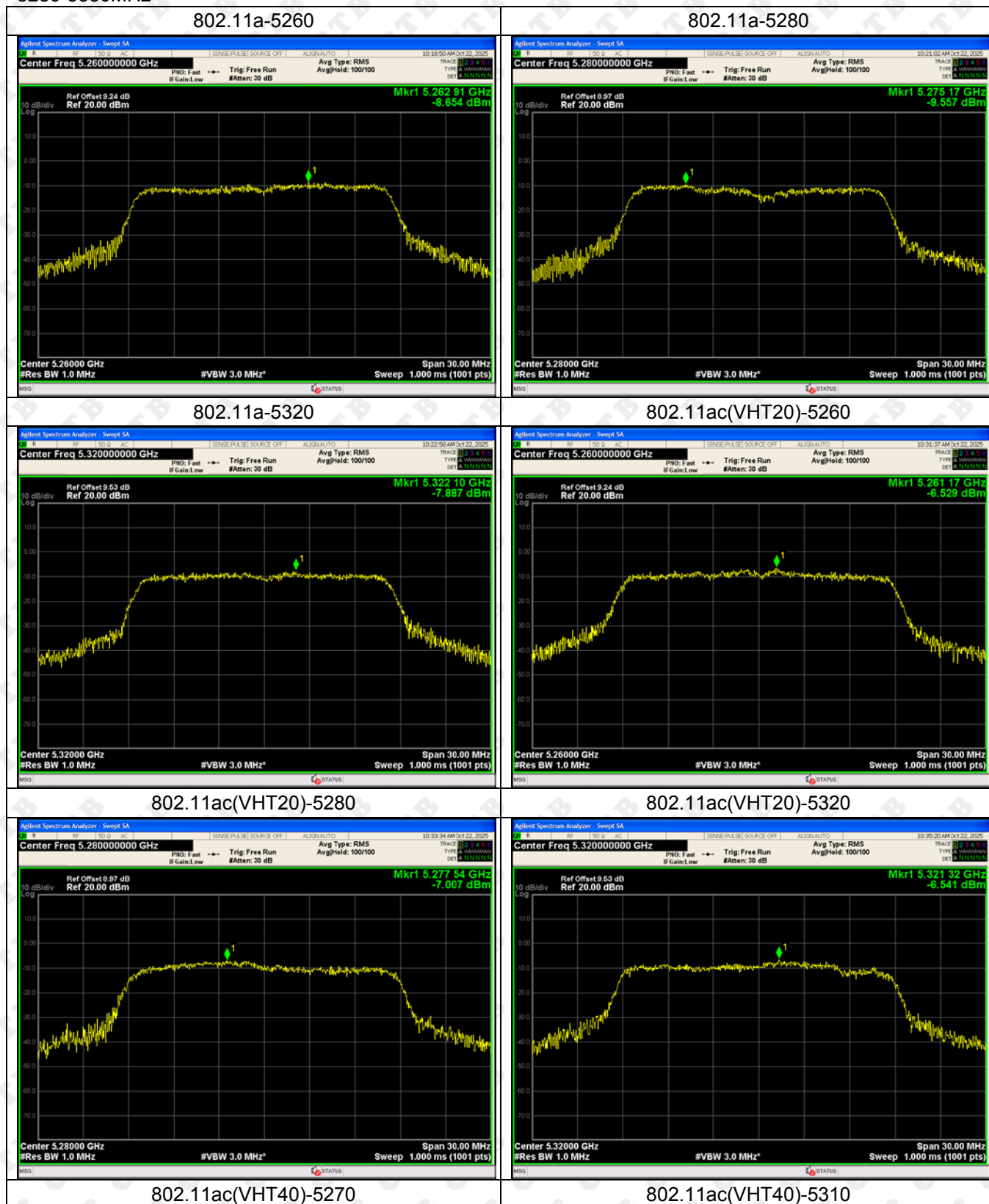
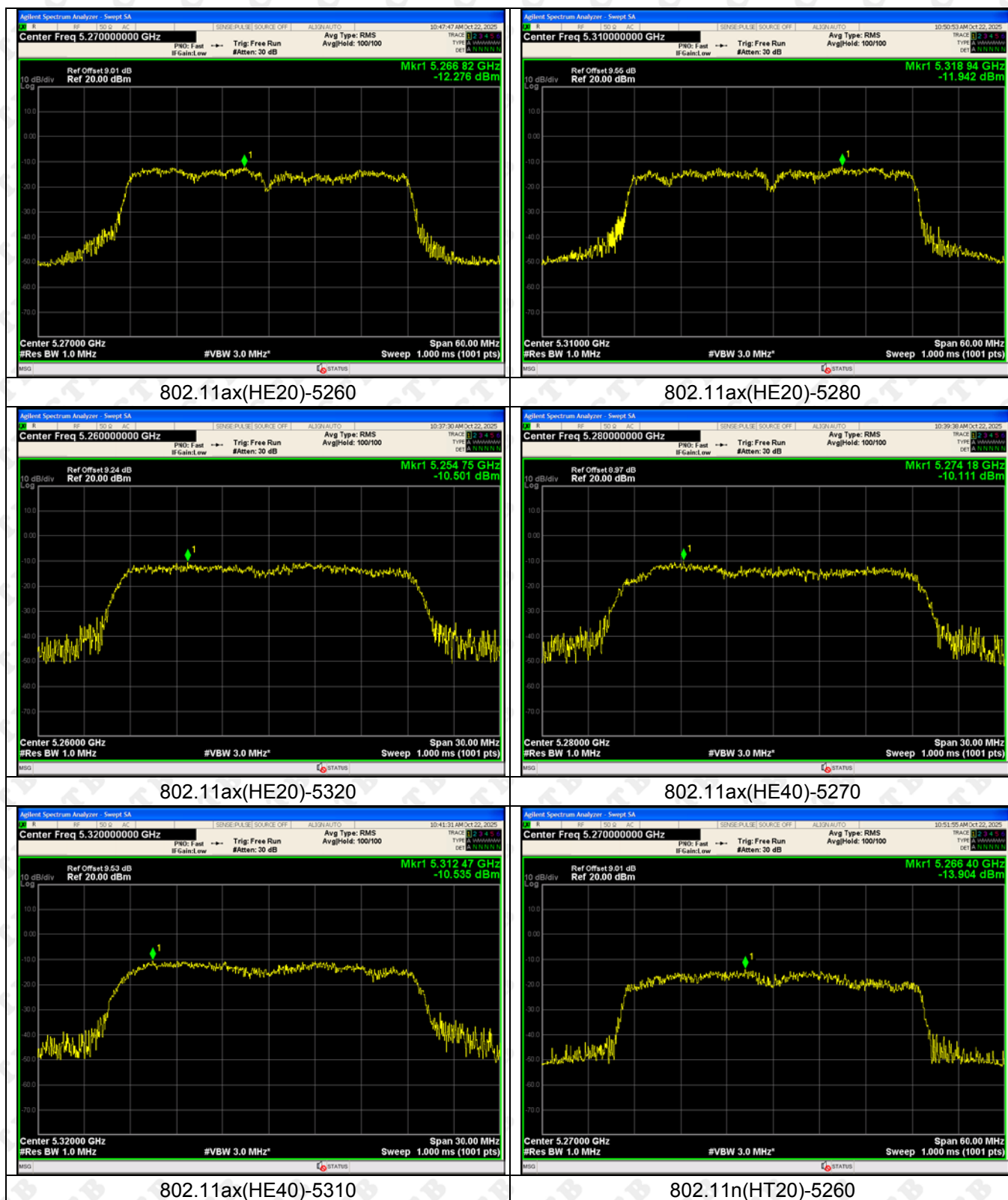
