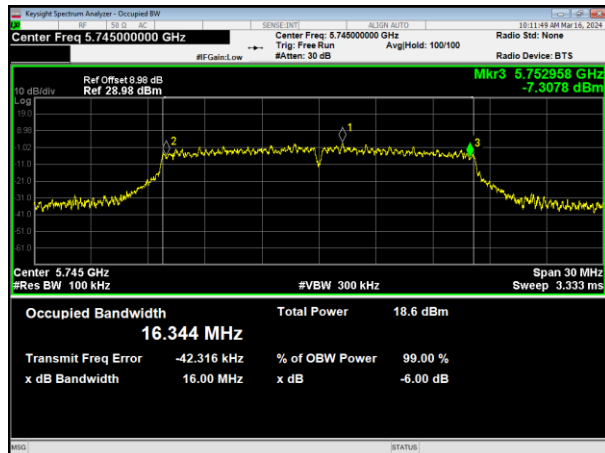


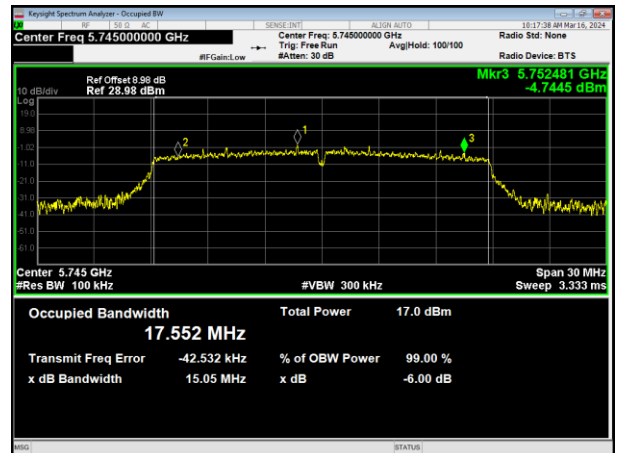


Antenna4

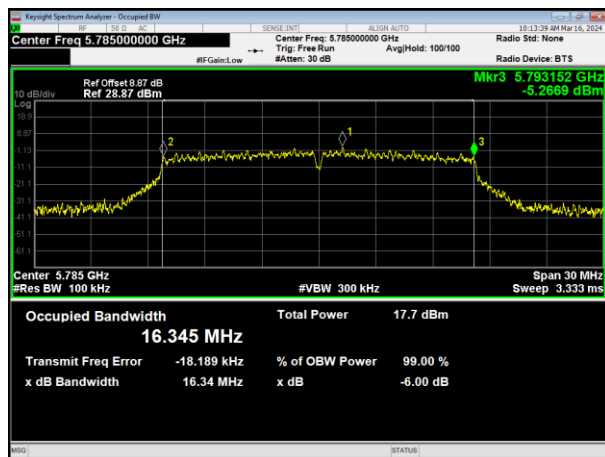
802.11a



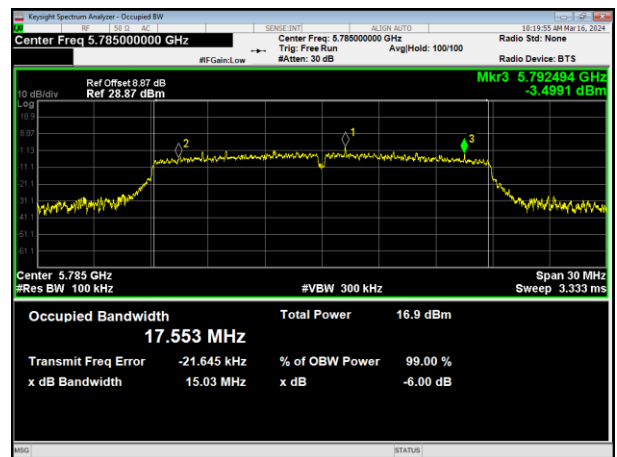
802.11n HT20



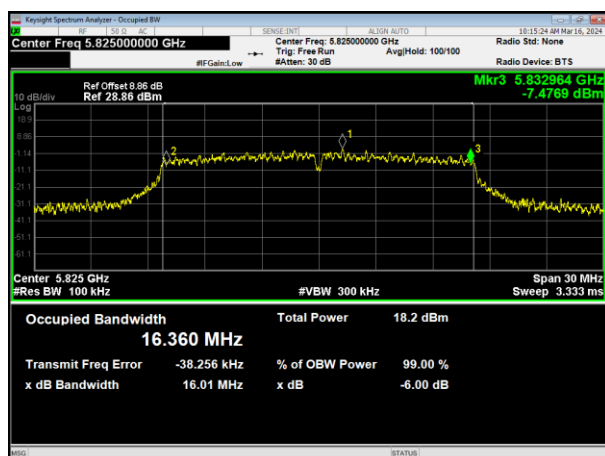
5745MHz



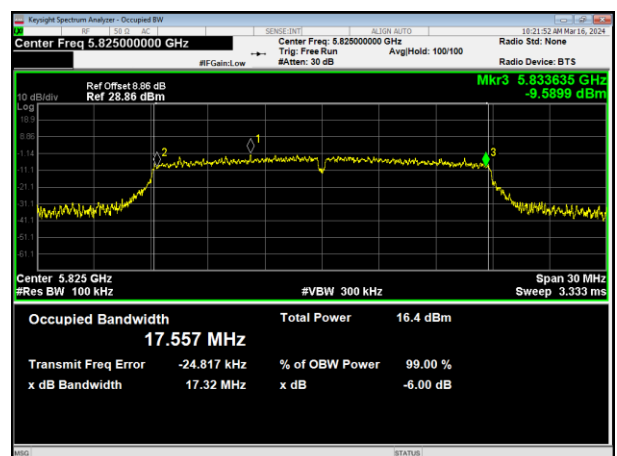
5745MHz



