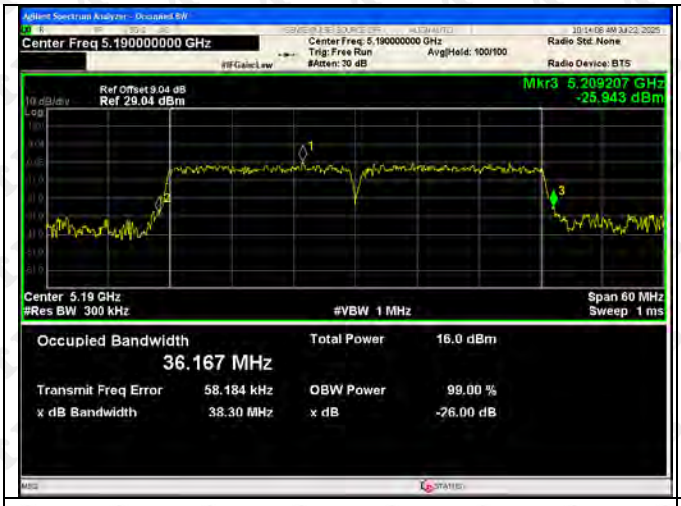
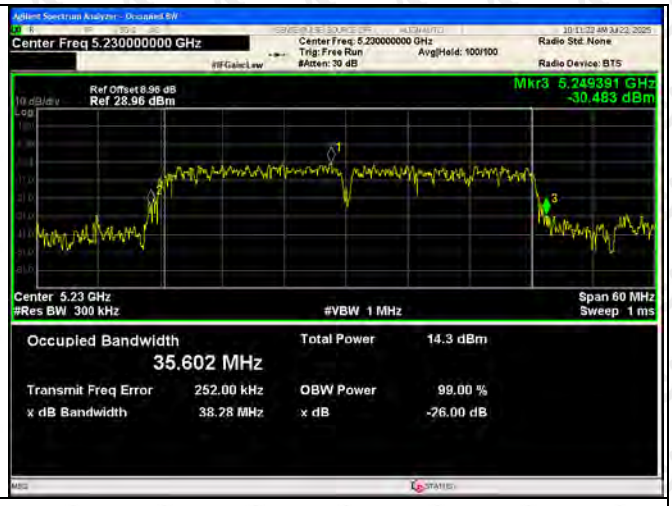


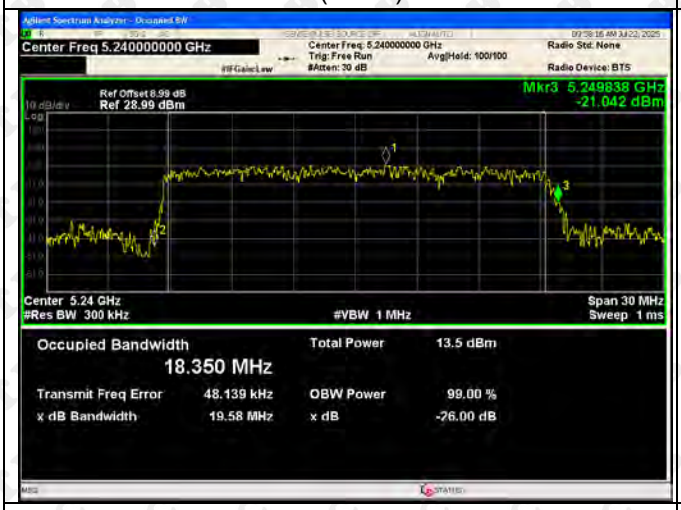
802.11ax(VH20)-5180



802.11ax(VH20)-5200

802.11ax(VH20)-5240

802.11ax(VH40)-5190



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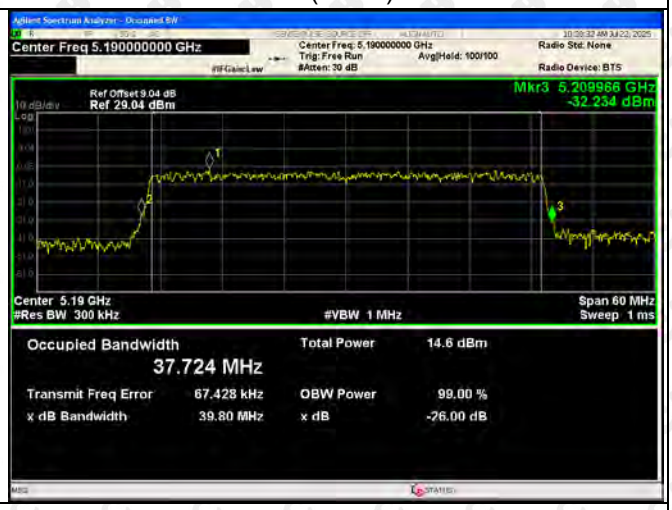

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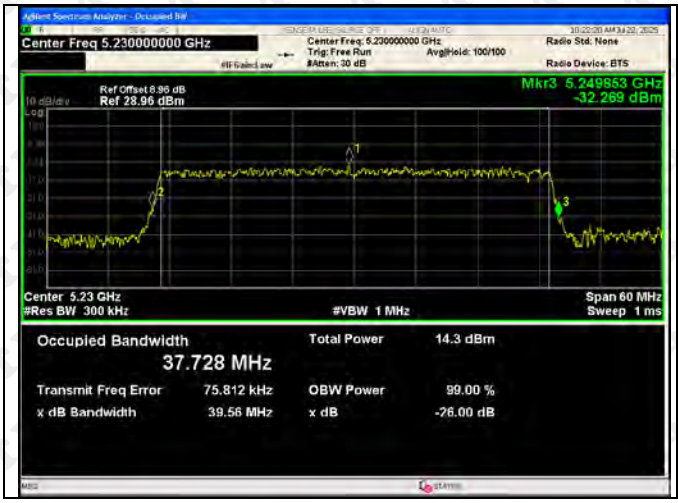


5150MHz ~5250MHz

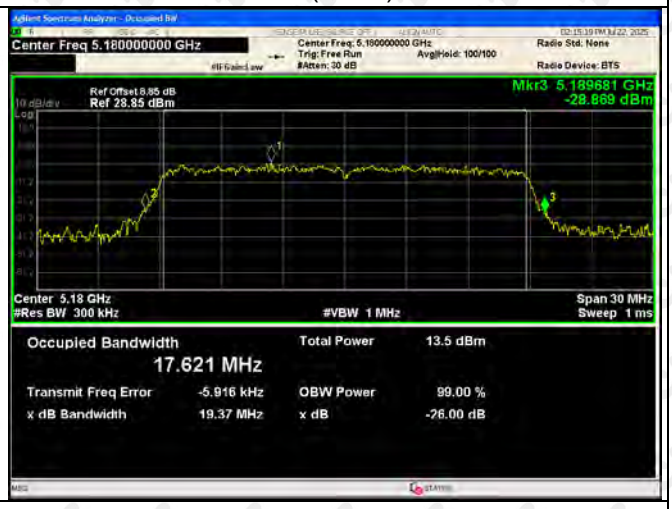
ANT 2:

802.11a-5180

802.11a-5200

802.11a-5240

802.11ac(VH20)-5180



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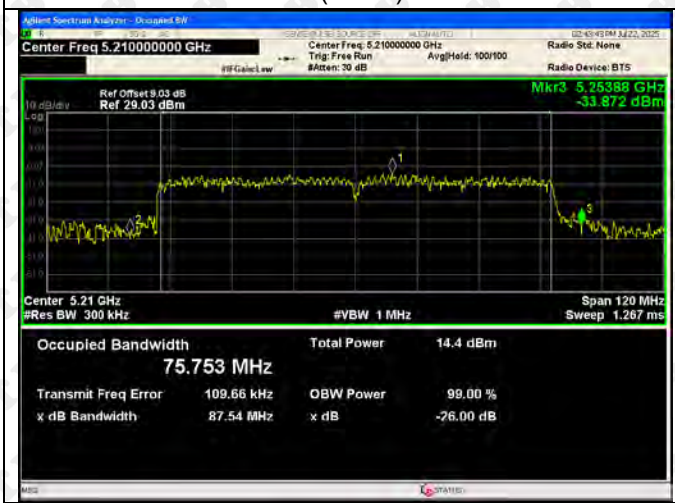
802.11ac(VH20)-5240

