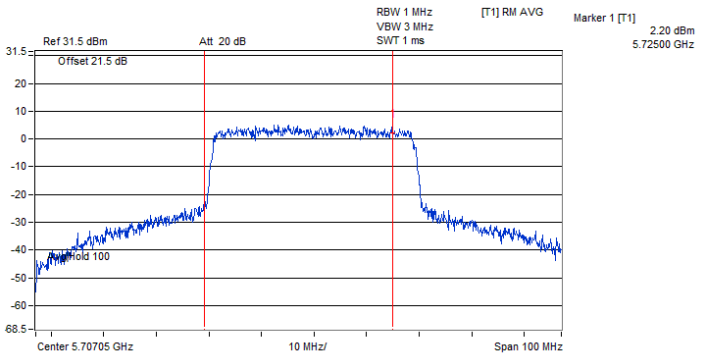
TX Channel Bandwidth 35.98 MHz Power 17.24 dBm

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



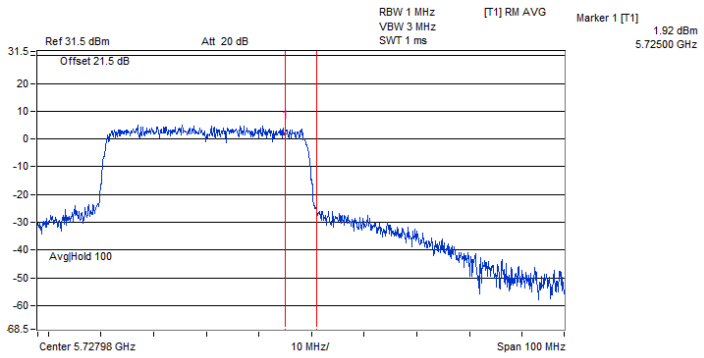
TX Channel Bandwidth 5.77 MHz Power 7.6 dBm

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



TX Channel Bandwidth 35.89 MHz Power 17.58 dBm

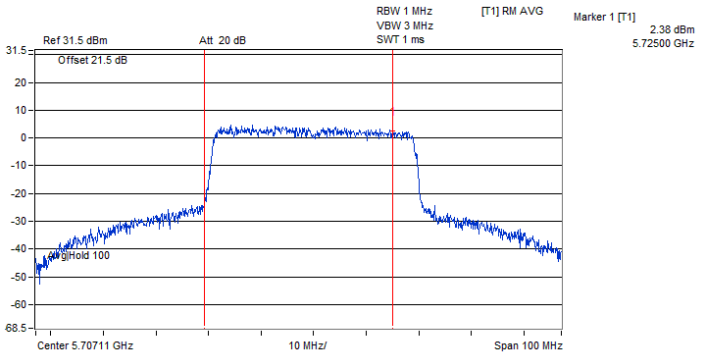
802.11ac (VHT40) CDD / Chain 1 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.97 MHz Power 7.68 dBm

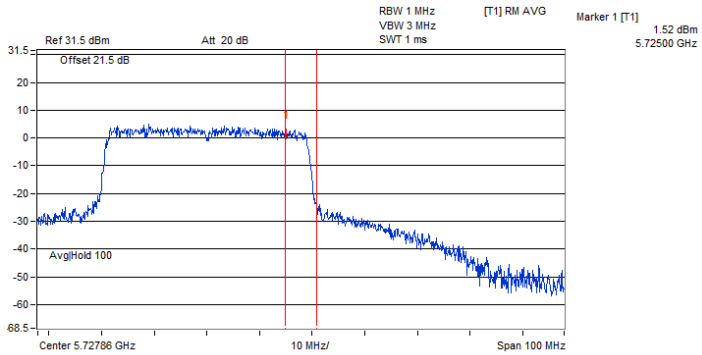
802.11ac (VHT40) CDD / Chain 1 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