5785MHz



5785MHz

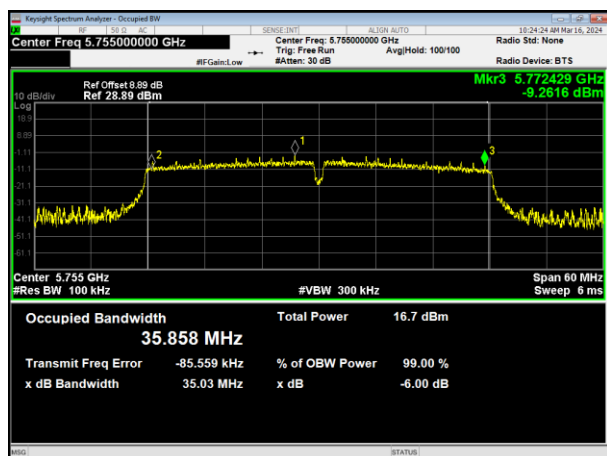


5825MHz

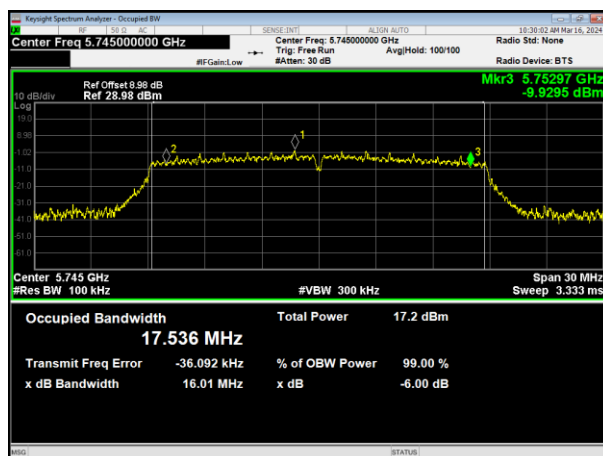
5825MHz



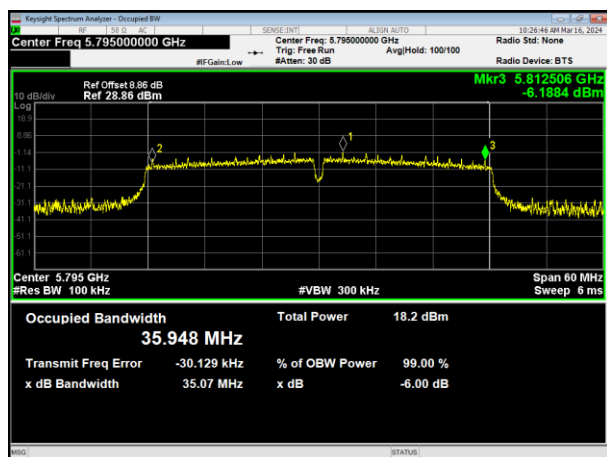
802.11n HT40



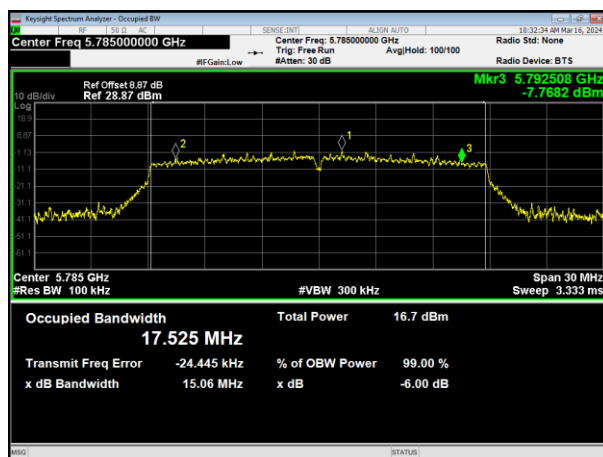
802.11ac HT20



5755MHz



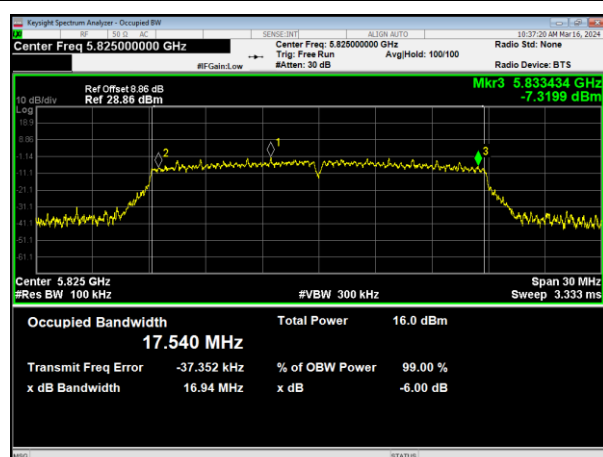
5745MHz



