



TEST REPORT

For WiFi-5GHz Band



Report No. : CHTEW24010017 Report Verification:
Project No..... : SHT2307016301EW
FCC ID..... : 2BDG9-697083172PF27
Applicant's name : Shenzhen Insighters Medical Technology Co.,Ltd
Address..... : The 13th floor of Hengtemei Building, Ganli Road No.3,518000
Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Product Name : Insight Workstation
Trade Mark : 
Model No. : iS-PF1
Listed Model(s) : iS-PF2
Standard : FCC CFR Title 47 Part 15 Subpart E § 15.407
Date of receipt of test sample : Oct.24, 2023
Date of testing..... : Oct.24, 2023- Jan.10, 2024
Date of issue..... : Jan.11, 2024
Result..... : PASS

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The test report merely correspond to the test sample.

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1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

- [FCC CFR Title 47 Part 15 Subpart E § 15.407](#): General technical requirements
- [ANSI C63.10:2013](#): American National Standard for Testing Unlicensed Wireless Devices
- [KDB789033 D02 v02r01](#): GUIDELINES FOR COMPLIANCE TESTING OF UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE (U-NII) DEVICES PART 15, SUBPART E

1.2. Report version

Revision No.	Date of issue	Description
N/A	2024-01-11	Original

2. TEST DESCRIPTION

Report clause	Test Items	Standard Requirement	Result	Test Engineer
5.1	Antenna Requirement	15.203/15.247(c)	PASS	Xiangyuwei
5.2	AC Conducted Emission	15.207	PASS	Junman Wang
5.3	Maximum Conducted Output Power	15.407(a)	PASS	Xiangyuwei
5.4	Maximum Power Spectral Density	15.407(a)	PASS	Xiangyuwei
5.5	26dB Bandwidth and 99% Occupancy bandwidth	15.407(a)	PASS	Xiangyuwei
5.6	6dB Bandwidth	15.407(a)	PASS	Xiangyuwei
5.7	Band edge	15.407(b)	PASS	Xiangyuwei
5.8	Radiated Spurious Emissions	15.209	PASS	Yifan Wang
5.9	Frequency Stability	15.407(g)	PASS	Xiangyuwei

Note:

- The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Client Information

Applicant:	Shenzhen Insighters Medical Technology Co.,Ltd
Address:	The 13th floor of Hengtemei Building, Ganli Road No.3,518000 Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Manufacturer:	Shenzhen Insighters Medical Technology Co.,Ltd
Address:	The 13th floor of Hengtemei Building, Ganli Road No.3,518000 Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA

3.2. Product Description

Main unit information:	
Product Name:	Insight Workstation
Trade Mark:	 The logo for Insighters, featuring the word "insighters" in a bold, lowercase sans-serif font, with the tagline "Trust in sight" in a smaller font below it. To the left of the text is a circular icon containing a stylized 'i'.
Model No.:	iS-PF1
Listed Model(s):	iS-PF2
Power supply:	DC 7.4V from Battery
Hardware version:	1.0.82
Software version:	PF1V1.0.0.118
Accessory unit information:	
Battery information:	Model:18650-2S5P 7.4V 13000mAh 96.2Wh
Adapter information:	Model:PH50-112 Input:100-240V a.c., 50/60Hz 1.4-0.6A Output:12Vd.c., 4.0A

3.3. Radio Specification Description

Support type ^{*1}	☒ 802.11a	☒ 802.11n	☒ 802.11ac
Support Bandwidth	20MHz:	802.11n, 802.11a, 802.11ac	
	40MHz:	802.11n, 802.11ac	
	80MHz:	802.11ac	
Operation frequency:	☒ U-NII-1 Band:	5150MHz~5250MHz	
	☒ U-NII-2A Band:	5250MHz~5350MHz	
	☒ U-NII-2C Band:	5470MHz~5725MHz	
	☒ U-NII-3 Band:	5725MHz~5850MHz	
Modulation:	BPSK, QPSK, 16QAM, 64QAM		
Function:	☐ Outdoor AP	☐ Indoor AP	☐ Fixed P2P
	☒ Client		
DFS type:	☐ Master devices	☐ Slave devices with radar detection	☒ Slave devices without radar detection
Antenna technology:	☒ SISO	☐ MIMO	
Antenna type:	PCB Antenna		
Antenna gain:	5.55dBi		

Note:

*1: only show the RF function associated with this report.

3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China	
Contact information:	Phone: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC Registration Number	762235
	FCC Designation Number	CN1181

4. TEST CONFIGURATION

4.1. Test frequency list

According to section 15.31(m), regards to the operating frequency range over 10 MHz, must select three channels which were tested. The Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the below .

Band	Test Channel	20MHz		40MHz		80MHz	
		Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
U-NII-1	CH _L	36	5180	38	5190	-	-
	CH _M	44	5220	-	-	42	5210
	CH _H	48	5240	46	5230	-	-
U-NII-2A	CH _L	52	5260	54	5270	-	-
	CH _M	56	5280	-	-	58	5290
	CH _H	64	5320	62	5310	-	-
U-NII-2C	CH _L	100	5500	102	5510	106	5530
	CH _M	116	5580	110	5550	122	5610
	CH _H	140	5700	134	5670	138	5690
	CH _{H1}	144	5720	142	5710		
U-NII-3	CH _L	149	5745	151	5755	-	-
	CH _M	157	5785	-	-	155	5775
	CH _H	165	5825	159	5795	-	-

4.2. Descriptions of Test mode

Preliminary tests were performed in different data rates, final test modes are considering the modulation and worse data rates as below table.

Modulation	Data rate
802.11a	6Mbps
802.11n(HT20)/ 802.11ac(HT20)	MCS0
802.11n(HT40)/ 802.11ac(HT40)	MCS0
802.11ac(HT80)	MCS0

4.3. Test mode

For RF test items
The engineering test program was provided and enabled to make EUT continuous transmit.
For AC power line conducted emissions:
The EUT was set to connect with the WLAN AP under large package sizes transmission.
For Radiated spurious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report.

4.4. Test sample information

Test item	HTW sample no.
RF Conducted test items	Please refer to the description in the appendix report
RF Radiated test items	YPHT23070163005
EMI test items	YPHT23070163001

Note:

RF Conducted test items: Maximum Conducted Output Power, Maximum Power Spectral Density , 26dB Bandwidth and 99% Occupancy bandwidth , 6dB Bandwidth ,Frequency Stability

RF Radiated test items: Band edge, Radiated Spurious Emission

EMI test items: AC Conducted Emission

4.5. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?			
✓ No			
Item	Equipment	Trade Name	Model No.
1			
2			

4.6. Testing environmental condition

Type	Requirement	Actual
Temperature:	15~35°C	25°C
Relative Humidity:	25~75%	50%
Air Pressure:	860~1060mbar	1000mbar

4.7. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	AC Conducted Emission	3.21dB
2	Maximum Conducted Output Power	1.07
3	Maximum Power Spectral Density	1.07
4	26dB Bandwidth and 99% Occupancy bandwidth	0.002%
5	6dB Bandwidth	0.002%
6	Radiated Band Edge Emission	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz
7	Radiated Spurious Emission	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz
8	Frequency Stability	0.05ppm

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

4.8. Equipment Used during the Test

● RF Conducted test item							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Signal and spectrum Analyzer	R&S	HTWE0242	FSV40	100048	2023/08/22	2024/08/21
●	Signal & Spectrum Analyzer	R&S	HTWE0262	FSW26	103440	2023/08/22	2024/08/21
●	Vector signal generator	R&S	HTWE0244	SMBV100A	260790	2023/05/23	2024/05/22
●	Test software	Tonscend	N/A	JS1120	N/A	N/A	N/A

● Conducted Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	EMI Test Receiver	R&S	HTWE0111	ESCI	101247	2023/8/22	2024/8/21
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2023/8/18	2024/8/17
●	Protection Network	SCHWARZBECK	HTWE0567	VTSD9561FN	00899	2023/8/18	2024/8/17
●	ISN	FCC	HTWE0148	FCC-TLISN-T2-02	20371	2023/8/18	2024/8/17
●	ISN	FCC	HTWE0150	FCC-TLISN-T8-02	20375	2023/8/18	2024/8/17
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated Emission – 9kHz~30MHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2023/4/6	2026/4/5
●	EMI Test Receiver	R&S	HTWE0099	ESCI 7	100900	2023/8/22	2024/8/21
●	Loop Antenna	R&S	HTWE0170	HFH2-Z2	100020	2021/4/6	2024/4/5
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated Emission - 30MHz~1GHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2023/4/6	2026/4/5
●	EMI Test Receiver	R&S	HTWE0099	ESCI 7	100900	2023/8/22	2024/8/21
●	Ultra-Broadband Antenna	SCHWARZBEC K	HTWE0119	VULB9163	546	2023/2/22	2026/2/21
●	Pre-Amplifier	SCHWARZBEC K	HTWE0295	BBV 9742	/	2023/5/25	2024/5/24
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated emission-Above 1GHz

Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11121	2023/4/17	2026/4/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2023/8/22	2024/8/21
●	Horn Antenna	SCHWARZBECK	HTWE0126	BBHA 9120D	1011	2023/2/14	2026/2/13
●	Horn Antenna	SCHWARZBECK	HTWE0103	BBHA9170	BBHA9170472	2023/2/20	2026/2/19
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2023/5/25	2024/5/24
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Antenna Requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

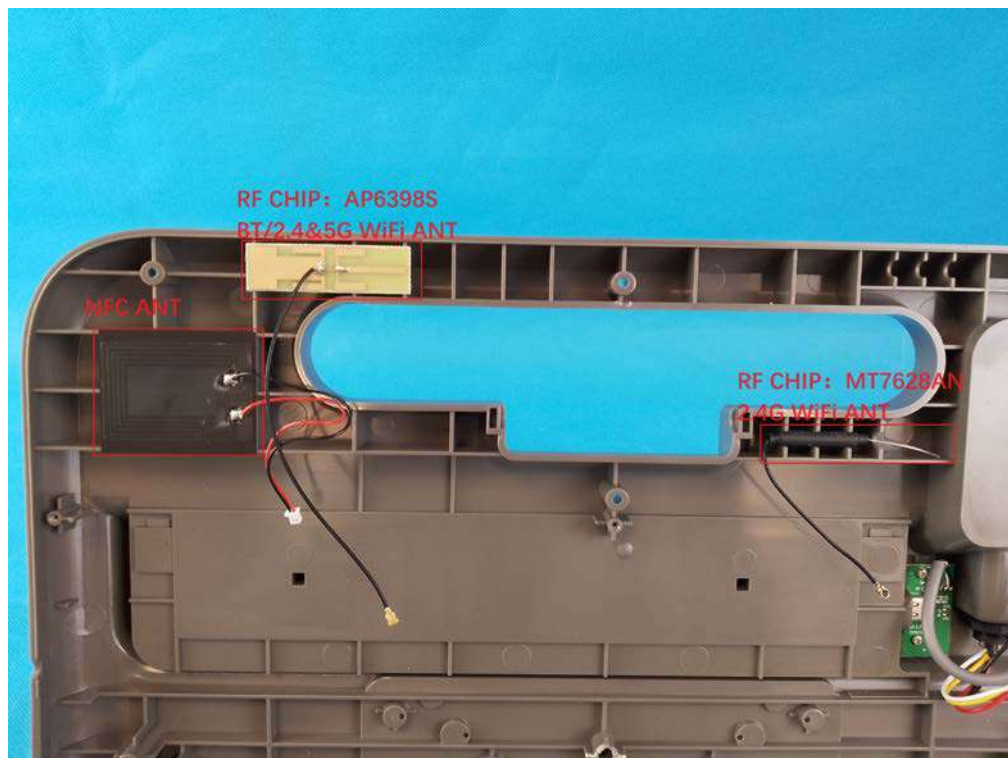
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

TEST RESULT

☒ Passed ☐ Not Applicable

The antenna type is a PCB antenna, please refer to the below antenna photo.

I



5.2. AC Conducted Emission

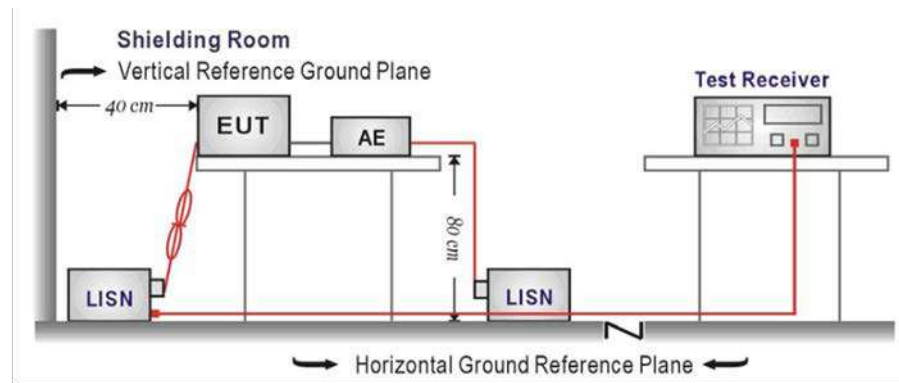
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.207

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup according to ANSI C63.10 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE:

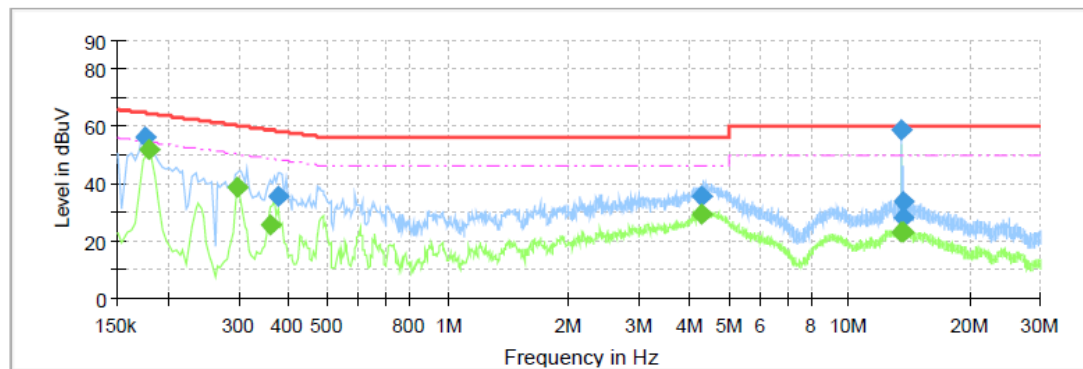
Please refer to the clause 4.3

TEST RESULT

☒ Passed ☐ Not Applicable

Test Line:

L

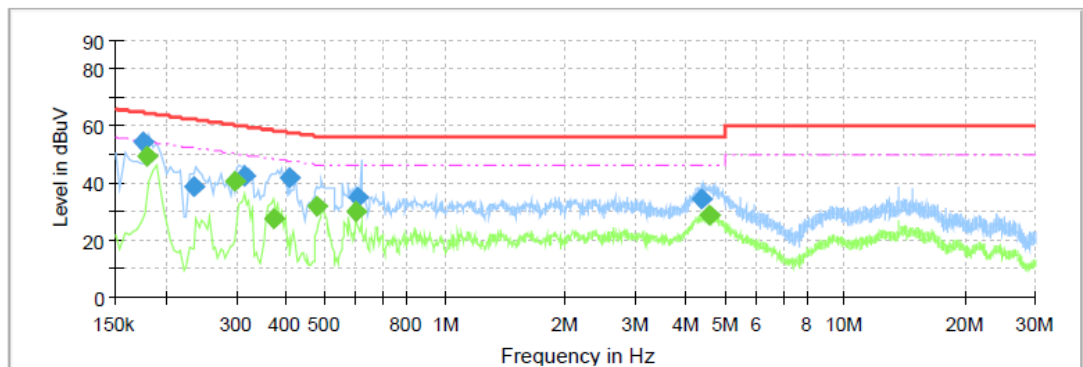


Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.1755	56.14	---	64.70	8.56	L1	10.9
0.1795	---	50.64	54.51	3.87	L1	10.9
0.2995	---	38.56	50.26	11.70	L1	10.9
0.3595	---	25.34	48.74	23.40	L1	10.9
0.3755	35.68	---	58.38	22.70	L1	10.9
4.2915	---	29.54	46.00	16.46	L1	11.1
4.3035	35.58	---	56.00	20.42	L1	11.1
13.5435	---	23.02	50.00	26.98	L1	11.3
13.5595	56.58	---	60.00	3.42	L1	11.3
13.5795	33.95	---	60.00	26.05	L1	11.3
13.5955	---	23.34	50.00	26.66	L1	11.3
13.7115	28.22	---	60.00	31.78	L1	11.3

Test Line:

N



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.1755	54.59	---	64.70	10.11	N	10.7
0.1795	---	49.10	54.51	5.41	N	10.7
0.2355	38.84	---	62.25	23.41	N	10.7
0.2995	---	40.70	50.26	9.56	N	10.7
0.3155	42.36	---	59.82	17.46	N	10.7
0.3715	---	27.51	48.47	20.96	N	10.7
0.4075	42.00	---	57.70	15.70	N	10.7
0.4795	---	31.62	46.35	14.73	N	10.7
0.5965	---	29.83	46.00	16.17	N	10.7
0.6035	34.73	---	56.00	21.27	N	10.8
4.3925	34.42	---	56.00	21.58	N	10.8
4.5755	---	28.48	46.00	17.52	N	10.8

5.3. Maximum Conducted Output Power

LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407(a):

For the 5.15~5.25GHz band:

- Outdoor AP
The maximum conducted output power (P_{out}) shall not exceed the lesser of 1W (30dBm).
if $G_{TX} > 6\text{dBi}$, then $P_{out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees $\leq 125\text{mW}$ (21dBm)
- Indoor AP
The maximum conducted output power (P_{out}) shall not exceed the lesser of 1W (30dBm).
if $G_{TX} > 6\text{dBi}$, then $P_{out} = 30 - (G_{TX} - 6)$.
- Point-to-point AP
The maximum conducted output power (P_{out}) shall not exceed the lesser of 1W (30dBm).
if $G_{TX} > 23\text{dBi}$, then $P_{out} = 30 - (G_{TX} - 23)$.
- Client devices
The maximum conducted output power (P_{out}) shall not exceed the lesser of 250W (24dBm).
if $G_{TX} > 6\text{dBi}$, then $P_{out} = 24 - (G_{TX} - 6)$.

For the 5.25~5.35GHz band:

The maximum conducted output power (P_{out}) shall not exceed the lesser of 250mW (24dBm) or 11dBm+10 log B, where B is the 26dB emission bandwidth in MHz.
if $G_{TX} > 6\text{dBi}$, then $P_{out} = 24 - (G_{TX} - 6)$.

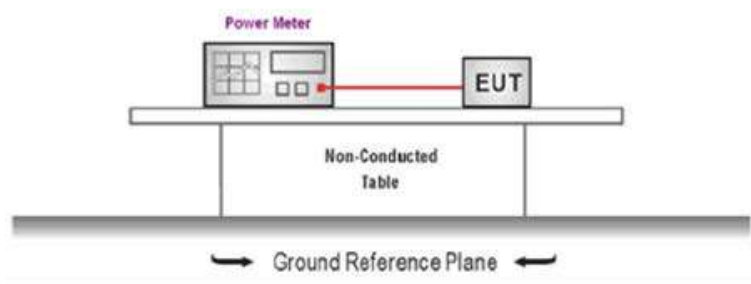
For the 5.47~5.725GHz band:

The maximum conducted output power (P_{out}) shall not exceed the lesser of 250mW (24dBm) or 11dBm+10 log B, where B is the 26dB emission bandwidth in MHz.
if $G_{TX} > 6\text{dBi}$, then $P_{out} = 24 - (G_{TX} - 6)$.

For the 5.725~5.85GHz band:

- Point-to-multipoint systems (P2M)
The maximum conducted output power (P_{out}) shall not exceed the lesser of 1W (30dBm).
if $G_{TX} > 6\text{dBi}$, then $P_{out} = 30 - (G_{TX} - 6)$.
- Point-to-point systems (P2P)
The maximum conducted output power (P_{out}) shall not exceed the lesser of 1W (30dBm).

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was tested according to KDB789033 Section E-3-b)
2. The maximum conducted output power may be measured using a broadband AVG RF power meter.
3. Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.
4. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
5. Record the measurement data.

6. TEST MODE:

Please refer to the clause 4.3

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Refer to the appendix report on the section 8

5.4. Power Spectral Density

LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407(a):

For the 5.15~5.25GHz band:

- Outdoor AP
The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz.
if $G_{TX} > 6\text{dBi}$, then $\text{PSD} = 17 - (G_{TX} - 6)$.
- Indoor AP
The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz.
if $G_{TX} > 6\text{dBi}$, then $\text{PSD} = 17 - (G_{TX} - 6)$.
- Point-to-point AP
The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz.
if $G_{TX} > 23\text{dBi}$, then $\text{PSD} = 17 - (G_{TX} - 23)$.
- Client devices
The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz.
if $G_{TX} > 6\text{dBi}$, then $\text{PSD} = 11 - (G_{TX} - 6)$.

For the 5.25~5.35GHz band:

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz.
if $G_{TX} > 6\text{dBi}$, then $\text{PSD} = 11 - (G_{TX} - 6)$.

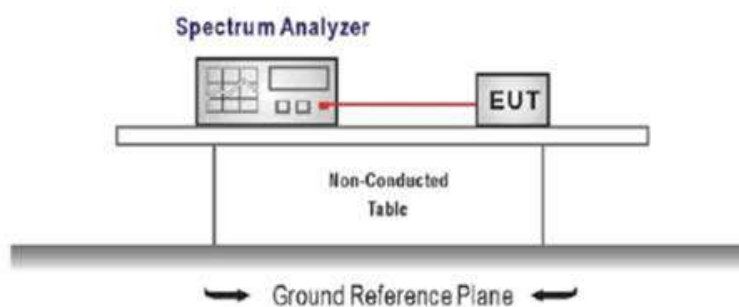
For the 5.47~5.725GHz band:

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz.
if $G_{TX} > 6\text{dBi}$, then $\text{PSD} = 11 - (G_{TX} - 6)$.

For the 5.725~5.85GHz band:

- Point-to-multipoint systems (P2M)
The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz.
if $G_{TX} > 6\text{dBi}$, then $\text{PSD} = 30 - (G_{TX} - 6)$.
- Point-to-point systems (P2P)
The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz.

TEST CONFIGURATION



TEST PROCEDURE

1. According KDB 789033 D02 – Section F
2. Analyzer was setting as follow:
Center frequency: test channel
Span was set to encompass the entire emission bandwidth of the signal
RBW=1MHz for devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz
RBW=500kHz for devices operating in the band 5.725-5.85 GHz
VBW ≥ 3 RBW
Number of sweep points $> 2 \times (\text{span}/\text{RBW})$
Sweep time = auto
Detector = Peak
Trigger was set to free run for all modes, trace was averaged over 100 sweeps
3. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

TEST MODE:

Please refer to the clause 4.3

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

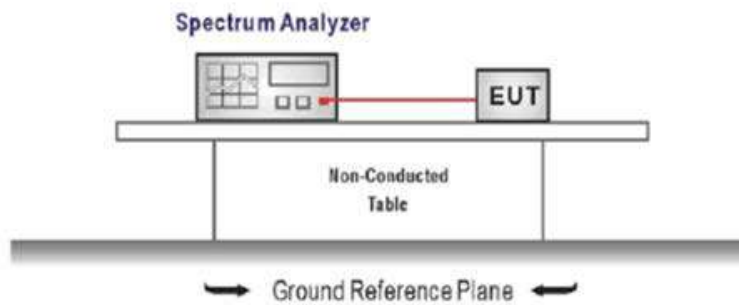
Refer to the appendix report on the section 8

5.5. 26dB bandwidth and 99% Occupancy bandwidth

LIMIT

The bandwidth at 26dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in KDB 789033 D02 , and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

TEST CONFIGURATION



TEST PROCEDURE

1. According KDB 789033 D02 – Section C, 26dB bandwidth test as follow
 - 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 maximum 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%.
2. According KDB 789033 D02 – Section D, 99% bandwidth test as follow
 - a). Set center frequency to the nominal EUT channel center frequency.
 - b). Set span = 1.5 times to 5.0 times the OBW.
 - c). Set RBW = 1% to 5% of the OBW
 - d). Set $VBW \geq 3 \text{ RBW}$
 - e). Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
 - f). Use the 99% power bandwidth function of the instrument

TEST MODE:

Please refer to the clause 4.3

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

Refer to the appendix report on the section 8

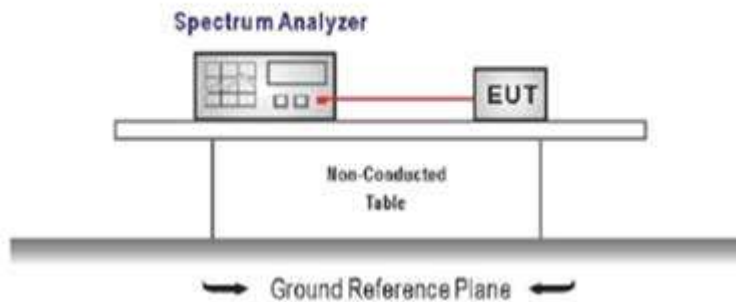
5.6. 6dB Bandwidth

LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).
Center Frequency = test channel center frequency
Span = 2 x emission bandwidth
RBW = 100 kHz, VBW $\geq 3 \times$ RBW
Sweep time = auto couple
Detector = Peak
Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter wave form on the spectrum analyzer.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission, and record the pertinent measurements.

TEST MODE:

Please refer to the clause 4.3

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

Refer to the appendix report on the section 8

5.7. Band edge

LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407(b)

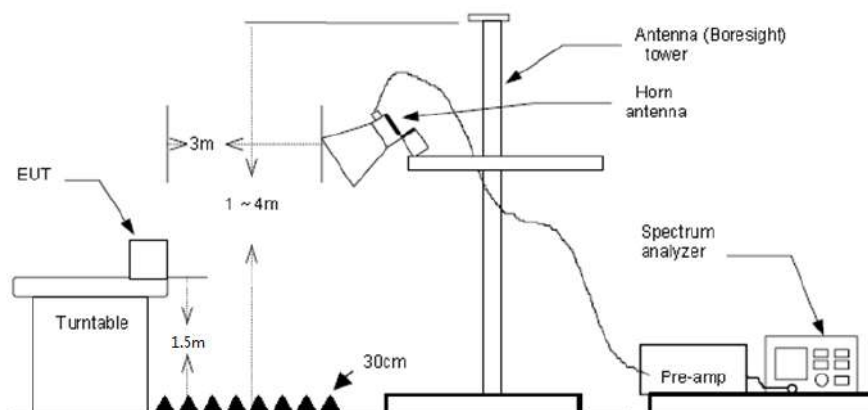
Un-restricted band emissions above 1GHz			
Operating Band	Frequency	EIRP Limit	Value
5150-5250MHz	Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak
5250-5350MHz	Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak
5470-5725MHz	Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak
5725-5850 MHz	1GHz-5.65GHz	-27 dBm/MHz(68.2dBuV/m)@3m	Peak
	5.65GHz-5.7GHz	-27*dBm/MHz to 10dBm/MHz (68.2* dBuV/m to 105.6dBuV/m)	Peak
	5.7GHz-5.72GHz	10*dBm/MHz to 15.6dBm/MHz (105.6*dBuV/m to 110.8dBuV/m)	Peak
	5.72GHz-5.725GHz	15.6*dBm/MHz to 27dBm/MHz (110.8dBuV/m to* 122.2dBuV/m)	Peak
	5.85GHz-5.855GHz	27dBm/MHz to 15.6*dBm/MHz (122.2dBuV/m to110.8* dBuV/m)	Peak
	5.855GHz-5.875GHz	15.6dBm/MHz to 10*dBm/MHz (110.8dBuV/m to 105.6* dBuV/m)	Peak
	5.875GHz-5.925GHz	10dBm/MHz to -27*dBm/MHz (105.6dBuV/m to 68.2* dBuV/m)	Peak
	Above 5.925GHz	-27 dBm/MHz(68.2dBuV/m)@3m	Peak

* Increase/Decreases with the linearly of the frequency.

For emission above 1GHz and in restricted band, according to FCC KDB 789033 D02 General UNII Test Procedure, all emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit. $E[dBuV/m] = EIRP[dBm] + 95.2$, for $d = 3$ meters.

TEST CONFIGURATION

Radiated:



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
RBW=1MHz, VBW=3MHz RMS detector for Average value.

