

Appendix RF Test Data for LTE Band 13

Company: : AGRES SISTEMAS ELETRONICOS S.A.

EUT : 12.3-inch Rugged Embedded Computer

Model Number : agroNave 12W

FCC ID : 2BDDS-AGRONAVE12W

Report No. : CTA25081101708

Reviewed By : Eric Wang

1 Conducted Output Power Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	22.22	PASS
Band13	5MHz	16QAM	23205	1RB#0	22.12	PASS
Band13	5MHz	QPSK	23205	1RB#12	22.36	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.28	PASS
Band13	5MHz	QPSK	23205	1RB#24	22.06	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.34	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.24	PASS
Band13	5MHz	16QAM	23205	12RB#0	22.28	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.08	PASS
Band13	5MHz	16QAM	23205	12RB#6	22.17	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.21	PASS
Band13	5MHz	16QAM	23205	12RB#13	21.86	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.10	PASS
Band13	5MHz	16QAM	23205	25RB#0	22.33	PASS
Band13	5MHz	QPSK	23230	1RB#0	22.34	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.12	PASS
Band13	5MHz	QPSK	23230	1RB#12	22.01	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.08	PASS
Band13	5MHz	QPSK	23230	1RB#24	21.95	PASS
Band13	5MHz	16QAM	23230	1RB#24	21.91	PASS
Band13	5MHz	QPSK	23230	12RB#0	21.63	PASS
Band13	5MHz	16QAM	23230	12RB#0	21.35	PASS
Band13	5MHz	QPSK	23230	12RB#6	21.46	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.27	PASS
Band13	5MHz	QPSK	23230	12RB#13	21.38	PASS
Band13	5MHz	16QAM	23230	12RB#13	21.22	PASS
Band13	5MHz	QPSK	23230	25RB#0	21.78	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.61	PASS
Band13	5MHz	QPSK	23255	1RB#0	21.78	PASS
Band13	5MHz	16QAM	23255	1RB#0	21.28	PASS
Band13	5MHz	QPSK	23255	1RB#12	21.88	PASS
Band13	5MHz	16QAM	23255	1RB#12	21.80	PASS
Band13	5MHz	QPSK	23255	1RB#24	21.44	PASS
Band13	5MHz	16QAM	23255	1RB#24	21.47	PASS
Band13	5MHz	QPSK	23255	12RB#0	21.40	PASS
Band13	5MHz	16QAM	23255	12RB#0	22.17	PASS
Band13	5MHz	QPSK	23255	12RB#6	22.38	PASS

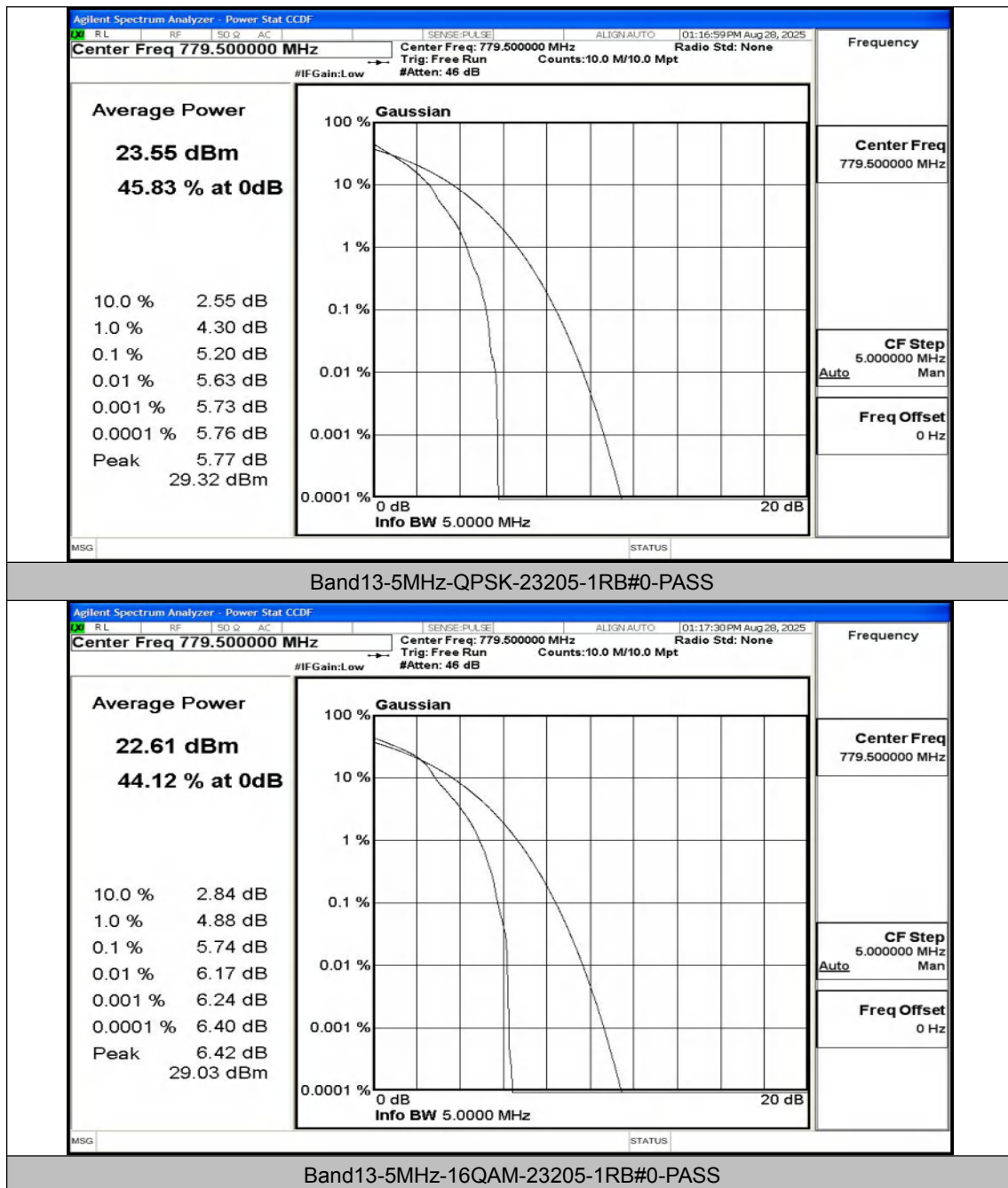
Band13	5MHz	16QAM	23255	12RB#6	21.62	PASS
Band13	5MHz	QPSK	23255	12RB#13	21.70	PASS
Band13	5MHz	16QAM	23255	12RB#13	22.34	PASS
Band13	5MHz	QPSK	23255	25RB#0	21.69	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.38	PASS
Band13	10MHz	QPSK	23230	1RB#0	21.92	PASS
Band13	10MHz	16QAM	23230	1RB#0	21.85	PASS
Band13	10MHz	QPSK	23230	1RB#24	21.91	PASS
Band13	10MHz	16QAM	23230	1RB#24	21.79	PASS
Band13	10MHz	QPSK	23230	1RB#49	21.77	PASS
Band13	10MHz	16QAM	23230	1RB#49	21.64	PASS
Band13	10MHz	QPSK	23230	25RB#0	21.94	PASS
Band13	10MHz	16QAM	23230	25RB#0	22.20	PASS
Band13	10MHz	QPSK	23230	25RB#12	21.83	PASS
Band13	10MHz	16QAM	23230	25RB#12	22.39	PASS
Band13	10MHz	QPSK	23230	25RB#25	22.30	PASS
Band13	10MHz	16QAM	23230	25RB#25	21.88	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.37	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.76	PASS

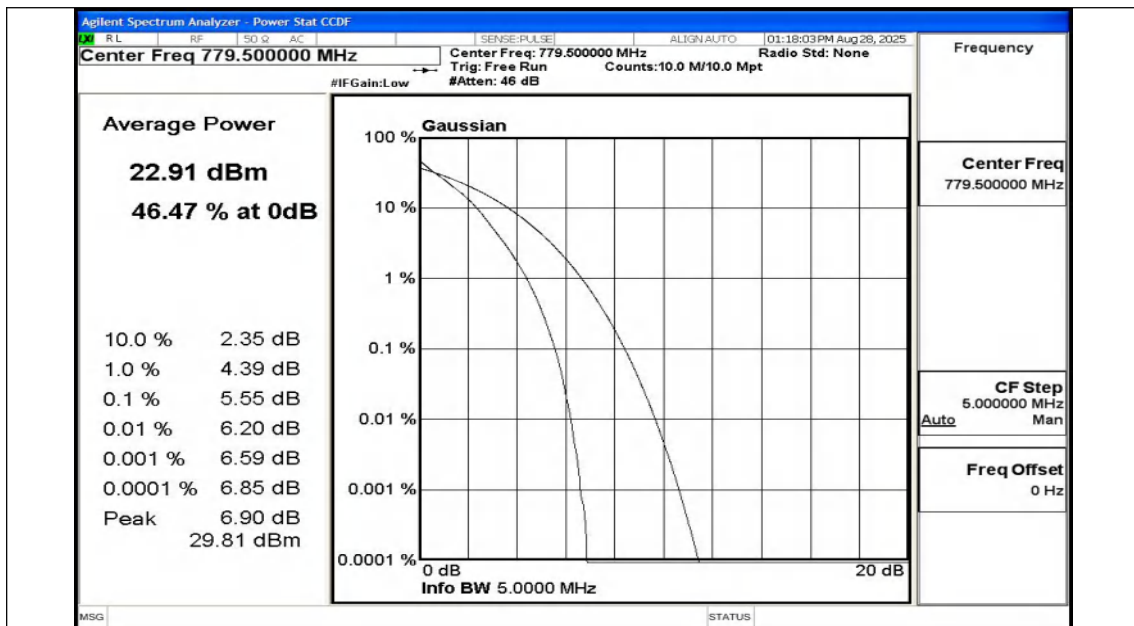
2 Peak-to-Average Ratio(CCDF)

Test Result

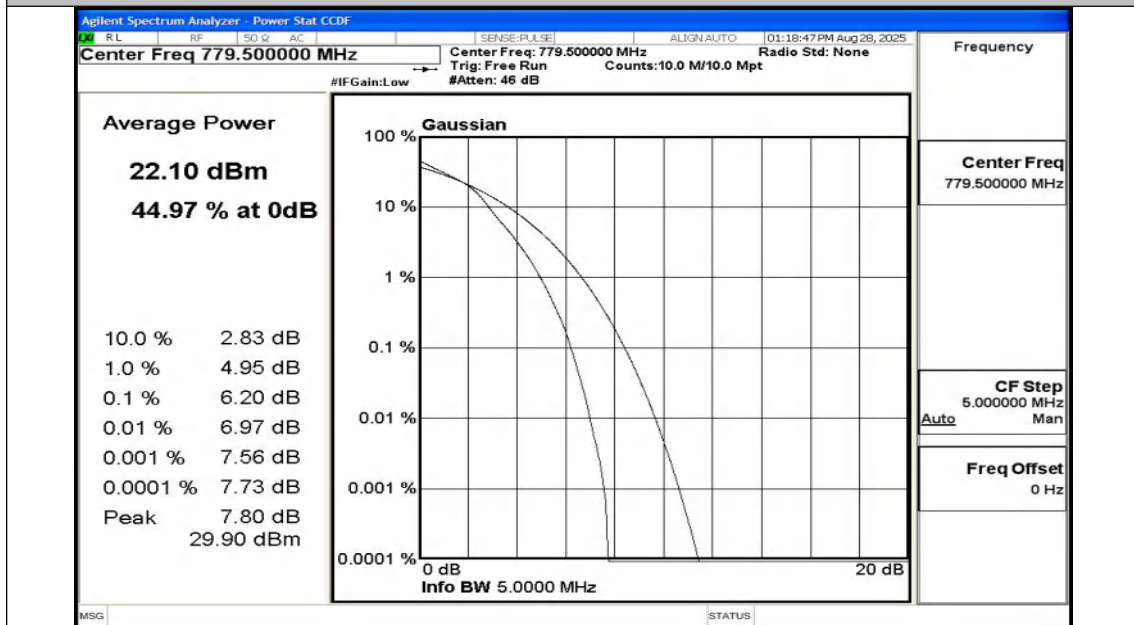
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	5.20	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	5.74	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	5.55	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	6.20	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	5.16	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	5.61	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.64	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	6.32	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	5.27	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	5.85	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.68	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.38	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	5.01	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	5.63	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.68	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	6.37	13	PASS

