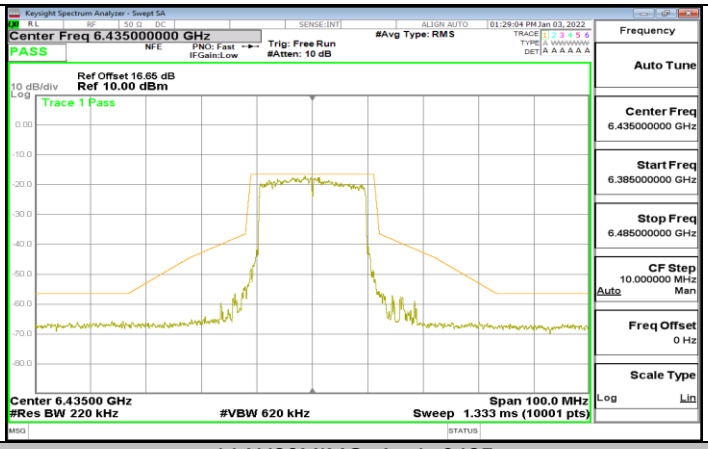
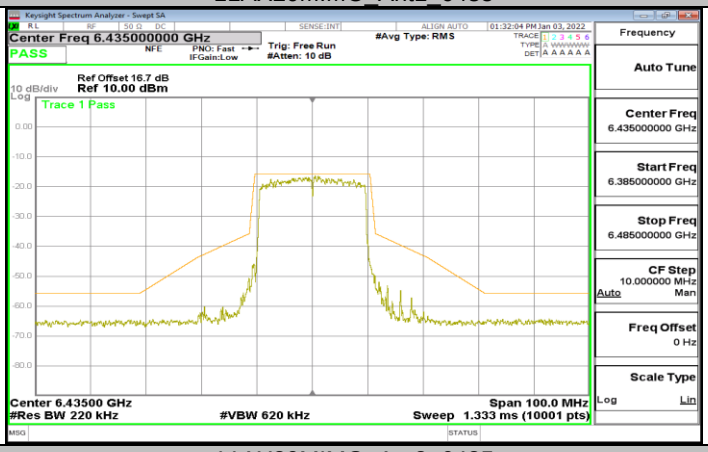
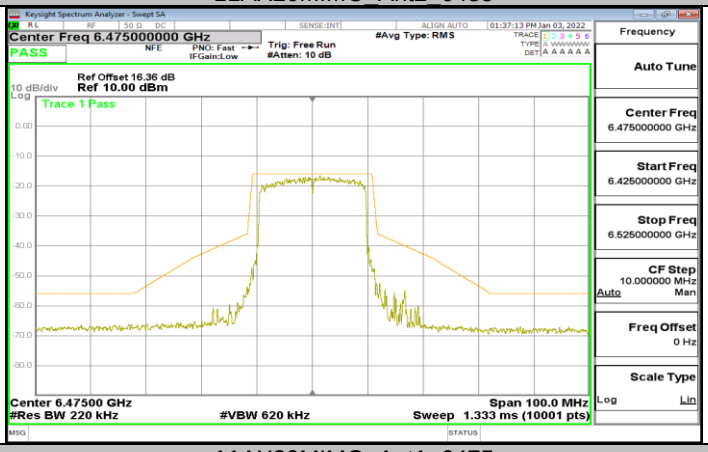


