

FCC Appendix RF Test Data for LTE

Company: : Topcon Positioning Systems, Inc.

EUT : AD-7 Display Terminal

FCC ID : WR4-1081315-01

Model Number : 1081315-01

Report No. : CTA25062300910

Reviewed By : Eric Wang

H.1 Conducted Output Power Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	24.09	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.19	PASS
Band13	5MHz	QPSK	23205	1RB#12	24.20	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.90	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.65	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.92	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.91	PASS
Band13	5MHz	16QAM	23205	12RB#0	22.20	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.83	PASS
Band13	5MHz	16QAM	23205	12RB#6	22.20	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.97	PASS
Band13	5MHz	16QAM	23205	12RB#13	22.16	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.90	PASS
Band13	5MHz	16QAM	23205	25RB#0	22.44	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.91	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.69	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.80	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.65	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.75	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.55	PASS
Band13	5MHz	QPSK	23230	12RB#0	23.01	PASS
Band13	5MHz	16QAM	23230	12RB#0	22.29	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.86	PASS
Band13	5MHz	16QAM	23230	12RB#6	22.28	PASS
Band13	5MHz	QPSK	23230	12RB#13	22.86	PASS
Band13	5MHz	16QAM	23230	12RB#13	22.24	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.81	PASS
Band13	5MHz	16QAM	23230	25RB#0	22.38	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.64	PASS
Band13	5MHz	16QAM	23255	1RB#0	23.47	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.37	PASS
Band13	5MHz	16QAM	23255	1RB#12	23.24	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.19	PASS
Band13	5MHz	16QAM	23255	1RB#24	23.10	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.84	PASS
Band13	5MHz	16QAM	23255	12RB#0	22.18	PASS
Band13	5MHz	QPSK	23255	12RB#6	22.84	PASS

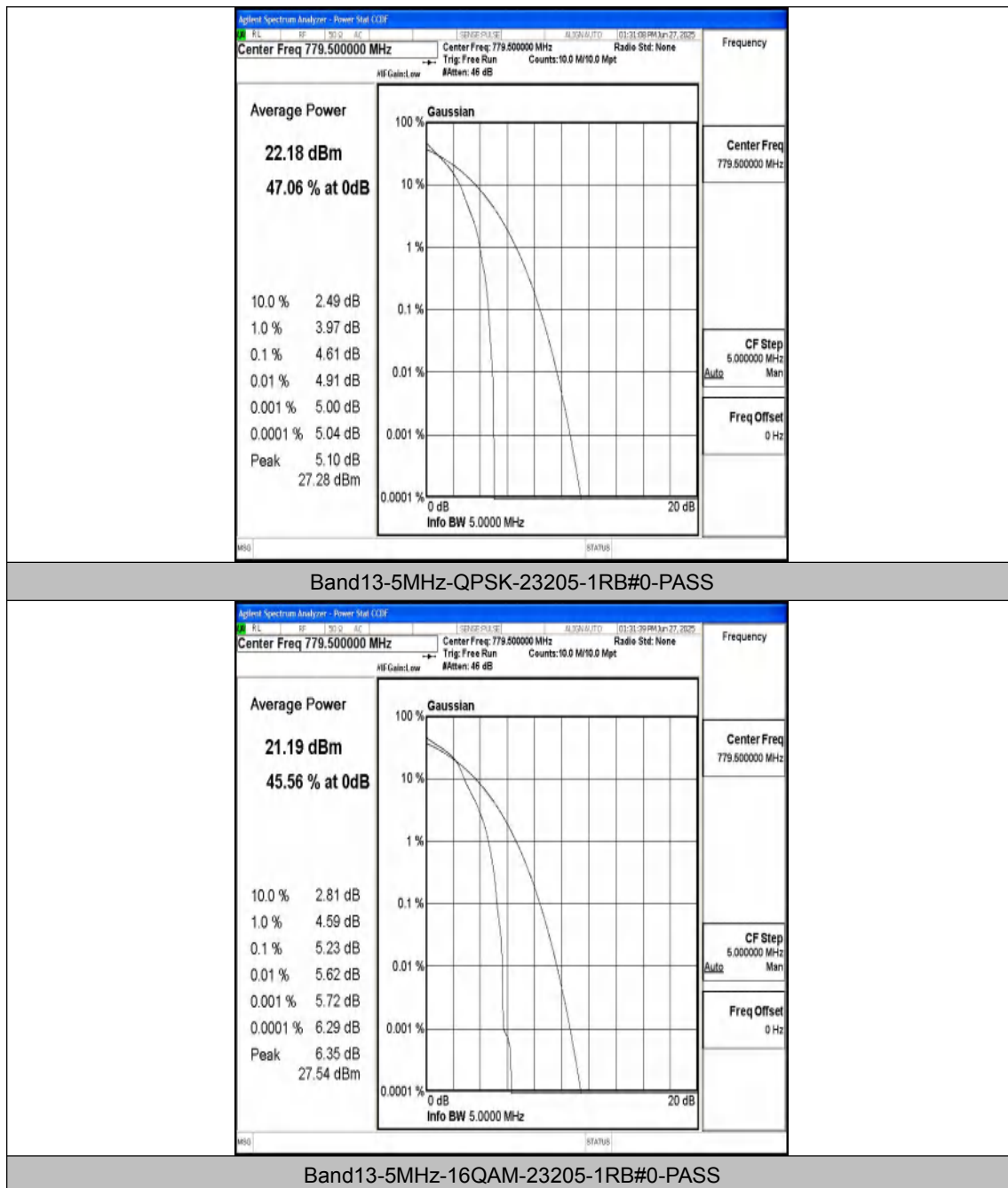
Band13	5MHz	16QAM	23255	12RB#6	22.18	PASS
Band13	5MHz	QPSK	23255	12RB#13	22.71	PASS
Band13	5MHz	16QAM	23255	12RB#13	22.08	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.80	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.19	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.13	PASS
Band13	10MHz	16QAM	23230	1RB#0	22.66	PASS
Band13	10MHz	QPSK	23230	1RB#24	23.04	PASS
Band13	10MHz	16QAM	23230	1RB#24	22.44	PASS
Band13	10MHz	QPSK	23230	1RB#49	22.75	PASS
Band13	10MHz	16QAM	23230	1RB#49	22.15	PASS
Band13	10MHz	QPSK	23230	25RB#0	22.25	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.39	PASS
Band13	10MHz	QPSK	23230	25RB#12	22.25	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.69	PASS
Band13	10MHz	QPSK	23230	25RB#25	22.04	PASS
Band13	10MHz	16QAM	23230	25RB#25	21.44	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.15	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.56	PASS

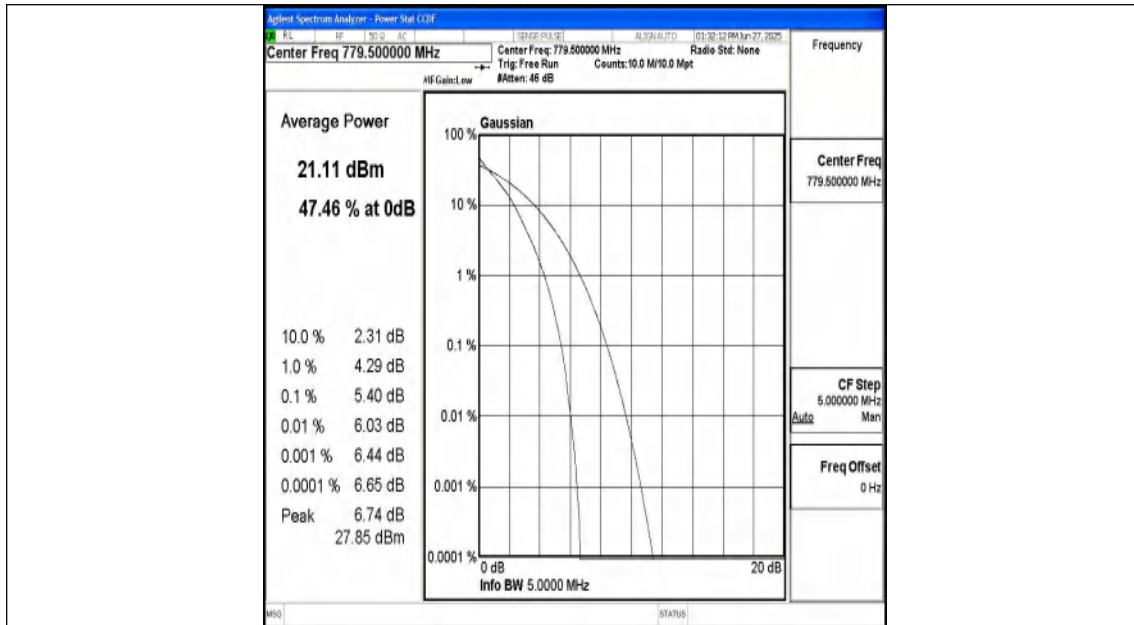
H.2 Peak-to-Average Ratio(CCDF)

Test Result

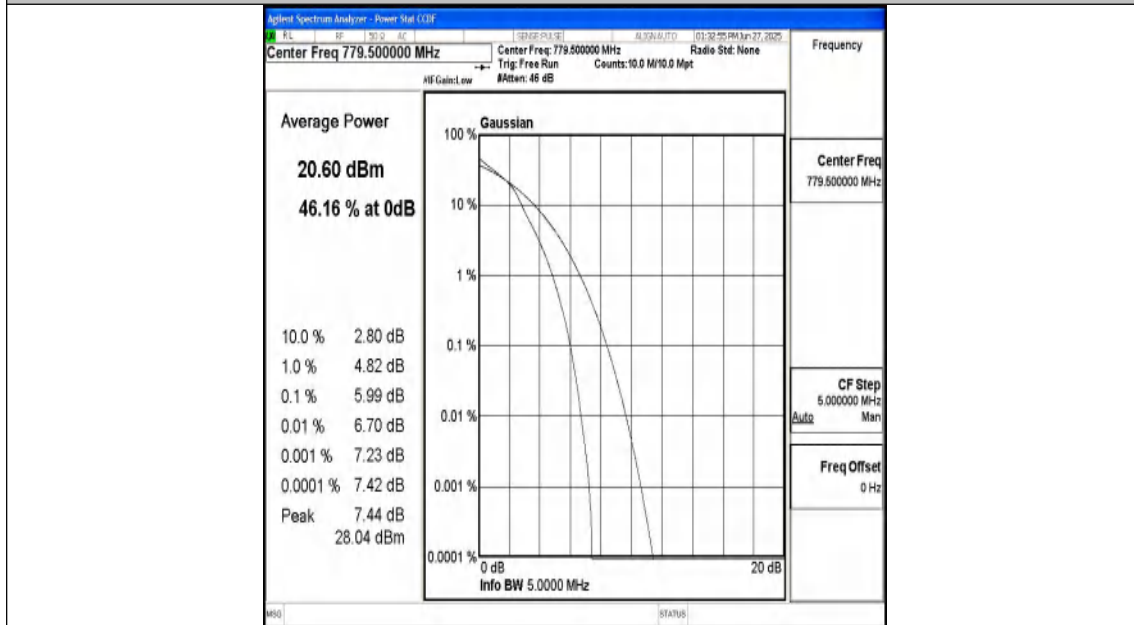
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	4.61	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	5.23	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	5.40	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	5.99	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	4.69	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	5.26	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.37	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	6.03	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	4.58	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	5.10	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.38	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.00	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	4.59	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	5.12	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.39	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	6.03	13	PASS