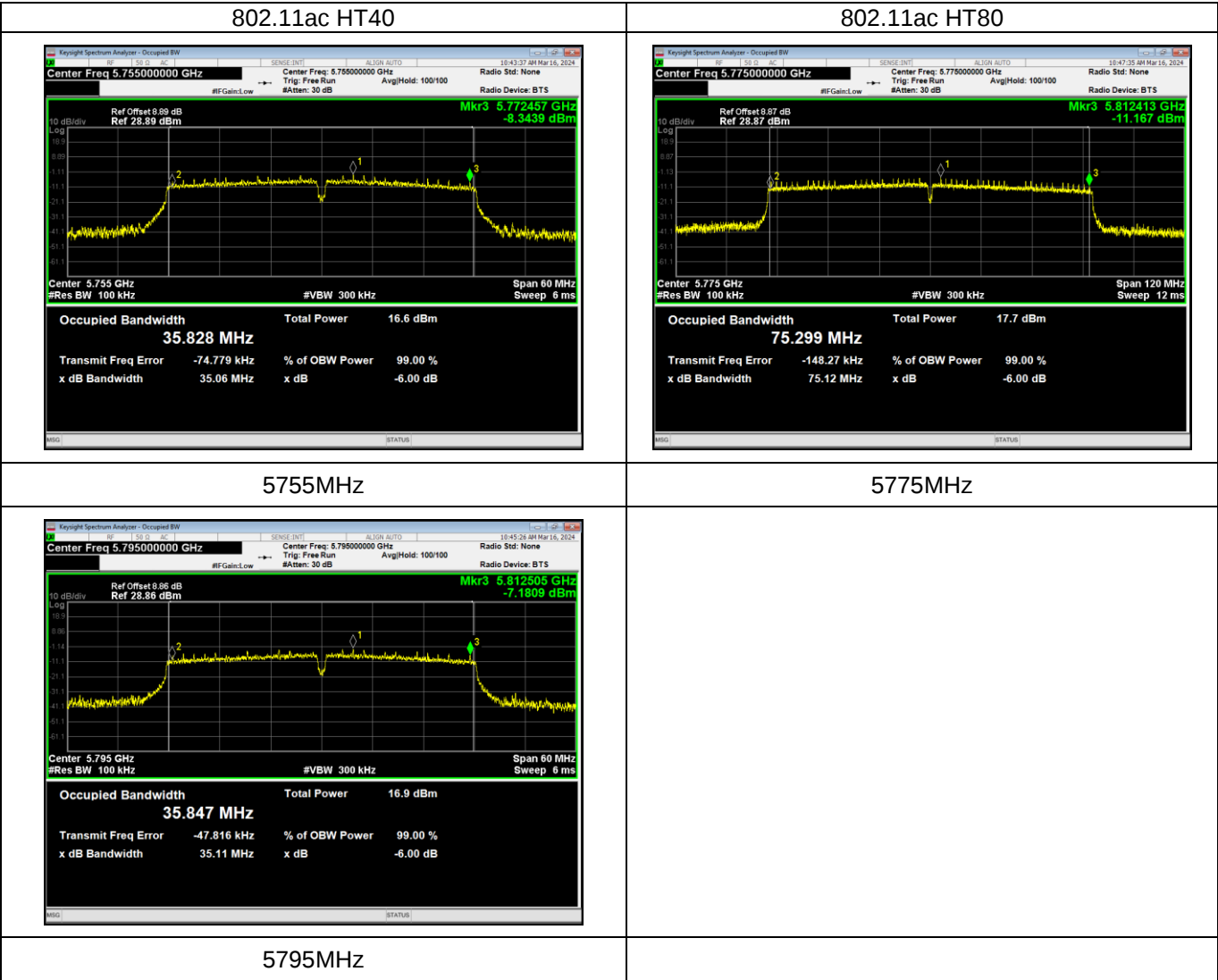
5795MHz



5785MHz



5825MHz





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

Antenna3

Operation Mode		Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 4	802.11a	81.82	0.87
	802.11n(HT20)	97.01	0.13
	802.11n(HT40)	94.2	0.26
	802.11ac(HT20)	97.04	0.13
	802.11ac(HT40)	89.74	0.47
