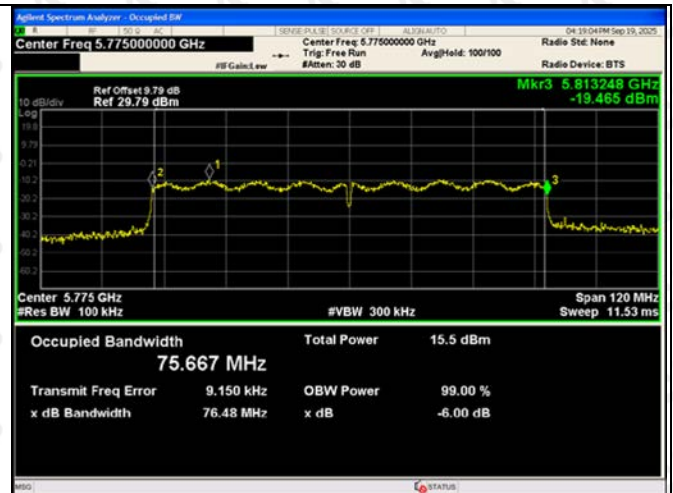
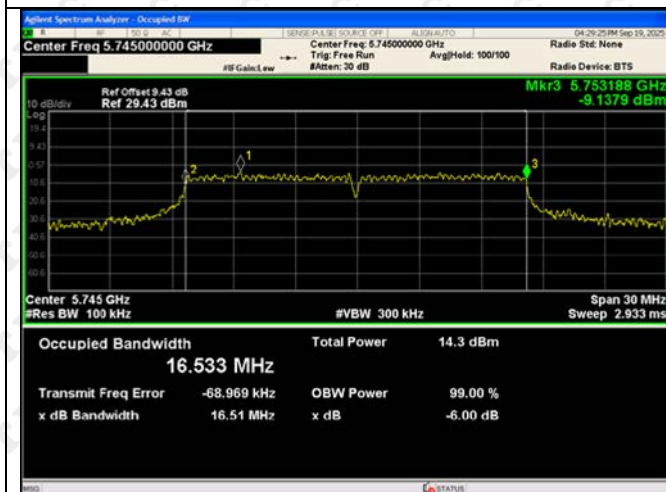


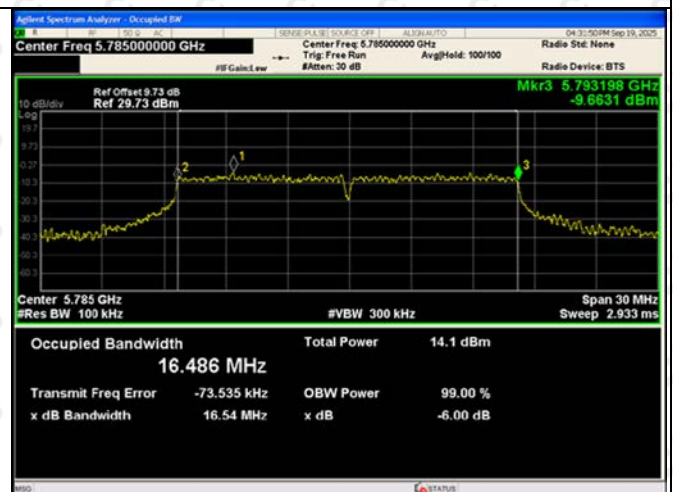


5725-5850MHz ANT2:

802.11a-5745



802.11a-5785



802.11a-5825

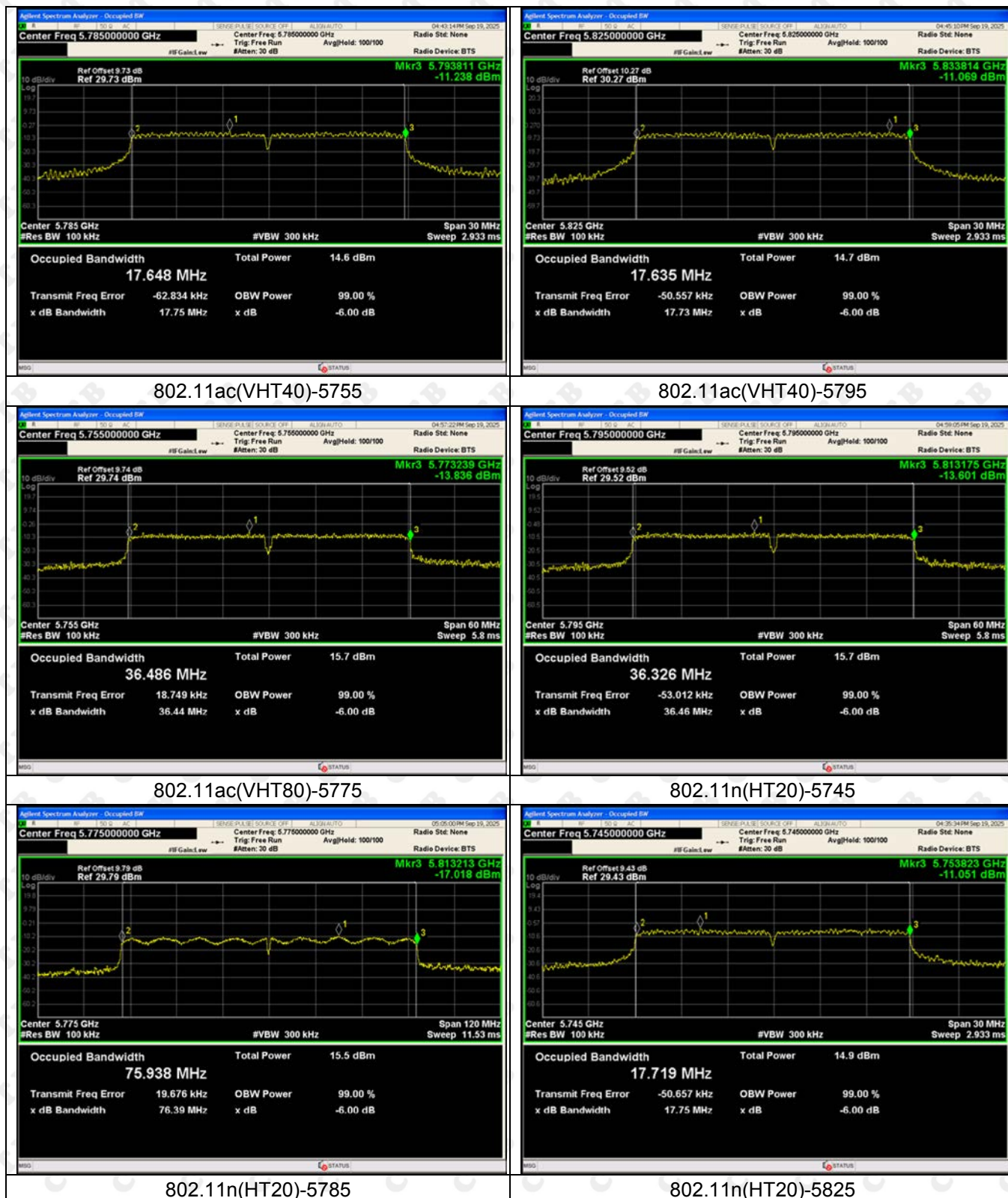


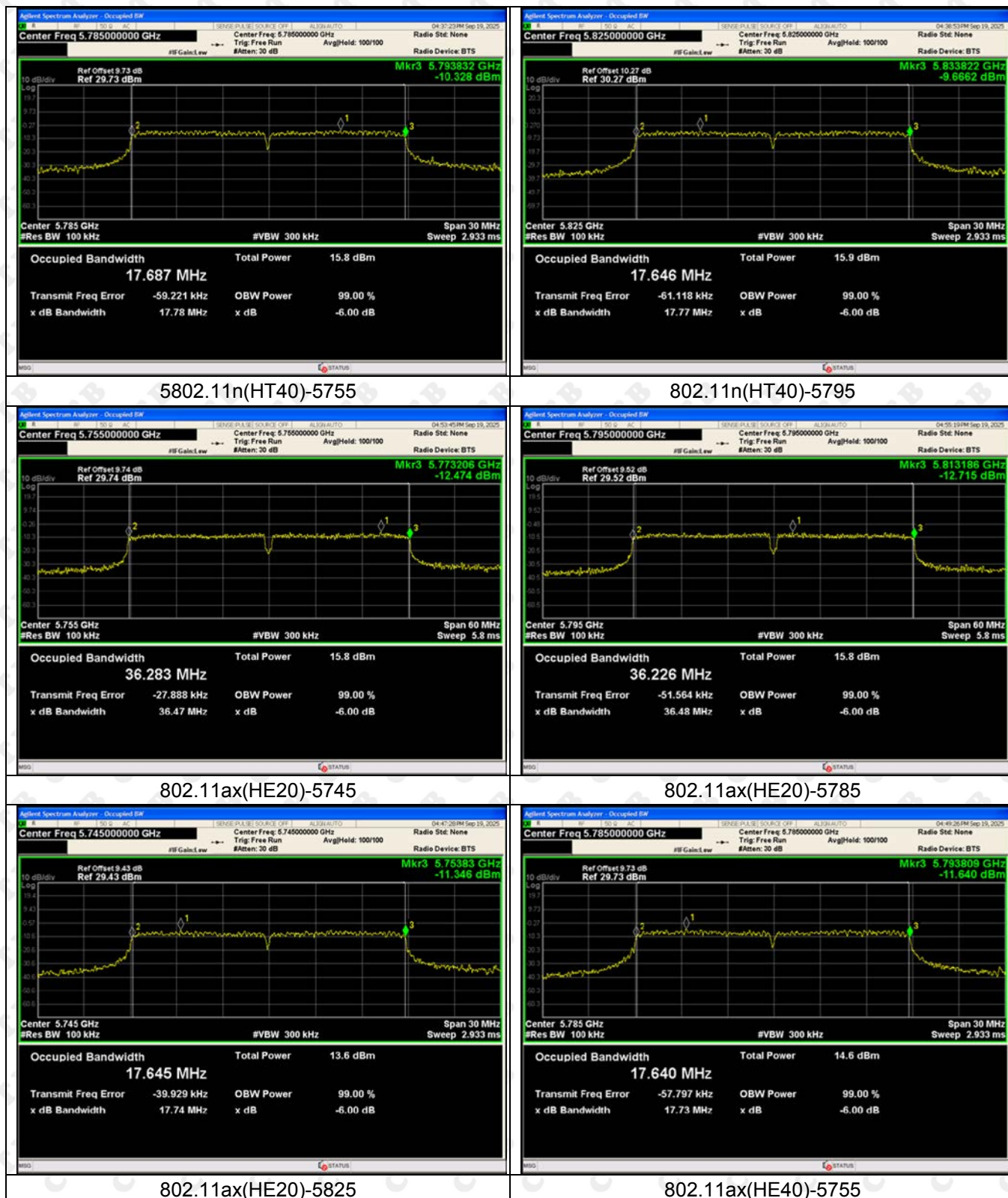
802.11ac(VHT20)-5745



802.11ac(VHT20)-5785

802.11ac(VHT20)-5825

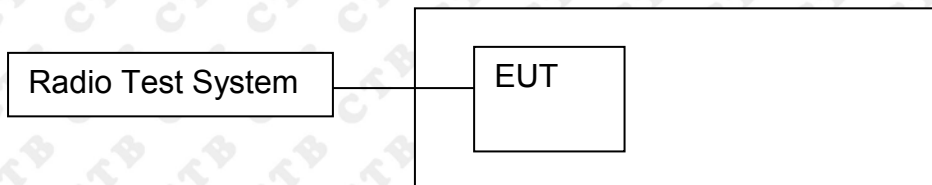






11. POWER SPECTRAL DENSITY

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 $11 \text{ dBm} + 10 \log B$, 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 ($< 1 \text{ MHz}$, or $< 500 \text{ kHz}$) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set $\text{RBW} \geq 1/T$, where T is defined in II.B.I.a).

b) Set $\text{VBW} \geq 3 \text{ RBW}$.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10 \log (500 \text{ kHz}/\text{RBW})$ 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 $10 \log (1\text{MHz}/\text{RBW})$ 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

ANT1+ANT2

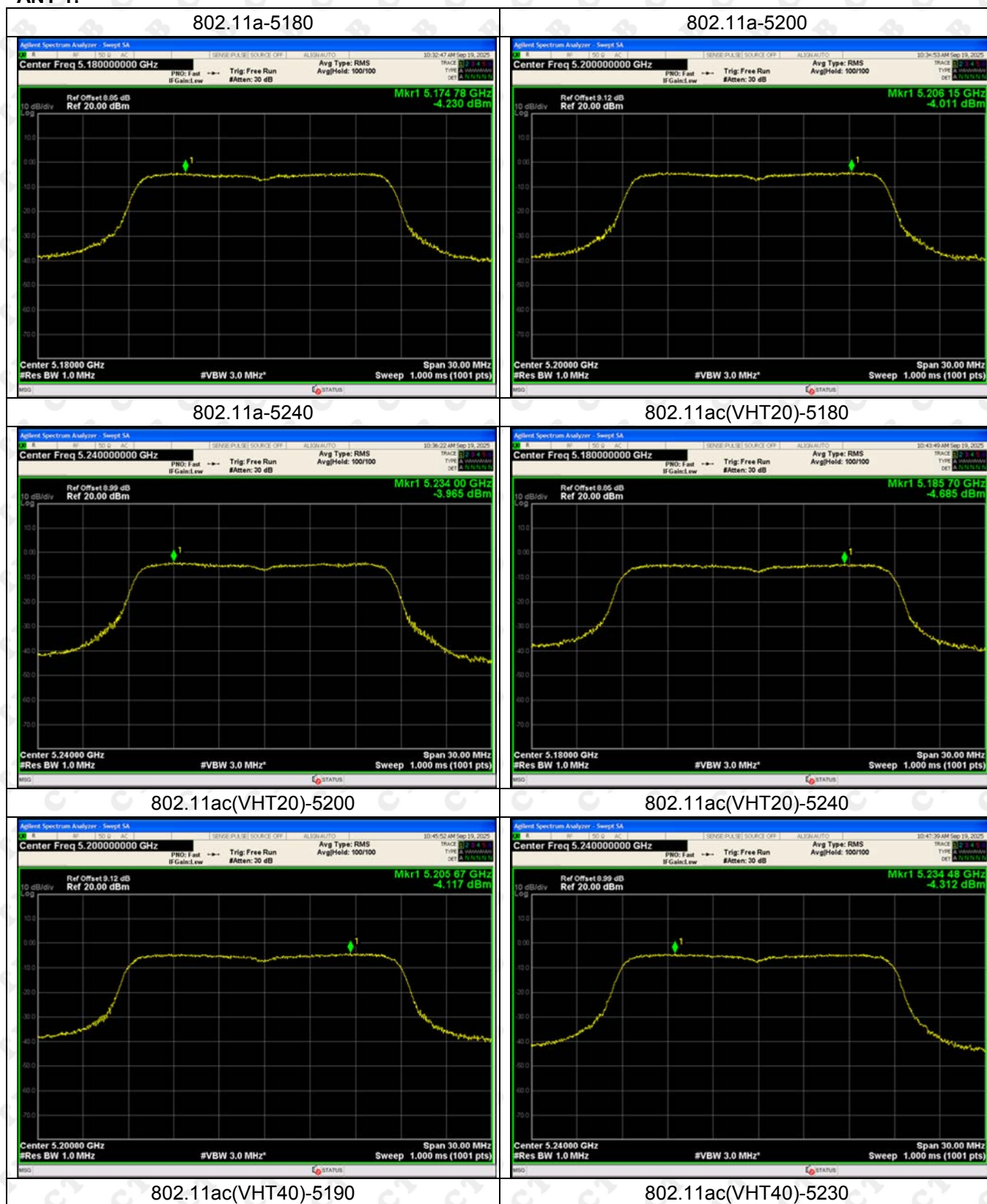
5150MHz ~5250MHz:

Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm/MHz)	Result
802.11a	5180	-4.23	-4.274	/	11	Pass
	5200	-4.011	-3.958	/	11	Pass
	5240	-3.965	-3.928	/	11	Pass
802.11ac(VHT20)	5180	-4.685	-4.65	-1.657	11	Pass
	5200	-4.117	-4.255	-1.175	11	Pass
	5240	-4.312	-4.29	-1.291	11	Pass
802.11ac(VHT40)	5190	-7.402	-7.203	-4.291	11	Pass
	5230	-6.909	-7.556	-4.210	11	Pass
802.11ac(VHT80)	5230	-8.757	-8.726	-5.731	11	Pass
802.11n(HT20)	5180	-4.522	-4.726	-1.613	11	Pass
	5200	-4.077	-4.152	-1.104	11	Pass
	5240	-4.021	-4.353	-1.174	11	Pass
802.11n(HT40)	5190	-7.505	-7.208	-4.344	11	Pass
	5230	-7.461	-7.354	-4.397	11	Pass
802.11ax(HE20)	5180	-4.591	-4.651	-1.611	11	Pass
	5200	-4.205	-4.202	-1.193	11	Pass
	5240	-4.372	-4.368	-1.360	11	Pass
802.11ax(HE40)	5190	-6.907	-7.127	-4.005	11	Pass
	5230	-7.325	-7.255	-4.280	11	Pass
802.11ax(HE80)	5210	-8.506	-8.448	-5.467	11	Pass

5725-5850MHz:

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	-5.85	-5.939	/	30	Pass
	5785	-5.724	-6.052	/	30	Pass
	5825	-5.288	-4.559	/	30	Pass
802.11ac(VHT20)	5745	-6.44	-6.888	-3.648	30	Pass
	5785	-5.794	-5.962	-2.867	30	Pass
	5825	-5.424	-5.991	-2.688	30	Pass
802.11ac(VHT40)	5755	-8.975	-8.148	-5.532	30	Pass
	5795	-8.915	-8.108	-5.482	30	Pass
802.11ac(VHT80)	5795	-11.287	-10.636	-7.939	30	Pass
802.11n(HT20)	5745	-6.916	-5.752	-3.285	30	Pass
	5785	-5.973	-4.821	-2.349	30	Pass
	5825	-5.403	-4.355	-1.837	30	Pass
802.11n(HT40)	5755	-8.921	-8.12	-5.492	30	Pass
	5795	-9.053	-8.095	-5.537	30	Pass
802.11ax(HE20)	5745	-6.455	-6.975	-3.697	30	Pass
	5785	-5.422	-6.171	-2.770	30	Pass
	5825	-5.142	-6.008	-2.543	30	Pass
802.11ax(HE40)	5755	-8.304	-7.792	-5.030	30	Pass
	5795	-8.588	-8.117	-5.336	30	Pass
802.11ax(HE80)	5775	-11.502	-10.642	-8.040	30	Pass

ANT 1:

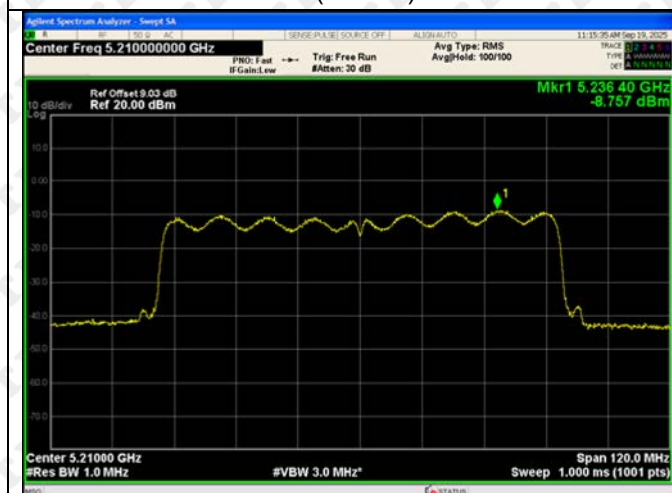




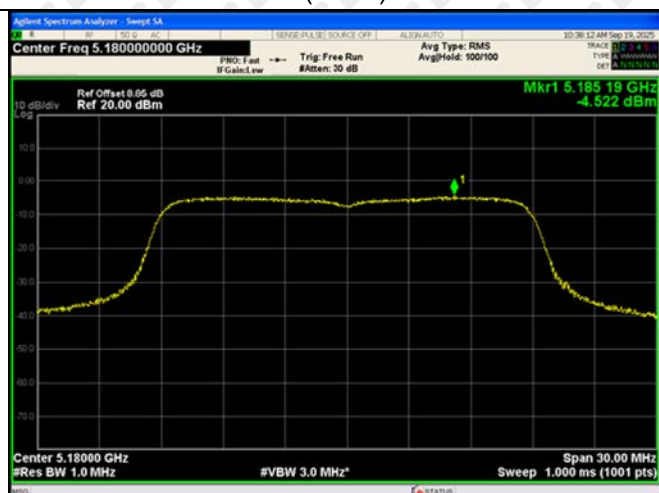
802.11ac(VHT80)-5210



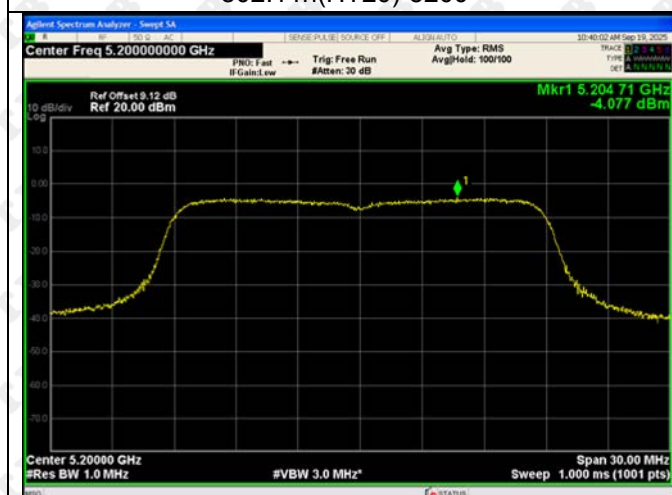
802.11n(HT20)-5180



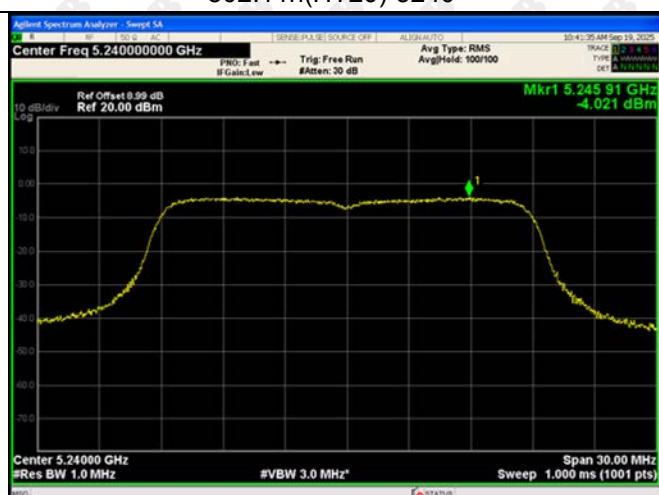
802.11n(HT20)-5200



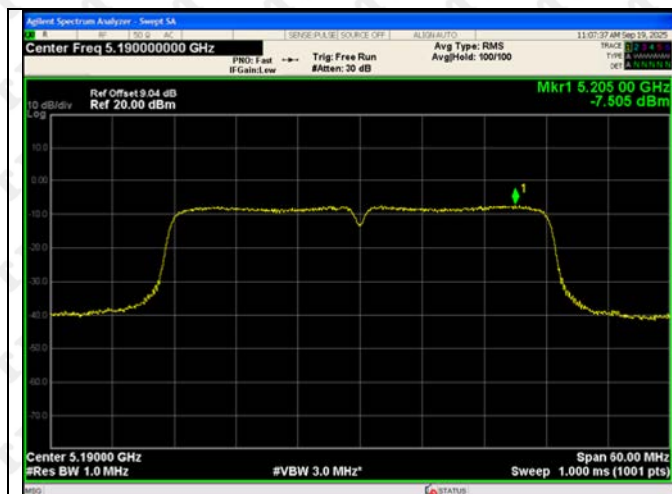
802.11n(HT20)-5240



802.11n(HT40)-5190



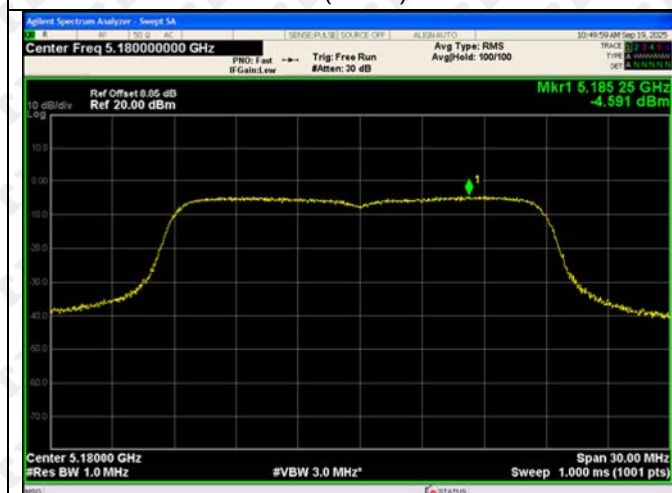
802.11n(HT40)-5230



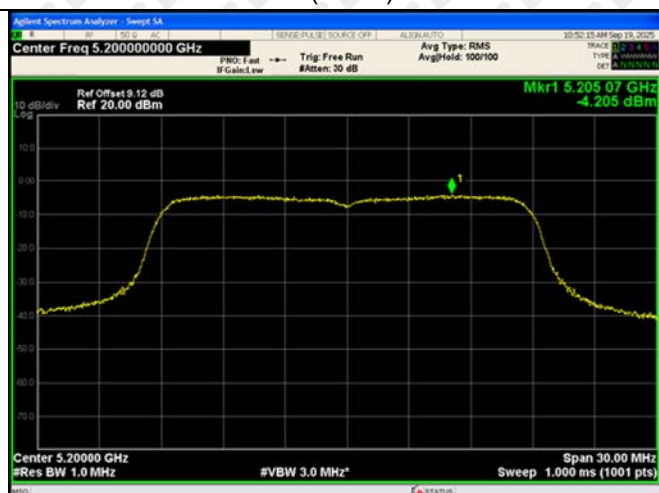
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802.11ax(HE20)-5200



802.11ax(HE20)-5240



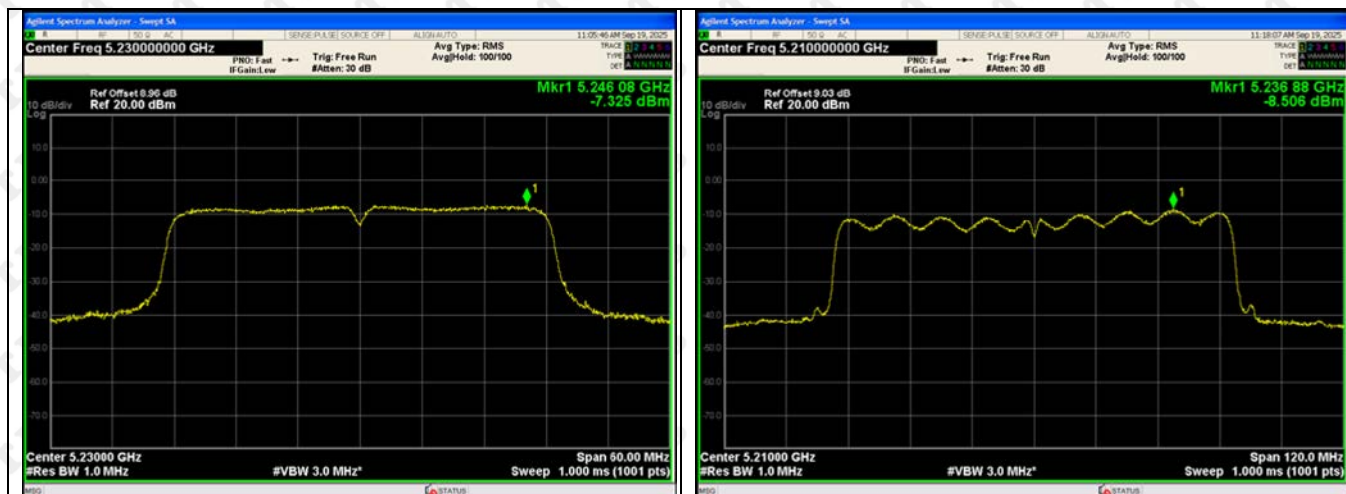
802.11ax(HE40)-5190



802.11ax(HE40)-5230

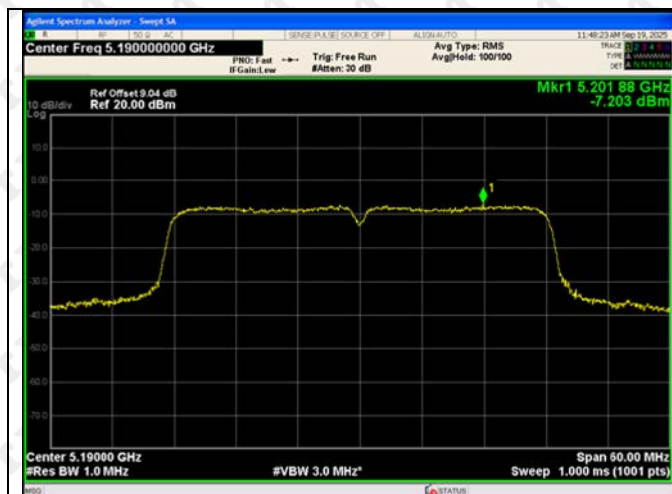


802.11ax(HE80)-5210



ANT 2:

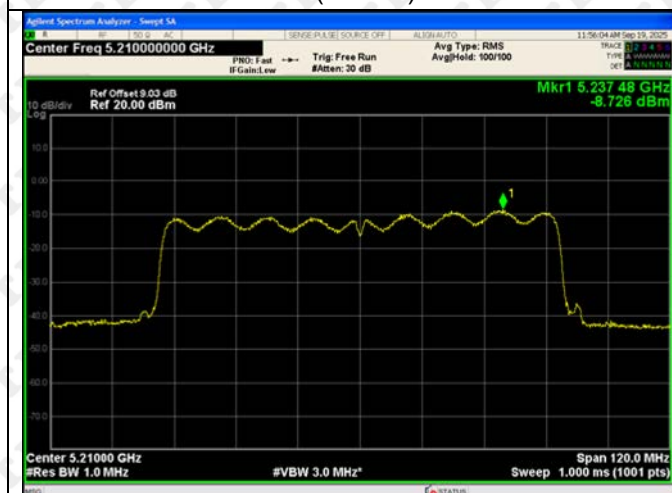




802.11ac(VHT80)-5210



802.11n(HT20)-5180



802.11n(HT20)-5200



802.11n(HT20)-5240



802.11n(HT40)-5190



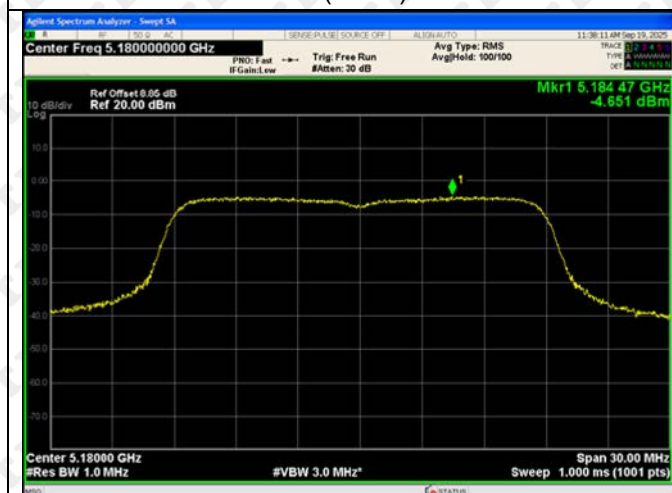
802.11n(HT40)-5230



802.11ax(HE20)-5180



802.11ax(HE20)-5200



802.11ax(HE20)-5240



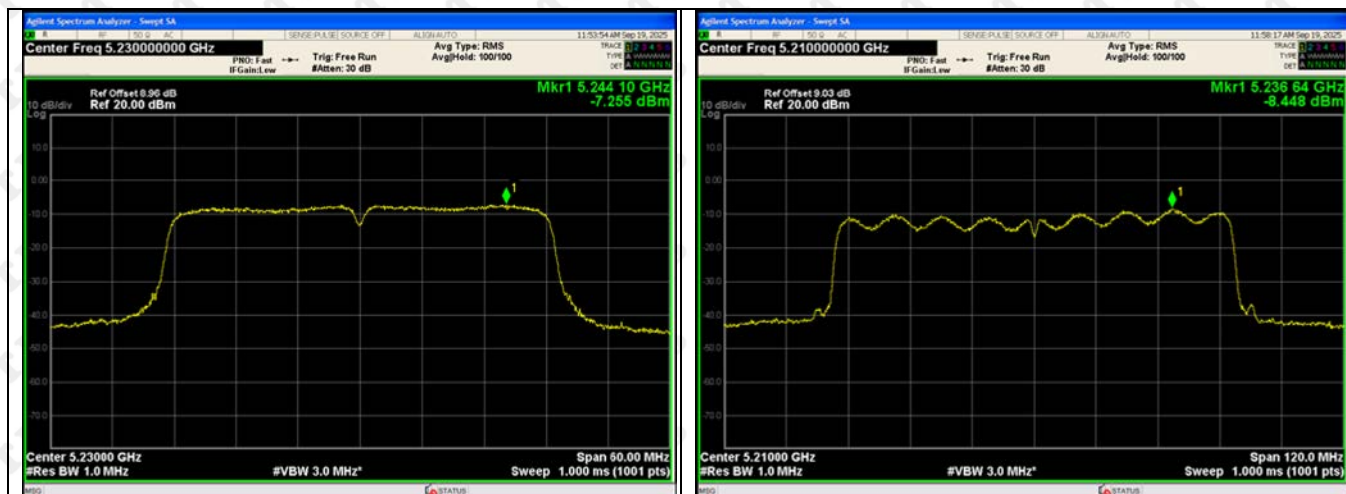
802.11ax(HE40)-5190



802.11ax(HE40)-5230

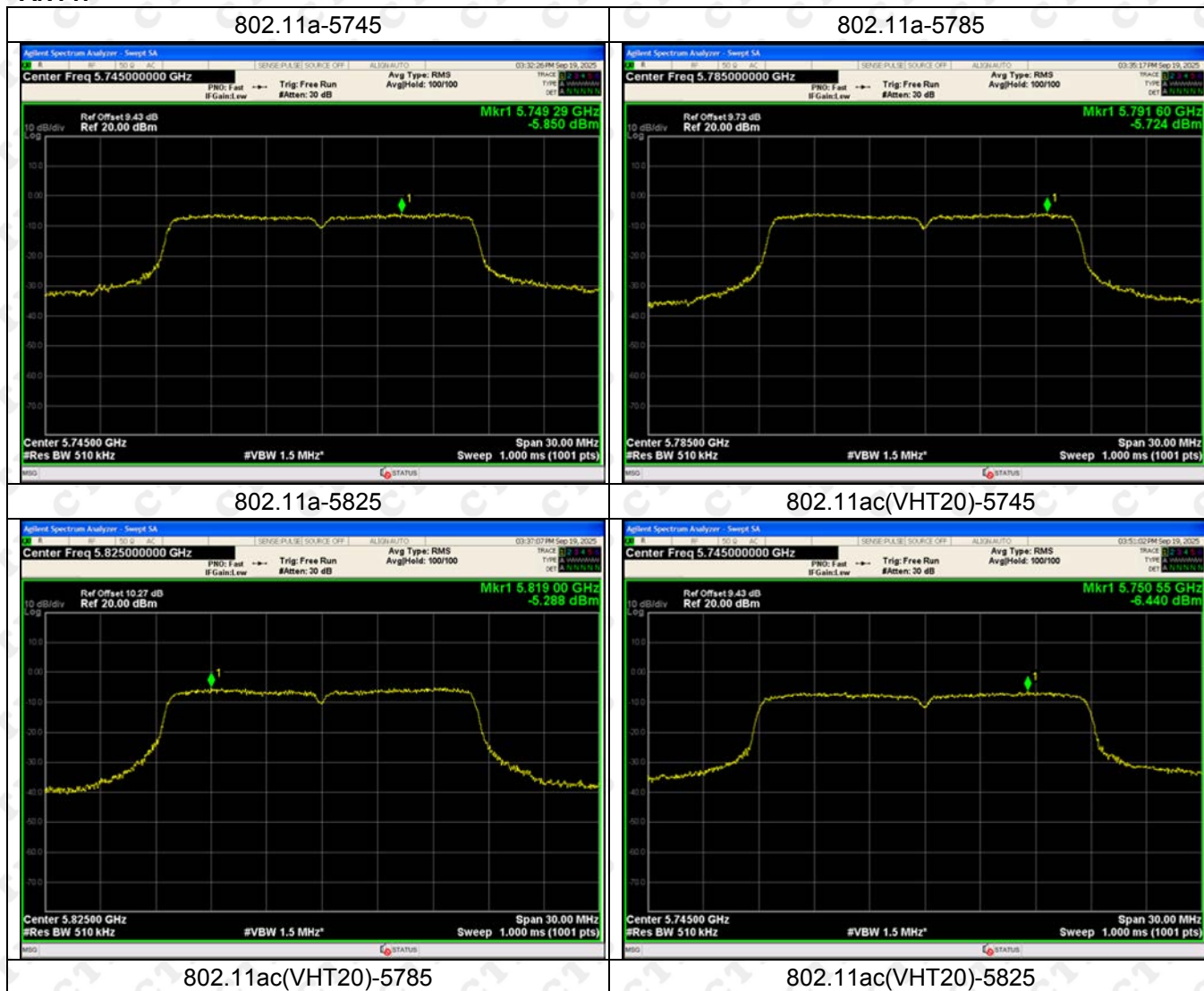


802.11ax(HE80)-5210



5725-5850MHz

ANT1:





802.11ac(VHT40)-5755