Test Graphs

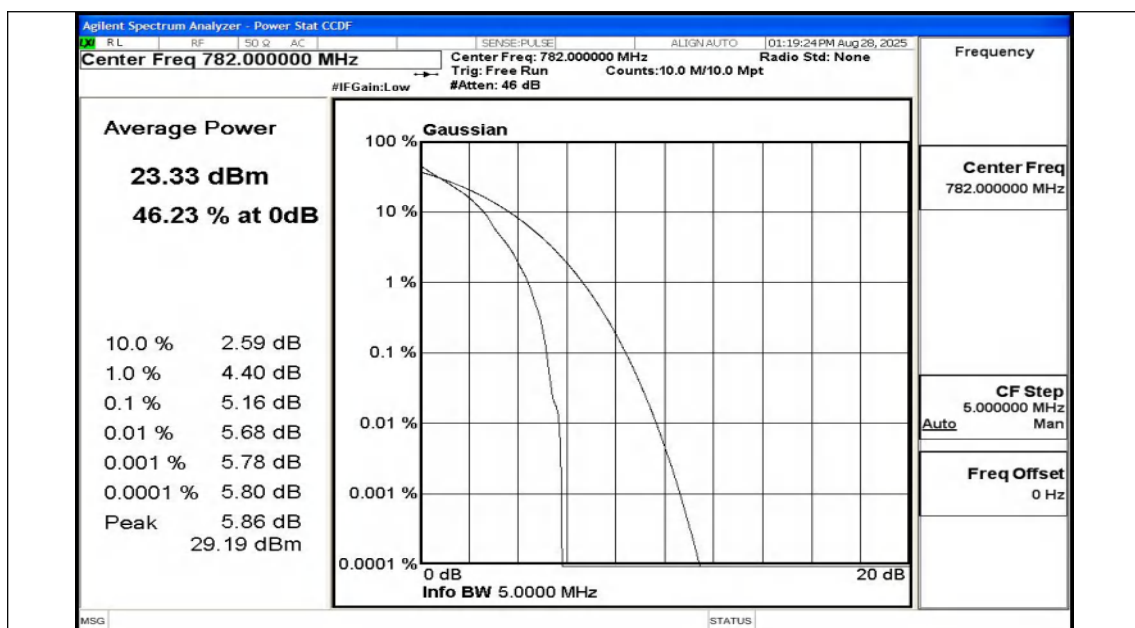




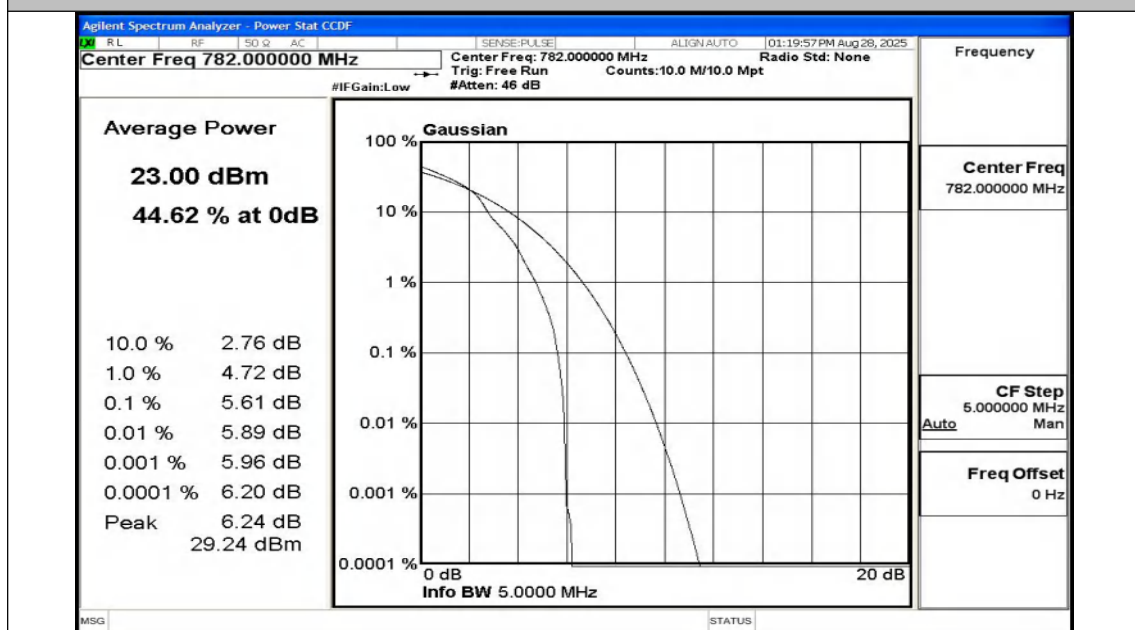
Band13-5MHz-QPSK-23205-25RB#0-PASS



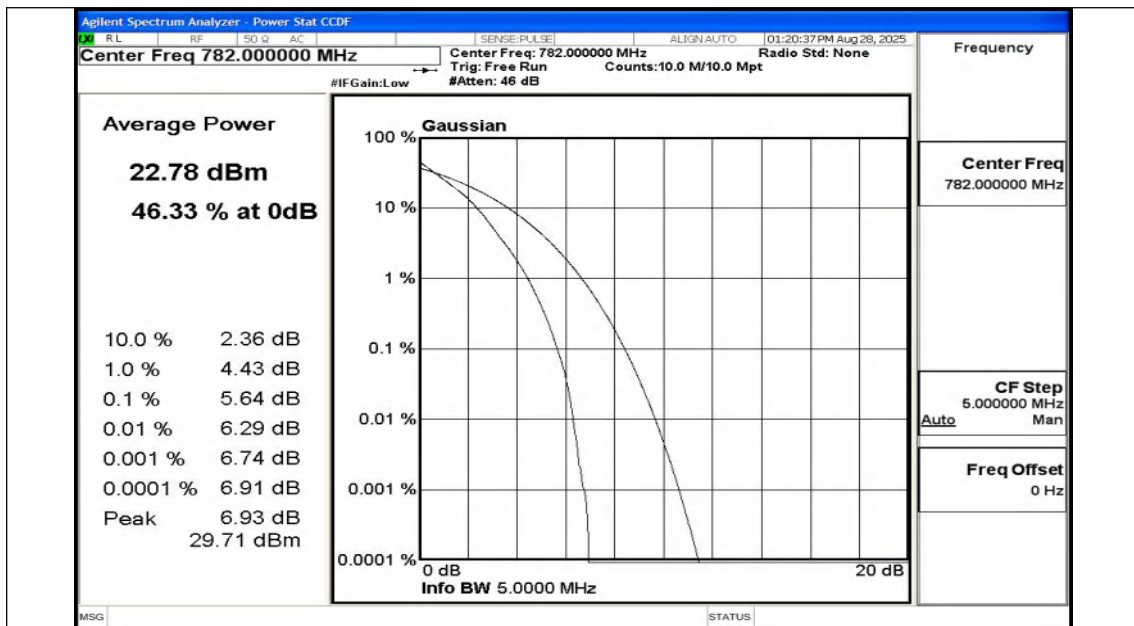
Band13-5MHz-16QAM-23205-25RB#0-PASS



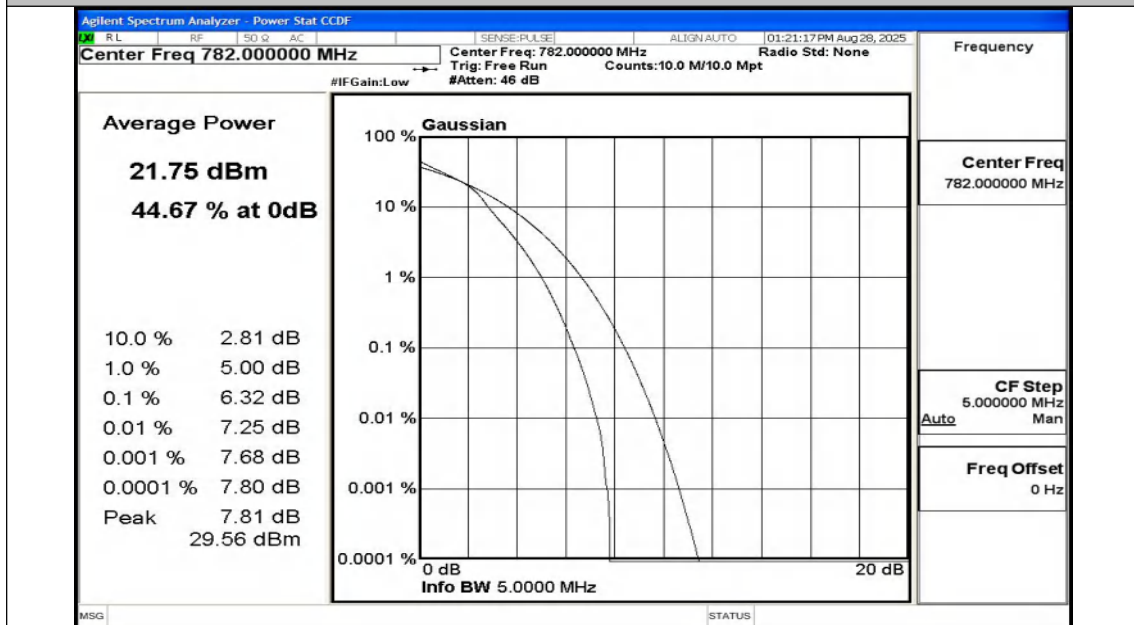
Band13-5MHz-QPSK-23230-1RB#0-PASS



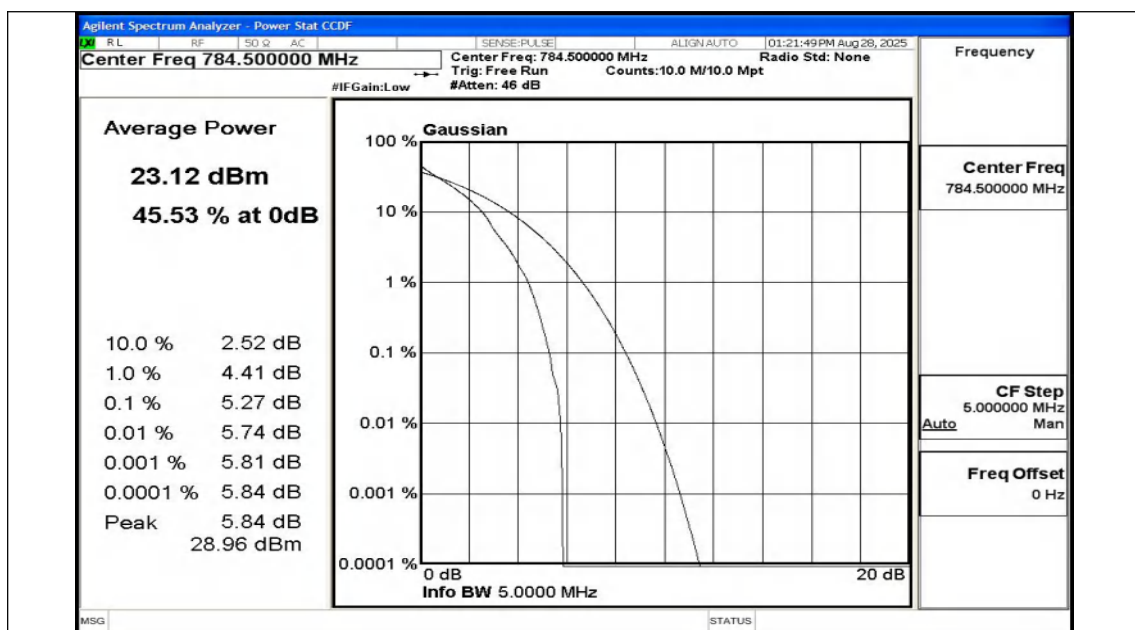
Band13-5MHz-16QAM-23230-1RB#0-PASS



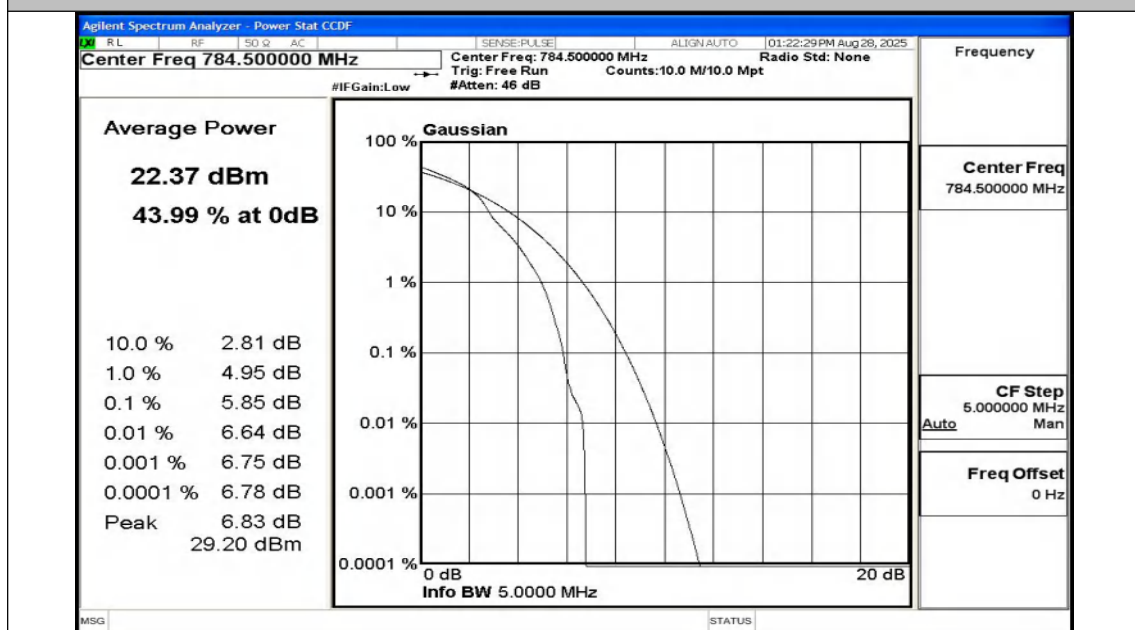
Band13-5MHz-QPSK-23230-25RB#0-PASS



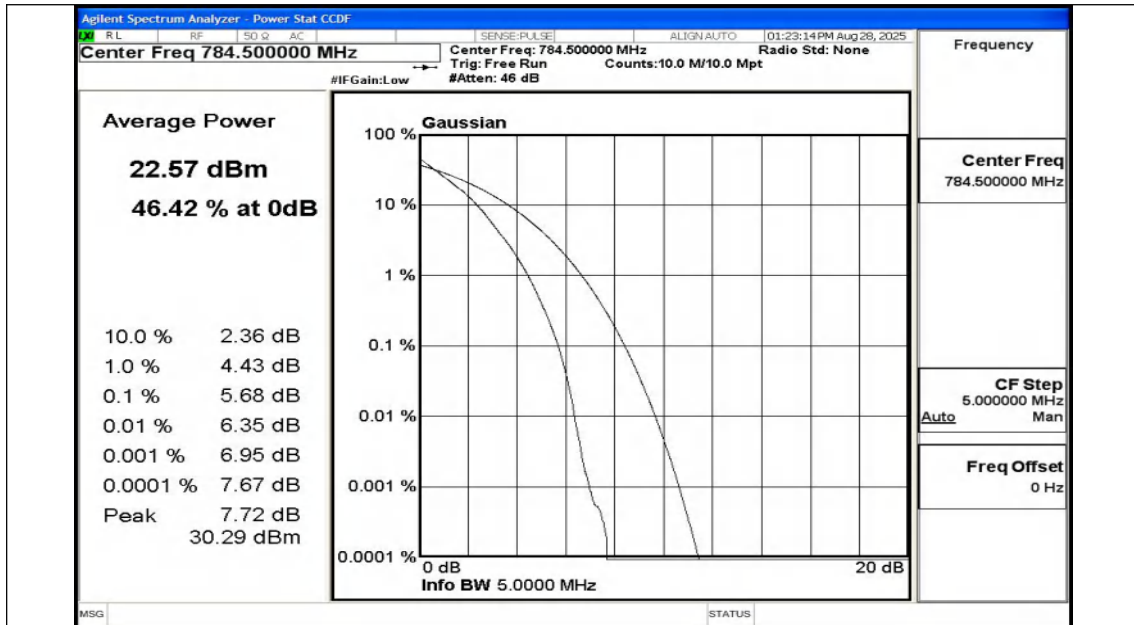
Band13-5MHz-16QAM-23230-25RB#0-PASS



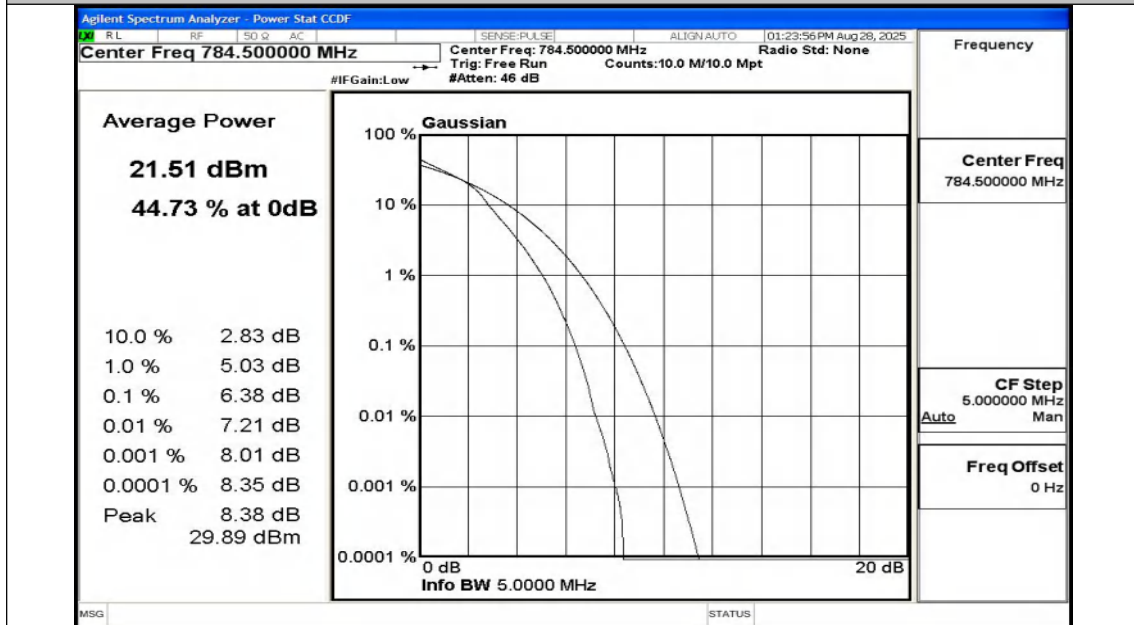
Band13-5MHz-QPSK-23255-1RB#0-PASS



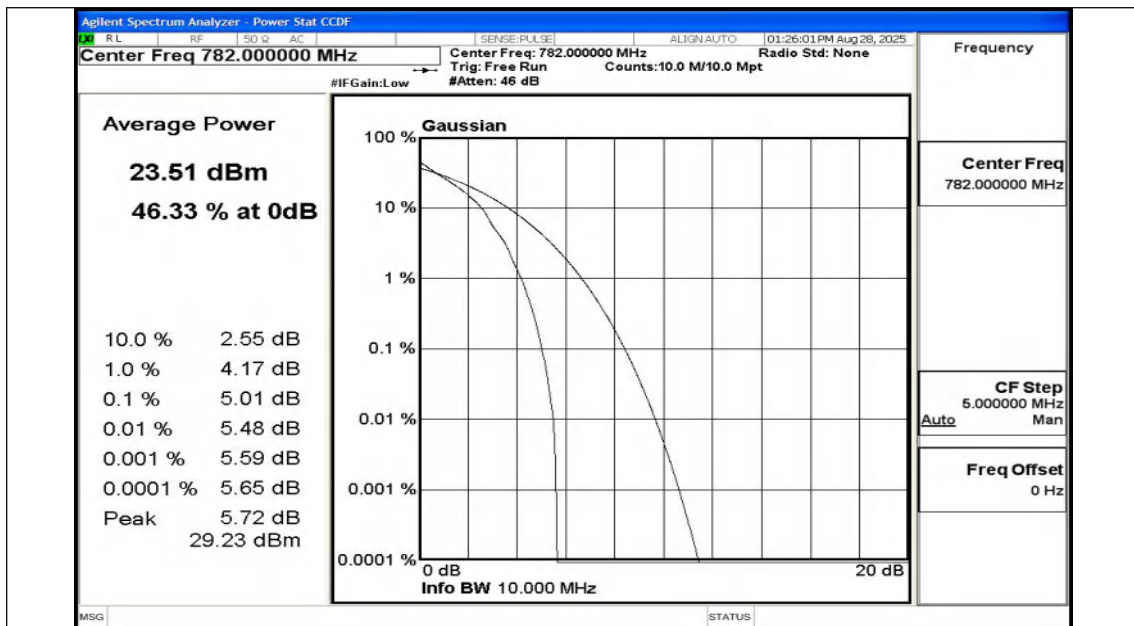
Band13-5MHz-16QAM-23255-1RB#0-PASS



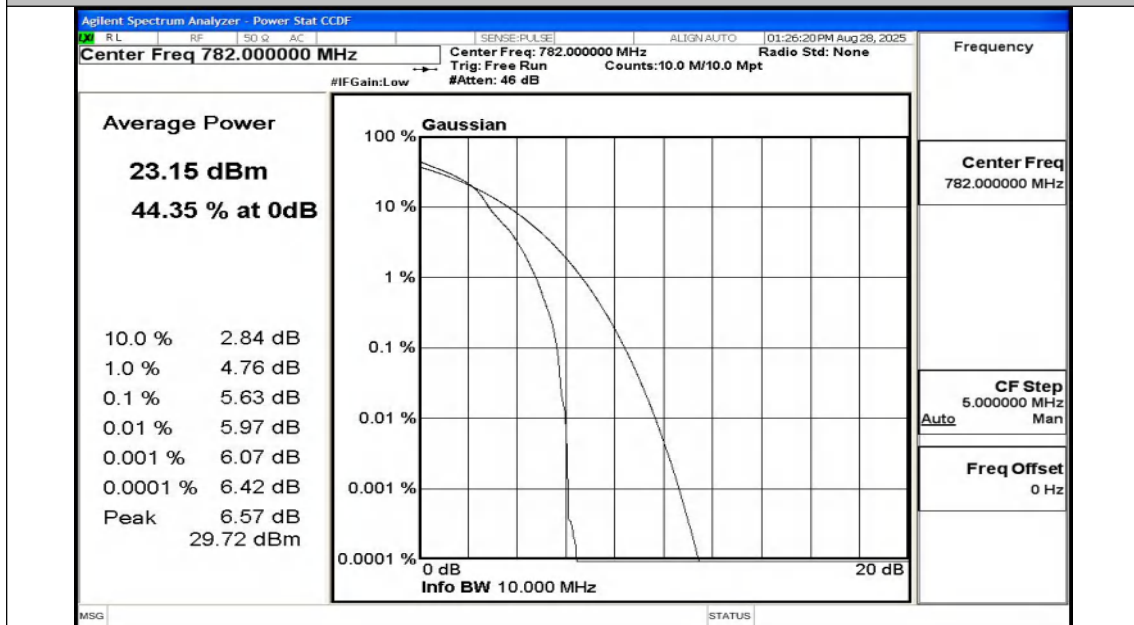
Band13-5MHz-QPSK-23255-25RB#0-PASS



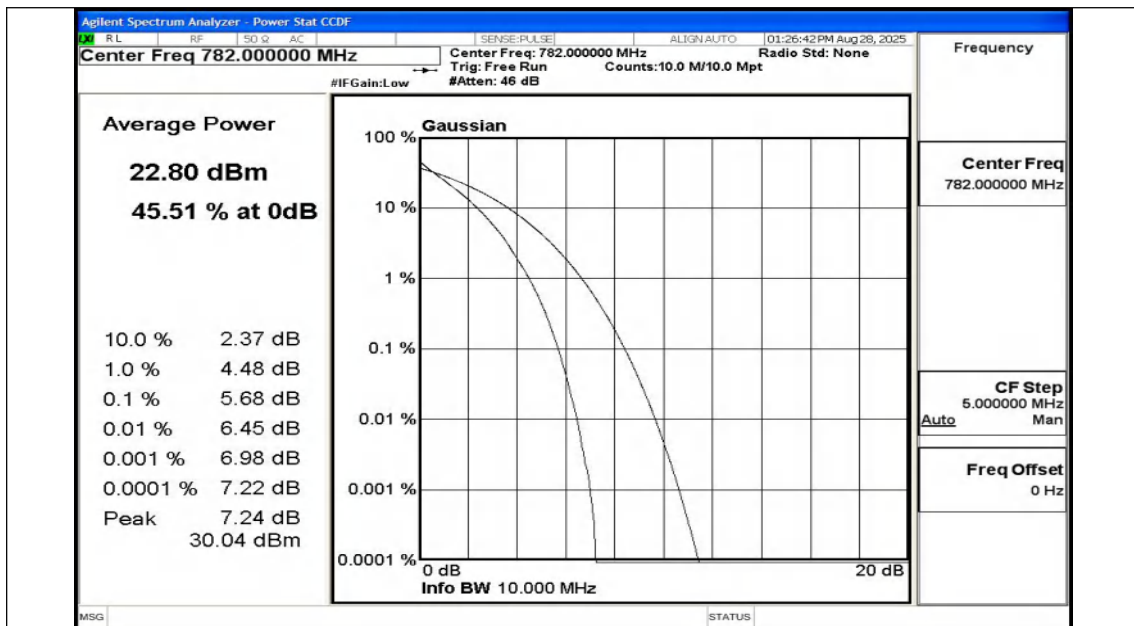
Band13-5MHz-16QAM-23255-25RB#0-PASS



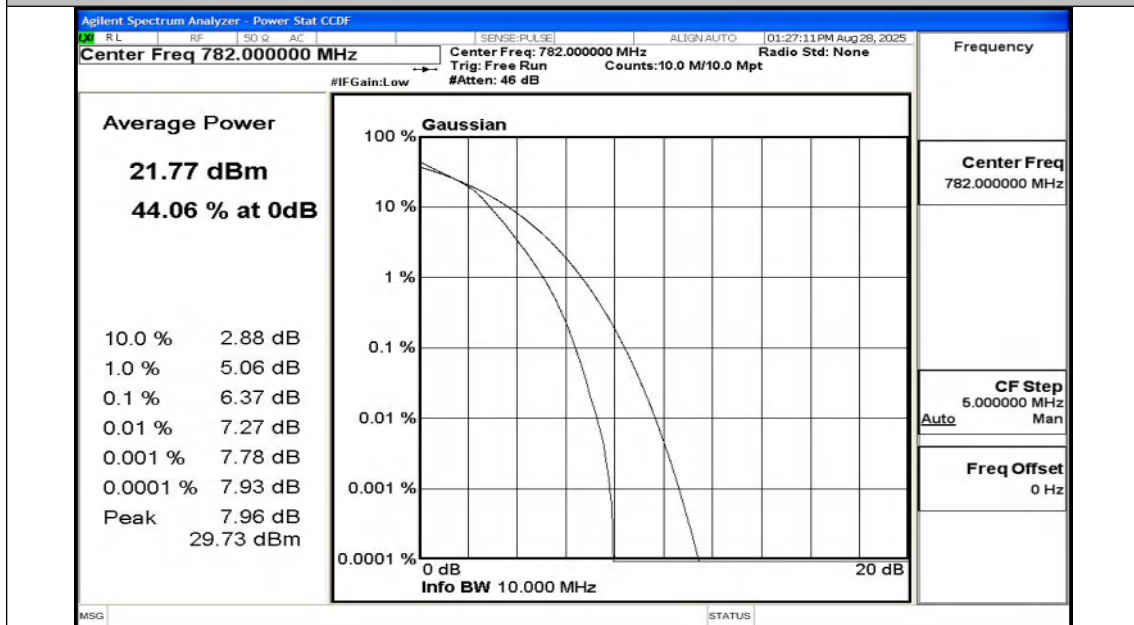
