ANT2

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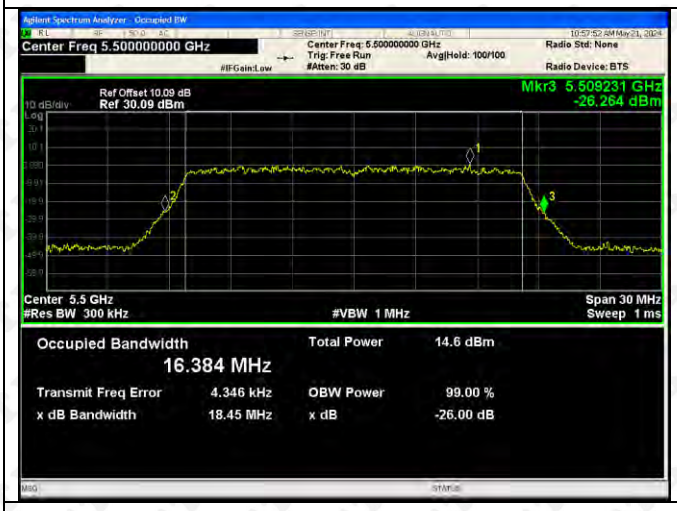	
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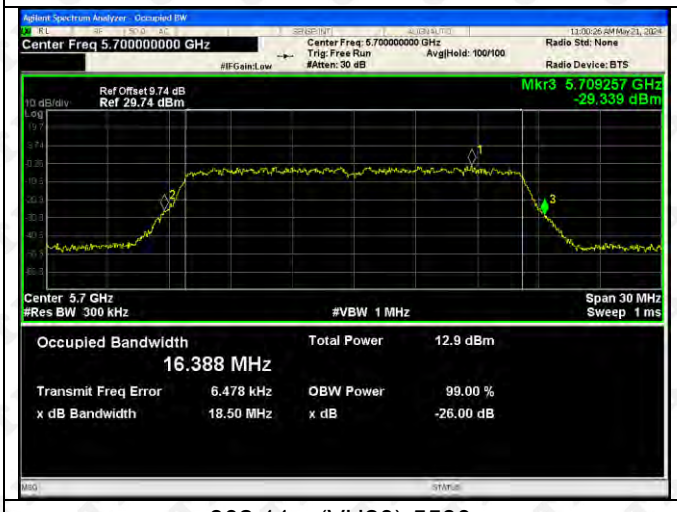	
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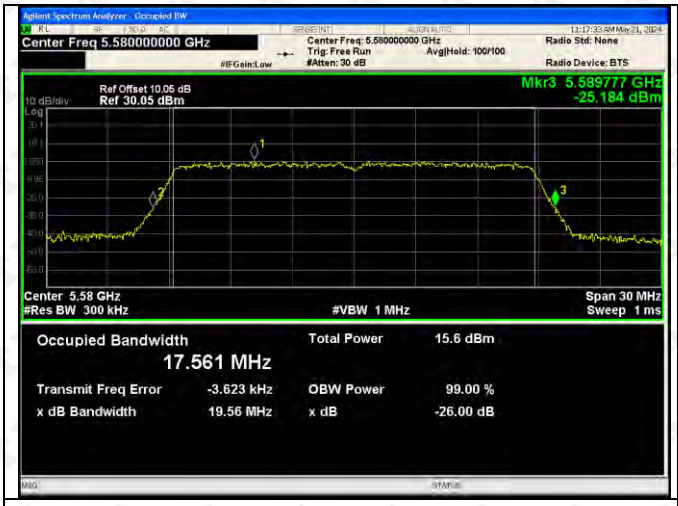
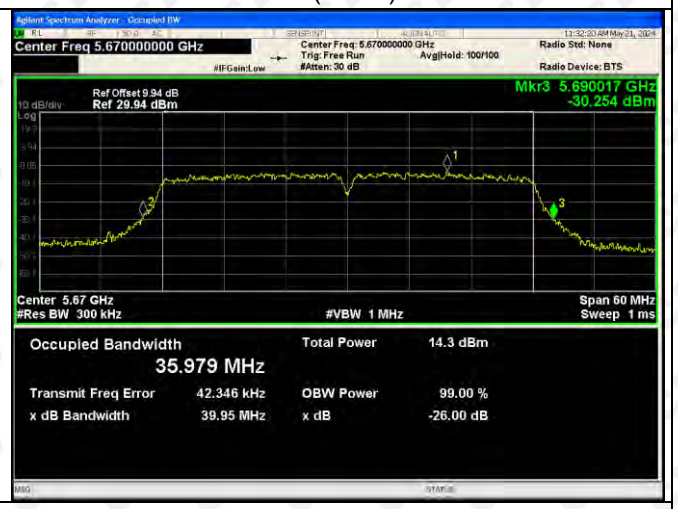


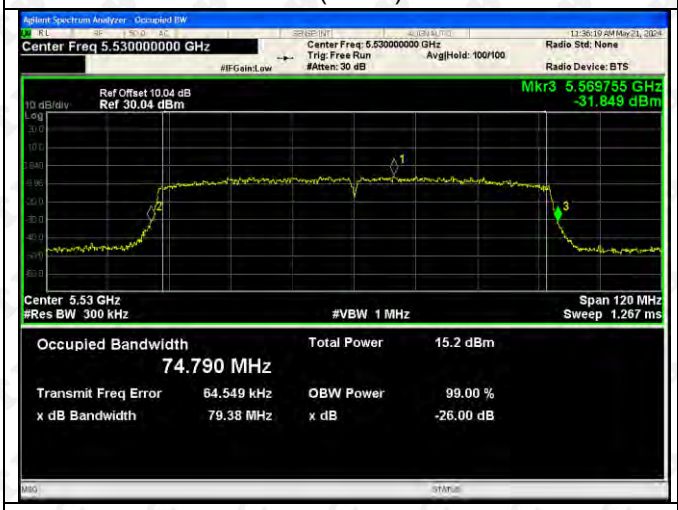
802.11ac(VH40)-5510

802.11ac(VH40)-5670

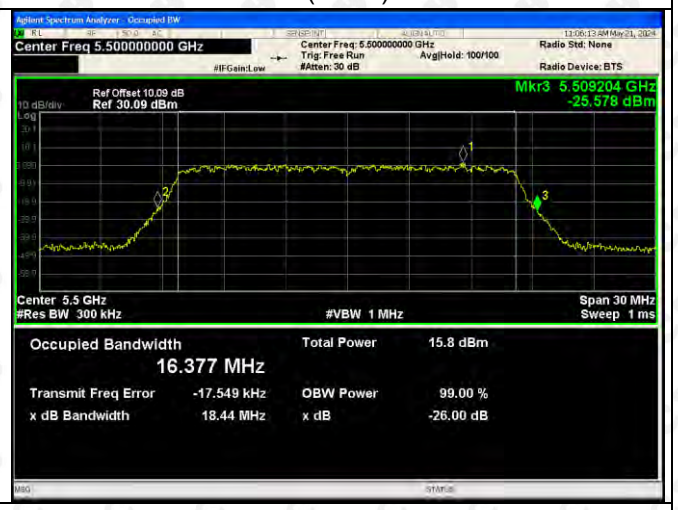
802.11ac(VH80)-5530



802.11n(HT20)-5500



802.11n(HT20)-5580



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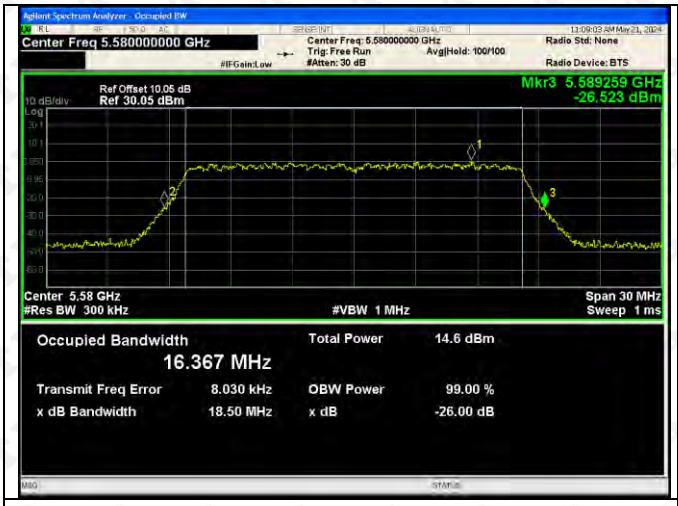
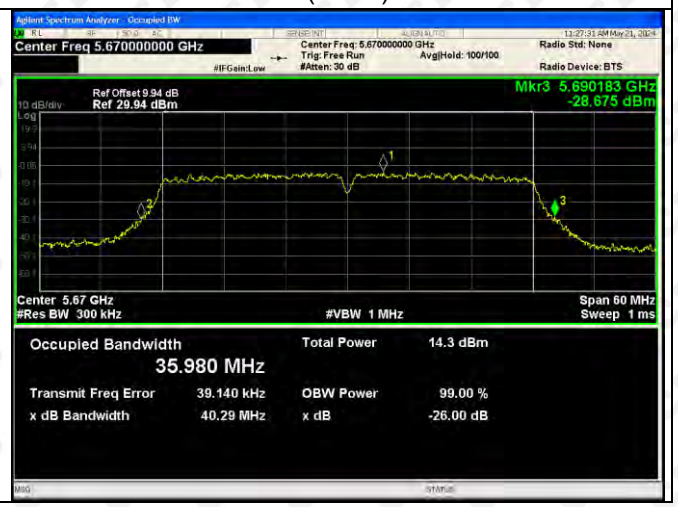


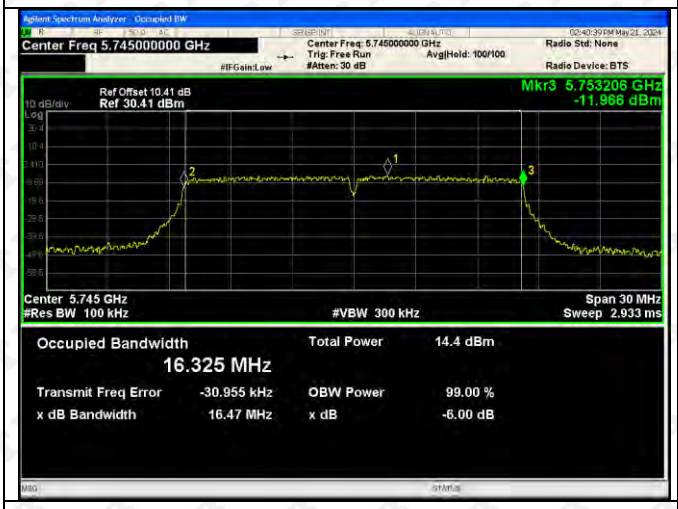
802.11n(HT40)-5510

802.11n(HT40)-5670



5725-5850MHz:-Power
ANT1

802.11a-5745



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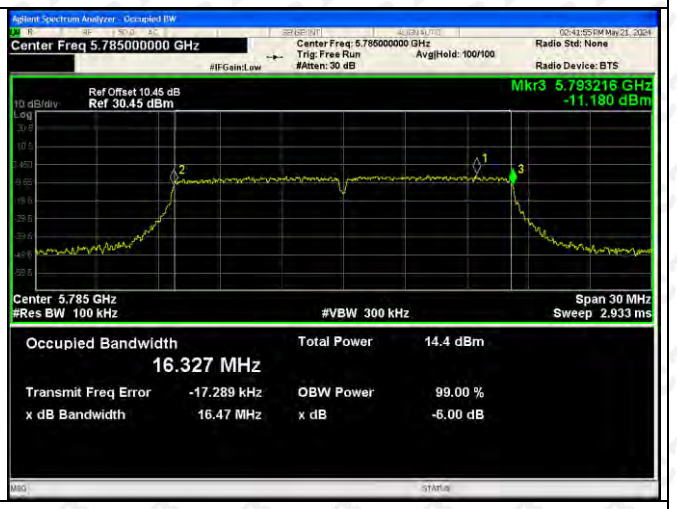
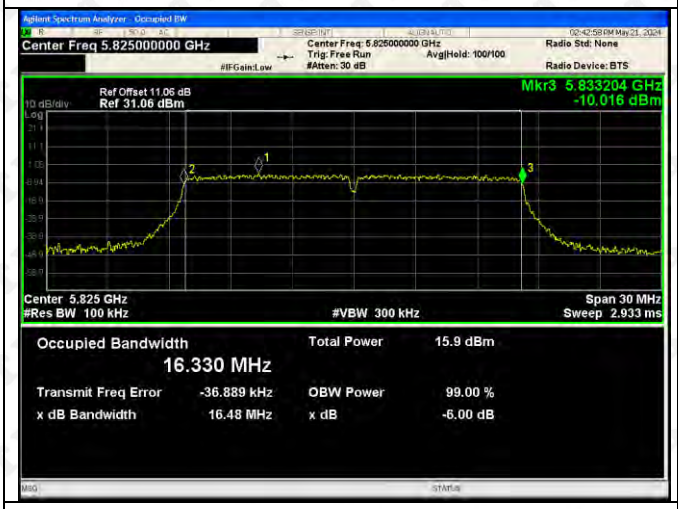


802.11a-5825



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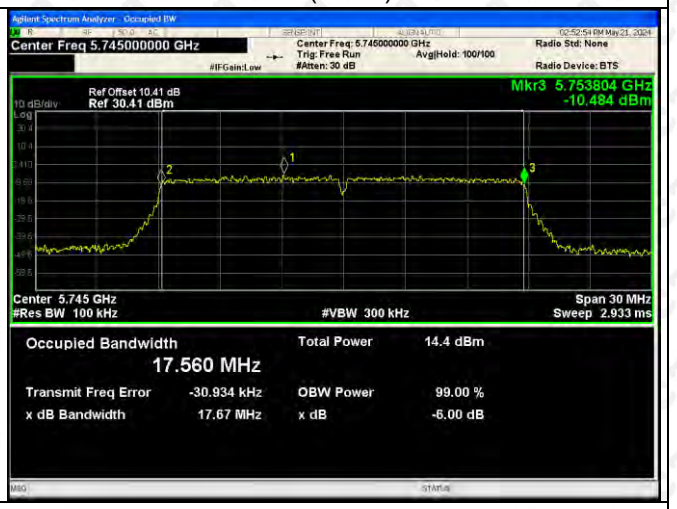