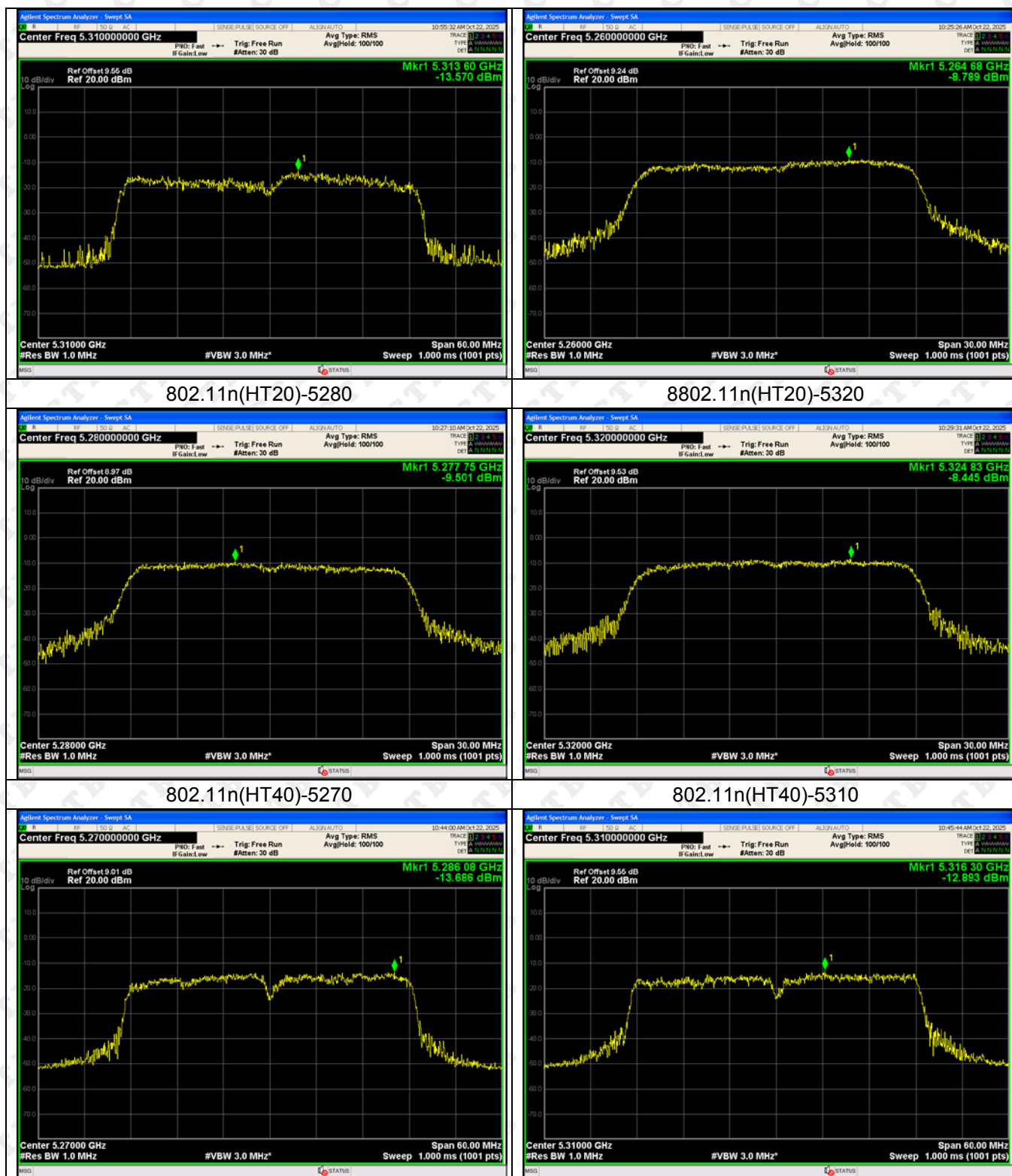


