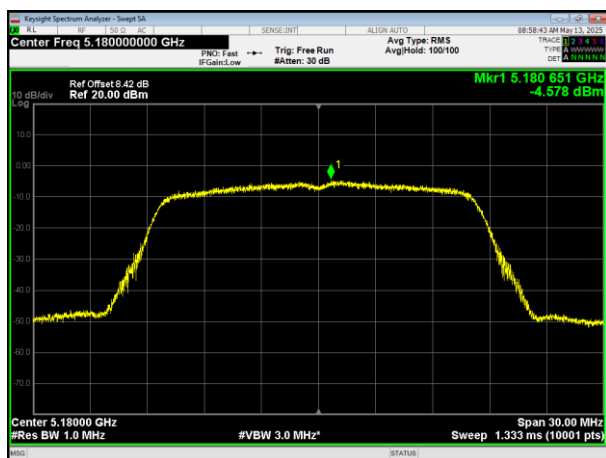
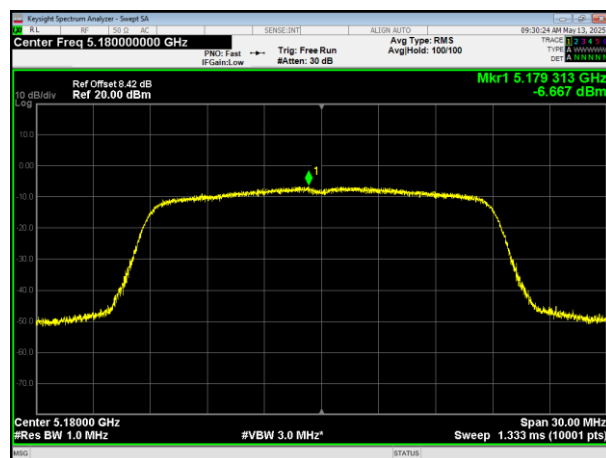




