

Appendix Test Data for LTE_band_12

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B12_1.4MHz_ERP

Band: 12 / Bandwidth: 1.4MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	699.7	1	0	23.73	0.41	21.99	<=34.77	Pass
			2	23.57	0.41	21.83	<=34.77	Pass
			5	23.33	0.41	21.59	<=34.77	Pass
		3	0	23.79	0.41	22.05	<=34.77	Pass
			2	23.84	0.41	22.10	<=34.77	Pass
			3	23.83	0.41	22.09	<=34.77	Pass
		6	0	22.81	0.41	21.07	<=34.77	Pass
	707.5	1	0	23.32	0.41	21.58	<=34.77	Pass
			2	23.33	0.41	21.59	<=34.77	Pass
			5	23.33	0.41	21.59	<=34.77	Pass
		3	0	23.87	0.41	22.13	<=34.77	Pass
			2	23.86	0.41	22.12	<=34.77	Pass
			3	23.87	0.41	22.13	<=34.77	Pass
		6	0	22.93	0.41	21.19	<=34.77	Pass
	715.3	1	0	23.92	0.41	22.18	<=34.77	Pass
			2	23.93	0.41	22.19	<=34.77	Pass
			5	23.88	0.41	22.14	<=34.77	Pass
		3	0	24.04	0.41	22.30	<=34.77	Pass
			2	24.07	0.41	22.33	<=34.77	Pass
			3	24.03	0.41	22.29	<=34.77	Pass
		6	0	22.98	0.41	21.24	<=34.77	Pass
16QAM	699.7	1	0	22.30	0.41	20.56	<=34.77	Pass
			2	22.33	0.41	20.59	<=34.77	Pass
			5	22.38	0.41	20.64	<=34.77	Pass
		3	0	22.82	0.41	21.08	<=34.77	Pass
			2	22.82	0.41	21.08	<=34.77	Pass
			3	22.82	0.41	21.08	<=34.77	Pass
		6	0	21.71	0.41	19.97	<=34.77	Pass
	707.5	1	0	22.56	0.41	20.82	<=34.77	Pass
			2	22.56	0.41	20.82	<=34.77	Pass
			5	22.57	0.41	20.83	<=34.77	Pass
		3	0	22.86	0.41	21.12	<=34.77	Pass
			2	22.84	0.41	21.10	<=34.77	Pass
			3	22.86	0.41	21.12	<=34.77	Pass
		6	0	21.93	0.41	20.19	<=34.77	Pass
	715.3	1	0	22.57	0.41	20.83	<=34.77	Pass
			2	22.57	0.41	20.83	<=34.77	Pass
			5	22.52	0.41	20.78	<=34.77	Pass
		3	0	23.03	0.41	21.29	<=34.77	Pass
			2	23.03	0.41	21.29	<=34.77	Pass
			3	23.00	0.41	21.26	<=34.77	Pass
		6	0	21.88	0.41	20.14	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.2 B12_3MHz_ERP

Band: 12 / Bandwidth: 3MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	

QPSK	700.5	1	0	23.79	0.41	22.05	<=34.77	Pass
			7	23.42	0.41	21.68	<=34.77	Pass
			14	23.32	0.41	21.58	<=34.77	Pass
		8	0	22.79	0.41	21.05	<=34.77	Pass
			4	22.79	0.41	21.05	<=34.77	Pass
			7	22.78	0.41	21.04	<=34.77	Pass
		15	0	22.82	0.41	21.08	<=34.77	Pass
	707.5	1	0	23.30	0.41	21.56	<=34.77	Pass
			7	23.33	0.41	21.59	<=34.77	Pass
			14	23.34	0.41	21.60	<=34.77	Pass
		8	0	22.80	0.41	21.06	<=34.77	Pass
			4	22.88	0.41	21.14	<=34.77	Pass
			7	22.86	0.41	21.12	<=34.77	Pass
		15	0	22.84	0.41	21.10	<=34.77	Pass
	714.5	1	0	23.58	0.41	21.84	<=34.77	Pass
			7	23.57	0.41	21.83	<=34.77	Pass
			14	23.45	0.41	21.71	<=34.77	Pass
		8	0	22.93	0.41	21.19	<=34.77	Pass
			4	22.94	0.41	21.20	<=34.77	Pass
			7	22.94	0.41	21.20	<=34.77	Pass
		15	0	22.96	0.41	21.22	<=34.77	Pass
16QAM	700.5	1	0	22.35	0.41	20.61	<=34.77	Pass
			7	22.38	0.41	20.64	<=34.77	Pass
			14	22.35	0.41	20.61	<=34.77	Pass
		8	0	21.87	0.41	20.13	<=34.77	Pass
			4	21.85	0.41	20.11	<=34.77	Pass
			7	21.85	0.41	20.11	<=34.77	Pass
		15	0	21.86	0.41	20.12	<=34.77	Pass
	707.5	1	0	22.56	0.41	20.82	<=34.77	Pass
			7	22.60	0.41	20.86	<=34.77	Pass
			14	22.57	0.41	20.83	<=34.77	Pass
		8	0	21.80	0.41	20.06	<=34.77	Pass
			4	21.85	0.41	20.11	<=34.77	Pass
			7	21.83	0.41	20.09	<=34.77	Pass
		15	0	21.80	0.41	20.06	<=34.77	Pass
	714.5	1	0	23.03	0.41	21.29	<=34.77	Pass
			7	22.96	0.41	21.22	<=34.77	Pass
			14	22.91	0.41	21.17	<=34.77	Pass
		8	0	22.16	0.41	20.42	<=34.77	Pass
			4	22.19	0.41	20.45	<=34.77	Pass
			7	22.17	0.41	20.43	<=34.77	Pass
		15	0	22.05	0.41	20.31	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.3 B12_5MHz_ERP

Band: 12 / Bandwidth: 5MHz / NTN								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	701.5	1	0	23.37	0.41	21.63	<=34.77	Pass
			13	23.31	0.41	21.57	<=34.77	Pass
			24	23.43	0.41	21.69	<=34.77	Pass
		12	0	22.85	0.41	21.11	<=34.77	Pass
			6	22.81	0.41	21.07	<=34.77	Pass
			13	22.84	0.41	21.10	<=34.77	Pass
		25	0	22.85	0.41	21.11	<=34.77	Pass
	707.5	1	0	23.30	0.41	21.56	<=34.77	Pass
			13	23.37	0.41	21.63	<=34.77	Pass

16QAM	713.5	12	24	23.42	0.41	21.68	<=34.77	Pass
			0	22.89	0.41	21.15	<=34.77	Pass
			6	22.90	0.41	21.16	<=34.77	Pass
			13	22.87	0.41	21.13	<=34.77	Pass
		25	0	22.86	0.41	21.12	<=34.77	Pass
			0	23.66	0.41	21.92	<=34.77	Pass
			13	23.72	0.41	21.98	<=34.77	Pass
			24	23.70	0.41	21.96	<=34.77	Pass
		12	0	22.98	0.41	21.24	<=34.77	Pass
			6	22.95	0.41	21.21	<=34.77	Pass
			13	22.96	0.41	21.22	<=34.77	Pass
			0	23.02	0.41	21.28	<=34.77	Pass
	701.5	1	0	22.44	0.41	20.70	<=34.77	Pass
			13	22.39	0.41	20.65	<=34.77	Pass
			24	22.48	0.41	20.74	<=34.77	Pass
			0	21.82	0.41	20.08	<=34.77	Pass
		12	6	21.78	0.41	20.04	<=34.77	Pass
			13	21.81	0.41	20.07	<=34.77	Pass
			0	21.88	0.41	20.14	<=34.77	Pass
			0	21.87	0.41	20.13	<=34.77	Pass
		1	0	22.62	0.41	20.88	<=34.77	Pass
			13	22.63	0.41	20.89	<=34.77	Pass
			24	22.72	0.41	20.98	<=34.77	Pass
			0	21.90	0.41	20.16	<=34.77	Pass
	707.5	12	6	21.90	0.41	20.16	<=34.77	Pass
			13	21.89	0.41	20.15	<=34.77	Pass
			0	21.87	0.41	20.13	<=34.77	Pass
			0	22.34	0.41	20.60	<=34.77	Pass
		1	13	22.37	0.41	20.63	<=34.77	Pass
			24	22.36	0.41	20.62	<=34.77	Pass
			0	22.01	0.41	20.27	<=34.77	Pass
			6	21.99	0.41	20.25	<=34.77	Pass
		12	13	22.07	0.41	20.33	<=34.77	Pass
			0	22.05	0.41	20.31	<=34.77	Pass
			0	22.05	0.41	20.31	<=34.77	Pass
			0	22.05	0.41	20.31	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.4 B12_10MHz_ERP

Band: 12 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	704	1	0	23.28	0.41	21.54	<=34.77	Pass
			25	23.37	0.41	21.63	<=34.77	Pass
			49	23.43	0.41	21.69	<=34.77	Pass
		25	0	22.73	0.41	20.99	<=34.77	Pass
			13	22.81	0.41	21.07	<=34.77	Pass
			25	22.85	0.41	21.11	<=34.77	Pass
		50	0	22.81	0.41	21.07	<=34.77	Pass
			0	23.26	0.41	21.52	<=34.77	Pass
			25	23.38	0.41	21.64	<=34.77	Pass
		1	49	23.42	0.41	21.68	<=34.77	Pass
			0	22.82	0.41	21.08	<=34.77	Pass
			13	22.89	0.41	21.15	<=34.77	Pass
	707.5	25	25	22.82	0.41	21.08	<=34.77	Pass
			0	22.85	0.41	21.11	<=34.77	Pass
			0	23.38	0.41	21.64	<=34.77	Pass
		1	25	23.54	0.41	21.80	<=34.77	Pass
			49	23.55	0.41	21.81	<=34.77	Pass
			0	23.00	0.41	21.26	<=34.77	Pass

16QAM	704	50	13	22.95	0.41	21.21	<=34.77	Pass
			25	23.02	0.41	21.28	<=34.77	Pass
			0	23.03	0.41	21.29	<=34.77	Pass
		1	0	22.35	0.41	20.61	<=34.77	Pass
			25	22.40	0.41	20.66	<=34.77	Pass
			49	22.47	0.41	20.73	<=34.77	Pass
		25	0	21.83	0.41	20.09	<=34.77	Pass
			13	21.95	0.41	20.21	<=34.77	Pass
			25	22.02	0.41	20.28	<=34.77	Pass
		50	0	21.83	0.41	20.09	<=34.77	Pass
	707.5	1	0	22.45	0.41	20.71	<=34.77	Pass
			25	22.58	0.41	20.84	<=34.77	Pass
			49	22.61	0.41	20.87	<=34.77	Pass
		25	0	21.85	0.41	20.11	<=34.77	Pass
			13	21.91	0.41	20.17	<=34.77	Pass
			25	21.83	0.41	20.09	<=34.77	Pass
		50	0	21.82	0.41	20.08	<=34.77	Pass
	711	1	0	22.86	0.41	21.12	<=34.77	Pass
			25	22.99	0.41	21.25	<=34.77	Pass
			49	22.98	0.41	21.24	<=34.77	Pass
		25	0	22.04	0.41	20.30	<=34.77	Pass
			13	22.02	0.41	20.28	<=34.77	Pass
			25	22.05	0.41	20.31	<=34.77	Pass
		50	0	22.02	0.41	20.28	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. Frequency Stability

2.1 Test Result

2.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	699.7	6	0	20	3.27	-0.844	-0.0012	-2.5 to 2.5	Pass
					3.85	0.143	0.0002	-2.5 to 2.5	Pass
					4.43	-3.591	-0.0051	-2.5 to 2.5	Pass
				-30	3.85	-0.858	-0.0012	-2.5 to 2.5	Pass
				-20	3.85	-5.035	-0.0072	-2.5 to 2.5	Pass
				-10	3.85	-2.532	-0.0036	-2.5 to 2.5	Pass
				0	3.85	-1.988	-0.0028	-2.5 to 2.5	Pass
				10	3.85	-3.147	-0.0045	-2.5 to 2.5	Pass
				30	3.85	-0.887	-0.0013	-2.5 to 2.5	Pass
				40	3.85	-5.035	-0.0072	-2.5 to 2.5	Pass
	707.5	6	0	20	3.85	-2.060	-0.0029	-2.5 to 2.5	Pass
					3.27	3.276	0.0046	-2.5 to 2.5	Pass
					3.85	1.602	0.0023	-2.5 to 2.5	Pass
				-30	4.43	3.247	0.0046	-2.5 to 2.5	Pass
					3.85	-0.787	-0.0011	-2.5 to 2.5	Pass
					3.85	-1.130	-0.0016	-2.5 to 2.5	Pass
				-20	3.85	2.160	0.0031	-2.5 to 2.5	Pass
				-10	3.85	1.202	0.0017	-2.5 to 2.5	Pass
				0	3.85	2.632	0.0037	-2.5 to 2.5	Pass
				10	3.85	-0.286	-0.0004	-2.5 to 2.5	Pass
				30	3.85	0.830	0.0012	-2.5 to 2.5	Pass