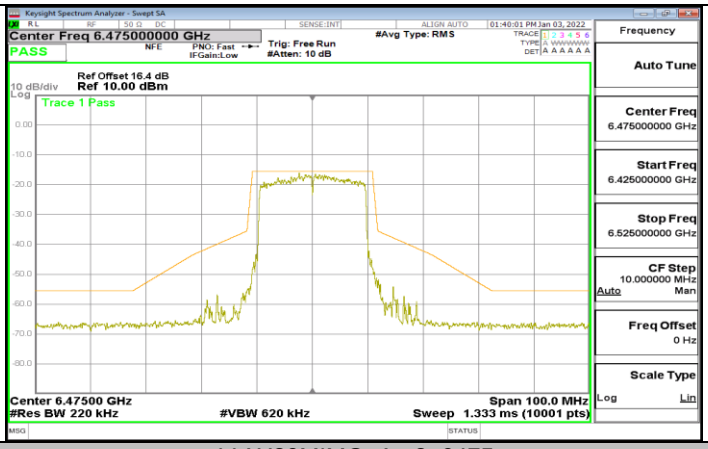
11AX20MIMO_Ant1_6435



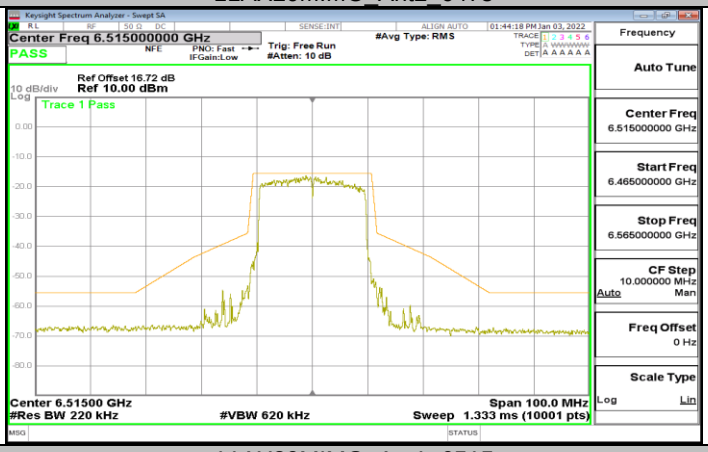
11AX20MIMO_Ant2_6435



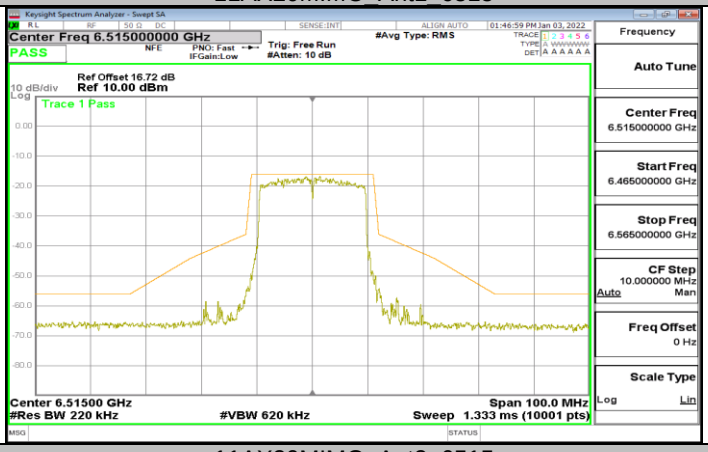
11AX20MIMO_Ant1_6475



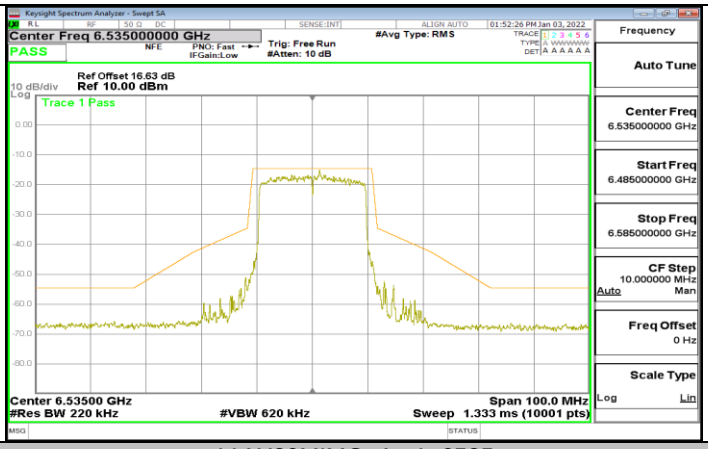
11AX20MIMO_Ant2_6475



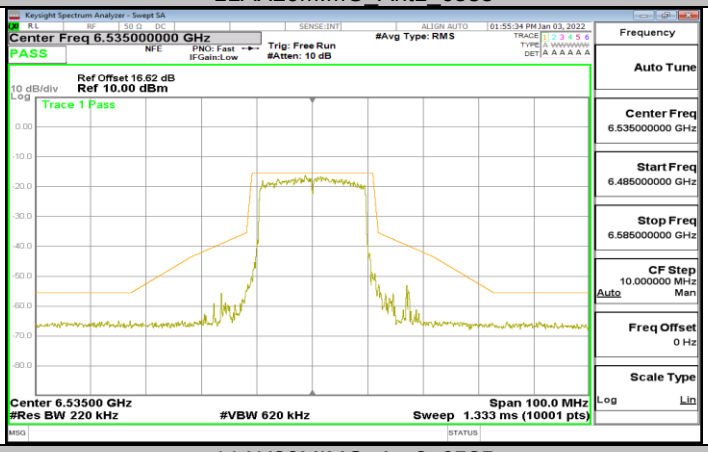
11AX20MIMO_Ant1_6515



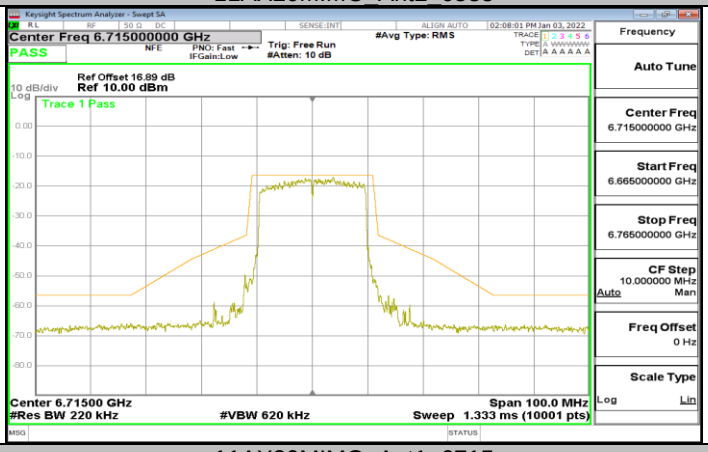
11AX20MIMO_Ant2_6515



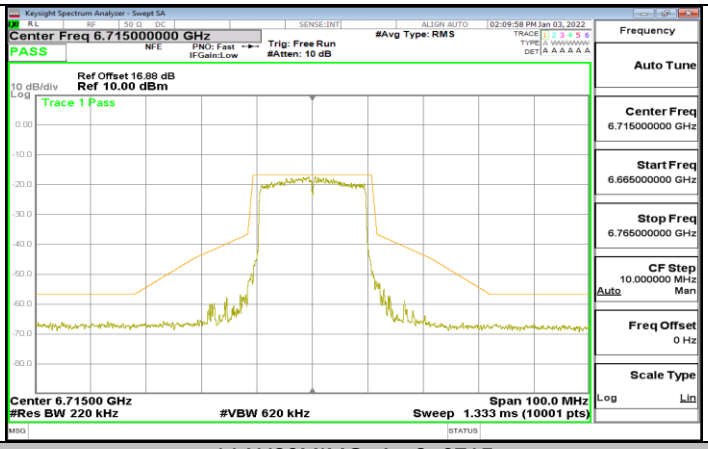
11AX20MIMO_Ant1_6535



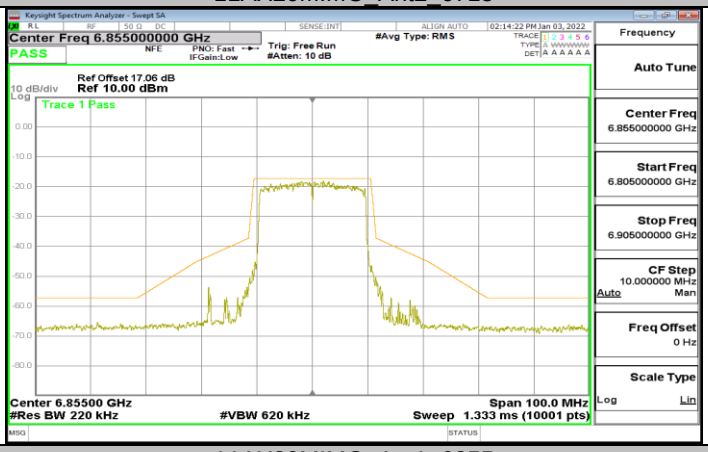
11AX20MIMO_Ant2_6535



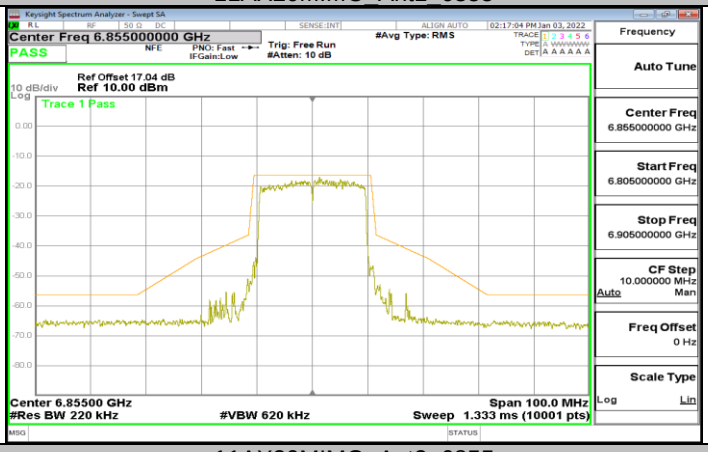
11AX20MIMO_Ant1_6715



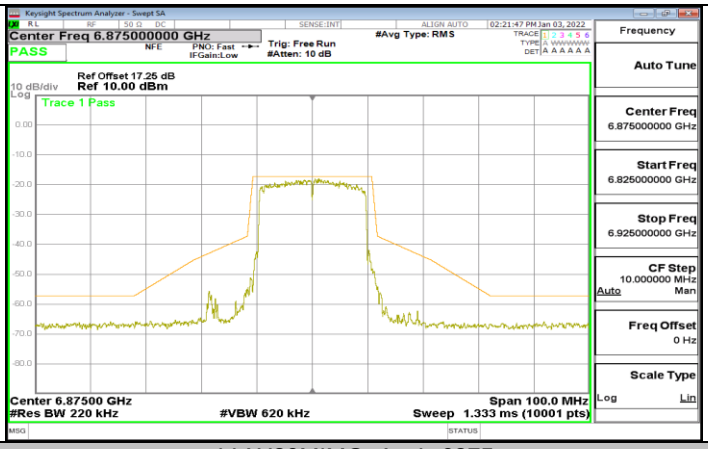
11AX20MIMO_Ant2_6715



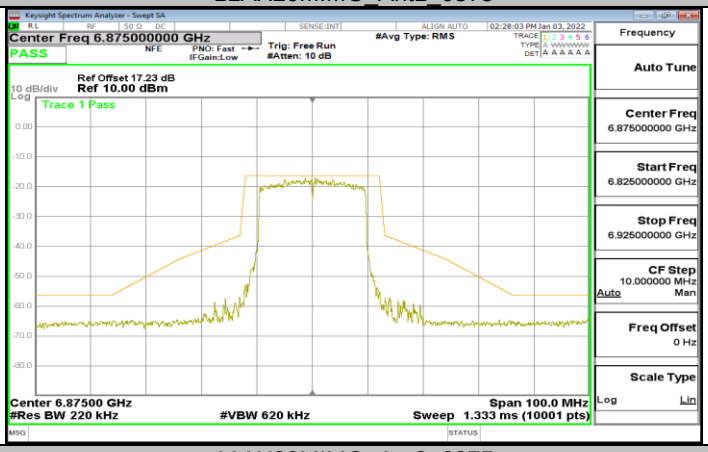
11AX20MIMO_Ant1_6855



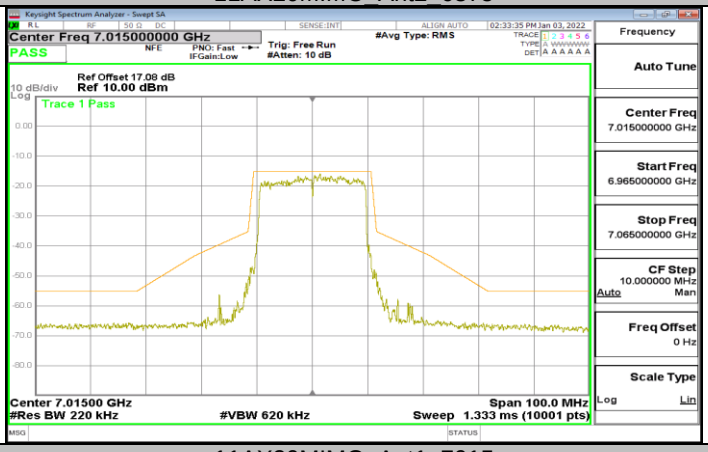
11AX20MIMO_Ant2_6855



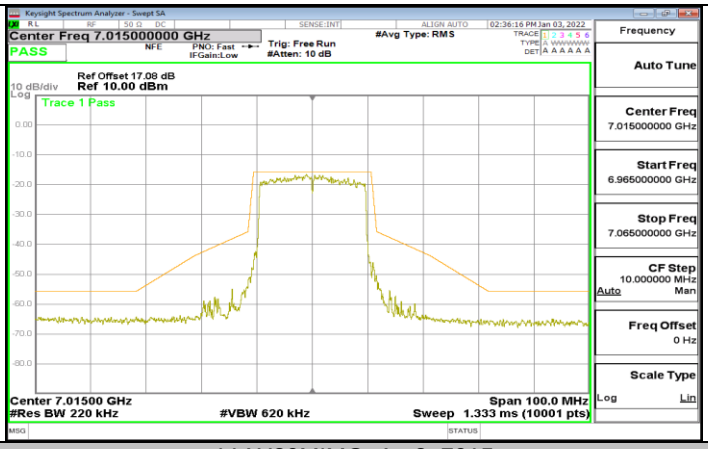
11AX20MIMO_Ant1_6875



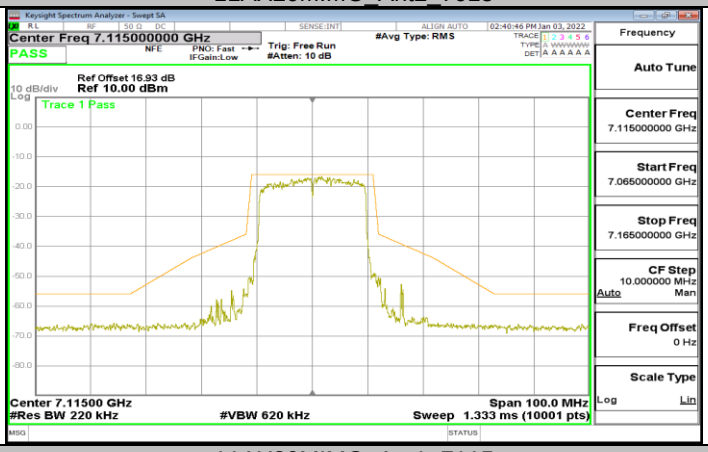
11AX20MIMO_Ant2_6875



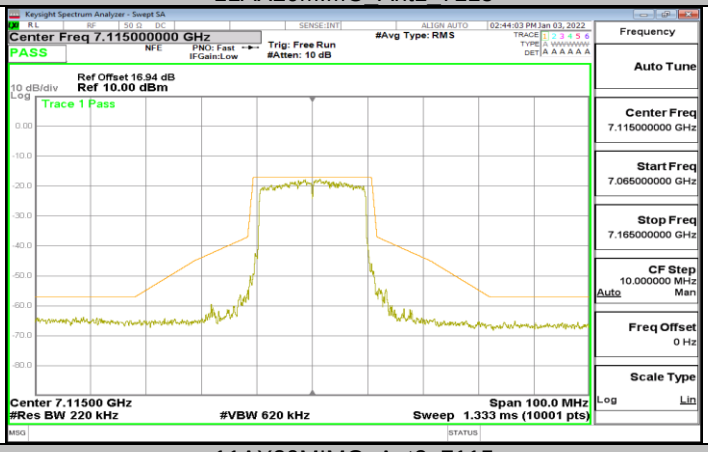
11AX20MIMO_Ant1_7015