TEST MODE:

Please refer to the clause 4.3

TEST RESULTS

☒ Passed ☐ Not Applicable

TEST DATA

U-NII-1 & U-NII-2A			Worst mode: 802.11a				Test channel: CH _L				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	56.56	31.90	6.28	41.04	10.00	63.70	68.20	-4.50	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	41.53	31.90	6.28	41.04	10.00	48.67	54.00	-5.33	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5147.85	50.81	31.90	6.27	41.04	10.00	57.94	68.20	-10.26	Peak	
2	5150.07	49.77	31.90	6.28	41.04	10.00	56.91	68.20	-11.29	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	32.45	31.90	6.28	41.04	10.00	39.59	54.00	-14.41	Average	

U-NII-1 & U-NII-2A			Worst mode: 802.11a				Test channel: CH _H				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	52.34	31.40	6.33	40.93	10.00	59.14	68.20	-9.06	Peak	
2	5459.99	40.62	31.80	6.60	40.84	10.00	48.18	68.20	-20.02	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	38.14	31.40	6.33	40.93	10.00	44.94	54.00	-9.06	Average	
2	5459.99	30.06	31.80	6.60	40.84	10.00	37.62	54.00	-16.38	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	41.63	31.40	6.33	40.93	10.00	48.43	68.20	-19.77	Peak	
2	5459.99	39.14	31.80	6.60	40.84	10.00	46.70	68.20	-21.50	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	29.90	31.40	6.33	40.93	10.00	36.70	54.00	-17.30	Average	
2	5459.99	29.02	31.80	6.60	40.84	10.00	36.58	54.00	-17.42	Average	

U-NII-1 & U-NII-2A			Worst mode: 802.11n(HT40)				Test channel: CH _L				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	56.81	31.90	6.28	41.04	10.00	63.95	68.20	-4.25	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	43.61	31.90	6.28	41.04	10.00	50.75	54.00	-3.25	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	50.97	31.90	6.28	41.04	10.00	58.11	68.20	-10.09	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5150.07	36.18	31.90	6.28	41.04	10.00	43.32	54.00	-10.68	Average	

U-NII-1 & U-NII-2A			Worst mode: 802.11n(HT40)				Test channel: CH _H			
Polarization:						Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5349.93	57.89	31.40	6.33	40.93	10.00	64.69	68.20	-3.51	Peak
2	5459.99	43.88	31.80	6.60	40.84	10.00	51.44	68.20	-16.76	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5349.93	42.40	31.40	6.33	40.93	10.00	49.20	54.00	-4.80	Average
2	5459.99	32.82	31.80	6.60	40.84	10.00	40.38	54.00	-13.62	Average
Polarization:						Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5349.93	46.33	31.40	6.33	40.93	10.00	53.13	68.20	-15.07	Peak
2	5459.99	42.62	31.80	6.60	40.84	10.00	50.18	68.20	-18.02	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5349.93	33.05	31.40	6.33	40.93	10.00	39.85	54.00	-14.15	Average
2	5459.99	31.18	31.80	6.60	40.84	10.00	38.74	54.00	-15.26	Average

U-NII-1 & U-NII-2A			Worst mode: 802.11ac(HT80)				Test channel: CH _L			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5150.07	54.93	31.90	6.28	41.04	10.00	62.07	68.20	-6.13	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5150.07	42.66	31.90	6.28	41.04	10.00	49.80	54.00	-4.20	Average
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5140.59	51.16	31.92	6.24	41.04	10.00	58.28	68.20	-9.92	Peak
2	5150.07	48.02	31.90	6.28	41.04	10.00	55.16	68.20	-13.04	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5150.07	34.01	31.90	6.28	41.04	10.00	41.15	54.00	-12.85	Average

U-NII-1 & U-NII-2A			Worst mode: 802.11ac(HT80)				Test channel: CH _H				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	54.74	31.40	6.33	40.93	10.00	61.54	68.20	-6.66	Peak	
2	5459.99	47.52	31.80	6.60	40.84	10.00	55.08	68.20	-13.12	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	39.09	31.40	6.33	40.93	10.00	45.89	54.00	-8.11	Average	
2	5459.99	36.24	31.80	6.60	40.84	10.00	43.80	54.00	-10.20	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	42.26	31.40	6.33	40.93	10.00	49.06	68.20	-19.14	Peak	
2	5459.99	42.32	31.80	6.60	40.84	10.00	49.88	68.20	-18.32	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5349.93	31.95	31.40	6.33	40.93	10.00	38.75	54.00	-15.25	Average	
2	5459.99	31.48	31.80	6.60	40.84	10.00	39.04	54.00	-14.96	Average	

U-NII-2C			Worst mode: 802.11a				Test channel: CH _L			
Polarization:						Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5460.09	49.64	31.80	6.60	40.84	10.00	57.20	68.20	-11.00	Peak
2	5469.92	56.85	31.80	6.60	40.84	10.00	64.41	68.20	-3.79	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5460.09	40.91	31.80	6.60	40.84	10.00	48.47	54.00	-5.53	Average
2	5469.92	42.41	31.80	6.60	40.84	10.00	49.97	54.00	-4.03	Average
Polarization:						Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5460.09	44.50	31.80	6.60	40.84	10.00	52.06	68.20	-16.14	Peak
2	5469.92	53.29	31.80	6.60	40.84	10.00	60.85	68.20	-7.35	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5460.09	32.04	31.80	6.60	40.84	10.00	39.60	54.00	-14.40	Average
2	5469.92	33.05	31.80	6.60	40.84	10.00	40.61	54.00	-13.39	Average

U-NII-2C			Worst mode: 802.11a				Test channel: CH _H			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5725.00	56.09	31.85	6.70	40.72	10.00	63.92	68.20	-4.28	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5725.02	41.46	31.85	6.70	40.72	10.00	49.29	54.00	-4.71	Average
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5725.00	50.87	31.85	6.70	40.72	10.00	58.70	68.20	-9.50	Peak
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	5725.02	37.38	31.85	6.70	40.72	10.00	45.21	54.00	-8.79	Average

U-NII-2C		Worst mode: 802.11n(HT40)					Test channel: CH _L				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	54.11	31.80	6.60	40.84	10.00	61.67	68.20	-6.53	Peak	
2	5469.92	56.91	31.80	6.60	40.84	10.00	64.47	68.20	-3.73	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	37.37	31.80	6.60	40.84	10.00	44.93	54.00	-9.07	Average	
2	5469.92	42.80	31.80	6.60	40.84	10.00	50.36	54.00	-3.64	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	49.29	31.80	6.60	40.84	10.00	56.85	68.20	-11.35	Peak	
2	5469.92	54.70	31.80	6.60	40.84	10.00	62.26	68.20	-5.94	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	34.70	31.80	6.60	40.84	10.00	42.26	54.00	-11.74	Average	
2	5469.92	38.57	31.80	6.60	40.84	10.00	46.13	54.00	-7.87	Average	

U-NII-2C			Worst mode: 802.11n(HT40)				Test channel: CH _H				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5725.04	56.23	31.85	6.70	40.72	10.00	64.06	68.20	-4.14	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5725.02	42.37	31.85	6.70	40.72	10.00	50.20	54.00	-3.80	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5725.04	47.82	31.85	6.70	40.72	10.00	55.65	68.20	-12.55	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5725.02	39.34	31.85	6.70	40.72	10.00	47.17	54.00	-6.83	Average	

U-NII-2C			Worst mode: 802.11ac(HT80)				Test channel: CH _L				
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	50.82	31.80	6.60	40.84	10.00	58.38	68.20	-9.82	Peak	
2	5469.92	54.09	31.80	6.60	40.84	10.00	61.65	68.20	-6.55	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	42.14	31.80	6.60	40.84	10.00	49.70	54.00	-4.30	Average	
2	5469.92	43.39	31.80	6.60	40.84	10.00	50.95	54.00	-3.05	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	48.03	31.80	6.60	40.84	10.00	55.59	68.20	-12.61	Peak	
2	5469.92	48.67	31.80	6.60	40.84	10.00	56.23	68.20	-11.97	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5460.09	35.71	31.80	6.60	40.84	10.00	43.27	54.00	-10.73	Average	
2	5469.92	36.73	31.80	6.60	40.84	10.00	44.29	54.00	-9.71	Average	

U-NII-2C			Worst mode: 802.11ac(HT80)					Test channel: CH _M			
Polarization:						Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5724.98	56.06	31.85	6.70	40.72	10.00	63.89	68.20	-4.31	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5725.02	41.73	31.85	6.70	40.72	10.00	49.56	54.00	-4.44	Average	
Polarization:						Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5724.98	44.04	31.85	6.70	40.72	10.00	51.87	68.20	-16.33	Peak	
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Aux dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	5725.02	38.34	31.85	6.70	40.72	10.00	46.17	54.00	-7.83	Average	

U-NII-3			Worst mode: 802.11a					Test channel: CH _L		
Frequency (MHz)	Read Level (dBuV)	Antenn a Factor (dB/m)	Cable Loss (dB)	Pream p Factor (dB)	Aux Factor (dB)	Level (dBuV/ m)	Limit Line (dBuV/ m)	Over Limit (dB)	Test value	Polari zation
5650	40.89	31.6	6.53	10	40.75	48.27	68.2	-19.93	Vertical	Peak
5700.007	45.82	31.8	6.61	10	40.73	53.5	105.2	-51.7	Vertical	Peak
5720.045	54.06	31.84	6.68	10	40.73	61.85	110.8	-48.95	Vertical	Peak
5650	44.81	31.6	6.53	10	40.75	52.19	68.2	-16.01	Horizontal	Peak
5700.007	53.94	31.8	6.61	10	40.73	61.62	105.2	-43.58	Horizontal	Peak
5720.045	61.44	31.84	6.68	10	40.73	69.23	110.8	-41.57	Horizontal	Peak

U-NII-3			Worst mode: 802.11a					Test channel: CH _H		
Frequency (MHz)	Read Level (dBuV)	Antenn a Factor (dB/m)	Cable Loss (dB)	Pream p Factor (dB)	Aux Factor (dB)	Level (dBuV/ m)	Limit Line (dBuV/ m)	Over Limit (dB)	Test value	Polari zation
5849.961	48.56	32.2	6.72	10	40.68	56.8	122	-65.2	Vertical	Peak
5875.003	42.13	32.25	6.75	10	40.67	50.46	105.6	-55.14	Vertical	Peak
5925.008	40.98	32.3	6.82	10	40.65	49.45	68.2	-18.75	Vertical	Peak
5849.961	59.24	32.2	6.72	10	40.68	67.48	122	-54.52	Horizontal	Peak
5875.003	52.07	32.25	6.75	10	40.67	60.4	105.6	-45.2	Horizontal	Peak
5925.008	42.58	32.3	6.82	10	40.65	51.05	68.2	-17.15	Horizontal	Peak

U-NII-3			Worst mode: 802.11n(HT40)					Test channel: CH _L		
Frequency (MHz)	Read Level (dBuV)	Antenn a Factor (dB/m)	Cable Loss (dB)	Pream p Factor (dB)	Aux Factor (dB)	Level (dBuV/ m)	Limit Line (dBuV/ m)	Over Limit (dB)	Test value	Polariz ation
5650	43.52	31.6	6.53	10	40.75	50.9	68.2	-17.3	Vertical	Peak
5700.007	49.94	31.8	6.61	10	40.73	57.62	105.2	-47.58	Vertical	Peak
5720.045	54.6	31.84	6.68	10	40.73	62.39	110.8	-48.41	Vertical	Peak
5650	49.31	31.6	6.53	10	40.75	56.69	68.2	-11.51	Horizontal	Peak
5700.007	56.36	31.8	6.61	10	40.73	64.04	105.2	-41.16	Horizontal	Peak
5720.045	62.99	31.84	6.68	10	40.73	70.78	110.8	-40.02	Horizontal	Peak

U-NII-3			Worst mode: 802.11n(HT40)					Test channel: CH _H		
Frequency (MHz)	Read Level (dBuV)	Antenn a Factor (dB/m)	Cable Loss (dB)	Pream p Factor (dB)	Aux Factor (dB)	Level (dBuV/ m)	Limit Line (dBuV/ m)	Over Limit (dB)	Test value	Polariz ation
5849.961	48.31	32.2	6.72	10	40.68	56.55	122	-65.45	Vertical	Peak
5875.003	43.81	32.25	6.75	10	40.67	52.14	105.6	-53.46	Vertical	Peak
5925.008	42.3	32.3	6.82	10	40.65	50.77	68.2	-17.43	Vertical	Peak
5849.961	56.54	32.2	6.72	10	40.68	64.78	122	-57.22	Horizontal	Peak
5875.003	54.2	32.25	6.75	10	40.67	62.53	105.6	-43.07	Horizontal	Peak
5925.008	43.36	32.3	6.82	10	40.65	51.83	68.2	-16.37	Horizontal	Peak

U-NII-3 Worst mode: 802.11n(HT80) Test channel: CH _L										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Aux Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Test value	Polarization
5650	45.95	31.6	6.53	10	40.75	53.33	68.2	-14.87	Vertical	Peak
5700.007	50.06	31.8	6.61	10	40.73	57.74	105.2	-47.46	Vertical	Peak
5720.045	54.39	31.84	6.68	10	40.73	62.18	110.8	-48.62	Vertical	Peak
5650	54.28	31.6	6.53	10	40.75	61.66	68.2	-6.54	Horizontal	Peak
5700.007	59.88	31.8	6.61	10	40.73	67.56	105.2	-37.64	Horizontal	Peak
5720.045	61.08	31.84	6.68	10	40.73	68.87	110.8	-41.93	Horizontal	Peak
U-NII-3 Worst mode: 802.11n(HT80) Test channel: CH _H										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Aux Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Test value	Polarization
5849.961	49.49	32.2	6.72	10	40.68	57.73	122	-64.27	Vertical	Peak
5875.003	49.78	32.25	6.75	10	40.67	58.11	105.6	-47.49	Vertical	Peak
5925.008	47.41	32.3	6.82	10	40.65	55.88	68.2	-12.32	Vertical	Peak
5849.961	59.46	32.2	6.72	10	40.68	67.7	122	-54.3	Horizontal	Peak
5875.003	58.37	32.25	6.75	10	40.67	66.7	105.6	-38.9	Horizontal	Peak
5925.008	54.51	32.3	6.82	10	40.65	62.98	68.2	-5.22	Horizontal	Peak

Remark:

1. Final Level = Receiver Read level + Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Test 802.11a, 802.11n, 802.11ac mode, all modulations have been tested, only worst case is reported

5.8. Radiated Spurious Emissions

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209 and Part 15 Subpart E Section 15.407

Frequency	Limit (dBuV/m)	Value
0.009 MHz ~0.49 MHz	2400/F(kHz) @300m	Quasi-peak
0.49 MHz ~ 1.705 MHz	24000/F(kHz) @30m	Quasi-peak
1.705 MHz ~30 MHz	30 @30m	Quasi-peak

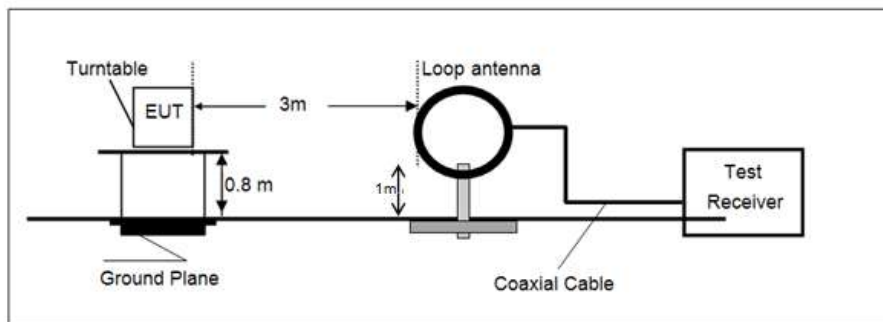
Note: Limit dBuV/m @3m = Limit dBuV/m @300m + 40*log(300/3)= Limit dBuV/m @300m +80,

Limit dBuV/m @3m = Limit dBuV/m @30m +40*log(30/3)= Limit dBuV/m @30m + 40.

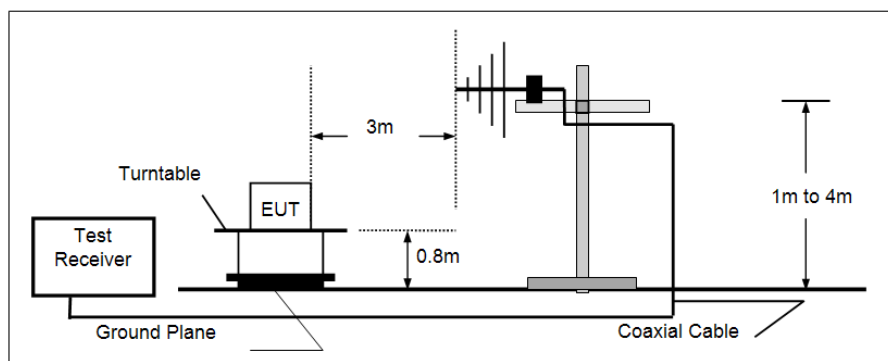
Unwanted emissions below 1GHz and Restricted band emissions above 1GHz		
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

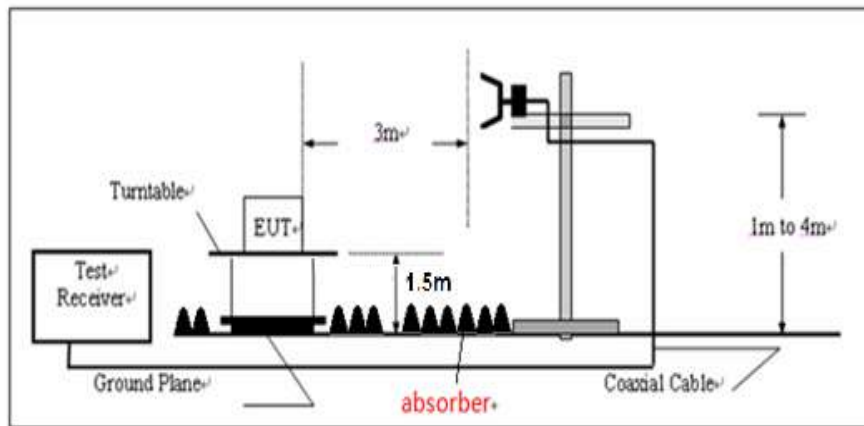
- 9KHz ~30MHz



- 30MHz ~ 1GHz



➤ Above 1GHz

**TEST PROCEDURE**

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - a) Span shall wide enough to fully capture the emission being measured;
 - b) Below 1 GHz:
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - c) From 1 GHz to 10th harmonic:
RBW=1MHz, VBW=3MHz Peak detector for Peak value.
RBW=1MHz, VBW=3MHz RMS detector for Average value.

TEST MODE:

Please refer to the clause 4.3

TEST RESULT

☒ Passed ☐ Not Applicable

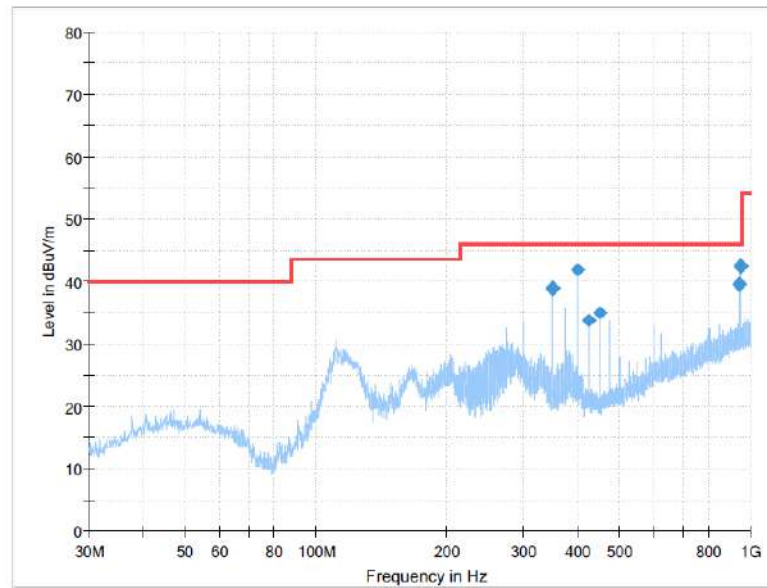
TEST DATA**FOR 9 kHz ~ 30 MHz**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

FOR 30MHz-1GHz

Polarization:

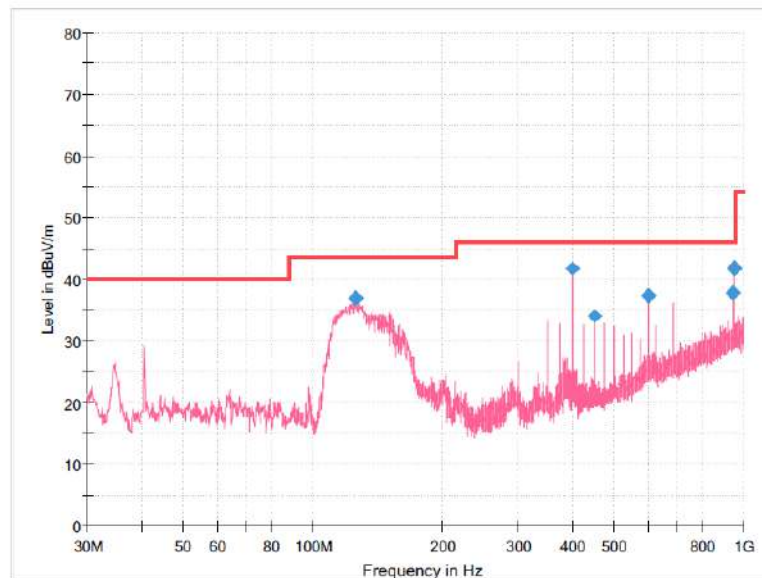
Horizontal

**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
349.9788	38.86	46.00	7.14	100.0	H	130.0	-5.4
400.0550	42.90	46.00	3.10	100.0	H	43.0	-4.5
425.0325	33.46	46.00	12.54	100.0	H	225.0	-3.7
450.0100	34.92	46.00	11.08	100.0	H	5.0	-3.4
945.1950	39.51	46.00	6.49	300.0	H	9.0	7.1
948.4688	42.45	46.00	3.55	100.0	H	169.0	7.1

Polarization:

Vertical

**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
125.3025	36.81	43.50	6.69	100.0	V	118.0	-13.5
400.0550	42.58	46.00	3.42	100.0	V	191.0	-4.5
450.0100	34.65	46.00	11.35	100.0	V	199.0	-3.4
599.9963	37.40	46.00	8.60	100.0	V	223.0	1.1
945.3163	37.84	46.00	8.16	100.0	V	36.0	7.1
948.4688	41.78	46.00	4.22	100.0	V	55.0	7.1

Remark:

Transd=Cable lose+ Antenna factor- Pre-amplifier; Margin=Limit -Level

FOR Above 1GHz

U-NII-1		Worst mode: 802.11a					Test channel: CH _L			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	8063.40	41.12	37.00	8.19	40.68	45.63	68.20	-22.57	Peak	
4	11515.68	40.78	40.47	10.37	42.30	49.32	68.20	-18.88	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	7394.88	41.72	36.20	7.78	41.00	44.70	68.20	-23.50	Peak	
4	11515.68	40.23	40.47	10.37	42.30	48.77	68.20	-19.43	Peak	

U-NII-1		Worst mode: 802.11a					Test channel: CH _M			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	7394.88	41.38	36.20	7.78	41.00	44.36	68.20	-23.84	Peak	
4	10348.05	40.70	39.74	9.68	40.70	49.42	68.20	-18.78	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	7394.88	40.68	36.20	7.78	41.00	43.66	68.20	-24.54	Peak	
4	10348.05	40.70	39.74	9.68	40.70	49.42	68.20	-18.78	Peak	

U-NII-1			Worst mode: 802.11a				Test channel: CH _H			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	8022.46	40.20	37.00	8.07	40.76	44.51	68.20	-23.69	Peak	
4	11056.09	40.57	40.33	10.04	42.30	48.64	68.20	-19.56	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	8042.90	40.28	37.00	8.19	40.72	44.75	68.20	-23.45	Peak	
4	10427.37	39.91	39.93	9.72	40.69	48.87	68.20	-19.33	Peak	

U-NII-2A		Worst mode: 802.11a					Test channel: CH _L			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	7981.72	41.67	36.96	7.99	40.85	45.77	68.20	-22.43	Peak	
4	10805.68	40.13	40.31	9.91	41.92	48.43	68.20	-19.77	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	9275.16	39.83	39.15	9.24	40.97	47.25	68.20	-20.95	Peak	
4	11457.21	40.58	40.46	10.33	42.30	49.07	68.20	-19.13	Peak	

U-NII-2A		Worst mode: 802.11a					Test channel: CH _M			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	7961.43	40.76	36.92	7.98	40.89	44.77	68.20	-23.43	Peak	
4	10860.83	39.78	40.42	9.93	42.10	48.03	68.20	-20.17	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	7921.00	40.15	36.73	7.95	40.97	43.86	68.20	-24.34	Peak	
4	11370.05	40.04	40.31	10.27	42.30	48.32	68.20	-19.88	Peak	

U-NII-2A			Worst mode: 802.11a				Test channel: CH _H			
Polarization:						Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	8250.27	41.05	36.50	8.34	40.80	45.09	68.20	-23.11	Peak	
4	11515.68	39.75	40.47	10.37	42.30	48.29	68.20	-19.91	Peak	
Polarization:						Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	8042.90	39.62	37.00	8.19	40.72	44.09	68.20	-24.11	Peak	
4	11515.68	40.12	40.47	10.37	42.30	48.66	68.20	-19.54	Peak	

U-NII-2C			Worst mode: 802.11a				Test channel: CH _L			
Polarization:						Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	7921.00	40.73	36.73	7.95	40.97	44.44	68.20	-23.76	Peak	
4	10321.74	39.33	39.67	9.67	40.74	47.93	68.20	-20.27	Peak	
Polarization:						Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	8571.38	41.35	37.39	8.69	41.68	45.75	68.20	-22.45	Peak	
4	11457.21	39.97	40.46	10.33	42.30	48.46	68.20	-19.74	Peak	

U-NII-2C		Worst mode: 802.11a					Test channel: CH _M			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	7961.43	40.79	36.92	7.98	40.89	44.80	68.20	-23.40	Peak	
4	10916.26	40.08	40.50	9.96	42.28	48.26	68.20	-19.94	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	8063.40	39.89	37.00	8.19	40.68	44.40	68.20	-23.80	Peak	
4	10944.09	39.83	40.50	9.97	42.30	48.00	68.20	-20.20	Peak	

U-NII-2C		Worst mode: 802.11a					Test channel: CH _H		
Polarization:					Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak
3	9134.58	39.93	38.44	9.10	41.03	46.44	68.20	-21.76	Peak
4	10480.59	39.78	39.98	9.75	40.86	48.65	68.20	-19.55	Peak
Polarization:					Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak
3	8063.40	40.60	37.00	8.19	40.68	45.11	68.20	-23.09	Peak
4	11515.68	40.05	40.47	10.37	42.30	48.59	68.20	-19.61	Peak

U-NII-3		Worst mode: 802.11a					Test channel: CH _L		
Polarization:					Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak
3	7508.69	41.89	36.18	7.69	41.09	44.67	68.20	-23.53	Peak
4	11399.03	40.54	40.40	10.29	42.30	48.93	68.20	-19.27	Peak
Polarization:					Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak
3	7961.43	40.38	36.92	7.98	40.89	44.39	68.20	-23.81	Peak
4	11486.41	39.44	40.49	10.35	42.30	47.98	68.20	-20.22	Peak

U-NII-3		Worst mode: 802.11a					Test channel: CH _M			
Polarization:					Horizontal					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak	
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak	
3	7981.72	39.56	36.96	7.99	40.85	43.66	68.20	-24.54	Peak	
4	10480.59	39.17	39.98	9.75	40.86	48.04	68.20	-20.16	Peak	
Polarization:					Vertical					
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark	
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak	
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak	
3	7451.57	41.66	36.20	7.83	41.05	44.64	68.20	-23.56	Peak	
4	10480.59	39.91	39.98	9.75	40.86	48.78	68.20	-19.42	Peak	

U-NII-3		Worst mode: 802.11a					Test channel: CH _H		
Polarization:					Horizontal				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1748.97	62.83	25.20	3.53	42.15	49.41	68.20	-18.79	Peak
2	2821.95	58.09	28.34	4.48	41.77	49.14	68.20	-19.06	Peak
3	7209.02	40.62	36.00	7.56	40.95	43.23	68.20	-24.97	Peak
4	11027.98	39.65	40.42	10.02	42.30	47.79	68.20	-20.41	Peak
Polarization:					Vertical				
Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1793.40	60.66	25.29	3.55	42.10	47.40	68.20	-20.80	Peak
2	2397.39	60.20	27.51	4.29	41.80	50.20	68.20	-18.00	Peak
3	8042.90	39.34	37.00	8.19	40.72	43.81	68.20	-24.39	Peak
4	11399.03	40.09	40.40	10.29	42.30	48.48	68.20	-19.72	Peak

Remark:

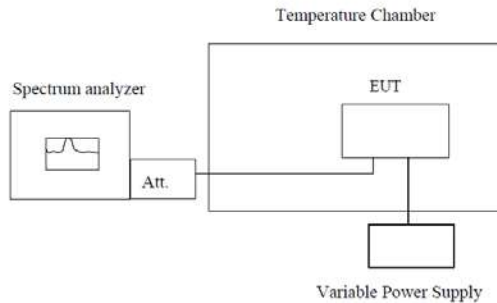
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Measuring frequencies from 1 GHz to 40GHz.
4. Test 802.11a, 802.11n, 802.11ac mode, all modulations have been tested, only worst case is reported

5.9. Frequency stability

LIMIT

Within Operation Band

TEST CONFIGURATION



Note : Measurement setup for testing on Antenna connector

TEST PROCEDURE

1. The equipment under test was connected to an external power supply.
2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
3. The EUT was placed inside the temperature chamber.
4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.
5. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached..

TEST MODE:

Please refer to the clause 4.3

TEST RESULT

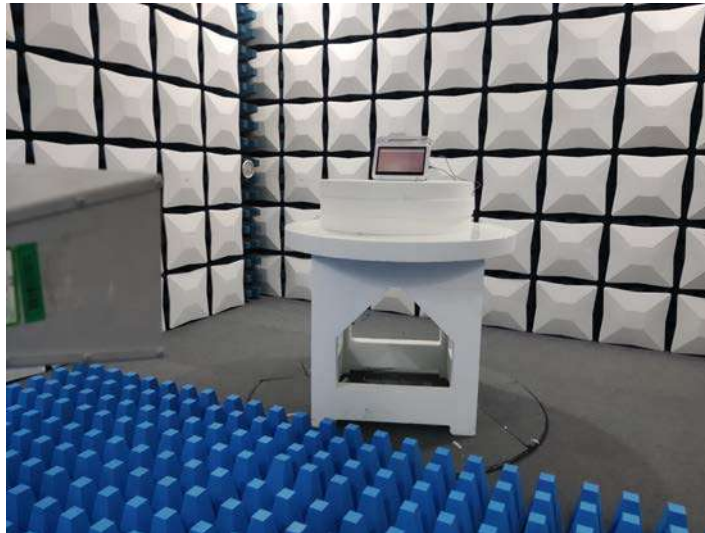
☒ Passed ☐ Not Applicable

Refer to the appendix report on the section 8

6. TEST SETUP PHOTOS

Radiated Emission





AC Conducted Emission



7. EXTERNAL AND INTERNAL PHOTOS

Refer to the test report No. CHTEW24010014

8. APPENDIX REPORT

APPENDIX REPORT

Project No.	SHT2307016301EW	Radio Specification	WIFI 5G
Test sample No.	YPHT23070163003	Model No.	iS-PF1
Start test date	2023-11-06	Finish date	2023-11-07
Temperature	25℃	Humidity	48.5%
Test Engineer	Xiangyu Wei	Auditor	Xiaodong Zheo

Appendix clause	Test item	Result
A	Maximum Conducted Output Power	PASS
B	Maximum Power Spectral Density	PASS
C	26 dB Bandwidth	PASS
D	99% Occupy bandwidth	PASS
E	6 dB Bandwidth	PASS
F	Frequency stability	PASS

Appendix A: Maximum Conducted Output Power

Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Conducted Output Power (dBm)	Limit (dBm)	Result
I	20	802.11a _c	CH _L	8.99	96.85	0.14	9.13	24.00	Pass
			CH _M	8.31	96.76	0.14	8.45		
			CH _H	7.82	96.85	0.14	7.96		
		802.11n	CH _L	9.28	96.74	0.14	9.42	24.00	Pass
			CH _M	8.45	96.74	0.14	8.59		
			CH _H	7.79	96.83	0.14	7.93		
		802.11a	CH _L	8.53	96.94	0.13	8.66	24.00	Pass
			CH _M	8.68	96.94	0.13	8.81		
			CH _H	8.11	97.02	0.13	8.24		
	40	802.11a _c	CH _L	8.01	93.92	0.27	8.28	24.00	Pass
			CH _H	7.17	93.92	0.27	7.44		
		802.11n	CH _L	7.96	93.85	0.28	8.24	24.00	Pass
			CH _H	7.15	93.85	0.28	7.43		
	80	802.11a _c	CH _M	5.46	88.39	0.54	6.00	24.00	Pass
II	20	802.11a _c	CH _L	7.42	96.85	0.14	7.56	24.00	Pass
			CH _M	6.90	96.76	0.14	7.04		
			CH _H	6.72	96.76	0.14	6.86		
		802.11n	CH _L	7.28	96.74	0.14	7.42	24.00	Pass
			CH _M	7.08	96.74	0.14	7.22		
			CH _H	6.74	96.74	0.14	6.88		
		802.11a	CH _L	7.52	96.94	0.13	7.65	24.00	Pass
			CH _M	7.06	96.94	0.13	7.19		
			CH _H	6.76	96.94	0.13	6.89		
	40	802.11a _c	CH _L	6.31	93.91	0.27	6.58	24.00	Pass
			CH _H	5.86	93.91	0.27	6.13		
		802.11n	CH _L	6.33	93.85	0.28	6.61	24.00	Pass
			CH _H	5.83	93.85	0.28	6.11		
	80	802.11a _c	CH _M	3.66	88.39	0.54	4.20	24.00	Pass

Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Conducted Output Power (dBm)	Limit (dBm)	Result
III	20	802.11ac	CH _L	10.43	96.85	0.14	10.57	24.00	Pass
			CH _{M1}	9.80	96.76	0.14	9.94		
			CH _{M2}	8.13	96.76	0.14	8.27		
			CH _H	7.28	96.76	0.14	7.42		
		802.11n	CH _L	10.44	96.74	0.14	10.58	24.00	Pass
			CH _{M1}	8.95	96.74	0.14	9.09		
			CH _{M2}	7.50	96.74	0.14	7.64		
			CH _H	8.21	96.83	0.14	8.35		
		802.11a	CH _L	10.66	96.94	0.13	10.79	24.00	Pass
			CH _{M1}	9.88	97.02	0.13	10.01		
			CH _{M2}	8.26	96.94	0.13	8.39		
			CH _H	8.45	96.94	0.13	8.58		
	40	802.11ac	CH _L	9.42	93.91	0.27	9.69	24.00	Pass
			CH _{M1}	9.11	93.91	0.27	9.38		
			CH _{M2}	7.36	93.92	0.27	7.63		
			CH _H	7.14	93.92	0.27	7.41		
		802.11n	CH _L	9.57	93.85	0.28	9.85	24.00	Pass
			CH _{M1}	9.07	93.85	0.28	9.35		
			CH _{M2}	6.85	93.85	0.28	7.13		
			CH _H	7.18	93.85	0.28	7.46		
	80	802.11ac	CH _L	6.76	88.39	0.54	7.30	24.00	Pass
			CH _M	6.02	88.39	0.54	6.56		
			CH _H	4.81	88.24	0.54	5.35		
IV	20	802.11ac	CH _L	8.40	96.76	0.14	8.54	30.00	Pass
			CH _M	8.55	96.85	0.14	8.69		
			CH _H	8.94	96.85	0.14	9.08		
		802.11n	CH _L	8.40	96.74	0.14	8.54	30.00	Pass
			CH _M	8.69	96.83	0.14	8.83		
			CH _H	8.82	96.74	0.14	8.96		
		802.11a	CH _L	8.55	96.94	0.13	8.68	30.00	Pass
			CH _M	8.88	96.94	0.13	9.01		
			CH _H	9.24	97.02	0.13	9.37		
	40	802.11ac	CH _L	7.39	93.91	0.27	7.66	30.00	Pass
			CH _H	7.75	93.92	0.27	8.02		
		802.11n	CH _L	7.49	93.85	0.28	7.77	30.00	Pass
			CH _H	7.77	93.85	0.28	8.05		
	80	802.11ac	CH _M	5.35	88.39	0.54	5.89	30.00	Pass

NOTE: duty cycle factor =10LOG(1/ duty cycle)

