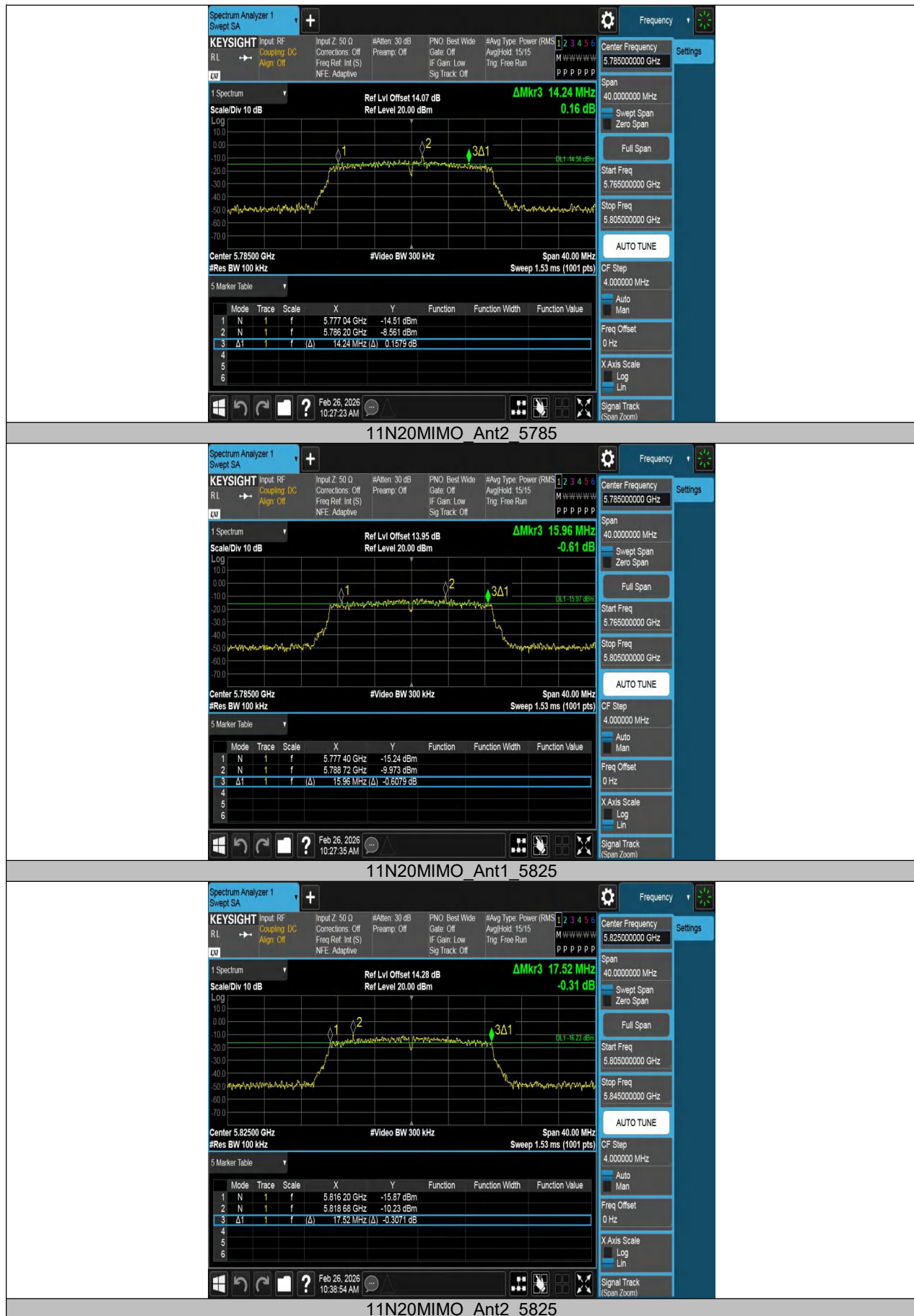
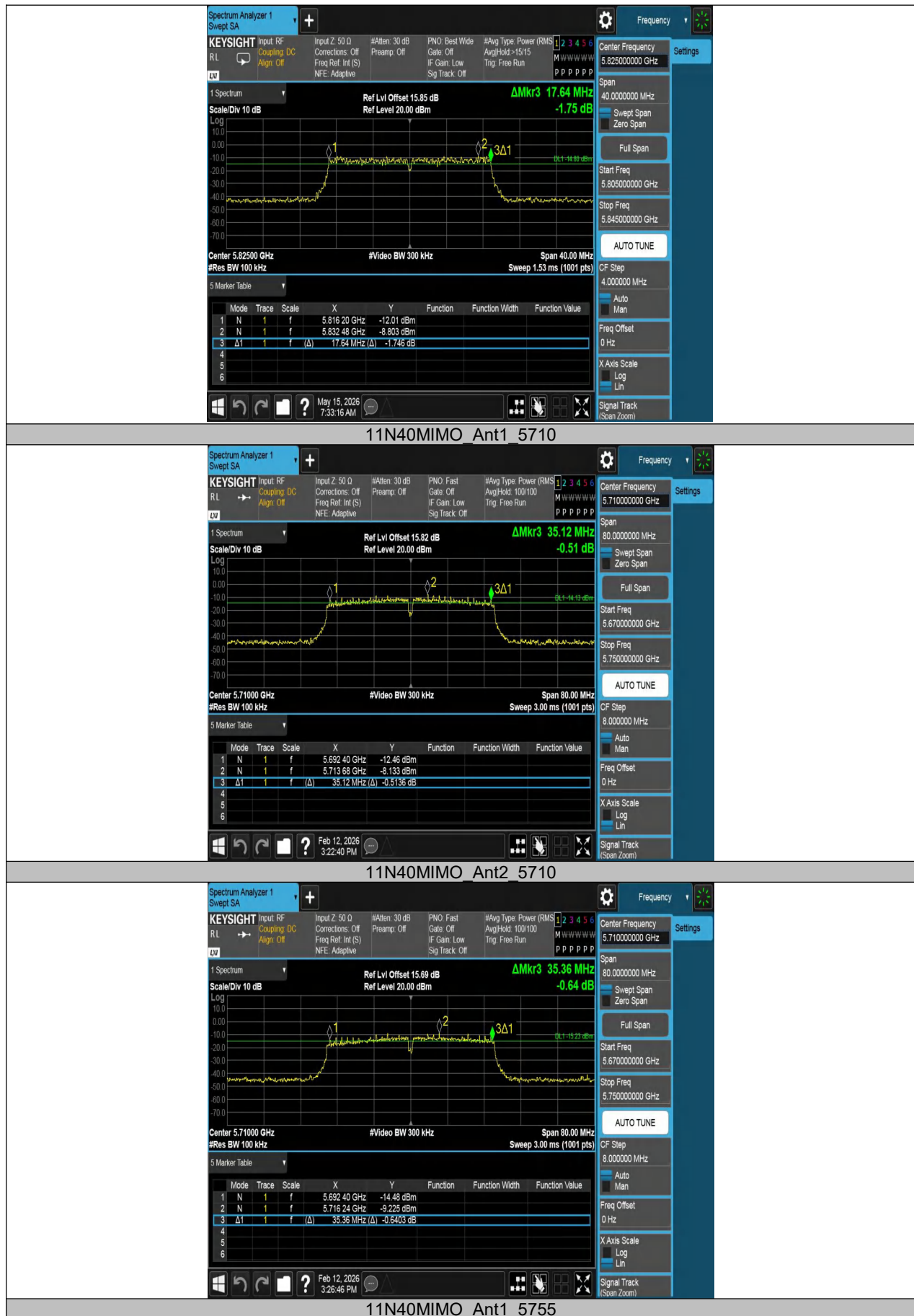