				50	3.85	-2.804	-0.0040	-2.5 to 2.5	Pass
	715.3	6	0	20	3.27	-1.860	-0.0026	-2.5 to 2.5	Pass
					3.85	-1.602	-0.0022	-2.5 to 2.5	Pass
					4.43	-0.858	-0.0012	-2.5 to 2.5	Pass
					-30	3.85	-2.589	-0.0036	-2.5 to 2.5
				-20	3.85	-0.644	-0.0009	-2.5 to 2.5	Pass
				-10	3.85	-4.635	-0.0065	-2.5 to 2.5	Pass
				0	3.85	-1.116	-0.0016	-2.5 to 2.5	Pass
				10	3.85	3.648	0.0051	-2.5 to 2.5	Pass
				30	3.85	-2.632	-0.0037	-2.5 to 2.5	Pass
				40	3.85	-0.687	-0.0010	-2.5 to 2.5	Pass
	50	3.85	-2.832	-0.0040	-2.5 to 2.5	Pass			
16QAM	699.7	6	0	20	3.27	2.646	0.0038	-2.5 to 2.5	Pass
					3.85	-2.074	-0.0030	-2.5 to 2.5	Pass
					4.43	-2.632	-0.0038	-2.5 to 2.5	Pass
					-30	3.85	-3.061	-0.0044	-2.5 to 2.5
				-20	3.85	-0.114	-0.0002	-2.5 to 2.5	Pass
				-10	3.85	-2.718	-0.0039	-2.5 to 2.5	Pass
				0	3.85	-3.548	-0.0051	-2.5 to 2.5	Pass
				10	3.85	-4.907	-0.0070	-2.5 to 2.5	Pass
				30	3.85	-2.174	-0.0031	-2.5 to 2.5	Pass
				40	3.85	-5.765	-0.0082	-2.5 to 2.5	Pass
				50	3.85	0.415	0.0006	-2.5 to 2.5	Pass
	707.5	6	0	20	3.27	-2.875	-0.0041	-2.5 to 2.5	Pass
					3.85	3.648	0.0052	-2.5 to 2.5	Pass
					4.43	-6.852	-0.0097	-2.5 to 2.5	Pass
					-30	3.85	0.014	0.0000	-2.5 to 2.5
				-20	3.85	4.721	0.0067	-2.5 to 2.5	Pass
				-10	3.85	0.486	0.0007	-2.5 to 2.5	Pass
				0	3.85	-1.402	-0.0020	-2.5 to 2.5	Pass
				10	3.85	4.406	0.0062	-2.5 to 2.5	Pass
				30	3.85	-0.458	-0.0006	-2.5 to 2.5	Pass
				40	3.85	-1.230	-0.0017	-2.5 to 2.5	Pass
				50	3.85	1.273	0.0018	-2.5 to 2.5	Pass
	715.3	6	0	20	3.27	2.561	0.0036	-2.5 to 2.5	Pass
					3.85	-2.346	-0.0033	-2.5 to 2.5	Pass
					4.43	-0.644	-0.0009	-2.5 to 2.5	Pass
					-30	3.85	-5.522	-0.0077	-2.5 to 2.5
				-20	3.85	-1.245	-0.0017	-2.5 to 2.5	Pass
				-10	3.85	2.046	0.0029	-2.5 to 2.5	Pass
				0	3.85	-3.819	-0.0053	-2.5 to 2.5	Pass
				10	3.85	-1.059	-0.0015	-2.5 to 2.5	Pass
				30	3.85	-2.003	-0.0028	-2.5 to 2.5	Pass
				40	3.85	0.086	0.0001	-2.5 to 2.5	Pass
				50	3.85	-0.172	-0.0002	-2.5 to 2.5	Pass

2.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	700.5	15	0	20	3.27	-0.229	-0.0003	-2.5 to 2.5	Pass
					3.85	1.531	0.0022	-2.5 to 2.5	Pass
					4.43	-2.861	-0.0041	-2.5 to 2.5	Pass
				-30	3.85	-2.618	-0.0037	-2.5 to 2.5	Pass
				-20	3.85	1.144	0.0016	-2.5 to 2.5	Pass
				-10	3.85	-0.029	0.0000	-2.5 to 2.5	Pass
				0	3.85	0.043	0.0001	-2.5 to 2.5	Pass

				10	3.85	1.373	0.0020	-2.5 to 2.5	Pass
				30	3.85	-0.558	-0.0008	-2.5 to 2.5	Pass
				40	3.85	-4.177	-0.0060	-2.5 to 2.5	Pass
				50	3.85	-2.418	-0.0035	-2.5 to 2.5	Pass
	707.5	15	0	20	3.27	0.415	0.0006	-2.5 to 2.5	Pass
					3.85	-0.229	-0.0003	-2.5 to 2.5	Pass
					4.43	-4.148	-0.0059	-2.5 to 2.5	Pass
				-30	3.85	0.315	0.0004	-2.5 to 2.5	Pass
				-20	3.85	1.173	0.0017	-2.5 to 2.5	Pass
				-10	3.85	0.229	0.0003	-2.5 to 2.5	Pass
				0	3.85	-1.359	-0.0019	-2.5 to 2.5	Pass
				10	3.85	-0.558	-0.0008	-2.5 to 2.5	Pass
				30	3.85	-0.501	-0.0007	-2.5 to 2.5	Pass
				40	3.85	-4.320	-0.0061	-2.5 to 2.5	Pass
				50	3.85	-2.003	-0.0028	-2.5 to 2.5	Pass
	714.5	15	0	20	3.27	0.958	0.0013	-2.5 to 2.5	Pass
					3.85	-5.136	-0.0072	-2.5 to 2.5	Pass
					4.43	-1.230	-0.0017	-2.5 to 2.5	Pass
				-30	3.85	-1.745	-0.0024	-2.5 to 2.5	Pass
				-20	3.85	-0.701	-0.0010	-2.5 to 2.5	Pass
				-10	3.85	0.100	0.0001	-2.5 to 2.5	Pass
				0	3.85	1.245	0.0017	-2.5 to 2.5	Pass
				10	3.85	-0.572	-0.0008	-2.5 to 2.5	Pass
				30	3.85	-1.130	-0.0016	-2.5 to 2.5	Pass
				40	3.85	-1.960	-0.0027	-2.5 to 2.5	Pass
				50	3.85	-2.203	-0.0031	-2.5 to 2.5	Pass
16QAM	700.5	15	0	20	3.27	-0.973	-0.0014	-2.5 to 2.5	Pass
					3.85	-0.458	-0.0007	-2.5 to 2.5	Pass
					4.43	-2.046	-0.0029	-2.5 to 2.5	Pass
				-30	3.85	-4.020	-0.0057	-2.5 to 2.5	Pass
				-20	3.85	-3.762	-0.0054	-2.5 to 2.5	Pass
				-10	3.85	-0.172	-0.0002	-2.5 to 2.5	Pass
				0	3.85	-1.388	-0.0020	-2.5 to 2.5	Pass
				10	3.85	-1.230	-0.0018	-2.5 to 2.5	Pass
				30	3.85	1.316	0.0019	-2.5 to 2.5	Pass
				40	3.85	-1.001	-0.0014	-2.5 to 2.5	Pass
				50	3.85	-2.732	-0.0039	-2.5 to 2.5	Pass
	707.5	15	0	20	3.27	0.114	0.0002	-2.5 to 2.5	Pass
					3.85	0.129	0.0002	-2.5 to 2.5	Pass
					4.43	-2.618	-0.0037	-2.5 to 2.5	Pass
				-30	3.85	-3.161	-0.0045	-2.5 to 2.5	Pass
				-20	3.85	-1.359	-0.0019	-2.5 to 2.5	Pass
				-10	3.85	-0.687	-0.0010	-2.5 to 2.5	Pass
				0	3.85	-3.276	-0.0046	-2.5 to 2.5	Pass
				10	3.85	-0.901	-0.0013	-2.5 to 2.5	Pass
				30	3.85	3.433	0.0049	-2.5 to 2.5	Pass
				40	3.85	-5.651	-0.0080	-2.5 to 2.5	Pass
				50	3.85	1.988	0.0028	-2.5 to 2.5	Pass
	714.5	15	0	20	3.27	-4.277	-0.0060	-2.5 to 2.5	Pass
					3.85	-2.804	-0.0039	-2.5 to 2.5	Pass
					4.43	-0.086	-0.0001	-2.5 to 2.5	Pass
				-30	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass
				-20	3.85	-2.804	-0.0039	-2.5 to 2.5	Pass
				-10	3.85	-0.372	-0.0005	-2.5 to 2.5	Pass
				0	3.85	0.544	0.0008	-2.5 to 2.5	Pass
				10	3.85	-2.618	-0.0037	-2.5 to 2.5	Pass
				30	3.85	-4.907	-0.0069	-2.5 to 2.5	Pass
				40	3.85	-4.735	-0.0066	-2.5 to 2.5	Pass
				50	3.85	-1.259	-0.0018	-2.5 to 2.5	Pass

2.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	701.5	25	0	20	3.27	-1.059	-0.0015	-2.5 to 2.5	Pass
					3.85	-0.572	-0.0008	-2.5 to 2.5	Pass
					4.43	-0.873	-0.0012	-2.5 to 2.5	Pass
				-30	3.85	0.687	0.0010	-2.5 to 2.5	Pass
				-20	3.85	-5.908	-0.0084	-2.5 to 2.5	Pass
				-10	3.85	-2.890	-0.0041	-2.5 to 2.5	Pass
				0	3.85	-4.249	-0.0061	-2.5 to 2.5	Pass
				10	3.85	0.057	0.0001	-2.5 to 2.5	Pass
				30	3.85	-1.259	-0.0018	-2.5 to 2.5	Pass
				40	3.85	-1.516	-0.0022	-2.5 to 2.5	Pass
				50	3.85	-1.931	-0.0028	-2.5 to 2.5	Pass
	707.5	25	0	20	3.27	-2.890	-0.0041	-2.5 to 2.5	Pass
					3.85	2.103	0.0030	-2.5 to 2.5	Pass
					4.43	-1.287	-0.0018	-2.5 to 2.5	Pass
				-30	3.85	-5.522	-0.0078	-2.5 to 2.5	Pass
				-20	3.85	-2.046	-0.0029	-2.5 to 2.5	Pass
				-10	3.85	0.401	0.0006	-2.5 to 2.5	Pass
				0	3.85	-5.150	-0.0073	-2.5 to 2.5	Pass
				10	3.85	-0.072	-0.0001	-2.5 to 2.5	Pass
				30	3.85	1.860	0.0026	-2.5 to 2.5	Pass
				40	3.85	-2.060	-0.0029	-2.5 to 2.5	Pass
				50	3.85	-1.588	-0.0022	-2.5 to 2.5	Pass
	713.5	25	0	20	3.27	-3.433	-0.0048	-2.5 to 2.5	Pass
					3.85	-2.847	-0.0040	-2.5 to 2.5	Pass
					4.43	-6.824	-0.0096	-2.5 to 2.5	Pass
				-30	3.85	-1.431	-0.0020	-2.5 to 2.5	Pass
				-20	3.85	0.601	0.0008	-2.5 to 2.5	Pass
				-10	3.85	-4.392	-0.0062	-2.5 to 2.5	Pass
				0	3.85	-4.163	-0.0058	-2.5 to 2.5	Pass
				10	3.85	-3.705	-0.0052	-2.5 to 2.5	Pass
				30	3.85	-2.675	-0.0037	-2.5 to 2.5	Pass
				40	3.85	-2.503	-0.0035	-2.5 to 2.5	Pass
16QAM	701.5	25	0	20	3.27	0.687	0.0010	-2.5 to 2.5	Pass
					3.85	0.901	0.0013	-2.5 to 2.5	Pass
					4.43	-0.029	0.0000	-2.5 to 2.5	Pass
				-30	3.85	0.343	0.0005	-2.5 to 2.5	Pass
				-20	3.85	-0.043	-0.0001	-2.5 to 2.5	Pass
				-10	3.85	-2.246	-0.0032	-2.5 to 2.5	Pass
				0	3.85	-3.490	-0.0050	-2.5 to 2.5	Pass
				10	3.85	-0.415	-0.0006	-2.5 to 2.5	Pass
				30	3.85	-2.317	-0.0033	-2.5 to 2.5	Pass
				40	3.85	-1.116	-0.0016	-2.5 to 2.5	Pass
				50	3.85	-0.601	-0.0009	-2.5 to 2.5	Pass
	707.5	25	0	20	3.27	-1.101	-0.0016	-2.5 to 2.5	Pass
					3.85	0.844	0.0012	-2.5 to 2.5	Pass
					4.43	-3.777	-0.0053	-2.5 to 2.5	Pass
				-30	3.85	1.888	0.0027	-2.5 to 2.5	Pass
				-20	3.85	-0.701	-0.0010	-2.5 to 2.5	Pass
				-10	3.85	0.114	0.0002	-2.5 to 2.5	Pass
				0	3.85	0.257	0.0004	-2.5 to 2.5	Pass
				10	3.85	2.975	0.0042	-2.5 to 2.5	Pass

	713.5	25	0	30	3.85	-2.575	-0.0036	-2.5 to 2.5	Pass
				40	3.85	1.588	0.0022	-2.5 to 2.5	Pass
				50	3.85	-1.774	-0.0025	-2.5 to 2.5	Pass
				20	3.27	-3.204	-0.0045	-2.5 to 2.5	Pass
					3.85	-3.405	-0.0048	-2.5 to 2.5	Pass
					4.43	-1.431	-0.0020	-2.5 to 2.5	Pass
				-30	3.85	-5.894	-0.0083	-2.5 to 2.5	Pass
				-20	3.85	-4.292	-0.0060	-2.5 to 2.5	Pass
				-10	3.85	-4.978	-0.0070	-2.5 to 2.5	Pass
				0	3.85	-2.689	-0.0038	-2.5 to 2.5	Pass
				10	3.85	-1.316	-0.0018	-2.5 to 2.5	Pass
				30	3.85	-2.675	-0.0037	-2.5 to 2.5	Pass
				40	3.85	-4.134	-0.0058	-2.5 to 2.5	Pass
				50	3.85	-0.372	-0.0005	-2.5 to 2.5	Pass

2.1.4 B12_10MHz

Band: 12 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	704	50	0	20	3.27	-1.173	-0.0017	-2.5 to 2.5	Pass
					3.85	-0.229	-0.0003	-2.5 to 2.5	Pass
					4.43	0.215	0.0003	-2.5 to 2.5	Pass
				-30	3.85	-0.257	-0.0004	-2.5 to 2.5	Pass
				-20	3.85	-2.475	-0.0035	-2.5 to 2.5	Pass
				-10	3.85	-0.458	-0.0007	-2.5 to 2.5	Pass
				0	3.85	-1.230	-0.0017	-2.5 to 2.5	Pass
				10	3.85	0.372	0.0005	-2.5 to 2.5	Pass
				30	3.85	-0.701	-0.0010	-2.5 to 2.5	Pass
				40	3.85	-0.329	-0.0005	-2.5 to 2.5	Pass
				50	3.85	-2.146	-0.0030	-2.5 to 2.5	Pass
	707.5	50	0	20	3.27	0.844	0.0012	-2.5 to 2.5	Pass
					3.85	-0.029	0.0000	-2.5 to 2.5	Pass
					4.43	-2.675	-0.0038	-2.5 to 2.5	Pass
				-30	3.85	-0.687	-0.0010	-2.5 to 2.5	Pass
				-20	3.85	3.462	0.0049	-2.5 to 2.5	Pass
				-10	3.85	-0.029	0.0000	-2.5 to 2.5	Pass
				0	3.85	1.802	0.0025	-2.5 to 2.5	Pass
				10	3.85	1.745	0.0025	-2.5 to 2.5	Pass
				30	3.85	-2.489	-0.0035	-2.5 to 2.5	Pass
				40	3.85	-0.415	-0.0006	-2.5 to 2.5	Pass
				50	3.85	1.373	0.0019	-2.5 to 2.5	Pass
	711	50	0	20	3.27	-1.502	-0.0021	-2.5 to 2.5	Pass
					3.85	-1.802	-0.0025	-2.5 to 2.5	Pass
					4.43	-1.187	-0.0017	-2.5 to 2.5	Pass
				-30	3.85	-3.462	-0.0049	-2.5 to 2.5	Pass
				-20	3.85	0.057	0.0001	-2.5 to 2.5	Pass
				-10	3.85	-2.217	-0.0031	-2.5 to 2.5	Pass
				0	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass
				10	3.85	-1.030	-0.0014	-2.5 to 2.5	Pass
				30	3.85	0.930	0.0013	-2.5 to 2.5	Pass
				40	3.85	0.629	0.0009	-2.5 to 2.5	Pass
				50	3.85	-2.775	-0.0039	-2.5 to 2.5	Pass
16QAM	704	50	0	20	3.27	-0.787	-0.0011	-2.5 to 2.5	Pass
					3.85	-0.787	-0.0011	-2.5 to 2.5	Pass
					4.43	1.745	0.0025	-2.5 to 2.5	Pass
				-30	3.85	-0.730	-0.0010	-2.5 to 2.5	Pass
				-20	3.85	-1.702	-0.0024	-2.5 to 2.5	Pass

