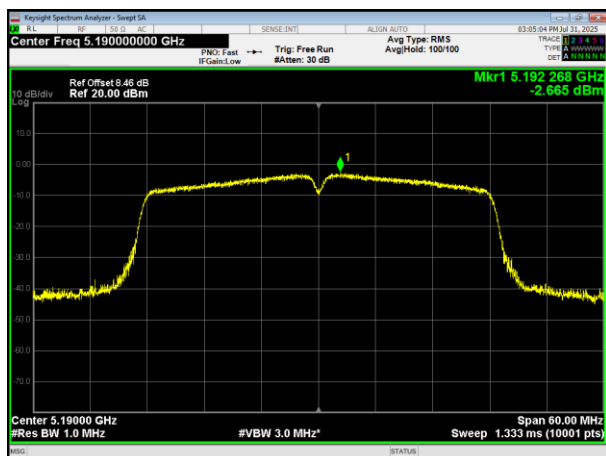
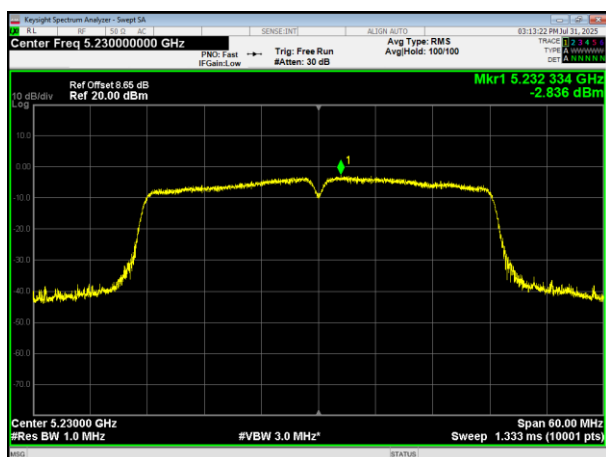




