

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B12_1.4MHz_ERP

Band: 12 / Bandwidth: 1.4MHz / NTNV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	699.7	1	0	21.55	-1.23	18.17	<=34.77	Pass		
			2	21.60	-1.23	18.22	<=34.77	Pass		
			5	21.61	-1.23	18.23	<=34.77	Pass		
		3	0	21.55	-1.23	18.17	<=34.77	Pass		
			2	21.57	-1.23	18.19	<=34.77	Pass		
			3	21.54	-1.23	18.16	<=34.77	Pass		
		6	0	20.87	-1.23	17.49	<=34.77	Pass		
		707.5	1	0	21.35	-1.23	17.97	<=34.77	Pass	
				2	21.46	-1.23	18.08	<=34.77	Pass	
	5			21.56	-1.23	18.18	<=34.77	Pass		
	3		0	21.40	-1.23	18.02	<=34.77	Pass		
			2	21.40	-1.23	18.02	<=34.77	Pass		
			3	21.47	-1.23	18.09	<=34.77	Pass		
	6		0	20.49	-1.23	17.11	<=34.77	Pass		
	715.3		1	0	21.41	-1.23	18.03	<=34.77	Pass	
				2	21.45	-1.23	18.07	<=34.77	Pass	
		5		21.41	-1.23	18.03	<=34.77	Pass		
		3	0	21.35	-1.23	17.97	<=34.77	Pass		
			2	21.44	-1.23	18.06	<=34.77	Pass		
			3	21.35	-1.23	17.97	<=34.77	Pass		
		6	0	20.34	-1.23	16.96	<=34.77	Pass		
		16QAM	699.7	1	0	20.84	-1.23	17.46	<=34.77	Pass
					2	20.98	-1.23	17.6	<=34.77	Pass
	5				20.89	-1.23	17.51	<=34.77	Pass	
3	0			20.67	-1.23	17.29	<=34.77	Pass		
	2			20.61	-1.23	17.23	<=34.77	Pass		
	3			20.66	-1.23	17.28	<=34.77	Pass		
6	0			19.93	-1.23	16.55	<=34.77	Pass		
707.5	1			0	21.12	-1.23	17.74	<=34.77	Pass	
				2	21.09	-1.23	17.71	<=34.77	Pass	
			5	21.16	-1.23	17.78	<=34.77	Pass		
	3		0	20.42	-1.23	17.04	<=34.77	Pass		
			2	20.44	-1.23	17.06	<=34.77	Pass		
			3	20.50	-1.23	17.12	<=34.77	Pass		
	6		0	20.01	-1.23	16.63	<=34.77	Pass		
	715.3		1	0	21.36	-1.23	17.98	<=34.77	Pass	
				2	21.44	-1.23	18.06	<=34.77	Pass	
5				21.50	-1.23	18.12	<=34.77	Pass		
3			0	20.24	-1.23	16.86	<=34.77	Pass		
			2	20.40	-1.23	17.02	<=34.77	Pass		
			3	20.39	-1.23	17.01	<=34.77	Pass		
6			0	19.61	-1.23	16.23	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.2 B12_3MHz_ERP

Band: 12 / Bandwidth: 3MHz / NTNV								
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Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	700.5	1	0	20.90	-1.23	17.52	<=34.77	Pass		
			7	20.81	-1.23	17.43	<=34.77	Pass		
			14	20.92	-1.23	17.54	<=34.77	Pass		
		8	0	20.89	-1.23	17.51	<=34.77	Pass		
			4	20.86	-1.23	17.48	<=34.77	Pass		
			7	20.84	-1.23	17.46	<=34.77	Pass		
		15	0	20.83	-1.23	17.45	<=34.77	Pass		
		707.5	1	0	20.43	-1.23	17.05	<=34.77	Pass	
				7	20.41	-1.23	17.03	<=34.77	Pass	
	14			20.49	-1.23	17.11	<=34.77	Pass		
	8		0	20.48	-1.23	17.1	<=34.77	Pass		
			4	20.48	-1.23	17.1	<=34.77	Pass		
			7	20.48	-1.23	17.1	<=34.77	Pass		
	15		0	20.47	-1.23	17.09	<=34.77	Pass		
	714.5		1	0	20.36	-1.23	16.98	<=34.77	Pass	
				7	20.35	-1.23	16.97	<=34.77	Pass	
		14		20.35	-1.23	16.97	<=34.77	Pass		
		8	0	20.33	-1.23	16.95	<=34.77	Pass		
			4	20.34	-1.23	16.96	<=34.77	Pass		
			7	20.33	-1.23	16.95	<=34.77	Pass		
		15	0	20.33	-1.23	16.95	<=34.77	Pass		
		16QAM	700.5	1	0	20.82	-1.23	17.44	<=34.77	Pass
					7	20.80	-1.23	17.42	<=34.77	Pass
	14				20.88	-1.23	17.5	<=34.77	Pass	
	8			0	20.87	-1.23	17.49	<=34.77	Pass	
				4	20.86	-1.23	17.48	<=34.77	Pass	
				7	20.85	-1.23	17.47	<=34.77	Pass	
15	0			20.91	-1.23	17.53	<=34.77	Pass		
707.5	1			0	20.46	-1.23	17.08	<=34.77	Pass	
				7	20.46	-1.23	17.08	<=34.77	Pass	
			14	20.46	-1.23	17.08	<=34.77	Pass		
	8		0	20.45	-1.23	17.07	<=34.77	Pass		
			4	20.45	-1.23	17.07	<=34.77	Pass		
			7	20.44	-1.23	17.06	<=34.77	Pass		
	15		0	20.43	-1.23	17.05	<=34.77	Pass		
	714.5		1	0	20.33	-1.23	16.95	<=34.77	Pass	
				7	20.33	-1.23	16.95	<=34.77	Pass	
14				20.33	-1.23	16.95	<=34.77	Pass		
8			0	20.34	-1.23	16.96	<=34.77	Pass		
			4	20.32	-1.23	16.94	<=34.77	Pass		
			7	20.31	-1.23	16.93	<=34.77	Pass		
15			0	20.32	-1.23	16.94	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.3 B12_5MHz_ERP

Band: 12 / Bandwidth: 5MHz / NTV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	701.5	1	0	21.47	-1.23	18.09	<=34.77	Pass
			13	21.54	-1.23	18.16	<=34.77	Pass
			24	21.53	-1.23	18.15	<=34.77	Pass
		12	0	20.93	-1.23	17.55	<=34.77	Pass
			6	20.50	-1.23	17.12	<=34.77	Pass
			13	20.49	-1.23	17.11	<=34.77	Pass

16QAM	707.5	25	0	20.48	-1.23	17.1	<=34.77	Pass		
		1	0	21.39	-1.23	18.01	<=34.77	Pass		
			13	21.29	-1.23	17.91	<=34.77	Pass		
			24	21.27	-1.23	17.89	<=34.77	Pass		
			0	20.58	-1.23	17.2	<=34.77	Pass		
		12	6	20.46	-1.23	17.08	<=34.77	Pass		
			13	20.49	-1.23	17.11	<=34.77	Pass		
			25	0	20.58	-1.23	17.2	<=34.77	Pass	
		713.5	1	0	21.41	-1.23	18.03	<=34.77	Pass	
				13	21.37	-1.23	17.99	<=34.77	Pass	
				24	21.39	-1.23	18.01	<=34.77	Pass	
				0	20.48	-1.23	17.1	<=34.77	Pass	
	12		6	20.40	-1.23	17.02	<=34.77	Pass		
			13	20.32	-1.23	16.94	<=34.77	Pass		
			25	0	20.35	-1.23	16.97	<=34.77	Pass	
	16QAM		701.5	1	0	20.38	-1.23	17	<=34.77	Pass
					13	20.04	-1.23	16.66	<=34.77	Pass
					24	20.11	-1.23	16.73	<=34.77	Pass
				12	0	19.92	-1.23	16.54	<=34.77	Pass
					6	19.54	-1.23	16.16	<=34.77	Pass
		13			19.53	-1.23	16.15	<=34.77	Pass	
		25		0	19.60	-1.23	16.22	<=34.77	Pass	
		707.5		1	0	21.04	-1.23	17.66	<=34.77	Pass
					13	20.95	-1.23	17.57	<=34.77	Pass
24					20.91	-1.23	17.53	<=34.77	Pass	
12				0	19.48	-1.23	16.1	<=34.77	Pass	
				6	19.85	-1.23	16.47	<=34.77	Pass	
			13	19.85	-1.23	16.47	<=34.77	Pass		
25			0	19.88	-1.23	16.5	<=34.77	Pass		
713.5			1	0	21.08	-1.23	17.7	<=34.77	Pass	
				13	20.94	-1.23	17.56	<=34.77	Pass	
				24	21.03	-1.23	17.65	<=34.77	Pass	
			12	0	19.85	-1.23	16.47	<=34.77	Pass	
				6	19.89	-1.23	16.51	<=34.77	Pass	
		13		19.84	-1.23	16.46	<=34.77	Pass		
		25	0	19.88	-1.23	16.5	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.4 B12_10MHz_ERP

Band: 12 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	704	1	0	21.41	-1.23	18.03	<=34.77	Pass
			25	21.42	-1.23	18.04	<=34.77	Pass
			49	21.43	-1.23	18.05	<=34.77	Pass
		25	0	20.46	-1.23	17.08	<=34.77	Pass
			13	20.46	-1.23	17.08	<=34.77	Pass
			25	20.46	-1.23	17.08	<=34.77	Pass
	50	0	20.43	-1.23	17.05	<=34.77	Pass	
	707.5	1	0	21.53	-1.23	18.15	<=34.77	Pass
			25	21.53	-1.23	18.15	<=34.77	Pass
			49	21.55	-1.23	18.17	<=34.77	Pass
		25	0	20.46	-1.23	17.08	<=34.77	Pass
			13	20.48	-1.23	17.1	<=34.77	Pass
			25	20.43	-1.23	17.05	<=34.77	Pass
		50	0	20.48	-1.23	17.1	<=34.77	Pass

16QAM	711	1	0	21.42	-1.23	18.04	<=34.77	Pass	
			25	21.30	-1.23	17.92	<=34.77	Pass	
			49	21.45	-1.23	18.07	<=34.77	Pass	
		25	0	20.42	-1.23	17.04	<=34.77	Pass	
			13	20.29	-1.23	16.91	<=34.77	Pass	
			25	20.33	-1.23	16.95	<=34.77	Pass	
		50	0	20.36	-1.23	16.98	<=34.77	Pass	
		704	1	0	20.94	-1.23	17.56	<=34.77	Pass
				25	20.71	-1.23	17.33	<=34.77	Pass
	49			20.56	-1.23	17.18	<=34.77	Pass	
	25		0	19.74	-1.23	16.36	<=34.77	Pass	
			13	19.82	-1.23	16.44	<=34.77	Pass	
			25	19.74	-1.23	16.36	<=34.77	Pass	
	50		0	19.58	-1.23	16.2	<=34.77	Pass	
	707.5		1	0	21.04	-1.23	17.66	<=34.77	Pass
25				21.02	-1.23	17.64	<=34.77	Pass	
49		21.02		-1.23	17.64	<=34.77	Pass		
25		0	19.61	-1.23	16.23	<=34.77	Pass		
		13	19.99	-1.23	16.61	<=34.77	Pass		
		25	19.94	-1.23	16.56	<=34.77	Pass		
50		0	20.01	-1.23	16.63	<=34.77	Pass		
711		1	0	21.08	-1.23	17.7	<=34.77	Pass	
			25	20.97	-1.23	17.59	<=34.77	Pass	
	49		20.97	-1.23	17.59	<=34.77	Pass		
	25	0	19.88	-1.23	16.5	<=34.77	Pass		
		13	19.82	-1.23	16.44	<=34.77	Pass		
		25	19.82	-1.23	16.44	<=34.77	Pass		
	50	0	19.92	-1.23	16.54	<=34.77	Pass		
	Note1: ERP=Conducted Power+Antenna Gain-2.15								

2. Frequency Stability

2.1 Test Result

2.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz										
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict	
		Size	Offset				Result	Limit		
QPSK	699.7	6	0	20	3.27	7.324	0.0105	-2.5 to 2.5	Pass	
					3.85	0.315	0.0005	-2.5 to 2.5	Pass	
					4.43	-12.274	-0.0175	-2.5 to 2.5	Pass	
				-30	3.85	-23.746	-0.0339	-2.5 to 2.5	Pass	
					-20	3.85	-32.487	-0.0464	-2.5 to 2.5	Pass
						-10	3.85	-39.725	-0.0568	-2.5 to 2.5
				0	3.85	-42.872	-0.0613	-2.5 to 2.5	Pass	
					10	3.85	-45.862	-0.0655	-2.5 to 2.5	Pass
					30	3.85	-4.148	-0.0059	-2.5 to 2.5	Pass
				40	3.85	-1.731	-0.0025	-2.5 to 2.5	Pass	
				50	3.85	-2.017	-0.0029	-2.5 to 2.5	Pass	
				707.5	6	0	20	3.27	5.765	0.0081
	3.85	6.623	0.0094					-2.5 to 2.5	Pass	
	4.43	2.060	0.0029					-2.5 to 2.5	Pass	
	-30	3.85	-0.043				-0.0001	-2.5 to 2.5	Pass	
		-20	3.85				2.518	0.0036	-2.5 to 2.5	Pass
	-10	3.85	2.861				0.0040	-2.5 to 2.5	Pass	

				0	3.85	3.347	0.0047	-2.5 to 2.5	Pass				
				10	3.85	3.419	0.0048	-2.5 to 2.5	Pass				
				30	3.85	4.449	0.0063	-2.5 to 2.5	Pass				
				40	3.85	4.935	0.0070	-2.5 to 2.5	Pass				
				50	3.85	2.174	0.0031	-2.5 to 2.5	Pass				
	715.3	6	0	20	3.27	5.622	0.0079	-2.5 to 2.5	Pass				
					3.85	2.704	0.0038	-2.5 to 2.5	Pass				
					4.43	4.849	0.0068	-2.5 to 2.5	Pass				
				-30	3.85	3.333	0.0047	-2.5 to 2.5	Pass				
				-20	3.85	2.689	0.0038	-2.5 to 2.5	Pass				
				-10	3.85	2.117	0.0030	-2.5 to 2.5	Pass				
				0	3.85	3.433	0.0048	-2.5 to 2.5	Pass				
				10	3.85	6.266	0.0088	-2.5 to 2.5	Pass				
				30	3.85	6.595	0.0092	-2.5 to 2.5	Pass				
				40	3.85	4.807	0.0067	-2.5 to 2.5	Pass				
				50	3.85	4.735	0.0066	-2.5 to 2.5	Pass				
				16QAM	699.7	6	0	20	3.27	-3.548	-0.0051	-2.5 to 2.5	Pass
									3.85	-4.921	-0.0070	-2.5 to 2.5	Pass
									4.43	-4.034	-0.0058	-2.5 to 2.5	Pass
								-30	3.85	-5.007	-0.0072	-2.5 to 2.5	Pass
-20	3.85	-5.722	-0.0082					-2.5 to 2.5	Pass				
-10	3.85	-3.662	-0.0052					-2.5 to 2.5	Pass				
0	3.85	-2.990	-0.0043					-2.5 to 2.5	Pass				
10	3.85	-4.263	-0.0061					-2.5 to 2.5	Pass				
30	3.85	-3.991	-0.0057					-2.5 to 2.5	Pass				
40	3.85	-4.163	-0.0059					-2.5 to 2.5	Pass				
50	3.85	-3.176	-0.0045		-2.5 to 2.5	Pass							
707.5	6	0	20		3.27	1.359	0.0019	-2.5 to 2.5	Pass				
					3.85	3.734	0.0053	-2.5 to 2.5	Pass				
					4.43	2.117	0.0030	-2.5 to 2.5	Pass				
			-30		3.85	2.961	0.0042	-2.5 to 2.5	Pass				
			-20		3.85	2.632	0.0037	-2.5 to 2.5	Pass				
			-10		3.85	5.035	0.0071	-2.5 to 2.5	Pass				
			0		3.85	4.821	0.0068	-2.5 to 2.5	Pass				
			10		3.85	3.290	0.0047	-2.5 to 2.5	Pass				
			30		3.85	0.701	0.0010	-2.5 to 2.5	Pass				
			40	3.85	2.217	0.0031	-2.5 to 2.5	Pass					
50	3.85	0.672	0.0009	-2.5 to 2.5	Pass								
715.3	6	0	20	3.27	4.578	0.0064	-2.5 to 2.5	Pass					
				3.85	5.407	0.0076	-2.5 to 2.5	Pass					
				4.43	6.466	0.0090	-2.5 to 2.5	Pass					
			-30	3.85	6.638	0.0093	-2.5 to 2.5	Pass					
			-20	3.85	7.997	0.0112	-2.5 to 2.5	Pass					
			-10	3.85	6.251	0.0087	-2.5 to 2.5	Pass					
			0	3.85	5.307	0.0074	-2.5 to 2.5	Pass					
			10	3.85	5.379	0.0075	-2.5 to 2.5	Pass					
			30	3.85	4.034	0.0056	-2.5 to 2.5	Pass					
			40	3.85	4.849	0.0068	-2.5 to 2.5	Pass					
50	3.85	4.449	0.0062	-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	-3.133	-0.0045	-2.5 to 2.5	Pass
					3.85	-21.715	-0.0310	-2.5 to 2.5	Pass

					4.43	-46.577	-0.0665	-2.5 to 2.5	Pass
				-30	3.85	-21.057	-0.0301	-2.5 to 2.5	Pass
				-20	3.85	-42.300	-0.0604	-2.5 to 2.5	Pass
				-10	3.85	-16.937	-0.0242	-2.5 to 2.5	Pass
				0	3.85	-33.102	-0.0473	-2.5 to 2.5	Pass
				10	3.85	-44.374	-0.0633	-2.5 to 2.5	Pass
				30	3.85	-7.038	-0.0100	-2.5 to 2.5	Pass
				40	3.85	-15.349	-0.0219	-2.5 to 2.5	Pass
	50	3.85	-23.689	-0.0338	-2.5 to 2.5	Pass			
	707.5	15	0	20	3.27	5.665	0.0080	-2.5 to 2.5	Pass
					3.85	5.894	0.0083	-2.5 to 2.5	Pass
					4.43	3.490	0.0049	-2.5 to 2.5	Pass
				-30	3.85	5.808	0.0082	-2.5 to 2.5	Pass
				-20	3.85	5.565	0.0079	-2.5 to 2.5	Pass
				-10	3.85	5.107	0.0072	-2.5 to 2.5	Pass
				0	3.85	3.734	0.0053	-2.5 to 2.5	Pass
				10	3.85	4.063	0.0057	-2.5 to 2.5	Pass
	30	3.85	4.292	0.0061	-2.5 to 2.5	Pass			
	40	3.85	3.948	0.0056	-2.5 to 2.5	Pass			
	50	3.85	3.147	0.0044	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	6.809	0.0095	-2.5 to 2.5	Pass
					3.85	5.608	0.0078	-2.5 to 2.5	Pass
					4.43	4.478	0.0063	-2.5 to 2.5	Pass
				-30	3.85	3.247	0.0045	-2.5 to 2.5	Pass
				-20	3.85	3.705	0.0052	-2.5 to 2.5	Pass
				-10	3.85	3.276	0.0046	-2.5 to 2.5	Pass
				0	3.85	5.150	0.0072	-2.5 to 2.5	Pass
				10	3.85	3.848	0.0054	-2.5 to 2.5	Pass
30	3.85	4.821	0.0067	-2.5 to 2.5	Pass				
40	3.85	1.788	0.0025	-2.5 to 2.5	Pass				
50	3.85	2.847	0.0040	-2.5 to 2.5	Pass				
16QAM	700.5	15	0	20	3.27	-29.039	-0.0415	-2.5 to 2.5	Pass
					3.85	-35.720	-0.0510	-2.5 to 2.5	Pass
					4.43	-34.819	-0.0497	-2.5 to 2.5	Pass
				-30	3.85	-40.069	-0.0572	-2.5 to 2.5	Pass
				-20	3.85	-38.610	-0.0551	-2.5 to 2.5	Pass
				-10	3.85	-38.466	-0.0549	-2.5 to 2.5	Pass
				0	3.85	-40.426	-0.0577	-2.5 to 2.5	Pass
				10	3.85	-42.114	-0.0601	-2.5 to 2.5	Pass
	30	3.85	-44.847	-0.0640	-2.5 to 2.5	Pass			
	40	3.85	-43.659	-0.0623	-2.5 to 2.5	Pass			
	50	3.85	-42.758	-0.0610	-2.5 to 2.5	Pass			
	707.5	15	0	20	3.27	4.091	0.0058	-2.5 to 2.5	Pass
					3.85	5.193	0.0073	-2.5 to 2.5	Pass
					4.43	5.021	0.0071	-2.5 to 2.5	Pass
				-30	3.85	5.522	0.0078	-2.5 to 2.5	Pass
				-20	3.85	4.878	0.0069	-2.5 to 2.5	Pass
				-10	3.85	2.789	0.0039	-2.5 to 2.5	Pass
				0	3.85	3.648	0.0052	-2.5 to 2.5	Pass
				10	3.85	3.977	0.0056	-2.5 to 2.5	Pass
	30	3.85	4.907	0.0069	-2.5 to 2.5	Pass			
	40	3.85	3.290	0.0047	-2.5 to 2.5	Pass			
	50	3.85	0.973	0.0014	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	4.234	0.0059	-2.5 to 2.5	Pass
					3.85	3.791	0.0053	-2.5 to 2.5	Pass
					4.43	2.003	0.0028	-2.5 to 2.5	Pass
				-30	3.85	2.747	0.0038	-2.5 to 2.5	Pass
				-20	3.85	3.562	0.0050	-2.5 to 2.5	Pass
	-10	3.85	2.918	0.0041	-2.5 to 2.5	Pass			

				0	3.85	6.208	0.0087	-2.5 to 2.5	Pass
				10	3.85	3.533	0.0049	-2.5 to 2.5	Pass
				30	3.85	3.147	0.0044	-2.5 to 2.5	Pass
				40	3.85	3.905	0.0055	-2.5 to 2.5	Pass
				50	3.85	3.204	0.0045	-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	8.383	0.0120	-2.5 to 2.5	Pass
					3.85	7.653	0.0109	-2.5 to 2.5	Pass
					4.43	3.676	0.0052	-2.5 to 2.5	Pass
				-30	3.85	4.063	0.0058	-2.5 to 2.5	Pass
				-20	3.85	4.635	0.0066	-2.5 to 2.5	Pass
				-10	3.85	6.065	0.0086	-2.5 to 2.5	Pass
				0	3.85	3.190	0.0045	-2.5 to 2.5	Pass
				10	3.85	3.376	0.0048	-2.5 to 2.5	Pass
				30	3.85	2.031	0.0029	-2.5 to 2.5	Pass
				40	3.85	4.878	0.0070	-2.5 to 2.5	Pass
	50	3.85	7.524	0.0107	-2.5 to 2.5	Pass			
	707.5	25	0	20	3.27	3.777	0.0053	-2.5 to 2.5	Pass
					3.85	4.435	0.0063	-2.5 to 2.5	Pass
					4.43	4.849	0.0069	-2.5 to 2.5	Pass
				-30	3.85	1.874	0.0026	-2.5 to 2.5	Pass
				-20	3.85	2.432	0.0034	-2.5 to 2.5	Pass
				-10	3.85	0.930	0.0013	-2.5 to 2.5	Pass
				0	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass
				10	3.85	0.129	0.0002	-2.5 to 2.5	Pass
				30	3.85	2.003	0.0028	-2.5 to 2.5	Pass
				40	3.85	1.760	0.0025	-2.5 to 2.5	Pass
	50	3.85	1.688	0.0024	-2.5 to 2.5	Pass			
	713.5	25	0	20	3.27	1.645	0.0023	-2.5 to 2.5	Pass
					3.85	0.529	0.0007	-2.5 to 2.5	Pass
					4.43	-3.533	-0.0050	-2.5 to 2.5	Pass
				-30	3.85	-2.861	-0.0040	-2.5 to 2.5	Pass
				-20	3.85	-0.944	-0.0013	-2.5 to 2.5	Pass
				-10	3.85	-1.531	-0.0021	-2.5 to 2.5	Pass
				0	3.85	-0.329	-0.0005	-2.5 to 2.5	Pass
				10	3.85	2.289	0.0032	-2.5 to 2.5	Pass
30				3.85	1.488	0.0021	-2.5 to 2.5	Pass	
40				3.85	-0.916	-0.0013	-2.5 to 2.5	Pass	
50	3.85	-0.772	-0.0011	-2.5 to 2.5	Pass				
16QAM	701.5	25	0	20	3.27	7.024	0.0100	-2.5 to 2.5	Pass
					3.85	4.764	0.0068	-2.5 to 2.5	Pass
					4.43	4.478	0.0064	-2.5 to 2.5	Pass
				-30	3.85	3.963	0.0056	-2.5 to 2.5	Pass
				-20	3.85	6.123	0.0087	-2.5 to 2.5	Pass
				-10	3.85	5.479	0.0078	-2.5 to 2.5	Pass
				0	3.85	3.591	0.0051	-2.5 to 2.5	Pass
				10	3.85	5.021	0.0072	-2.5 to 2.5	Pass
				30	3.85	6.151	0.0088	-2.5 to 2.5	Pass
				40	3.85	4.807	0.0069	-2.5 to 2.5	Pass
	50	3.85	4.835	0.0069	-2.5 to 2.5	Pass			
	707.5	25	0	20	3.27	1.974	0.0028	-2.5 to 2.5	Pass
					3.85	3.934	0.0056	-2.5 to 2.5	Pass

					4.43	3.362	0.0048	-2.5 to 2.5	Pass			
				-30	3.85	1.845	0.0026	-2.5 to 2.5	Pass			
				-20	3.85	0.701	0.0010	-2.5 to 2.5	Pass			
				-10	3.85	-0.072	-0.0001	-2.5 to 2.5	Pass			
				0	3.85	2.418	0.0034	-2.5 to 2.5	Pass			
				10	3.85	3.691	0.0052	-2.5 to 2.5	Pass			
				30	3.85	3.748	0.0053	-2.5 to 2.5	Pass			
				40	3.85	3.018	0.0043	-2.5 to 2.5	Pass			
				50	3.85	3.548	0.0050	-2.5 to 2.5	Pass			
	713.5	25	0	20	3.27	-1.273	-0.0018	-2.5 to 2.5	Pass			
3.85					0.386	0.0005	-2.5 to 2.5	Pass				
4.43					-0.315	-0.0004	-2.5 to 2.5	Pass				
							-30	3.85	0.930	0.0013	-2.5 to 2.5	Pass
							-20	3.85	0.587	0.0008	-2.5 to 2.5	Pass
							-10	3.85	-0.286	-0.0004	-2.5 to 2.5	Pass
							0	3.85	0.086	0.0001	-2.5 to 2.5	Pass
							10	3.85	-2.375	-0.0033	-2.5 to 2.5	Pass
							30	3.85	0.300	0.0004	-2.5 to 2.5	Pass
							40	3.85	0.286	0.0004	-2.5 to 2.5	Pass
							50	3.85	0.587	0.0008	-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	6.094	0.0087	-2.5 to 2.5	Pass				
					3.85	-0.815	-0.0012	-2.5 to 2.5	Pass				
					4.43	-11.930	-0.0169	-2.5 to 2.5	Pass				
								-30	3.85	-15.163	-0.0215	-2.5 to 2.5	Pass
								-20	3.85	-20.614	-0.0293	-2.5 to 2.5	Pass
								-10	3.85	-26.550	-0.0377	-2.5 to 2.5	Pass
								0	3.85	-30.613	-0.0435	-2.5 to 2.5	Pass
								10	3.85	-34.447	-0.0489	-2.5 to 2.5	Pass
								30	3.85	-35.820	-0.0509	-2.5 to 2.5	Pass
								40	3.85	-37.179	-0.0528	-2.5 to 2.5	Pass
								50	3.85	-37.665	-0.0535	-2.5 to 2.5	Pass
					707.5	50	0	20	3.27	10.285	0.0145	-2.5 to 2.5	Pass
	3.85	9.899	0.0140	-2.5 to 2.5					Pass				
	4.43	7.739	0.0109	-2.5 to 2.5					Pass				
								-30	3.85	6.638	0.0094	-2.5 to 2.5	Pass
								-20	3.85	6.852	0.0097	-2.5 to 2.5	Pass
								-10	3.85	6.380	0.0090	-2.5 to 2.5	Pass
								0	3.85	5.336	0.0075	-2.5 to 2.5	Pass
								10	3.85	6.337	0.0090	-2.5 to 2.5	Pass
								30	3.85	3.505	0.0050	-2.5 to 2.5	Pass
								40	3.85	6.180	0.0087	-2.5 to 2.5	Pass
								50	3.85	6.738	0.0095	-2.5 to 2.5	Pass
		711	50	0				20	3.27	1.459	0.0021	-2.5 to 2.5	Pass
	3.85				-0.672	-0.0009	-2.5 to 2.5		Pass				
	4.43				-4.807	-0.0068	-2.5 to 2.5		Pass				
								-30	3.85	-2.432	-0.0034	-2.5 to 2.5	Pass
								-20	3.85	-1.345	-0.0019	-2.5 to 2.5	Pass
								-10	3.85	-2.503	-0.0035	-2.5 to 2.5	Pass
								0	3.85	-2.003	-0.0028	-2.5 to 2.5	Pass
								10	3.85	-3.991	-0.0056	-2.5 to 2.5	Pass
				30	3.85	-0.930	-0.0013	-2.5 to 2.5	Pass				

