

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 B12_1.4MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict Limit	
		Size	Offset			
QPSK	699.7	1	0	23.60	<=34.77	Pass
			2	23.56	<=34.77	Pass
			5	23.47	<=34.77	Pass
		3	0	23.55	<=34.77	Pass
			2	23.49	<=34.77	Pass
			3	23.45	<=34.77	Pass
		6	0	22.60	<=34.77	Pass
	707.5	1	0	24.21	<=34.77	Pass
			2	24.30	<=34.77	Pass
			5	24.14	<=34.77	Pass
		3	0	24.18	<=34.77	Pass
			2	24.27	<=34.77	Pass
			3	24.19	<=34.77	Pass
		6	0	23.34	<=34.77	Pass
	715.3	1	0	23.89	<=34.77	Pass
			2	23.83	<=34.77	Pass
			5	23.54	<=34.77	Pass
		3	0	23.91	<=34.77	Pass
			2	23.74	<=34.77	Pass
			3	23.67	<=34.77	Pass
		6	0	22.72	<=34.77	Pass
16QAM	699.7	1	0	22.48	<=34.77	Pass
			2	22.40	<=34.77	Pass
			5	22.36	<=34.77	Pass
		3	0	22.65	<=34.77	Pass
			2	22.59	<=34.77	Pass
			3	22.57	<=34.77	Pass
		6	0	21.53	<=34.77	Pass
	707.5	1	0	23.34	<=34.77	Pass
			2	23.36	<=34.77	Pass
			5	23.26	<=34.77	Pass
		3	0	23.31	<=34.77	Pass
			2	23.29	<=34.77	Pass
			3	23.25	<=34.77	Pass
		6	0	22.35	<=34.77	Pass
	715.3	1	0	22.90	<=34.77	Pass
			2	22.90	<=34.77	Pass
			5	22.66	<=34.77	Pass
		3	0	22.79	<=34.77	Pass
			2	22.69	<=34.77	Pass
			3	22.62	<=34.77	Pass
		6	0	21.91	<=34.77	Pass

1.1.2 B12_3MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict Limit	
		Size	Offset			
QPSK	700.5	1	0	23.46	<=34.77	Pass

16QAM	707.5	8	7	23.52	<=34.77	Pass
			14	23.32	<=34.77	Pass
			0	22.49	<=34.77	Pass
			4	22.46	<=34.77	Pass
			7	22.40	<=34.77	Pass
		15	0	22.41	<=34.77	Pass
		1	0	24.00	<=34.77	Pass
			7	24.36	<=34.77	Pass
			14	24.06	<=34.77	Pass
			0	23.26	<=34.77	Pass
			4	23.33	<=34.77	Pass
			7	23.24	<=34.77	Pass
		15	0	23.28	<=34.77	Pass
	714.5	1	0	23.55	<=34.77	Pass
			7	23.88	<=34.77	Pass
			14	23.44	<=34.77	Pass
		8	0	22.76	<=34.77	Pass
			4	22.93	<=34.77	Pass
			7	22.85	<=34.77	Pass
		15	0	22.81	<=34.77	Pass
	700.5	1	0	22.71	<=34.77	Pass
			7	22.74	<=34.77	Pass
			14	22.60	<=34.77	Pass
		8	0	21.59	<=34.77	Pass
			4	21.61	<=34.77	Pass
			7	21.56	<=34.77	Pass
		15	0	21.49	<=34.77	Pass
	707.5	1	0	22.85	<=34.77	Pass
			7	23.26	<=34.77	Pass
			14	22.92	<=34.77	Pass
		8	0	22.36	<=34.77	Pass
			4	22.45	<=34.77	Pass
			7	22.34	<=34.77	Pass
		15	0	22.39	<=34.77	Pass
	714.5	1	0	22.52	<=34.77	Pass
			7	22.92	<=34.77	Pass
			14	22.50	<=34.77	Pass
		8	0	21.81	<=34.77	Pass
			4	21.98	<=34.77	Pass
			7	21.91	<=34.77	Pass
		15	0	21.70	<=34.77	Pass

1.1.3 B12_5MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict	
		Size	Offset		Limit	
QPSK	701.5	1	0	23.49	<=34.77	Pass
			13	23.49	<=34.77	Pass
			24	23.18	<=34.77	Pass
		12	0	22.66	<=34.77	Pass
			6	22.65	<=34.77	Pass
			13	22.56	<=34.77	Pass
		25	0	22.61	<=34.77	Pass
	707.5	1	0	23.58	<=34.77	Pass
			13	24.64	<=34.77	Pass
			24	24.01	<=34.77	Pass
		12	0	23.16	<=34.77	Pass

		25	6	23.53	<=34.77	Pass
			13	23.38	<=34.77	Pass
			0	23.24	<=34.77	Pass
	713.5	1	0	23.55	<=34.77	Pass
			13	23.77	<=34.77	Pass
			24	23.62	<=34.77	Pass
		12	0	22.55	<=34.77	Pass
			6	22.70	<=34.77	Pass
			13	22.80	<=34.77	Pass
		25	0	22.67	<=34.77	Pass
16QAM	701.5	1	0	22.77	<=34.77	Pass
			13	22.83	<=34.77	Pass
			24	22.48	<=34.77	Pass
		12	0	21.59	<=34.77	Pass
			6	21.73	<=34.77	Pass
			13	21.56	<=34.77	Pass
		25	0	21.64	<=34.77	Pass
	707.5	1	0	22.80	<=34.77	Pass
			13	23.74	<=34.77	Pass
			24	23.12	<=34.77	Pass
		12	0	22.14	<=34.77	Pass
			6	22.61	<=34.77	Pass
			13	22.44	<=34.77	Pass
		25	0	22.42	<=34.77	Pass
	713.5	1	0	22.66	<=34.77	Pass
			13	22.97	<=34.77	Pass
			24	22.71	<=34.77	Pass
		12	0	21.70	<=34.77	Pass
			6	21.87	<=34.77	Pass
			13	21.97	<=34.77	Pass
		25	0	21.86	<=34.77	Pass
			0	21.86	<=34.77	Pass

1.1.4 B12_10MHz

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Verdict Limit	
		Size	Offset			
QPSK	704	1	0	23.51	<=34.77	Pass
			25	23.66	<=34.77	Pass
			49	24.17	<=34.77	Pass
		25	0	22.58	<=34.77	Pass
			13	22.77	<=34.77	Pass
			25	23.03	<=34.77	Pass
		50	0	22.86	<=34.77	Pass
	707.5	1	0	23.26	<=34.77	Pass
			25	24.37	<=34.77	Pass
			49	23.58	<=34.77	Pass
		25	0	22.81	<=34.77	Pass
			13	23.19	<=34.77	Pass
			25	23.16	<=34.77	Pass
		50	0	23.02	<=34.77	Pass
		711	0	23.65	<=34.77	Pass
			25	24.03	<=34.77	Pass
			49	23.70	<=34.77	Pass
			0	23.01	<=34.77	Pass
			13	22.85	<=34.77	Pass
		25	25	22.87	<=34.77	Pass
			0	22.92	<=34.77	Pass

16QAM	704	1	0	22.65	<=34.77	Pass
			25	22.85	<=34.77	Pass
			49	23.34	<=34.77	Pass
		12	0	22.60	<=34.77	Pass
			19	22.76	<=34.77	Pass
			38	23.35	<=34.77	Pass
		27	0	21.71	<=34.77	Pass
	707.5	1	0	22.06	<=34.77	Pass
			25	23.21	<=34.77	Pass
			49	22.43	<=34.77	Pass
		12	0	22.54	<=34.77	Pass
			19	23.42	<=34.77	Pass
			38	23.11	<=34.77	Pass
		27	0	21.98	<=34.77	Pass
	711	1	0	22.62	<=34.77	Pass
			25	22.98	<=34.77	Pass
			49	22.79	<=34.77	Pass
		12	0	22.97	<=34.77	Pass
			19	22.88	<=34.77	Pass
			38	22.97	<=34.77	Pass
		27	23	22.00	<=34.77	Pass

2. Frequency Stability

2.1 Test Result

2.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	699.7	6	0	20	3.27	-0.601	-0.0009	-2.5 to 2.5	Pass
					3.85	0.129	0.0002	-2.5 to 2.5	Pass
					4.43	2.360	0.0034	-2.5 to 2.5	Pass
				-30	3.85	1.917	0.0027	-2.5 to 2.5	Pass
				-20	3.85	1.845	0.0026	-2.5 to 2.5	Pass
				-10	3.85	0.715	0.0010	-2.5 to 2.5	Pass
				0	3.85	1.745	0.0025	-2.5 to 2.5	Pass
				10	3.85	0.916	0.0013	-2.5 to 2.5	Pass
				30	3.85	3.204	0.0046	-2.5 to 2.5	Pass
				40	3.85	0.830	0.0012	-2.5 to 2.5	Pass
				50	3.85	3.090	0.0044	-2.5 to 2.5	Pass
	707.5	6	0	20	3.27	-2.074	-0.0029	-2.5 to 2.5	Pass
					3.85	-2.317	-0.0033	-2.5 to 2.5	Pass
					4.43	-0.787	-0.0011	-2.5 to 2.5	Pass
				-30	3.85	-1.702	-0.0024	-2.5 to 2.5	Pass
				-20	3.85	2.418	0.0034	-2.5 to 2.5	Pass
				-10	3.85	0.587	0.0008	-2.5 to 2.5	Pass
				0	3.85	0.830	0.0012	-2.5 to 2.5	Pass
				10	3.85	3.047	0.0043	-2.5 to 2.5	Pass
				30	3.85	-2.604	-0.0037	-2.5 to 2.5	Pass
				40	3.85	-1.688	-0.0024	-2.5 to 2.5	Pass
				50	3.85	0.587	0.0008	-2.5 to 2.5	Pass
	715.3	6	0	20	3.27	-2.861	-0.0040	-2.5 to 2.5	Pass
					3.85	-2.246	-0.0031	-2.5 to 2.5	Pass
					4.43	-3.505	-0.0049	-2.5 to 2.5	Pass

				-30	3.85	-2.890	-0.0040	-2.5 to 2.5	Pass
				-20	3.85	-3.204	-0.0045	-2.5 to 2.5	Pass
				-10	3.85	-4.406	-0.0062	-2.5 to 2.5	Pass
				0	3.85	-2.747	-0.0038	-2.5 to 2.5	Pass
				10	3.85	-2.546	-0.0036	-2.5 to 2.5	Pass
				30	3.85	-0.858	-0.0012	-2.5 to 2.5	Pass
				40	3.85	-1.259	-0.0018	-2.5 to 2.5	Pass
				50	3.85	0.043	0.0001	-2.5 to 2.5	Pass
16QAM	699.7	6	0	20	3.27	4.420	0.0063	-2.5 to 2.5	Pass
					3.85	-0.329	-0.0005	-2.5 to 2.5	Pass
					4.43	1.144	0.0016	-2.5 to 2.5	Pass
				-30	3.85	2.017	0.0029	-2.5 to 2.5	Pass
				-20	3.85	-1.531	-0.0022	-2.5 to 2.5	Pass
				-10	3.85	1.144	0.0016	-2.5 to 2.5	Pass
				0	3.85	4.020	0.0057	-2.5 to 2.5	Pass
				10	3.85	0.930	0.0013	-2.5 to 2.5	Pass
				30	3.85	2.303	0.0033	-2.5 to 2.5	Pass
				40	3.85	2.646	0.0038	-2.5 to 2.5	Pass
				50	3.85	0.930	0.0013	-2.5 to 2.5	Pass
	707.5	6	0	20	3.27	2.604	0.0037	-2.5 to 2.5	Pass
					3.85	-0.787	-0.0011	-2.5 to 2.5	Pass
					4.43	0.758	0.0011	-2.5 to 2.5	Pass
				-30	3.85	-2.389	-0.0034	-2.5 to 2.5	Pass
				-20	3.85	1.473	0.0021	-2.5 to 2.5	Pass
				-10	3.85	0.916	0.0013	-2.5 to 2.5	Pass
				0	3.85	-3.862	-0.0055	-2.5 to 2.5	Pass
				10	3.85	-2.317	-0.0033	-2.5 to 2.5	Pass
				30	3.85	-0.143	-0.0002	-2.5 to 2.5	Pass
				40	3.85	-1.431	-0.0020	-2.5 to 2.5	Pass
				50	3.85	-1.574	-0.0022	-2.5 to 2.5	Pass
	715.3	6	0	20	3.27	1.273	0.0018	-2.5 to 2.5	Pass
					3.85	-1.473	-0.0021	-2.5 to 2.5	Pass
					4.43	2.375	0.0033	-2.5 to 2.5	Pass
				-30	3.85	1.116	0.0016	-2.5 to 2.5	Pass
				-20	3.85	2.189	0.0031	-2.5 to 2.5	Pass
				-10	3.85	3.362	0.0047	-2.5 to 2.5	Pass
				0	3.85	-1.302	-0.0018	-2.5 to 2.5	Pass
				10	3.85	1.388	0.0019	-2.5 to 2.5	Pass
				30	3.85	2.661	0.0037	-2.5 to 2.5	Pass
				40	3.85	2.804	0.0039	-2.5 to 2.5	Pass
				50	3.85	0.744	0.0010	-2.5 to 2.5	Pass

2.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	700.5	15	0	20	3.27	-2.861	-0.0041	-2.5 to 2.5	Pass
					3.85	1.774	0.0025	-2.5 to 2.5	Pass
					4.43	3.018	0.0043	-2.5 to 2.5	Pass
				-30	3.85	2.203	0.0031	-2.5 to 2.5	Pass
				-20	3.85	-0.172	-0.0002	-2.5 to 2.5	Pass
				-10	3.85	0.730	0.0010	-2.5 to 2.5	Pass
				0	3.85	3.276	0.0047	-2.5 to 2.5	Pass
				10	3.85	1.216	0.0017	-2.5 to 2.5	Pass
				30	3.85	3.104	0.0044	-2.5 to 2.5	Pass
				40	3.85	3.104	0.0044	-2.5 to 2.5	Pass

	707.5	15	0	50	3.85	1.717	0.0025	-2.5 to 2.5	Pass
				20	3.27	-1.402	-0.0020	-2.5 to 2.5	Pass
					3.85	-0.401	-0.0006	-2.5 to 2.5	Pass
				20	4.43	2.089	0.0030	-2.5 to 2.5	Pass
					3.85	0.143	0.0002	-2.5 to 2.5	Pass
				-20	3.85	-2.089	-0.0030	-2.5 to 2.5	Pass
				-10	3.85	1.059	0.0015	-2.5 to 2.5	Pass
				0	3.85	2.704	0.0038	-2.5 to 2.5	Pass
				10	3.85	2.661	0.0038	-2.5 to 2.5	Pass
				30	3.85	1.988	0.0028	-2.5 to 2.5	Pass
	714.5	15	0	40	3.85	-0.930	-0.0013	-2.5 to 2.5	Pass
				50	3.85	3.018	0.0043	-2.5 to 2.5	Pass
				20	3.27	-0.243	-0.0003	-2.5 to 2.5	Pass
					3.85	2.861	0.0040	-2.5 to 2.5	Pass
				20	4.43	1.760	0.0025	-2.5 to 2.5	Pass
					3.85	0.987	0.0014	-2.5 to 2.5	Pass
				-20	3.85	1.860	0.0026	-2.5 to 2.5	Pass
				-10	3.85	-0.029	0.0000	-2.5 to 2.5	Pass
				0	3.85	0.701	0.0010	-2.5 to 2.5	Pass
				10	3.85	1.001	0.0014	-2.5 to 2.5	Pass
16QAM	700.5	15	0	30	3.85	1.874	0.0026	-2.5 to 2.5	Pass
				40	3.85	3.462	0.0048	-2.5 to 2.5	Pass
				50	3.85	0.787	0.0011	-2.5 to 2.5	Pass
				20	3.27	0.687	0.0010	-2.5 to 2.5	Pass
					3.85	-1.817	-0.0026	-2.5 to 2.5	Pass
				20	4.43	-2.747	-0.0039	-2.5 to 2.5	Pass
					3.85	1.473	0.0021	-2.5 to 2.5	Pass
				-20	3.85	-0.014	0.0000	-2.5 to 2.5	Pass
				-10	3.85	-0.014	0.0000	-2.5 to 2.5	Pass
				0	3.85	1.402	0.0020	-2.5 to 2.5	Pass
	707.5	15	0	10	3.85	2.589	0.0037	-2.5 to 2.5	Pass
				30	3.85	2.389	0.0034	-2.5 to 2.5	Pass
				40	3.85	0.200	0.0003	-2.5 to 2.5	Pass
				50	3.85	1.001	0.0014	-2.5 to 2.5	Pass
				20	3.27	1.059	0.0015	-2.5 to 2.5	Pass
					3.85	0.472	0.0007	-2.5 to 2.5	Pass
				20	4.43	-2.217	-0.0031	-2.5 to 2.5	Pass
					3.85	1.674	0.0024	-2.5 to 2.5	Pass
				-20	3.85	-0.544	-0.0008	-2.5 to 2.5	Pass
				-10	3.85	-1.001	-0.0014	-2.5 to 2.5	Pass
16QAM	714.5	15	0	0	3.85	-1.645	-0.0023	-2.5 to 2.5	Pass
				10	3.85	-0.172	-0.0002	-2.5 to 2.5	Pass
				30	3.85	1.616	0.0023	-2.5 to 2.5	Pass
				40	3.85	-2.389	-0.0034	-2.5 to 2.5	Pass
				50	3.85	0.587	0.0008	-2.5 to 2.5	Pass
				20	3.27	3.090	0.0043	-2.5 to 2.5	Pass
					3.85	-0.587	-0.0008	-2.5 to 2.5	Pass
				20	4.43	-1.645	-0.0023	-2.5 to 2.5	Pass
					3.85	1.287	0.0018	-2.5 to 2.5	Pass
				-20	3.85	-1.960	-0.0027	-2.5 to 2.5	Pass
	707.5	15	0	-10	3.85	-1.860	-0.0026	-2.5 to 2.5	Pass
				0	3.85	-1.431	-0.0020	-2.5 to 2.5	Pass
				10	3.85	0.744	0.0010	-2.5 to 2.5	Pass
				30	3.85	1.330	0.0019	-2.5 to 2.5	Pass
				40	3.85	-0.343	-0.0005	-2.5 to 2.5	Pass
				50	3.85	-1.817	-0.0025	-2.5 to 2.5	Pass

2.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	701.5	25	0	20	3.27	3.033	0.0043	-2.5 to 2.5	Pass
					3.85	3.018	0.0043	-2.5 to 2.5	Pass
					4.43	2.317	0.0033	-2.5 to 2.5	Pass
				-30	3.85	1.316	0.0019	-2.5 to 2.5	Pass
				-20	3.85	1.144	0.0016	-2.5 to 2.5	Pass
				-10	3.85	1.101	0.0016	-2.5 to 2.5	Pass
				0	3.85	-0.687	-0.0010	-2.5 to 2.5	Pass
				10	3.85	0.601	0.0009	-2.5 to 2.5	Pass
				30	3.85	2.303	0.0033	-2.5 to 2.5	Pass
				40	3.85	2.432	0.0035	-2.5 to 2.5	Pass
				50	3.85	3.033	0.0043	-2.5 to 2.5	Pass
	707.5	25	0	20	3.27	-0.973	-0.0014	-2.5 to 2.5	Pass
					3.85	0.715	0.0010	-2.5 to 2.5	Pass
					4.43	3.405	0.0048	-2.5 to 2.5	Pass
				-30	3.85	1.788	0.0025	-2.5 to 2.5	Pass
				-20	3.85	-0.472	-0.0007	-2.5 to 2.5	Pass
				-10	3.85	-1.144	-0.0016	-2.5 to 2.5	Pass
				0	3.85	2.460	0.0035	-2.5 to 2.5	Pass
				10	3.85	0.286	0.0004	-2.5 to 2.5	Pass
				30	3.85	2.875	0.0041	-2.5 to 2.5	Pass
				40	3.85	-1.287	-0.0018	-2.5 to 2.5	Pass
				50	3.85	1.945	0.0027	-2.5 to 2.5	Pass
	713.5	25	0	20	3.27	-1.760	-0.0025	-2.5 to 2.5	Pass
					3.85	1.531	0.0021	-2.5 to 2.5	Pass
					4.43	1.574	0.0022	-2.5 to 2.5	Pass
				-30	3.85	2.875	0.0040	-2.5 to 2.5	Pass
				-20	3.85	3.448	0.0048	-2.5 to 2.5	Pass
				-10	3.85	3.004	0.0042	-2.5 to 2.5	Pass
				0	3.85	1.645	0.0023	-2.5 to 2.5	Pass
				10	3.85	-0.572	-0.0008	-2.5 to 2.5	Pass
				30	3.85	0.615	0.0009	-2.5 to 2.5	Pass
				40	3.85	1.431	0.0020	-2.5 to 2.5	Pass
				50	3.85	0.458	0.0006	-2.5 to 2.5	Pass
16QAM	701.5	25	0	20	3.27	0.944	0.0013	-2.5 to 2.5	Pass
					3.85	-3.233	-0.0046	-2.5 to 2.5	Pass
					4.43	-3.233	-0.0046	-2.5 to 2.5	Pass
				-30	3.85	-3.476	-0.0050	-2.5 to 2.5	Pass
				-20	3.85	0.286	0.0004	-2.5 to 2.5	Pass
				-10	3.85	-0.787	-0.0011	-2.5 to 2.5	Pass
				0	3.85	-2.432	-0.0035	-2.5 to 2.5	Pass
				10	3.85	-0.901	-0.0013	-2.5 to 2.5	Pass
				30	3.85	0.701	0.0010	-2.5 to 2.5	Pass
				40	3.85	-0.386	-0.0006	-2.5 to 2.5	Pass
				50	3.85	-2.546	-0.0036	-2.5 to 2.5	Pass
	707.5	25	0	20	3.27	-1.059	-0.0015	-2.5 to 2.5	Pass
					3.85	0.014	0.0000	-2.5 to 2.5	Pass
					4.43	-0.830	-0.0012	-2.5 to 2.5	Pass
				-30	3.85	-0.587	-0.0008	-2.5 to 2.5	Pass
				-20	3.85	-0.901	-0.0013	-2.5 to 2.5	Pass
				-10	3.85	-2.089	-0.0030	-2.5 to 2.5	Pass
				0	3.85	1.760	0.0025	-2.5 to 2.5	Pass
				10	3.85	-0.215	-0.0003	-2.5 to 2.5	Pass
				30	3.85	-2.947	-0.0042	-2.5 to 2.5	Pass
				40	3.85	-2.546	-0.0036	-2.5 to 2.5	Pass
				50	3.85	0.772	0.0011	-2.5 to 2.5	Pass
	713.5	25	0	20	3.27	0.429	0.0006	-2.5 to 2.5	Pass

					3.85	0.086	0.0001	-2.5 to 2.5	Pass
					4.43	-0.844	-0.0012	-2.5 to 2.5	Pass
				-30	3.85	-0.758	-0.0011	-2.5 to 2.5	Pass
				-20	3.85	-1.845	-0.0026	-2.5 to 2.5	Pass
				-10	3.85	0.887	0.0012	-2.5 to 2.5	Pass
				0	3.85	0.858	0.0012	-2.5 to 2.5	Pass
				10	3.85	0.501	0.0007	-2.5 to 2.5	Pass
				30	3.85	-3.419	-0.0048	-2.5 to 2.5	Pass
				40	3.85	-0.629	-0.0009	-2.5 to 2.5	Pass
				50	3.85	-1.702	-0.0024	-2.5 to 2.5	Pass

2.1.4 B12_10MHz

Band: 12 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	704	50	0	20	3.27	2.646	0.0038	-2.5 to 2.5	Pass
					3.85	1.287	0.0018	-2.5 to 2.5	Pass
					4.43	0.372	0.0005	-2.5 to 2.5	Pass
				-30	3.85	0.901	0.0013	-2.5 to 2.5	Pass
				-20	3.85	2.704	0.0038	-2.5 to 2.5	Pass
				-10	3.85	3.190	0.0045	-2.5 to 2.5	Pass
				0	3.85	0.644	0.0009	-2.5 to 2.5	Pass
				10	3.85	1.402	0.0020	-2.5 to 2.5	Pass
				30	3.85	2.303	0.0033	-2.5 to 2.5	Pass
				40	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass
				50	3.85	1.388	0.0020	-2.5 to 2.5	Pass
	707.5	50	0	20	3.27	-1.745	-0.0025	-2.5 to 2.5	Pass
					3.85	2.618	0.0037	-2.5 to 2.5	Pass
					4.43	1.216	0.0017	-2.5 to 2.5	Pass
				-30	3.85	0.315	0.0004	-2.5 to 2.5	Pass
				-20	3.85	1.945	0.0027	-2.5 to 2.5	Pass
				-10	3.85	3.533	0.0050	-2.5 to 2.5	Pass
				0	3.85	0.086	0.0001	-2.5 to 2.5	Pass
				10	3.85	0.458	0.0006	-2.5 to 2.5	Pass
				30	3.85	1.059	0.0015	-2.5 to 2.5	Pass
				40	3.85	4.406	0.0062	-2.5 to 2.5	Pass
				50	3.85	2.561	0.0036	-2.5 to 2.5	Pass
	711	50	0	20	3.27	0.257	0.0004	-2.5 to 2.5	Pass
					3.85	1.960	0.0028	-2.5 to 2.5	Pass
					4.43	2.074	0.0029	-2.5 to 2.5	Pass
				-30	3.85	1.702	0.0024	-2.5 to 2.5	Pass
				-20	3.85	2.418	0.0034	-2.5 to 2.5	Pass
				-10	3.85	1.602	0.0023	-2.5 to 2.5	Pass
				0	3.85	1.445	0.0020	-2.5 to 2.5	Pass
				10	3.85	0.443	0.0006	-2.5 to 2.5	Pass
				30	3.85	1.388	0.0020	-2.5 to 2.5	Pass
				40	3.85	0.486	0.0007	-2.5 to 2.5	Pass
				50	3.85	2.360	0.0033	-2.5 to 2.5	Pass
16QAM	704	27	0	20	3.27	0.730	0.0010	-2.5 to 2.5	Pass
					3.85	-1.359	-0.0019	-2.5 to 2.5	Pass
					4.43	-2.832	-0.0040	-2.5 to 2.5	Pass
				-30	3.85	-2.446	-0.0035	-2.5 to 2.5	Pass
				-20	3.85	0.701	0.0010	-2.5 to 2.5	Pass
				-10	3.85	-0.172	-0.0002	-2.5 to 2.5	Pass
				0	3.85	-3.777	-0.0054	-2.5 to 2.5	Pass
				10	3.85	-0.372	-0.0005	-2.5 to 2.5	Pass

				30	3.85	-1.287	-0.0018	-2.5 to 2.5	Pass
				40	3.85	2.131	0.0030	-2.5 to 2.5	Pass
				50	3.85	0.544	0.0008	-2.5 to 2.5	Pass
	707.5	27	0	20	3.27	-0.515	-0.0007	-2.5 to 2.5	Pass
					3.85	-2.418	-0.0034	-2.5 to 2.5	Pass
					4.43	-2.260	-0.0032	-2.5 to 2.5	Pass
				-30	3.85	-3.390	-0.0048	-2.5 to 2.5	Pass
				-20	3.85	-2.718	-0.0038	-2.5 to 2.5	Pass
				-10	3.85	-1.588	-0.0022	-2.5 to 2.5	Pass
				0	3.85	0.029	0.0000	-2.5 to 2.5	Pass
				10	3.85	0.930	0.0013	-2.5 to 2.5	Pass
				30	3.85	-1.574	-0.0022	-2.5 to 2.5	Pass
				40	3.85	0.358	0.0005	-2.5 to 2.5	Pass
				50	3.85	-2.847	-0.0040	-2.5 to 2.5	Pass
	711	27	23	20	3.27	2.518	0.0035	-2.5 to 2.5	Pass
					3.85	0.100	0.0001	-2.5 to 2.5	Pass
					4.43	1.717	0.0024	-2.5 to 2.5	Pass
				-30	3.85	-1.130	-0.0016	-2.5 to 2.5	Pass
				-20	3.85	-0.730	-0.0010	-2.5 to 2.5	Pass
				-10	3.85	2.818	0.0040	-2.5 to 2.5	Pass
				0	3.85	1.616	0.0023	-2.5 to 2.5	Pass
				10	3.85	1.917	0.0027	-2.5 to 2.5	Pass
				30	3.85	-0.315	-0.0004	-2.5 to 2.5	Pass
				40	3.85	-0.157	-0.0002	-2.5 to 2.5	Pass
				50	3.85	0.973	0.0014	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

3.1.1 B12_1.4MHz

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

3.1.2 B12_3MHz

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

3.1.3 B12_5MHz

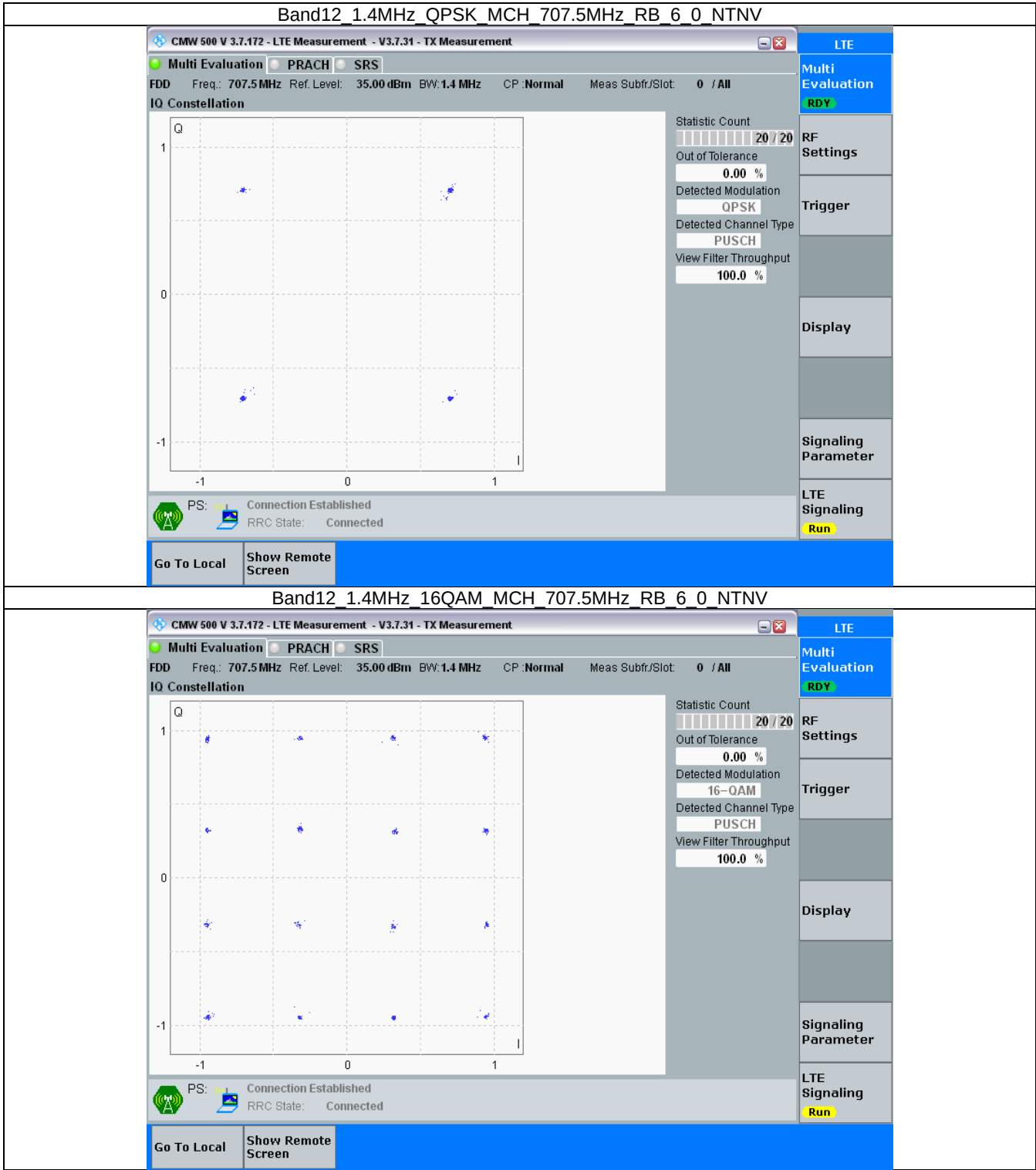
Band: 12 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	25	0	Refer To Test Graph		Pass
16QAM	707.5	25	0	Refer To Test Graph		Pass

3.1.4 B12_10MHz

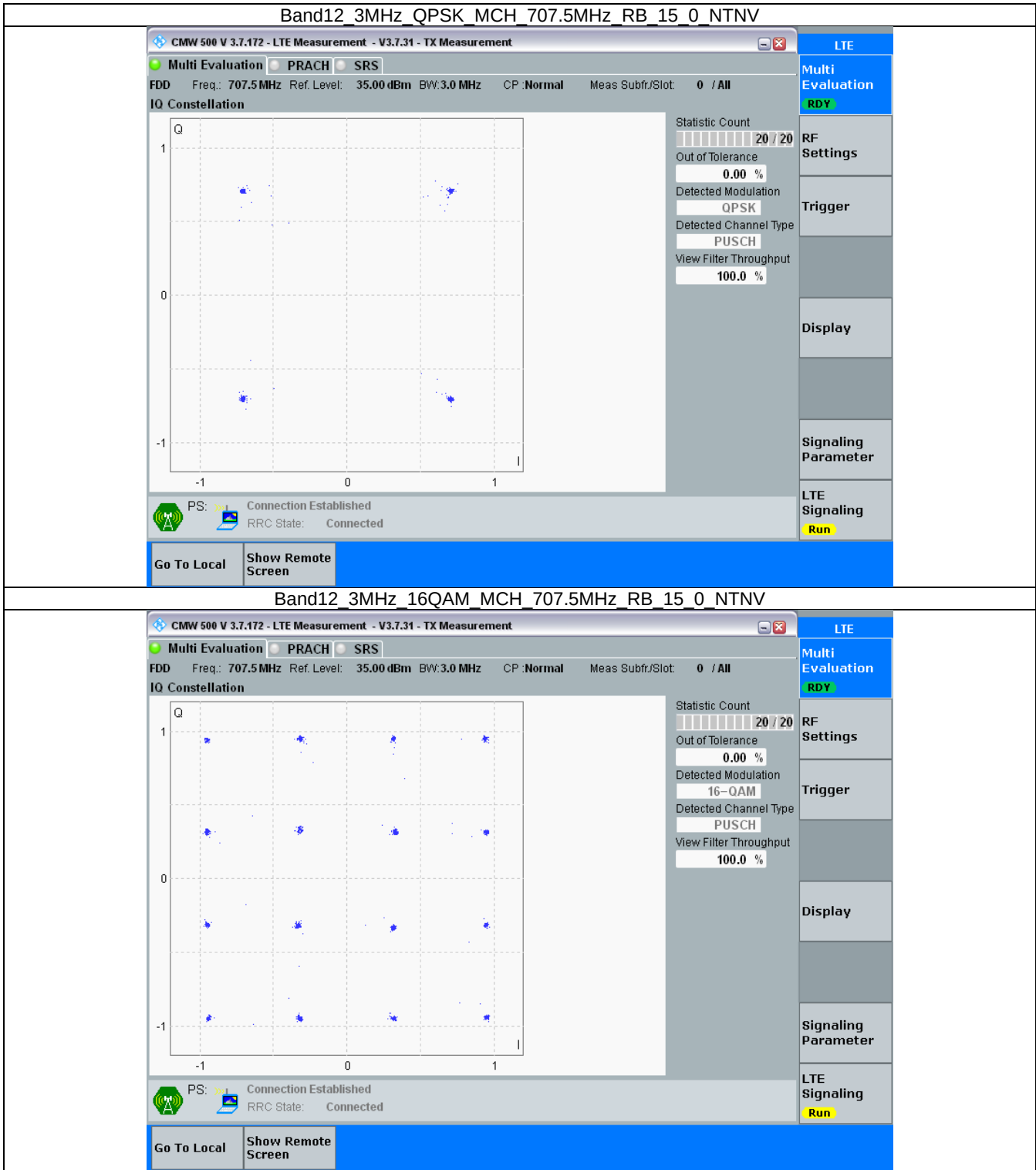
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	50	0	Refer To Test Graph		Pass
16QAM	707.5	27	0	Refer To Test Graph		Pass

3.2 Test Graph

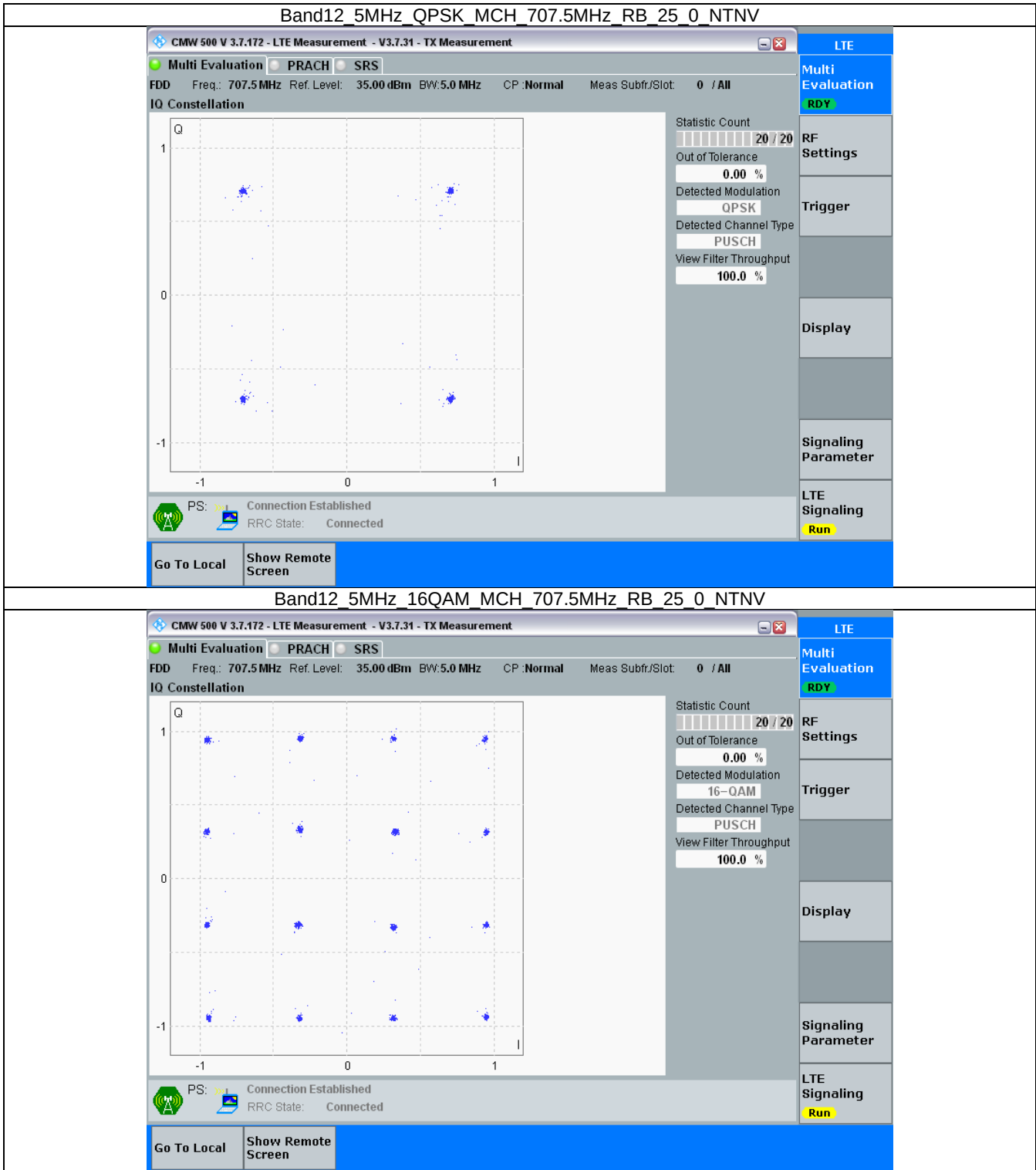
3.2.1 B12_1.4MHz



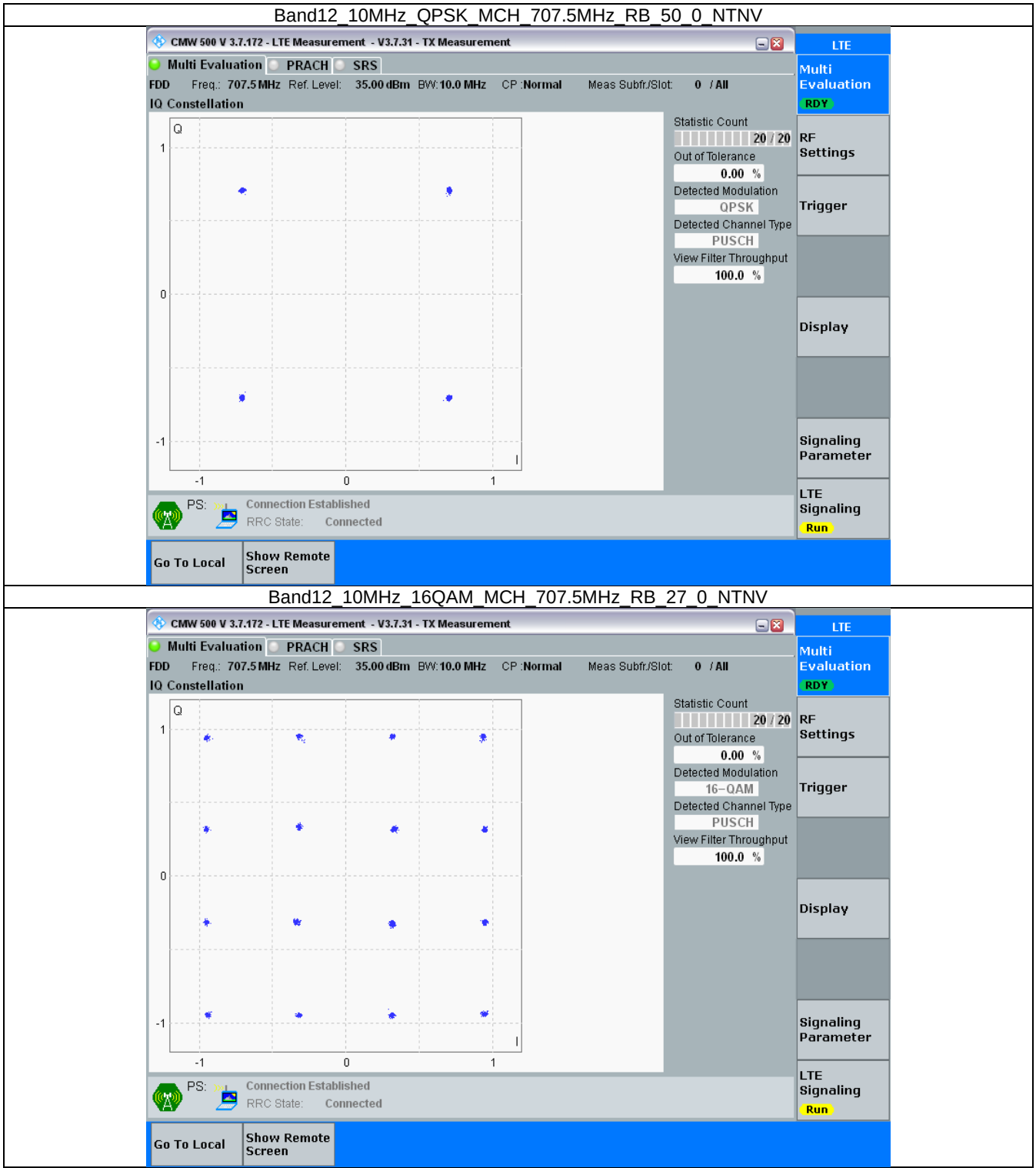
3.2.2 B12_3MHz



3.2.3 B12_5MHz



3.2.4 B12_10MHz



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band12_OBW

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.112	/	Pass
		707.5	6	0	1.109	/	Pass
		715.3	6	0	1.108	/	Pass
	16QAM	699.7	6	0	1.109	/	Pass
		707.5	6	0	1.112	/	Pass
		715.3	6	0	1.109	/	Pass
3	QPSK	700.5	15	0	2.732	/	Pass
		707.5	15	0	2.735	/	Pass
		714.5	15	0	2.721	/	Pass
	16QAM	700.5	15	0	2.745	/	Pass
		707.5	15	0	2.717	/	Pass
		714.5	15	0	2.710	/	Pass
5	QPSK	701.5	25	0	4.529	/	Pass
		707.5	25	0	4.541	/	Pass
		713.5	25	0	4.533	/	Pass
	16QAM	701.5	25	0	4.543	/	Pass
		707.5	25	0	4.520	/	Pass
		713.5	25	0	4.527	/	Pass
10	QPSK	704	50	0	9.020	/	Pass
		707.5	50	0	9.051	/	Pass
		711	50	0	9.109	/	Pass
	16QAM	704	27	0	5.151	/	Pass
		707.5	27	0	5.061	/	Pass
		711	27	23	5.135	/	Pass

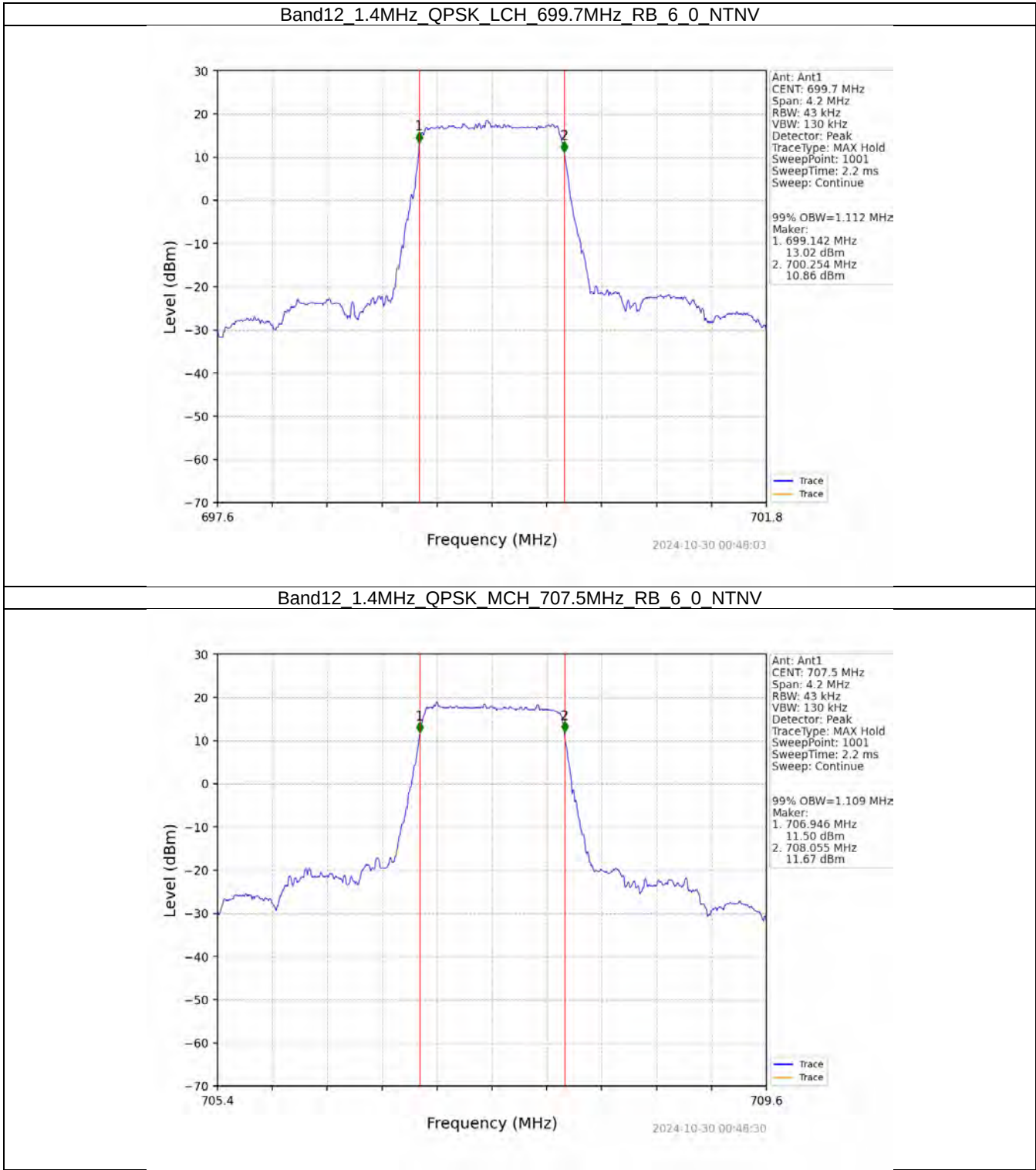
4.1.2 Band12_XDB

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.322	/	Pass
		707.5	6	0	1.322	/	Pass
		715.3	6	0	1.333	/	Pass
	16QAM	699.7	6	0	1.330	/	Pass
		707.5	6	0	1.335	/	Pass
		715.3	6	0	1.298	/	Pass
3	QPSK	700.5	15	0	3.026	/	Pass
		707.5	15	0	3.023	/	Pass
		714.5	15	0	3.033	/	Pass
	16QAM	700.5	15	0	3.031	/	Pass
		707.5	15	0	3.032	/	Pass
		714.5	15	0	3.017	/	Pass
5	QPSK	701.5	25	0	5.006	/	Pass
		707.5	25	0	5.030	/	Pass
		713.5	25	0	5.037	/	Pass

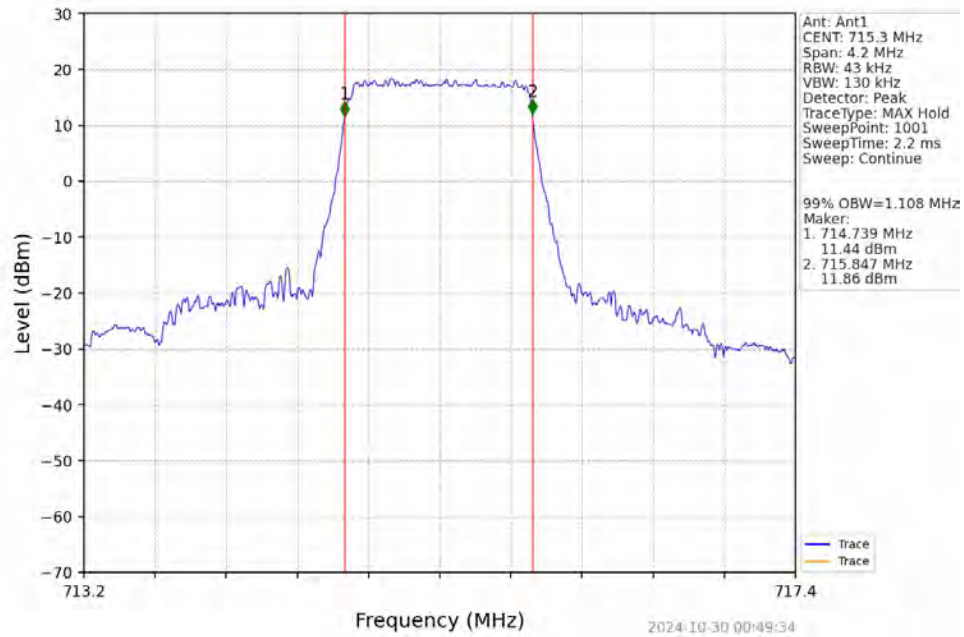
10	16QAM	701.5	25	0	5.024	/	Pass
		707.5	25	0	5.001	/	Pass
		713.5	25	0	5.022	/	Pass
	QPSK	704	50	0	10.300	/	Pass
		707.5	50	0	10.301	/	Pass
		711	50	0	10.641	/	Pass
	16QAM	704	27	0	6.269	/	Pass
		707.5	27	0	6.347	/	Pass
		711	27	23	6.608	/	Pass

4.2 Test Graph

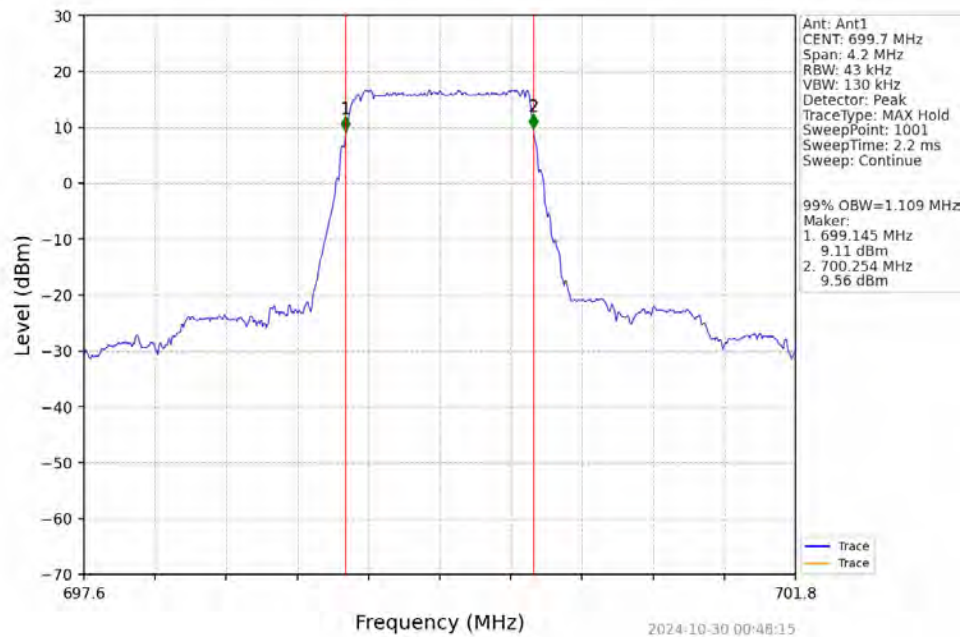
4.2.1 Band12_OBW



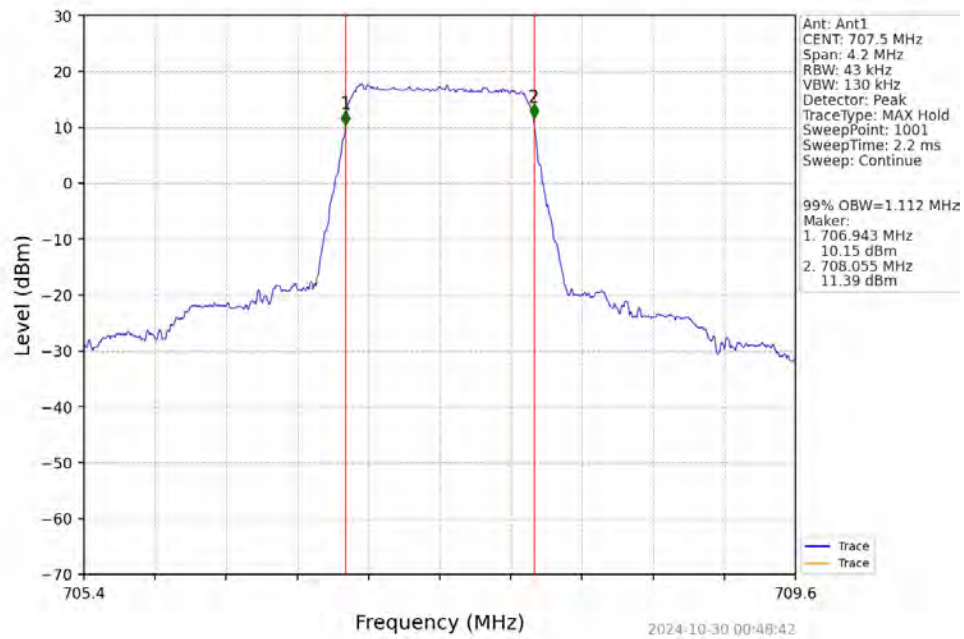
Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTNV



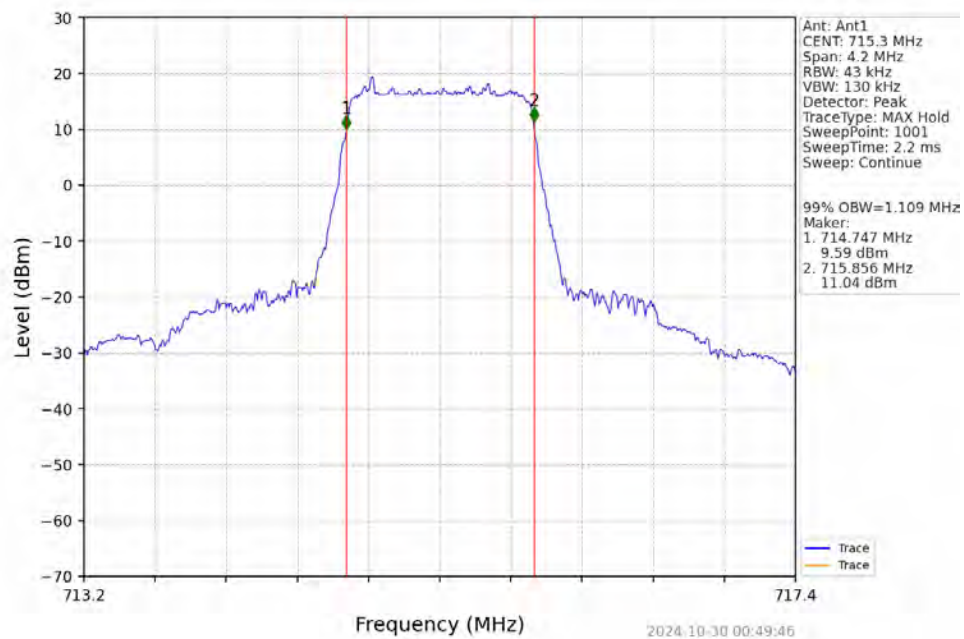
Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTNV



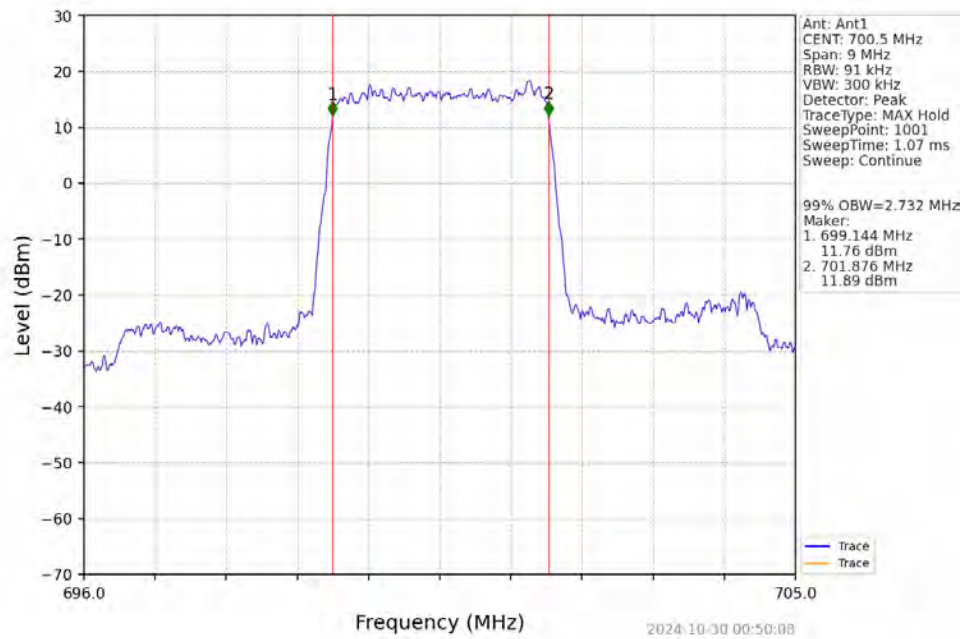
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTNV



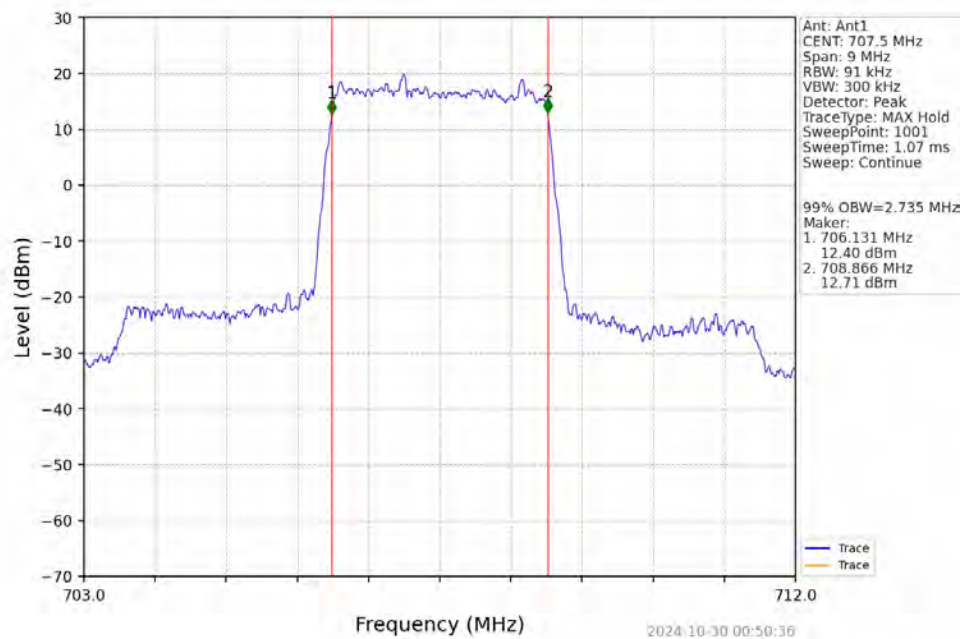
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTNV



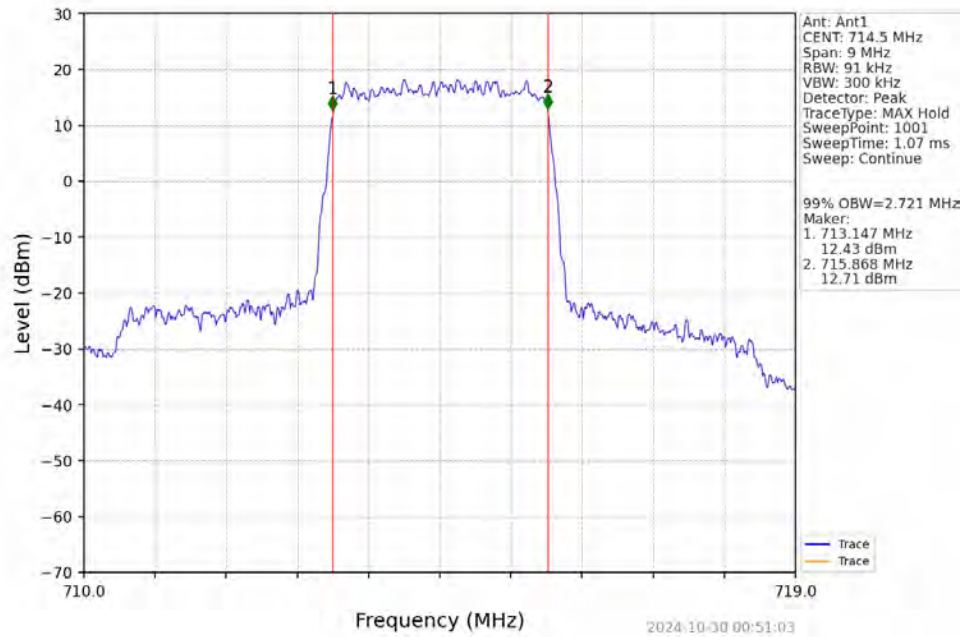
Band12 3MHz QPSK LCH 700.5MHz RB 15 0 NTNV



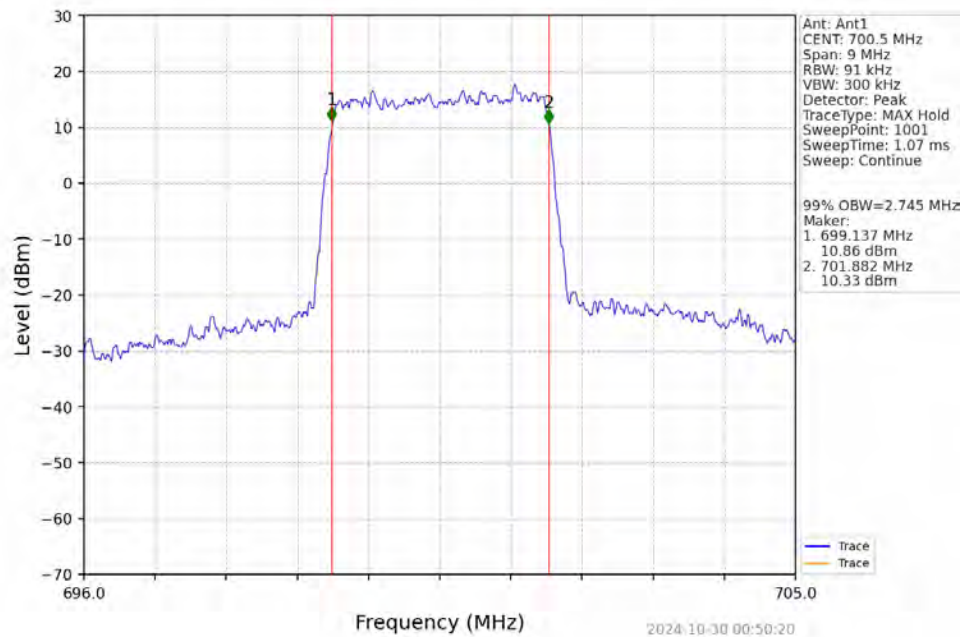
Band12 3MHz QPSK MCH 707.5MHz RB 15 0 NTNV



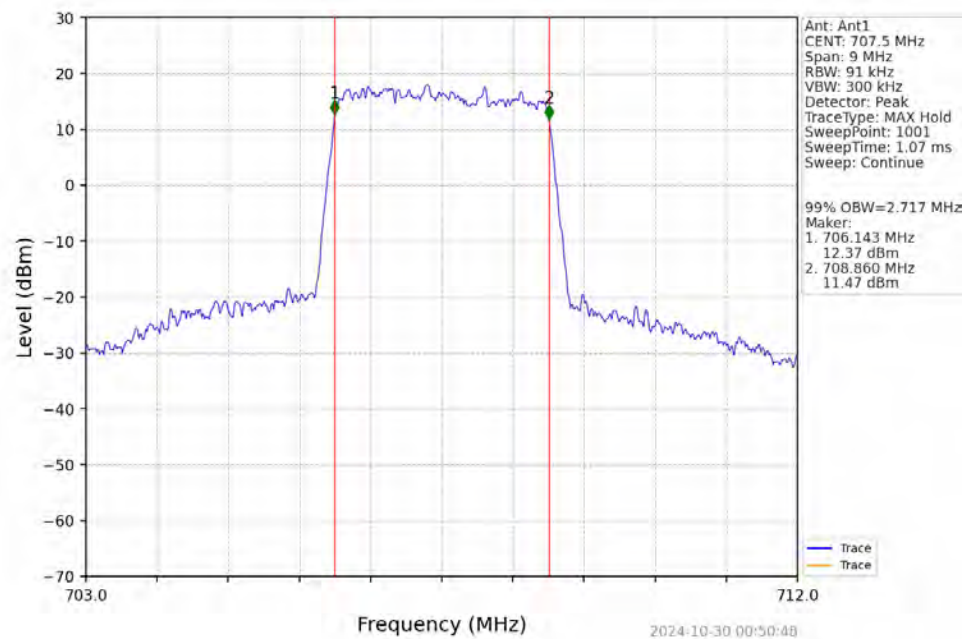
Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTNV



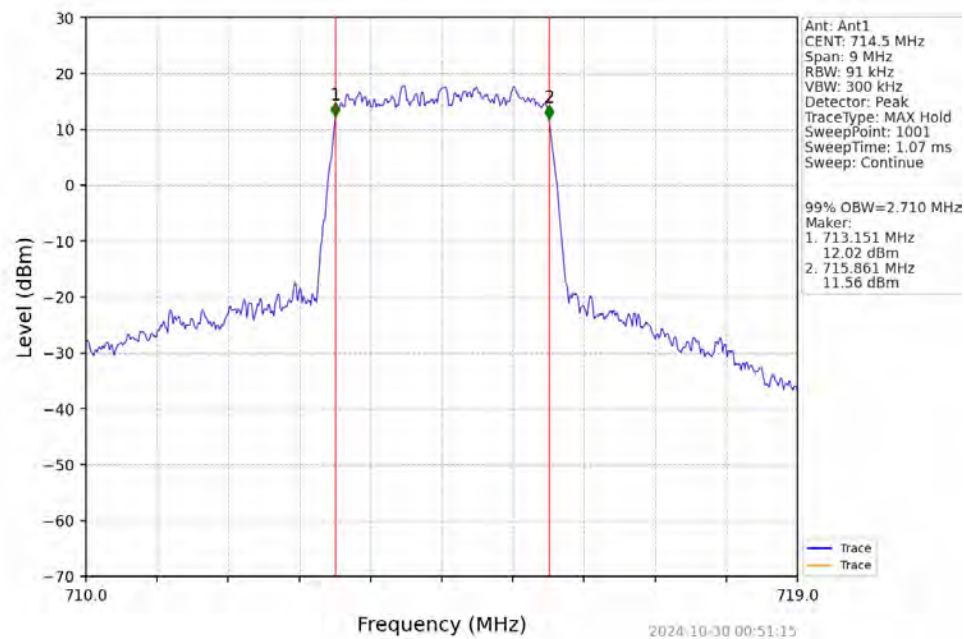
Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTNV



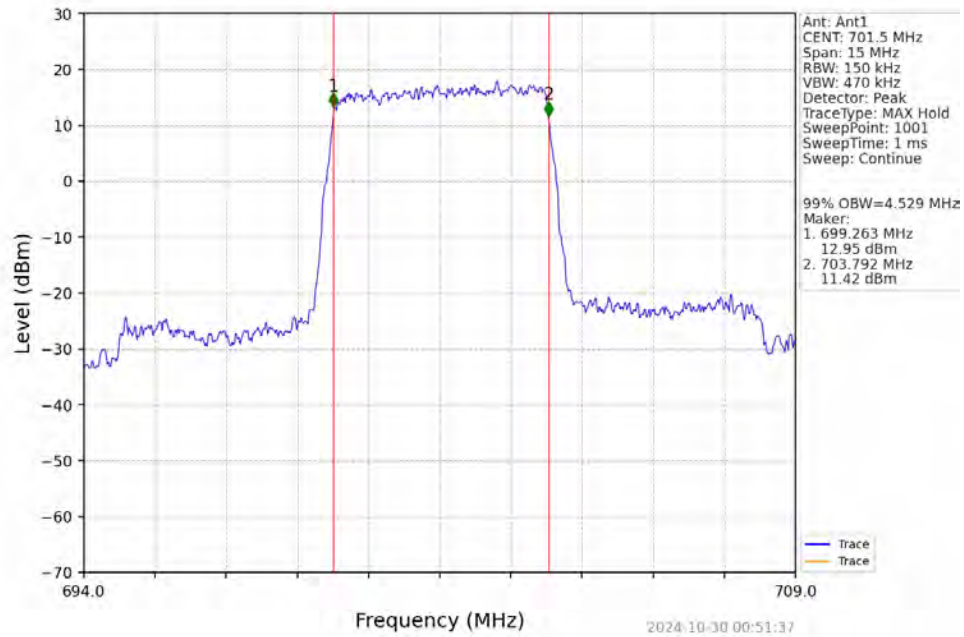
Band12 3MHz 16QAM MCH 707.5MHz RB 15 0 NTNV



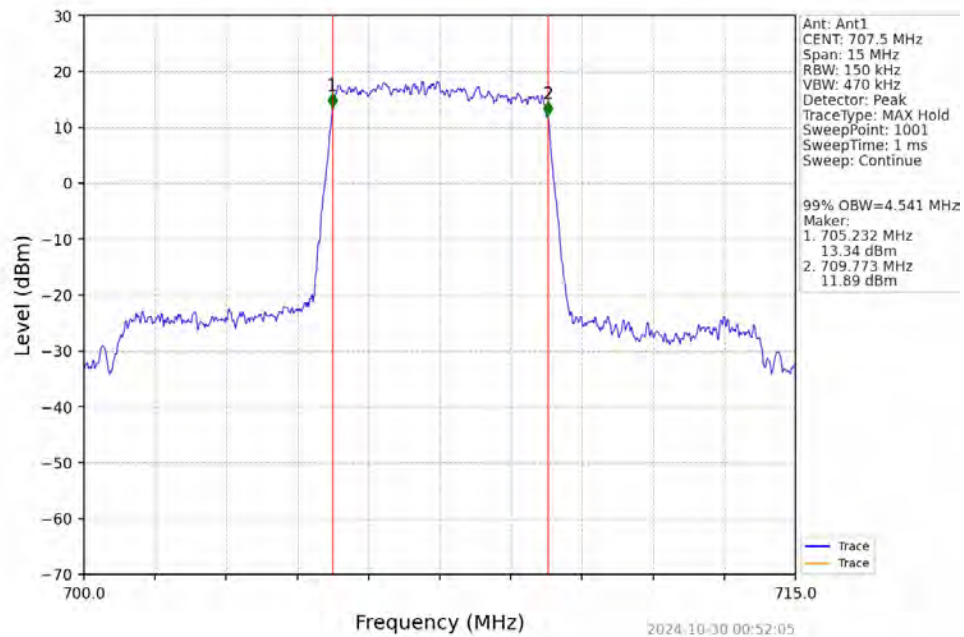
Band12 3MHz 16QAM HCH 714.5MHz RB 15 0 NTNV



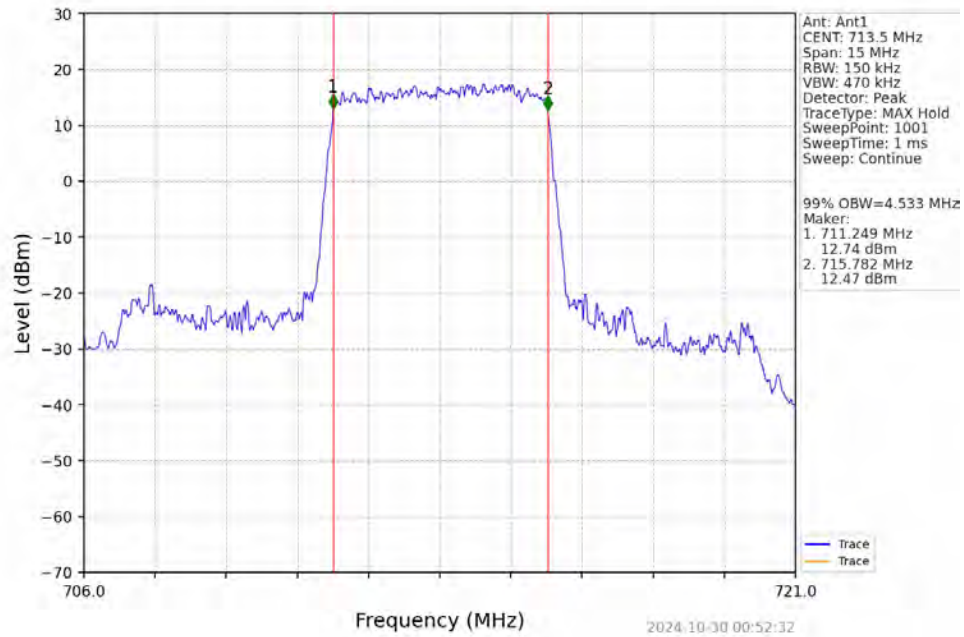
Band12 5MHz QPSK LCH 701.5MHz RB 25 0 NTNV



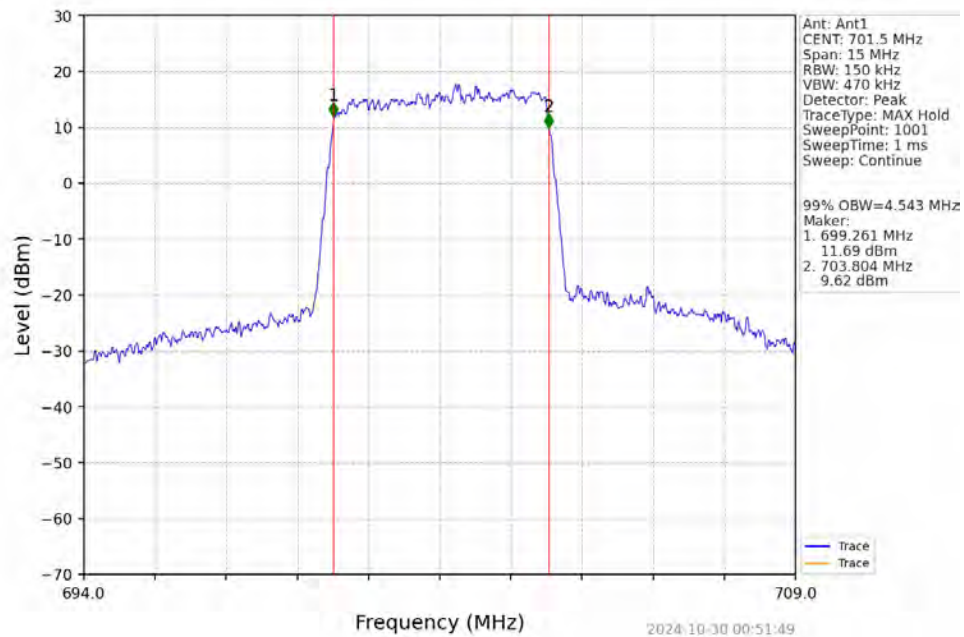
Band12 5MHz QPSK MCH 707.5MHz RB 25 0 NTNV



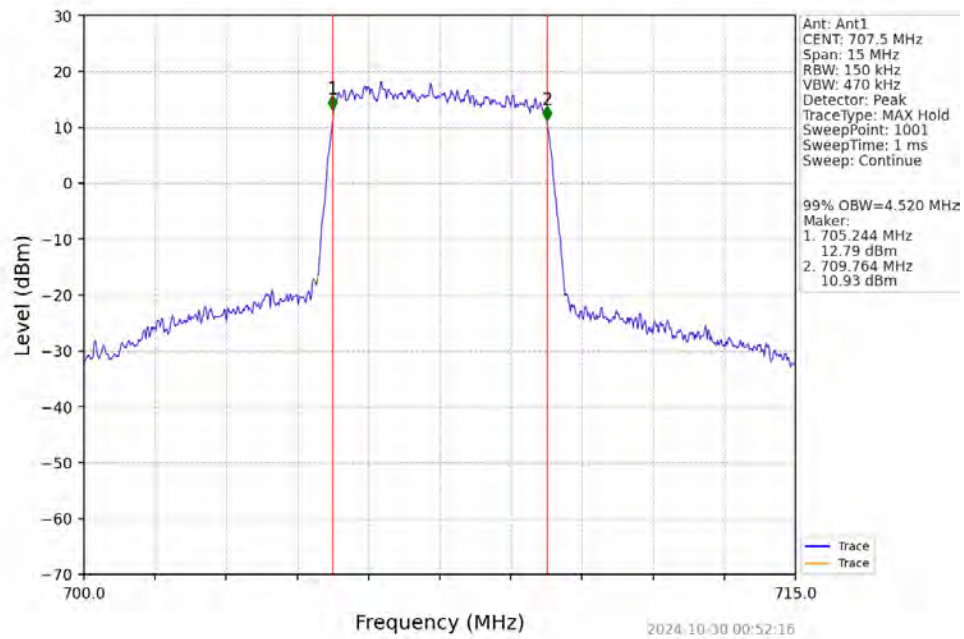
Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTNV



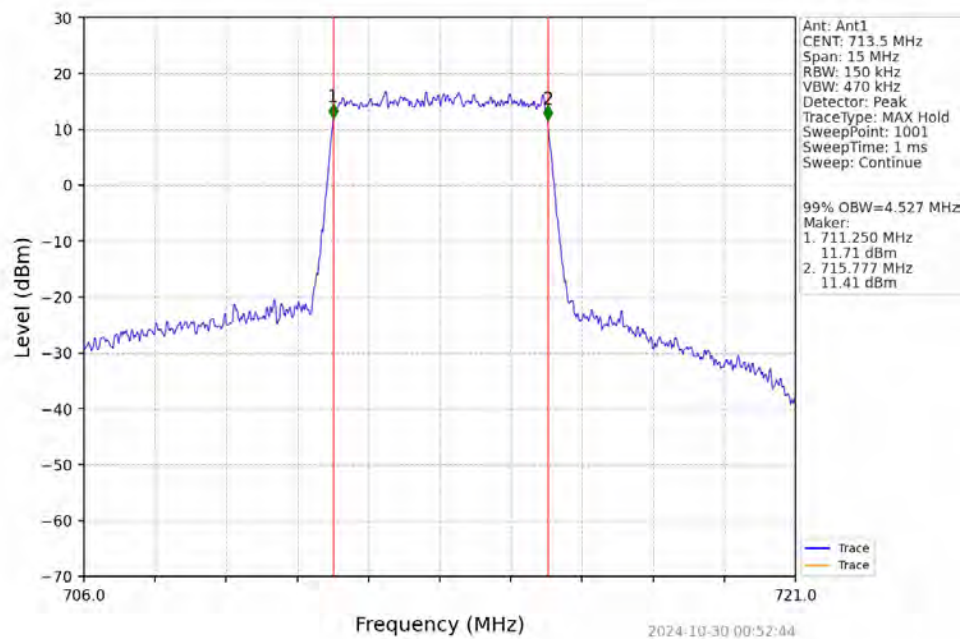
Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTNV



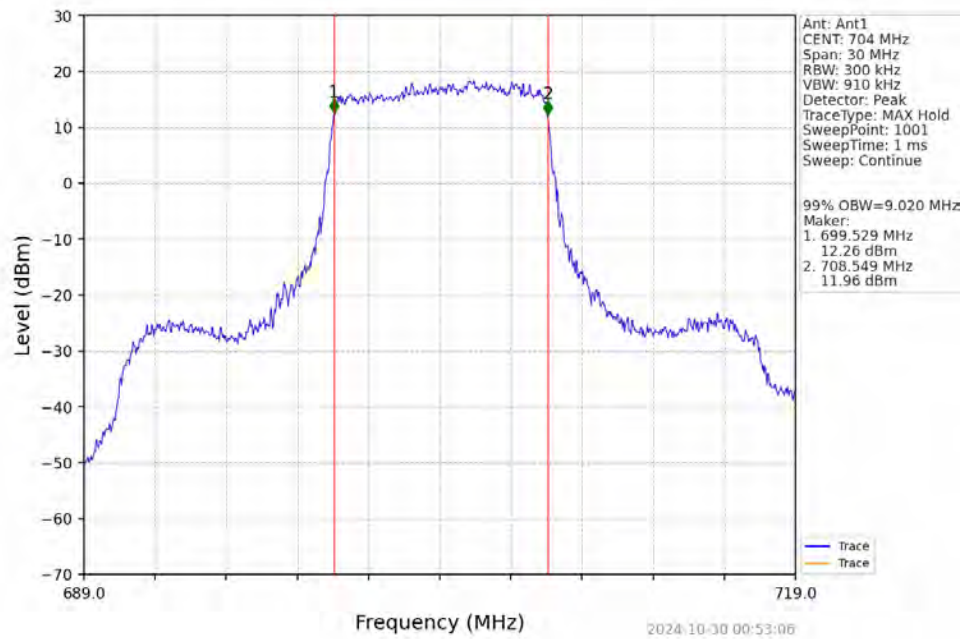
Band12 5MHz 16QAM MCH 707.5MHz RB 25 0 NTNV



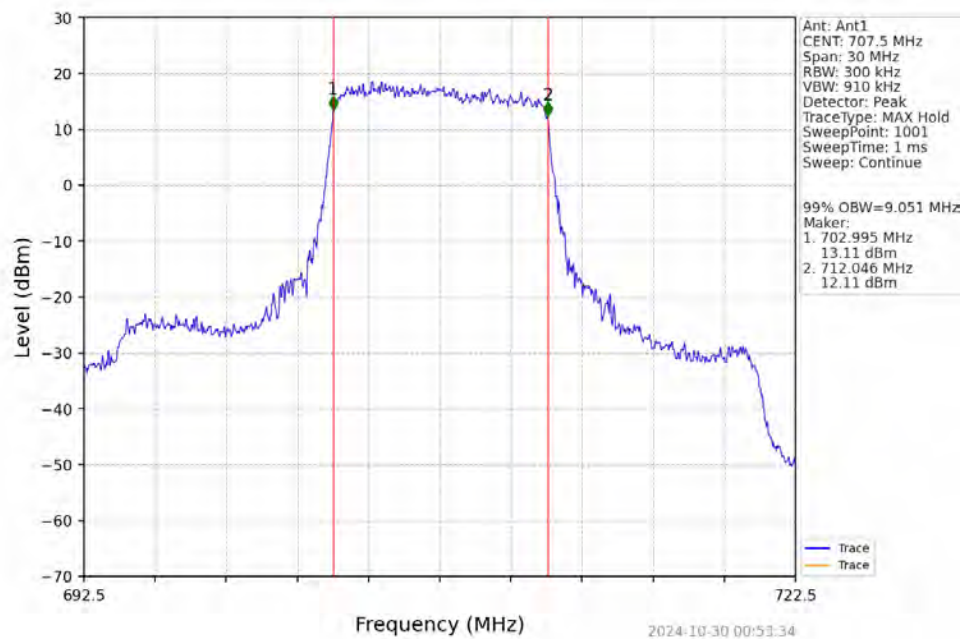
Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTNV



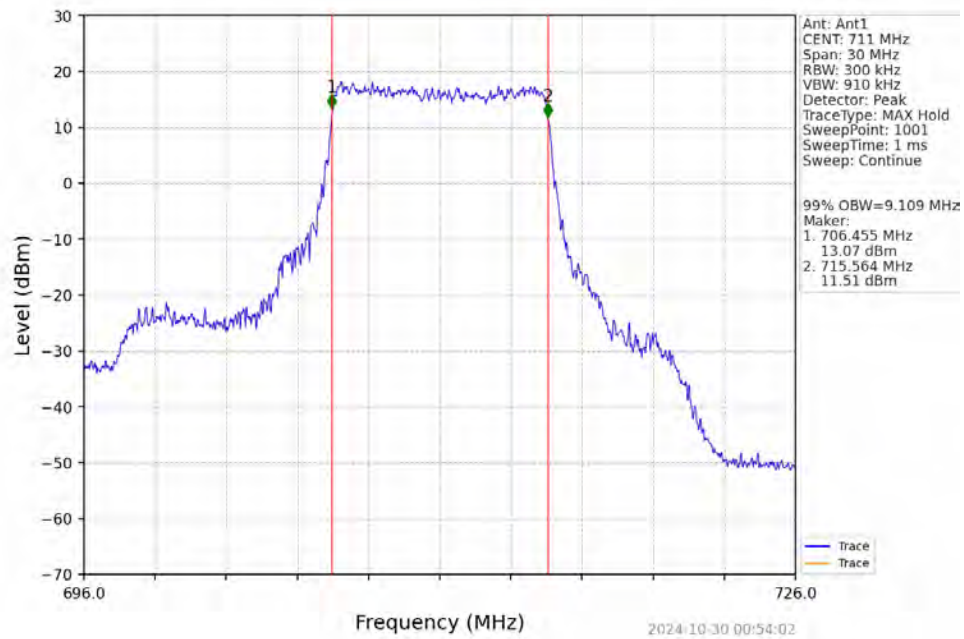
Band12 10MHz QPSK LCH 704MHz RB 50 0 NTNV



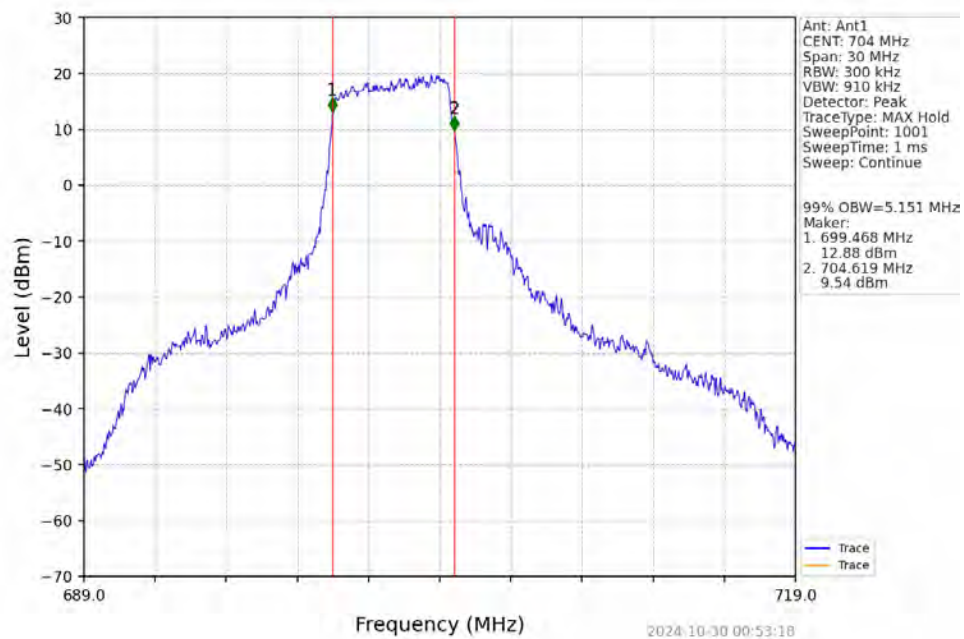
Band12 10MHz QPSK MCH 707.5MHz RB 50 0 NTNV



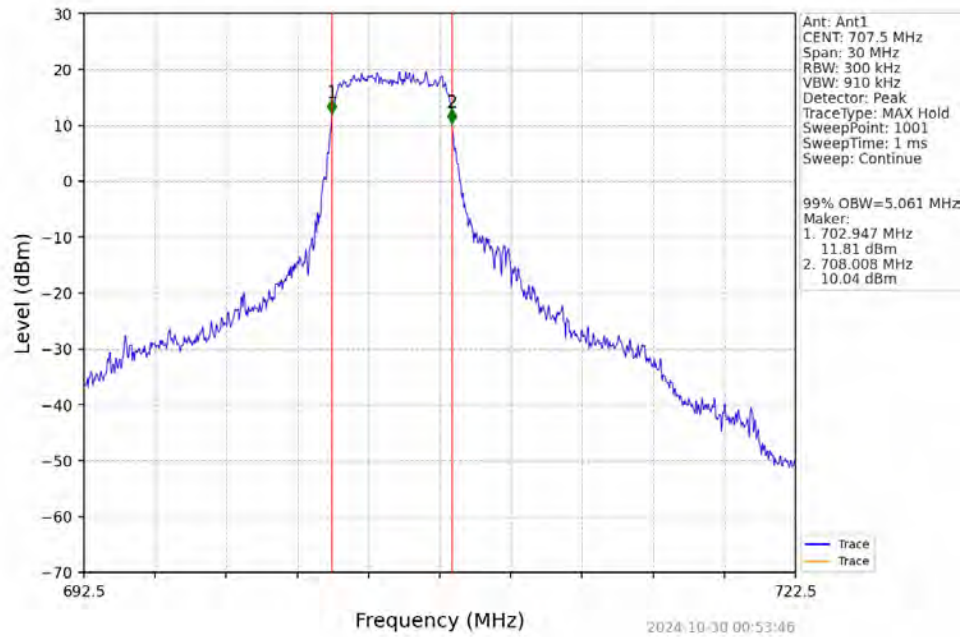
Band12 10MHz QPSK HCH 711MHz RB 50 0 NTNV



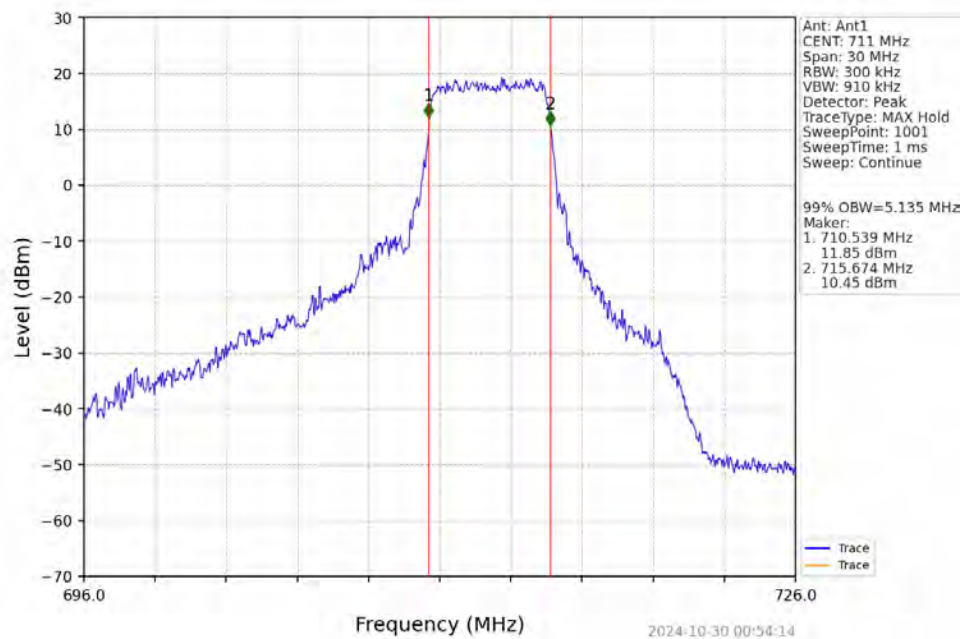
Band12 10MHz 16QAM LCH 704MHz RB 27 0 NTNV



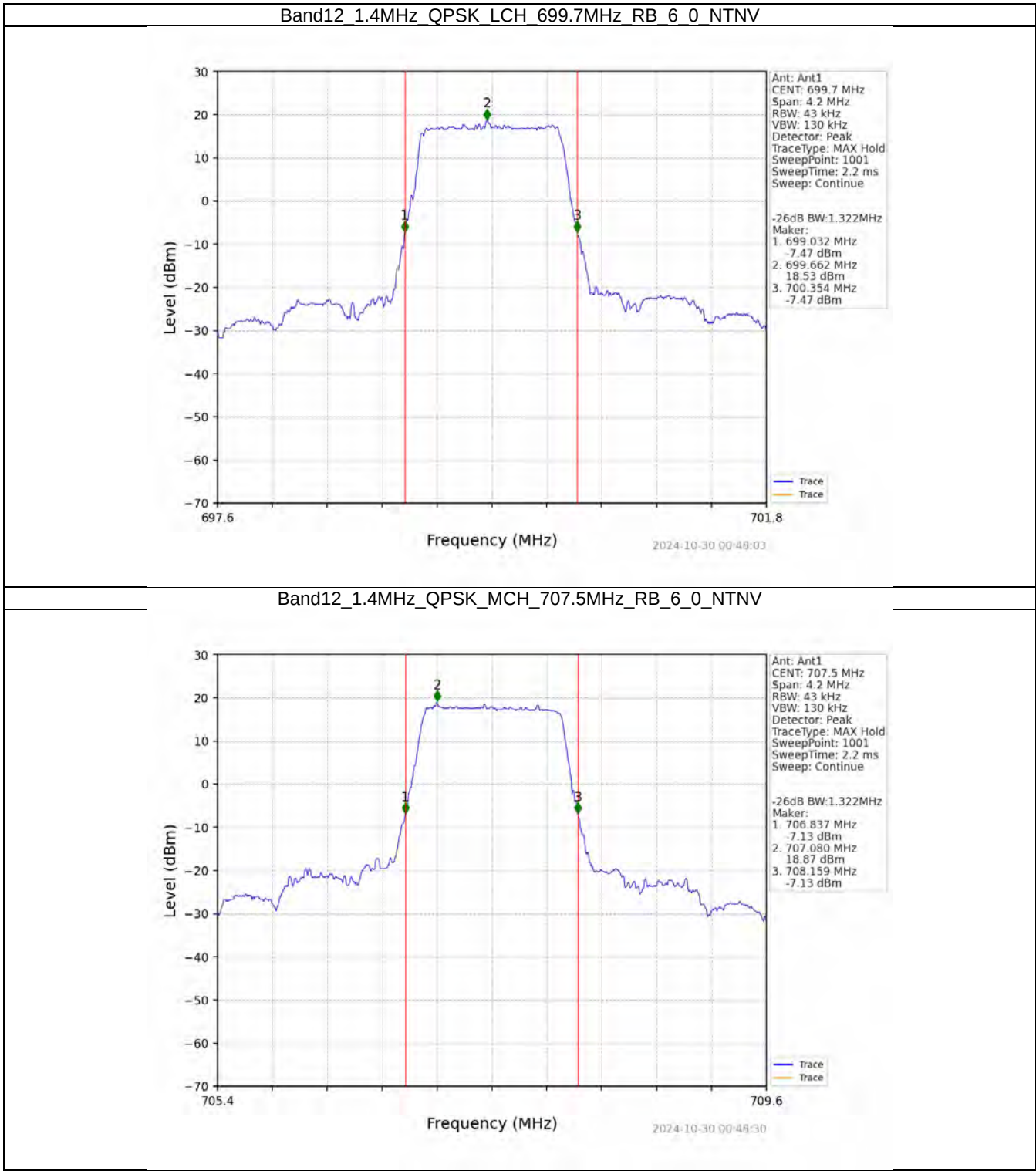
Band12 10MHz 16QAM MCH 707.5MHz RB 27 0 NTNV



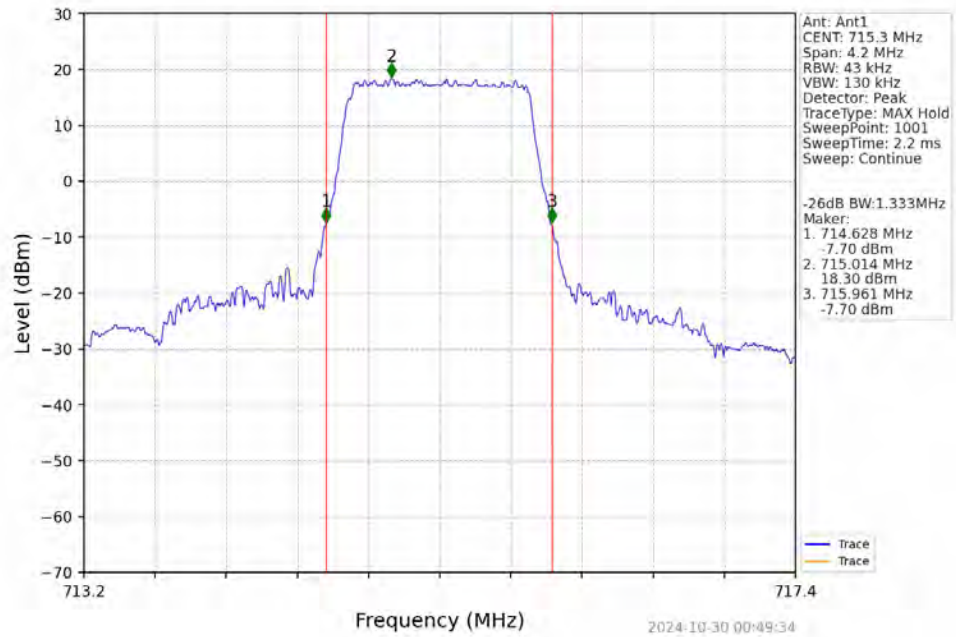
Band12 10MHz 16QAM HCH 711MHz RB 27 23 NTNV



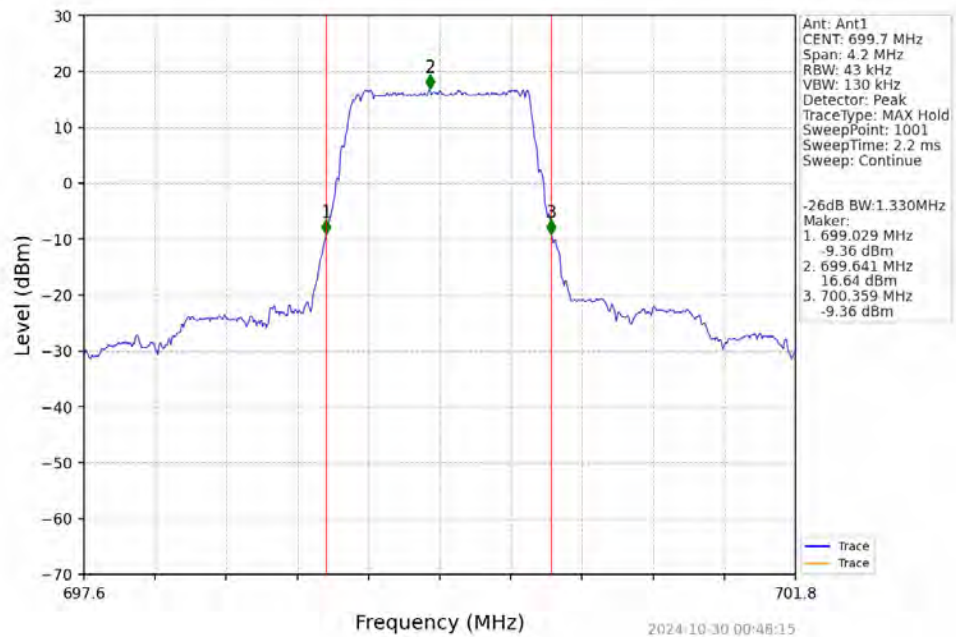
4.2.2 Band12_XDB



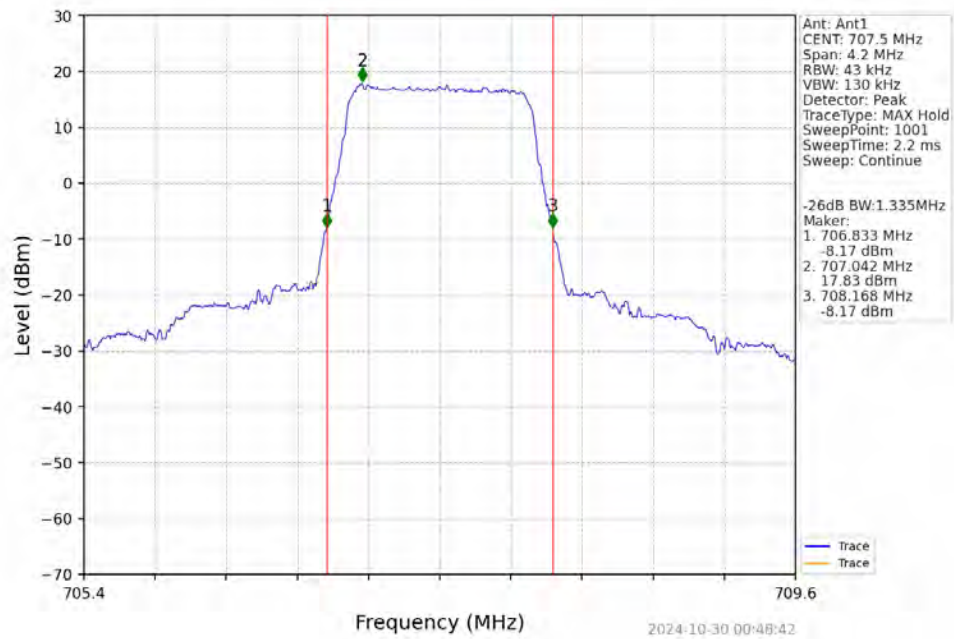
Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTNV



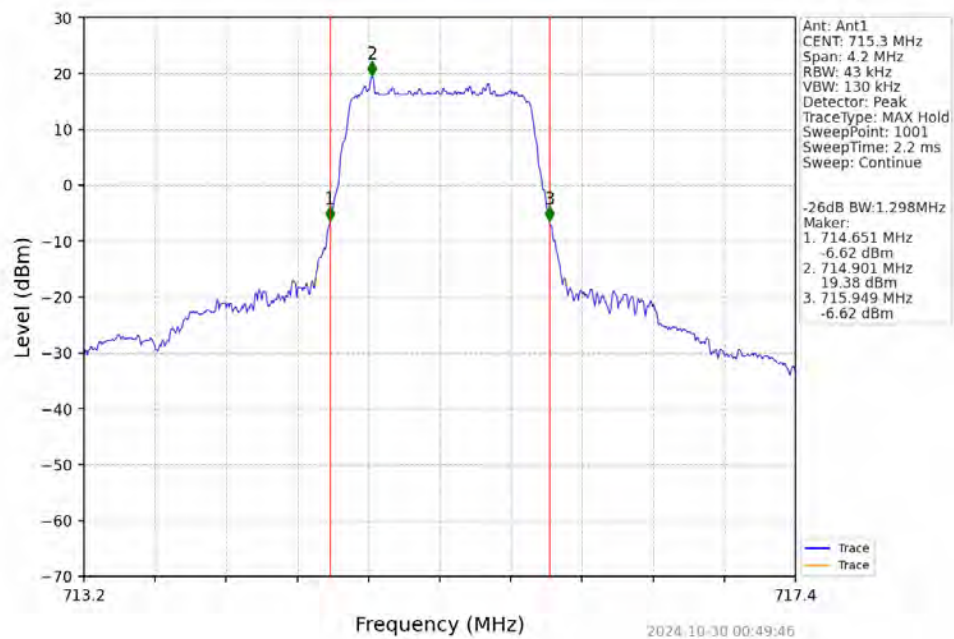
Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTNV



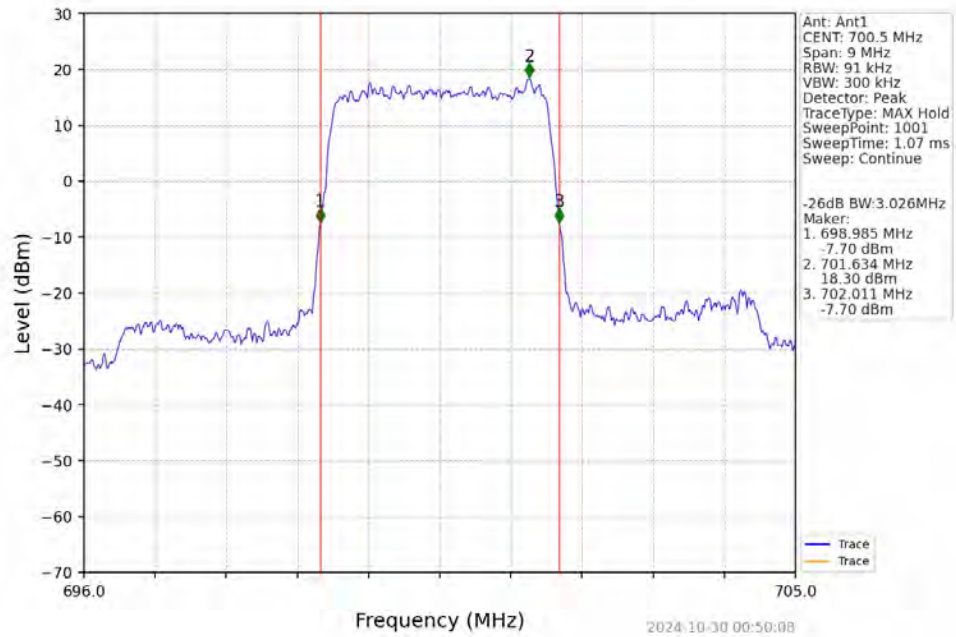
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTNV



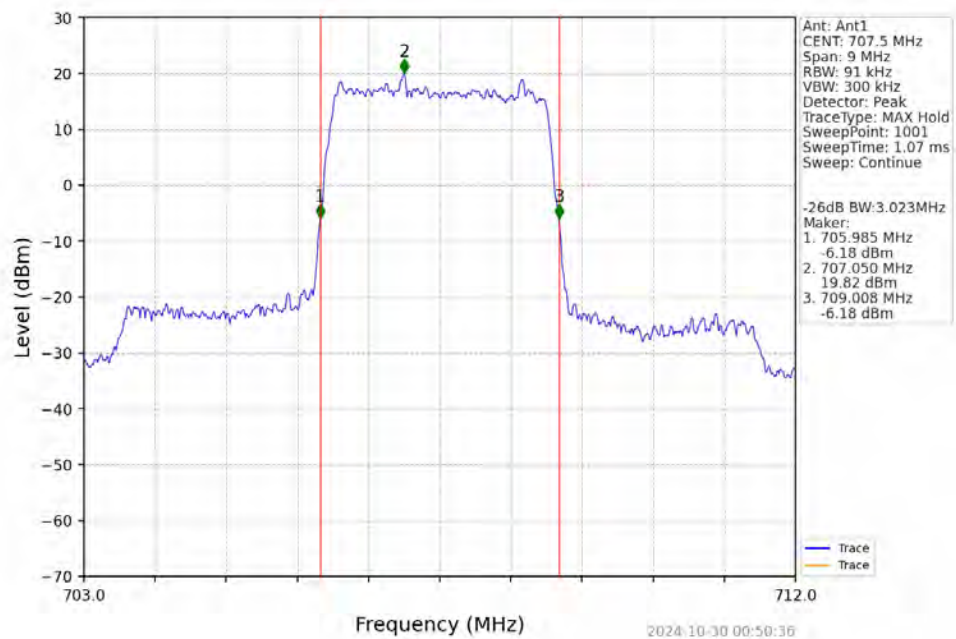
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTNV



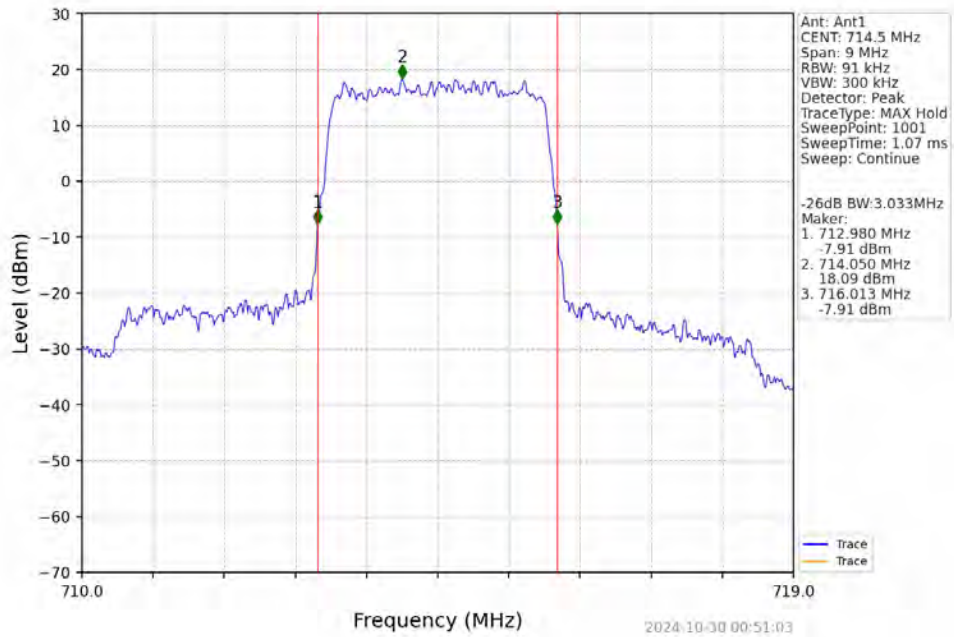
Band12 3MHz QPSK LCH 700.5MHz RB 15 0 NTNV



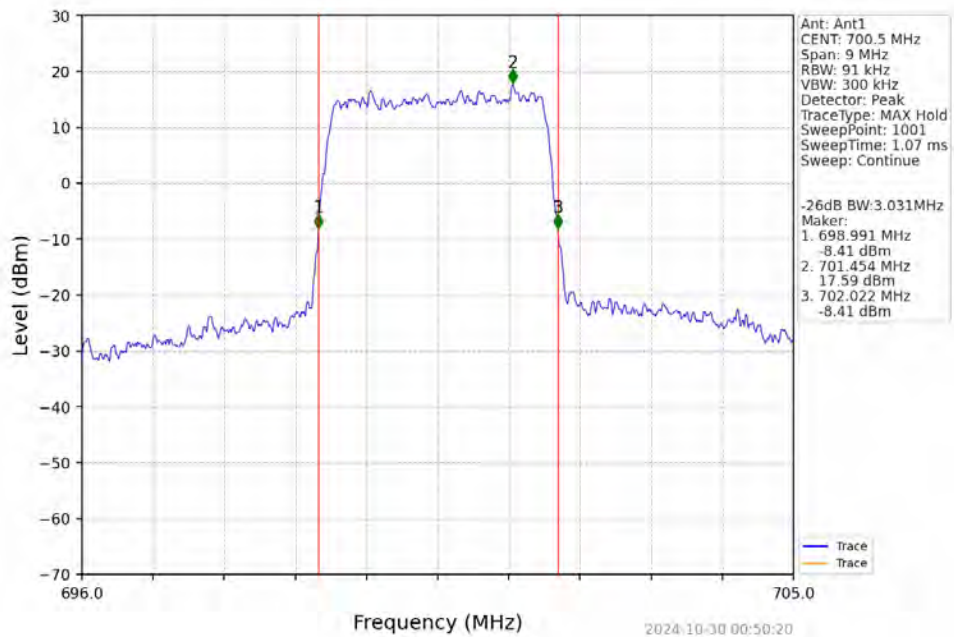
Band12 3MHz QPSK MCH 707.5MHz RB 15 0 NTNV



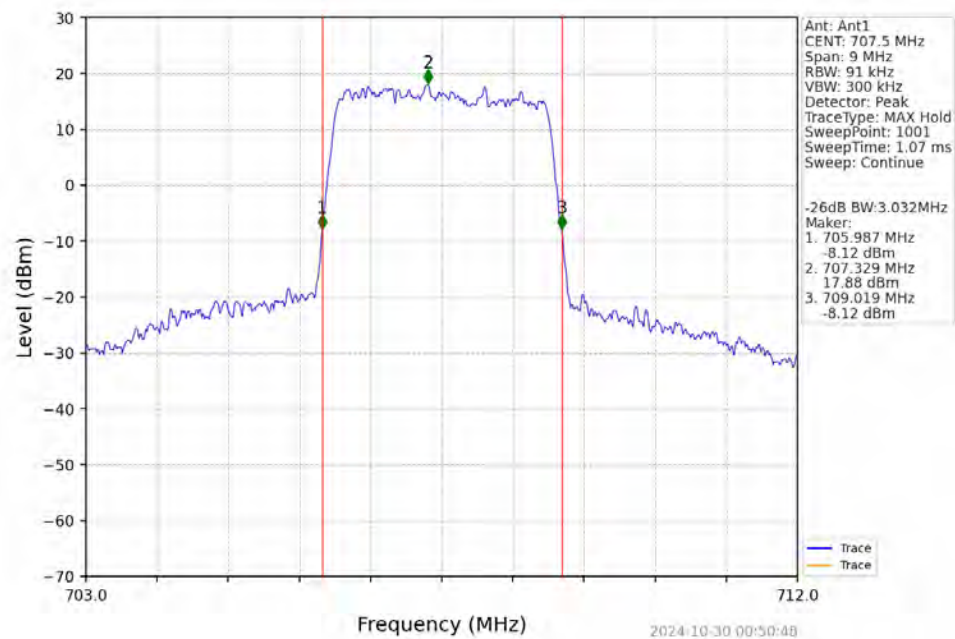
Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTN



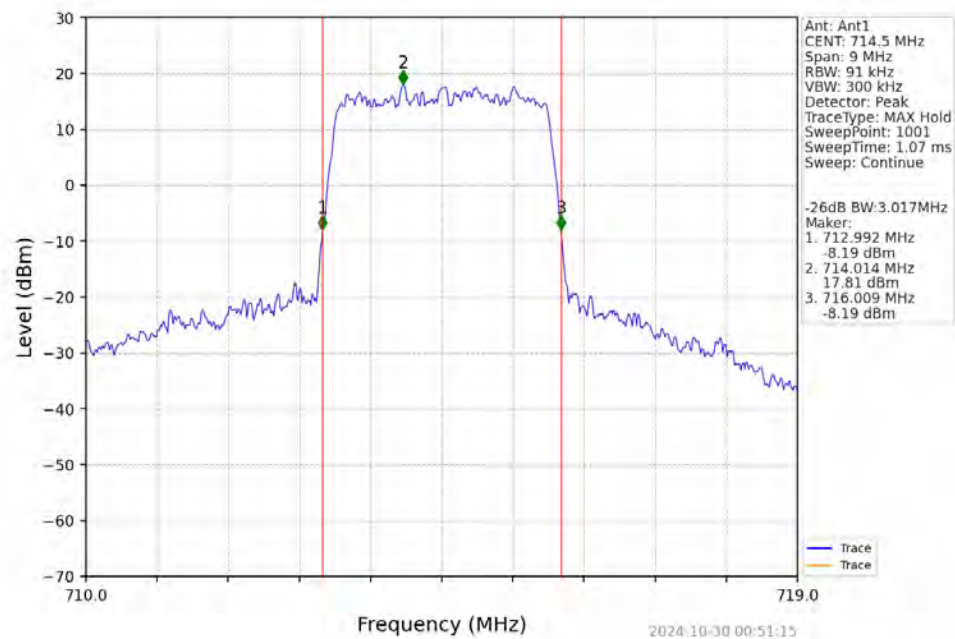
Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTN



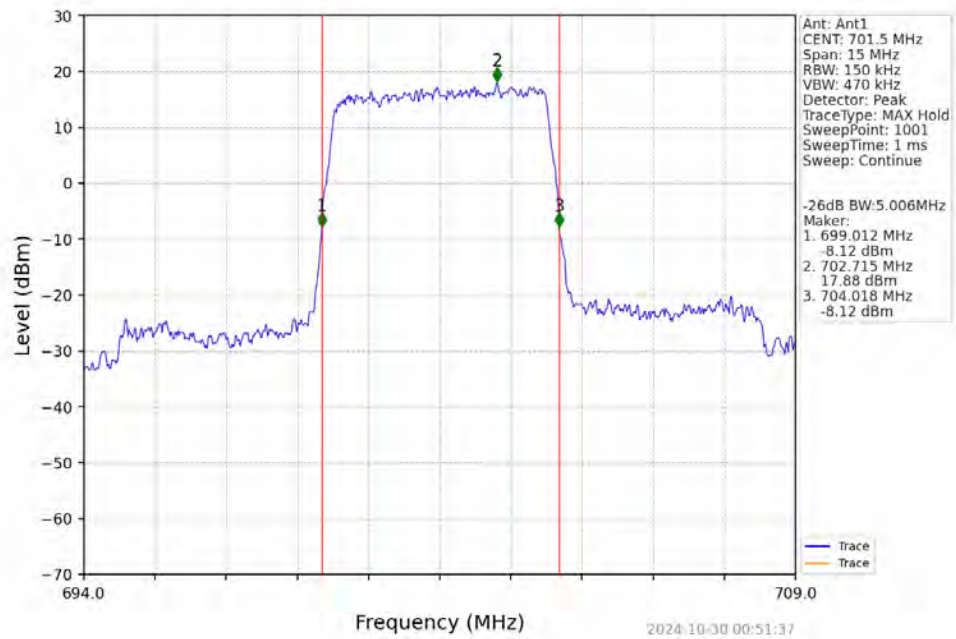
Band12 3MHz 16QAM MCH 707.5MHz RB 15 0 NTNV



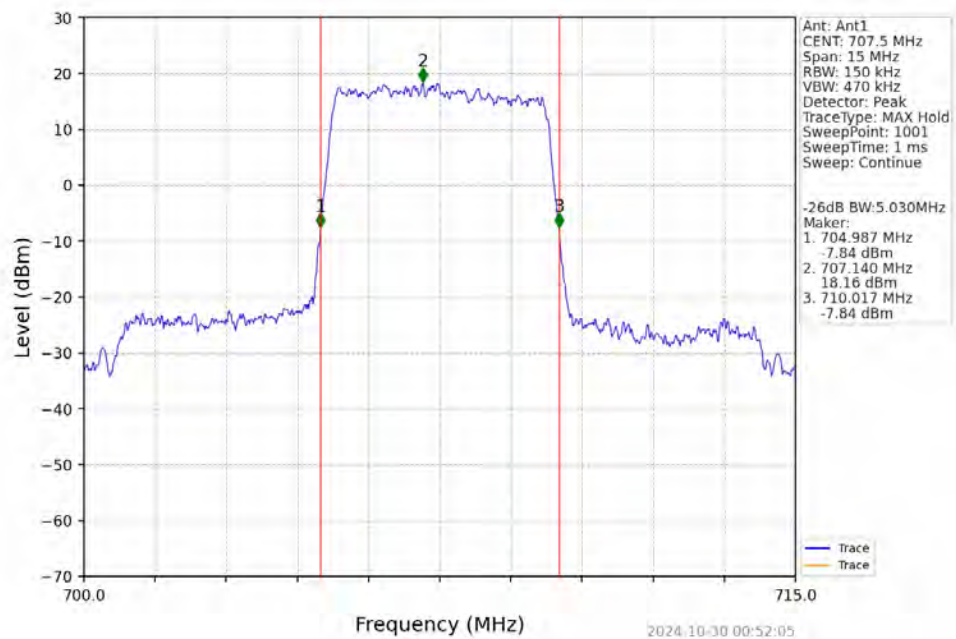
Band12 3MHz 16QAM HCH 714.5MHz RB 15 0 NTNV



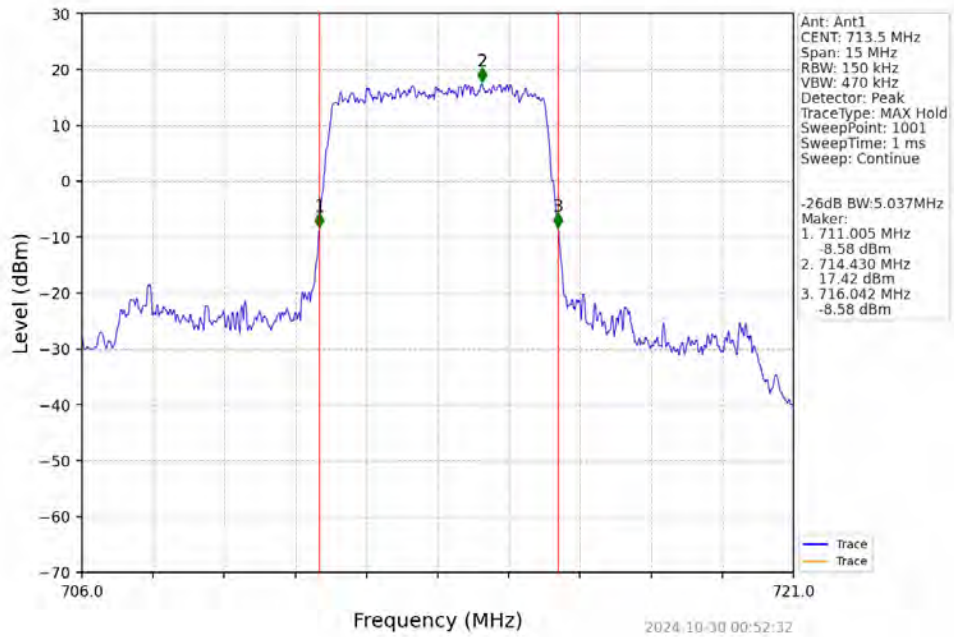
Band12 5MHz QPSK LCH 701.5MHz RB 25 0 NTN



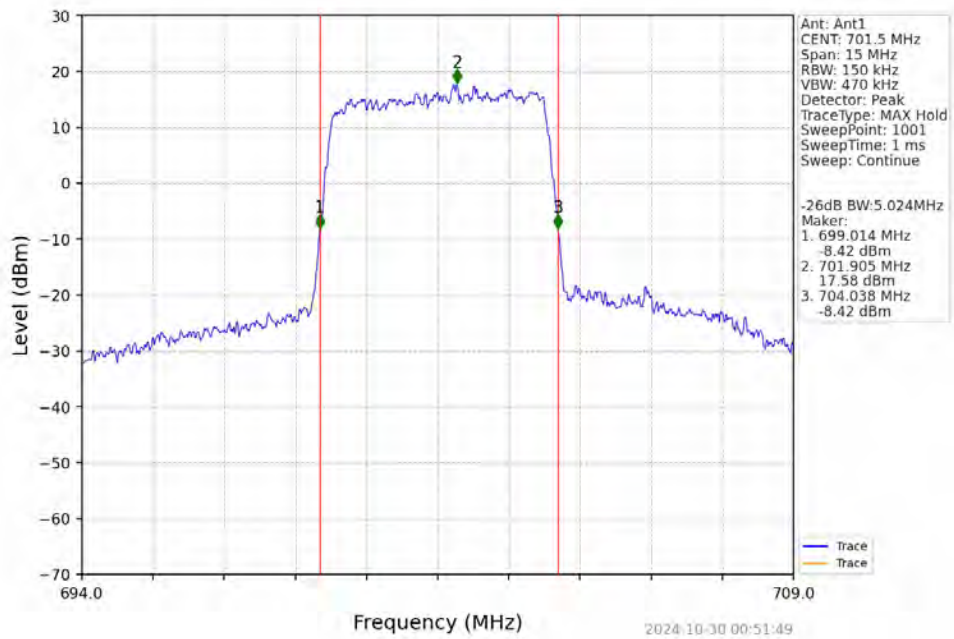
Band12 5MHz QPSK MCH 707.5MHz RB 25 0 NTN



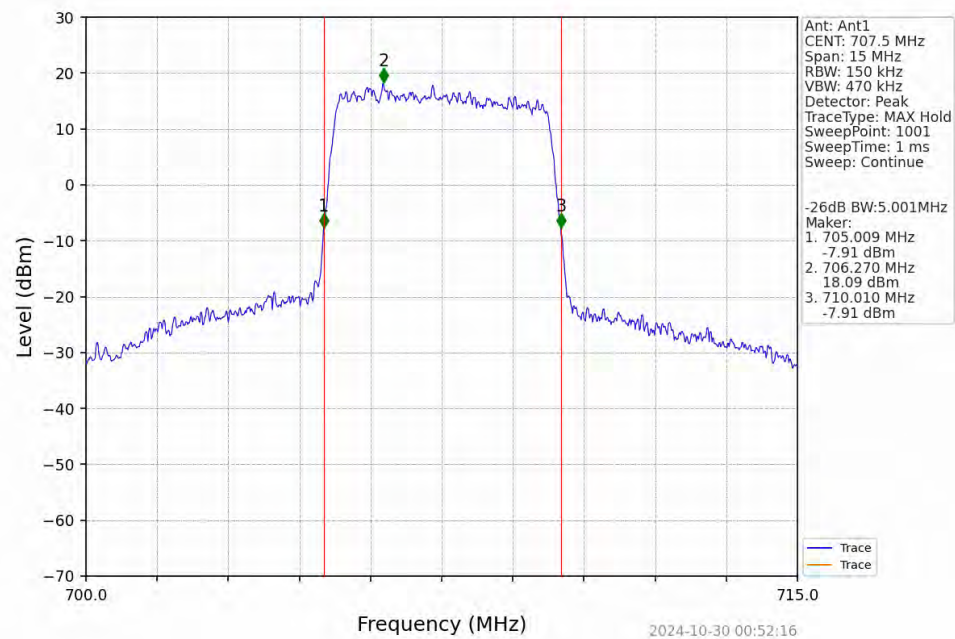
Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTNV



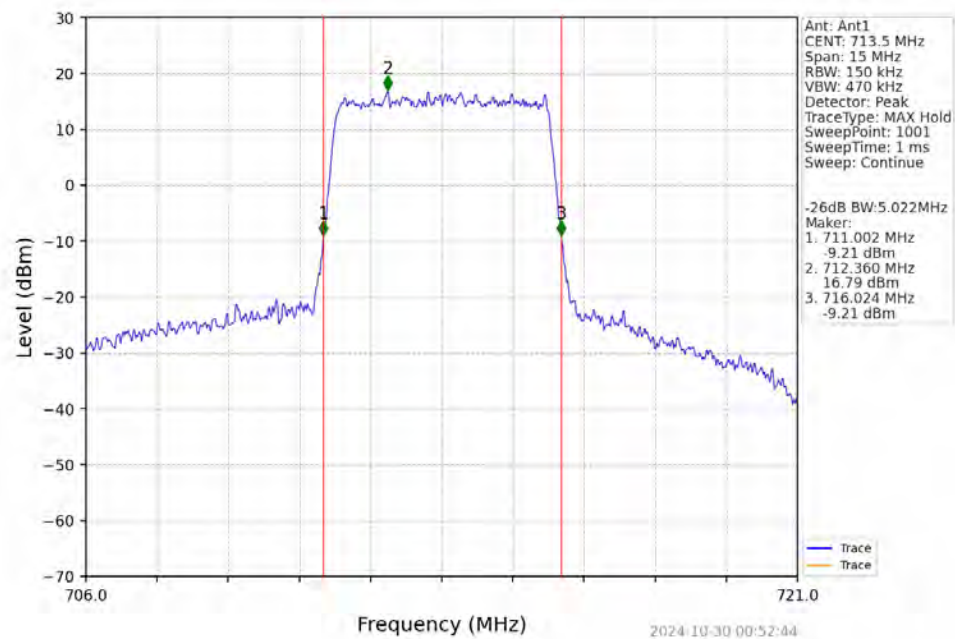
Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTNV



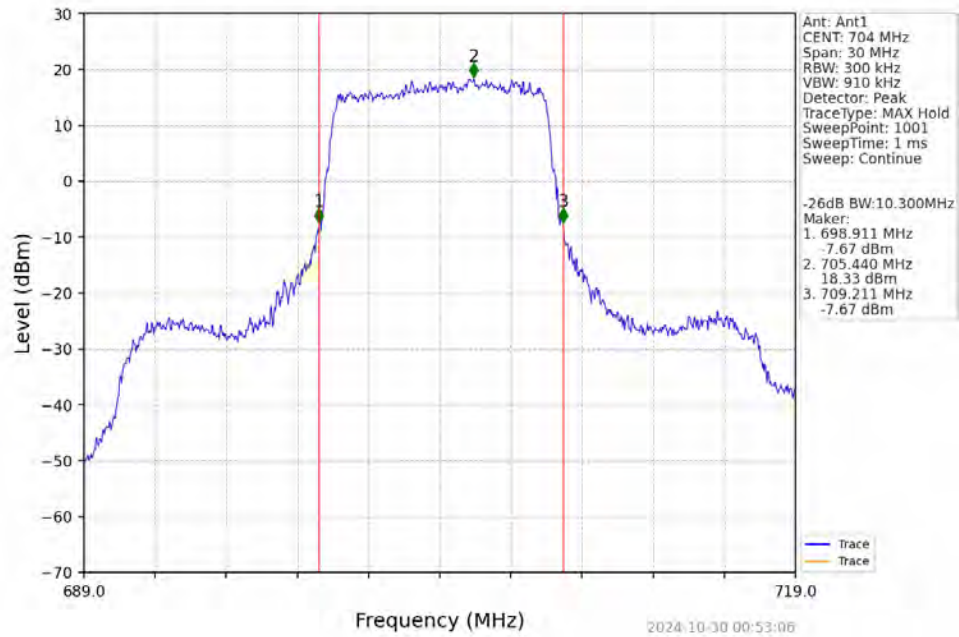
Band12 5MHz 16QAM MCH 707.5MHz RB 25 0 NTNV



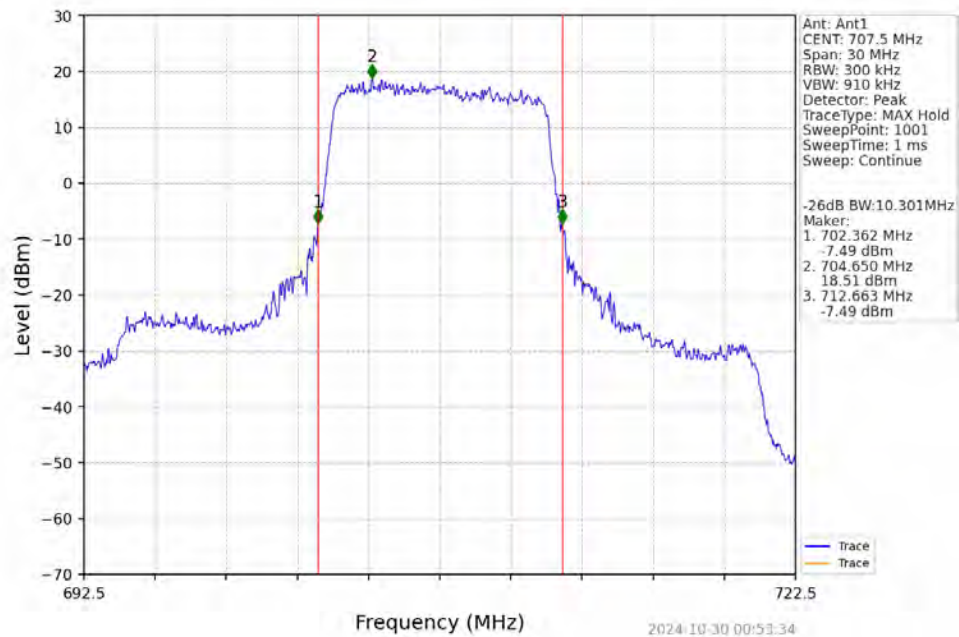
Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTNV



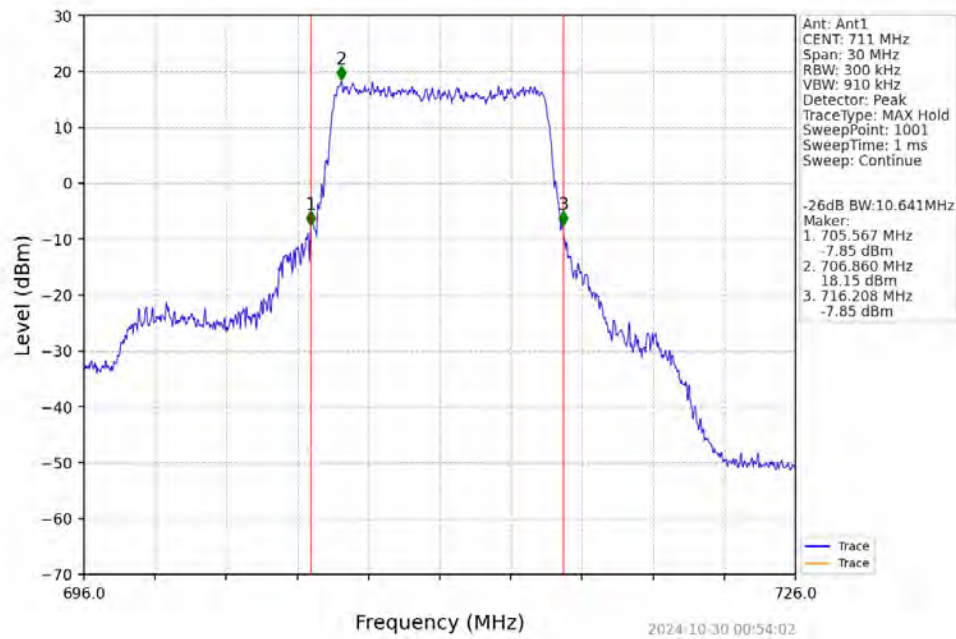
Band12 10MHz QPSK LCH 704MHz RB 50 0 NTNV



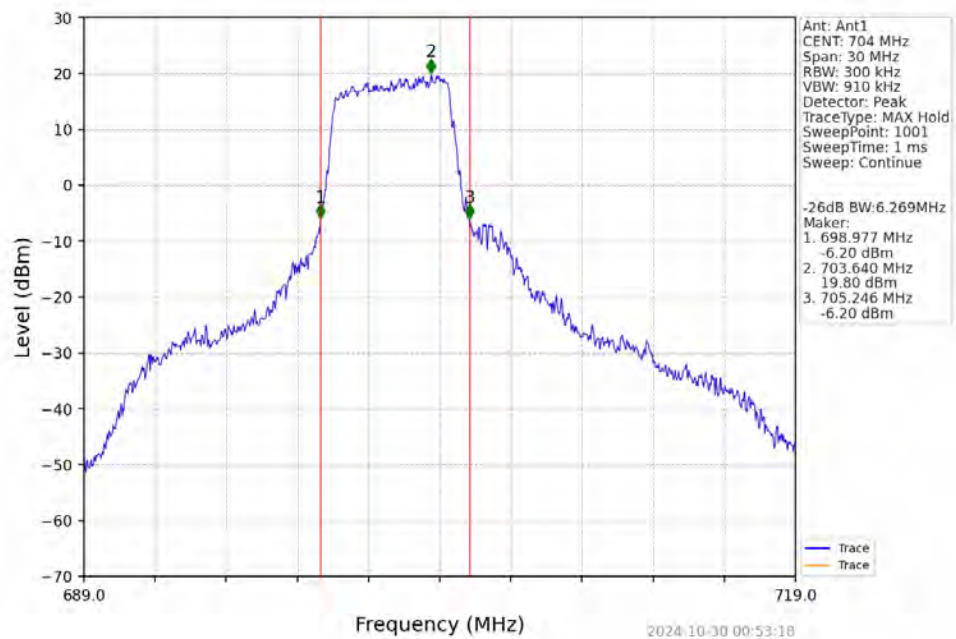
Band12 10MHz QPSK MCH 707.5MHz RB 50 0 NTNV



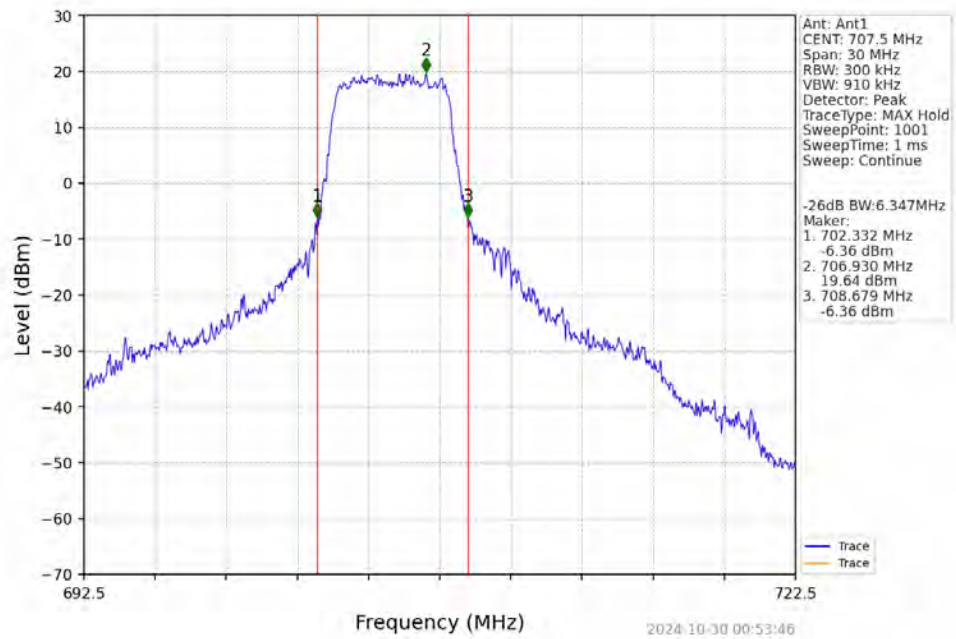
Band12 10MHz QPSK HCH 711MHz RB 50 0 NTNV



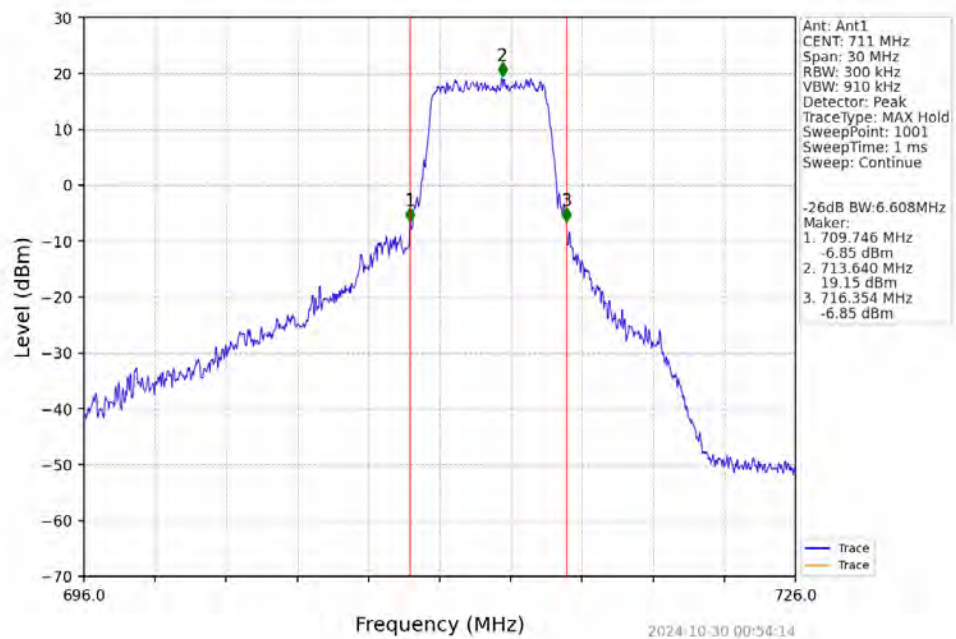
Band12 10MHz 16QAM LCH 704MHz RB 27 0 NTNV



Band12 10MHz 16QAM MCH 707.5MHz RB 27 0 NTNV



Band12 10MHz 16QAM HCH 711MHz RB 27 23 NTNV



5. Peak-Average Ratio

5.1 Test Result

5.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	6	0	5.65	<=13	Pass
	707.5	6	0	5.43	<=13	Pass
	715.3	6	0	5.15	<=13	Pass
16QAM	699.7	6	0	6.47	<=13	Pass
	707.5	6	0	6.15	<=13	Pass
	715.3	6	0	5.78	<=13	Pass

5.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.63	<=13	Pass
	707.5	15	0	5.52	<=13	Pass
	714.5	15	0	5.31	<=13	Pass
16QAM	700.5	15	0	6.28	<=13	Pass
	707.5	15	0	6.25	<=13	Pass
	714.5	15	0	6.02	<=13	Pass

5.1.3 B12_5MHz

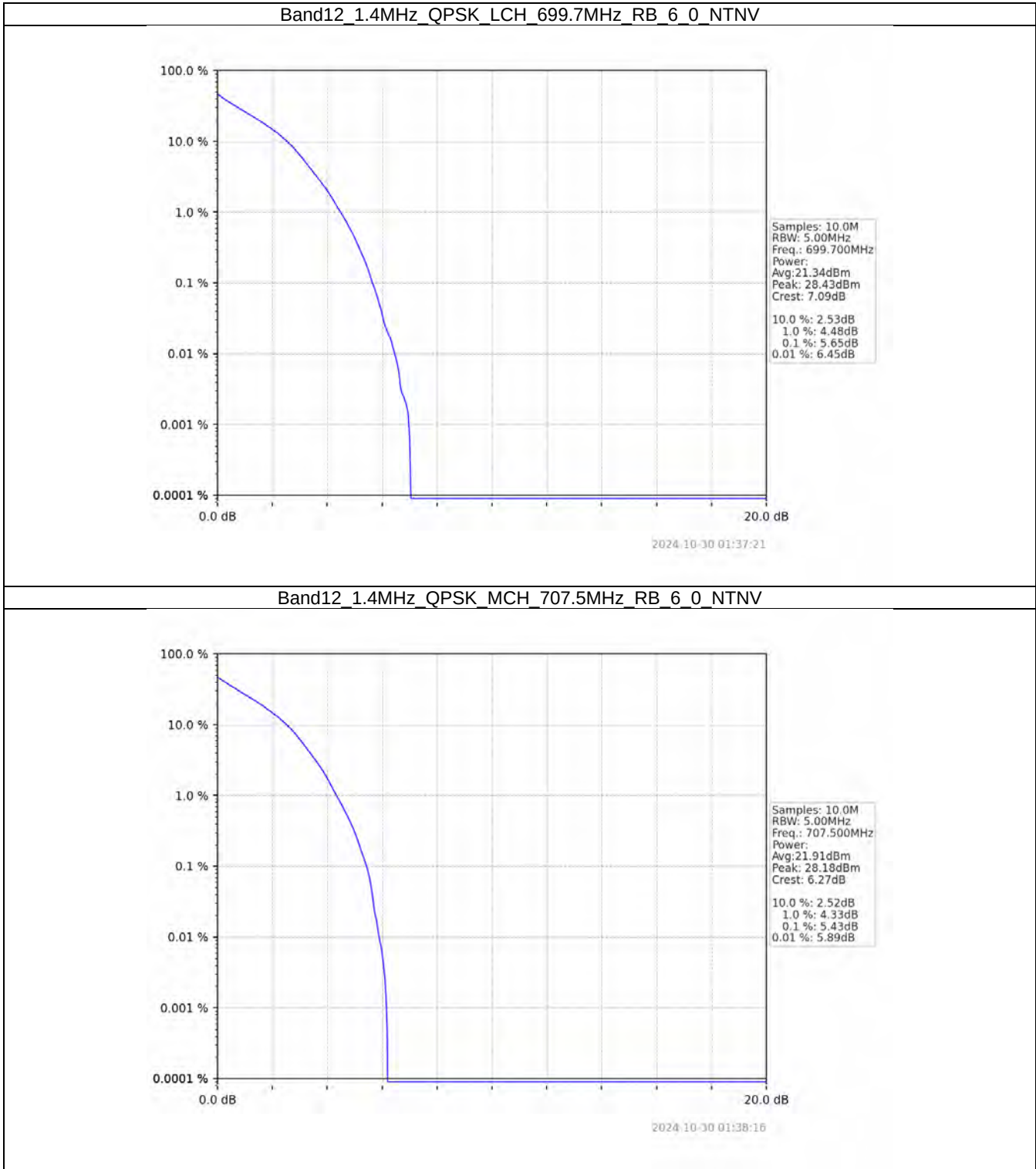
Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.70	<=13	Pass
	707.5	25	0	5.50	<=13	Pass
	713.5	25	0	5.57	<=13	Pass
16QAM	701.5	25	0	6.28	<=13	Pass
	707.5	25	0	6.16	<=13	Pass
	713.5	25	0	6.29	<=13	Pass

5.1.4 B12_10MHz

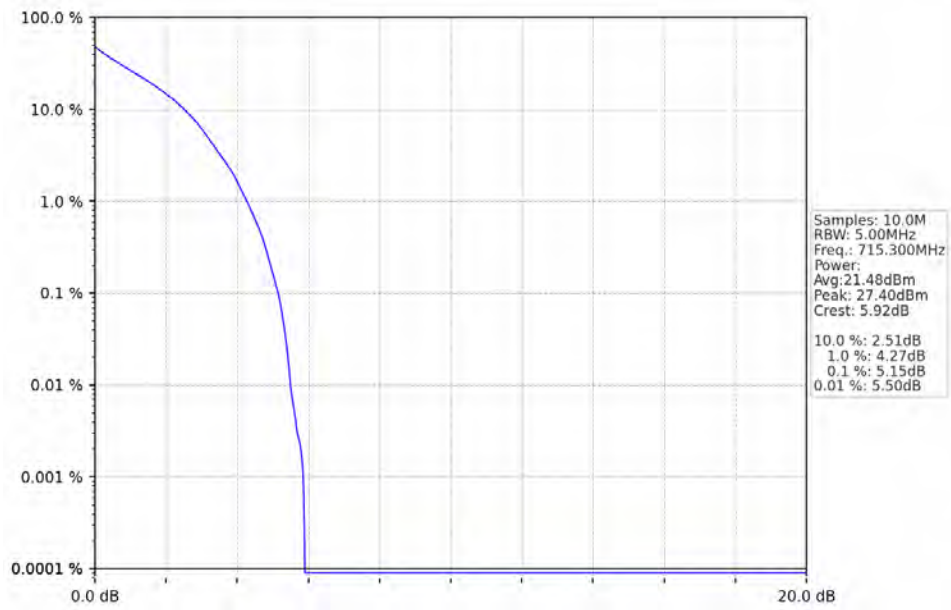
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.41	<=13	Pass
	707.5	50	0	5.41	<=13	Pass
	711	50	0	5.65	<=13	Pass
16QAM	704	27	0	6.16	<=13	Pass
	707.5	27	0	6.10	<=13	Pass
	711	27	23	6.20	<=13	Pass

5.2 Test Graph

5.2.1 B12_1.4MHz

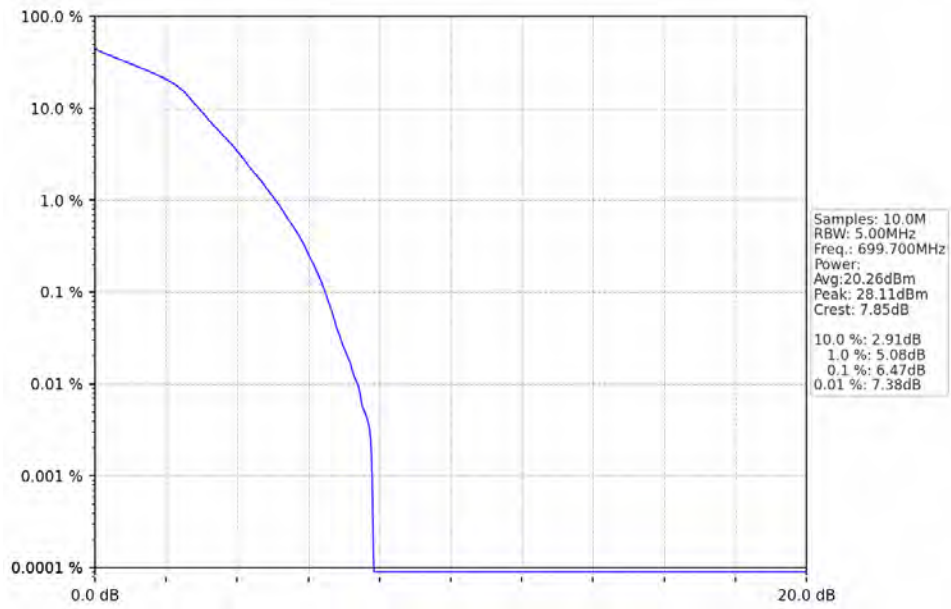


Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



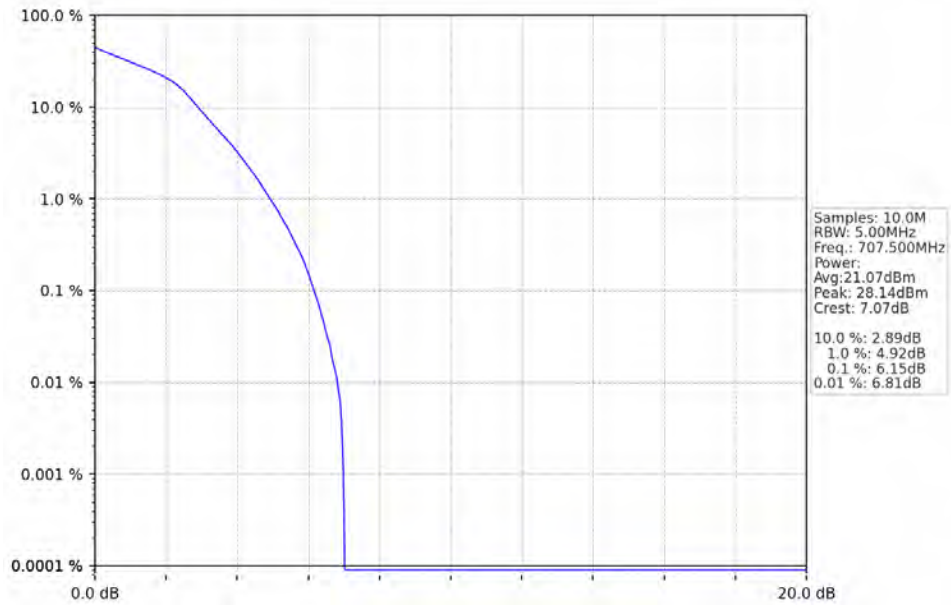
2024-10-30 01:39:06

Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



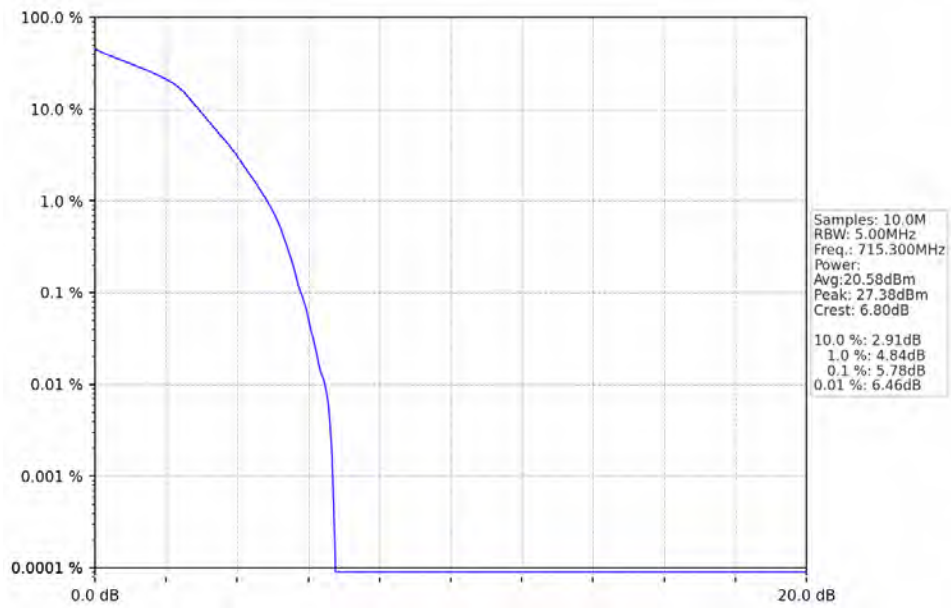
2024-10-30 01:37:49

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



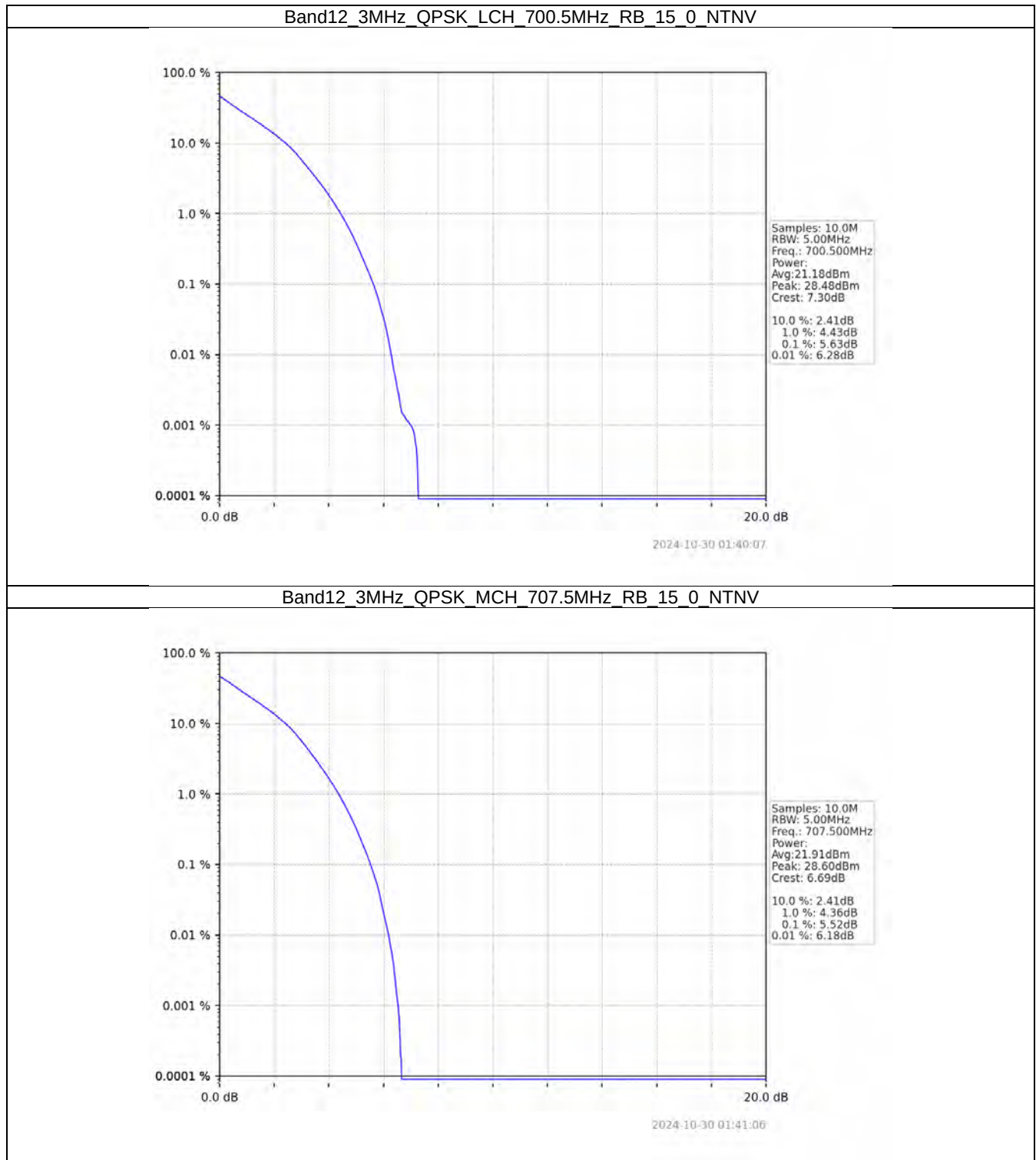
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Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTNV

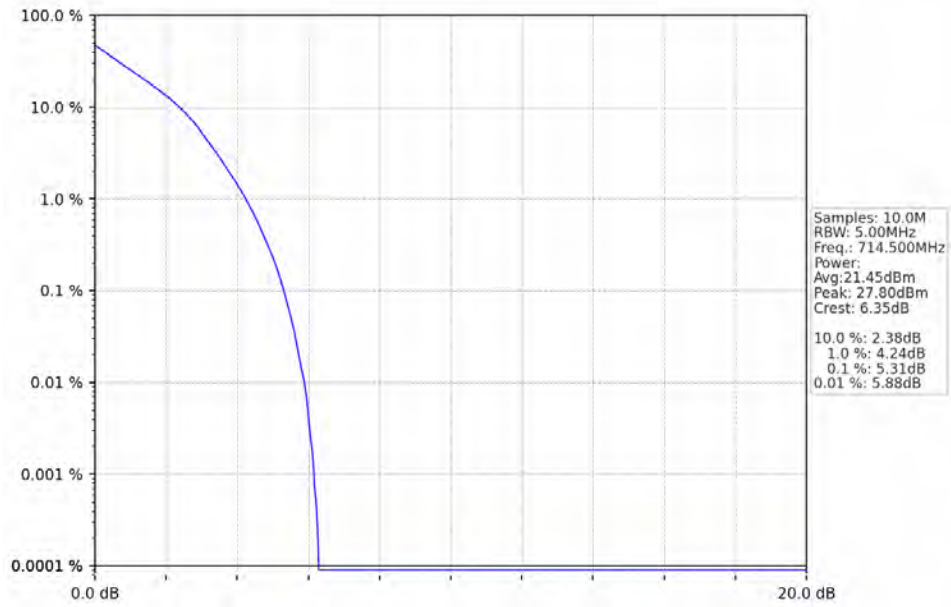


2024-10-30 01:39:31

5.2.2 B12_3MHz

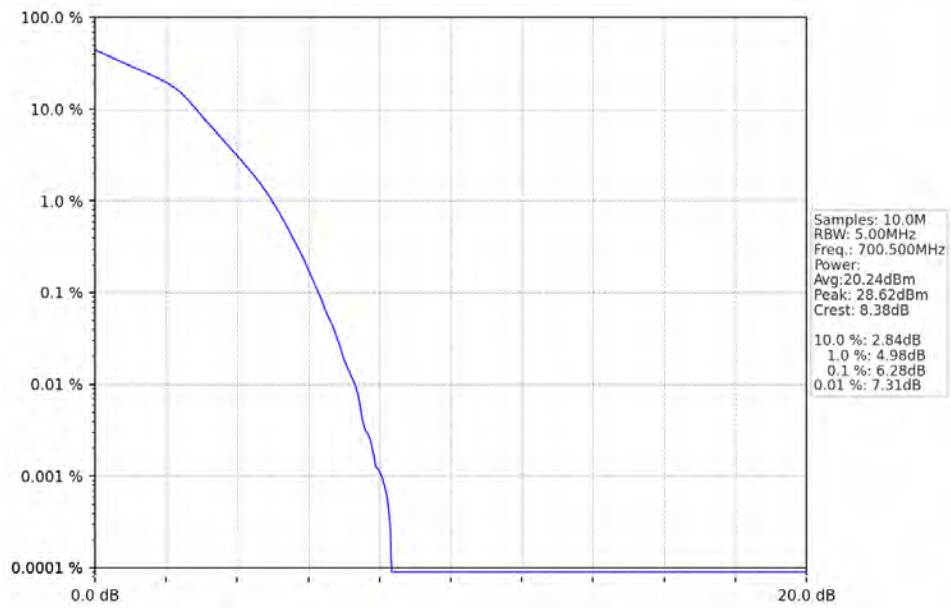


Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTNV



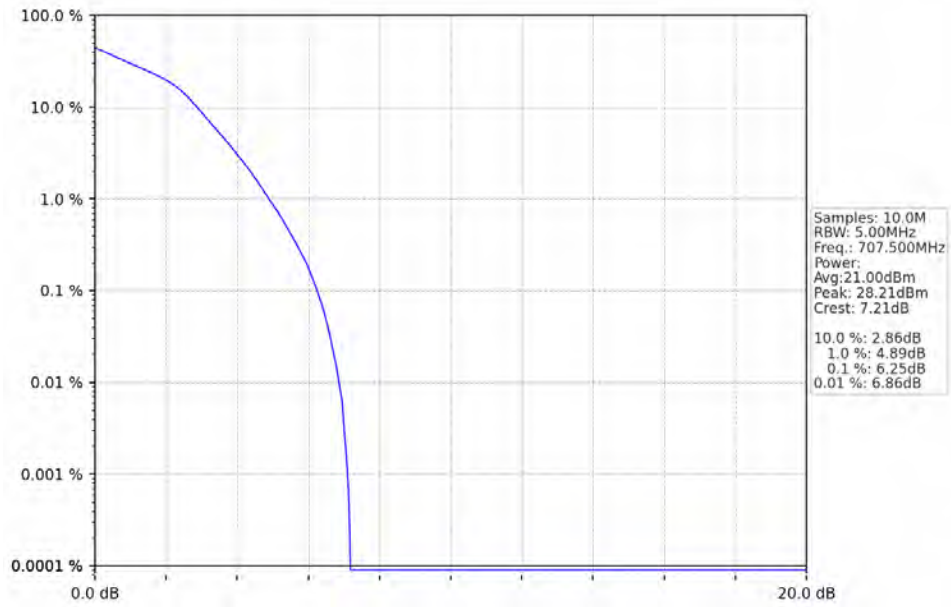
2024-10-30 01:41:59

Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTNV



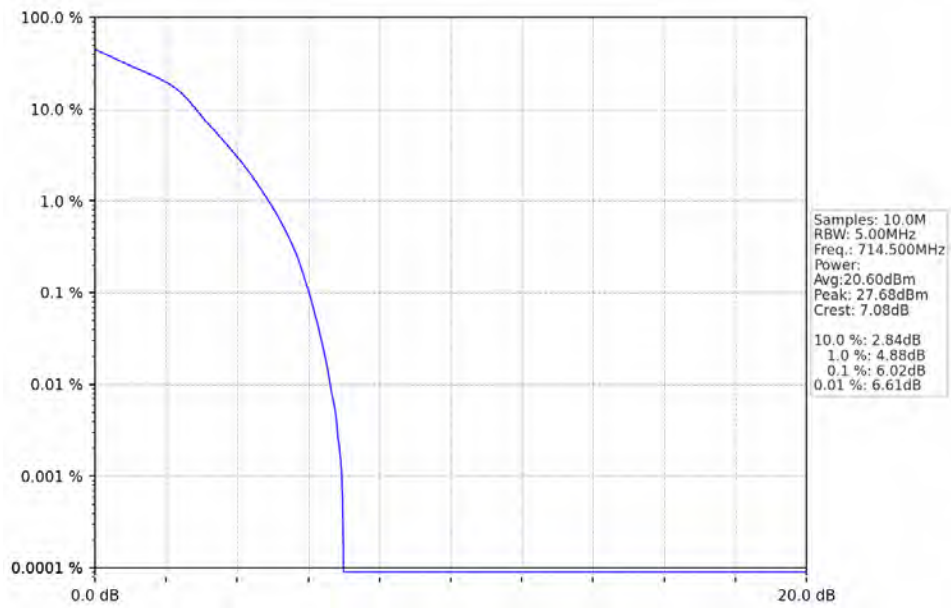
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Band12 3MHz 16QAM MCH 707.5MHz RB 15 0 NTV



