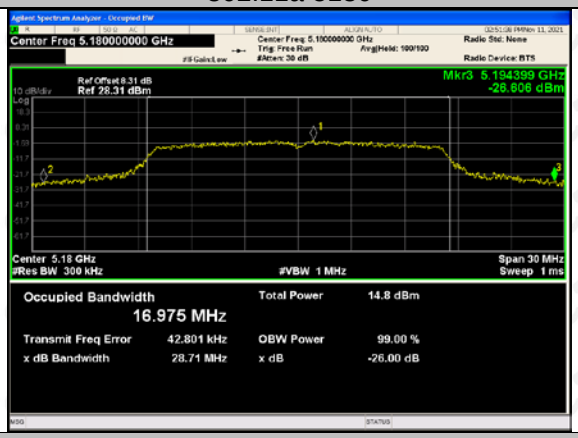
Test mode ANT 2	Test Channel (MHz)	26dB Bandwidth (MHz)	Limit (MHz)
802.11a	5180	25.188	≥0.5
	5200	21.515	≥0.5
	5240	25.138	≥0.5
802.11a20	5180	26.53	≥0.5
	5200	24.787	≥0.5
	5240	24.325	≥0.5
802.11a40	5190	58.151	≥0.5
	5230	53.63	≥0.5
802.11a80	5210	83.130	≥0.5
802.11n(HT20)	5180	26.063	≥0.5
	5200	24.608	≥0.5
	5240	24.649	≥0.5
802.11n(HT40)	5190	52.084	≥0.5
	5230	50.746	≥0.5

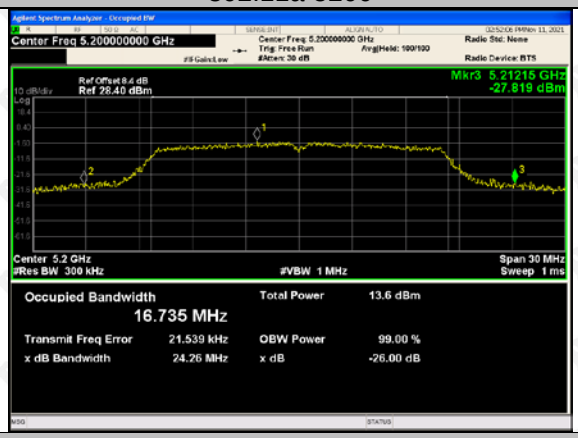
Test mode ANT 2	Test Channel (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
802.11a	5745	15.051	≥0.5
	5785	14.417	≥0.5
	5825	15.3	≥0.5
802.11a20	5745	15.143	≥0.5
	5785	12.562	≥0.5
	5825	15.072	≥0.5
802.11a40	5755	33.87	≥0.5
	5795	32.585	≥0.5
802.11a80	5775	75.822	≥0.5
802.11n(HT20)	5745	11.641	≥0.5
	5785	15.114	≥0.5
	5825	15.051	≥0.5
802.11n(HT40)	5755	33.833	≥0.5
	5795	32.629	≥0.5

Test Graph ANT 1

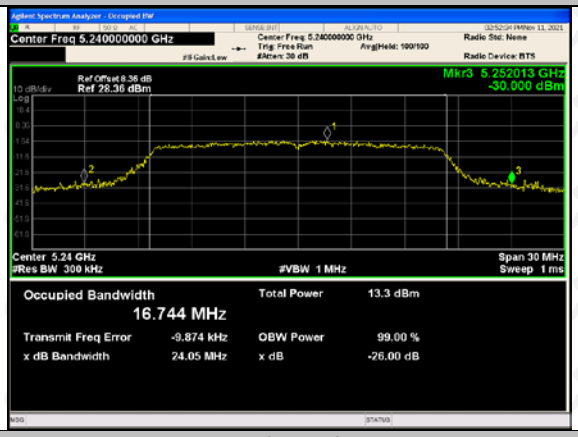
802.11a-5180



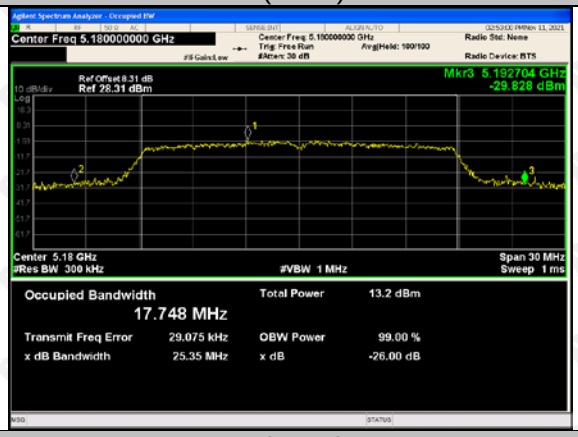
802.11a-5200



802.11a-5240



802.11n(HT20)-5180



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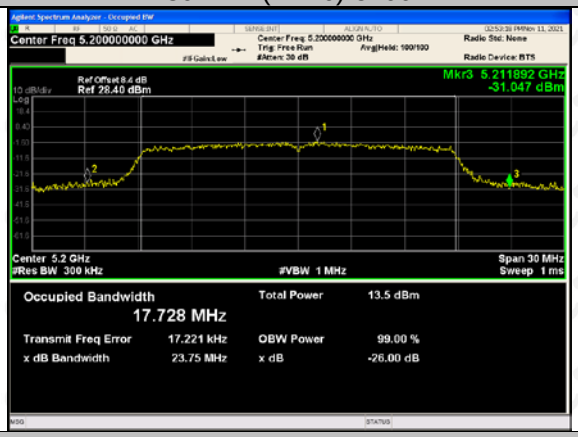
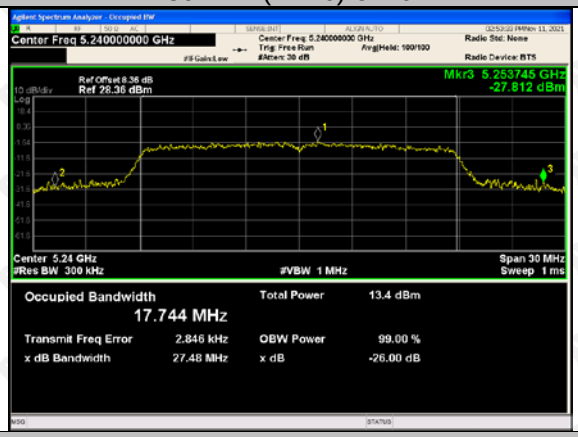
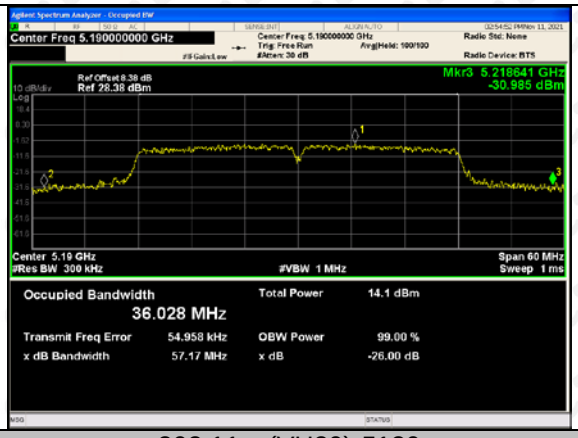


