

FCC LTE Band Test Data

FCC ID : 2BDNA-GS-THINKNODE

Company: : Shenzhen Elecrow Limited

EUT : ThinkNode LoRaWAN Gateway

Model Number : G1-US915

Reviewed By : 

1. Conducted Power Output Data

1.1 Test Result

1.1.1 B5_1.4MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict	
		Size	Offset		Limit	
QPSK	824.7	1	0	23.33	<=38.45	Pass
			2	23.50	<=38.45	Pass
			5	23.56	<=38.45	Pass
		3	0	23.39	<=38.45	Pass
			2	23.53	<=38.45	Pass
			3	23.46	<=38.45	Pass
		6	0	22.43	<=38.45	Pass
	836.5	1	0	23.73	<=38.45	Pass
			2	23.63	<=38.45	Pass
			5	23.44	<=38.45	Pass
		3	0	23.54	<=38.45	Pass
			2	23.42	<=38.45	Pass
			3	23.32	<=38.45	Pass
		6	0	22.55	<=38.45	Pass
	848.3	1	0	23.49	<=38.45	Pass
			2	23.40	<=38.45	Pass
			5	23.09	<=38.45	Pass
		3	0	23.38	<=38.45	Pass
			2	23.29	<=38.45	Pass
			3	23.18	<=38.45	Pass
		6	0	22.37	<=38.45	Pass
16QAM	824.7	1	0	22.32	<=38.45	Pass
			2	22.55	<=38.45	Pass
			5	22.54	<=38.45	Pass
		3	0	22.41	<=38.45	Pass
			2	22.42	<=38.45	Pass
			3	22.47	<=38.45	Pass
		6	0	21.52	<=38.45	Pass
	836.5	1	0	22.65	<=38.45	Pass
			2	22.63	<=38.45	Pass
			5	22.50	<=38.45	Pass
		3	0	22.46	<=38.45	Pass
			2	22.41	<=38.45	Pass
			3	22.33	<=38.45	Pass
		6	0	21.64	<=38.45	Pass
	848.3	1	0	22.29	<=38.45	Pass
			2	22.33	<=38.45	Pass
			5	22.07	<=38.45	Pass
		3	0	22.54	<=38.45	Pass
			2	22.45	<=38.45	Pass
			3	22.34	<=38.45	Pass
		6	0	21.44	<=38.45	Pass

1.1.2 B5_3MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict	
		Size	Offset		Limit	
QPSK	825.5	1	0	23.09	<=38.45	Pass

			7	23.34	<=38.45	Pass
			14	23.24	<=38.45	Pass
			0	22.22	<=38.45	Pass
			4	22.34	<=38.45	Pass
			7	22.27	<=38.45	Pass
		15	0	22.23	<=38.45	Pass
		836.5	1	0	23.37	<=38.45
				7	23.33	<=38.45
				14	22.91	<=38.45
			8	0	22.54	<=38.45
				4	22.47	<=38.45
				7	22.37	<=38.45
			15	0	22.44	<=38.45
		847.5	1	0	23.96	<=38.45
				7	23.63	<=38.45
				14	23.13	<=38.45
			8	0	22.92	<=38.45
				4	22.71	<=38.45
				7	22.47	<=38.45
			15	0	22.69	<=38.45
	16QAM	825.5	1	0	22.30	<=38.45
				7	22.61	<=38.45
				14	22.42	<=38.45
			8	0	21.23	<=38.45
				4	21.38	<=38.45
				7	21.35	<=38.45
			15	0	21.23	<=38.45
		836.5	1	0	22.33	<=38.45
				7	22.34	<=38.45
				14	21.93	<=38.45
			8	0	21.54	<=38.45
				4	21.50	<=38.45
				7	21.40	<=38.45
			15	0	21.48	<=38.45
		847.5	1	0	22.87	<=38.45
				7	22.66	<=38.45
				14	22.07	<=38.45
			8	0	21.98	<=38.45
				4	21.79	<=38.45
				7	21.58	<=38.45
			15	0	21.73	<=38.45

1.1.3 B5_5MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict	
		Size	Offset		Limit	
QPSK	826.5	1	0	23.11	<=38.45	Pass
			13	23.49	<=38.45	Pass
			24	23.36	<=38.45	Pass
		12	0	22.34	<=38.45	Pass
			6	22.47	<=38.45	Pass
			13	22.42	<=38.45	Pass
		25	0	22.38	<=38.45	Pass
	836.5	1	0	23.18	<=38.45	Pass
			13	23.38	<=38.45	Pass
			24	22.98	<=38.45	Pass
		12	0	22.41	<=38.45	Pass

		25	6	22.44	<=38.45	Pass
			13	22.20	<=38.45	Pass
			0	22.28	<=38.45	Pass
	846.5	1	0	23.37	<=38.45	Pass
			13	23.77	<=38.45	Pass
			24	22.72	<=38.45	Pass
		12	0	22.69	<=38.45	Pass
			6	22.81	<=38.45	Pass
			13	22.40	<=38.45	Pass
		25	0	22.70	<=38.45	Pass
16QAM	826.5	1	0	22.26	<=38.45	Pass
			13	22.71	<=38.45	Pass
			24	22.60	<=38.45	Pass
		12	0	21.42	<=38.45	Pass
			6	21.56	<=38.45	Pass
			13	21.51	<=38.45	Pass
		25	0	21.50	<=38.45	Pass
	836.5	1	0	22.37	<=38.45	Pass
			13	22.59	<=38.45	Pass
			24	22.24	<=38.45	Pass
		12	0	21.39	<=38.45	Pass
			6	21.43	<=38.45	Pass
			13	21.19	<=38.45	Pass
		25	0	21.33	<=38.45	Pass
	846.5	1	0	22.53	<=38.45	Pass
			13	23.01	<=38.45	Pass
			24	22.01	<=38.45	Pass
		12	0	21.87	<=38.45	Pass
			6	22.02	<=38.45	Pass
			13	21.70	<=38.45	Pass
		25	0	21.84	<=38.45	Pass

1.1.4 B5_10MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict	
		Size	Offset		Limit	
QPSK	829	1	0	23.32	<=38.45	Pass
			25	23.99	<=38.45	Pass
			49	23.41	<=38.45	Pass
		25	0	22.50	<=38.45	Pass
			13	22.78	<=38.45	Pass
			25	22.79	<=38.45	Pass
		50	0	22.63	<=38.45	Pass
	836.5	1	0	23.22	<=38.45	Pass
			25	23.40	<=38.45	Pass
			49	23.15	<=38.45	Pass
		25	0	22.51	<=38.45	Pass
			13	22.49	<=38.45	Pass
			25	22.37	<=38.45	Pass
		50	0	22.44	<=38.45	Pass
	844	1	0	23.21	<=38.45	Pass
			25	23.80	<=38.45	Pass
			49	23.00	<=38.45	Pass
		25	0	22.43	<=38.45	Pass
			13	22.72	<=38.45	Pass
			25	22.69	<=38.45	Pass
		50	0	22.58	<=38.45	Pass

16QAM	829	1	0	22.43	<=38.45	Pass
			25	23.16	<=38.45	Pass
			49	22.60	<=38.45	Pass
		12	0	22.43	<=38.45	Pass
			19	22.94	<=38.45	Pass
			38	22.68	<=38.45	Pass
		27	0	21.51	<=38.45	Pass
	836.5	1	0	22.13	<=38.45	Pass
			25	22.35	<=38.45	Pass
			49	22.02	<=38.45	Pass
		12	0	22.46	<=38.45	Pass
			19	22.56	<=38.45	Pass
			38	22.37	<=38.45	Pass
		27	0	21.57	<=38.45	Pass
	844	1	0	22.08	<=38.45	Pass
			25	22.74	<=38.45	Pass
			49	22.03	<=38.45	Pass
		12	0	22.23	<=38.45	Pass
			19	22.67	<=38.45	Pass
			38	22.48	<=38.45	Pass
		27	23	21.86	<=38.45	Pass

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	-0.257	-0.0003	-2.5 to 2.5	Pass
					3.85	-0.830	-0.0010	-2.5 to 2.5	Pass
					4.43	2.389	0.0029	-2.5 to 2.5	Pass
				-30	3.85	2.203	0.0027	-2.5 to 2.5	Pass
				-20	3.85	2.732	0.0033	-2.5 to 2.5	Pass
				-10	3.85	4.034	0.0049	-2.5 to 2.5	Pass
				0	3.85	2.117	0.0026	-2.5 to 2.5	Pass
				10	3.85	-0.844	-0.0010	-2.5 to 2.5	Pass
				30	3.85	-0.601	-0.0007	-2.5 to 2.5	Pass
				40	3.85	0.172	0.0002	-2.5 to 2.5	Pass
				50	3.85	2.246	0.0027	-2.5 to 2.5	Pass
	836.5	6	0	20	3.27	-1.945	-0.0023	-2.5 to 2.5	Pass
					3.85	3.161	0.0038	-2.5 to 2.5	Pass
					4.43	1.960	0.0023	-2.5 to 2.5	Pass
				-30	3.85	2.704	0.0032	-2.5 to 2.5	Pass
				-20	3.85	4.005	0.0048	-2.5 to 2.5	Pass
				-10	3.85	0.200	0.0002	-2.5 to 2.5	Pass
				0	3.85	0.229	0.0003	-2.5 to 2.5	Pass
				10	3.85	0.272	0.0003	-2.5 to 2.5	Pass
				30	3.85	0.386	0.0005	-2.5 to 2.5	Pass
				40	3.85	2.918	0.0035	-2.5 to 2.5	Pass
				50	3.85	2.003	0.0024	-2.5 to 2.5	Pass
	848.3	6	0	20	3.27	0.429	0.0005	-2.5 to 2.5	Pass
					3.85	3.476	0.0041	-2.5 to 2.5	Pass
					4.43	3.176	0.0037	-2.5 to 2.5	Pass

				-30	3.85	3.948	0.0047	-2.5 to 2.5	Pass
				-20	3.85	0.415	0.0005	-2.5 to 2.5	Pass
				-10	3.85	2.317	0.0027	-2.5 to 2.5	Pass
				0	3.85	2.375	0.0028	-2.5 to 2.5	Pass
				10	3.85	1.016	0.0012	-2.5 to 2.5	Pass
				30	3.85	-1.502	-0.0018	-2.5 to 2.5	Pass
				40	3.85	1.101	0.0013	-2.5 to 2.5	Pass
				50	3.85	1.044	0.0012	-2.5 to 2.5	Pass
16QAM	824.7	6	0	20	3.27	0.815	0.0010	-2.5 to 2.5	Pass
					3.85	0.458	0.0006	-2.5 to 2.5	Pass
					4.43	-2.847	-0.0035	-2.5 to 2.5	Pass
				-30	3.85	0.372	0.0005	-2.5 to 2.5	Pass
				-20	3.85	0.401	0.0005	-2.5 to 2.5	Pass
				-10	3.85	-1.330	-0.0016	-2.5 to 2.5	Pass
				0	3.85	0.830	0.0010	-2.5 to 2.5	Pass
				10	3.85	-0.501	-0.0006	-2.5 to 2.5	Pass
	836.5	6	0	30	3.85	-1.001	-0.0012	-2.5 to 2.5	Pass
				40	3.85	-0.472	-0.0006	-2.5 to 2.5	Pass
				50	3.85	1.960	0.0024	-2.5 to 2.5	Pass
				20	3.27	3.390	0.0041	-2.5 to 2.5	Pass
					3.85	0.787	0.0009	-2.5 to 2.5	Pass
					4.43	-1.030	-0.0012	-2.5 to 2.5	Pass
				-30	3.85	-0.958	-0.0011	-2.5 to 2.5	Pass
				-20	3.85	2.961	0.0035	-2.5 to 2.5	Pass
	848.3	6	0	-10	3.85	1.101	0.0013	-2.5 to 2.5	Pass
				0	3.85	-1.988	-0.0024	-2.5 to 2.5	Pass
				10	3.85	0.629	0.0008	-2.5 to 2.5	Pass
				30	3.85	-1.330	-0.0016	-2.5 to 2.5	Pass
				40	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass
				50	3.85	1.402	0.0017	-2.5 to 2.5	Pass
				20	3.27	2.246	0.0026	-2.5 to 2.5	Pass
					3.85	-3.519	-0.0041	-2.5 to 2.5	Pass
					4.43	-2.933	-0.0035	-2.5 to 2.5	Pass
				-30	3.85	-0.529	-0.0006	-2.5 to 2.5	Pass
				-20	3.85	-1.273	-0.0015	-2.5 to 2.5	Pass
				-10	3.85	-0.801	-0.0009	-2.5 to 2.5	Pass
				0	3.85	0.973	0.0011	-2.5 to 2.5	Pass
				10	3.85	-2.303	-0.0027	-2.5 to 2.5	Pass
				30	3.85	-1.173	-0.0014	-2.5 to 2.5	Pass
				40	3.85	-0.572	-0.0007	-2.5 to 2.5	Pass
				50	3.85	1.330	0.0016	-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	-2.818	-0.0034	-2.5 to 2.5	Pass
					3.85	-2.675	-0.0032	-2.5 to 2.5	Pass
					4.43	-3.233	-0.0039	-2.5 to 2.5	Pass
				-30	3.85	-3.061	-0.0037	-2.5 to 2.5	Pass
				-20	3.85	-3.333	-0.0040	-2.5 to 2.5	Pass
				-10	3.85	-2.861	-0.0035	-2.5 to 2.5	Pass
				0	3.85	-3.347	-0.0041	-2.5 to 2.5	Pass
				10	3.85	-1.101	-0.0013	-2.5 to 2.5	Pass
				30	3.85	-3.219	-0.0039	-2.5 to 2.5	Pass
				40	3.85	-0.973	-0.0012	-2.5 to 2.5	Pass

	836.5	15	0	50	3.85	-3.290	-0.0040	-2.5 to 2.5	Pass
				20	3.27	-0.587	-0.0007	-2.5 to 2.5	Pass
					3.85	-0.672	-0.0008	-2.5 to 2.5	Pass
					4.43	-0.429	-0.0005	-2.5 to 2.5	Pass
				-30	3.85	-0.415	-0.0005	-2.5 to 2.5	Pass
				-20	3.85	0.358	0.0004	-2.5 to 2.5	Pass
				-10	3.85	-0.887	-0.0011	-2.5 to 2.5	Pass
				0	3.85	-3.920	-0.0047	-2.5 to 2.5	Pass
				10	3.85	1.931	0.0023	-2.5 to 2.5	Pass
				30	3.85	-2.117	-0.0025	-2.5 to 2.5	Pass
	847.5	15	0	40	3.85	-1.817	-0.0022	-2.5 to 2.5	Pass
				50	3.85	-2.646	-0.0032	-2.5 to 2.5	Pass
				20	3.27	0.873	0.0010	-2.5 to 2.5	Pass
					3.85	1.388	0.0016	-2.5 to 2.5	Pass
					4.43	0.744	0.0009	-2.5 to 2.5	Pass
				-30	3.85	2.732	0.0032	-2.5 to 2.5	Pass
				-20	3.85	2.546	0.0030	-2.5 to 2.5	Pass
				-10	3.85	2.775	0.0033	-2.5 to 2.5	Pass
				0	3.85	1.359	0.0016	-2.5 to 2.5	Pass
				10	3.85	0.386	0.0005	-2.5 to 2.5	Pass
16QAM	825.5	15	0	30	3.85	-1.001	-0.0012	-2.5 to 2.5	Pass
				40	3.85	3.204	0.0038	-2.5 to 2.5	Pass
				50	3.85	3.119	0.0037	-2.5 to 2.5	Pass
				20	3.27	-2.303	-0.0028	-2.5 to 2.5	Pass
					3.85	-2.646	-0.0032	-2.5 to 2.5	Pass
					4.43	-2.890	-0.0035	-2.5 to 2.5	Pass
				-30	3.85	0.215	0.0003	-2.5 to 2.5	Pass
				-20	3.85	-1.302	-0.0016	-2.5 to 2.5	Pass
				-10	3.85	-0.687	-0.0008	-2.5 to 2.5	Pass
				0	3.85	-0.300	-0.0004	-2.5 to 2.5	Pass
	836.5	15	0	10	3.85	-2.546	-0.0031	-2.5 to 2.5	Pass
				30	3.85	0.830	0.0010	-2.5 to 2.5	Pass
				40	3.85	-0.587	-0.0007	-2.5 to 2.5	Pass
				50	3.85	-0.772	-0.0009	-2.5 to 2.5	Pass
				20	3.27	-2.847	-0.0034	-2.5 to 2.5	Pass
					3.85	1.373	0.0016	-2.5 to 2.5	Pass
					4.43	-0.644	-0.0008	-2.5 to 2.5	Pass
				-30	3.85	0.744	0.0009	-2.5 to 2.5	Pass
				-20	3.85	0.558	0.0007	-2.5 to 2.5	Pass
				-10	3.85	1.602	0.0019	-2.5 to 2.5	Pass
	847.5	15	0	0	3.85	1.187	0.0014	-2.5 to 2.5	Pass
				10	3.85	2.060	0.0025	-2.5 to 2.5	Pass
				30	3.85	2.704	0.0032	-2.5 to 2.5	Pass
				40	3.85	0.801	0.0010	-2.5 to 2.5	Pass
				50	3.85	1.273	0.0015	-2.5 to 2.5	Pass
				20	3.27	2.933	0.0035	-2.5 to 2.5	Pass
					3.85	-0.229	-0.0003	-2.5 to 2.5	Pass
					4.43	-2.561	-0.0030	-2.5 to 2.5	Pass
				-30	3.85	0.529	0.0006	-2.5 to 2.5	Pass
				-20	3.85	0.544	0.0006	-2.5 to 2.5	Pass
				-10	3.85	-0.157	-0.0002	-2.5 to 2.5	Pass
				0	3.85	2.389	0.0028	-2.5 to 2.5	Pass
				10	3.85	2.360	0.0028	-2.5 to 2.5	Pass
				30	3.85	-1.817	-0.0021	-2.5 to 2.5	Pass
				40	3.85	-1.445	-0.0017	-2.5 to 2.5	Pass
				50	3.85	-1.931	-0.0023	-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	1.173	0.0014	-2.5 to 2.5	Pass
					3.85	0.558	0.0007	-2.5 to 2.5	Pass
					4.43	2.832	0.0034	-2.5 to 2.5	Pass
				-30	3.85	-0.730	-0.0009	-2.5 to 2.5	Pass
				-20	3.85	-1.173	-0.0014	-2.5 to 2.5	Pass
				-10	3.85	1.974	0.0024	-2.5 to 2.5	Pass
				0	3.85	-1.717	-0.0021	-2.5 to 2.5	Pass
				10	3.85	2.017	0.0024	-2.5 to 2.5	Pass
				30	3.85	-0.286	-0.0003	-2.5 to 2.5	Pass
				40	3.85	-0.587	-0.0007	-2.5 to 2.5	Pass
				50	3.85	1.073	0.0013	-2.5 to 2.5	Pass
	836.5	25	0	20	3.27	-2.861	-0.0034	-2.5 to 2.5	Pass
					3.85	0.744	0.0009	-2.5 to 2.5	Pass
					4.43	-0.057	-0.0001	-2.5 to 2.5	Pass
				-30	3.85	0.300	0.0004	-2.5 to 2.5	Pass
				-20	3.85	3.548	0.0042	-2.5 to 2.5	Pass
				-10	3.85	2.475	0.0030	-2.5 to 2.5	Pass
				0	3.85	-1.216	-0.0015	-2.5 to 2.5	Pass
				10	3.85	2.632	0.0031	-2.5 to 2.5	Pass
				30	3.85	0.801	0.0010	-2.5 to 2.5	Pass
				40	3.85	2.389	0.0029	-2.5 to 2.5	Pass
				50	3.85	1.945	0.0023	-2.5 to 2.5	Pass
	846.5	25	0	20	3.27	-2.174	-0.0026	-2.5 to 2.5	Pass
					3.85	0.157	0.0002	-2.5 to 2.5	Pass
					4.43	2.346	0.0028	-2.5 to 2.5	Pass
				-30	3.85	3.204	0.0038	-2.5 to 2.5	Pass
				-20	3.85	1.717	0.0020	-2.5 to 2.5	Pass
				-10	3.85	3.061	0.0036	-2.5 to 2.5	Pass
				0	3.85	2.675	0.0032	-2.5 to 2.5	Pass
				10	3.85	-0.601	-0.0007	-2.5 to 2.5	Pass
				30	3.85	0.529	0.0006	-2.5 to 2.5	Pass
				40	3.85	0.200	0.0002	-2.5 to 2.5	Pass
				50	3.85	-1.488	-0.0018	-2.5 to 2.5	Pass
16QAM	826.5	25	0	20	3.27	1.173	0.0014	-2.5 to 2.5	Pass
					3.85	-0.930	-0.0011	-2.5 to 2.5	Pass
					4.43	-0.486	-0.0006	-2.5 to 2.5	Pass
				-30	3.85	0.629	0.0008	-2.5 to 2.5	Pass
				-20	3.85	-2.317	-0.0028	-2.5 to 2.5	Pass
				-10	3.85	0.100	0.0001	-2.5 to 2.5	Pass
				0	3.85	-1.445	-0.0017	-2.5 to 2.5	Pass
				10	3.85	0.944	0.0011	-2.5 to 2.5	Pass
				30	3.85	-0.172	-0.0002	-2.5 to 2.5	Pass
				40	3.85	-2.375	-0.0029	-2.5 to 2.5	Pass
				50	3.85	-2.103	-0.0025	-2.5 to 2.5	Pass
	836.5	25	0	20	3.27	1.874	0.0022	-2.5 to 2.5	Pass
					3.85	-0.472	-0.0006	-2.5 to 2.5	Pass
					4.43	-0.186	-0.0002	-2.5 to 2.5	Pass
				-30	3.85	1.287	0.0015	-2.5 to 2.5	Pass
				-20	3.85	0.157	0.0002	-2.5 to 2.5	Pass
				-10	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass
				0	3.85	-1.345	-0.0016	-2.5 to 2.5	Pass
				10	3.85	1.516	0.0018	-2.5 to 2.5	Pass
				30	3.85	0.544	0.0007	-2.5 to 2.5	Pass
				40	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass
				50	3.85	2.089	0.0025	-2.5 to 2.5	Pass
	846.5	25	0	20	3.27	-0.372	-0.0004	-2.5 to 2.5	Pass

					3.85	-2.675	-0.0032	-2.5 to 2.5	Pass
					4.43	2.232	0.0026	-2.5 to 2.5	Pass
				-30	3.85	-2.275	-0.0027	-2.5 to 2.5	Pass
				-20	3.85	-0.687	-0.0008	-2.5 to 2.5	Pass
				-10	3.85	-0.243	-0.0003	-2.5 to 2.5	Pass
				0	3.85	-3.519	-0.0042	-2.5 to 2.5	Pass
				10	3.85	-2.475	-0.0029	-2.5 to 2.5	Pass
				30	3.85	-0.601	-0.0007	-2.5 to 2.5	Pass
				40	3.85	1.044	0.0012	-2.5 to 2.5	Pass
				50	3.85	-1.302	-0.0015	-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	1.316	0.0016	-2.5 to 2.5	Pass
					3.85	3.247	0.0039	-2.5 to 2.5	Pass
					4.43	1.230	0.0015	-2.5 to 2.5	Pass
				-30	3.85	2.875	0.0035	-2.5 to 2.5	Pass
				-20	3.85	2.232	0.0027	-2.5 to 2.5	Pass
				-10	3.85	1.645	0.0020	-2.5 to 2.5	Pass
				0	3.85	2.246	0.0027	-2.5 to 2.5	Pass
				10	3.85	2.589	0.0031	-2.5 to 2.5	Pass
				30	3.85	0.186	0.0002	-2.5 to 2.5	Pass
				40	3.85	0.315	0.0004	-2.5 to 2.5	Pass
				50	3.85	-1.130	-0.0014	-2.5 to 2.5	Pass
	836.5	50	0	20	3.27	-0.529	-0.0006	-2.5 to 2.5	Pass
					3.85	1.602	0.0019	-2.5 to 2.5	Pass
					4.43	2.289	0.0027	-2.5 to 2.5	Pass
				-30	3.85	2.732	0.0033	-2.5 to 2.5	Pass
				-20	3.85	1.273	0.0015	-2.5 to 2.5	Pass
				-10	3.85	1.988	0.0024	-2.5 to 2.5	Pass
				0	3.85	0.057	0.0001	-2.5 to 2.5	Pass
				10	3.85	1.016	0.0012	-2.5 to 2.5	Pass
				30	3.85	0.501	0.0006	-2.5 to 2.5	Pass
				40	3.85	1.287	0.0015	-2.5 to 2.5	Pass
				50	3.85	-1.001	-0.0012	-2.5 to 2.5	Pass
	844	50	0	20	3.27	-2.789	-0.0033	-2.5 to 2.5	Pass
					3.85	2.160	0.0026	-2.5 to 2.5	Pass
					4.43	2.704	0.0032	-2.5 to 2.5	Pass
				-30	3.85	0.572	0.0007	-2.5 to 2.5	Pass
				-20	3.85	1.173	0.0014	-2.5 to 2.5	Pass
				-10	3.85	1.760	0.0021	-2.5 to 2.5	Pass
				0	3.85	3.591	0.0043	-2.5 to 2.5	Pass
				10	3.85	2.346	0.0028	-2.5 to 2.5	Pass
				30	3.85	1.931	0.0023	-2.5 to 2.5	Pass
				40	3.85	0.329	0.0004	-2.5 to 2.5	Pass
				50	3.85	1.874	0.0022	-2.5 to 2.5	Pass
16QAM	829	27	0	20	3.27	1.988	0.0024	-2.5 to 2.5	Pass
					3.85	-4.649	-0.0056	-2.5 to 2.5	Pass
					4.43	0.429	0.0005	-2.5 to 2.5	Pass
				-30	3.85	0.758	0.0009	-2.5 to 2.5	Pass
				-20	3.85	2.174	0.0026	-2.5 to 2.5	Pass
				-10	3.85	-0.615	-0.0007	-2.5 to 2.5	Pass
				0	3.85	-3.119	-0.0038	-2.5 to 2.5	Pass
				10	3.85	0.300	0.0004	-2.5 to 2.5	Pass

				30	3.85	-0.644	-0.0008	-2.5 to 2.5	Pass
				40	3.85	1.674	0.0020	-2.5 to 2.5	Pass
				50	3.85	-1.245	-0.0015	-2.5 to 2.5	Pass
	836.5	27	0	20	3.27	-0.987	-0.0012	-2.5 to 2.5	Pass
					3.85	-2.060	-0.0025	-2.5 to 2.5	Pass
					4.43	0.858	0.0010	-2.5 to 2.5	Pass
				-30	3.85	0.772	0.0009	-2.5 to 2.5	Pass
					-20	3.85	0.172	-2.5 to 2.5	Pass
				-10	3.85	-1.588	-0.0019	-2.5 to 2.5	Pass
					0	3.85	-0.086	-2.5 to 2.5	Pass
				10	3.85	-3.762	-0.0045	-2.5 to 2.5	Pass
					30	3.85	0.572	-2.5 to 2.5	Pass
				40	3.85	1.488	0.0018	-2.5 to 2.5	Pass
					50	3.85	-2.003	-2.5 to 2.5	Pass
	844	27	23	20	3.27	1.845	0.0022	-2.5 to 2.5	Pass
					3.85	0.043	0.0001	-2.5 to 2.5	Pass
					4.43	-0.300	-0.0004	-2.5 to 2.5	Pass
				-30	3.85	-2.160	-0.0026	-2.5 to 2.5	Pass
					-20	3.85	0.830	-2.5 to 2.5	Pass
				-10	3.85	-0.629	-0.0007	-2.5 to 2.5	Pass
					0	3.85	2.389	-2.5 to 2.5	Pass
				10	3.85	0.515	0.0006	-2.5 to 2.5	Pass
					30	3.85	-0.758	-2.5 to 2.5	Pass
				40	3.85	-0.114	-0.0001	-2.5 to 2.5	Pass
					50	3.85	-1.559	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

3.1.1 B5_1.4MHz

Band: 5 / Bandwidth: 1.4MHz / NTVN						
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 / NTV						
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

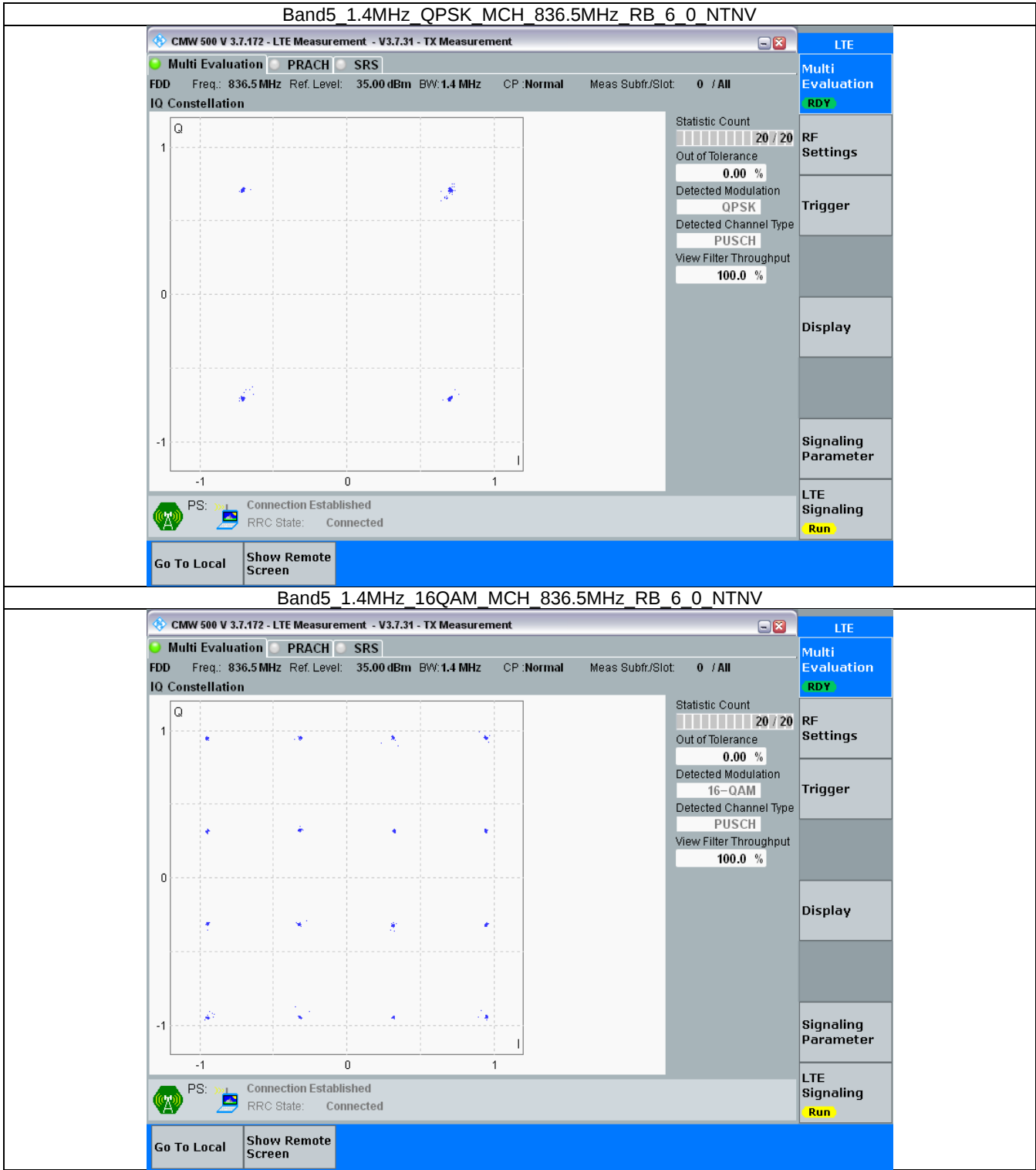
Band: 5 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	836.5	25	0	Refer To Test Graph		Pass
16QAM	836.5	25	0	Refer To Test Graph		Pass

3.1.4 B5_10MHz

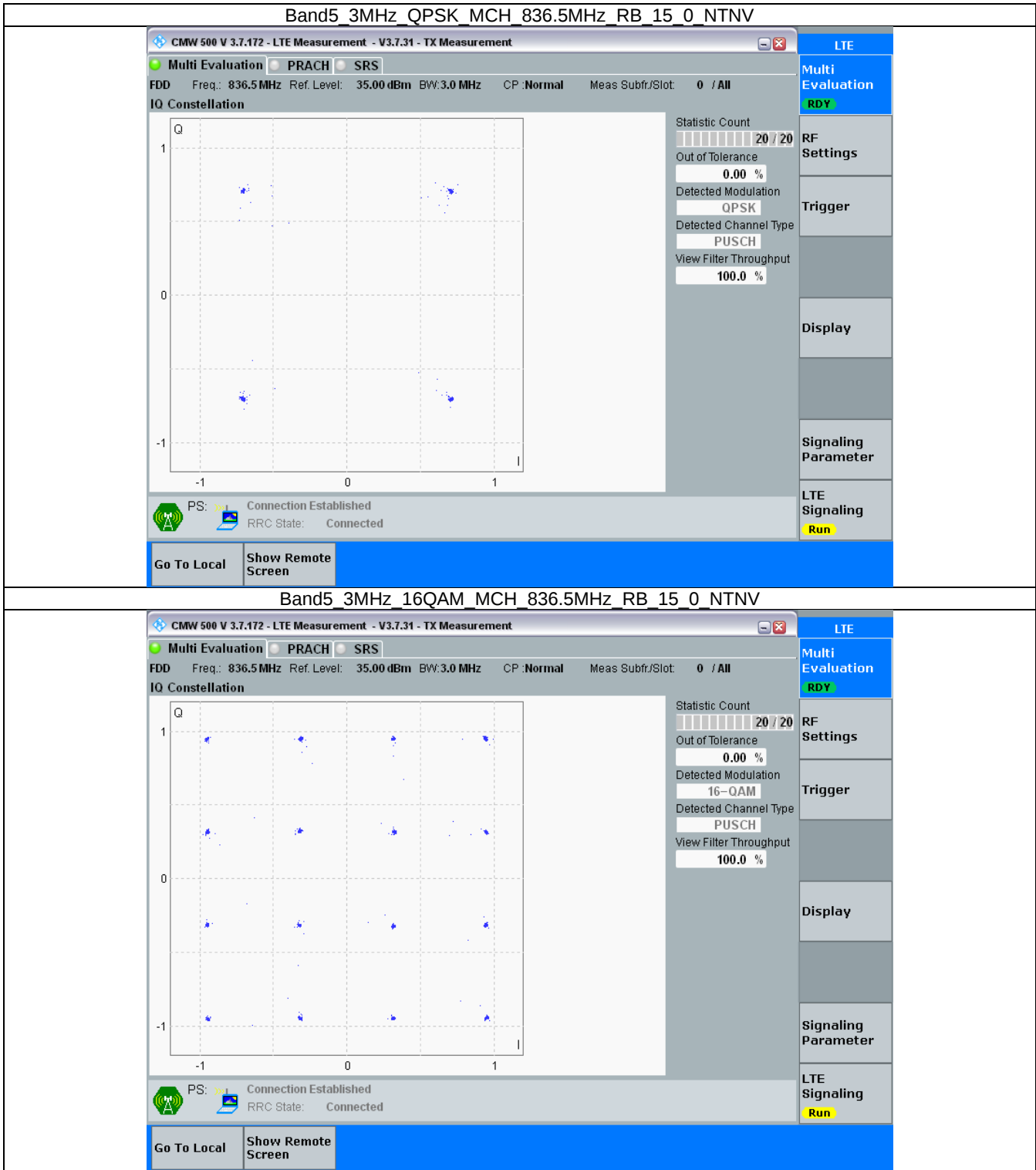
Band: 5 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	836.5	50	0	Refer To Test Graph		Pass
16QAM	836.5	27	0	Refer To Test Graph		Pass

3.2 Test Graph

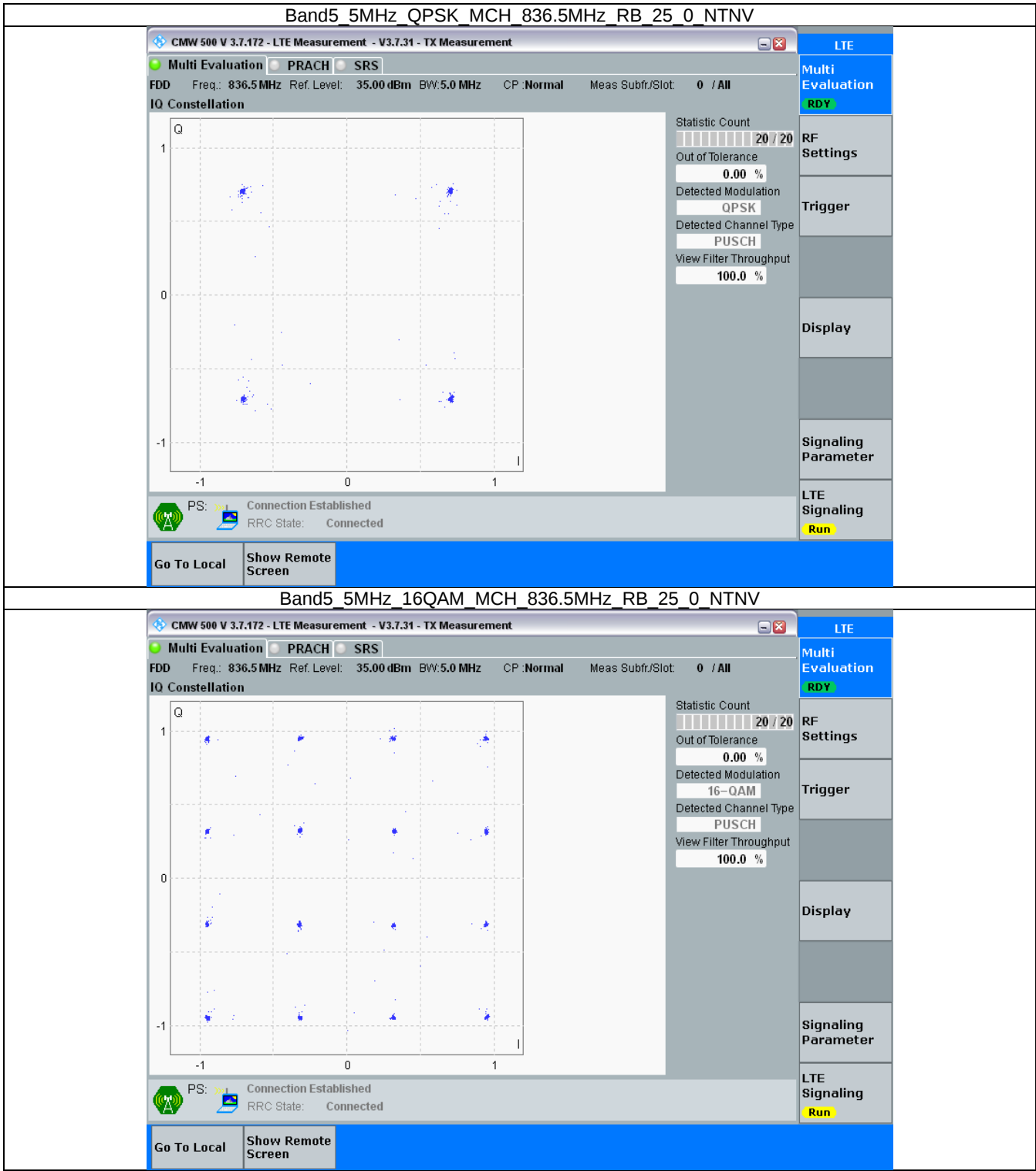
3.2.1 B5_1.4MHz



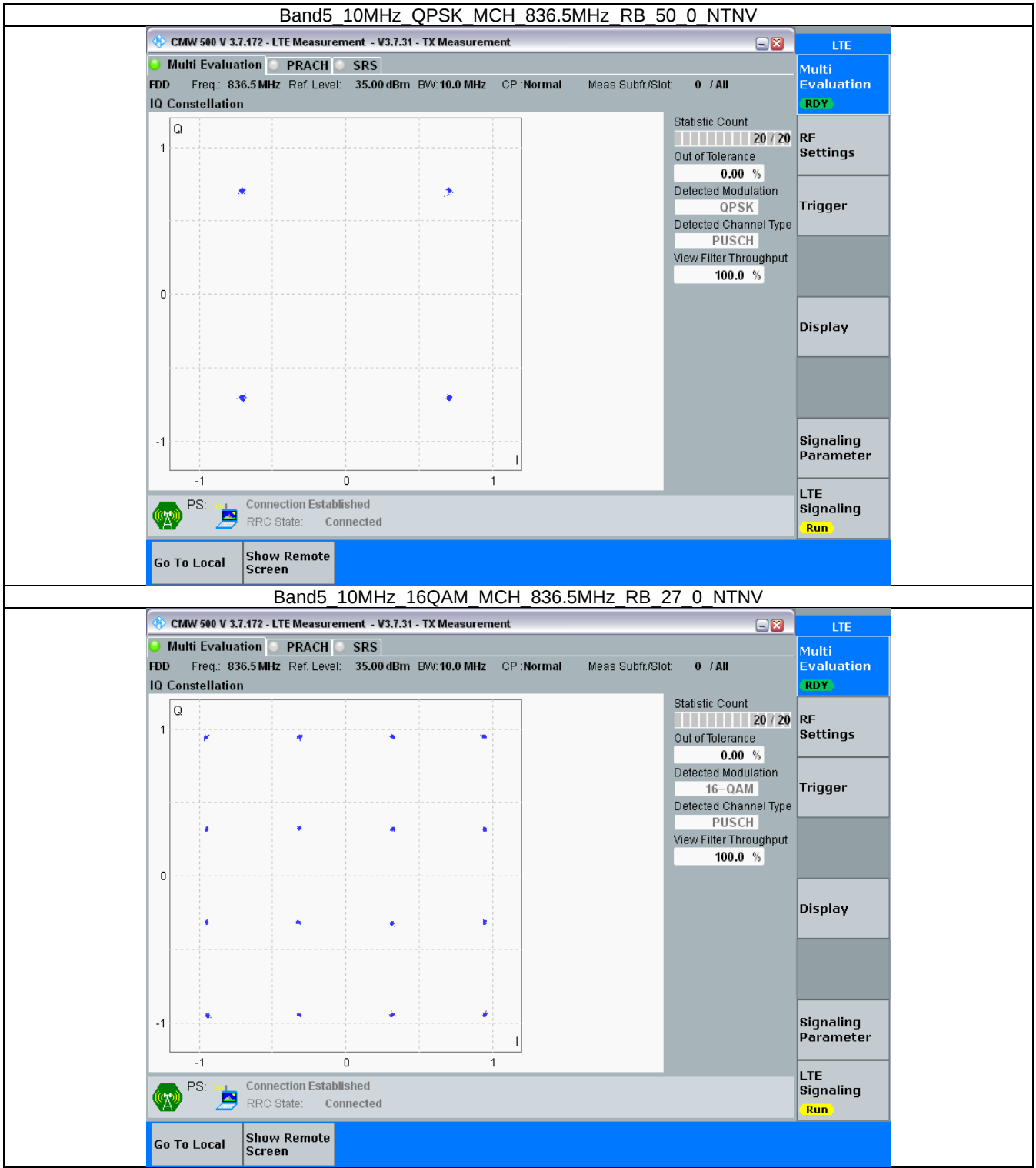
3.2.2 B5_3MHz



3.2.3 B5_5MHz



3.2.4 B5_10MHz



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band5_OBW

Band: 5 / NTN							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	824.7	6	0	1.110	/	Pass
		836.5	6	0	1.108	/	Pass
		848.3	6	0	1.111	/	Pass
	16QAM	824.7	6	0	1.116	/	Pass
		836.5	6	0	1.110	/	Pass
		848.3	6	0	1.113	/	Pass
3	QPSK	825.5	15	0	2.732	/	Pass
		836.5	15	0	2.737	/	Pass
		847.5	15	0	2.728	/	Pass
	16QAM	825.5	15	0	2.745	/	Pass
		836.5	15	0	2.718	/	Pass
		847.5	15	0	2.721	/	Pass
5	QPSK	826.5	25	0	4.545	/	Pass
		836.5	25	0	4.525	/	Pass
		846.5	25	0	4.540	/	Pass
	16QAM	826.5	25	0	4.521	/	Pass
		836.5	25	0	4.521	/	Pass
		846.5	25	0	4.534	/	Pass
10	QPSK	829	50	0	9.056	/	Pass
		836.5	50	0	9.081	/	Pass
		844	50	0	9.067	/	Pass
	16QAM	829	27	0	5.111	/	Pass
		836.5	27	0	5.118	/	Pass
		844	27	23	5.072	/	Pass

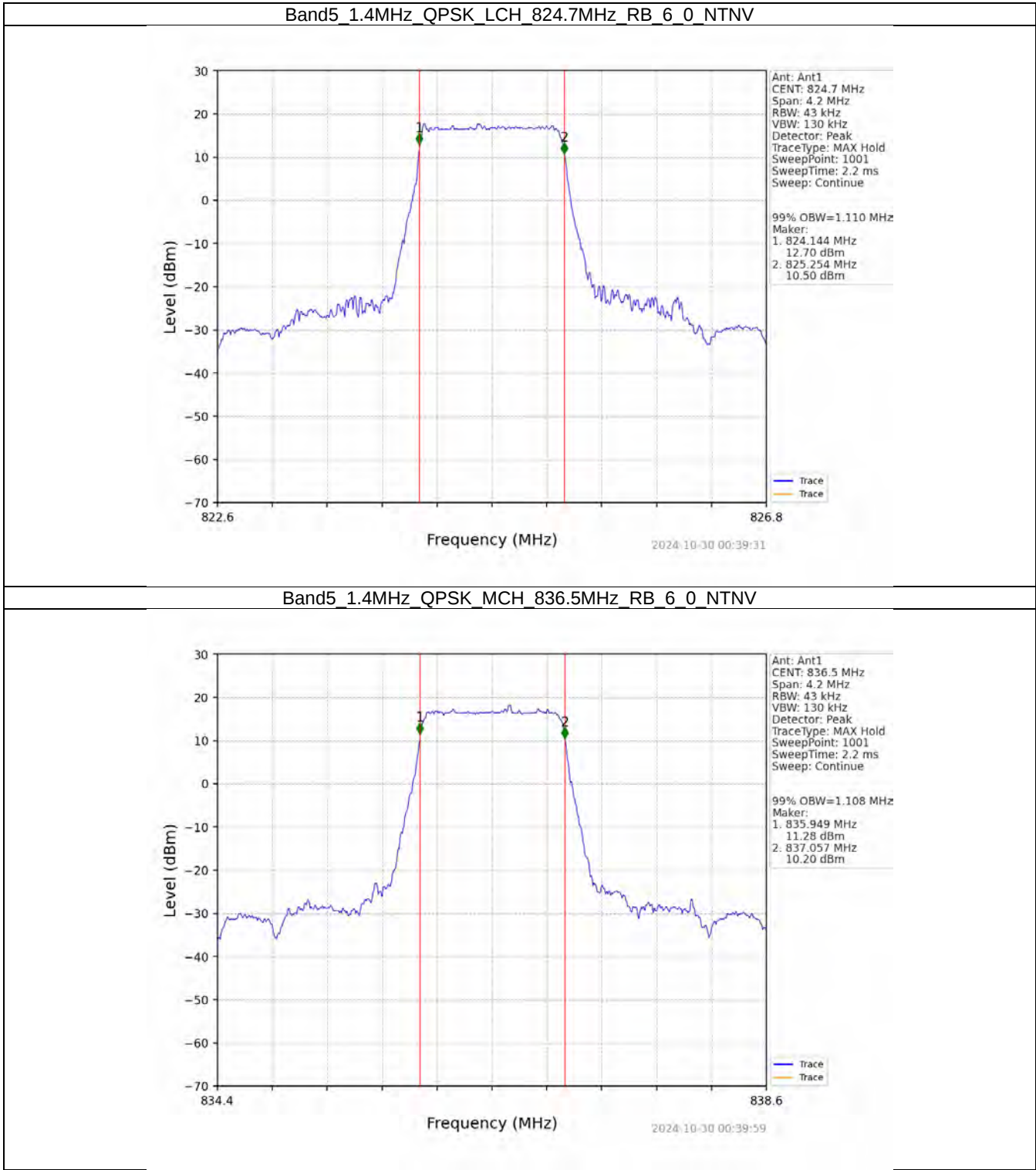
4.1.2 Band5_XDB

Band: 5 / NTN							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	824.7	6	0	1.328	/	Pass
		836.5	6	0	1.329	/	Pass
		848.3	6	0	1.326	/	Pass
	16QAM	824.7	6	0	1.337	/	Pass
		836.5	6	0	1.336	/	Pass
		848.3	6	0	1.336	/	Pass
3	QPSK	825.5	15	0	3.034	/	Pass
		836.5	15	0	3.024	/	Pass
		847.5	15	0	3.053	/	Pass
	16QAM	825.5	15	0	3.057	/	Pass
		836.5	15	0	3.021	/	Pass
		847.5	15	0	3.009	/	Pass
5	QPSK	826.5	25	0	5.041	/	Pass
		836.5	25	0	5.011	/	Pass
		846.5	25	0	5.025	/	Pass

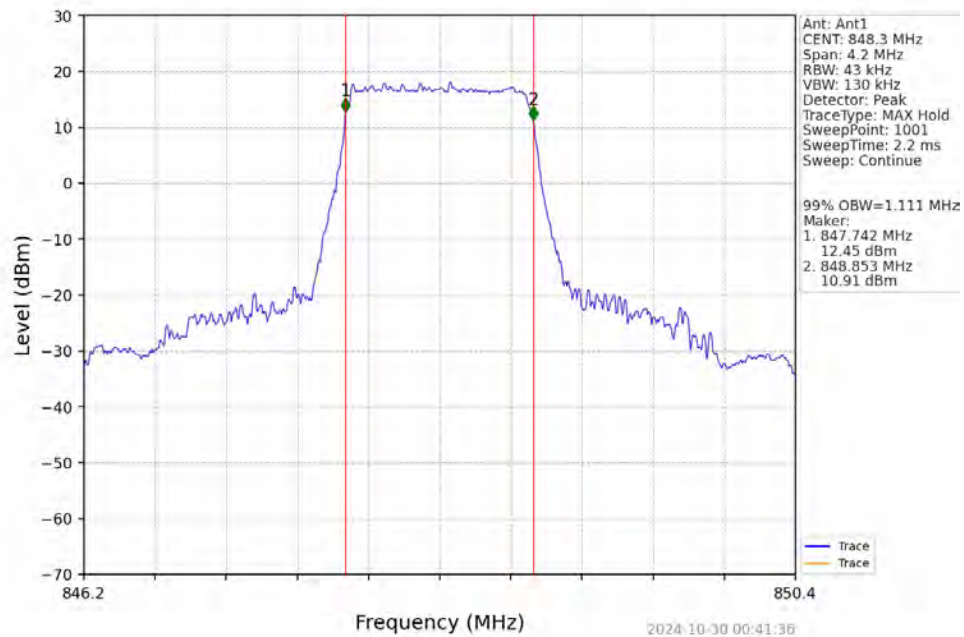
	16QAM	826.5	25	0	5.036	/	Pass
		836.5	25	0	4.981	/	Pass
		846.5	25	0	4.993	/	Pass
10	QPSK	829	50	0	10.253	/	Pass
		836.5	50	0	10.331	/	Pass
		844	50	0	10.353	/	Pass
	16QAM	829	27	0	6.277	/	Pass
		836.5	27	0	6.347	/	Pass
		844	27	23	6.420	/	Pass

4.2 Test Graph

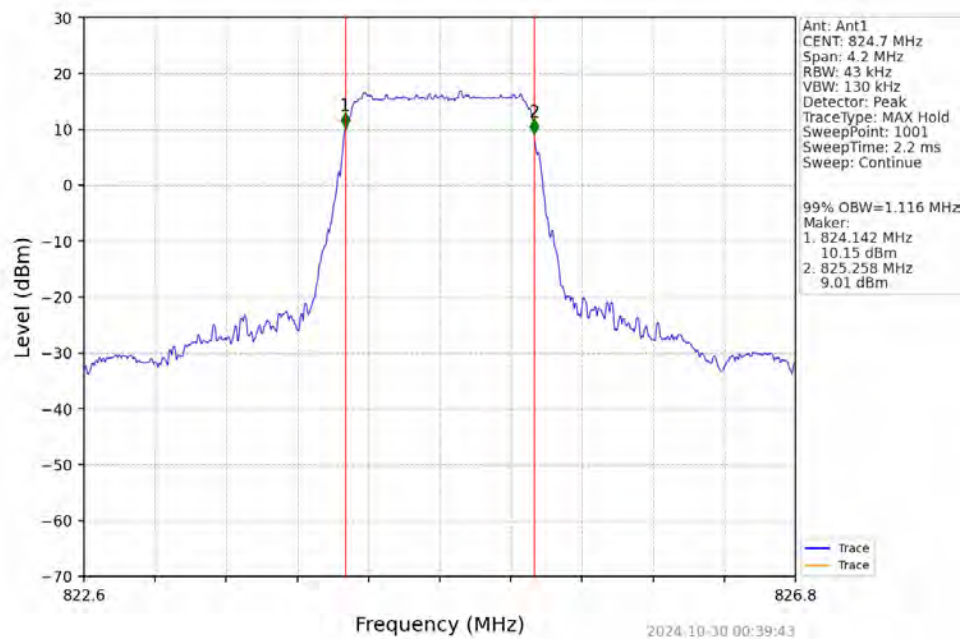
4.2.1 Band5_OBW



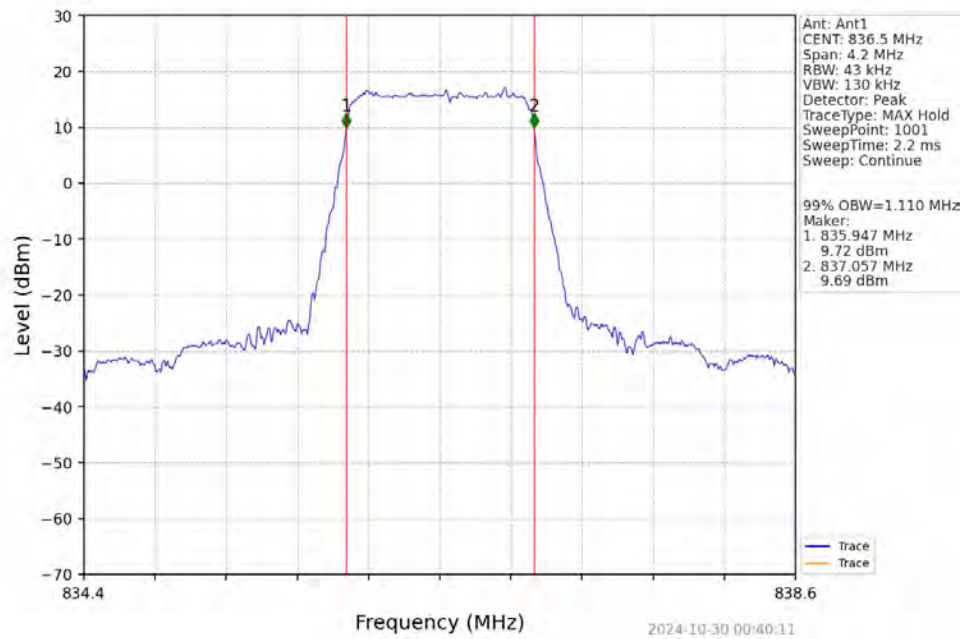
Band5 1.4MHz QPSK HCH 848.3MHz RB 6 0 NTN



