Appendix RF test data for LTE_band_5

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B5_1.4MHz_ERP

Band: 5 / Bandwidth: 1.4MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	824.7	1	0	24.37	-1.80	20.42	<=38.45	Pass
			2	24.47	-1.80	20.52	<=38.45	Pass
			5	24.40	-1.80	20.45	<=38.45	Pass
		3	0	24.45	-1.80	20.50	<=38.45	Pass
			2	24.49	-1.80	20.54	<=38.45	Pass
			3	24.46	-1.80	20.51	<=38.45	Pass
		6	0	23.41	-1.80	19.46	<=38.45	Pass
	836.5	1	0	24.30	-1.80	20.35	<=38.45	Pass
			2	24.37	-1.80	20.42	<=38.45	Pass
			5	24.26	-1.80	20.31	<=38.45	Pass
		3	0	24.40	-1.80	20.45	<=38.45	Pass
			2	24.42	-1.80	20.47	<=38.45	Pass
			3	24.37	-1.80	20.42	<=38.45	Pass
		6	0	23.40	-1.80	19.45	<=38.45	Pass
	848.3	1	0	24.27	-1.80	20.32	<=38.45	Pass
			2	24.45	-1.80	20.50	<=38.45	Pass
			5	24.36	-1.80	20.41	<=38.45	Pass
		3	0	24.34	-1.80	20.39	<=38.45	Pass
			2	24.35	-1.80	20.40	<=38.45	Pass
			3	24.33	-1.80	20.38	<=38.45	Pass
		6	0	23.41	-1.80	19.46	<=38.45	Pass
16QAM	824.7	1	0	23.48	-1.80	19.53	<=38.45	Pass
			2	23.62	-1.80	19.67	<=38.45	Pass
			5	23.54	-1.80	19.59	<=38.45	Pass
		3	0	23.37	-1.80	19.42	<=38.45	Pass
			2	23.40	-1.80	19.45	<=38.45	Pass
			3	23.48	-1.80	19.53	<=38.45	Pass
		6	0	22.41	-1.80	18.46	<=38.45	Pass
	836.5	1	0	23.31	-1.80	19.36	<=38.45	Pass
			2	23.40	-1.80	19.45	<=38.45	Pass
			5	23.27	-1.80	19.32	<=38.45	Pass
		3	0	23.58	-1.80	19.63	<=38.45	Pass
			2	23.60	-1.80	19.65	<=38.45	Pass
			3	23.59	-1.80	19.64	<=38.45	Pass
		6	0	22.37	-1.80	18.42	<=38.45	Pass
	848.3	1	0	23.26	-1.80	19.31	<=38.45	Pass
			2	23.40	-1.80	19.45	<=38.45	Pass
			5	23.32	-1.80	19.37	<=38.45	Pass
		3	0	23.35	-1.80	19.40	<=38.45	Pass
			2	23.36	-1.80	19.41	<=38.45	Pass
			3	23.34	-1.80	19.39	<=38.45	Pass
		6	0	22.29	-1.80	18.34	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.2 B5_3MHz_ERP

Band: 5 / Bandwidth: 3MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	

QPSK	825.5	1	0	24.40	-1.80	20.45	<=38.45	Pass
			7	24.54	-1.80	20.59	<=38.45	Pass
			14	24.42	-1.80	20.47	<=38.45	Pass
		8	0	23.41	-1.80	19.46	<=38.45	Pass
			4	23.46	-1.80	19.51	<=38.45	Pass
			7	23.41	-1.80	19.46	<=38.45	Pass
		15	0	23.40	-1.80	19.45	<=38.45	Pass
	836.5	1	0	24.37	-1.80	20.42	<=38.45	Pass
			7	24.51	-1.80	20.56	<=38.45	Pass
			14	24.41	-1.80	20.46	<=38.45	Pass
		8	0	23.40	-1.80	19.45	<=38.45	Pass
			4	23.46	-1.80	19.51	<=38.45	Pass
			7	23.44	-1.80	19.49	<=38.45	Pass
		15	0	23.42	-1.80	19.47	<=38.45	Pass
	847.5	1	0	24.30	-1.80	20.35	<=38.45	Pass
			7	24.42	-1.80	20.47	<=38.45	Pass
			14	24.35	-1.80	20.40	<=38.45	Pass
		8	0	23.37	-1.80	19.42	<=38.45	Pass
			4	23.42	-1.80	19.47	<=38.45	Pass
			7	23.39	-1.80	19.44	<=38.45	Pass
		15	0	23.39	-1.80	19.44	<=38.45	Pass
16QAM	825.5	1	0	23.87	-1.80	19.92	<=38.45	Pass
			7	24.01	-1.80	20.06	<=38.45	Pass
			14	23.89	-1.80	19.94	<=38.45	Pass
		8	0	22.56	-1.80	18.61	<=38.45	Pass
			4	22.60	-1.80	18.65	<=38.45	Pass
			7	22.56	-1.80	18.61	<=38.45	Pass
		15	0	22.45	-1.80	18.50	<=38.45	Pass
	836.5	1	0	23.42	-1.80	19.47	<=38.45	Pass
			7	23.54	-1.80	19.59	<=38.45	Pass
			14	23.38	-1.80	19.43	<=38.45	Pass
		8	0	22.46	-1.80	18.51	<=38.45	Pass
			4	22.52	-1.80	18.57	<=38.45	Pass
			7	22.45	-1.80	18.50	<=38.45	Pass
		15	0	22.48	-1.80	18.53	<=38.45	Pass
	847.5	1	0	23.49	-1.80	19.54	<=38.45	Pass
			7	23.61	-1.80	19.66	<=38.45	Pass
			14	23.48	-1.80	19.53	<=38.45	Pass
		8	0	22.33	-1.80	18.38	<=38.45	Pass
			4	22.38	-1.80	18.43	<=38.45	Pass
			7	22.33	-1.80	18.38	<=38.45	Pass
		15	0	22.31	-1.80	18.36	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.3 B5_5MHz_ERP

Band: 5 / Bandwidth: 5MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	826.5	1	0	24.27	-1.80	20.32	<=38.45	Pass
			13	24.43	-1.80	20.48	<=38.45	Pass
			24	24.31	-1.80	20.36	<=38.45	Pass
		12	0	23.34	-1.80	19.39	<=38.45	Pass
			6	23.41	-1.80	19.46	<=38.45	Pass
			13	23.37	-1.80	19.42	<=38.45	Pass
		25	0	23.34	-1.80	19.39	<=38.45	Pass
	836.5	1	0	24.22	-1.80	20.27	<=38.45	Pass
			13	24.31	-1.80	20.36	<=38.45	Pass

			24	24.22	-1.80	20.27	<=38.45	Pass
		12	0	23.29	-1.80	19.34	<=38.45	Pass
			6	23.40	-1.80	19.45	<=38.45	Pass
			13	23.38	-1.80	19.43	<=38.45	Pass
		25	0	23.34	-1.80	19.39	<=38.45	Pass
	846.5	1	0	24.23	-1.80	20.28	<=38.45	Pass
			13	24.29	-1.80	20.34	<=38.45	Pass
			24	24.24	-1.80	20.29	<=38.45	Pass
		12	0	23.34	-1.80	19.39	<=38.45	Pass
			6	23.37	-1.80	19.42	<=38.45	Pass
			13	23.36	-1.80	19.41	<=38.45	Pass
		25	0	23.31	-1.80	19.36	<=38.45	Pass
16QAM	826.5	1	0	23.48	-1.80	19.53	<=38.45	Pass
			13	23.64	-1.80	19.69	<=38.45	Pass
			24	23.55	-1.80	19.60	<=38.45	Pass
		12	0	22.37	-1.80	18.42	<=38.45	Pass
			6	22.42	-1.80	18.47	<=38.45	Pass
			13	22.37	-1.80	18.42	<=38.45	Pass
		25	0	22.38	-1.80	18.43	<=38.45	Pass
	836.5	1	0	23.11	-1.80	19.16	<=38.45	Pass
			13	23.20	-1.80	19.25	<=38.45	Pass
			24	23.12	-1.80	19.17	<=38.45	Pass
		12	0	22.30	-1.80	18.35	<=38.45	Pass
			6	22.41	-1.80	18.46	<=38.45	Pass
			13	22.37	-1.80	18.42	<=38.45	Pass
		25	0	22.40	-1.80	18.45	<=38.45	Pass
	846.5	1	0	23.33	-1.80	19.38	<=38.45	Pass
			13	23.42	-1.80	19.47	<=38.45	Pass
			24	23.30	-1.80	19.35	<=38.45	Pass
		12	0	22.34	-1.80	18.39	<=38.45	Pass
			6	22.38	-1.80	18.43	<=38.45	Pass
			13	22.33	-1.80	18.38	<=38.45	Pass
		25	0	22.35	-1.80	18.40	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.4 B5_10MHz_ERP

Band: 5 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	829	1	0	24.34	-1.80	20.39	<=38.45	Pass
			25	24.53	-1.80	20.58	<=38.45	Pass
			49	24.30	-1.80	20.35	<=38.45	Pass
		25	0	23.48	-1.80	19.53	<=38.45	Pass
			13	23.41	-1.80	19.46	<=38.45	Pass
			25	23.40	-1.80	19.45	<=38.45	Pass
		50	0	23.47	-1.80	19.52	<=38.45	Pass
	836.5	1	0	24.34	-1.80	20.39	<=38.45	Pass
			25	24.51	-1.80	20.56	<=38.45	Pass
			49	24.37	-1.80	20.42	<=38.45	Pass
		25	0	23.33	-1.80	19.38	<=38.45	Pass
			13	23.43	-1.80	19.48	<=38.45	Pass
			25	23.36	-1.80	19.41	<=38.45	Pass
		50	0	23.38	-1.80	19.43	<=38.45	Pass
	844	1	0	24.28	-1.80	20.33	<=38.45	Pass
			25	24.43	-1.80	20.48	<=38.45	Pass
			49	24.31	-1.80	20.36	<=38.45	Pass
		25	0	23.49	-1.80	19.54	<=38.45	Pass

			13	23.38	-1.80	19.43	<=38.45	Pass
			25	23.33	-1.80	19.38	<=38.45	Pass
		50	0	23.44	-1.80	19.49	<=38.45	Pass
16QAM	829	1	0	23.79	-1.80	19.84	<=38.45	Pass
			25	24.02	-1.80	20.07	<=38.45	Pass
			49	23.87	-1.80	19.92	<=38.45	Pass
		25	0	22.56	-1.80	18.61	<=38.45	Pass
			13	22.49	-1.80	18.54	<=38.45	Pass
			25	22.51	-1.80	18.56	<=38.45	Pass
		50	0	22.49	-1.80	18.54	<=38.45	Pass
	836.5	1	0	23.38	-1.80	19.43	<=38.45	Pass
			25	23.50	-1.80	19.55	<=38.45	Pass
			49	23.37	-1.80	19.42	<=38.45	Pass
		25	0	22.44	-1.80	18.49	<=38.45	Pass
			13	22.49	-1.80	18.54	<=38.45	Pass
			25	22.49	-1.80	18.54	<=38.45	Pass
		50	0	22.44	-1.80	18.49	<=38.45	Pass
	844	1	0	23.45	-1.80	19.50	<=38.45	Pass
			25	23.62	-1.80	19.67	<=38.45	Pass
			49	23.47	-1.80	19.52	<=38.45	Pass
		25	0	22.46	-1.80	18.51	<=38.45	Pass
			13	22.38	-1.80	18.43	<=38.45	Pass
			25	22.33	-1.80	18.38	<=38.45	Pass
		50	0	22.42	-1.80	18.47	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

2. Frequency Stability

2.1 Test Result

2.1.1 B5_1.4MHz

Band: 5 / 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	824.7	6	0	20	3.27	-7.310	-0.0089	-2.5 to 2.5	Pass
					3.85	-8.826	-0.0107	-2.5 to 2.5	Pass
					4.43	-6.537	-0.0079	-2.5 to 2.5	Pass
				-30	3.85	-1.788	-0.0022	-2.5 to 2.5	Pass
				-20	3.85	-4.621	-0.0056	-2.5 to 2.5	Pass
				-10	3.85	-3.304	-0.0040	-2.5 to 2.5	Pass
				0	3.85	-5.951	-0.0072	-2.5 to 2.5	Pass
				10	3.85	-3.061	-0.0037	-2.5 to 2.5	Pass
				30	3.85	-2.546	-0.0031	-2.5 to 2.5	Pass
				40	3.85	-5.422	-0.0066	-2.5 to 2.5	Pass
				50	3.85	-5.422	-0.0066	-2.5 to 2.5	Pass
	836.5	6	0	20	3.27	-1.688	-0.0020	-2.5 to 2.5	Pass
					3.85	-5.865	-0.0070	-2.5 to 2.5	Pass
					4.43	-4.206	-0.0050	-2.5 to 2.5	Pass
				-30	3.85	-4.749	-0.0057	-2.5 to 2.5	Pass
				-20	3.85	-3.991	-0.0048	-2.5 to 2.5	Pass
				-10	3.85	-5.894	-0.0070	-2.5 to 2.5	Pass
				0	3.85	-6.652	-0.0080	-2.5 to 2.5	Pass
				10	3.85	-4.735	-0.0057	-2.5 to 2.5	Pass
				30	3.85	-5.479	-0.0065	-2.5 to 2.5	Pass
				40	3.85	-5.336	-0.0064	-2.5 to 2.5	Pass

				50	3.85	-8.011	-0.0096	-2.5 to 2.5	Pass
	848.3	6	0	20	3.27	-5.436	-0.0064	-2.5 to 2.5	Pass
					3.85	-5.150	-0.0061	-2.5 to 2.5	Pass
					4.43	-5.493	-0.0065	-2.5 to 2.5	Pass
				-30	3.85	-3.777	-0.0045	-2.5 to 2.5	Pass
				-20	3.85	-6.938	-0.0082	-2.5 to 2.5	Pass
				-10	3.85	-8.540	-0.0101	-2.5 to 2.5	Pass
				0	3.85	-5.565	-0.0066	-2.5 to 2.5	Pass
				10	3.85	-9.327	-0.0110	-2.5 to 2.5	Pass
				30	3.85	-9.227	-0.0109	-2.5 to 2.5	Pass
				40	3.85	-7.653	-0.0090	-2.5 to 2.5	Pass
				50	3.85	-7.453	-0.0088	-2.5 to 2.5	Pass
16QAM	824.7	6	0	20	3.27	-7.310	-0.0089	-2.5 to 2.5	Pass
					3.85	-5.636	-0.0068	-2.5 to 2.5	Pass
					4.43	-4.649	-0.0056	-2.5 to 2.5	Pass
				-30	3.85	-5.264	-0.0064	-2.5 to 2.5	Pass
				-20	3.85	-6.709	-0.0081	-2.5 to 2.5	Pass
				-10	3.85	-5.150	-0.0062	-2.5 to 2.5	Pass
				0	3.85	-3.905	-0.0047	-2.5 to 2.5	Pass
				10	3.85	-6.766	-0.0082	-2.5 to 2.5	Pass
				30	3.85	-2.933	-0.0036	-2.5 to 2.5	Pass
				40	3.85	-7.038	-0.0085	-2.5 to 2.5	Pass
				50	3.85	-4.821	-0.0058	-2.5 to 2.5	Pass
	836.5	6	0	20	3.27	-7.396	-0.0088	-2.5 to 2.5	Pass
					3.85	-8.640	-0.0103	-2.5 to 2.5	Pass
					4.43	-7.768	-0.0093	-2.5 to 2.5	Pass
				-30	3.85	-5.736	-0.0069	-2.5 to 2.5	Pass
				-20	3.85	-11.559	-0.0138	-2.5 to 2.5	Pass
				-10	3.85	-6.351	-0.0076	-2.5 to 2.5	Pass
				0	3.85	-9.799	-0.0117	-2.5 to 2.5	Pass
				10	3.85	-9.799	-0.0117	-2.5 to 2.5	Pass
				30	3.85	-6.008	-0.0072	-2.5 to 2.5	Pass
				40	3.85	-5.436	-0.0065	-2.5 to 2.5	Pass
				50	3.85	-8.726	-0.0104	-2.5 to 2.5	Pass
	848.3	6	0	20	3.27	-5.779	-0.0068	-2.5 to 2.5	Pass
					3.85	-3.920	-0.0046	-2.5 to 2.5	Pass
					4.43	-4.864	-0.0057	-2.5 to 2.5	Pass
				-30	3.85	-7.038	-0.0083	-2.5 to 2.5	Pass
				-20	3.85	-1.602	-0.0019	-2.5 to 2.5	Pass
				-10	3.85	-6.580	-0.0078	-2.5 to 2.5	Pass
				0	3.85	-6.537	-0.0077	-2.5 to 2.5	Pass
				10	3.85	-5.622	-0.0066	-2.5 to 2.5	Pass
				30	3.85	-4.435	-0.0052	-2.5 to 2.5	Pass
				40	3.85	-7.696	-0.0091	-2.5 to 2.5	Pass
				50	3.85	-6.666	-0.0079	-2.5 to 2.5	Pass

