



11.3. APPENDIX C: 6DB EMISSION BANDWIDTH
11.3.1. Test Result

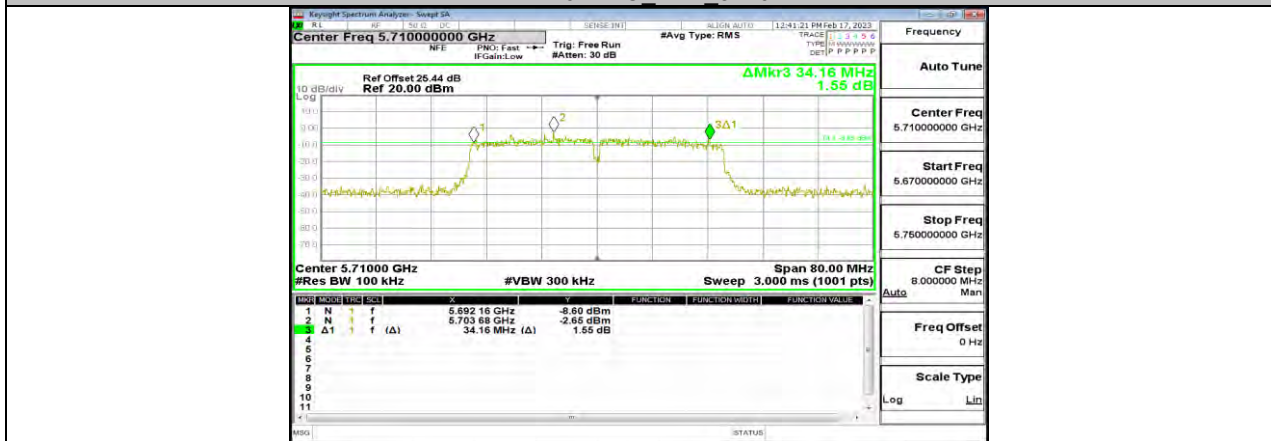
Test Mode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5720	16.320	5711.800	5728.120	0.5	PASS
	Ant2	5720	16.080	5711.840	5727.920	0.5	PASS
	Ant1	5720_UNII-3	3.12	5725	5728.120	0.5	PASS
	Ant2	5720_UNII-3	2.92	5725	5727.920	0.5	PASS
11N20MIMO	Ant1	5720	17.560	5711.200	5728.760	0.5	PASS
	Ant2	5720	15.800	5712.080	5727.880	0.5	PASS
	Ant1	5720_UNII-3	3.76	5725	5728.760	0.5	PASS
	Ant2	5720_UNII-3	2.88	5725	5727.880	0.5	PASS
11N40MIMO	Ant1	5710	34.160	5692.160	5726.320	0.5	PASS
	Ant2	5710	34.480	5691.840	5726.320	0.5	PASS
	Ant1	5710_UNII-3	1.32	5725	5726.320	0.5	PASS
	Ant2	5710_UNII-3	1.32	5725	5726.320	0.5	PASS
11AC80MIMO	Ant1	5690	75.520	5651.920	5727.440	0.5	PASS
	Ant2	5690	75.360	5652.240	5727.600	0.5	PASS
	Ant1	5690_UNII-3	2.44	5725	5727.440	0.5	PASS
	Ant2	5690_UNII-3	2.6	5725	5727.600	0.5	PASS

11.3.2. Test Graphs

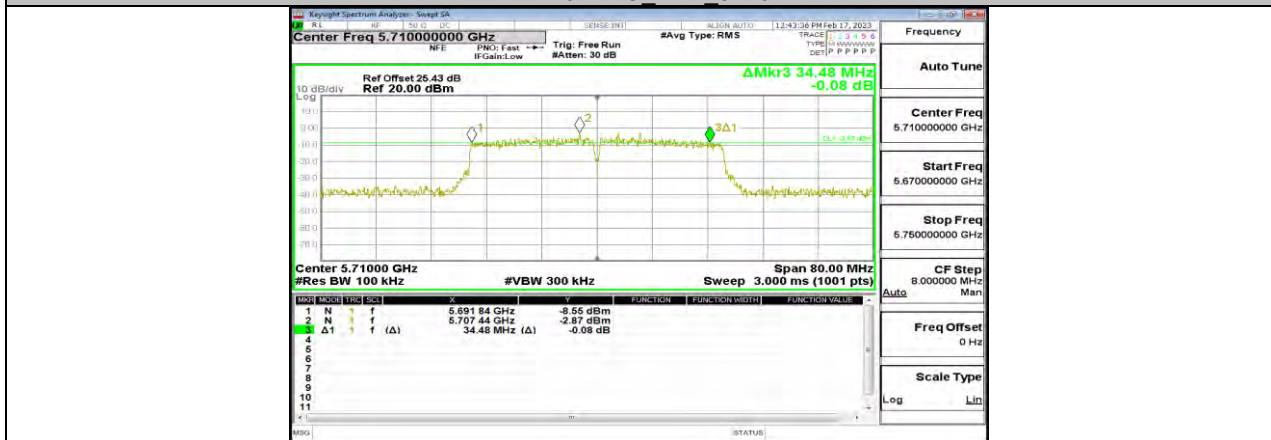




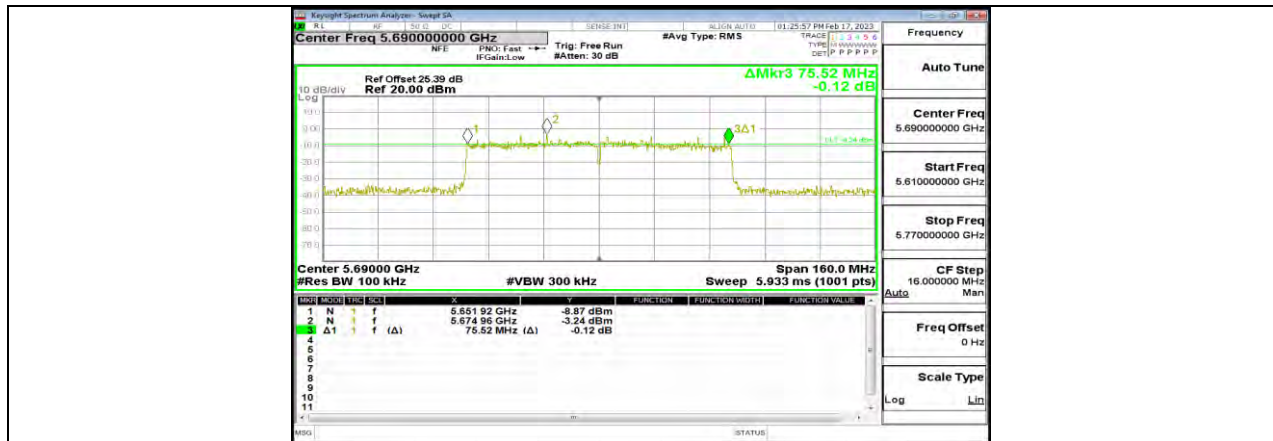
11N20MIMO Ant2 5720



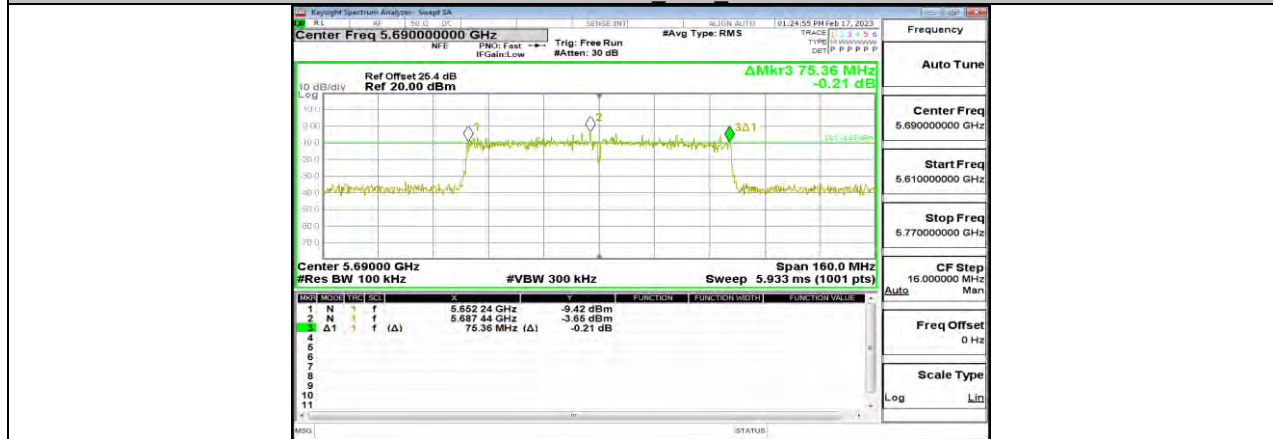
11N40MIMO Ant1 5710



11N40MIMO Ant2 5710



11AC80MIMO Ant1 5690



11AC80MIMO Ant2 5690

11.4. APPENDIX D: MAXIMUM CONDUCTED OUTPUT POWER

11.4.1. Test Result

Test Mode	Antenna	Channel	Power [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	EIRP [dBm]	EIRP Limit for ISED [dBm]	Verdict
11A	Ant1	5260	14.65	≤23.98	≤23.23	18.52	≤29.23	PASS
	Ant2	5260	14.16	≤23.86	≤23.21	18.03	≤29.21	PASS
	Ant1	5280	14.62	≤23.91	≤23.19	18.49	≤29.19	PASS
	Ant2	5280	14.24	≤23.80	≤23.17	18.11	≤29.17	PASS
	Ant1	5320	14.56	≤23.98	≤23.18	18.43	≤29.18	PASS
	Ant2	5320	14.39	≤23.90	≤23.20	18.26	≤29.20	PASS
	Ant1	5500	14.37	≤23.90	≤23.19	18.24	≤29.19	PASS
	Ant2	5500	14.03	≤23.77	≤23.20	17.90	≤29.20	PASS
	Ant1	5580	14.58	≤23.81	≤23.19	18.45	≤29.19	PASS
	Ant2	5580	14.20	≤23.93	≤23.18	18.07	≤29.18	PASS
	Ant1	5700	14.50	≤23.90	≤23.19	18.37	≤29.19	PASS
	Ant2	5700	14.12	≤23.88	≤23.19	17.99	≤29.19	PASS
	Ant1	5720_UNII-2C	13.38	≤22.64	≤22.24	17.25	≤28.24	PASS
	Ant2	5720_UNII-2C	12.80	≤22.75	≤22.25	16.67	≤28.25	PASS
Ant1	5720_UNII-3	5.37	≤30.00	≤30.00	9.24	---	PASS	
Ant2	5720_UNII-3	4.95	≤30.00	≤30.00	8.82	---	PASS	
11N20MIMO	Ant1	5260	13.99	≤23.95	≤23.48	17.86	≤29.48	PASS
	Ant2	5260	12.52	≤23.96	≤23.45	16.39	≤29.45	PASS
	total	5260	16.33	≤23.98	≤23.45	20.20	≤29.45	PASS
	Ant1	5280	13.99	≤23.98	≤23.48	17.86	≤29.48	PASS
	Ant2	5280	12.47	≤23.95	≤23.45	16.34	≤29.45	PASS
	total	5280	16.31	≤23.98	≤23.45	20.18	≤29.45	PASS
	Ant1	5320	14.16	≤23.98	≤23.48	18.03	≤29.48	PASS
	Ant2	5320	12.62	≤23.97	≤23.46	16.49	≤29.46	PASS
	total	5320	16.47	≤23.98	≤23.46	20.34	≤29.46	PASS
	Ant1	5500	13.60	≤23.97	≤23.48	17.47	≤29.48	PASS
	Ant2	5500	13.26	≤23.98	≤23.44	17.13	≤29.44	PASS
	total	5500	16.44	≤23.98	≤23.44	20.31	≤29.44	PASS
	Ant1	5580	13.83	≤23.93	≤23.48	17.70	≤29.48	PASS
	Ant2	5580	13.84	≤23.98	≤23.47	17.71	≤29.47	PASS
	total	5580	16.85	≤23.98	≤23.47	20.72	≤29.47	PASS
	Ant1	5700	12.93	≤23.98	≤23.48	16.80	≤29.48	PASS
	Ant2	5700	13.41	≤23.98	≤23.44	17.28	≤29.44	PASS
	total	5700	16.19	≤23.98	≤23.44	20.06	≤29.44	PASS
	Ant1	5720_UNII-2C	11.74	≤23.98	≤22.42	15.61	≤28.42	PASS
	Ant2	5720_UNII-2C	12.14	≤23.98	≤22.40	16.01	≤28.40	PASS
	total	5720_UNII-2C	14.95	≤23.98	≤22.40	18.82	≤28.40	PASS
Ant1	5720_UNII-3	4.59	≤30.00	≤30.00	8.46	---	PASS	
Ant2	5720_UNII-3	4.86	≤30.00	≤30.00	8.73	---	PASS	
total	5720_UNII-3	7.74	≤30.00	≤30.00	11.61	---	PASS	
11N40MIMO	Ant1	5270	13.19	≤23.98	≤23.98	17.06	≤30.00	PASS
	Ant2	5270	11.41	≤23.98	≤23.98	15.28	≤30.00	PASS
	total	5270	15.40	≤23.98	≤23.98	19.27	≤30.00	PASS
	Ant1	5310	13.29	≤23.98	≤23.98	17.16	≤30.00	PASS
	Ant2	5310	11.32	≤23.98	≤23.98	15.19	≤30.00	PASS
	total	5310	15.43	≤23.98	≤23.98	19.30	≤30.00	PASS
	Ant1	5510	12.36	≤23.98	≤23.98	16.23	≤30.00	PASS
	Ant2	5510	12.01	≤23.98	≤23.98	15.88	≤30.00	PASS
	total	5510	15.20	≤23.98	≤23.98	19.07	≤30.00	PASS
Ant1	5550	12.23	≤23.98	≤23.98	16.10	≤30.00	PASS	