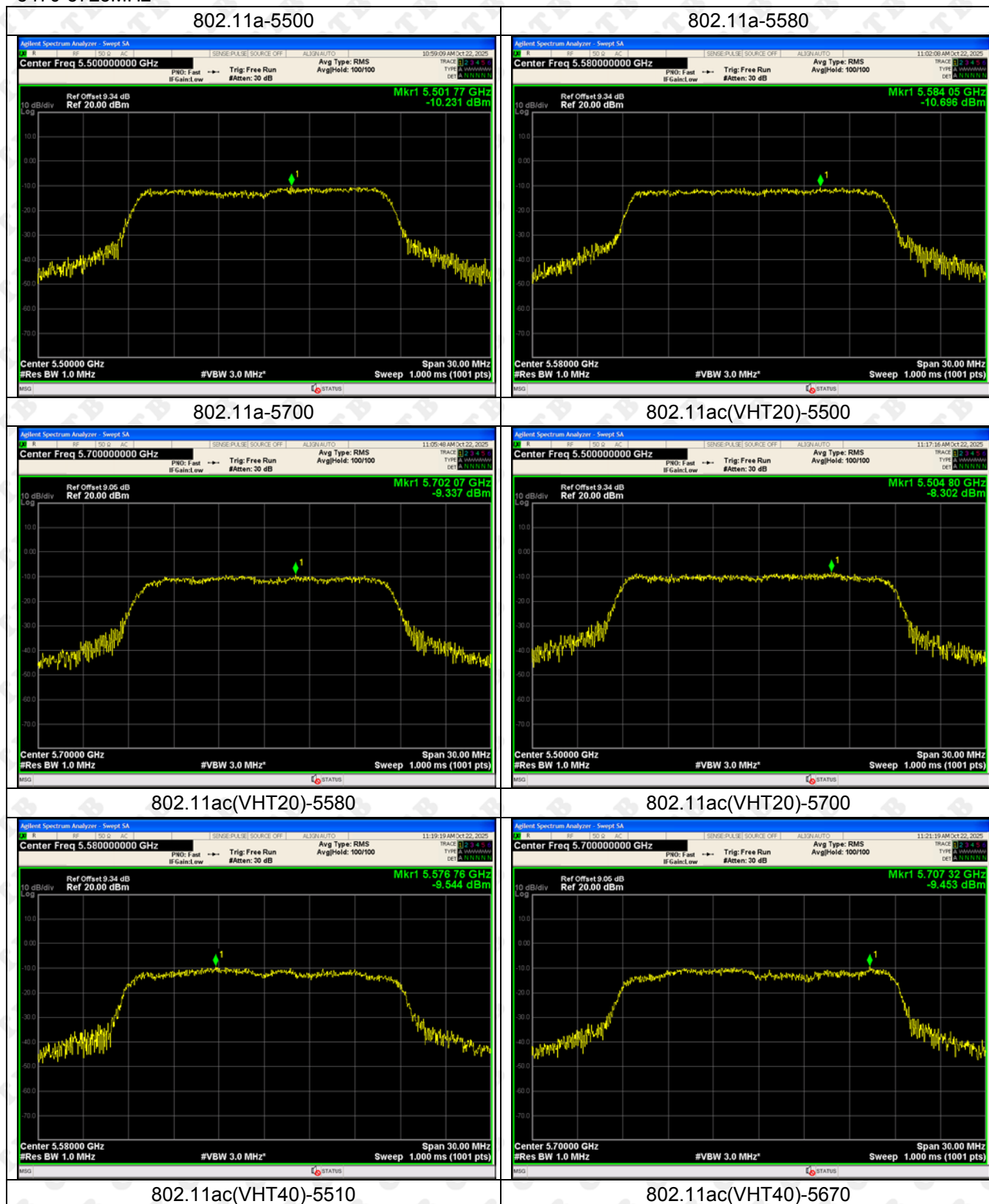
5250-5350MHz

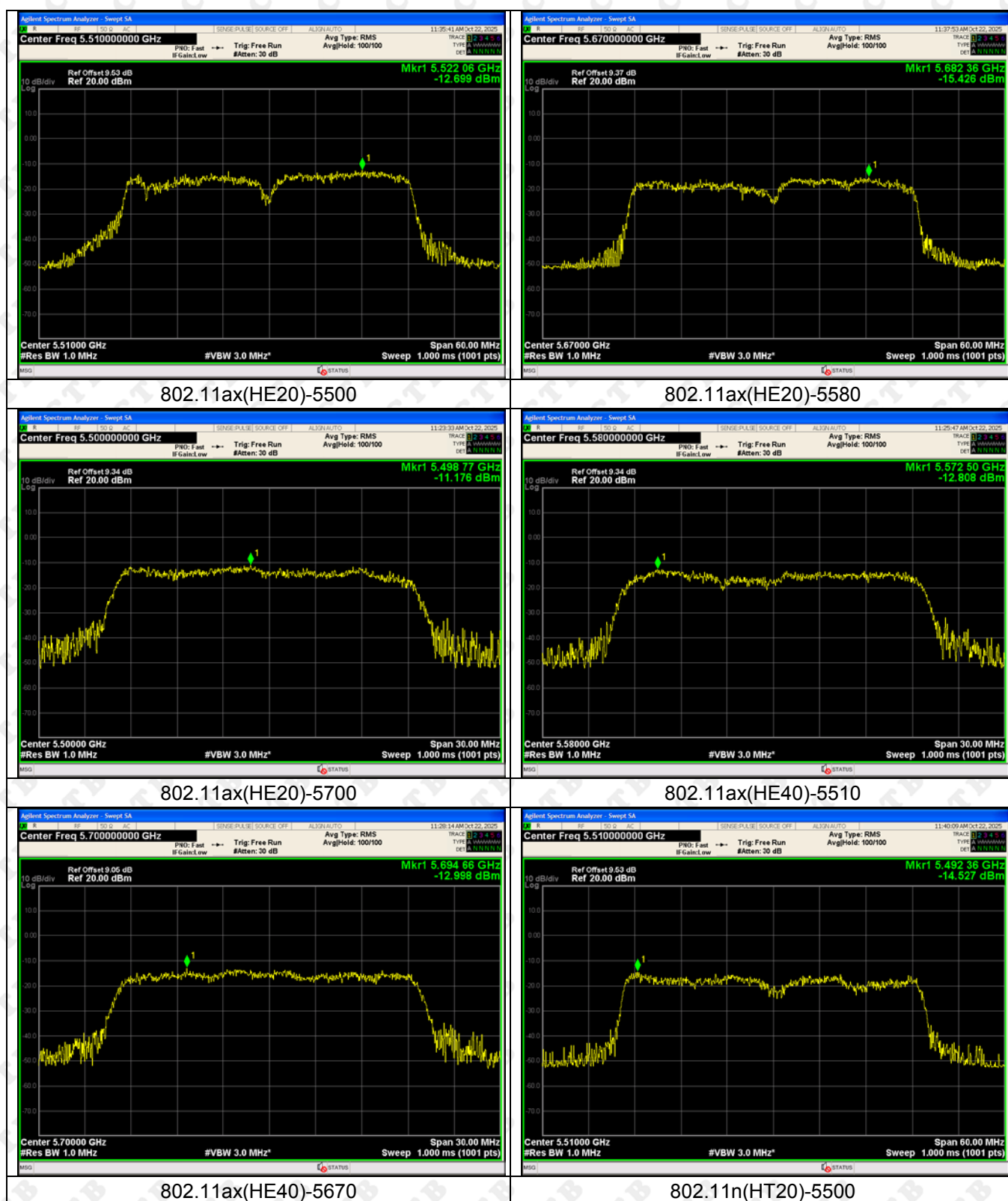


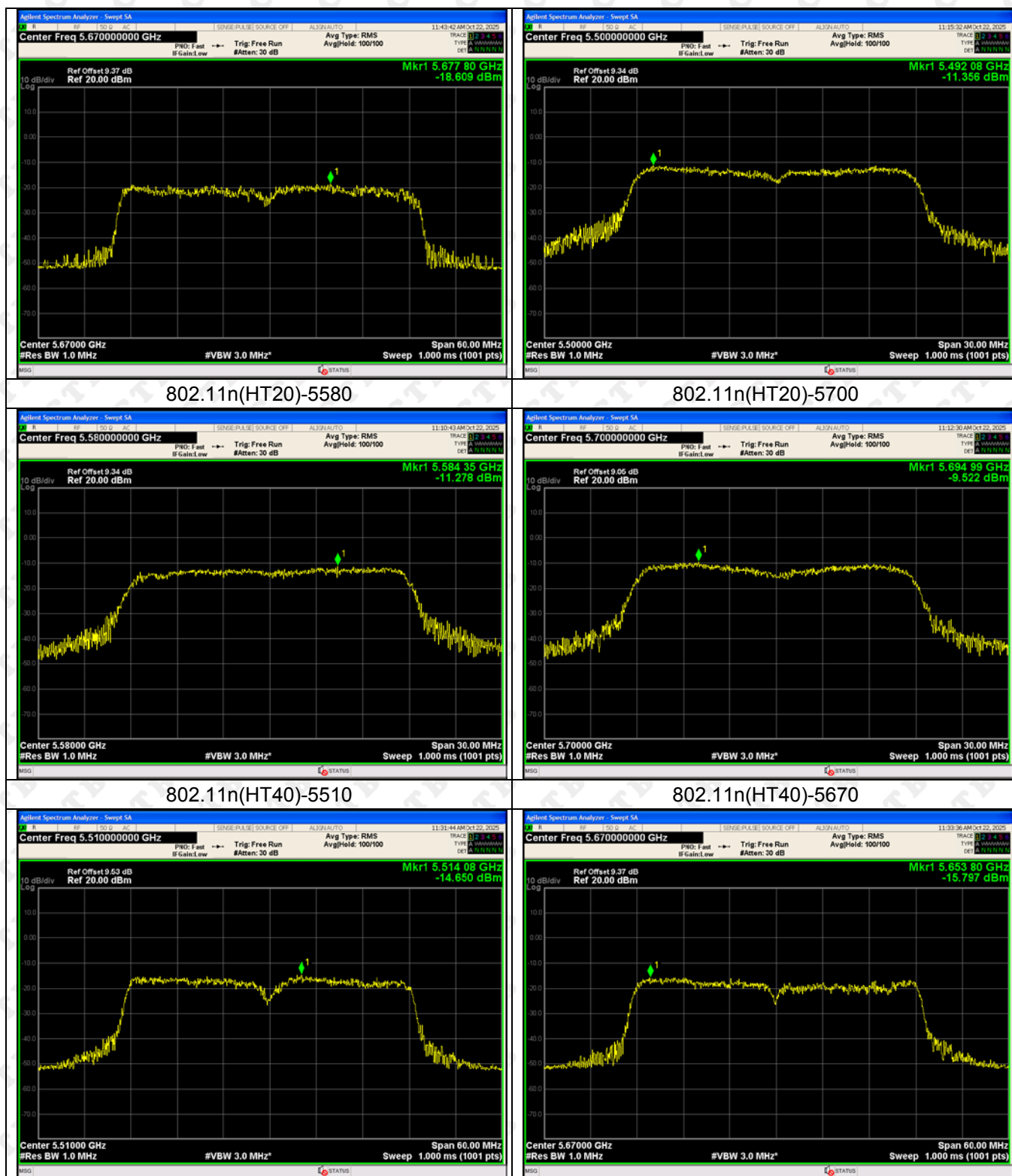