802.11n(HT20)-5240

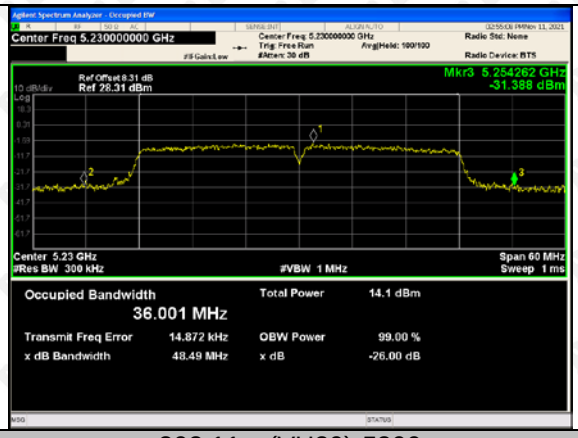


802.11n(HT40)-5190

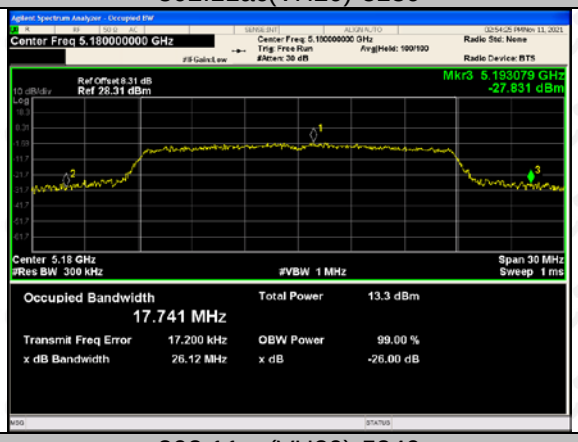
802.11n(HT40)-5230



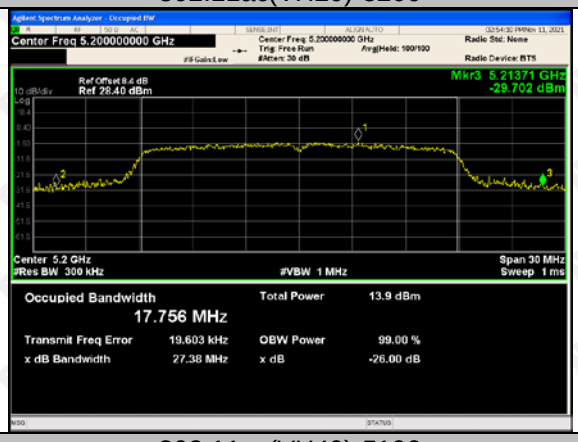
802.11ac(VH20)-5180



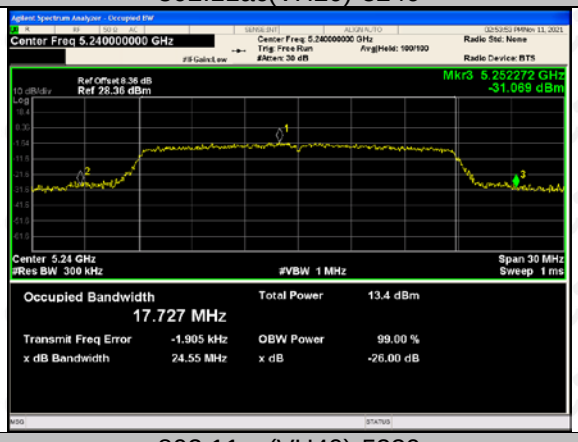
802.11ac(VH20)-5200



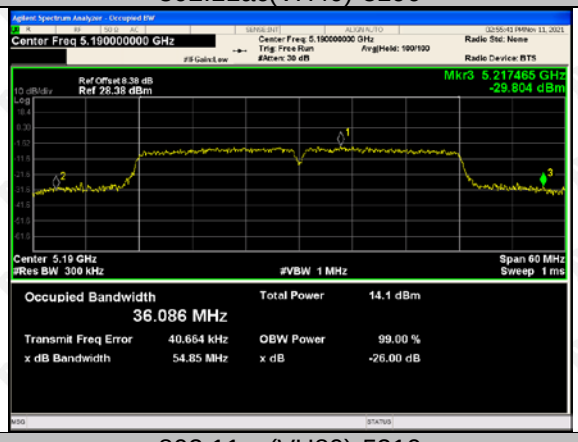
802.11ac(VH20)-5240



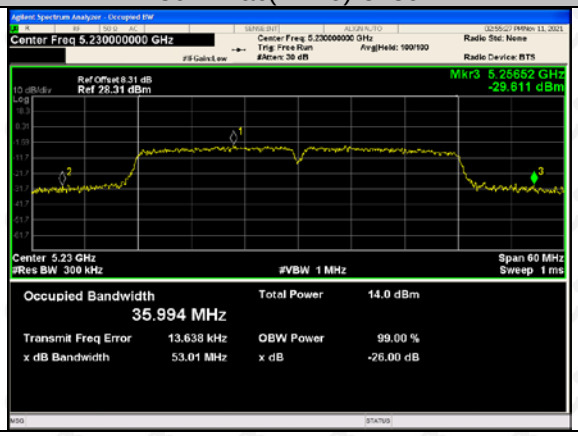
802.11ac(VH40)-5190

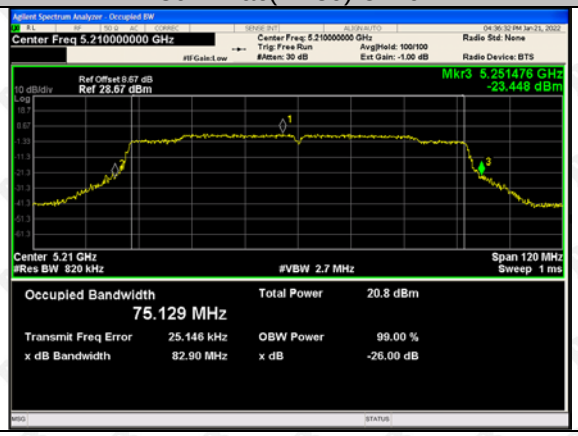


802.11ac(VH40)-5230

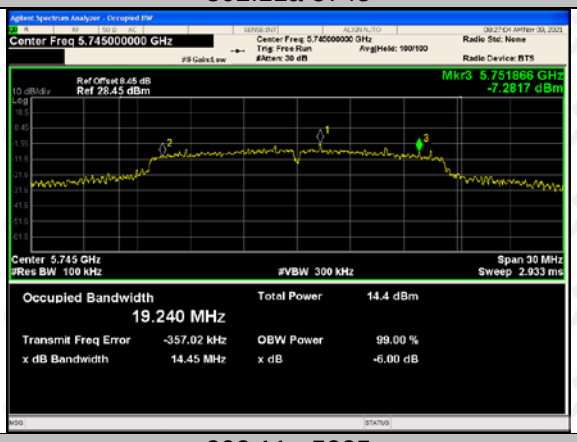
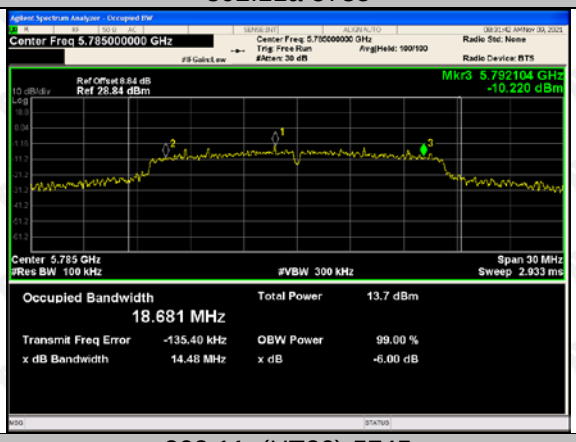
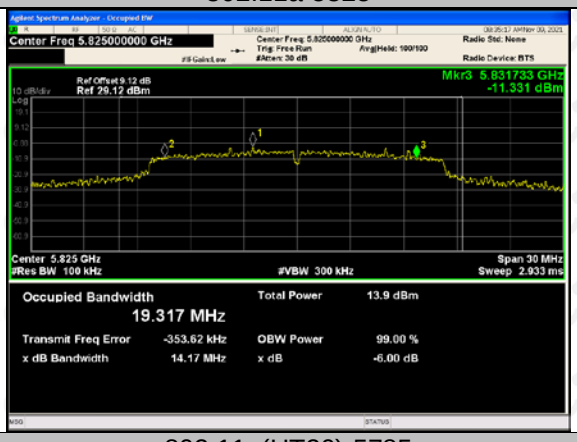
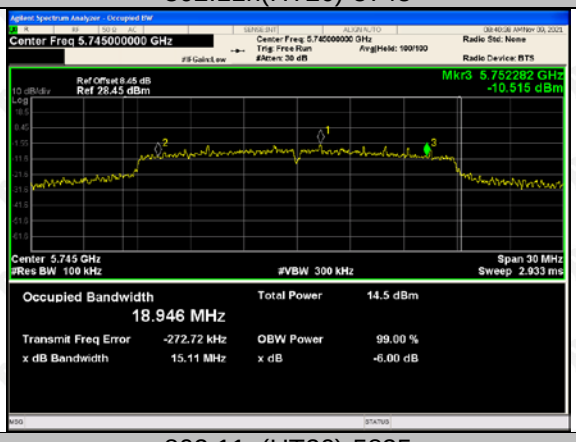
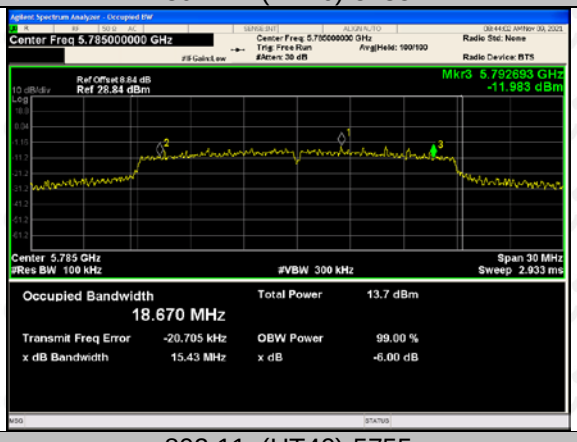
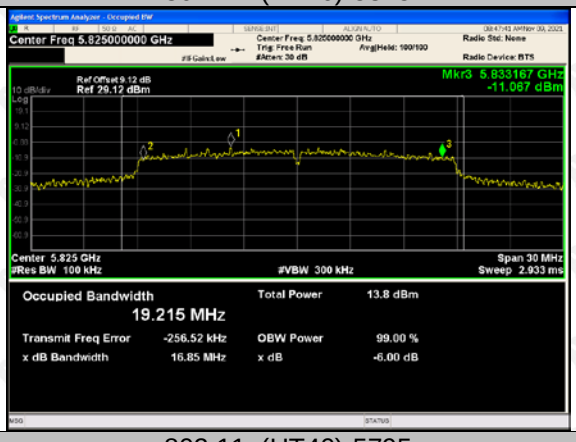