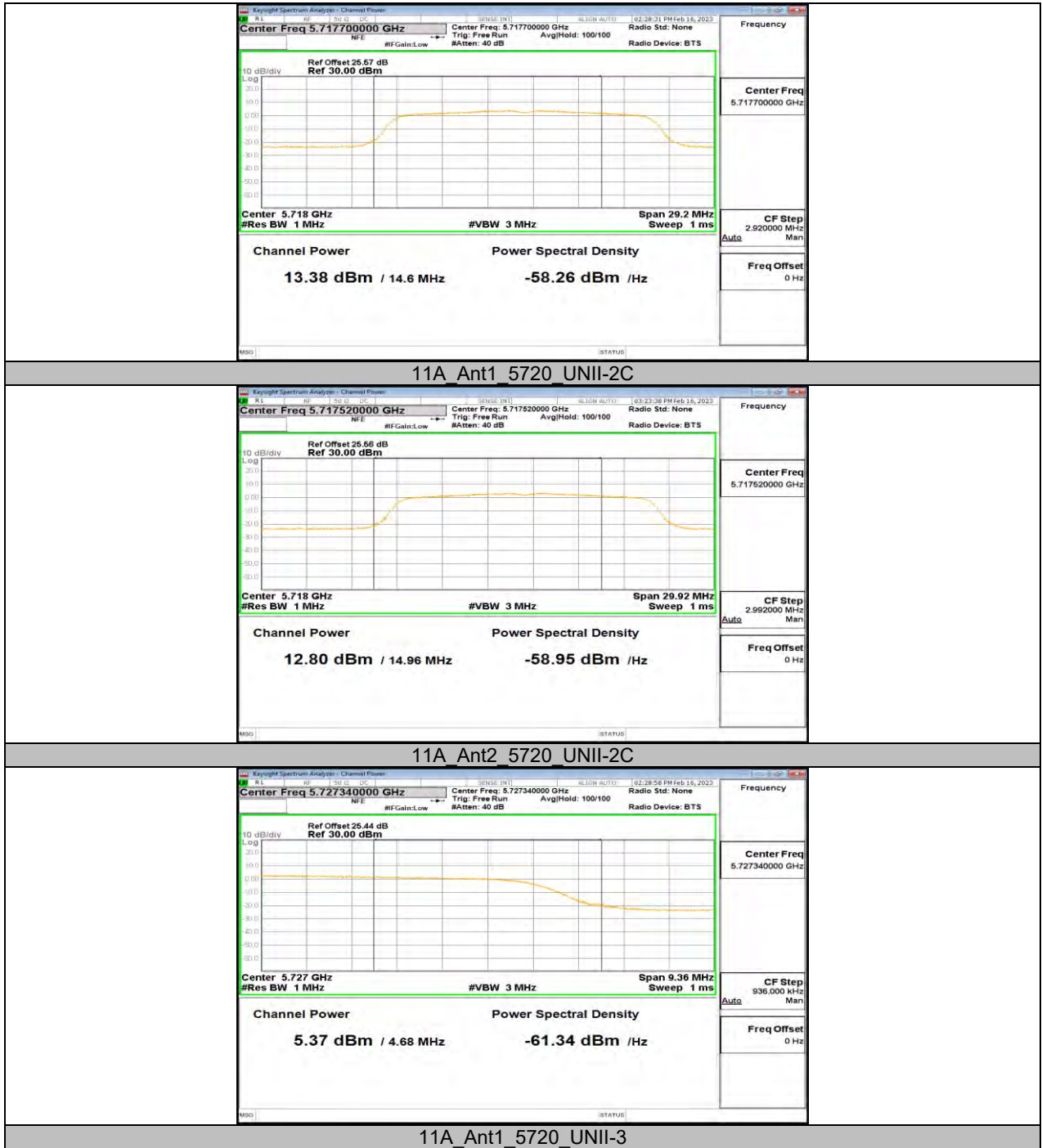


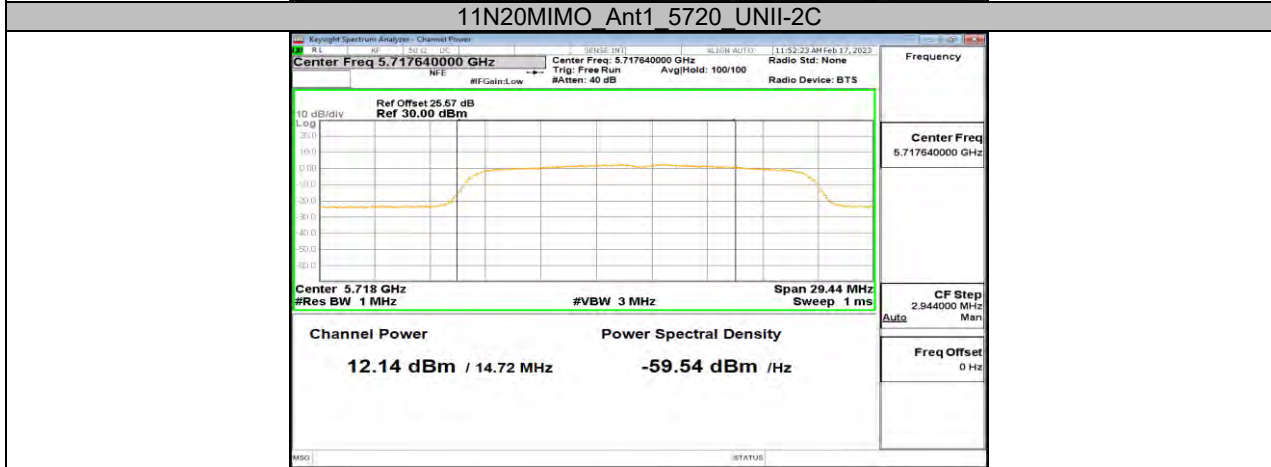
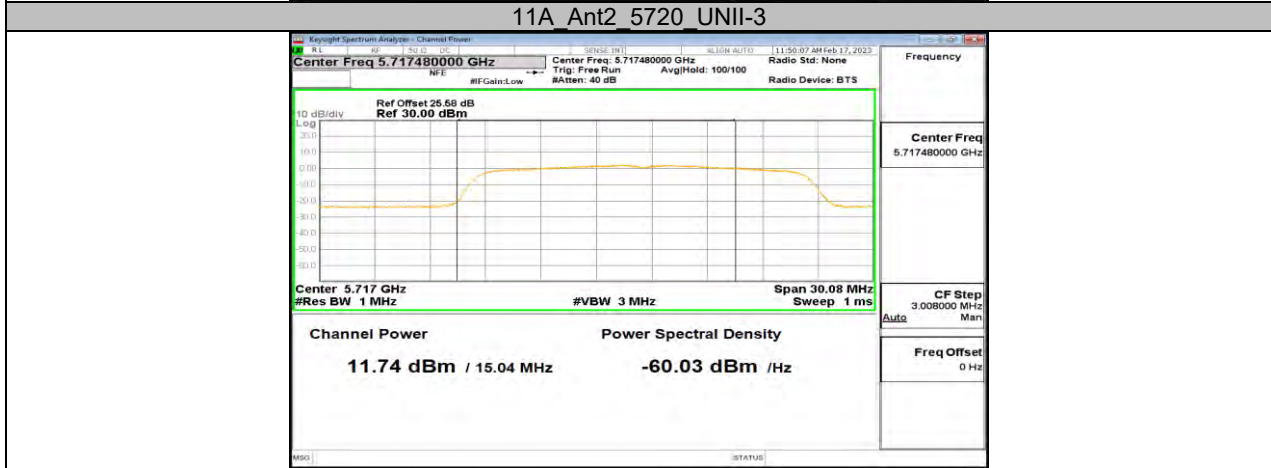
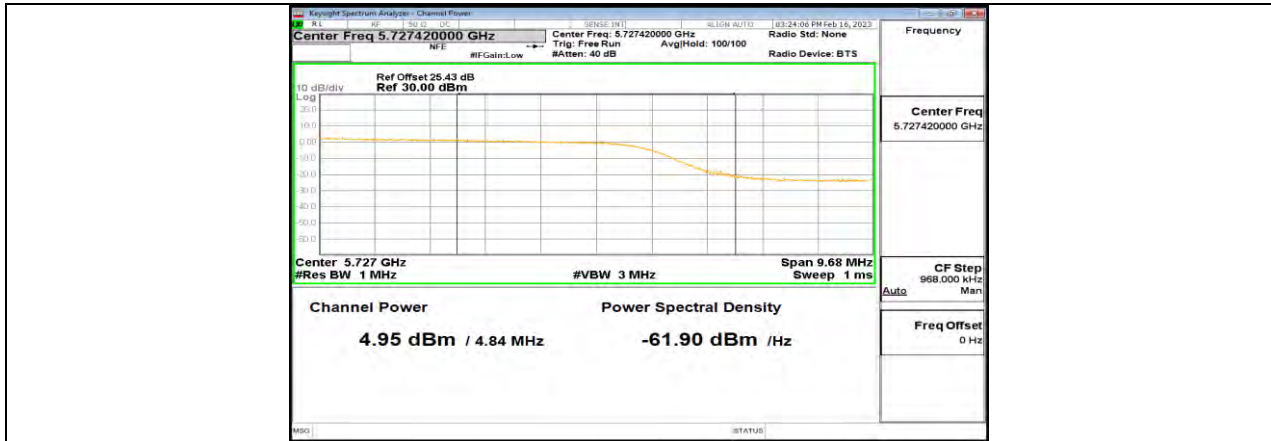
	Ant2	5550	12.00	≤23.98	≤23.98	15.87	≤30.00	PASS
	total	5550	15.13	≤23.98	≤23.98	19.00	≤30.00	PASS
	Ant1	5670	13.03	≤23.98	≤23.98	16.90	≤30.00	PASS
	Ant2	5670	12.12	≤23.98	≤23.98	15.99	≤30.00	PASS
	total	5670	15.61	≤23.98	≤23.98	19.48	≤30.00	PASS
	Ant1	5710_UNII-2C	12.43	≤23.98	≤23.98	16.30	≤30.00	PASS
	Ant2	5710_UNII-2C	12.61	≤23.98	≤23.98	16.48	≤30.00	PASS
	total	5710_UNII-2C	15.53	≤23.98	≤23.98	19.40	≤30.00	PASS
	Ant1	5710_UNII-3	-0.28	≤30.00	≤30.00	3.59	---	PASS
	Ant2	5710_UNII-3	0.16	≤30.00	≤30.00	4.03	---	PASS
total	5710_UNII-3	2.96	≤30.00	≤30.00	6.83	---	PASS	
11AC80MIMO	Ant1	5290	12.97	≤23.98	≤23.98	16.84	≤30.00	PASS
	Ant2	5290	12.13	≤23.98	≤23.98	16.00	≤30.00	PASS
	total	5290	15.58	≤23.98	≤23.98	19.45	≤30.00	PASS
	Ant1	5530	11.82	≤23.98	≤23.98	15.69	≤30.00	PASS
	Ant2	5530	10.55	≤23.98	≤23.98	14.42	≤30.00	PASS
	total	5530	14.24	≤23.98	≤23.98	18.11	≤30.00	PASS
	Ant1	5610	13.07	≤23.98	≤23.98	16.94	≤30.00	PASS
	Ant2	5610	12.96	≤23.98	≤23.98	16.83	≤30.00	PASS
	total	5610	16.03	≤23.98	≤23.98	19.90	≤30.00	PASS
	Ant1	5690_UNII-2C	13.35	≤23.98	≤23.98	17.22	≤30.00	PASS
	Ant2	5690_UNII-2C	12.07	≤23.98	≤23.98	15.94	≤30.00	PASS
	total	5690_UNII-2C	15.77	≤23.98	≤23.98	19.64	≤30.00	PASS
	Ant1	5690_UNII-3	-2.36	≤30.00	≤30.00	1.51	---	PASS
	Ant2	5690_UNII-3	-3.20	≤30.00	≤30.00	0.67	---	PASS
	total	5690_UNII-3	0.25	≤30.00	≤30.00	4.12	---	PASS

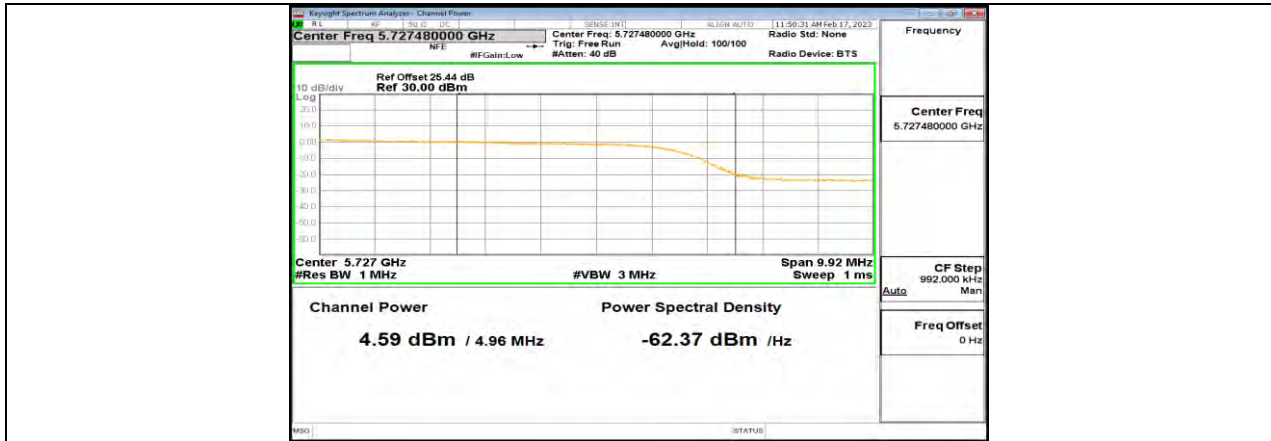
- Note: 1. Conducted Power=Meas. Level+ Correction Factor
2. The Duty Cycle Factor (refer to section 7.1) had already compensated to the test data.



