



FCC Appendix RF Test Data for LTE Band 13

Product Name: Vehicle Mount Computer

Test Model: LC:TWO mini

Environmental Conditions

Temperature:	23.6°C
Relative Humidity:	54.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised 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	23.88	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.05	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.46	PASS
Band13	5MHz	16QAM	23205	1RB#12	23.39	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.52	PASS
Band13	5MHz	16QAM	23205	1RB#24	23.36	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.96	PASS
Band13	5MHz	16QAM	23205	12RB#0	22.41	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.96	PASS
Band13	5MHz	16QAM	23205	12RB#6	22.28	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.70	PASS
Band13	5MHz	16QAM	23205	12RB#13	22.17	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.97	PASS
Band13	5MHz	16QAM	23205	25RB#0	22.08	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.63	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.98	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.64	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.92	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.46	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.81	PASS
Band13	5MHz	QPSK	23230	12RB#0	22.82	PASS
Band13	5MHz	16QAM	23230	12RB#0	22.27	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.83	PASS
Band13	5MHz	16QAM	23230	12RB#6	22.27	PASS
Band13	5MHz	QPSK	23230	12RB#13	22.83	PASS
Band13	5MHz	16QAM	23230	12RB#13	22.31	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.83	PASS
Band13	5MHz	16QAM	23230	25RB#0	22.22	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.80	PASS
Band13	5MHz	16QAM	23255	1RB#0	22.51	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.56	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.38	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.33	PASS
Band13	5MHz	16QAM	23255	1RB#24	22.19	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.82	PASS
Band13	5MHz	16QAM	23255	12RB#0	22.20	PASS



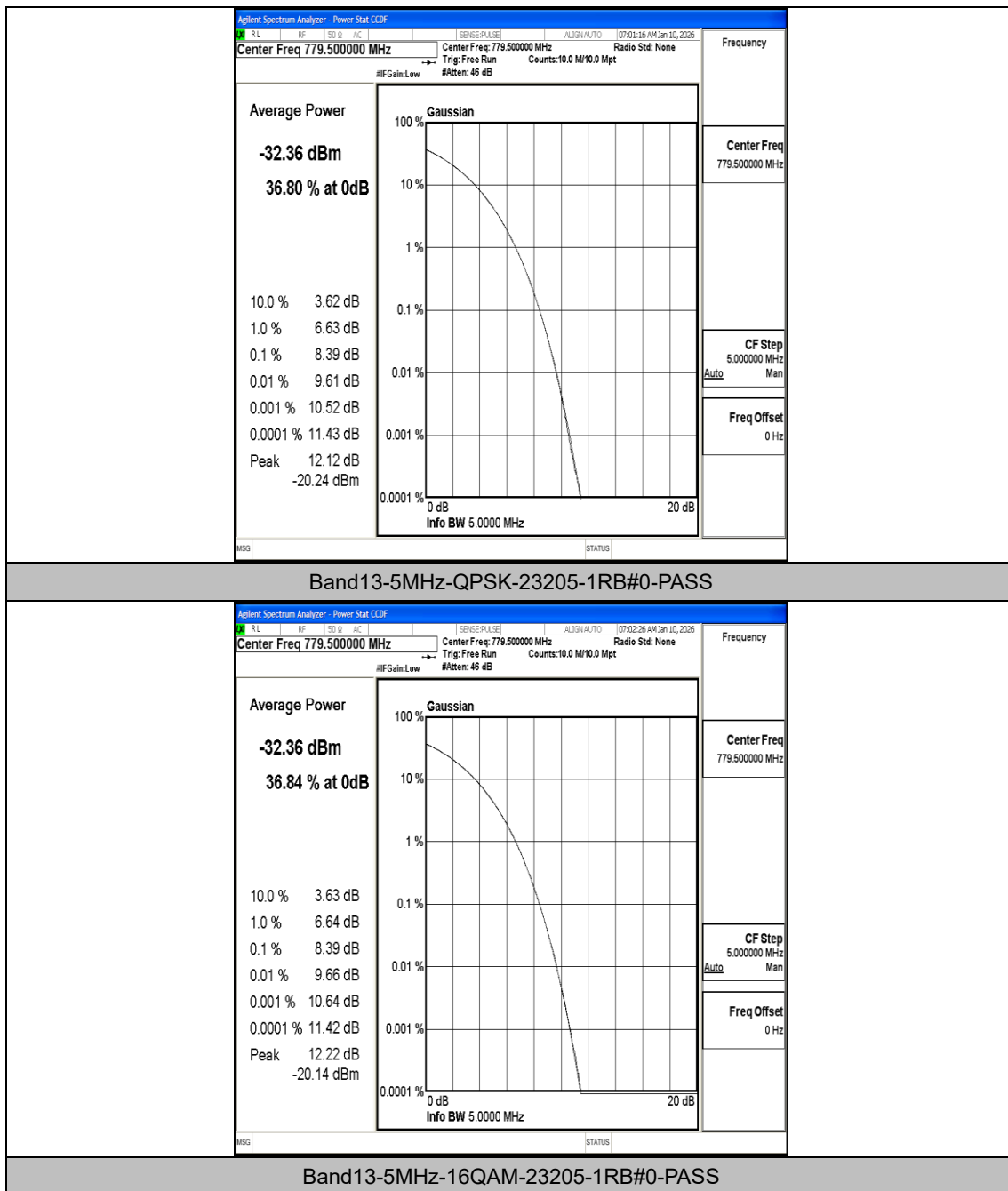
Band13	5MHz	QPSK	23255	12RB#6	22.86	PASS
Band13	5MHz	16QAM	23255	12RB#6	22.20	PASS
Band13	5MHz	QPSK	23255	12RB#13	22.61	PASS
Band13	5MHz	16QAM	23255	12RB#13	22.01	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.70	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.30	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.23	PASS
Band13	10MHz	16QAM	23230	1RB#0	22.61	PASS
Band13	10MHz	QPSK	23230	1RB#24	23.24	PASS
Band13	10MHz	16QAM	23230	1RB#24	22.71	PASS
Band13	10MHz	QPSK	23230	1RB#49	22.81	PASS
Band13	10MHz	16QAM	23230	1RB#49	22.33	PASS
Band13	10MHz	QPSK	23230	25RB#0	22.33	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.75	PASS
Band13	10MHz	QPSK	23230	25RB#12	22.39	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.74	PASS
Band13	10MHz	QPSK	23230	25RB#25	22.14	PASS
Band13	10MHz	16QAM	23230	25RB#25	21.52	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.36	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.72	PASS

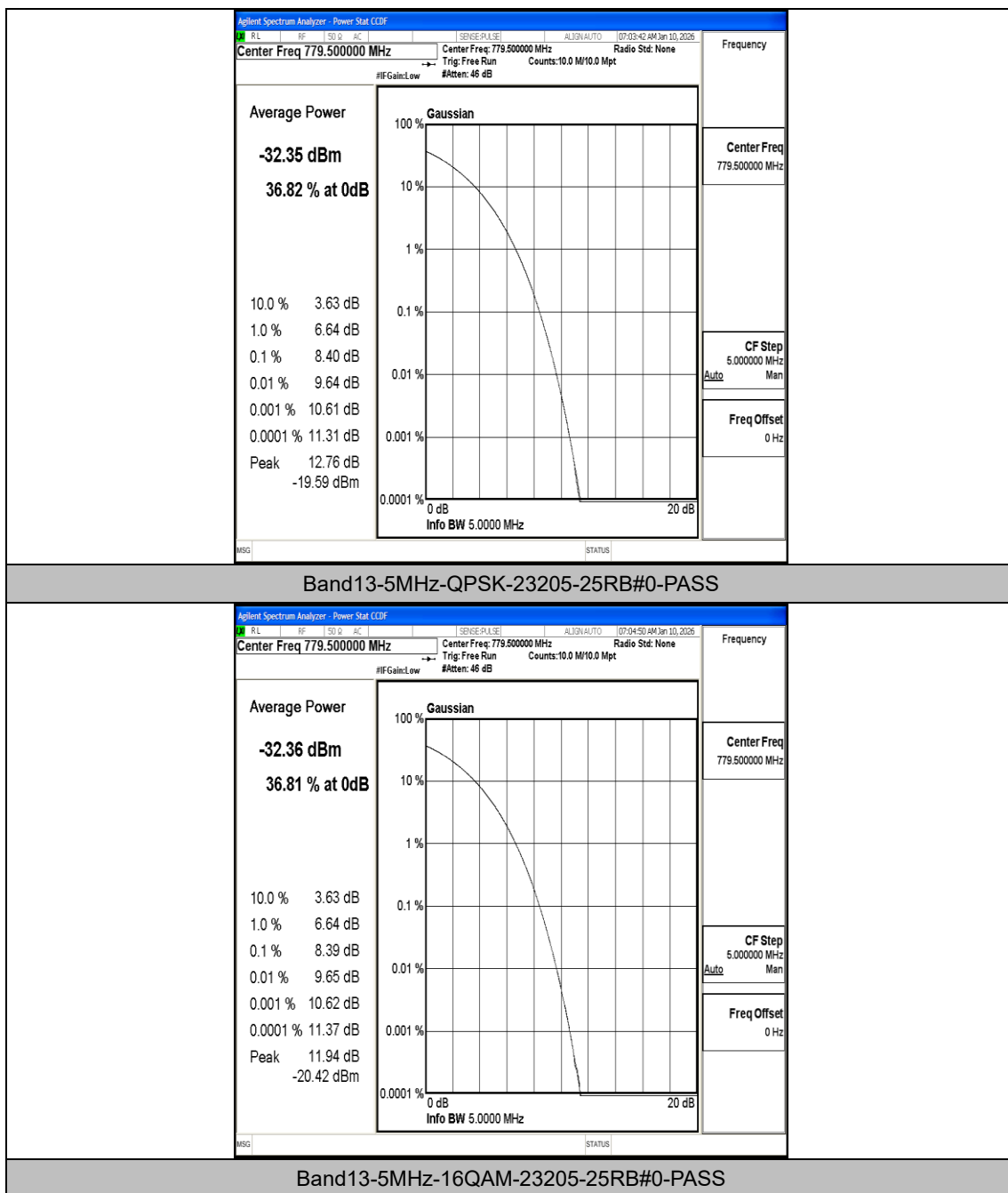
2 Peak-to-Average Ratio(CCDF)

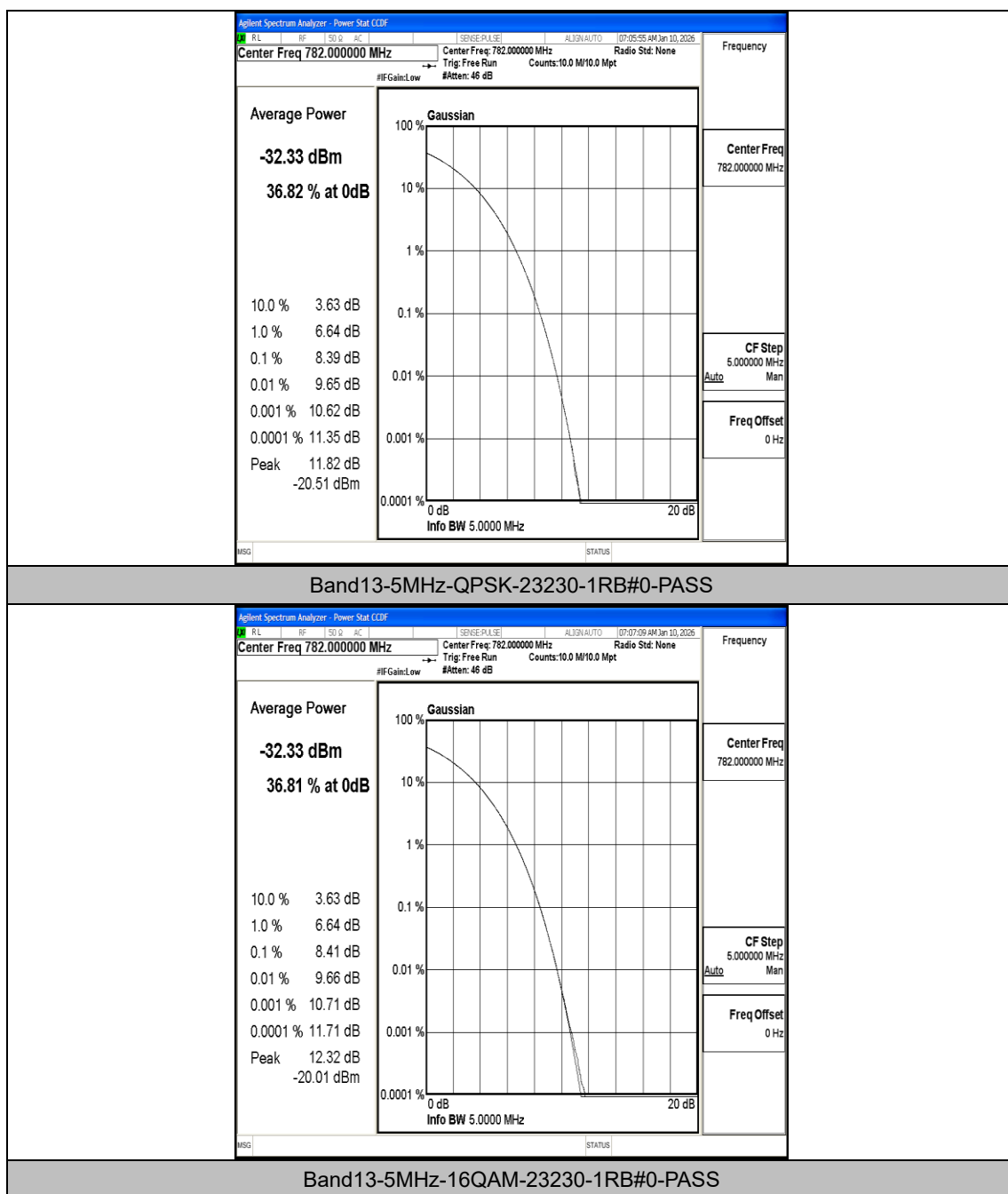
Test Result

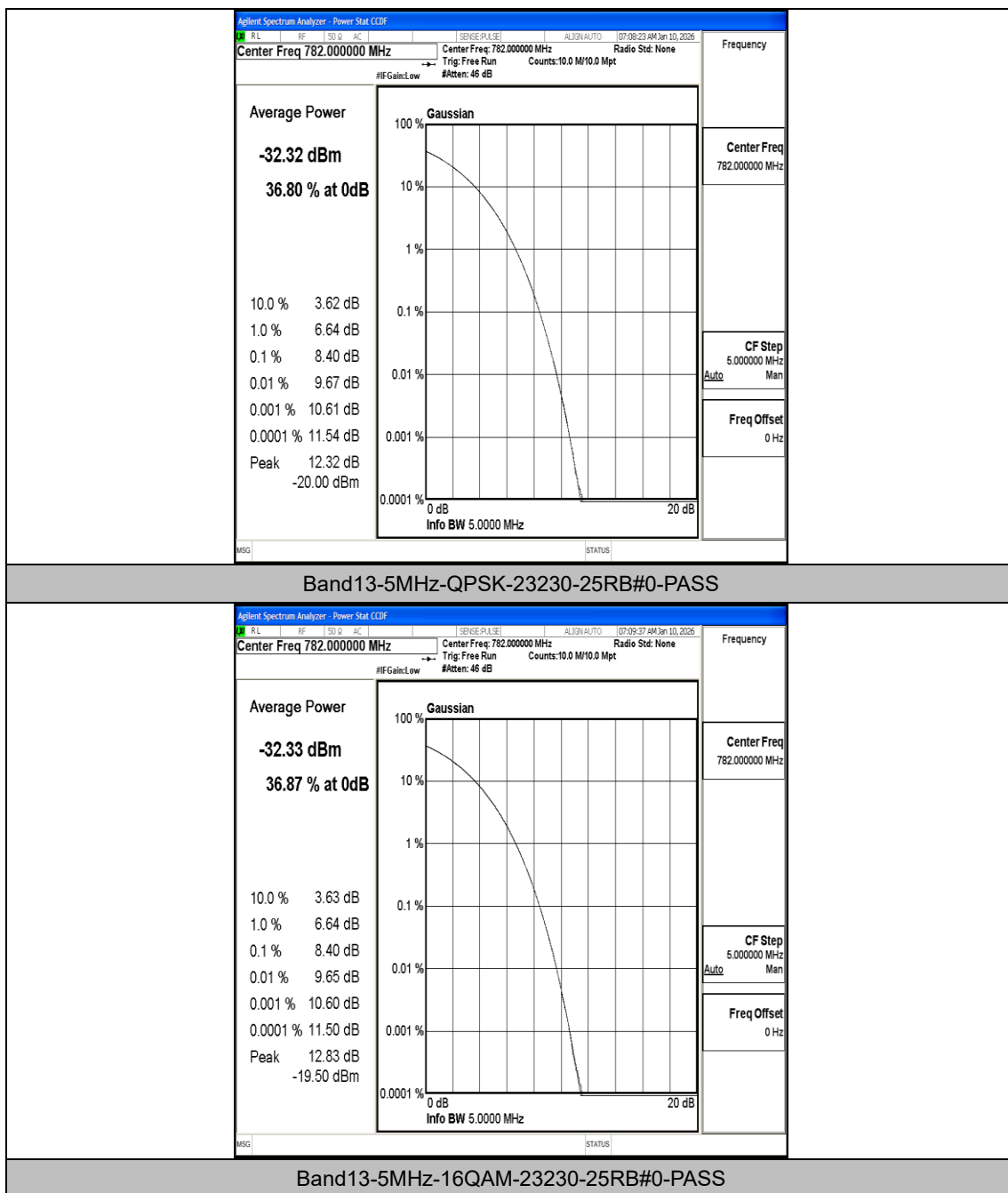
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	8.39	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	8.39	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	8.40	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	8.39	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	8.39	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	8.41	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	8.40	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	8.40	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	8.39	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	8.40	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	8.41	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	8.40	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	8.41	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	8.41	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.40	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.39	13	PASS