Band13-10MHz-QPSK-23230-1RB#0-PASS



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



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



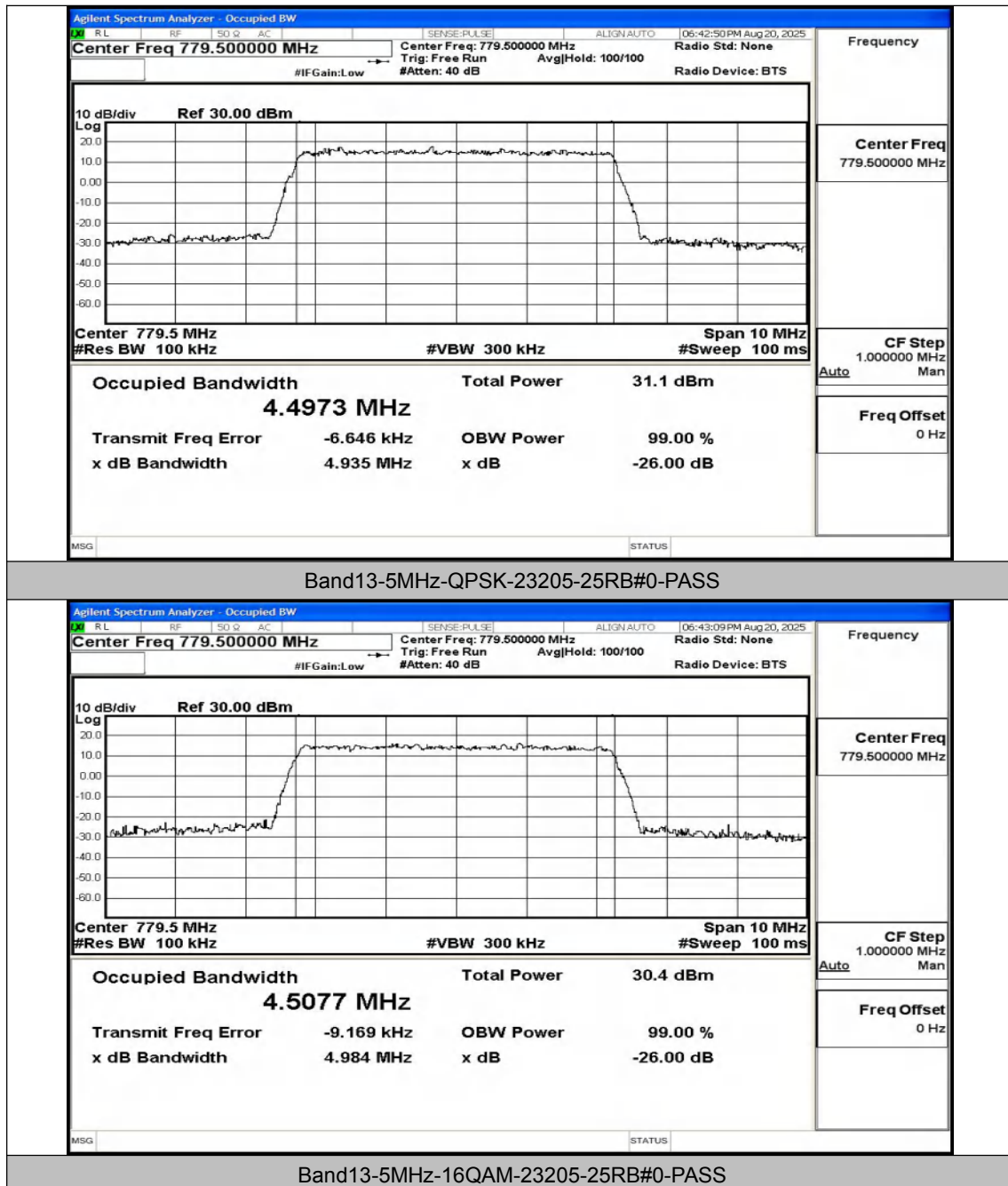
Band13-10MHz-16QAM-23230-50RB#0-PASS

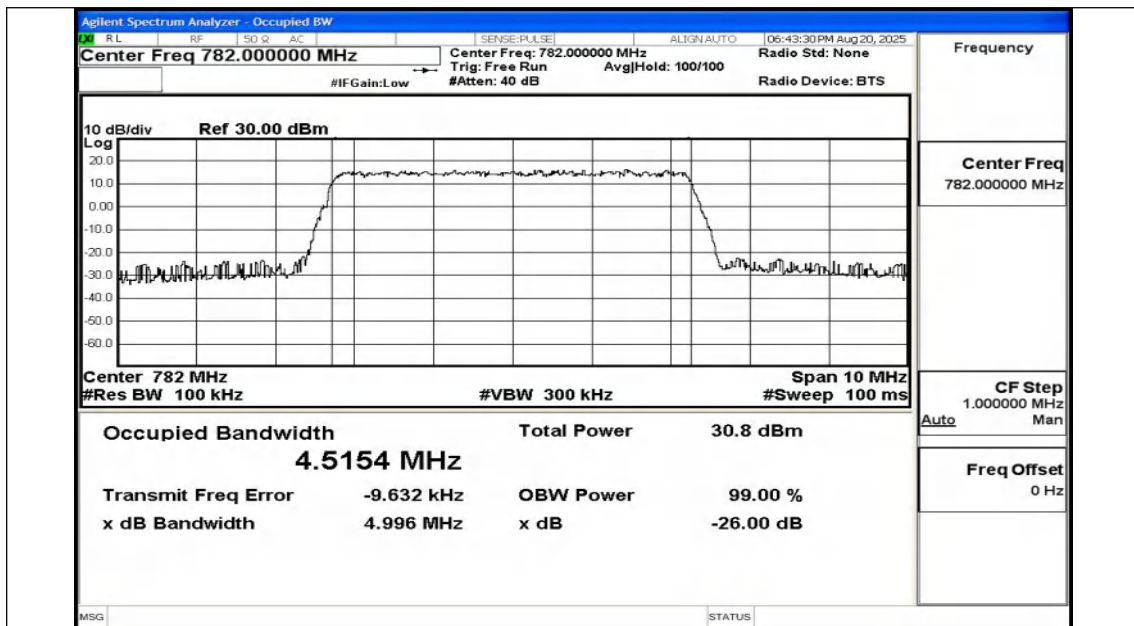
3 26dB Bandwidth and Occupied Bandwidth

Test Result

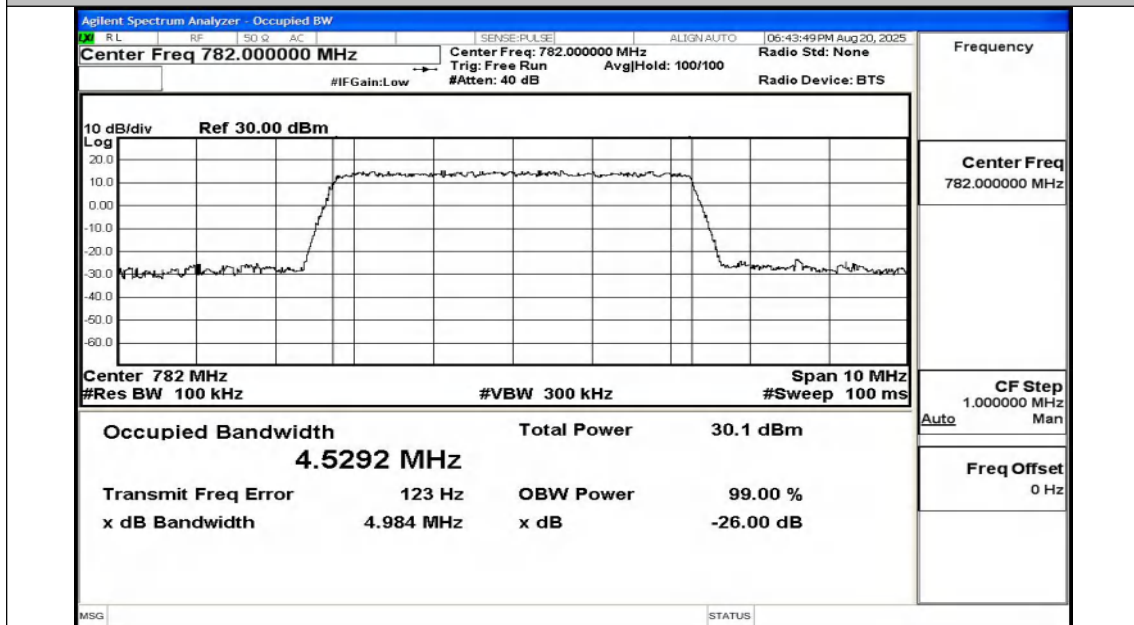
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.4973	4.935	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5077	4.984	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5154	4.996	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5292	4.984	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.4973	4.975	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5079	4.949	PASS
Band13	10MHz	QPSK	23230	50RB#0	9.0168	9.923	PASS
Band13	10MHz	16QAM	23230	50RB#0	9.0240	9.960	PASS