11.4.2. Test Graphs



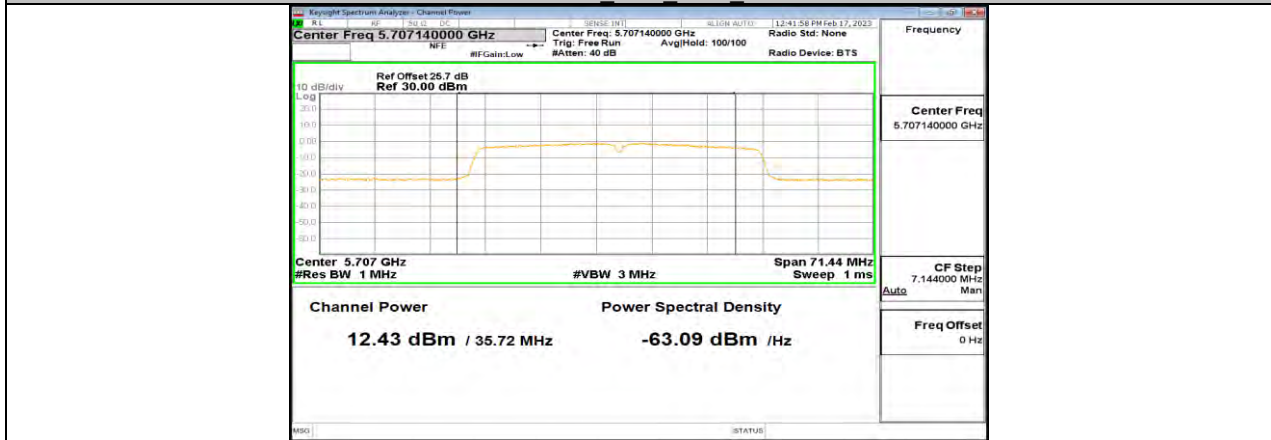




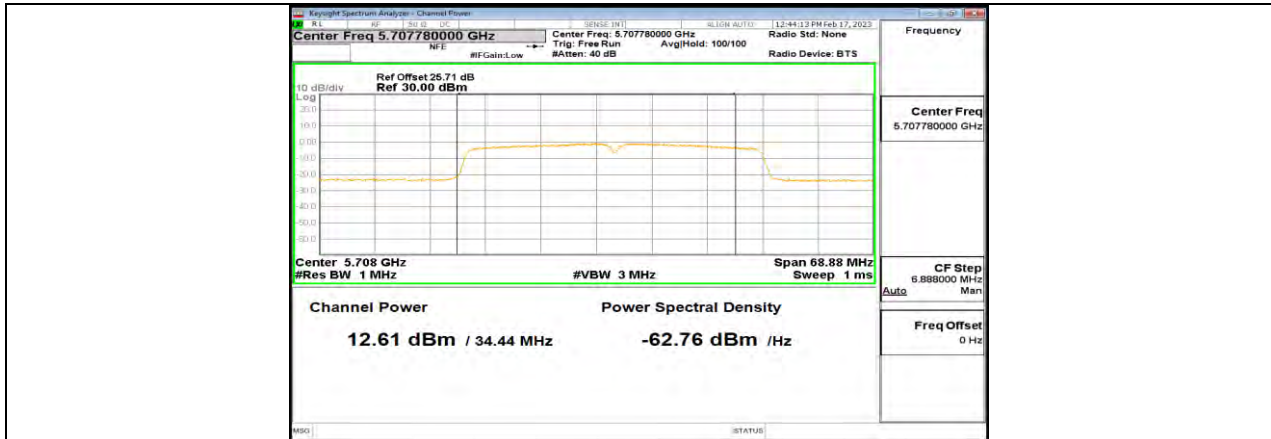
11N20MIMO Ant1 5720 UNII-3



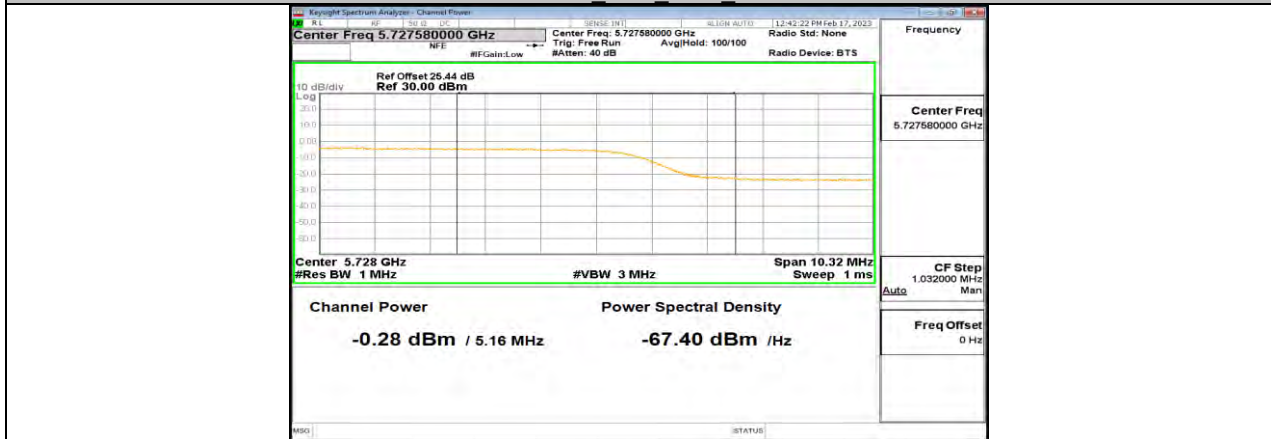
11N20MIMO Ant2 5720 UNII-3



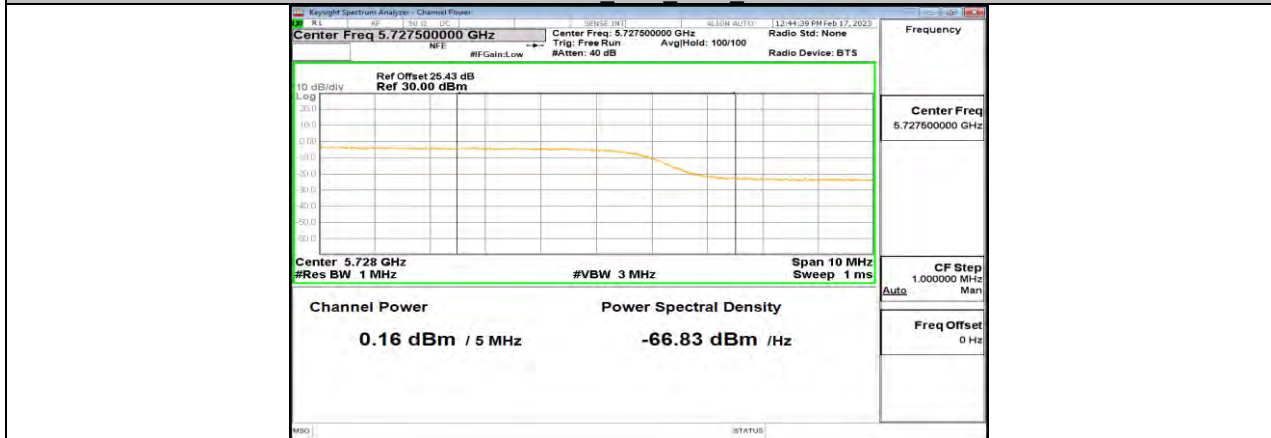
11N40MIMO Ant1 5710 UNII-2C



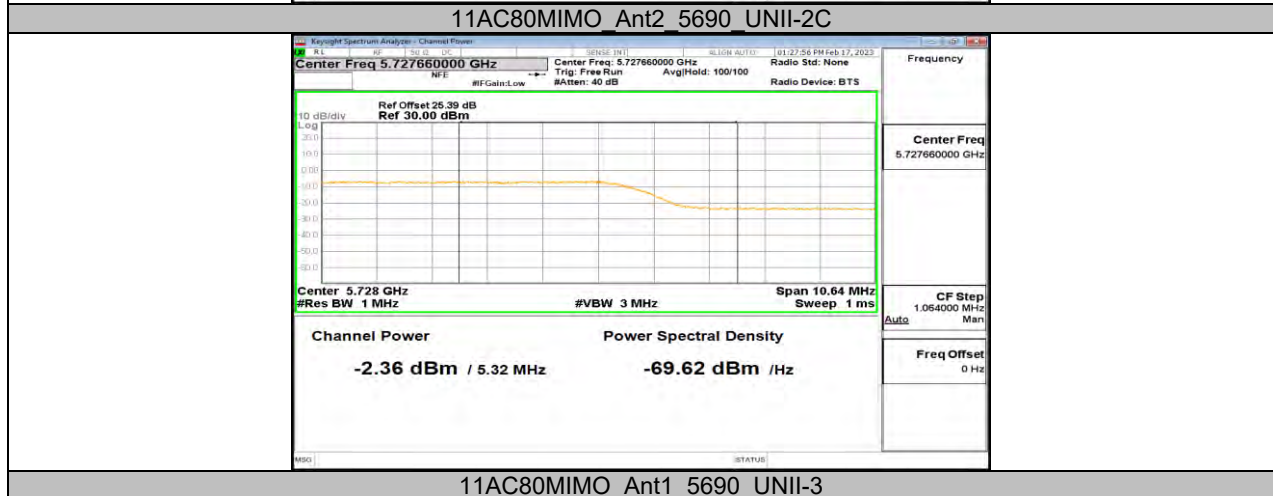
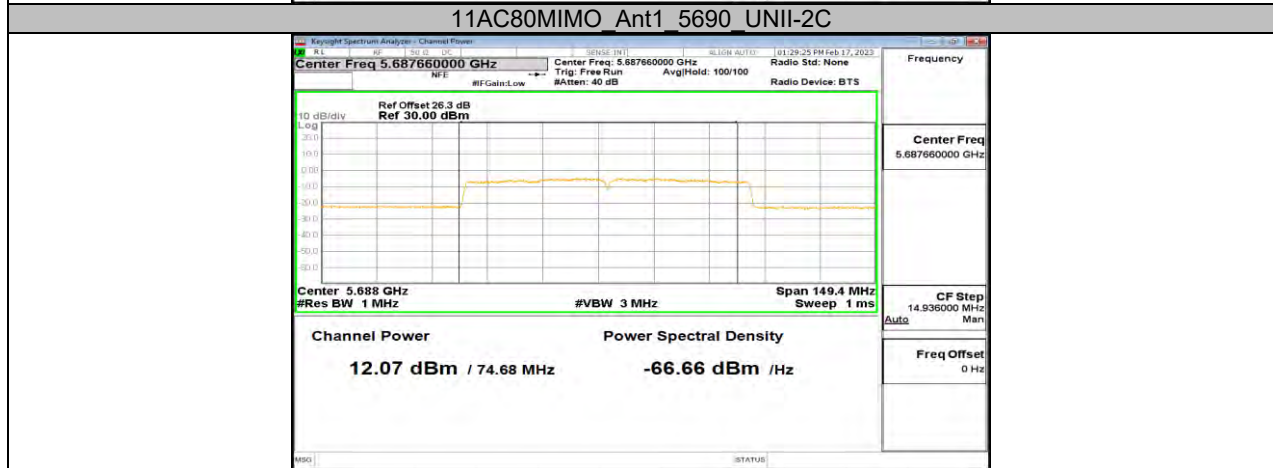
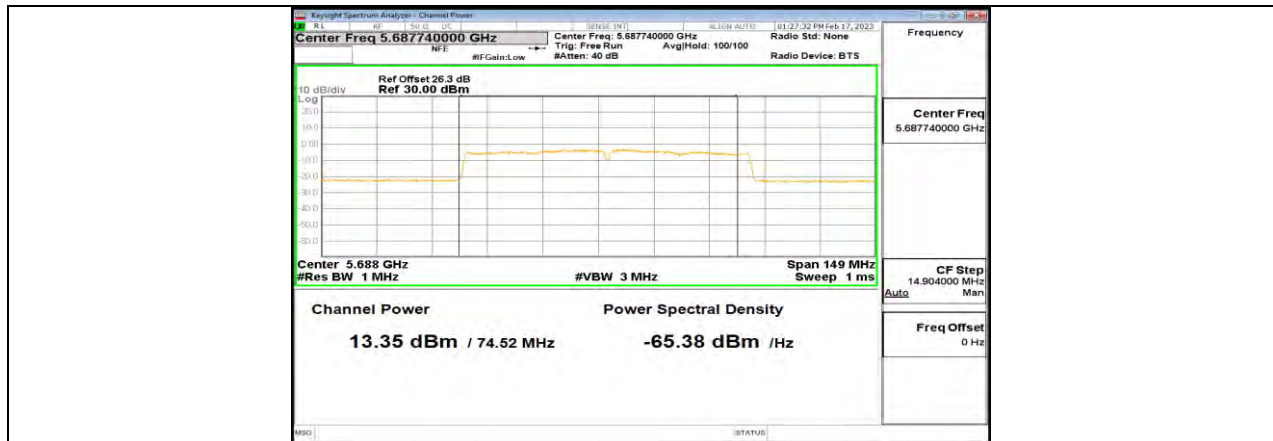
11N40MIMO Ant2 5710 UNII-2C

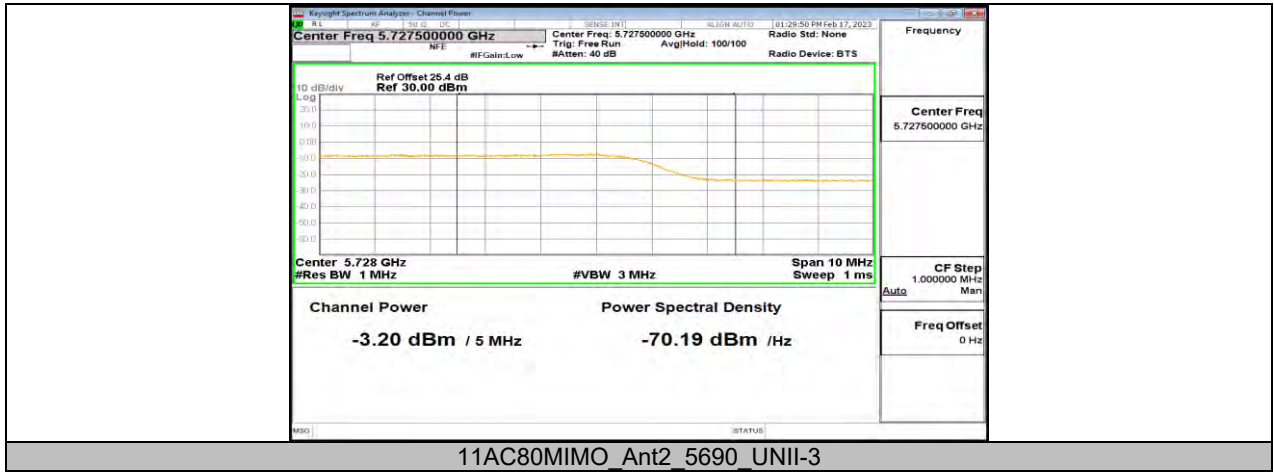


11N40MIMO Ant1 5710 UNII-3



11N40MIMO Ant2 5710 UNII-3





11.5. APPENDIX E: MAXIMUM POWER SPECTRAL DENSITY

11.5.1. Test Result

Test Mode	Antenna	Channel	Power [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5260	4.53	≤11.00	PASS
	Ant2	5260	4.25	≤11.00	PASS
	Ant1	5280	4.56	≤11.00	PASS
	Ant2	5280	4.02	≤11.00	PASS
	Ant1	5320	4.43	≤11.00	PASS
	Ant2	5320	4.37	≤11.00	PASS
	Ant1	5500	4.37	≤11.00	PASS
	Ant2	5500	3.9	≤11.00	PASS
	Ant1	5580	4.49	≤11.00	PASS
	Ant2	5580	4.02	≤11.00	PASS
	Ant1	5700	4.29	≤11.00	PASS
	Ant2	5700	4.08	≤11.00	PASS
	Ant1	5720 UNII-2C	4.28	≤11.00	PASS
	Ant2	5720 UNII-2C	3.58	≤11.00	PASS
	Ant1	5720 UNII-3	-0.74	≤30.00	PASS
	Ant2	5720 UNII-3	-1.22	≤30.00	PASS
11N20MIMO	Ant1	5260	3.57	≤10.10	PASS
	Ant2	5260	2.32	≤10.10	PASS
	total	5260	6.01	≤10.10	PASS
	Ant1	5280	3.58	≤10.10	PASS
	Ant2	5280	2.32	≤10.10	PASS
	total	5280	6.01	≤10.10	PASS
	Ant1	5320	4.27	≤10.10	PASS
	Ant2	5320	2.37	≤10.10	PASS
	total	5320	6.43	≤10.10	PASS
	Ant1	5500	3.14	≤10.10	PASS
	Ant2	5500	2.94	≤10.10	PASS
	total	5500	6.05	≤10.10	PASS
	Ant1	5580	3.9	≤10.10	PASS
	Ant2	5580	3.82	≤10.10	PASS
	total	5580	6.87	≤10.10	PASS
	Ant1	5700	2.55	≤10.10	PASS
	Ant2	5700	3.05	≤10.10	PASS
	total	5700	5.82	≤10.10	PASS
	Ant1	5720 UNII-2C	2.58	≤10.10	PASS
	Ant2	5720 UNII-2C	2.92	≤10.10	PASS
	total	5720 UNII-2C	5.76	≤10.10	PASS
	Ant1	5720 UNII-3	-2.33	≤29.10	PASS
	Ant2	5720 UNII-3	-2.17	≤29.10	PASS
	total	5720 UNII-3	0.76	≤29.10	PASS
11N40MIMO	Ant1	5270	-0.58	≤10.10	PASS
	Ant2	5270	-2.19	≤10.10	PASS
	total	5270	1.70	≤10.10	PASS
	Ant1	5310	-0.48	≤10.10	PASS
	Ant2	5310	-2.52	≤10.10	PASS
	total	5310	1.63	≤10.10	PASS
	Ant1	5510	-1.38	≤10.10	PASS
	Ant2	5510	-1.8	≤10.10	PASS
	total	5510	1.43	≤10.10	PASS
	Ant1	5550	-1.47	≤10.10	PASS
	Ant2	5550	-1.85	≤10.10	PASS
	total	5550	1.35	≤10.10	PASS
	Ant1	5670	-0.74	≤10.10	PASS
	Ant2	5670	-1.67	≤10.10	PASS
	total	5670	1.83	≤10.10	PASS
	Ant1	5710 UNII-2C	-0.97	≤10.10	PASS
	Ant2	5710 UNII-2C	-0.74	≤10.10	PASS