Test Graphs

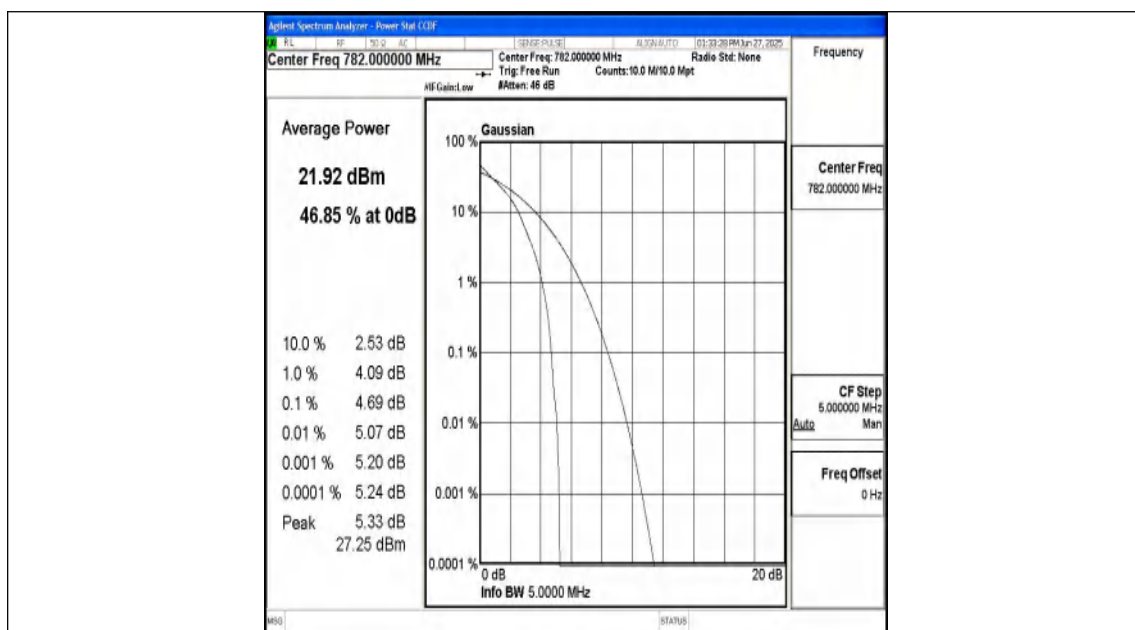




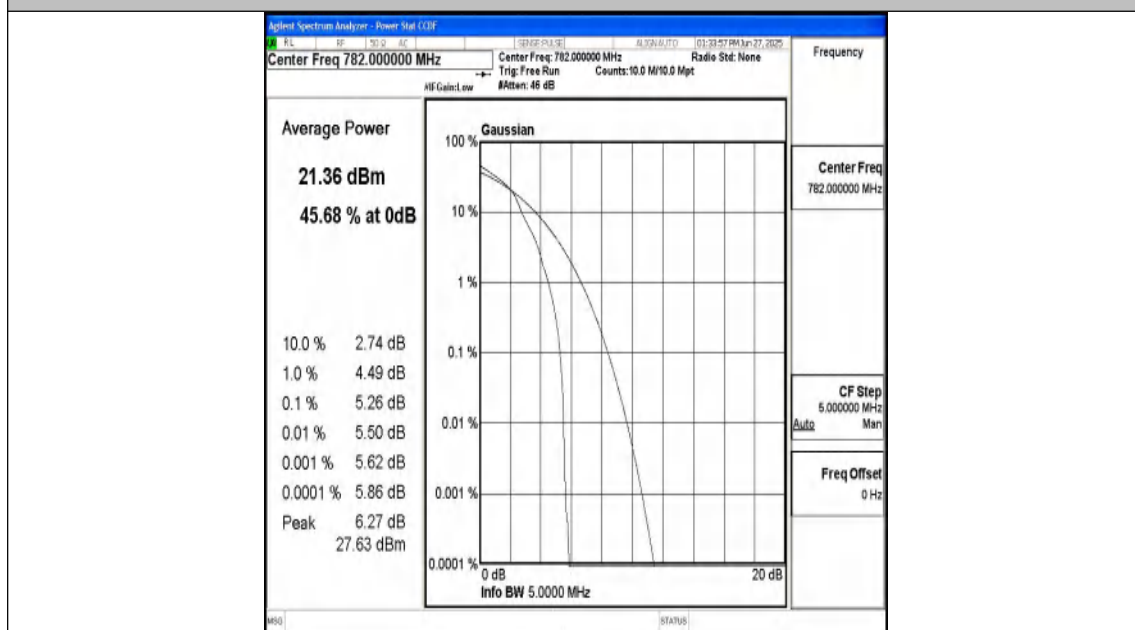
Band13-5MHz-QPSK-23205-25RB#0-PASS



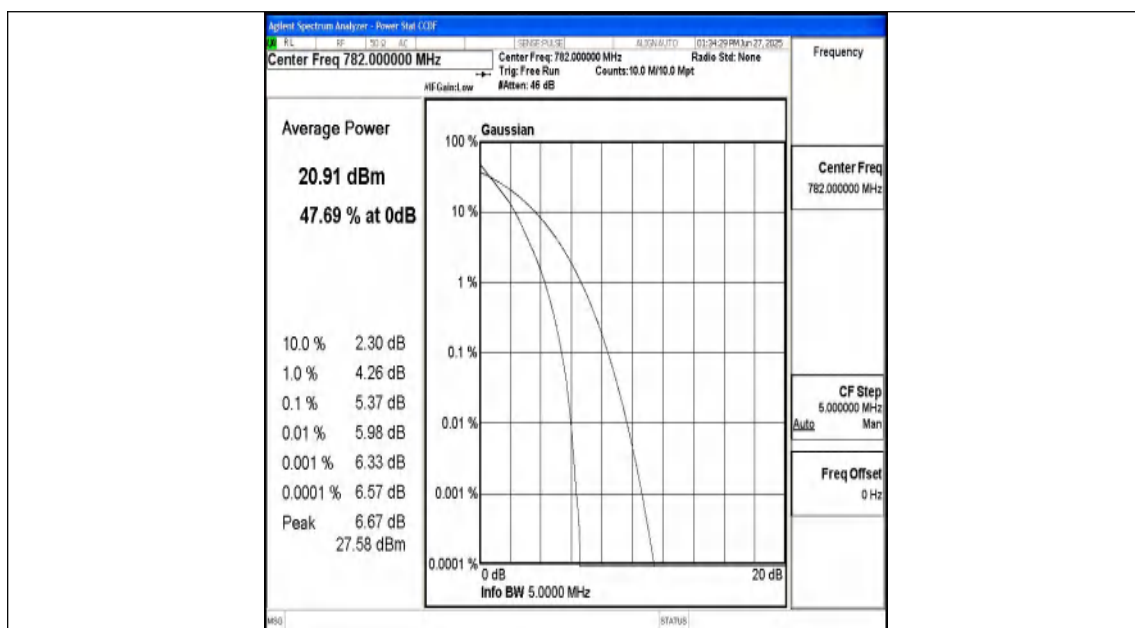
Band13-5MHz-16QAM-23205-25RB#0-PASS



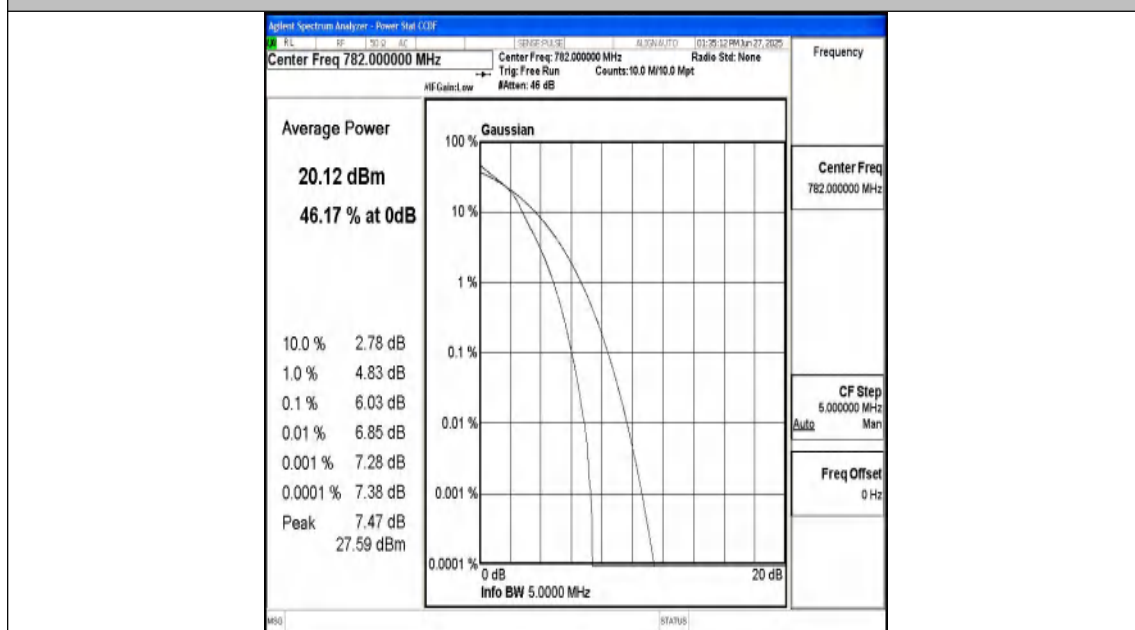
Band13-5MHz-QPSK-23230-1RB#0-PASS



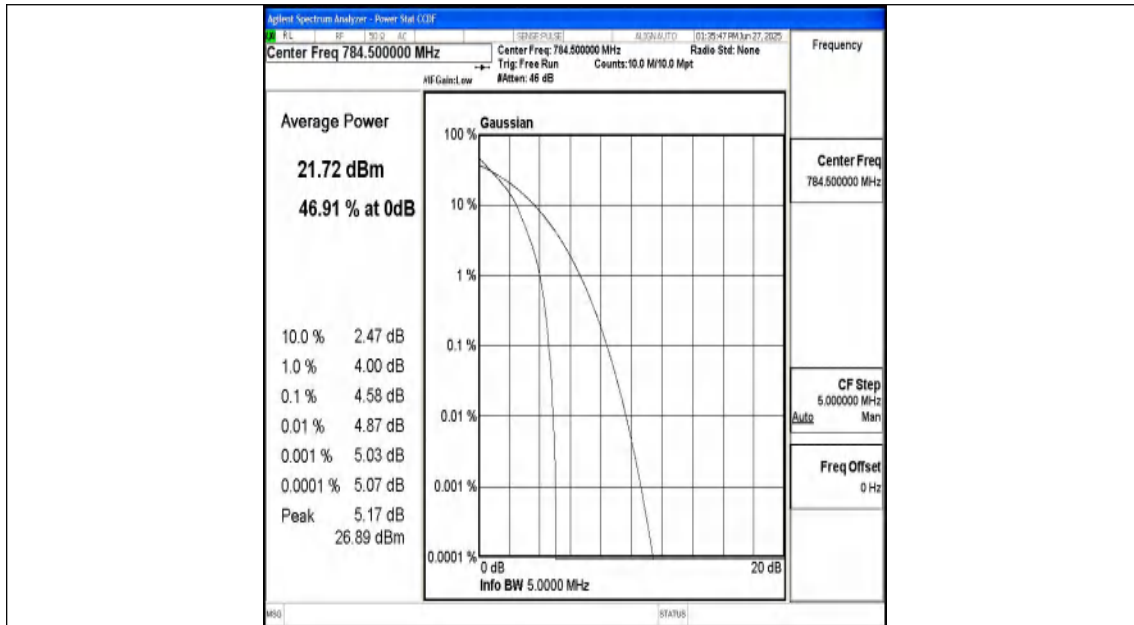
Band13-5MHz-16QAM-23230-1RB#0-PASS



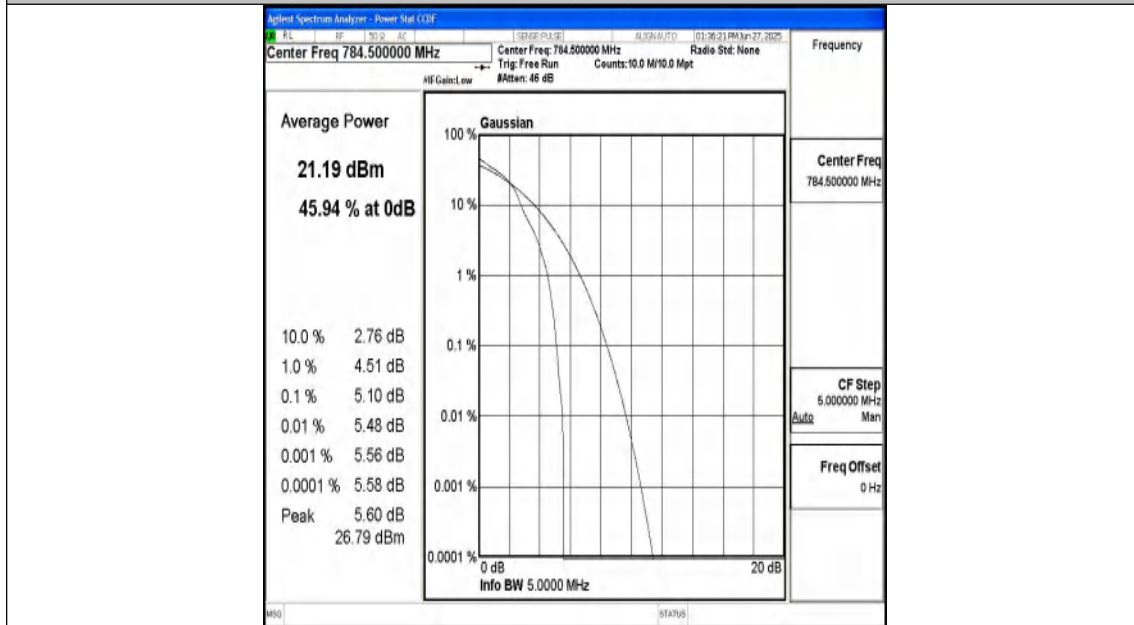
Band13-5MHz-QPSK-23230-25RB#0-PASS



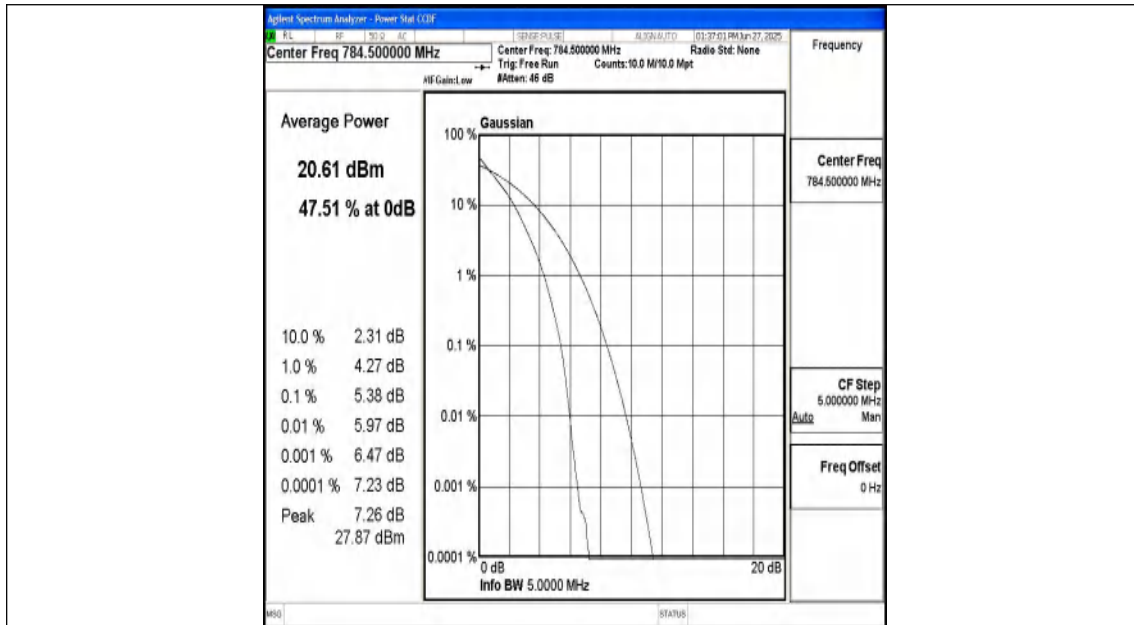
Band13-5MHz-16QAM-23230-25RB#0-PASS



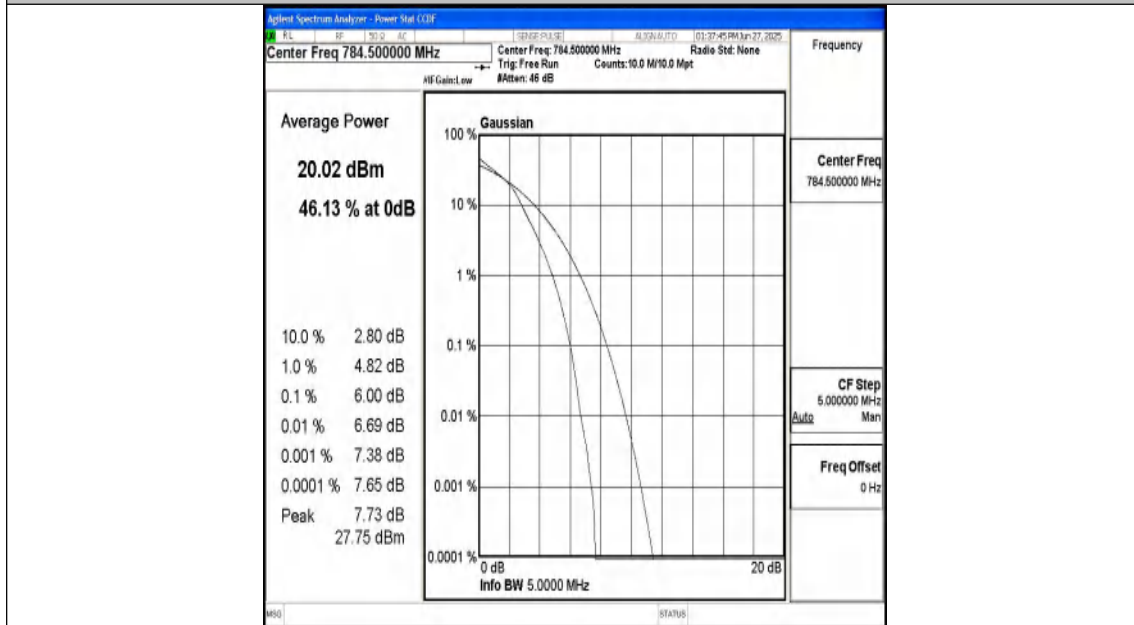
Band13-5MHz-QPSK-23255-1RB#0-PASS



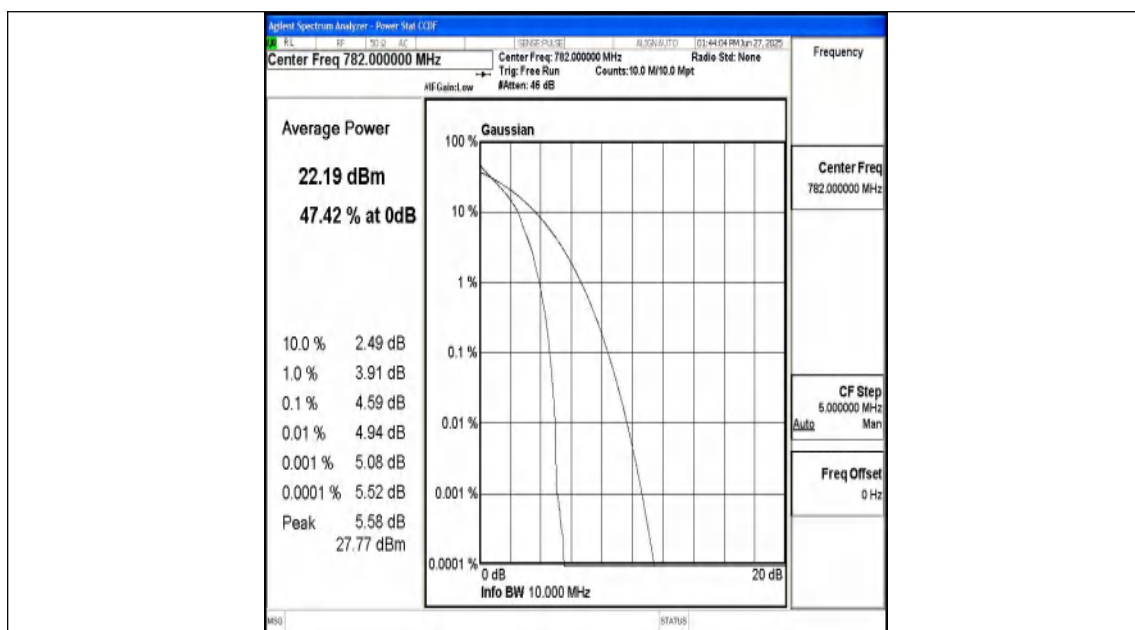
Band13-5MHz-16QAM-23255-1RB#0-PASS



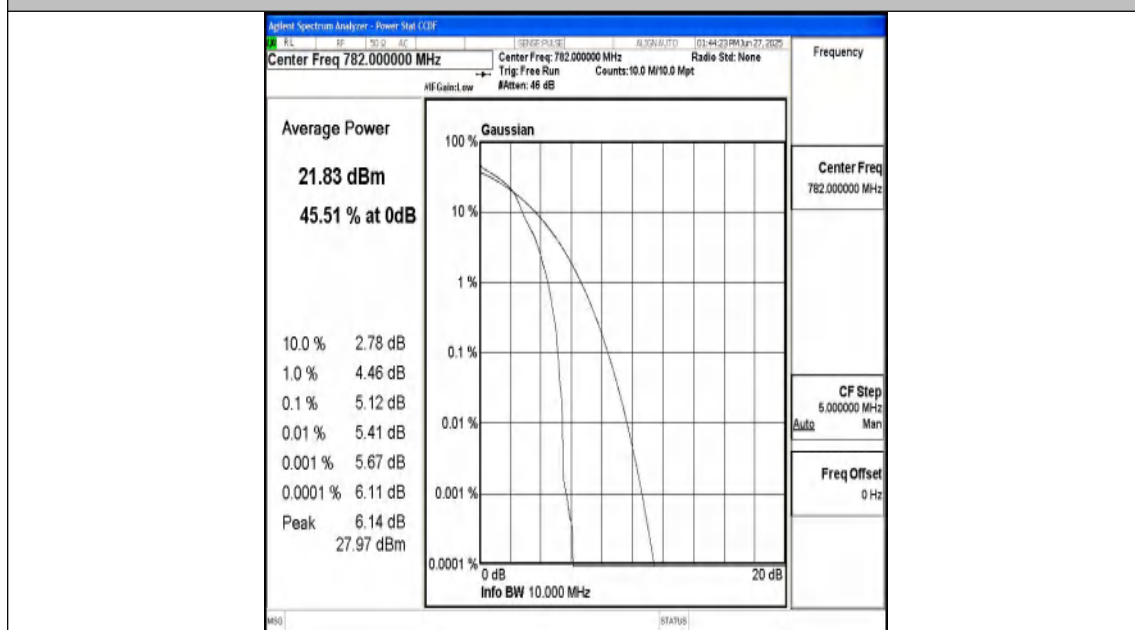
Band13-5MHz-QPSK-23255-25RB#0-PASS



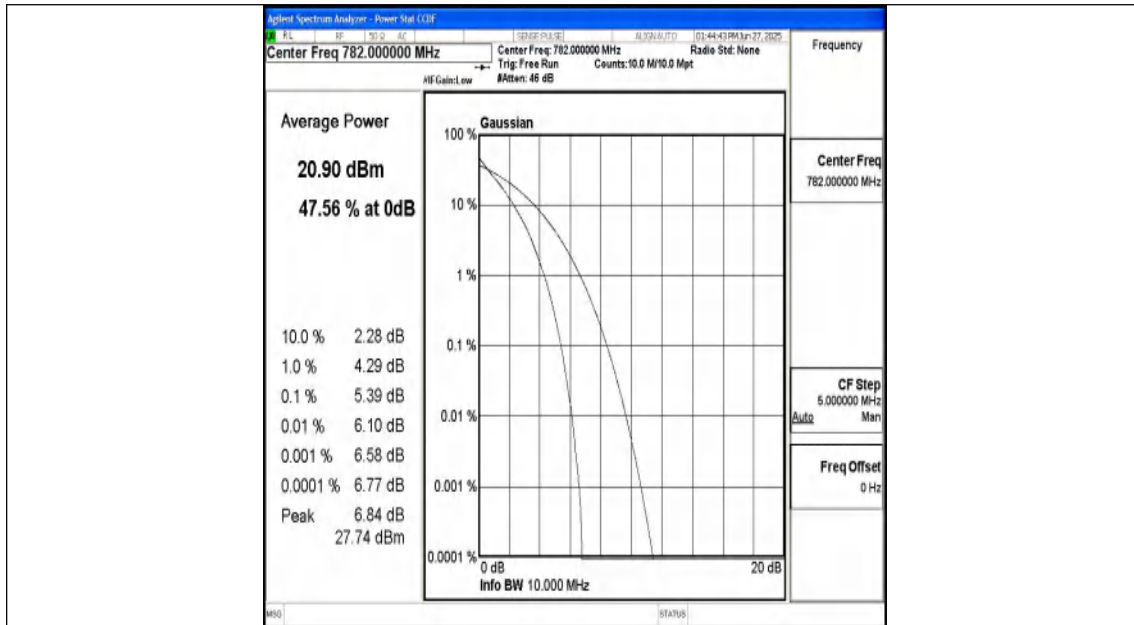
Band13-5MHz-16QAM-23255-25RB#0-PASS



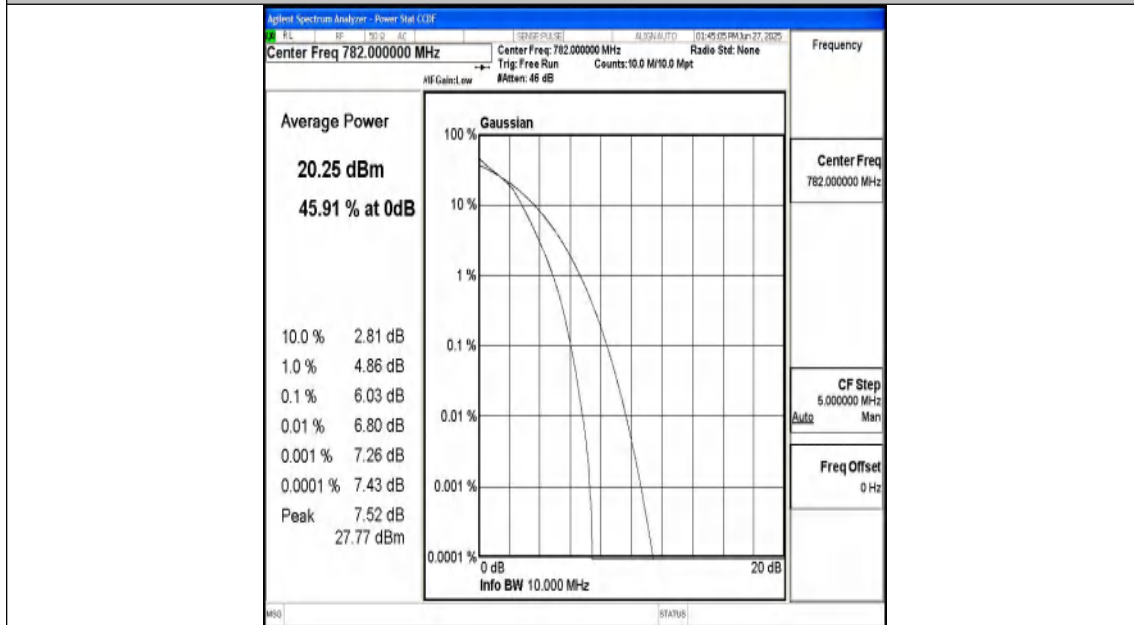
Band13-10MHz-QPSK-23230-1RB#0-PASS



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



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



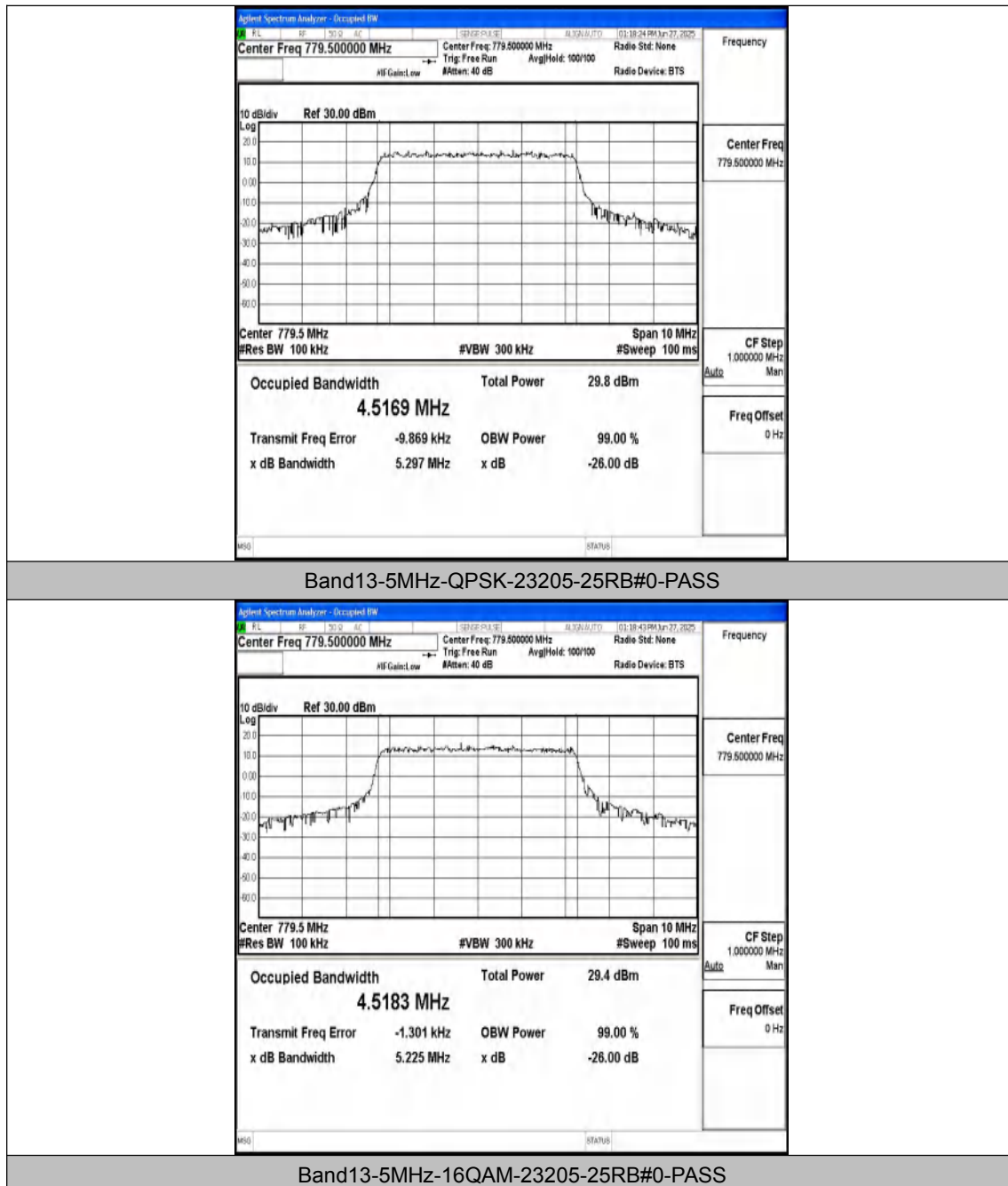
Band13-10MHz-16QAM-23230-50RB#0-PASS

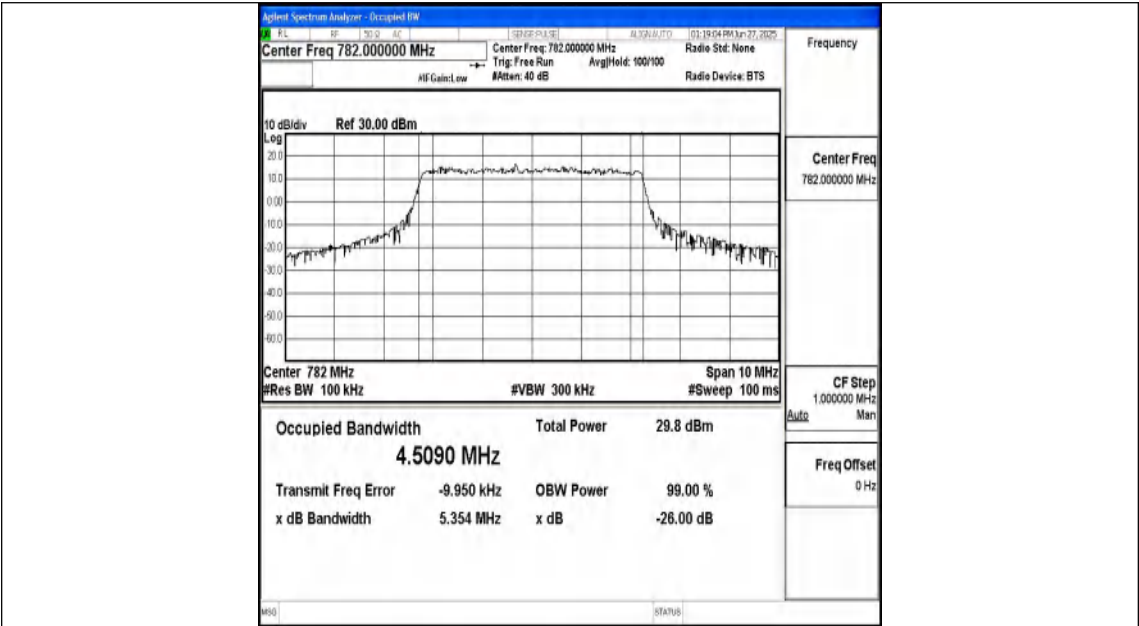
H.3 26dB Bandwidth and Occupied Bandwidth

Test Result

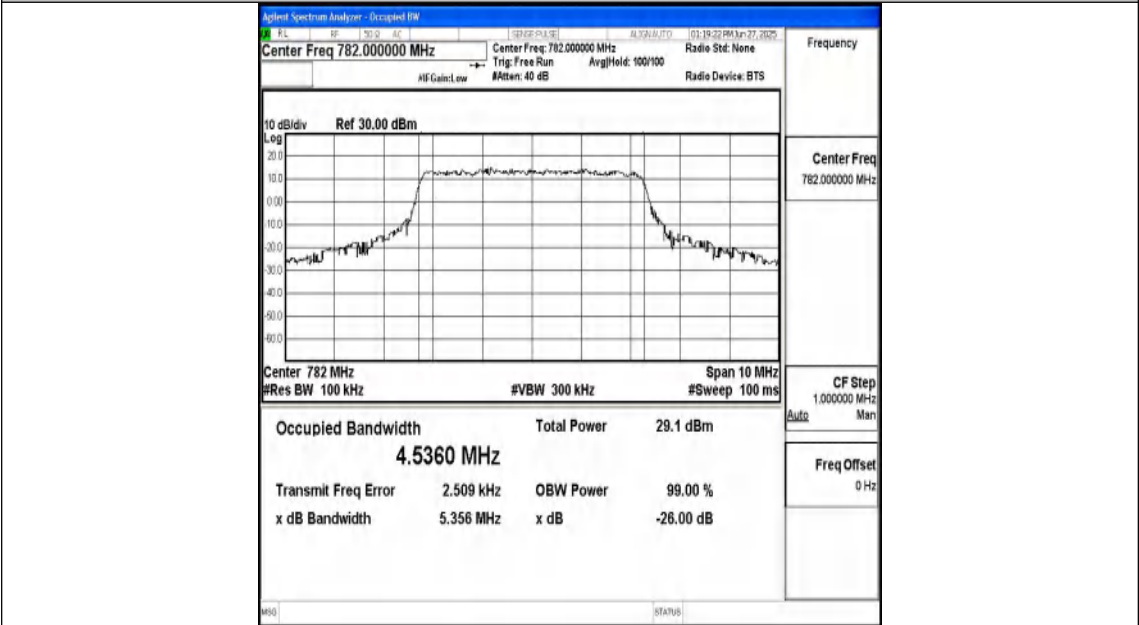