802.11n HT40



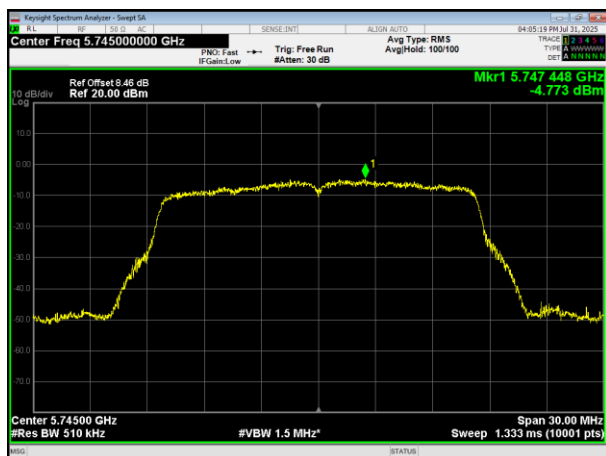
5190MHz



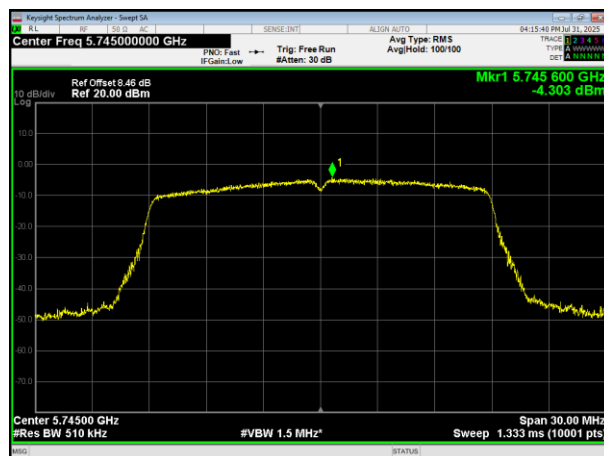
5230MHz



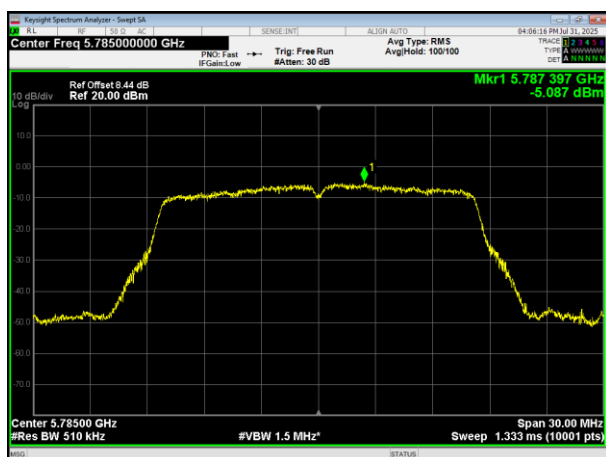
802.11a



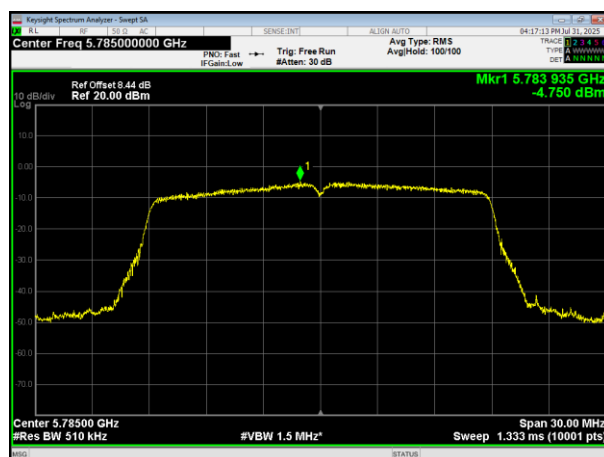
802.11ac HT20



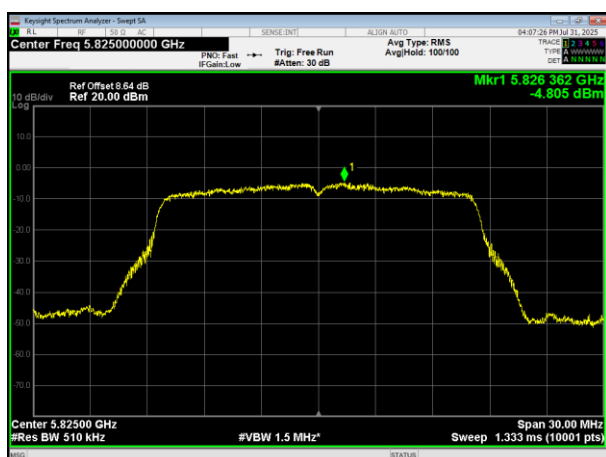
5745MHz



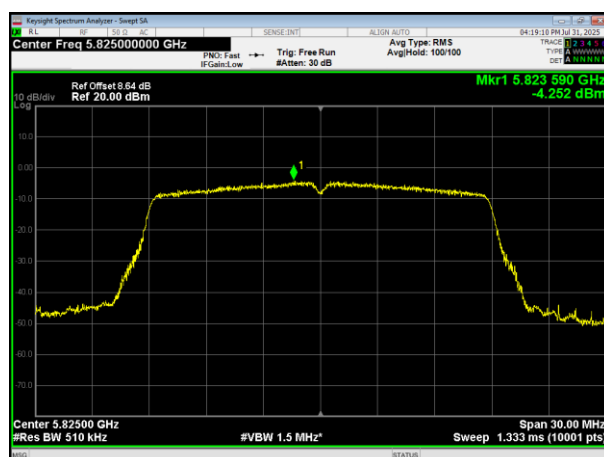
5745MHz



5785MHz



5785MHz

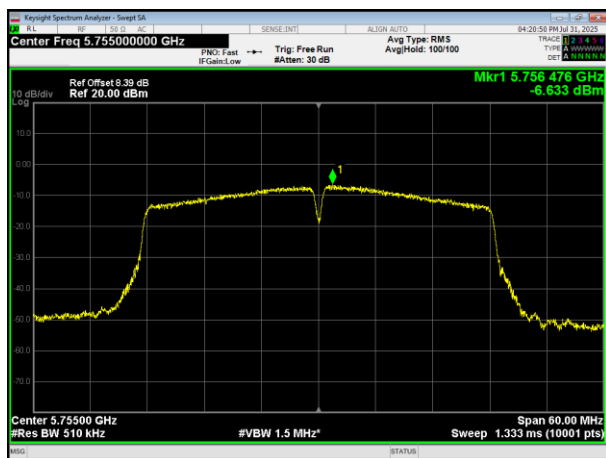


5825MHz

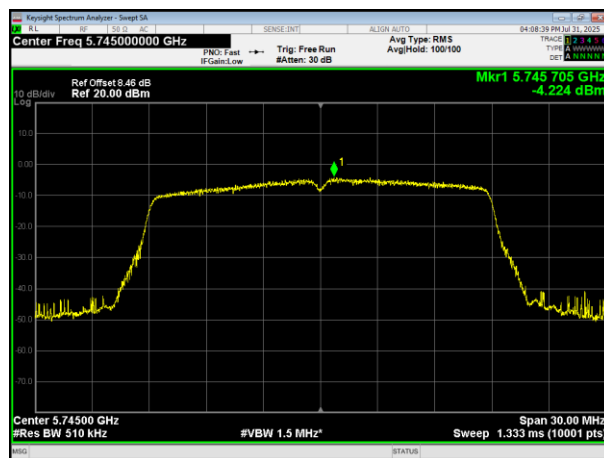
5825MHz



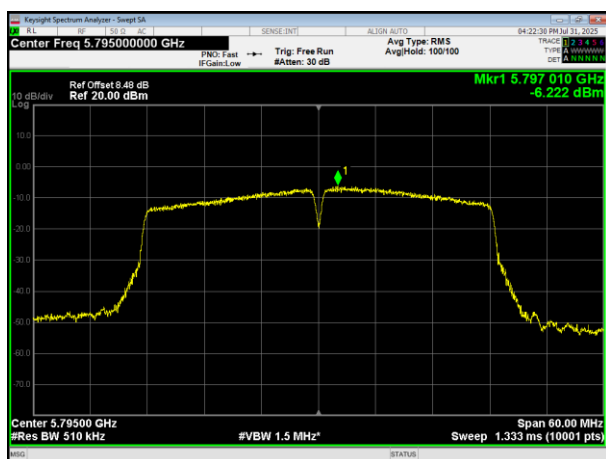
802.11ac HT40



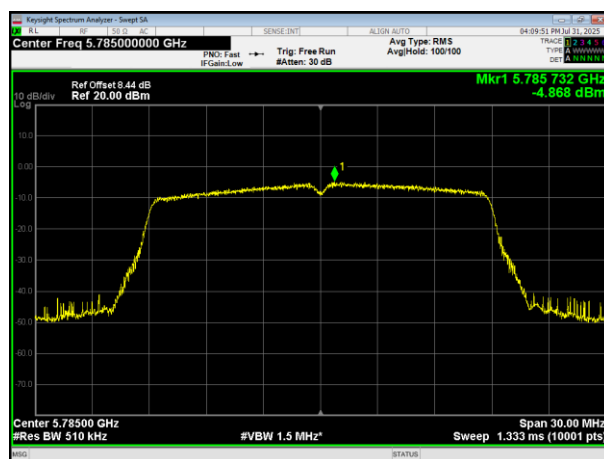
802.11n HT20



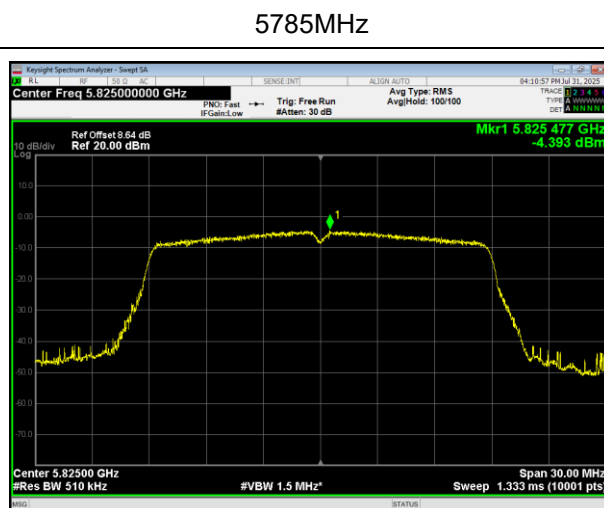
5755MHz



5745MHz



5795MHz

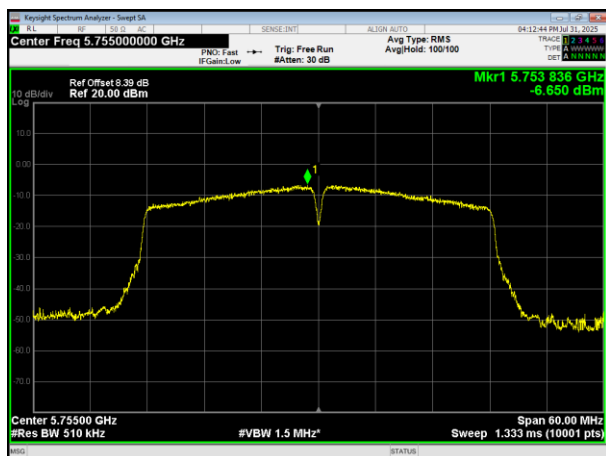


5785MHz

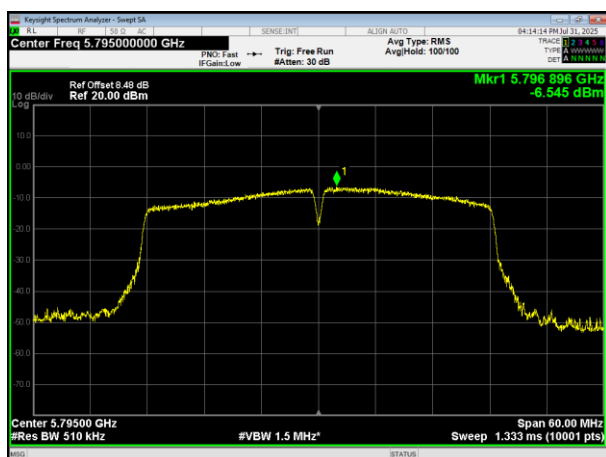
5825MHz



802.11n HT40



5755MHz



5795MHz



6. 6DB&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.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

6.1.1 TEST PROCEDURE

6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