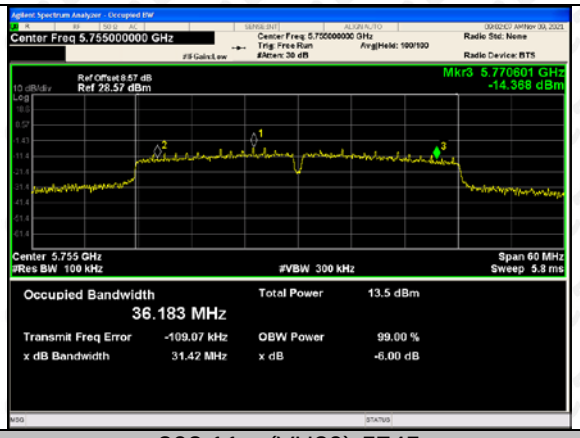
802.11ac(VH80)-5210



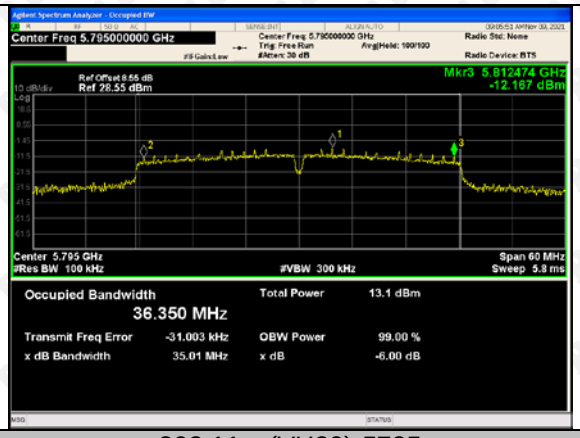


5725-5850MHz

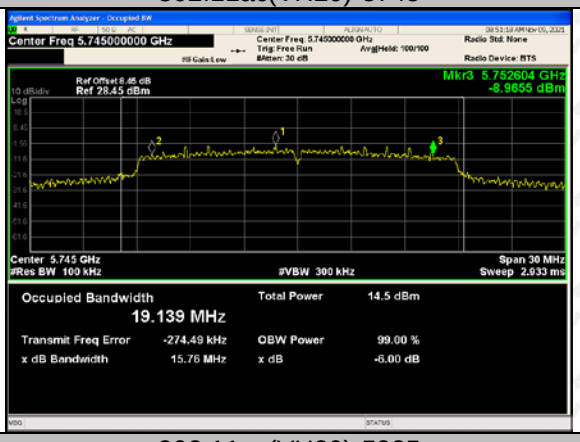
802.11a-5745	802.11a-5785
	
802.11a-5825	802.11n(HT20)-5745
	
802.11n(HT20)-5785	802.11n(HT20)-5825
	
802.11n(HT40)-5755	802.11n(HT40)-5795



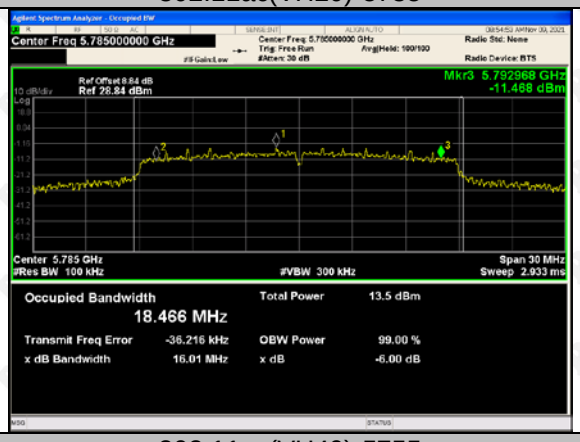
802.11ac(VH20)-5745



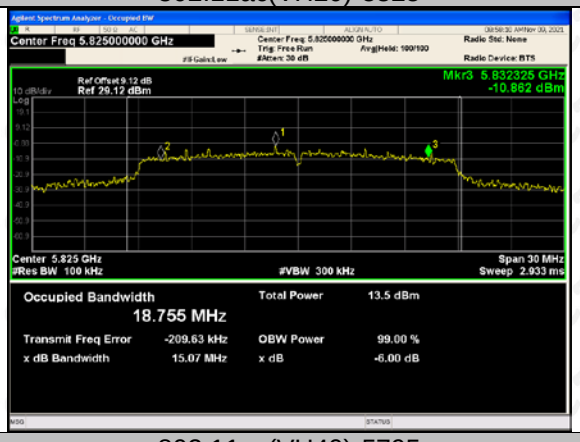
802.11ac(VH20)-5785



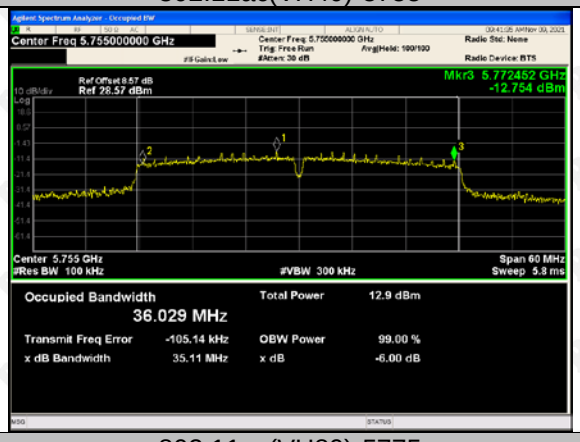
802.11ac(VH20)-5825



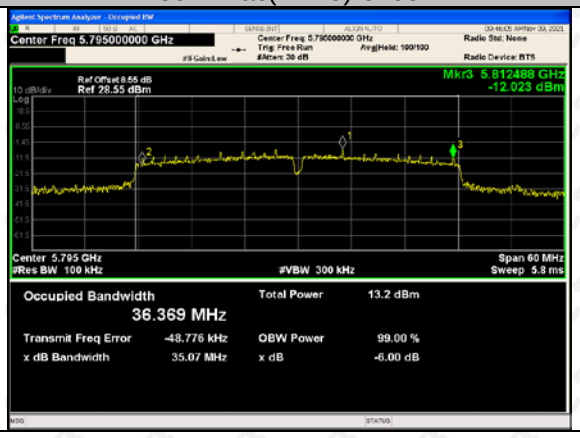
802.11ac(VH40)-5755

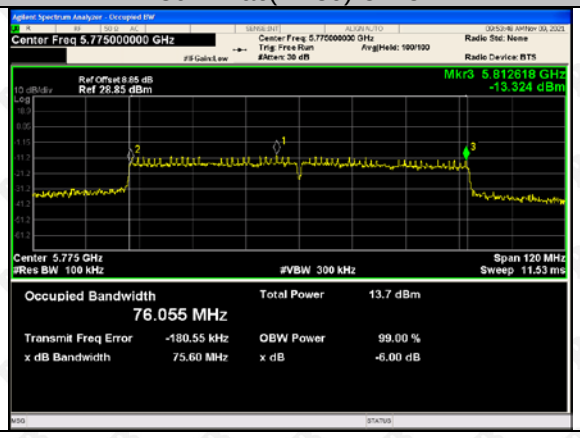


802.11ac(VH40)-5795



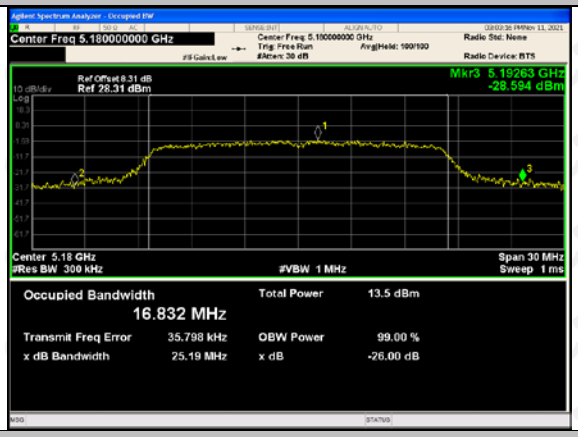
802.11ac(VH80)-5775



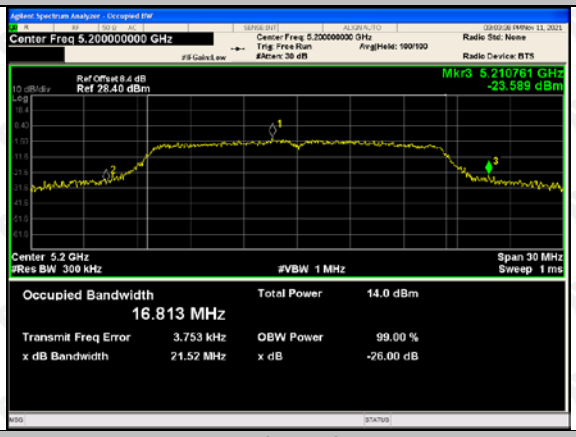


ANT 2

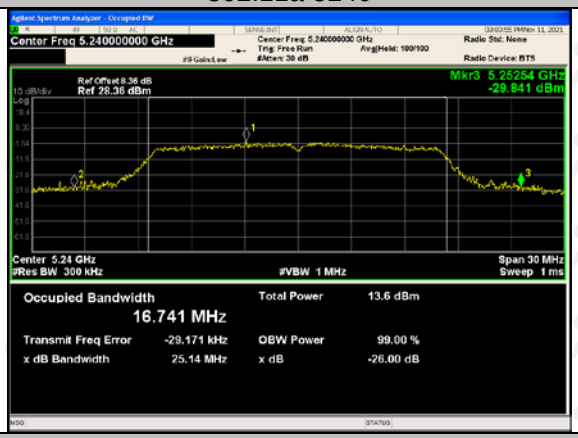
802.11a-5180



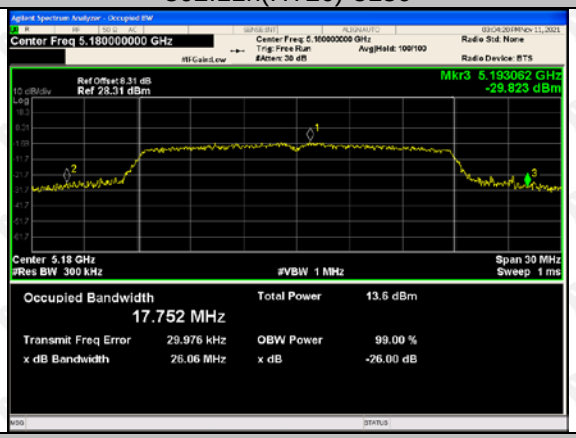
802.11a-5200



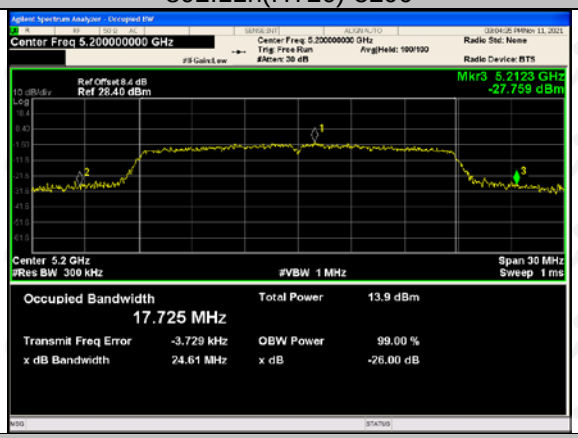
802.11a-5240



802.11n(HT20)-5180



802.11n(HT20)-5200



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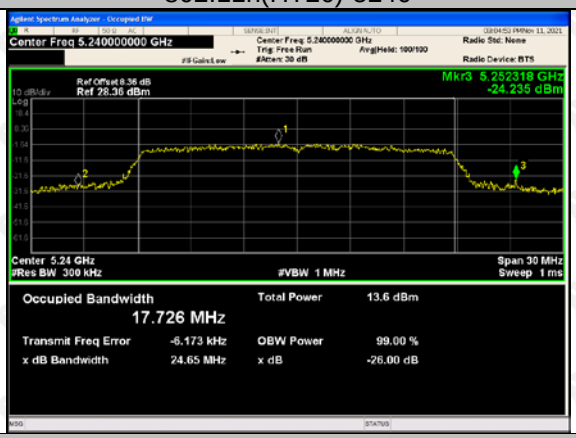
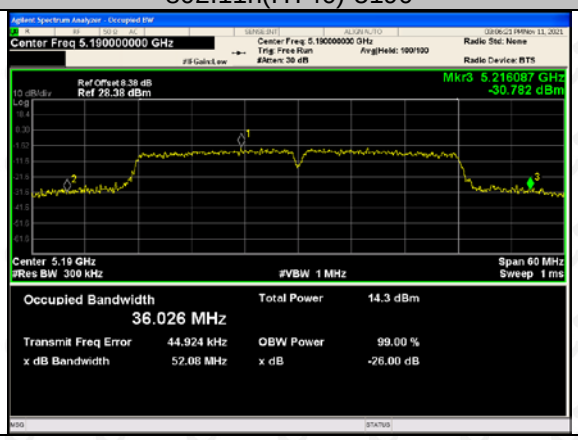
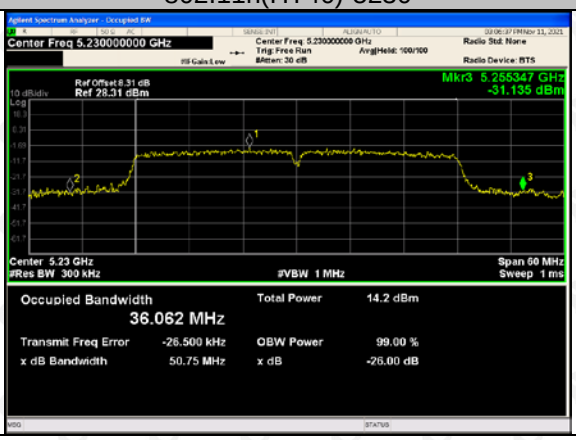