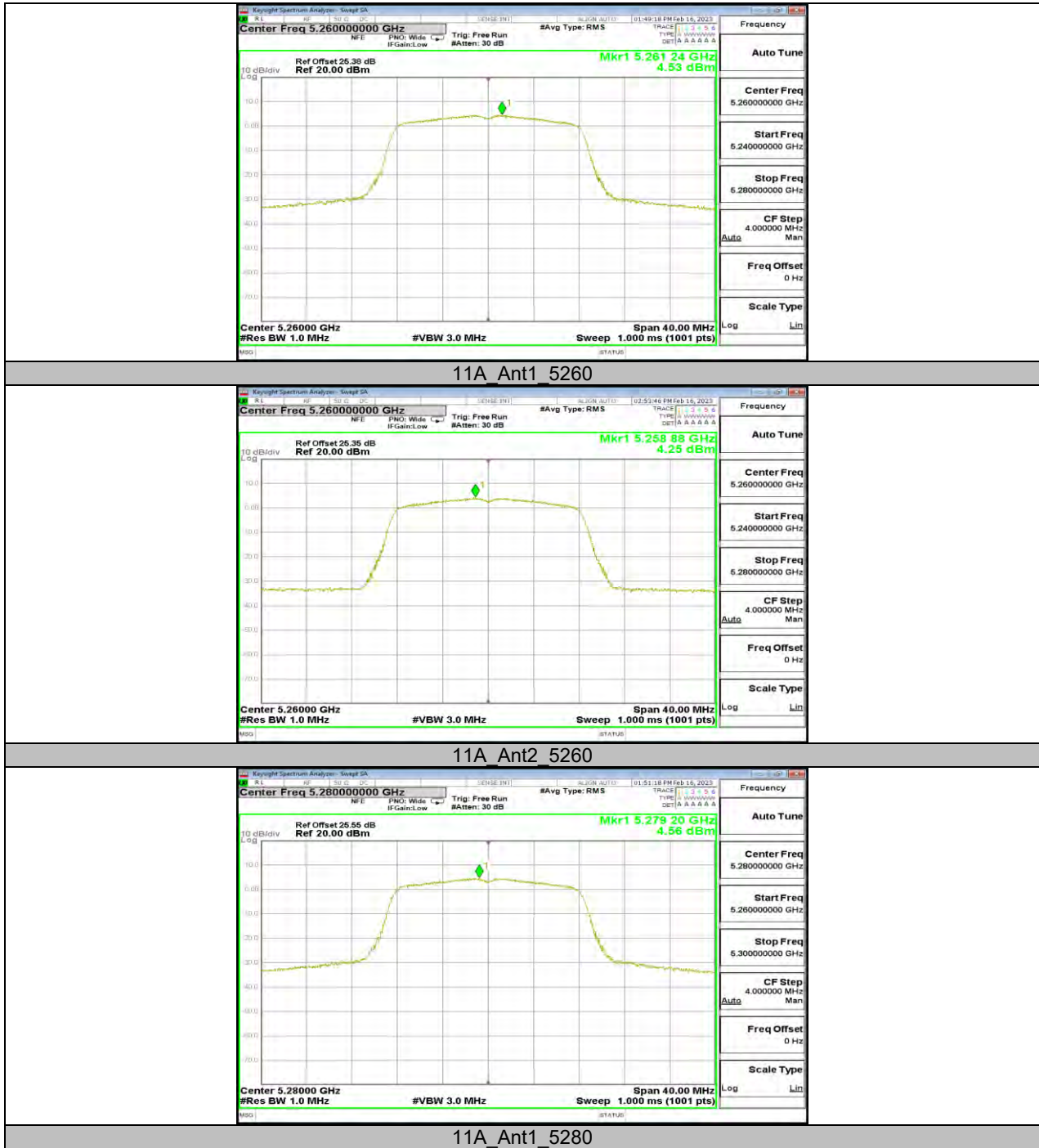


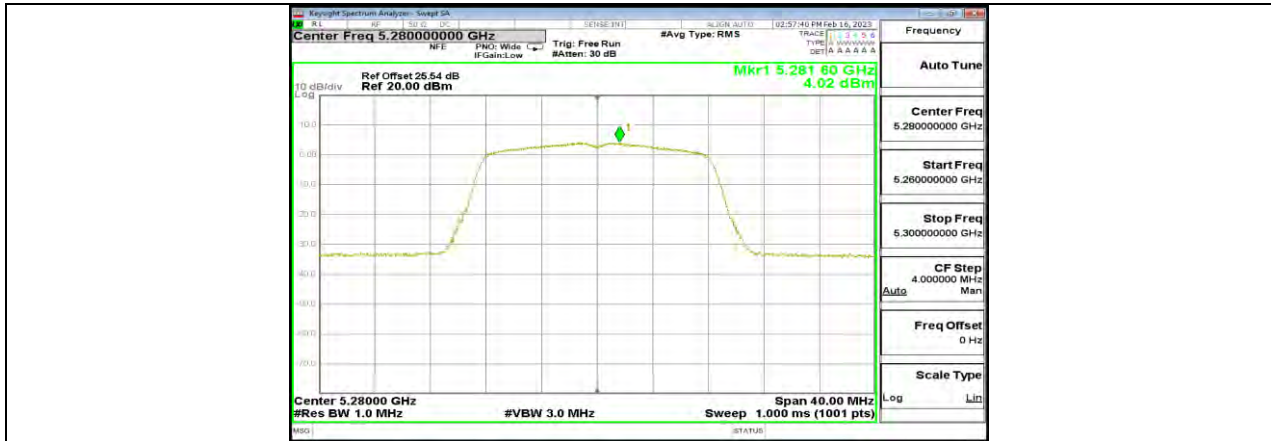
	total	5710 UNII-2C	2.16	≤10.10	PASS
	Ant1	5710 UNII-3	-6.26	≤29.10	PASS
	Ant2	5710 UNII-3	-6.41	≤29.10	PASS
	total	5710 UNII-3	-3.33	≤29.10	PASS
11AC80MIMO	Ant1	5290	-2.91	≤10.10	PASS
	Ant2	5290	-5.07	≤10.10	PASS
	total	5290	-0.85	≤10.10	PASS
	Ant1	5530	-5.47	≤10.10	PASS
	Ant2	5530	-6.21	≤10.10	PASS
	total	5530	-2.81	≤10.10	PASS
	Ant1	5610	-3.67	≤10.10	PASS
	Ant2	5610	-4.05	≤10.10	PASS
	total	5610	-0.85	≤10.10	PASS
	Ant1	5690 UNII-2C	1.31	≤10.10	PASS
	Ant2	5690 UNII-2C	-4.38	≤10.10	PASS
	total	5690 UNII-2C	2.35	≤10.10	PASS
	Ant1	5690 UNII-3	-3.73	≤29.10	PASS
	Ant2	5690 UNII-3	-9.76	≤29.10	PASS
	total	5690 UNII-3	-2.76	≤29.10	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

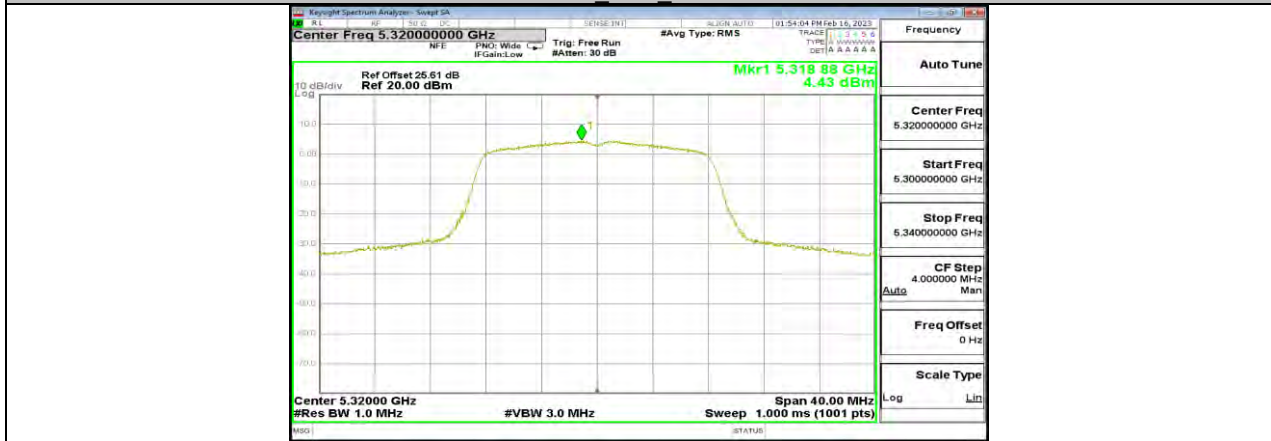
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

