

Appendix for Band 12

Report No.: BCTC2504135595-3E

Applicant: Shanghai TUGE Data Technologies Co., Ltd.

Product Name: Smart IoT 4G Router

Test Model: TR40

Tested Date: 2025-04-03 to 2025-05-16

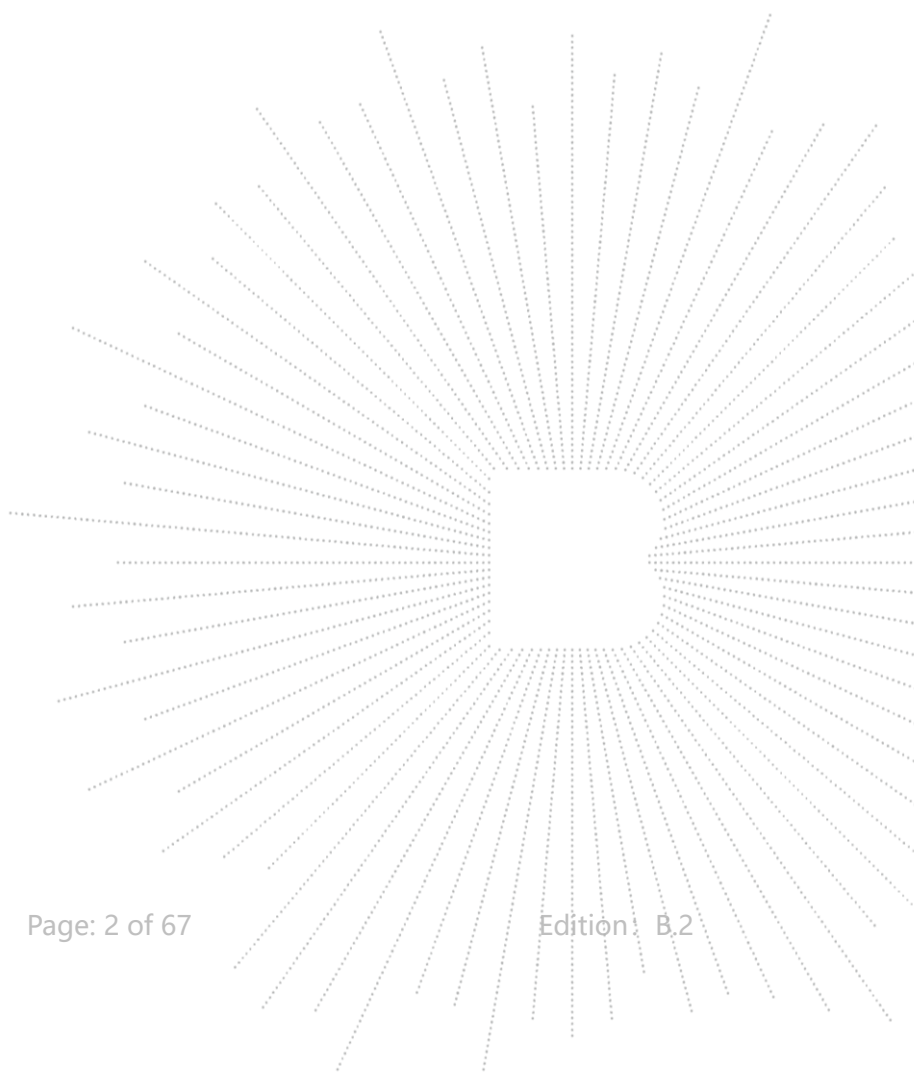
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Shenzhen BCTC Testing Co., Ltd.



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Appendix 1. Conducted output power

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Verdict
Band12	1.4	23017	1	#0	QPSK	22.97	PASS
Band12	1.4	23017	1	#Mid	QPSK	22.92	PASS
Band12	1.4	23017	1	#Max	QPSK	22.87	PASS
Band12	1.4	23017	3	#0	QPSK	22.69	PASS
Band12	1.4	23017	3	#Mid	QPSK	22.75	PASS
Band12	1.4	23017	3	#Max	QPSK	22.70	PASS
Band12	1.4	23017	6	#0	QPSK	21.78	PASS
Band12	1.4	23017	1	#0	16QAM	22.81	PASS
Band12	1.4	23017	1	#Mid	16QAM	22.77	PASS
Band12	1.4	23017	1	#Max	16QAM	22.84	PASS
Band12	1.4	23017	3	#0	16QAM	21.98	PASS
Band12	1.4	23017	3	#Mid	16QAM	21.96	PASS
Band12	1.4	23017	3	#Max	16QAM	21.96	PASS
Band12	1.4	23017	6	#0	16QAM	20.85	PASS
Band12	1.4	23095	1	#0	QPSK	22.61	PASS
Band12	1.4	23095	1	#Mid	QPSK	22.90	PASS
Band12	1.4	23095	1	#Max	QPSK	22.83	PASS
Band12	1.4	23095	3	#0	QPSK	23.04	PASS
Band12	1.4	23095	3	#Mid	QPSK	22.97	PASS
Band12	1.4	23095	3	#Max	QPSK	22.97	PASS
Band12	1.4	23095	6	#0	QPSK	21.91	PASS
Band12	1.4	23095	1	#0	16QAM	22.30	PASS
Band12	1.4	23095	1	#Mid	16QAM	22.55	PASS
Band12	1.4	23095	1	#Max	16QAM	22.58	PASS
Band12	1.4	23095	3	#0	16QAM	22.06	PASS
Band12	1.4	23095	3	#Mid	16QAM	22.04	PASS
Band12	1.4	23095	3	#Max	16QAM	22.01	PASS
Band12	1.4	23095	6	#0	16QAM	20.91	PASS
Band12	1.4	23173	1	#0	QPSK	22.49	PASS
Band12	1.4	23173	1	#Mid	QPSK	22.62	PASS
Band12	1.4	23173	1	#Max	QPSK	22.63	PASS
Band12	1.4	23173	3	#0	QPSK	22.36	PASS
Band12	1.4	23173	3	#Mid	QPSK	22.54	PASS
Band12	1.4	23173	3	#Max	QPSK	22.52	PASS
Band12	1.4	23173	6	#0	QPSK	21.40	PASS
Band12	1.4	23173	1	#0	16QAM	23.04	PASS
Band12	1.4	23173	1	#Mid	16QAM	22.39	PASS
Band12	1.4	23173	1	#Max	16QAM	22.41	PASS
Band12	1.4	23173	3	#0	16QAM	22.29	PASS
Band12	1.4	23173	3	#Mid	16QAM	21.78	PASS

Band12	1.4	23173	3	#Max	16QAM	21.77	PASS
Band12	1.4	23173	6	#0	16QAM	20.63	PASS
Band12	3	23025	1	#0	QPSK	22.79	PASS
Band12	3	23025	1	#Mid	QPSK	22.77	PASS
Band12	3	23025	1	#Max	QPSK	22.74	PASS
Band12	3	23025	8	#0	QPSK	21.82	PASS
Band12	3	23025	8	#Mid	QPSK	21.79	PASS
Band12	3	23025	8	#Max	QPSK	21.76	PASS
Band12	3	23025	15	#0	QPSK	21.79	PASS
Band12	3	23025	1	#0	16QAM	22.71	PASS
Band12	3	23025	1	#Mid	16QAM	22.67	PASS
Band12	3	23025	1	#Max	16QAM	22.62	PASS
Band12	3	23025	8	#0	16QAM	20.65	PASS
Band12	3	23025	8	#Mid	16QAM	20.70	PASS
Band12	3	23025	8	#Max	16QAM	20.47	PASS
Band12	3	23025	15	#0	16QAM	20.86	PASS
Band12	3	23095	1	#0	QPSK	22.59	PASS
Band12	3	23095	1	#Mid	QPSK	22.88	PASS
Band12	3	23095	1	#Max	QPSK	22.77	PASS
Band12	3	23095	8	#0	QPSK	21.87	PASS
Band12	3	23095	8	#Mid	QPSK	22.02	PASS
Band12	3	23095	8	#Max	QPSK	22.04	PASS
Band12	3	23095	15	#0	QPSK	21.96	PASS
Band12	3	23095	1	#0	16QAM	22.30	PASS
Band12	3	23095	1	#Mid	16QAM	22.59	PASS
Band12	3	23095	1	#Max	16QAM	22.50	PASS
Band12	3	23095	8	#0	16QAM	20.91	PASS
Band12	3	23095	8	#Mid	16QAM	21.21	PASS
Band12	3	23095	8	#Max	16QAM	21.21	PASS
Band12	3	23095	15	#0	16QAM	20.99	PASS
Band12	3	23165	1	#0	QPSK	22.57	PASS
Band12	3	23165	1	#Mid	QPSK	22.54	PASS
Band12	3	23165	1	#Max	QPSK	22.64	PASS
Band12	3	23165	8	#0	QPSK	21.90	PASS
Band12	3	23165	8	#Mid	QPSK	21.97	PASS
Band12	3	23165	8	#Max	QPSK	21.46	PASS
Band12	3	23165	15	#0	QPSK	21.98	PASS
Band12	3	23165	1	#0	16QAM	22.91	PASS
Band12	3	23165	1	#Mid	16QAM	22.98	PASS
Band12	3	23165	1	#Max	16QAM	22.40	PASS
Band12	3	23165	8	#0	16QAM	20.95	PASS
Band12	3	23165	8	#Mid	16QAM	20.93	PASS
Band12	3	23165	8	#Max	16QAM	20.51	PASS
Band12	3	23165	15	#0	16QAM	20.98	PASS

Band12	5	23035	1	#0	QPSK	22.60	PASS
Band12	5	23035	1	#Mid	QPSK	22.68	PASS
Band12	5	23035	1	#Max	QPSK	22.45	PASS
Band12	5	23035	12	#0	QPSK	21.75	PASS
Band12	5	23035	12	#Mid	QPSK	21.89	PASS
Band12	5	23035	12	#Max	QPSK	21.92	PASS
Band12	5	23035	25	#0	QPSK	21.72	PASS
Band12	5	23035	1	#0	16QAM	22.00	PASS
Band12	5	23035	1	#Mid	16QAM	21.89	PASS
Band12	5	23035	1	#Max	16QAM	21.84	PASS
Band12	5	23035	12	#0	16QAM	20.71	PASS
Band12	5	23035	12	#Mid	16QAM	20.48	PASS
Band12	5	23035	12	#Max	16QAM	20.51	PASS
Band12	5	23035	25	#0	16QAM	20.60	PASS
Band12	5	23095	1	#0	QPSK	22.62	PASS
Band12	5	23095	1	#Mid	QPSK	22.85	PASS
Band12	5	23095	1	#Max	QPSK	22.45	PASS
Band12	5	23095	12	#0	QPSK	21.79	PASS
Band12	5	23095	12	#Mid	QPSK	22.02	PASS
Band12	5	23095	12	#Max	QPSK	21.87	PASS
Band12	5	23095	25	#0	QPSK	21.90	PASS
Band12	5	23095	1	#0	16QAM	21.41	PASS
Band12	5	23095	1	#Mid	16QAM	21.60	PASS
Band12	5	23095	1	#Max	16QAM	21.26	PASS
Band12	5	23095	12	#0	16QAM	20.56	PASS
Band12	5	23095	12	#Mid	16QAM	20.92	PASS
Band12	5	23095	12	#Max	16QAM	20.89	PASS
Band12	5	23095	25	#0	16QAM	21.08	PASS
Band12	5	23155	1	#0	QPSK	22.62	PASS
Band12	5	23155	1	#Mid	QPSK	22.36	PASS
Band12	5	23155	1	#Max	QPSK	22.51	PASS
Band12	5	23155	12	#0	QPSK	21.42	PASS
Band12	5	23155	12	#Mid	QPSK	21.91	PASS
Band12	5	23155	12	#Max	QPSK	21.93	PASS
Band12	5	23155	25	#0	QPSK	22.07	PASS
Band12	5	23155	1	#0	16QAM	21.52	PASS
Band12	5	23155	1	#Mid	16QAM	21.99	PASS
Band12	5	23155	1	#Max	16QAM	21.50	PASS
Band12	5	23155	12	#0	16QAM	20.41	PASS
Band12	5	23155	12	#Mid	16QAM	20.97	PASS
Band12	5	23155	12	#Max	16QAM	20.96	PASS
Band12	5	23155	25	#0	16QAM	20.97	PASS
Band12	10	23060	1	#0	QPSK	22.78	PASS
Band12	10	23060	1	#Mid	QPSK	22.58	PASS

Band12	10	23060	1	#Max	QPSK	22.85	PASS
Band12	10	23060	25	#0	QPSK	21.81	PASS
Band12	10	23060	25	#Mid	QPSK	21.74	PASS
Band12	10	23060	25	#Max	QPSK	21.80	PASS
Band12	10	23060	50	#0	QPSK	21.79	PASS
Band12	10	23060	1	#0	16QAM	22.86	PASS
Band12	10	23060	1	#Mid	16QAM	22.83	PASS
Band12	10	23060	1	#Max	16QAM	23.10	PASS
Band12	10	23060	25	#0	16QAM	20.56	PASS
Band12	10	23060	25	#Mid	16QAM	20.51	PASS
Band12	10	23060	25	#Max	16QAM	20.60	PASS
Band12	10	23060	50	#0	16QAM	20.70	PASS
Band12	10	23095	1	#0	QPSK	22.71	PASS
Band12	10	23095	1	#Mid	QPSK	22.90	PASS
Band12	10	23095	1	#Max	QPSK	22.57	PASS
Band12	10	23095	25	#0	QPSK	21.88	PASS
Band12	10	23095	25	#Mid	QPSK	22.11	PASS
Band12	10	23095	25	#Max	QPSK	21.47	PASS
Band12	10	23095	50	#0	QPSK	22.00	PASS
Band12	10	23095	1	#0	16QAM	21.82	PASS
Band12	10	23095	1	#Mid	16QAM	22.04	PASS
Band12	10	23095	1	#Max	16QAM	21.48	PASS
Band12	10	23095	25	#0	16QAM	20.81	PASS
Band12	10	23095	25	#Mid	16QAM	21.04	PASS
Band12	10	23095	25	#Max	16QAM	20.99	PASS
Band12	10	23095	50	#0	16QAM	21.04	PASS
Band12	10	23130	1	#0	QPSK	22.89	PASS
Band12	10	23130	1	#Mid	QPSK	22.81	PASS
Band12	10	23130	1	#Max	QPSK	22.74	PASS
Band12	10	23130	25	#0	QPSK	22.04	PASS
Band12	10	23130	25	#Mid	QPSK	21.39	PASS
Band12	10	23130	25	#Max	QPSK	21.89	PASS
Band12	10	23130	50	#0	QPSK	21.37	PASS
Band12	10	23130	1	#0	16QAM	21.74	PASS
Band12	10	23130	1	#Mid	16QAM	21.51	PASS
Band12	10	23130	1	#Max	16QAM	21.51	PASS
Band12	10	23130	25	#0	16QAM	21.01	PASS
Band12	10	23130	25	#Mid	16QAM	21.03	PASS
Band12	10	23130	25	#Max	16QAM	21.05	PASS
Band12	10	23130	50	#0	16QAM	20.91	PASS

Appendix 2. Frequency stability

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Voltage (Vdc)	Temperature (C)	Result (Hz)	Result (ppm)	Low Limit (ppm)	high Limit (ppm)	Verdict
Band 12	1.4	23017	6	#0	QPSK	LV	NT	-8.57	-0.012	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	NT	-10.53	-0.015	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	HV	NT	-8.85	-0.013	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	LV	NT	-8.03	-0.011	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	NT	-7.75	-0.011	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	HV	NT	-7.14	-0.010	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	LV	NT	-24.15	-0.034	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	NT	-24.62	-0.035	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	HV	NT	-23.55	-0.033	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	LV	NT	-22.09	-0.031	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	NT	-22.70	-0.032	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	HV	NT	-22.85	-0.032	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	LV	NT	4.41	0.006	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	NT	3.22	0.005	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	HV	NT	4.16	0.006	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	LV	NT	6.78	0.009	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	NT	8.88	0.012	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	HV	NT	10.53	0.015	-2.5	2.5	PASS



Band 12	3	23025	15	#0	QPSK	LV	NT	-25.92	-0.037	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	NT	-28.27	-0.040	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	HV	NT	-26.21	-0.037	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	LV	NT	-25.22	-0.036	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	NT	-25.62	-0.037	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	HV	NT	-26.31	-0.038	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	LV	NT	-42.82	-0.061	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	NT	-45.29	-0.064	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	HV	NT	-46.18	-0.065	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	LV	NT	-44.69	-0.063	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	NT	-44.83	-0.063	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	HV	NT	-45.32	-0.064	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	LV	NT	8.44	0.012	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	NT	8.24	0.012	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	HV	NT	9.70	0.014	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	LV	NT	12.69	0.018	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	NT	16.09	0.023	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	HV	NT	18.84	0.026	-2.5	2.5	PASS
Band 12	5	23035	25	#0	QPSK	LV	NT	-12.40	-0.018	-2.5	2.5	PASS
Band 12	5	23035	25	#0	QPSK	NV	NT	-13.65	-0.019	-2.5	2.5	PASS
Band 12	5	23035	25	#0	QPSK	HV	NT	-11.30	-0.016	-2.5	2.5	PASS
Band 12	5	23035	25	#0	16QAM	LV	NT	-10.21	-0.015	-2.5	2.5	PASS



Band 12	5	23035	25	#0	16QAM	NV	NT	-11.12	-0.016	-2.5	2.5	PASS
Band 12	5	23035	25	#0	16QAM	HV	NT	-13.22	-0.019	-2.5	2.5	PASS
Band 12	5	23095	25	#0	QPSK	LV	NT	-9.91	-0.014	-2.5	2.5	PASS
Band 12	5	23095	25	#0	QPSK	NV	NT	-12.87	-0.018	-2.5	2.5	PASS
Band 12	5	23095	25	#0	QPSK	HV	NT	-11.73	-0.017	-2.5	2.5	PASS
Band 12	5	23095	25	#0	16QAM	LV	NT	-9.97	-0.014	-2.5	2.5	PASS
Band 12	5	23095	25	#0	16QAM	NV	NT	-8.84	-0.012	-2.5	2.5	PASS
Band 12	5	23095	25	#0	16QAM	HV	NT	-6.92	-0.010	-2.5	2.5	PASS
Band 12	5	23155	25	#0	QPSK	LV	NT	-1.56	-0.002	-2.5	2.5	PASS
Band 12	5	23155	25	#0	QPSK	NV	NT	-0.01	0.000	-2.5	2.5	PASS
Band 12	5	23155	25	#0	QPSK	HV	NT	2.07	0.003	-2.5	2.5	PASS
Band 12	5	23155	25	#0	16QAM	LV	NT	4.03	0.006	-2.5	2.5	PASS
Band 12	5	23155	25	#0	16QAM	NV	NT	7.54	0.011	-2.5	2.5	PASS
Band 12	5	23155	25	#0	16QAM	HV	NT	10.06	0.014	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	LV	NT	-30.56	-0.043	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	NT	-28.67	-0.041	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	HV	NT	-24.63	-0.035	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	LV	NT	-22.53	-0.032	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	NT	-20.33	-0.029	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	HV	NT	-18.20	-0.026	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	LV	NT	-4.53	-0.006	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	NT	-4.69	-0.007	-2.5	2.5	PASS



Band 12	10	23095	50	#0	QPSK	HV	NT	-2.29	-0.003	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	LV	NT	0.30	0.000	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	NT	3.32	0.005	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	HV	NT	5.91	0.008	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	LV	NT	6.45	0.009	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	NT	8.50	0.012	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	HV	NT	10.31	0.015	-2.5	2.5	PASS
Band 12	10	23130	50	#0	16QAM	LV	NT	13.70	0.019	-2.5	2.5	PASS
Band 12	10	23130	50	#0	16QAM	NV	NT	16.92	0.024	-2.5	2.5	PASS
Band 12	10	23130	50	#0	16QAM	HV	NT	19.21	0.027	-2.5	2.5	PASS

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Voltage (Vdc)	Temperature (C)	Result (Hz)	Result (ppm)	Low Limit (ppm)	high Limit (ppm)	Verdict
Band 12	1.4	23017	6	#0	QPSK	NV	-30	15.06	0.022	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	-20	13.79	0.020	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	0	13.12	0.019	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	10	11.73	0.017	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	20	10.60	0.015	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	30	10.50	0.015	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	40	10.06	0.014	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	QPSK	NV	50	8.83	0.013	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	-30	8.25	0.012	-2.5	2.5	PASS



Band 12	1.4	23017	6	#0	16QAM	NV	-20	7.42	0.011	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	0	6.32	0.009	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	10	5.24	0.007	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	20	4.35	0.006	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	30	3.73	0.005	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	40	2.32	0.003	-2.5	2.5	PASS
Band 12	1.4	23017	6	#0	16QAM	NV	50	1.52	0.002	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	-30	0.53	0.001	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	-20	-1.83	-0.003	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	0	-5.55	-0.008	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	10	-9.01	-0.013	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	20	-12.27	-0.017	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	30	-16.54	-0.023	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	40	-20.89	-0.030	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	QPSK	NV	50	-25.39	-0.036	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	-30	-30.53	-0.043	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	-20	-35.46	-0.050	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	0	-37.57	-0.053	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	10	-42.43	-0.060	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	20	-45.82	-0.065	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	30	0.36	0.001	-2.5	2.5	PASS
Band 12	1.4	23095	6	#0	16QAM	NV	40	-4.39	-0.006	-2.5	2.5	PASS

Band 12	1.4	23095	6	#0	16QAM	NV	50	-7.50	-0.011	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	-30	-10.04	-0.014	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	-20	-13.10	-0.018	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	0	-19.98	-0.028	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	10	-24.19	-0.034	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	20	-28.37	-0.040	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	30	-33.50	-0.047	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	40	-39.41	-0.055	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	QPSK	NV	50	-44.10	-0.062	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	-30	-47.56	-0.066	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	-20	-2.37	-0.003	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	0	-5.65	-0.008	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	10	-8.90	-0.012	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	20	-12.29	-0.017	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	30	-15.21	-0.021	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	40	-17.48	-0.024	-2.5	2.5	PASS
Band 12	1.4	23173	6	#0	16QAM	NV	50	-20.51	-0.029	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	-30	19.11	0.027	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	-20	15.71	0.022	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	0	12.25	0.017	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	10	9.31	0.013	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	20	7.78	0.011	-2.5	2.5	PASS

Band 12	3	23025	15	#0	QPSK	NV	30	6.09	0.009	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	40	4.45	0.006	-2.5	2.5	PASS
Band 12	3	23025	15	#0	QPSK	NV	50	1.97	0.003	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	-30	-1.23	-0.002	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	-20	-3.69	-0.005	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	0	-5.42	-0.008	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	10	-6.15	-0.009	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	20	-7.80	-0.011	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	30	-8.74	-0.012	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	40	-10.20	-0.015	-2.5	2.5	PASS
Band 12	3	23025	15	#0	16QAM	NV	50	-12.12	-0.017	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	-30	1.82	0.003	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	-20	-1.86	-0.003	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	0	-5.75	-0.008	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	10	-9.84	-0.014	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	20	-13.49	-0.019	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	30	-17.74	-0.025	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	40	-21.30	-0.030	-2.5	2.5	PASS
Band 12	3	23095	15	#0	QPSK	NV	50	-26.87	-0.038	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	-30	-32.06	-0.045	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	-20	-37.06	-0.052	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	0	-40.88	-0.058	-2.5	2.5	PASS

Band 12	3	23095	15	#0	16QAM	NV	10	-45.65	-0.065	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	20	-23.78	-0.034	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	30	-10.11	-0.014	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	40	-15.23	-0.022	-2.5	2.5	PASS
Band 12	3	23095	15	#0	16QAM	NV	50	-20.01	-0.028	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	-30	-6.72	-0.009	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	-20	-12.85	-0.018	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	0	-17.98	-0.025	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	10	-24.35	-0.034	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	20	-29.77	-0.042	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	30	-34.49	-0.048	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	40	-39.67	-0.056	-2.5	2.5	PASS
Band 12	3	23165	15	#0	QPSK	NV	50	-43.56	-0.061	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	-30	0.46	0.001	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	-20	-3.40	-0.005	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	0	-5.49	-0.008	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	10	-9.16	-0.013	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	20	-11.57	-0.016	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	30	-14.85	-0.021	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	40	-17.40	-0.024	-2.5	2.5	PASS
Band 12	3	23165	15	#0	16QAM	NV	50	-18.83	-0.026	-2.5	2.5	PASS
Band 12	5	23035	25	#0	QPSK	NV	-30	23.05	0.033	-2.5	2.5	PASS

Band 12	5	23035	25	#0	QPSK	NV	-20	23.0 5	0.03 3	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	QPSK	NV	0	25.3 3	0.03 6	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	QPSK	NV	10	28.0 0	0.04 0	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	QPSK	NV	20	28.7 4	0.04 1	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	QPSK	NV	30	29.0 5	0.04 1	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	QPSK	NV	40	30.6 4	0.04 4	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	QPSK	NV	50	28.2 2	0.04 0	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	-30	26.4 6	0.03 8	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	-20	24.4 9	0.03 5	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	0	23.6 3	0.03 4	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	10	20.2 3	0.02 9	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	20	18.3 1	0.02 6	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	30	15.0 1	0.02 1	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	40	13.3 9	0.01 9	-2.5	2.5	PAS S
Band 12	5	23035	25	#0	16QAM	NV	50	11.3 6	0.01 6	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	-30	-1.3 6	-0.0 02	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	-20	-6.4 9	-0.0 09	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	0	-14. 29	-0.0 20	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	10	-21. 72	-0.0 31	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	20	-28. 28	-0.0 40	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	30	-34. 12	-0.0 48	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	QPSK	NV	40	-43. 14	-0.0 61	-2.5	2.5	PAS S



Band 12	5	23095	25	#0	QPSK	NV	50	-1.1 2	-0.0 02	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	-30	-10. 49	-0.0 15	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	-20	-17. 60	-0.0 25	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	0	-23. 30	-0.0 33	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	10	-31. 20	-0.0 44	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	20	-37. 65	-0.0 53	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	30	-43. 53	-0.0 62	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	40	-3.3 2	-0.0 05	-2.5	2.5	PAS S
Band 12	5	23095	25	#0	16QAM	NV	50	-10. 33	-0.0 15	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	-30	-5.5 5	-0.0 08	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	-20	-11.4 7	-0.0 16	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	0	-16. 92	-0.0 24	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	10	-24. 06	-0.0 34	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	20	-29. 48	-0.0 41	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	30	-34. 63	-0.0 49	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	40	-40. 47	-0.0 57	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	QPSK	NV	50	-45. 93	-0.0 64	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	16QAM	NV	-30	-2.8 9	-0.0 04	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	16QAM	NV	-20	-7.8 1	-0.01 1	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	16QAM	NV	0	-10. 14	-0.0 14	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	16QAM	NV	10	-13. 42	-0.0 19	-2.5	2.5	PAS S
Band 12	5	23155	25	#0	16QAM	NV	20	-16. 08	-0.0 23	-2.5	2.5	PAS S

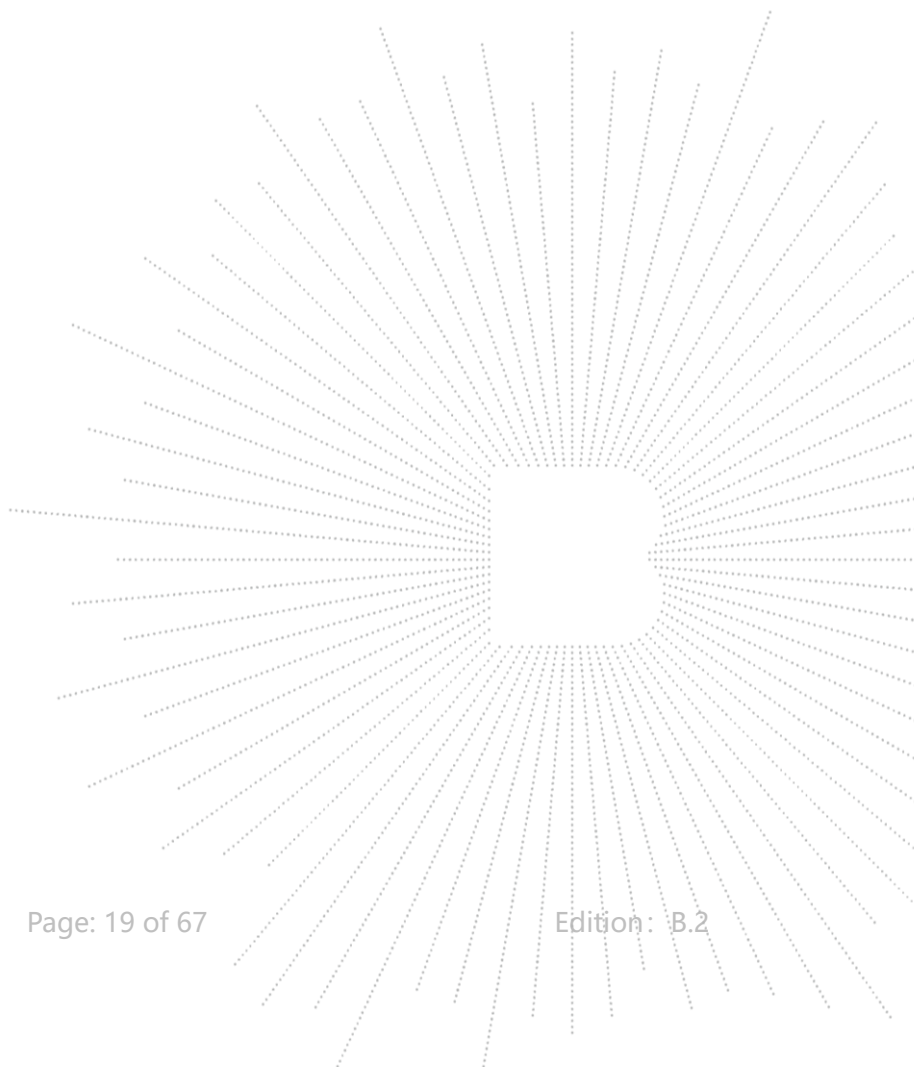


Band 12	5	23155	25	#0	16QAM	NV	30	-17.88	-0.025	-2.5	2.5	PASS
Band 12	5	23155	25	#0	16QAM	NV	40	-20.89	-0.029	-2.5	2.5	PASS
Band 12	5	23155	25	#0	16QAM	NV	50	-22.79	-0.032	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	-30	20.17	0.029	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	-20	13.52	0.019	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	0	9.03	0.013	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	10	6.27	0.009	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	20	2.95	0.004	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	30	-1.36	-0.002	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	40	-7.87	-0.011	-2.5	2.5	PASS
Band 12	10	23060	50	#0	QPSK	NV	50	-12.27	-0.017	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	-30	-17.97	-0.026	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	-20	-21.27	-0.030	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	0	-23.75	-0.034	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	10	-28.30	-0.040	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	20	-30.93	-0.044	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	30	-34.23	-0.049	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	40	-39.05	-0.055	-2.5	2.5	PASS
Band 12	10	23060	50	#0	16QAM	NV	50	-41.79	-0.059	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	-30	-6.32	-0.009	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	-20	-11.69	-0.017	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	0	-16.62	-0.023	-2.5	2.5	PASS



Band 12	10	23095	50	#0	QPSK	NV	10	-23.55	-0.033	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	20	-28.91	-0.041	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	30	-36.02	-0.051	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	40	-42.36	-0.060	-2.5	2.5	PASS
Band 12	10	23095	50	#0	QPSK	NV	50	-38.70	-0.055	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	-30	-6.68	-0.009	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	-20	-12.96	-0.018	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	0	-19.38	-0.027	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	10	-23.99	-0.034	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	20	-28.17	-0.040	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	30	-32.34	-0.046	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	40	-35.83	-0.051	-2.5	2.5	PASS
Band 12	10	23095	50	#0	16QAM	NV	50	-39.97	-0.056	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	-30	-2.65	-0.004	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	-20	-5.92	-0.008	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	0	-10.27	-0.014	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	10	-14.53	-0.020	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	20	-18.64	-0.026	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	30	-22.67	-0.032	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	40	-27.09	-0.038	-2.5	2.5	PASS
Band 12	10	23130	50	#0	QPSK	NV	50	-30.38	-0.043	-2.5	2.5	PASS
Band 12	10	23130	50	#0	16QAM	NV	-30	-35.20	-0.050	-2.5	2.5	PASS

Band 12	10	23130	50	#0	16QAM	NV	-20	-38. 24	-0.0 54	-2.5	2.5	PAS S
Band 12	10	23130	50	#0	16QAM	NV	0	-41. 80	-0.0 59	-2.5	2.5	PAS S
Band 12	10	23130	50	#0	16QAM	NV	10	-44. 82	-0.0 63	-2.5	2.5	PAS S
Band 12	10	23130	50	#0	16QAM	NV	20	-46. 45	-0.0 65	-2.5	2.5	PAS S
Band 12	10	23130	50	#0	16QAM	NV	30	-43. 27	-0.0 61	-2.5	2.5	PAS S
Band 12	10	23130	50	#0	16QAM	NV	40	-1.5 4	-0.0 02	-2.5	2.5	PAS S
Band 12	10	23130	50	#0	16QAM	NV	50	-3.4 0	-0.0 05	-2.5	2.5	PAS S

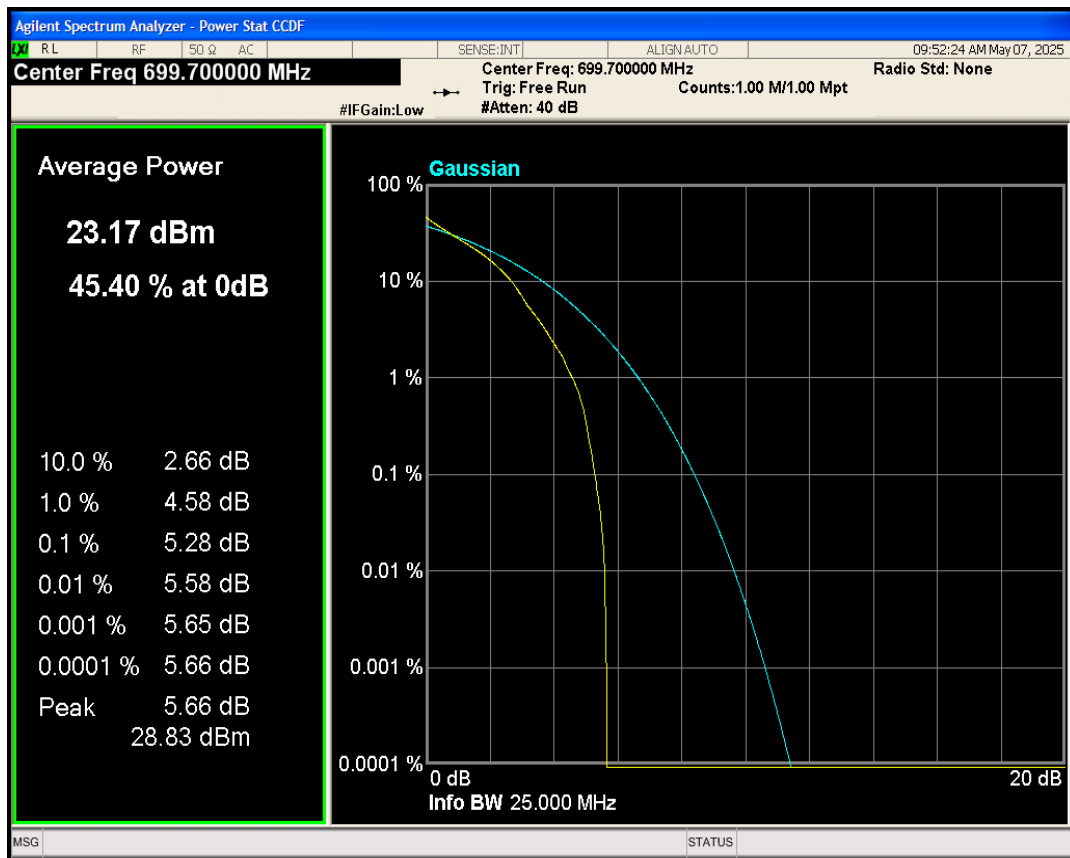


Appendix 3. Peak-to-Average Ratio

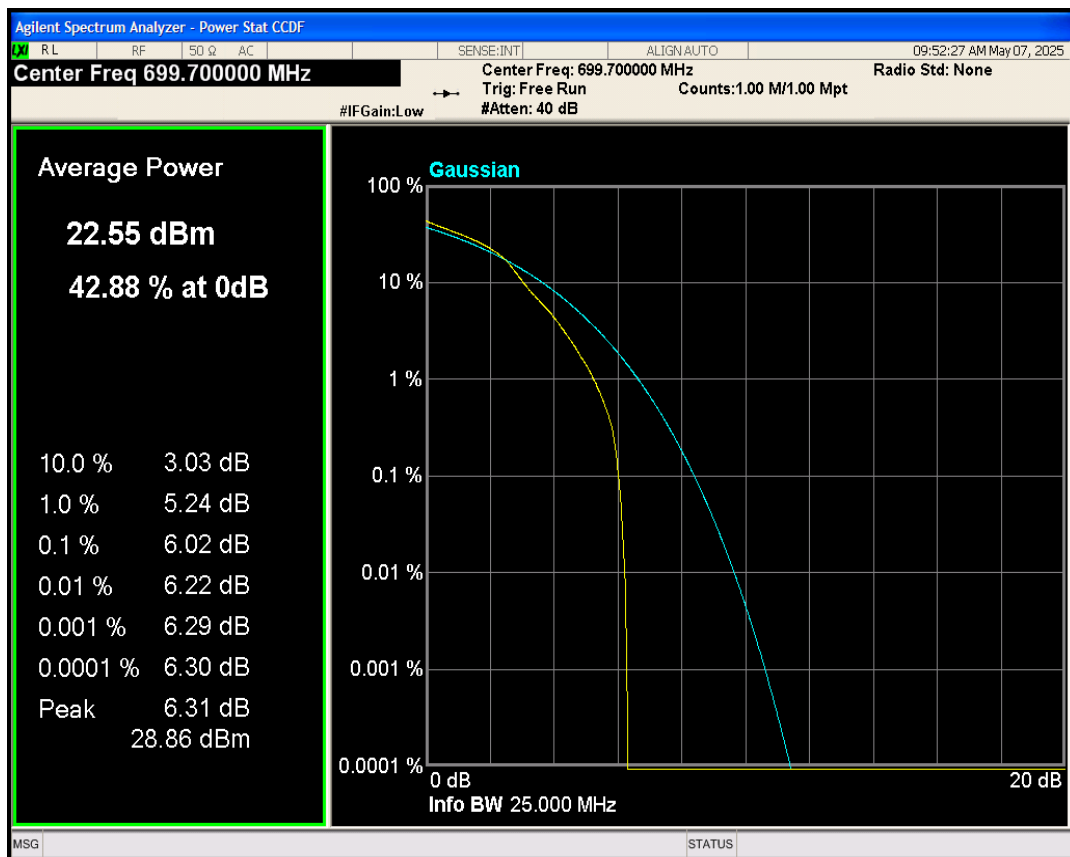
Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Result (dB)	high Limit (dB)	Verdict
Band12	1.4	23017	1	#0	QPSK	5.28	13	PASS
Band12	1.4	23017	1	#0	16QAM	6.02	13	PASS
Band12	1.4	23095	1	#0	QPSK	5.68	13	PASS
Band12	1.4	23095	1	#0	16QAM	6.29	13	PASS
Band12	1.4	23173	1	#0	QPSK	4.76	13	PASS
Band12	1.4	23173	1	#0	16QAM	5.60	13	PASS
Band12	3	23025	1	#0	QPSK	5.16	13	PASS
Band12	3	23025	1	#0	16QAM	6.33	13	PASS
Band12	3	23095	1	#0	QPSK	5.52	13	PASS
Band12	3	23095	1	#0	16QAM	6.28	13	PASS
Band12	3	23165	1	#0	QPSK	4.50	13	PASS
Band12	3	23165	1	#0	16QAM	5.33	13	PASS
Band12	5	23035	1	#0	QPSK	5.49	13	PASS
Band12	5	23035	1	#0	16QAM	6.51	13	PASS
Band12	5	23095	1	#0	QPSK	5.44	13	PASS
Band12	5	23095	1	#0	16QAM	6.18	13	PASS
Band12	5	23155	1	#0	QPSK	4.51	13	PASS
Band12	5	23155	1	#0	16QAM	5.59	13	PASS
Band12	10	23060	1	#0	QPSK	5.26	13	PASS
Band12	10	23060	1	#0	16QAM	6.43	13	PASS
Band12	10	23095	1	#0	QPSK	4.97	13	PASS
Band12	10	23095	1	#0	16QAM	5.85	13	PASS
Band12	10	23130	1	#0	QPSK	5.48	13	PASS
Band12	10	23130	1	#0	16QAM	6.32	13	PASS



