5745-5825MHz

Test mode Ant 1	Test Channel (MHz)	6dB Bandwidth (MHz)	Result
802.11a	5745	16.532	Pass
	5785	16.5	Pass
	5825	16.517	Pass
802.11ac(VHT20)	5745	17.763	Pass
	5785	17.761	Pass
	5825	17.732	Pass
802.11ac(VHT40)	5755	36.489	Pass
	5795	36.522	Pass
802.11n(HT20)	5745	17.797	Pass
	5785	17.752	Pass
	5825	17.787	Pass
802.11n(HT40)	5755	36.465	Pass
	5795	36.46	Result
802.11ax(HE20)	5745	17.761	Pass
	5785	17.749	Pass
	5825	17.8	Pass
802.11ax(HE40)	5755	36.488	Pass
	5795	36.494	Pass

Test mode Ant 2	Test Channel (MHz)	6dB Bandwidth (MHz)	Result
802.11a	5745	16.448	Pass
	5785	16.38	Pass
	5825	16.395	Pass
802.11ac(VHT20)	5745	17.674	Pass
	5785	17.58	Pass
	5825	17.6	Pass
802.11ac(VHT40)	5755	30.008	Pass
	5795	33.225	Pass
802.11n(HT20)	5745	16.891	Pass
	5785	16.987	Pass
	5825	16.677	Pass
802.11n(HT40)	5755	19.099	Pass
	5795	25.294	Result
802.11ax(HE20)	5745	17.681	Pass
	5785	17.357	Pass
	5825	17.339	Pass
802.11ax(HE40)	5755	32.222	Pass
	5795	33.257	Pass