Test Graphs

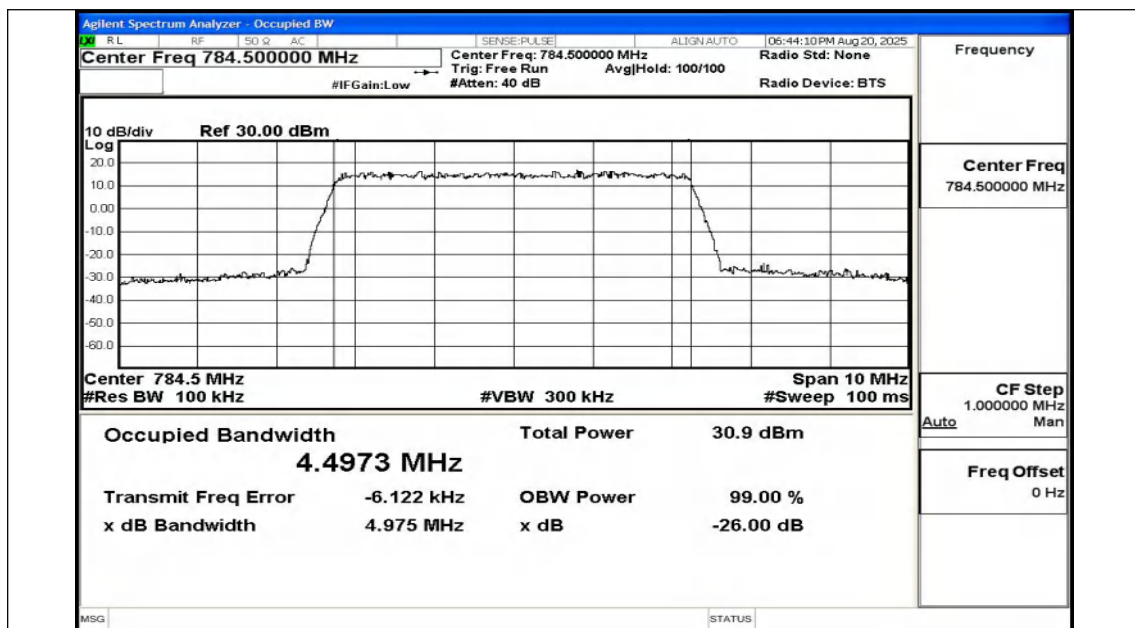




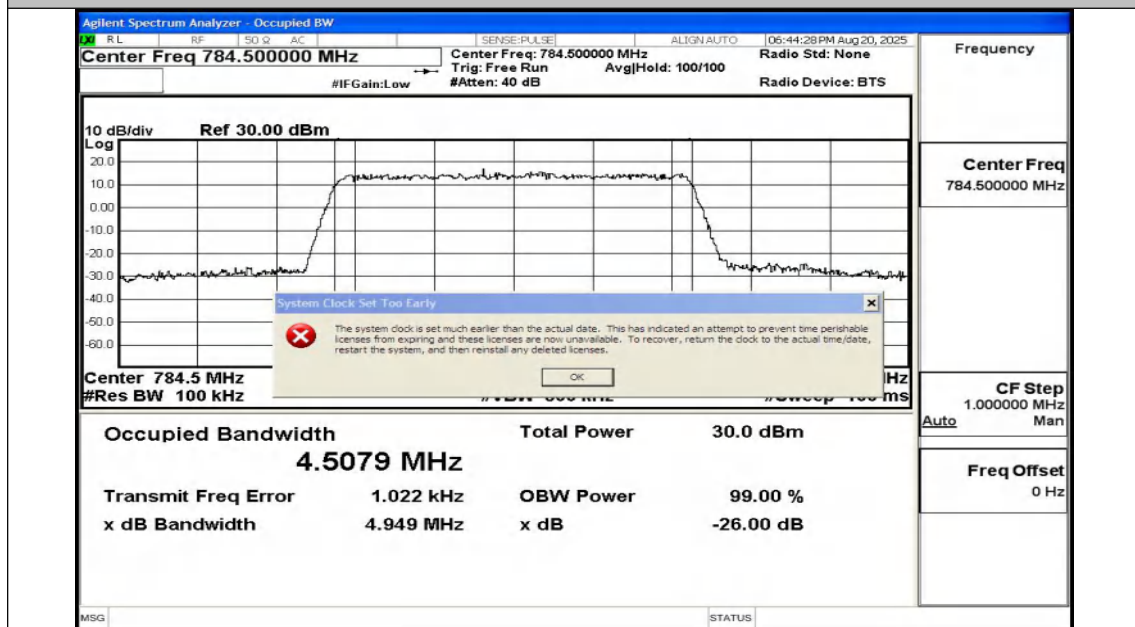
Band13-5MHz-QPSK-23230-25RB#0-PASS



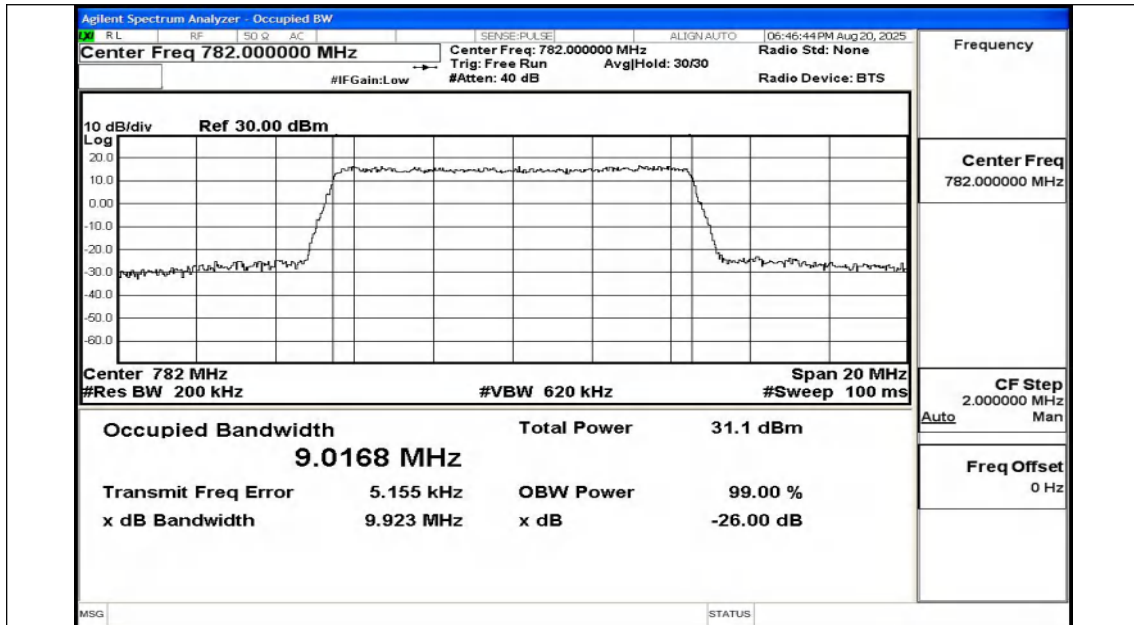
Band13-5MHz-16QAM-23230-25RB#0-PASS



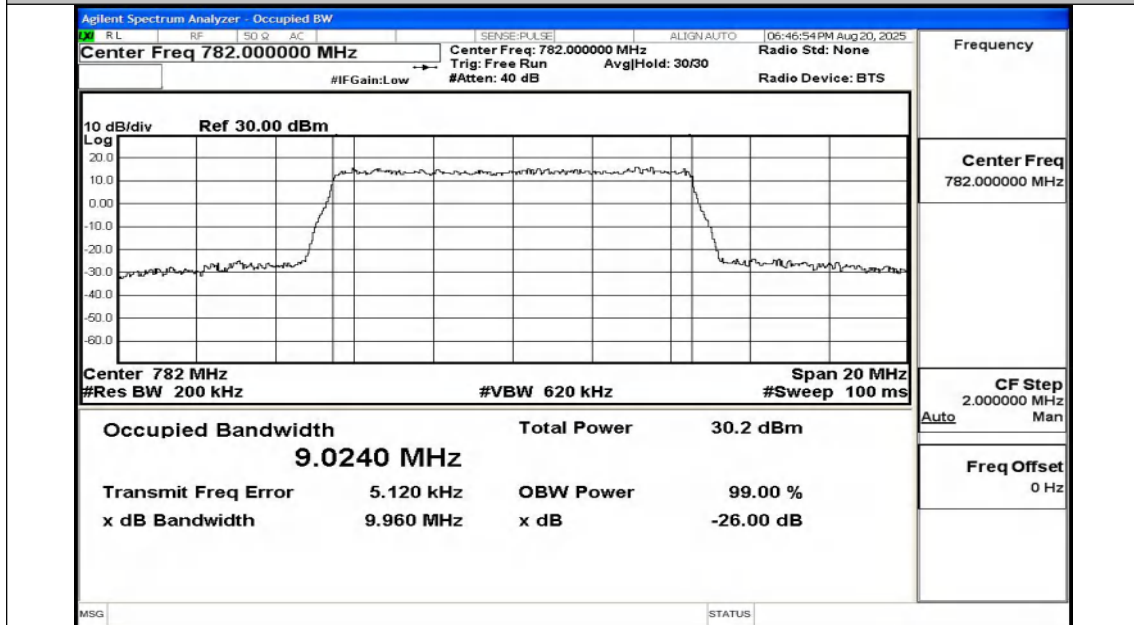
Band13-5MHz-QPSK-23255-25RB#0-PASS



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



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



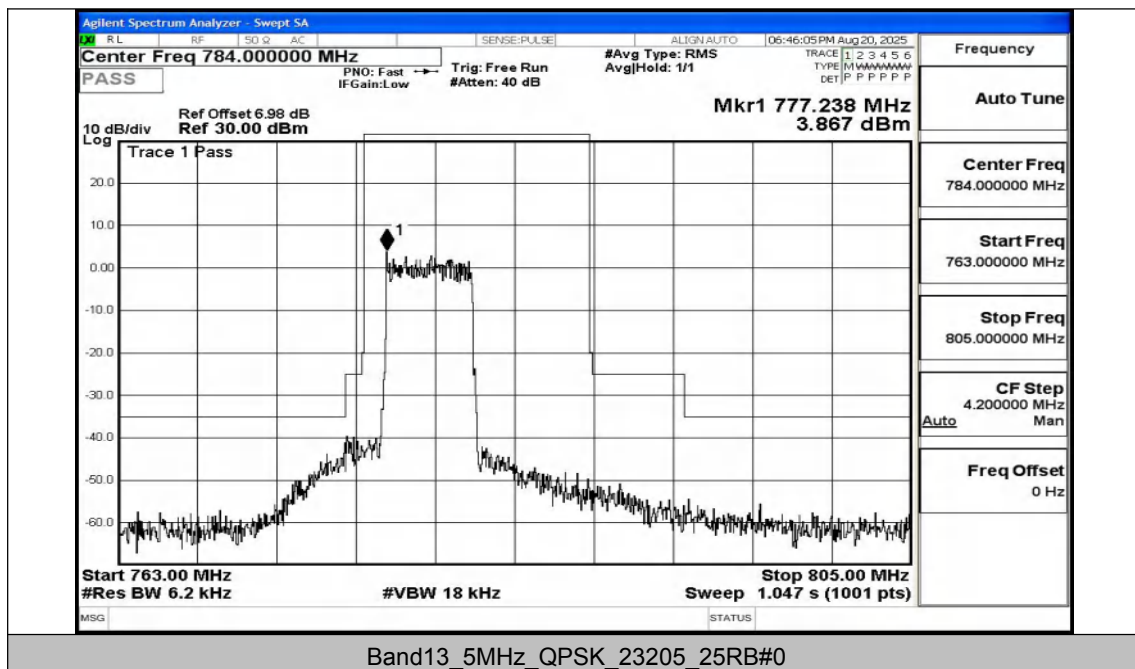
Band13-10MHz-16QAM-23230-50RB#0-PASS

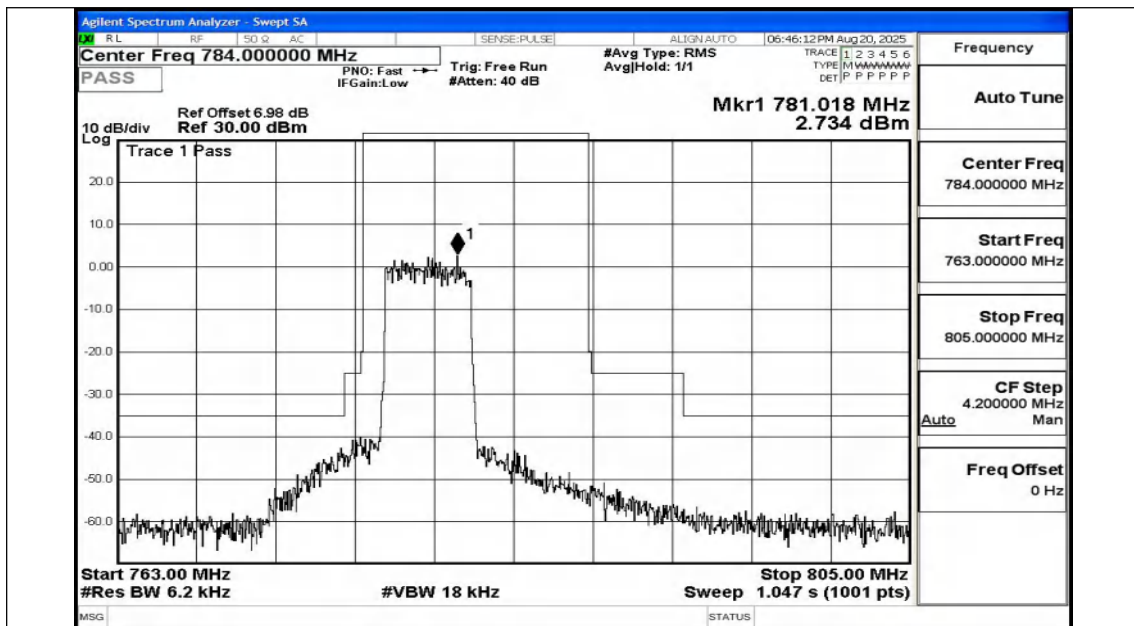
4 Band Edge

Test Result

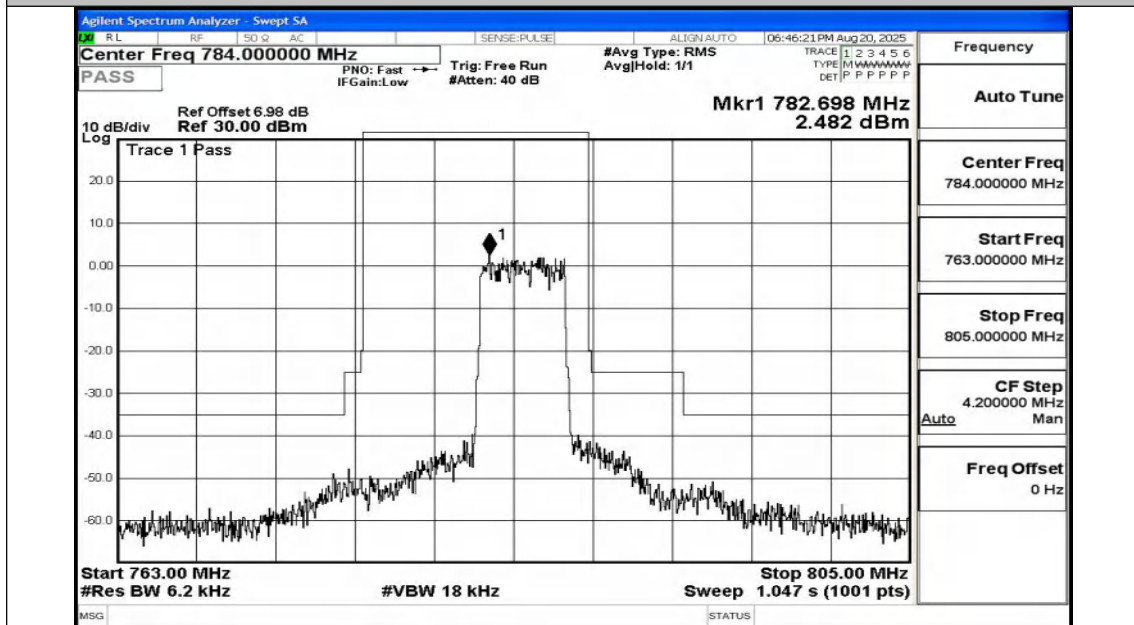
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	-56.38	PASS
Band13	5MHz	16QAM	23205	25RB#0	-57.53	PASS
Band13	5MHz	QPSK	23255	25RB#0	-57.64	PASS
Band13	5MHz	16QAM	23255	25RB#0	-56.62	PASS
Band13	10MHz	QPSK	23230	50RB#0	-44.94	PASS
Band13	10MHz	16QAM	23230	50RB#0	-43.90	PASS