				-10	3.85	0.215	0.0003	-2.5 to 2.5	Pass
				0	3.85	0.057	0.0001	-2.5 to 2.5	Pass
				10	3.85	1.302	0.0018	-2.5 to 2.5	Pass
				30	3.85	0.873	0.0012	-2.5 to 2.5	Pass
				40	3.85	-2.503	-0.0036	-2.5 to 2.5	Pass
				50	3.85	2.875	0.0041	-2.5 to 2.5	Pass
	707.5	50	0	20	3.27	-2.861	-0.0040	-2.5 to 2.5	Pass
					3.85	1.416	0.0020	-2.5 to 2.5	Pass
					4.43	0.043	0.0001	-2.5 to 2.5	Pass
				-30	3.85	-1.144	-0.0016	-2.5 to 2.5	Pass
				-20	3.85	-0.815	-0.0012	-2.5 to 2.5	Pass
				-10	3.85	-3.734	-0.0053	-2.5 to 2.5	Pass
				0	3.85	-2.317	-0.0033	-2.5 to 2.5	Pass
				10	3.85	3.090	0.0044	-2.5 to 2.5	Pass
				30	3.85	0.830	0.0012	-2.5 to 2.5	Pass
				40	3.85	0.515	0.0007	-2.5 to 2.5	Pass
				50	3.85	1.173	0.0017	-2.5 to 2.5	Pass
	711	50	0	20	3.27	-1.802	-0.0025	-2.5 to 2.5	Pass
					3.85	-0.186	-0.0003	-2.5 to 2.5	Pass
					4.43	-2.904	-0.0041	-2.5 to 2.5	Pass
				-30	3.85	0.186	0.0003	-2.5 to 2.5	Pass
				-20	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass
				-10	3.85	-1.330	-0.0019	-2.5 to 2.5	Pass
				0	3.85	0.730	0.0010	-2.5 to 2.5	Pass
				10	3.85	-0.987	-0.0014	-2.5 to 2.5	Pass
				30	3.85	-1.016	-0.0014	-2.5 to 2.5	Pass
				40	3.85	-0.744	-0.0010	-2.5 to 2.5	Pass
				50	3.85	-0.401	-0.0006	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

3.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	6	0	Refer To Test Graph		Pass
16QAM	707.5	6	0	Refer To Test Graph		Pass

3.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	15	0	Refer To Test Graph		Pass
16QAM	707.5	15	0	Refer To Test Graph		Pass

3.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	

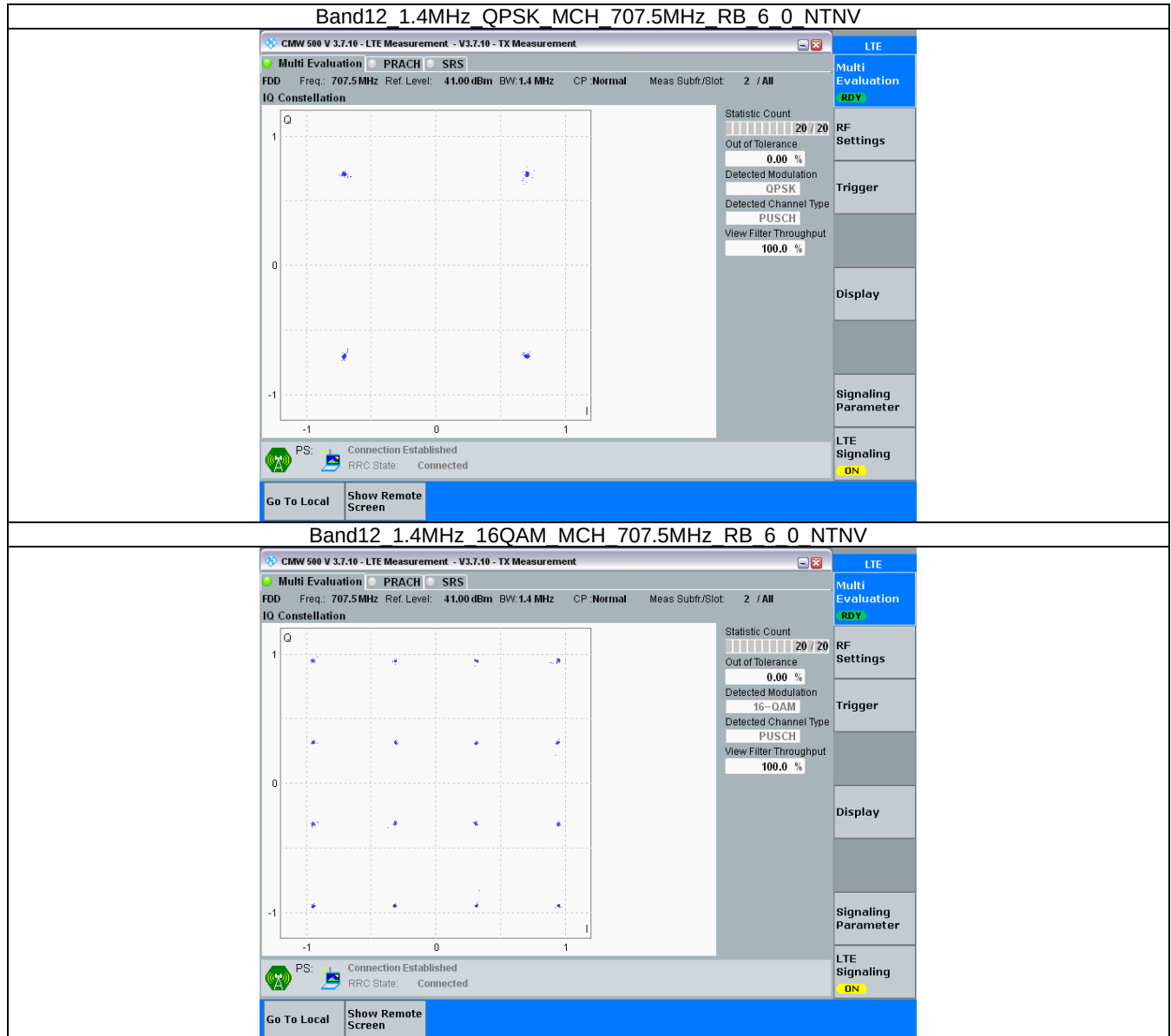
QPSK	707.5	25	0	Refer To Test Graph	Pass
16QAM	707.5	25	0	Refer To Test Graph	Pass

3.1.4 B12_10MHz

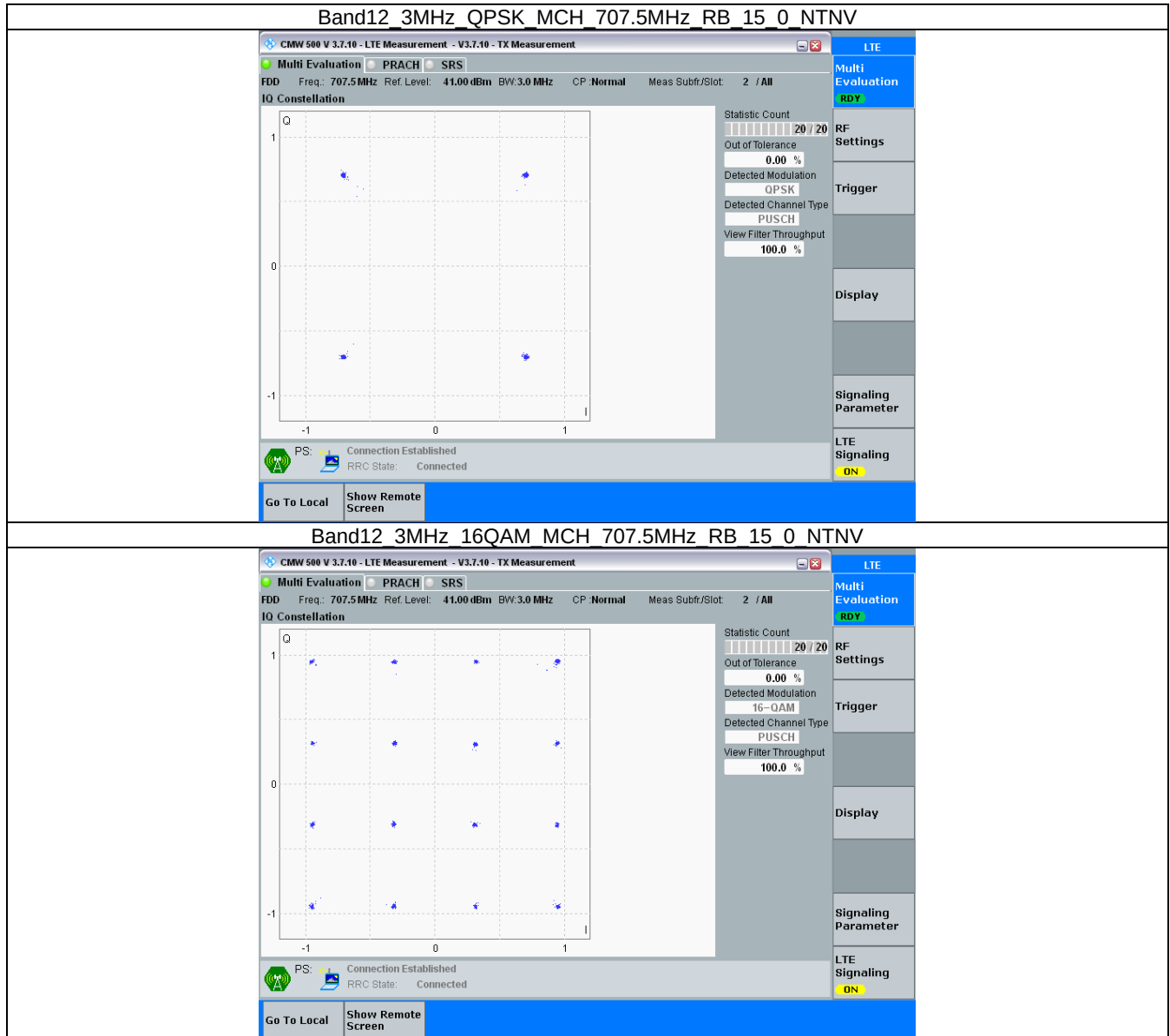
Band: 12 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	50	0	Refer To Test Graph		Pass
16QAM	707.5	50	0	Refer To Test Graph		Pass