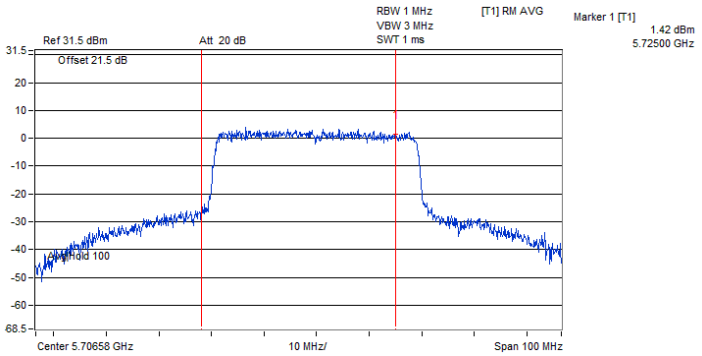
TX Channel Bandwidth 35.78 MHz Power 17.25 dBm

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



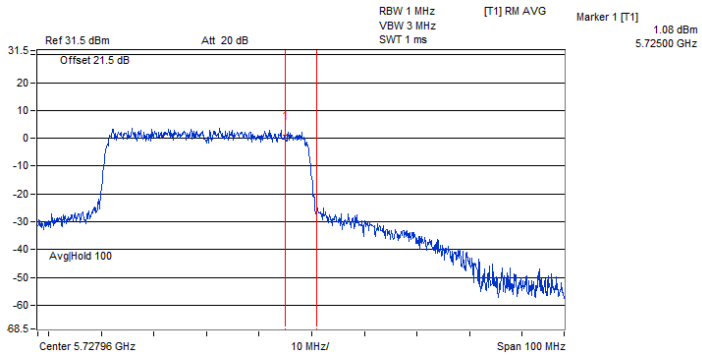
TX Channel Bandwidth 5.72 MHz Power 7.07 dBm

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



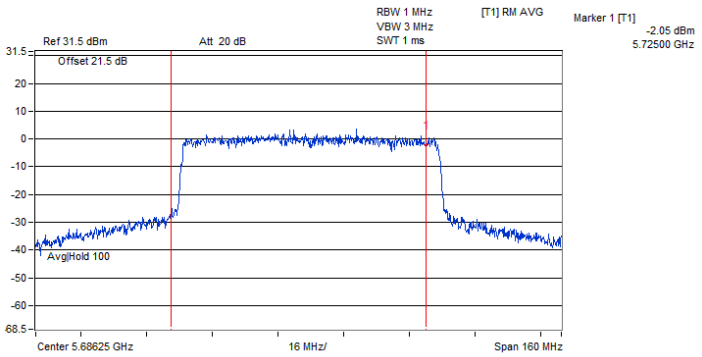
TX Channel Bandwidth 36.83 MHz Power 16.19 dBm

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



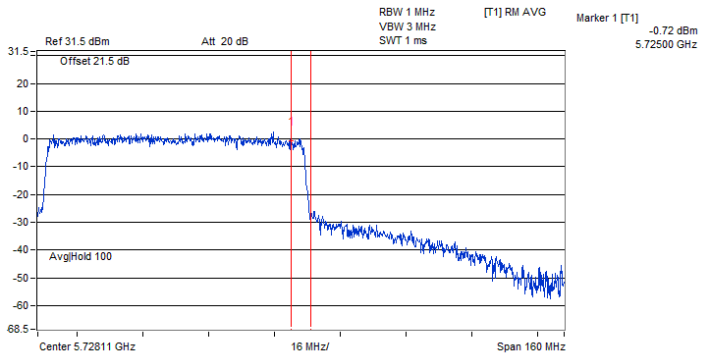
TX Channel Bandwidth 5.93 MHz Power 6.42 dBm