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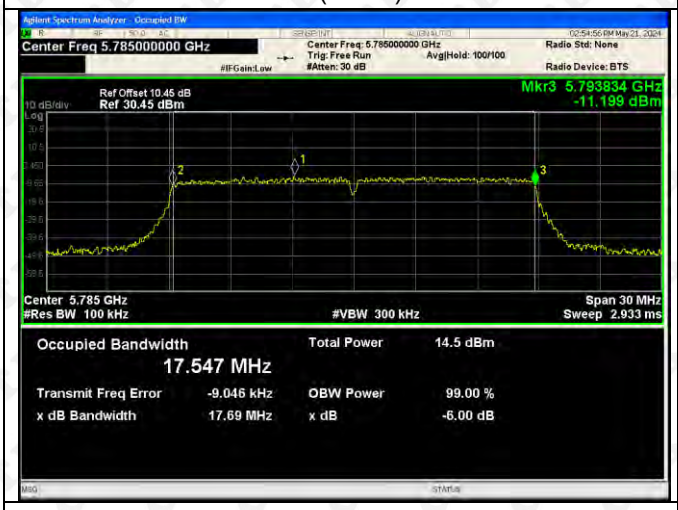

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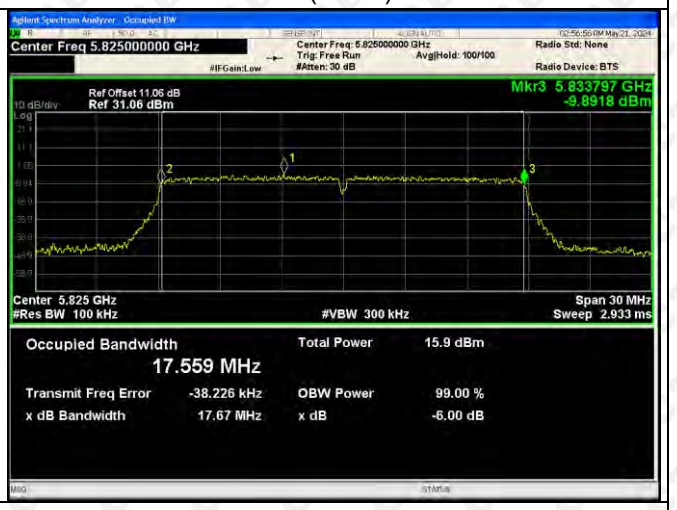
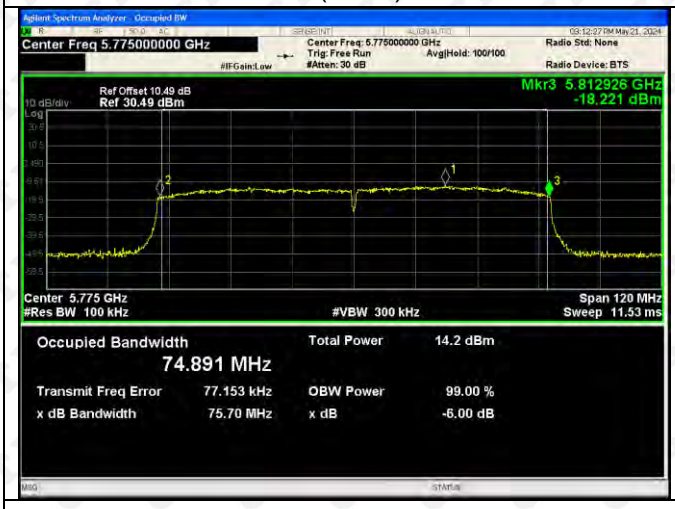


802.11ac(VH40)-5755

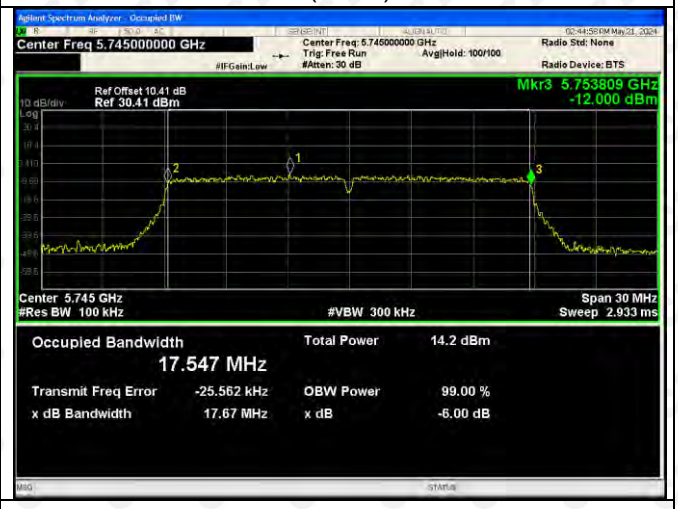
802.11ac(VH40)-5795

802.11ac(VH80)-5775

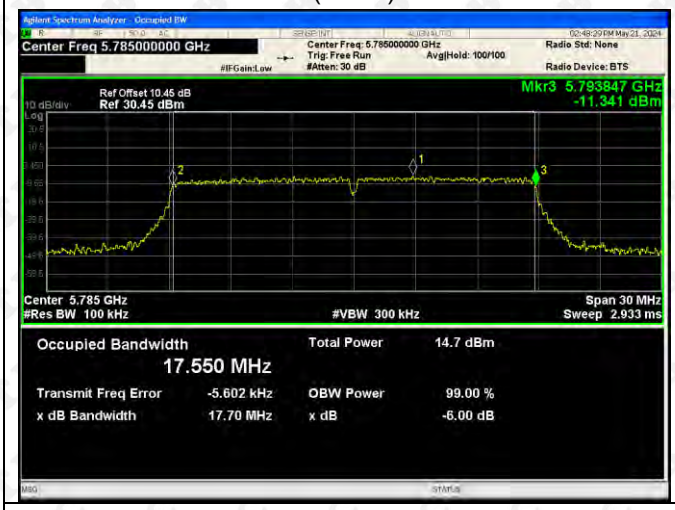
802.11n(HT20)-5745



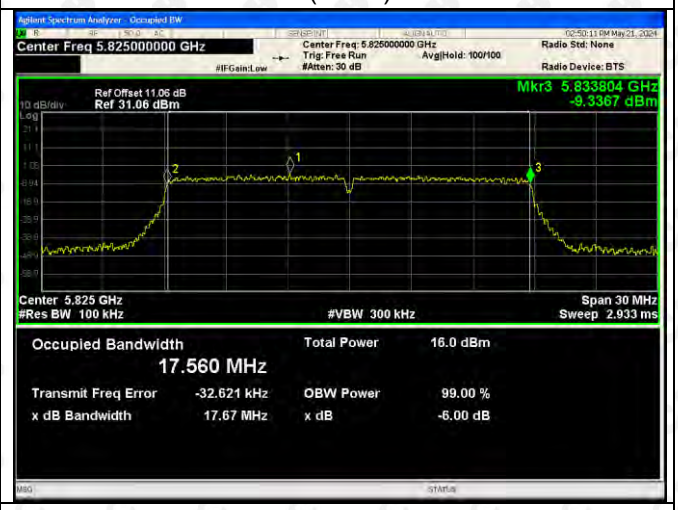
802.11n(HT20)-5785



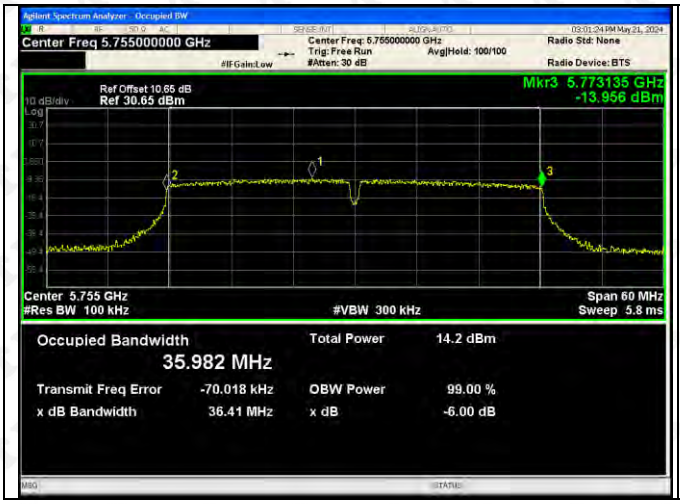
802.11n(HT20)-5825



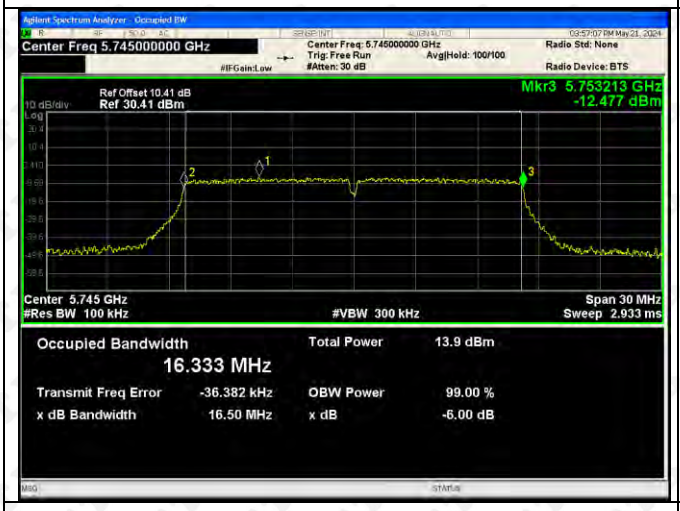
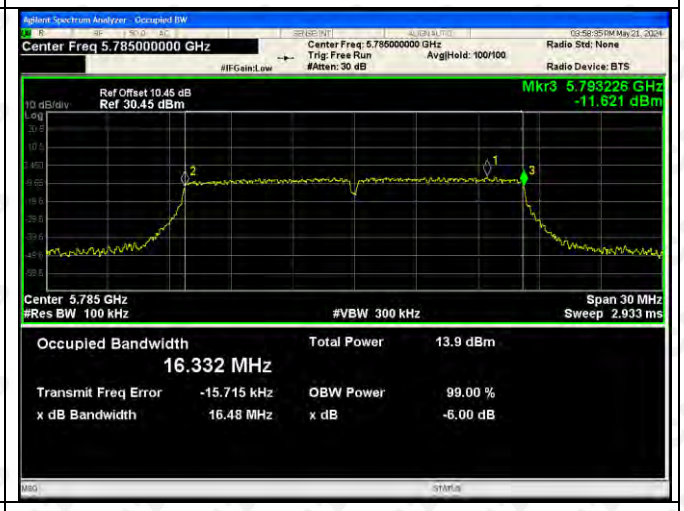
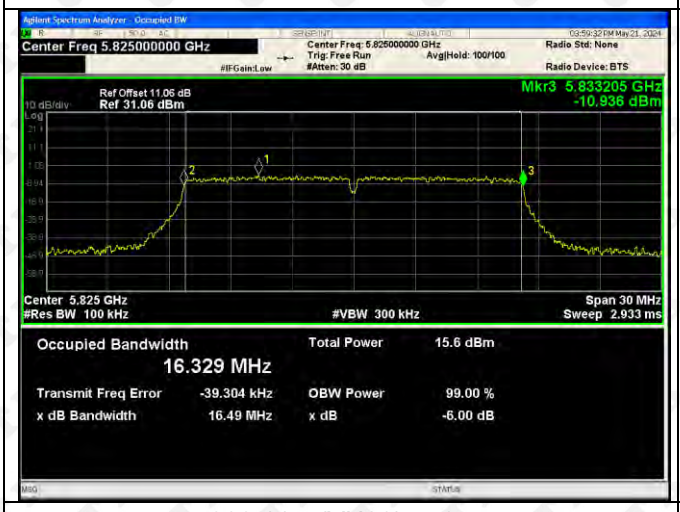
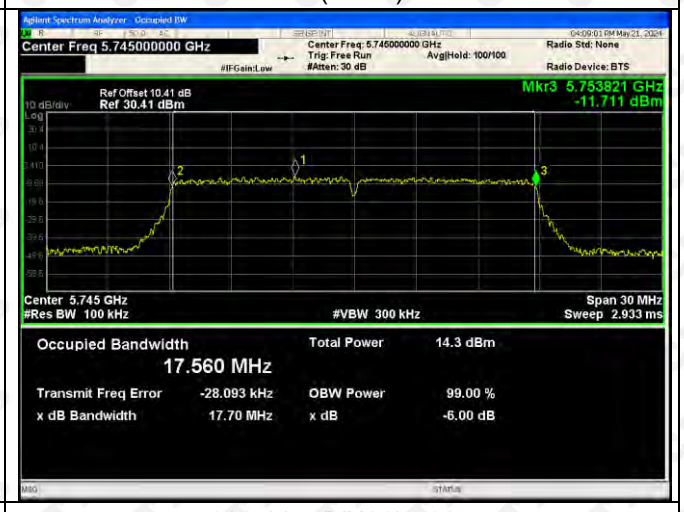
802.11n(HT40)-5795