802.11ac(VH40)-5190

802.11ac(VH40)-5230

802.11ac(VH80)-5210

802.11n(HT20)-5180



802.11n(HT20)-5200

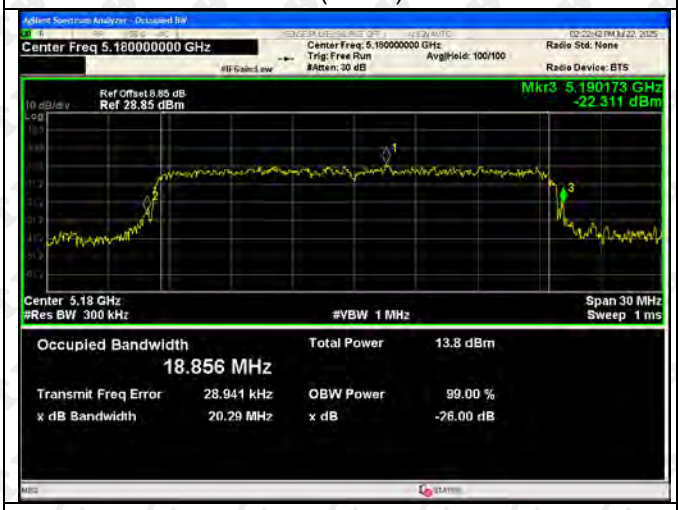
802.11n(HT20)-5240

802.11n(HT40)-5190

802.11n(HT40)-5230

802.11ax(VH20)-5180

802.11ax(VH20)-5200



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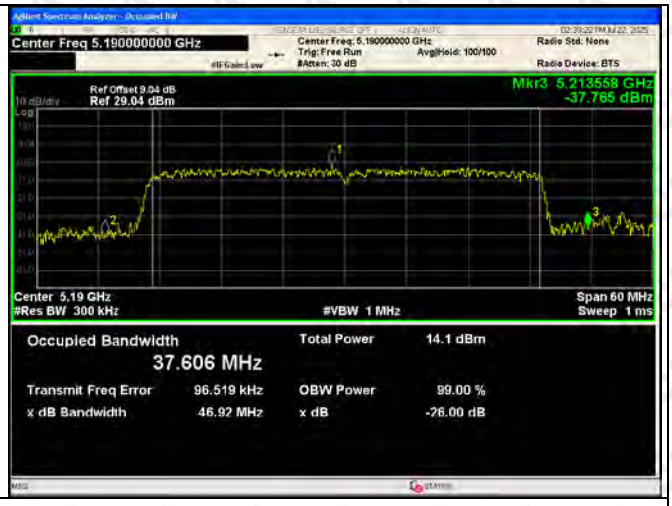
802.11ax(VH40)-5190

802.11ax(VH40)-5230



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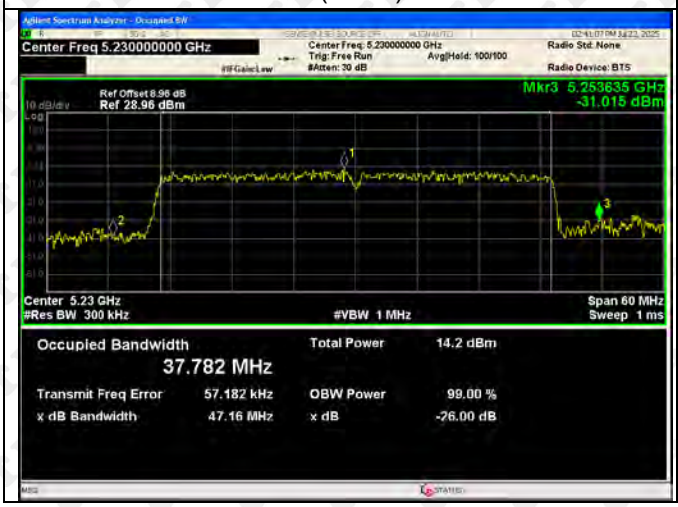
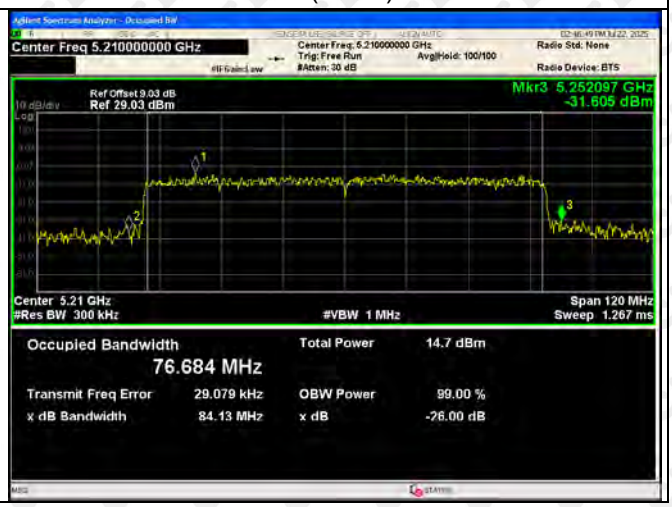
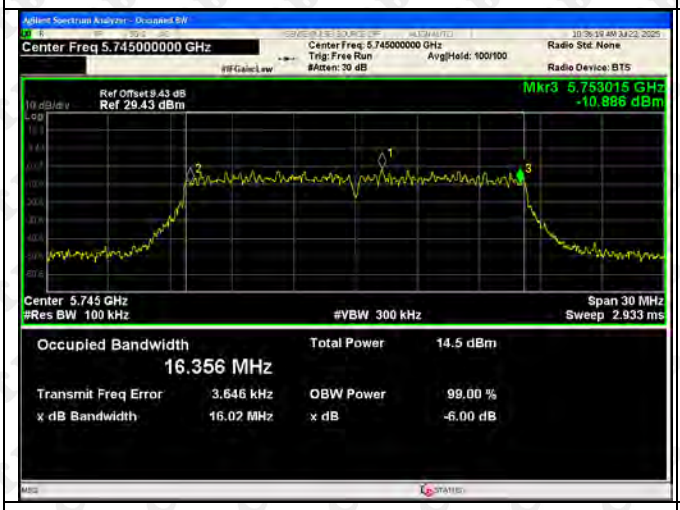




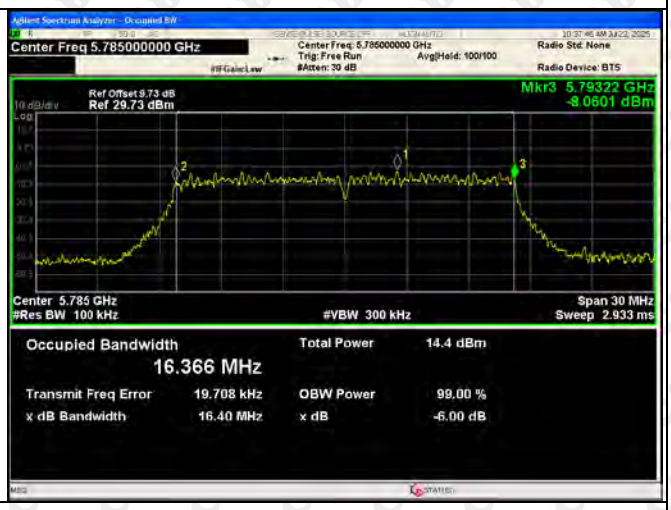
5725-5850MHz

ANT1:

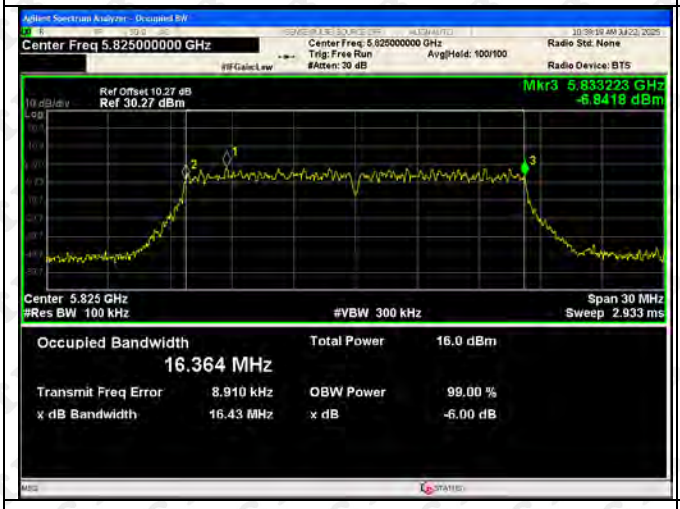
802.11a-5745



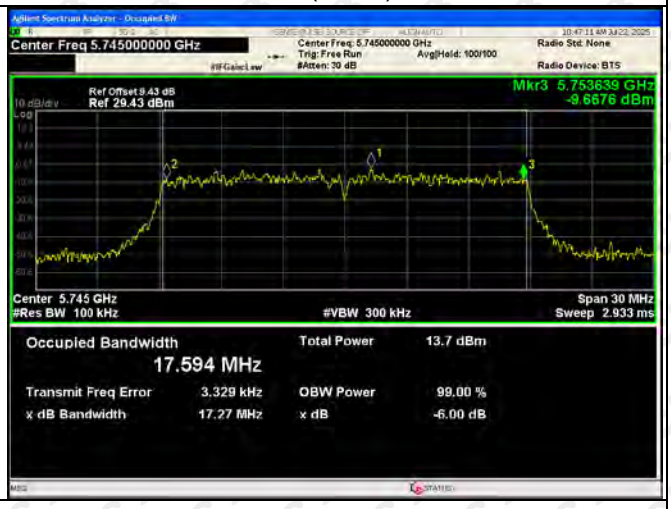
802.11a-5785



802.11a-5825



802.11ac(VH20)-5745



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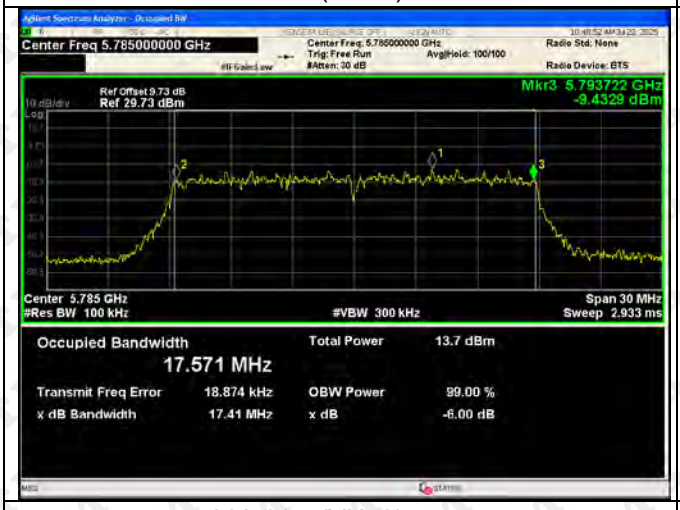
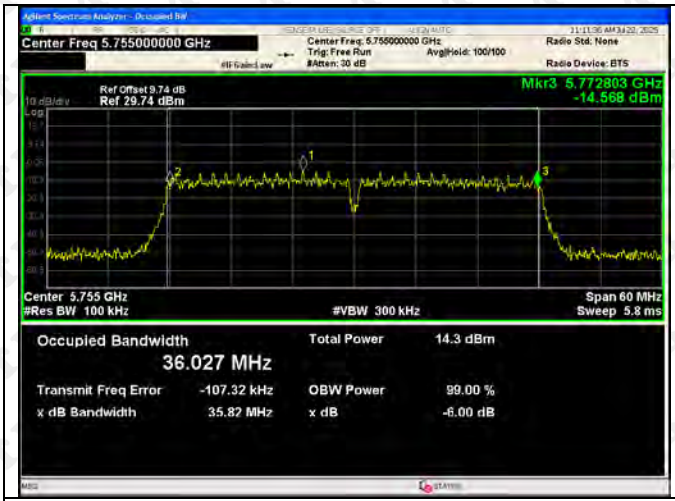


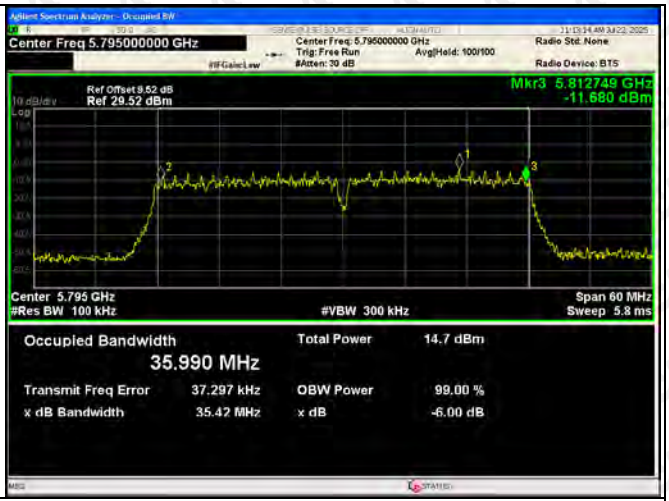
802.11ac(VH20)-5825

802.11ac(VH40)-5755

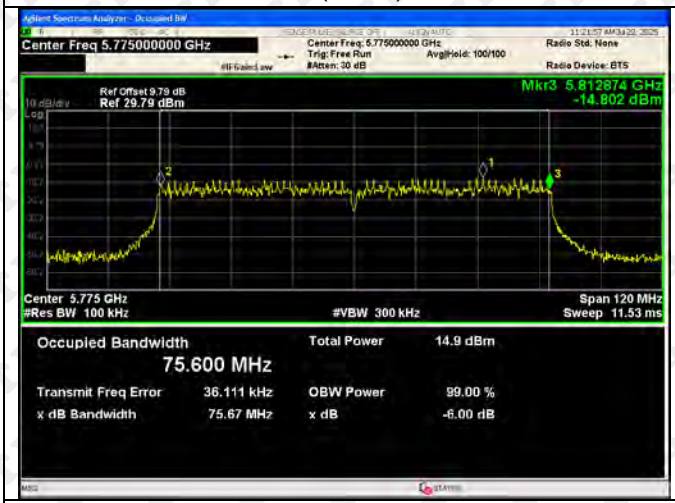
802.11ac(VH40)-5795



802.11ac(VH80)-5775



802.11n(HT20)-5745



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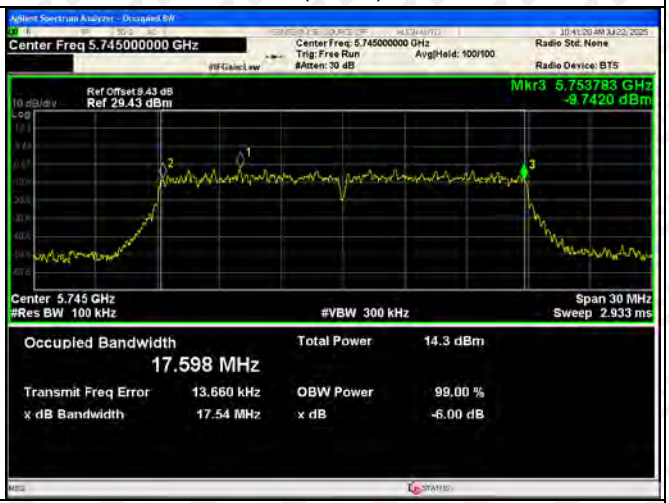
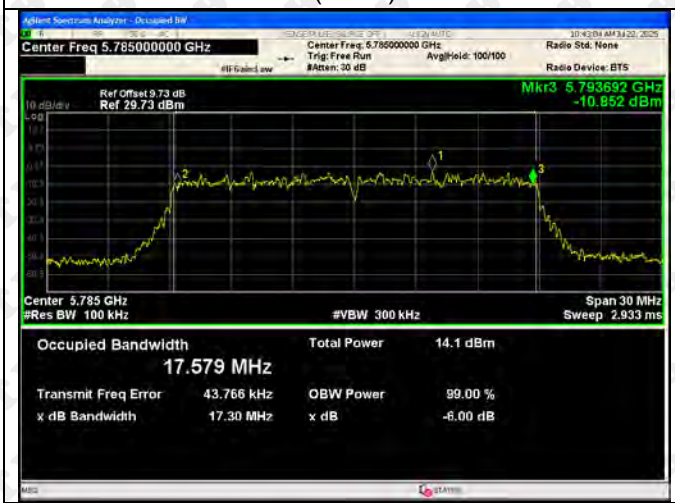
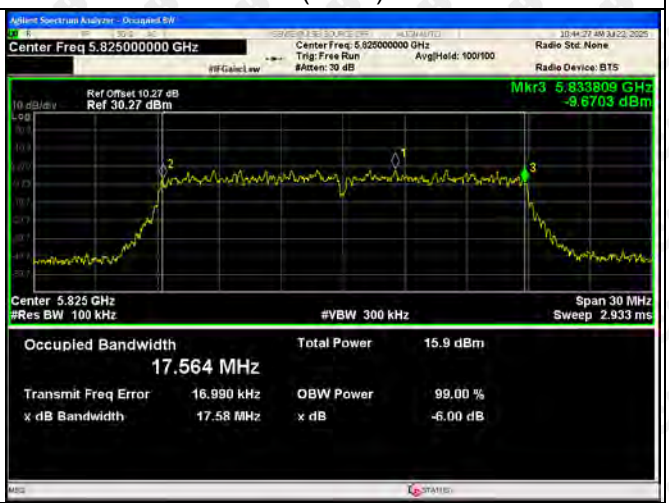