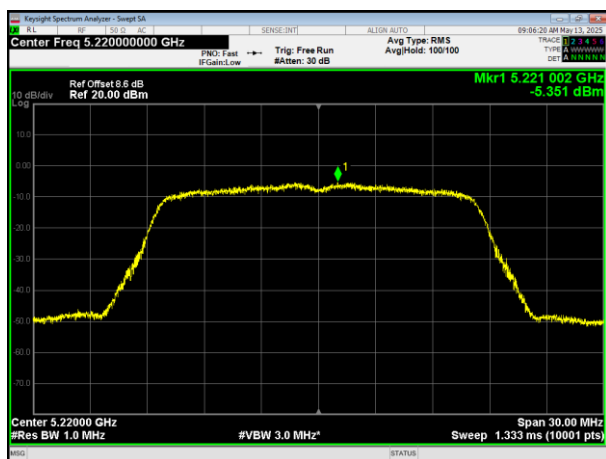
802.11a



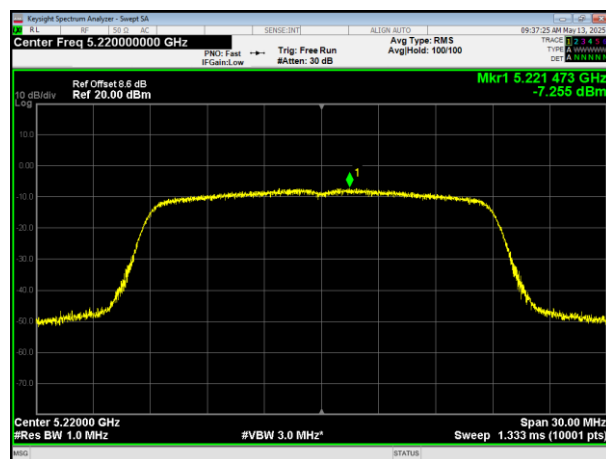
802.11ac HT20



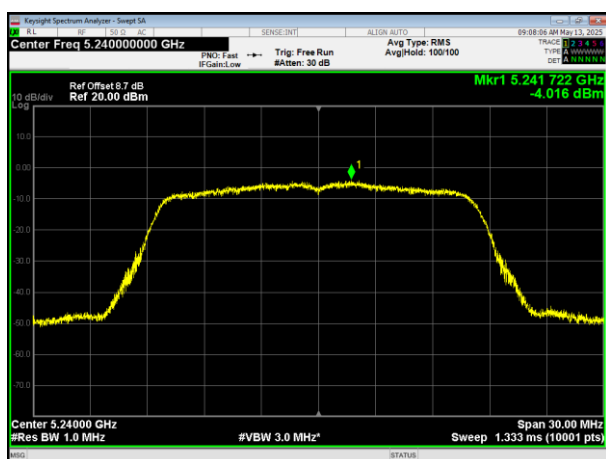
5180MHz



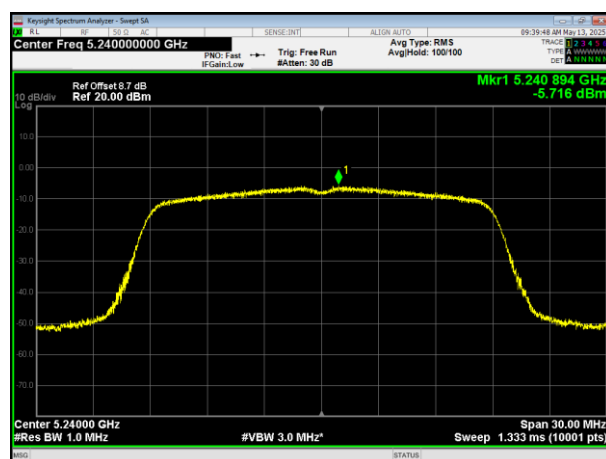
5180MHz



5200MHz



5200MHz

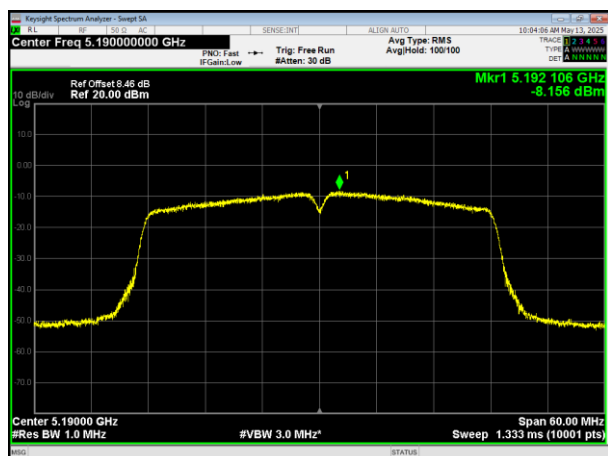


5240MHz

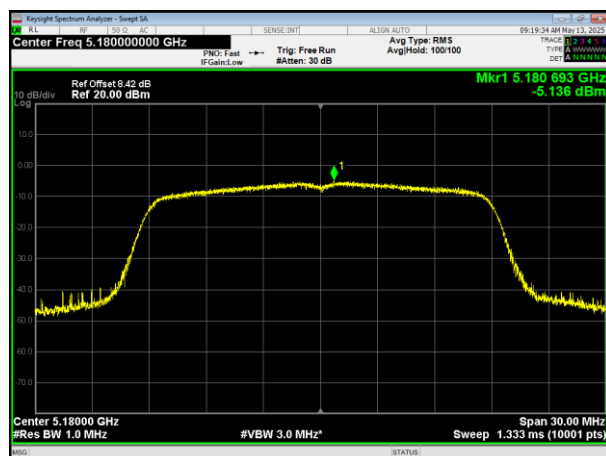
5240MHz



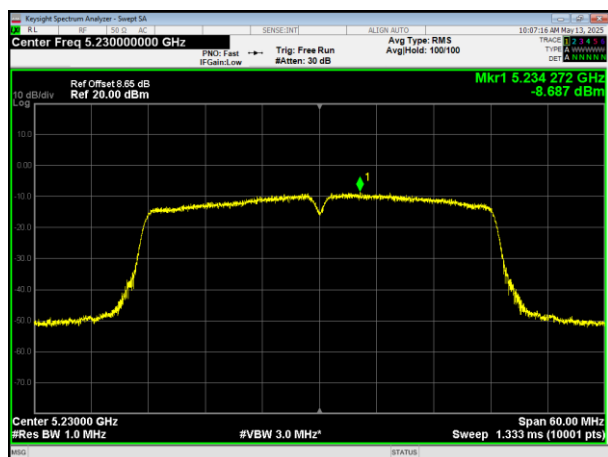
802.11ac HT40



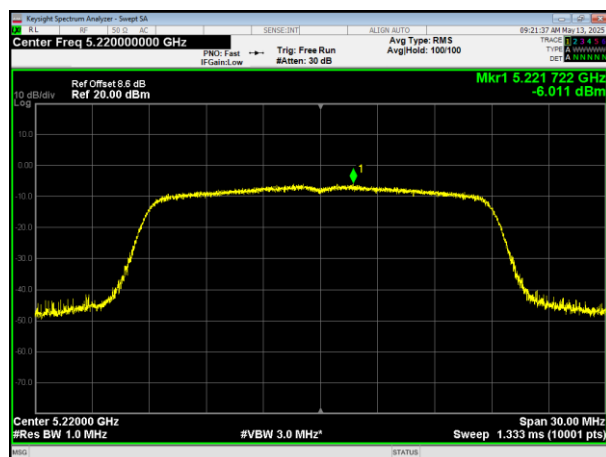
802.11n HT20



5190MHz

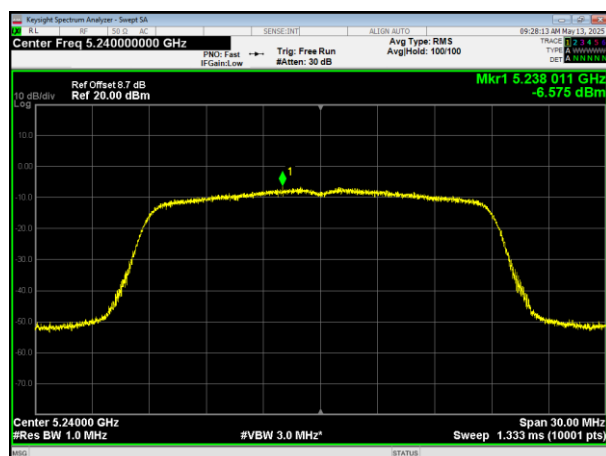


5180MHz



5230MHz

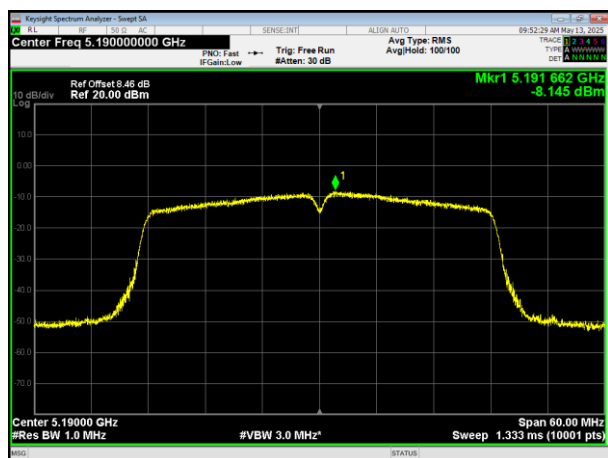
5200MHz



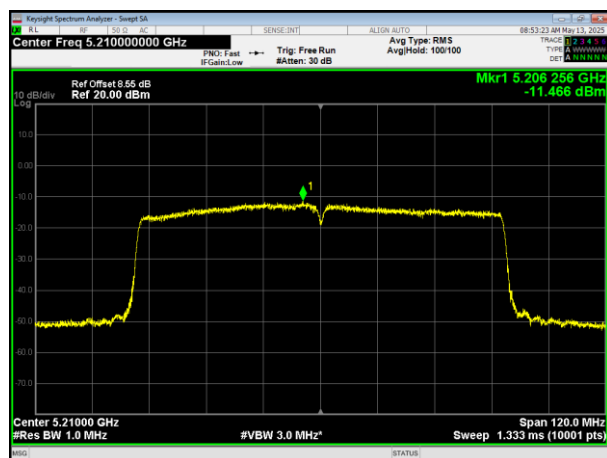
5240MHz



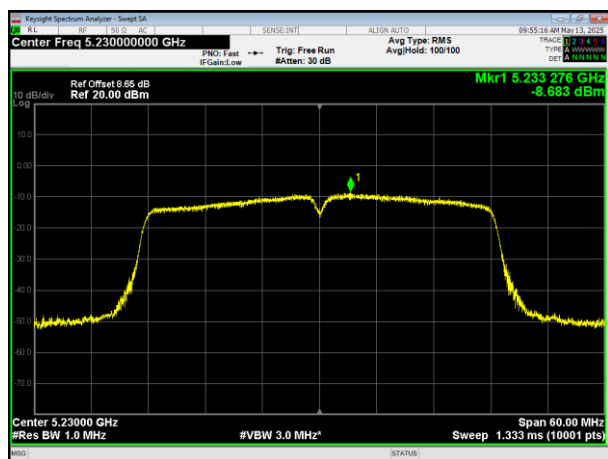
802.11n HT40



802.11ac HT80



5190MHz



5210MHz

5230MHz



6.. 26DB&99% BANDWIDTH TEST

6.1. APPLIED PROCEDURES / LIMIT

The 26 dB bandwidth is used to determine the conducted power limits.

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

6.1.1. TEST PROCEDURE

26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	>RBW
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	Approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

6.1.2. DEVIATION FROM STANDARD

No deviation.

6.1.3. TEST SETUP



6.1.4. EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

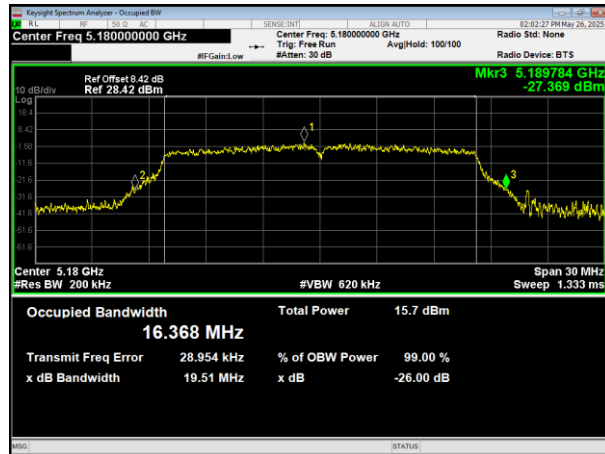
**6.1.5. TEST RESULTS**

		Test Channel	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
Band 1	802.11a	Low	19.51	16.360	Pass
		Middle	19.341	16.375	Pass
		High	19.302	16.363	Pass
	802.11ac HT20	Low	20.004	17.572	Pass
		Middle	20.124	17.564	Pass
		High	19.824	17.508	Pass
	802.11ac HT40	Low	39.954	35.774	Pass
		High	39.978	35.965	Pass
	802.11ac HT80	/	80.402	75.223	Pass
	802.11n HT20	Low	20.323	17.553	Pass
		Middle	20.268	17.566	Pass
		High	19.984	17.528	Pass
	802.11n HT40	Low	39.808	35.768	Pass
		High	40.438	35.996	Pass