2.1.2 B5_3MHz

Band: 5 / Bandwidth: 3MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	825.5	15	0	20	3.27	-3.748	-0.0045	-2.5 to 2.5	Pass
					3.85	-6.294	-0.0076	-2.5 to 2.5	Pass
					4.43	-5.078	-0.0062	-2.5 to 2.5	Pass
				-30	3.85	-9.198	-0.0111	-2.5 to 2.5	Pass
				-20	3.85	-8.998	-0.0109	-2.5 to 2.5	Pass
				-10	3.85	-7.768	-0.0094	-2.5 to 2.5	Pass
				0	3.85	-9.270	-0.0112	-2.5 to 2.5	Pass

				10	3.85	-9.041	-0.0110	-2.5 to 2.5	Pass
				30	3.85	-9.727	-0.0118	-2.5 to 2.5	Pass
				40	3.85	-6.680	-0.0081	-2.5 to 2.5	Pass
				50	3.85	-4.778	-0.0058	-2.5 to 2.5	Pass
	836.5	15	0	20	3.27	-3.476	-0.0042	-2.5 to 2.5	Pass
					3.85	-6.366	-0.0076	-2.5 to 2.5	Pass
					4.43	-4.764	-0.0057	-2.5 to 2.5	Pass
				-30	3.85	-3.991	-0.0048	-2.5 to 2.5	Pass
				-20	3.85	-4.950	-0.0059	-2.5 to 2.5	Pass
				-10	3.85	-6.638	-0.0079	-2.5 to 2.5	Pass
				0	3.85	-7.997	-0.0096	-2.5 to 2.5	Pass
				10	3.85	-5.980	-0.0071	-2.5 to 2.5	Pass
				30	3.85	-5.307	-0.0063	-2.5 to 2.5	Pass
				40	3.85	-4.635	-0.0055	-2.5 to 2.5	Pass
				50	3.85	-3.877	-0.0046	-2.5 to 2.5	Pass
	847.5	15	0	20	3.27	-6.723	-0.0079	-2.5 to 2.5	Pass
					3.85	-6.981	-0.0082	-2.5 to 2.5	Pass
					4.43	-5.980	-0.0071	-2.5 to 2.5	Pass
				-30	3.85	-6.623	-0.0078	-2.5 to 2.5	Pass
				-20	3.85	-4.134	-0.0049	-2.5 to 2.5	Pass
				-10	3.85	-5.808	-0.0069	-2.5 to 2.5	Pass
				0	3.85	-3.476	-0.0041	-2.5 to 2.5	Pass
				10	3.85	-4.063	-0.0048	-2.5 to 2.5	Pass
				30	3.85	-5.693	-0.0067	-2.5 to 2.5	Pass
				40	3.85	-4.320	-0.0051	-2.5 to 2.5	Pass
				50	3.85	-5.608	-0.0066	-2.5 to 2.5	Pass
16QAM	825.5	15	0	20	3.27	-3.605	-0.0044	-2.5 to 2.5	Pass
					3.85	-9.828	-0.0119	-2.5 to 2.5	Pass
					4.43	-8.183	-0.0099	-2.5 to 2.5	Pass
				-30	3.85	-6.967	-0.0084	-2.5 to 2.5	Pass
				-20	3.85	-3.920	-0.0047	-2.5 to 2.5	Pass
				-10	3.85	-4.835	-0.0059	-2.5 to 2.5	Pass
				0	3.85	-5.250	-0.0064	-2.5 to 2.5	Pass
				10	3.85	-6.094	-0.0074	-2.5 to 2.5	Pass
				30	3.85	-8.154	-0.0099	-2.5 to 2.5	Pass
				40	3.85	-8.125	-0.0098	-2.5 to 2.5	Pass
				50	3.85	-6.323	-0.0077	-2.5 to 2.5	Pass
	836.5	15	0	20	3.27	-7.353	-0.0088	-2.5 to 2.5	Pass
					3.85	-3.133	-0.0037	-2.5 to 2.5	Pass
					4.43	-1.359	-0.0016	-2.5 to 2.5	Pass
				-30	3.85	-5.765	-0.0069	-2.5 to 2.5	Pass
				-20	3.85	-5.908	-0.0071	-2.5 to 2.5	Pass
				-10	3.85	-5.279	-0.0063	-2.5 to 2.5	Pass
				0	3.85	-4.449	-0.0053	-2.5 to 2.5	Pass
				10	3.85	-5.035	-0.0060	-2.5 to 2.5	Pass
				30	3.85	-4.864	-0.0058	-2.5 to 2.5	Pass
				40	3.85	-4.749	-0.0057	-2.5 to 2.5	Pass
				50	3.85	-4.649	-0.0056	-2.5 to 2.5	Pass
	847.5	15	0	20	3.27	-6.952	-0.0082	-2.5 to 2.5	Pass
					3.85	-6.194	-0.0073	-2.5 to 2.5	Pass
					4.43	-5.035	-0.0059	-2.5 to 2.5	Pass
				-30	3.85	-6.280	-0.0074	-2.5 to 2.5	Pass
				-20	3.85	-4.978	-0.0059	-2.5 to 2.5	Pass
				-10	3.85	-5.193	-0.0061	-2.5 to 2.5	Pass
				0	3.85	-4.892	-0.0058	-2.5 to 2.5	Pass
				10	3.85	-5.522	-0.0065	-2.5 to 2.5	Pass
				30	3.85	-0.744	-0.0009	-2.5 to 2.5	Pass
				40	3.85	-6.566	-0.0077	-2.5 to 2.5	Pass
				50	3.85	-4.020	-0.0047	-2.5 to 2.5	Pass

2.1.3 B5_5MHz

Band: 5 / Bandwidth: 5MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	826.5	25	0	20	3.27	-7.725	-0.0093	-2.5 to 2.5	Pass
					3.85	-5.107	-0.0062	-2.5 to 2.5	Pass
					4.43	-3.505	-0.0042	-2.5 to 2.5	Pass
				-30	3.85	-8.154	-0.0099	-2.5 to 2.5	Pass
				-20	3.85	-6.680	-0.0081	-2.5 to 2.5	Pass
				-10	3.85	-5.579	-0.0068	-2.5 to 2.5	Pass
				0	3.85	-8.497	-0.0103	-2.5 to 2.5	Pass
				10	3.85	-5.336	-0.0065	-2.5 to 2.5	Pass
				30	3.85	-10.529	-0.0127	-2.5 to 2.5	Pass
				40	3.85	-4.807	-0.0058	-2.5 to 2.5	Pass
				50	3.85	-10.014	-0.0121	-2.5 to 2.5	Pass
	836.5	25	0	20	3.27	-1.202	-0.0014	-2.5 to 2.5	Pass
					3.85	-3.605	-0.0043	-2.5 to 2.5	Pass
					4.43	-5.064	-0.0061	-2.5 to 2.5	Pass
				-30	3.85	-6.437	-0.0077	-2.5 to 2.5	Pass
				-20	3.85	-11.144	-0.0133	-2.5 to 2.5	Pass
				-10	3.85	-5.980	-0.0071	-2.5 to 2.5	Pass
				0	3.85	-5.379	-0.0064	-2.5 to 2.5	Pass
				10	3.85	-2.861	-0.0034	-2.5 to 2.5	Pass
				30	3.85	-3.819	-0.0046	-2.5 to 2.5	Pass
				40	3.85	-5.322	-0.0064	-2.5 to 2.5	Pass
				50	3.85	-5.922	-0.0071	-2.5 to 2.5	Pass
	846.5	25	0	20	3.27	-5.751	-0.0068	-2.5 to 2.5	Pass
					3.85	-9.012	-0.0106	-2.5 to 2.5	Pass
					4.43	-6.881	-0.0081	-2.5 to 2.5	Pass
				-30	3.85	-3.176	-0.0038	-2.5 to 2.5	Pass
				-20	3.85	-5.322	-0.0063	-2.5 to 2.5	Pass
				-10	3.85	-3.805	-0.0045	-2.5 to 2.5	Pass
				0	3.85	-3.791	-0.0045	-2.5 to 2.5	Pass
				10	3.85	-4.749	-0.0056	-2.5 to 2.5	Pass
				30	3.85	-8.669	-0.0102	-2.5 to 2.5	Pass
				40	3.85	-5.121	-0.0060	-2.5 to 2.5	Pass
				50	3.85	-8.125	-0.0096	-2.5 to 2.5	Pass
16QAM	826.5	25	0	20	3.27	-4.792	-0.0058	-2.5 to 2.5	Pass
					3.85	-6.566	-0.0079	-2.5 to 2.5	Pass
					4.43	-9.141	-0.0111	-2.5 to 2.5	Pass
				-30	3.85	-4.320	-0.0052	-2.5 to 2.5	Pass
				-20	3.85	-3.648	-0.0044	-2.5 to 2.5	Pass
				-10	3.85	-3.362	-0.0041	-2.5 to 2.5	Pass
				0	3.85	-1.903	-0.0023	-2.5 to 2.5	Pass
				10	3.85	-4.649	-0.0056	-2.5 to 2.5	Pass
				30	3.85	-6.967	-0.0084	-2.5 to 2.5	Pass
				40	3.85	-6.824	-0.0083	-2.5 to 2.5	Pass
				50	3.85	-4.306	-0.0052	-2.5 to 2.5	Pass
	836.5	25	0	20	3.27	-6.194	-0.0074	-2.5 to 2.5	Pass
					3.85	-5.980	-0.0071	-2.5 to 2.5	Pass
					4.43	-8.283	-0.0099	-2.5 to 2.5	Pass
				-30	3.85	-9.041	-0.0108	-2.5 to 2.5	Pass
				-20	3.85	-6.723	-0.0080	-2.5 to 2.5	Pass
				-10	3.85	-4.449	-0.0053	-2.5 to 2.5	Pass
				0	3.85	-6.809	-0.0081	-2.5 to 2.5	Pass
				10	3.85	-5.250	-0.0063	-2.5 to 2.5	Pass

				30	3.85	-4.435	-0.0053	-2.5 to 2.5	Pass
				40	3.85	-9.899	-0.0118	-2.5 to 2.5	Pass
				50	3.85	-8.955	-0.0107	-2.5 to 2.5	Pass
	846.5	25	0	20	3.27	-7.224	-0.0085	-2.5 to 2.5	Pass
					3.85	-3.090	-0.0037	-2.5 to 2.5	Pass
					4.43	-3.419	-0.0040	-2.5 to 2.5	Pass
				-30	3.85	-4.935	-0.0058	-2.5 to 2.5	Pass
				-20	3.85	-6.351	-0.0075	-2.5 to 2.5	Pass
				-10	3.85	-5.693	-0.0067	-2.5 to 2.5	Pass
				0	3.85	-5.522	-0.0065	-2.5 to 2.5	Pass
				10	3.85	-4.120	-0.0049	-2.5 to 2.5	Pass
				30	3.85	-5.436	-0.0064	-2.5 to 2.5	Pass
				40	3.85	-7.582	-0.0090	-2.5 to 2.5	Pass
				50	3.85	-4.263	-0.0050	-2.5 to 2.5	Pass

2.1.4 B5_10MHz

Band: 5 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	829	50	0	20	3.27	-5.422	-0.0065	-2.5 to 2.5	Pass
					3.85	-5.293	-0.0064	-2.5 to 2.5	Pass
					4.43	-2.675	-0.0032	-2.5 to 2.5	Pass
				-30	3.85	-6.051	-0.0073	-2.5 to 2.5	Pass
				-20	3.85	-9.313	-0.0112	-2.5 to 2.5	Pass
				-10	3.85	-6.881	-0.0083	-2.5 to 2.5	Pass
				0	3.85	-6.480	-0.0078	-2.5 to 2.5	Pass
				10	3.85	-7.710	-0.0093	-2.5 to 2.5	Pass
				30	3.85	-5.479	-0.0066	-2.5 to 2.5	Pass
				40	3.85	-3.562	-0.0043	-2.5 to 2.5	Pass
				50	3.85	-4.964	-0.0060	-2.5 to 2.5	Pass
	836.5	50	0	20	3.27	-8.569	-0.0102	-2.5 to 2.5	Pass
					3.85	-7.739	-0.0093	-2.5 to 2.5	Pass
					4.43	-7.124	-0.0085	-2.5 to 2.5	Pass
				-30	3.85	-4.735	-0.0057	-2.5 to 2.5	Pass
				-20	3.85	-4.749	-0.0057	-2.5 to 2.5	Pass
				-10	3.85	-3.705	-0.0044	-2.5 to 2.5	Pass
				0	3.85	-3.362	-0.0040	-2.5 to 2.5	Pass
				10	3.85	-6.180	-0.0074	-2.5 to 2.5	Pass
				30	3.85	-4.520	-0.0054	-2.5 to 2.5	Pass
				40	3.85	-5.693	-0.0068	-2.5 to 2.5	Pass
				50	3.85	-5.193	-0.0062	-2.5 to 2.5	Pass
	844	50	0	20	3.27	-6.337	-0.0075	-2.5 to 2.5	Pass
					3.85	-8.168	-0.0097	-2.5 to 2.5	Pass
					4.43	-4.921	-0.0058	-2.5 to 2.5	Pass
				-30	3.85	-5.078	-0.0060	-2.5 to 2.5	Pass
				-20	3.85	-4.635	-0.0055	-2.5 to 2.5	Pass
				-10	3.85	-7.052	-0.0084	-2.5 to 2.5	Pass
				0	3.85	-7.010	-0.0083	-2.5 to 2.5	Pass
				10	3.85	-5.765	-0.0068	-2.5 to 2.5	Pass
				30	3.85	-5.093	-0.0060	-2.5 to 2.5	Pass
				40	3.85	-3.290	-0.0039	-2.5 to 2.5	Pass
				50	3.85	-3.119	-0.0037	-2.5 to 2.5	Pass
16QAM	829	50	0	20	3.27	-7.639	-0.0092	-2.5 to 2.5	Pass
					3.85	-5.279	-0.0064	-2.5 to 2.5	Pass
					4.43	-9.284	-0.0112	-2.5 to 2.5	Pass
				-30	3.85	-6.180	-0.0075	-2.5 to 2.5	Pass
				-20	3.85	-6.552	-0.0079	-2.5 to 2.5	Pass