				40	3.85	0.558	0.0008	-2.5 to 2.5	Pass
				50	3.85	-0.830	-0.0012	-2.5 to 2.5	Pass
16QAM	704	50	0	20	3.27	-36.836	-0.0523	-2.5 to 2.5	Pass
					3.85	-39.139	-0.0556	-2.5 to 2.5	Pass
					4.43	-40.083	-0.0569	-2.5 to 2.5	Pass
					3.85	-41.356	-0.0587	-2.5 to 2.5	Pass
				-30	3.85	-40.298	-0.0572	-2.5 to 2.5	Pass
				-20	3.85	-39.296	-0.0558	-2.5 to 2.5	Pass
				0	3.85	-39.454	-0.0560	-2.5 to 2.5	Pass
				10	3.85	-43.216	-0.0614	-2.5 to 2.5	Pass
				30	3.85	-41.513	-0.0590	-2.5 to 2.5	Pass
				40	3.85	-41.871	-0.0595	-2.5 to 2.5	Pass
				50	3.85	-42.057	-0.0597	-2.5 to 2.5	Pass
				707.5	50	0	20	3.27	6.838
	3.85	5.322	0.0075					-2.5 to 2.5	Pass
	4.43	6.752	0.0095					-2.5 to 2.5	Pass
	3.85	5.865	0.0083					-2.5 to 2.5	Pass
	-30	3.85	6.452				0.0091	-2.5 to 2.5	Pass
	-20	3.85	8.326				0.0118	-2.5 to 2.5	Pass
	0	3.85	4.835				0.0068	-2.5 to 2.5	Pass
	10	3.85	6.022				0.0085	-2.5 to 2.5	Pass
	30	3.85	8.268				0.0117	-2.5 to 2.5	Pass
	40	3.85	5.250				0.0074	-2.5 to 2.5	Pass
	50	3.85	7.896				0.0112	-2.5 to 2.5	Pass
	711	50	0				20	3.27	-2.346
				3.85	-0.329	-0.0005		-2.5 to 2.5	Pass
				4.43	-2.418	-0.0034		-2.5 to 2.5	Pass
				3.85	-2.174	-0.0031		-2.5 to 2.5	Pass
				-30	3.85	-1.702	-0.0024	-2.5 to 2.5	Pass
				-20	3.85	-2.017	-0.0028	-2.5 to 2.5	Pass
				0	3.85	-2.117	-0.0030	-2.5 to 2.5	Pass
				10	3.85	-1.230	-0.0017	-2.5 to 2.5	Pass
30				3.85	-2.031	-0.0029	-2.5 to 2.5	Pass	
40				3.85	-2.360	-0.0033	-2.5 to 2.5	Pass	
50				3.85	-0.172	-0.0002	-2.5 to 2.5	Pass	

3. Modulation Characteristics

3.1 Test Result

3.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTV						
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

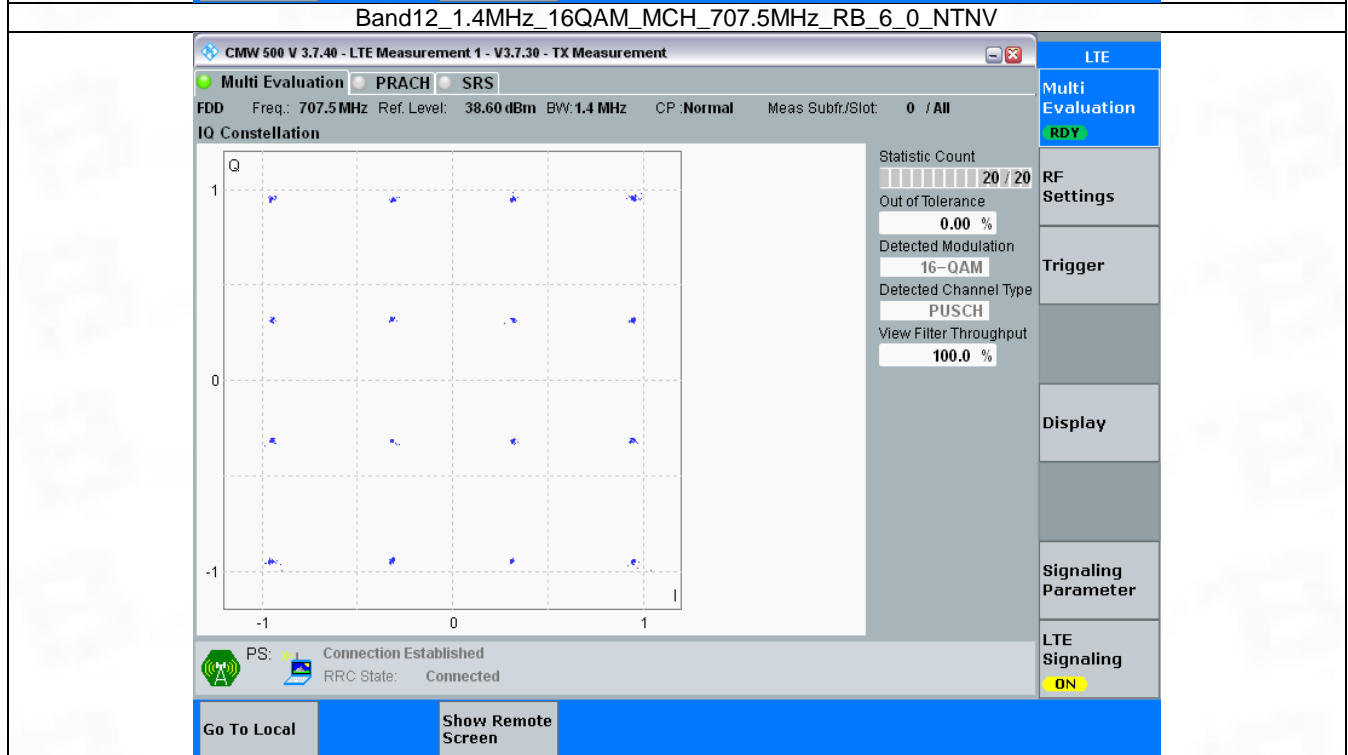
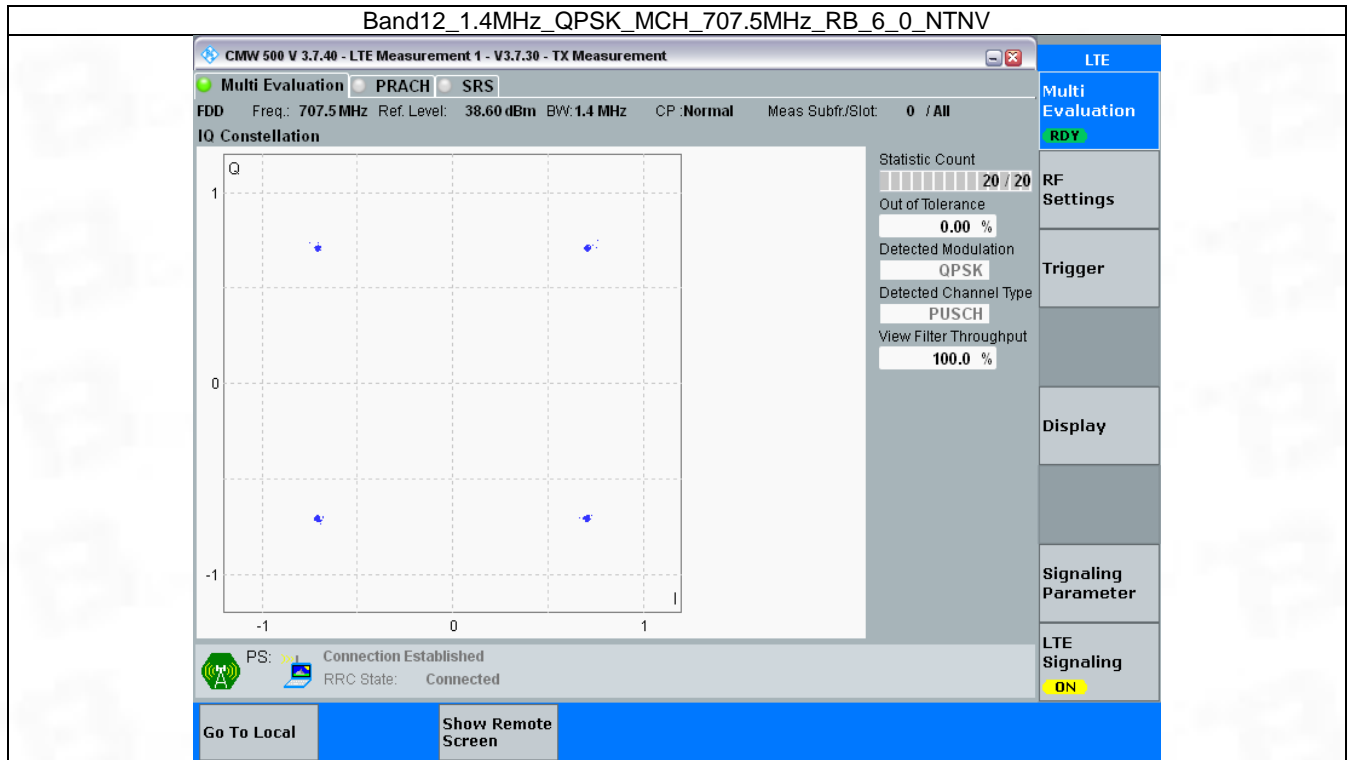
Band: 12 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	25	0	Refer To Test Graph		Pass
16QAM	707.5	25	0	Refer To Test Graph		Pass

3.1.4 B12_10MHz

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

3.2 Test Graph

3.2.1 B12_1.4MHz



3.2.2 B12_3MHz

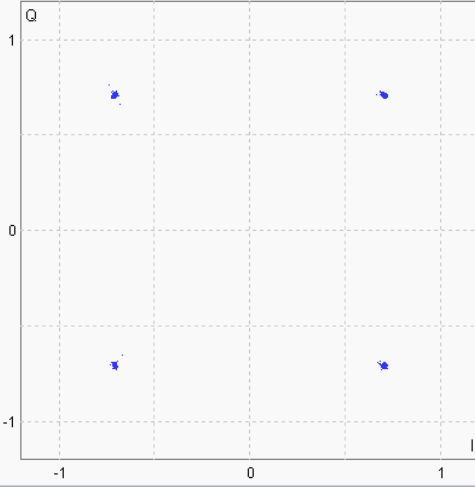
Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV

CMW 500 V 3.7.40 - LTE Measurement 1 - V3.7.30 - TX MeasurementLTE

Multi Evaluation PRACH SRSMulti Evaluation
RDY

FDD Freq.: 707.5 MHz Ref. Level: 39.10 dBm BW: 3.0 MHz CP: Normal Meas Subfr./Slot: 0 / AllRF Settings

IQ Constellation



Statistic Count
20 / 20

Out of Tolerance
0.00 %

Detected Modulation
QPSK

Detected Channel Type
PUSCH

View Filter Throughput
100.0 %

Trigger

Display

Signaling Parameter

LTE Signaling
ON

PS: Connection Established
RRC State: ConnectedGo To Local Show Remote Screen

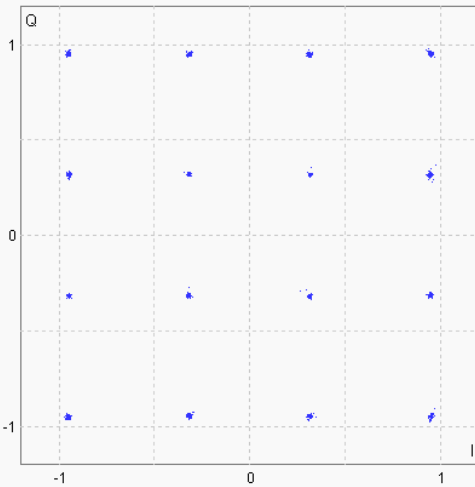
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV

CMW 500 V 3.7.40 - LTE Measurement 1 - V3.7.30 - TX MeasurementLTE

Multi Evaluation PRACH SRSMulti Evaluation
RDY

FDD Freq.: 707.5 MHz Ref. Level: 39.10 dBm BW: 3.0 MHz CP: Normal Meas Subfr./Slot: 0 / AllRF Settings

IQ Constellation



Statistic Count
20 / 20

Out of Tolerance
0.00 %

Detected Modulation
16-QAM

Detected Channel Type
PUSCH

View Filter Throughput
100.0 %

Trigger

Display

Signaling Parameter

LTE Signaling
ON

PS: Connection Established
RRC State: ConnectedGo To Local Show Remote Screen

3.2.3 B12_5MHz

Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV

CMW 500 V 3.7.40 - LTE Measurement 1 - V3.7.30 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq.: 707.5 MHz Ref. Level: 39.20 dBm BW: 5.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

IQ Constellation

Statistic Count: 20 / 20

Out of Tolerance: 0.00 %

Detected Modulation: QPSK

Detected Channel Type: PUSCH

View Filter Throughput: 100.0 %

LTE

Multi Evaluation **RDY**

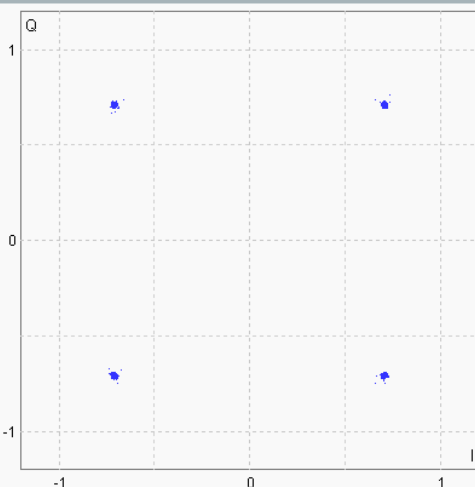
RF Settings

Trigger

Display

Signaling Parameter

LTE Signaling **ON**



PS: Connection Established

RRC State: Connected

Go To Local

Show Remote Screen

Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV

CMW 500 V 3.7.40 - LTE Measurement 1 - V3.7.30 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq.: 707.5 MHz Ref. Level: 39.20 dBm BW: 5.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

IQ Constellation

Statistic Count: 20 / 20

Out of Tolerance: 0.00 %

Detected Modulation: 16-QAM

Detected Channel Type: PUSCH

View Filter Throughput: 100.0 %

LTE

Multi Evaluation **RDY**

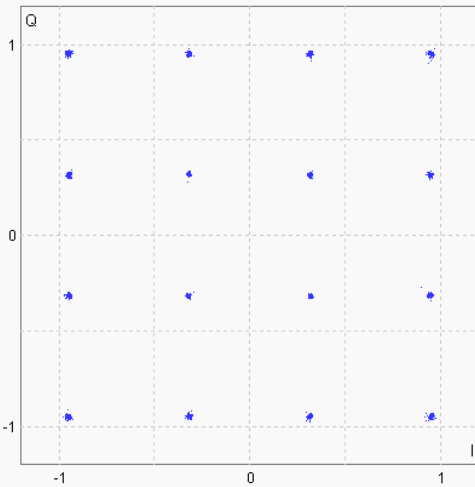
RF Settings

Trigger

Display

Signaling Parameter

LTE Signaling **ON**



PS: Connection Established

RRC State: Connected

Go To Local

Show Remote Screen

3.2.4 B12_10MHz

Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV

CMW 500 V 3.7.40 - LTE Measurement 1 - V3.7.30 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq.: 707.5 MHz Ref. Level: 38.90 dBm BW: 10.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

IQ Constellation

Statistic Count: 20 / 20

Out of Tolerance: 0.00 %

Detected Modulation: QPSK

Detected Channel Type: PUSCH

View Filter Throughput: 100.0 %

PS: Connection Established RRC State: Connected

Go To Local Show Remote Screen

LTE
Multi Evaluation RDY
RF Settings
Trigger
Display
Signaling Parameter
LTE Signaling ON

Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV

CMW 500 V 3.7.40 - LTE Measurement 1 - V3.7.30 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq.: 707.5 MHz Ref. Level: 38.90 dBm BW: 10.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

IQ Constellation

Statistic Count: 20 / 20

Out of Tolerance: 0.00 %

Detected Modulation: 16-QAM

Detected Channel Type: PUSCH

View Filter Throughput: 100.0 %

PS: Connection Established RRC State: Connected

Go To Local Show Remote Screen

LTE
Multi Evaluation RDY
RF Settings
Trigger
Display
Signaling Parameter
LTE Signaling ON

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	1.114	/	Pass
		707.5	6	0	1.114	/	Pass
		715.3	6	0	1.111	/	Pass
	16QAM	699.7	6	0	1.118	/	Pass
		707.5	6	0	1.108	/	Pass
		715.3	6	0	1.116	/	Pass
3	QPSK	700.5	15	0	2.750	/	Pass
		707.5	15	0	2.754	/	Pass
		714.5	15	0	2.759	/	Pass
	16QAM	700.5	15	0	2.762	/	Pass
		707.5	15	0	2.766	/	Pass
		714.5	15	0	2.756	/	Pass
5	QPSK	701.5	25	0	4.556	/	Pass
		707.5	25	0	4.553	/	Pass
		713.5	25	0	4.544	/	Pass
	16QAM	701.5	25	0	4.550	/	Pass
		707.5	25	0	4.554	/	Pass
		713.5	25	0	4.567	/	Pass
10	QPSK	704	50	0	9.051	/	Pass
		707.5	50	0	9.092	/	Pass
		711	50	0	9.042	/	Pass
	16QAM	704	50	0	9.061	/	Pass
		707.5	50	0	9.094	/	Pass
		711	50	0	9.061	/	Pass

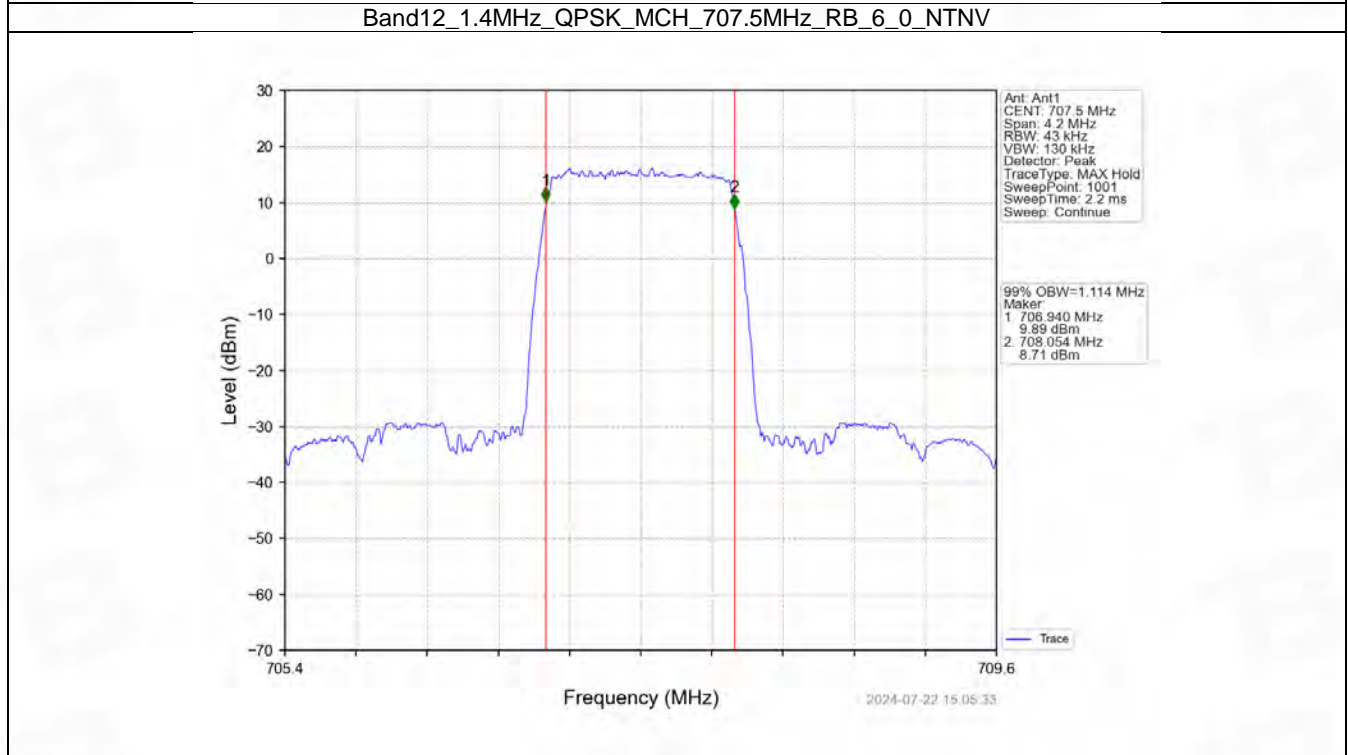
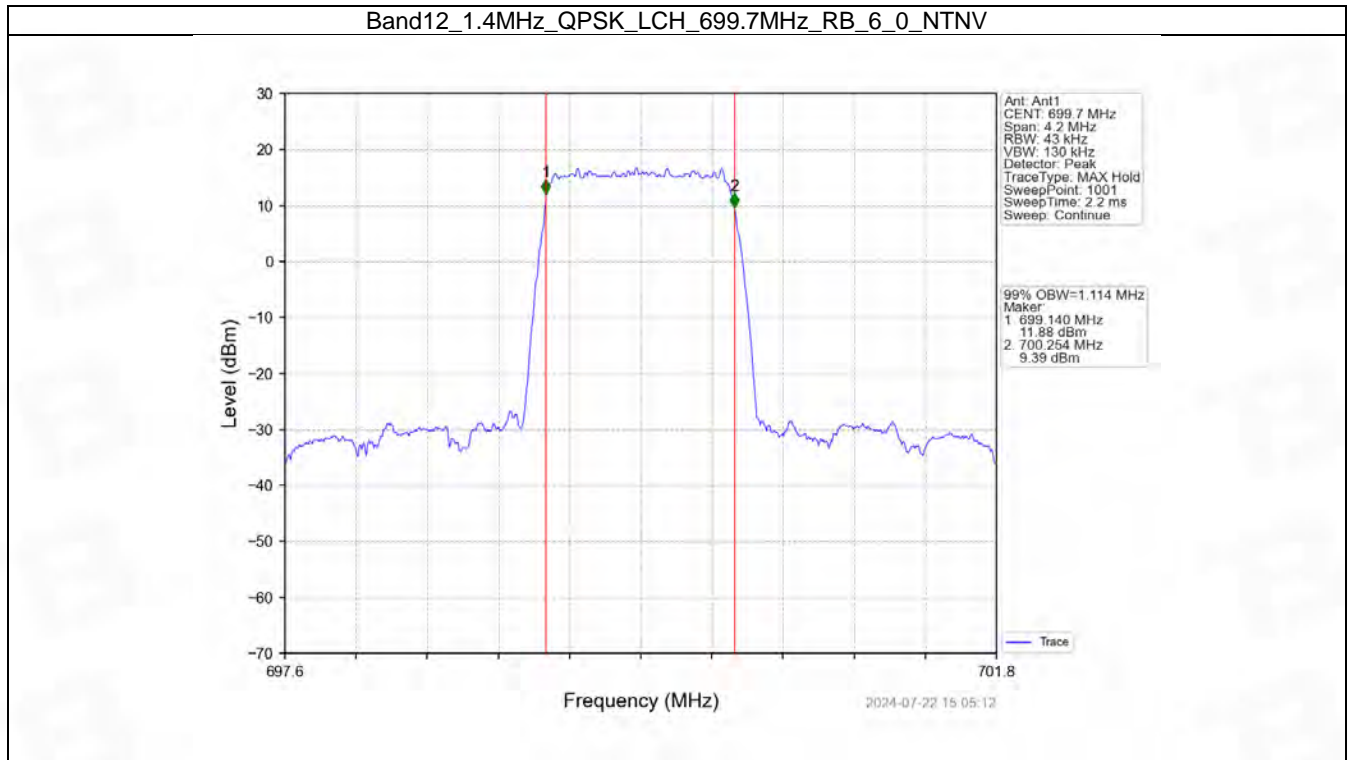
4.1.2 Band12_XDB

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	1.269	/	Pass
		707.5	6	0	1.275	/	Pass
		715.3	6	0	1.265	/	Pass
	16QAM	699.7	6	0	1.270	/	Pass
		707.5	6	0	1.267	/	Pass
		715.3	6	0	1.268	/	Pass
3	QPSK	700.5	15	0	3.080	/	Pass
		707.5	15	0	3.109	/	Pass
		714.5	15	0	3.093	/	Pass
	16QAM	700.5	15	0	3.091	/	Pass
		707.5	15	0	3.104	/	Pass
		714.5	15	0	3.084	/	Pass
5	QPSK	701.5	25	0	5.051	/	Pass
		707.5	25	0	5.026	/	Pass
		713.5	25	0	5.069	/	Pass

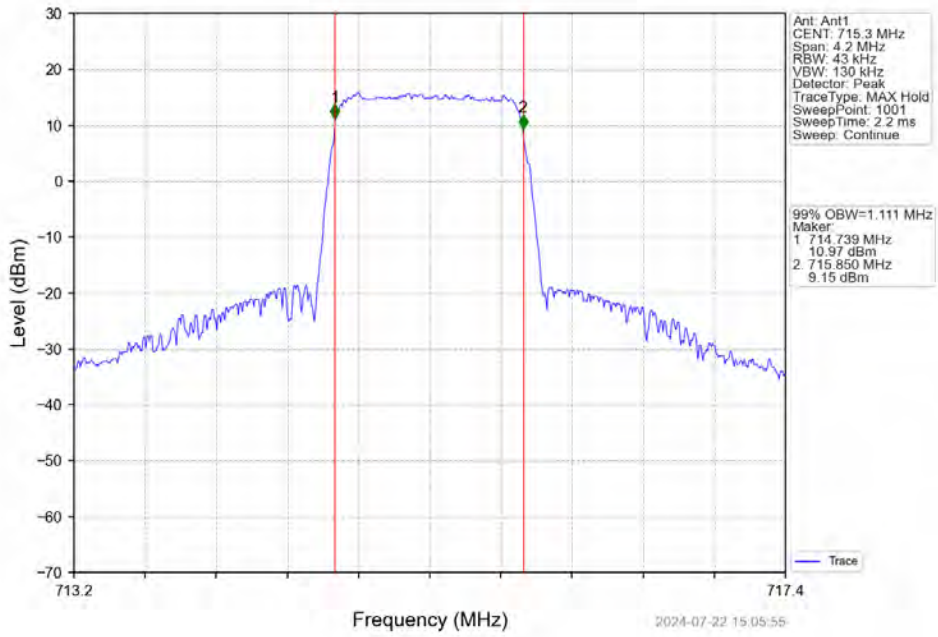
	16QAM	701.5	25	0	5.055	/	Pass
		707.5	25	0	5.050	/	Pass
		713.5	25	0	5.037	/	Pass
10	QPSK	704	50	0	10.006	/	Pass
		707.5	50	0	10.075	/	Pass
		711	50	0	10.084	/	Pass
	16QAM	704	50	0	10.060	/	Pass
		707.5	50	0	10.076	/	Pass
		711	50	0	10.027	/	Pass