11.5.2. Test Graphs





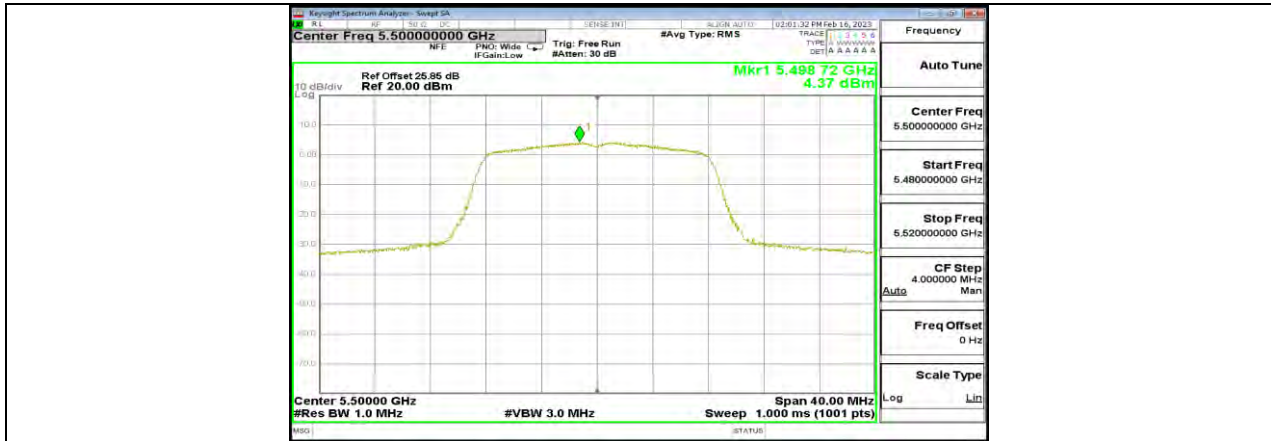
11A Ant2 5280



11A Ant1 5320



11A Ant2 5320



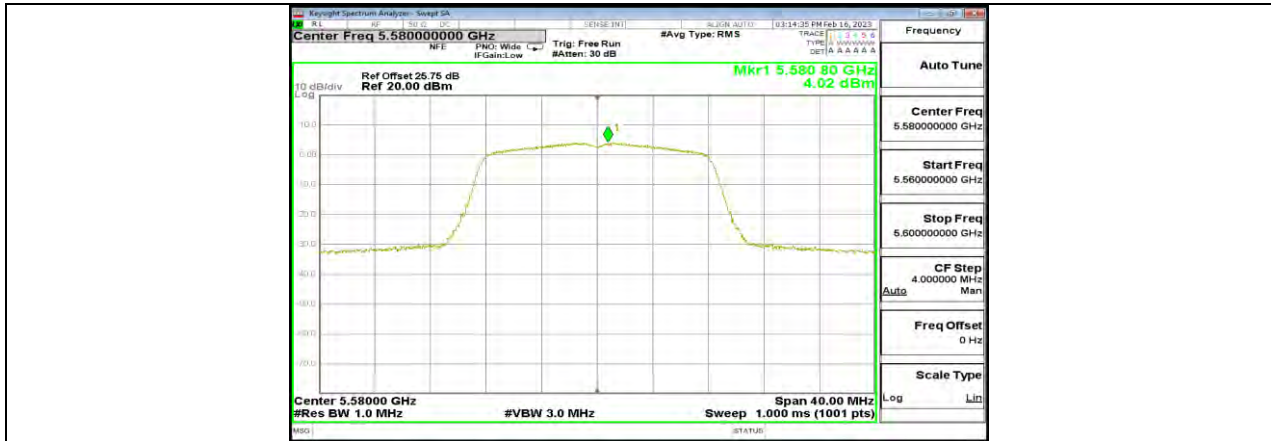
11A Ant1 5500



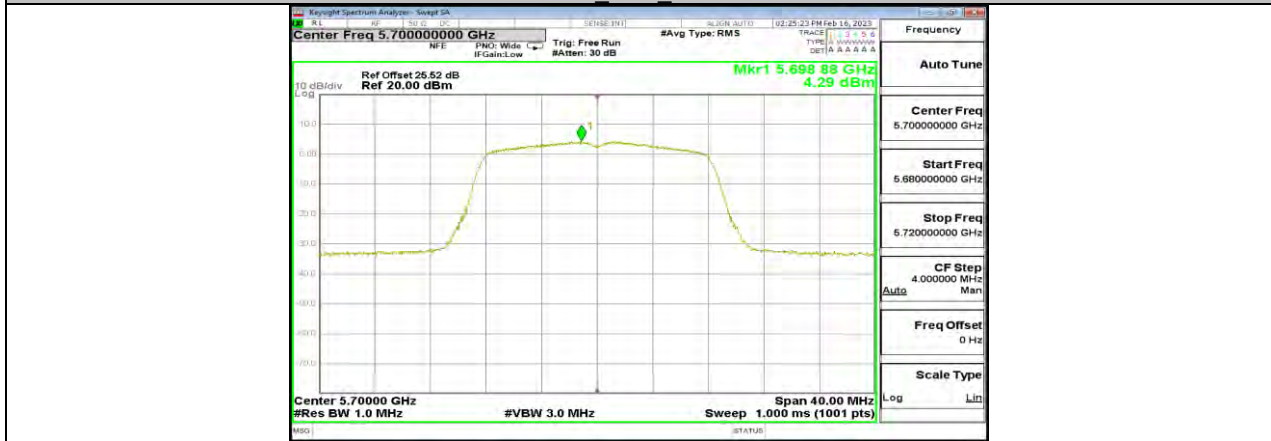
11A Ant2 5500



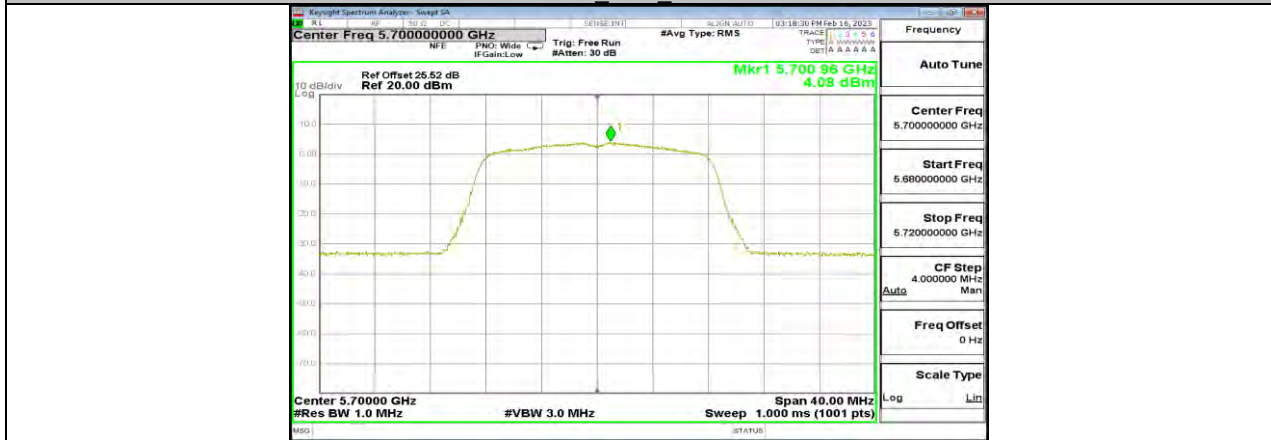
11A Ant1 5580



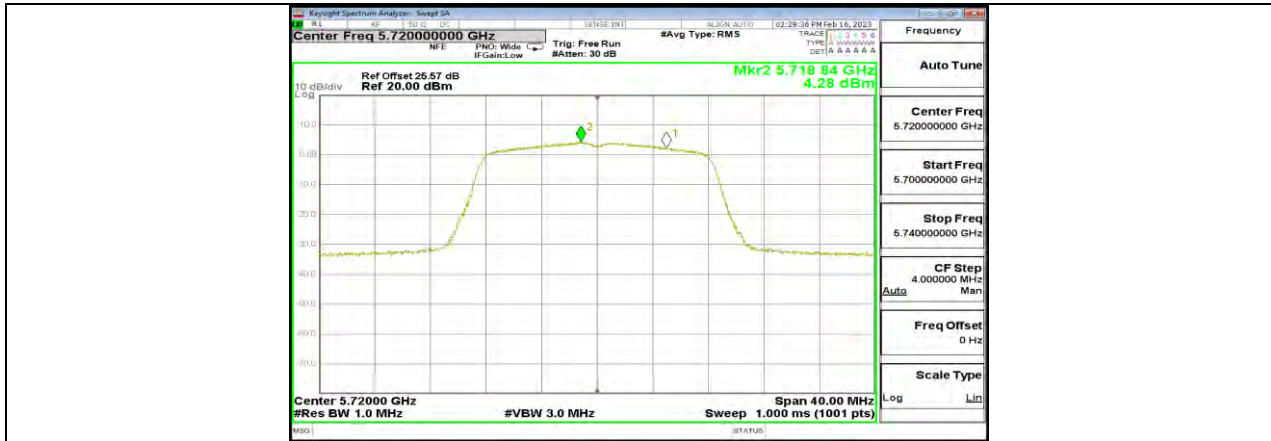
11A Ant2 5580



11A Ant1 5700



11A Ant2 5700



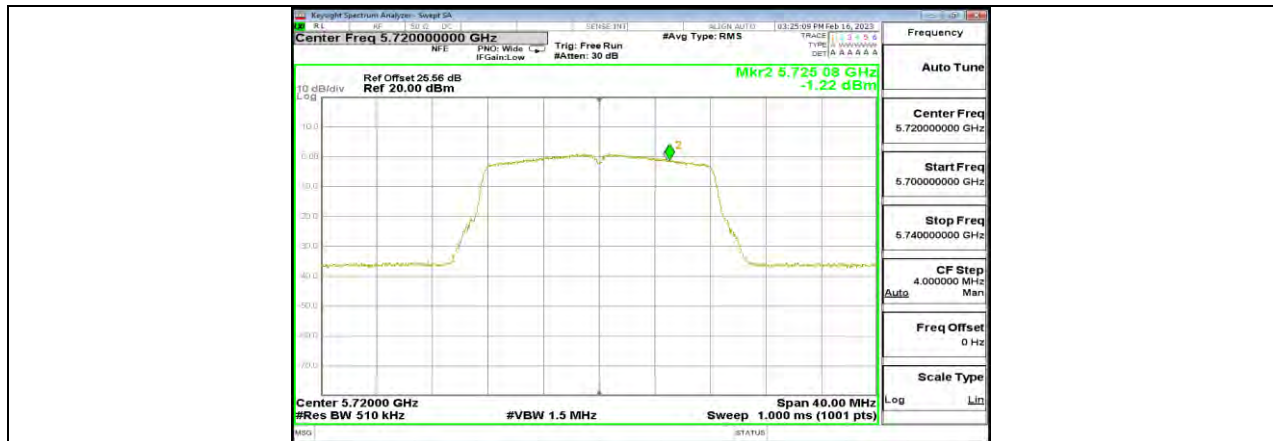
11A Ant1 5720 UNII-2C



11A Ant2 5720 UNII-2C



11A Ant1 5720 UNII-3



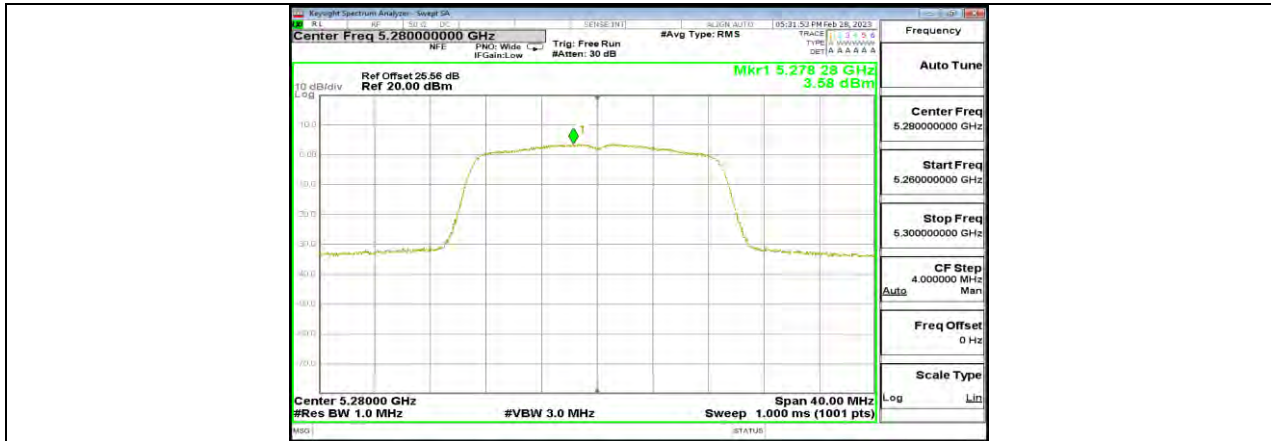
11A Ant2 5720 UNII-3



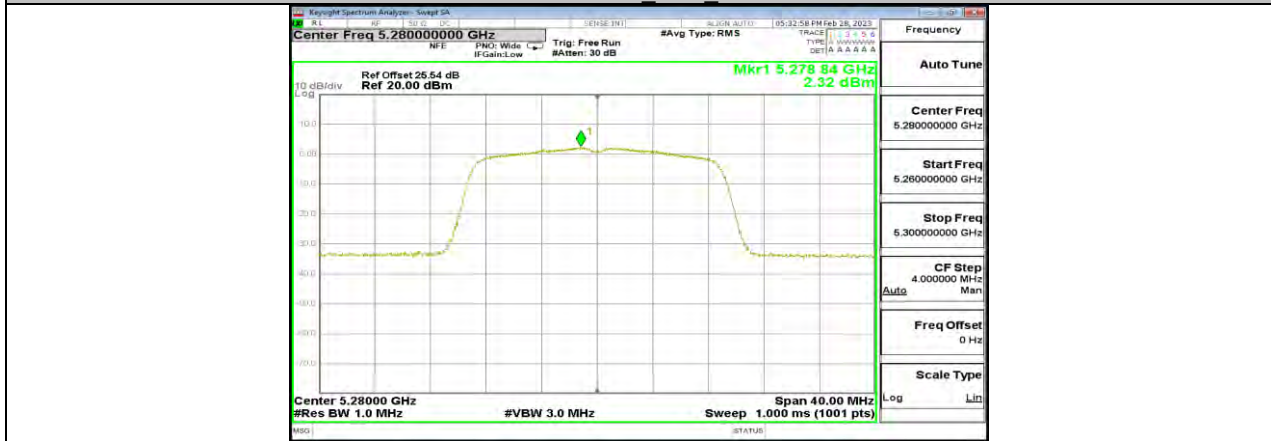
11N20MIMO Ant1 5260



11N20MIMO Ant2 5260



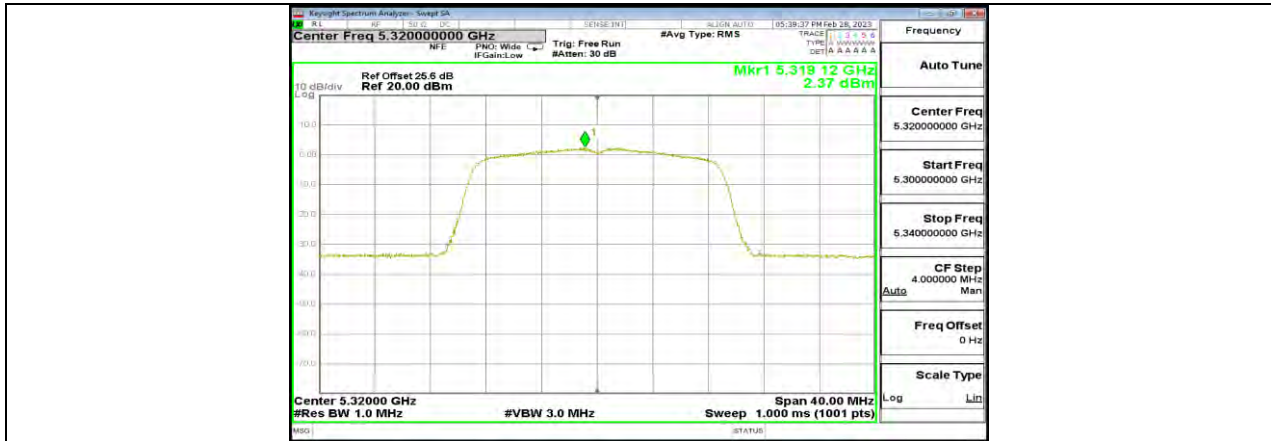
11N20MIMO Ant1 5280



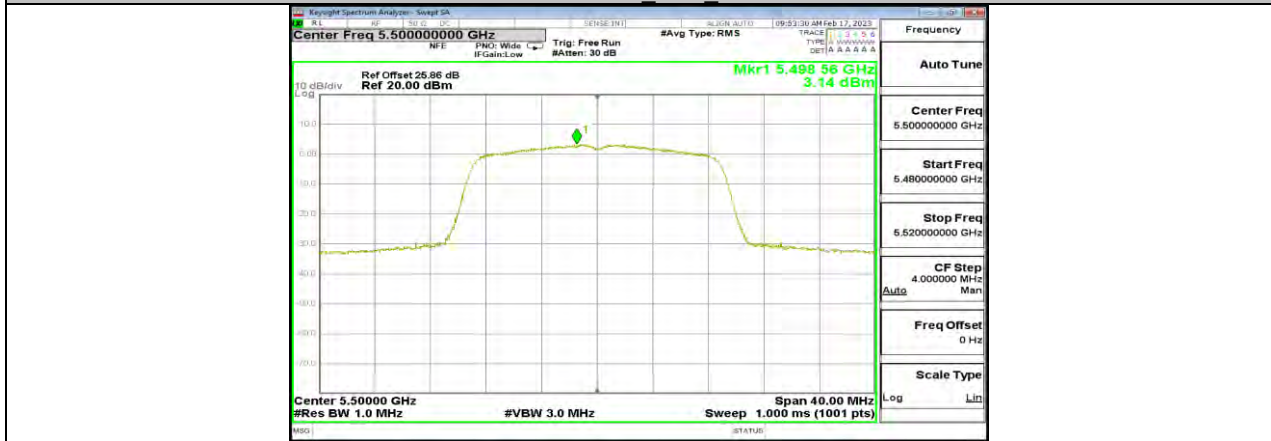
11N20MIMO Ant2 5280



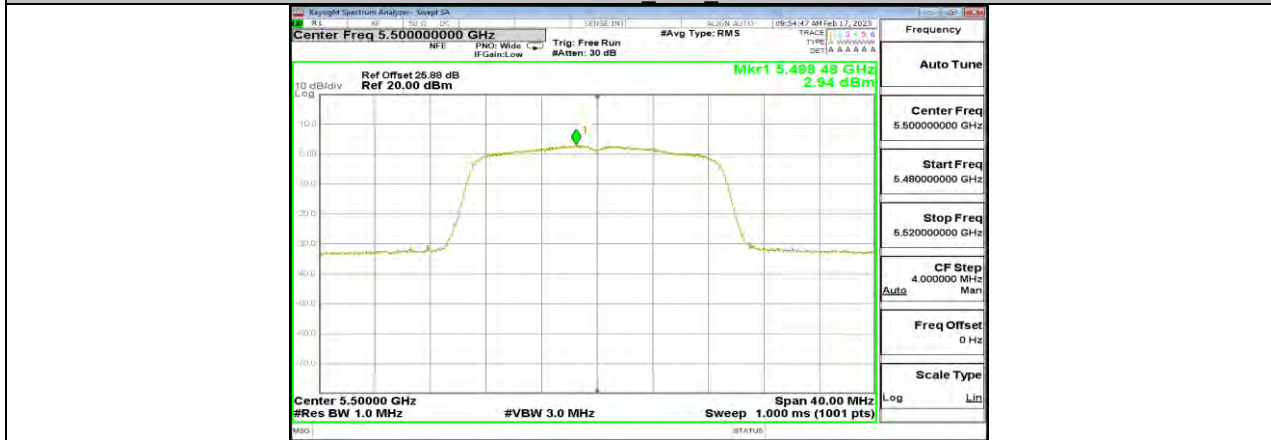
11N20MIMO Ant1 5320



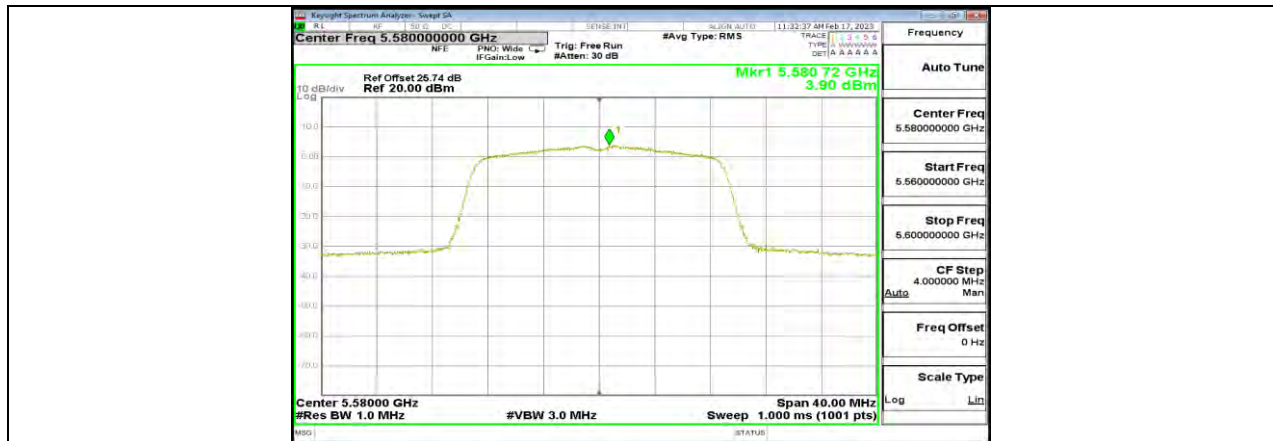