	802.11ac(HT80)	82.61	0.83

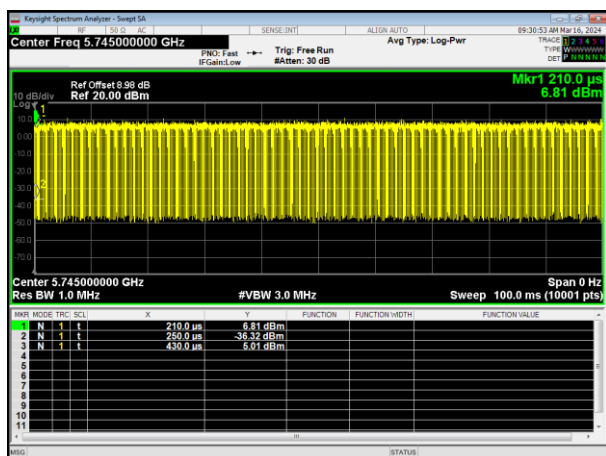
Antenna4

Operation Mode		Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 4	802.11a	81.82	0.87
	802.11n(HT20)	96.3	0.16
	802.11n(HT40)	92.86	0.32
	802.11ac(HT20)	93.06	0.31
	802.11ac(HT40)	94.2	0.26
	802.11ac(HT80)	89.19	0.5