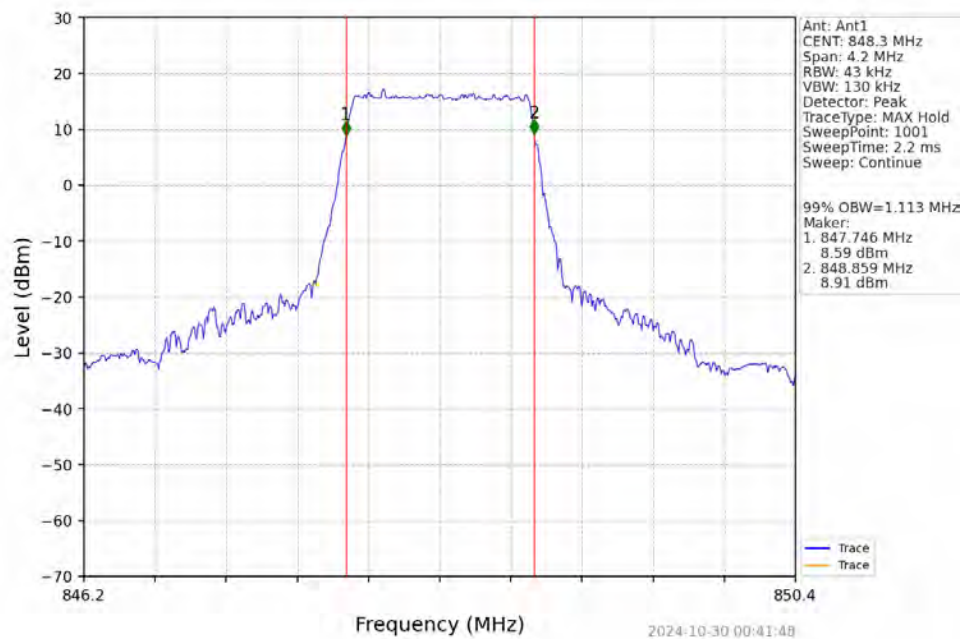
Band5 1.4MHz 16QAM LCH 824.7MHz RB 6 0 NTN



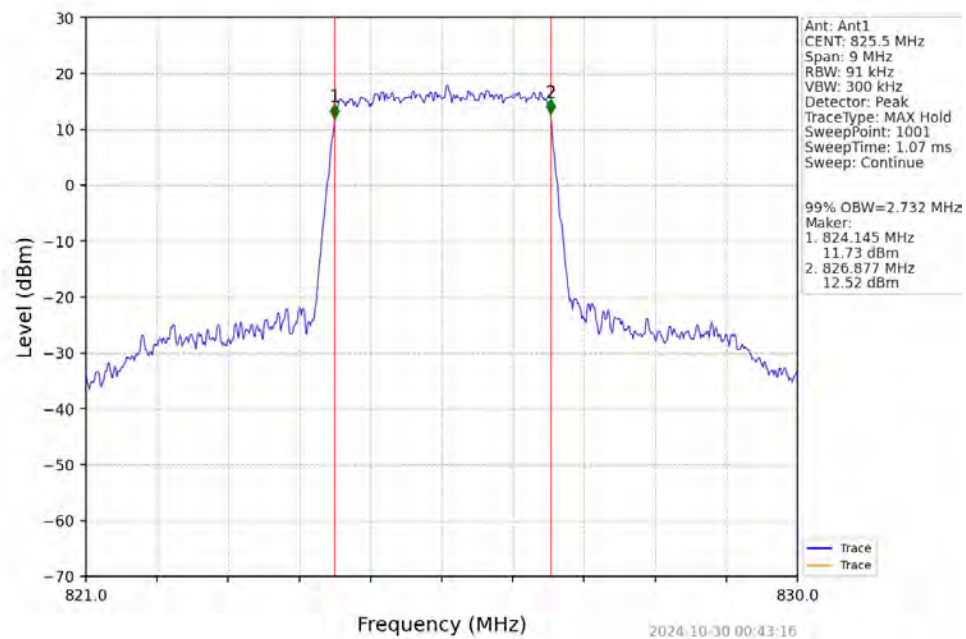
Band5 1.4MHz 16QAM MCH 836.5MHz RB 6 0 NTNV



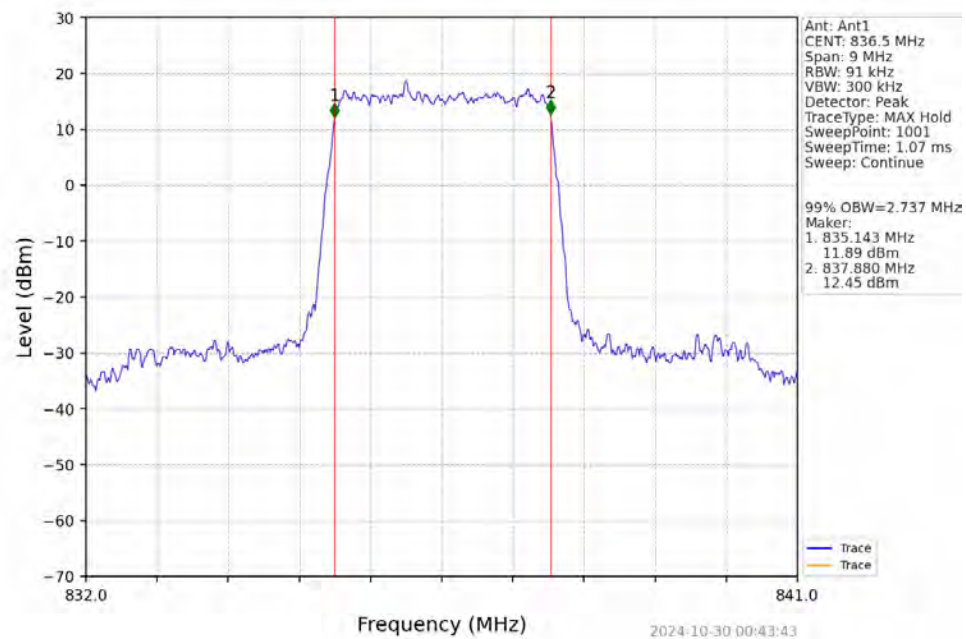
Band5 1.4MHz 16QAM HCH 848.3MHz RB 6 0 NTNV



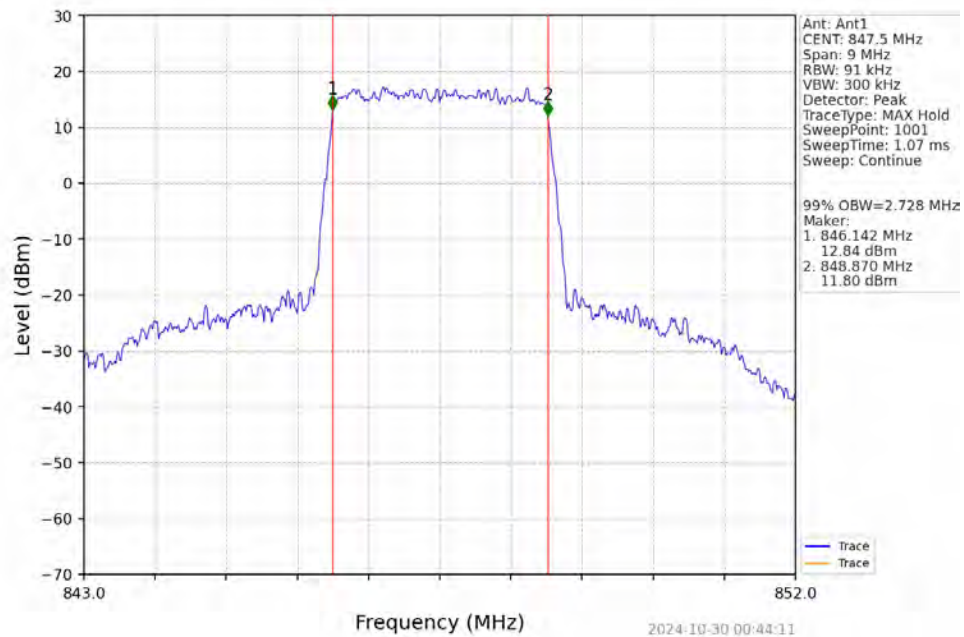
Band5 3MHz QPSK LCH 825.5MHz RB 15 0 NTN



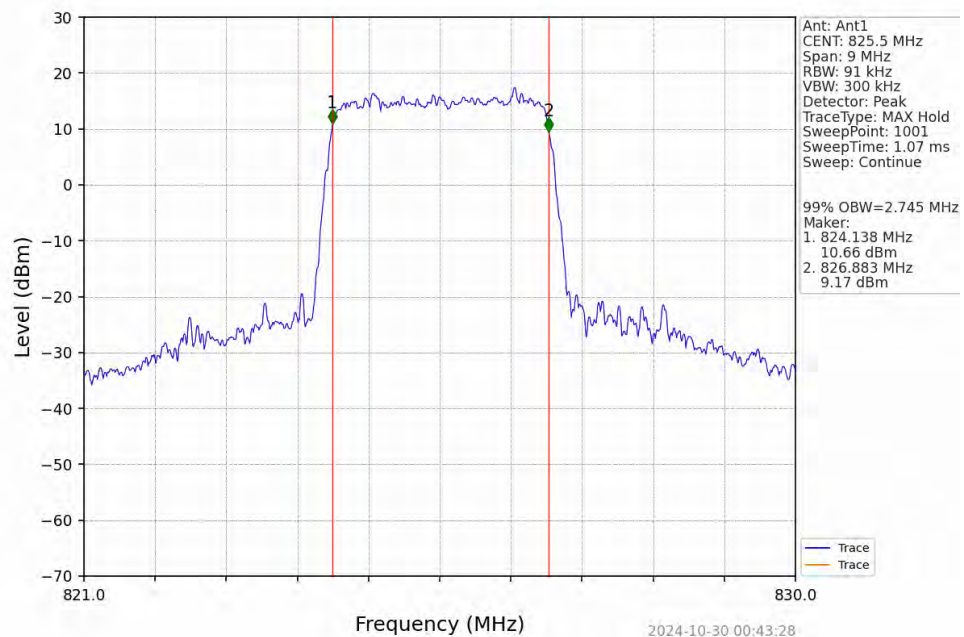
Band5 3MHz QPSK MCH 836.5MHz RB 15 0 NTN



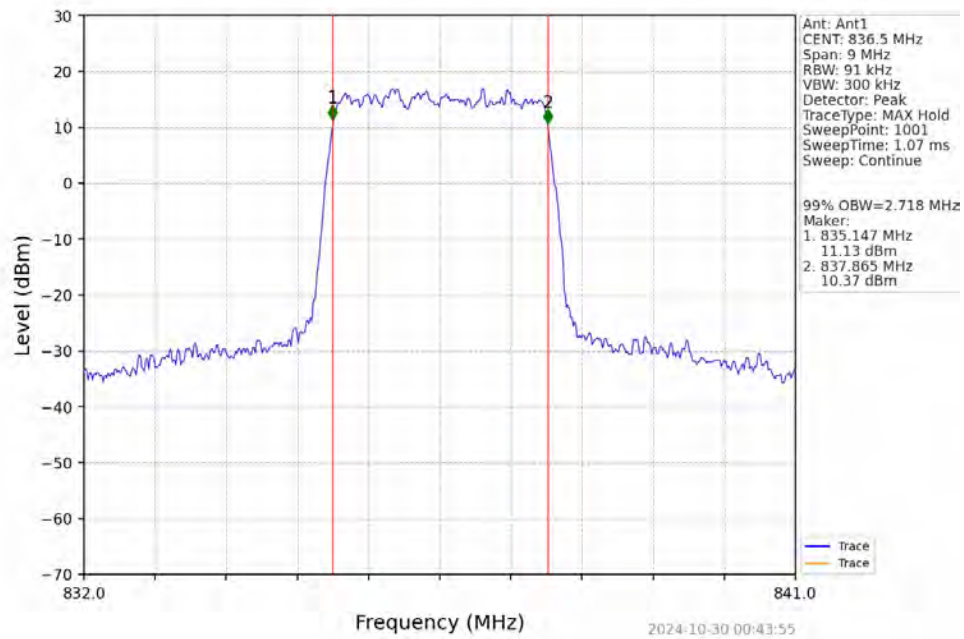
Band5 3MHz QPSK HCH 847.5MHz RB 15 0 NTN



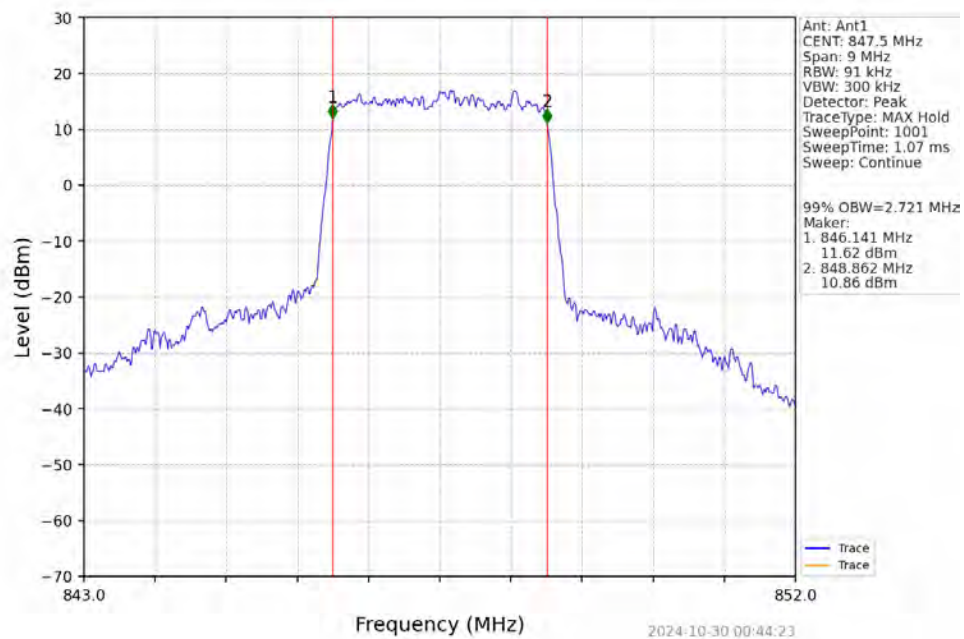
Band5 3MHz 16QAM LCH 825.5MHz RB 15 0 NTN



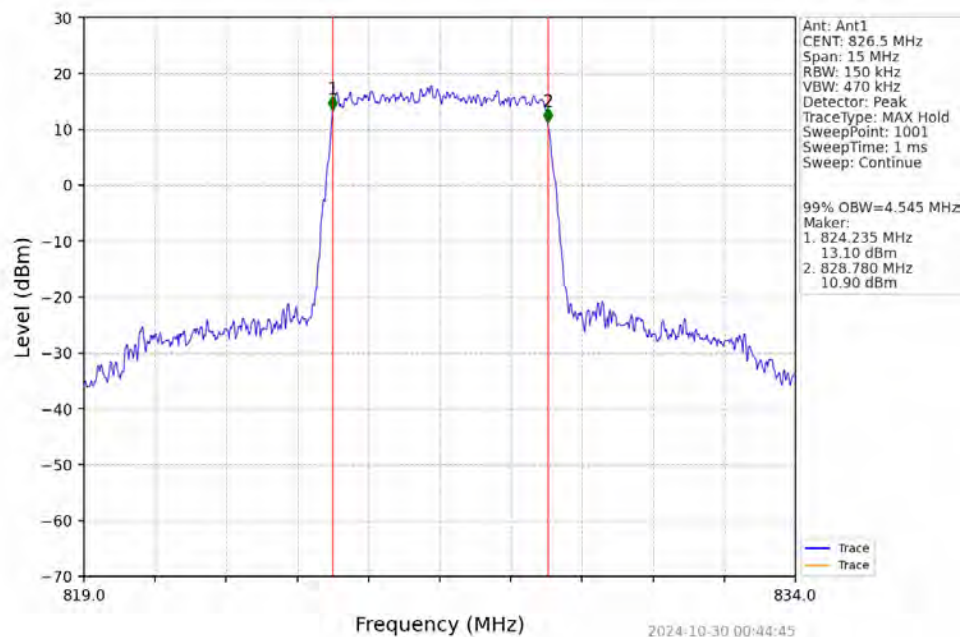
Band5 3MHz 16QAM MCH 836.5MHz RB 15 0 NTNV



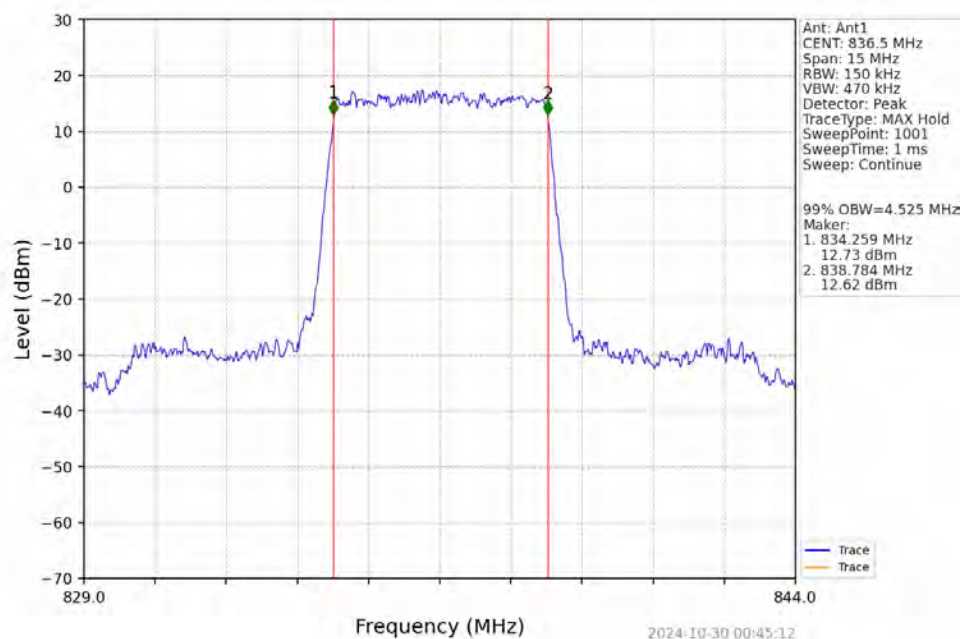
Band5 3MHz 16QAM HCH 847.5MHz RB 15 0 NTNV



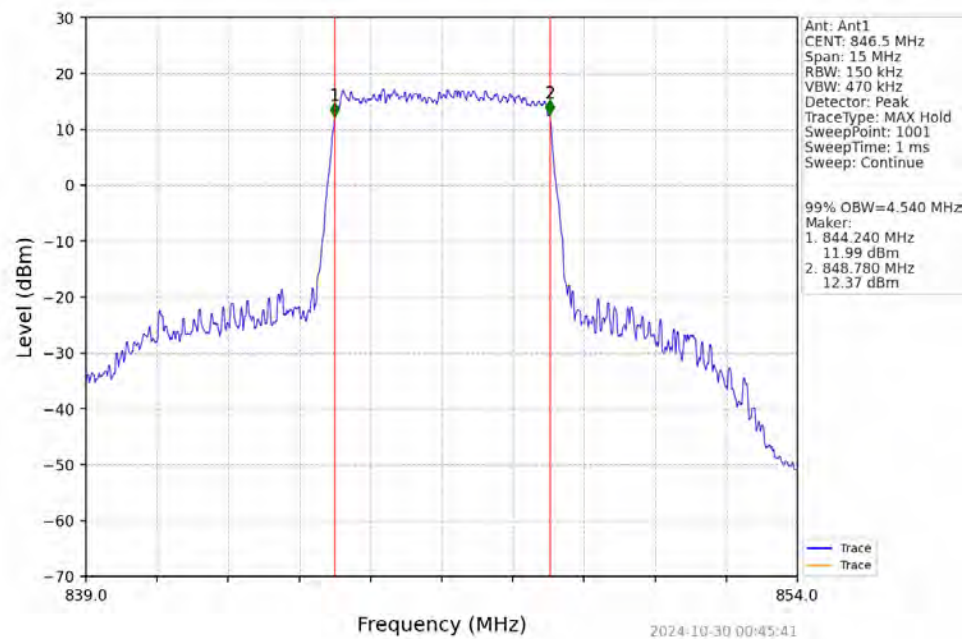
Band5 5MHz QPSK LCH 826.5MHz RB 25 0 NTN



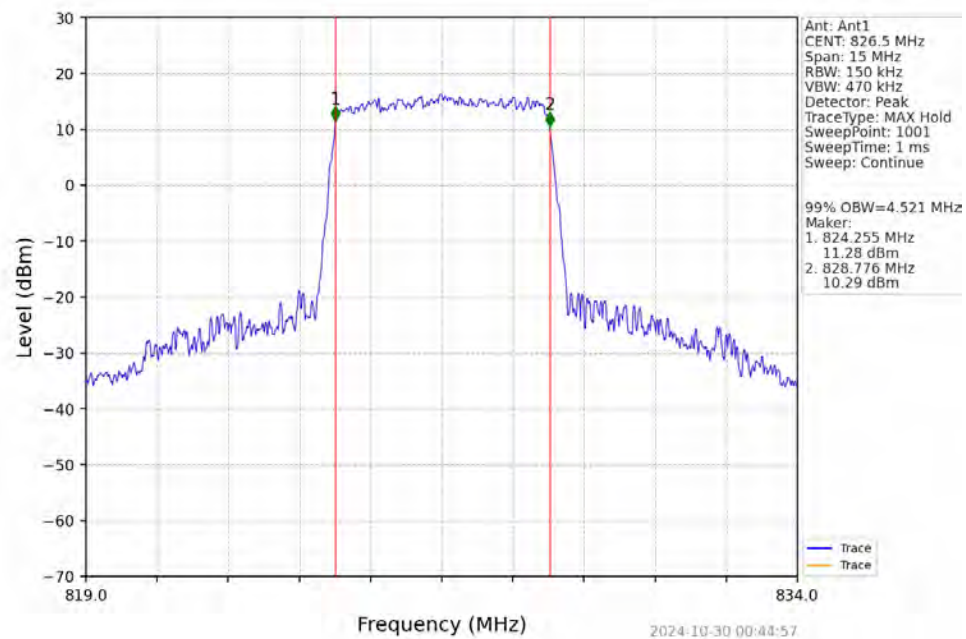
Band5 5MHz QPSK MCH 836.5MHz RB 25 0 NTN



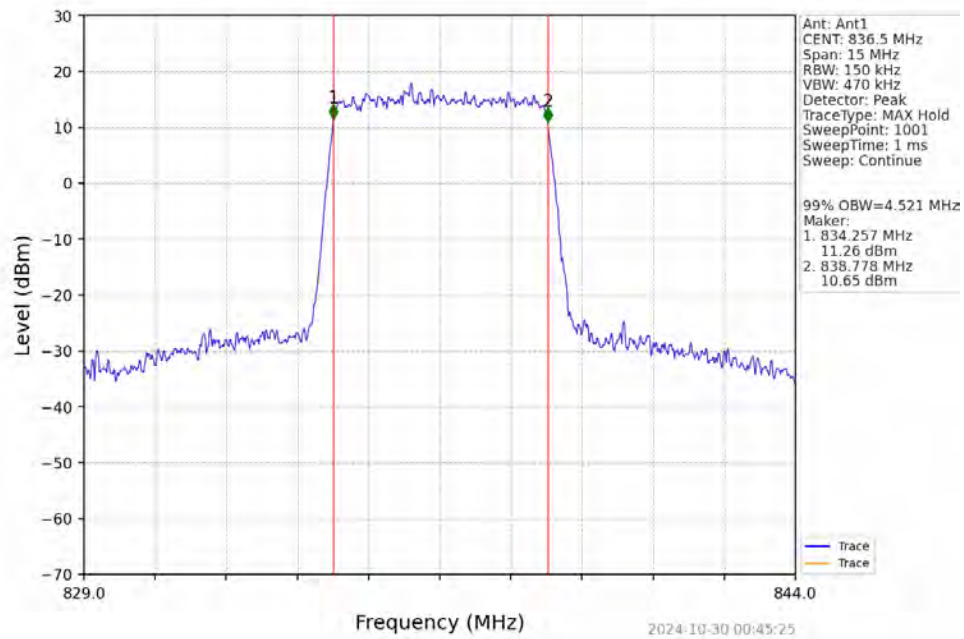
Band5 5MHz QPSK HCH 846.5MHz RB 25 0 NTN



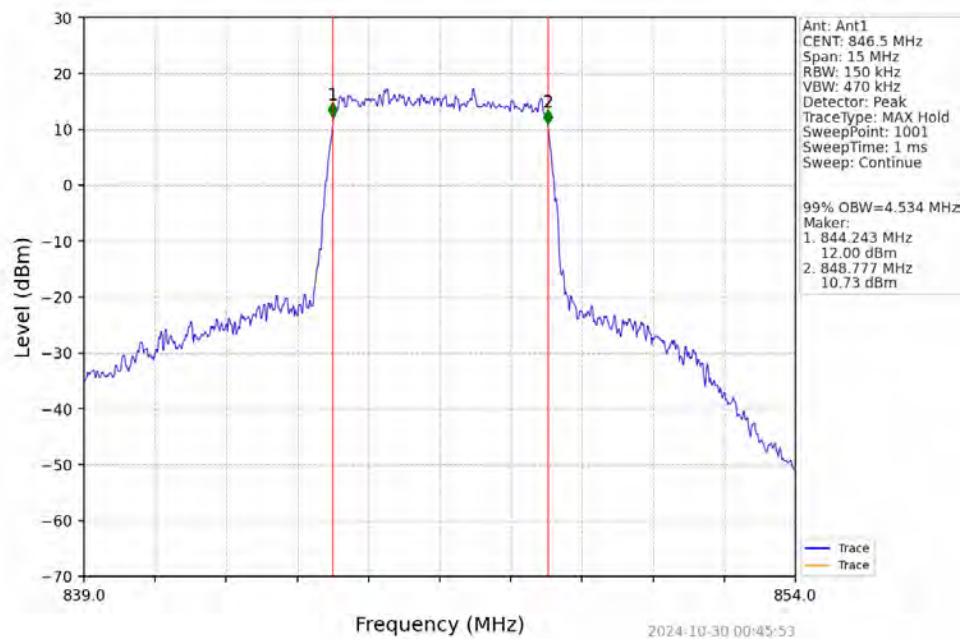
Band5 5MHz 16QAM LCH 826.5MHz RB 25 0 NTN



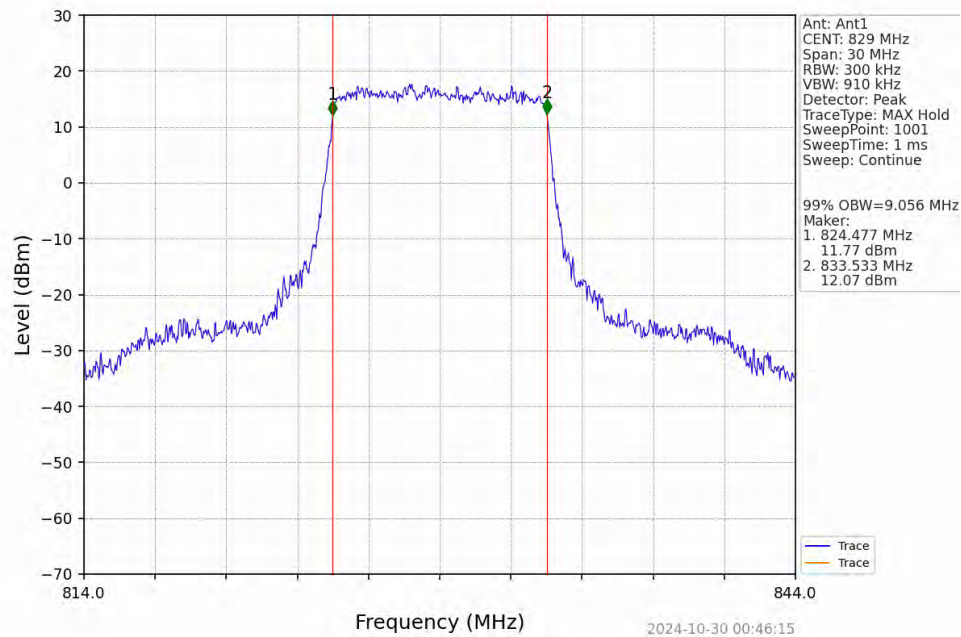
Band5 5MHz 16QAM MCH 836.5MHz RB 25 0 NTNV



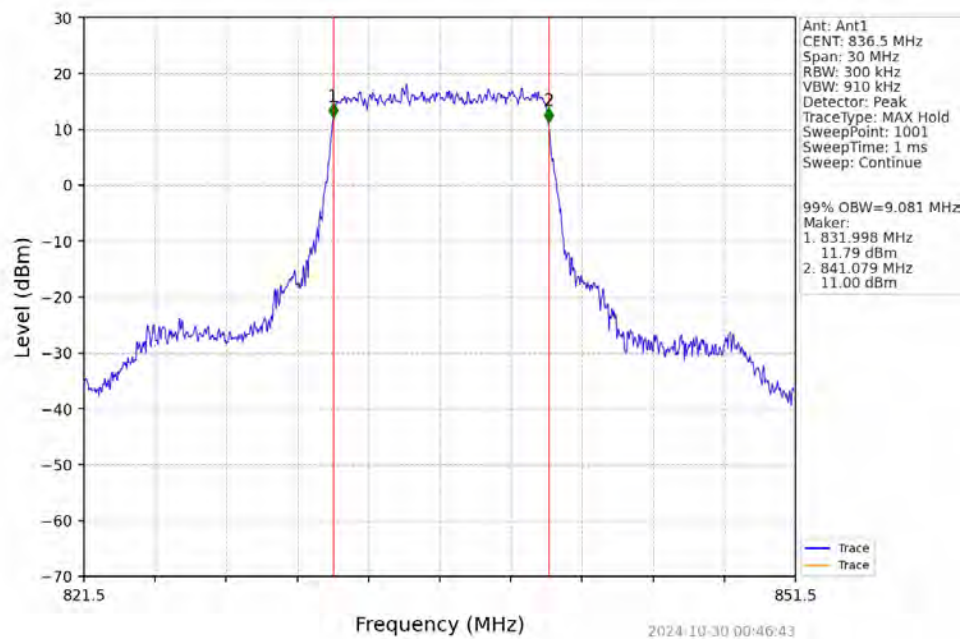
Band5 5MHz 16QAM HCH 846.5MHz RB 25 0 NTNV



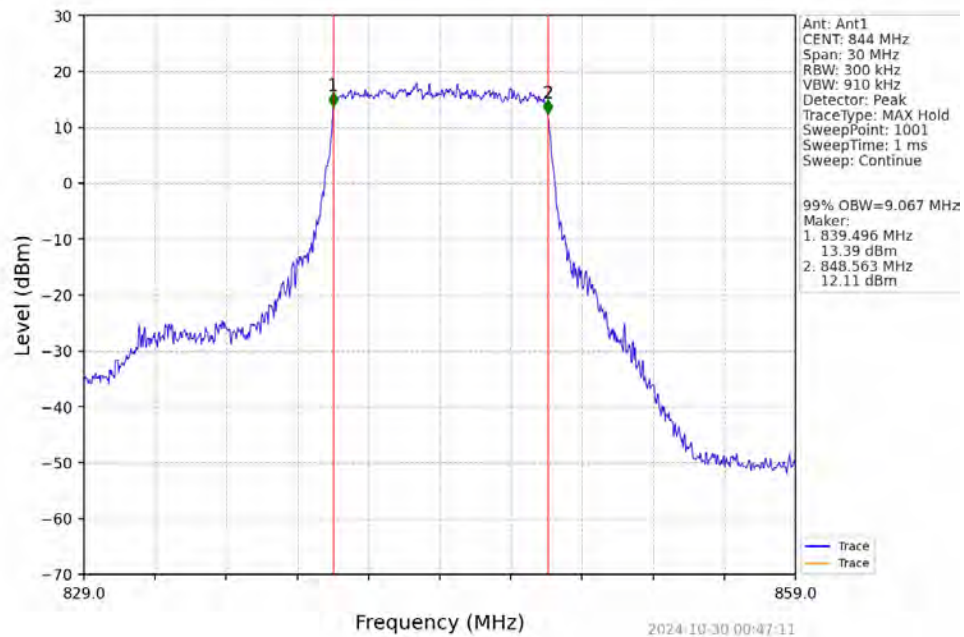
Band5 10MHz QPSK LCH 829MHz RB 50 0 NTNV



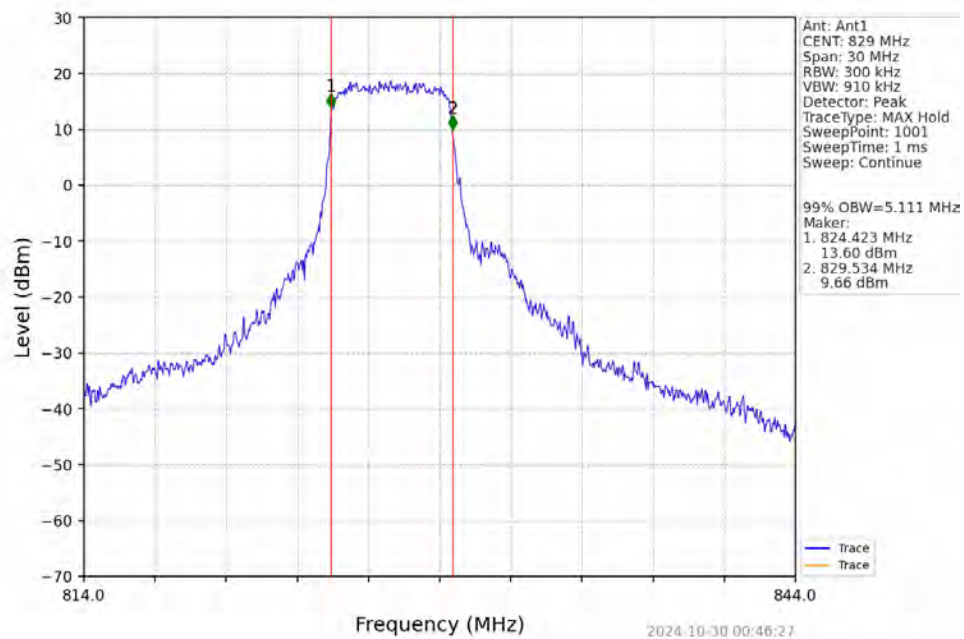
Band5 10MHz QPSK MCH 836.5MHz RB 50 0 NTNV



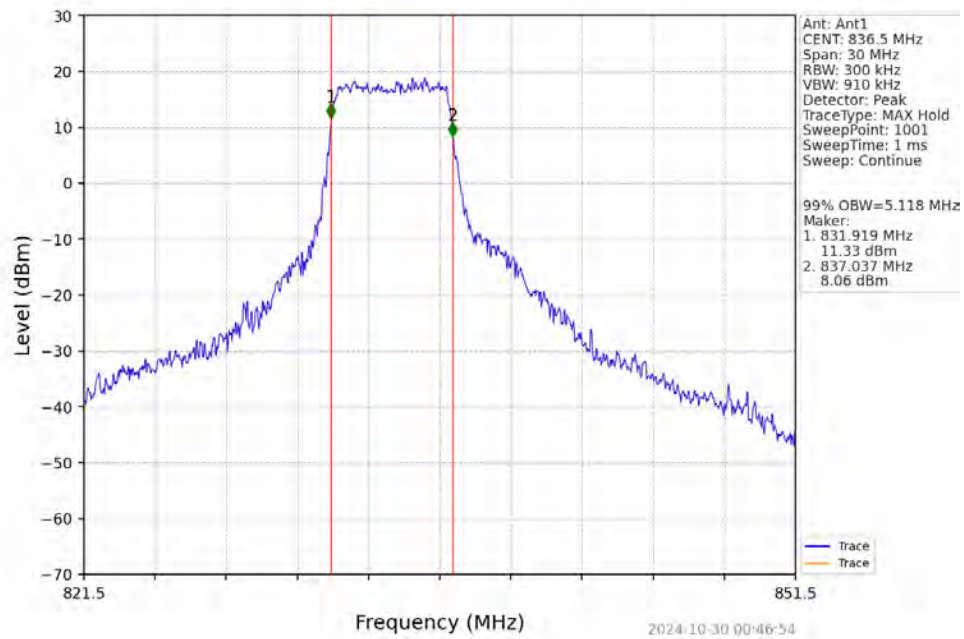
Band5 10MHz QPSK HCH 844MHz RB 50 0 NTNV



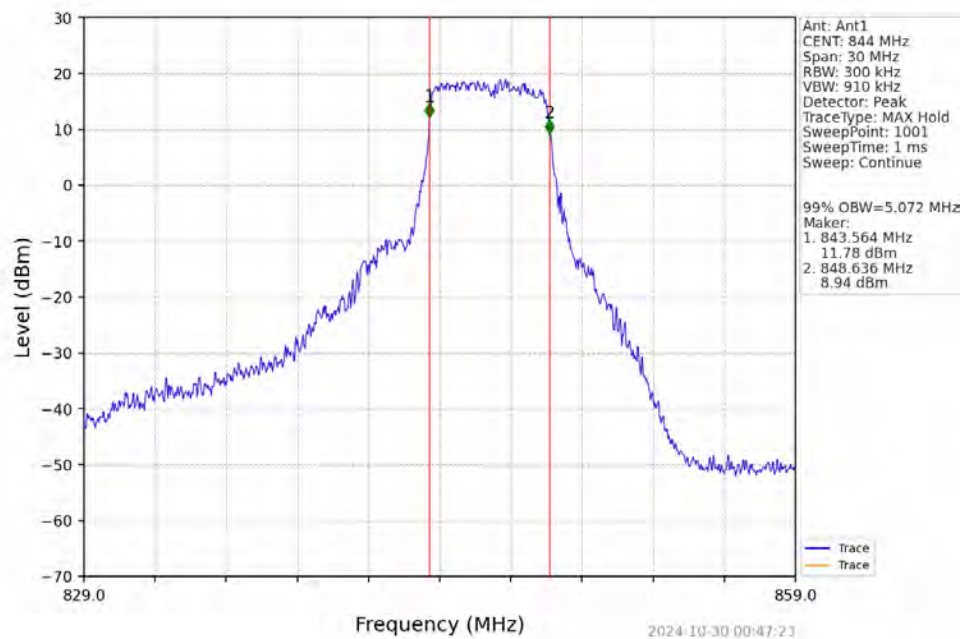
Band5 10MHz 16QAM LCH 829MHz RB 27 0 NTNV



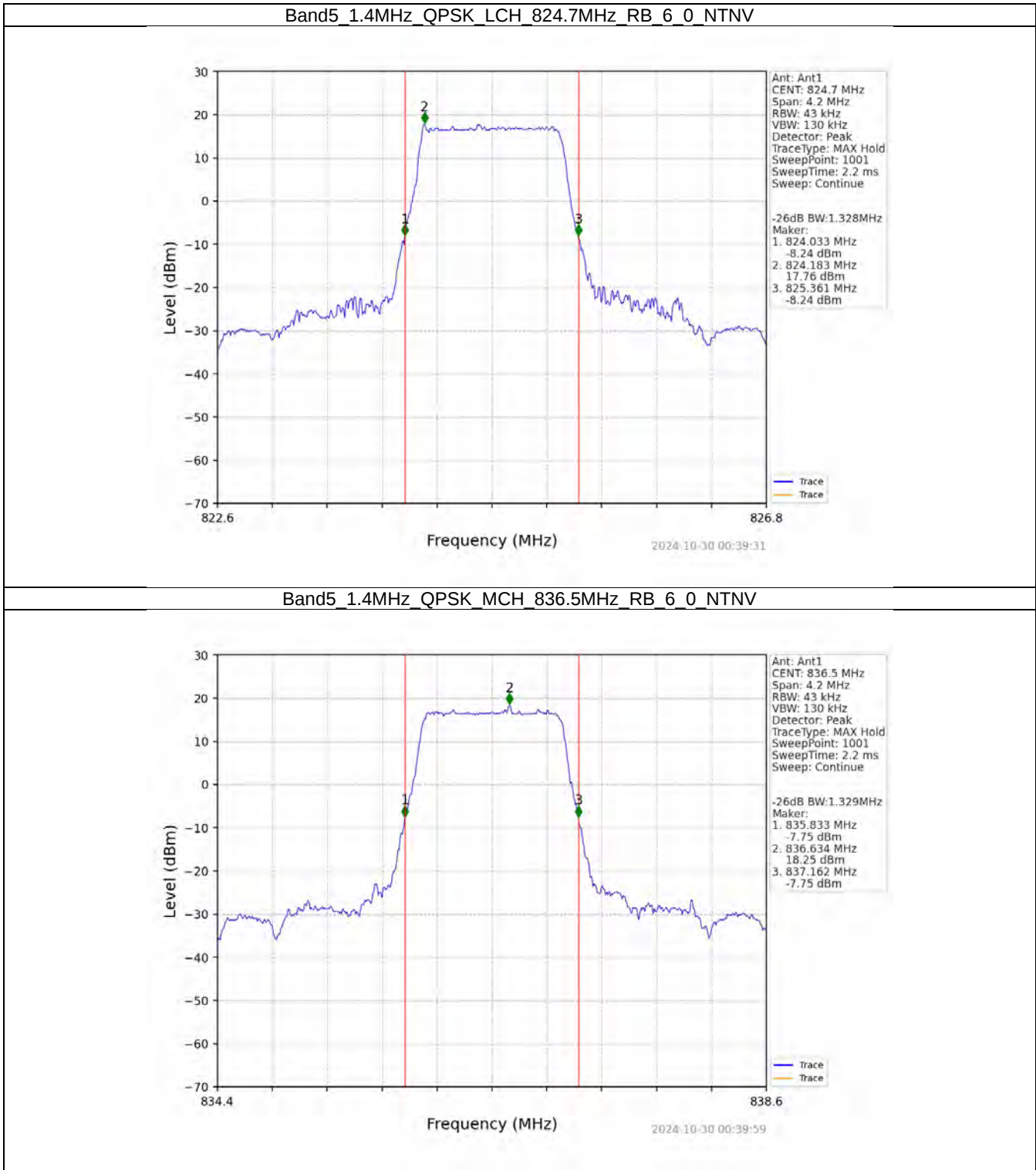
Band5 10MHz 16QAM MCH 836.5MHz RB 27 0 NTNV



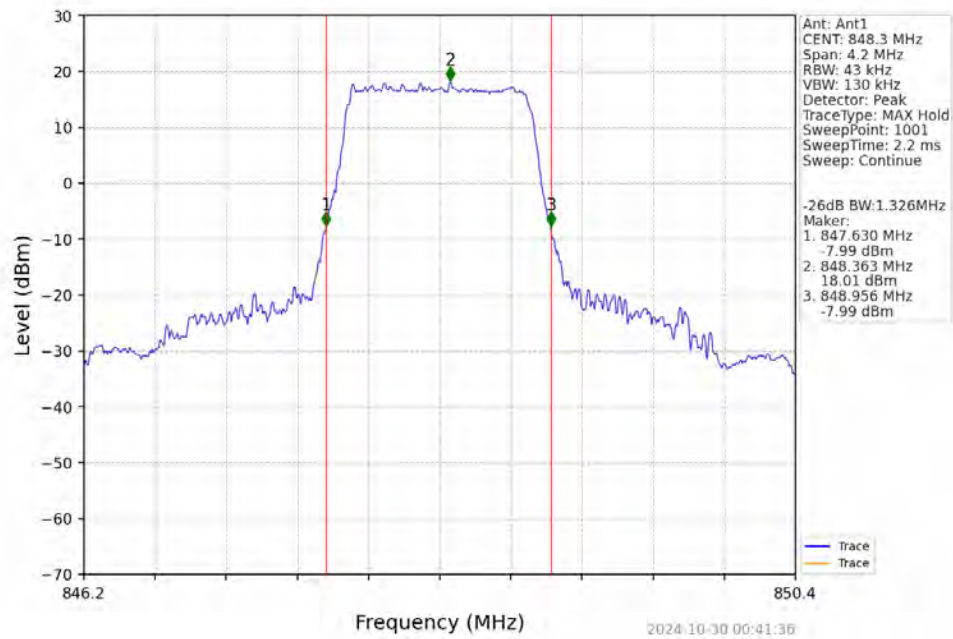
Band5 10MHz 16QAM HCH 844MHz RB 27 23 NTNV



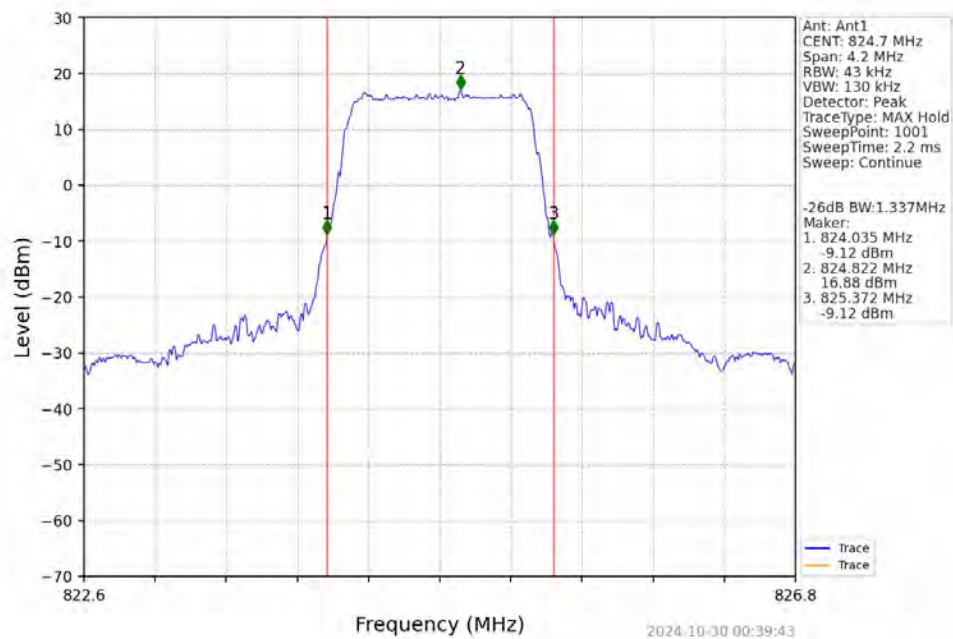
4.2.2 Band5_XDB



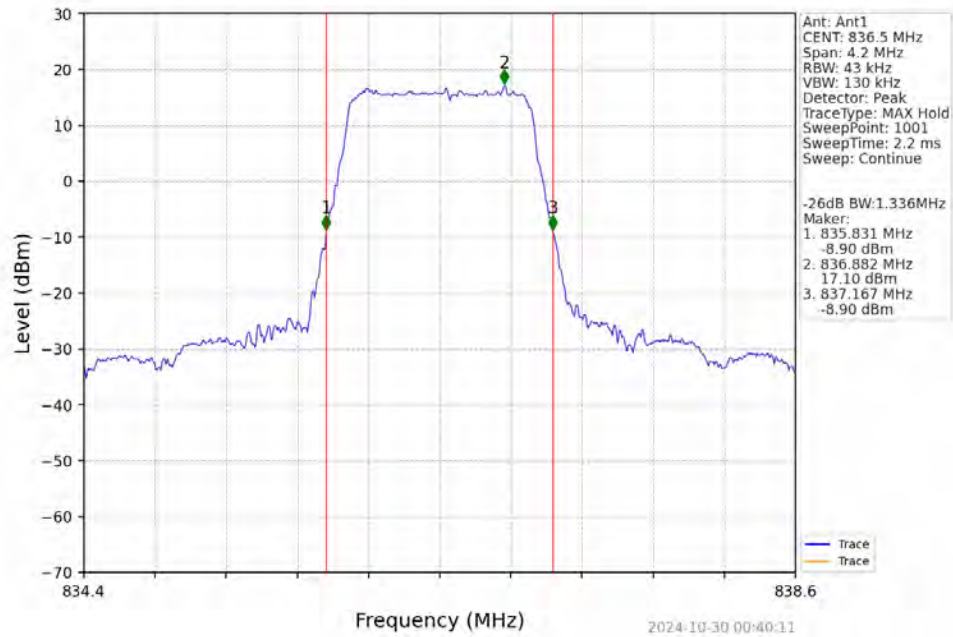
Band5 1.4MHz QPSK HCH 848.3MHz RB 6 0 NTNV



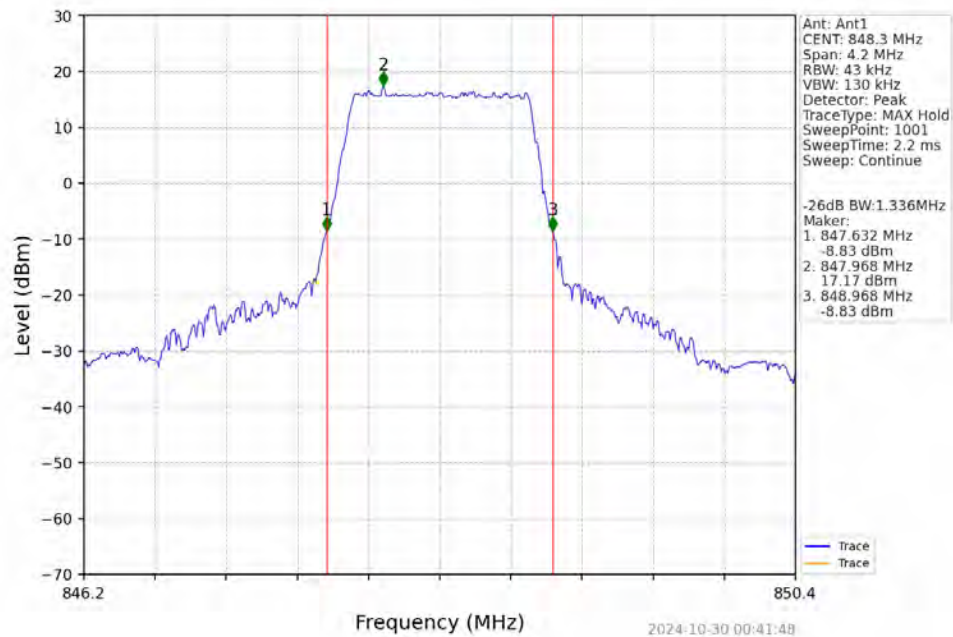
Band5 1.4MHz 16QAM LCH 824.7MHz RB 6 0 NTNV



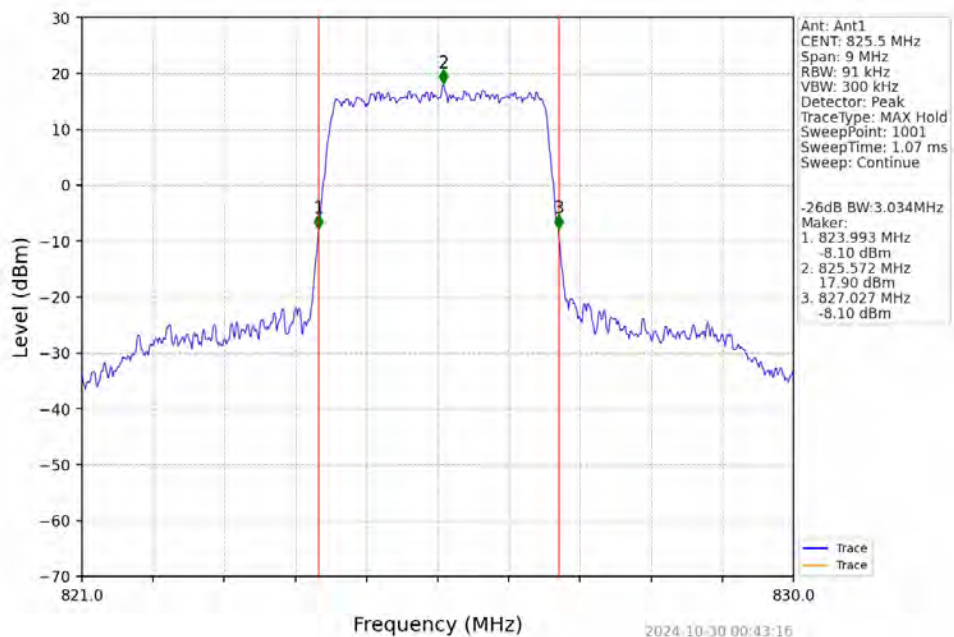
Band5 1.4MHz 16QAM MCH 836.5MHz RB 6 0 NTNV



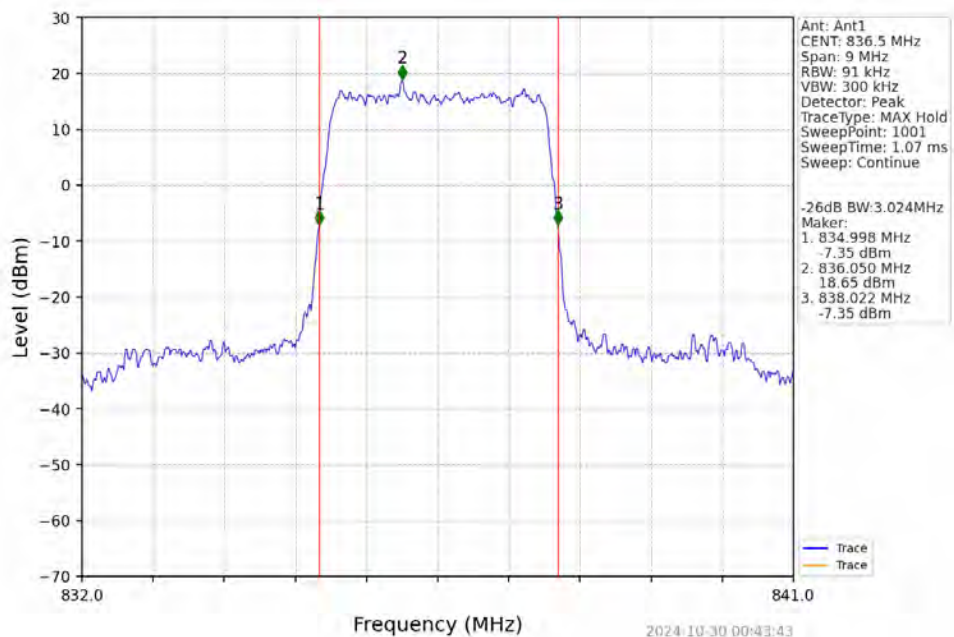
Band5 1.4MHz 16QAM HCH 848.3MHz RB 6 0 NTNV