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.

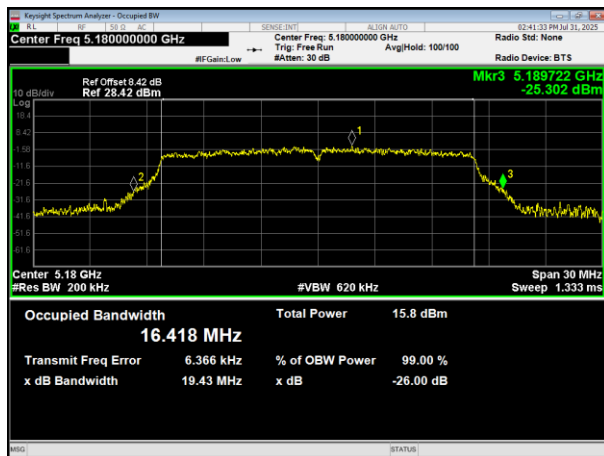
6.1.5 TEST RESULTS

		Test Channel	26dB Bandwidth (MHz)	Result
Band 1	802.11a	Low	19.431	Pass
		Middle	19.368	Pass
		High	19.405	Pass
	802.11ac HT20	Low	20.176	Pass
		Middle	20.143	Pass
		High	20.115	Pass
	802.11ac HT40	Low	39.958	Pass
		High	40.686	Pass
	802.11n HT20	Low	20.164	Pass
		Middle	20.04	Pass
		High	19.978	Pass
	802.11n HT40	Low	40.319	Pass
		High	40.336	Pass

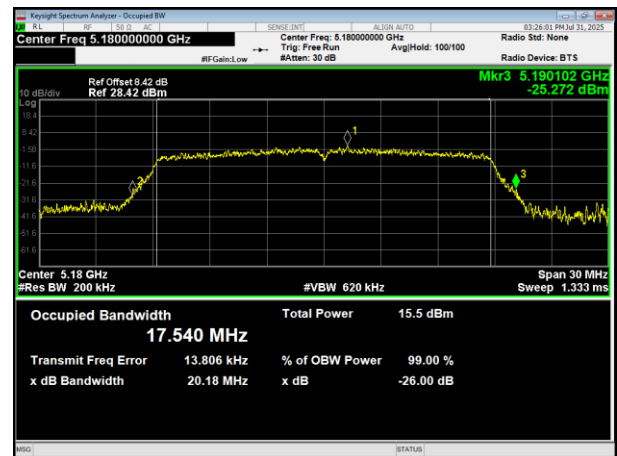
		Test Channel	6dB Bandwidth (MHz)	6dB Bandwidth Limit (MHz)	Result
Band 4	802.11a	Low	15.7	>0.5	Pass
		Middle	15.926	>0.5	Pass
		High	15.728	>0.5	Pass
	802.11ac HT20	Low	16.332	>0.5	Pass
		Middle	15.258	>0.5	Pass
		High	15.255	>0.5	Pass
	802.11ac HT40	Low	30.062	>0.5	Pass
		High	32.528	>0.5	Pass
	802.11n HT20	Low	13.779	>0.5	Pass
		Middle	14.754	>0.5	Pass
		High	15.044	>0.5	Pass
	802.11n HT40	Low	28.77	>0.5	Pass
		High	31.254	>0.5	Pass