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5169	5.297	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5183	5.225	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5090	5.354	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5360	5.356	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5169	5.128	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5414	5.452	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9955	10.04	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9882	10.06	PASS

Test Graphs

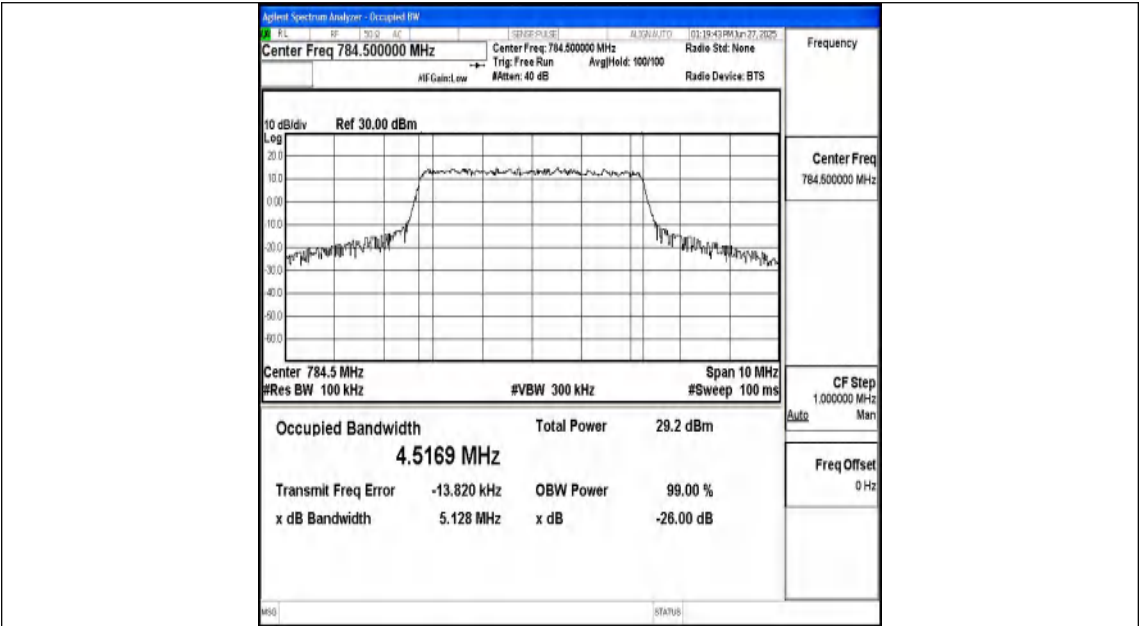




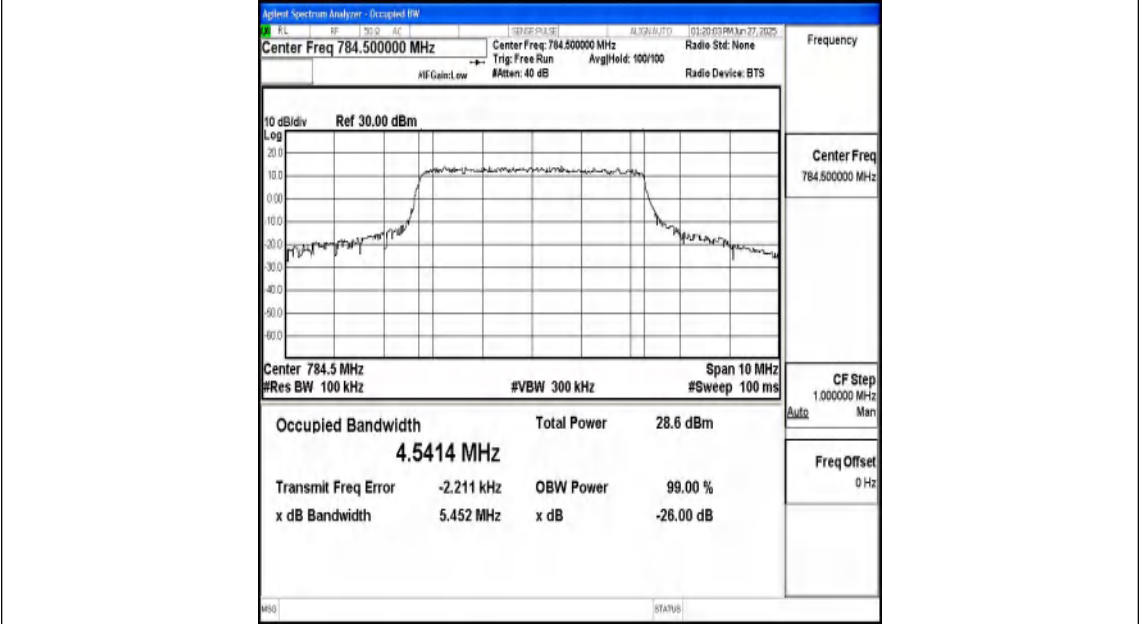
Band13-5MHz-QPSK-23230-25RB#0-PASS



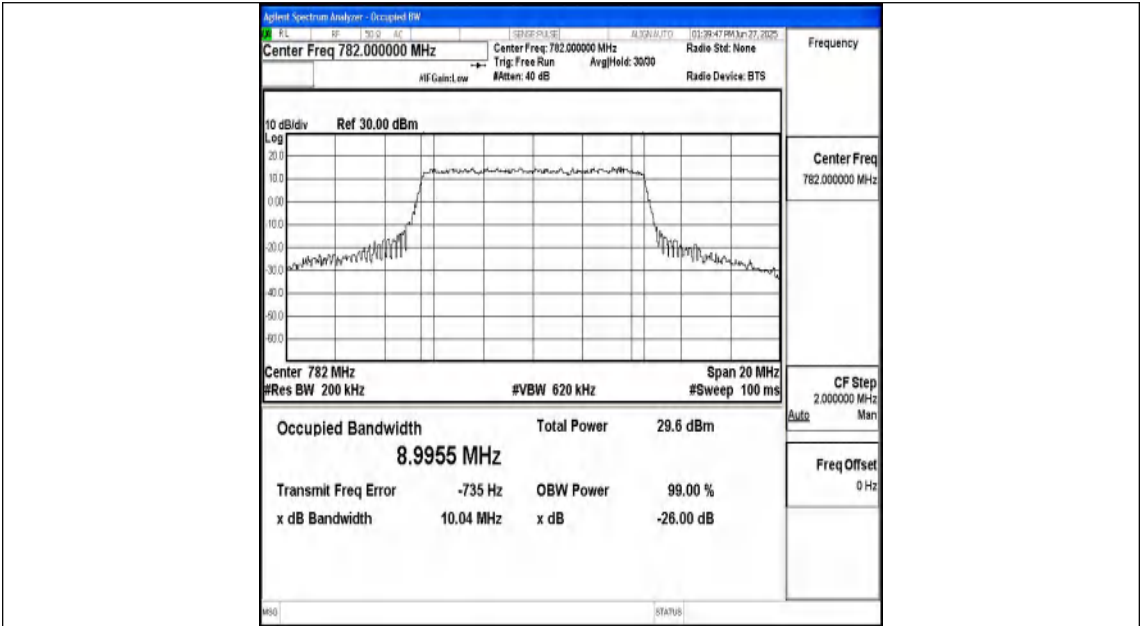
Band13-5MHz-16QAM-23230-25RB#0-PASS



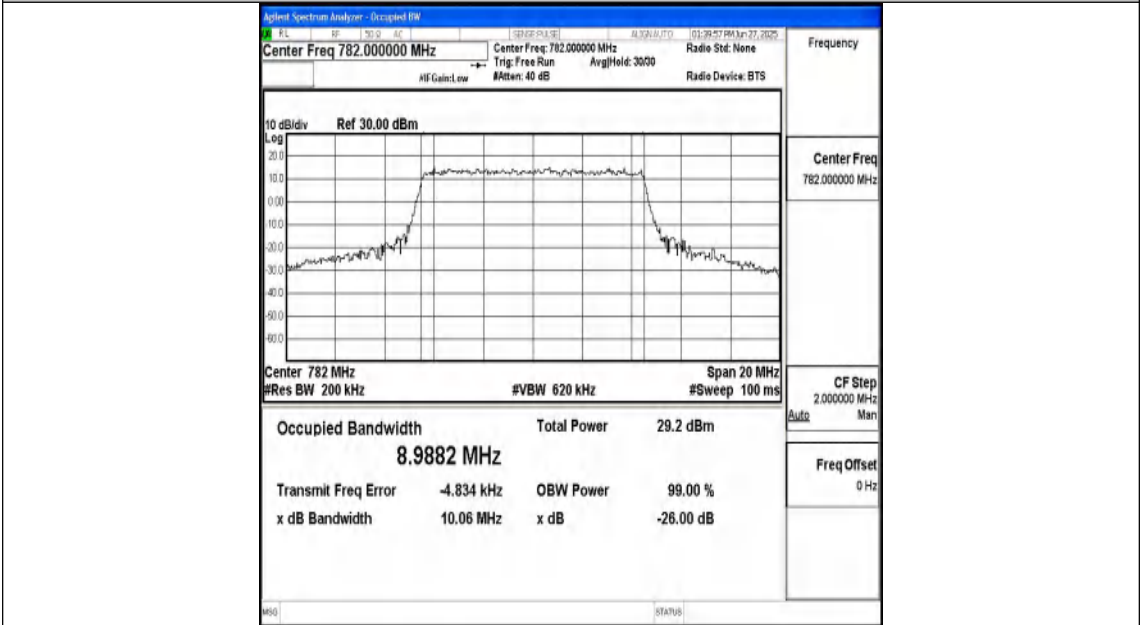
Band13-5MHz-QPSK-23255-25RB#0-PASS



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



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



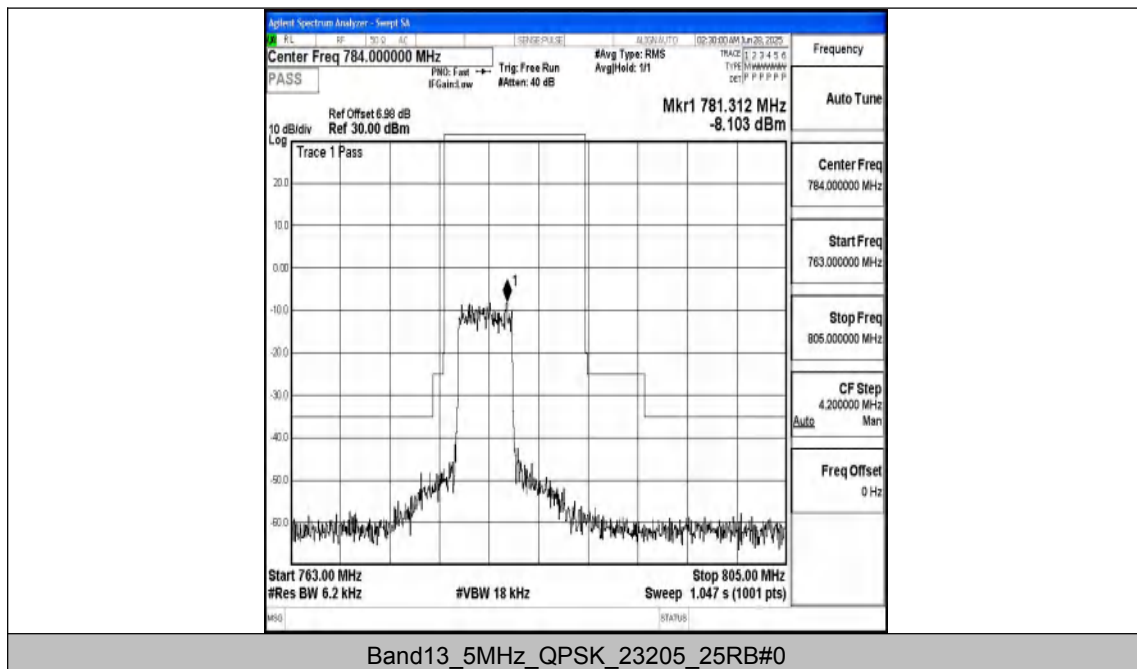
Band13-10MHz-16QAM-23230-50RB#0-PASS

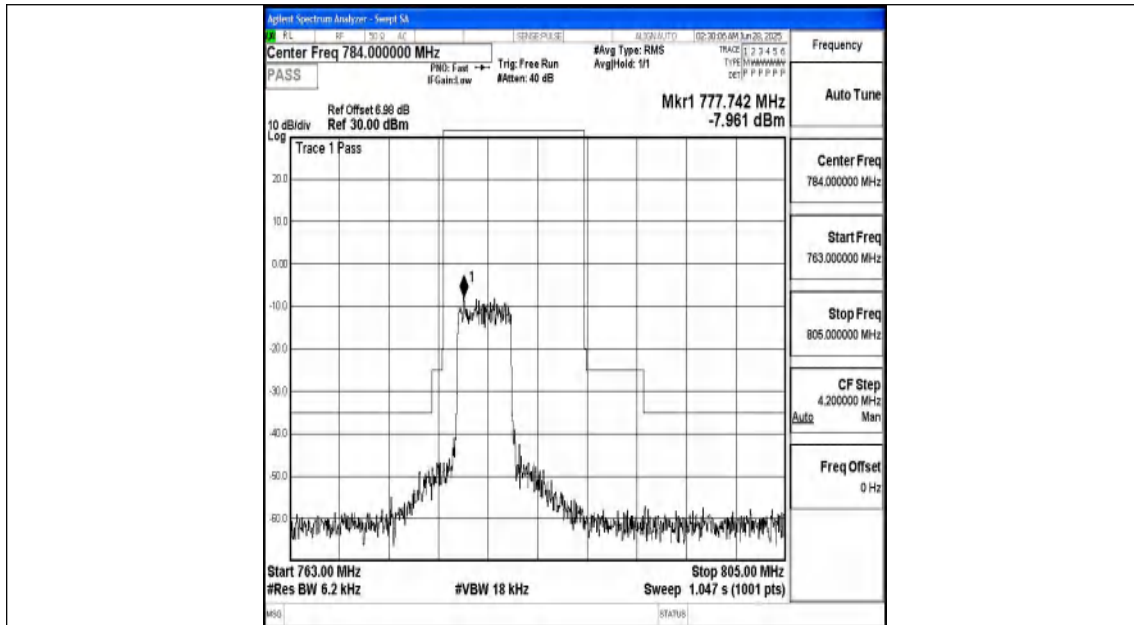
H.4 Band Edge

Test Result

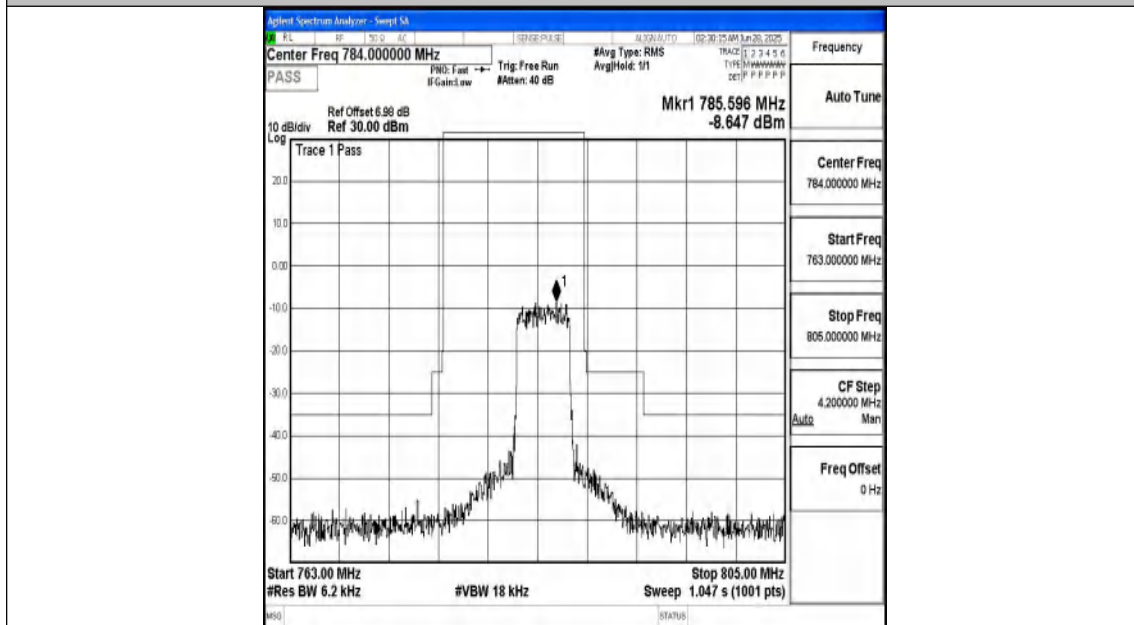
Band	Bandwidth	Modulation	Channel	RB Configuration	Peak Frequency	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	774.80	-48.30	PASS
Band13	5MHz	16QAM	23205	25RB#0	774.76	-48.71	PASS
Band13	5MHz	QPSK	23255	25RB#0	773.79	-55.26	PASS
Band13	5MHz	16QAM	23255	25RB#0	768.54	-56.95	PASS
Band13	10MHz	QPSK	23230	50RB#0	774.59	-49.96	PASS
Band13	10MHz	16QAM	23230	50RB#0	773.84	-48.60	PASS