802.11ac(VHT40)-5795



802.11ac(VHT80)-5775



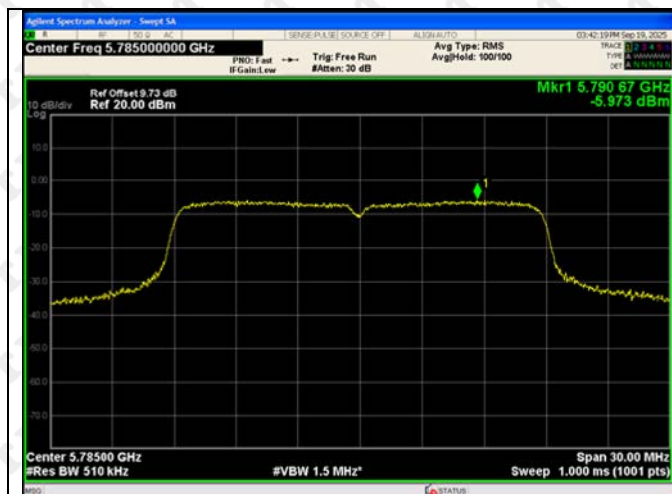
802.11n(HT20)-5745



802.11n(HT20)-5785



802.11n(HT20)-5825



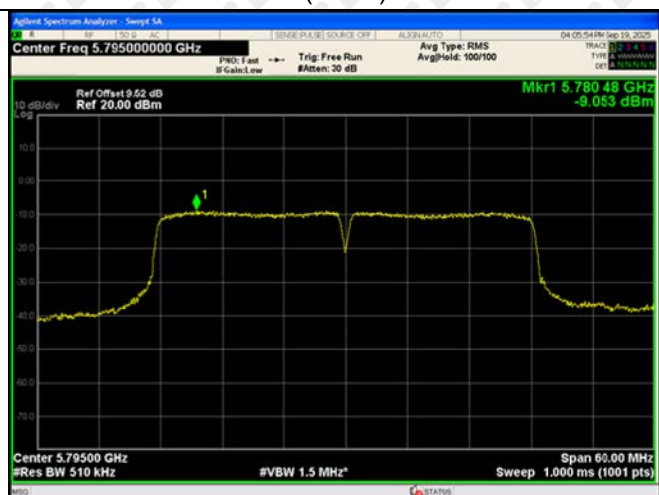
5802.11n(HT40)-5755



802.11n(HT40)-5795



802.11ax(HE20)-5745



802.11ax(HE20)-5785



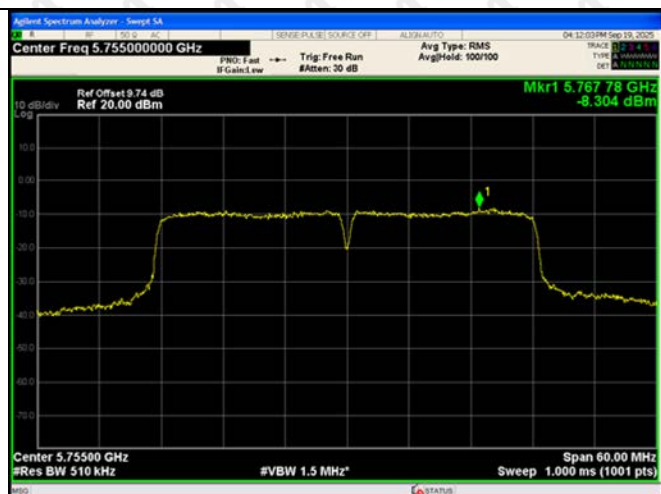
802.11ax(HE20)-5825



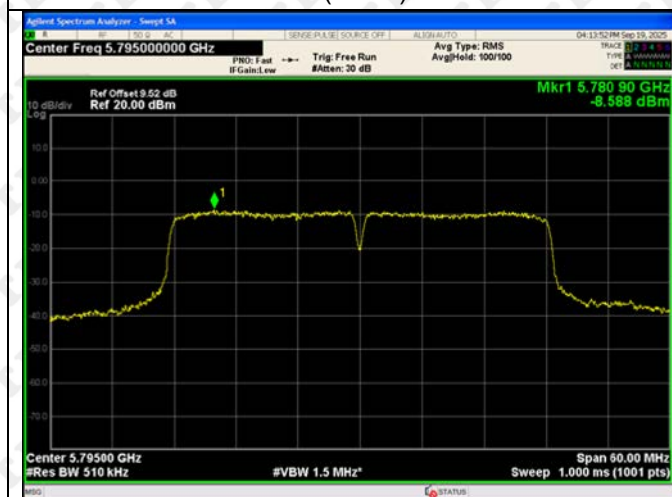
802.11ax(HE40)-5755



802.11ax(HE40)-5795



802.11ax(HE80)-5775



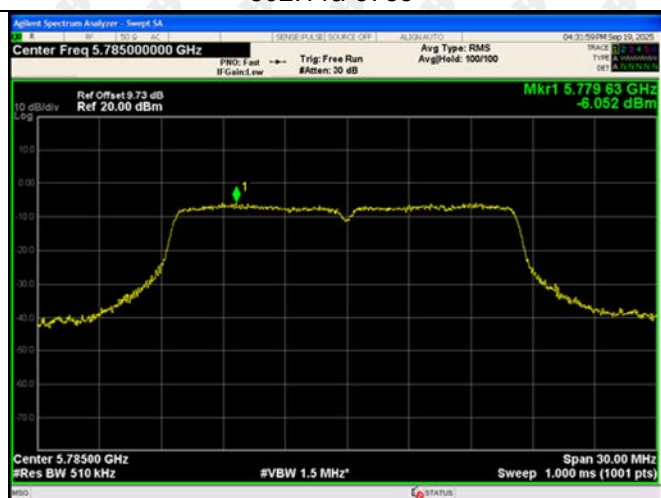
ANT2:

802.11a-5745

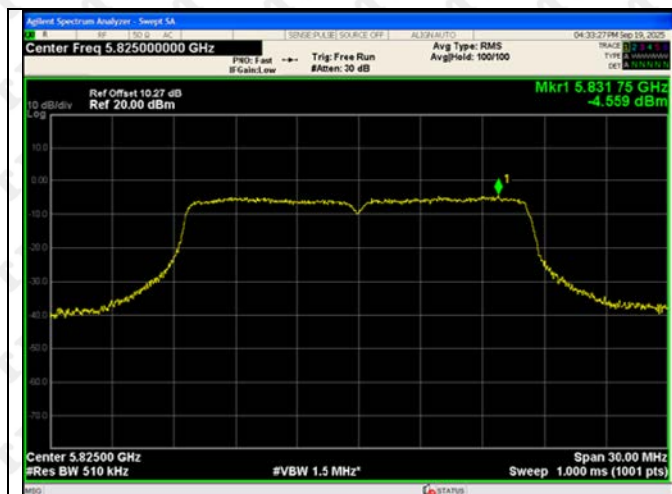


802.11a-5825

802.11a-5785



802.11ac(VHT20)-5745



802.11ac(VHT20)-5785



802.11ac(VHT20)-5825



802.11ac(VHT40)-5755



802.11ac(VHT40)-5795



802.11ac(VHT80)-5775



802.11n(HT20)-5745



802.11n(HT20)-5785



802.11n(HT20)-5825



5802.11n(HT40)-5755



802.11n(HT40)-5795



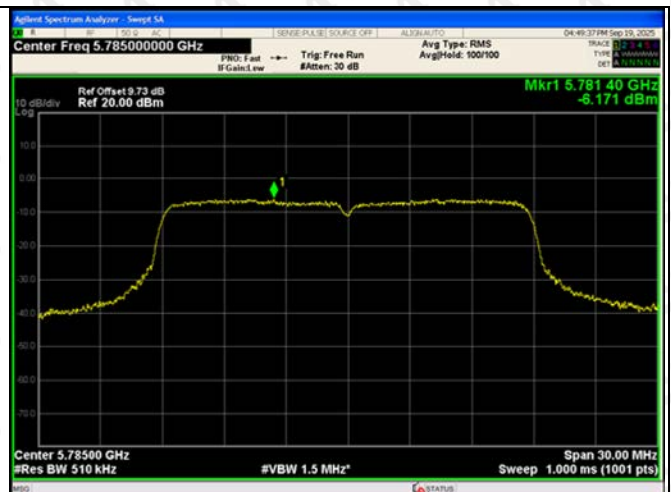
802.11ax(HE20)-5745



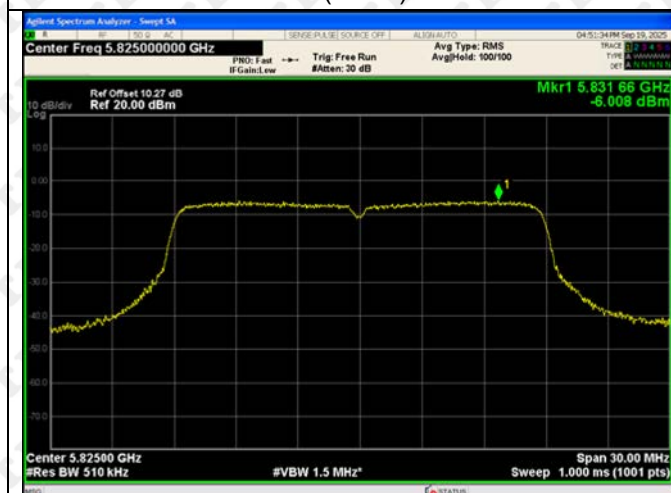
802.11ax(HE20)-5785



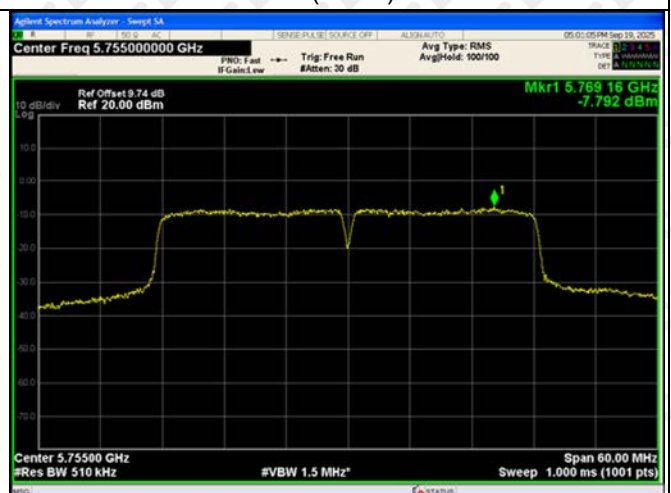
802.11ax(HE20)-5825



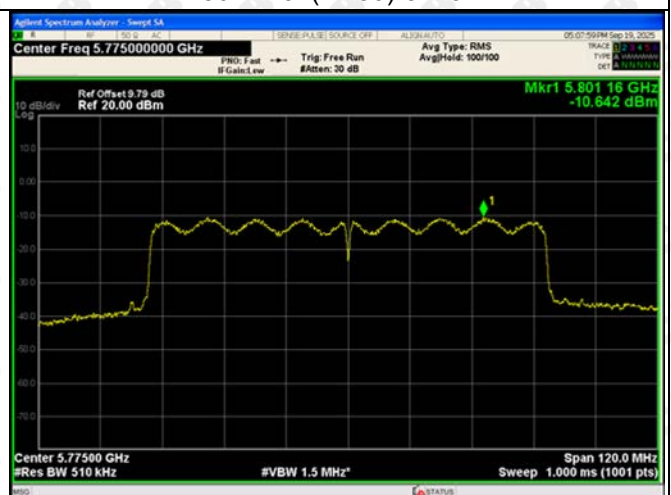
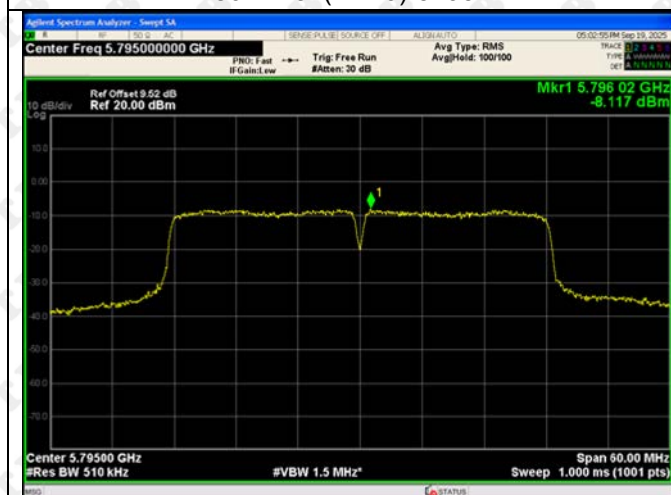
802.11ax(HE40)-5755