				-10	3.85	-5.751	-0.0069	-2.5 to 2.5	Pass
				0	3.85	-5.164	-0.0062	-2.5 to 2.5	Pass
				10	3.85	-8.111	-0.0098	-2.5 to 2.5	Pass
				30	3.85	-5.980	-0.0072	-2.5 to 2.5	Pass
				40	3.85	-4.063	-0.0049	-2.5 to 2.5	Pass
				50	3.85	-4.005	-0.0048	-2.5 to 2.5	Pass
	836.5	50	0	20	3.27	-5.565	-0.0067	-2.5 to 2.5	Pass
					3.85	-5.622	-0.0067	-2.5 to 2.5	Pass
					4.43	-4.249	-0.0051	-2.5 to 2.5	Pass
				-30	3.85	-8.740	-0.0104	-2.5 to 2.5	Pass
				-20	3.85	-6.537	-0.0078	-2.5 to 2.5	Pass
				-10	3.85	-2.489	-0.0030	-2.5 to 2.5	Pass
				0	3.85	-3.419	-0.0041	-2.5 to 2.5	Pass
				10	3.85	-2.890	-0.0035	-2.5 to 2.5	Pass
				30	3.85	-6.108	-0.0073	-2.5 to 2.5	Pass
				40	3.85	-6.967	-0.0083	-2.5 to 2.5	Pass
				50	3.85	-7.353	-0.0088	-2.5 to 2.5	Pass
	844	50	0	20	3.27	-5.393	-0.0064	-2.5 to 2.5	Pass
					3.85	-2.718	-0.0032	-2.5 to 2.5	Pass
					4.43	-5.908	-0.0070	-2.5 to 2.5	Pass
				-30	3.85	-7.968	-0.0094	-2.5 to 2.5	Pass
				-20	3.85	-8.211	-0.0097	-2.5 to 2.5	Pass
				-10	3.85	-5.836	-0.0069	-2.5 to 2.5	Pass
				0	3.85	-7.625	-0.0090	-2.5 to 2.5	Pass
				10	3.85	-8.640	-0.0102	-2.5 to 2.5	Pass
				30	3.85	-10.171	-0.0121	-2.5 to 2.5	Pass
				40	3.85	-7.839	-0.0093	-2.5 to 2.5	Pass
				50	3.85	-7.896	-0.0094	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

3.1.1 B5_1.4MHz

Band: 5 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	836.5	6	0	Refer To Test Graph		Pass
16QAM	836.5	6	0	Refer To Test Graph		Pass

3.1.2 B5_3MHz

Band: 5 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	836.5	15	0	Refer To Test Graph		Pass
16QAM	836.5	15	0	Refer To Test Graph		Pass

3.1.3 B5_5MHz

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

QPSK	836.5	25	0	Refer To Test Graph	Pass
16QAM	836.5	25	0	Refer To Test Graph	Pass

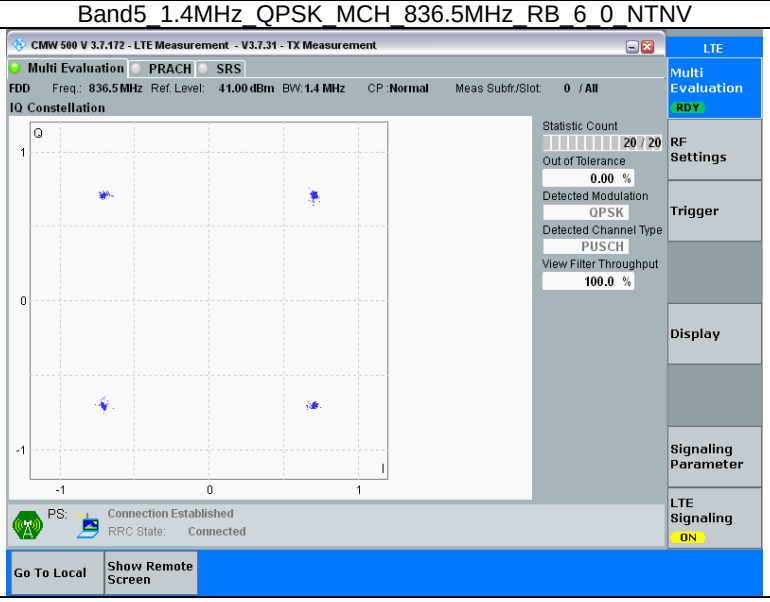
3.1.4 B5_10MHz

Band: 5 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	836.5	50	0	Refer To Test Graph		Pass
16QAM	836.5	50	0	Refer To Test Graph		Pass

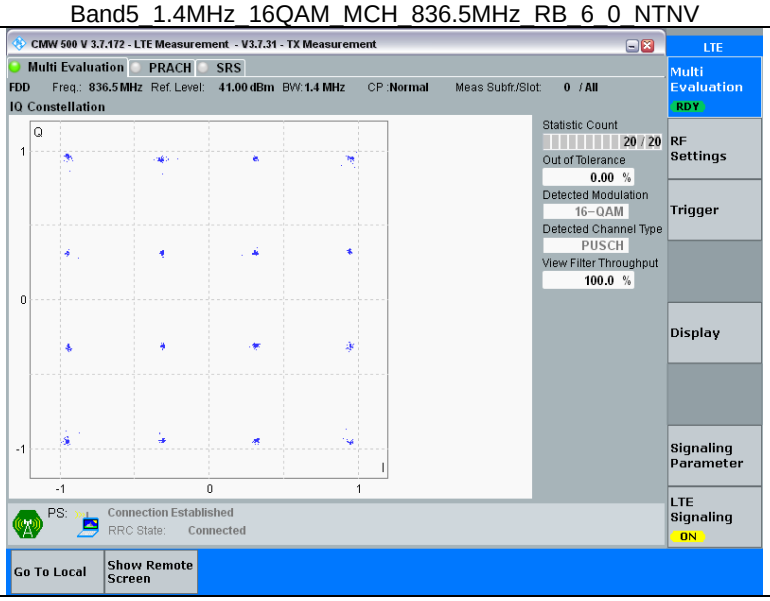
3.2 Test Graph

3.2.1 B5_1.4MHz

Band5_1.4MHz_QPSK_MCH_836.5MHz_RB_6_0_NTNV

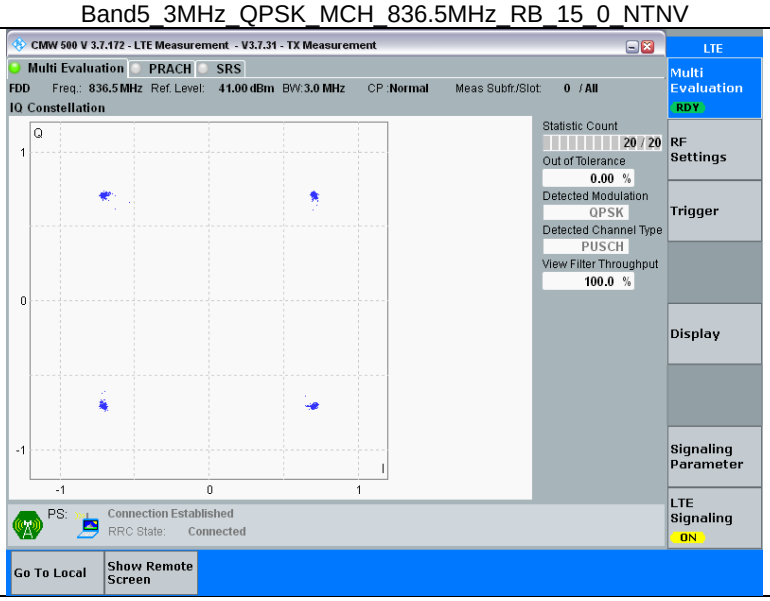


Band5_1.4MHz_16QAM_MCH_836.5MHz_RB_6_0_NTNV

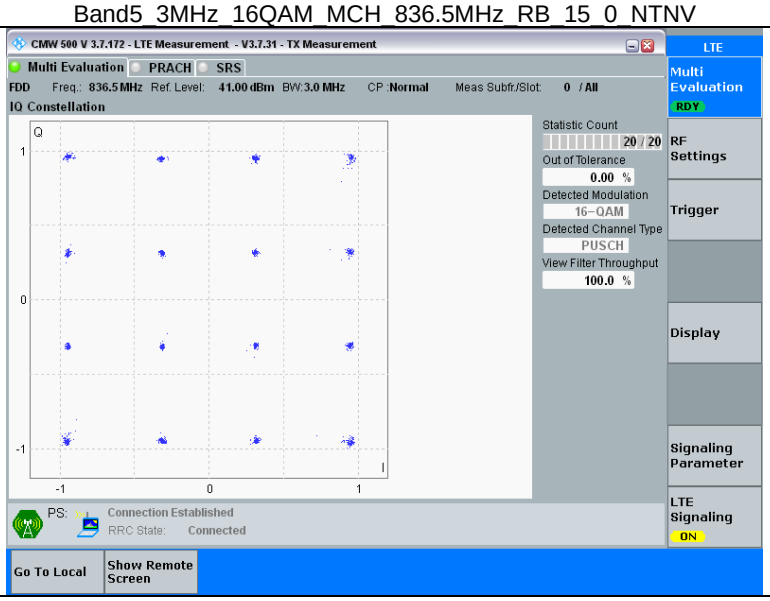


3.2.2 B5_3MHz

Band5_3MHz_QPSK_MCH_836.5MHz_RB_15_0_NTNV

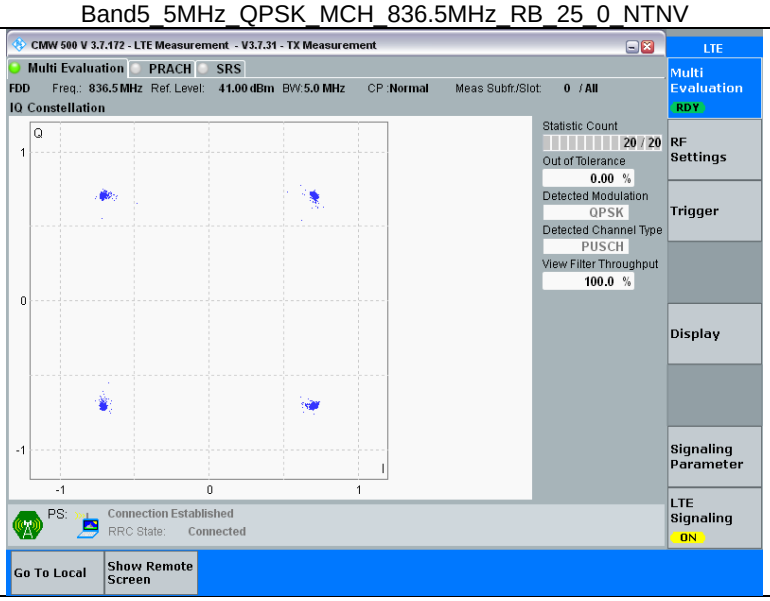


Band5_3MHz_16QAM_MCH_836.5MHz_RB_15_0_NTNV

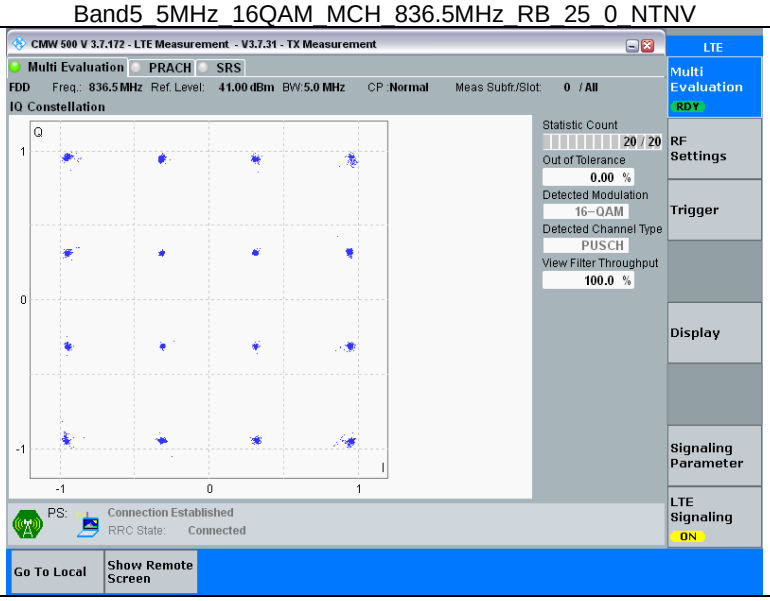


3.2.3 B5_5MHz

Band5_5MHz_QPSK_MCH_836.5MHz_RB_25_0_NTNV

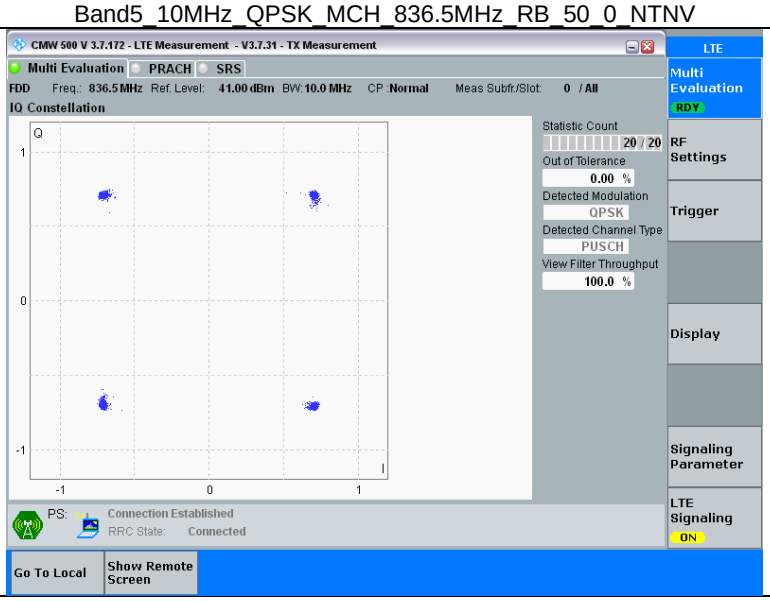


Band5_5MHz_16QAM_MCH_836.5MHz_RB_25_0_NTNV

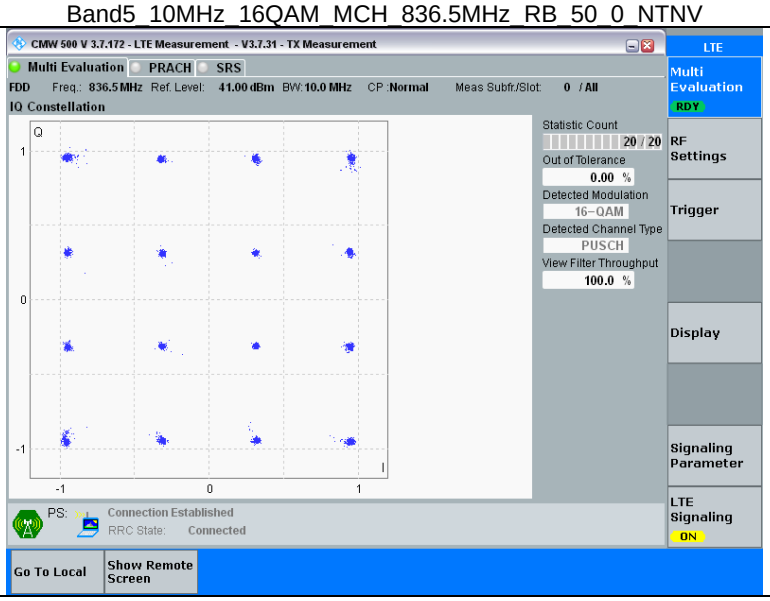


3.2.4 B5_10MHz

Band5_10MHz_QPSK_MCH_836.5MHz_RB_50_0_NTNV



Band5_10MHz_16QAM_MCH_836.5MHz_RB_50_0_NTNV



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band5_OBW

Band: 5 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	824.7	6	0	1.114	/	Pass
		836.5	6	0	1.113	/	Pass
		848.3	6	0	1.109	/	Pass
	16QAM	824.7	6	0	1.112	/	Pass
		836.5	6	0	1.102	/	Pass
		848.3	6	0	1.118	/	Pass
3	QPSK	825.5	15	0	2.729	/	Pass
		836.5	15	0	2.731	/	Pass
		847.5	15	0	2.723	/	Pass
	16QAM	825.5	15	0	2.723	/	Pass
		836.5	15	0	2.720	/	Pass
		847.5	15	0	2.731	/	Pass
5	QPSK	826.5	25	0	4.548	/	Pass
		836.5	25	0	4.549	/	Pass
		846.5	25	0	4.550	/	Pass
	16QAM	826.5	25	0	4.558	/	Pass
		836.5	25	0	4.529	/	Pass
		846.5	25	0	4.563	/	Pass
10	QPSK	829	50	0	9.063	/	Pass
		836.5	50	0	9.064	/	Pass
		844	50	0	9.080	/	Pass
	16QAM	829	50	0	9.074	/	Pass
		836.5	50	0	9.038	/	Pass
		844	50	0	9.058	/	Pass