Test Graph
5180-5240MHz:
ANT 1

802.11a-5180

802.11a-5200

802.11a-5240

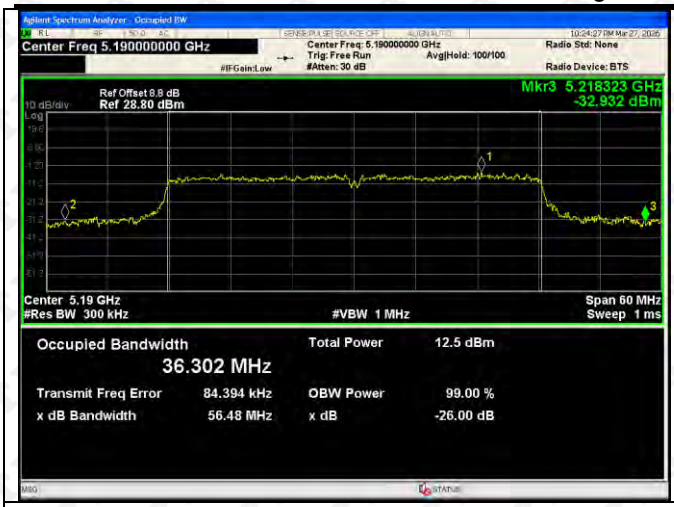
802.11ac(VHT20)-5180

802.11ac(VHT20)-5200

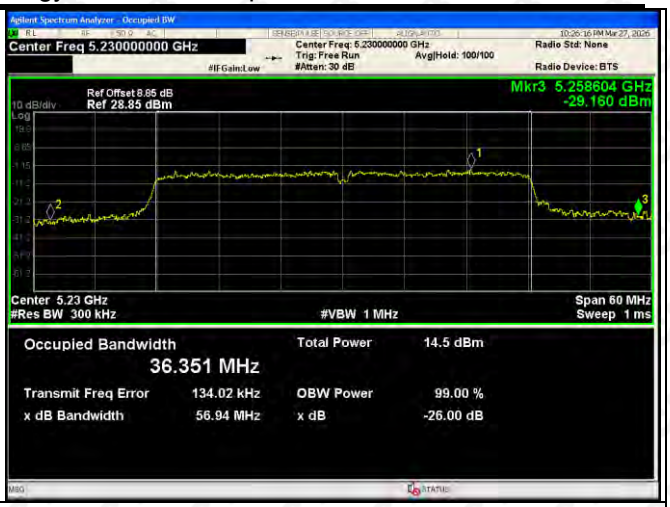
802.11ac(VHT20)-5240

802.11ac(VHT40)-5190

802.11ac(VHT40)-5230



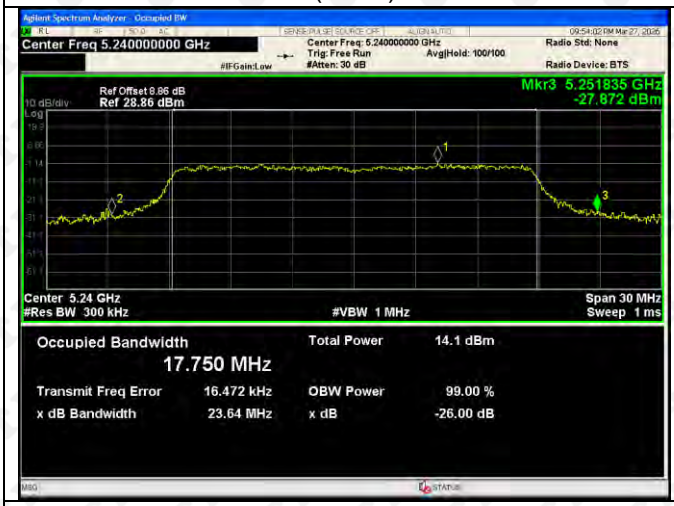
802.11n(HT20)-5180



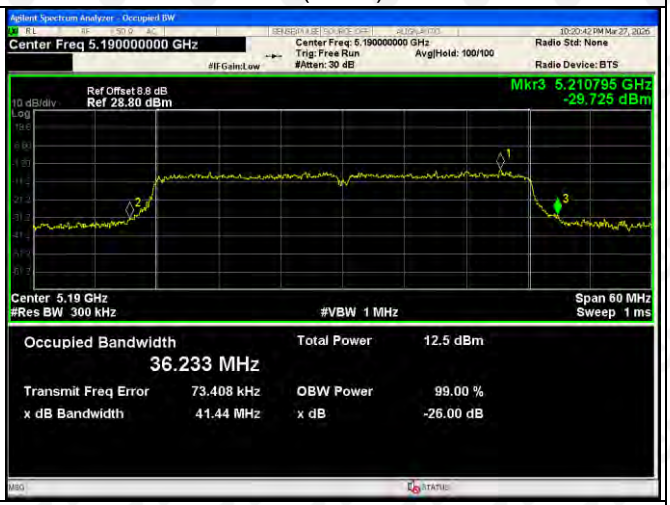
802.11n(HT20)-5200

802.11n(HT20)-5240

802.11n(HT40)-5190



802.11n(HT40)-5230

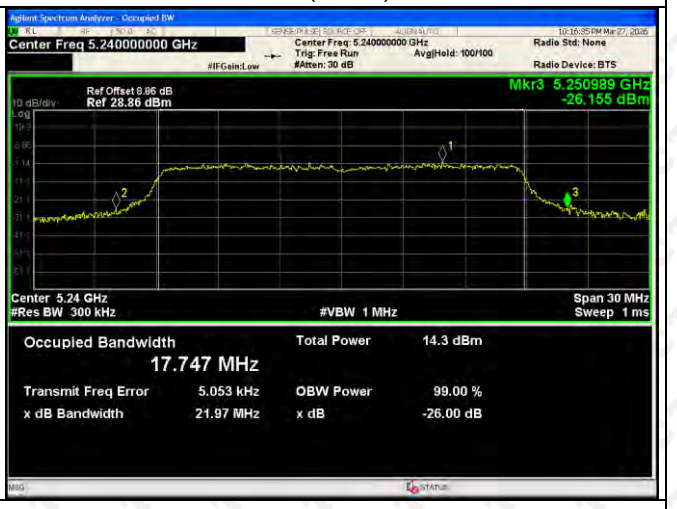


802.11ax(HE20)-5180

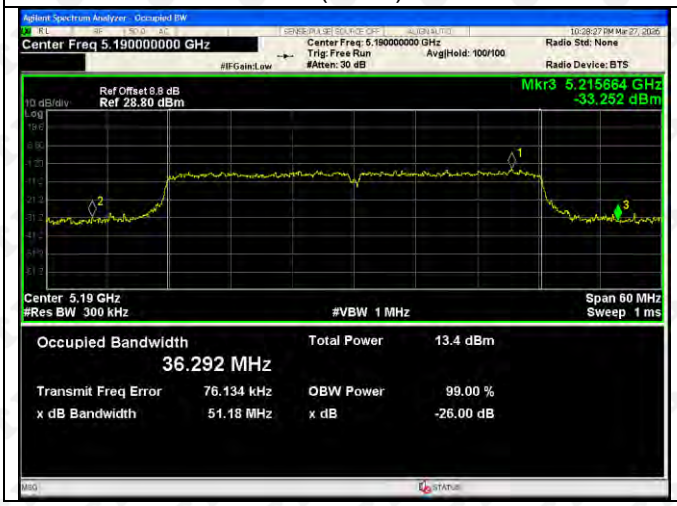
802.11ax(HE20)-5200

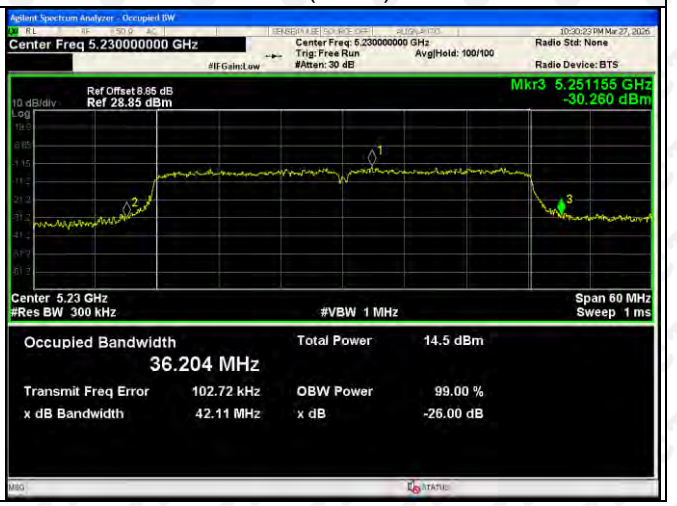
802.11ax(HE20)-5240

802.11ax(HE40)-5190



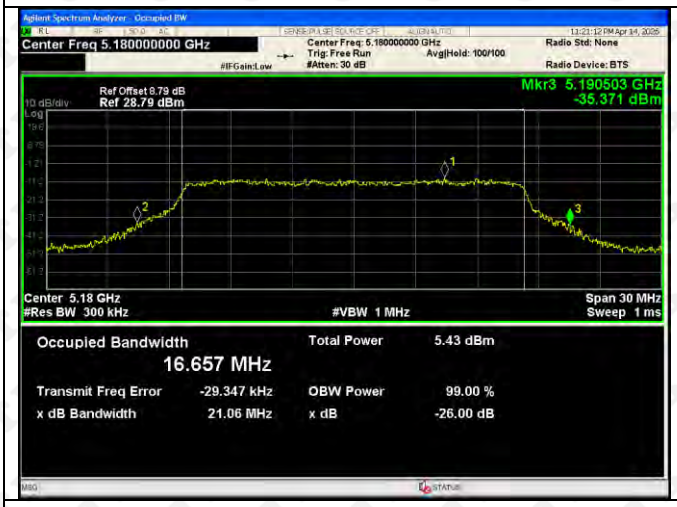
802.11ax(HE40)-5230





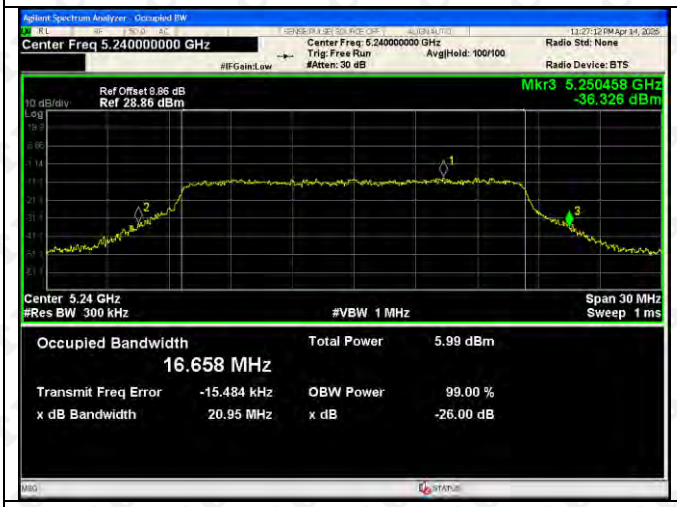
ANT 2

802.11a-5180

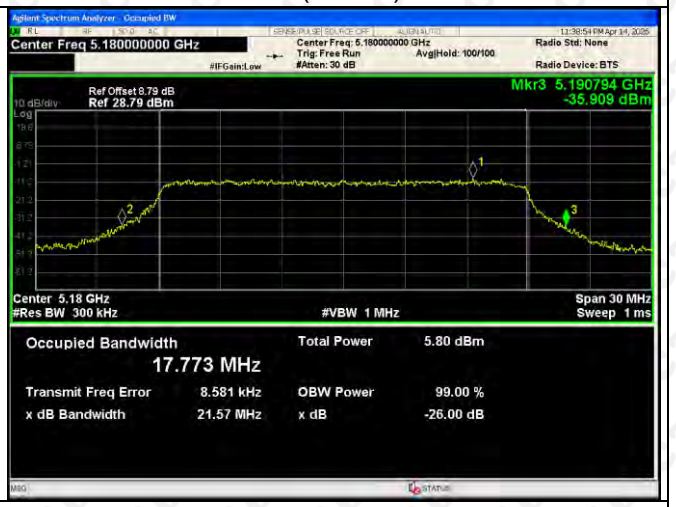


802.11a-5200

802.11a-5240