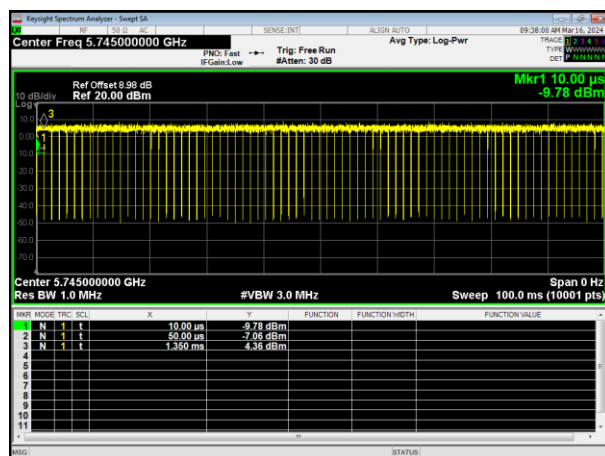


Antenna3

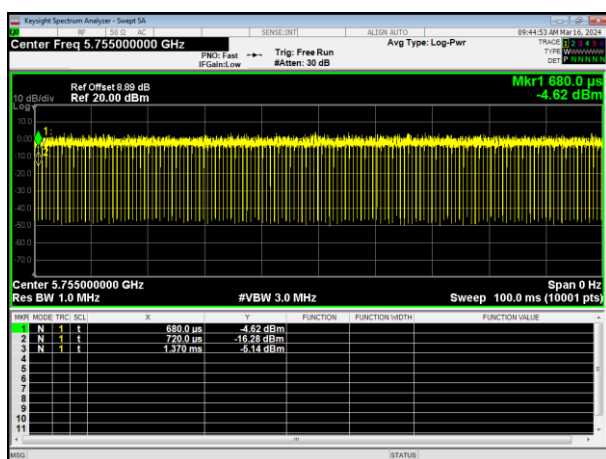
802.11a



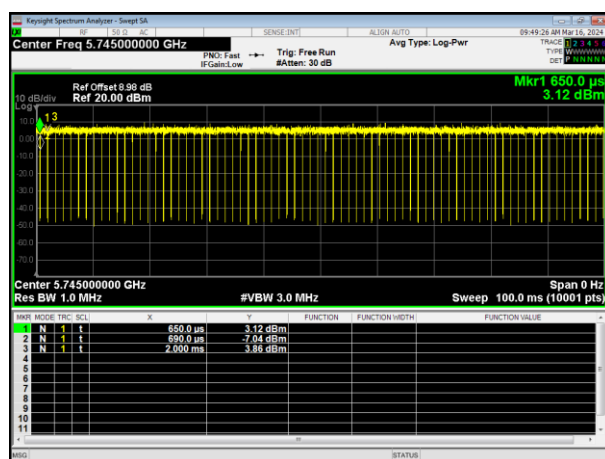
802.11n HT20



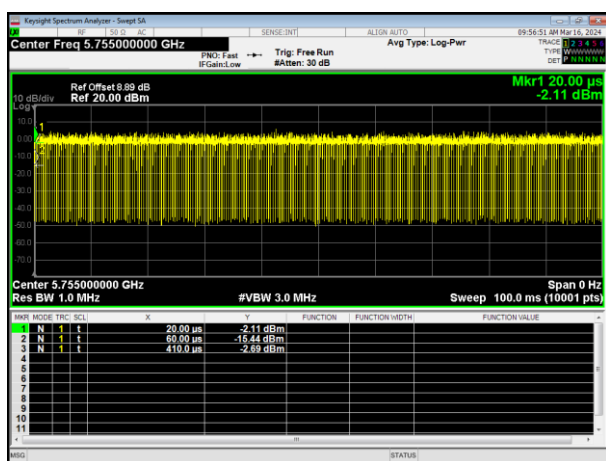
802.11n HT40



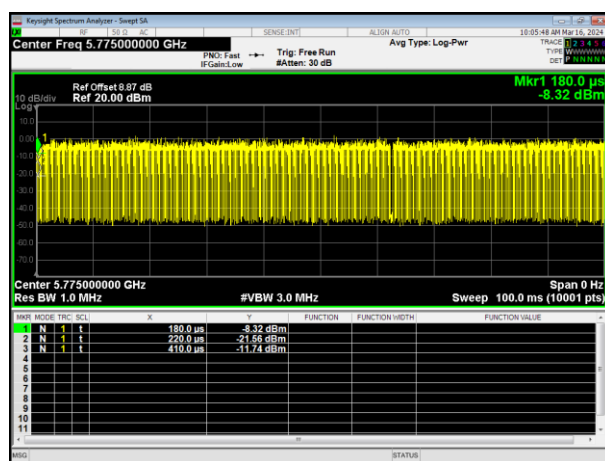