11N20MIMO Ant2 5320



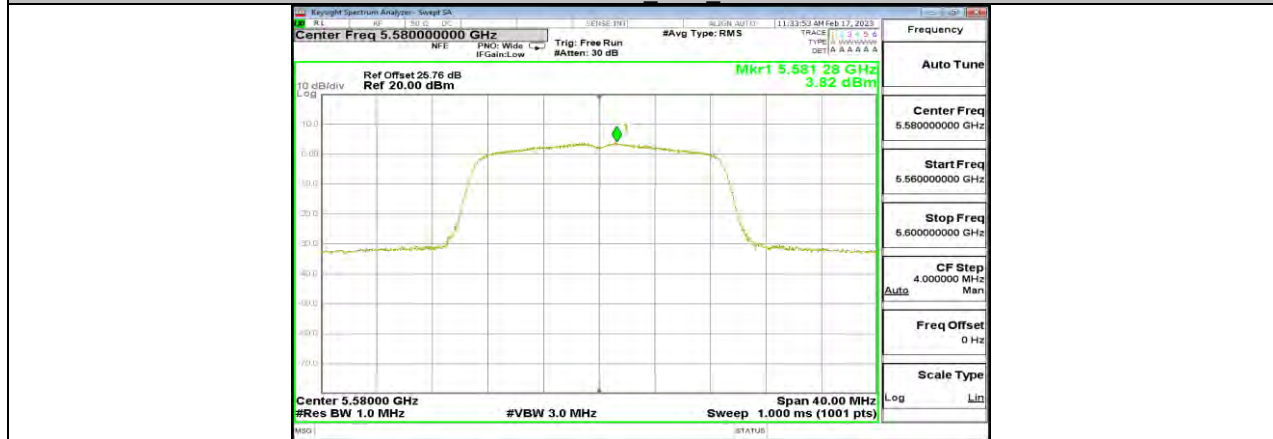
11N20MIMO Ant1 5500



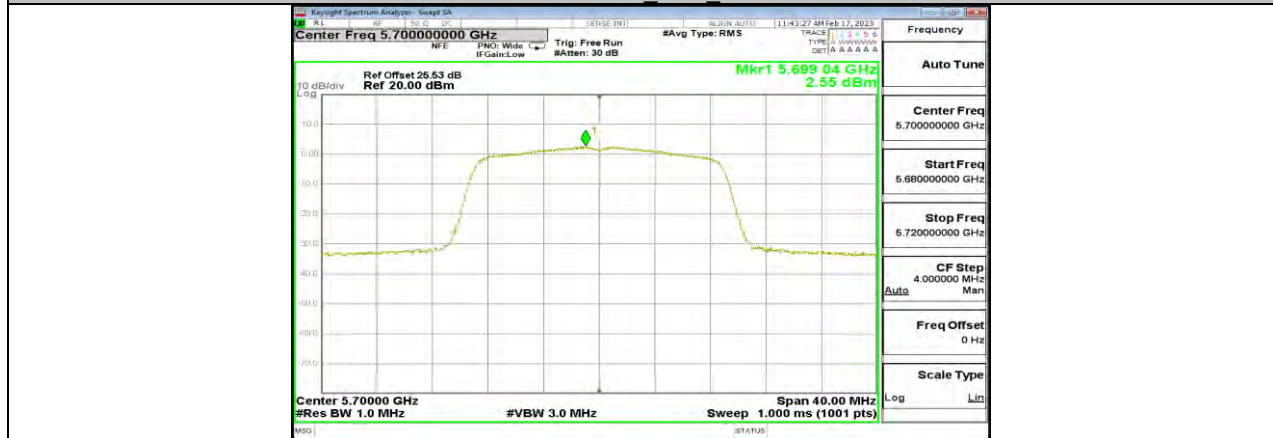
11N20MIMO Ant2 5500



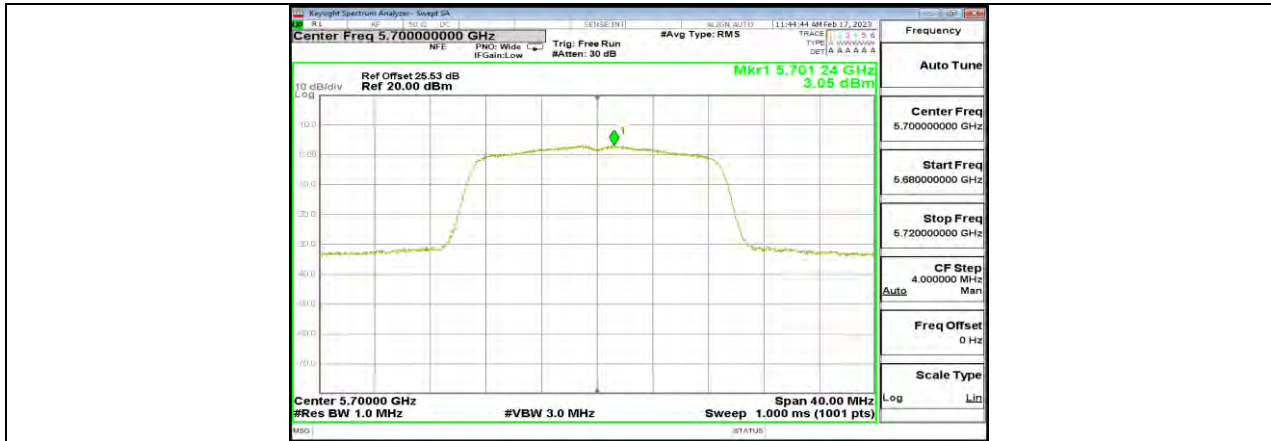
11N20MIMO Ant1 5580



11N20MIMO Ant2 5580



11N20MIMO Ant1 5700



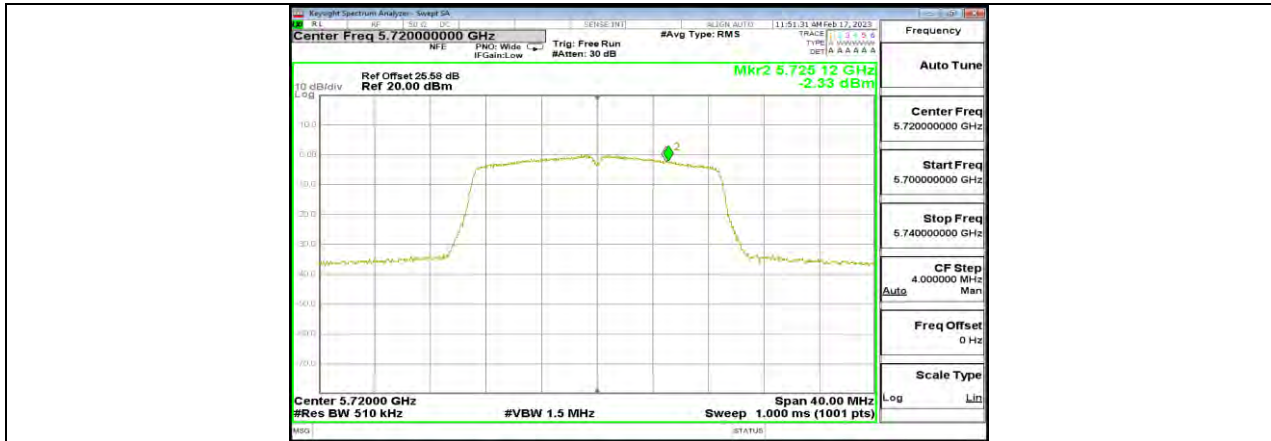
11N20MIMO Ant2 5700



11N20MIMO Ant1 5720 UNII-2C



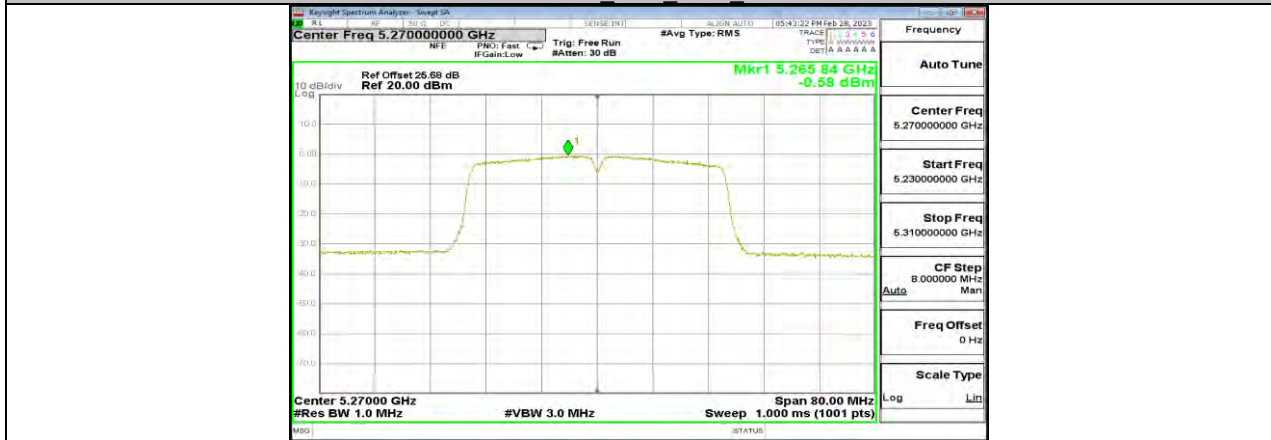
11N20MIMO Ant2 5720 UNII-2C



11N20MIMO Ant1 5720 UNII-3



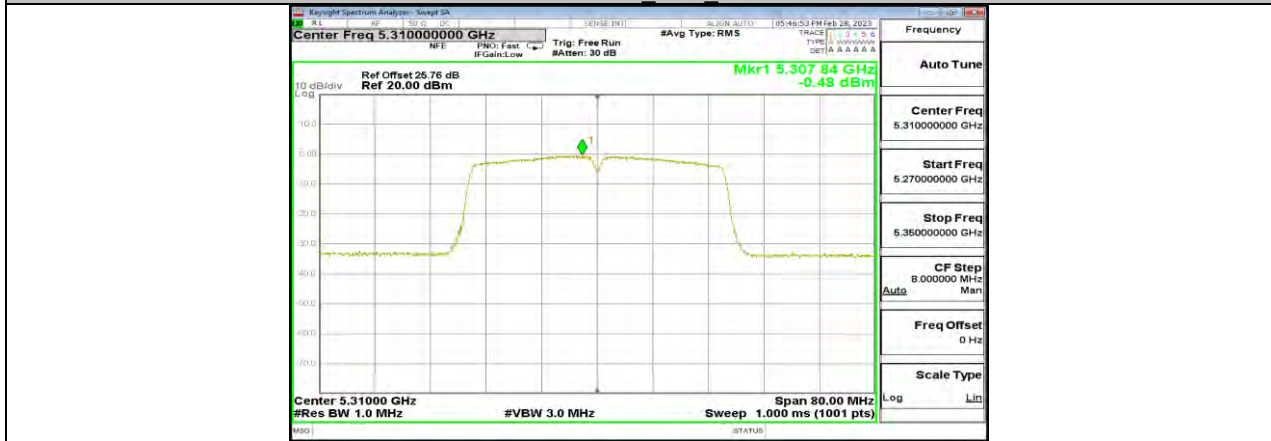
11N20MIMO Ant2 5720 UNII-3



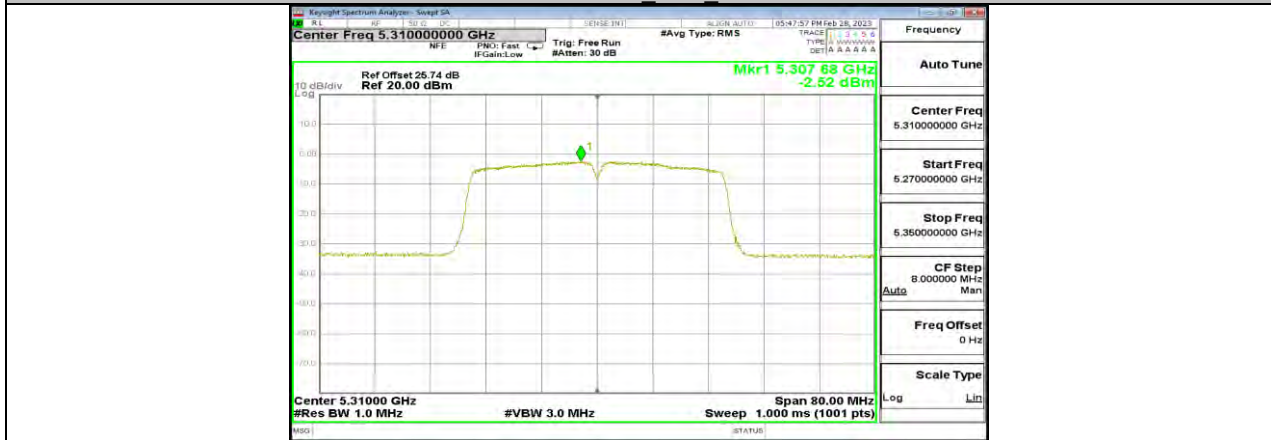
11N40MIMO Ant1 5270



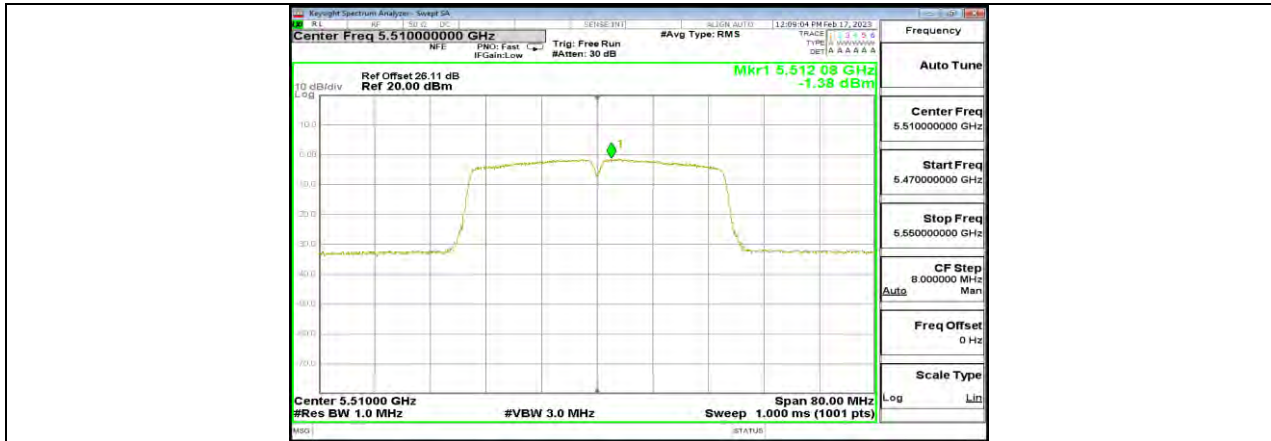
11N40MIMO Ant2 5270



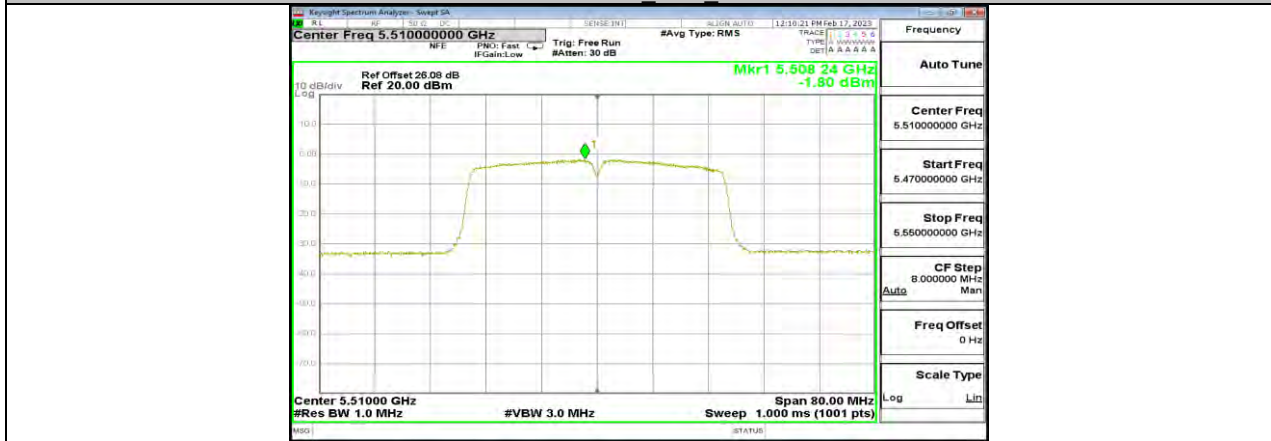
11N40MIMO Ant1 5310



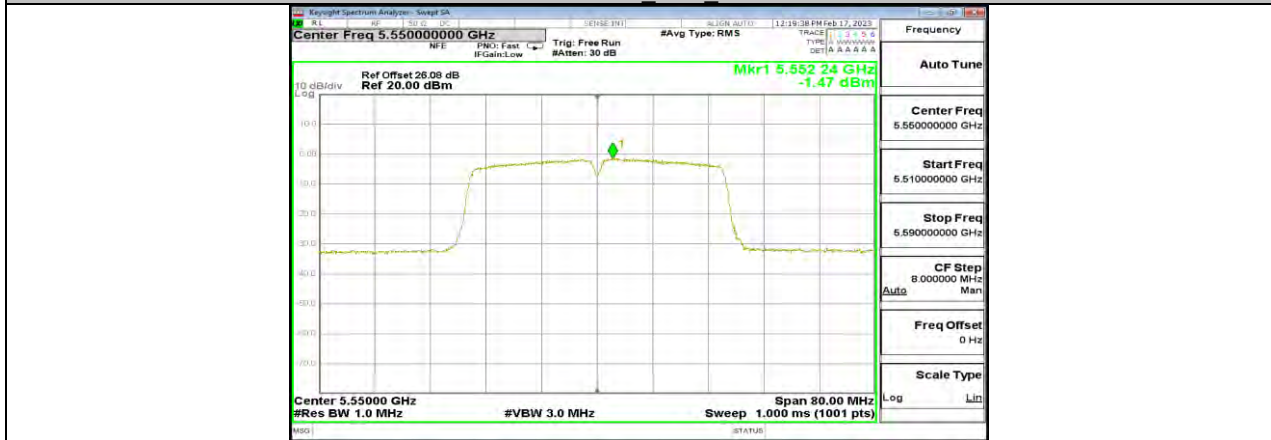
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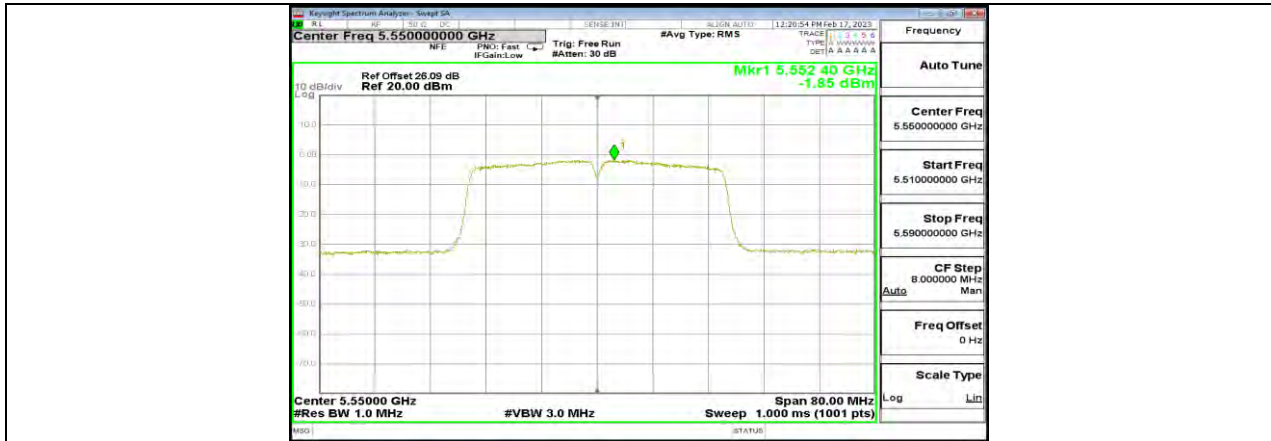
11N40MIMO Ant1 5510