Band12 QPSK BW=1.4MHz Channel=23017 RB Size=1 Position=#0

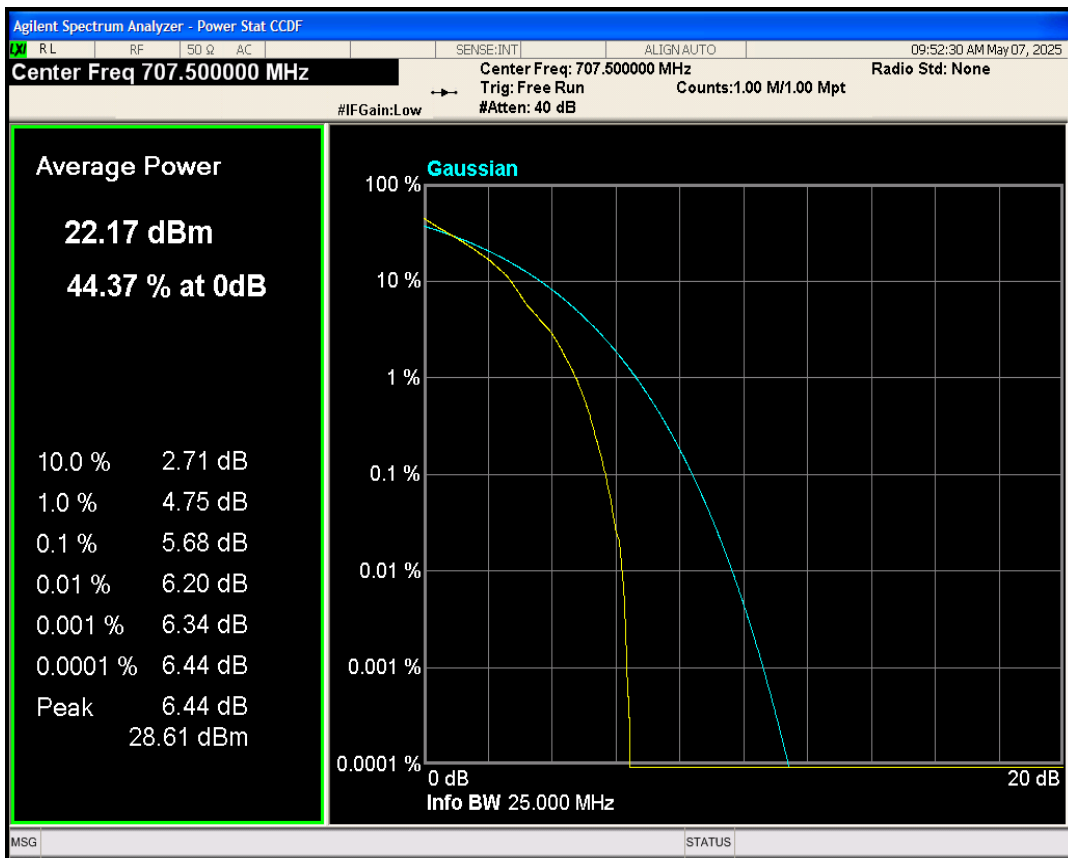


Band12 16QAM BW=1.4MHz Channel=23017 RB Size=1 Position=#0

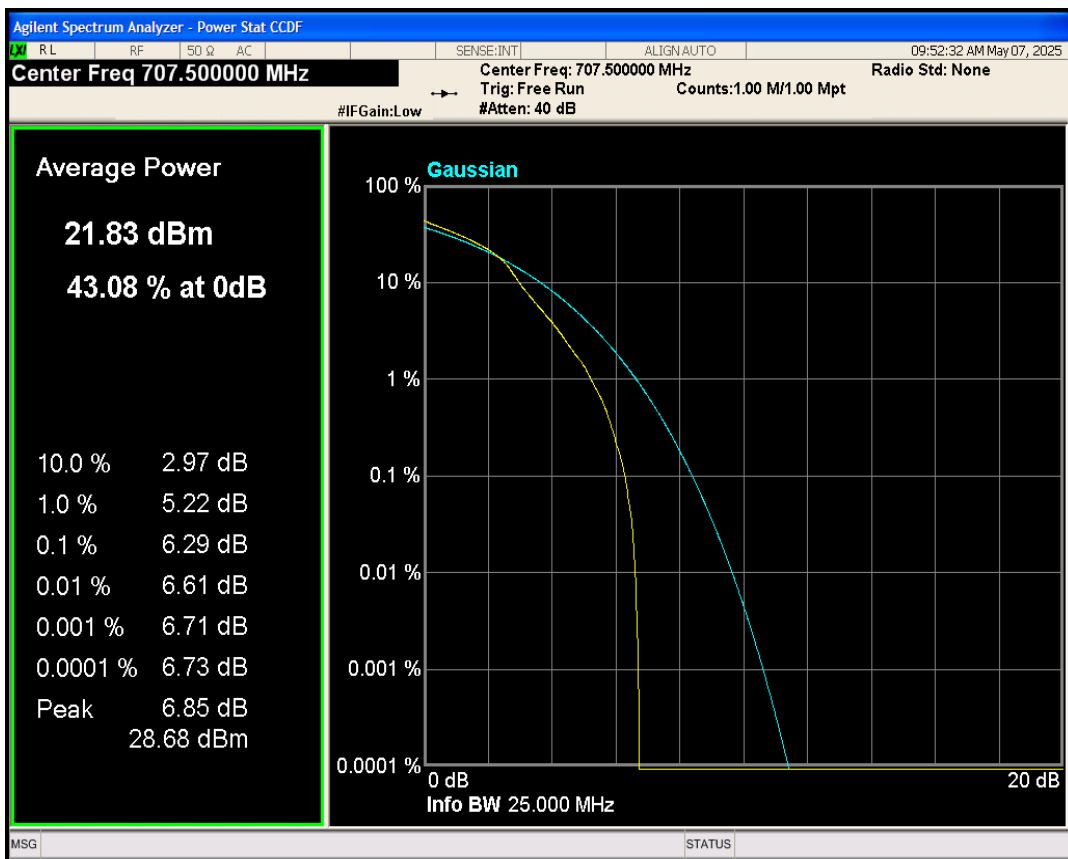




Band12 QPSK BW=1.4MHz Channel=23095 RB Size=1 Position=#0

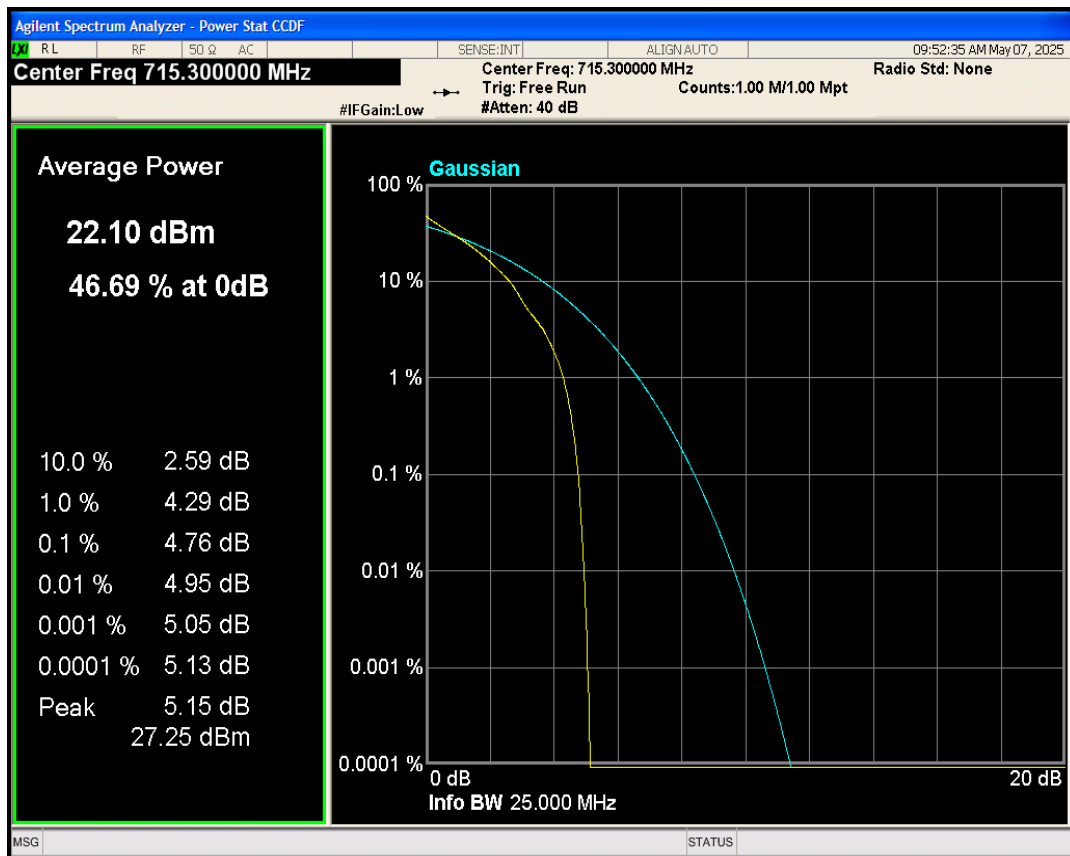


Band12 16QAM BW=1.4MHz Channel=23095 RB Size=1 Position=#0

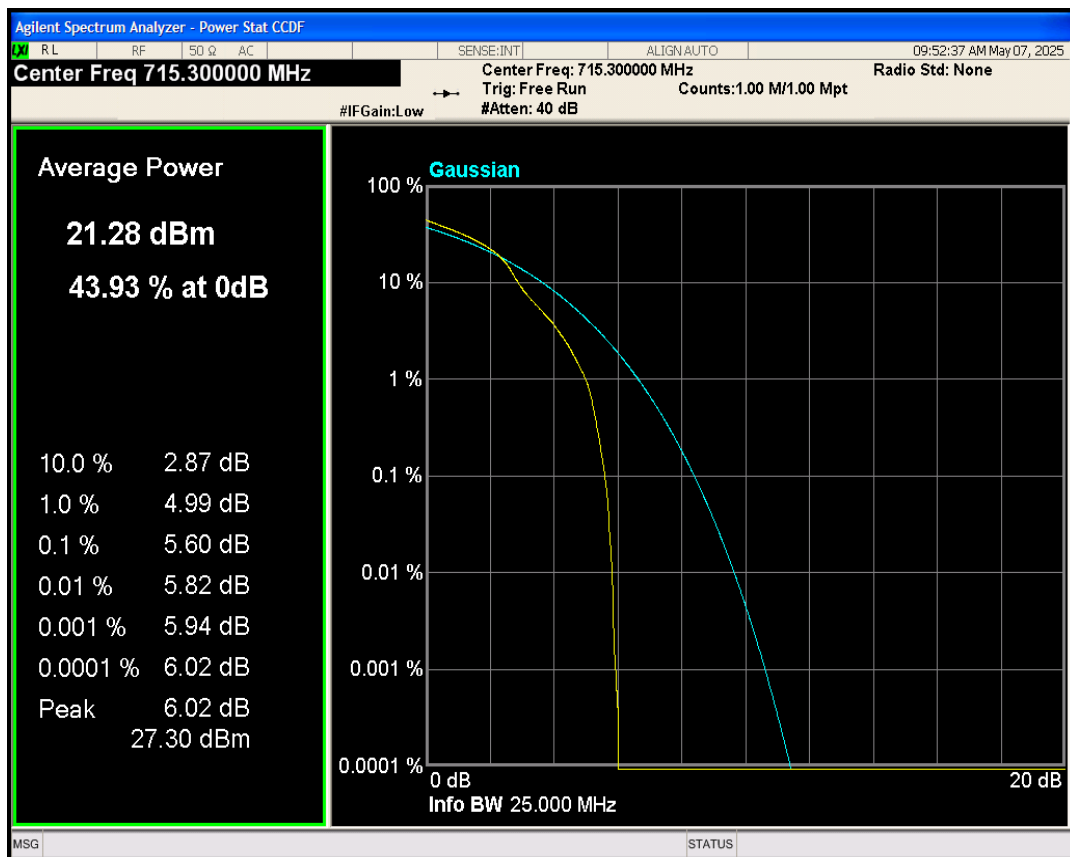




Band12 QPSK BW=1.4MHz Channel=23173 RB Size=1 Position=#0

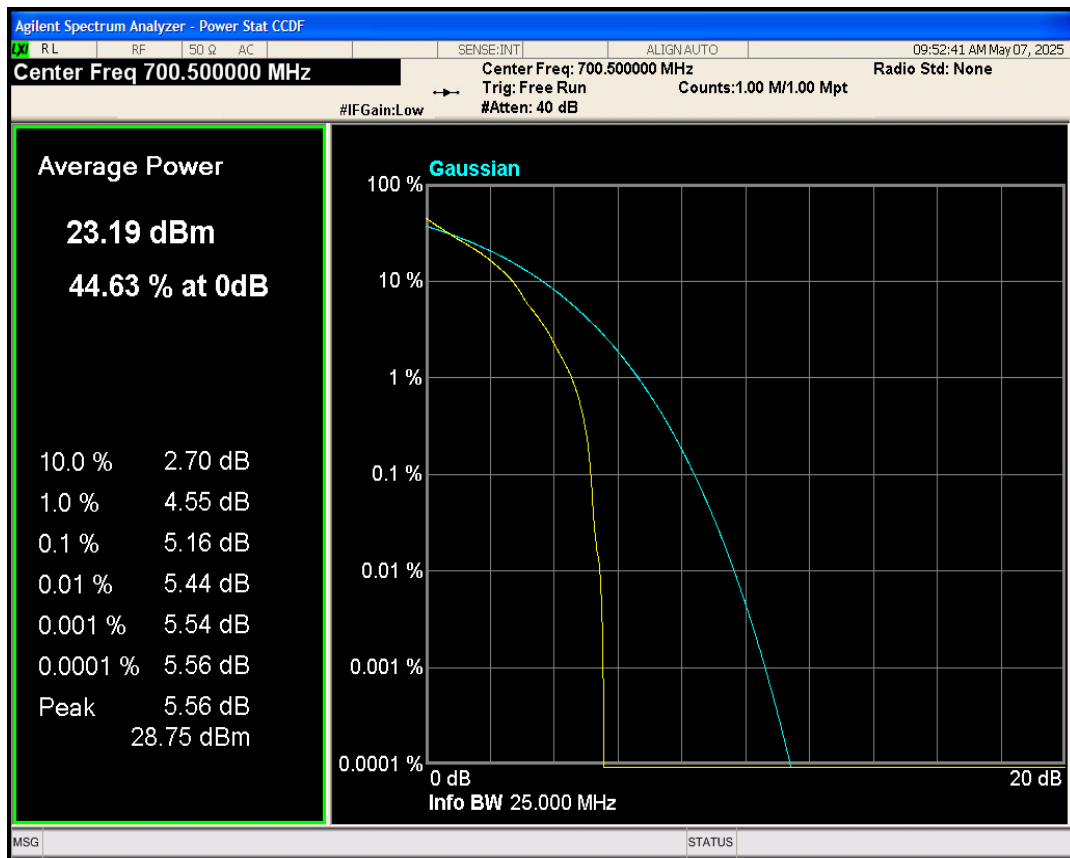


Band12 16QAM BW=1.4MHz Channel=23173 RB Size=1 Position=#0

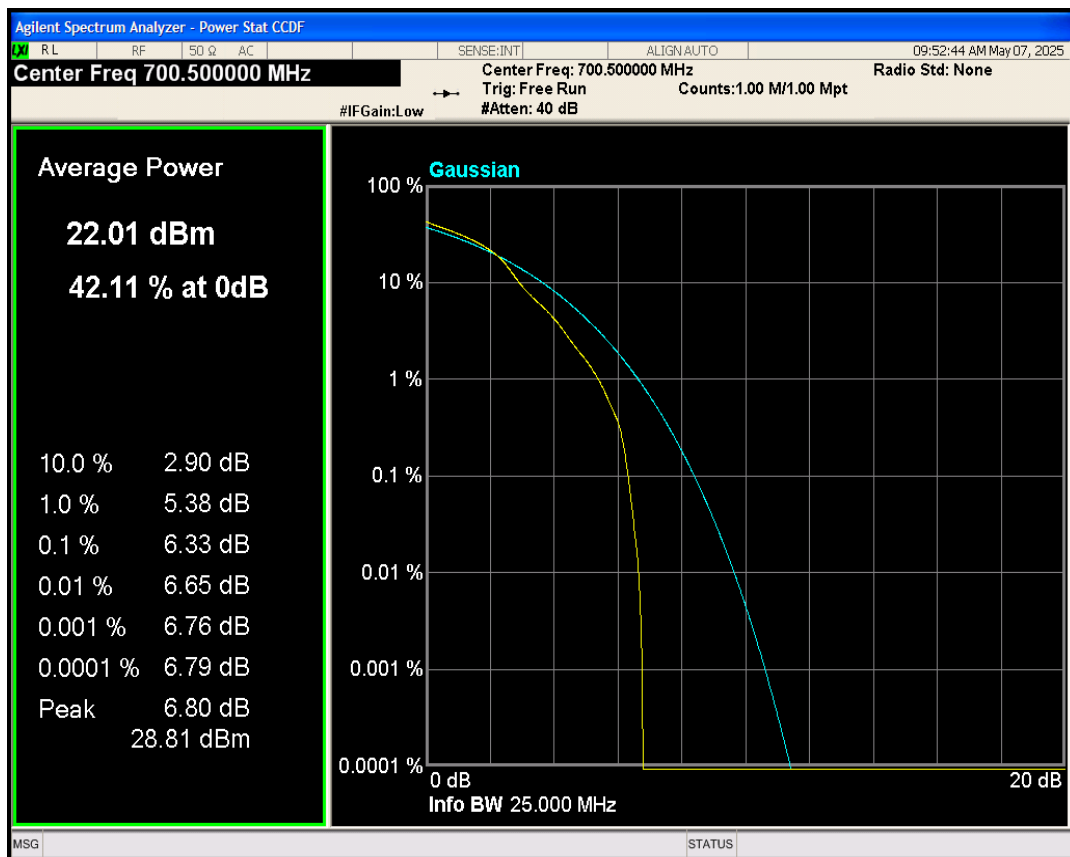




Band12 QPSK BW=3MHz Channel=23025 RB Size=1 Position=#0

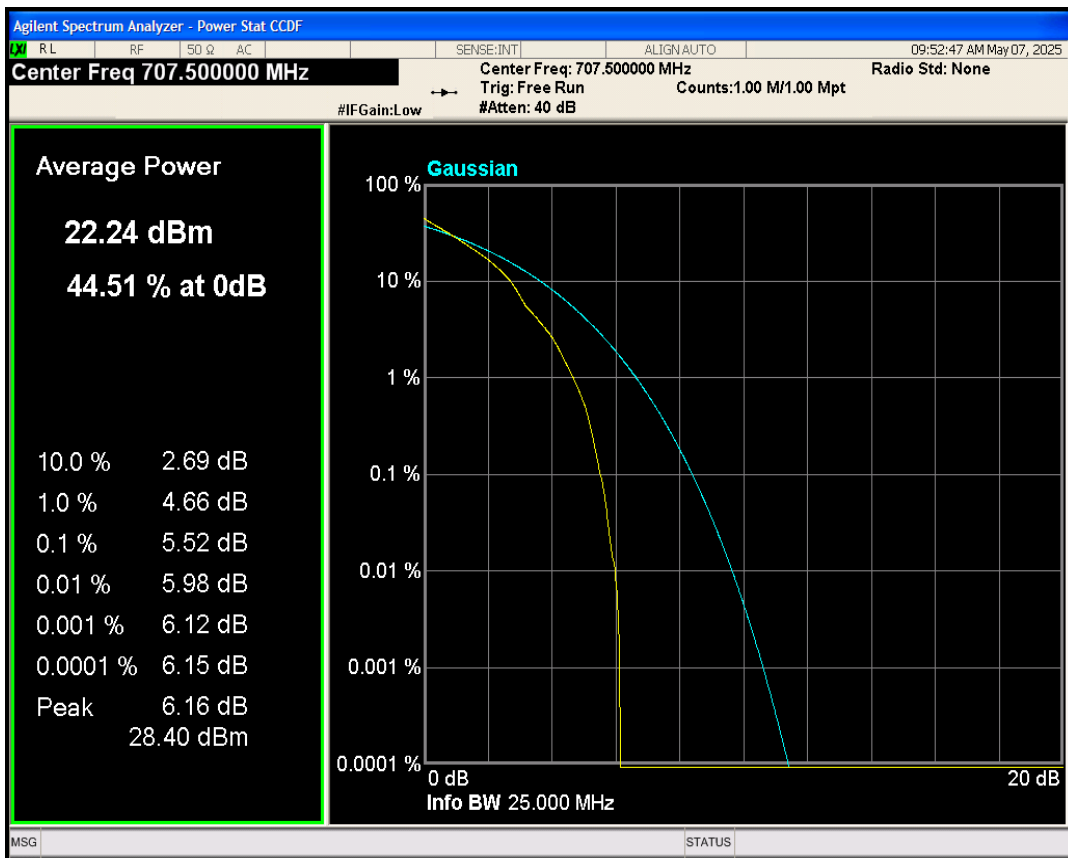


Band12 16QAM BW=3MHz Channel=23025 RB Size=1 Position=#0

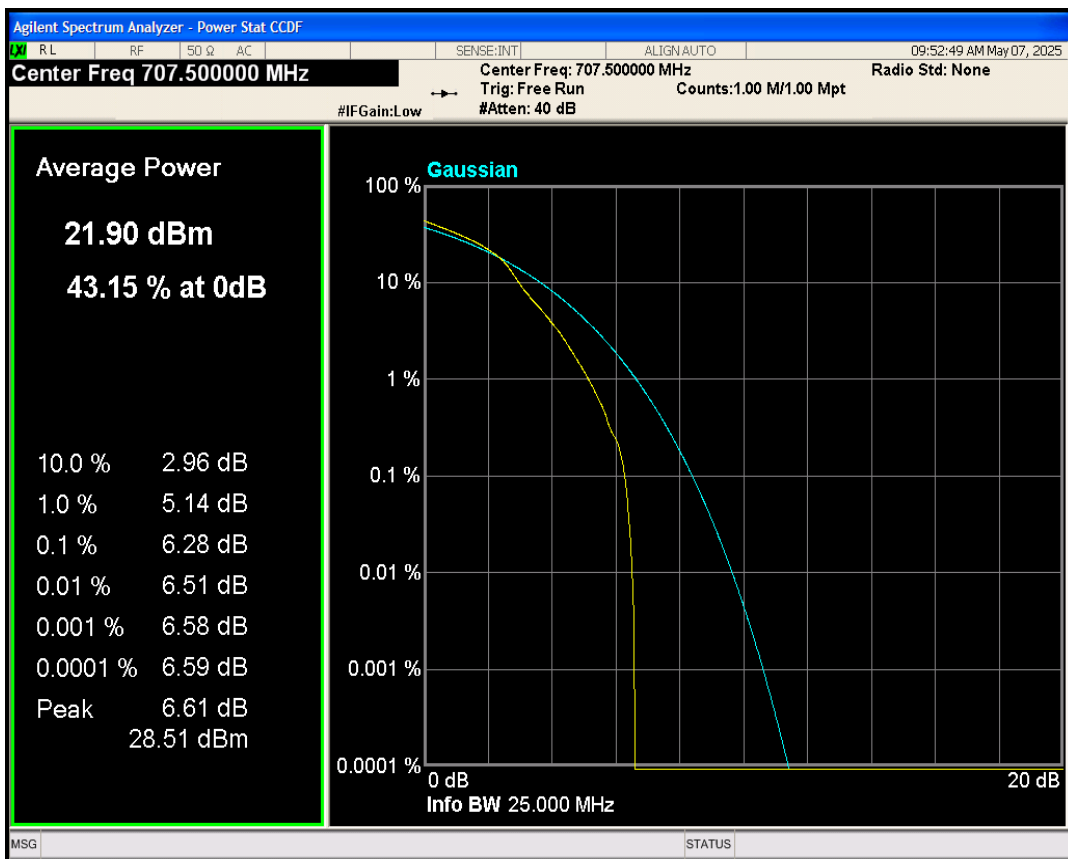




Band12 QPSK BW=3MHz Channel=23095 RB Size=1 Position=#0

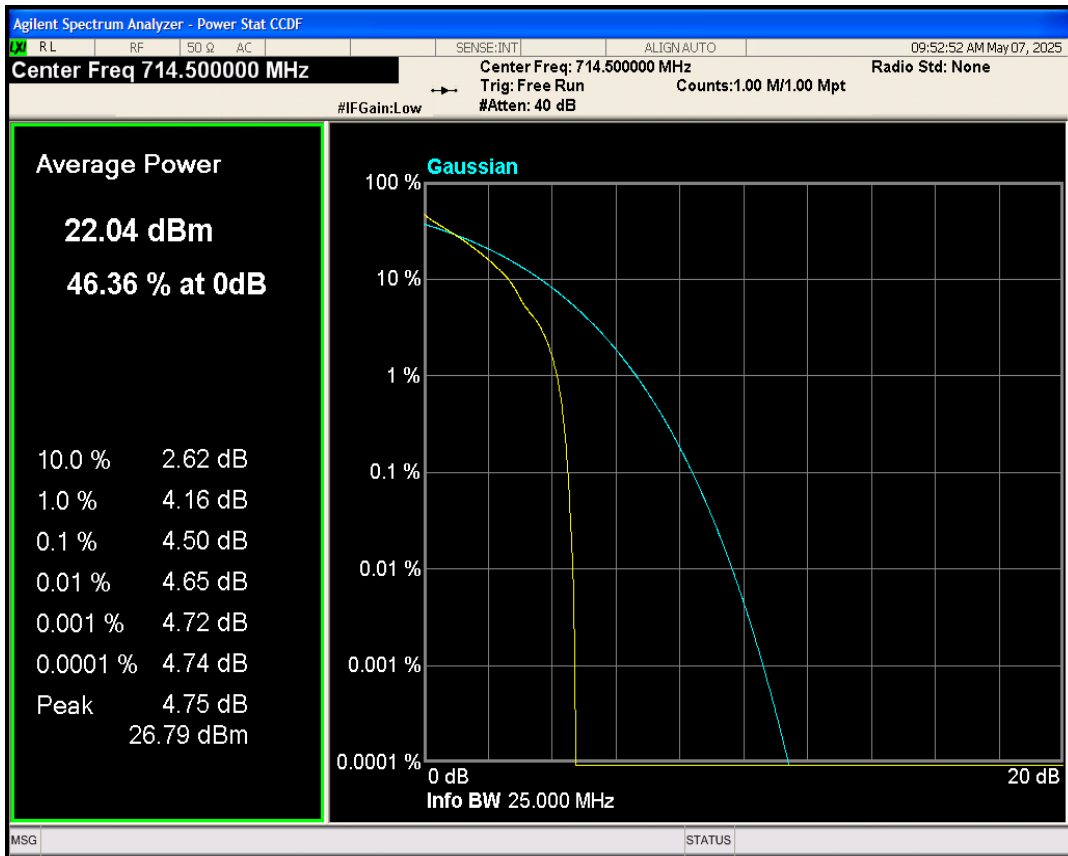


Band12 16QAM BW=3MHz Channel=23095 RB Size=1 Position=#0

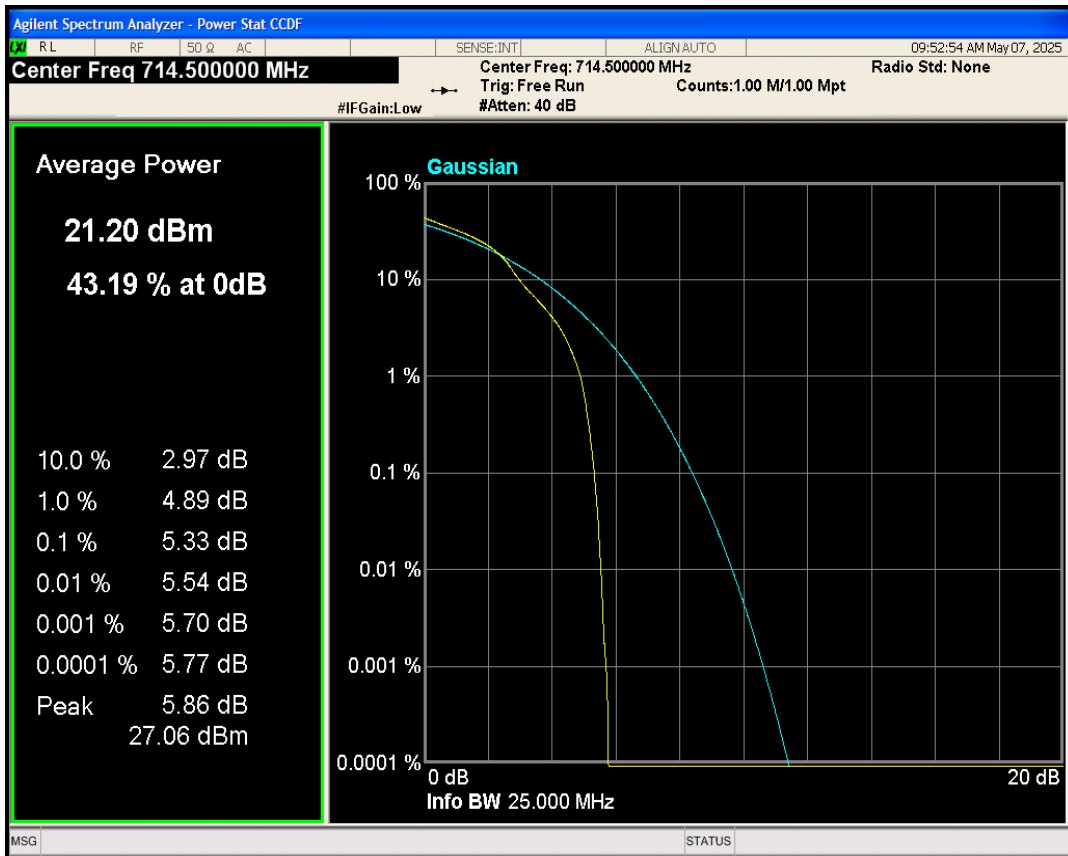




Band12 QPSK BW=3MHz Channel=23165 RB Size=1 Position=#0

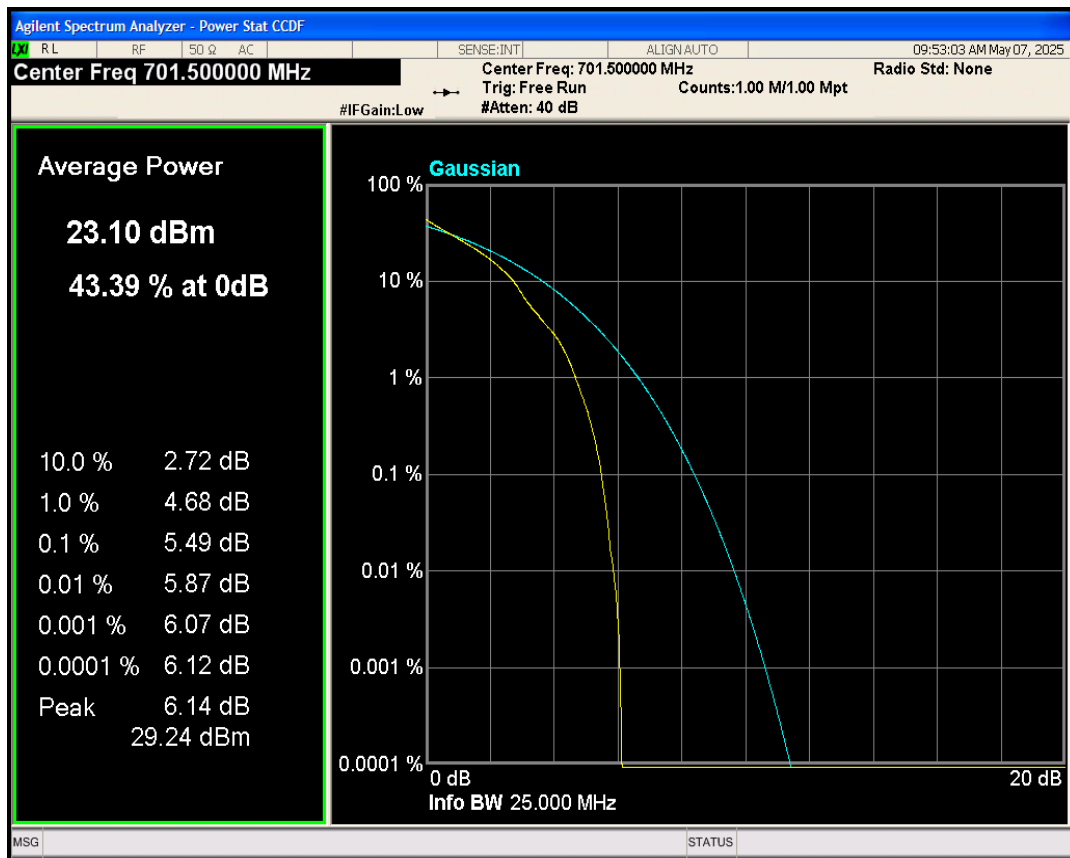


Band12 16QAM BW=3MHz Channel=23165 RB Size=1 Position=#0

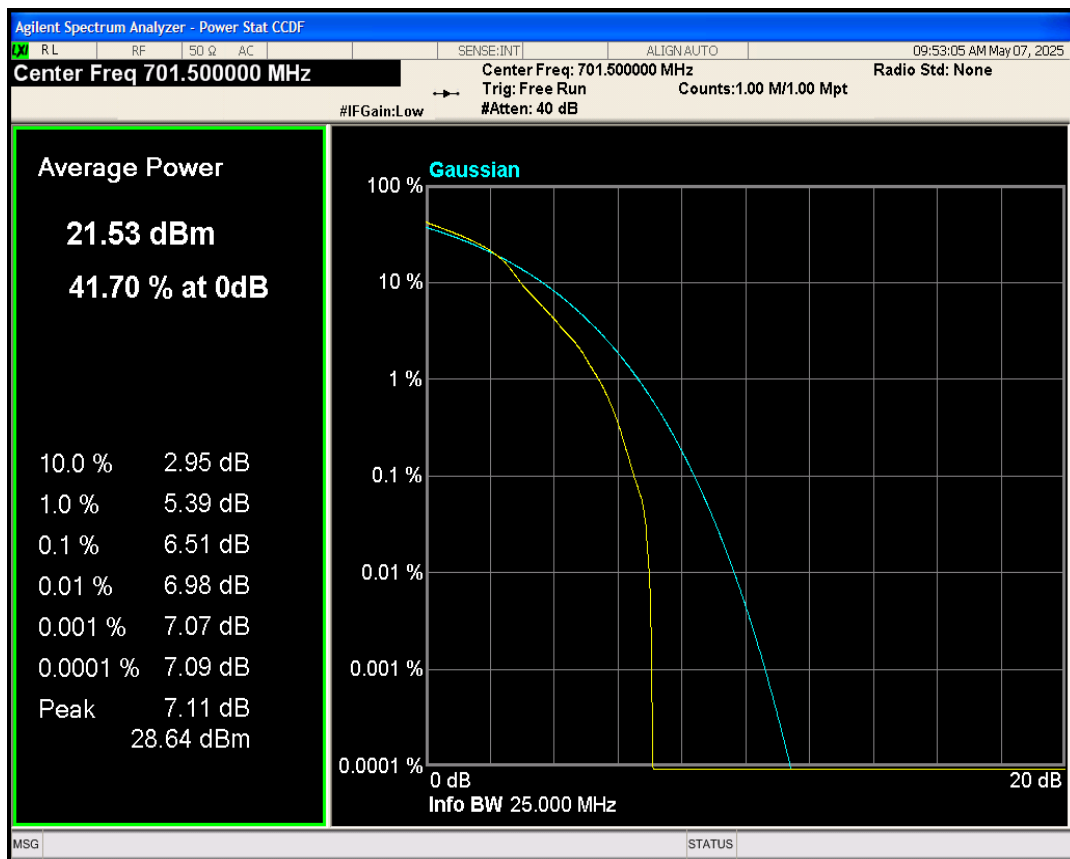




Band12 QPSK BW=5MHz Channel=23035 RB Size=1 Position=#0

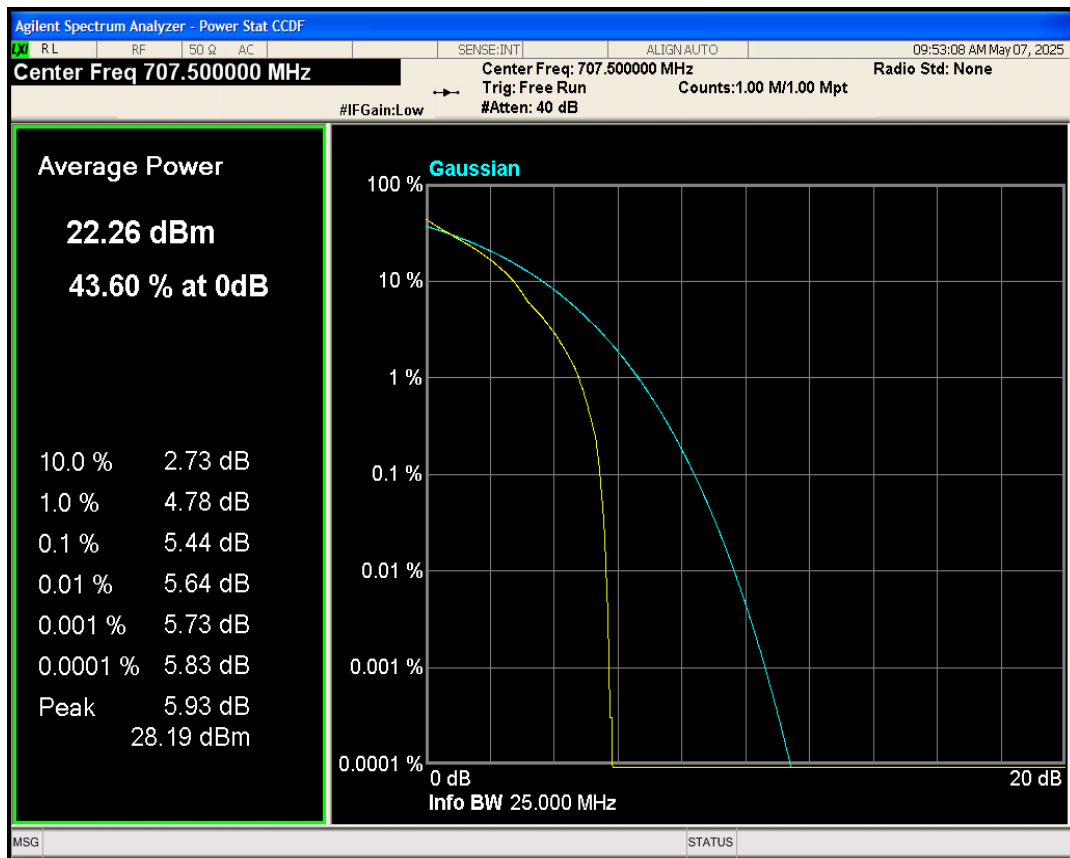


Band12 16QAM BW=5MHz Channel=23035 RB Size=1 Position=#0

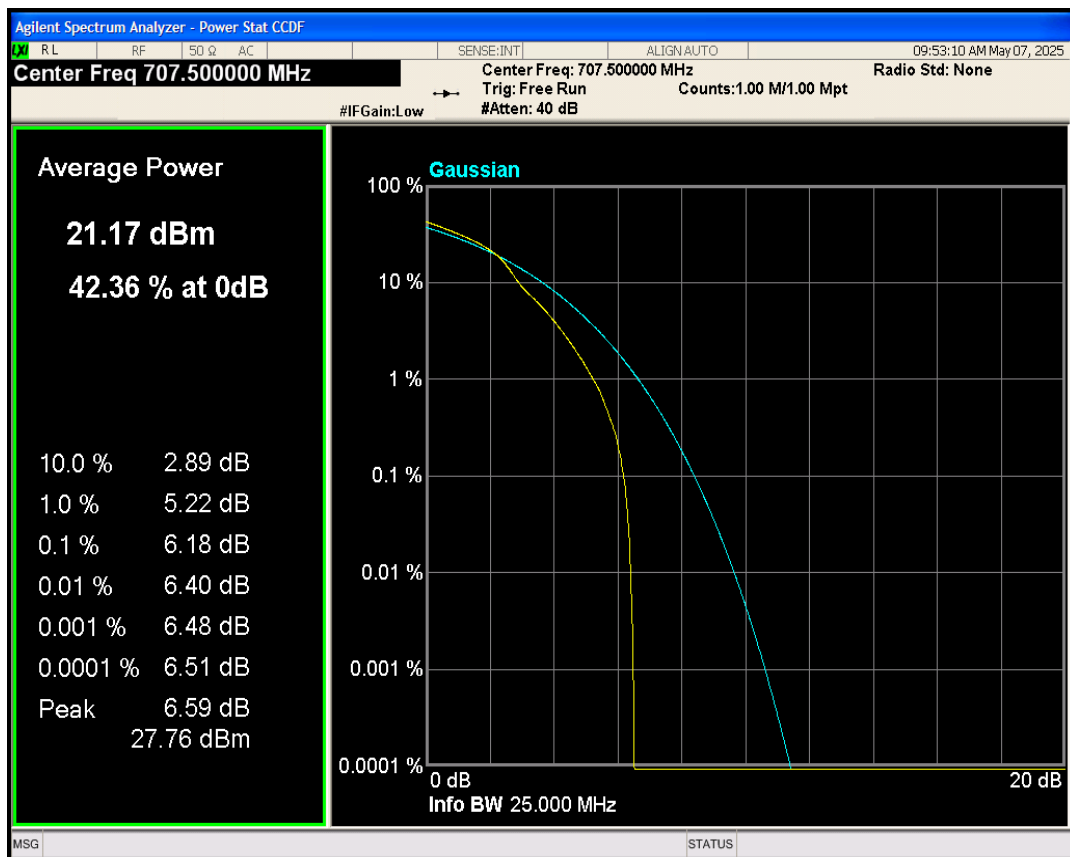




Band12 QPSK BW=5MHz Channel=23095 RB Size=1 Position=#0

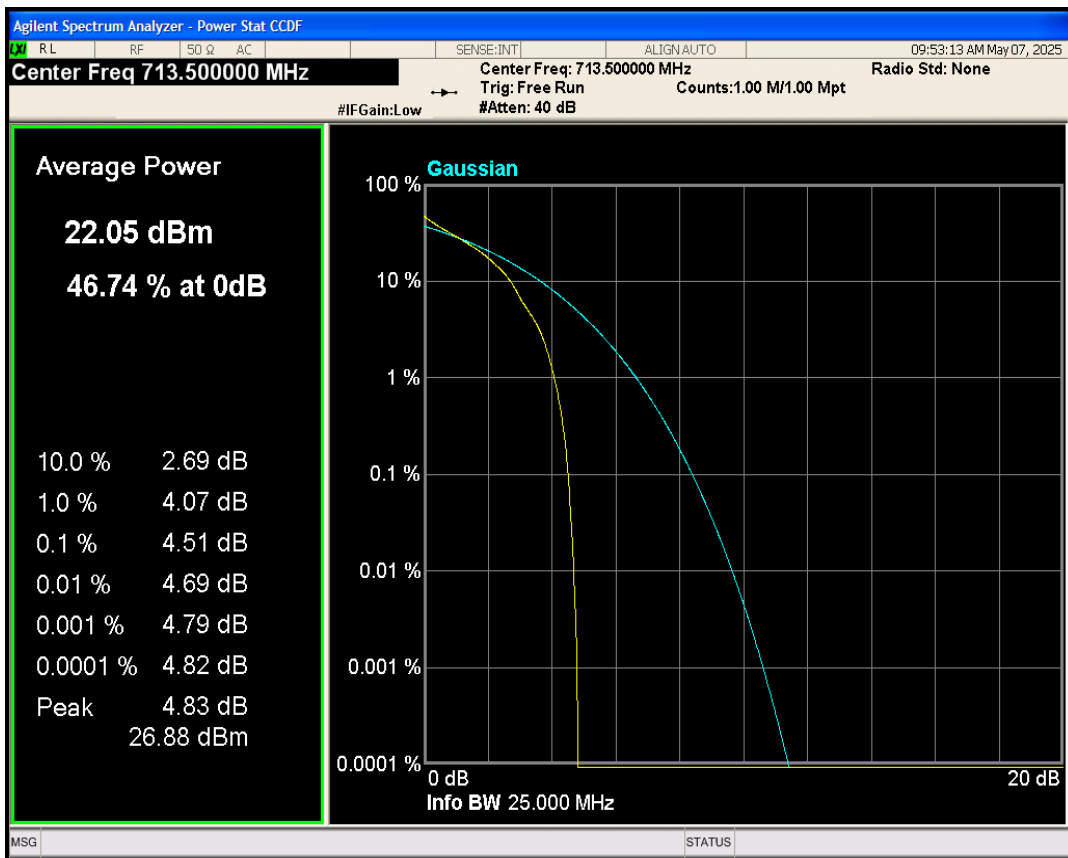


Band12 16QAM BW=5MHz Channel=23095 RB Size=1 Position=#0

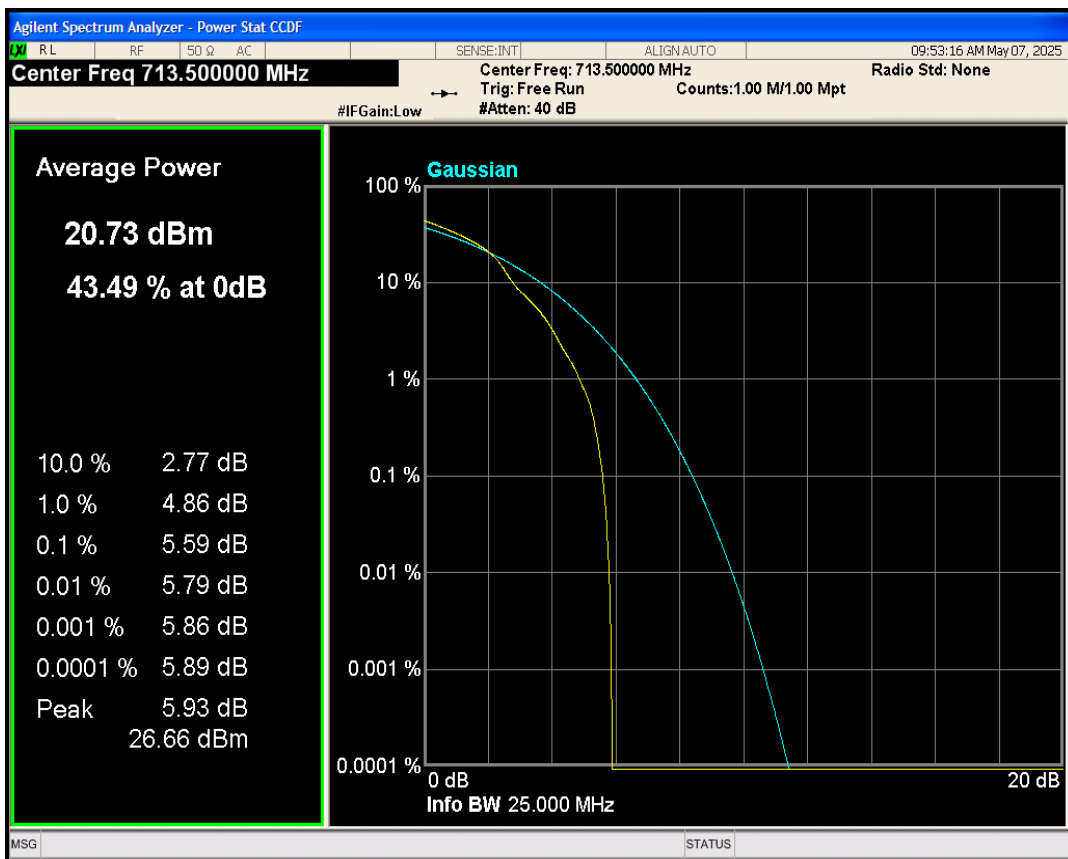




Band12 QPSK BW=5MHz Channel=23155 RB Size=1 Position=#0

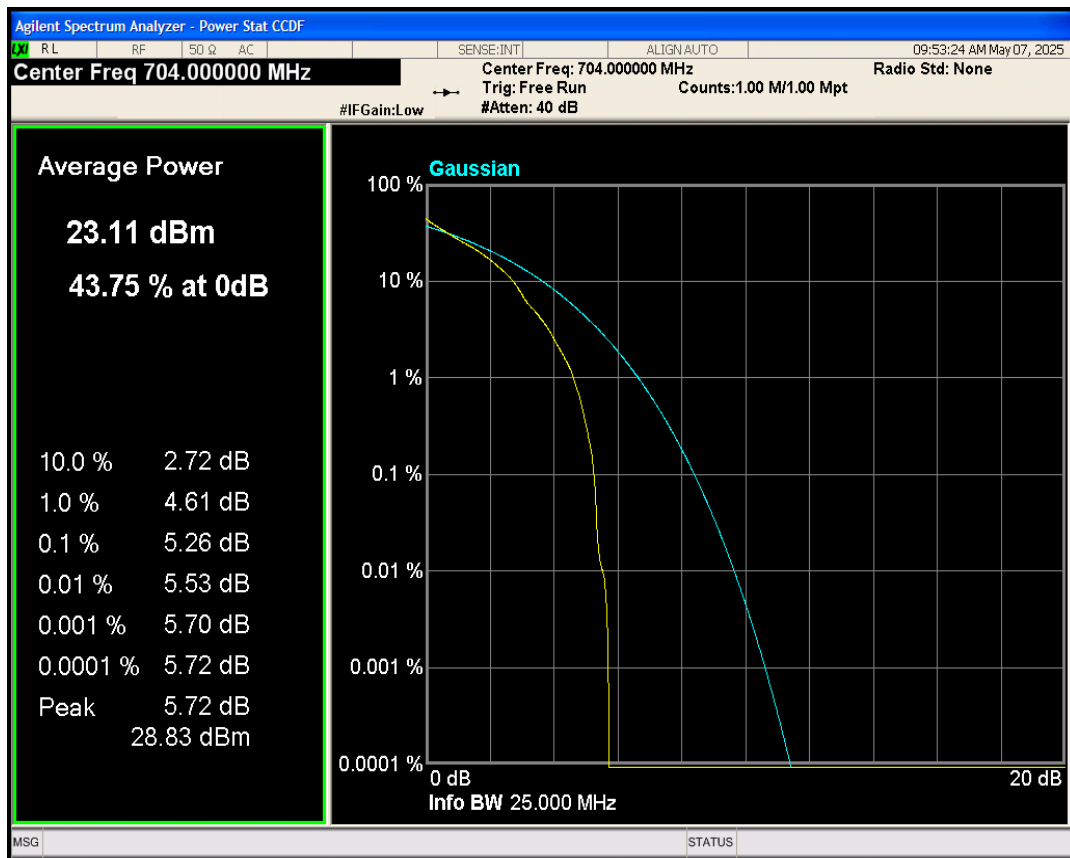


Band12 16QAM BW=5MHz Channel=23155 RB Size=1 Position=#0

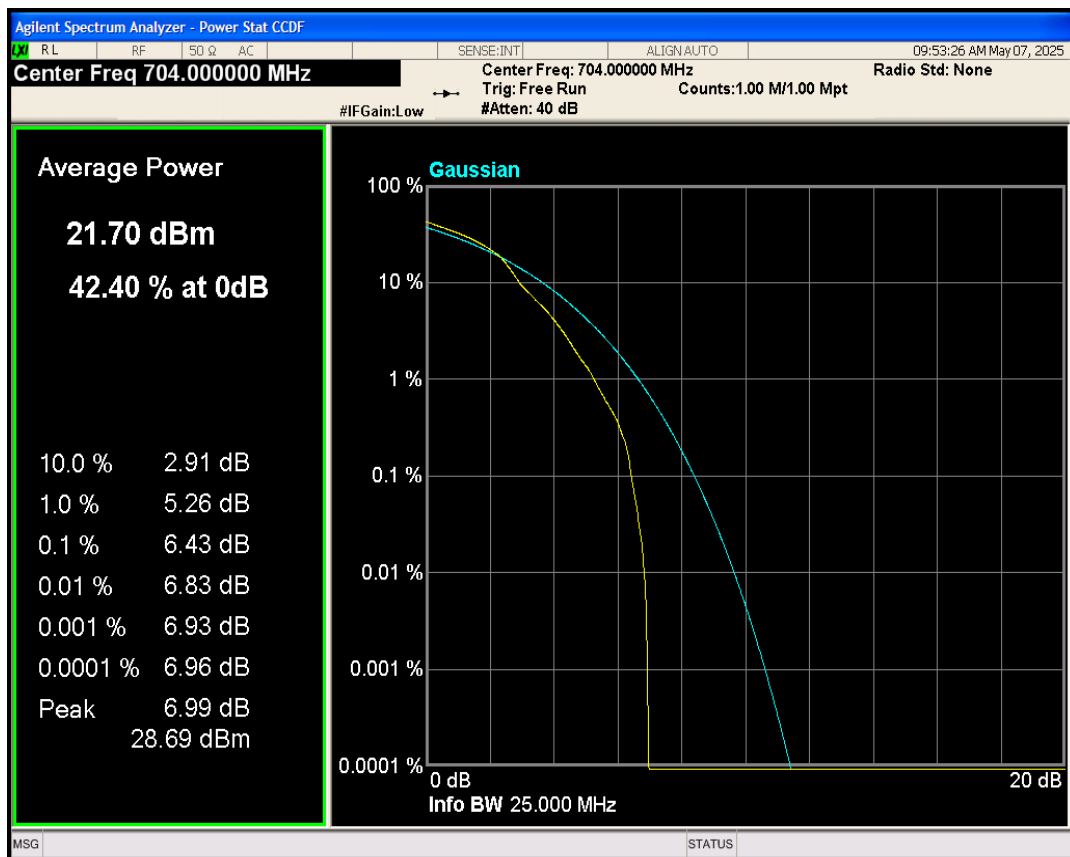