Test Graphs

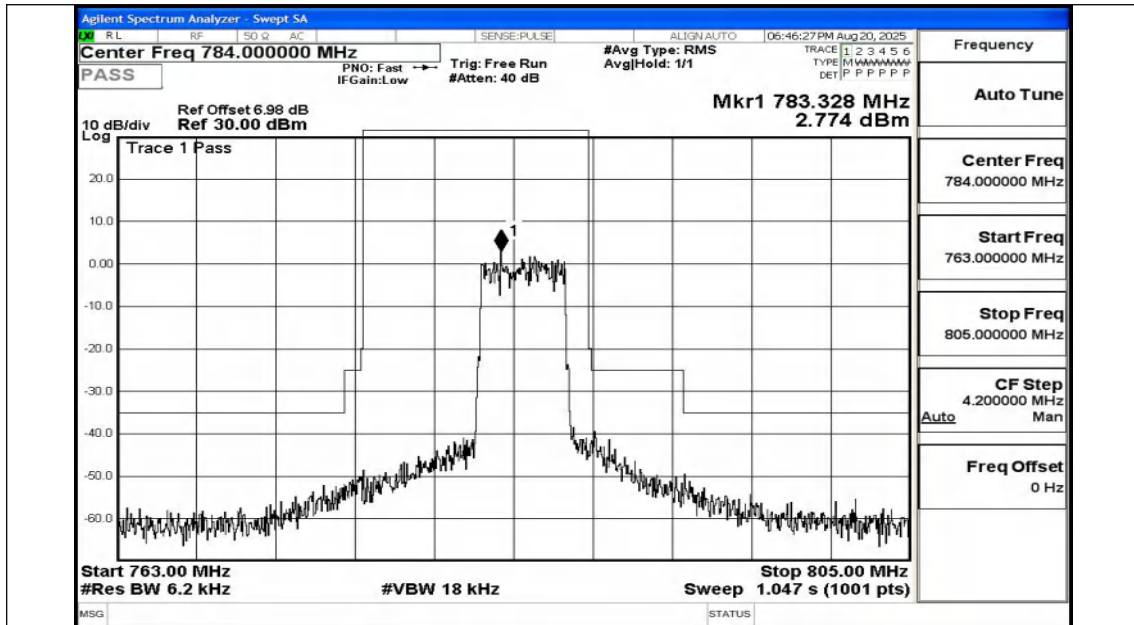




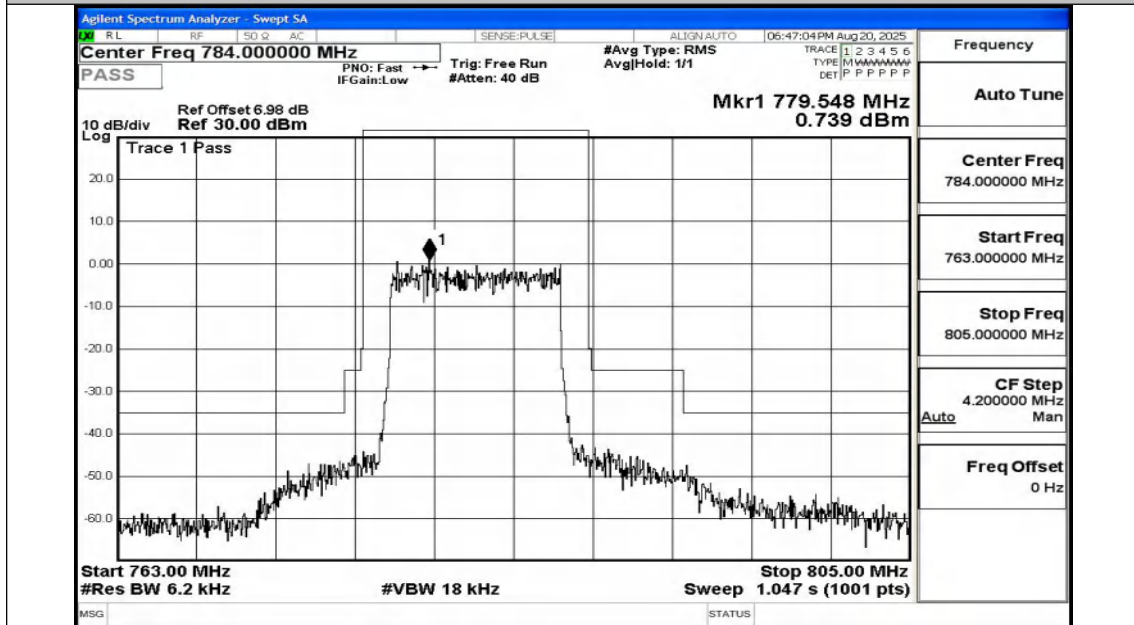
Band13_5MHz_16QAM_23205_25RB#0



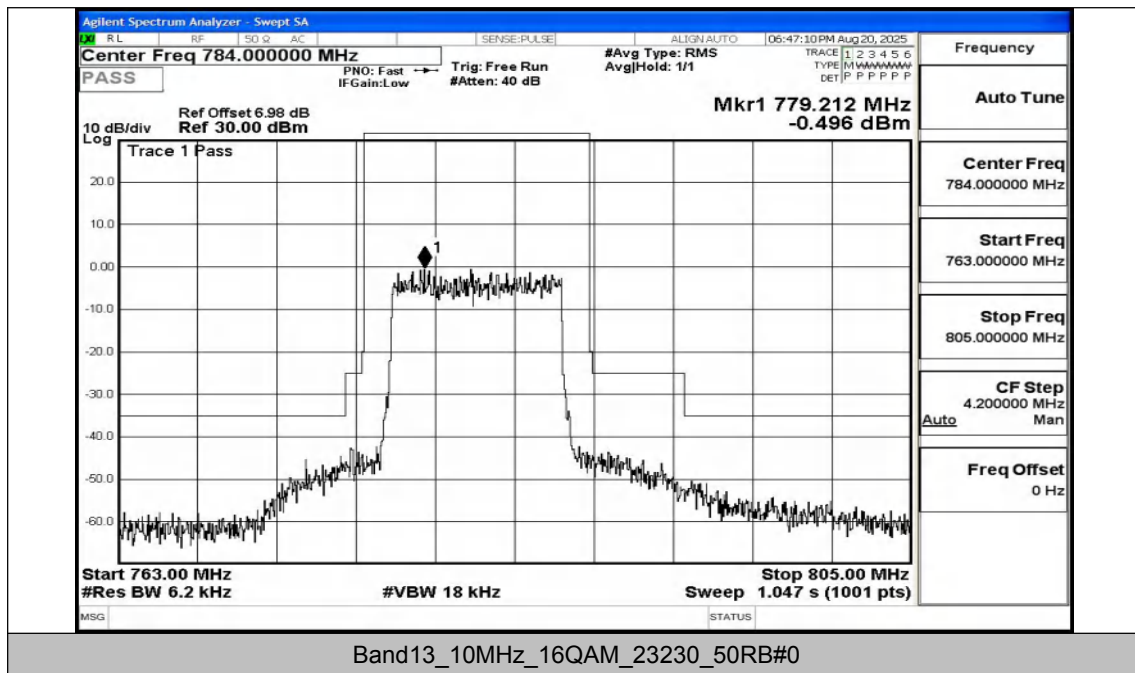
Band13_5MHz_QPSK_23255_25RB#0



Band13_5MHz_16QAM_23255_25RB#0



Band13_10MHz_QPSK_23230_50RB#0



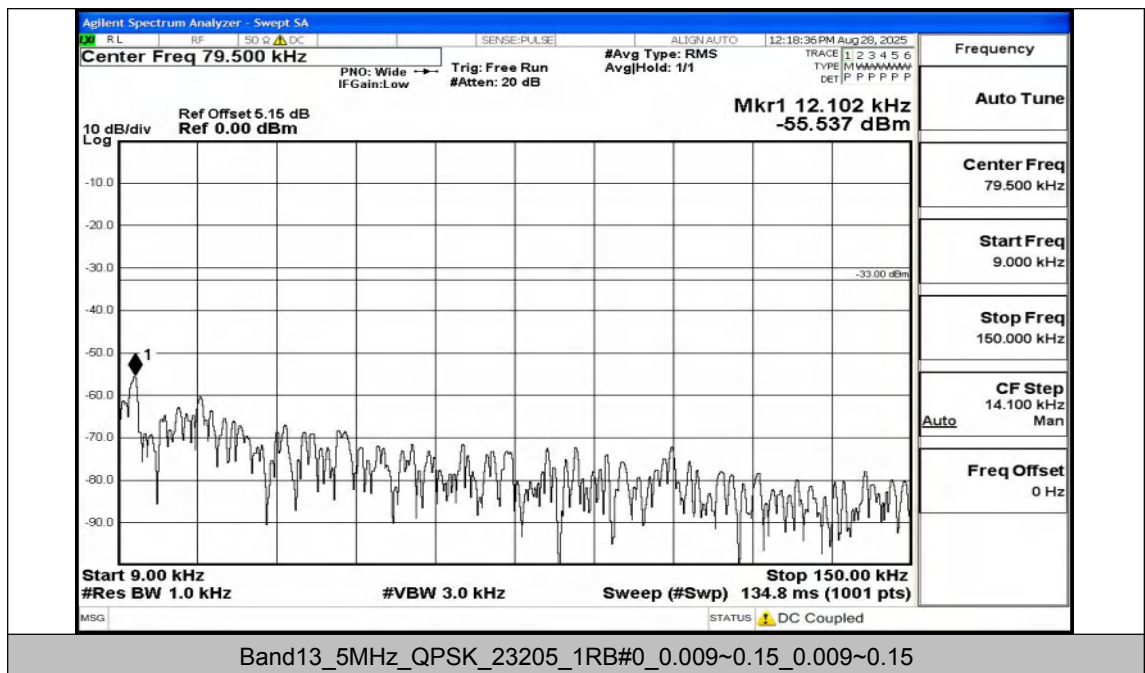
5 Conducted Spurious Emission

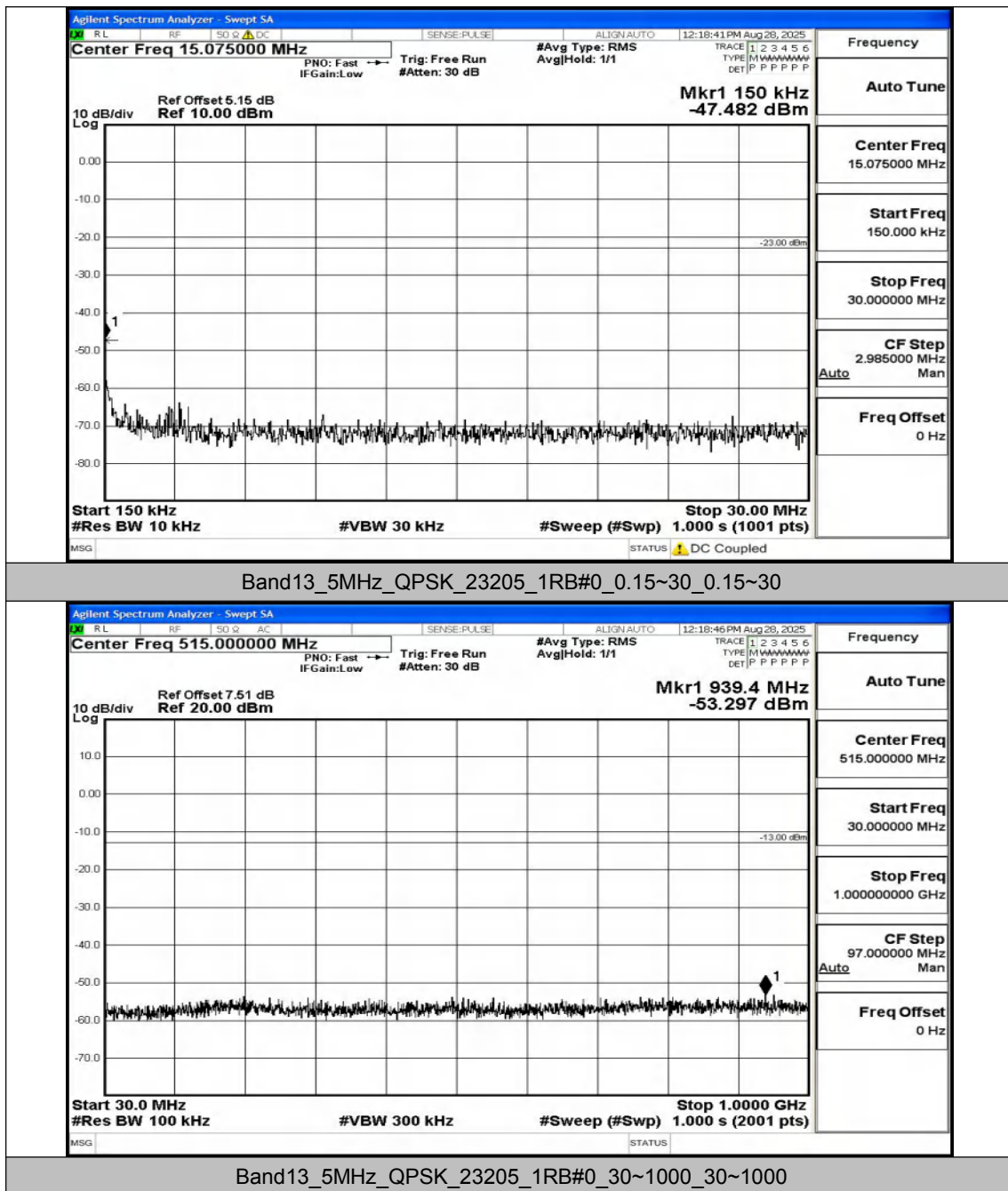
Test Result

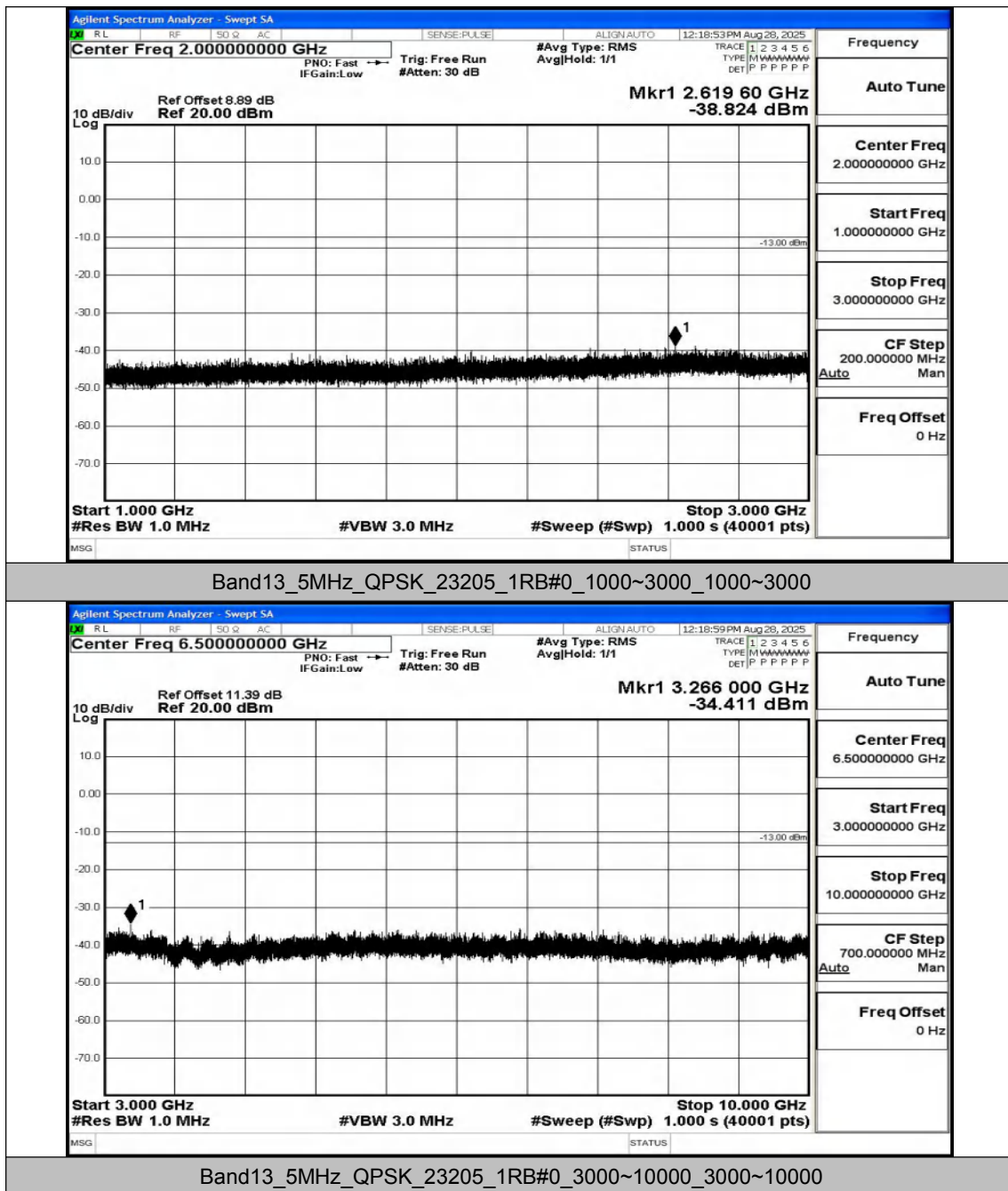
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	0.009~0.15	-55.54	PASS
Band13	5MHz	QPSK	23205	1RB#0	0.15~30	-47.48	PASS
Band13	5MHz	QPSK	23205	1RB#0	30~1000	-53.30	PASS
Band13	5MHz	QPSK	23205	1RB#0	1000~3000	-38.82	PASS
Band13	5MHz	QPSK	23205	1RB#0	3000~10000	-34.41	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.009~0.15	-60.23	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.15~30	-44.15	PASS
Band13	5MHz	16QAM	23205	1RB#0	30~1000	-52.06	PASS
Band13	5MHz	16QAM	23205	1RB#0	1000~3000	-38.77	PASS
Band13	5MHz	16QAM	23205	1RB#0	3000~10000	-35.30	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.009~0.15	-59.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.15~30	-45.24	PASS
Band13	5MHz	QPSK	23230	1RB#0	30~1000	-52.49	PASS
Band13	5MHz	QPSK	23230	1RB#0	1000~3000	-38.35	PASS
Band13	5MHz	QPSK	23230	1RB#0	3000~10000	-34.94	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.009~0.15	-56.51	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.15~30	-47.36	PASS
Band13	5MHz	16QAM	23230	1RB#0	30~1000	-53.06	PASS
Band13	5MHz	16QAM	23230	1RB#0	1000~3000	-38.55	PASS

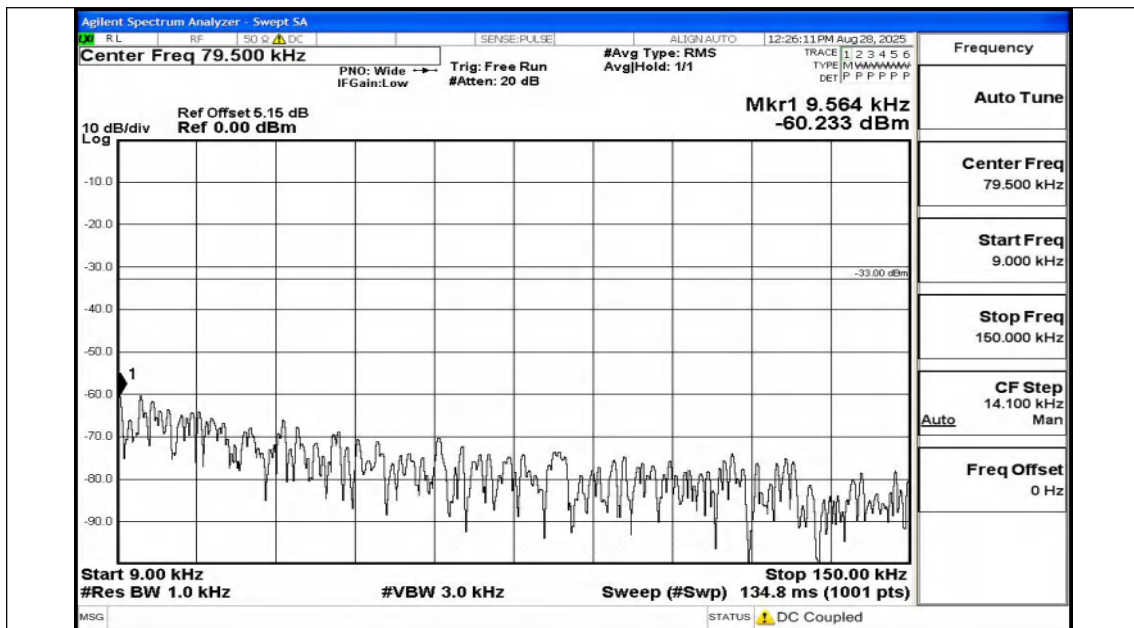
Band13	5MHz	16QAM	23230	1RB#0	3000~10000	-34.96	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.009~0.15	-59.85	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.15~30	-43.74	PASS
Band13	5MHz	QPSK	23255	1RB#0	30~1000	-52.94	PASS
Band13	5MHz	QPSK	23255	1RB#0	1000~3000	-39.61	PASS
Band13	5MHz	QPSK	23255	1RB#0	3000~10000	-35.54	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.009~0.15	-58.84	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.15~30	-43.25	PASS
Band13	5MHz	16QAM	23255	1RB#0	30~1000	-53.07	PASS
Band13	5MHz	16QAM	23255	1RB#0	1000~3000	-39.59	PASS
Band13	5MHz	16QAM	23255	1RB#0	3000~10000	-34.56	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.009~0.15	-57.19	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.15~30	-42.88	PASS
Band13	10MHz	QPSK	23230	1RB#0	30~1000	-51.60	PASS
Band13	10MHz	QPSK	23230	1RB#0	1000~3000	-36.74	PASS
Band13	10MHz	QPSK	23230	1RB#0	3000~10000	-35.59	PASS
Band13	10MHz	16QAM	23230	1RB#0	0.009~0.15	-57.60	PASS
Band13	10MHz	16QAM	23230	1RB#0	0.15~30	-48.83	PASS
Band13	10MHz	16QAM	23230	1RB#0	30~1000	-52.15	PASS
Band13	10MHz	16QAM	23230	1RB#0	1000~3000	-36.78	PASS
Band13	10MHz	16QAM	23230	1RB#0	3000~10000	-35.72	PASS