3.2 Test Graph

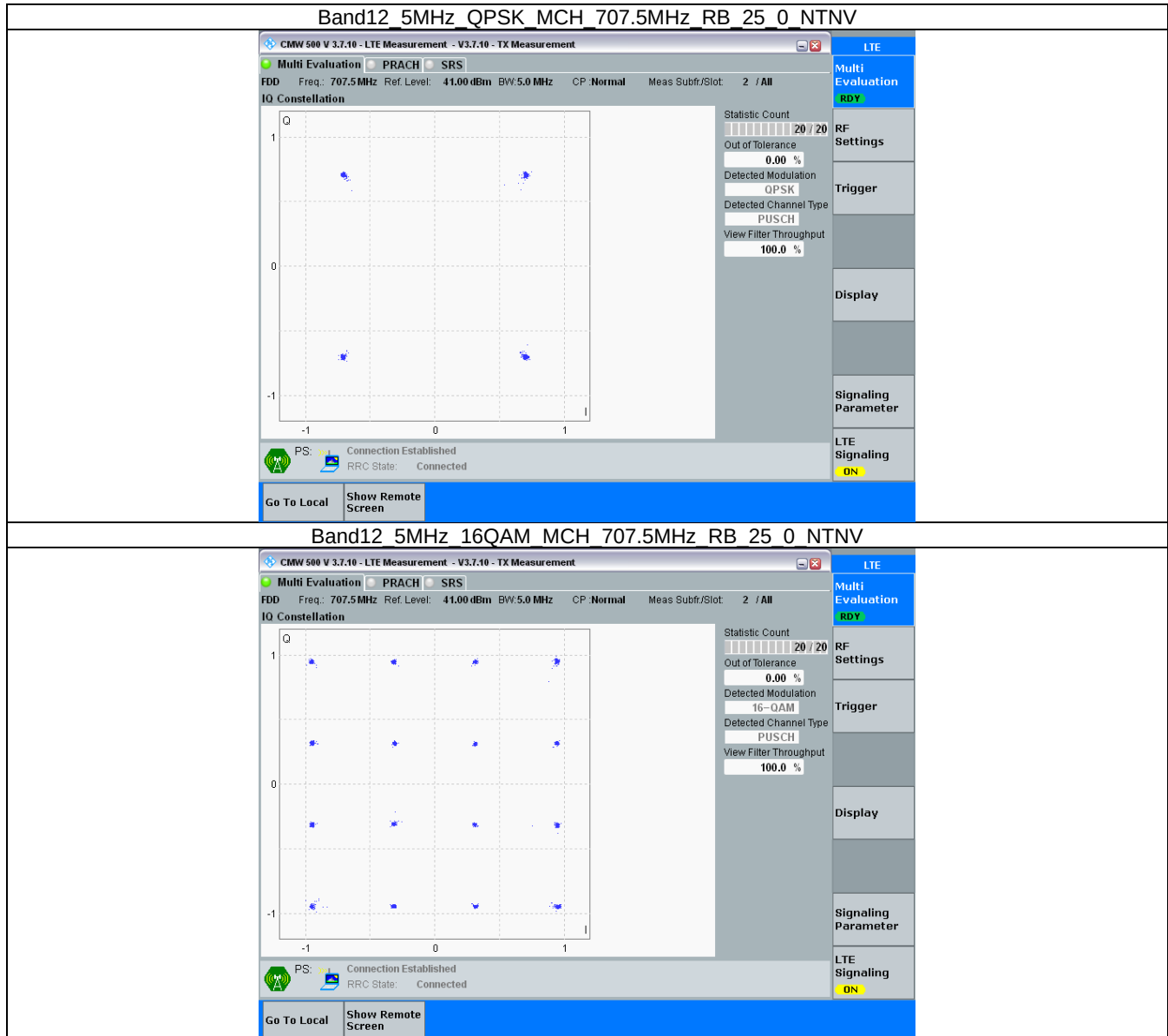
3.2.1 B12_1.4MHz



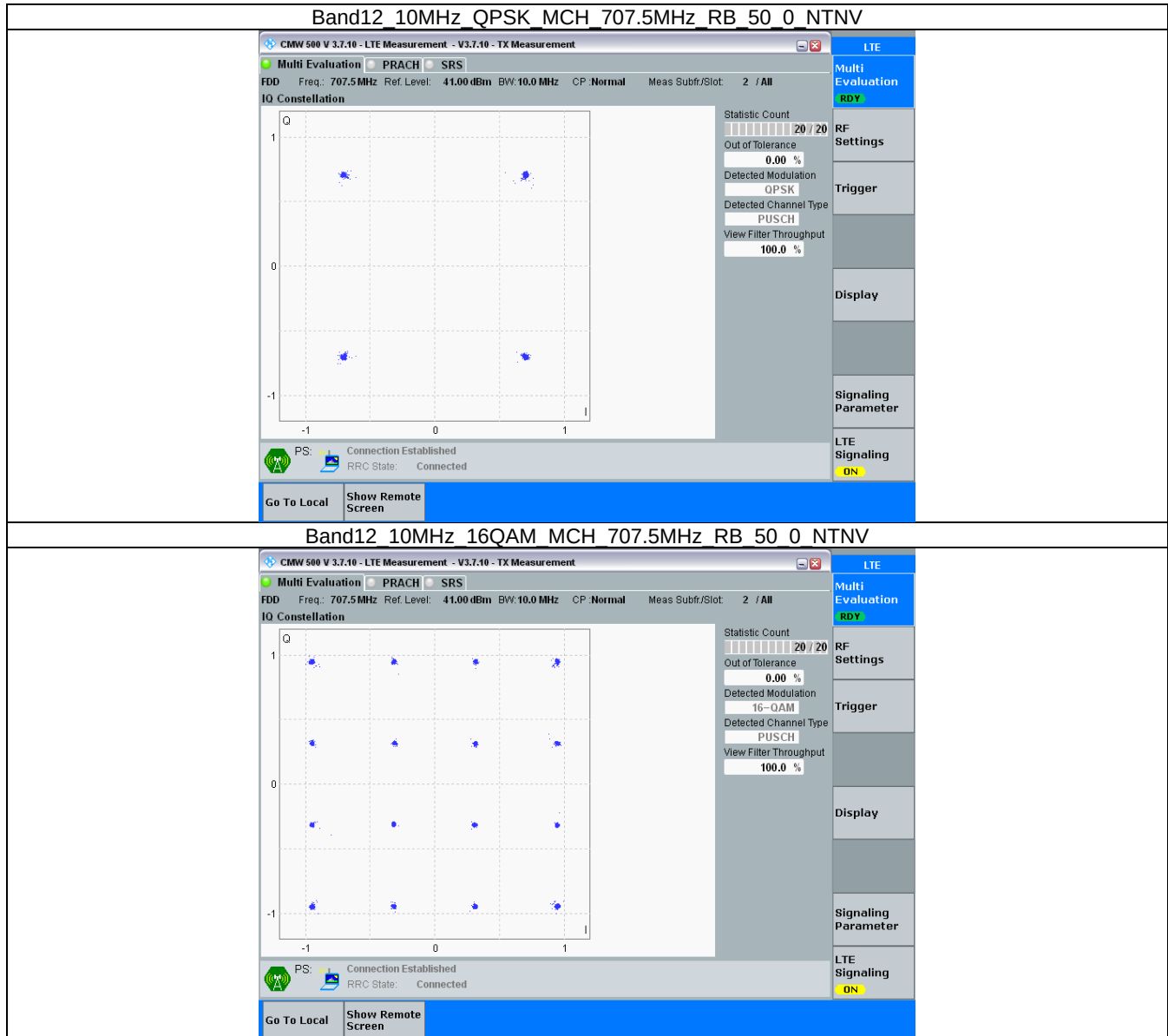
3.2.2 B12_3MHz



3.2.3 B12_5MHz



3.2.4 B12_10MHz



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band12_OBW

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.122	/	Pass
		707.5	6	0	1.113	/	Pass
		715.3	6	0	1.113	/	Pass
	16QAM	699.7	6	0	1.116	/	Pass
		707.5	6	0	1.103	/	Pass
		715.3	6	0	1.115	/	Pass
3	QPSK	700.5	15	0	2.738	/	Pass
		707.5	15	0	2.737	/	Pass
		714.5	15	0	2.736	/	Pass
	16QAM	700.5	15	0	2.728	/	Pass
		707.5	15	0	2.733	/	Pass
		714.5	15	0	2.722	/	Pass
5	QPSK	701.5	25	0	4.548	/	Pass
		707.5	25	0	4.543	/	Pass
		713.5	25	0	4.549	/	Pass
	16QAM	701.5	25	0	4.540	/	Pass
		707.5	25	0	4.564	/	Pass
		713.5	25	0	4.538	/	Pass
10	QPSK	704	50	0	9.030	/	Pass
		707.5	50	0	9.010	/	Pass
		711	50	0	9.049	/	Pass
	16QAM	704	50	0	9.046	/	Pass
		707.5	50	0	9.030	/	Pass
		711	50	0	9.054	/	Pass

4.1.2 Band12_XDB

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.305	/	Pass
		707.5	6	0	1.329	/	Pass
		715.3	6	0	1.343	/	Pass
	16QAM	699.7	6	0	1.328	/	Pass
		707.5	6	0	1.290	/	Pass
		715.3	6	0	1.338	/	Pass
3	QPSK	700.5	15	0	3.014	/	Pass
		707.5	15	0	3.015	/	Pass
		714.5	15	0	3.047	/	Pass
	16QAM	700.5	15	0	3.008	/	Pass
		707.5	15	0	3.014	/	Pass
		714.5	15	0	2.977	/	Pass
5	QPSK	701.5	25	0	5.060	/	Pass
		707.5	25	0	5.025	/	Pass
		713.5	25	0	5.039	/	Pass

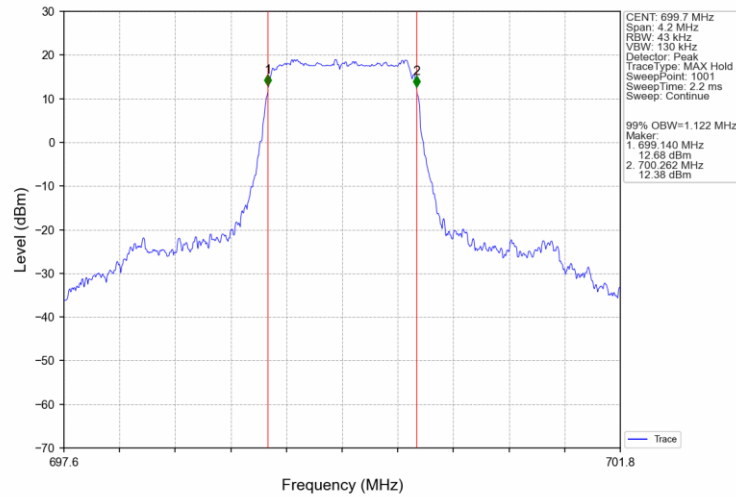


	16QAM	701.5	25	0	5.087	/	Pass
		707.5	25	0	5.082	/	Pass
		713.5	25	0	5.045	/	Pass
10	QPSK	704	50	0	9.966	/	Pass
		707.5	50	0	9.886	/	Pass
		711	50	0	9.912	/	Pass
	16QAM	704	50	0	10.002	/	Pass
		707.5	50	0	9.876	/	Pass
		711	50	0	9.909	/	Pass

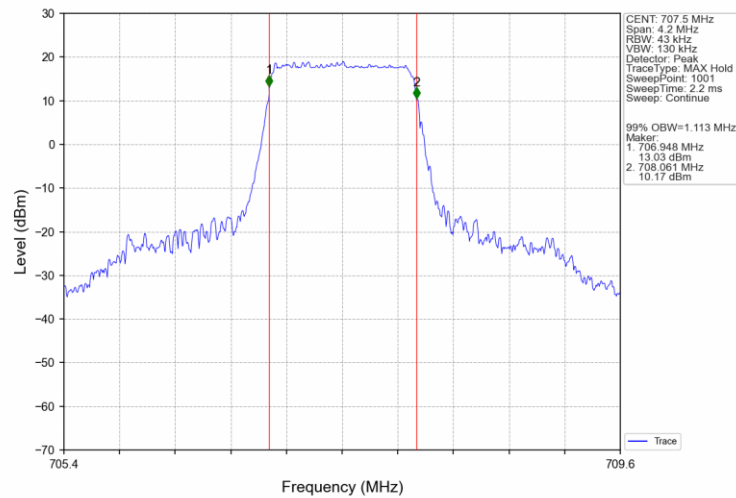
4.2 Test Graph

4.2.1 Band12_OBW

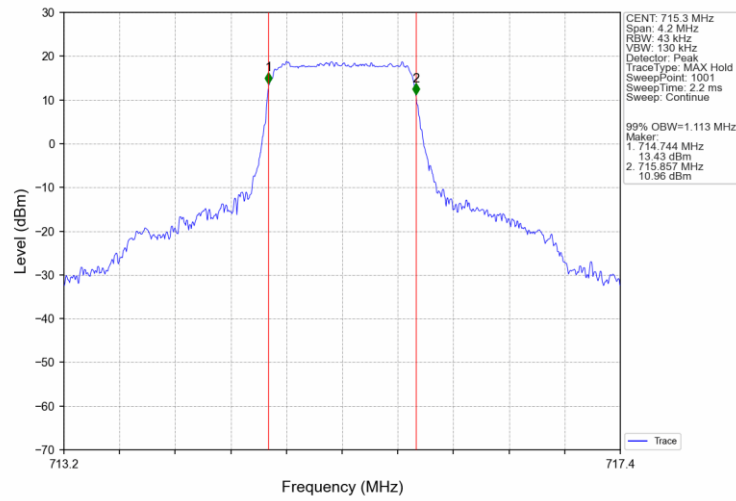
Band12 1.4MHz QPSK LCH 699.7MHz RB 6 0 NTV



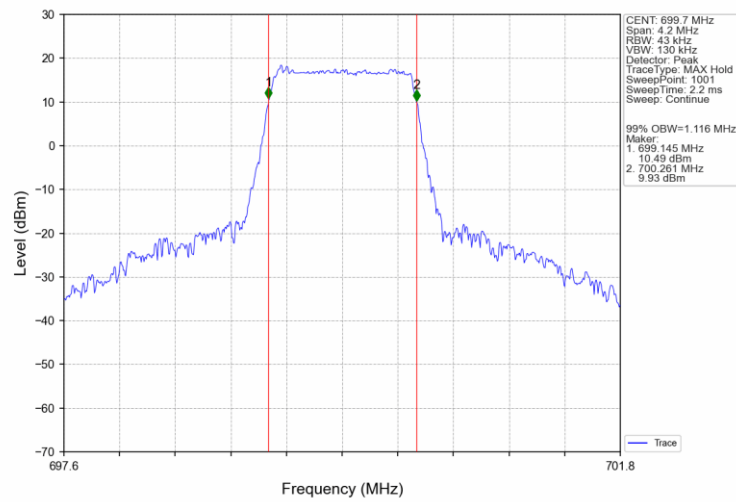
Band12 1.4MHz QPSK MCH 707.5MHz RB 6 0 NTV



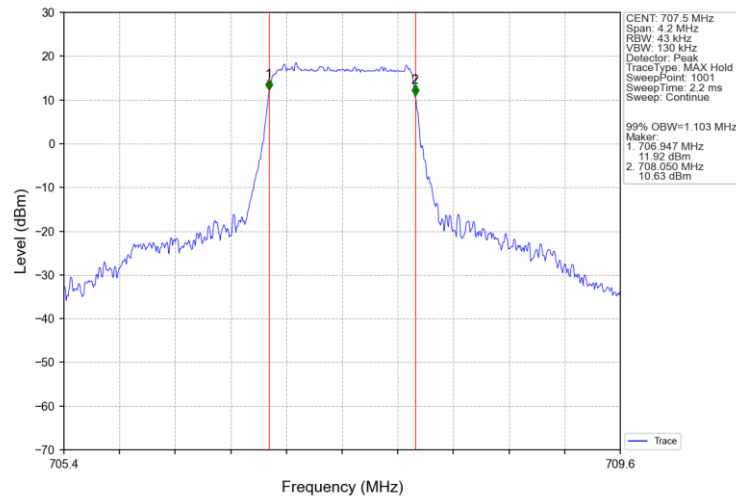
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



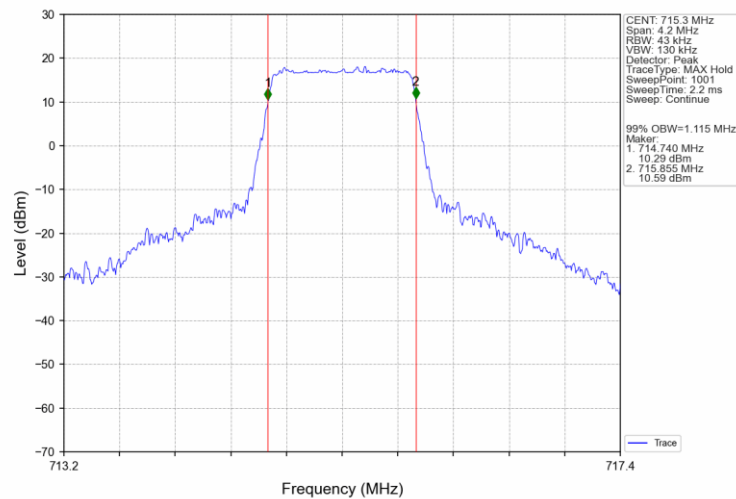
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



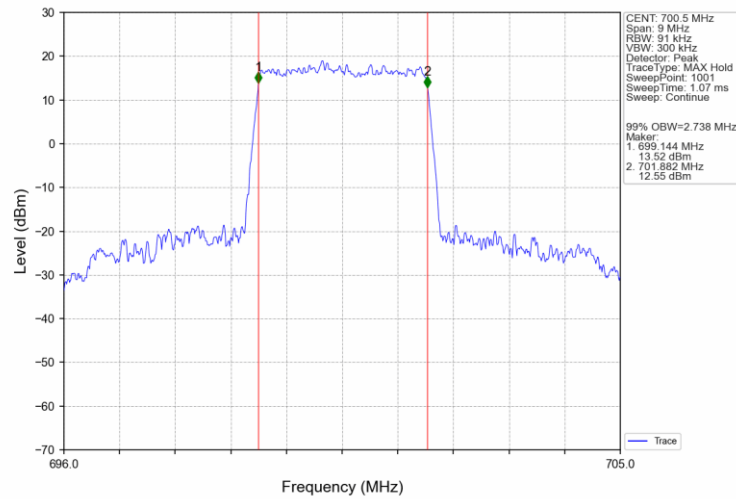
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