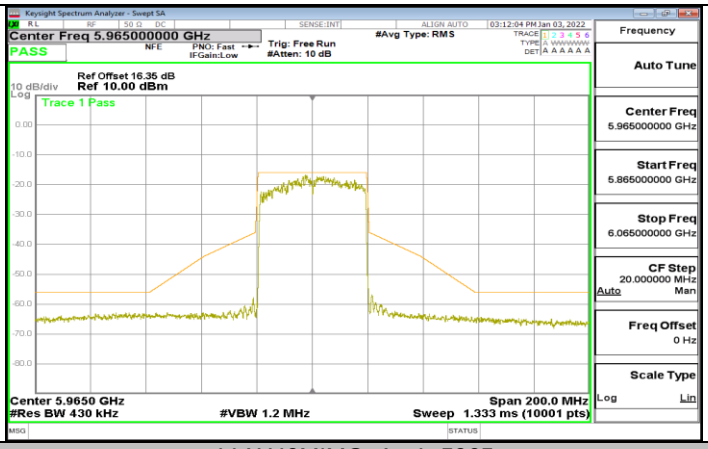
11AX20MIMO_Ant2_7015



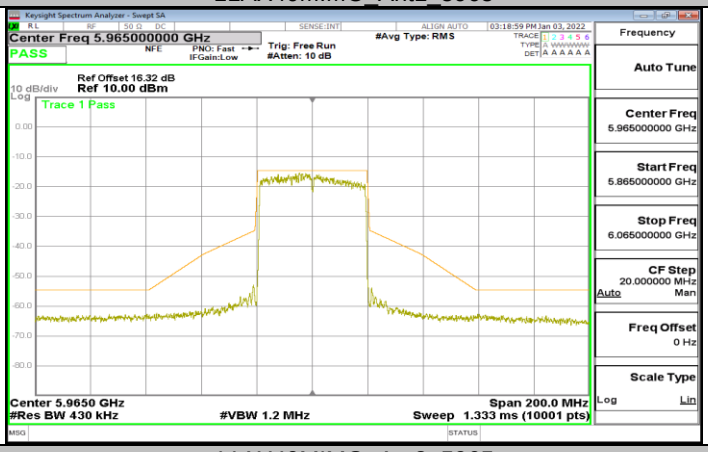
11AX20MIMO_Ant1_7115



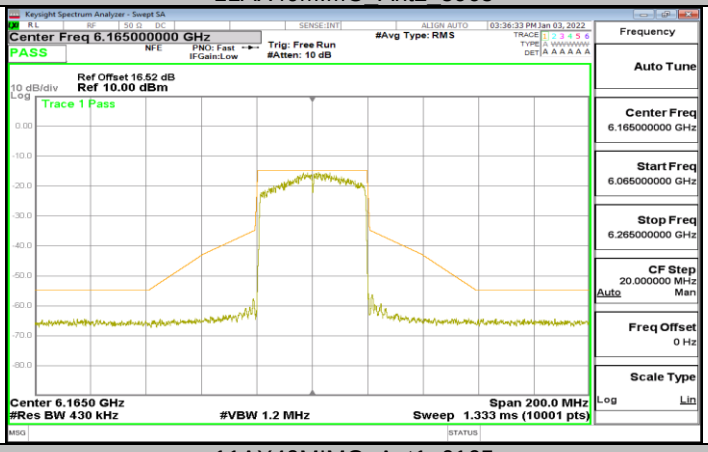
11AX20MIMO_Ant2_7115



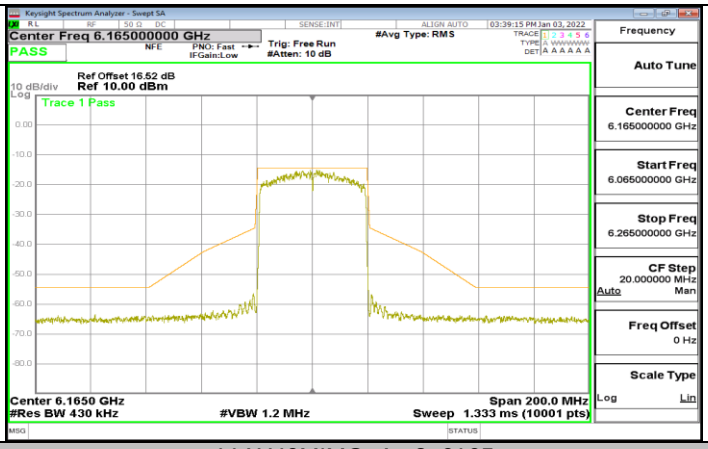
11AX40MIMO_Ant1_5965



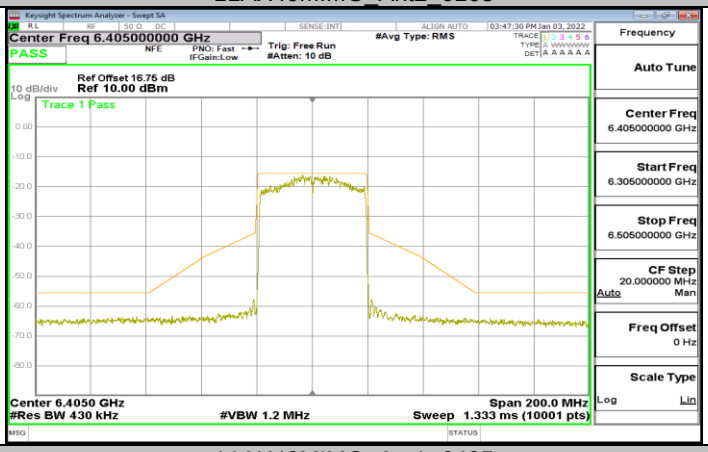
11AX40MIMO_Ant2_5965



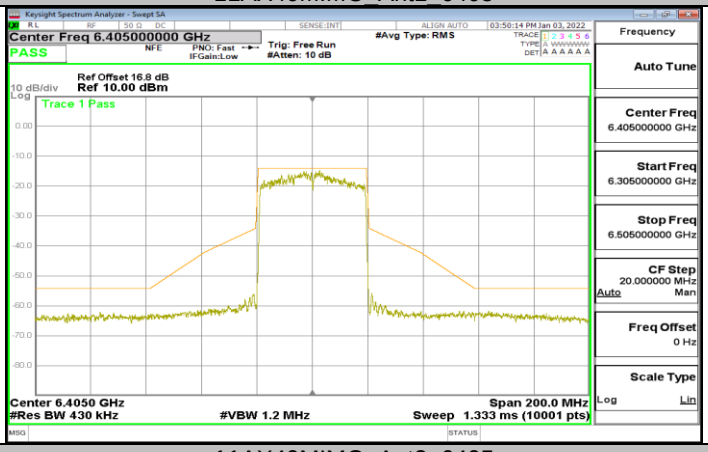
11AX40MIMO_Ant1_6165



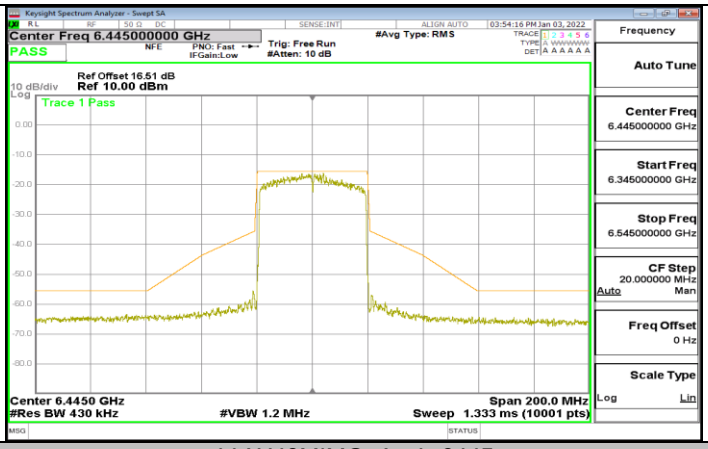
11AX40MIMO_Ant2_6165



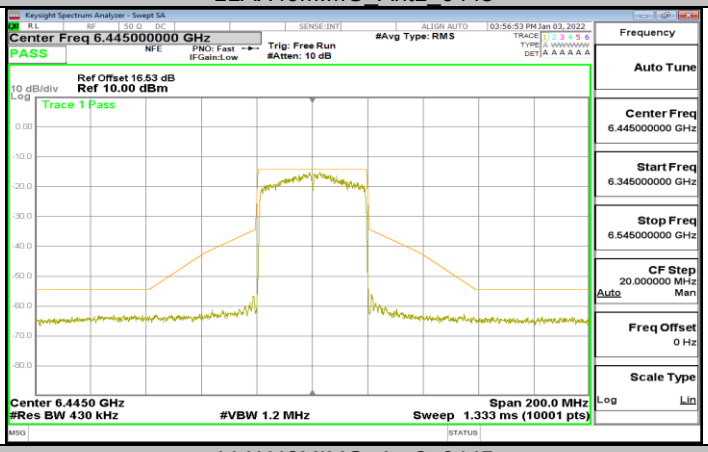
11AX40MIMO_Ant1_6405



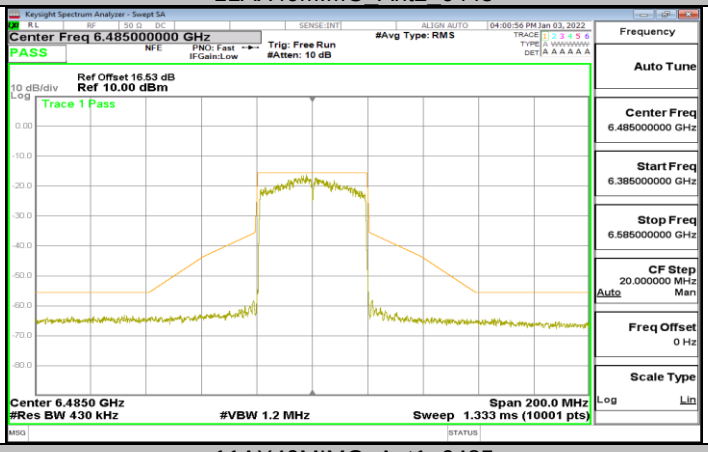
11AX40MIMO_Ant2_6405



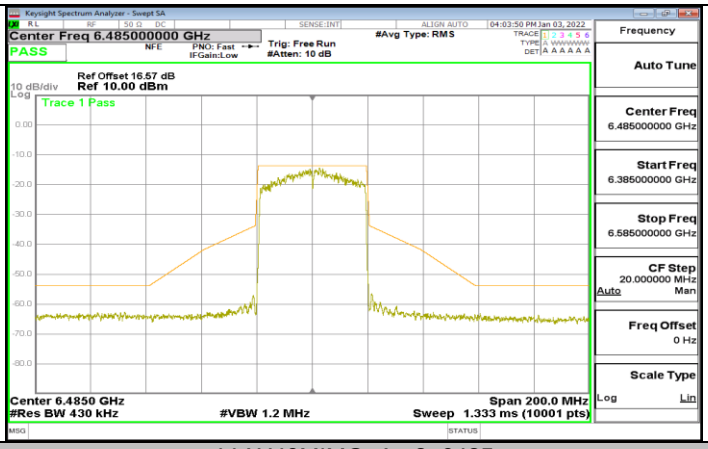
11AX40MIMO_Ant1_6445



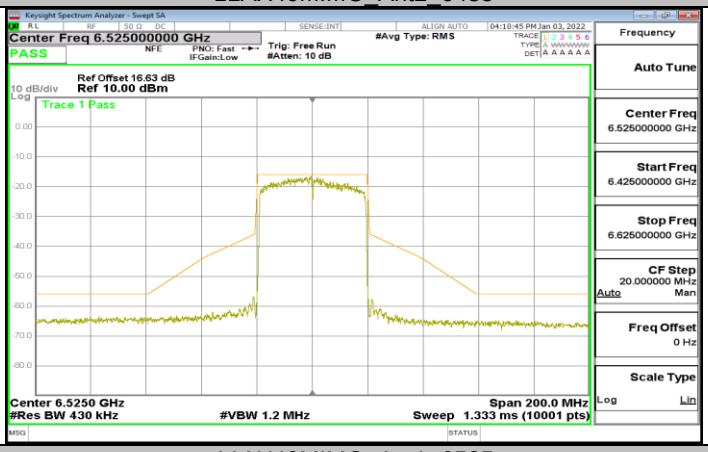
11AX40MIMO_Ant2_6445



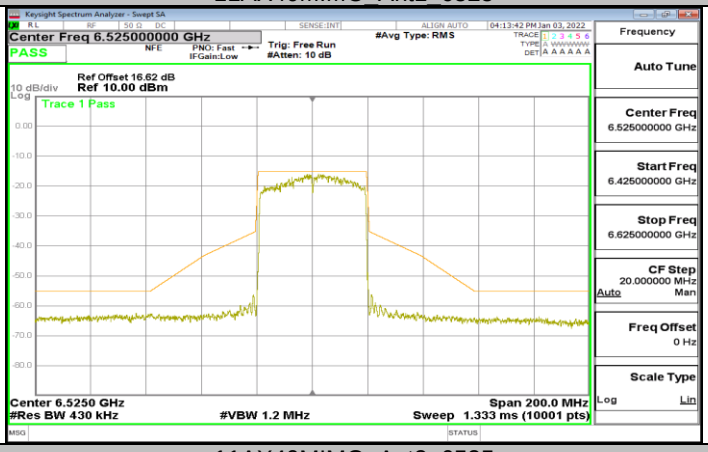
11AX40MIMO_Ant1_6485



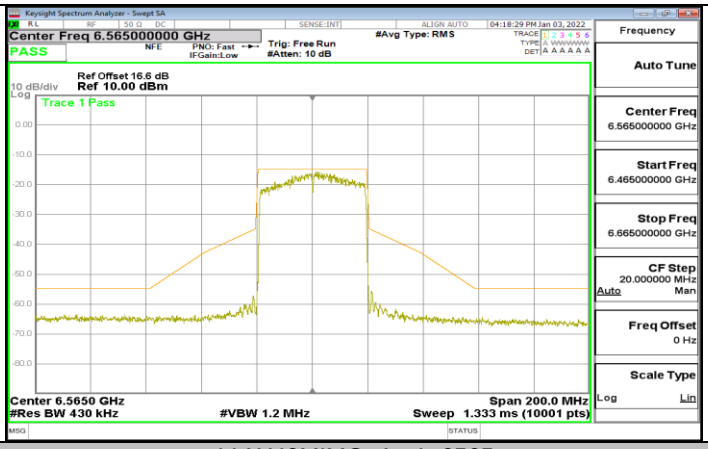
11AX40MIMO_Ant2_6485



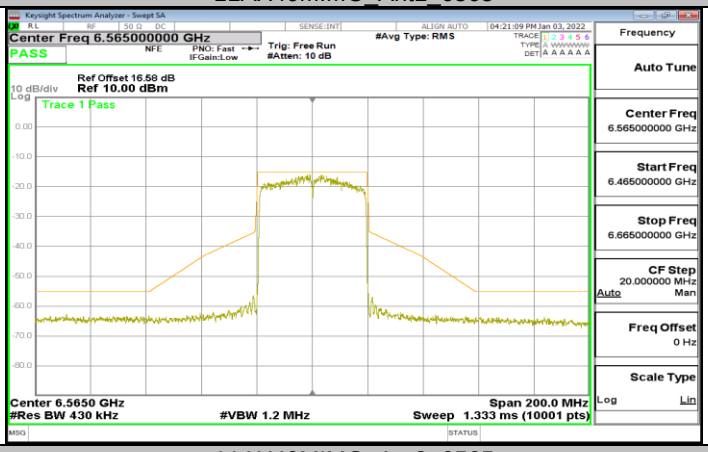
11AX40MIMO_Ant1_6525



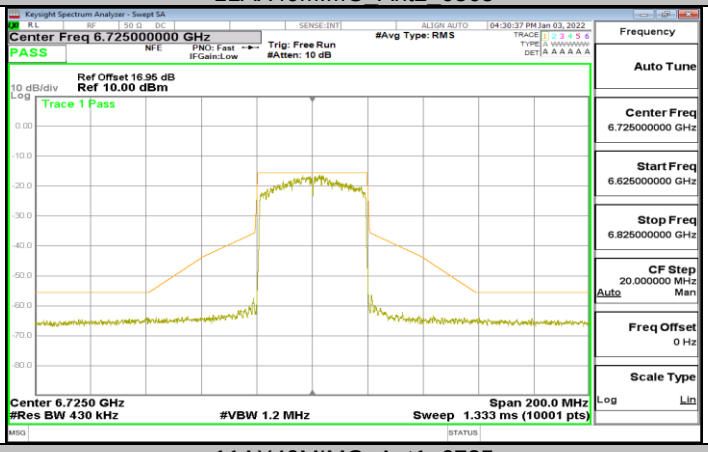
11AX40MIMO_Ant2_6525



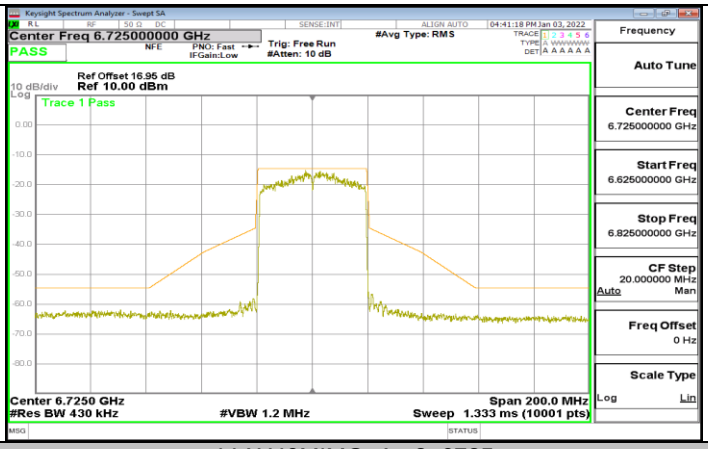