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



TX Channel Bandwidth 77.5 MHz Power 17.91 dBm

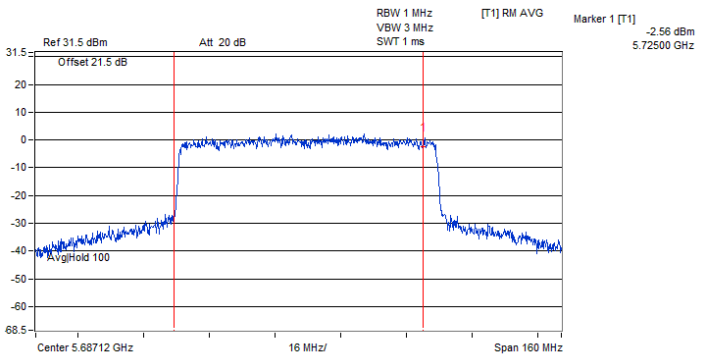
802.11ac (VHT80) CDD / Chain 0 : CH 138 (U-NII-2C)



TX Channel Bandwidth 6.23 MHz Power 4.01 dBm

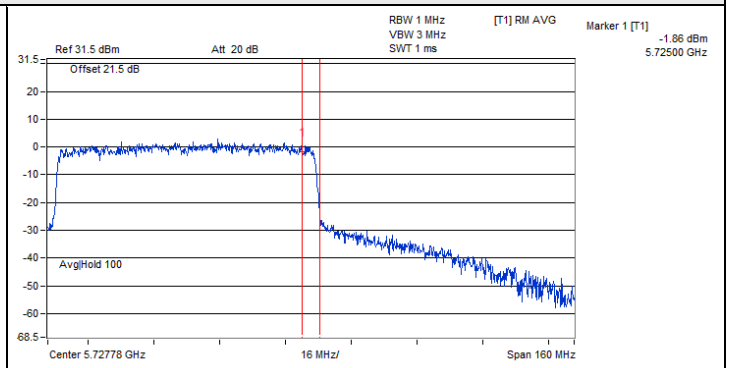
802.11ac (VHT80) CDD / Chain 0 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



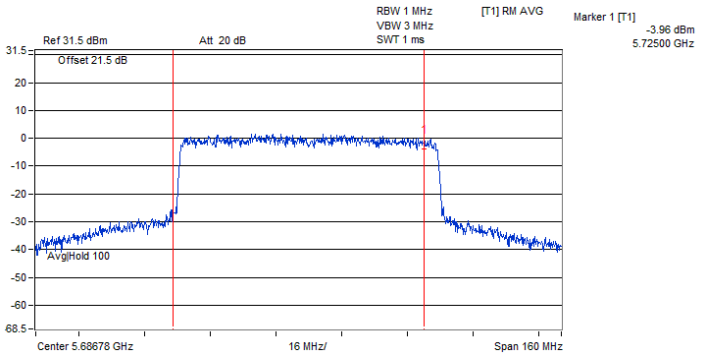
TX Channel Bandwidth 75.76 MHz Power 17.61 dBm

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



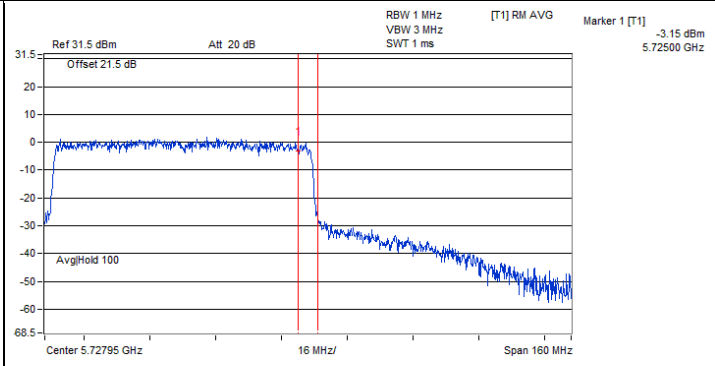
TX Channel Bandwidth 5.56 MHz Power 4.35 dBm