4.1.2 Band5_XDB

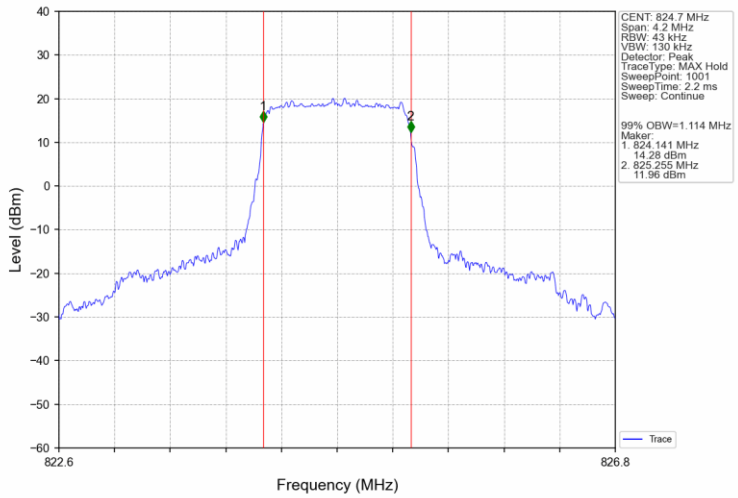
Band: 5 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	824.7	6	0	1.312	/	Pass
		836.5	6	0	1.337	/	Pass
		848.3	6	0	1.368	/	Pass
	16QAM	824.7	6	0	1.328	/	Pass
		836.5	6	0	1.311	/	Pass
		848.3	6	0	1.338	/	Pass
3	QPSK	825.5	15	0	3.006	/	Pass
		836.5	15	0	2.992	/	Pass
		847.5	15	0	2.991	/	Pass
	16QAM	825.5	15	0	2.980	/	Pass
		836.5	15	0	2.994	/	Pass
		847.5	15	0	2.996	/	Pass
5	QPSK	826.5	25	0	5.032	/	Pass
		836.5	25	0	5.020	/	Pass
		846.5	25	0	5.050	/	Pass

	16QAM	826.5	25	0	5.017	/	Pass
		836.5	25	0	5.001	/	Pass
		846.5	25	0	5.054	/	Pass
10	QPSK	829	50	0	9.893	/	Pass
		836.5	50	0	9.958	/	Pass
		844	50	0	9.955	/	Pass
	16QAM	829	50	0	9.937	/	Pass
		836.5	50	0	9.909	/	Pass
		844	50	0	9.891	/	Pass

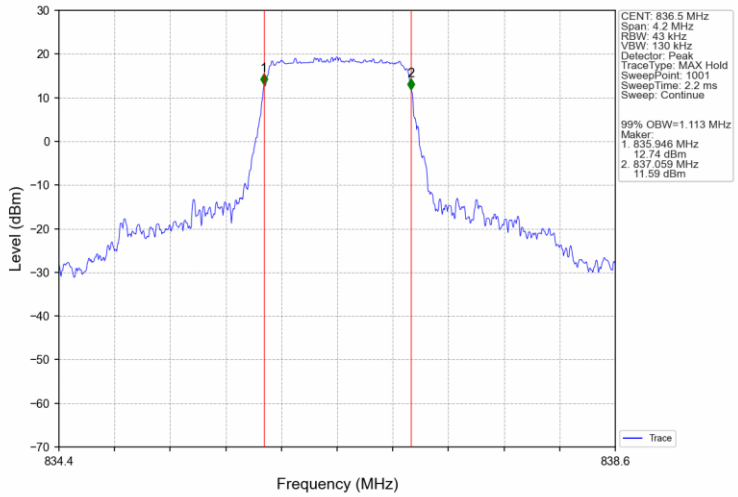
4.2 Test Graph

4.2.1 Band5_OBW

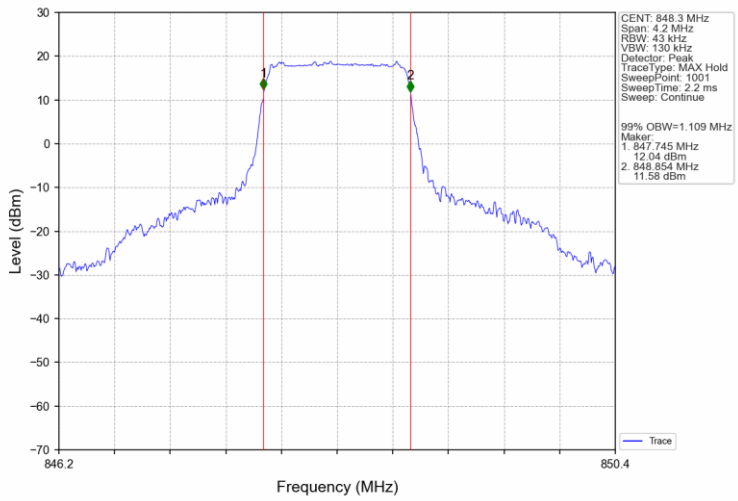
Band5_1.4MHz_QPSK_LCH_824.7MHz_RB_6_0_NTNV



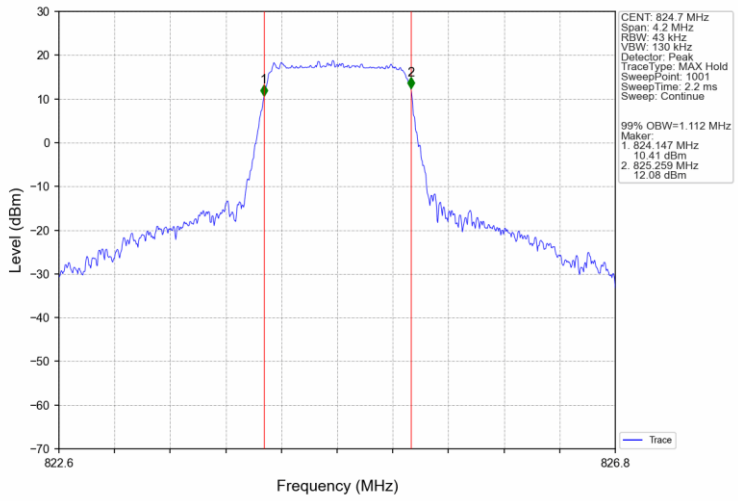
Band5_1.4MHz_QPSK_MCH_836.5MHz_RB_6_0_NTNV



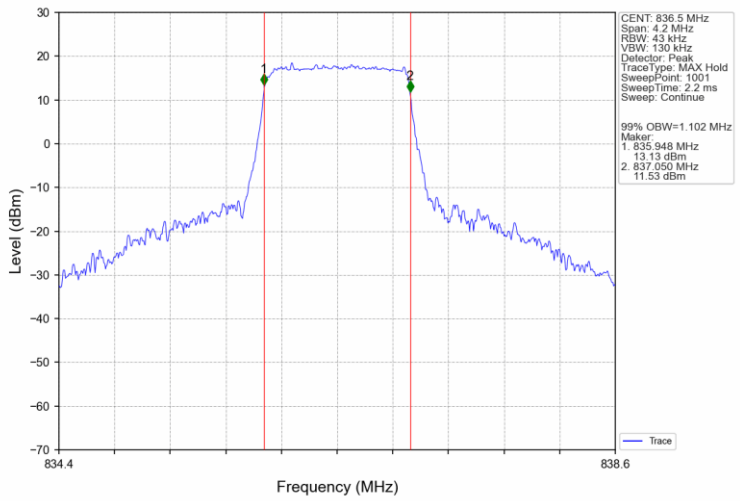
Band5_1.4MHz_QPSK_HCH_848.3MHz_RB_6_0_NTNV



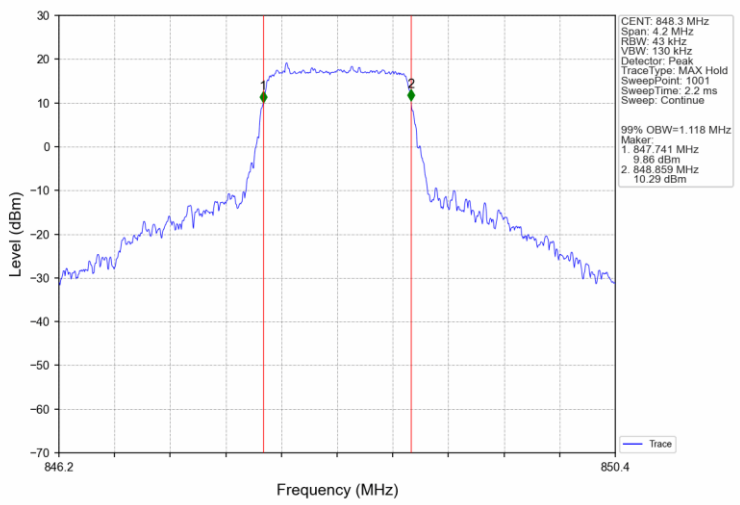
Band5_1.4MHz_16QAM_LCH_824.7MHz_RB_6_0_NTNV



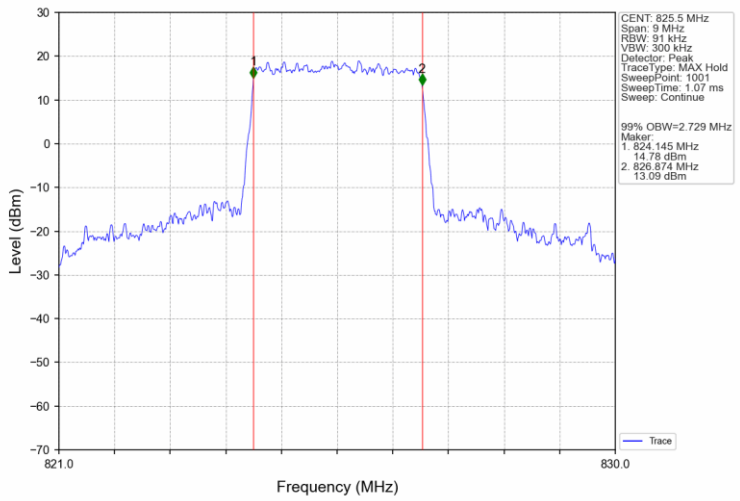
Band5_1.4MHz_16QAM_MCH_836.5MHz_RB_6_0_NTNV



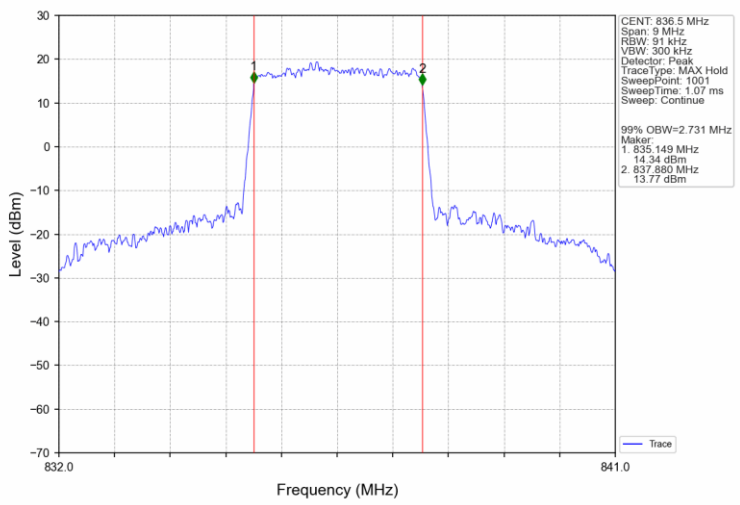
Band5_1.4MHz_16QAM_HCH_848.3MHz_RB_6_0_NTNV



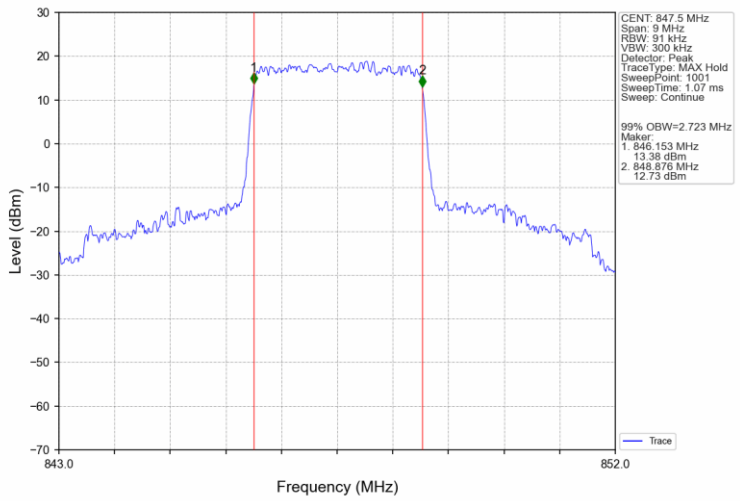
Band5_3MHz_QPSK_LCH_825.5MHz_RB_15_0_NTNV



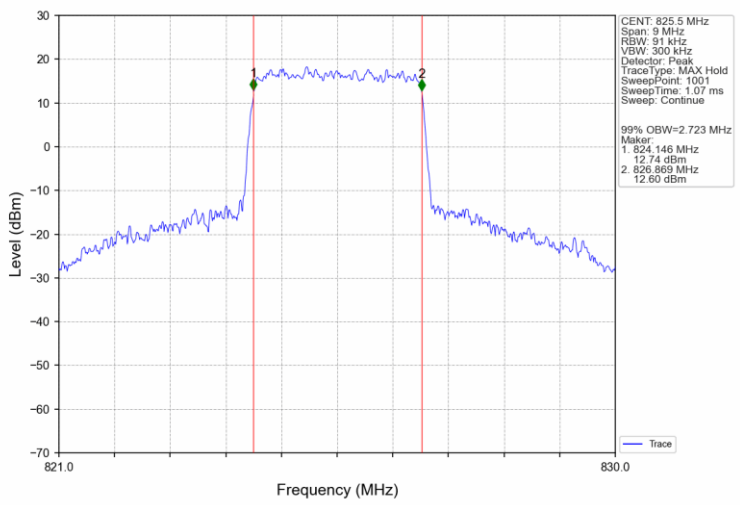
Band5_3MHz_QPSK_MCH_836.5MHz_RB_15_0_NTNV



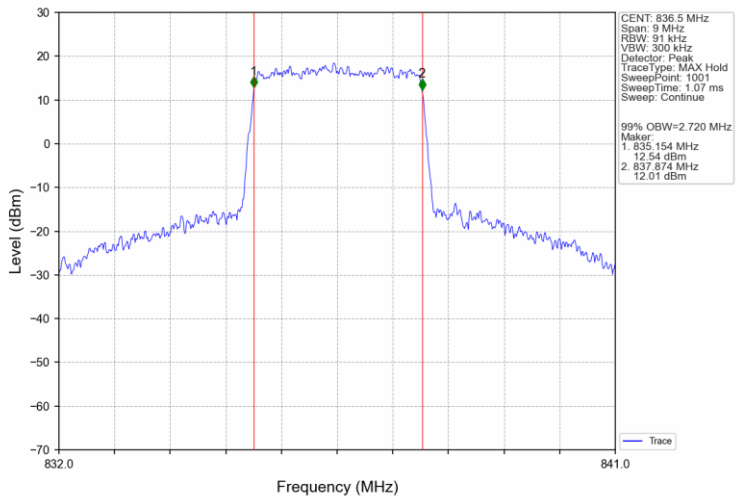
Band5_3MHz_QPSK_HCH_847.5MHz_RB_15_0_NTNV