11AX40MIMO_Ant1_6565



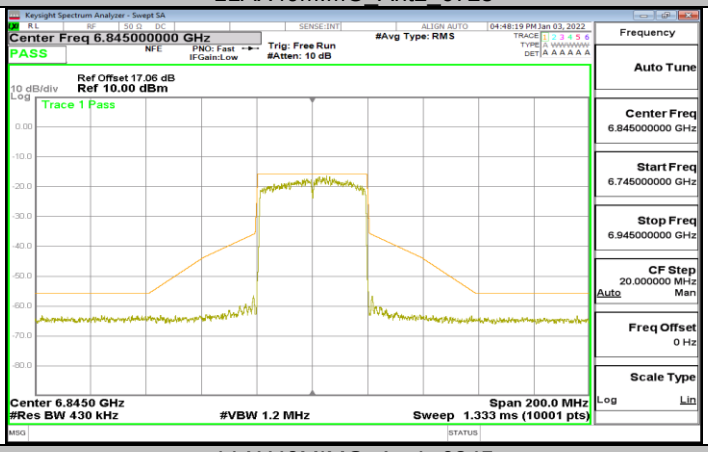
11AX40MIMO_Ant2_6565



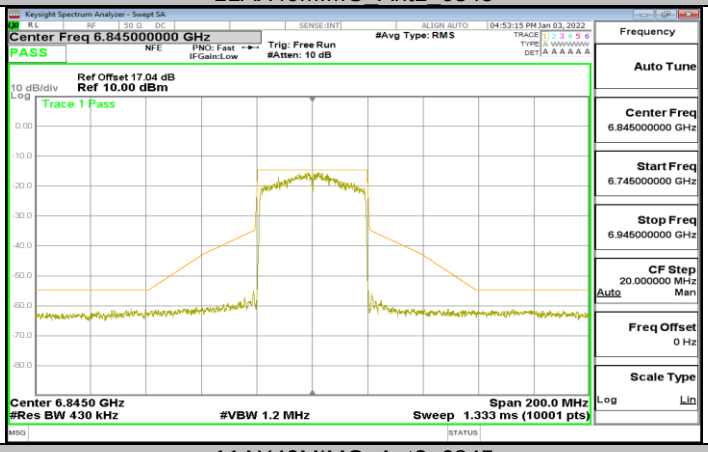
11AX40MIMO_Ant1_6725



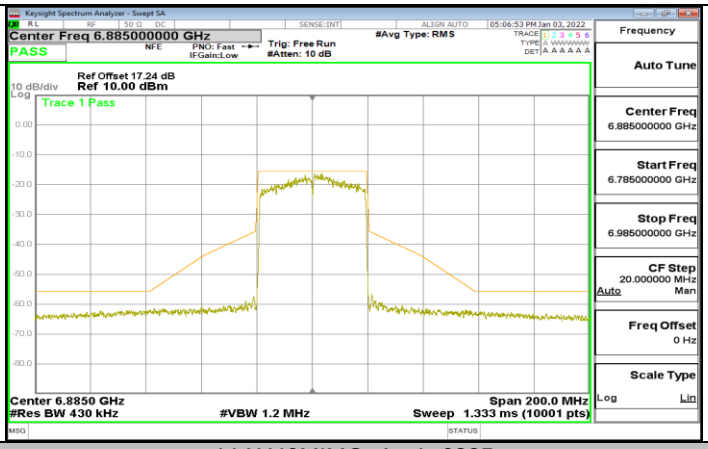
11AX40MIMO_Ant2_6725



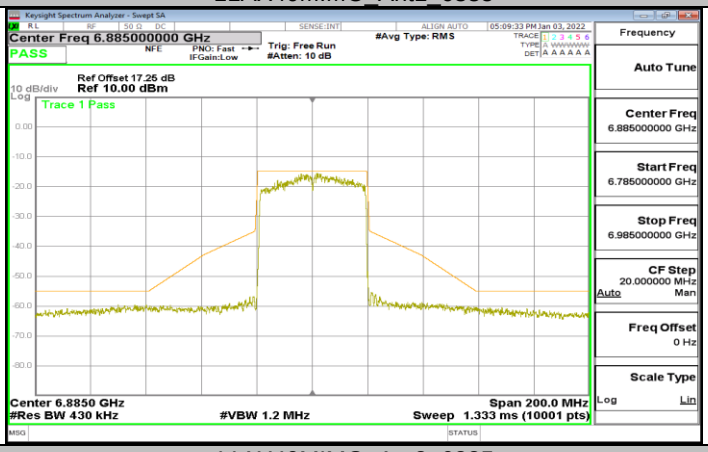
11AX40MIMO_Ant1_6845



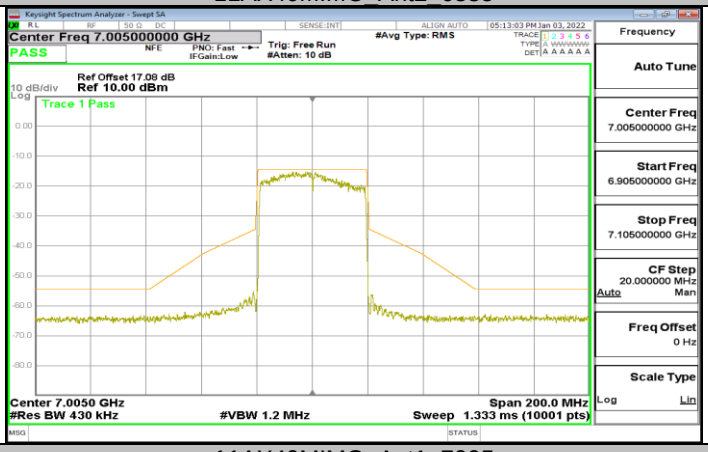
11AX40MIMO_Ant2_6845



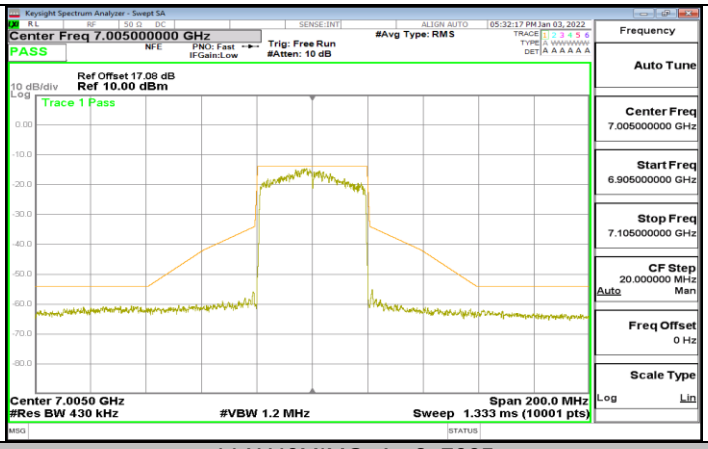
11AX40MIMO_Ant1_6885



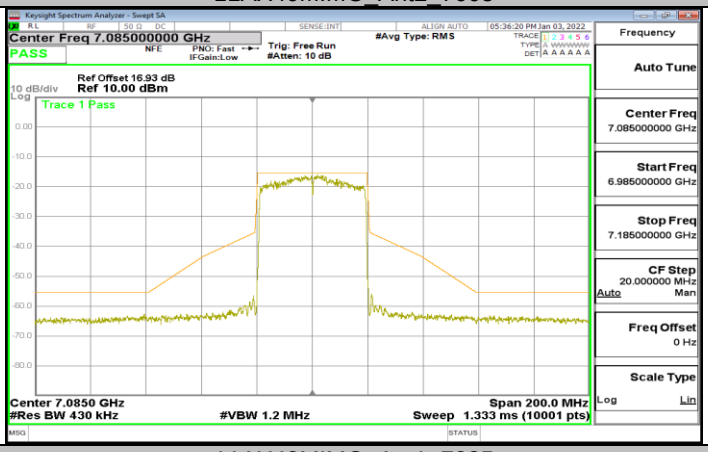
11AX40MIMO_Ant2_6885



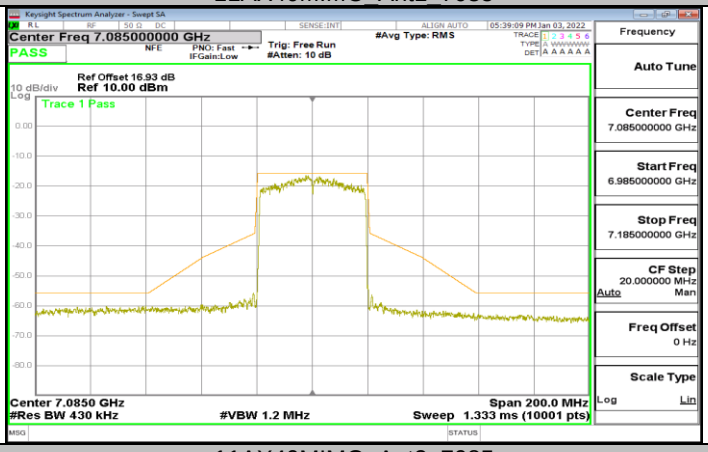
11AX40MIMO_Ant1_7005



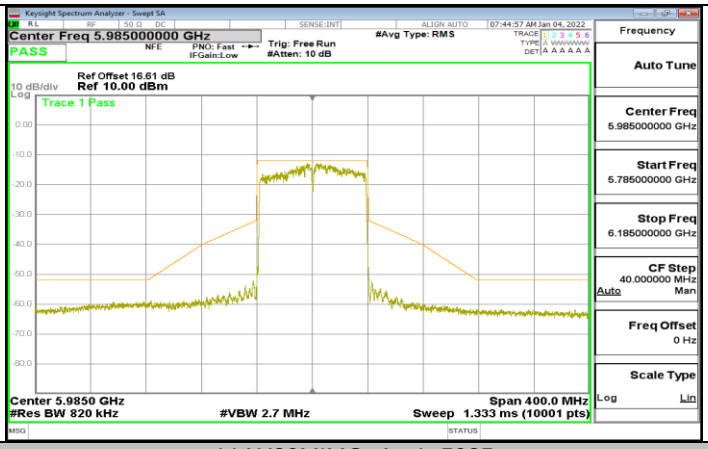
11AX40MIMO_Ant2_7005



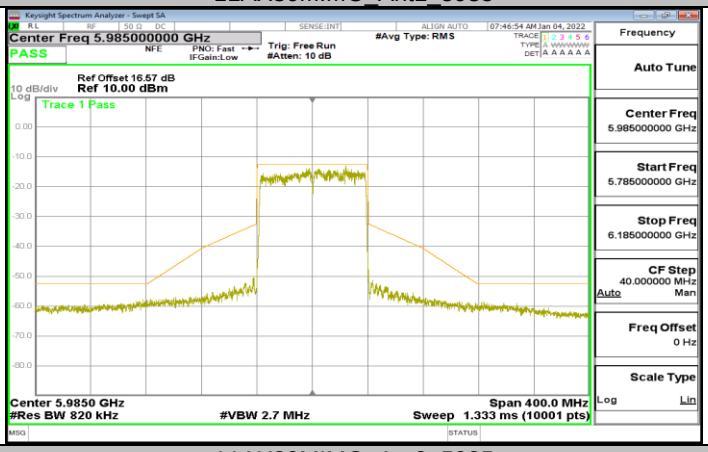
11AX40MIMO_Ant1_7085



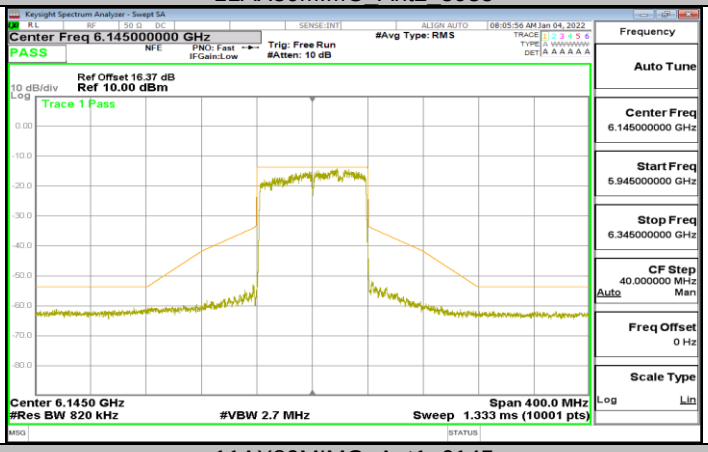
11AX40MIMO_Ant2_7085



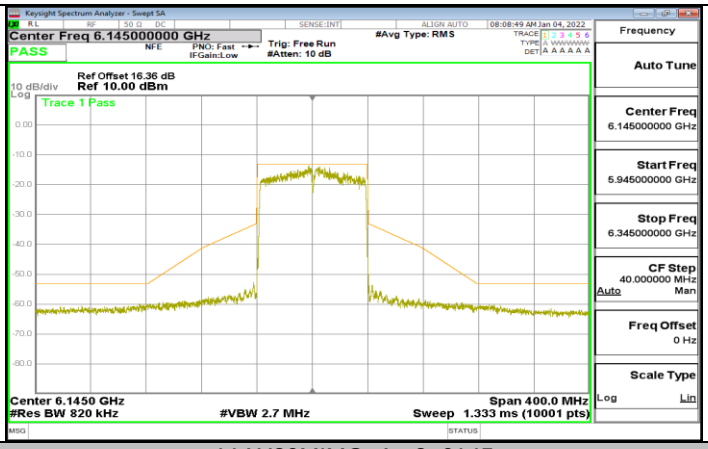
11AX80MIMO_Ant1_5985



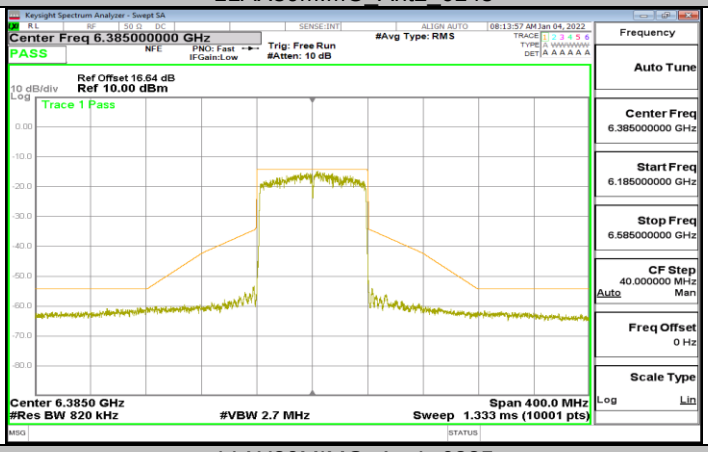
11AX80MIMO_Ant2_5985



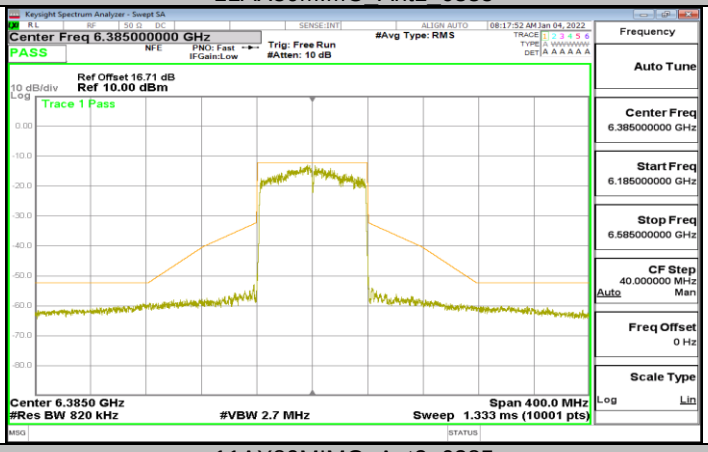
11AX80MIMO_Ant1_6145



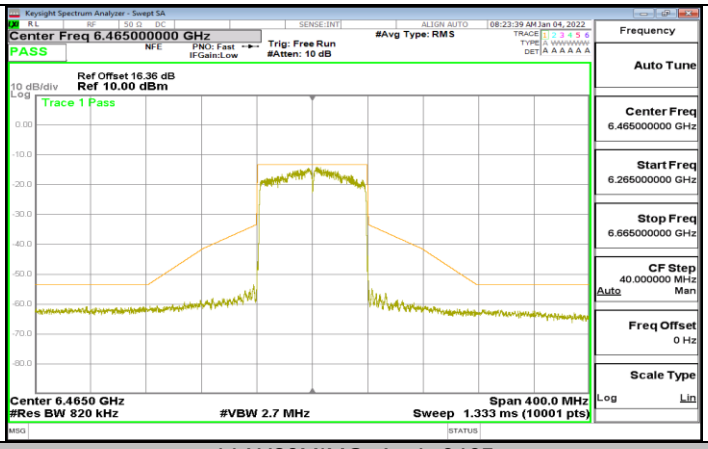