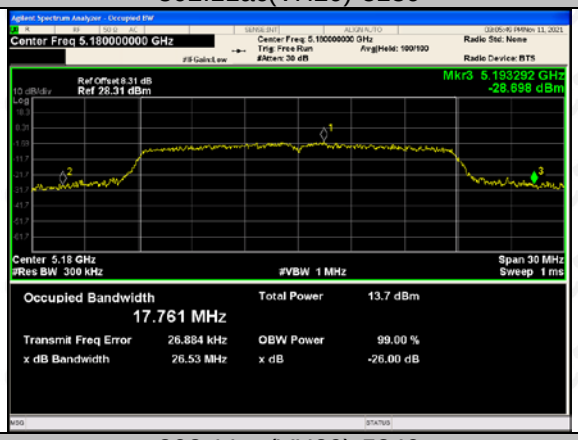
802.11n(HT40)-5190



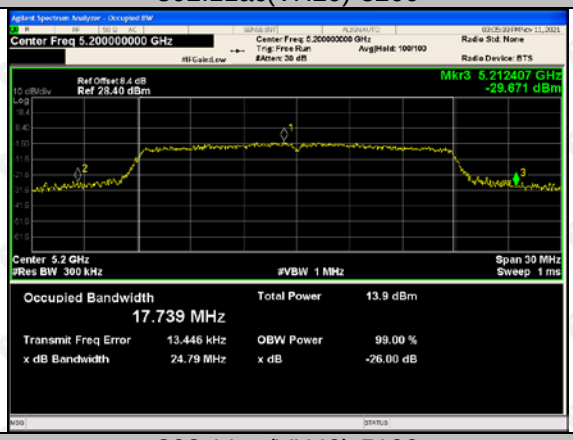
802.11n(HT40)-5230



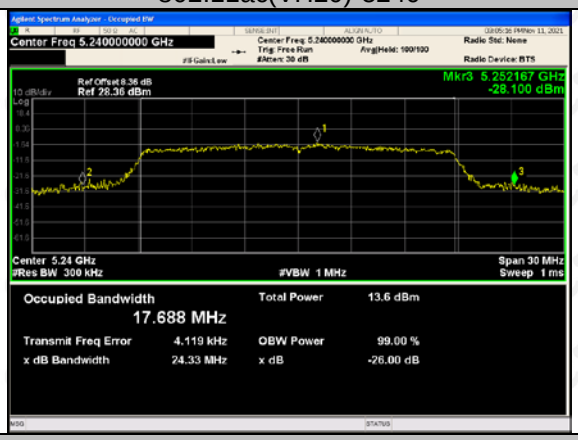
802.11ac(VH20)-5180



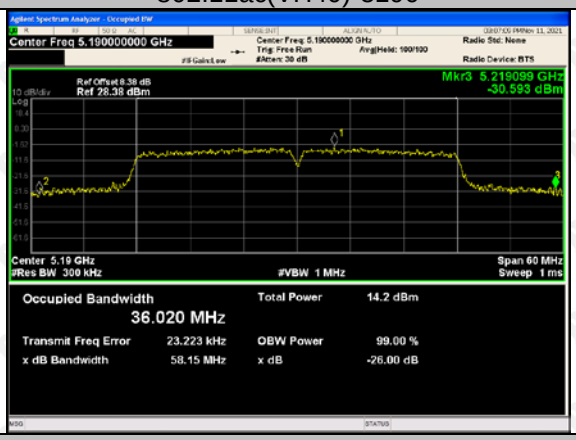
802.11ac(VH20)-5200



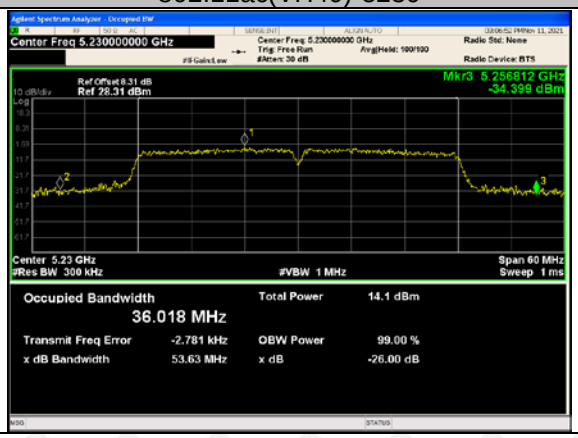
802.11ac(VH20)-5240



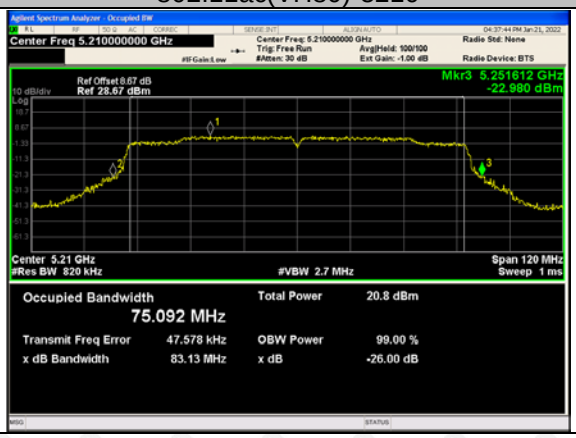
802.11ac(VH40)-5190



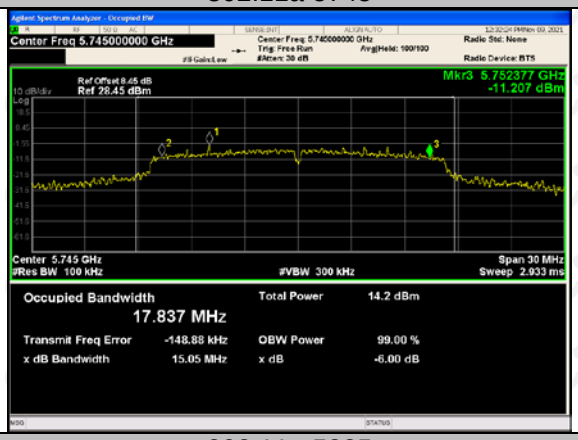
802.11ac(VH40)-5230



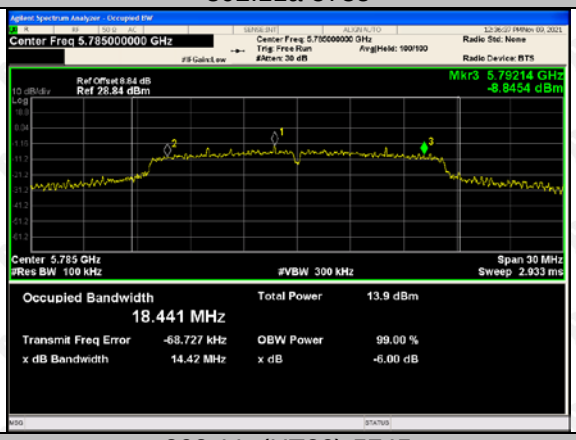
802.11ac(VH80)-5210



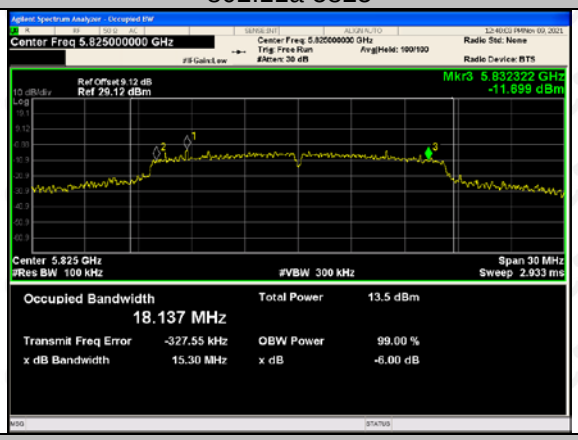
802.11a-5745



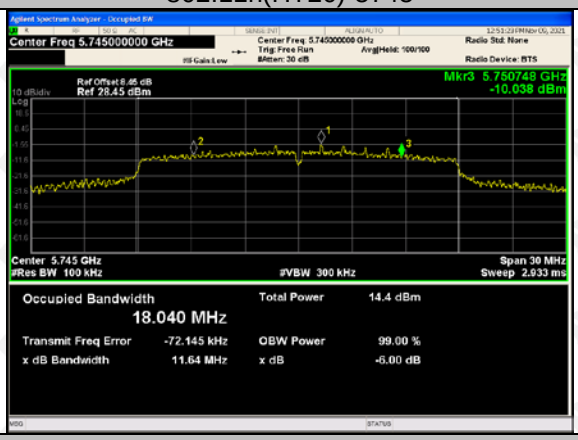
802.11a-5785



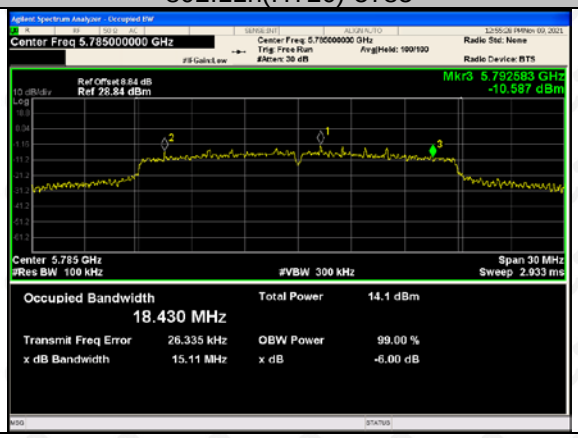
802.11a-5825



802.11n(HT20)-5745



802.11n(HT20)-5785



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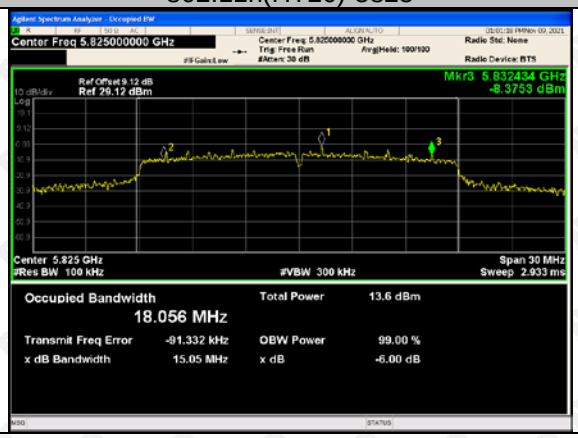
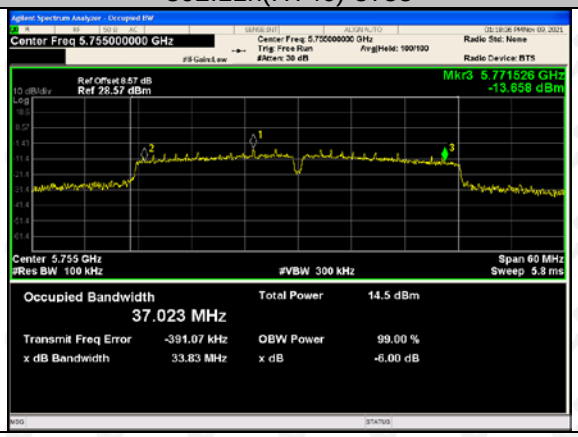
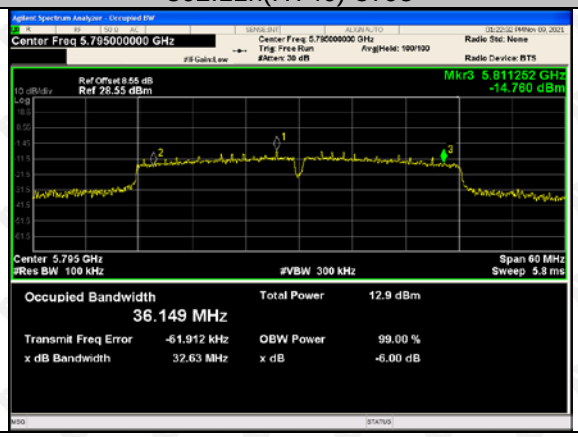


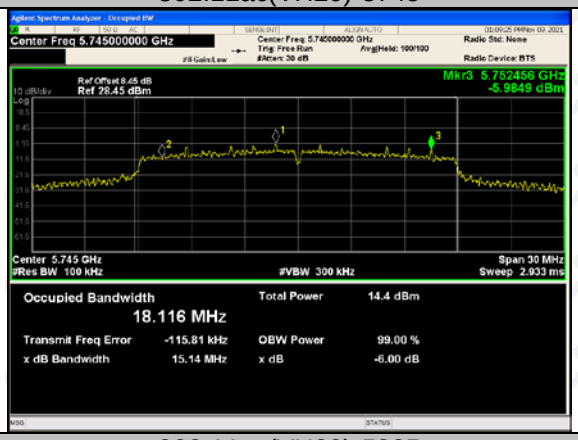
802.11n(HT40)-5755



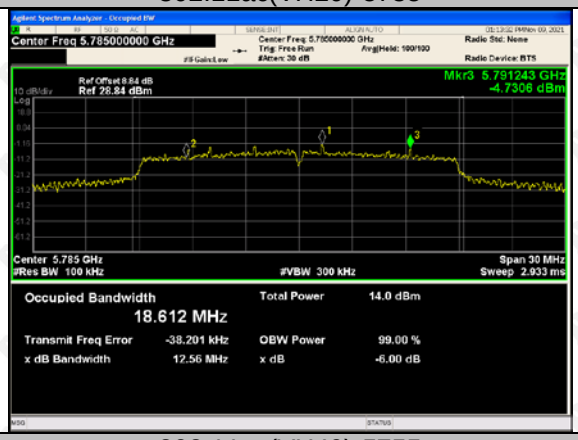
802.11n(HT40)-5795



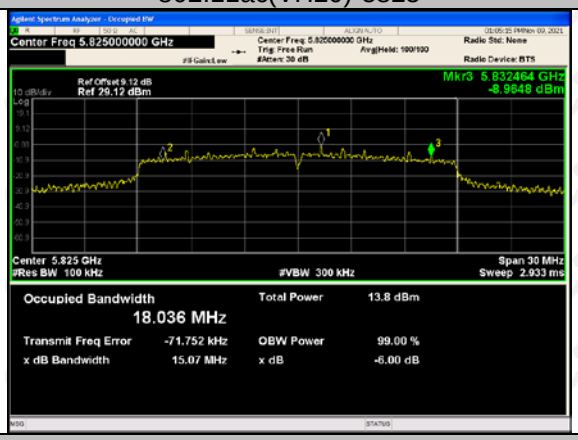
802.11ac(VH20)-5745



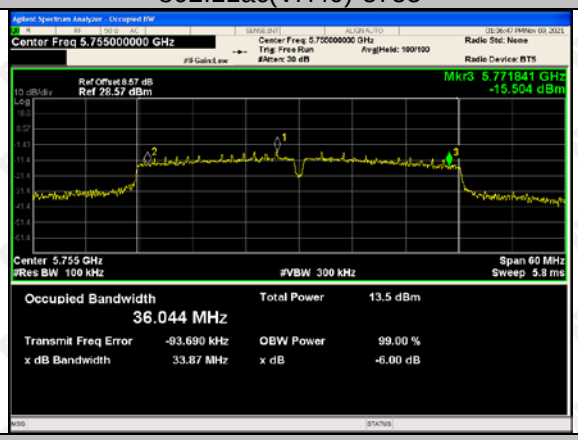
802.11ac(VH20)-5785



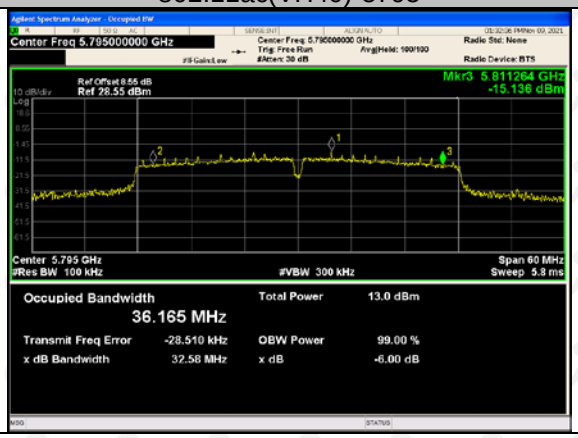
802.11ac(VH20)-5825



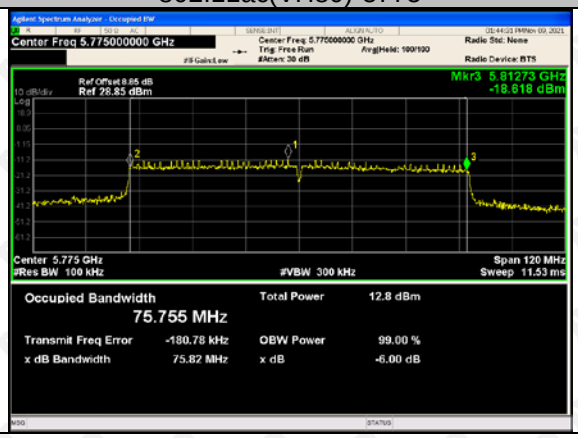
802.11ac(VH40)-5755



802.11ac(VH40)-5795

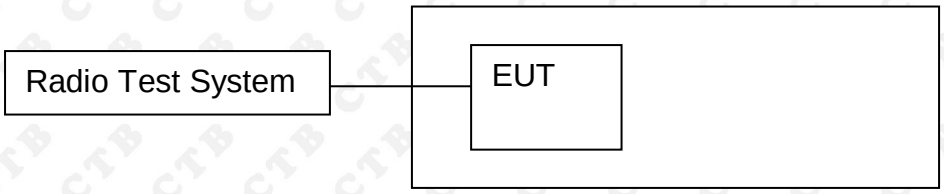


802.11ac(VH80)-5775



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.l.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.

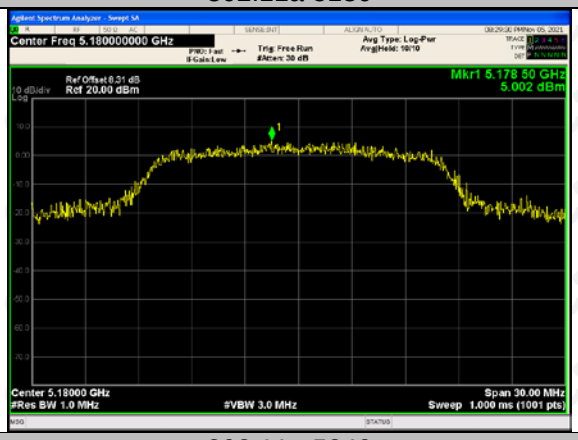
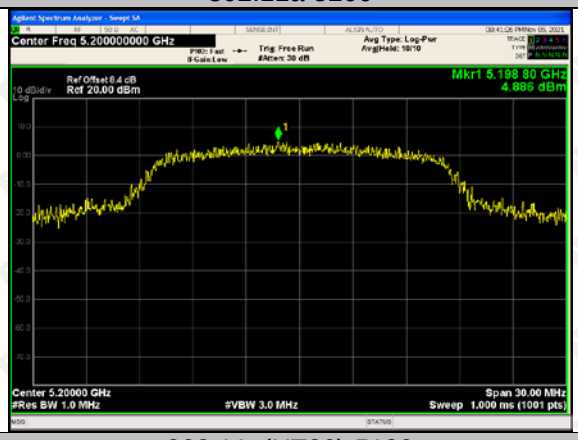
11.4 Test Result

ANT 1+2

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	5.002	4.966	7.994	11	Pass
	5200	4.886	4.577	7.745	11	Pass
	5240	4.75	4.391	7.585	11	Pass
802.11n(HT20)	5180	4.689	4.517	7.614	11	Pass
	5200	4.72	4.228	7.491	11	Pass
	5240	4.785	4.591	7.699	11	Pass
802.11n(HT40)	5190	1.911	1.241	4.599	11	Pass
	5230	1.518	0.899	4.230	11	Pass
802.11ac(VH20)	5210	-3.195	-1.815	0.560	11	Pass
	5180	4.844	4.35	7.614	11	Pass
	5200	4.471	4.365	7.429	11	Pass
802.11ac(VH40)	5240	4.259	4.292	7.286	11	Pass
	5190	1.651	1.249	4.465	11	Pass
802.11ac(VH80)	5230	1.394	1.307	4.361	11	Pass

Test mode	Test Channel (MHz)	PSD [dBm/500kHz] ANT 1	PSD [dBm/500kHz] ANT 2	PSD [dBm/500kHz] Total	Limit (dBm)	Result
802.11a	5745	2.585	2.153	5.385	30	Pass
	5785	1.908	2.119	5.025	30	Pass
	5825	2.241	1.844	5.057	30	Pass
802.11n(HT20)	5745	2.139	2.216	5.188	30	Pass
	5785	1.133	1.943	4.567	30	Pass
	5825	1.602	1.102	4.369	30	Pass
802.11n(HT40)	5755	-2.077	-2.649	0.657	30	Pass
	5795	-2.139	-2.223	0.830	30	Pass
802.11ac(VH20)	5745	1.96	2.048	5.015	30	Pass
	5785	1.022	1.866	4.475	30	Pass
	5825	1.189	1.392	4.302	30	Pass
802.11ac(VH40)	5755	-3.042	-1.611	0.742	30	Pass
	5795	-2.286	-2.6	0.570	30	Pass
802.11ac(VH80)	5775	-5.592	-6.667	-3.086	30	Pass