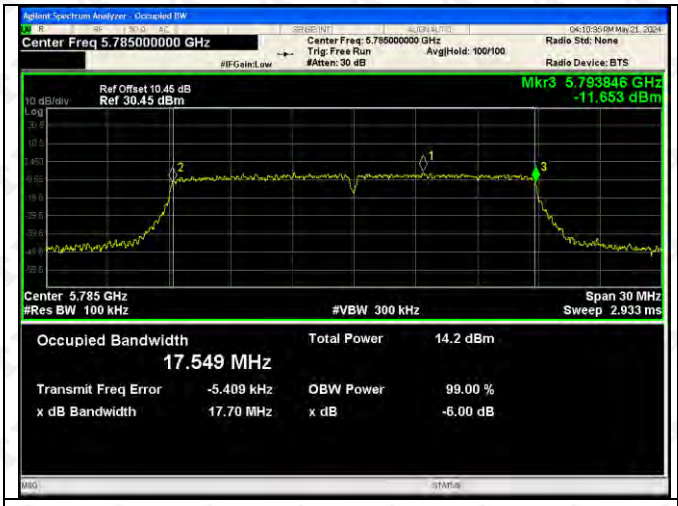


802.11n(HT40)-5825



ANT2

802.11a-5745	802.11a-5785
	
802.11a-5825	802.11ac(VH20)-5745
	
802.11ac(VH20)-5785	802.11ac(VH20)-5825

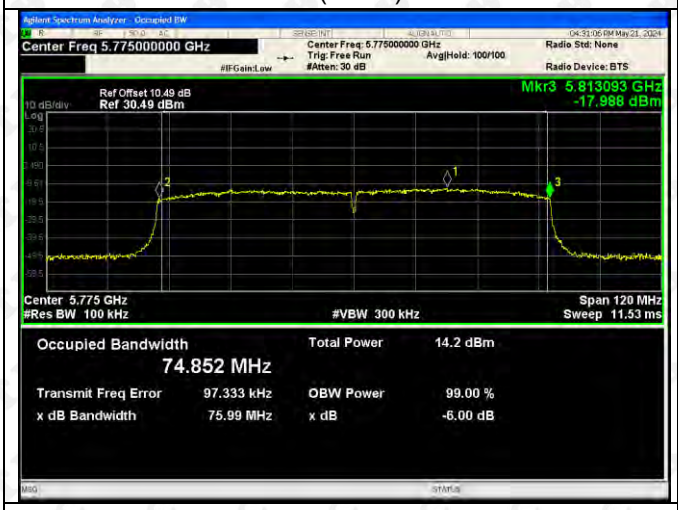


802.11ac(VH40)-5755

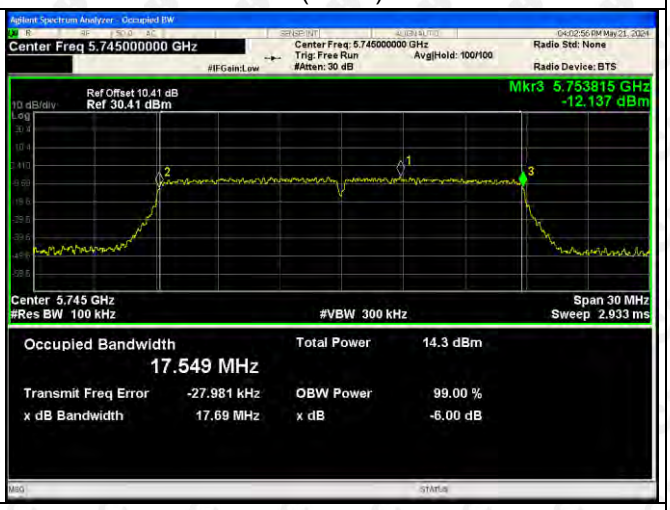
802.11ac(VH40)-5795

802.11ac(VH80)-5775

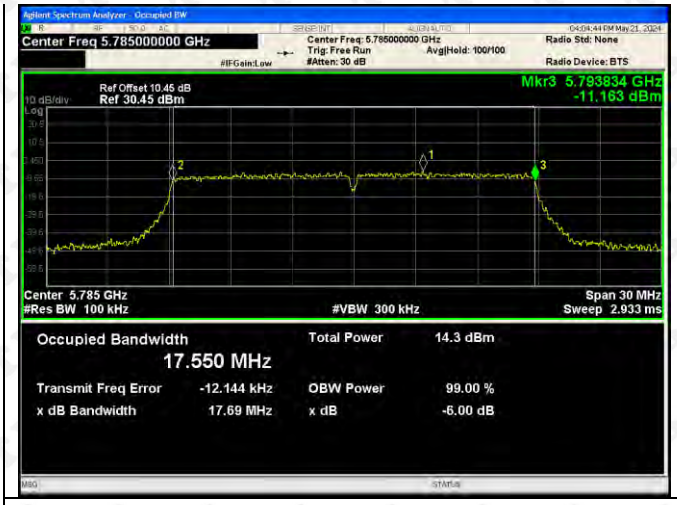
802.11n(HT20)-5745



802.11n(HT20)-5785

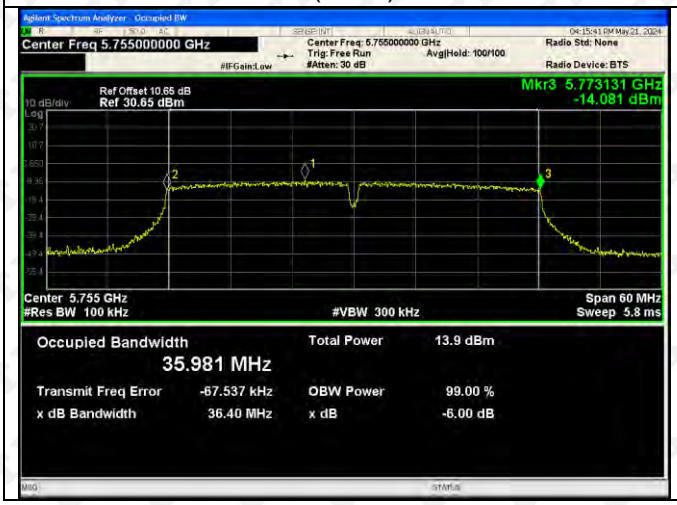


802.11n(HT20)-5825



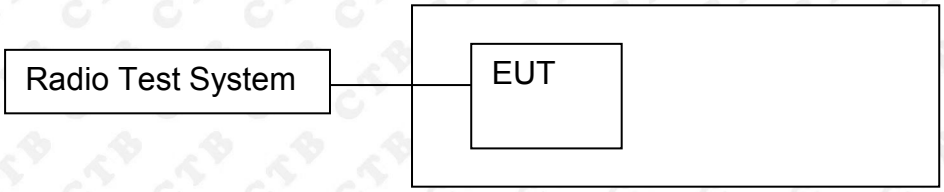
802.11n(HT40)-5795

802.11n(HT40)-5825



11. POWER SPECTRAL DENSITY

11.1 Block Diagram Of Test Setup



11.2 Limit

(1) For the band 5.15-5.25 GHz.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

11.3 Test procedure

According to KDB789033 D02v02r01 sectionE, the following is the measurement procedure.

For devices operating in the bands 5.15−5.25 GHz, 5.25−5.35 GHz, and 5.47−5.725 GHz, the preceding procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725−5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
a) Set RBW ≥ 1/*T*, where *T* is defined in II.B.I.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the

measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.
Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the II.F.5.c) and II.F.5.d), since RBW=100 kHz is available on nearly all spectrum analyzers.

11.4 Test Result

5150-5250MHz:MHz
ANT1+ANT2

Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm)	Result
802.11a	5180	-2.264	-2.103	/	11	Pass
	5200	-2.355	-2.382	/	11	Pass
	5240	-2.555	-2.609	/	11	Pass
802.11n(HT20)	5180	-2.467	-2.396	0.579	11	Pass
	5200	-2.494	-2.760	0.385	11	Pass
	5240	-2.868	-2.765	0.194	11	Pass
802.11n(HT40)	5190	-5.717	-5.423	-2.557	11	Pass
	5230	-6.288	-5.759	-3.005	11	Pass
802.11ac(VH20)	5210	-10.95	-9.375	-7.081	11	Pass
	5180	-2.542	-2.606	0.436	11	Pass
	5200	-3.166	-2.754	0.055	11	Pass
802.11ac(VH40)	5240	-3.218	-2.916	-0.054	11	Pass
	5190	-5.723	-5.367	-2.531	11	Pass
802.11ac(VH80)	5230	-5.591	-5.915	-2.740	11	Pass

5250-5350 MHzMHz
ANT1+ANT2

Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm)	Result
802.11a	5260	-2.609	-1.982	/	11	Pass
	5280	-3.405	-2.341	/	11	Pass
	5320	-4.415	-1.530	/	11	Pass
802.11n(HT20)	5260	-2.336	-2.012	0.839	11	Pass
	5280	-3.145	-2.799	0.042	11	Pass
	5320	-3.976	-2.023	0.120	11	Pass
802.11n(HT40)	5270	-5.957	-7.965	-3.836	11	Pass
	5310	-6.988	-7.642	-4.292	11	Pass
802.11ac(VH20)	5260	-9.089	-11.259	-7.030	11	Pass
	5280	-3.440	-2.037	0.328	11	Pass
	5320	-3.88	-2.191	0.056	11	Pass
802.11ac(VH40)	5270	-4.767	-1.356	0.275	11	Pass
	5310	-5.955	-6.004	-2.969	11	Pass
802.11ac(VH80)	5290	-6.885	-5.729	-3.258	11	Pass

5470-5725MHz:
ANT1+ANT2

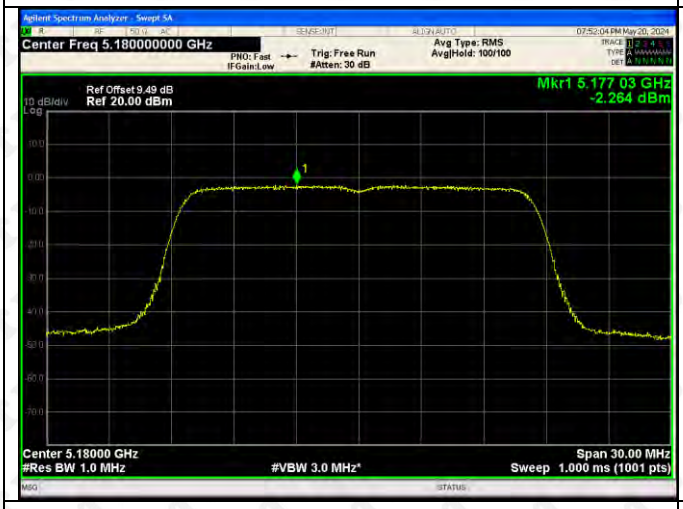
Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm)	Result
802.11a	5500	-1.524	-2.274	/	30	Pass
	5580	-1.540	-2.676	/	30	Pass
	5700	-3.092	-3.945	/	30	Pass
802.11n(HT20)	5500	-1.343	-1.771	1.459	30	Pass
	5580	-1.382	-1.529	1.555	30	Pass
	5700	-3.126	-2.717	0.094	30	Pass
802.11n(HT40)	5510	-5.083	-4.557	-1.802	30	Pass
	5670	-6.137	-5.595	-2.847	30	Pass
802.11ac(VH20)	5530	-8.566	-8.186	-5.362	30	Pass
	5500	-1.552	-2.431	1.041	30	Pass
	5580	-1.257	-2.582	1.141	30	Pass
802.11ac(VH40)	5700	-2.722	-3.759	-0.199	30	Pass
	5510	-4.289	-4.111	-1.189	30	Pass
802.11ac(VH80)	5670	-6.211	-5.672	-2.923	30	Pass

5725-5850MHz:
ANT1+ANT2

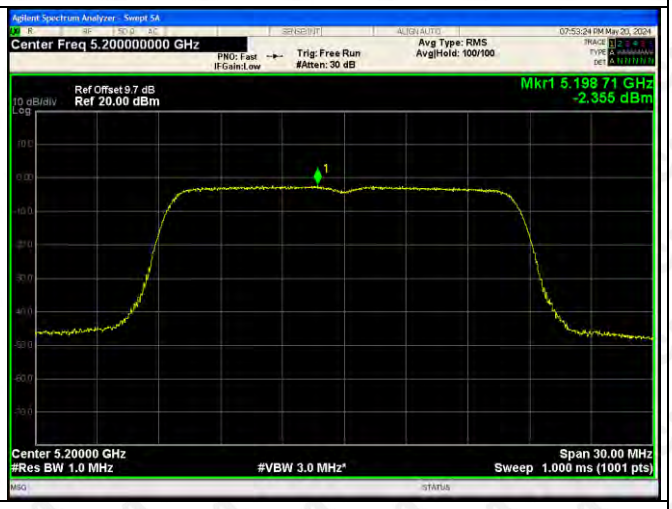
Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm)	Result
802.11a	5745	-5.217	-5.735	/	30	Pass
	5785	-5.176	-5.638	/	30	Pass
	5825	-3.821	-4.192	/	30	Pass
802.11n(HT20)	5745	-5.440	-5.484	-2.452	30	Pass
	5785	-5.278	-5.465	-2.360	30	Pass
	5825	-3.668	-4.135	-0.885	30	Pass
802.11n(HT40)	5755	-8.652	-8.296	-5.460	30	Pass
	5795	-7.915	-8.188	-5.039	30	Pass
802.11ac(VH20)	5745	-11.377	-11.665	-8.508	30	Pass
	5785	-5.600	-5.458	-2.518	30	Pass
	5825	-5.134	-5.436	-2.272	30	Pass
802.11ac(VH40)	5755	-3.915	-4.065	-0.979	30	Pass
	5795	-7.903	-8.595	-5.225	30	Pass
802.11ac(VH80)	5775	-7.774	-5.735	-3.626	30	Pass