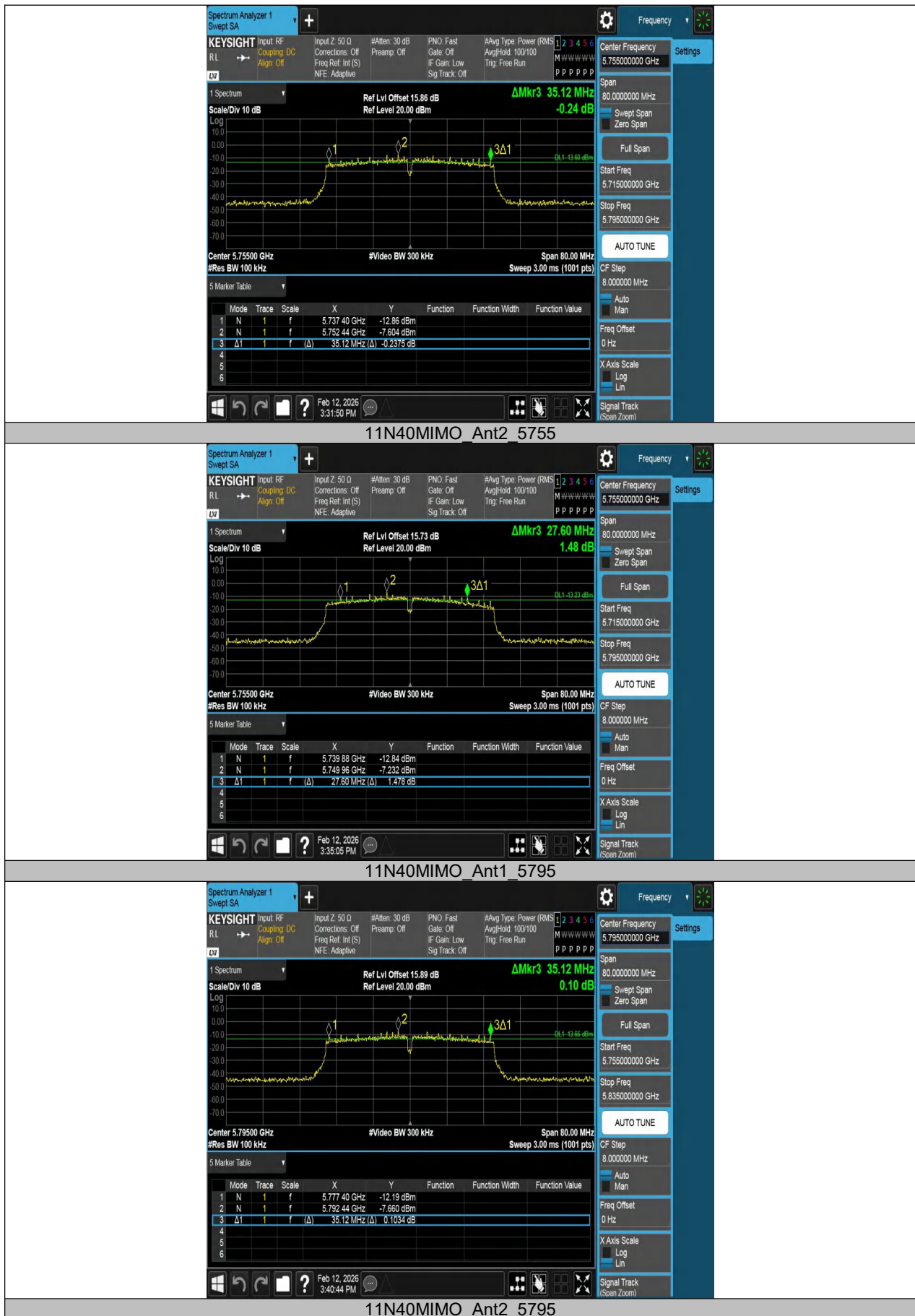
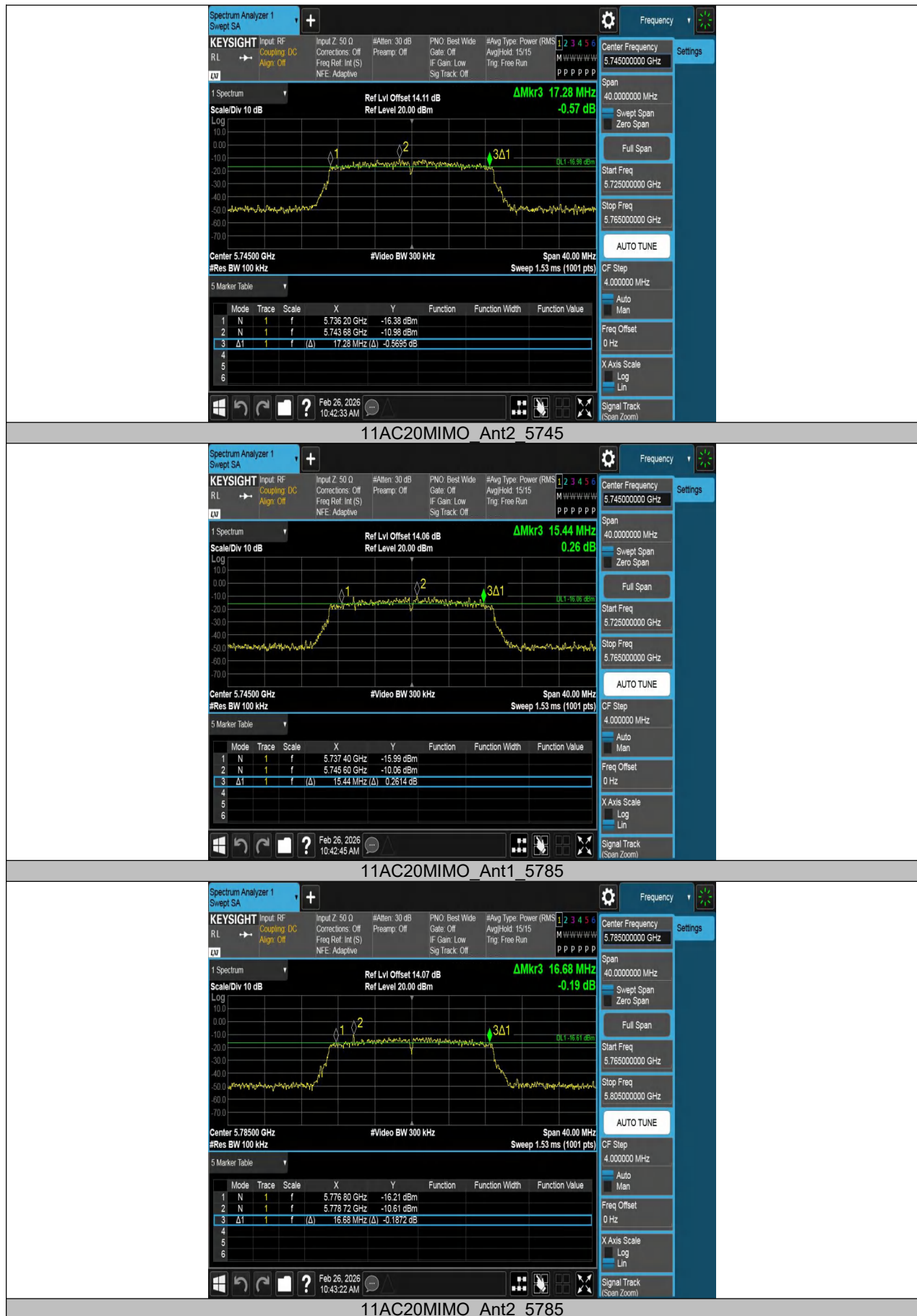