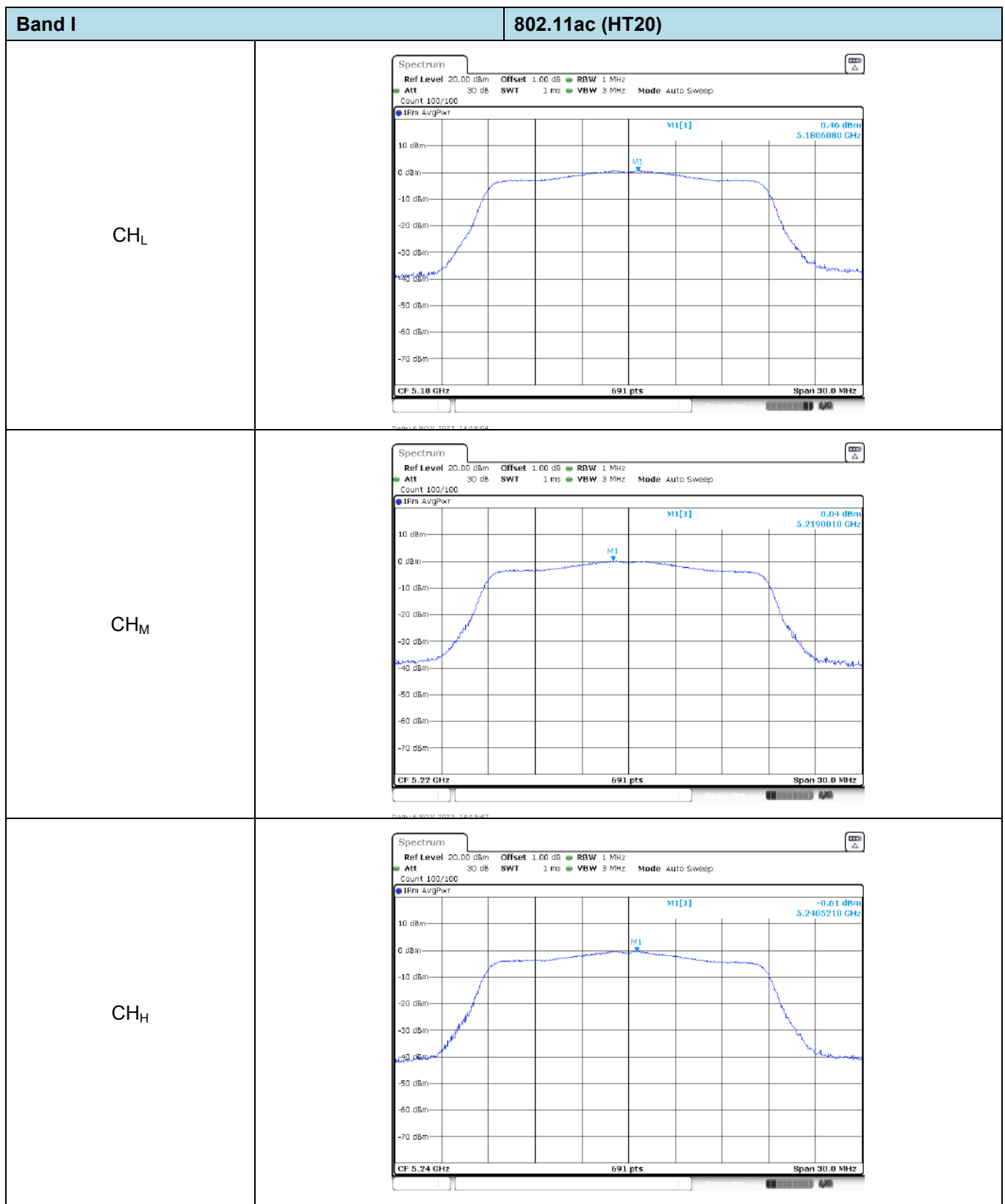
Appendix B: Maximum Power Spectral Density

Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
I	20	802.11ac	CH _L	0.52	96.85	0.14	0.66	11.00	Pass
			CH _M	-0.30	96.76	0.14	-0.16		
			CH _H	-1.05	96.85	0.14	-0.91		
		802.11n	CH _L	0.74	96.74	0.14	0.88	11.00	Pass
			CH _M	0.06	96.74	0.14	0.20		
			CH _H	-0.88	96.83	0.14	-0.74		
		802.11a	CH _L	1.25	96.94	0.13	1.38	11.00	Pass
			CH _M	0.24	96.94	0.13	0.37		
			CH _H	-0.27	97.02	0.13	-0.14		
	40	802.11ac	CH _L	-2.33	93.92	0.27	-2.06	11.00	Pass
			CH _H	-3.32	93.92	0.27	-3.05		
		802.11n	CH _L	-2.31	93.85	0.28	-2.03	11.00	Pass
			CH _H	-3.76	93.85	0.28	-3.48		
	80	802.11ac	CH _M	-6.20	88.39	0.54	-5.66	11.00	Pass

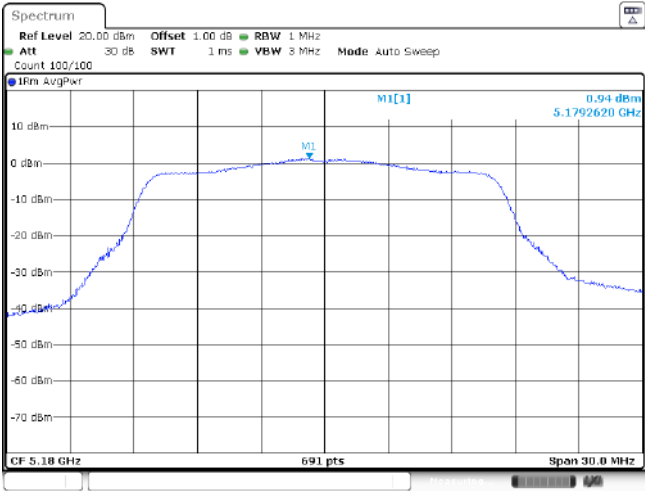
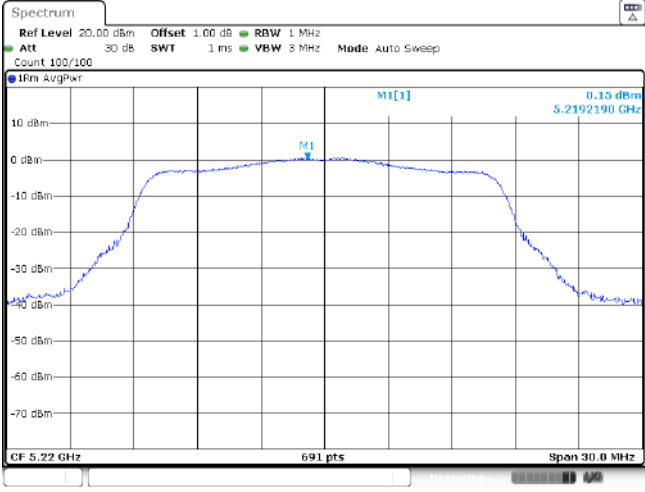
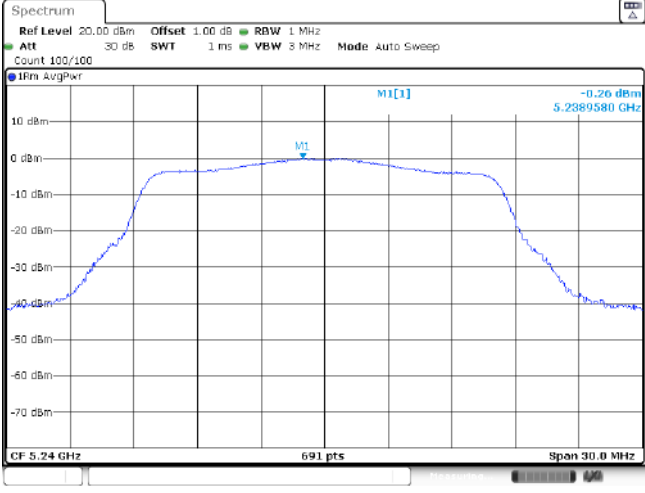
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
II	20	802.11ac	CH _L	-1.23	96.85	0.14	-1.09	11.00	Pass
			CH _M	-1.51	96.76	0.14	-1.37		
			CH _H	-1.83	96.76	0.14	-1.69		
		802.11n	CH _L	-1.36	96.74	0.14	-1.22	11.00	Pass
			CH _M	-1.48	96.74	0.14	-1.34		
			CH _H	-1.84	96.74	0.14	-1.70		
		802.11a	CH _L	-0.90	96.94	0.13	-0.77	11.00	Pass
			CH _M	-1.68	96.94	0.13	-1.55		
			CH _H	-1.45	96.94	0.13	-1.32		
	40	802.11ac	CH _L	-4.94	93.91	0.27	-4.67	11.00	Pass
			CH _H	-4.83	93.91	0.27	-4.56		
		802.11n	CH _L	-4.38	93.85	0.28	-4.10	11.00	Pass
			CH _H	-4.76	93.85	0.28	-4.48		
	80	802.11ac	CH _M	-8.66	88.39	0.54	-8.12	11.00	Pass

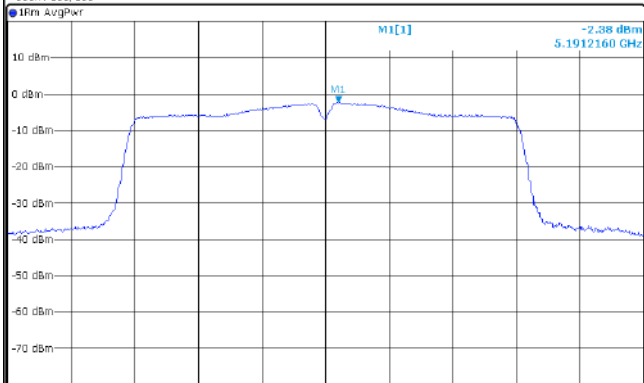
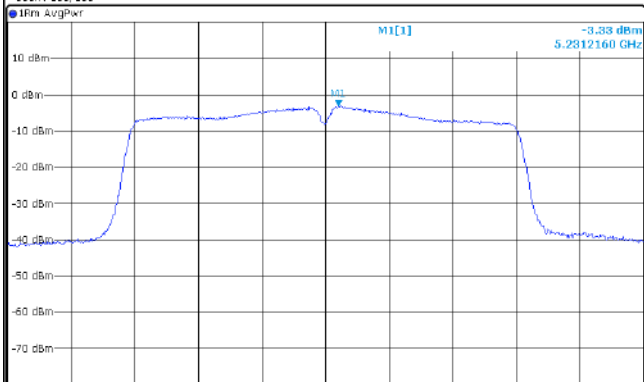
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
III	20	802.11ac	CH _L	1.78	96.85	0.14	1.92	11.00	Pass
			CH _M	1.11	96.76	0.14	1.25		
			CH _H	-2.93	96.76	0.14	-2.79		
		802.11n	CH _L	2.00	96.74	0.14	2.14	11.00	Pass
			CH _M	0.43	96.74	0.14	0.57		
			CH _H	-0.58	96.83	0.14	-0.44		
		802.11a	CH _L	2.37	96.94	0.13	2.50	11.00	Pass
			CH _M	1.45	97.02	0.13	1.58		
			CH _H	0.01	96.94	0.13	0.14		
	40	802.11ac	CH _L	-1.03	93.91	0.27	-0.76	11.00	Pass
			CH _M	-1.27	93.91	0.27	-1.00		
			CH _H	-3.26	93.92	0.27	-2.99		
		802.11n	CH _L	-1.00	93.85	0.28	-0.72	11.00	Pass
			CH _M	-0.77	93.85	0.28	-0.49		
			CH _H	-3.90	93.85	0.28	-3.62		
	80	802.11ac	CH _L	-5.02	88.39	0.54	-4.48	11.00	Pass
			CH _H	-7.86	88.24	0.54	-7.32		
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500KHz)	Result
IV	20	802.11ac	CH _L	-2.69	96.76	0.14	-2.55	30.00	Pass
			CH _M	-2.96	96.85	0.14	-2.82		
			CH _H	-2.44	96.85	0.14	-2.30		
		802.11n	CH _L	-2.59	96.74	0.14	-2.45	30.00	Pass
			CH _M	-2.34	96.83	0.14	-2.20		
			CH _H	-1.93	96.74	0.14	-1.79		
		802.11a	CH _L	-2.39	96.94	0.13	-2.26	30.00	Pass
			CH _M	-1.96	96.94	0.13	-1.83		
			CH _H	-1.81	97.02	0.13	-1.68		
	40	802.11ac	CH _L	-5.89	93.91	0.27	-5.62	30.00	Pass
			CH _H	-5.03	93.92	0.27	-4.76		
		802.11n	CH _L	-5.50	93.85	0.28	-5.22	30.00	Pass
			CH _H	-5.24	93.85	0.28	-4.96		
	80	802.11ac	CH _M	-9.37	88.39	0.54	-8.83	30.00	Pass

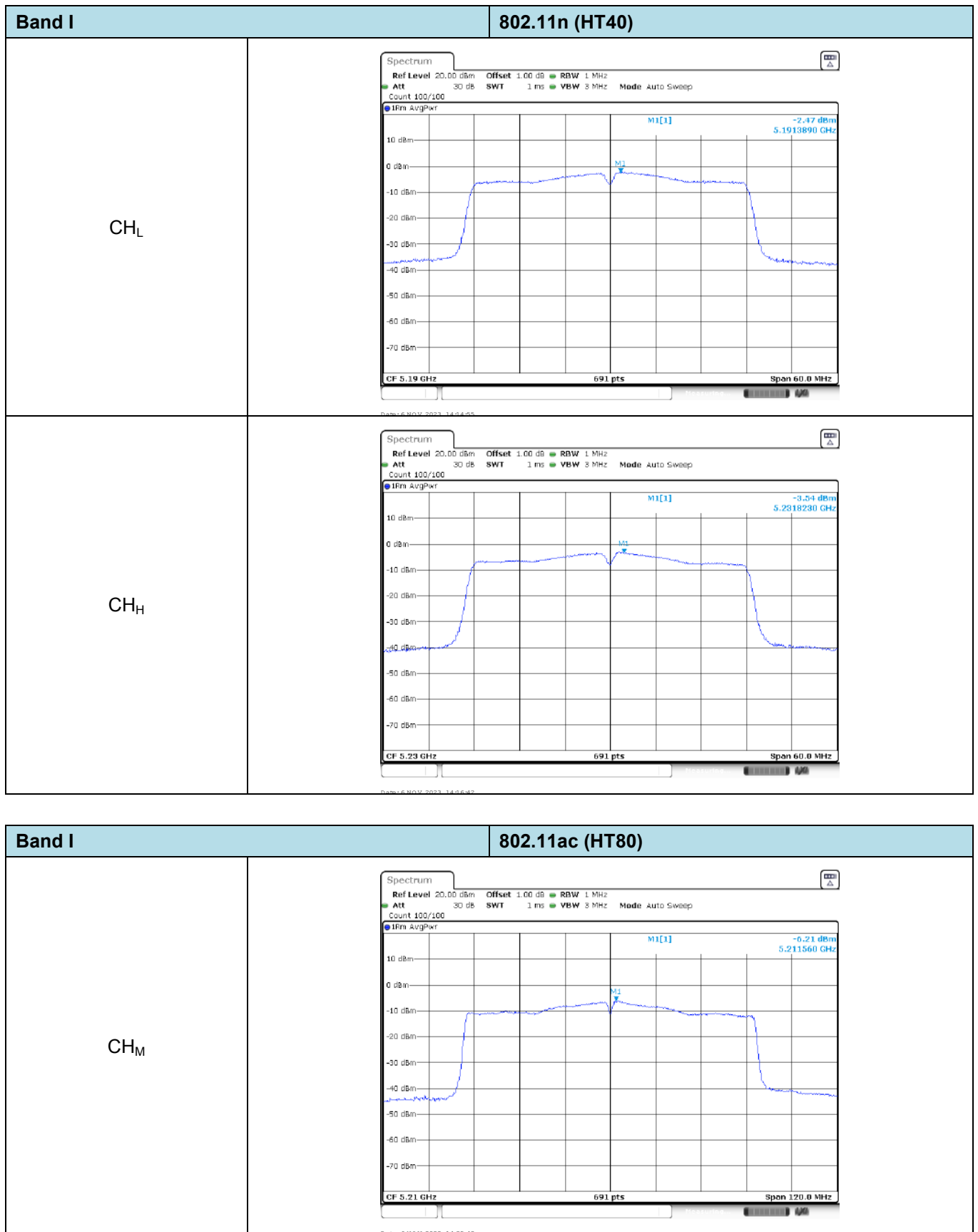
Test plot as follows:

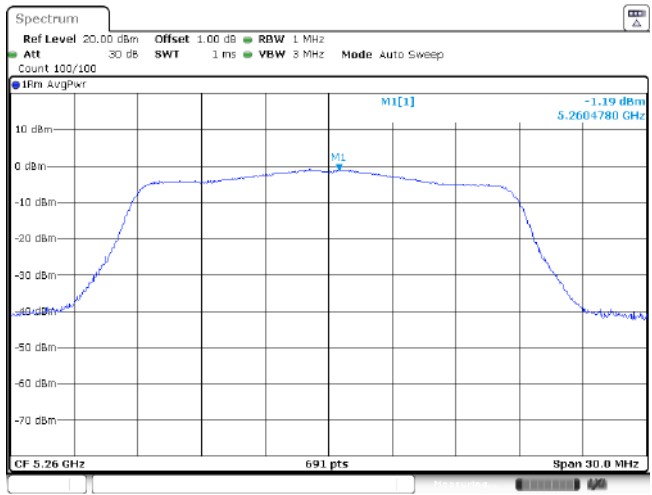
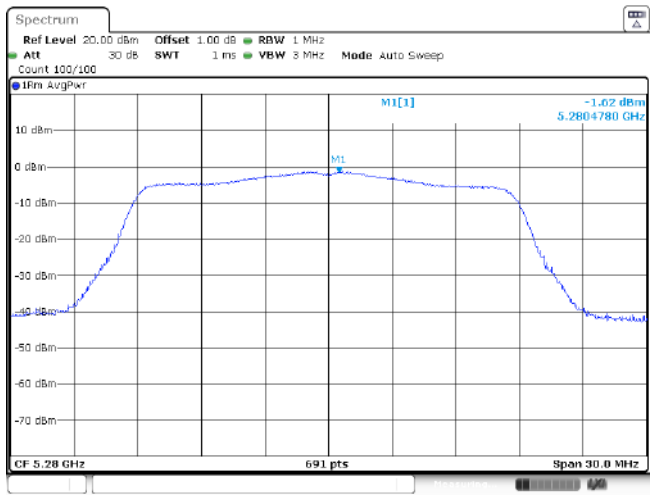
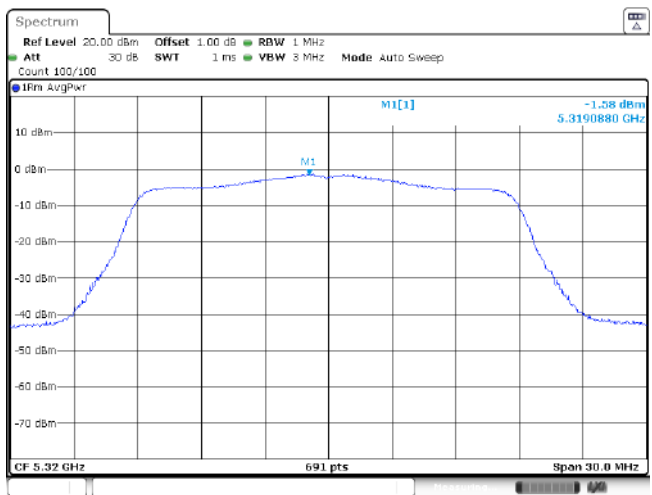


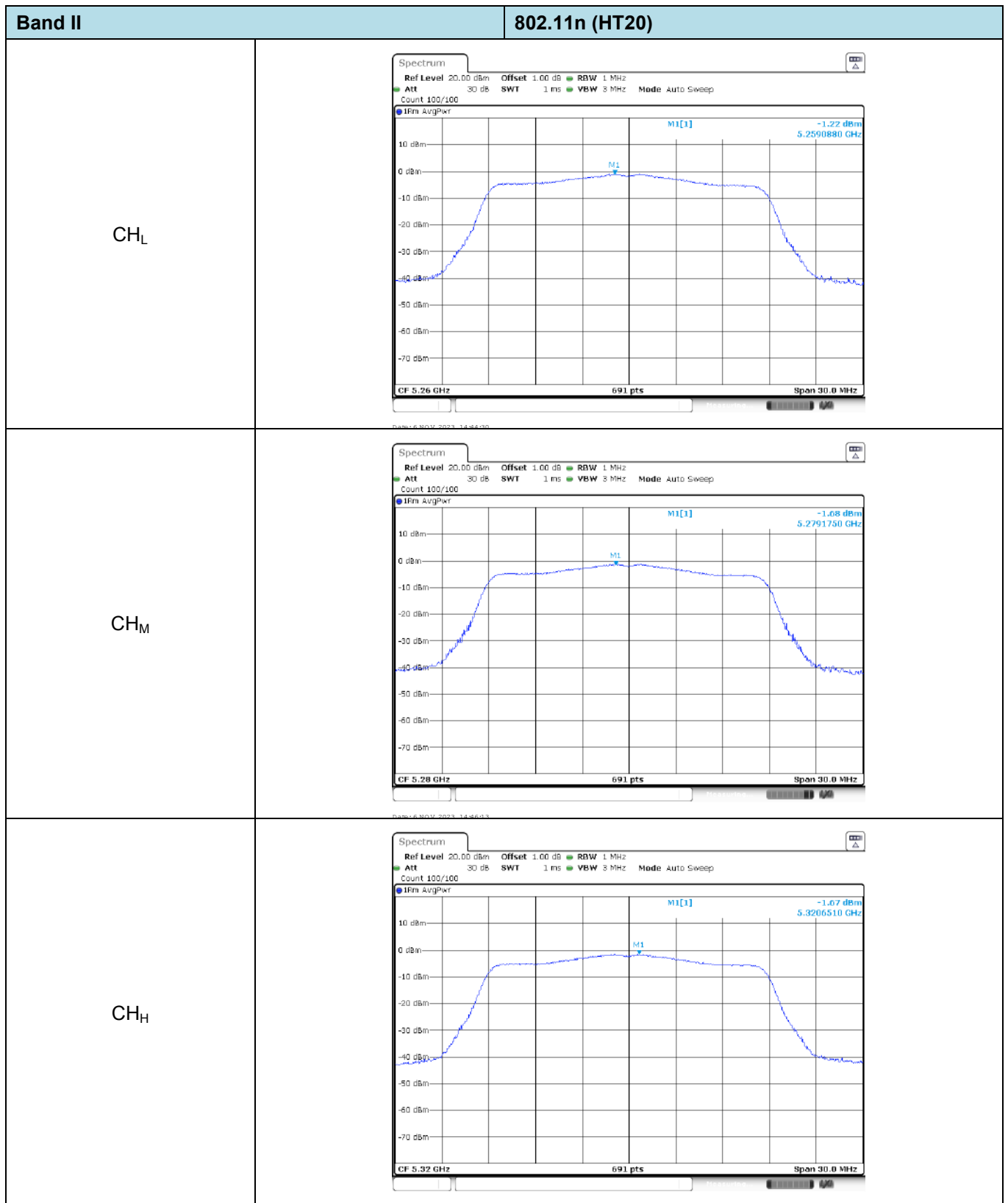
Band I		802.11n (HT20)
CH _L		
CH _M		
CH _H		

Band I		802.11a
CH _L	 The spectrum plot for CH_L shows a signal centered at 5.18 GHz. The peak level is 0.94 dBm. The plot includes parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 1 MHz, Att 30 dB, SWT 1 ms, VBW 3 MHz, Mode Auto Sweep, Count 100/100. The signal is labeled M1[1].	
CH _M	 The spectrum plot for CH_M shows a signal centered at 5.22 GHz. The peak level is 0.15 dBm. The plot includes parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 1 MHz, Att 30 dB, SWT 1 ms, VBW 3 MHz, Mode Auto Sweep, Count 100/100. The signal is labeled M1[1].	
CH _H	 The spectrum plot for CH_H shows a signal centered at 5.24 GHz. The peak level is -0.26 dBm. The plot includes parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 1 MHz, Att 30 dB, SWT 1 ms, VBW 3 MHz, Mode Auto Sweep, Count 100/100. The signal is labeled M1[1].	

Band I		802.11ac (HT40)
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr M1[1] -2.38 dBm 5.1912160 GHz  CF 5.19 GHz691 ptsSpan 60.0 MHz Devel6 NOV 2023 14:22:56	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr M1[1] -3.33 dBm 5.2312160 GHz  CF 5.23 GHz691 ptsSpan 60.0 MHz Devel6 NOV 2023 14:23:04	

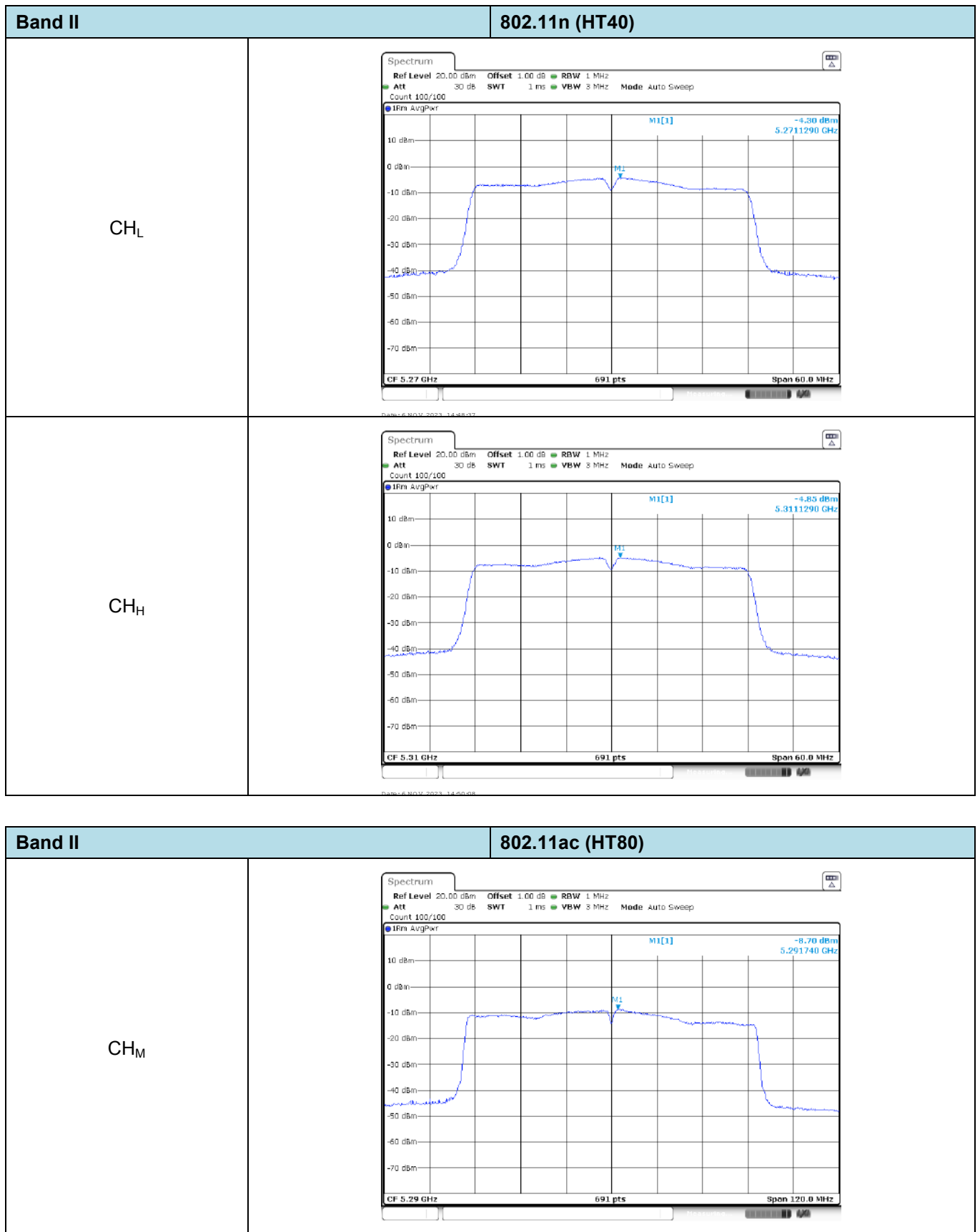


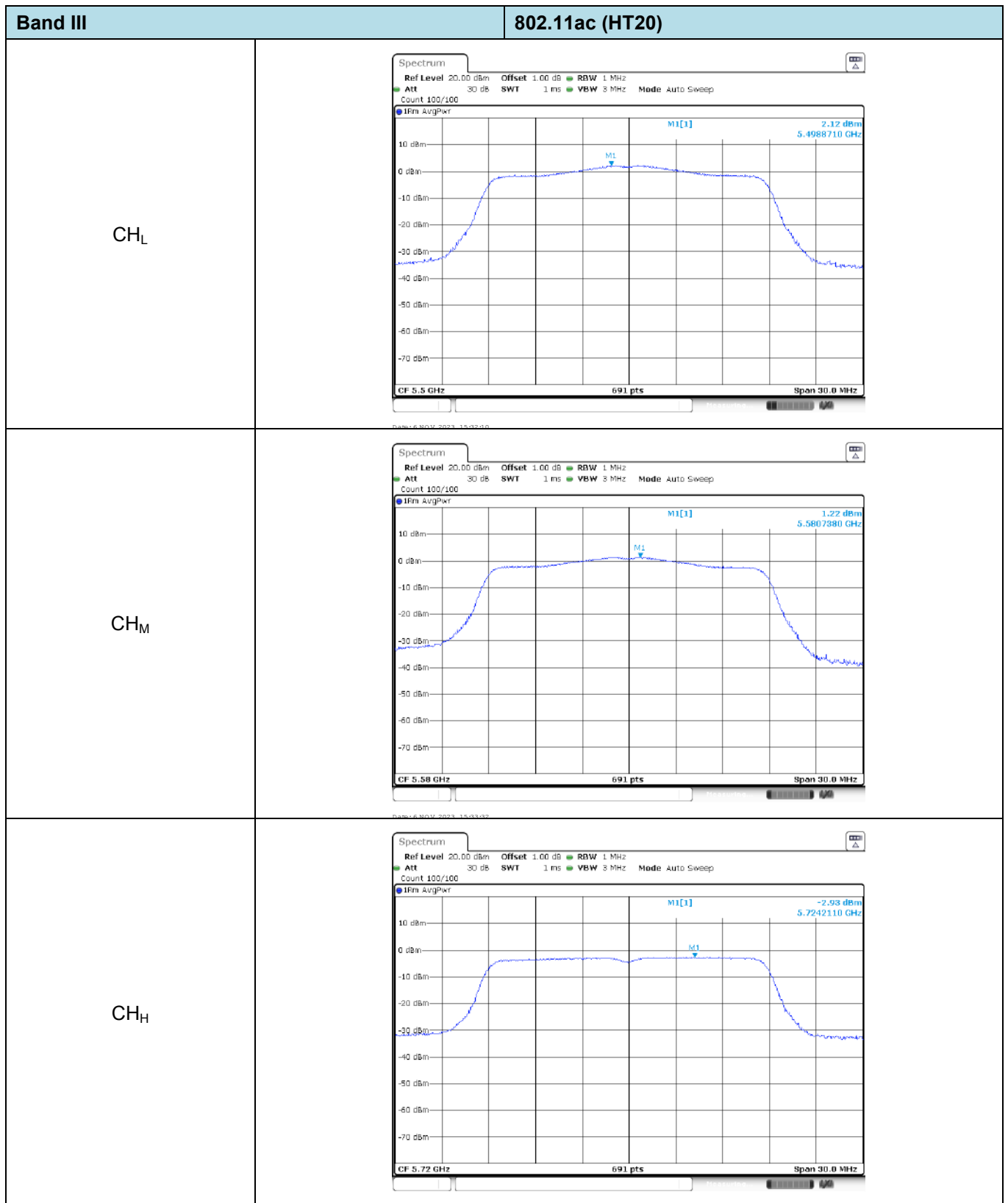
Band II	802.11ac (HT20)
CH _L	 Spectrum plot for CH_L channel. The plot shows a signal centered at 5.26 GHz with a peak level of -1.19 dBm. The signal is measured over a span of 30.0 MHz. The plot includes a reference level of 20.00 dBm, an offset of 1.00 dB, and a resolution bandwidth (RBW) of 1 MHz. The signal is measured using a 100/100 count. The plot also shows the signal level in dBm across the frequency range.
CH _M	 Spectrum plot for CH_M channel. The plot shows a signal centered at 5.28 GHz with a peak level of -1.02 dBm. The signal is measured over a span of 30.0 MHz. The plot includes a reference level of 20.00 dBm, an offset of 1.00 dB, and a resolution bandwidth (RBW) of 1 MHz. The signal is measured using a 100/100 count. The plot also shows the signal level in dBm across the frequency range.
CH _H	 Spectrum plot for CH_H channel. The plot shows a signal centered at 5.32 GHz with a peak level of -1.58 dBm. The signal is measured over a span of 30.0 MHz. The plot includes a reference level of 20.00 dBm, an offset of 1.00 dB, and a resolution bandwidth (RBW) of 1 MHz. The signal is measured using a 100/100 count. The plot also shows the signal level in dBm across the frequency range.