5470-5725MHz







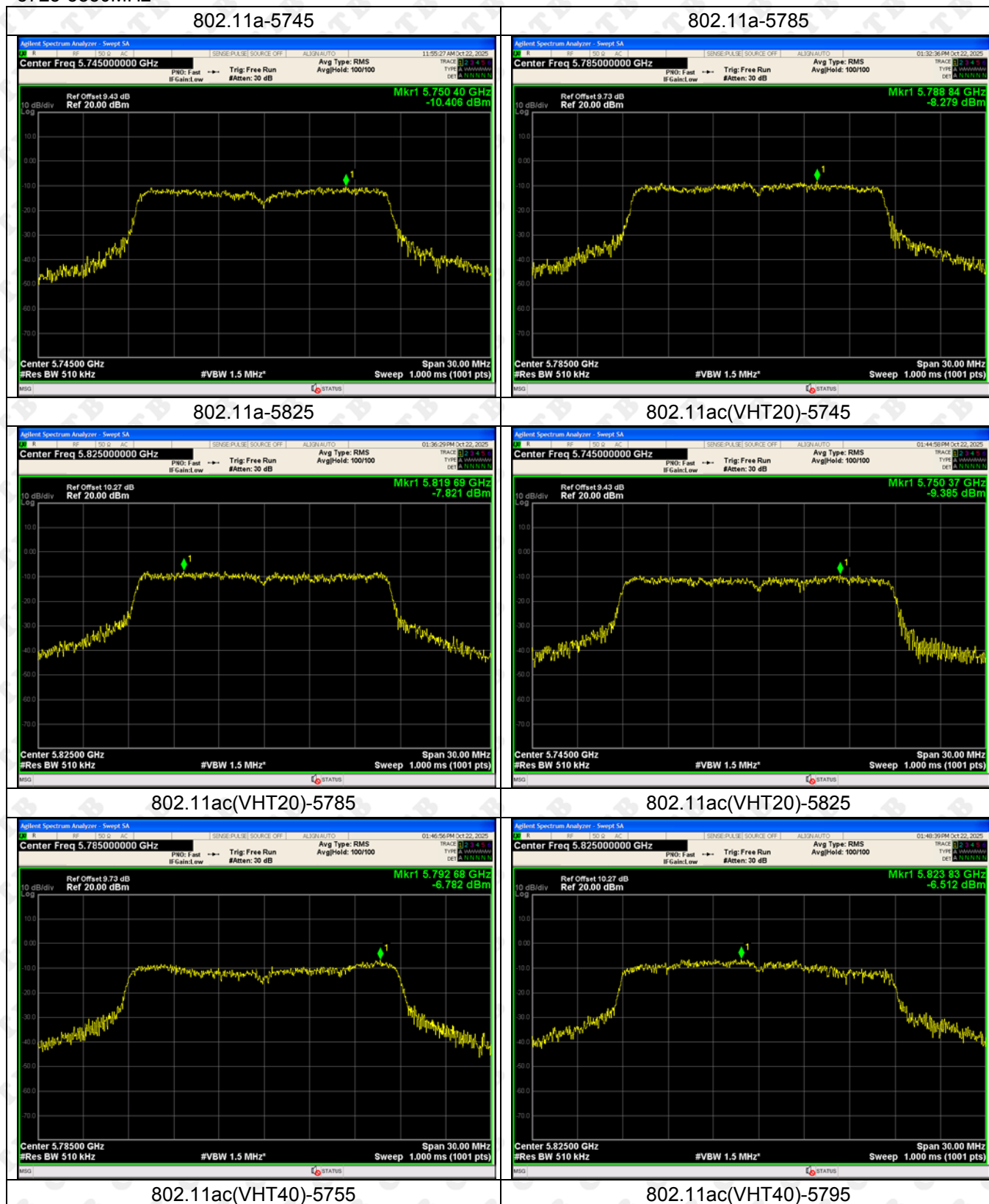
802.11n(HT20)-5580

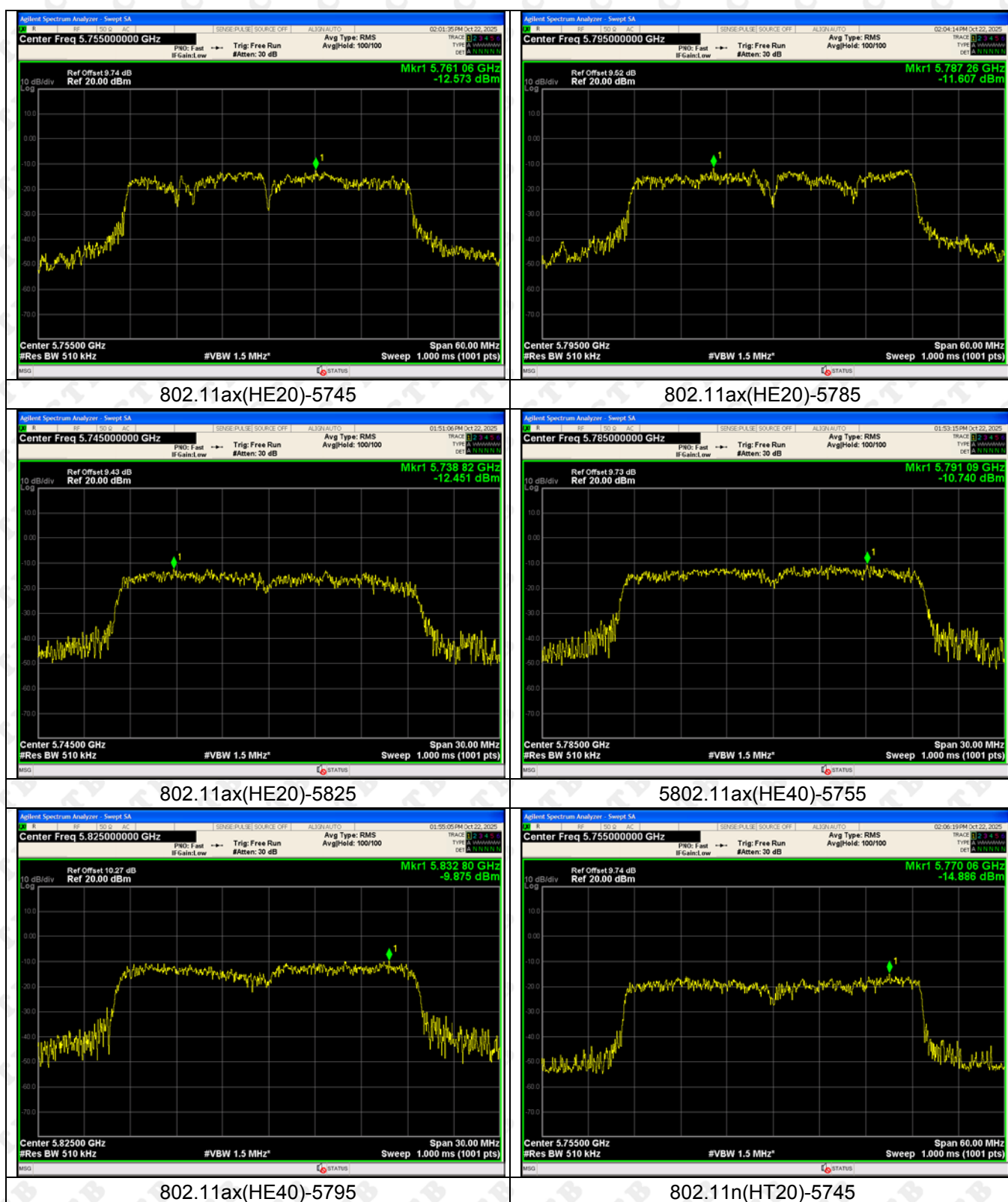
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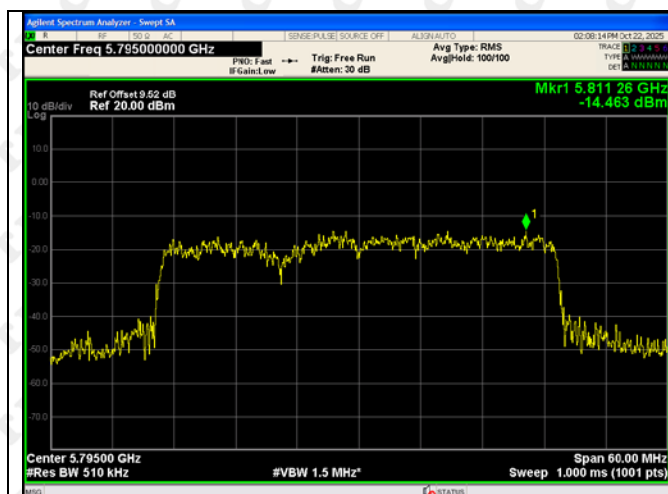
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802.11n(HT40)-5670