ANT 1

802.11a-5180	802.11a-5200
	
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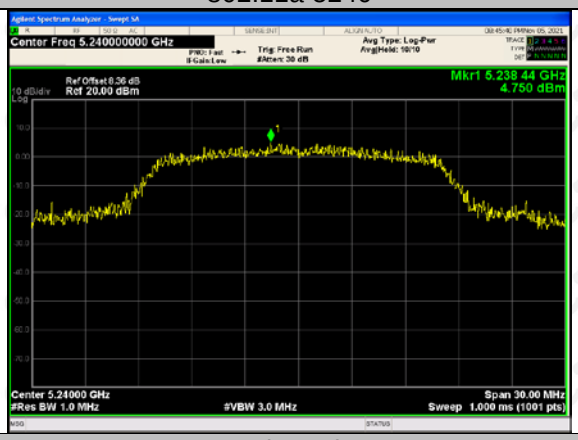	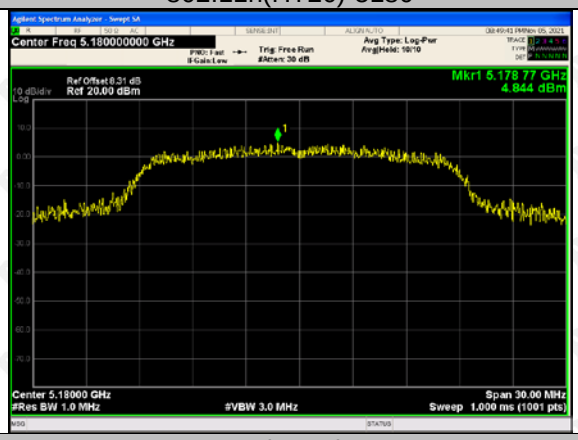
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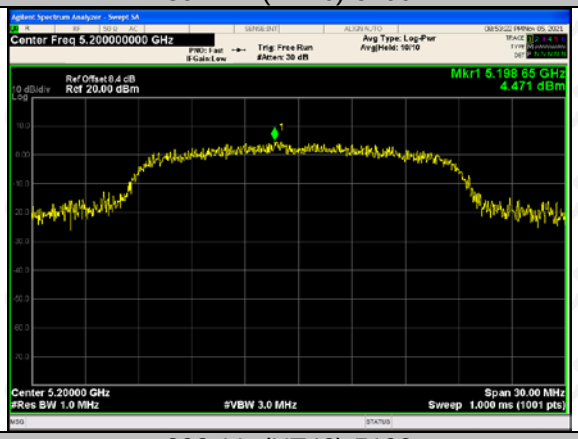	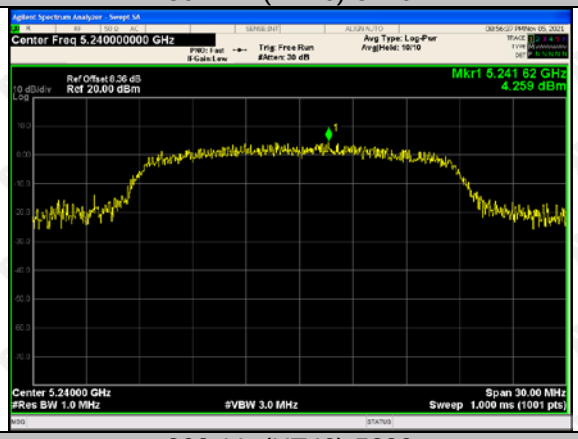
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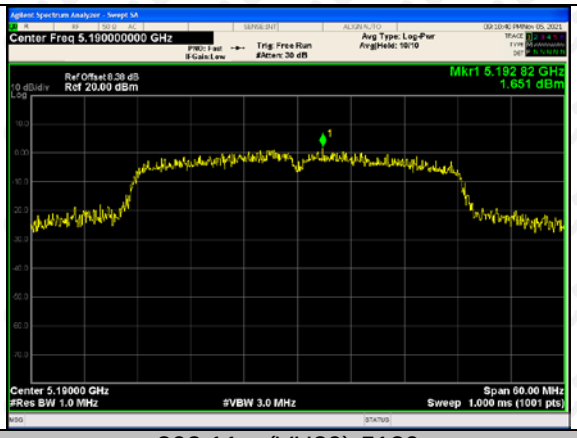

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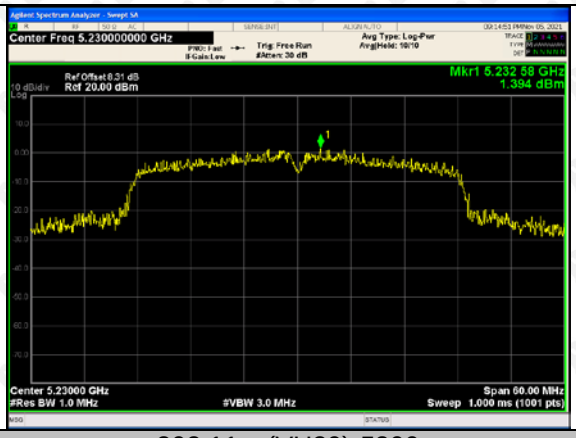

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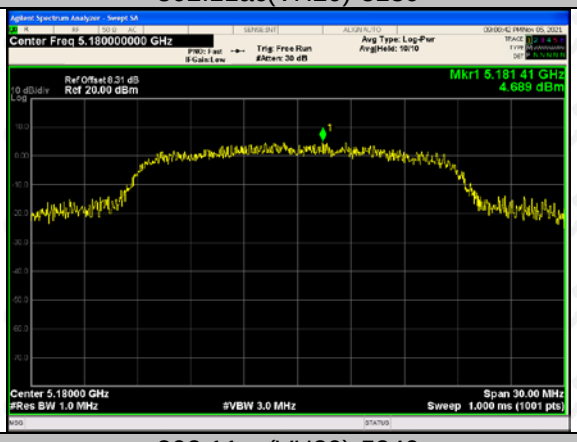

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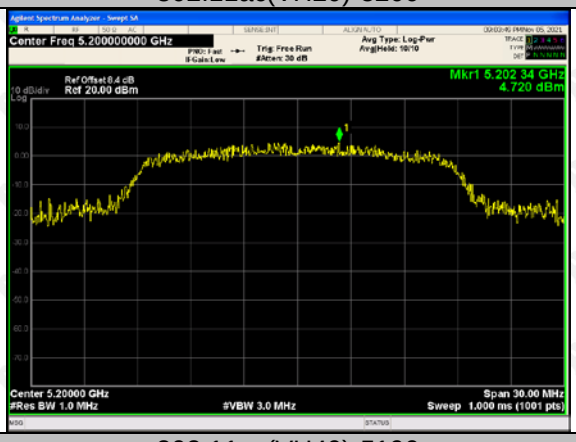
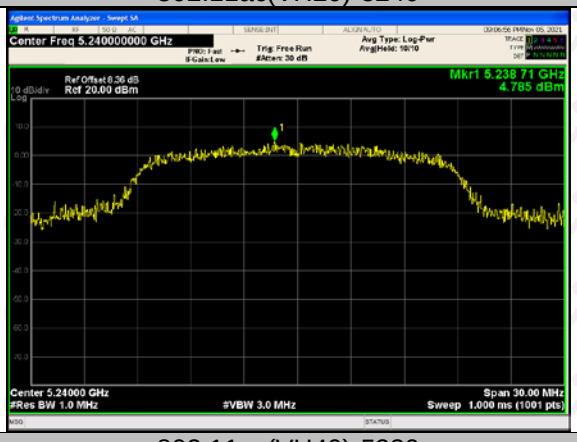


802.11ac(VH40)-5190



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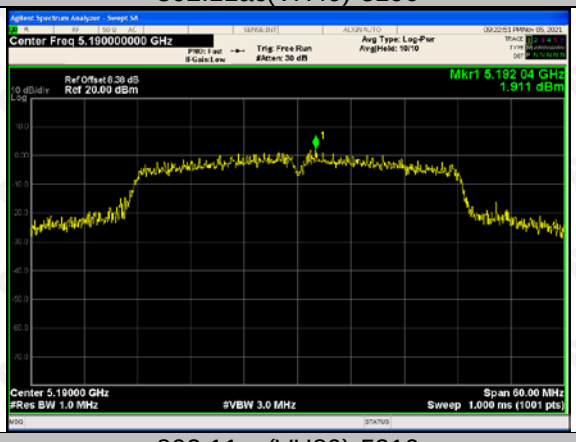
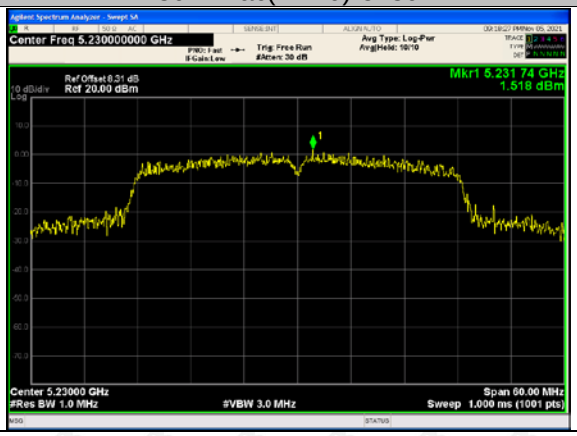
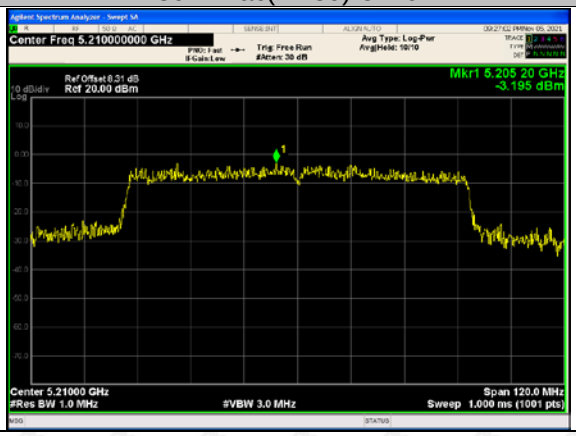
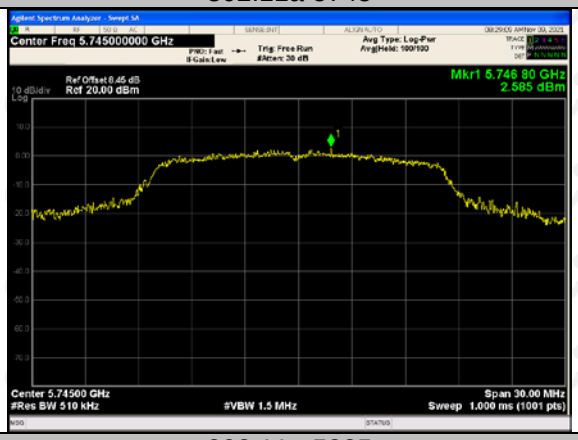
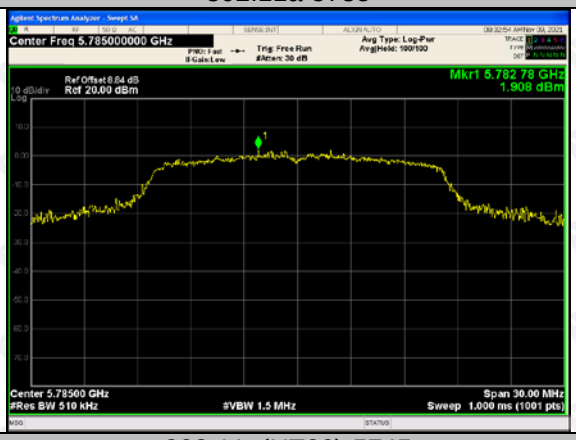


802.11ac(VH80)-5210





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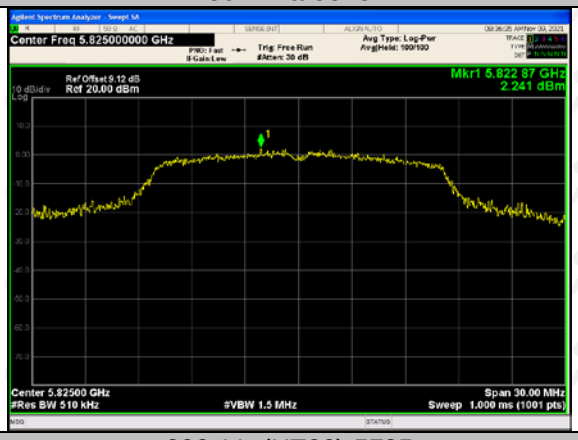	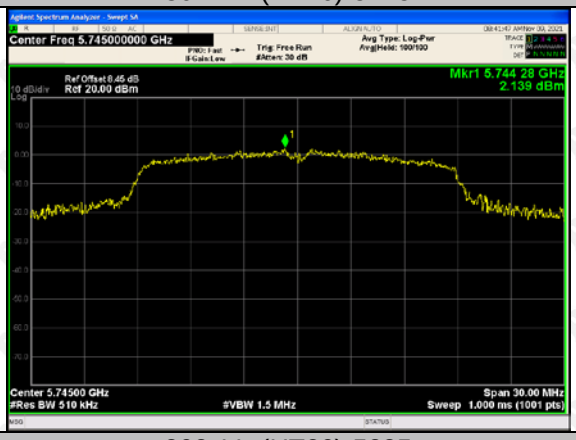
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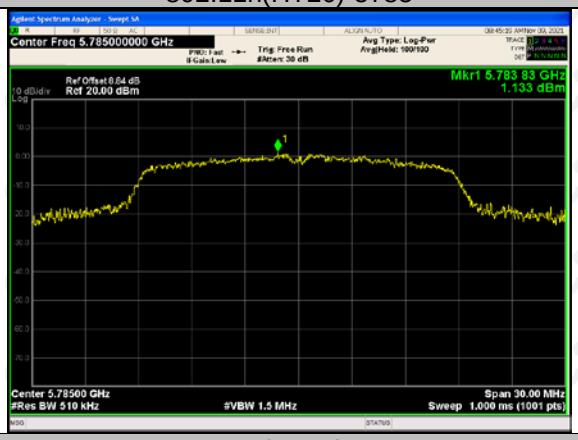	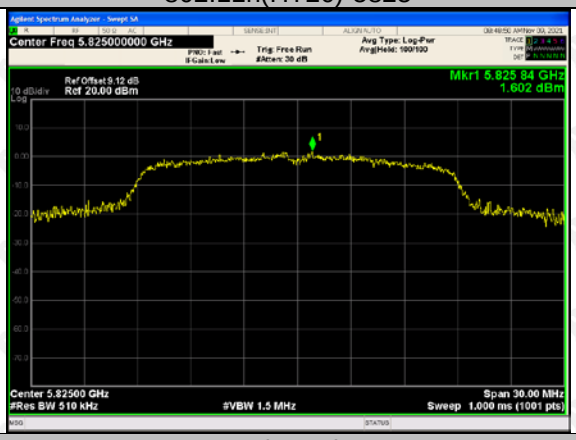
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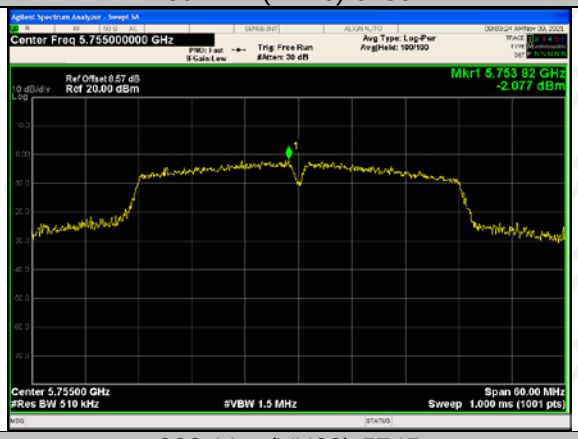
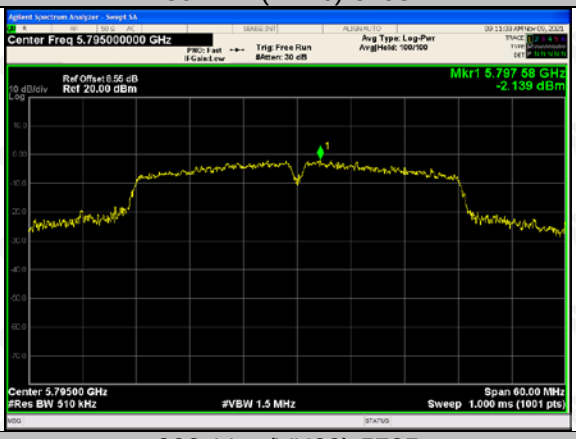
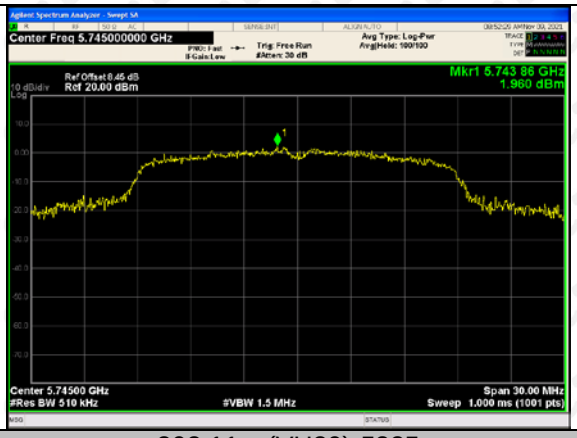
	