11AX80MIMO_Ant2_6145



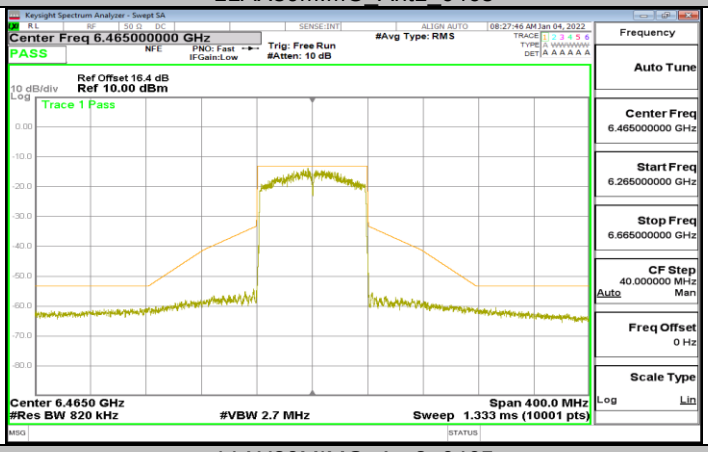
11AX80MIMO_Ant1_6385



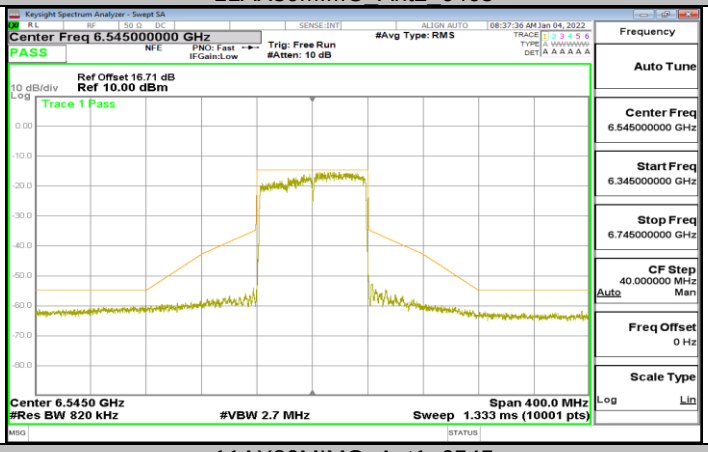
11AX80MIMO_Ant2_6385



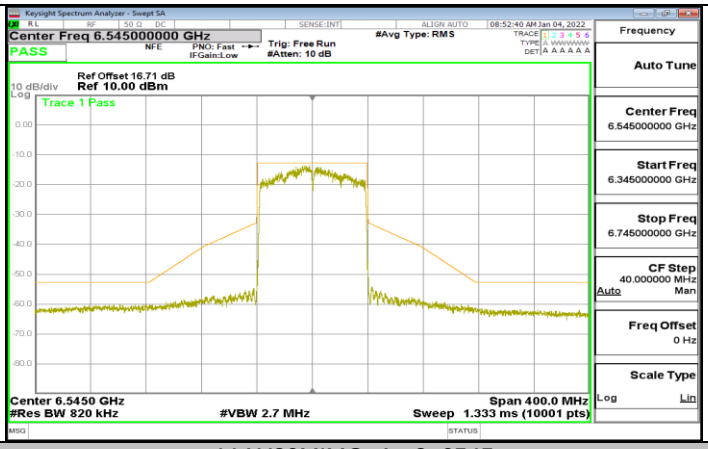
11AX80MIMO_Ant1_6465



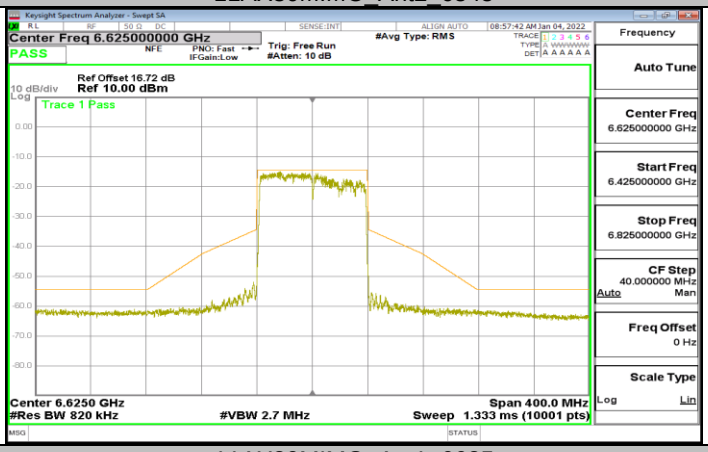
11AX80MIMO_Ant2_6465



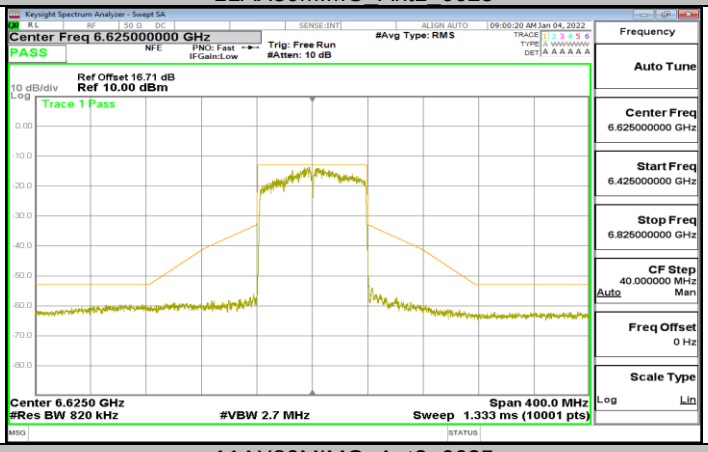
11AX80MIMO_Ant1_6545



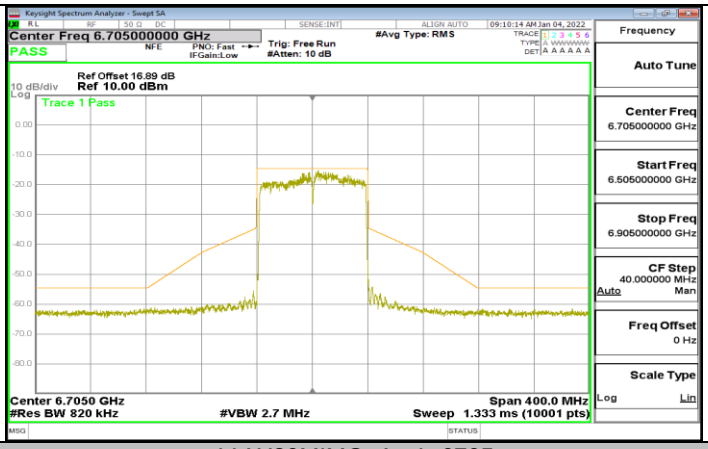
11AX80MIMO_Ant2_6545



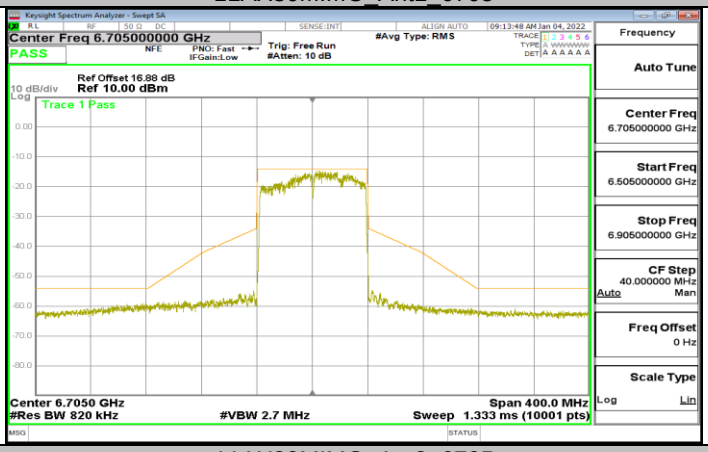
11AX80MIMO_Ant1_6625



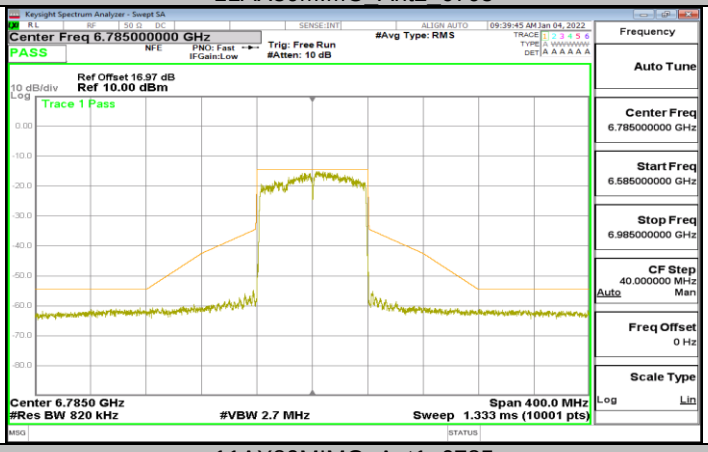
11AX80MIMO_Ant2_6625



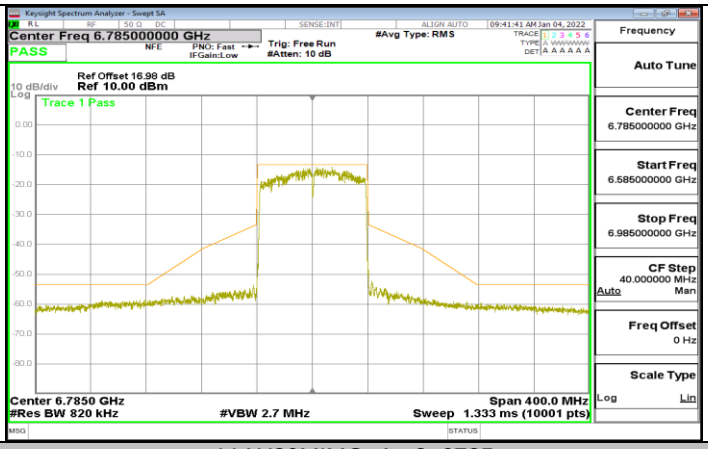
11AX80MIMO_Ant1_6705



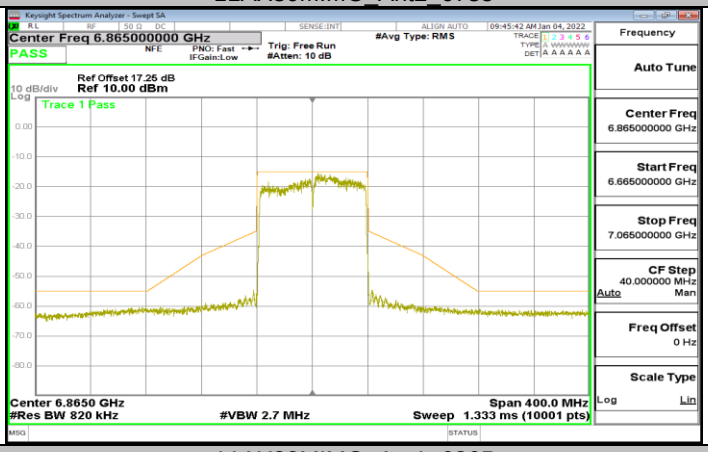
11AX80MIMO_Ant2_6705



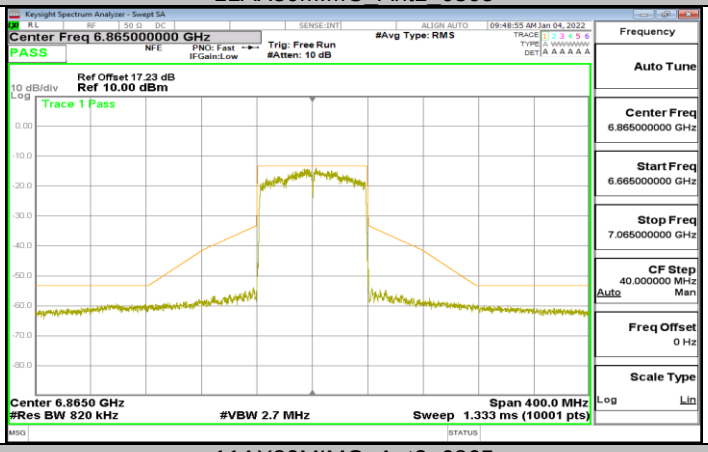
11AX80MIMO_Ant1_6785



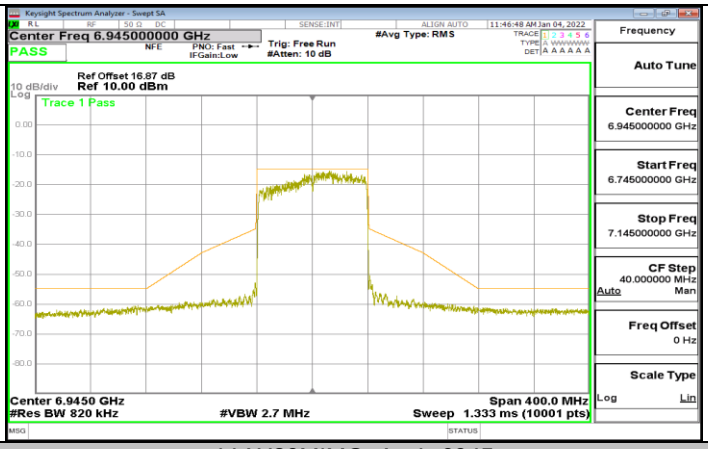
11AX80MIMO_Ant2_6785



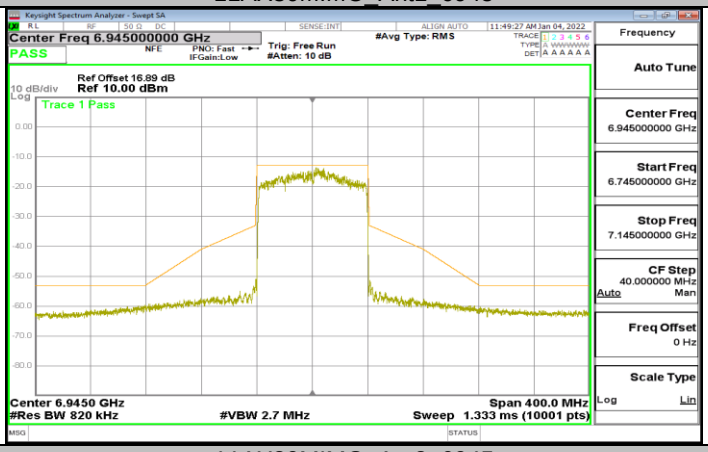
11AX80MIMO_Ant1_6865



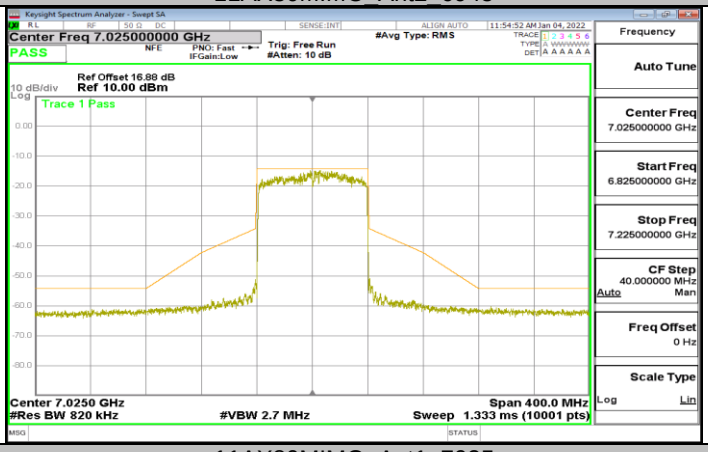
11AX80MIMO_Ant2_6865



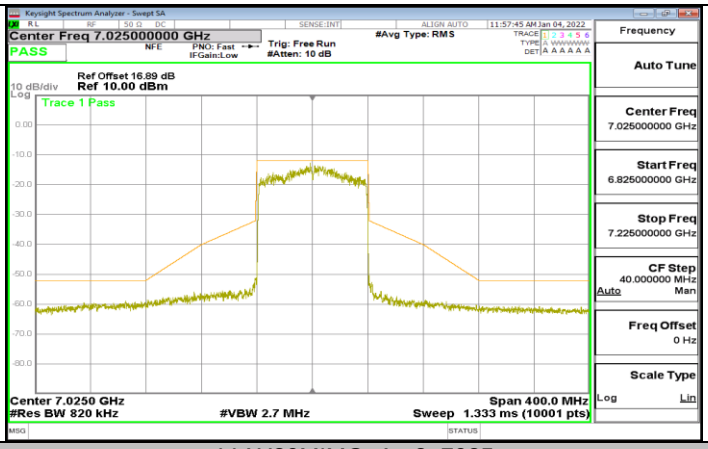
11AX80MIMO_Ant1_6945