Band12 QPSK BW=10MHz Channel=23060 RB Size=1 Position=#0

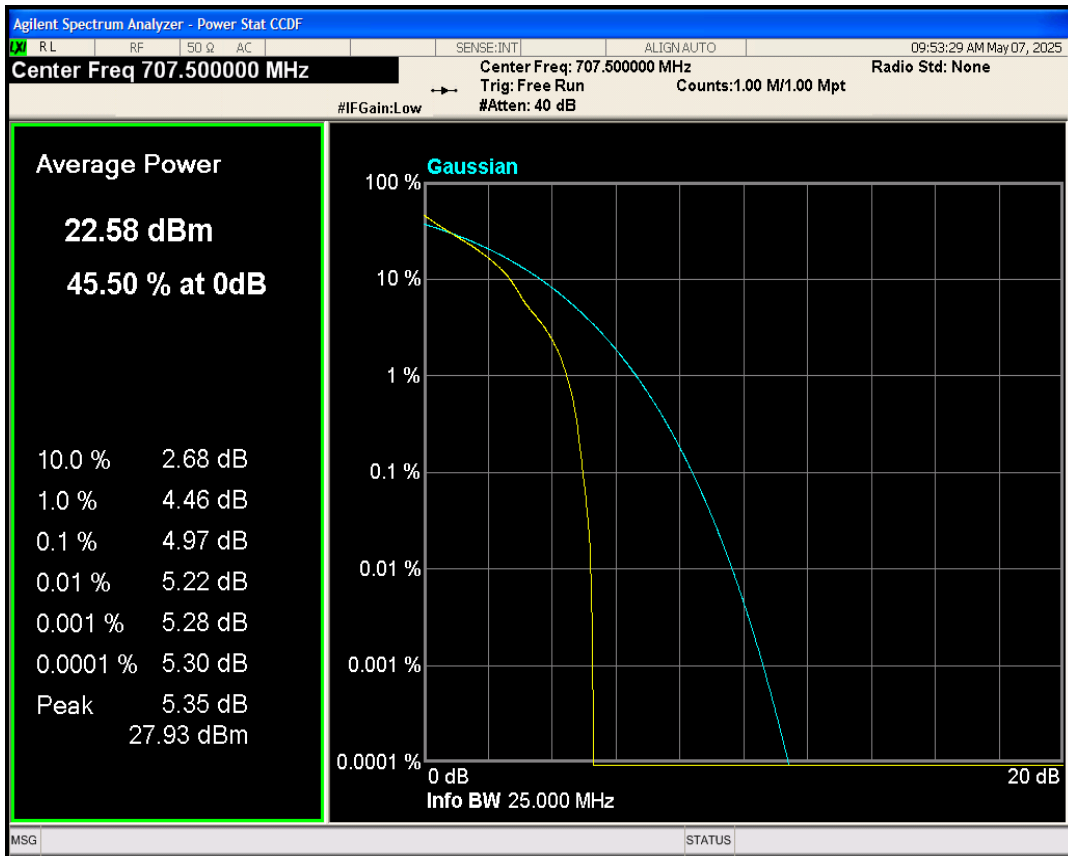


Band12 16QAM BW=10MHz Channel=23060 RB Size=1 Position=#0

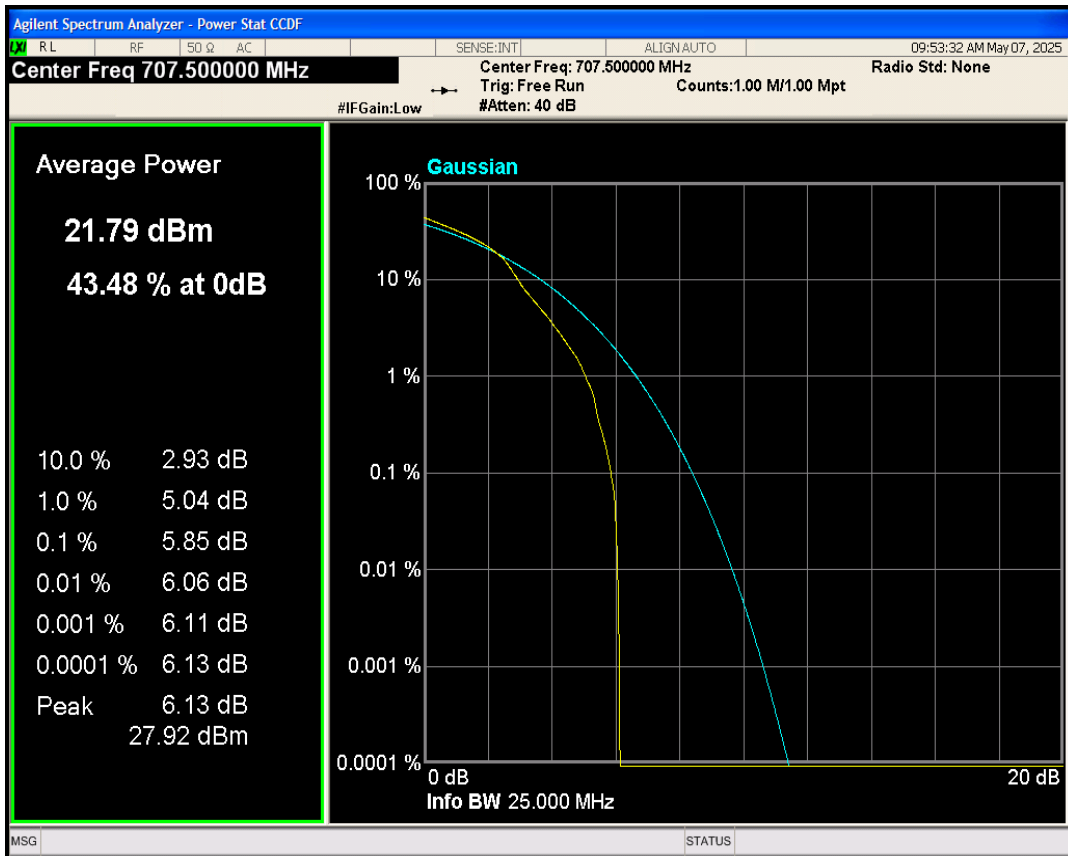




Band12 QPSK BW=10MHz Channel=23095 RB Size=1 Position=#0

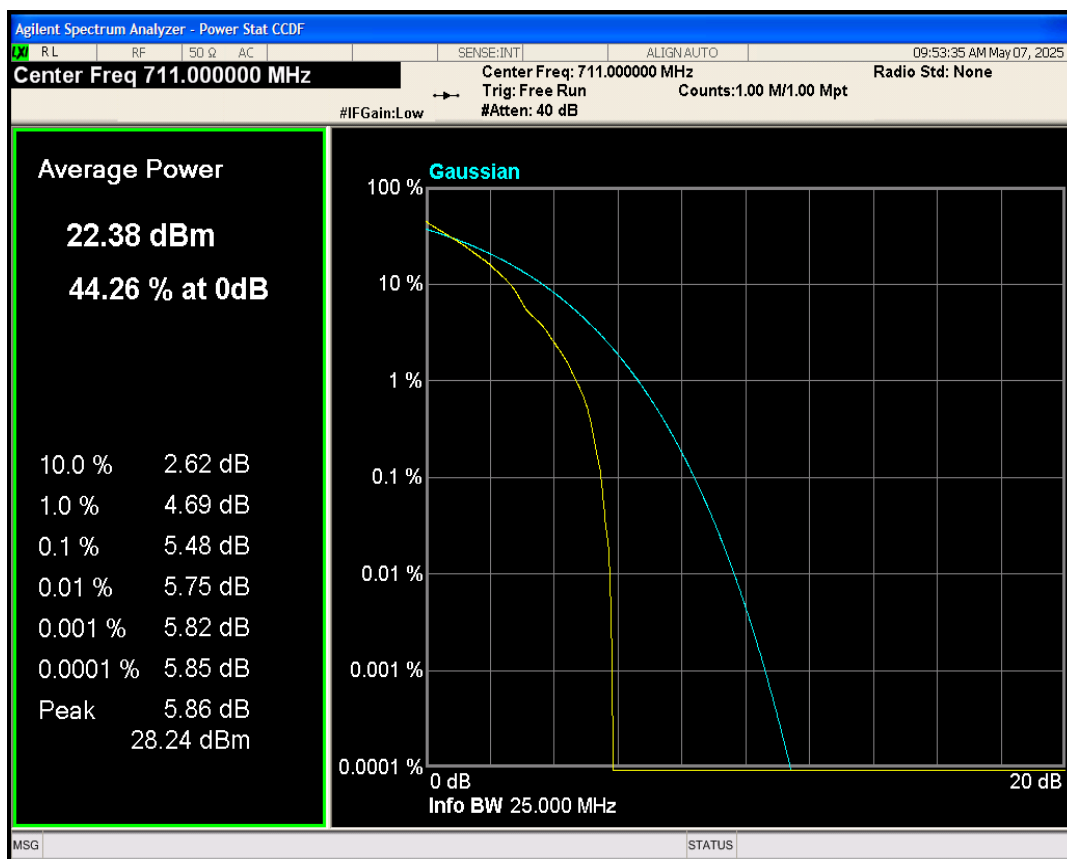


Band12 16QAM BW=10MHz Channel=23095 RB Size=1 Position=#0

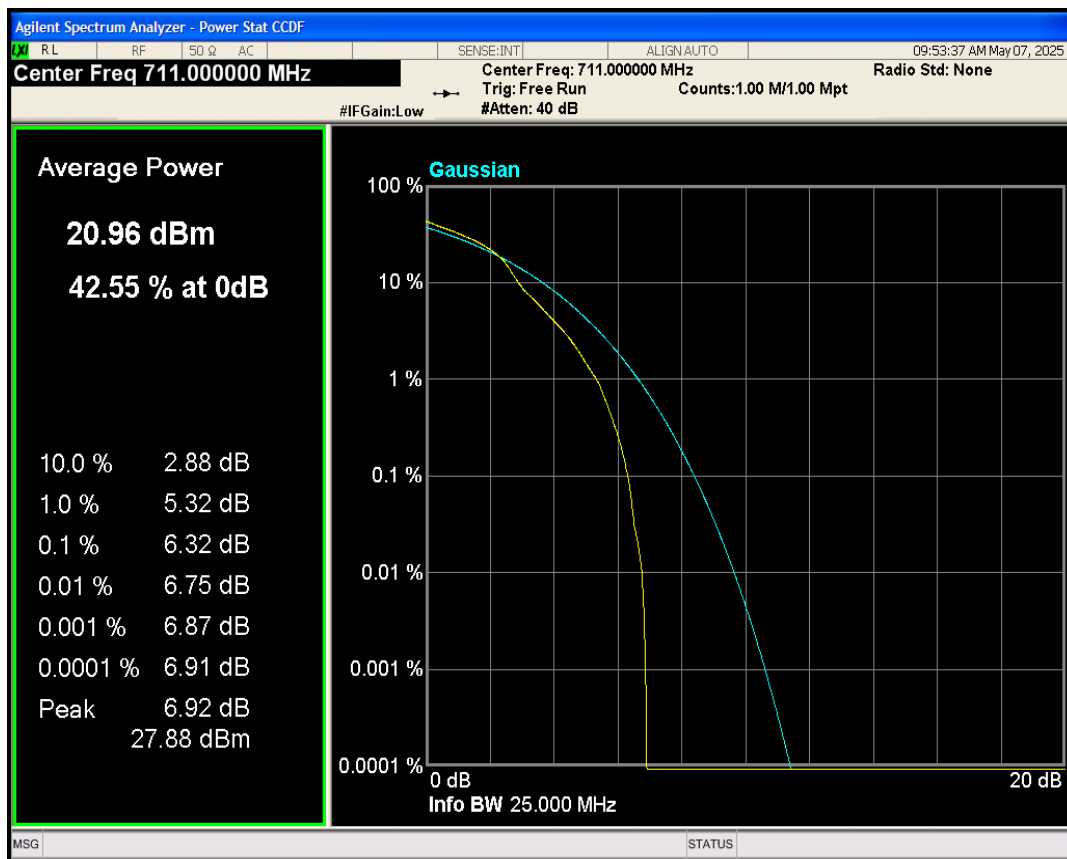




Band12 QPSK BW=10MHz Channel=23130 RB Size=1 Position=#0



Band12 16QAM BW=10MHz Channel=23130 RB Size=1 Position=#0

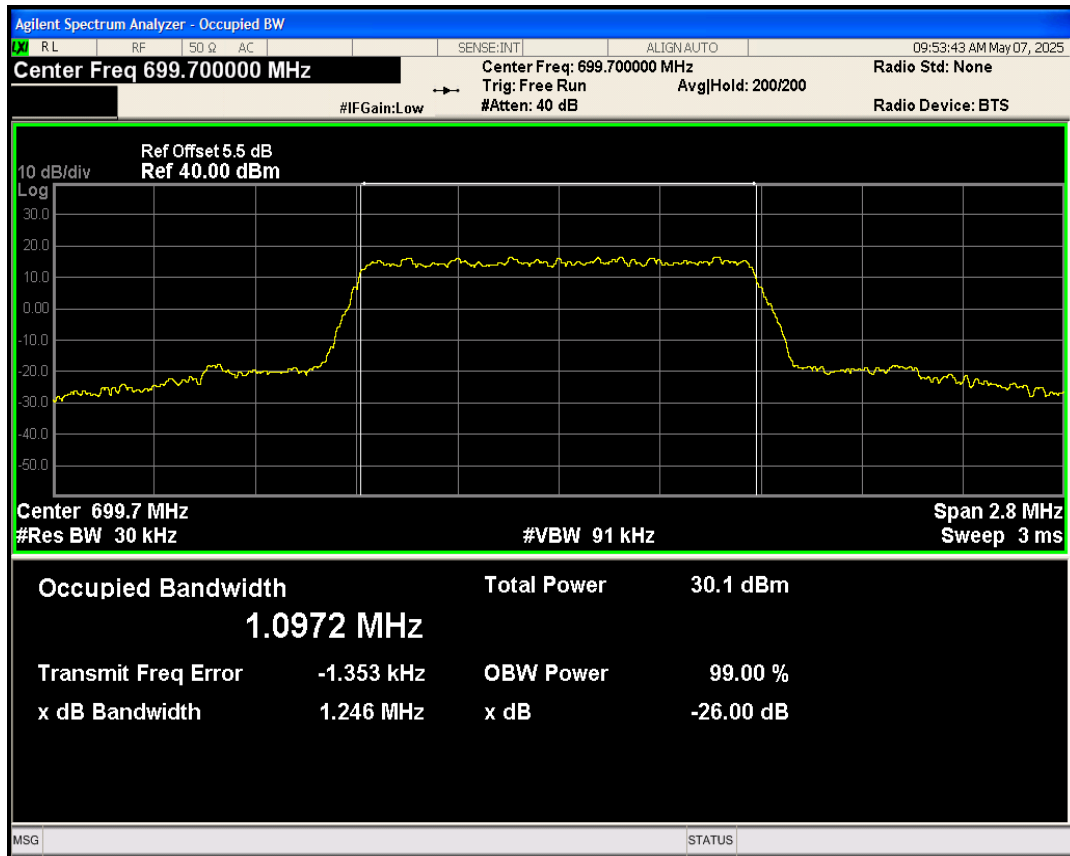


Appendix 4. Occupied bandwidth

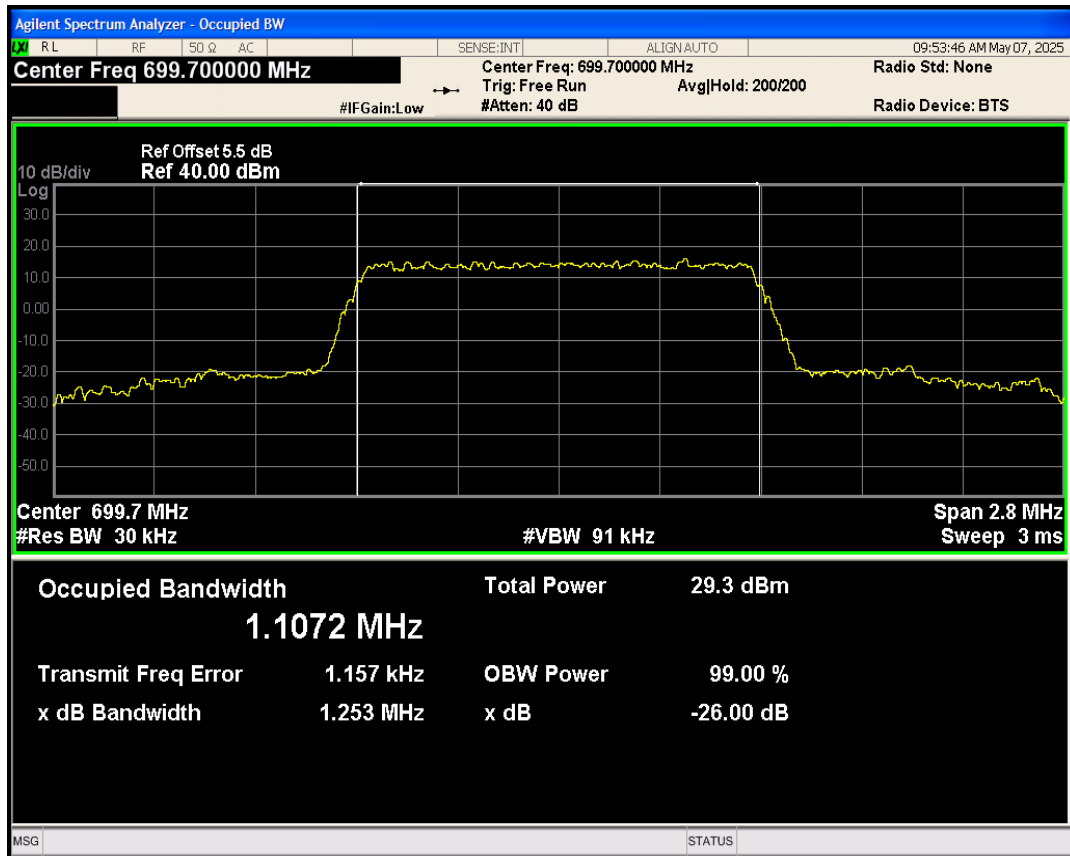
Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	99% OBW (MHz)	-26dB EBW (MHz)	Verdict
Band12	1.4	23017	6	#0	QPSK	1.097	1.246	PASS
Band12	1.4	23017	6	#0	16QAM	1.107	1.253	PASS
Band12	1.4	23095	6	#0	QPSK	1.104	1.249	PASS
Band12	1.4	23095	6	#0	16QAM	1.092	1.243	PASS
Band12	1.4	23173	6	#0	QPSK	1.109	1.247	PASS
Band12	1.4	23173	6	#0	16QAM	1.102	1.246	PASS
Band12	3	23025	15	#0	QPSK	2.700	2.978	PASS
Band12	3	23025	15	#0	16QAM	2.730	3.025	PASS
Band12	3	23095	15	#0	QPSK	2.706	3.046	PASS
Band12	3	23095	15	#0	16QAM	2.707	3.043	PASS
Band12	3	23165	15	#0	QPSK	2.722	3.042	PASS
Band12	3	23165	15	#0	16QAM	2.724	3.059	PASS
Band12	5	23035	25	#0	QPSK	4.511	4.960	PASS
Band12	5	23035	25	#0	16QAM	4.488	4.930	PASS
Band12	5	23095	25	#0	QPSK	4.528	4.958	PASS
Band12	5	23095	25	#0	16QAM	4.551	5.004	PASS
Band12	5	23155	25	#0	QPSK	4.506	4.948	PASS
Band12	5	23155	25	#0	16QAM	4.524	4.985	PASS
Band12	10	23060	50	#0	QPSK	9.002	9.824	PASS
Band12	10	23060	50	#0	16QAM	8.968	9.869	PASS
Band12	10	23095	50	#0	QPSK	9.026	9.849	PASS
Band12	10	23095	50	#0	16QAM	9.009	9.819	PASS
Band12	10	23130	50	#0	QPSK	8.957	9.906	PASS
Band12	10	23130	50	#0	16QAM	8.973	9.847	PASS