802.11n(HT20)-5825

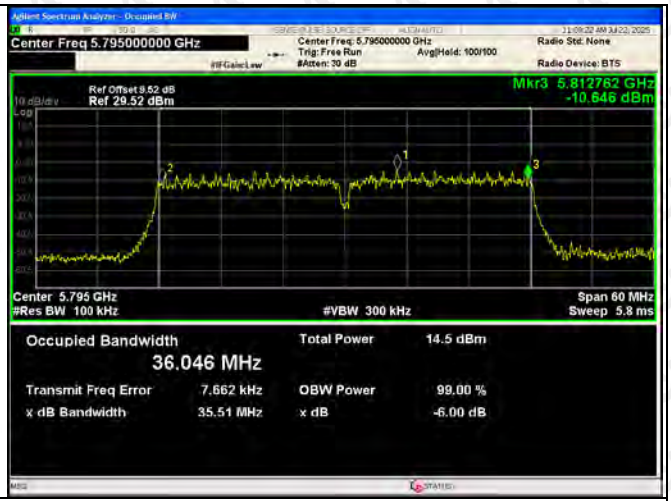


5802.11n(HT40)-5755



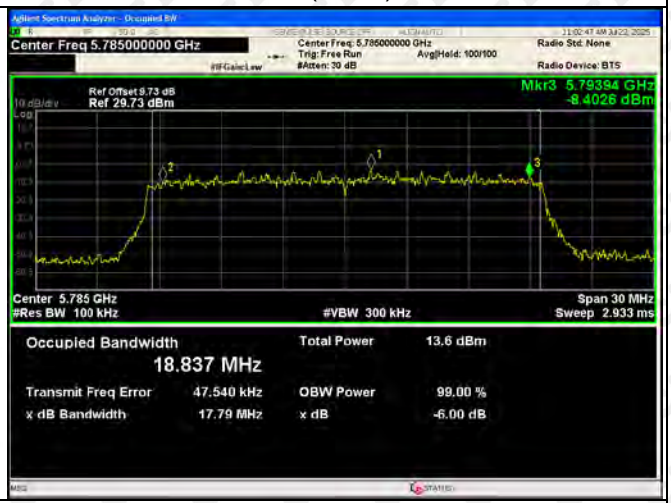
802.11n(HT40)-5795

802.11ax(VH20)-5745



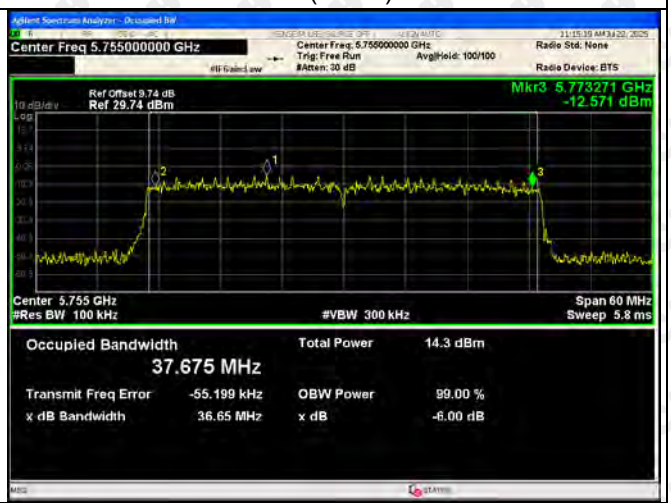
802.11ax(VH20)-5785

802.11ax(VH20)-5825

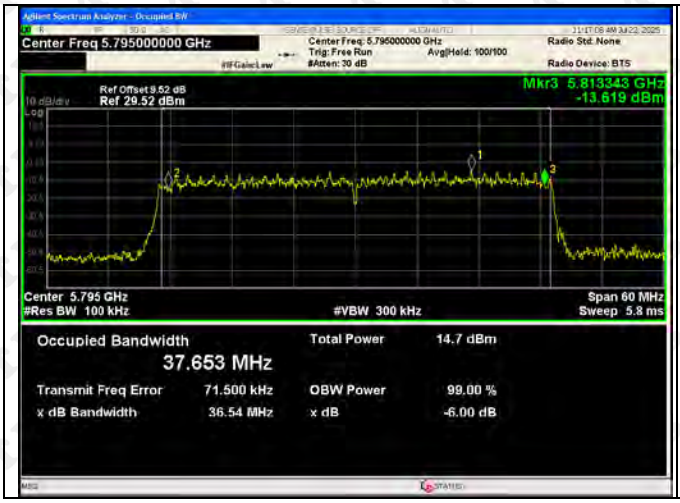


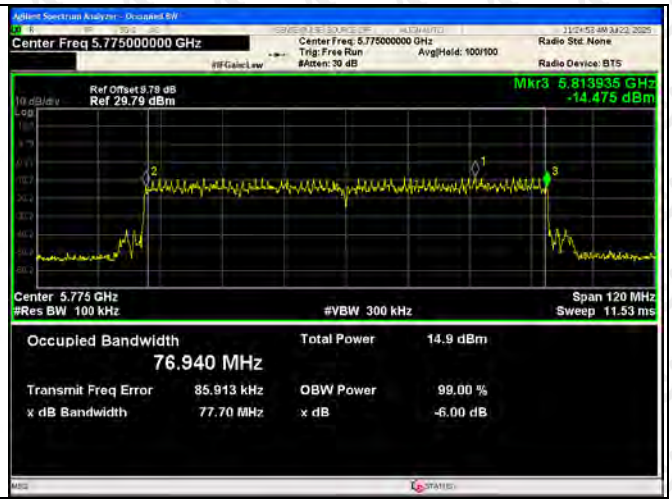
802.11ax(VH40)-5755

802.11ax(VH40)-5795



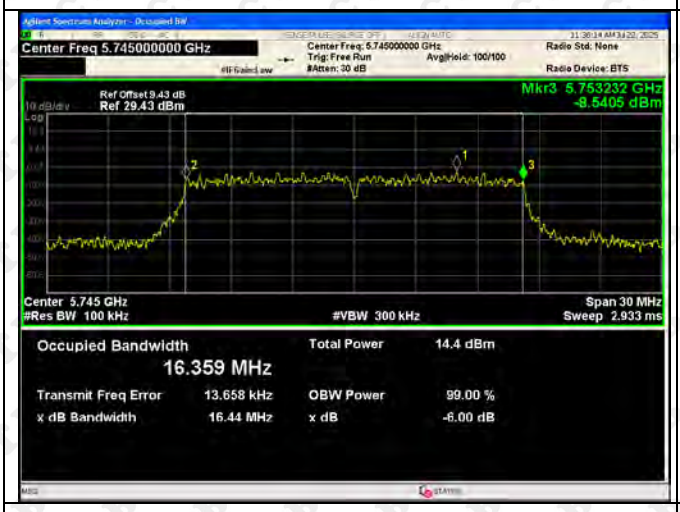
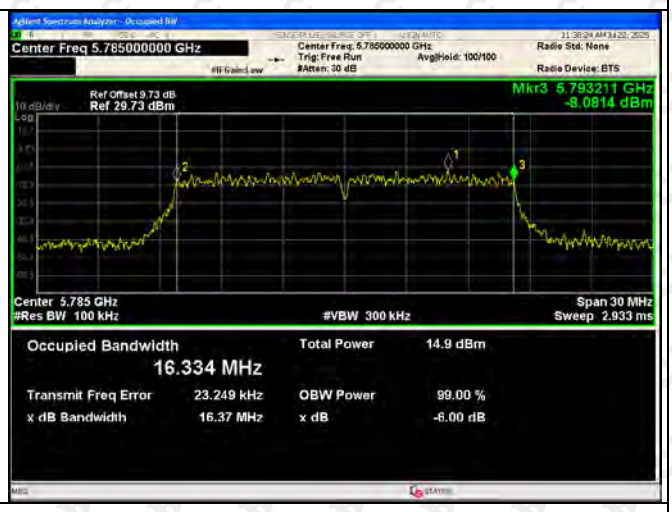
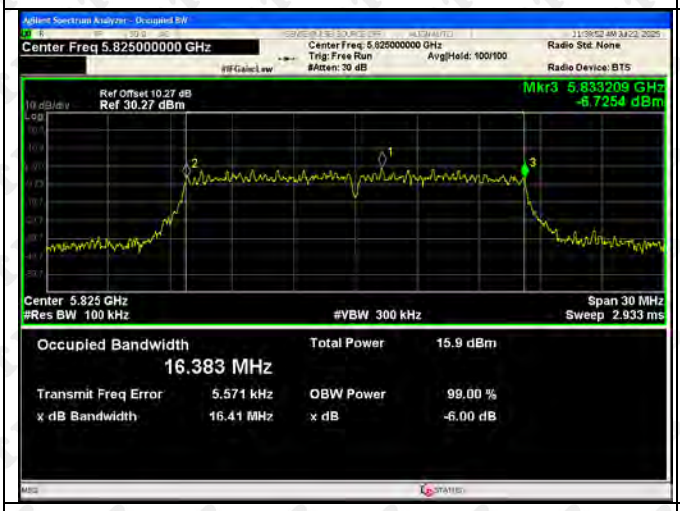
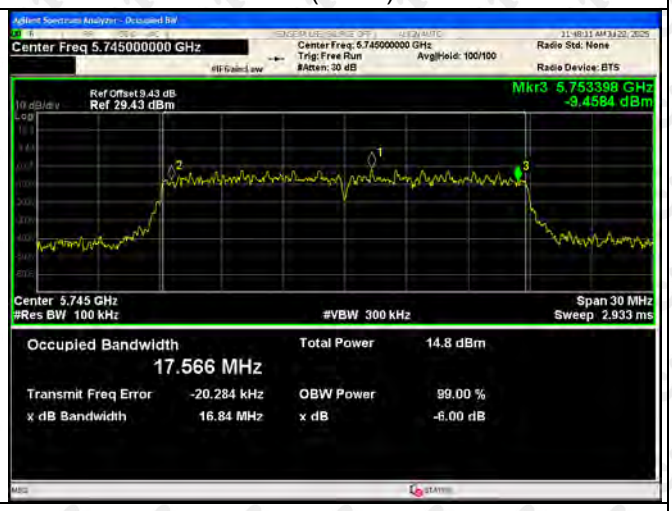
802.11ax(VH80)-5775

