

Test Data for E-UTRA Band 13

EUT: <u>iMat @Weigh -30 Smart office Vending machine</u>	Test Model: <u>W80-30</u>
Ambient Condition: <u>25 °C, 45 %RH, 101.325 kPa</u>	
Test Engineer: <u>Jack Zhou</u>	

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Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	ERP(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	24.32	21.92	PASS
Band13	5MHz	QPSK	23205	1RB#12	24.32	21.92	PASS
Band13	5MHz	QPSK	23205	1RB#24	24.14	21.74	PASS
Band13	5MHz	QPSK	23205	12RB#0	23.70	21.30	PASS
Band13	5MHz	QPSK	23205	12RB#6	23.70	21.30	PASS
Band13	5MHz	QPSK	23205	12RB#13	23.73	21.33	PASS
Band13	5MHz	QPSK	23205	25RB#0	23.60	21.20	PASS
Band13	5MHz	QPSK	23230	1RB#0	24.50	22.10	PASS
Band13	5MHz	QPSK	23230	1RB#12	24.67	22.27	PASS
Band13	5MHz	QPSK	23230	1RB#24	24.48	22.08	PASS
Band13	5MHz	QPSK	23230	12RB#0	23.68	21.28	PASS
Band13	5MHz	QPSK	23230	12RB#6	23.57	21.17	PASS
Band13	5MHz	QPSK	23230	12RB#13	23.39	20.99	PASS
Band13	5MHz	QPSK	23230	25RB#0	23.92	21.52	PASS
Band13	5MHz	QPSK	23255	1RB#0	24.41	22.01	PASS
Band13	5MHz	QPSK	23255	1RB#12	24.68	22.28	PASS
Band13	5MHz	QPSK	23255	1RB#24	24.50	22.10	PASS
Band13	5MHz	QPSK	23255	12RB#0	23.46	21.06	PASS
Band13	5MHz	QPSK	23255	12RB#6	23.20	20.80	PASS
Band13	5MHz	QPSK	23255	12RB#13	23.49	21.09	PASS
Band13	5MHz	QPSK	23255	25RB#0	23.35	20.95	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.30	20.90	PASS
Band13	5MHz	16QAM	23205	1RB#12	23.27	20.87	PASS
Band13	5MHz	16QAM	23205	1RB#24	23.28	20.88	PASS
Band13	5MHz	16QAM	23205	12RB#0	22.38	19.98	PASS
Band13	5MHz	16QAM	23205	12RB#6	22.37	19.97	PASS
Band13	5MHz	16QAM	23205	12RB#13	22.42	20.02	PASS
Band13	5MHz	16QAM	23205	25RB#0	22.40	20.00	PASS
Band13	5MHz	16QAM	23230	1RB#0	23.76	21.36	PASS
Band13	5MHz	16QAM	23230	1RB#12	23.70	21.30	PASS
Band13	5MHz	16QAM	23230	1RB#24	23.62	21.22	PASS

Band13	5MHz	16QAM	23230	12RB#0	22.42	20.02	PASS
Band13	5MHz	16QAM	23230	12RB#6	22.42	20.02	PASS
Band13	5MHz	16QAM	23230	12RB#13	22.34	19.94	PASS
Band13	5MHz	16QAM	23230	25RB#0	22.31	19.91	PASS
Band13	5MHz	16QAM	23255	1RB#0	23.54	21.14	PASS
Band13	5MHz	16QAM	23255	1RB#12	23.88	21.48	PASS
Band13	5MHz	16QAM	23255	1RB#24	23.50	21.10	PASS
Band13	5MHz	16QAM	23255	12RB#0	22.27	19.87	PASS
Band13	5MHz	16QAM	23255	12RB#6	22.27	19.87	PASS
Band13	5MHz	16QAM	23255	12RB#13	22.28	19.88	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.69	20.29	PASS
Band13	10MHz	QPSK	23230	1RB#0	24.31	21.91	PASS
Band13	10MHz	QPSK	23230	1RB#24	24.88	22.48	PASS
Band13	10MHz	QPSK	23230	1RB#49	24.48	22.08	PASS
Band13	10MHz	QPSK	23230	25RB#0	23.58	21.18	PASS
Band13	10MHz	QPSK	23230	25RB#12	23.52	21.12	PASS
Band13	10MHz	QPSK	23230	25RB#25	23.73	21.33	PASS
Band13	10MHz	QPSK	23230	50RB#0	23.51	21.11	PASS
Band13	10MHz	16QAM	23230	1RB#0	23.55	21.15	PASS
Band13	10MHz	16QAM	23230	1RB#24	23.72	21.32	PASS
Band13	10MHz	16QAM	23230	1RB#49	23.49	21.09	PASS
Band13	10MHz	16QAM	23230	25RB#0	22.54	20.14	PASS
Band13	10MHz	16QAM	23230	25RB#12	22.62	20.22	PASS
Band13	10MHz	16QAM	23230	25RB#25	22.57	20.17	PASS
Band13	10MHz	16QAM	23230	50RB#0	22.61	20.21	PASS

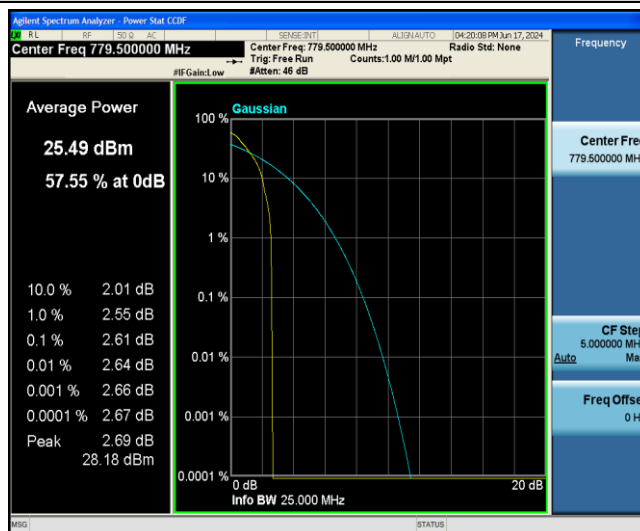
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

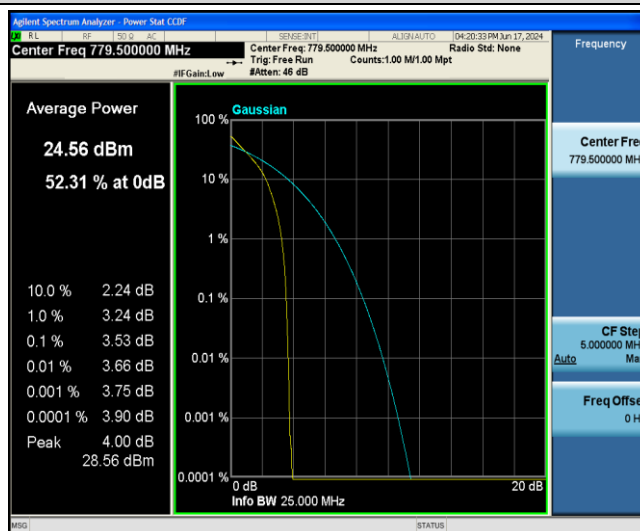
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	2.61	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	3.53	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	2.88	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	3.82	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	2.88	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	3.79	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	3.84	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.38	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	3.84	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.71	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	3.98	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.94	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	2.44	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	3.78	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	3.11	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	4.70	13	PASS