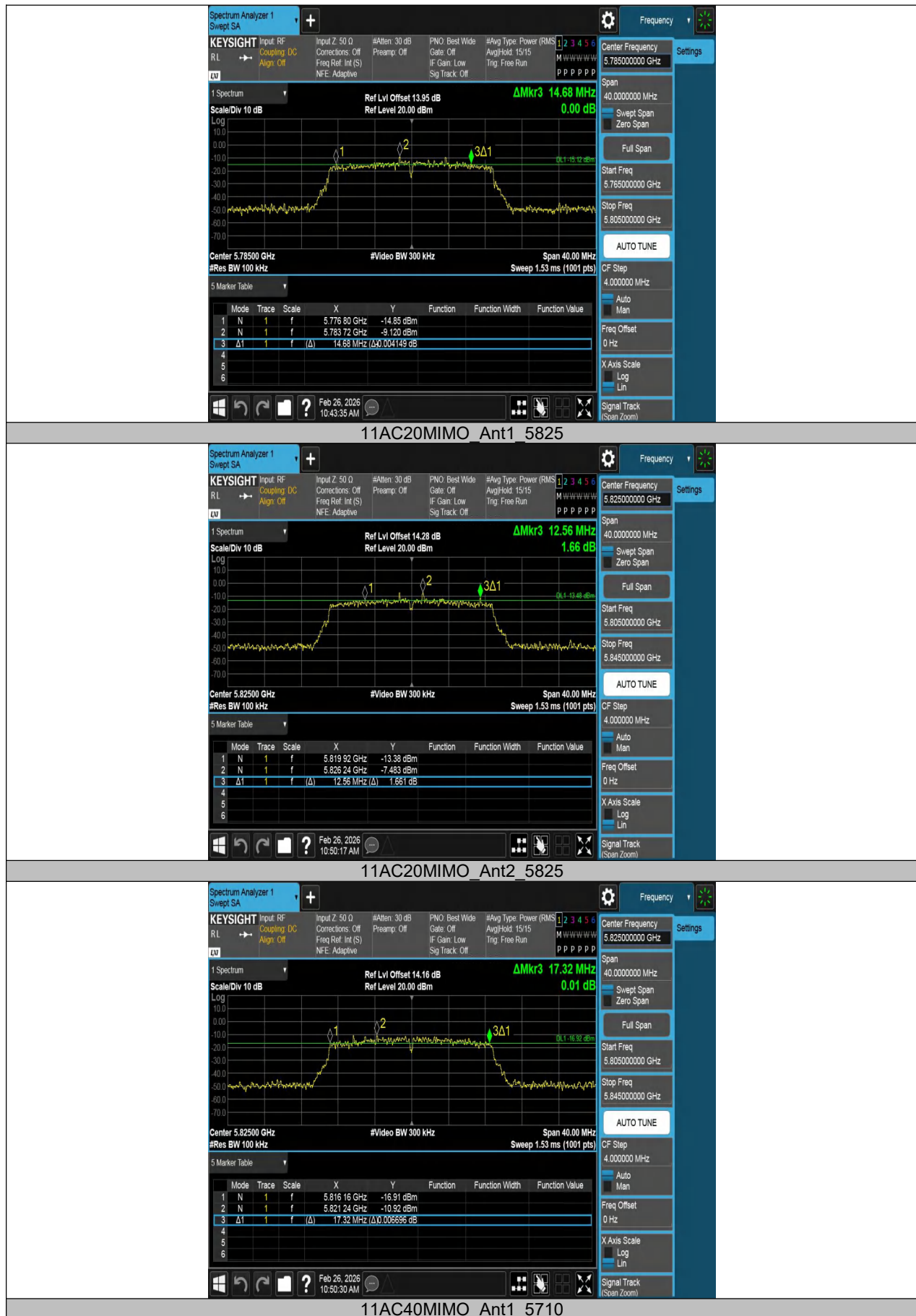


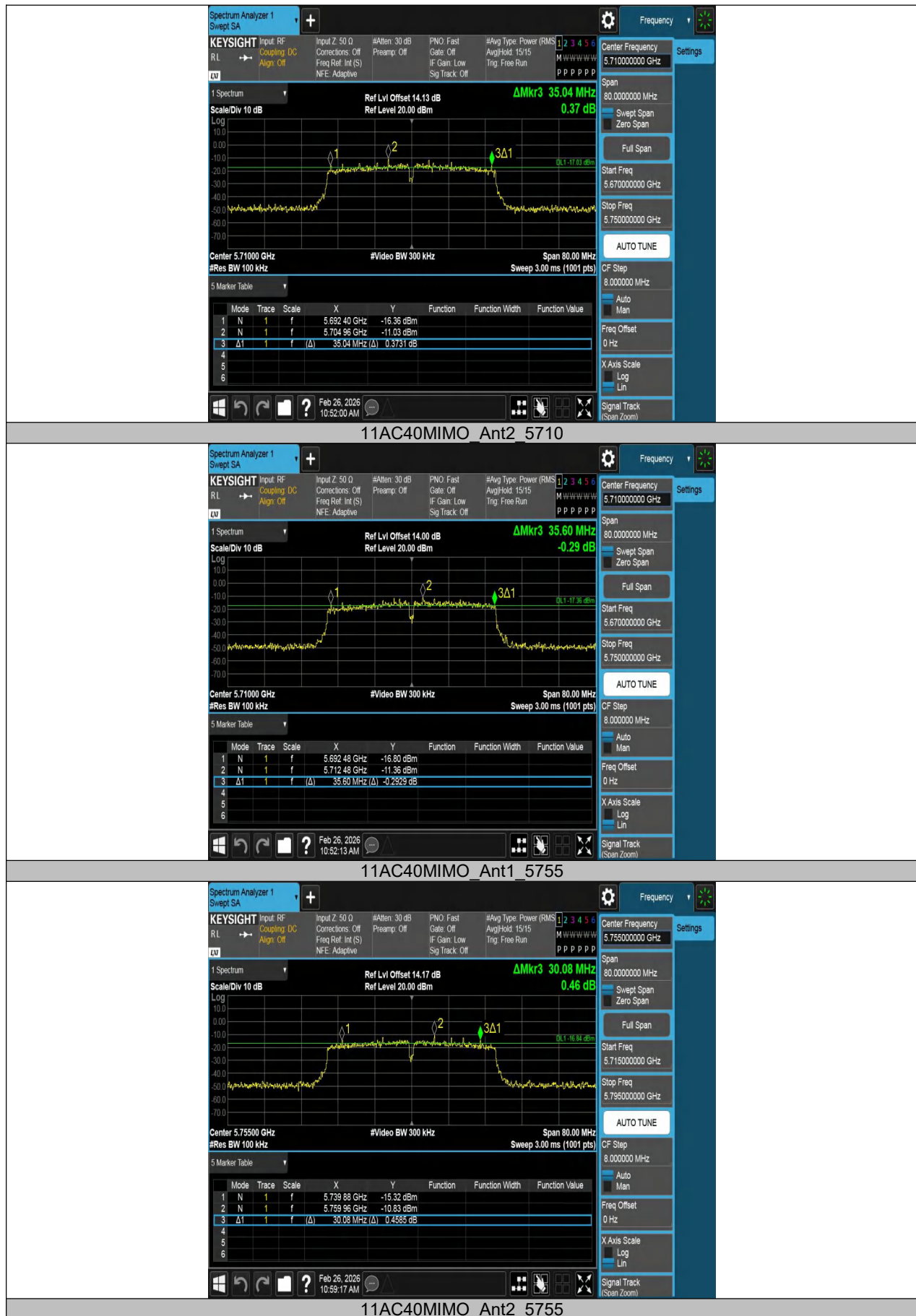


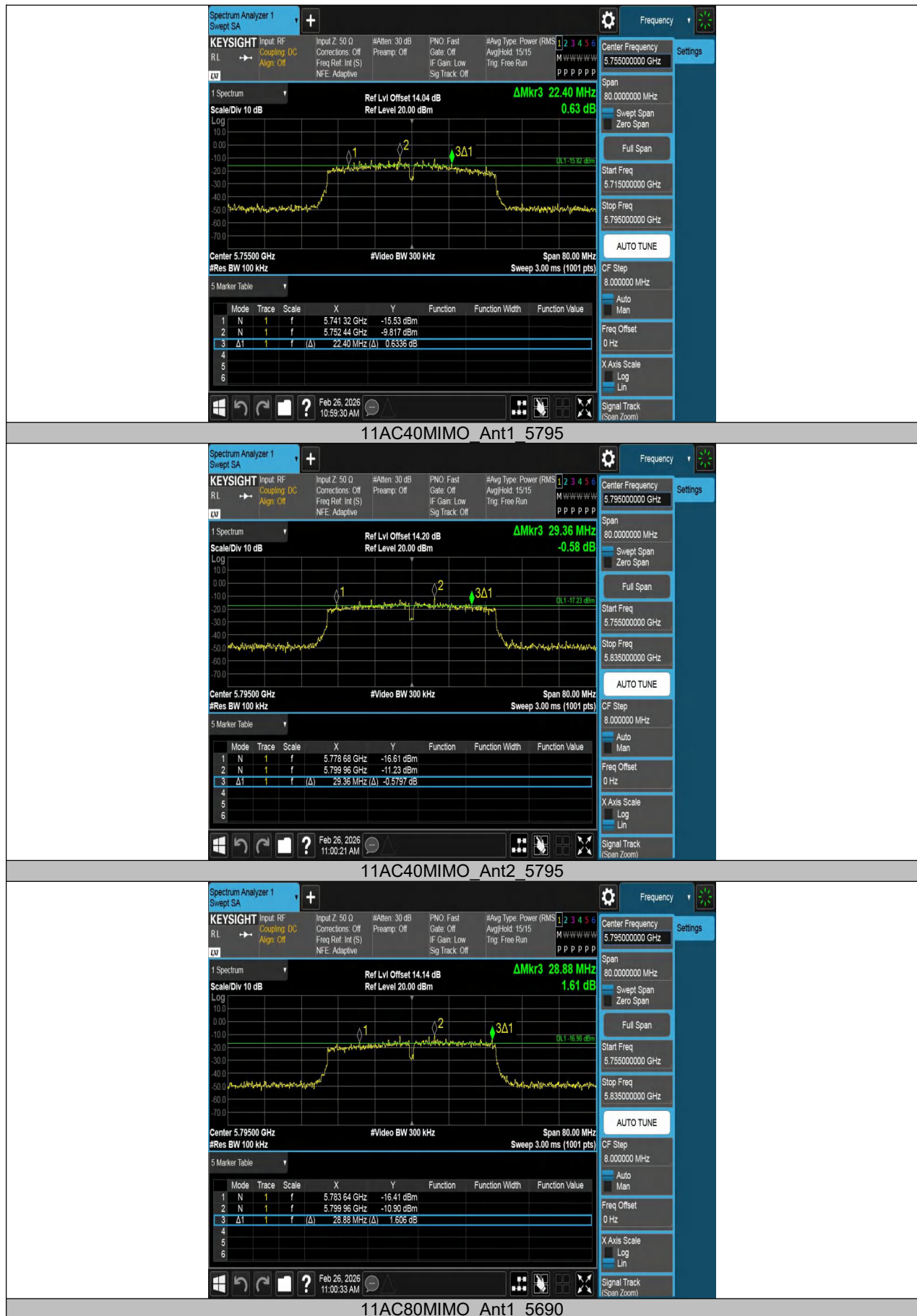


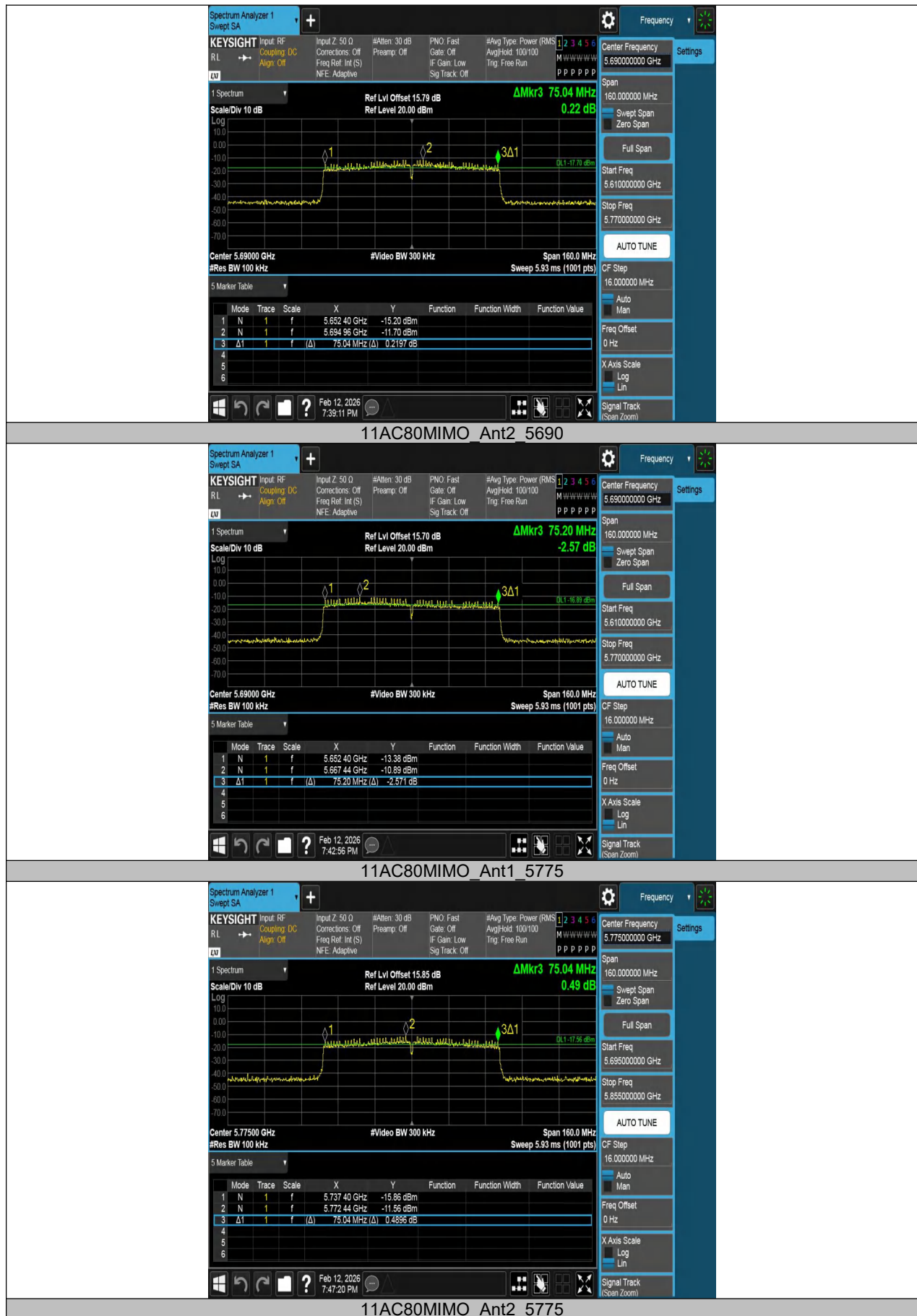














10. Maximum Output Power

10.1. Block Diagram of Test Setup

Same as section 8.1

10.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	☐ Outdoor Access Point: 1 W (30 dBm)	5150-5250
	☒ Indoor Access Point: 1 W (30 dBm)	
	☐ Fixed Point-To-Point Access Points: 1 W (30 dBm)	
	☐ Client Devices: 250 mW (24 dBm)	
	Shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.	5250-5350 5470-5725
	Shall not exceed 1 Watt (30 dBm).	5725-5850
Note: For 802.11n and 802.11ac, the EUT incorporates a MIMO function. The Antenna directional gain is 8.74 dBi. The Output Power limit is the above limits-(8.74-6)		

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

10.3. Test Procedure

Method PM is Measurement using an RF average power meter. The procedure for this method is as follows:

- (1) Measurements may be performed using a wide band RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
 - a) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
 - b) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
 - c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- (2) If the transmitter does not transmit continuously, measure the duty cycle D of the transmitter output signal as described in 12.2.
- (3) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
- (4) Correct the measurement in dBm by adding $(10 \log (1 / D))$, where D is the duty cycle {e.g., $(10 \log (1 / 0.25))$, if the duty cycle is 25%}.