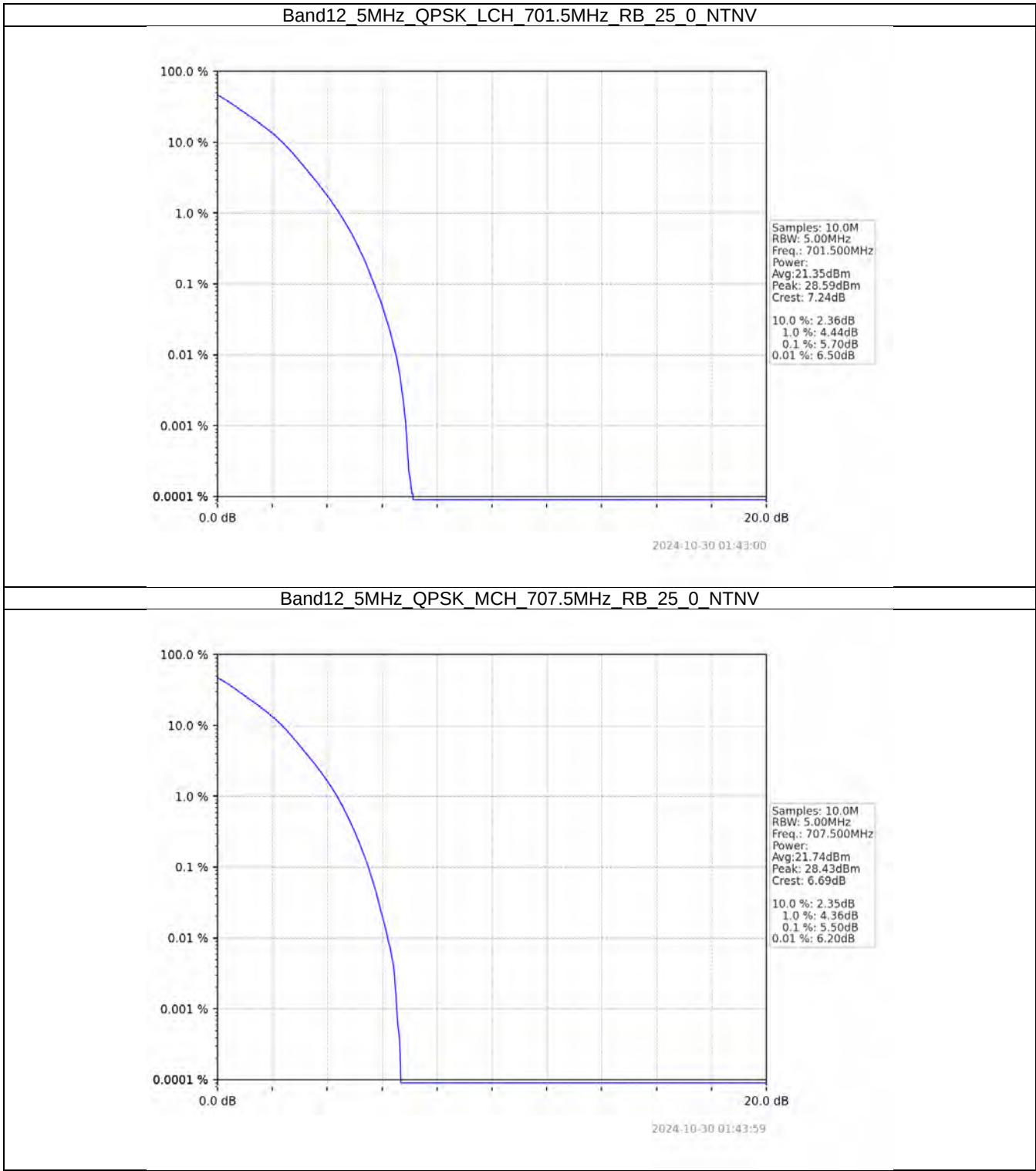
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Band12 3MHz 16QAM HCH 714.5MHz RB 15 0 NTV

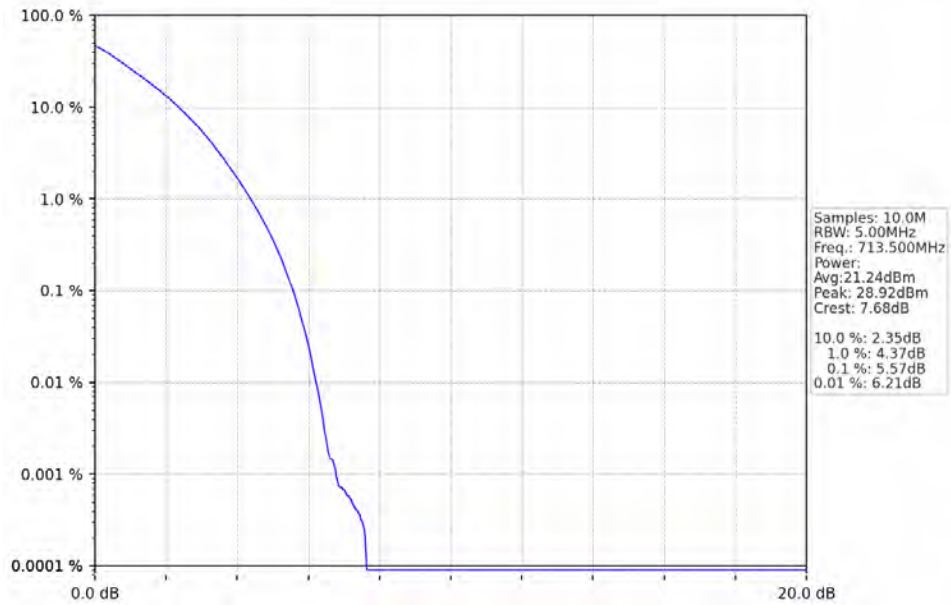


2024-10-30 01:42:24

5.2.3 B12_5MHz

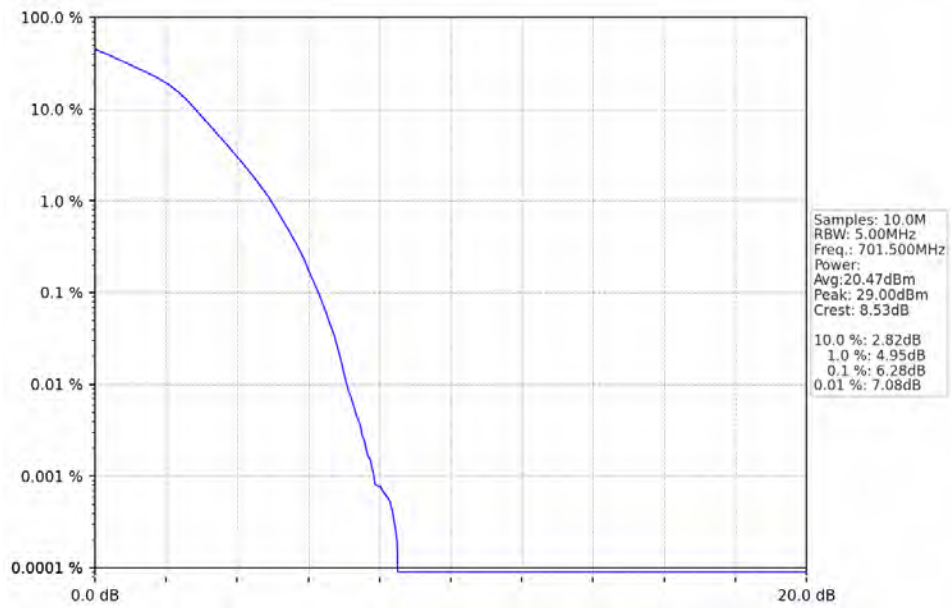


Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTNV



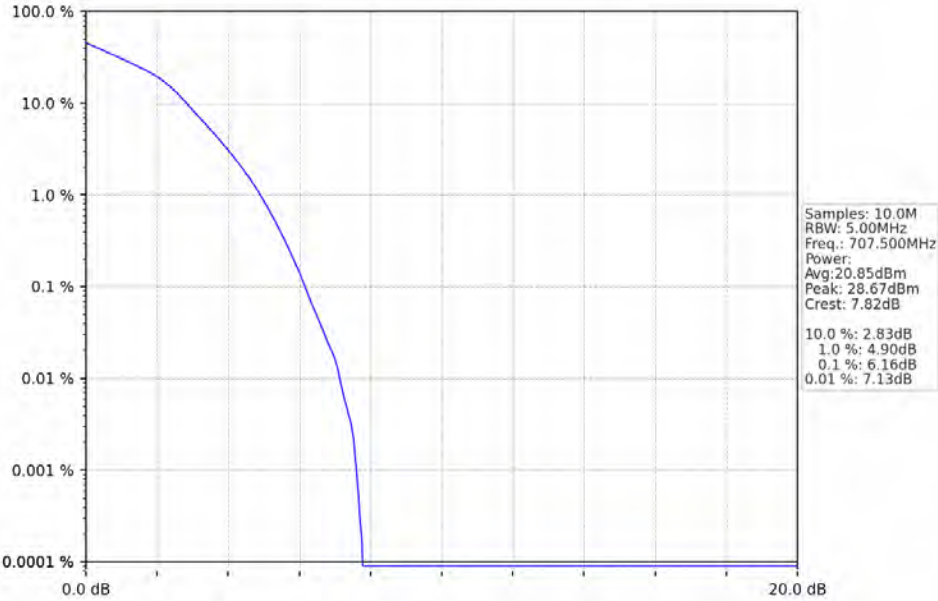
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Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTNV



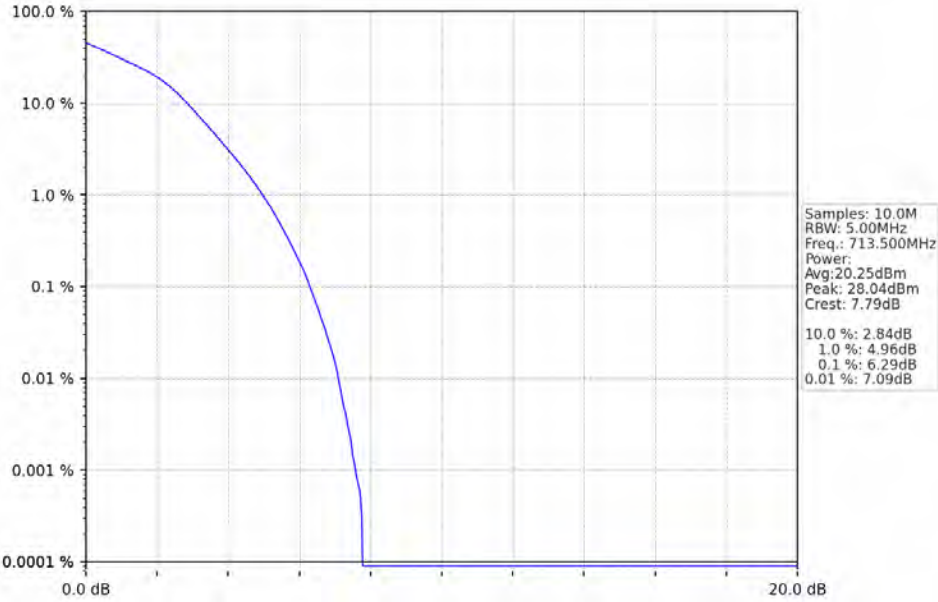
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Band12 5MHz 16QAM MCH 707.5MHz RB 25 0 NTV



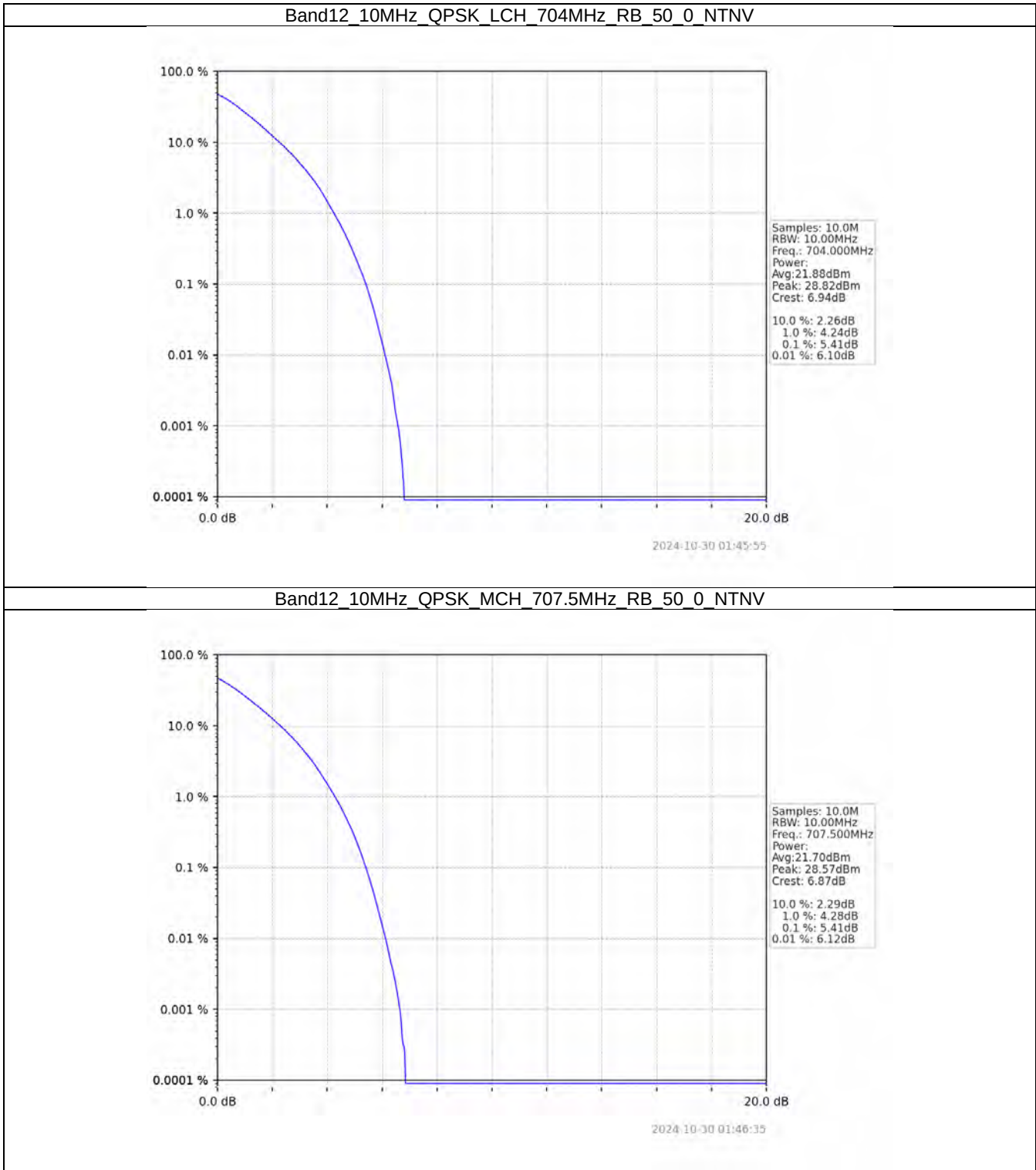
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Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTV

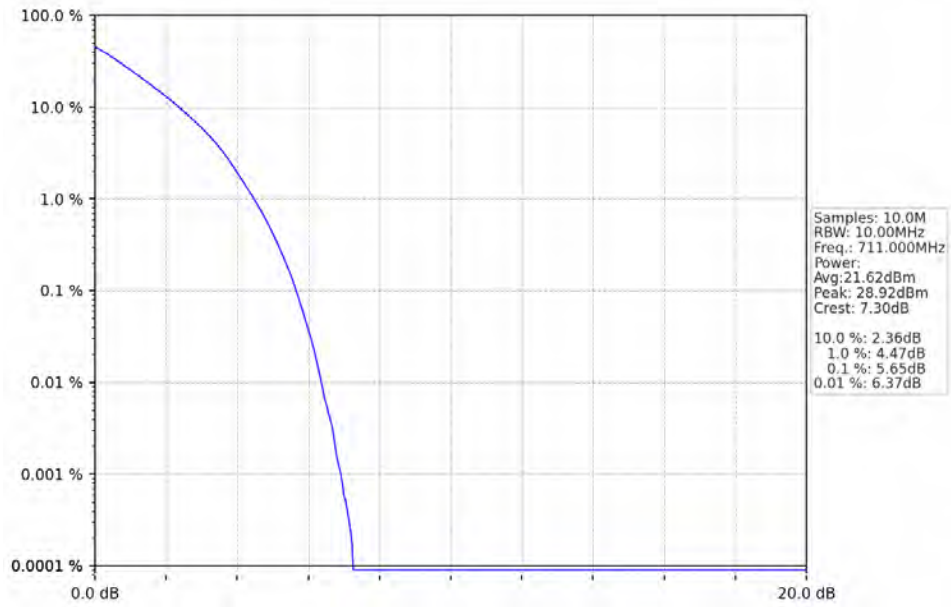


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5.2.4 B12_10MHz

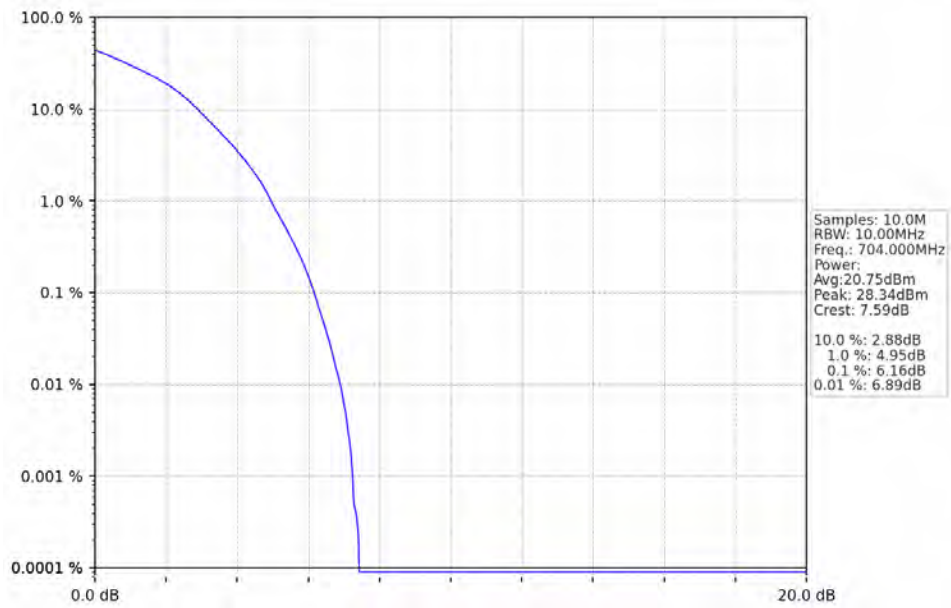


Band12 10MHz QPSK HCH 711MHz RB 50 0 NTN



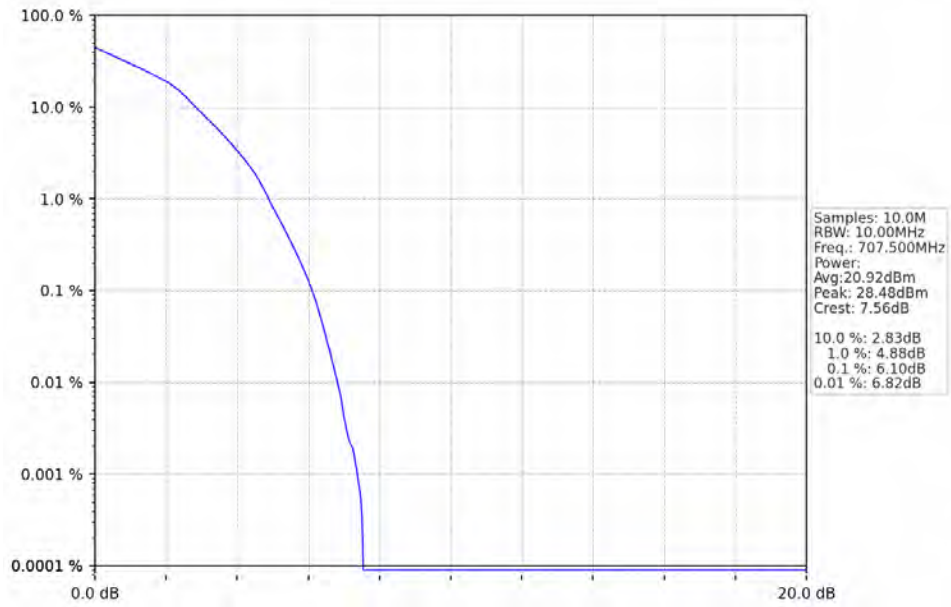
2024-10-30 01:47:17

Band12 10MHz 16QAM LCH 704MHz RB 27 0 NTN



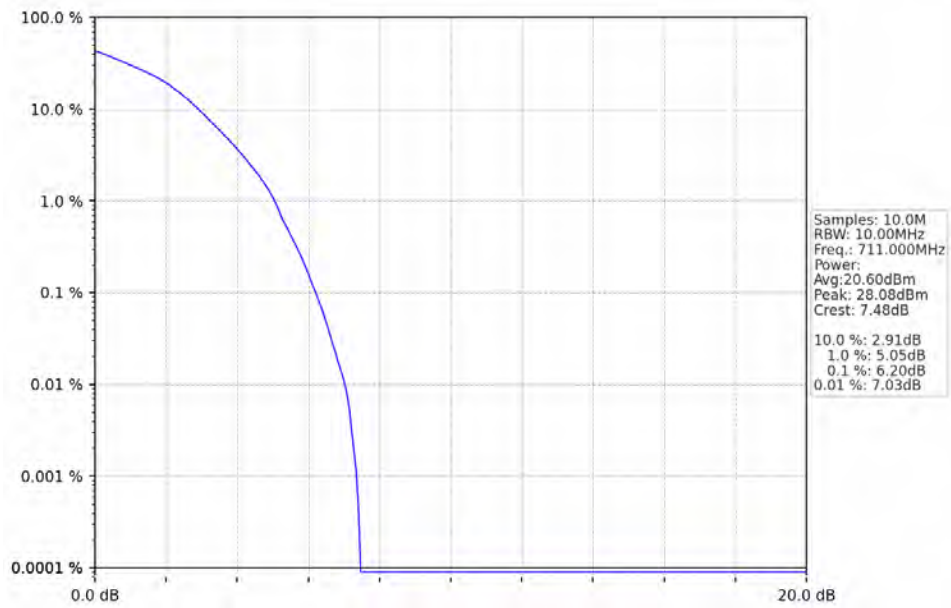
2024-10-30 01:46:13

Band12 10MHz 16QAM MCH 707.5MHz RB 27 0 NTNV



2024-10-30 01:46:54

Band12 10MHz 16QAM HCH 711MHz RB 27 23 NTNV



2024-10-30 01:47:35

6. Spurious Emission

6.1 Test Result

6.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	715.3	1	5	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
16QAM	699.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	715.3	1	5	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass

6.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	714.5	1	14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
16QAM	700.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	714.5	1	14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass

6.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	713.5	1	24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
16QAM	701.5	1	0	Refer To Test Graph		Pass

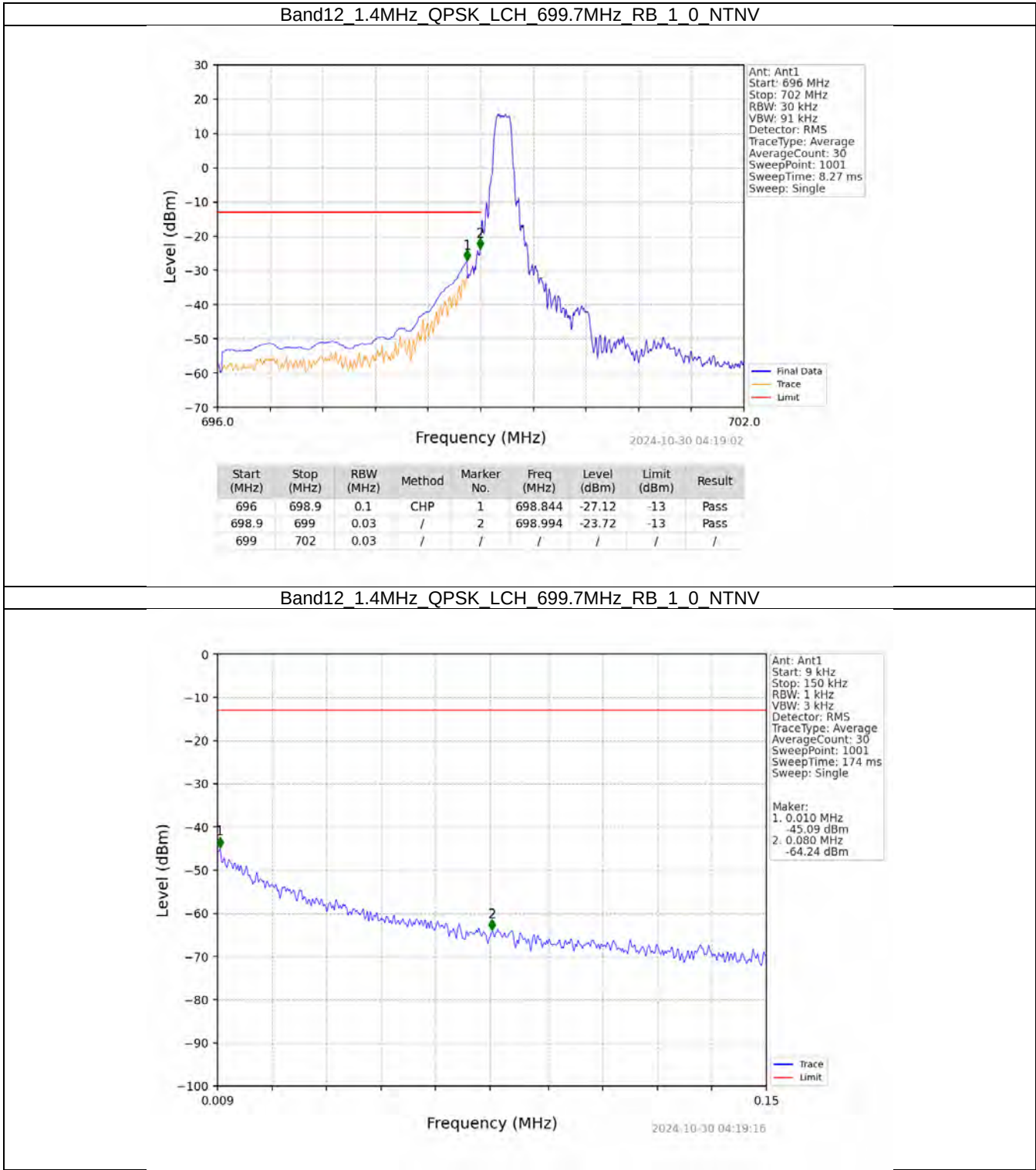
		25	0	Refer To Test Graph	Pass
	707.5	1	0	Refer To Test Graph	Pass
	713.5	1	0	Refer To Test Graph	Pass
			24	Refer To Test Graph	Pass
		25	0	Refer To Test Graph	Pass

6.1.4 B12_10MHz

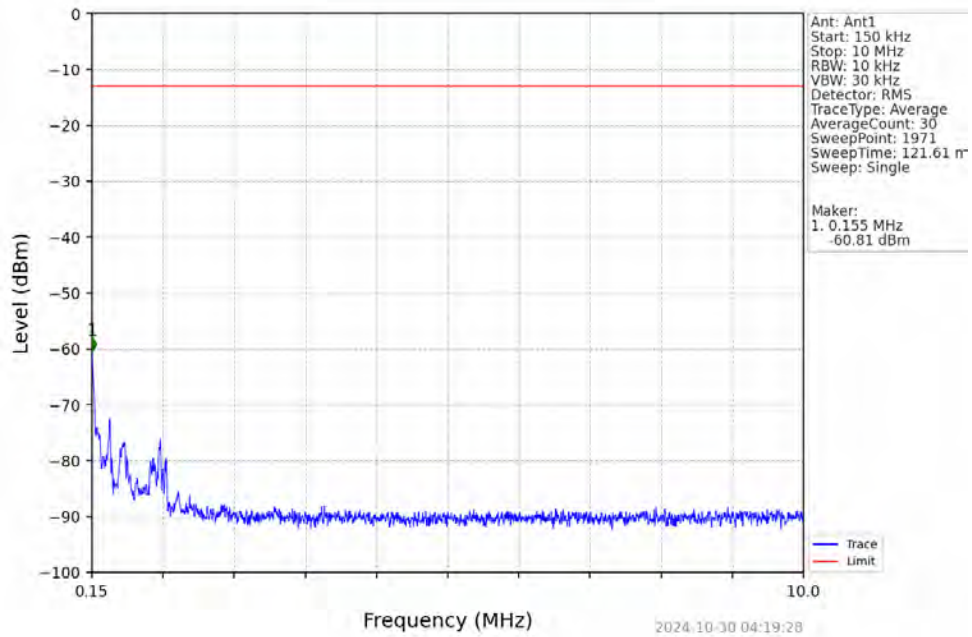
Band: 12 / Bandwidth: 10MHz / NTNV					
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission	
		Size	Offset	Result	Limit
QPSK	704	1	0	Refer To Test Graph	Pass
		50	0	Refer To Test Graph	Pass
	707.5	1	0	Refer To Test Graph	Pass
	711	1	0	Refer To Test Graph	Pass
			49	Refer To Test Graph	Pass
		50	0	Refer To Test Graph	Pass
16QAM	704	1	0	Refer To Test Graph	Pass
	707.5	1	0	Refer To Test Graph	Pass
	711	1	0	Refer To Test Graph	Pass
			49	Refer To Test Graph	Pass

6.2 Test Graph

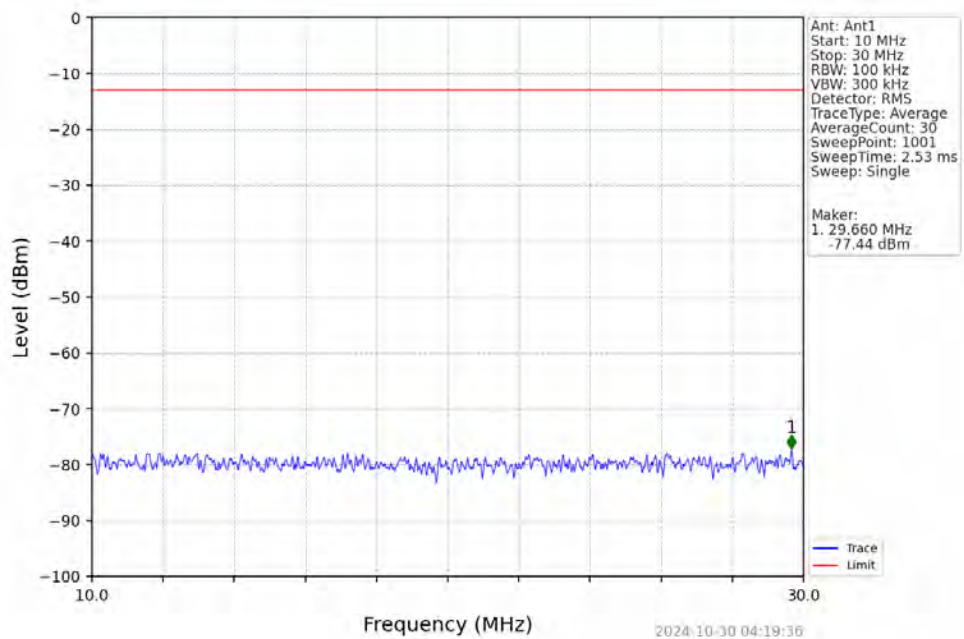
6.2.1 B12_1.4MHz



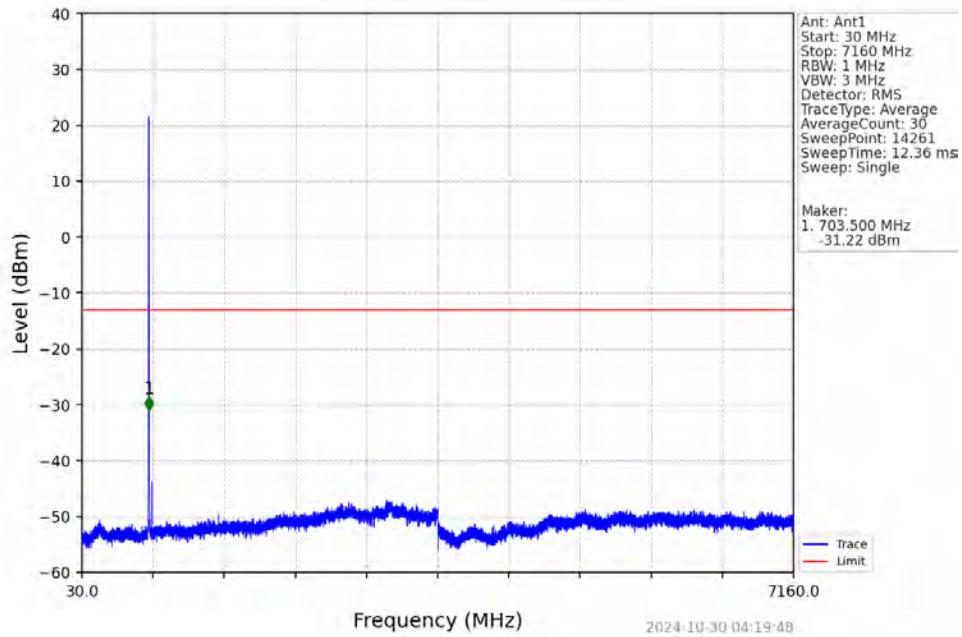
Band12 1.4MHz QPSK LCH 699.7MHz RB 1 0 NTNV



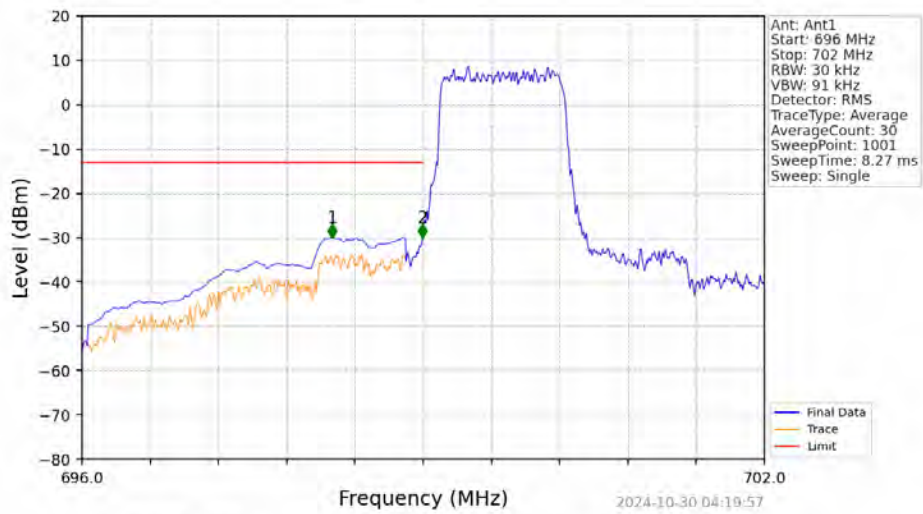
Band12 1.4MHz QPSK LCH 699.7MHz RB 1 0 NTNV



Band12 1.4MHz QPSK LCH 699.7MHz RB 1 0 NTNV

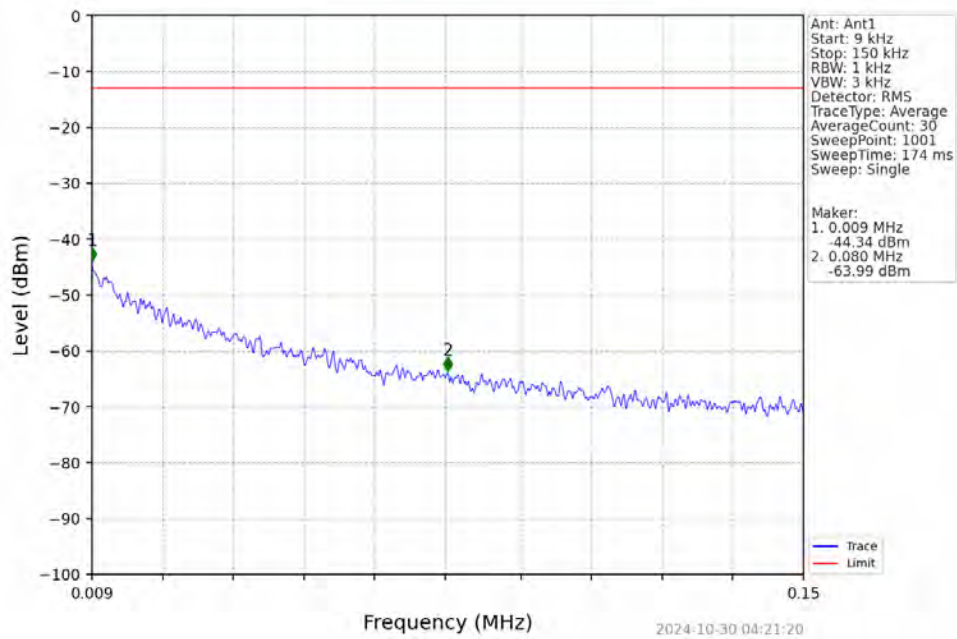


Band12 1.4MHz QPSK LCH 699.7MHz RB 6 0 NTNV

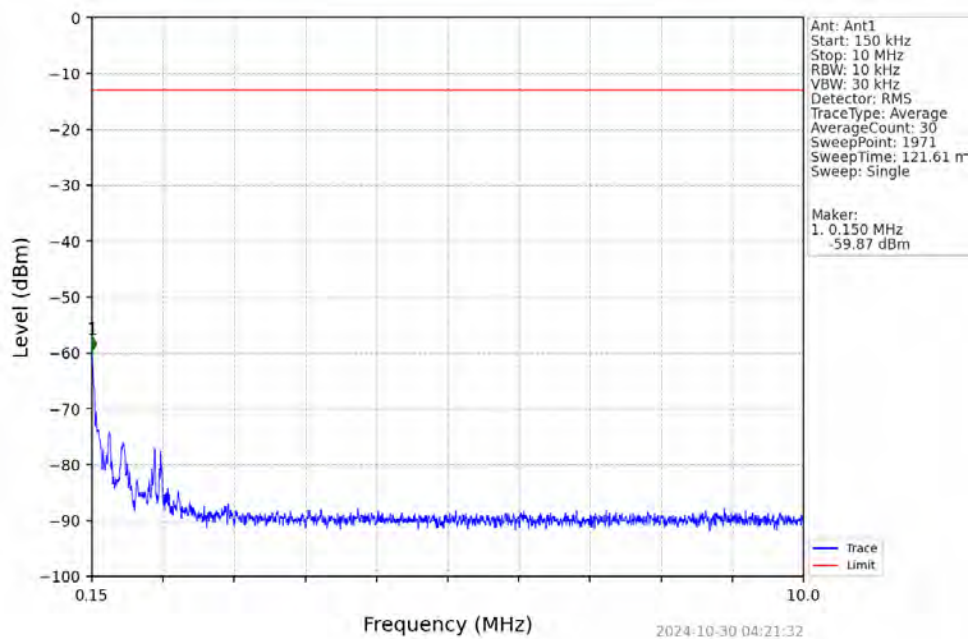


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.202	-30.00	-13	Pass
698.9	699	0.03	/	2	698.994	-30.11	-13	Pass
699	702	0.03	/	/	/	/	/	/

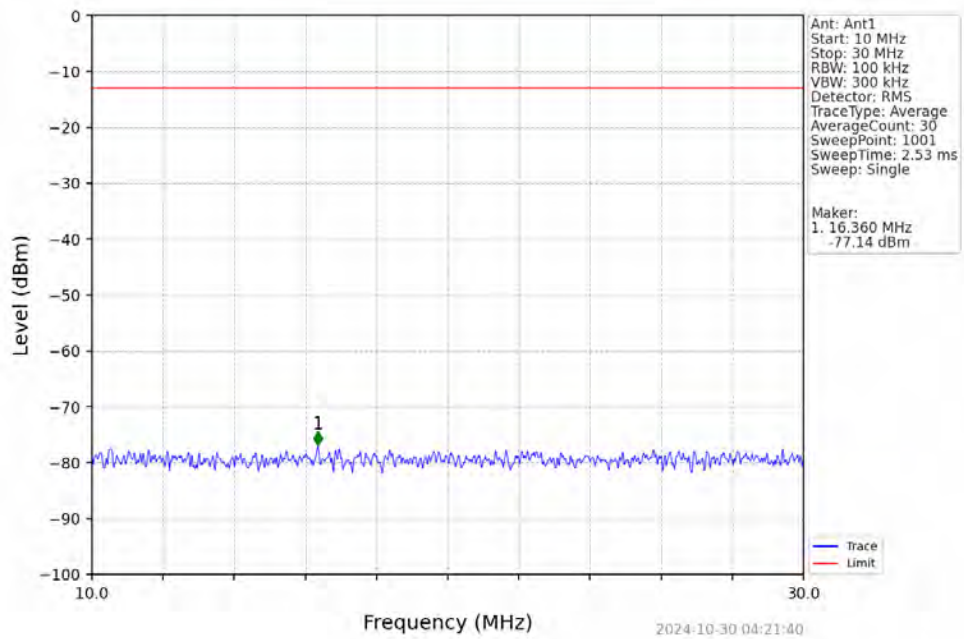
Band12 1.4MHz QPSK MCH 707.5MHz RB 1 0 NTNV



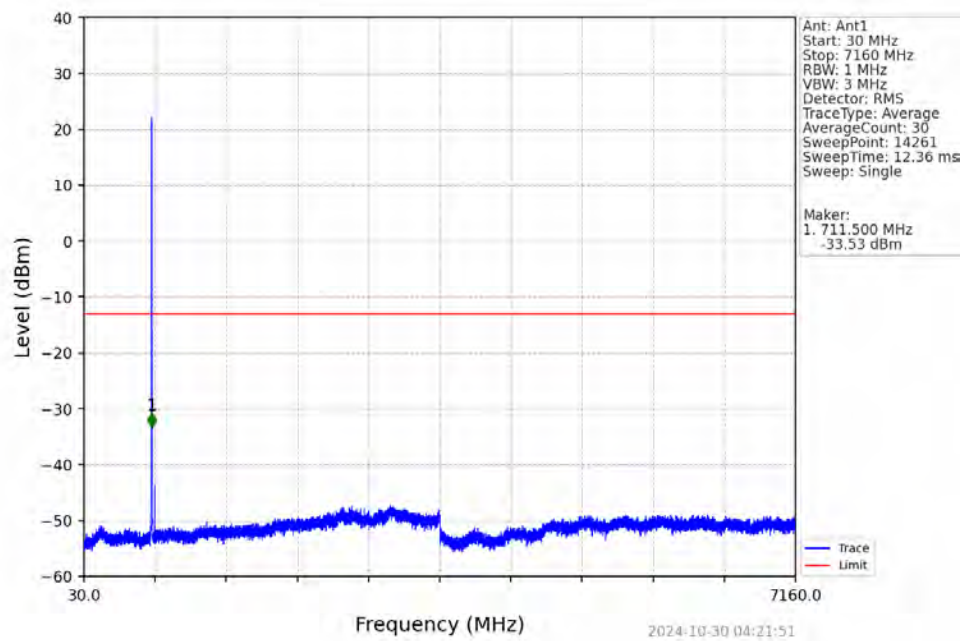
Band12 1.4MHz QPSK MCH 707.5MHz RB 1 0 NTNV



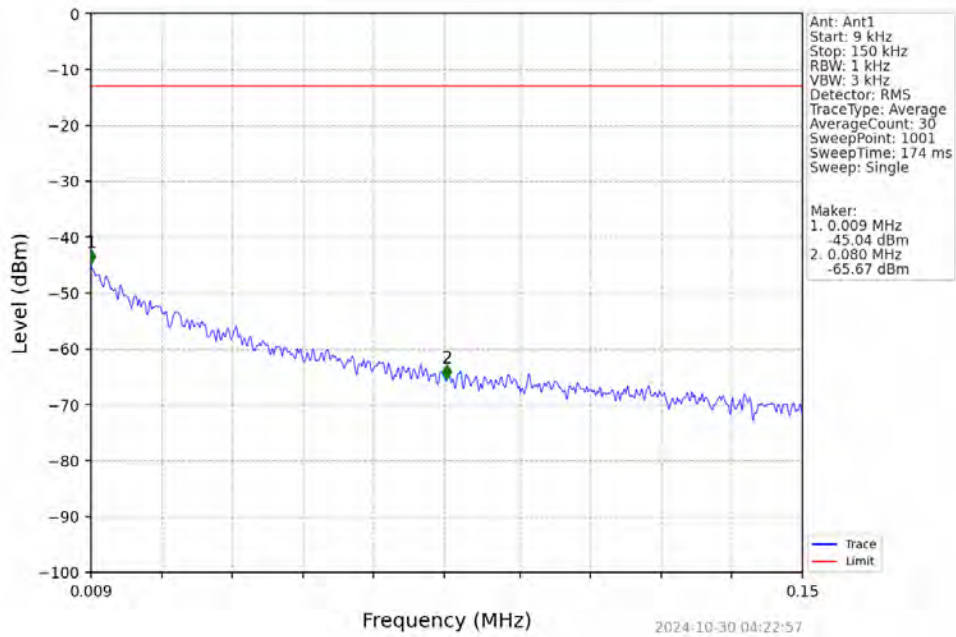
Band12 1.4MHz QPSK MCH 707.5MHz RB 1 0 NTV



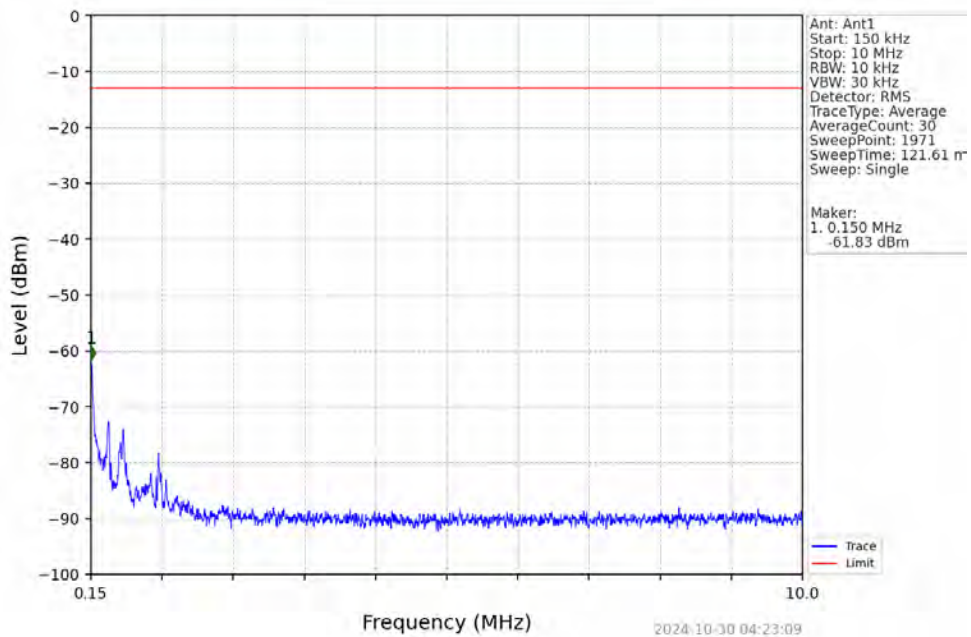
Band12 1.4MHz QPSK MCH 707.5MHz RB 1 0 NTV



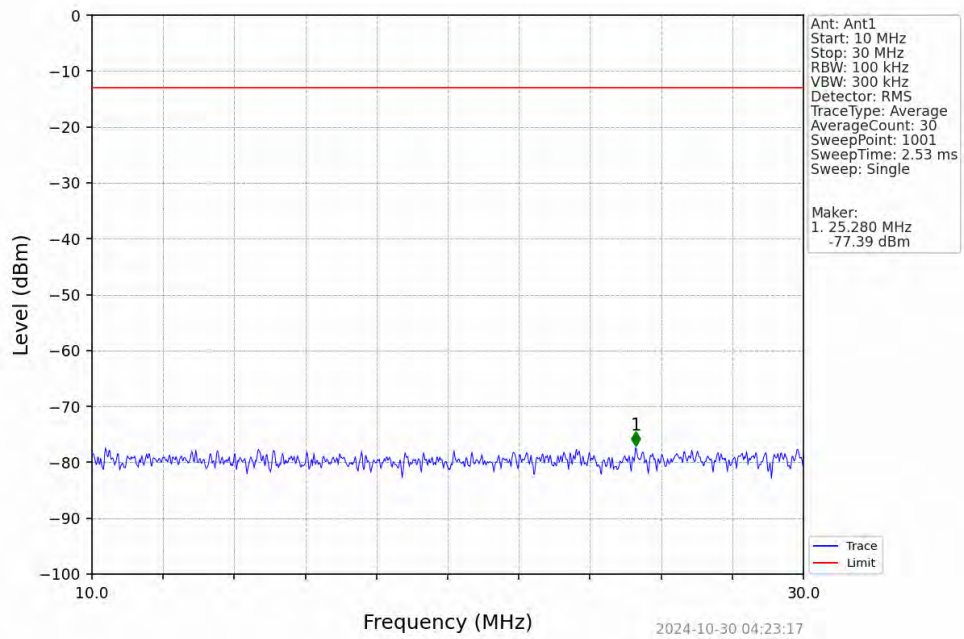
Band12 1.4MHz QPSK HCH 715.3MHz RB 1 0 NTV



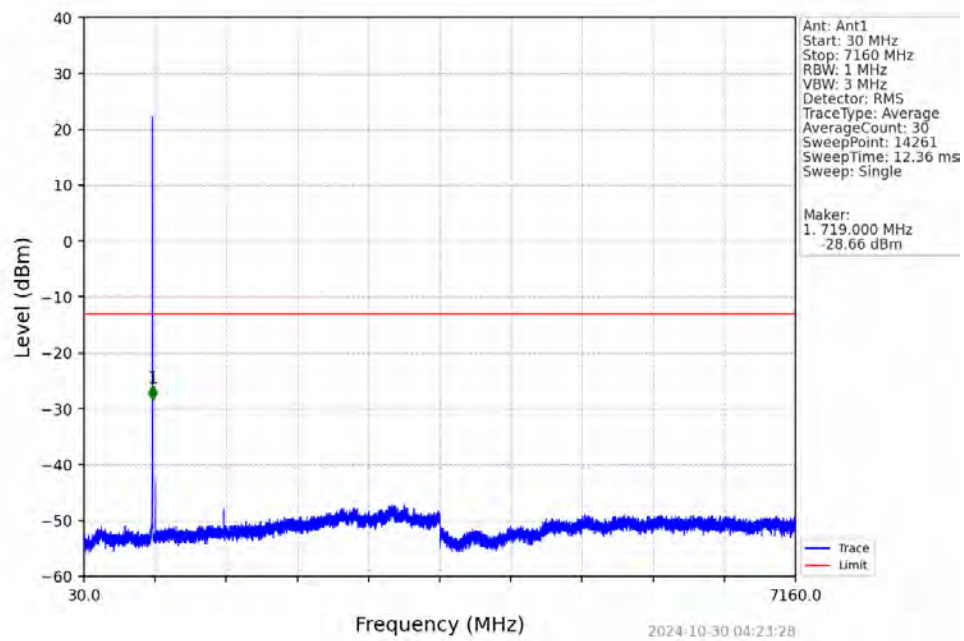
Band12 1.4MHz QPSK HCH 715.3MHz RB 1 0 NTV