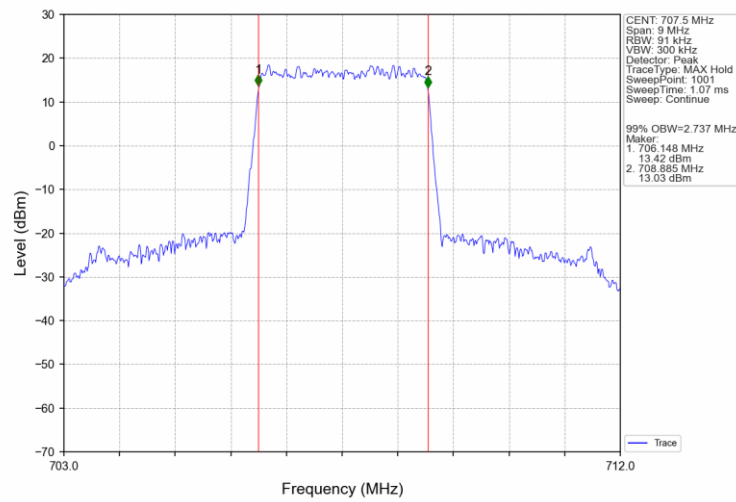
Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



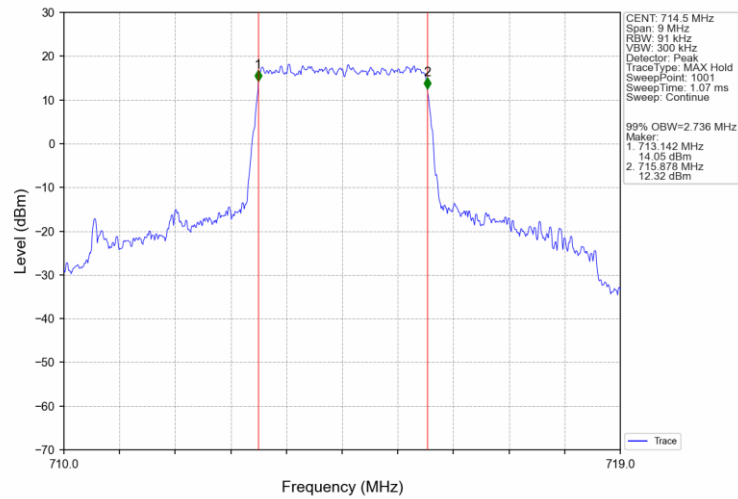
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



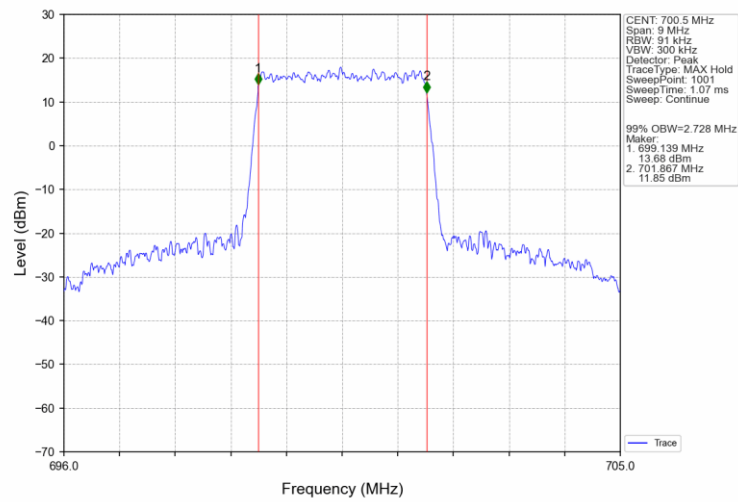
Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



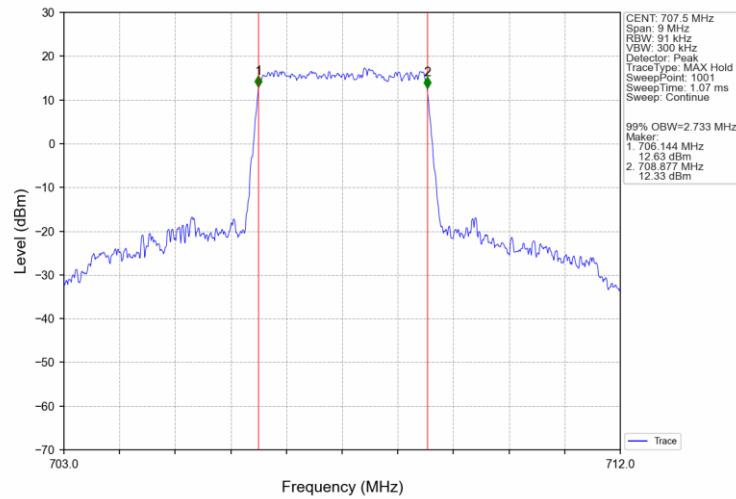
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



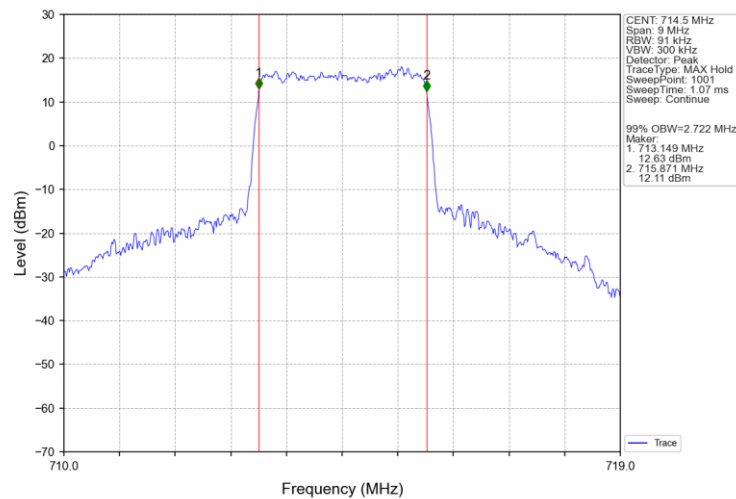
Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



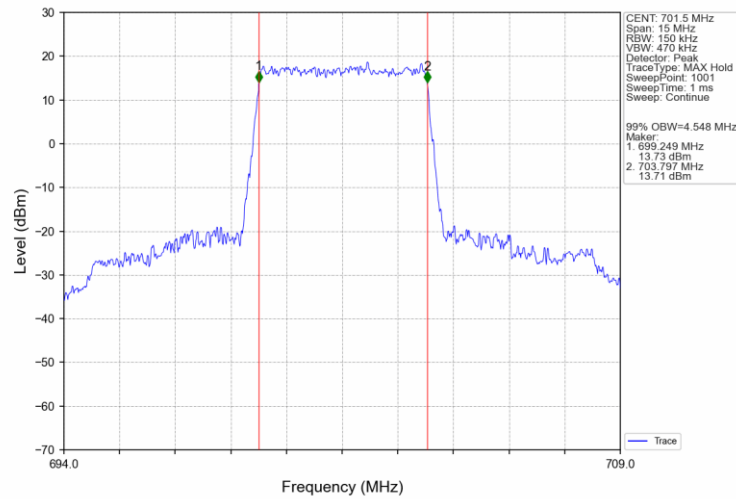
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



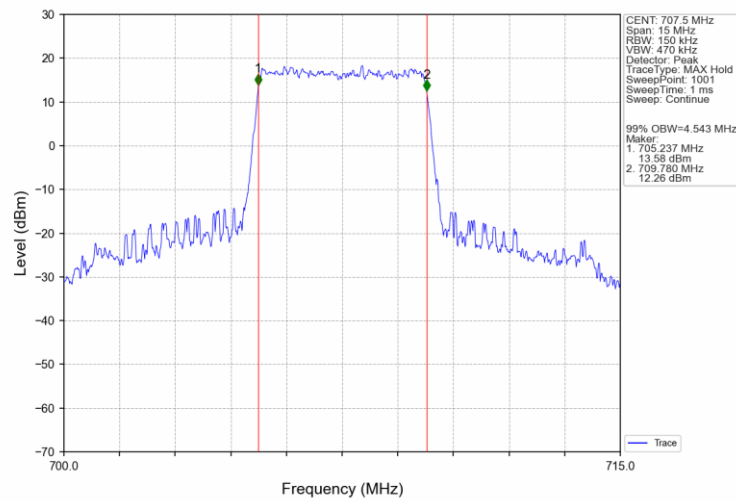
Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



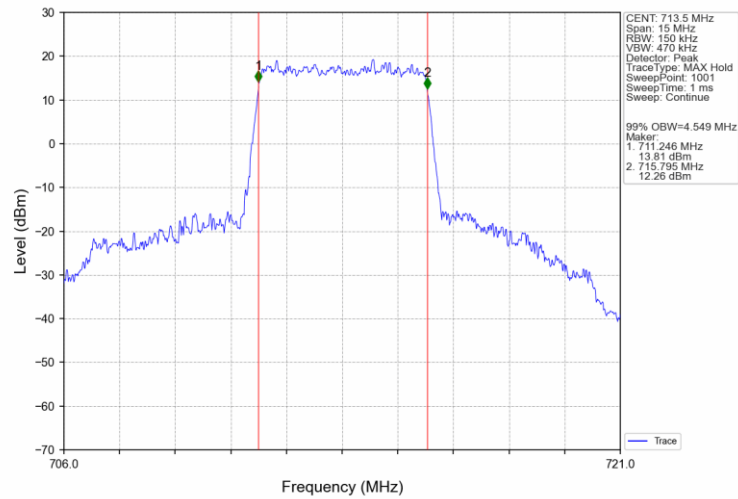
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



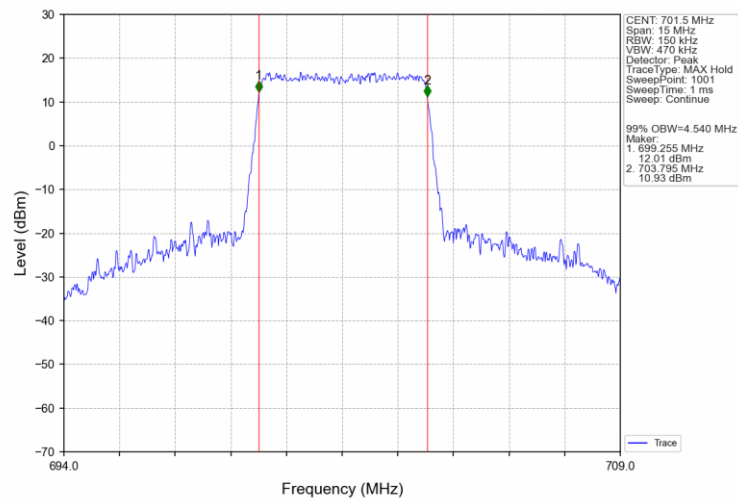
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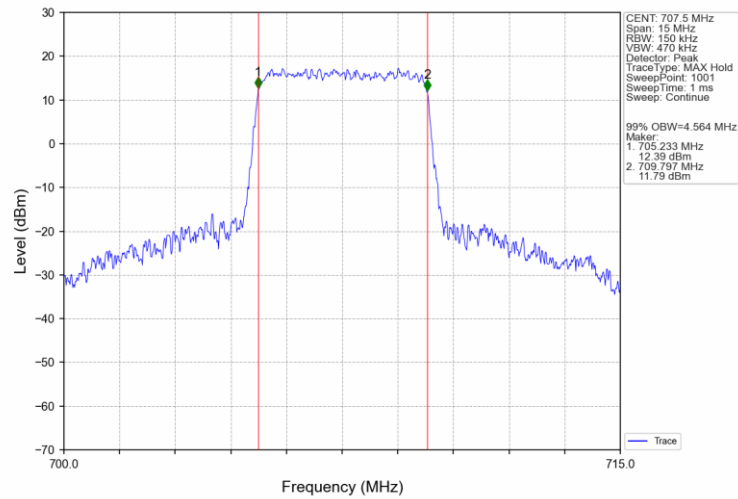
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



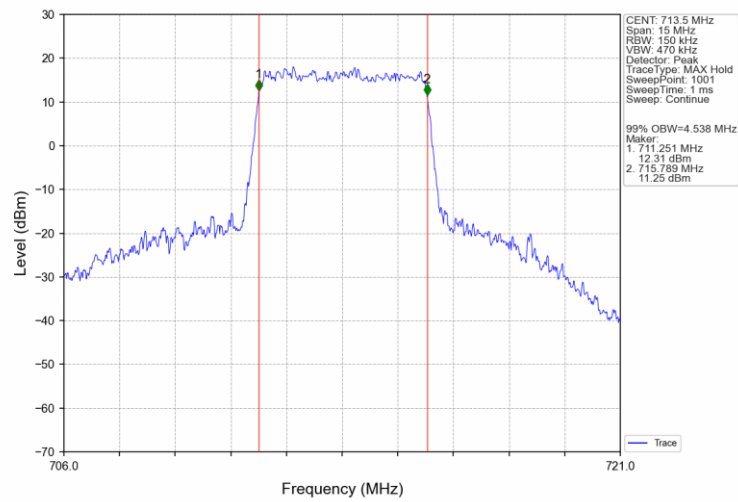
Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



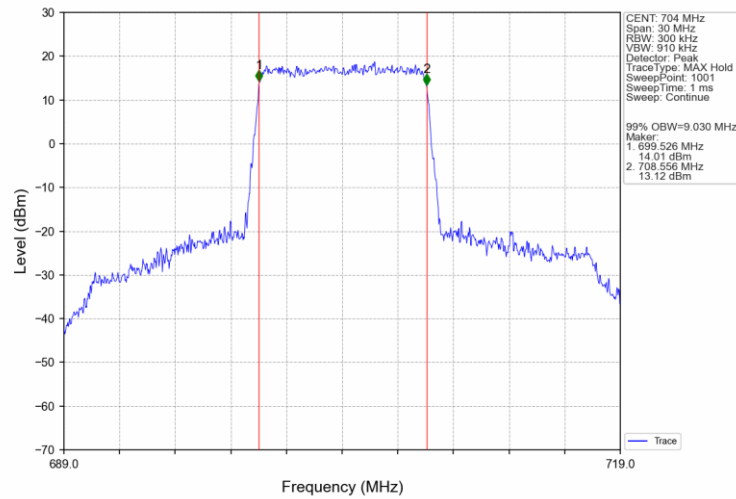
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