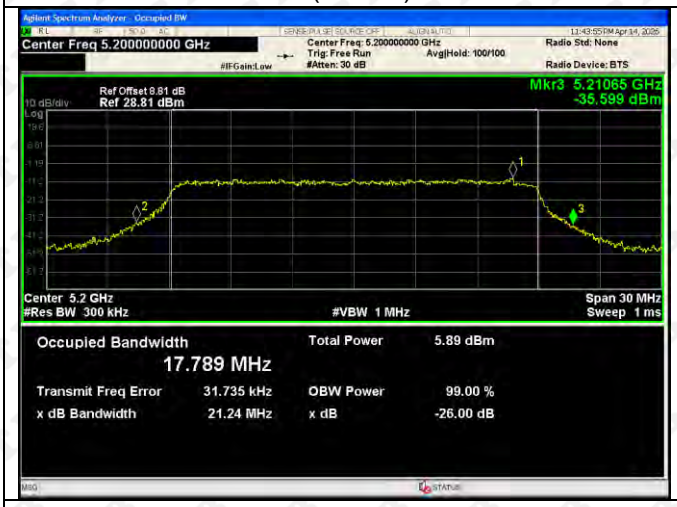


802.11ac(VHT20)-5180

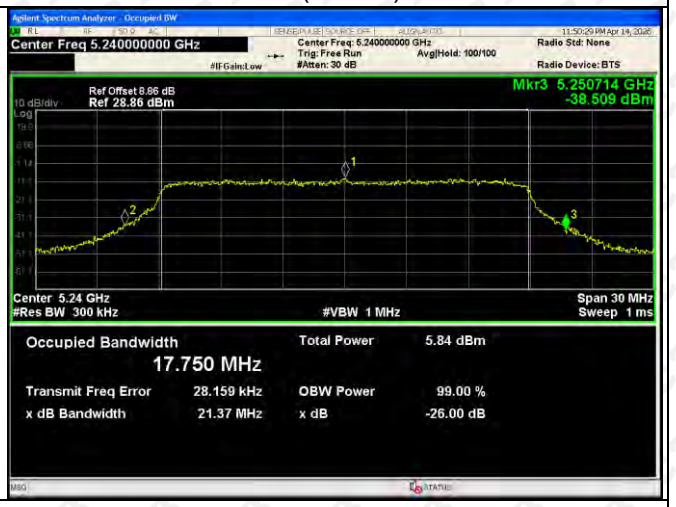


802.11ac(VHT20)-5200

802.11ac(VHT20)-5240

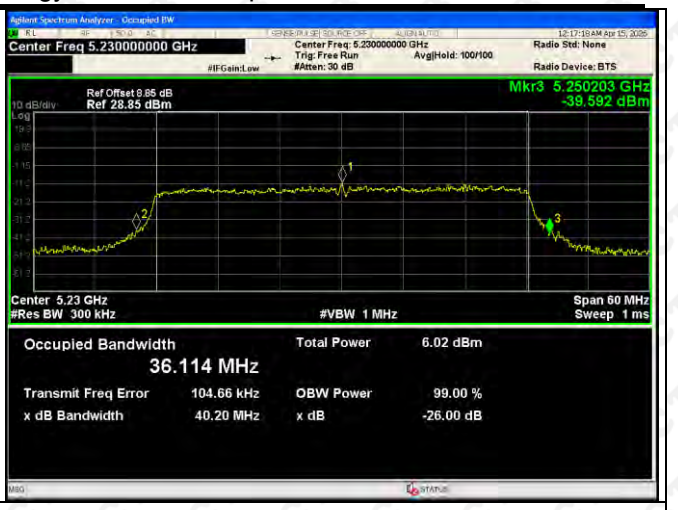


802.11ac(VHT40)-5190



802.11ac(VHT40)-5230

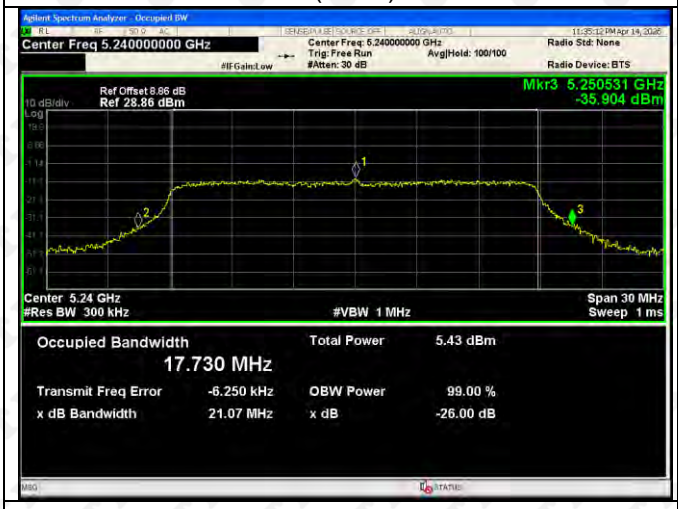
802.11n(HT20)-5180



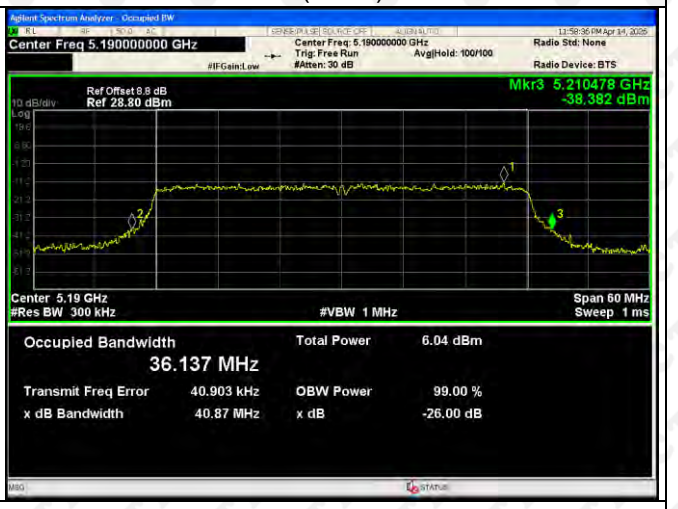
802.11n(HT20)-5200

802.11n(HT20)-5240

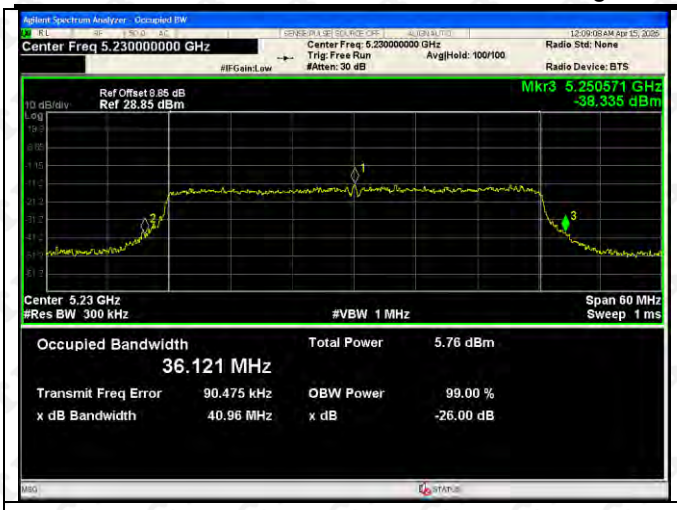
802.11n(HT40)-5190



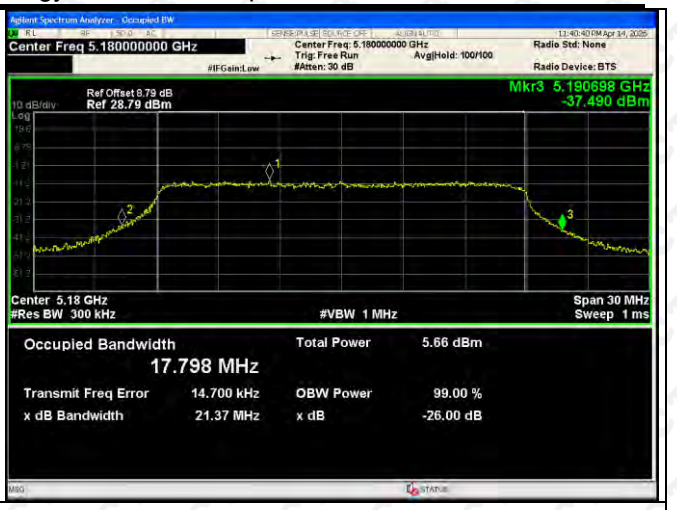
802.11n(HT40)-5230



802.11ax(HE20)-5180

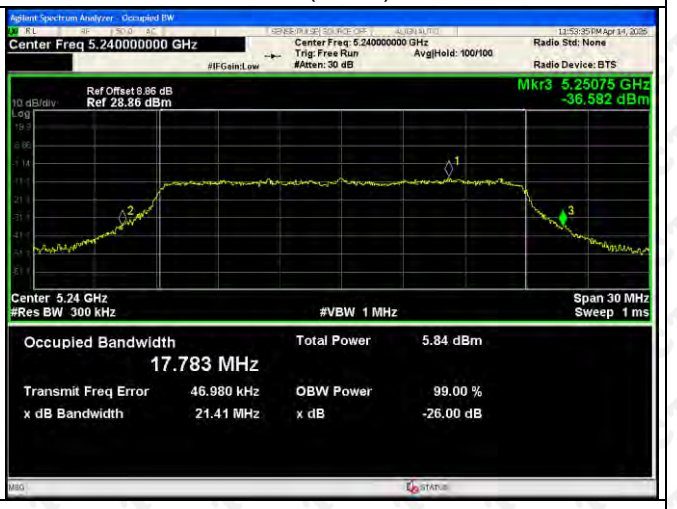


802.11ax(HE20)-5200

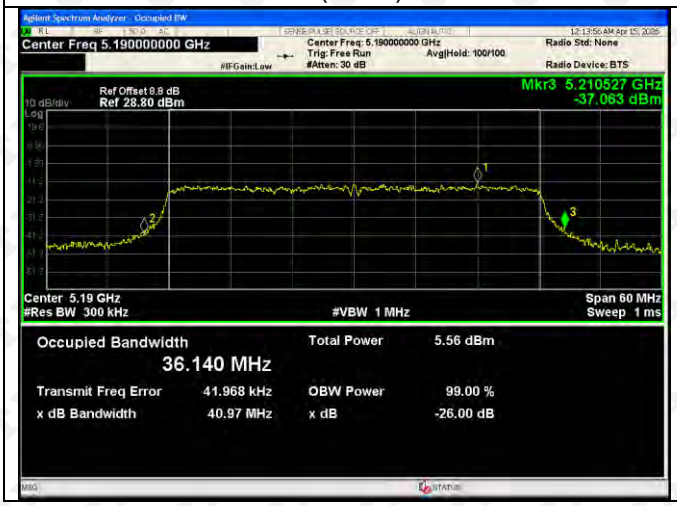


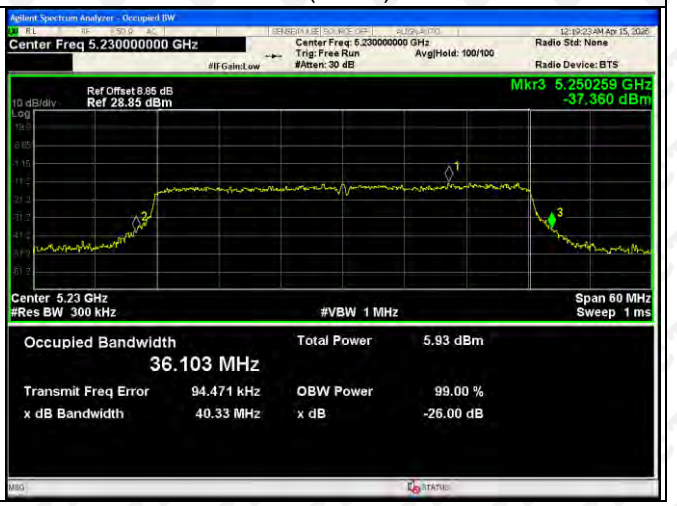
802.11ax(HE20)-5240

802.11ax(HE40)-5190



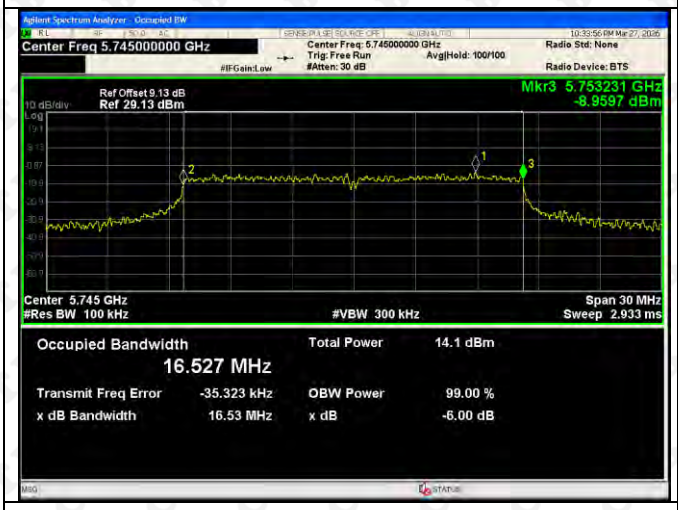
802.11ax(HE40)-5230





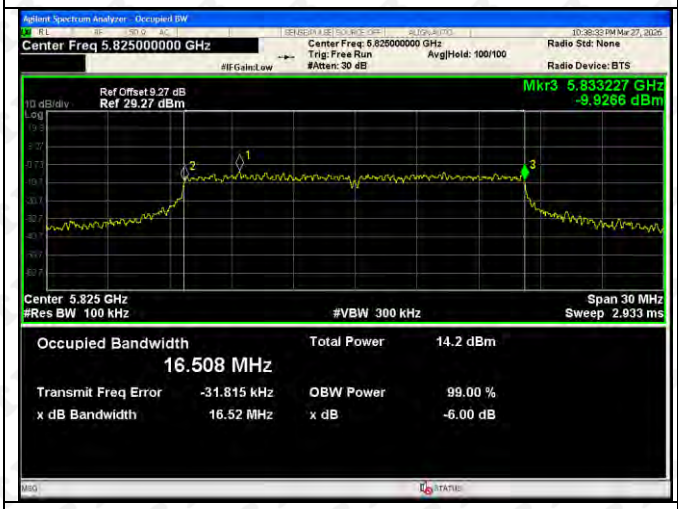
5745-5825MHz:
ANT1:

802.11a-5745

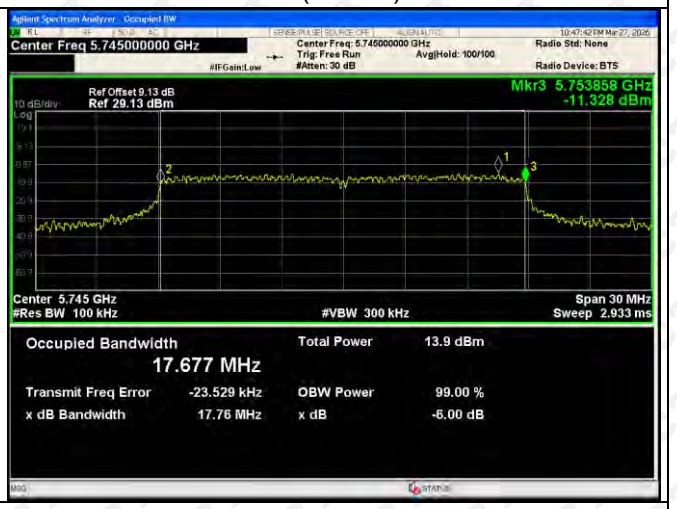


802.11a-5785

802.11a-5825



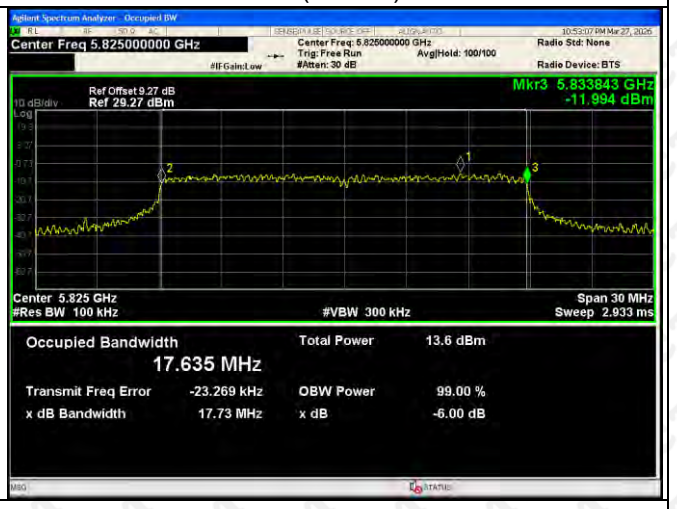
802.11ac(VHT20)-5745



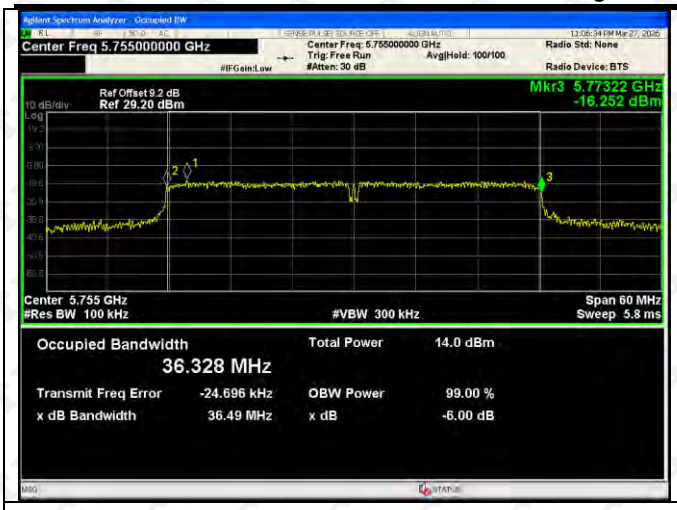
802.11ac(VHT20)-5785

802.11ac(VHT20)-5825

802.11ac(VHT40)-5755



802.11ac(VHT40)-5795

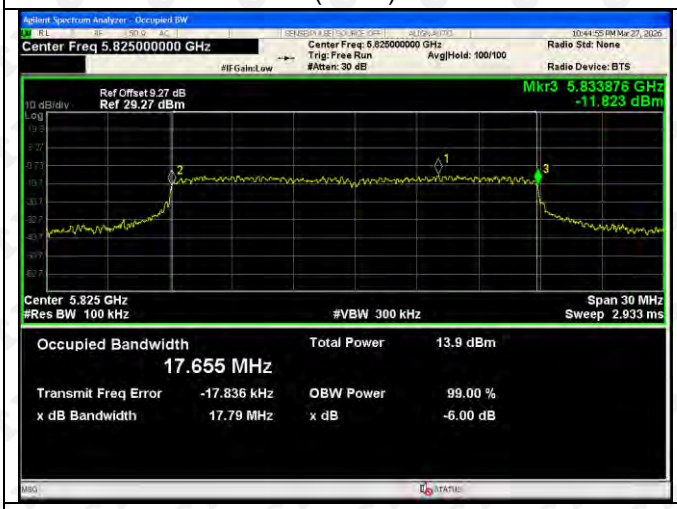


802.11n(HT20)-5745

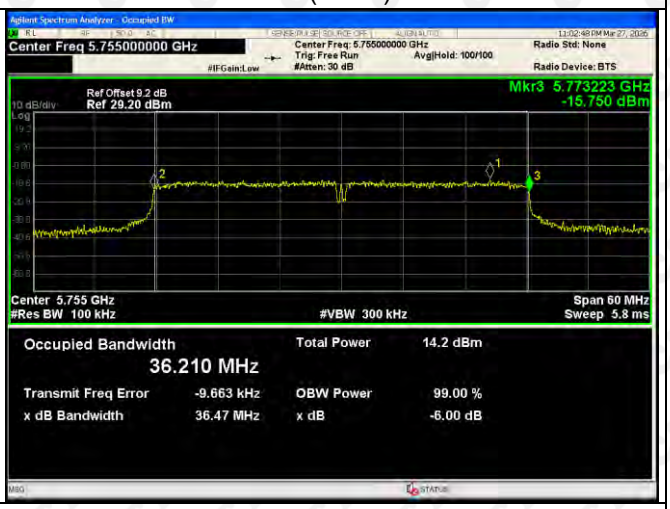
802.11n(HT20)-5785

802.11n(HT20)-5825

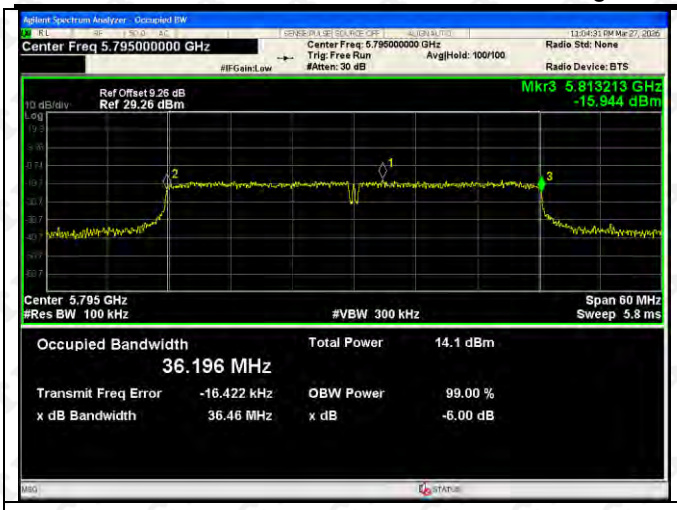
5802.11n(HT40)-5755



802.11n(HT40)-5795



802.11ax(HE20)-5745

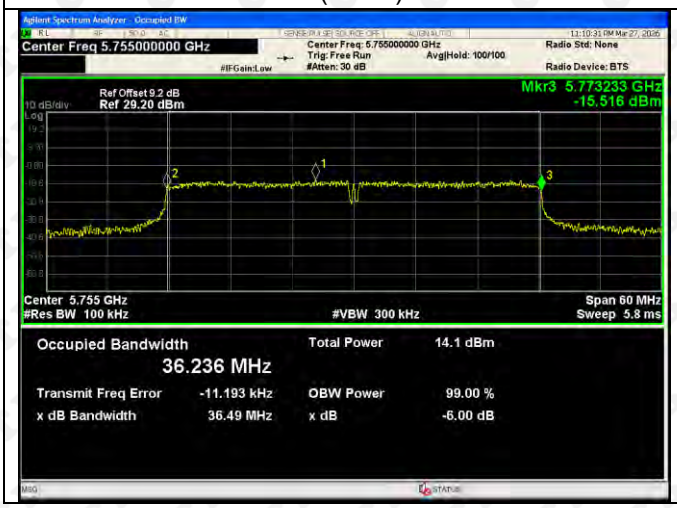


802.11ax(HE20)-5785

802.11ax(HE20)-5825

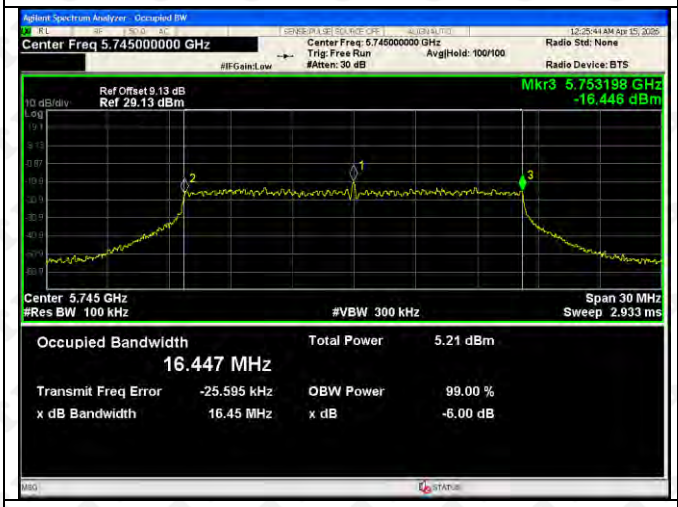
802.11ax(HE40)-5755

802.11ax(HE40)-5795



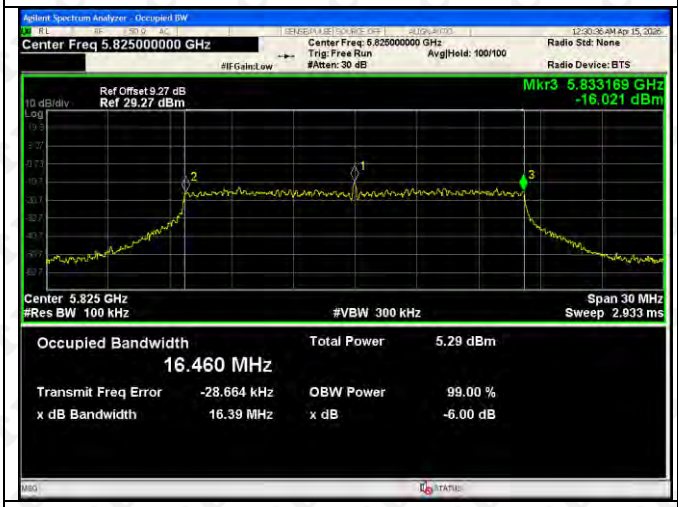
ANT2:

802.11a-5745

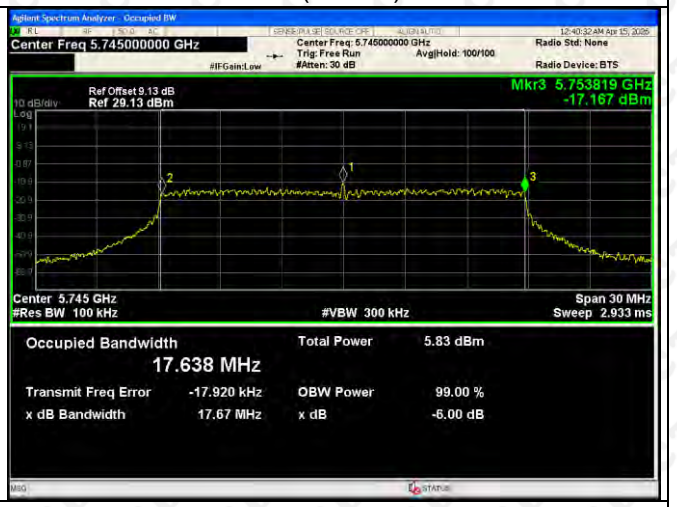


802.11a-5785

802.11a-5825

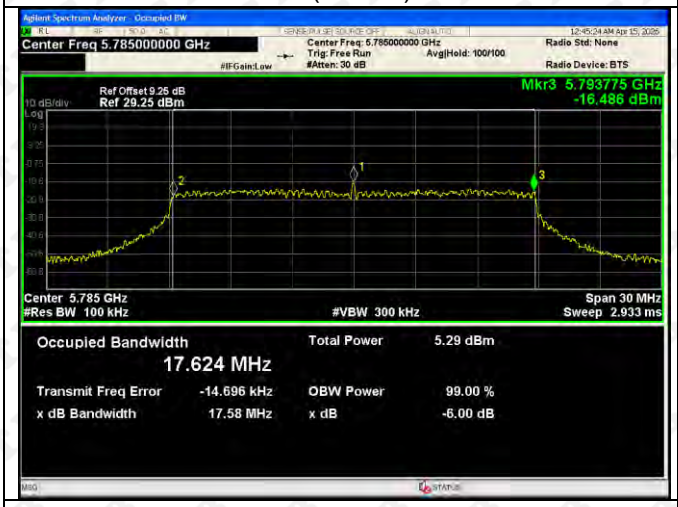


802.11ac(VHT20)-5745

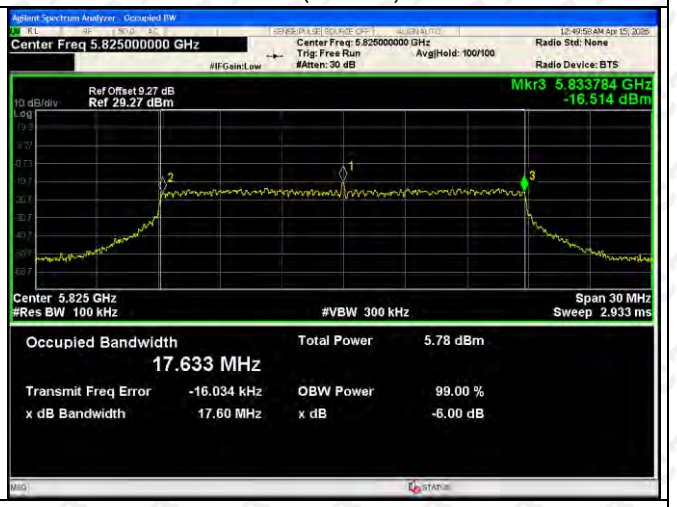


802.11ac(VHT20)-5785

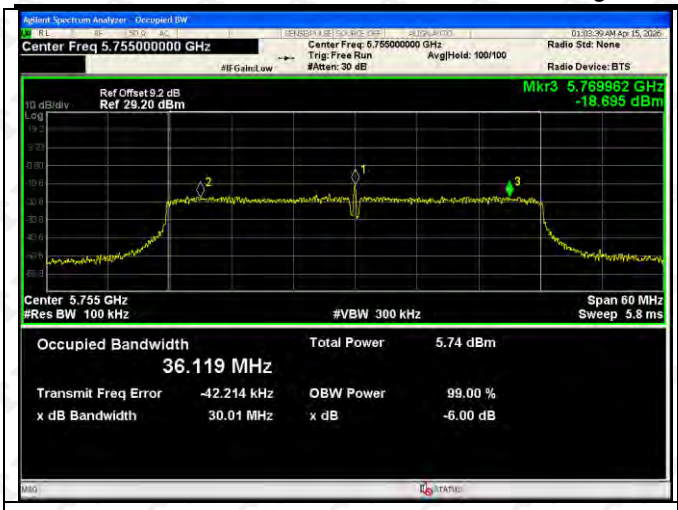
802.11ac(VHT20)-5825



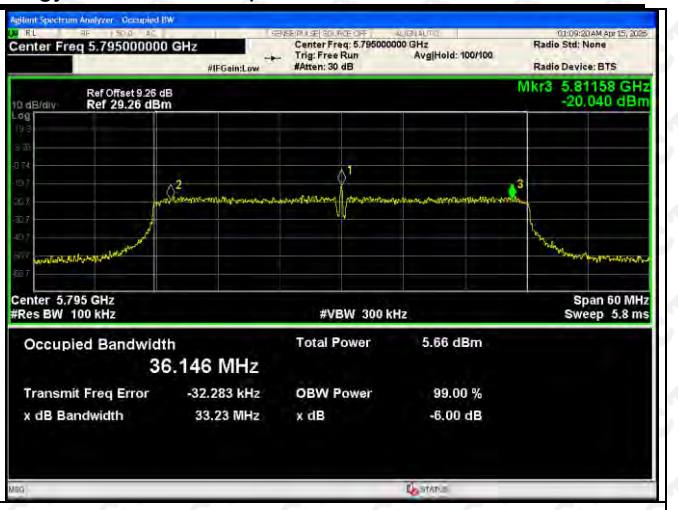
802.11ac(VHT40)-5755



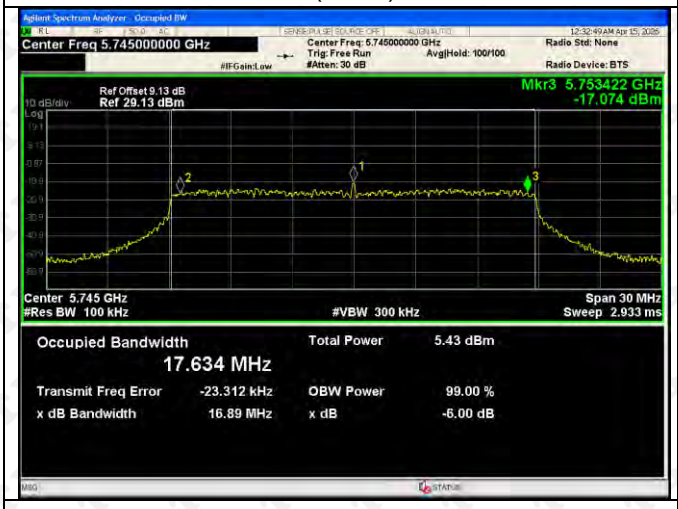
802.11ac(VHT40)-5795



802.11n(HT20)-5745

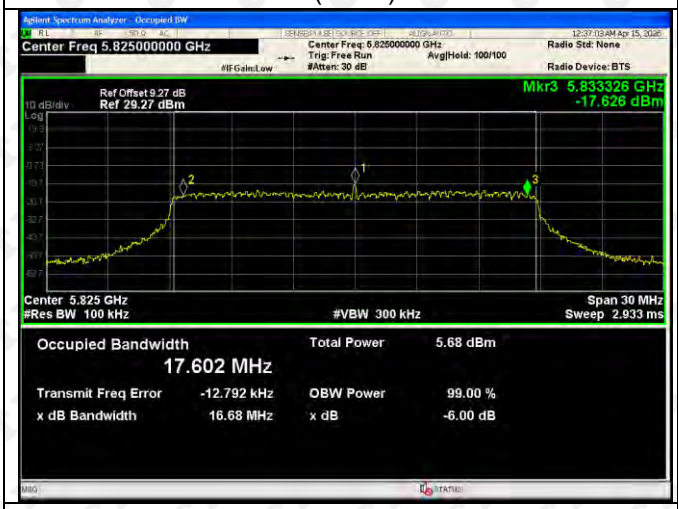


802.11n(HT20)-5785

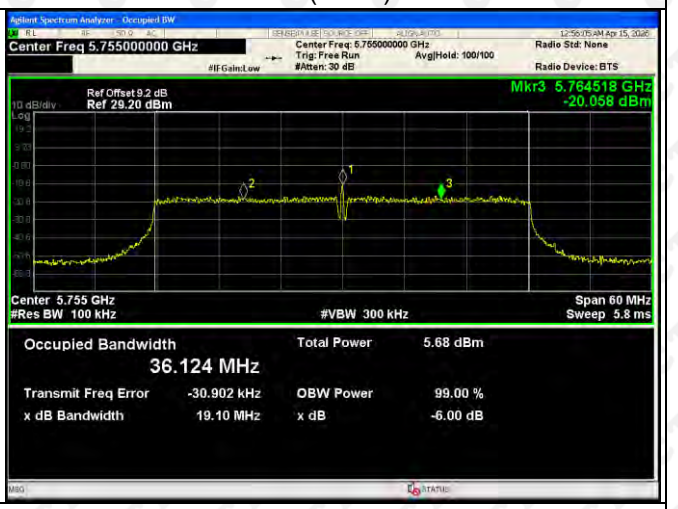


802.11n(HT20)-5825

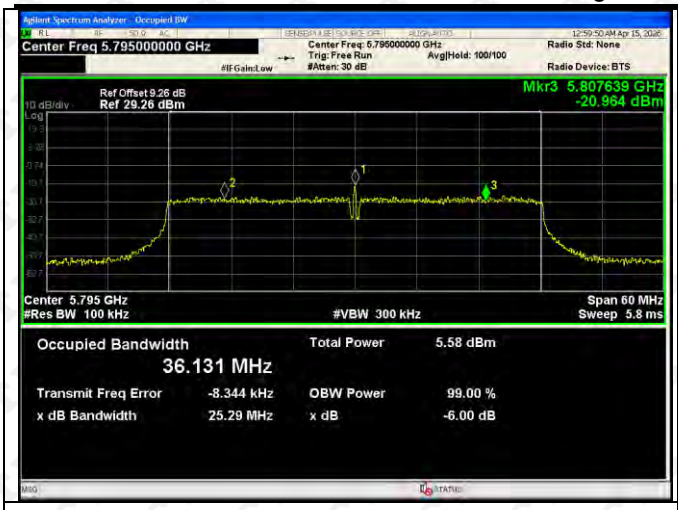
5802.11n(HT40)-5755



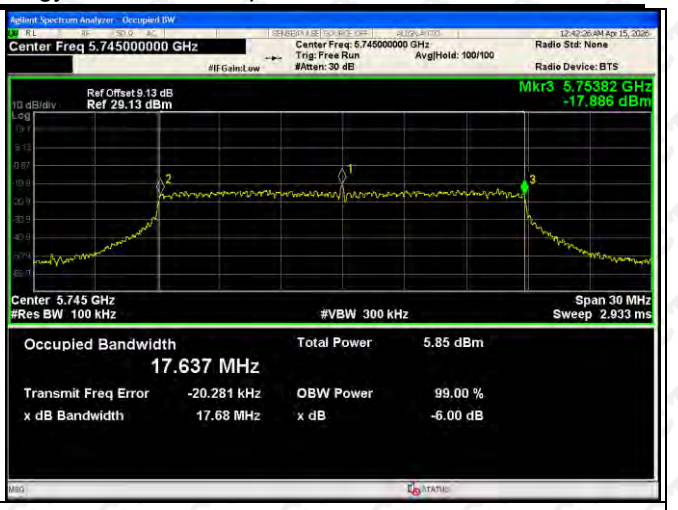
802.11n(HT40)-5795



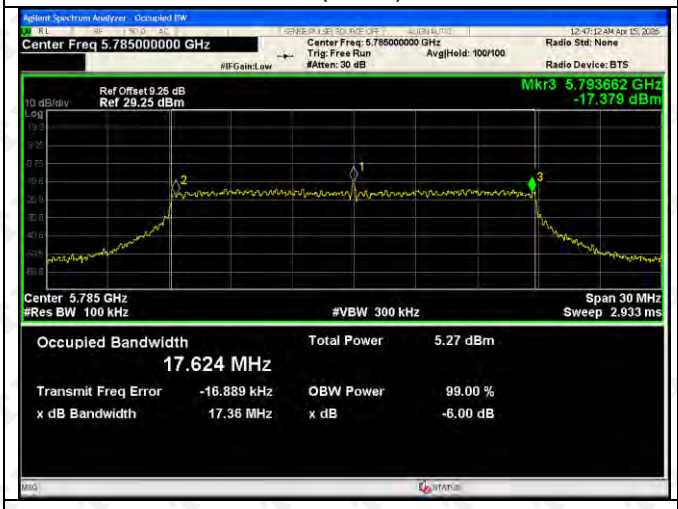
802.11ax(HE20)-5745



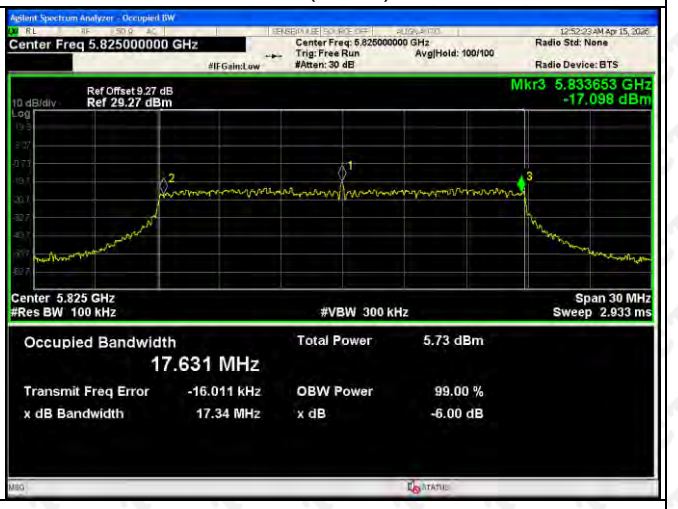
802.11ax(HE20)-5785



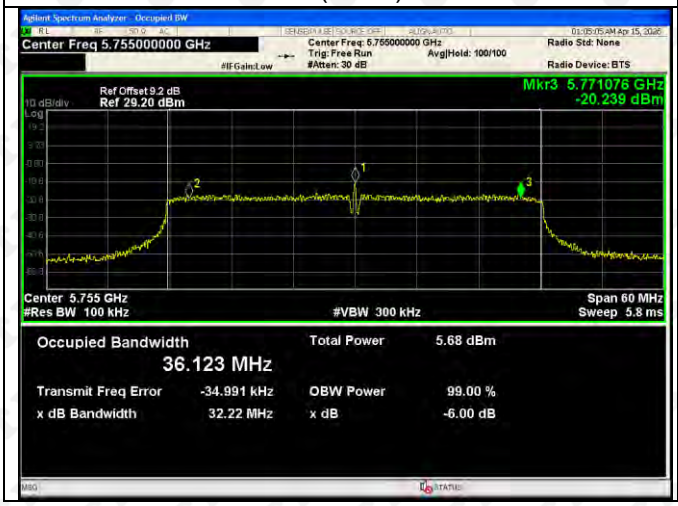
802.11ax(HE20)-5825

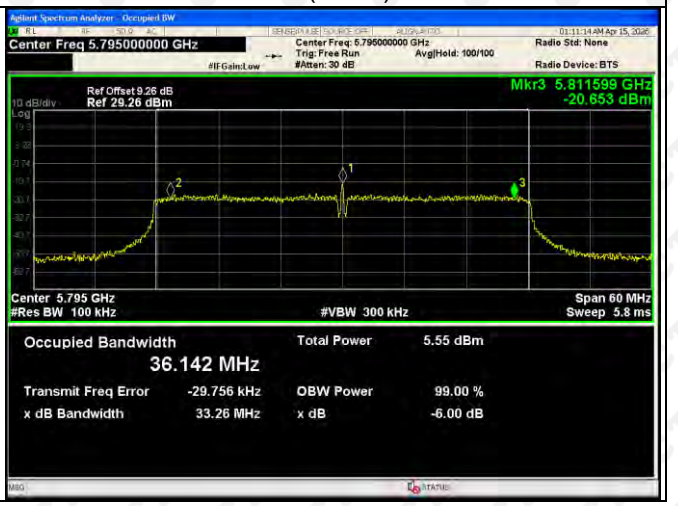


802.11ax(HE40)-5755



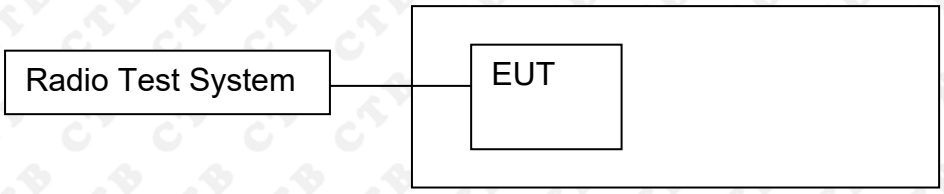
802.11ax(HE40)-5795





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

ANT1+ANT2

5180-5240MHz:

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	-5.412	-11.413	/	11	Pass
	5200	-4.16	-11.183	/	11	Pass
	5240	-2.59	-10.415	/	11	Pass
802.11ac(VHT20)	5180	-5.309	-11.479	-4.369	11	Pass
	5200	-5.04	-11.319	-4.121	11	Pass