Test Graph:
5150-5250MHz
ANT1

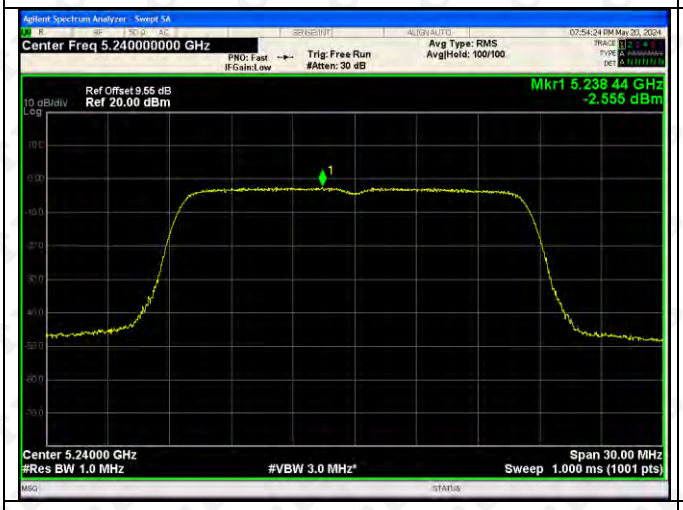
802.11a-5180



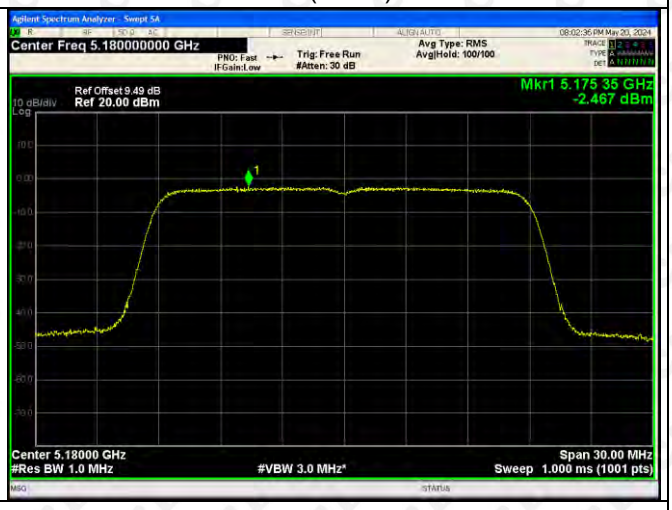
802.11a-5200



802.11a-5240

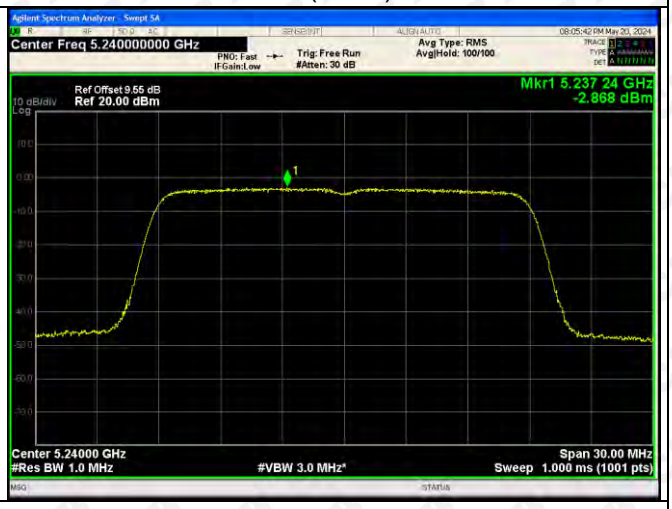


802.11ac(VH20)-5180



802.11ac(VH20)-5200

802.11ac(VH20)-5240

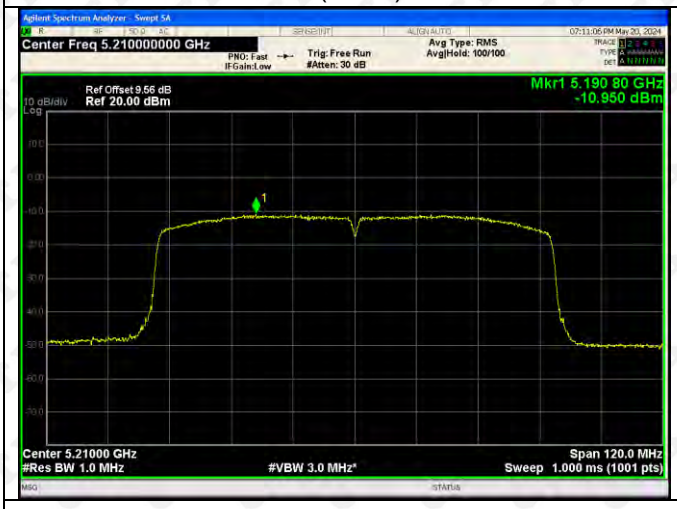


802.11ac(VH40)-5190

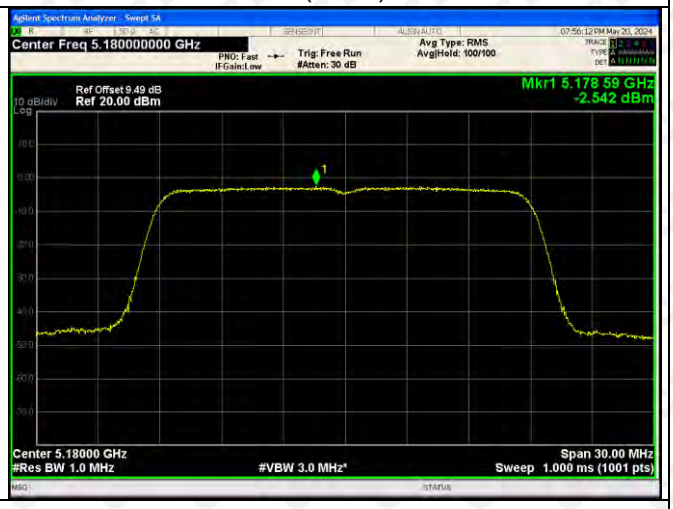
802.11ac(VH40)-5230

802.11ac(VH80)-5210

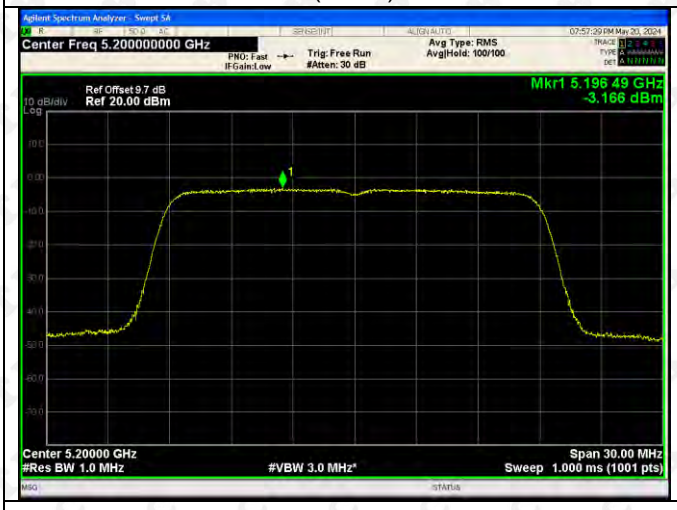
802.11n(HT20)-5180



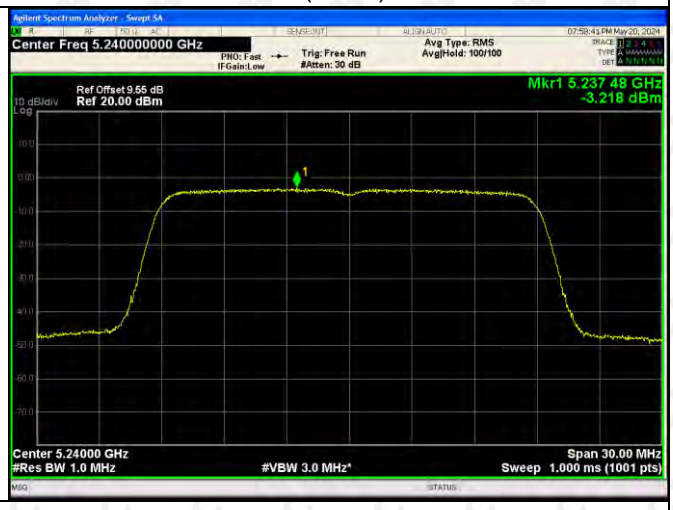
802.11n(HT20)-5200



802.11n(HT20)-5240

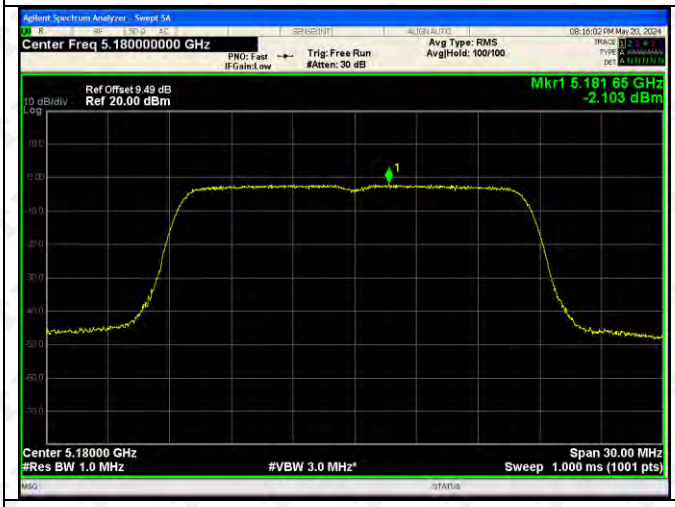


802.11n(HT40)-5190



802.11n(HT40)-5230

ANT2

802.11a-5180	802.11a-5200
	
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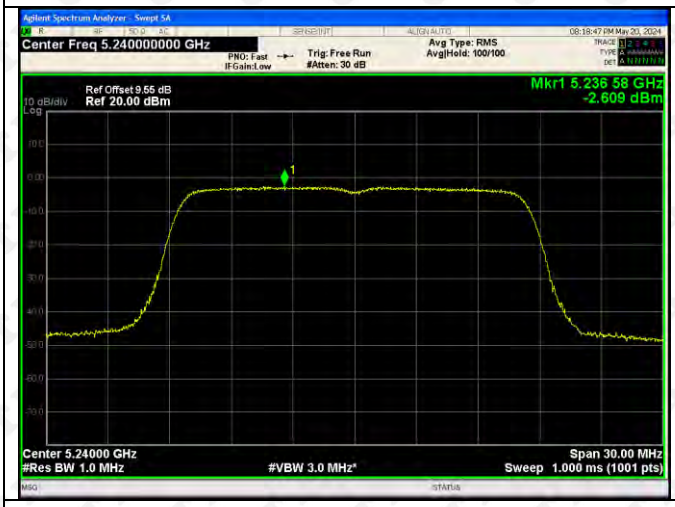
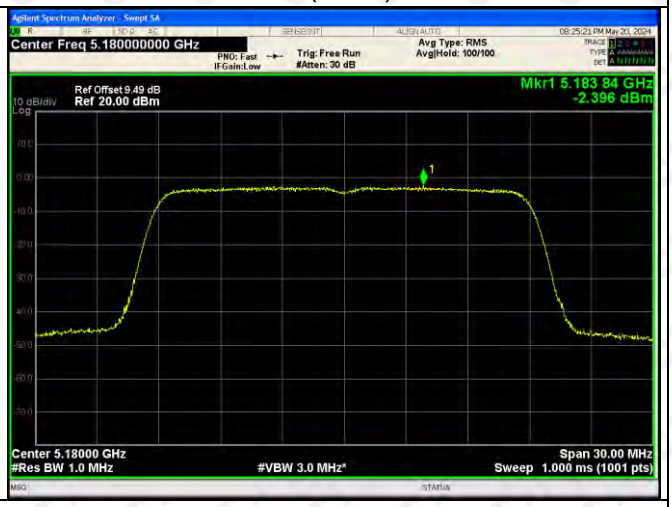
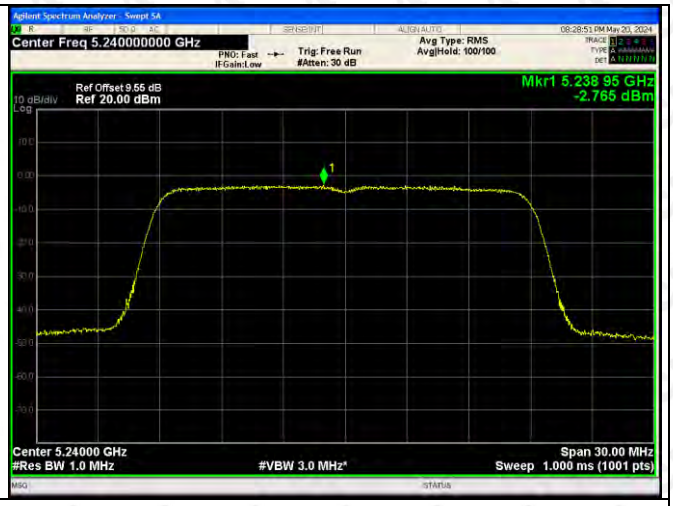
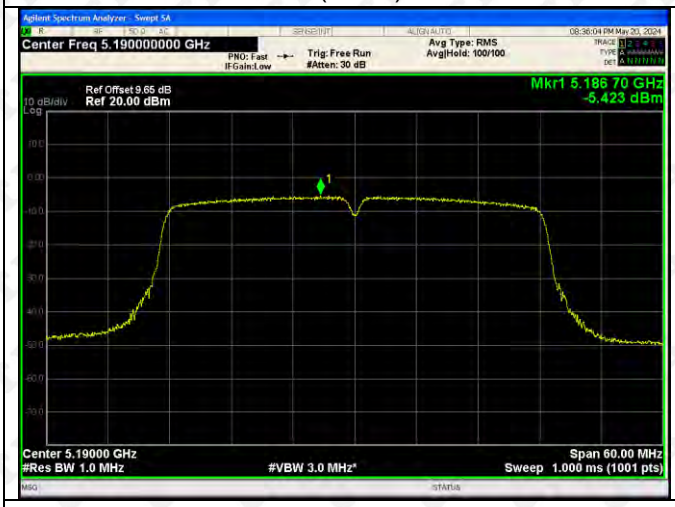
	
802.11ac(VH20)-5200	802.11ac(VH20)-5240

802.11ac(VH40)-5190

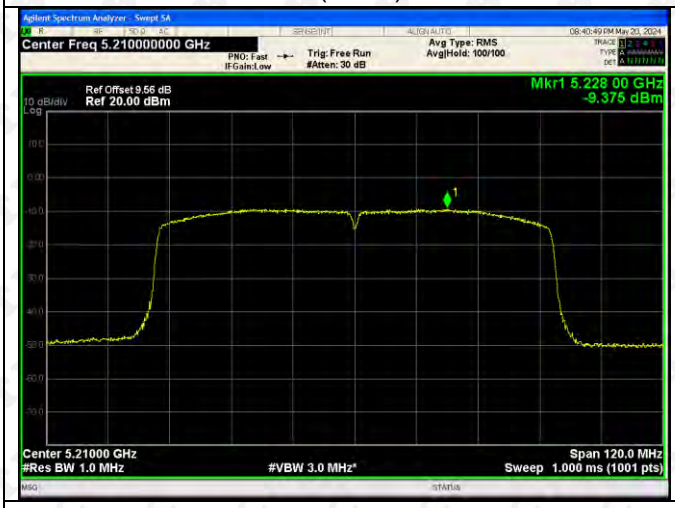


802.11ac(VH40)-5230

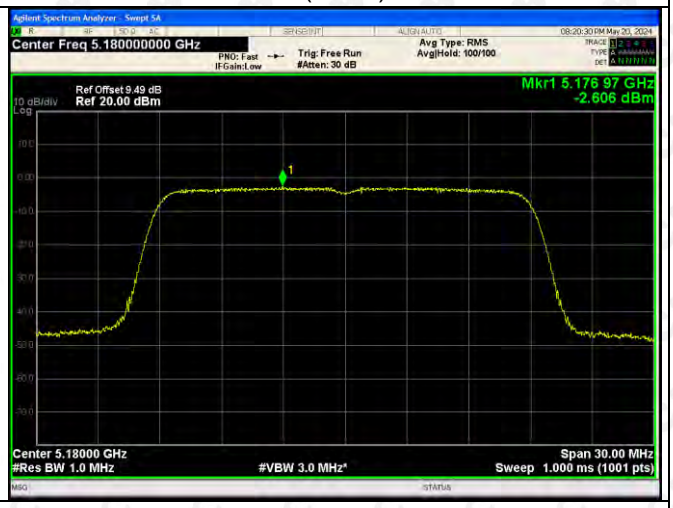


802.11ac(VH80)-5210

802.11n(HT20)-5180



802.11n(HT20)-5200



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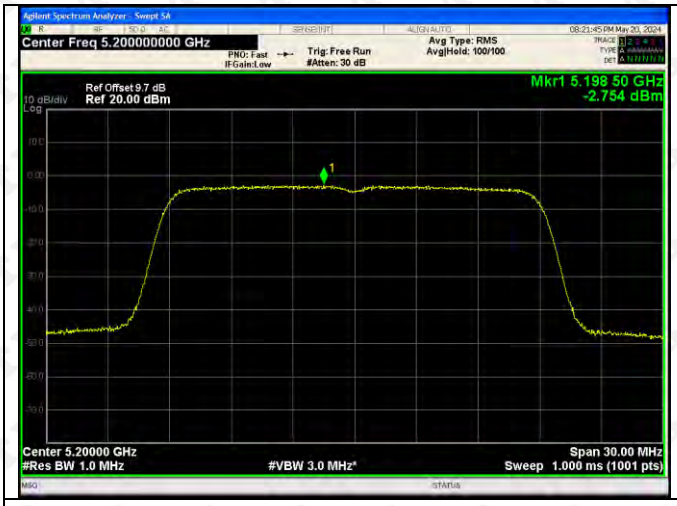
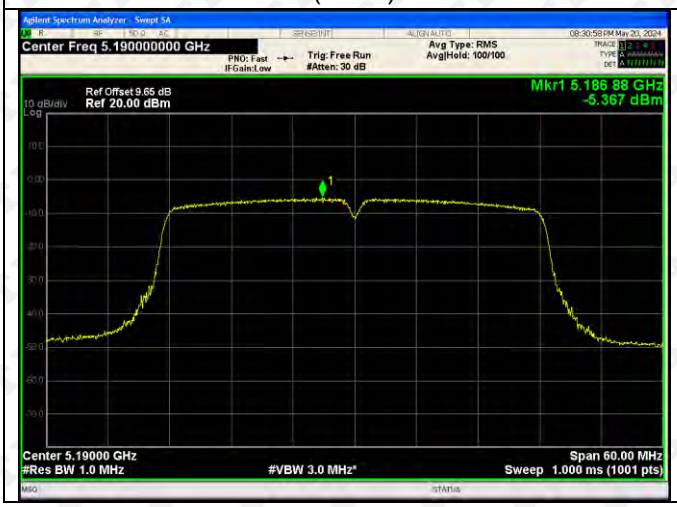
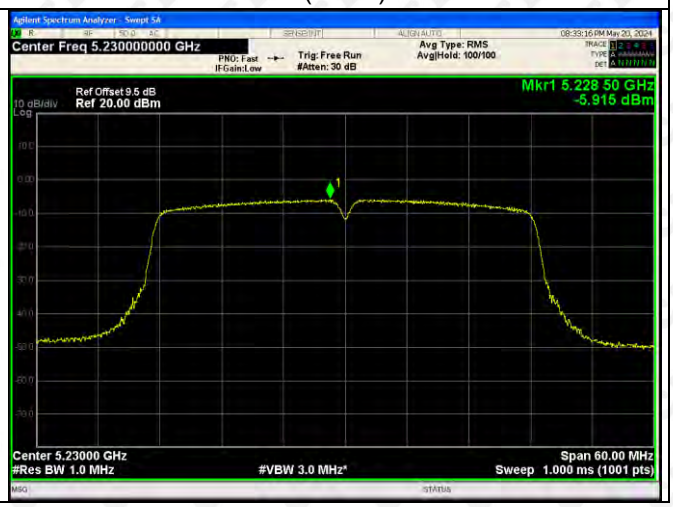


802.11n(HT40)-5190

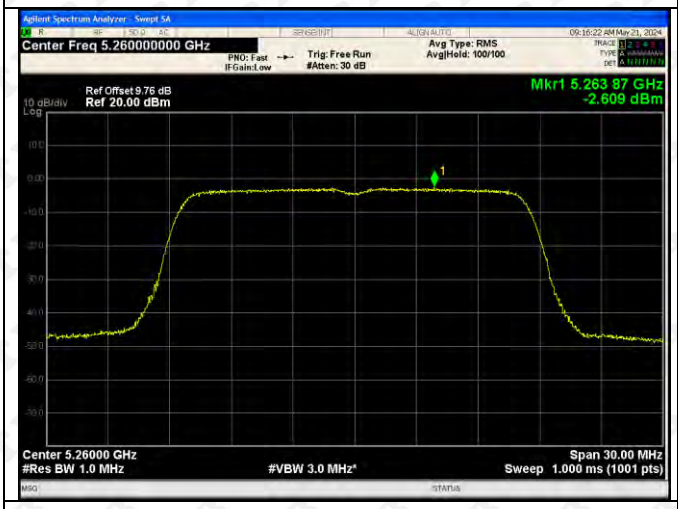
802.11n(HT40)-5230





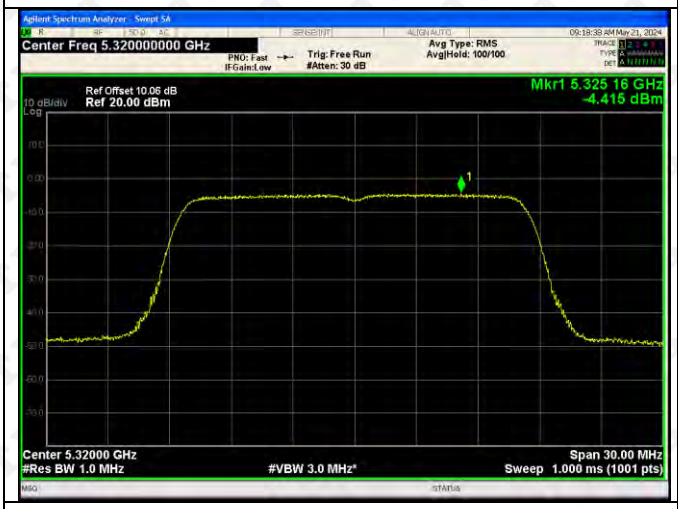
5250-5350MHz
ANT1

802.11a-5260

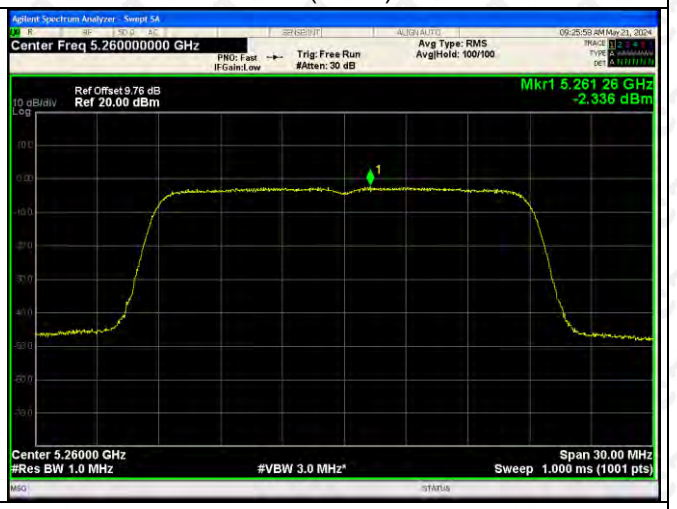


802.11a-5280

802.11a-5320



802.11ac(VH20)-5260



802.11ac(VH20)-5280

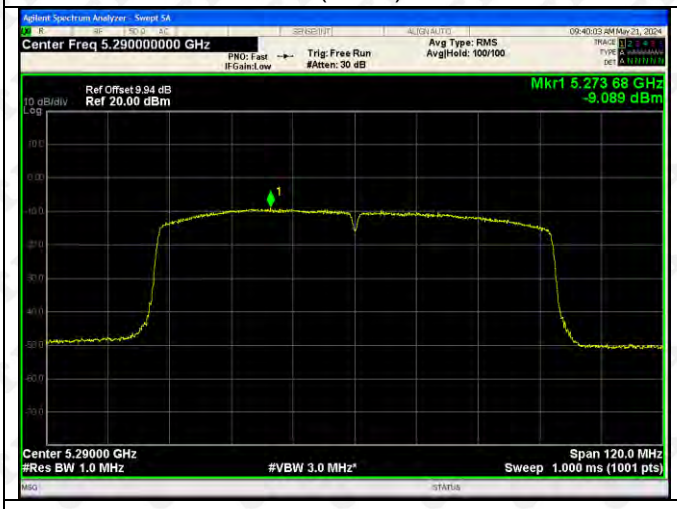
802.11ac(VH20)-5320

802.11ac(VH40)-5270

802.11ac(VH40)-5310

802.11ac(VH80)-5290

802.11n(HT20)-5260



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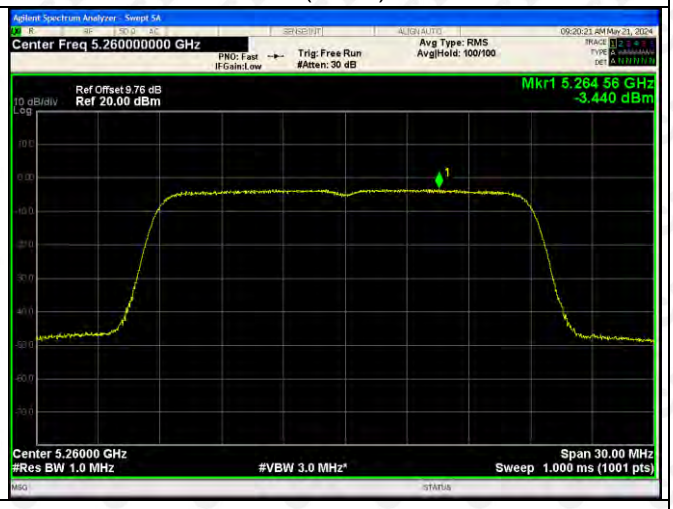
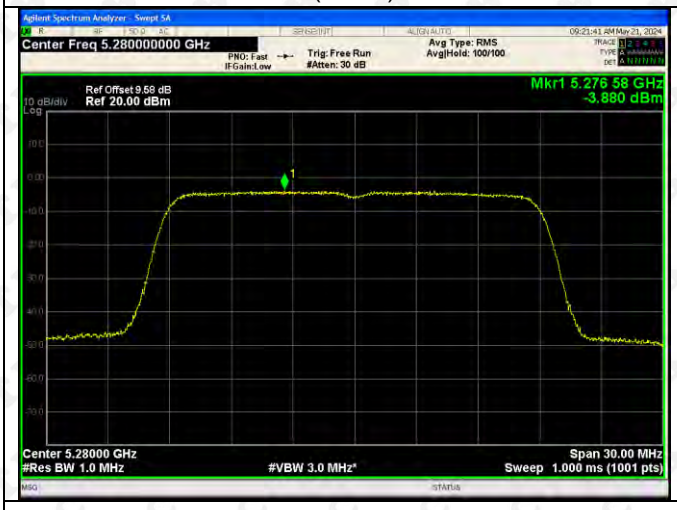
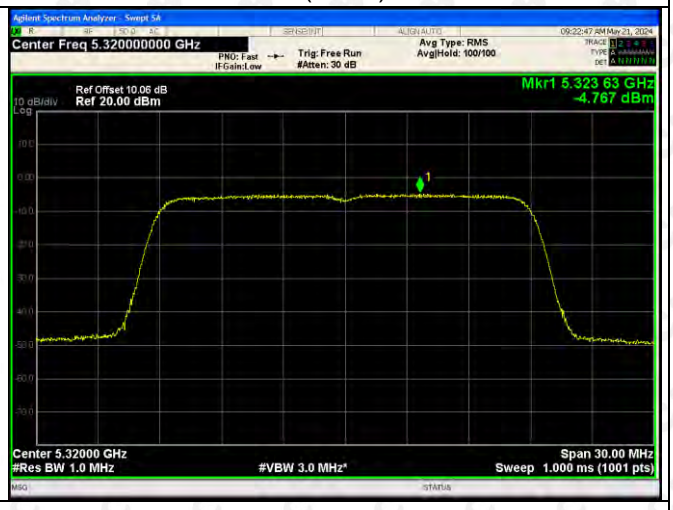