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



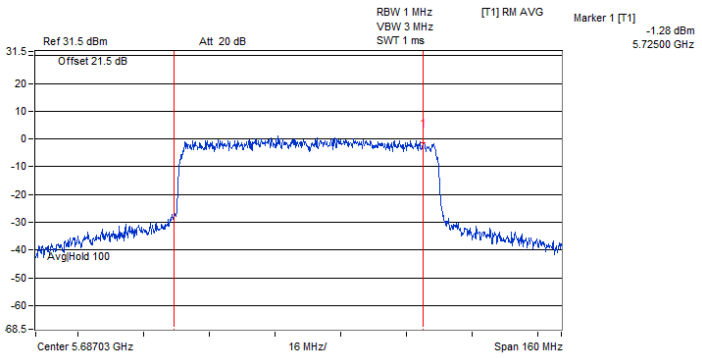
TX Channel Bandwidth 76.43 MHz Power 17.53 dBm

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



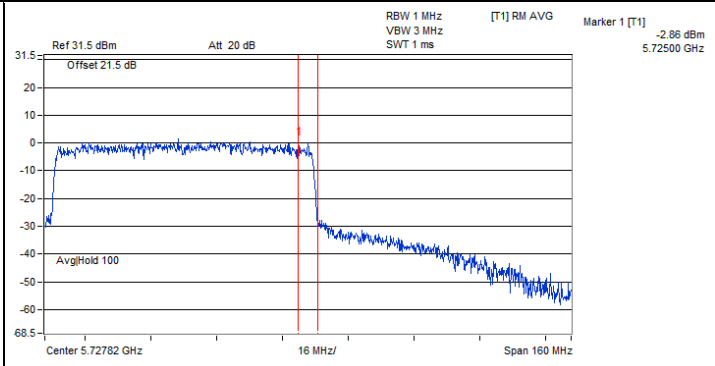
TX Channel Bandwidth 5.91 MHz Power 3.48 dBm

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



TX Channel Bandwidth 75.93 MHz Power 16.45 dBm

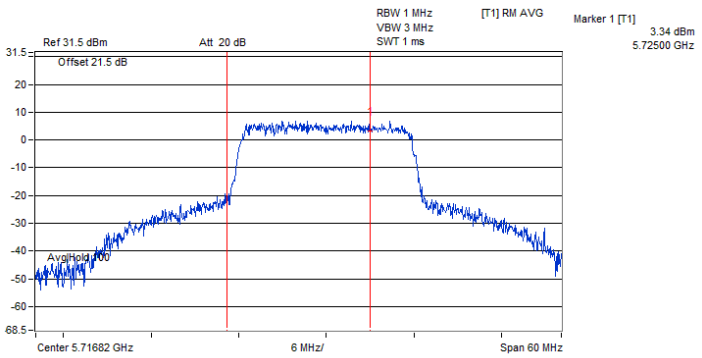
802.11ac (VHT80) CDD / Chain 3 : CH 138 (U-NII-2C)



TX Channel Bandwidth 5.65 MHz Power 3.14 dBm

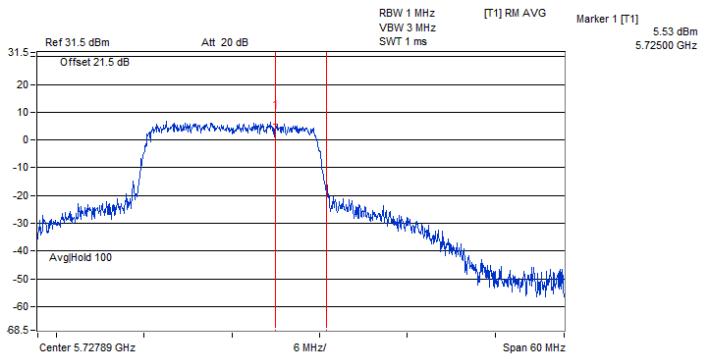
802.11ac (VHT80) CDD / Chain 3 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