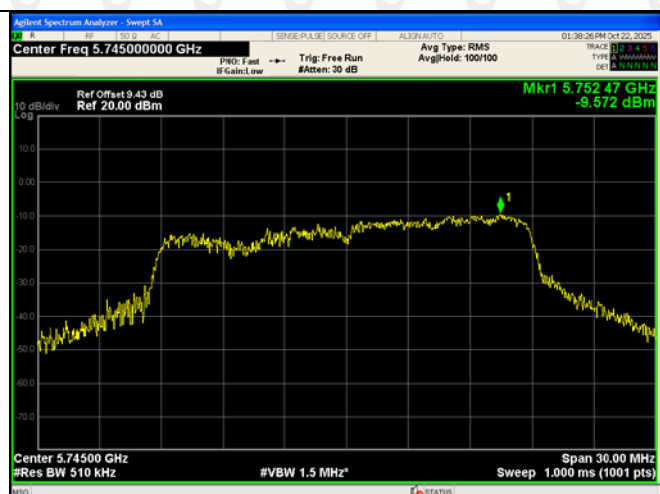
5725-5850MHz



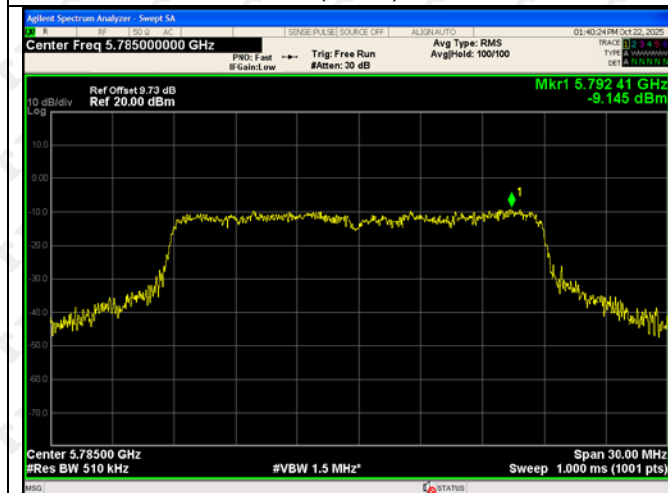




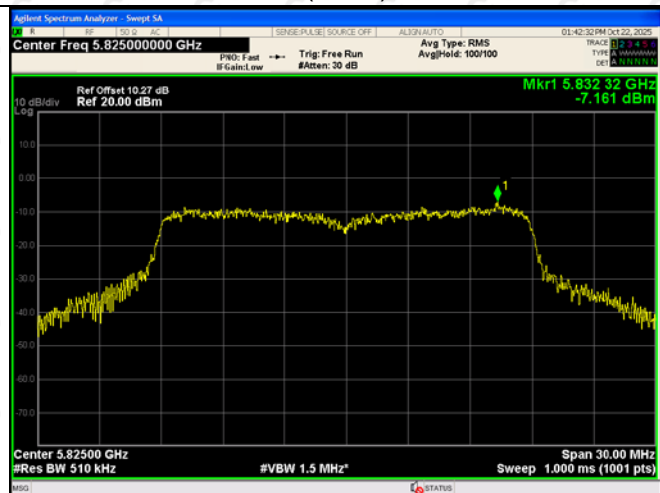
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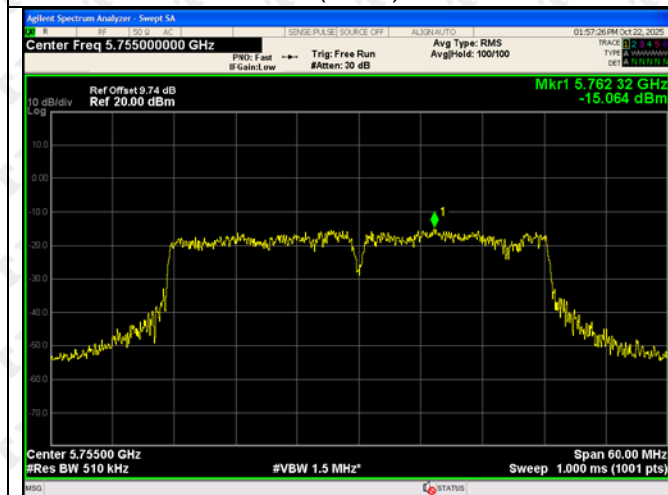
802.11n(HT20)-5825



802.11n(HT40)-5755

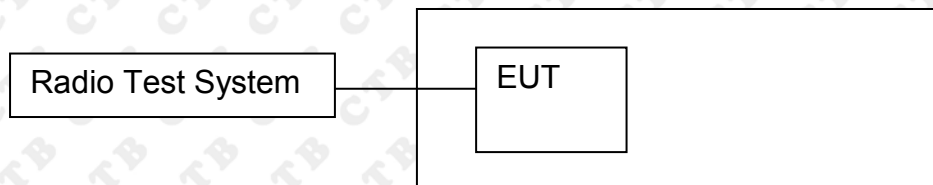


802.11n(HT40)-5795



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)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5180.0178	5180	0.0178	3.4384
		V max (V)	5.5	5180.0082	5180	0.0082	1.5889
		V min (V)	4.5	5180.0565	5180	0.0565	10.9015
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5180.0483	5180	0.0483	9.3294
		T (°C)	10	5180.0082	5180	0.0082	1.5756
		T (°C)	20	5180.0418	5180	0.0418	8.0747
		T (°C)	30	5180.0535	5180	0.0535	10.3237
		T (°C)	40	5180.0486	5180	0.0486	9.3895
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5200.0503	5200	0.0503	9.6745
		V max (V)	5.5	5200.0514	5200	0.0514	9.8882
		V min (V)	4.5	5200.0165	5200	0.0165	3.1741
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5200.0083	5200	0.0083	1.6010
		T (°C)	10	5200.0356	5200	0.0356	6.8486
		T (°C)	20	5200.0349	5200	0.0349	6.7162
		T (°C)	30	5200.0289	5200	0.0289	5.5519
		T (°C)	40	5200.0173	5200	0.0173	3.3297
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5240.0190	5240	0.0190	3.6253
		V max (V)	5.5	5240.0217	5240	0.0217	4.1373
		V min (V)	4.5	5240.0329	5240	0.0329	6.2786
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5240.0085	5240	0.0085	1.6272
		T (°C)	10	5240.0377	5240	0.0377	7.2032
		T (°C)	20	5240.0229	5240	0.0229	4.3668
		T (°C)	30	5240.0134	5240	0.0134	2.5667
		T (°C)	40	5240.0364	5240	0.0364	6.9497
Limits				±20ppm			
Result				Complies			