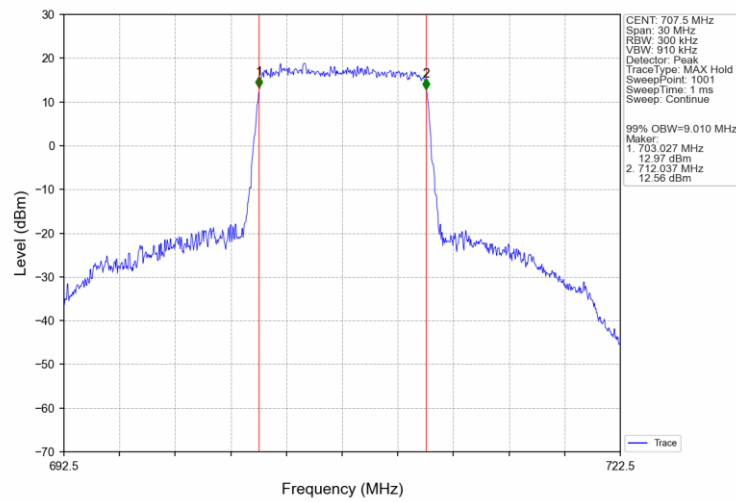
Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



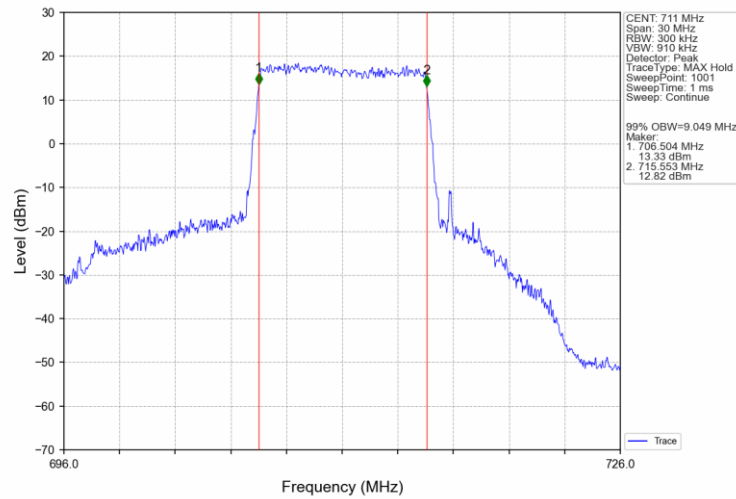
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



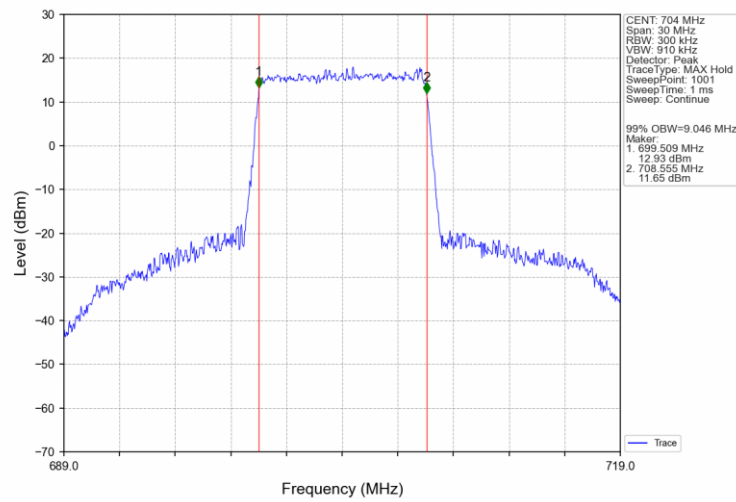
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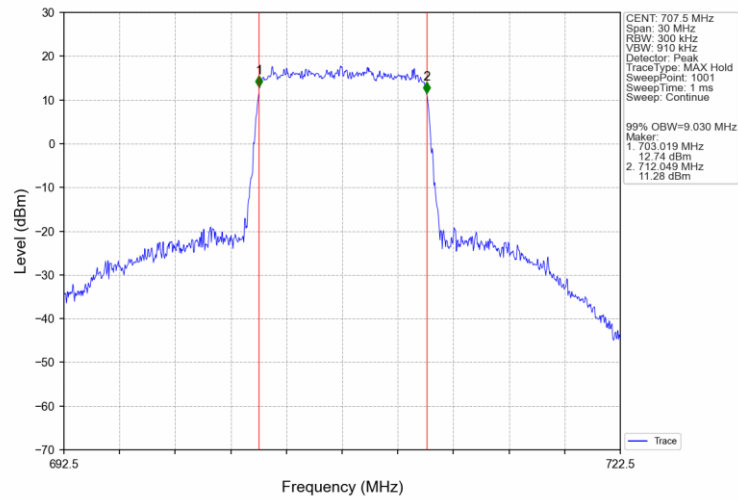
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



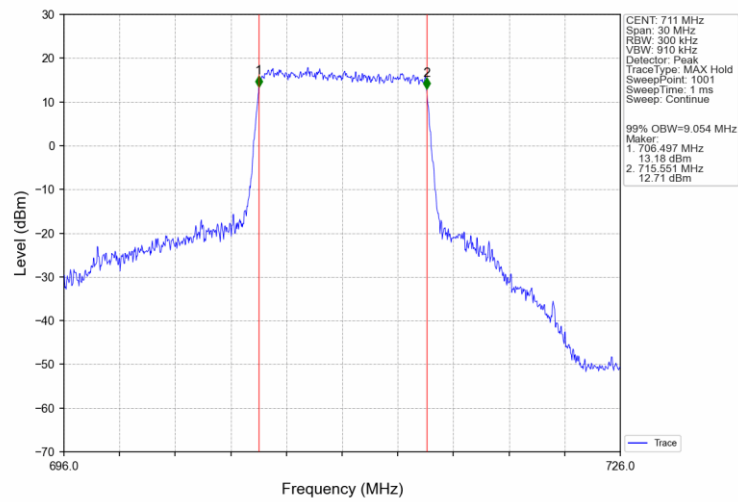
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Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV

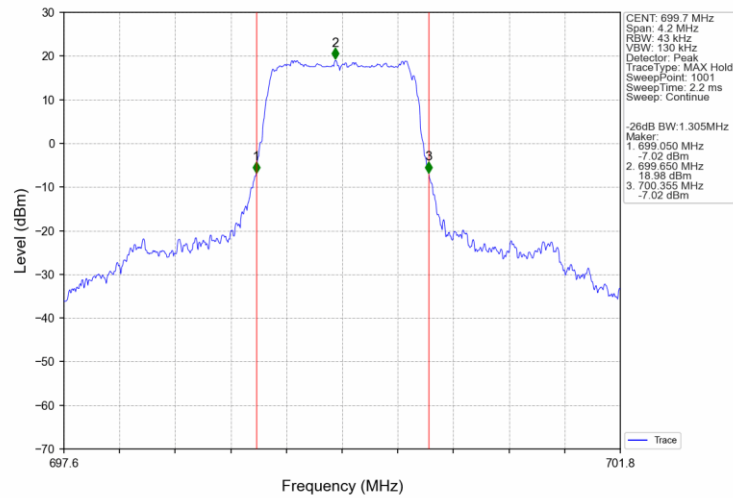


Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV

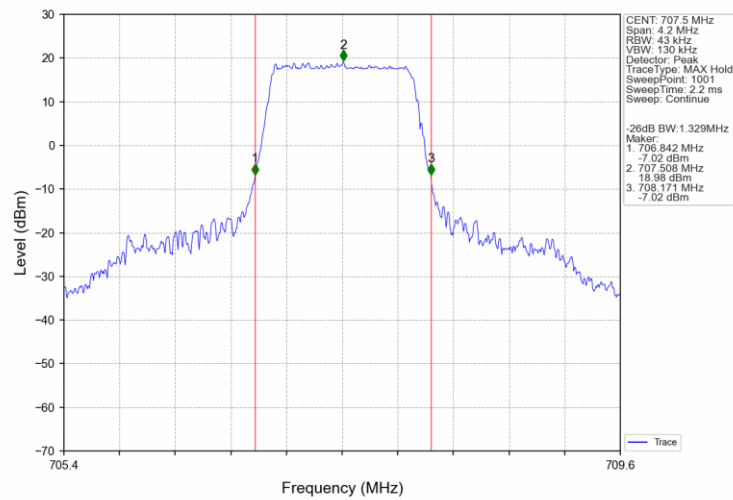


4.2.2 Band12_XDB

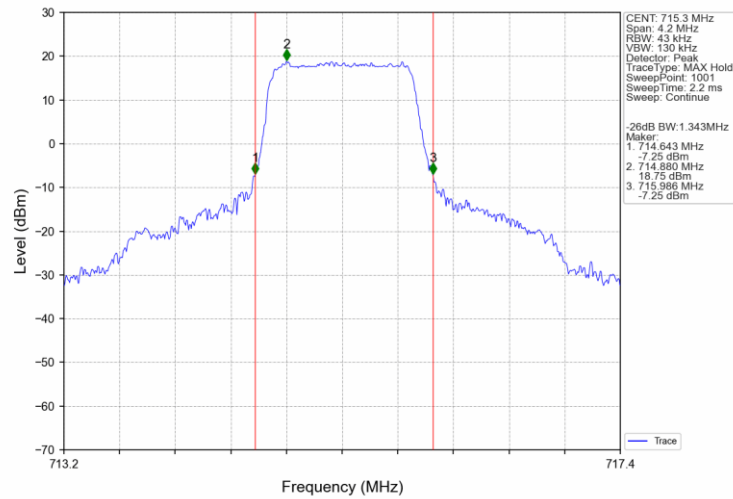
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV



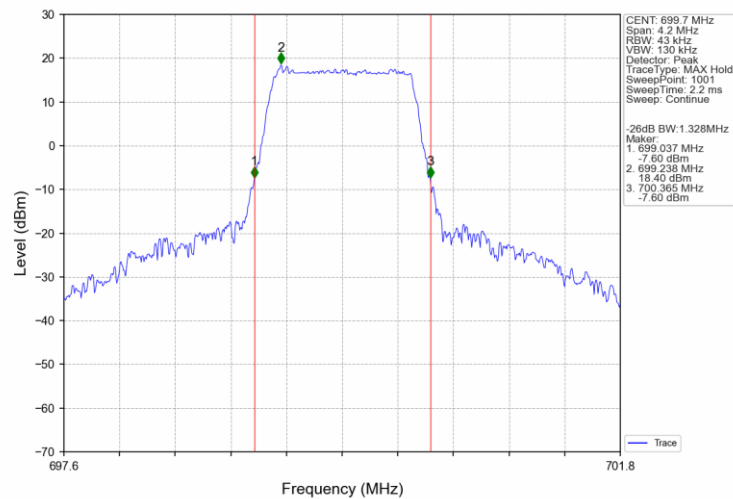
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV



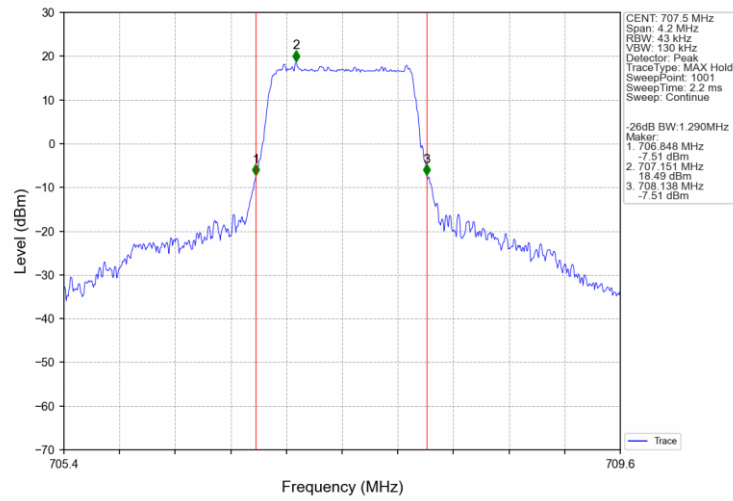
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



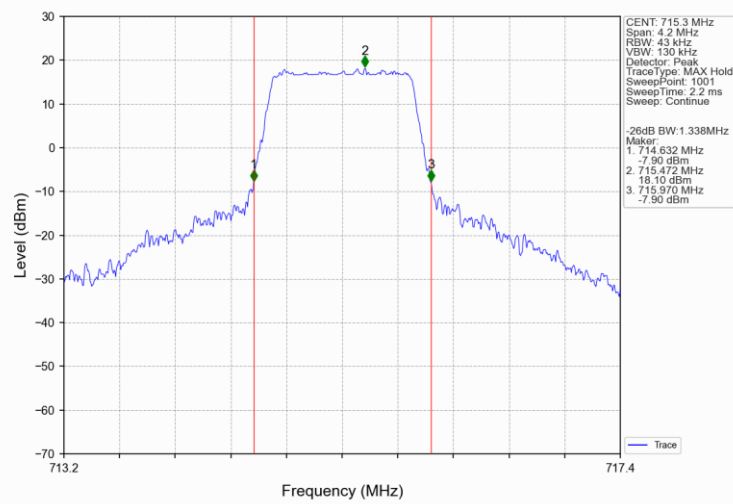
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



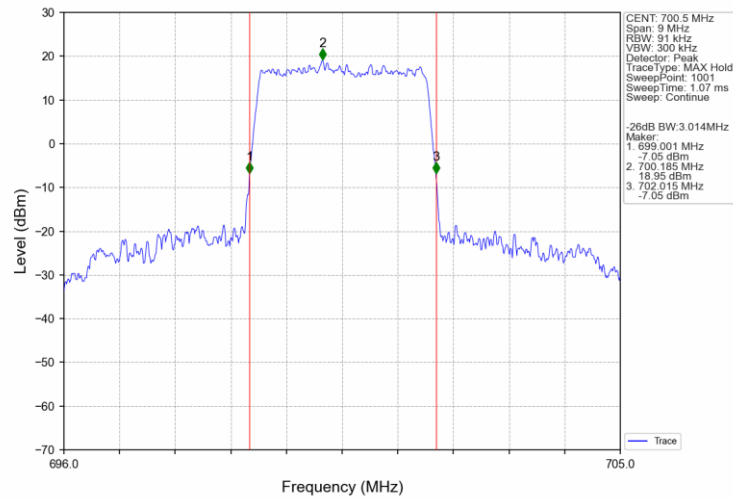
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