Test Graphs

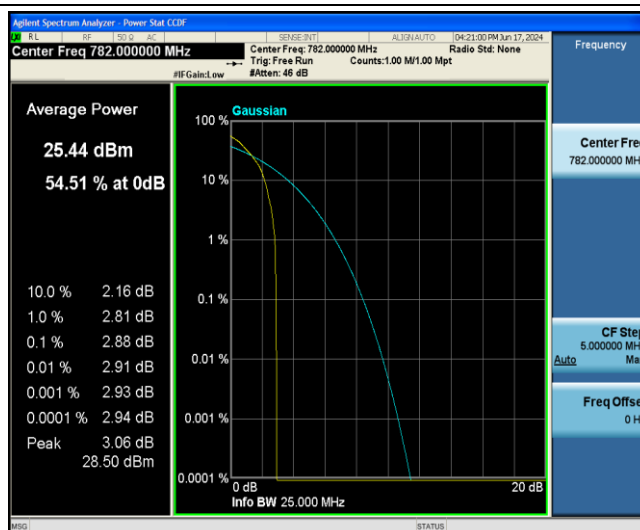
Band13-5MHz-QPSK-23205-1RB#0



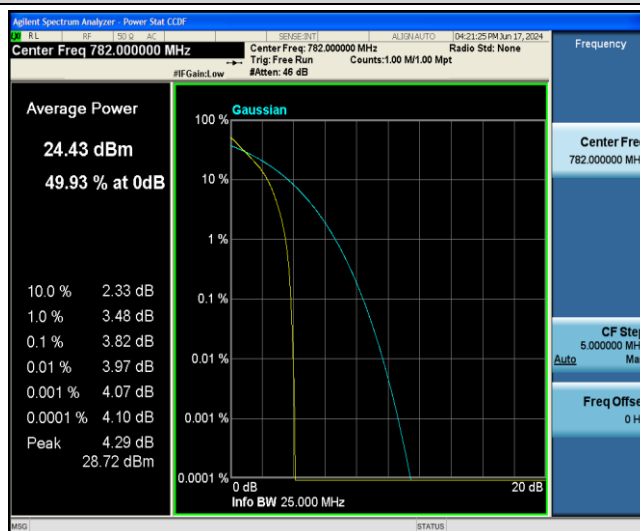
Band13-5MHz-QPSK-23205-25RB#0



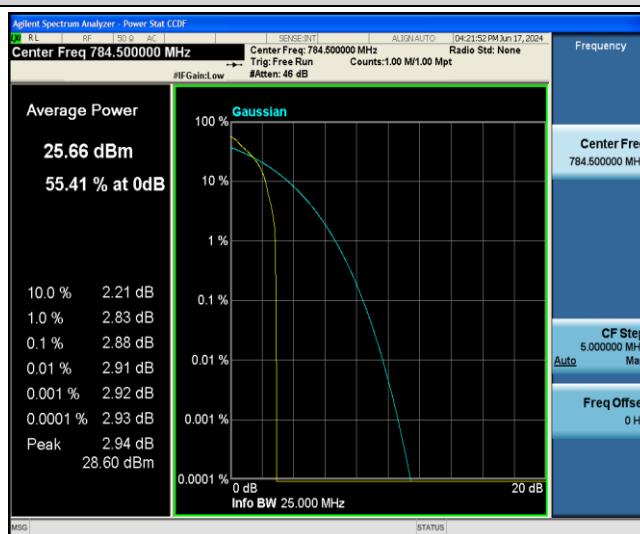
Band13-5MHz-QPSK-23230-1RB#0



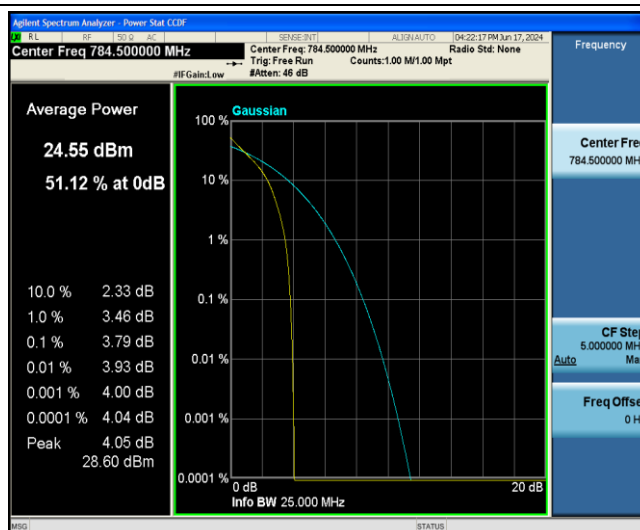
Band13-5MHz-QPSK-23230-25RB#0



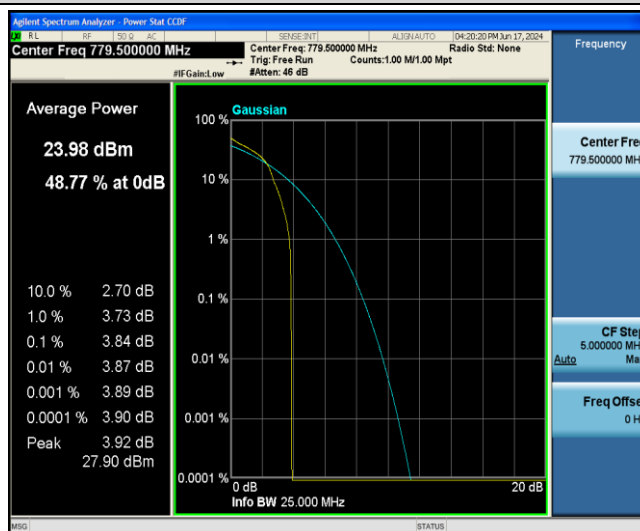
Band13-5MHz-QPSK-23255-1RB#0



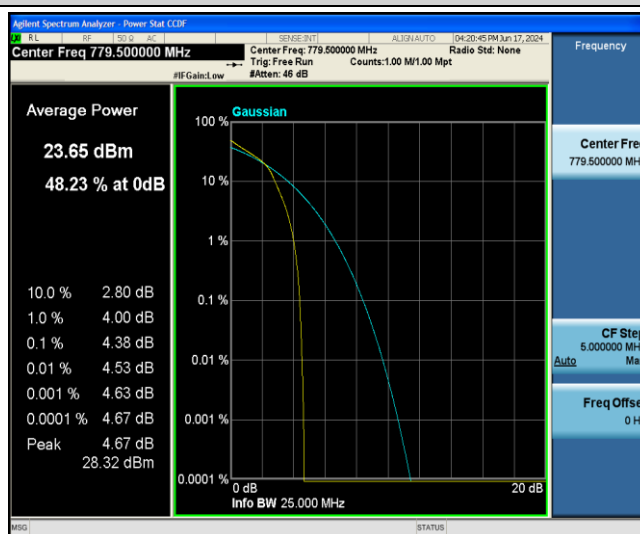
Band13-5MHz-QPSK-23255-25RB#0



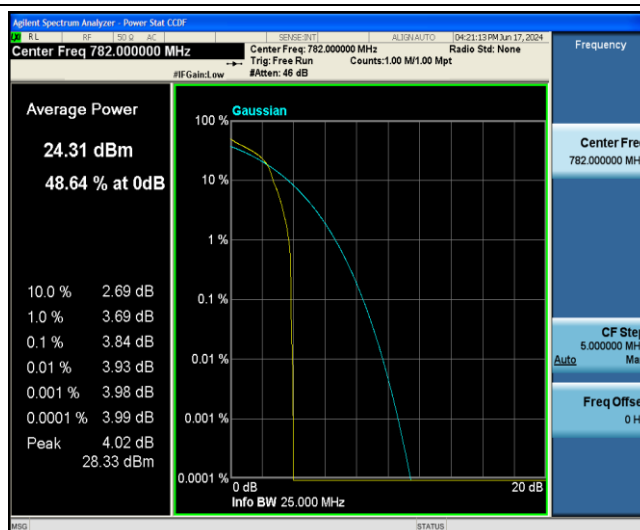
Band13-5MHz-16QAM-23205-1RB#0



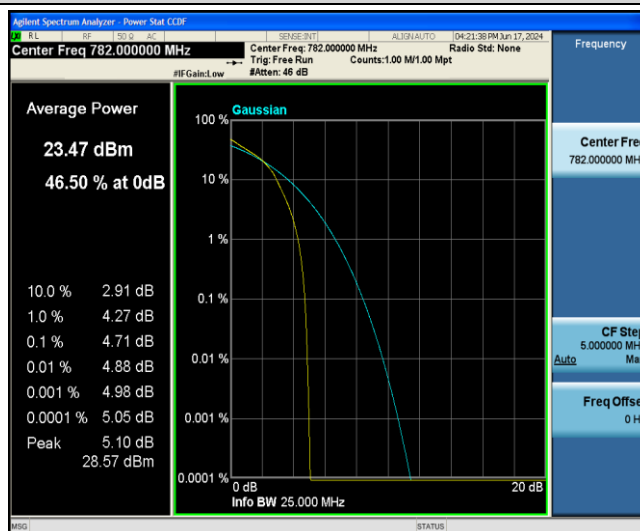
Band13-5MHz-16QAM-23205-25RB#0



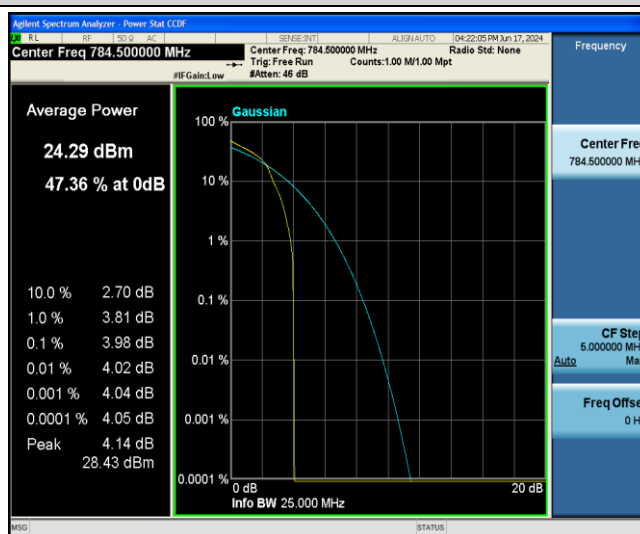
Band13-5MHz-16QAM-23230-1RB#0



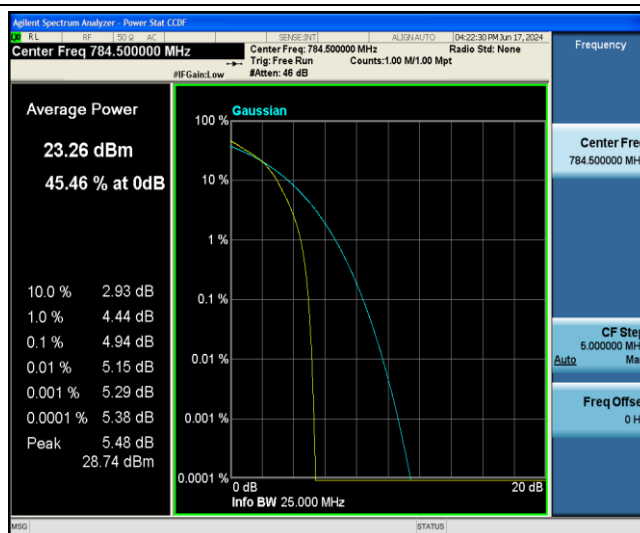
Band13-5MHz-16QAM-23230-25RB#0



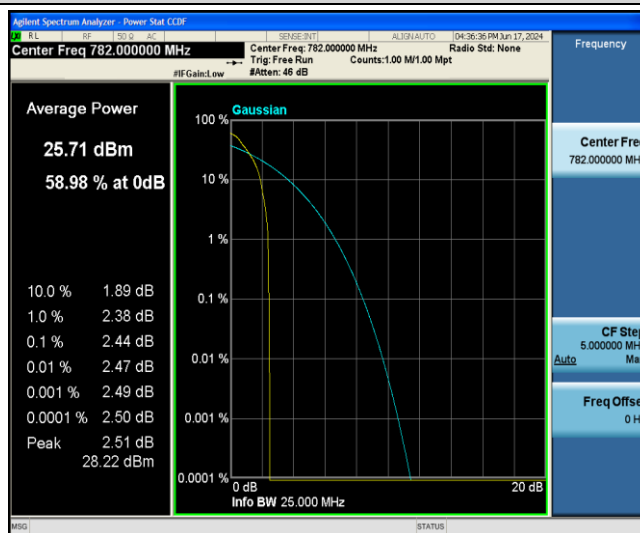
Band13-5MHz-16QAM-23255-1RB#0