802.11ac(VH20)-5745	802.11ac(VH20)-5785



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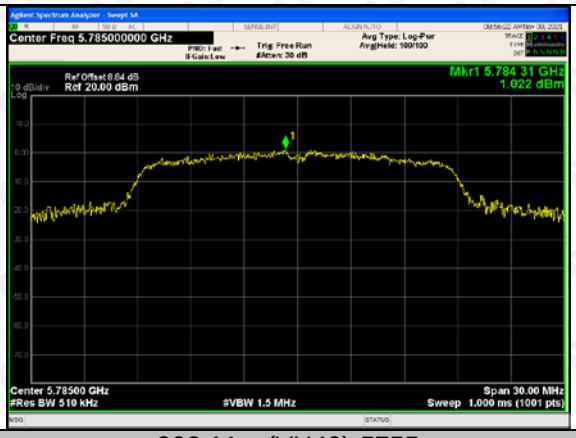

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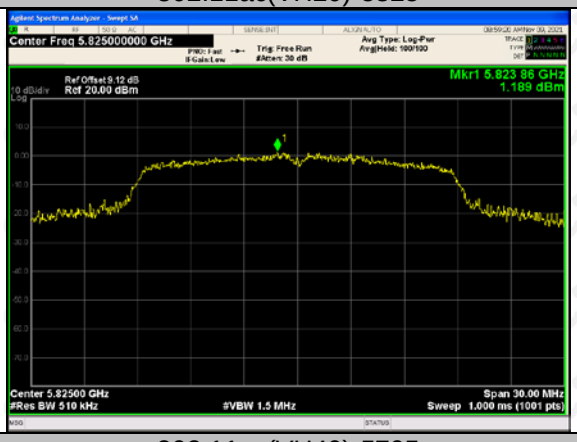

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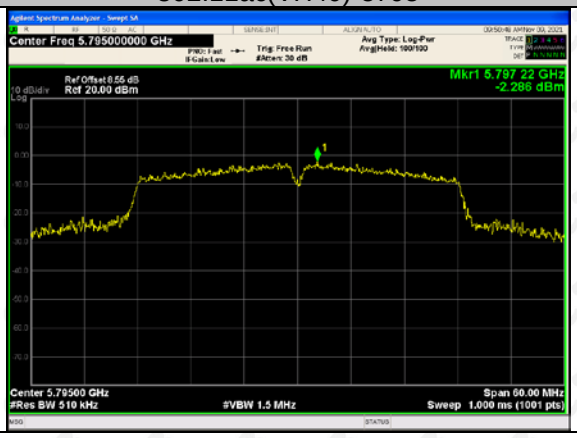
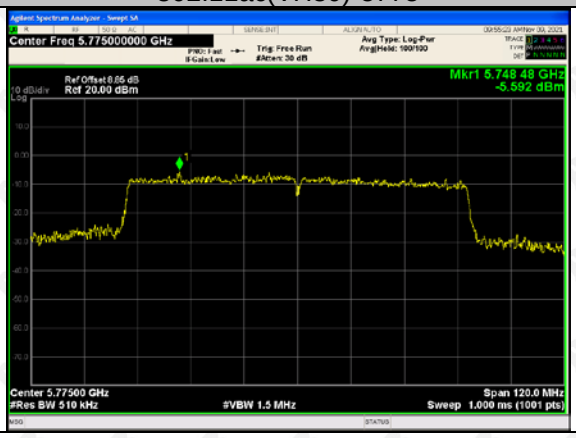
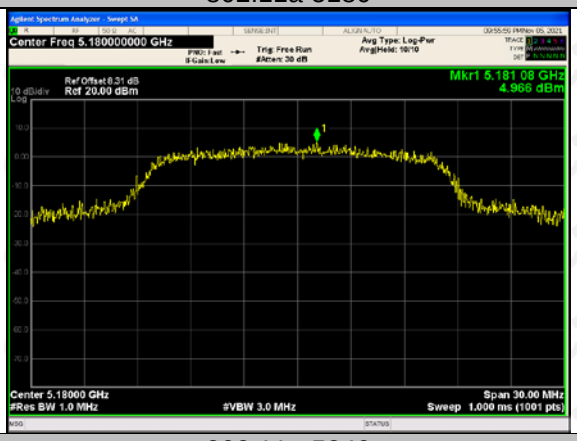
802.11ac(VH80)-5775



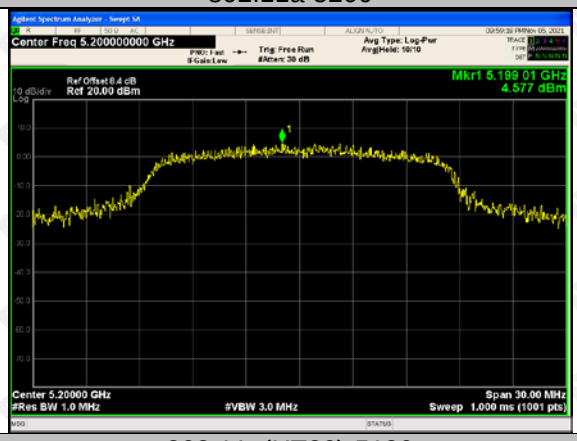


ANT 2

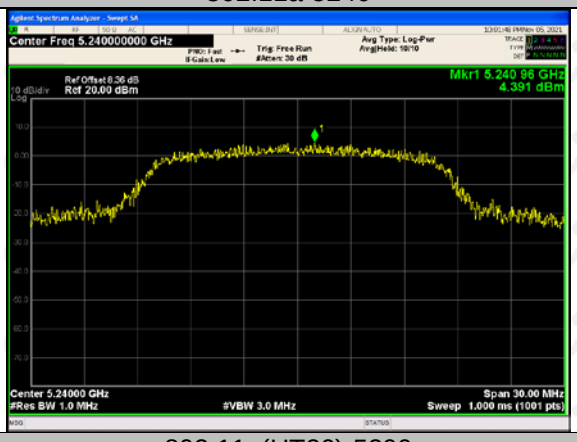
802.11a-5180



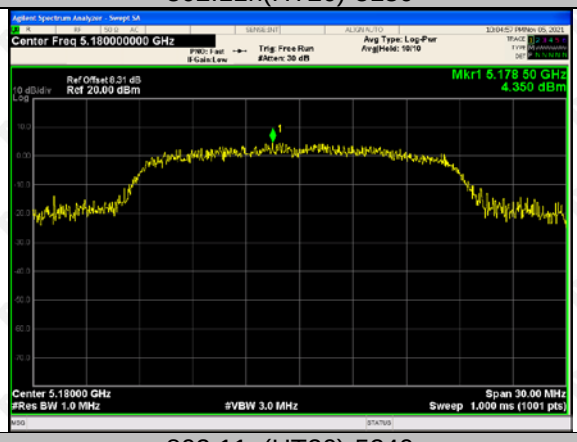
802.11a-5200



802.11a-5240



802.11n(HT20)-5180



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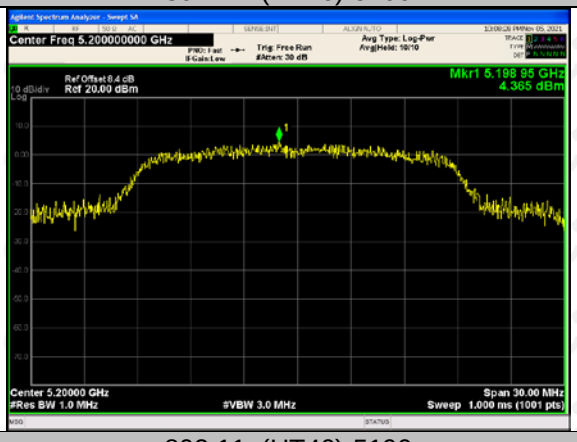

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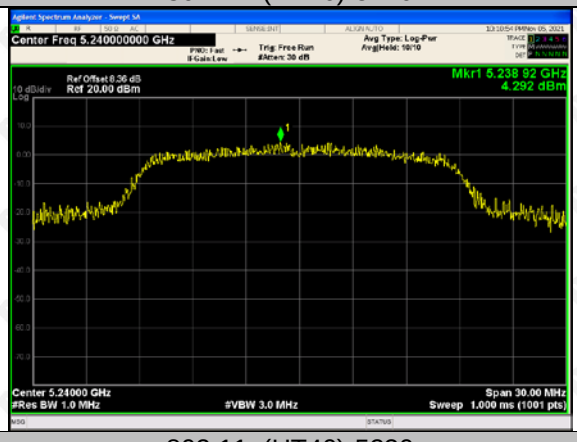

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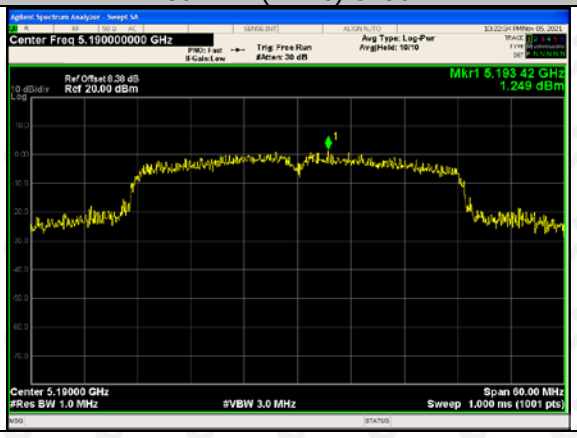

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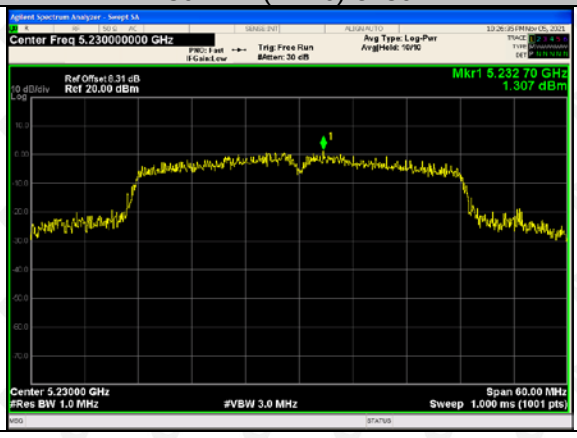