	5240	-3.411	-10.586	-2.650	11	Pass
802.11ac(VHT40)	5190	-7.968	-13.683	-6.936	11	Pass
	5230	-5.904	-12.638	-5.069	11	Pass
802.11n(HT20)	5180	-5.419	-11.381	-4.438	11	Pass
	5200	-4.803	-11.287	-3.923	11	Pass
	5240	-3.34	-10.728	-2.612	11	Pass
802.11n(HT40)	5190	-7.742	-13.765	-6.773	11	Pass
	5230	-6.08	-12.806	-5.243	11	Pass
802.11ax(HE20)	5180	-4.632	-11.484	-4.369	11	Pass
	5200	-4.327	-11.191	-3.514	11	Pass
	5240	-3.116	-10.708	-2.419	11	Pass
802.11ax(HE40)	5190	-6.971	-14.044	-6.193	11	Pass
	5230	-5.948	-12.882	-5.147	11	Pass

5745-5825MHz:

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	-6.238	-11.612	/	30	Pass
	5785	-6.16	-12.078	/	30	Pass
	5825	-6.243	-11.877	/	30	Pass
802.11ac(VHT20)	5745	-6.748	-11.913	-5.594	30	Pass
	5785	-7	-11.758	-5.747	30	Pass
	5825	-7.289	-11.641	-5.931	30	Pass
802.11ac(VHT40)	5755	-9.998	-12.654	-8.116	30	Pass
	5795	-10.154	-13.043	-8.352	30	Pass
802.11n(HT20)	5745	-6.78	-11.944	-5.626	30	Pass
	5785	-6.952	-11.803	-5.722	30	Pass
	5825	-6.94	-11.397	-5.610	30	Pass
802.11n(HT40)	5755	-9.706	-12.723	-7.947	30	Pass
	5795	-9.475	-13.011	-7.882	30	Pass
802.11ax(HE20)	5745	-6.841	-11.723	-5.619	30	Pass
	5785	-6.765	-12.142	-5.659	30	Pass
	5825	-6.862	-11.577	-5.598	30	Pass
802.11ax(HE40)	5755	-9.595	-12.622	-7.840	30	Pass
	5795	-9.852	-12.941	-8.117	30	Pass