11AX80MIMO_Ant2_6945



11AX80MIMO_Ant1_7025



11AX80MIMO_Ant2_7025

12.7. Appendix F: Frequency Stability
Test Result

Frequency Error vs. Voltage									
802.11ax HE20: 6195 MHz									
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	6195.0229	3.70	6195.0055	0.88	6195.0046	0.74	6194.9847	6195.0229
TN	VN	6194.9823	-2.86	6194.9901	-1.60	6195.0047	0.77	6195.0103	6194.9823
TN	VH	6194.9794	-3.33	6195.0227	3.67	6195.0003	0.05	6195.0101	6194.9794
Frequency Error vs. Temperature									
802.11ax HE20: 6195 MHz									
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)
60	VN	6195.0093	1.50	6194.9831	-2.73	6195.0050	0.81	6195.0076	1.23
40	VN	6194.9820	-2.90	6195.0101	1.63	6195.0081	1.32	6194.9788	-3.41
30	VN	6194.9907	-1.50	6194.9798	-3.26	6195.0039	0.62	6195.0031	0.49
20	VN	6194.9960	-0.65	6194.9989	-0.18	6194.9849	-2.43	6194.9908	-1.49
10	VN	6194.9934	-1.07	6195.0125	2.02	6194.9945	-0.88	6194.9789	-3.41
0	VN	6194.9933	-1.08	6195.0035	0.56	6195.0160	2.58	6194.9986	-0.22