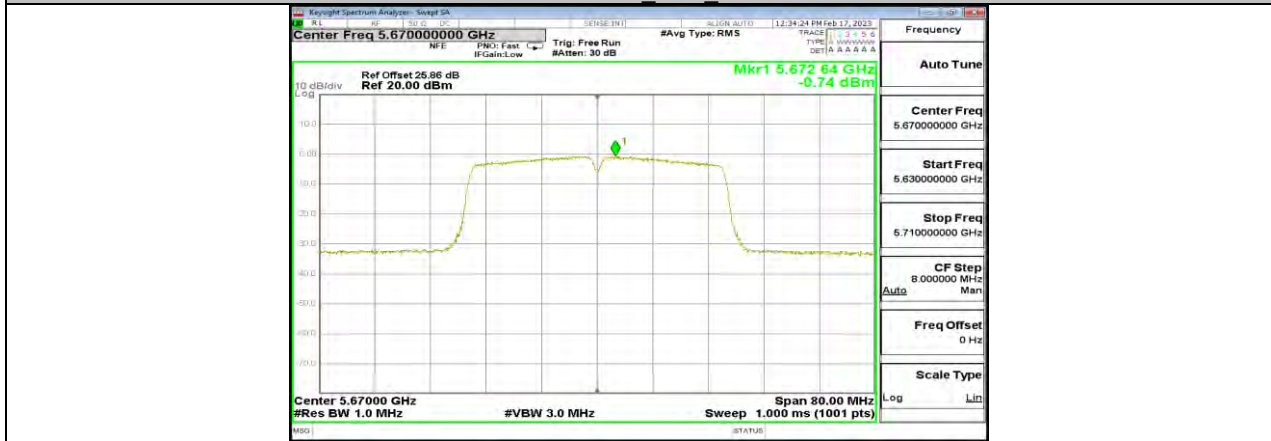
11N40MIMO Ant2 5510



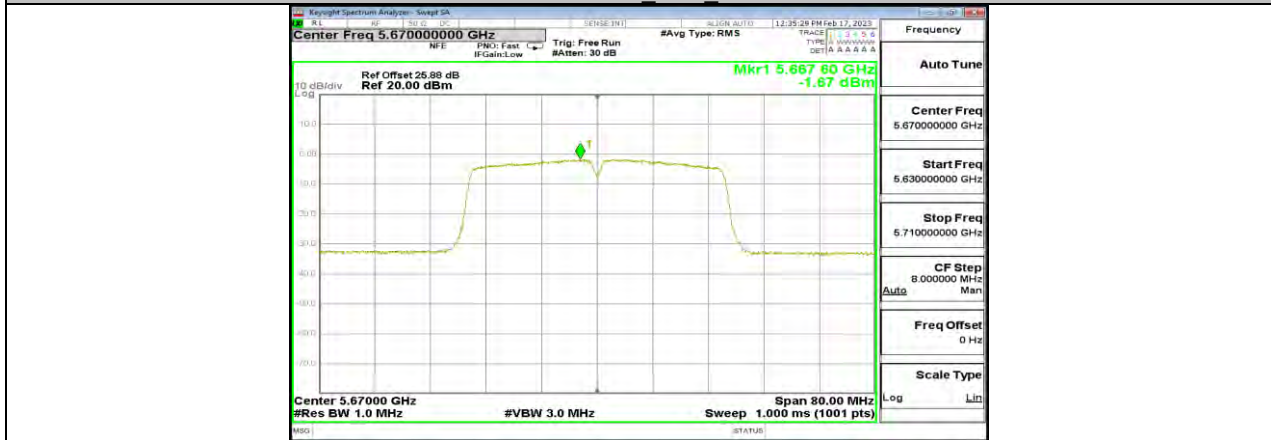
11N40MIMO Ant1 5550



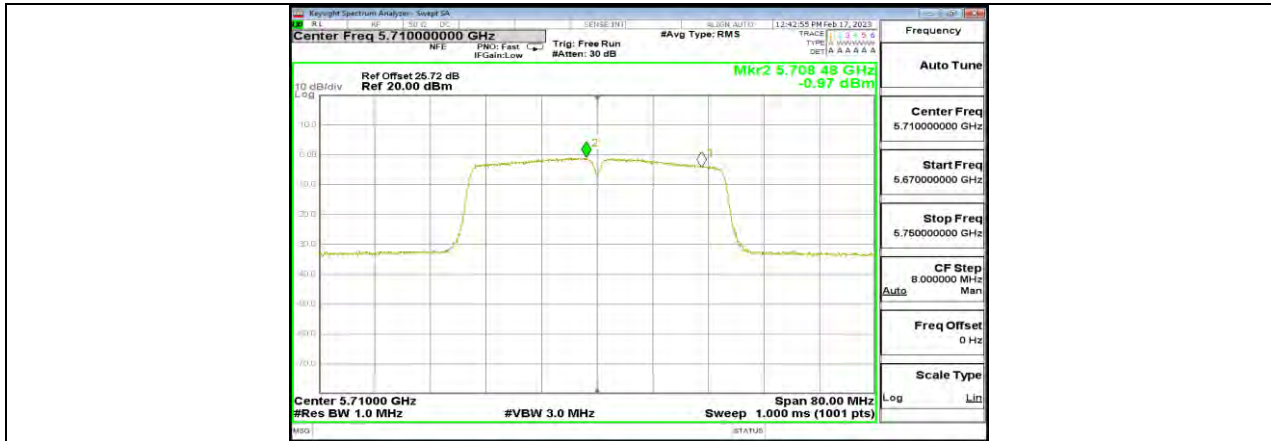
11N40MIMO Ant2 5550



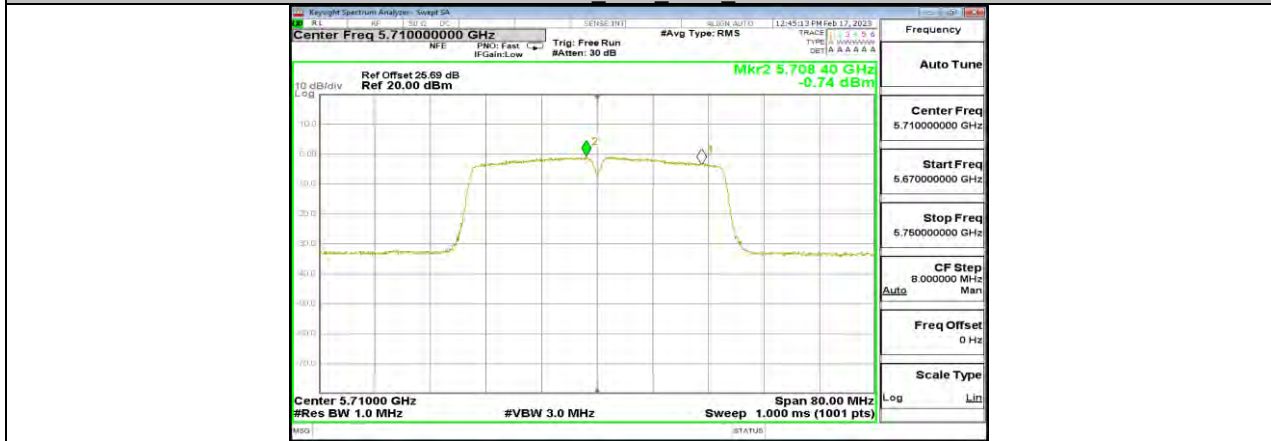
11N40MIMO Ant1 5670



11N40MIMO Ant2 5670



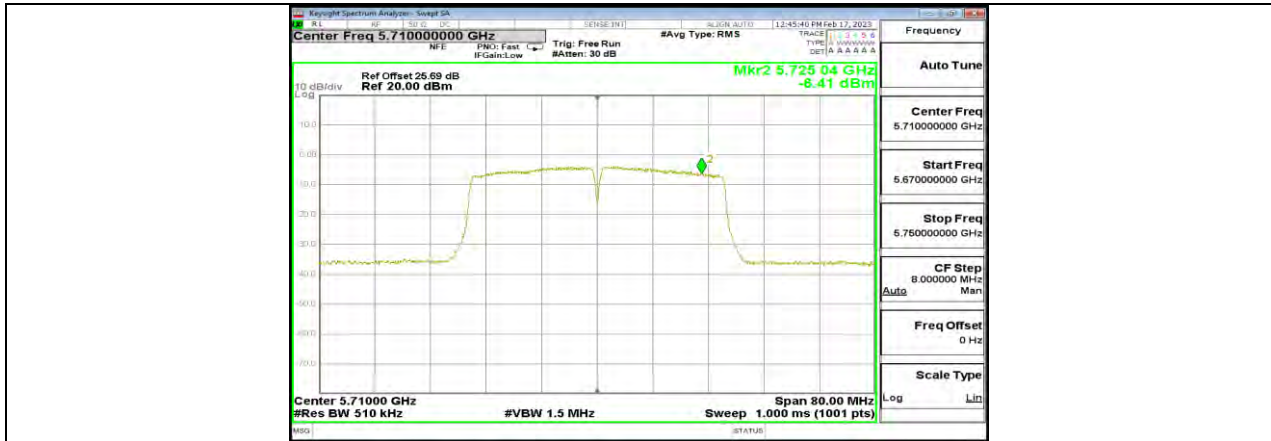
11N40MIMO Ant1 5710 UNII-2C



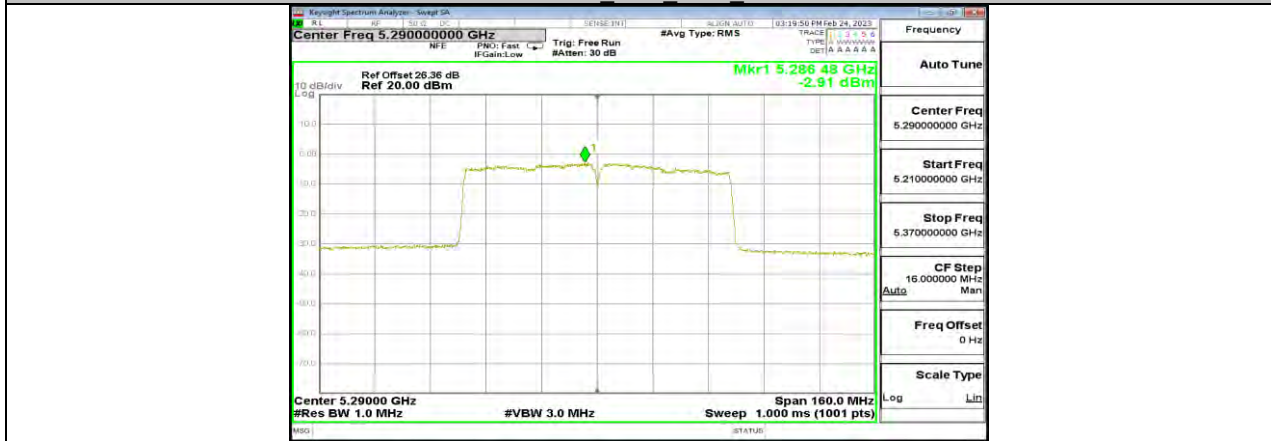
11N40MIMO Ant2 5710 UNII-2C



11N40MIMO Ant1 5710 UNII-3



11N40MIMO Ant2 5710 UNII-3



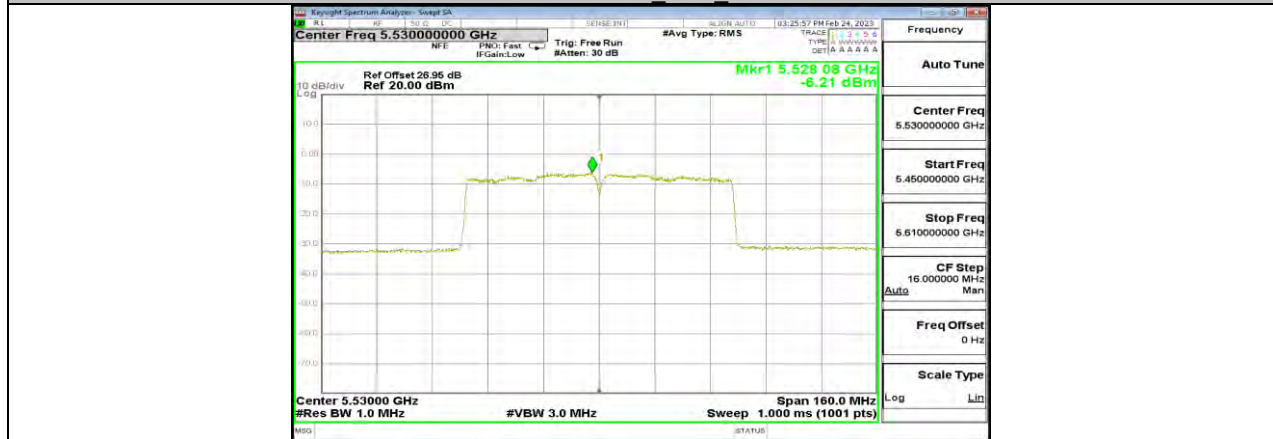
11AC80MIMO Ant1 5290



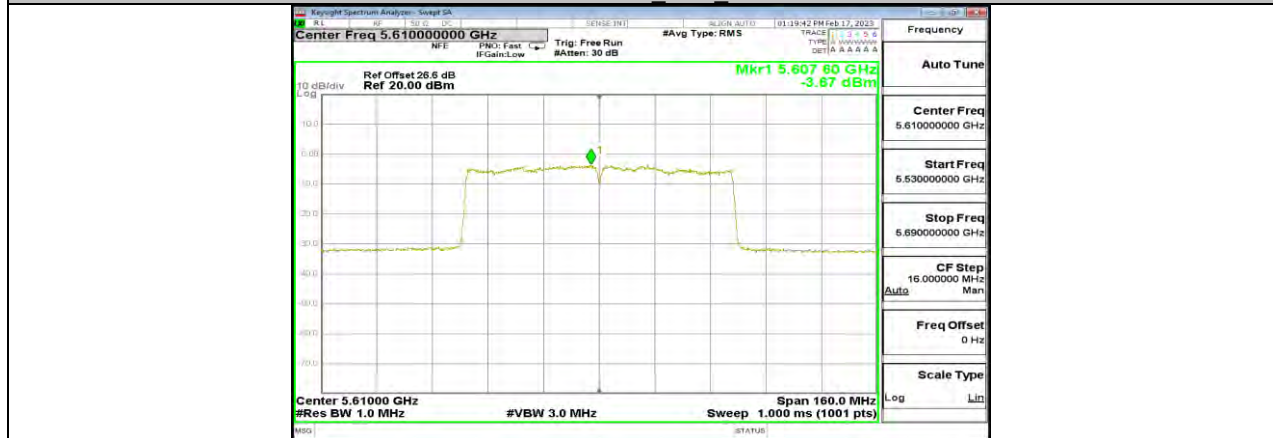
11AC80MIMO Ant2 5290



11AC80MIMO Ant1 5530



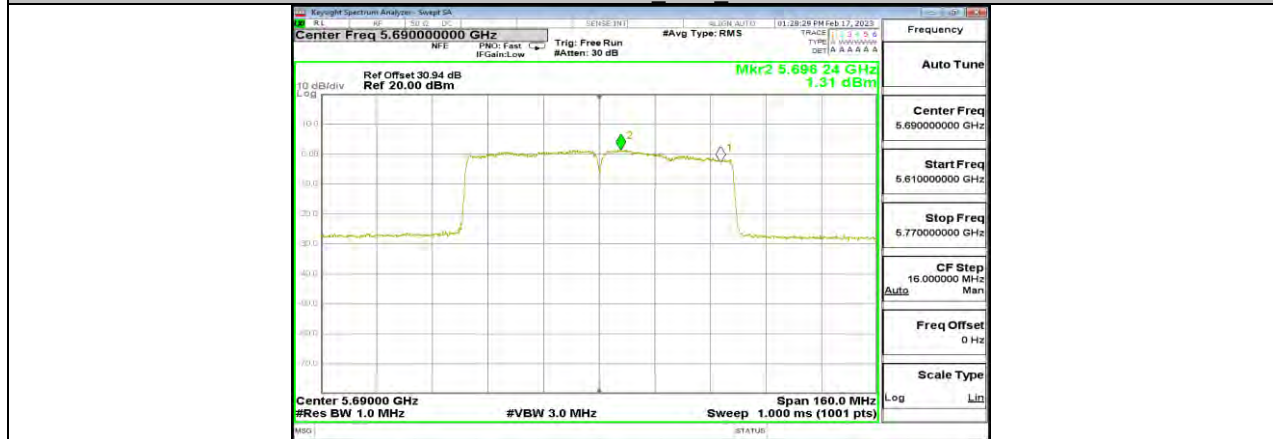
11AC80MIMO Ant2 5530



11AC80MIMO Ant1 5610



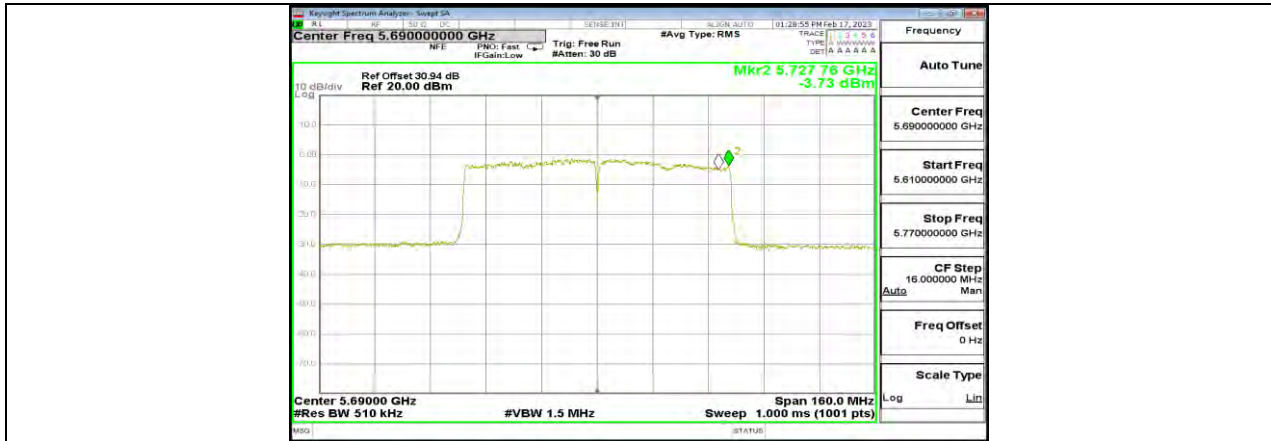
11AC80MIMO Ant2 5610



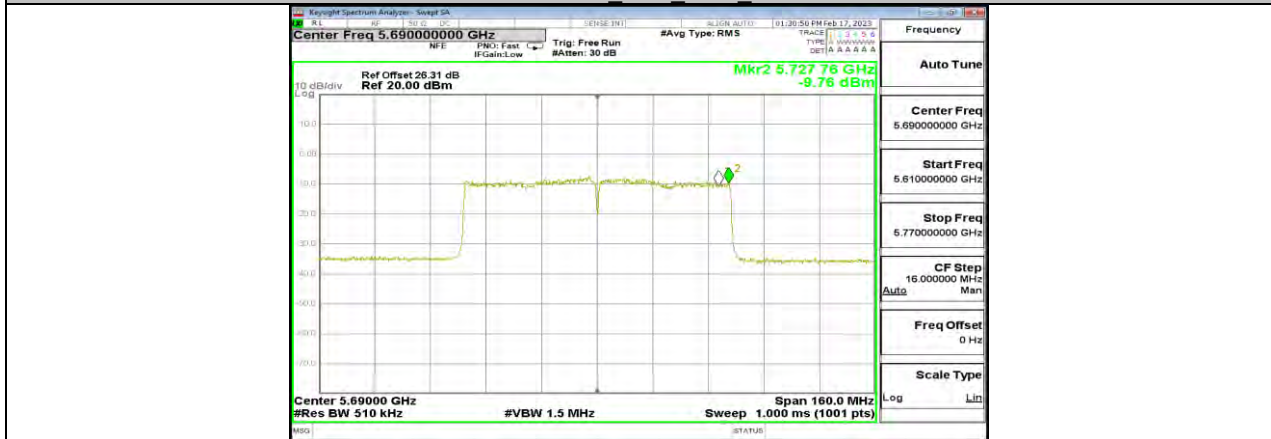
11AC80MIMO Ant1 5690 UNII-2C



11AC80MIMO Ant2 5690 UNII-2C



11AC80MIMO Ant1 5690 UNII-3



11AC80MIMO Ant2 5690 UNII-3

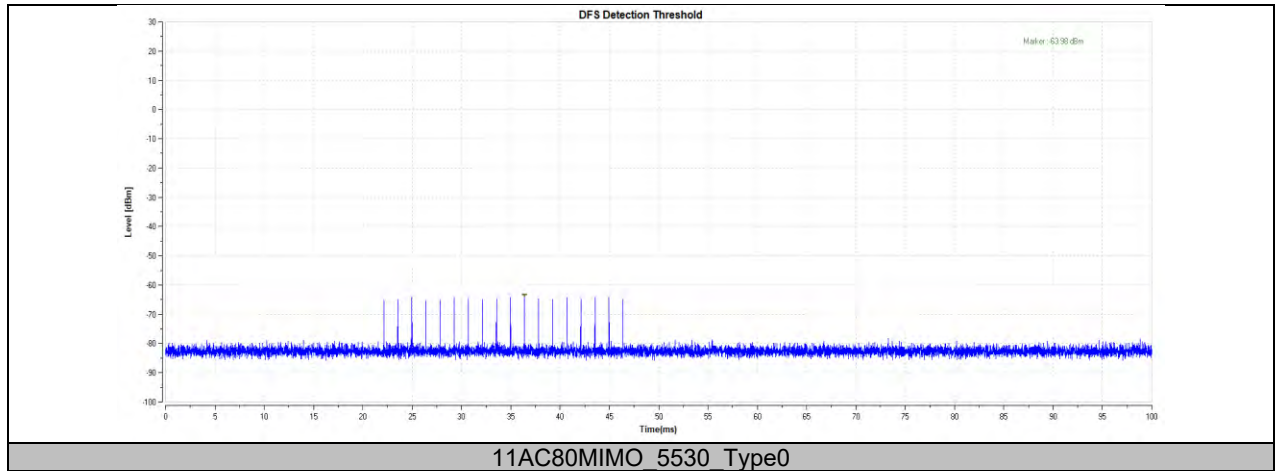


11.6. APPENDIX F: DFS DETECTION THRESHOLDS

11.6.1. Test Result

Test Mode	Channel	Radar Type	Result	Limit[dbm]	Verdict
11AC80MIMO	5530	Type0	-63.98	-62.00	PASS

11.6.2. Test Graphs





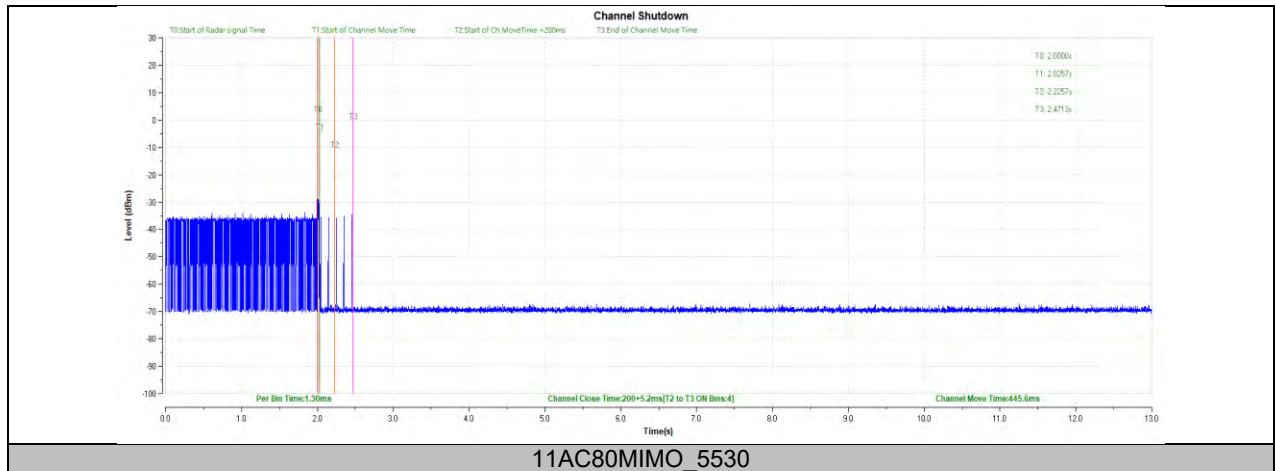
11.7. APPENDIX G: CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

11.7.1. Test Result

Test Mode	Channel	CCT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11AC80MIMO	5530	200+5.2	200+60	445.6	10000	PASS



11.7.2. Test Graphs





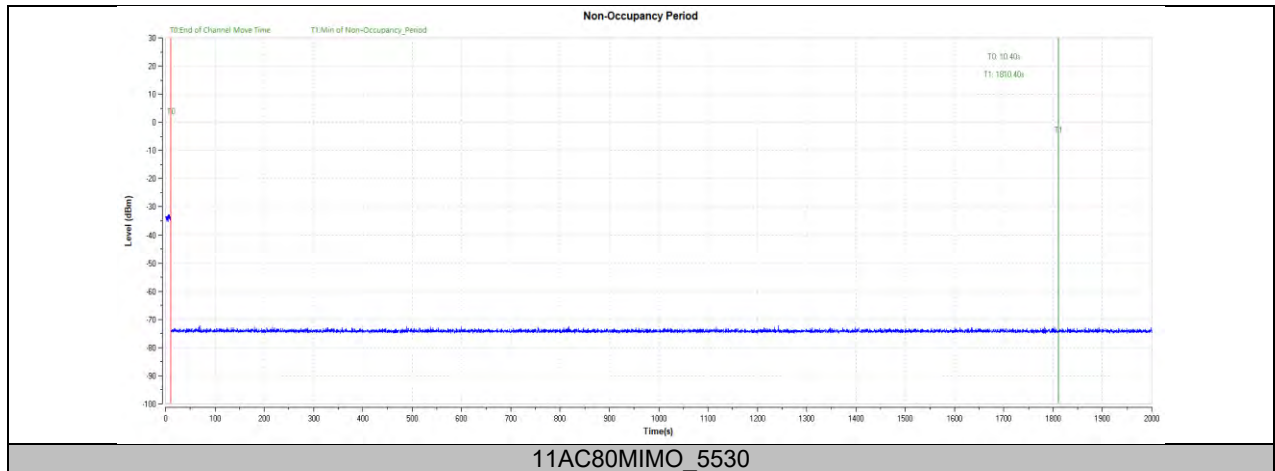
11.8. APPENDIX H: NON-OCCUPANCY PERIOD

Test Result

Test Mode	Channel	Result	Limit[s]	Verdict
11AC80MIMO	5530	see test graph	≥1800	PASS



11.8.1. Test Graphs





11.9. APPENDIX I: FREQUENCY STABILITY