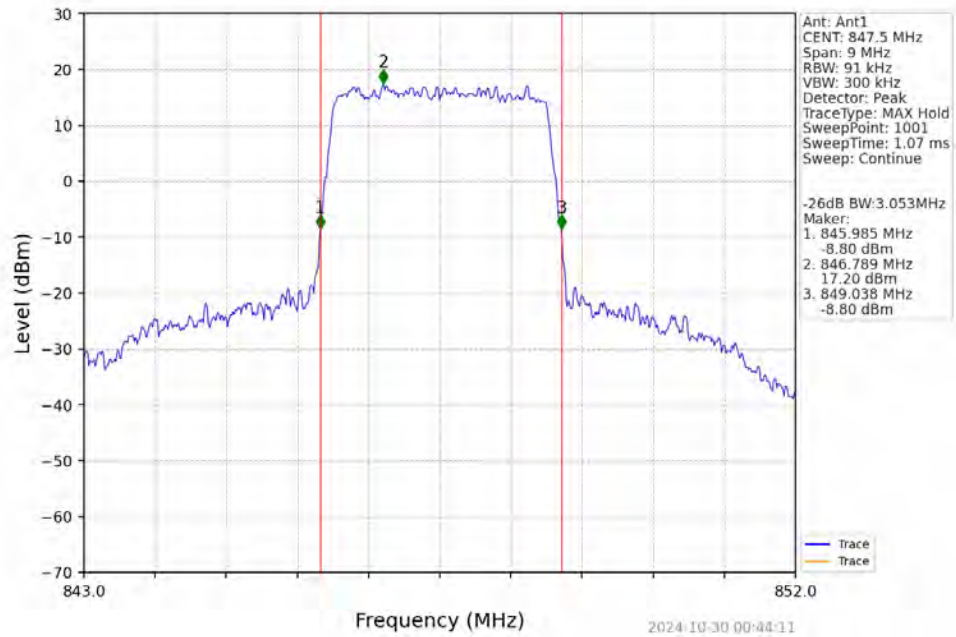
Band5 3MHz QPSK LCH 825.5MHz RB 15 0 NTN



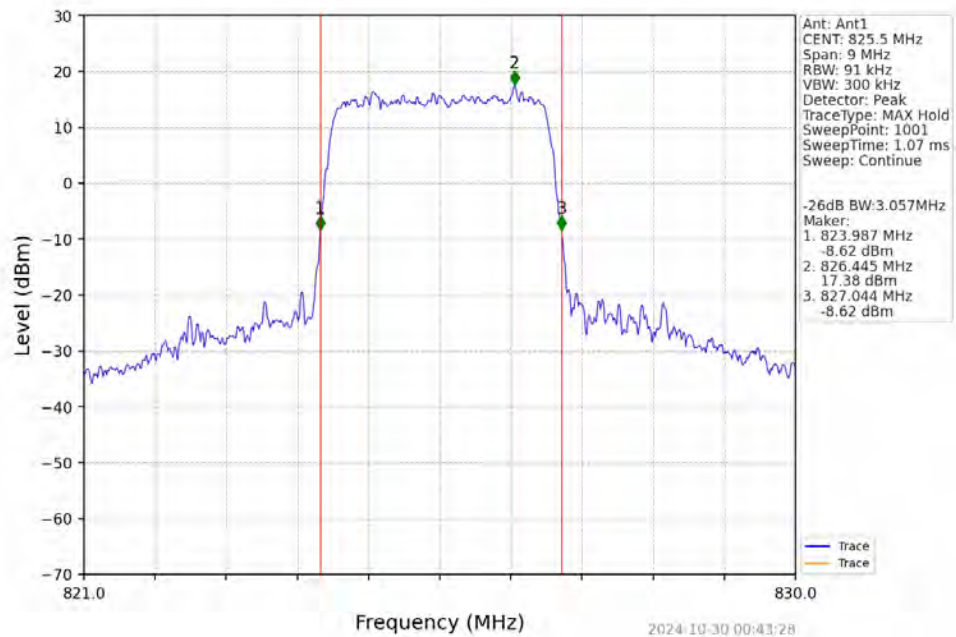
Band5 3MHz QPSK MCH 836.5MHz RB 15 0 NTN



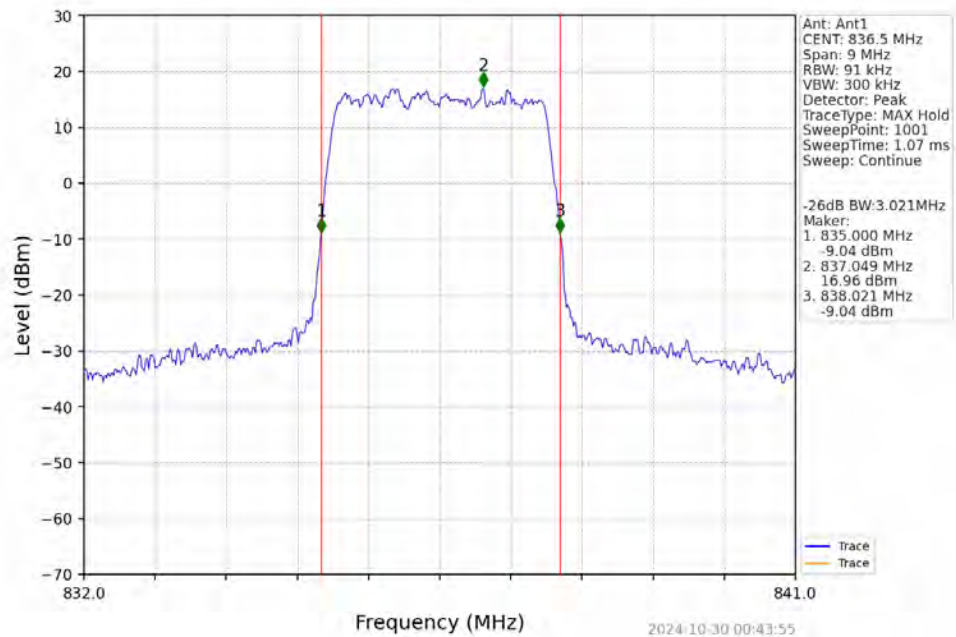
Band5 3MHz QPSK HCH 847.5MHz RB 15 0 NTN



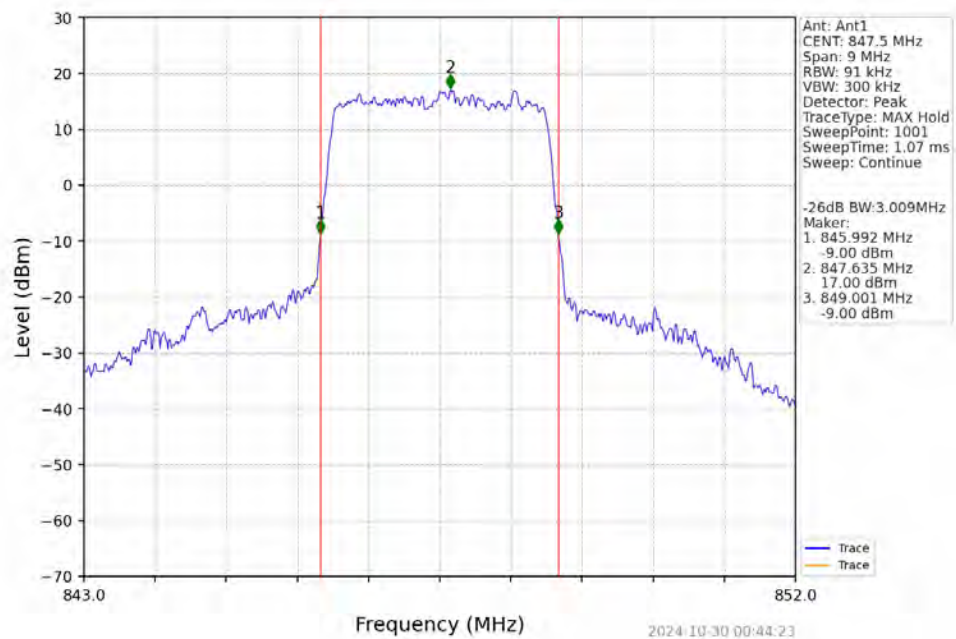
Band5 3MHz 16QAM LCH 825.5MHz RB 15 0 NTN



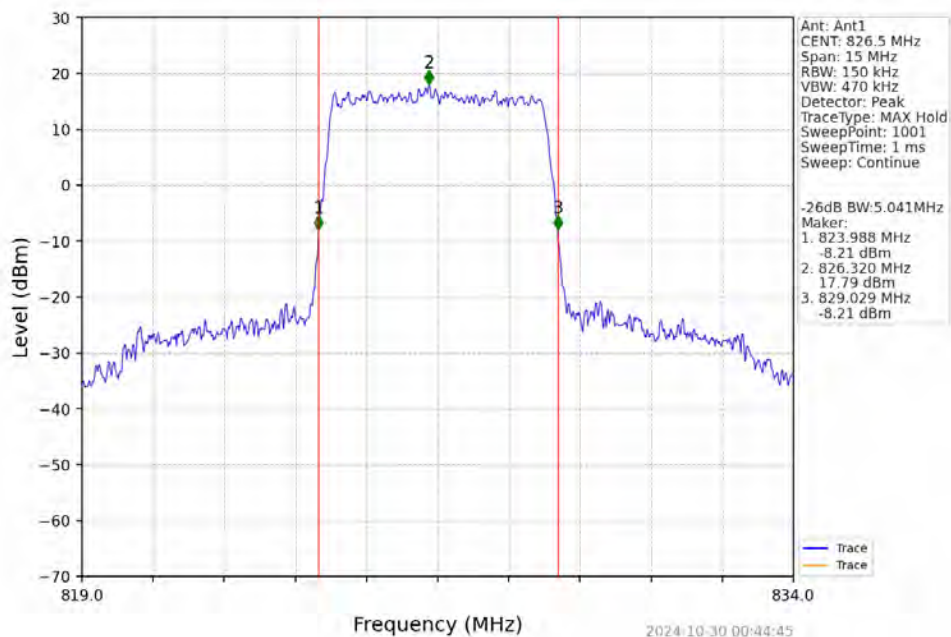
Band5 3MHz 16QAM MCH 836.5MHz RB 15 0 NTNV



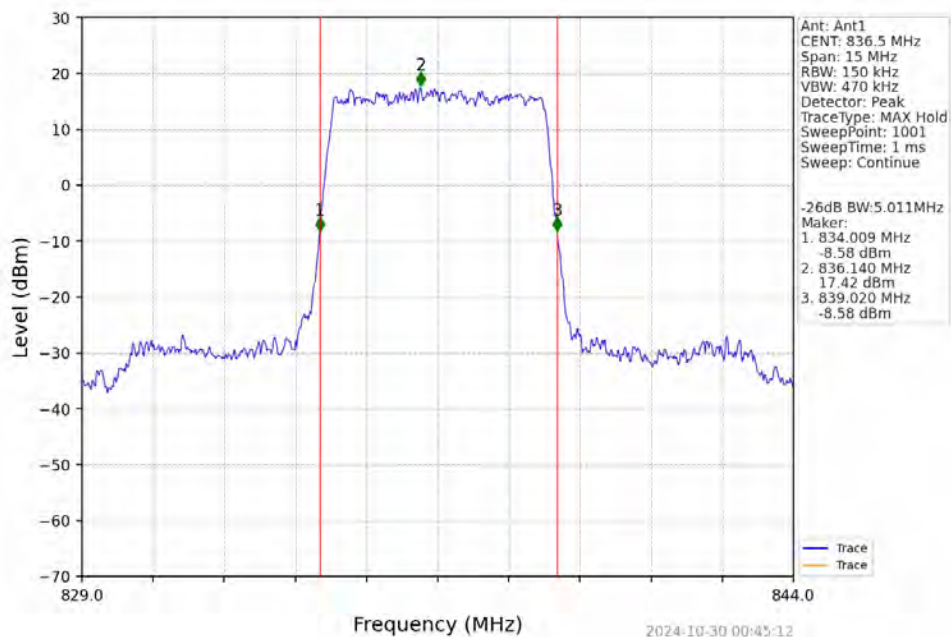
Band5 3MHz 16QAM HCH 847.5MHz RB 15 0 NTNV



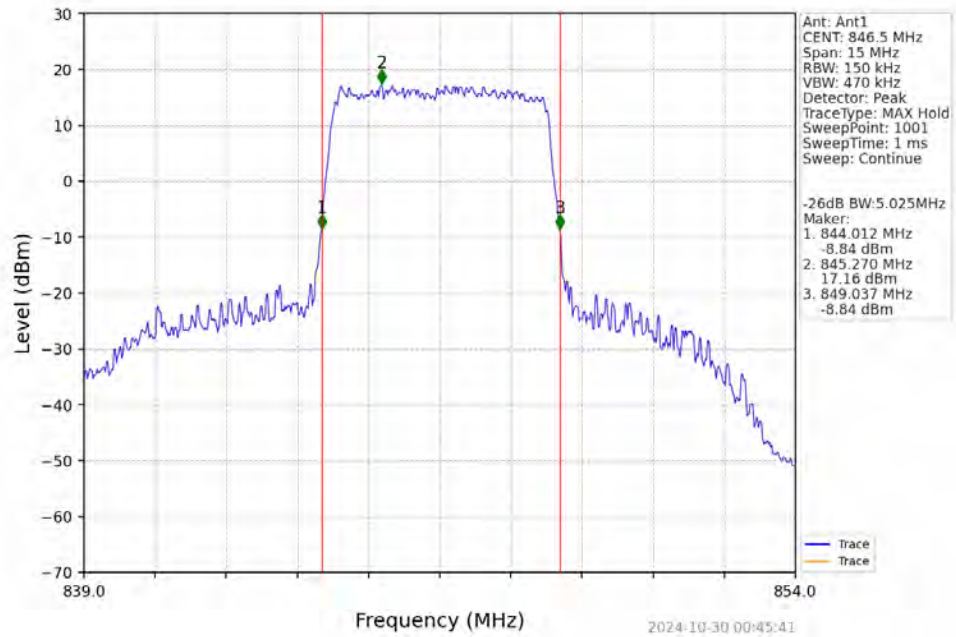
Band5 5MHz QPSK LCH 826.5MHz RB 25 0 NTN



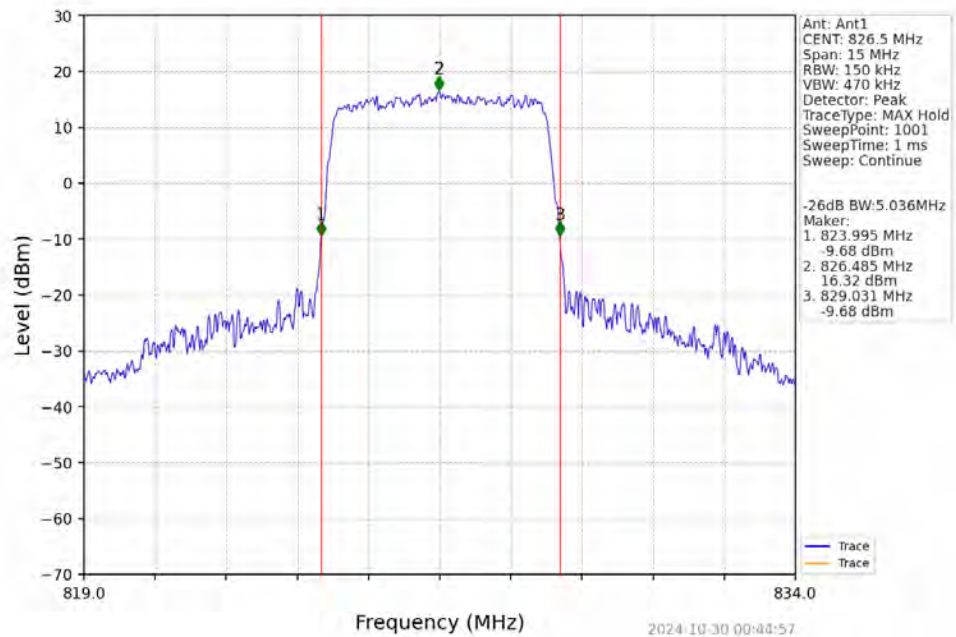
Band5 5MHz QPSK MCH 836.5MHz RB 25 0 NTN



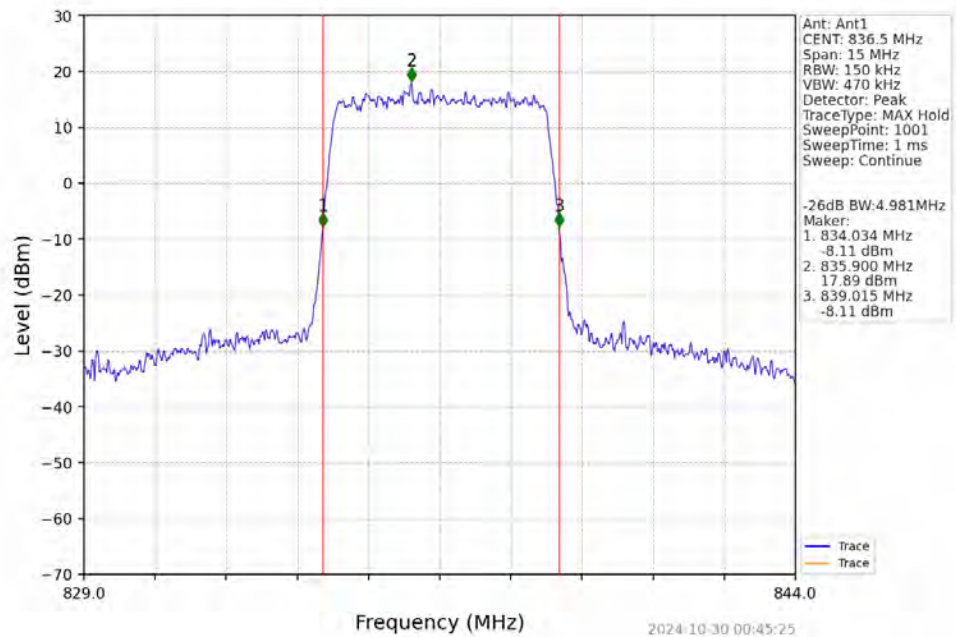
Band5 5MHz QPSK HCH 846.5MHz RB 25 0 NTN



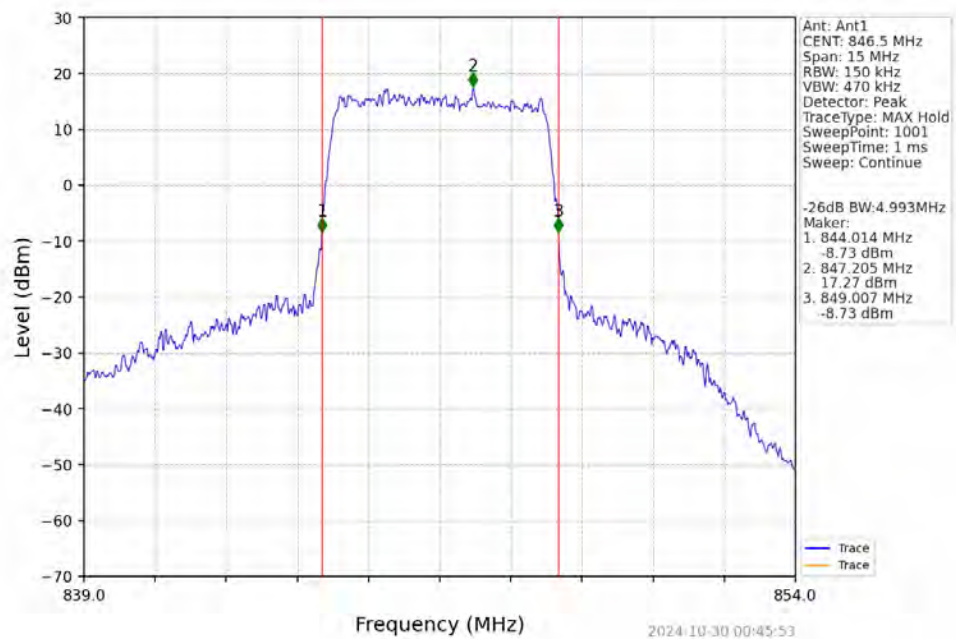
Band5 5MHz 16QAM LCH 826.5MHz RB 25 0 NTN



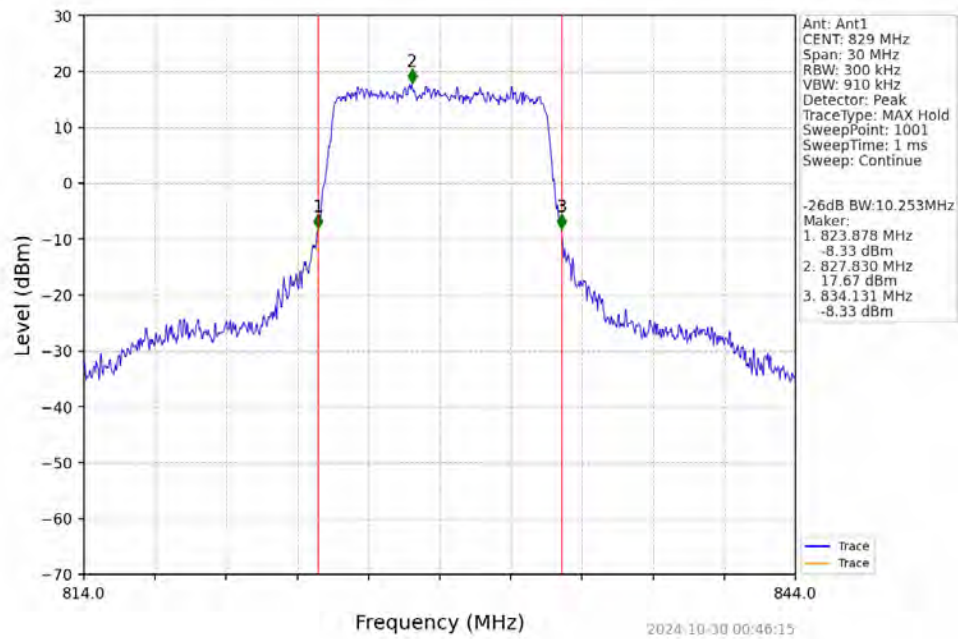
Band5 5MHz 16QAM MCH 836.5MHz RB 25 0 NTNV



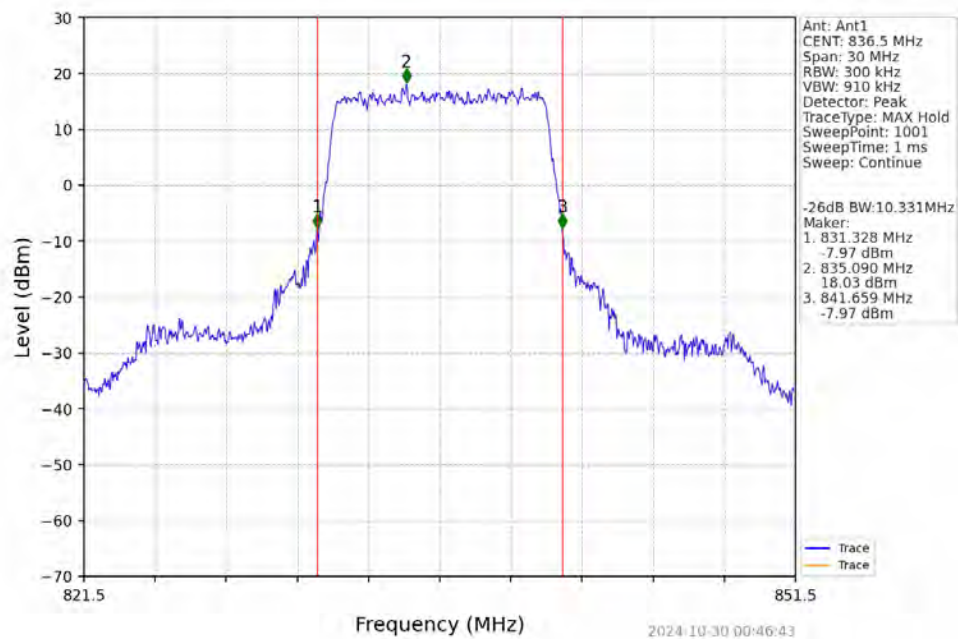
Band5 5MHz 16QAM HCH 846.5MHz RB 25 0 NTNV



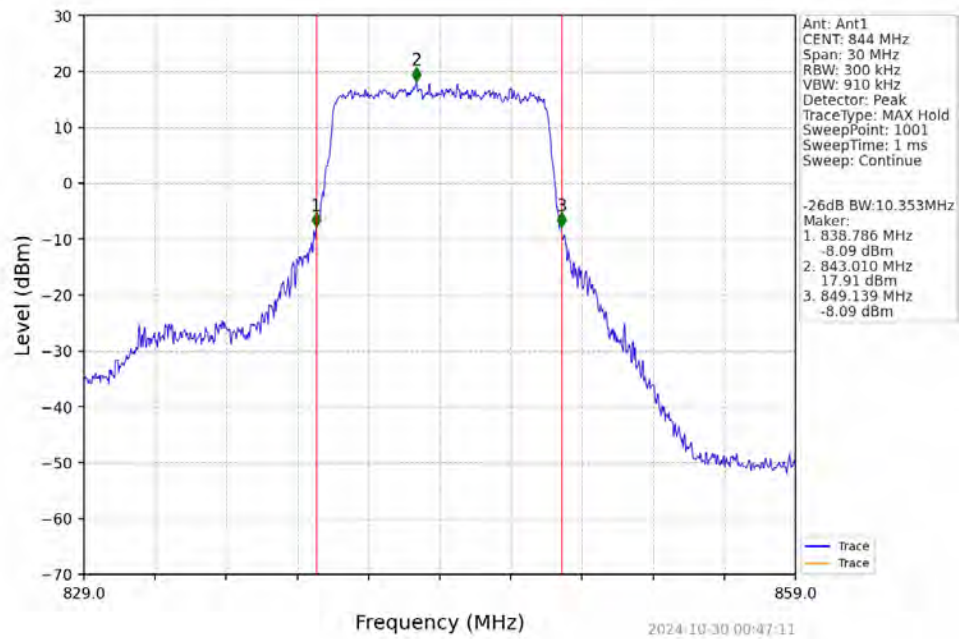
Band5 10MHz QPSK LCH 829MHz RB 50 0 NTNV



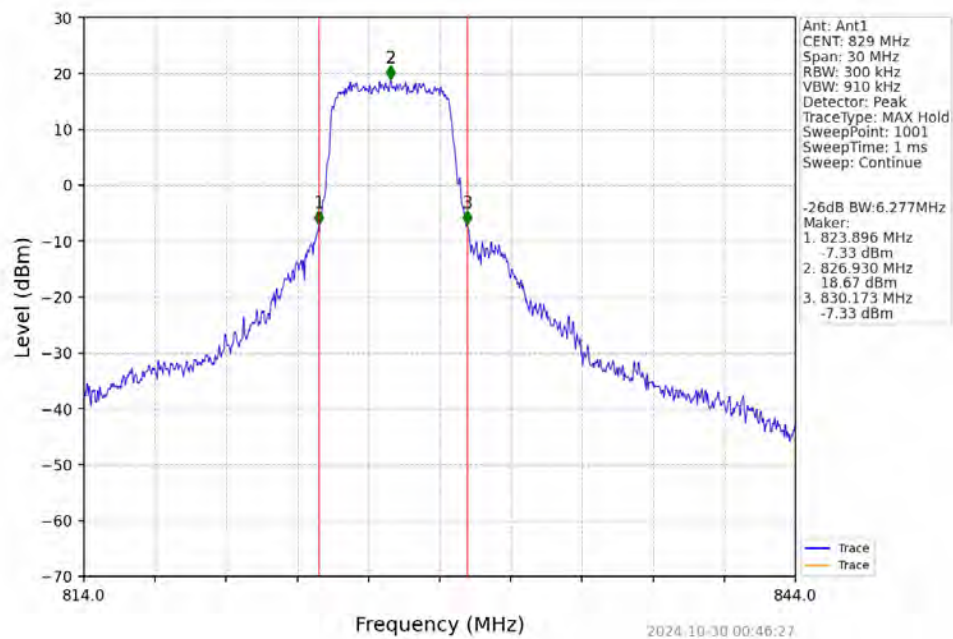
Band5 10MHz QPSK MCH 836.5MHz RB 50 0 NTNV



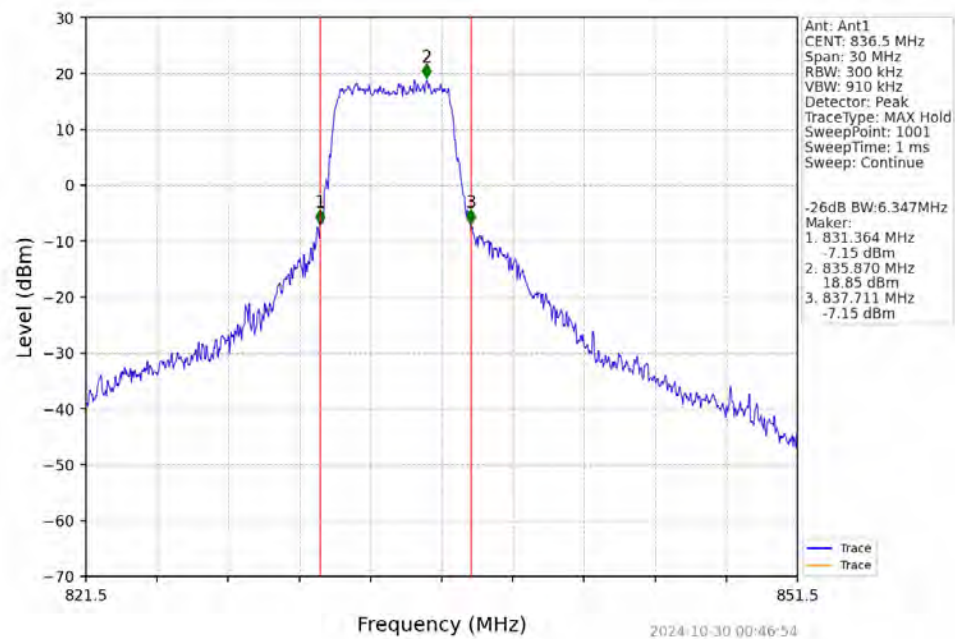
Band5 10MHz QPSK HCH 844MHz RB 50 0 NTN



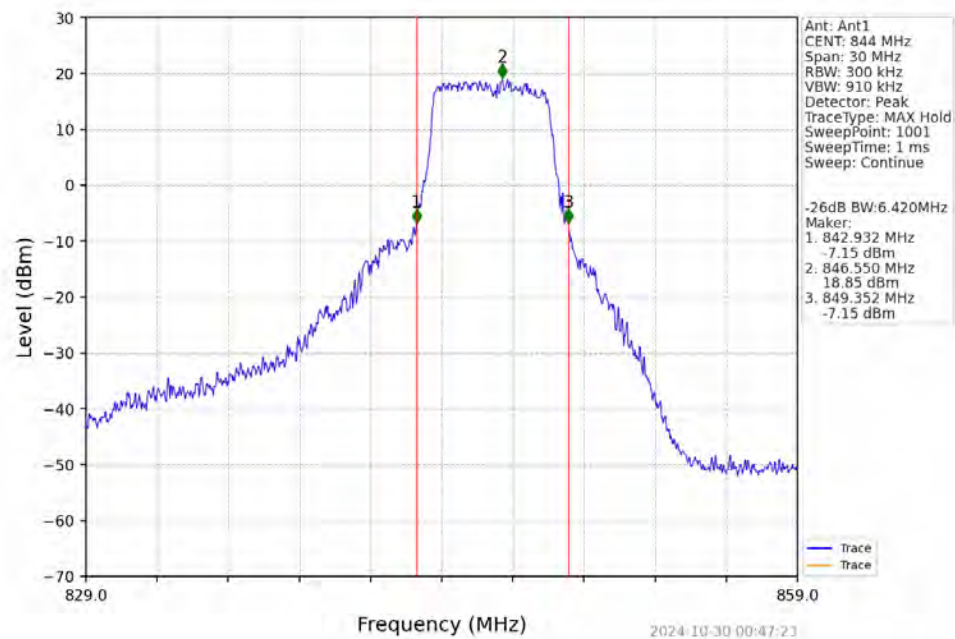
Band5 10MHz 16QAM LCH 829MHz RB 27 0 NTN



Band5 10MHz 16QAM MCH 836.5MHz RB 27 0 NTNV



Band5 10MHz 16QAM HCH 844MHz RB 27 23 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	5.22	<=13	Pass
	836.5	6	0	5.59	<=13	Pass
	848.3	6	0	5.00	<=13	Pass
16QAM	824.7	6	0	6.06	<=13	Pass
	836.5	6	0	6.32	<=13	Pass
	848.3	6	0	5.65	<=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	5.33	<=13	Pass
	836.5	15	0	5.61	<=13	Pass
	847.5	15	0	5.24	<=13	Pass
16QAM	825.5	15	0	5.33	<=13	Pass
	836.5	15	0	5.60	<=13	Pass
	847.5	15	0	5.25	<=13	Pass

5.1.3 B5_5MHz

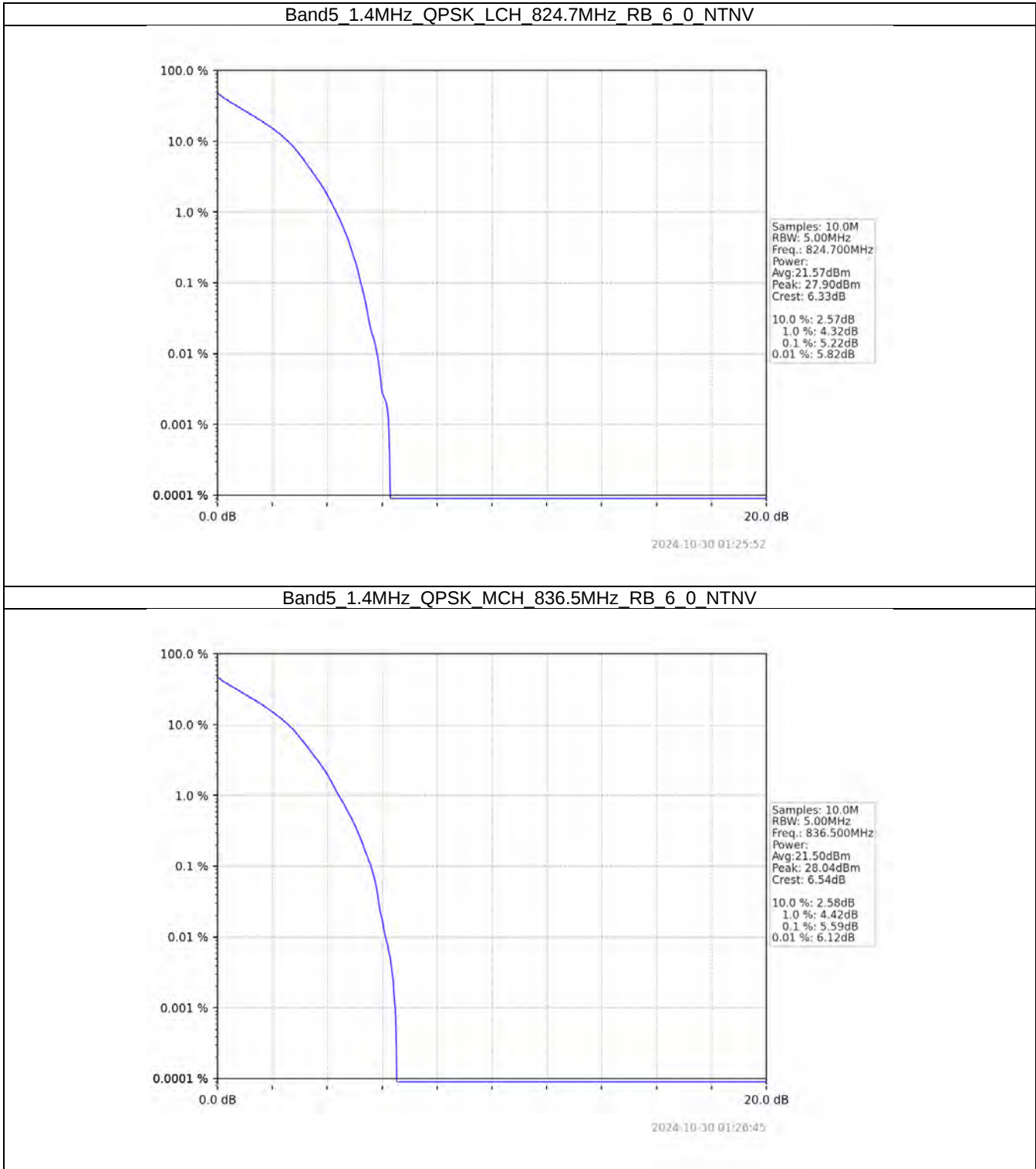
Band: 5 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	826.5	25	0	5.47	<=13	Pass
	836.5	25	0	5.62	<=13	Pass
	846.5	25	0	5.39	<=13	Pass
16QAM	826.5	25	0	6.10	<=13	Pass
	836.5	25	0	6.26	<=13	Pass
	846.5	25	0	6.14	<=13	Pass

5.1.4 B5_10MHz

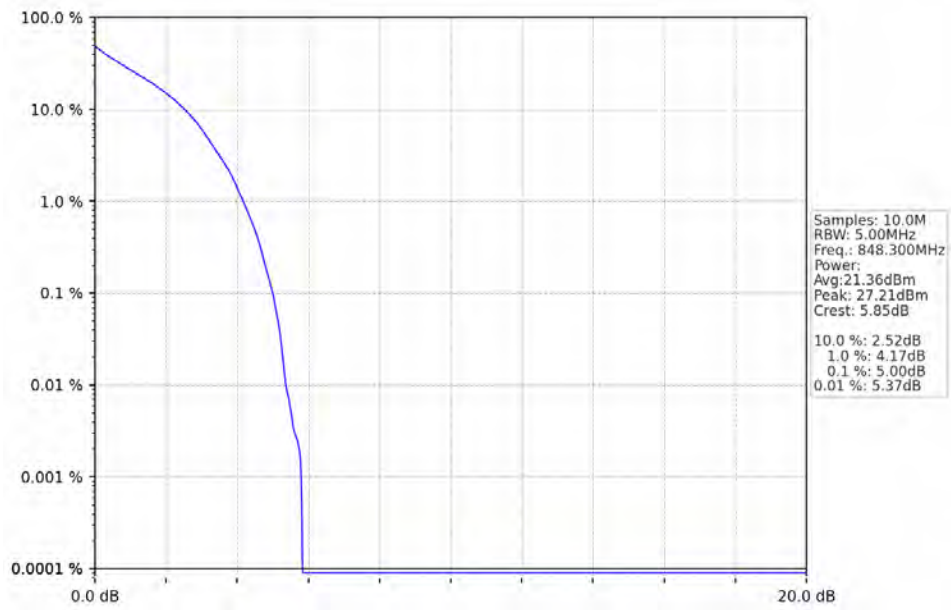
Band: 5 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	829	50	0	5.46	<=13	Pass
	836.5	50	0	5.60	<=13	Pass
	844	50	0	5.33	<=13	Pass
16QAM	829	27	0	6.01	<=13	Pass
	836.5	27	0	6.36	<=13	Pass
	844	27	23	5.99	<=13	Pass