Frequency Error vs. Voltage									
802.11ax HE20: 6995 MHz									
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	6995.0065	0.94	6995.0125	1.79	6995.0016	0.23	6994.9926	-1.06
TN	VN	6994.9850	-2.14	6994.9953	-0.67	6995.0105	1.50	6994.9806	-2.78
TN	VH	6994.9998	-0.03	6995.0193	2.75	6994.9939	-0.87	6994.9980	-0.28
Frequency Error vs. Temperature									
802.11ax HE20: 6995 MHz									
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)
60	VN	6994.9915	-1.22	6995.0121	1.73	6995.0048	0.69	6995.0013	0.19
40	VN	6995.0042	0.60	6994.9892	-1.55	6995.0246	3.52	6994.9976	-0.34
30	VN	6994.9953	-0.67	6994.9760	-3.43	6994.9834	-2.37	6995.0139	1.99
20	VN	6994.9929	-1.02	6995.0204	2.91	6994.9949	-0.73	6995.0094	1.35
10	VN	6995.0137	1.96	6994.9760	-3.43	6994.9964	-0.51	6995.0232	3.32
0	VN	6994.9854	-2.08	6994.9869	-1.87	6995.0170	2.43	6995.0078	1.12

Note: All the mode had been tested, but only the worst data was recorded in the repot.

12.8. Appendix G: Contention Based Protocol

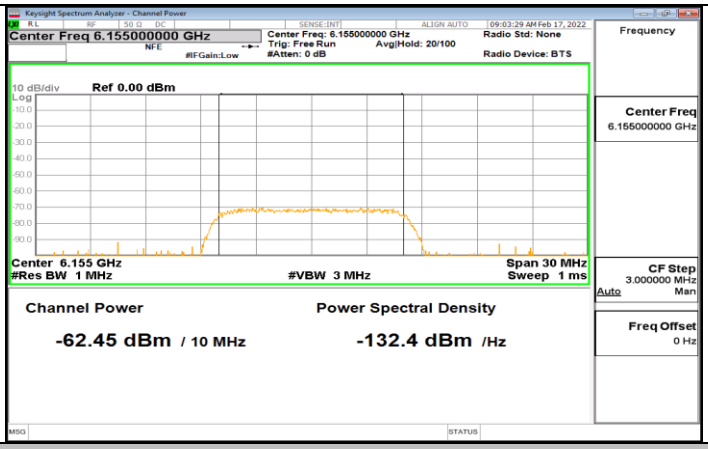
Test Mode	Antenna	Channel	Frequency [MHz]	Result [dBm]	Limit[dBm]	Verdict
11AX20MIMO	Ant1	6155	6155	-62.39	-62	PASS
		6455	6455	-62.4996	-62	PASS
		6615	6615	-62.4794	-62	PASS
		7015	7015	-62.2596	-62	PASS
11AX80MIMO	Ant1	6145	6110	-62.4869	-62	PASS
			6145	-62.3684	-62	PASS
			6180	-62.3997	-62	PASS
		6465	6430	-62.2901	-62	PASS
			6465	-62.4776	-62	PASS
			6500	-62.3996	-62	PASS
		6705	6670	-62.2377	-62	PASS
			6705	-62.3314	-62	PASS
			6740	-62.487	-62	PASS
		6945	6910	-62.4779	-62	PASS
			6945	-62.2365	-62	PASS
			6980	-62.4623	-62	PASS

Test Mode	Antenna	Channel	Interference Frequency [MHz]		Test Time	Is Detected	Verdict
11AX20MIMO	Ant1	6155	Center	6155	1	Yes	PASS
			Center	6155	2	Yes	PASS
			Center	6155	3	Yes	PASS
			Center	6155	4	Yes	PASS
			Center	6155	5	Yes	PASS
			Center	6155	6	Yes	PASS
			Center	6155	7	Yes	PASS
			Center	6155	8	Yes	PASS
			Center	6155	9	Yes	PASS
			Center	6155	10	Yes	PASS
		6455	Center	6455	1	Yes	PASS
			Center	6455	2	Yes	PASS
			Center	6455	3	Yes	PASS
			Center	6455	4	Yes	PASS
			Center	6455	5	Yes	PASS
			Center	6455	6	Yes	PASS
			Center	6455	7	No	FAIL
			Center	6455	8	Yes	PASS
			Center	6455	9	Yes	PASS
			Center	6455	10	Yes	PASS
		6615	Center	6615	1	Yes	PASS
			Center	6615	2	Yes	PASS
			Center	6615	3	Yes	PASS
			Center	6615	4	Yes	PASS
			Center	6615	5	Yes	PASS
			Center	6615	6	Yes	PASS
			Center	6615	7	No	FAIL
			Center	6615	8	Yes	PASS
			Center	6615	9	Yes	PASS
			Center	6615	10	Yes	PASS
		7015	Center	7015	1	Yes	PASS
			Center	7015	2	Yes	PASS
			Center	7015	3	Yes	PASS
			Center	7015	4	Yes	PASS
			Center	7015	5	Yes	PASS
			Center	7015	6	Yes	PASS
			Center	7015	7	Yes	PASS
			Center	7015	8	Yes	PASS
			Center	7015	9	Yes	PASS
			Center	7015	10	Yes	PASS
11AX80MIMO	Ant1	6145	High	6110	1	Yes	PASS
			High	6110	2	Yes	PASS
			High	6110	3	Yes	PASS
			High	6110	4	Yes	PASS
			High	6110	5	Yes	PASS
			High	6110	6	Yes	PASS
			High	6110	7	Yes	PASS
			High	6110	8	Yes	PASS
			High	6110	9	Yes	PASS
			High	6110	10	Yes	PASS
			Center	6145	1	Yes	PASS
			Center	6145	2	Yes	PASS
			Center	6145	3	Yes	PASS
			Center	6145	4	Yes	PASS
			Center	6145	5	Yes	PASS
			Center	6145	6	Yes	PASS

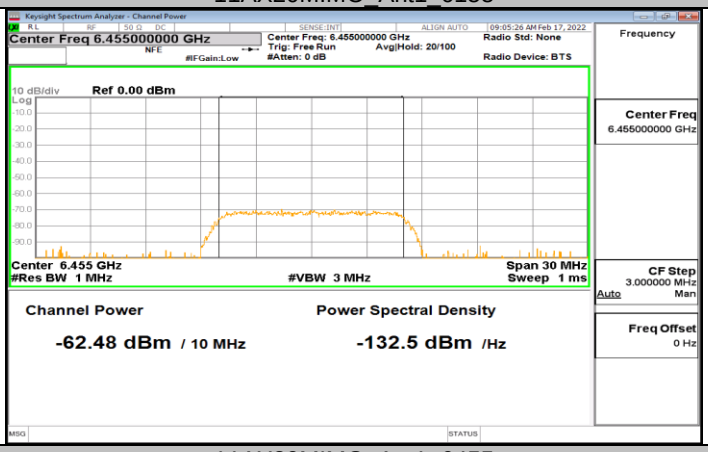
			Center	6145	7	Yes	PASS
			Center	6145	8	Yes	PASS
			Center	6145	9	Yes	PASS
			Center	6145	10	Yes	PASS
			Low	6180	1	Yes	PASS
			Low	6180	2	Yes	PASS
			Low	6180	3	Yes	PASS
			Low	6180	4	Yes	PASS
			Low	6180	5	Yes	PASS
			Low	6180	6	Yes	PASS
			Low	6180	7	Yes	PASS
			Low	6180	8	Yes	PASS
			Low	6180	9	Yes	PASS
			Low	6180	10	Yes	PASS
		6465	High	6430	1	Yes	PASS
			High	6430	2	Yes	PASS
			High	6430	3	Yes	PASS
			High	6430	4	Yes	PASS
			High	6430	5	Yes	PASS
			High	6430	6	Yes	PASS
			High	6430	7	Yes	PASS
			High	6430	8	Yes	PASS
			High	6430	9	Yes	PASS
			High	6430	10	Yes	PASS
			Center	6465	1	Yes	PASS
			Center	6465	2	Yes	PASS
			Center	6465	3	Yes	PASS
			Center	6465	4	Yes	PASS
			Center	6465	5	Yes	PASS
			Center	6465	6	Yes	PASS
			Center	6465	7	Yes	PASS
			Center	6465	8	Yes	PASS
			Center	6465	9	Yes	PASS
			Center	6465	10	Yes	PASS
			Low	6500	1	Yes	PASS
			Low	6500	2	Yes	PASS
			Low	6500	3	Yes	PASS
			Low	6500	4	Yes	PASS
			Low	6500	5	Yes	PASS
			Low	6500	6	Yes	PASS
			Low	6500	7	Yes	PASS
			Low	6500	8	Yes	PASS
			Low	6500	9	Yes	PASS
			Low	6500	10	Yes	PASS
		6705	High	6670	1	Yes	PASS
			High	6670	2	Yes	PASS
			High	6670	3	Yes	PASS
			High	6670	4	Yes	PASS
			High	6670	5	Yes	PASS
			High	6670	6	Yes	PASS
			High	6670	7	Yes	PASS
			High	6670	8	Yes	PASS
			High	6670	9	Yes	PASS
			High	6670	10	Yes	PASS
			Center	6705	1	Yes	PASS
			Center	6705	2	Yes	PASS
			Center	6705	3	Yes	PASS
			Center	6705	4	Yes	PASS
			Center	6705	5	Yes	PASS
			Center	6705	6	Yes	PASS
			Center	6705	7	Yes	PASS

			Center	6705	8	Yes	PASS
			Center	6705	9	Yes	PASS
			Center	6705	10	Yes	PASS
			Low	6740	1	Yes	PASS
			Low	6740	2	Yes	PASS
			Low	6740	3	Yes	PASS
			Low	6740	4	Yes	PASS
			Low	6740	5	Yes	PASS
			Low	6740	6	Yes	PASS
			Low	6740	7	Yes	PASS
			Low	6740	8	Yes	PASS
			Low	6740	9	Yes	PASS
			Low	6740	10	Yes	PASS
		6945	High	6910	1	Yes	PASS
			High	6910	2	Yes	PASS
			High	6910	3	Yes	PASS
			High	6910	4	Yes	PASS
			High	6910	5	Yes	PASS
			High	6910	6	Yes	PASS
			High	6910	7	Yes	PASS
			High	6910	8	Yes	PASS
			High	6910	9	Yes	PASS
			High	6910	10	Yes	PASS
			Center	6945	1	Yes	PASS
			Center	6945	2	Yes	PASS
			Center	6945	3	Yes	PASS
			Center	6945	4	Yes	PASS
			Center	6945	5	Yes	PASS
			Center	6945	6	Yes	PASS
			Center	6945	7	Yes	PASS
			Center	6945	8	Yes	PASS
			Center	6945	9	Yes	PASS
			Center	6945	10	Yes	PASS
			Low	6980	1	Yes	PASS
			Low	6980	2	Yes	PASS
			Low	6980	3	Yes	PASS
			Low	6980	4	Yes	PASS
			Low	6980	5	Yes	PASS
			Low	6980	6	Yes	PASS
			Low	6980	7	Yes	PASS
			Low	6980	8	Yes	PASS
			Low	6980	9	Yes	PASS
			Low	6980	10	Yes	PASS