Test Graphs

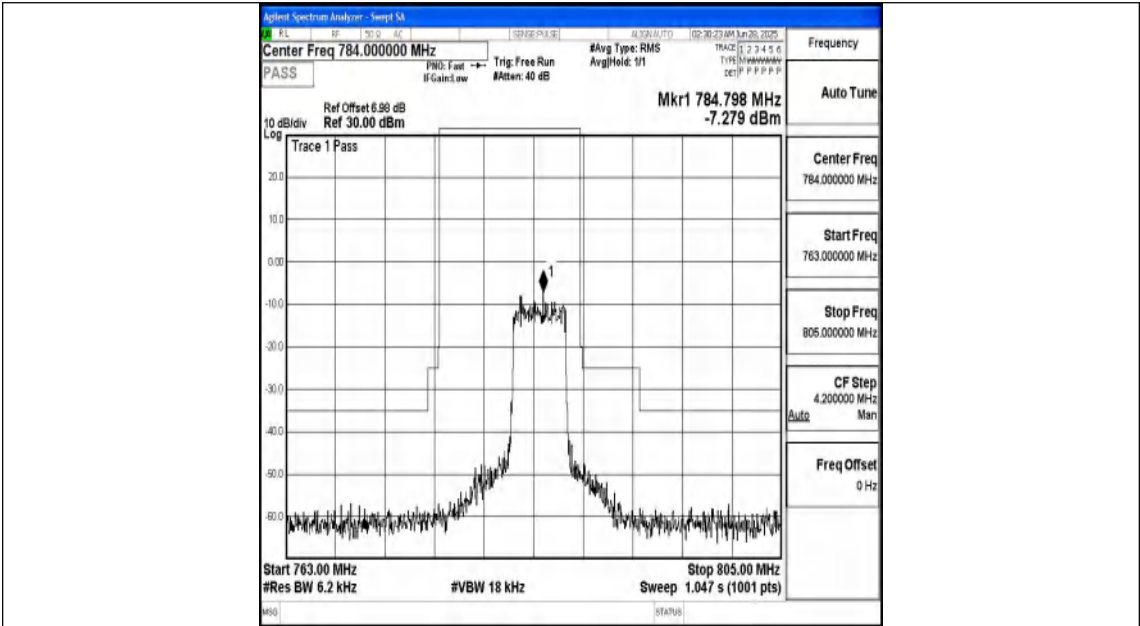




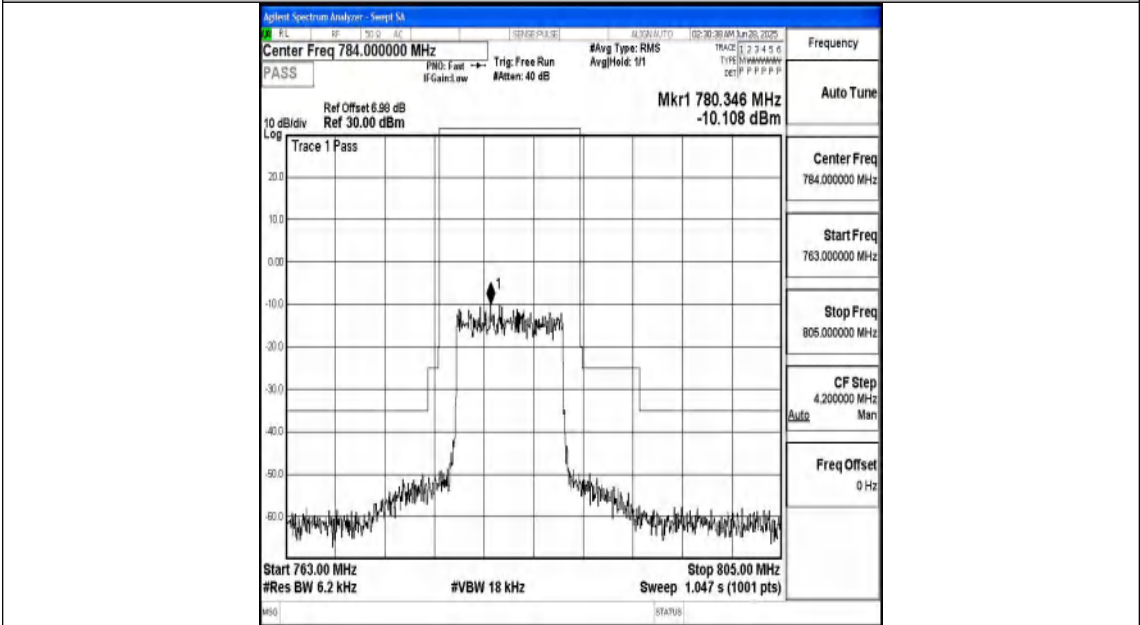
Band13_5MHz_16QAM_23205_25RB#0



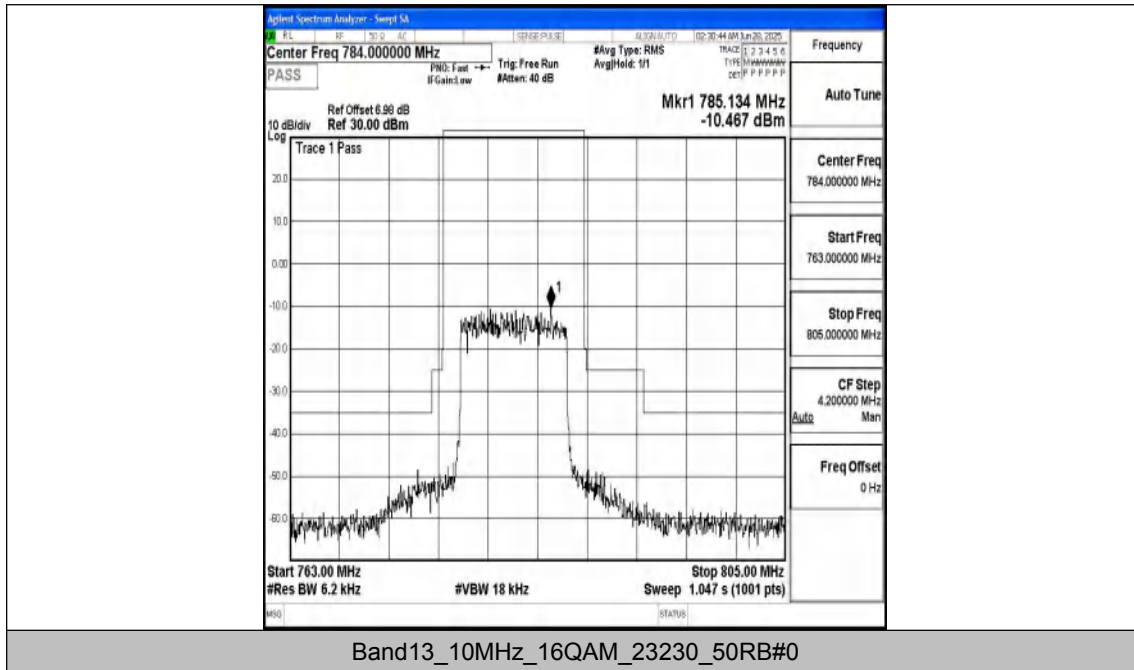
Band13_5MHz_QPSK_23255_25RB#0



Band13_5MHz_16QAM_23255_25RB#0



Band13_10MHz_QPSK_23230_50RB#0



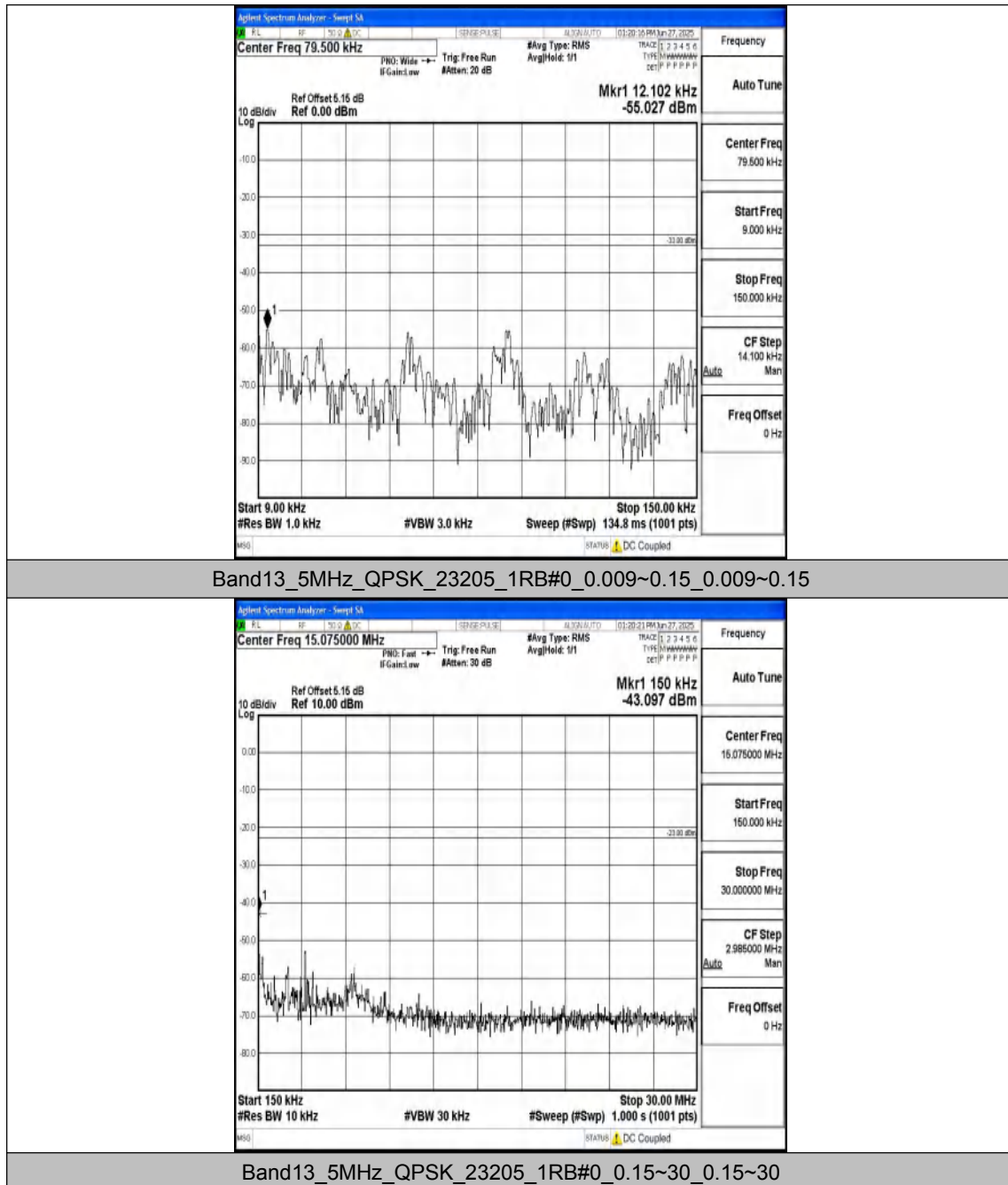
H.5 Conducted Spurious Emission

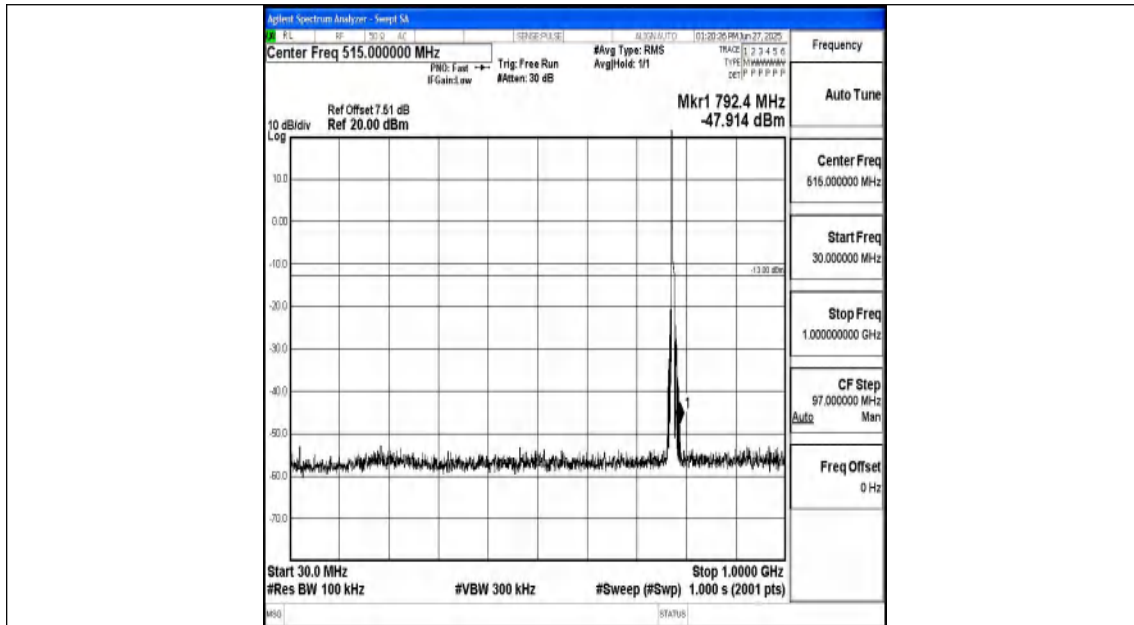
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	0.009~0.15	-55.03	PASS
Band13	5MHz	QPSK	23205	1RB#0	0.15~30	-43.10	PASS
Band13	5MHz	QPSK	23205	1RB#0	30~1000	-47.91	PASS
Band13	5MHz	QPSK	23205	1RB#0	1000~3000	-38.25	PASS
Band13	5MHz	QPSK	23205	1RB#0	3000~10000	-35.45	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.009~0.15	-53.33	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.15~30	-45.28	PASS
Band13	5MHz	16QAM	23205	1RB#0	30~1000	-52.78	PASS
Band13	5MHz	16QAM	23205	1RB#0	1000~3000	-38.44	PASS
Band13	5MHz	16QAM	23205	1RB#0	3000~10000	-34.73	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.009~0.15	-55.22	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.15~30	-44.51	PASS
Band13	5MHz	QPSK	23230	1RB#0	30~1000	-50.96	PASS
Band13	5MHz	QPSK	23230	1RB#0	1000~3000	-38.47	PASS
Band13	5MHz	QPSK	23230	1RB#0	3000~10000	-34.82	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.009~0.15	-57.14	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.15~30	-47.67	PASS
Band13	5MHz	16QAM	23230	1RB#0	30~1000	-52.31	PASS
Band13	5MHz	16QAM	23230	1RB#0	1000~3000	-38.68	PASS
Band13	5MHz	16QAM	23230	1RB#0	3000~10000	-35.47	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.009~0.15	-53.04	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.15~30	-45.92	PASS
Band13	5MHz	QPSK	23255	1RB#0	30~1000	-49.63	PASS
Band13	5MHz	QPSK	23255	1RB#0	1000~3000	-38.65	PASS
Band13	5MHz	QPSK	23255	1RB#0	3000~10000	-35.10	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.009~0.15	-54.46	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.15~30	-45.55	PASS
Band13	5MHz	16QAM	23255	1RB#0	30~1000	-48.80	PASS
Band13	5MHz	16QAM	23255	1RB#0	1000~3000	-38.95	PASS
Band13	5MHz	16QAM	23255	1RB#0	3000~10000	-35.02	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.009~0.15	-53.17	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.15~30	-45.99	PASS
Band13	10MHz	QPSK	23230	1RB#0	30~1000	-52.12	PASS
Band13	10MHz	QPSK	23230	1RB#0	1000~3000	-38.05	PASS
Band13	10MHz	QPSK	23230	1RB#0	3000~10000	-35.46	PASS
Band13	10MHz	16QAM	23230	1RB#0	0.009~0.15	-54.82	PASS
Band13	10MHz	16QAM	23230	1RB#0	0.15~30	-46.05	PASS

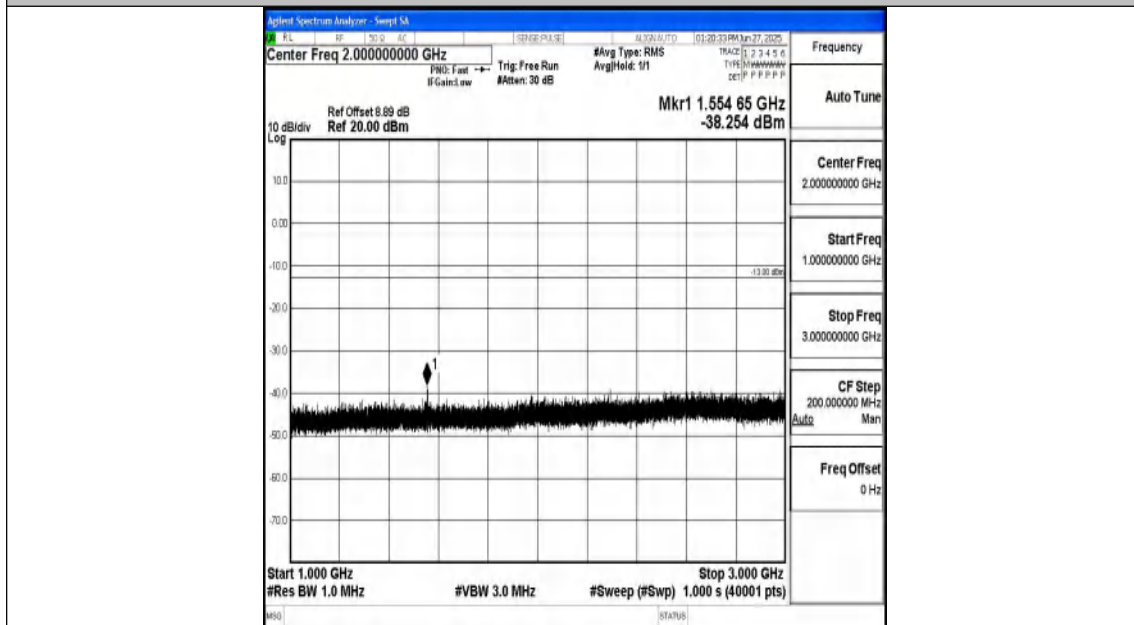
Band13	10MHz	16QAM	23230	1RB#0	30~1000	-53.21	PASS
Band13	10MHz	16QAM	23230	1RB#0	1000~3000	-38.01	PASS
Band13	10MHz	16QAM	23230	1RB#0	3000~10000	-34.92	PASS