5.2 Test Graph

5.2.1 B5_1.4MHz

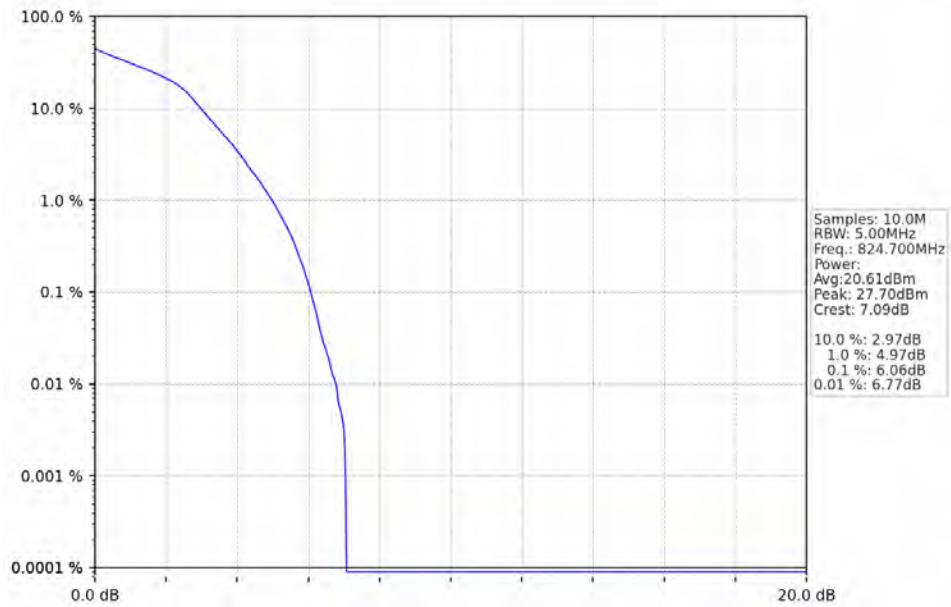


Band5_1.4MHz_QPSK_HCH_848.3MHz_RB_6_0_NTNV



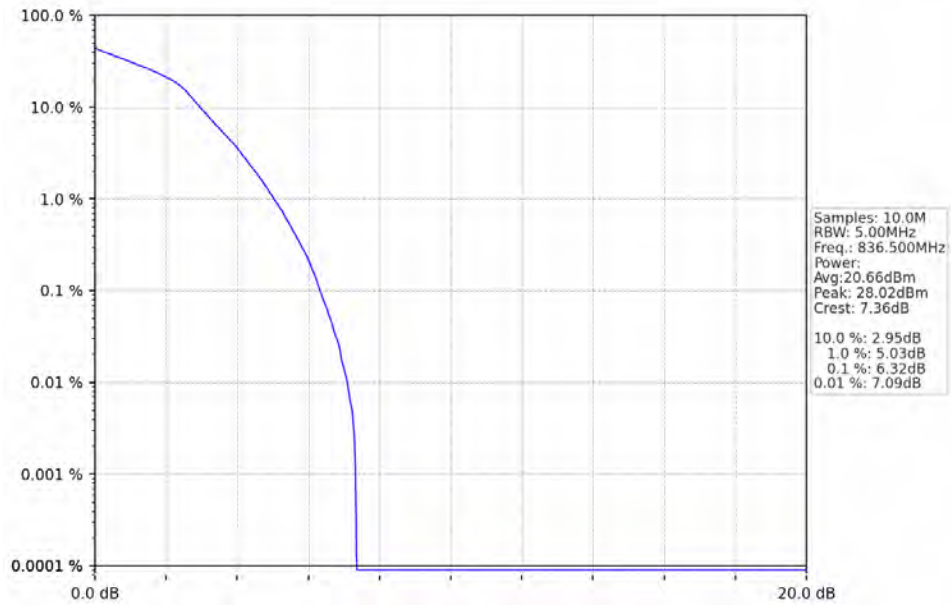
2024-10-30 01:27:37

Band5_1.4MHz_16QAM_LCH_824.7MHz_RB_6_0_NTNV



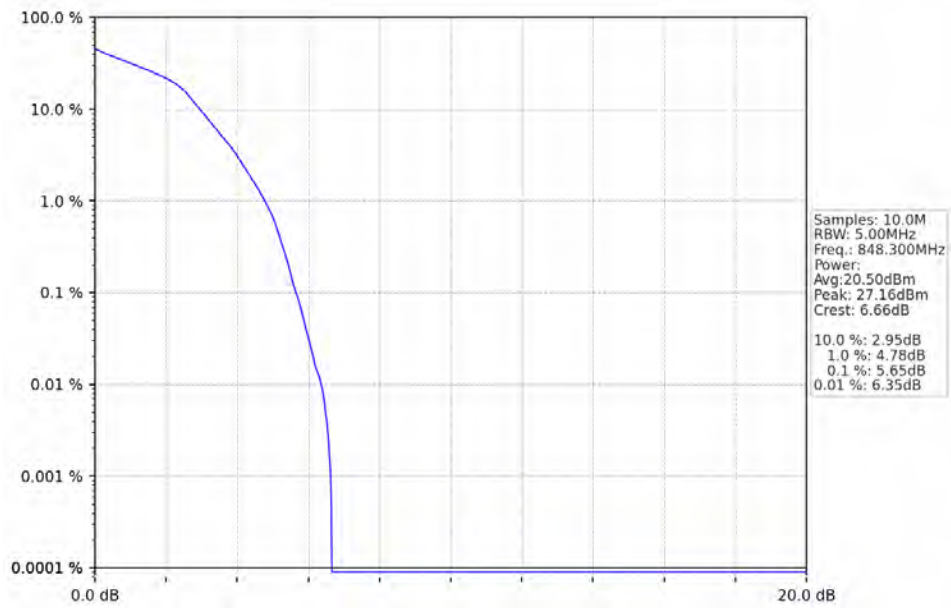
2024-10-30 01:26:18

Band5 1.4MHz 16QAM MCH 836.5MHz RB 6 0 NTNV



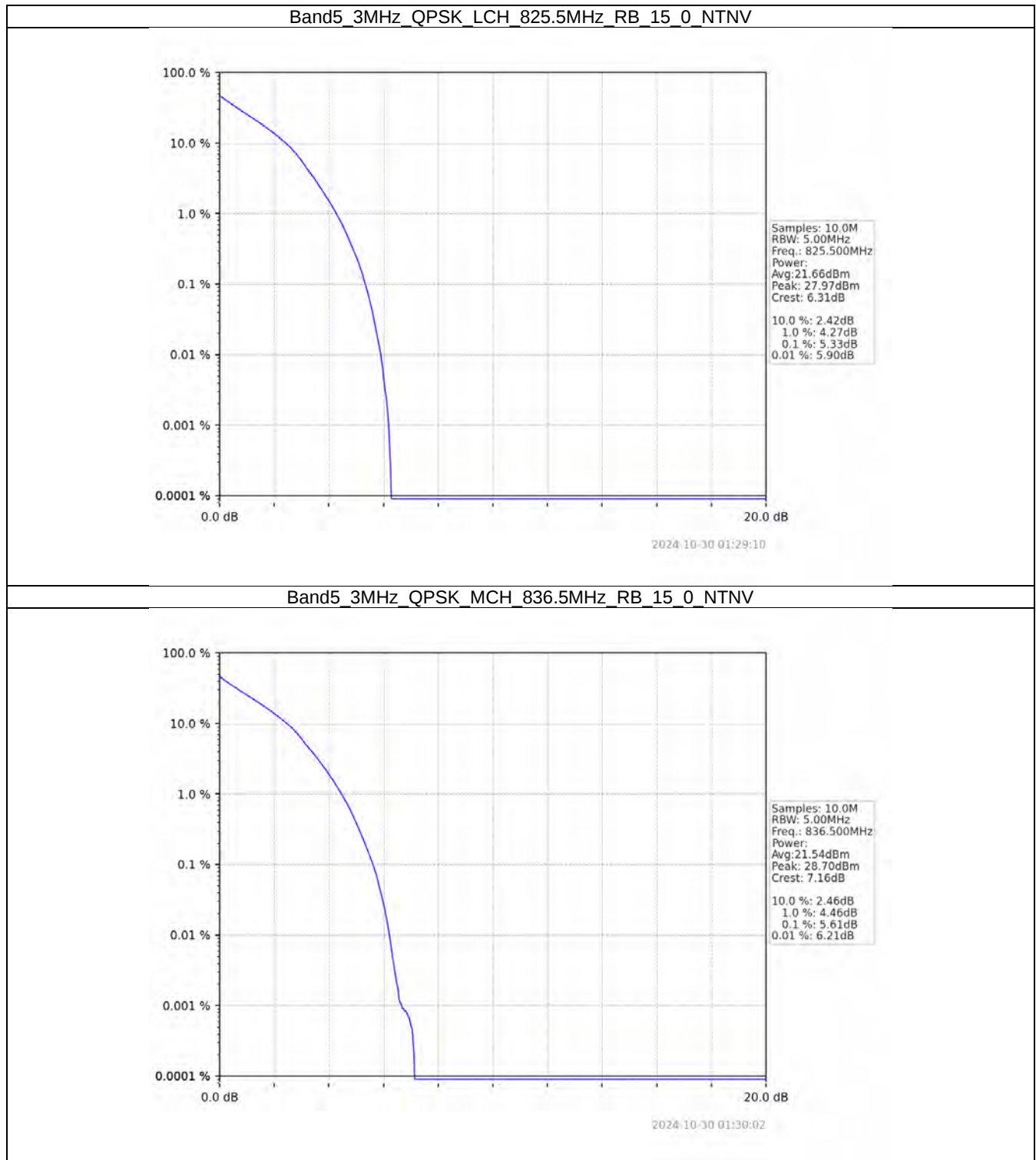
2024-10-30 01:27:12

Band5 1.4MHz 16QAM HCH 848.3MHz RB 6 0 NTNV

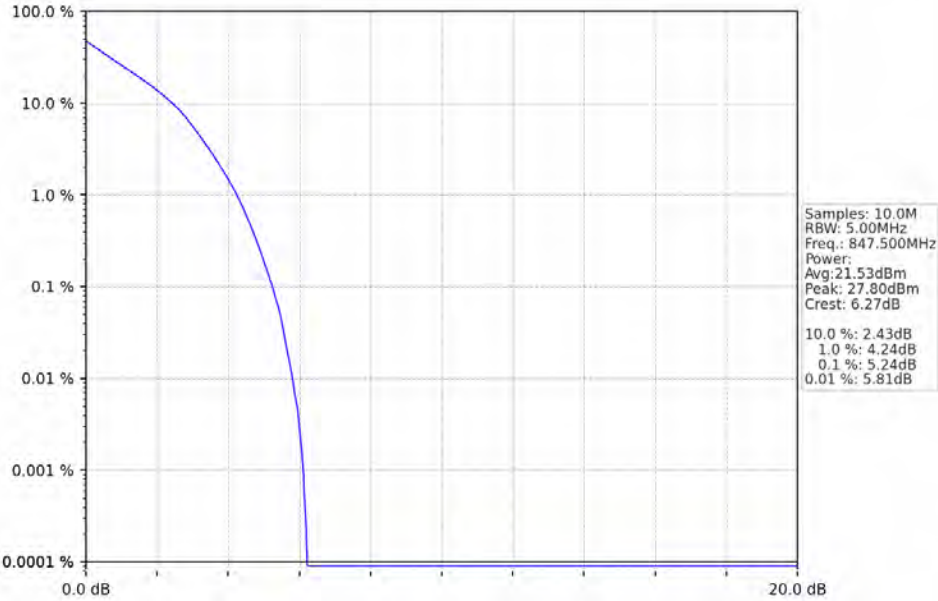


2024-10-30 01:28:01

5.2.2 B5_3MHz

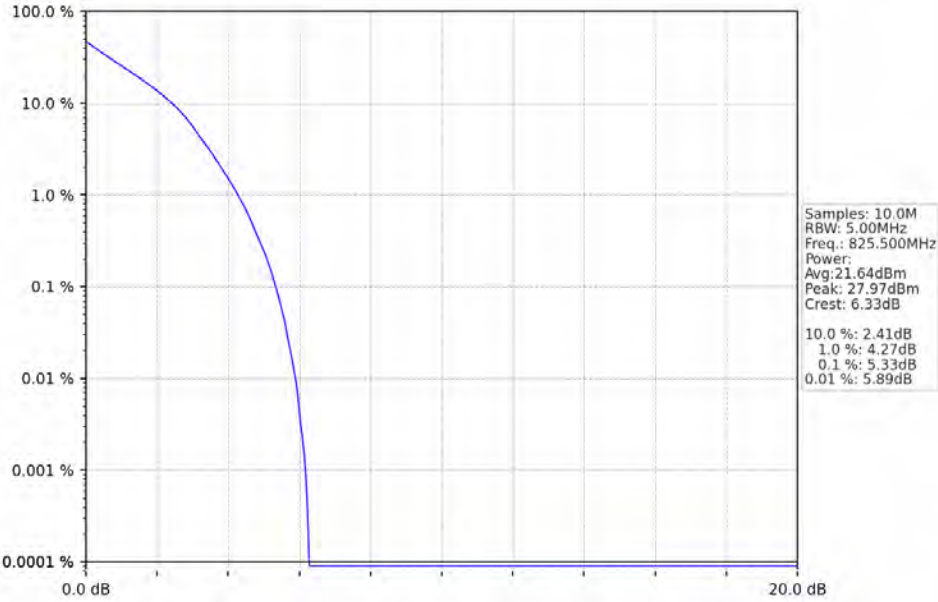


Band5 3MHz QPSK HCH 847.5MHz RB 15 0 NTN



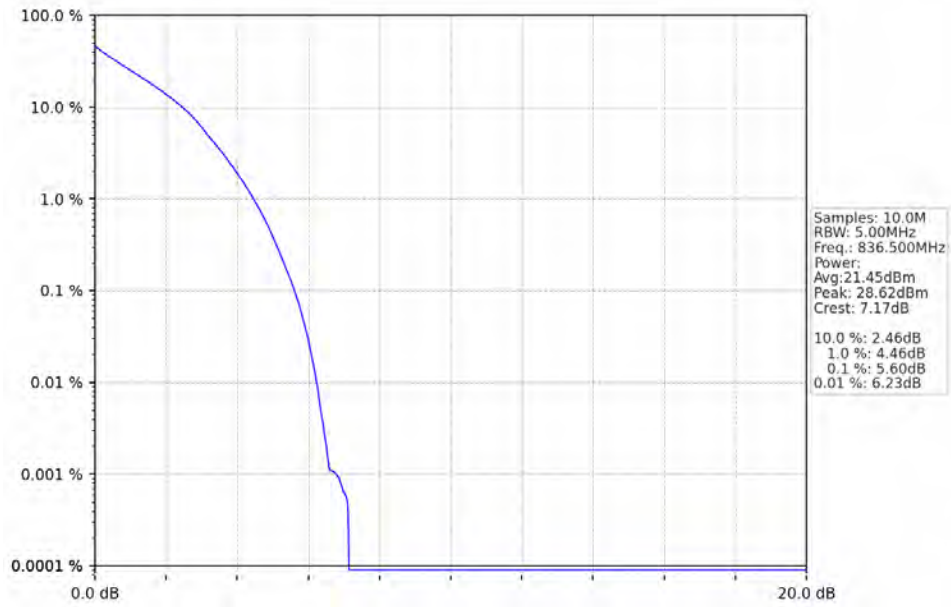
2024-10-30 01:30:55

Band5 3MHz 16QAM LCH 825.5MHz RB 15 0 NTN



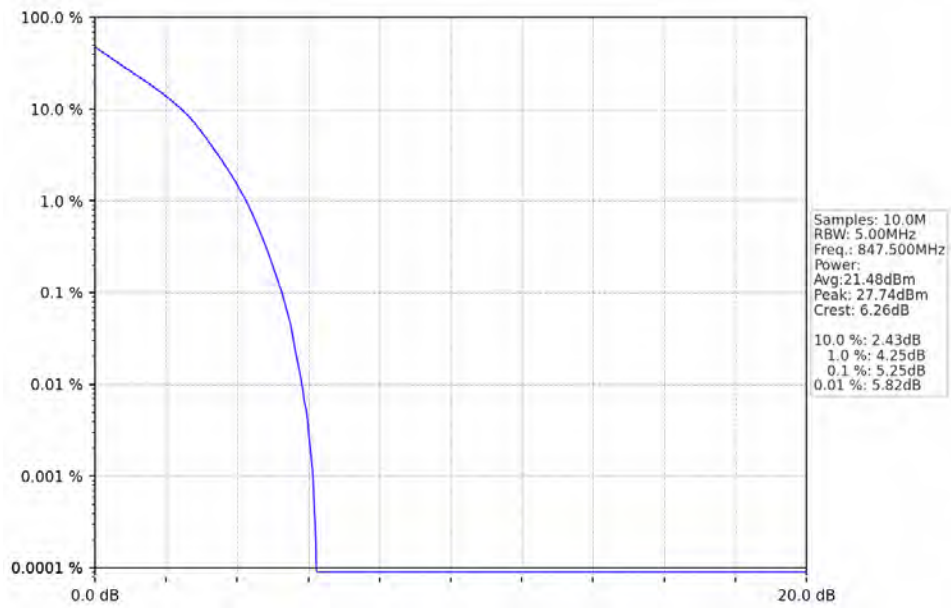
2024-10-30 01:29:32

Band5 3MHz 16QAM MCH 836.5MHz RB 15 0 NTNV



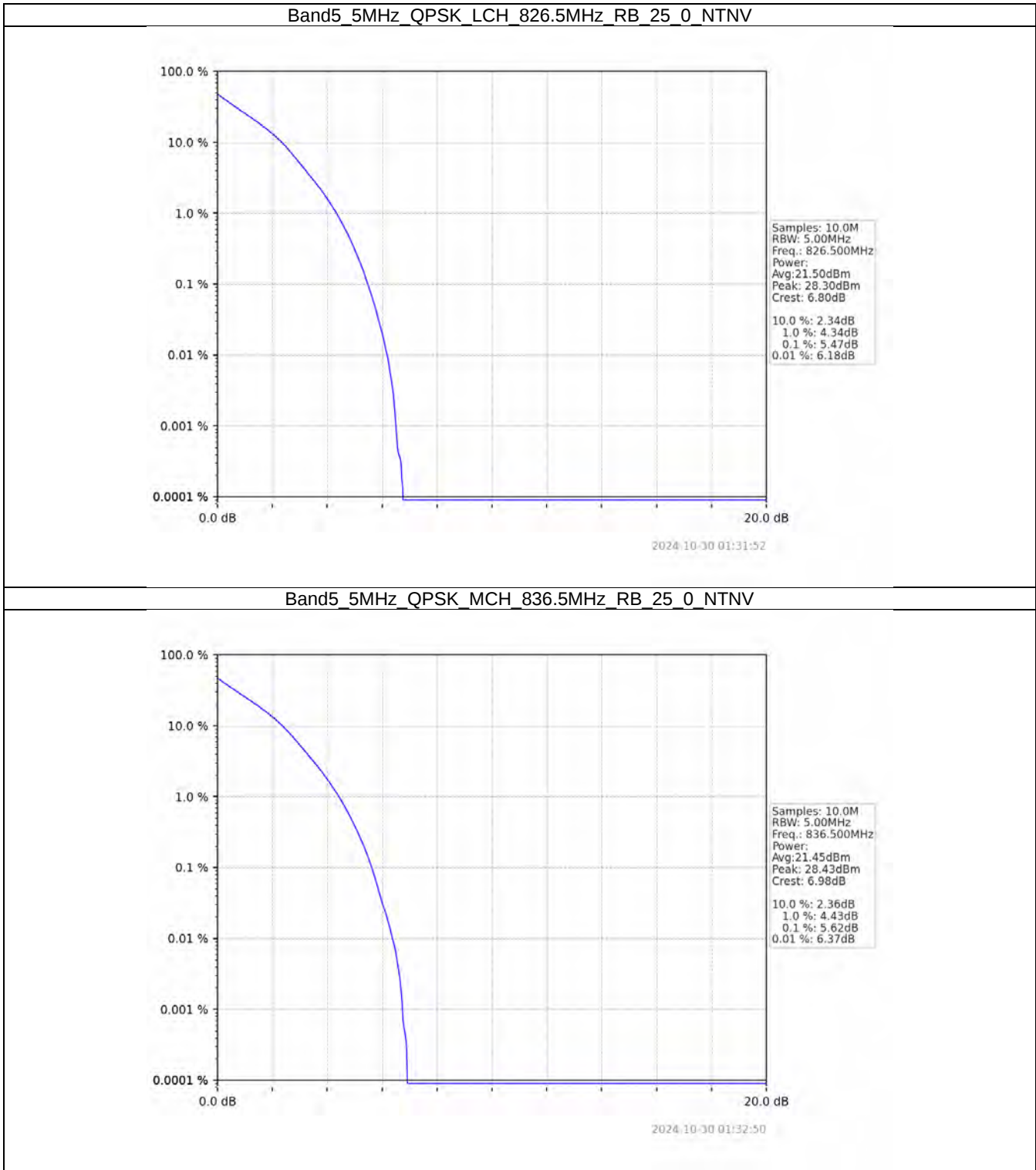
2024-10-30 01:30:28

Band5 3MHz 16QAM HCH 847.5MHz RB 15 0 NTNV

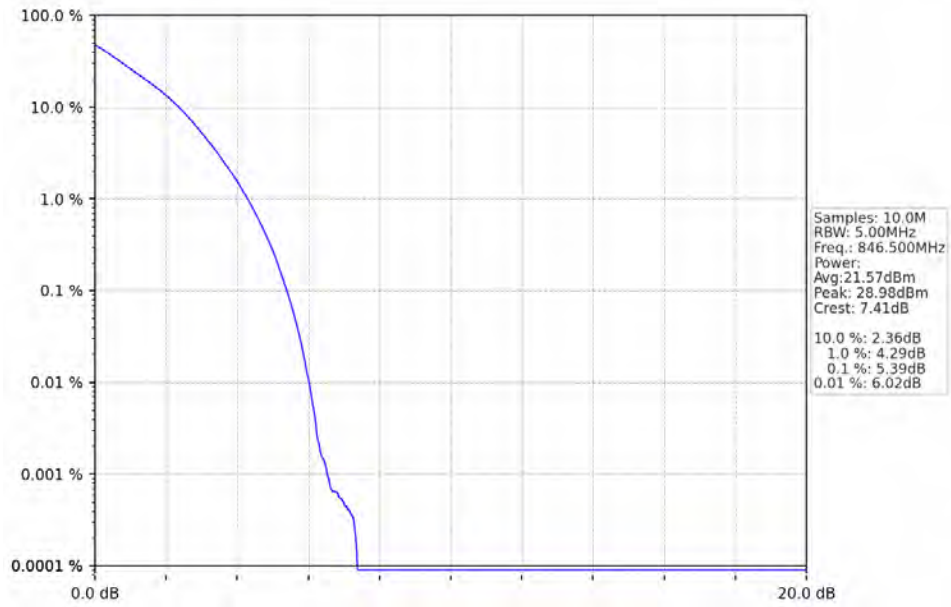


2024-10-30 01:31:17

5.2.3 B5_5MHz

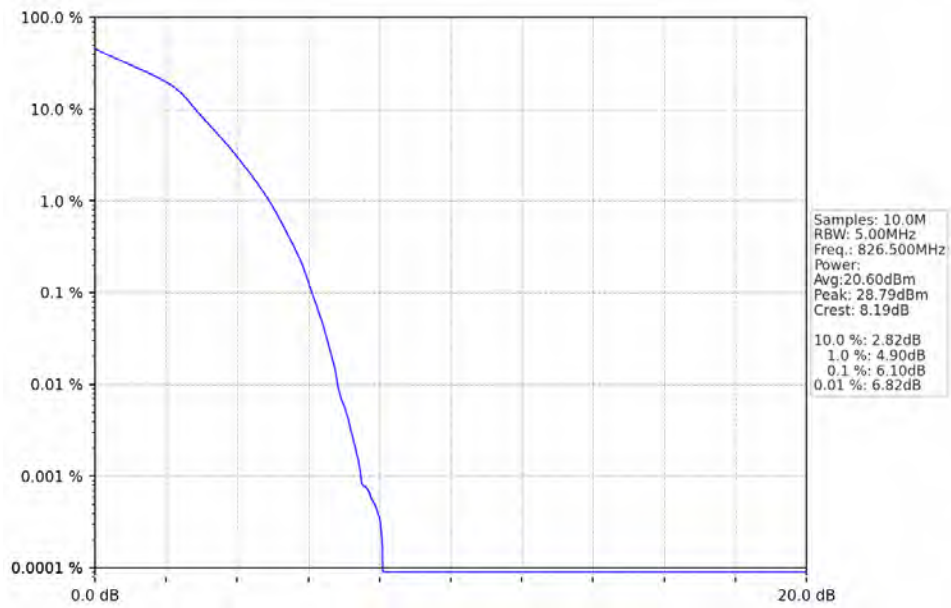


Band5 5MHz QPSK HCH 846.5MHz RB 25 0 NTNV



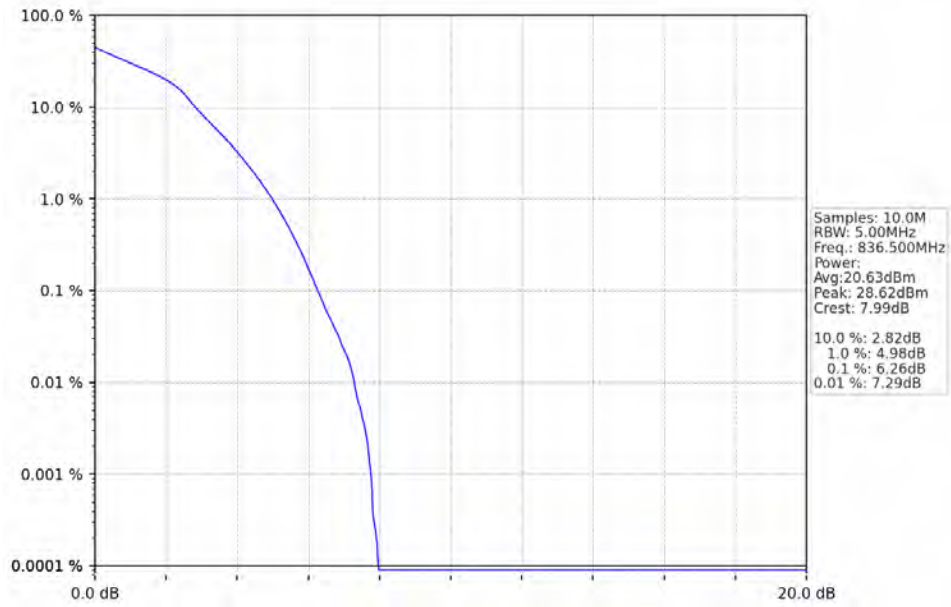
2024-10-30 01:33:49

Band5 5MHz 16QAM LCH 826.5MHz RB 25 0 NTNV



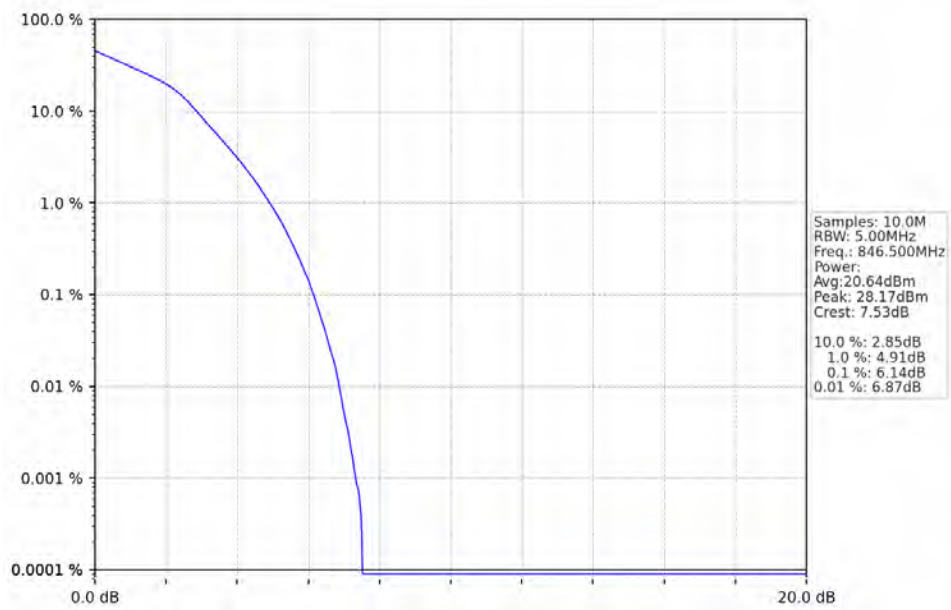
2024-10-30 01:32:21

Band5 5MHz 16QAM MCH 836.5MHz RB 25 0 NTNV



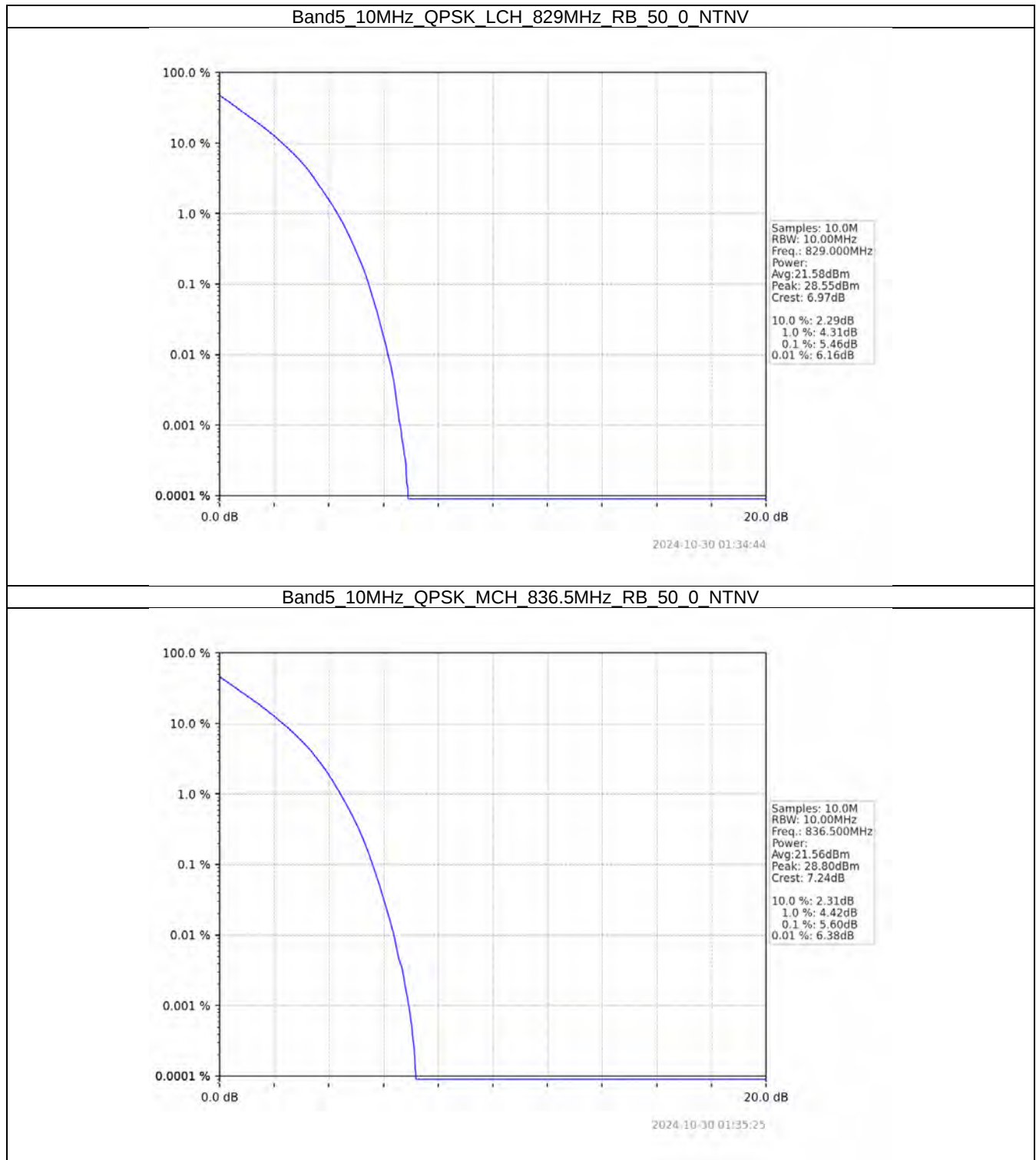
2024-10-30 01:33:19

Band5 5MHz 16QAM HCH 846.5MHz RB 25 0 NTNV

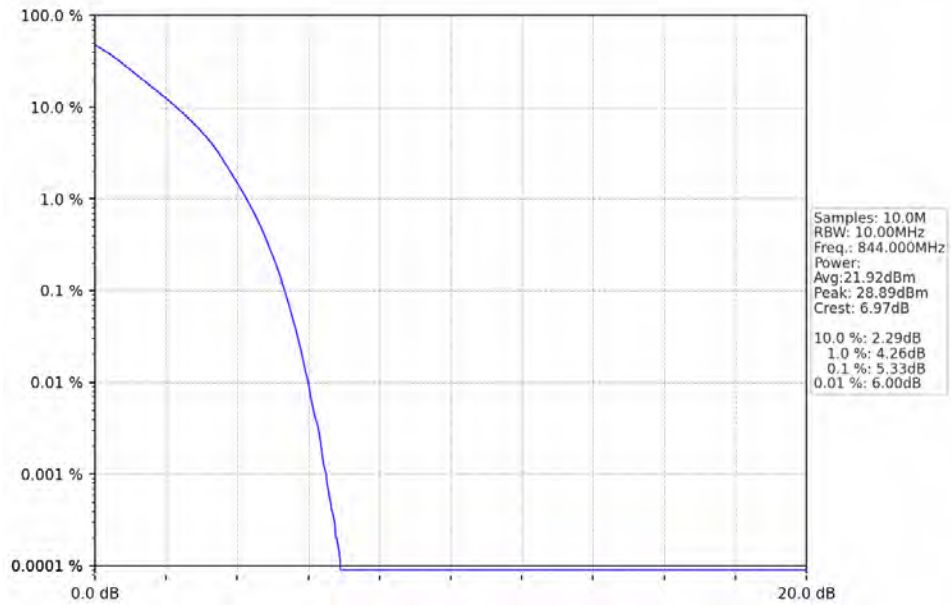


2024-10-30 01:34:16

5.2.4 B5_10MHz

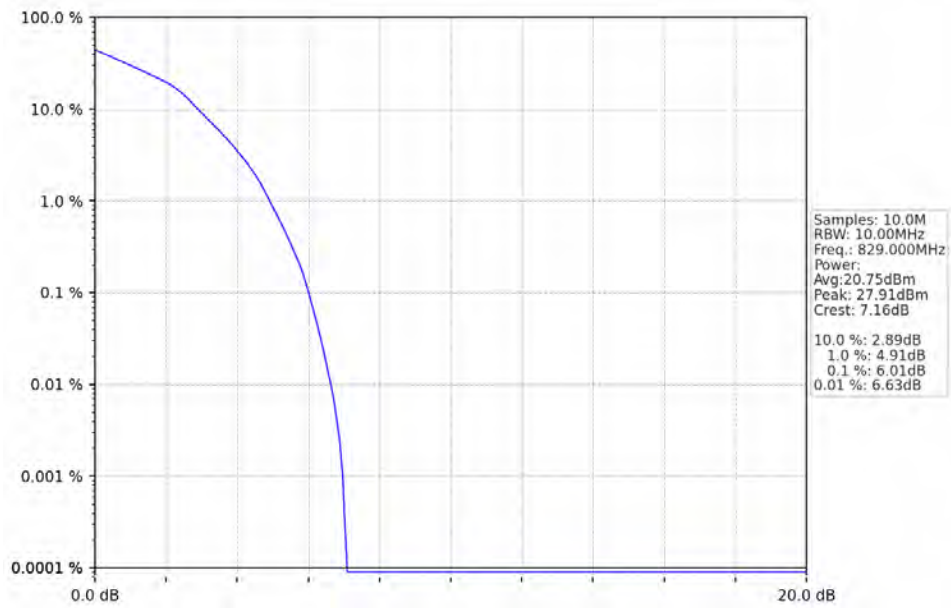


Band5 10MHz QPSK HCH 844MHz RB 50 0 NTNV



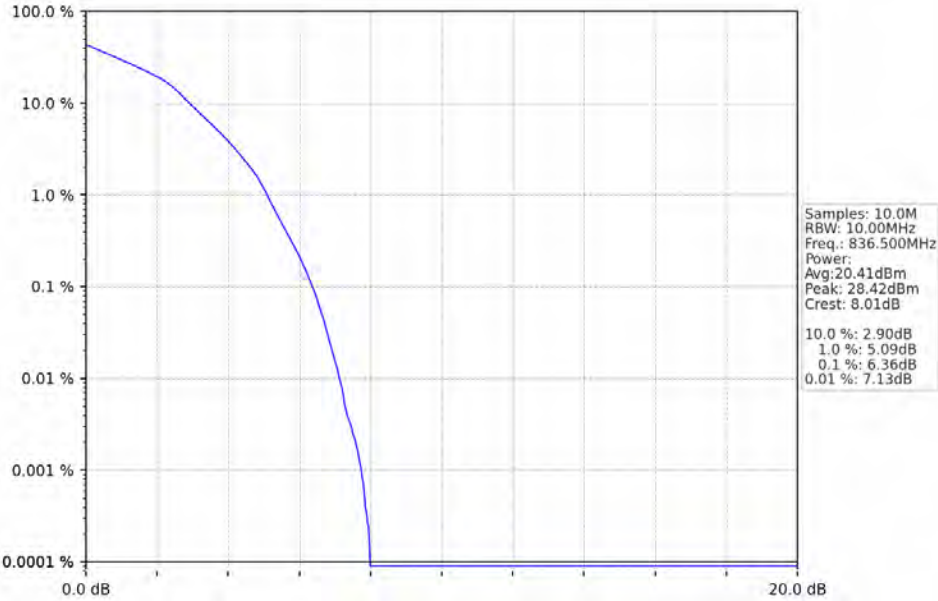
2024-10-30 01:36:07

Band5 10MHz 16QAM LCH 829MHz RB 27 0 NTNV



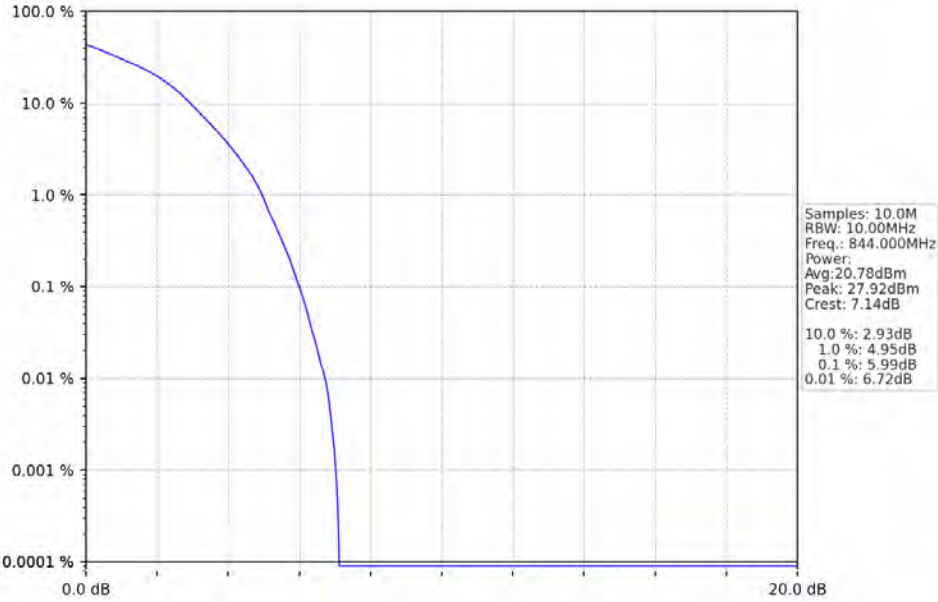
2024-10-30 01:35:03

Band5 10MHz 16QAM MCH 836.5MHz RB 27 0 NTNV



2024-10-30 01:35:45

Band5 10MHz 16QAM HCH 844MHz RB 27 23 NTNV



2024-10-30 01:36:24

6. Spurious Emission

6.1 Test Result

6.1.1 B5_1.4MHz

Band: 5 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	824.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			5	Refer To Test Graph		Pass
			0	Refer To Test Graph		Pass
16QAM	824.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			5	Refer To Test Graph		Pass
			0	Refer To Test Graph		Pass

6.1.2 B5_3MHz

Band: 5 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	825.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
			0	Refer To Test Graph		Pass
16QAM	825.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
			0	Refer To Test Graph		Pass

6.1.3 B5_5MHz

Band: 5 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	826.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
			0	Refer To Test Graph		Pass
16QAM	826.5	1	0	Refer To Test Graph		Pass

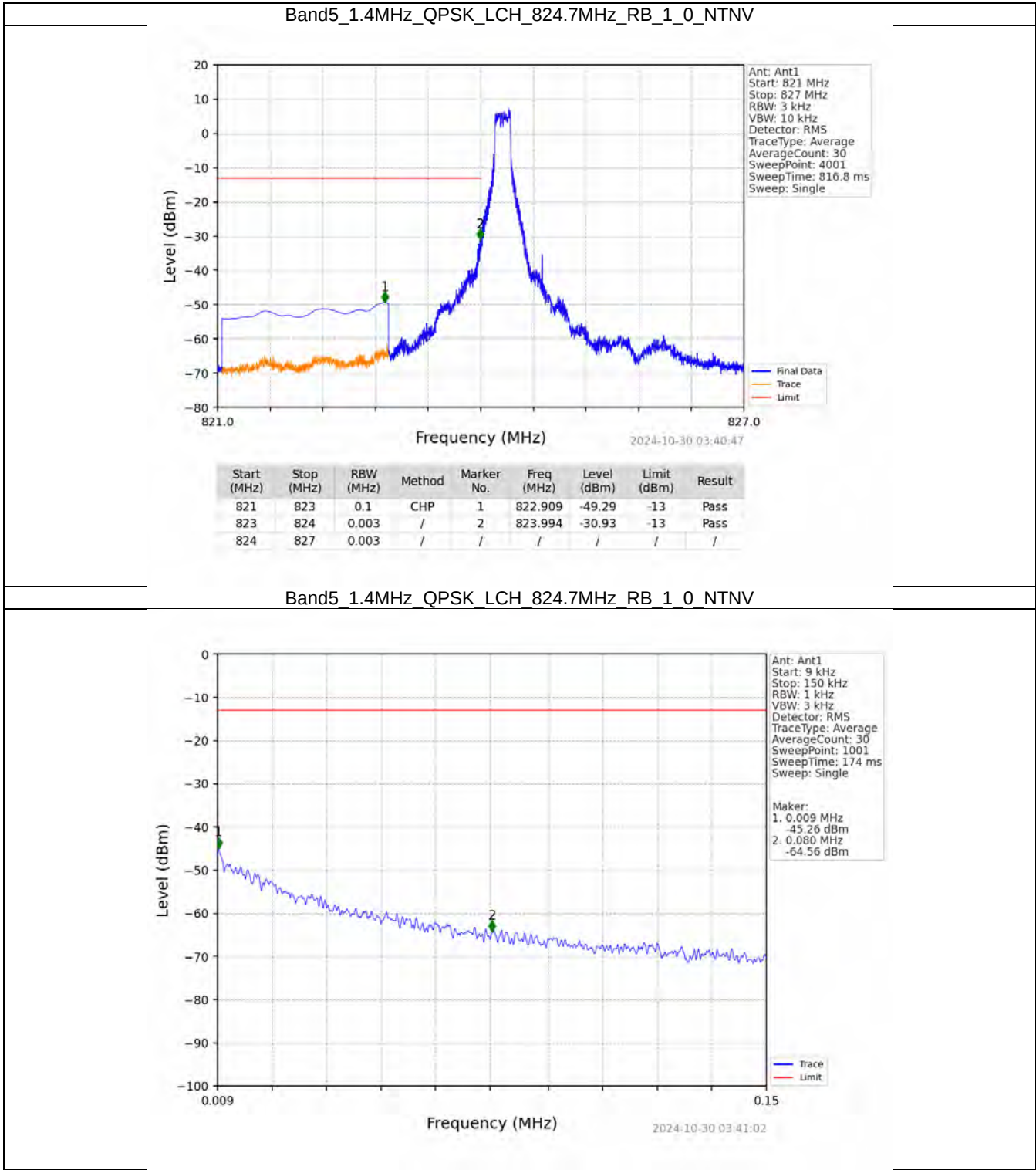
		25	0	Refer To Test Graph	Pass
	836.5	1	0	Refer To Test Graph	Pass
	846.5	1	0	Refer To Test Graph	Pass
			24	Refer To Test Graph	Pass
		25	0	Refer To Test Graph	Pass

6.1.4 B5_10MHz

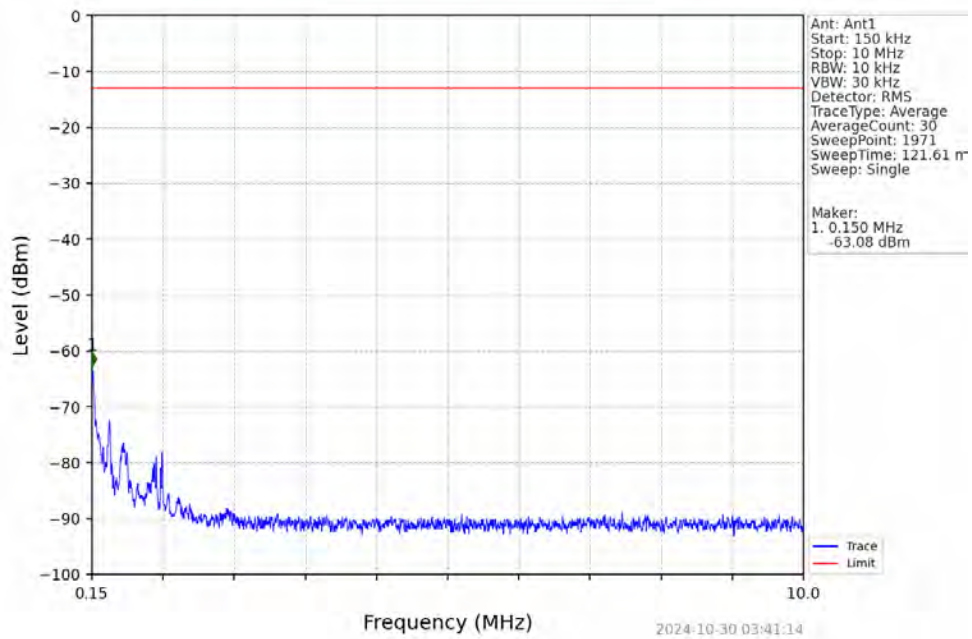
Band: 5 / Bandwidth: 10MHz / NTNV					
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission	
		Size	Offset	Result	Limit
QPSK	829	1	0	Refer To Test Graph	Pass
		50	0	Refer To Test Graph	Pass
	836.5	1	0	Refer To Test Graph	Pass
	844	1	0	Refer To Test Graph	Pass
			49	Refer To Test Graph	Pass
		50	0	Refer To Test Graph	Pass
16QAM	829	1	0	Refer To Test Graph	Pass
	836.5	1	0	Refer To Test Graph	Pass
	844	1	0	Refer To Test Graph	Pass
			49	Refer To Test Graph	Pass

6.2 Test Graph

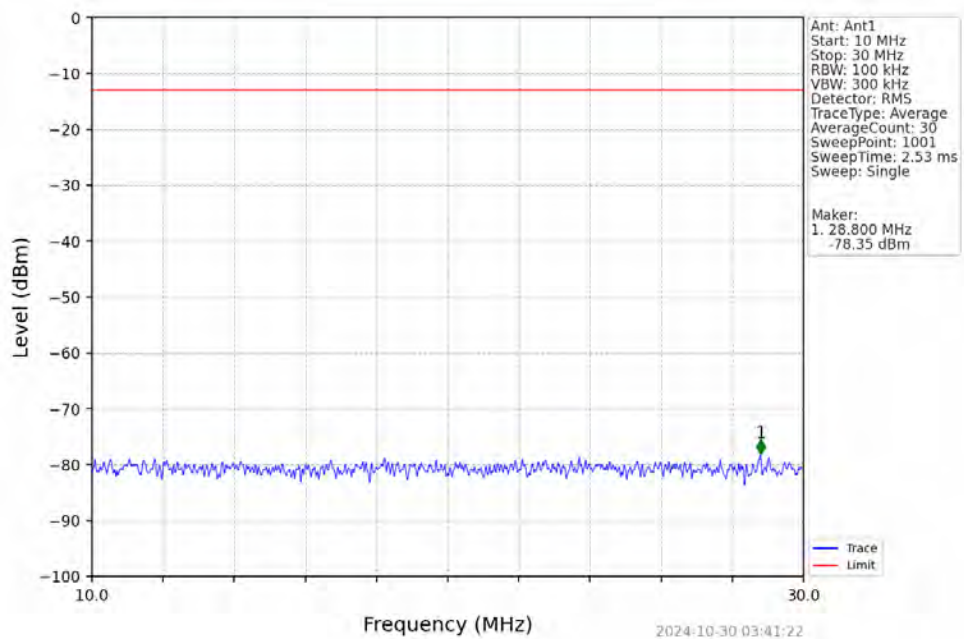
6.2.1 B5_1.4MHz



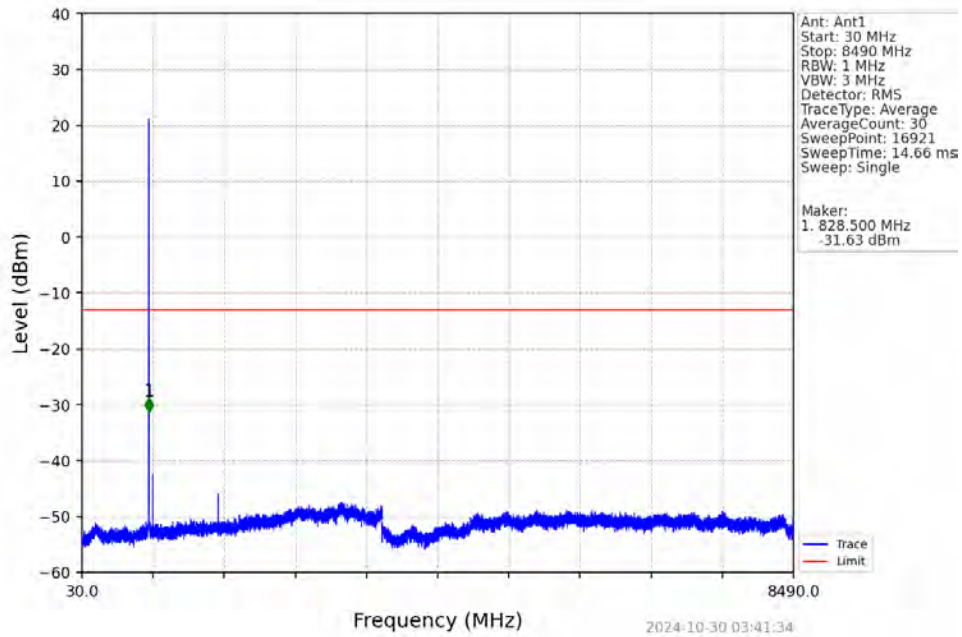
Band5 1.4MHz QPSK LCH 824.7MHz RB 1 0 NTNV



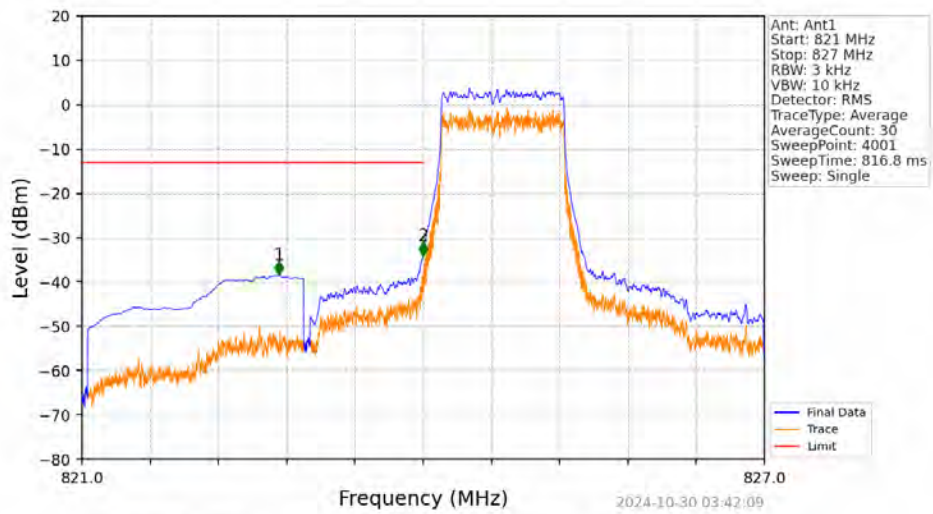
Band5 1.4MHz QPSK LCH 824.7MHz RB 1 0 NTNV



Band5 1.4MHz QPSK LCH 824.7MHz RB 1 0 NTN

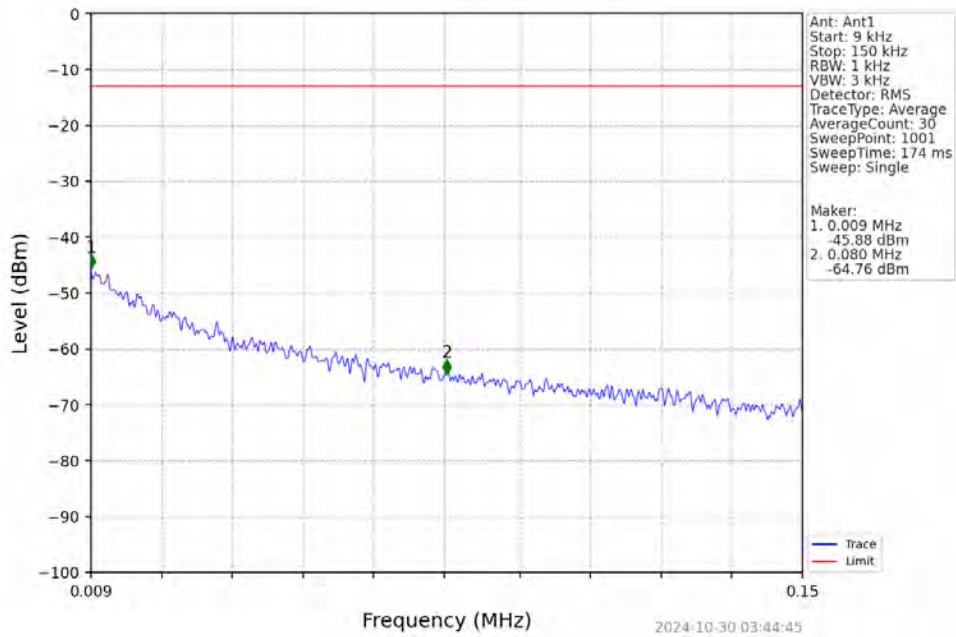


Band5 1.4MHz QPSK LCH 824.7MHz RB 6 0 NTN

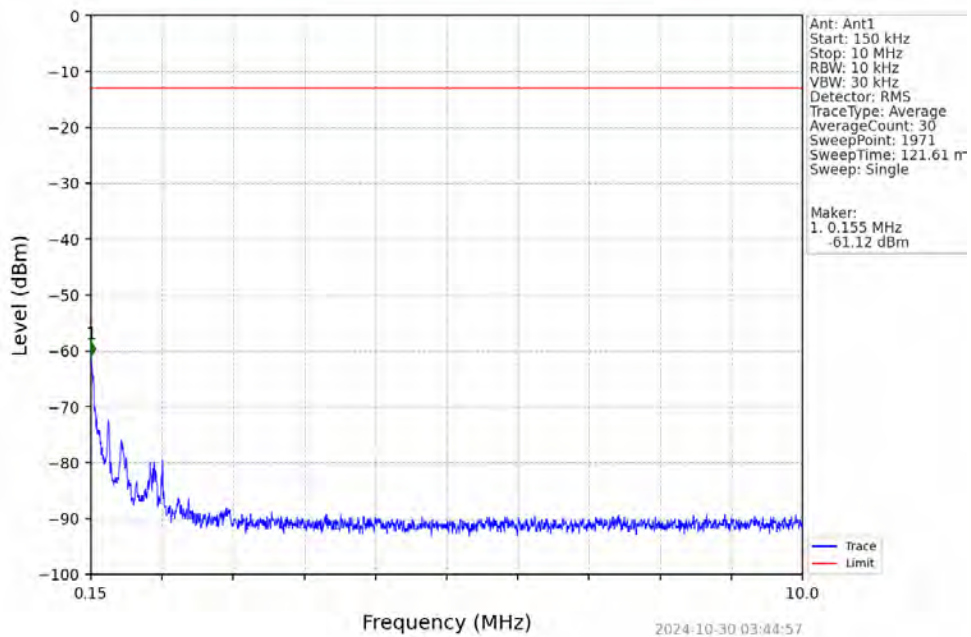


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
821	823	0.1	CHP	1	822.730	-38.50	-13	Pass
823	824	0.013	CHP	2	823.999	-34.07	-13	Pass
824	827	0.013	CHP	/	/	/	/	/

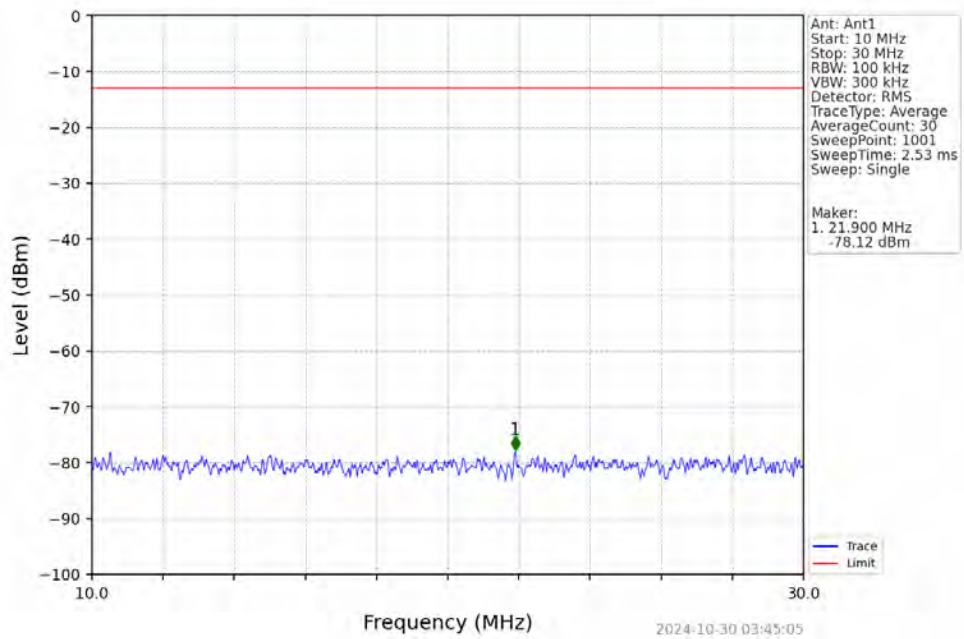
Band5 1.4MHz QPSK MCH 836.5MHz RB 1 0 NTNV



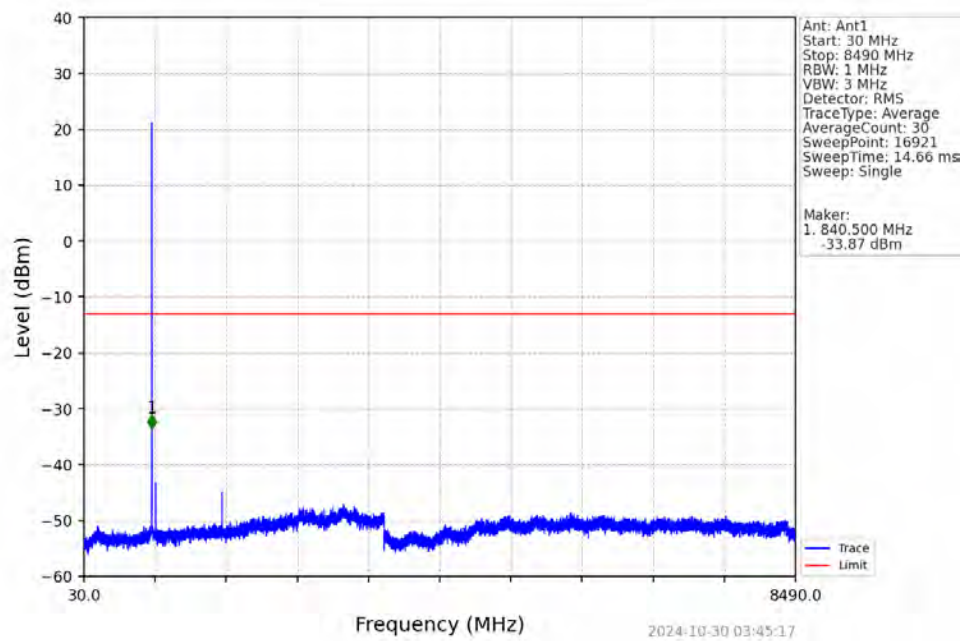
Band5 1.4MHz QPSK MCH 836.5MHz RB 1 0 NTNV



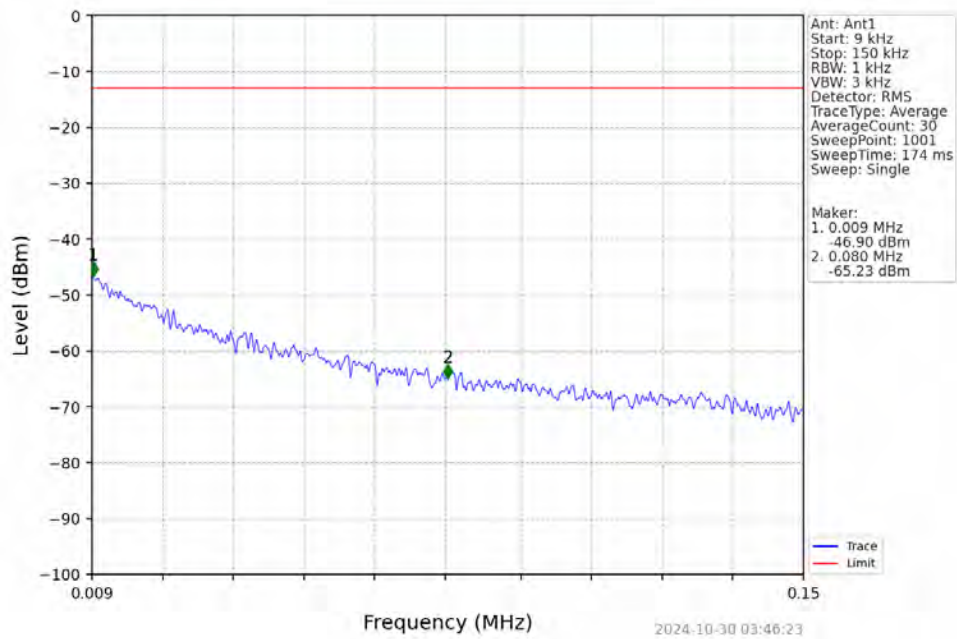
Band5 1.4MHz QPSK MCH 836.5MHz RB 1 0 NTNV



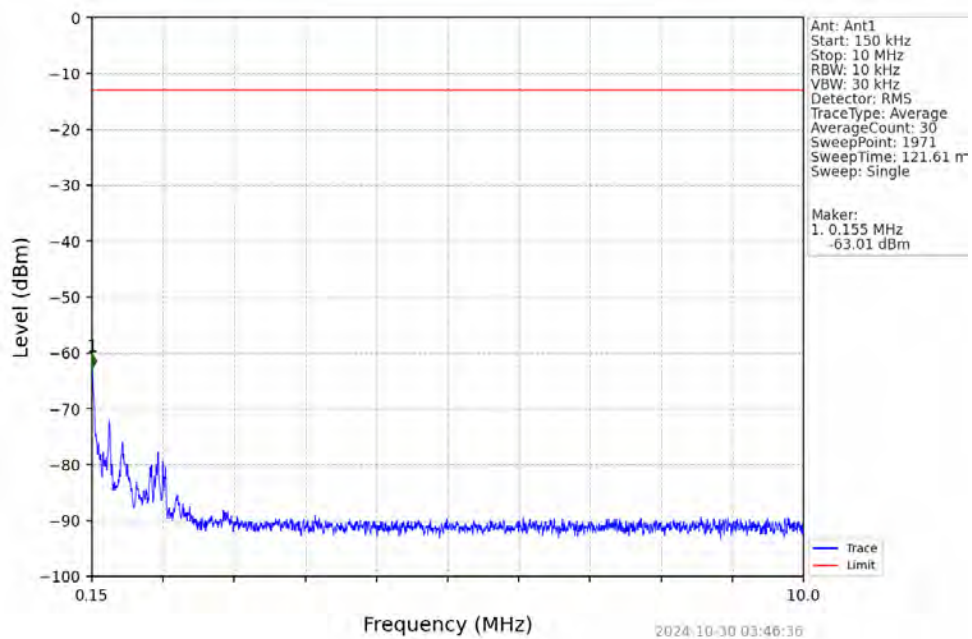
Band5 1.4MHz QPSK MCH 836.5MHz RB 1 0 NTNV



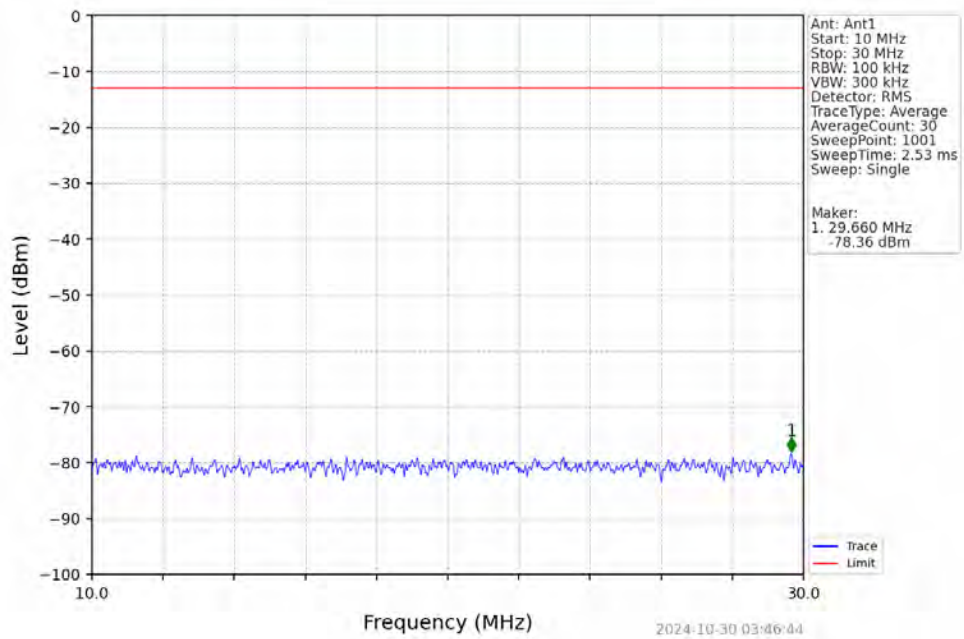
Band5 1.4MHz QPSK HCH 848.3MHz RB 1 0 NTN



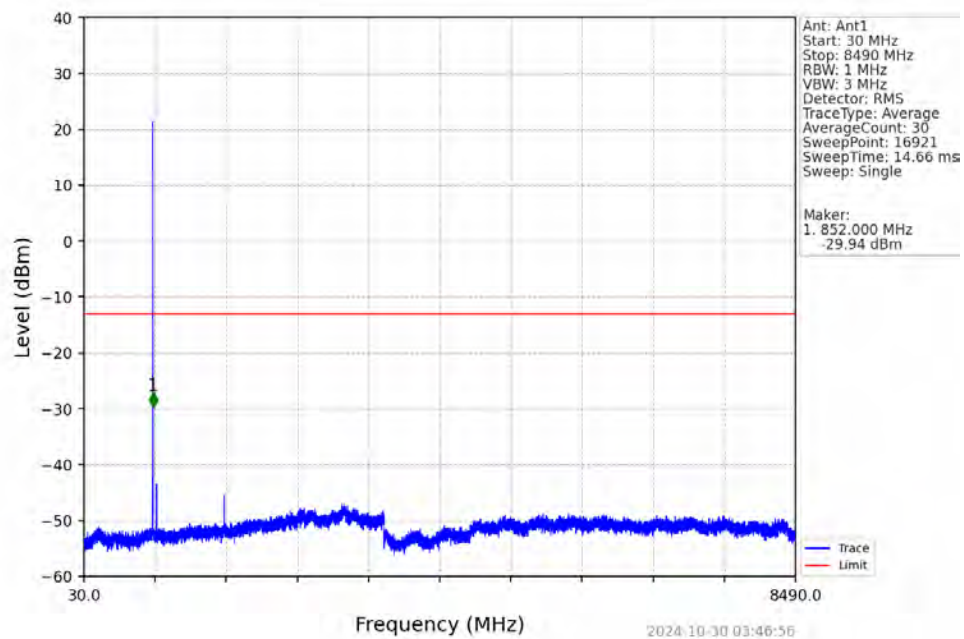
Band5 1.4MHz QPSK HCH 848.3MHz RB 1 0 NTN