4.2 Test Graph

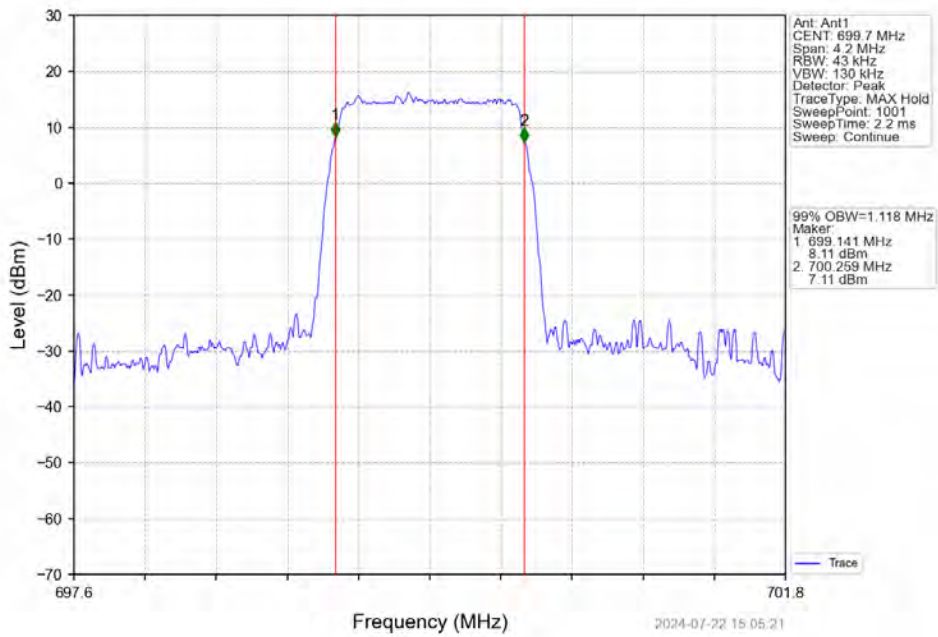
4.2.1 Band12_OBW



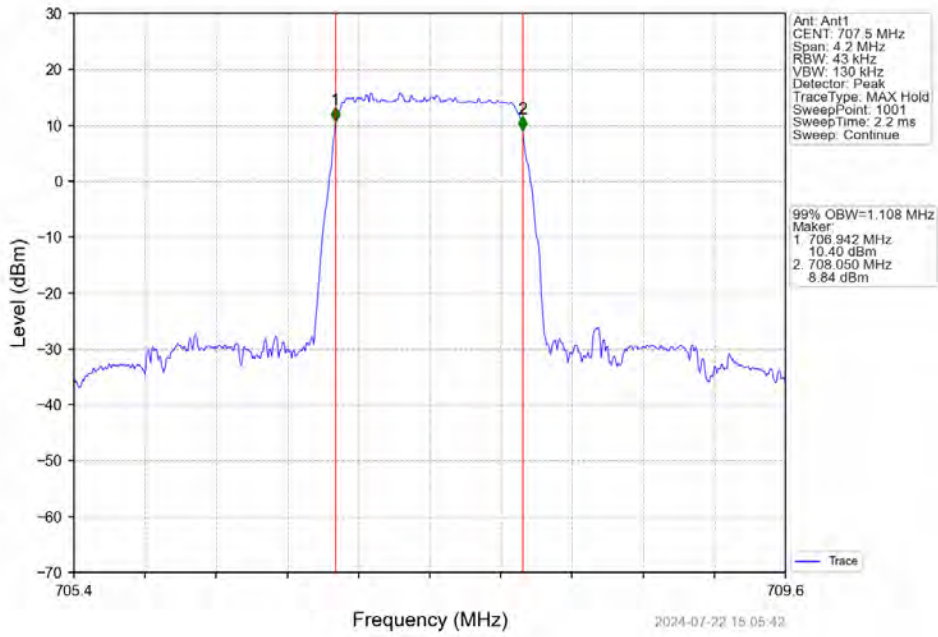
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



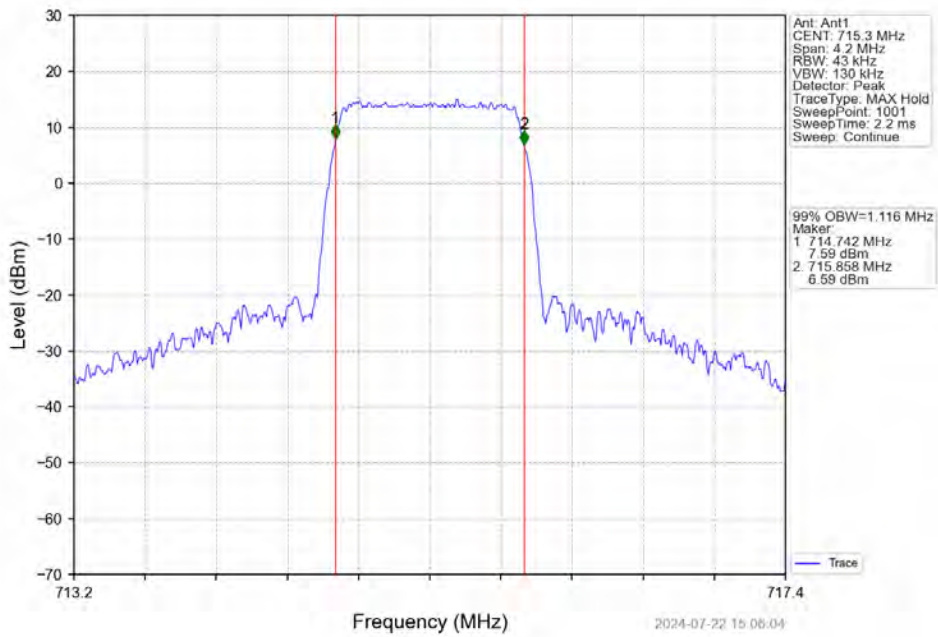
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



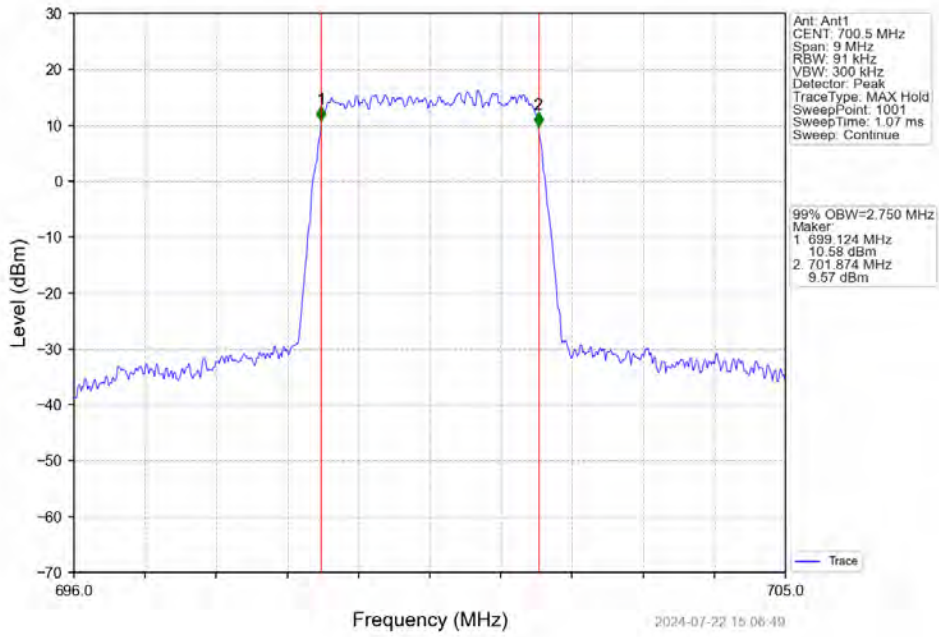
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



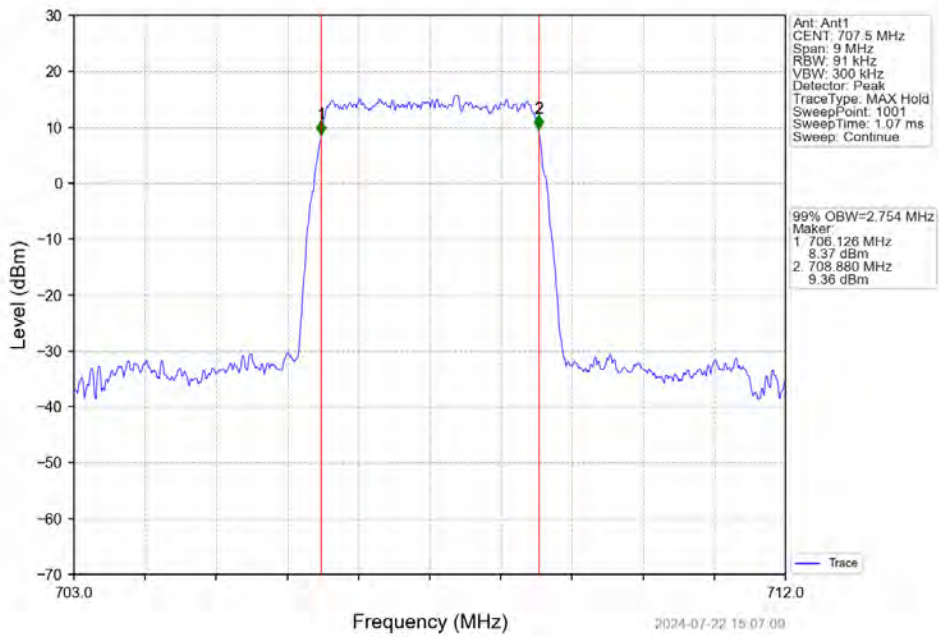
Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



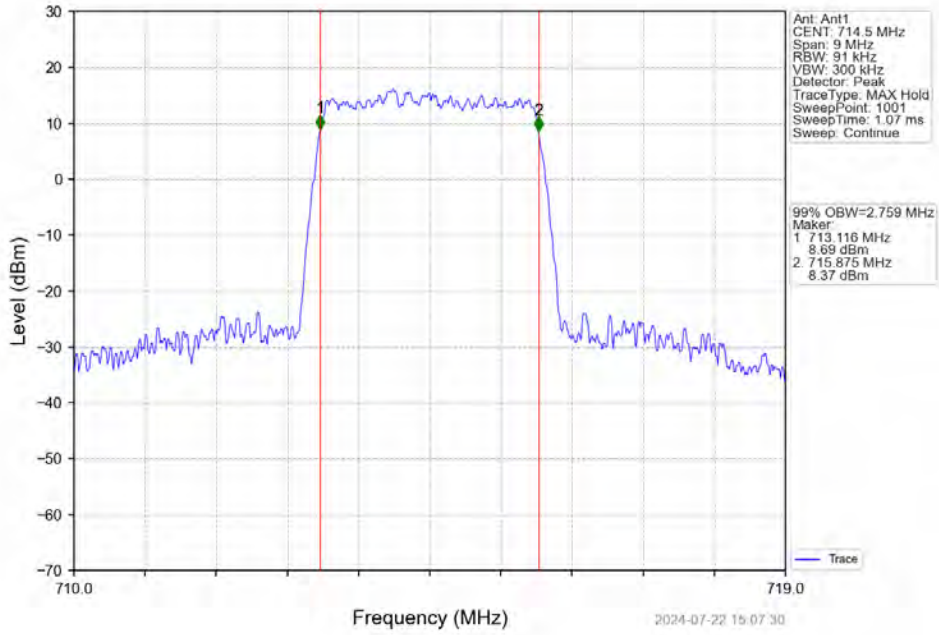
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



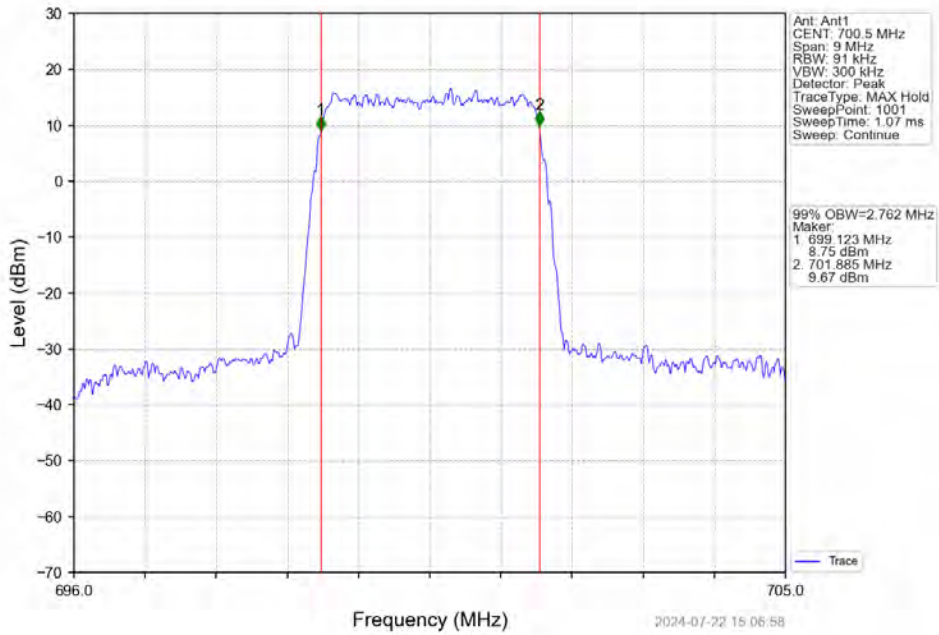
Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



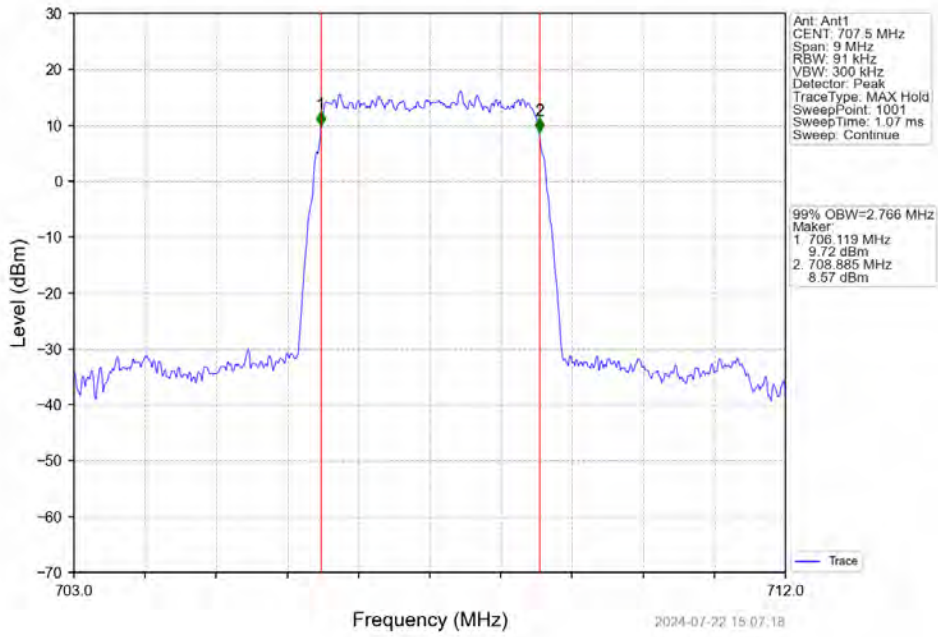
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



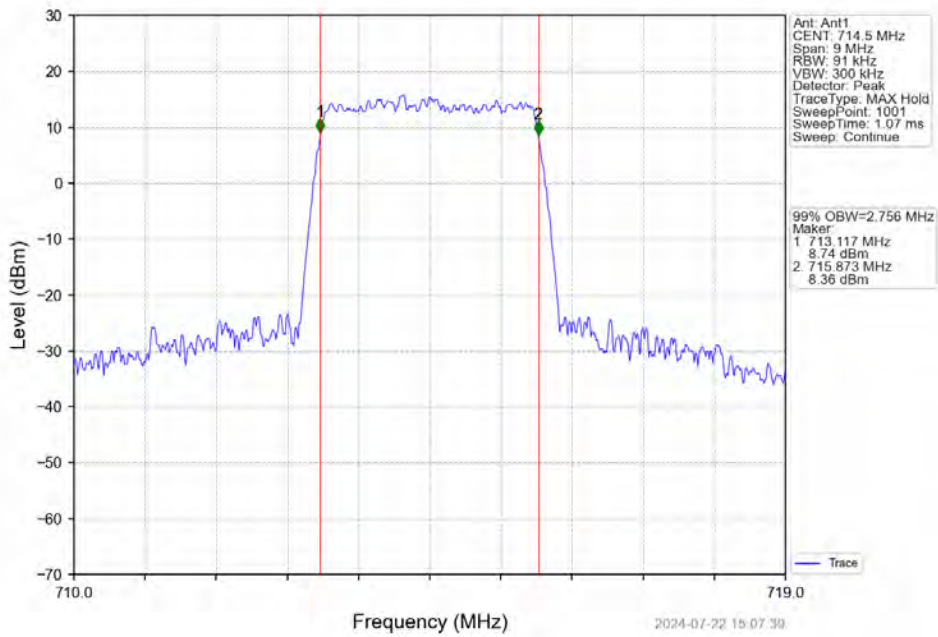
Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



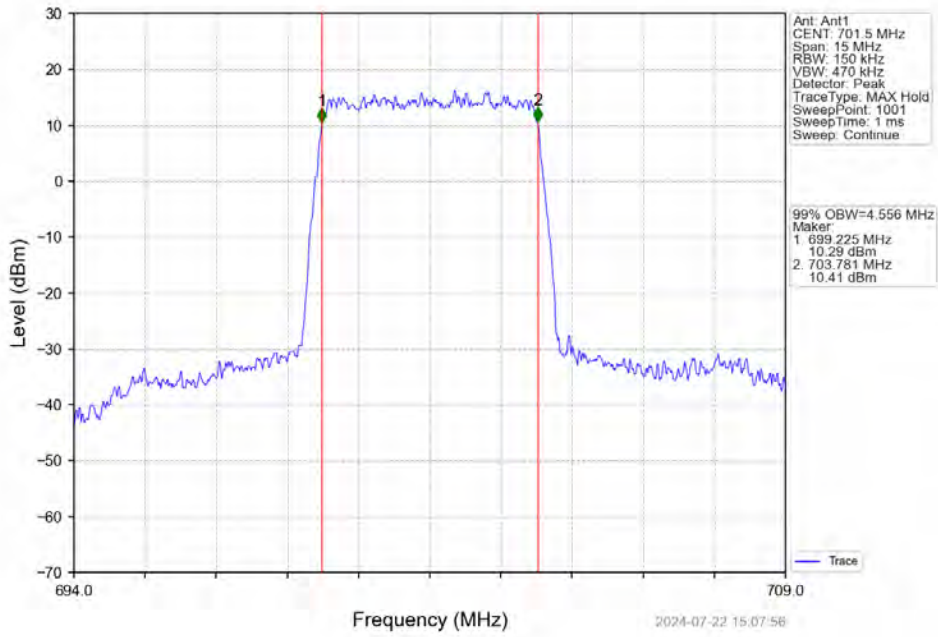
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



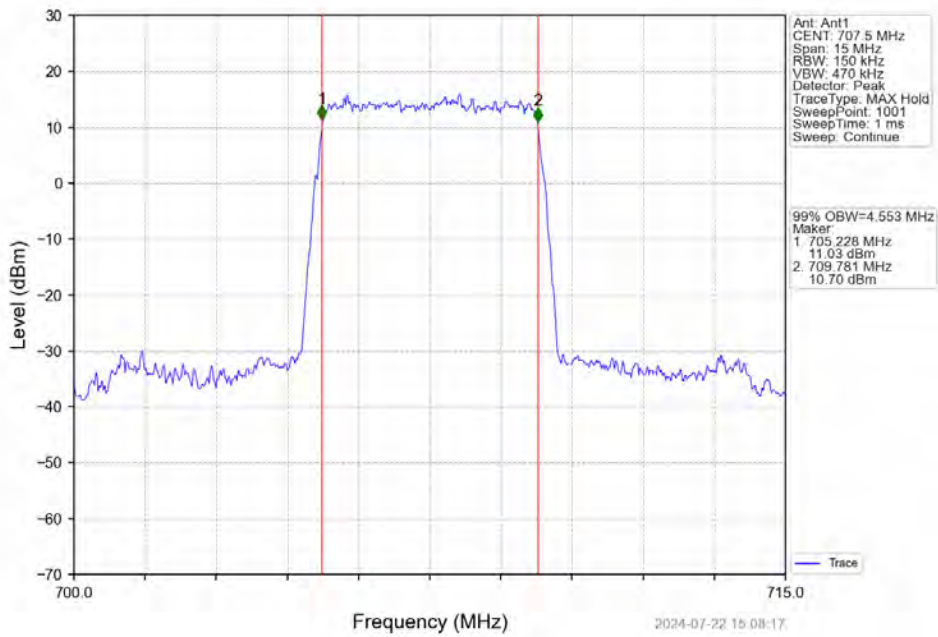
Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



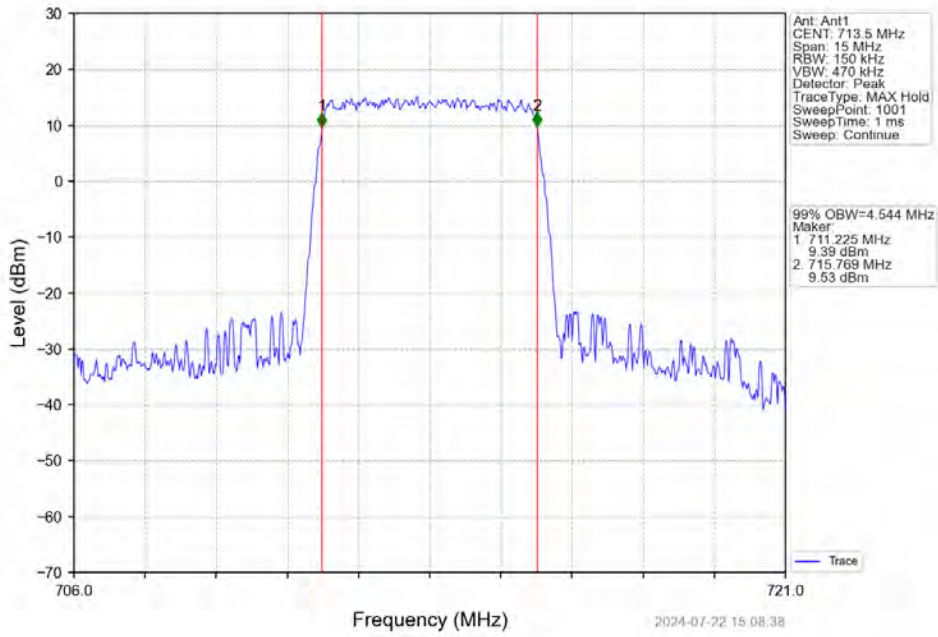
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



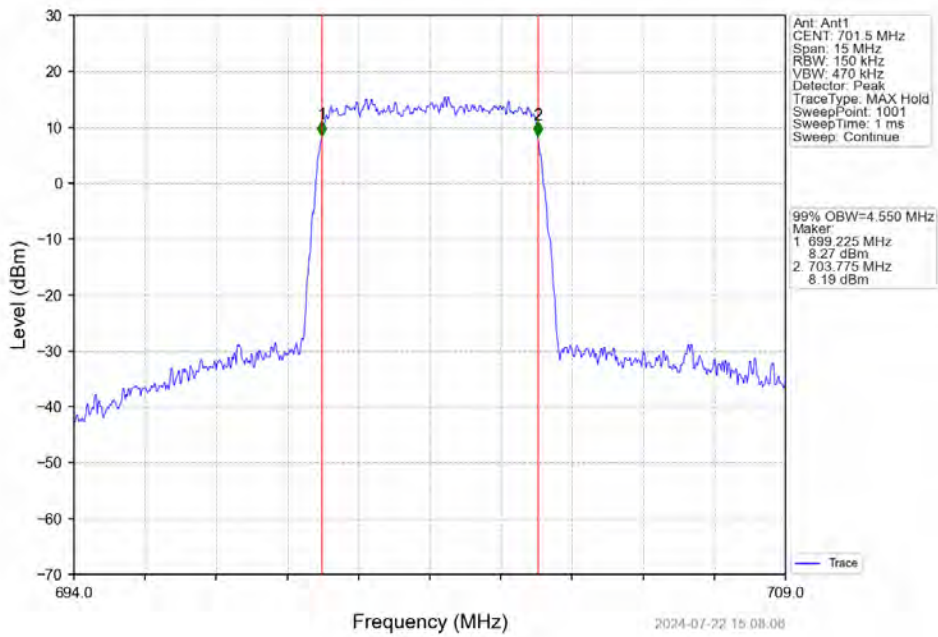
Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



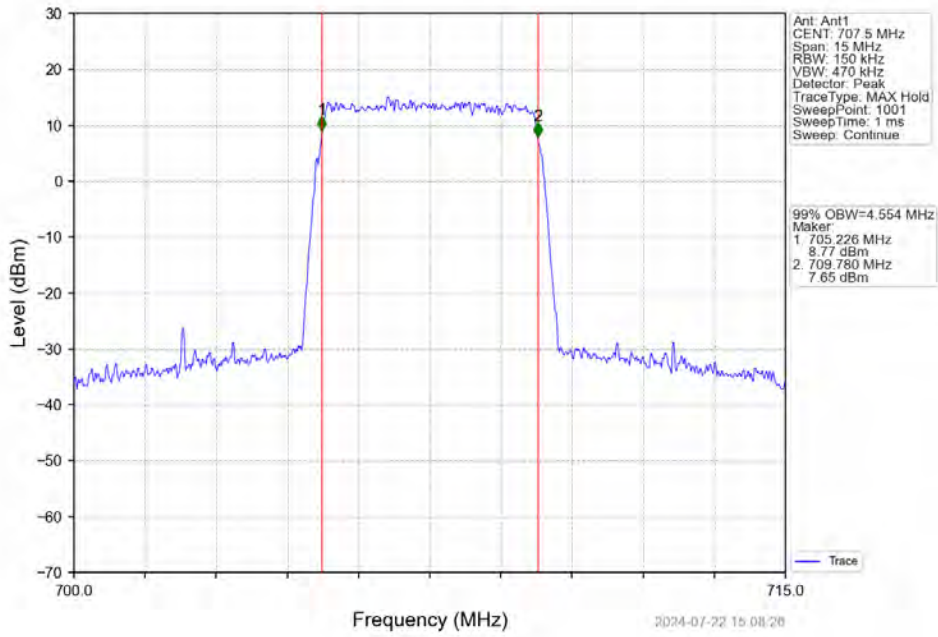
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



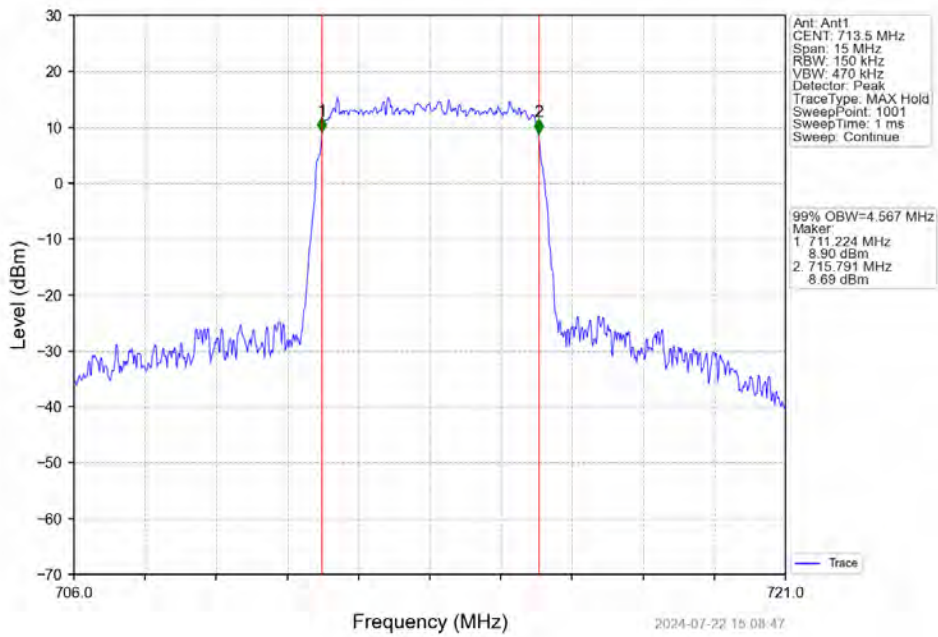
Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



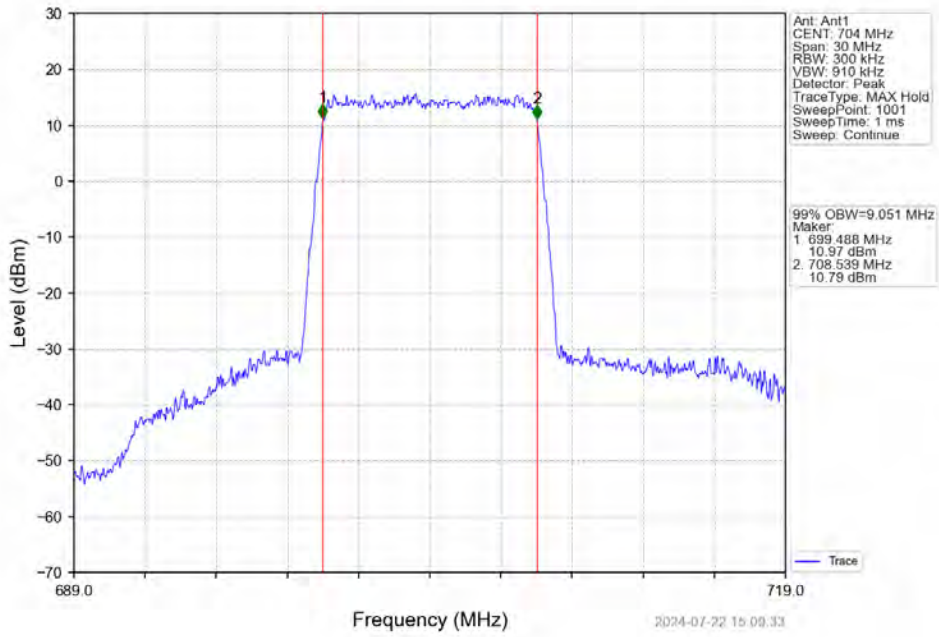
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