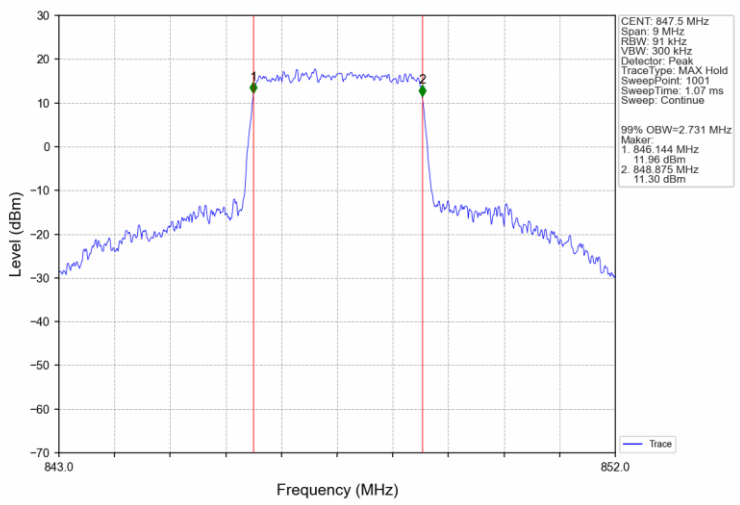
Band5_3MHz_16QAM_LCH_825.5MHz_RB_15_0_NTNV



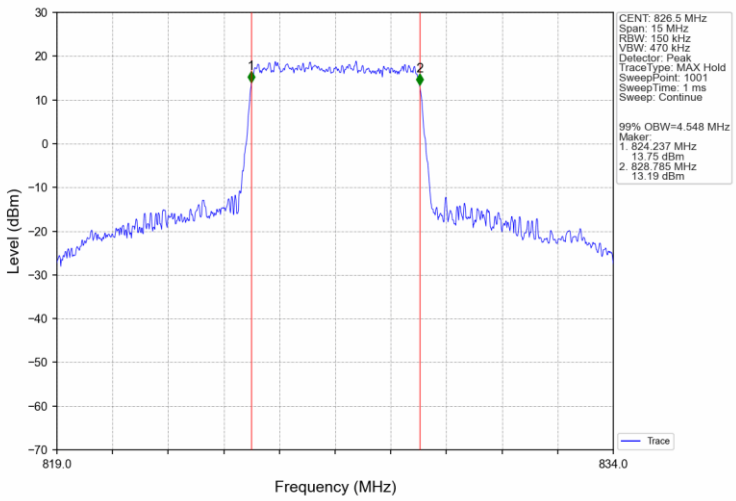
Band5_3MHz_16QAM_MCH_836.5MHz_RB_15_0_NTNV



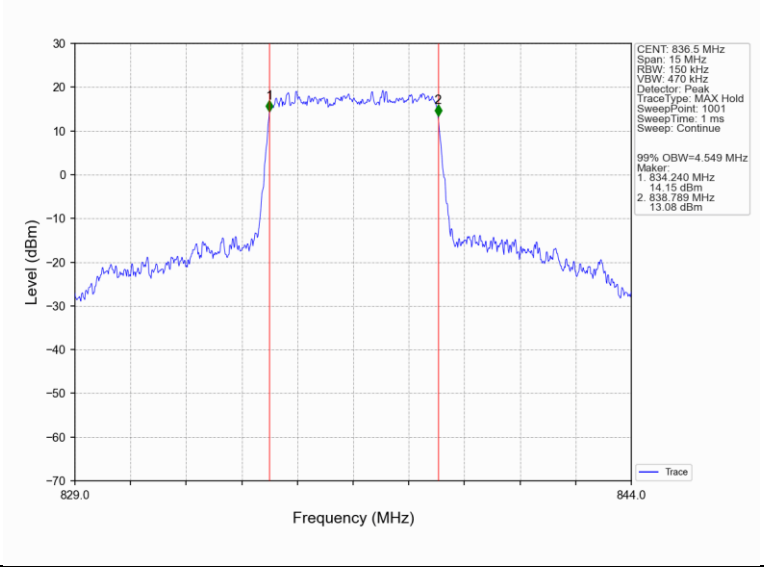
Band5_3MHz_16QAM_HCH_847.5MHz_RB_15_0_NTNV



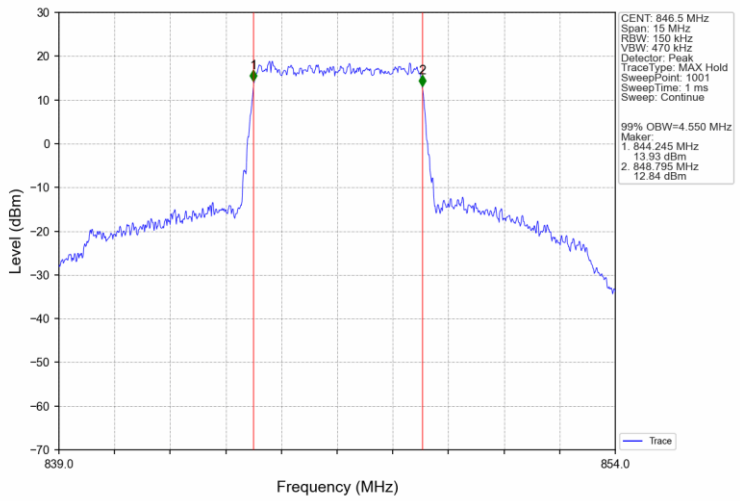
Band5_5MHz_QPSK_LCH_826.5MHz_RB_25_0_NTNV



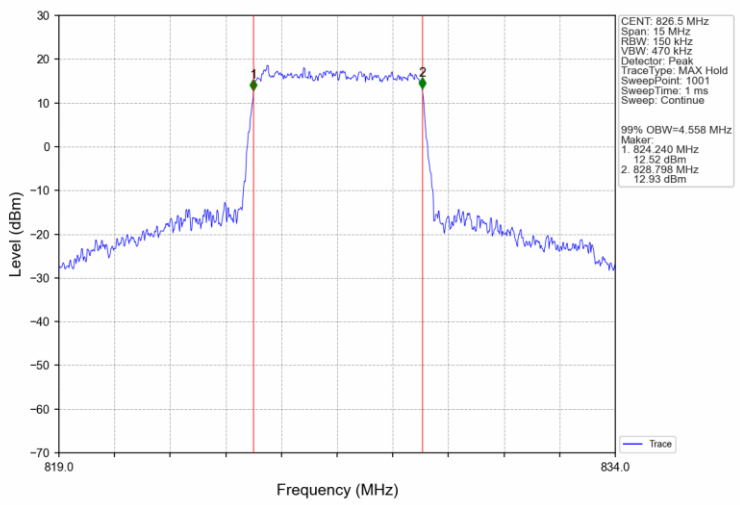
Band5_5MHz_QPSK_MCH_836.5MHz_RB_25_0_NTNV



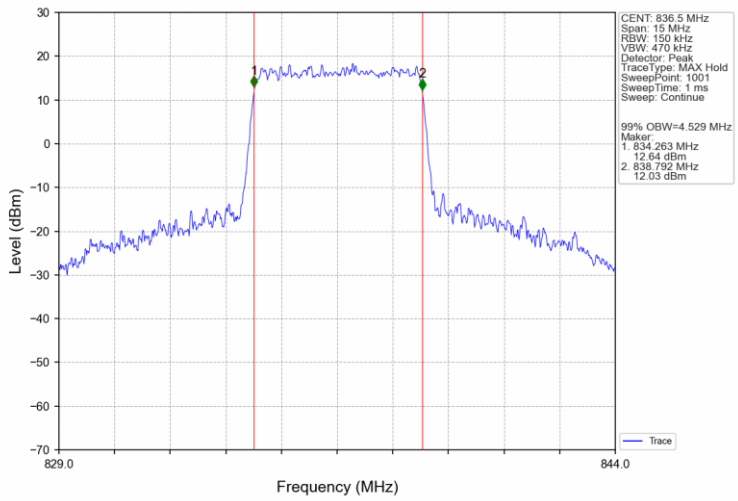
Band5_5MHz_QPSK_HCH_846.5MHz_RB_25_0_NTNV



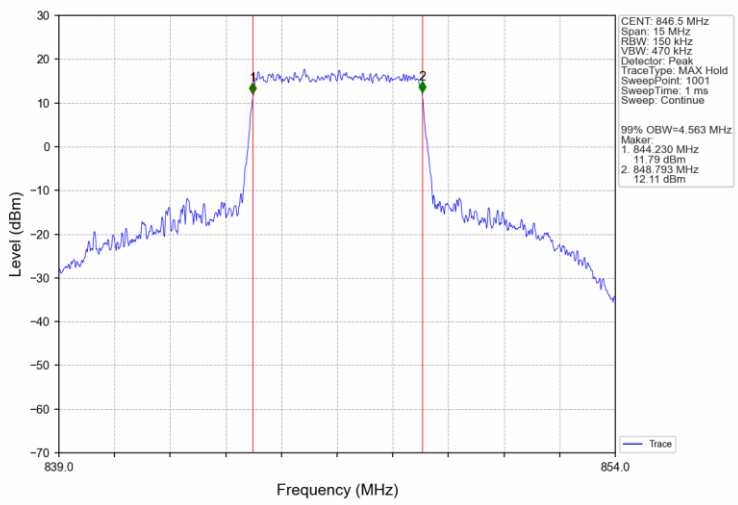
Band5_5MHz_16QAM_LCH_826.5MHz_RB_25_0_NTNV



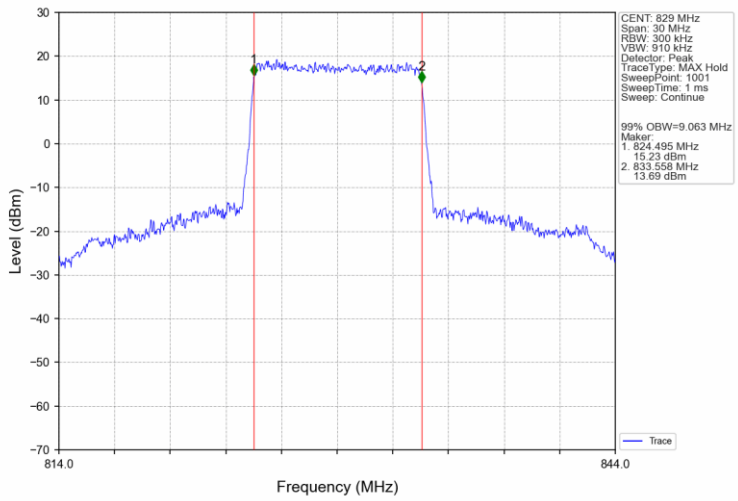
Band5_5MHz_16QAM_MCH_836.5MHz_RB_25_0_NTNV



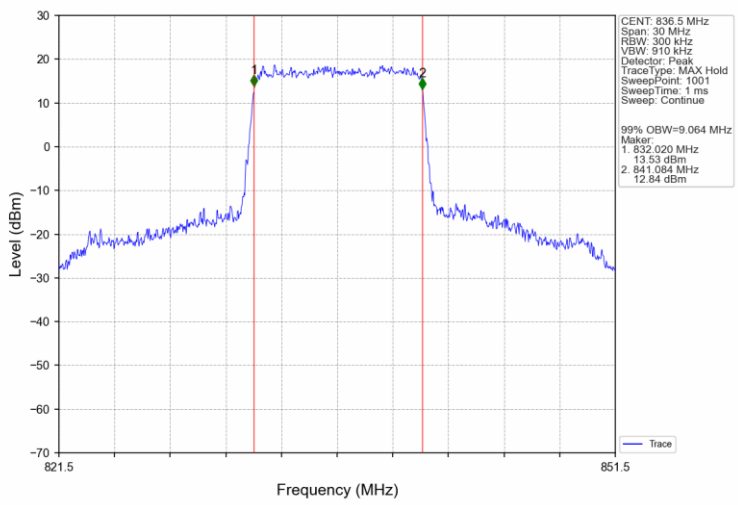
Band5_5MHz_16QAM_HCH_846.5MHz_RB_25_0_NTNV



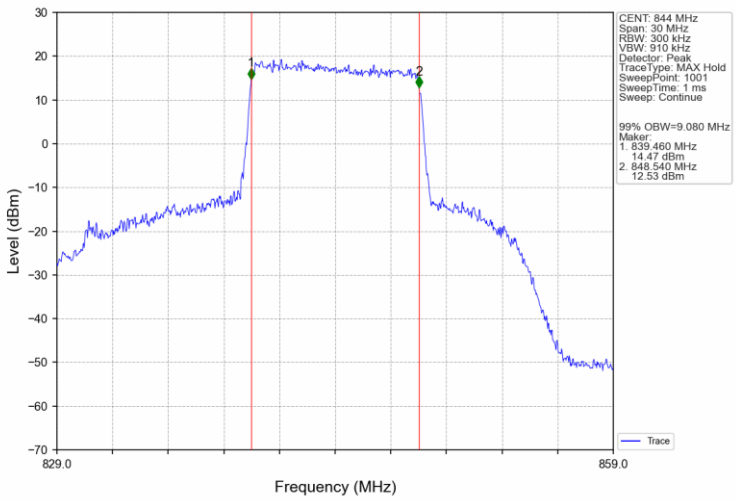
Band5_10MHz_QPSK_LCH_829MHz_RB_50_0_NTNV



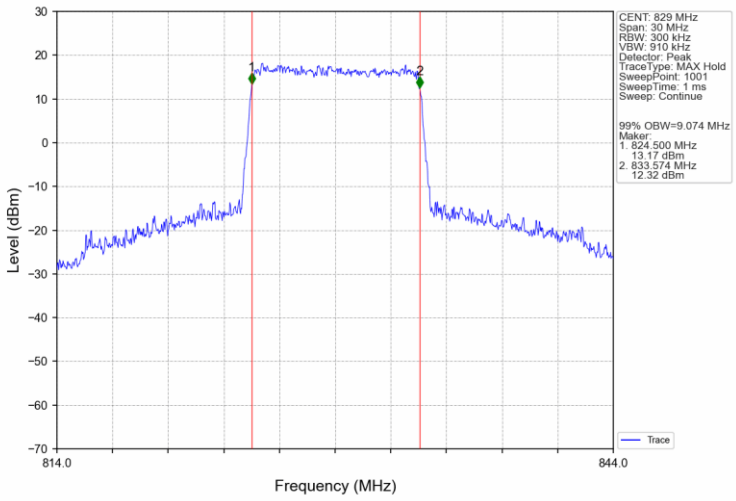
Band5_10MHz_QPSK_MCH_836.5MHz_RB_50_0_NTNV



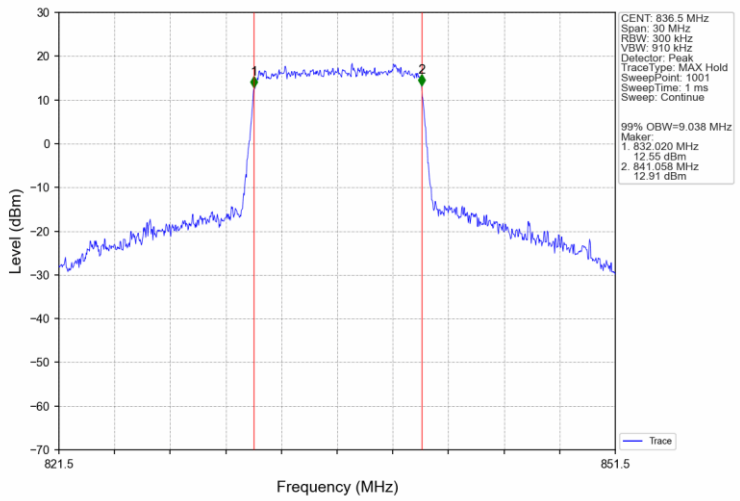
Band5_10MHz_QPSK_HCH_844MHz_RB_50_0_NTNV