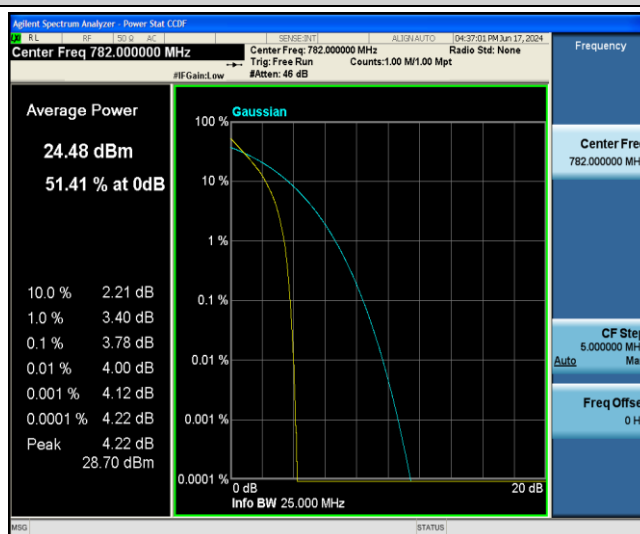
Band13-5MHz-16QAM-23255-25RB#0



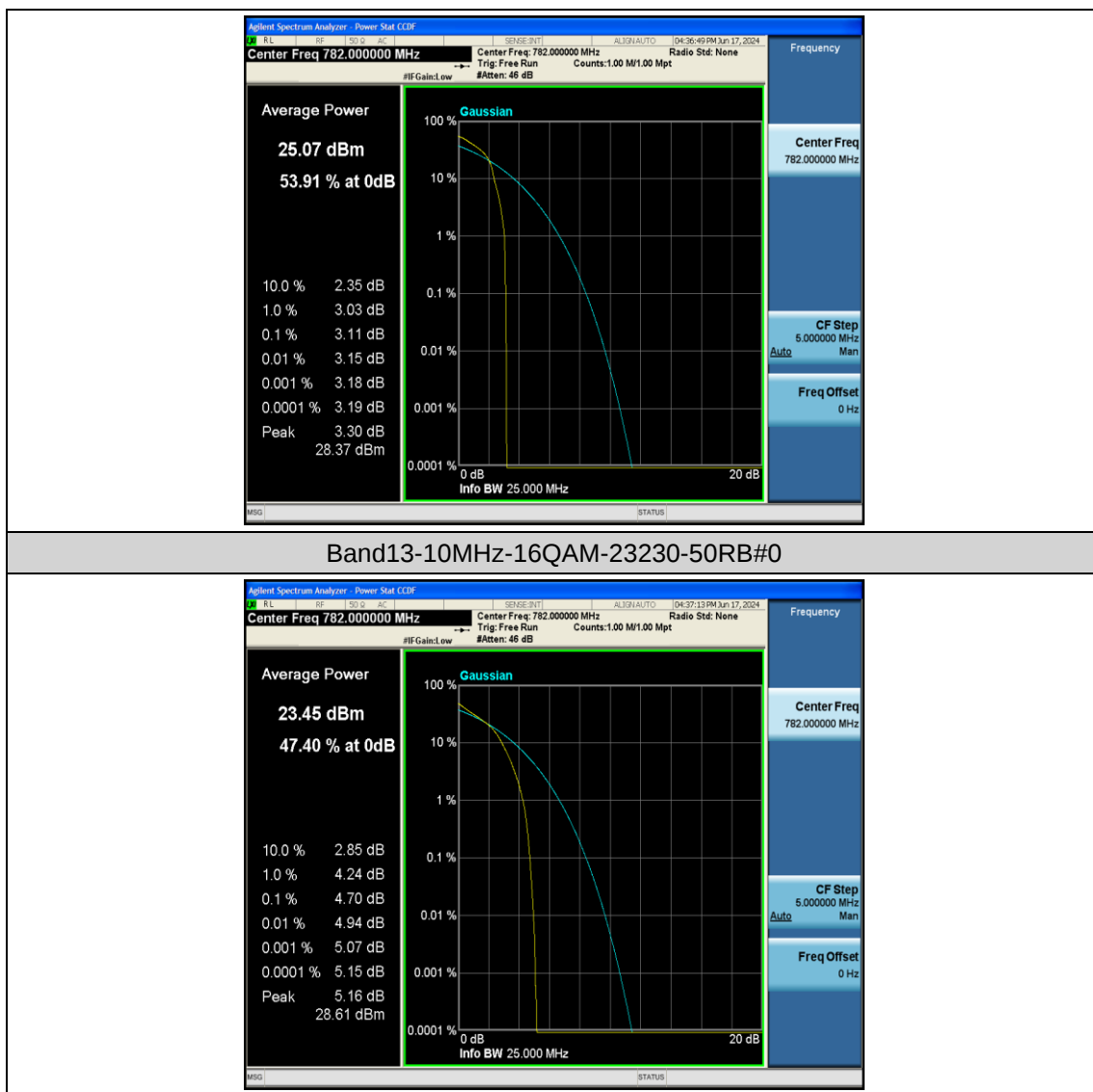
Band13-10MHz-QPSK-23230-1RB#0



Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-1RB#0



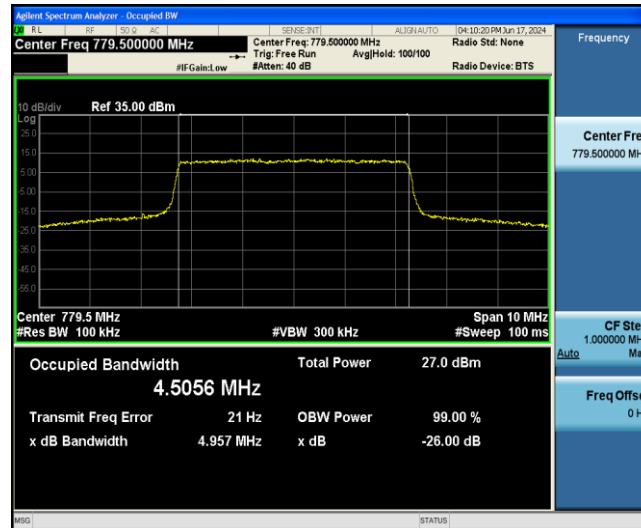
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

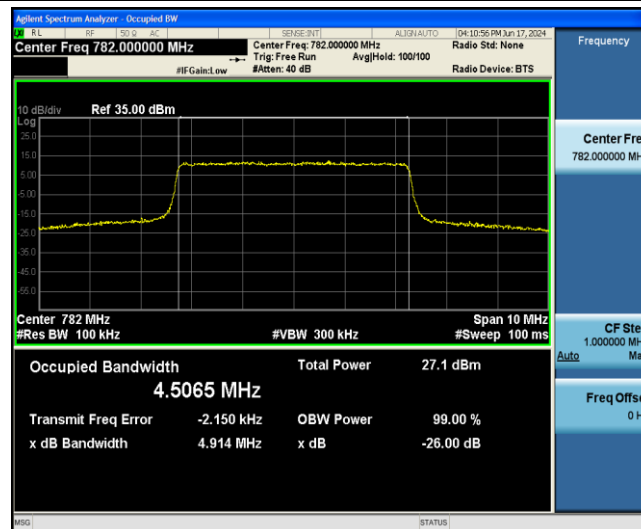
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5056	4.957	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5065	4.914	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5004	4.903	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5008	4.919	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5056	4.915	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5049	4.912	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9655	9.618	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9575	9.562	PASS