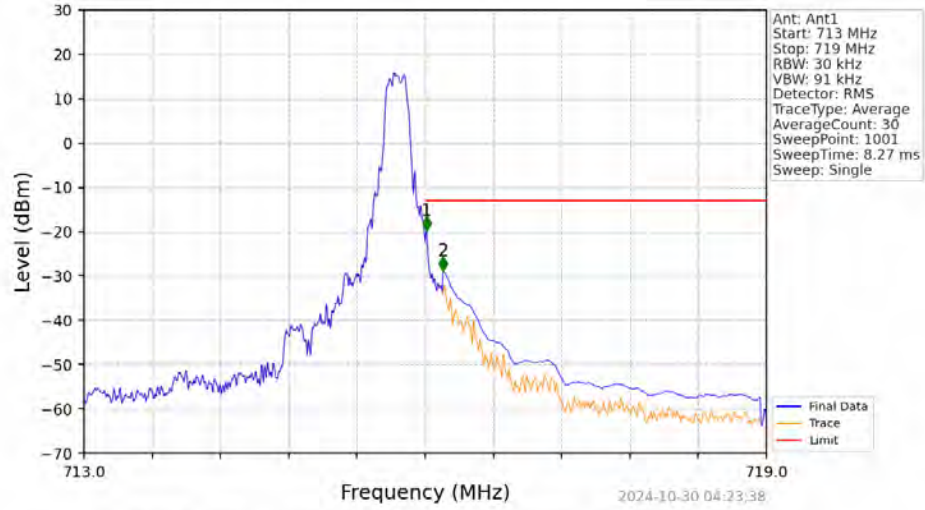
Band12 1.4MHz QPSK HCH 715.3MHz RB 1 0 NTV



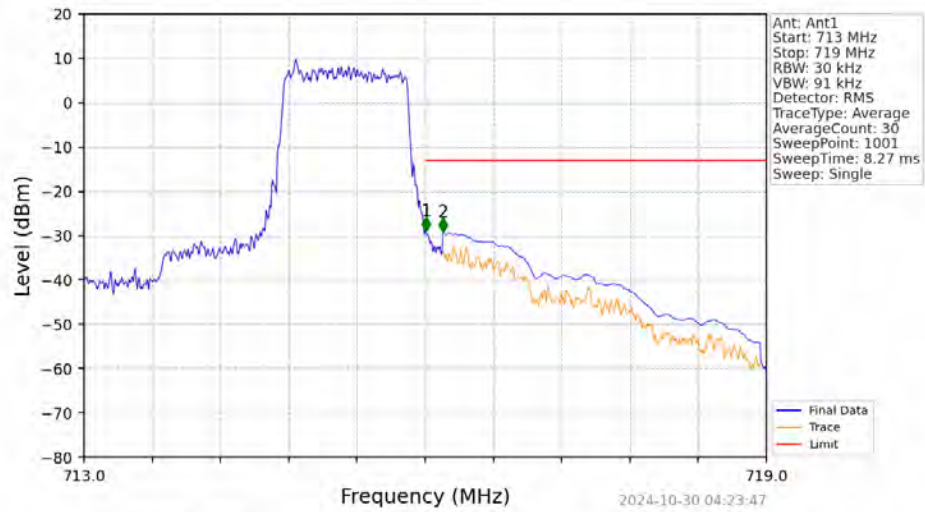
Band12 1.4MHz QPSK HCH 715.3MHz RB 1 0 NTV



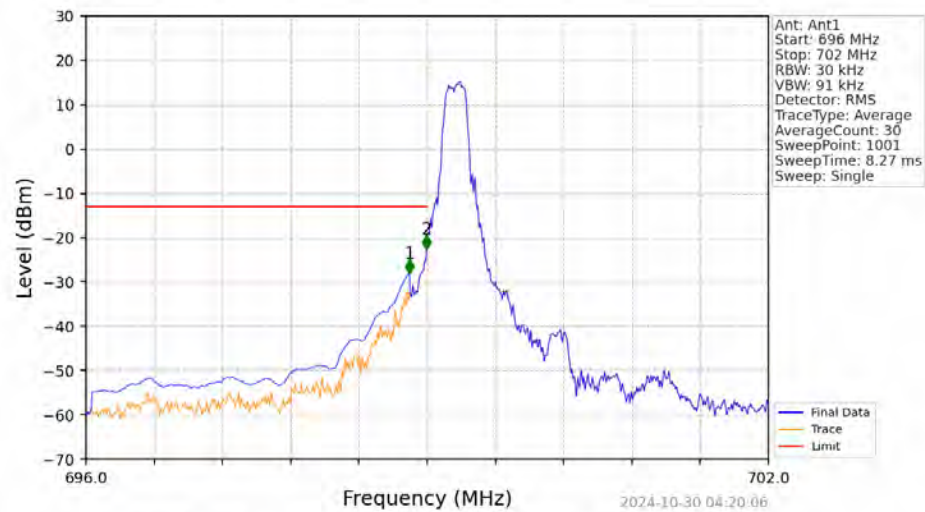
Band12 1.4MHz QPSK HCH 715.3MHz RB 1 5 NTV



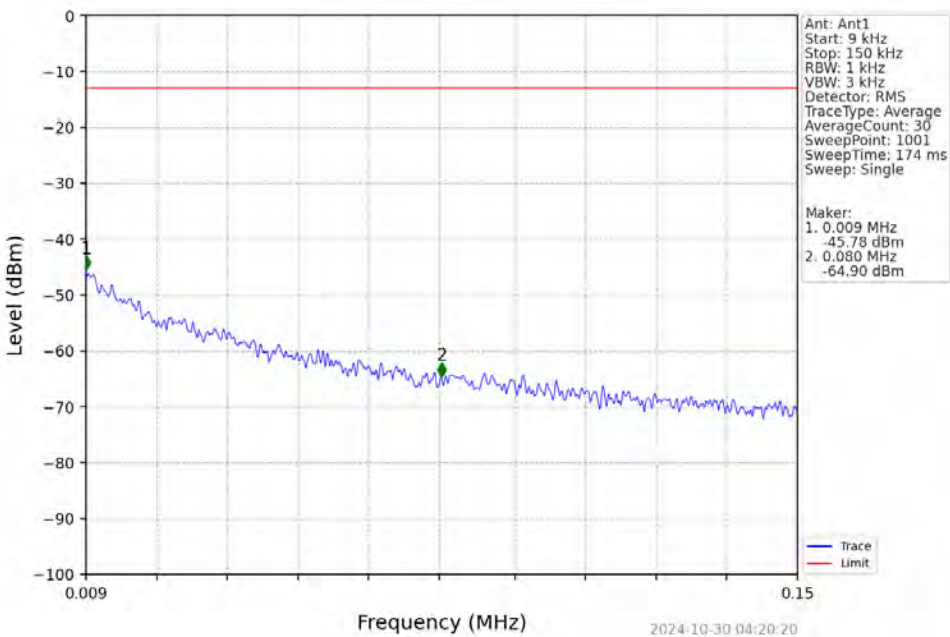
Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTV



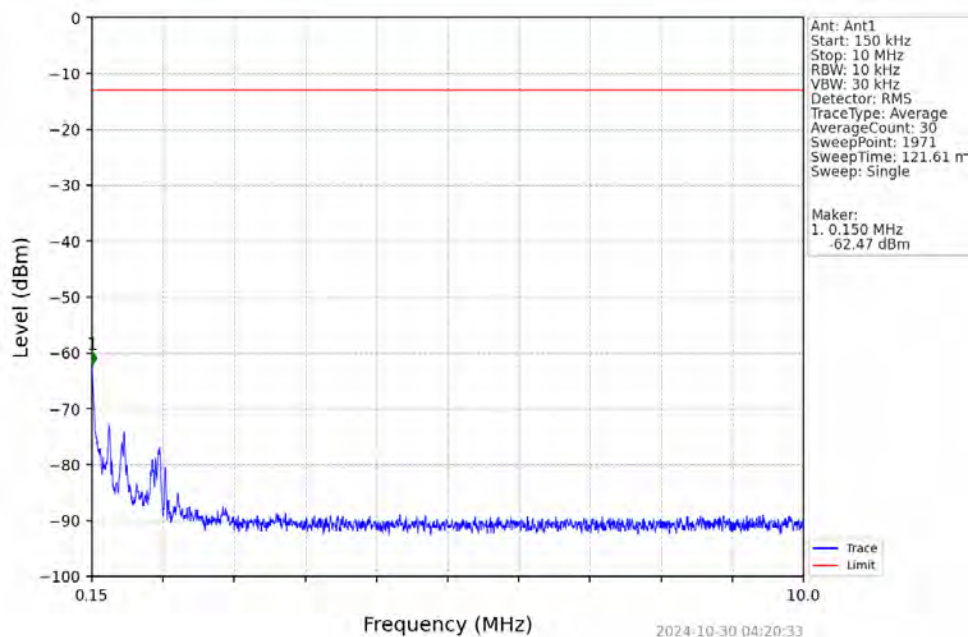
Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTNV



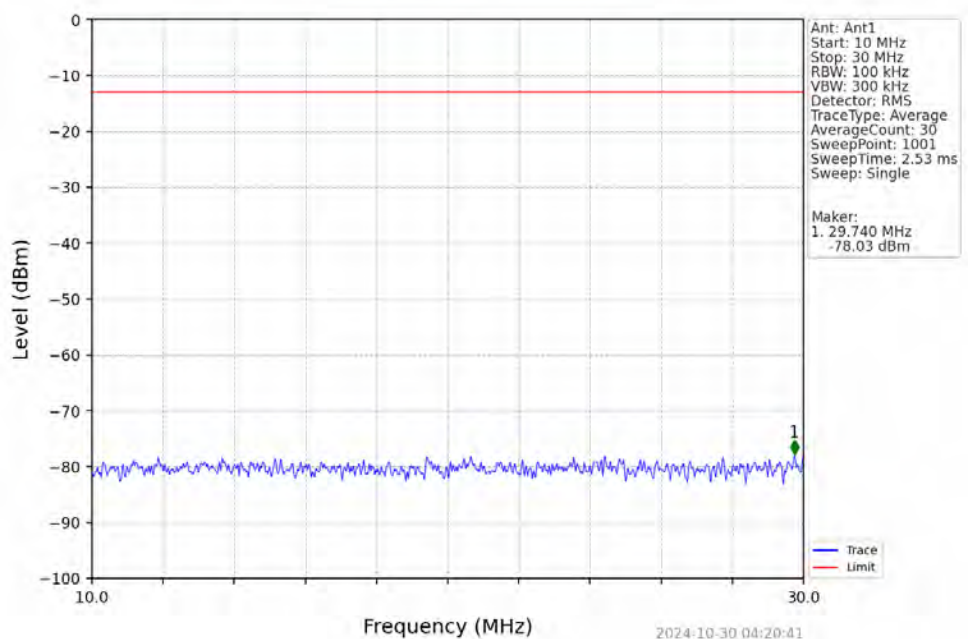
Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTNV



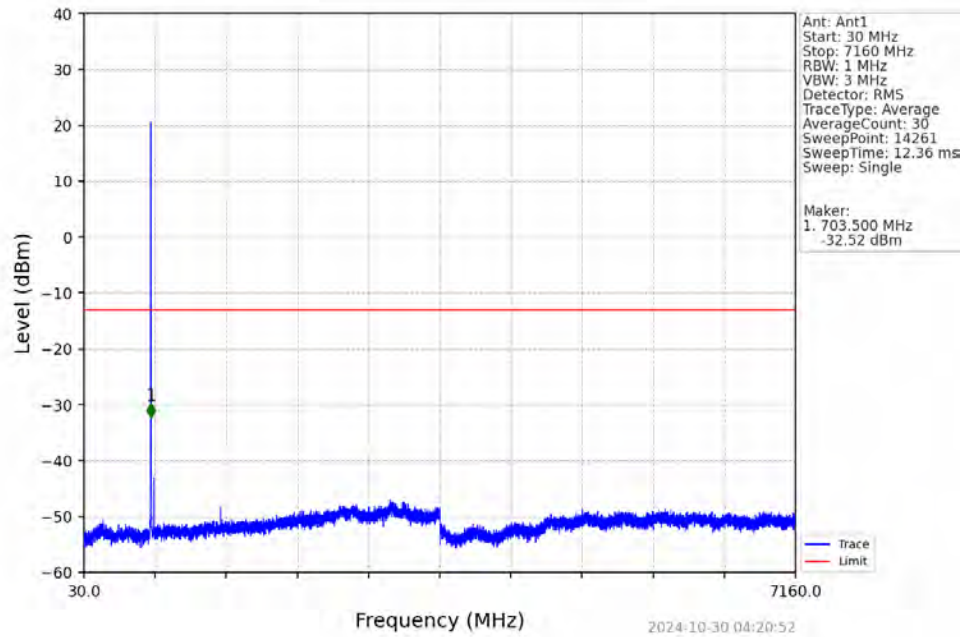
Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTNV



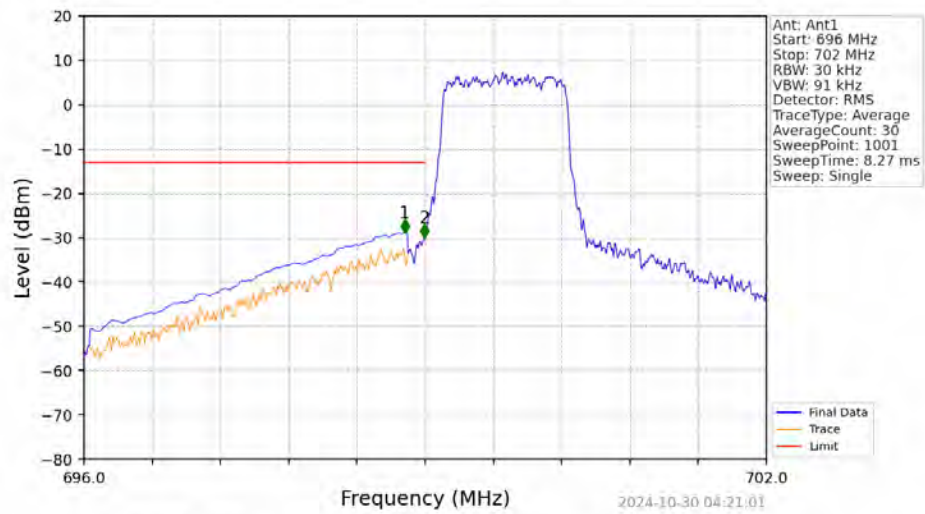
Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTNV



Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTNV

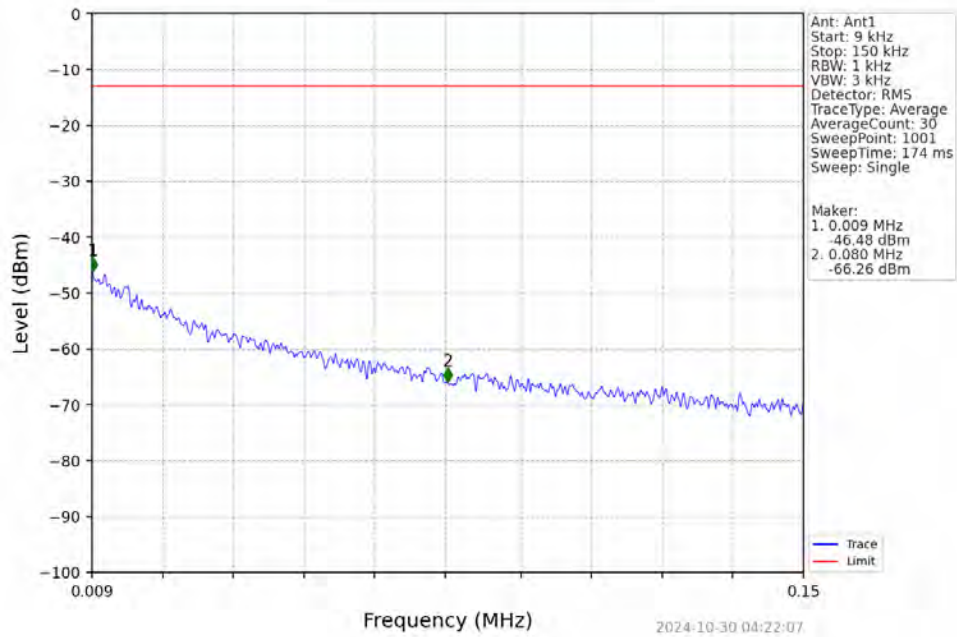


Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTNV

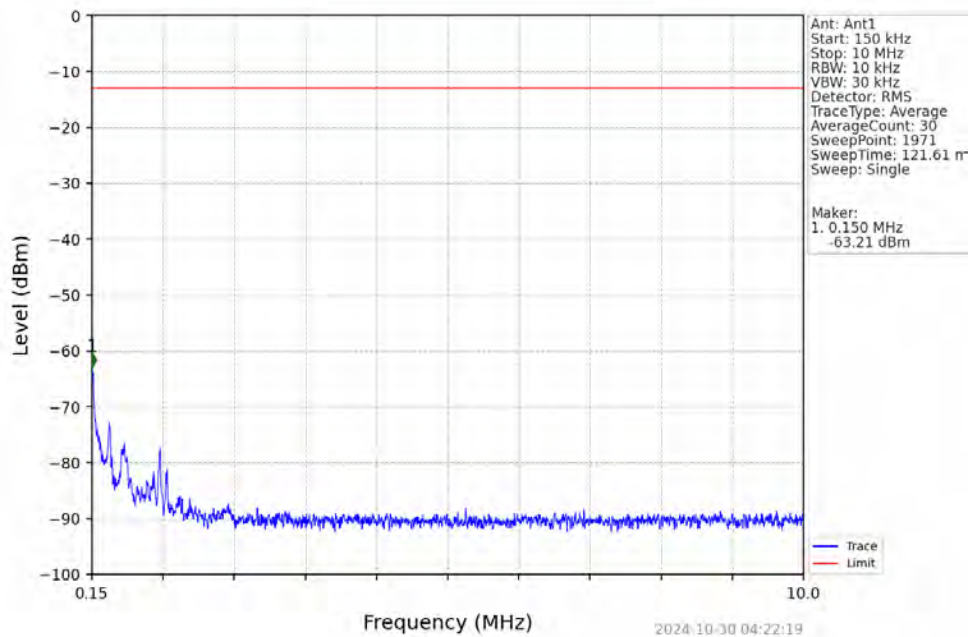


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.820	-28.89	-13	Pass
698.9	699	0.03	/	2	698.994	-30.08	-13	Pass
699	702	0.03	/	/	/	/	/	/

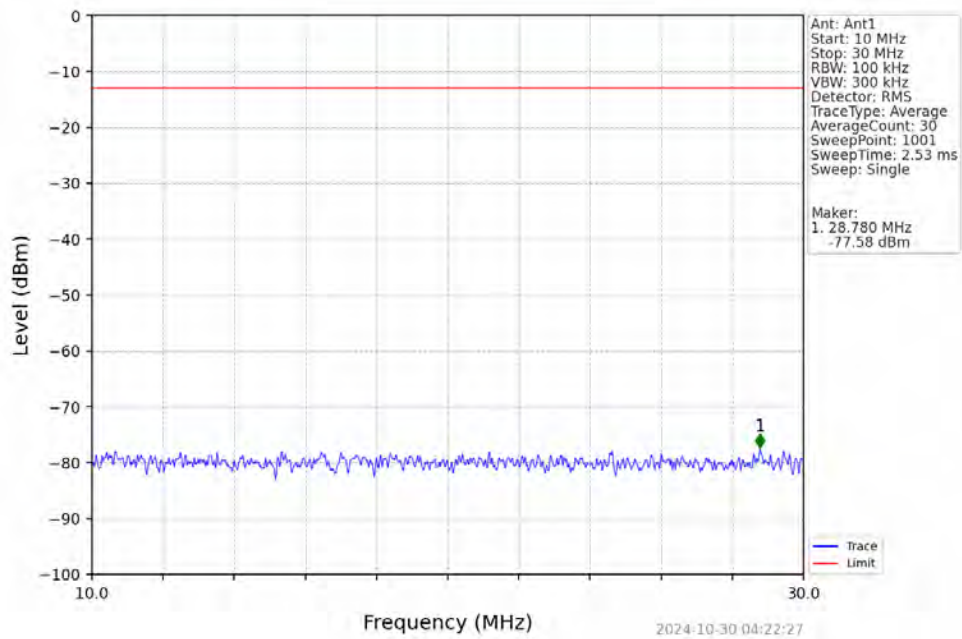
Band12 1.4MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



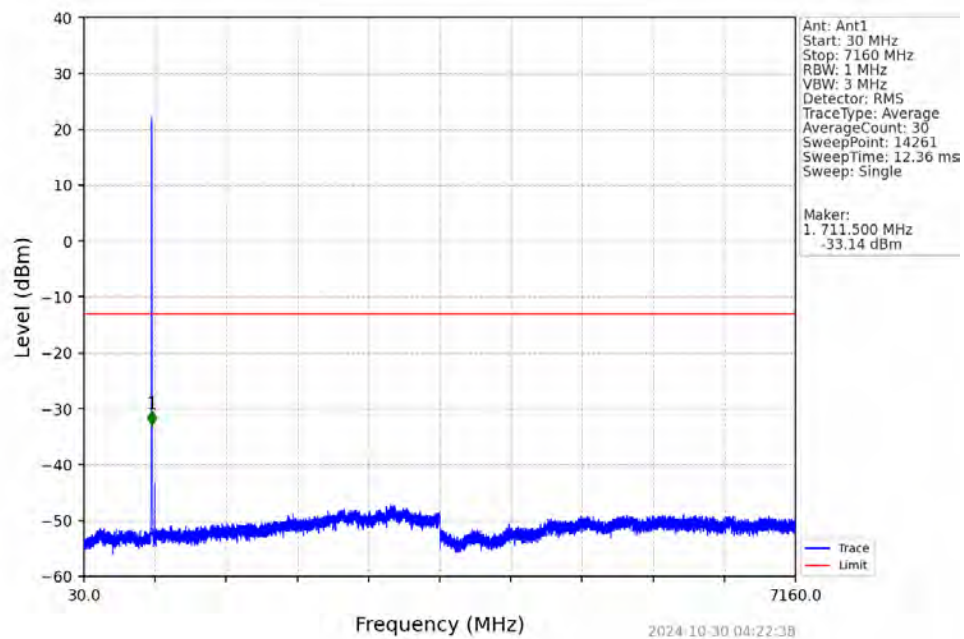
Band12 1.4MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



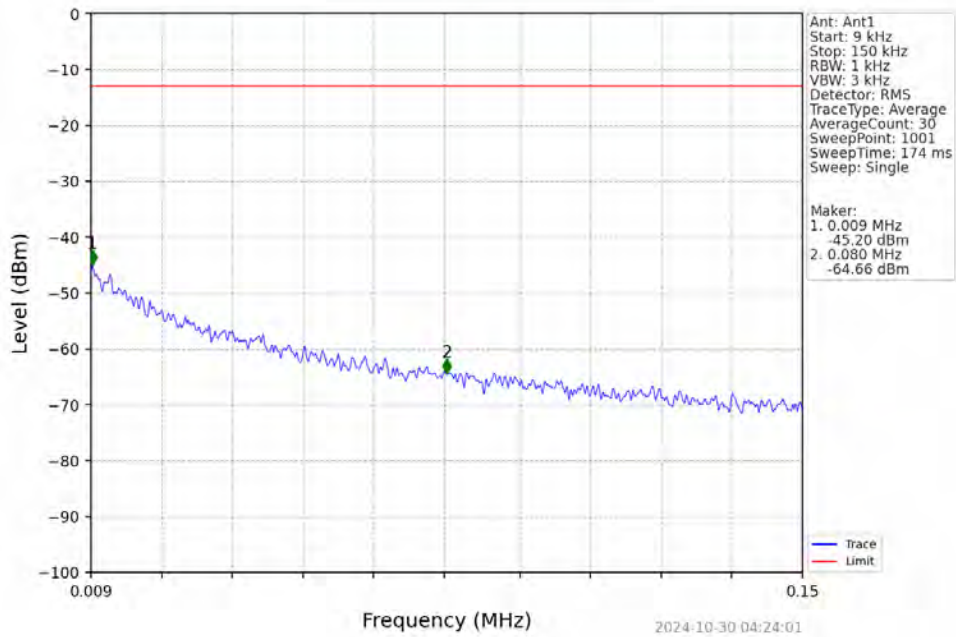
Band12 1.4MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



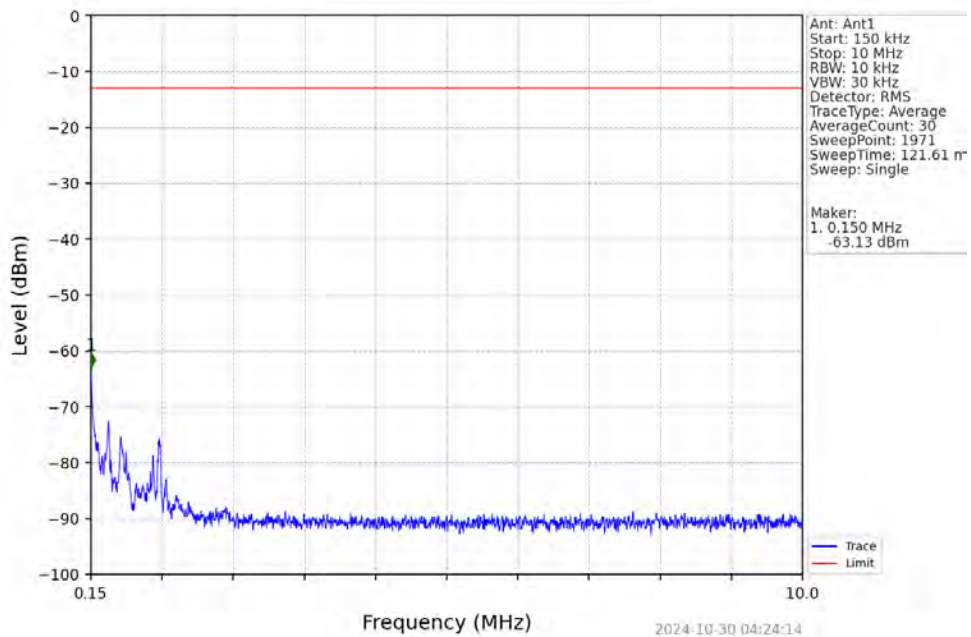
Band12 1.4MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



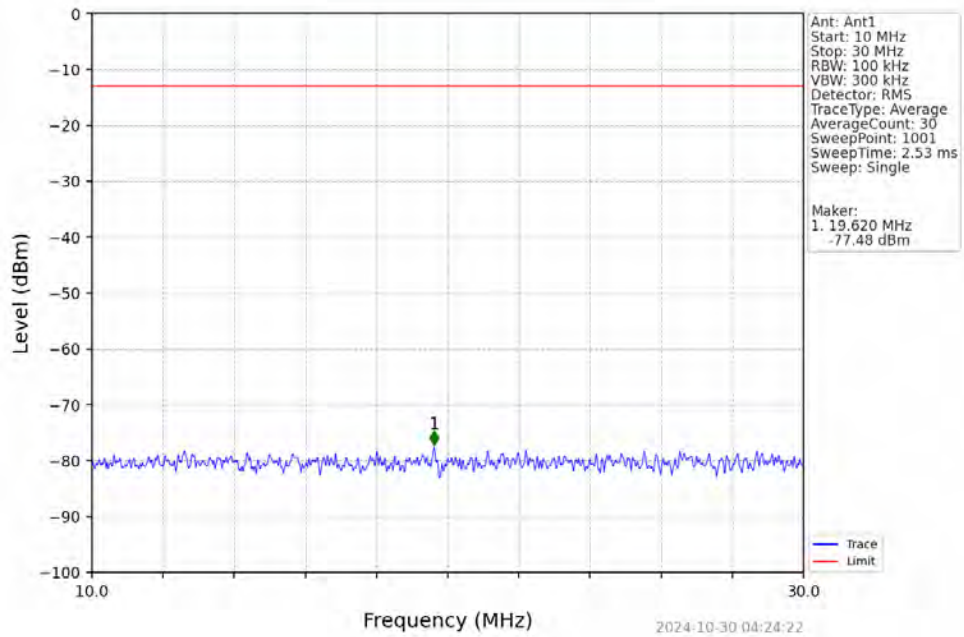
Band12 1.4MHz 16QAM HCH 715.3MHz RB 1 0 NTV



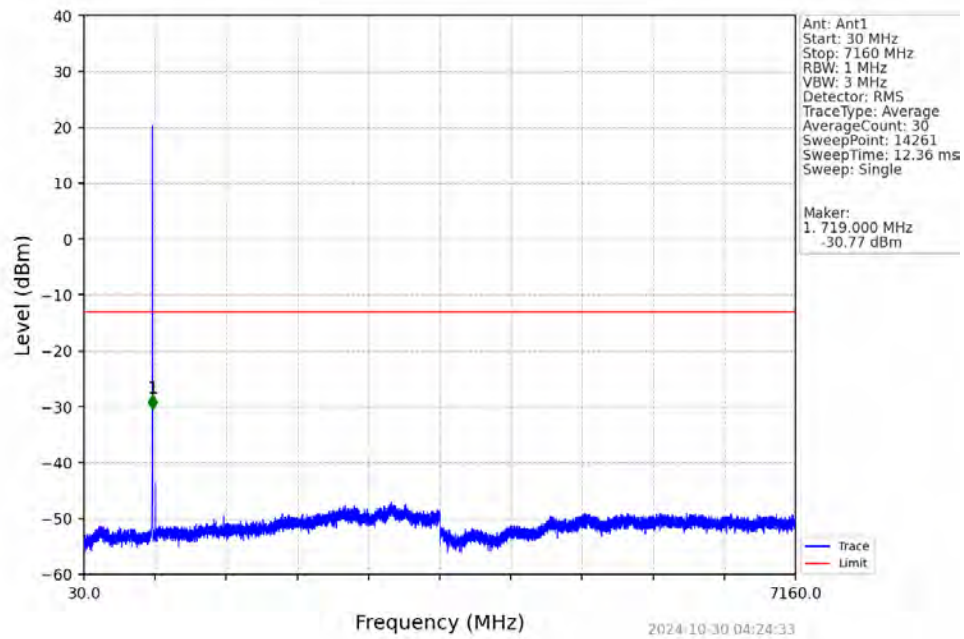
Band12 1.4MHz 16QAM HCH 715.3MHz RB 1 0 NTV



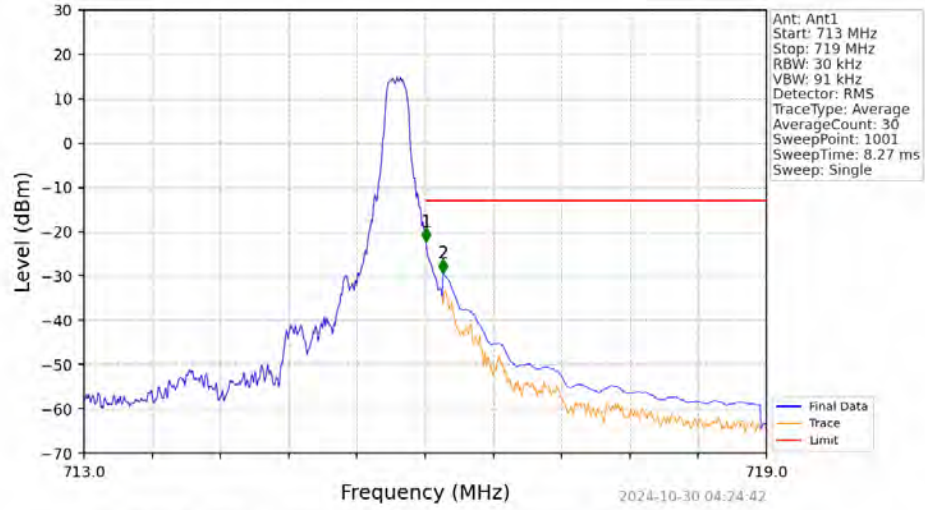
Band12 1.4MHz 16QAM HCH 715.3MHz RB 1 0 NTV



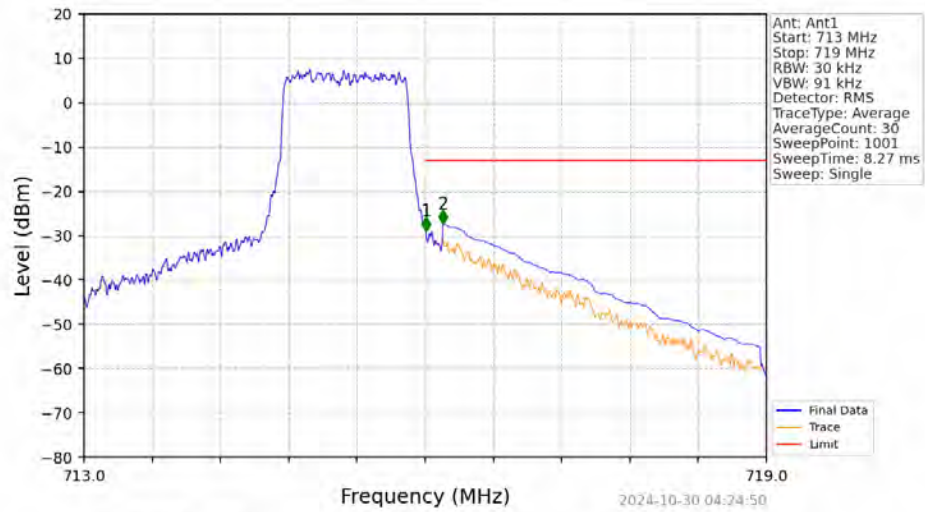
Band12 1.4MHz 16QAM HCH 715.3MHz RB 1 0 NTV



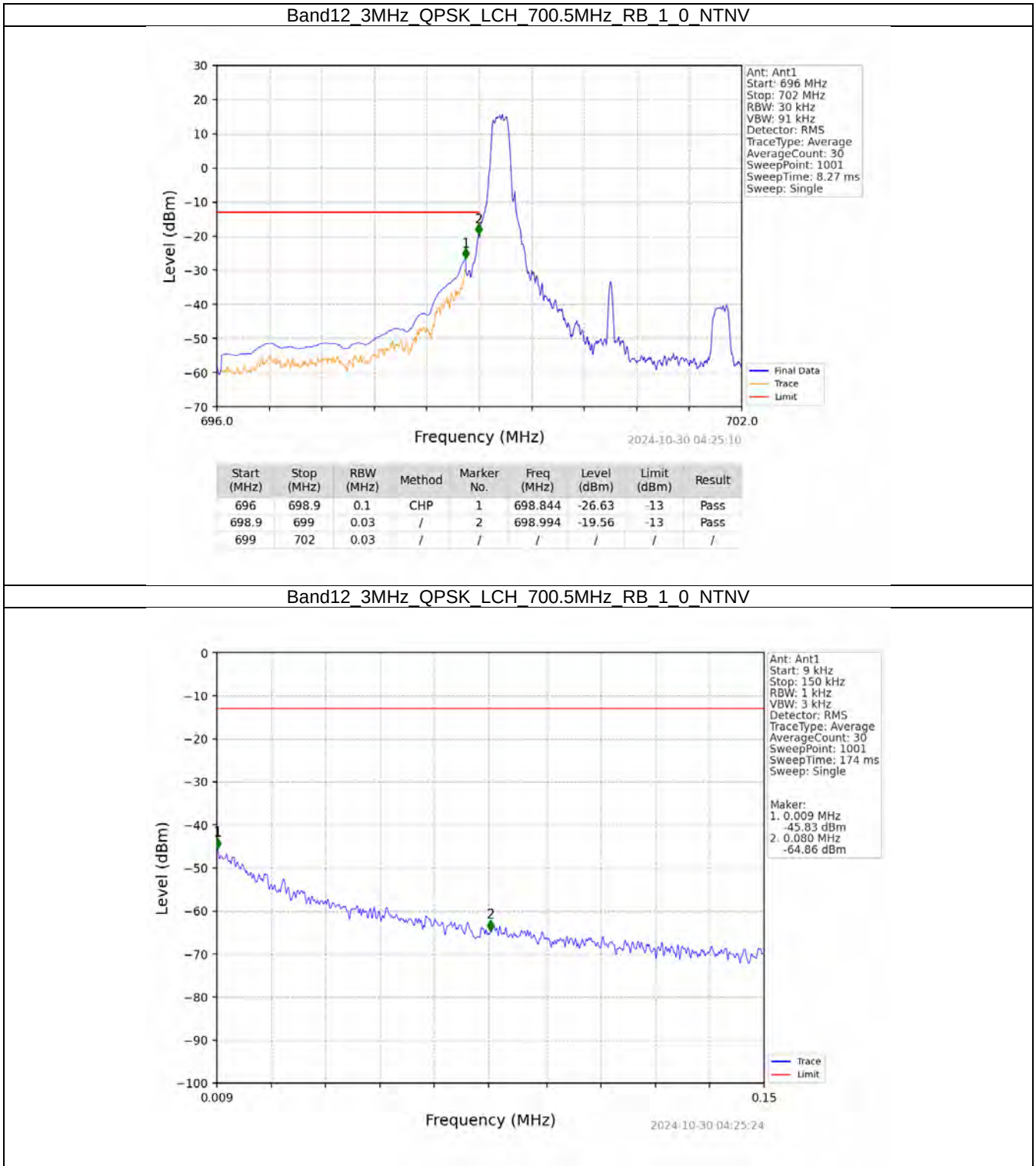
Band12 1.4MHz 16QAM HCH 715.3MHz RB 1 5 NTNV



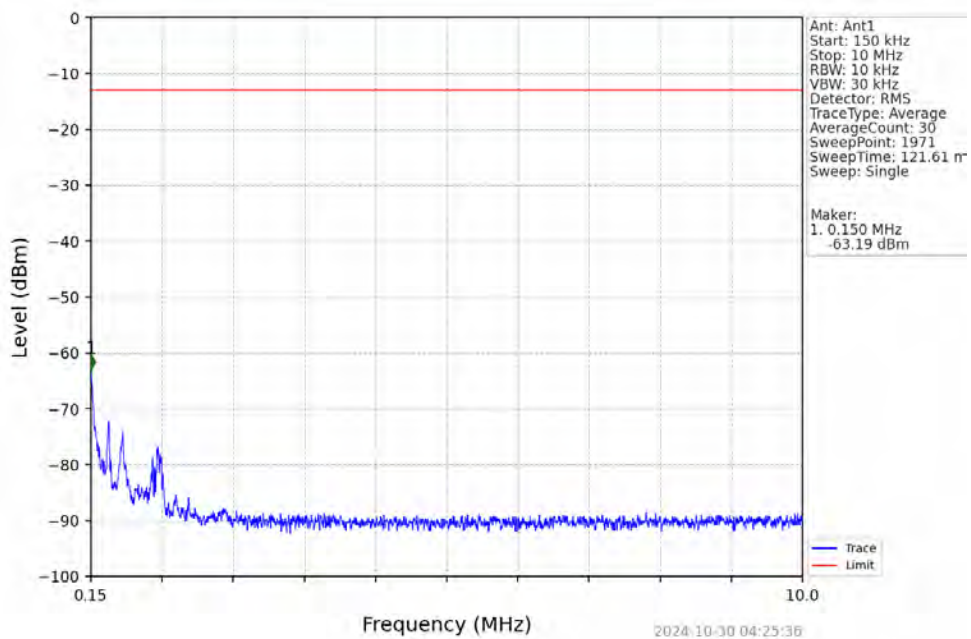
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTNV



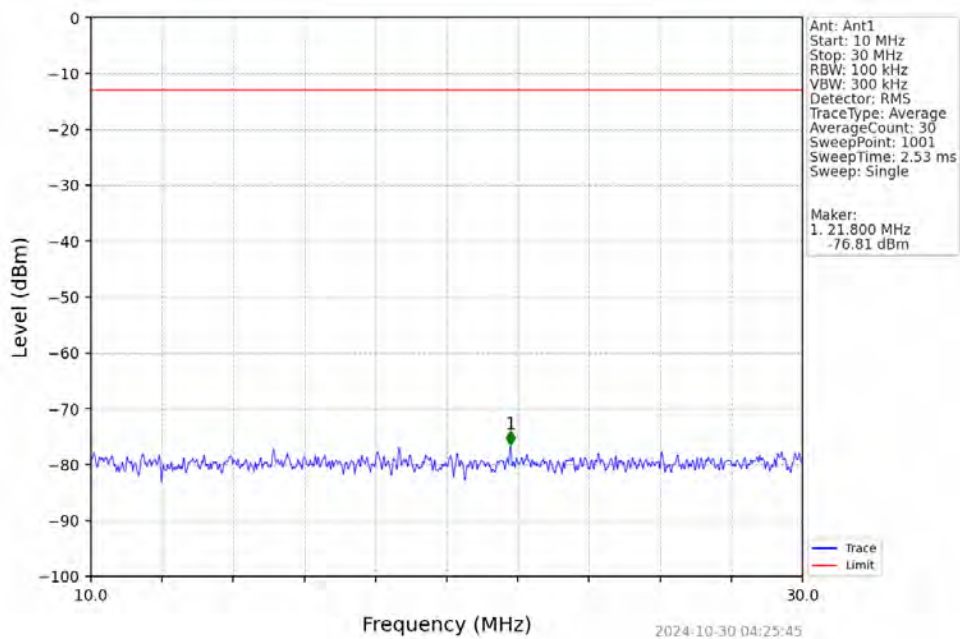
6.2.2 B12_3MHz



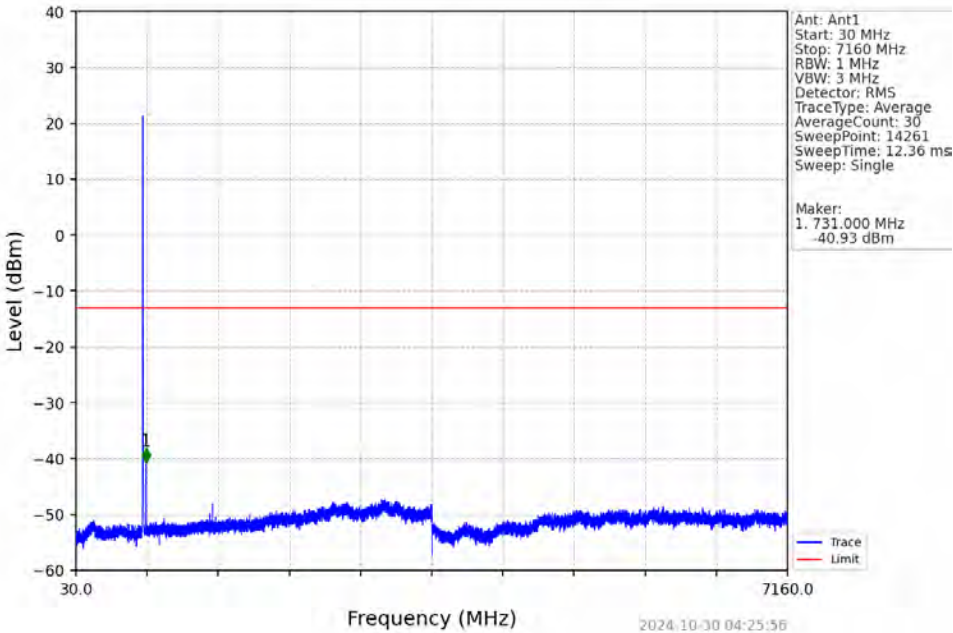
Band12 3MHz QPSK LCH 700.5MHz RB 1 0 NTNV



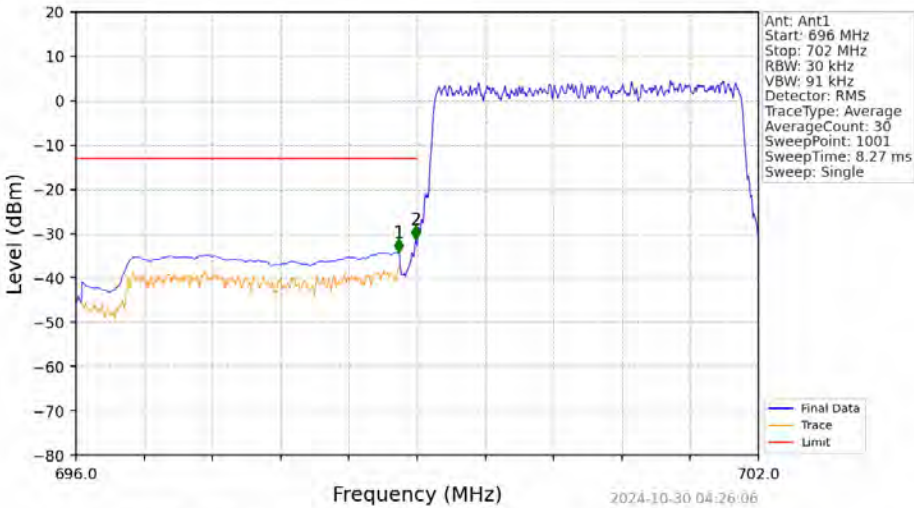
Band12 3MHz QPSK LCH 700.5MHz RB 1 0 NTNV



Band12 3MHz QPSK LCH 700.5MHz RB 1 0 NTN

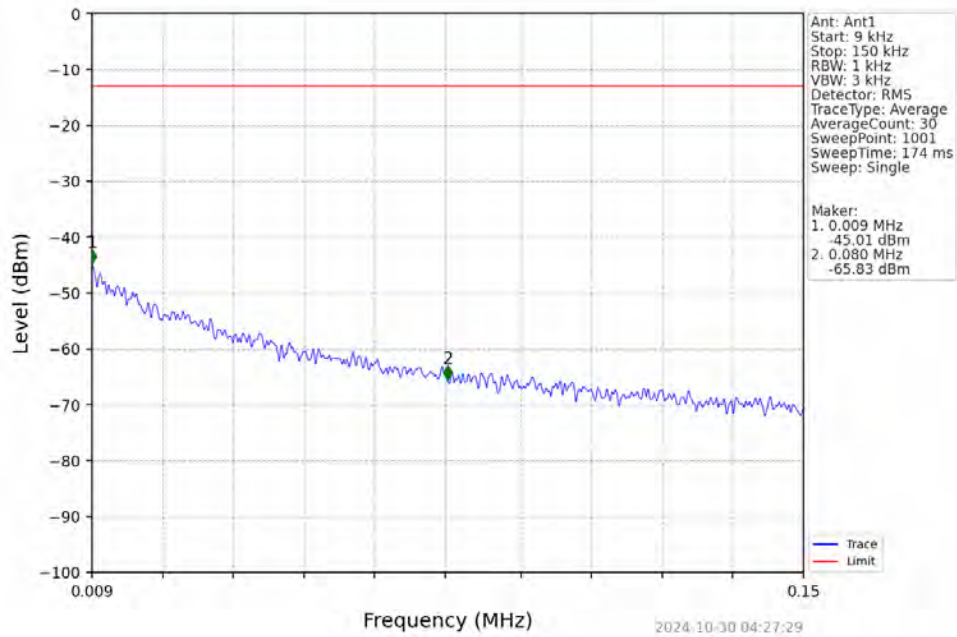


Band12 3MHz QPSK LCH 700.5MHz RB 15 0 NTN

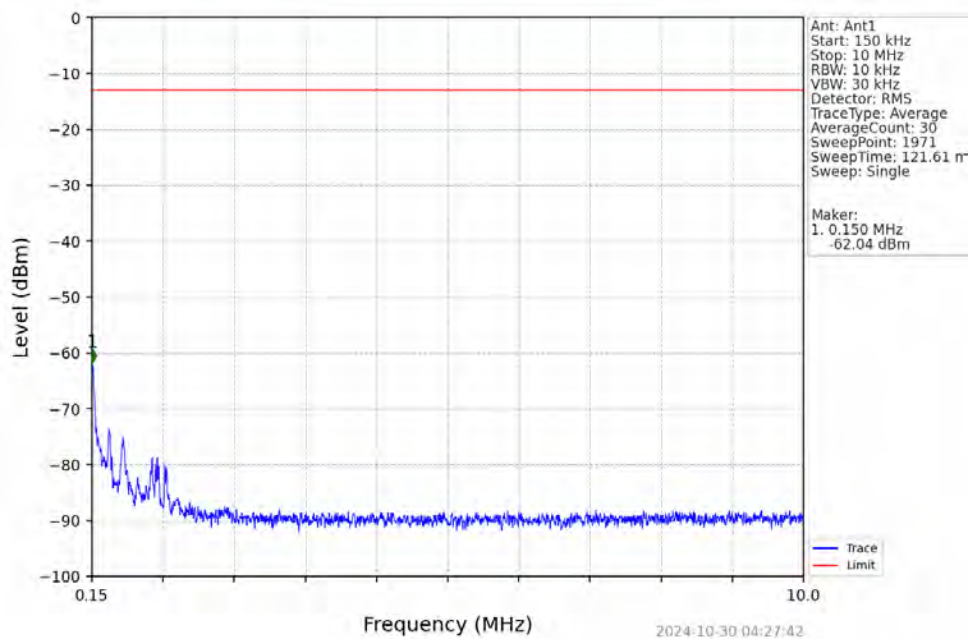


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.838	-34.23	-13	Pass
698.9	699	0.03	/	2	698.988	-31.36	-13	Pass
699	702	0.03	/	/	/	/	/	/

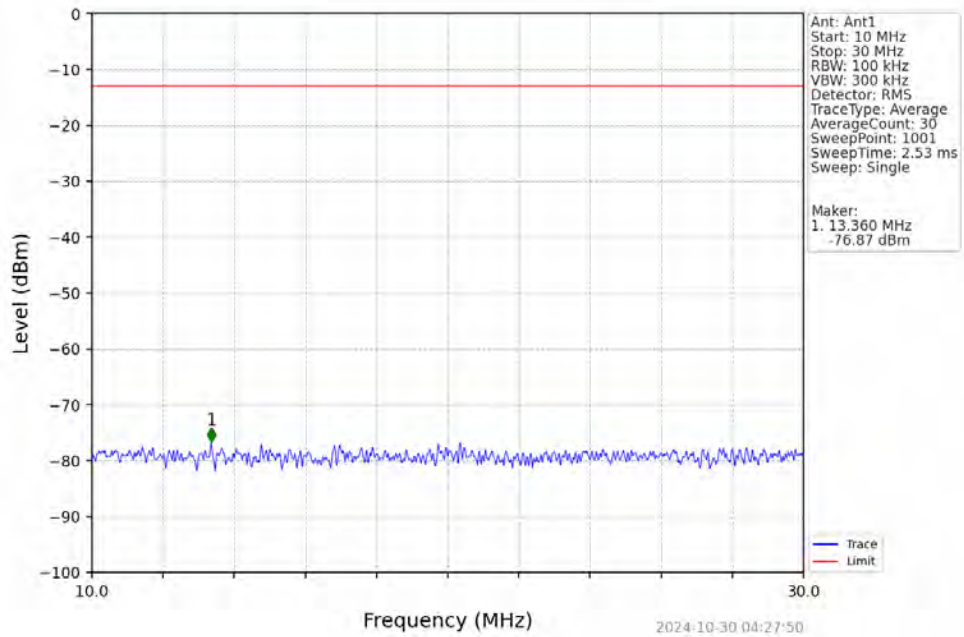
Band12 3MHz QPSK MCH 707.5MHz RB 1 0 NTN



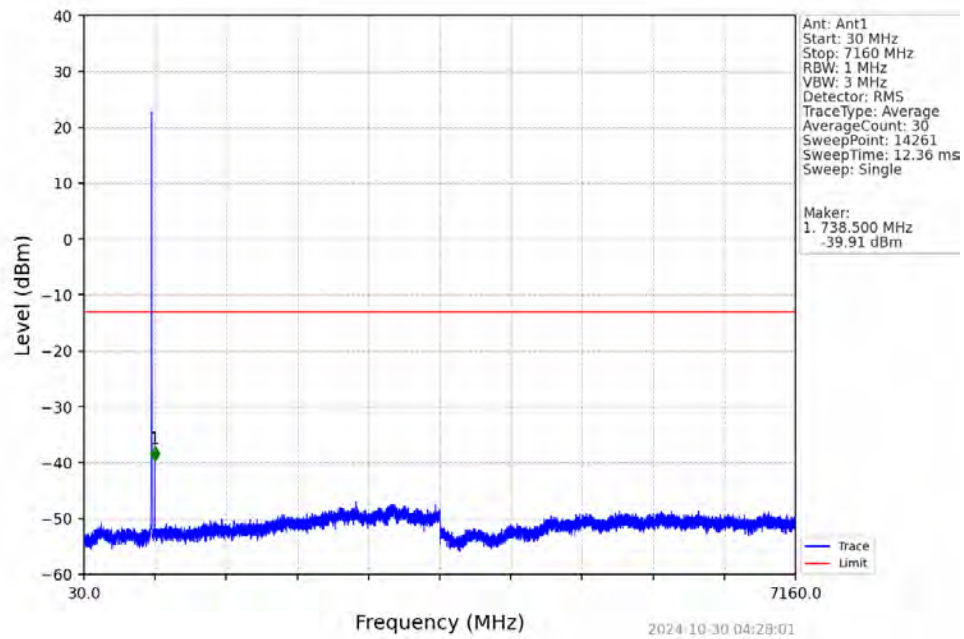
Band12 3MHz QPSK MCH 707.5MHz RB 1 0 NTN