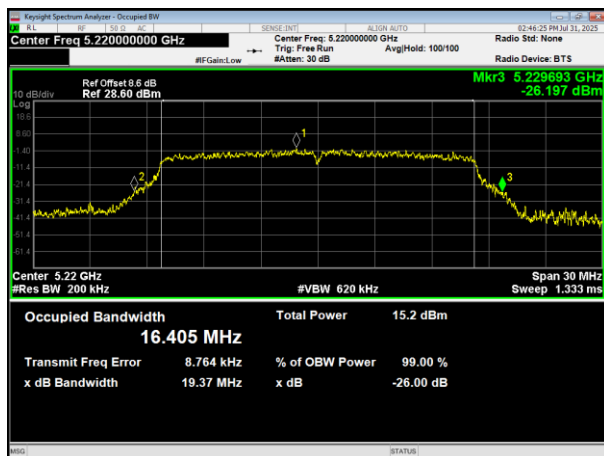
802.11a



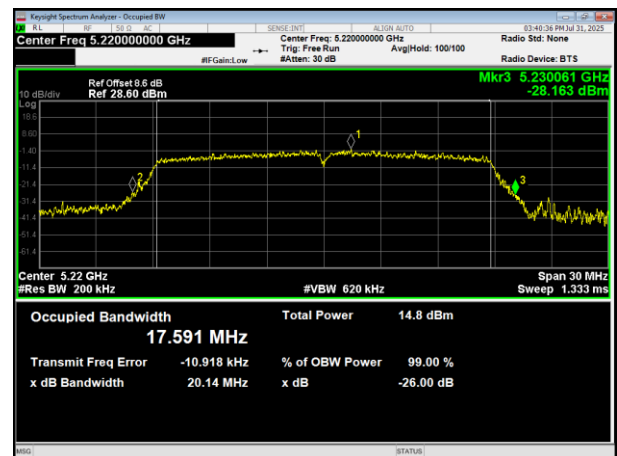
802.11ac HT20



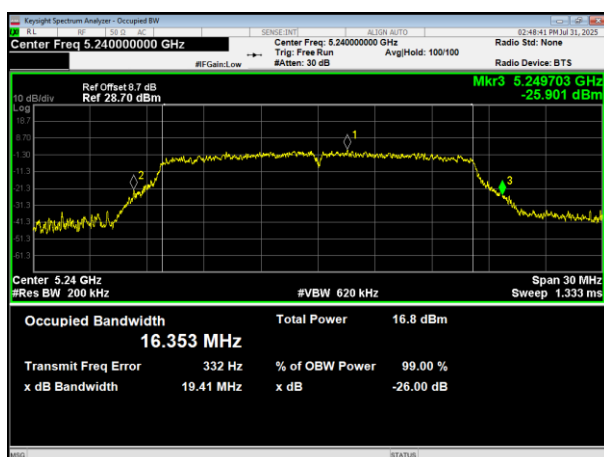
5180MHz



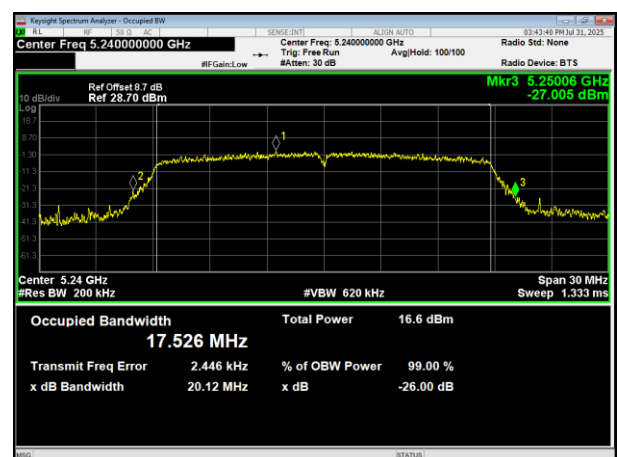
5180MHz



5200MHz



5200MHz

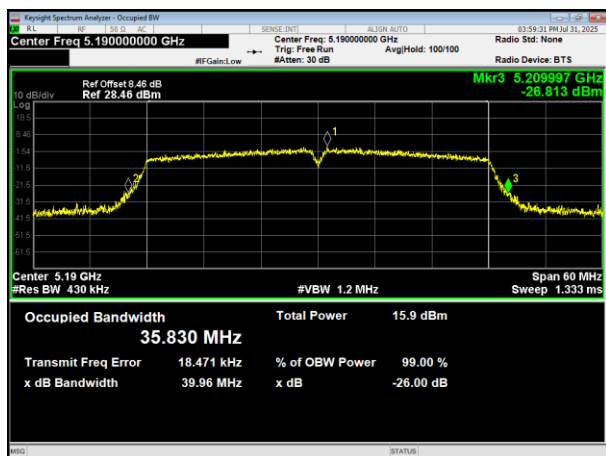


5240MHz

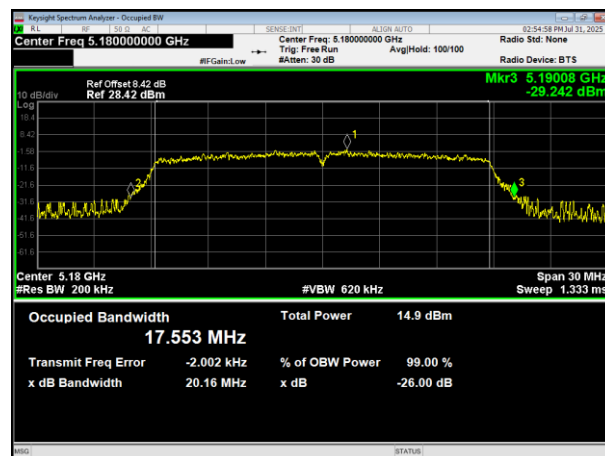
5240MHz



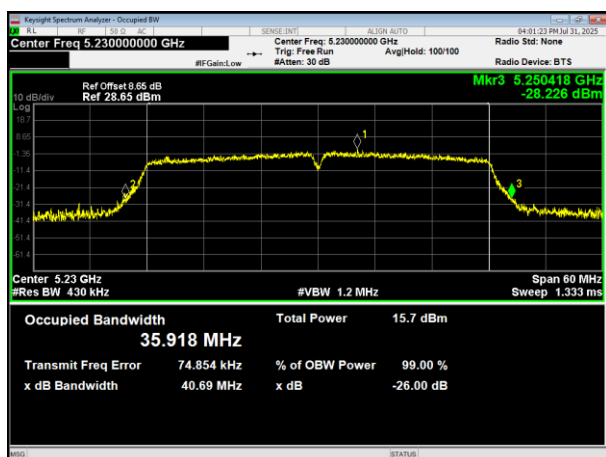
802.11ac HT40



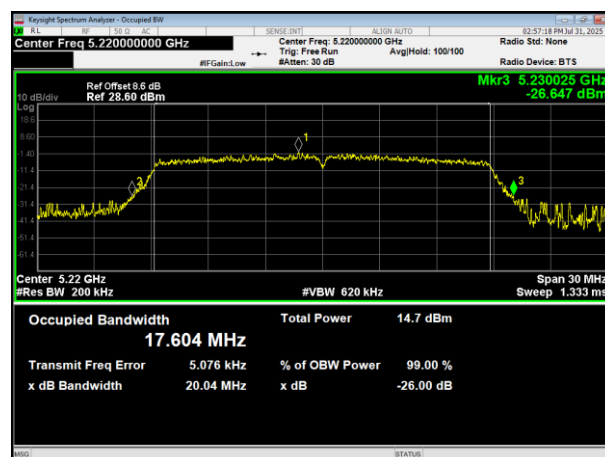
802.11n HT20



5190MHz

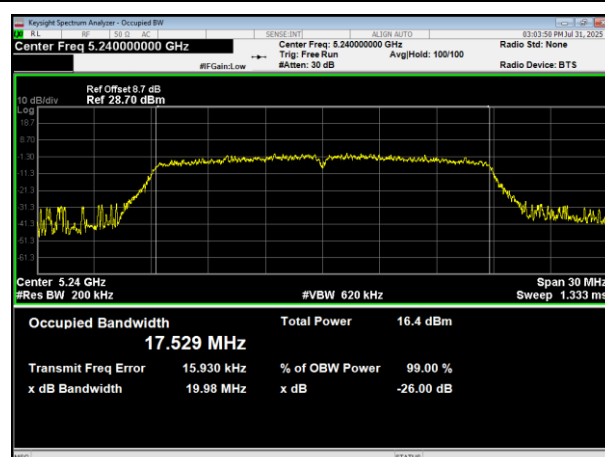


5180MHz



5230MHz

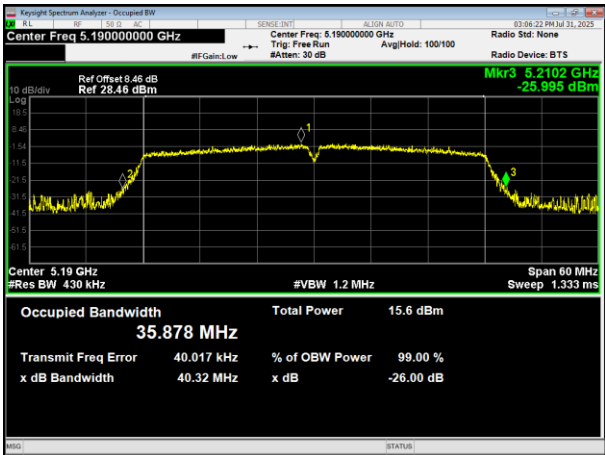
5200MHz



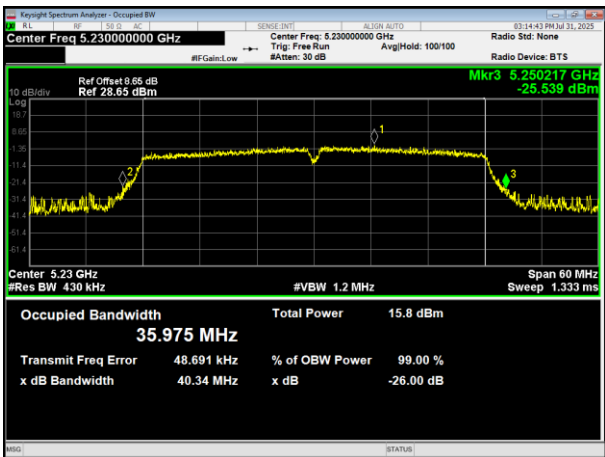
5240MHz



802.11n HT40



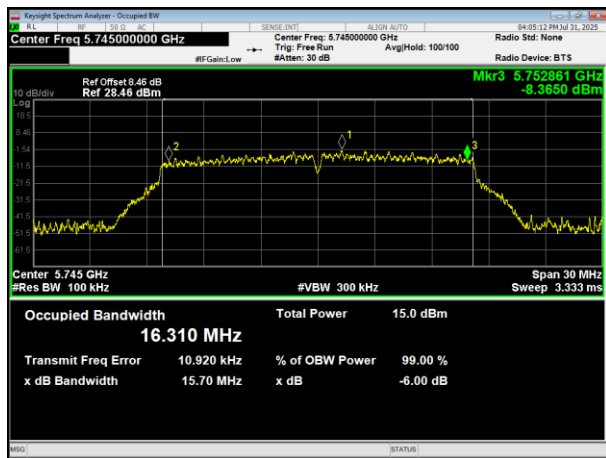
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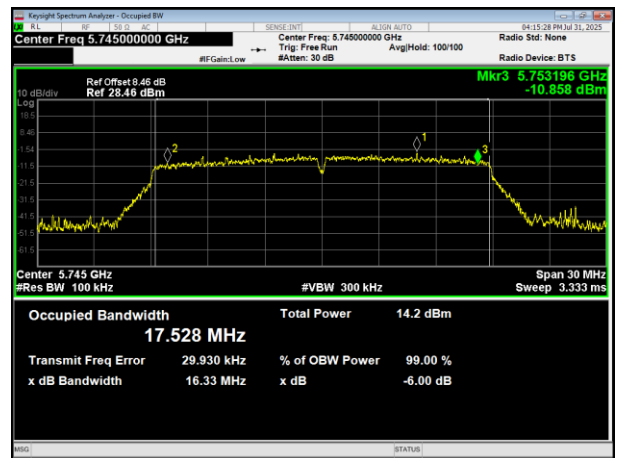
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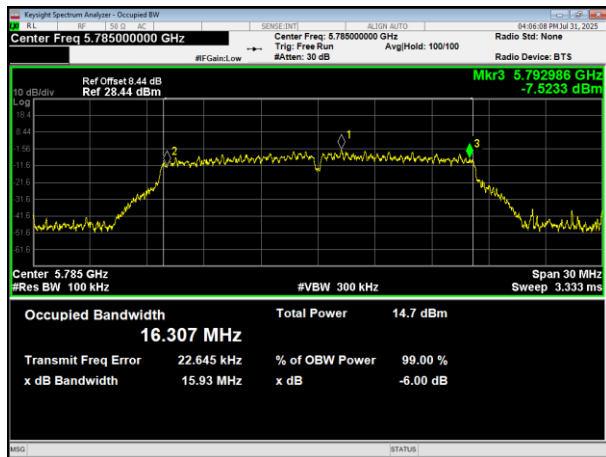
802.11a