Test Graphs

Band13-5MHz-QPSK-23205-25RB#0



Band13-5MHz-QPSK-23230-25RB#0



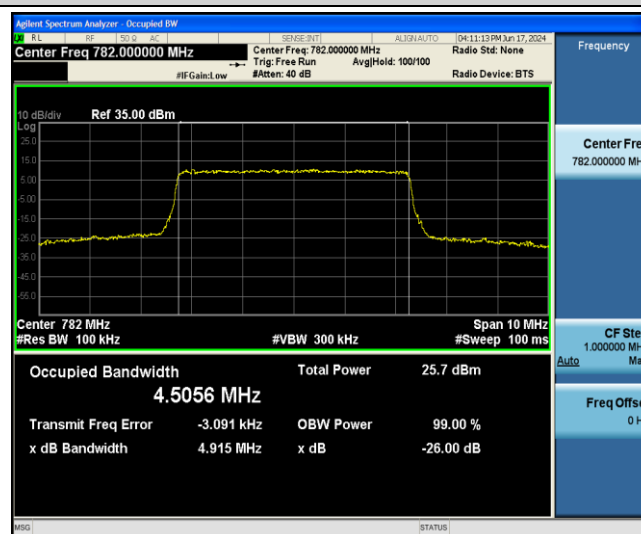
Band13-5MHz-QPSK-23255-25RB#0



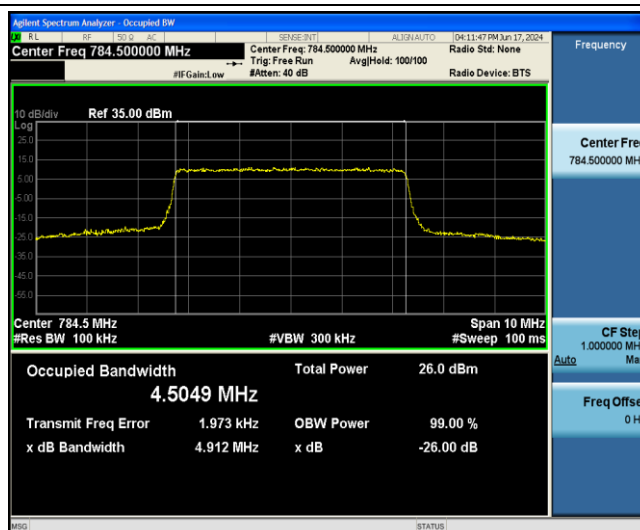
Band13-5MHz-16QAM-23205-25RB#0



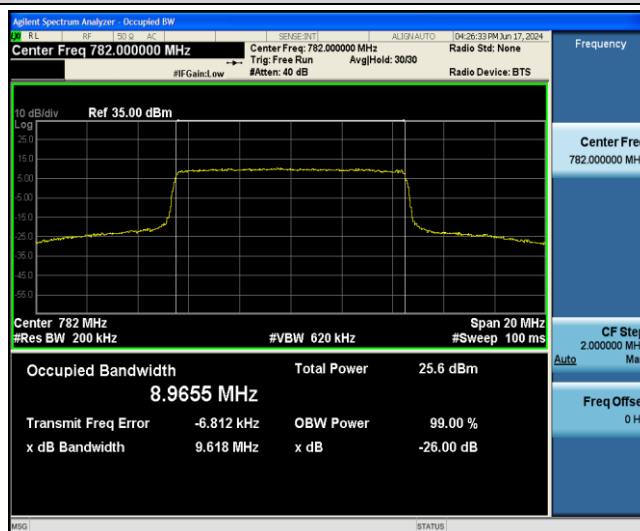
Band13-5MHz-16QAM-23230-25RB#0



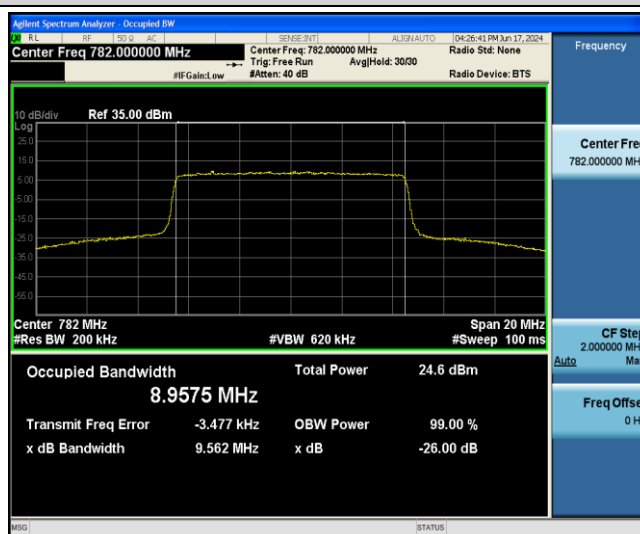
Band13-5MHz-16QAM-23255-25RB#0



Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0

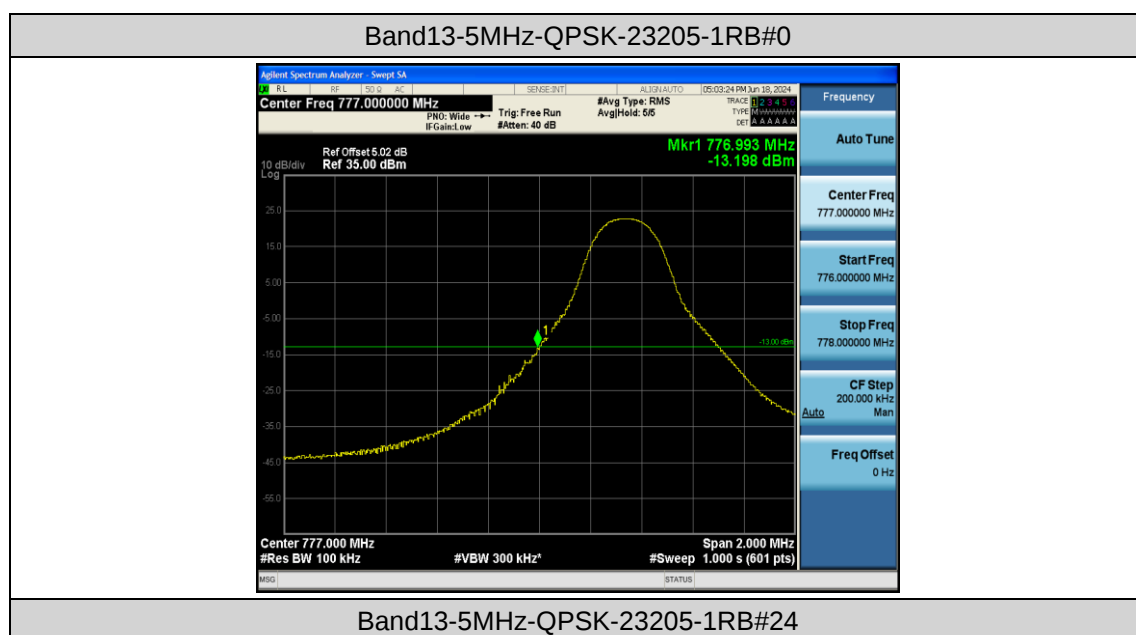


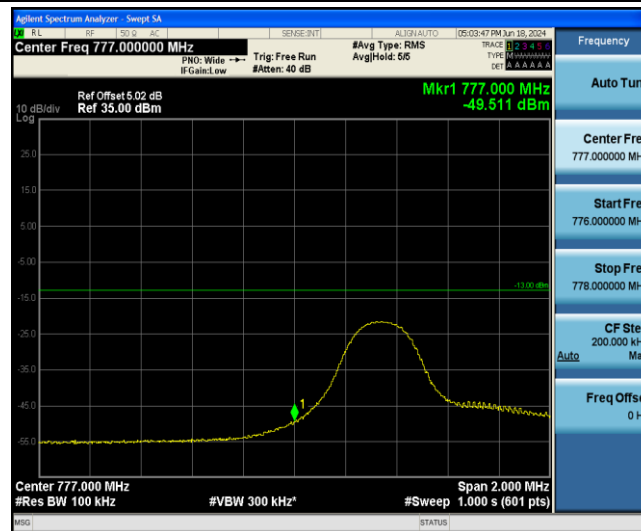
Appendix D: Band Edge

Test Result

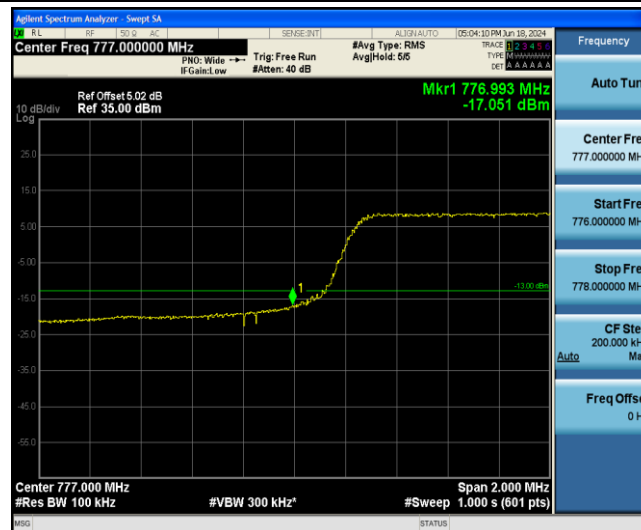
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	-13.20	PASS
Band13	5MHz	QPSK	23205	1RB#24	-49.51	PASS
Band13	5MHz	QPSK	23205	25RB#0	-17.05	PASS
Band13	5MHz	QPSK	23255	1RB#0	-51.77	PASS
Band13	5MHz	QPSK	23255	1RB#24	-14.39	PASS
Band13	5MHz	QPSK	23255	25RB#0	-18.72	PASS
Band13	5MHz	16QAM	23205	1RB#0	-14.53	PASS
Band13	5MHz	16QAM	23205	1RB#24	-50.66	PASS
Band13	5MHz	16QAM	23205	25RB#0	-21.51	PASS
Band13	5MHz	16QAM	23255	1RB#0	-52.13	PASS
Band13	5MHz	16QAM	23255	1RB#24	-15.37	PASS
Band13	5MHz	16QAM	23255	25RB#0	-21.13	PASS
Band13	10MHz	QPSK	23230	1RB#0	-16.58,-46.97	PASS
Band13	10MHz	QPSK	23230	1RB#49	-44.95,-20.59	PASS
Band13	10MHz	QPSK	23230	50RB#0	-19.02,-20.28	PASS
Band13	10MHz	16QAM	23230	1RB#0	-19.44,-46.03	PASS
Band13	10MHz	16QAM	23230	1RB#49	-42.17,-19.82	PASS
Band13	10MHz	16QAM	23230	50RB#0	-21.27,-21.15	PASS