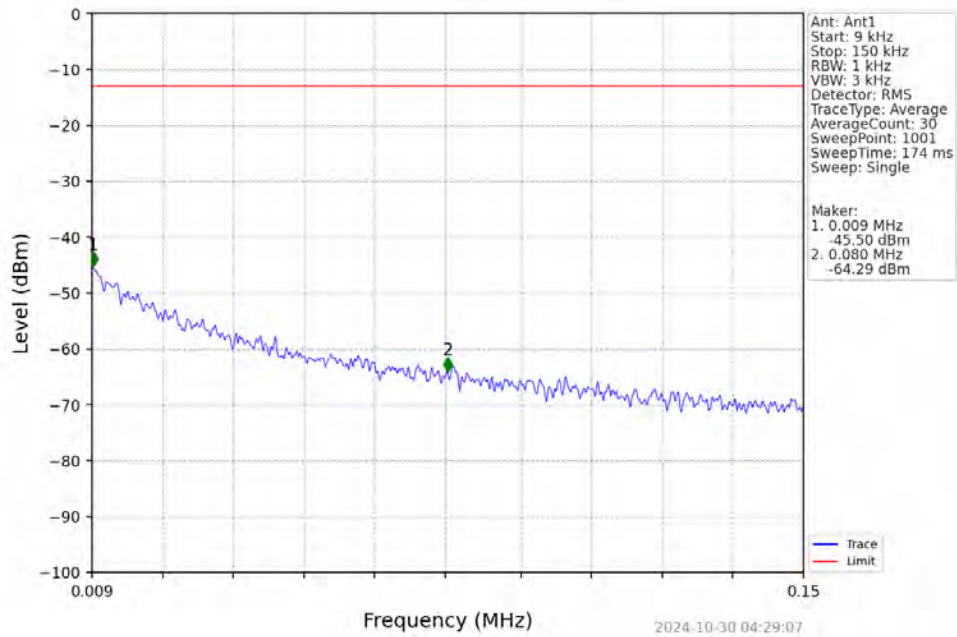
Band12 3MHz QPSK MCH 707.5MHz RB 1 0 NTNV



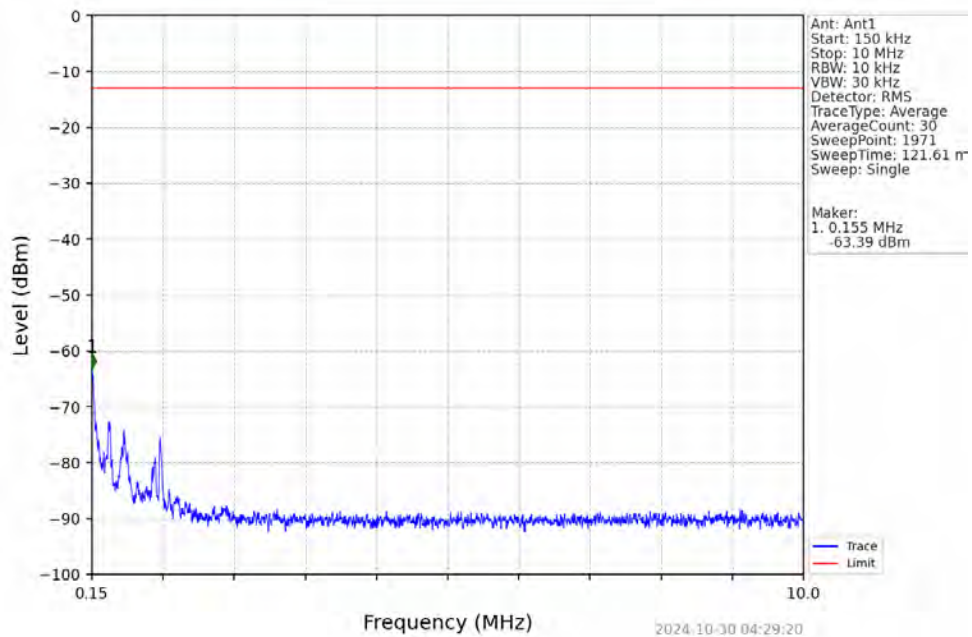
Band12 3MHz QPSK MCH 707.5MHz RB 1 0 NTNV



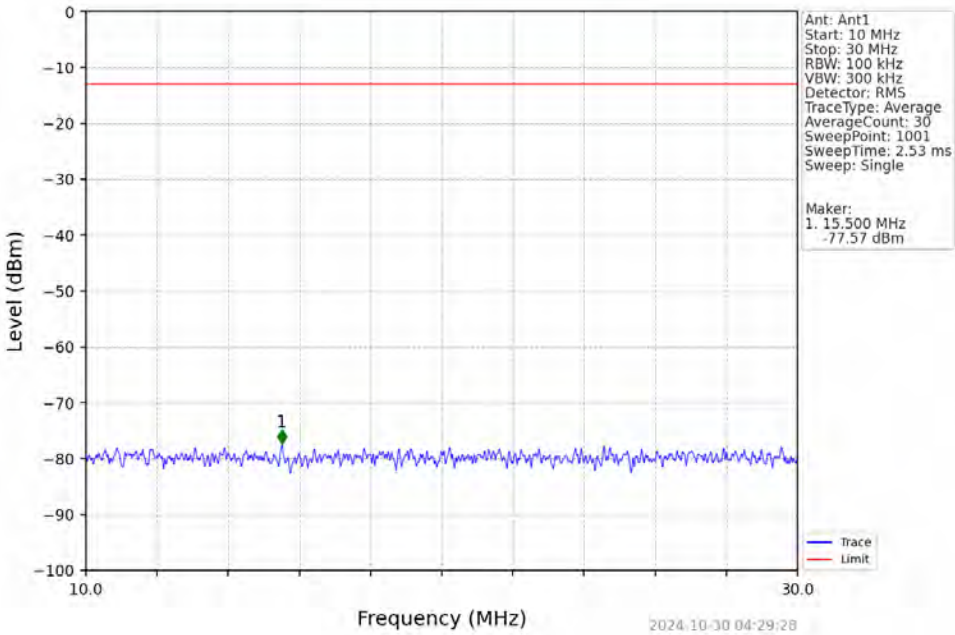
Band12 3MHz QPSK HCH 714.5MHz RB 1 0 NTN



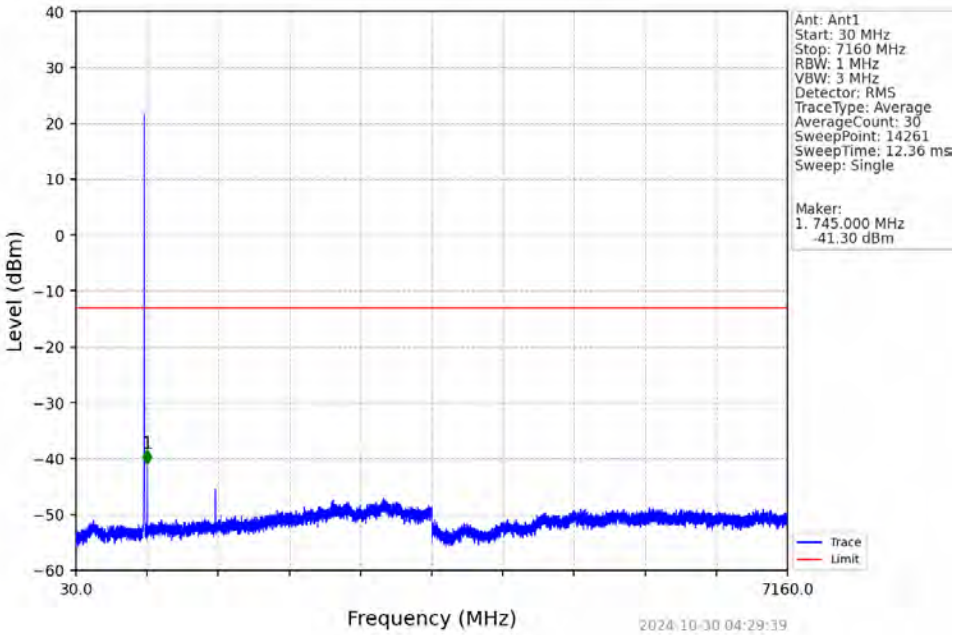
Band12 3MHz QPSK HCH 714.5MHz RB 1 0 NTN



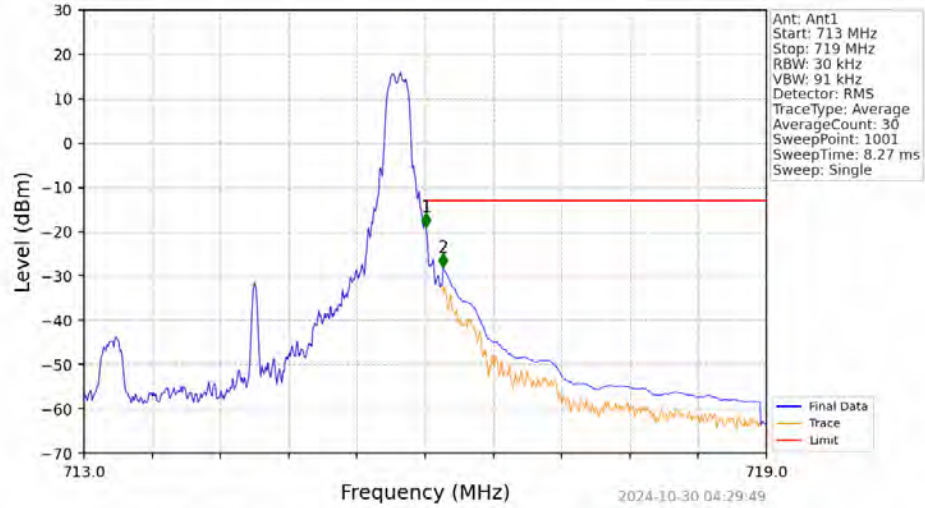
Band12 3MHz QPSK HCH 714.5MHz RB 1 0 NTN



Band12 3MHz QPSK HCH 714.5MHz RB 1 0 NTN

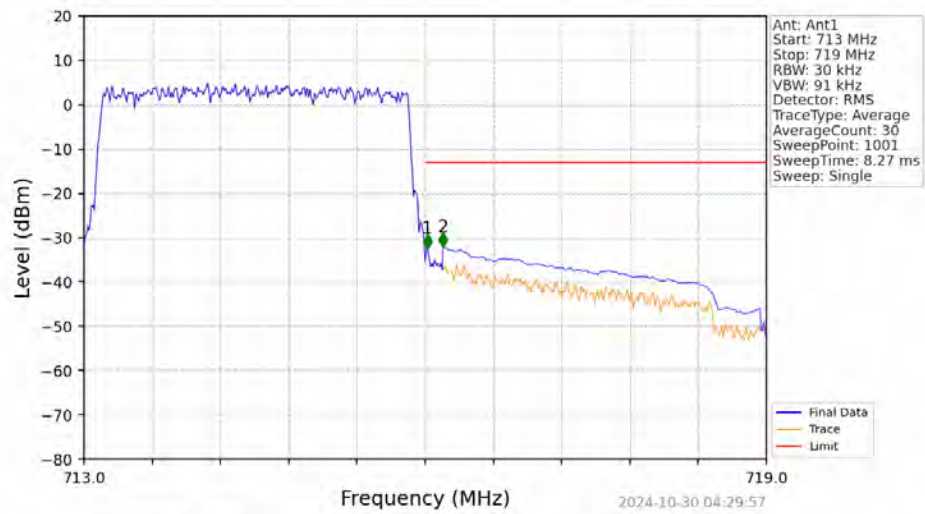


Band12 3MHz QPSK HCH 714.5MHz RB 1 14 NTV



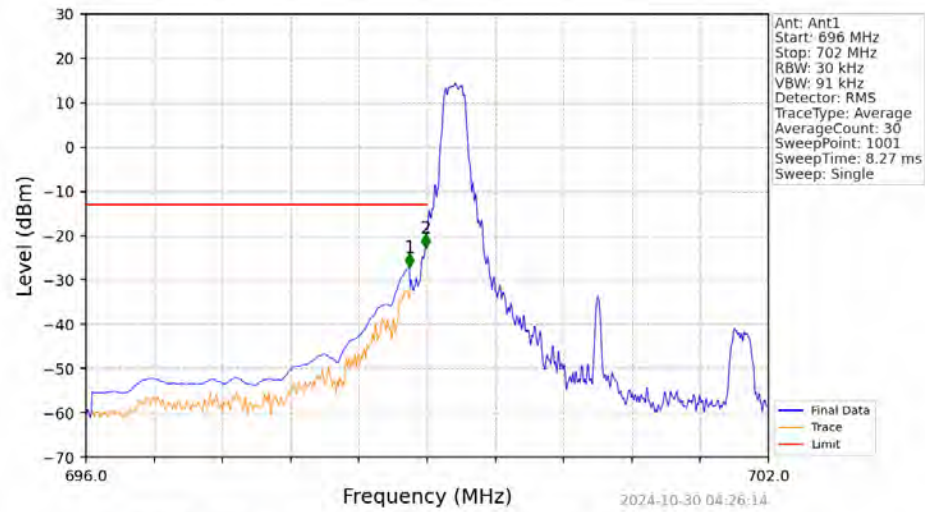
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.006	-18.86	-13	Pass
716.1	719	0.1	CHP	2	716.156	-28.08	-13	Pass

Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTV

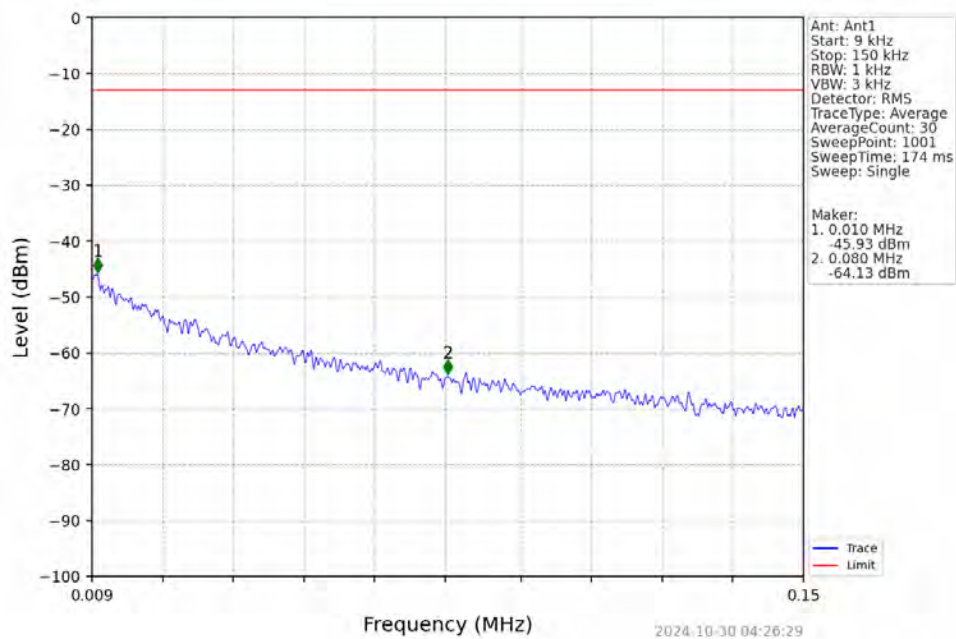


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.018	-32.35	-13	Pass
716.1	719	0.1	CHP	2	716.156	-32.02	-13	Pass

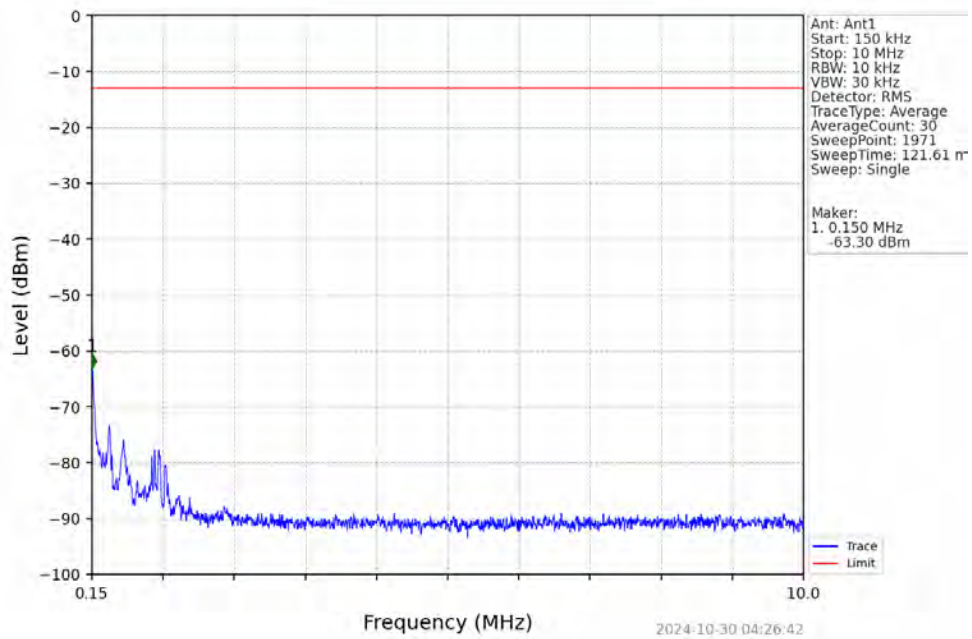
Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTNV



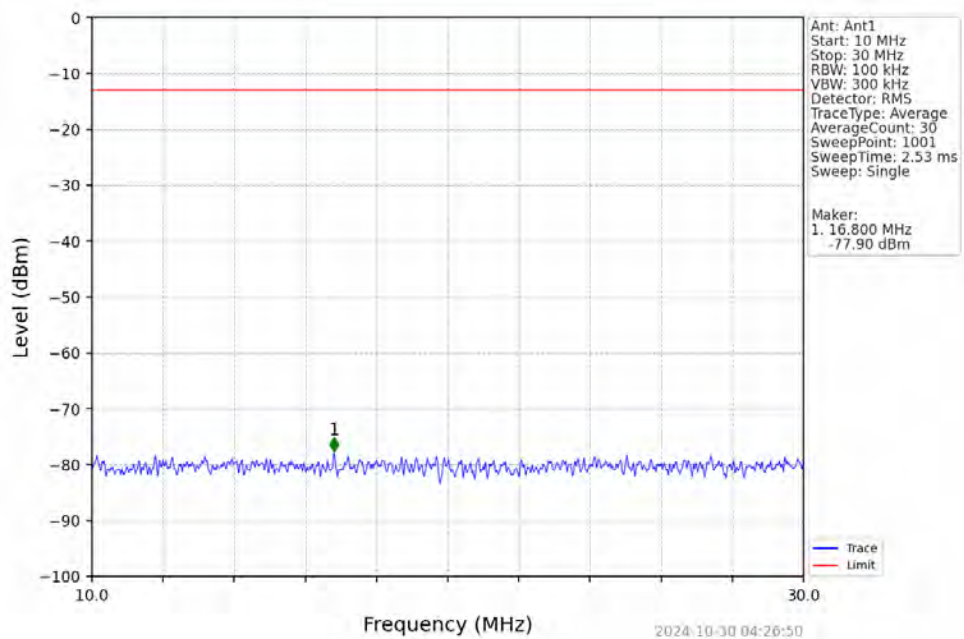
Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTNV



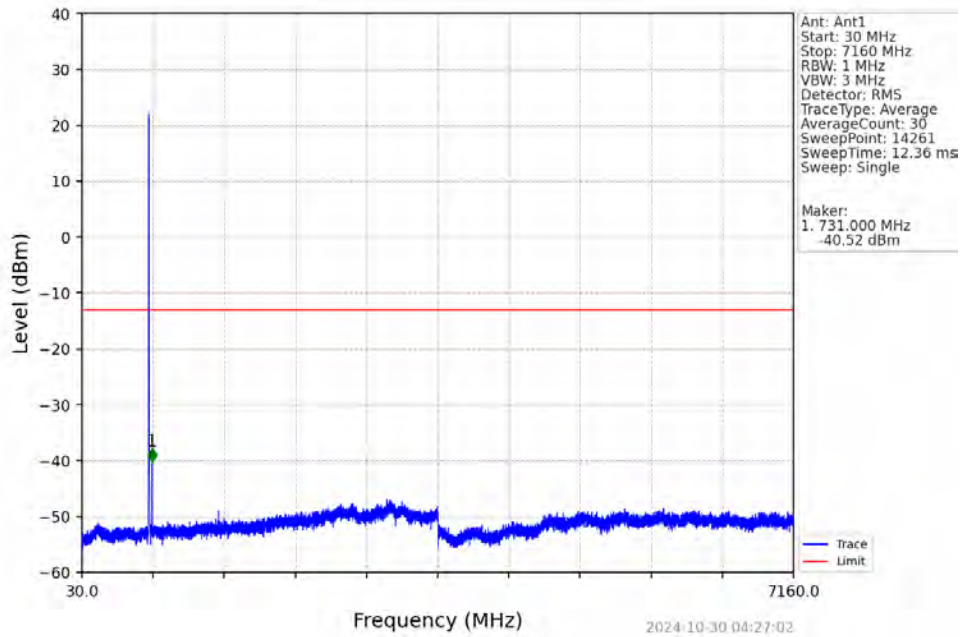
Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTNV



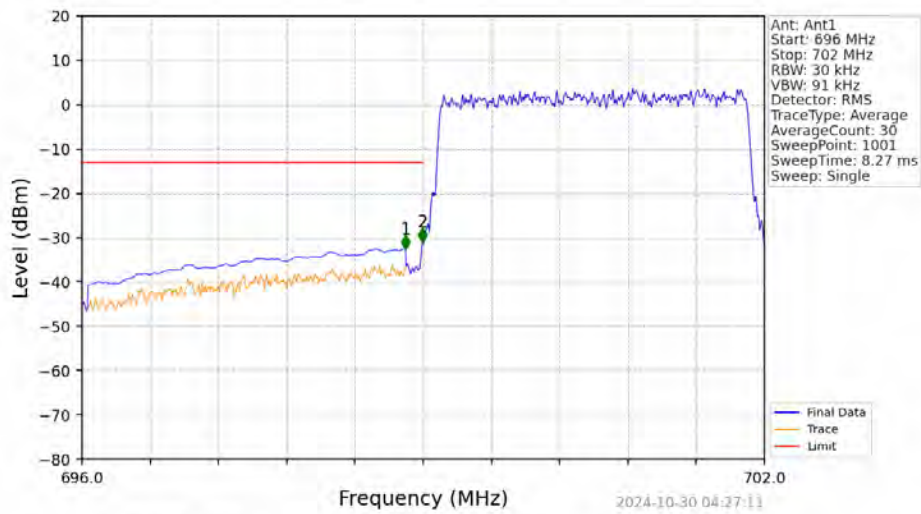
Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTNV



Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTNV

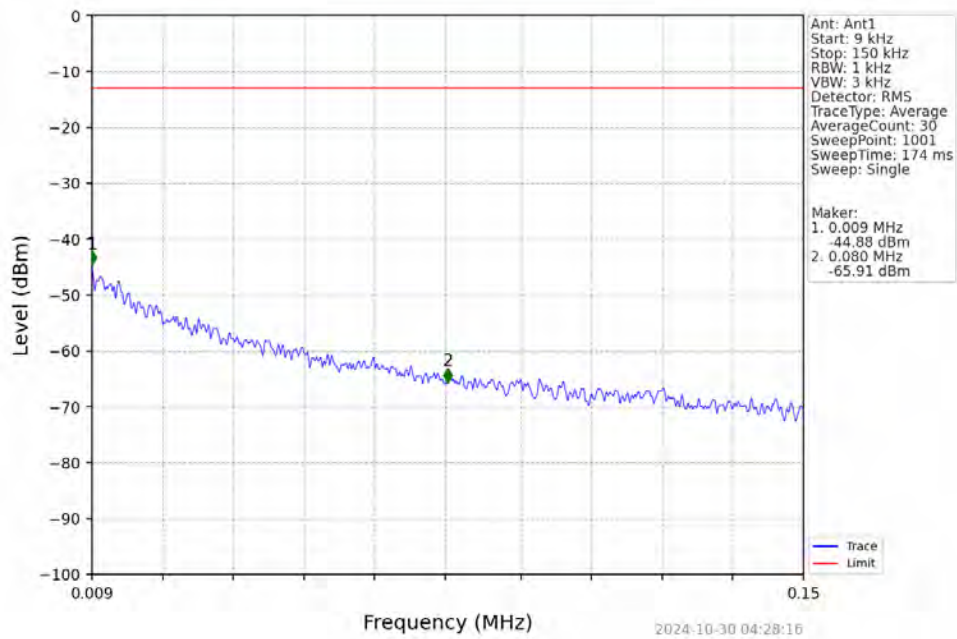


Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTNV

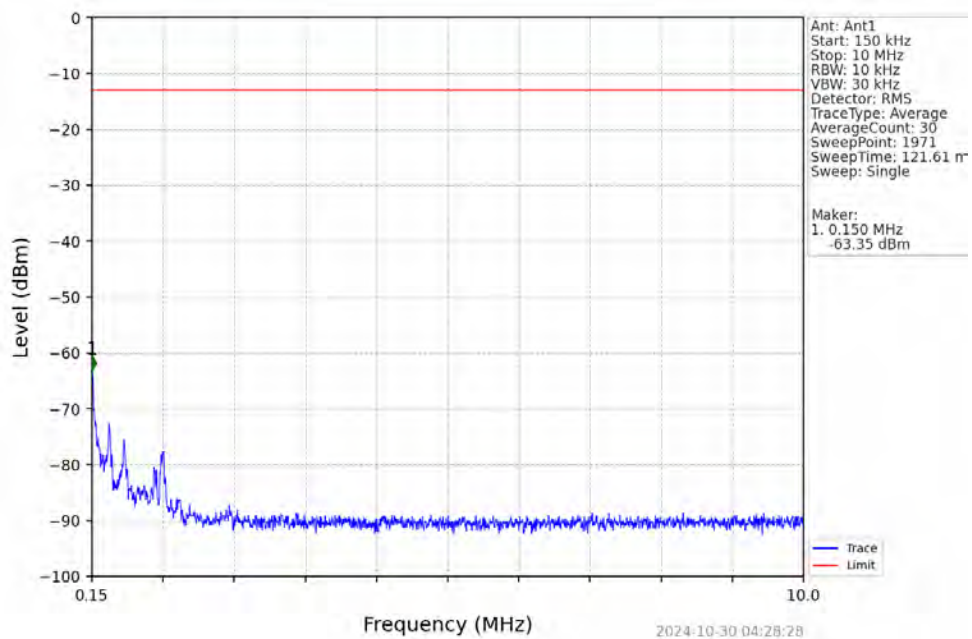


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.844	-32.52	-13	Pass
698.9	699	0.03	/	2	698.994	-31.02	-13	Pass
699	702	0.03	/	/	/	/	/	/

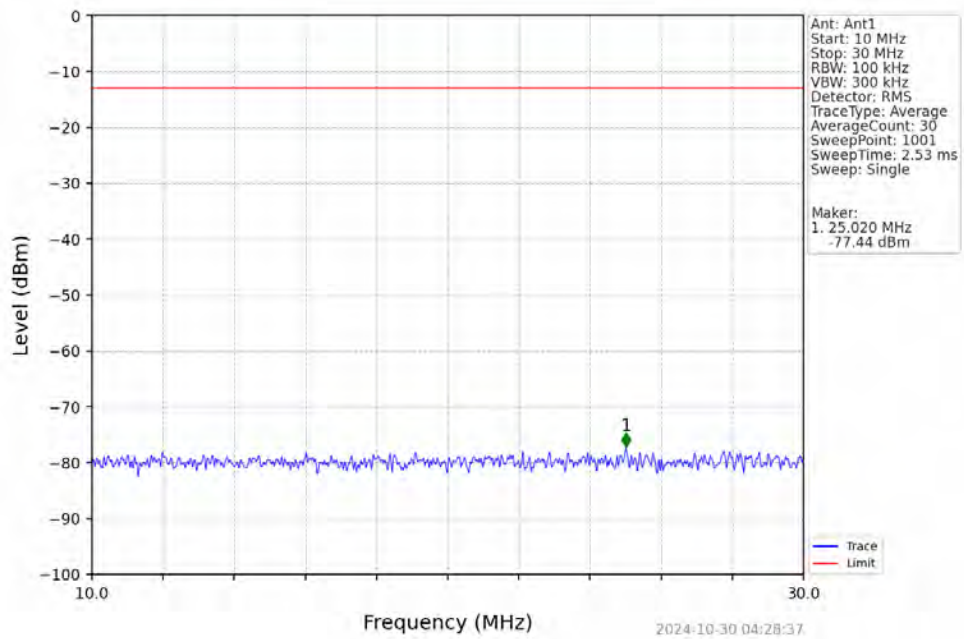
Band12 3MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



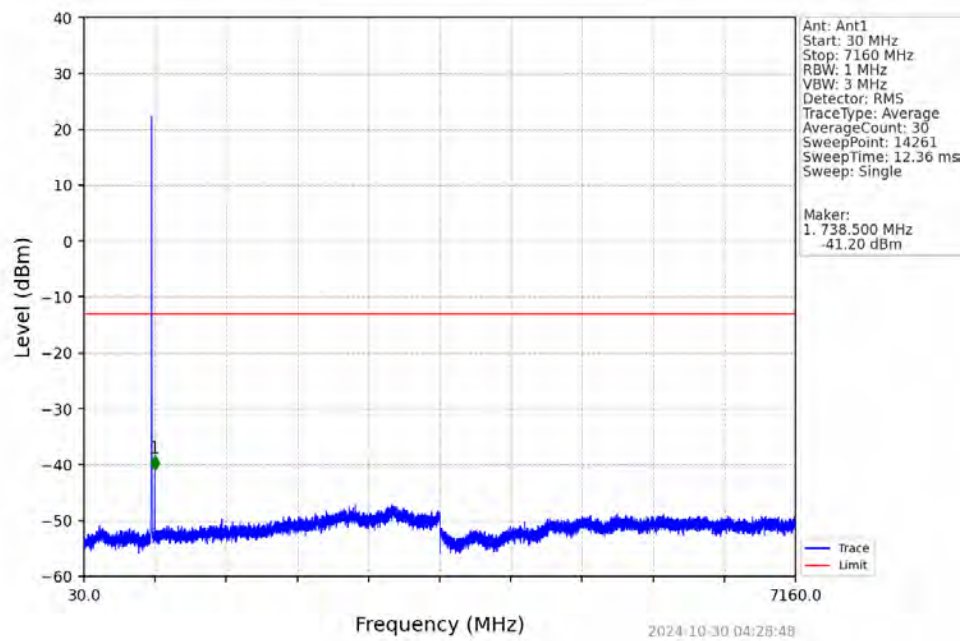
Band12 3MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



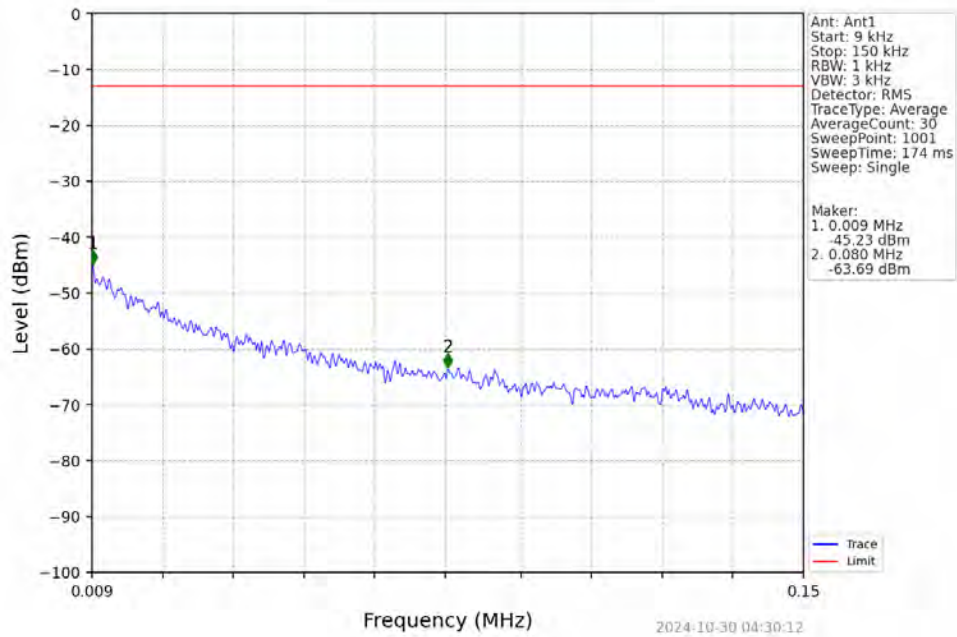
Band12 3MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



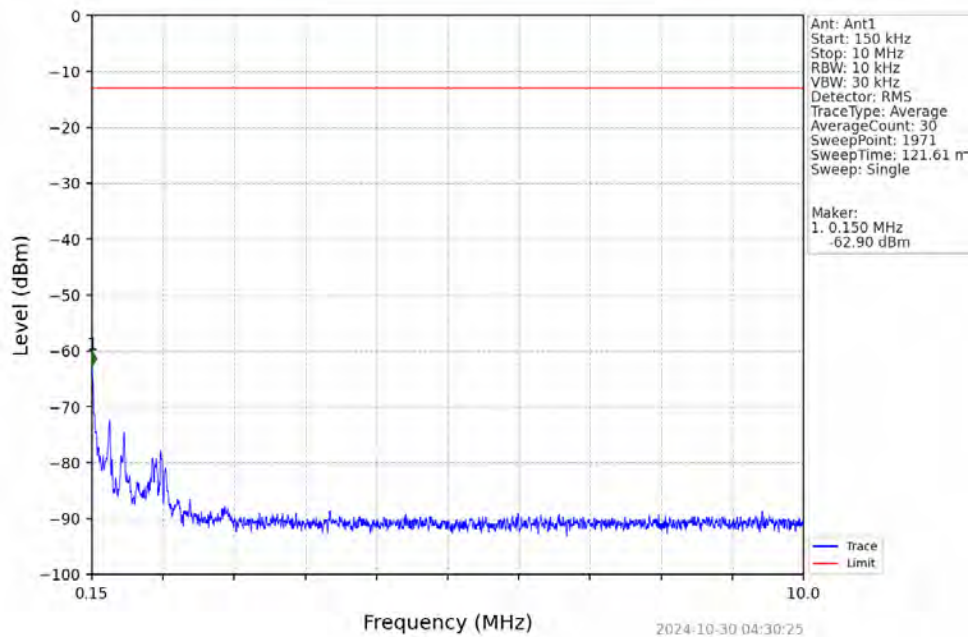
Band12 3MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



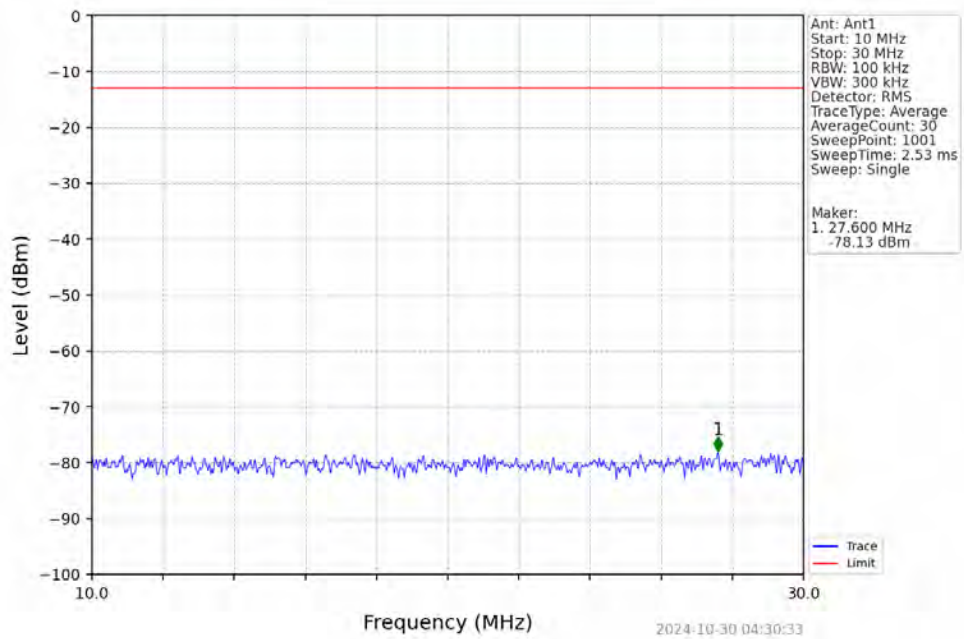
Band12 3MHz 16QAM HCH 714.5MHz RB 1 0 NTV



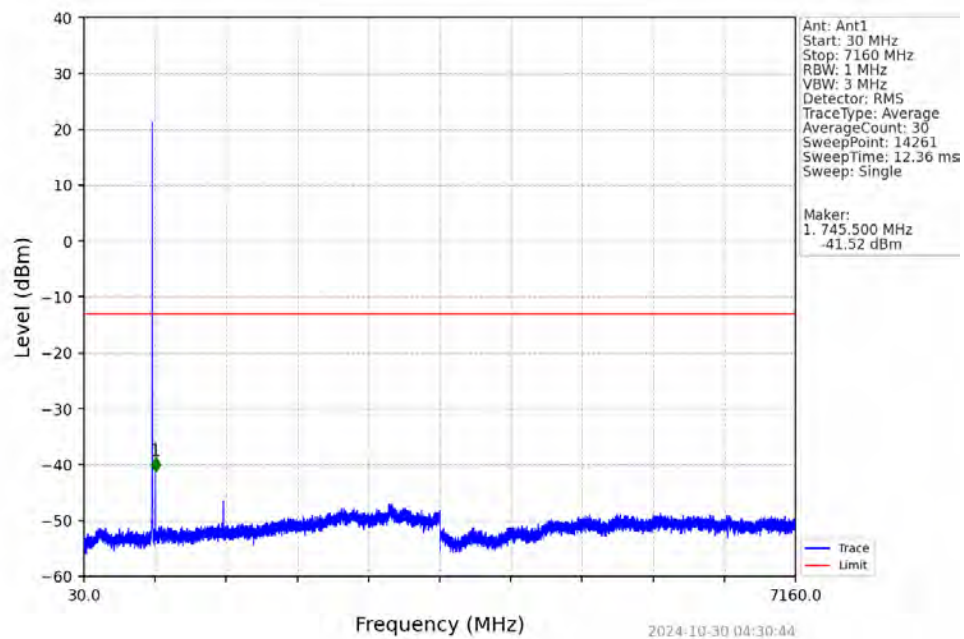
Band12 3MHz 16QAM HCH 714.5MHz RB 1 0 NTV



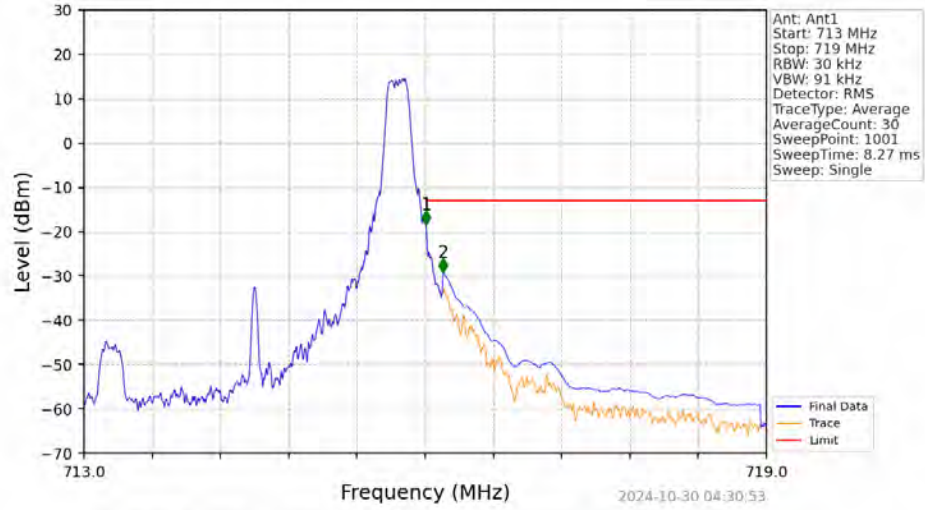
Band12 3MHz 16QAM HCH 714.5MHz RB 1 0 NTV



Band12 3MHz 16QAM HCH 714.5MHz RB 1 0 NTV

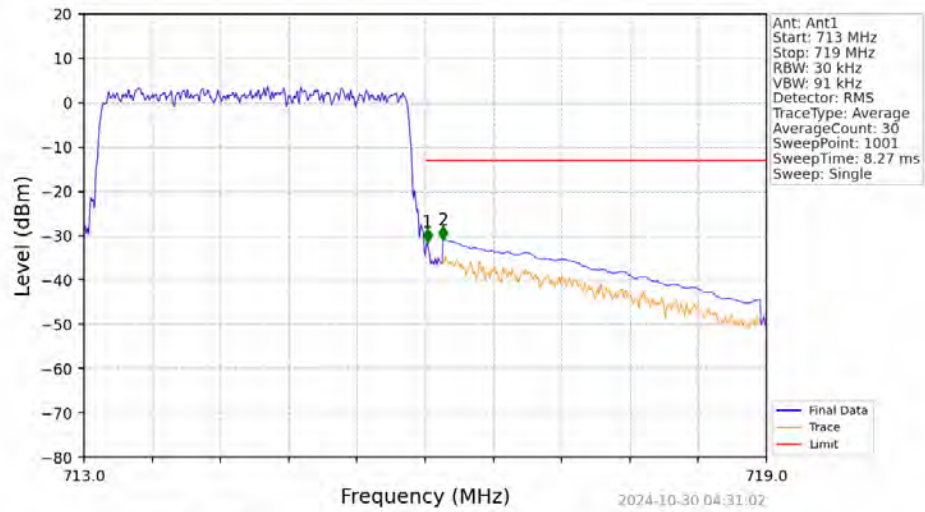


Band12 3MHz 16QAM HCH 714.5MHz RB 1 14 NTNV



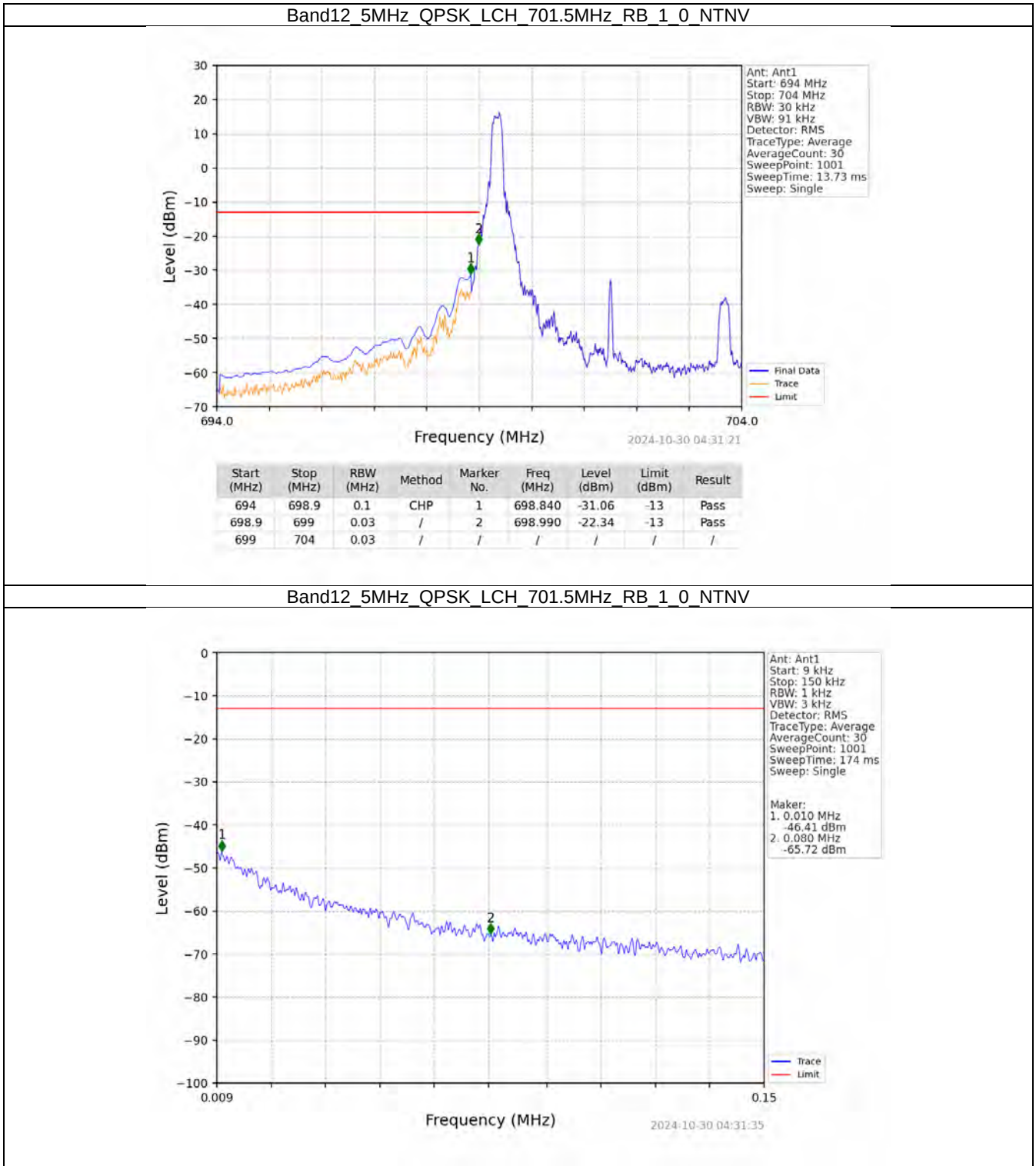
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.006	-18.40	-13	Pass
716.1	719	0.1	CHP	2	716.156	-29.13	-13	Pass

Band12 3MHz 16QAM HCH 714.5MHz RB 15 0 NTNV

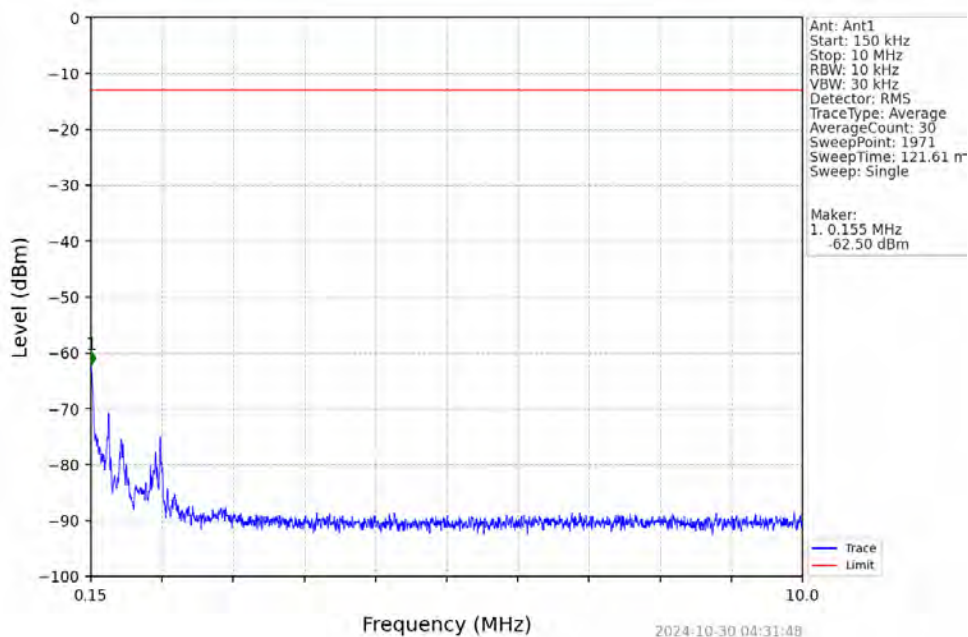


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.018	-31.52	-13	Pass
716.1	719	0.1	CHP	2	716.156	-30.97	-13	Pass

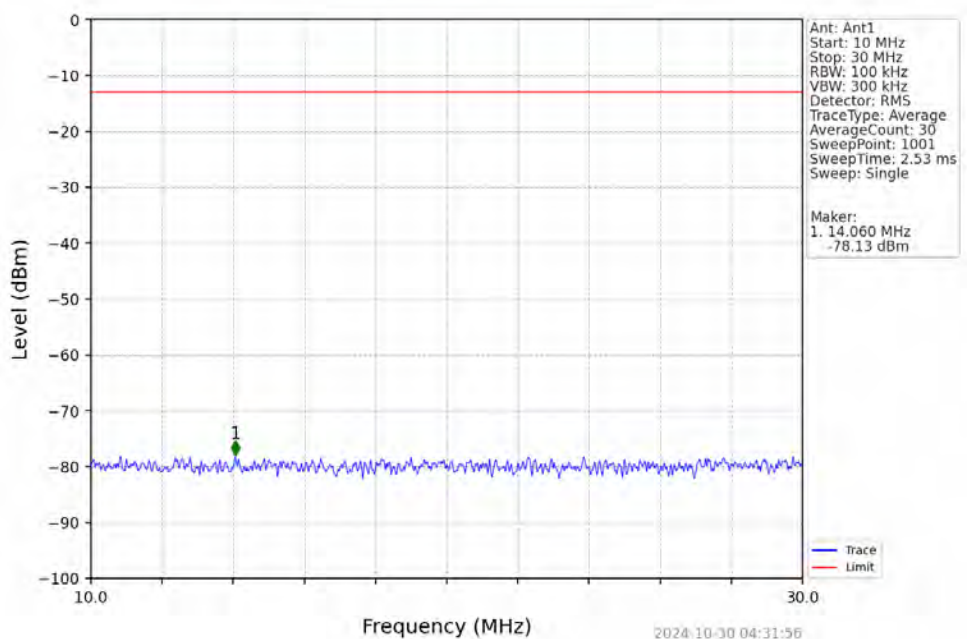
6.2.3 B12_5MHz



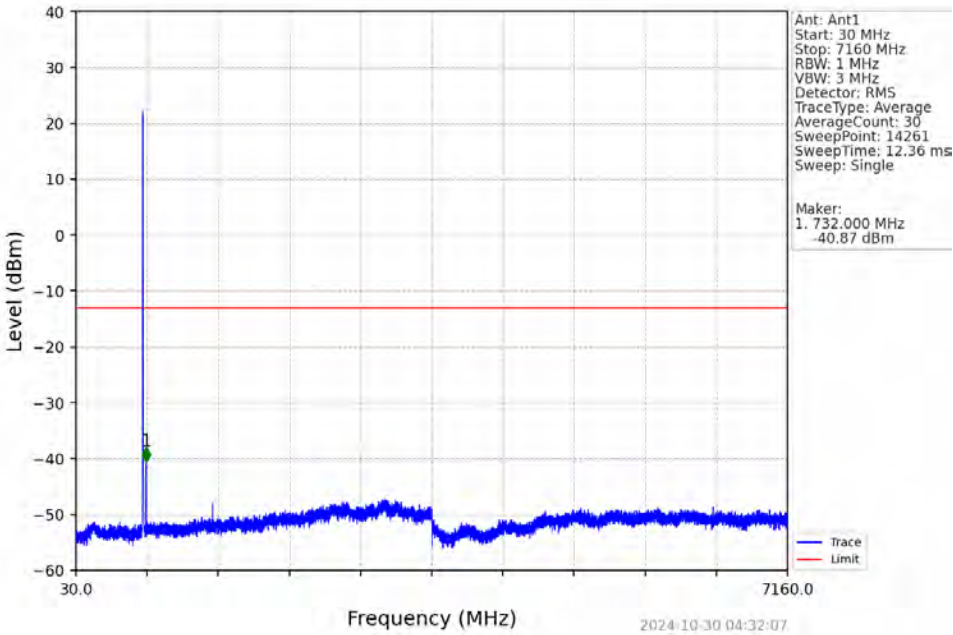
Band12 5MHz QPSK LCH 701.5MHz RB 1 0 NTN



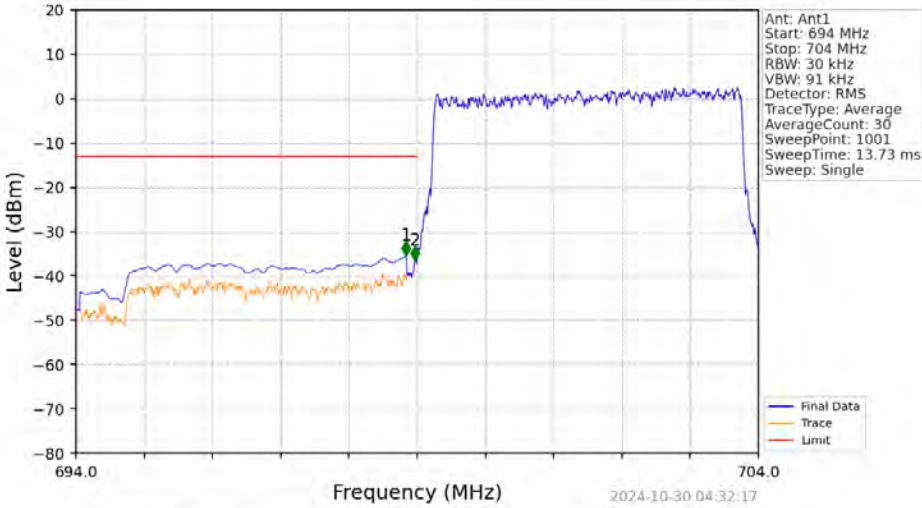
Band12 5MHz QPSK LCH 701.5MHz RB 1 0 NTN