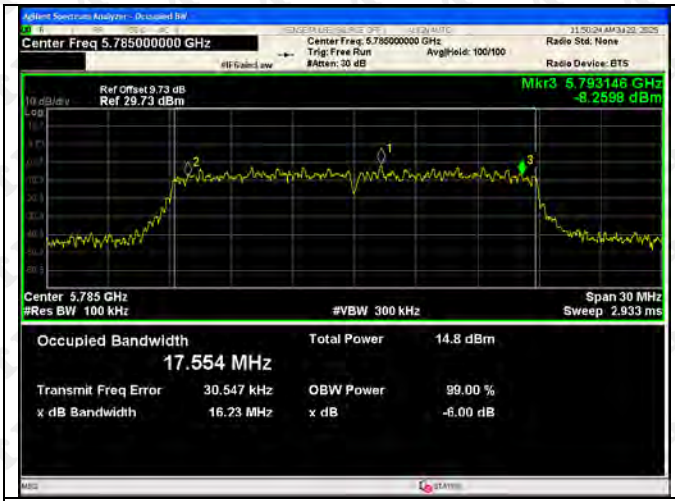




5725-5850MHz

ANT2:

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



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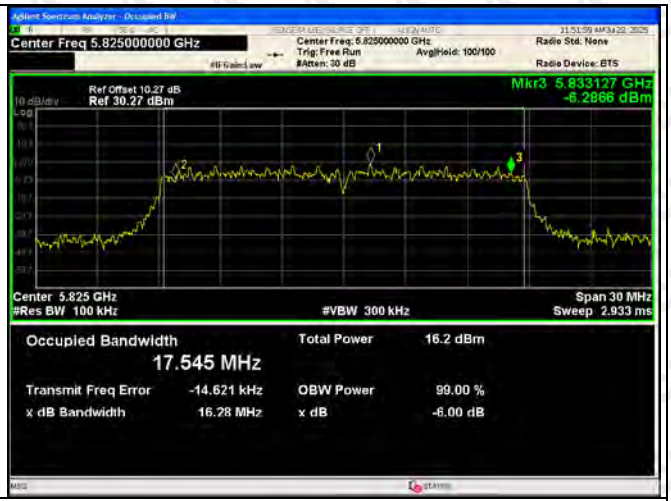
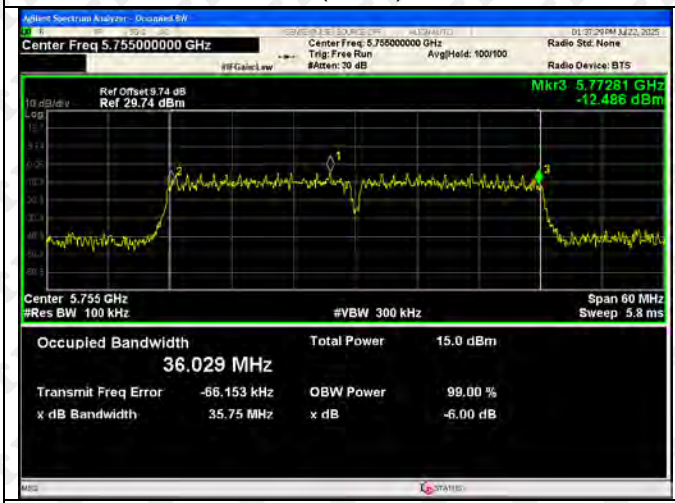
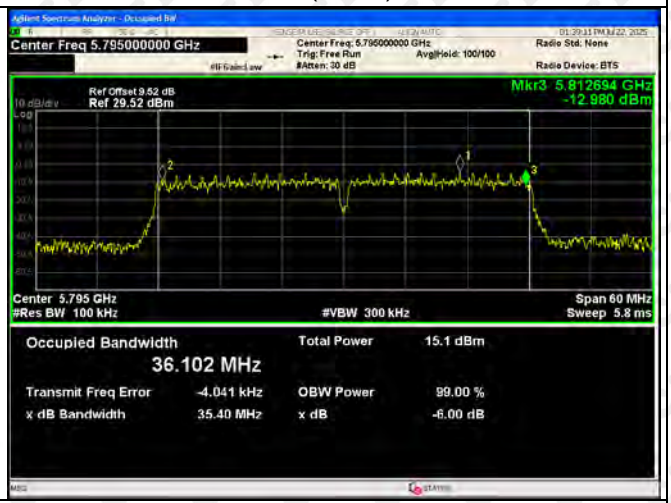


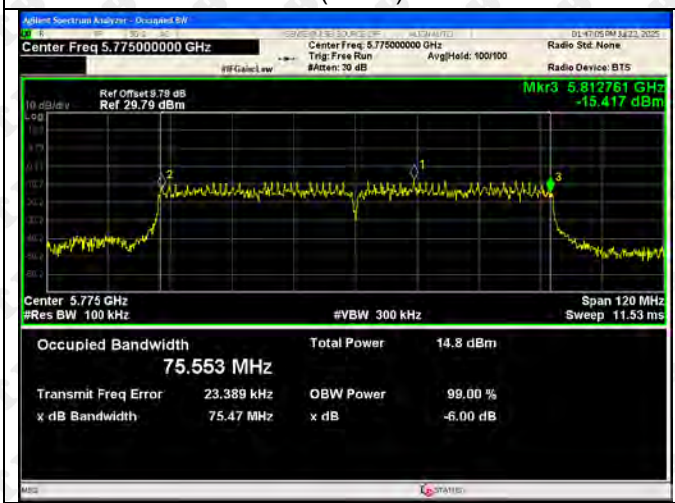
802.11ac(VH40)-5795



802.11ac(VH80)-5775



802.11n(HT20)-5745



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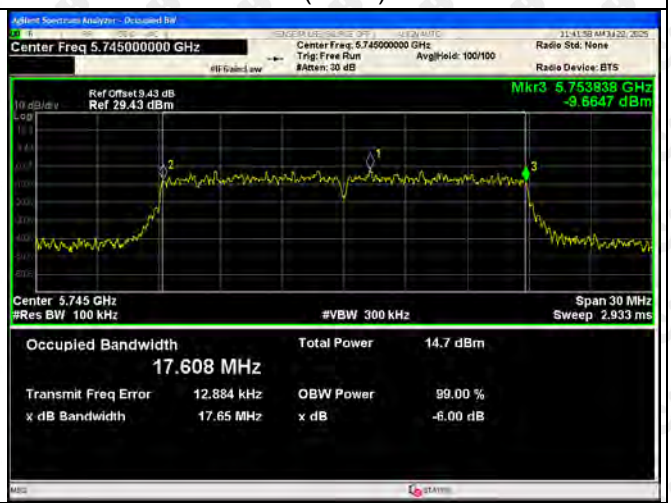
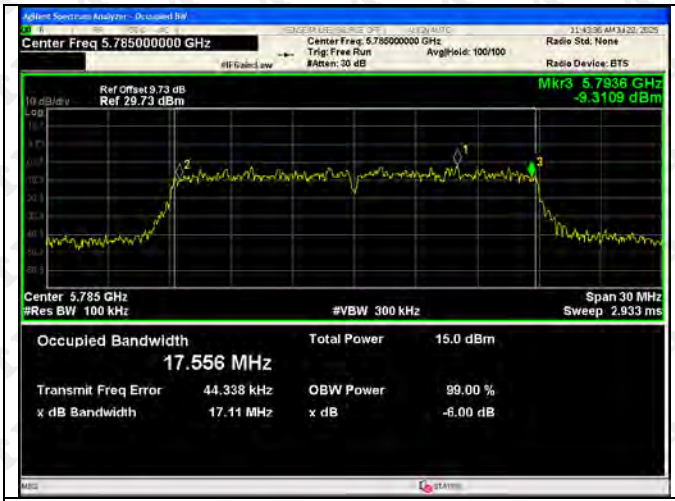
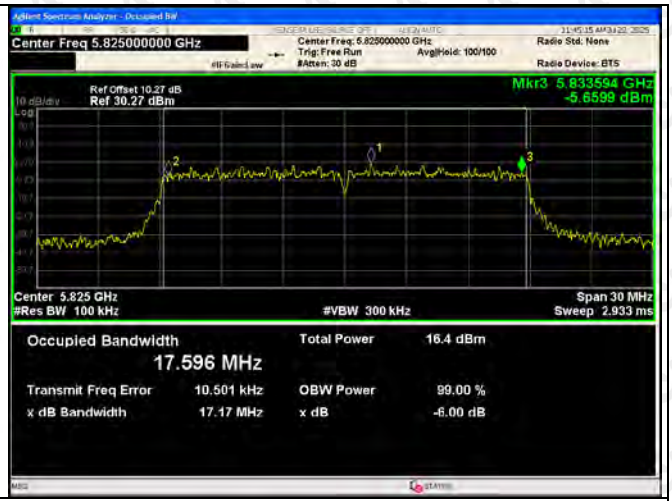