Band12 QPSK BW=1.4MHz Channel=23017 RB Size=6 Position=#0

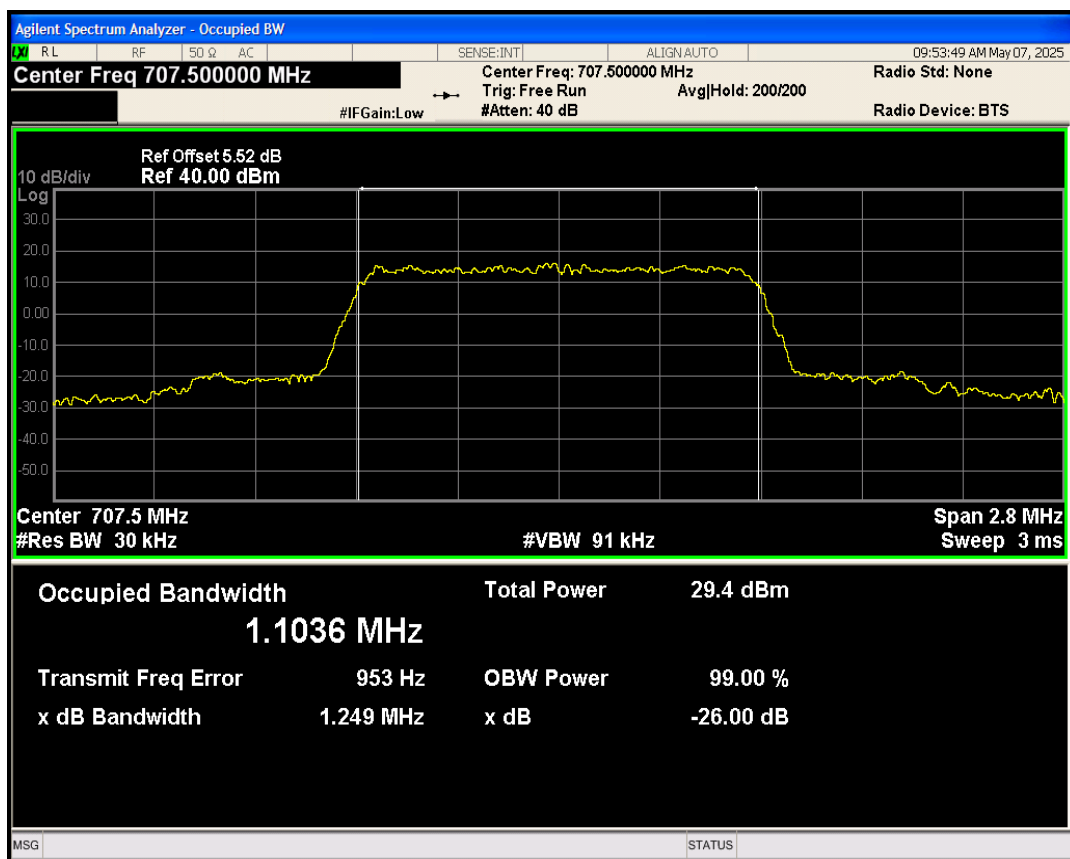


Band12 16QAM BW=1.4MHz Channel=23017 RB Size=6 Position=#0

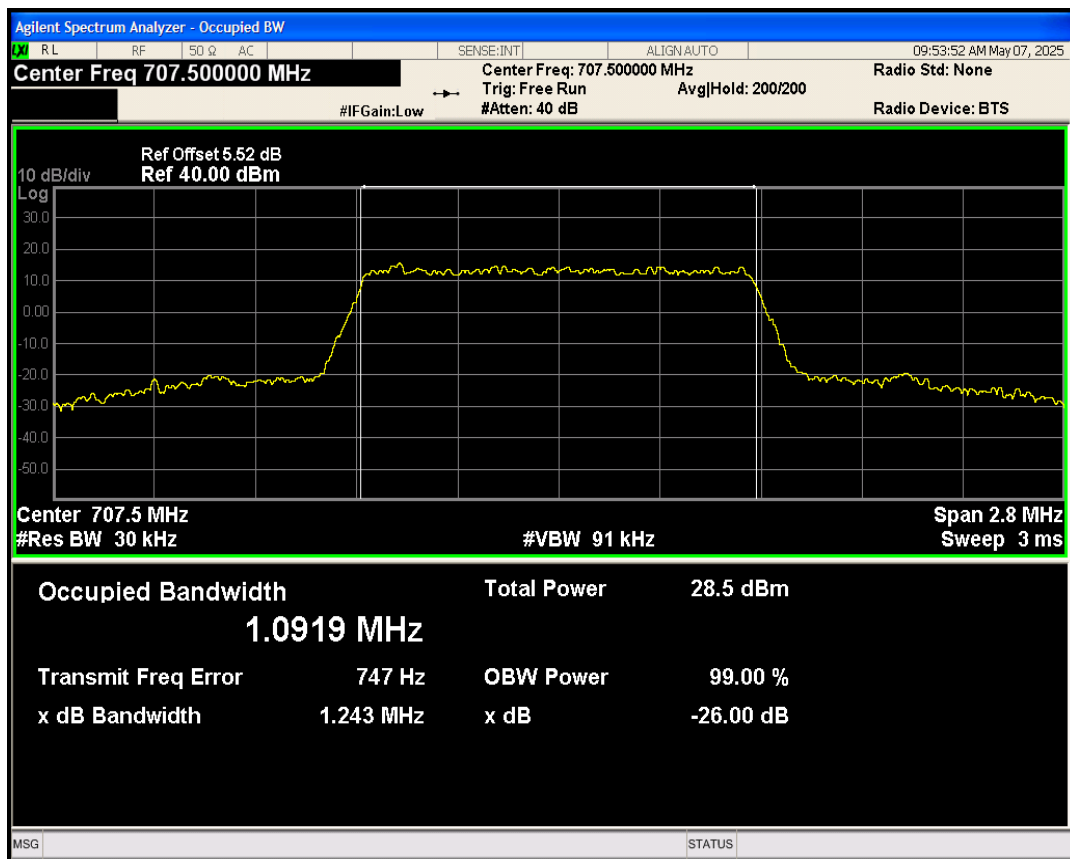




Band12 QPSK BW=1.4MHz Channel=23095 RB Size=6 Position=#0

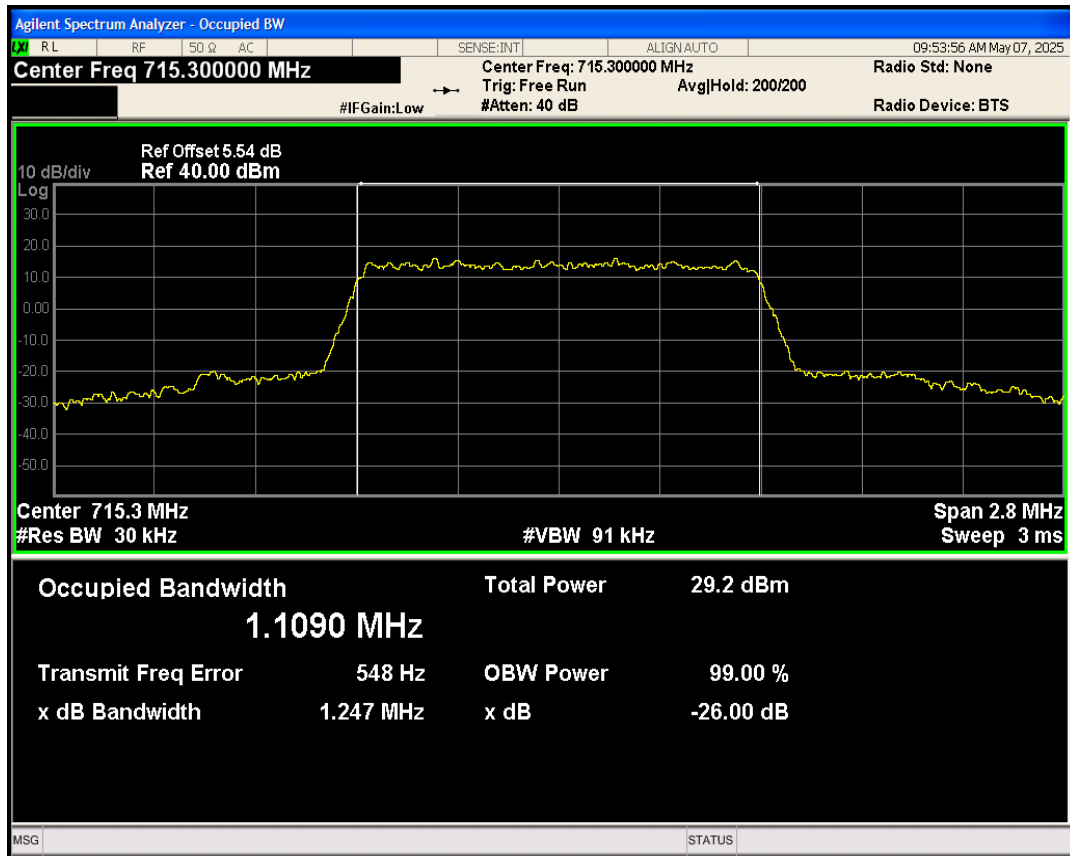


Band12 16QAM BW=1.4MHz Channel=23095 RB Size=6 Position=#0

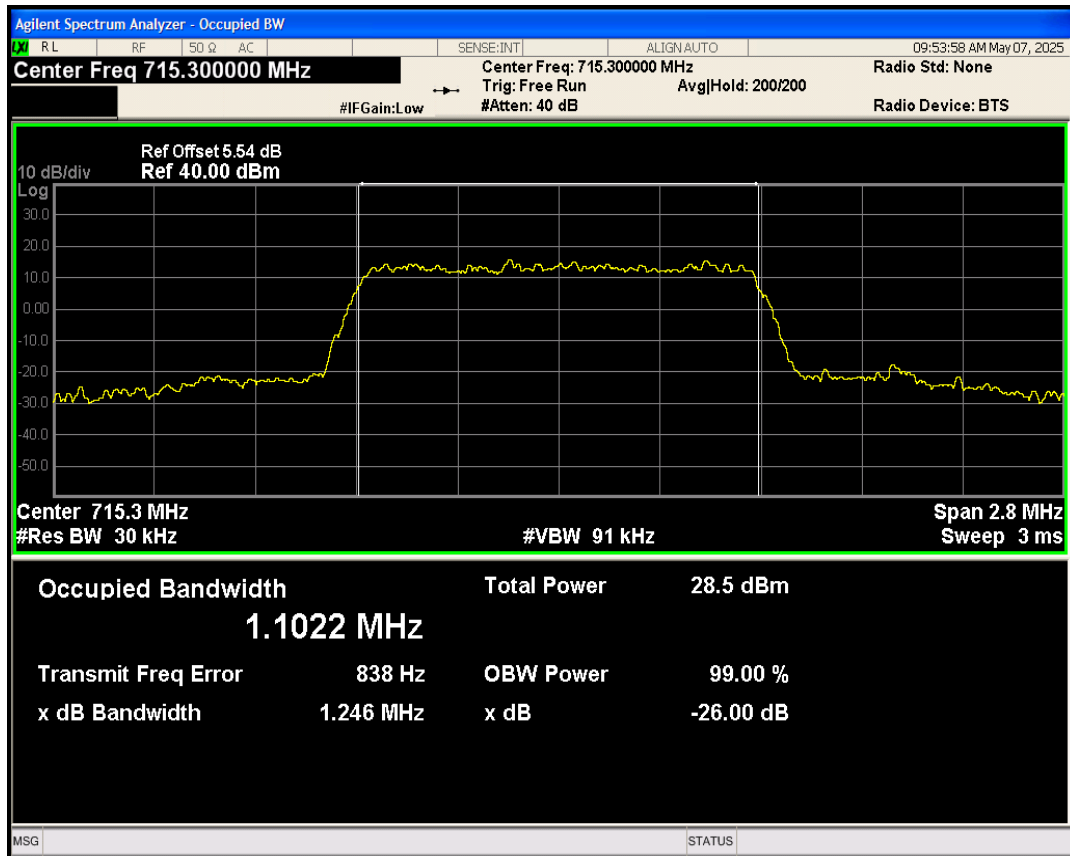




Band12 QPSK BW=1.4MHz Channel=23173 RB Size=6 Position=#0

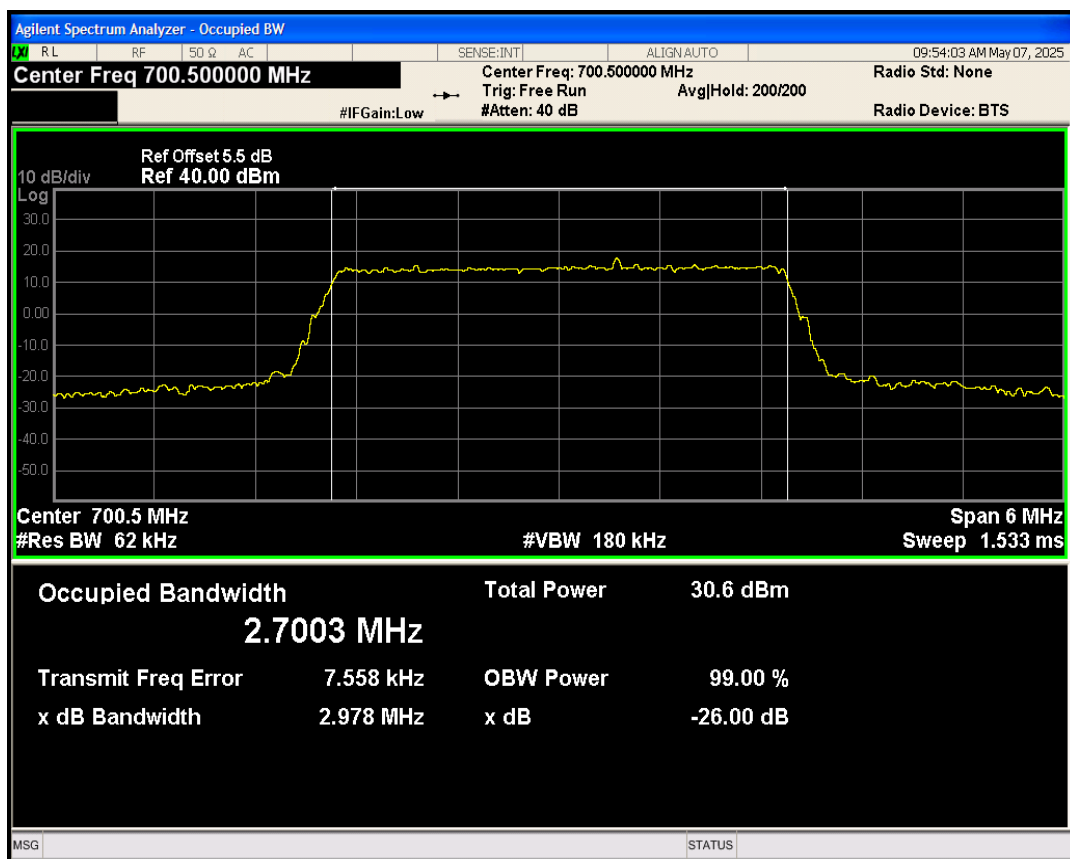


Band12 16QAM BW=1.4MHz Channel=23173 RB Size=6 Position=#0

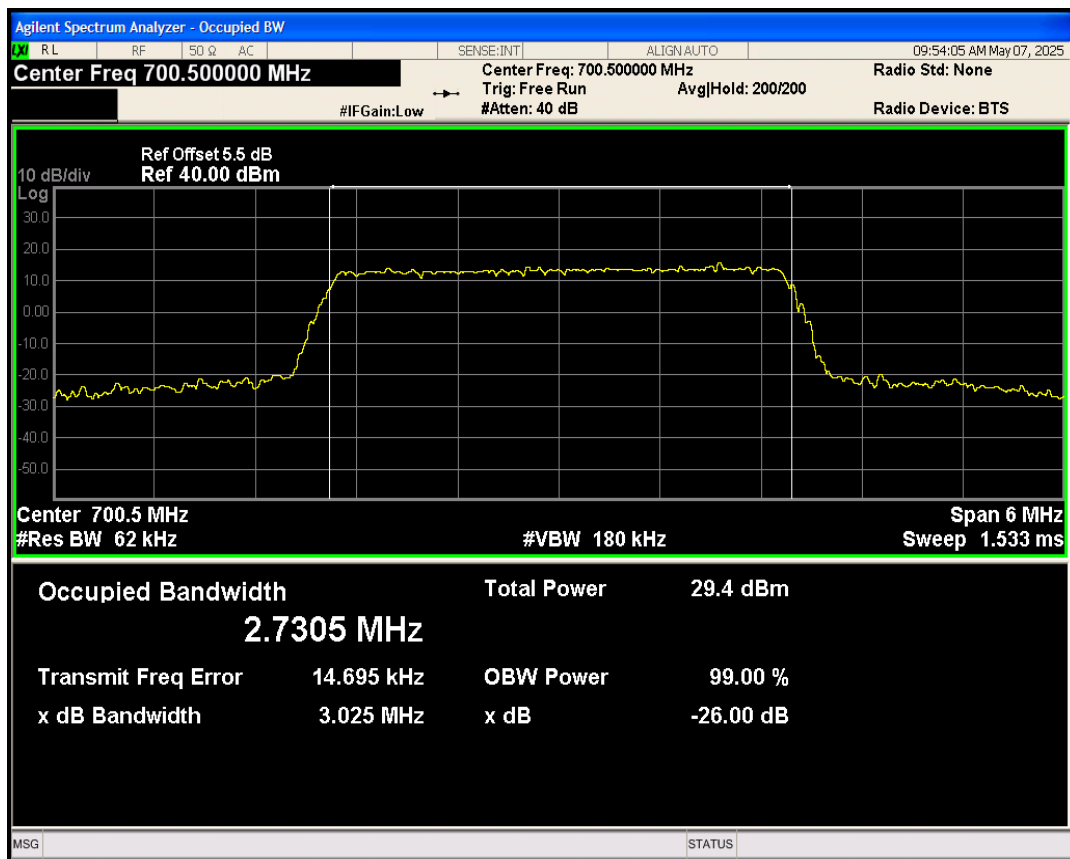




Band12 QPSK BW=3MHz Channel=23025 RB Size=15 Position=#0

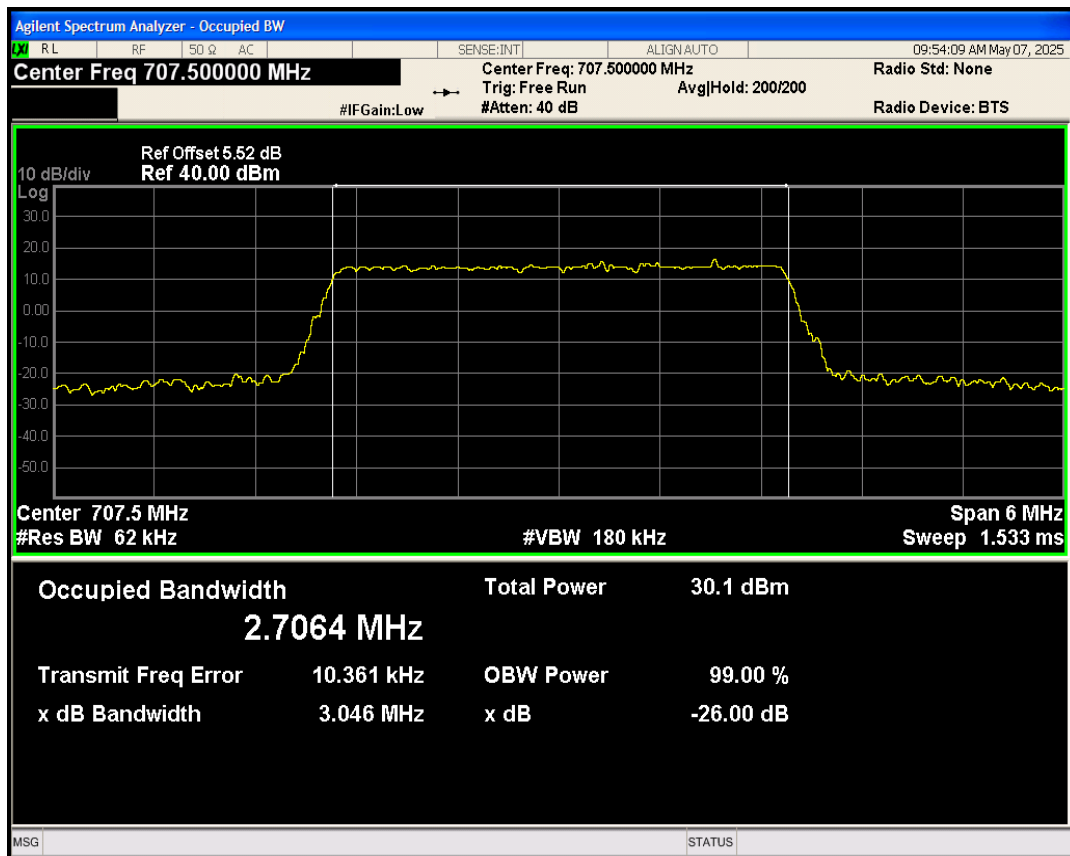


Band12 16QAM BW=3MHz Channel=23025 RB Size=15 Position=#0

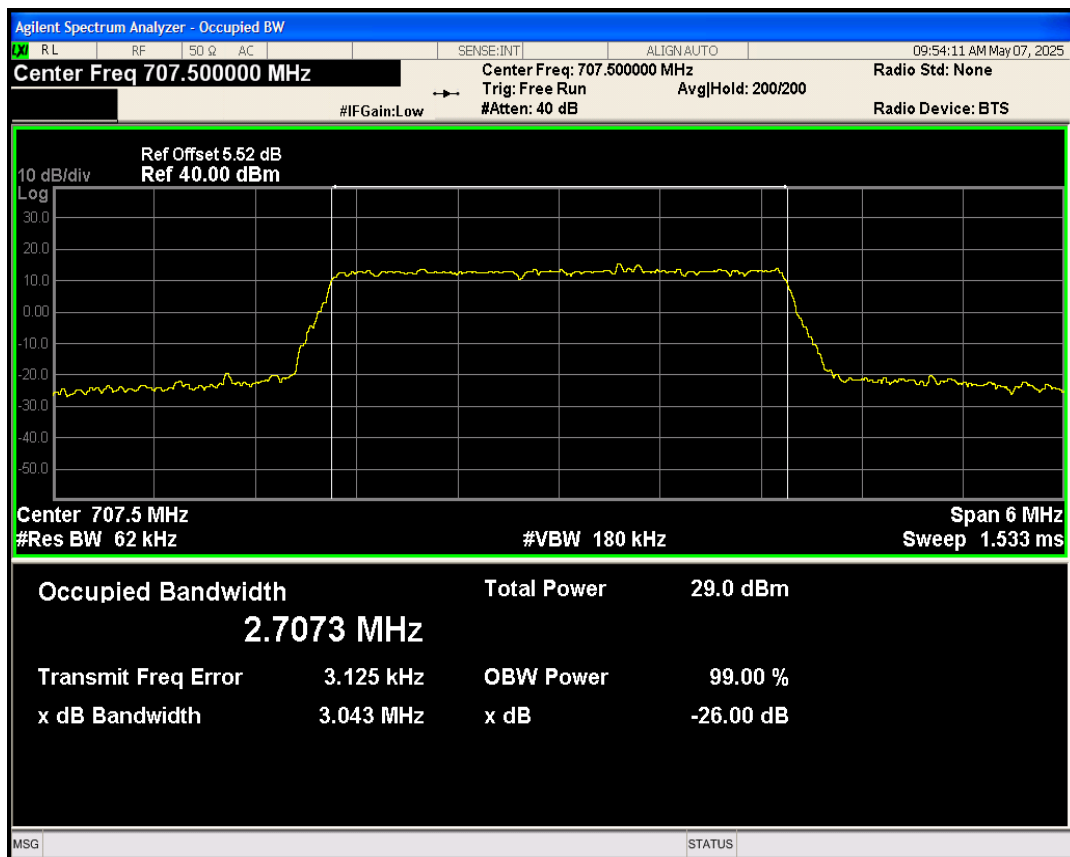




Band12 QPSK BW=3MHz Channel=23095 RB Size=15 Position=#0

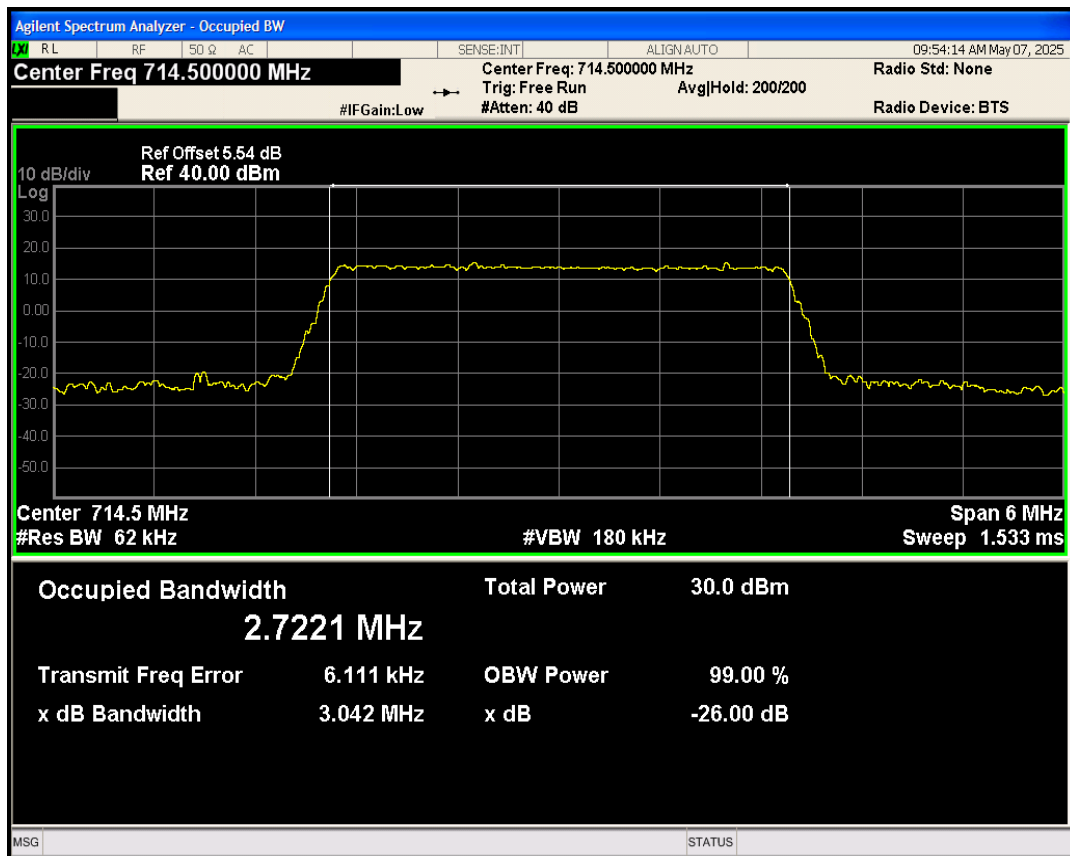


Band12 16QAM BW=3MHz Channel=23095 RB Size=15 Position=#0

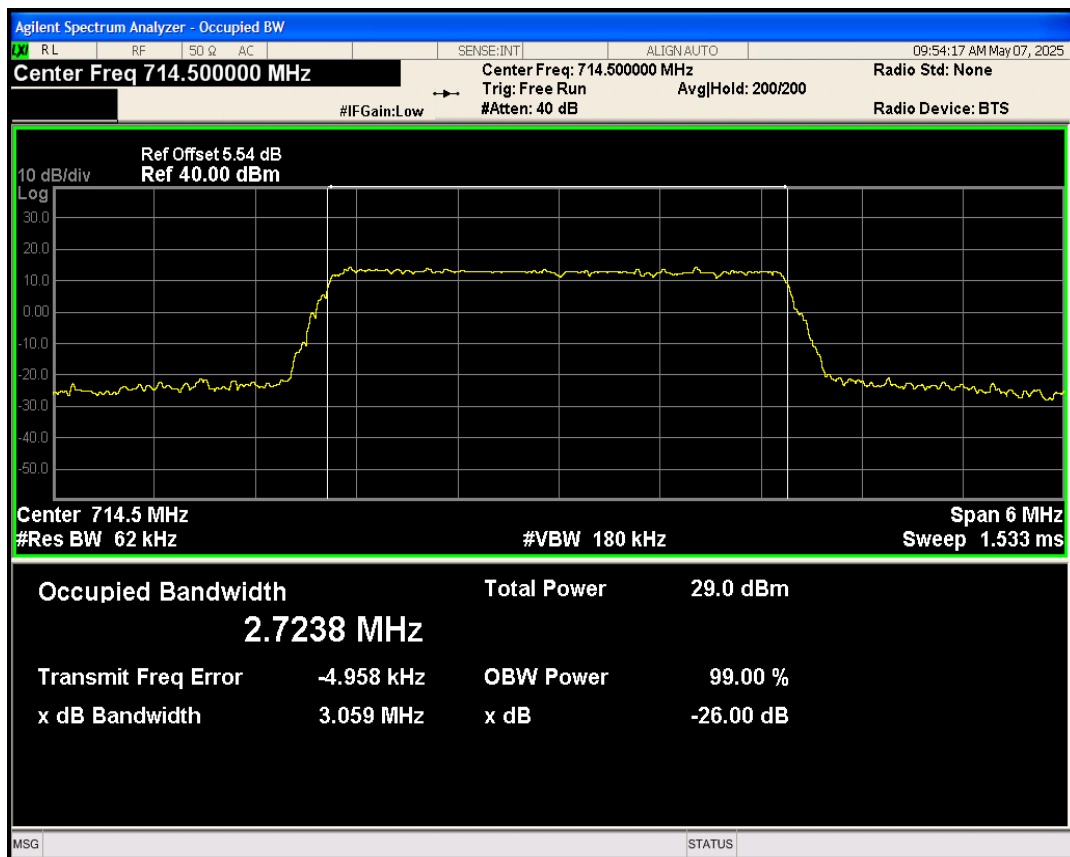




Band12 QPSK BW=3MHz Channel=23165 RB Size=15 Position=#0

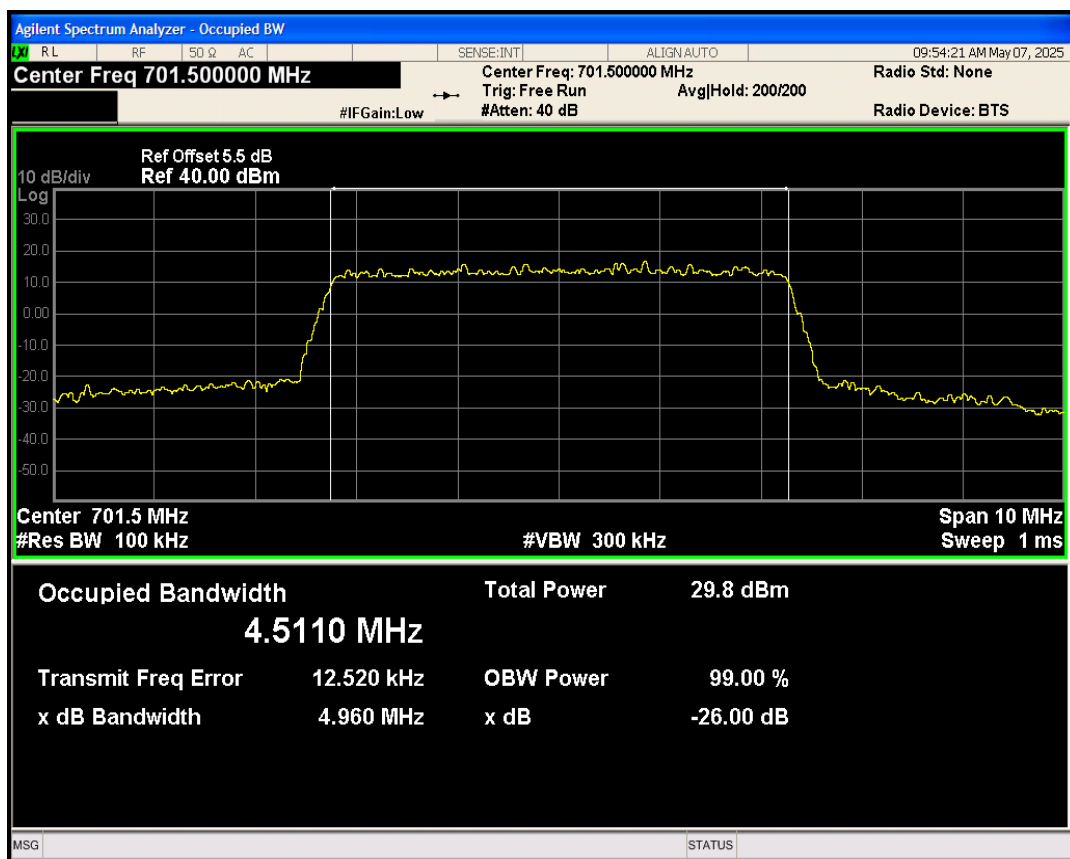


Band12 16QAM BW=3MHz Channel=23165 RB Size=15 Position=#0

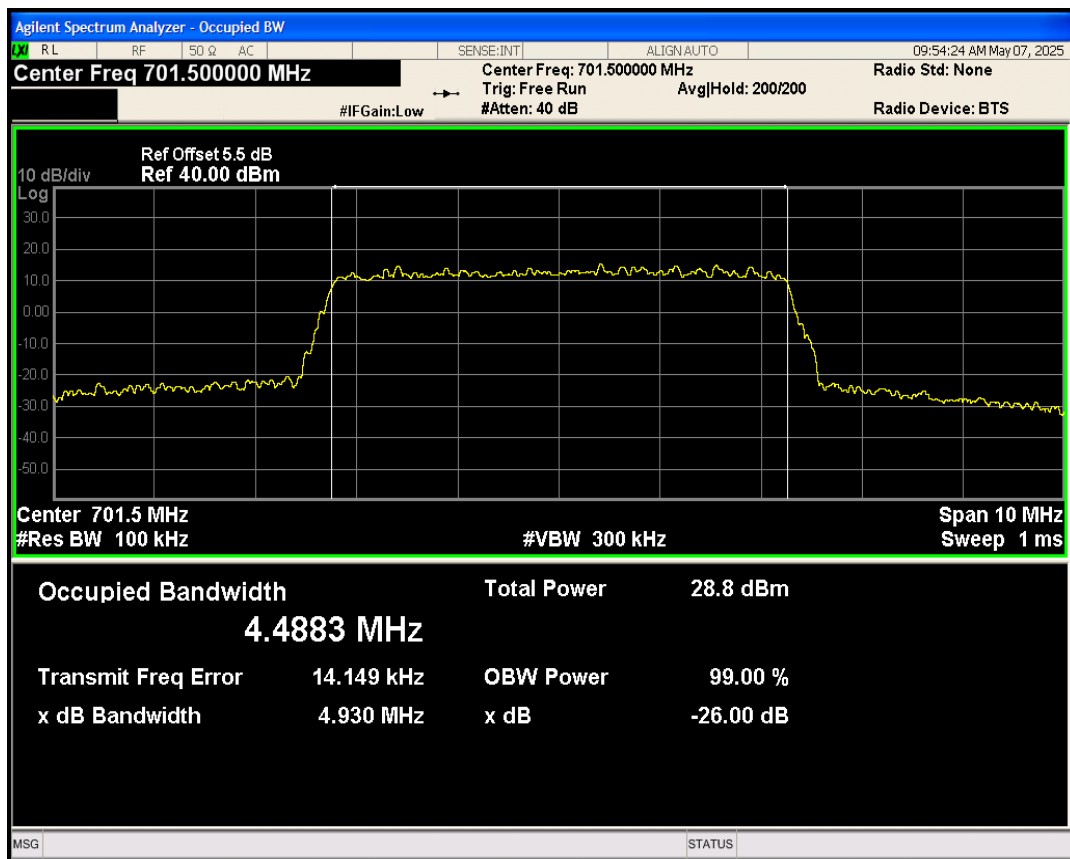




Band12 QPSK BW=5MHz Channel=23035 RB Size=25 Position=#0

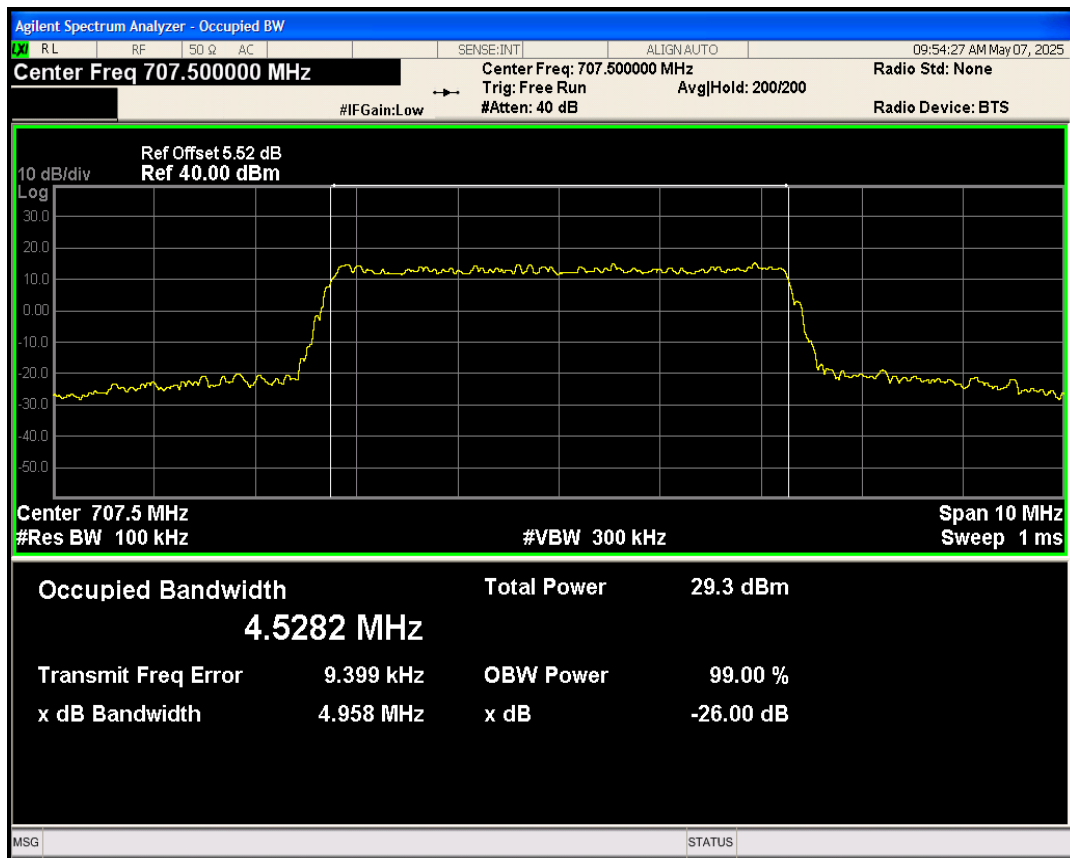


Band12 16QAM BW=5MHz Channel=23035 RB Size=25 Position=#0

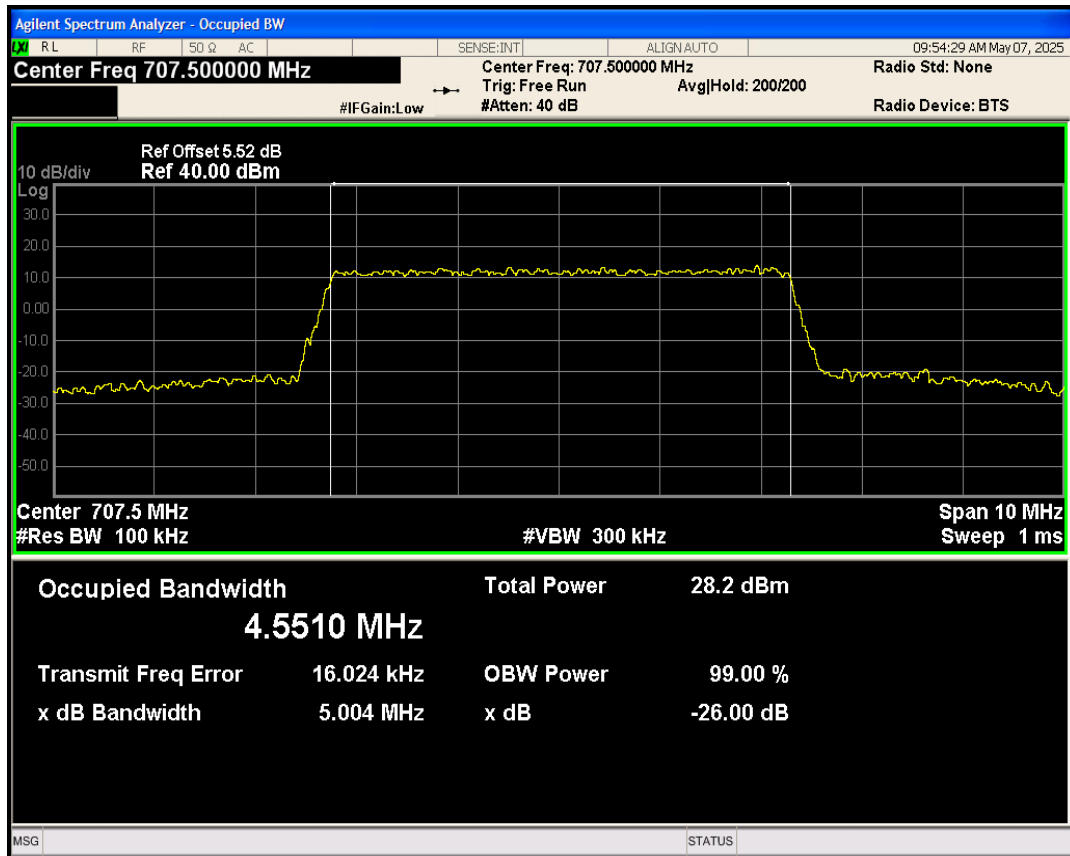




Band12 QPSK BW=5MHz Channel=23095 RB Size=25 Position=#0

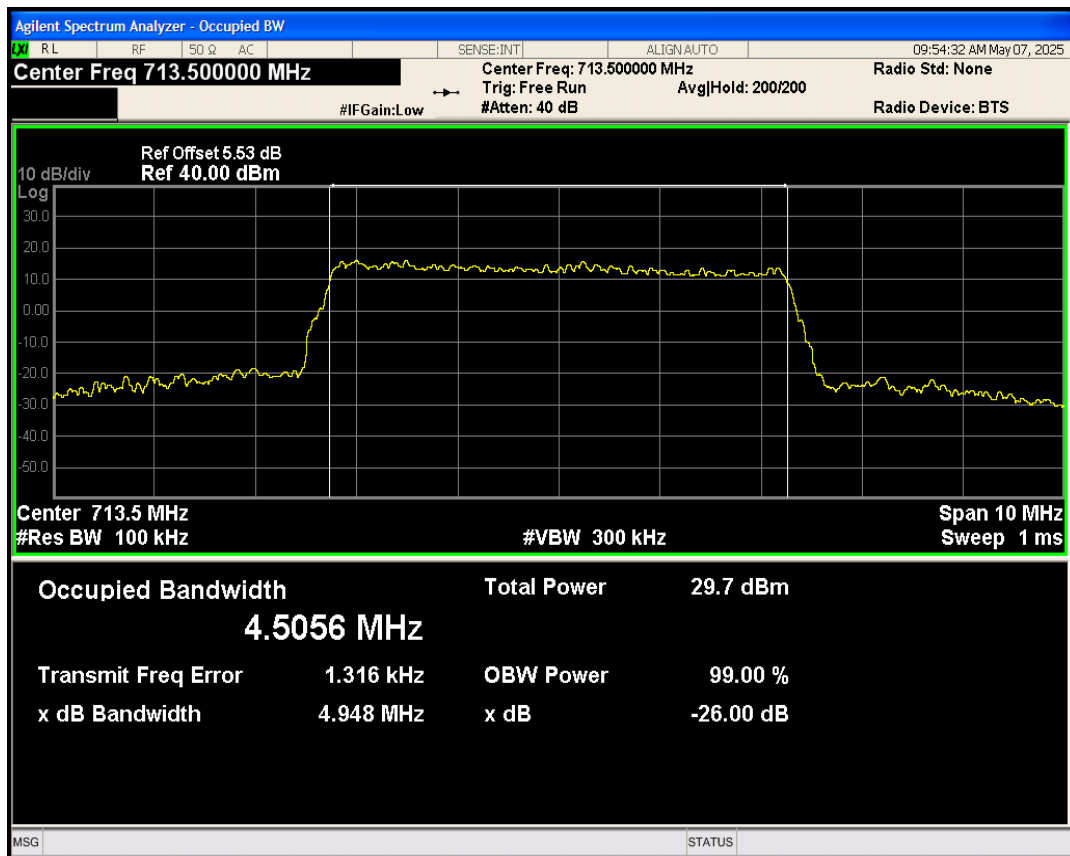


Band12 16QAM BW=5MHz Channel=23095 RB Size=25 Position=#0

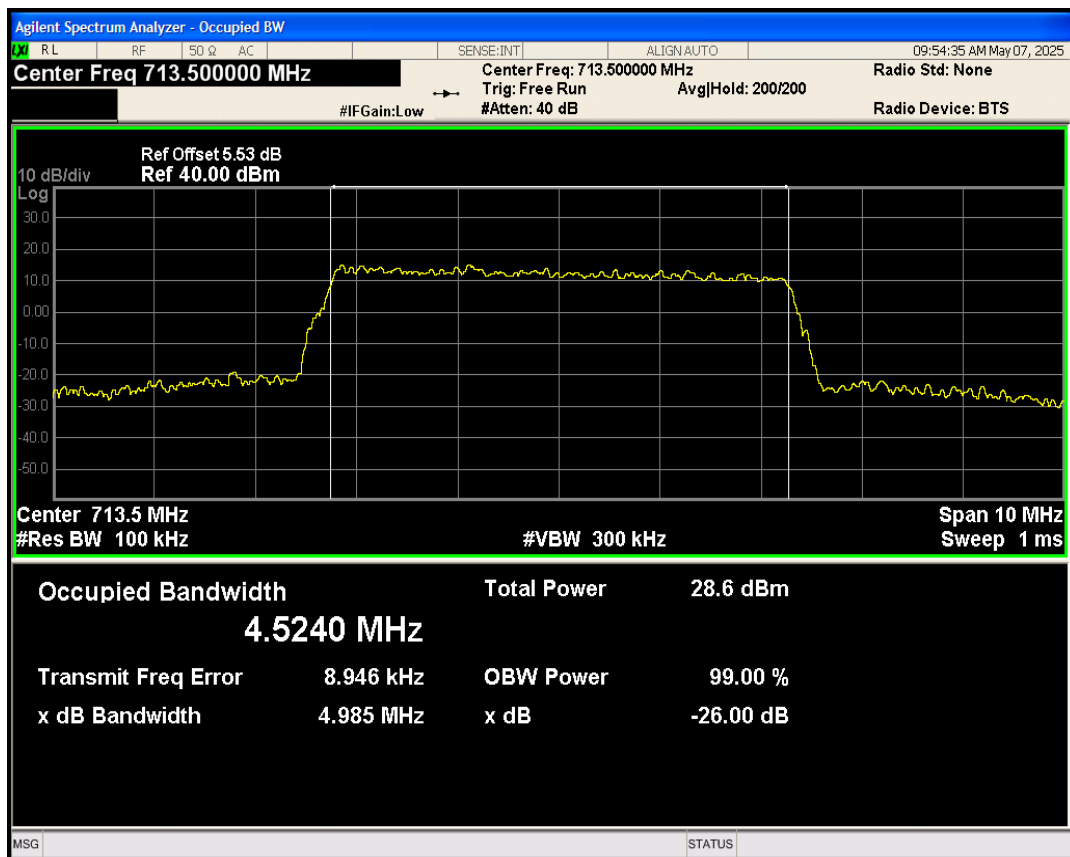