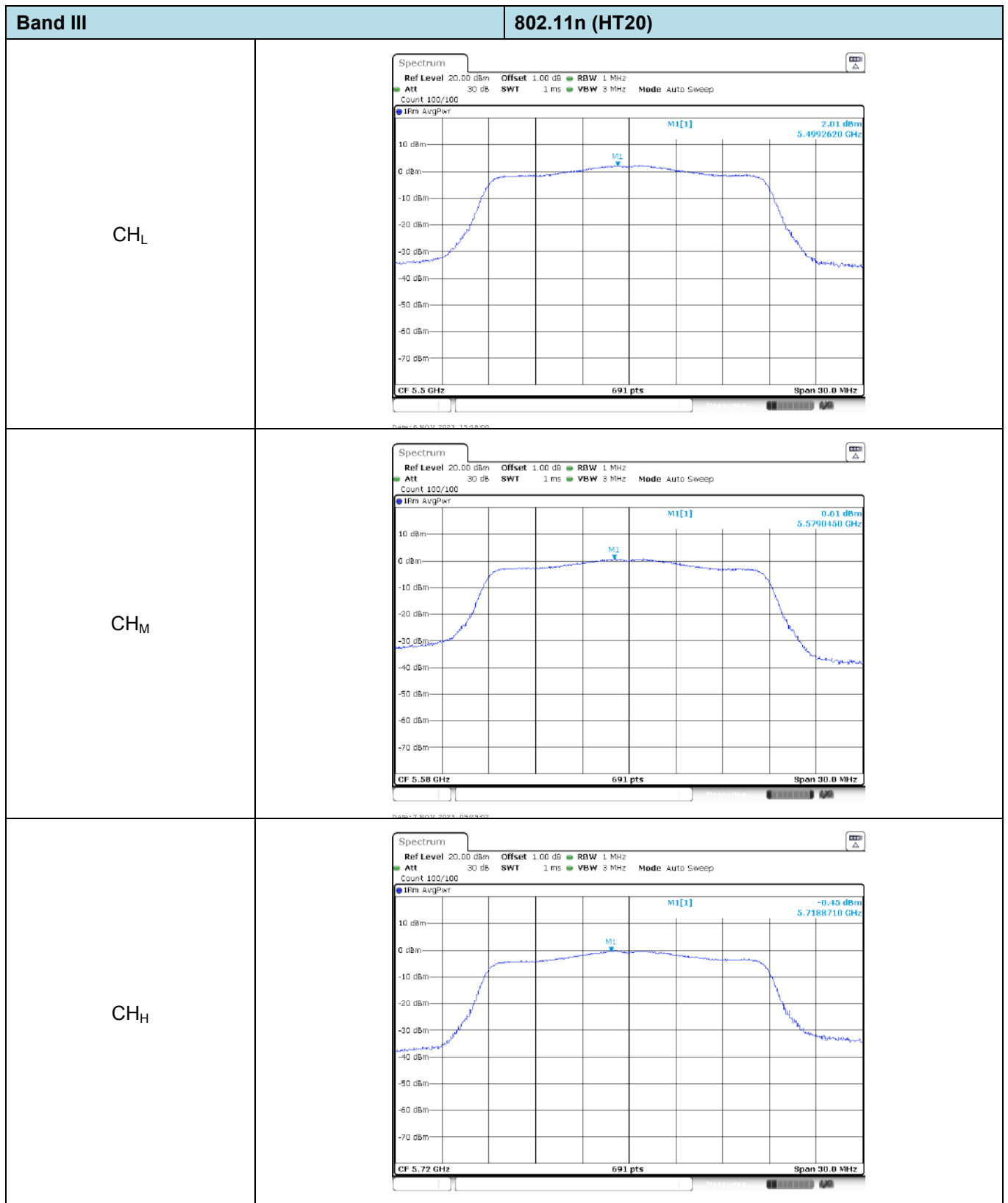


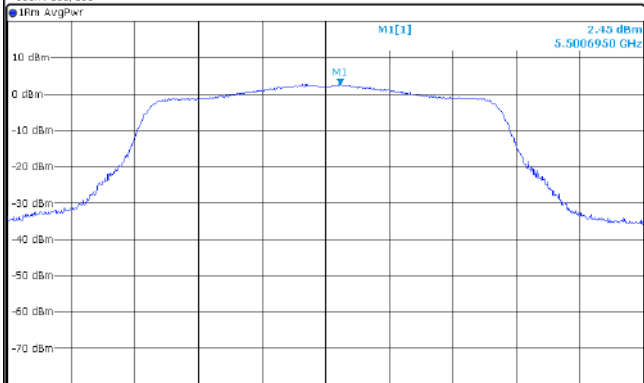
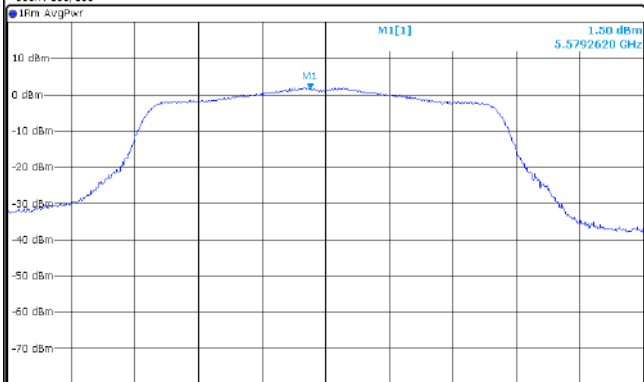
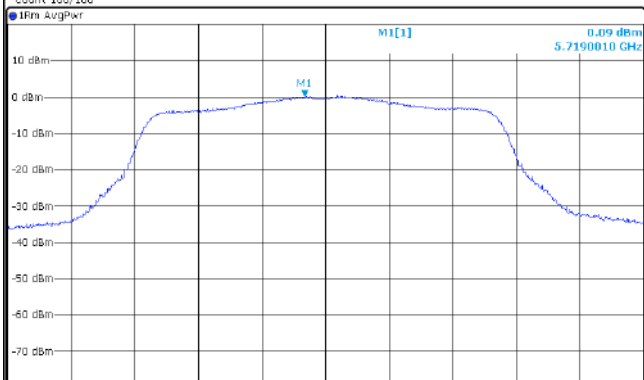
Band II		802.11a
CH _L		
CH _M		
CH _H		

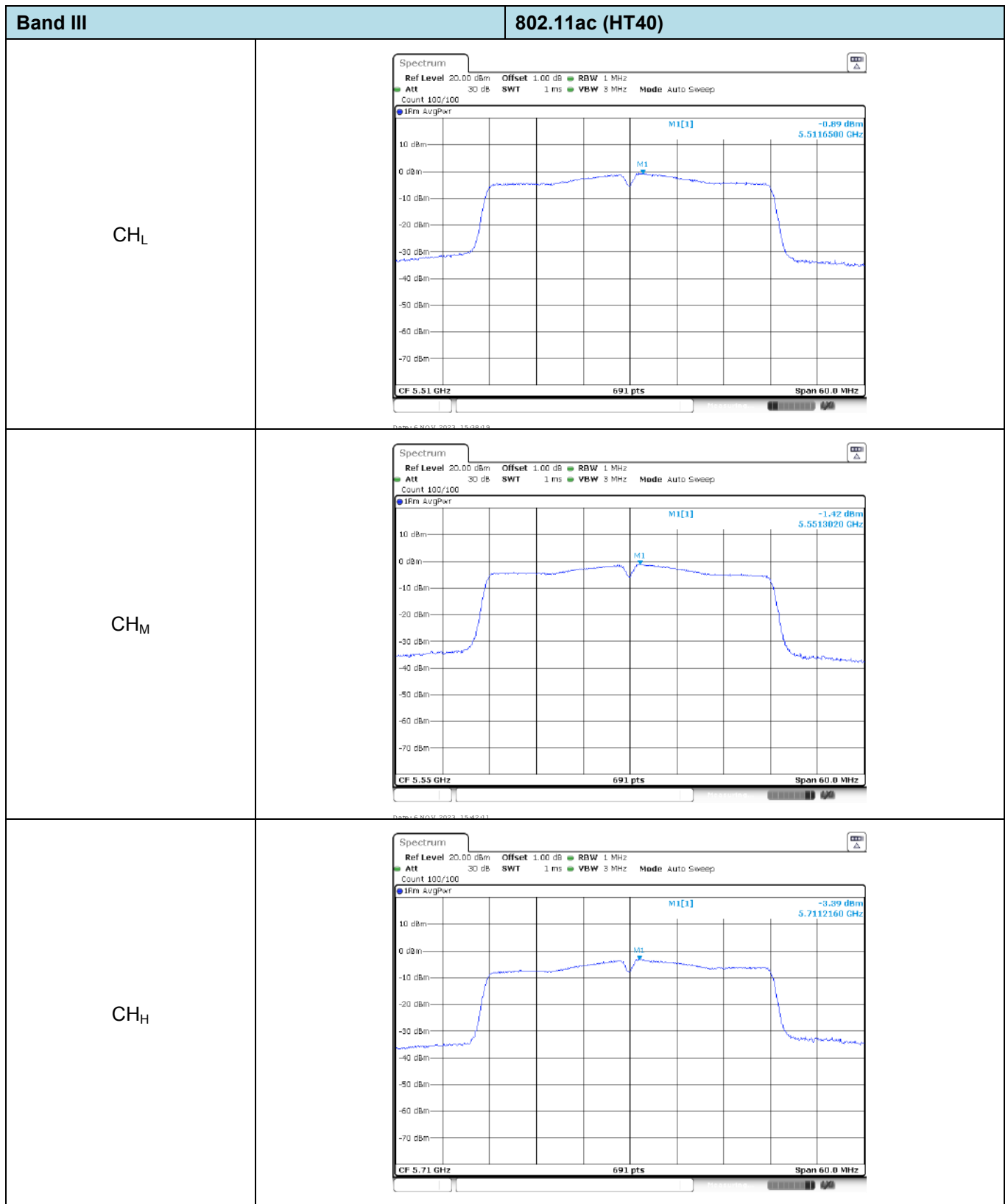
Band II		802.11ac (HT40)
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] -4.59 dBm 5.2716500 GHz CF 5.27 GHz 691 pts Span 60.0 MHz Device: NCV 2023-14-56-56	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] -4.79 dBm 5.3113020 GHz CF 5.31 GHz 691 pts Span 60.0 MHz Device: NCV 2023-14-58-49	

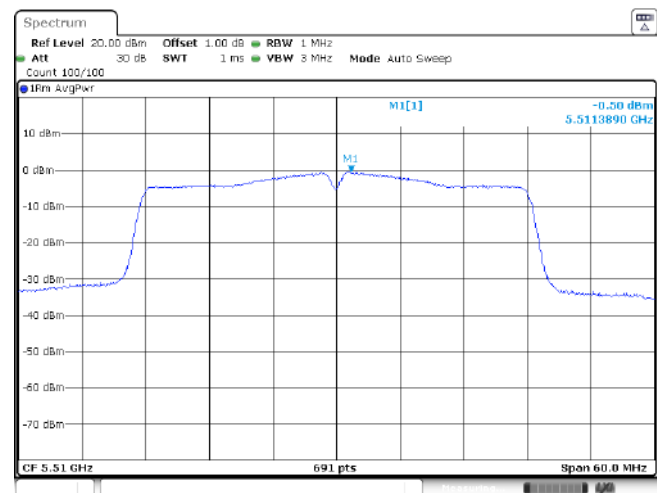
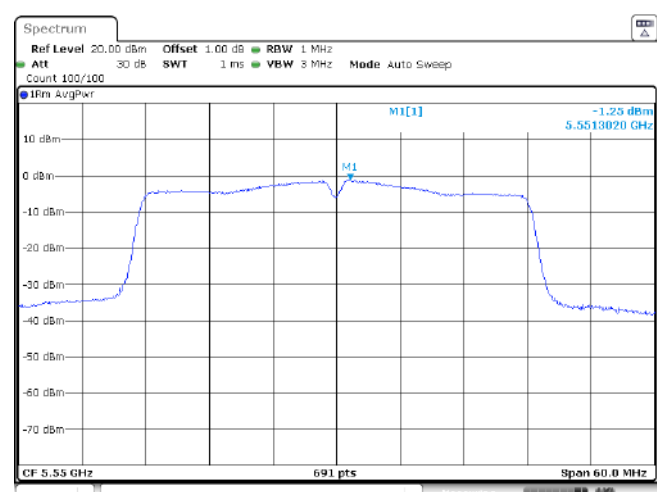
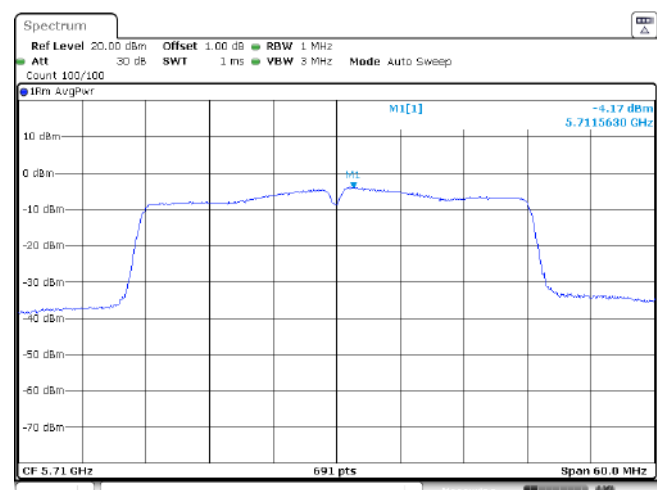


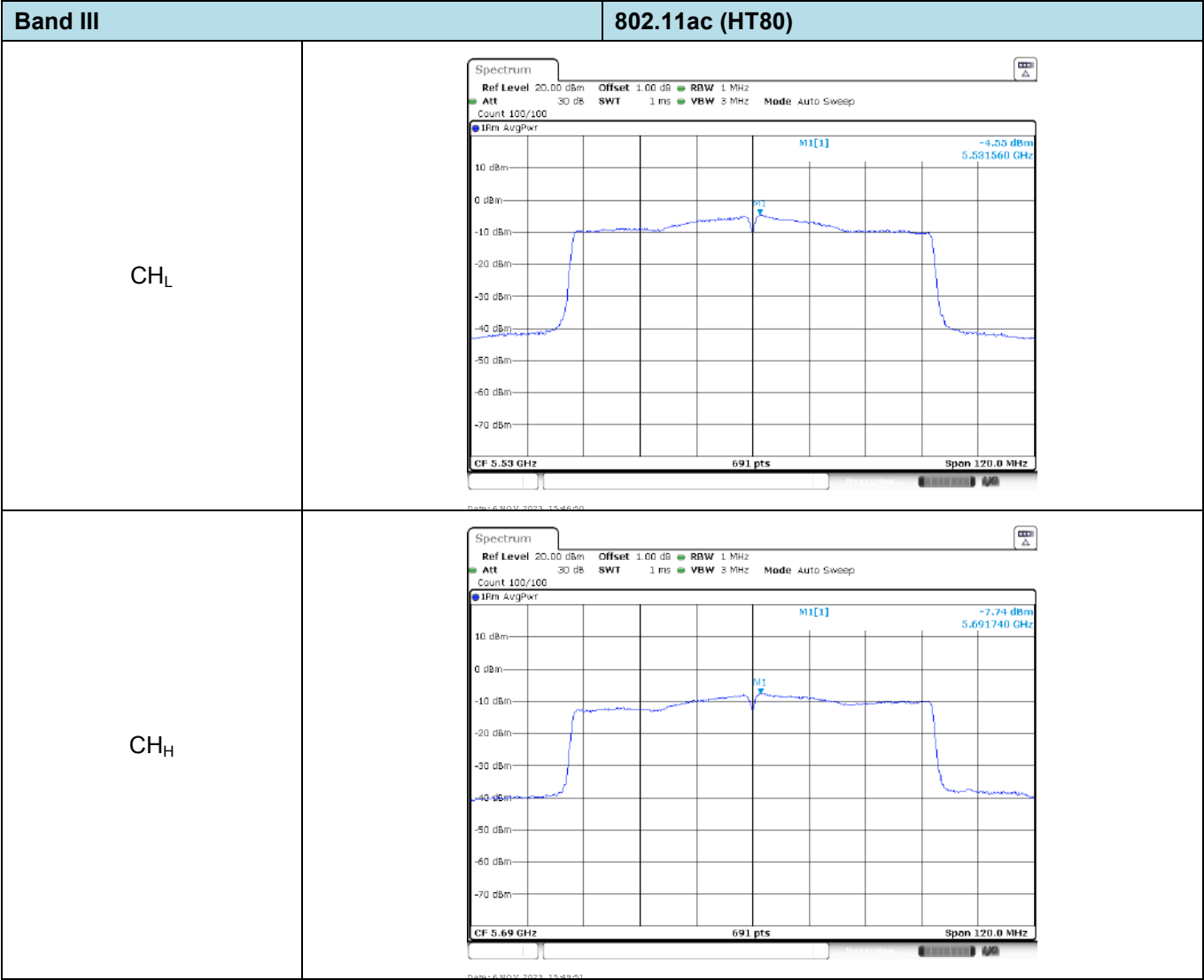


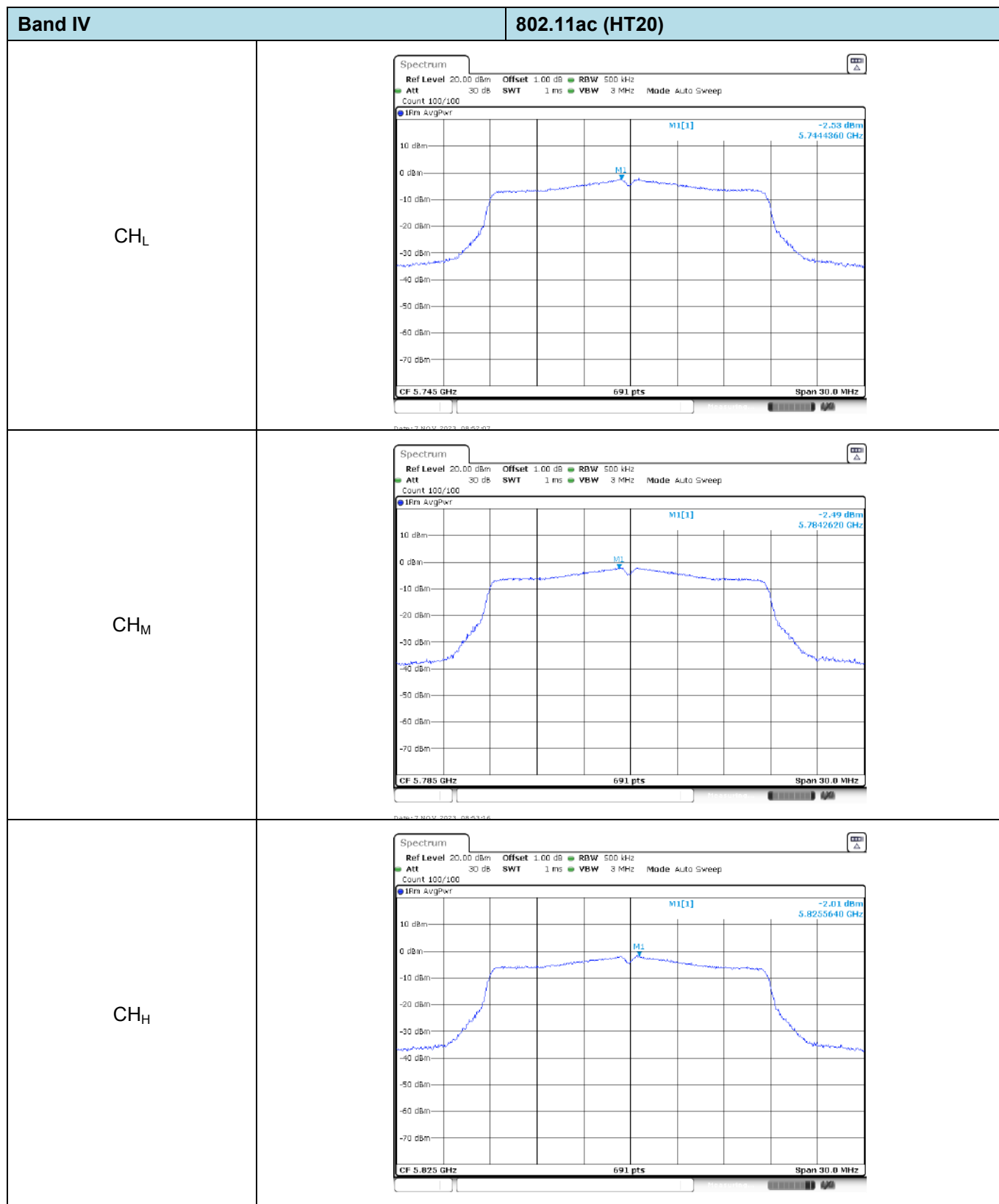


Band III		802.11a
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr  CF 5.5 GHz691 ptsSpan 30.0 MHz DevE-WiFi-2023-15-09-04	
CH _M	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr  CF 5.58 GHz691 ptsSpan 30.0 MHz DevE-WiFi-2023-15-09-05	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr  CF 5.72 GHz691 ptsSpan 30.0 MHz DevE-WiFi-2023-15-09-06	

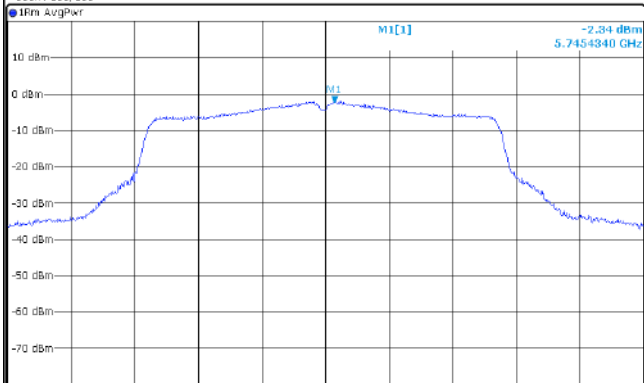
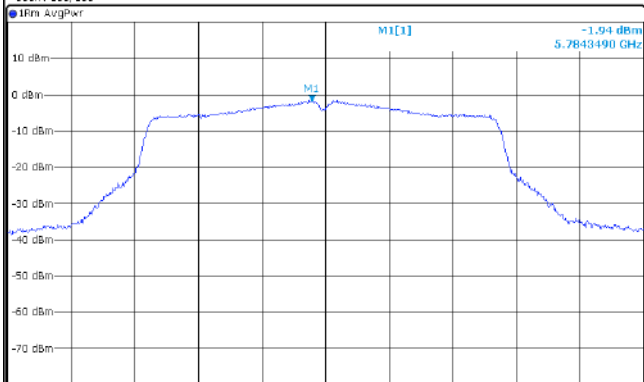
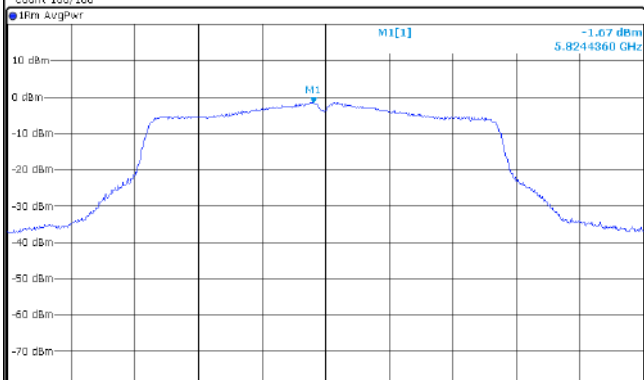


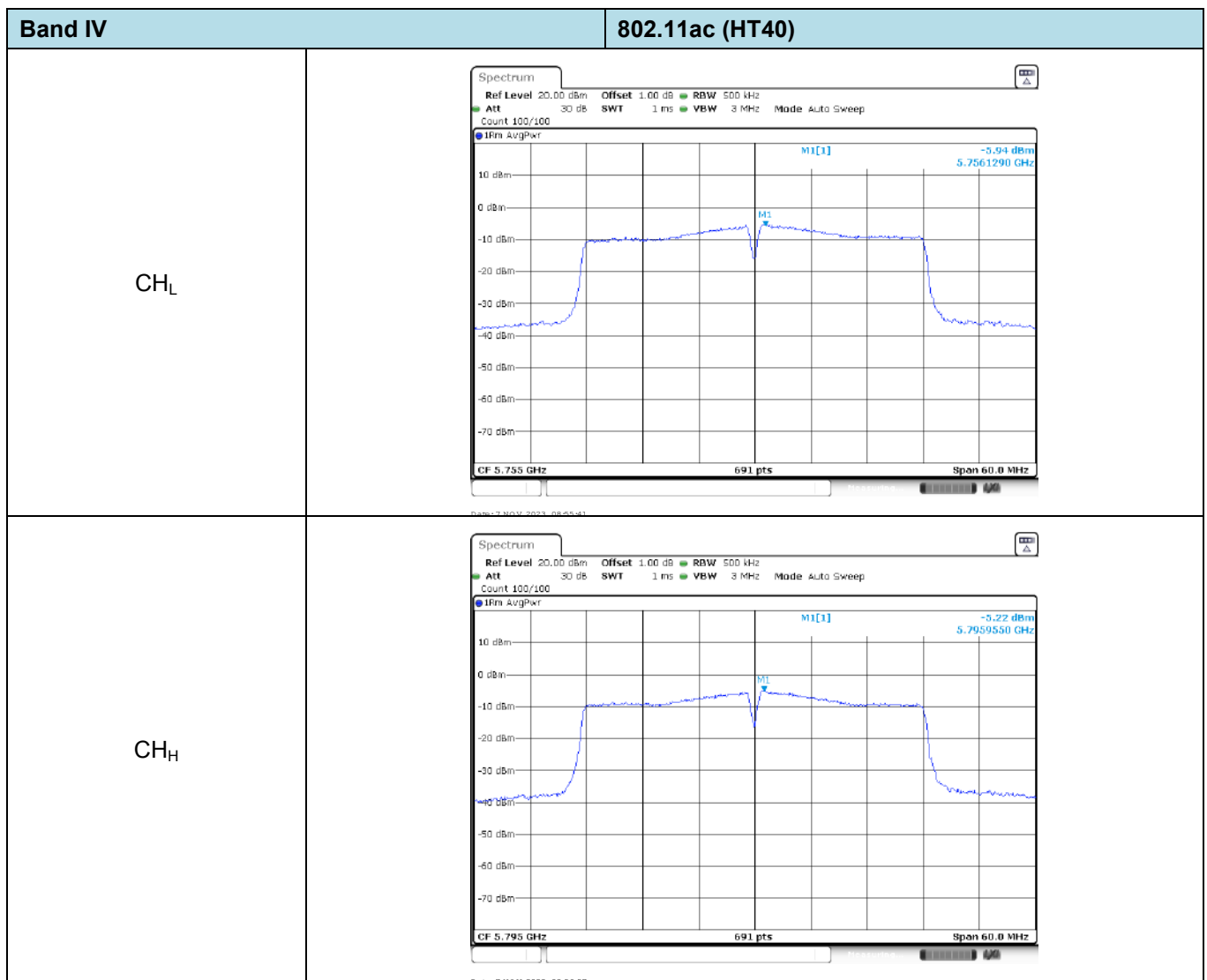
Band III	802.11n (HT40)
CH _L	 Spectrum plot for CH_L band. The plot shows a signal at 5.5113890 GHz with a power level of -0.50 dBm. The frequency span is 60.0 MHz, and the center frequency is 5.51 GHz. The plot includes a peak marker M1[1] at the signal frequency.
CH _M	 Spectrum plot for CH_M band. The plot shows a signal at 5.5513020 GHz with a power level of -1.25 dBm. The frequency span is 60.0 MHz, and the center frequency is 5.55 GHz. The plot includes a peak marker M1[1] at the signal frequency.
CH _H	 Spectrum plot for CH_H band. The plot shows a signal at 5.7115630 GHz with a power level of -4.17 dBm. The frequency span is 60.0 MHz, and the center frequency is 5.71 GHz. The plot includes a peak marker M1[1] at the signal frequency.