Test Graphs

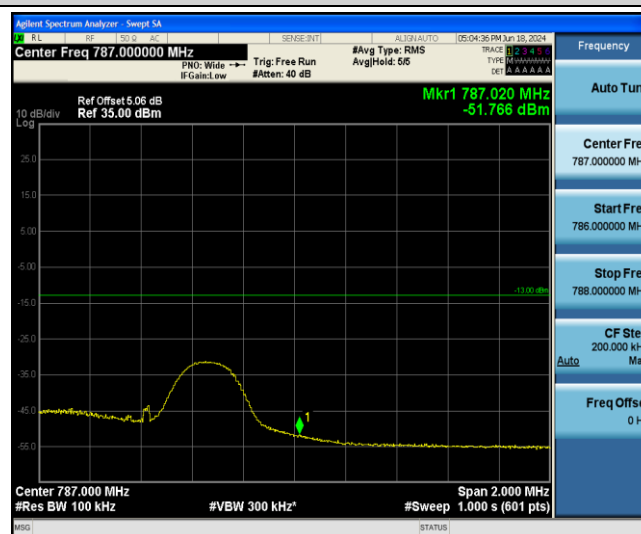




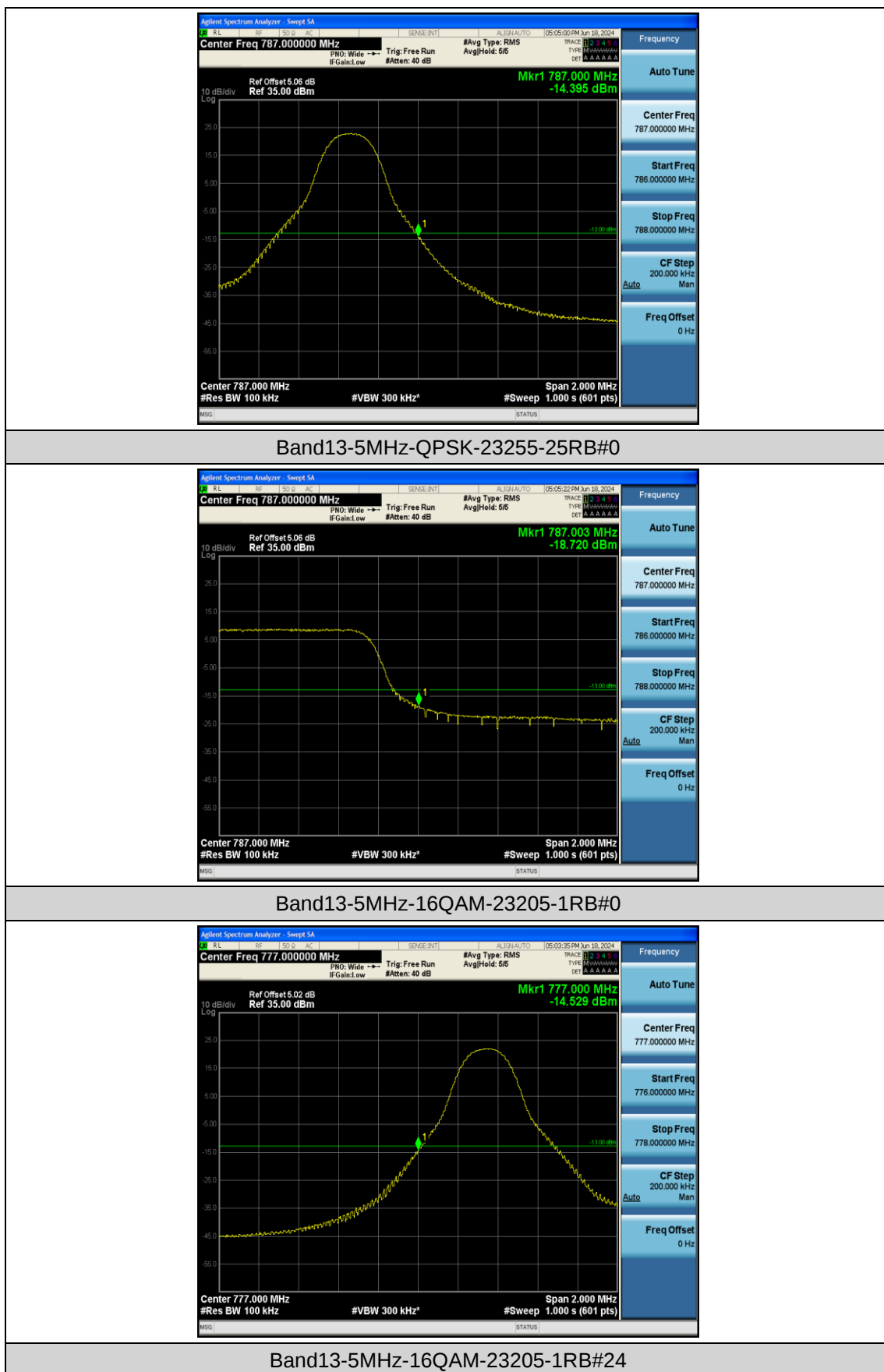
Band13-5MHz-QPSK-23205-25RB#0

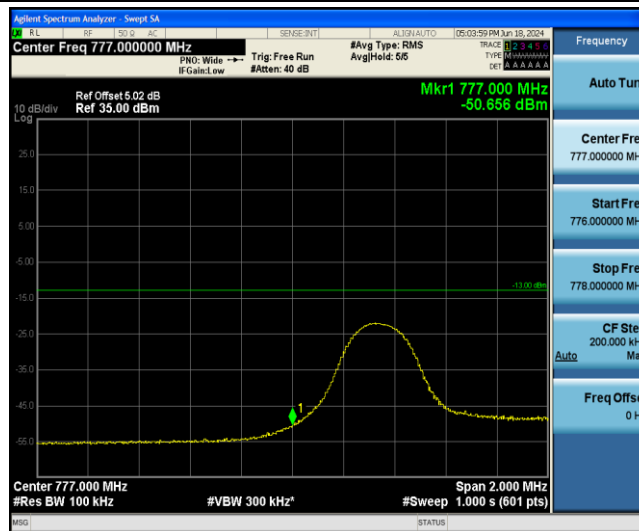


Band13-5MHz-QPSK-23255-1RB#0

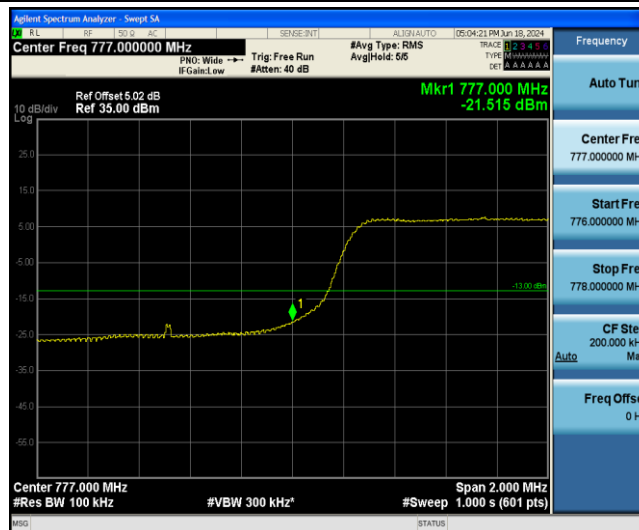


Band13-5MHz-QPSK-23255-1RB#24

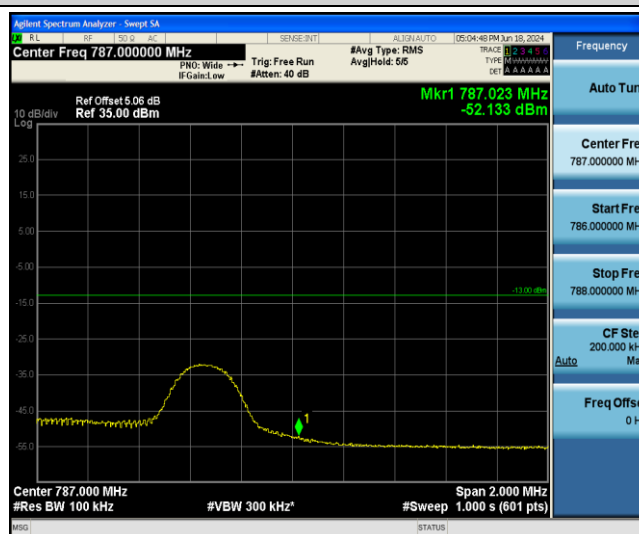




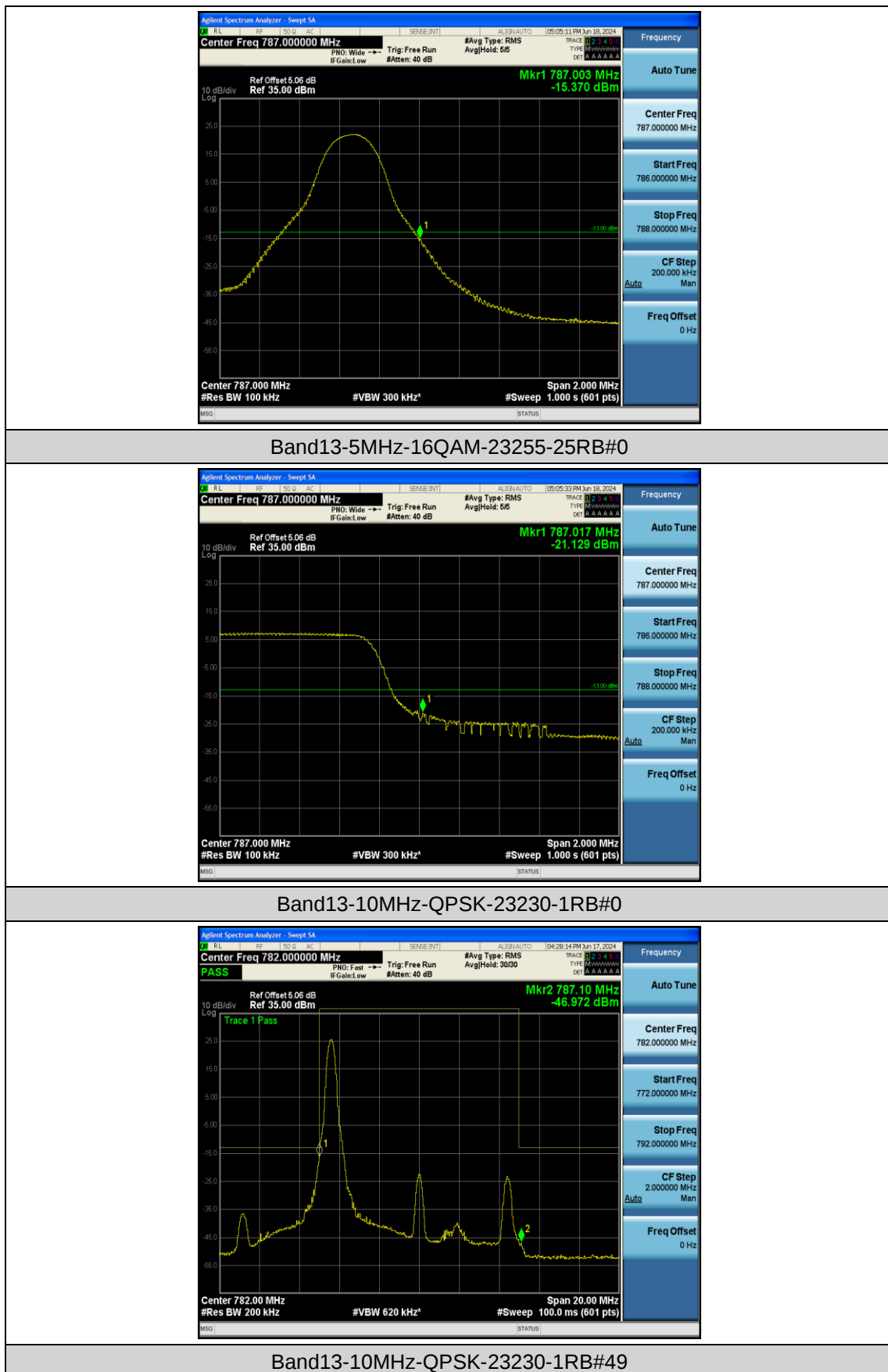
Band13-5MHz-16QAM-23205-25RB#0

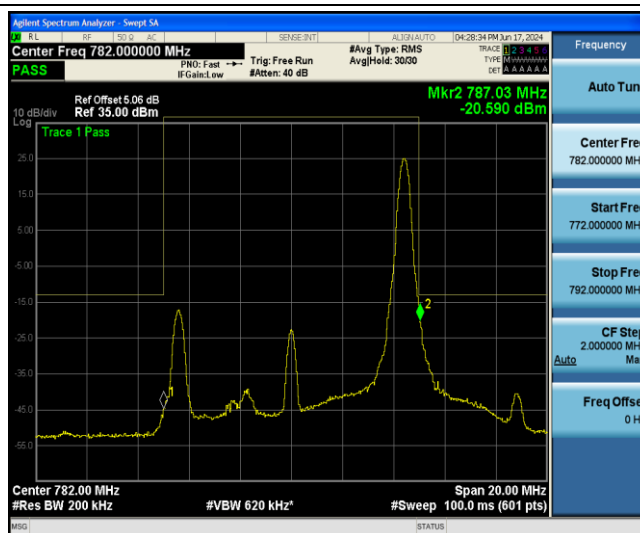


Band13-5MHz-16QAM-23255-1RB#0

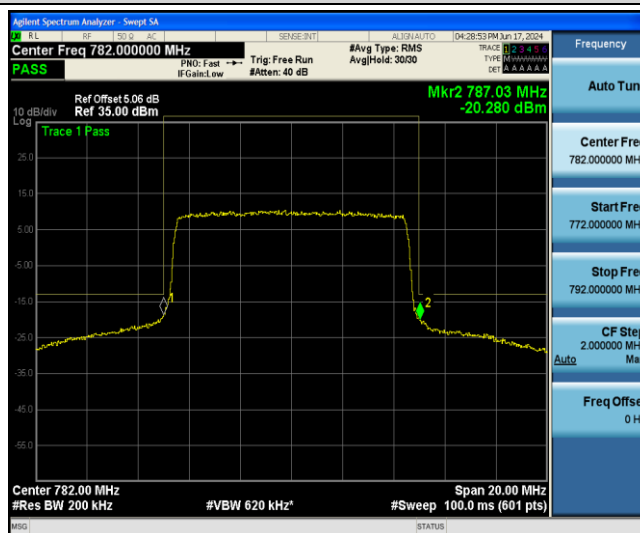


Band13-5MHz-16QAM-23255-1RB#24

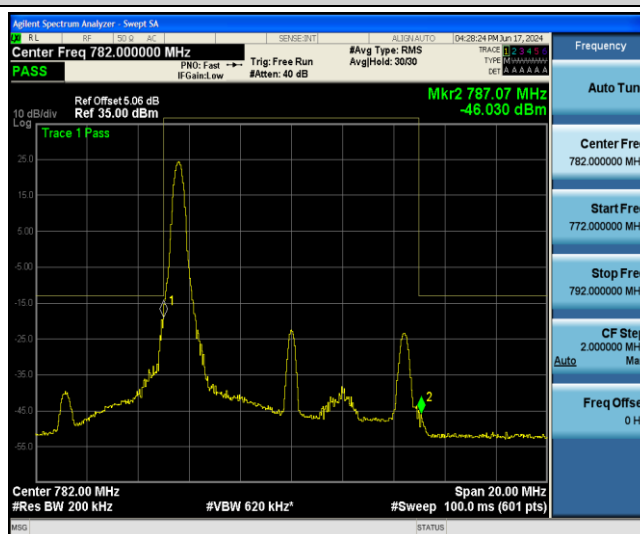




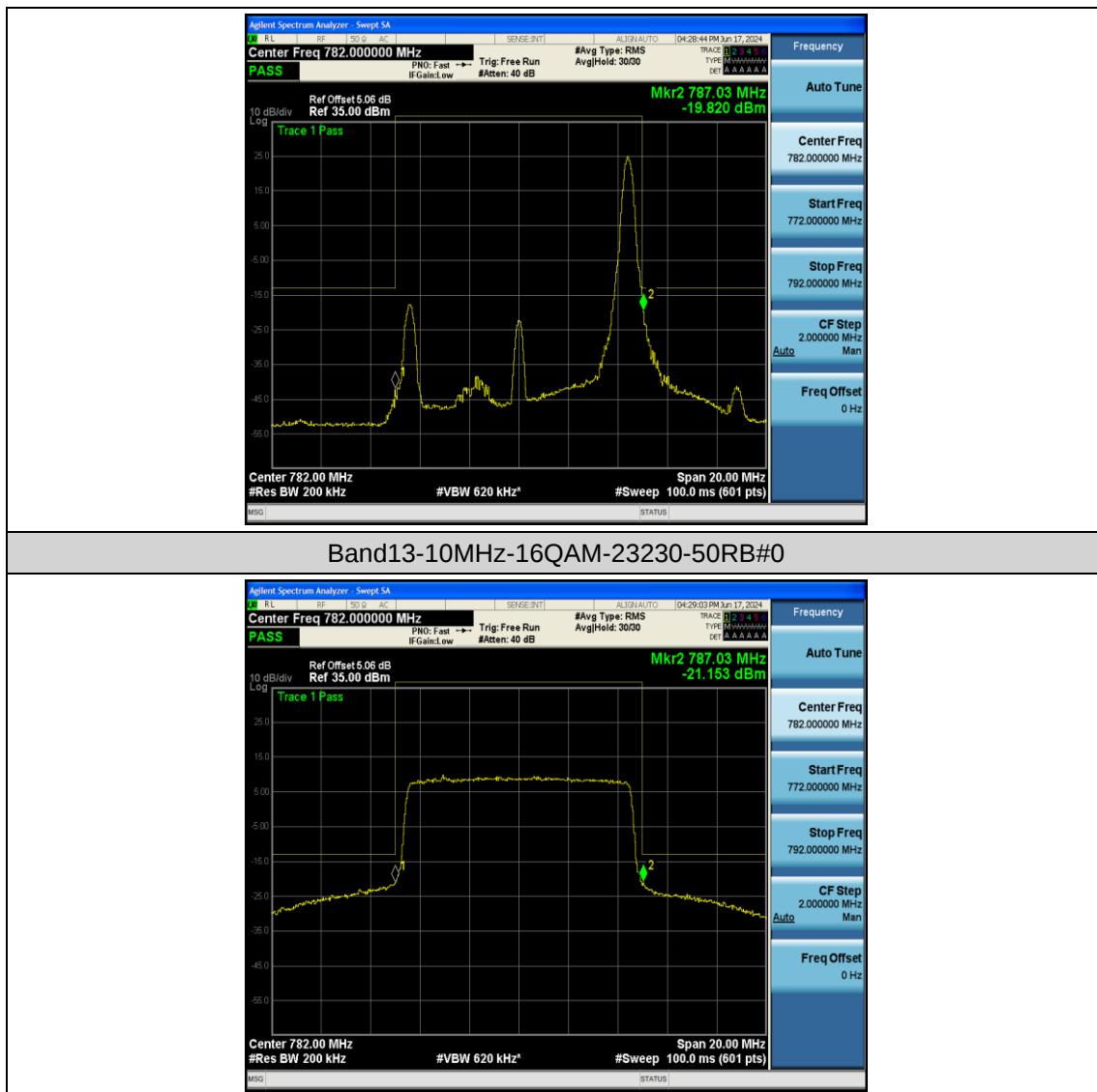
Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-1RB#0