Band12 QPSK BW=5MHz Channel=23155 RB Size=25 Position=#0

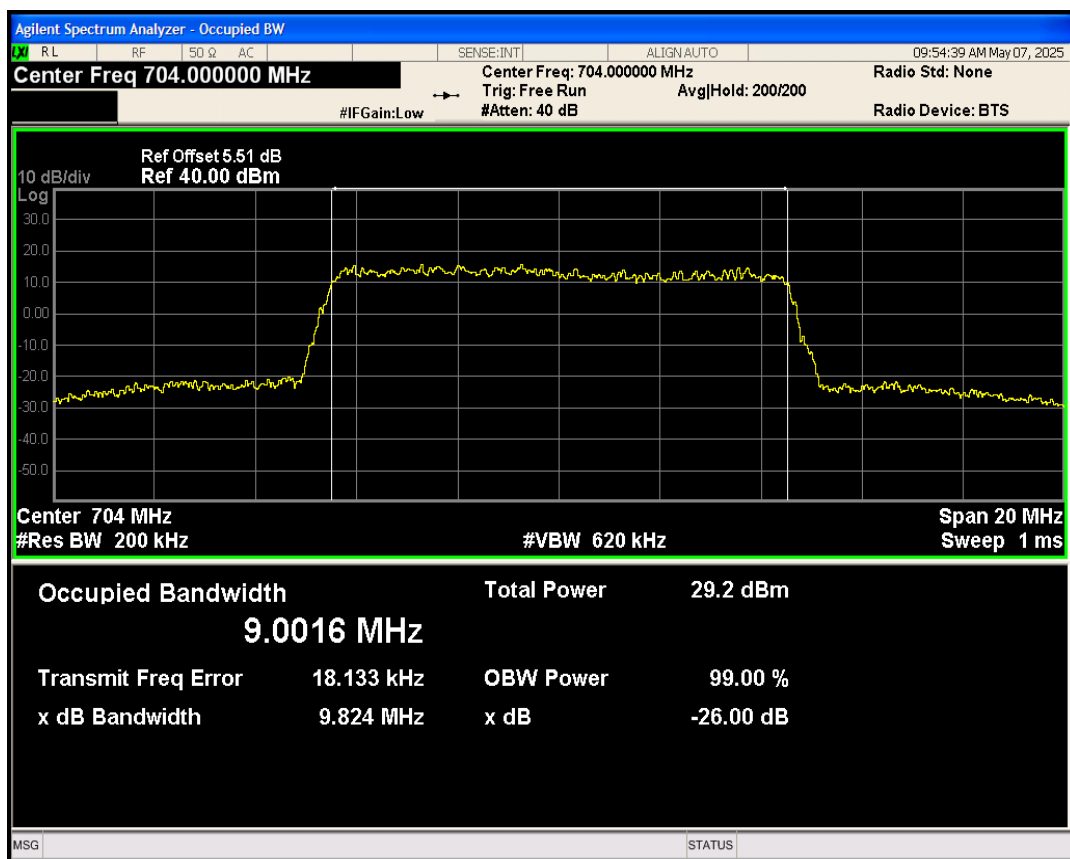


Band12 16QAM BW=5MHz Channel=23155 RB Size=25 Position=#0

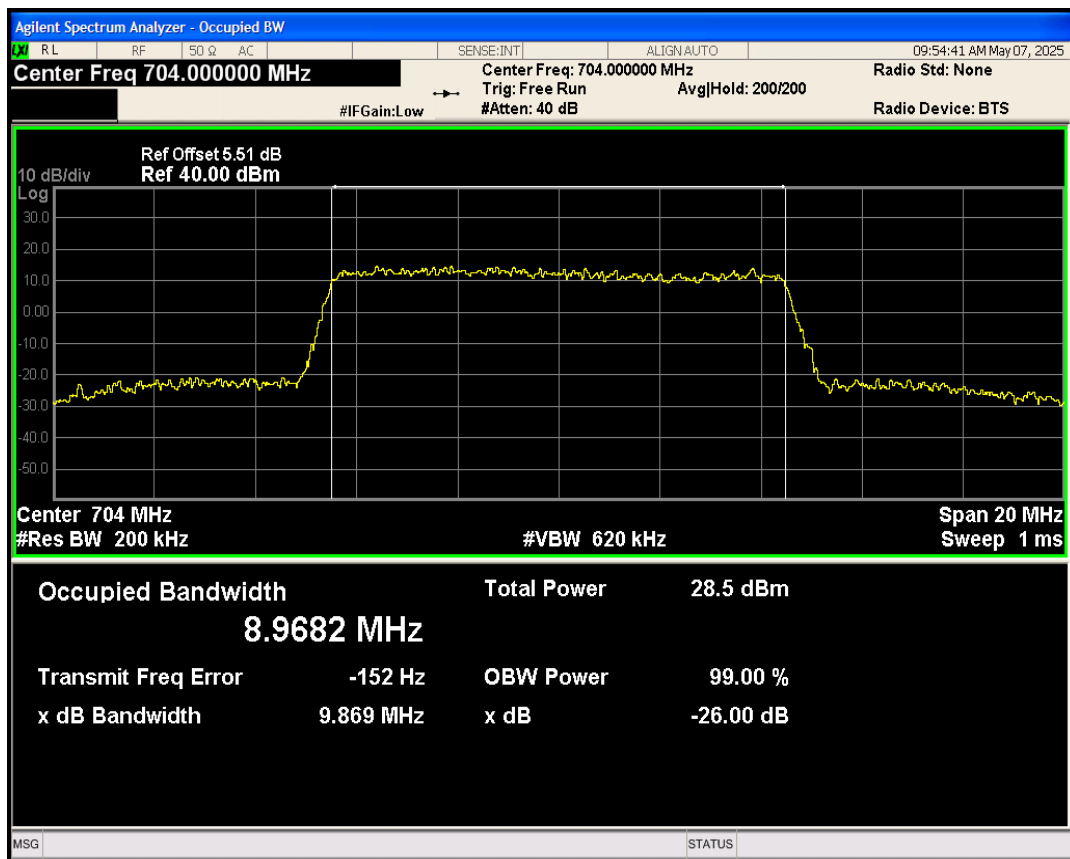




Band12 QPSK BW=10MHz Channel=23060 RB Size=50 Position=#0

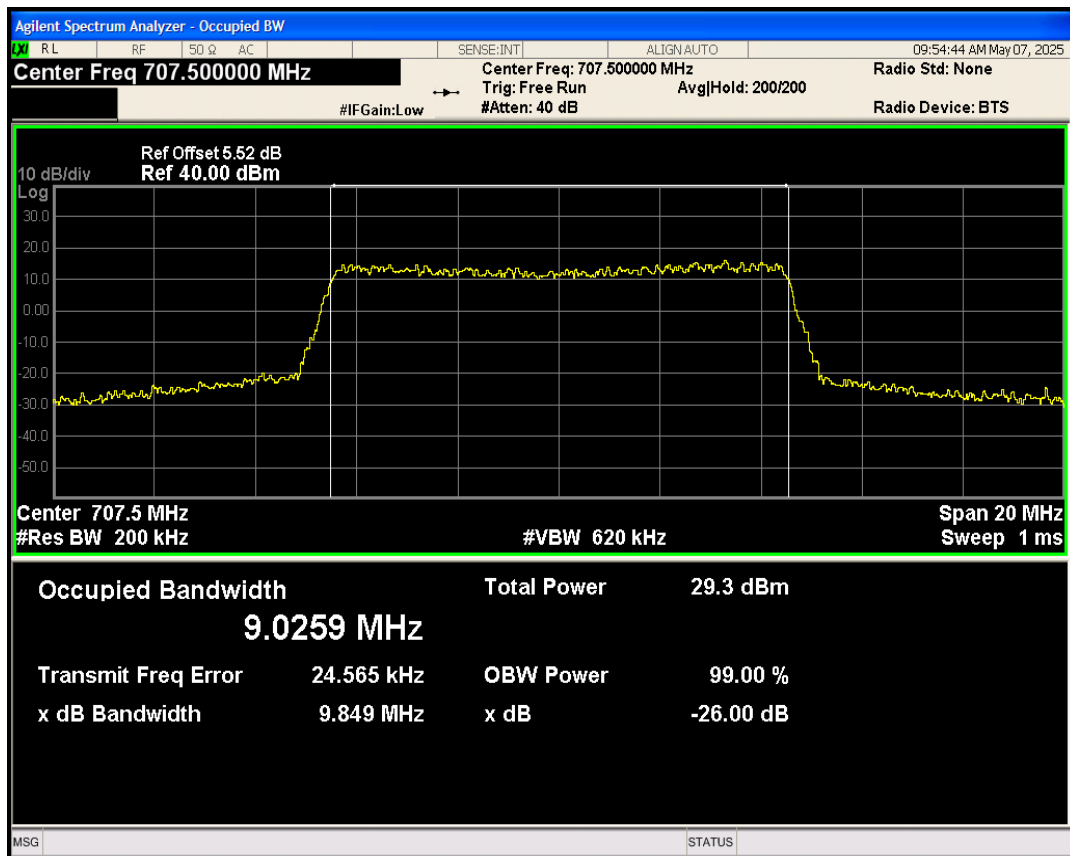


Band12 16QAM BW=10MHz Channel=23060 RB Size=50 Position=#0

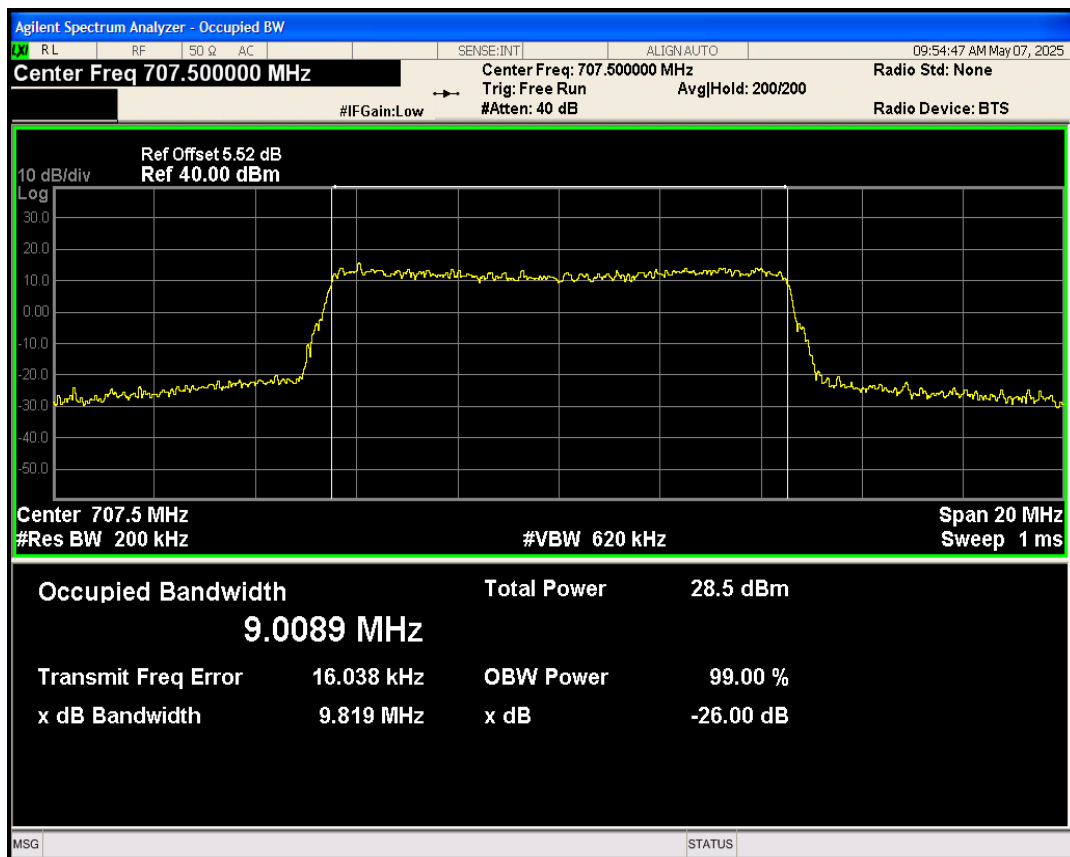




Band12 QPSK BW=10MHz Channel=23095 RB Size=50 Position=#0

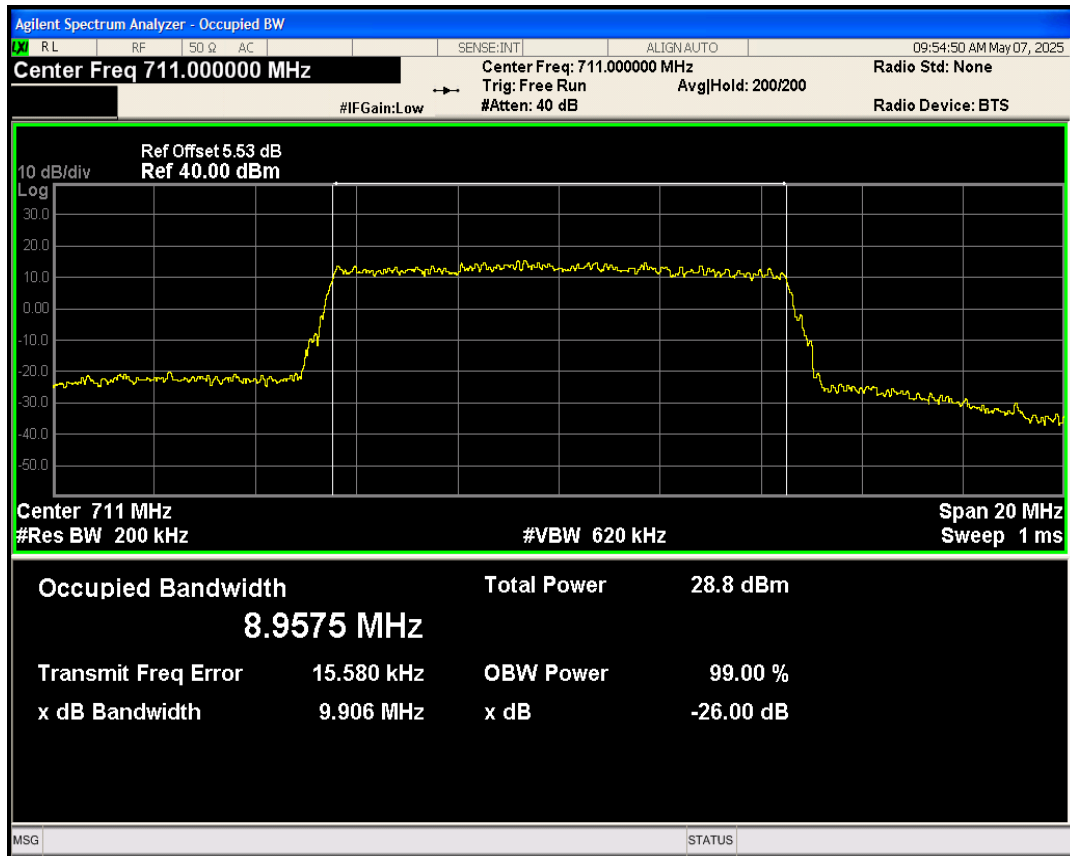


Band12 16QAM BW=10MHz Channel=23095 RB Size=50 Position=#0

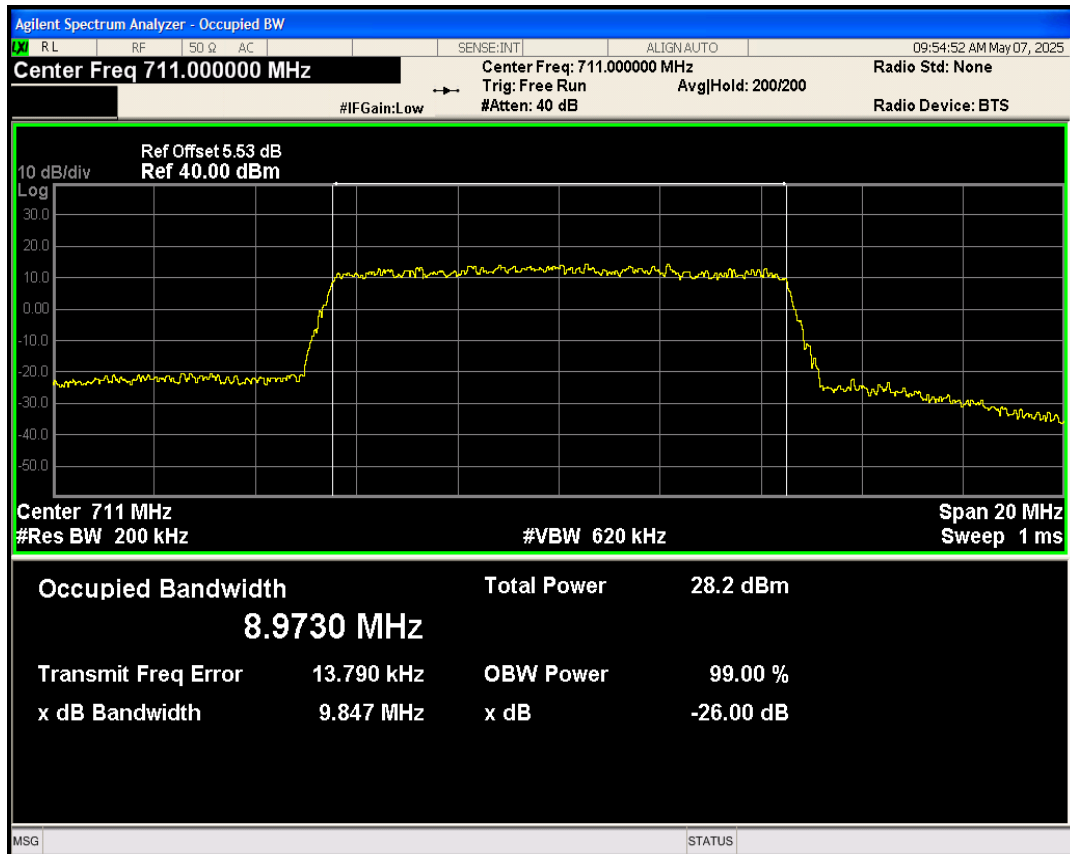




Band12 QPSK BW=10MHz Channel=23130 RB Size=50 Position=#0

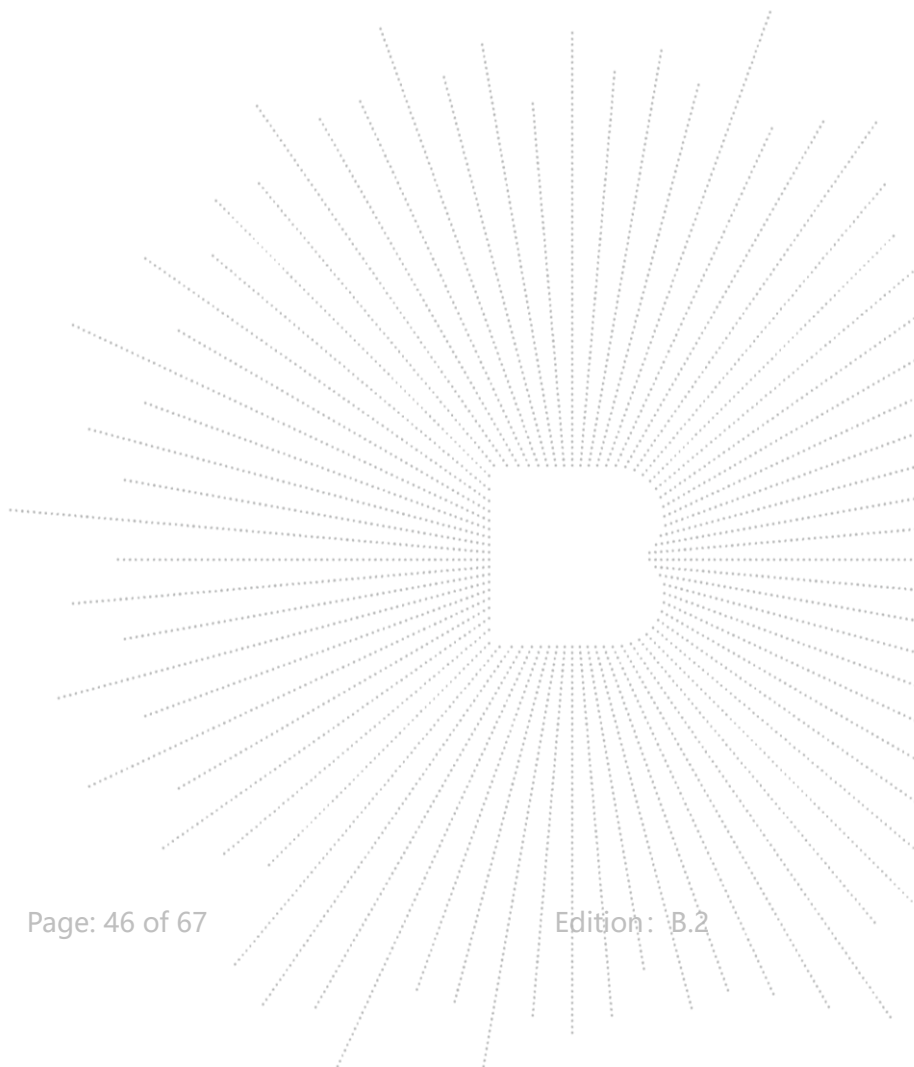


Band12 16QAM BW=10MHz Channel=23130 RB Size=50 Position=#0



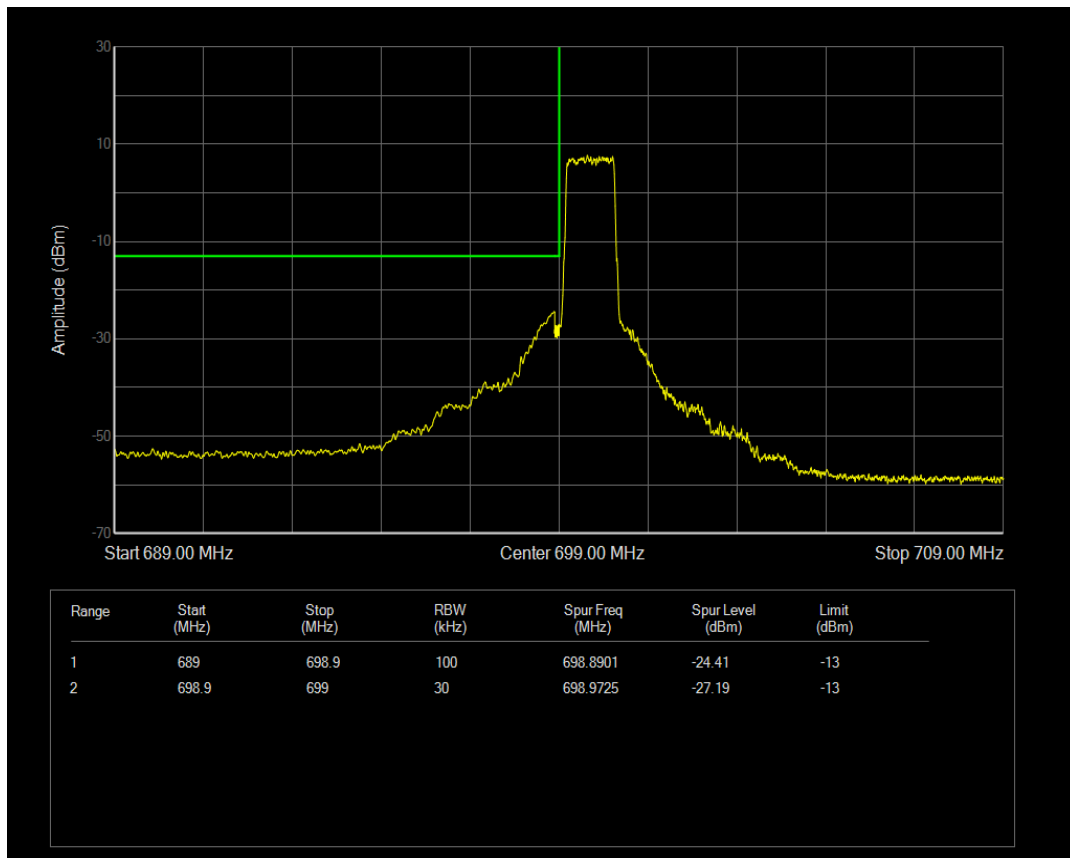
Appendix 5. Band edge

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
Band12	1.4	23017	6	#0	QPSK	698.89	-24.41	-13	PASS
Band12	1.4	23017	6	#0	16QAM	698.89	-24.22	-13	PASS
Band12	1.4	23173	6	#0	QPSK	716.19	-25.22	-13	PASS
Band12	1.4	23173	6	#0	16QAM	716.16	-24.99	-13	PASS
Band12	3	23025	15	#0	QPSK	699.00	-24.40	-13	PASS
Band12	3	23025	15	#0	16QAM	698.99	-25.26	-13	PASS
Band12	3	23165	15	#0	QPSK	716.01	-24.67	-13	PASS
Band12	3	23165	15	#0	16QAM	716.00	-26.00	-13	PASS
Band12	5	23035	25	#0	QPSK	698.83	-28.59	-13	PASS
Band12	5	23035	25	#0	16QAM	698.80	-30.63	-13	PASS
Band12	5	23155	25	#0	QPSK	716.55	-31.29	-13	PASS
Band12	5	23155	25	#0	16QAM	716.13	-31.37	-13	PASS
Band12	10	23060	50	#0	QPSK	698.71	-32.45	-13	PASS
Band12	10	23060	50	#0	16QAM	698.58	-32.48	-13	PASS
Band12	10	23130	50	#0	QPSK	716.12	-34.47	-13	PASS
Band12	10	23130	50	#0	16QAM	716.21	-35.38	-13	PASS