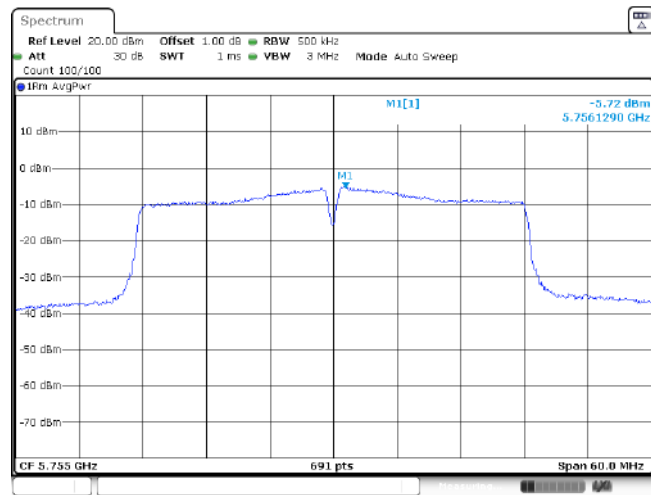
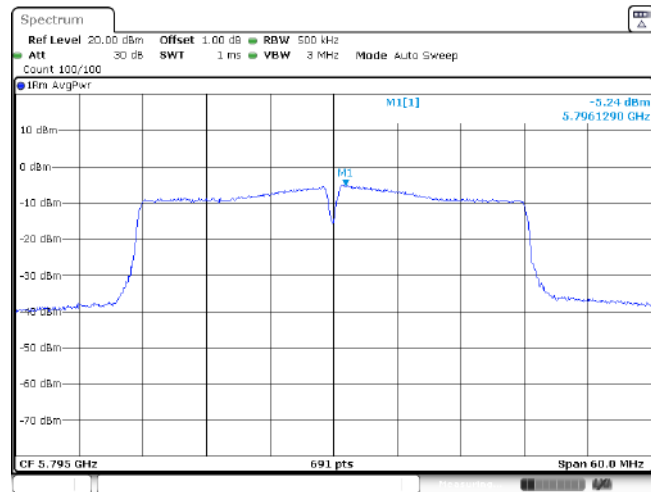
Band IV		802.11n (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr M1[1] -2.59 dBm 5.7454840 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.745 GHz 691 pts Span 30.0 MHz Result NOV-2023-08-15-02	
CH _M	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr M1[1] -2.51 dBm 5.7855640 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.785 GHz 691 pts Span 30.0 MHz Result NOV-2023-08-17-00	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr M1[1] -2.28 dBm 5.8253470 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.825 GHz 691 pts Span 30.0 MHz Result NOV-2023-08-18-11	

Band IV		802.11a
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr  Result NOV-2023-084243	
CH _M	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr  Result NOV-2023-084348	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IFin AvgPwr  Result NOV-2023-084407	



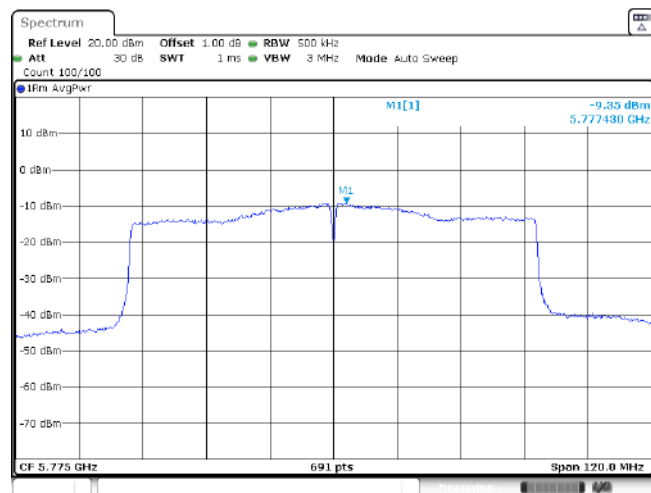
Band IV

802.11n (HT40)

CH_LCH_H

Band IV

802.11ac (HT80)

CH_M

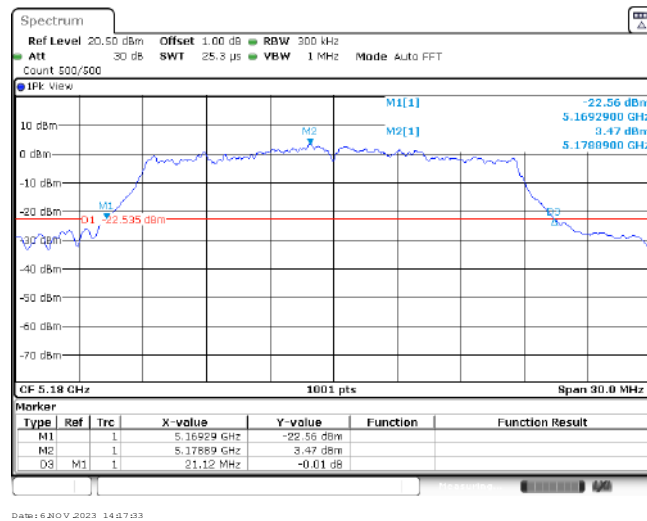
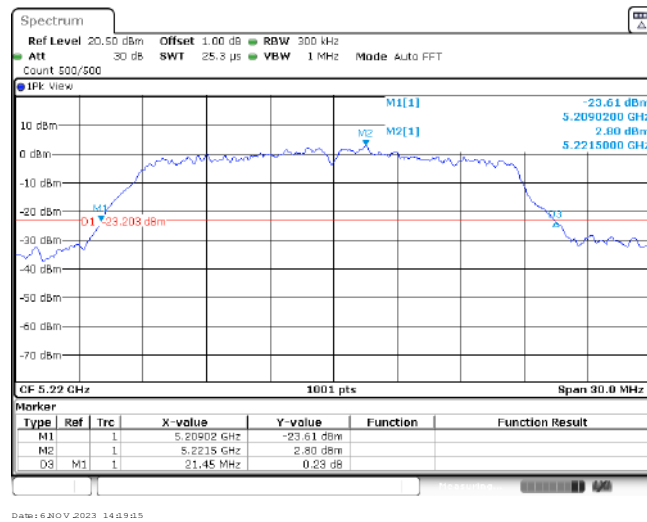
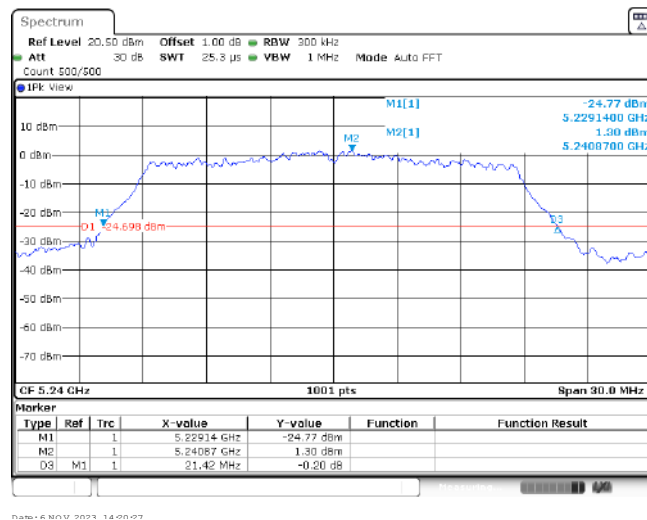
Appendix C: 26dB bandwidth

Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
I	20	802.11ac	CH _L	21.12	Pass
			CH _M	21.45	
			CH _H	21.42	
		802.11n	CH _L	21.48	Pass
			CH _M	23.28	
			CH _H	21.21	
		802.11a	CH _L	21.12	Pass
			CH _M	20.82	
			CH _H	21.06	
	40	802.11ac	CH _L	45.66	Pass
			CH _H	40.38	
		802.11n	CH _L	41.04	Pass
			CH _H	40.20	
	80	802.11ac	CH _M	81.72	Pass
II	20	802.11ac	CH _L	21.66	Pass
			CH _M	21.21	
			CH _H	21.72	
		802.11n	CH _L	21.66	Pass
			CH _M	21.12	
			CH _H	21.27	
		802.11a	CH _L	21.06	Pass
			CH _M	21.09	
			CH _H	21.09	
	40	802.11ac	CH _L	40.14	Pass
			CH _H	40.26	
		802.11n	CH _L	40.20	Pass
			CH _H	40.14	
	80	802.11ac	CH _M	93.60	Pass

Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
III	20	802.11ac	CH _L	21.36	Pass
			CH _M	21.63	
			CH _H	25.53	
		802.11n	CH _L	21.48	Pass
			CH _M	21.81	
			CH _H	21.60	
		802.11a	CH _L	20.82	Pass
			CH _M	21.33	
			CH _H	21.09	
	40	802.11ac	CH _L	47.64	Pass
			CH _M	40.50	
			CH _H	49.86	
		802.11n	CH _L	40.20	Pass
			CH _M	40.56	
			CH _H	49.92	
	80	802.11ac	CH _L	81.60	Pass
			CH _H	95.52	

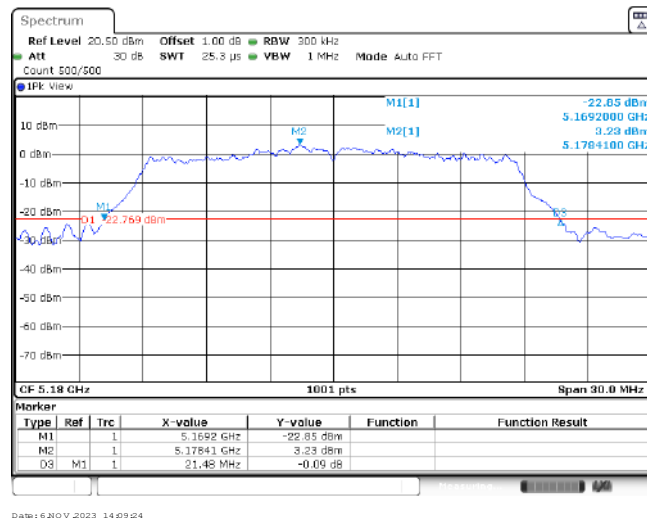
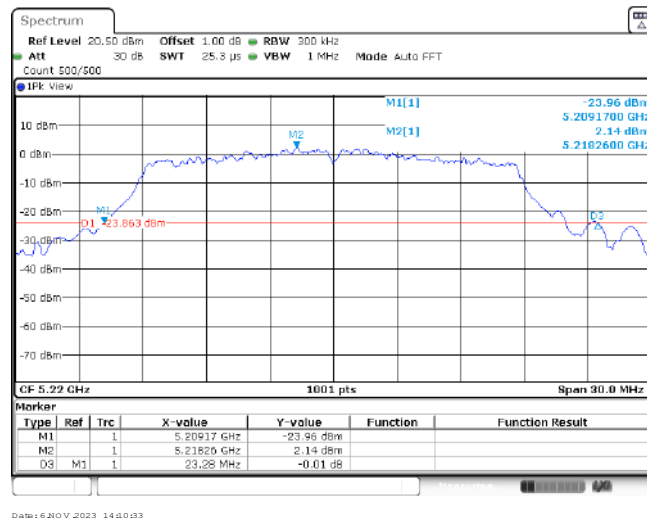
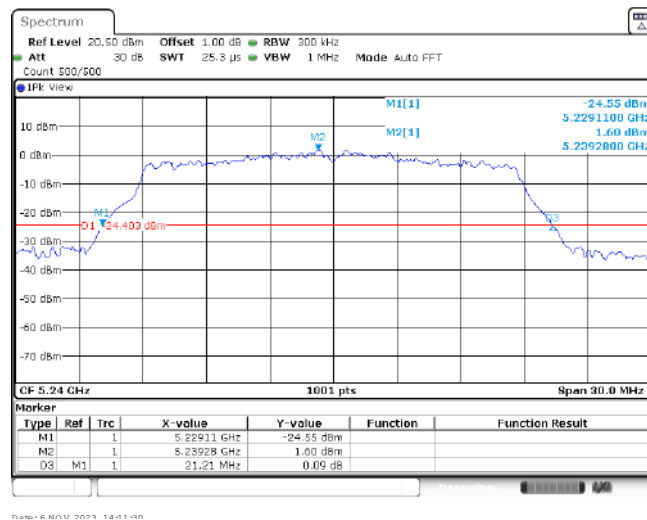
Band I

802.11ac (HT20)

CH_LCH_MCH_H

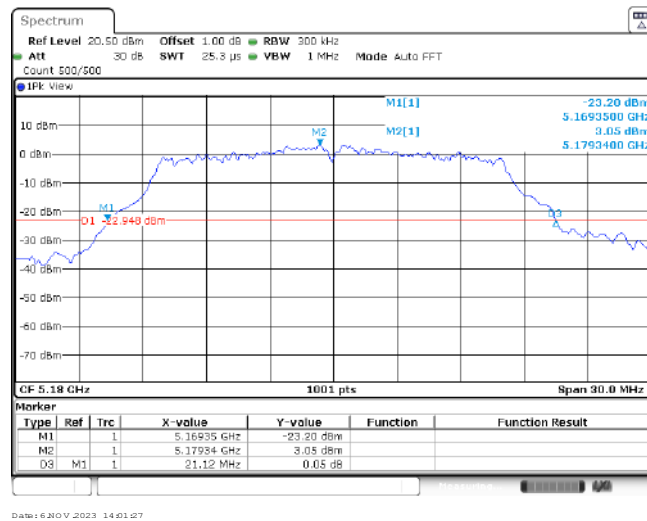
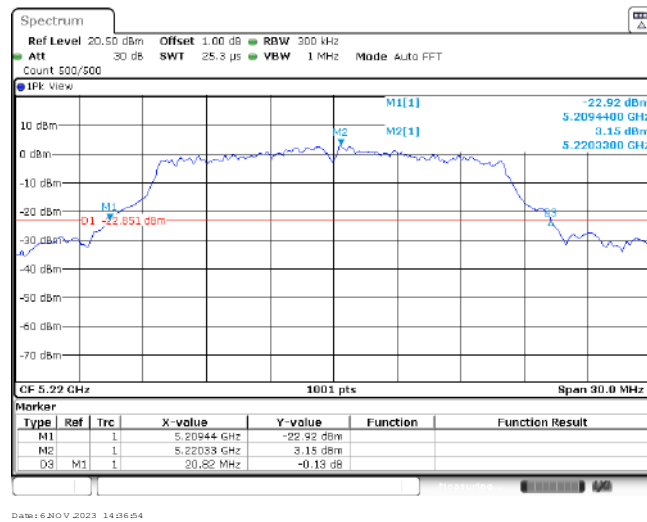
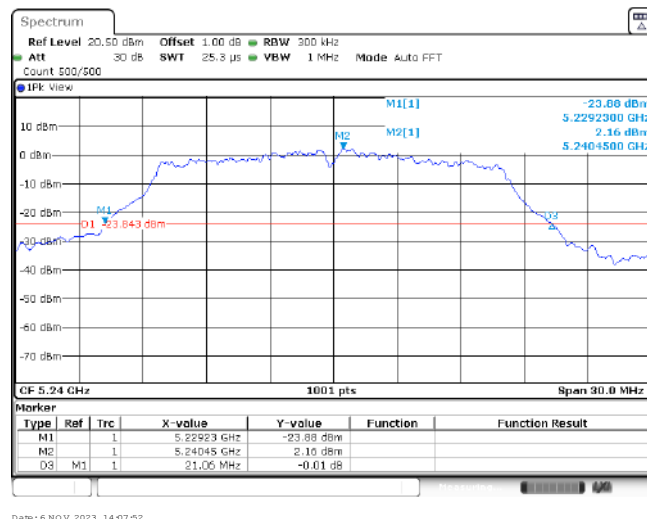
Band I

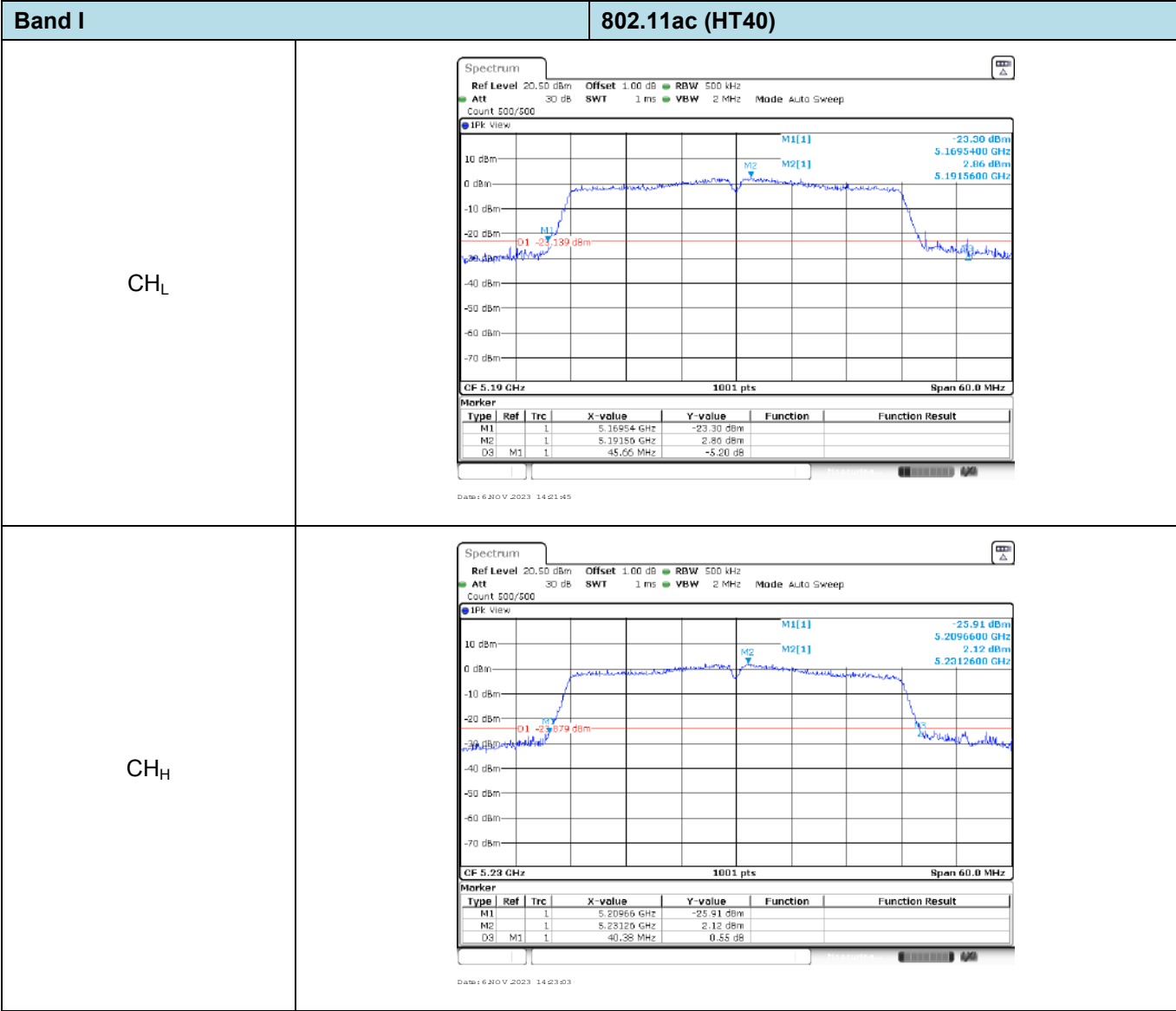
802.11n (HT20)

CH_LCH_MCH_H

Band I

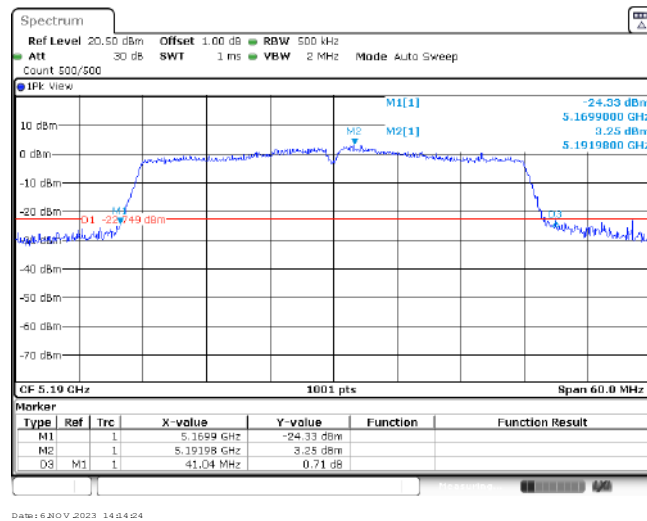
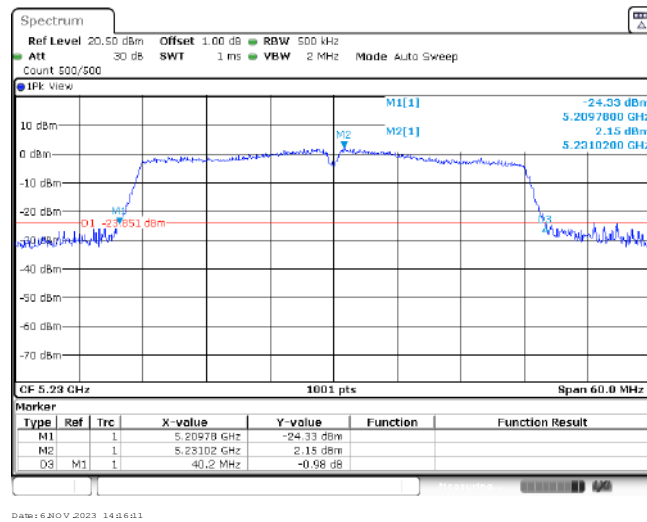
802.11a

CH_LCH_MCH_H



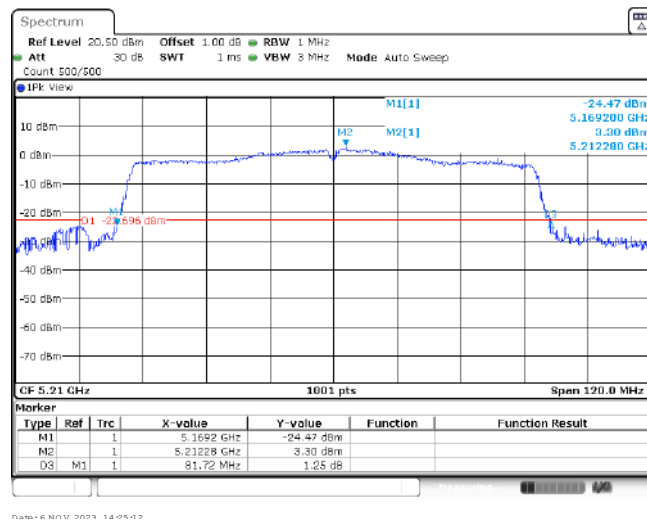
Band I

802.11n (HT40)

CH_LCH_H

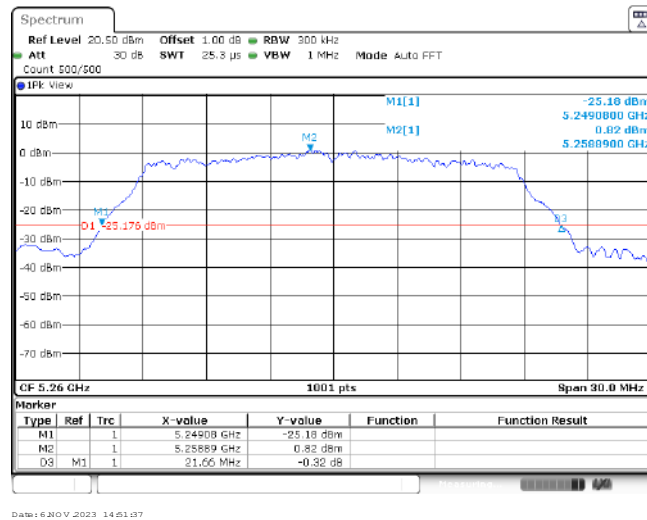
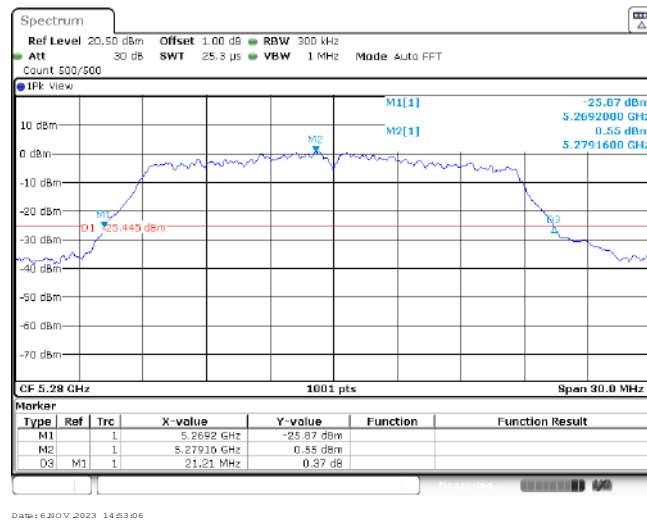
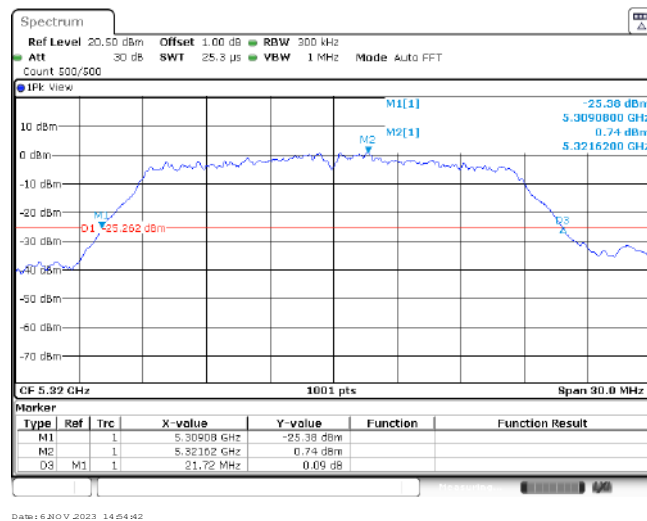
Band I

802.11ac (HT80)

CH_M

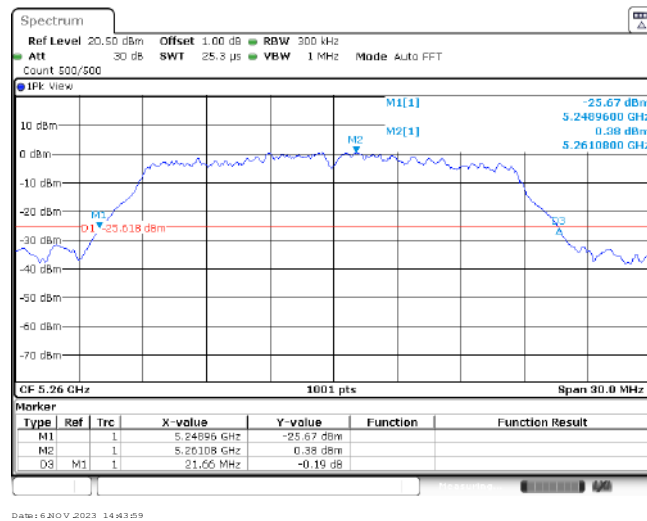
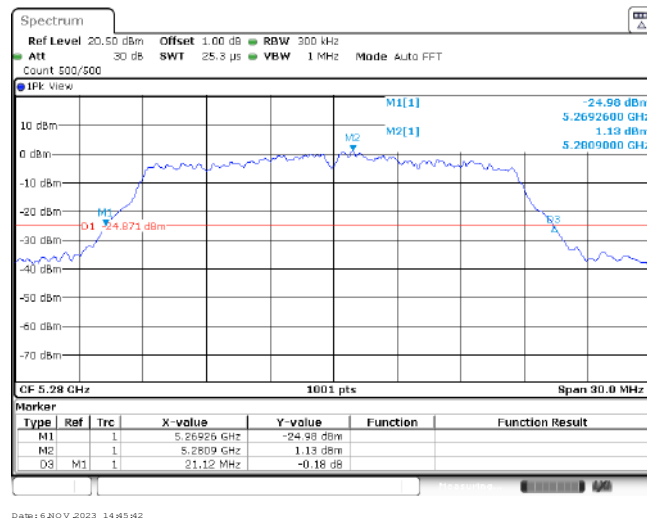
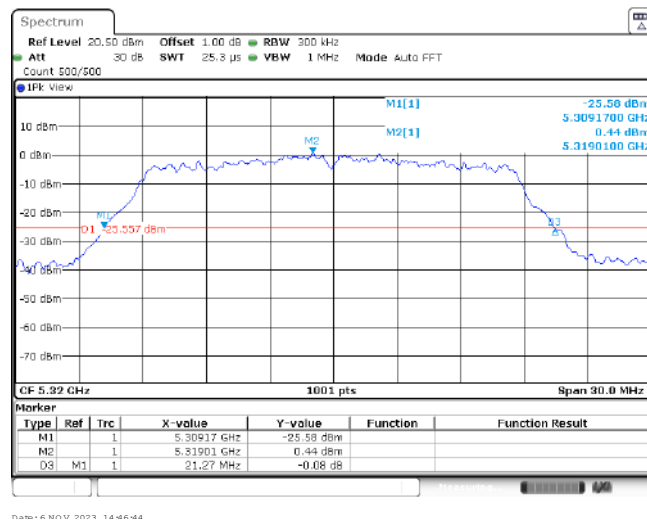
Band II

802.11ac (HT20)

CH_LCH_MCH_H

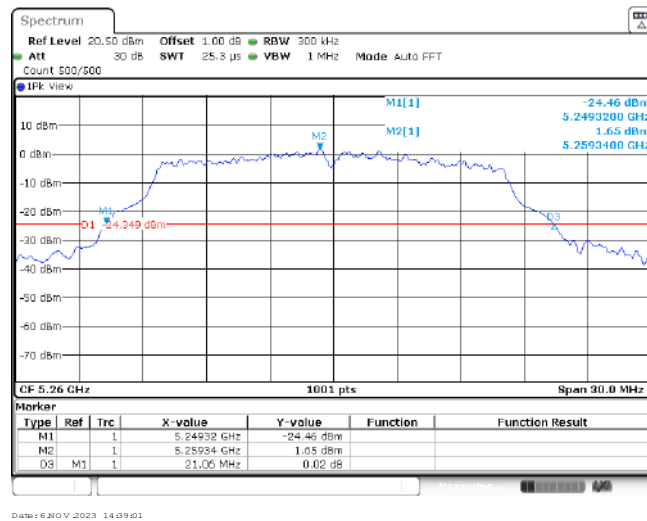
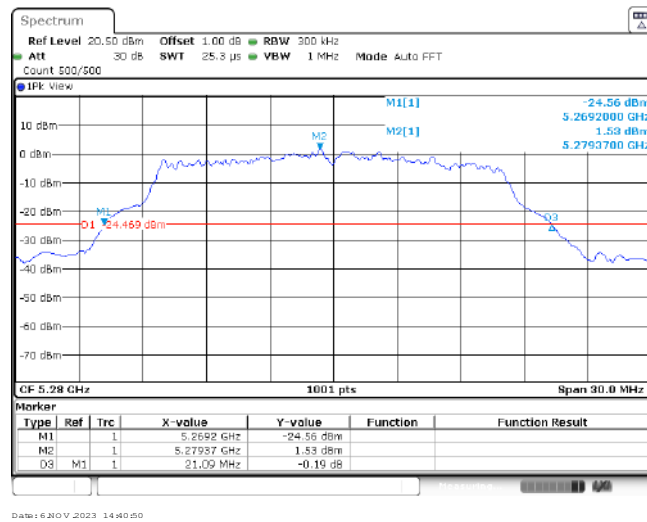
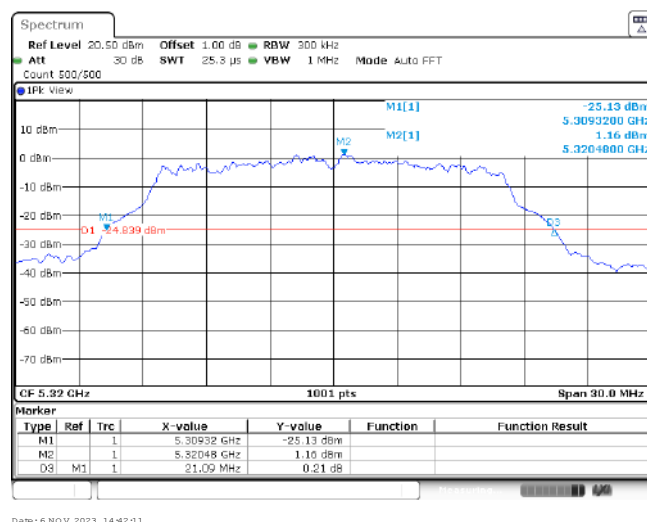
Band II

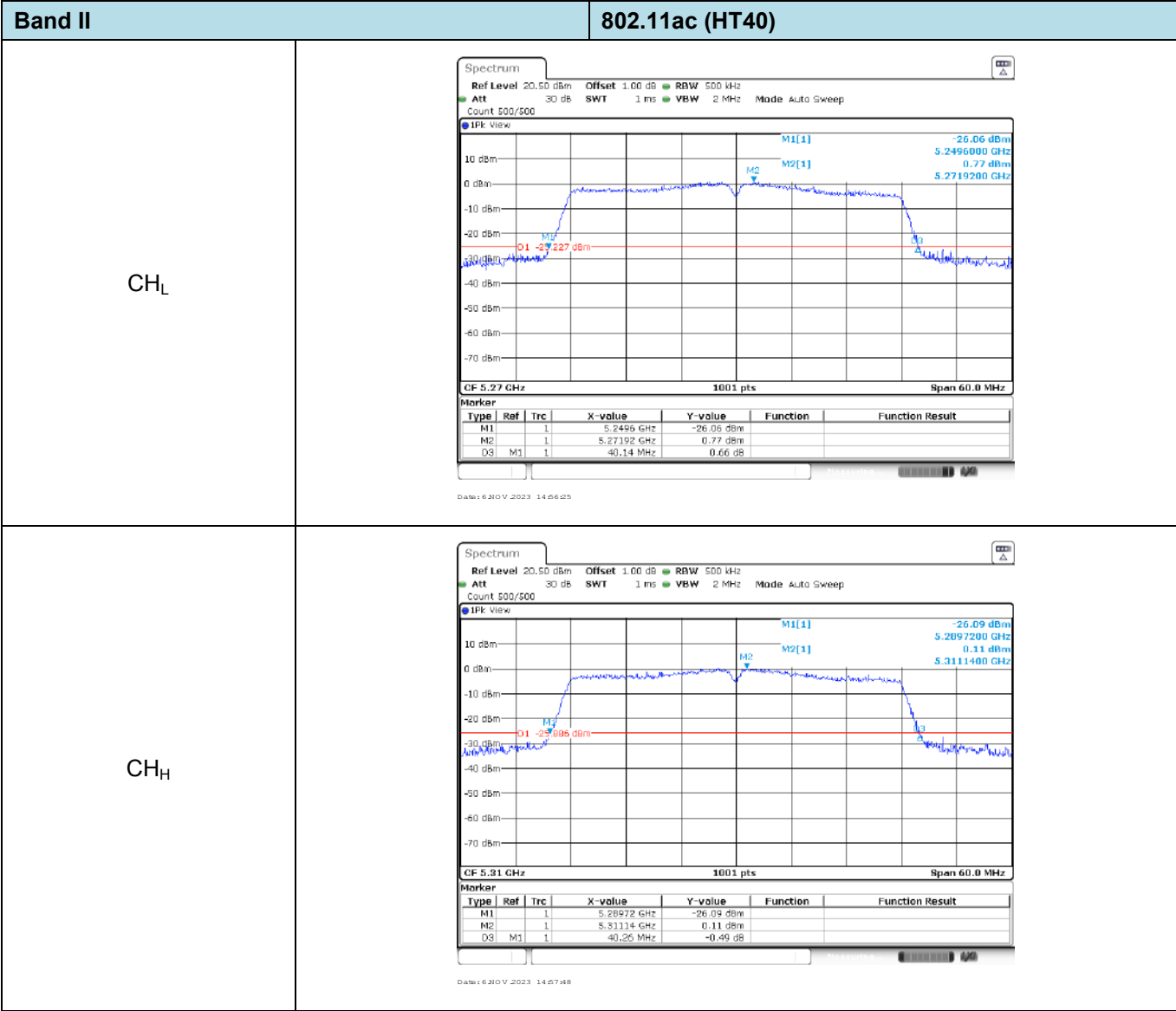
802.11n (HT20)