11.9.1. Test Result

Frequency Error vs. Voltage									
802.11a:5260MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
TN	VL	5259.9932	-1.30	5260.0034	0.65	5260.0130	2.46	5259.9787	-4.05
TN	VN	5259.9937	-1.20	5260.0032	0.60	5259.9833	-3.17	5259.9807	-3.68
TN	VH	5259.9868	-2.51	5260.0246	4.68	5259.9940	-1.14	5259.9806	-3.68
Frequency Error vs. Temperature									
802.11a:5260MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
70	VN	5259.9857	-2.71	5259.9980	-0.38	5259.9836	-3.12	5260.0197	3.74
60	VN	5260.0186	3.54	5259.9903	-1.85	5260.0109	2.08	5259.9861	-2.64
50	VN	5260.0214	4.07	5259.9766	-4.44	5259.9867	-2.52	5259.9852	-2.82
40	VN	5260.0169	3.21	5260.0244	4.63	5260.0107	2.03	5260.0190	3.61
30	VN	5259.9760	-4.56	5259.9805	-3.70	5259.9859	-2.69	5259.9958	-0.80
20	VN	5260.0003	0.07	5259.9779	-4.20	5260.0045	0.86	5259.9801	-3.78
10	VN	5259.9843	-2.98	5260.0205	3.91	5260.0064	1.22	5260.0084	1.60
0	VN	5260.0174	3.31	5259.9762	-4.52	5259.9943	-1.09	5259.9906	-1.80

Note:

1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 7.5 TEST ENVIRONMENT.



11.10. APPENDIX J: DUTY CYCLE

11.10.1. Test Result

Test Mode	On Time (msec)	Period (msec)	Duty Cycle ^x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11A	1.39	1.42	0.9789	97.89	0.09	0.72	1
11N20MIMO	1.30	1.34	0.9701	97.01	0.13	0.77	1
11N40MIMO	0.64	0.68	0.9412	94.12	0.26	1.56	2
11AC80MIMO	0.94	1.57	0.5987	59.87	2.23	1.06	2

Note:

For 11AC80MIMO mode, On Time= $0.1888\text{ms} \times 5 = 0.94\text{ms}$

Duty Cycle Correction Factor= $10\log(1/x)$.

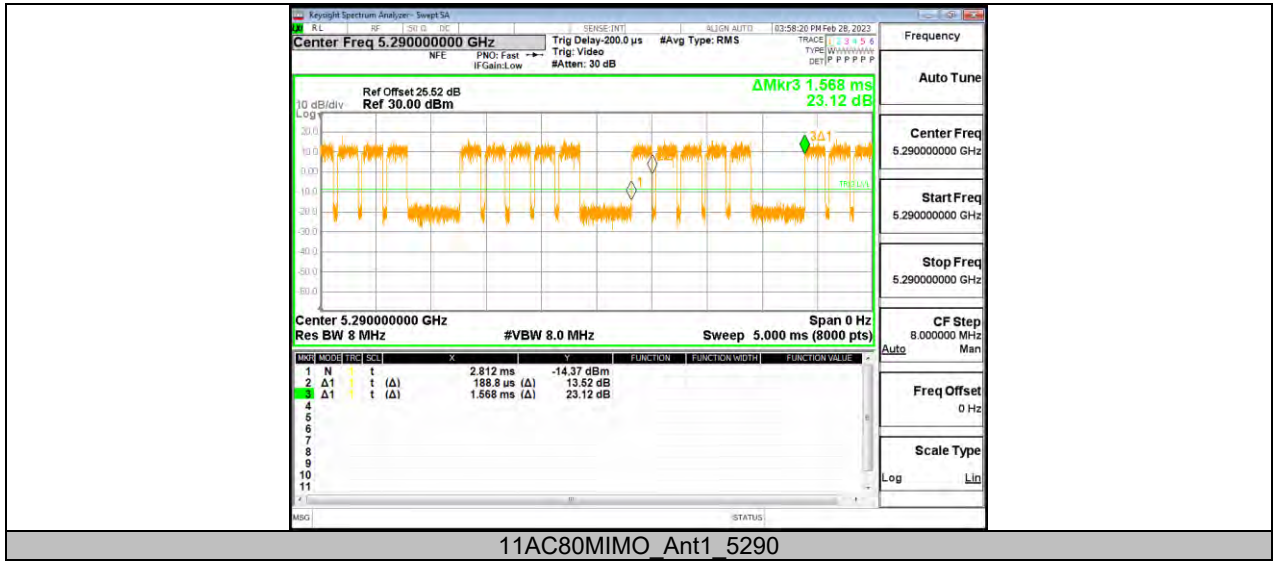
Where: x is Duty Cycle (Linear)

Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used.

11.10.2. Test Graphs





END OF REPORT