802.11ac HT20



802.11ac HT40



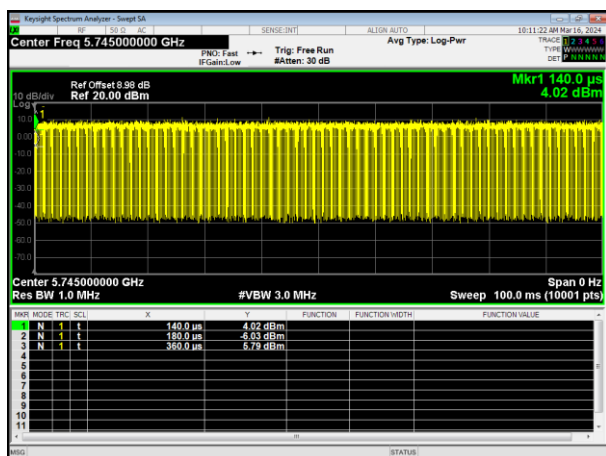
802.11ac HT80



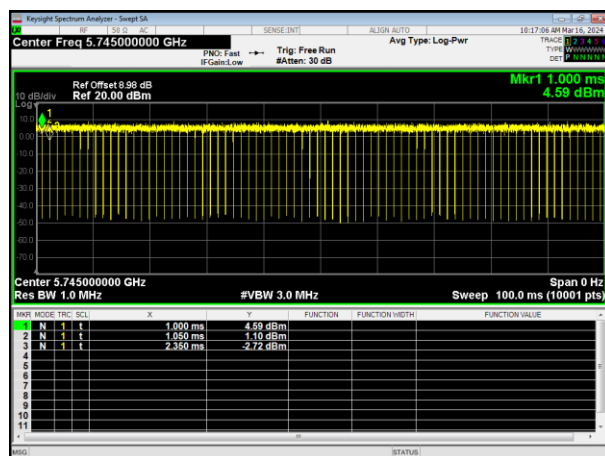


Antenna4

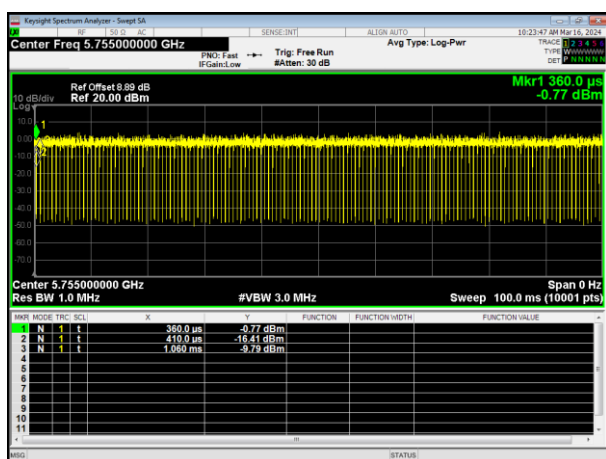
802.11a



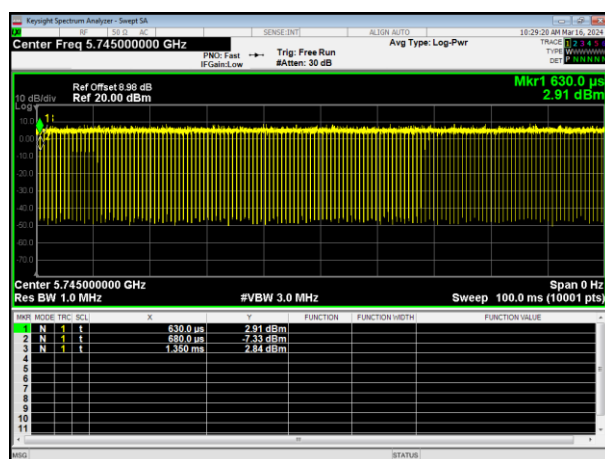