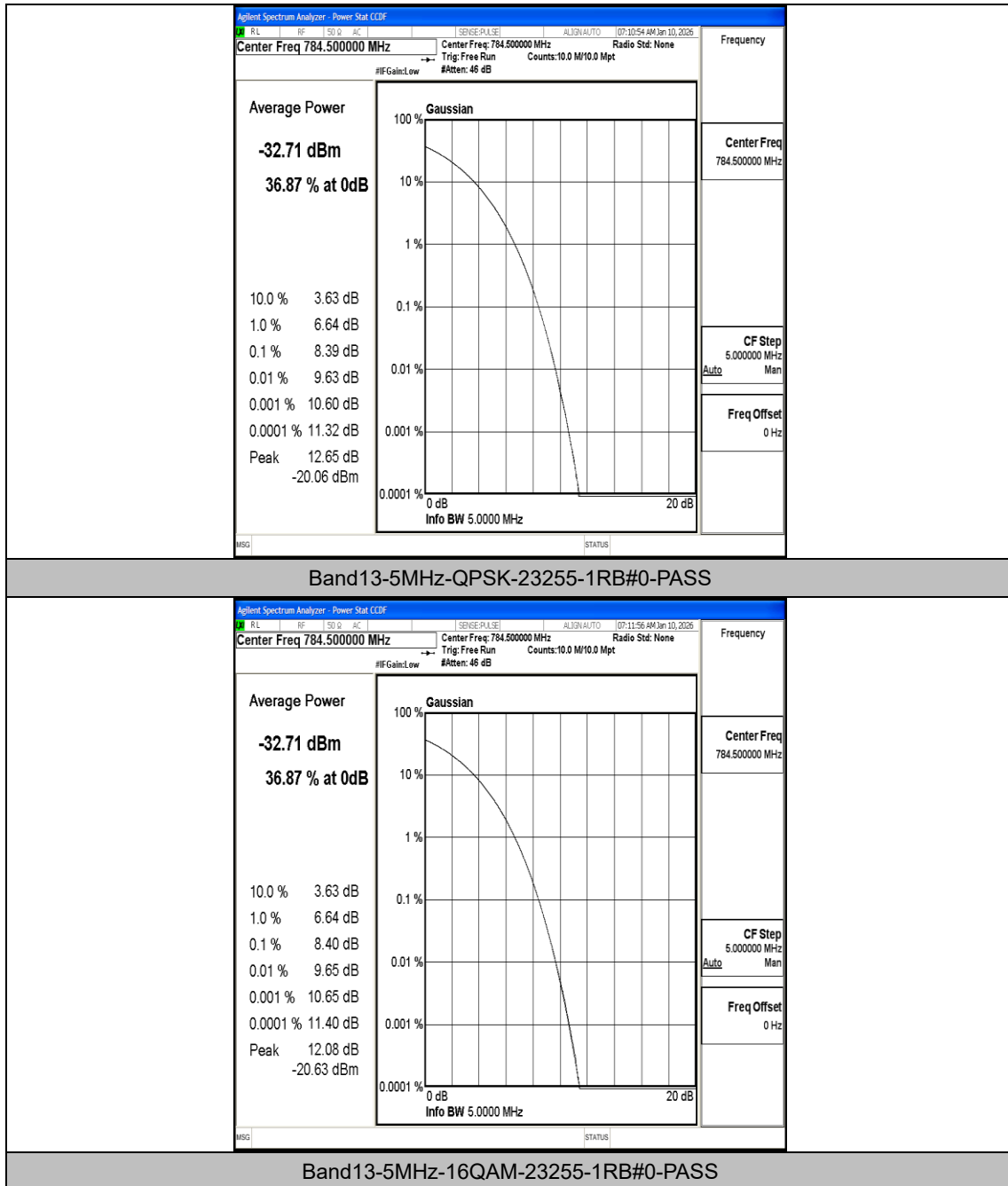
Test Graphs

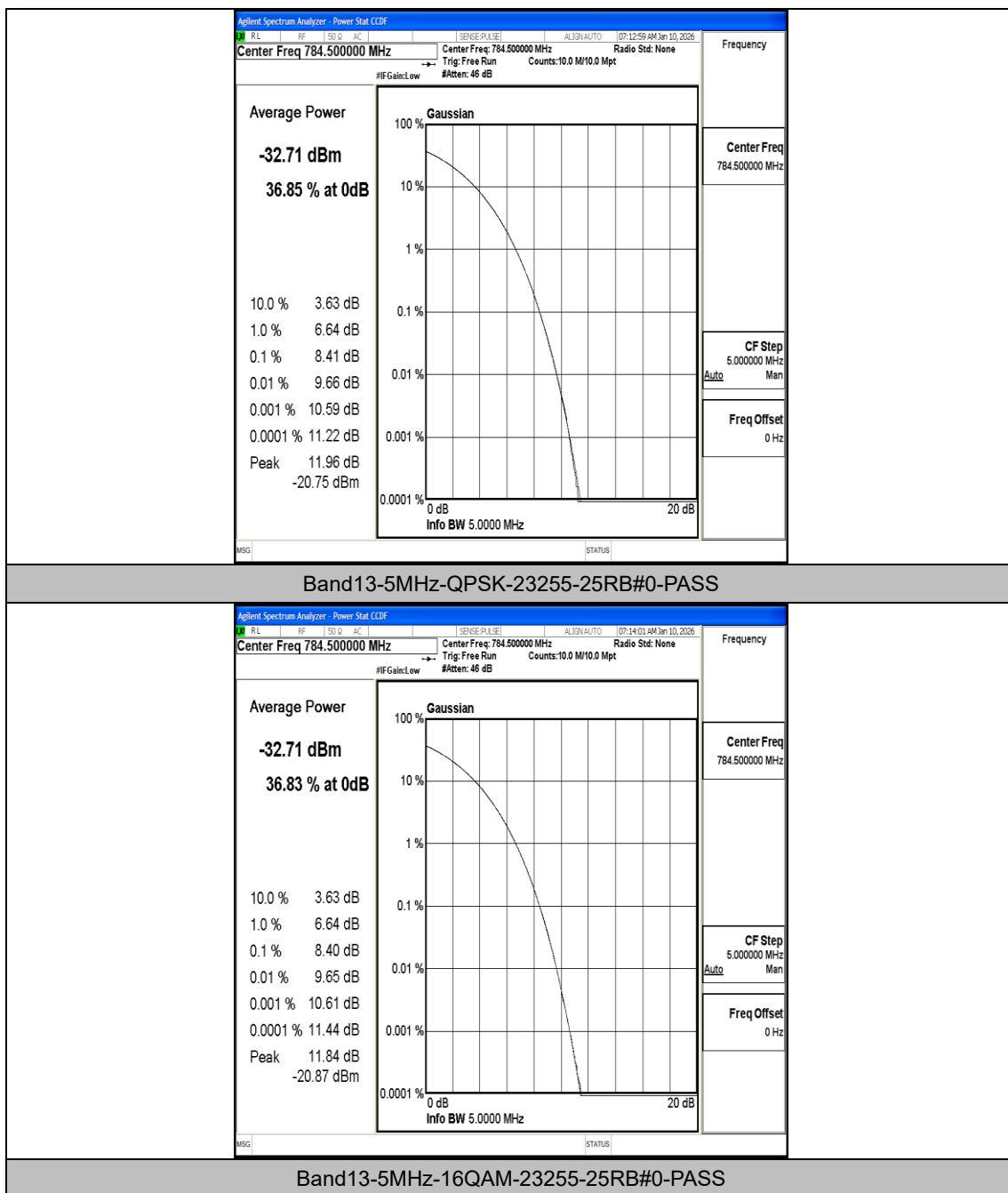


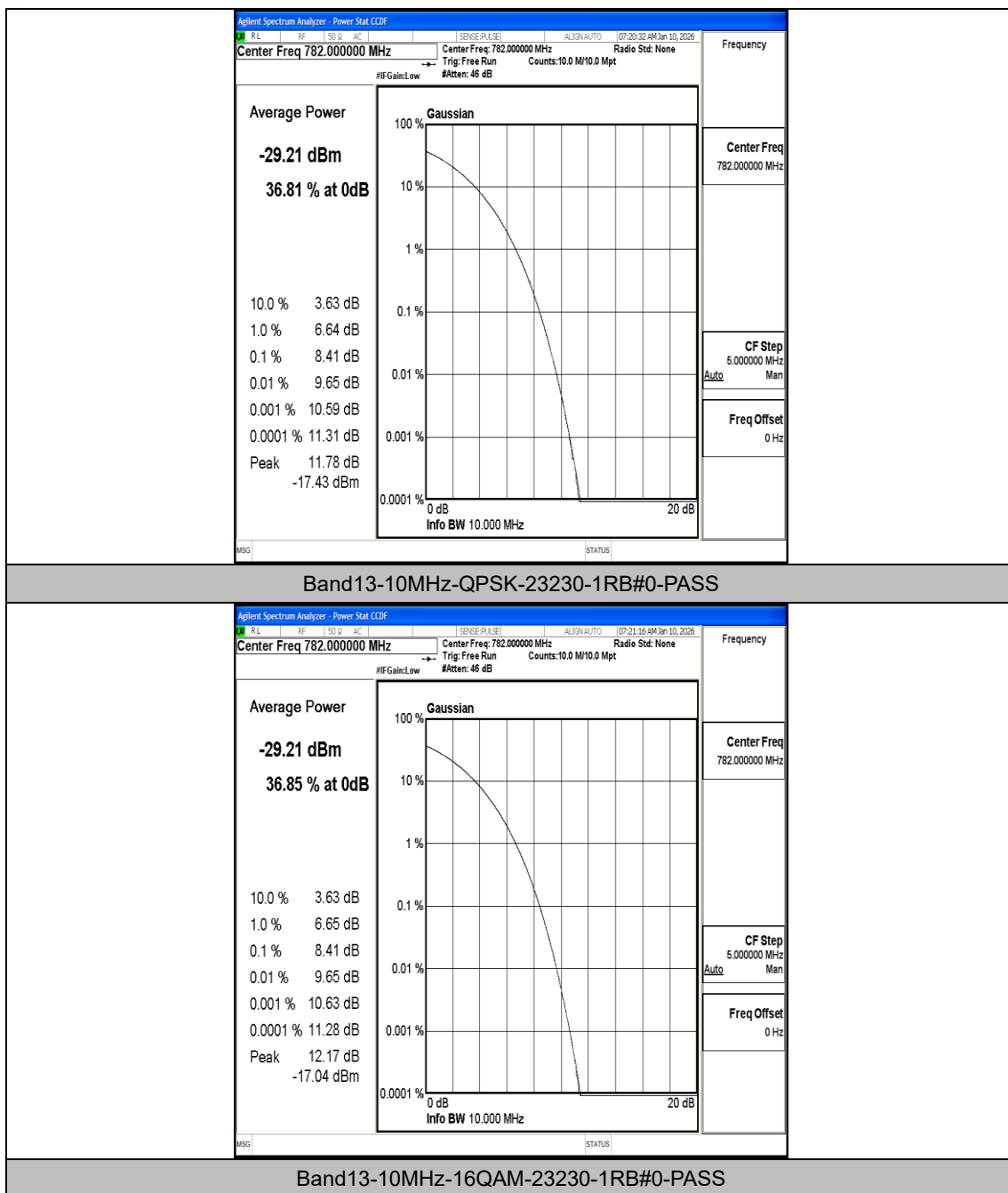


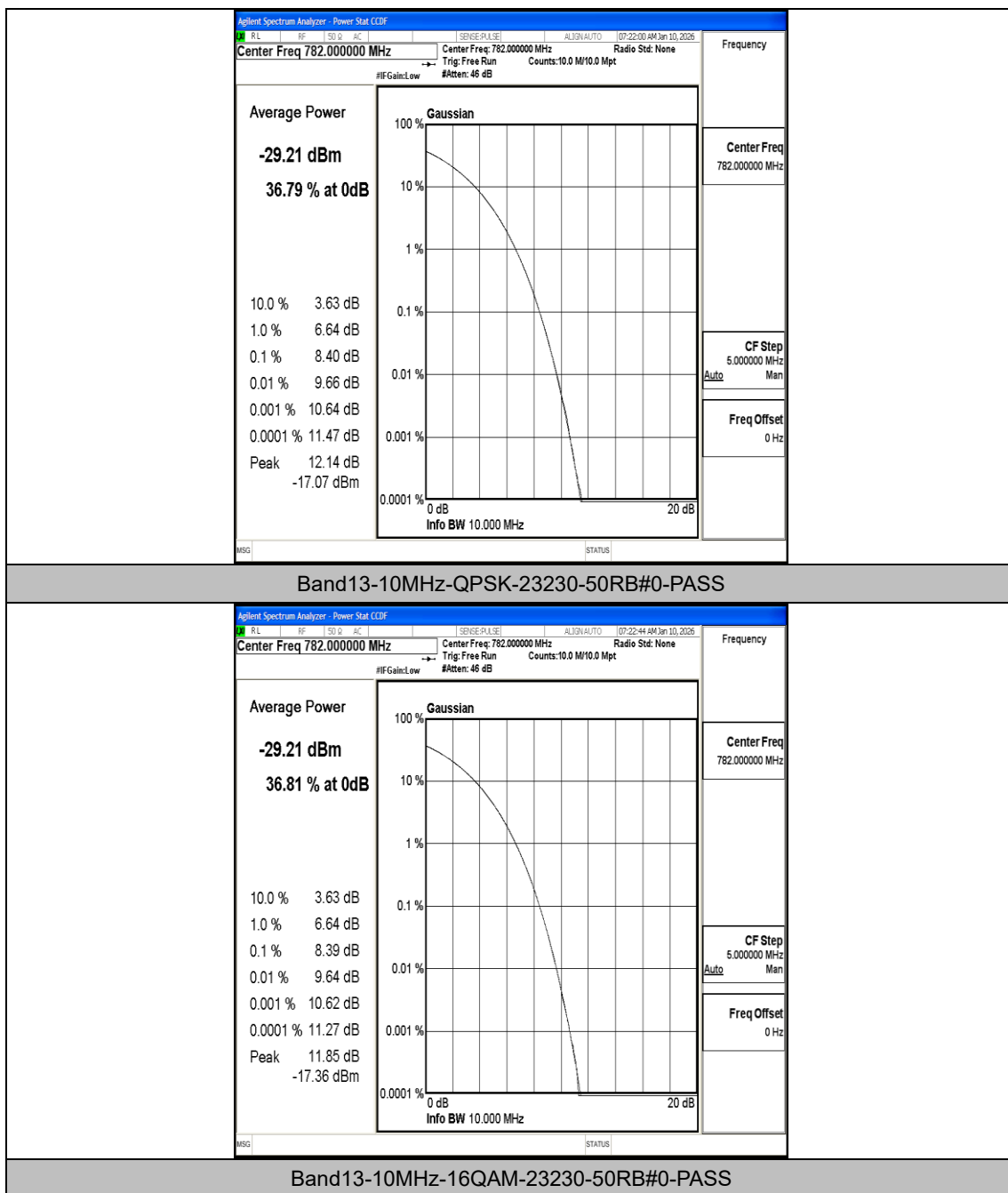










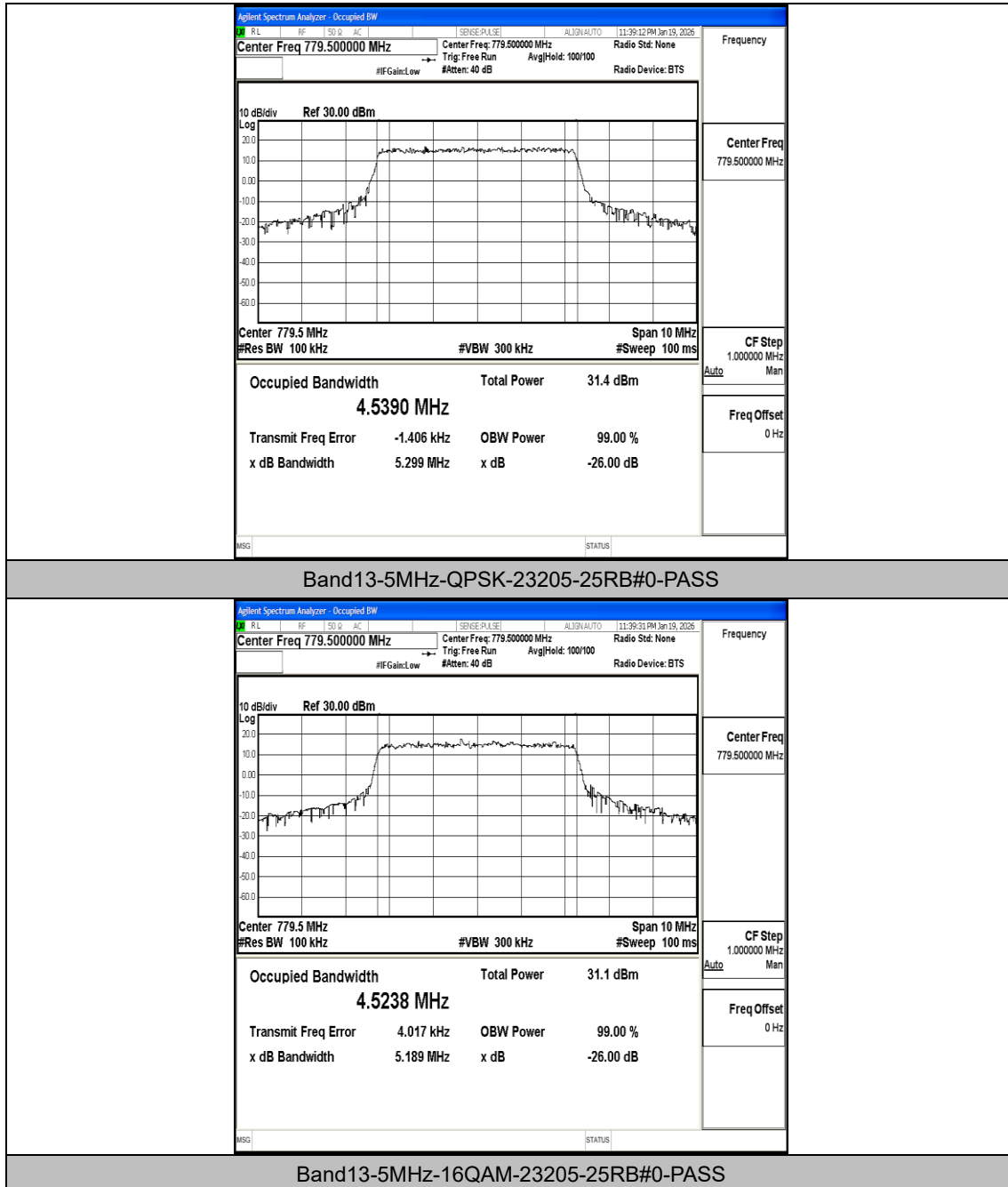


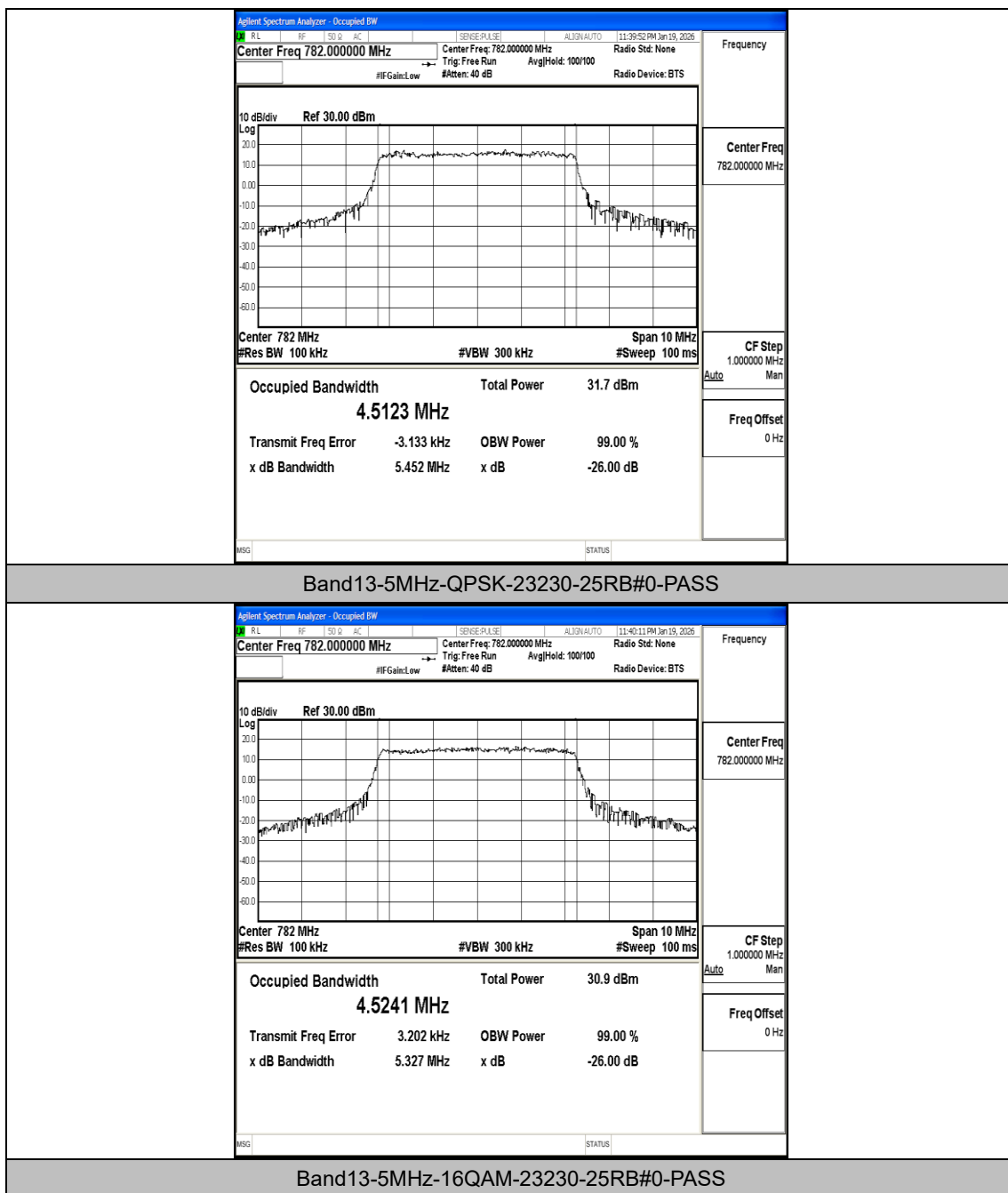
3 26dB Bandwidth and Occupied Bandwidth

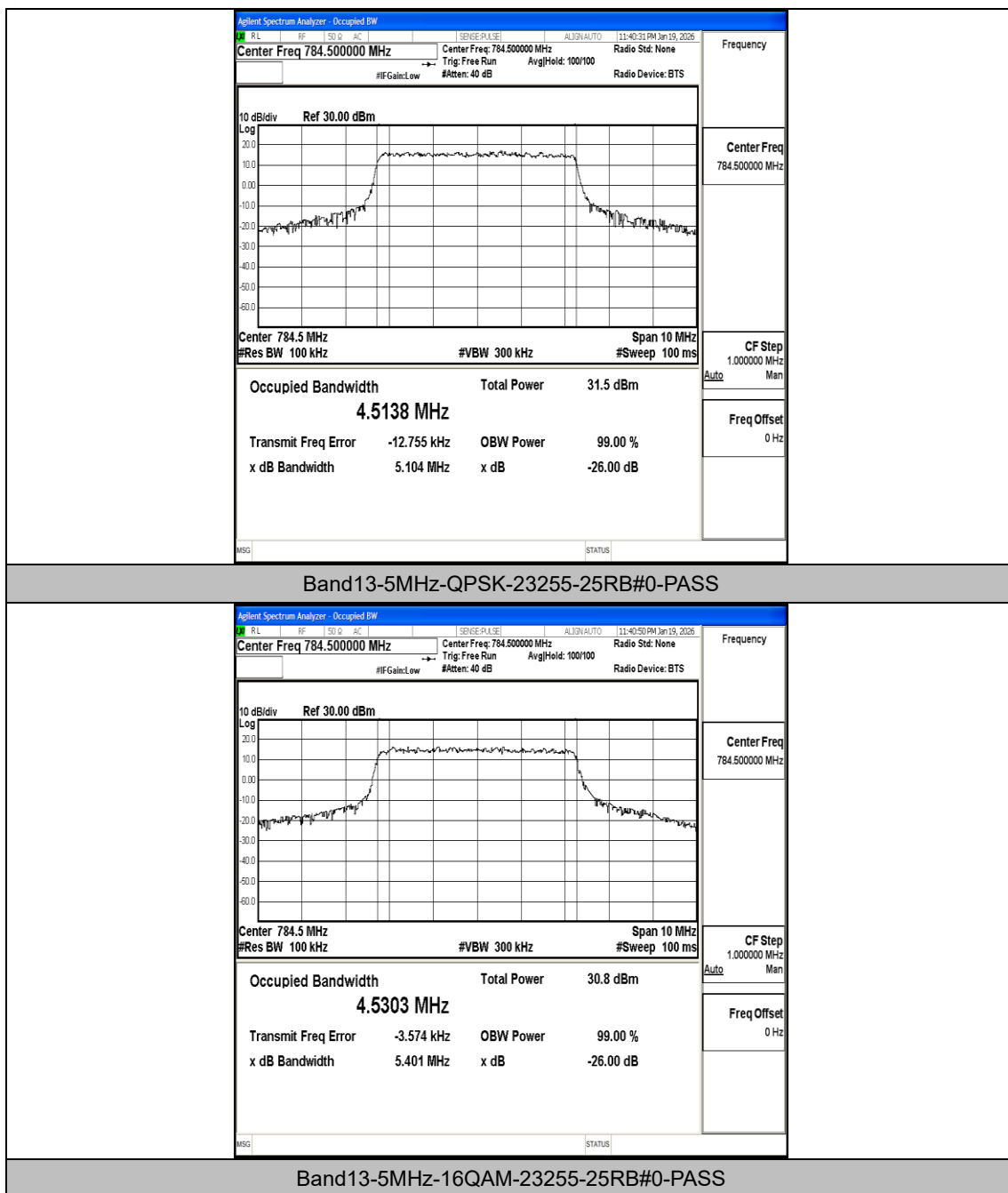
Test Result

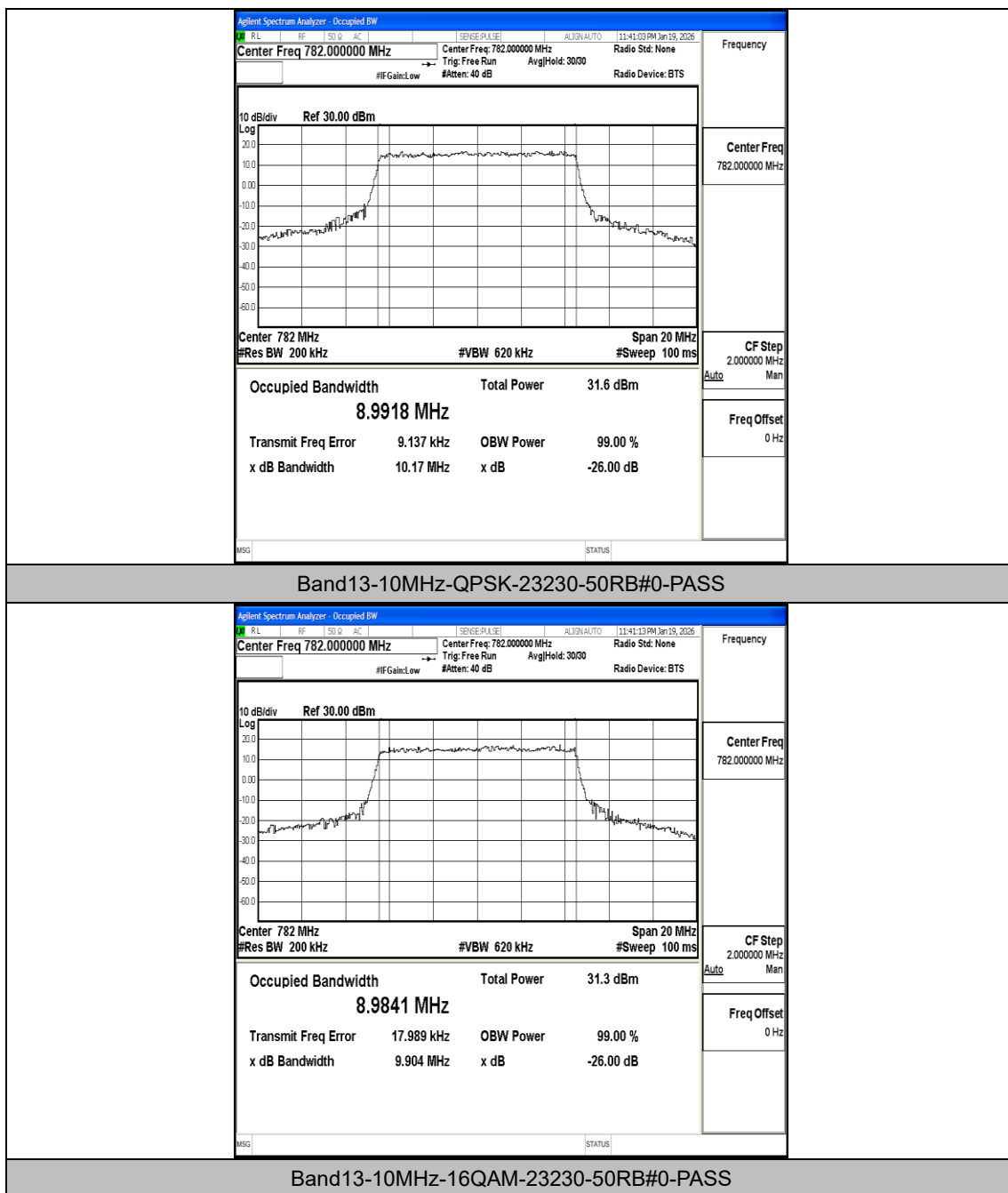
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5390	5.299	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5238	5.189	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5123	5.452	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5241	5.327	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5138	5.104	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5303	5.401	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9918	10.17	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9841	9.904	PASS

Test Graphs







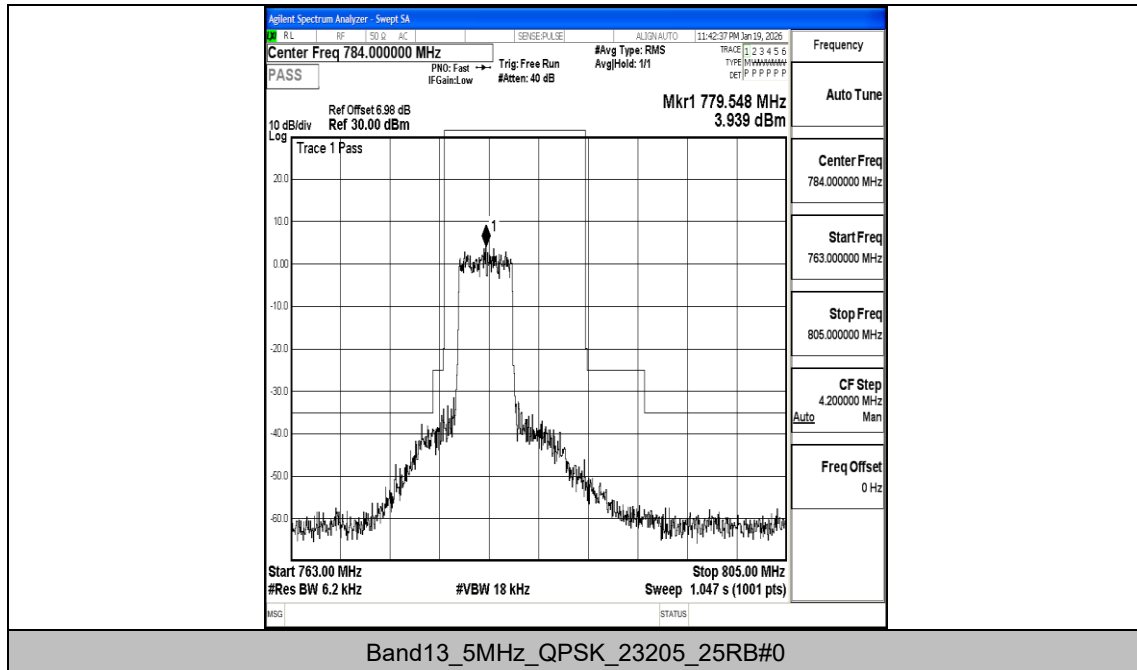


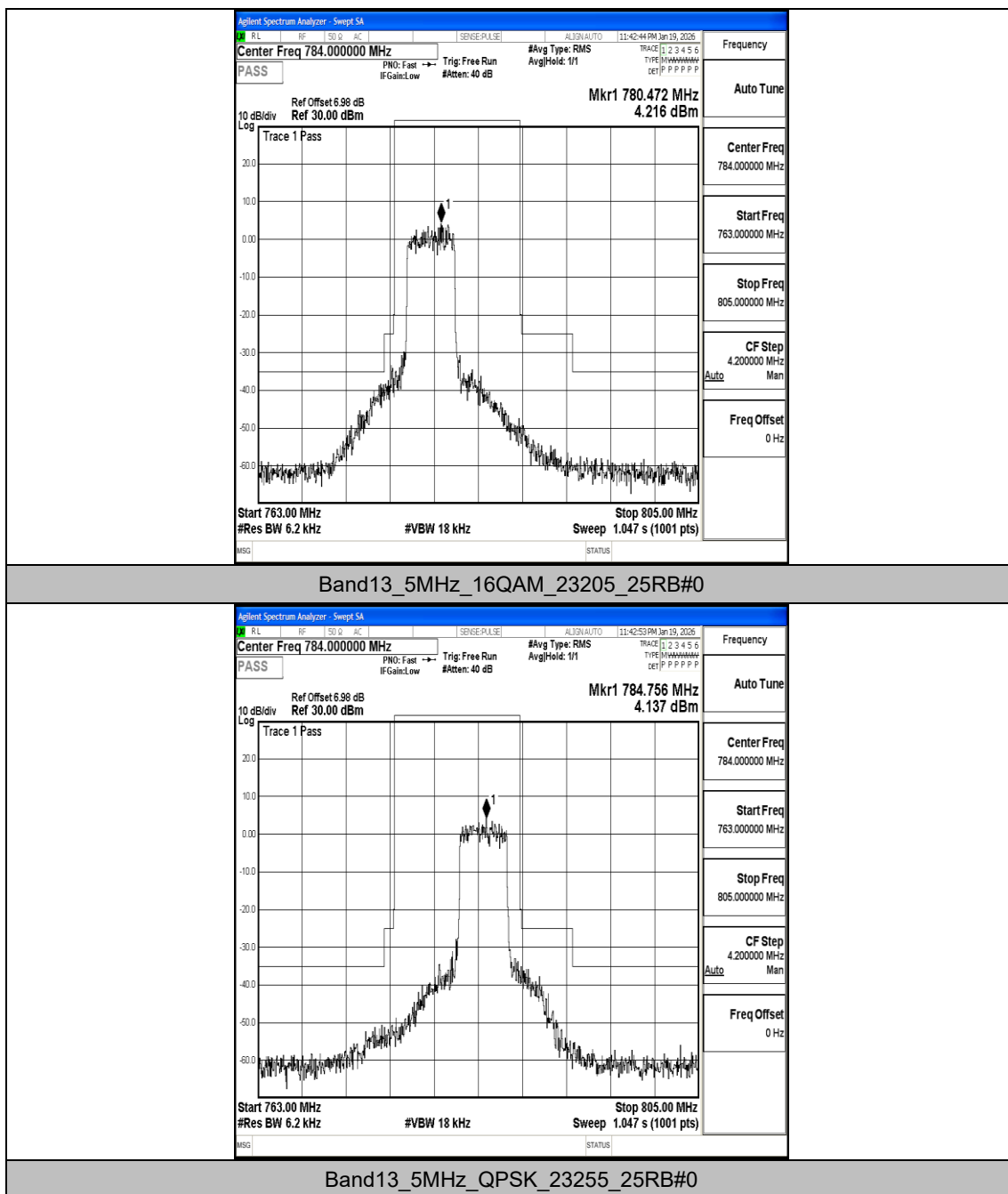
4 Band Edge

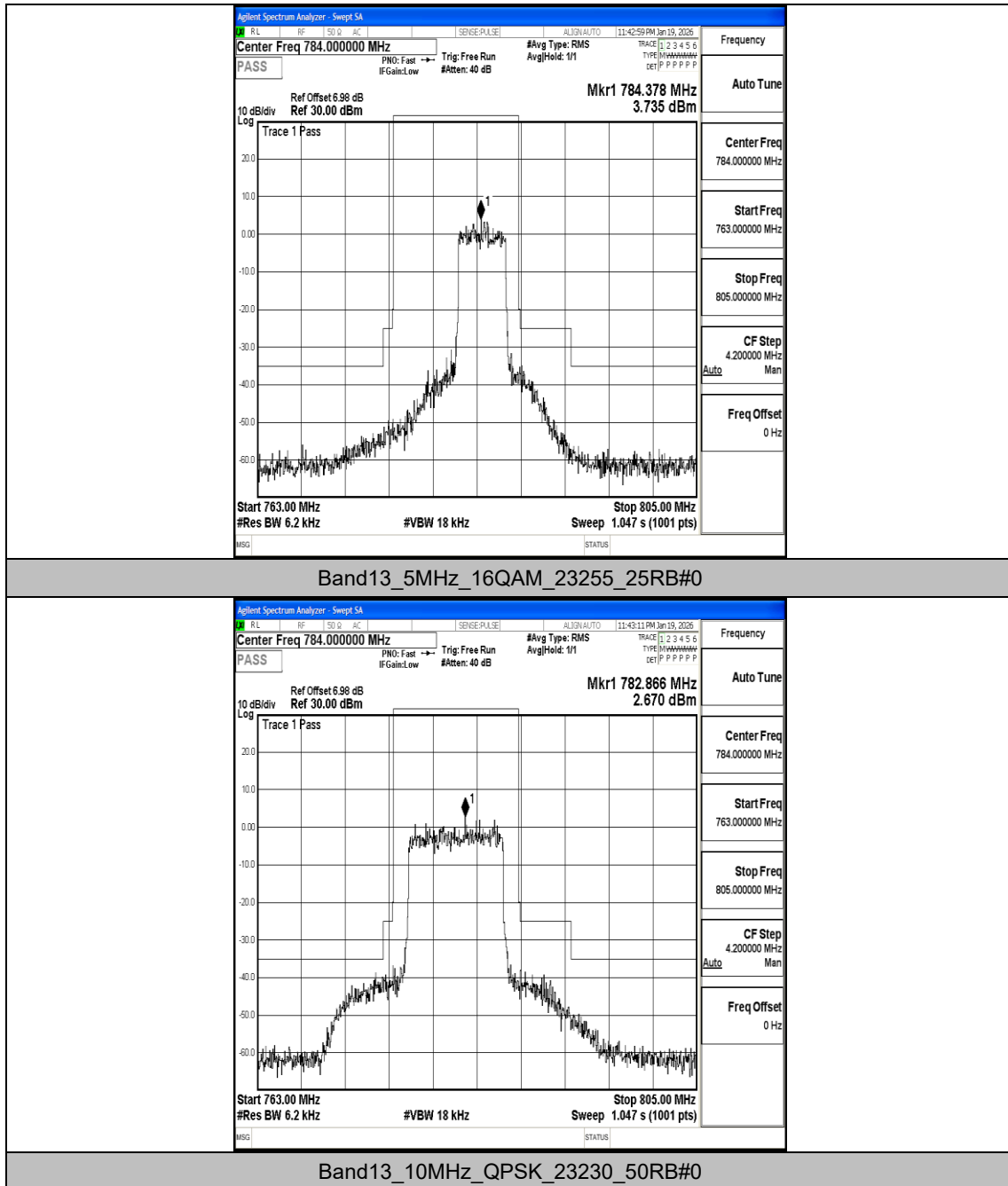
Test Result

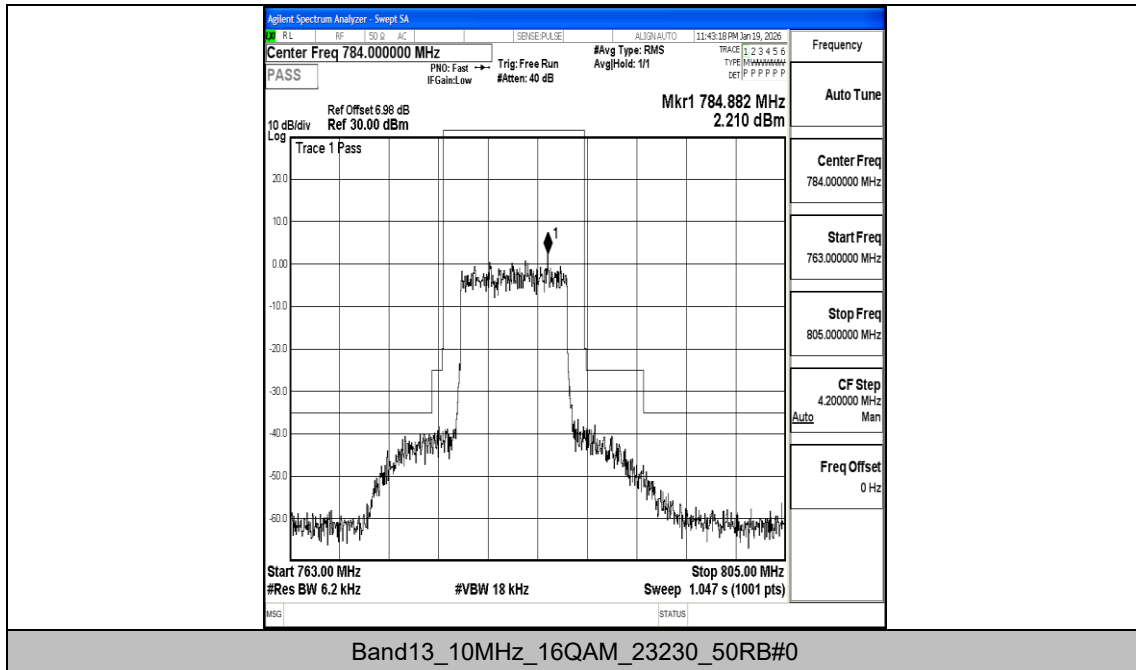
Band	Bandwidth	Modulation	Channel	RB Configuration	Peak Frequency	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	774.13	-37.80	PASS
Band13	5MHz	16QAM	23205	25RB#0	774.72	-38.36	PASS
Band13	5MHz	QPSK	23255	25RB#0	788.58	-35.79	PASS
Band13	5MHz	16QAM	23255	25RB#0	788.33	-34.82	PASS
Band13	10MHz	QPSK	23230	50RB#0	774.34	-38.74	PASS
Band13	10MHz	16QAM	23230	50RB#0	774.84	-40.03	PASS

Test Graphs









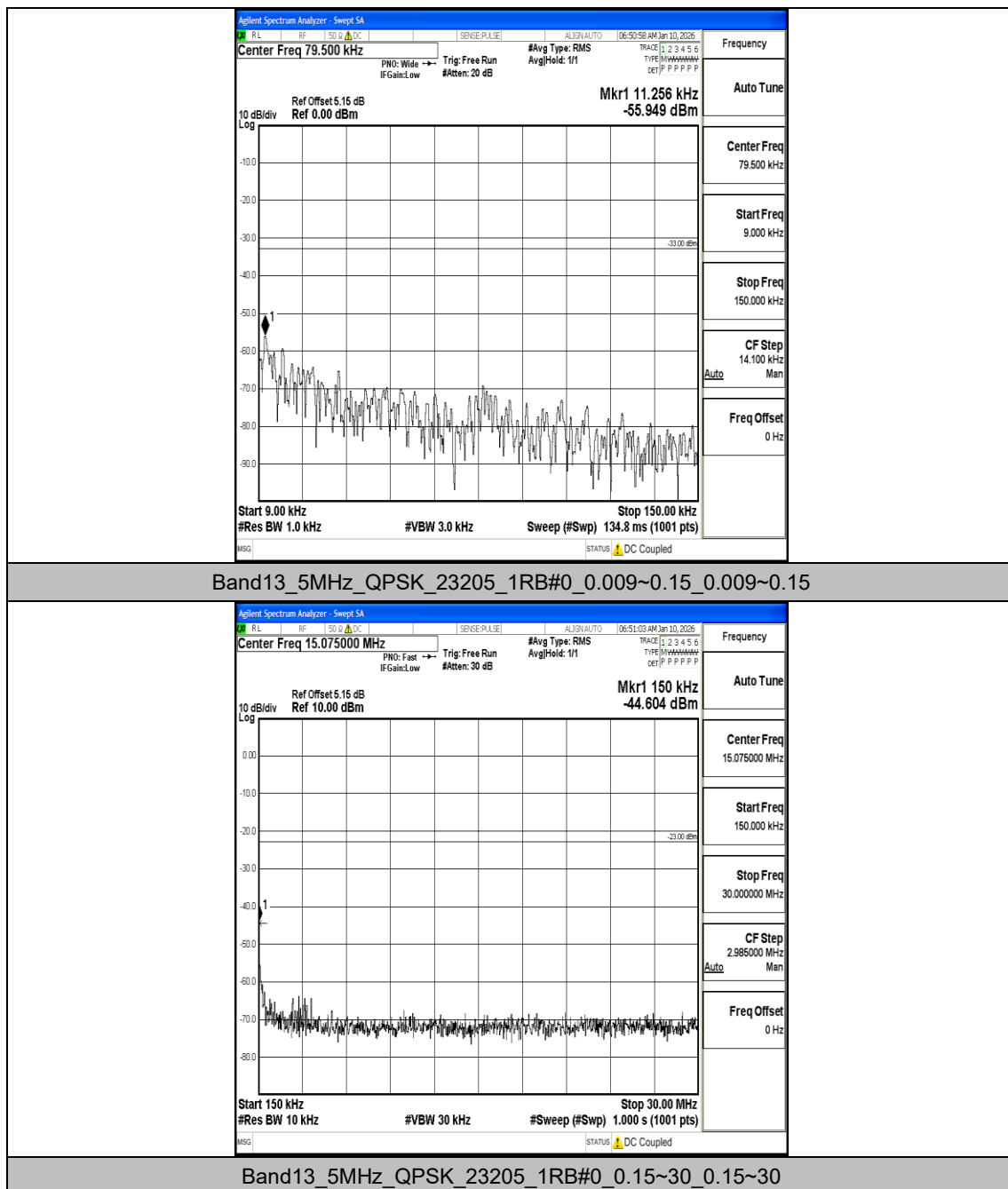
5 Conducted Spurious Emission

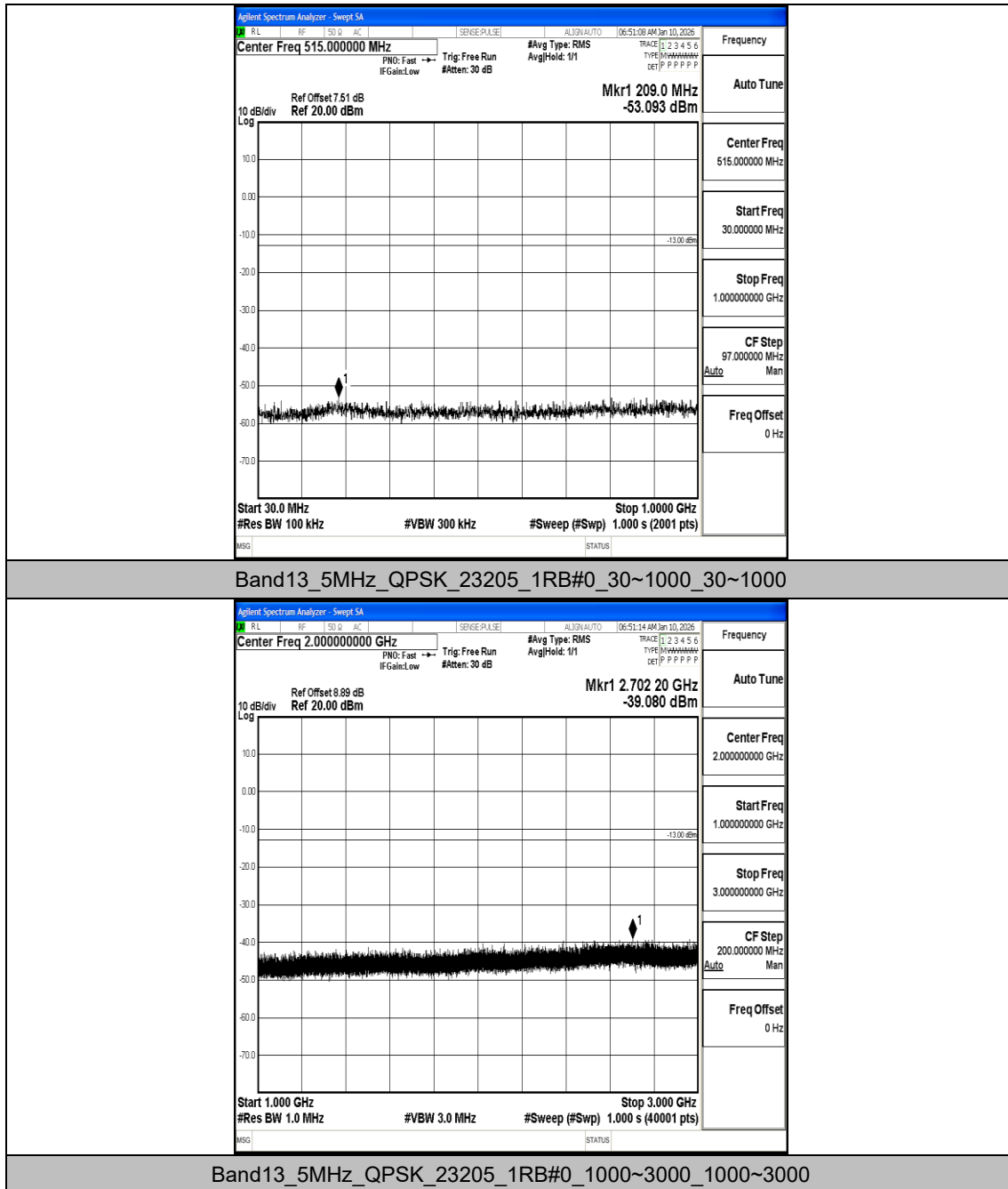
Test Result

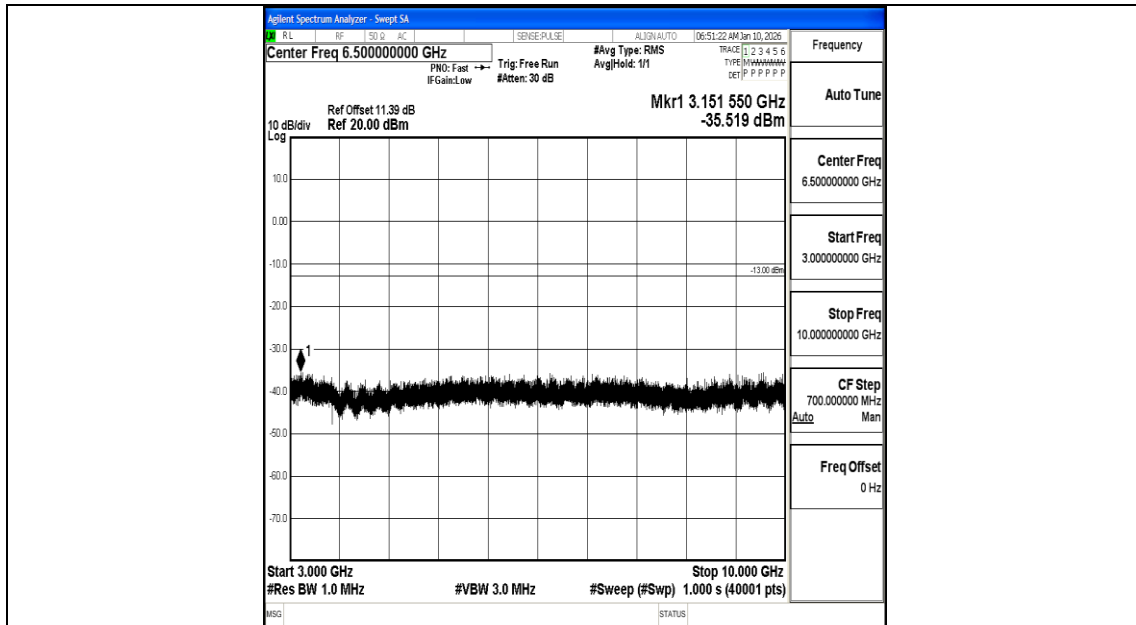
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	0.009~0.15	-55.95	PASS
Band13	5MHz	QPSK	23205	1RB#0	0.15~30	-44.60	PASS
Band13	5MHz	QPSK	23205	1RB#0	30~1000	-53.09	PASS
Band13	5MHz	QPSK	23205	1RB#0	1000~3000	-39.08	PASS
Band13	5MHz	QPSK	23205	1RB#0	3000~10000	-35.52	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.009~0.15	-55.20	PASS
Band13	5MHz	16QAM	23205	1RB#0	0.15~30	-47.06	PASS
Band13	5MHz	16QAM	23205	1RB#0	30~1000	-52.67	PASS
Band13	5MHz	16QAM	23205	1RB#0	1000~3000	-39.14	PASS
Band13	5MHz	16QAM	23205	1RB#0	3000~10000	-35.35	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.009~0.15	-57.66	PASS
Band13	5MHz	QPSK	23230	1RB#0	0.15~30	-46.19	PASS
Band13	5MHz	QPSK	23230	1RB#0	30~1000	-52.21	PASS
Band13	5MHz	QPSK	23230	1RB#0	1000~3000	-39.10	PASS
Band13	5MHz	QPSK	23230	1RB#0	3000~10000	-35.19	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.009~0.15	-53.01	PASS
Band13	5MHz	16QAM	23230	1RB#0	0.15~30	-44.08	PASS
Band13	5MHz	16QAM	23230	1RB#0	30~1000	-51.59	PASS
Band13	5MHz	16QAM	23230	1RB#0	1000~3000	-38.45	PASS
Band13	5MHz	16QAM	23230	1RB#0	3000~10000	-35.44	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.009~0.15	-57.88	PASS
Band13	5MHz	QPSK	23255	1RB#0	0.15~30	-47.61	PASS
Band13	5MHz	QPSK	23255	1RB#0	30~1000	-52.71	PASS
Band13	5MHz	QPSK	23255	1RB#0	1000~3000	-38.89	PASS
Band13	5MHz	QPSK	23255	1RB#0	3000~10000	-35.50	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.009~0.15	-55.98	PASS
Band13	5MHz	16QAM	23255	1RB#0	0.15~30	-45.25	PASS
Band13	5MHz	16QAM	23255	1RB#0	30~1000	-52.74	PASS
Band13	5MHz	16QAM	23255	1RB#0	1000~3000	-38.56	PASS
Band13	5MHz	16QAM	23255	1RB#0	3000~10000	-35.35	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.009~0.15	-57.15	PASS
Band13	10MHz	QPSK	23230	1RB#0	0.15~30	-45.58	PASS
Band13	10MHz	QPSK	23230	1RB#0	30~1000	-53.42	PASS
Band13	10MHz	QPSK	23230	1RB#0	1000~3000	-38.50	PASS
Band13	10MHz	QPSK	23230	1RB#0	3000~10000	-34.61	PASS
Band13	10MHz	16QAM	23230	1RB#0	0.009~0.15	-58.09	PASS

Band13	10MHz	16QAM	23230	1RB#0	0.15~30	-47.04	PASS
Band13	10MHz	16QAM	23230	1RB#0	30~1000	-52.47	PASS
Band13	10MHz	16QAM	23230	1RB#0	1000~3000	-39.31	PASS
Band13	10MHz	16QAM	23230	1RB#0	3000~10000	-34.76	PASS

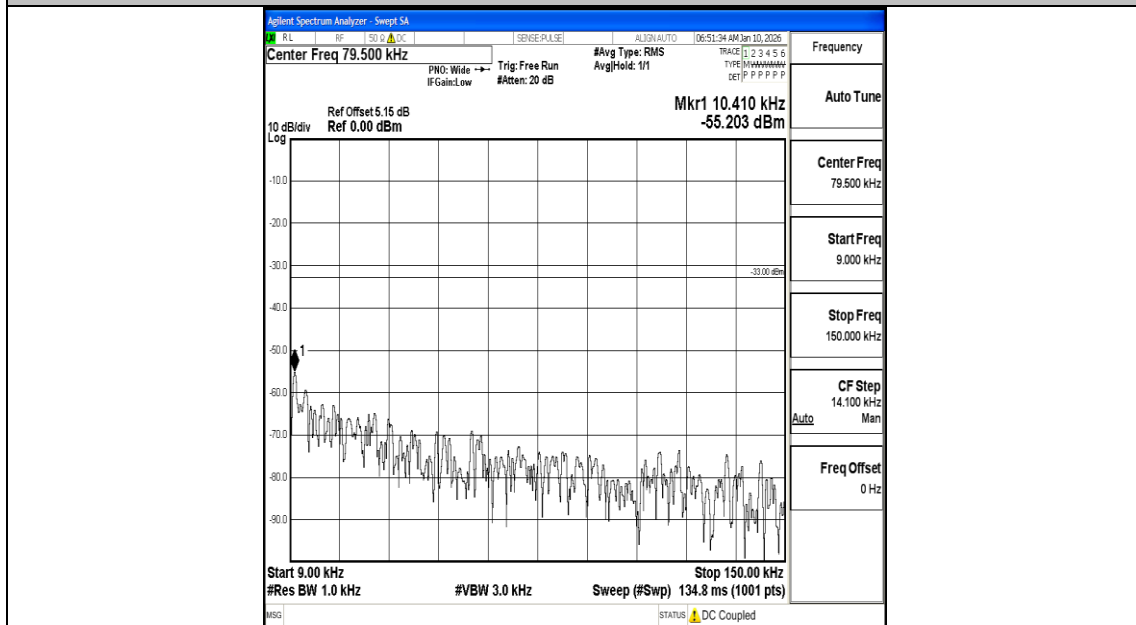
Test Graphs



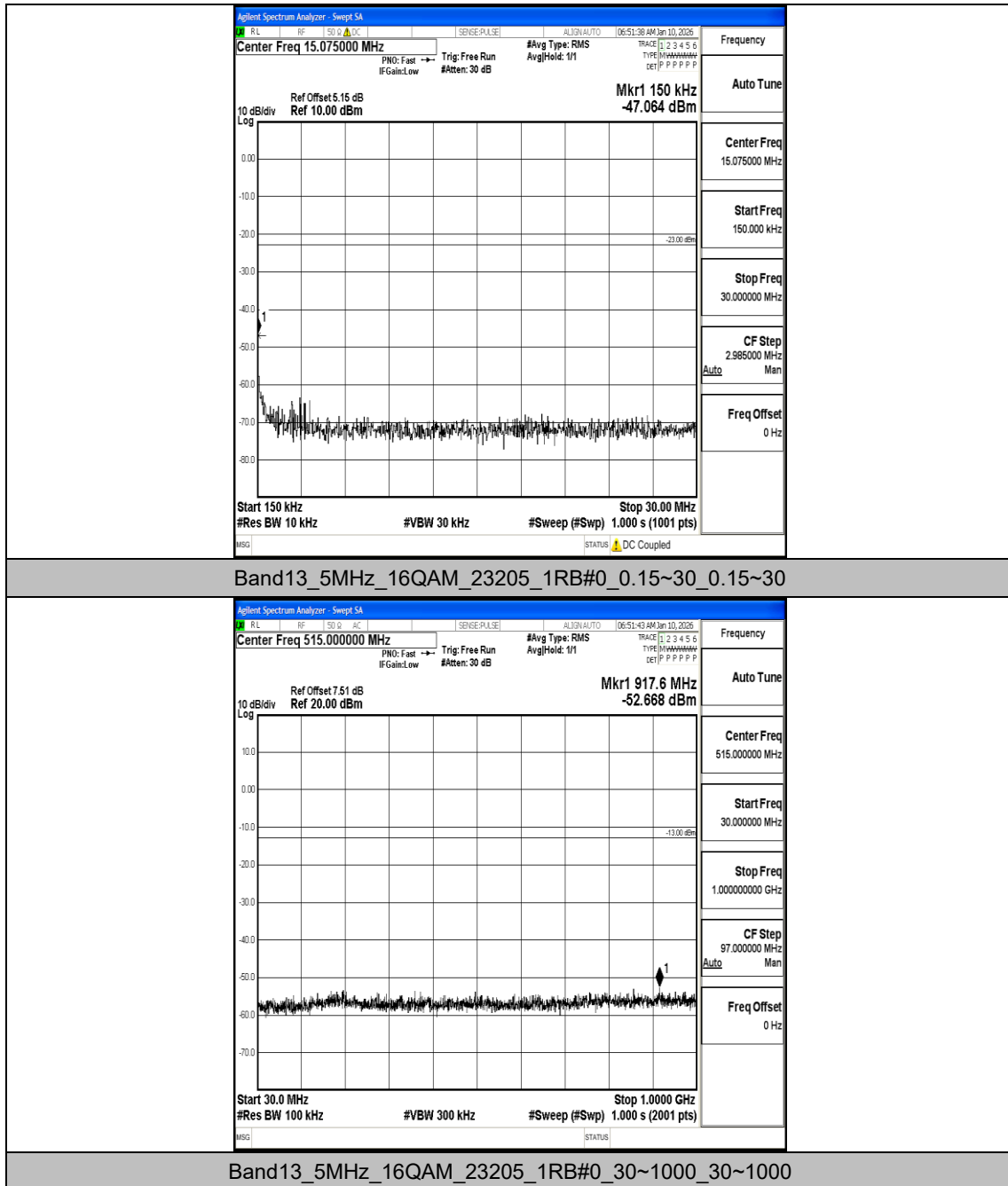


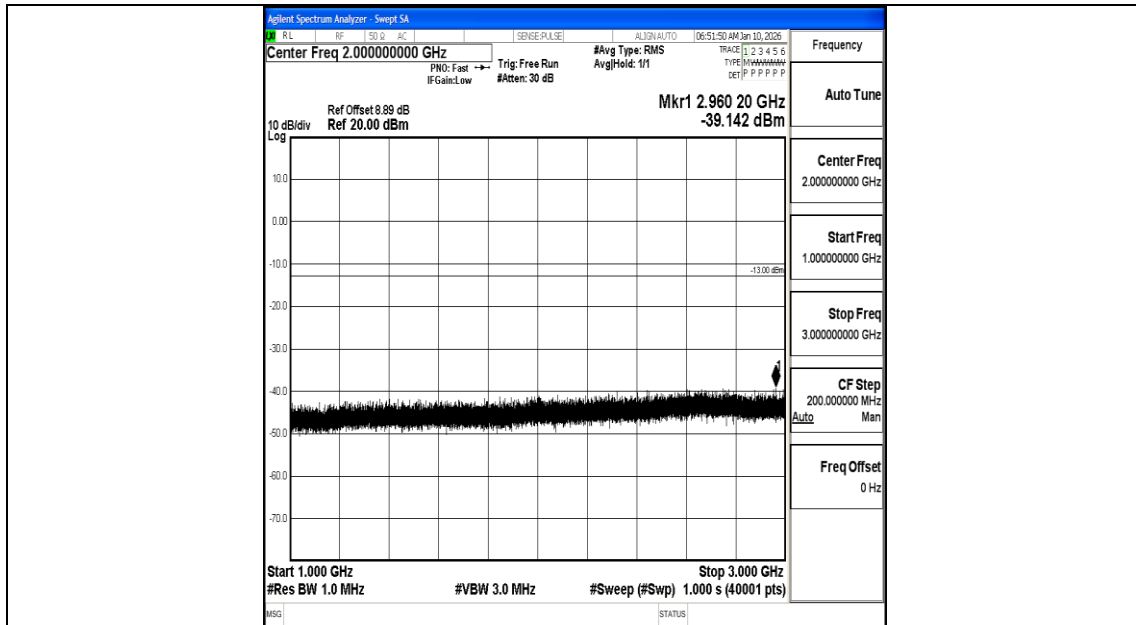


Band13_5MHz_QPSK_23205_1RB#0_3000~10000_3000~10000

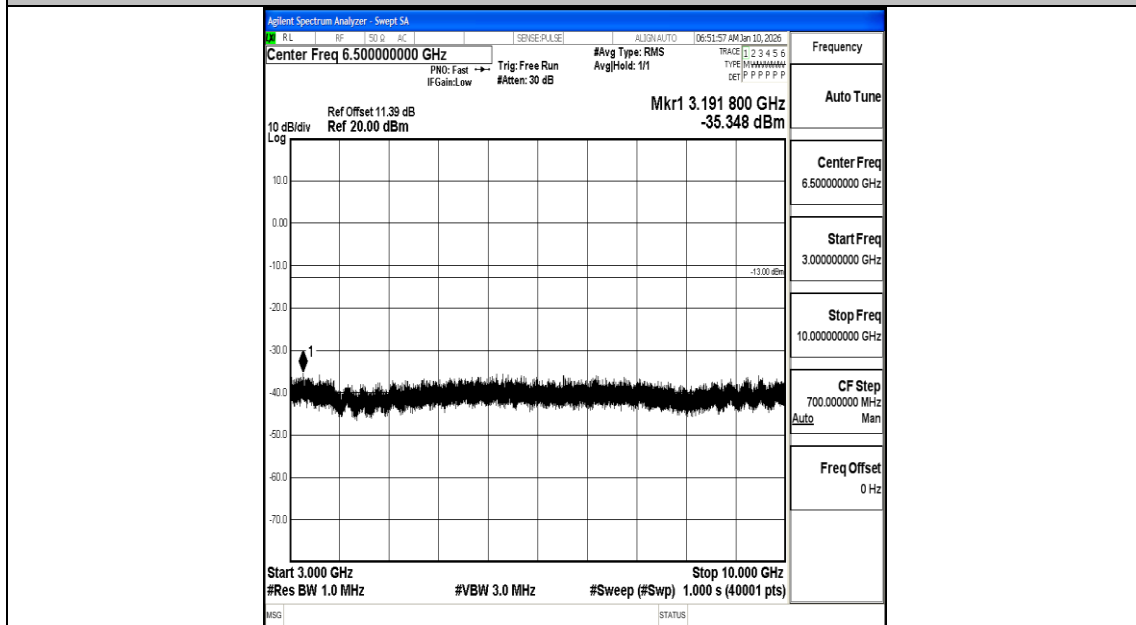


Band13_5MHz_16QAM_23205_1RB#0_0.009~0.15_0.009~0.15

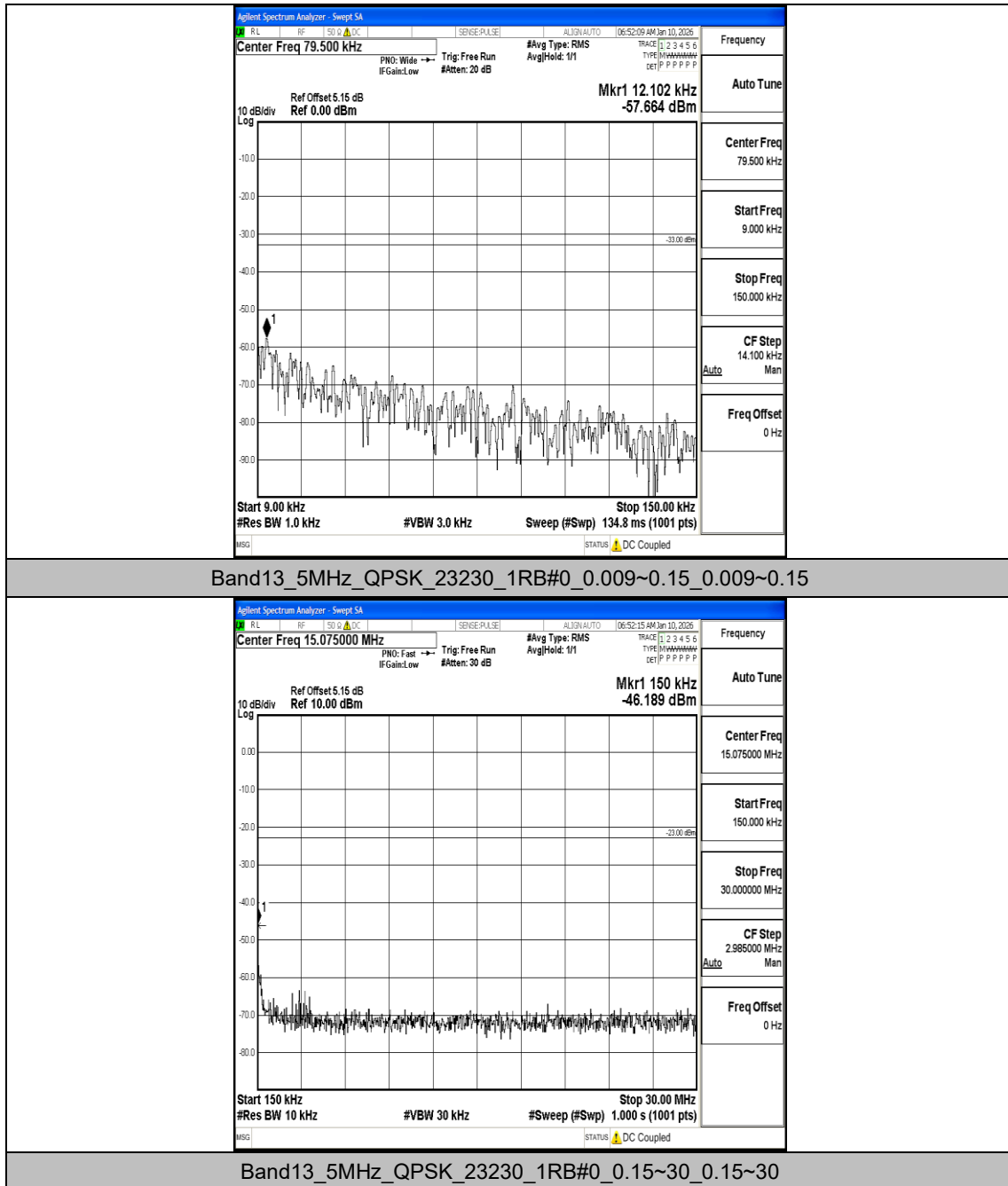


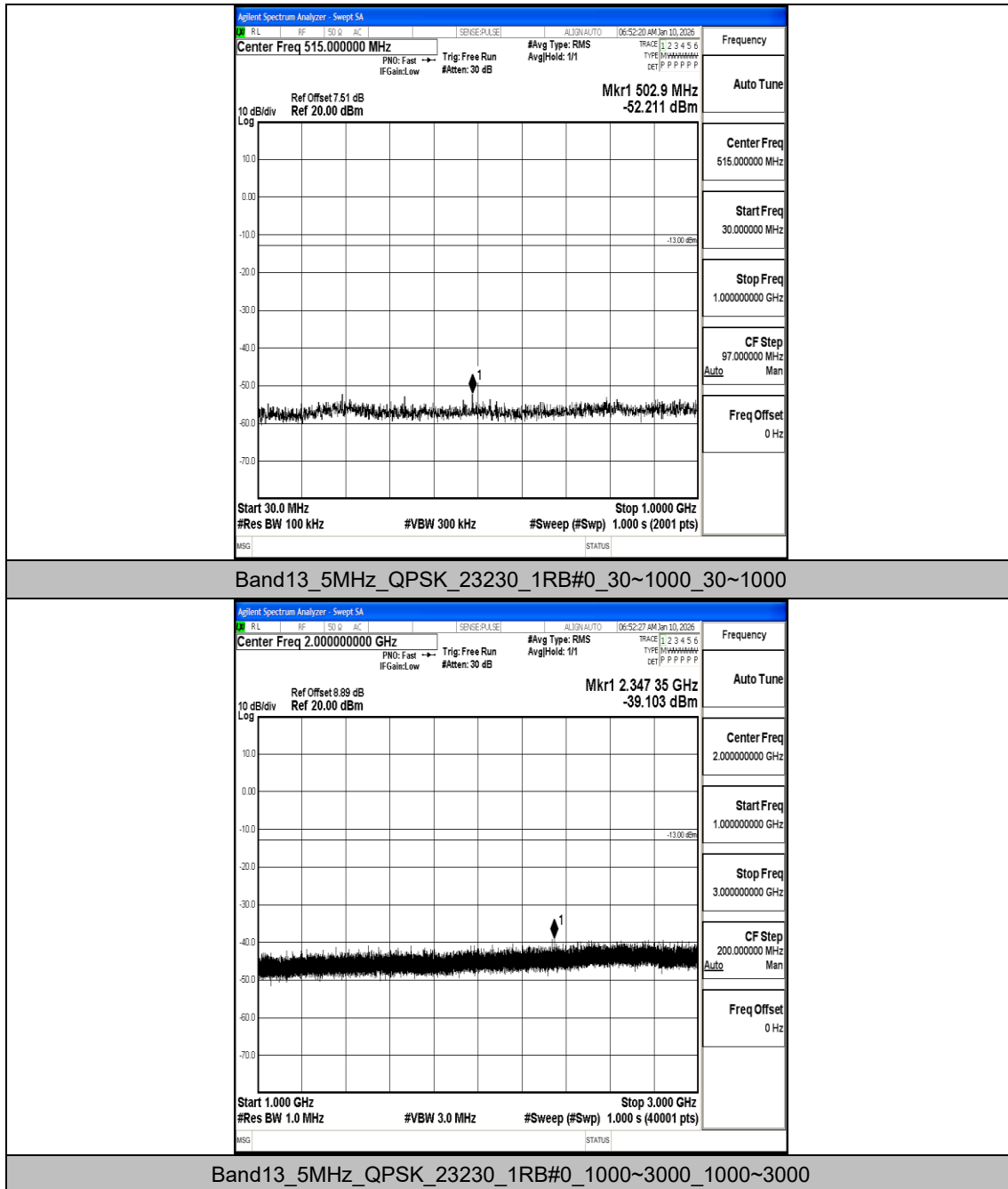


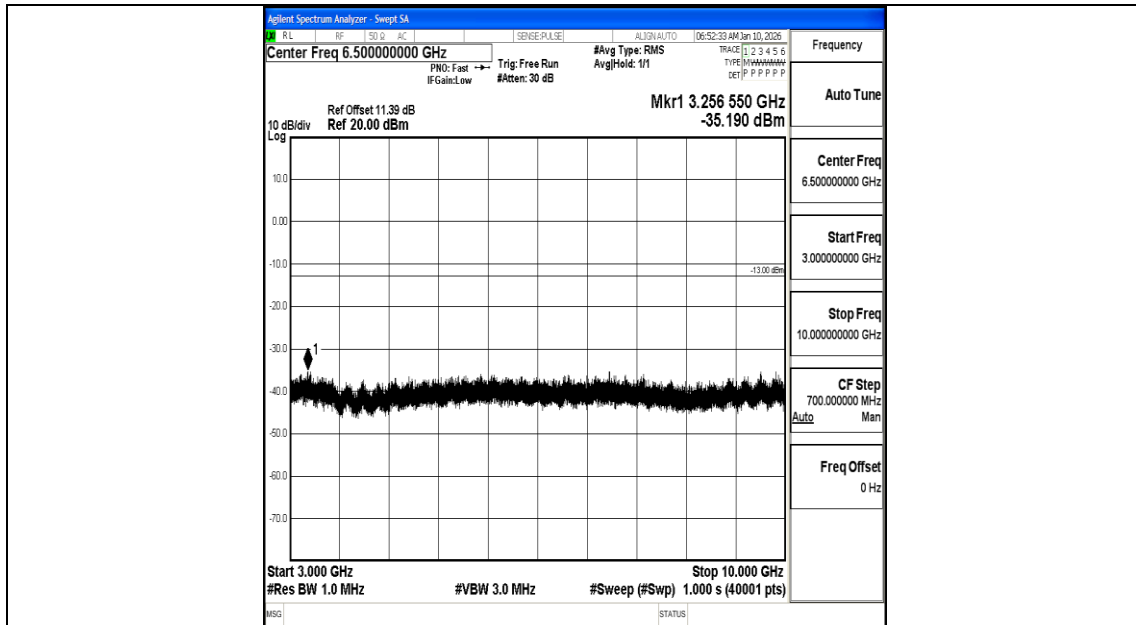
Band13_5MHz_16QAM_23205_1RB#0_1000~3000_1000~3000



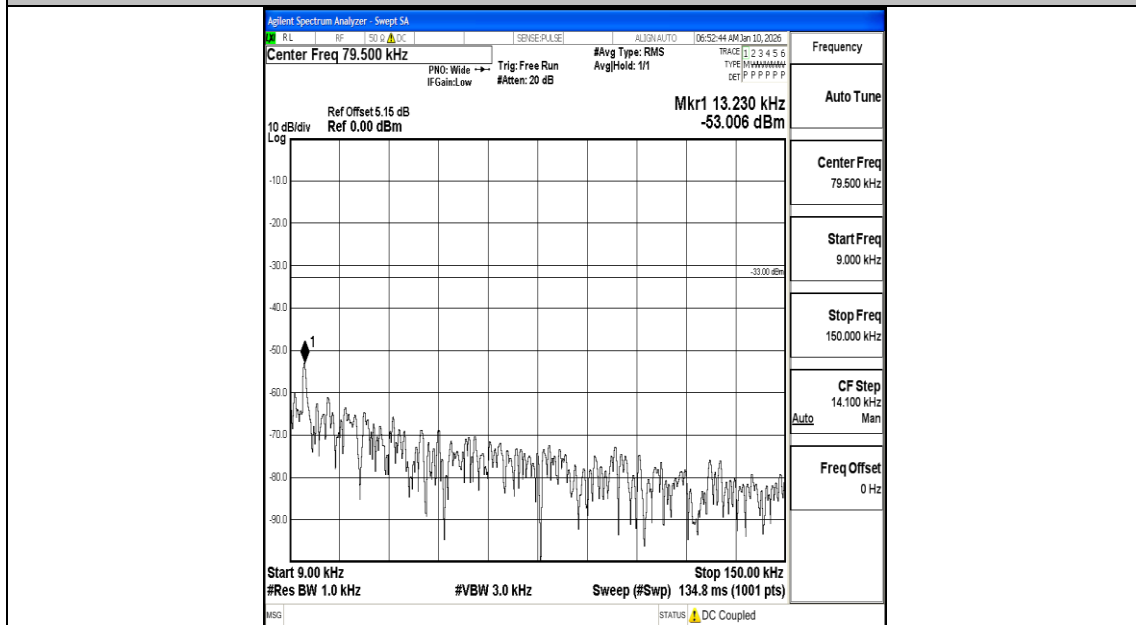
Band13_5MHz_16QAM_23205_1RB#0_3000~10000_3000~10000