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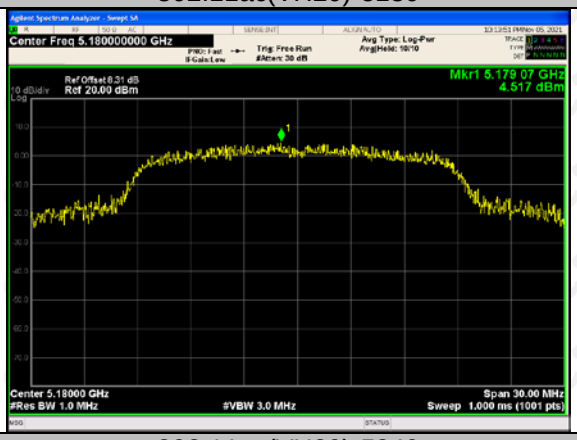	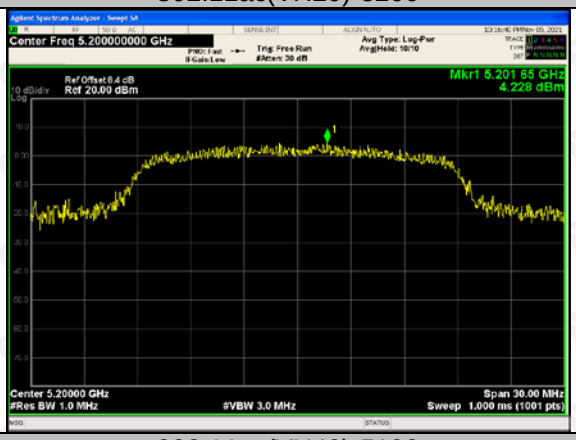
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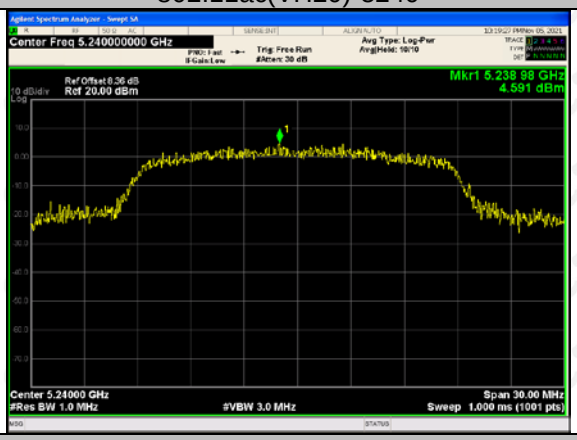	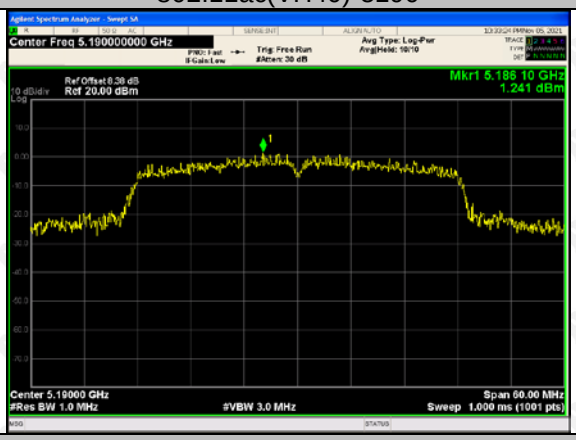
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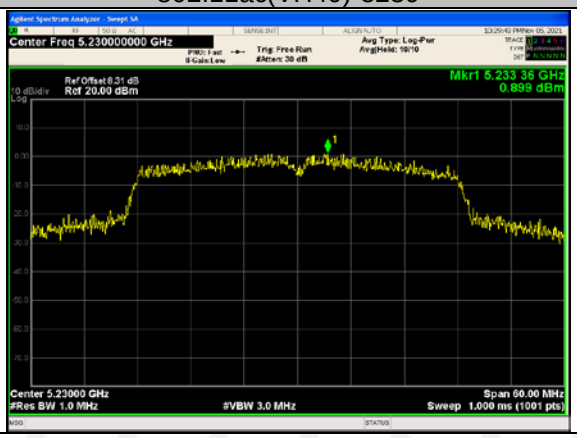
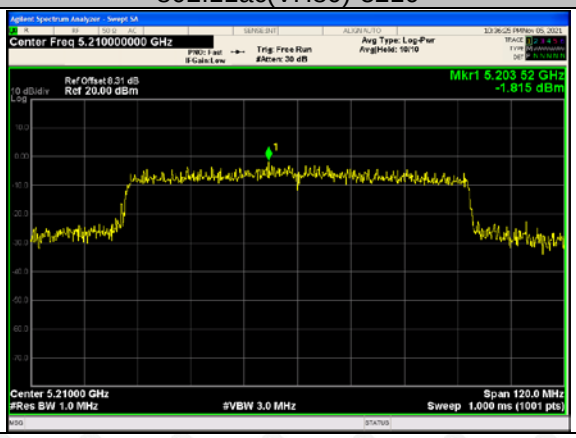
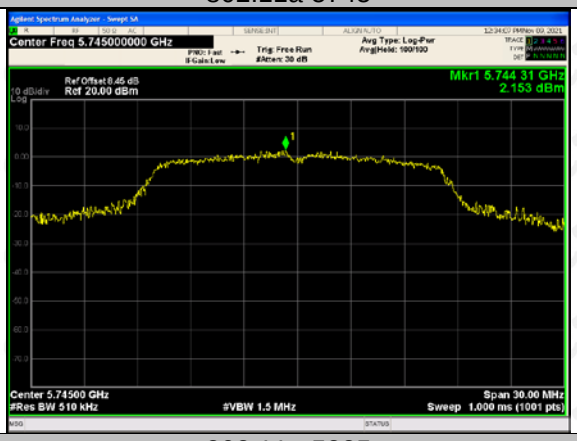
	

802.11a-5745



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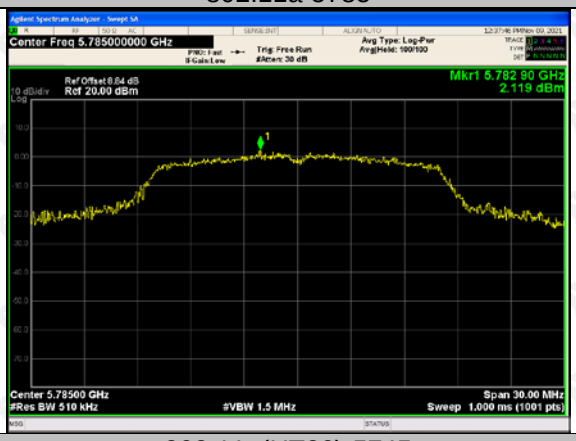

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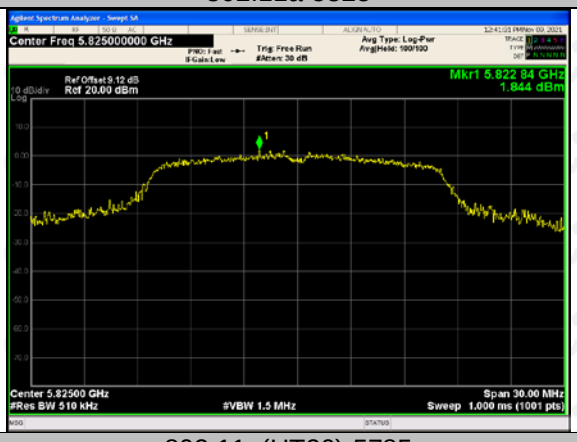

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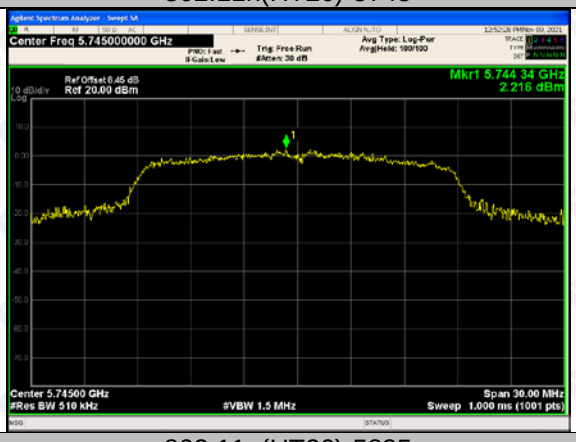

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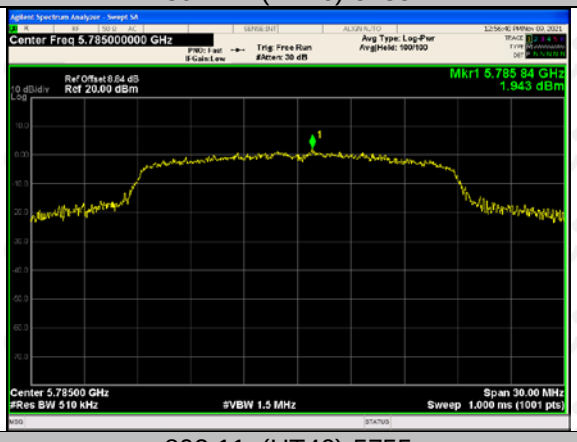

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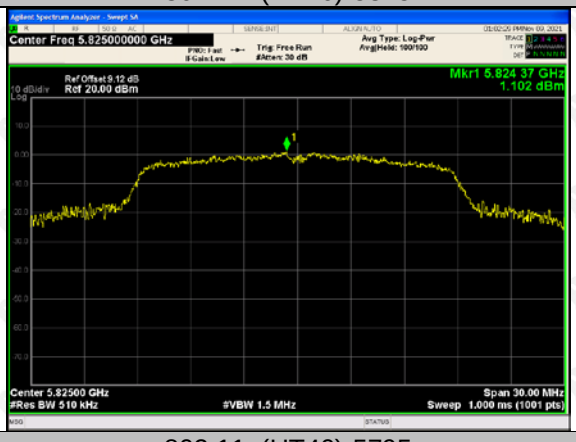

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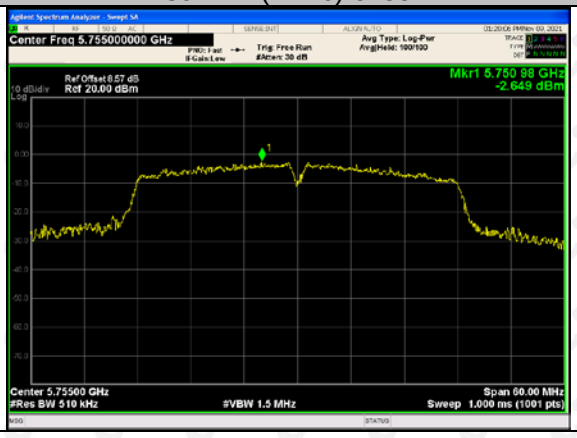

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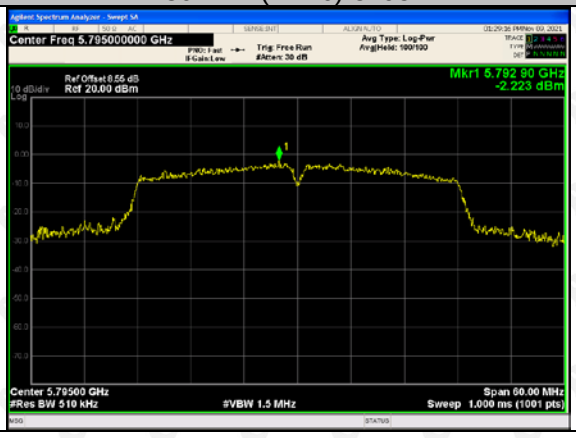

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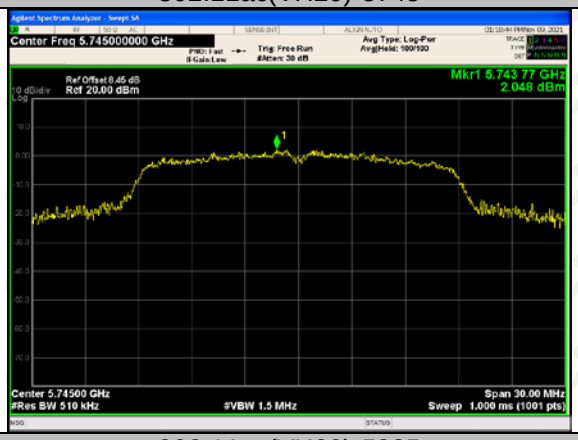

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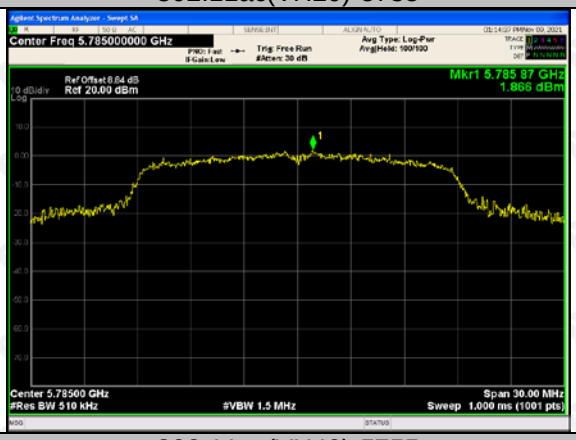

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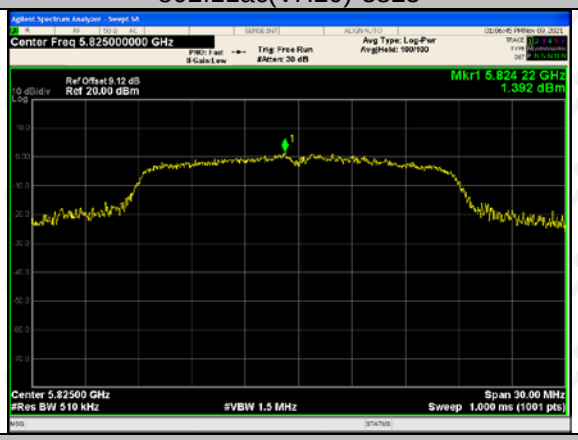