Test Graphs

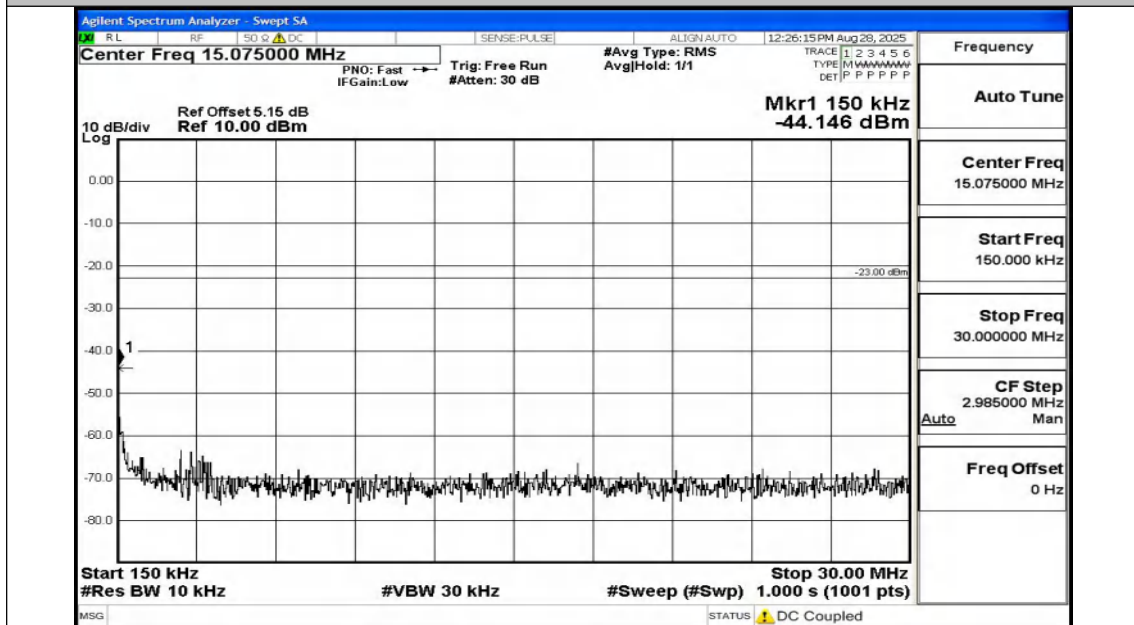




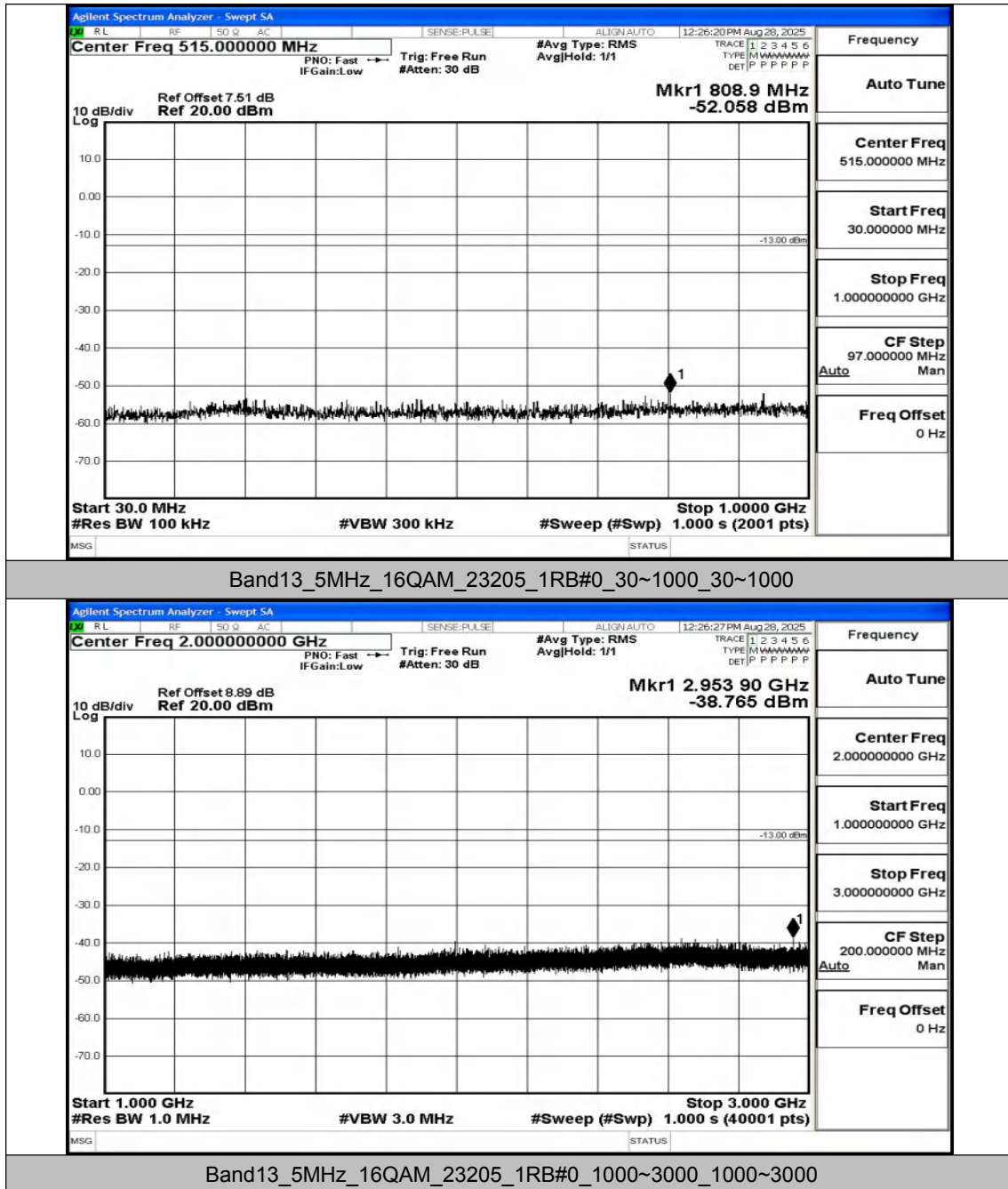


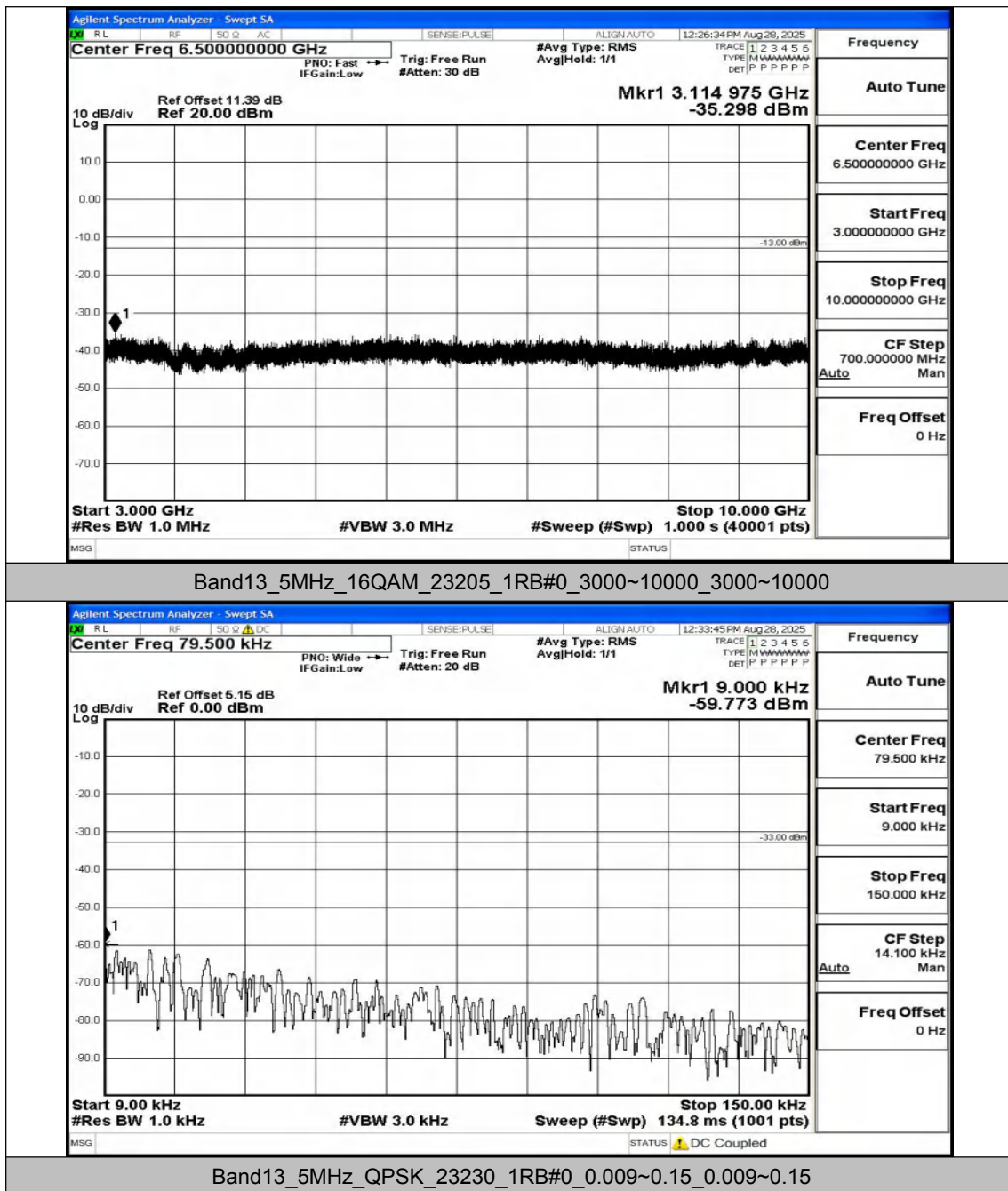


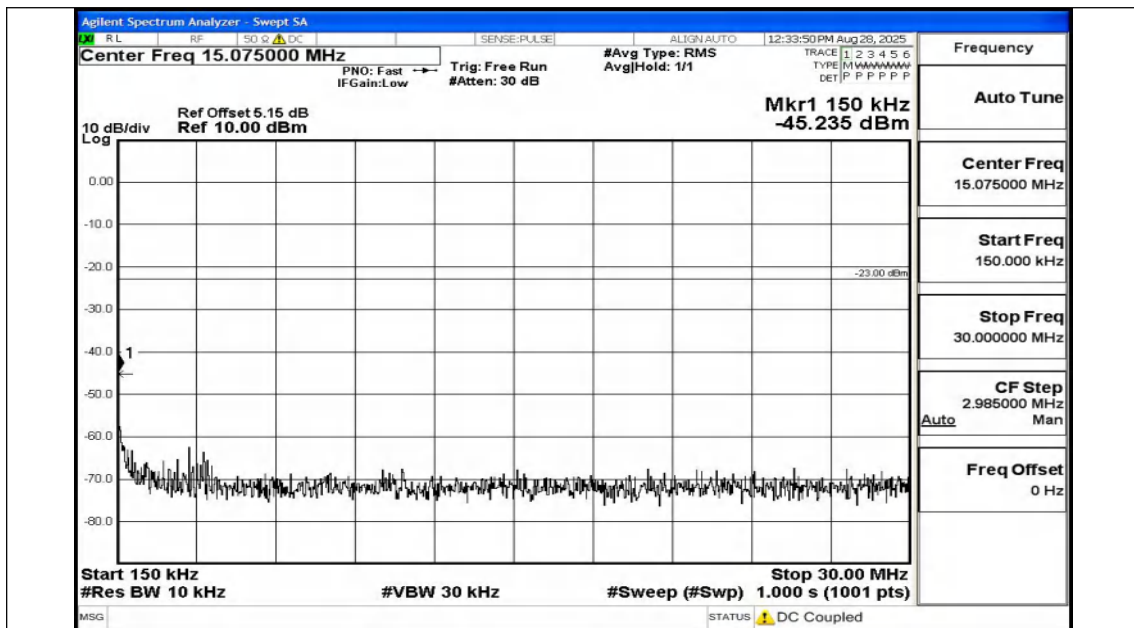
Band13_5MHz_16QAM_23205_1RB#0_0.009~0.15_0.009~0.15



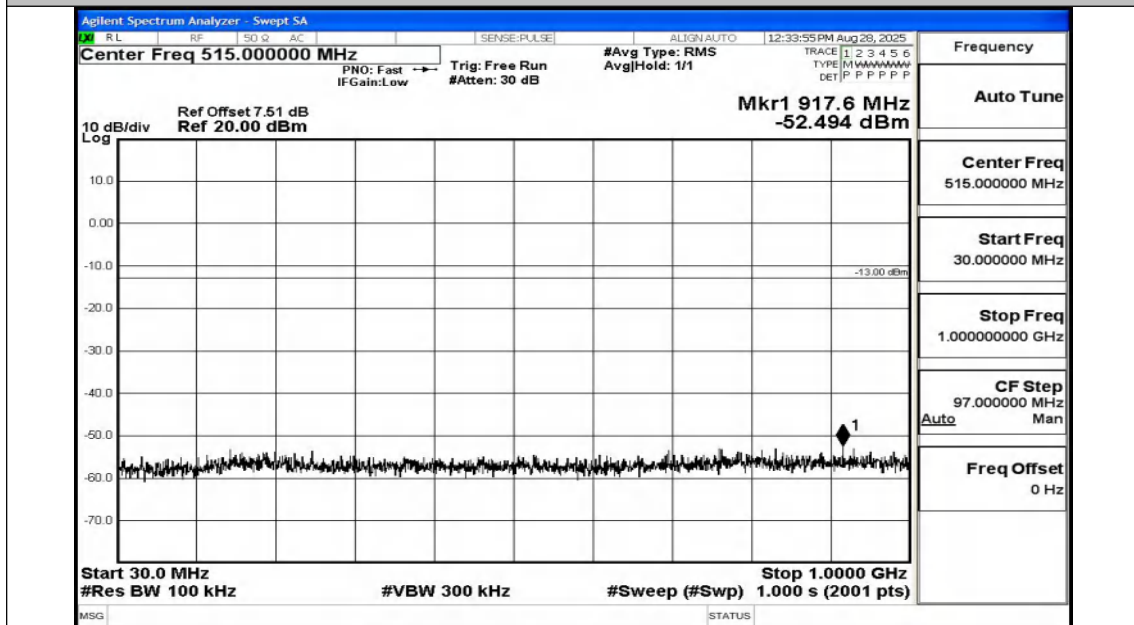
Band13_5MHz_16QAM_23205_1RB#0_0.15~30_0.15~30