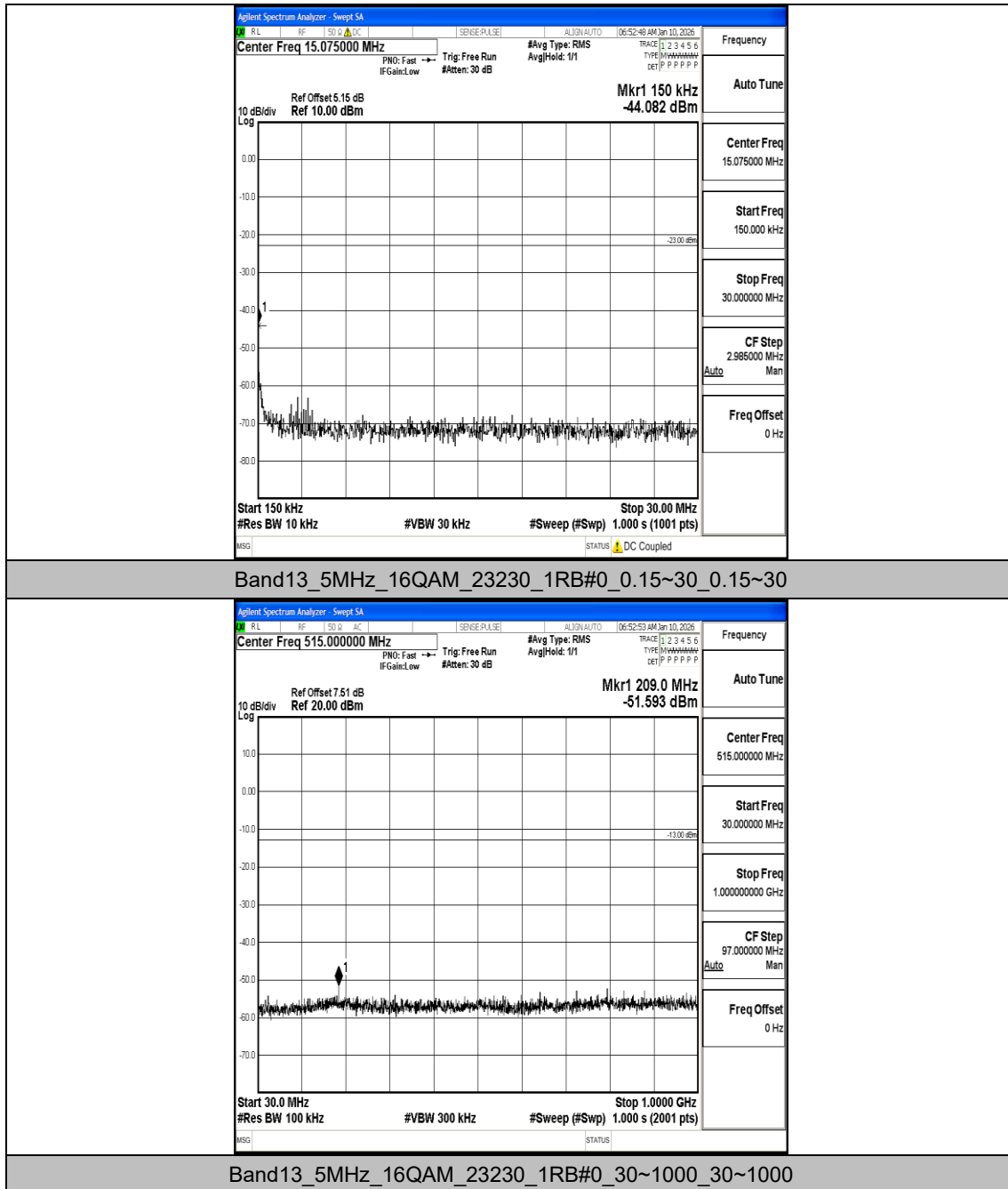


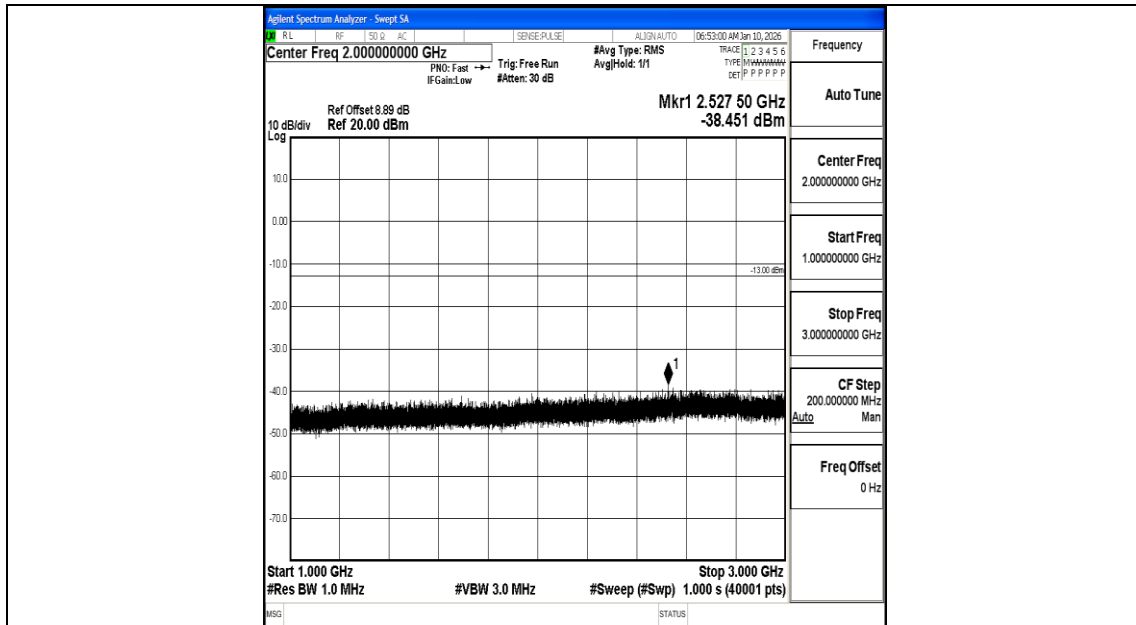


Band13_5MHz_QPSK_23230_1RB#0_3000~10000_3000~10000

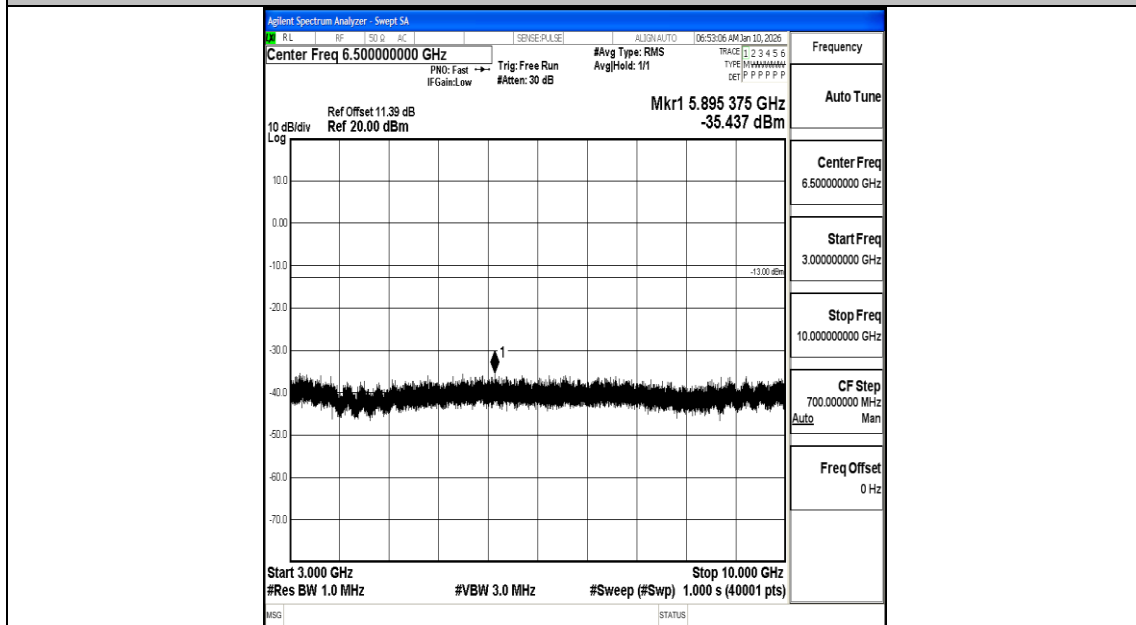


Band13_5MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15

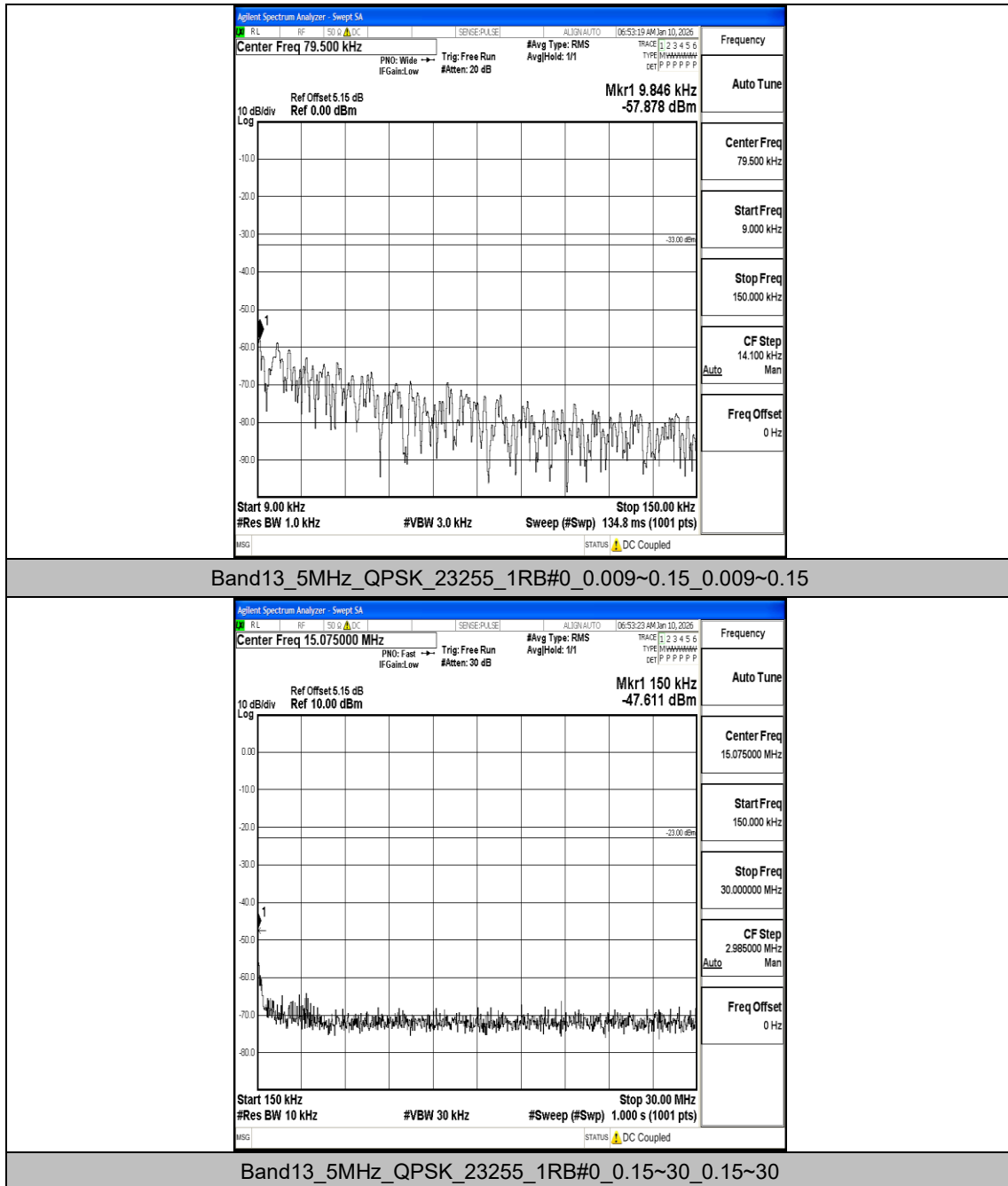


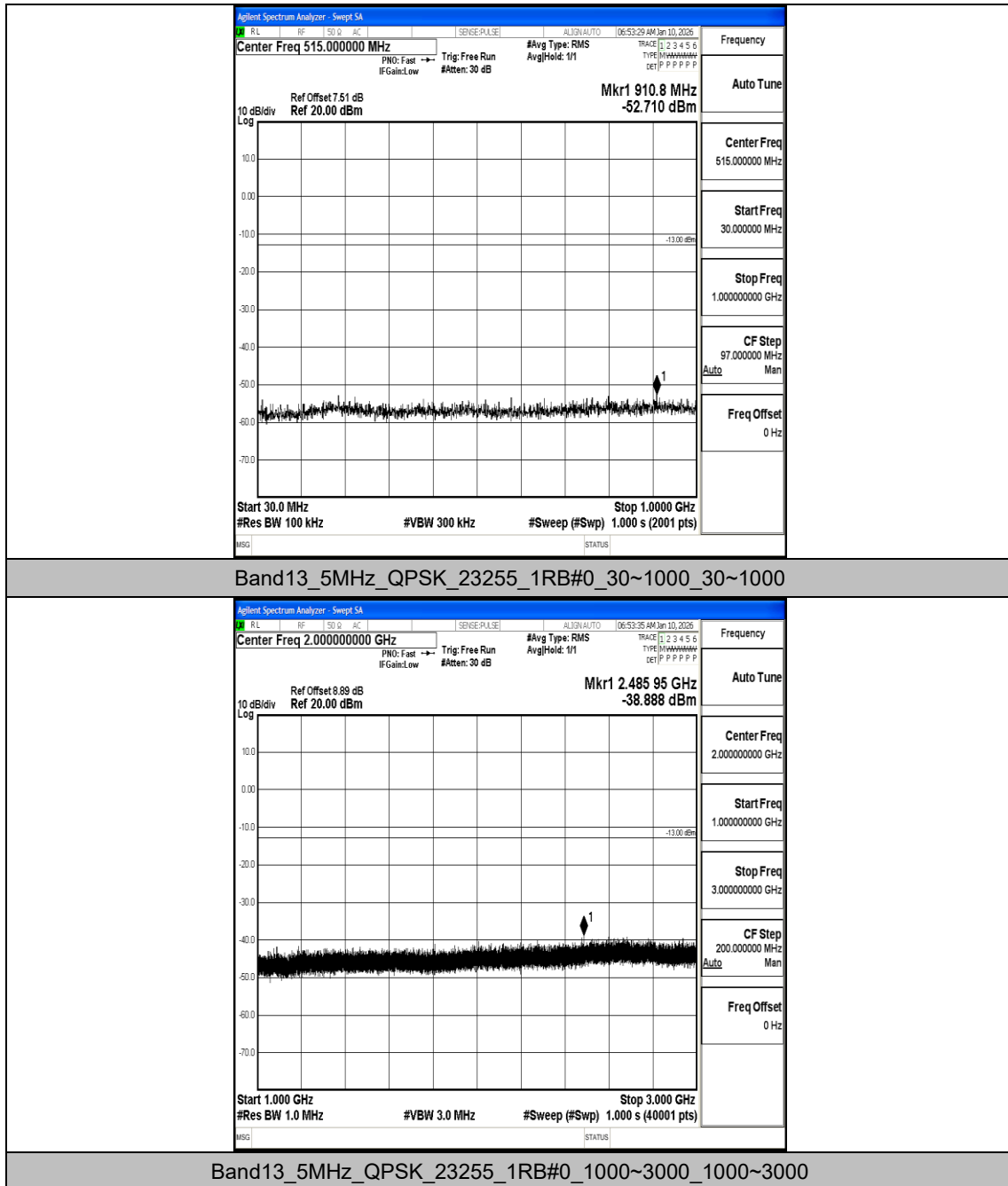