Band12 5MHz QPSK LCH 701.5MHz RB 1 0 NTN

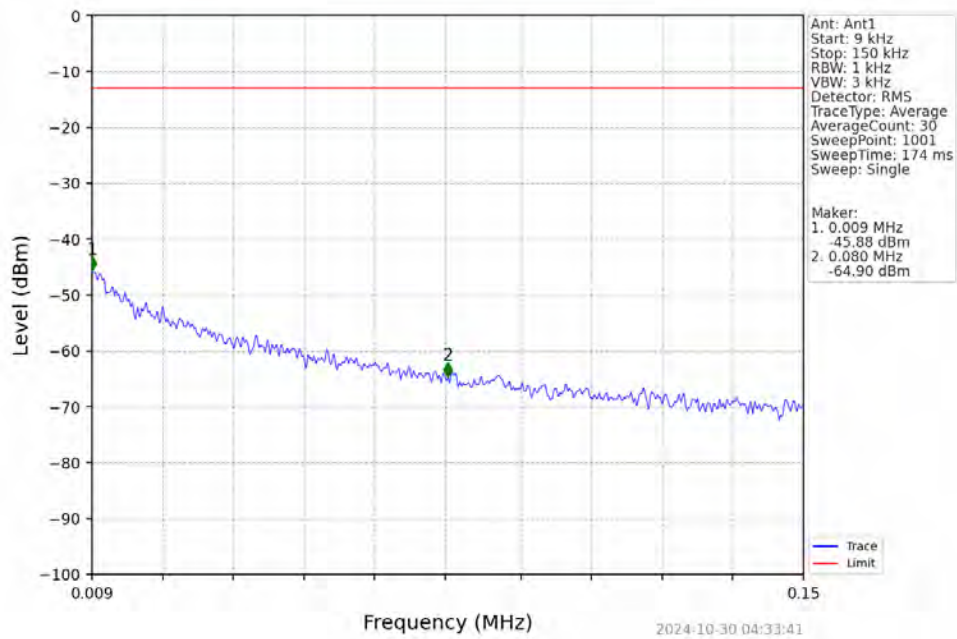


Band12 5MHz QPSK LCH 701.5MHz RB 25 0 NTN

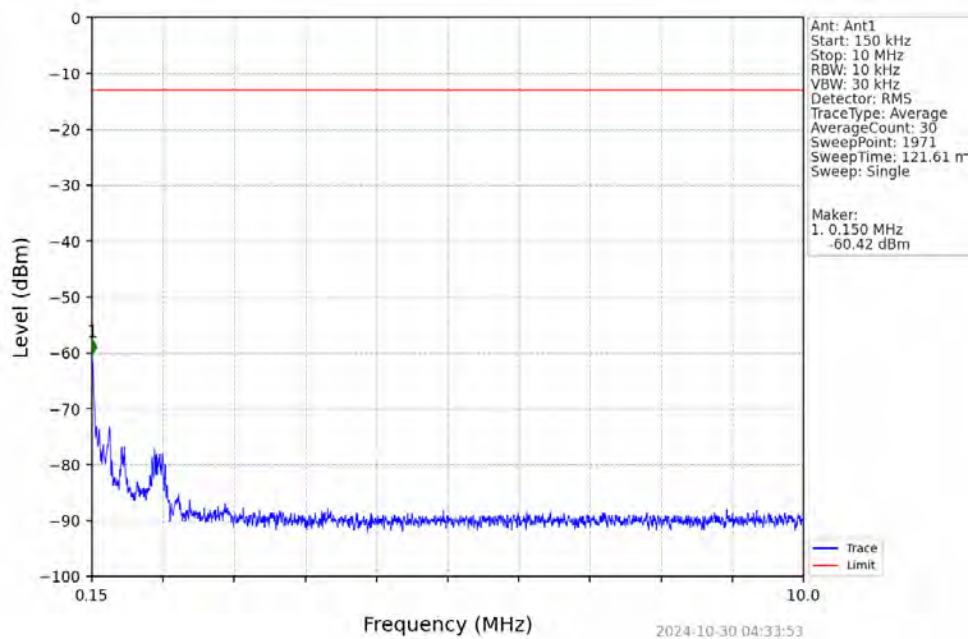


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.840	-35.27	-13	Pass
698.9	699	0.03	/	2	698.970	-36.37	-13	Pass
699	704	0.03	/	/	/	/	/	/

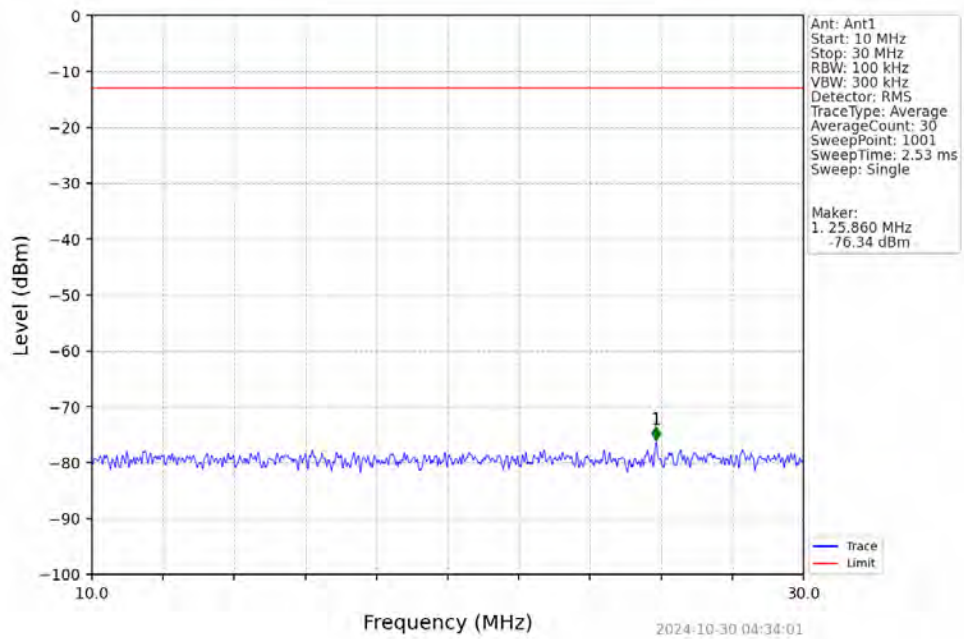
Band12 5MHz QPSK MCH 707.5MHz RB 1 0 NTNV



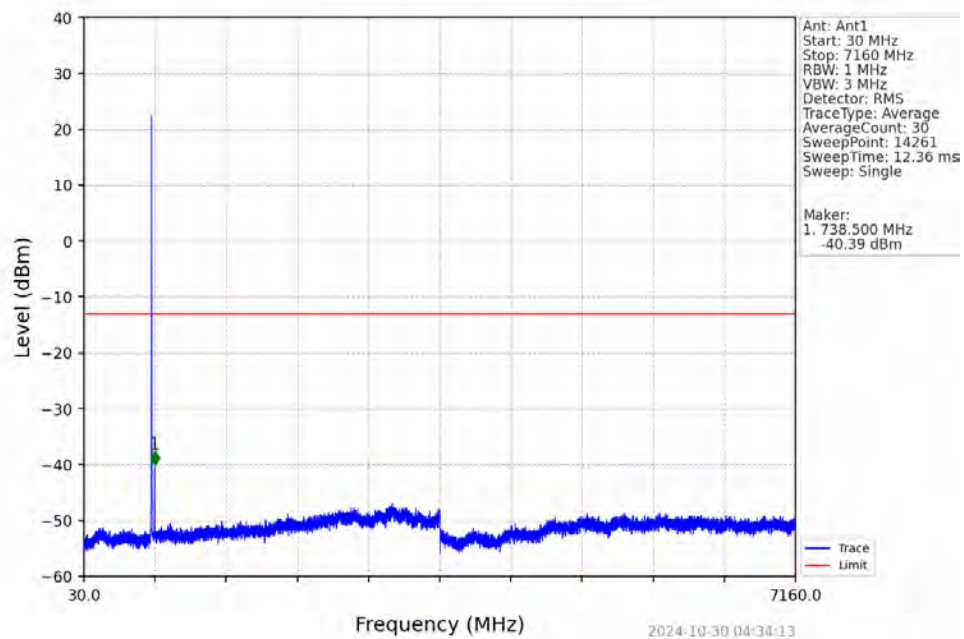
Band12 5MHz QPSK MCH 707.5MHz RB 1 0 NTNV



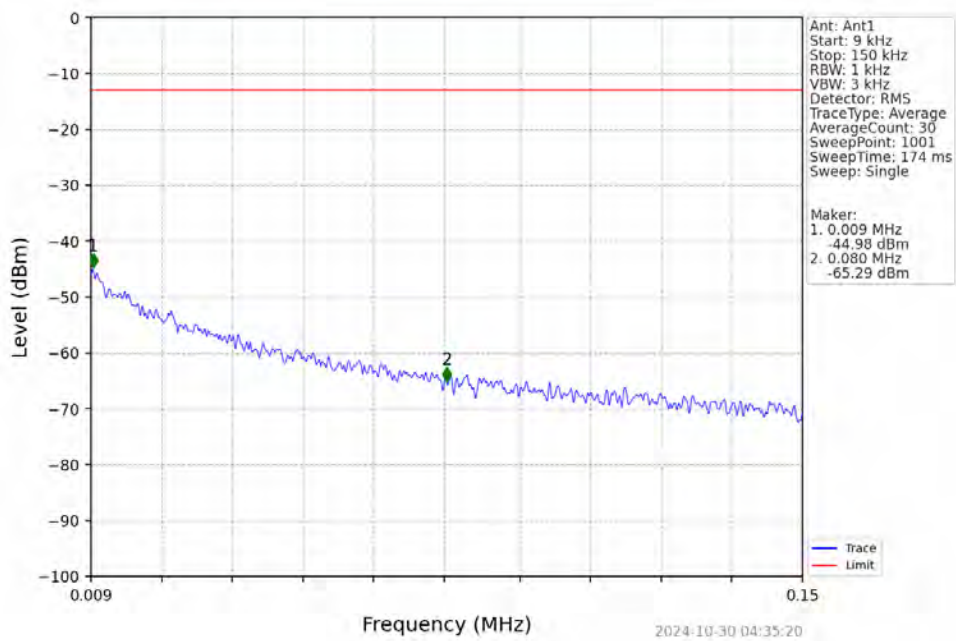
Band12 5MHz QPSK MCH 707.5MHz RB 1 0 NTN



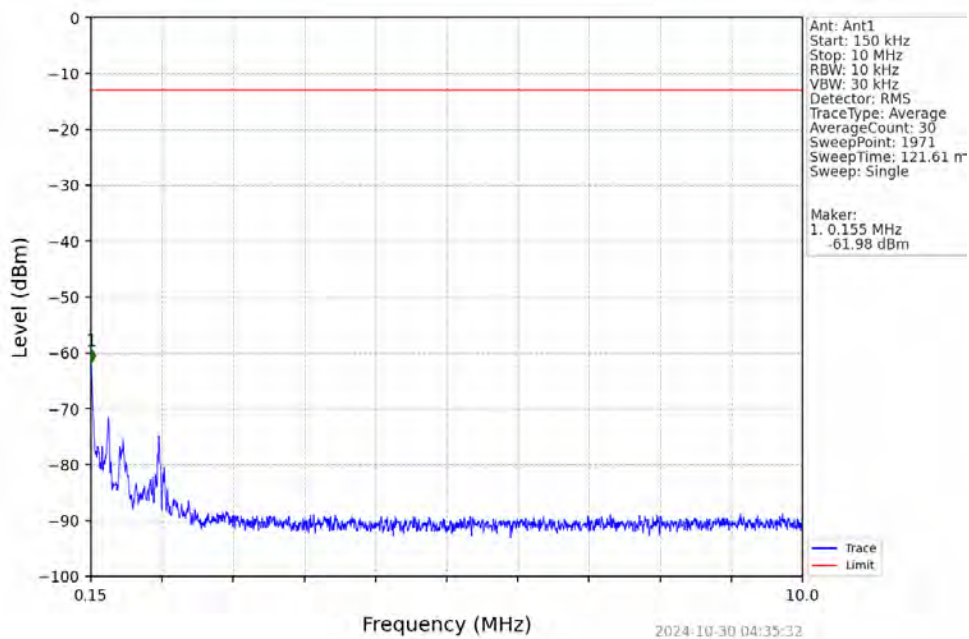
Band12 5MHz QPSK MCH 707.5MHz RB 1 0 NTN



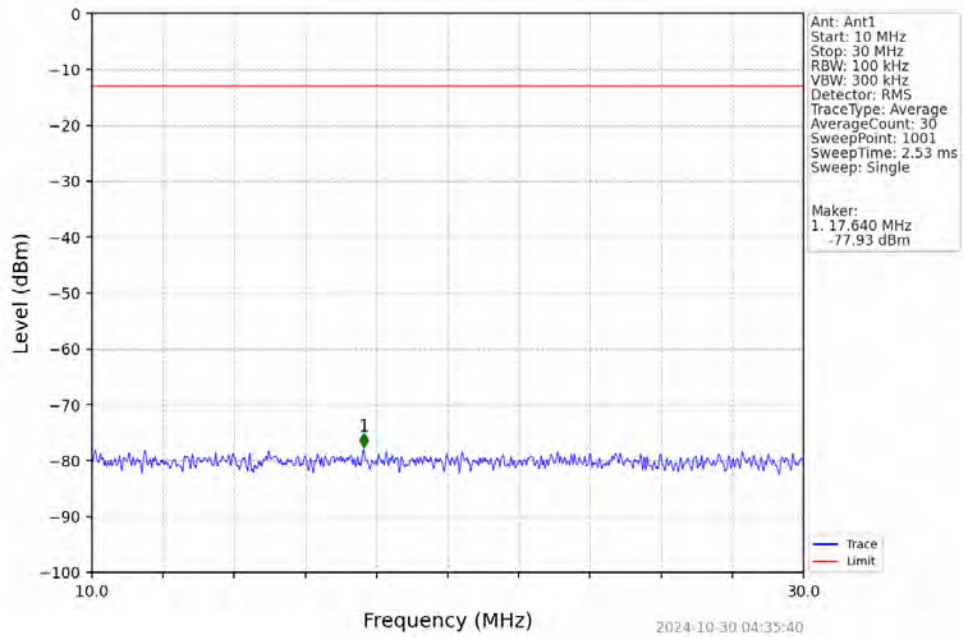
Band12 5MHz QPSK HCH 713.5MHz RB 1 0 NTN



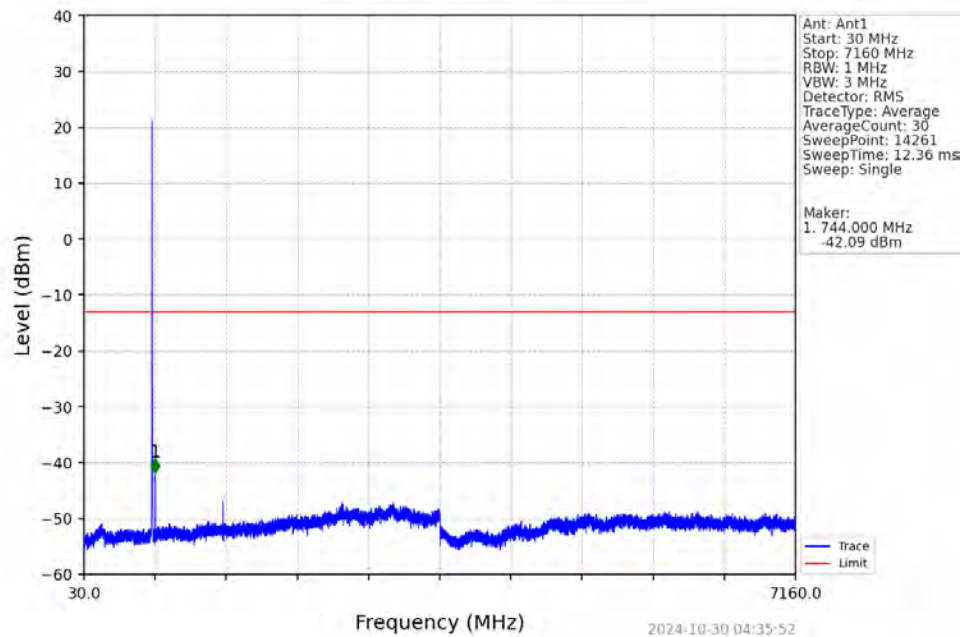
Band12 5MHz QPSK HCH 713.5MHz RB 1 0 NTN



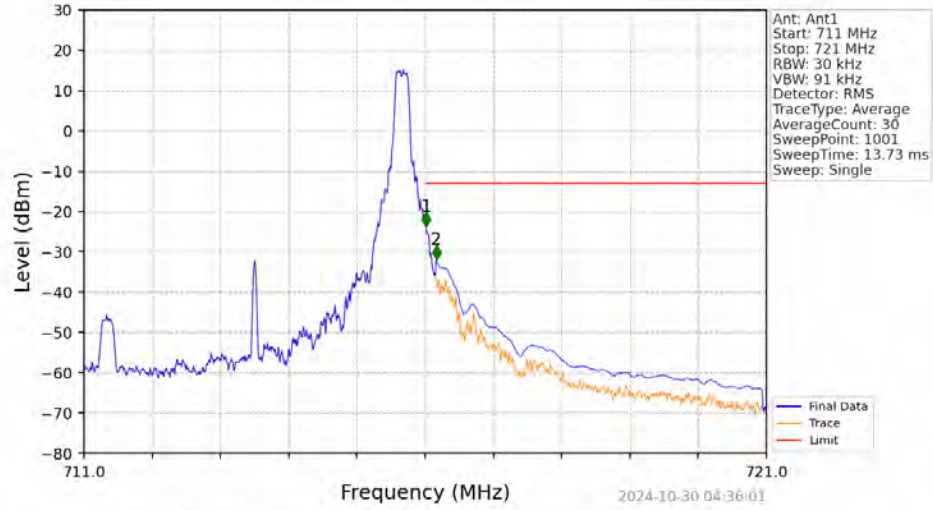
Band12 5MHz QPSK HCH 713.5MHz RB 1 0 NTNV



Band12 5MHz QPSK HCH 713.5MHz RB 1 0 NTNV

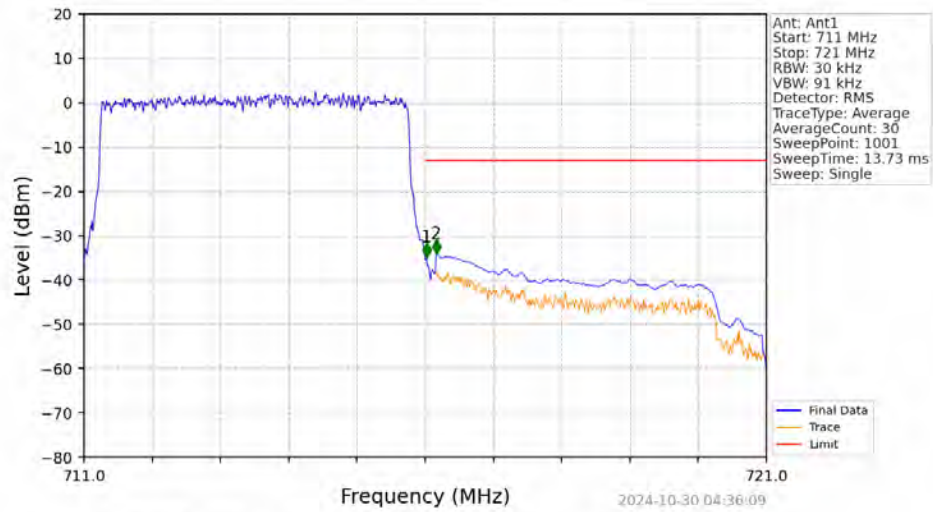


Band12 5MHz QPSK HCH 713.5MHz RB 1 24 NTV



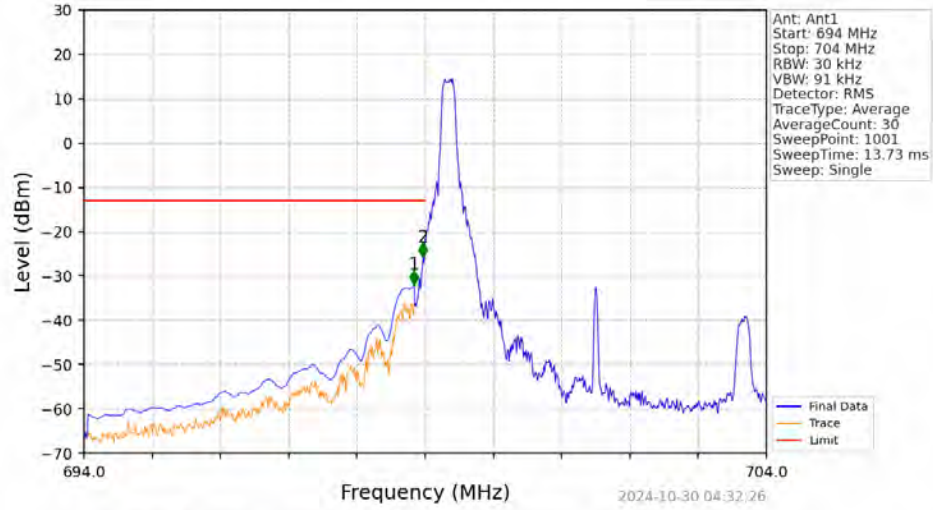
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-23.72	-13	Pass
716.1	721	0.1	CHP	2	716.160	-31.90	-13	Pass

Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTV

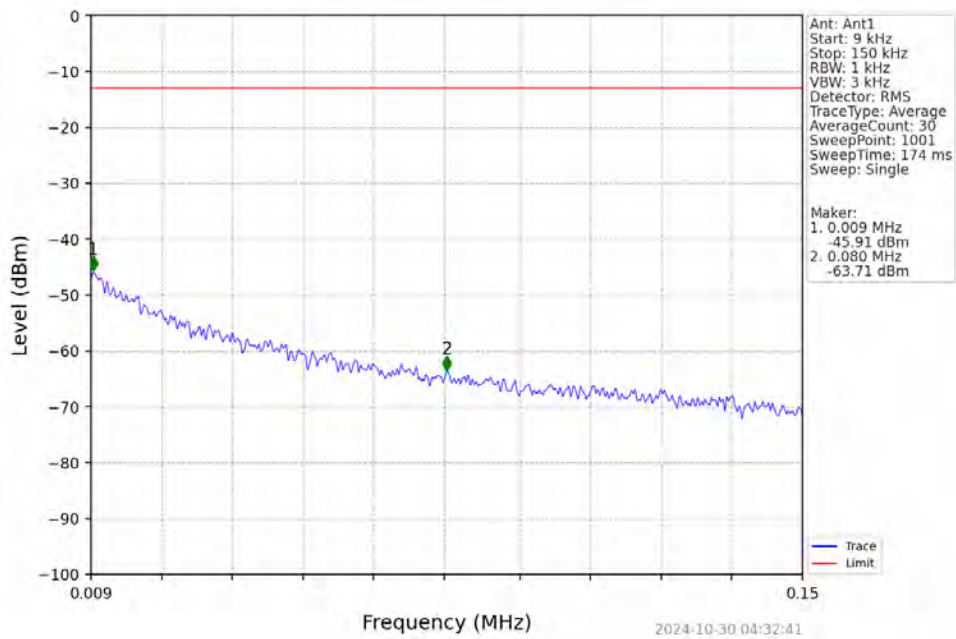


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.020	-34.72	-13	Pass
716.1	721	0.1	CHP	2	716.160	-33.99	-13	Pass

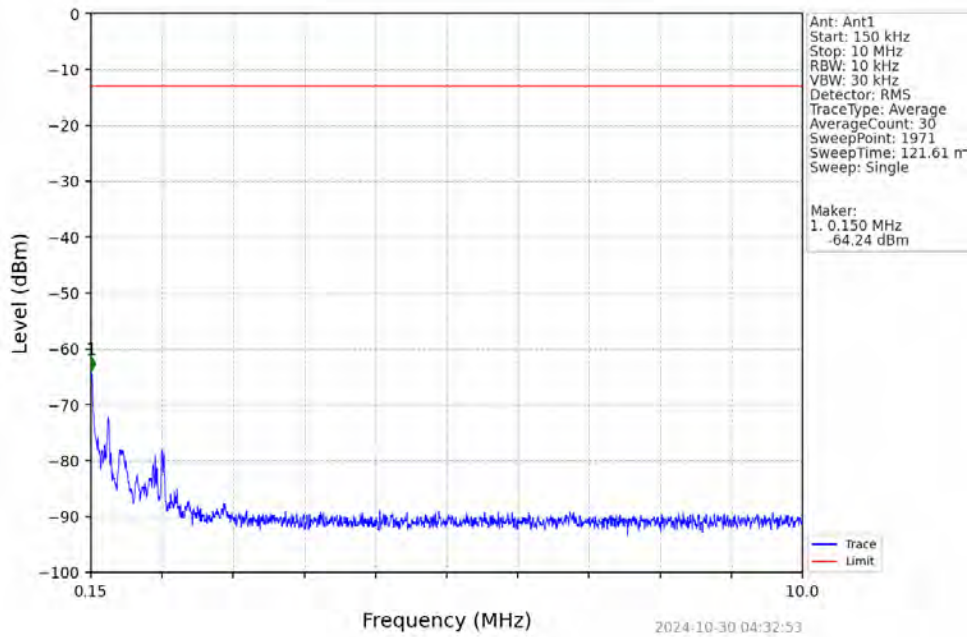
Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTNV



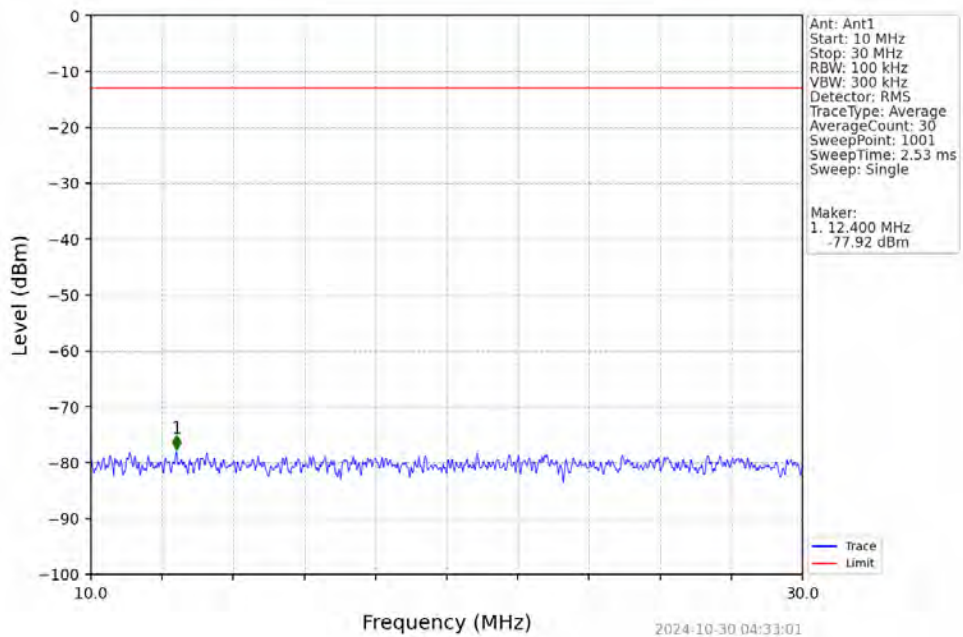
Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTNV



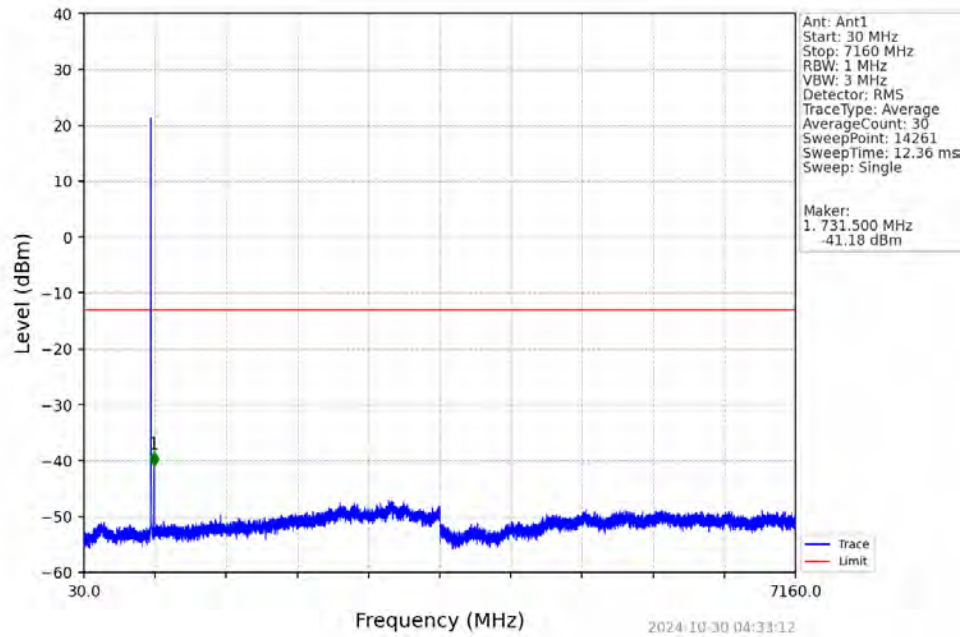
Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTNV



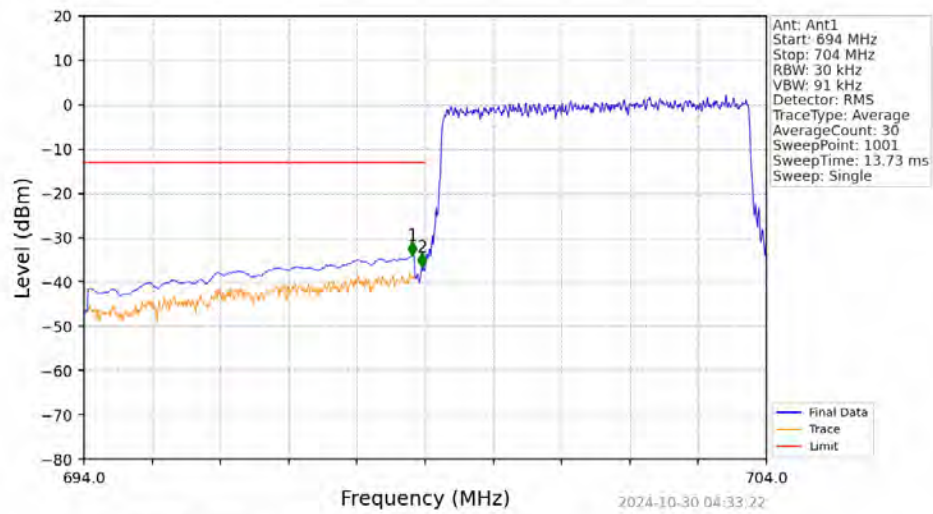
Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTNV



Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTNV

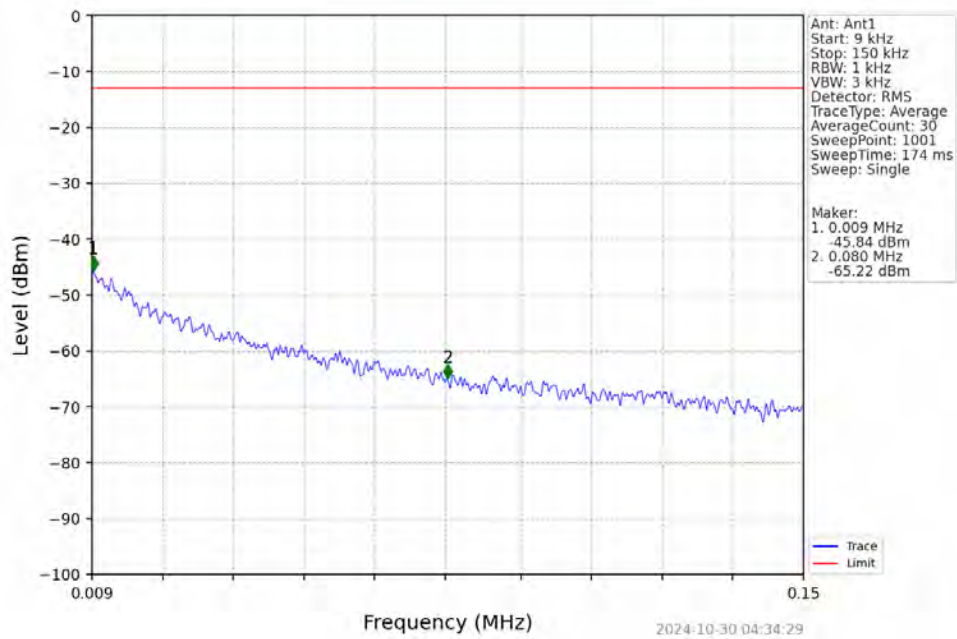


Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTNV

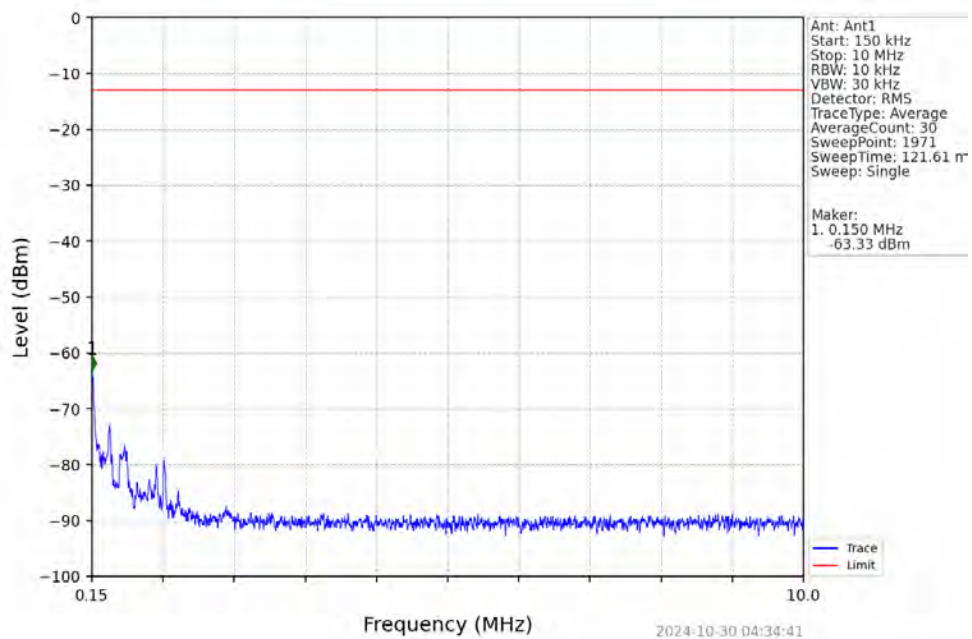


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.810	-34.13	-13	Pass
698.9	699	0.03	/	2	698.950	-36.54	-13	Pass
699	704	0.03	/	/	/	/	/	/

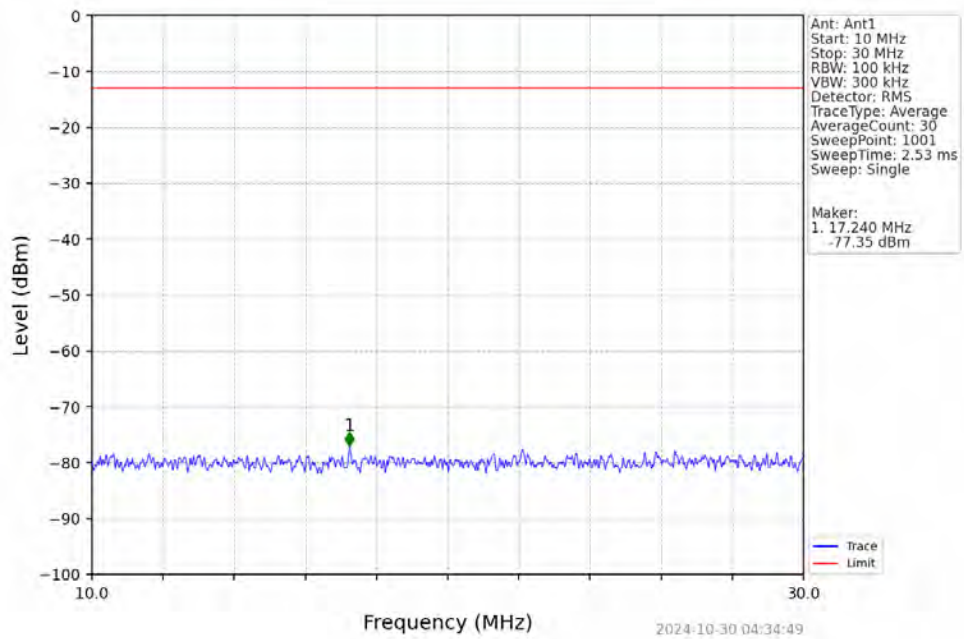
Band12 5MHz 16QAM MCH 707.5MHz RB 1 0 NTV



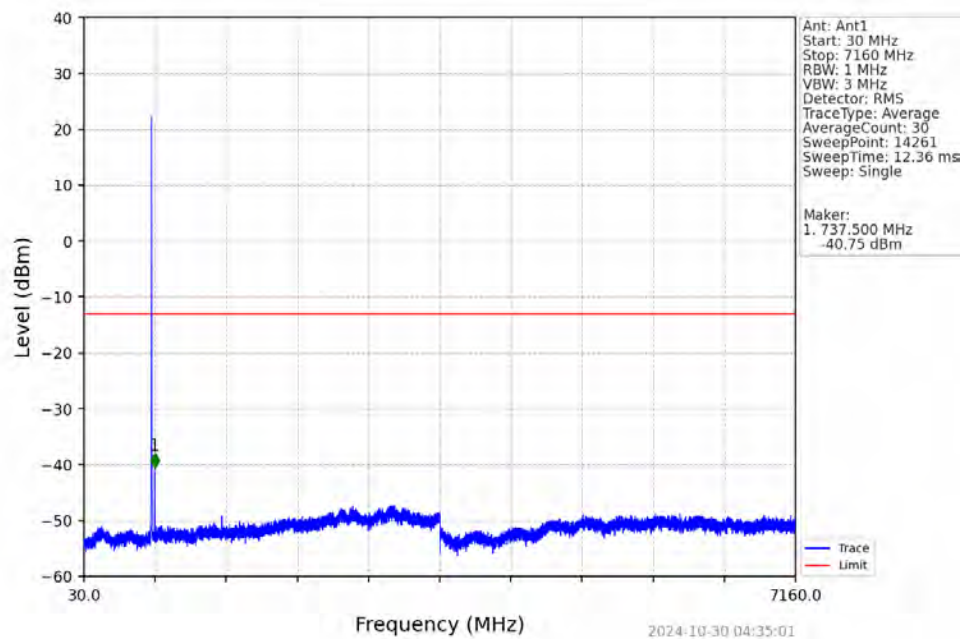
Band12 5MHz 16QAM MCH 707.5MHz RB 1 0 NTV



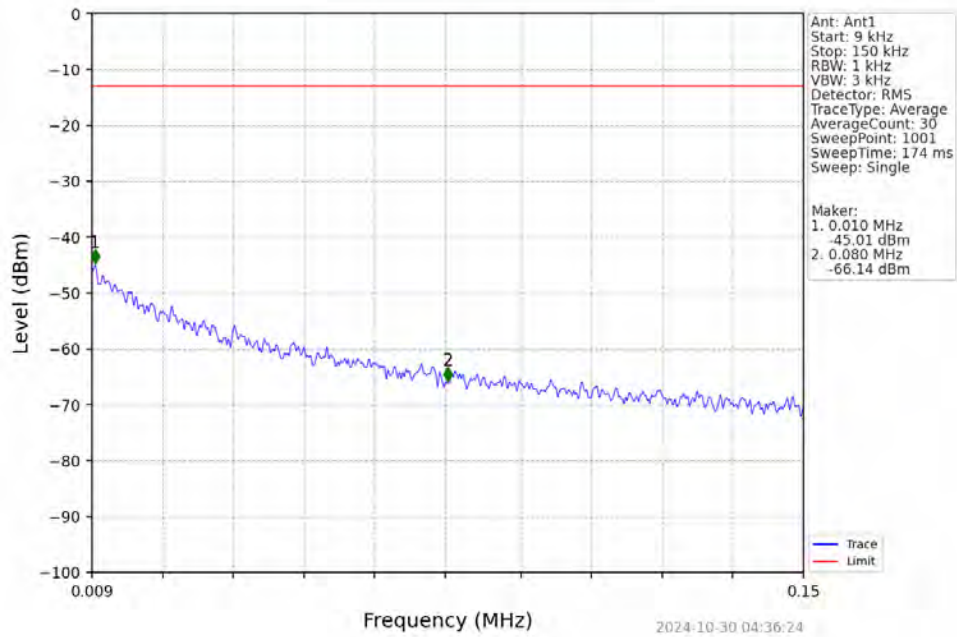
Band12 5MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



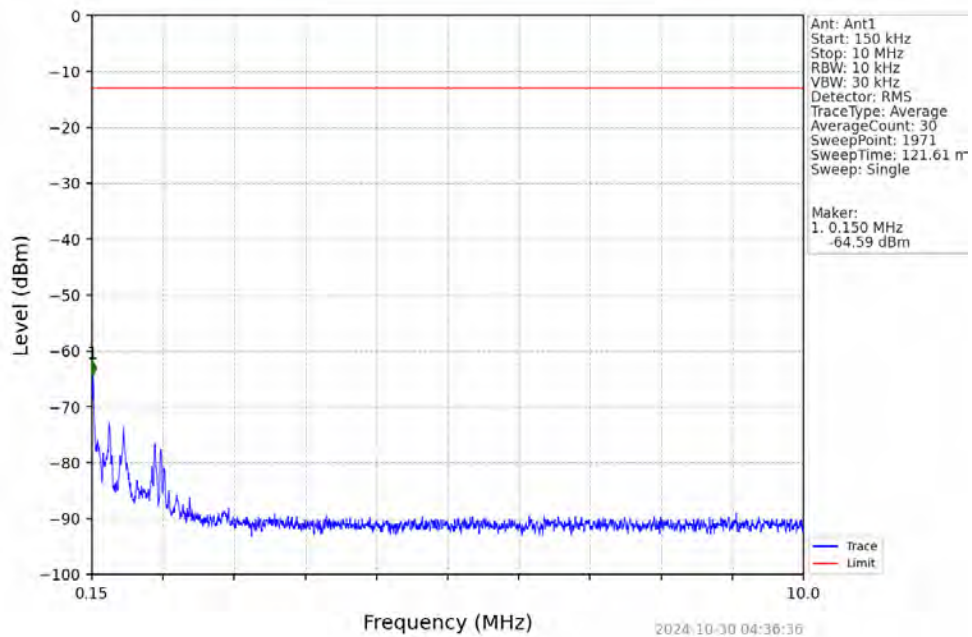
Band12 5MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



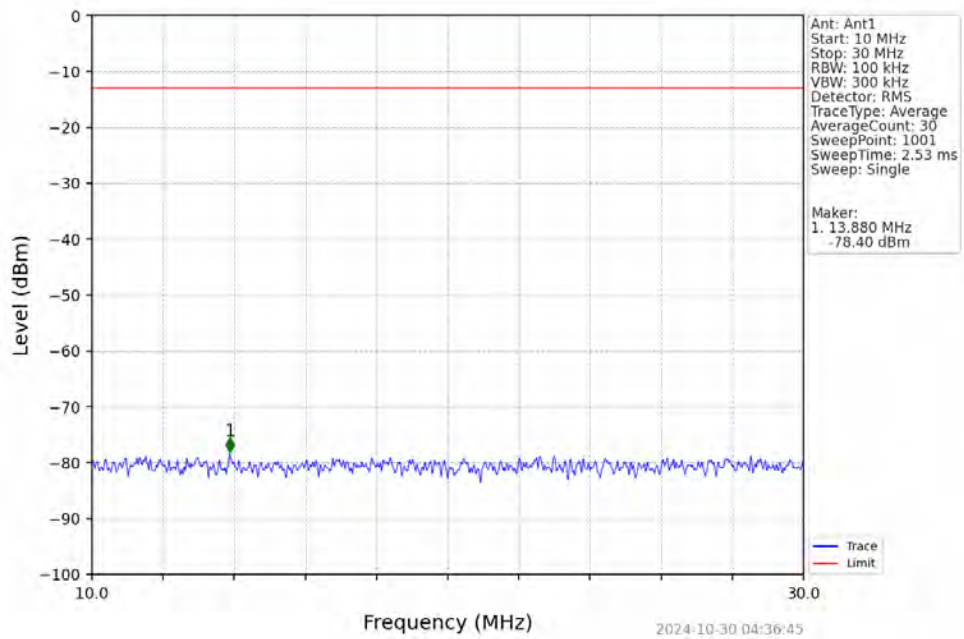
Band12 5MHz 16QAM HCH 713.5MHz RB 1 0 NTV



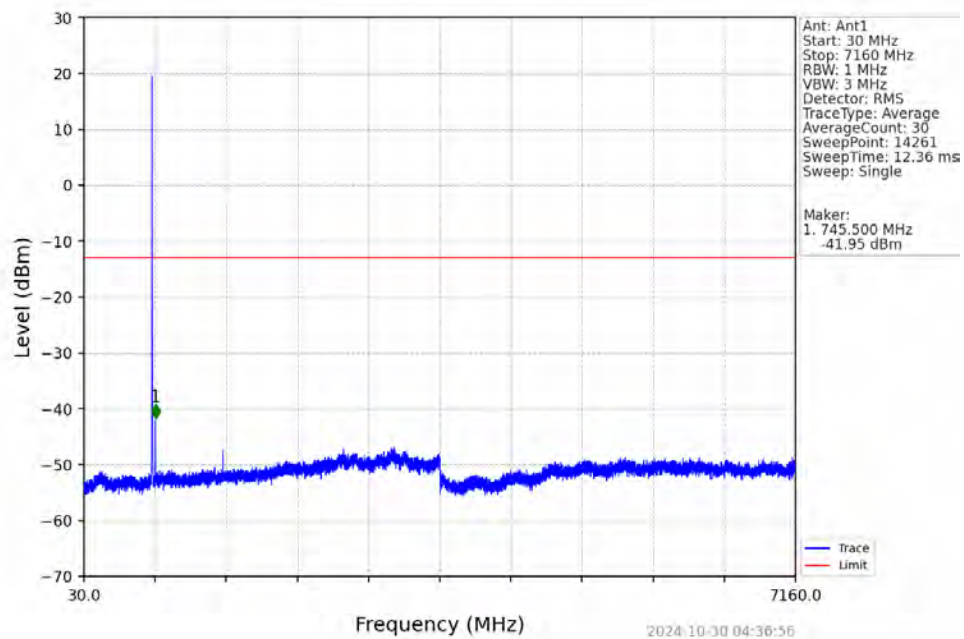
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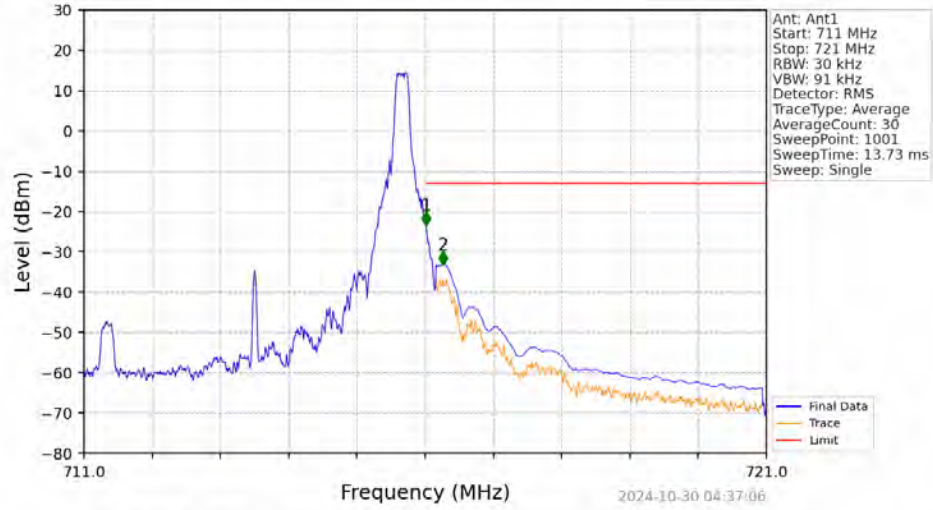
Band12 5MHz 16QAM HCH 713.5MHz RB 1 0 NTV



Band12 5MHz 16QAM HCH 713.5MHz RB 1 0 NTV

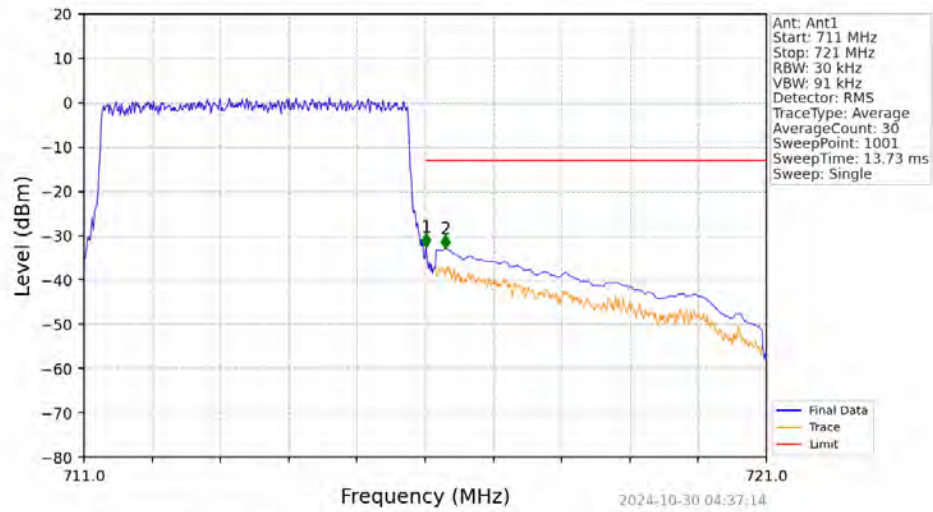


Band12 5MHz 16QAM HCH 713.5MHz RB 1 24 NTNV



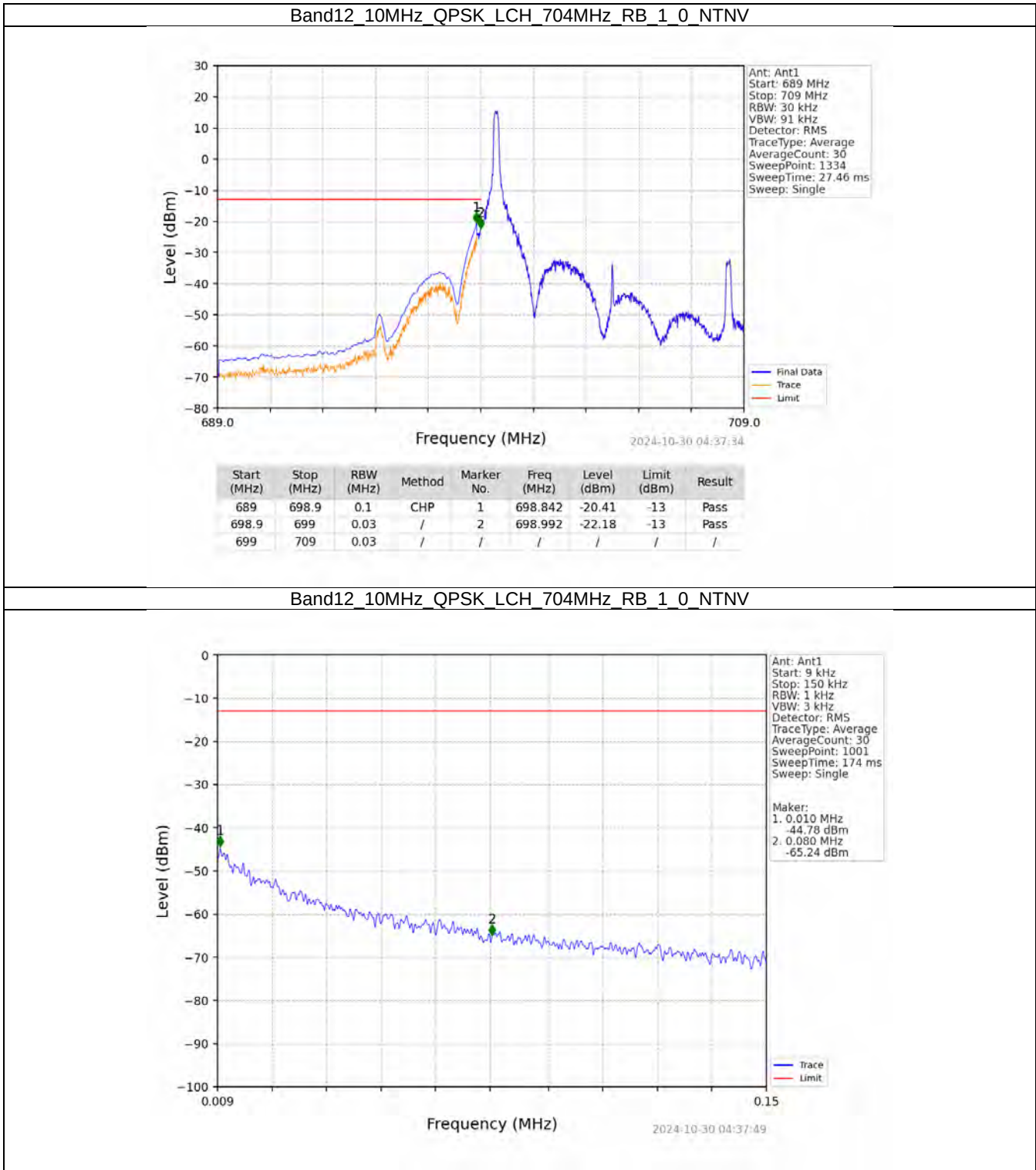
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-23.38	-13	Pass
716.1	721	0.1	CHP	2	716.260	-33.18	-13	Pass

Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTNV

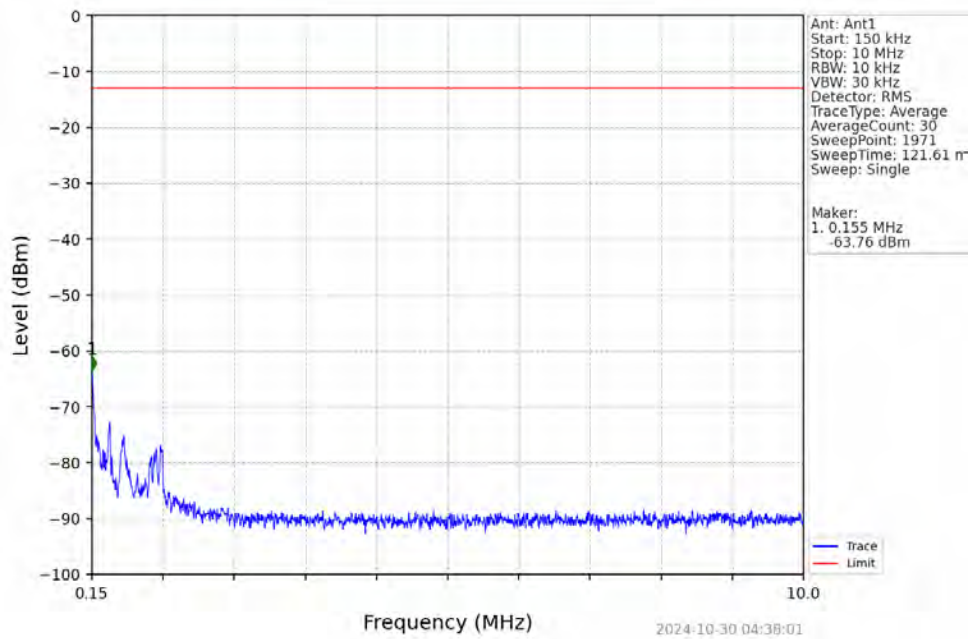


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-32.63	-13	Pass
716.1	721	0.1	CHP	2	716.300	-32.99	-13	Pass

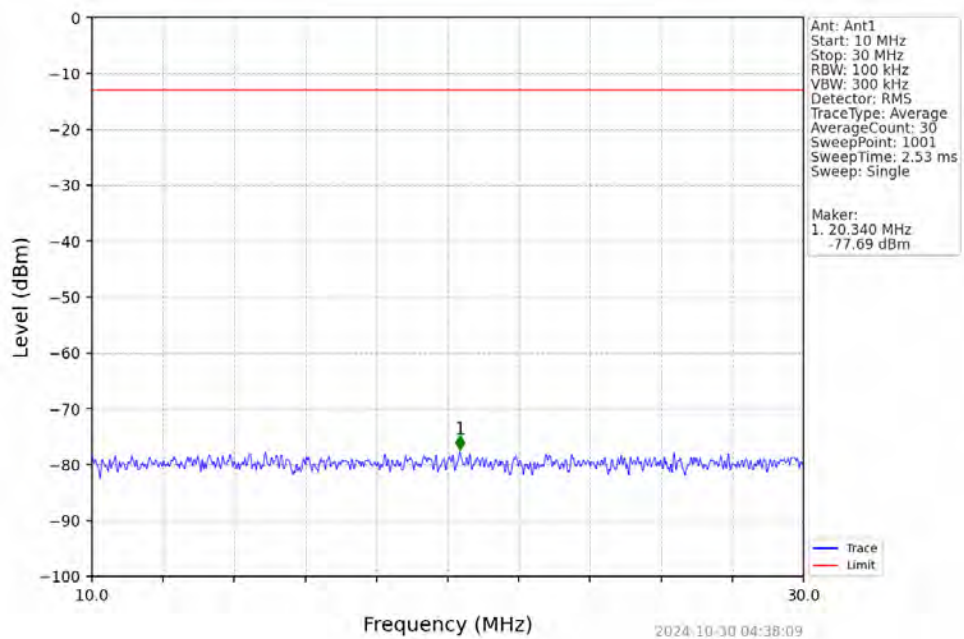
6.2.4 B12_10MHz



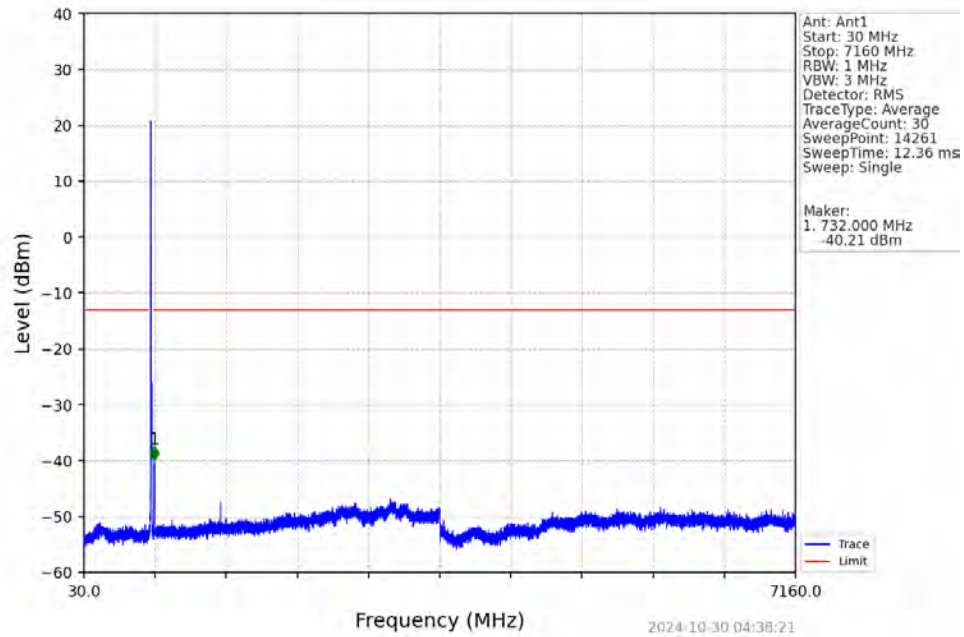
Band12 10MHz QPSK LCH 704MHz RB 1 0 NTNV



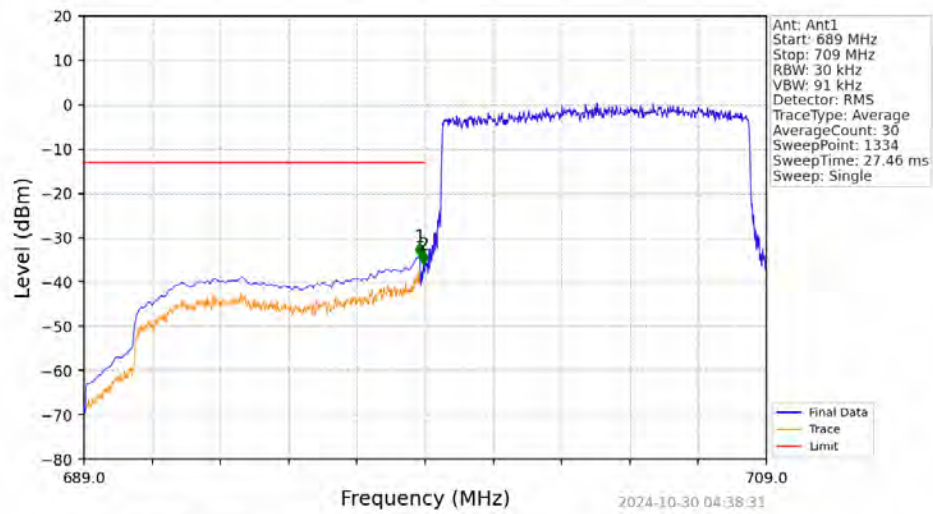
Band12 10MHz QPSK LCH 704MHz RB 1 0 NTNV



Band12 10MHz QPSK LCH 704MHz RB 1 0 NTN

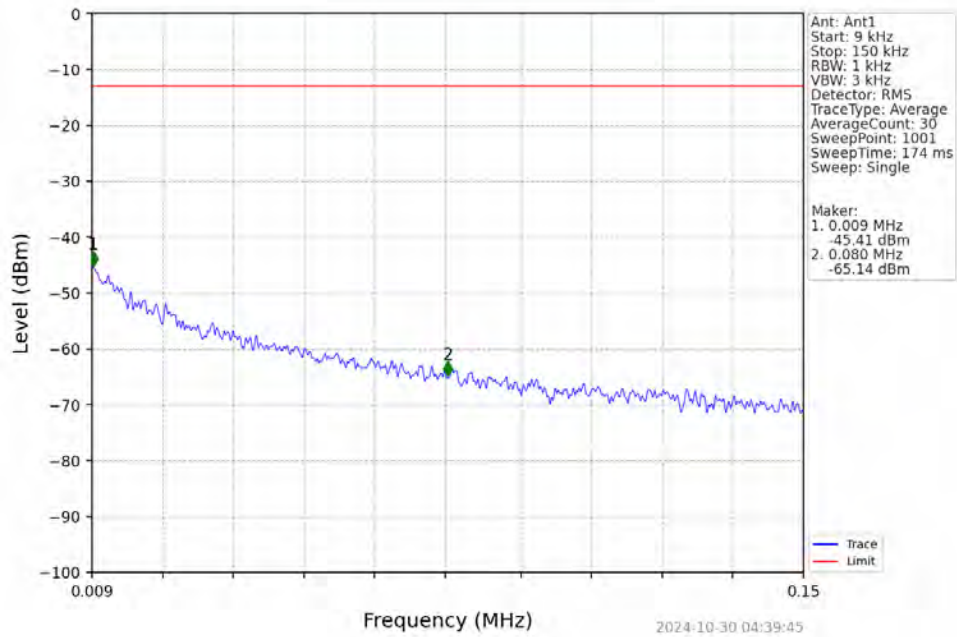


Band12 10MHz QPSK LCH 704MHz RB 50 0 NTN

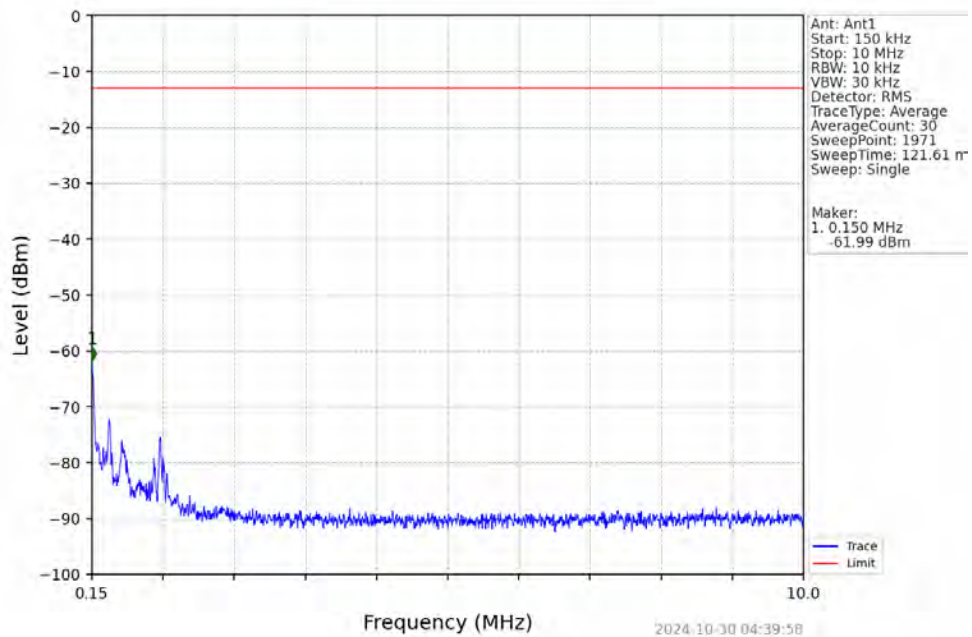


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-34.29	-13	Pass
698.9	699	0.03	/	2	698.947	-35.97	-13	Pass
699	709	0.03	/	/	/	/	/	/

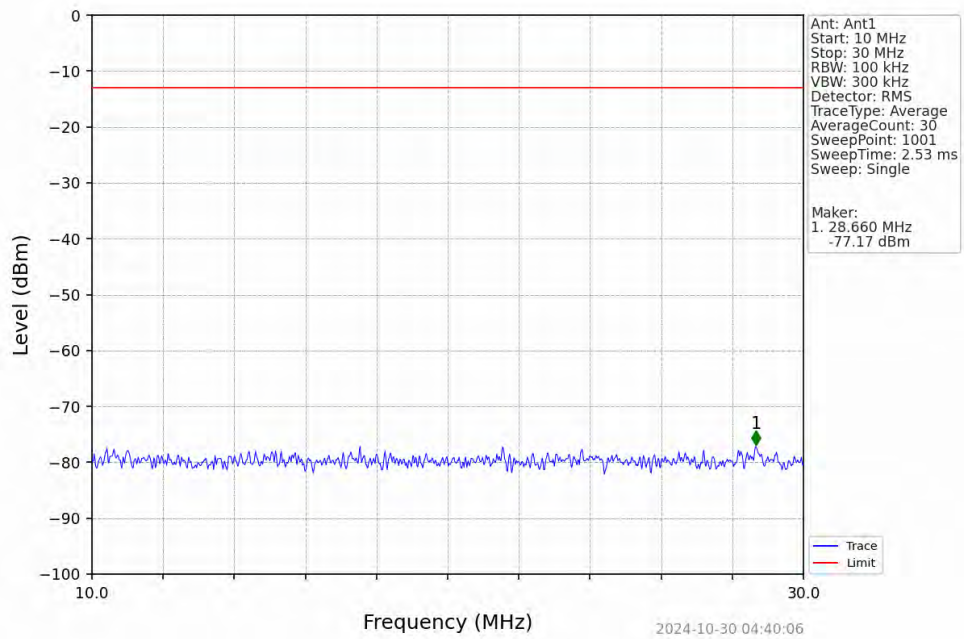
Band12 10MHz QPSK MCH 707.5MHz RB 1 0 NTNV



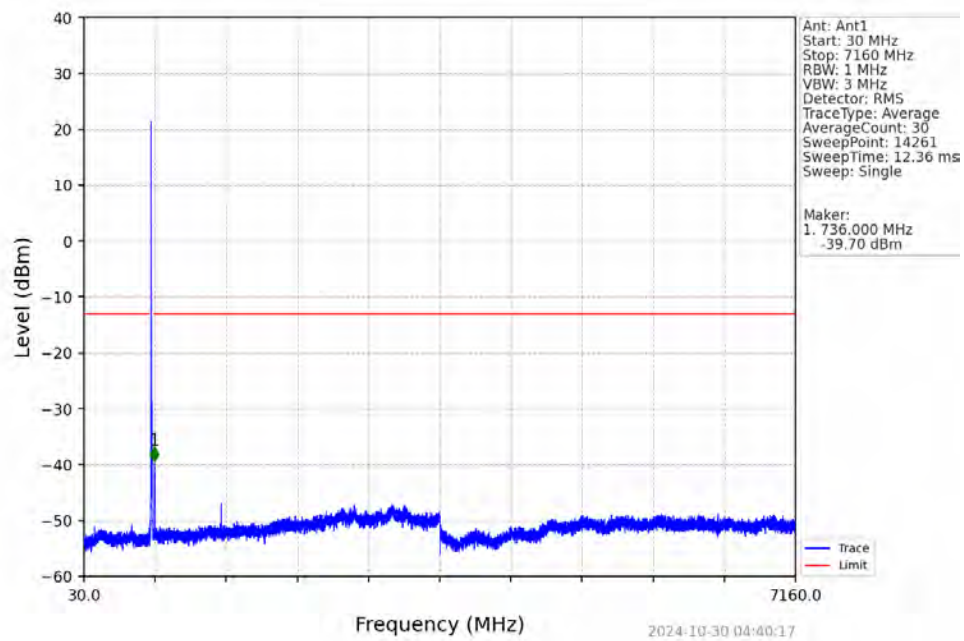
Band12 10MHz QPSK MCH 707.5MHz RB 1 0 NTNV



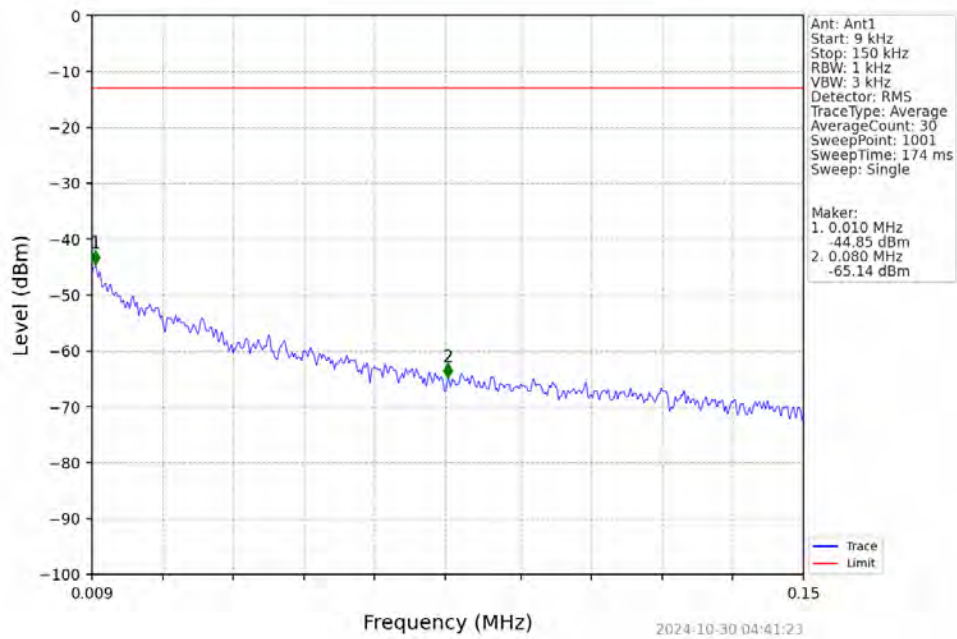
Band12 10MHz QPSK MCH 707.5MHz RB 1 0 NTNV



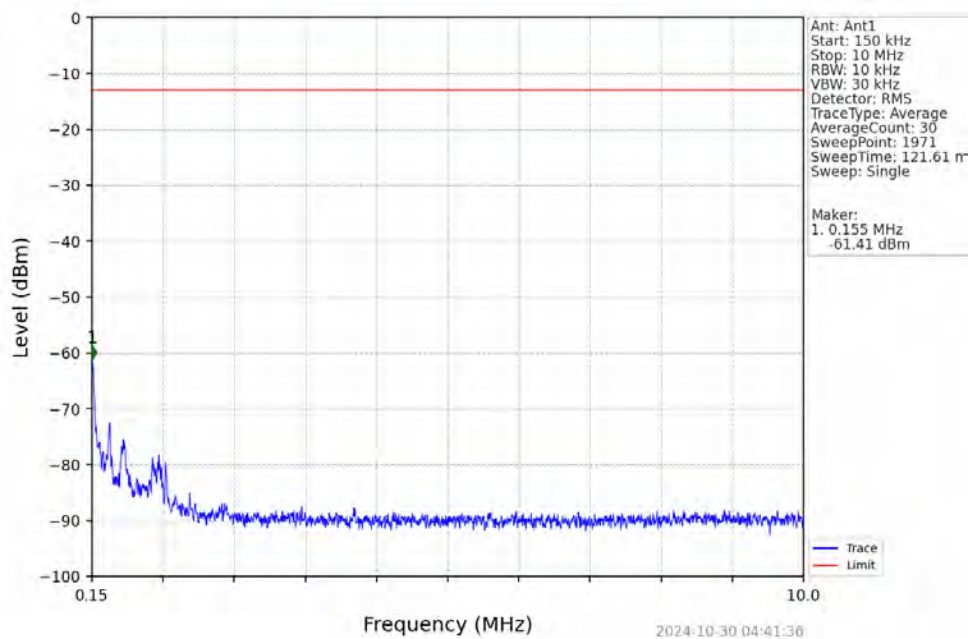
Band12 10MHz QPSK MCH 707.5MHz RB 1 0 NTNV



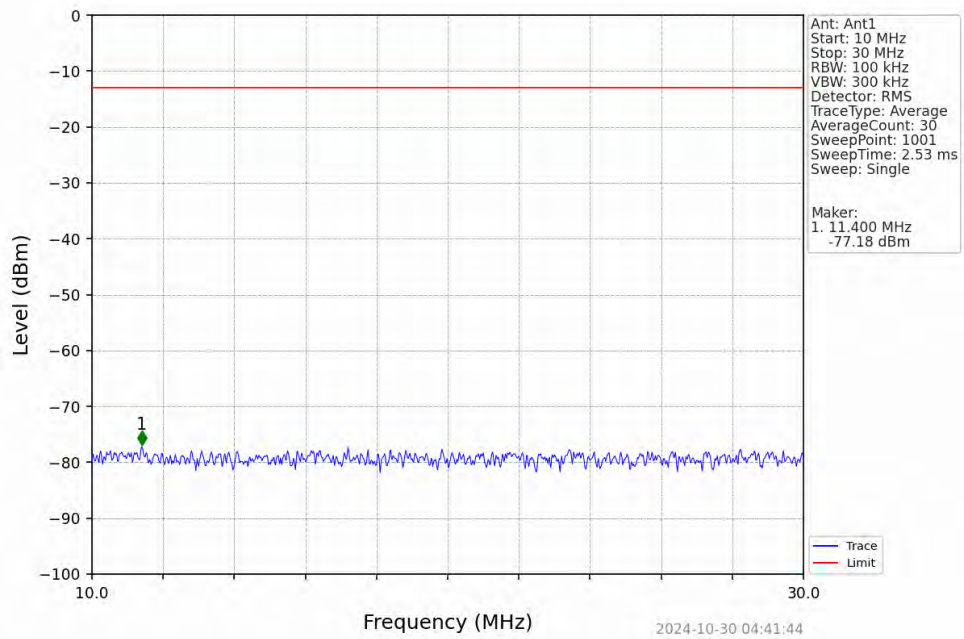
Band12 10MHz QPSK HCH 711MHz RB 1 0 NTN



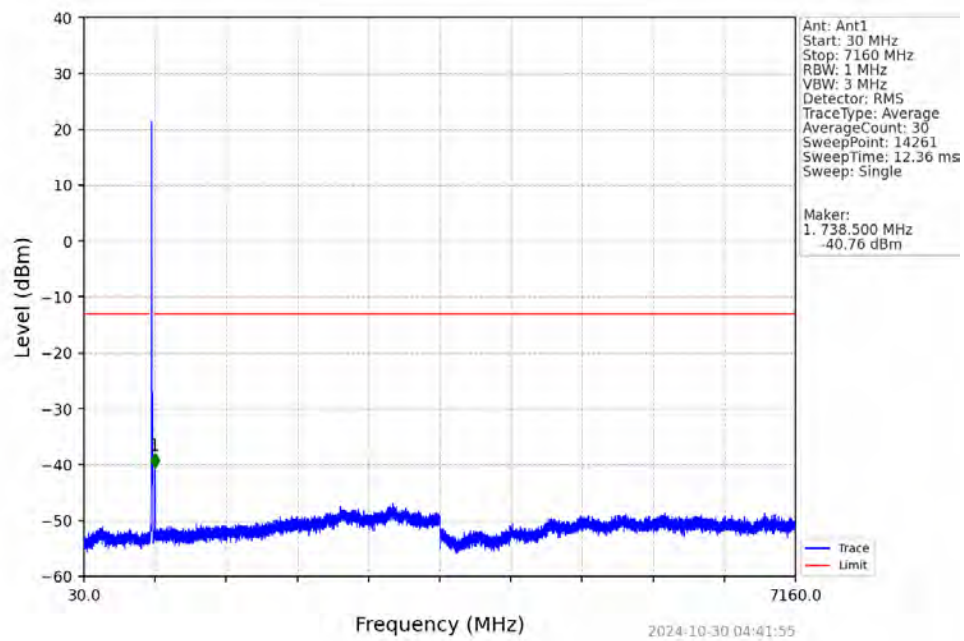
Band12 10MHz QPSK HCH 711MHz RB 1 0 NTN



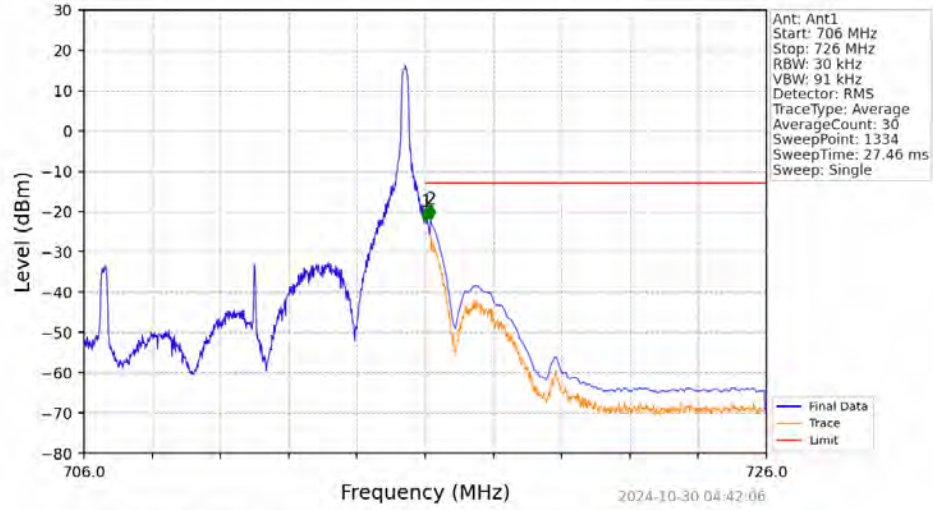
Band12 10MHz QPSK HCH 711MHz RB 1 0 NTN



Band12 10MHz QPSK HCH 711MHz RB 1 0 NTN

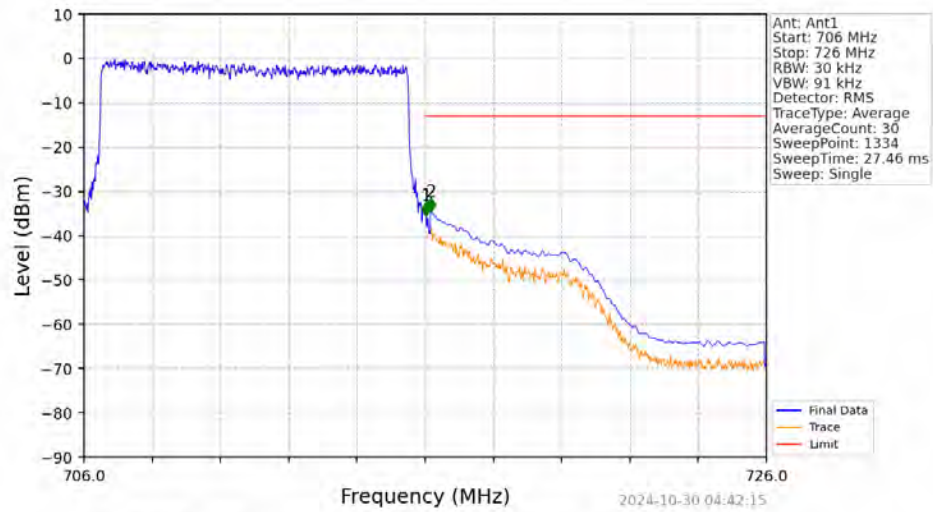


Band12 10MHz QPSK HCH 711MHz RB 1 49 NTNV



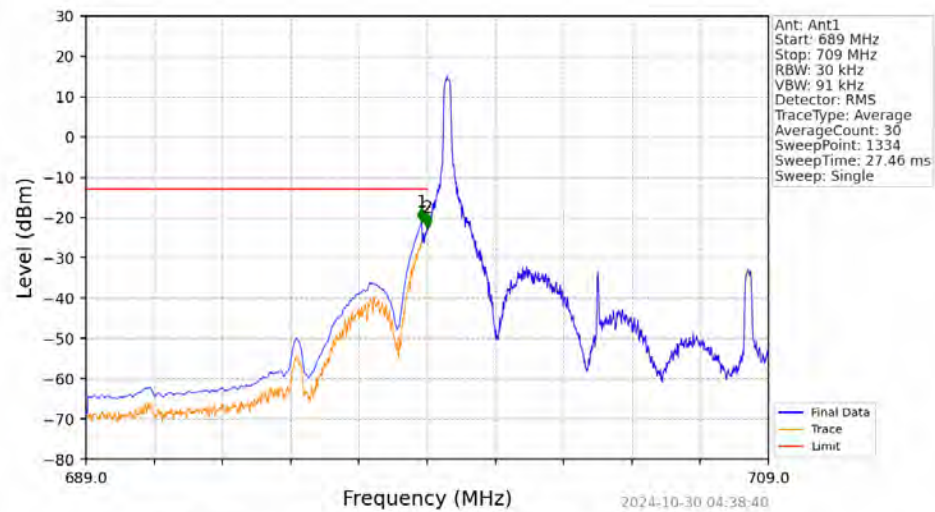
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.023	-22.52	-13	Pass
716.1	726	0.1	CHP	2	716.158	-21.93	-13	Pass

Band12 10MHz QPSK HCH 711MHz RB 50 0 NTNV

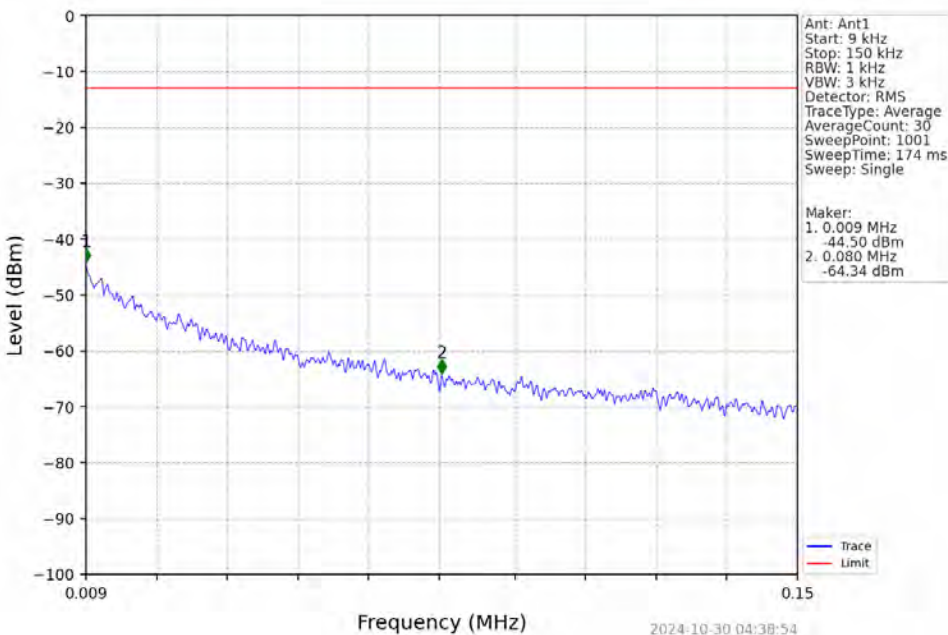


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.023	-35.42	-13	Pass
716.1	726	0.1	CHP	2	716.158	-34.50	-13	Pass

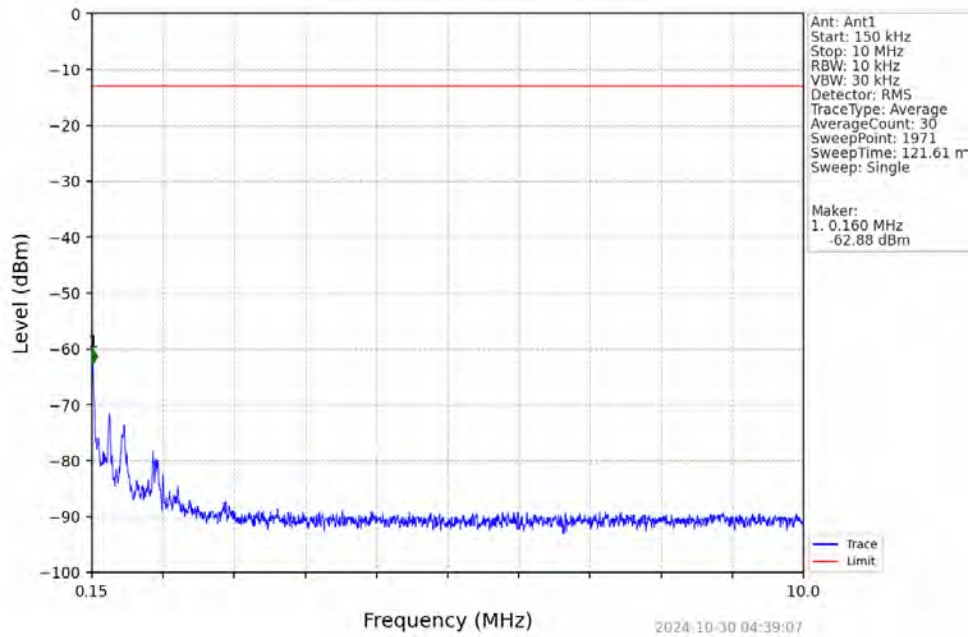
Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTN



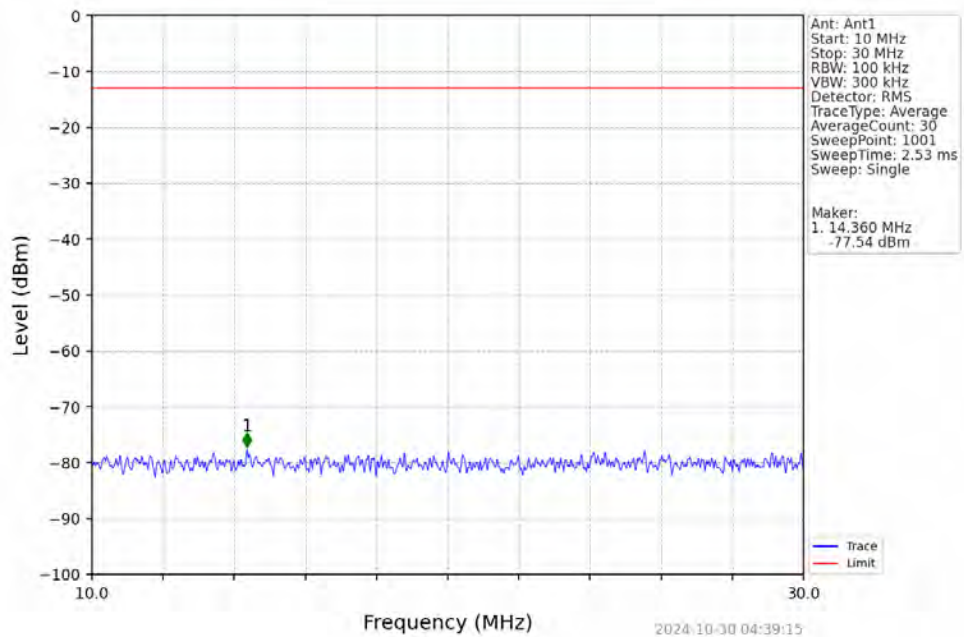
Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTN



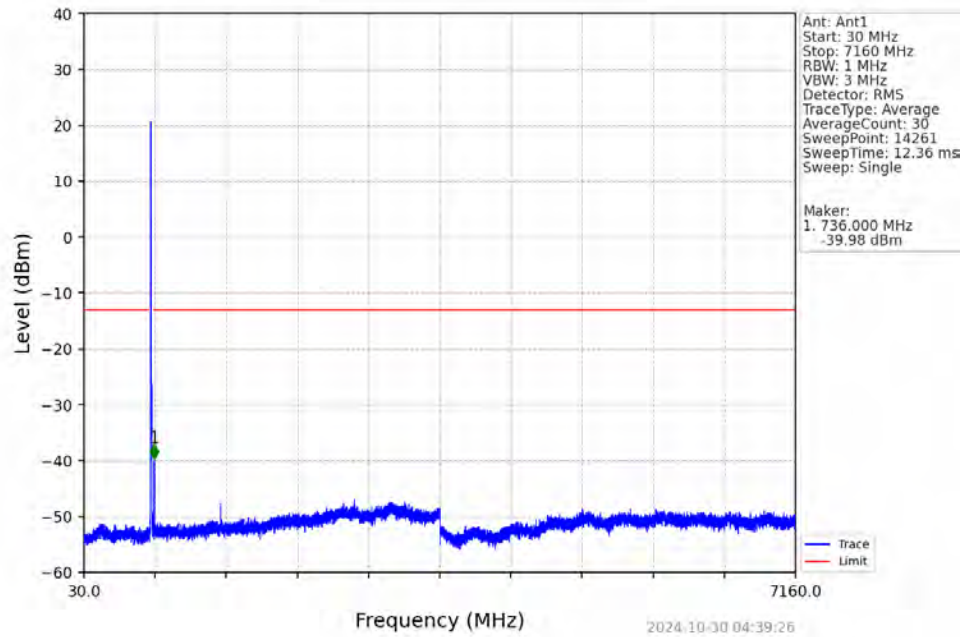
Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTNV



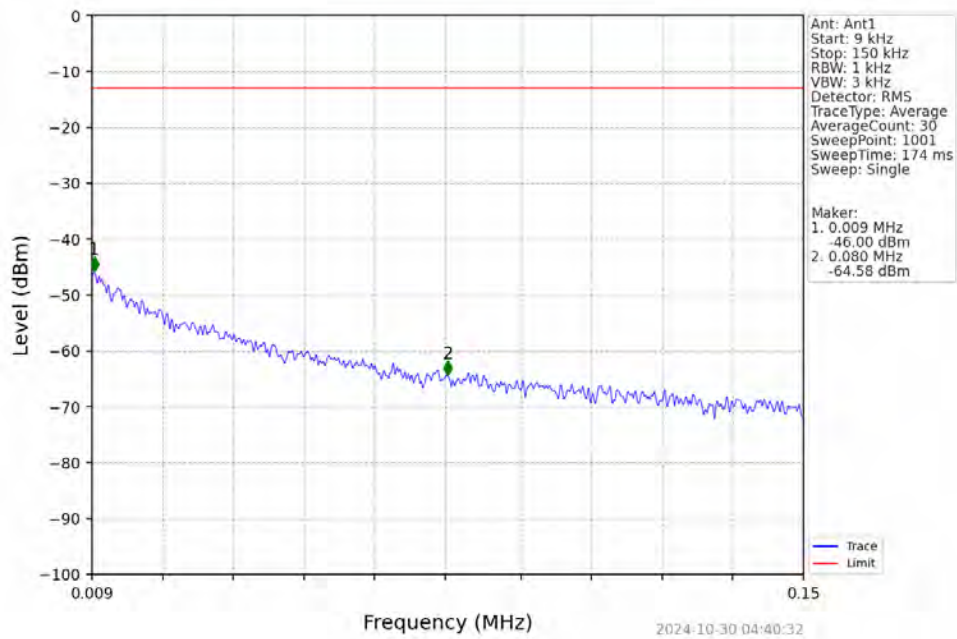
Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTNV



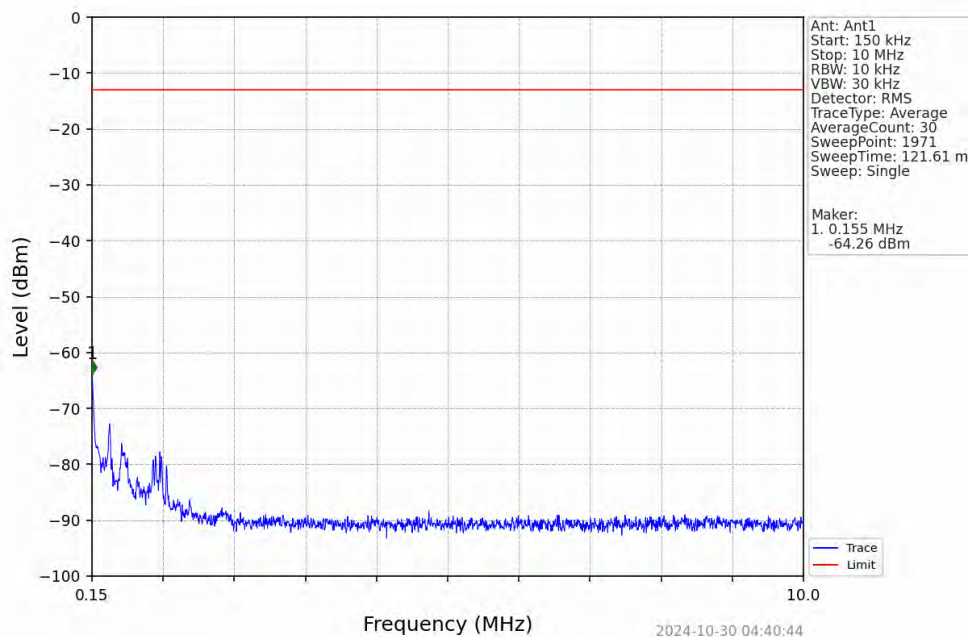
Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTNV



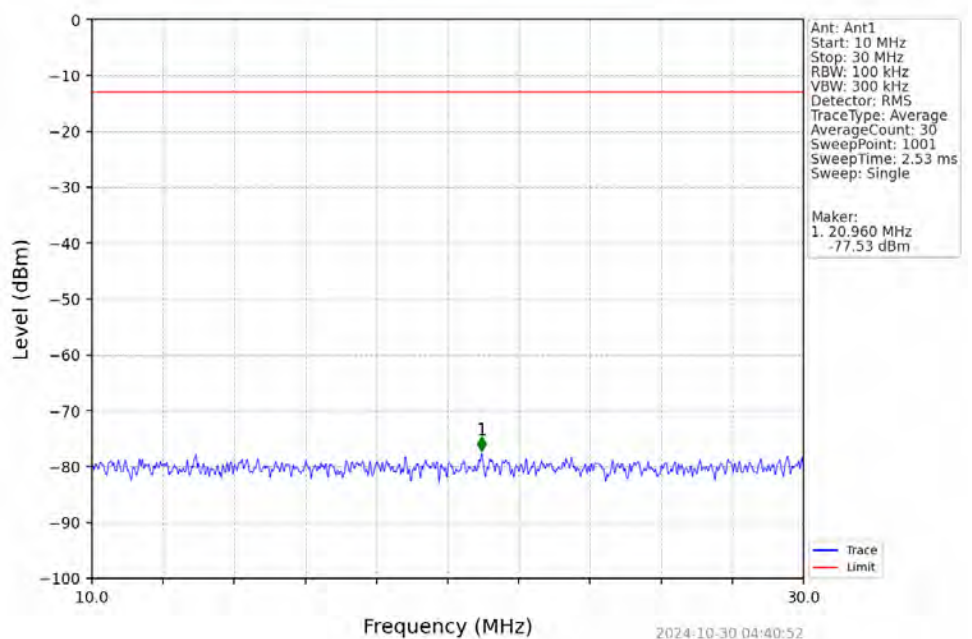
Band12 10MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



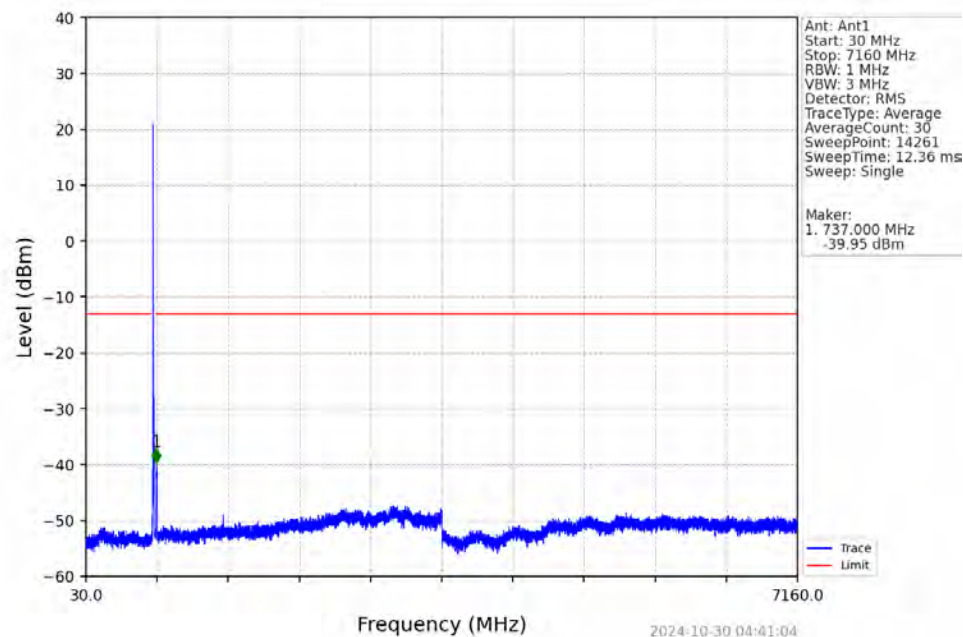
Band12 10MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



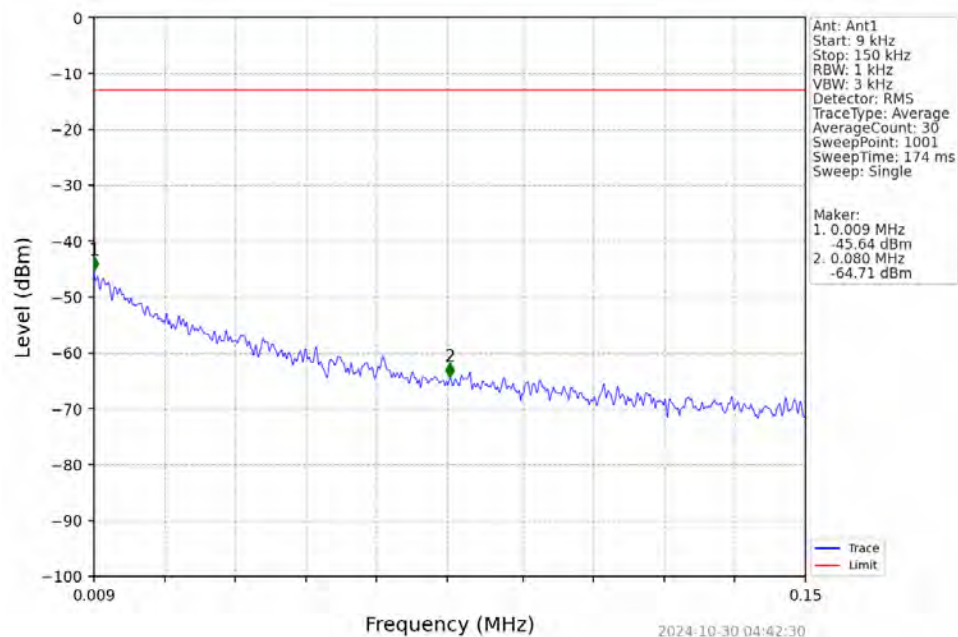
Band12 10MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



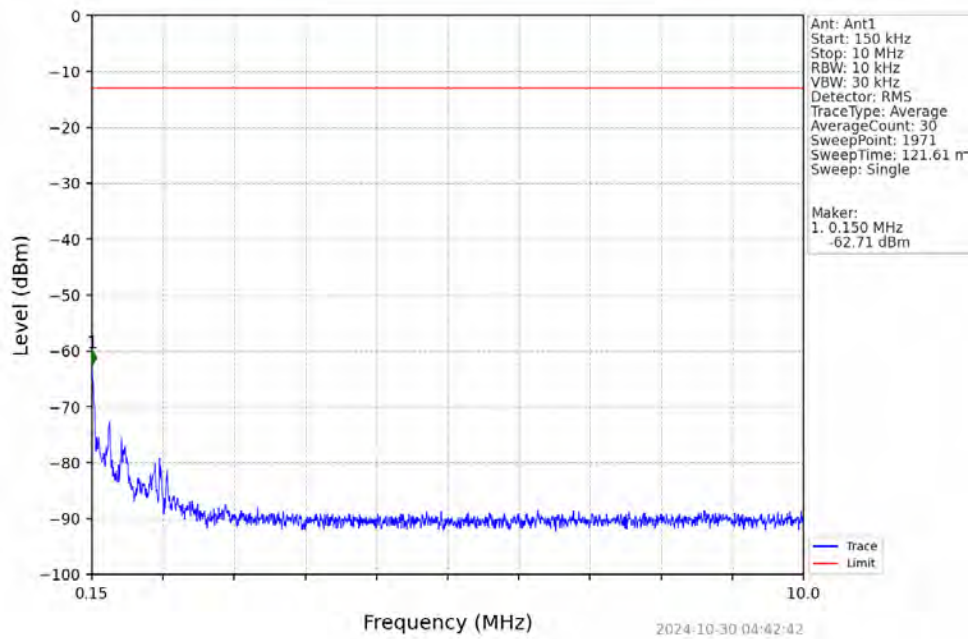
Band12 10MHz 16QAM MCH 707.5MHz RB 1 0 NTNV



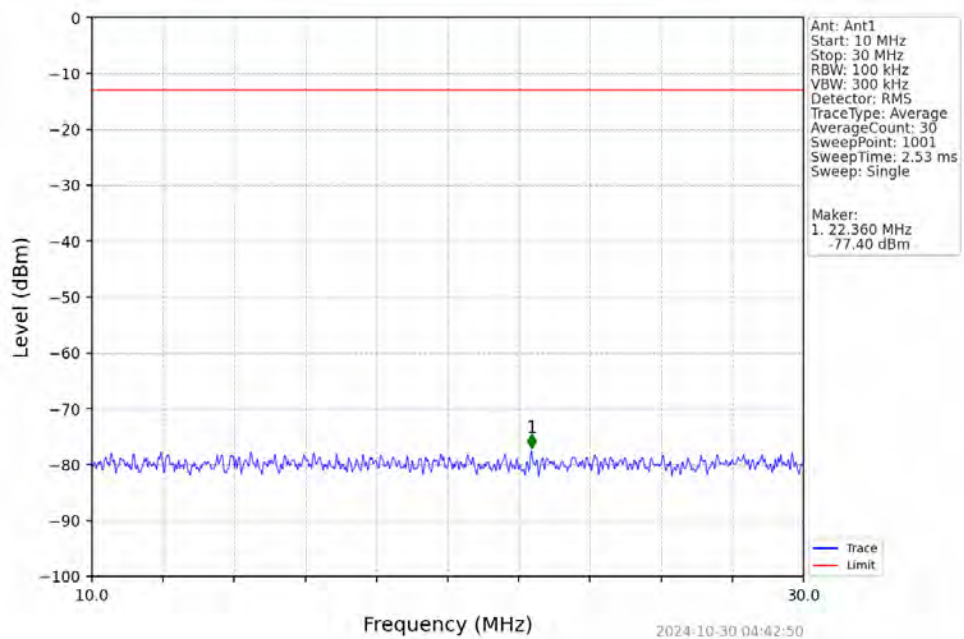
Band12 10MHz 16QAM HCH 711MHz RB 1 0 NTNV



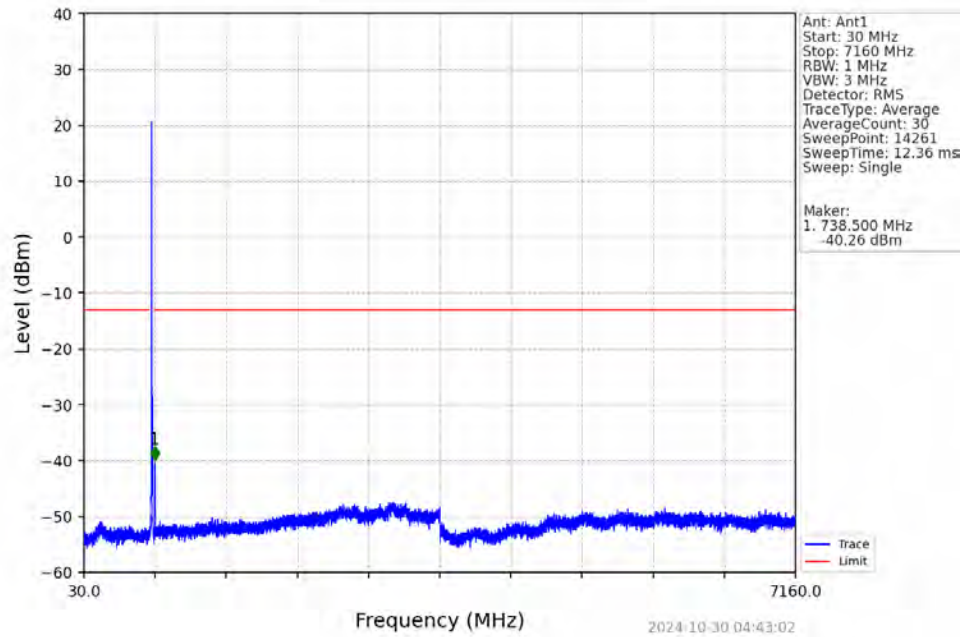
Band12 10MHz 16QAM HCH 711MHz RB 1 0 NTNV



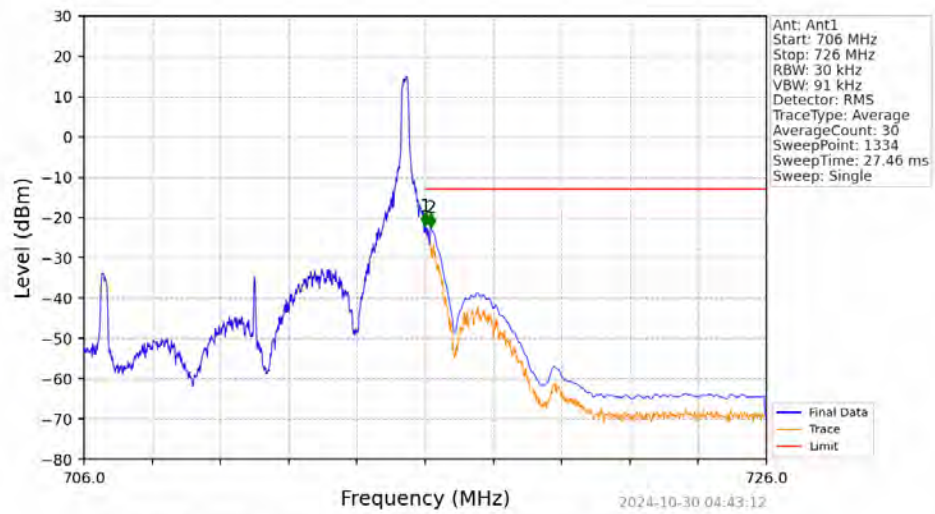
Band12 10MHz 16QAM HCH 711MHz RB 1 0 NTNV



Band12 10MHz 16QAM HCH 711MHz RB 1 0 NTNV



Band12 10MHz 16QAM HCH 711MHz RB 1 49 NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.008	-22.07	-13	Pass
716.1	726	0.1	CHP	2	716.158	-22.37	-13	Pass