CH_LCH_MCH_H

Band II

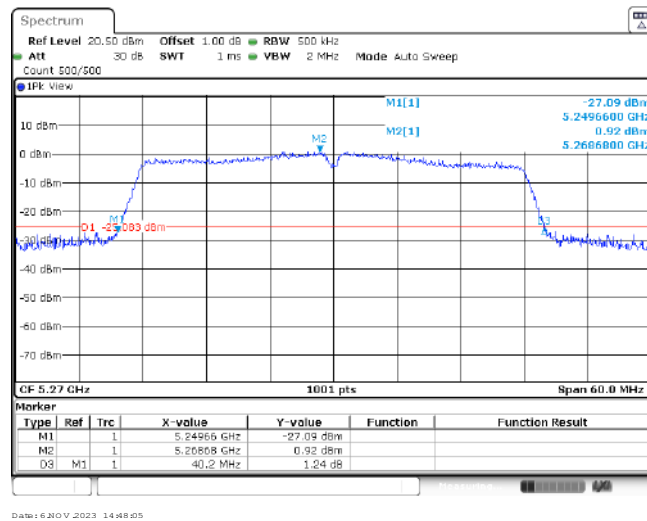
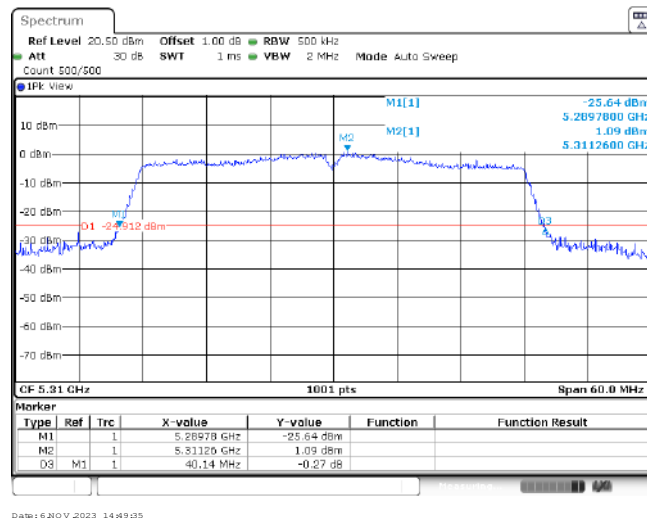
802.11a

CH_LCH_MCH_H



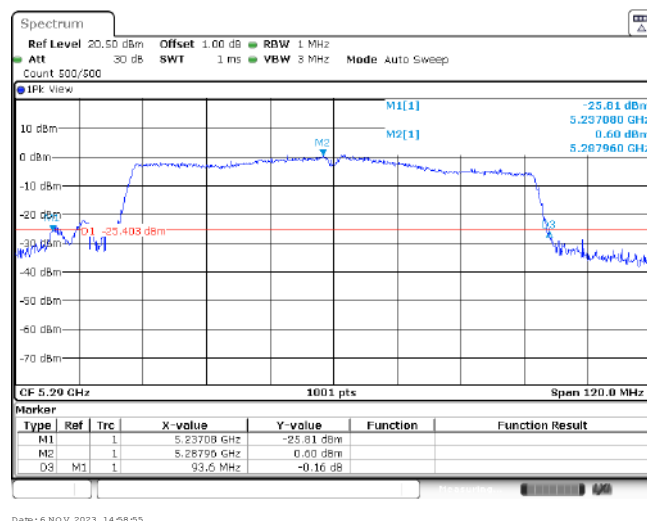
Band II

802.11n (HT40)

CH_LCH_H

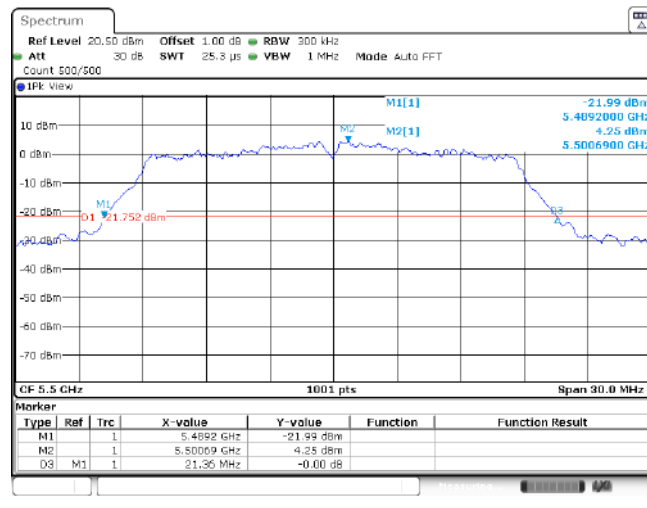
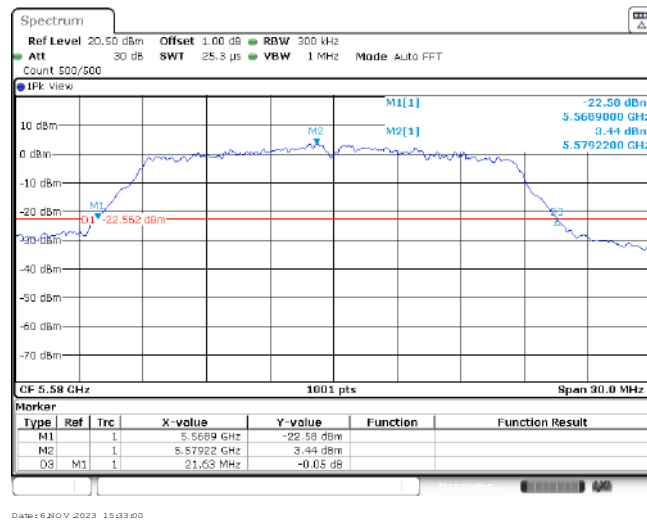
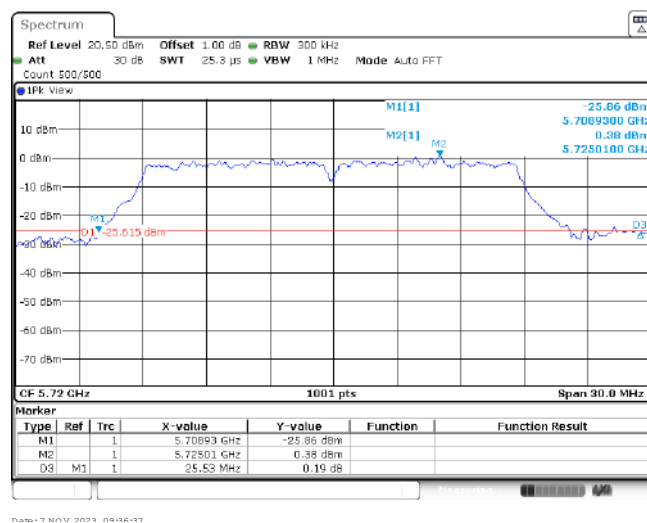
Band II

802.11ac (HT80)

CH_M

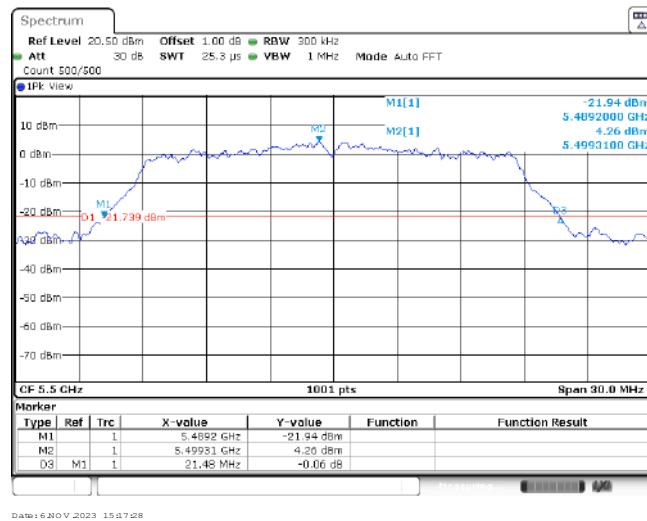
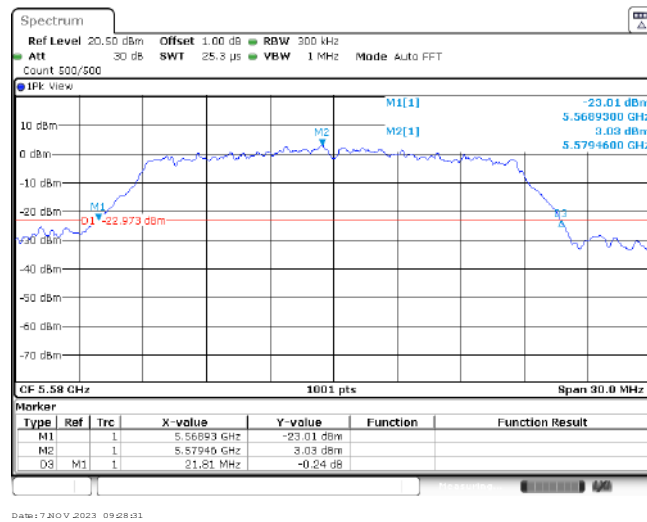
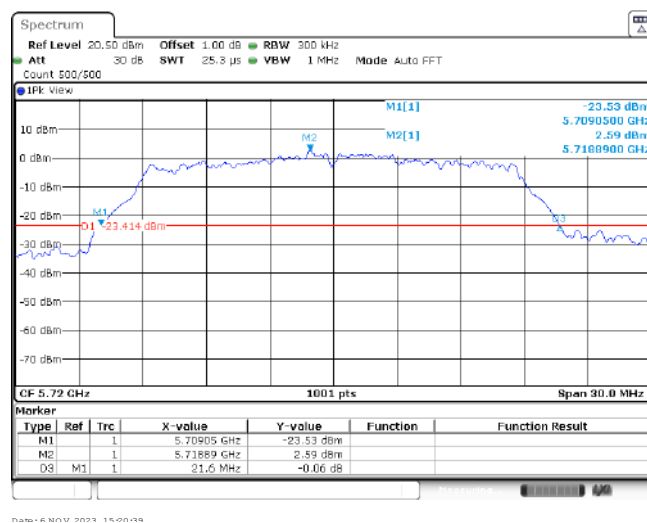
Band III

802.11ac (HT20)

CH_LCH_MCH_H

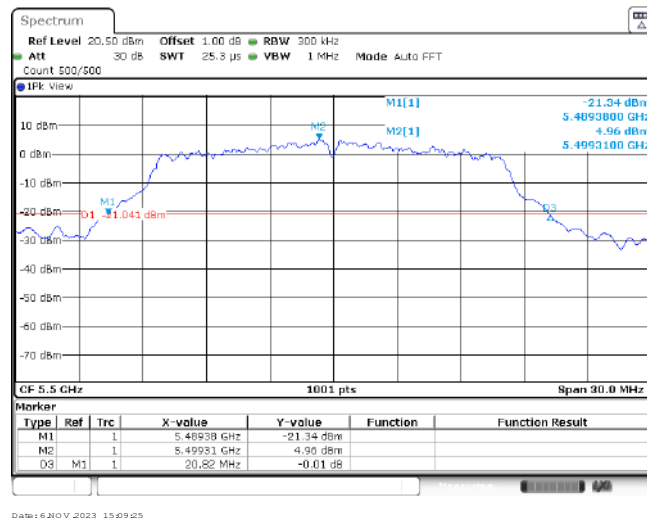
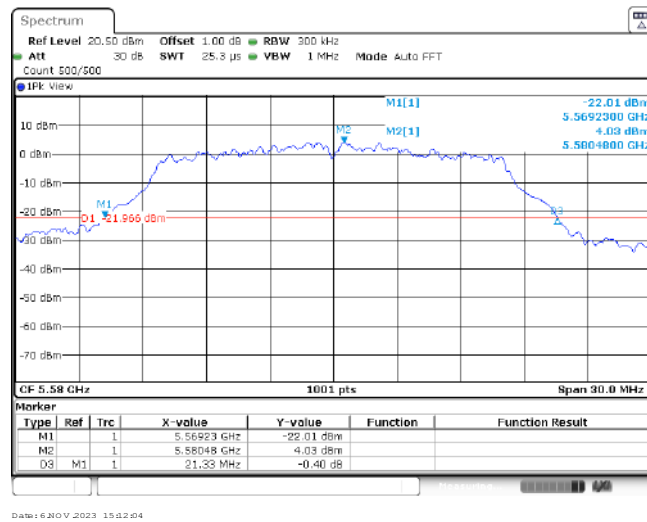
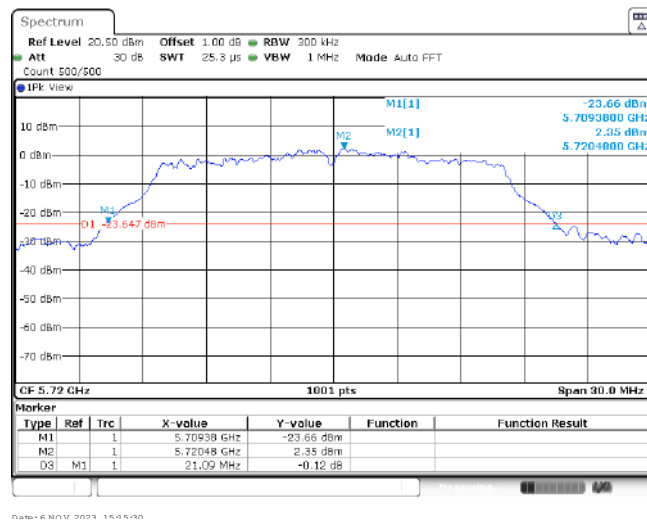
Band III

802.11n (HT20)

CH_LCH_MCH_H

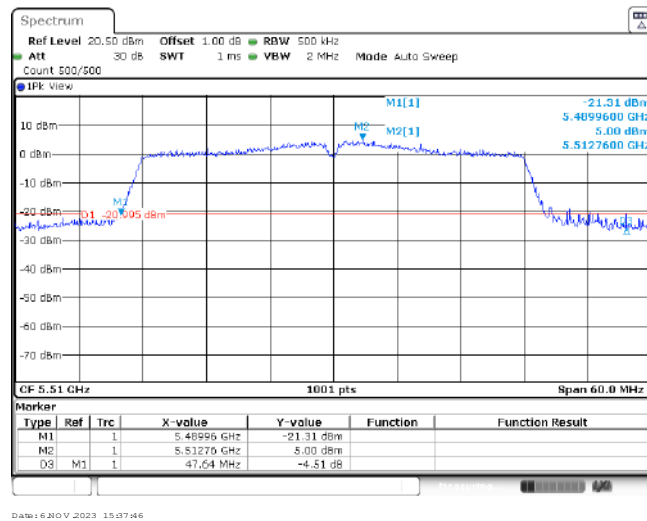
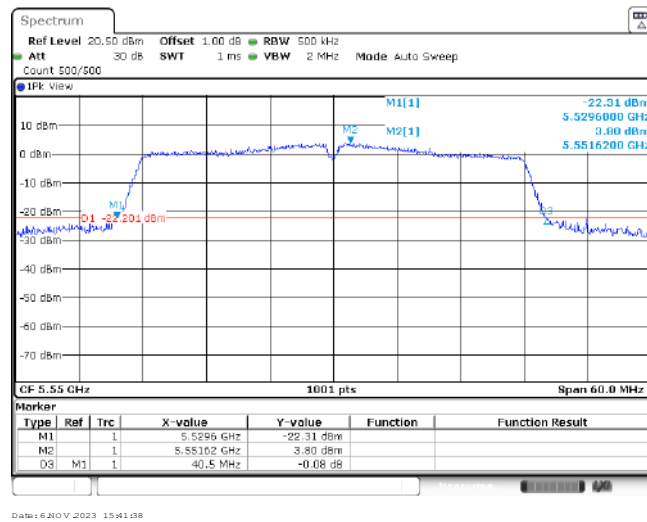
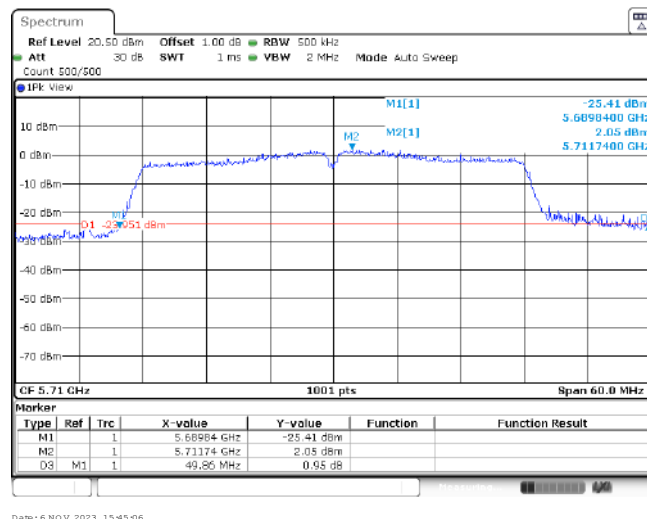
Band III

802.11a

CH_LCH_MCH_H

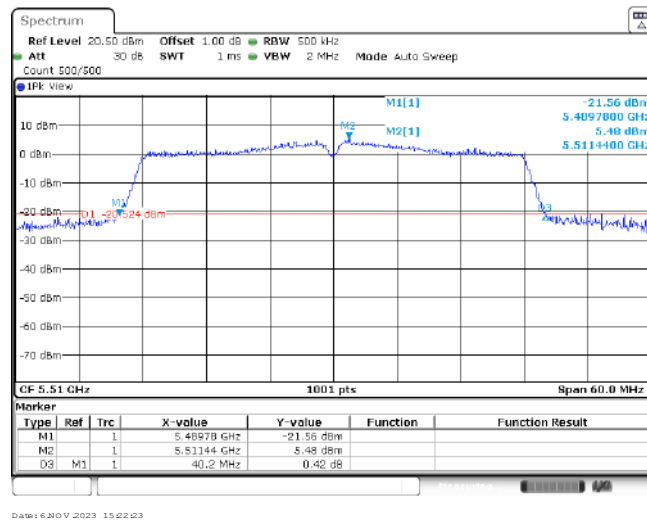
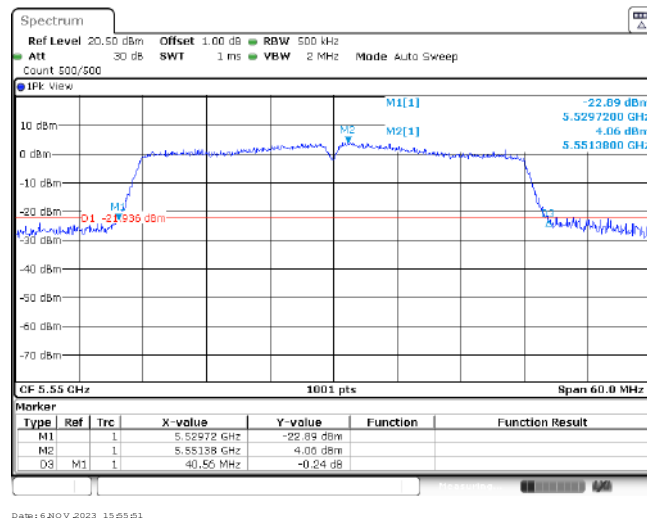
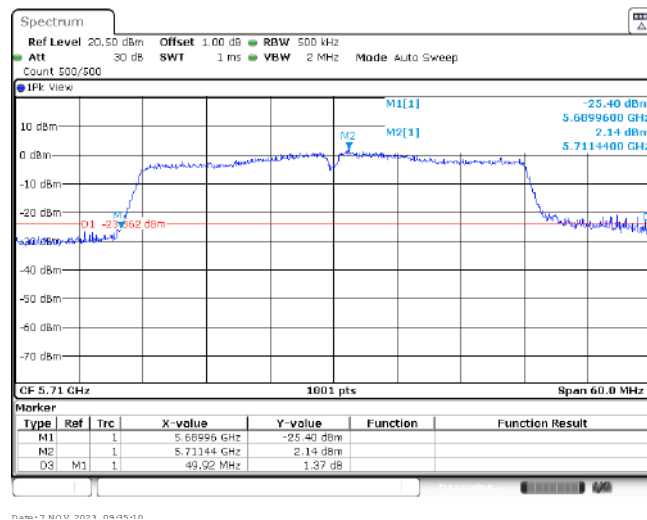
Band III

802.11ac (HT40)

CH_LCH_MCH_H

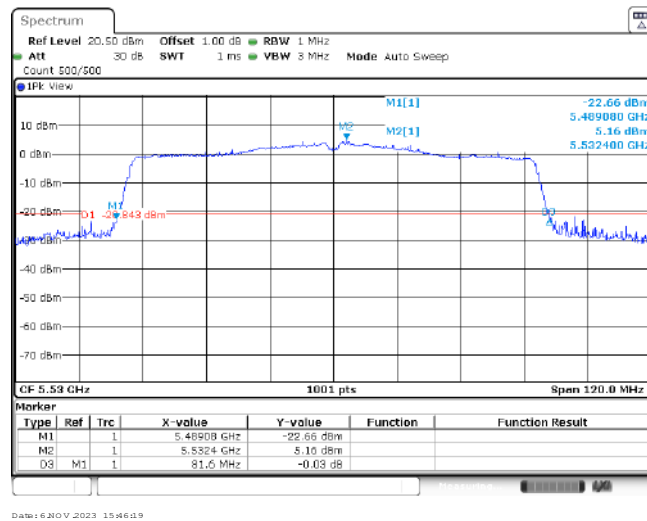
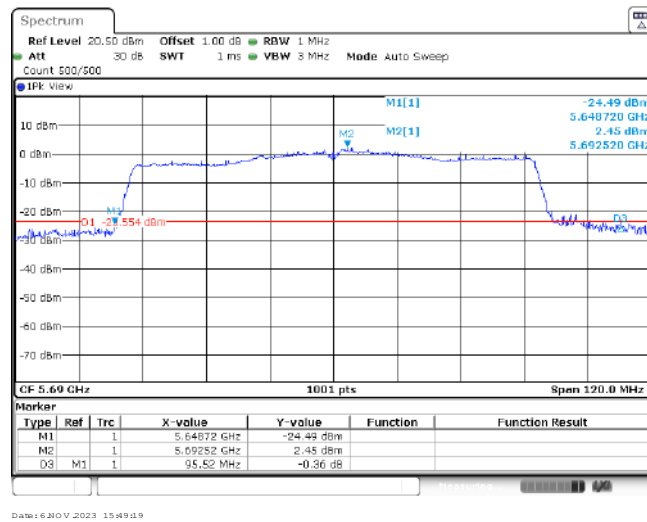
Band III

802.11n (HT40)

CH_LCH_MCH_H

Band III

802.11ac (HT80)

CH_LCH_H

Appendix D: 99% Occupy bandwidth

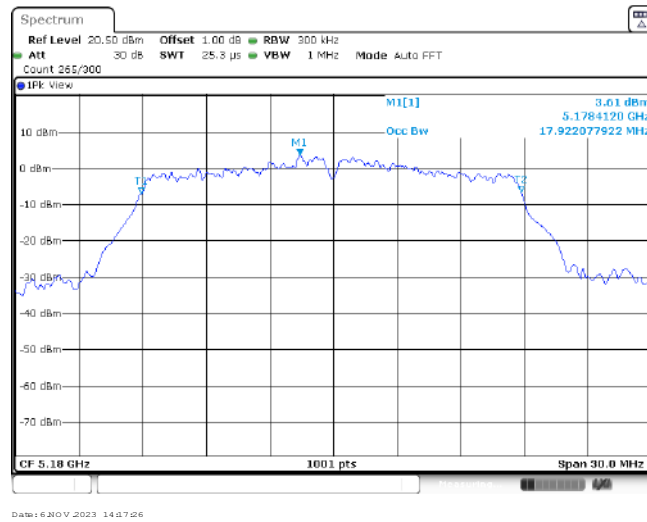
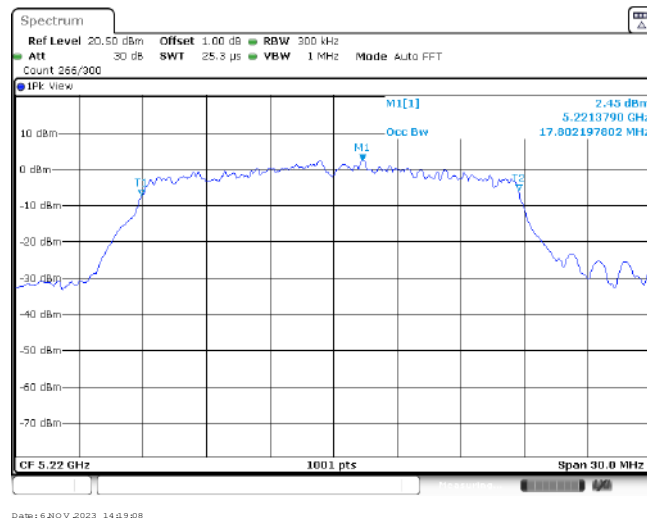
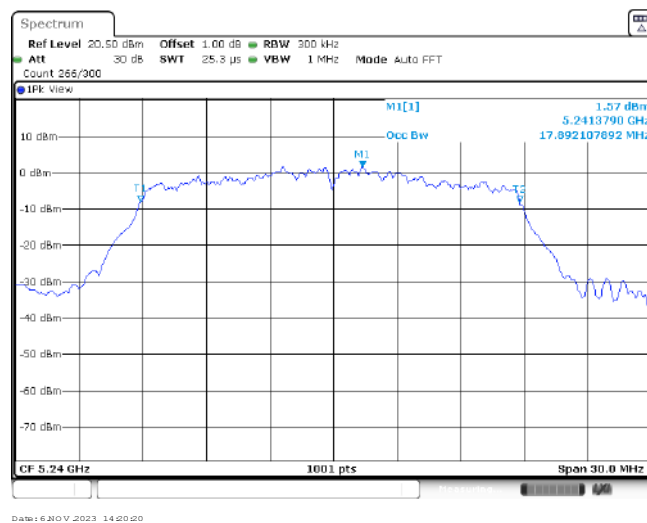
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
I	20	802.11ac	CH _L	17.92	Pass
			CH _M	17.80	
			CH _H	17.89	
		802.11n	CH _L	17.83	Pass
			CH _M	17.89	
			CH _H	17.80	
		802.11a	CH _L	16.60	Pass
			CH _M	16.78	
			CH _H	16.72	
	40	802.11ac	CH _L	36.32	Pass
			CH _H	36.26	
		802.11n	CH _L	36.32	Pass
			CH _H	36.32	
	80	802.11ac	CH _M	75.29	Pass
II	20	802.11ac	CH _L	17.86	Pass
			CH _M	17.92	
			CH _H	18.13	
		802.11n	CH _L	17.92	Pass
			CH _M	18.07	
			CH _H	17.98	
		802.11a	CH _L	16.75	Pass
			CH _M	16.93	
			CH _H	16.60	
	40	802.11ac	CH _L	36.32	Pass
			CH _H	36.38	
		802.11n	CH _L	36.26	Pass
			CH _H	36.32	
	80	802.11ac	CH _M	75.52	Pass

Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
III	20	802.11ac	CH _L	17.74	Pass
			CH _M	18.13	
			CH _H	18.01	
		802.11n	CH _L	18.04	Pass
			CH _M	17.95	
			CH _H	17.89	
		802.11a	CH _L	16.66	Pass
			CH _M	16.78	
			CH _H	17.02	
	40	802.11ac	CH _L	36.38	Pass
			CH _M	36.38	
			CH _H	36.44	
		802.11n	CH _L	36.38	Pass
			CH _M	36.38	
			CH _H	36.50	
	80	802.11ac	CH _L	75.41	Pass
			CH _H	75.76	

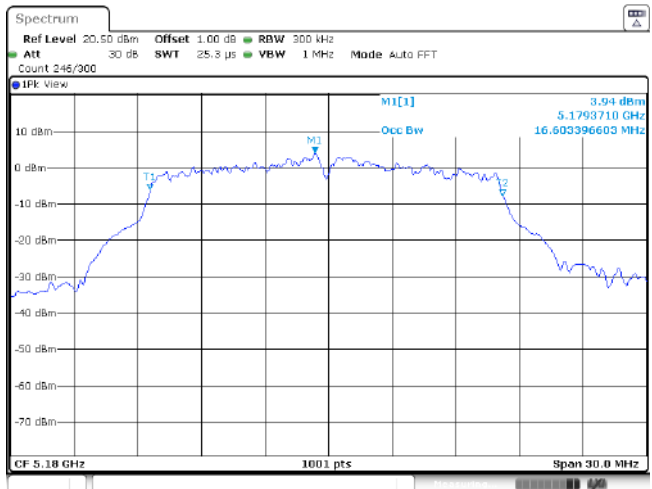
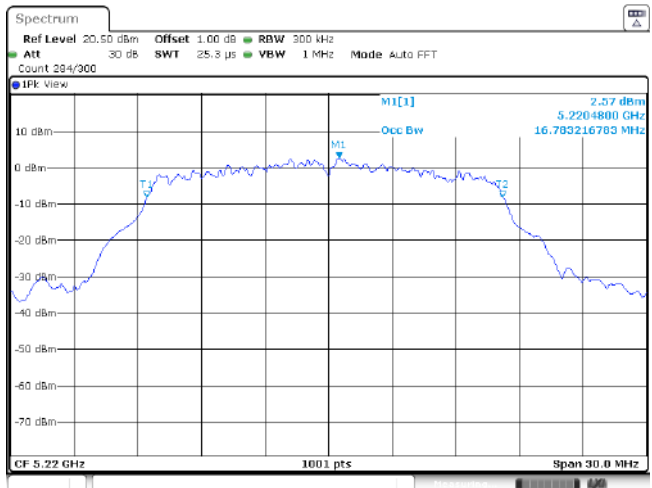
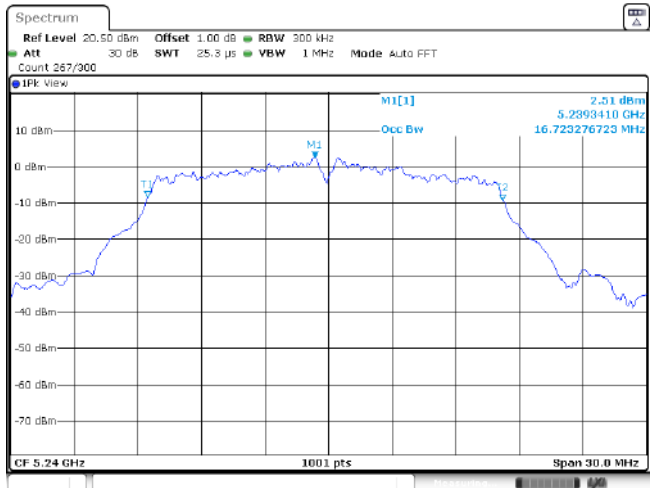
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	18.01	Pass
			CH _M	17.83	
			CH _H	17.86	
		802.11n	CH _L	17.95	Pass
			CH _M	18.04	
			CH _H	18.04	
		802.11a	CH _L	16.87	Pass
			CH _M	16.96	
			CH _H	16.84	
	40	802.11ac	CH _L	36.44	Pass
			CH _H	36.38	
		802.11n	CH _L	36.47	Pass
			CH _H	36.47	
	80	802.11ac	CH _M	75.52	Pass

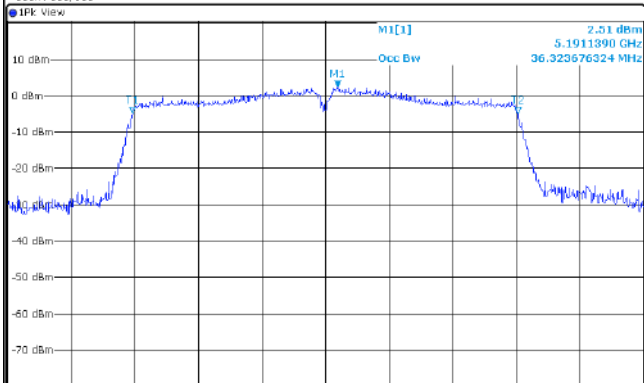
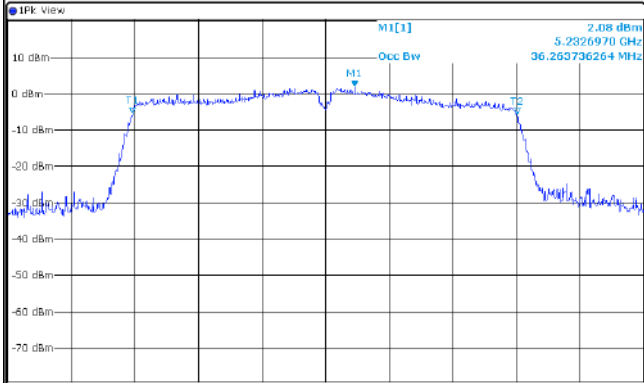
Band I

802.11ac (HT20)

CH_LCH_MCH_H

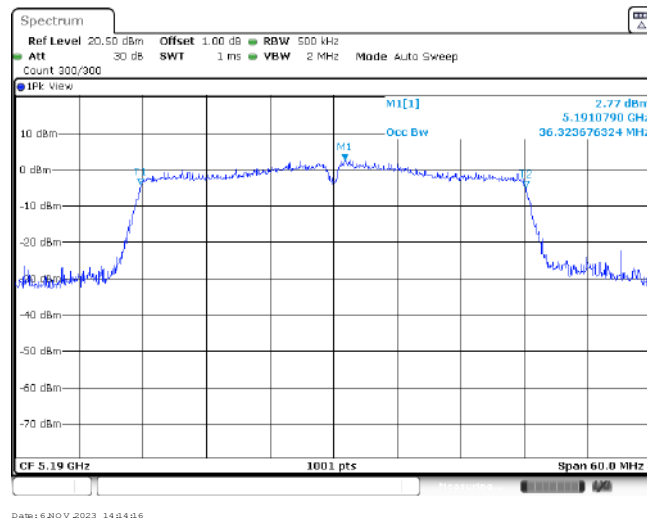
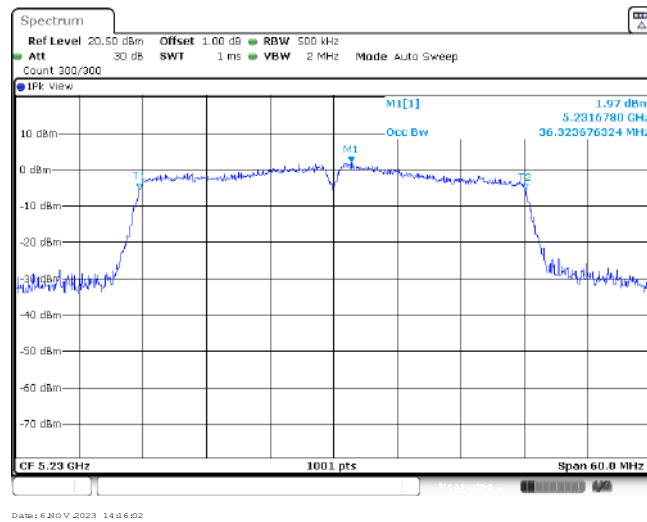
Band I		802.11n (HT20)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 296/300 IFK View M1 M1[1] Occ Bw 3.01 dBm 5.1793410 GHz 17.892167632 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.18 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:09:17	
CH _M	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 284/300 IFK View M1 M1[1] Occ Bw 3.11 dBm 5.2208990 GHz 17.892107692 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.22 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:10:26	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 261/300 IFK View M1 M1[1] Occ Bw 1.23 dBm 5.2407490 GHz 17.802197602 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.24 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:11:04	

Band I	802.11a
CH _L	 Spectrum plot for CH_L channel. The plot shows a signal centered at 5.18 GHz. The peak level is 3.94 dBm. The signal is identified as M1[1]. The plot includes a grid and various parameters: Ref Level 20.50 dBm, Offset 1.00 dB, RBW 300 kHz, Att 30 dB, SWT 25.3 μs, VBW 1 MHz, Mode Auto FFT, Count 246/300. The x-axis is labeled CF 5.18 GHz and the y-axis is labeled Span 30.0 MHz. The plot also shows a peak at 5.1793710 GHz with a level of 16.603396603 MHz.
CH _M	 Spectrum plot for CH_M channel. The plot shows a signal centered at 5.22 GHz. The peak level is 2.57 dBm. The signal is identified as M1[1]. The plot includes a grid and various parameters: Ref Level 20.50 dBm, Offset 1.00 dB, RBW 300 kHz, Att 30 dB, SWT 25.3 μs, VBW 1 MHz, Mode Auto FFT, Count 284/300. The x-axis is labeled CF 5.22 GHz and the y-axis is labeled Span 30.0 MHz. The plot also shows a peak at 5.2204800 GHz with a level of 16.793216793 MHz.
CH _H	 Spectrum plot for CH_H channel. The plot shows a signal centered at 5.24 GHz. The peak level is 2.51 dBm. The signal is identified as M1[1]. The plot includes a grid and various parameters: Ref Level 20.50 dBm, Offset 1.00 dB, RBW 300 kHz, Att 30 dB, SWT 25.3 μs, VBW 1 MHz, Mode Auto FFT, Count 267/300. The x-axis is labeled CF 5.24 GHz and the y-axis is labeled Span 30.0 MHz. The plot also shows a peak at 5.2393410 GHz with a level of 16.723276723 MHz.