10.4. Test Result

Test Mode	Ant.	Freq. (MHz)	Channel Power (dBm)	DC Factor (dBm)	Result (dBm)	Limit (dBm)	Verdict
11A	Ant1	5180	11.62	0.18	11.80	≤30.00	PASS
	Ant2	5180	11.26	0.18	11.44	≤30.00	PASS
	Ant1	5200	11.03	0.18	11.21	≤30.00	PASS
	Ant2	5200	11.24	0.21	11.45	≤30.00	PASS
	Ant1	5240	12.19	0.18	12.37	≤30.00	PASS
	Ant2	5240	11.70	0.18	11.88	≤30.00	PASS
	Ant1	5260	12.01	0.18	12.19	≤23.94	PASS
	Ant2	5260	11.05	0.18	11.23	≤23.92	PASS
	Ant1	5280	12.22	0.18	12.40	≤23.98	PASS
	Ant2	5280	10.87	0.18	11.05	≤23.95	PASS

	Ant1	5320	11.97	0.18	12.15	≤23.91	PASS
	Ant2	5320	11.65	0.18	11.83	≤23.95	PASS
	Ant1	5500	12.49	0.18	12.67	≤23.89	PASS
	Ant2	5500	12.35	0.18	12.53	≤23.92	PASS
	Ant1	5580	13.07	0.18	13.25	≤23.94	PASS
	Ant2	5580	12.06	0.21	12.27	≤23.93	PASS
	Ant1	5700	11.81	0.18	11.99	≤23.89	PASS
	Ant2	5700	13.14	0.18	13.32	≤23.93	PASS
	Ant1	5720_UNII-2C	10.74	0.18	10.92	≤22.74	PASS
	Ant2	5720_UNII-2C	11.98	0.18	12.16	≤22.63	PASS
	Ant1	5720_UNII-3	2.78	0.18	2.96	≤30.00	PASS
	Ant2	5720_UNII-3	3.70	0.18	3.88	≤30.00	PASS
	Ant1	5745	12.47	0.18	12.65	≤30.00	PASS
	Ant2	5745	12.54	0.18	12.72	≤30.00	PASS
	Ant1	5785	11.79	0.18	11.97	≤30.00	PASS
	Ant2	5785	12.93	0.18	13.11	≤30.00	PASS
	Ant1	5825	12.92	0.21	13.13	≤30.00	PASS
	Ant2	5825	12.55	0.21	12.76	≤30.00	PASS
11N20MI MO	Ant1	5180	10.23	0.18	10.41	≤30.00	PASS
	Ant2	5180	9.64	0.18	9.82	≤30.00	PASS
	total	5180	---	---	13.14	≤27.26	PASS
	Ant1	5200	6.66	0.18	6.84	≤30.00	PASS
	Ant2	5200	6.90	0.18	7.08	≤30.00	PASS
	total	5200	---	---	9.97	≤27.26	PASS
	Ant1	5240	7.66	0.18	7.84	≤30.00	PASS
	Ant2	5240	6.99	0.21	7.20	≤30.00	PASS
	total	5240	---	---	10.54	≤27.26	PASS
	Ant1	5260	6.75	0.18	6.93	≤23.88	PASS
	Ant2	5260	5.93	0.21	6.14	≤23.90	PASS
	total	5260	---	---	9.56	≤21.24	PASS
	Ant1	5280	6.35	0.23	6.58	≤23.98	PASS
	Ant2	5280	6.52	0.20	6.72	≤23.98	PASS
	total	5280	---	---	9.66	≤21.24	PASS
	Ant1	5320	7.16	0.19	7.35	≤23.96	PASS
	Ant2	5320	6.89	0.23	7.12	≤23.98	PASS
	total	5320	---	---	10.25	≤21.24	PASS
	Ant1	5500	6.58	0.19	6.77	≤23.96	PASS
	Ant2	5500	7.59	0.19	7.78	≤23.97	PASS
	total	5500	---	---	10.31	≤21.24	PASS
	Ant1	5580	6.62	0.23	6.85	≤23.90	PASS
	Ant2	5580	7.43	0.20	7.63	≤23.97	PASS
	total	5580	---	---	10.27	≤21.24	PASS
	Ant1	5700	8.03	0.23	8.26	≤23.98	PASS
	Ant2	5700	7.22	0.23	7.45	≤23.98	PASS
	total	5700	---	---	10.88	≤21.24	PASS
	Ant1	5720_UNII-2C	7.18	0.23	7.41	≤22.76	PASS
	Ant2	5720_UNII-2C	6.44	0.19	6.63	≤22.73	PASS
	total	5720_UNII-2C	---	---	10.05	≤21.24	PASS
	Ant1	5720_UNII-3	-1.06	0.23	-0.83	≤30.00	PASS
	Ant2	5720_UNII-3	-1.26	0.19	-1.07	≤30.00	PASS
	total	5720_UNII-3	---	---	2.06	≤27.26	PASS
	Ant1	5745	7.35	0.19	7.54	≤30.00	PASS
	Ant2	5745	7.36	0.19	7.55	≤30.00	PASS
	total	5745	---	---	10.56	≤27.26	PASS
	Ant1	5785	6.95	0.20	7.15	≤30.00	PASS
	Ant2	5785	6.72	0.19	6.91	≤30.00	PASS
	total	5785	---	---	10.04	≤27.26	PASS
	Ant1	5825	7.40	0.19	7.59	≤30.00	PASS
	Ant2	5825	7.35	0.19	7.54	≤30.00	PASS
	total	5825	---	---	10.58	≤27.26	PASS