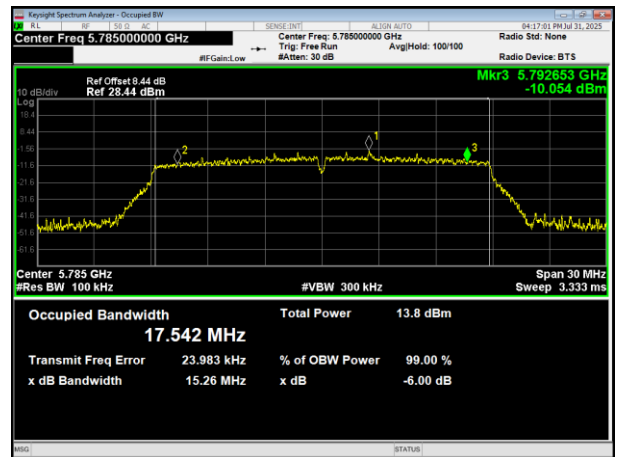
802.11ac HT20



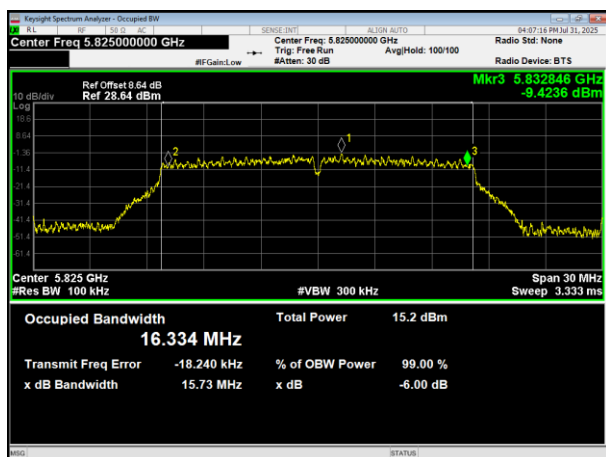
5745MHz



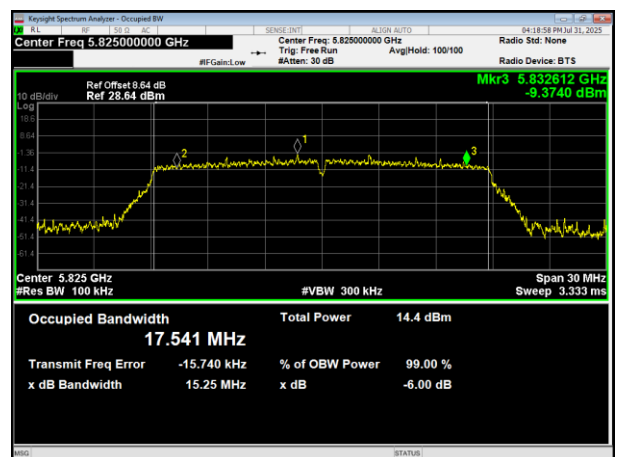
5745MHz



5785MHz



5785MHz

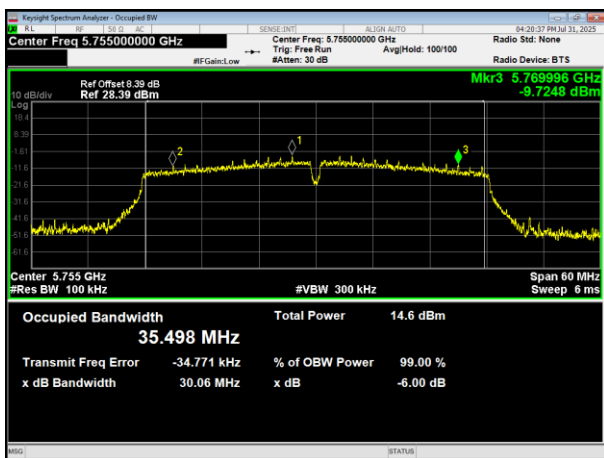


5825MHz

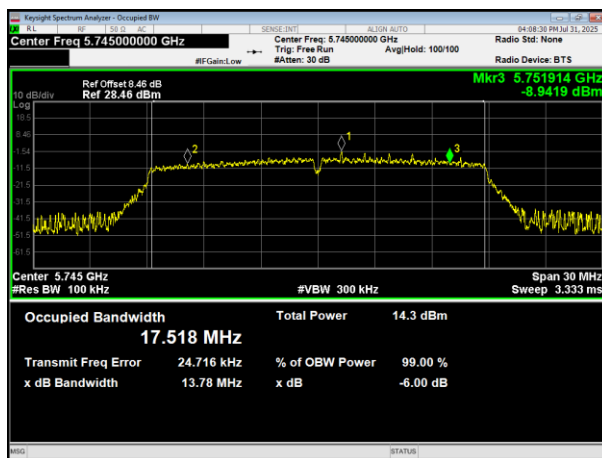
5825MHz



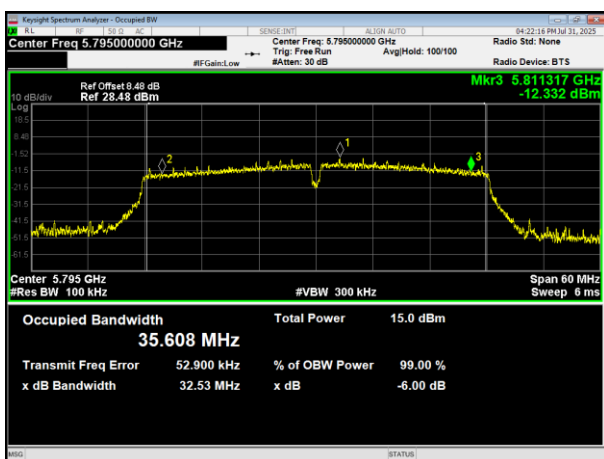
802.11ac HT40



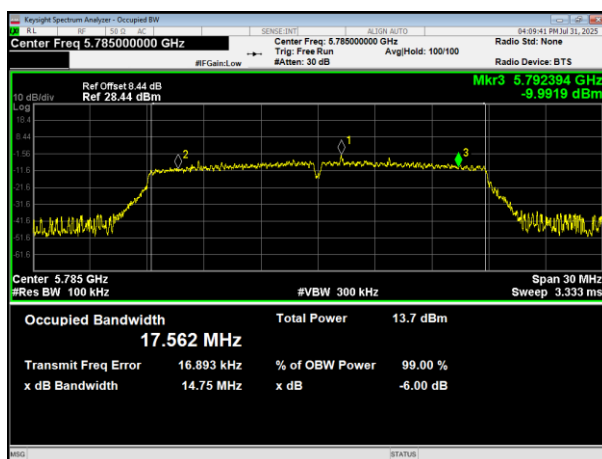
802.11n HT20



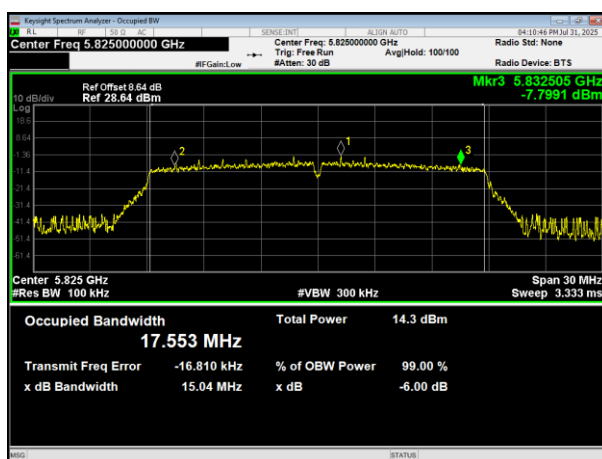
5755MHz



5745MHz



5795MHz

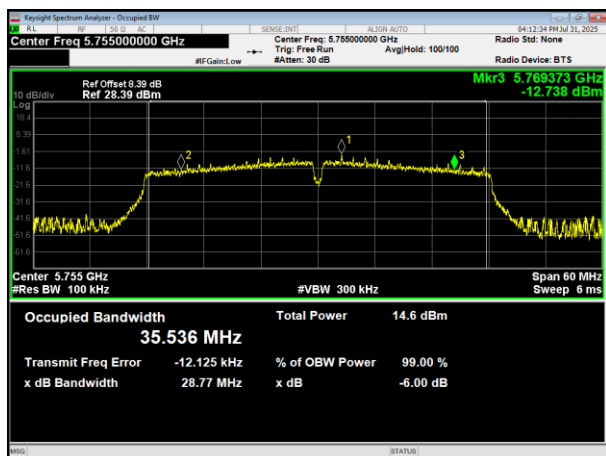


5785MHz

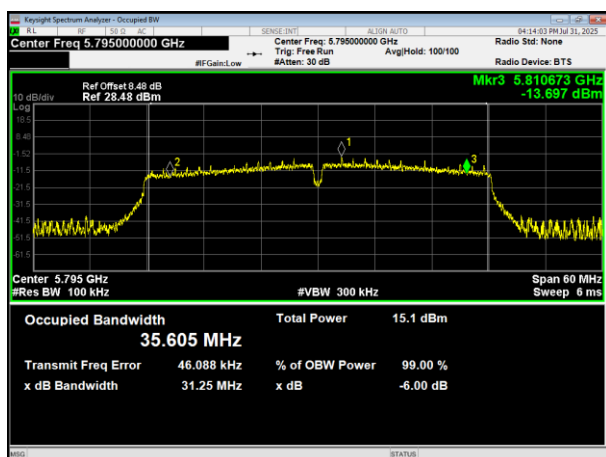
5825MHz



802.11n HT40



5755MHz



5795MHz



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.

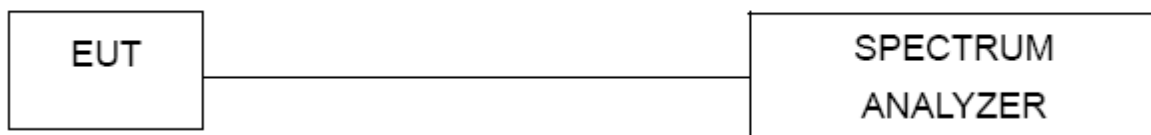
7.1.1 TEST PROCEDURE

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.

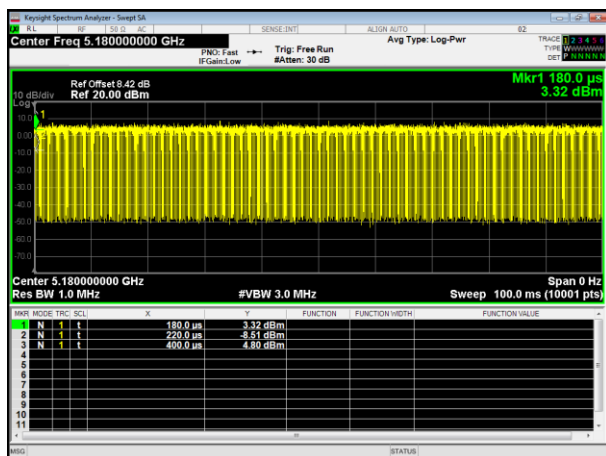
**7.1.5 TEST RESULTS**

		Test Channel	Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 1	802.11a	Low	81.82	0.87
		Middle	78.26	1.06
		High	77.27	1.12
	802.11ac HT20	Low	96.32	0.16
		Middle	97.04	0.13
		High	97.04	0.13
	802.11ac HT40	Low	92.86	0.32
		High	94.29	0.26
	802.11n HT20	Low	97.01	0.13
		Middle	96.3	0.16
		High	96.3	0.16
	802.11n HT40	Low	94.2	0.26
		High	94.2	0.26

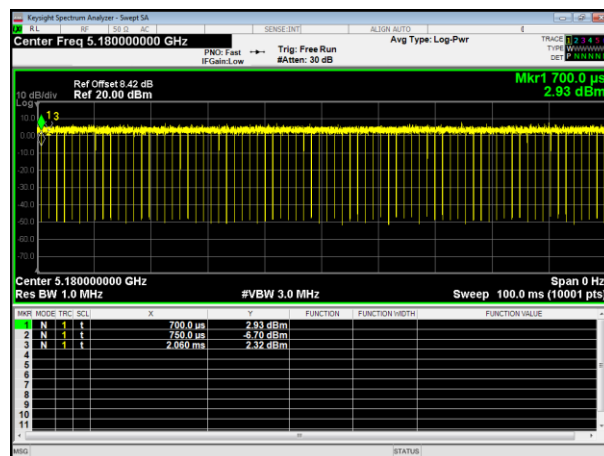
		Test Channel	Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 1	802.11a	Low	77.27	1.12
		Middle	81.82	0.87
		High	81.82	0.87
	802.11ac HT20	Low	96.32	0.16
		Middle	96.32	0.16
		High	97.06	0.13
	802.11ac HT40	Low	94.2	0.26
		High	94.2	0.26
	802.11n HT20	Low	96.3	0.16
		Middle	97.04	0.13
		High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