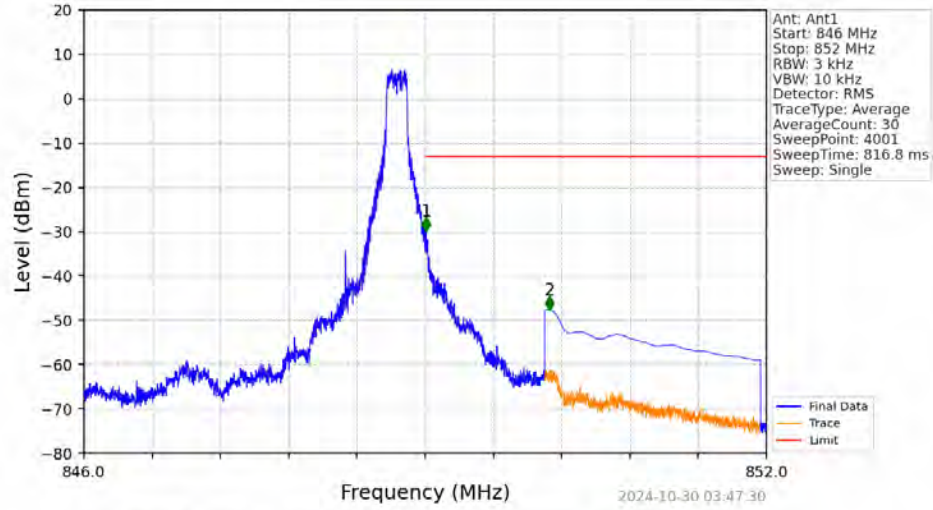
Band5 1.4MHz QPSK HCH 848.3MHz RB 1 0 NTNV



Band5 1.4MHz QPSK HCH 848.3MHz RB 1 0 NTNV

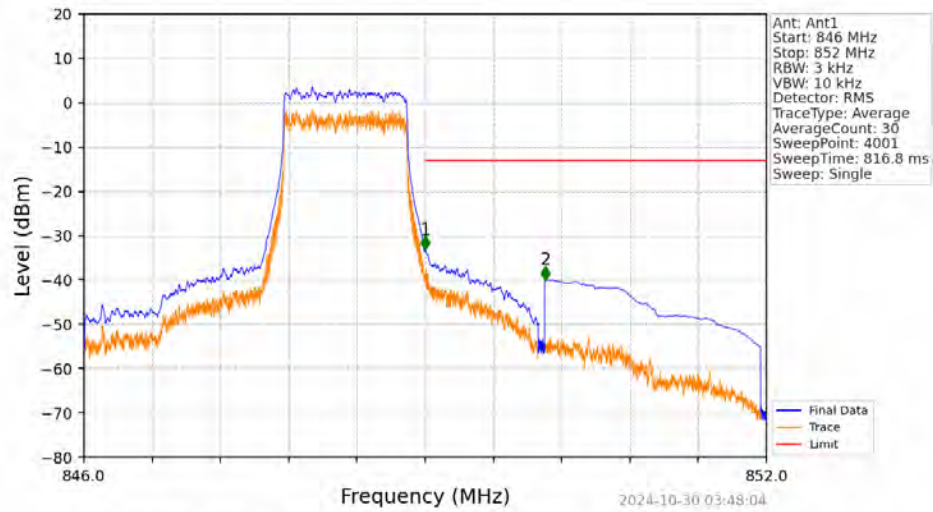


Band5 1.4MHz QPSK HCH 848.3MHz RB 1 5 NTNV



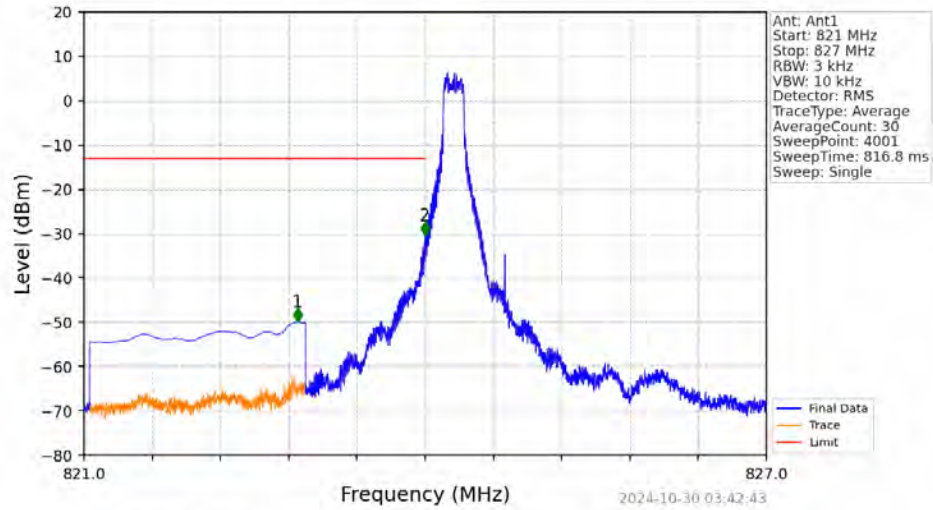
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.008	-29.90	-13	Pass
850	852	0.1	CHP	2	850.092	-47.63	-13	Pass

Band5 1.4MHz QPSK HCH 848.3MHz RB 6 0 NTNV

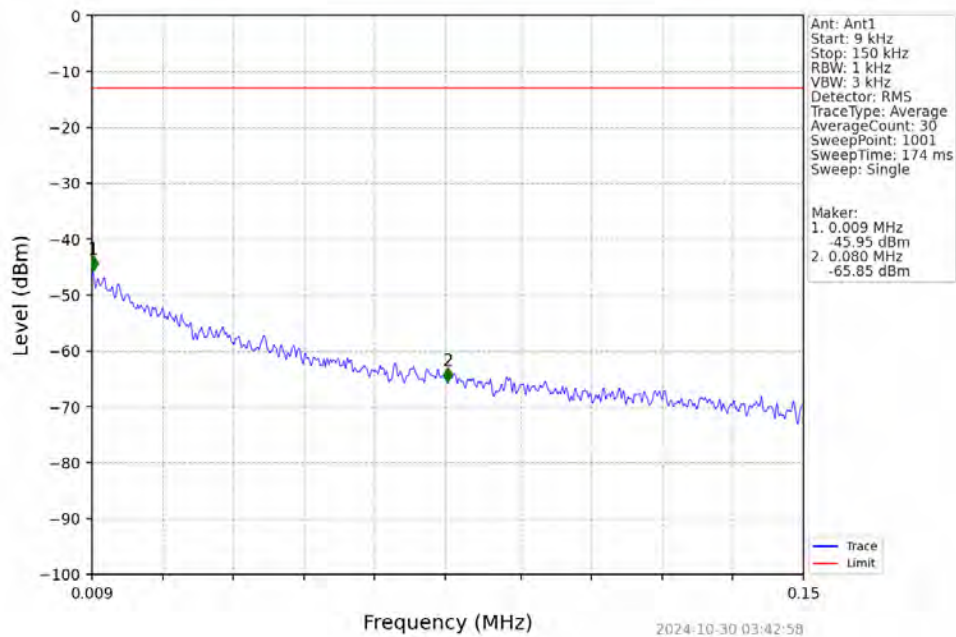


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.013	CHP	/	/	/	/	/
849	850	0.013	CHP	1	849.001	-33.14	-13	Pass
850	852	0.1	CHP	2	850.054	-39.96	-13	Pass

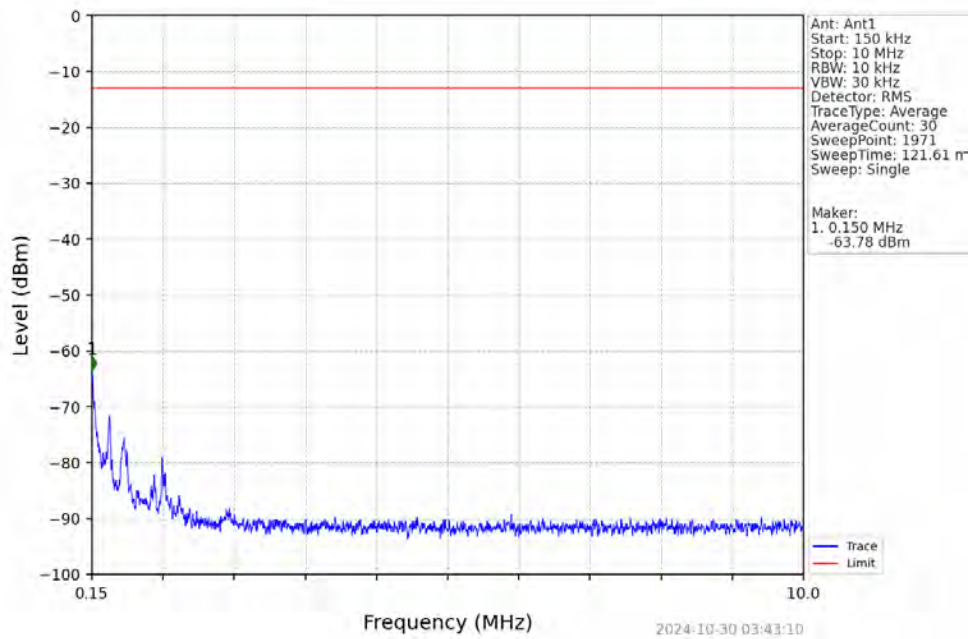
Band5 1.4MHz 16QAM LCH 824.7MHz RB 1 0 NTV



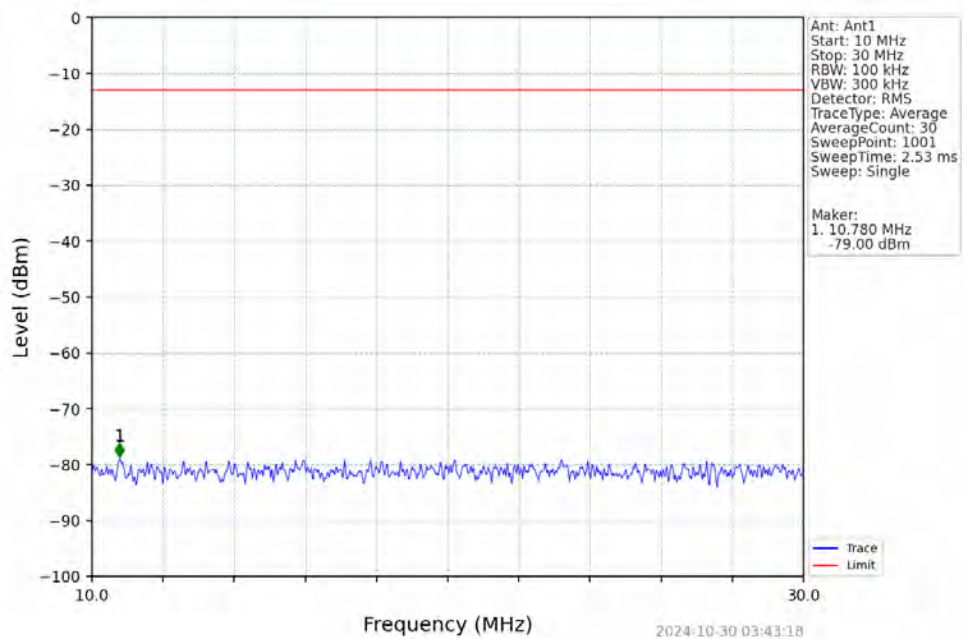
Band5 1.4MHz 16QAM LCH 824.7MHz RB 1 0 NTV



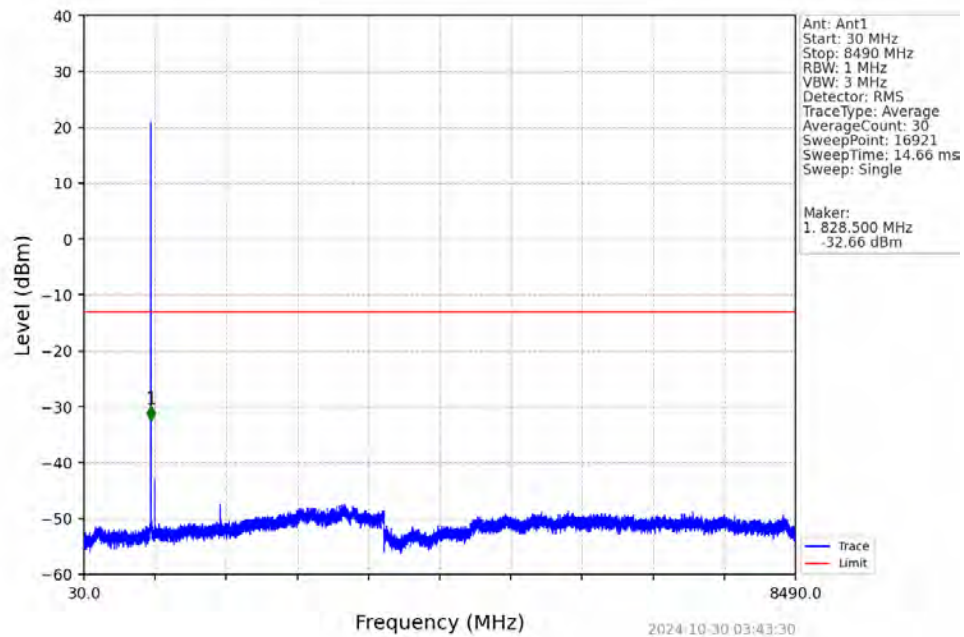
Band5 1.4MHz 16QAM LCH 824.7MHz RB 1 0 NTNV



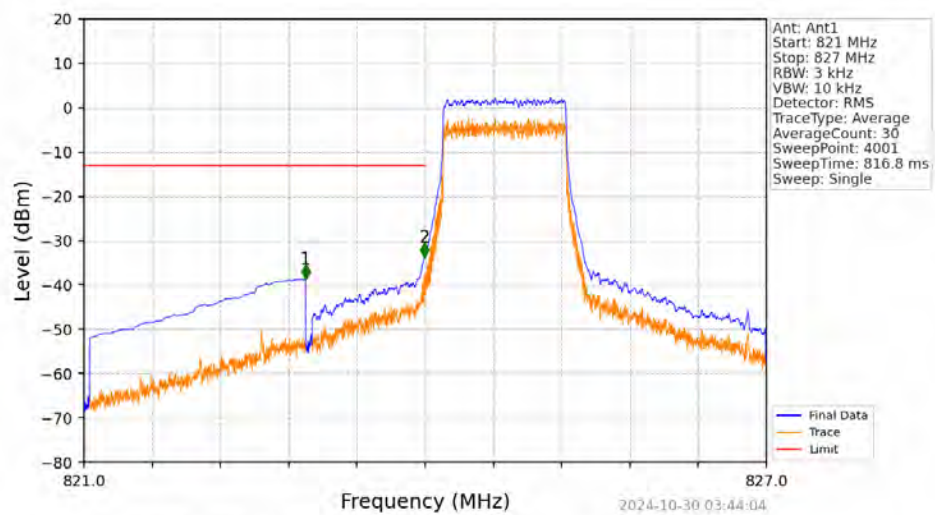
Band5 1.4MHz 16QAM LCH 824.7MHz RB 1 0 NTNV



Band5 1.4MHz 16QAM LCH 824.7MHz RB 1 0 NTNV

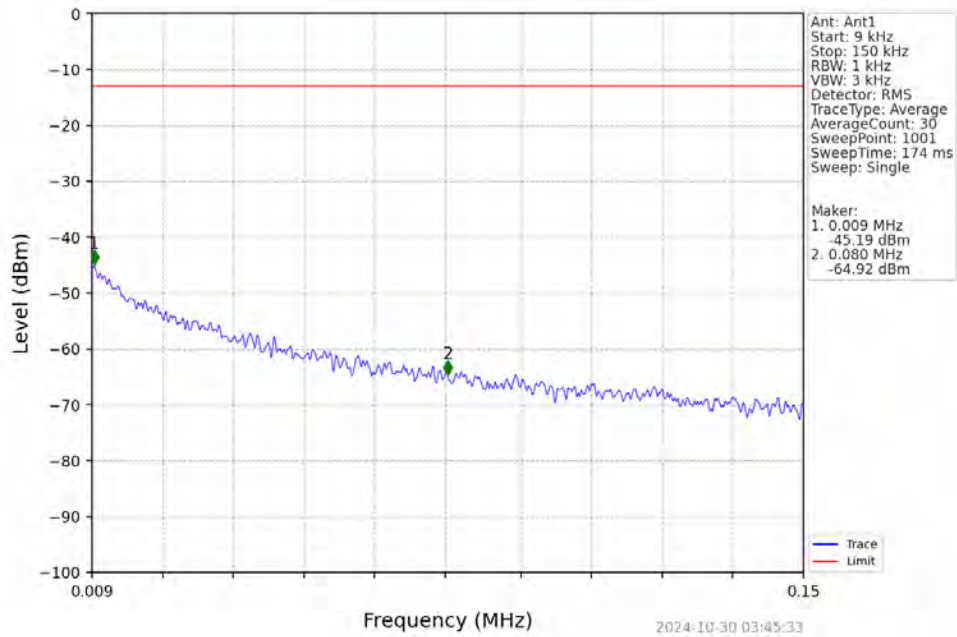


Band5 1.4MHz 16QAM LCH 824.7MHz RB 6 0 NTNV

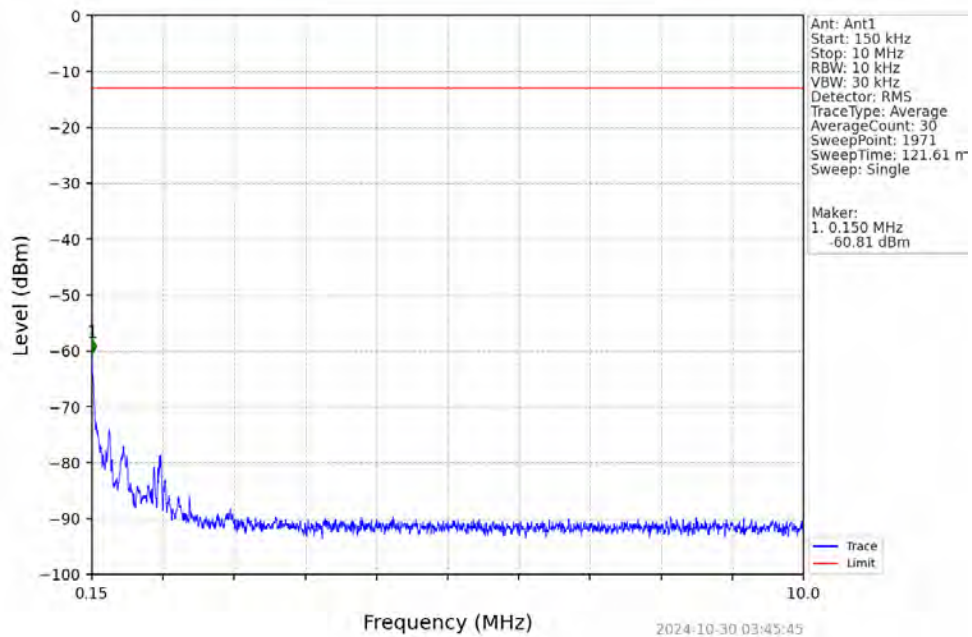


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
821	823	0.1	CHP	1	822.948	-38.61	-13	Pass
823	824	0.013	CHP	2	823.994	-33.70	-13	Pass
824	827	0.013	CHP	/	/	/	/	/

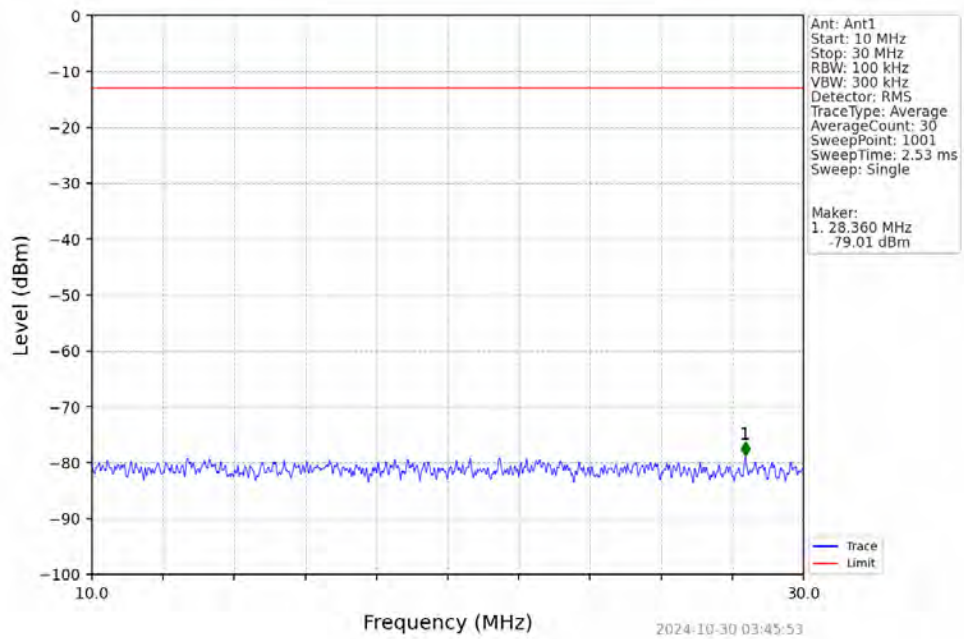
Band5 1.4MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



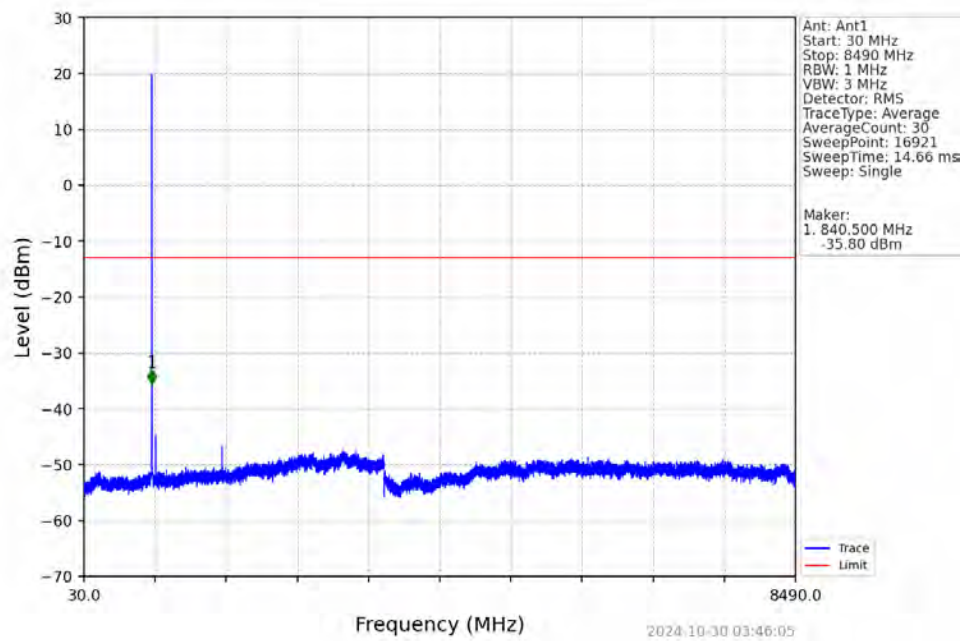
Band5 1.4MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



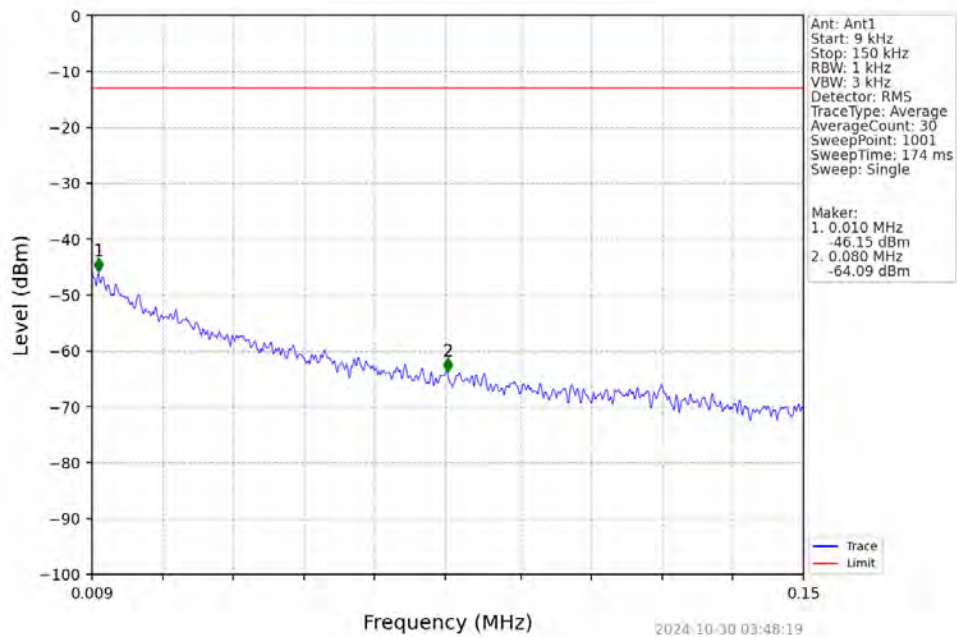
Band5 1.4MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



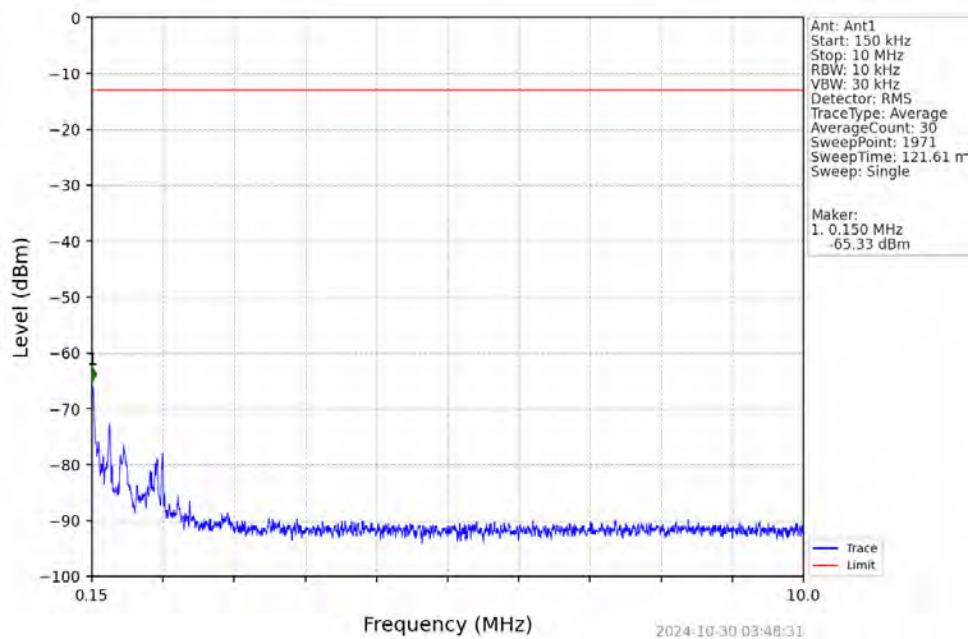
Band5 1.4MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



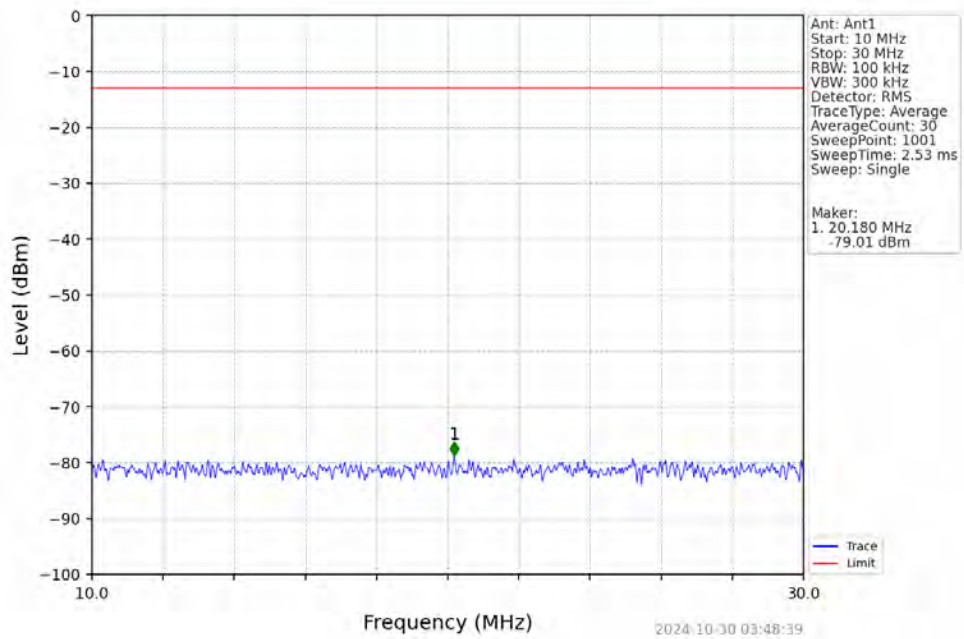
Band5 1.4MHz 16QAM HCH 848.3MHz RB 1 0 NTNV



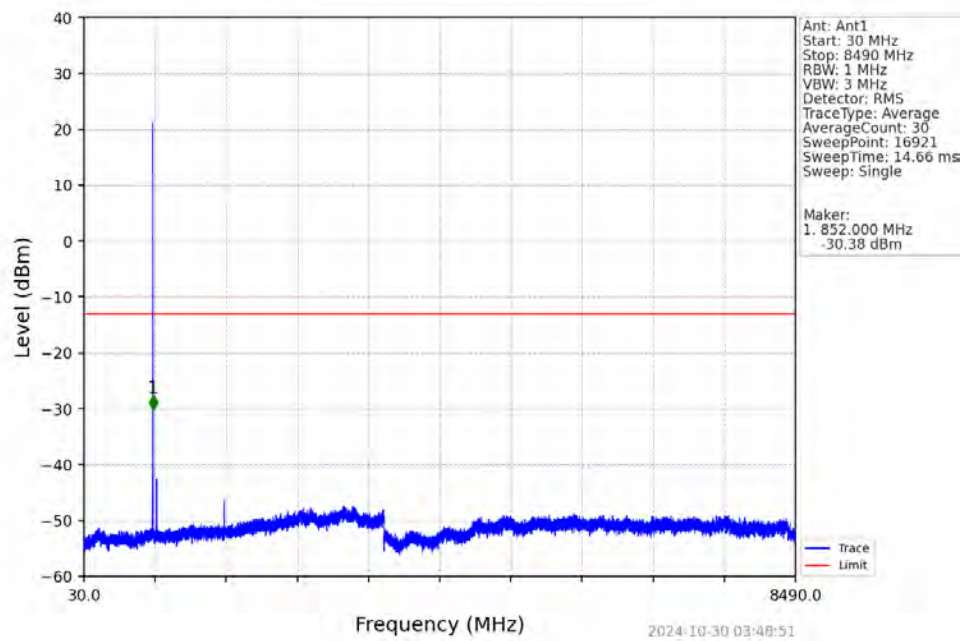
Band5 1.4MHz 16QAM HCH 848.3MHz RB 1 0 NTNV



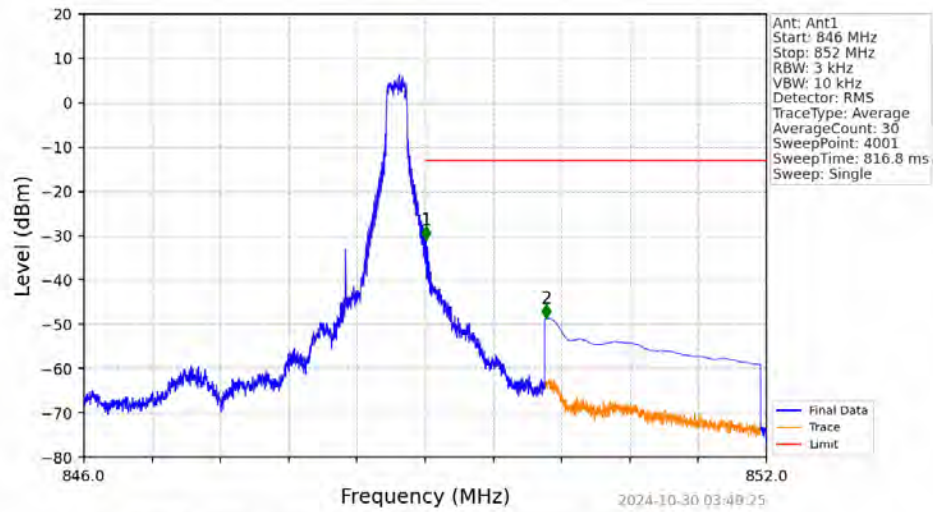
Band5 1.4MHz 16QAM HCH 848.3MHz RB 1 0 NTV



Band5 1.4MHz 16QAM HCH 848.3MHz RB 1 0 NTV

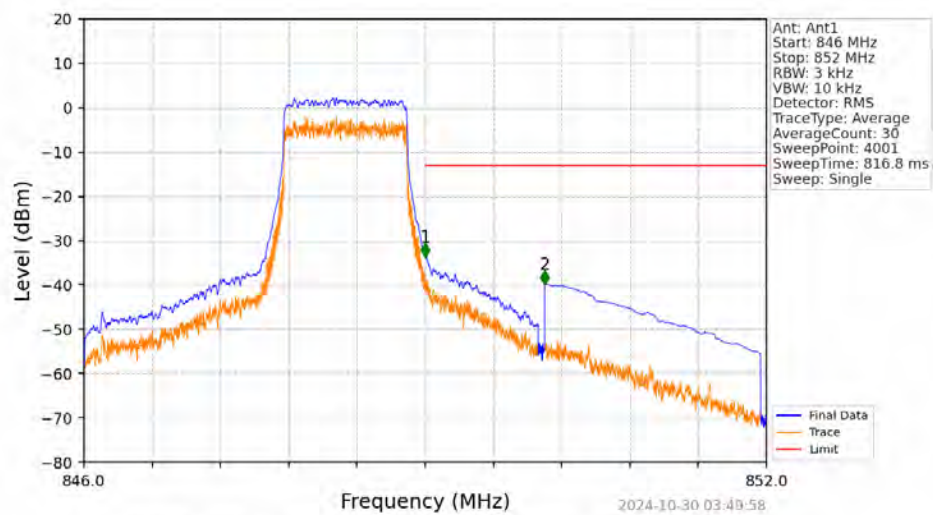


Band5 1.4MHz 16QAM HCH 848.3MHz RB 1 5 NTV



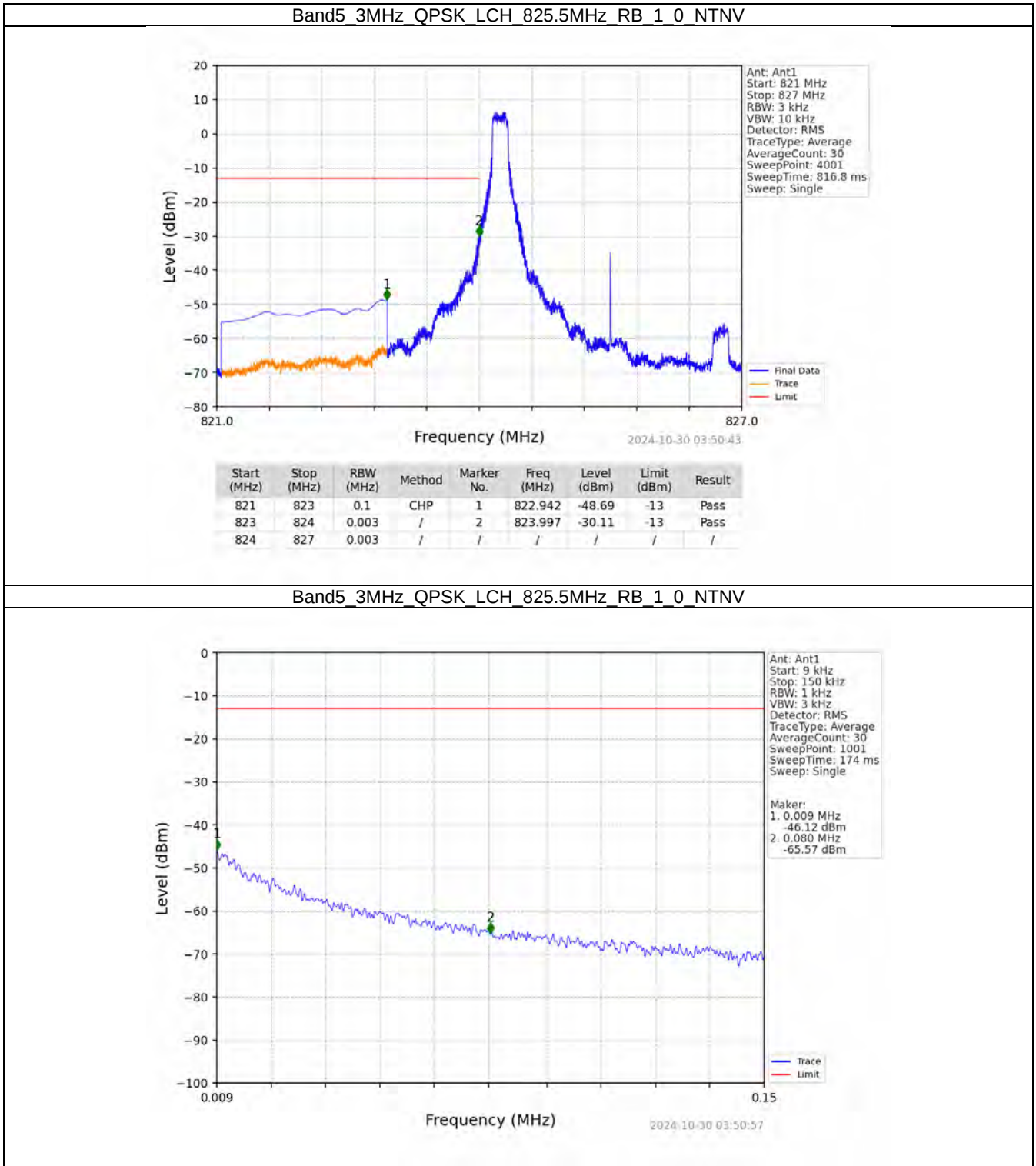
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.008	-30.91	-13	Pass
850	852	0.1	CHP	2	850.067	-48.68	-13	Pass

Band5 1.4MHz 16QAM HCH 848.3MHz RB 6 0 NTV

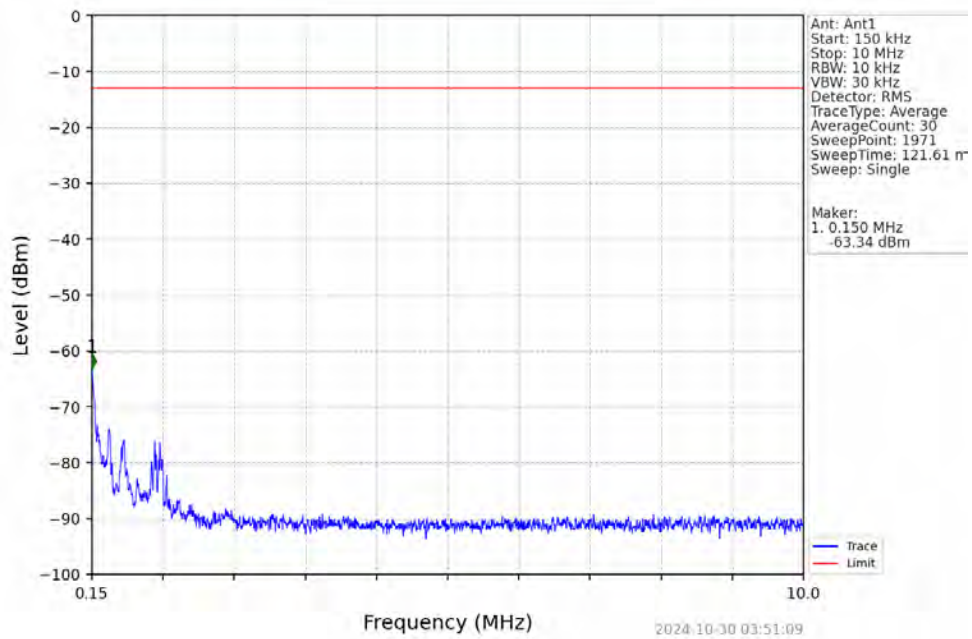


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.013	CHP	/	/	/	/	/
849	850	0.013	CHP	1	849.001	-33.75	-13	Pass
850	852	0.1	CHP	2	850.052	-39.81	-13	Pass

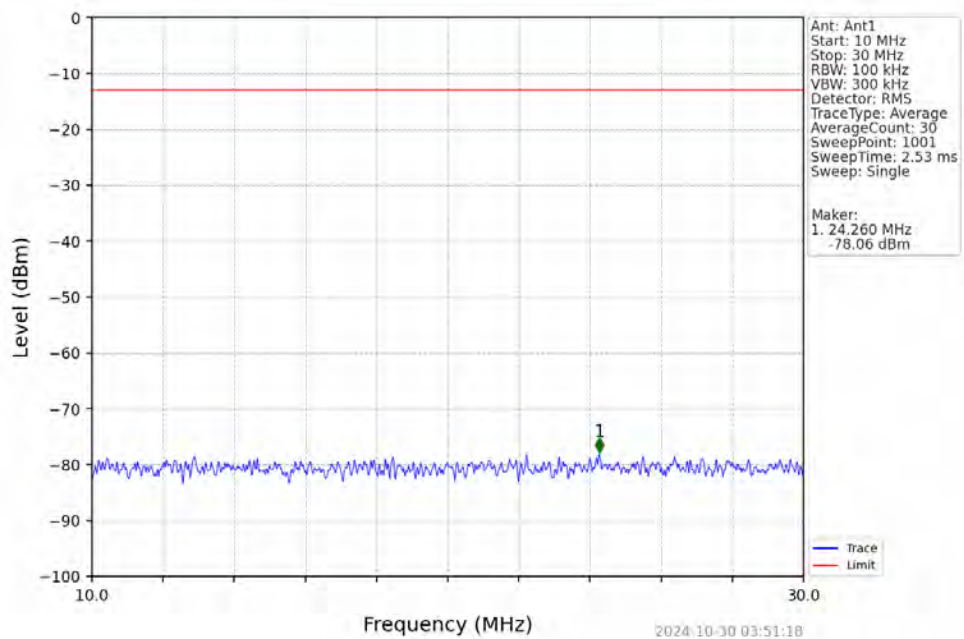
6.2.2 B5_3MHz



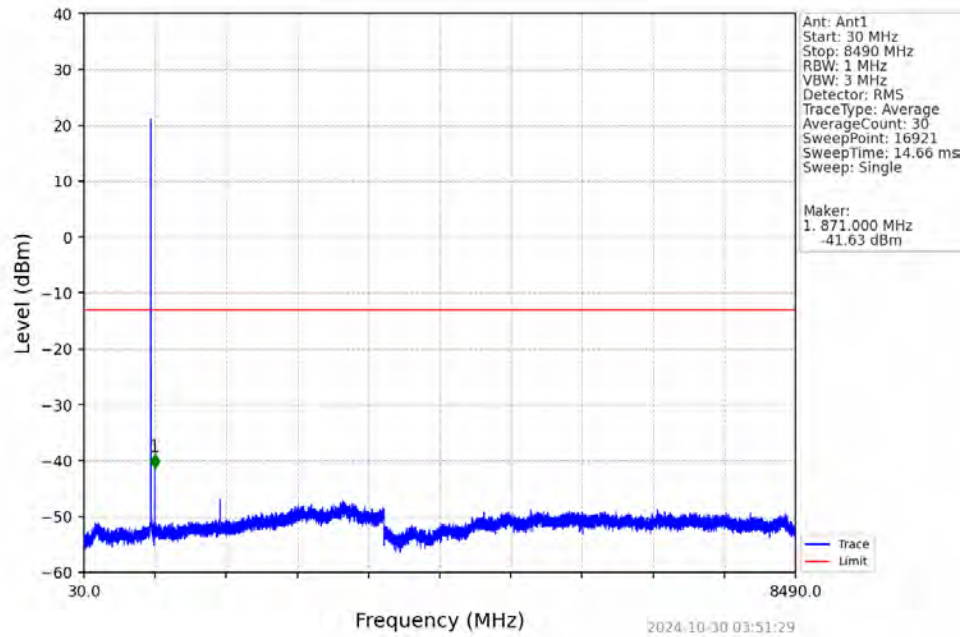
Band5 3MHz QPSK LCH 825.5MHz RB 1 0 NTNV



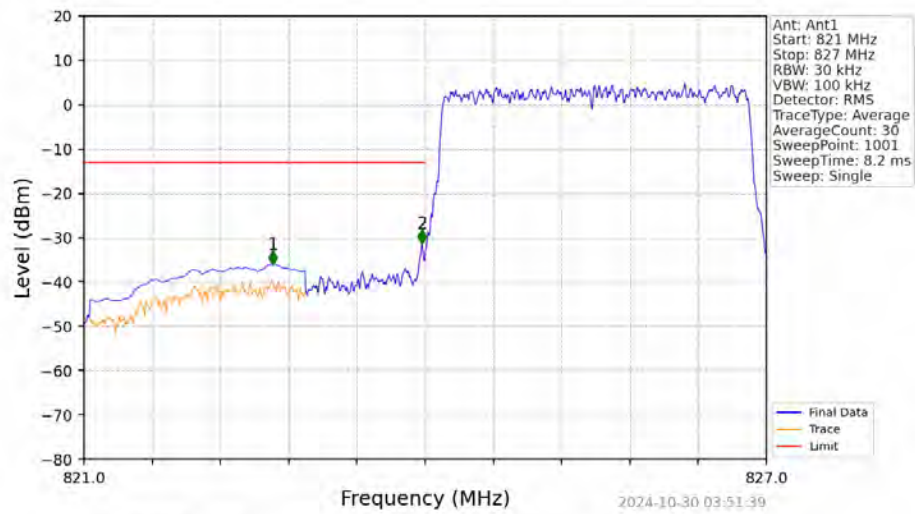
Band5 3MHz QPSK LCH 825.5MHz RB 1 0 NTNV



Band5 3MHz QPSK LCH 825.5MHz RB 1 0 NTNV

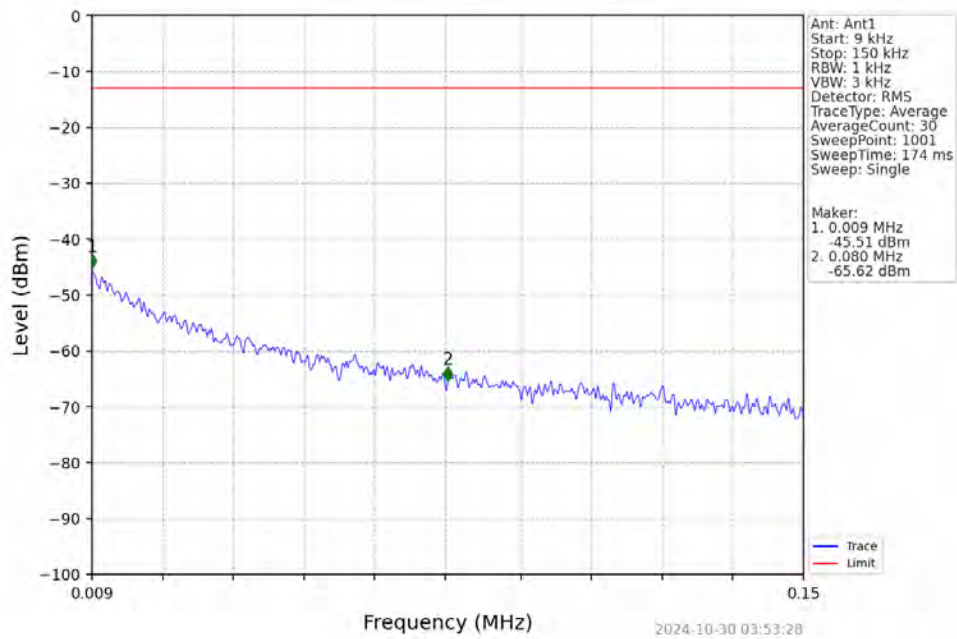


Band5 3MHz QPSK LCH 825.5MHz RB 15 0 NTNV

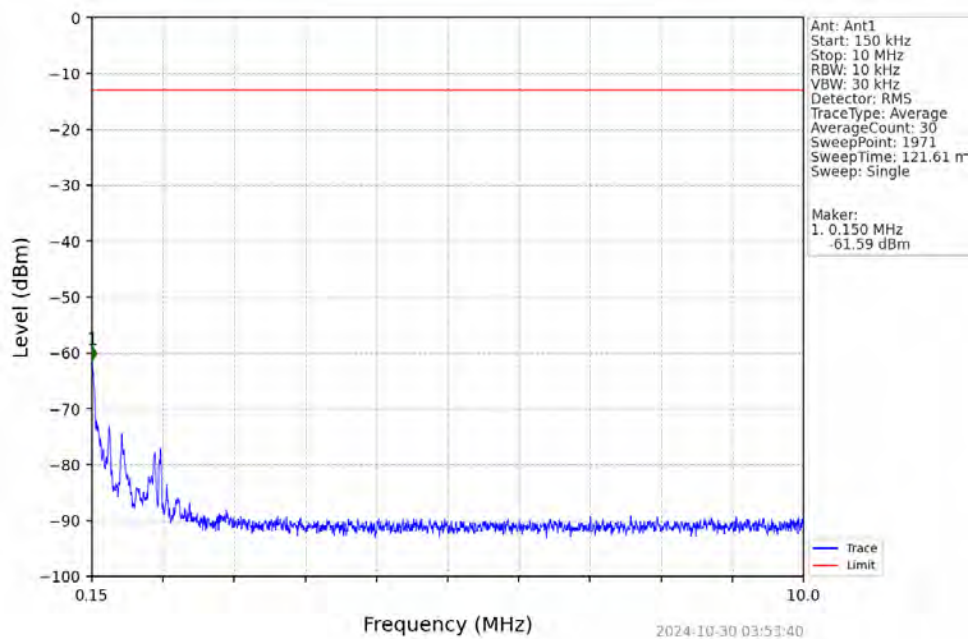


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
821	823	0.1	CHP	1	822.662	-35.98	-13	Pass
823	824	0.03	/	2	823.970	-31.39	-13	Pass
824	827	0.03	/	/	/	/	/	/

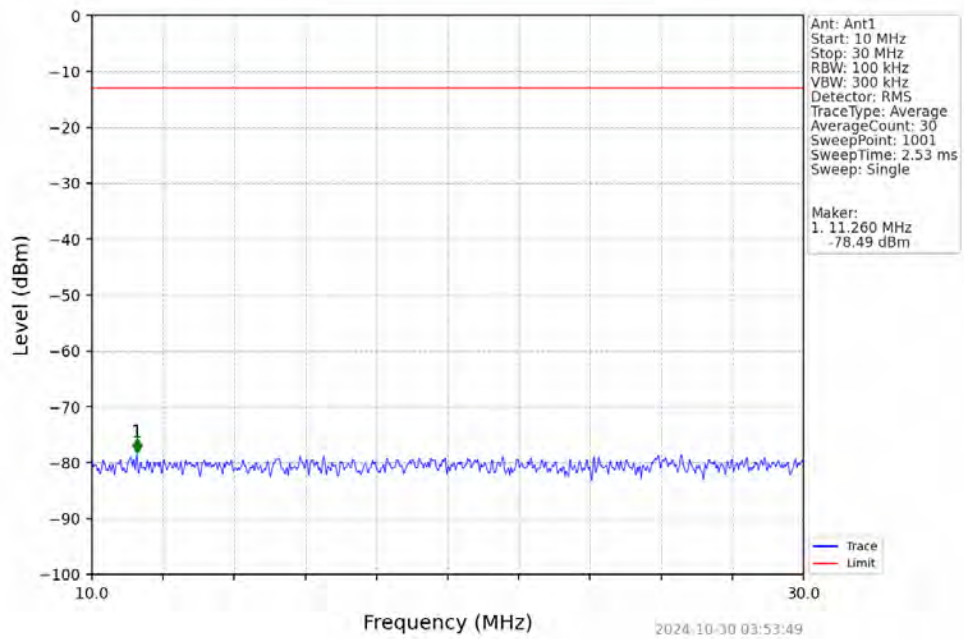
Band5 3MHz QPSK MCH 836.5MHz RB 1 0 NTNV



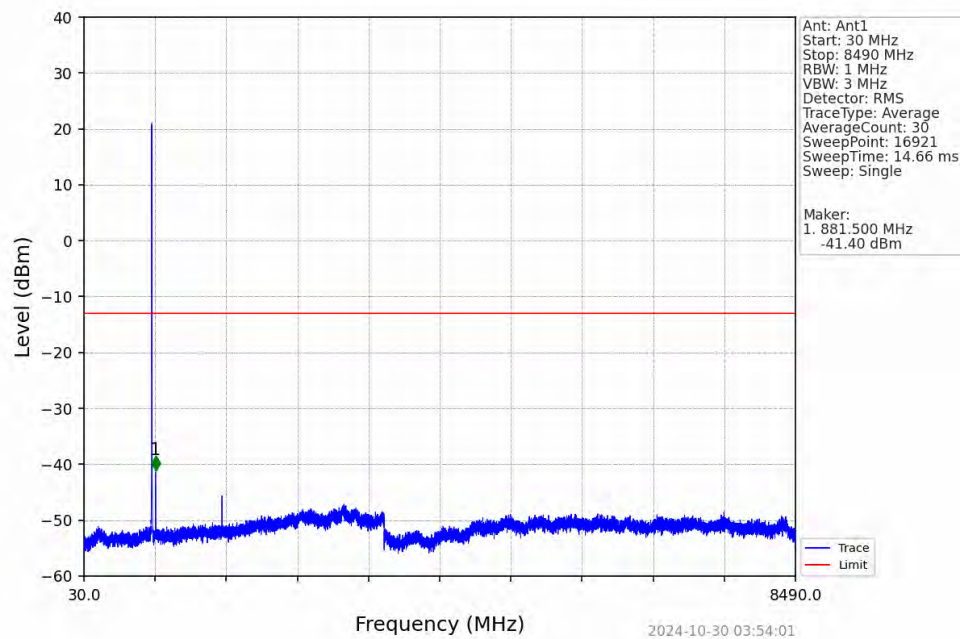
Band5 3MHz QPSK MCH 836.5MHz RB 1 0 NTNV