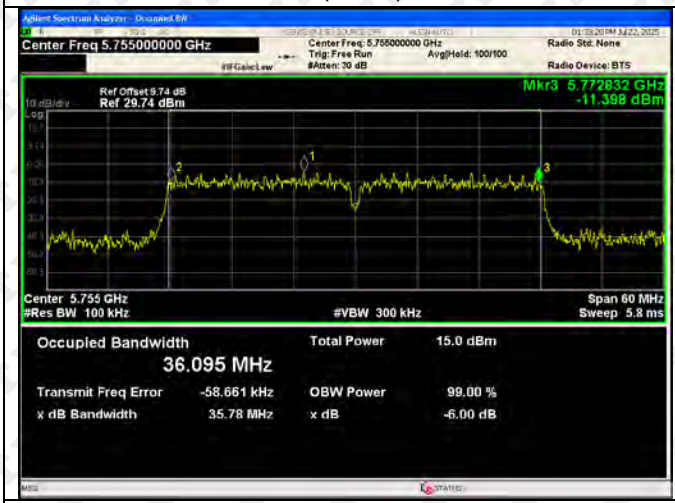
802.11n(HT20)-5825



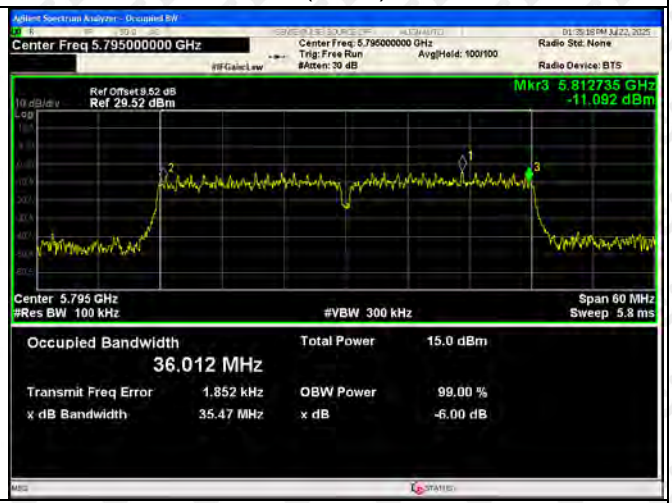
5802.11n(HT40)-5755



802.11n(HT40)-5795

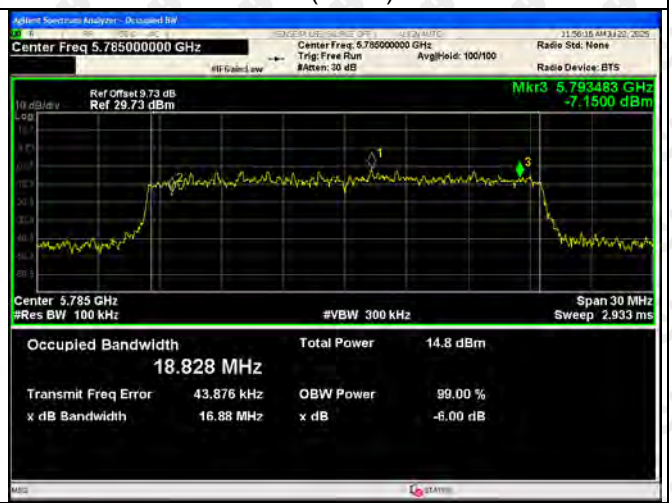


802.11ax(VH20)-5745

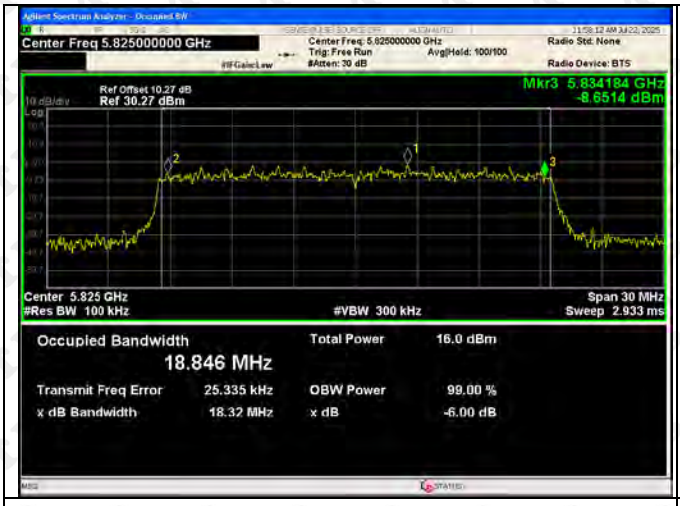


802.11ax(VH20)-5785

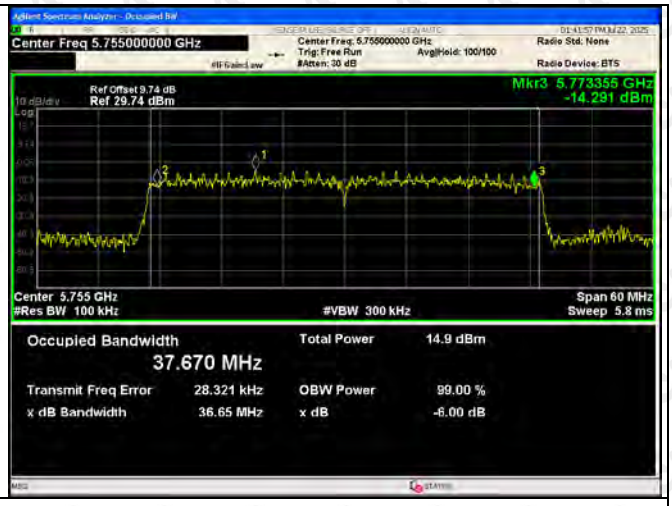
802.11ax(VH20)-5825



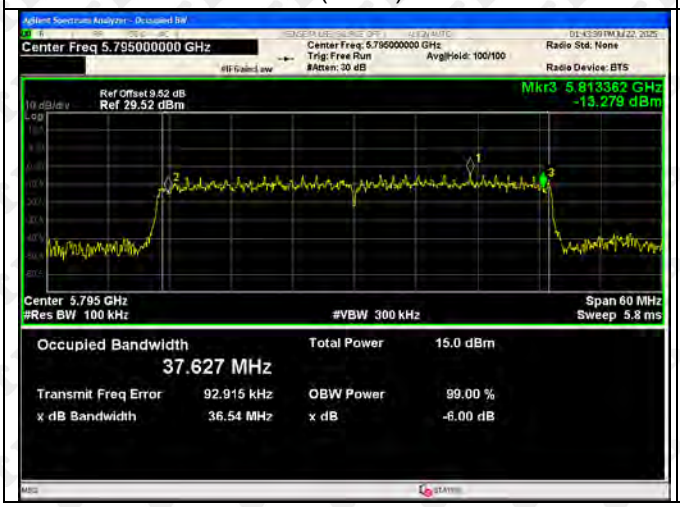
802.11ax(VH40)-5755

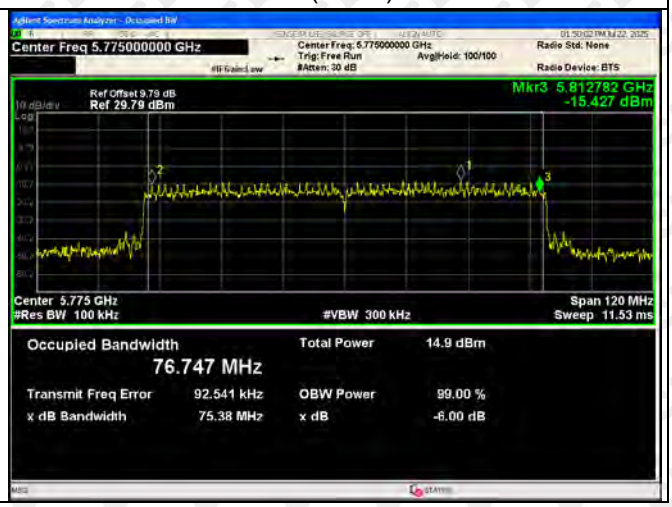


802.11ax(VH40)-5795



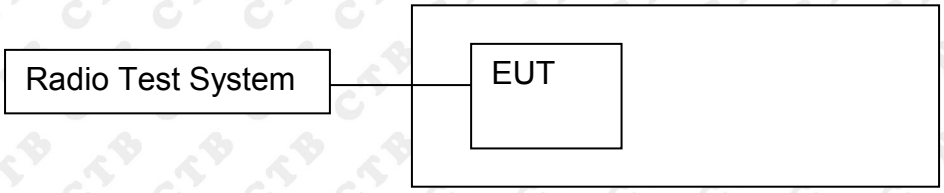
802.11ax(VH80)-5775





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.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