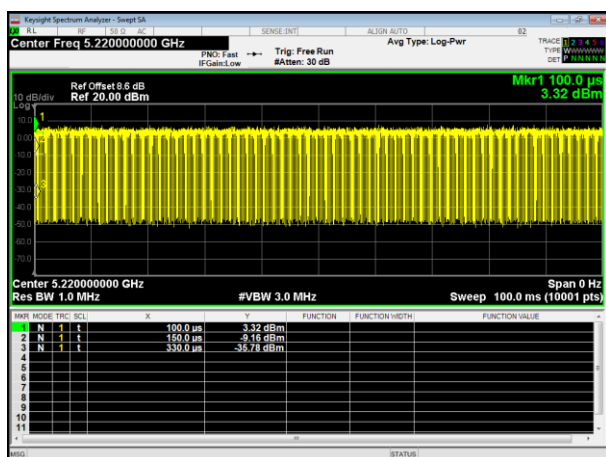
802.11a



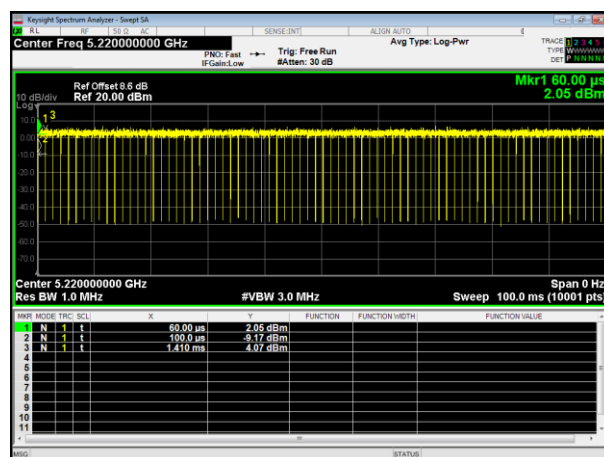
802.11ac HT20



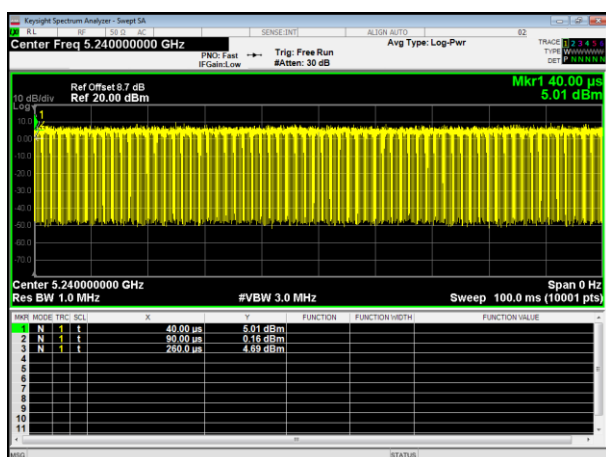
5180MHz



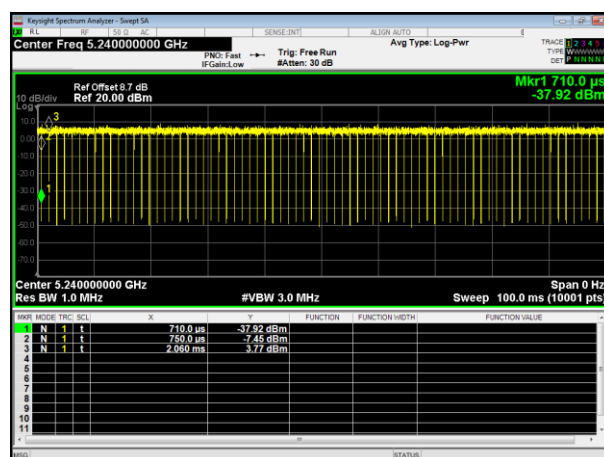
5180MHz



5200MHz



5200MHz

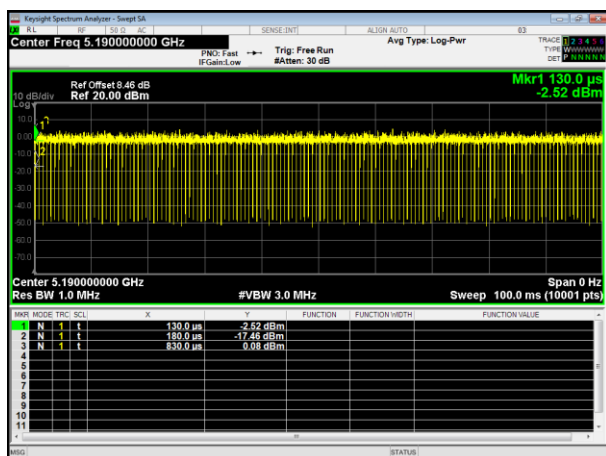


5240MHz

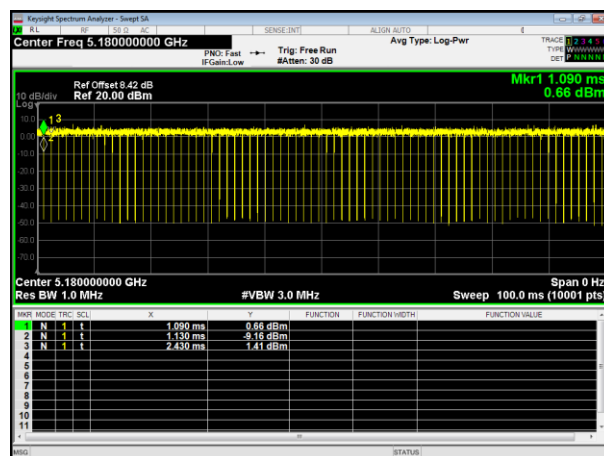
5240MHz



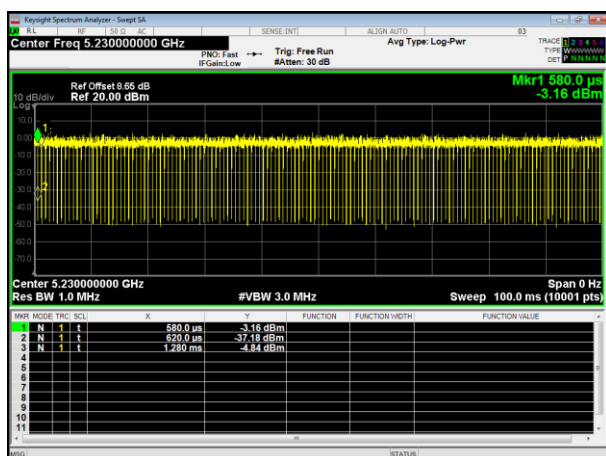
802.11ac HT40



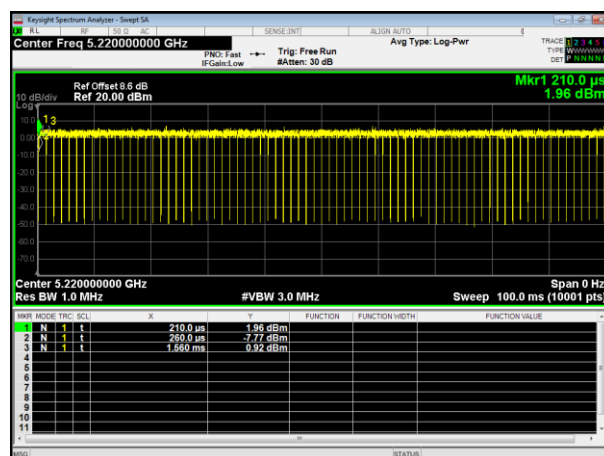
802.11n HT20



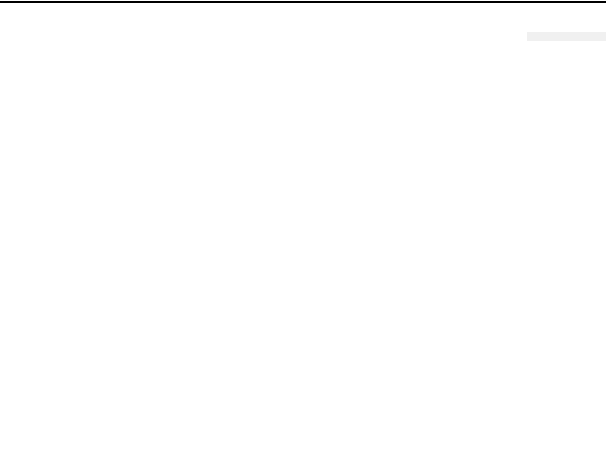
5190MHz



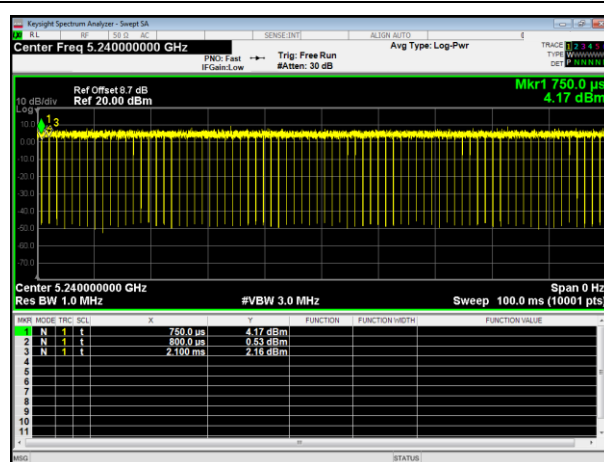
5180MHz



5230MHz



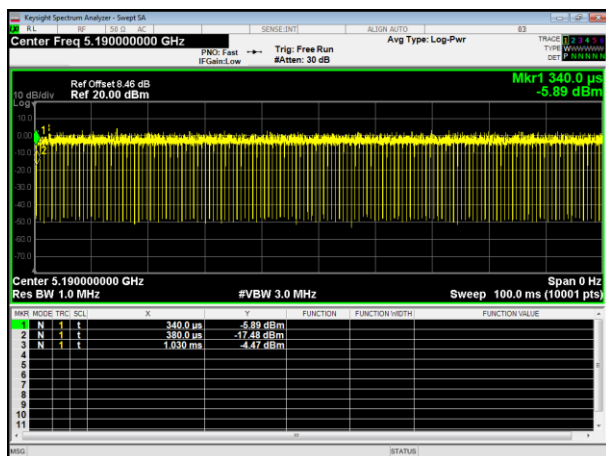
5200MHz



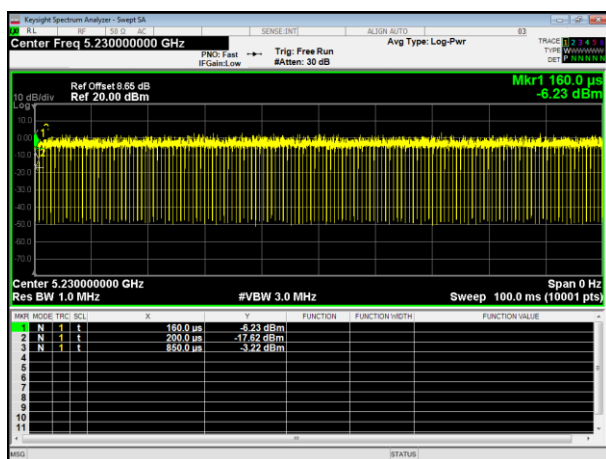
5240MHz



802.11n HT40



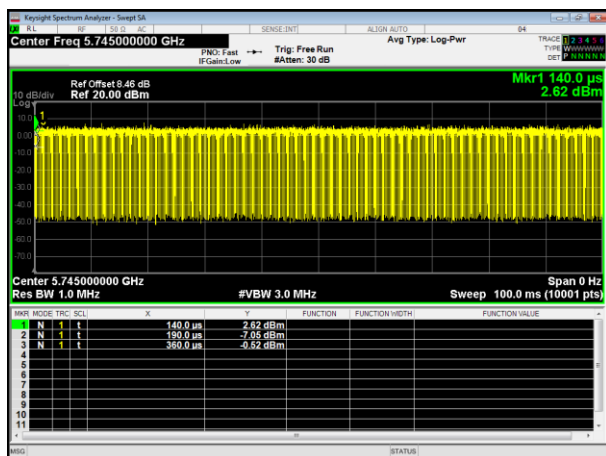
5190MHz



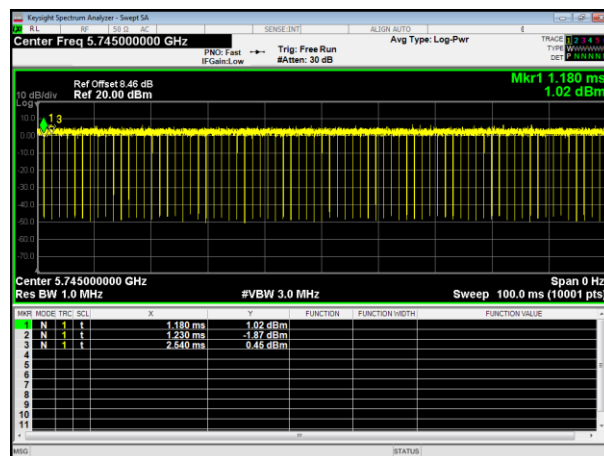
5230MHz



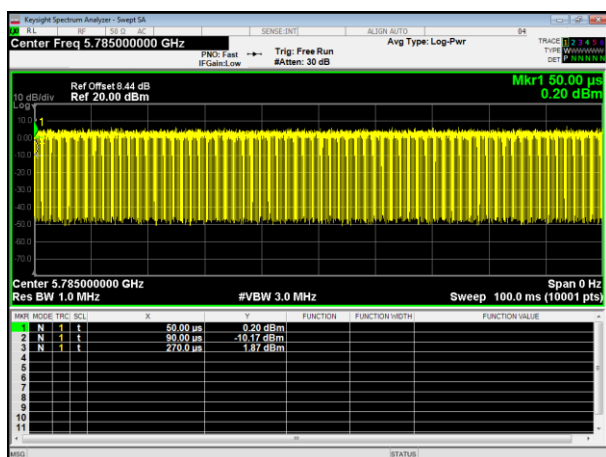
802.11a



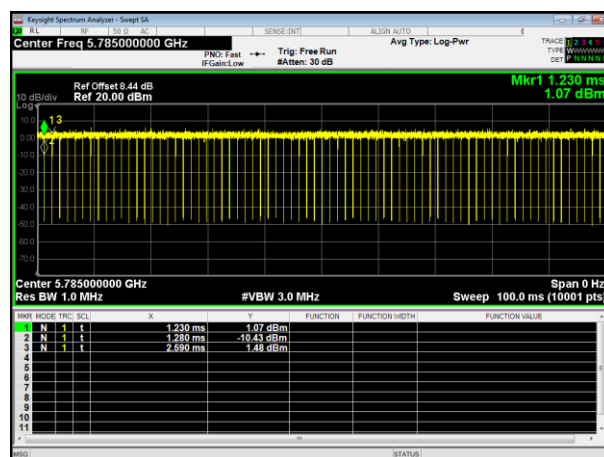
802.11ac HT20



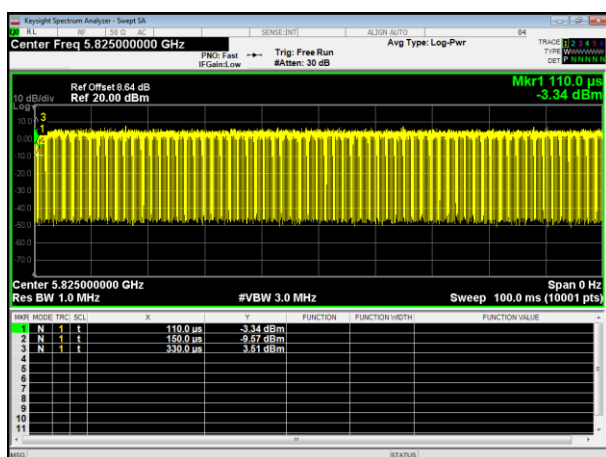
5745MHz



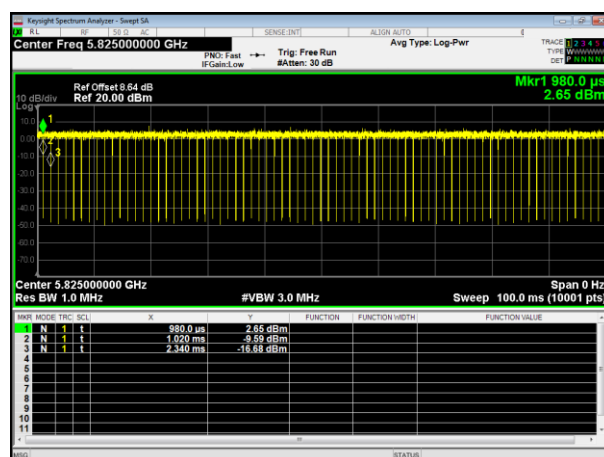
5745MHz



5785MHz



5785MHz

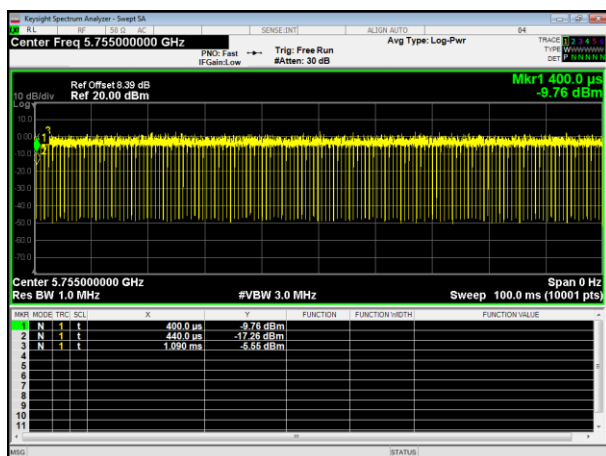


5825MHz

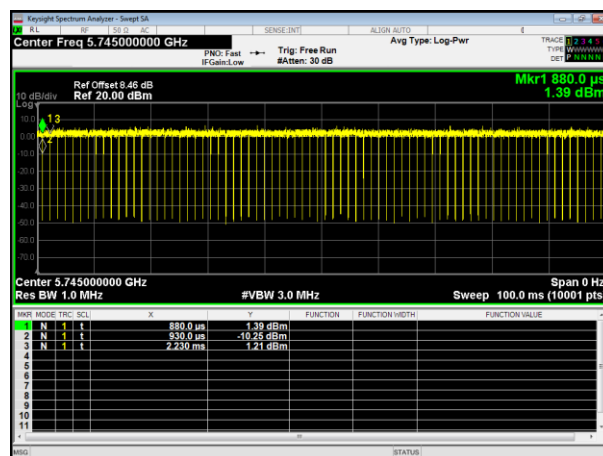
5825MHz



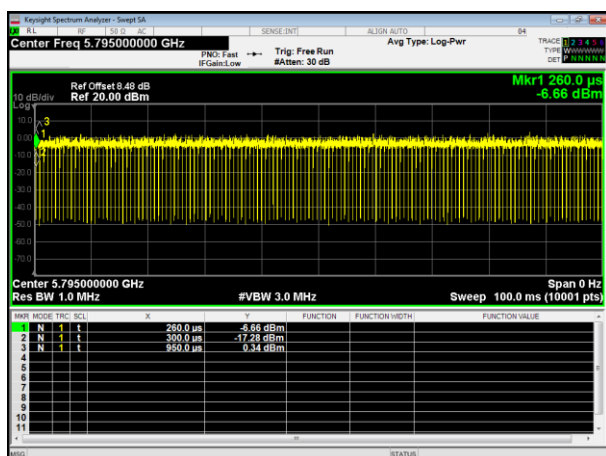
802.11ac HT40



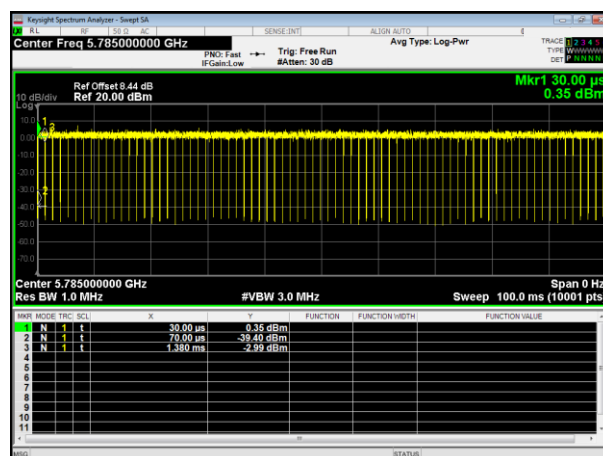
802.11n HT20



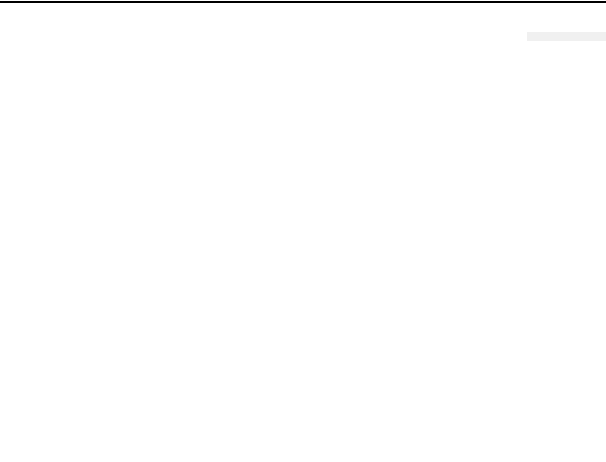
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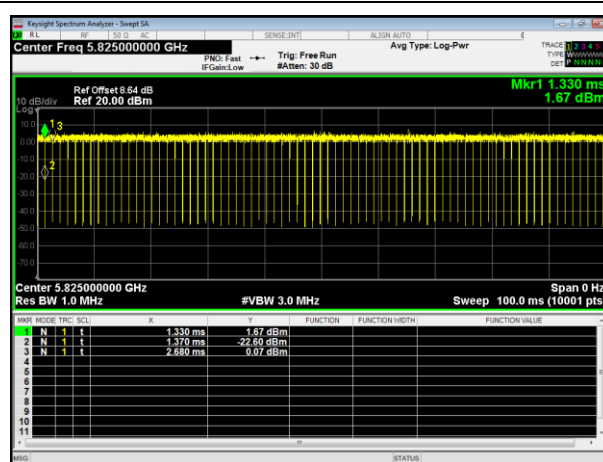
5745MHz



5795MHz



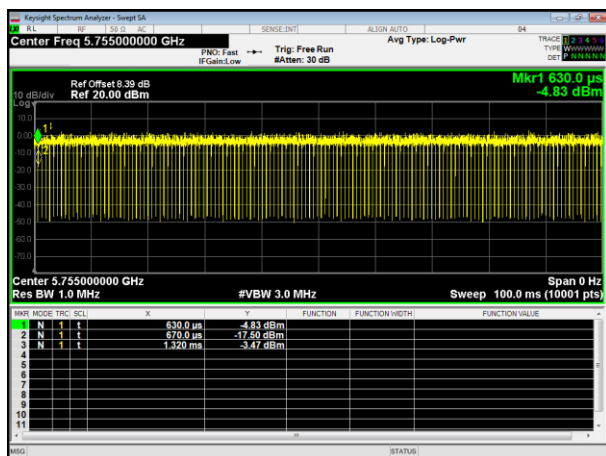
5785MHz



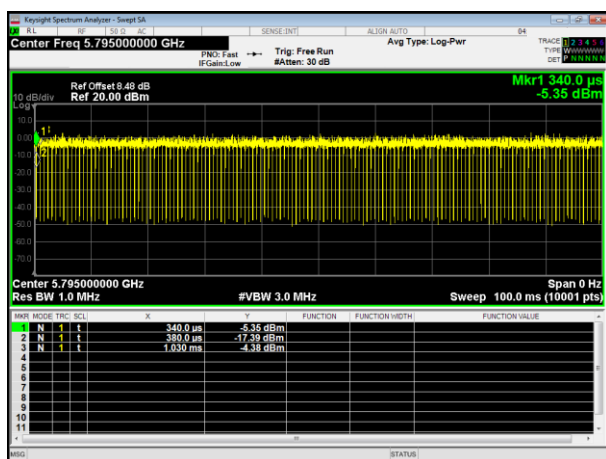
5825MHz



802.11n HT40