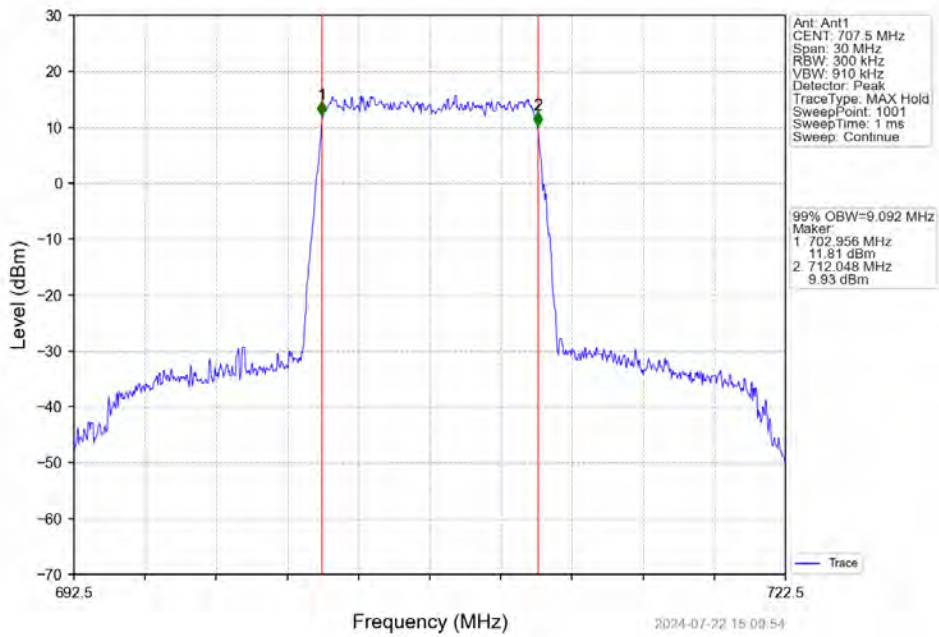
Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



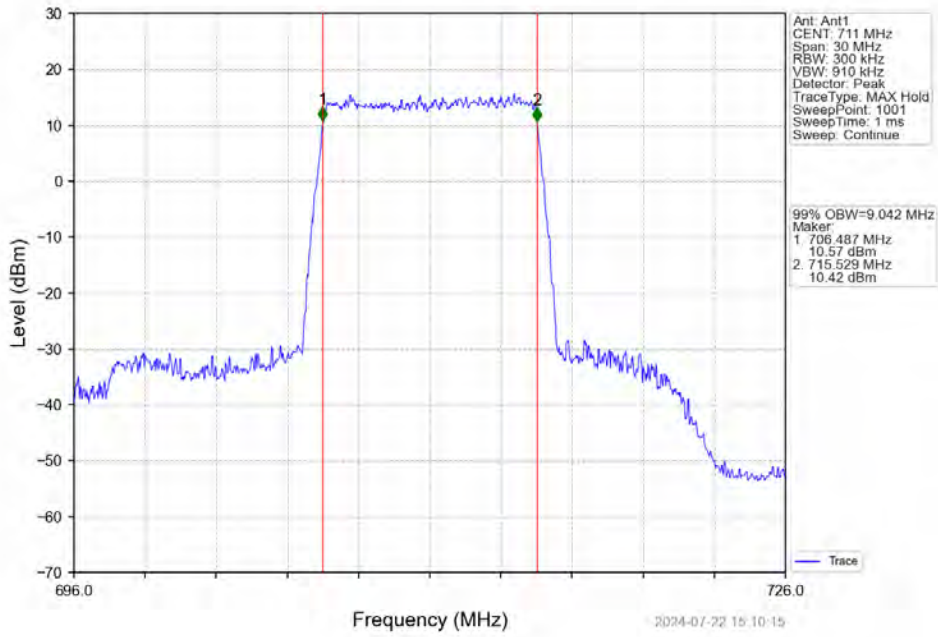
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



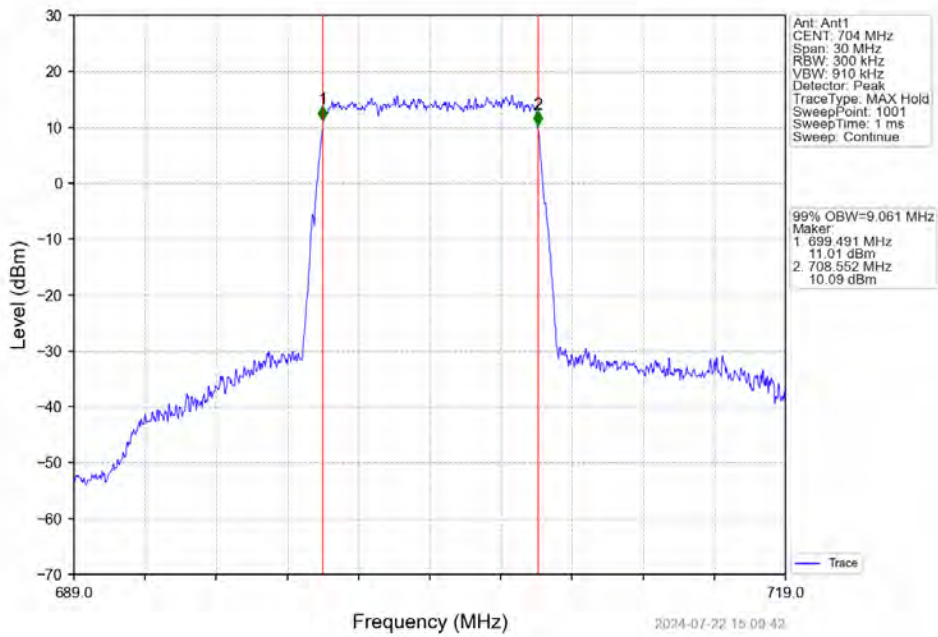
Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



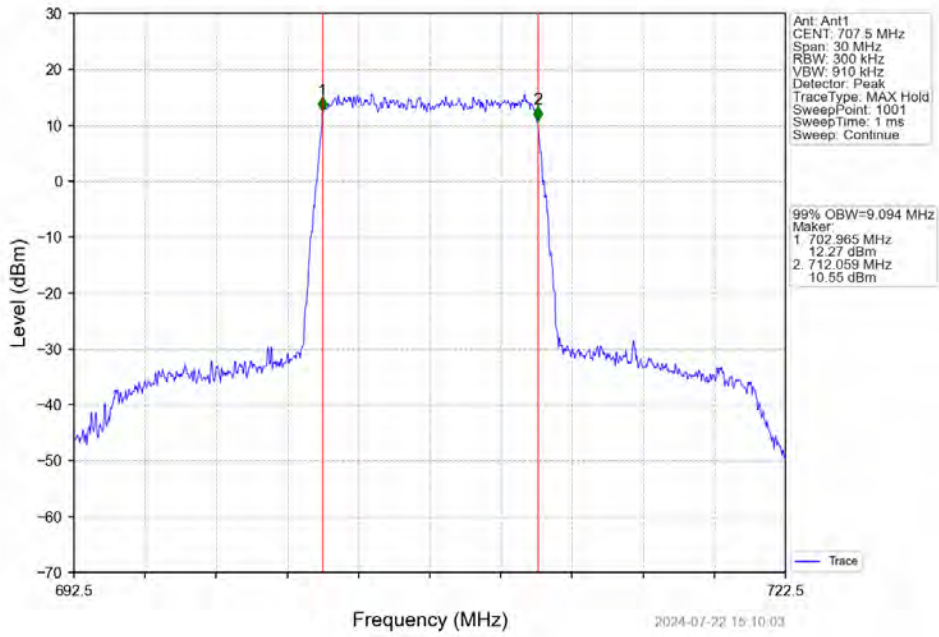
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



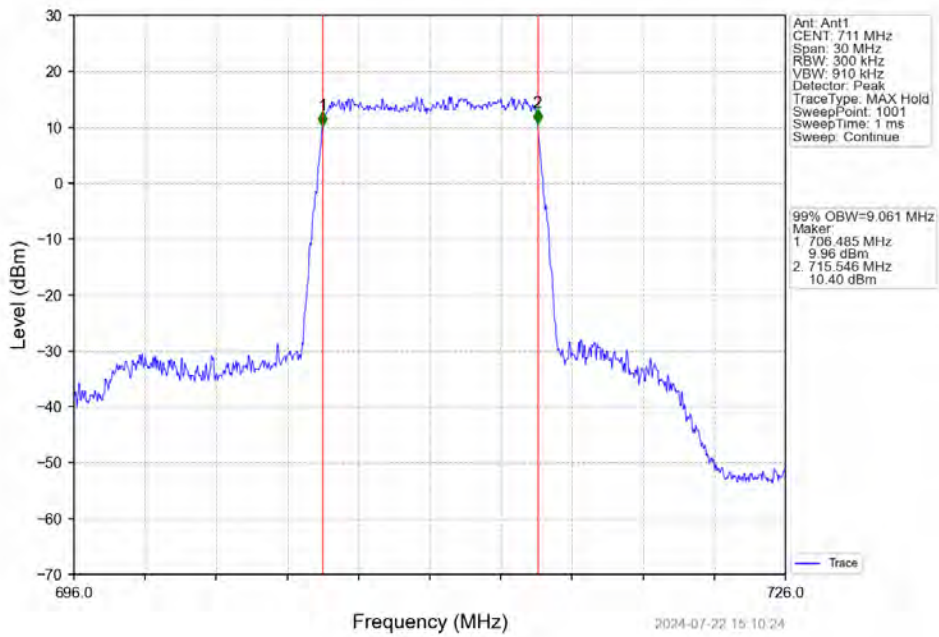
Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



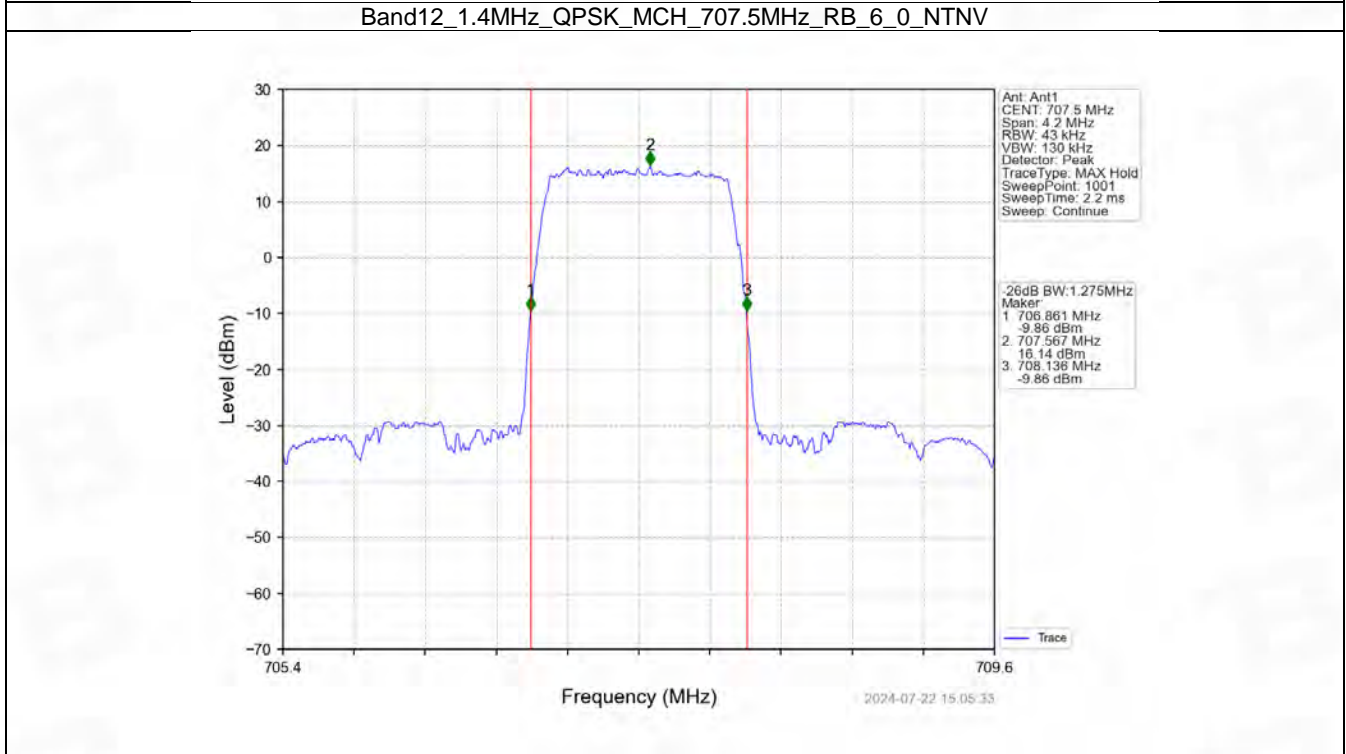
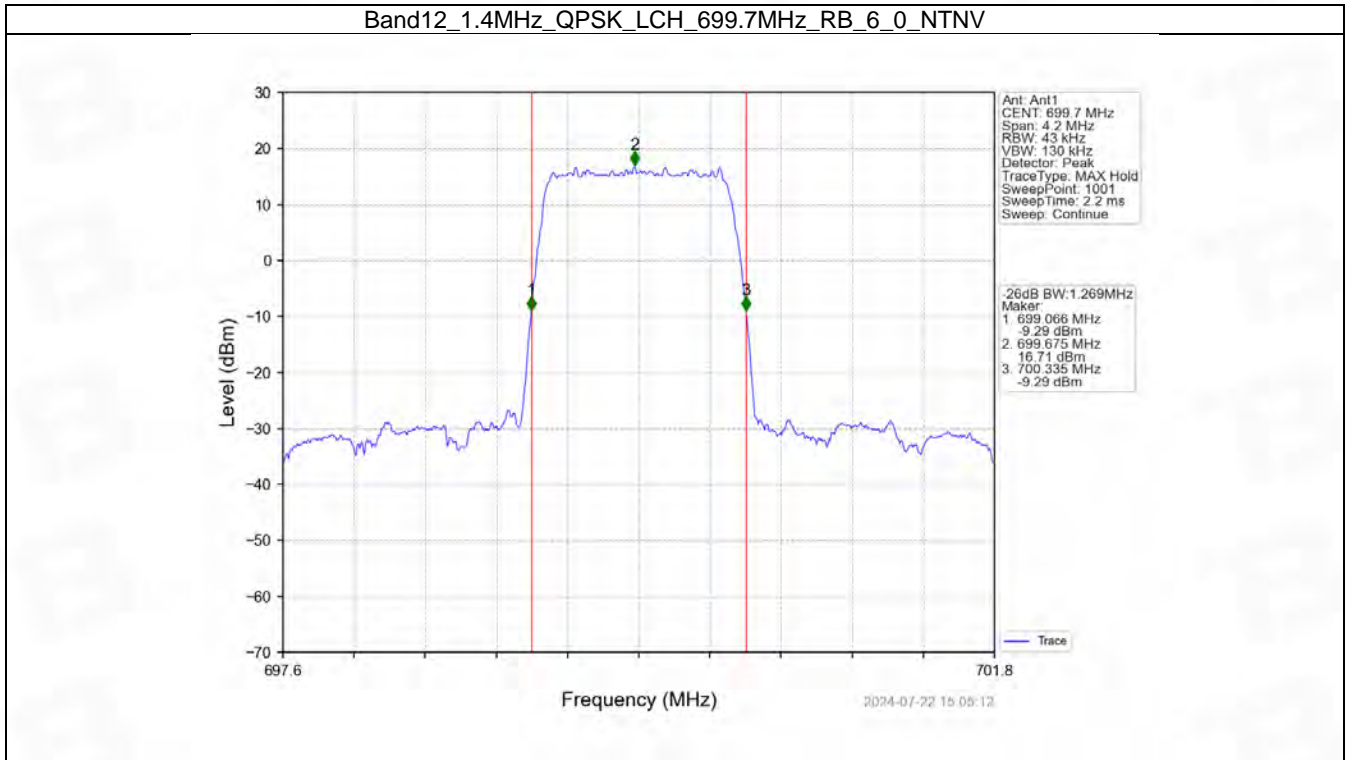
Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV



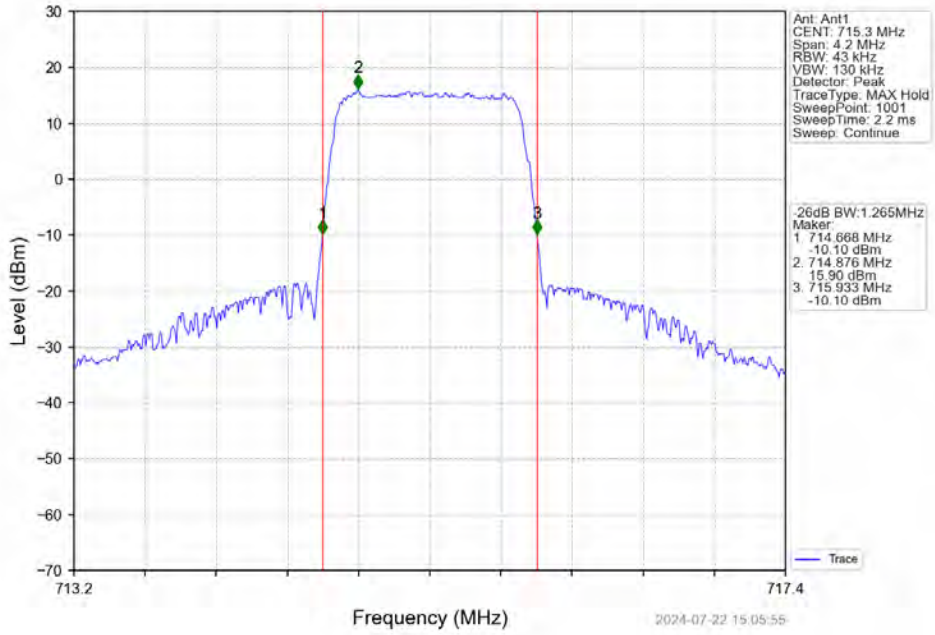
Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



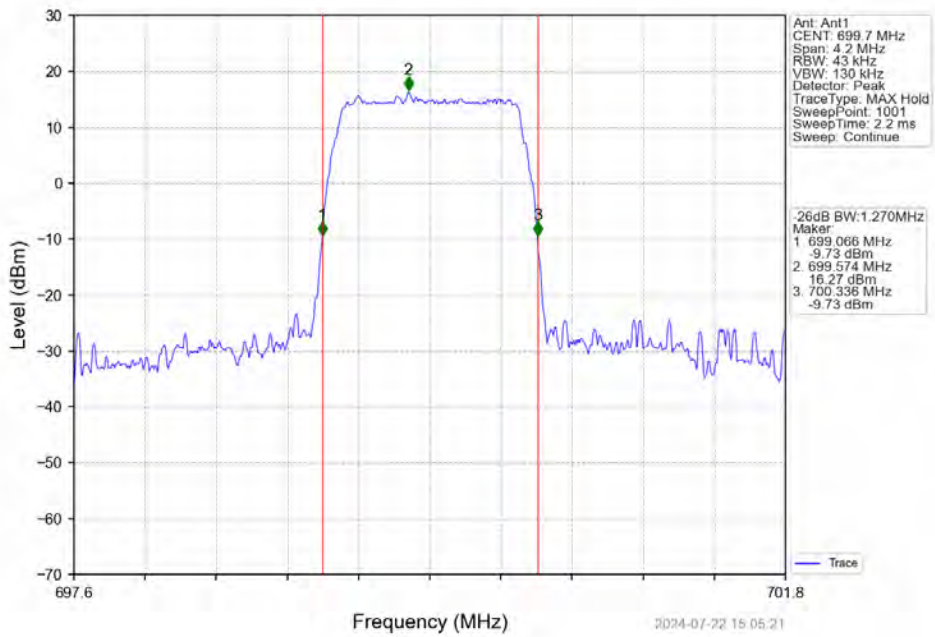
4.2.2 Band12_XDB



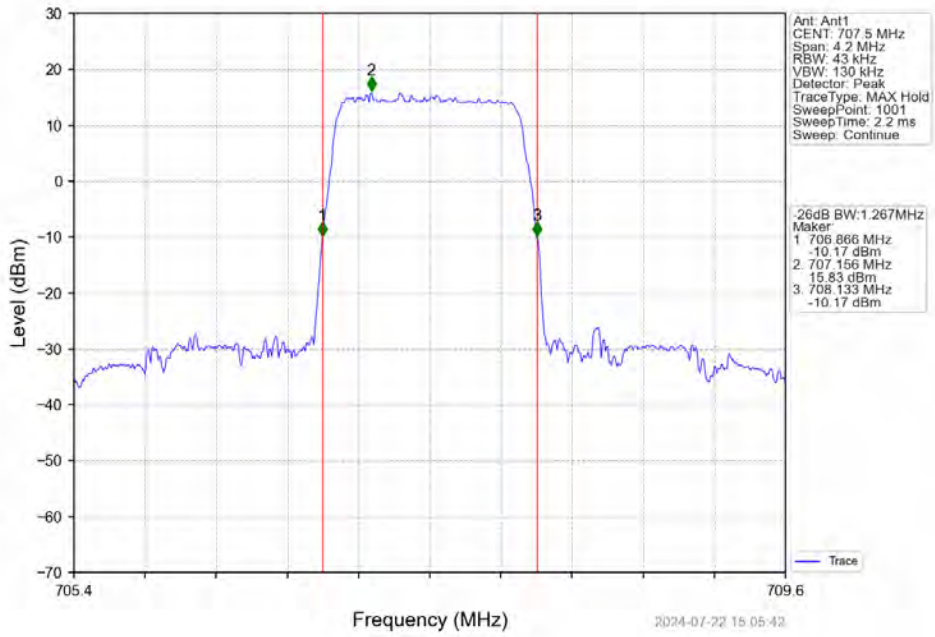
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



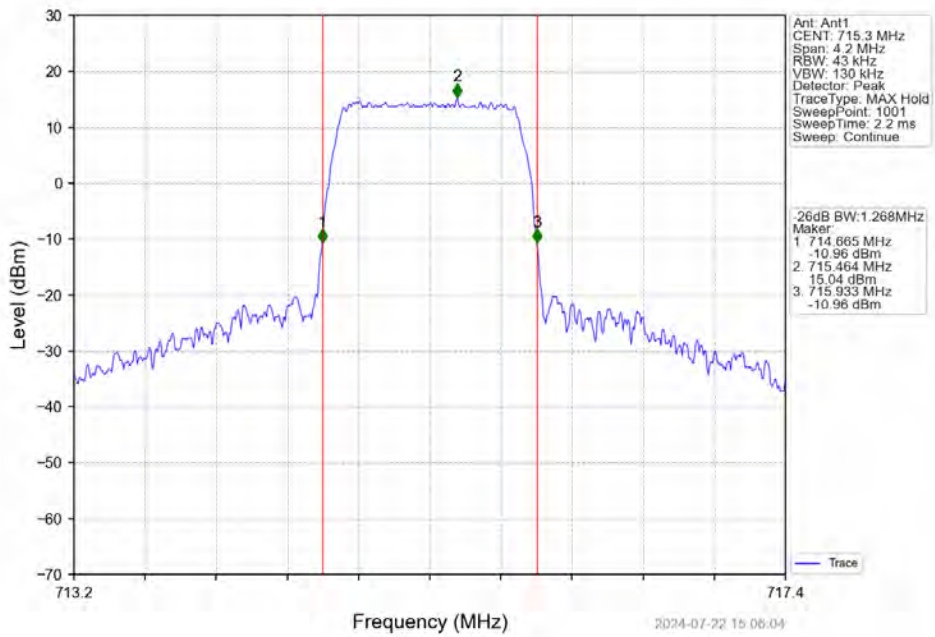
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



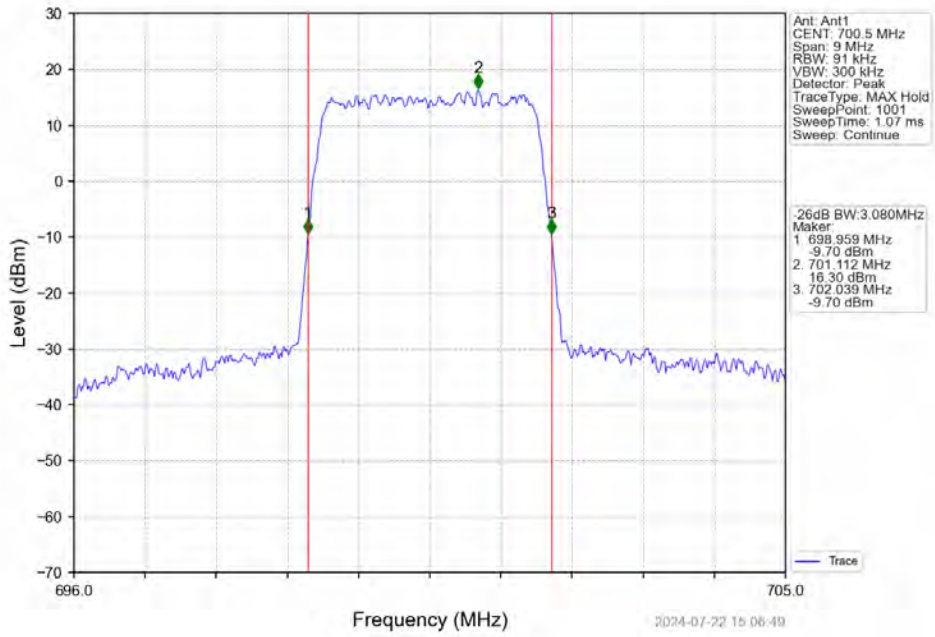
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



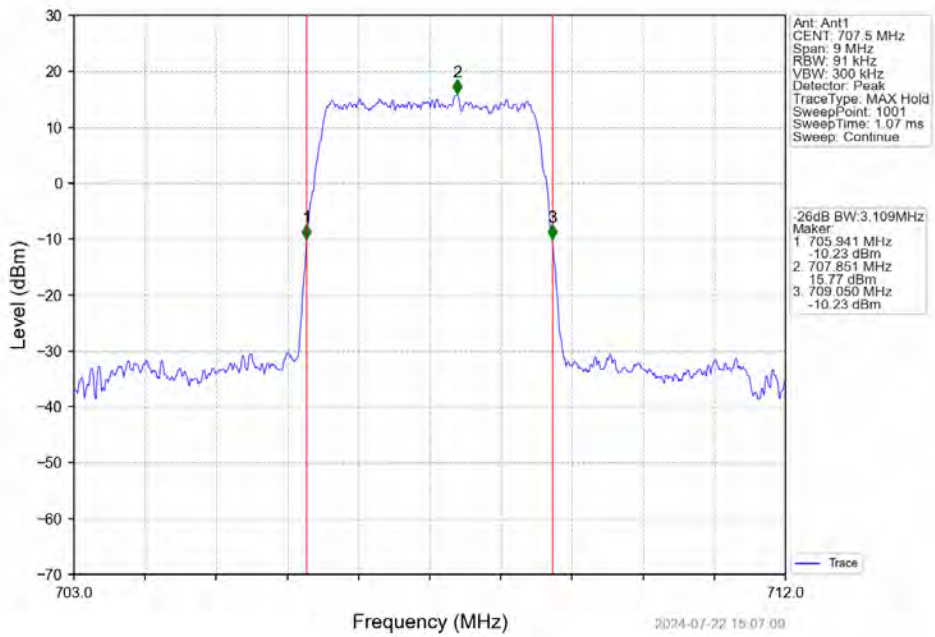
Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



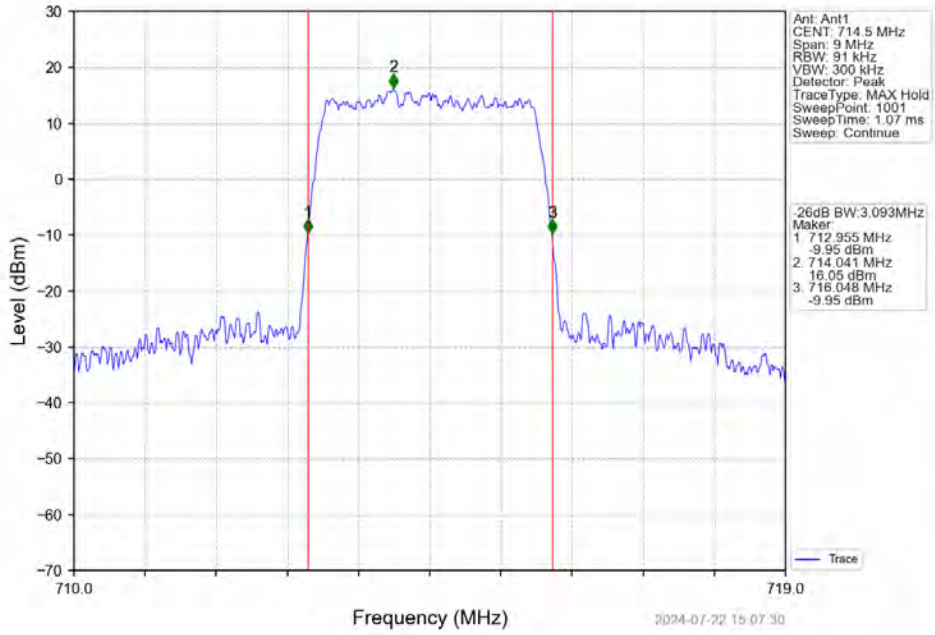
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