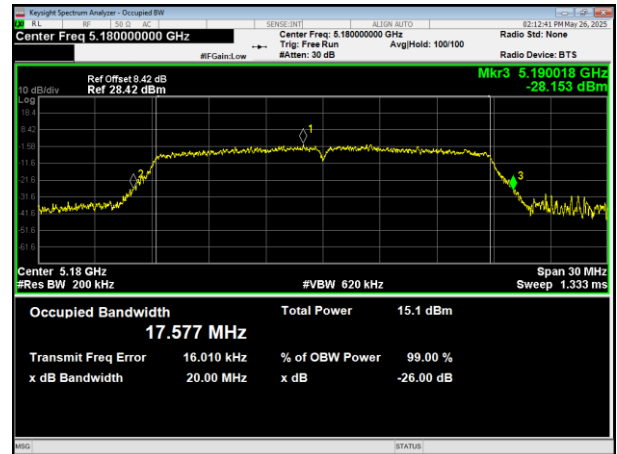


26dB Bandwidth

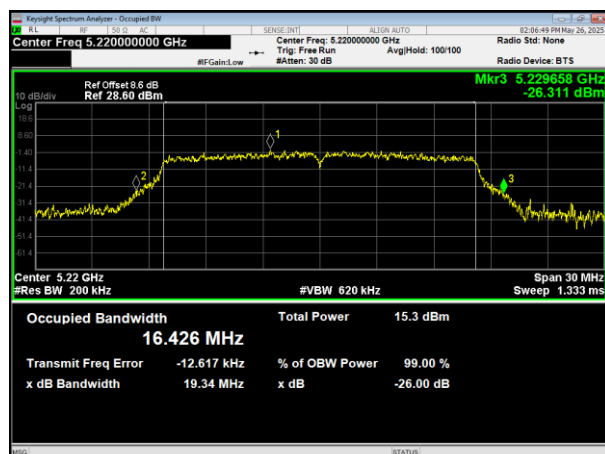
802.11a



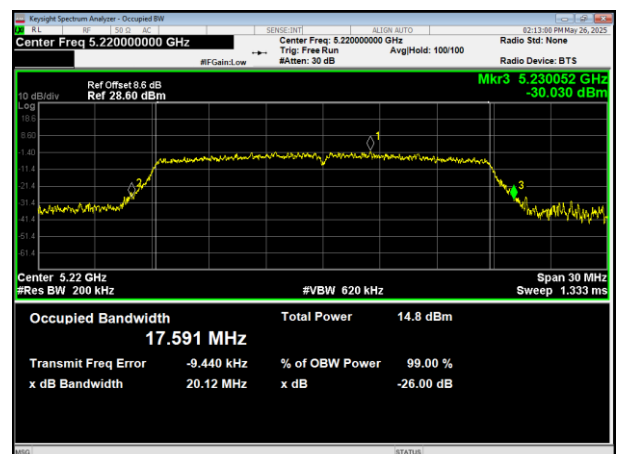
802.11ac HT20



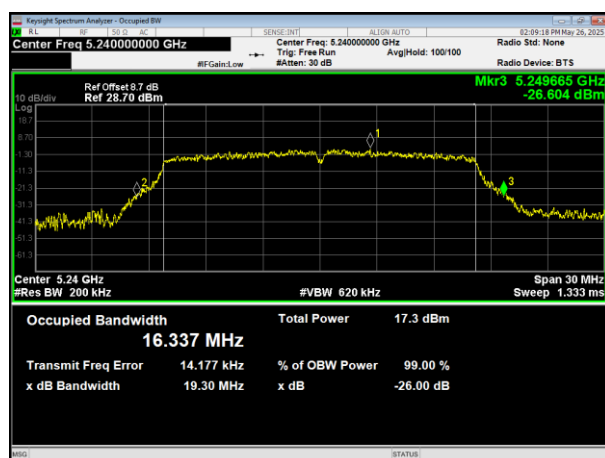
5180MHz



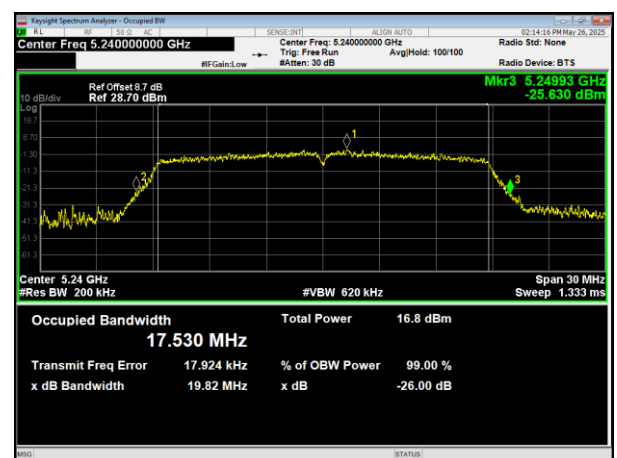
5180MHz



5200MHz



5200MHz

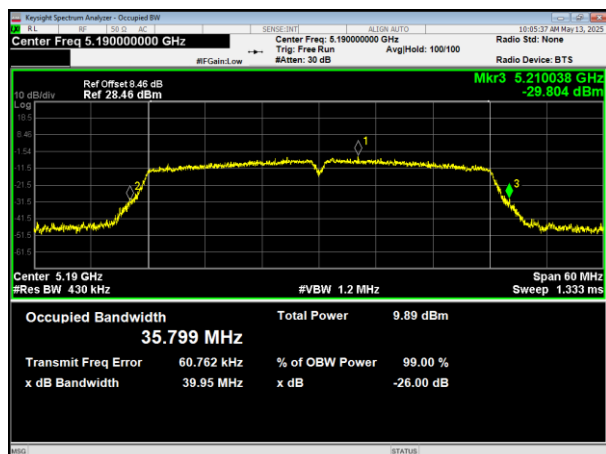


5240MHz

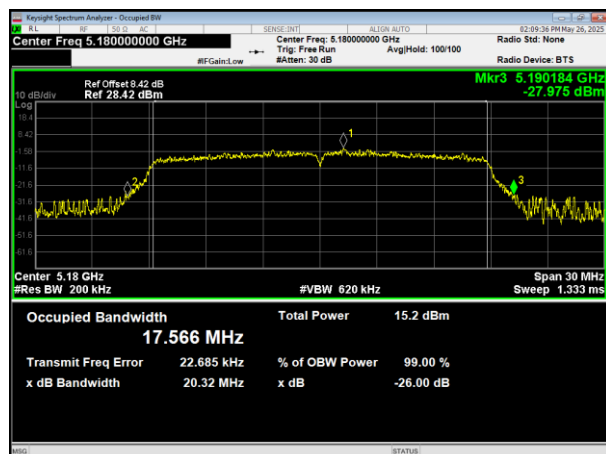
5240MHz



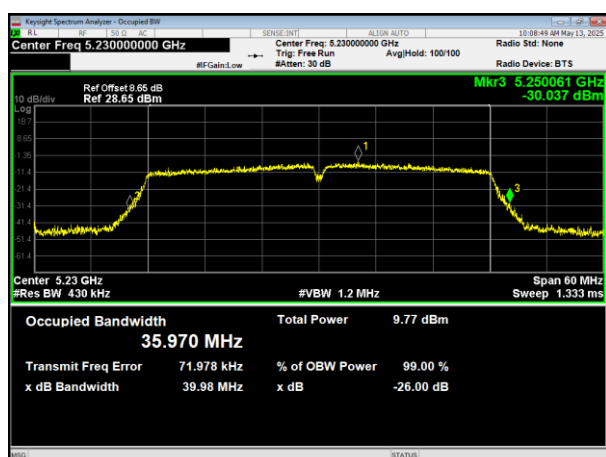
802.11ac HT40



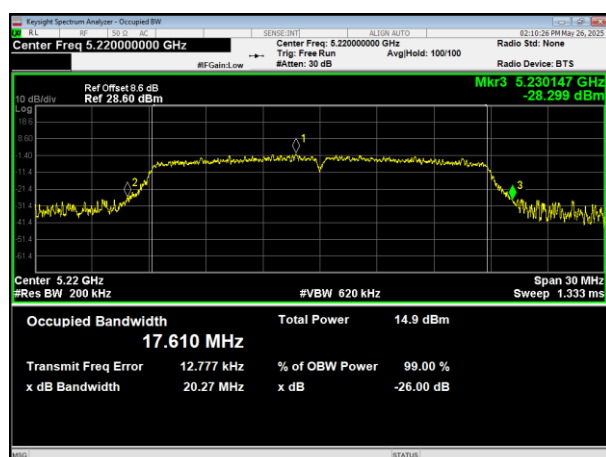
802.11n HT20



5190MHz



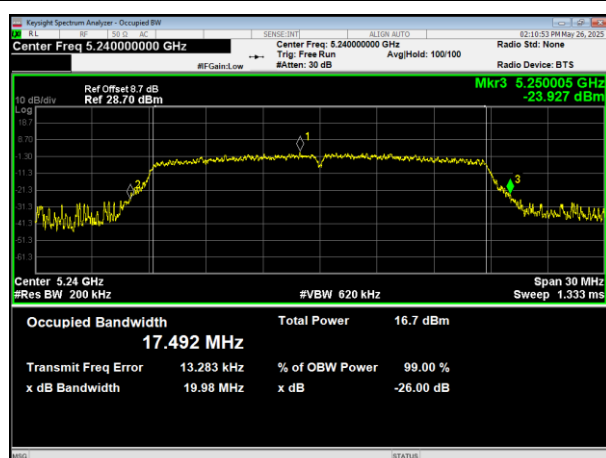
5180MHz



5230MHz



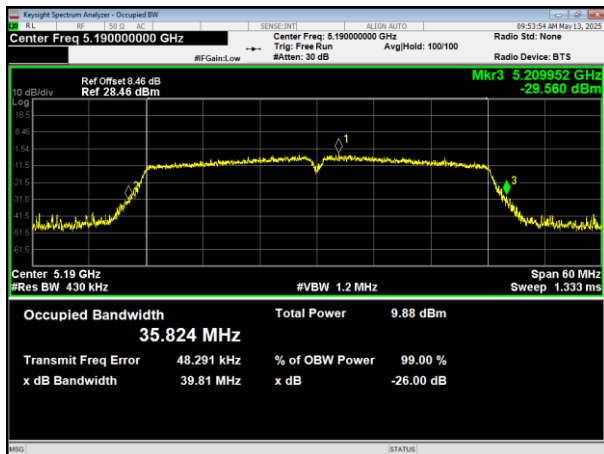
5200MHz