TX Frequency (5250-5350MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5260.0278	5260	0.0278	5.2841
		V max (V)	5.5	5260.0360	5260	0.0360	6.8495
		V min (V)	4.5	5260.0353	5260	0.0353	6.7157
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5260.0671	5260	0.0671	12.7611
		T (°C)	10	5260.0305	5260	0.0305	5.7937
		T (°C)	20	5260.0393	5260	0.0393	7.4630
		T (°C)	30	5260.0377	5260	0.0377	7.1758
		T (°C)	40	5260.0174	5260	0.0174	3.3077
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5280.0408	5280	0.0408	7.7218
		V max (V)	5.5	5280.0013	5280	0.0013	0.2477
		V min (V)	4.5	5280.0423	5280	0.0423	8.0121
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5280.0627	5280	0.0627	11.8779
		T (°C)	10	5280.0677	5280	0.0677	12.8201
		T (°C)	20	5280.0122	5280	0.0122	2.3074
		T (°C)	30	5280.0733	5280	0.0733	13.8899
		T (°C)	40	5280.0521	5280	0.0521	9.8683
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5320.0362	5320	0.0362	6.7958
		V max (V)	5.5	5320.0514	5320	0.0514	9.6689
		V min (V)	4.5	5320.0353	5320	0.0353	6.6319
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5320.0780	5320	0.0780	14.6589
		T (°C)	10	5320.0188	5320	0.0188	3.5304
		T (°C)	20	5320.0397	5320	0.0397	7.4531
		T (°C)	30	5320.0863	5320	0.0863	16.2170
		T (°C)	40	5320.0520	5320	0.0520	9.7675
Limits				±20ppm			
Result				Complies			

TX Frequency (5470-5725MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5500.0022	5500	0.0022	0.3977
		V max (V)	5.5	5500.0918	5500	0.0918	16.6965
		V min (V)	4.5	5500.0623	5500	0.0623	11.3273
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5500.0484	5500	0.0484	8.8015
		T (°C)	10	5500.0221	5500	0.0221	4.0159
		T (°C)	20	5500.0555	5500	0.0555	10.0886
		T (°C)	30	5500.0114	5500	0.0114	2.0694
		T (°C)	40	5500.0907	5500	0.0907	16.4974
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5580.0734	5580	0.0734	13.1546
		V max (V)	5.5	5580.0719	5580	0.0719	12.8806
		V min (V)	4.5	5580.0441	5580	0.0441	7.8990
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5580.0769	5580	0.0769	13.7786
		T (°C)	10	5580.0619	5580	0.0619	11.0987
		T (°C)	20	5580.0412	5580	0.0412	7.3915
		T (°C)	30	5580.0125	5580	0.0125	2.2356
		T (°C)	40	5580.0705	5580	0.0705	12.6368
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5700.0930	5700	0.0930	16.3122
		V max (V)	5.5	5700.0072	5700	0.0072	1.2584
		V min (V)	4.5	5700.0191	5700	0.0191	3.3464
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5700.0013	5700	0.0013	0.2198
		T (°C)	10	5700.0850	5700	0.0850	14.9086
		T (°C)	20	5700.0369	5700	0.0369	6.4821
		T (°C)	30	5700.0484	5700	0.0484	8.4864
		T (°C)	40	5700.0230	5700	0.0230	4.0276
Limits				±20ppm			
Result				Complies			

TX Frequency (5725-5850MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5745.0192	5745	0.0192	3.3353
		V max (V)	5.5	5745.0613	5745	0.0613	10.6689
		V min (V)	4.5	5745.0192	5745	0.0192	3.3353
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5745.0767	5745	0.0767	13.3593
		T (°C)	10	5745.0080	5745	0.0080	1.3859
		T (°C)	20	5745.0881	5745	0.0881	15.3277
		T (°C)	30	5745.0316	5745	0.0316	5.5054
		T (°C)	40	5745.0579	5745	0.0579	10.0703
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5785.0133	5785	0.0133	2.3029
		V max (V)	5.5	5785.0253	5785	0.0253	4.3759
		V min (V)	4.5	5785.0244	5785	0.0244	4.2189
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5785.0841	5785	0.0841	14.5392
		T (°C)	10	5785.0163	5785	0.0163	2.8102
		T (°C)	20	5785.0734	5785	0.0734	12.6827
		T (°C)	30	5785.0399	5785	0.0399	6.9048
		T (°C)	40	5785.0083	5785	0.0083	1.4313
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5	5825.0217	5825	0.0217	3.7185
		V max (V)	5.5	5825.0887	5825	0.0887	15.2341
		V min (V)	4.5	5825.0016	5825	0.0016	0.2706
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	0	5825.0364	5825	0.0364	6.2516
		T (°C)	10	5825.0562	5825	0.0562	9.6501
		T (°C)	20	5825.0664	5825	0.0664	11.4052
		T (°C)	30	5825.0835	5825	0.0835	14.3377
		T (°C)	40	5825.0242	5825	0.0242	4.1611
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 WLAN message transmitting from remote device and verify whether it shall reconnect. (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.