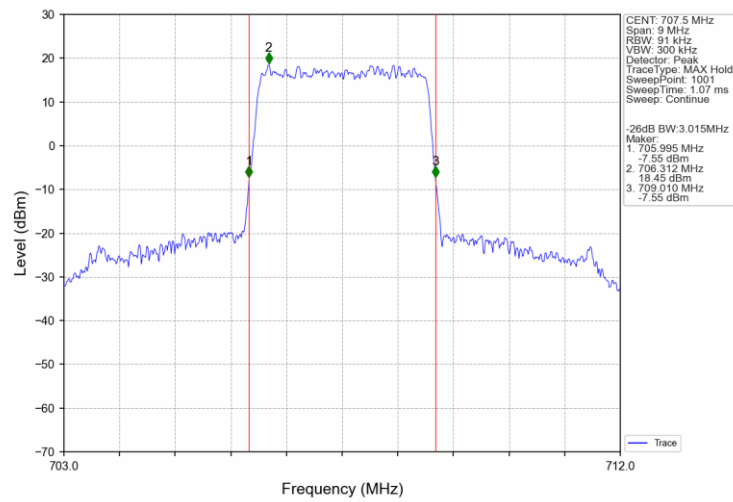
Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



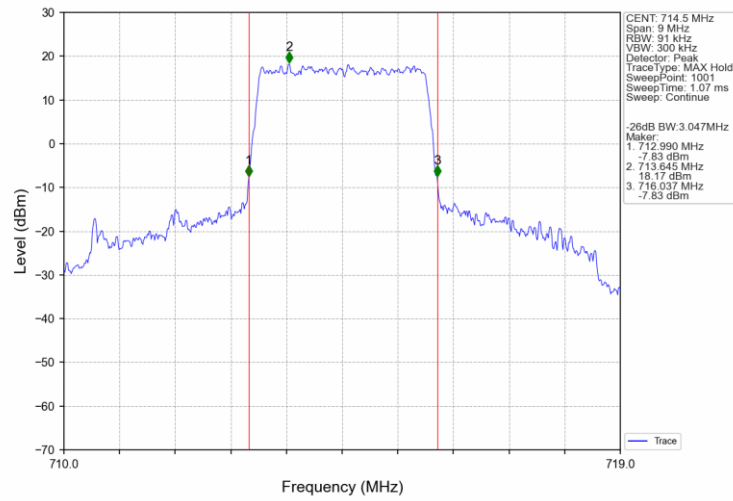
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



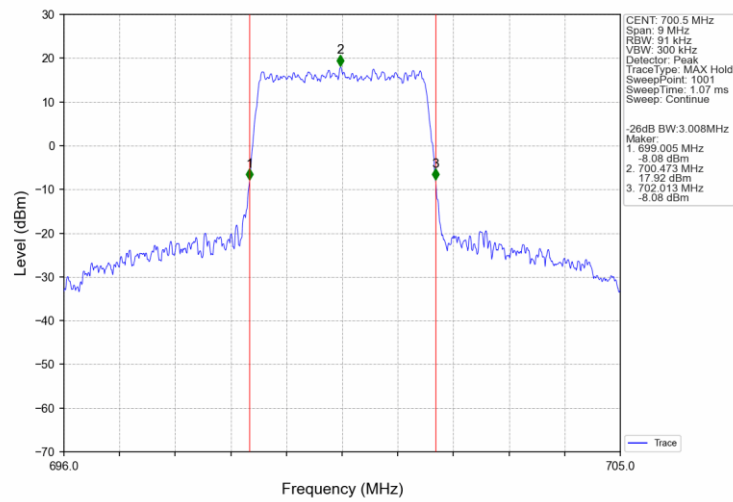
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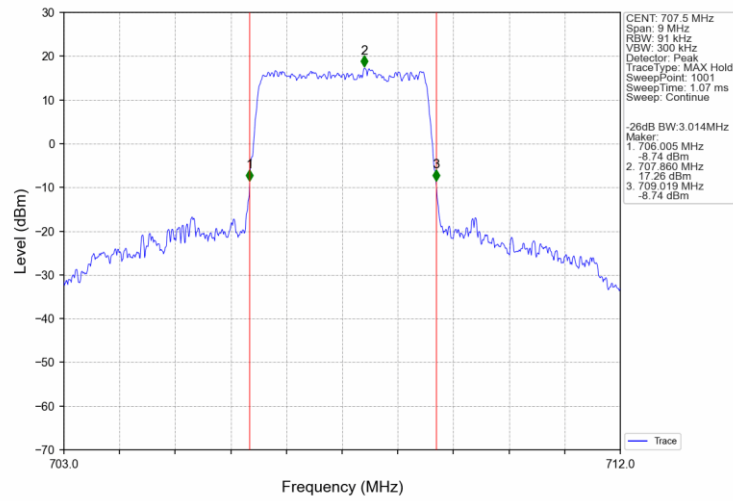
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



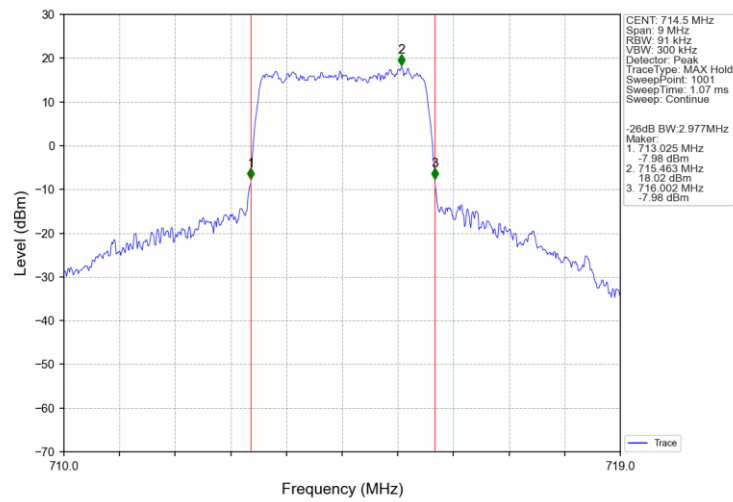
Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



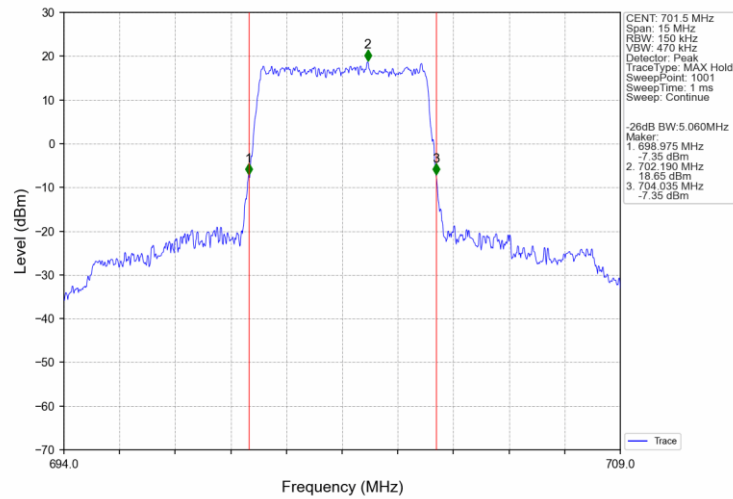
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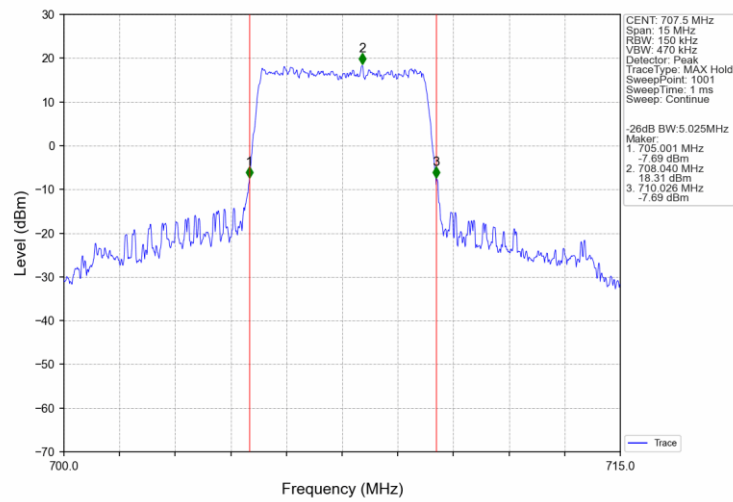
Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



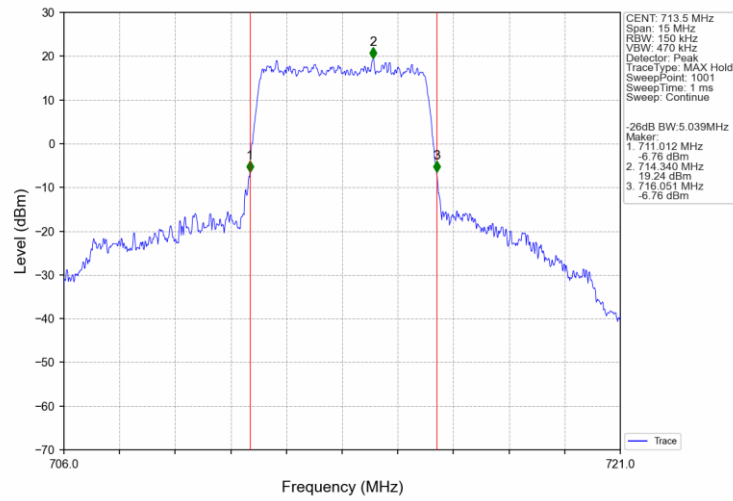
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



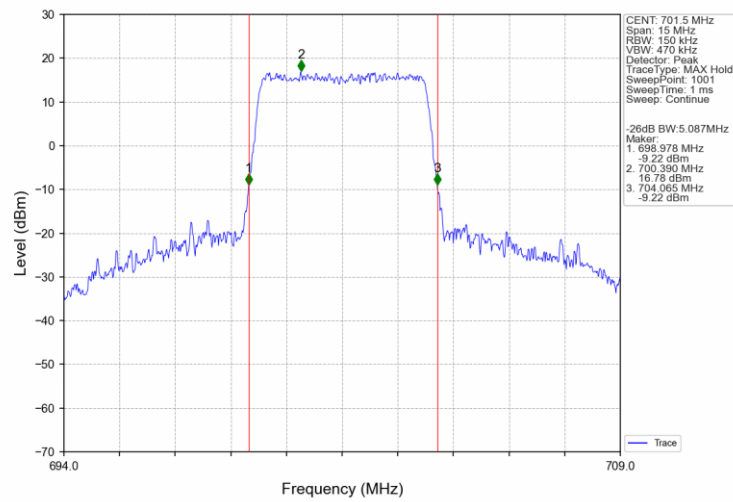
Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



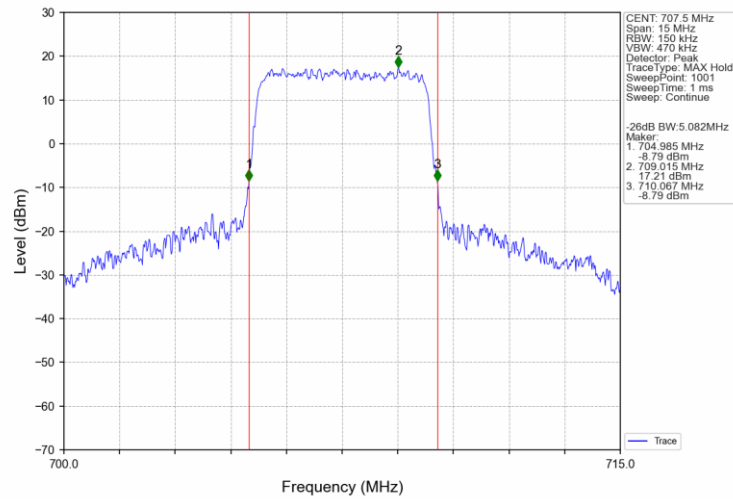
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



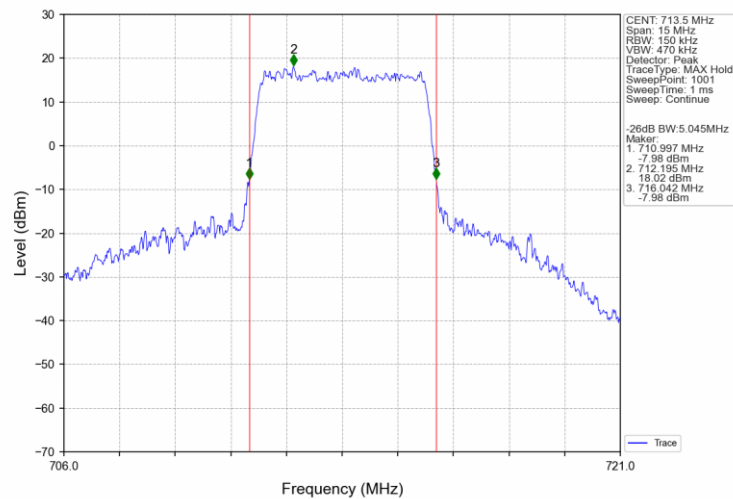
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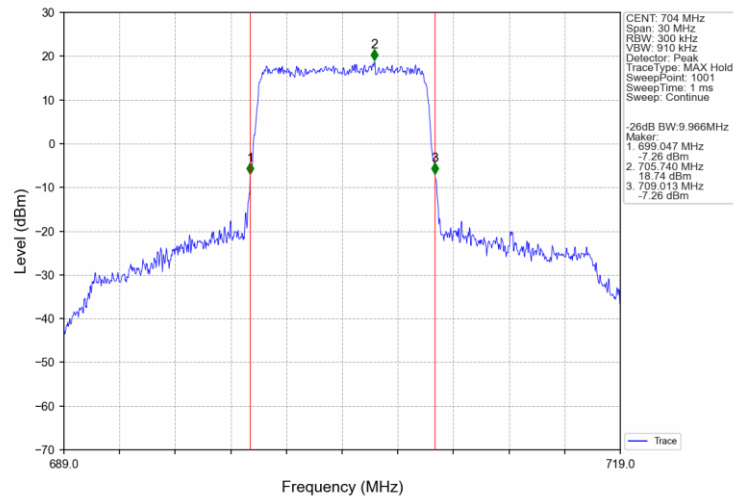
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