802.11n(HT20)-5320

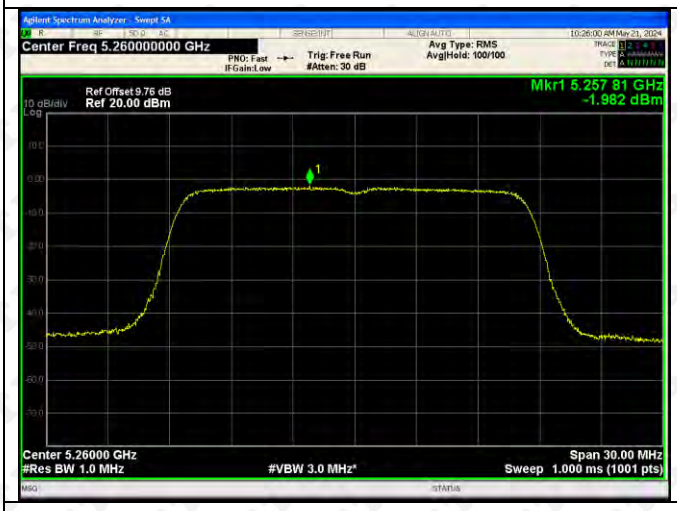
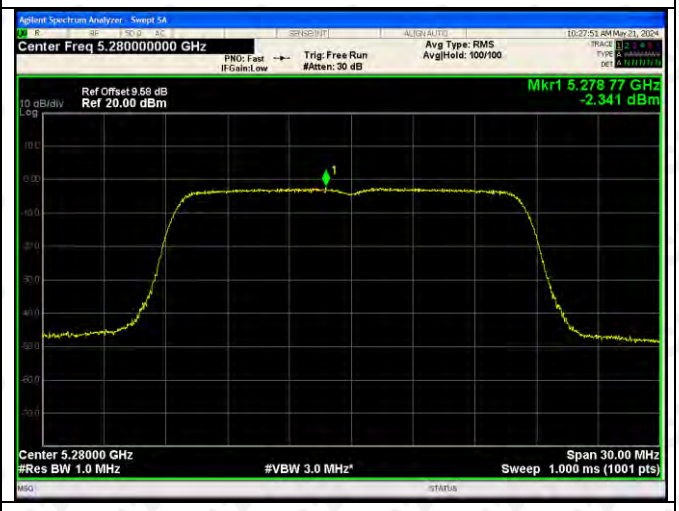