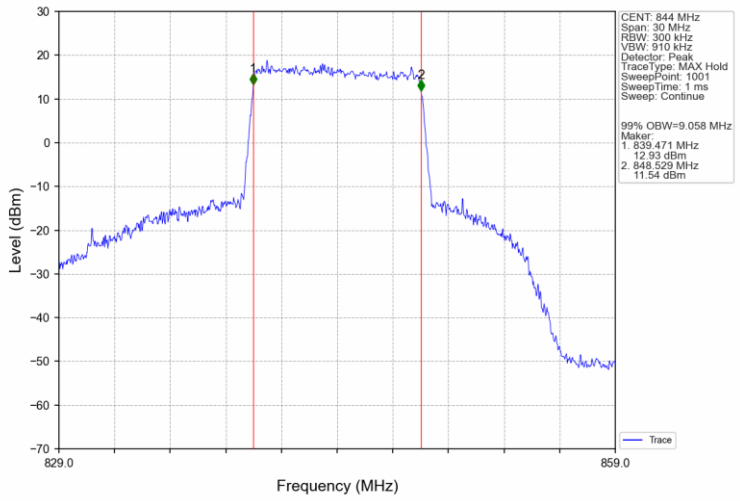
Band5_10MHz_16QAM_LCH_829MHz_RB_50_0_NTNV



Band5_10MHz_16QAM_MCH_836.5MHz_RB_50_0_NTNV

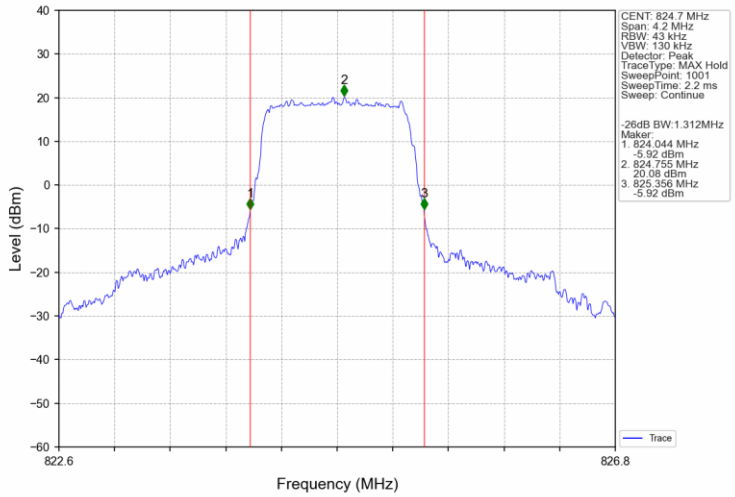


Band5_10MHz_16QAM_HCH_844MHz_RB_50_0_NTNV

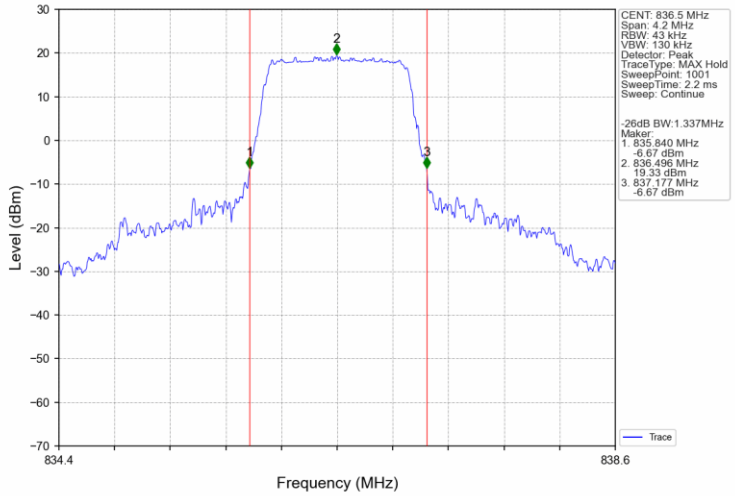


4.2.2 Band5_XDB

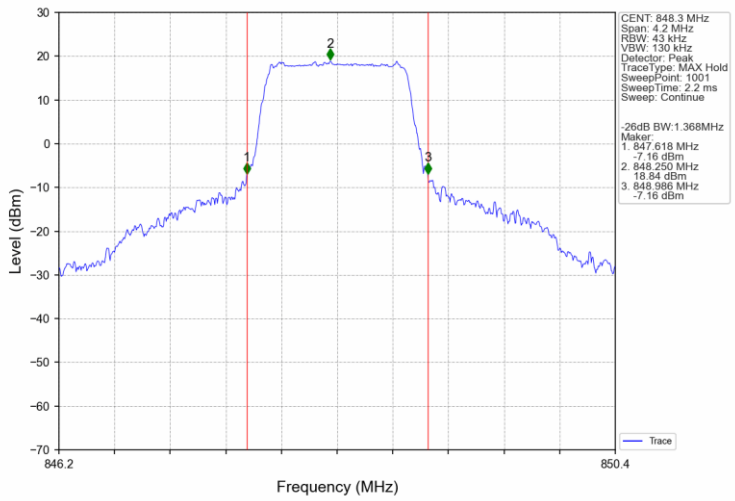
Band5_1.4MHz_QPSK_LCH_824.7MHz_RB_6_0_NTNV



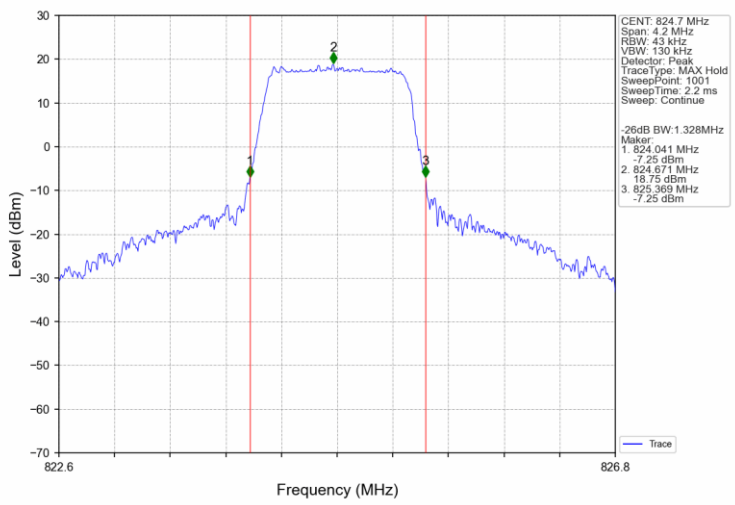
Band5_1.4MHz_QPSK_MCH_836.5MHz_RB_6_0_NTNV



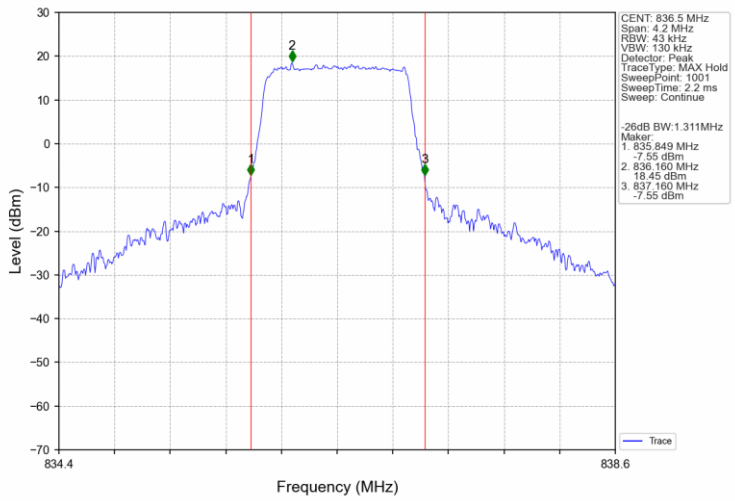
Band5_1.4MHz_QPSK_HCH_848.3MHz_RB_6_0_NTNV



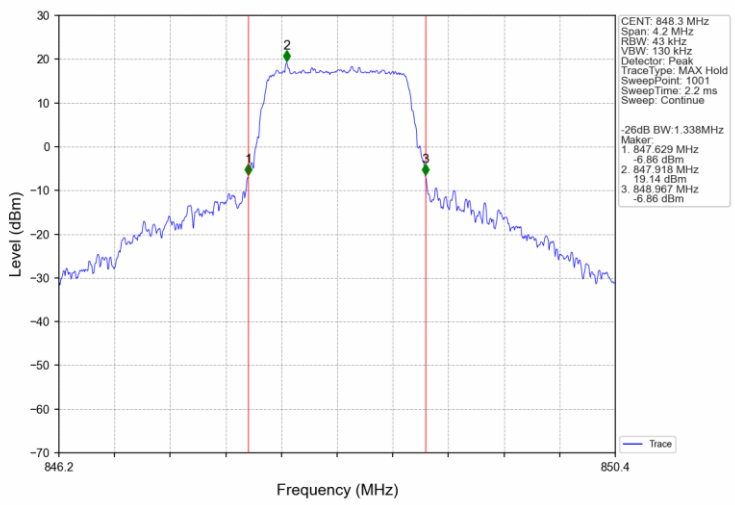
Band5_1.4MHz_16QAM_LCH_824.7MHz_RB_6_0_NTNV



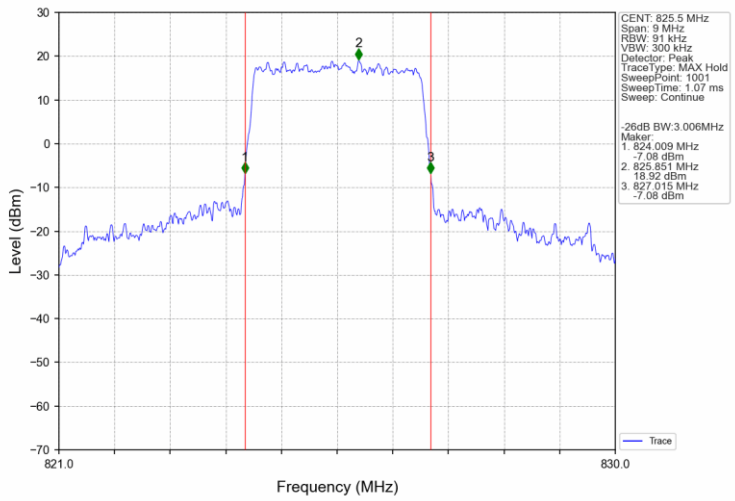
Band5_1.4MHz_16QAM_MCH_836.5MHz_RB_6_0_NTNV



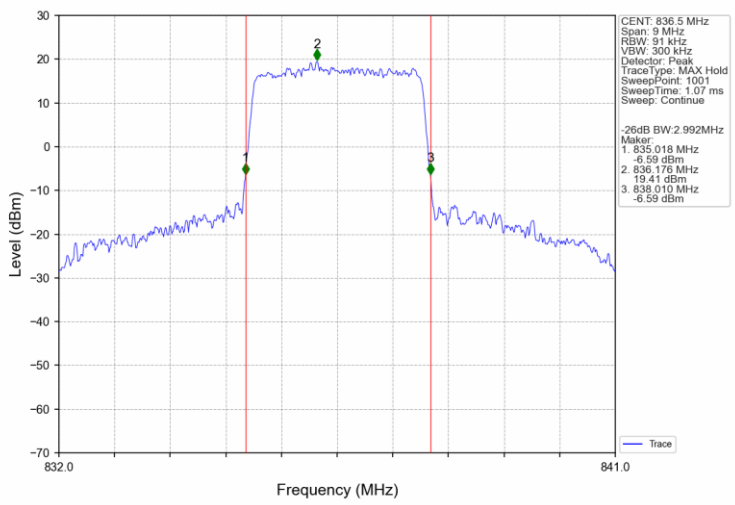
Band5_1.4MHz_16QAM_HCH_848.3MHz_RB_6_0_NTNV



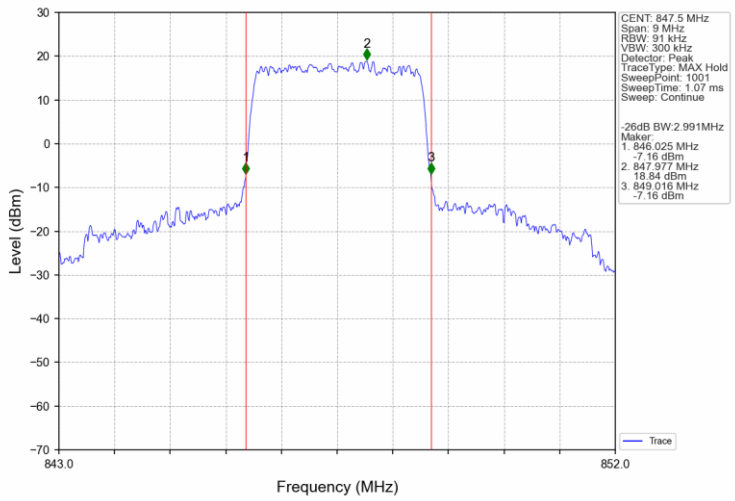
Band5_3MHz_QPSK_LCH_825.5MHz_RB_15_0_NTNV



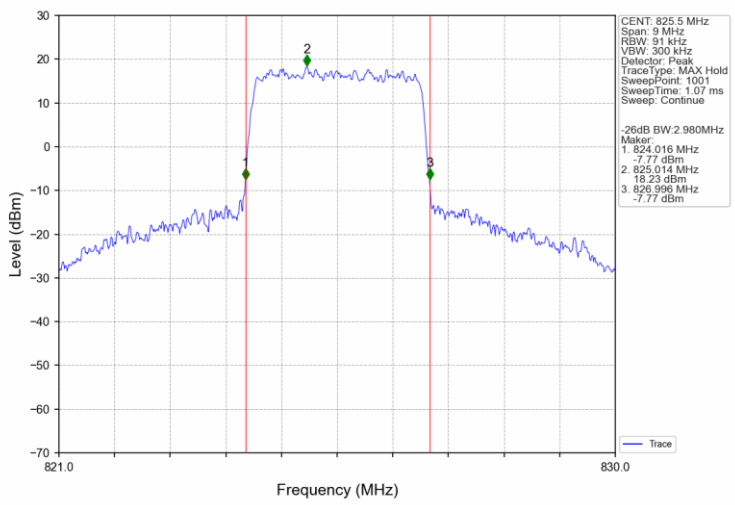
Band5_3MHz_QPSK_MCH_836.5MHz_RB_15_0_NTNV



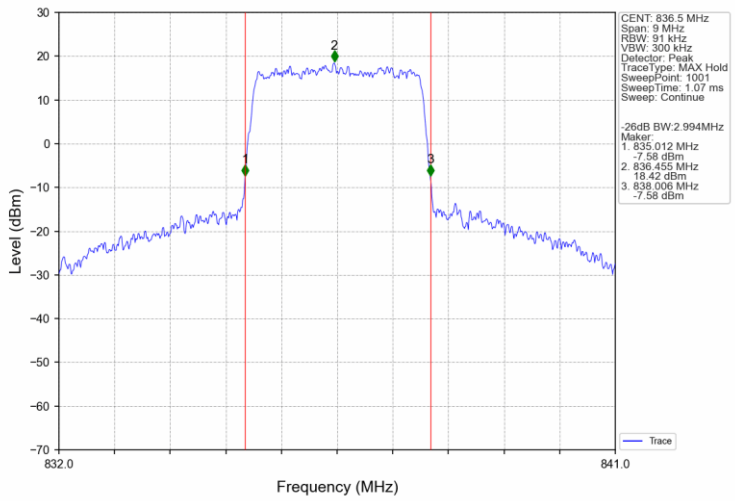
Band5_3MHz_QPSK_HCH_847.5MHz_RB_15_0_NTNV