5755MHz



5795MHz



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.

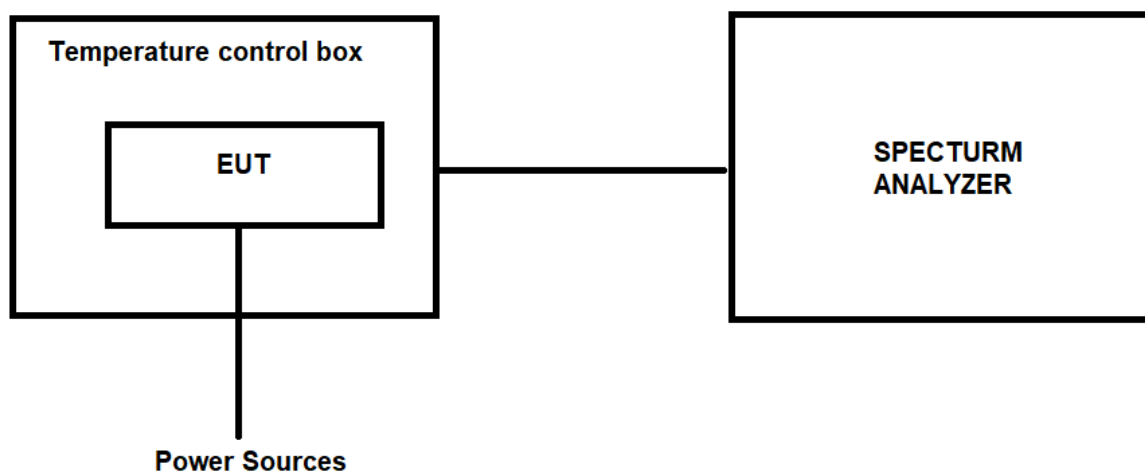
8.1.1 TEST PROCEDURE

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 (MHz)		
			802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
132V	-20℃	5180	5180.0330	5180.0316	5180.0356	0.033	0.0316	0.0356
		5220	5220.0342	5220.0353	5220.0332	0.0342	0.0353	0.0332
		5240	5240.0204	5240.0202	5240.0214	0.0204	0.0202	0.0214
		5745	5745.0357	5745.0343	5745.0383	0.0357	0.0343	0.0383
		5785	5785.0347	5785.0327	5785.0370	0.0347	0.0327	0.037
		5825	5825.0370	5825.0350	5825.0312	0.037	0.035	0.0312
108V		5180	5180.0257	5180.0237	5180.0211	0.0257	0.0237	0.0211
		5220	5220.0316	5220.0365	5220.0303	0.0316	0.0365	0.0303
		5240	5240.0243	5240.0210	5240.0237	0.0243	0.021	0.0237
		5745	5745.0235	5745.0273	5745.0243	0.0235	0.0273	0.0243
		5785	5785.0372	5785.0334	5785.0325	0.0372	0.0334	0.0325
		5825	5825.0433	5825.0457	5825.0464	0.0433	0.0457	0.0464
120V	25℃	5180	5180.0536	5180.0545	5180.0548	0.0536	0.0545	0.0548
		5220	5220.0251	5220.0223	5220.0224	0.0251	0.0223	0.0224
		5240	5240.0354	5240.0335	5240.0335	0.0354	0.0335	0.0335
		5745	5745.0330	5745.0321	5745.0357	0.033	0.0321	0.0357
		5785	5785.0477	5785.0423	5785.0463	0.0477	0.0423	0.0463
		5825	5825.0213	5825.0243	5825.0282	0.0213	0.0243	0.0282
132V	50℃	5180	5180.0335	5180.0364	5180.0334	0.0335	0.0364	0.0334
		5220	5220.0197	5220.0215	5220.0215	0.0197	0.0215	0.0215
		5240	5240.0324	5240.0322	5240.0316	0.0324	0.0322	0.0316