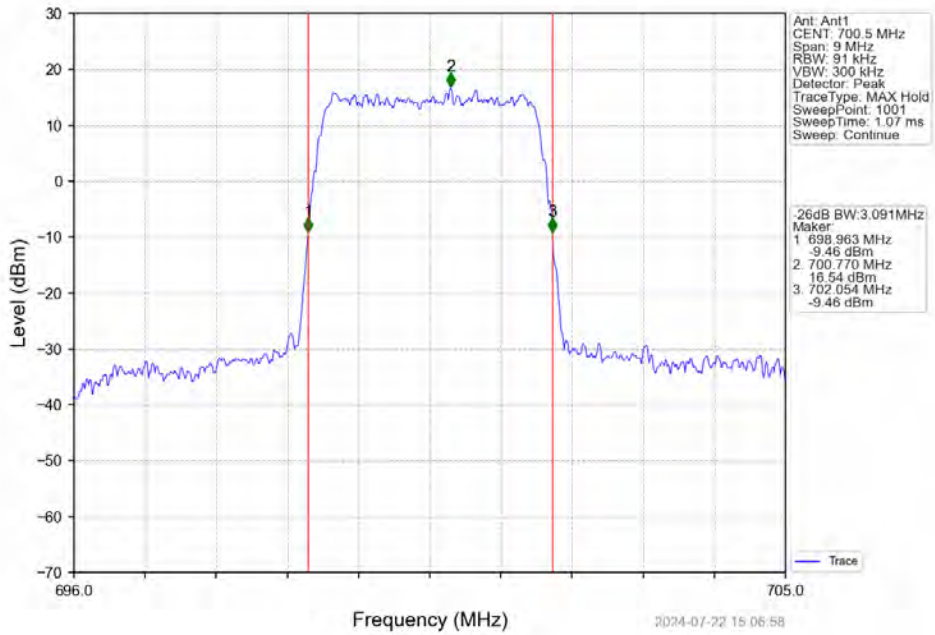
Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



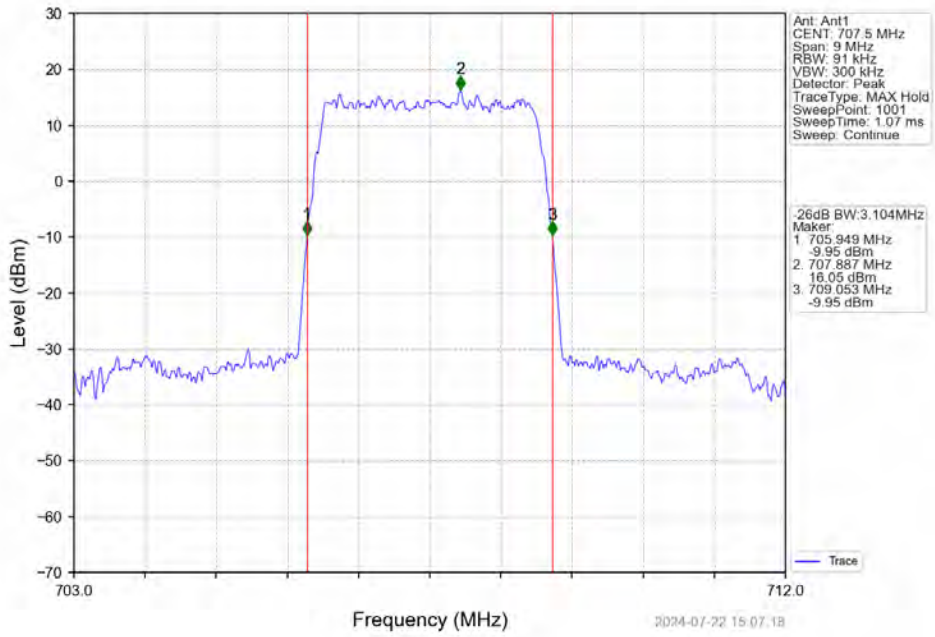
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



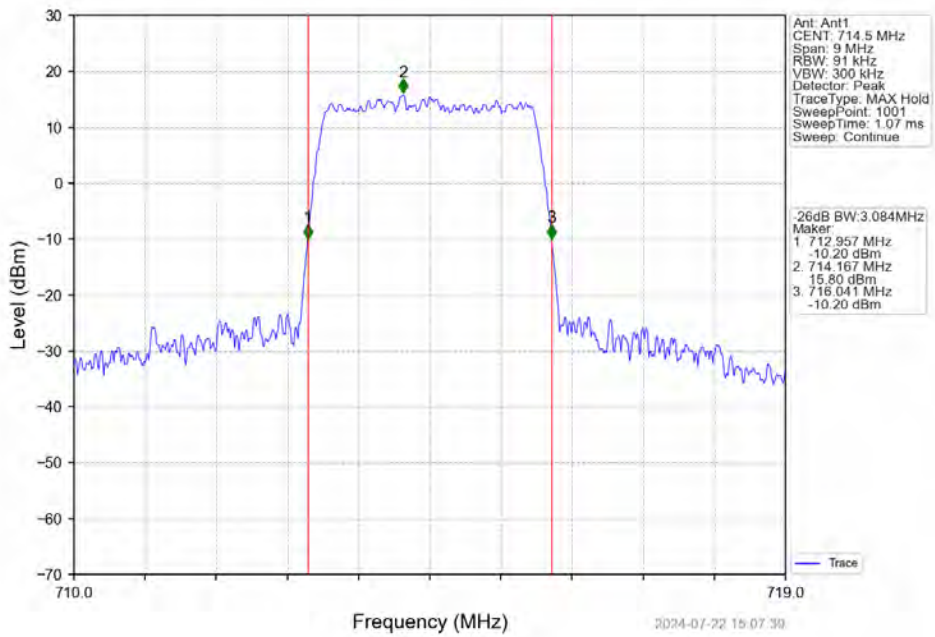
Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



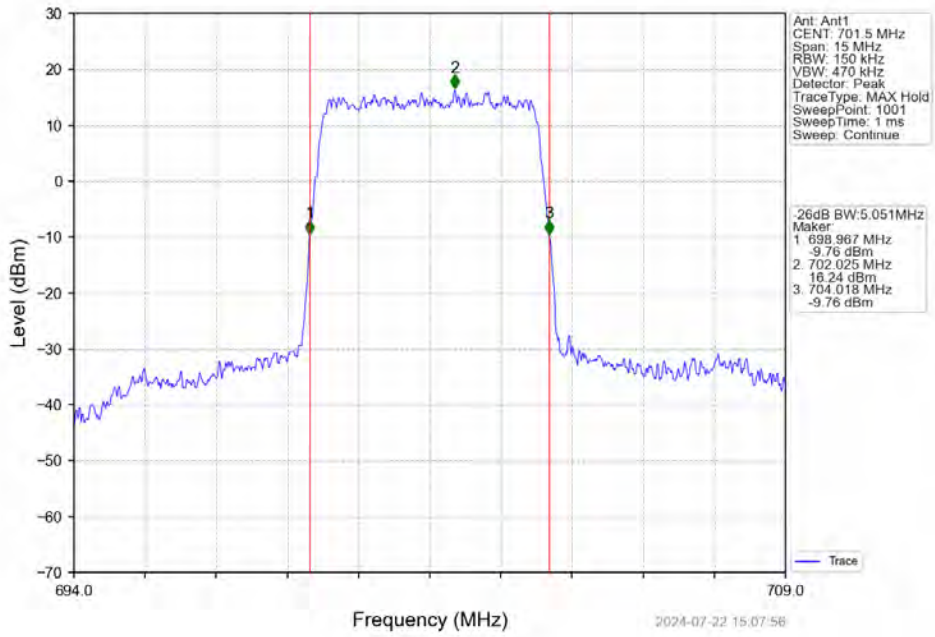
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



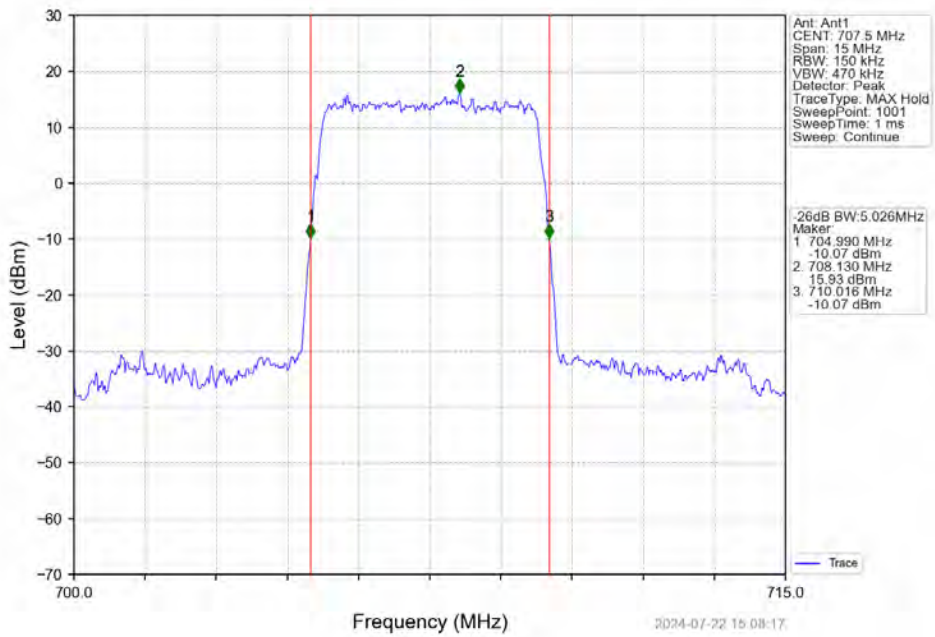
Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



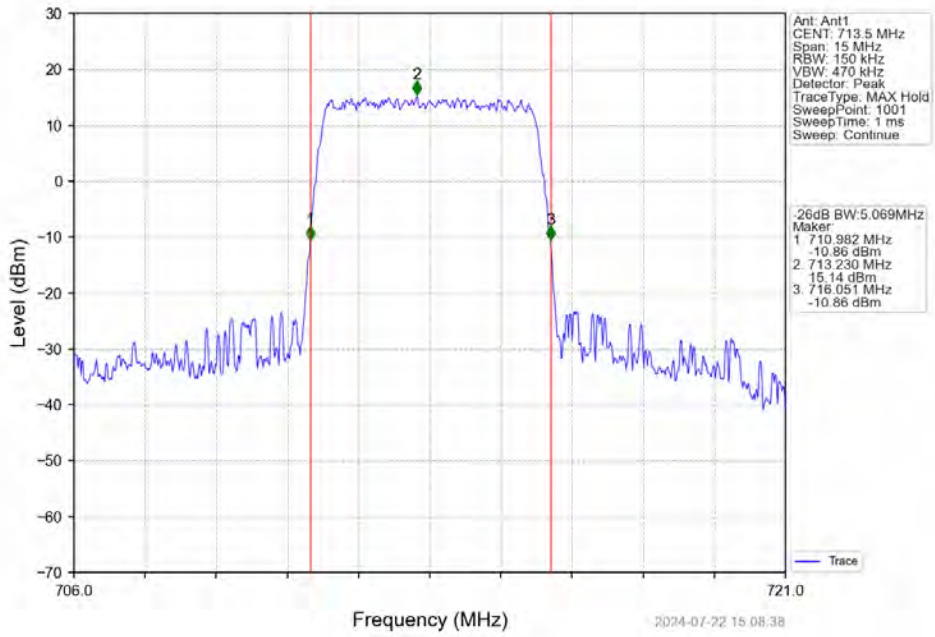
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



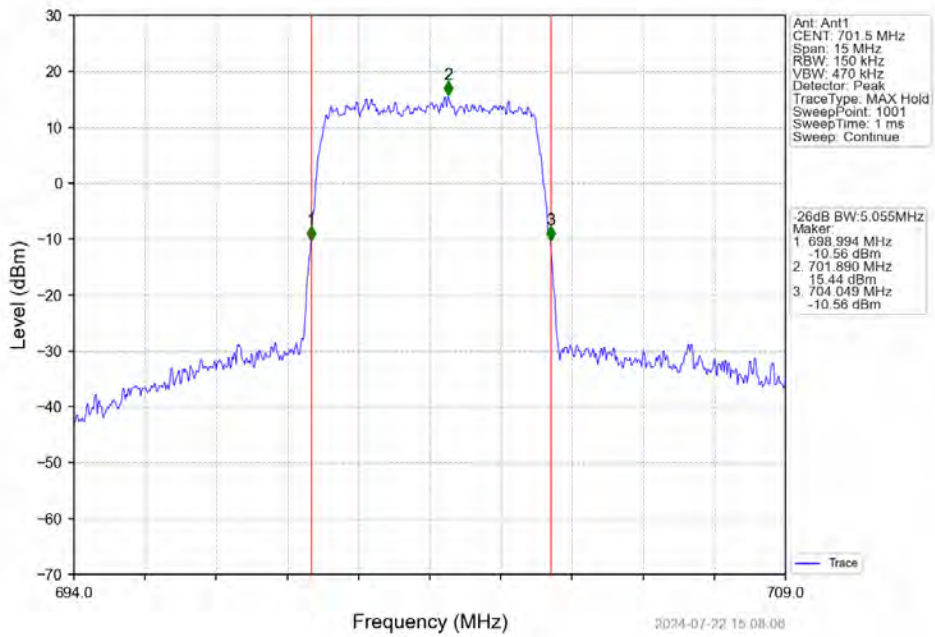
Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



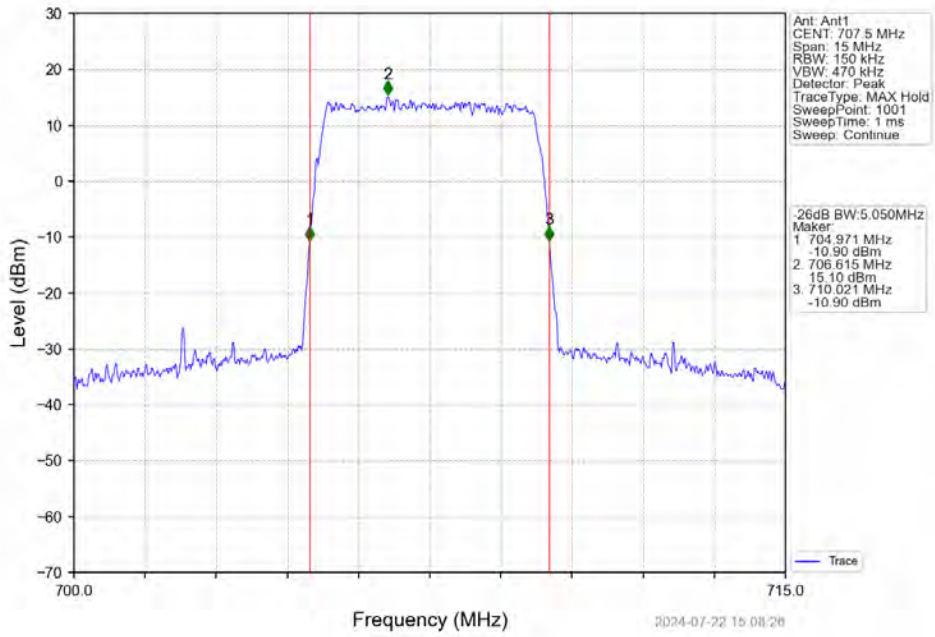
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



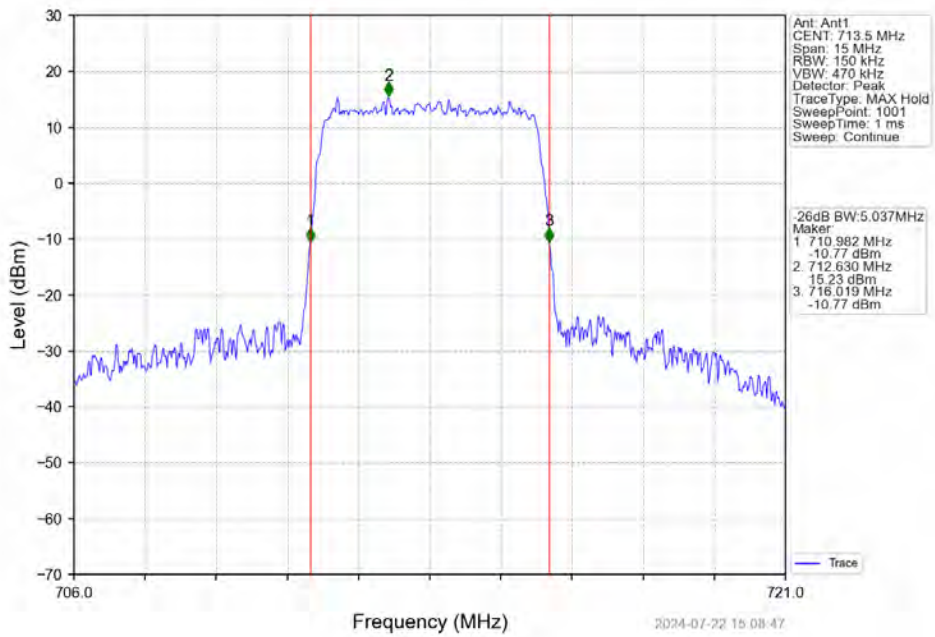
Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



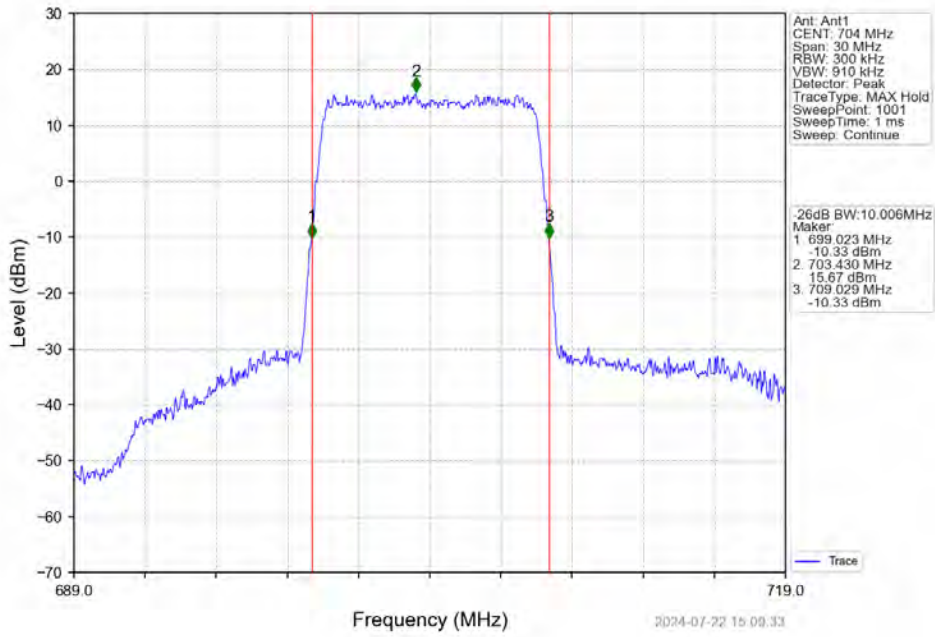
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



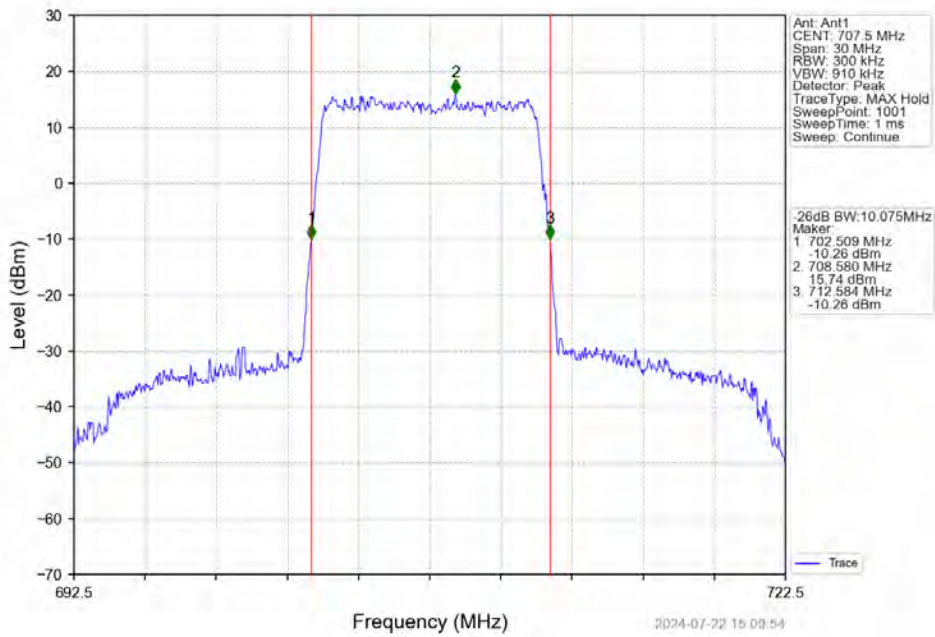
Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



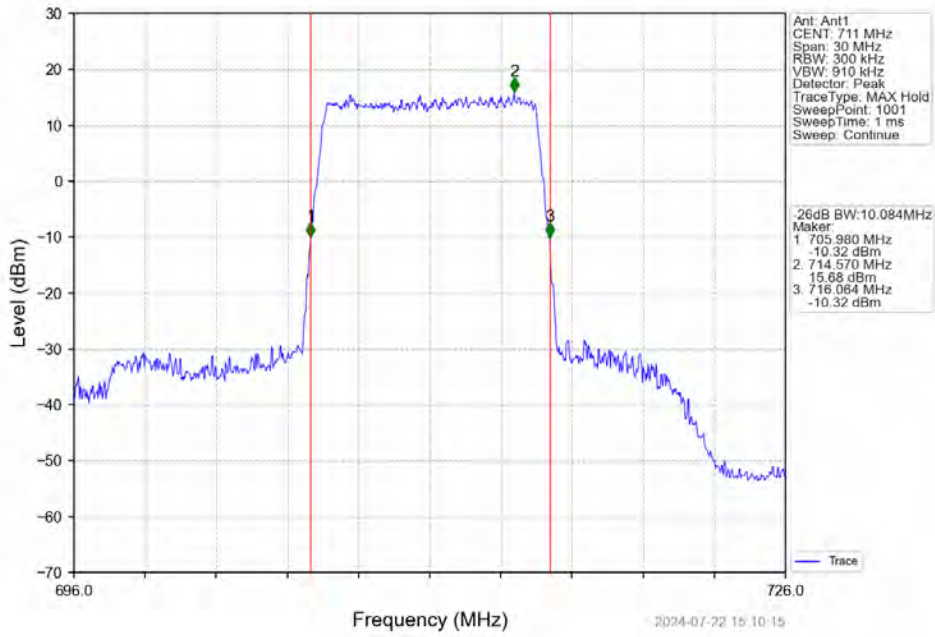
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



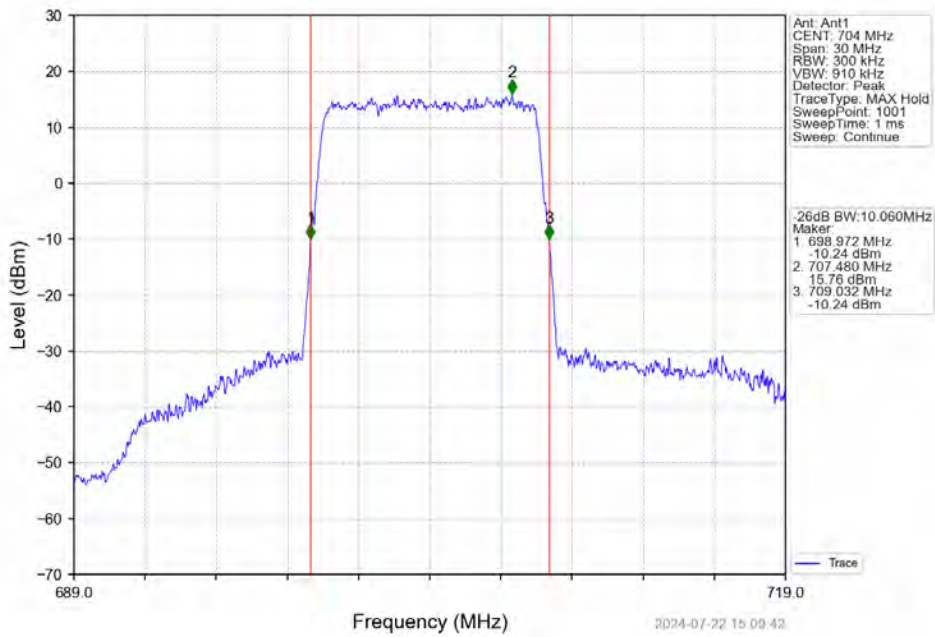
Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



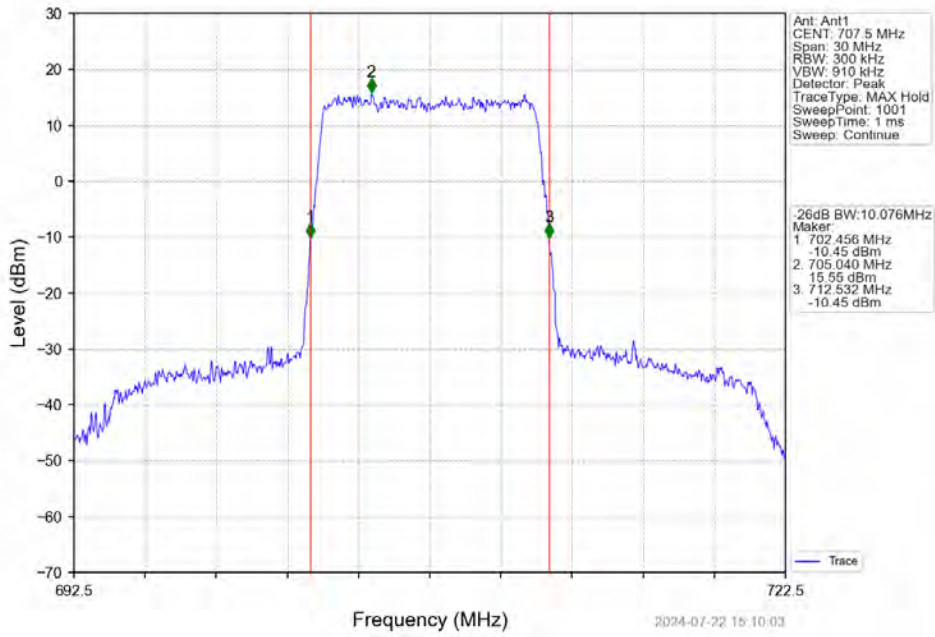
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



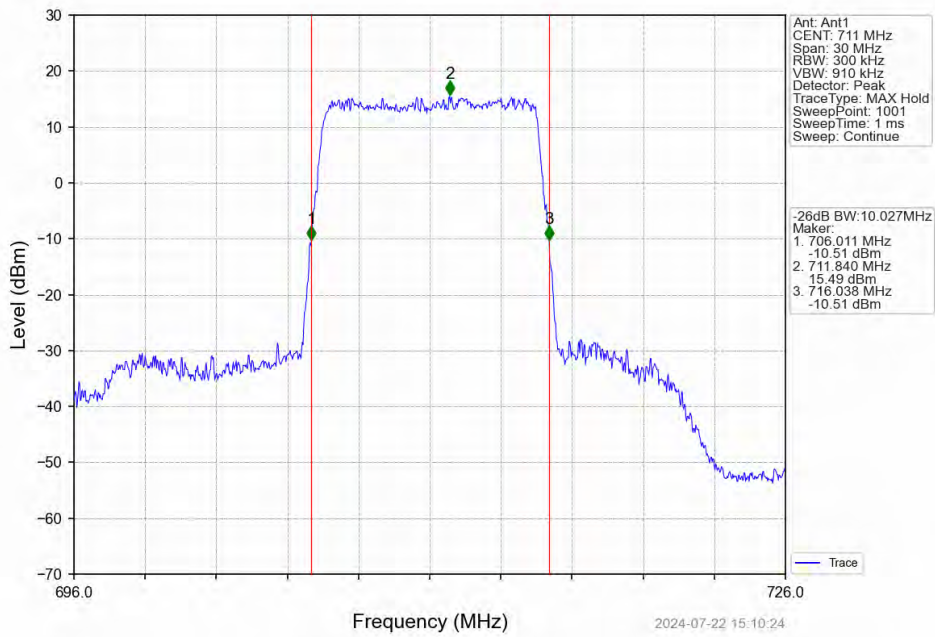
Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



5. Peak-Average Ratio

5.1 Test Result

5.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	6	0	5.84	<=13	Pass
	707.5	6	0	5.88	<=13	Pass
	715.3	6	0	5.22	<=13	Pass
16QAM	699.7	6	0	6.53	<=13	Pass
	707.5	6	0	6.52	<=13	Pass
	715.3	6	0	6.02	<=13	Pass

5.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.82	<=13	Pass
	707.5	15	0	5.81	<=13	Pass
	714.5	15	0	5.56	<=13	Pass
16QAM	700.5	15	0	5.82	<=13	Pass
	707.5	15	0	5.80	<=13	Pass
	714.5	15	0	5.50	<=13	Pass