Band I		802.11ac (HT40)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 2.51 dBm 5.1911890 GHz 36.323676324 MHz M1 Occ Bw  CF 5.19 GHz1001 ptsSpan 60.0 MHz Date: 6/20/2023 14:01:07	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 2.08 dBm 5.2326970 GHz 36.263736264 MHz M1 Occ Bw  CF 5.23 GHz1001 ptsSpan 60.0 MHz Date: 6/20/2023 14:02:05	

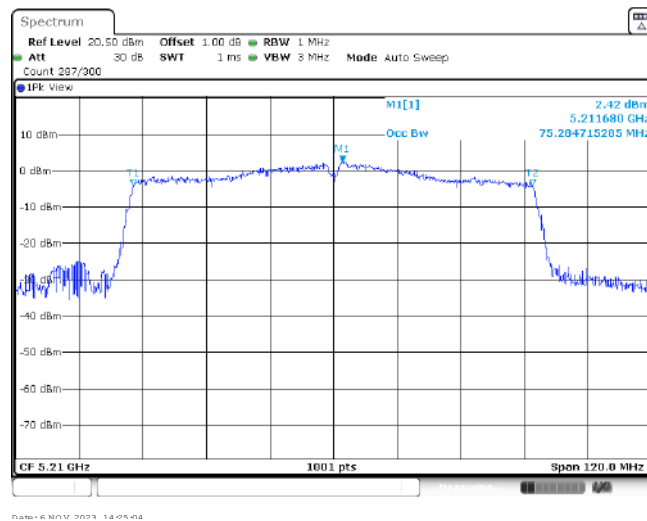
Band I

802.11n (HT40)

CH_LCH_H

Band I

802.11ac (HT80)

CH_M

Band II		802.11ac (HT20)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 281/300 IFK View M1[1] 1.31 dBm 5.2588310 GHz 17.862137862 MHz Occ BW M1 7 CF 5.26 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:51:00	
CH _M	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 237/300 IFK View M1[1] 1.30 dBm 5.2793410 GHz 17.922077922 MHz Occ BW M1 7 CF 5.28 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:52:09	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 245/300 IFK View M1[1] 0.73 dBm 5.3188910 GHz 18.131958132 MHz Occ BW M1 7 CF 5.32 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:54:05	

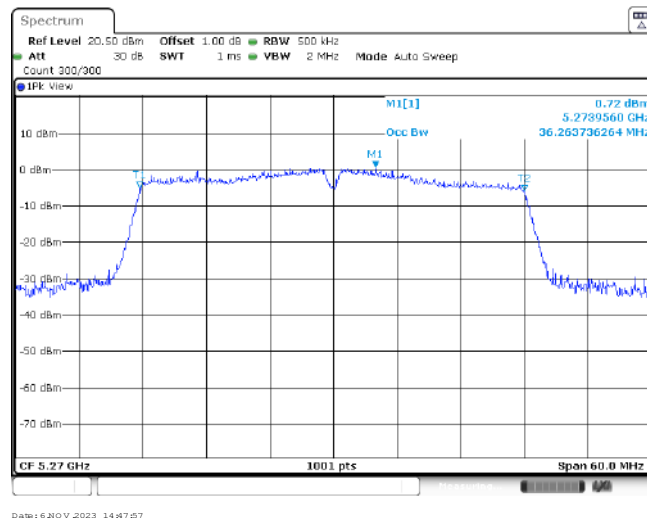
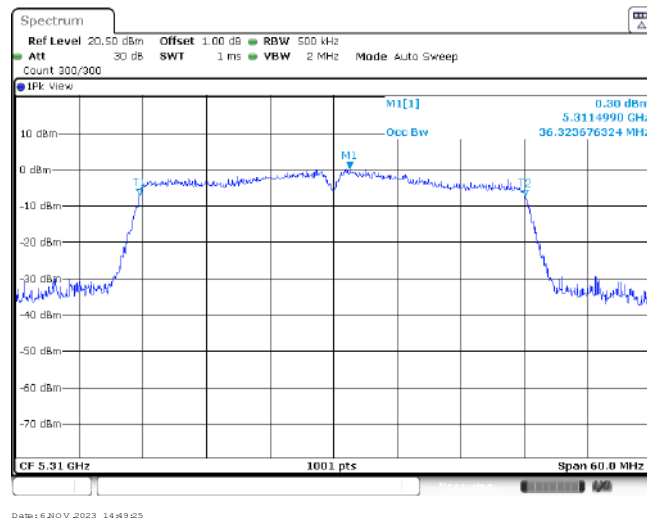
Band II		802.11n (HT20)	
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 241/300 IFK view M1[1] 0.98 dBm 5.2613790 GHz 17.922077922 MHz Occ Bw M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.26 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:43:52		
CH _M	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 235/300 IFK view M1[1] 0.70 dBm 5.2805990 GHz 18.071928072 MHz Occ Bw M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.28 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:45:05		
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 213/300 IFK view M1[1] 0.04 dBm 5.3213490 GHz 17.982017982 MHz Occ Bw M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.32 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:46:07		

Band II		802.11a
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 277/300 IFK view M1[1] 1.28 dBm 5.2608690 GHz 16.753246753 MHz Occ Bw M1 T2 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.26 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:08:54	
CH _M	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 260/300 IFK view M1[1] 0.96 dBm 5.2804800 GHz 16.933066933 MHz Occ Bw M1 T2 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.28 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:40:43	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 230/300 IFK view M1[1] 1.27 dBm 5.3193710 GHz 16.603396603 MHz Occ Bw M1 T2 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.32 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 14:42:04	

Band II		802.11ac (HT40)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 0.02 dBm 5.2710190 GHz 36.323676324 MHz Occ BW M1 T2 CF 5.27 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 14:56:16	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 0.16 dBm 5.3116780 GHz 36.393616384 MHz Occ BW M1 T2 CF 5.31 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 14:57:39	

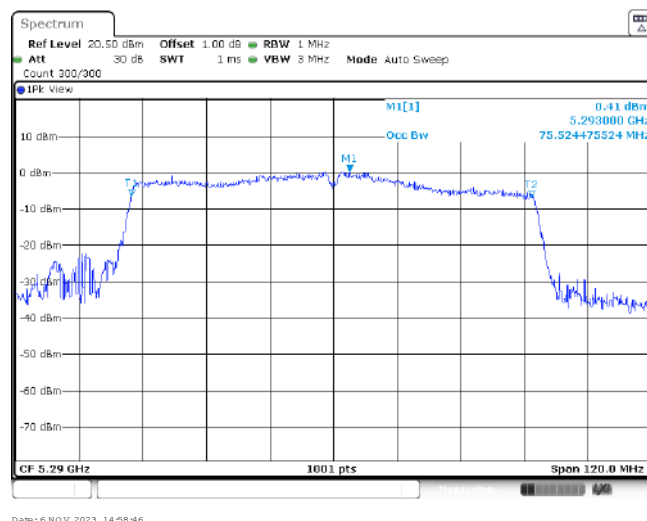
Band II

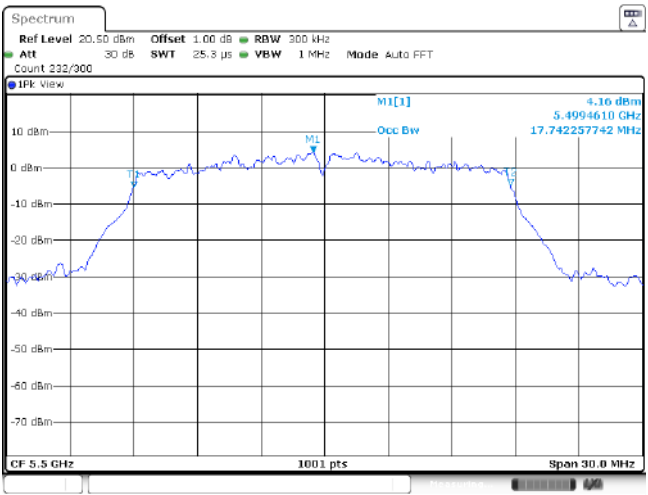
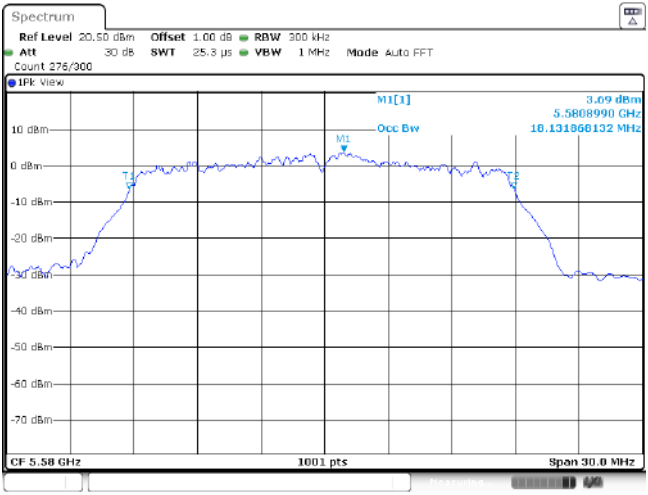
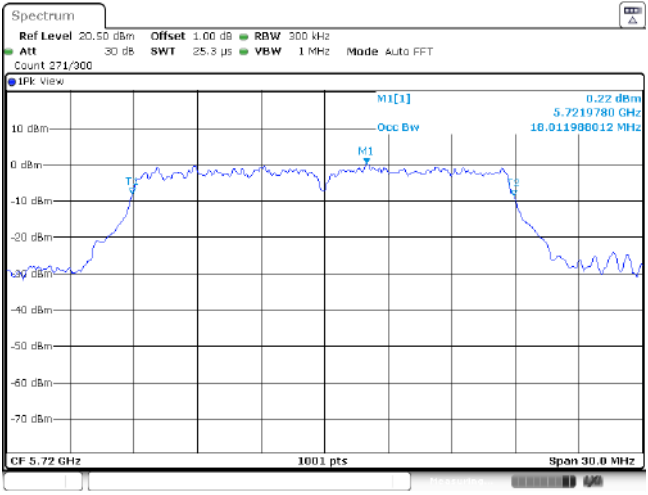
802.11n (HT40)

CH_LCH_H

Band II

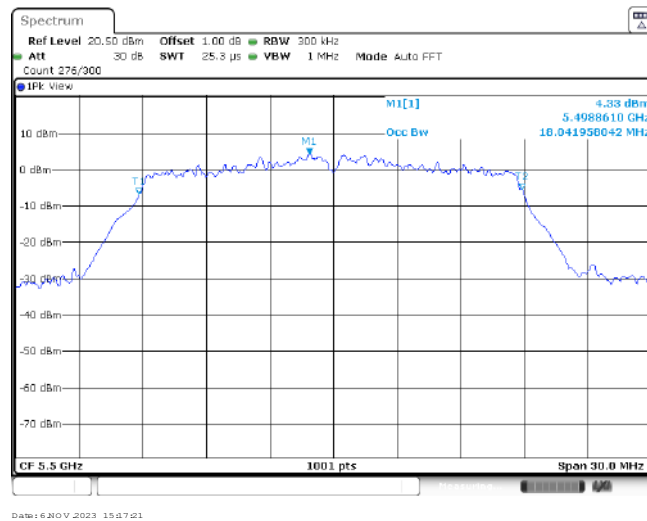
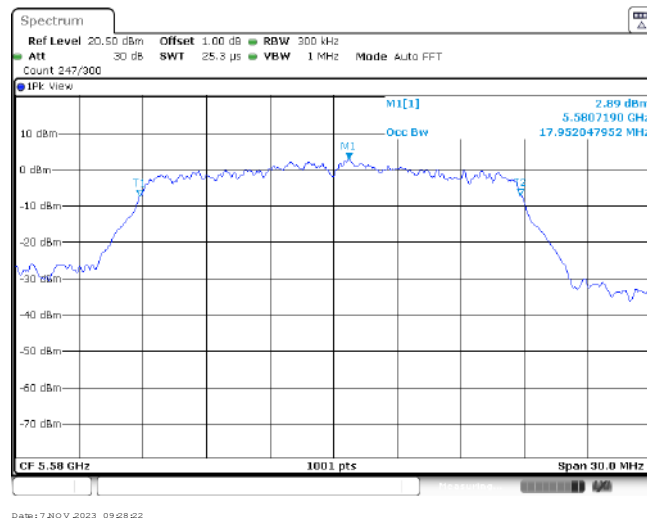
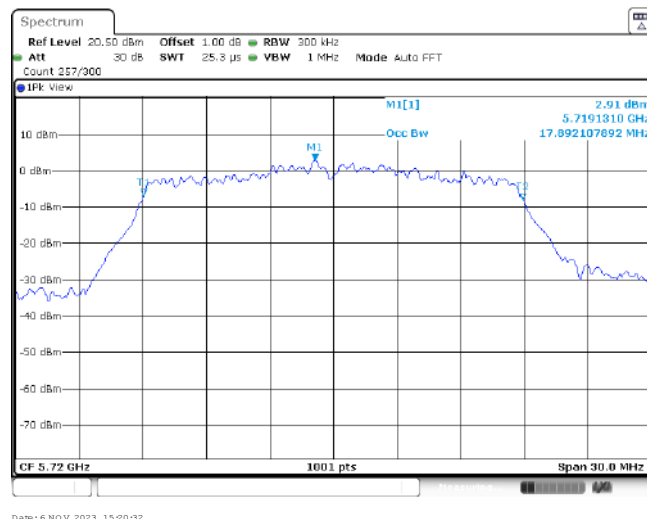
802.11ac (HT80)

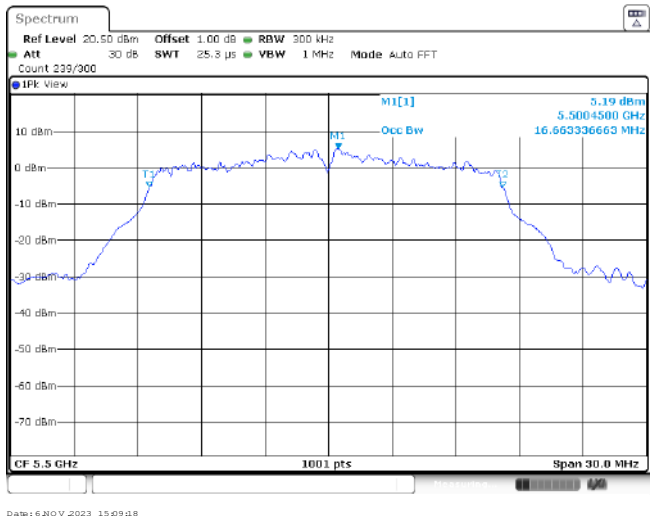
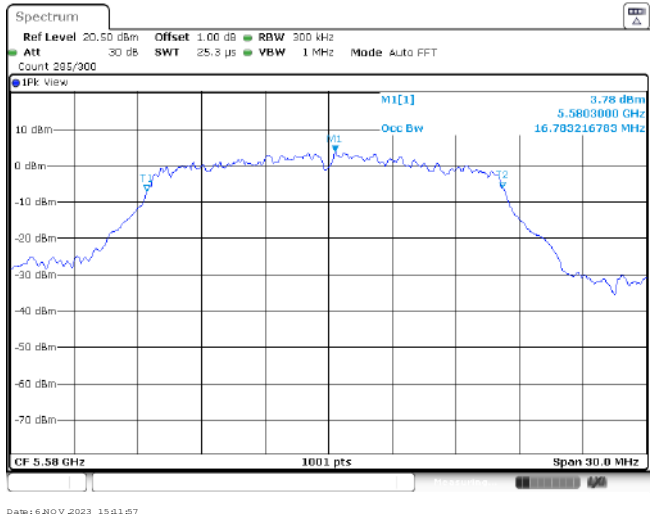
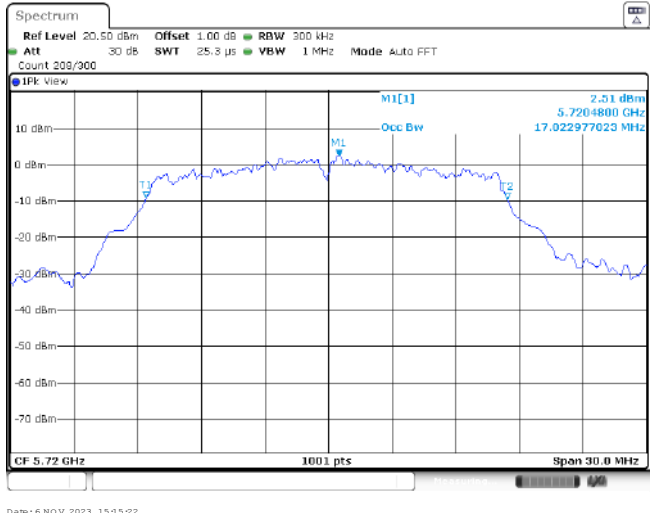
CH_M

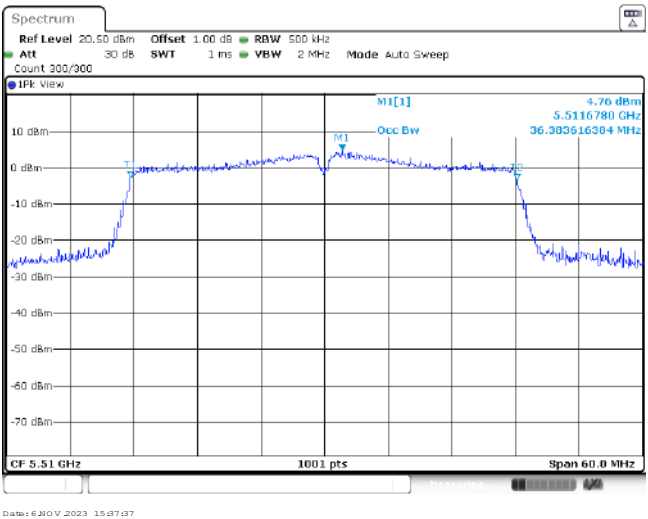
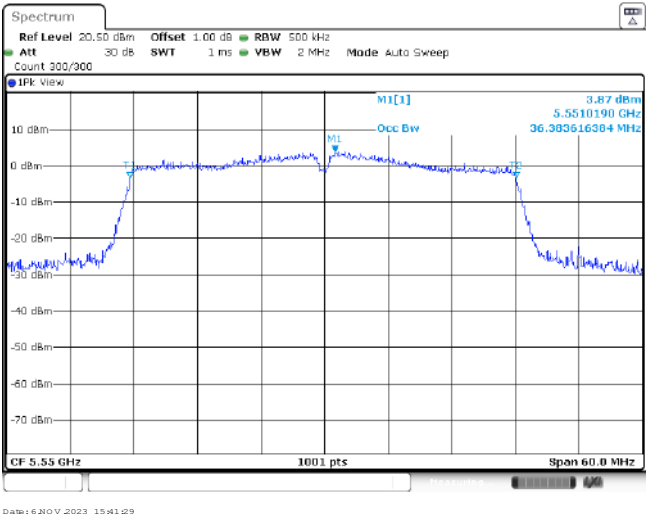
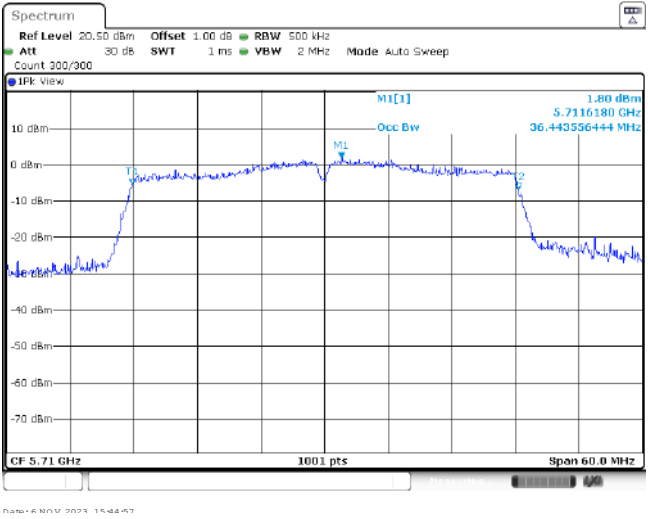
Band III	802.11ac (HT20)
CH _L	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 232/300 IFK view M1[1] 4.16 dBm Occ BW 5.4994610 GHz 17.742257742 MHz CF 5.5 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 15:01:02
CH _M	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 276/300 IFK view M1[1] 3.09 dBm Occ BW 5.5808990 GHz 16.131966132 MHz CF 5.58 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 15:02:53
CH _H	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 271/300 IFK view M1[1] 0.22 dBm Occ BW 5.7219780 GHz 16.011986012 MHz CF 5.72 GHz 1001 pts Span 30.0 MHz Date: 6/20/2023 09:46:09

Band III

802.11n (HT20)

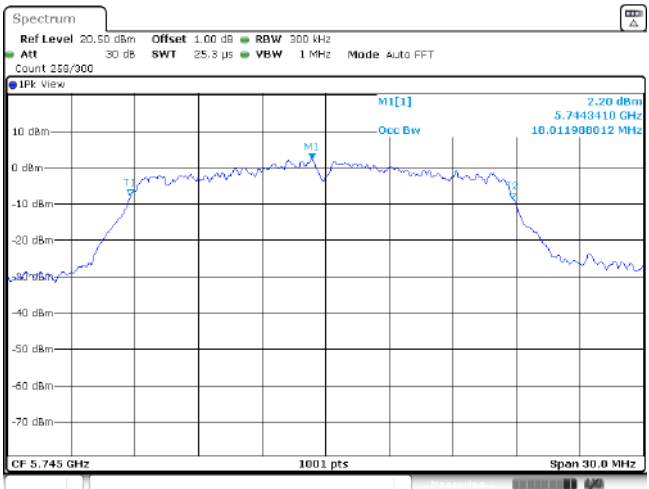
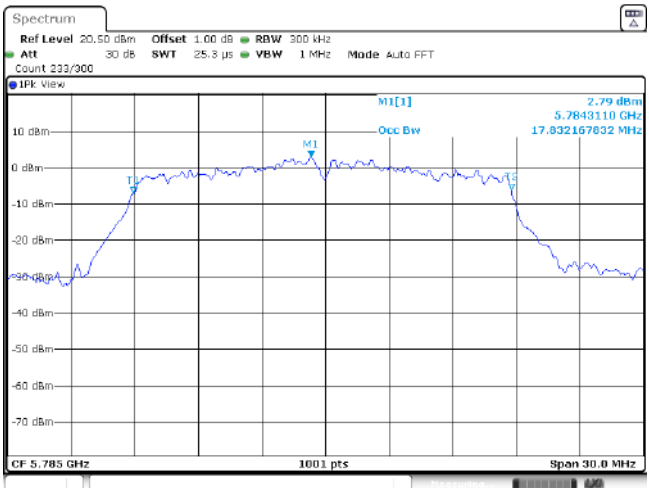
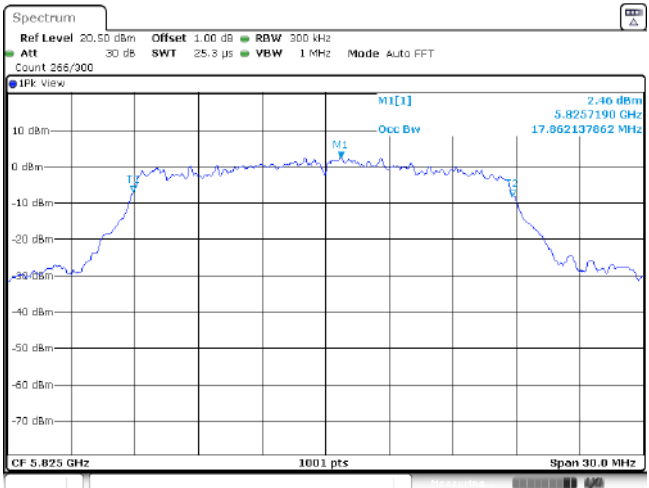
CH_LCH_MCH_H

Band III	802.11a
CH _L	
CH _M	
CH _H	

Band III	802.11ac (HT40)
CH _L	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 4.76 dBm 5.5116780 GHz 36.393516384 MHz CF 5.51 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 15:07:37
CH _M	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 3.87 dBm 5.5510190 GHz 36.393516384 MHz CF 5.55 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 15:41:29
CH _H	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 1.80 dBm 5.7116180 GHz 36.443556444 MHz CF 5.71 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 15:44:57

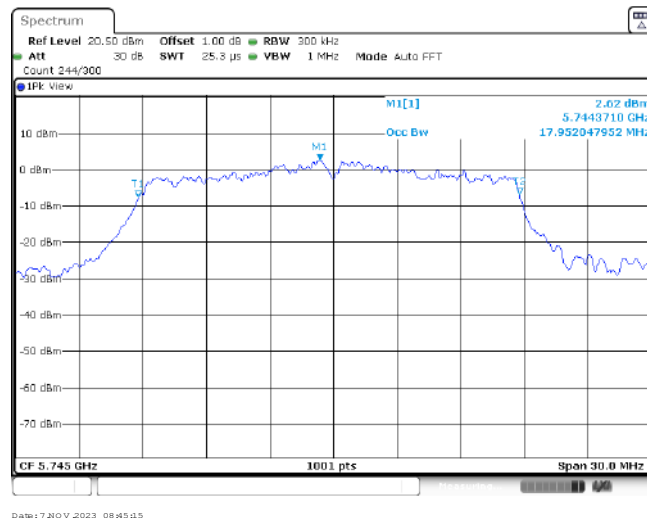
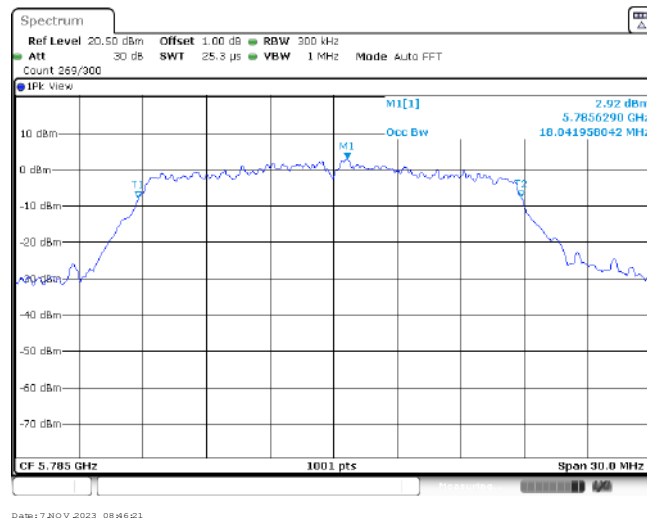
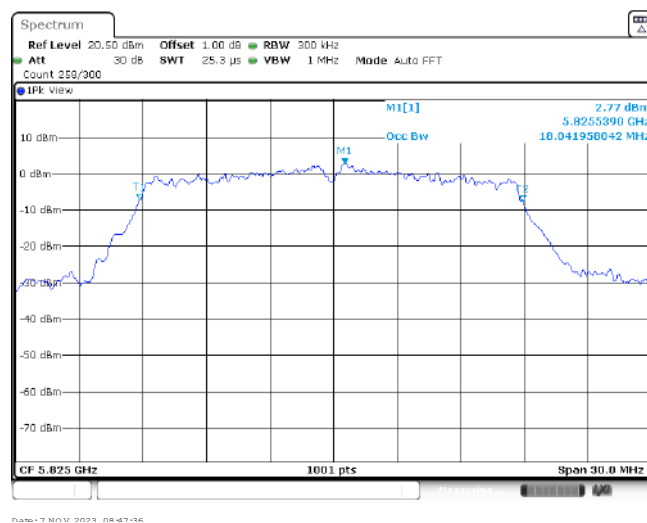
Band III		802.11n (HT40)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK View M1 M1[1] Occ BW 4.00 dBm 5.5110190 GHz 36.393616384 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.51 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 15:22:15	
CH _M	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK View M1 M1[1] Occ BW 3.63 dBm 5.5512590 GHz 36.393616384 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.55 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 15:05:43	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK View M1 M1[1] Occ BW 1.21 dBm 5.7078420 GHz 36.503496503 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.71 GHz 1001 pts Span 60.0 MHz Date: 6/20/2023 09:55:02	