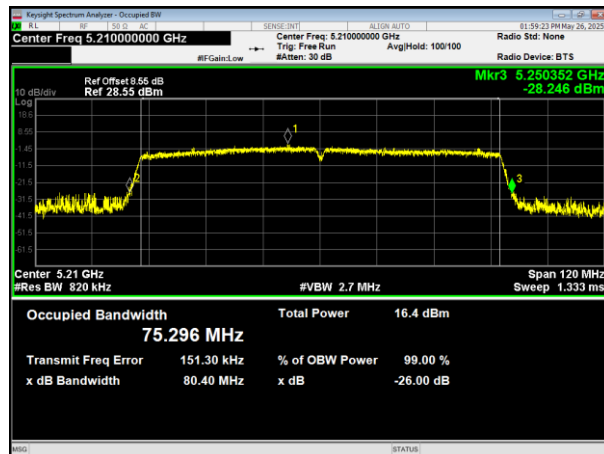
5240MHz



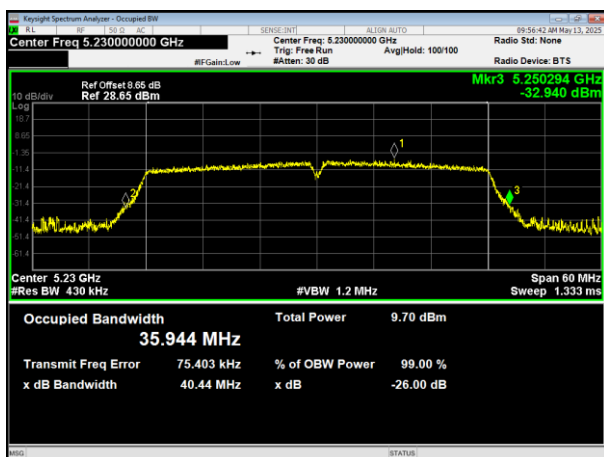
802.11n HT40



802.11ac HT80



5190MHz



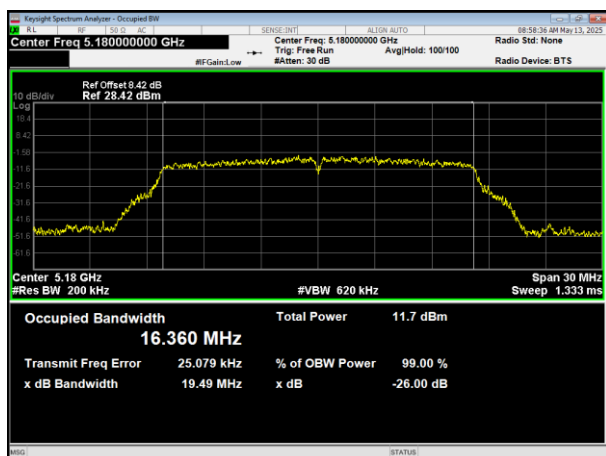
5210MHz

5230MHz

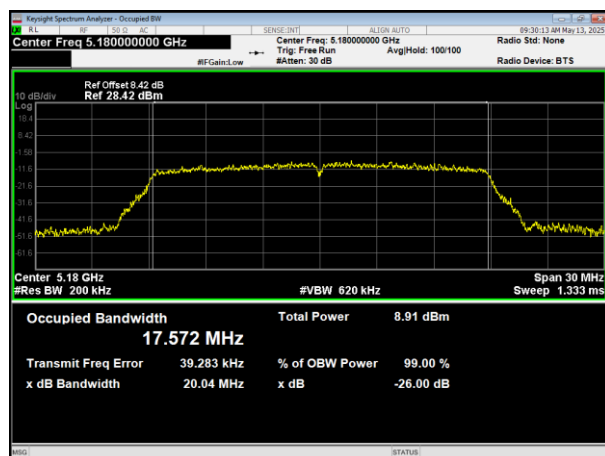


99% Bandwidth

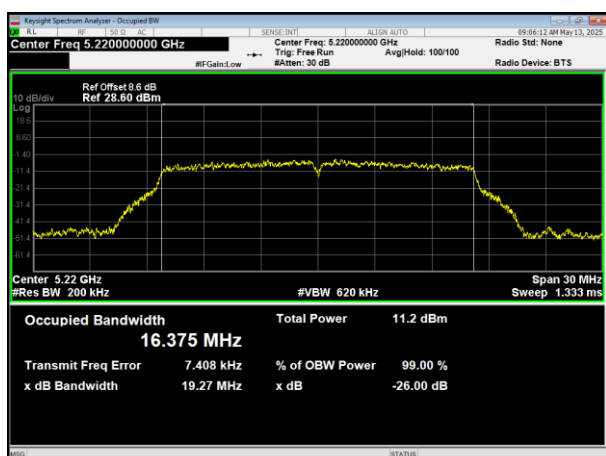
802.11a



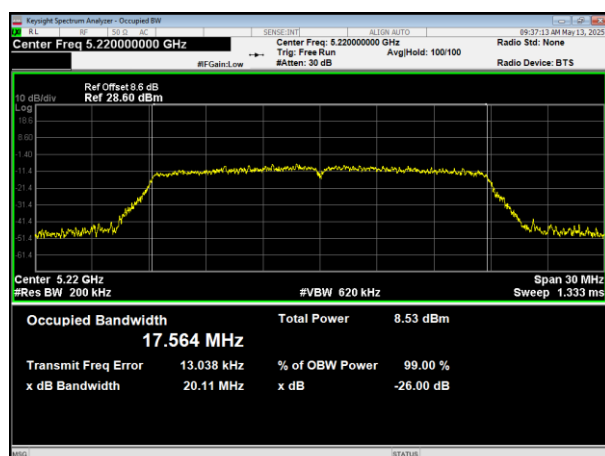
802.11ac HT20



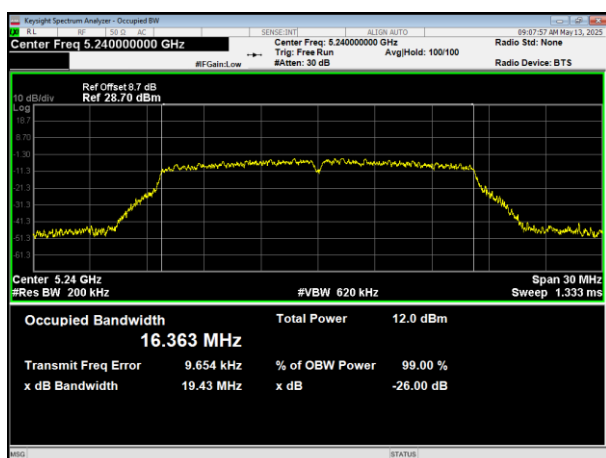
5180MHz



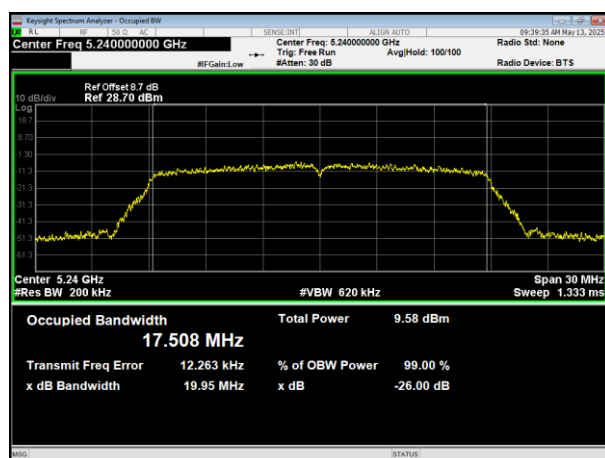
5180MHz



5200MHz



5200MHz

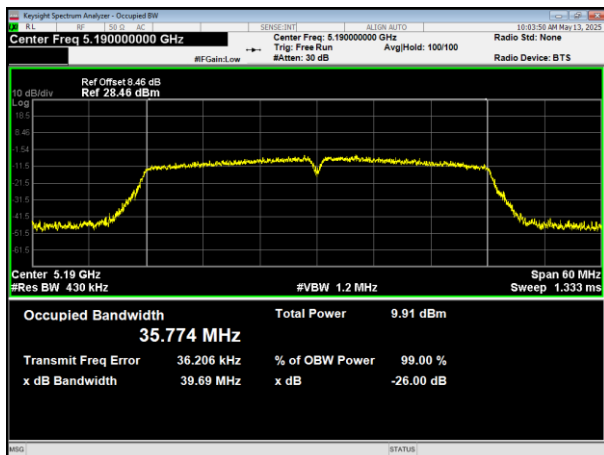


5240MHz

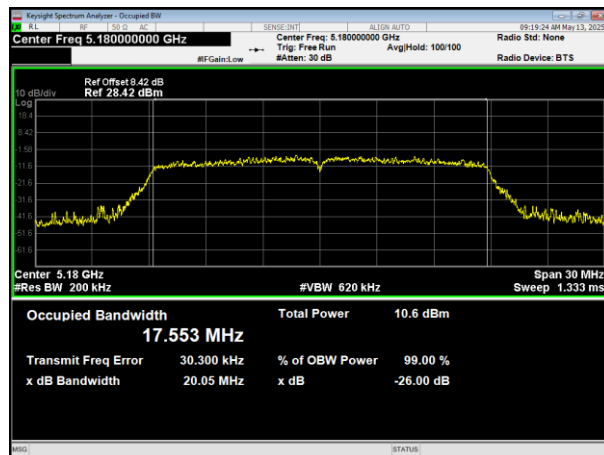
5240MHz



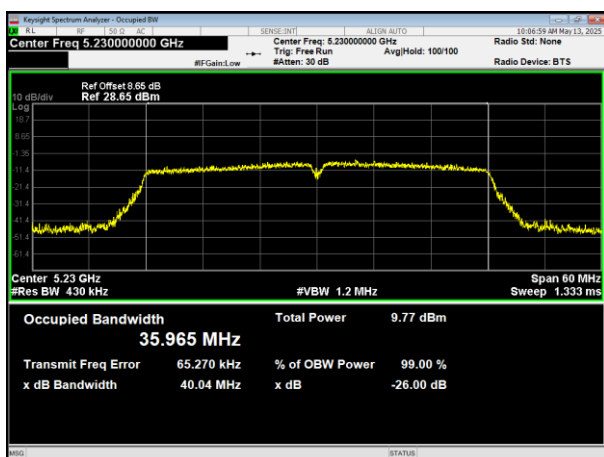
802.11ac HT40