Test Graphs

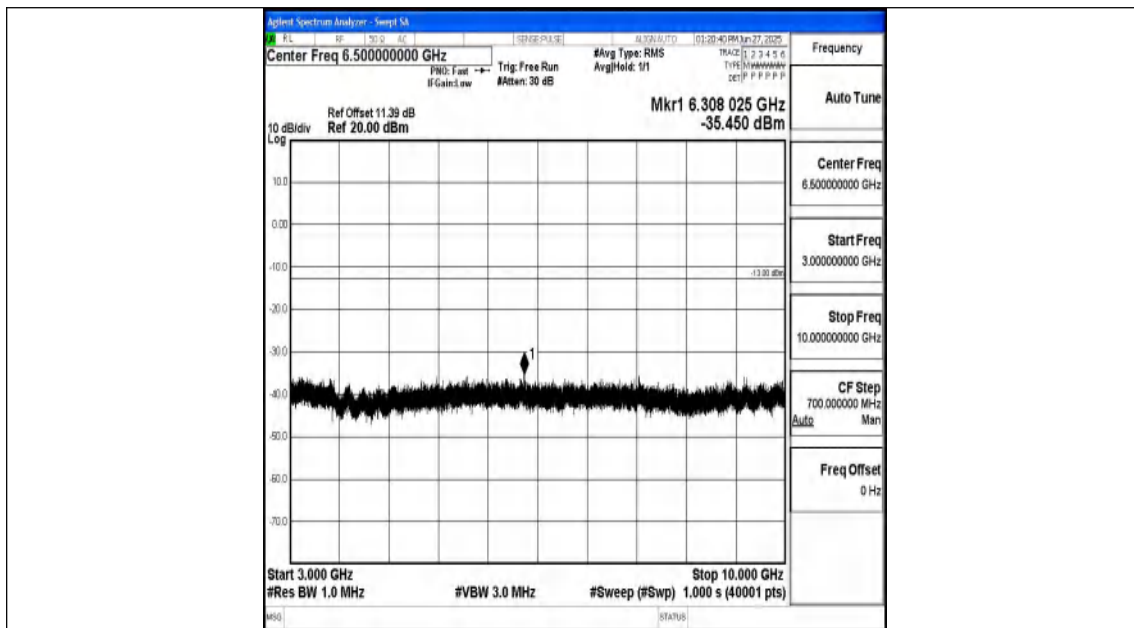




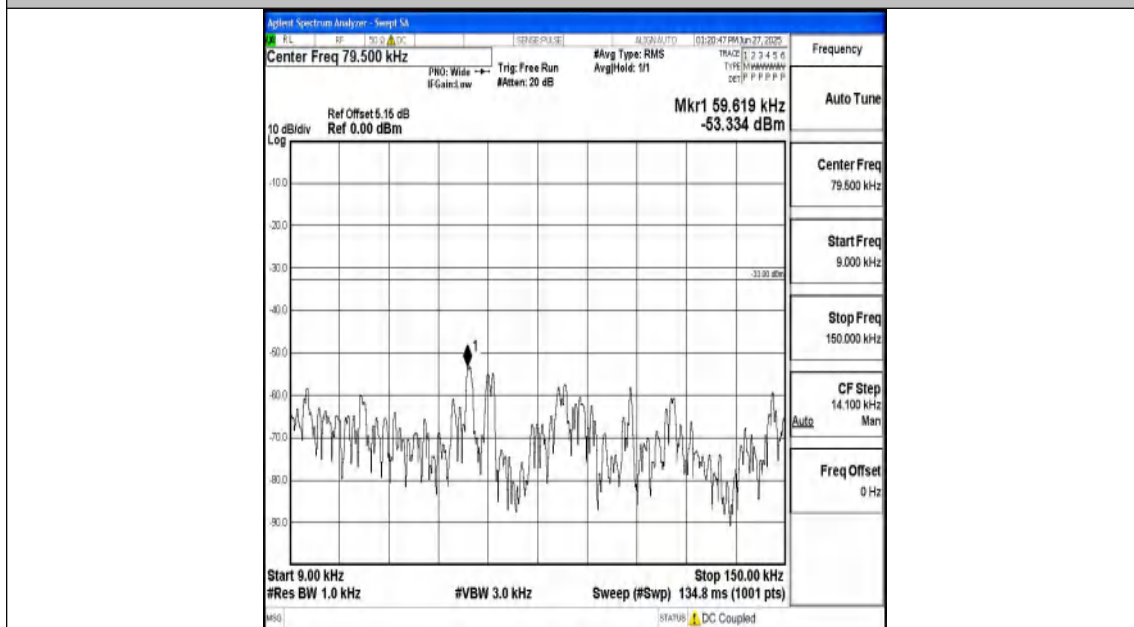
Band13_5MHz_QPSK_23205_1RB#0_30~1000_30~1000



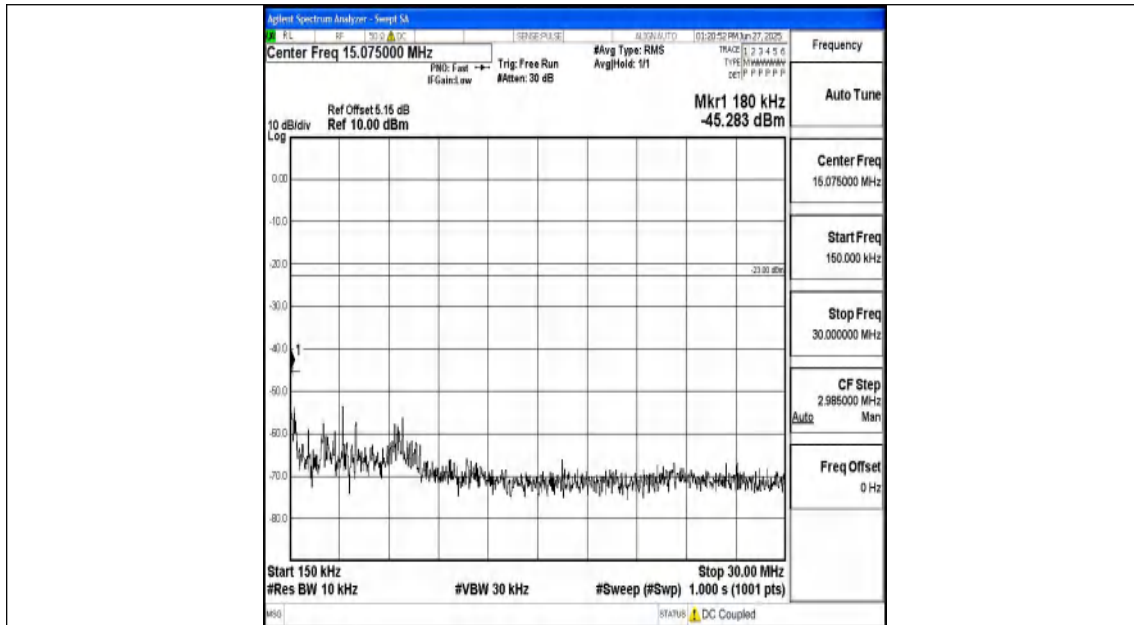
Band13_5MHz_QPSK_23205_1RB#0_1000~3000_1000~3000



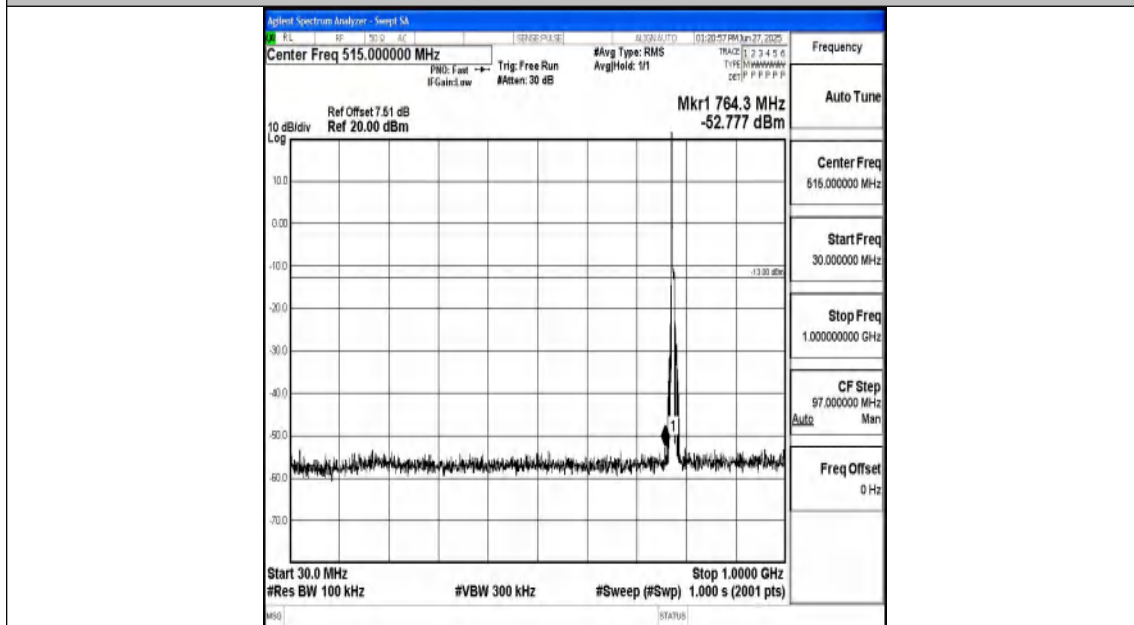
Band13_5MHz_QPSK_23205_1RB#0_3000~10000_3000~10000



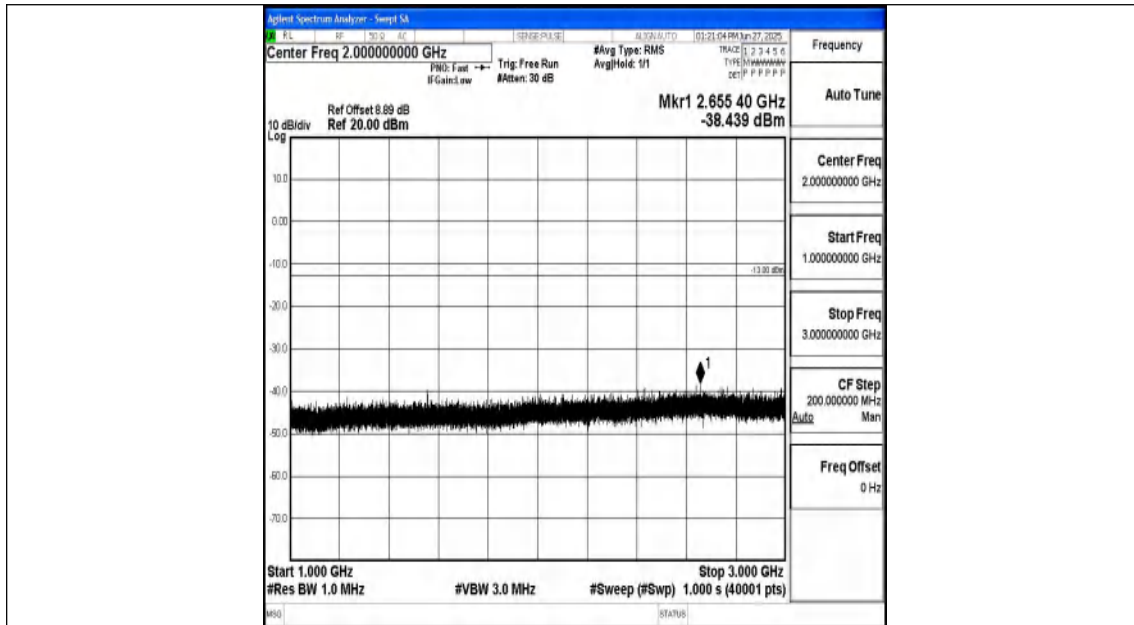
Band13_5MHz_16QAM_23205_1RB#0_0.009~0.15_0.009~0.15



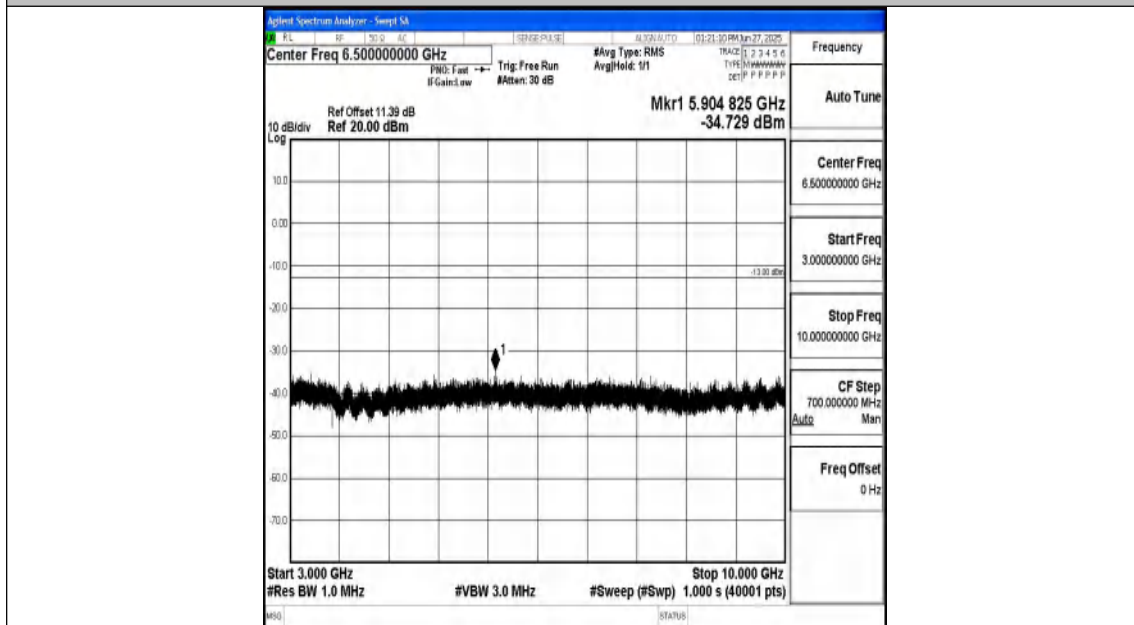
Band13_5MHz_16QAM_23205_1RB#0_0.15~30_0.15~30



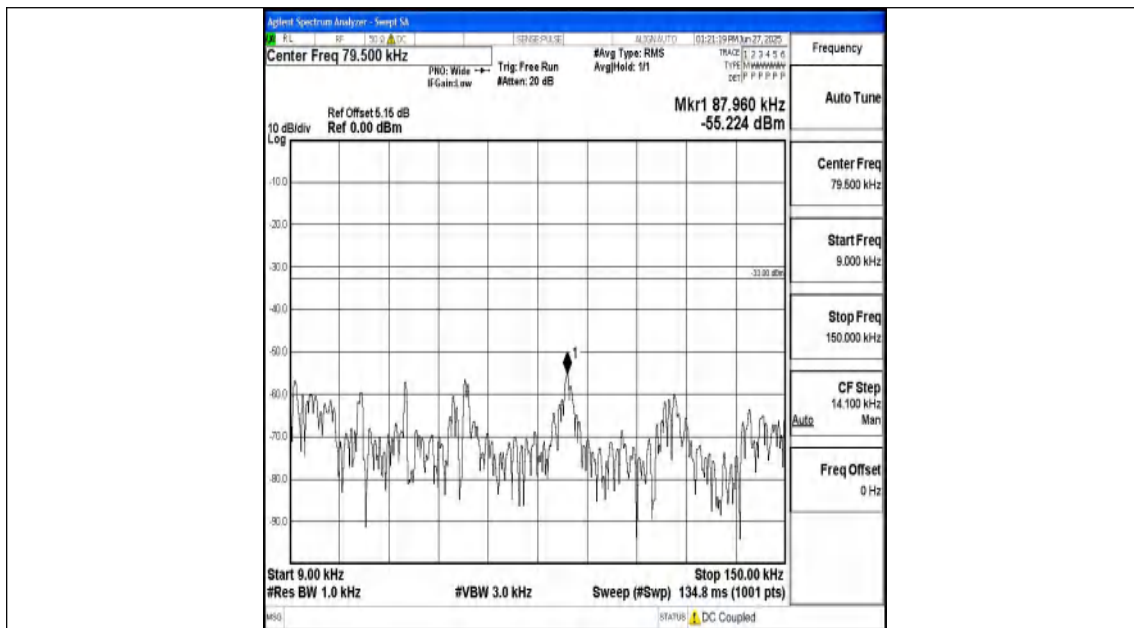
Band13_5MHz_16QAM_23205_1RB#0_30~1000_30~1000



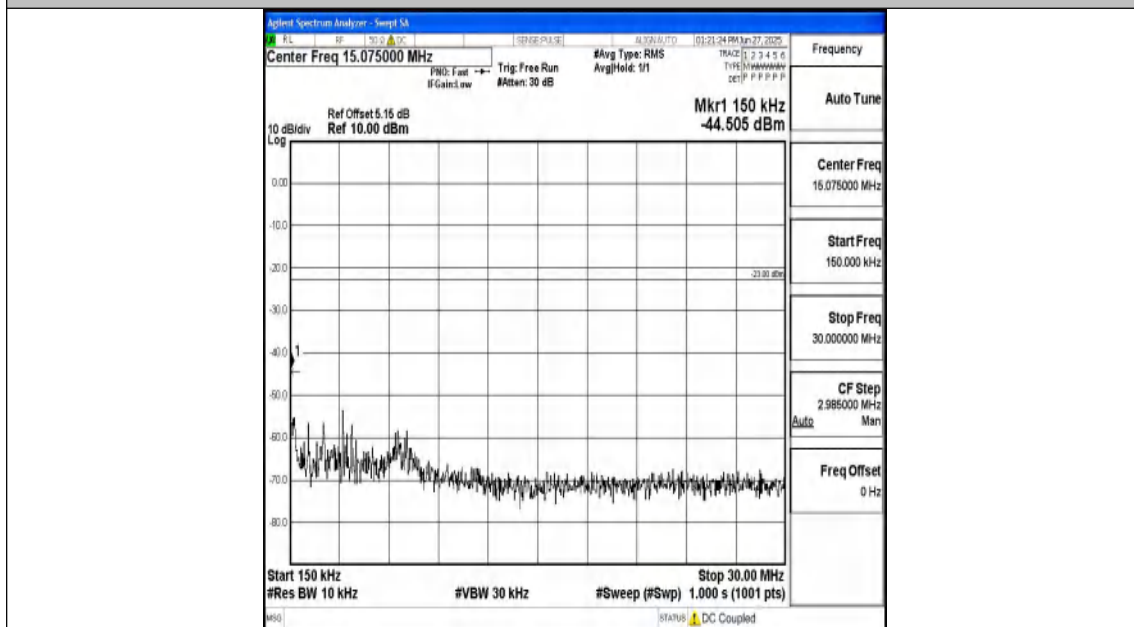
Band13_5MHz_16QAM_23205_1RB#0_1000~3000_1000~3000



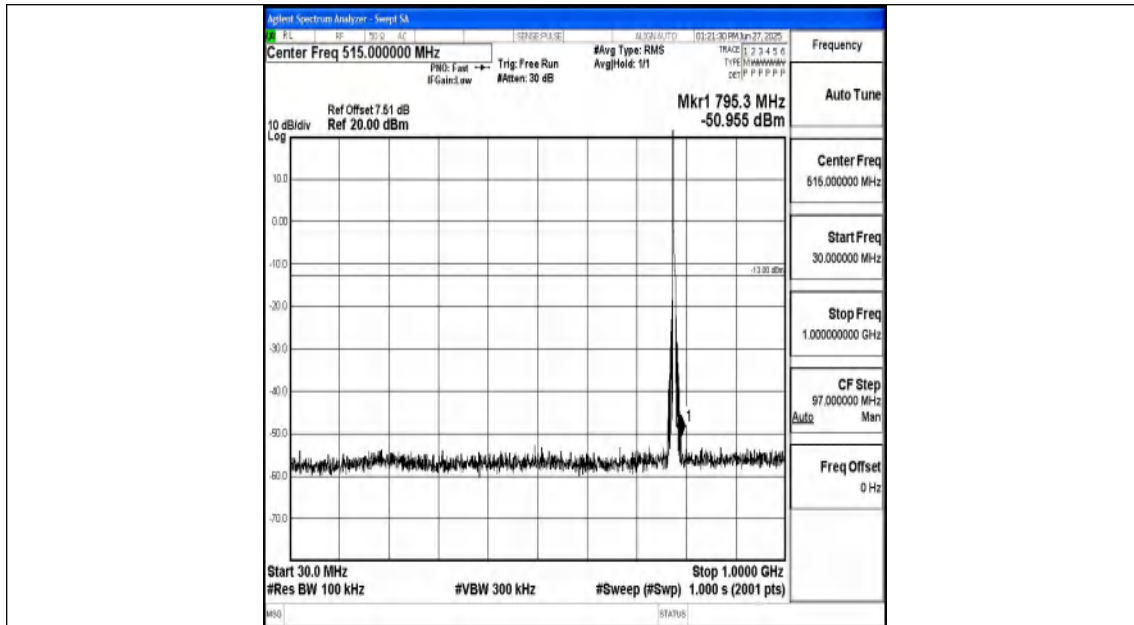
Band13_5MHz_16QAM_23205_1RB#0_3000~10000_3000~10000