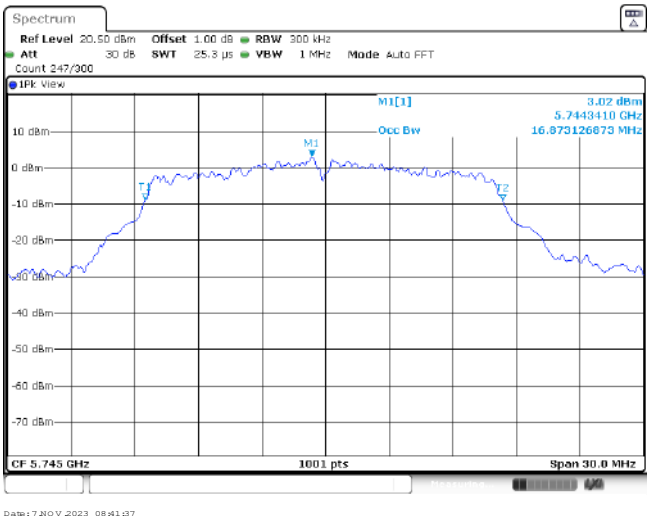
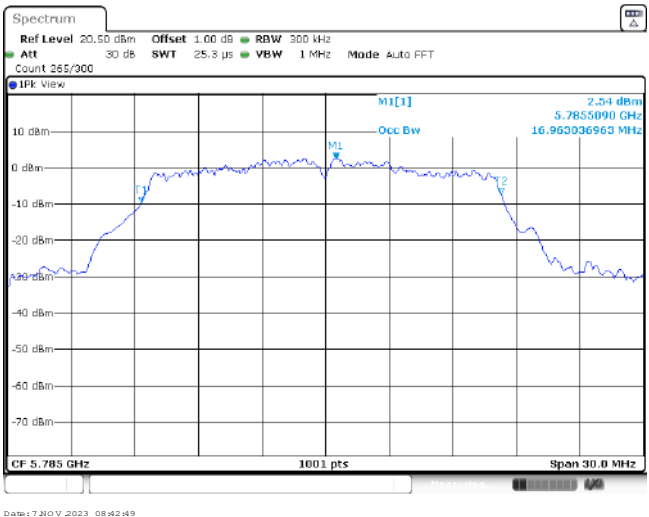
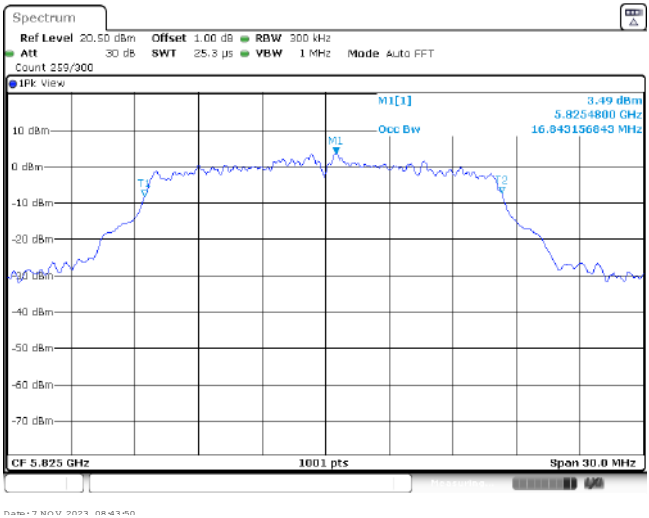
Band III		802.11ac (HT80)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 300/300 IFK view T1 M1 M1[1] T2 4.37 dBm 5.521970 GHz 75.404595405 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.53 GHz 1001 pts Spon 120.0 MHz Date: 6/20/2023 15:56:10	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 300/300 IFK view T1 M1 M1[1] T2 1.81 dBm 5.692880 GHz 75.764235764 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.69 GHz 1001 pts Spon 120.0 MHz Date: 6/20/2023 15:59:10	

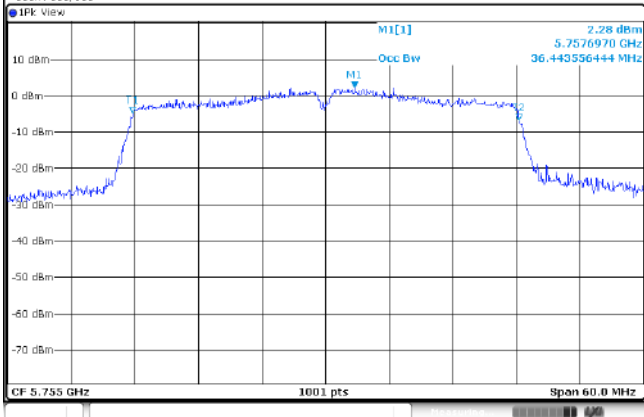
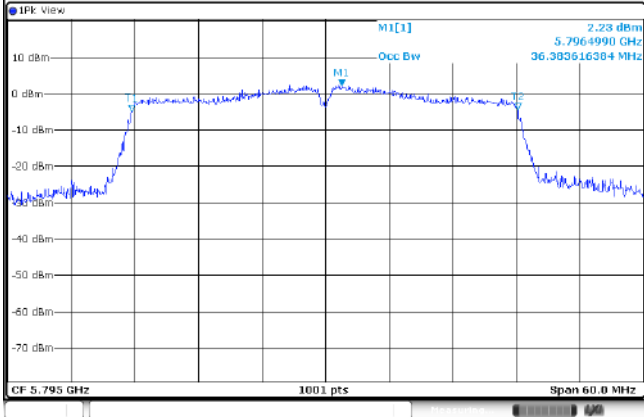
Band IV	802.11ac (HT20)
CH _L	 Spectrum plot for CH_L channel. The plot shows a signal centered at 5.745 GHz with a span of 30.0 MHz. The y-axis ranges from -70 dBm to 10 dBm. The plot includes a peak marker M1[1] at 5.7443110 GHz and a noise floor marker M2 at 18.01198012 MHz. The plot also shows a peak marker M1[1] at 2.20 dBm.
CH _M	 Spectrum plot for CH_M channel. The plot shows a signal centered at 5.785 GHz with a span of 30.0 MHz. The y-axis ranges from -70 dBm to 10 dBm. The plot includes a peak marker M1[1] at 5.7843110 GHz and a noise floor marker M2 at 17.832167832 MHz. The plot also shows a peak marker M1[1] at 2.79 dBm.
CH _H	 Spectrum plot for CH_H channel. The plot shows a signal centered at 5.825 GHz with a span of 30.0 MHz. The y-axis ranges from -70 dBm to 10 dBm. The plot includes a peak marker M1[1] at 5.8257190 GHz and a noise floor marker M2 at 17.862137862 MHz. The plot also shows a peak marker M1[1] at 2.46 dBm.

Band IV

802.11n (HT20)

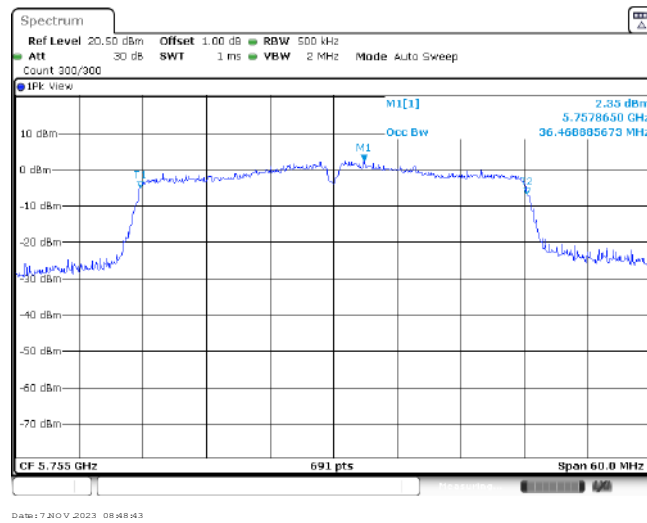
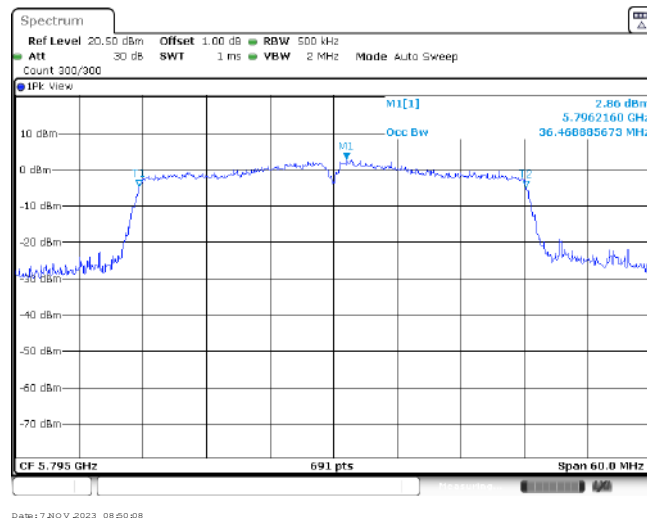
CH_LCH_MCH_H

Band IV	802.11a
CH _L	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 247/300 IFK view M1[1] 3.02 dBm Occ BW 5.7443410 GHz 16.873126873 MHz CF 5.745 GHz 1001 pts Span 30.0 MHz Date: 7/20/2023 08:41:07
CH _M	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 265/300 IFK view M1[1] 2.54 dBm Occ BW 5.7855090 GHz 16.963036963 MHz CF 5.785 GHz 1001 pts Span 30.0 MHz Date: 7/20/2023 08:42:49
CH _H	 Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 25.3 μs VBW 1 MHz Mode Auto FFT Count 259/300 IFK view M1[1] 3.49 dBm Occ BW 5.8254800 GHz 16.843156843 MHz CF 5.825 GHz 1001 pts Span 30.0 MHz Date: 7/20/2023 08:43:40

Band IV		802.11ac (HT40)
CH _L	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 2.28 dBm 5.7576970 GHz 36.443556444 MHz Occ Bw  CF 5.755 GHz1001 ptsSpan 60.0 MHz Date: 7/20/2023 08:55:02	
CH _H	Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 2 MHz Mode Auto Sweep Count 300/300 IFK view M1[1] 2.23 dBm 5.7964990 GHz 36.383516384 MHz Occ Bw  CF 5.795 GHz1001 ptsSpan 60.0 MHz Date: 7/20/2023 08:56:19	

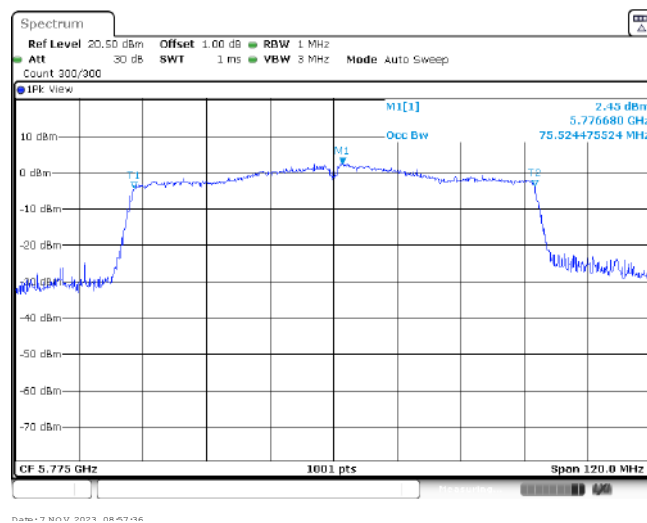
Band IV

802.11n (HT40)

CH_LCH_H

Band IV

802.11ac (HT80)

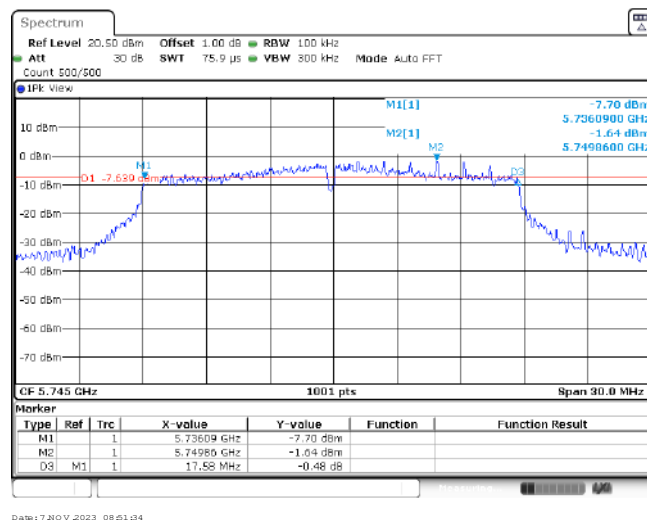
CH_M

Appendix E: 6dB Bandwidth

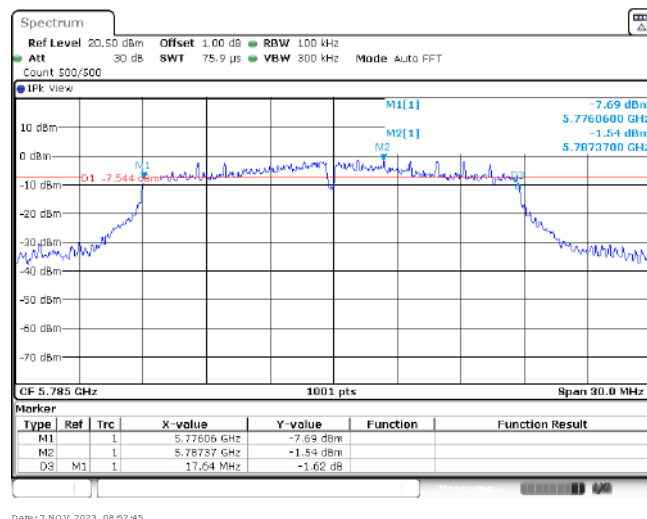
Band	Bandwidth (MHz)	Type	Channel	6dB bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	17.58	Pass
			CH _M	17.64	
			CH _H	17.61	
		802.11n	CH _L	17.61	Pass
			CH _M	17.64	
			CH _H	17.64	
		802.11a	CH _L	16.38	Pass
			CH _M	16.38	
			CH _H	16.38	
	40	802.11ac	CH _L	35.46	Pass
			CH _H	35.28	
		802.11n	CH _L	35.39	Pass
			CH _H	36.44	
	80	802.11ac	CH _M	75.36	Pass

Band IV

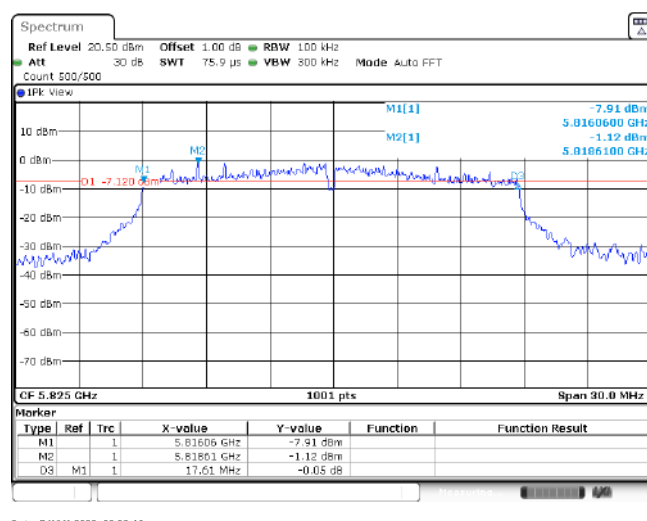
802.11ac (HT20)

$$\text{CH}_L$$


Date: 7 NOV 2023 08:51:34

$$\text{CH}_M$$


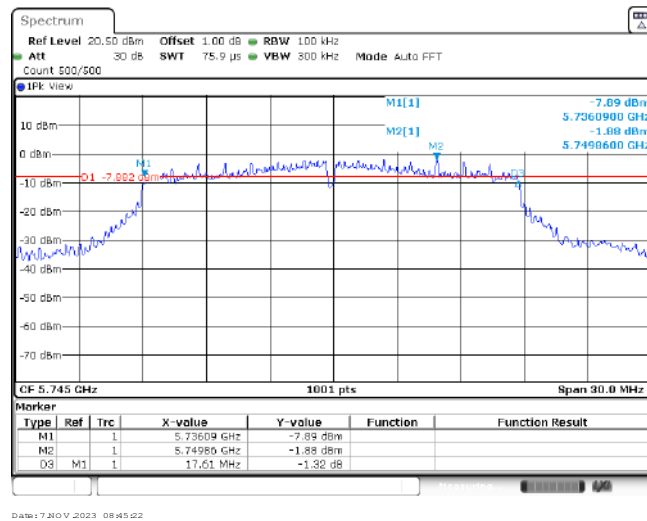
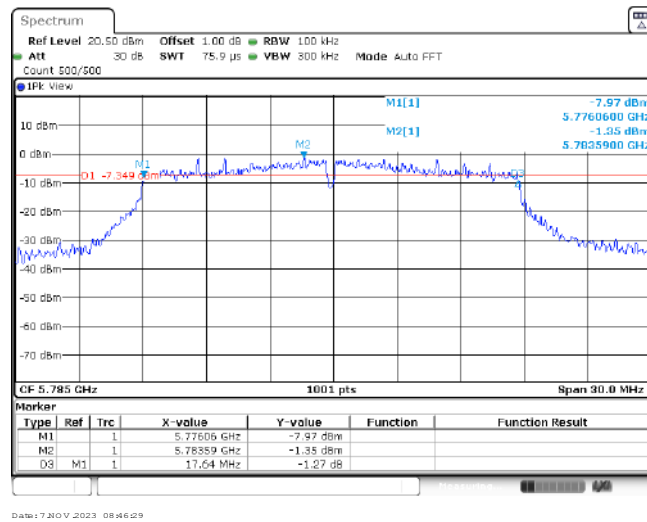
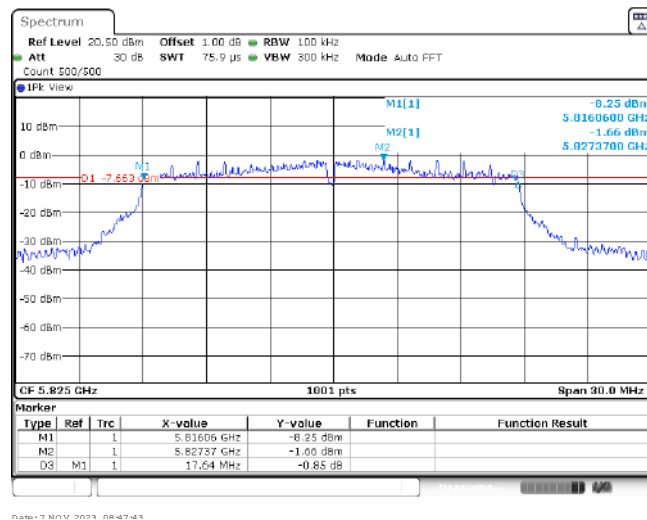
Date: 7 NOV 2023 08:52:45

$$\text{CH}_H$$


Date: 7 NOV 2023 08:53:46

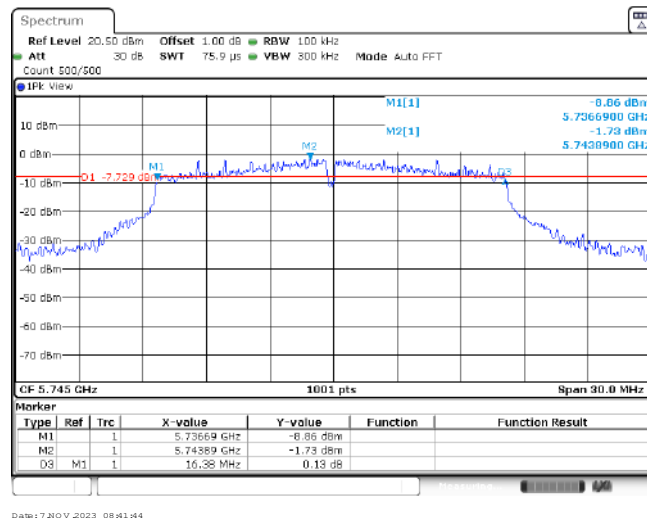
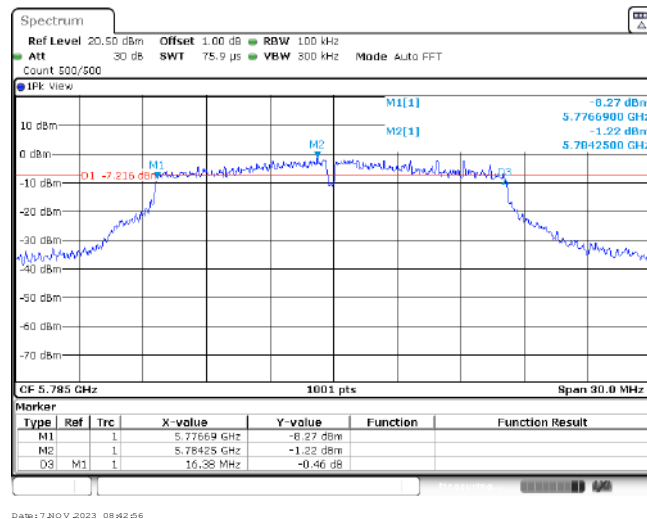
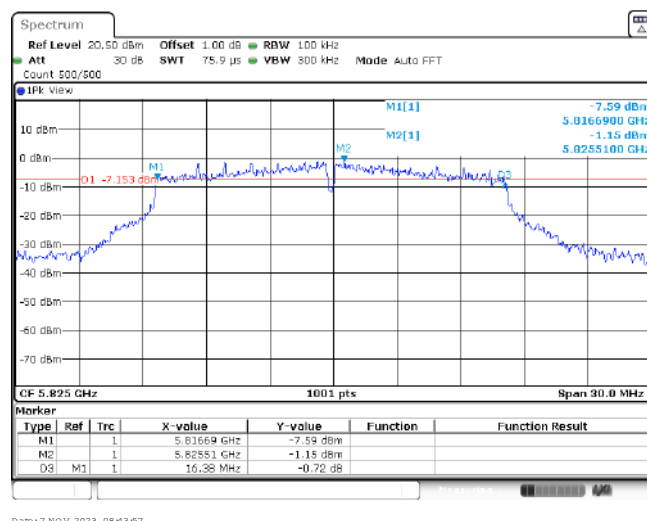
Band IV

802.11n (HT20)

CH_LCH_MCH_H

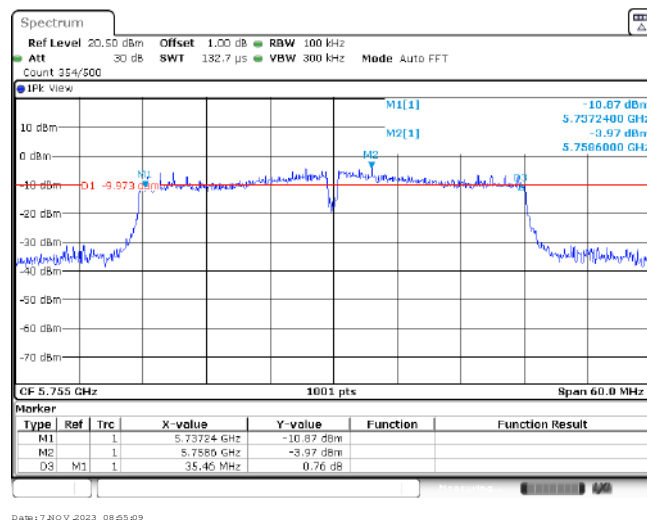
Band IV

802.11a

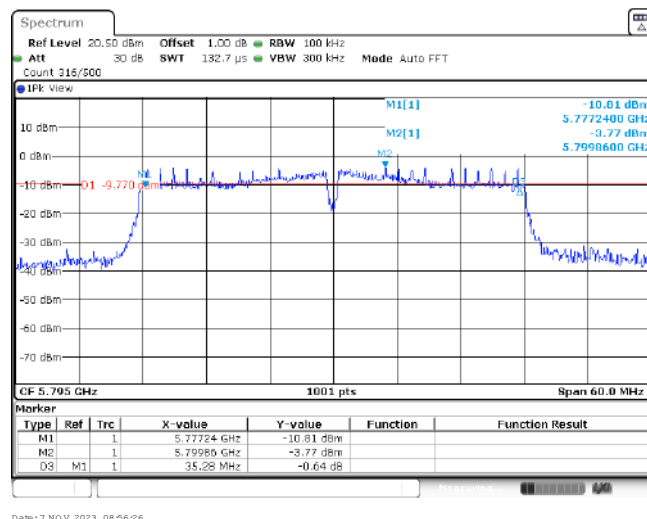
CH_LCH_MCH_H

Band IV

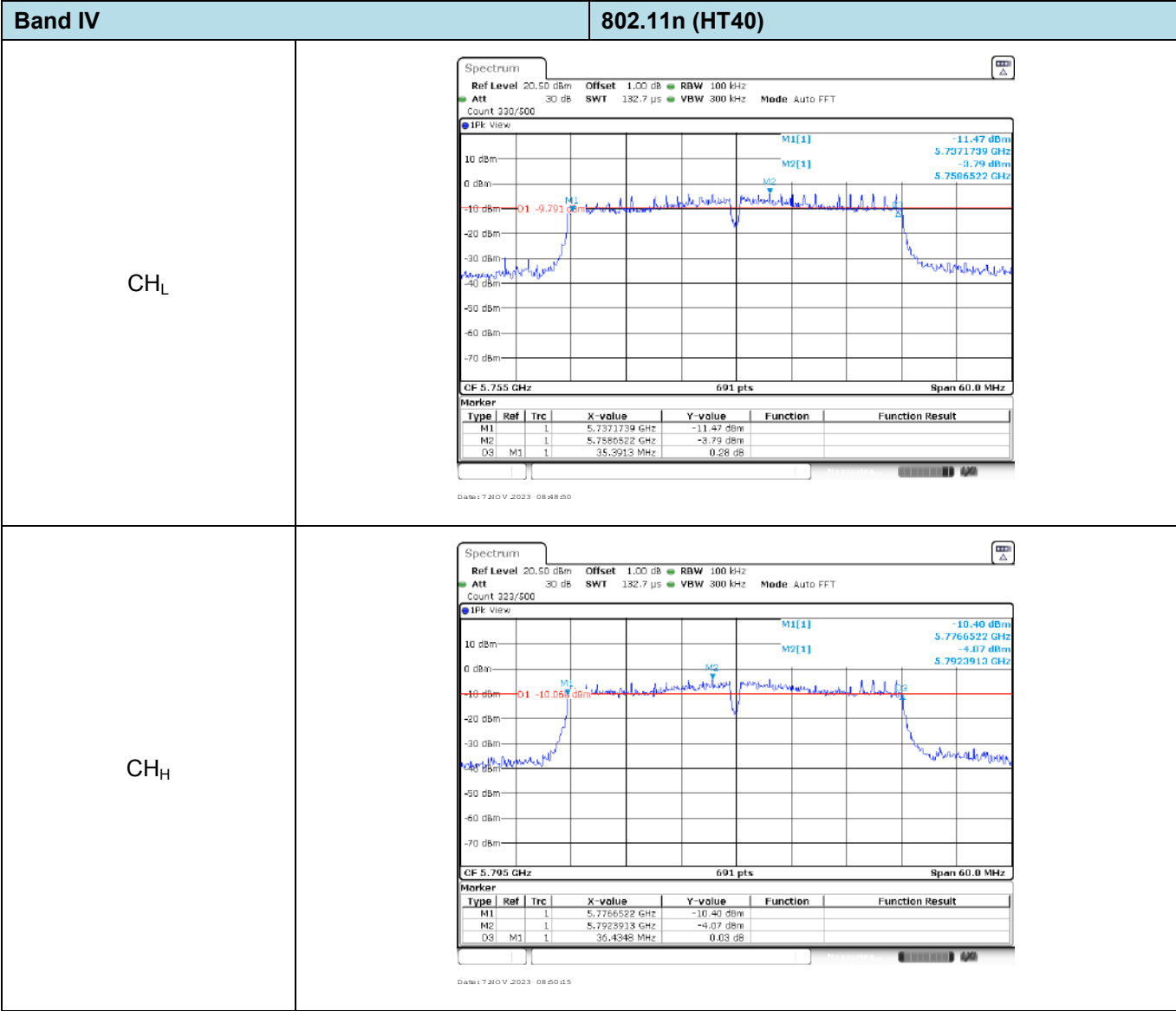
802.11ac (HT40)

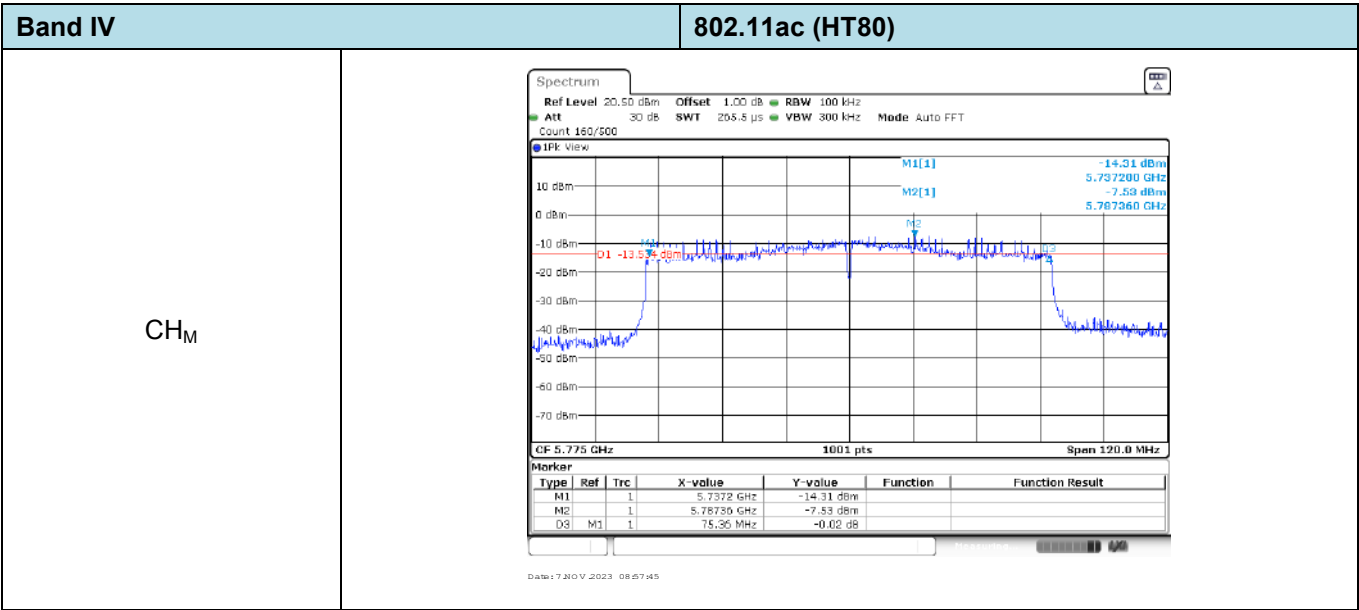
$$\text{CH}_L$$


Date: 7 NOV 2023 08:55:09

$$\text{CH}_H$$


Date: 7 NOV 2023 08:56:26





Appendix F: Frequency stability**Voltage VS Frequency stability**

Band: I			Test Frequency: 5180.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	-121900.00	-23.53282	PASS
T _N	V _N	-121900.00	-23.53282	PASS
T _N	V _H	-121900.00	-23.53282	PASS

Band: II			Test Frequency: 5260.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	-119900.00	-22.79468	PASS
T _N	V _N	-119900.00	-22.79468	PASS
T _N	V _H	-120900.00	-22.98479	PASS

Band: III			Test Frequency: 5500.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	-127900.00	-23.25455	PASS
T _N	V _N	-124900.00	-22.70909	PASS
T _N	V _H	-128900.00	-23.43636	PASS

Band: IV			Test Frequency: 5745.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	-129900.00	-22.61097	PASS
T _N	V _N	-129900.00	-22.61097	PASS
T _N	V _H	-129900.00	-22.61097	PASS

Temperature VS Frequency stability

Band: I			Test Frequency: 5180.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-121900.00	-23.53282	PASS
V _N	-10	-121900.00	-23.53282	PASS
V _N	0	-121900.00	-23.53282	PASS
V _N	10	-121900.00	-23.53282	PASS
V _N	20	-121900.00	-23.53282	PASS
V _N	30	-121900.00	-23.53282	PASS
V _N	40	-121900.00	-23.53282	PASS
V _N	50	-121900.00	-23.53282	PASS

Band: II			Test Frequency: 5260.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-120900.00	-22.98479	PASS
V _N	-10	-120900.00	-22.98479	PASS
V _N	0	-120900.00	-22.98479	PASS
V _N	10	-120900.00	-22.98479	PASS
V _N	20	-120900.00	-22.98479	PASS
V _N	30	477500.00	90.77947	PASS
V _N	40	288700.00	54.88593	PASS
V _N	50	486500.00	92.49049	PASS

Band: III			Test Frequency: 5500.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-129900.00	-23.61818	PASS
V _N	-10	-129900.00	-23.61818	PASS
V _N	0	-129900.00	-23.61818	PASS
V _N	10	-129900.00	-23.61818	PASS
V _N	20	-129900.00	-23.61818	PASS
V _N	30	-129900.00	-23.61818	PASS
V _N	40	-129900.00	-23.61818	PASS
V _N	50	-129900.00	-23.61818	PASS

Band: IV			Test Frequency: 5745.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-129900.00	-22.61097	PASS
V _N	-10	-129900.00	-22.61097	PASS
V _N	0	87900.00	15.30026	PASS
V _N	10	94900.00	16.51871	PASS
V _N	20	223800.00	38.95561	PASS
V _N	30	-377600.00	-65.72672	PASS
V _N	40	492500.00	85.72672	PASS
V _N	50	-389600.00	-67.81549	PASS

-----End of Report-----