5.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.83	<=13	Pass
	707.5	25	0	5.83	<=13	Pass
	713.5	25	0	5.75	<=13	Pass
16QAM	701.5	25	0	6.49	<=13	Pass
	707.5	25	0	6.55	<=13	Pass
	713.5	25	0	6.37	<=13	Pass

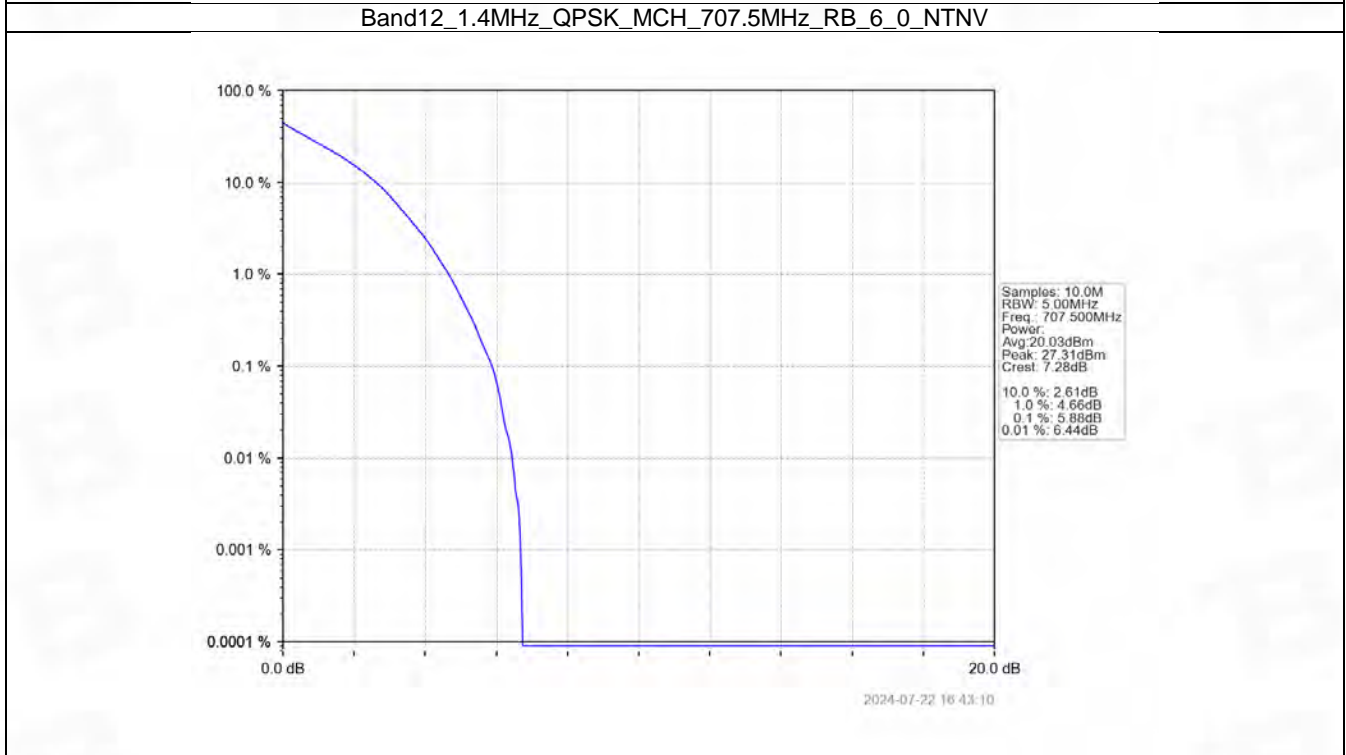
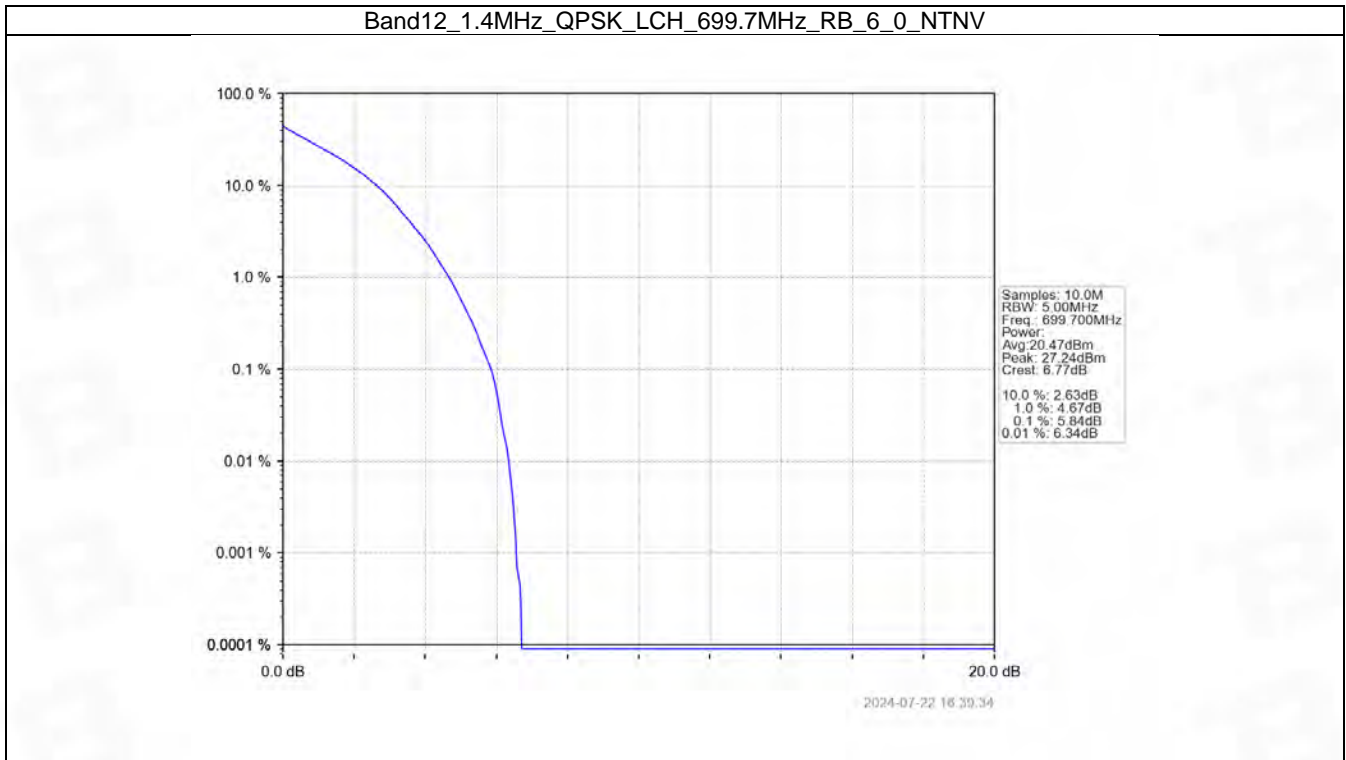
5.1.4 B12_10MHz

Band: 12 / Bandwidth: 10MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.79	<=13	Pass
	707.5	50	0	5.89	<=13	Pass
	711	50	0	5.83	<=13	Pass
16QAM	704	50	0	6.52	<=13	Pass
	707.5	50	0	6.58	<=13	Pass

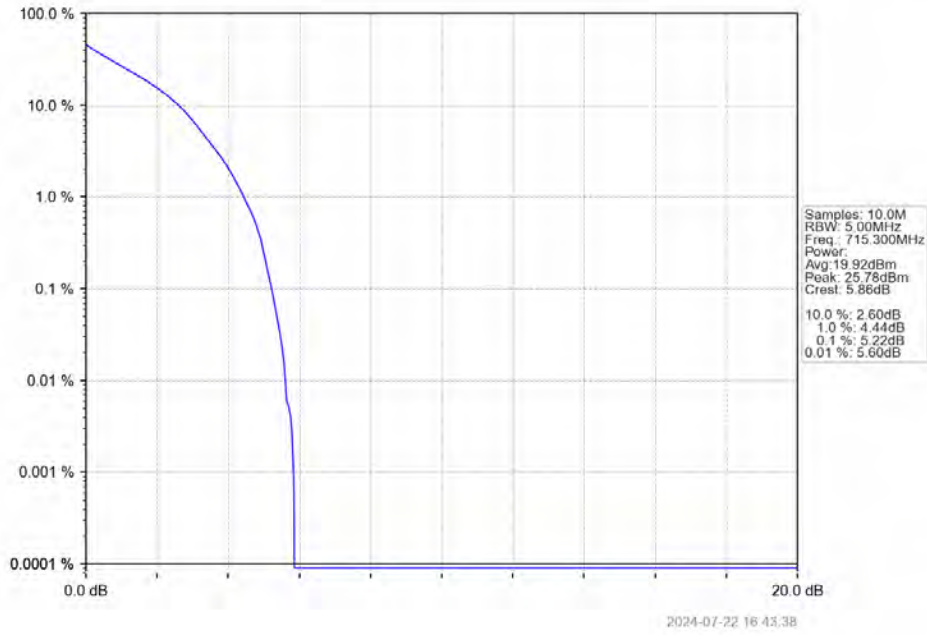
	711	50	0	6.51	<=13	Pass
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5.2 Test Graph

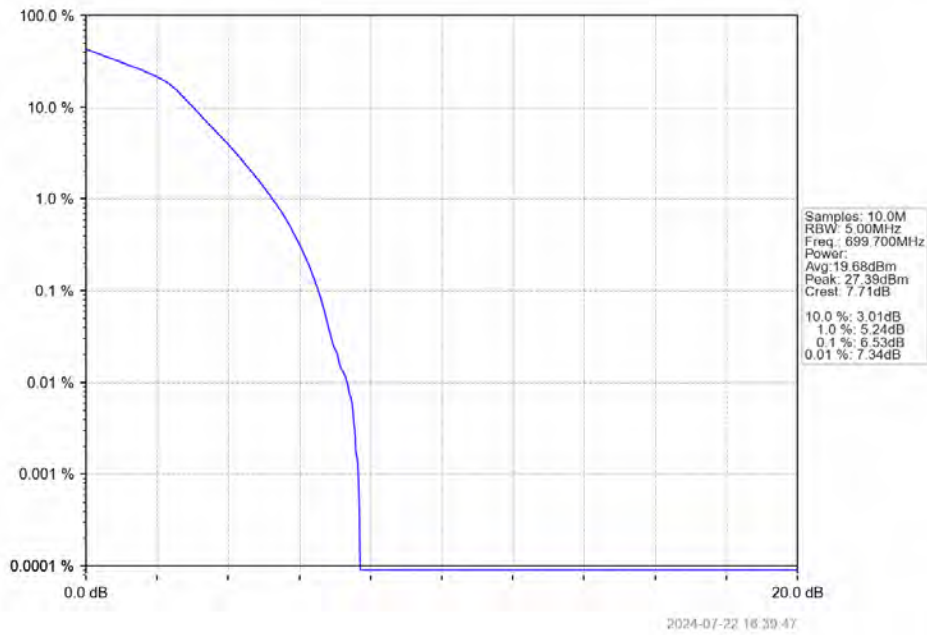
5.2.1 B12_1.4MHz



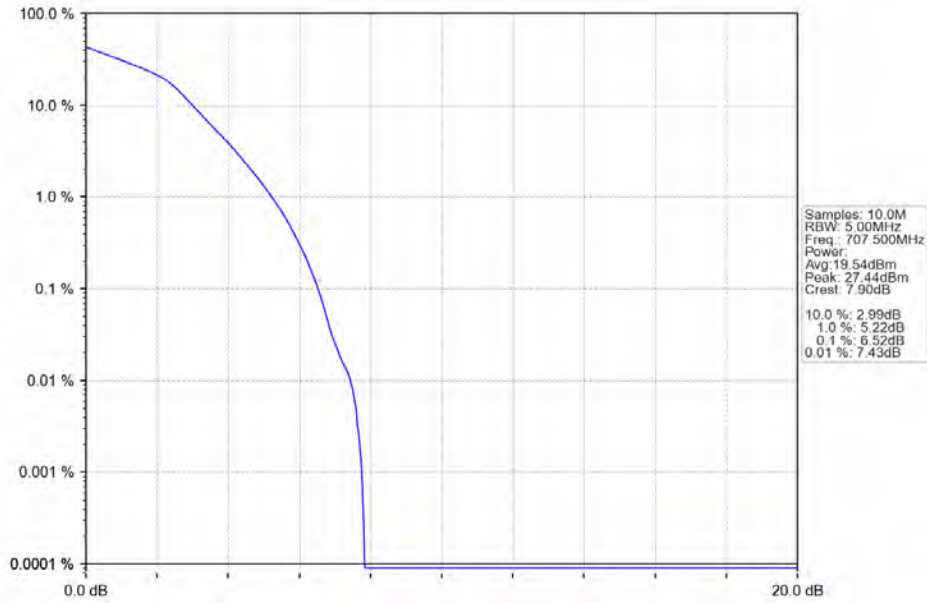
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV

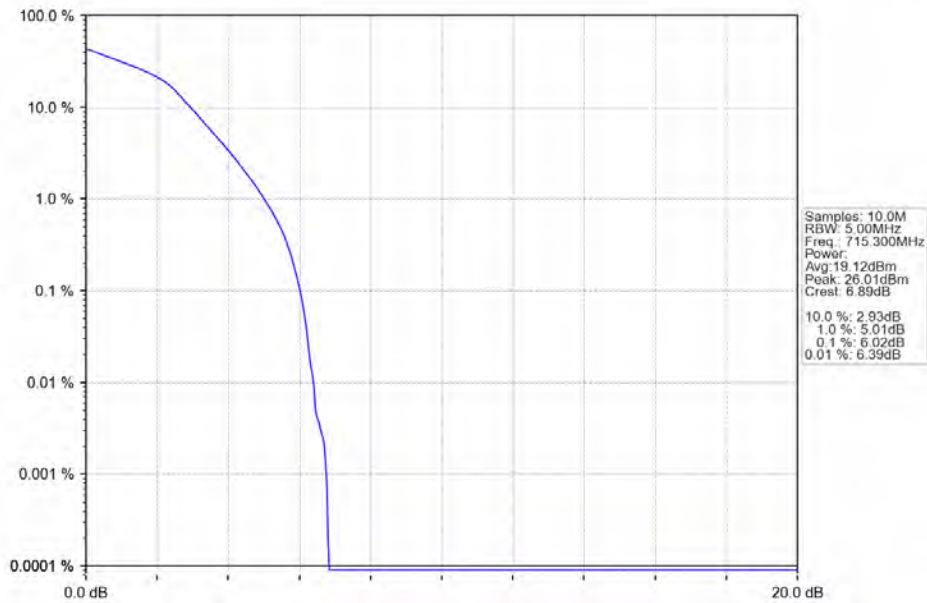


Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



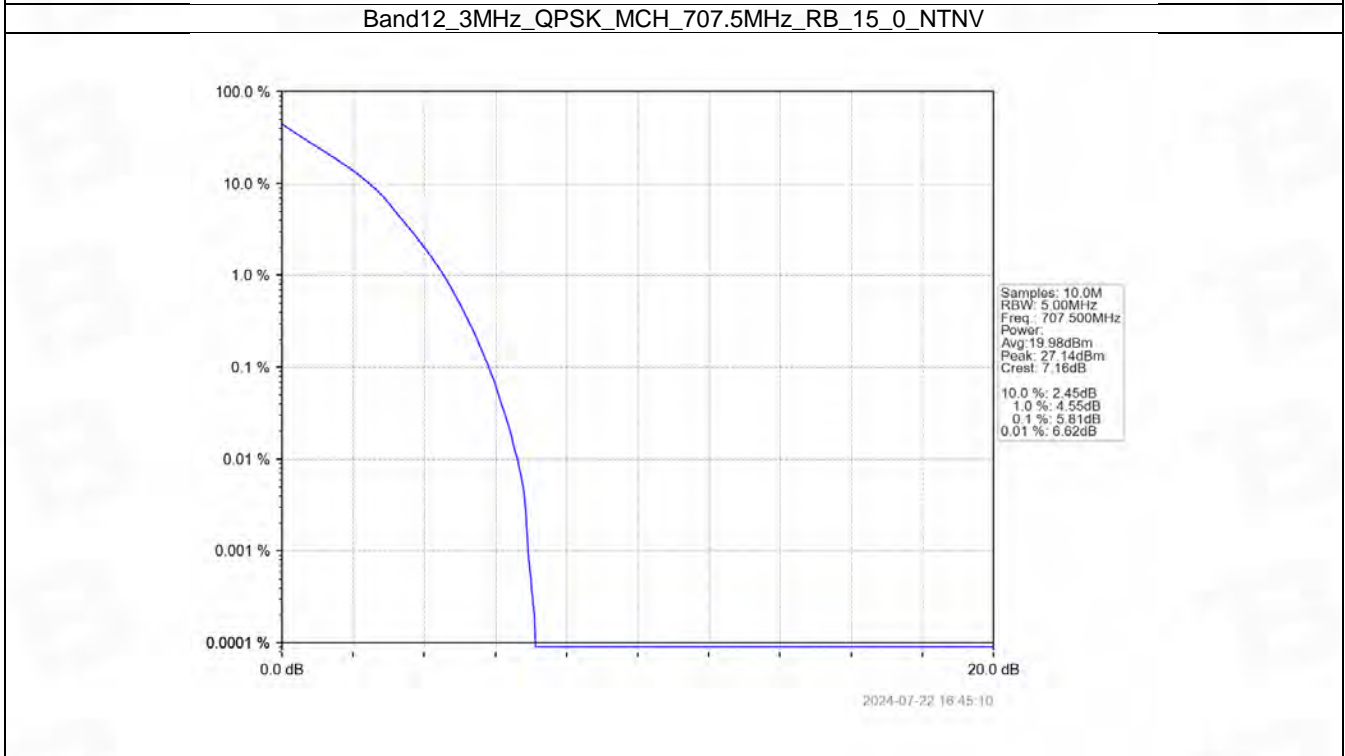
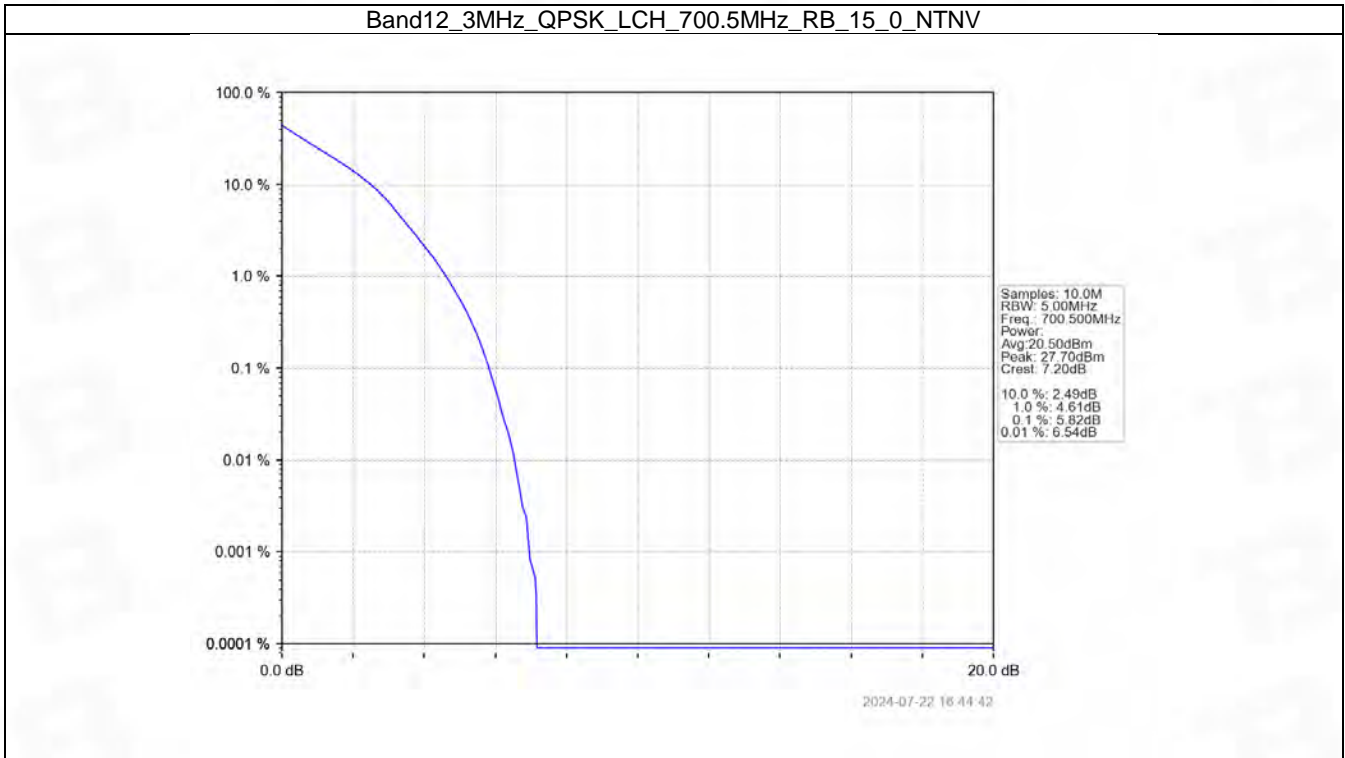
2024-07-22 16:43:24

Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV

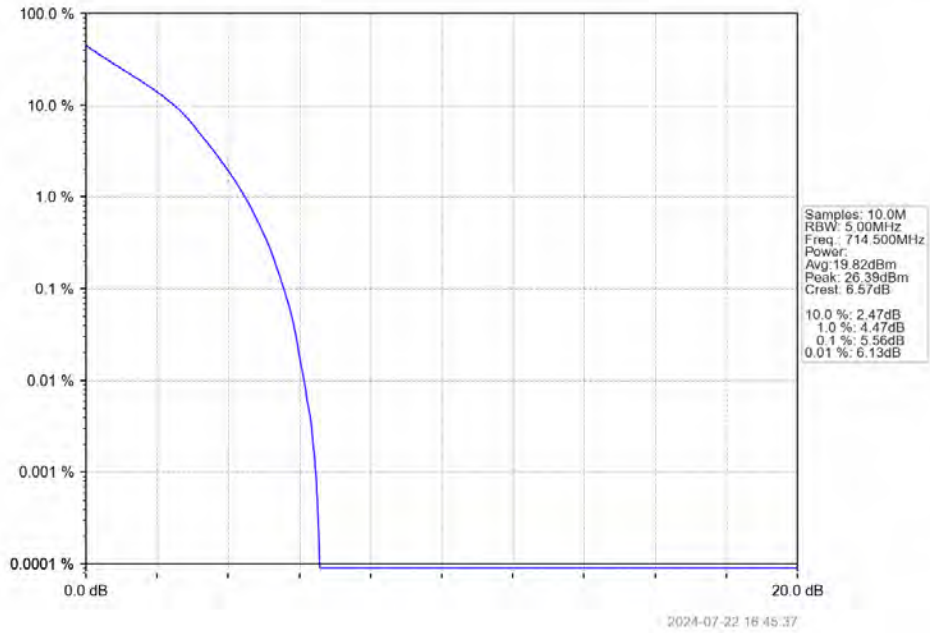


2024-07-22 16:43:50

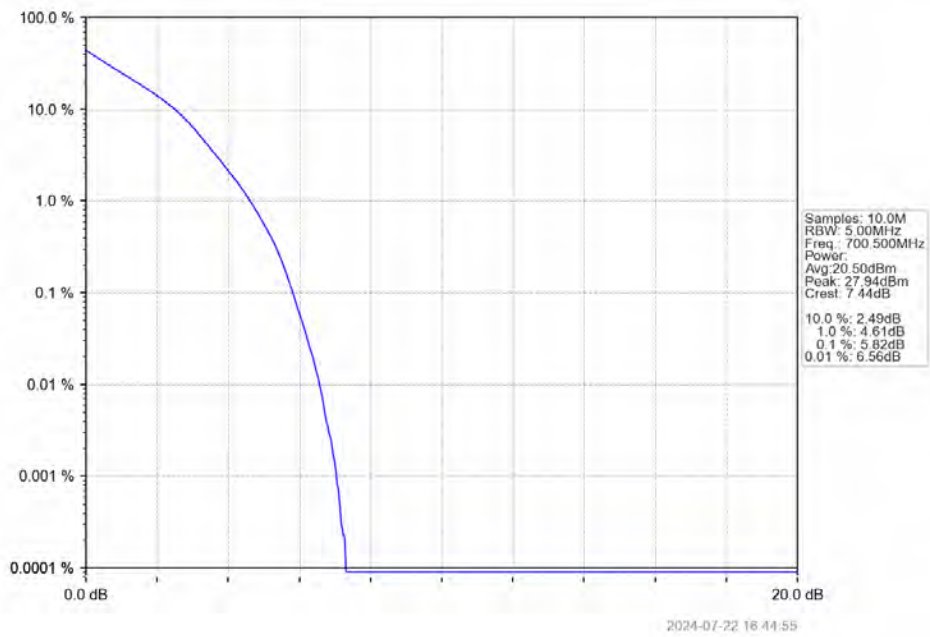
5.2.2 B12_3MHz



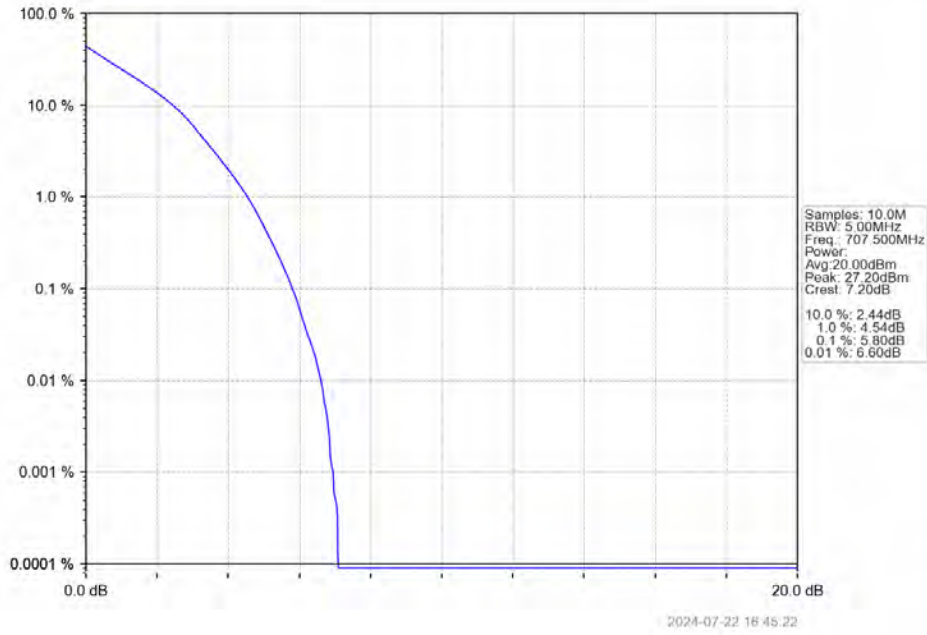
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



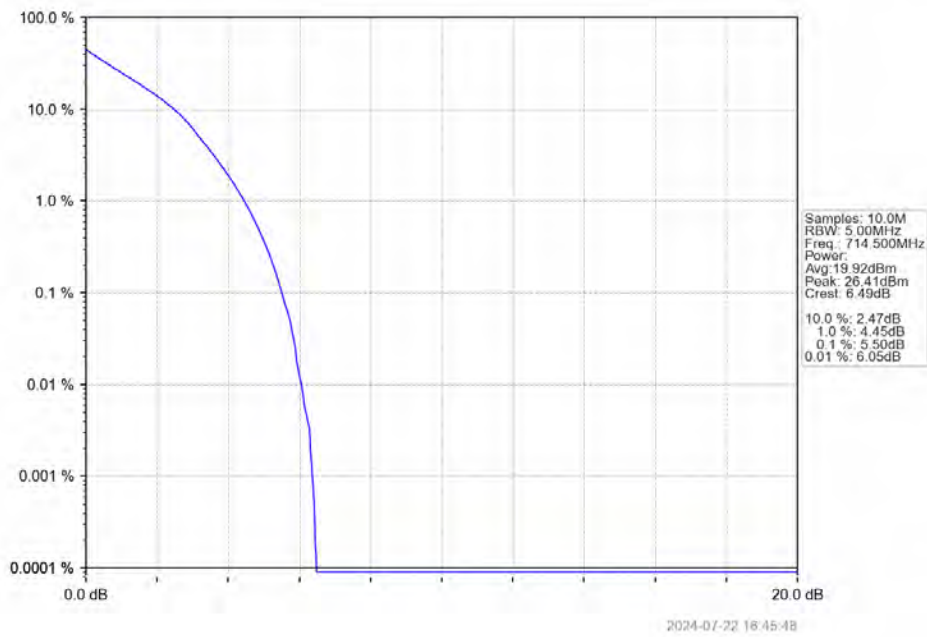
Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