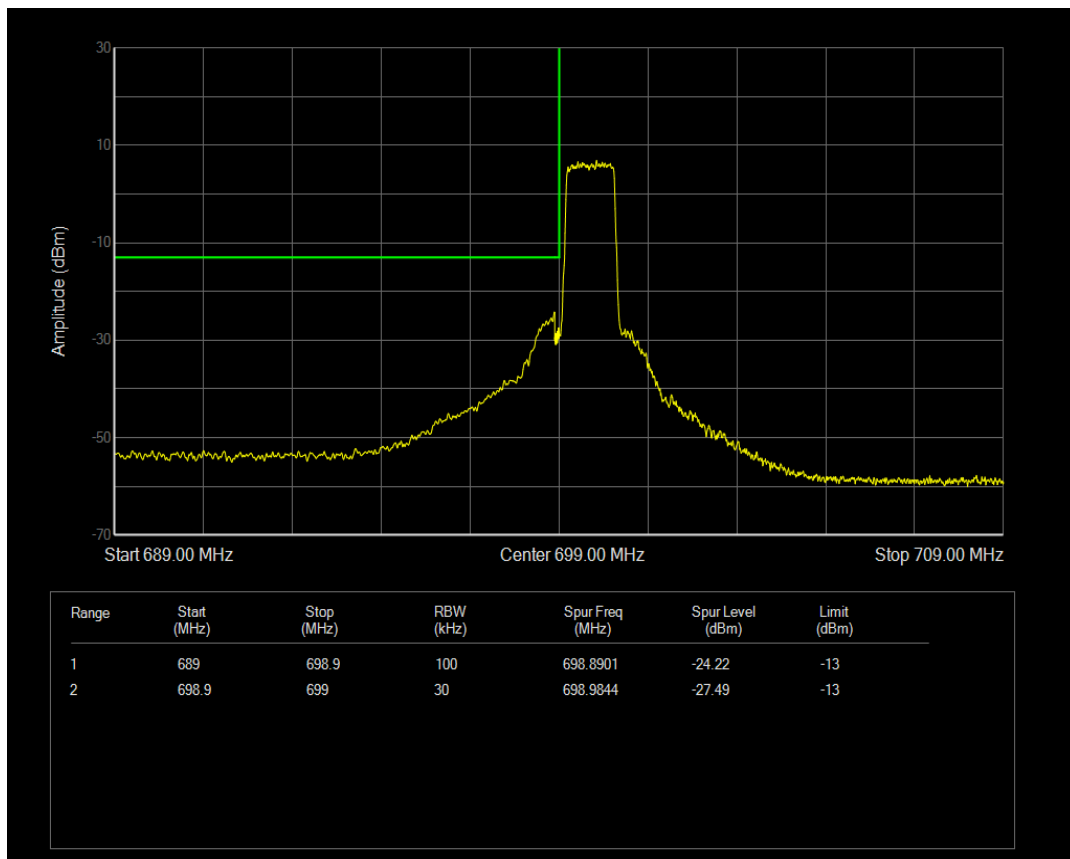




Band12 QPSK BW=1.4MHz Channel=23017 RB Size=6 Position=#0

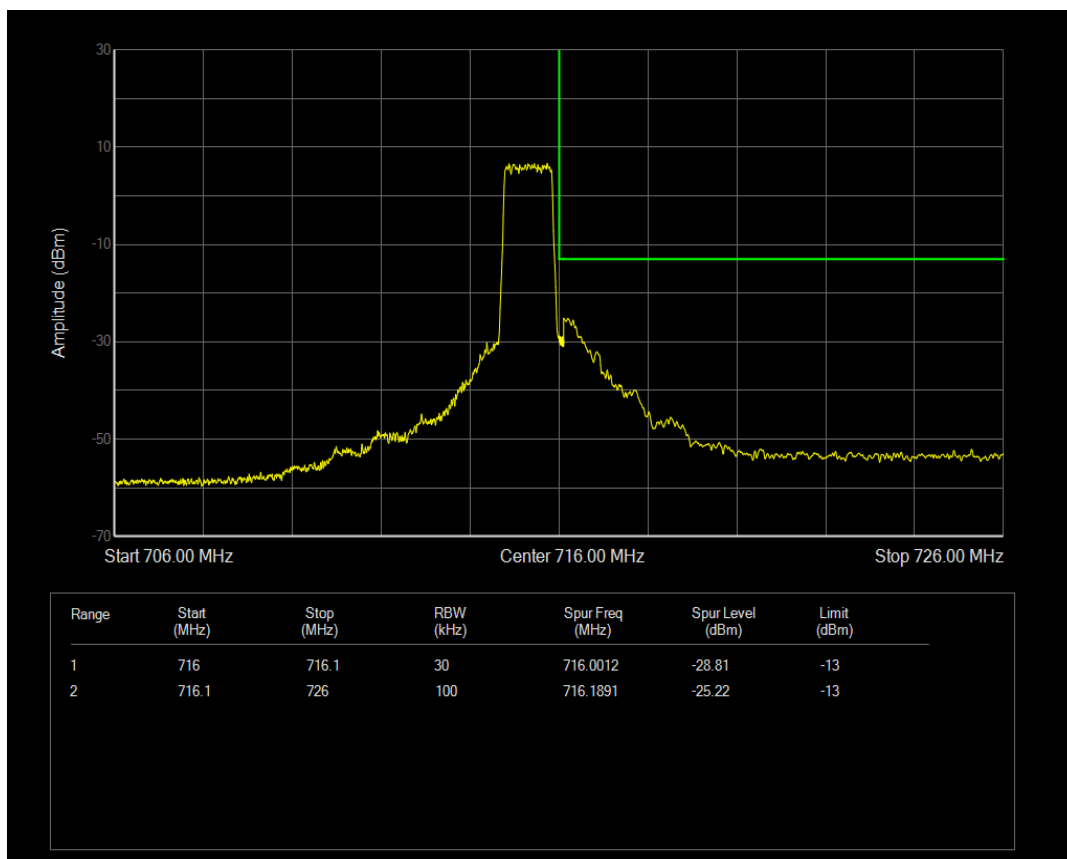


Band12 16QAM BW=1.4MHz Channel=23017 RB Size=6 Position=#0

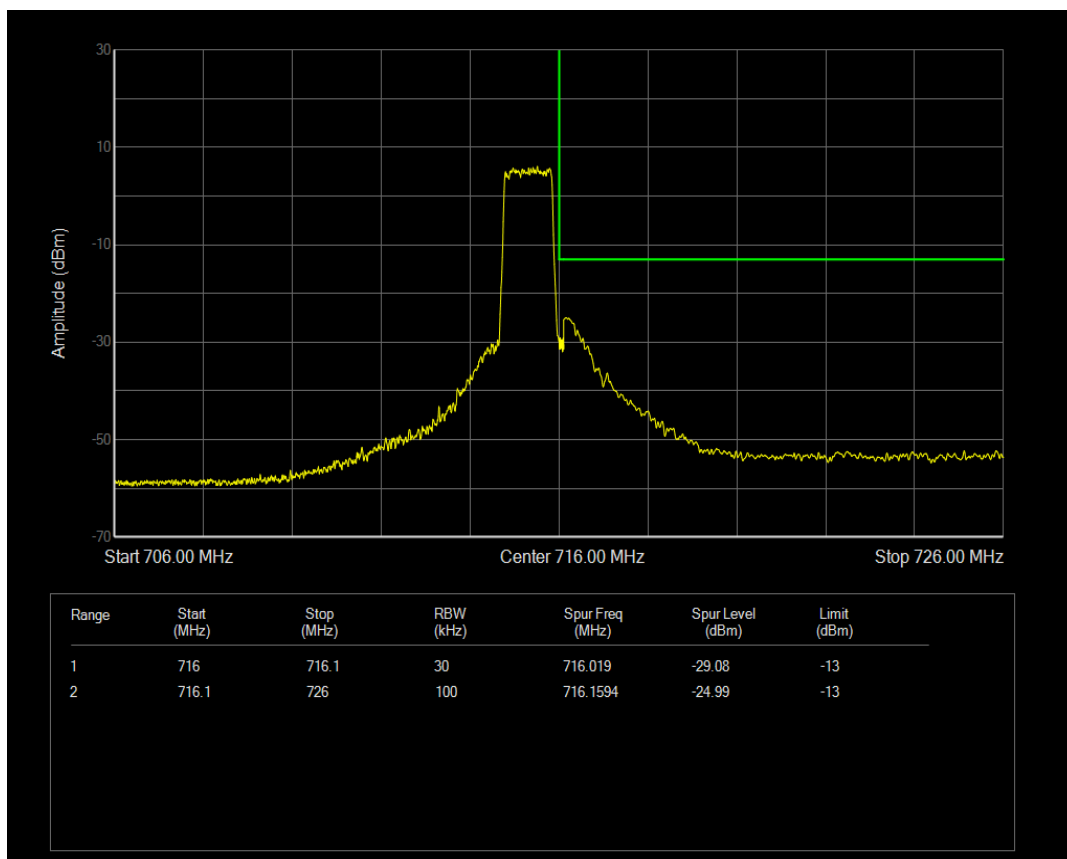




Band12 QPSK BW=1.4MHz Channel=23173 RB Size=6 Position=#0

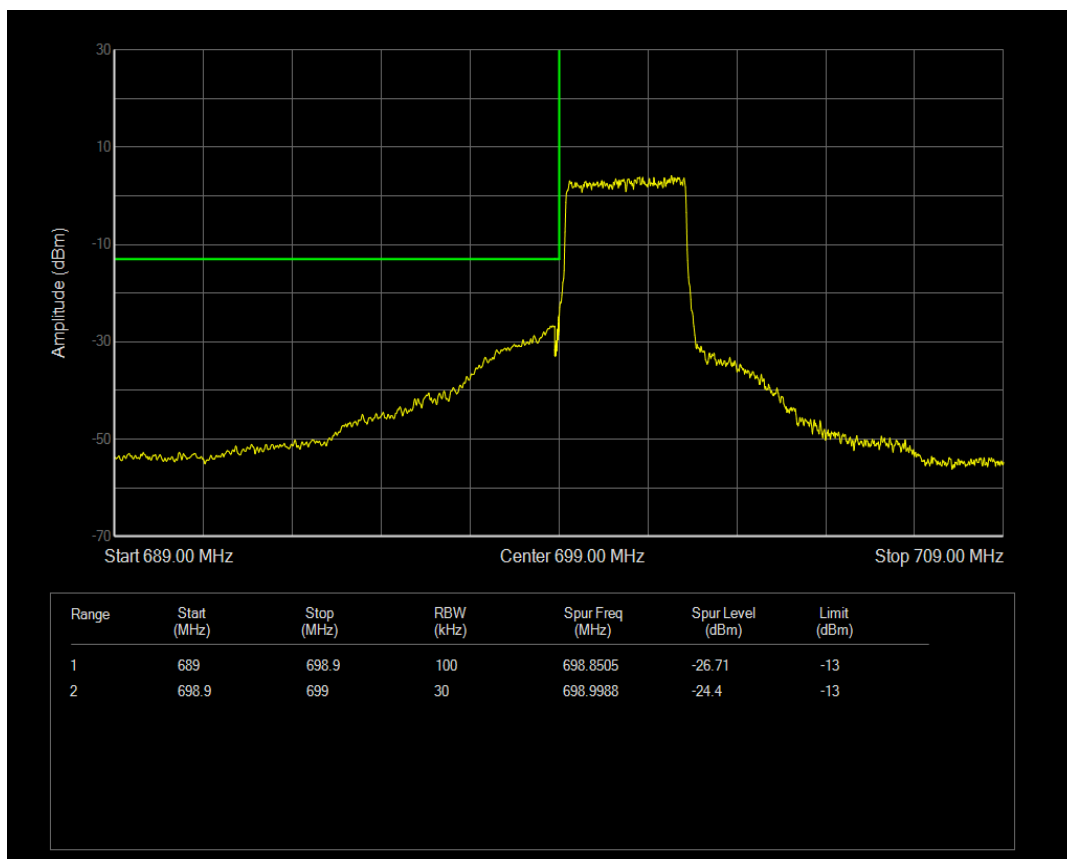


Band12 16QAM BW=1.4MHz Channel=23173 RB Size=6 Position=#0

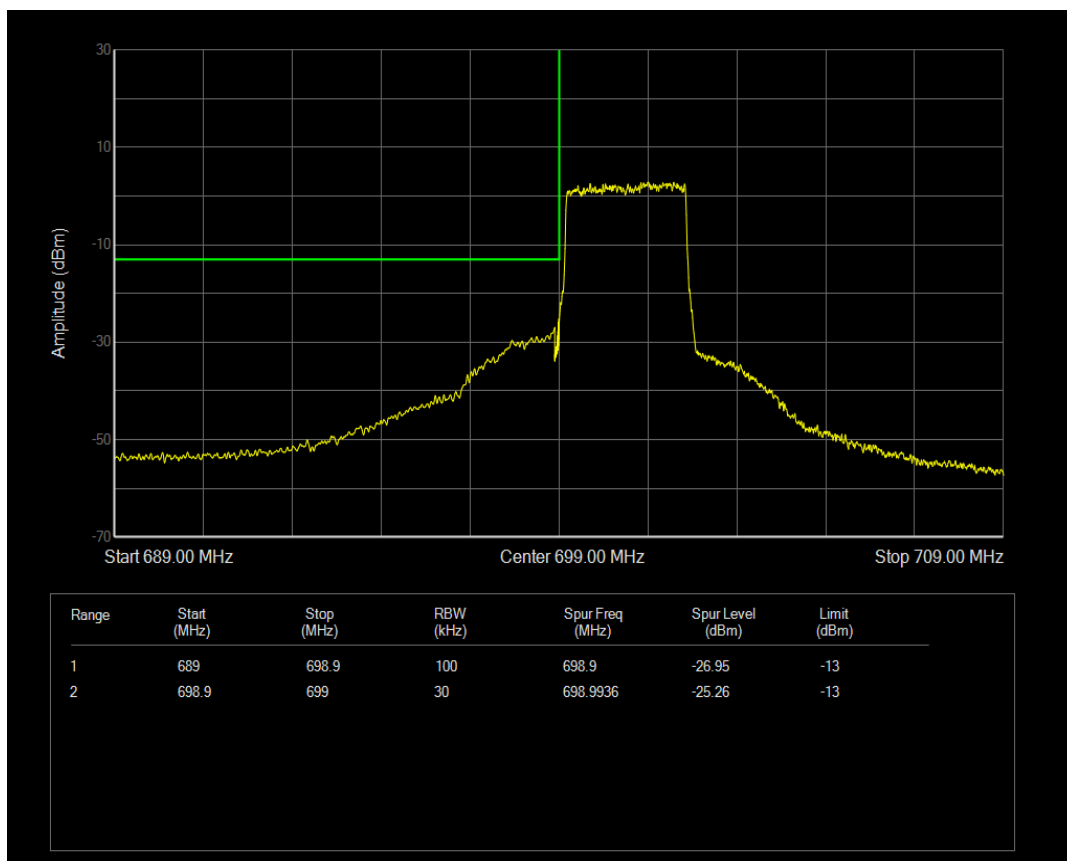




Band12 QPSK BW=3MHz Channel=23025 RB Size=15 Position=#0

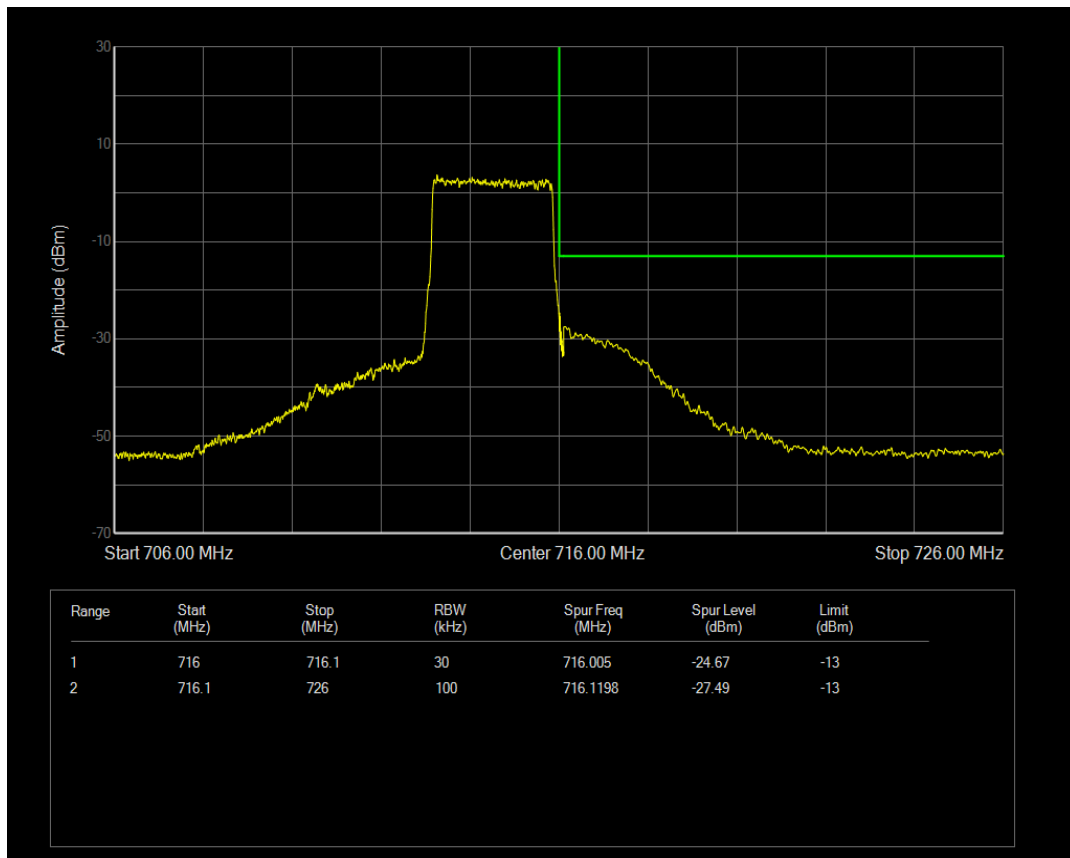


Band12 16QAM BW=3MHz Channel=23025 RB Size=15 Position=#0

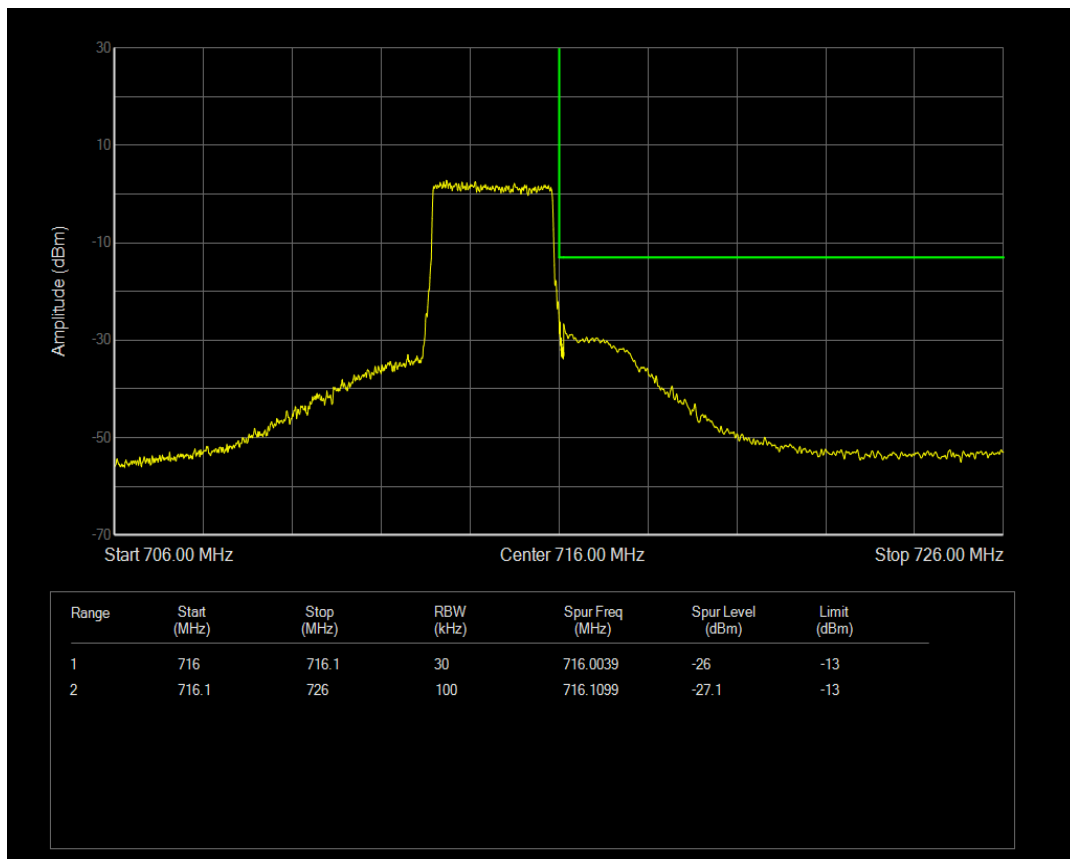




Band12 QPSK BW=3MHz Channel=23165 RB Size=15 Position=#0

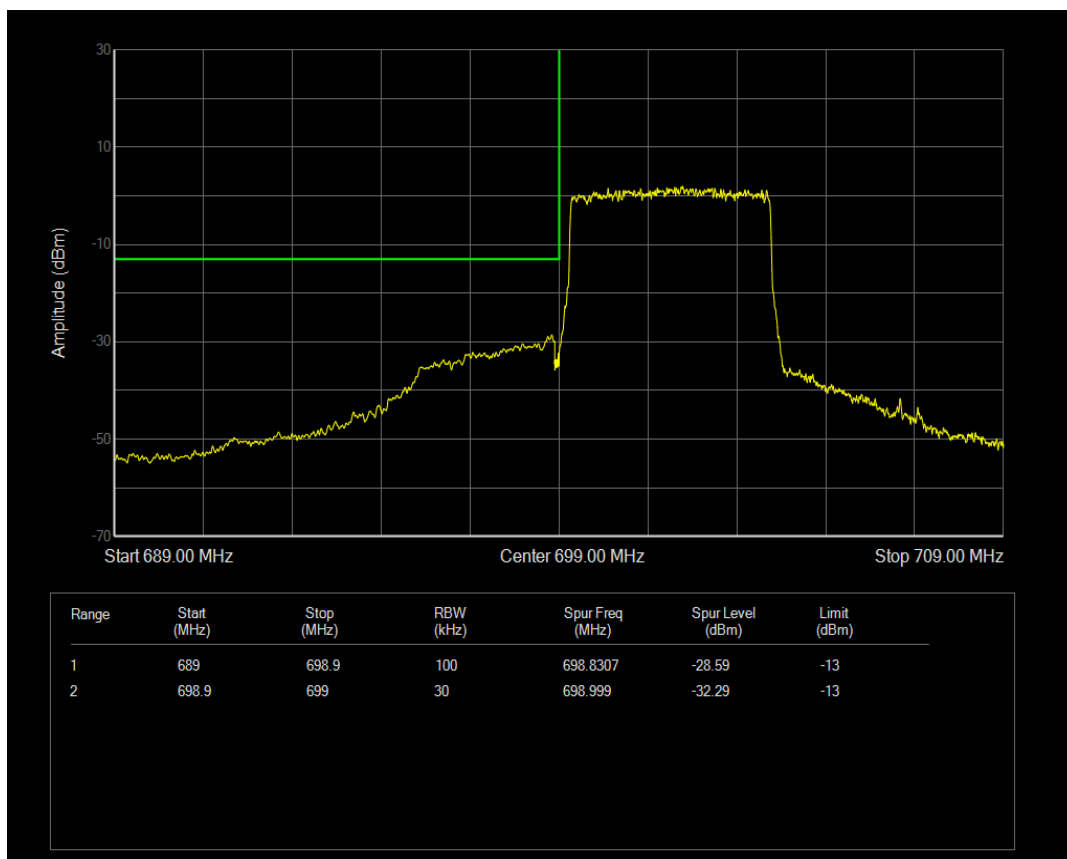


Band12 16QAM BW=3MHz Channel=23165 RB Size=15 Position=#0

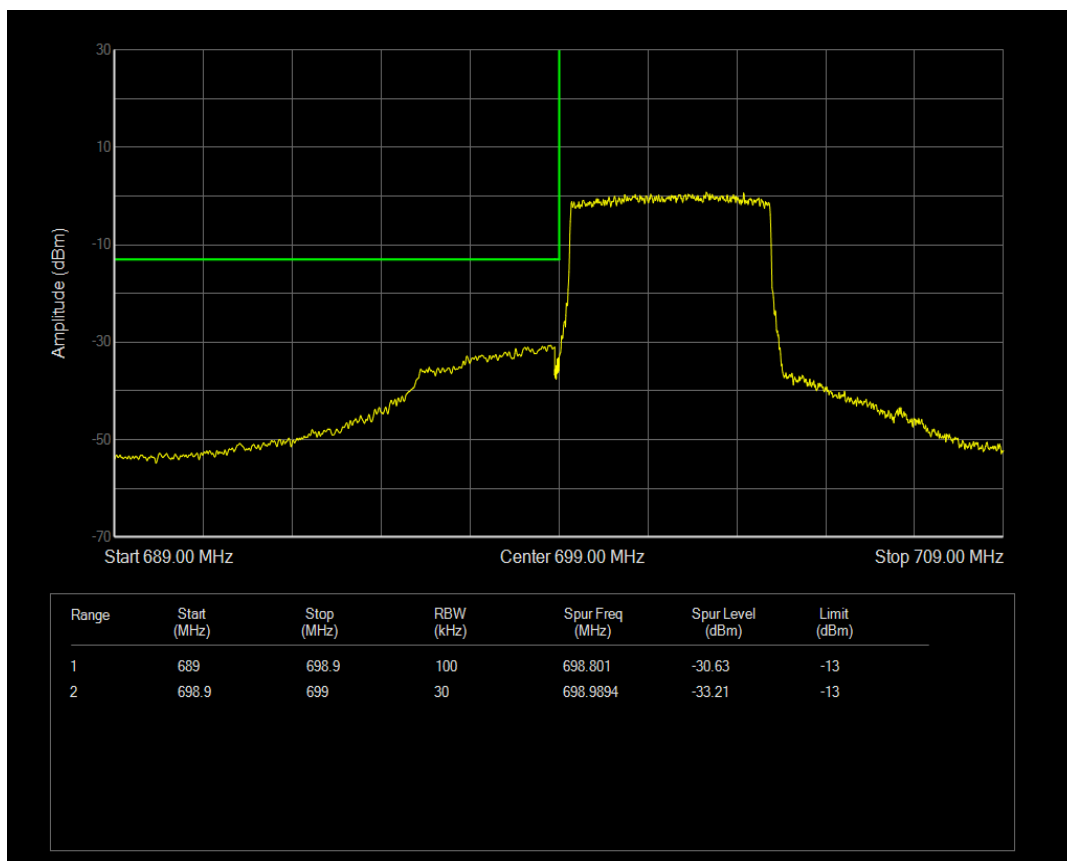




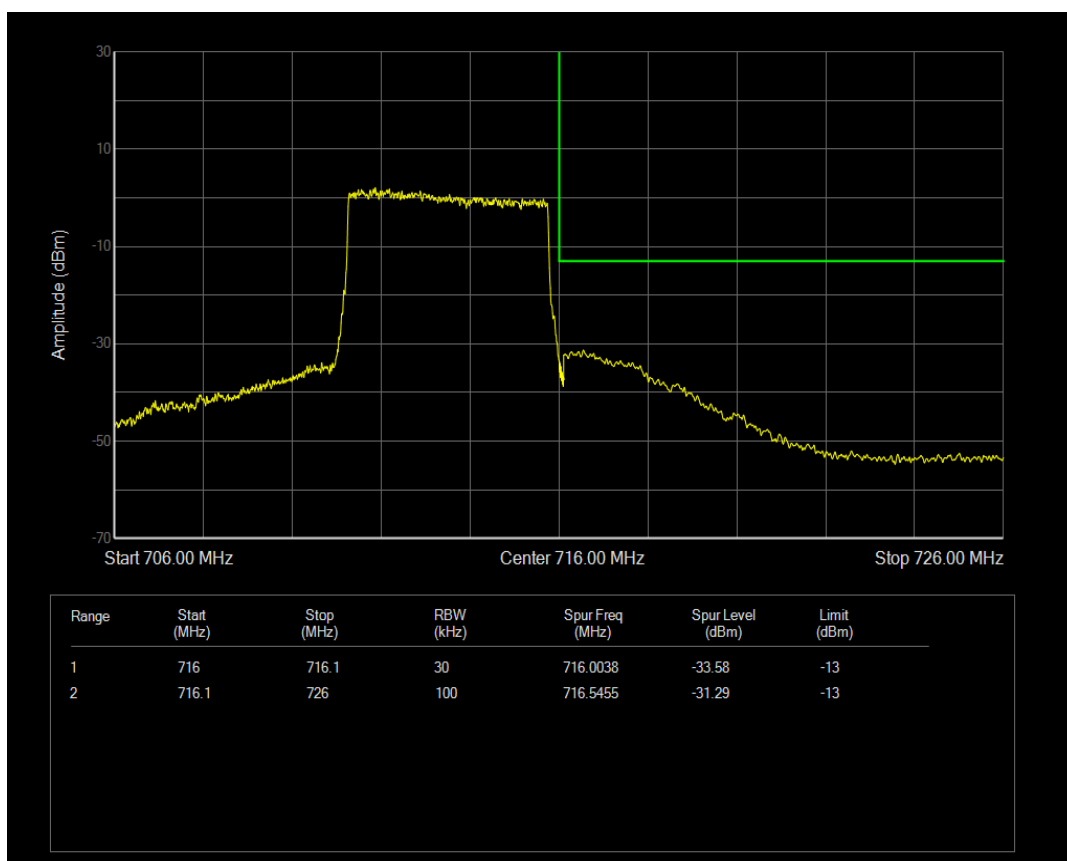
Band12 QPSK BW=5MHz Channel=23035 RB Size=25 Position=#0



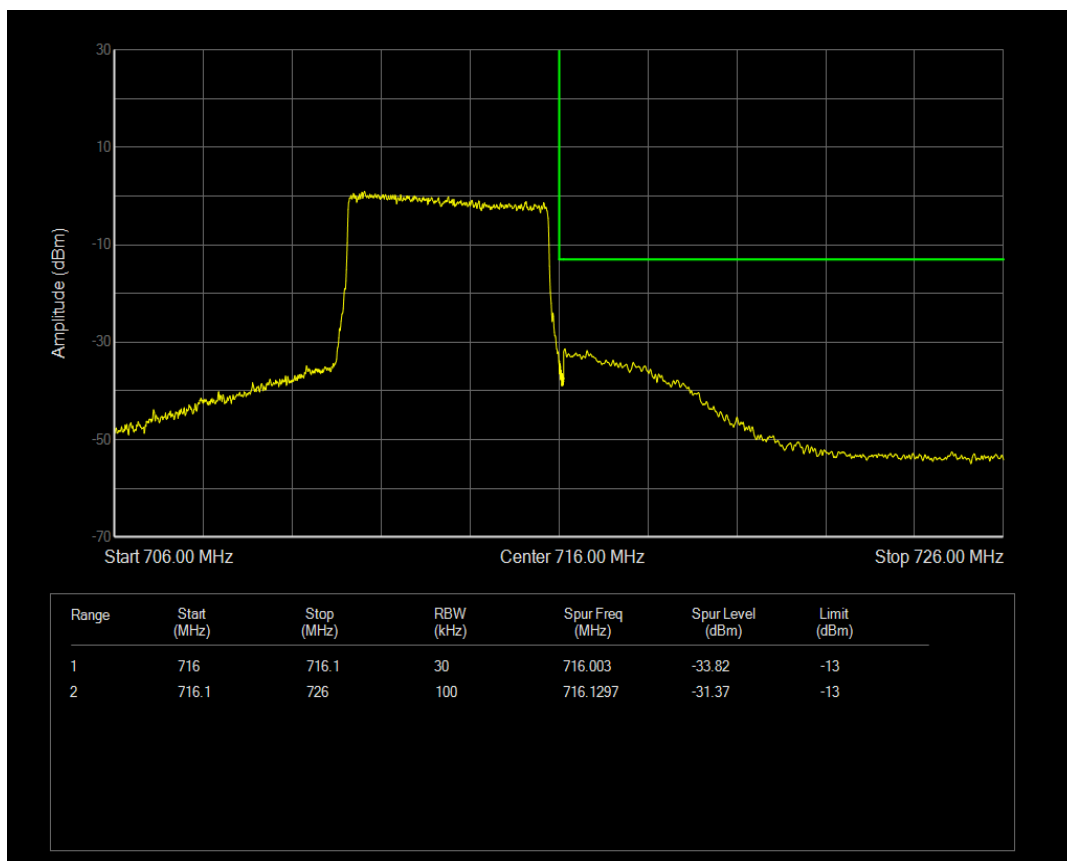
Band12 16QAM BW=5MHz Channel=23035 RB Size=25 Position=#0