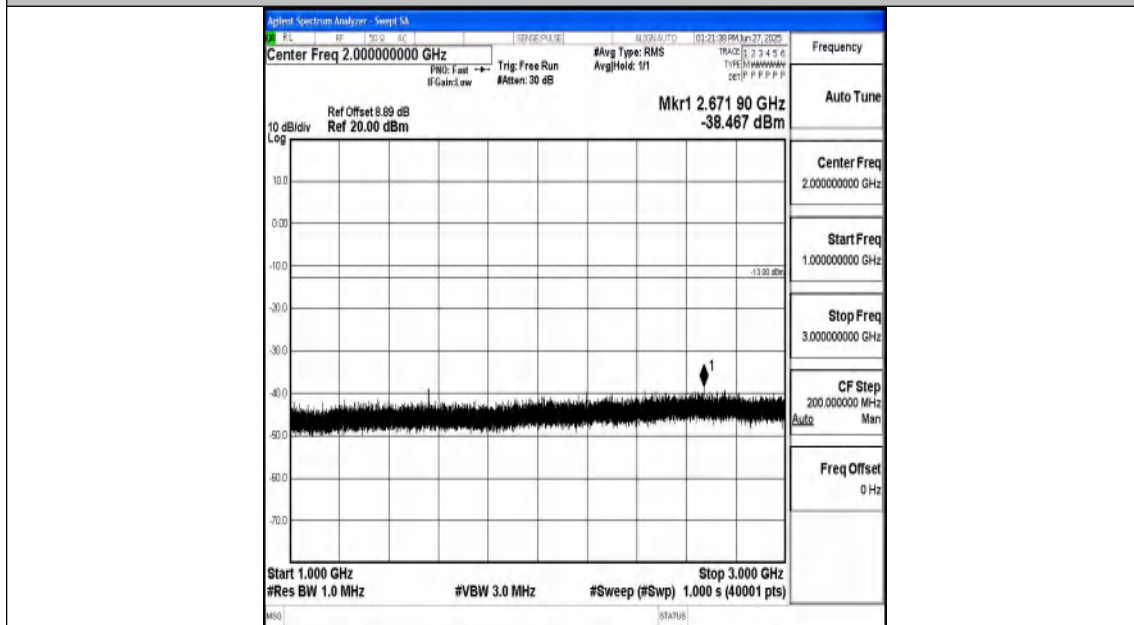
Band13_5MHz_QPSK_23230_1RB#0_0.009~0.15_0.009~0.15



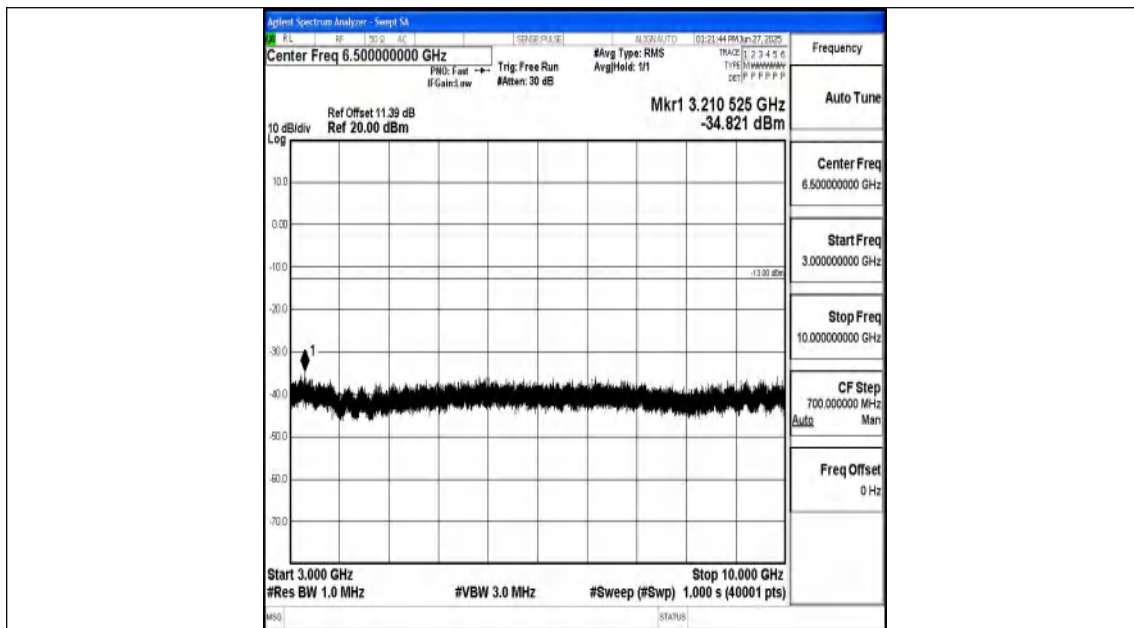
Band13_5MHz_QPSK_23230_1RB#0_0.15~30_0.15~30



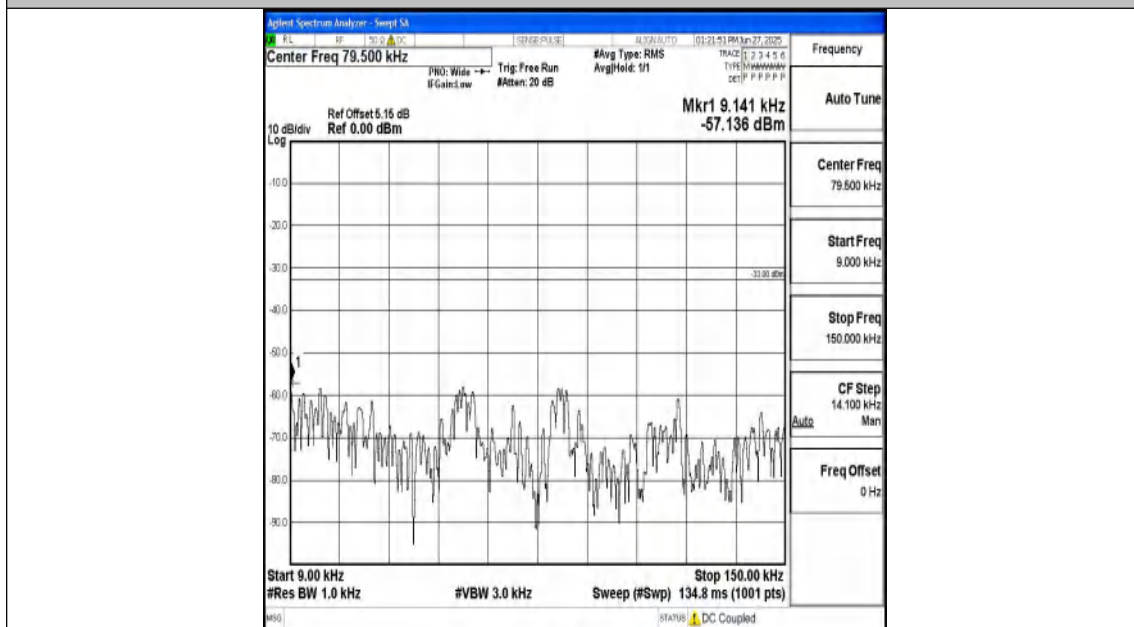
Band13_5MHz_QPSK_23230_1RB#0_30~1000_30~1000



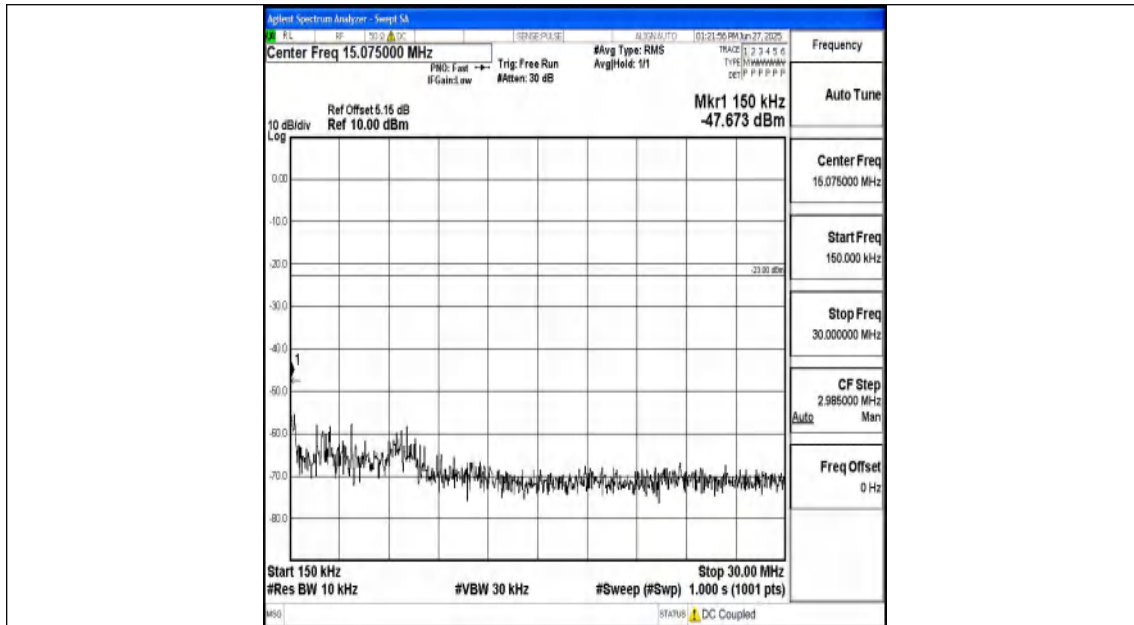
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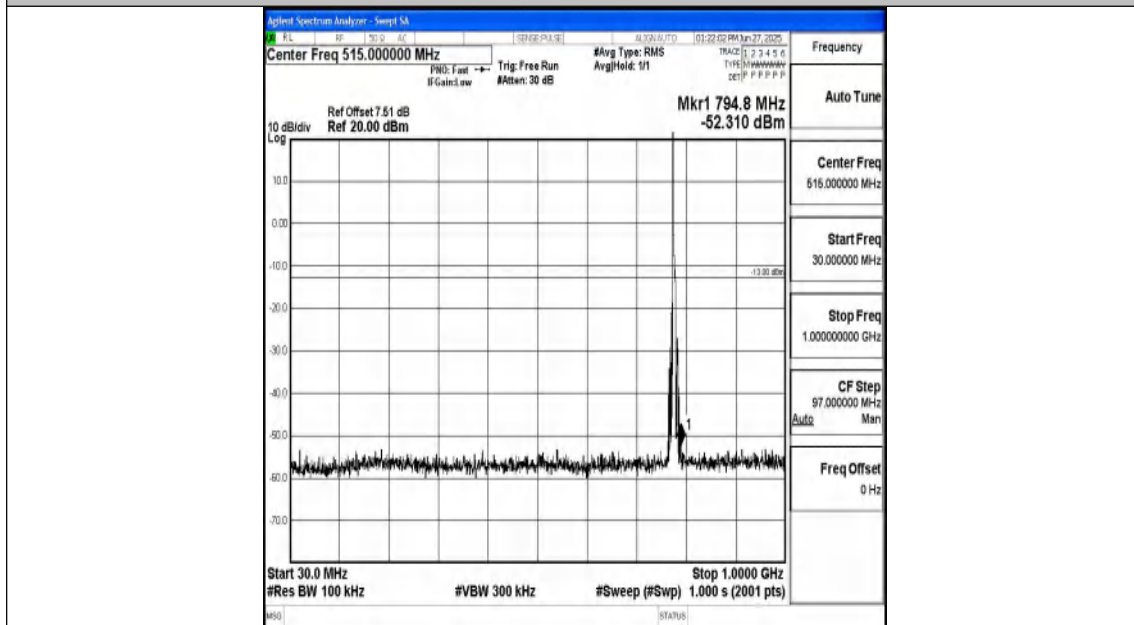
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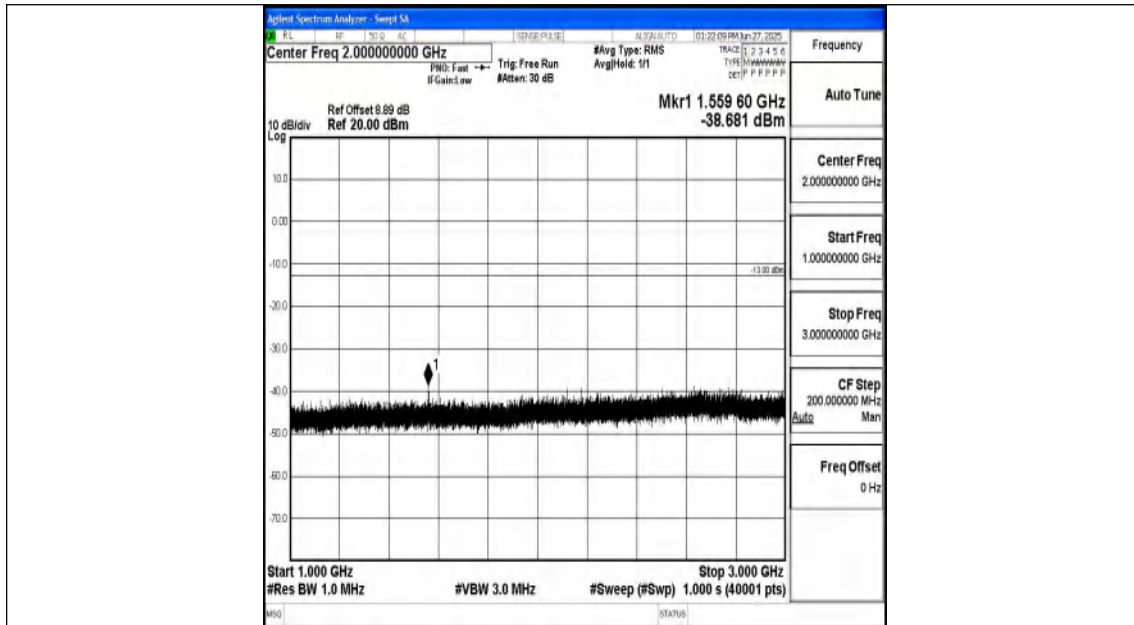
Band13_5MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15