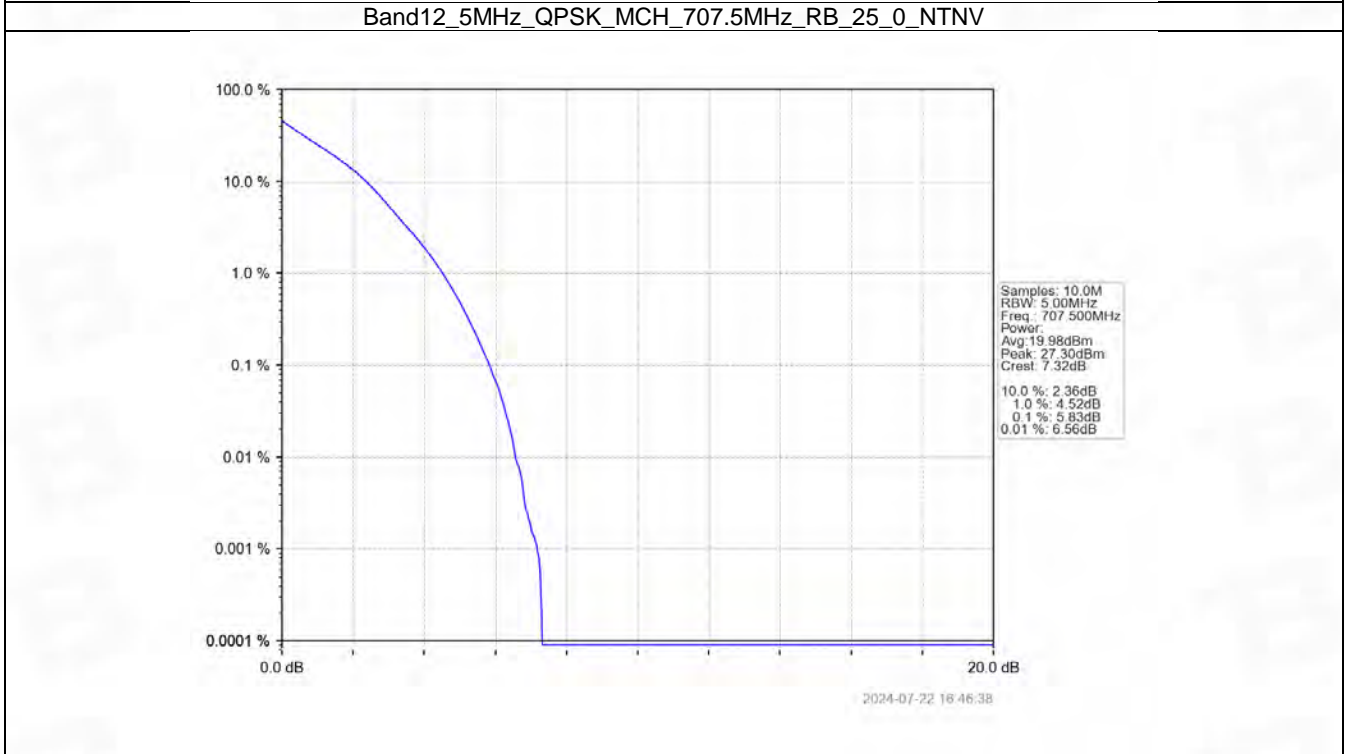
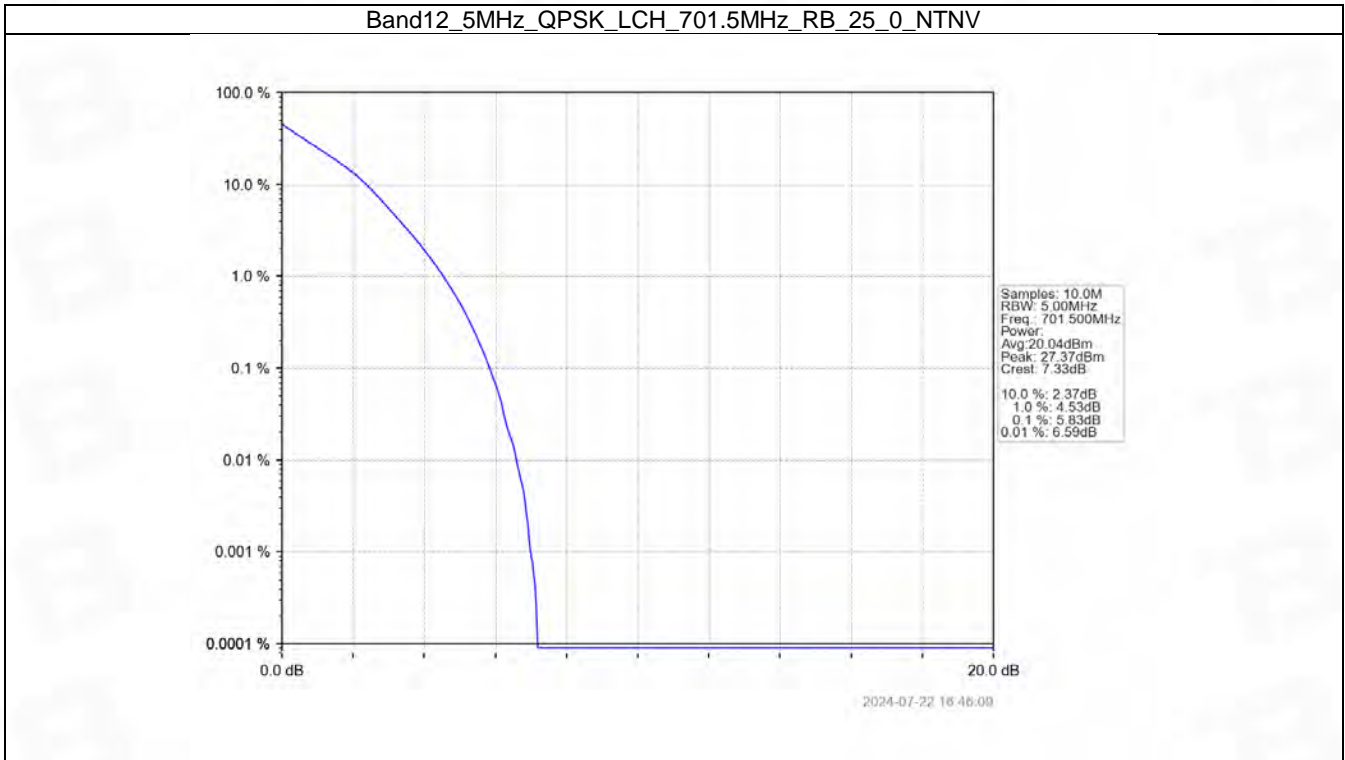
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



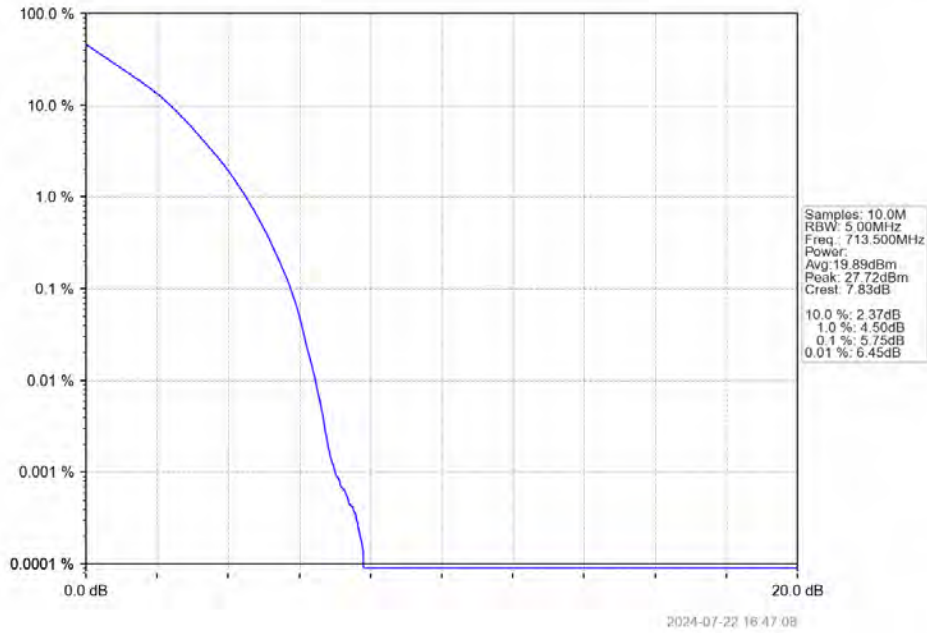
Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



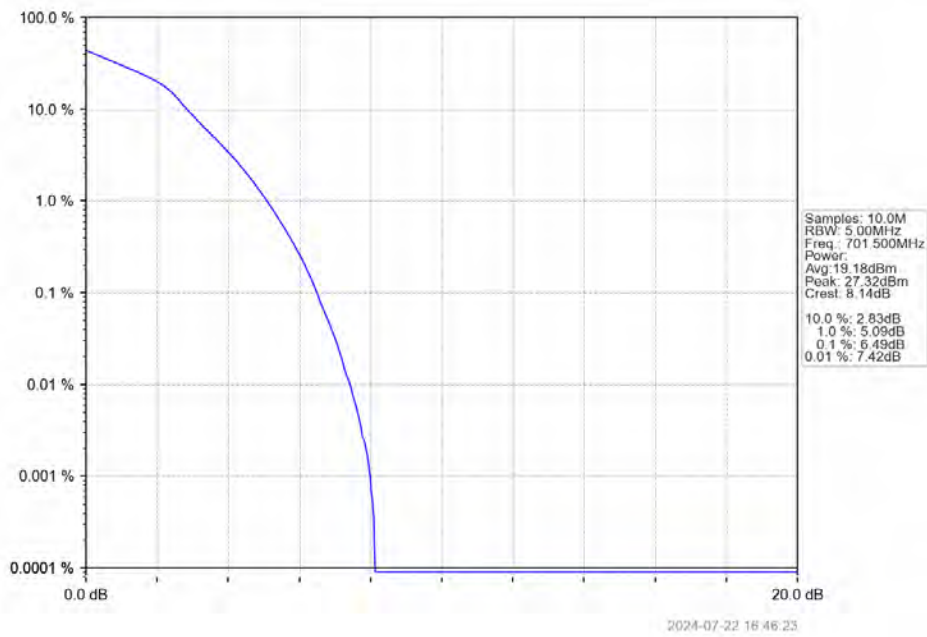
5.2.3 B12_5MHz



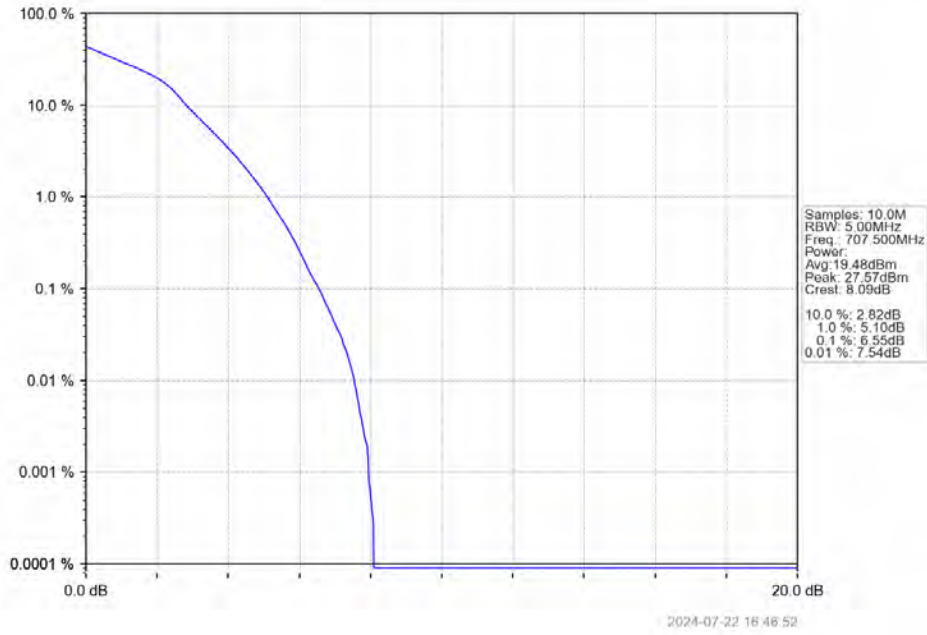
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



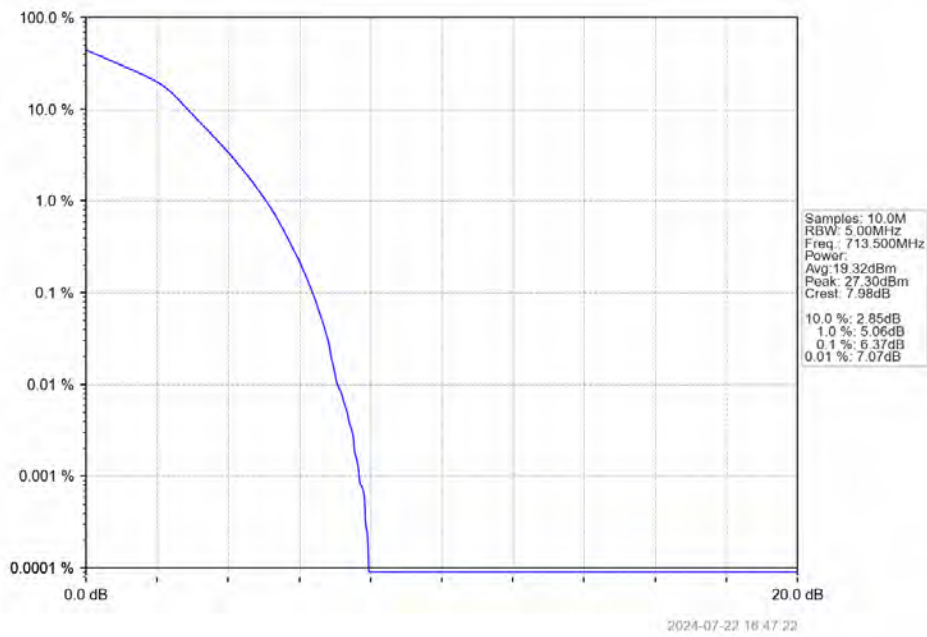
Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



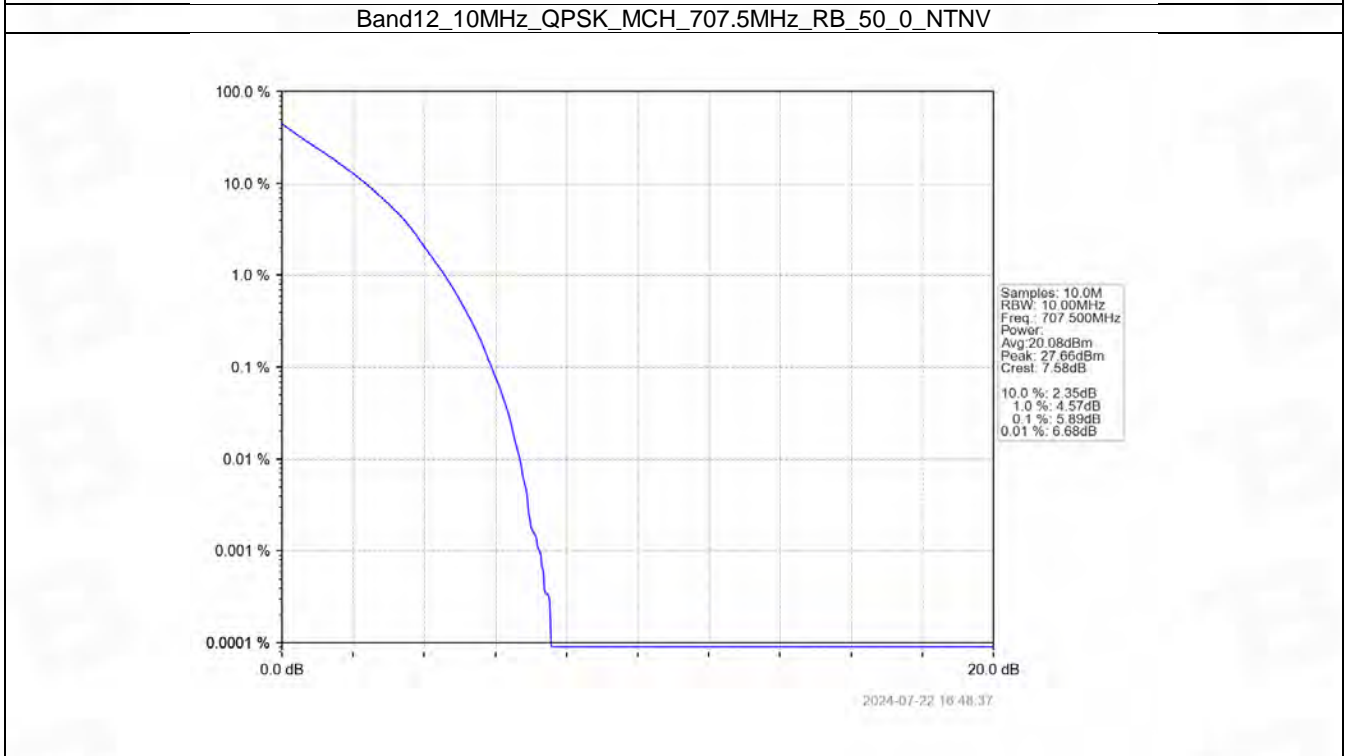
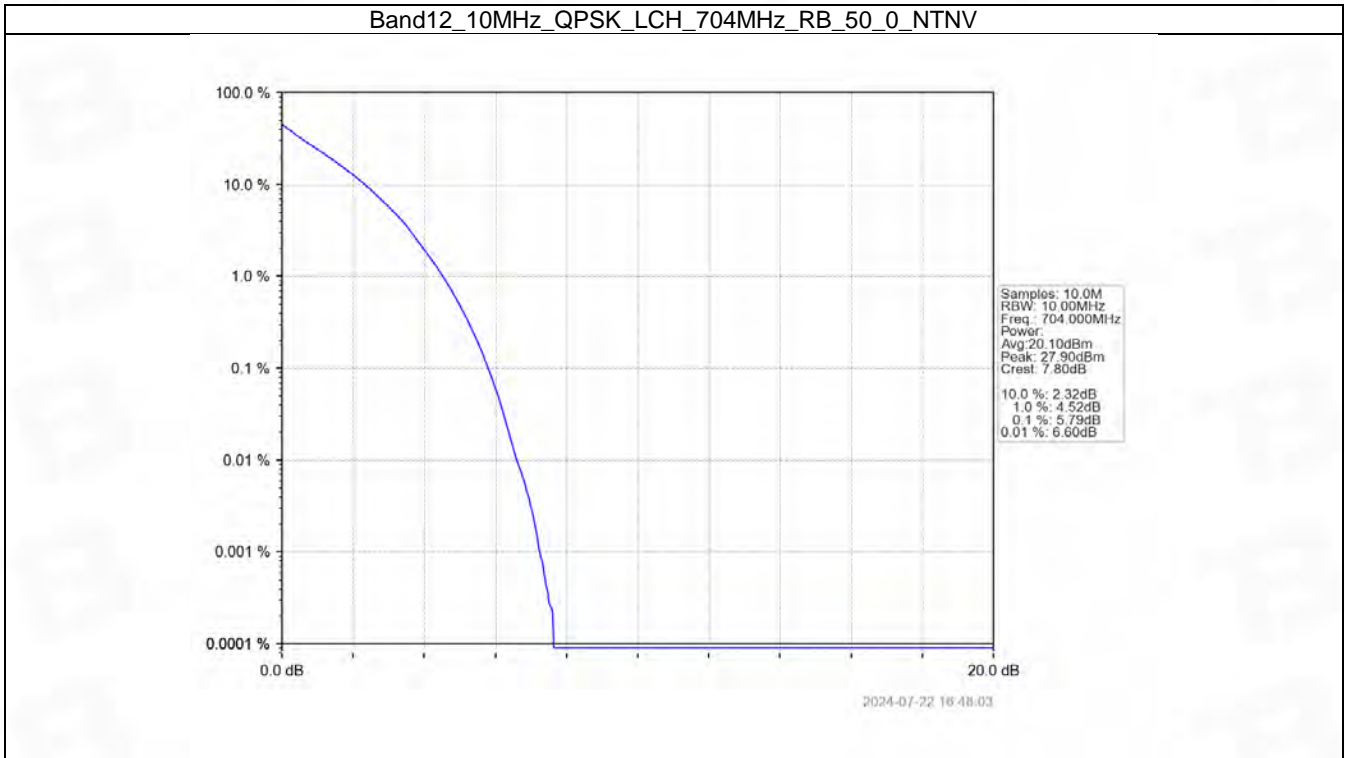
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



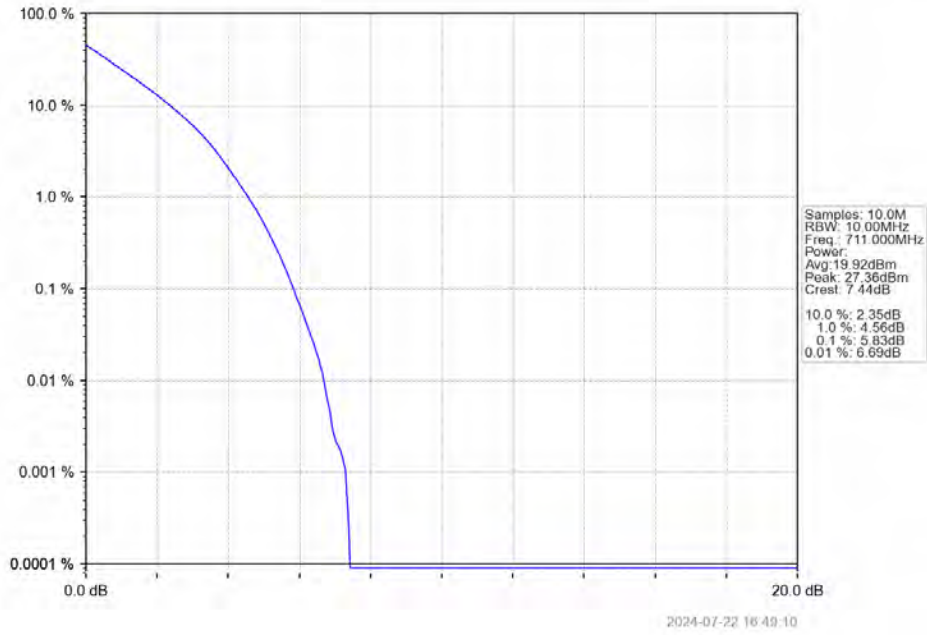
Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



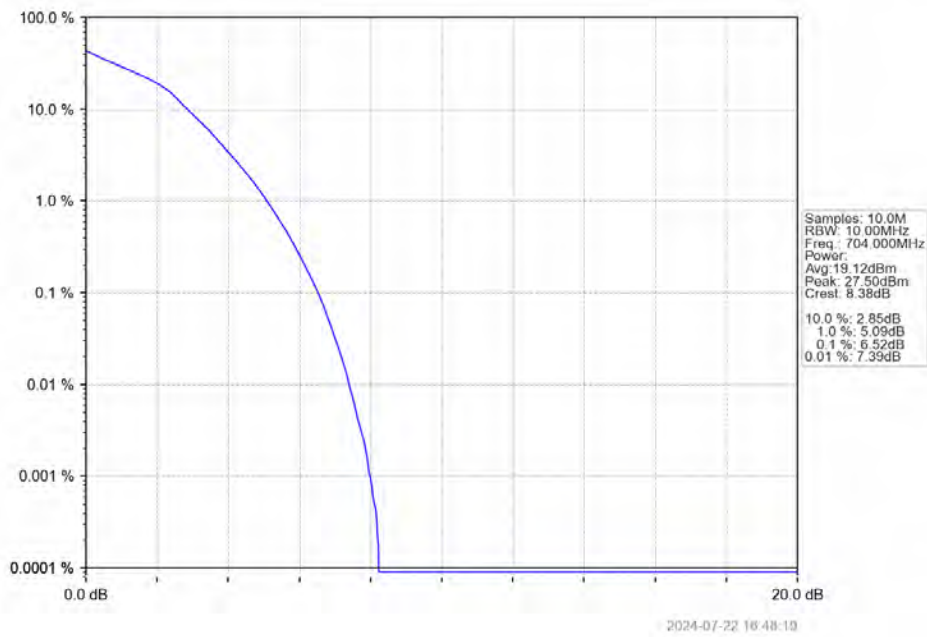
5.2.4 B12_10MHz



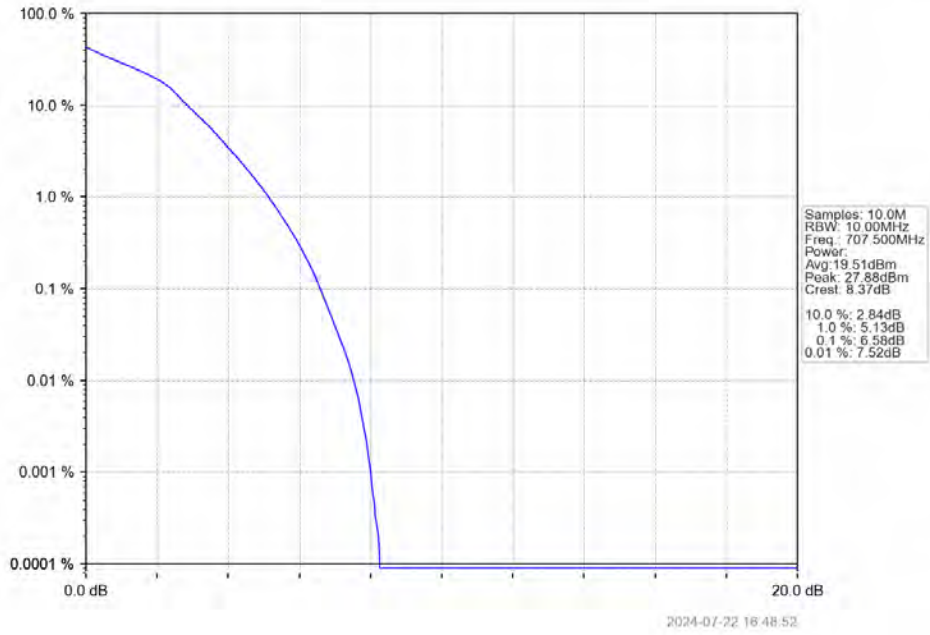
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



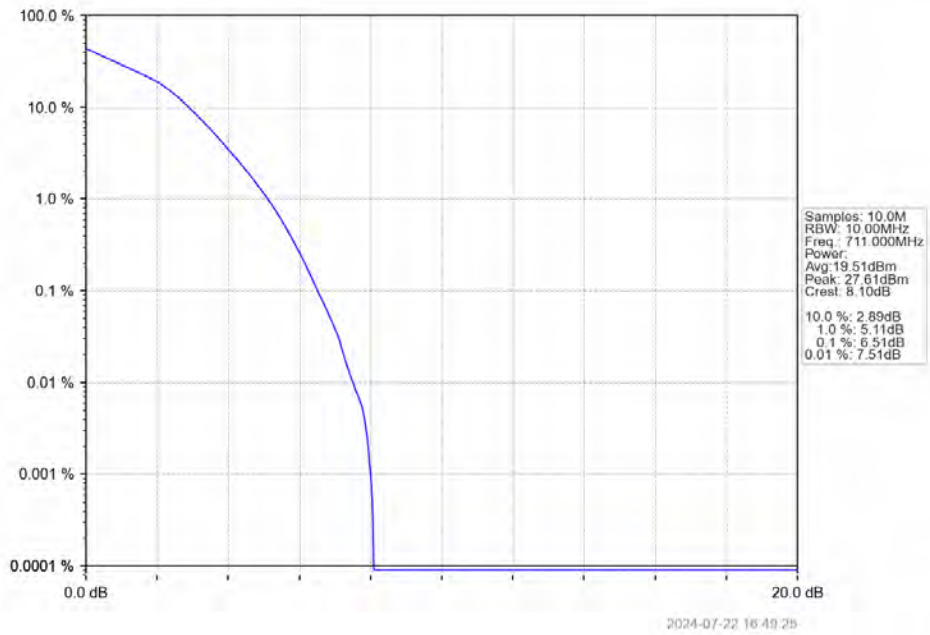
Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



6. Spurious Emission

6.1 Test Result

6.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTV						
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
		715.3	1	0	Refer To Test Graph	
				5	Refer To Test Graph	
			6	0	Refer To Test Graph	
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
		715.3	1	0	Refer To Test Graph	
				5	Refer To Test Graph	
			6	0	Refer To Test Graph	

6.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTV						
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
		714.5	1	0	Refer To Test Graph	
				14	Refer To Test Graph	
			15	0	Refer To Test Graph	
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
		714.5	1	0	Refer To Test Graph	
				14	Refer To Test Graph	
			15	0	Refer To Test Graph	

6.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTV						
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
		713.5	1	0	Refer To Test Graph	
				24	Refer To Test Graph	
			25	0	Refer To Test Graph	
16QAM	701.5	1	0	Refer To Test Graph		Pass