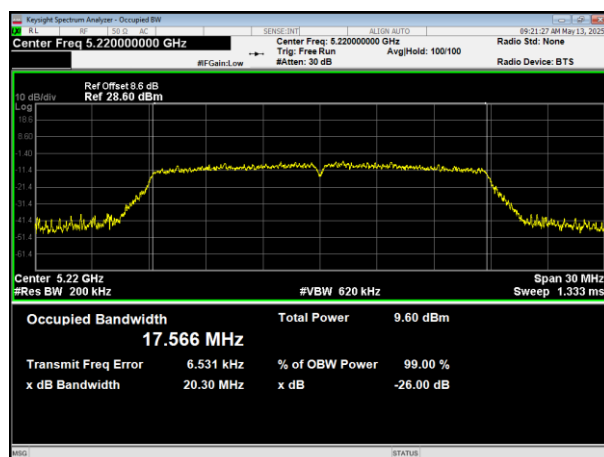
802.11n HT20



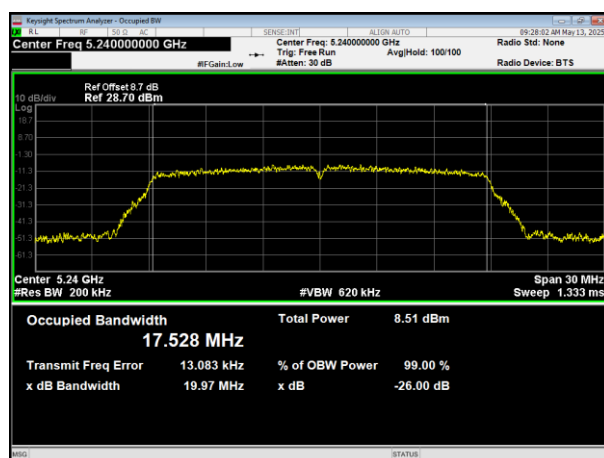
5190MHz



5180MHz



5230MHz

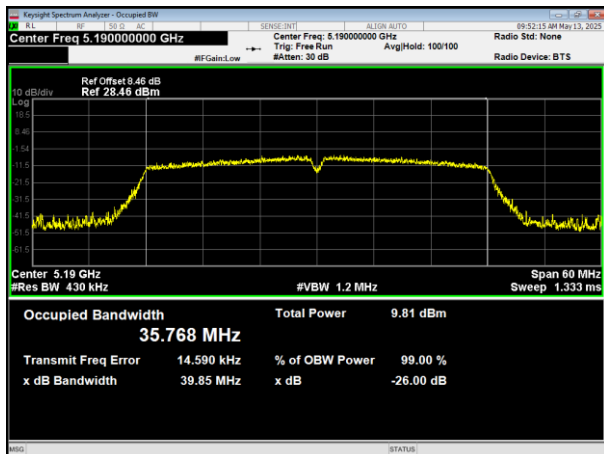


5200MHz

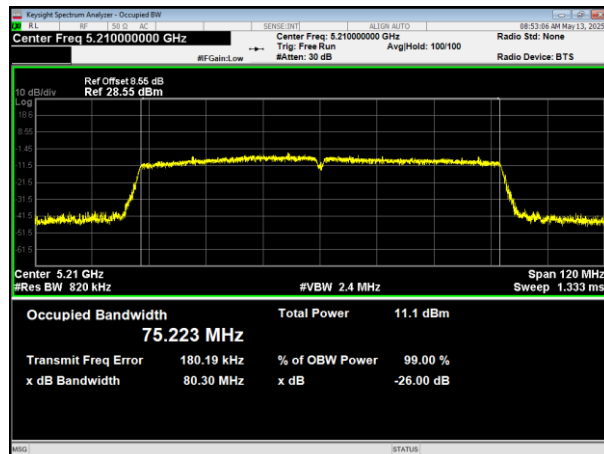
5240MHz



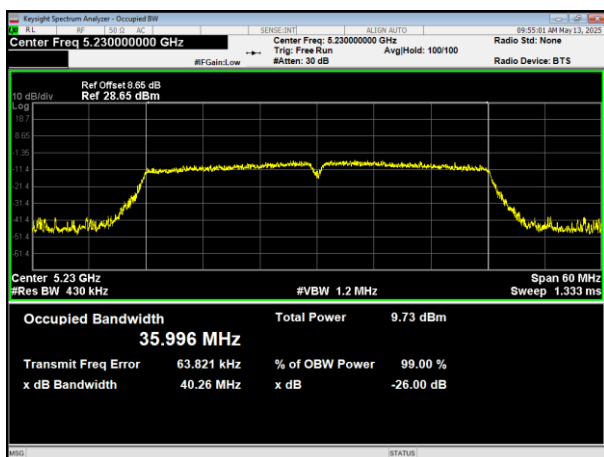
802.11n HT40



802.11ac HT80



5190MHz



5210MHz

5230MHz



7.. DUTY CYCLE TEST SIGNAL

7.1. APPLIED PROCEDURES / LIMIT

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

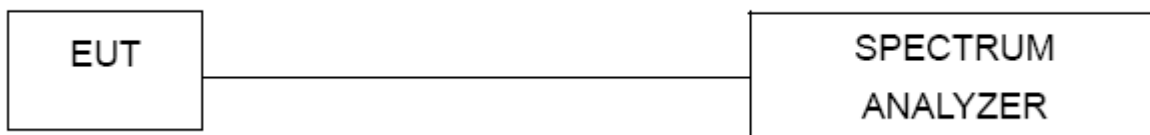
7.1.1. TEST PROCEDURE

1. Set RBW = 1 MHz.
2. Set the video bandwidth (VBW) $\geq$ RBW.
3. Detector = Peak.
4. Sweep = auto couple.
5. Allow the trace to stabilize.
6. Span=0