802.11ax(HE40)-5795

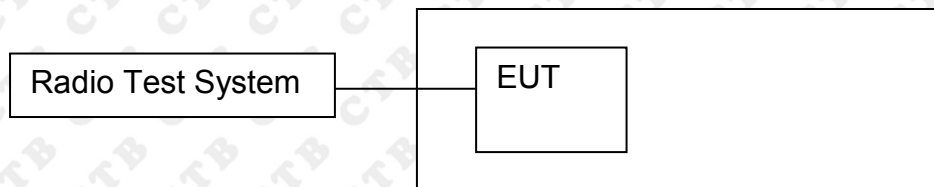


802.11ax(HE80)-5775



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)	120	5180.0134	5180	0.0134	2.5903
		V max (V)	132	5180.0087	5180	0.0087	1.6735
		V min (V)	108	5180.0201	5180	0.0201	3.8813
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5180.0067	5180	0.0067	1.2918
		T (°C)	10	5180.0398	5180	0.0398	7.6825
		T (°C)	20	5180.0518	5180	0.0518	9.9912
		T (°C)	30	5180.0471	5180	0.0471	9.0925
		T (°C)	40	5180.0140	5180	0.0140	2.7003
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)	120	5200.0254	5200	0.0254	4.8883
		V max (V)	132	5200.0243	5200	0.0243	4.6815
		V min (V)	108	5200.0276	5200	0.0276	5.3132
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5200.0190	5200	0.0190	3.6446
		T (°C)	10	5200.0140	5200	0.0140	2.6978
		T (°C)	20	5200.0319	5200	0.0319	6.1425
		T (°C)	30	5200.0249	5200	0.0249	4.7876
		T (°C)	40	5200.0042	5200	0.0042	0.8011
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)	120	5240.0338	5240	0.0338	6.4587
		V max (V)	132	5240.0414	5240	0.0414	7.8946
		V min (V)	108	5240.0382	5240	0.0382	7.2821
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5240.0328	5240	0.0328	6.2616
		T (°C)	10	5240.0256	5240	0.0256	4.8816
		T (°C)	20	5240.0068	5240	0.0068	1.3057
		T (°C)	30	5240.0335	5240	0.0335	6.3916
		T (°C)	40	5240.0525	5240	0.0525	10.0099
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)	120	5745.0167	5745	0.0167	2.9135
		V max (V)	132	5745.0074	5745	0.0074	1.2946
		V min (V)	108	5745.0167	5745	0.0167	2.9135
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5745.0108	5745	0.0108	1.8880
		T (°C)	10	5745.0325	5745	0.0325	5.6577
		T (°C)	20	5745.0889	5745	0.0889	15.4786
		T (°C)	30	5745.0190	5745	0.0190	3.3138
		T (°C)	40	5745.0001	5745	0.0001	0.0098
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)	120	5785.0223	5785	0.0223	3.8618
		V max (V)	132	5785.0497	5785	0.0497	8.5935
		V min (V)	108	5785.0176	5785	0.0176	3.0477
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5785.0048	5785	0.0048	0.8274
		T (°C)	10	5785.0935	5785	0.0935	16.1541
		T (°C)	20	5785.0167	5785	0.0167	2.8926
		T (°C)	30	5785.0550	5785	0.0550	9.5058
		T (°C)	40	5785.0795	5785	0.0795	13.7493
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)	120	5825.0338	5825	0.0338	5.8083
		V max (V)	132	5825.0700	5825	0.0700	12.0256
		V min (V)	108	5825.0602	5825	0.0602	10.3335
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5825.0871	5825	0.0871	14.9473
		T (°C)	10	5825.0376	5825	0.0376	6.4478
		T (°C)	20	5825.0370	5825	0.0370	6.3581
		T (°C)	30	5825.0127	5825	0.0127	2.1843
		T (°C)	40	5825.0450	5825	0.0450	7.7305
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)	120	5180.0709	5180	0.0709	13.6832
		V max (V)	132	5180.0893	5180	0.0893	17.2300
		V min (V)	108	5180.0038	5180	0.0038	0.7263
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5180.0685	5180	0.0685	13.2249
		T (°C)	10	5180.0607	5180	0.0607	11.7271
		T (°C)	20	5180.0119	5180	0.0119	2.2899
		T (°C)	30	5180.0467	5180	0.0467	9.0134
		T (°C)	40	5180.0175	5180	0.0175	3.3785
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)	120	5200.0311	5200	0.0311	5.9894
		V max (V)	132	5200.0637	5200	0.0637	12.2493
		V min (V)	108	5200.0610	5200	0.0610	11.7287
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5200.0669	5200	0.0669	12.8620
		T (°C)	10	5200.0887	5200	0.0887	17.0501
		T (°C)	20	5200.0446	5200	0.0446	8.5840
		T (°C)	30	5200.0243	5200	0.0243	4.6728
		T (°C)	40	5200.0583	5200	0.0583	11.2184
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)	120	5240.0805	5240	0.0805	15.3548
		V max (V)	132	5240.0813	5240	0.0813	15.5107
		V min (V)	108	5240.0706	5240	0.0706	13.4763
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5240.0501	5240	0.0501	9.5600
		T (°C)	10	5240.0008	5240	0.0008	0.1513
		T (°C)	20	5240.0102	5240	0.0102	1.9456
		T (°C)	30	5240.0818	5240	0.0818	15.6149
		T (°C)	40	5240.0067	5240	0.0067	1.2875
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)	120	5745.0797	5745	0.0797	13.8663
		V max (V)	132	5745.0820	5745	0.0820	14.2799
		V min (V)	108	5745.0880	5745	0.0880	15.3217
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5745.0278	5745	0.0278	4.8341
		T (°C)	10	5745.0145	5745	0.0145	2.5302
		T (°C)	20	5745.0650	5745	0.0650	11.3072
		T (°C)	30	5745.0678	5745	0.0678	11.8017
		T (°C)	40	5745.0000	5745	0.0000	0.0056
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)	120	5785.0932	5785	0.0932	16.1031
		V max (V)	132	5785.0680	5785	0.0680	11.7490
		V min (V)	108	5785.0115	5785	0.0115	1.9932
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5785.0115	5785	0.0115	1.9912
		T (°C)	10	5785.0594	5785	0.0594	10.2611
		T (°C)	20	5785.0801	5785	0.0801	13.8548
		T (°C)	30	5785.0343	5785	0.0343	5.9361
		T (°C)	40	5785.0407	5785	0.0407	7.0346
		T (°C)	50	5785.0763	5785	0.0763	13.1915
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)	120	5825.0581	5825	0.0581	9.9767
		V max (V)	132	5825.0246	5825	0.0246	4.2177
		V min (V)	108	5825.0302	5825	0.0302	5.1767
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	0	5825.0856	5825	0.0856	14.6930
		T (°C)	10	5825.0659	5825	0.0659	11.3078
		T (°C)	20	5825.0704	5825	0.0704	12.0919
		T (°C)	30	5825.0817	5825	0.0817	14.0266
		T (°C)	40	5825.0579	5825	0.0579	9.9320
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: 3.31dBi, Ant2: 3.31dBi, WiFi (5.8G): Ant1: 3.99dBi, Ant2: 3.99dBi.

15. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G



Conducted Emission



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