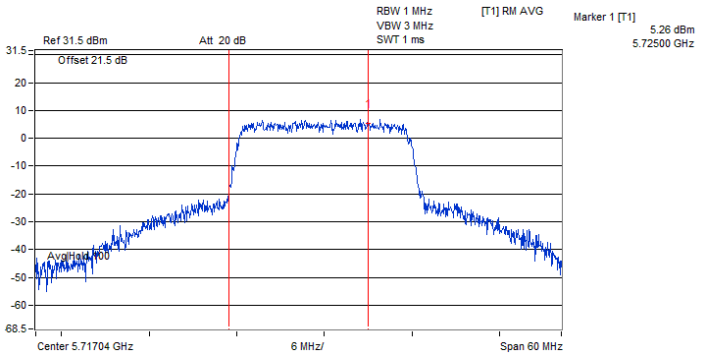
TX Channel Bandwidth 16.36 MHz Power 15.78 dBm

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



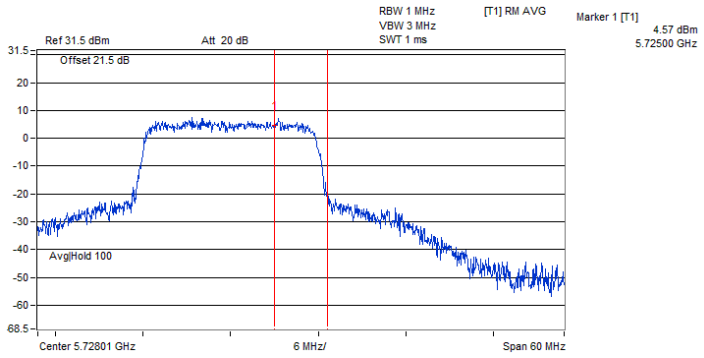
TX Channel Bandwidth 5.78 MHz Power 10.31 dBm

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



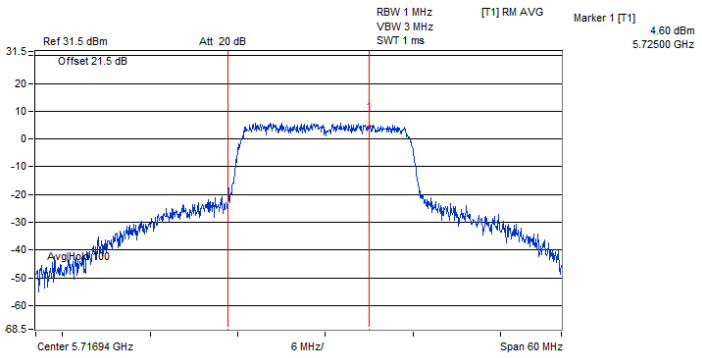
TX Channel Bandwidth 15.91 MHz Power 15.83 dBm

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



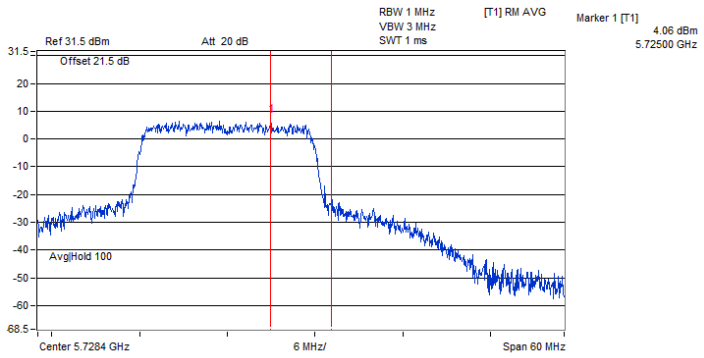
TX Channel Bandwidth 6.02 MHz Power 10.59 dBm

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



TX Channel Bandwidth 16.11 MHz Power 15.32 dBm

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



TX Channel Bandwidth 6.81 MHz Power 9.83 dBm

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