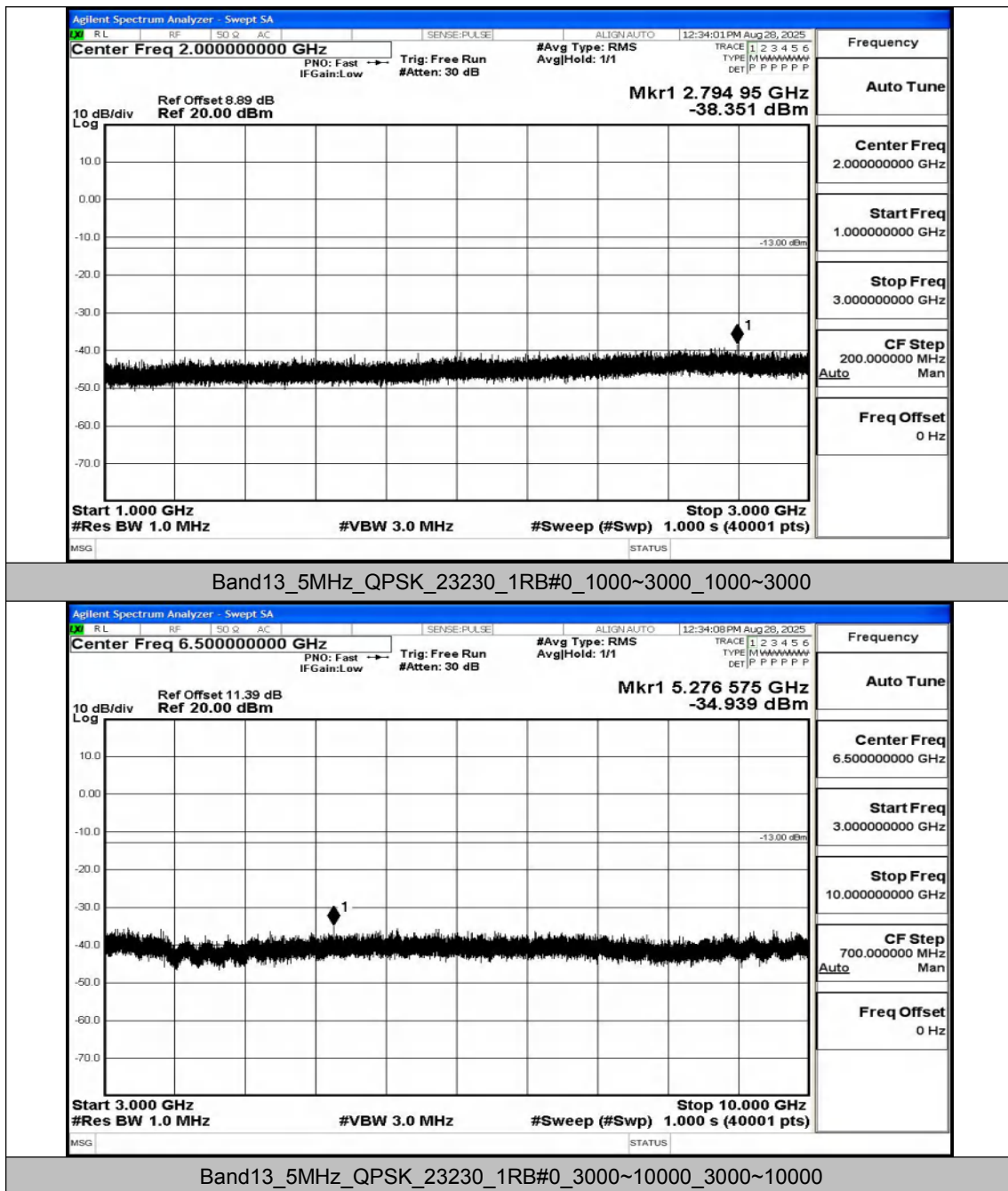


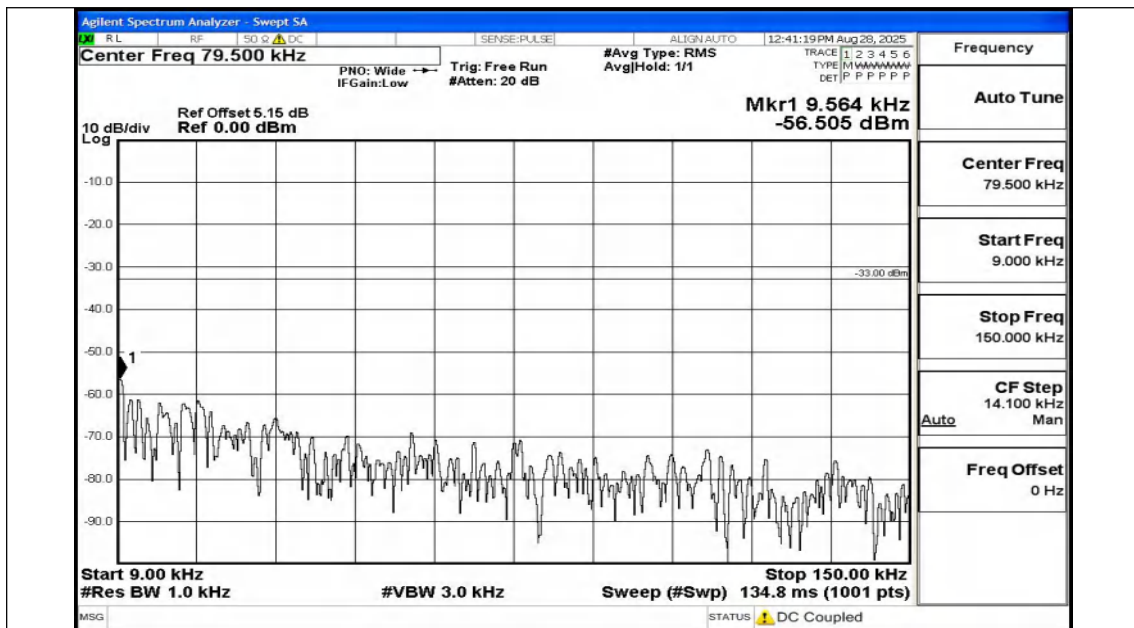


Band13_5MHz_QPSK_23230_1RB#0_0.15~30_0.15~30

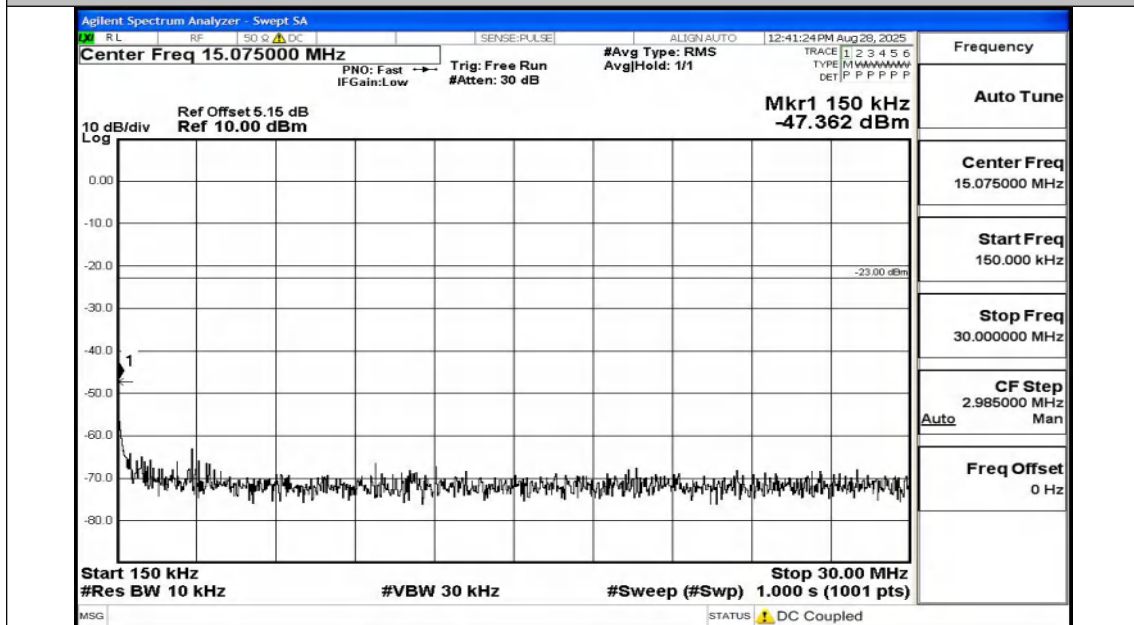


Band13_5MHz_QPSK_23230_1RB#0_30~1000_30~1000

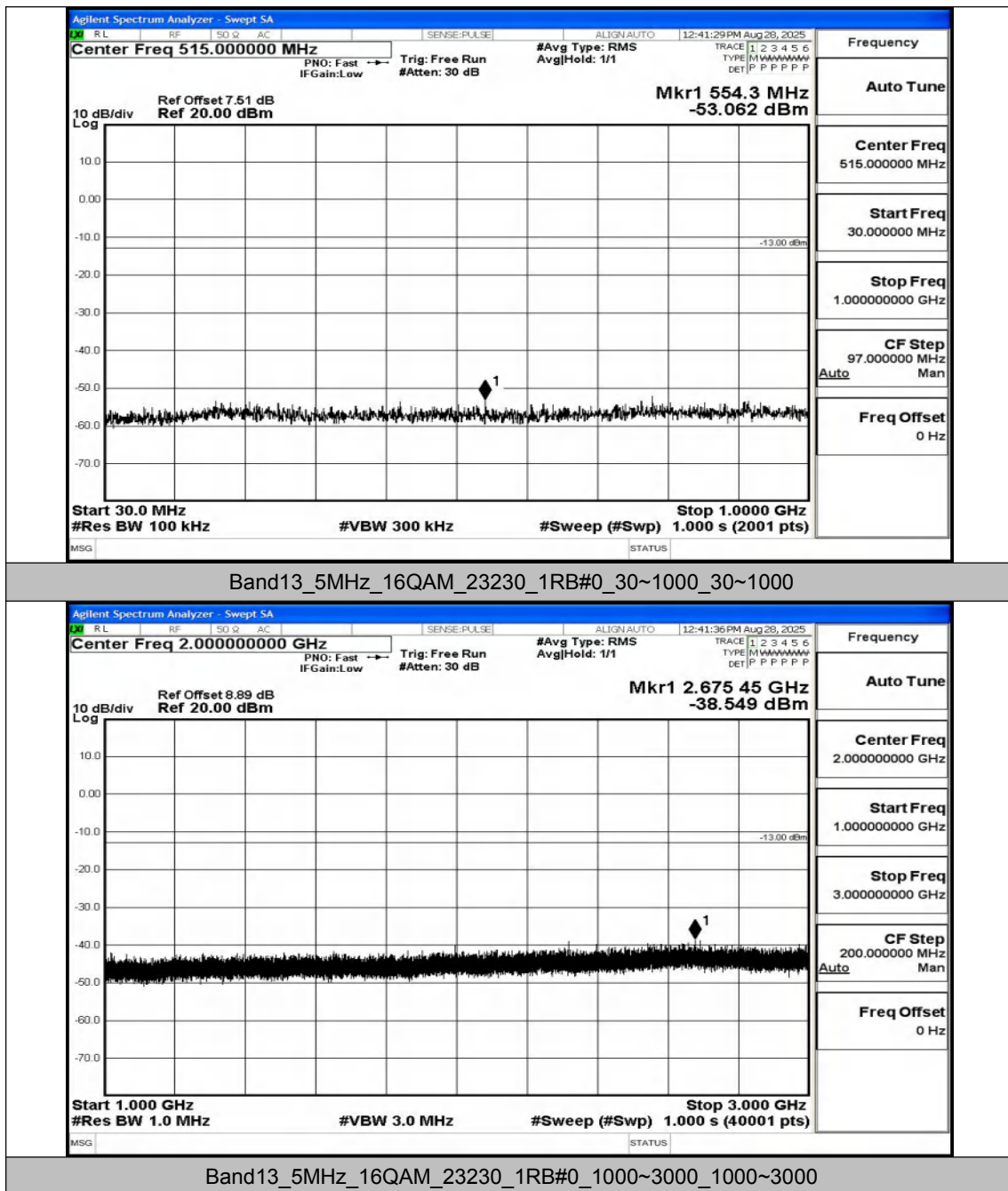


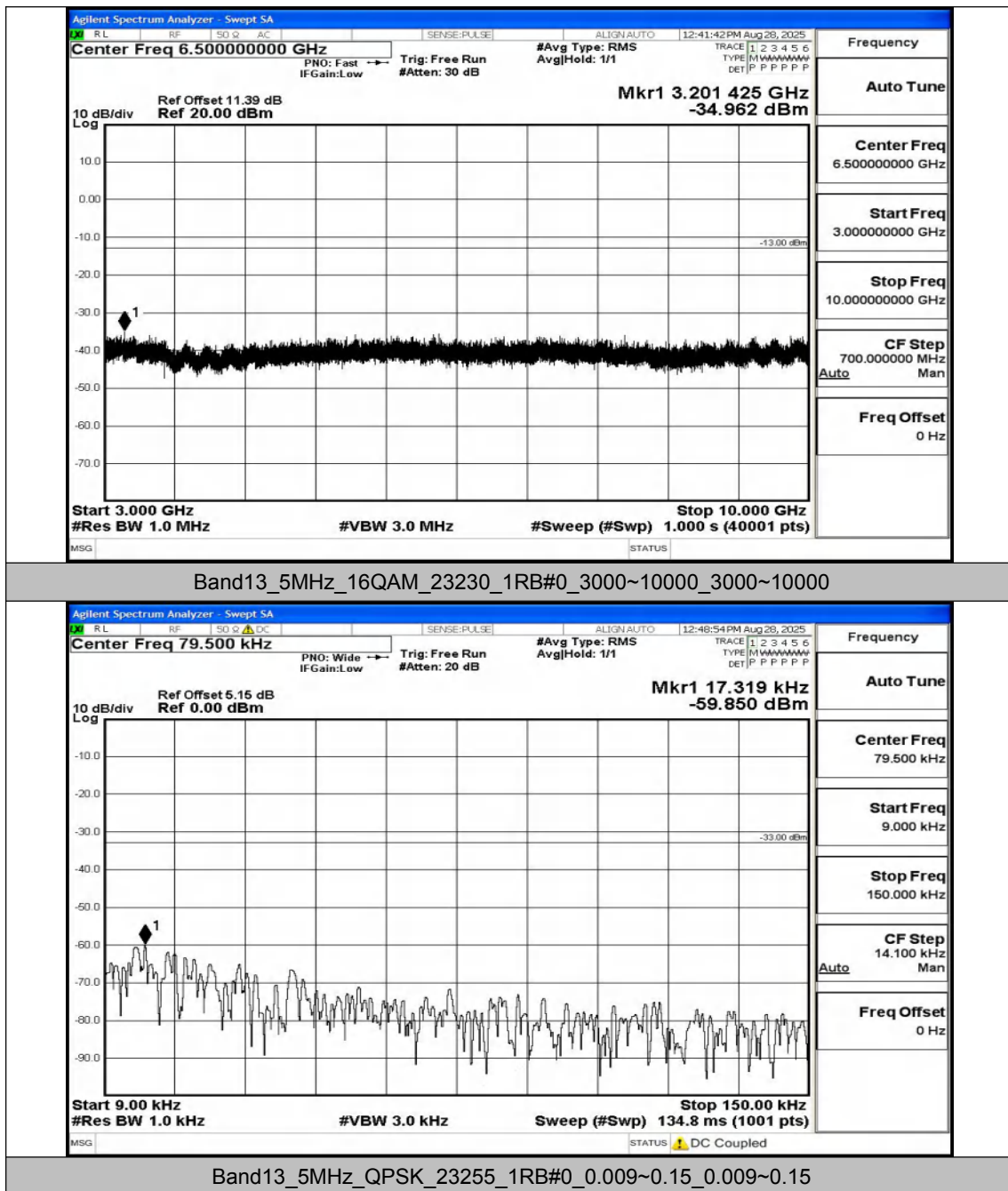


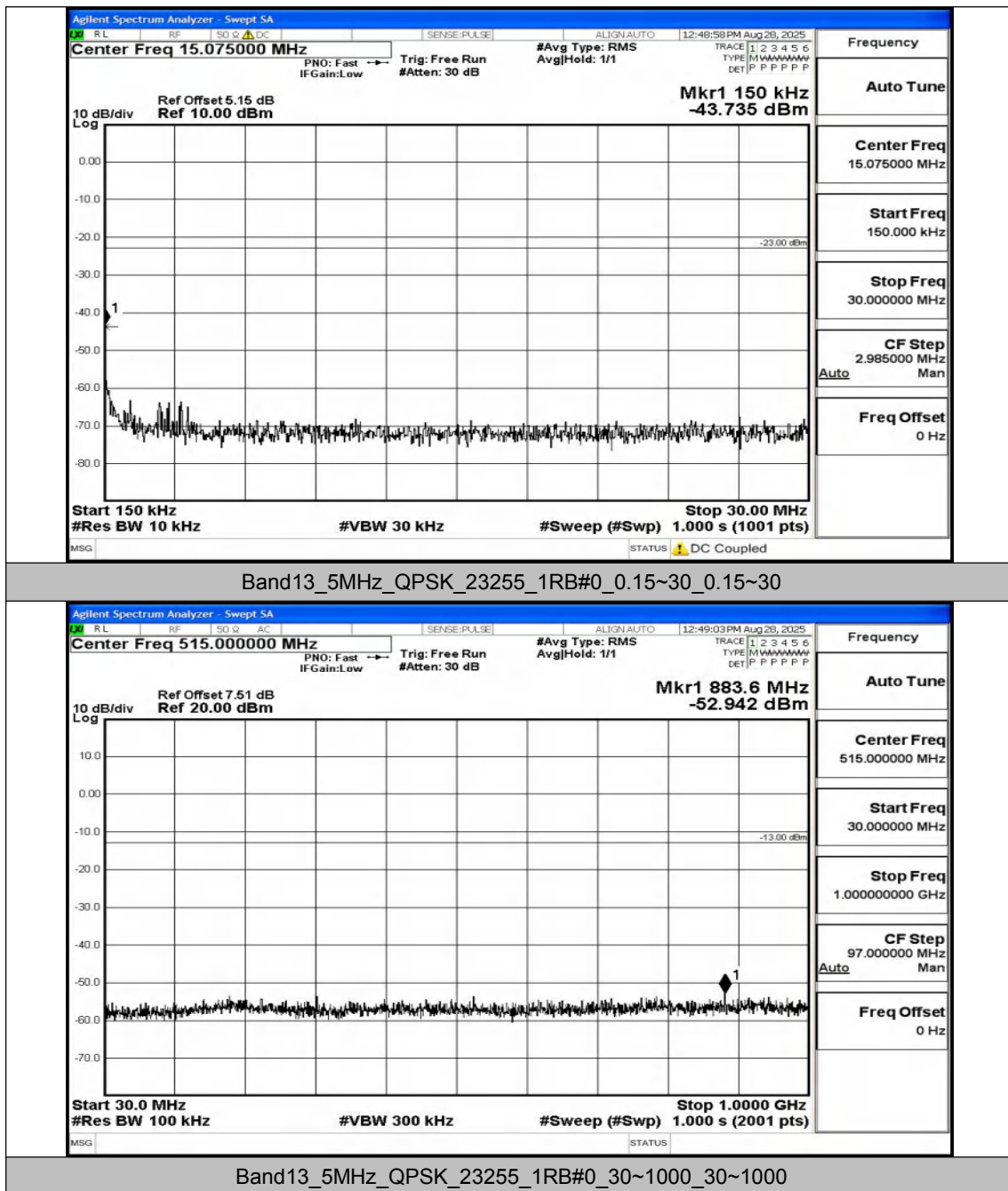
Band13_5MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15

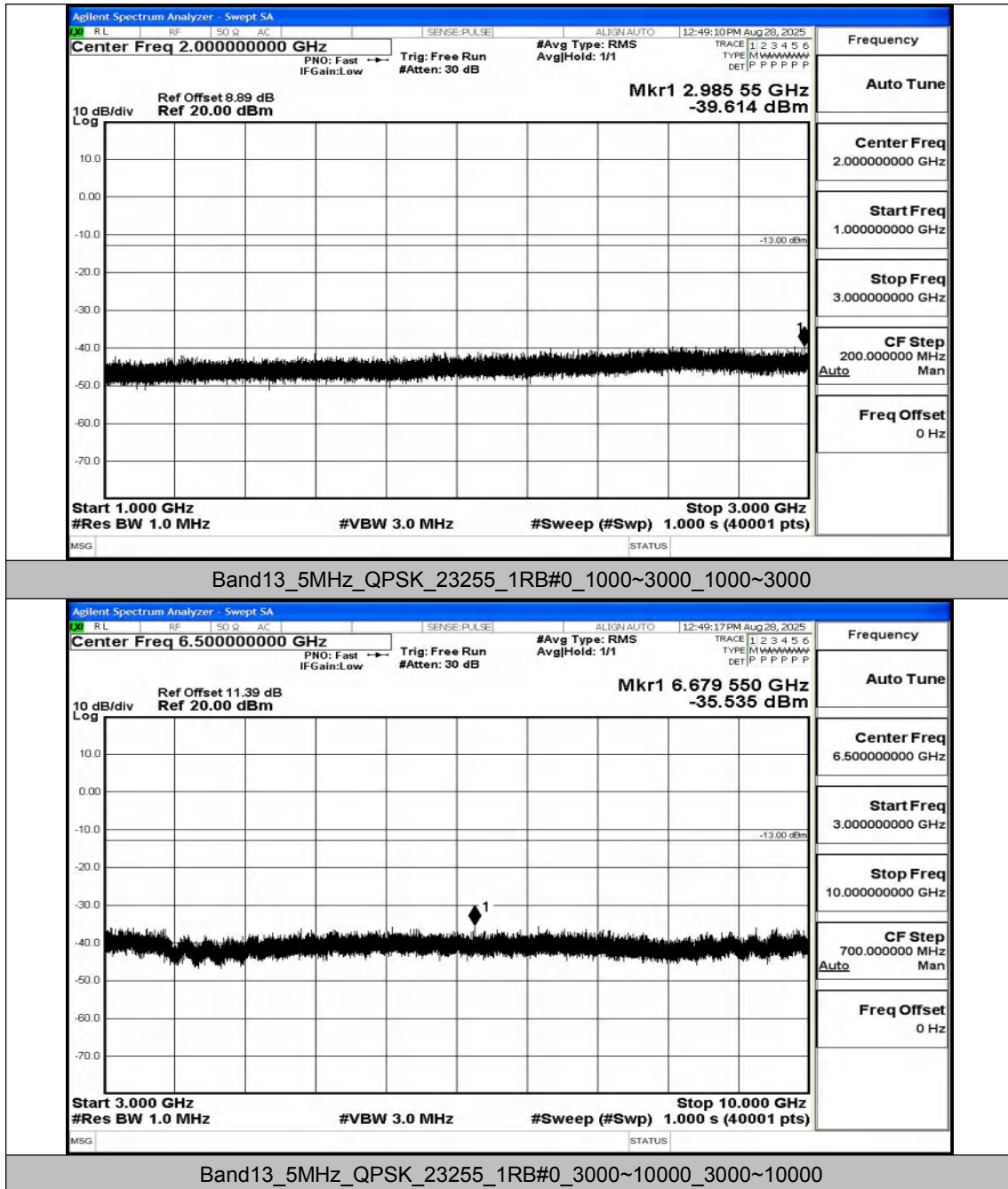


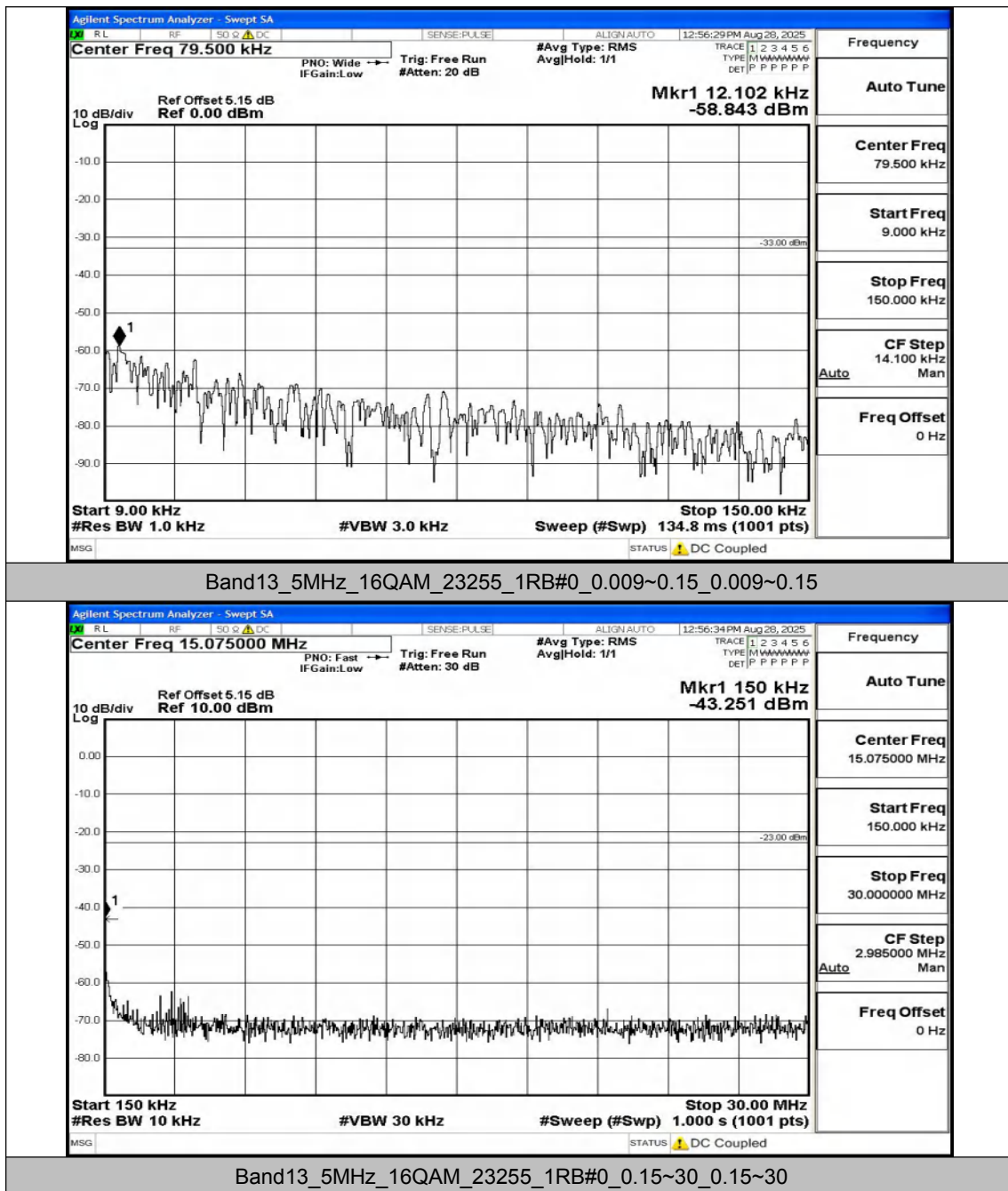
Band13_5MHz_16QAM_23230_1RB#0_0.15~30_0.15~30