802.11n HT20



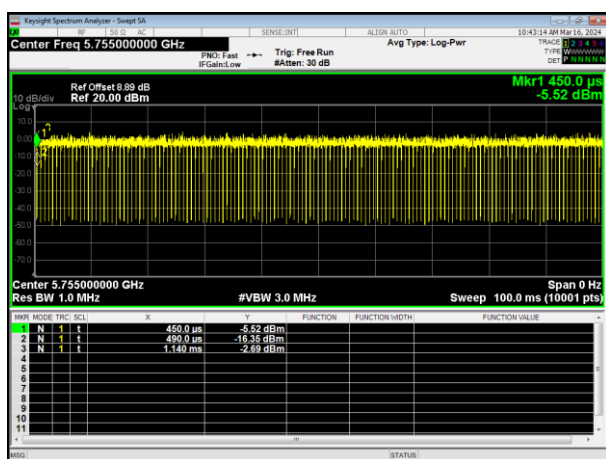
802.11n HT40



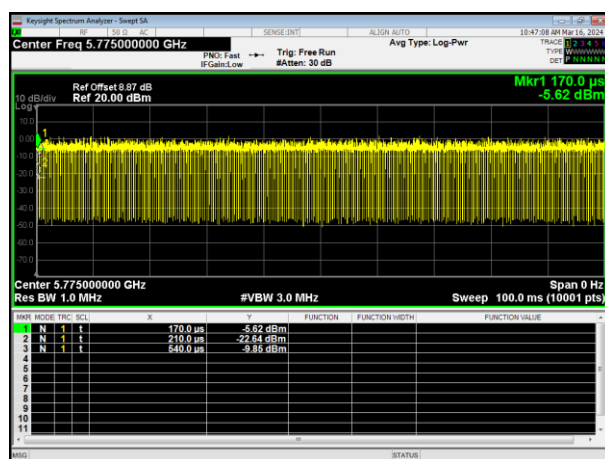
802.11ac HT20



802.11ac HT40



802.11ac HT80





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.