7.1.2. DEVIATION FROM STANDARD

No deviation.

7.1.3. TEST SETUP



7.1.4. EUT OPERATION CONDITIONS

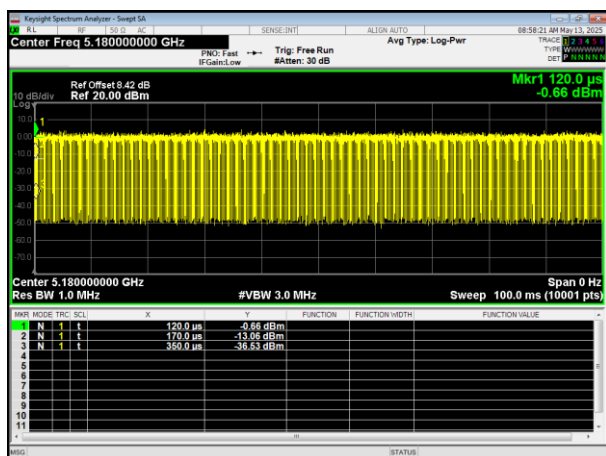
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

**7.1.5. TEST RESULTS**

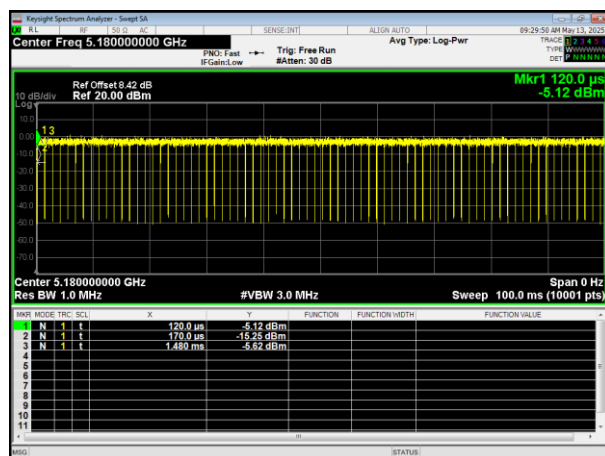
		Test Channel	Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 1	802.11a	Low	78.26	1.06
		Middle	77.27	1.12
		High	81.82	0.87
	802.11ac HT20	Low	96.32	0.16
		Middle	97.04	0.13
		High	97.06	0.13
	802.11ac HT40	Low	94.29	0.26
		High	94.2	0.26
	802.11ac HT80	/	89.19	0.5
	802.11n HT20	Low	97.04	0.13
		Middle	96.3	0.16
		High	97.04	0.13
	802.11n HT40	Low	94.2	0.26
		High	94.2	0.26