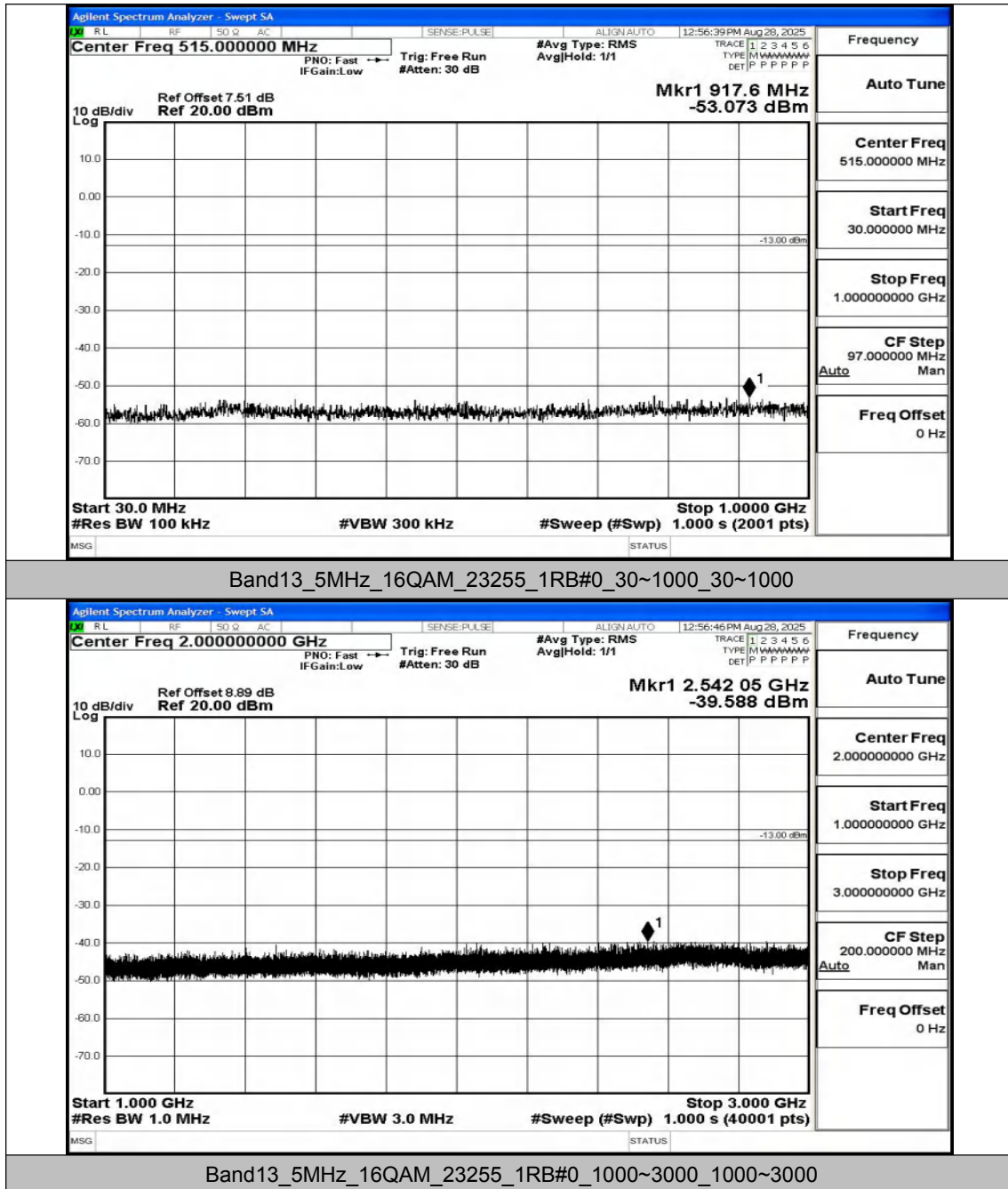


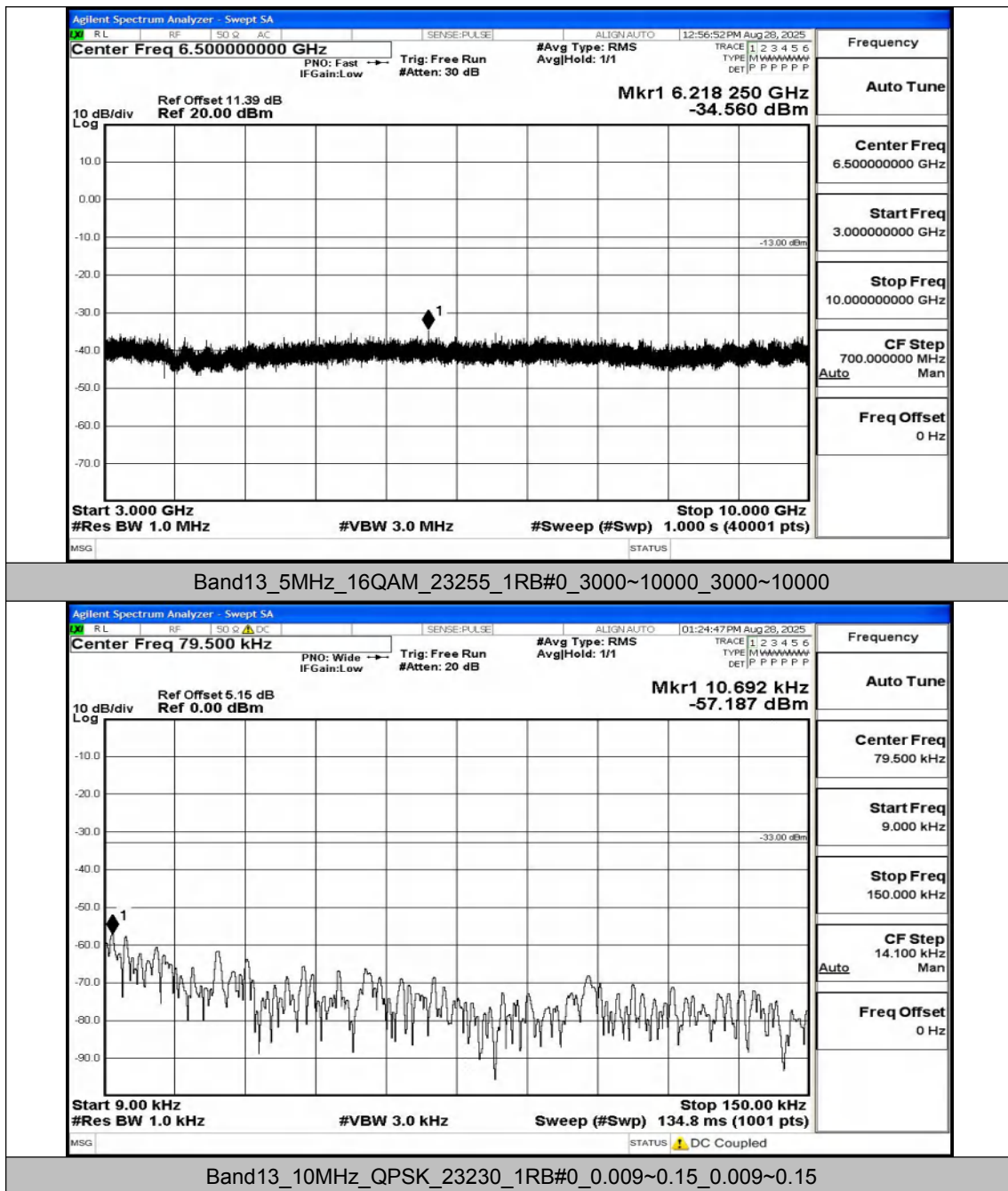


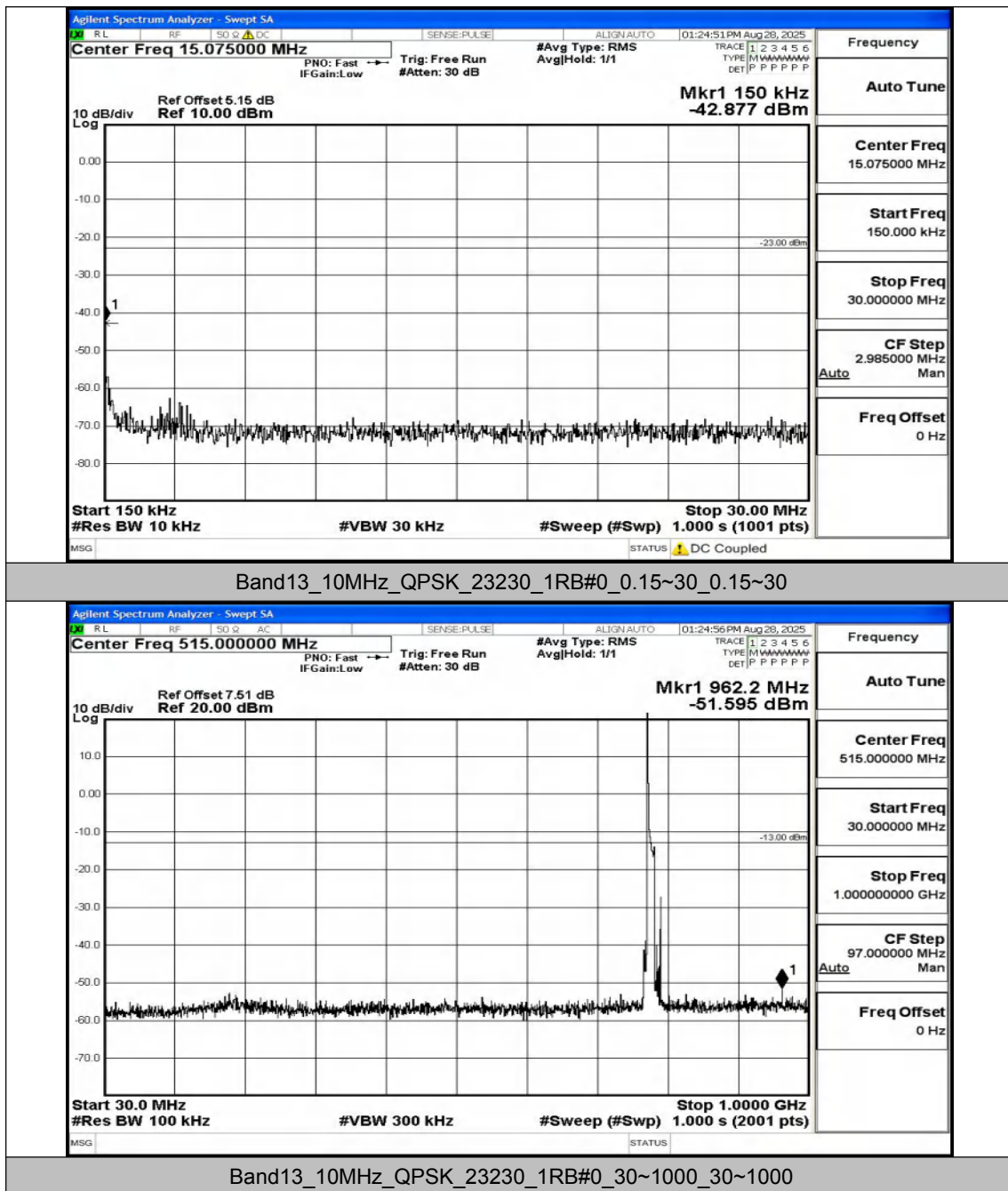


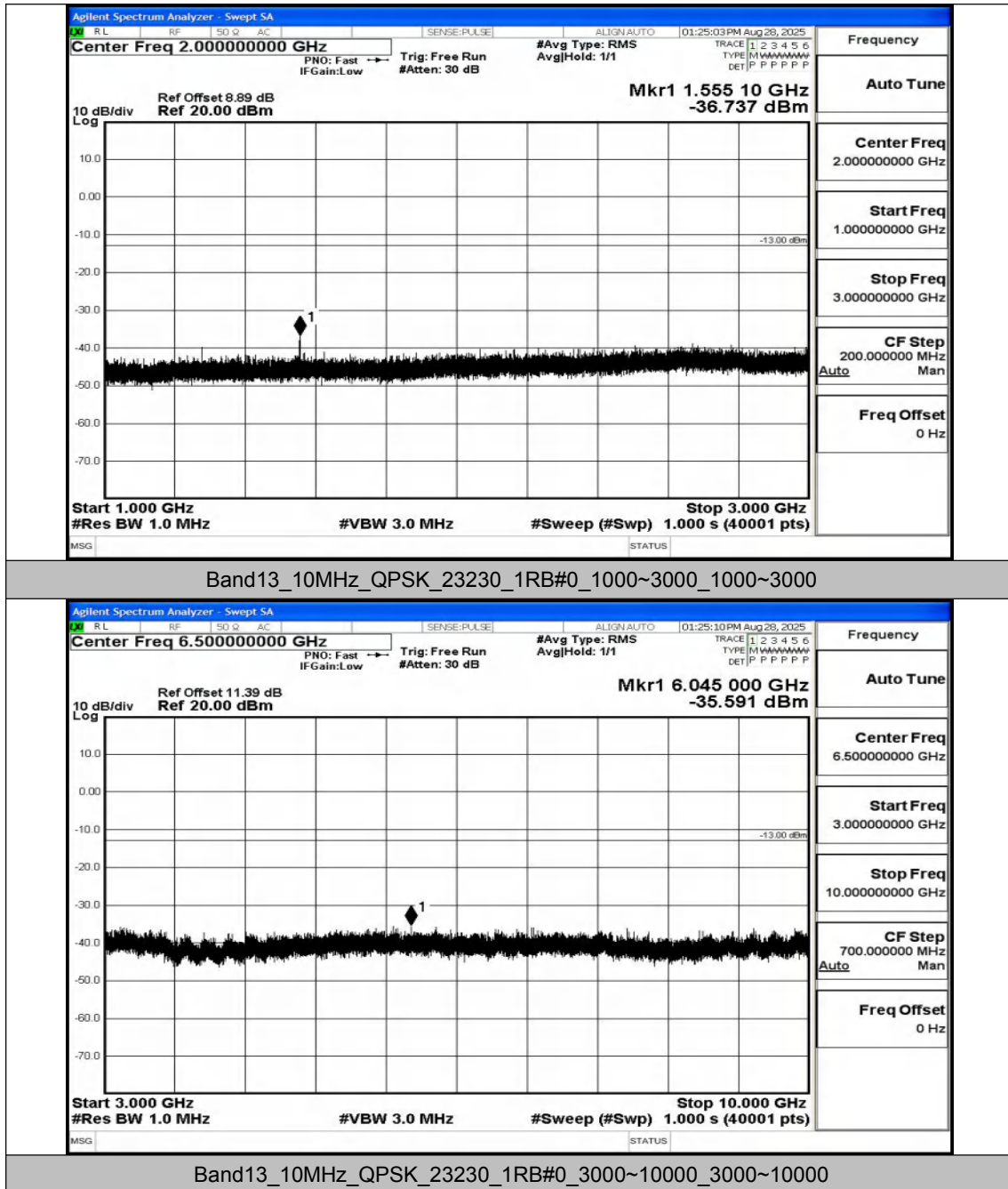


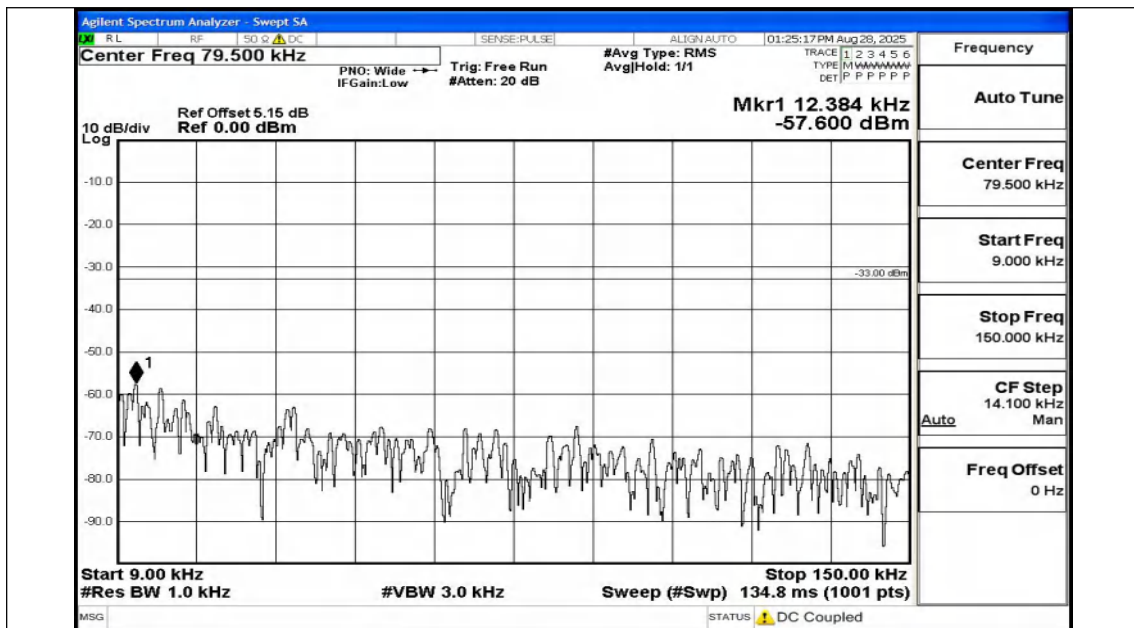




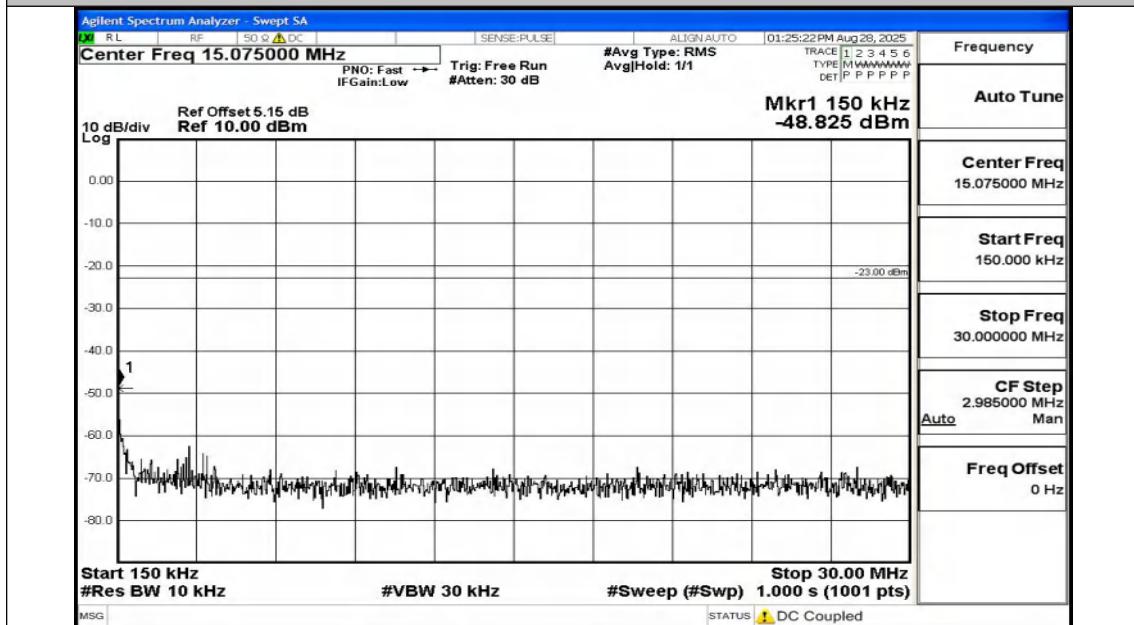








Band13_10MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15



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