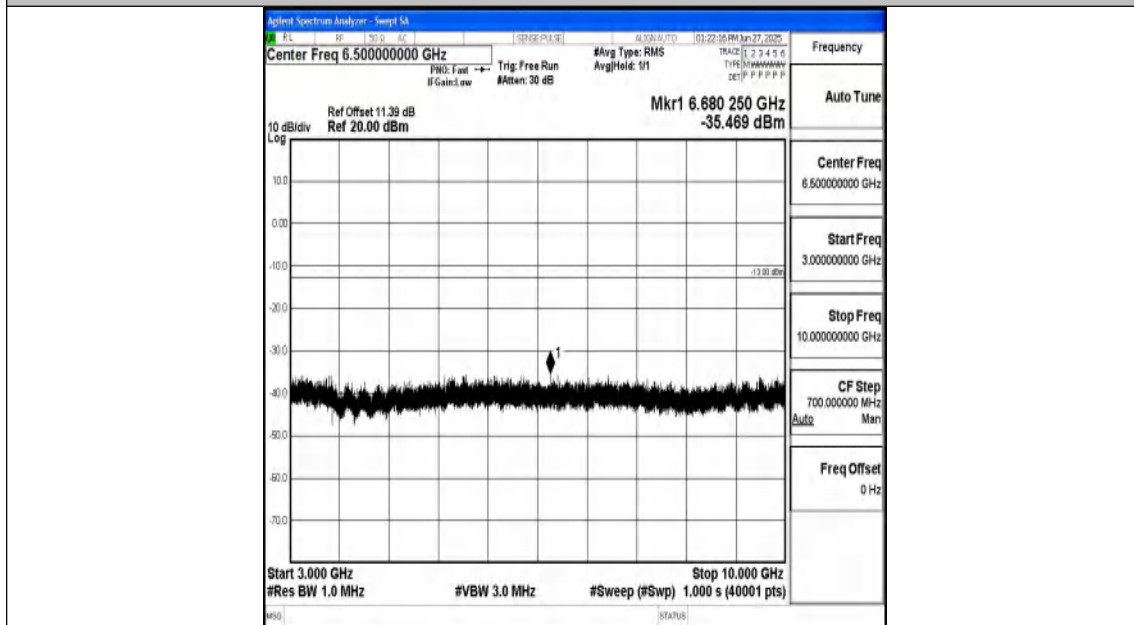
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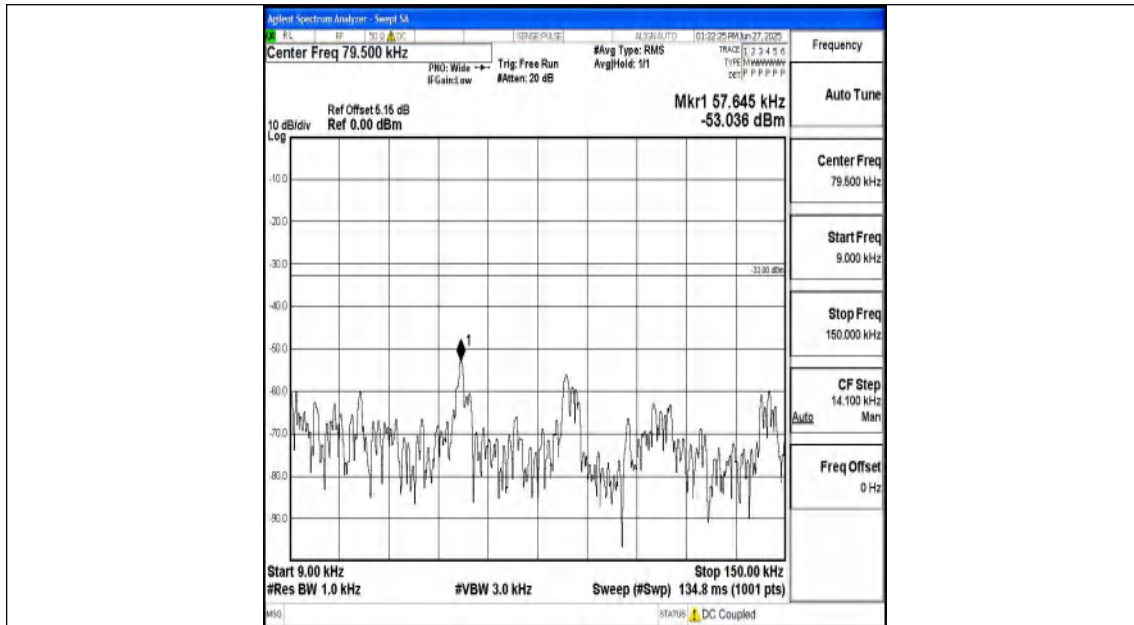
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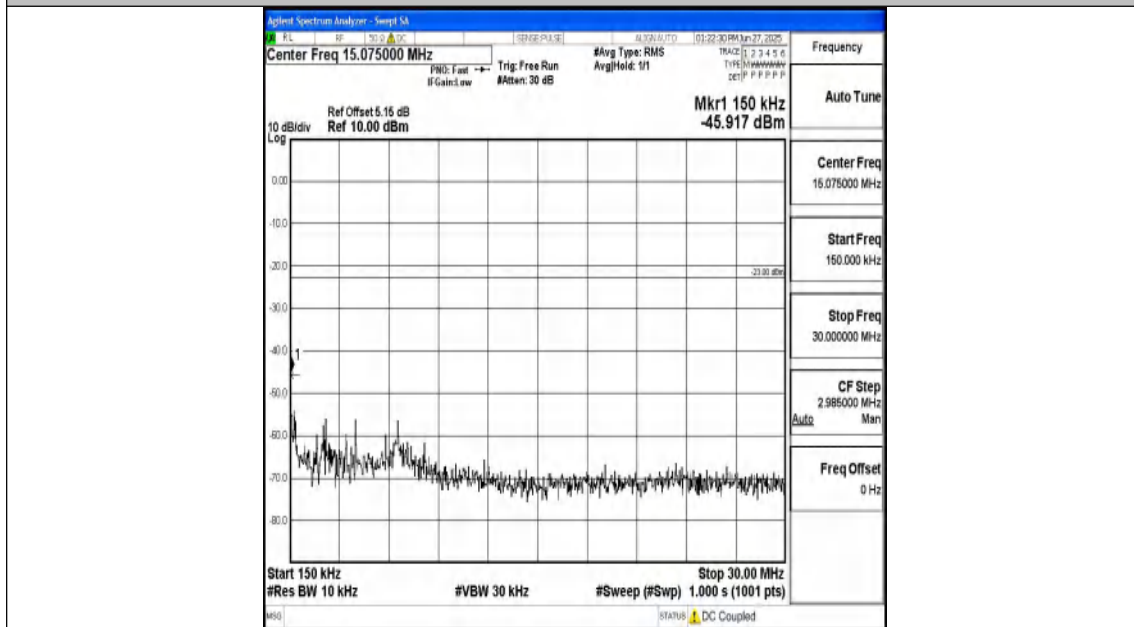
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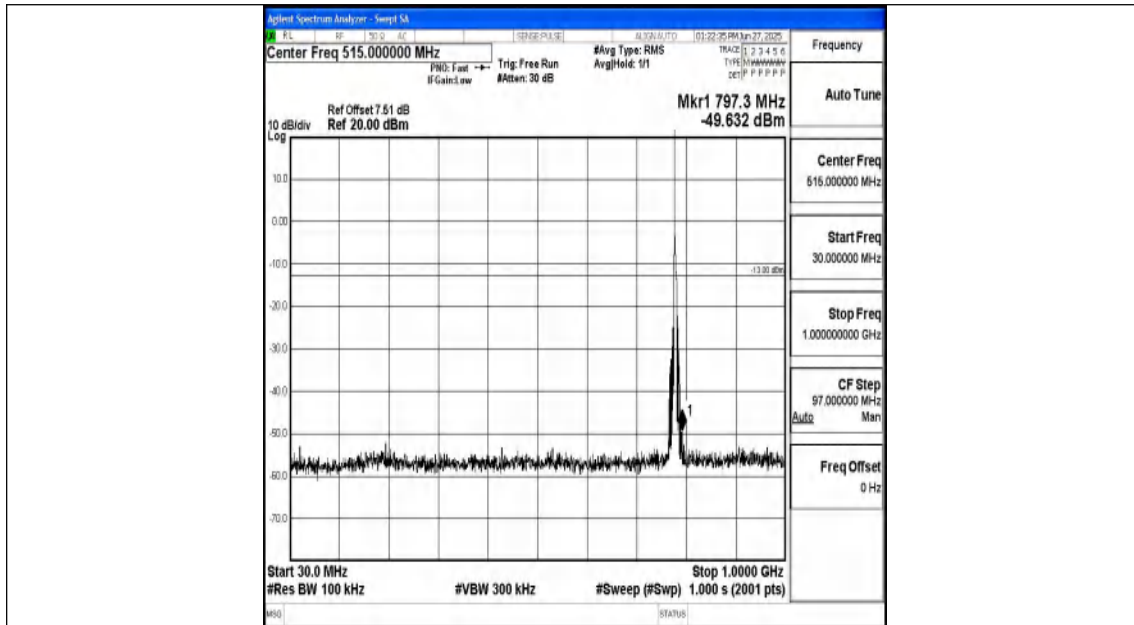
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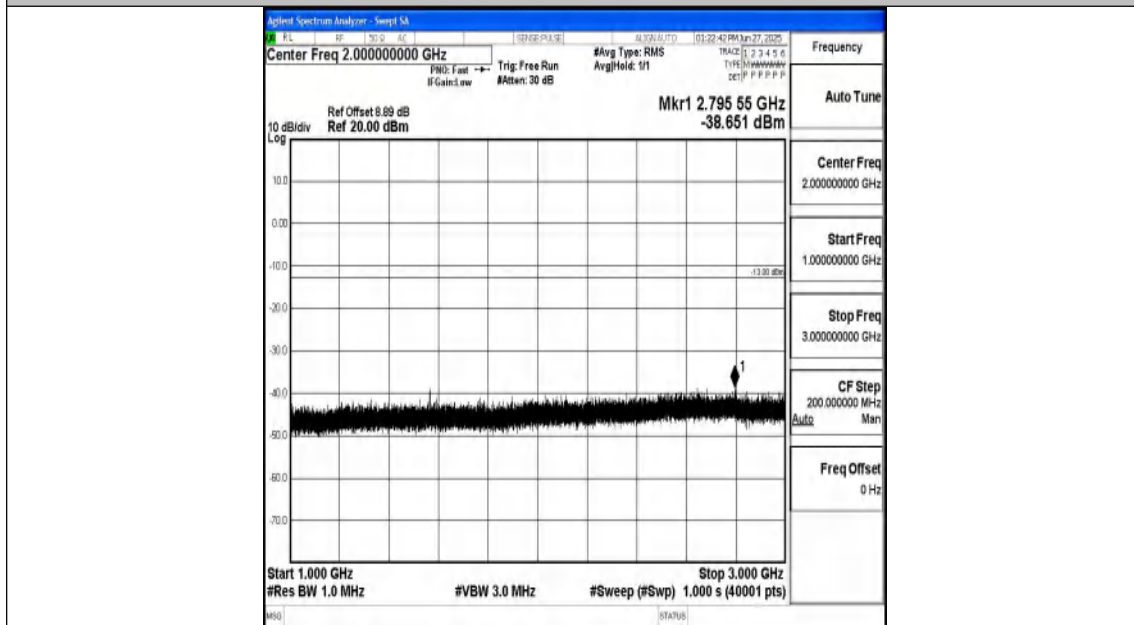
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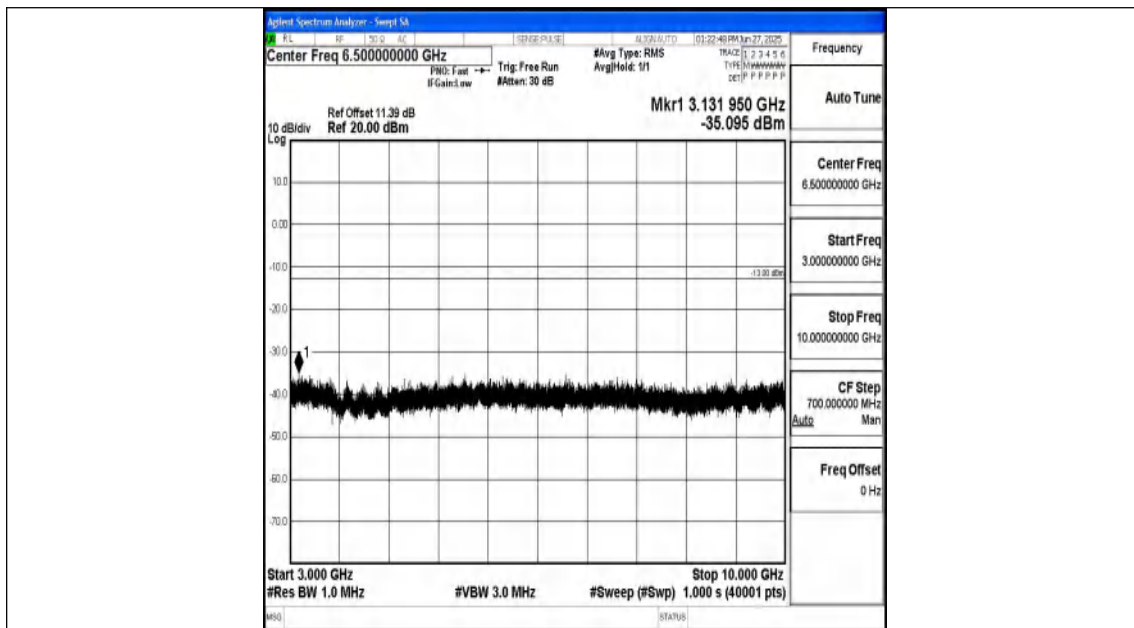
Band13_5MHz_QPSK_23255_1RB#0_0.15~30_0.15~30



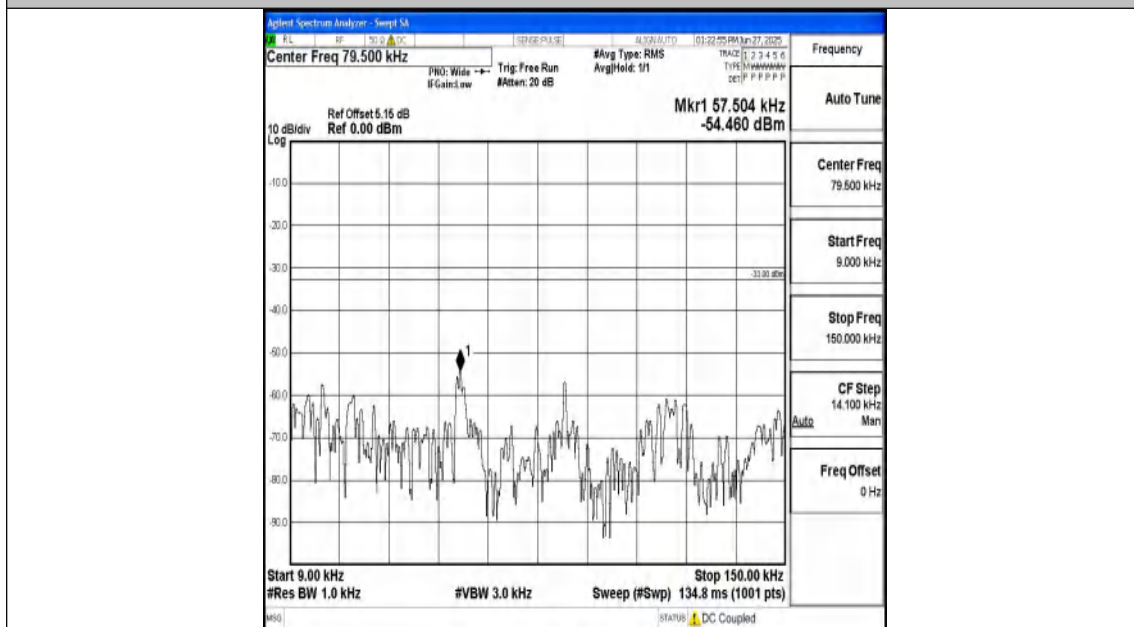
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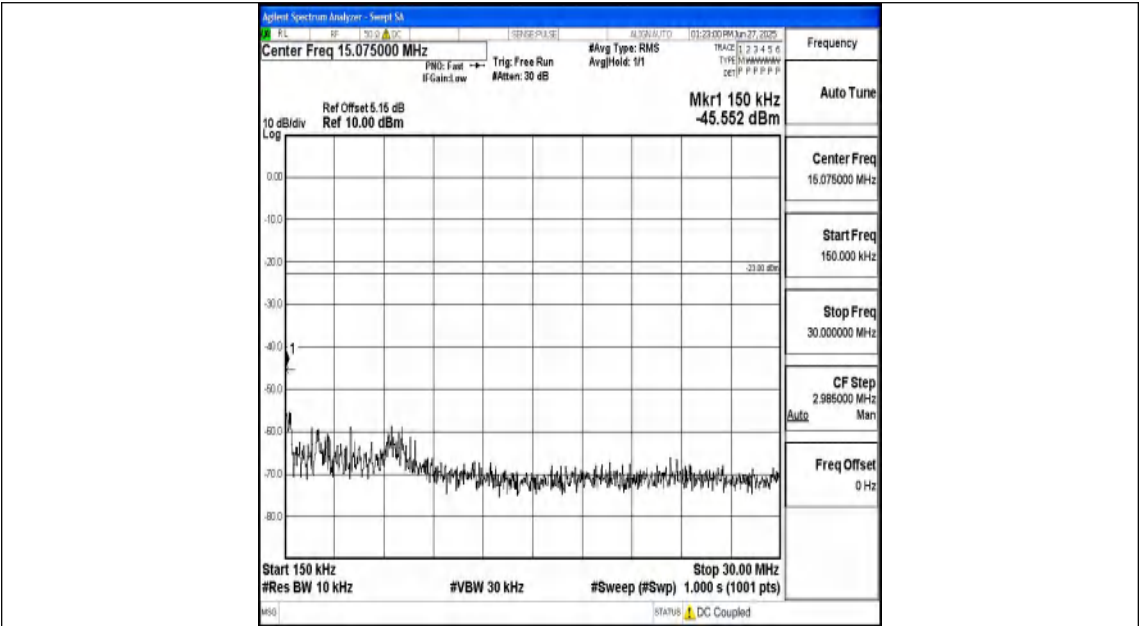
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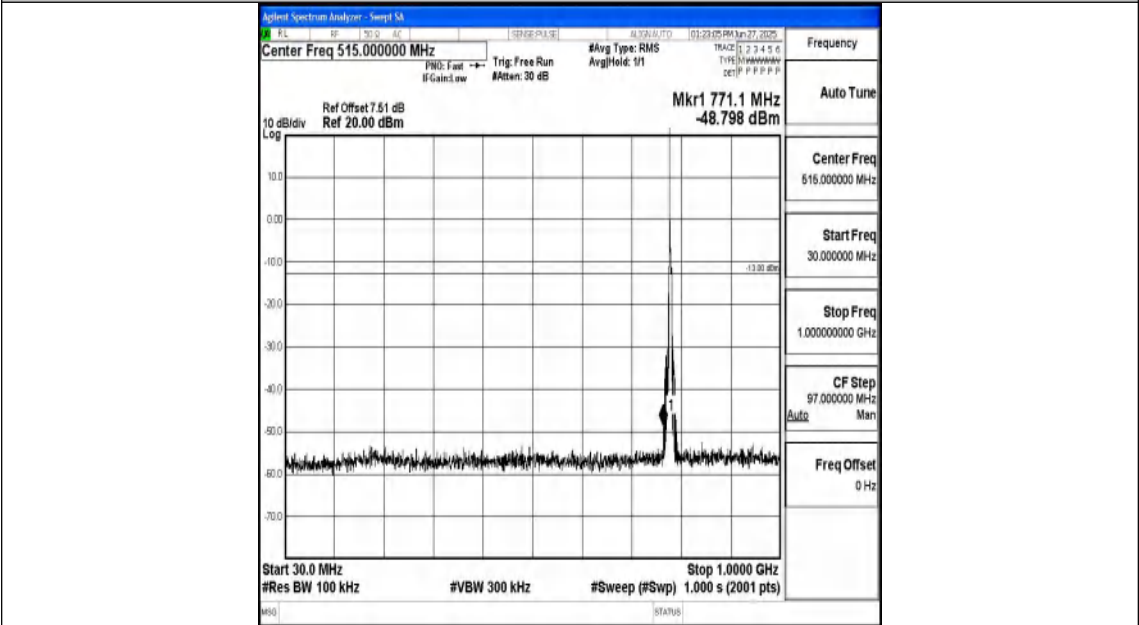
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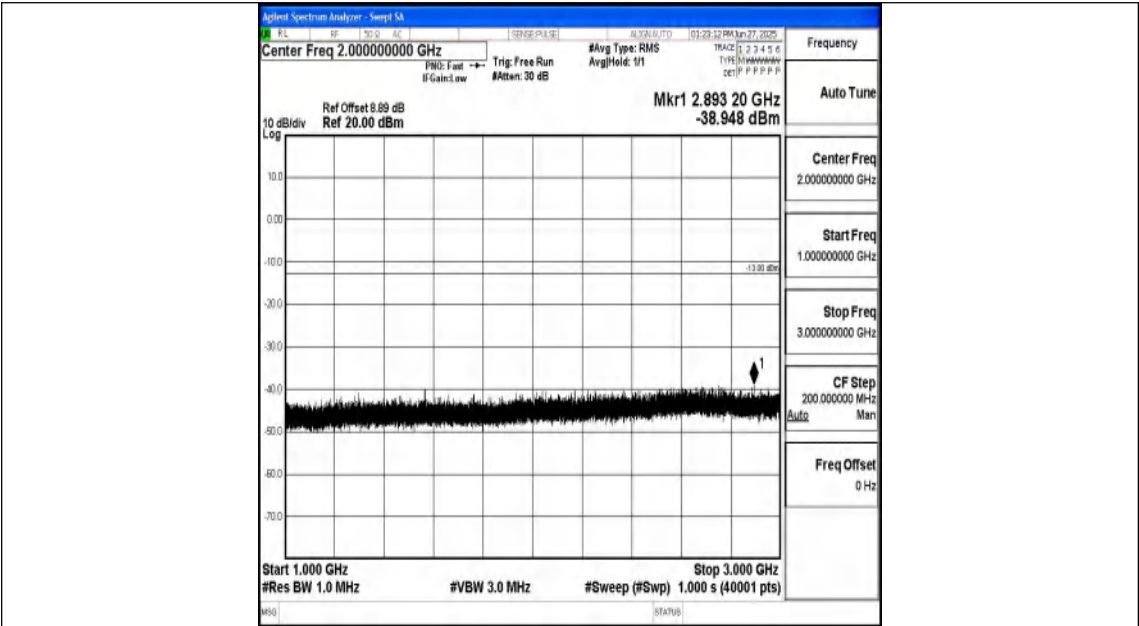
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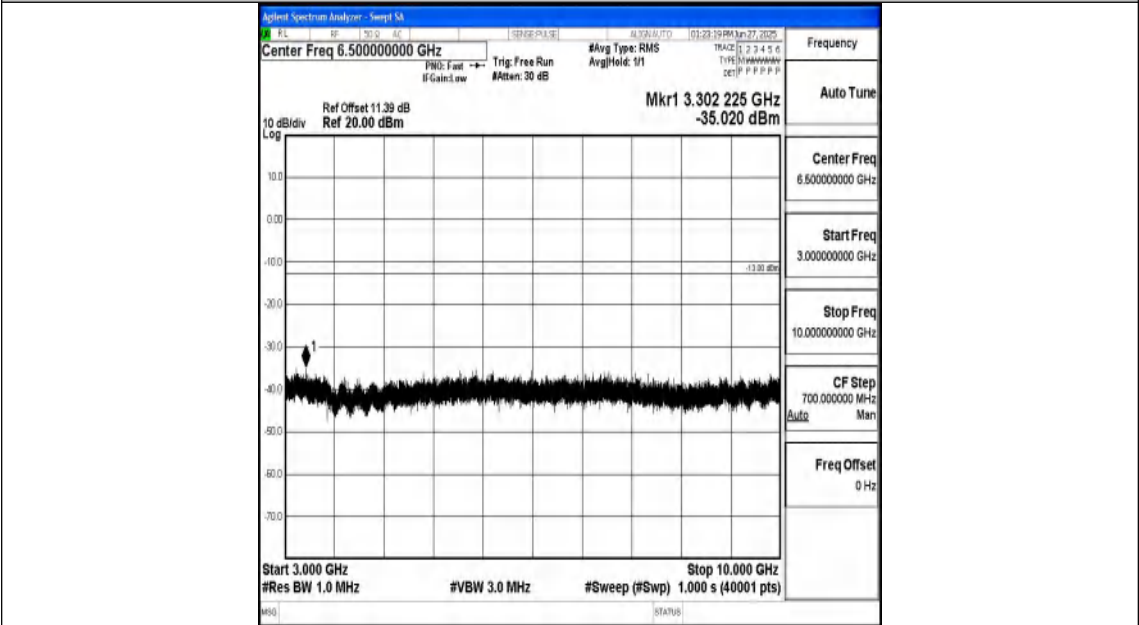
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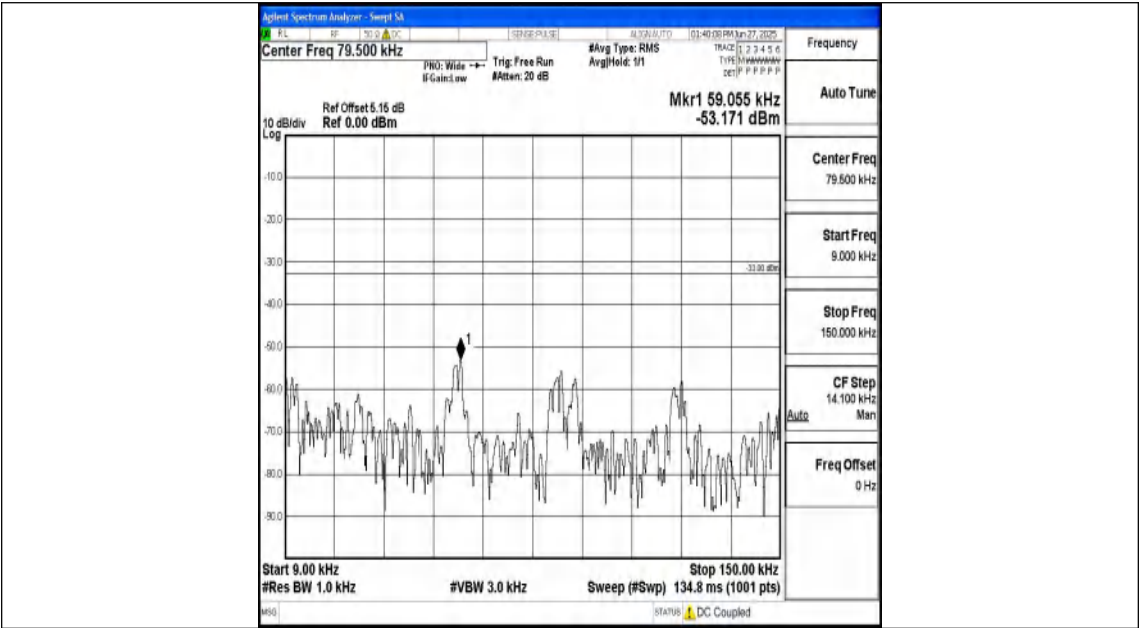
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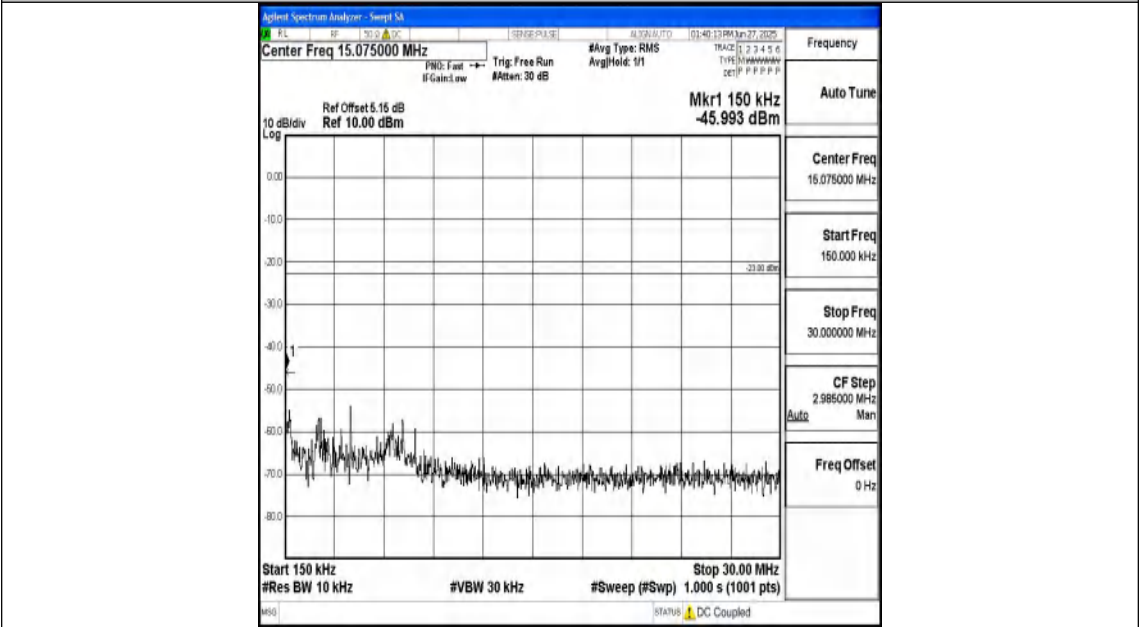
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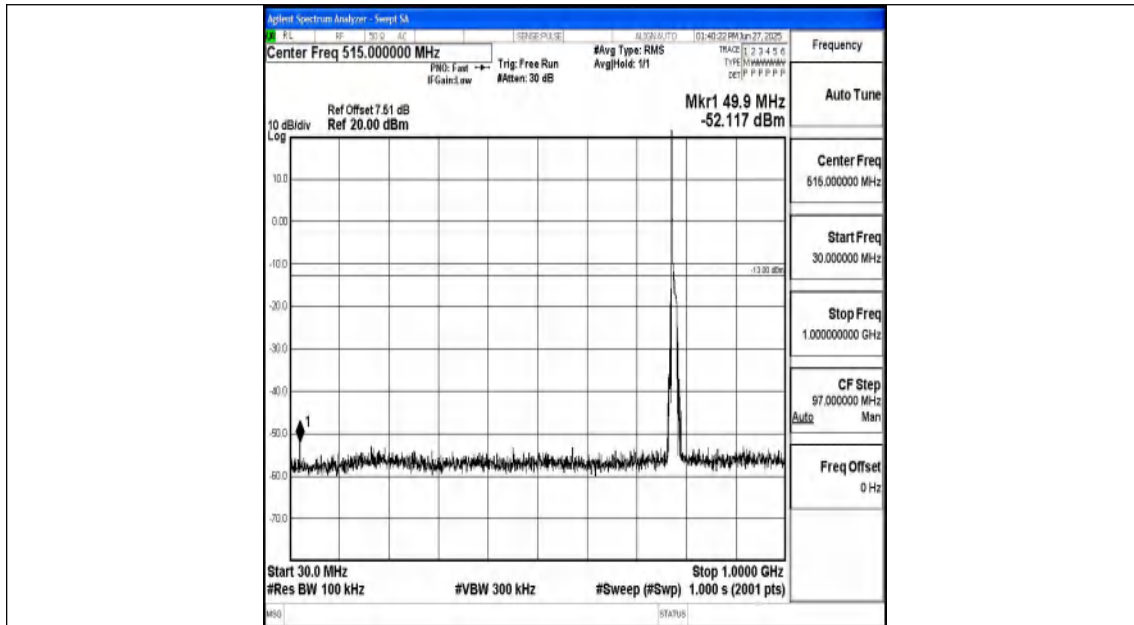
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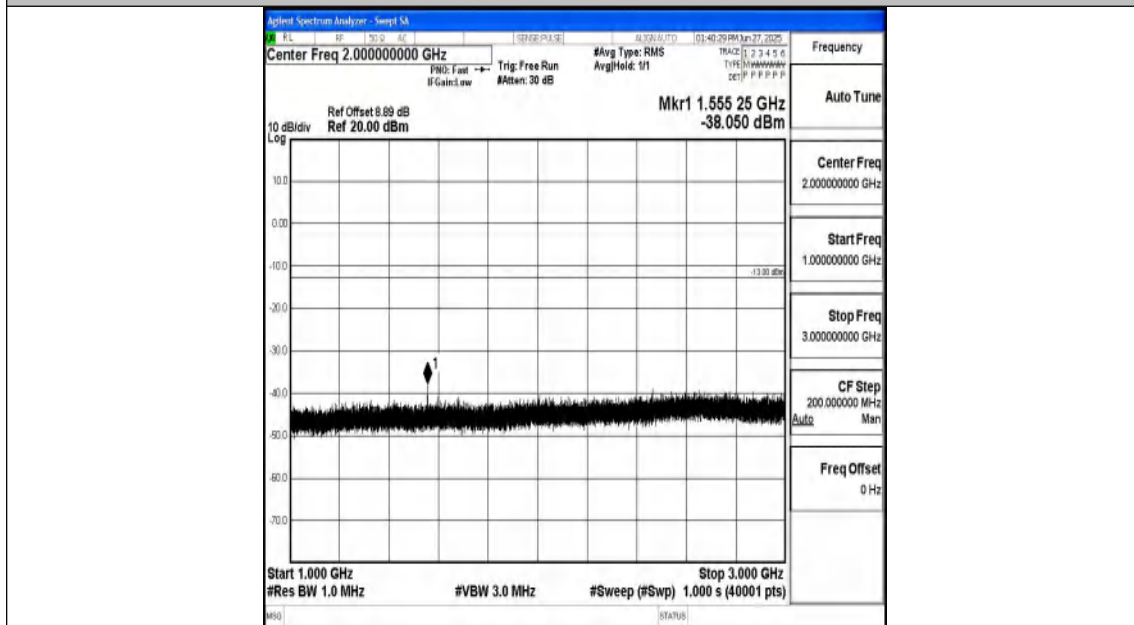
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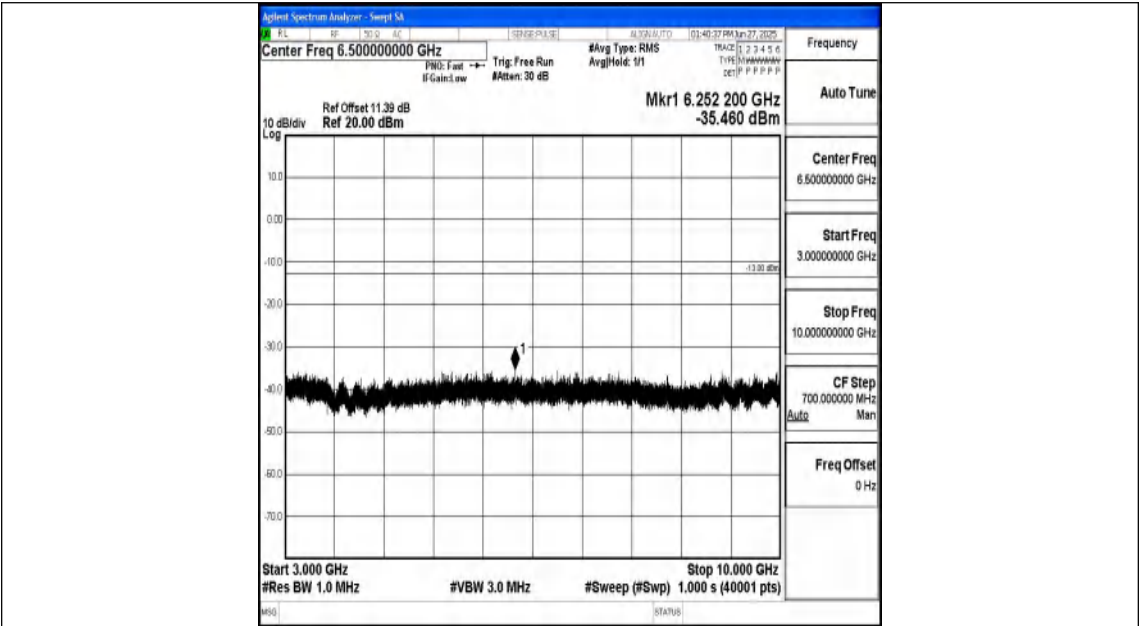
Band13_10MHz_QPSK_23230_1RB#0_0.15~30_0.15~30