		5745	5745.0616	5745.0634	5745.0603	0.0616	0.0634	0.0603
		5785	5785.0418	5785.0403	5785.0437	0.0418	0.0403	0.0437
		5825	5825.0650	5825.0652	5825.0654	0.065	0.0652	0.0654
108V		5180	5180.0302	5180.0335	5180.0335	0.0302	0.0335	0.0335
		5220	5220.0224	5220.0244	5220.0273	0.0224	0.0244	0.0273
		5240	5240.0345	5240.0300	5240.0302	0.0345	0.03	0.0302
		5745	5745.0450	5745.0437	5745.0424	0.045	0.0437	0.0424
		5785	5785.0217	5785.0244	5785.0231	0.0217	0.0244	0.0231
		5825	5825.0722	5825.0735	5825.0746	0.0722	0.0735	0.0746



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℃	5190	5190.0225	5190.0216	0.0225	0.0216
		5230	5230.0343	5230.0355	0.0343	0.0355
		5755	5755.0577	5755.0546	0.0577	0.0546
		5795	5795.0604	5795.0603	0.0604	0.0603
108V		5190	5190.0251	5190.0224	0.0251	0.0224
		5230	5230.0316	5230.0335	0.0316	0.0335
		5755	5755.0234	5755.0642	0.0234	0.0642
		5795	5795.0423	5795.0473	0.0423	0.0473
120V	25℃	5190	5190.0234	5190.0270	0.0234	0.027
		5230	5230.0653	5230.0645	0.0653	0.0645
		5755	5755.0205	5755.0254	0.0205	0.0254
		5795	5795.0557	5795.0516	0.0557	0.0516
132V	50℃	5190	5190.0616	5190.0635	0.0616	0.0635
		5230	5230.0547	5230.0573	0.0547	0.0573
		5755	5755.0450	5755.0437	0.045	0.0437
		5795	5795.0304	5795.0324	0.0304	0.0324
108V		5190	5190.0533	5190.0545	0.0533	0.0545
		5230	5230.0341	5230.0337	0.0341	0.0337
		5755	5755.0302	5755.0324	0.0302	0.0324
		5795	5795.0453	5795.0430	0.0453	0.043



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 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 *****