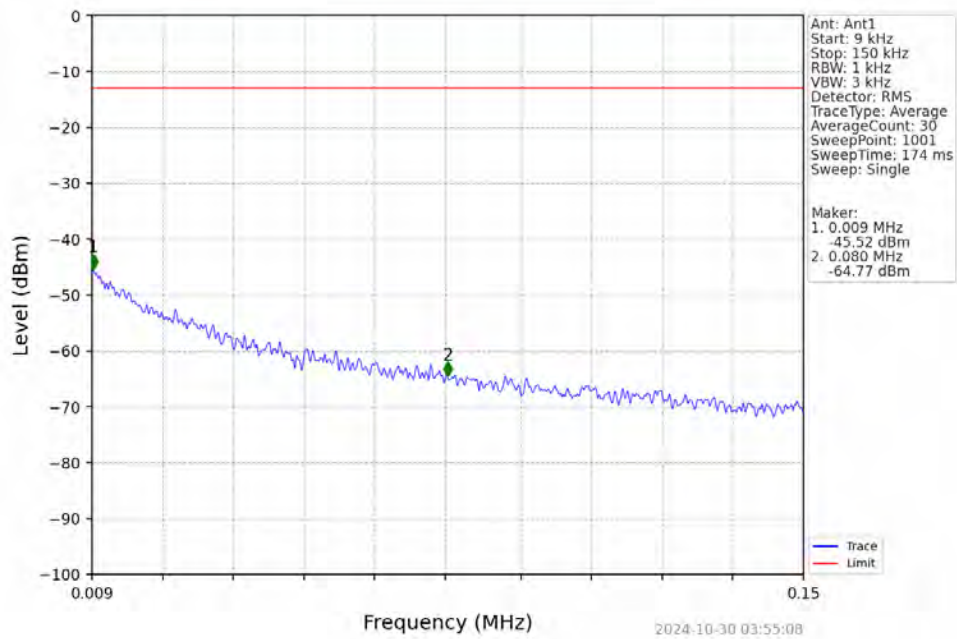
Band5 3MHz QPSK MCH 836.5MHz RB 1 0 NTNV



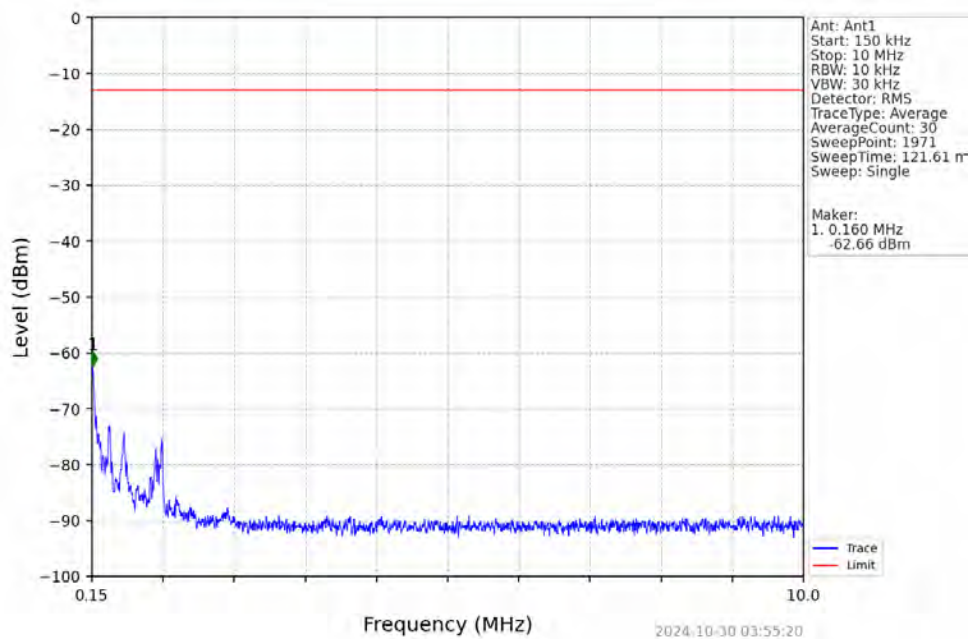
Band5 3MHz QPSK MCH 836.5MHz RB 1 0 NTNV



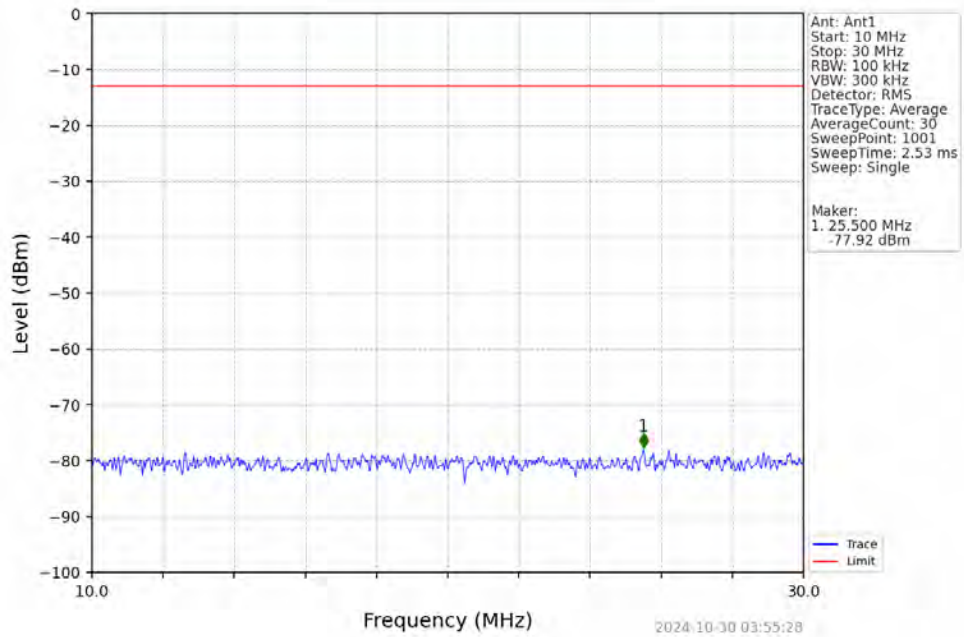
Band5 3MHz QPSK HCH 847.5MHz RB 1 0 NTV



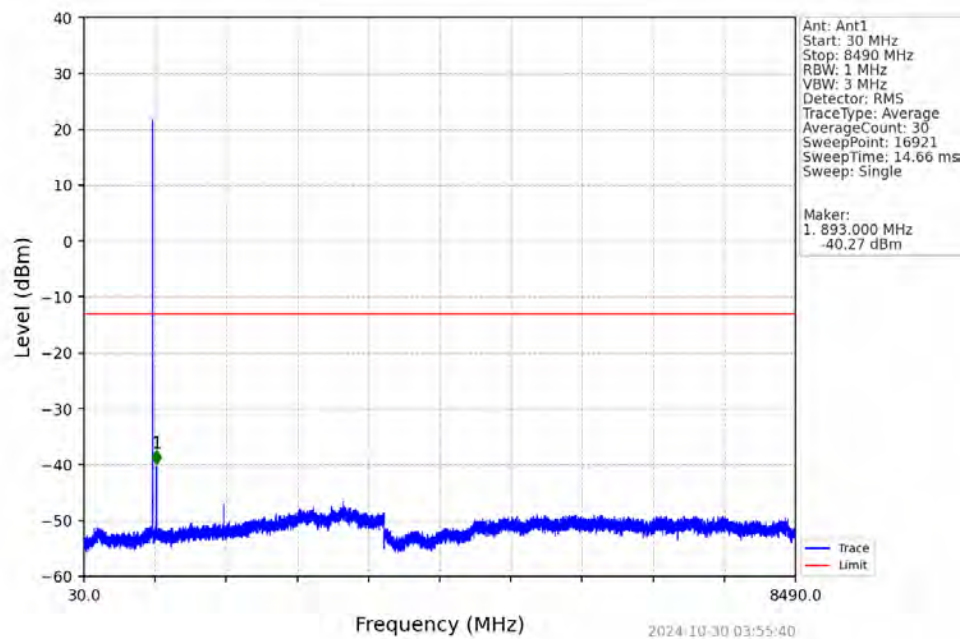
Band5 3MHz QPSK HCH 847.5MHz RB 1 0 NTV



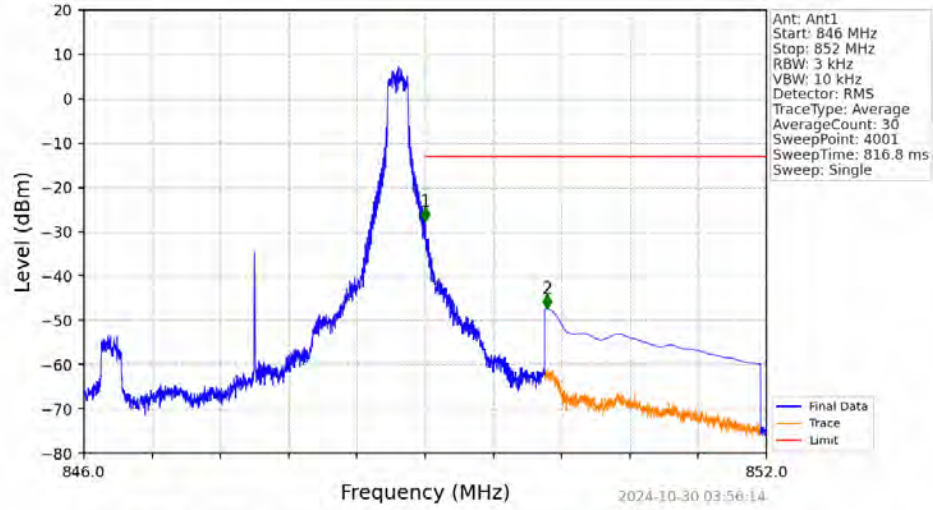
Band5 3MHz QPSK HCH 847.5MHz RB 1 0 NTNV



Band5 3MHz QPSK HCH 847.5MHz RB 1 0 NTNV

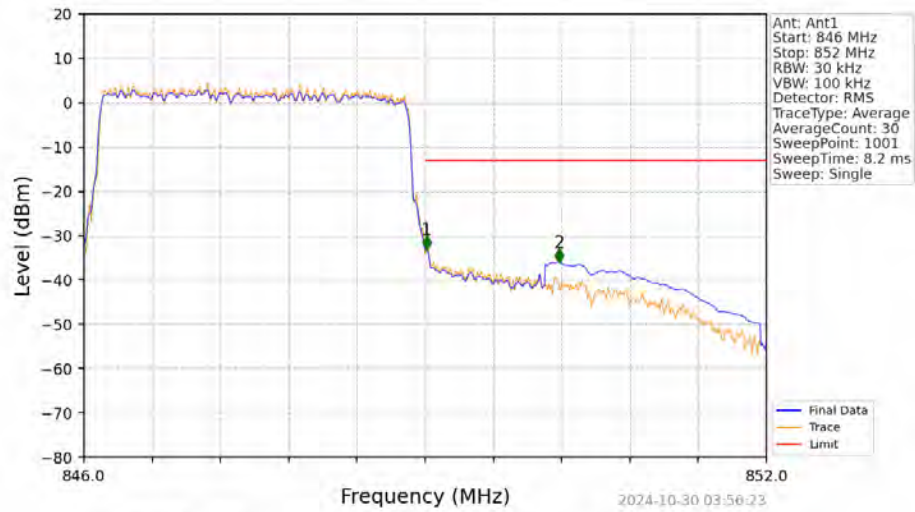


Band5 3MHz QPSK HCH 847.5MHz RB 1 14 NTNV



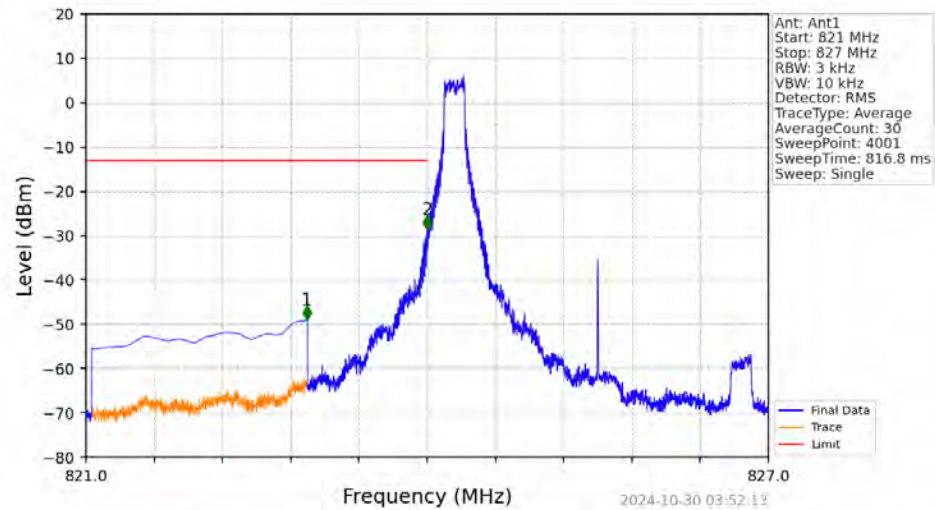
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.001	-27.74	-13	Pass
850	852	0.1	CHP	2	850.069	-47.33	-13	Pass

Band5 3MHz QPSK HCH 847.5MHz RB 15 0 NTNV

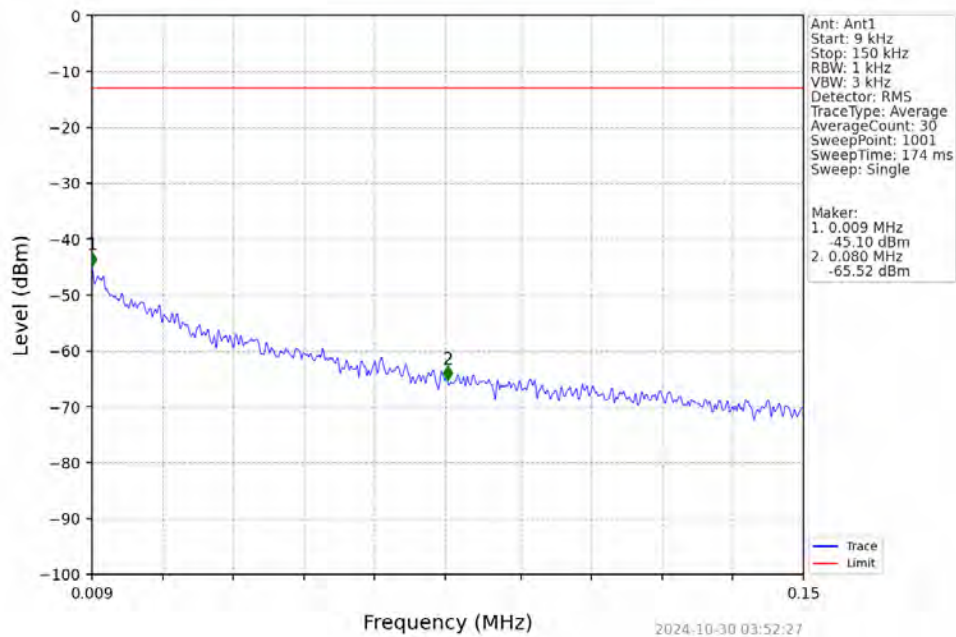


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.031	CHP	/	/	/	/	/
849	850	0.031	CHP	1	849.012	-33.08	-13	Pass
850	852	0.1	CHP	2	850.176	-35.97	-13	Pass

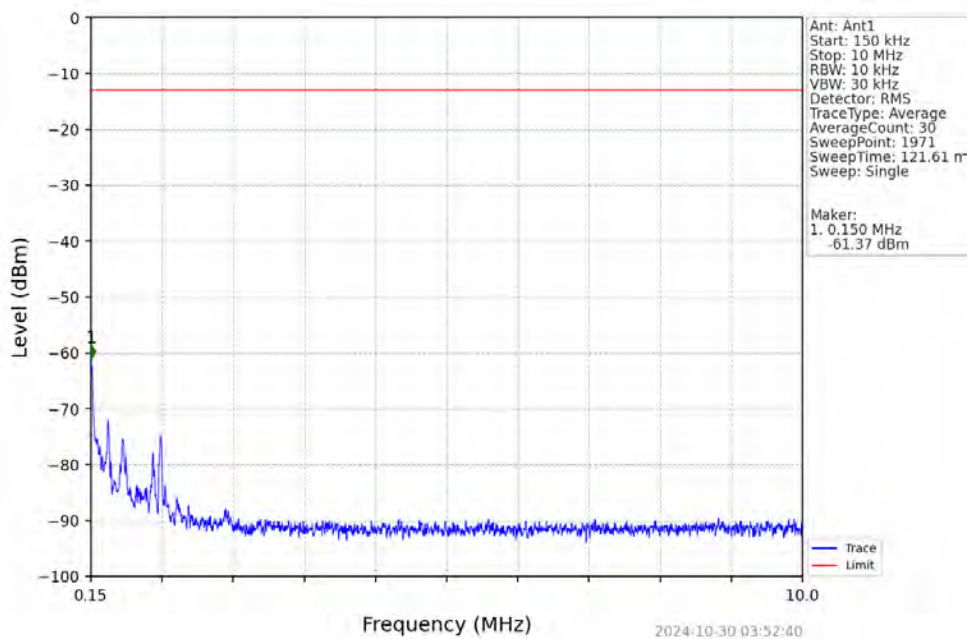
Band5 3MHz 16QAM LCH 825.5MHz RB 1 0 NTN



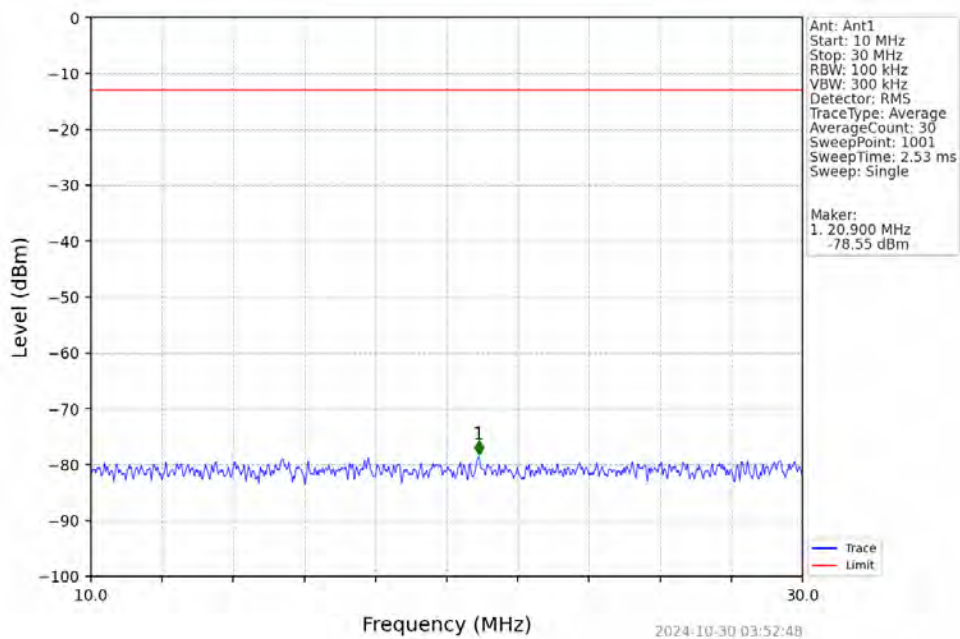
Band5 3MHz 16QAM LCH 825.5MHz RB 1 0 NTN



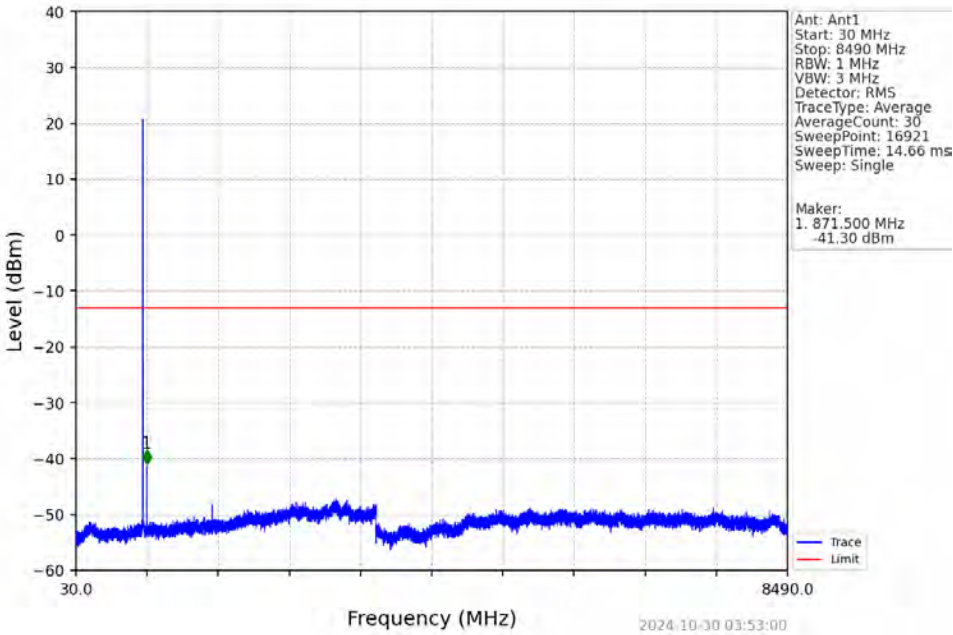
Band5 3MHz 16QAM LCH 825.5MHz RB 1 0 NTN



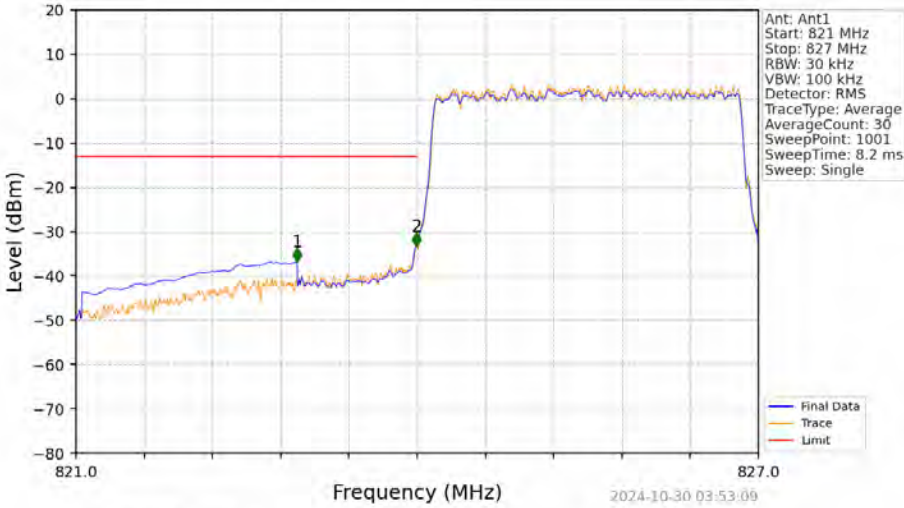
Band5 3MHz 16QAM LCH 825.5MHz RB 1 0 NTN



Band5 3MHz 16QAM LCH 825.5MHz RB 1 0 NTN

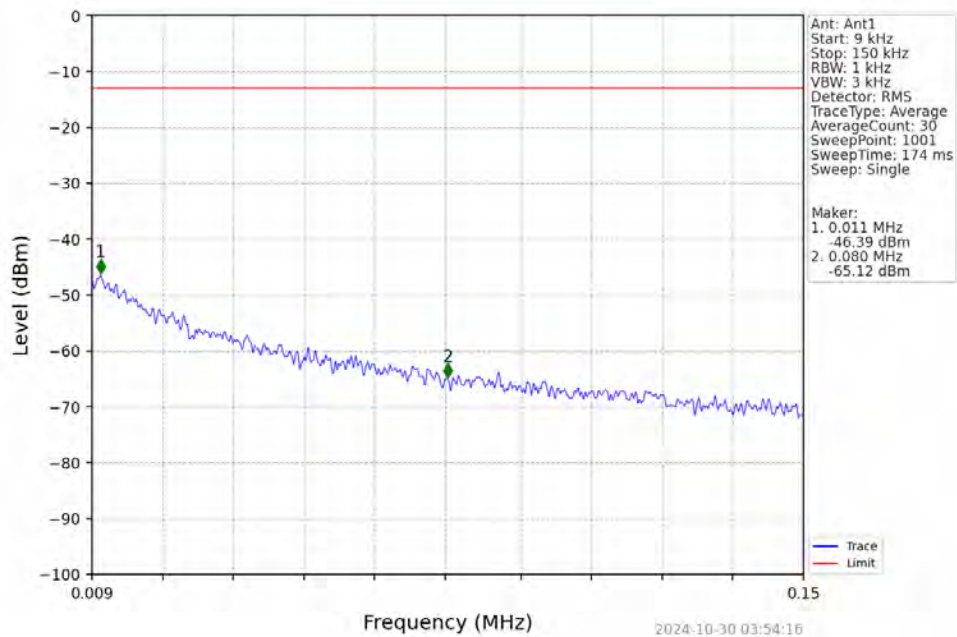


Band5 3MHz 16QAM LCH 825.5MHz RB 15 0 NTN

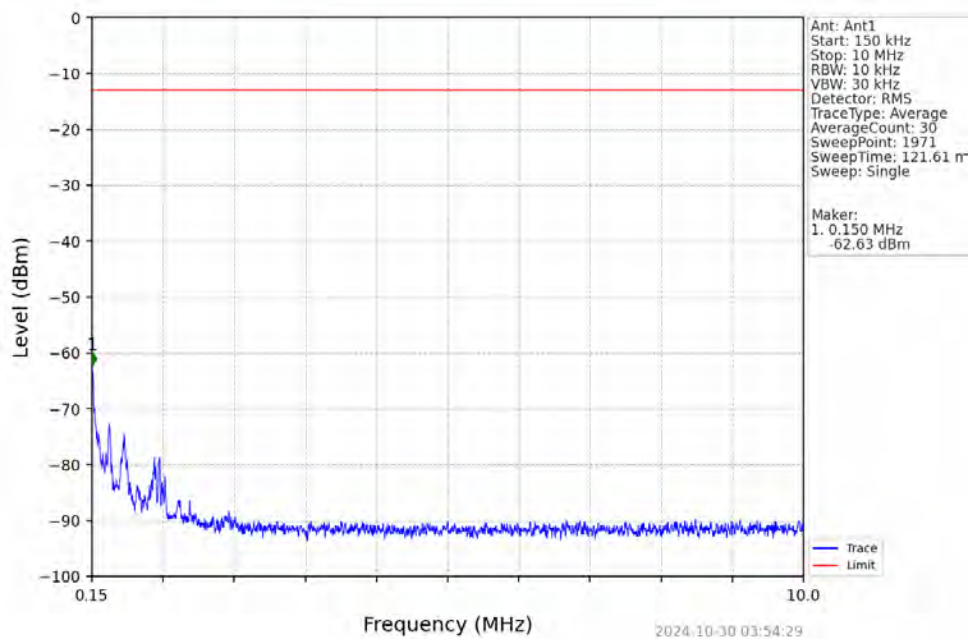


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
821	823	0.1	CHP	1	822.944	-36.76	-13	Pass
823	824	0.031	CHP	2	823.994	-33.30	-13	Pass
824	827	0.031	CHP	/	/	/	/	/

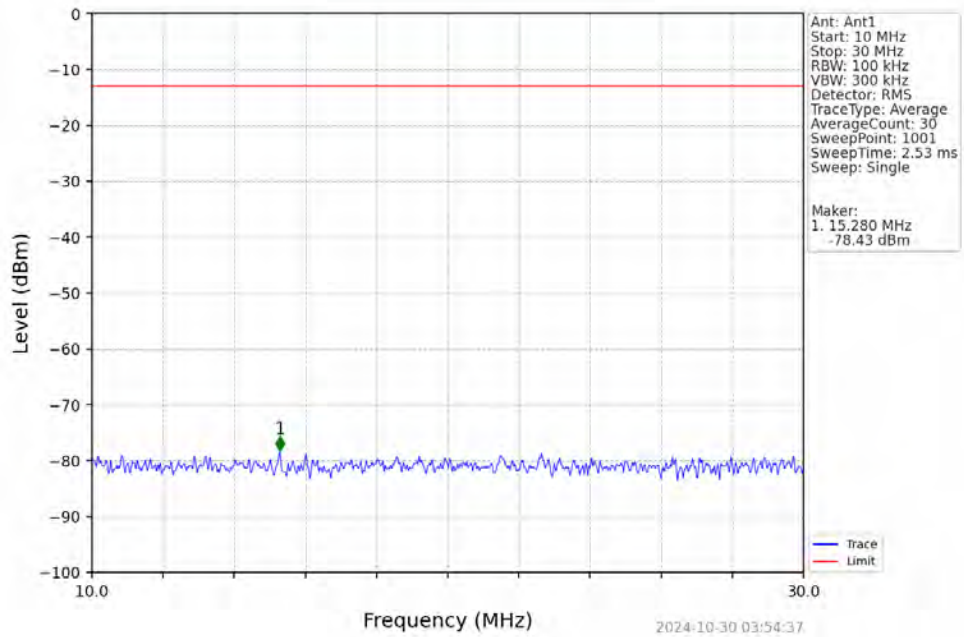
Band5 3MHz 16QAM MCH 836.5MHz RB 1 0 NTN



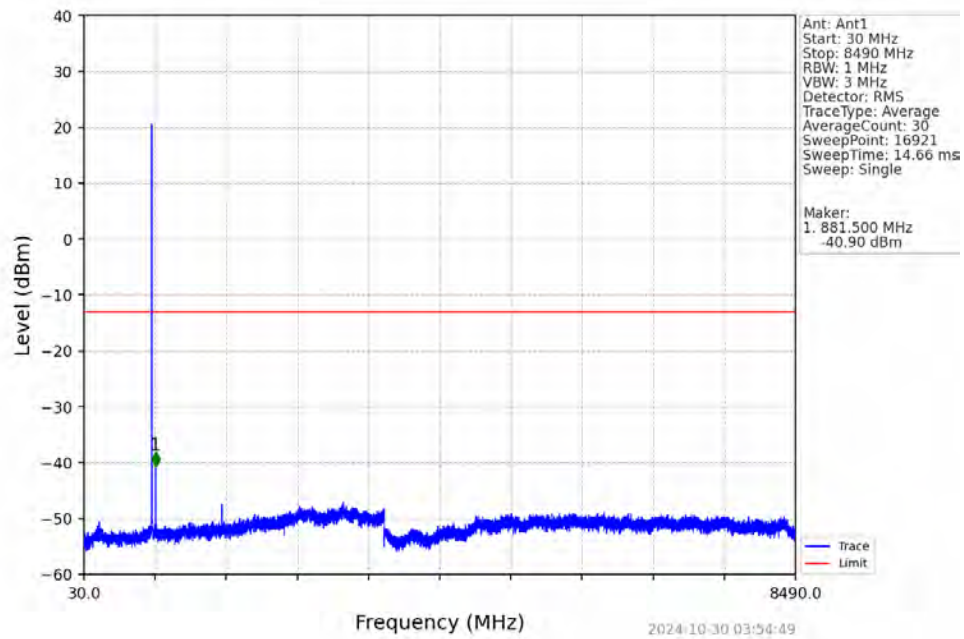
Band5 3MHz 16QAM MCH 836.5MHz RB 1 0 NTN



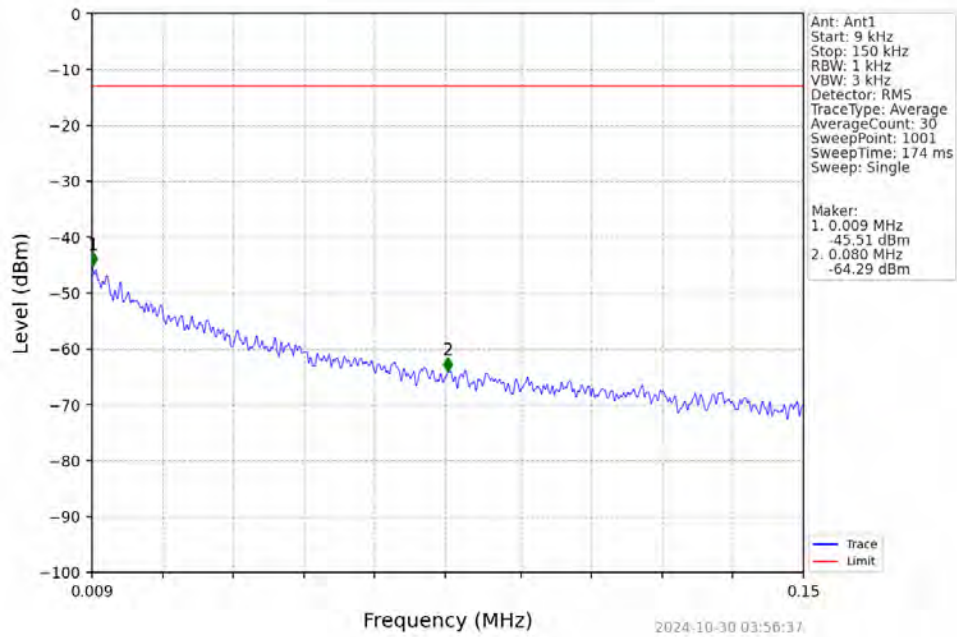
Band5 3MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



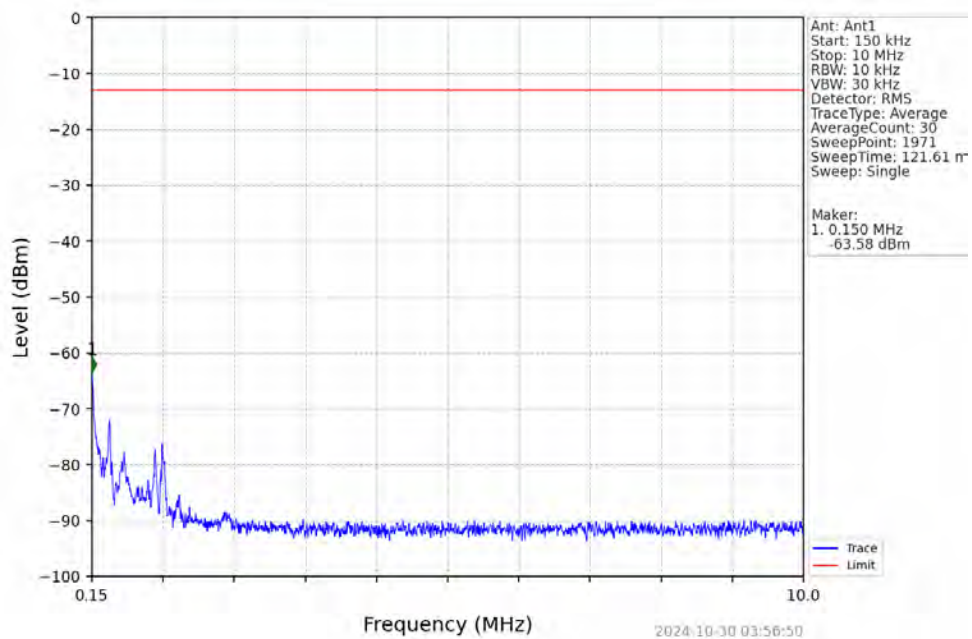
Band5 3MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



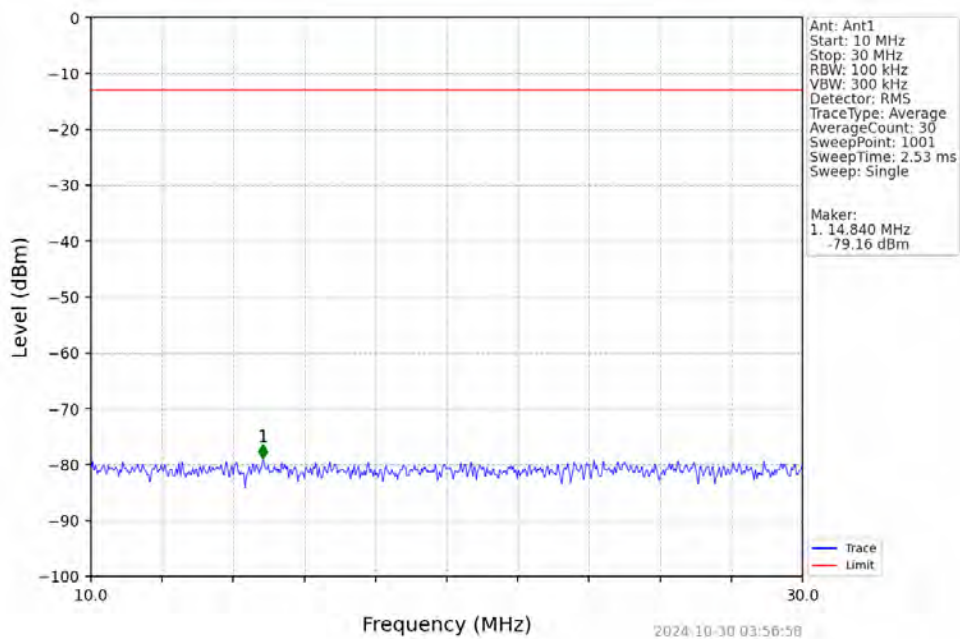
Band5 3MHz 16QAM HCH 847.5MHz RB 1 0 NTNV



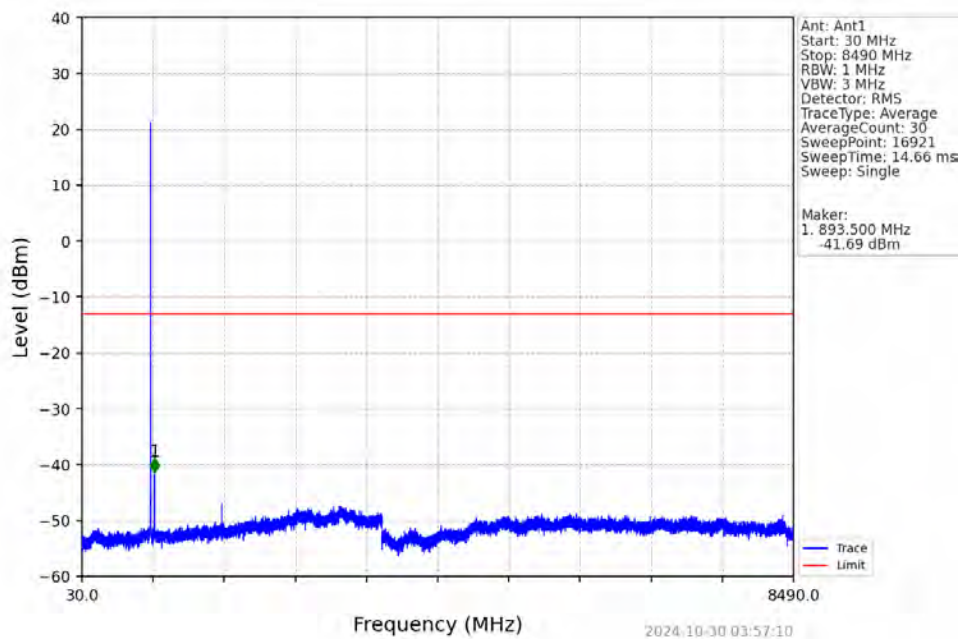
Band5 3MHz 16QAM HCH 847.5MHz RB 1 0 NTNV



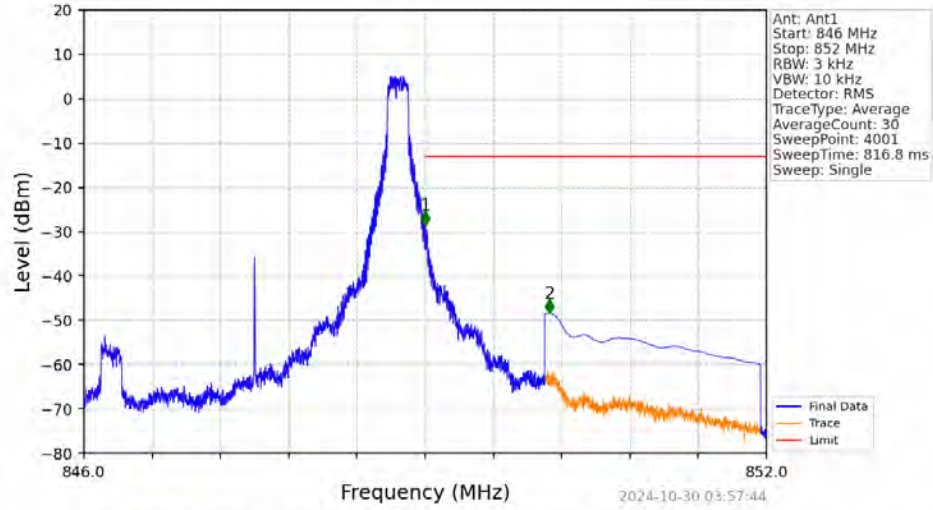
Band5 3MHz 16QAM HCH 847.5MHz RB 1 0 NTN



Band5 3MHz 16QAM HCH 847.5MHz RB 1 0 NTN

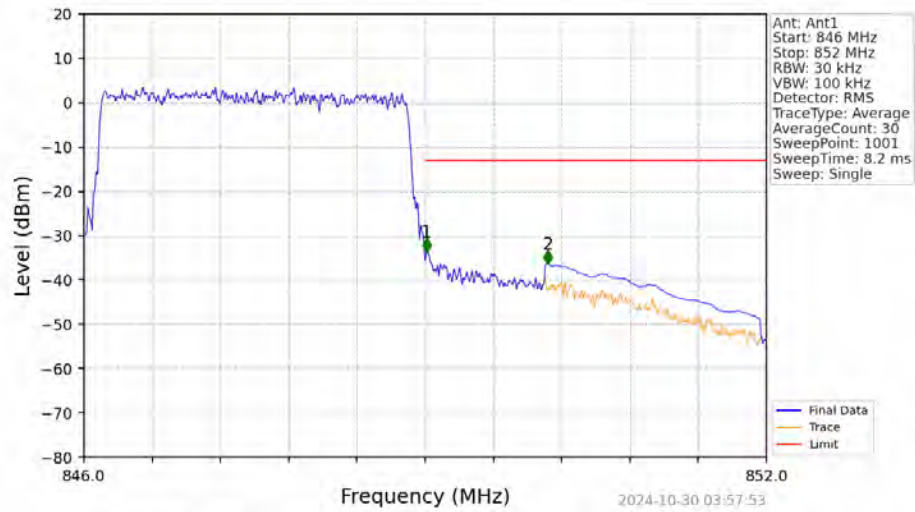


Band5 3MHz 16QAM HCH 847.5MHz RB 1 14 NTV



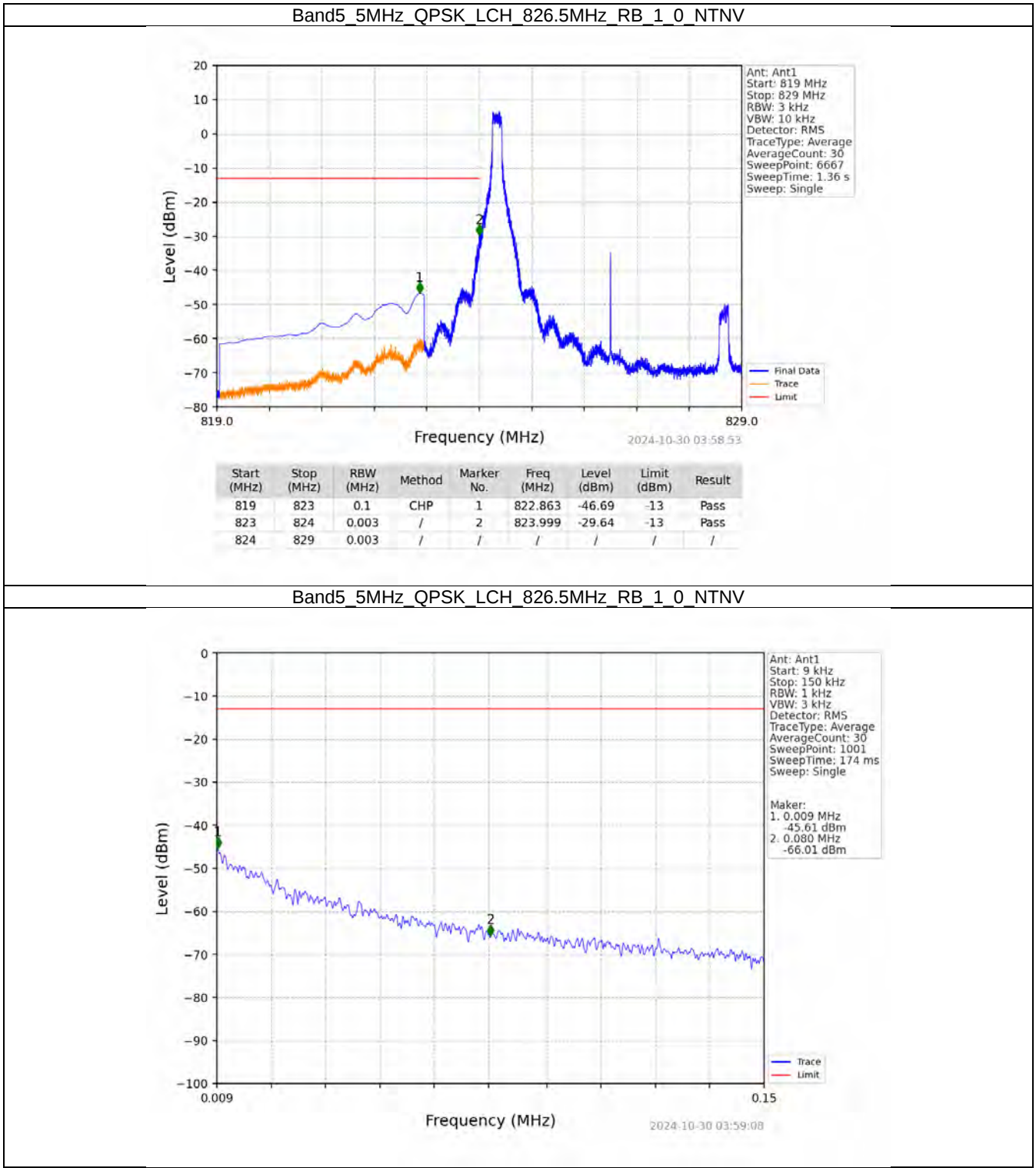
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.003	-28.49	-13	Pass
850	852	0.1	CHP	2	850.091	-48.35	-13	Pass

Band5 3MHz 16QAM HCH 847.5MHz RB 15 0 NTV

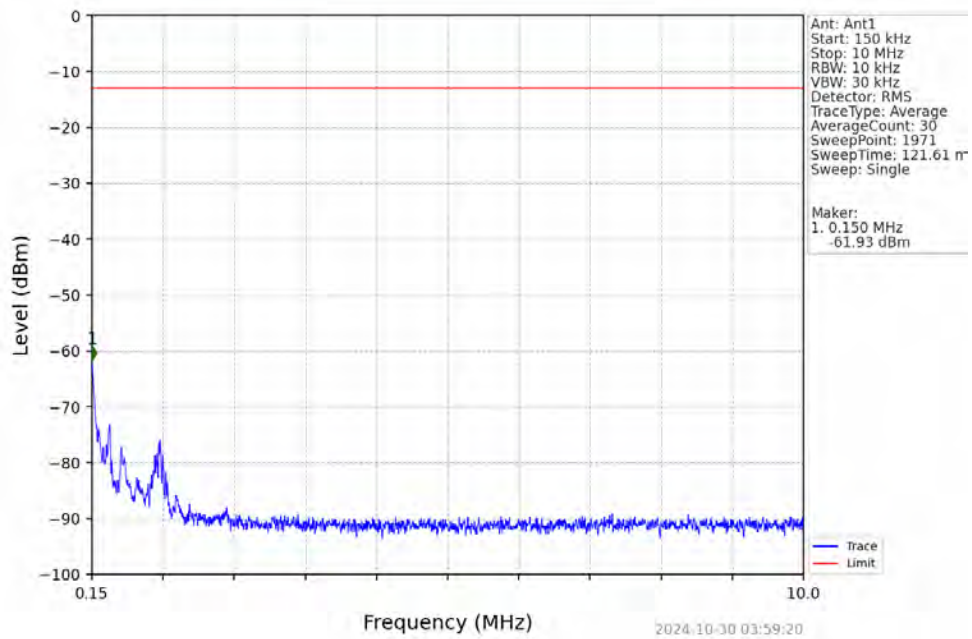


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.03	/	/	/	/	/	/
849	850	0.03	/	1	849.012	-33.72	-13	Pass
850	852	0.1	CHP	2	850.080	-36.46	-13	Pass

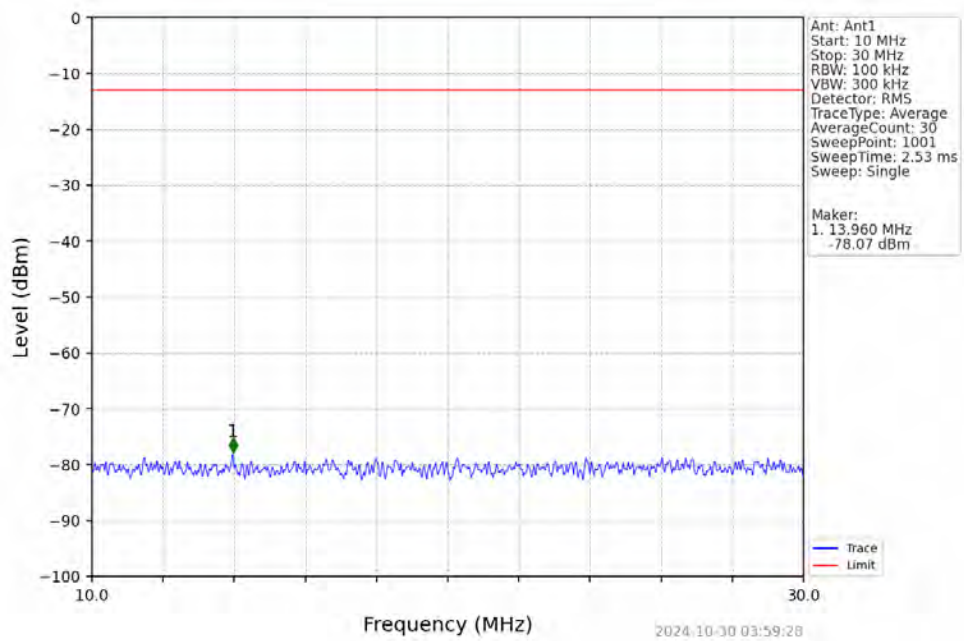
6.2.3 B5_5MHz



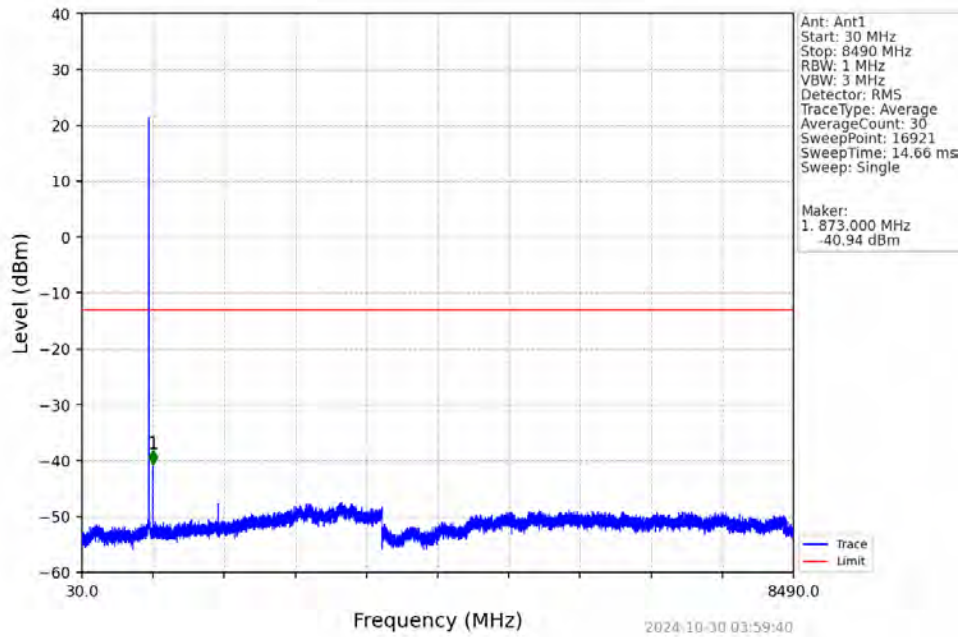
Band5 5MHz QPSK LCH 826.5MHz RB 1 0 NTNV



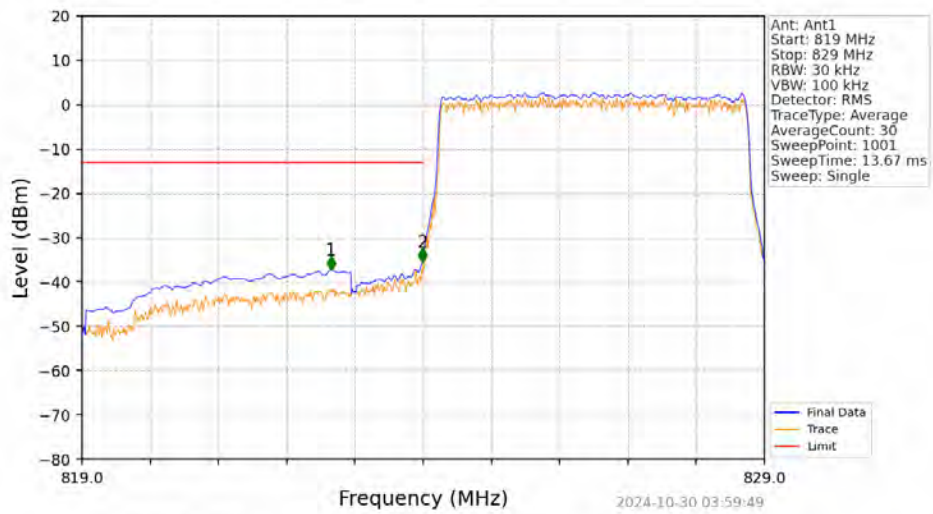
Band5 5MHz QPSK LCH 826.5MHz RB 1 0 NTNV