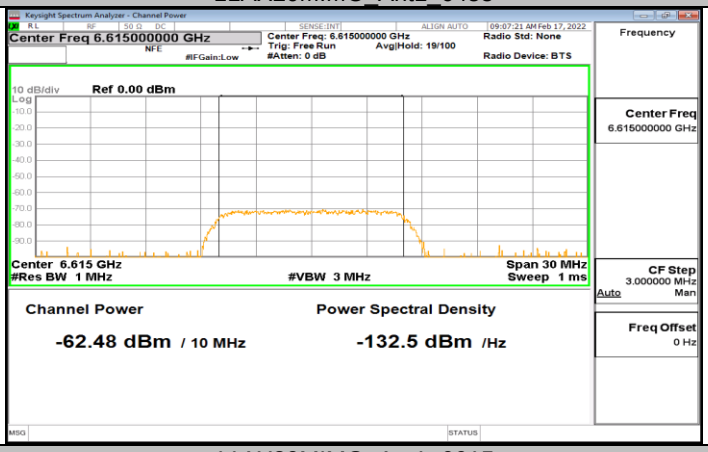
12.8.1. Test Graphs



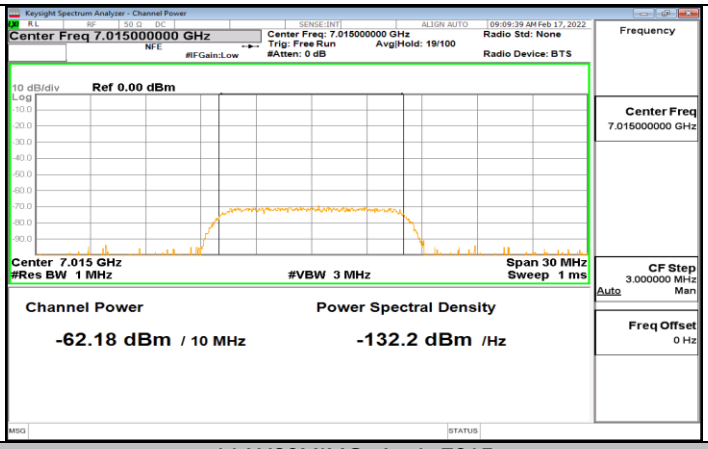
11AX20MIMO_Ant1_6155



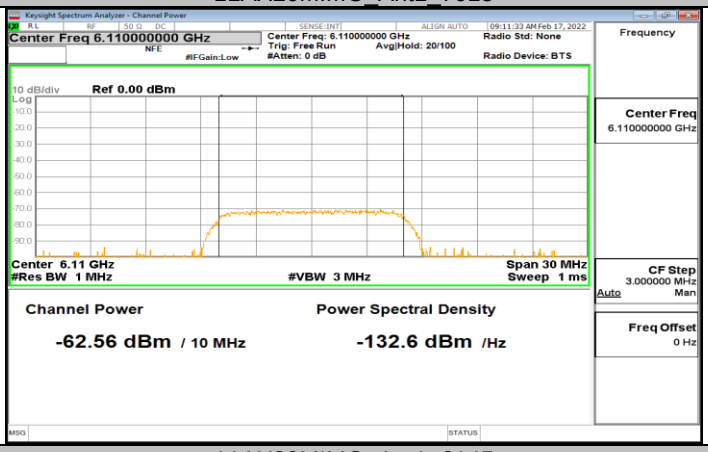
11AX20MIMO_Ant1_6455



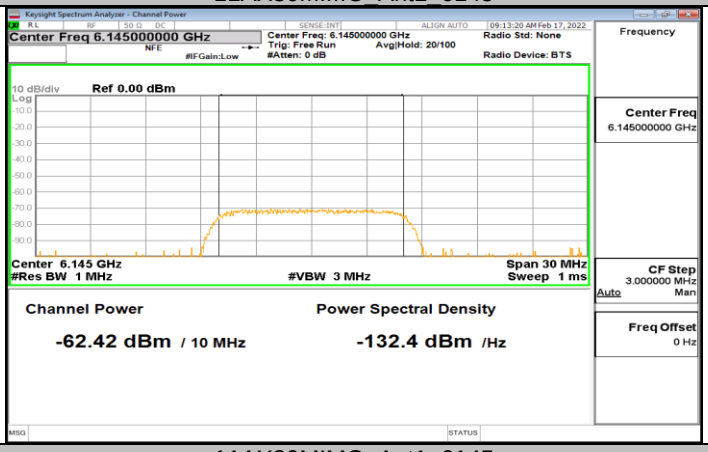
11AX20MIMO_Ant1_6615



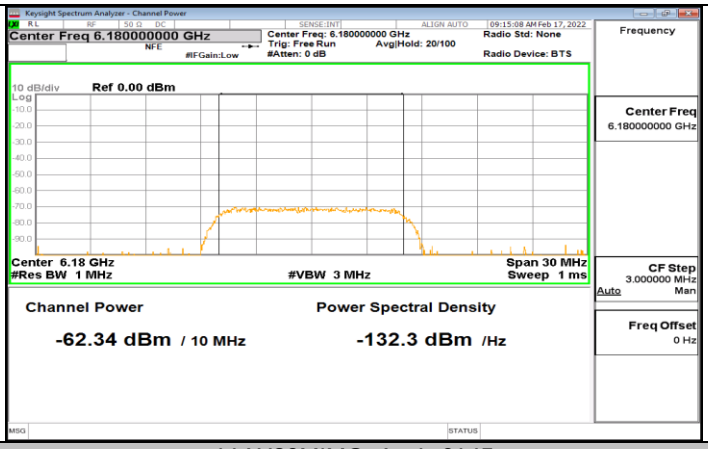
11AX20MIMO_Ant1_7015



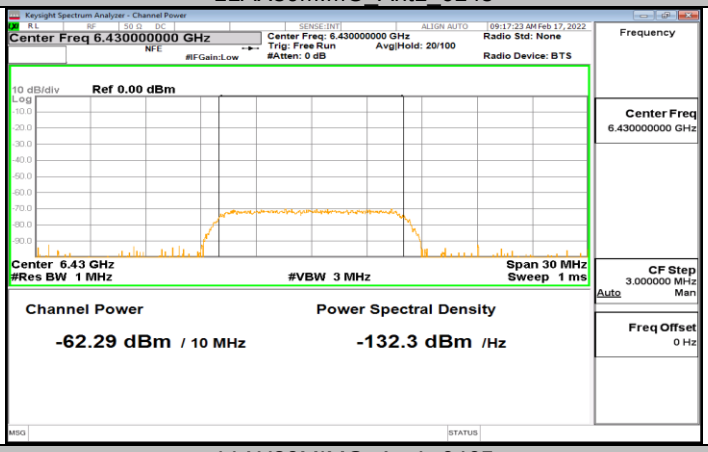
11AX80MIMO_Ant1_6145



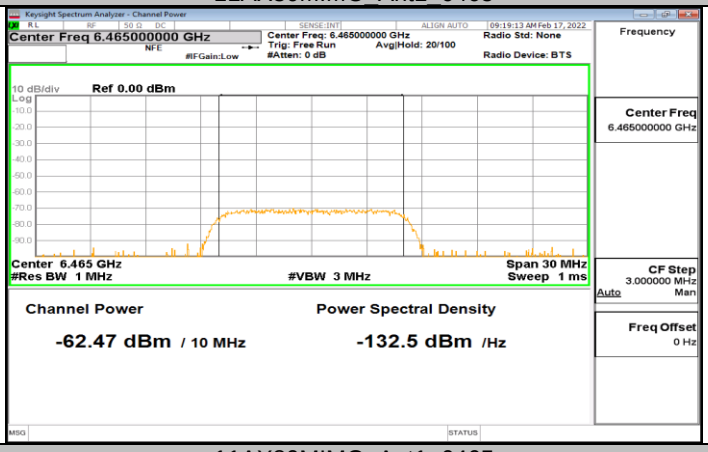
11AX80MIMO_Ant1_6145



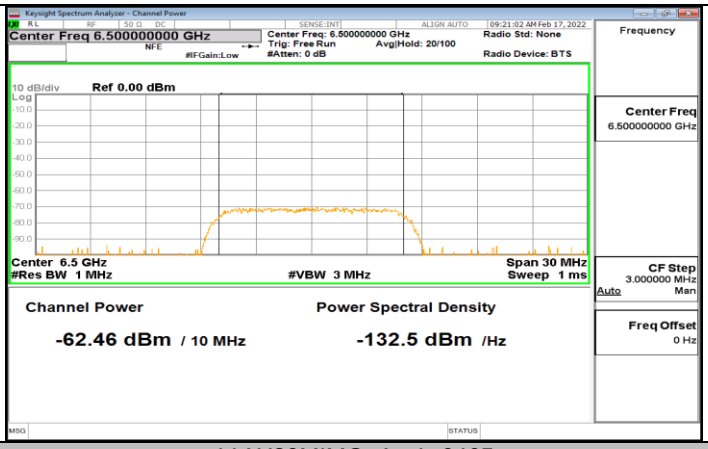
11AX80MIMO_Ant1_6145



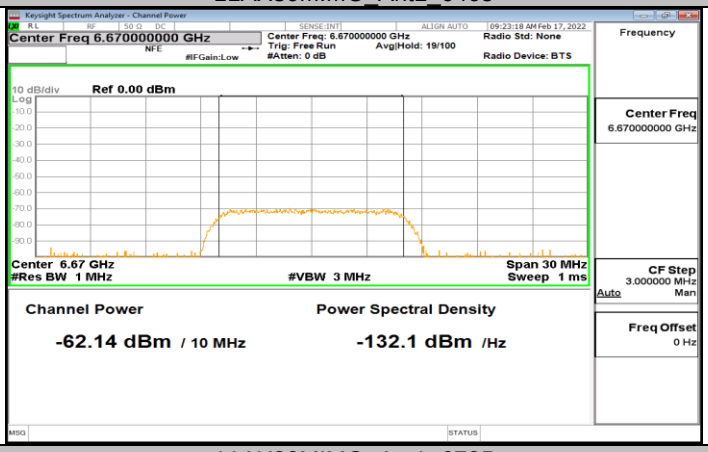
11AX80MIMO_Ant1_6465



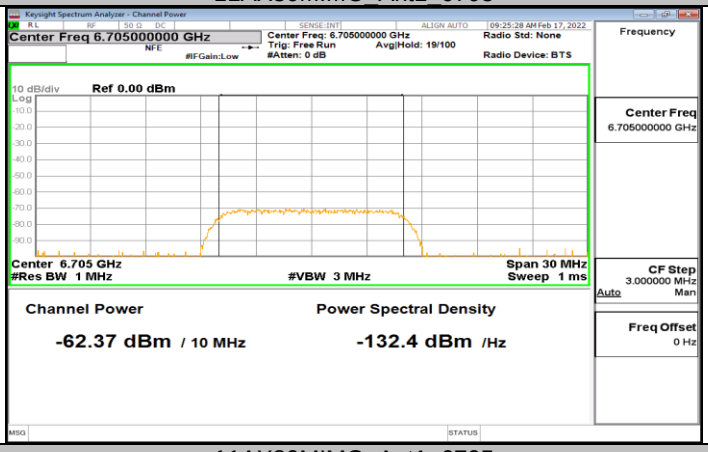
11AX80MIMO_Ant1_6465



11AX80MIMO_Ant1_6465



11AX80MIMO_Ant1_6705



11AX80MIMO_Ant1_6705