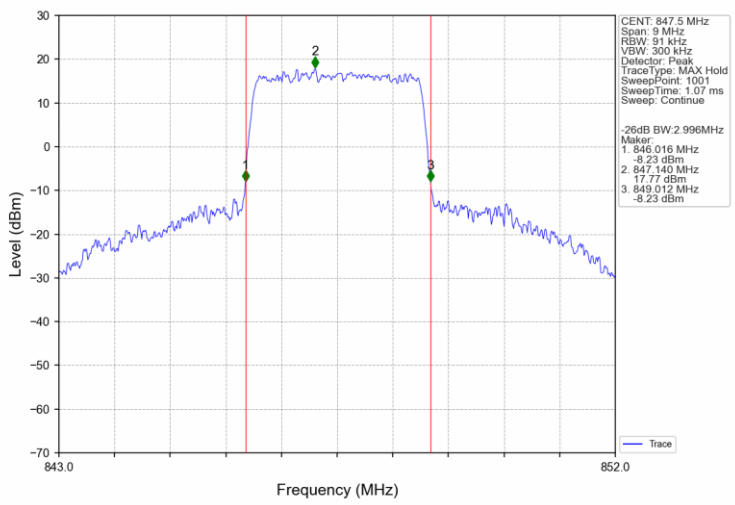
Band5_3MHz_16QAM_LCH_825.5MHz_RB_15_0_NTNV



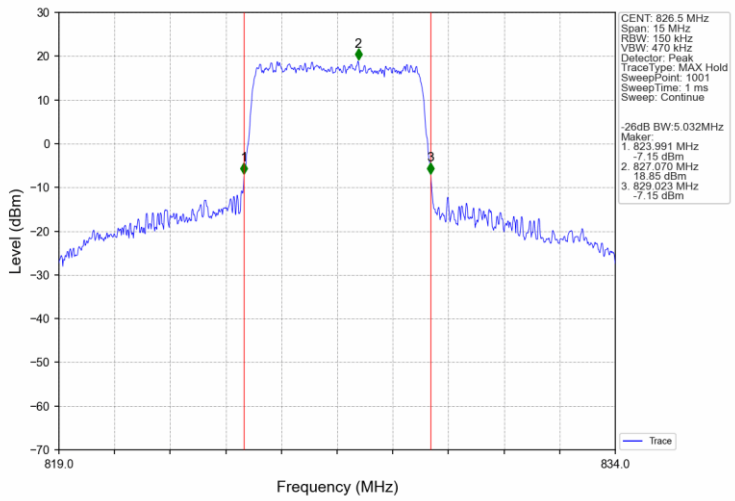
Band5_3MHz_16QAM_MCH_836.5MHz_RB_15_0_NTNV



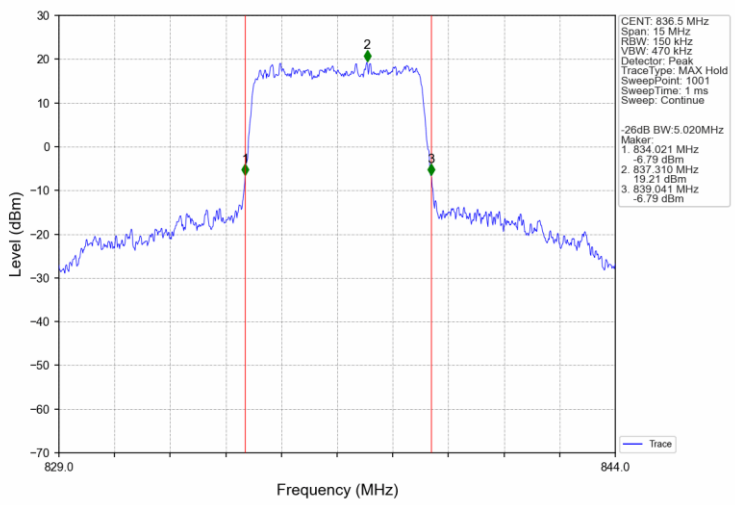
Band5_3MHz_16QAM_HCH_847.5MHz_RB_15_0_NTNV



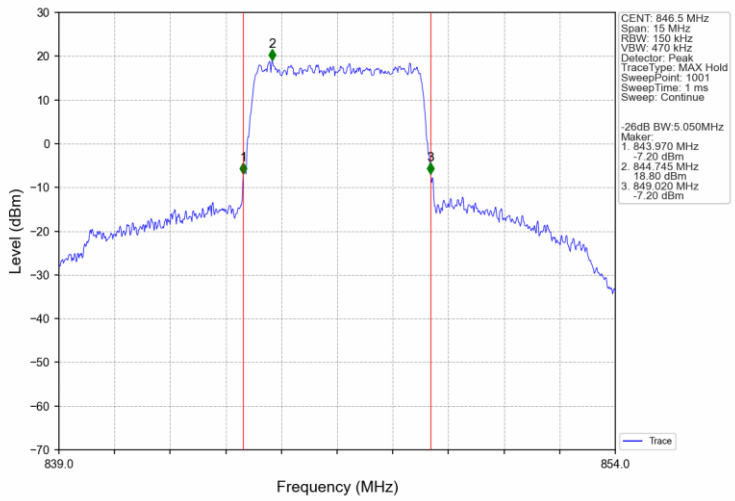
Band5_5MHz_QPSK_LCH_826.5MHz_RB_25_0_NTNV



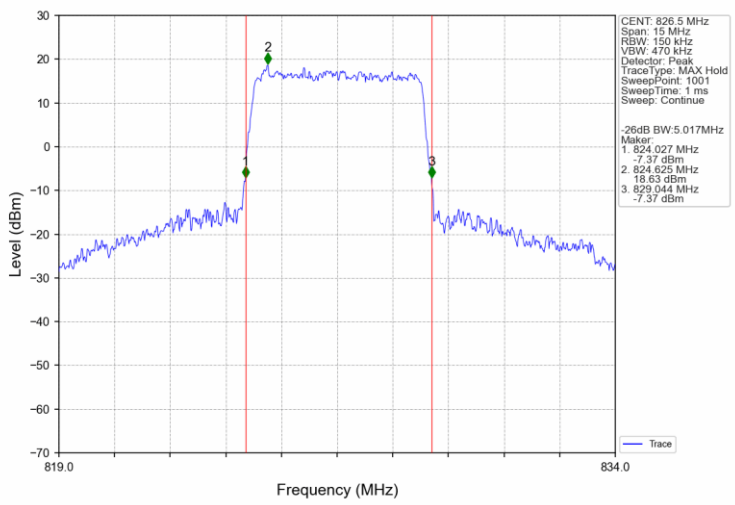
Band5_5MHz_QPSK_MCH_836.5MHz_RB_25_0_NTNV



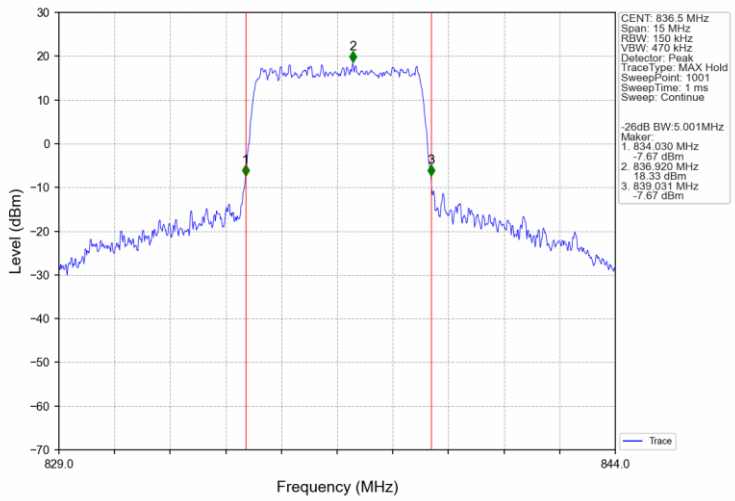
Band5_5MHz_QPSK_HCH_846.5MHz_RB_25_0_NTNV



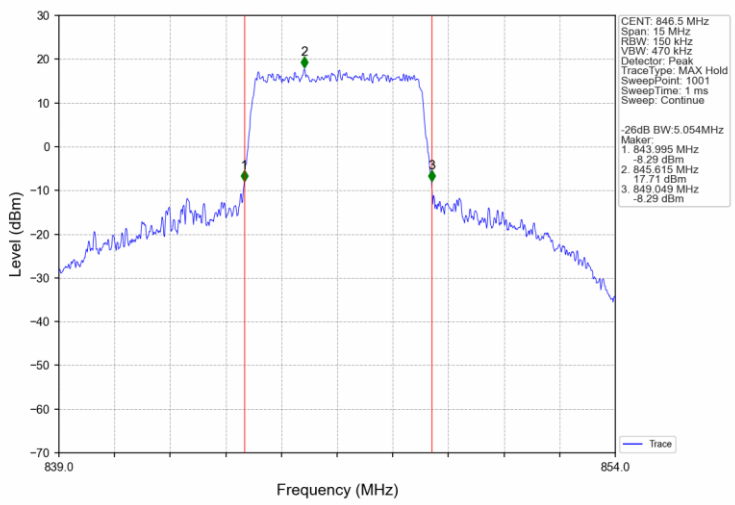
Band5_5MHz_16QAM_LCH_826.5MHz_RB_25_0_NTNV



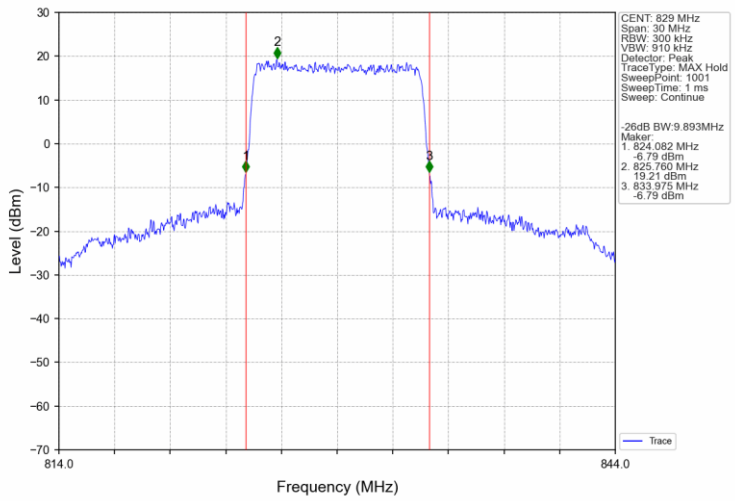
Band5_5MHz_16QAM_MCH_836.5MHz_RB_25_0_NTNV



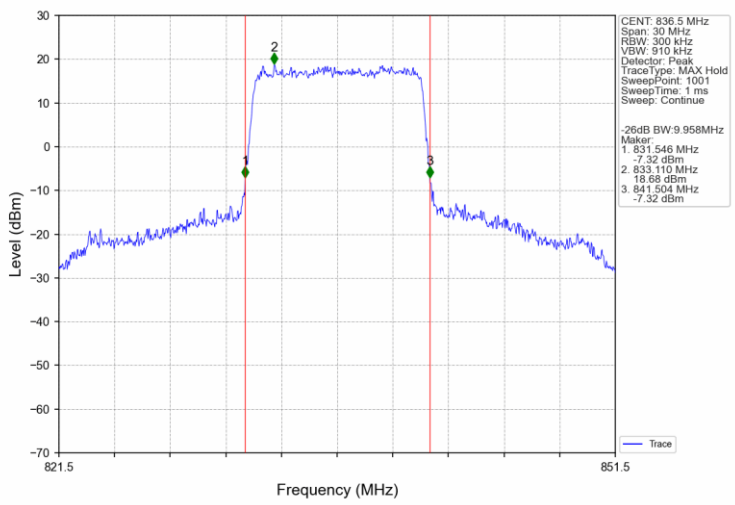
Band5_5MHz_16QAM_HCH_846.5MHz_RB_25_0_NTNV



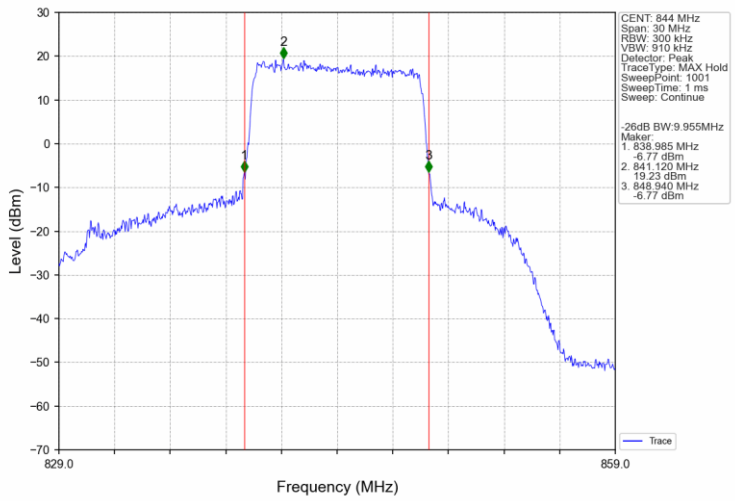
Band5_10MHz_QPSK_LCH_829MHz_RB_50_0_NTNV



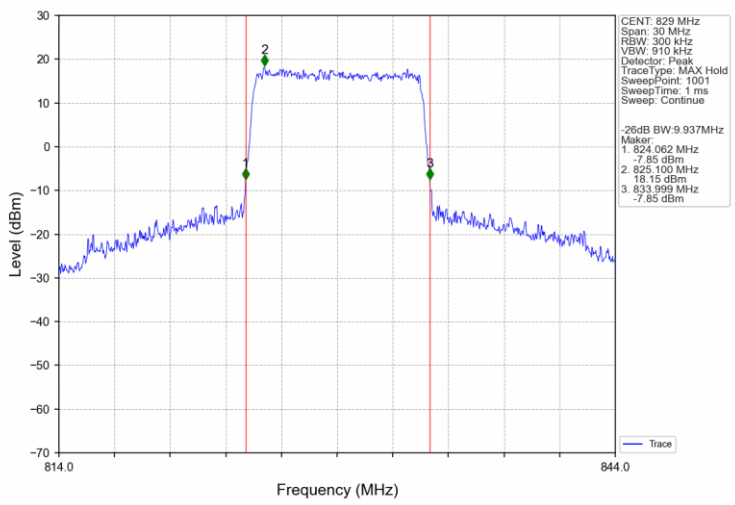
Band5_10MHz_QPSK_MCH_836.5MHz_RB_50_0_NTNV



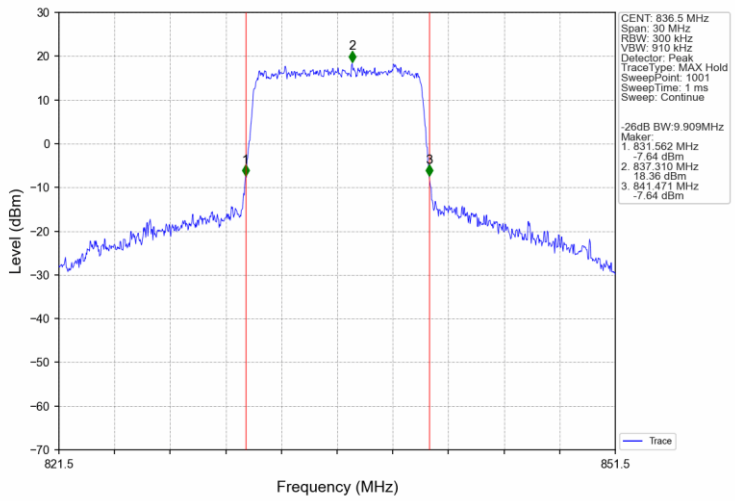
Band5_10MHz_QPSK_HCH_844MHz_RB_50_0_NTNV