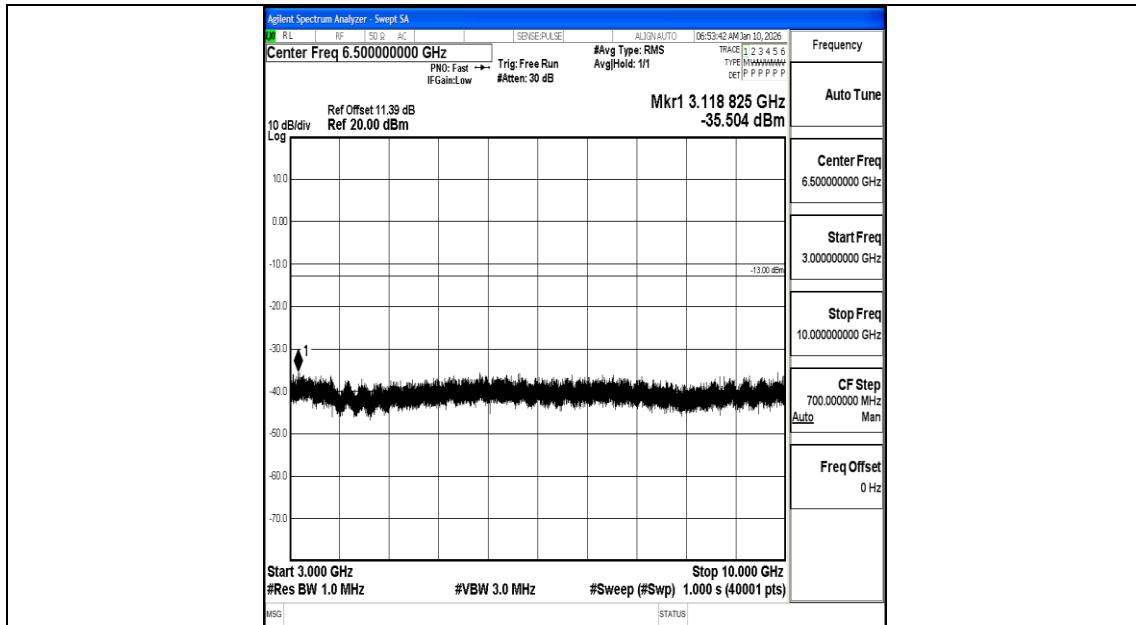
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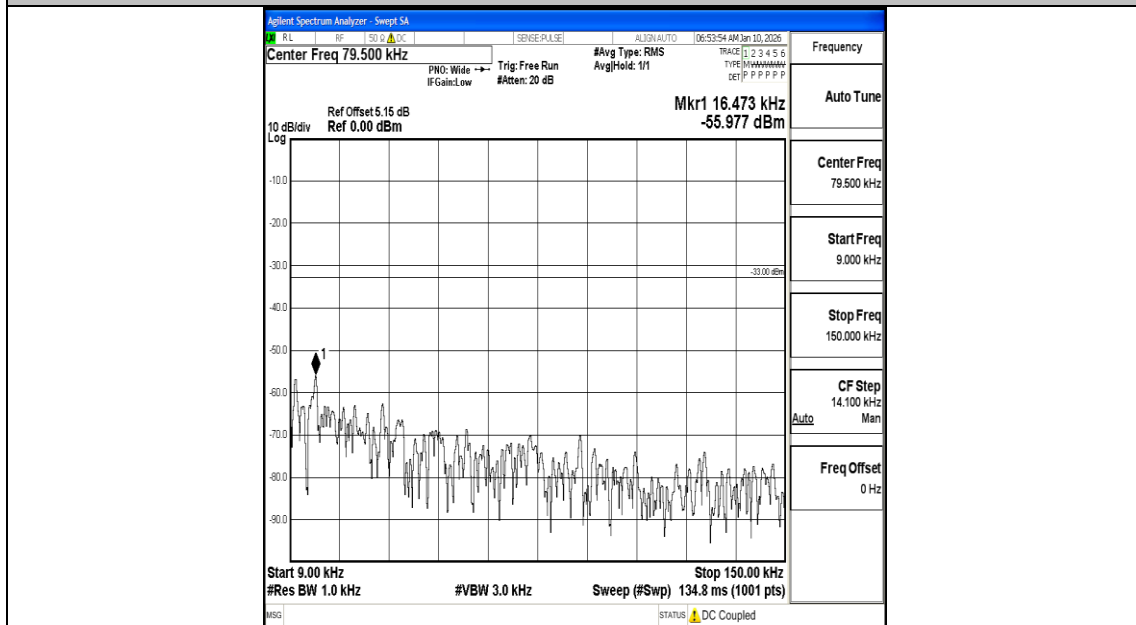
Band13_5MHz_16QAM_23230_1RB#0_3000~10000_3000~10000



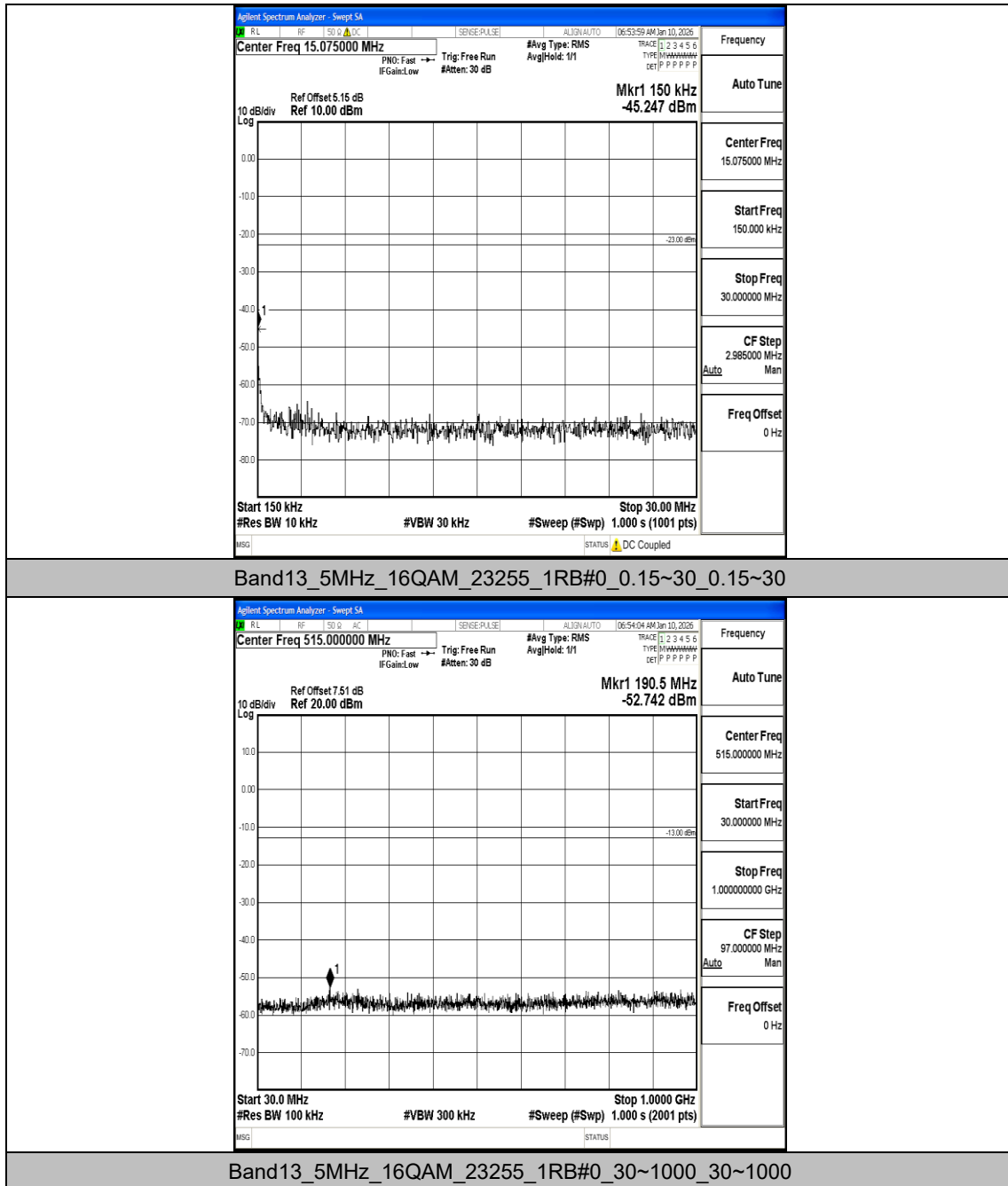


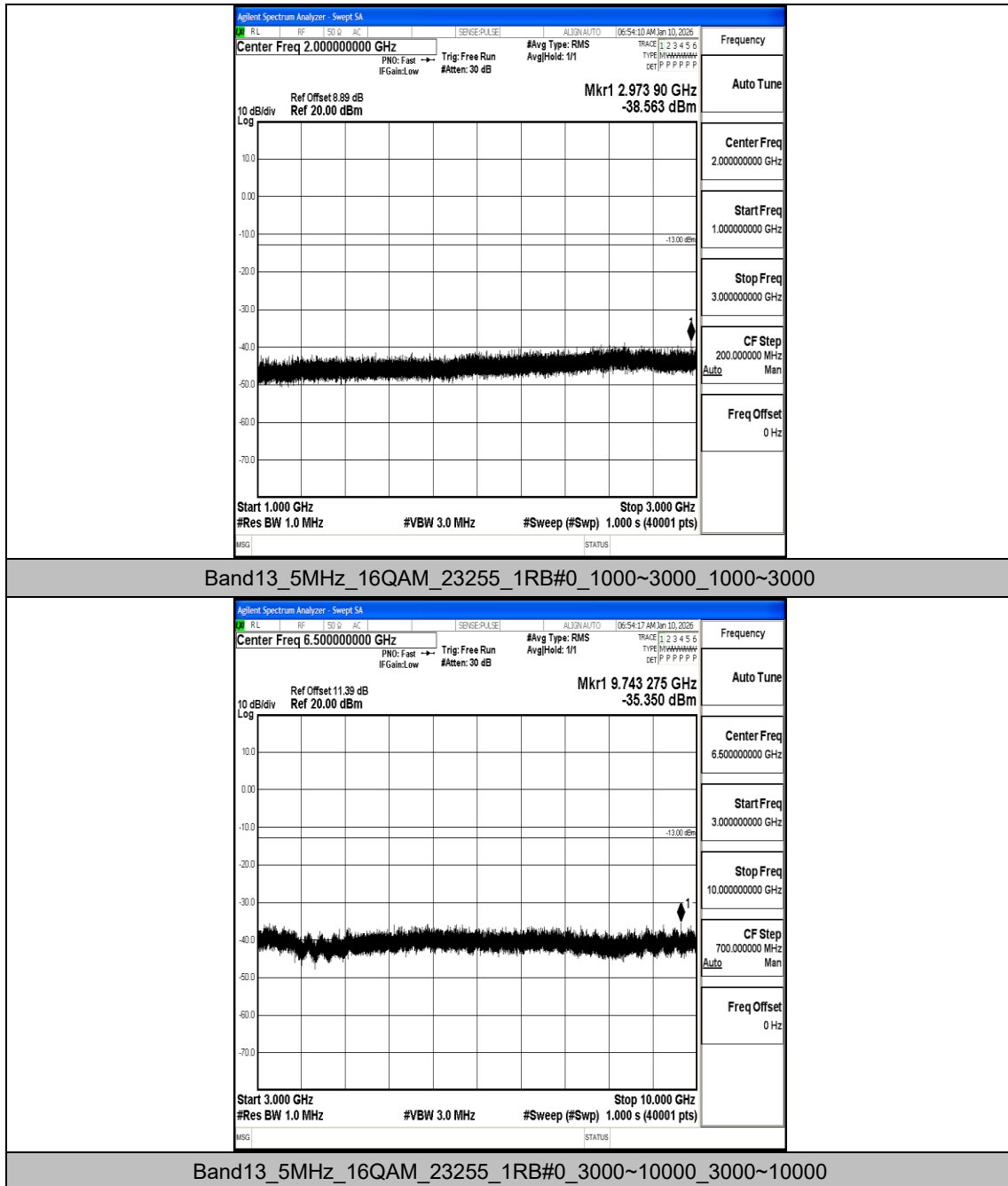


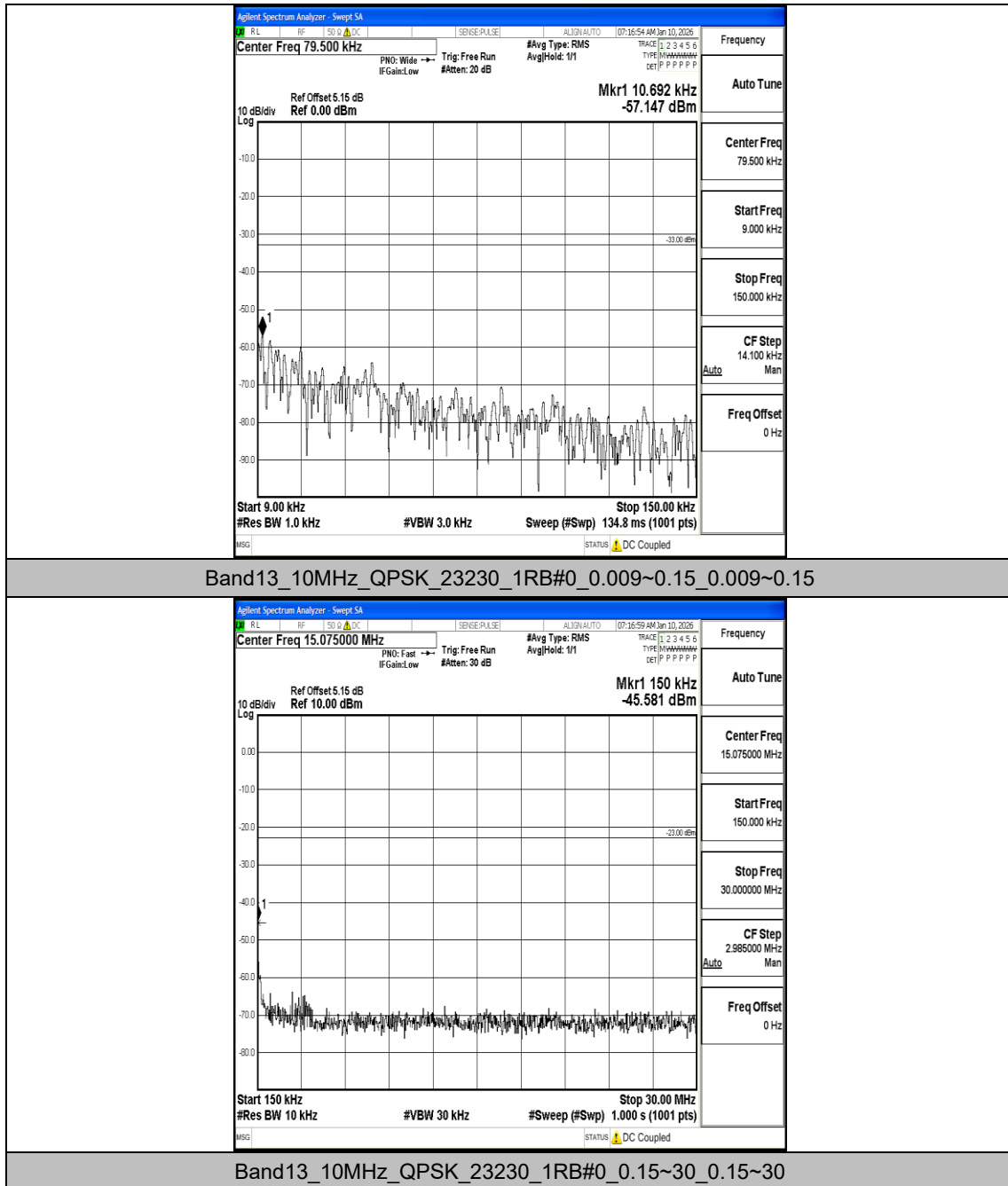
Band13_5MHz_QPSK_23255_1RB#0_3000~10000_3000~10000