Band5 5MHz QPSK LCH 826.5MHz RB 1 0 NTNV

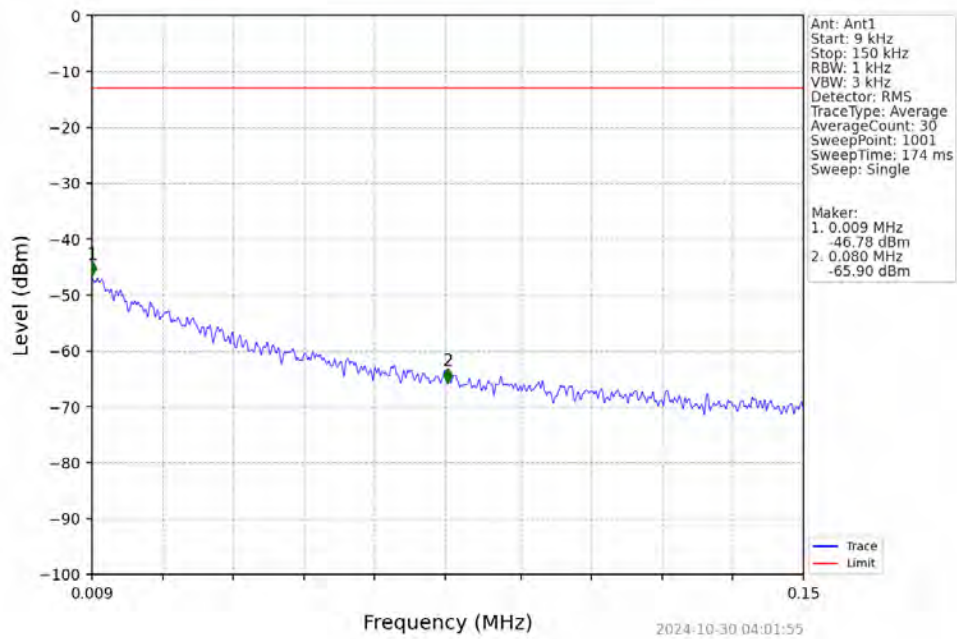


Band5 5MHz QPSK LCH 826.5MHz RB 25 0 NTNV

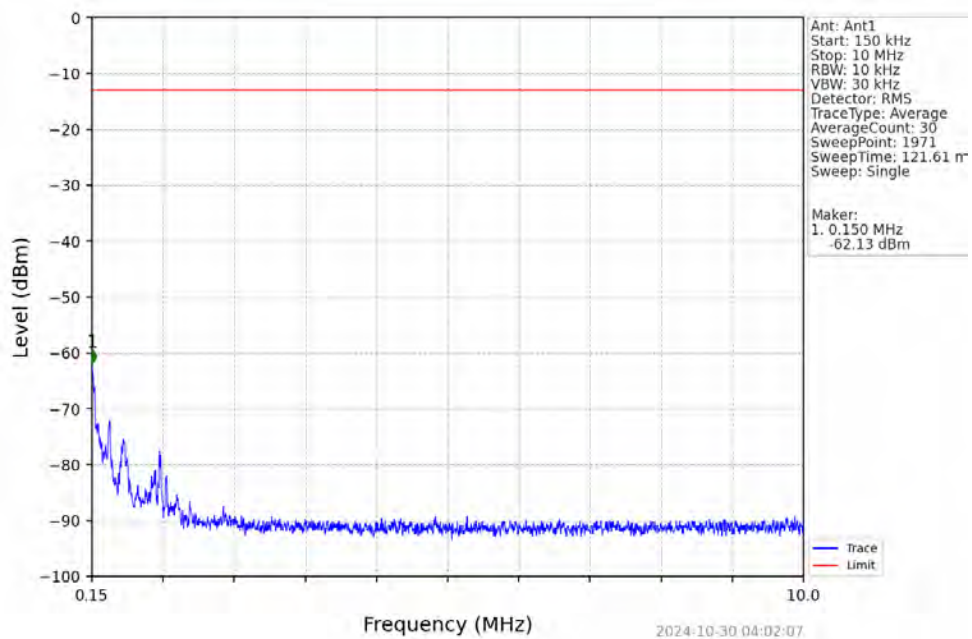


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	823	0.1	CHP	1	822.650	-37.33	-13	Pass
823	824	0.05	CHP	2	823.990	-35.46	-13	Pass
824	829	0.05	CHP	/	/	/	/	/

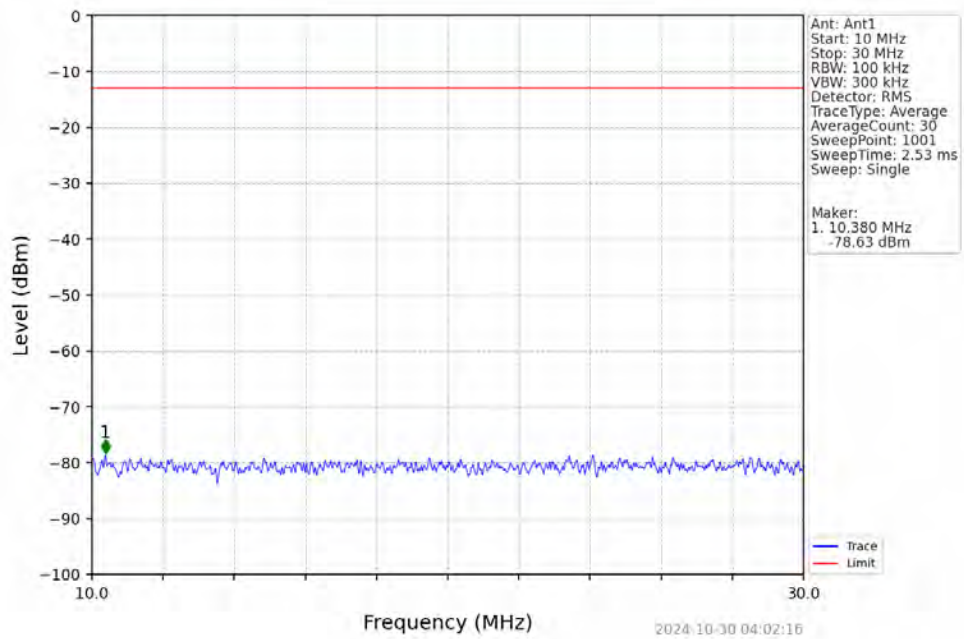
Band5 5MHz QPSK MCH 836.5MHz RB 1 0 NTNV



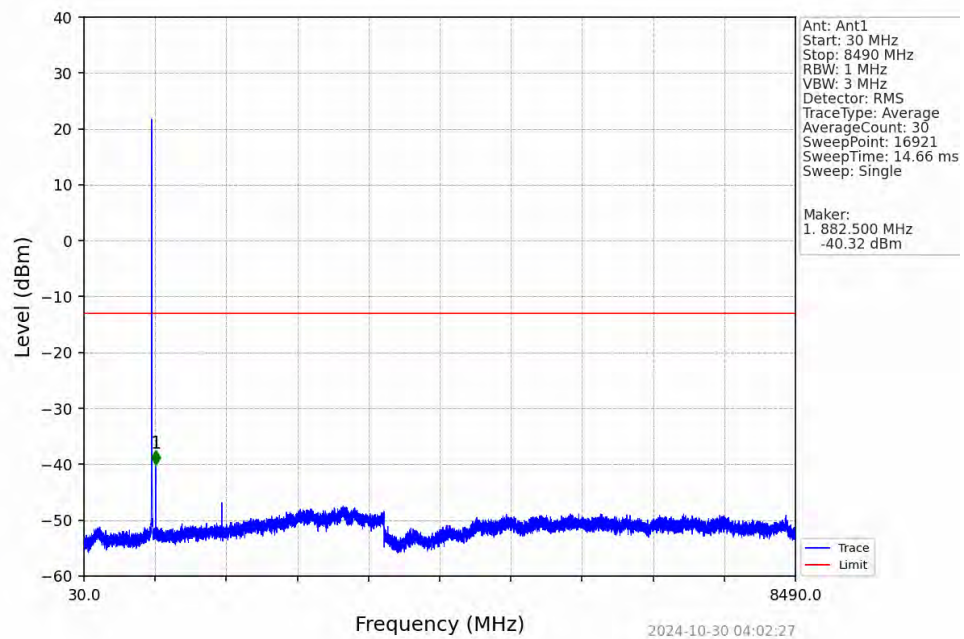
Band5 5MHz QPSK MCH 836.5MHz RB 1 0 NTNV



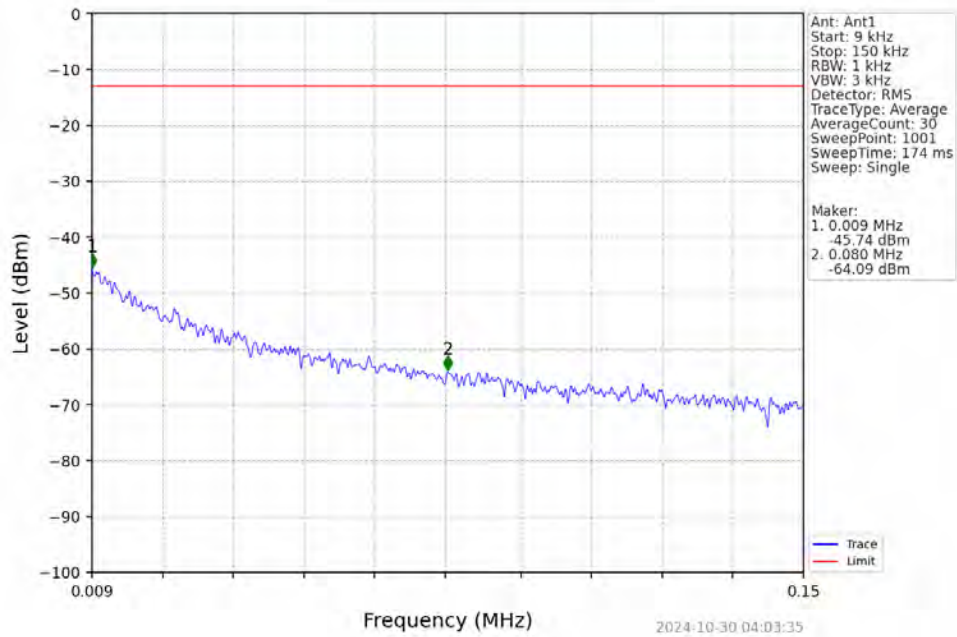
Band5 5MHz QPSK MCH 836.5MHz RB 1 0 NTNV



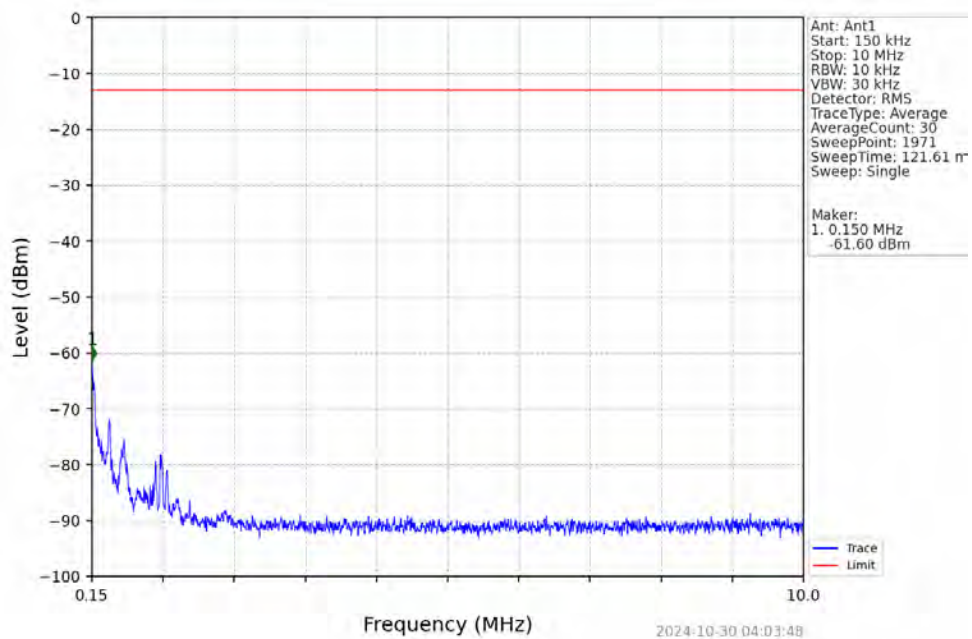
Band5 5MHz QPSK MCH 836.5MHz RB 1 0 NTNV



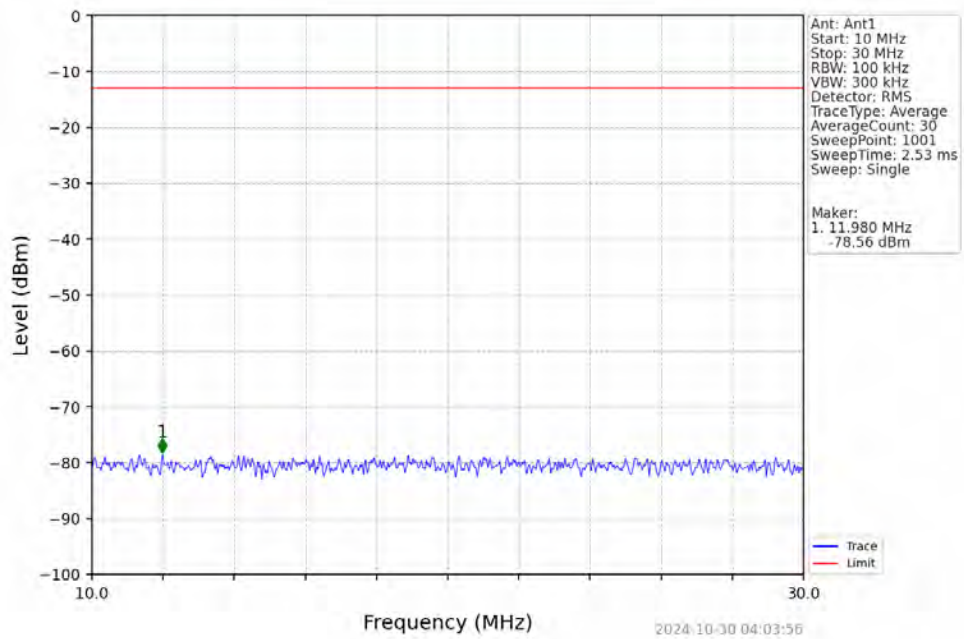
Band5 5MHz QPSK HCH 846.5MHz RB 1 0 NTNV



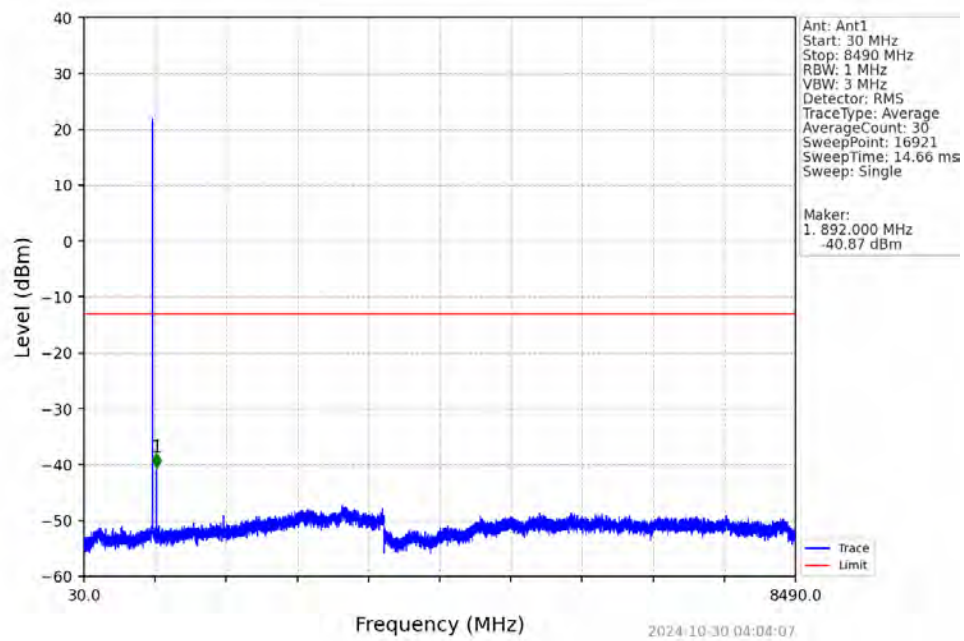
Band5 5MHz QPSK HCH 846.5MHz RB 1 0 NTNV



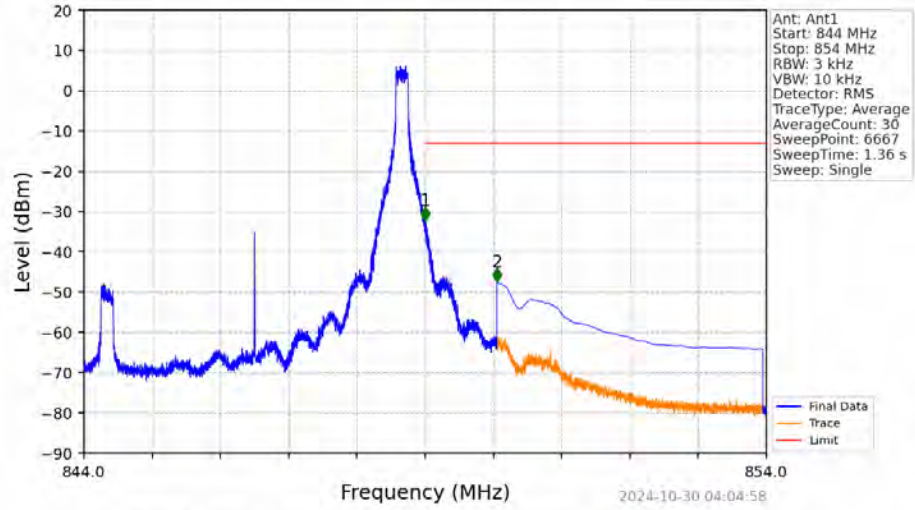
Band5 5MHz QPSK HCH 846.5MHz RB 1 0 NTNV



Band5 5MHz QPSK HCH 846.5MHz RB 1 0 NTNV

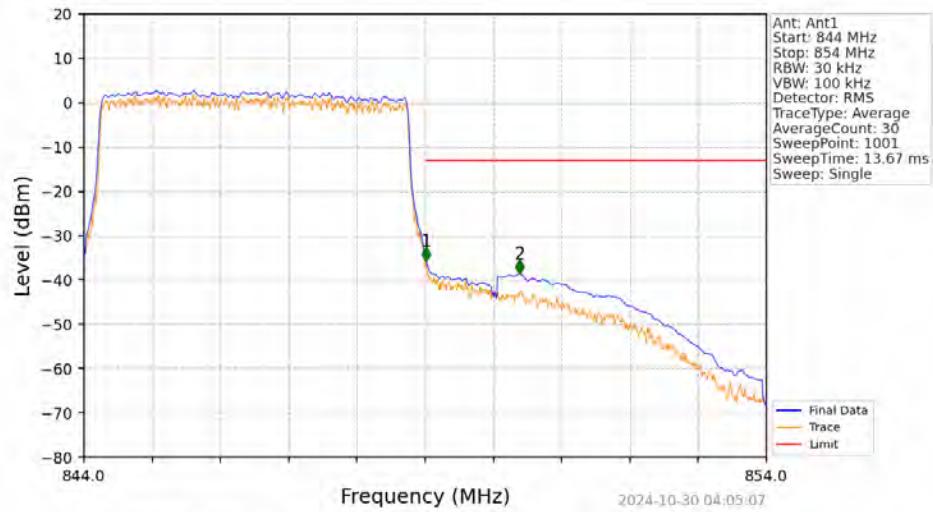


Band5 5MHz QPSK HCH 846.5MHz RB 1 24 NTNV



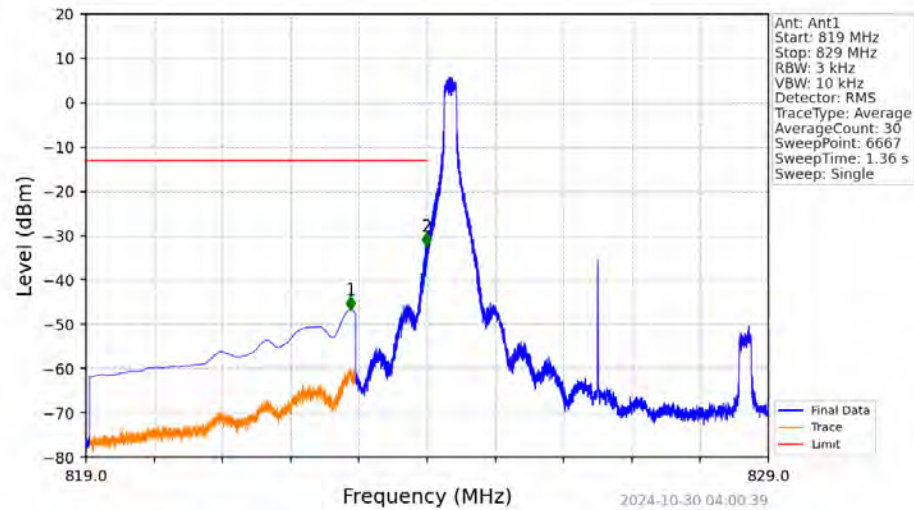
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
844	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.001	-32.22	-13	Pass
850	854	0.1	CHP	2	850.050	-47.46	-13	Pass

Band5 5MHz QPSK HCH 846.5MHz RB 25 0 NTNV



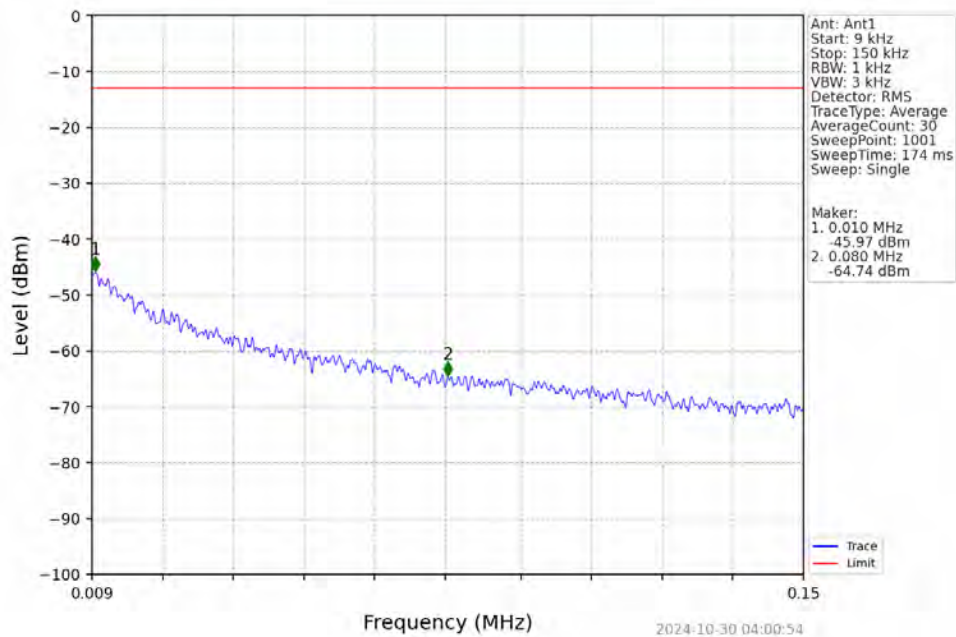
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
844	849	0.05	CHP	/	/	/	/	/
849	850	0.05	CHP	1	849.010	-35.64	-13	Pass
850	854	0.1	CHP	2	850.380	-38.63	-13	Pass

Band5 5MHz 16QAM LCH 826.5MHz RB 1 0 NTN

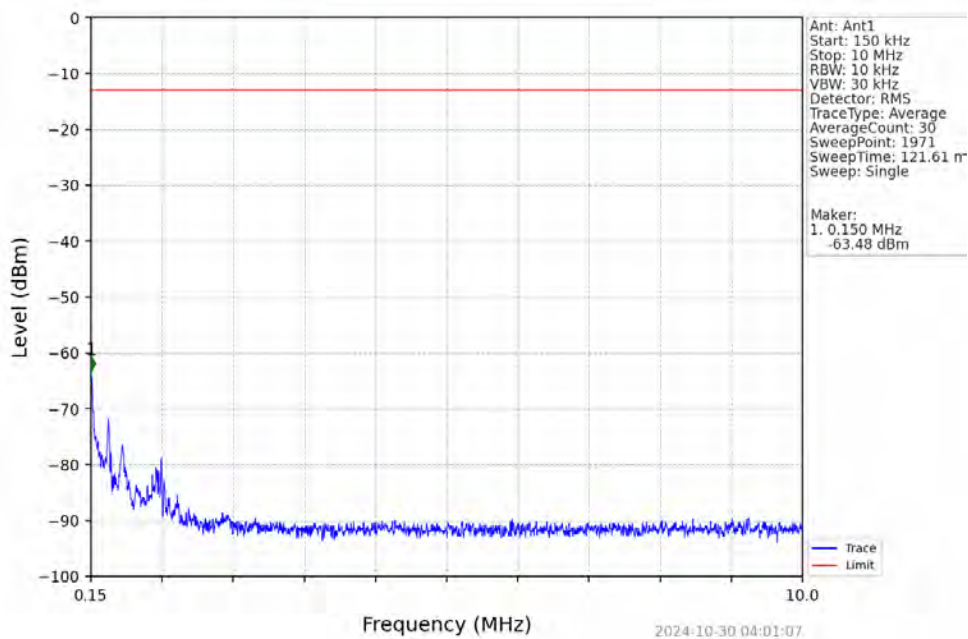


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	823	0.1	CHP	1	822.879	-46.73	-13	Pass
823	824	0.003	/	2	823.986	-32.43	-13	Pass
824	829	0.003	/	/	/	/	/	/

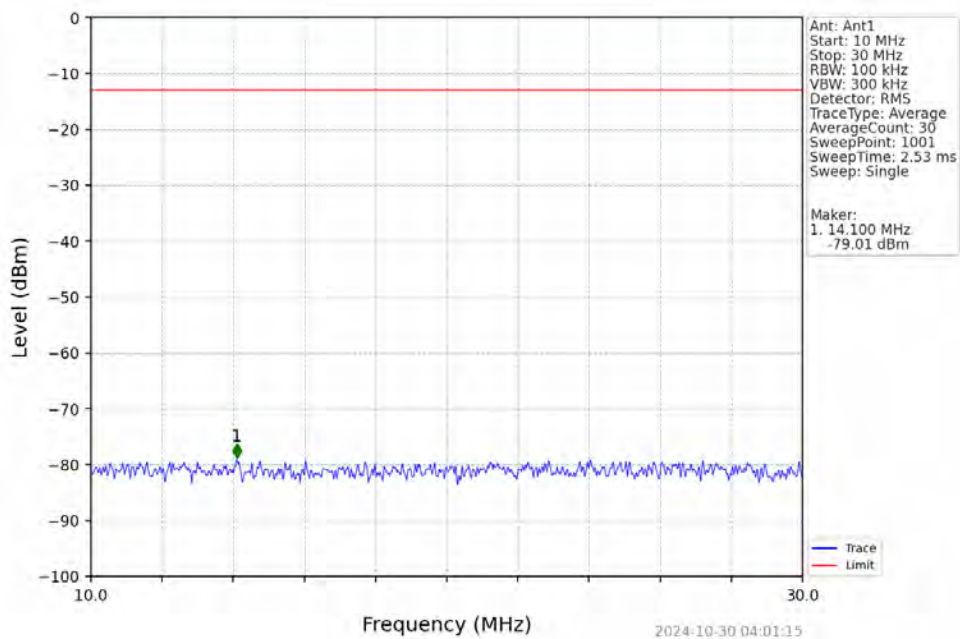
Band5 5MHz 16QAM LCH 826.5MHz RB 1 0 NTN



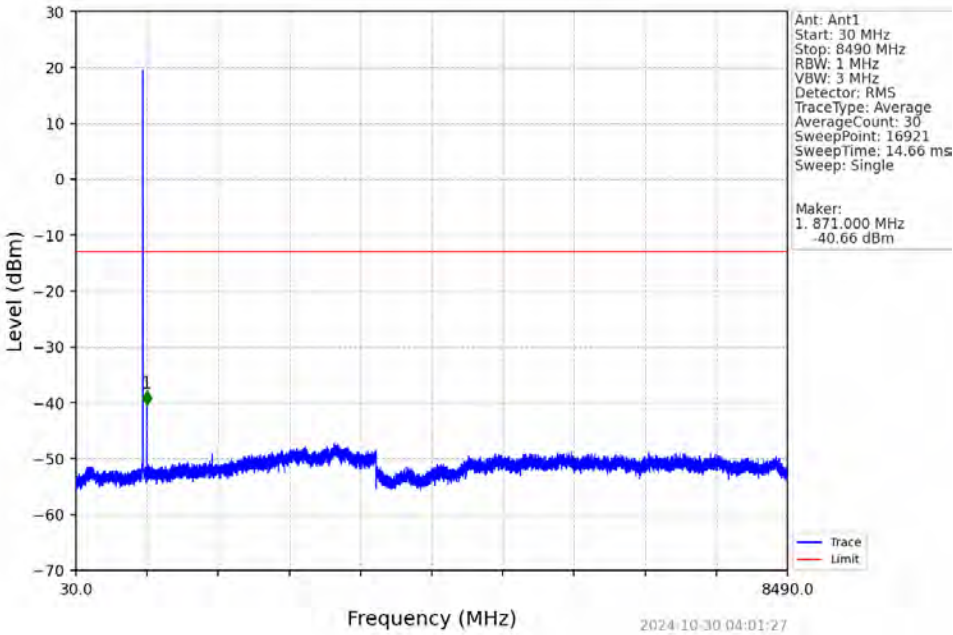
Band5 5MHz 16QAM LCH 826.5MHz RB 1 0 NTN



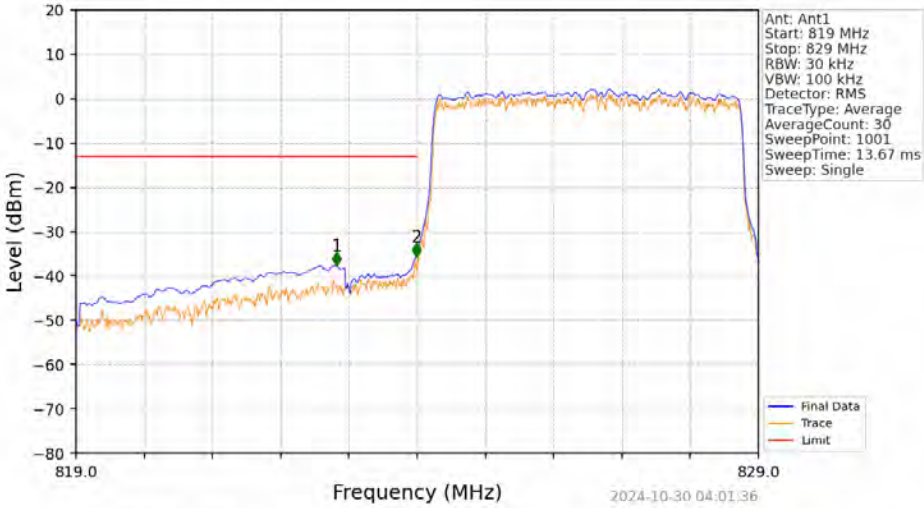
Band5 5MHz 16QAM LCH 826.5MHz RB 1 0 NTN



Band5 5MHz 16QAM LCH 826.5MHz RB 1 0 NTN

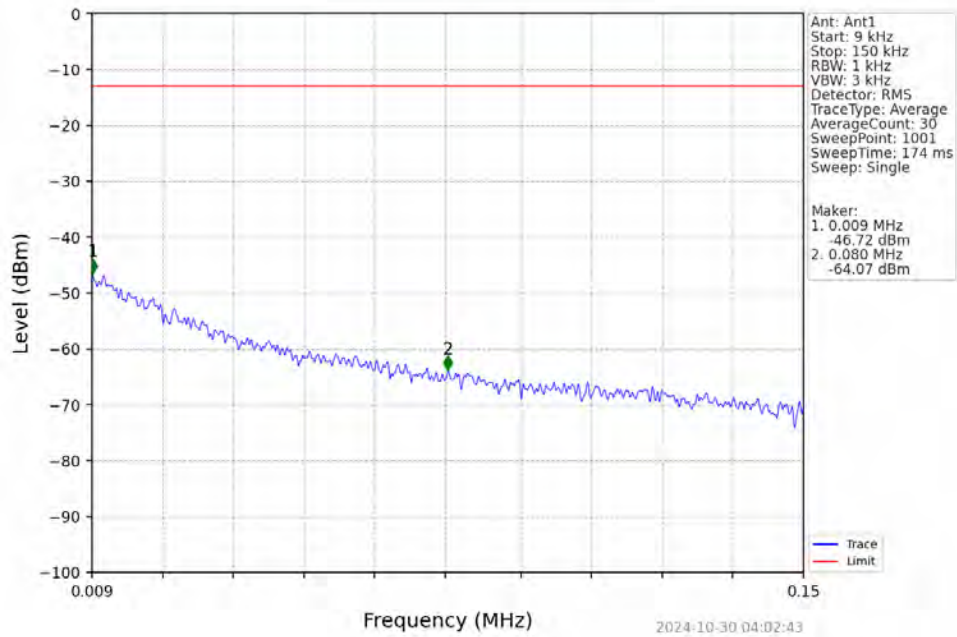


Band5 5MHz 16QAM LCH 826.5MHz RB 25 0 NTN

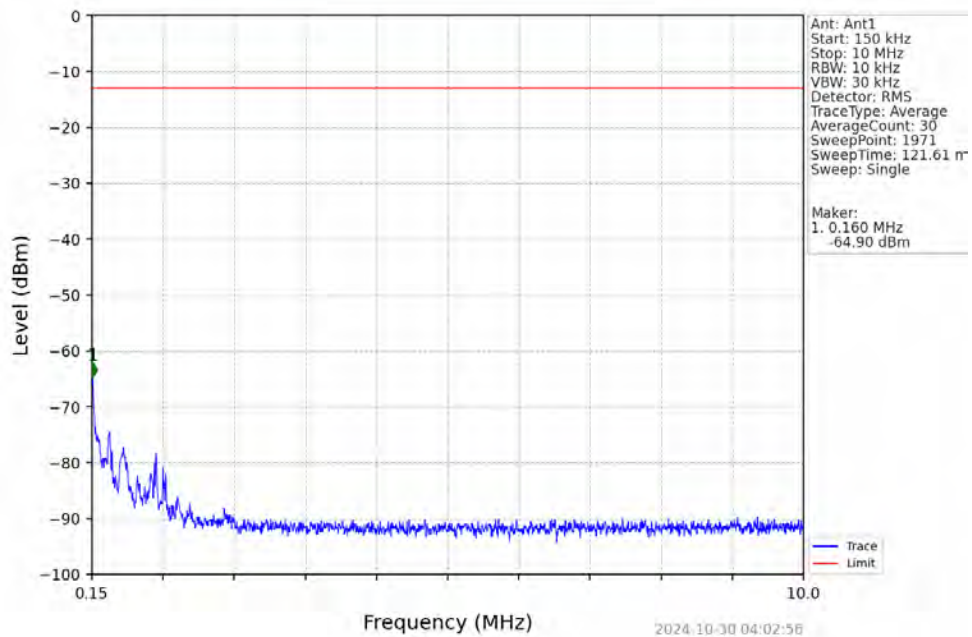


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	823	0.1	CHP	1	822.820	-37.70	-13	Pass
823	824	0.05	CHP	2	823.990	-35.60	-13	Pass
824	829	0.05	CHP	/	/	/	/	/

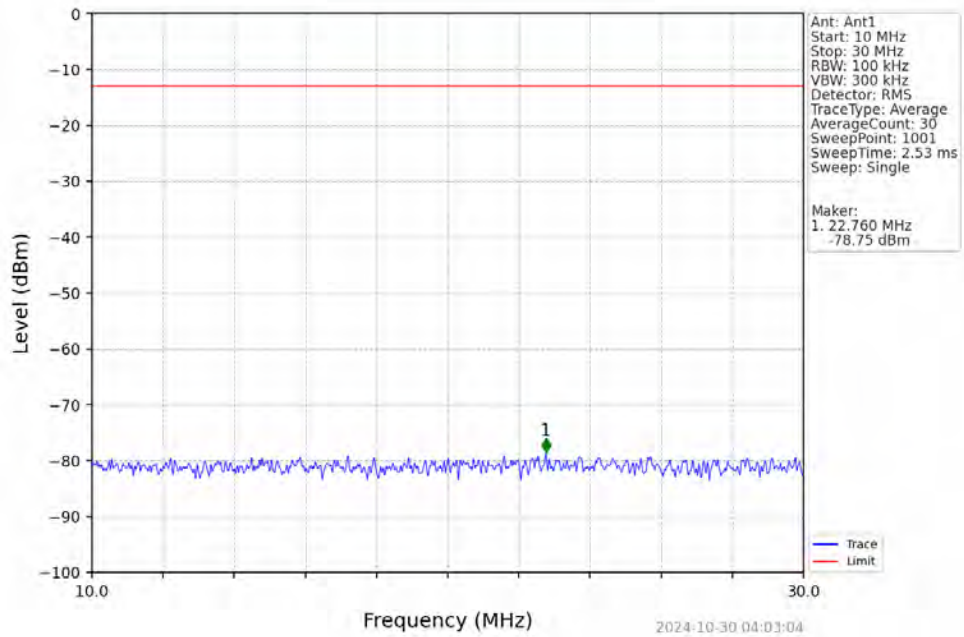
Band5 5MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



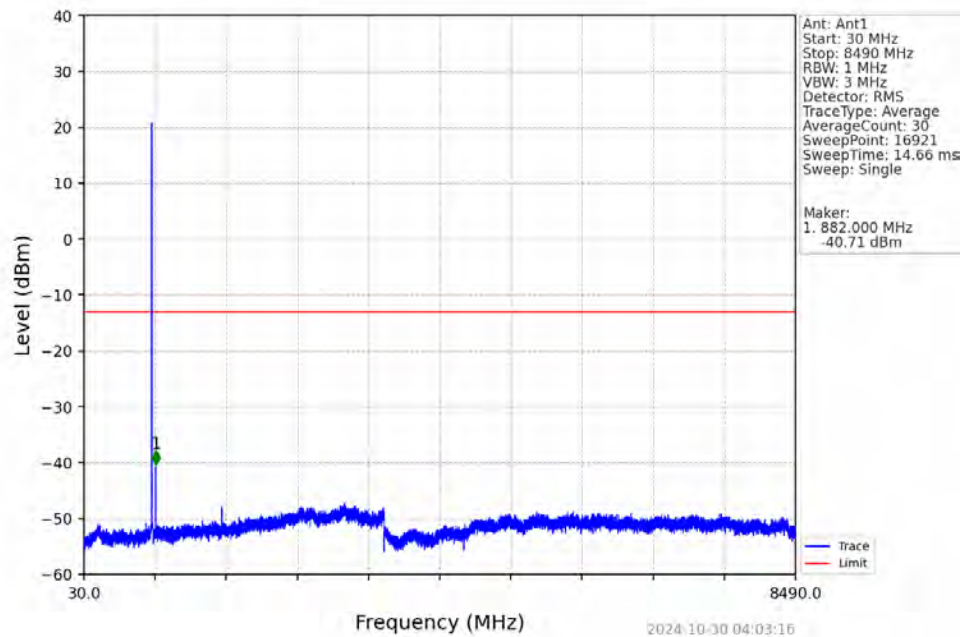
Band5 5MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



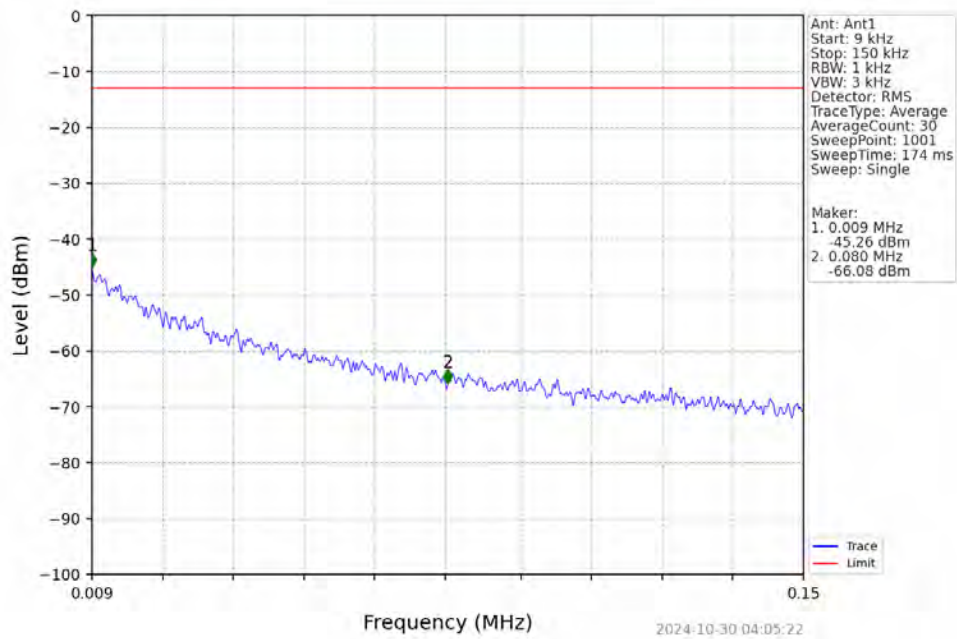
Band5 5MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



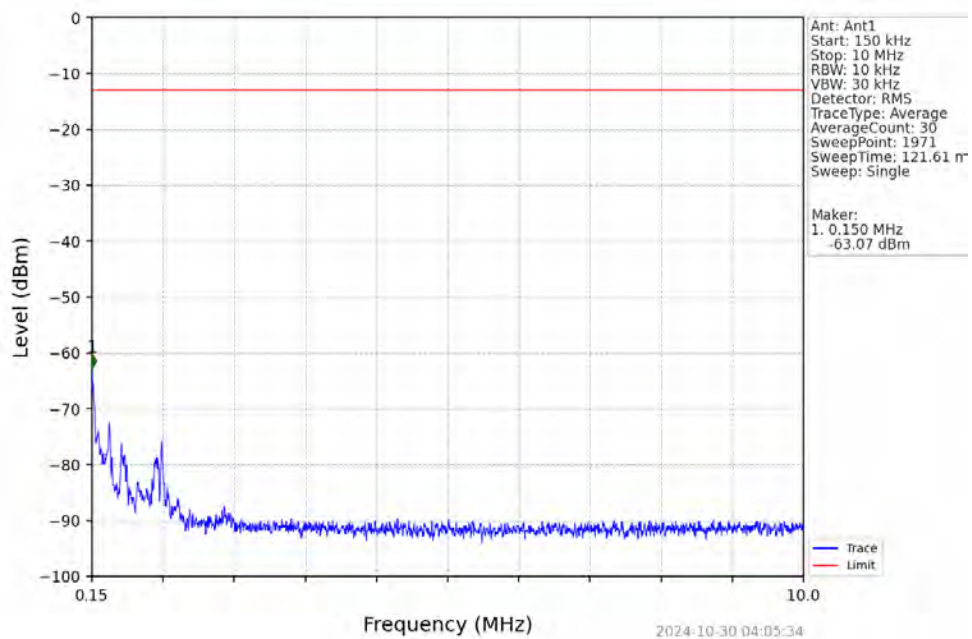
Band5 5MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



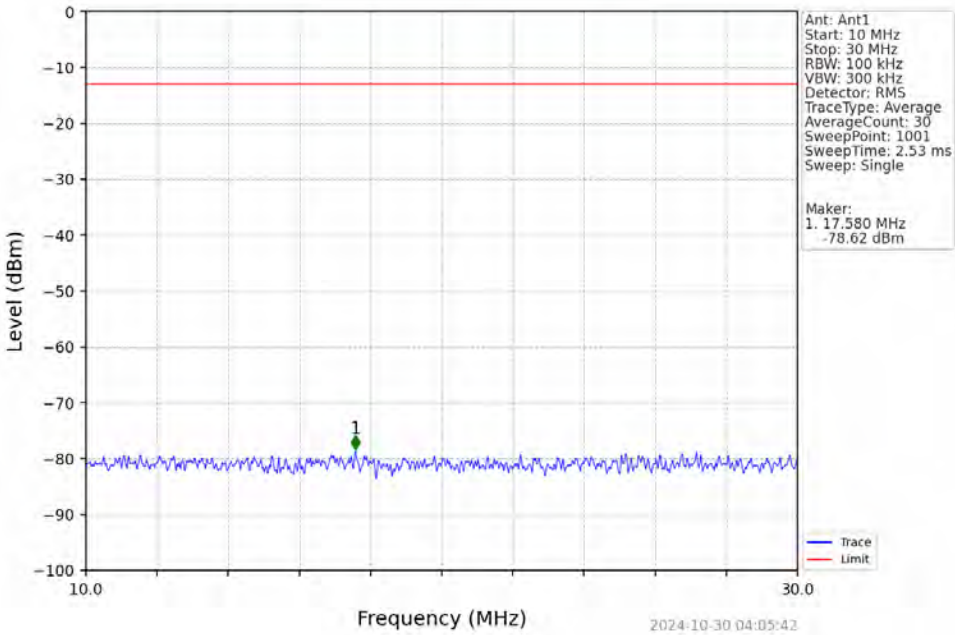
Band5 5MHz 16QAM HCH 846.5MHz RB 1 0 NTNV



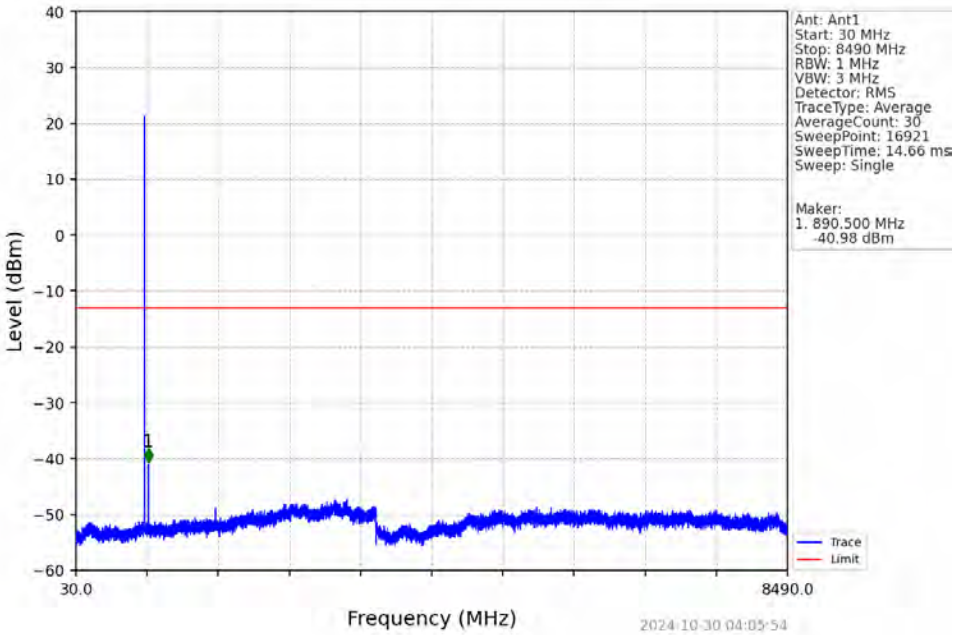
Band5 5MHz 16QAM HCH 846.5MHz RB 1 0 NTNV



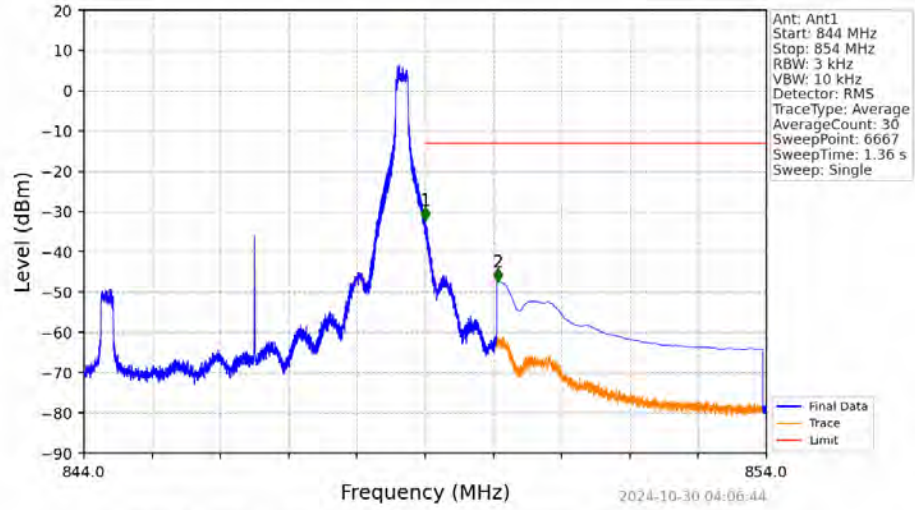
Band5 5MHz 16QAM HCH 846.5MHz RB 1 0 NTN



Band5 5MHz 16QAM HCH 846.5MHz RB 1 0 NTN

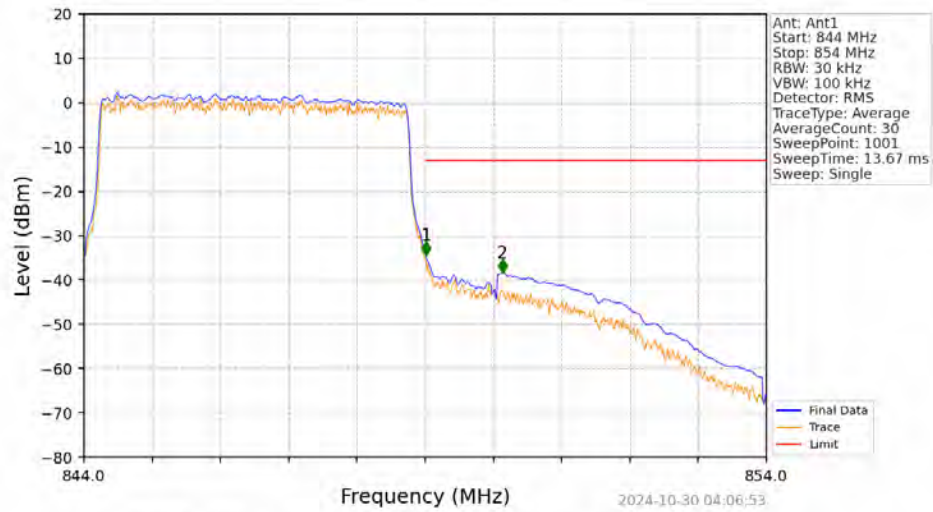


Band5 5MHz 16QAM HCH 846.5MHz RB 1 24 NTV



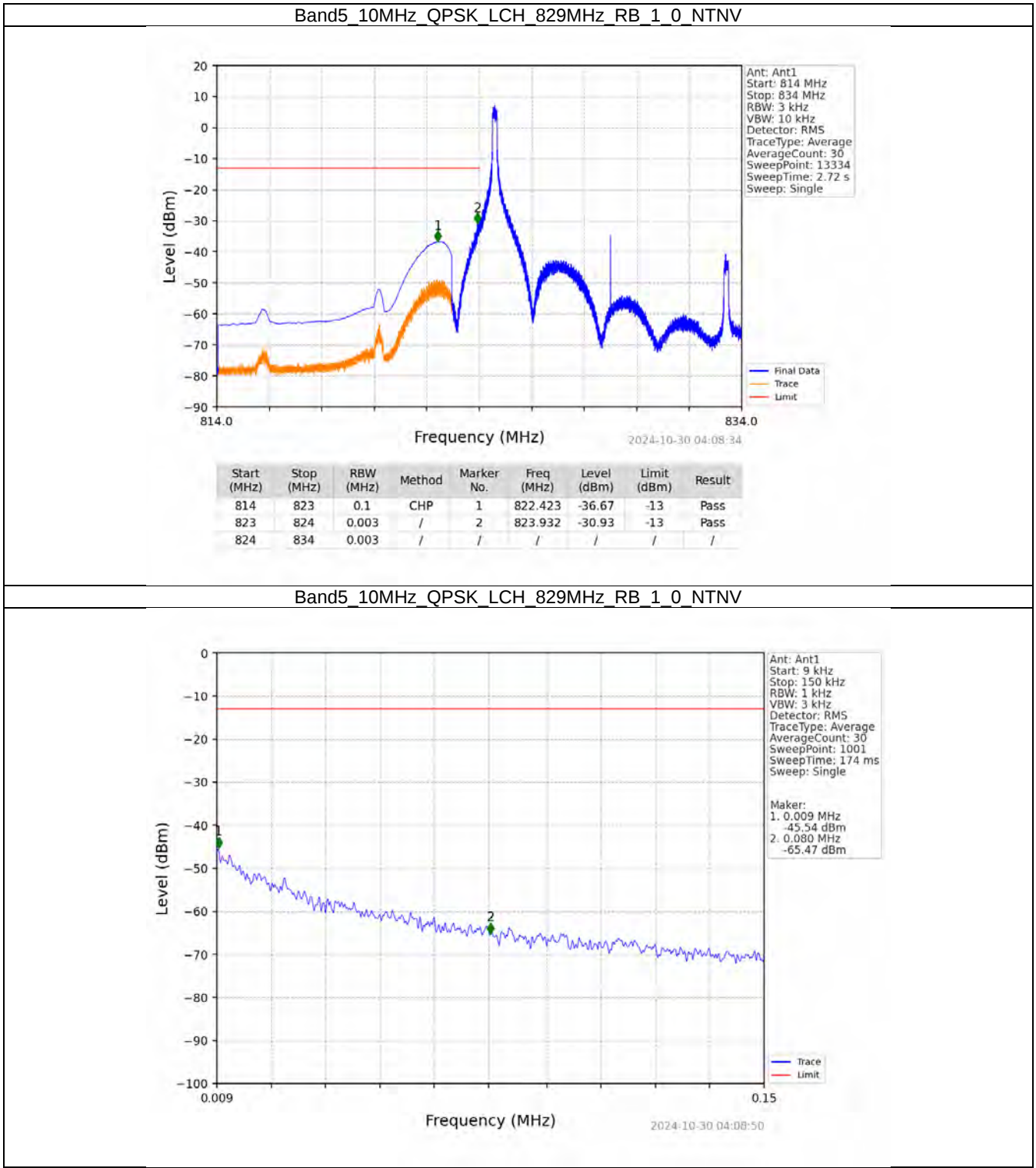
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
844	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.001	-32.28	-13	Pass
850	854	0.1	CHP	2	850.065	-47.40	-13	Pass