Band12 QPSK BW=5MHz Channel=23155 RB Size=25 Position=#0

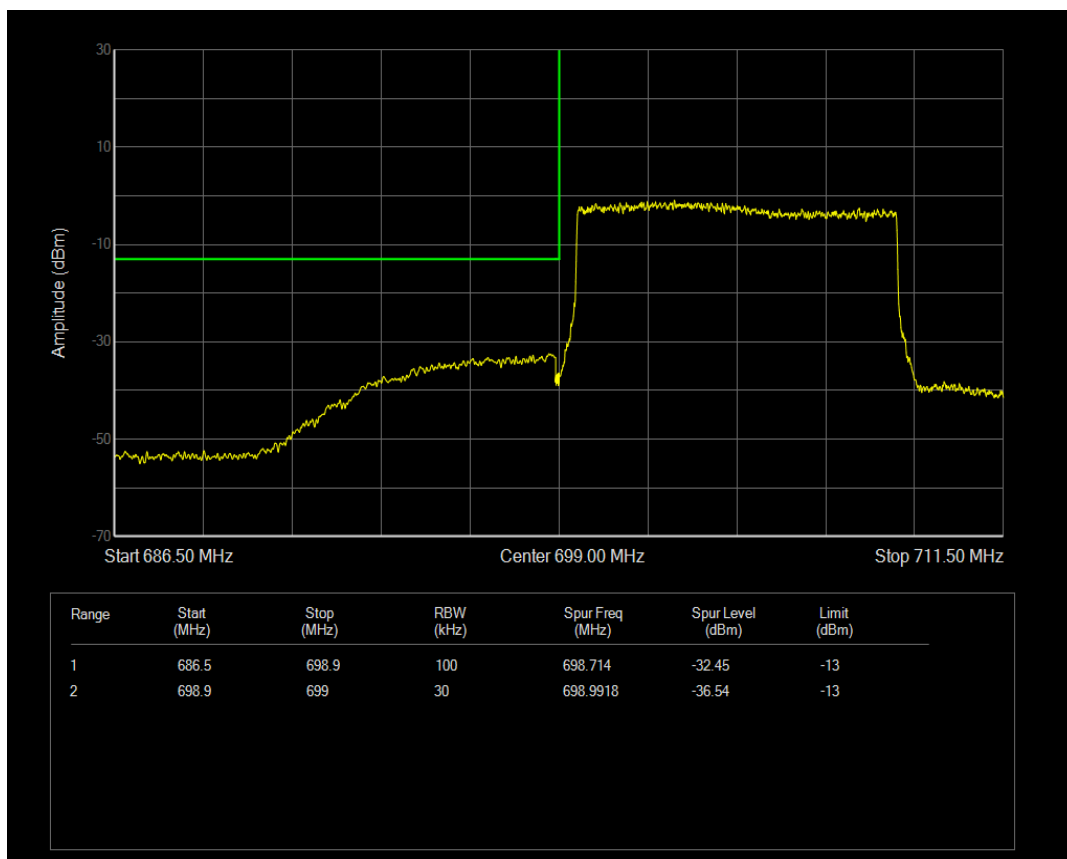


Band12 16QAM BW=5MHz Channel=23155 RB Size=25 Position=#0

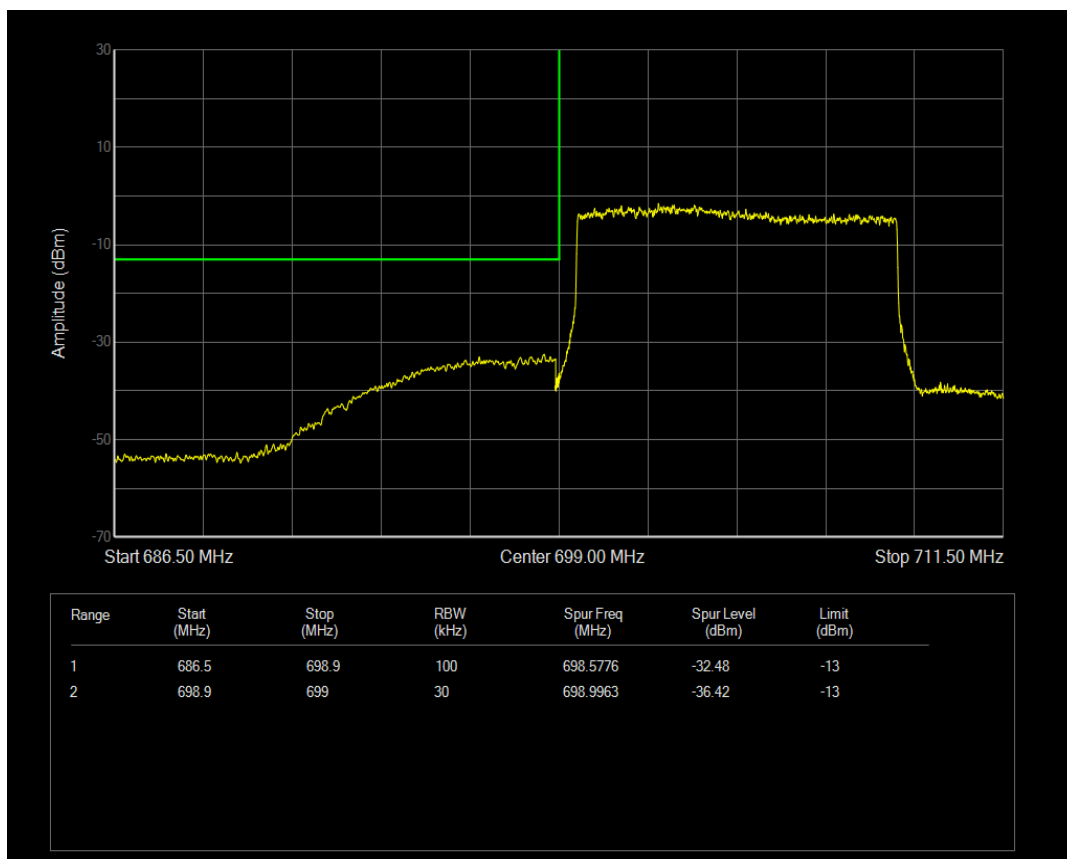




Band12 QPSK BW=10MHz Channel=23060 RB Size=50 Position=#0

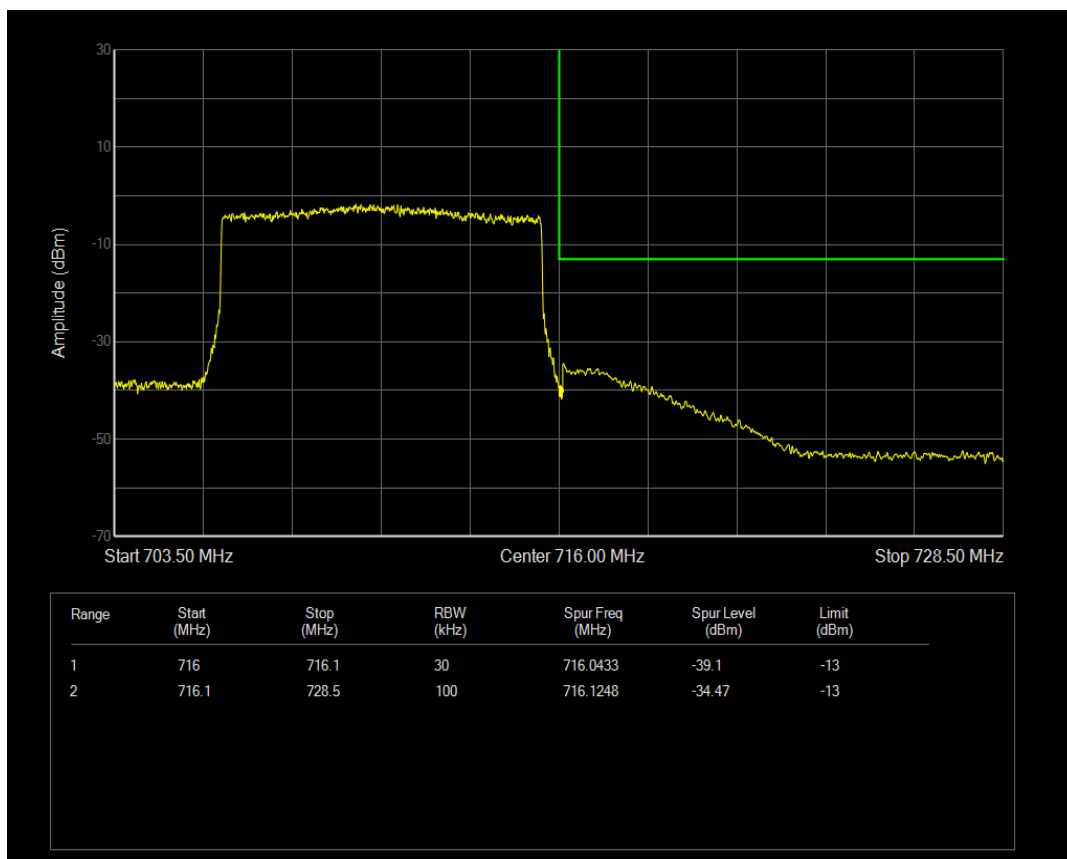


Band12 16QAM BW=10MHz Channel=23060 RB Size=50 Position=#0

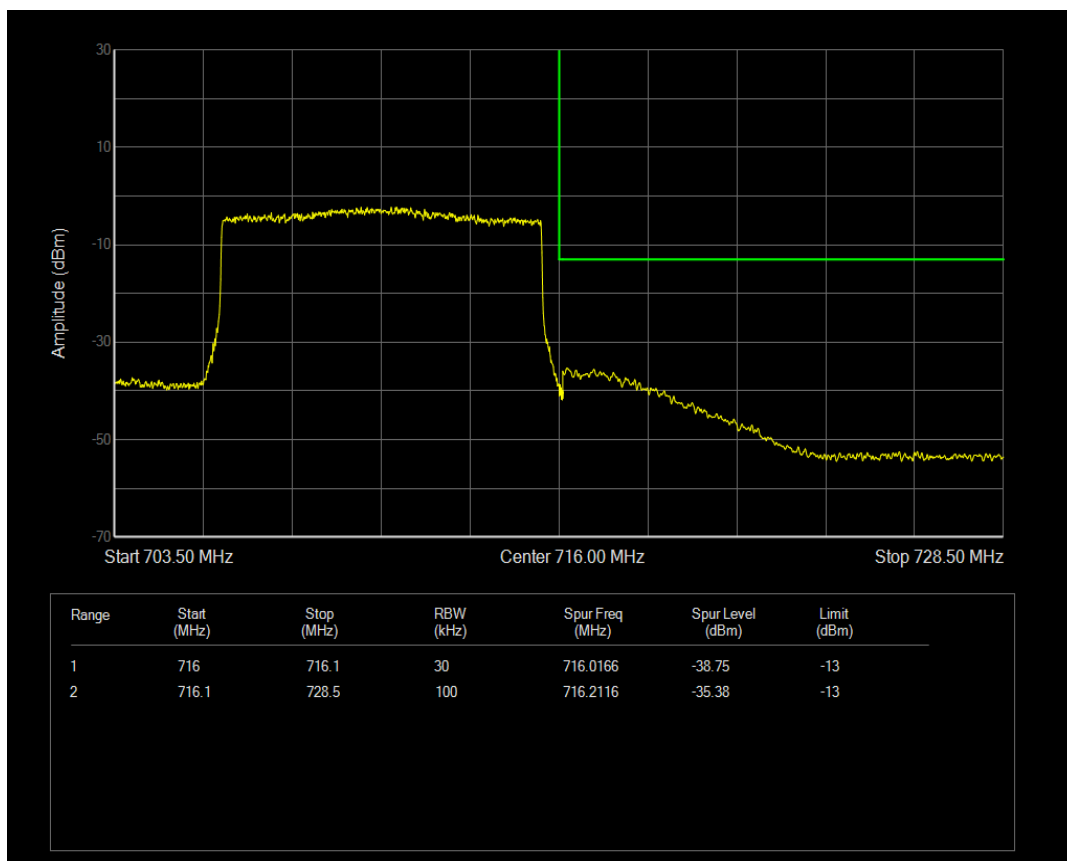




Band12 QPSK BW=10MHz Channel=23130 RB Size=50 Position=#0



Band12 16QAM BW=10MHz Channel=23130 RB Size=50 Position=#0

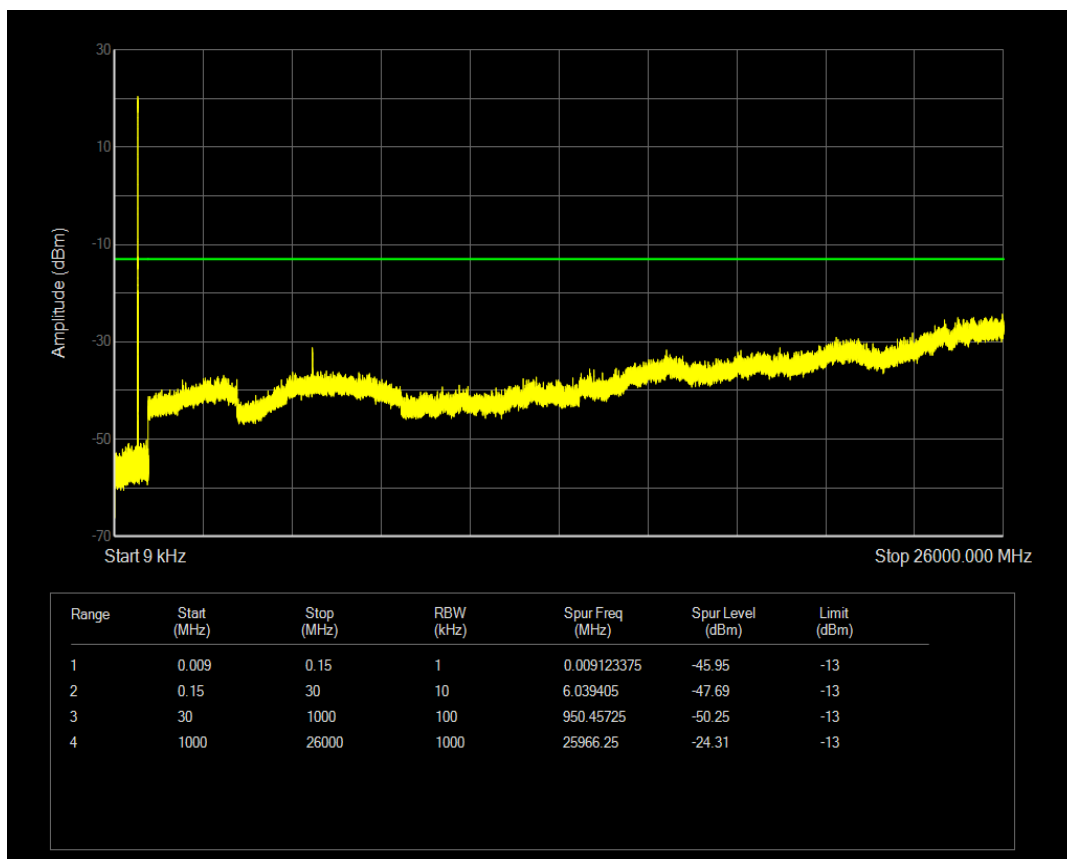


Appendix 6. Out-of-band emissions

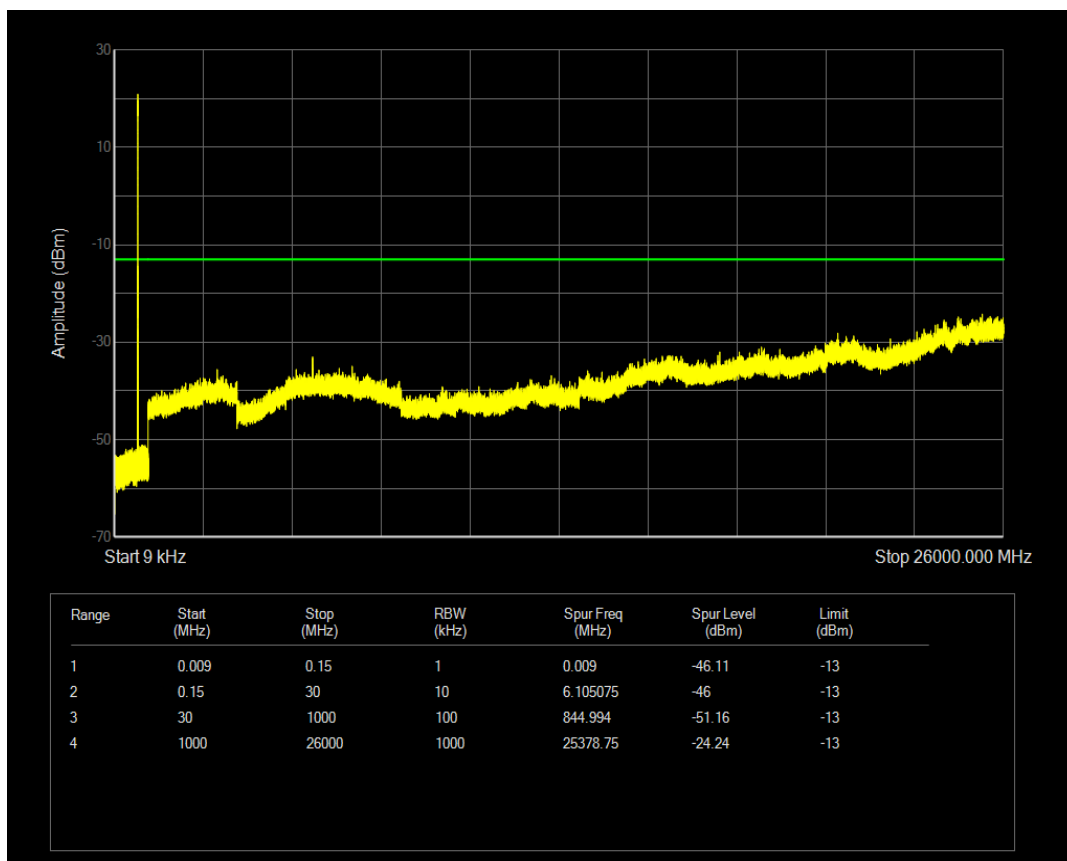
Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
Band12	1.4	23017	6	#0	QPSK	25966.25	-24.31	-13	PASS
Band12	1.4	23017	6	#0	16QAM	25378.75	-24.24	-13	PASS
Band12	1.4	23095	6	#0	QPSK	25891.88	-24.78	-13	PASS
Band12	1.4	23095	6	#0	16QAM	25671.88	-24.72	-13	PASS
Band12	1.4	23173	6	#0	QPSK	25519.38	-23.78	-13	PASS
Band12	1.4	23173	6	#0	16QAM	25238.75	-24.44	-13	PASS
Band12	3	23025	15	#0	QPSK	24672.50	-24.49	-13	PASS
Band12	3	23025	15	#0	16QAM	25756.88	-24.51	-13	PASS
Band12	3	23095	15	#0	QPSK	24682.50	-24.70	-13	PASS
Band12	3	23095	15	#0	16QAM	25433.75	-24.05	-13	PASS
Band12	3	23165	15	#0	QPSK	25075.63	-23.74	-13	PASS
Band12	3	23165	15	#0	16QAM	25109.38	-23.84	-13	PASS
Band12	5	23035	25	#0	QPSK	25898.13	-24.52	-13	PASS
Band12	5	23035	25	#0	16QAM	25836.25	-24.47	-13	PASS
Band12	5	23095	25	#0	QPSK	25840.63	-23.53	-13	PASS
Band12	5	23095	25	#0	16QAM	25408.75	-24.41	-13	PASS
Band12	5	23155	25	#0	QPSK	24736.88	-24.71	-13	PASS
Band12	5	23155	25	#0	16QAM	25640.63	-23.67	-13	PASS
Band12	10	23060	50	#0	QPSK	25526.88	-24.38	-13	PASS
Band12	10	23060	50	#0	16QAM	24695.63	-24.60	-13	PASS
Band12	10	23095	50	#0	QPSK	25133.13	-24.48	-13	PASS
Band12	10	23095	50	#0	16QAM	25411.25	-23.94	-13	PASS
Band12	10	23130	50	#0	QPSK	25732.50	-24.30	-13	PASS
Band12	10	23130	50	#0	16QAM	25053.13	-24.22	-13	PASS



Band12 QPSK BW=1.4MHz Channel=23017 RB Size=6 Position=#0

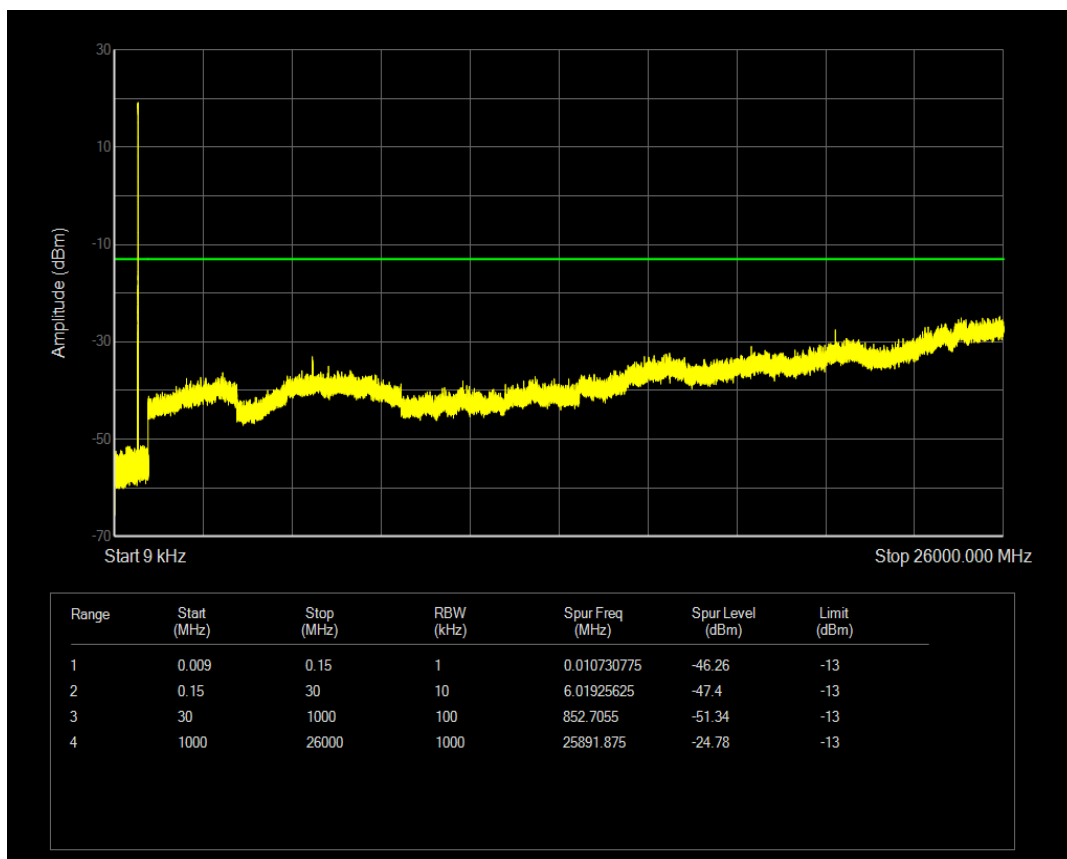


Band12 16QAM BW=1.4MHz Channel=23017 RB Size=6 Position=#0

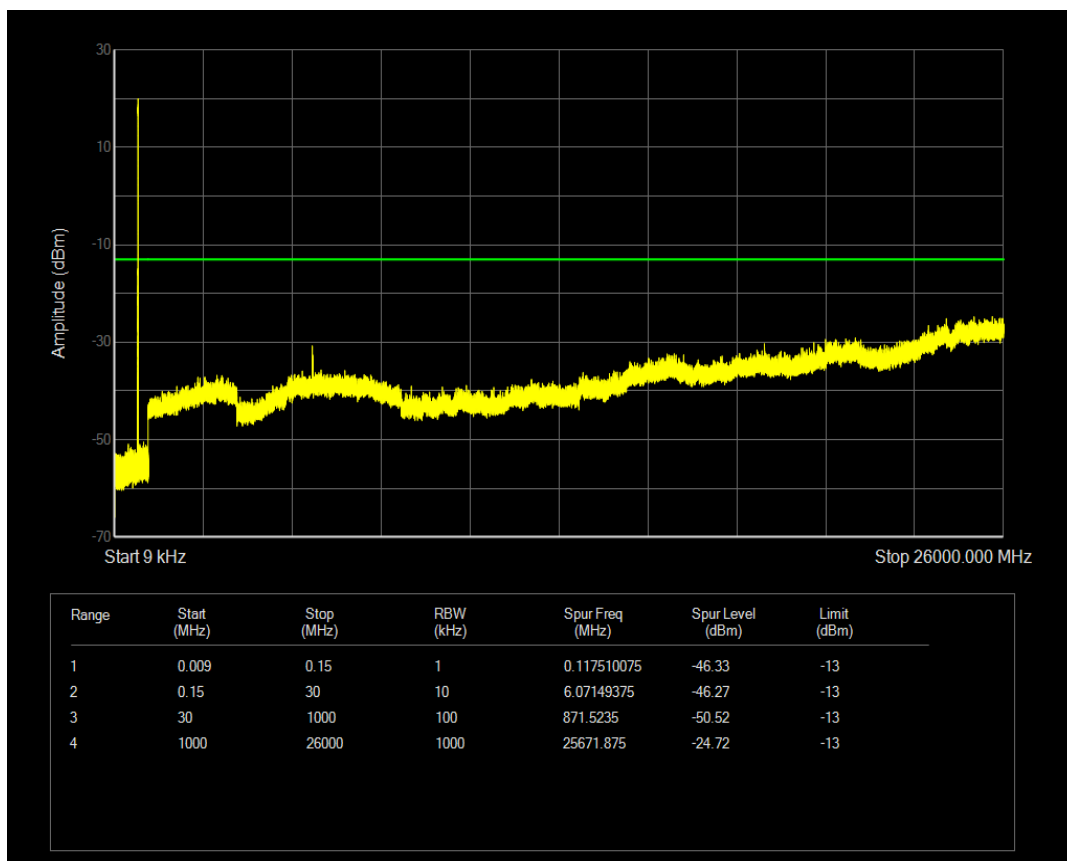




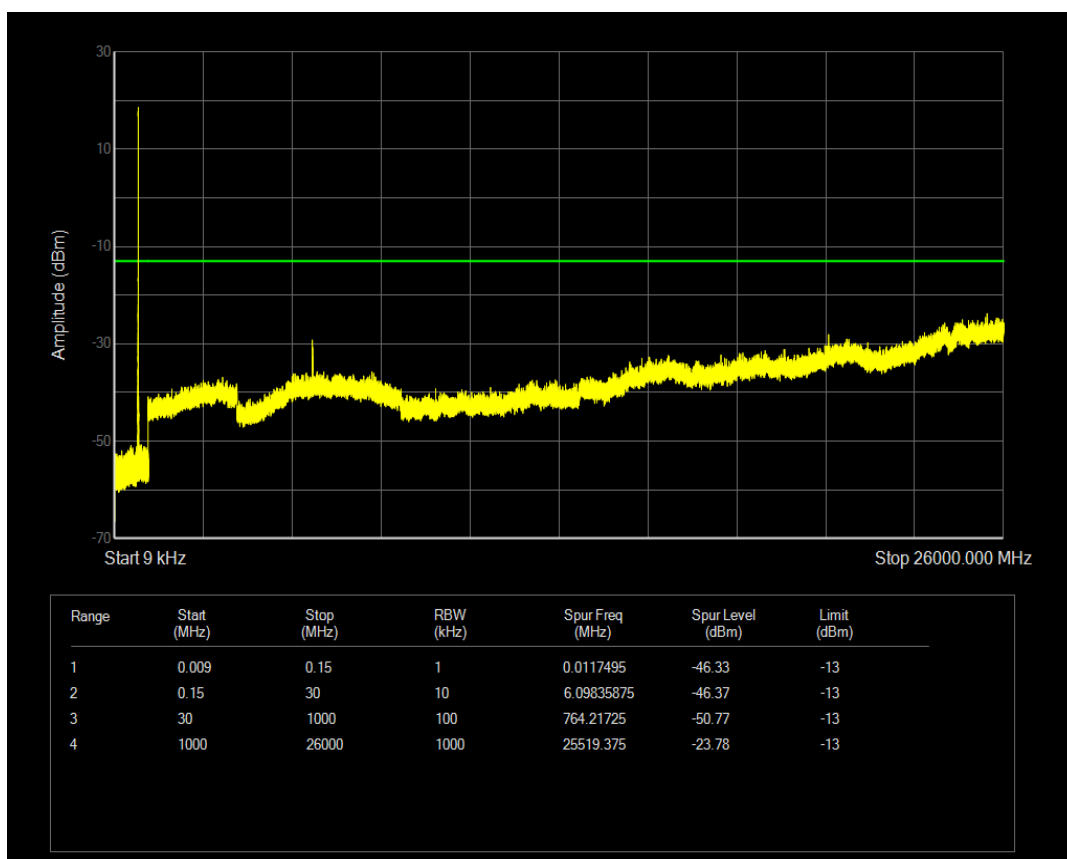
Band12 QPSK BW=1.4MHz Channel=23095 RB Size=6 Position=#0



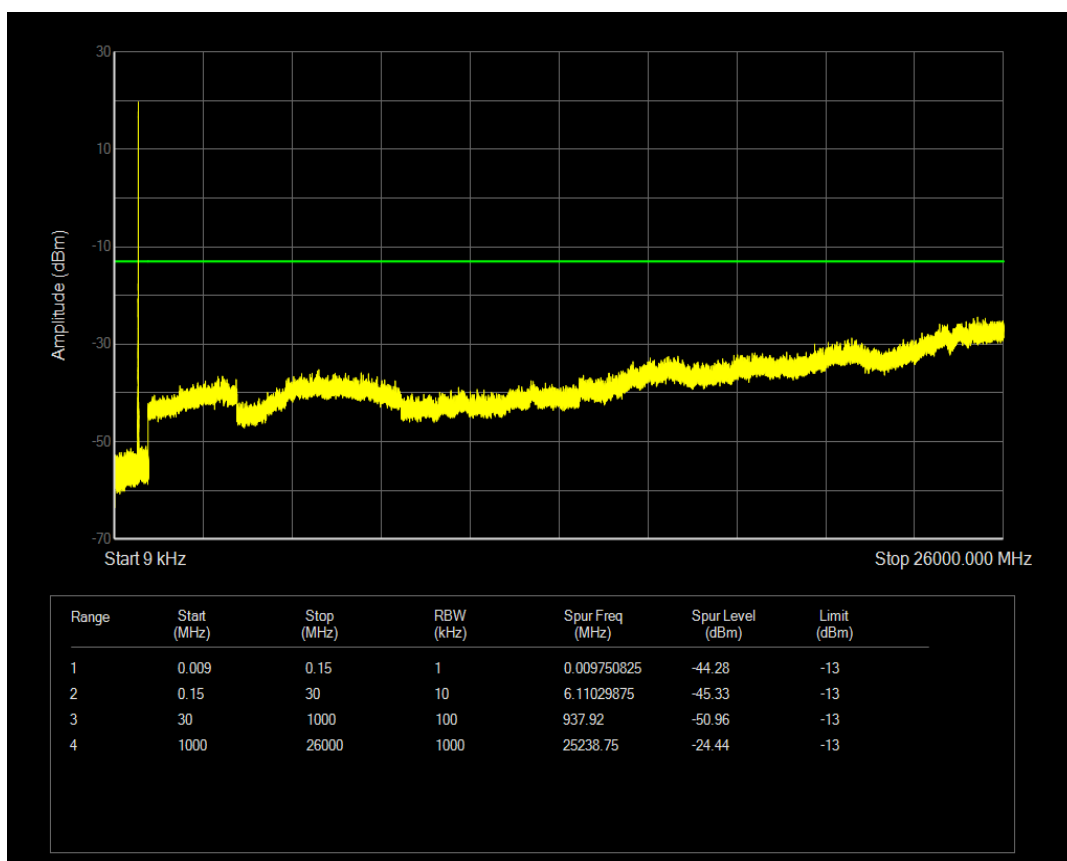
Band12 16QAM BW=1.4MHz Channel=23095 RB Size=6 Position=#0