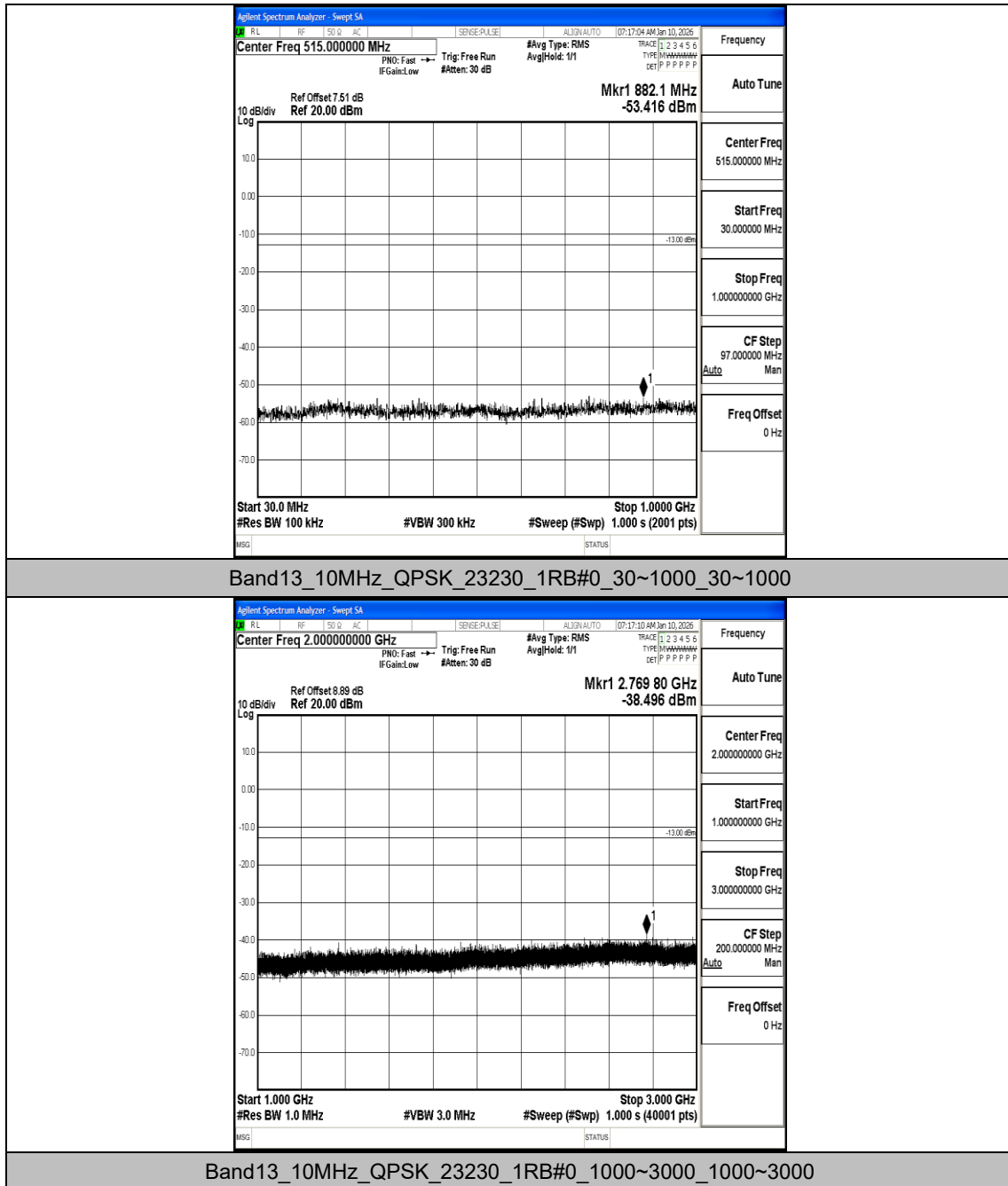


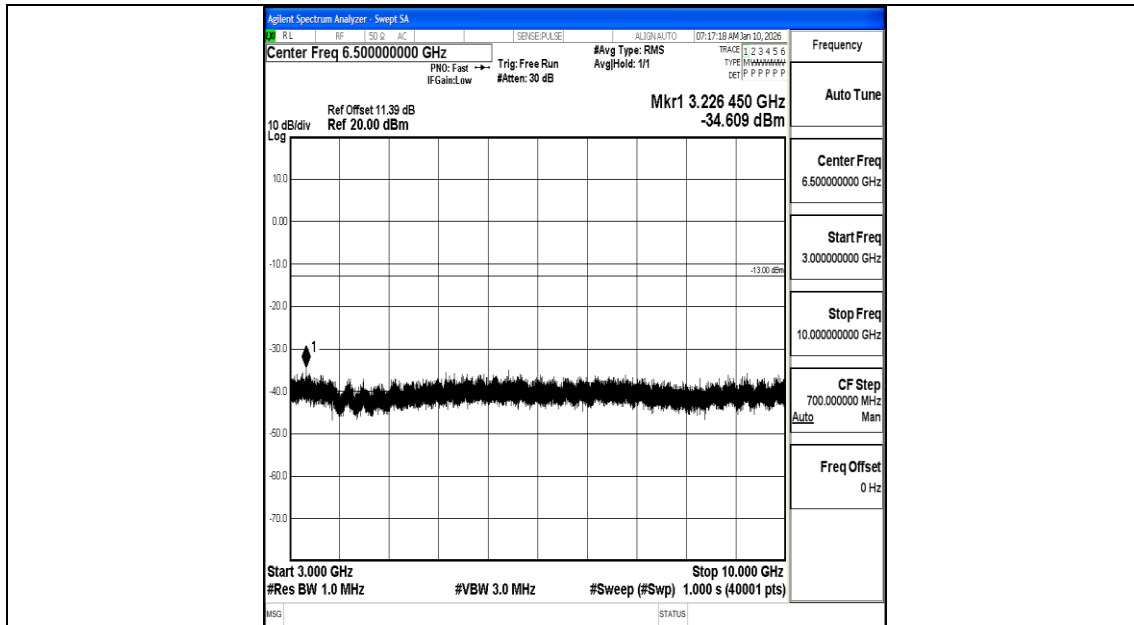
Band13_5MHz_16QAM_23255_1RB#0_0.009~0.15_0.009~0.15



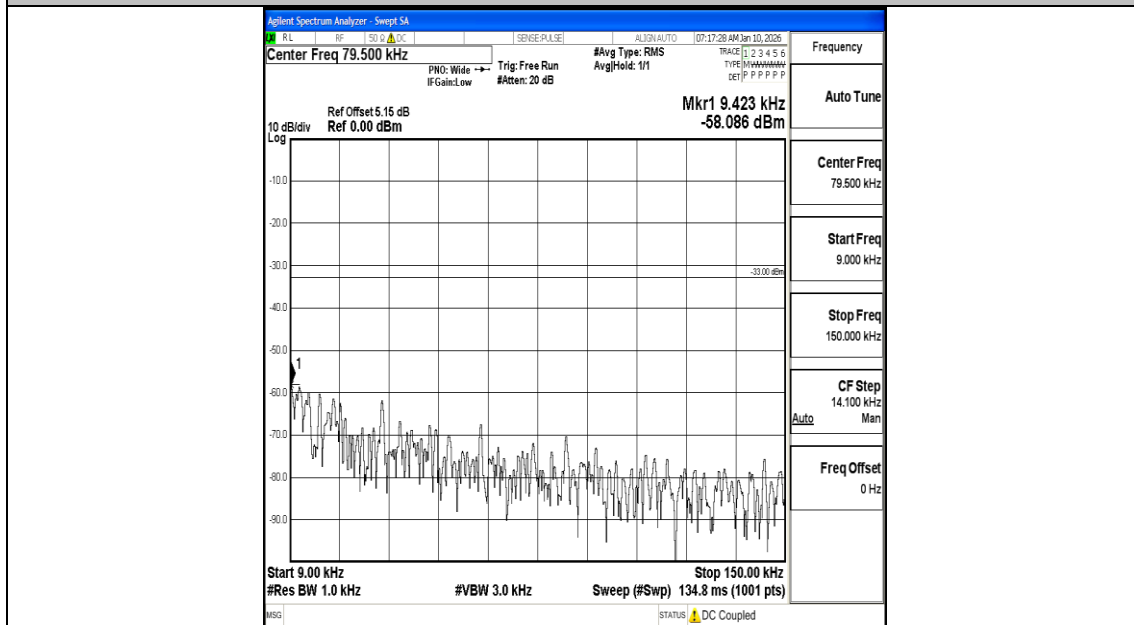




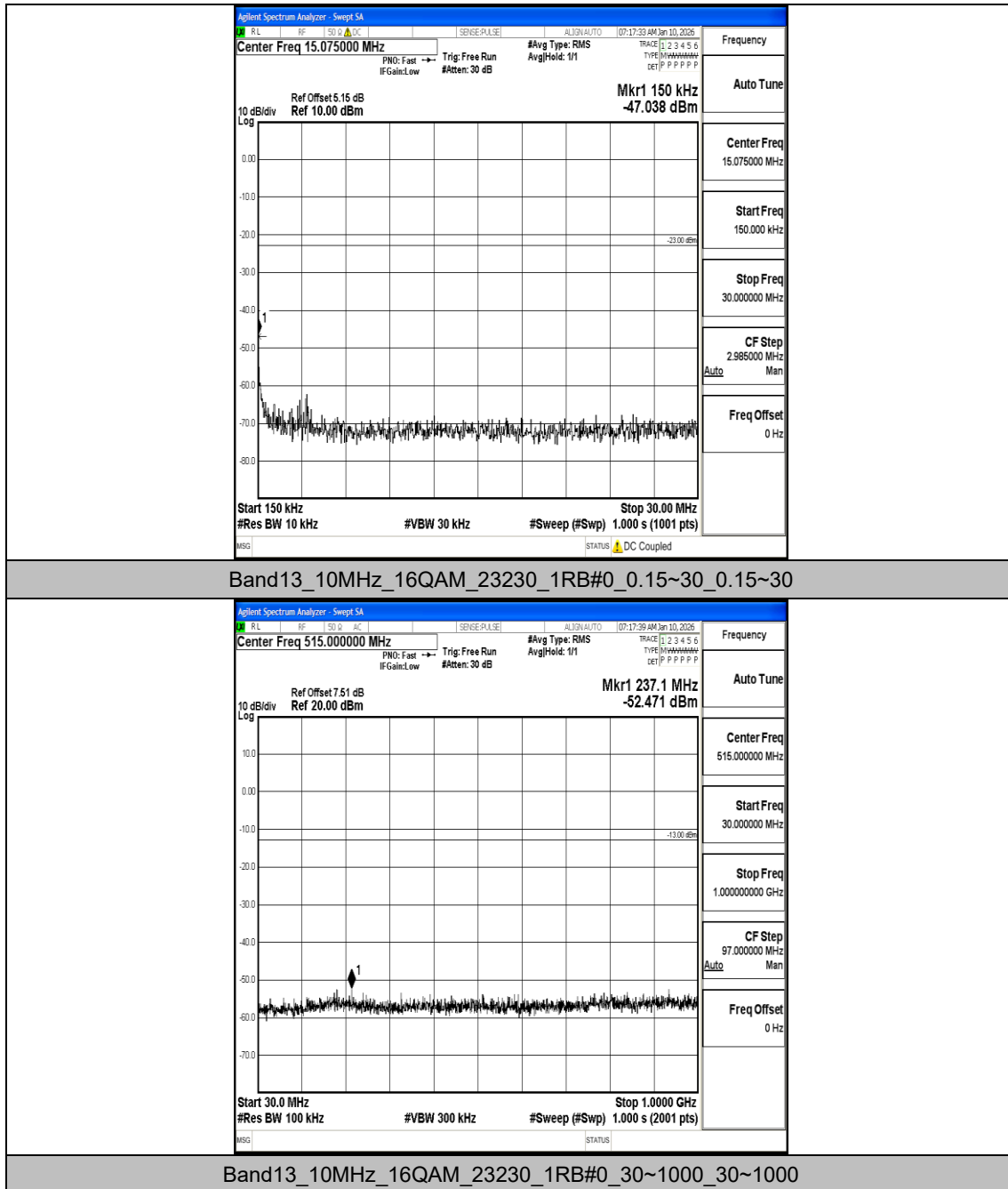


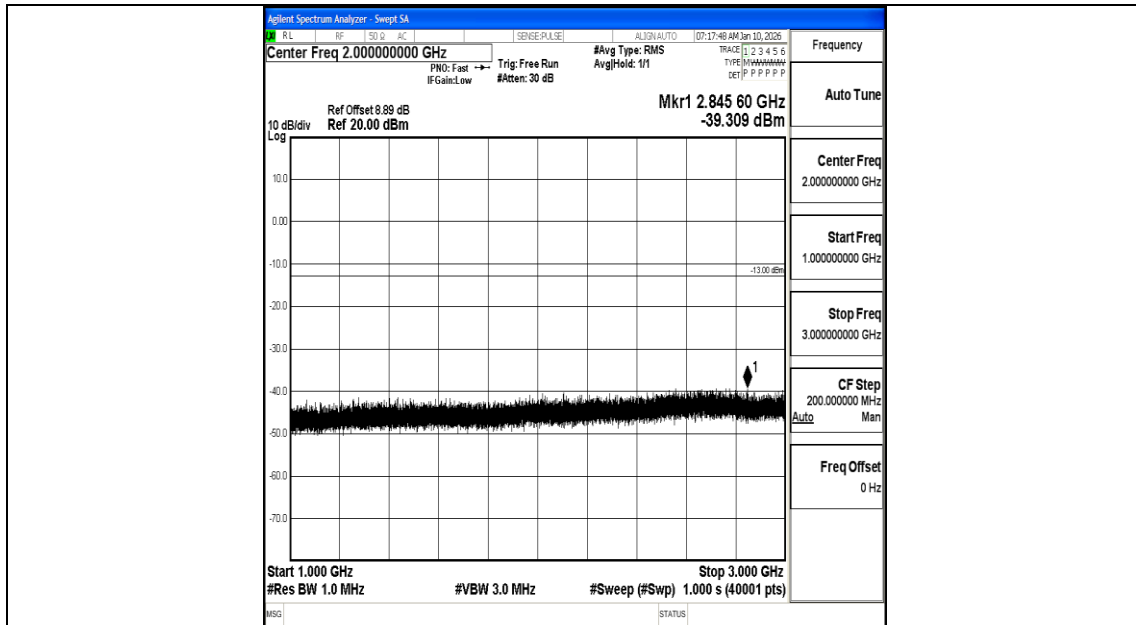


Band13_10MHz_QPSK_23230_1RB#0_3000~10000_3000~10000

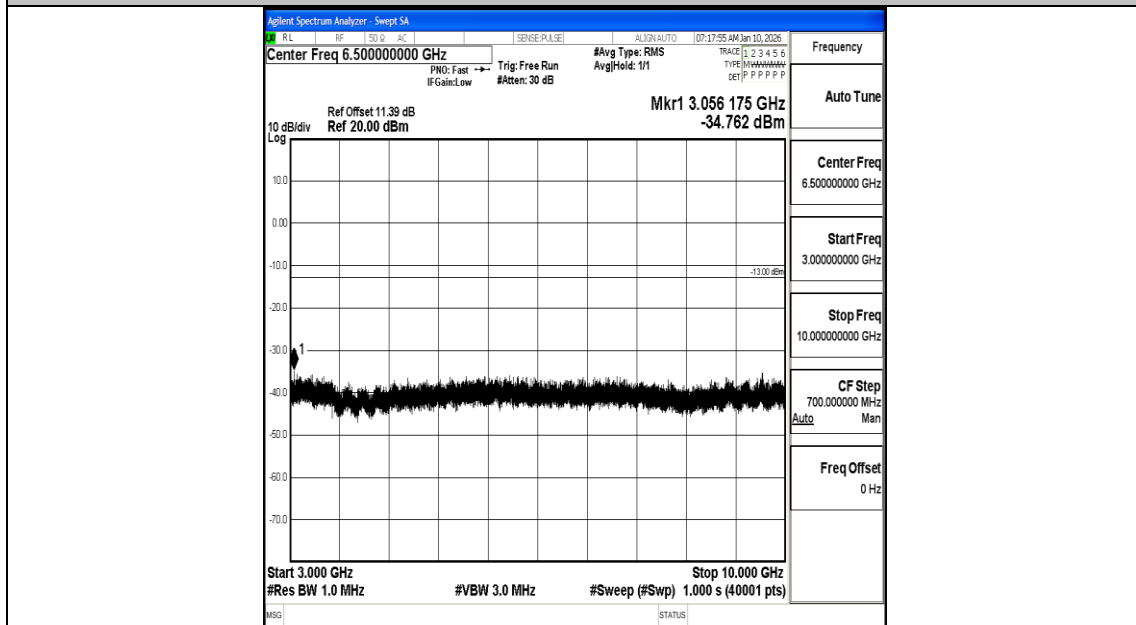


Band13_10MHz_16QAM_23230_1RB#0_0.009~0.15_0.009~0.15





Band13_10MHz_16QAM_23230_1RB#0_1000~3000_1000~3000



Band13_10MHz_16QAM_23230_1RB#0_3000~10000_3000~10000