11N40MI MO	Ant1	5190	4.03	0.39	4.42	≤30.00	PASS
	Ant2	5190	4.66	0.39	5.05	≤30.00	PASS
	total	5190	---	---	7.76	≤27.26	PASS
	Ant1	5230	5.40	0.39	5.79	≤30.00	PASS
	Ant2	5230	6.21	0.39	6.60	≤30.00	PASS
	total	5230	---	---	9.22	≤27.26	PASS
	Ant1	5270	5.26	0.40	5.66	≤23.98	PASS
	Ant2	5270	5.21	0.39	5.60	≤23.98	PASS
	total	5270	---	---	8.64	≤21.24	PASS
	Ant1	5310	5.09	0.39	5.48	≤23.98	PASS
	Ant2	5310	5.63	0.39	6.02	≤23.98	PASS
	total	5310	---	---	8.77	≤21.24	PASS
	Ant1	5510	5.40	0.40	5.80	≤23.98	PASS
	Ant2	5510	6.27	0.39	6.66	≤23.98	PASS
	total	5510	---	---	9.26	≤21.24	PASS
	Ant1	5550	5.80	0.39	6.19	≤23.98	PASS
	Ant2	5550	5.38	0.39	5.77	≤23.98	PASS
	total	5550	---	---	9.00	≤21.24	PASS
	Ant1	5670	6.60	0.40	7.00	≤23.98	PASS
	Ant2	5670	6.49	0.39	6.88	≤23.98	PASS
	total	5670	---	---	9.95	≤21.24	PASS
	Ant1	5710_UNII-2C	5.32	0.39	5.71	≤23.98	PASS
	Ant2	5710_UNII-2C	6.40	0.39	6.79	≤23.98	PASS
	total	5710_UNII-2C	---	---	9.29	≤21.24	PASS
	Ant1	5710_UNII-3	-7.96	0.39	-7.57	≤30.00	PASS
	Ant2	5710_UNII-3	-5.03	0.39	-4.64	≤30.00	PASS
	total	5710_UNII-3	---	---	-2.85	≤27.26	PASS
	Ant1	5755	5.72	0.39	6.11	≤30.00	PASS
	Ant2	5755	5.72	0.39	6.11	≤30.00	PASS
	total	5755	---	---	9.12	≤27.26	PASS
	Ant1	5795	5.32	0.40	5.72	≤30.00	PASS
	Ant2	5795	5.98	0.39	6.37	≤30.00	PASS
	total	5795	---	---	9.07	≤27.26	PASS
11AC20 MIMO	Ant1	5180	3.88	0.36	4.24	≤30.00	PASS
	Ant2	5180	4.45	0.36	4.81	≤30.00	PASS
	total	5180	---	---	7.54	≤27.26	PASS
	Ant1	5200	2.83	0.43	3.26	≤30.00	PASS
	Ant2	5200	4.20	0.36	4.56	≤30.00	PASS
	total	5200	---	---	6.97	≤27.26	PASS
	Ant1	5240	6.98	0.36	7.34	≤30.00	PASS
	Ant2	5240	6.56	0.36	6.92	≤30.00	PASS
	total	5240	---	---	10.15	≤27.26	PASS
	Ant1	5260	5.48	0.37	5.85	≤23.98	PASS
	Ant2	5260	5.86	0.36	6.22	≤23.98	PASS
	total	5260	---	---	9.05	≤21.24	PASS
	Ant1	5280	5.92	0.37	6.29	≤23.98	PASS
	Ant2	5280	6.43	0.37	6.80	≤23.98	PASS
	total	5280	---	---	9.56	≤21.24	PASS
	Ant1	5320	6.70	0.43	7.13	≤23.95	PASS
	Ant2	5320	5.94	0.37	6.31	≤23.98	PASS
	total	5320	---	---	9.75	≤21.24	PASS
	Ant1	5500	5.87	0.36	6.23	≤23.97	PASS
	Ant2	5500	6.54	0.36	6.90	≤23.98	PASS
	total	5500	---	---	9.59	≤21.24	PASS
	Ant1	5580	5.81	0.36	6.17	≤23.84	PASS
	Ant2	5580	6.35	0.43	6.78	≤23.97	PASS
	total	5580	---	---	9.50	≤21.24	PASS
	Ant1	5700	6.86	0.36	7.22	≤23.98	PASS
	Ant2	5700	6.22	0.37	6.59	≤23.98	PASS
	total	5700	---	---	9.93	≤21.24	PASS

	Ant1	5720 UNII-2C	5.80	0.37	6.17	≤22.81	PASS
	Ant2	5720 UNII-2C	4.84	0.36	5.20	≤22.76	PASS
	total	5720 UNII-2C	---	---	8.72	≤21.24	PASS
	Ant1	5720 UNII-3	-1.98	0.37	-1.61	≤30.00	PASS
	Ant2	5720 UNII-3	-1.87	0.36	-1.51	≤30.00	PASS
	total	5720 UNII-3	---	---	1.45	≤27.26	PASS
	Ant1	5745	6.39	0.43	6.82	≤30.00	PASS
	Ant2	5745	5.99	0.43	6.42	≤30.00	PASS
	total	5745	---	---	9.63	≤27.26	PASS
	Ant1	5785	5.74	0.36	6.10	≤30.00	PASS
	Ant2	5785	6.25	0.36	6.61	≤30.00	PASS
	total	5785	---	---	9.37	≤27.26	PASS
11AC40 MIMO	Ant1	5825	5.98	0.43	6.41	≤30.00	PASS
	Ant2	5825	6.49	0.37	6.86	≤30.00	PASS
	total	5825	---	---	9.65	≤27.26	PASS
	Ant1	5190	5.96	0.69	6.65	≤30.00	PASS
	Ant2	5190	5.22	0.67	5.89	≤30.00	PASS
	total	5190	---	---	9.30	≤27.26	PASS
	Ant1	5230	5.84	0.69	6.53	≤30.00	PASS
	Ant2	5230	5.73	0.69	6.42	≤30.00	PASS
	total	5230	---	---	9.49	≤27.26	PASS
	Ant1	5270	5.09	0.67	5.76	≤23.98	PASS
	Ant2	5270	5.72	0.69	6.41	≤23.98	PASS
	total	5270	---	---	9.11	≤21.24	PASS
	Ant1	5310	5.69	0.69	6.38	≤23.98	PASS
	Ant2	5310	5.38	0.69	6.07	≤23.98	PASS
	total	5310	---	---	9.24	≤21.24	PASS
	Ant1	5510	5.37	0.69	6.06	≤23.98	PASS
	Ant2	5510	6.56	0.69	7.25	≤23.98	PASS
	total	5510	---	---	9.71	≤21.24	PASS
	Ant1	5550	5.02	0.69	5.71	≤23.98	PASS
	Ant2	5550	5.90	0.69	6.59	≤23.98	PASS
	total	5550	---	---	9.18	≤21.24	PASS
	Ant1	5670	6.18	0.67	6.85	≤23.98	PASS
	Ant2	5670	6.55	0.69	7.24	≤23.98	PASS
	total	5670	---	---	10.06	≤21.24	PASS
	Ant1	5710 UNII-2C	6.36	0.69	7.05	≤23.98	PASS
	Ant2	5710 UNII-2C	5.27	0.69	5.96	≤23.98	PASS
	total	5710 UNII-2C	---	---	9.55	≤21.24	PASS
	Ant1	5710 UNII-3	-7.21	0.69	-6.52	≤30.00	PASS
	Ant2	5710 UNII-3	-6.68	0.69	-5.99	≤30.00	PASS
	total	5710 UNII-3	---	---	-3.24	≤27.26	PASS
	Ant1	5755	6.23	0.69	6.92	≤30.00	PASS
	Ant2	5755	5.85	0.69	6.54	≤30.00	PASS
	total	5755	---	---	9.74	≤27.26	PASS
	Ant1	5795	5.51	0.69	6.20	≤30.00	PASS
	Ant2	5795	5.32	0.69	6.01	≤30.00	PASS
	total	5795	---	---	9.12	≤27.26	PASS
11AC80 MIMO	Ant1	5210	4.67	0.64	5.31	≤30.00	PASS
	Ant2	5210	5.43	0.64	6.07	≤30.00	PASS
	total	5210	---	---	8.72	≤27.26	PASS
	Ant1	5290	5.02	0.64	5.66	≤23.98	PASS
	Ant2	5290	5.18	0.64	5.82	≤23.98	PASS
	total	5290	---	---	8.75	≤21.24	PASS
	Ant1	5530	5.11	0.64	5.75	≤23.98	PASS
	Ant2	5530	6.02	0.64	6.66	≤23.98	PASS
	total	5530	---	---	9.24	≤21.24	PASS
	Ant1	5610	5.80	0.64	6.44	≤23.98	PASS
	Ant2	5610	5.47	0.64	6.11	≤23.98	PASS
	total	5610	---	---	9.29	≤21.24	PASS

	Ant1	5690 UNII-2C	5.68	0.64	6.32	≤23.98	PASS
	Ant2	5690 UNII-2C	5.66	0.64	6.30	≤23.98	PASS
	total	5690 UNII-2C	---	---	9.32	≤21.24	PASS
	Ant1	5690 UNII-3	-10.46	0.64	-9.82	≤30.00	PASS
	Ant2	5690 UNII-3	-9.26	0.64	-8.62	≤30.00	PASS
	total	5690 UNII-3	---	---	-6.17	≤27.26	PASS
	Ant1	5775	4.73	0.64	5.37	≤30.00	PASS
	Ant2	5775	5.55	0.64	6.19	≤30.00	PASS
	total	5775	---	---	8.81	≤27.26	PASS