Test Graph

5180-5240MHz:

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

802.11n(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

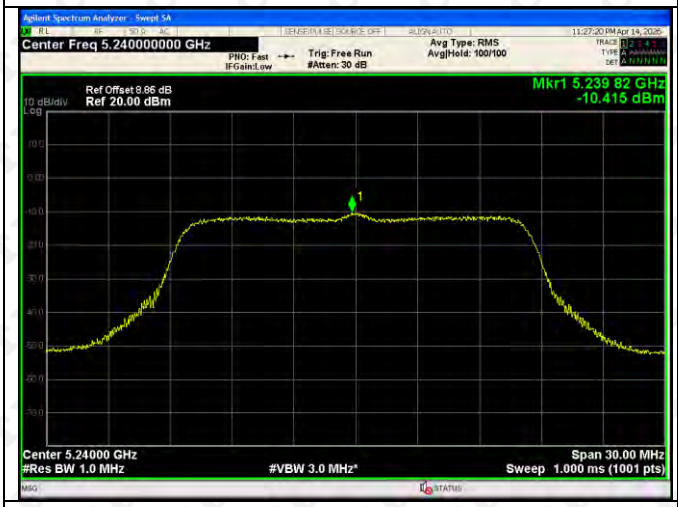
802.11ax(HE40)-5230

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

802.11n(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

5745-5825MHz:
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

802.11n(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

ANT2:

802.11a-5745

802.11a-5785

802.11a-5825

802.11ac(VHT20)-5745

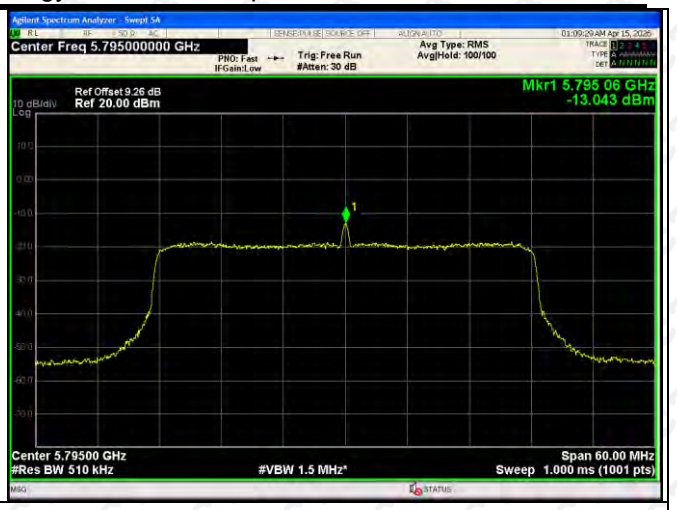
802.11ac(VHT20)-5785

802.11ac(VHT20)-5825

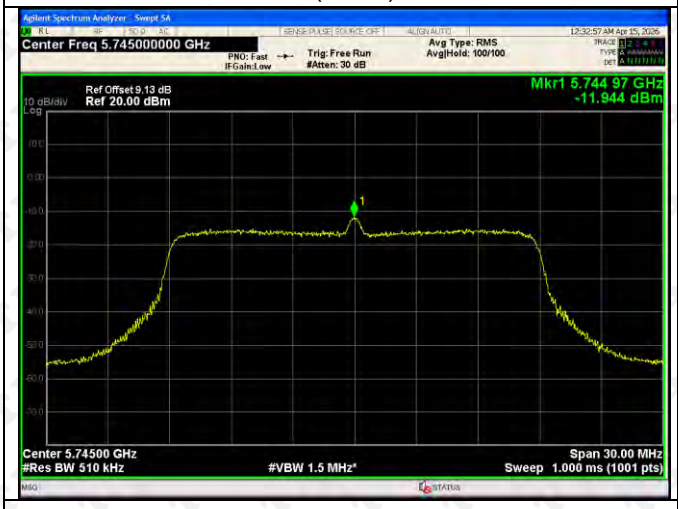
802.11ac(VHT40)-5755

802.11ac(VHT40)-5795

802.11n(HT20)-5745



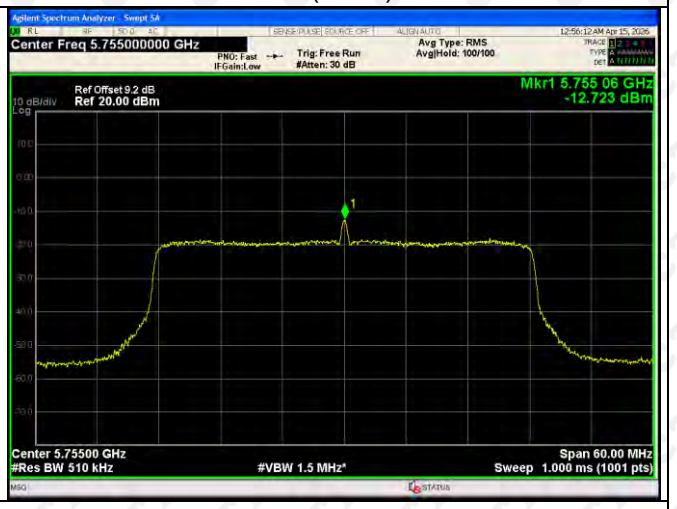
802.11n(HT20)-5785



802.11n(HT20)-5825

5802.11n(HT40)-5755

802.11n(HT40)-5795



802.11ax(HE20)-5745

802.11ax(HE20)-5785

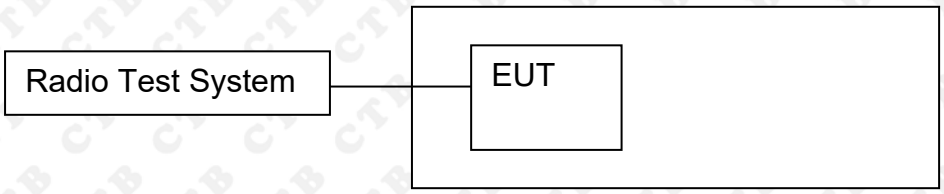
802.11ax(HE20)-5825

802.11ax(HE40)-5755

802.11ax(HE40)-5795

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)	12.0	5180.0101	5180	0.0101	1.9588
		V max (V)	13.2	5180.0358	5180	0.0358	6.9092
		V min (V)	10.8	5180.0076	5180	0.0076	1.4757
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5180.0481	5180	0.0481	9.2832
		T (°C)	10	5180.0661	5180	0.0661	12.7664
		T (°C)	20	5180.0642	5180	0.0642	12.3946
		T (°C)	30	5180.0651	5180	0.0651	12.5604
		T (°C)	40	5180.0507	5180	0.0507	9.7853
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)	12.0	5200.0814	5200	0.0814	15.6614
		V max (V)	13.2	5200.0022	5200	0.0022	0.4274
		V min (V)	10.8	5200.0272	5200	0.0272	5.2253
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5200.0327	5200	0.0327	6.2860
		T (°C)	10	5200.0638	5200	0.0638	12.2599
		T (°C)	20	5200.0717	5200	0.0717	13.7963
		T (°C)	30	5200.0898	5200	0.0898	17.2644
		T (°C)	40	5200.0060	5200	0.0060	1.1460
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)	12.0	5240.0793	5240	0.0793	15.1398
		V max (V)	13.2	5240.0096	5240	0.0096	1.8328
		V min (V)	10.8	5240.0068	5240	0.0068	1.2911
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5240.0478	5240	0.0478	9.1230
		T (°C)	10	5240.0316	5240	0.0316	6.0345
		T (°C)	20	5240.0769	5240	0.0769	14.6702
		T (°C)	30	5240.0245	5240	0.0245	4.6660
		T (°C)	40	5240.0519	5240	0.0519	9.9114
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)	12.0	5745.0028	5745	0.0028	0.4824
		V max (V)	13.2	5745.0166	5745	0.0166	2.8859
		V min (V)	10.8	5745.0227	5745	0.0227	3.9505
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5745.0096	5745	0.0096	1.6764
		T (°C)	10	5745.0219	5745	0.0219	3.8122
		T (°C)	20	5745.0237	5745	0.0237	4.1245
		T (°C)	30	5745.0482	5745	0.0482	8.3913
		T (°C)	40	5745.0578	5745	0.0578	10.0560
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)	12.0	5785.0401	5785	0.0401	6.9338
		V max (V)	13.2	5785.0206	5785	0.0206	3.5681
		V min (V)	10.8	5785.0655	5785	0.0655	11.3308
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5785.0813	5785	0.0813	14.0537
		T (°C)	10	5785.0863	5785	0.0863	14.9214
		T (°C)	20	5785.0370	5785	0.0370	6.4023
		T (°C)	30	5785.0339	5785	0.0339	5.8599
		T (°C)	40	5785.0009	5785	0.0009	0.1636
		T (°C)	50	5785.0052	5785	0.0052	0.8947
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)	12.0	5825.0707	5825	0.0707	12.1290
		V max (V)	13.2	5825.0357	5825	0.0357	6.1251
		V min (V)	10.8	5825.0930	5825	0.0930	15.9589
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5825.0833	5825	0.0833	14.3001
		T (°C)	10	5825.0518	5825	0.0518	8.8888
		T (°C)	20	5825.0372	5825	0.0372	6.3785
		T (°C)	30	5825.0848	5825	0.0848	14.5612
		T (°C)	40	5825.0580	5825	0.0580	9.9572
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)	12.0	5180.0407	5180	0.0407	7.8608
		V max (V)	13.2	5180.0087	5180	0.0087	1.6873
		V min (V)	10.8	5180.0750	5180	0.0750	14.4774
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5180.0389	5180	0.0389	7.5149
		T (°C)	10	5180.0111	5180	0.0111	2.1437
		T (°C)	20	5180.0817	5180	0.0817	15.7798
		T (°C)	30	5180.0046	5180	0.0046	0.8838
		T (°C)	40	5180.0925	5180	0.0925	17.8550
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)	12.0	5200.0209	5200	0.0209	4.0288
		V max (V)	13.2	5200.0461	5200	0.0461	8.8605
		V min (V)	10.8	5200.0750	5200	0.0750	14.4270
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5200.0562	5200	0.0562	10.7992
		T (°C)	10	5200.0432	5200	0.0432	8.3102
		T (°C)	20	5200.0290	5200	0.0290	5.5732
		T (°C)	30	5200.0929	5200	0.0929	17.8579
		T (°C)	40	5200.0534	5200	0.0534	10.2753
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)	12.0	5240.0609	5240	0.0609	11.6182
		V max (V)	13.2	5240.0662	5240	0.0662	12.6352
		V min (V)	10.8	5240.0590	5240	0.0590	11.2598
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5240.0040	5240	0.0040	0.7558
		T (°C)	10	5240.0126	5240	0.0126	2.4071
		T (°C)	20	5240.0860	5240	0.0860	16.4190
		T (°C)	30	5240.0875	5240	0.0875	16.6895
		T (°C)	40	5240.0038	5240	0.0038	0.7224
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)	12.0	5745.0774	5745	0.0774	13.4785
		V max (V)	13.2	5745.0106	5745	0.0106	1.8490
		V min (V)	10.8	5745.0573	5745	0.0573	9.9798
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5745.0866	5745	0.0866	15.0766
		T (°C)	10	5745.0922	5745	0.0922	16.0414
		T (°C)	20	5745.0896	5745	0.0896	15.6004
		T (°C)	30	5745.0515	5745	0.0515	8.9576
		T (°C)	40	5745.0147	5745	0.0147	2.5530
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)	12.0	5785.0897	5785	0.0897	15.5121
		V max (V)	13.2	5785.0432	5785	0.0432	7.4723
		V min (V)	10.8	5785.0310	5785	0.0310	5.3570
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5785.0192	5785	0.0192	3.3227
		T (°C)	10	5785.0018	5785	0.0018	0.3089
		T (°C)	20	5785.0659	5785	0.0659	11.3889
		T (°C)	30	5785.0920	5785	0.0920	15.9069
		T (°C)	40	5785.0467	5785	0.0467	8.0776
		T (°C)	50	5785.0826	5785	0.0826	14.2742
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)	12.0	5825.0814	5825	0.0814	13.9762
		V max (V)	13.2	5825.0589	5825	0.0589	10.1132
		V min (V)	10.8	5825.0165	5825	0.0165	2.8245
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5825.0467	5825	0.0467	8.0167
		T (°C)	10	5825.0198	5825	0.0198	3.4033
		T (°C)	20	5825.0631	5825	0.0631	10.8330
		T (°C)	30	5825.0866	5825	0.0866	14.8664
		T (°C)	40	5825.0642	5825	0.0642	11.0227
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.