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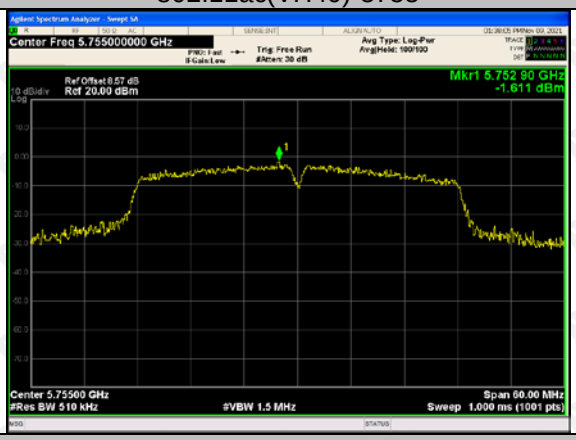

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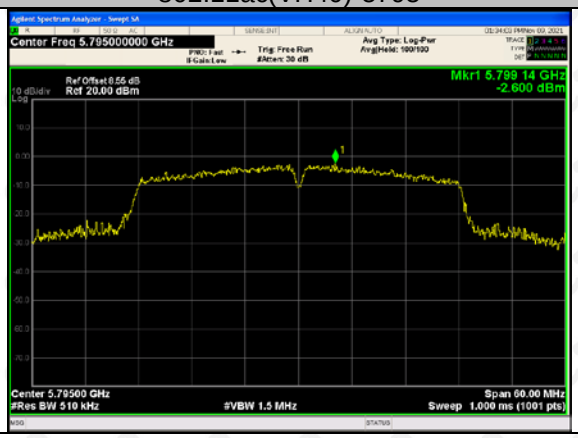

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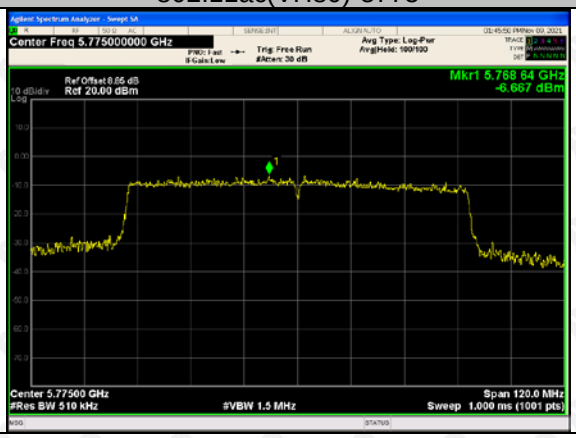
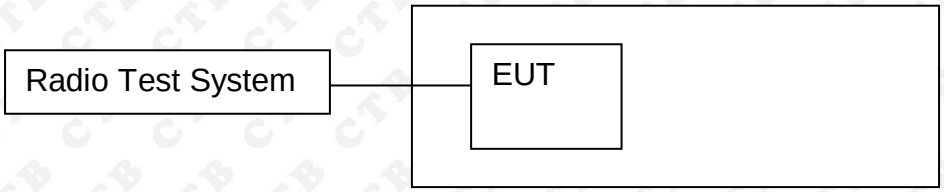


12. FREQUENCY STABILITY

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

ANT1:

TX Frequency (5180-5240MHz)

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	5180.0364	5180	0.0364	7.0270
		V max (V)	132	5180.0337	5180	0.0337	6.5058
		V min (V)	108	5180.0465	5180	0.0465	8.9768
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)	-20	5180.0249	5180	0.0249	4.8069
		T (°C)	-10	5180.0304	5180	0.0304	5.8687
		T (°C)	0	5180.0231	5180	0.0231	4.4595
		T (°C)	10	5180.0385	5180	0.0385	7.4324
		T (°C)	20	5180.0292	5180	0.0292	5.6371
		T (°C)	30	5180.0335	5180	0.0335	6.4672
		T (°C)	40	5180.0324	5180	0.0324	6.2548
		T (°C)	50	5180.0396	5180	0.0396	7.6448
		T (°C)	60	5180.0348	5180	0.0348	6.7181
		T (°C)	70	5180.0298	5180	0.0298	5.7529
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	5200.0236	5200	0.0236	4.5385
		V max (V)	132	5200.0322	5200	0.0322	6.1923
		V min (V)	108	5200.0369	5200	0.0369	7.0962
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)	-20	5200.0332	5200	0.0332	6.3846
		T (°C)	-10	5200.0323	5200	0.0323	6.2115
		T (°C)	0	5200.0324	5200	0.0324	6.2308
		T (°C)	10	5200.0321	5200	0.0321	6.1731
		T (°C)	20	5200.0325	5200	0.0325	6.2500
		T (°C)	30	5200.0328	5200	0.0328	6.3077
		T (°C)	40	5200.0435	5200	0.0435	8.3654
		T (°C)	50	5200.0417	5200	0.0417	8.0192
		T (°C)	60	5200.0398	5200	0.0398	7.6538
		T (°C)	70	5200.0423	5200	0.0423	8.1346
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	5240.0332	5240	0.0332	6.3359
		V max (V)	132	5240.0313	5240	0.0313	5.9733
		V min (V)	108	5240.0398	5240	0.0398	7.5954
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)	-20	5240.0388	5240	0.0388	7.4046
		T (°C)	-10	5240.0334	5240	0.0334	6.3740
		T (°C)	0	5240.0332	5240	0.0332	6.3359
		T (°C)	10	5240.0358	5240	0.0358	6.8321
		T (°C)	20	5240.0329	5240	0.0329	6.2786
		T (°C)	30	5240.0326	5240	0.0326	6.2214
		T (°C)	40	5240.0383	5240	0.0383	7.3092
		T (°C)	50	5240.0396	5240	0.0396	7.5573
		T (°C)	60	5240.0383	5240	0.0383	7.3092
		T (°C)	70	5240.0313	5240	0.0313	5.9733
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	5745.0324	5745	0.0324	5.6397
		V max (V)	132	5745.0345	5745	0.0345	6.0052
		V min (V)	108	5745.0332	5745	0.0332	5.7789
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)	-20	5745.0257	5745	0.0257	4.4735
		T (°C)	-10	5745.0303	5745	0.0303	5.2742
		T (°C)	0	5745.0324	5745	0.0324	5.6397
		T (°C)	10	5745.0378	5745	0.0378	6.5796
		T (°C)	20	5745.0383	5745	0.0383	6.6667
		T (°C)	30	5745.0320	5745	0.0320	5.5701
		T (°C)	40	5745.0315	5745	0.0315	5.4830
		T (°C)	50	5745.0296	5745	0.0296	5.1523
		T (°C)	60	5745.0309	5745	0.0309	5.3786
		T (°C)	70	5745.0298	5745	0.0298	5.1871
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	5785.0358	5785	0.0358	6.1884
		V max (V)	132	5785.0325	5785	0.0325	5.6180
		V min (V)	108	5785.0384	5785	0.0384	6.6379
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)	-20	5785.0388	5785	0.0388	6.7070
		T (°C)	-10	5785.0425	5785	0.0425	7.3466
		T (°C)	0	5785.0426	5785	0.0426	7.3639
		T (°C)	10	5785.0339	5785	0.0339	5.8600
		T (°C)	20	5785.0342	5785	0.0342	5.9118
		T (°C)	30	5785.0325	5785	0.0325	5.6180
		T (°C)	40	5785.0345	5785	0.0345	5.9637
		T (°C)	50	5785.0323	5785	0.0323	5.5834
		T (°C)	60	5785.0326	5785	0.0326	5.6353
		T (°C)	70	5785.0425	5785	0.0425	7.3466
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	5825.0333	5825	0.0333	5.7167
		V max (V)	132	5825.0315	5825	0.0315	5.4077
		V min (V)	108	5825.0328	5825	0.0328	5.6309
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)	-20	5825.0339	5825	0.0339	5.8197
		T (°C)	-10	5825.0334	5825	0.0334	5.7339
		T (°C)	0	5825.0355	5825	0.0355	6.0944
		T (°C)	10	5825.0384	5825	0.0384	6.5923
		T (°C)	20	5825.0325	5825	0.0325	5.5794
		T (°C)	30	5825.0335	5825	0.0335	5.7511
		T (°C)	40	5825.0354	5825	0.0354	6.0773
		T (°C)	50	5825.0386	5825	0.0386	6.6266
		T (°C)	60	5825.0345	5825	0.0345	5.9227
		T (°C)	70	5825.0303	5825	0.0303	5.2017
Limits				±20ppm			
Result				Complies			

ANT2:

TX Frequency (5180-5240MHz)

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	5180.0358	5180	0.0358	6.9054
		V max (V)	132	5180.0320	5180	0.0320	6.1776
		V min (V)	108	5180.0389	5180	0.0389	7.5097
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)	-20	5180.0349	5180	0.0349	6.7375
		T (°C)	-10	5180.0309	5180	0.0309	5.9653
		T (°C)	0	5180.0382	5180	0.0382	7.3745
		T (°C)	10	5180.0387	5180	0.0387	7.4710
		T (°C)	20	5180.0343	5180	0.0343	6.6216
		T (°C)	30	5180.0320	5180	0.0320	6.1776
		T (°C)	40	5180.0338	5180	0.0338	6.5251
		T (°C)	50	5180.0387	5180	0.0387	7.4710
		T (°C)	60	5180.0319	5180	0.0319	6.1583
		T (°C)	70	5180.0398	5180	0.0398	7.6834
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	5200.0282	5200	0.0282	5.4231
		V max (V)	132	5200.0325	5200	0.0325	6.2500
		V min (V)	108	5200.0396	5200	0.0396	7.6154
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)	-20	5200.0389	5200	0.0389	7.4808
		T (°C)	-10	5200.0333	5200	0.0333	6.4038
		T (°C)	0	5200.0357	5200	0.0357	6.8654
		T (°C)	10	5200.0328	5200	0.0328	6.3077
		T (°C)	20	5200.0337	5200	0.0337	6.4808
		T (°C)	30	5200.0328	5200	0.0328	6.3077
		T (°C)	40	5200.0349	5200	0.0349	6.7115
		T (°C)	50	5200.0315	5200	0.0315	6.0577
		T (°C)	60	5200.0379	5200	0.0379	7.2885
		T (°C)	70	5200.0331	5200	0.0331	6.3654
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	5240.0339	5240	0.0339	6.4695
		V max (V)	132	5240.0312	5240	0.0312	5.9542
		V min (V)	108	5240.0308	5240	0.0308	5.8779
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)	-20	5240.0348	5240	0.0348	6.6412
		T (°C)	-10	5240.0342	5240	0.0342	6.5267
		T (°C)	0	5240.0305	5240	0.0305	5.8206
		T (°C)	10	5240.0347	5240	0.0347	6.6221
		T (°C)	20	5240.0318	5240	0.0318	6.0687
		T (°C)	30	5240.0335	5240	0.0335	6.3931
		T (°C)	40	5240.0378	5240	0.0378	7.2137
		T (°C)	50	5240.0379	5240	0.0379	7.2328
		T (°C)	60	5240.0306	5240	0.0306	5.8397
		T (°C)	70	5240.0308	5240	0.0308	5.8779
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	5745.0318	5745	0.0318	5.5352
		V max (V)	132	5745.0340	5745	0.0340	5.9182
		V min (V)	108	5745.0323	5745	0.0323	5.6223
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)	-20	5745.0349	5745	0.0349	6.0748
		T (°C)	-10	5745.0304	5745	0.0304	5.2916
		T (°C)	0	5745.0325	5745	0.0325	5.6571
		T (°C)	10	5745.0376	5745	0.0376	6.5448
		T (°C)	20	5745.0303	5745	0.0303	5.2742
		T (°C)	30	5745.0318	5745	0.0318	5.5352
		T (°C)	40	5745.0325	5745	0.0325	5.6571
		T (°C)	50	5745.0387	5745	0.0387	6.7363
		T (°C)	60	5745.0324	5745	0.0324	5.6397
		T (°C)	70	5745.0387	5745	0.0387	6.7363
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	5785.0357	5785	0.0357	6.1711
		V max (V)	132	5785.0352	5785	0.0352	6.0847
		V min (V)	108	5785.0395	5785	0.0395	6.8280
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)	-20	5785.0344	5785	0.0344	5.9464
		T (°C)	-10	5785.0327	5785	0.0327	5.6525
		T (°C)	0	5785.0324	5785	0.0324	5.6007
		T (°C)	10	5785.0338	5785	0.0338	5.8427
		T (°C)	20	5785.0345	5785	0.0345	5.9637
		T (°C)	30	5785.0324	5785	0.0324	5.6007
		T (°C)	40	5785.0347	5785	0.0347	5.9983
		T (°C)	50	5785.0417	5785	0.0417	7.2083
		T (°C)	60	5785.0336	5785	0.0336	5.8081
		T (°C)	70	5785.0401	5785	0.0401	6.9317
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	5825.0325	5825	0.0325	5.5794
		V max (V)	132	5825.0420	5825	0.0420	7.2103
		V min (V)	108	5825.0398	5825	0.0398	6.8326
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)	-20	5825.0387	5825	0.0387	6.6438
		T (°C)	-10	5825.0325	5825	0.0325	5.5794
		T (°C)	0	5825.0350	5825	0.0350	6.0086
		T (°C)	10	5825.0387	5825	0.0387	6.6438
		T (°C)	20	5825.0315	5825	0.0315	5.4077
		T (°C)	30	5825.0328	5825	0.0328	5.6309
		T (°C)	40	5825.0335	5825	0.0335	5.7511
		T (°C)	50	5825.0377	5825	0.0377	6.4721
		T (°C)	60	5825.0357	5825	0.0357	6.1288
		T (°C)	70	5825.0304	5825	0.0304	5.2189
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 External Antenna and no consideration of replacement. The best case gain of the antenna is 1.0dBi.

15. EUT PHOTOGRAPHS

EUT Photo 1

EUT Photo 2

16. EUT TEST SETUP PHOTOGRAPHS

Spurious emissions

Below 1G

Above 1GHz

Conducted Emission

※※※※※ END OF REPORT ※※※※※