Note: The Result = Channel Power + DC factor

Beamforming on

Test Mode	Ant.	Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
11N20MIMO	Ant1	5180	9.82	≤30.00	PASS
	Ant2	5180	9.55	≤30.00	PASS
	total	5180	12.70	≤27.26	PASS
	Ant1	5200	7.08	≤30.00	PASS
	Ant2	5200	6.77	≤30.00	PASS
	total	5200	9.94	≤27.26	PASS
	Ant1	5240	8.28	≤30.00	PASS
	Ant2	5240	7.51	≤30.00	PASS
	total	5240	10.92	≤27.26	PASS
	Ant1	5260	7.76	≤23.88	PASS
	Ant2	5260	6.90	≤23.90	PASS
	total	5260	10.36	≤21.24	PASS
	Ant1	5280	6.49	≤23.98	PASS
	Ant2	5280	5.66	≤23.98	PASS
	total	5280	9.11	≤21.24	PASS
	Ant1	5320	7.11	≤23.96	PASS
	Ant2	5320	6.85	≤23.98	PASS
	total	5320	9.99	≤21.24	PASS
	Ant1	5500	7.25	≤23.96	PASS
	Ant2	5500	7.12	≤23.97	PASS
	total	5500	10.20	≤21.24	PASS
	Ant1	5580	8.03	≤23.90	PASS
	Ant2	5580	6.57	≤23.97	PASS
	total	5580	10.37	≤21.24	PASS
	Ant1	5700	6.86	≤23.98	PASS
	Ant2	5700	7.07	≤23.98	PASS
	total	5700	9.98	≤21.24	PASS
	Ant1	5720 UNII-2C	6.63	≤22.76	PASS
	Ant2	5720 UNII-2C	6.34	≤22.73	PASS
	total	5720 UNII-2C	9.50	≤21.24	PASS
	Ant1	5720 UNII-3	-0.39	≤30.00	PASS
	Ant2	5720 UNII-3	0.25	≤30.00	PASS
	total	5720 UNII-3	2.95	≤27.26	PASS
	Ant1	5745	7.36	≤30.00	PASS
	Ant2	5745	6.85	≤30.00	PASS
	total	5745	10.12	≤27.26	PASS
	Ant1	5785	6.87	≤30.00	PASS
	Ant2	5785	6.40	≤30.00	PASS
	total	5785	9.65	≤27.26	PASS
	Ant1	5825	7.47	≤30.00	PASS
	Ant2	5825	6.54	≤30.00	PASS
	total	5825	10.04	≤27.26	PASS
11N40MIMO	Ant1	5190	4.98	≤30.00	PASS
	Ant2	5190	4.81	≤30.00	PASS
	total	5190	7.91	≤27.26	PASS
	Ant1	5230	5.69	≤30.00	PASS
	Ant2	5230	5.57	≤30.00	PASS

	total	5230	8.64	≤27.26	PASS
	Ant1	5270	5.42	≤23.98	PASS
	Ant2	5270	4.20	≤23.98	PASS
	total	5270	7.86	≤21.24	PASS
	Ant1	5310	5.35	≤23.98	PASS
	Ant2	5310	5.16	≤23.98	PASS
	total	5310	8.27	≤21.24	PASS
	Ant1	5510	5.55	≤23.98	PASS
	Ant2	5510	5.28	≤23.98	PASS
	total	5510	8.43	≤21.24	PASS
	Ant1	5550	6.27	≤23.98	PASS
	Ant2	5550	4.45	≤23.98	PASS
	total	5550	8.46	≤21.24	PASS
	Ant1	5670	6.96	≤23.98	PASS
	Ant2	5670	6.31	≤23.98	PASS
	total	5670	9.66	≤21.24	PASS
	Ant1	5710 UNII-2C	5.71	≤23.98	PASS
	Ant2	5710 UNII-2C	5.46	≤23.98	PASS
	total	5710 UNII-2C	8.60	≤21.24	PASS
	Ant1	5710 UNII-3	-7.41	≤30.00	PASS
	Ant2	5710 UNII-3	-6.20	≤30.00	PASS
	total	5710 UNII-3	-3.75	≤27.26	PASS
	Ant1	5755	6.30	≤30.00	PASS
	Ant2	5755	5.82	≤30.00	PASS
	total	5755	9.08	≤27.26	PASS
	Ant1	5795	6.11	≤30.00	PASS
	Ant2	5795	5.56	≤30.00	PASS
	total	5795	8.85	≤27.26	PASS
11AC20MIMO	Ant1	5180	4.56	≤30.00	PASS
	Ant2	5180	4.35	≤30.00	PASS
	total	5180	7.47	≤27.26	PASS
	Ant1	5200	4.10	≤30.00	PASS
	Ant2	5200	4.02	≤30.00	PASS
	total	5200	7.07	≤27.26	PASS
	Ant1	5240	6.61	≤30.00	PASS
	Ant2	5240	6.15	≤30.00	PASS
	total	5240	9.40	≤27.26	PASS
	Ant1	5260	6.25	≤23.98	PASS
	Ant2	5260	5.22	≤23.98	PASS
	total	5260	8.78	≤21.24	PASS
	Ant1	5280	6.29	≤23.98	PASS
	Ant2	5280	5.33	≤23.98	PASS
	total	5280	8.85	≤21.24	PASS
	Ant1	5320	6.41	≤23.95	PASS
	Ant2	5320	5.81	≤23.98	PASS
	total	5320	9.13	≤21.24	PASS
	Ant1	5500	6.72	≤23.97	PASS
	Ant2	5500	6.36	≤23.98	PASS
	total	5500	9.55	≤21.24	PASS
	Ant1	5580	7.71	≤23.84	PASS
	Ant2	5580	5.94	≤23.97	PASS
	total	5580	9.92	≤21.24	PASS
	Ant1	5700	6.54	≤23.98	PASS
	Ant2	5700	6.33	≤23.98	PASS
	total	5700	9.45	≤21.24	PASS
	Ant1	5720 UNII-2C	5.13	≤22.81	PASS
	Ant2	5720 UNII-2C	4.96	≤22.76	PASS
	total	5720 UNII-2C	8.06	≤21.24	PASS
	Ant1	5720 UNII-3	-2.43	≤30.00	PASS
	Ant2	5720 UNII-3	-2.06	≤30.00	PASS