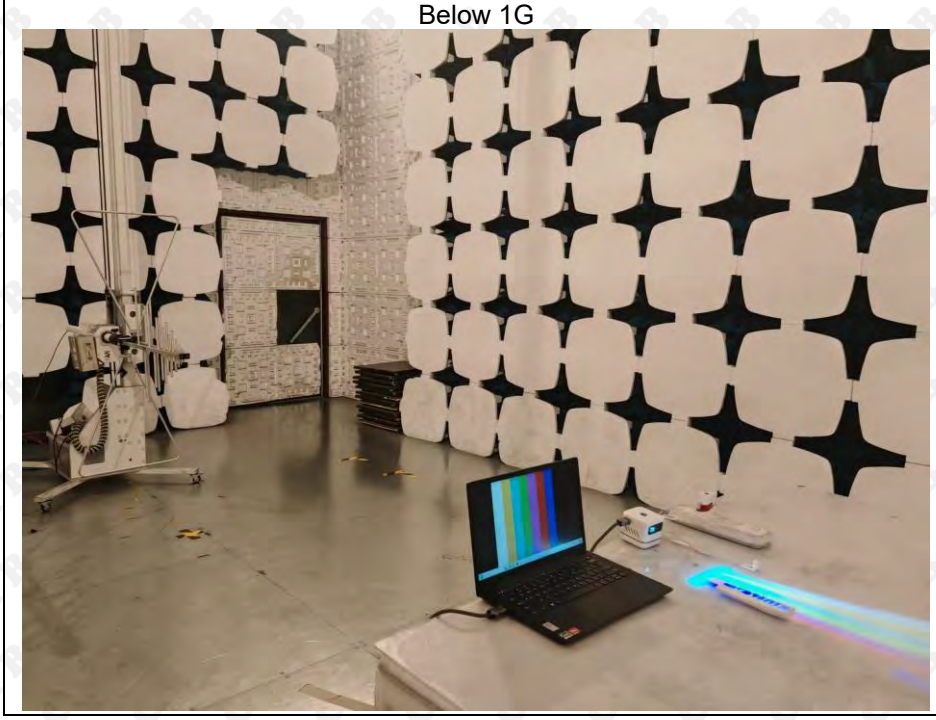
EUT Antenna:

The antenna is Internal antenna and no consideration of replacement. The best case gain of the antenna is WiFi (5.2G): Ant1: 3.29dBi Ant2: 3.29dBi WiFi (5.8G): Ant1: 3.72dBi Ant2: 3.72dBi

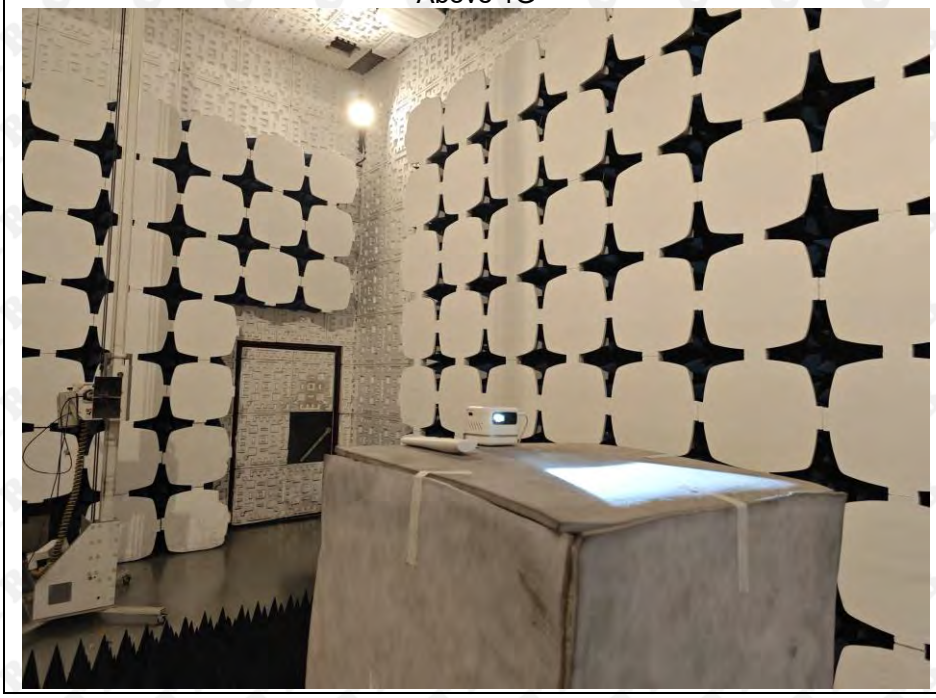
15. EUT TEST SETUP PHOTOGRAPHS

Radiated Emissions

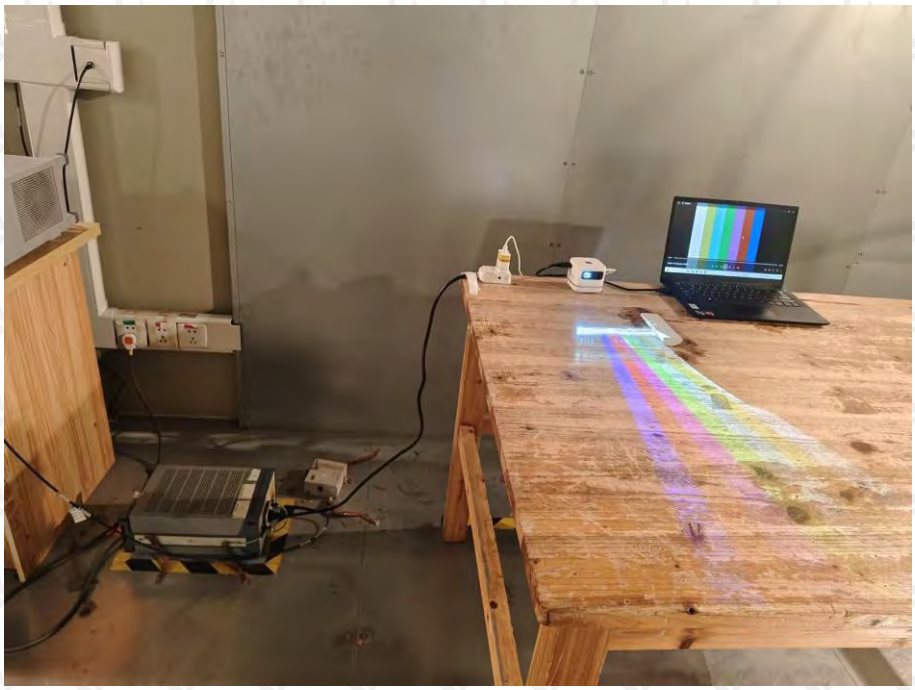
Below 1G



Above 1G



Conducted emission



※※※※※ **END OF REPORT** ※※※※※