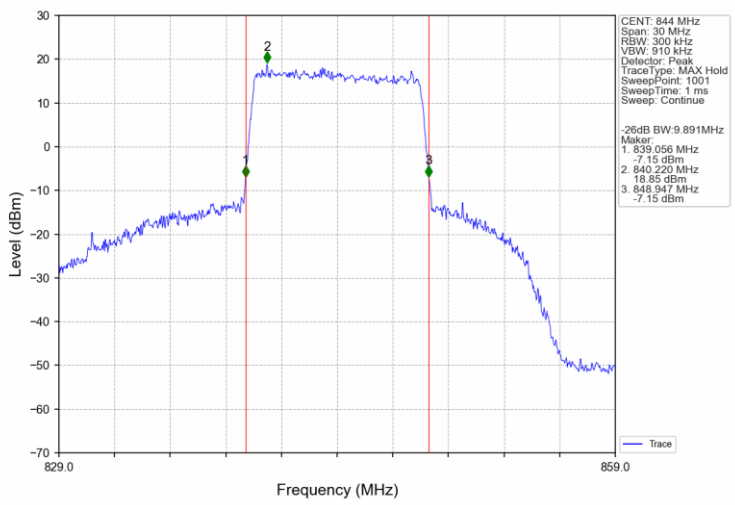
Band5_10MHz_16QAM_LCH_829MHz_RB_50_0_NTNV



Band5_10MHz_16QAM_MCH_836.5MHz_RB_50_0_NTNV



Band5_10MHz_16QAM_HCH_844MHz_RB_50_0_NTNV



5. Peak-Average Ratio

5.1 Test Result

5.1.1 B5_1.4MHz

Band: 5 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	824.7	6	0	4.59	<=13	Pass
	836.5	6	0	4.74	<=13	Pass
	848.3	6	0	4.19	<=13	Pass
16QAM	824.7	6	0	5.48	<=13	Pass
	836.5	6	0	5.63	<=13	Pass
	848.3	6	0	5.11	<=13	Pass

5.1.2 B5_3MHz

Band: 5 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	825.5	15	0	4.87	<=13	Pass
	836.5	15	0	4.97	<=13	Pass
	847.5	15	0	4.65	<=13	Pass
16QAM	825.5	15	0	5.71	<=13	Pass
	836.5	15	0	5.80	<=13	Pass
	847.5	15	0	5.52	<=13	Pass

5.1.3 B5_5MHz

Band: 5 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	826.5	25	0	5.21	<=13	Pass
	836.5	25	0	5.23	<=13	Pass
	846.5	25	0	5.10	<=13	Pass
16QAM	826.5	25	0	5.91	<=13	Pass
	836.5	25	0	6.00	<=13	Pass
	846.5	25	0	5.84	<=13	Pass

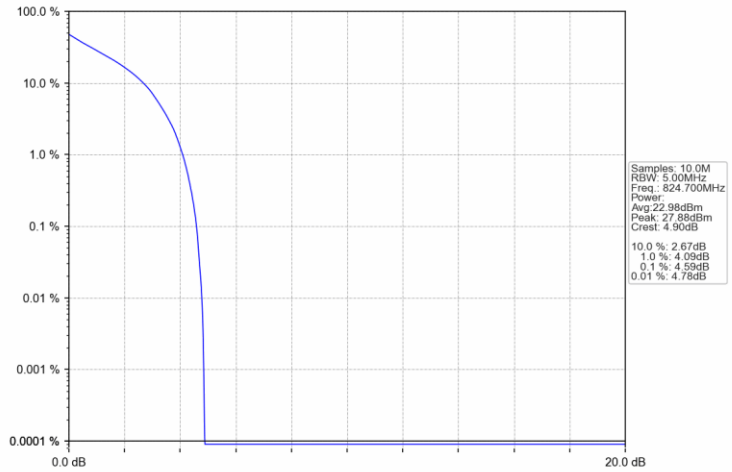
5.1.4 B5_10MHz

Band: 5 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	829	50	0	5.24	<=13	Pass
	836.5	50	0	5.21	<=13	Pass
	844	50	0	5.09	<=13	Pass
16QAM	829	50	0	6.04	<=13	Pass
	836.5	50	0	6.01	<=13	Pass
	844	50	0	5.82	<=13	Pass

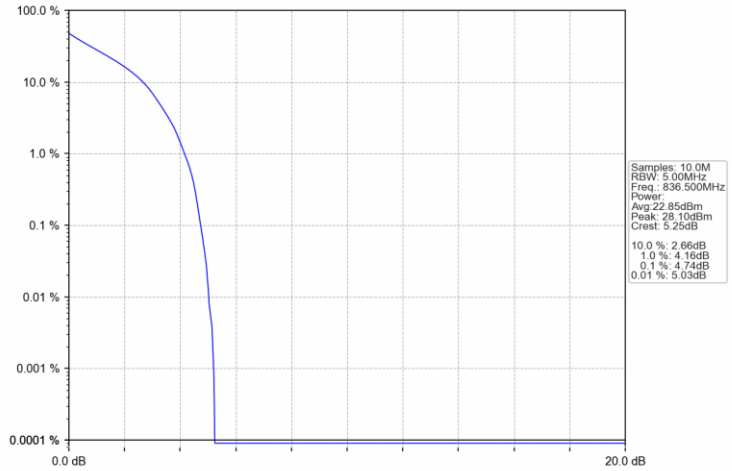
5.2 Test Graph

5.2.1 B5_1.4MHz

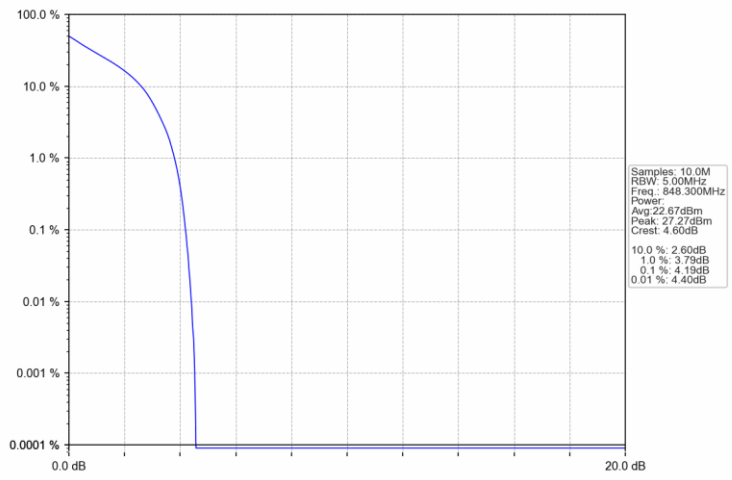
Band5_1.4MHz_QPSK_LCH_824.7MHz_RB_6_0_NTNV



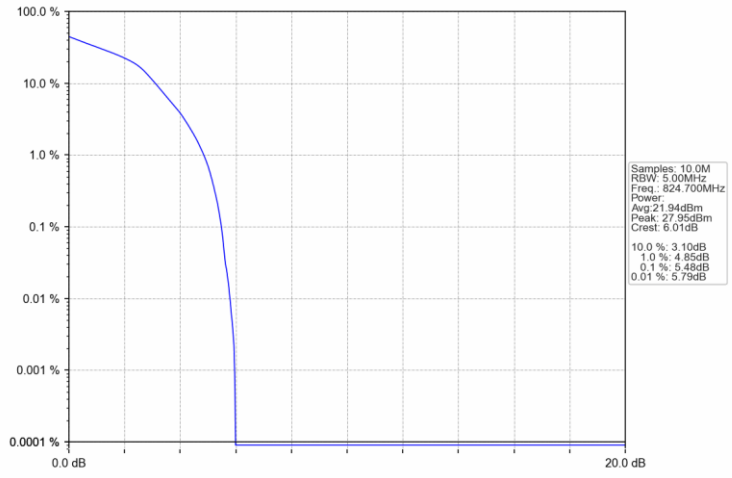
Band5_1.4MHz_QPSK_MCH_836.5MHz_RB_6_0_NTNV



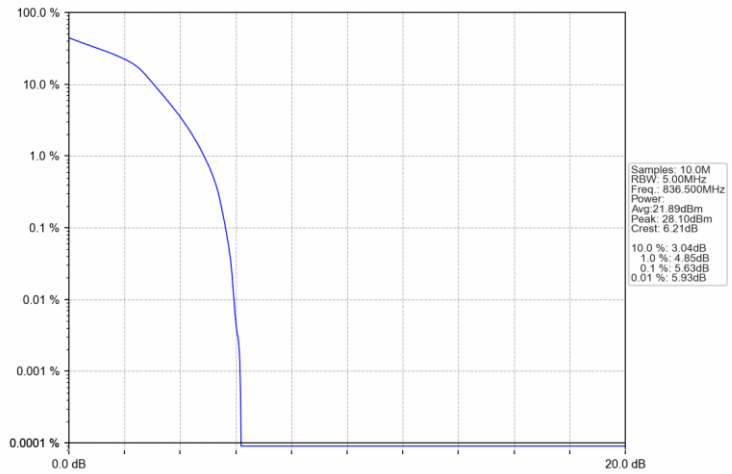
Band5_1.4MHz_QPSK_HCH_848.3MHz_RB_6_0_NTNV



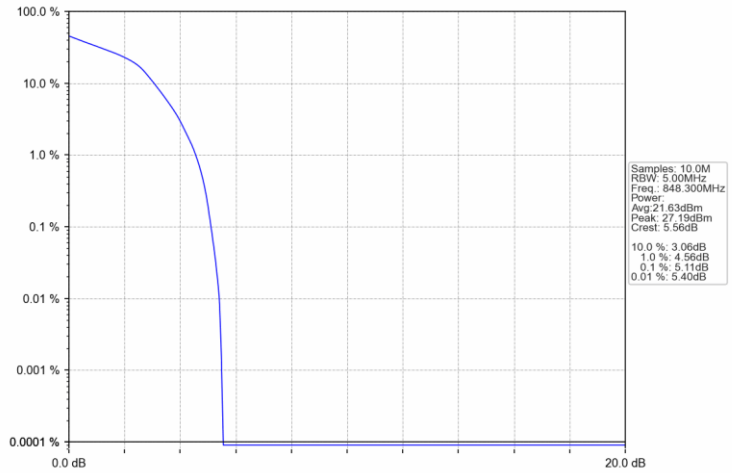
Band5_1.4MHz_16QAM_LCH_824.7MHz_RB_6_0_NTNV



Band5_1.4MHz_16QAM_MCH_836.5MHz_RB_6_0_NTNV

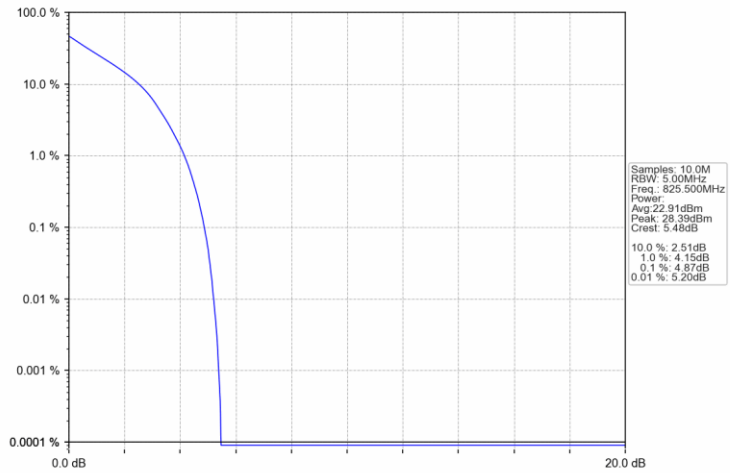


Band5_1.4MHz_16QAM_HCH_848.3MHz_RB_6_0_NTNV

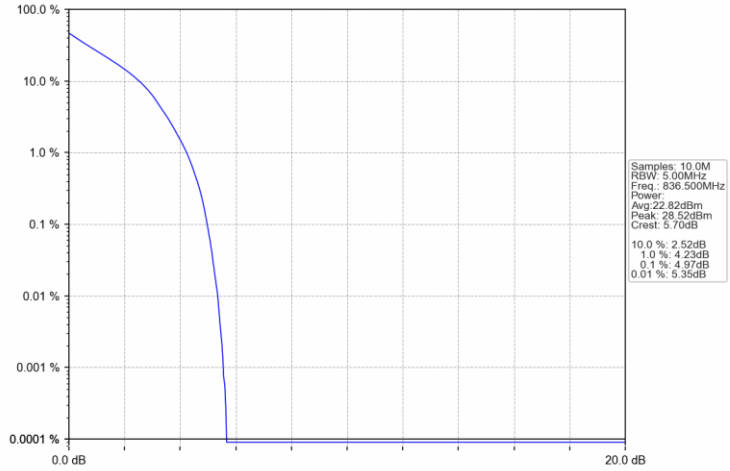


5.2.2 B5_3MHz

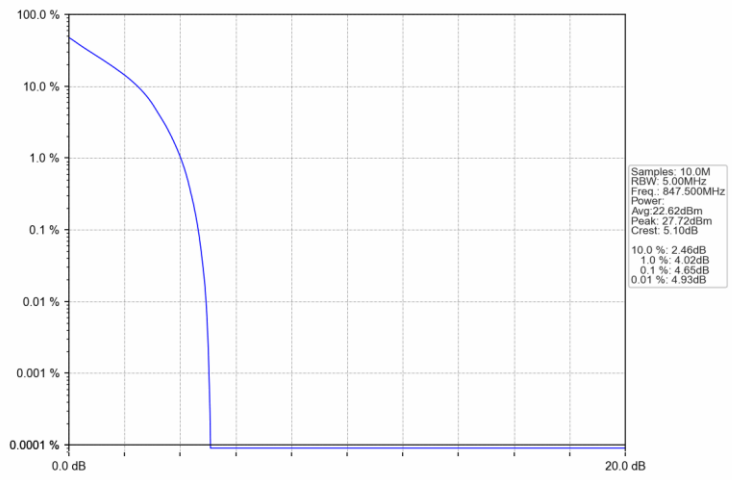
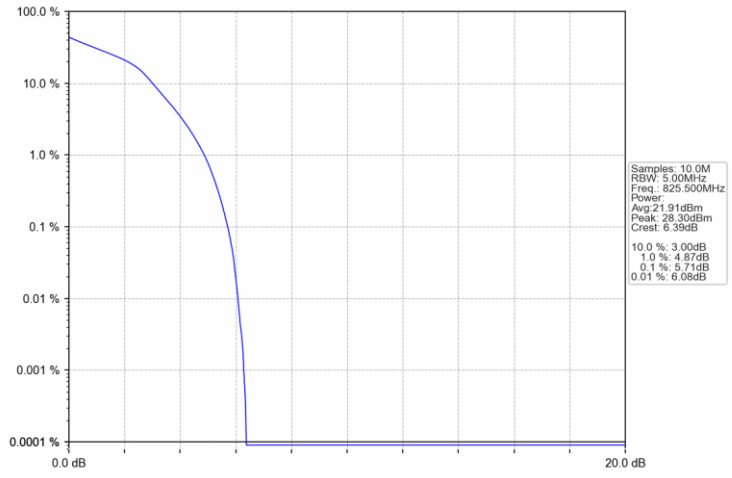
Band5_3MHz_QPSK_LCH_825.5MHz_RB_15_0_NTNV



Band5_3MHz_QPSK_MCH_836.5MHz_RB_15_0_NTNV



Band5_3MHz_QPSK_HCH_847.5MHz_RB_15_0_NTNV



Band5_3MHz_16QAM_LCH_825.5MHz_RB_15_0_NTNV