	total	5720 UNII-3	0.77	≤27.26	PASS
	Ant1	5745	6.25	≤30.00	PASS
	Ant2	5745	5.33	≤30.00	PASS
	total	5745	8.82	≤27.26	PASS
	Ant1	5785	5.84	≤30.00	PASS
	Ant2	5785	5.42	≤30.00	PASS
	total	5785	8.65	≤27.26	PASS
	Ant1	5825	6.42	≤30.00	PASS
	Ant2	5825	5.50	≤30.00	PASS
	total	5825	8.99	≤27.26	PASS
11AC40MIMO	Ant1	5190	5.76	≤30.00	PASS
	Ant2	5190	5.65	≤30.00	PASS
	total	5190	8.72	≤27.26	PASS
	Ant1	5230	5.82	≤30.00	PASS
	Ant2	5230	5.87	≤30.00	PASS
	total	5230	8.86	≤27.26	PASS
	Ant1	5270	5.77	≤23.98	PASS
	Ant2	5270	4.98	≤23.98	PASS
	total	5270	8.40	≤21.24	PASS
	Ant1	5310	5.88	≤23.98	PASS
	Ant2	5310	5.44	≤23.98	PASS
	total	5310	8.68	≤21.24	PASS
	Ant1	5510	6.13	≤23.98	PASS
	Ant2	5510	6.02	≤23.98	PASS
	total	5510	9.09	≤21.24	PASS
	Ant1	5550	6.55	≤23.98	PASS
	Ant2	5550	5.15	≤23.98	PASS
	total	5550	8.92	≤21.24	PASS
	Ant1	5670	6.45	≤23.98	PASS
	Ant2	5670	5.66	≤23.98	PASS
	total	5670	9.08	≤21.24	PASS
	Ant1	5710 UNII-2C	5.46	≤23.98	PASS
	Ant2	5710 UNII-2C	5.65	≤23.98	PASS
	total	5710 UNII-2C	8.57	≤21.24	PASS
	Ant1	5710 UNII-3	-6.25	≤30.00	PASS
	Ant2	5710 UNII-3	-4.82	≤30.00	PASS
	total	5710 UNII-3	-2.47	≤27.26	PASS
	Ant1	5755	6.09	≤30.00	PASS
	Ant2	5755	5.88	≤30.00	PASS
	total	5755	9.00	≤27.26	PASS
	Ant1	5795	6.13	≤30.00	PASS
	Ant2	5795	5.53	≤30.00	PASS
	total	5795	8.85	≤27.26	PASS
11AC80MIMO	Ant1	5210	5.62	≤30.00	PASS
	Ant2	5210	5.68	≤30.00	PASS
	total	5210	8.66	≤27.26	PASS
	Ant1	5290	6.35	≤23.98	PASS
	Ant2	5290	5.79	≤23.98	PASS
	total	5290	9.09	≤21.24	PASS
	Ant1	5530	6.09	≤23.98	PASS
	Ant2	5530	6.10	≤23.98	PASS
	total	5530	9.11	≤21.24	PASS
	Ant1	5610	6.82	≤23.98	PASS
	Ant2	5610	5.52	≤23.98	PASS
	total	5610	9.23	≤21.24	PASS
	Ant1	5690 UNII-2C	6.38	≤23.98	PASS
	Ant2	5690 UNII-2C	5.66	≤23.98	PASS
	total	5690 UNII-2C	9.05	≤21.24	PASS
	Ant1	5690 UNII-3	-8.32	≤30.00	PASS
	Ant2	5690 UNII-3	-8.28	≤30.00	PASS

	total	5690 UNII-3	-5.29	≤ 27.26	PASS
	Ant1	5775	5.73	≤ 30.00	PASS
	Ant2	5775	5.42	≤ 30.00	PASS
	total	5775	8.59	≤ 27.26	PASS

11. Power Spectral Density

11.1. Block Diagram of Test Setup

Same as section 8.1

11.2. Limits

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	☐ Outdoor Access Point: 17 dBm/MHz ☒ Indoor Access Point: 17 dBm/MHz ☐ Fixed Point-To-Point Access Points: 17 dBm/MHz ☐ Client Devices: 11 dBm/MHz	5150-5250
	11 dBm/MHz	5250-5350 5470-5725
	30 dBm/500 kHz	5725-5850
	Note: For 802.11n and 802.11ac, the EUT incorporates a MIMO function. The Antenna directional gain is 8.74 dBi. The Power Spectral Density limit is the above limits-(8.74-6)	

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

11.3. Test Procedure

- Measure the duty cycle D of the transmitter output signal as described in 12.2.
- Set span to encompass the entire 99% OBW of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep $\geq (2 \times \text{span} / \text{RBW})$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto.
- Detector = Power averaging (rms), if available. Otherwise, use sample detector mode.
- Do not use sweep triggering. Allow the sweep to "free run."
- Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter. then add $(10 \log (1 / D))$, where D is the duty cycle, to the peak of the spectrum.
- The procedure in item a) through item i) requires the use of 1 MHz resolution bandwidth to satisfy the 1 MHz measurement bandwidth specified by some regulatory authorities.⁸⁵ This requirement also permits use of resolution bandwidths less than 1 MHz "provided that the measured power is integrated to show the total power over the measurement bandwidth" (i.e., 1 MHz). If measurements are performed using a reduced resolution bandwidth and integrated over 1 MHz bandwidth, the following adjustments to the procedures apply:
 - Set $\text{RBW} \geq 1 / T$.
 - Set $\text{VBW} \geq (3 \times \text{RBW})$.
 - Care shall be taken such that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Connect the UUT to the spectrum analyzer and use the following settings:

5150 MHz~5250 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal

Sweep time	Auto
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5725 MHz-5850 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Sweep time	Auto

Note:

1. For UNII-3, according to KdB publication 789033 D02 General U-NII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 1 MHz and VBW at 3 MHz if the spectrum analyzer does not have 500 kHz RBW.

2. The value measured with RBW=300kHz is to be added with $10\log(500\text{kHz}/300\text{kHz})$ which is 2.2dB. For example, if the measured value is +30 dBm using RBW=300kHz (that is +30 dBm/300kHz), then the converted value will be +32.2 dBm/1MHz.

3. Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

11.4. Test Result

Test Result for B1/2/3

Test Mode	Ant.	Freq. (MHz)	Raw Data (dBm/MHz)	DC Factor	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
11A	Ant1	5180	1.86	0.18	2.04	≤ 17.00	PASS
	Ant2	5180	1.38	0.18	1.56	≤ 17.00	PASS
	Ant1	5200	1.05	0.18	1.23	≤ 17.00	PASS
	Ant2	5200	1.05	0.21	1.26	≤ 17.00	PASS
	Ant1	5240	2.67	0.18	2.85	≤ 17.00	PASS
	Ant2	5240	2.00	0.18	2.18	≤ 17.00	PASS
	Ant1	5260	1.56	0.18	1.74	≤ 11.00	PASS
	Ant2	5260	0.76	0.18	0.94	≤ 11.00	PASS
	Ant1	5280	1.55	0.18	1.73	≤ 11.00	PASS
	Ant2	5280	0.67	0.18	0.85	≤ 11.00	PASS
	Ant1	5320	1.82	0.18	2.00	≤ 11.00	PASS
	Ant2	5320	1.78	0.18	1.96	≤ 11.00	PASS
	Ant1	5500	2.54	0.18	2.72	≤ 11.00	PASS
	Ant2	5500	2.75	0.18	2.93	≤ 11.00	PASS
	Ant1	5580	2.84	0.18	3.02	≤ 11.00	PASS
	Ant2	5580	1.83	0.21	2.04	≤ 11.00	PASS
	Ant1	5700	1.96	0.18	2.14	≤ 11.00	PASS
	Ant2	5700	3.26	0.18	3.44	≤ 11.00	PASS
	Ant1	5720 UNII-2C	2.06	0.18	2.24	≤ 11.00	PASS
	Ant2	5720 UNII-2C	3.54	0.18	3.72	≤ 11.00	PASS
11N20MIMO	Ant1	5720 UNII-3	-5.26	0.18	-2.86	≤ 30.00	PASS
	Ant2	5720 UNII-3	-3.75	0.18	-1.35	≤ 30.00	PASS
	Ant1	5180	-0.31	0.18	-0.13	≤ 17.00	PASS
	Ant2	5180	-0.49	0.18	-0.31	≤ 17.00	PASS
	total	5180	---	---	2.79	≤ 14.26	PASS
	Ant1	5200	-3.49	0.18	-3.31	≤ 17.00	PASS
	Ant2	5200	-3.37	0.18	-3.19	≤ 17.00	PASS
	total	5200	---	---	-0.24	≤ 14.26	PASS
	Ant1	5240	-3.16	0.18	-2.98	≤ 17.00	PASS
	Ant2	5240	-3.35	0.21	-3.14	≤ 17.00	PASS
	total	5240	---	---	-0.05	≤ 14.26	PASS
	Ant1	5260	-3.53	0.18	-3.35	≤ 11.00	PASS
	Ant2	5260	-3.78	0.21	-3.57	≤ 11.00	PASS