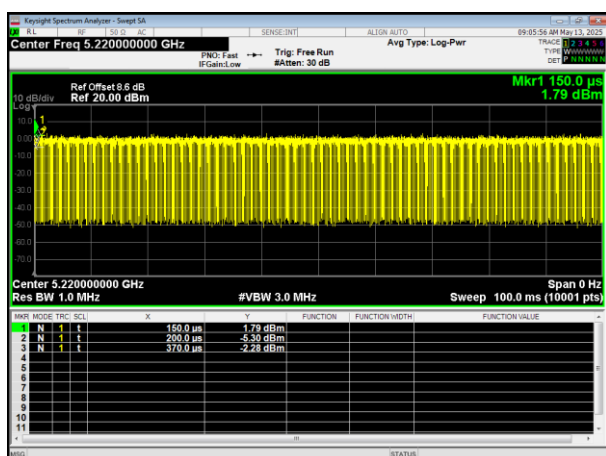
802.11a



802.11ac HT20



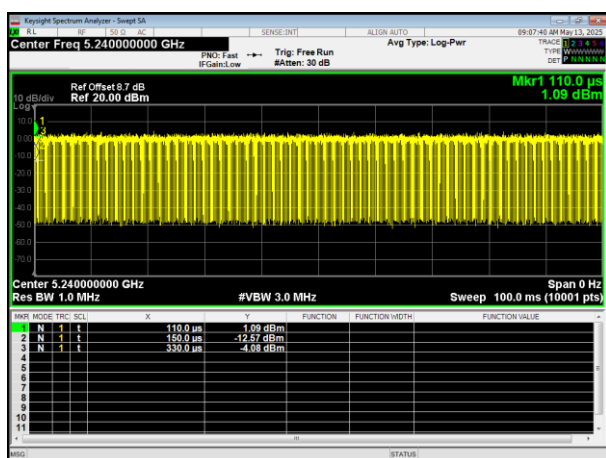
5180MHz



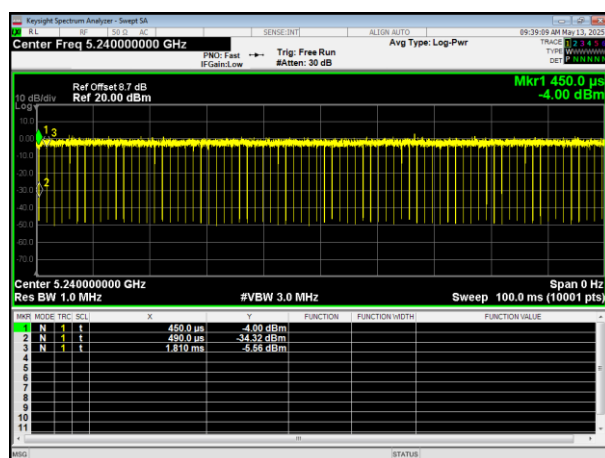
5180MHz



5200MHz



5200MHz

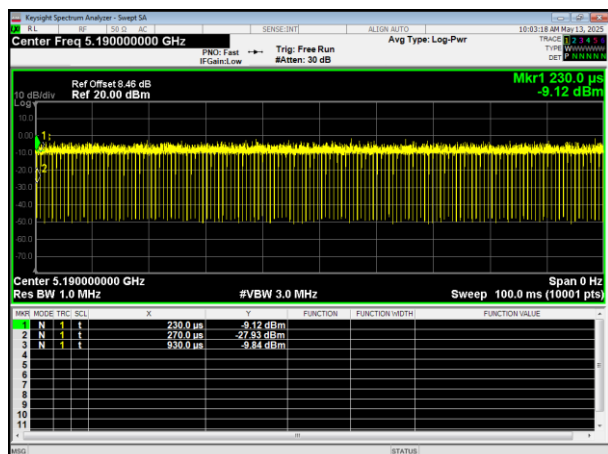


5240MHz

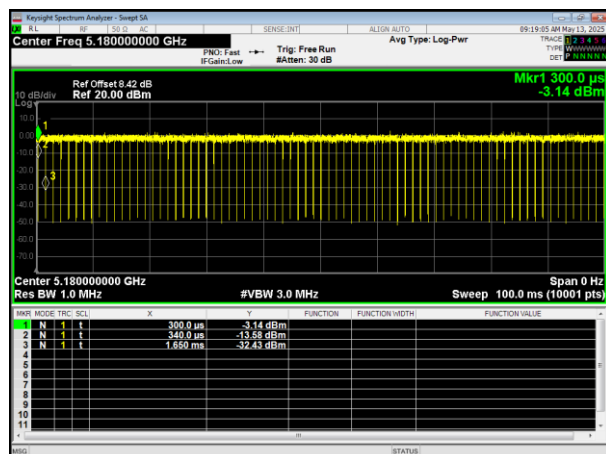
5240MHz



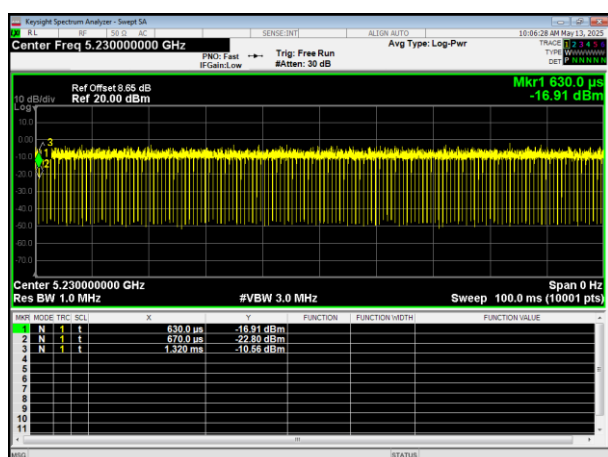
802.11ac HT40



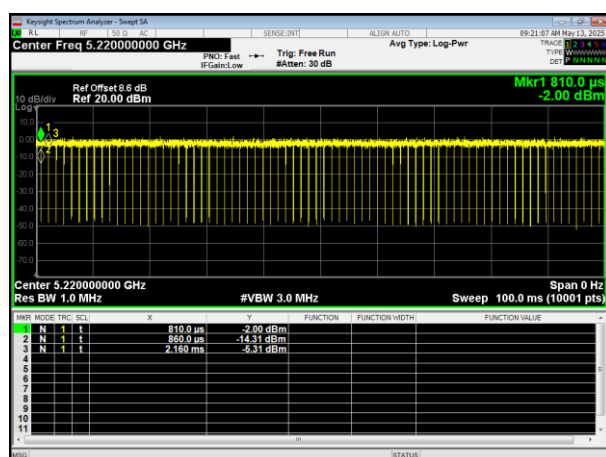
802.11n HT20



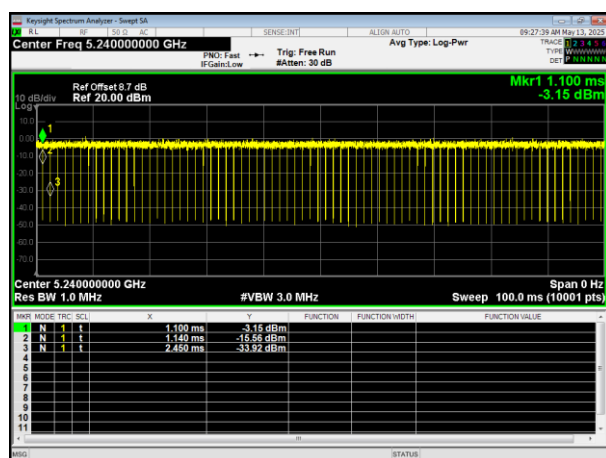
5190MHz



5180MHz



5230MHz

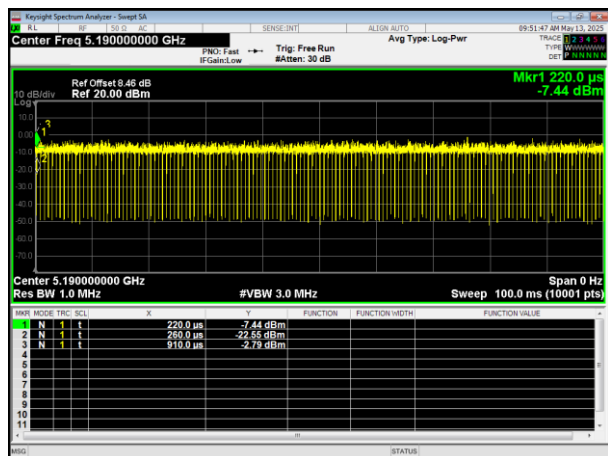


5200MHz

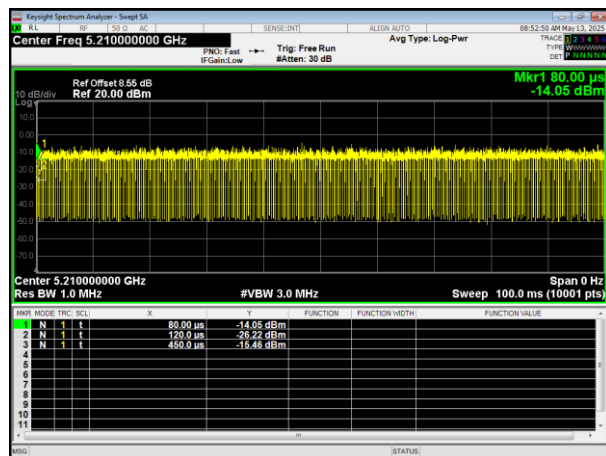
5240MHz



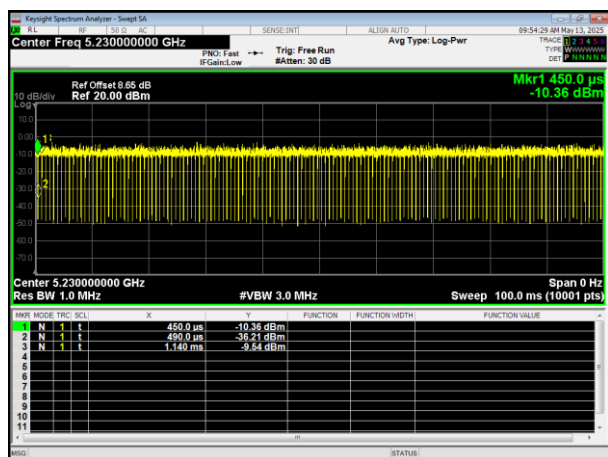
802.11n HT40



802.11ac HT80



5190MHz



5210MHz

5230MHz



8.. FREQUENCY STABILITY

8.1. APPLIED PROCEDURES / LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

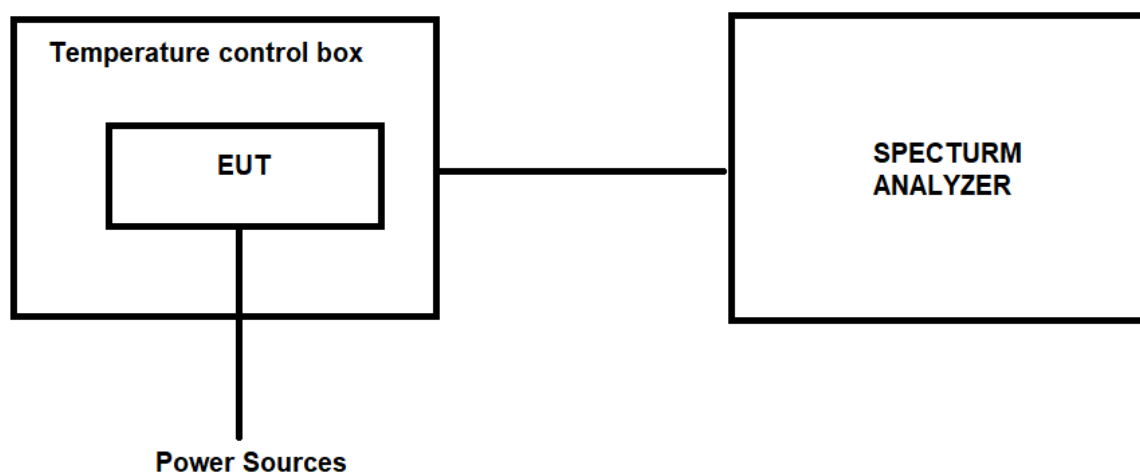
8.1.1. TEST PROCEDURE

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

8.1.2. DEVIATION FROM STANDARD

No deviation.

8.1.3. TEST SETUP



8.1.4. EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

**8.1.5. TEST RESULTS**

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)			Δ Frequency (PPM)		
			802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
4.07V	-20℃	5180	5180.0352	5180.0365	5180.0352	6.7954	7.0463	6.7954
		5220	5220.0331	5220.0323	5220.0336	6.3410	6.1877	6.4368
		5240	5240.0213	5240.0265	5240.0255	4.0649	5.0573	4.8664
3.33V		5180	5180.0248	5180.0246	5180.0211	4.7876	4.7490	4.0734
		5220	5220.0314	5220.0325	5220.0336	6.0153	6.2261	6.4368
		5240	5240.0251	5240.0251	5240.0235	4.7901	4.7901	4.4847
3.7V	25℃	5180	5180.0553	5180.0558	5180.0546	10.6757	10.7722	10.5405
		5220	5220.0265	5220.0233	5220.0228	5.0766	4.4636	4.3678
		5240	5240.0326	5240.0362	5240.0336	6.2214	6.9084	6.4122