Band13-10MHz-16QAM-23230-1RB#49



Appendix E: Conducted Spurious Emission

Test Result

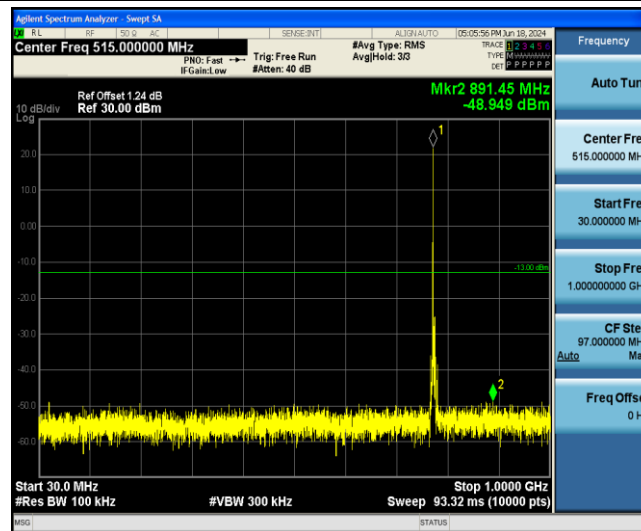
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	Range1:30~1000MHz	-48.95	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range3:763~775MHz	-43.32	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range4:793~805MHz	-60	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range2:1000~10000MHz	-39.57	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range5:1559~1610MHz	-56.58	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range1:30~1000MHz	-47.65	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range3:763~775MHz	-55.04	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range4:793~805MHz	-58.65	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range2:1000~10000MHz	-41.7	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range5:1559~1610MHz	-21.1	FAIL
Band13	5MHz	QPSK	23255	1RB#0	Range1:30~1000MHz	-48.58	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range3:763~775MHz	-52.79	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range4:793~805MHz	-58.08	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range2:1000~10000MHz	-37.41	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range5:1559~1610MHz	-20.93	FAIL
Band13	5MHz	16QAM	23205	1RB#0	Range1:30~1000MHz	-48.34	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range3:763~775MHz	-52.9	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range4:793~805MHz	-59.1	PASS

3						2	S
Band1 3	5MHz	16QAM	23205	1RB#0	Range2:1000~10000M Hz	-42.6 7	PAS S
Band1 3	5MHz	16QAM	23205	1RB#0	Range5:1559~1610M Hz	-56.5 6	PAS S
Band1 3	5MHz	16QAM	23230	1RB#0	Range1:30~1000MHz	-49.4	PAS S
Band1 3	5MHz	16QAM	23230	1RB#0	Range3:763~775MHz	-57.8 3	PAS S
Band1 3	5MHz	16QAM	23230	1RB#0	Range4:793~805MHz	-59.3 4	PAS S
Band1 3	5MHz	16QAM	23230	1RB#0	Range2:1000~10000M Hz	-43.0 9	PAS S
Band1 3	5MHz	16QAM	23230	1RB#0	Range5:1559~1610M Hz	-21.4	FAIL
Band1 3	5MHz	16QAM	23255	1RB#0	Range1:30~1000MHz	-48.5 6	PAS S
Band1 3	5MHz	16QAM	23255	1RB#0	Range3:763~775MHz	-54.0 3	PAS S
Band1 3	5MHz	16QAM	23255	1RB#0	Range4:793~805MHz	-59.4	PAS S
Band1 3	5MHz	16QAM	23255	1RB#0	Range2:1000~10000M Hz	-43.4 6	PAS S
Band1 3	5MHz	16QAM	23255	1RB#0	Range5:1559~1610M Hz	-21.2 2	FAIL
Band1 3	10MHz	QPSK	23230	1RB#0	Range1:30~1000MHz	-49.1	PAS S
Band1 3	10MHz	QPSK	23230	1RB#0	Range3:763~775MHz	-45.1 9	PAS S
Band1 3	10MHz	QPSK	23230	1RB#0	Range4:793~805MHz	-50.0 1	PAS S
Band1 3	10MHz	QPSK	23230	1RB#0	Range2:1000~10000M Hz	-38.7 1	PAS S
Band1 3	10MHz	QPSK	23230	1RB#0	Range5:1559~1610M Hz	-56.1 7	PAS S
Band1 3	10MHz	16QAM	23230	1RB#0	Range1:30~1000MHz	-49.5 1	PAS S
Band1 3	10MHz	16QAM	23230	1RB#0	Range3:763~775MHz	-46.2	PAS S
Band1 3	10MHz	16QAM	23230	1RB#0	Range4:793~805MHz	-48.5 8	PAS S
Band1 3	10MHz	16QAM	23230	1RB#0	Range2:1000~10000M Hz	-42.7 2	PAS S

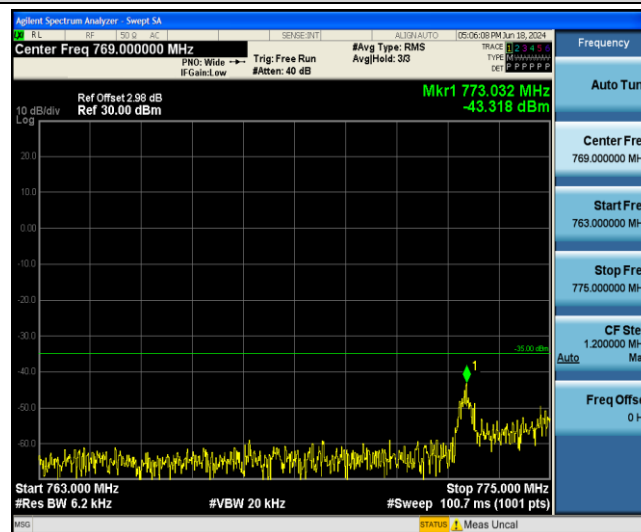
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Test Graphs