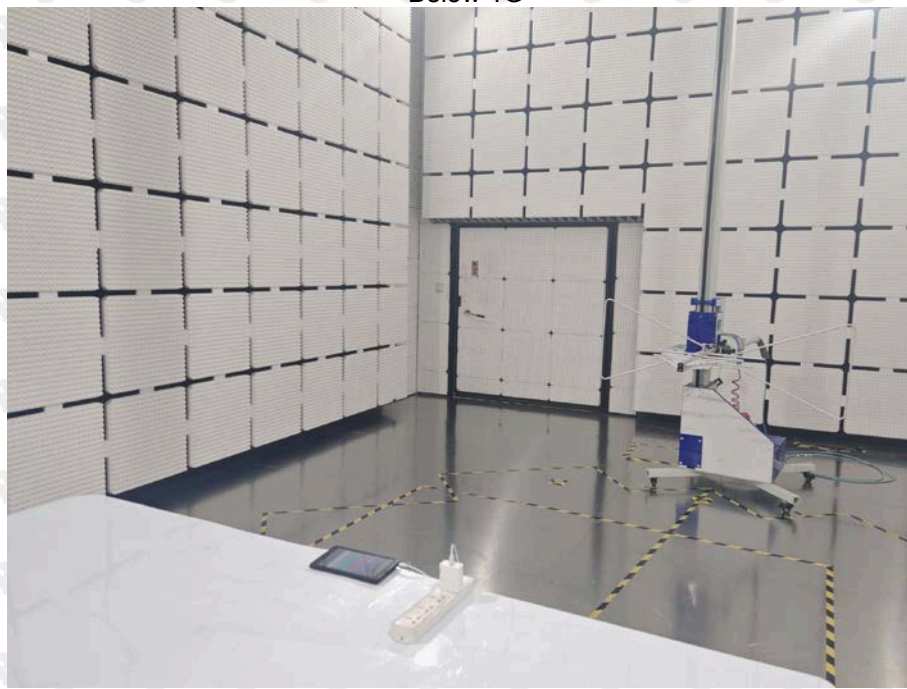
EUT Antenna:

The antenna is FPC antenna and no consideration of replacement. The best case gain of the antenna is WiFi (5.2G): 2.71dBi, WiFi (5.3G): 2.09dBi, WiFi (5.6G): 1.95dBi, WiFi (5.8G): 1.09dBi.

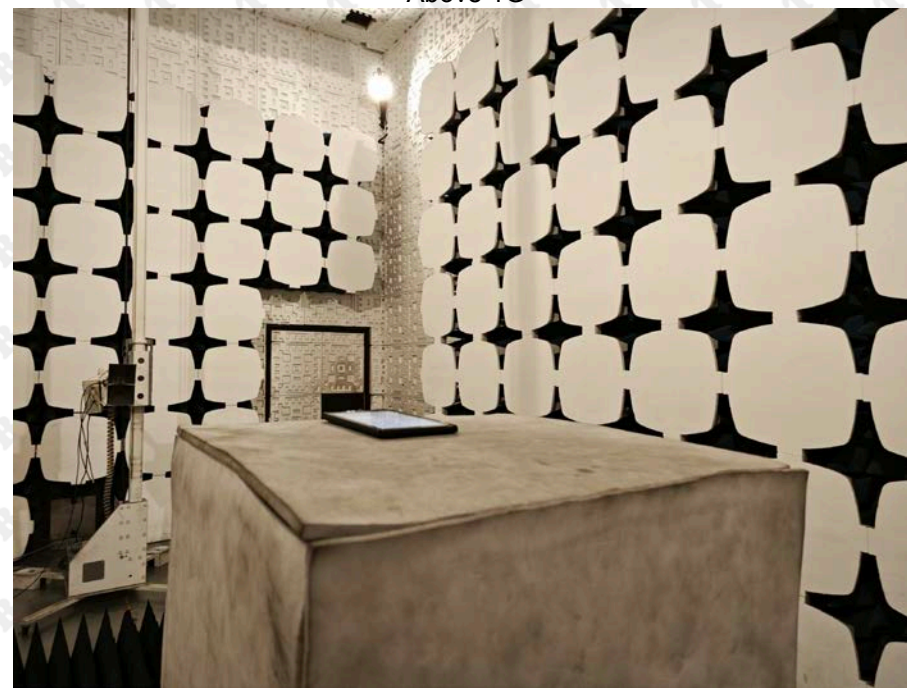
15. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

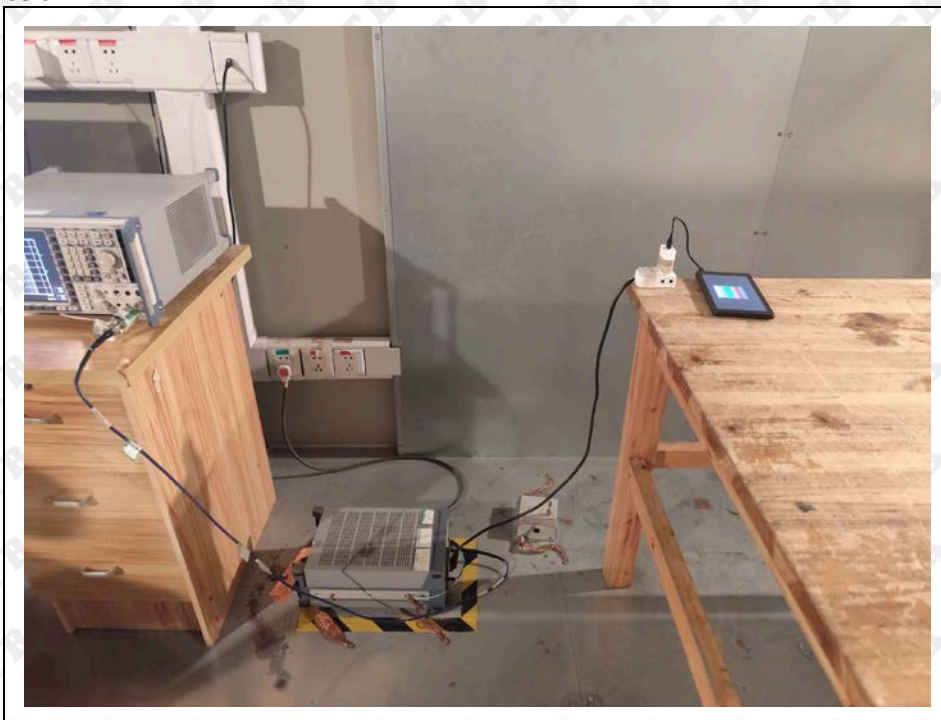
Below 1G



Above 1G



Conducted Emission



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