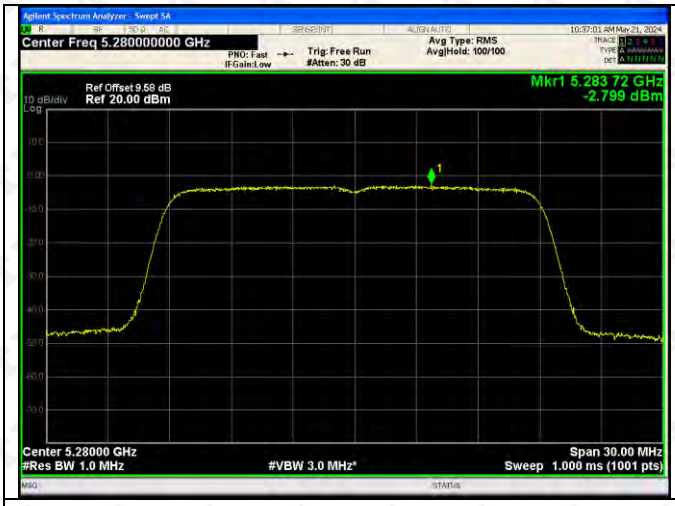
802.11n(HT40)-5270



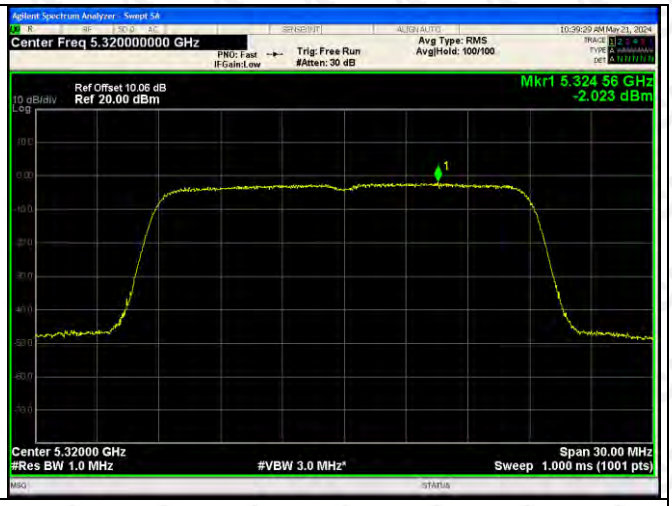
802.11n(HT40)-5310

ANT2

802.11a-5260	802.11a-5280
	
802.11a-5320	802.11ac(VH20)-5260
	
802.11ac(VH20)-5280	802.11ac(VH20)-5320



802.11ac(VH40)-5270



802.11ac(VH40)-5310

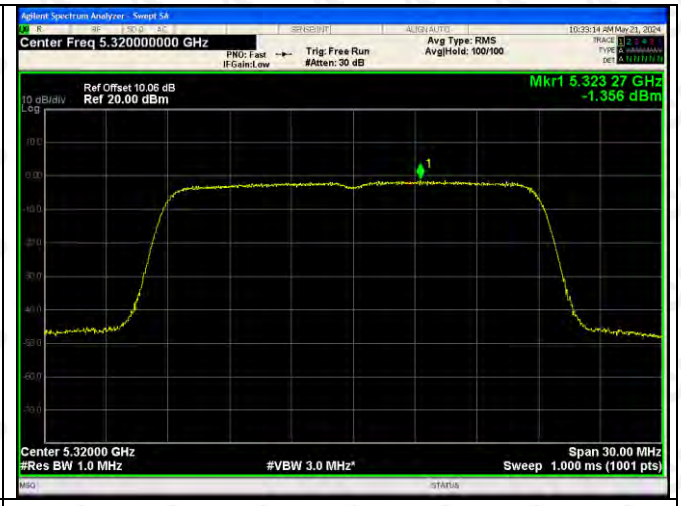
802.11ac(VH80)-5290

802.11n(HT20)-5260

802.11n(HT20)-5280

802.11n(HT20)-5320

802.11n(HT40)-5270



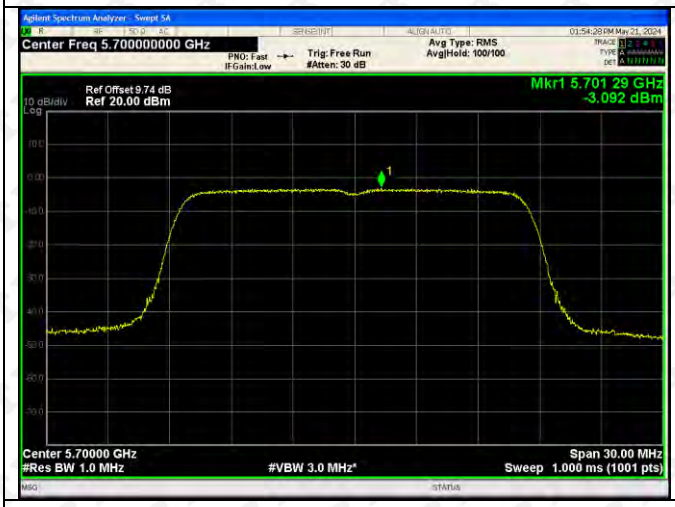
802.11n(HT40)-5310

5470-5725MHzANT1

802.11a-5500

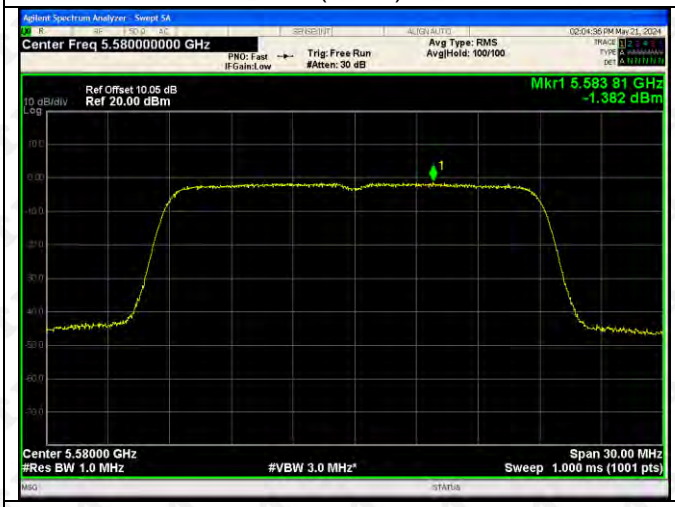
802.11a-5580

802.11a-5700



802.11ac(VH20)-5500

802.11ac(VH20)-5580

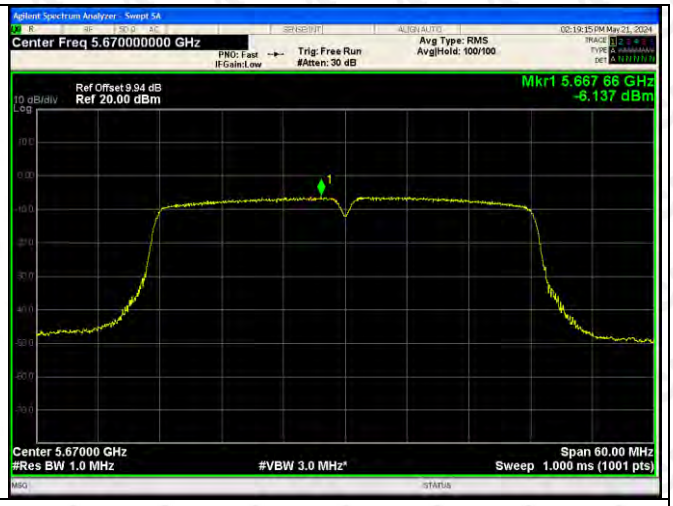


802.11ac(VH20)-5700

802.11ac(VH40)-5510

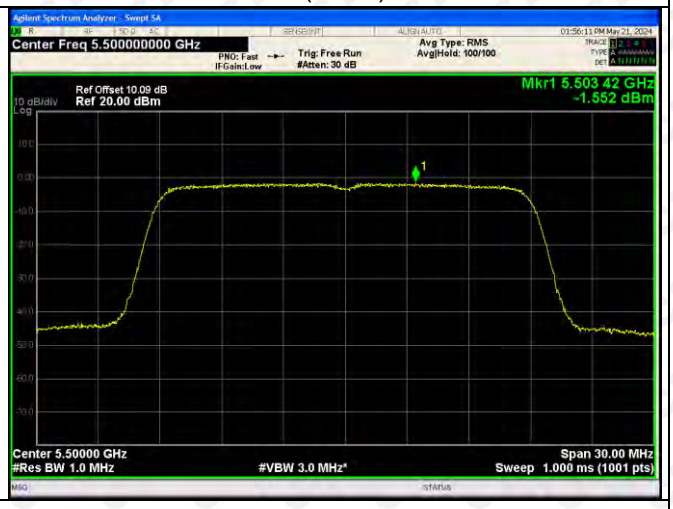
802.11ac(VH40)-5670

802.11ac(VH80)-5530



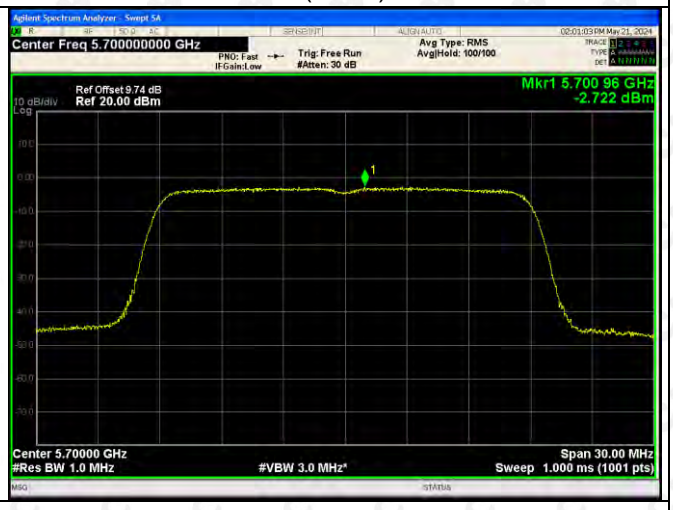
802.11n(HT20)-5500

802.11n(HT20)-5580



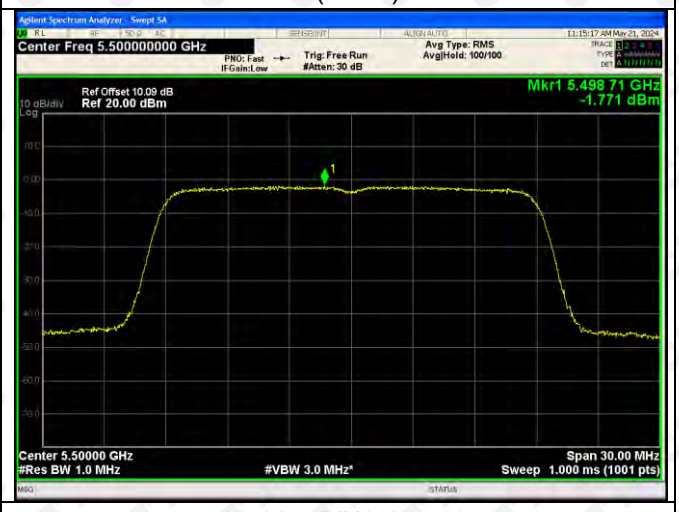
802.11n(HT20)-5700

802.11n(HT40)-5510

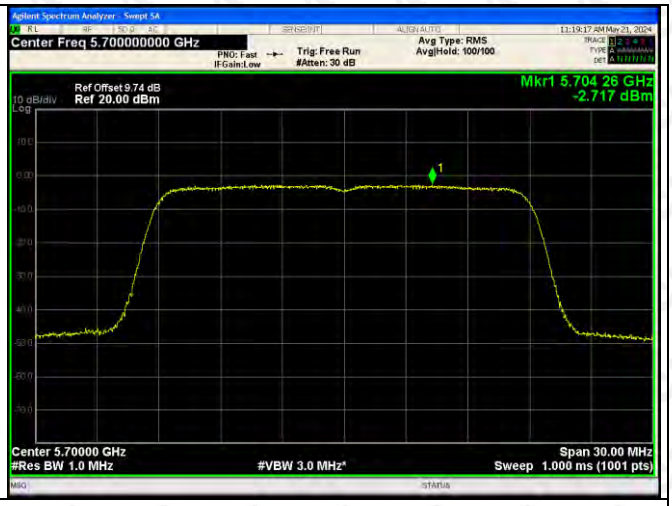


802.11n(HT40)-5670

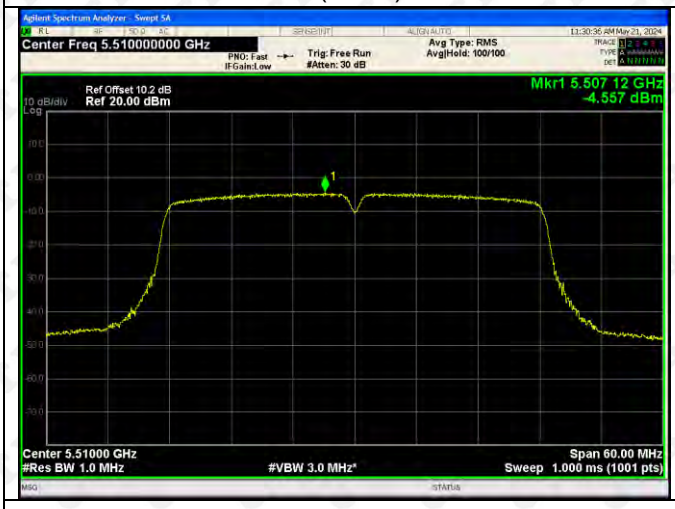
ANT2

802.11a-5500	802.11a-5580
	
802.11a-5700	802.11ac(VH20)-5500
	
802.11ac(VH20)-5580	802.11ac(VH20)-5700

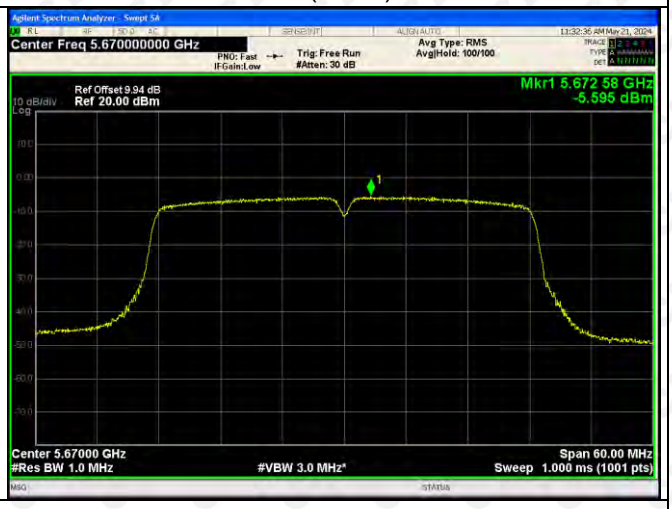
802.11ac(VH40)-5510



802.11ac(VH40)-5670



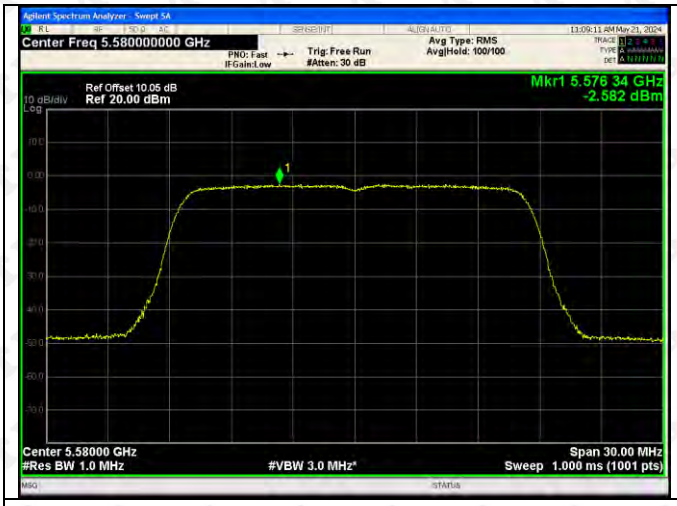
802.11ac(VH80)-5530



802.11n(HT20)-5500

802.11n(HT20)-5580

802.11n(HT20)-5700



802.11n(HT40)-5510

802.11n(HT40)-5670

5725-5850MHz:
ANT1

802.11a-5745

802.11a-5785

802.11a-5825

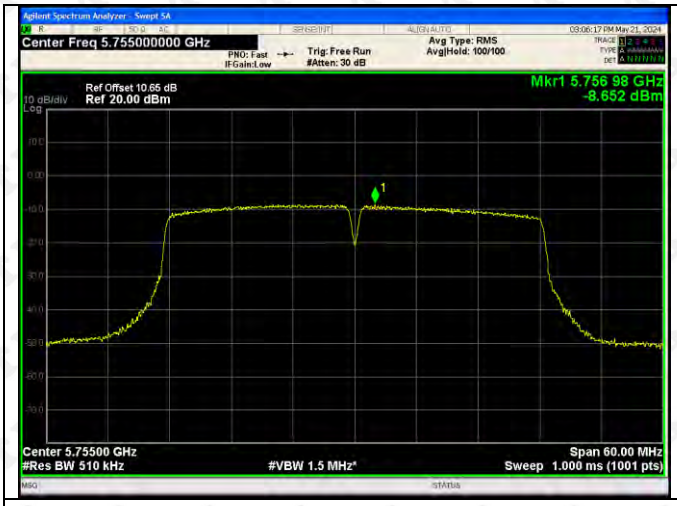
802.11ac(VH20)-5745

802.11ac(VH20)-5785

802.11ac(VH20)-5825

802.11ac(VH40)-5755

802.11ac(VH40)-5795



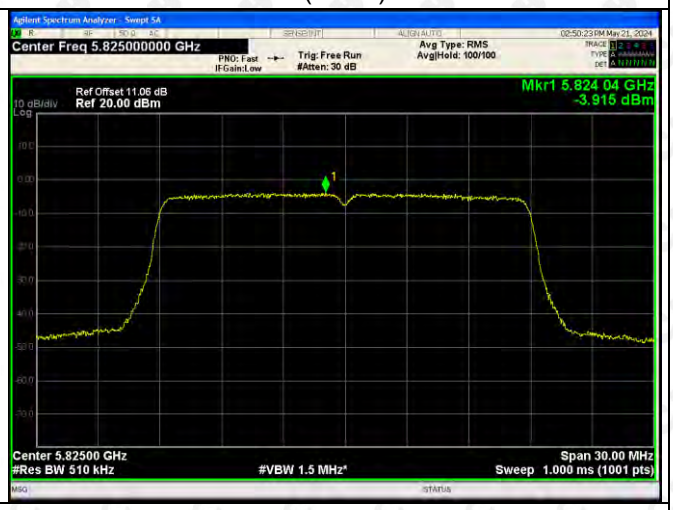
802.11ac(VH80)-5775

802.11n(HT20)-5745

802.11n(HT20)-5785

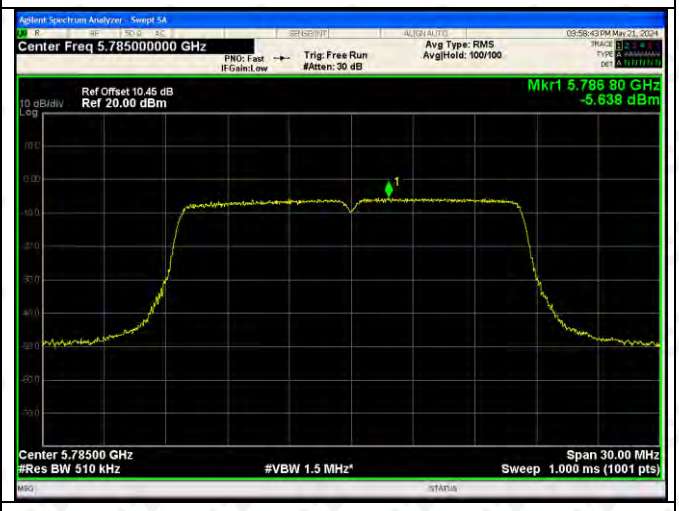
802.11n(HT20)-5825

802.11n(HT40)-5795



802.11n(HT40)-5825

ANT2

802.11a-5745	802.11a-5785
	
802.11a-5825	802.11ac(VH20)-5745
	
802.11ac(VH20)-5785	802.11ac(VH20)-5825

802.11ac(VH40)-5755

802.11ac(VH40)-5795

802.11ac(VH80)-5775

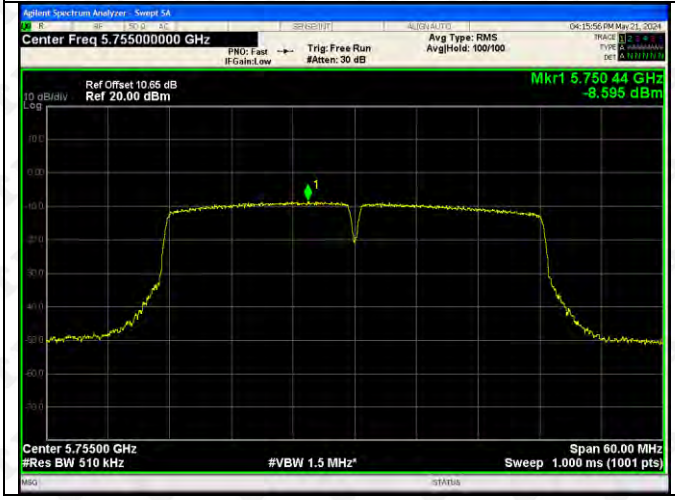
802.11n(HT20)-5745

802.11n(HT20)-5785

802.11n(HT20)-5825

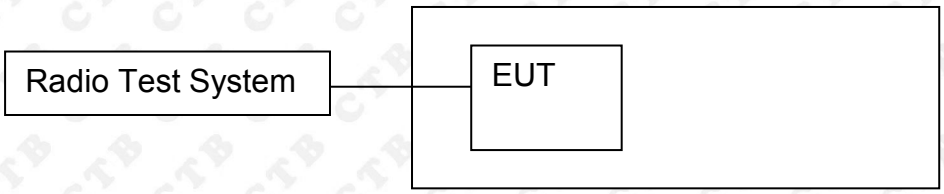
802.11n(HT40)-5795

802.11n(HT40)-5825



12. FREQUENCY STABILITY

12.1 Block Diagram Of Test Setup



12.2 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.

12.3 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.

12.4 Test Result

TX Frequency (5150-5250MHz)

ANT1

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5180.0289	5180	0.0289	5.5733
		V max (V)	5.5	5180.0755	5180	0.0755	14.5756
		V min (V)	4.5	5180.0537	5180	0.0537	10.3646
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5180.0195	5180	0.0195	3.7666
		T (°C)	10	5180.0125	5180	0.0125	2.4227
		T (°C)	20	5180.0407	5180	0.0407	7.8483
		T (°C)	30	5180.0336	5180	0.0336	6.4956
		T (°C)	40	5180.0331	5180	0.0331	6.3971
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5200.0076	5200	0.0076	1.4646
		V max (V)	5.5	5200.0524	5200	0.0524	10.0849
		V min (V)	4.5	5200.0305	5200	0.0305	5.8646
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5200.0114	5200	0.0114	2.1829
		T (°C)	10	5200.0381	5200	0.0381	7.3240
		T (°C)	20	5200.0025	5200	0.0025	0.4894
		T (°C)	30	5200.0396	5200	0.0396	7.6243
		T (°C)	40	5200.0178	5200	0.0178	3.4138
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5240.0356	5240	0.0356	6.8032
		V max (V)	5.5	5240.0310	5240	0.0310	5.9149
		V min (V)	4.5	5240.0495	5240	0.0495	9.4539
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5240.0176	5240	0.0176	3.3639
		T (°C)	10	5240.0477	5240	0.0477	9.1055
		T (°C)	20	5240.0178	5240	0.0178	3.3988
		T (°C)	30	5240.0446	5240	0.0446	8.5105
		T (°C)	40	5240.0507	5240	0.0507	9.6753
Limits				±20ppm			
Result				Complies			