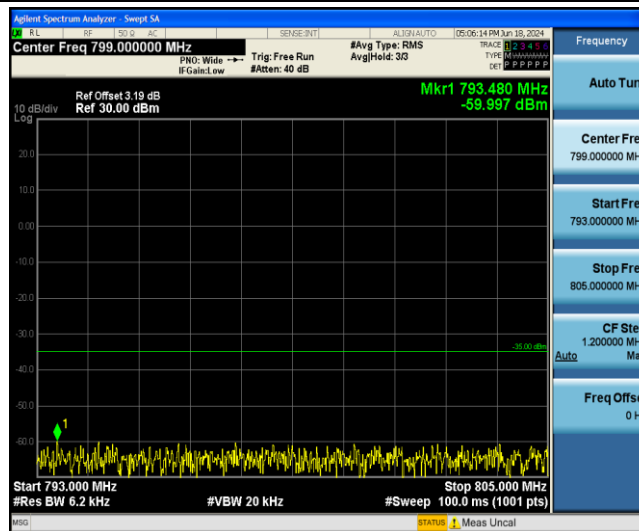
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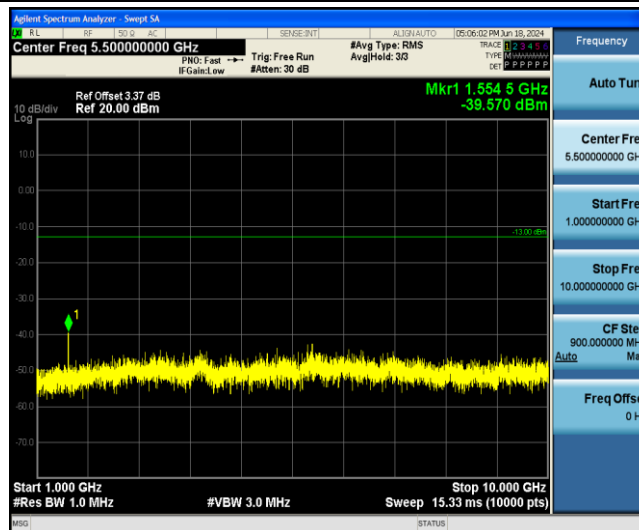
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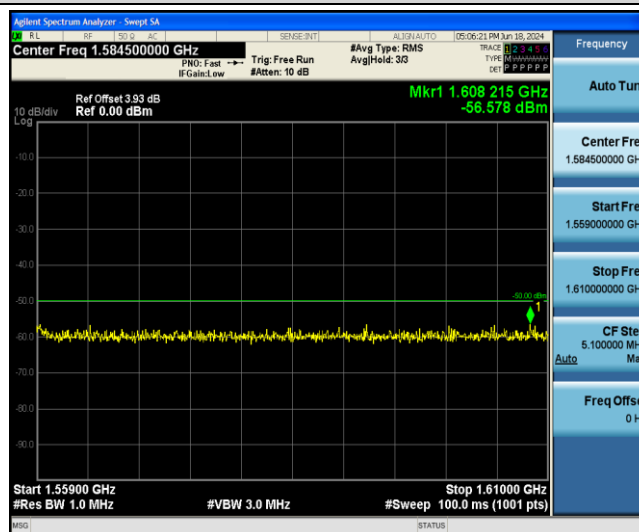
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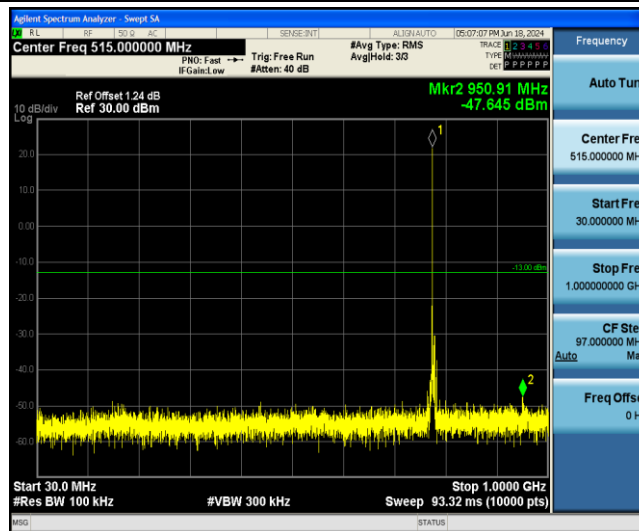
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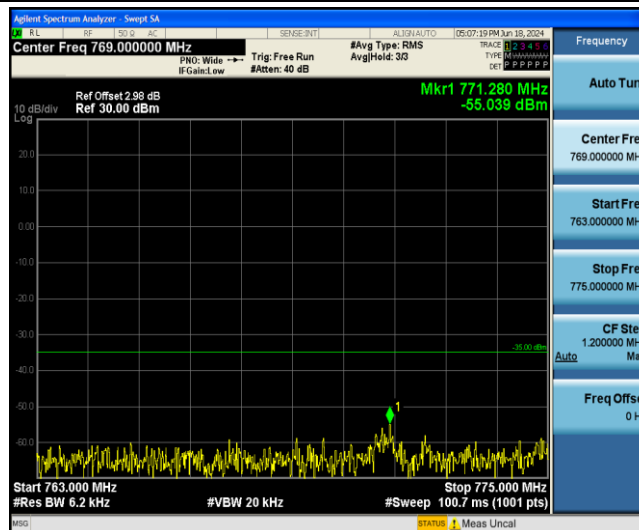
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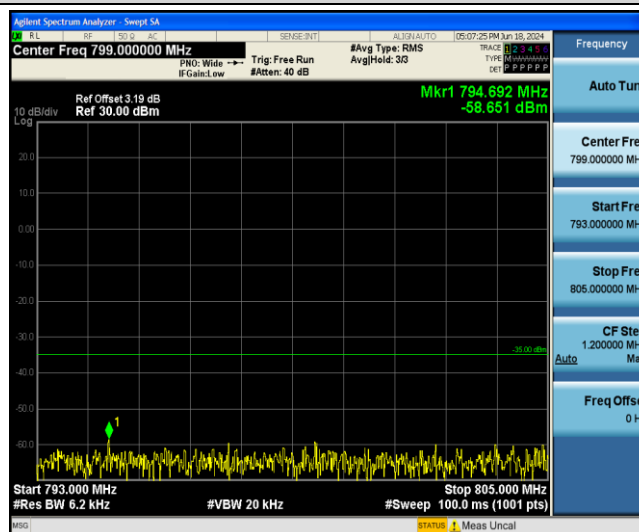
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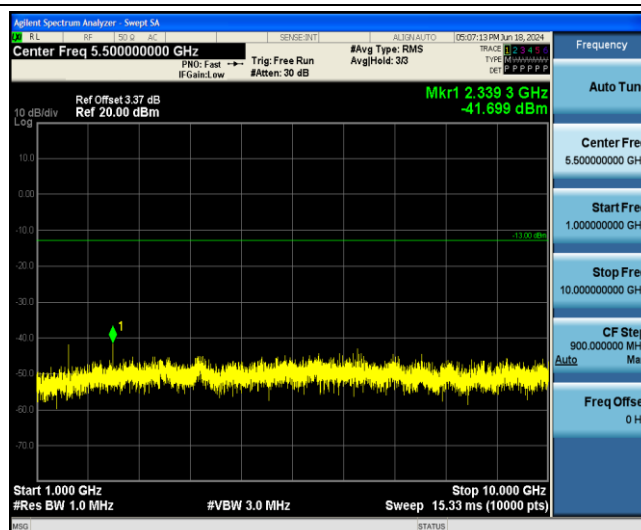
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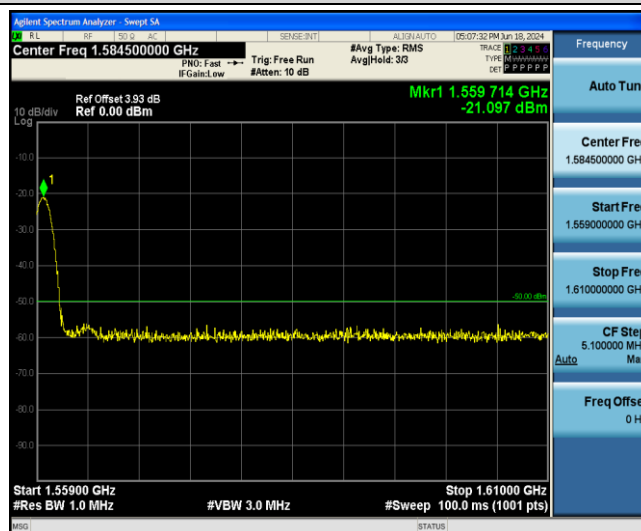
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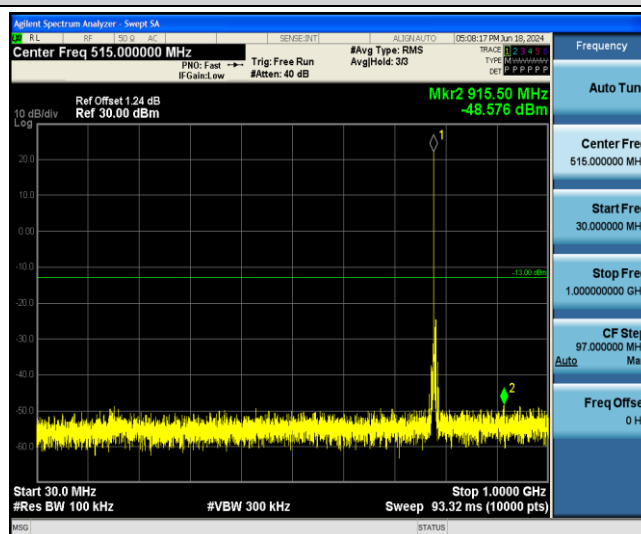
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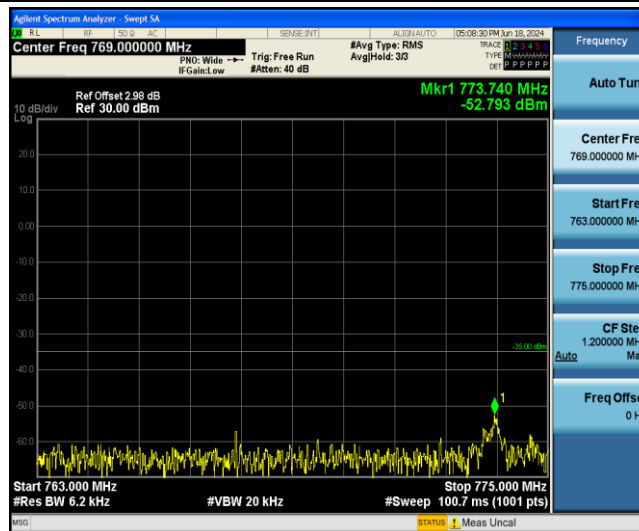
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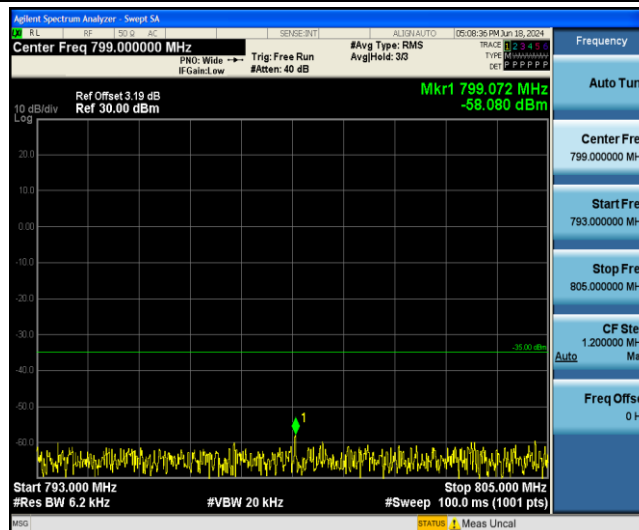
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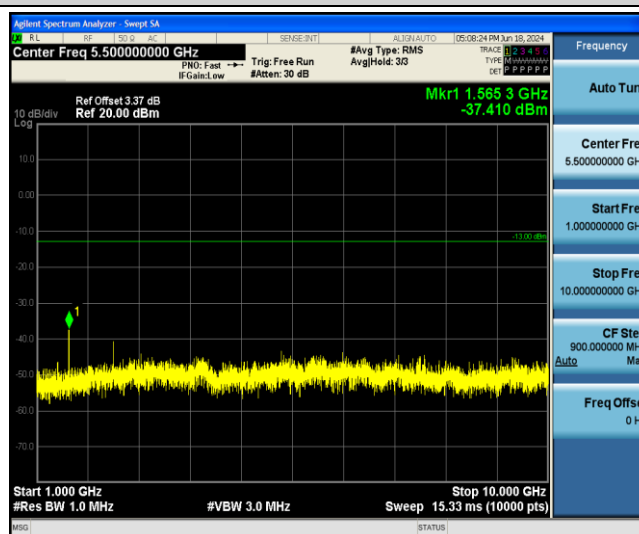
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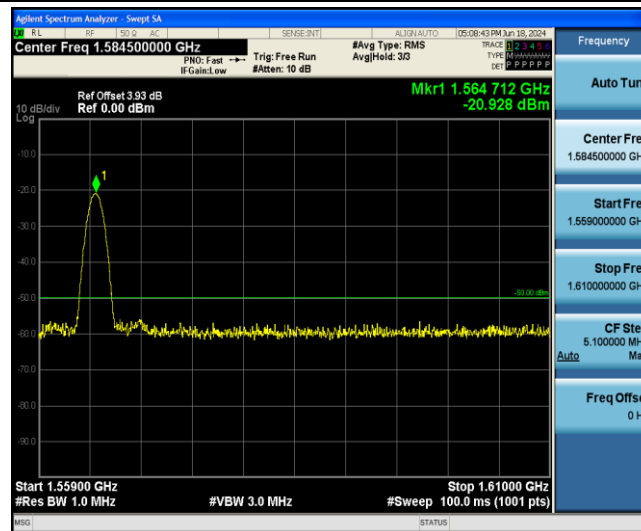