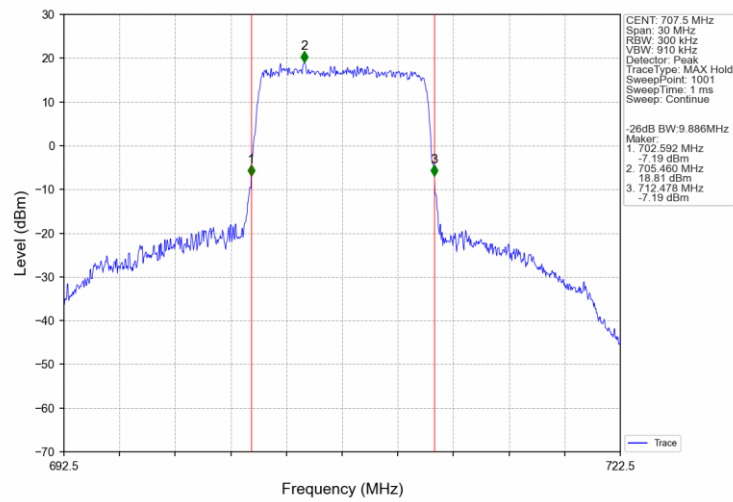
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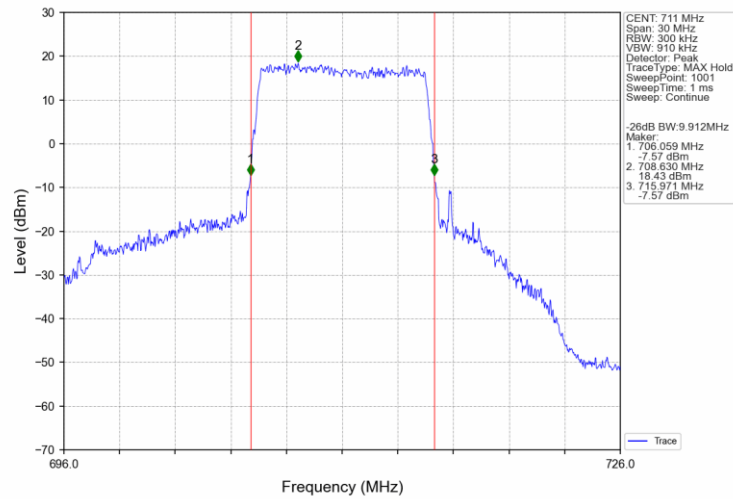
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



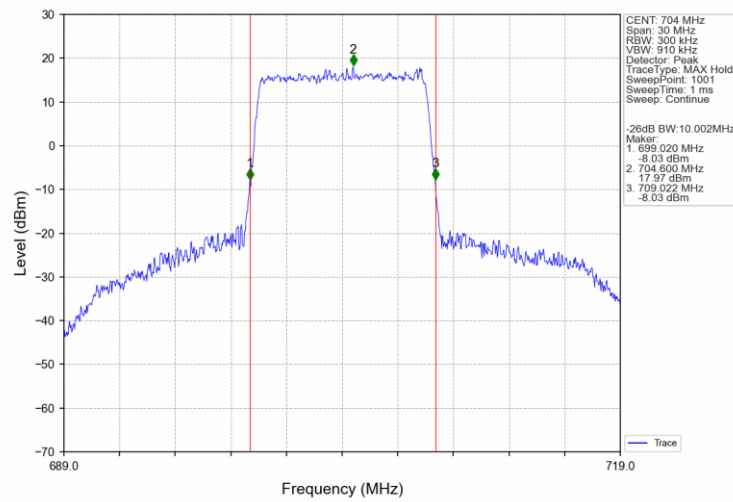
Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



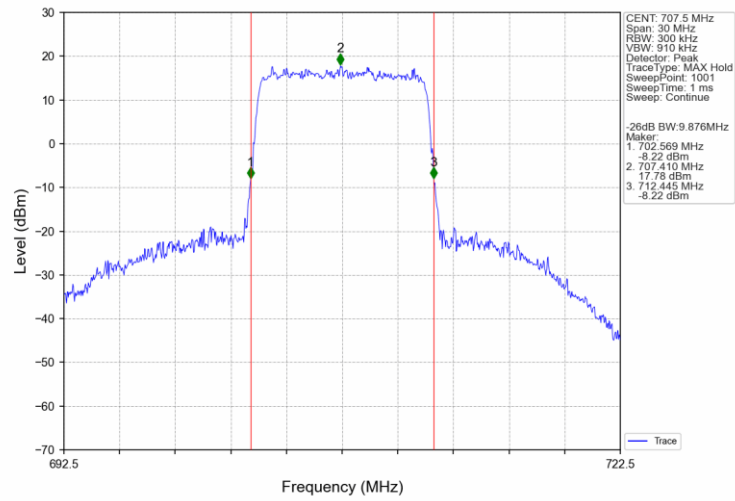
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



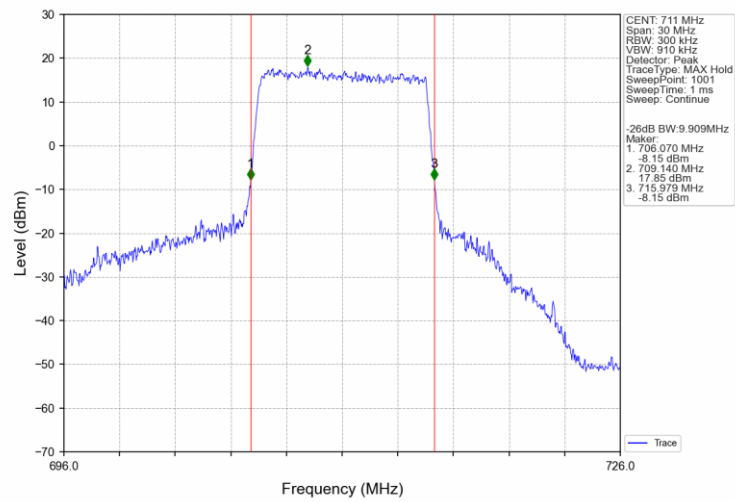
Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



5. Peak-Average Ratio

5.1 Test Result

5.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	6	0	5.15	<=13	Pass
	707.5	6	0	4.87	<=13	Pass
	715.3	6	0	4.26	<=13	Pass
16QAM	699.7	6	0	6.05	<=13	Pass
	707.5	6	0	5.73	<=13	Pass
	715.3	6	0	5.04	<=13	Pass

5.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.33	<=13	Pass
	707.5	15	0	5.09	<=13	Pass
	714.5	15	0	4.67	<=13	Pass
16QAM	700.5	15	0	6.18	<=13	Pass
	707.5	15	0	5.95	<=13	Pass
	714.5	15	0	5.49	<=13	Pass

5.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.52	<=13	Pass
	707.5	25	0	5.45	<=13	Pass
	713.5	25	0	5.19	<=13	Pass
16QAM	701.5	25	0	6.28	<=13	Pass
	707.5	25	0	6.19	<=13	Pass
	713.5	25	0	5.88	<=13	Pass

5.1.4 B12_10MHz

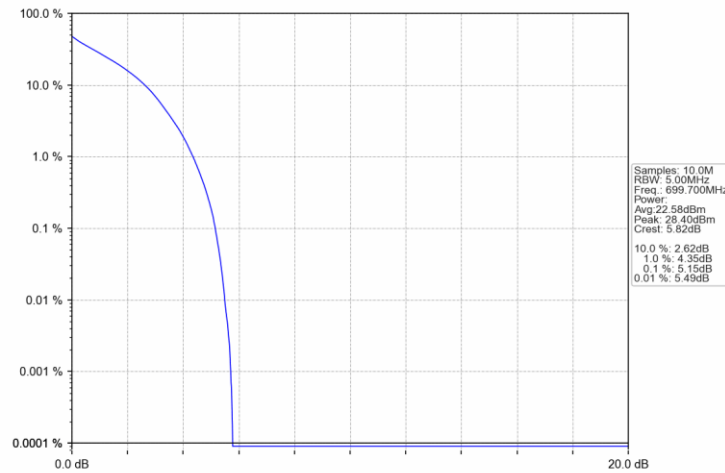
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.30	<=13	Pass
	707.5	50	0	5.27	<=13	Pass
	711	50	0	5.31	<=13	Pass
16QAM	704	50	0	6.09	<=13	Pass
	707.5	50	0	6.09	<=13	Pass
	711	50	0	6.09	<=13	Pass



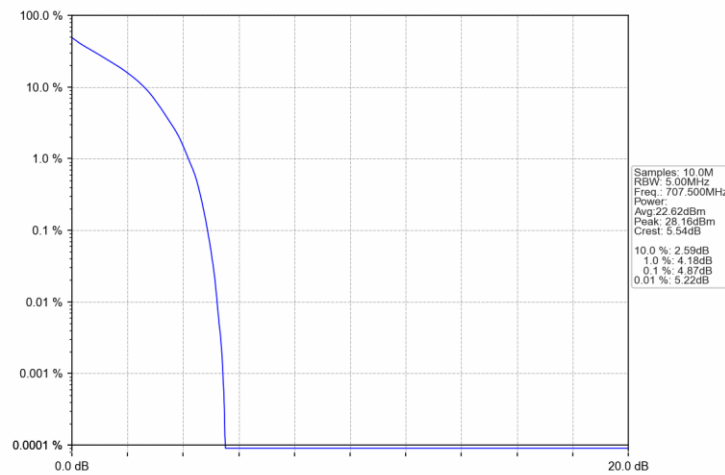
5.2 Test Graph

5.2.1 B12_1.4MHz

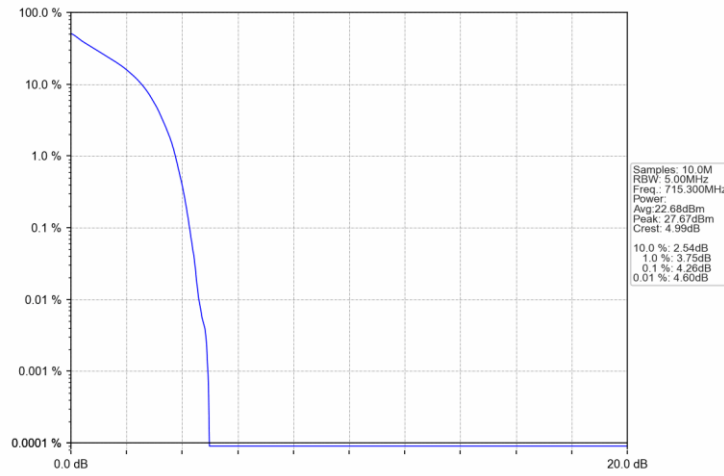
Band12 1.4MHz QPSK LCH 699.7MHz RB 6 0 NTV



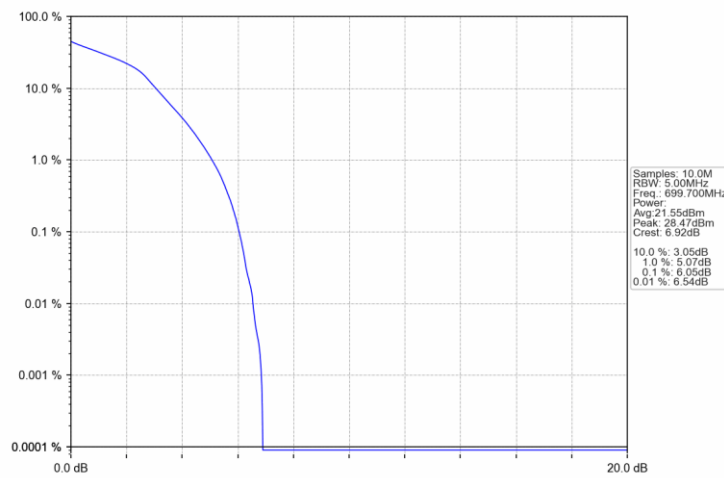
Band12 1.4MHz QPSK MCH 707.5MHz RB 6 0 NTV



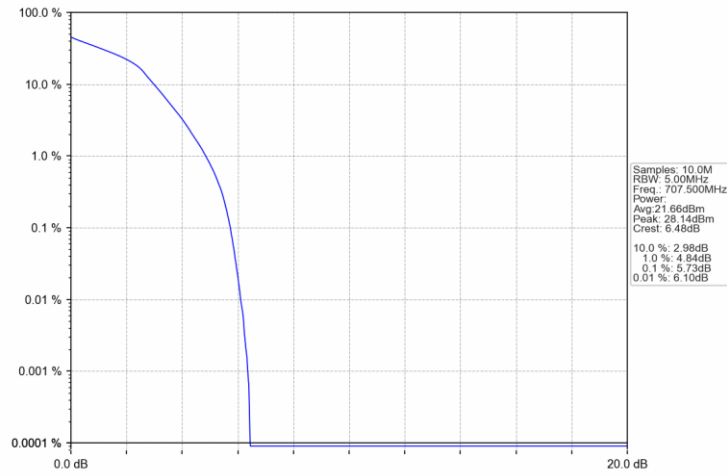
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



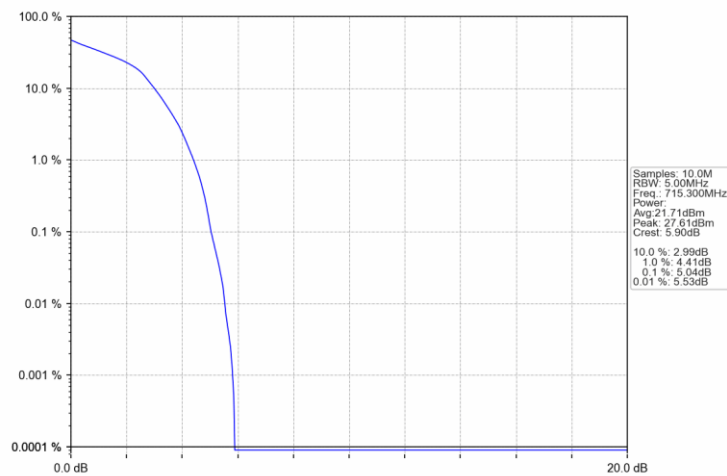
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTNV

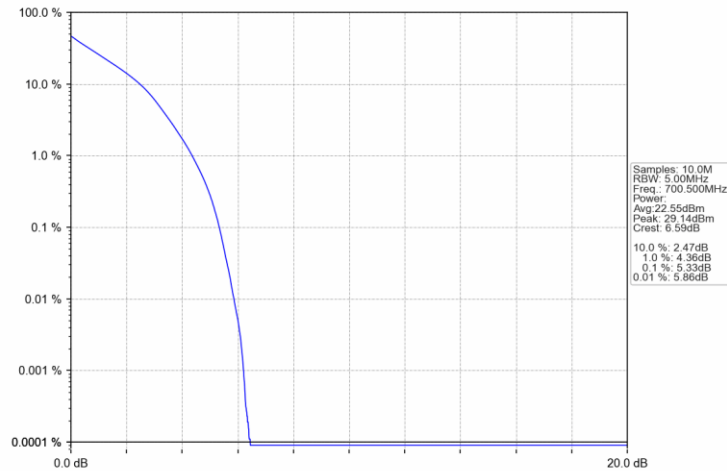


Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTNV



5.2.2 B12_3MHz

Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV