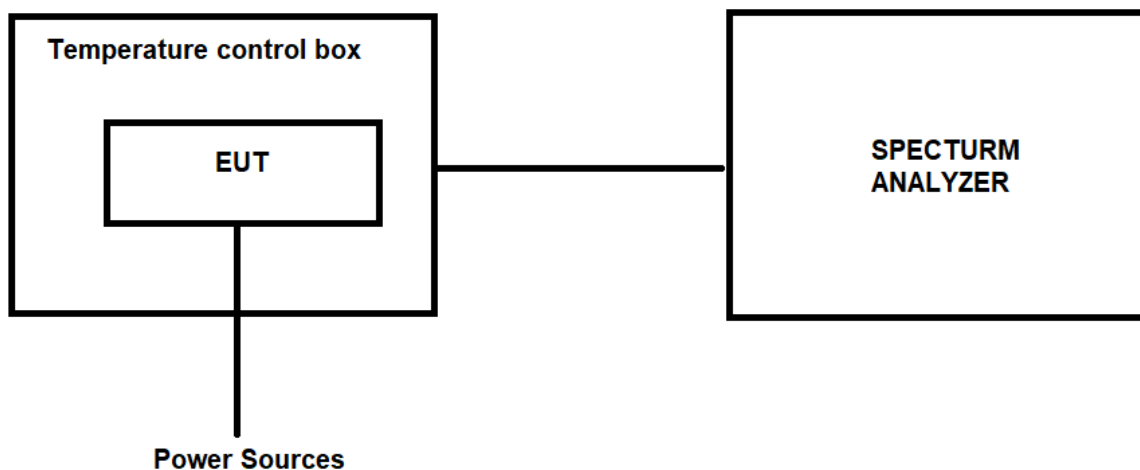
8.1.1 TEST PROCEDURE

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

We test all antenna's data, the data only show the antenna3 worst mode.

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)			Δ Frequency (MHz)		
			802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
132V	-20℃	5745	5745.0325	5745.0328	5745.0323	5.6571	5.7093	5.6223
		5785	5785.0332	5785.0336	5785.0352	5.7390	5.8081	6.0847
		5825	5825.0325	5825.0334	5825.0361	5.5794	5.7339	6.1974
108V		5745	5745.0234	5745.0262	5745.0299	4.0731	4.5605	5.2045
		5785	5785.0353	5785.0336	5785.0355	6.1020	5.8081	6.1366
		5825	5825.0499	5825.0454	5825.0414	8.5665	7.7940	7.1073
120V	25℃	5745	5745.0351	5745.0352	5745.0343	6.1097	6.1271	5.9704
		5785	5785.0483	5785.0413	5785.0467	8.3492	7.1392	8.0726
		5825	5825.0224	5825.0224	5825.0225	3.8455	3.8455	3.8627
132V	50℃	5745	5745.0666	5745.0685	5745.0683	11.5927	11.9234	11.8886
		5785	5785.0494	5785.0425	5785.0448	8.5393	7.3466	7.7442
		5825	5825.0646	5825.0626	5825.0664	11.0901	10.7468	11.3991
108V	50℃	5745	5745.0418	5745.0437	5745.0436	7.2759	7.6066	7.5892
		5785	5785.0234	5785.0256	5785.0284	4.0449	4.4252	4.9092
		5825	5825.0746	5825.0735	5825.0768	12.8069	12.6180	13.1845

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)		Δ Frequency (MHz)	
			802.11n HT40	802.11ac HT40	802.11n HT40	802.11ac HT40
132V	-20℃	5755	5755.0525	5755.0524	9.1225	9.1051
		5795	5795.0614	5795.0668	10.5953	11.5272
108V		5755	5755.0233	5755.0656	4.0487	11.3988
		5795	5795.0457	5795.0494	7.8861	8.5246
120V	25℃	5755	5755.0254	5755.0232	4.4136	4.0313
		5795	5795.0566	5795.0531	9.7670	9.1631
132V	50℃	5755	5755.0468	5755.0488	8.1321	8.4796
		5795	5795.0324	5795.0355	5.5910	6.1260
108V	50℃	5755	5755.0352	5755.0363	6.1164	6.3076
		5795	5795.0463	5795.0485	7.9896	8.3693



Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
			802.11ac HT80	802.11ac HT80
132V	-20℃	5775	5775.0164	2.8398
108V		5775	5775.0342	5.9221
120V	25℃	5775	5775.0363	6.2857
132V	50℃	5775	5775.0265	4.5887
108V	50℃	5775	5775.0543	9.4026



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

No non-compliance noted:
Refer to the theory of operation.

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 External 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 *****