Band12 QPSK BW=1.4MHz Channel=23173 RB Size=6 Position=#0

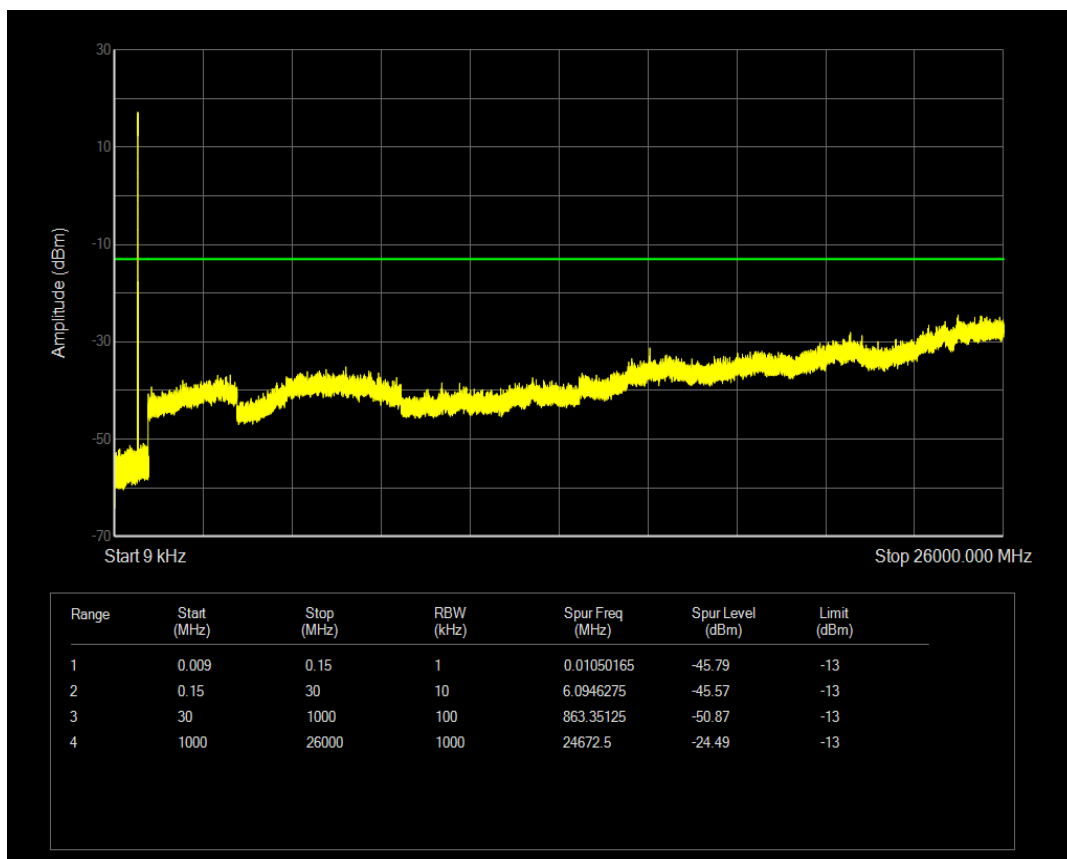


Band12 16QAM BW=1.4MHz Channel=23173 RB Size=6 Position=#0

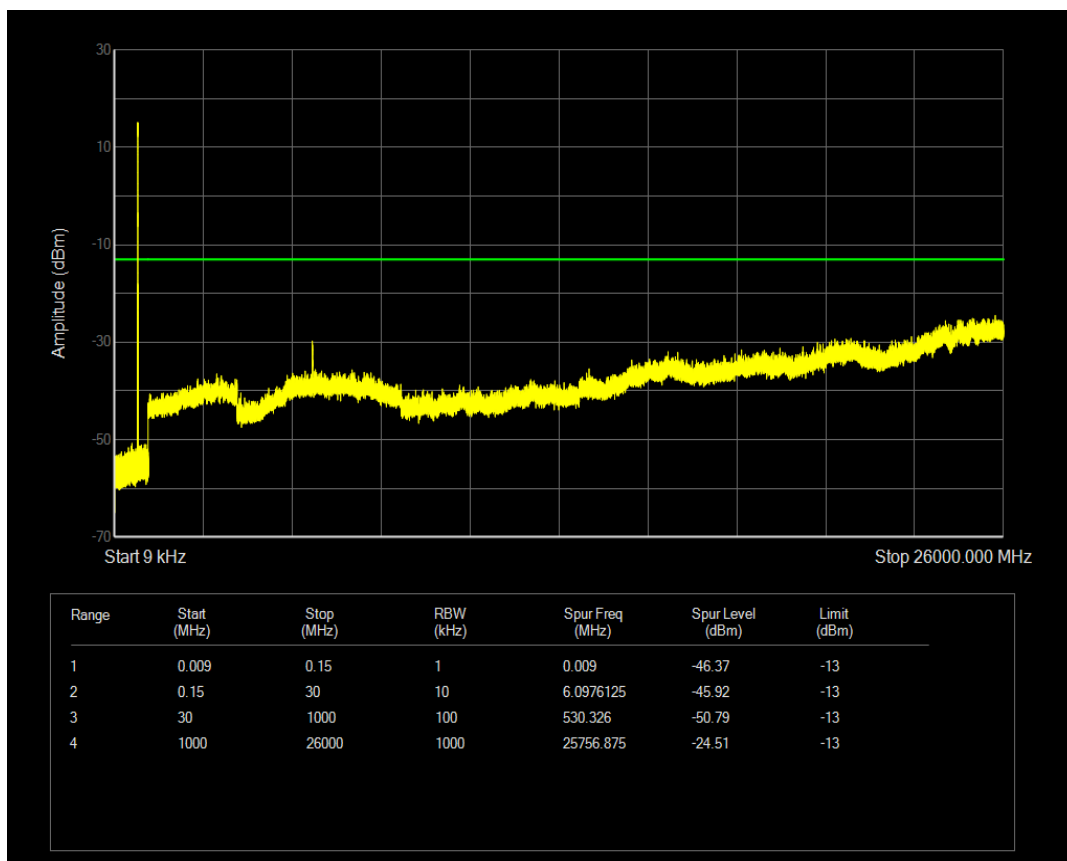




Band12 QPSK BW=3MHz Channel=23025 RB Size=15 Position=#0

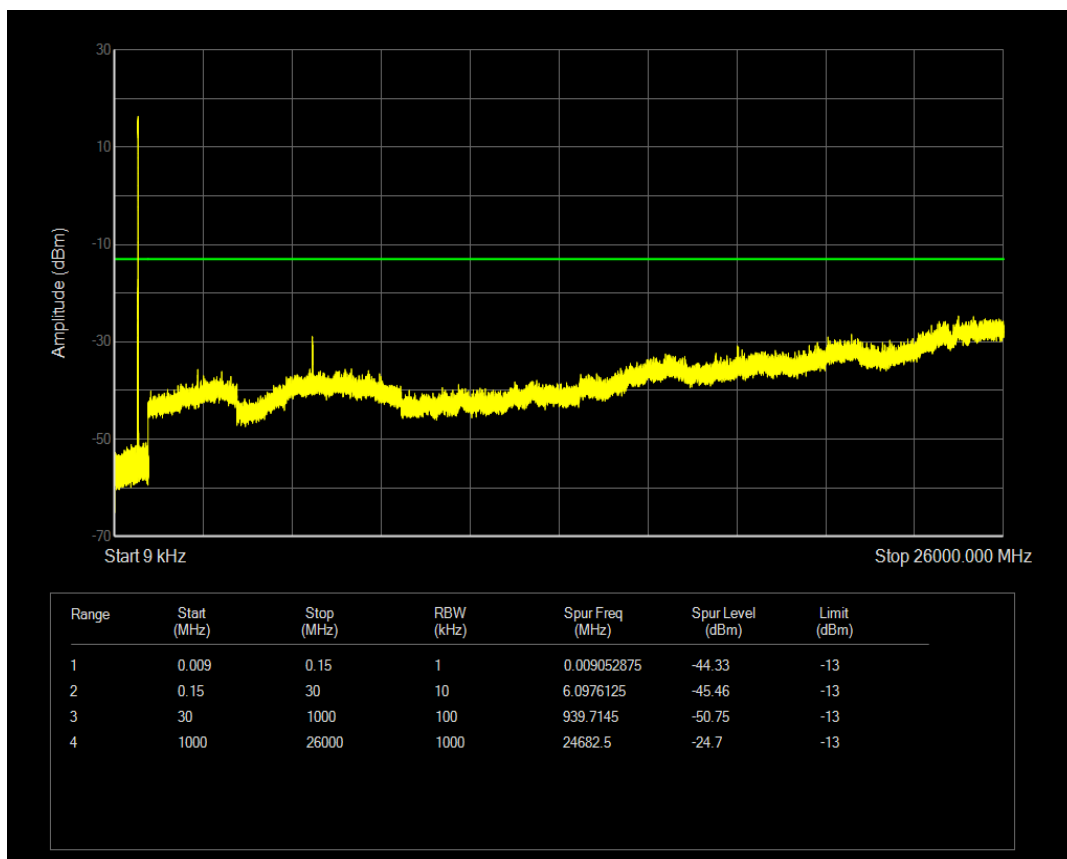


Band12 16QAM BW=3MHz Channel=23025 RB Size=15 Position=#0

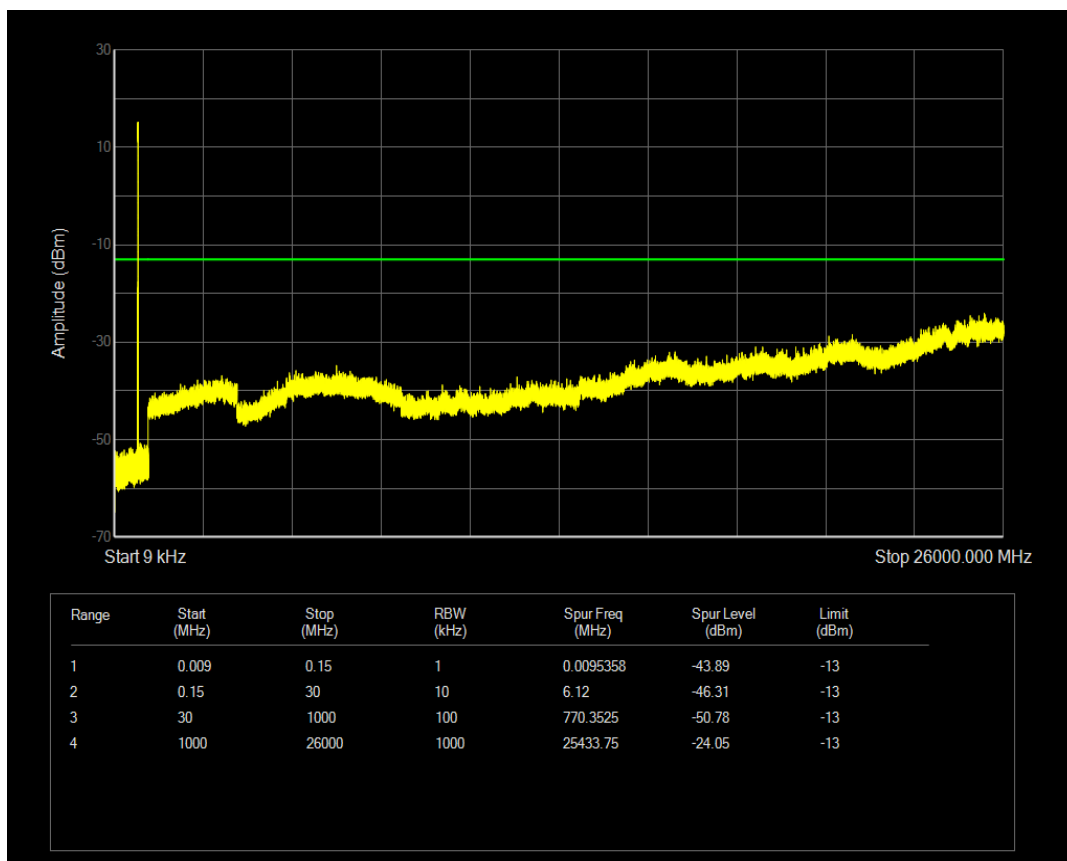




Band12 QPSK BW=3MHz Channel=23095 RB Size=15 Position=#0

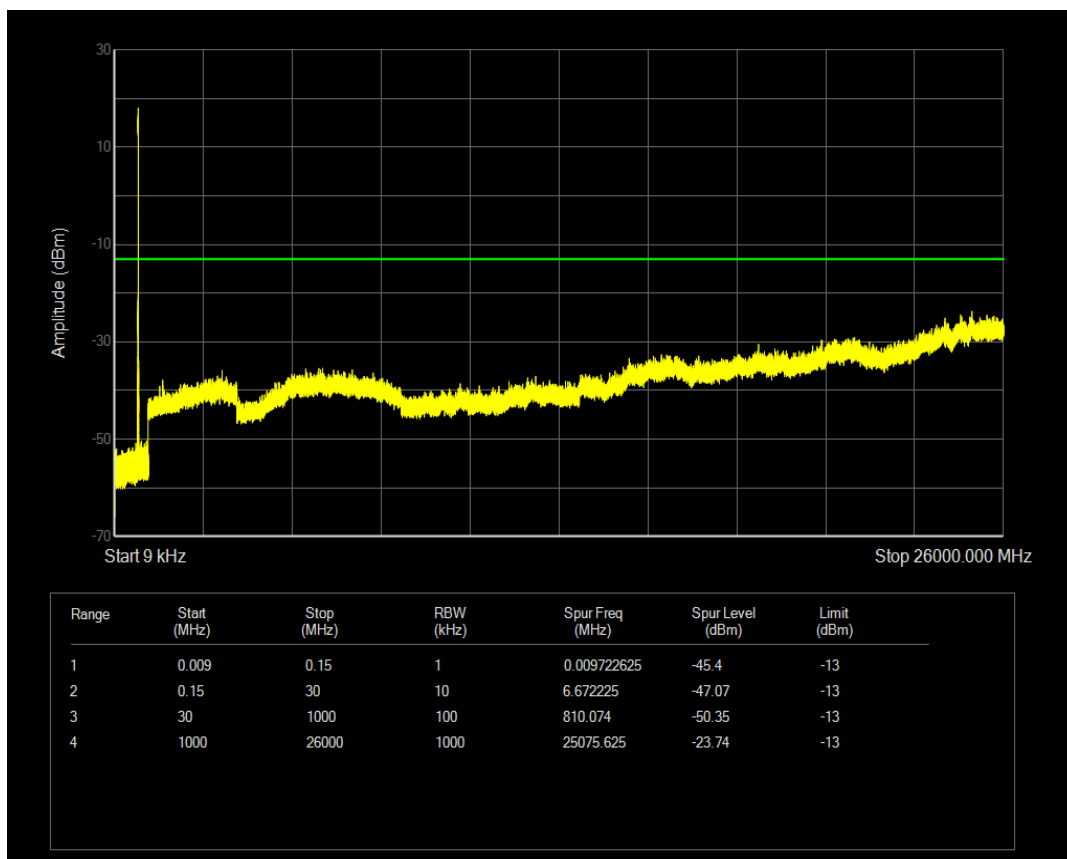


Band12 16QAM BW=3MHz Channel=23095 RB Size=15 Position=#0

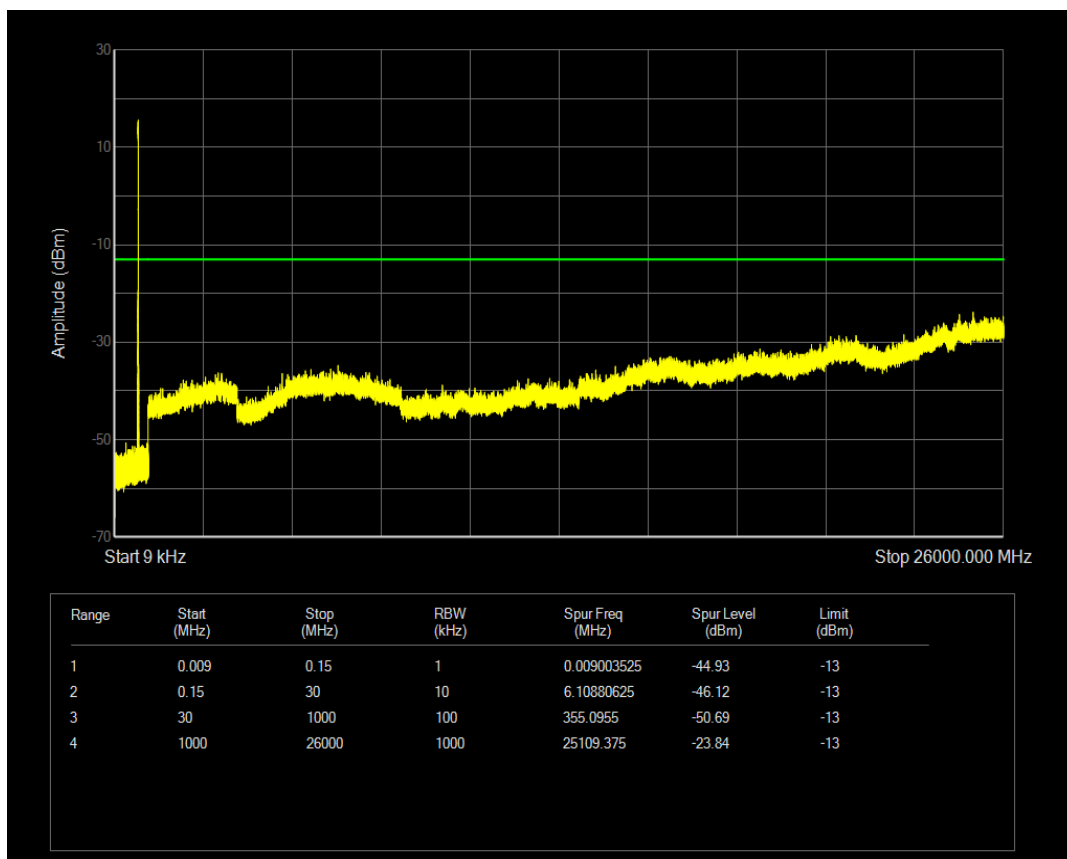




Band12 QPSK BW=3MHz Channel=23165 RB Size=15 Position=#0

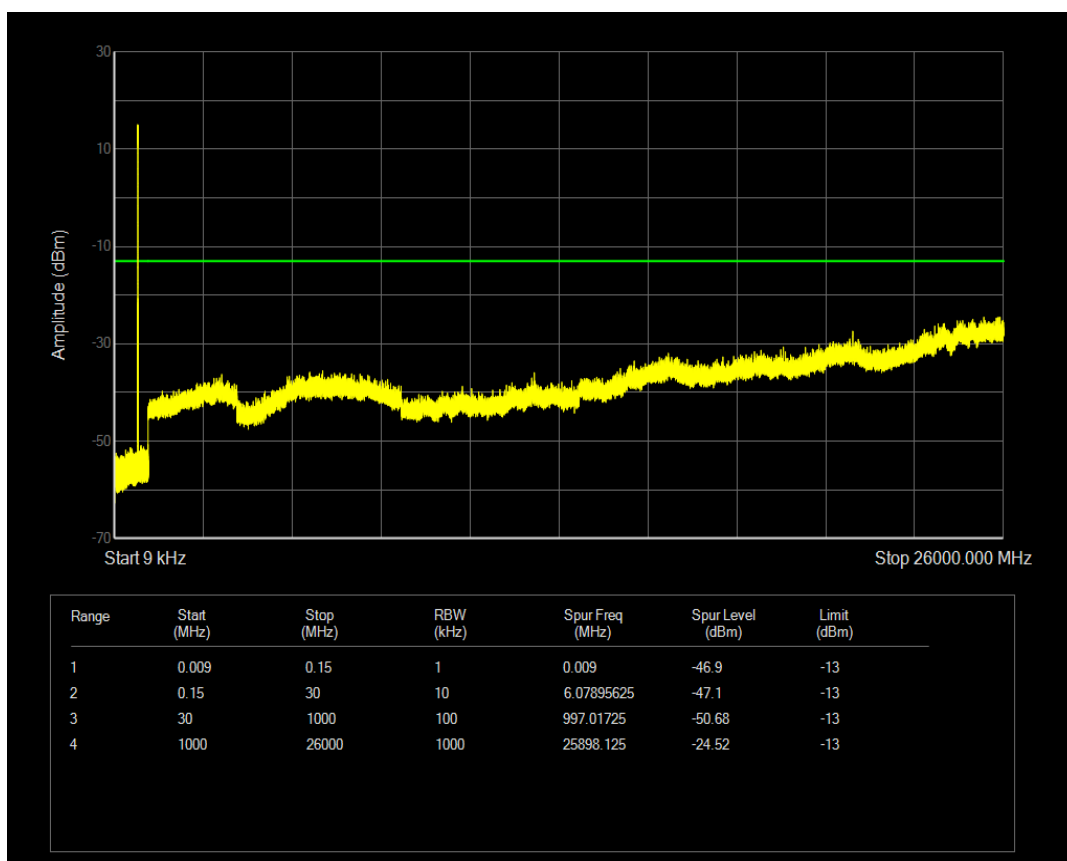


Band12 16QAM BW=3MHz Channel=23165 RB Size=15 Position=#0

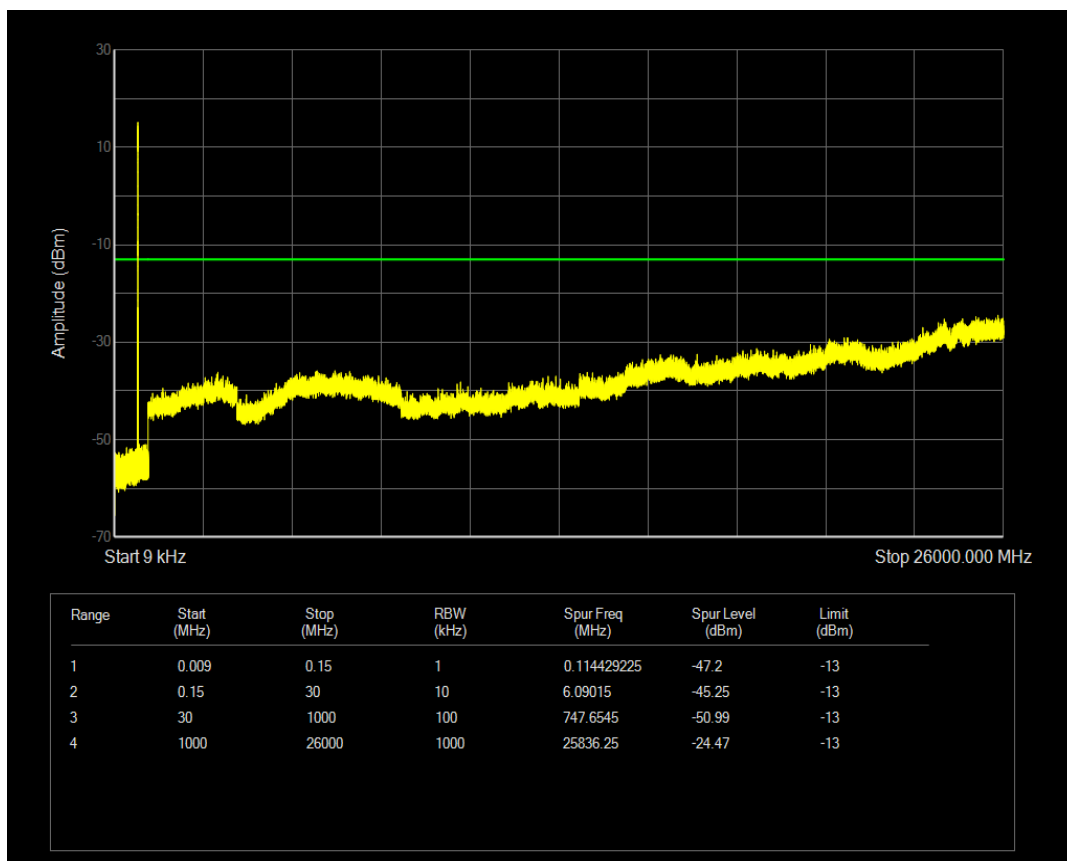




Band12 QPSK BW=5MHz Channel=23035 RB Size=25 Position=#0

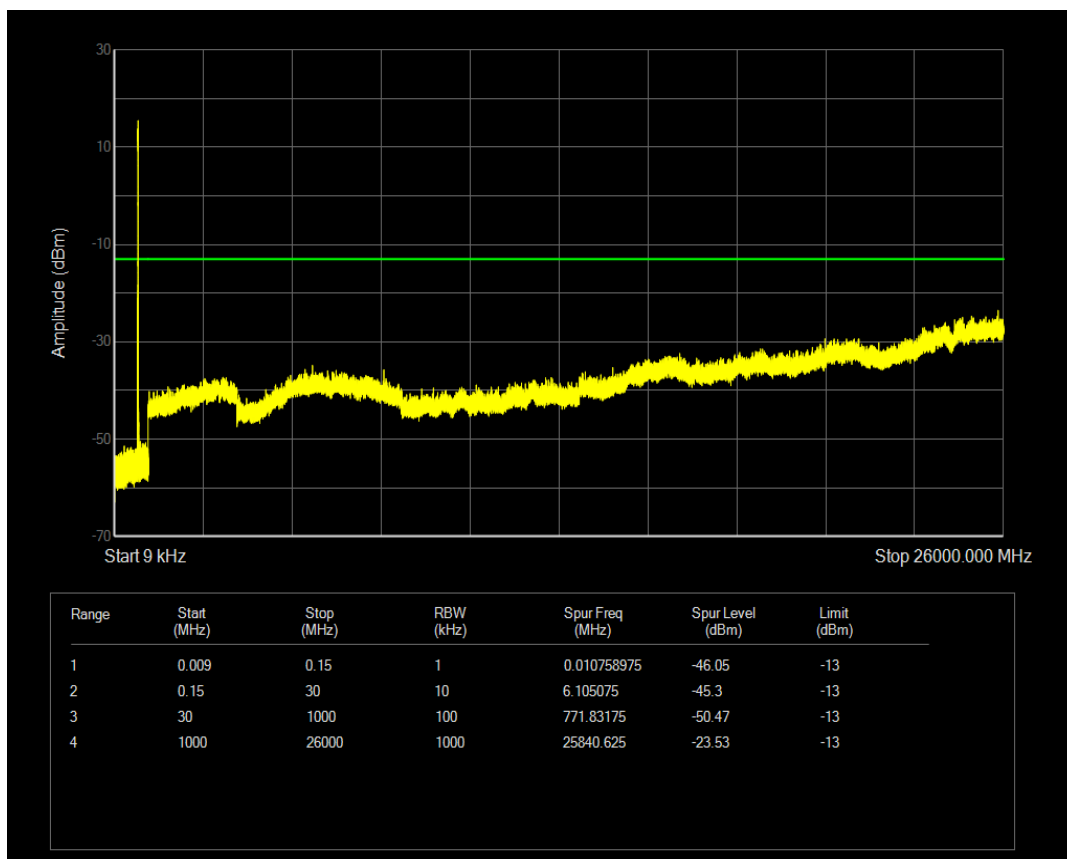


Band12 16QAM BW=5MHz Channel=23035 RB Size=25 Position=#0

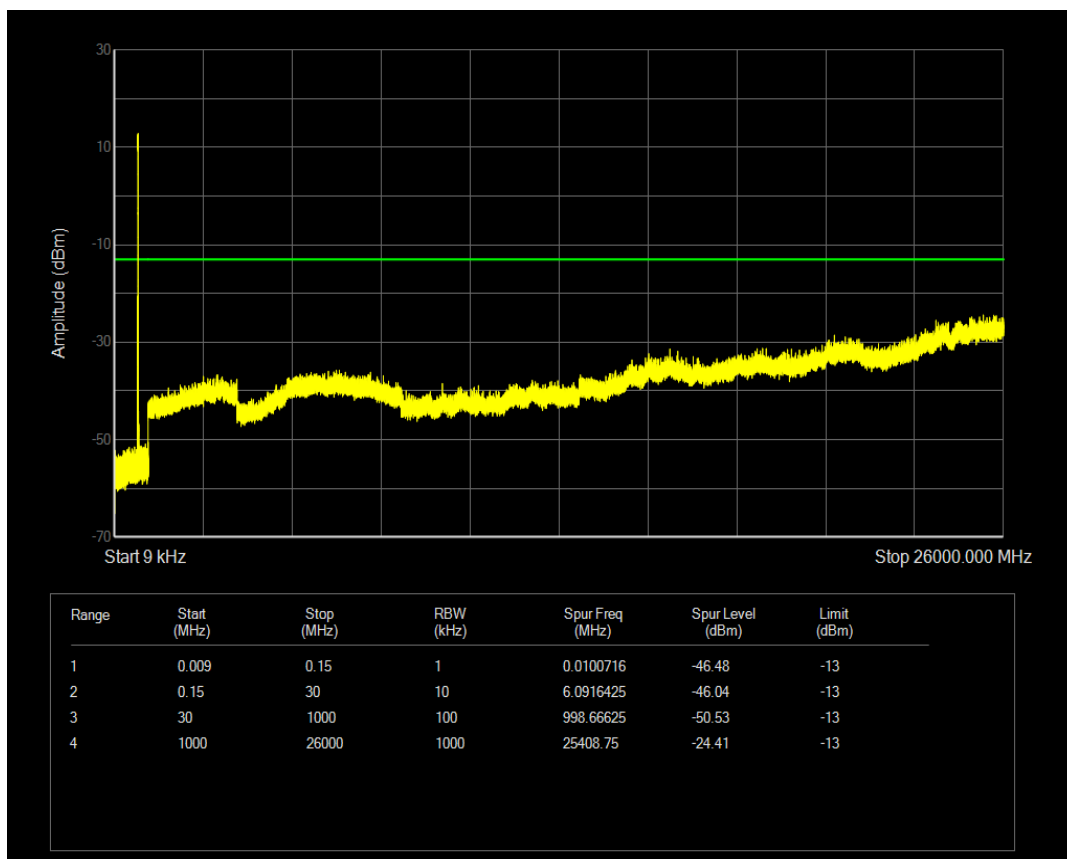




Band12 QPSK BW=5MHz Channel=23095 RB Size=25 Position=#0

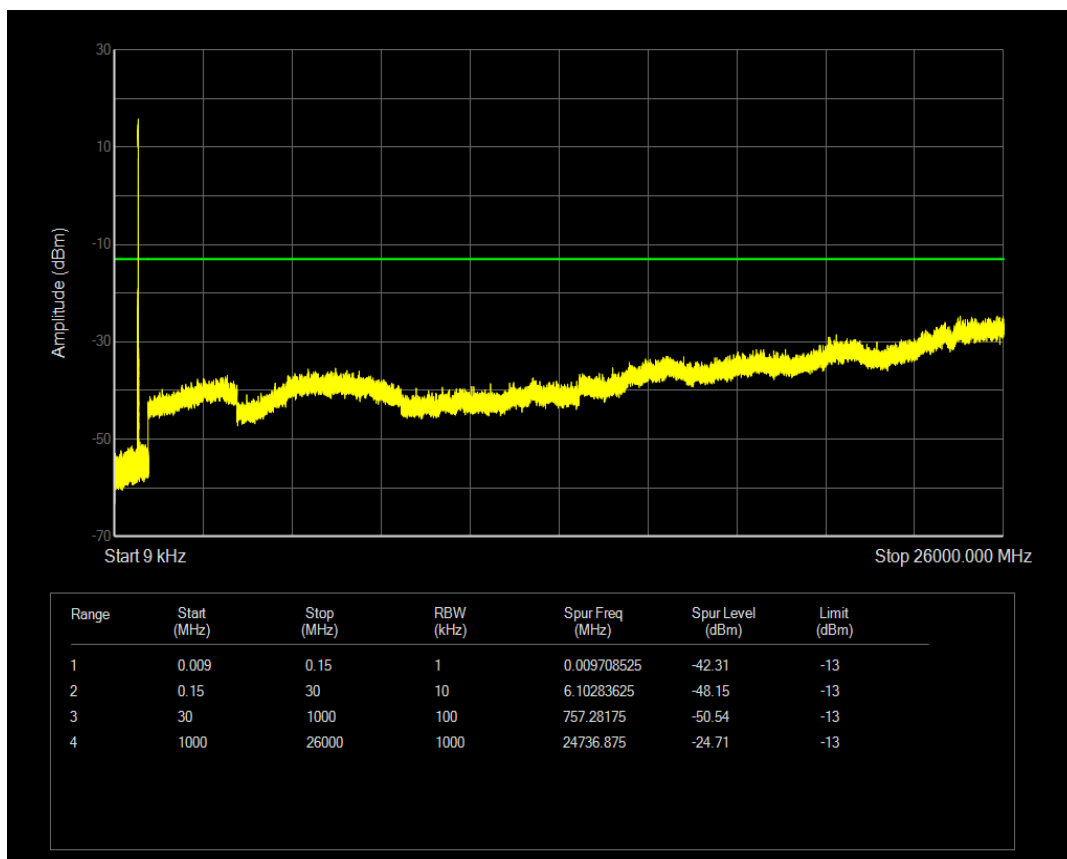


Band12 16QAM BW=5MHz Channel=23095 RB Size=25 Position=#0

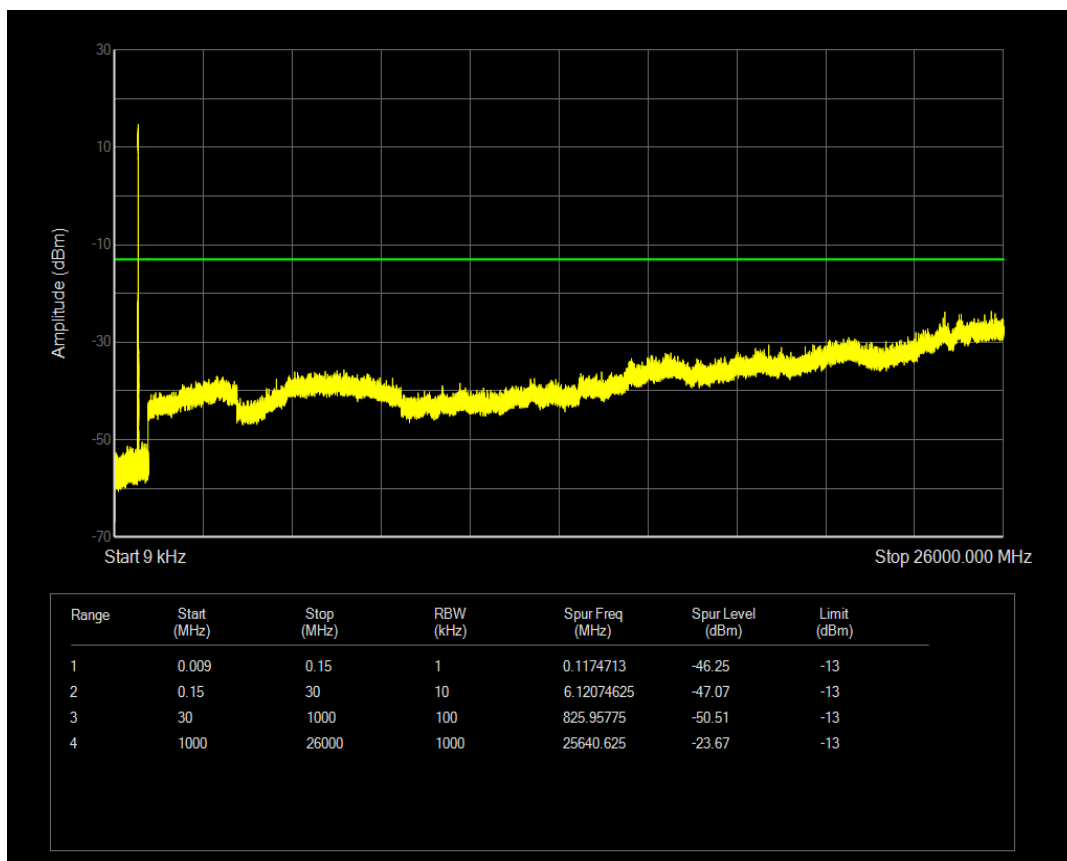




Band12 QPSK BW=5MHz Channel=23155 RB Size=25 Position=#0

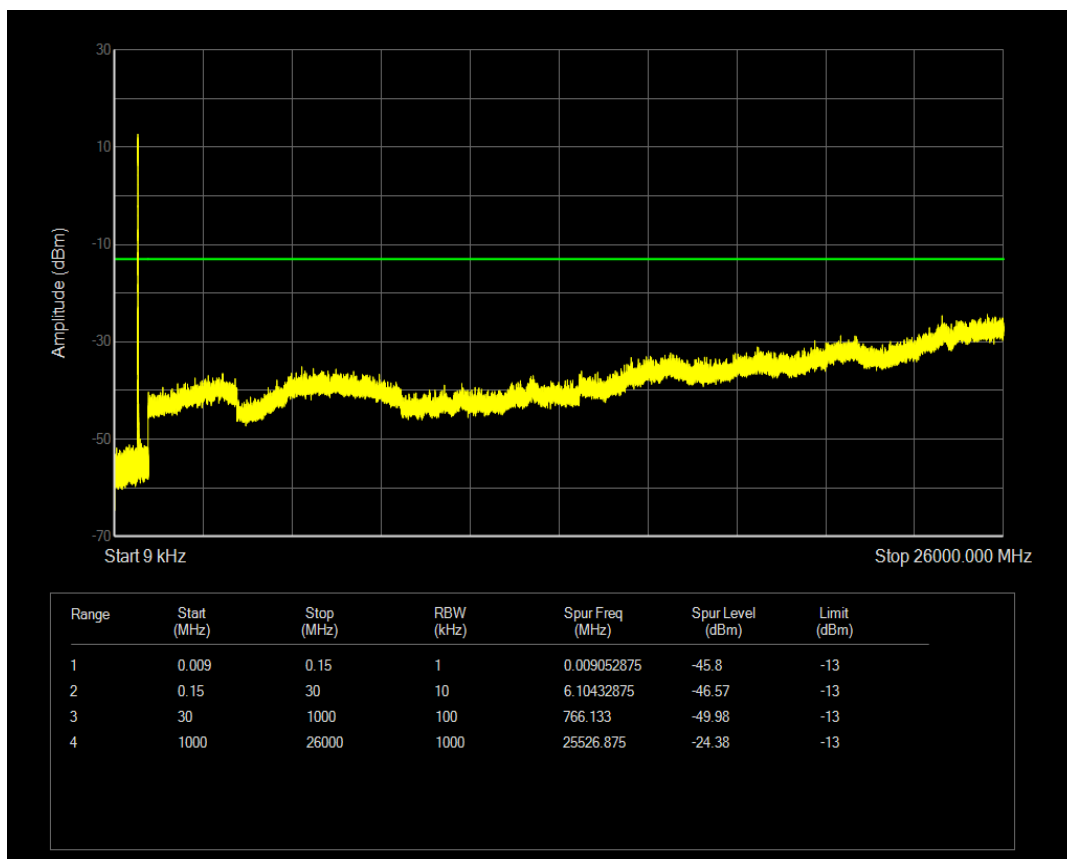


Band12 16QAM BW=5MHz Channel=23155 RB Size=25 Position=#0

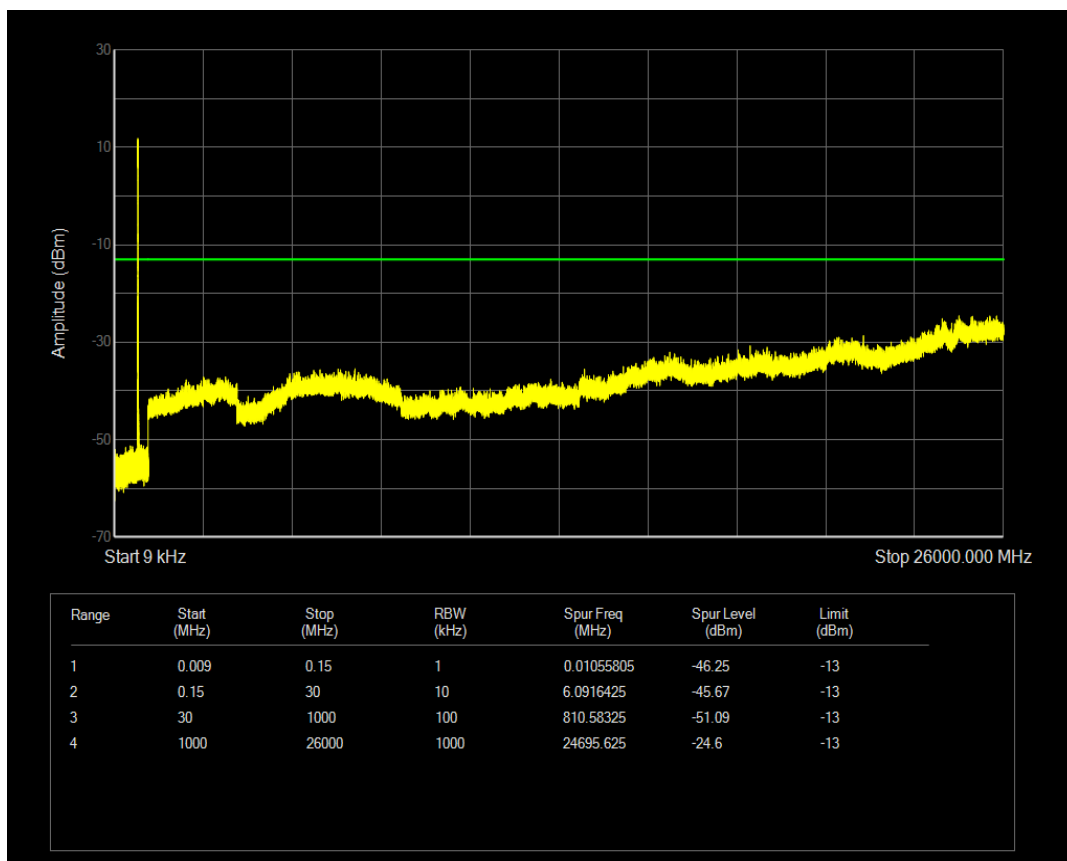




Band12 QPSK BW=10MHz Channel=23060 RB Size=50 Position=#0

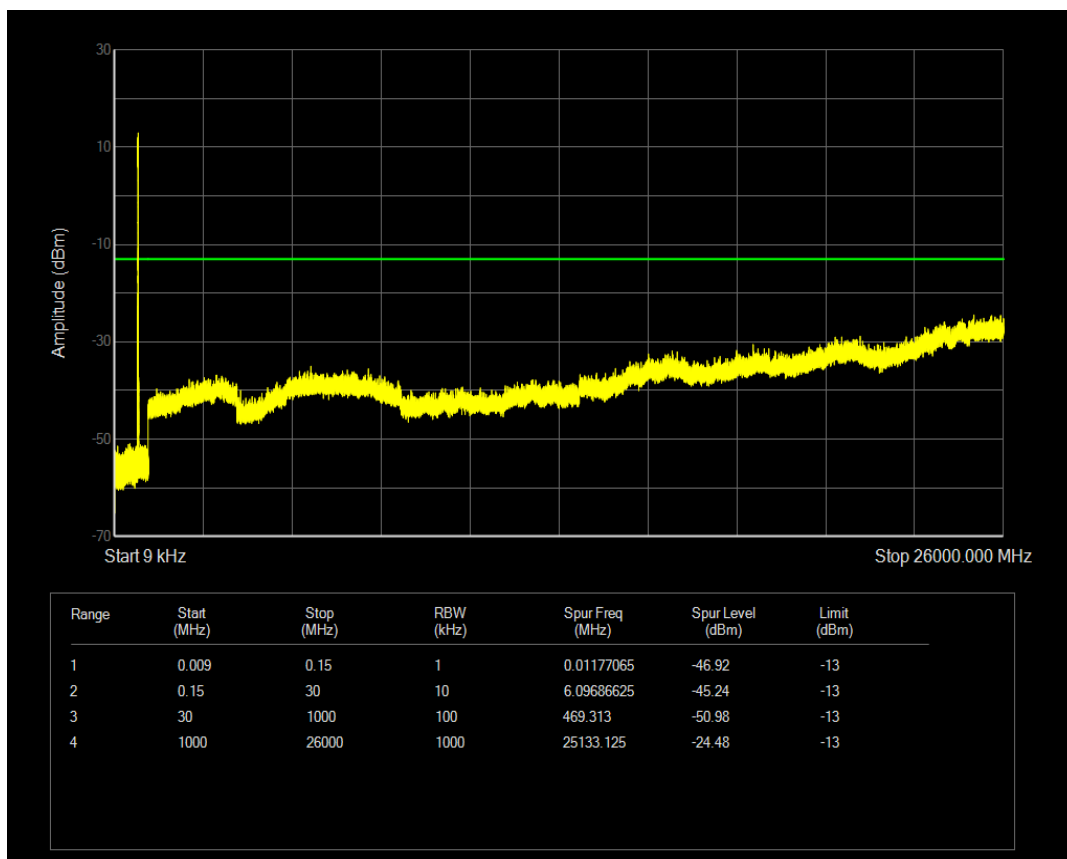


Band12 16QAM BW=10MHz Channel=23060 RB Size=50 Position=#0

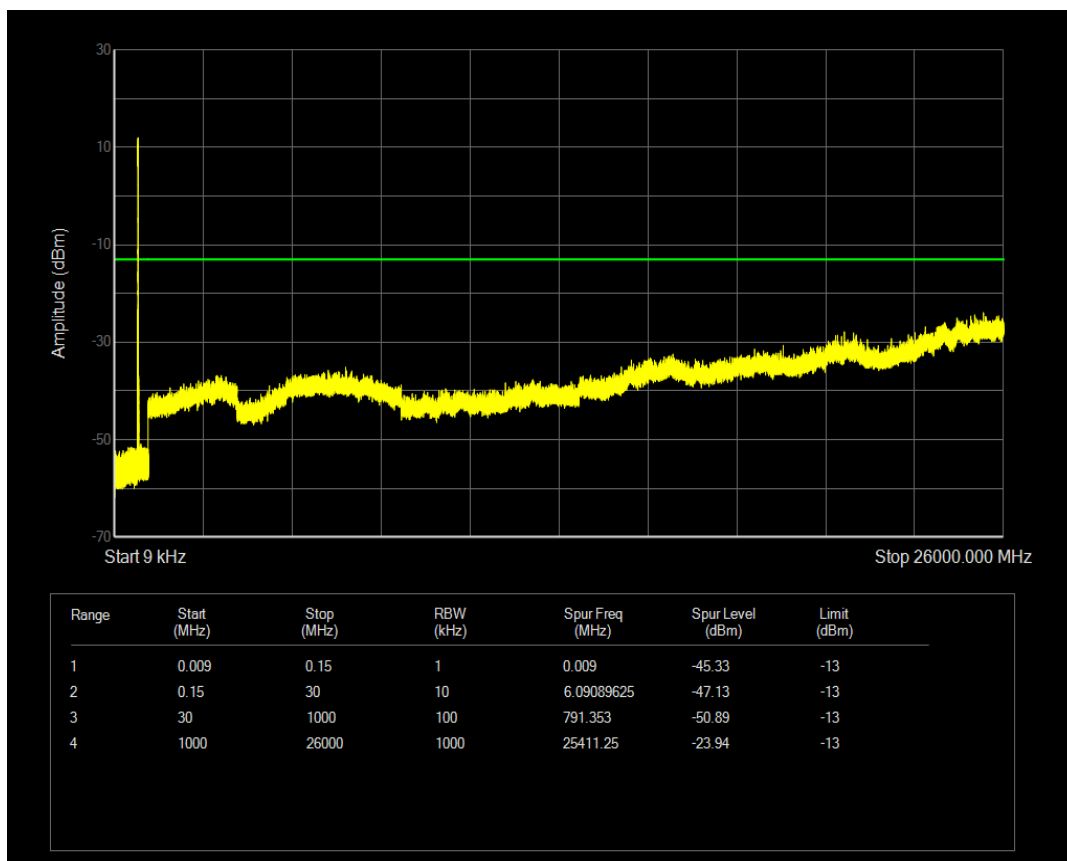




Band12 QPSK BW=10MHz Channel=23095 RB Size=50 Position=#0

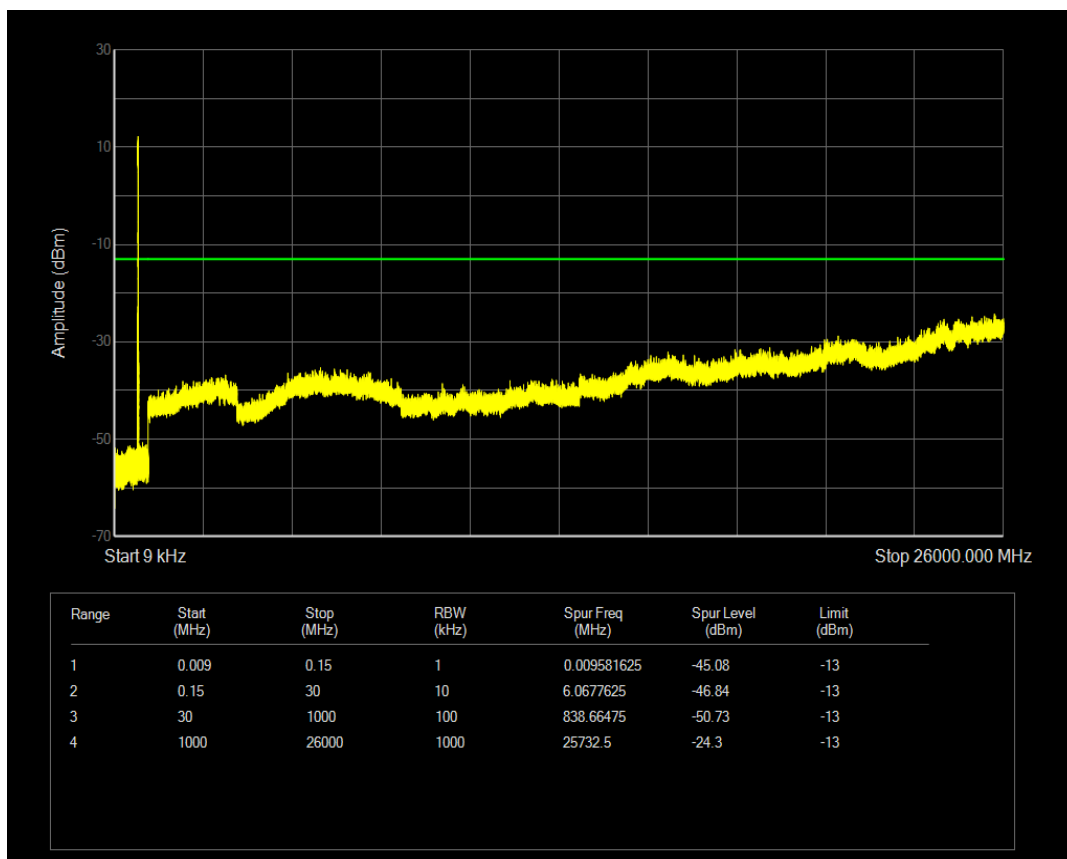


Band12 16QAM BW=10MHz Channel=23095 RB Size=50 Position=#0





Band12 QPSK BW=10MHz Channel=23130 RB Size=50 Position=#0



Band12 16QAM BW=10MHz Channel=23130 RB Size=50 Position=#0