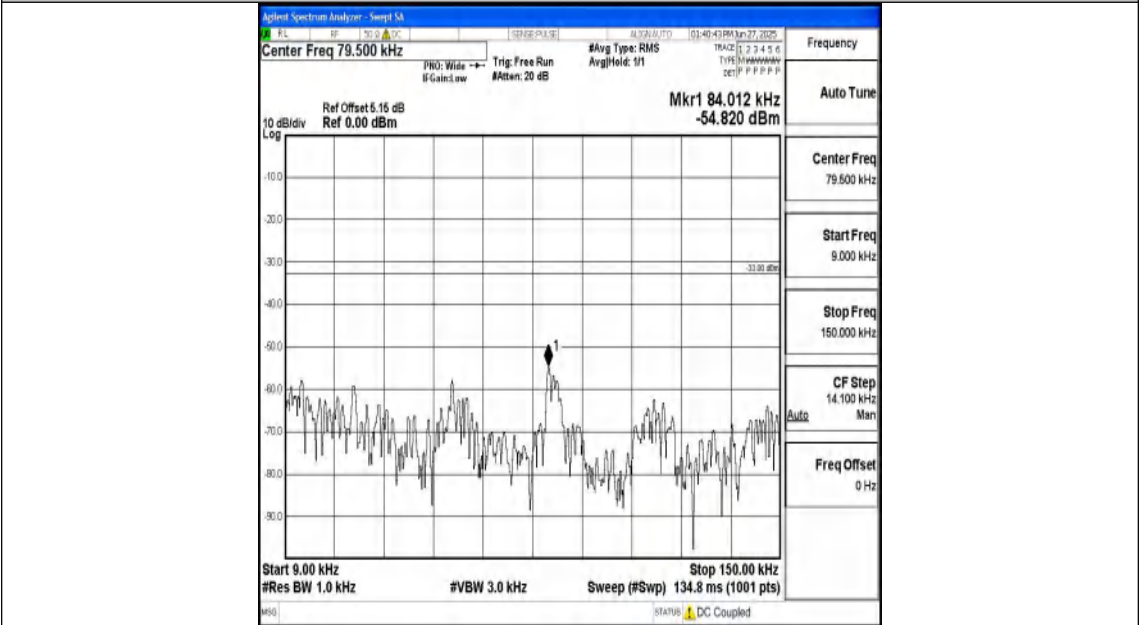
Band13_10MHz_QPSK_23230_1RB#0_30~1000_30~1000



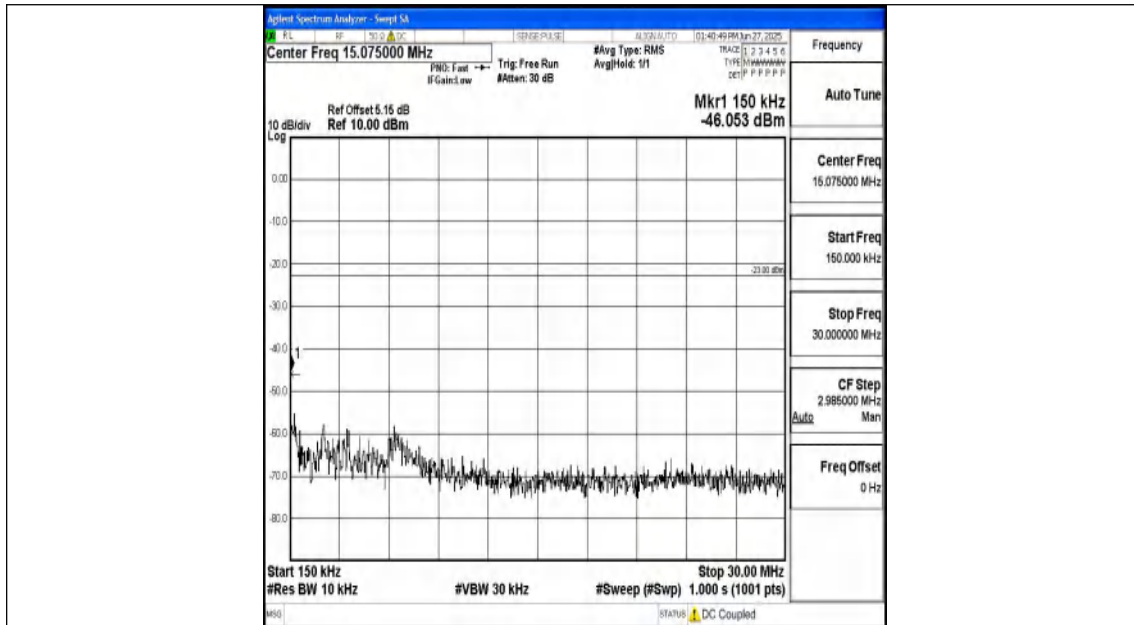
Band13_10MHz_QPSK_23230_1RB#0_1000~3000_1000~3000



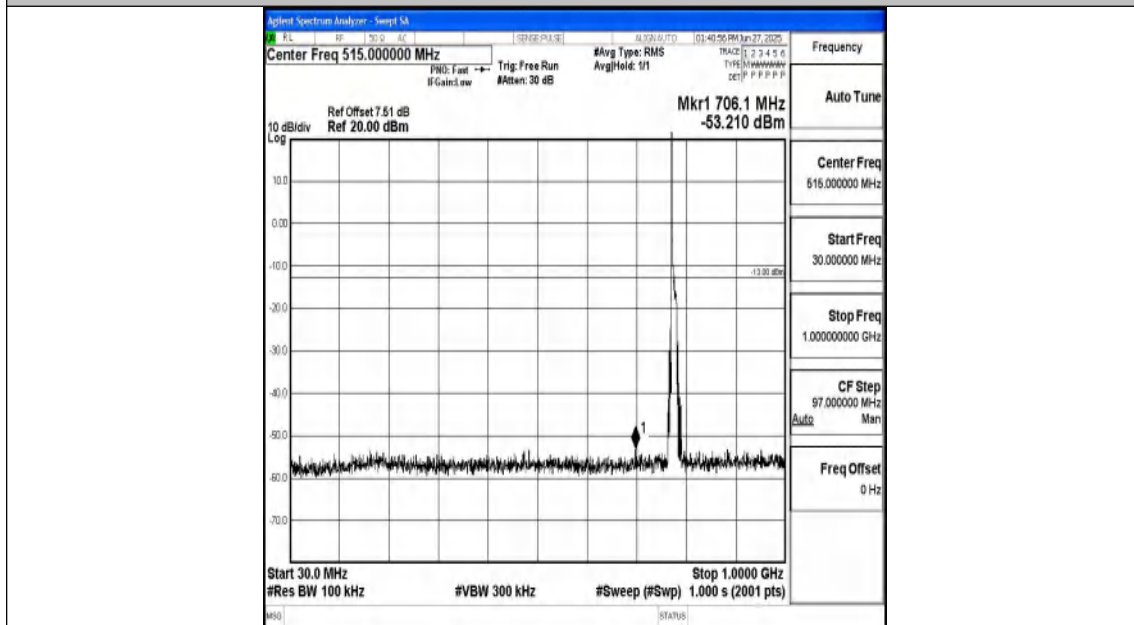
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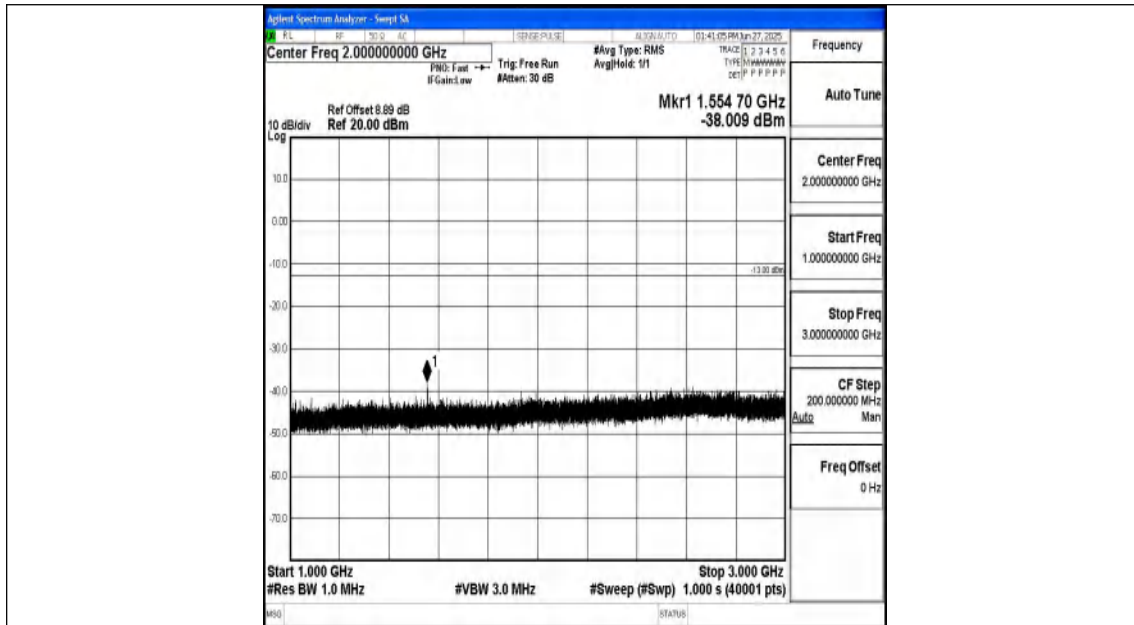
Band13_10MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15



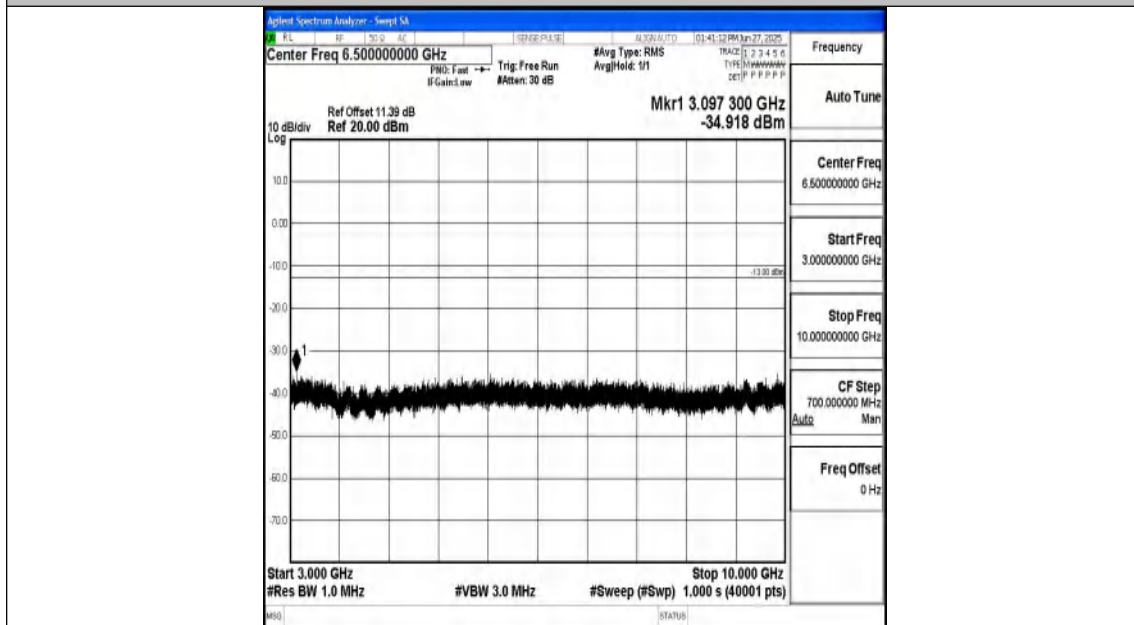
Band13_10MHz_16QAM_23230_1RB#0_0.15~30_0.15~30



Band13_10MHz_16QAM_23230_1RB#0_30~1000_30~1000



Band13_10MHz_16QAM_23230_1RB#0_1000~3000_1000~3000



Band13_10MHz_16QAM_23230_1RB#0_3000~10000_3000~10000