ANT 1+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	-9.62	-7.389	/	11	Pass
	5200	-10.23	-8.104	/	11	Pass
	5240	-10.856	-8.054	/	11	Pass
802.11ac(VHT20)	5180	-11.94	-8.535	-6.902	11	Pass
	5200	-11.67	-9.201	-7.252	11	Pass
	5240	-10.111	-8.936	-6.474	11	Pass
802.11ac(VHT40)	5190	-10.04	-11.328	-7.626	11	Pass
	5230	-9.711	-11.248	-7.402	11	Pass
802.11ac(VHT80)	5230	-6.759	-6.612	-3.675	11	Pass
802.11n(HT20)	5180	-11.498	-7.601	-6.116	11	Pass
	5200	-11.261	-7.798	-6.183	11	Pass
	5240	-10.987	-7.53	-5.913	11	Pass
802.11n(HT40)	5190	-14.528	-12.205	-10.203	11	Pass
	5230	-13.802	-11.417	-9.437	11	Pass
802.11ax(HE20)	5180	-12.265	-9.308	-7.529	11	Pass
	5200	1.259	-9.019	1.648	11	Pass
	5240	1.947	-8.188	2.349	11	Pass
802.11ax(HE40)	5190	-11.013	-12.452	-8.663	11	Pass
	5230	-12.124	-12.58	-9.336	11	Pass
802.11ax(HE80)	5210	-6.104	-6.676	-3.370	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	-9.667	-9.467	/	30	Pass
	5785	-9.529	-9.547	/	30	Pass
	5825	-8.066	-8.341	/	30	Pass
802.11ac(VHT20)	5745	-11.604	-10.414	-7.958	30	Pass
	5785	-11.342	-10.079	-7.654	30	Pass
	5825	-9.979	-8.341	-6.073	30	Pass
802.11ac(VHT40)	5755	-14.701	-14.308	-11.490	30	Pass
	5795	-14.49	-14.47	-11.470	30	Pass
802.11ac(VHT80)	5795	-18.487	-17.849	-15.146	30	Pass
802.11n(HT20)	5745	-10.235	-10.857	-7.525	30	Pass
	5785	-10.028	-9.773	-6.888	30	Pass
	5825	-8.767	-8.791	-5.769	30	Pass
802.11n(HT40)	5755	-14.725	-14.485	-11.593	30	Pass
	5795	-14.341	-13.502	-10.891	30	Pass
802.11ax(HE20)	5745	-11.778	-10.758	-8.228	30	Pass
	5785	-11.898	-10.717	-8.257	30	Pass
	5825	-9.532	-10.066	-6.780	30	Pass
802.11ax(HE40)	5755	-14.633	-14.013	-11.302	30	Pass
	5795	-15.188	-14.096	-11.597	30	Pass
802.11ax(HE80)	5775	-18.708	-17.929	-15.291	30	Pass

ANT 1:

802.11a-5180

802.11a-5200

802.11a-5240

802.11ac(VHT20)-5180

802.11ac(VHT20)-5200

802.11ac(VHT20)-5240

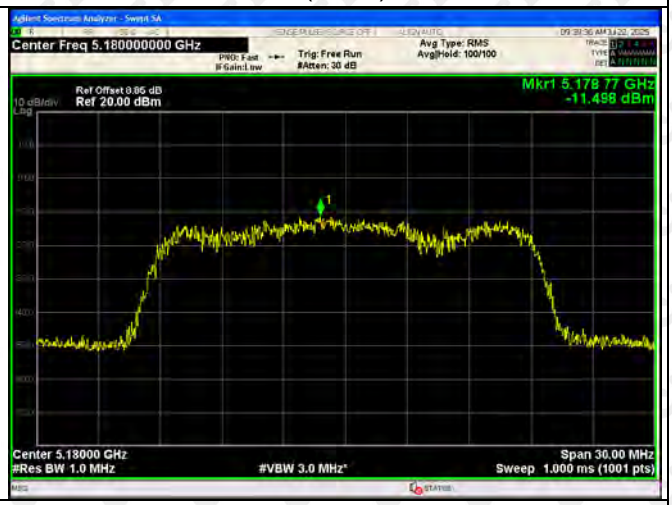
802.11ac(VHT40)-5190

802.11ac(VHT40)-5230

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


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.230000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: RMS
Avg|Hold: 100/100
Ref Offset 8.96 dB
10 dB/div
Ref 20.00 dBm
Mkr1 5.231 14 GHz
-12.124 dBm
Center 5.23000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 60.00 MHz
Sweep 1.000 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: RMS
Avg|Hold: 100/100
Ref Offset 9.03 dB
10 dB/div
Ref 20.00 dBm
Mkr1 5.213 24 GHz
-14.534 dBm
Center 5.21000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 120.0 MHz
Sweep 1.000 ms (1001 pts)

ANT 2:

802.11a-5180

802.11a-5200

802.11a-5240

802.11ac(VHT20)-5180

802.11ac(VHT20)-5200

802.11ac(VHT20)-5240

802.11ac(VHT40)-5190

802.11ac(VHT40)-5230

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

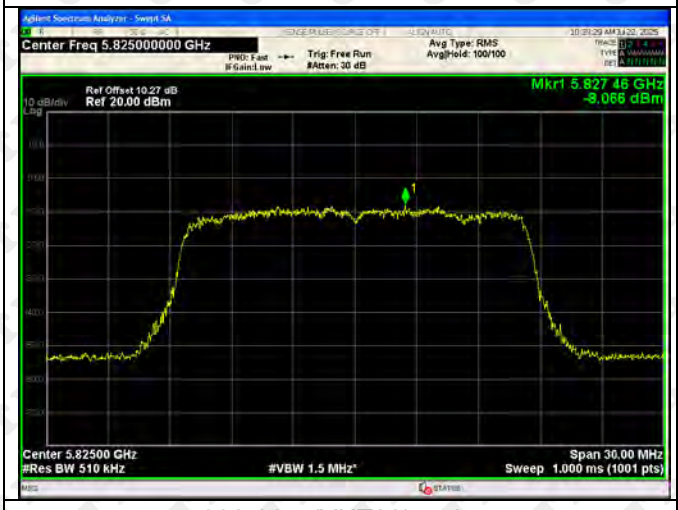
802.11ax(HE40)-5190

802.11ax(HE40)-5230

802.11ax(HE80)-5210

5725-5850MHz

ANT1:

802.11a-5745	802.11a-5785
	
802.11a-5825	802.11ac(VHT20)-5745
	
802.11ac(VHT20)-5785	802.11ac(VHT20)-5825

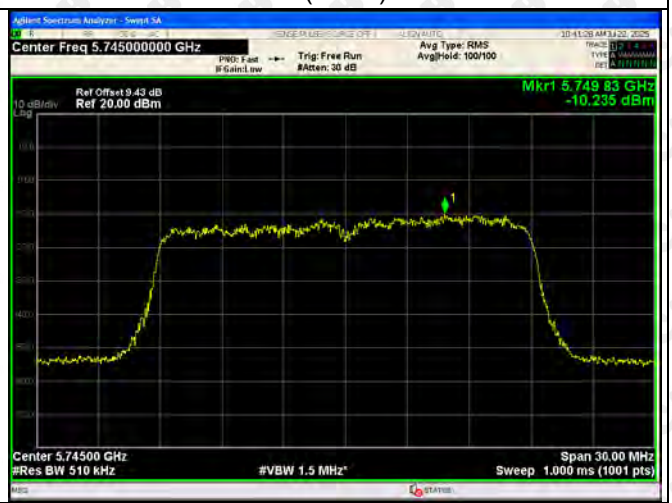
802.11ac(VHT40)-5755

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

ANT2:

802.11a-5745

802.11a-5785

802.11a-5825

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

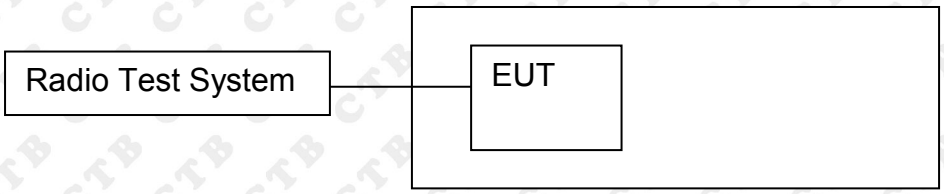
802.11ax(HE40)-5755

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	5180.0217	5180	0.0217	4.1955
		V max (V)	132	5180.0065	5180	0.0065	1.2589
		V min (V)	108	5180.0067	5180	0.0067	1.2952
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	5180.0108	5180	0.0108	2.0875
		T (°C)	10	5180.0109	5180	0.0109	2.0971
		T (°C)	20	5180.0291	5180	0.0291	5.6095
		T (°C)	30	5180.0267	5180	0.0267	5.1555
		T (°C)	40	5180.0179	5180	0.0179	3.4471
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	5200.0163	5200	0.0163	3.1329
		V max (V)	132	5200.0205	5200	0.0205	3.9435
		V min (V)	108	5200.0360	5200	0.0360	6.9298
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	5200.0280	5200	0.0280	5.3824
		T (°C)	10	5200.0388	5200	0.0388	7.4629
		T (°C)	20	5200.0015	5200	0.0015	0.2795
		T (°C)	30	5200.0139	5200	0.0139	2.6802
		T (°C)	40	5200.0309	5200	0.0309	5.9461
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	5240.0157	5240	0.0157	2.9896
		V max (V)	132	5240.0109	5240	0.0109	2.0734
		V min (V)	108	5240.0035	5240	0.0035	0.6683
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	5240.0212	5240	0.0212	4.0441
		T (°C)	10	5240.0125	5240	0.0125	2.3915
		T (°C)	20	5240.0324	5240	0.0324	6.1748
		T (°C)	30	5240.0496	5240	0.0496	9.4706
		T (°C)	40	5240.0501	5240	0.0501	9.5637
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	5745.0263	5745	0.0263	4.5819
		V max (V)	132	5745.0705	5745	0.0705	12.2708
		V min (V)	108	5745.0263	5745	0.0263	4.5819
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	5745.0570	5745	0.0570	9.9174
		T (°C)	10	5745.0347	5745	0.0347	6.0417
		T (°C)	20	5745.0422	5745	0.0422	7.3441
		T (°C)	30	5745.0005	5745	0.0005	0.0830
		T (°C)	40	5745.0913	5745	0.0913	15.8872
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	5785.0392	5785	0.0392	6.7679
		V max (V)	132	5785.0759	5785	0.0759	13.1116
		V min (V)	108	5785.0309	5785	0.0309	5.3487
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	5785.0266	5785	0.0266	4.5977
		T (°C)	10	5785.0095	5785	0.0095	1.6464
		T (°C)	20	5785.0248	5785	0.0248	4.2861
		T (°C)	30	5785.0061	5785	0.0061	1.0565
		T (°C)	40	5785.0387	5785	0.0387	6.6962
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	5825.0934	5825	0.0934	16.0285
		V max (V)	132	5825.0758	5825	0.0758	13.0116
		V min (V)	108	5825.0553	5825	0.0553	9.4941
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	5825.0580	5825	0.0580	9.9496
		T (°C)	10	5825.0136	5825	0.0136	2.3406
		T (°C)	20	5825.0390	5825	0.0390	6.6995
		T (°C)	30	5825.0707	5825	0.0707	12.1435
		T (°C)	40	5825.0280	5825	0.0280	4.8075
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	5180.0582	5180	0.0582	11.2408
		V max (V)	132	5180.0725	5180	0.0725	13.9903
		V min (V)	108	5180.0594	5180	0.0594	11.4695
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	5180.0294	5180	0.0294	5.6760
		T (°C)	10	5180.0409	5180	0.0409	7.8966
		T (°C)	20	5180.0163	5180	0.0163	3.1382
		T (°C)	30	5180.0420	5180	0.0420	8.1135
		T (°C)	40	5180.0552	5180	0.0552	10.6607
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	5200.0767	5200	0.0767	14.7466
		V max (V)	132	5200.0285	5200	0.0285	5.4816
		V min (V)	108	5200.0569	5200	0.0569	10.9385
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	5200.0039	5200	0.0039	0.7486
		T (°C)	10	5200.0789	5200	0.0789	15.1693
		T (°C)	20	5200.0108	5200	0.0108	2.0846
		T (°C)	30	5200.0042	5200	0.0042	0.7982
		T (°C)	40	5200.0361	5200	0.0361	6.9398
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	5240.0515	5240	0.0515	9.8332
		V max (V)	132	5240.0823	5240	0.0823	15.6987
		V min (V)	108	5240.0662	5240	0.0662	12.6320
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	5240.0624	5240	0.0624	11.9032
		T (°C)	10	5240.0482	5240	0.0482	9.2022
		T (°C)	20	5240.0355	5240	0.0355	6.7797
		T (°C)	30	5240.0251	5240	0.0251	4.7847
		T (°C)	40	5240.0863	5240	0.0863	16.4661
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	5745.0111	5745	0.0111	1.9324
		V max (V)	132	5745.0499	5745	0.0499	8.6867
		V min (V)	108	5745.0271	5745	0.0271	4.7211
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	5745.0814	5745	0.0814	14.1616
		T (°C)	10	5745.0436	5745	0.0436	7.5890
		T (°C)	20	5745.0666	5745	0.0666	11.5938
		T (°C)	30	5745.0768	5745	0.0768	13.3697
		T (°C)	40	5745.0061	5745	0.0061	1.0670
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	5785.0161	5785	0.0161	2.7846
		V max (V)	132	5785.0731	5785	0.0731	12.6308
		V min (V)	108	5785.0812	5785	0.0812	14.0358
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	5785.0911	5785	0.0911	15.7455
		T (°C)	10	5785.0601	5785	0.0601	10.3867
		T (°C)	20	5785.0331	5785	0.0331	5.7301
		T (°C)	30	5785.0384	5785	0.0384	6.6348
		T (°C)	40	5785.0664	5785	0.0664	11.4830
		T (°C)	50	5785.0119	5785	0.0119	2.0510
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	5825.0898	5825	0.0898	15.4148
		V max (V)	132	5825.0798	5825	0.0798	13.7046
		V min (V)	108	5825.0919	5825	0.0919	15.7749
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	5825.0501	5825	0.0501	8.5989
		T (°C)	10	5825.0887	5825	0.0887	15.2241
		T (°C)	20	5825.0288	5825	0.0288	4.9467
		T (°C)	30	5825.0199	5825	0.0199	3.4215
		T (°C)	40	5825.0257	5825	0.0257	4.4102
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.

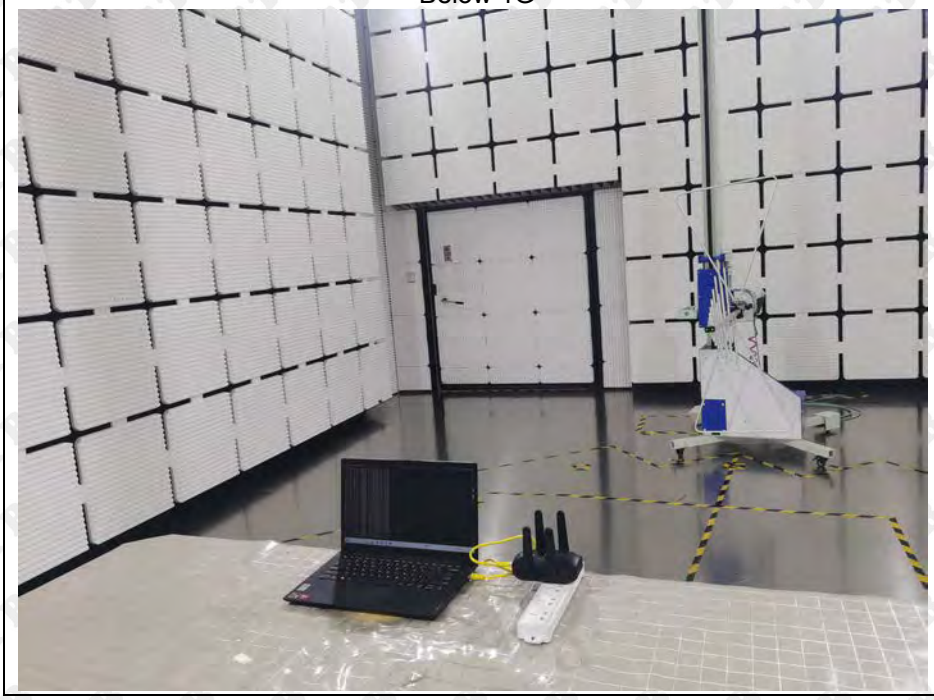
EUT Antenna:

The antenna is External antenna and no consideration of replacement. The best case gain of the antenna is WiFi (5.2G): 3.15dBi; WiFi (5.8G): 3.29dBi.

15. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G

Conducted Emission

※※※※※ **END OF REPORT** ※※※※※