4.07V	50℃	5180	5180.0311	5180.0354	5180.0329	6.0039	6.8340	6.3514
		5220	5220.0264	5220.0221	5220.0222	5.0575	4.2337	4.2529
		5240	5240.0348	5240.0336	5240.0344	6.6412	6.4122	6.5649
3.33V	50℃	5180	5180.0333	5180.0358	5180.0359	6.4286	6.9112	6.9305
		5220	5220.0255	5220.0265	5220.0244	4.8851	5.0766	4.6743
		5240	5240.0313	5240.0325	5240.0366	5.9733	6.2023	6.9847



Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)		Δ Frequency (PPM)	
			802.11n HT40	802.11ac HT40	802.11n HT40	802.11ac HT40
4.07V	-20℃	5190	5190.0235	5190.0225	4.5279	4.3353
		5230	5230.0315	5230.0333	6.0229	6.3671
3.33V		5190	5190.0268	5190.0221	5.1638	4.2582
		5230	5230.0384	5230.0368	7.3423	7.0363
3.7V	25℃	5190	5190.0252	5190.0265	4.8555	5.1060
		5230	5230.0653	5230.0556	12.4857	10.6310
4.07V	50℃	5190	5190.0614	5190.0632	11.8304	12.1773
		5230	5230.0585	5230.0551	11.1855	10.5354
3.33V	50℃	5190	5190.0521	5190.0554	10.0385	10.6744
		5230	5230.0315	5230.0368	6.0229	7.0363

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (PPM)
			802.11ac HT80	802.11ac HT80
4.07V	-20°C	5210	5210.0113	2.1689
3.33V		5210	5210.0265	5.0864
3.7V	25°C	5210	5210.0424	8.1382
4.07V	50°C	5210	5210.0364	6.9866
3.33V	50°C	5210	5210.0384	7.3704



9.. TRANSMISSION IN THE ABSENCE OF DATA

9.1. STANDARD REQUIREMENT

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

9.2. TEST RESULT

Pass.

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

10.. ANTENNA REQUIREMENT

10.1. STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

10.2. EUT ANTENNA

The EUT antenna is Internal antenna, It comply with the standard requirement.

11.. TEST SEUUP PHOTO

Reference to the appendix I for details.

12.. EUT PHOTO

Reference to the appendix II for details.

******* END OF REPORT *******