TX Frequency (5250-5350MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5260.0531	5260	0.0531	10.0874
		V max (V)	5.5	5260.0279	5260	0.0279	5.3079
		V min (V)	4.5	5260.0386	5260	0.0386	7.3444
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5260.0224	5260	0.0224	4.2658
		T (°C)	10	5260.0108	5260	0.0108	2.0594
		T (°C)	20	5260.0061	5260	0.0061	1.1621
		T (°C)	30	5260.0170	5260	0.0170	3.2382
		T (°C)	40	5260.0477	5260	0.0477	9.0653
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5280.0026	5280	0.0026	0.4897
		V max (V)	5.5	5280.0189	5280	0.0189	3.5844
		V min (V)	4.5	5280.0749	5280	0.0749	14.1922
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5280.0311	5280	0.0311	5.8937
		T (°C)	10	5280.0530	5280	0.0530	10.0448
		T (°C)	20	5280.0183	5280	0.0183	3.4637
		T (°C)	30	5280.0693	5280	0.0693	13.1283
		T (°C)	40	5280.0778	5280	0.0778	14.7304
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5320.0118	5320	0.0118	2.2172
		V max (V)	5.5	5320.0496	5320	0.0496	9.3229
		V min (V)	4.5	5320.0156	5320	0.0156	2.9248
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5320.0451	5320	0.0451	8.4735
		T (°C)	10	5320.0101	5320	0.0101	1.9058
		T (°C)	20	5320.0911	5320	0.0911	17.1325
		T (°C)	30	5320.0096	5320	0.0096	1.7958
		T (°C)	40	5320.0558	5320	0.0558	10.4950
Limits				±20ppm			
Result				Complies			

TX Frequency (5470-5725MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5550.0526	5500	50.0526	9100.4724
		V max (V)	5.5	5550.0858	5500	50.0858	9106.5158
		V min (V)	4.5	5550.0775	5500	50.0775	9104.9958
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5500.0385	5500	0.0385	6.9955
		T (°C)	10	5500.0864	5500	0.0864	15.7031
		T (°C)	20	5500.0654	5500	0.0654	11.8982
		T (°C)	30	5500.0026	5500	0.0026	0.4679
		T (°C)	40	5500.0719	5500	0.0719	13.0817
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5580.0878	5580	0.0878	15.7419
		V max (V)	5.5	5580.0335	5580	0.0335	5.9984
		V min (V)	4.5	5580.0420	5580	0.0420	7.5227
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5580.0414	5580	0.0414	7.4252
		T (°C)	10	5580.0397	5580	0.0397	7.1081
		T (°C)	20	5580.0324	5580	0.0324	5.8146
		T (°C)	30	5580.0189	5580	0.0189	3.3915
		T (°C)	40	5580.0596	5580	0.0596	10.6791
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5700.0395	5700	0.0395	6.9375
		V max (V)	5.5	5700.0430	5700	0.0430	7.5512
		V min (V)	4.5	5700.0432	5700	0.0432	7.5819
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5700.0161	5700	0.0161	2.8194
		T (°C)	10	5700.0173	5700	0.0173	3.0266
		T (°C)	20	5700.0016	5700	0.0016	0.2732
		T (°C)	30	5700.0620	5700	0.0620	10.8751
		T (°C)	40	5700.0238	5700	0.0238	4.1726
Limits				±20ppm			
Result				Complies			

TX Frequency (5725-5850MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5745.0266	5745	0.0266	4.6286
		V max (V)	5.5	5745.0587	5745	0.0587	10.2232
		V min (V)	4.5	5745.0266	5745	0.0266	4.6286
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5745.0509	5745	0.0509	8.8598
		T (°C)	10	5745.0627	5745	0.0627	10.9081
		T (°C)	20	5745.0370	5745	0.0370	6.4318
		T (°C)	30	5745.0707	5745	0.0707	12.3031
		T (°C)	40	5745.0454	5745	0.0454	7.9030
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5785.0463	5785	0.0463	8.0004
		V max (V)	5.5	5785.0217	5785	0.0217	3.7520
		V min (V)	4.5	5785.0062	5785	0.0062	1.0682
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5785.0357	5785	0.0357	6.1669
		T (°C)	10	5785.0313	5785	0.0313	5.4140
		T (°C)	20	5785.0582	5785	0.0582	10.0523
		T (°C)	30	5785.0056	5785	0.0056	0.9608
		T (°C)	40	5785.0409	5785	0.0409	7.0632
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5825.0031	5825	0.0031	0.5363
		V max (V)	5.5	5825.0412	5825	0.0412	7.0774
		V min (V)	4.5	5825.0164	5825	0.0164	2.8168
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5825.0905	5825	0.0905	15.5289
		T (°C)	10	5825.0626	5825	0.0626	10.7538
		T (°C)	20	5825.0272	5825	0.0272	4.6686
		T (°C)	30	5825.0832	5825	0.0832	14.2840
		T (°C)	40	5825.0356	5825	0.0356	6.1147
Limits				±20ppm			
Result				Complies			

ANT2:

TX Frequency (5150-5250MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5180.0144	5180	0.0144	2.7719
		V max (V)	5.5	5180.0593	5180	0.0593	11.4561
		V min (V)	4.5	5180.0021	5180	0.0021	0.4089
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5180.0183	5180	0.0183	3.5254
		T (°C)	10	5180.0127	5180	0.0127	2.4478
		T (°C)	20	5180.0200	5180	0.0200	3.8683
		T (°C)	30	5180.0014	5180	0.0014	0.2644
		T (°C)	40	5180.0811	5180	0.0811	15.6536
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5200.0685	5200	0.0685	13.1791
		V max (V)	5.5	5200.0334	5200	0.0334	6.4271
		V min (V)	4.5	5200.0888	5200	0.0888	17.0742
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5200.0851	5200	0.0851	16.3611
		T (°C)	10	5200.0733	5200	0.0733	14.1015
		T (°C)	20	5200.0857	5200	0.0857	16.4871
		T (°C)	30	5200.0576	5200	0.0576	11.0744
		T (°C)	40	5200.0336	5200	0.0336	6.4554
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5240.0388	5240	0.0388	7.4042
		V max (V)	5.5	5240.0502	5240	0.0502	9.5894
		V min (V)	4.5	5240.0458	5240	0.0458	8.7409
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5240.0886	5240	0.0886	16.8997
		T (°C)	10	5240.0353	5240	0.0353	6.7448
		T (°C)	20	5240.0076	5240	0.0076	1.4493
		T (°C)	30	5240.0241	5240	0.0241	4.5995
		T (°C)	40	5240.0340	5240	0.0340	6.4955
Limits				±20ppm			
Result				Complies			

TX Frequency (5250-5350MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5260.0627	5260	0.0627	11.9127
		V max (V)	5.5	5260.0672	5260	0.0672	12.7719
		V min (V)	4.5	5260.0447	5260	0.0447	8.5019
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5260.0867	5260	0.0867	16.4912
		T (°C)	10	5260.0693	5260	0.0693	13.1740
		T (°C)	20	5260.0267	5260	0.0267	5.0731
		T (°C)	30	5260.0865	5260	0.0865	16.4507
		T (°C)	40	5260.0074	5260	0.0074	1.4084
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5280.0150	5280	0.0150	2.8493
		V max (V)	5.5	5280.0837	5280	0.0837	15.8461
		V min (V)	4.5	5280.0126	5280	0.0126	2.3894
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5280.0628	5280	0.0628	11.8931
		T (°C)	10	5280.0104	5280	0.0104	1.9721
		T (°C)	20	5280.0054	5280	0.0054	1.0207
		T (°C)	30	5280.0843	5280	0.0843	15.9649
		T (°C)	40	5280.0330	5280	0.0330	6.2466
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5320.0608	5320	0.0608	11.4219
		V max (V)	5.5	5320.0895	5320	0.0895	16.8325
		V min (V)	4.5	5320.0592	5320	0.0592	11.1185
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5320.0792	5320	0.0792	14.8848
		T (°C)	10	5320.0256	5320	0.0256	4.8041
		T (°C)	20	5320.0317	5320	0.0317	5.9647
		T (°C)	30	5320.0239	5320	0.0239	4.4834
		T (°C)	40	5320.0861	5320	0.0861	16.1832

TX Frequency (5470-5725MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5500.0265	5500	0.0265	4.8122
		V max (V)	5.5	5500.0637	5500	0.0637	11.5778
		V min (V)	4.5	5500.0472	5500	0.0472	8.5746
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5500.0391	5500	0.0391	7.1156
		T (°C)	10	5500.0527	5500	0.0527	9.5879
		T (°C)	20	5500.0922	5500	0.0922	16.7712
		T (°C)	30	5500.0731	5500	0.0731	13.2834
		T (°C)	40	5500.0805	5500	0.0805	14.6414
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5580.0821	5580	0.0821	14.7159
		V max (V)	5.5	5580.0280	5580	0.0280	5.0213
		V min (V)	4.5	5580.0459	5580	0.0459	8.2170
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5580.0204	5580	0.0204	3.6475
		T (°C)	10	5580.0356	5580	0.0356	6.3747
		T (°C)	20	5580.0924	5580	0.0924	16.5603
		T (°C)	30	5580.0540	5580	0.0540	9.6783
		T (°C)	40	5580.0719	5580	0.0719	12.8833
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5700.0323	5700	0.0323	5.6723
		V max (V)	5.5	5700.0820	5700	0.0820	14.3924
		V min (V)	4.5	5700.0386	5700	0.0386	6.7668
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5700.0496	5700	0.0496	8.7035
		T (°C)	10	5700.0809	5700	0.0809	14.1878
		T (°C)	20	5700.0587	5700	0.0587	10.3013
		T (°C)	30	5700.0503	5700	0.0503	8.8285
		T (°C)	40	5700.0329	5700	0.0329	5.7659
Limits				±20ppm			
Result				Complies			

TX Frequency (5725-5850MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5745.0837	5745	0.0837	14.5639
		V max (V)	5.5	5745.0846	5745	0.0846	14.7202
		V min (V)	4.5	5745.0290	5745	0.0290	5.0441
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5745.0676	5745	0.0676	11.7750
		T (°C)	10	5745.0004	5745	0.0004	0.0618
		T (°C)	20	5745.0109	5745	0.0109	1.8987
		T (°C)	30	5745.0490	5745	0.0490	8.5306
		T (°C)	40	5745.0869	5745	0.0869	15.1342
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5785.0798	5785	0.0798	13.7867
		V max (V)	5.5	5785.0649	5785	0.0649	11.2230
		V min (V)	4.5	5785.0500	5785	0.0500	8.6431
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5785.0473	5785	0.0473	8.1764
		T (°C)	10	5785.0890	5785	0.0890	15.3822
		T (°C)	20	5785.0557	5785	0.0557	9.6243
		T (°C)	30	5785.0910	5785	0.0910	15.7330
		T (°C)	40	5785.0680	5785	0.0680	11.7587
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.0	5825.0818	5825	0.0818	14.0354
		V max (V)	5.5	5825.0187	5825	0.0187	3.2183
		V min (V)	4.5	5825.0672	5825	0.0672	11.5449
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5825.0041	5825	0.0041	0.7052
		T (°C)	10	5825.0558	5825	0.0558	9.5835
		T (°C)	20	5825.0741	5825	0.0741	12.7248
		T (°C)	30	5825.0015	5825	0.0015	0.2493
		T (°C)	40	5825.0921	5825	0.0921	15.8049
Limits				±20ppm			
Result				Complies			

13. OPERATION IN THE ABSENCE OF INFORMATION TO THE TRANSMIT

13.1 Requirement

15.407(c) requirement:
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 signal ling 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.

13.2 Test Results

Operation in the absence of information to the transmit:

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling
signal of ASK message transmitting from remote device and verify whether it shall resend or
discontinue transmission. (manufacturer declare)

14. ANTENNA REQUIREMENT

15.203 requirement:
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.
15.247(b) (4) requirement:
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

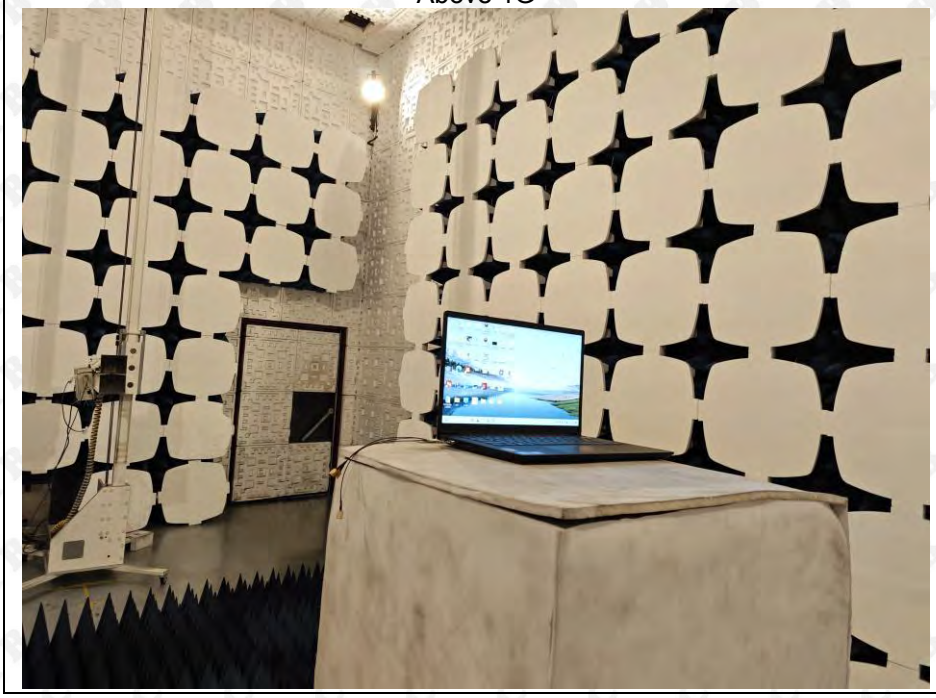
The antenna is Internal antenna and no consideration of replacement. The best case gain of the antenna is WiFi (5.2G): ANT1: 1.62dBi, ANT2: 1.62dBi; WiFi (5.3G): ANT1: 3.51dBi, ANT2: 3.51dBi; WiFi (5.6G): ANT1: 5.57dBi, ANT2: 5.57dBi; WiFi (5.8G): ANT1: 3.58dBi, ANT2: 3.58dBi.

15. EUT TEST SETUP PHOTOGRAPHS

Radiated Emissions

Below 1G

Above 1G



Conducted emission

※※※※※ **END OF REPORT** ※※※※※