Band5 5MHz 16QAM HCH 846.5MHz RB 25 0 NTV

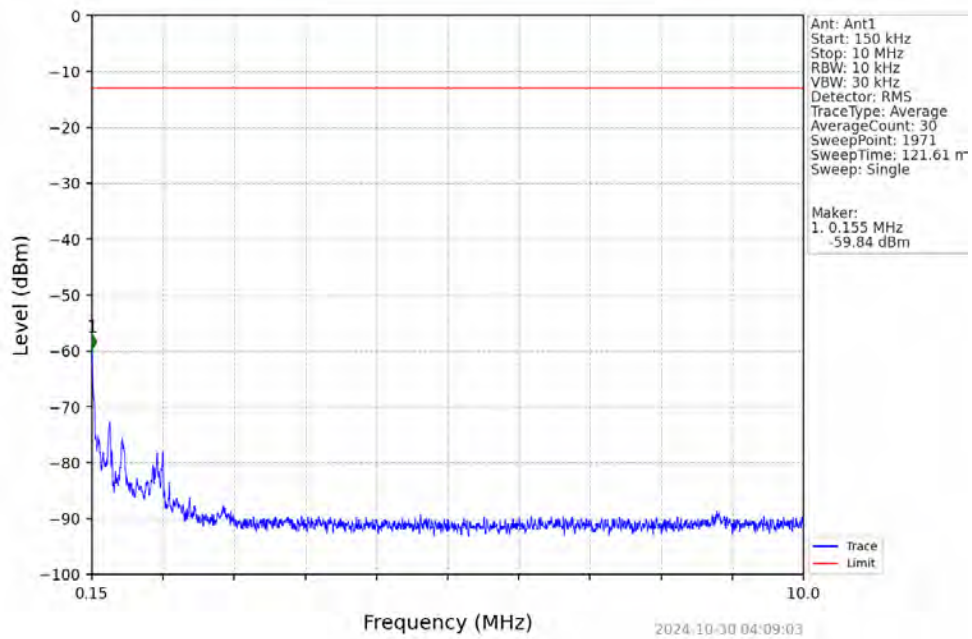


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
844	849	0.05	CHP	/	/	/	/	/
849	850	0.05	CHP	1	849.010	-34.39	-13	Pass
850	854	0.1	CHP	2	850.130	-38.42	-13	Pass

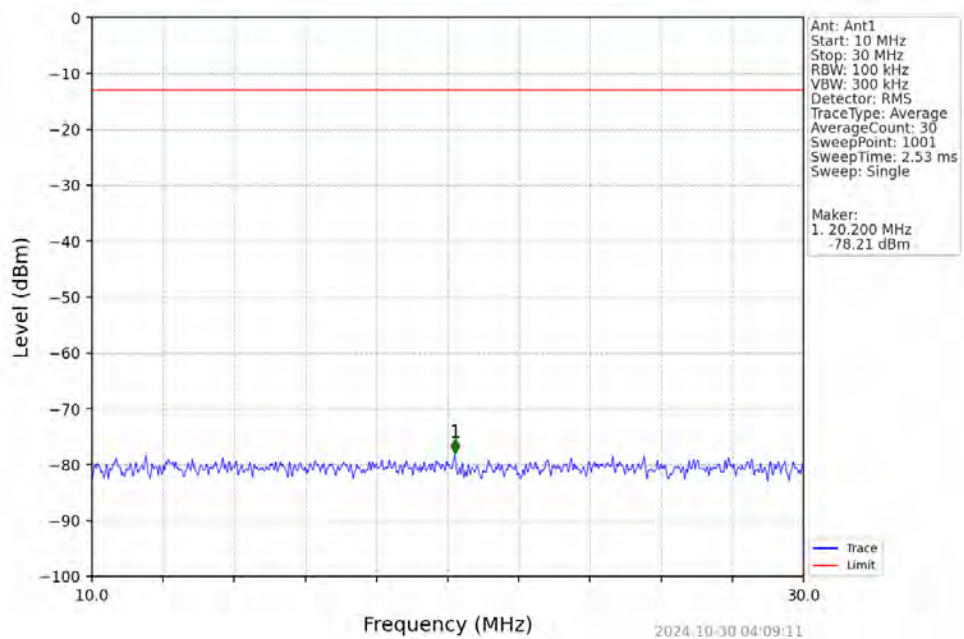
6.2.4 B5_10MHz



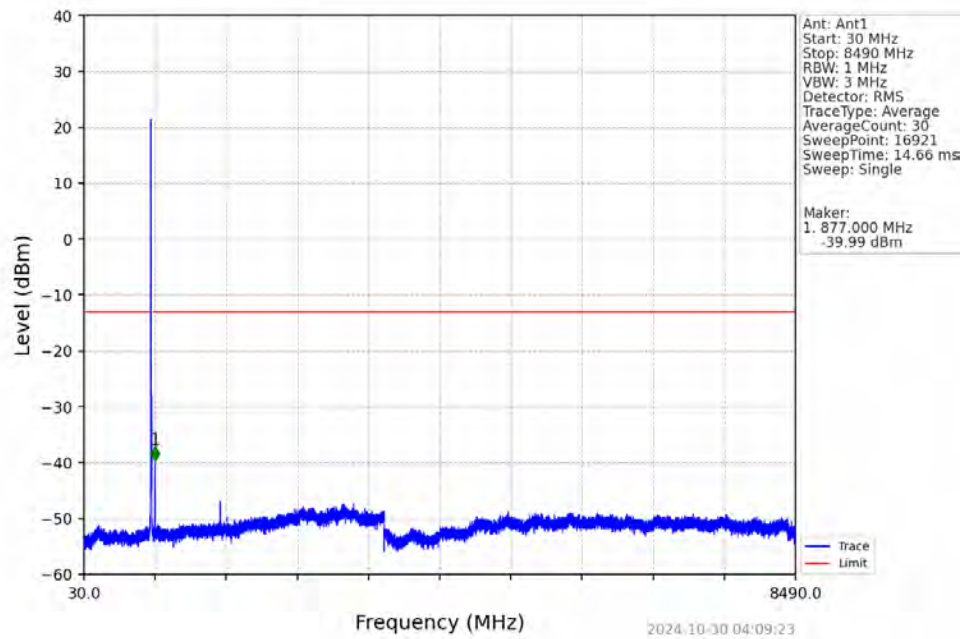
Band5 10MHz QPSK LCH 829MHz RB 1 0 NTNV



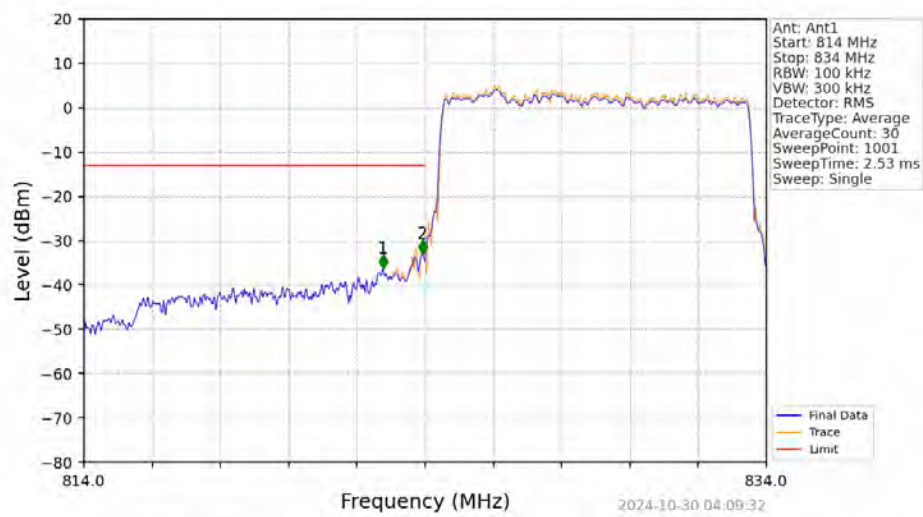
Band5 10MHz QPSK LCH 829MHz RB 1 0 NTNV



Band5 10MHz QPSK LCH 829MHz RB 1 0 NTNV

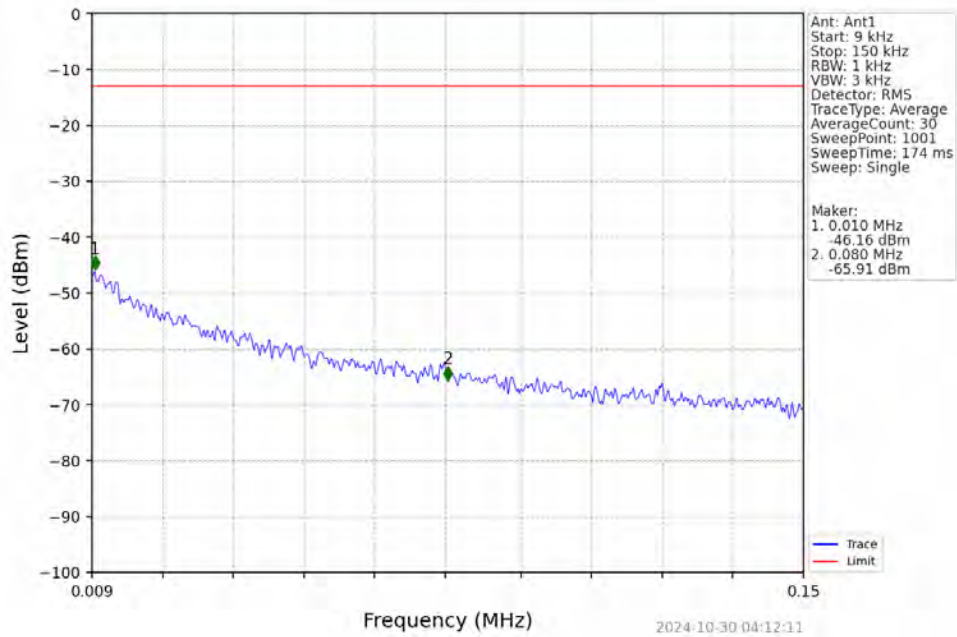


Band5 10MHz QPSK LCH 829MHz RB 50 0 NTNV

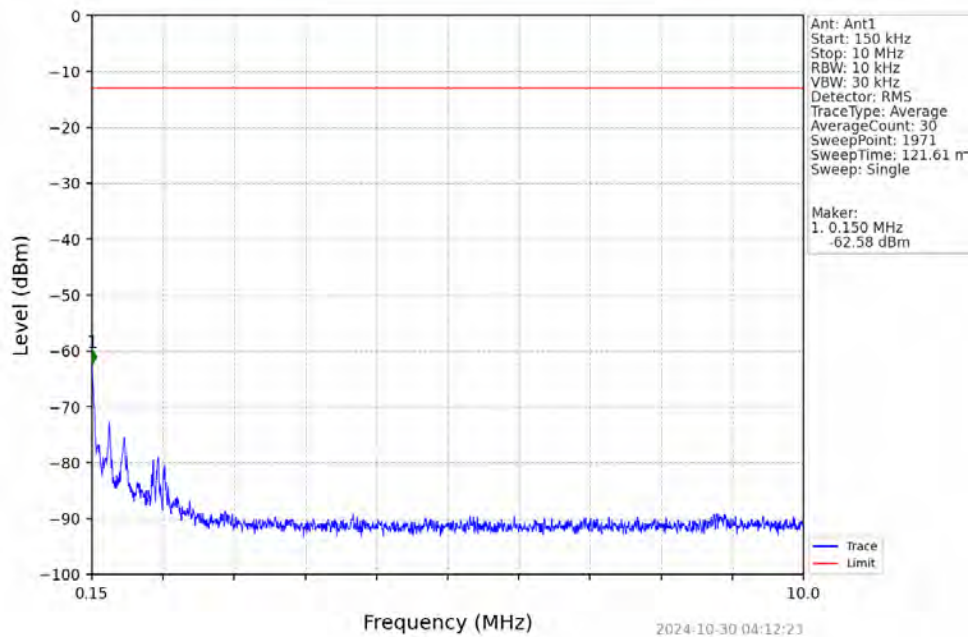


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
814	823	0.1	/	1	822.760	-36.24	-13	Pass
823	824	0.103	CHP	2	823.920	-32.92	-13	Pass
824	834	0.103	CHP	/	/	/	/	/

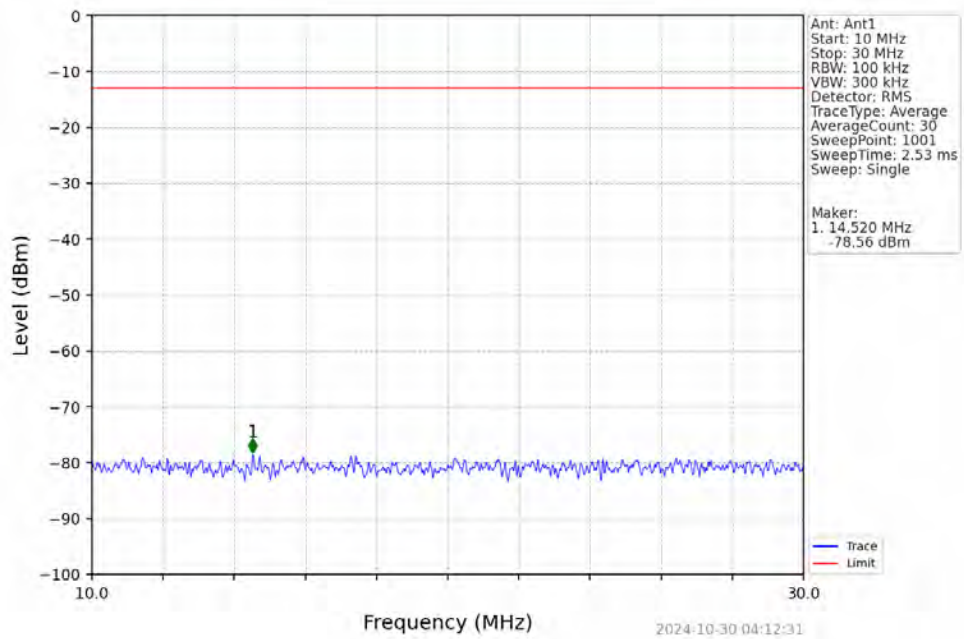
Band5 10MHz QPSK MCH 836.5MHz RB 1 0 NTNV



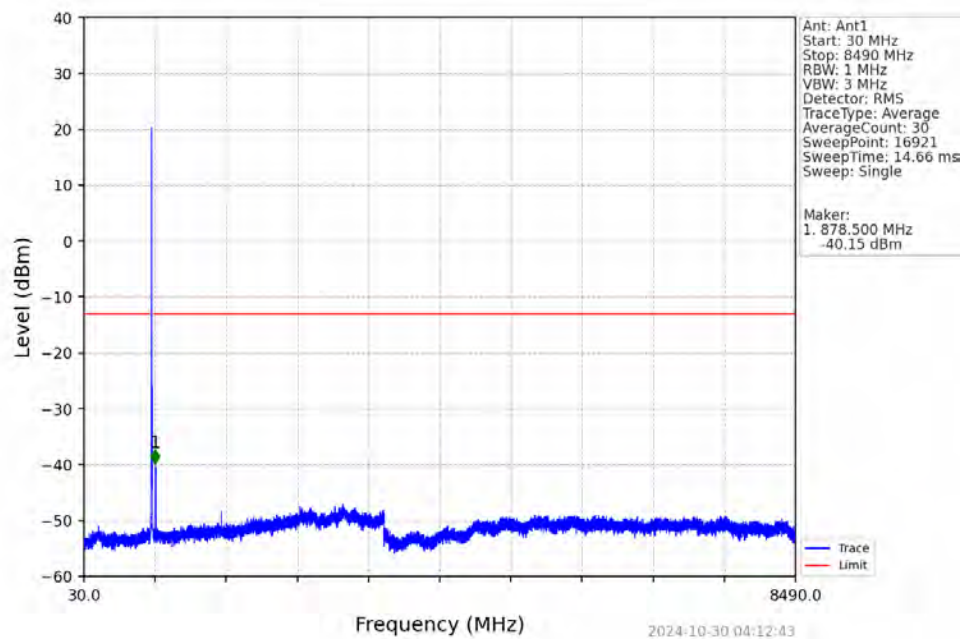
Band5 10MHz QPSK MCH 836.5MHz RB 1 0 NTNV



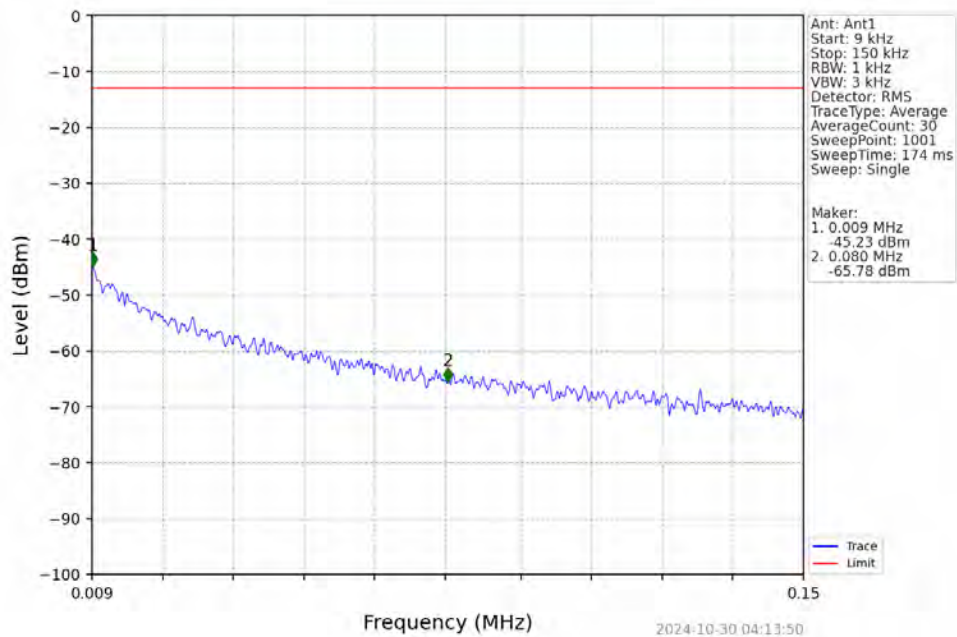
Band5 10MHz QPSK MCH 836.5MHz RB 1 0 NTNV



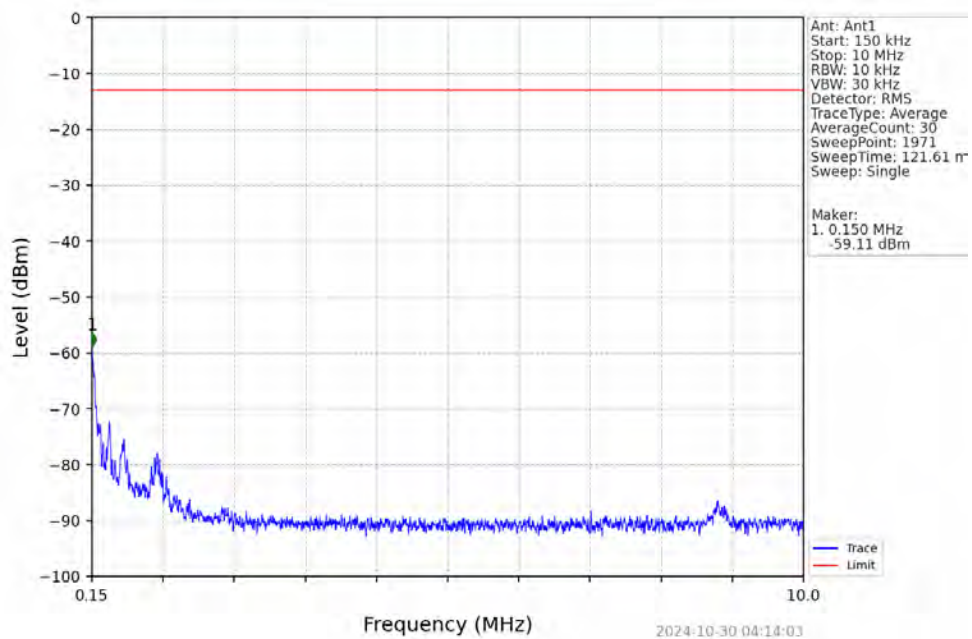
Band5 10MHz QPSK MCH 836.5MHz RB 1 0 NTNV



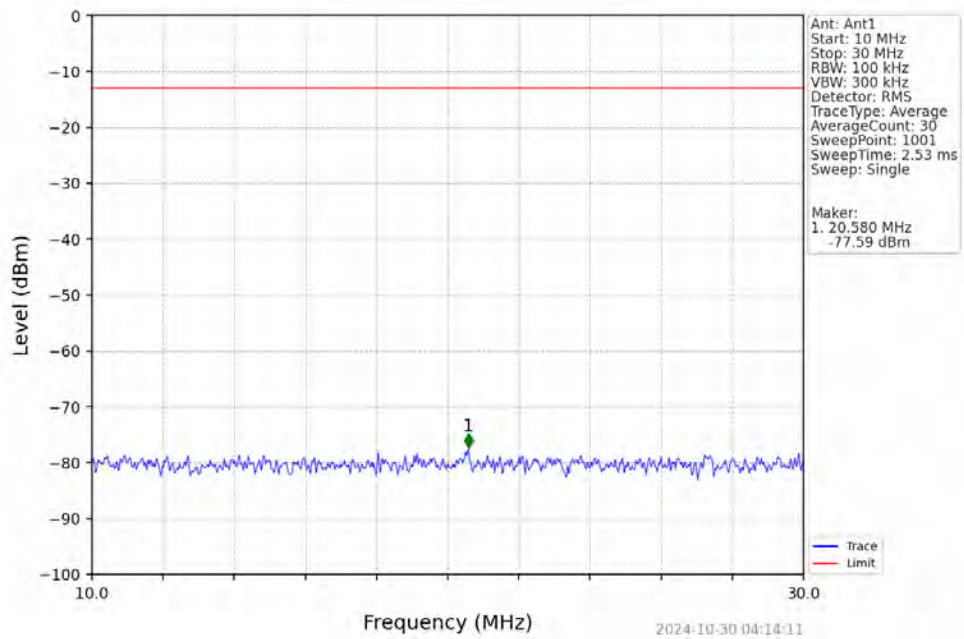
Band5 10MHz QPSK HCH 844MHz RB 1 0 NTNV



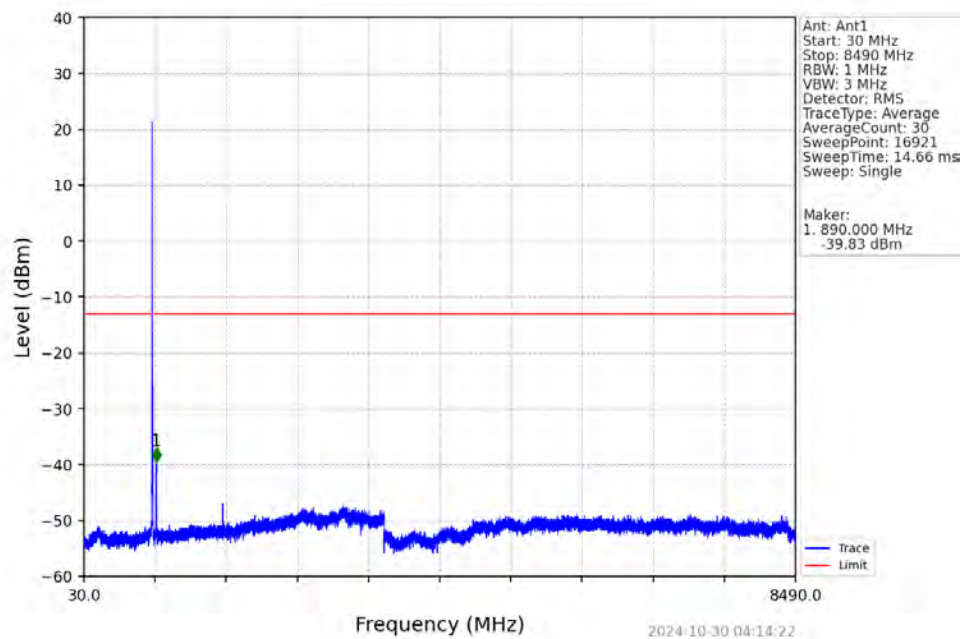
Band5 10MHz QPSK HCH 844MHz RB 1 0 NTNV



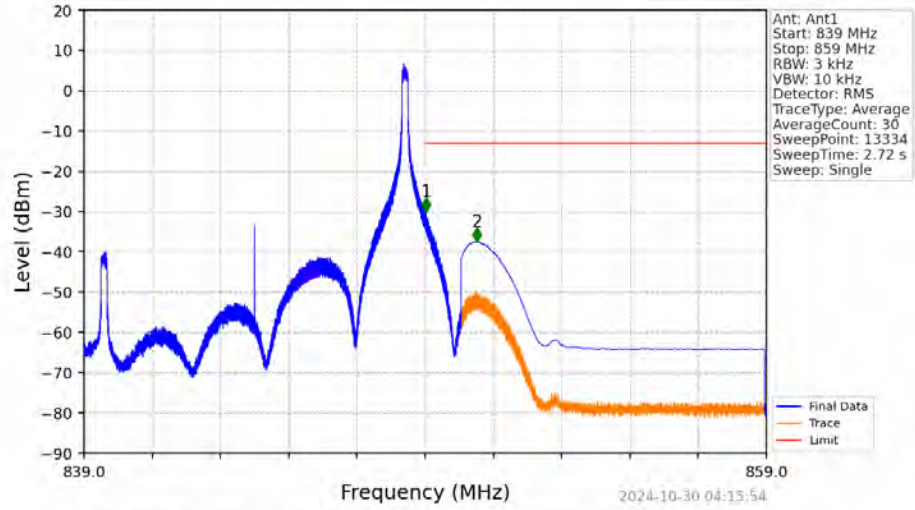
Band5 10MHz QPSK HCH 844MHz RB 1 0 NTNV



Band5 10MHz QPSK HCH 844MHz RB 1 0 NTNV

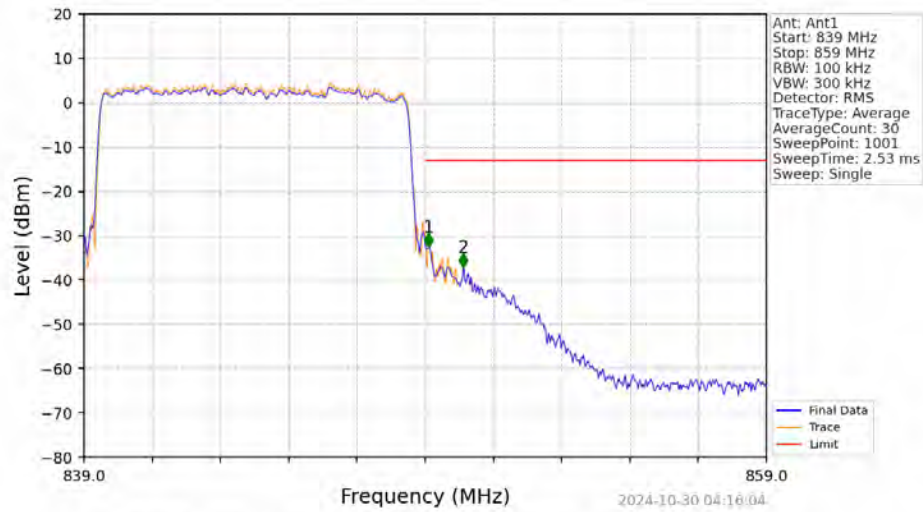


Band5 10MHz QPSK HCH 844MHz RB 1 49 NTNV



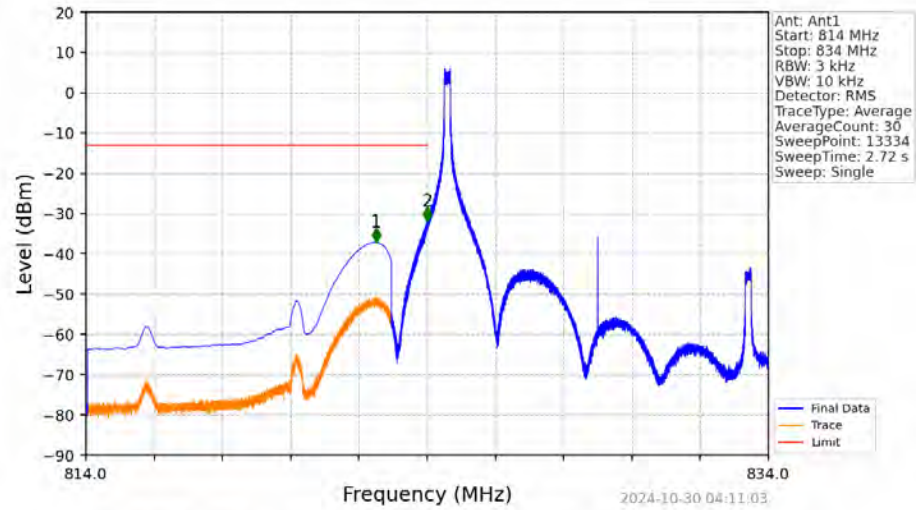
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
839	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.028	-30.09	-13	Pass
850	859	0.1	CHP	2	850.519	-37.41	-13	Pass

Band5 10MHz QPSK HCH 844MHz RB 50 0 NTNV



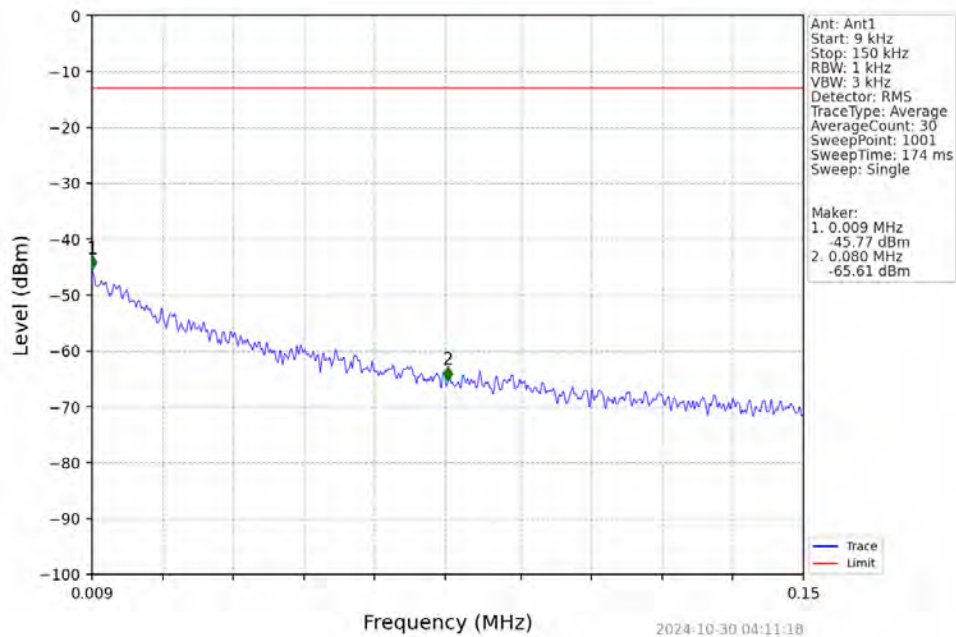
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
839	849	0.104	CHP	/	/	/	/	/
849	850	0.104	CHP	1	849.100	-32.54	-13	Pass
850	859	0.1	/	2	850.120	-37.07	-13	Pass

Band5 10MHz 16QAM LCH 829MHz RB 1 0 NTNV

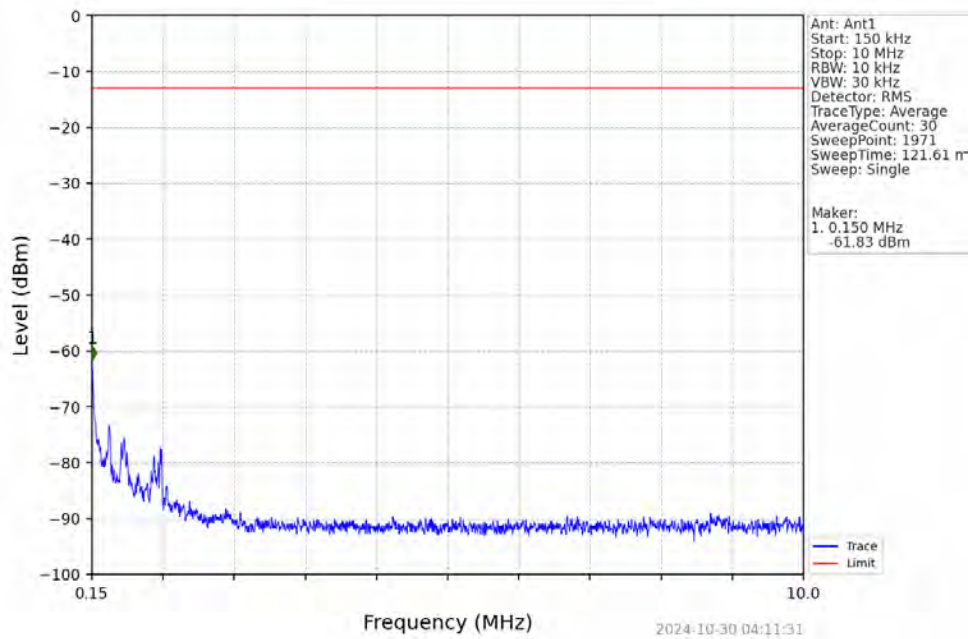


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
814	823	0.1	CHP	1	822.501	-37.04	-13	Pass
823	824	0.003	/	2	823.999	-31.82	-13	Pass
824	834	0.003	/	/	/	/	/	/

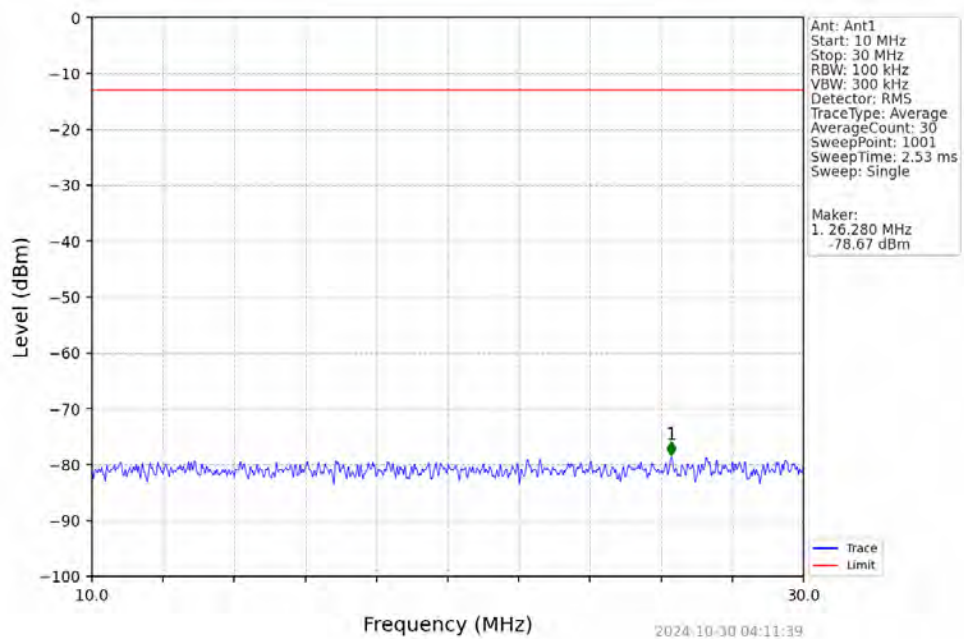
Band5 10MHz 16QAM LCH 829MHz RB 1 0 NTNV



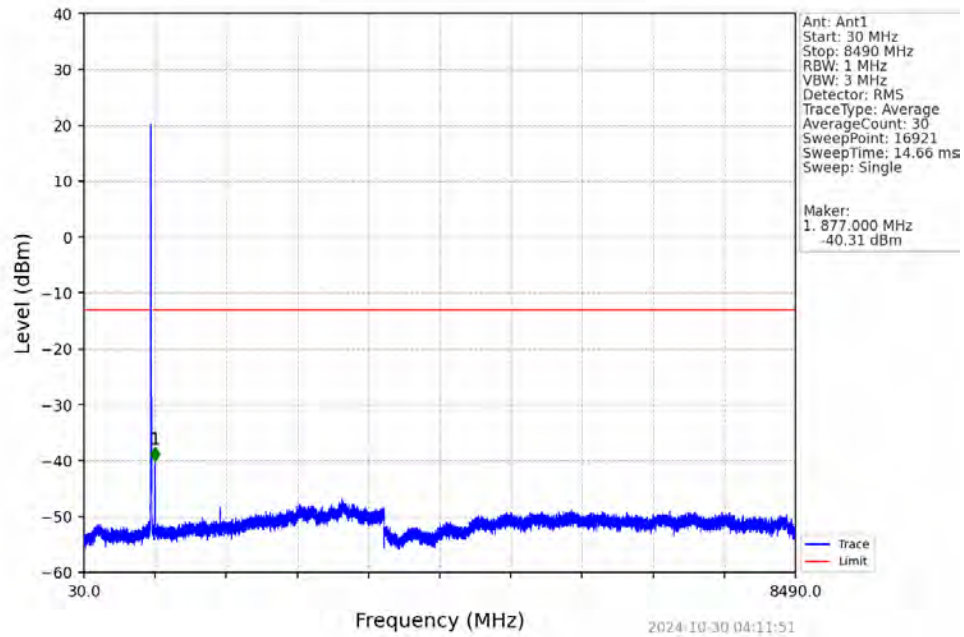
Band5 10MHz 16QAM LCH 829MHz RB 1 0 NTNV



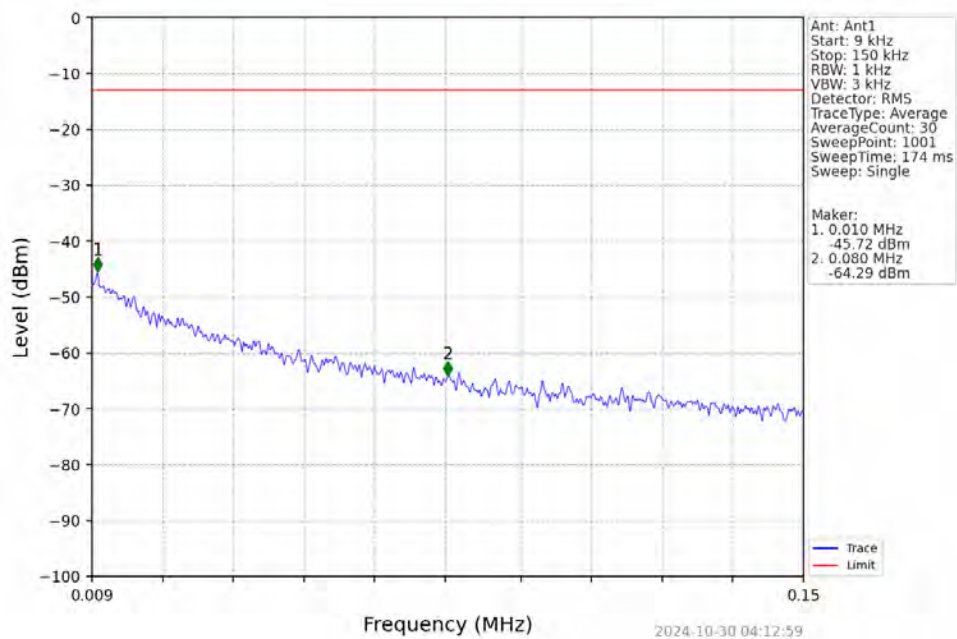
Band5 10MHz 16QAM LCH 829MHz RB 1 0 NTNV



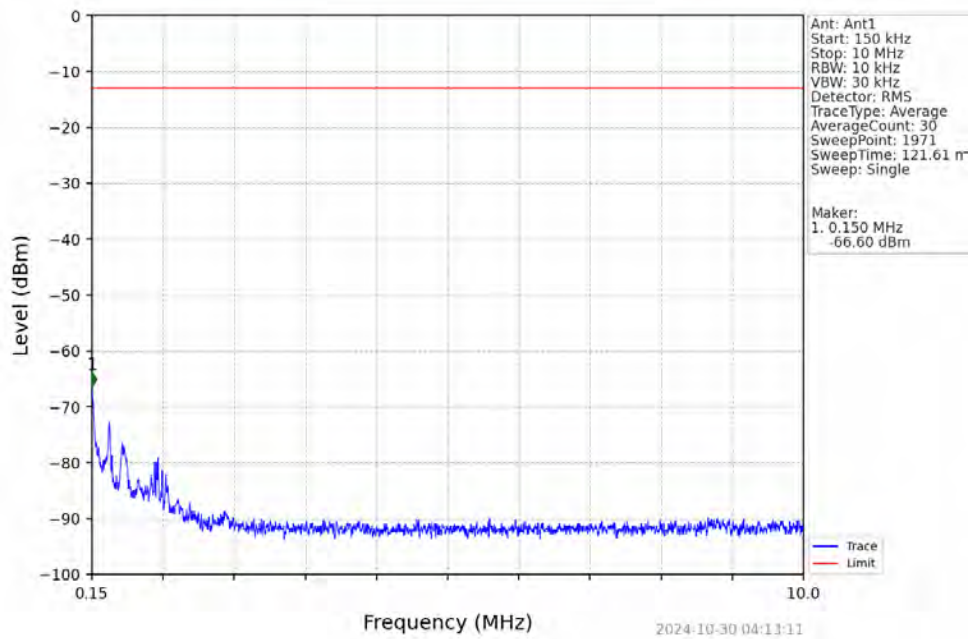
Band5 10MHz 16QAM LCH 829MHz RB 1 0 NTNV



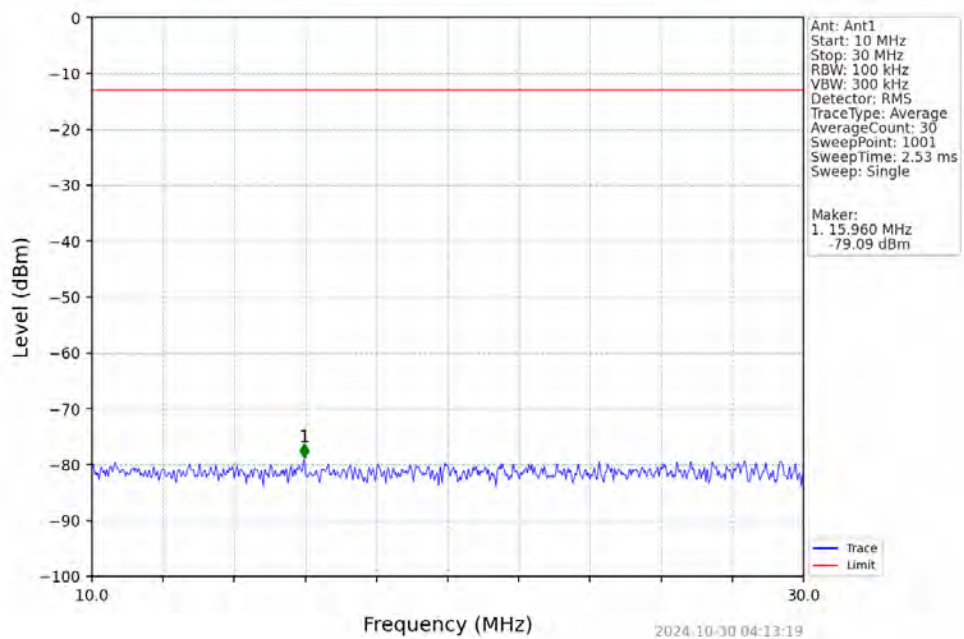
Band5 10MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



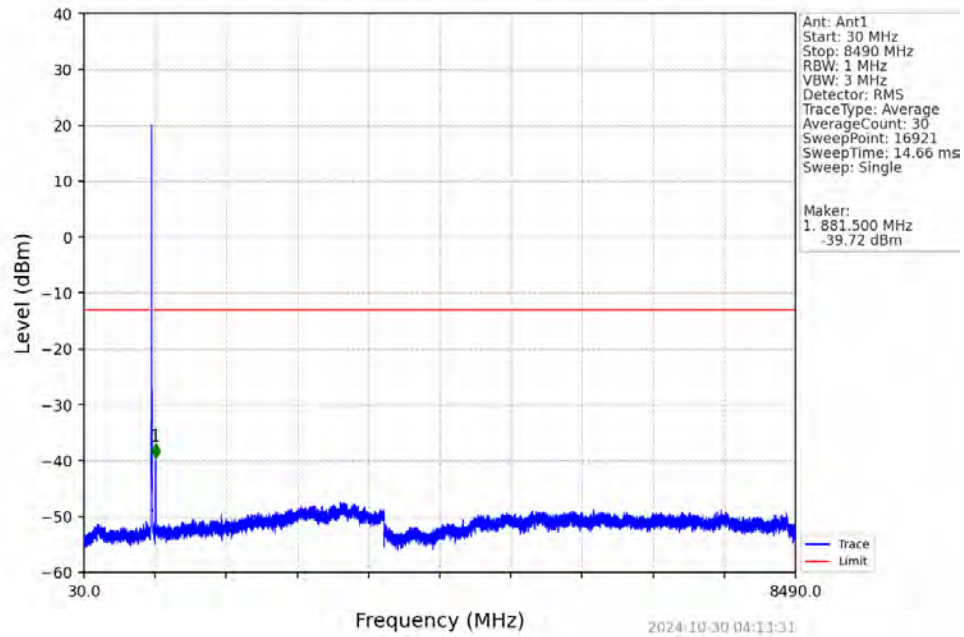
Band5 10MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



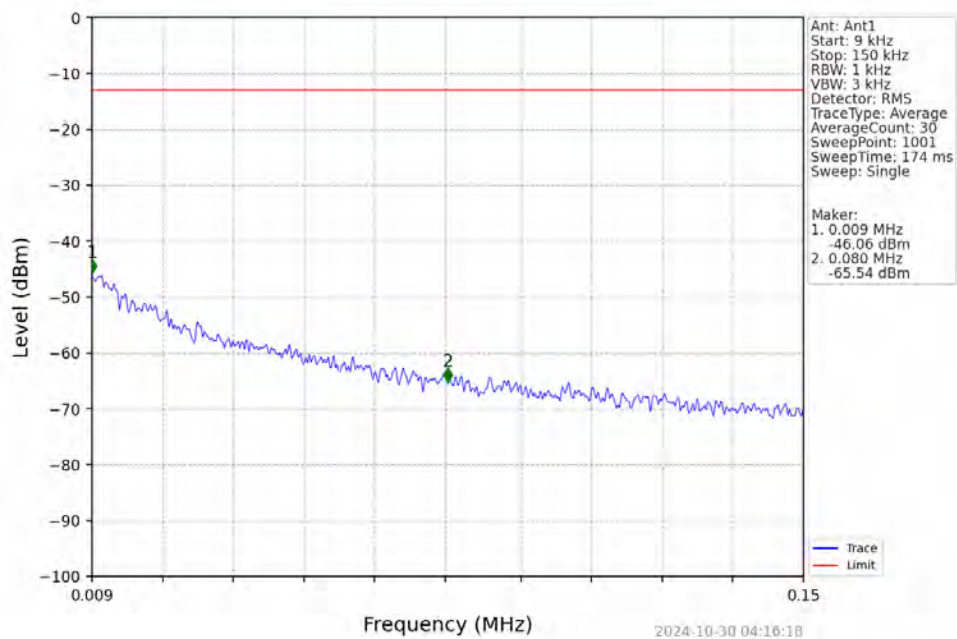
Band5 10MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



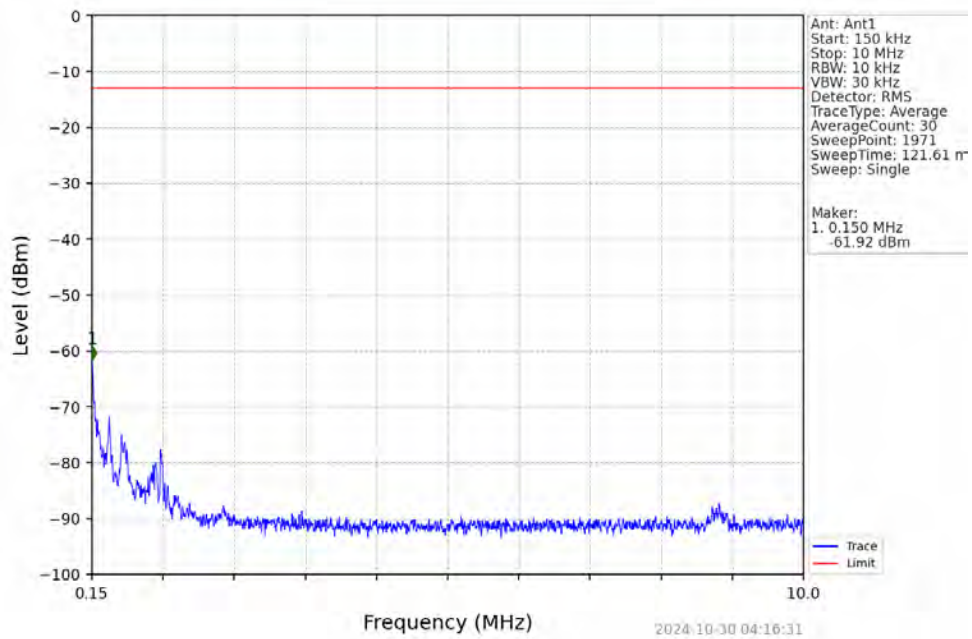
Band5 10MHz 16QAM MCH 836.5MHz RB 1 0 NTNV



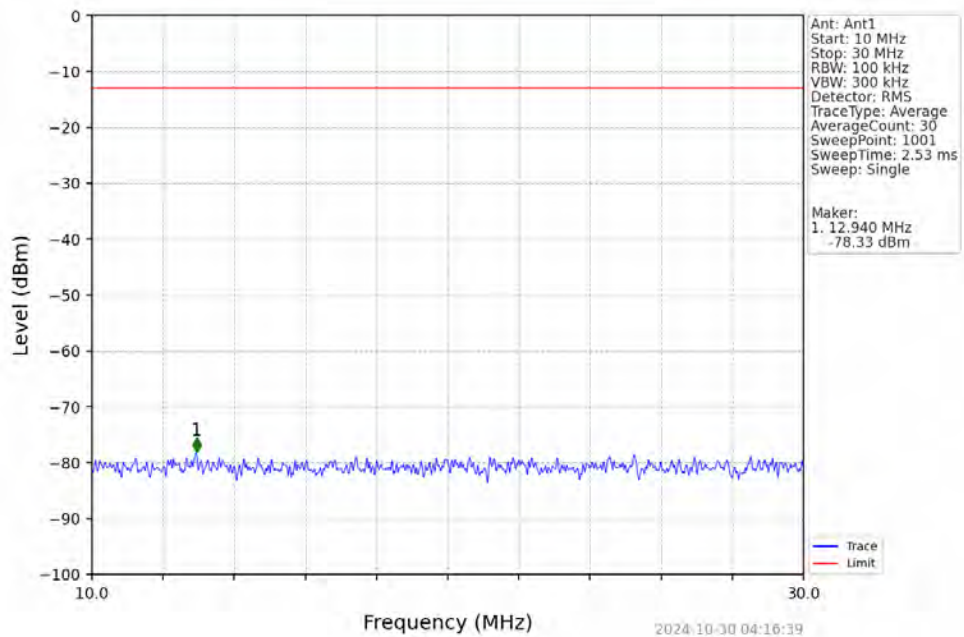
Band5 10MHz 16QAM HCH 844MHz RB 1 0 NTNV



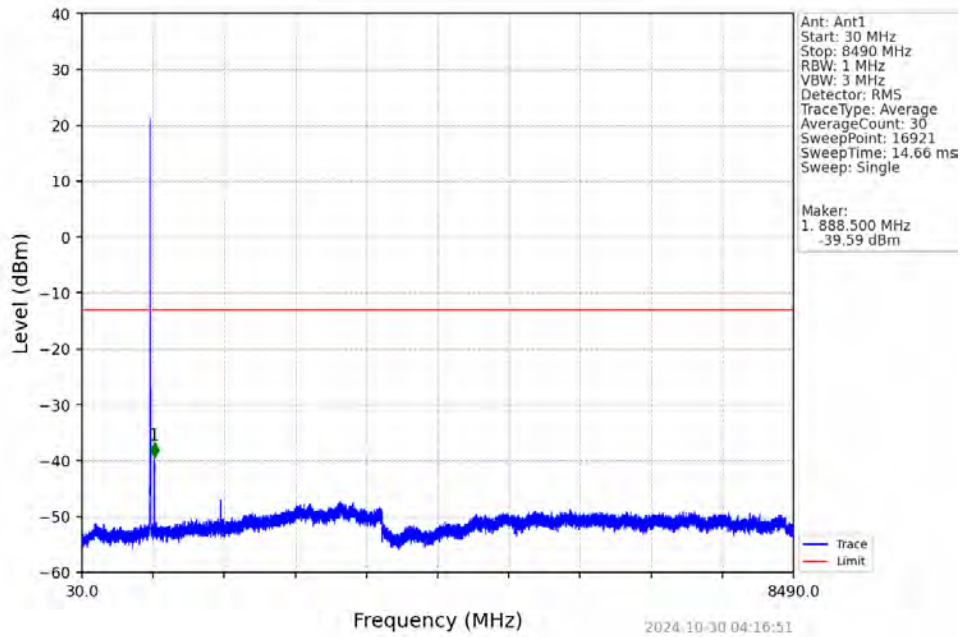
Band5 10MHz 16QAM HCH 844MHz RB 1 0 NTNV



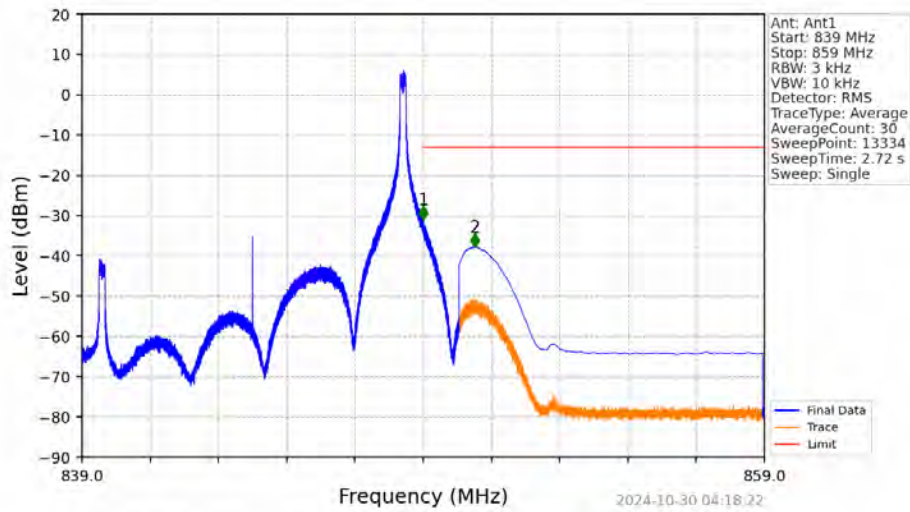
Band5 10MHz 16QAM HCH 844MHz RB 1 0 NTNV



Band5 10MHz 16QAM HCH 844MHz RB 1 0 NTNV



Band5 10MHz 16QAM HCH 844MHz RB 1 49 NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
839	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.001	-31.05	-13	Pass
850	859	0.1	CHP	2	850.519	-37.78	-13	Pass