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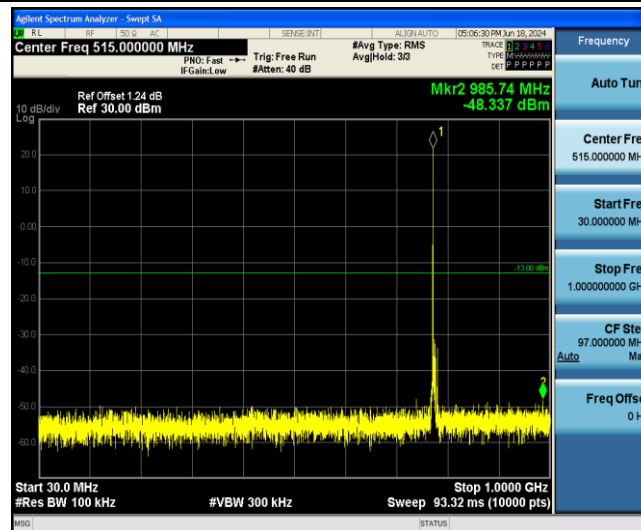
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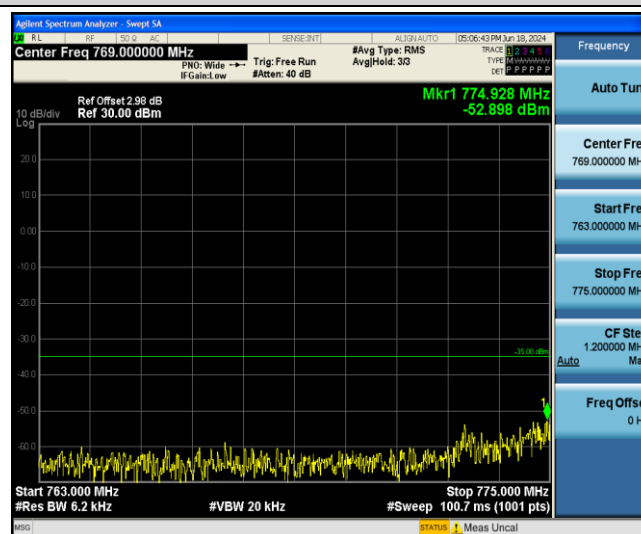
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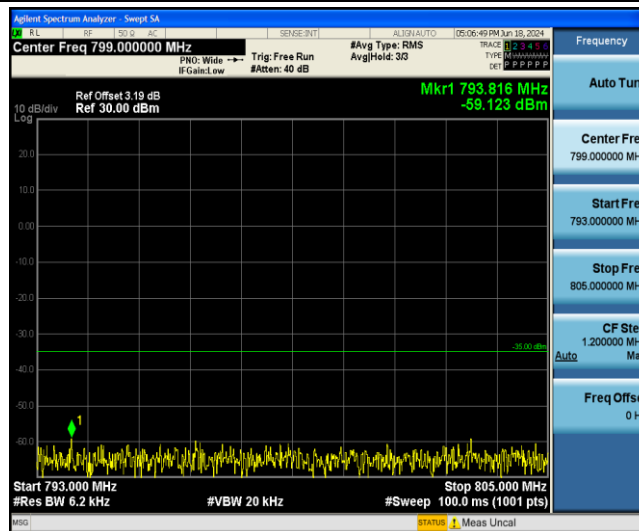
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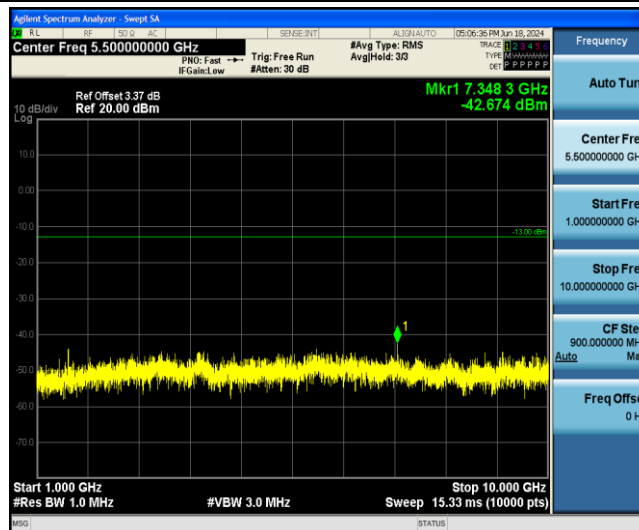
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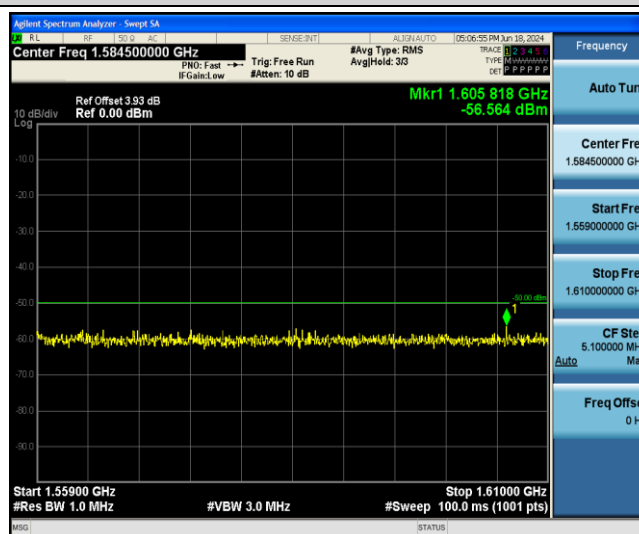
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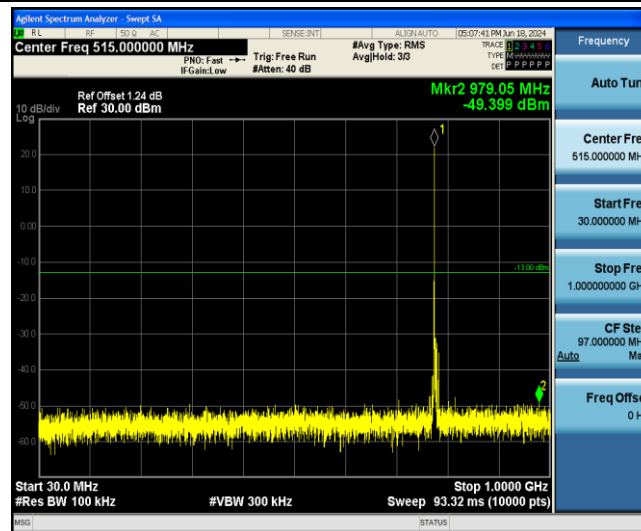
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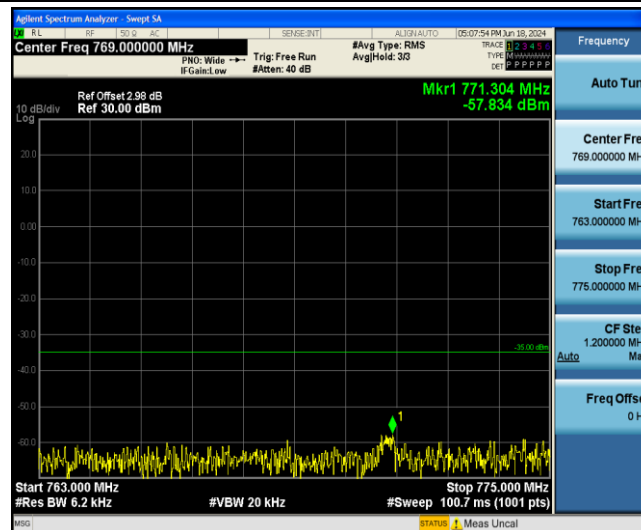
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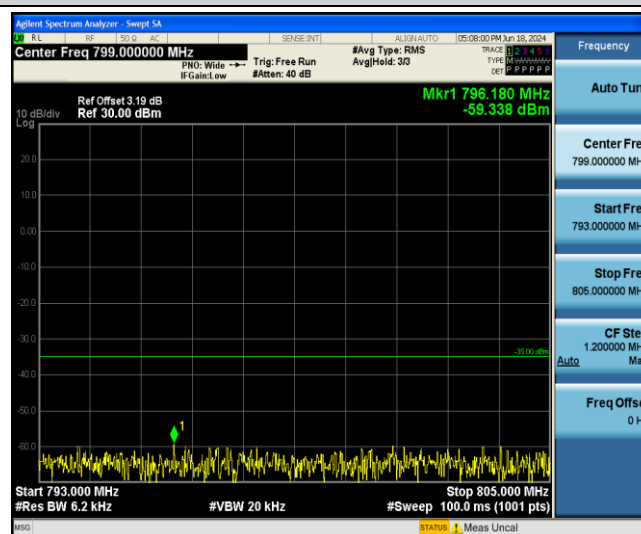
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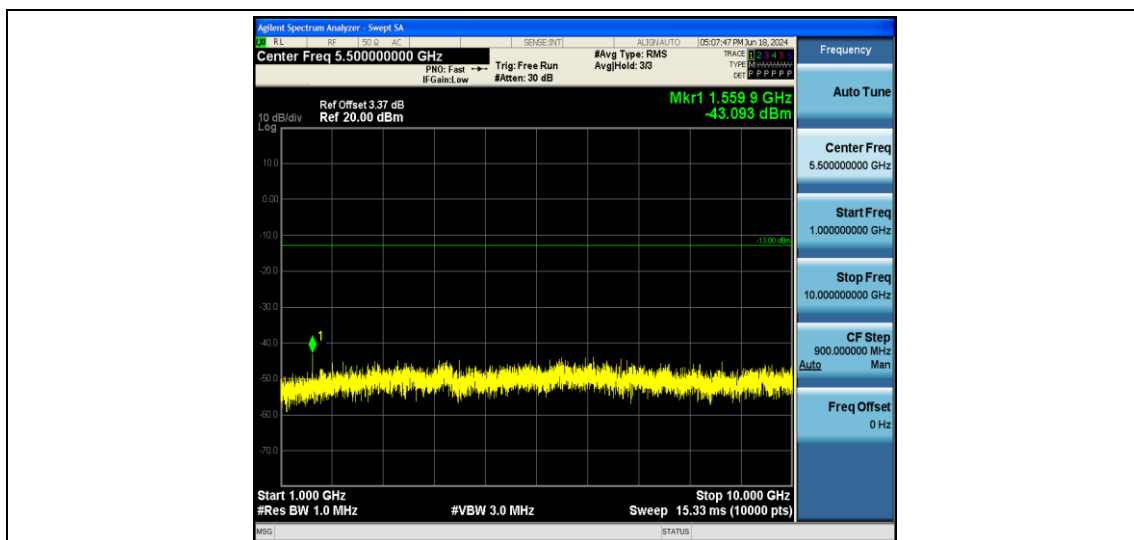
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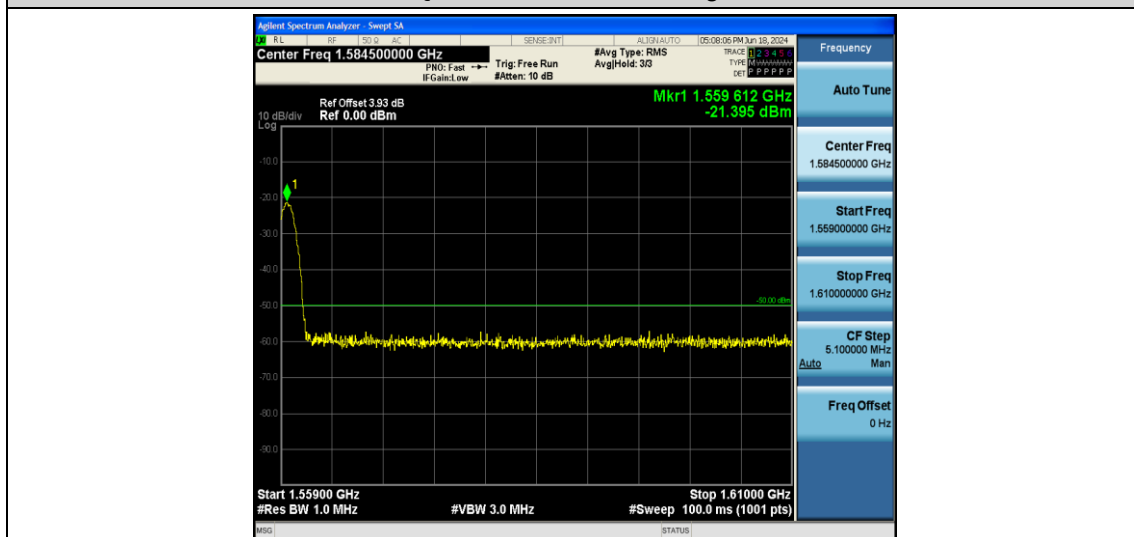
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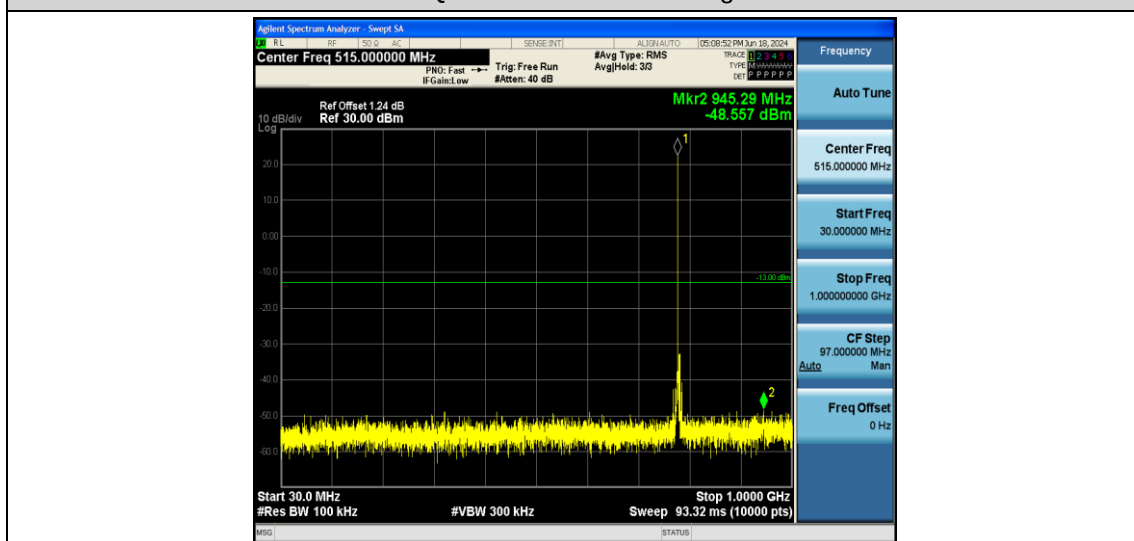
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Band13-5MHz-16QAM-23230-1RB#0-Range5:1559~1610MHz



Band13-5MHz-16QAM-23255-1RB#0-Range1:30~1000MHz



Band13-5MHz-16QAM-23255-1RB#0-Range3:763~775MHz