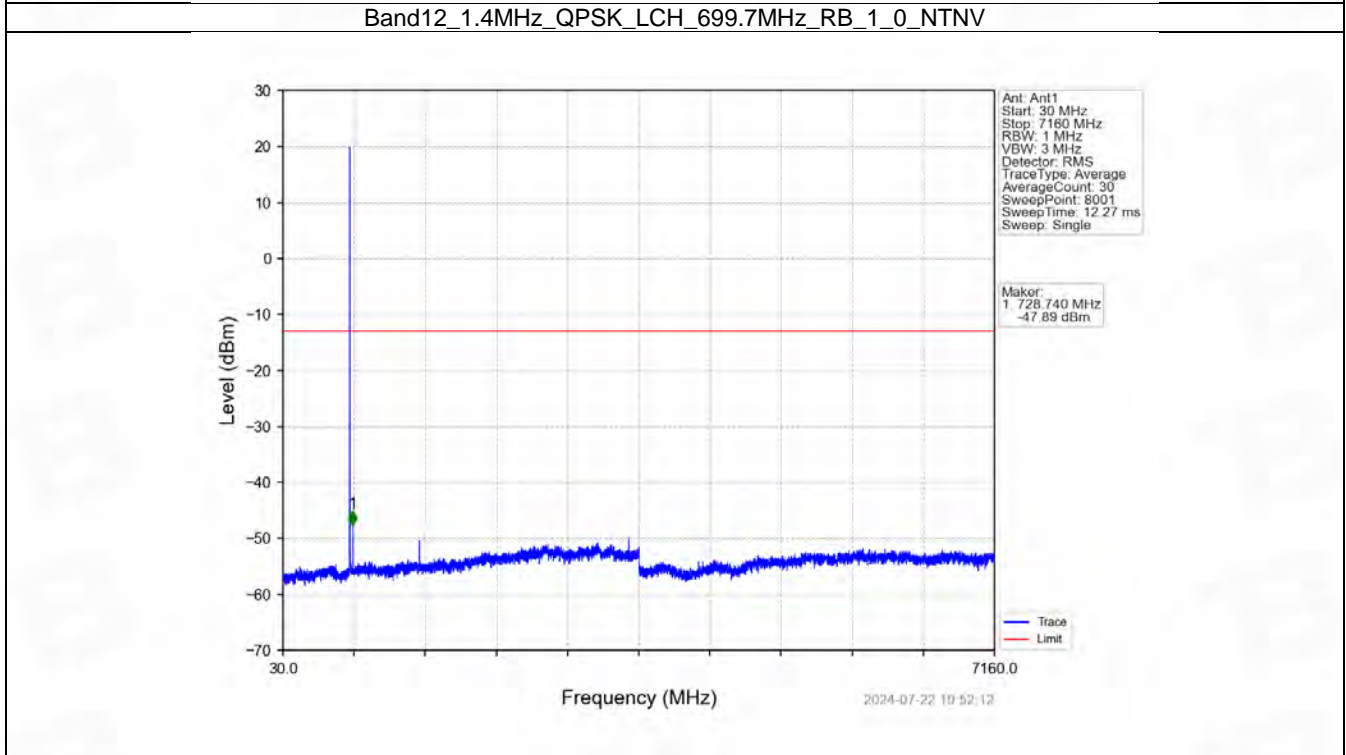
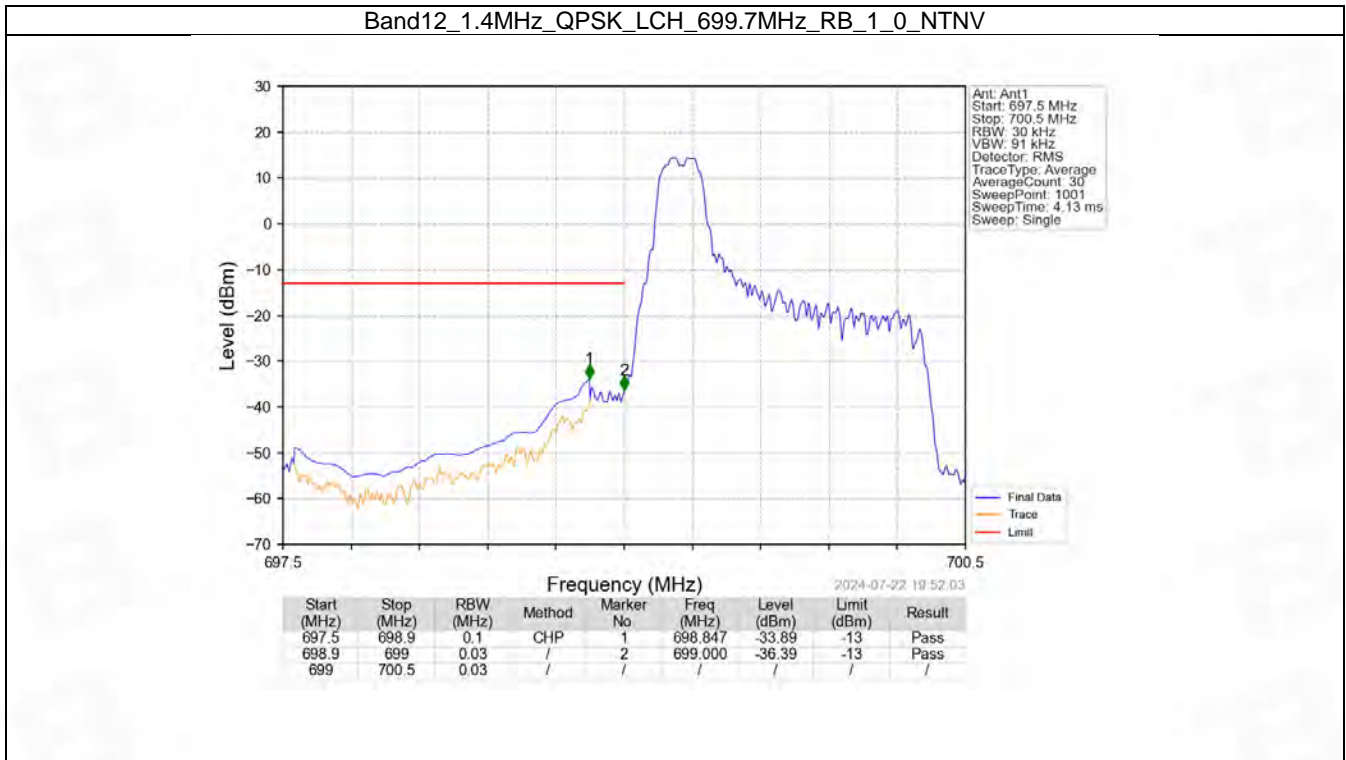
		25	0	Refer To Test Graph	Pass
	707.5	1	0	Refer To Test Graph	Pass
	713.5	1	0	Refer To Test Graph	Pass
			24	Refer To Test Graph	Pass
		25	0	Refer To Test Graph	Pass

6.1.4 B12_10MHz

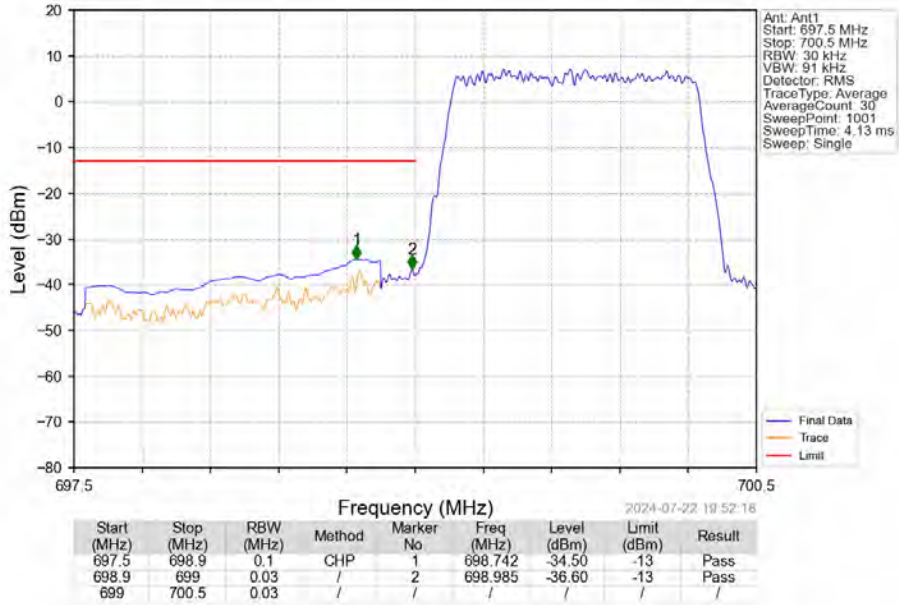
Band: 12 / Bandwidth: 10MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	704	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph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

6.2 Test Graph

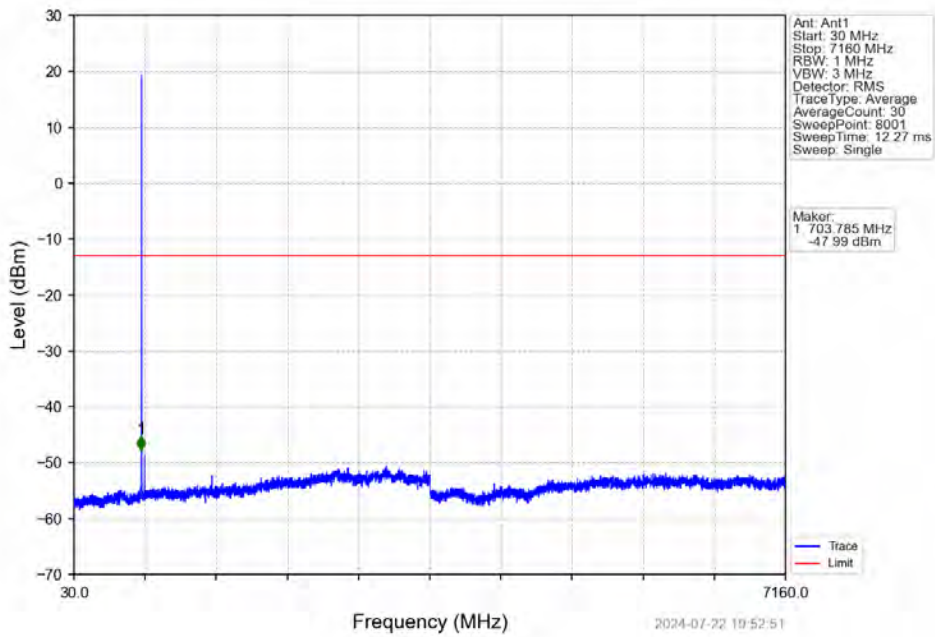
6.2.1 B12_1.4MHz



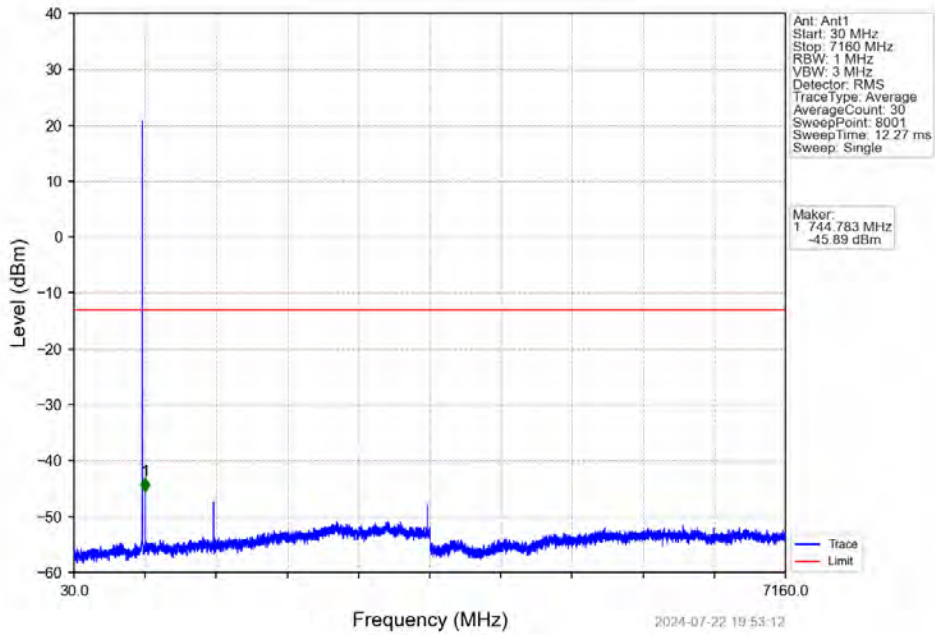
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV



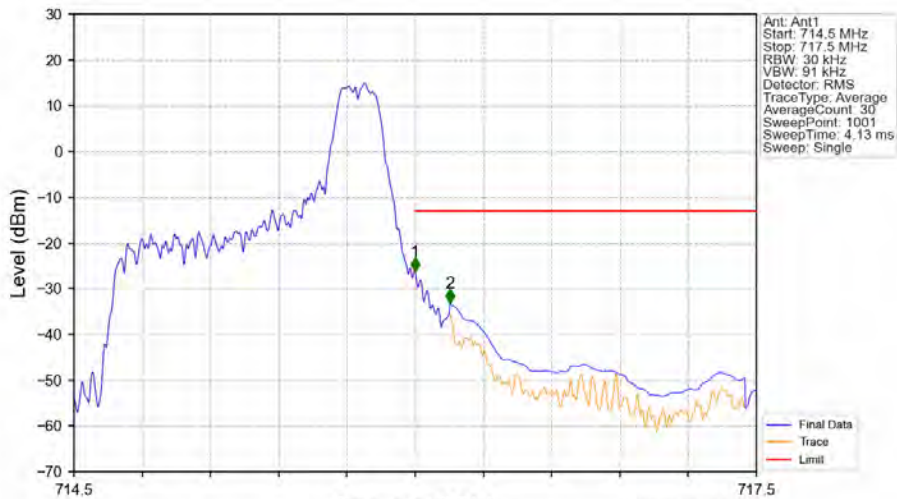
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_0_NTV

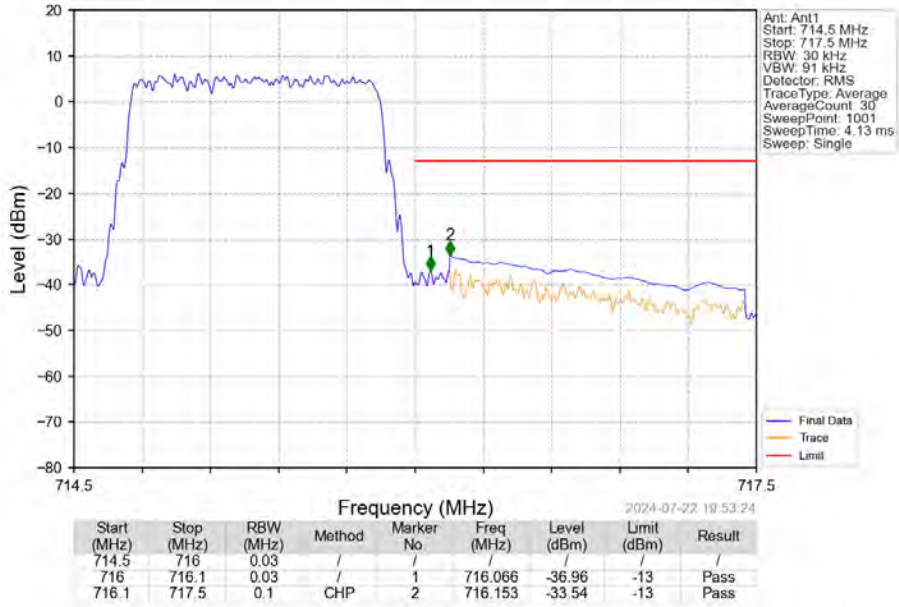


Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_5_NTV

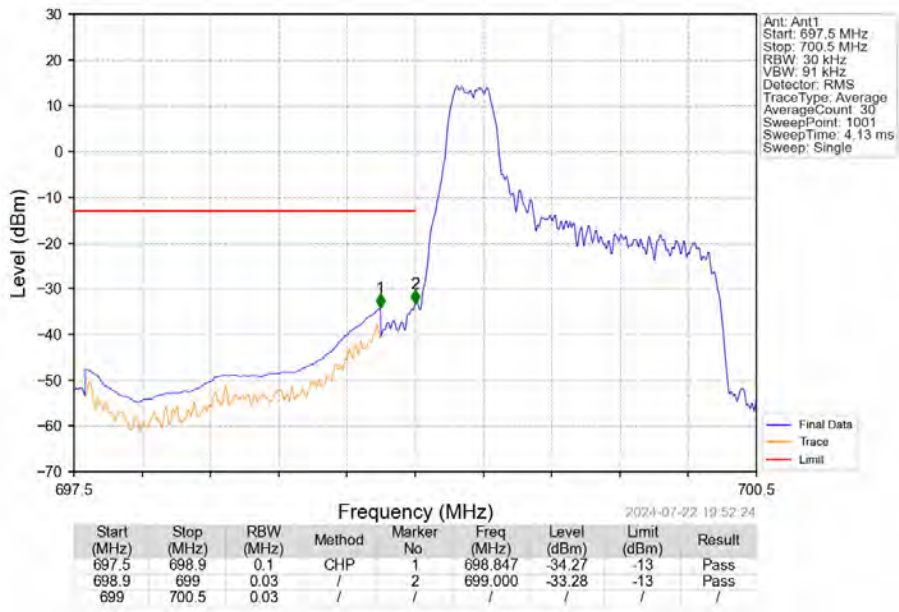


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.000	-26.26	-13	Pass
716	716.1	0.03	/	1	716.000	-26.26	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-33.15	-13	Pass

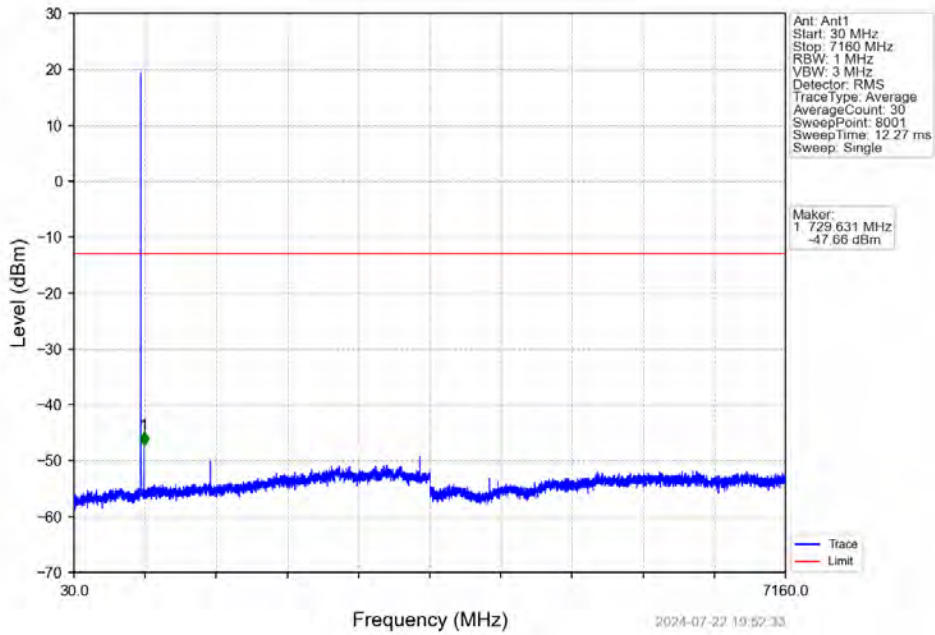
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTV



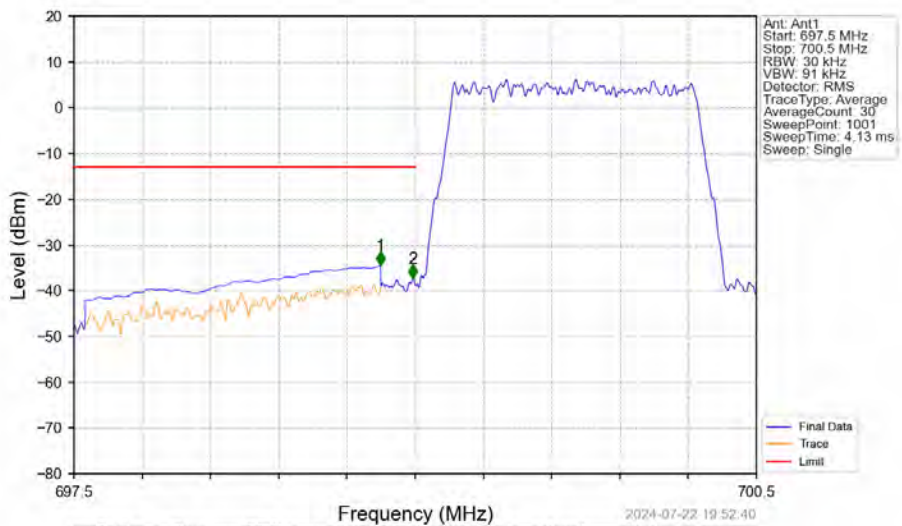
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTV



Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTNV

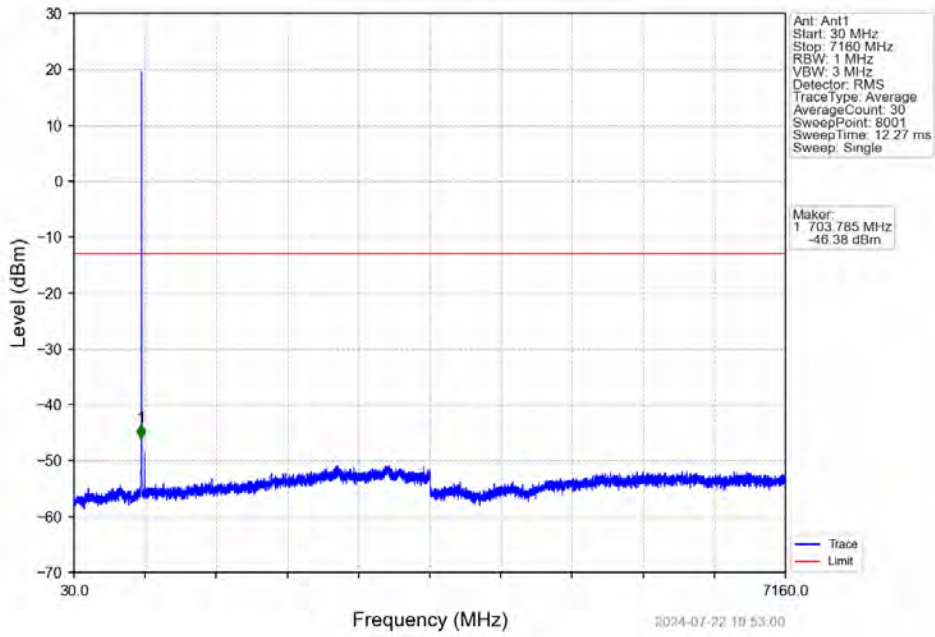


Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV

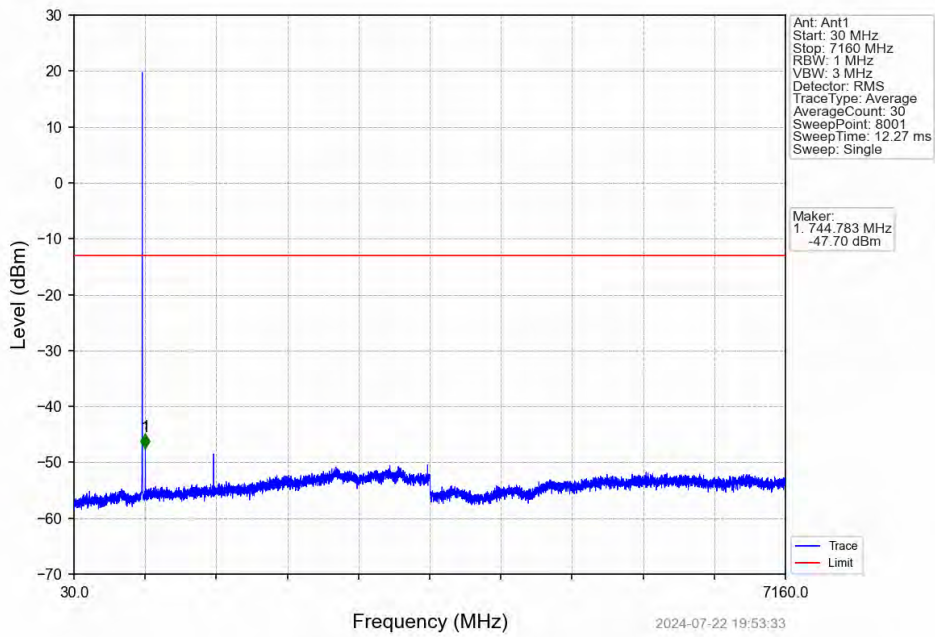


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.847	-34.57	-13	Pass
698.9	699	0.03	/	2	698.991	-37.32	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

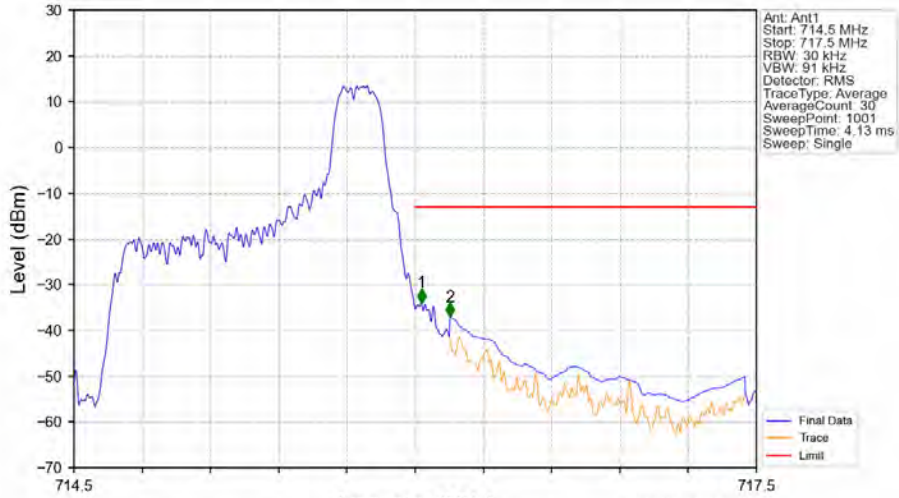
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_1_0_NTNV

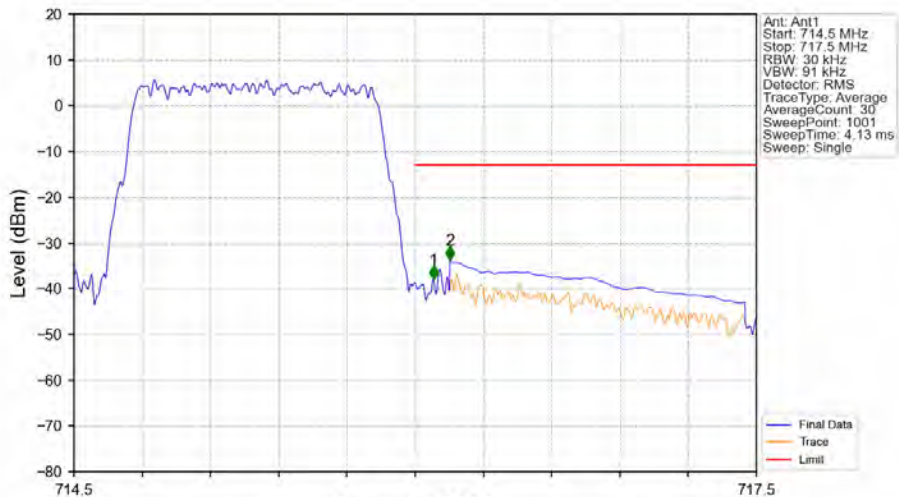


Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_1_5_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.027	-33.95	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-37.05	-13	Pass

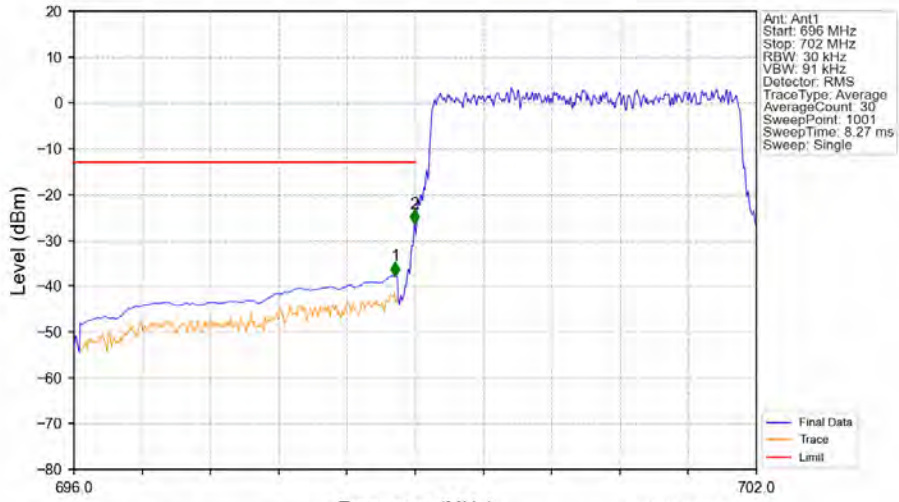
Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.081	-37.99	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-33.82	-13	Pass

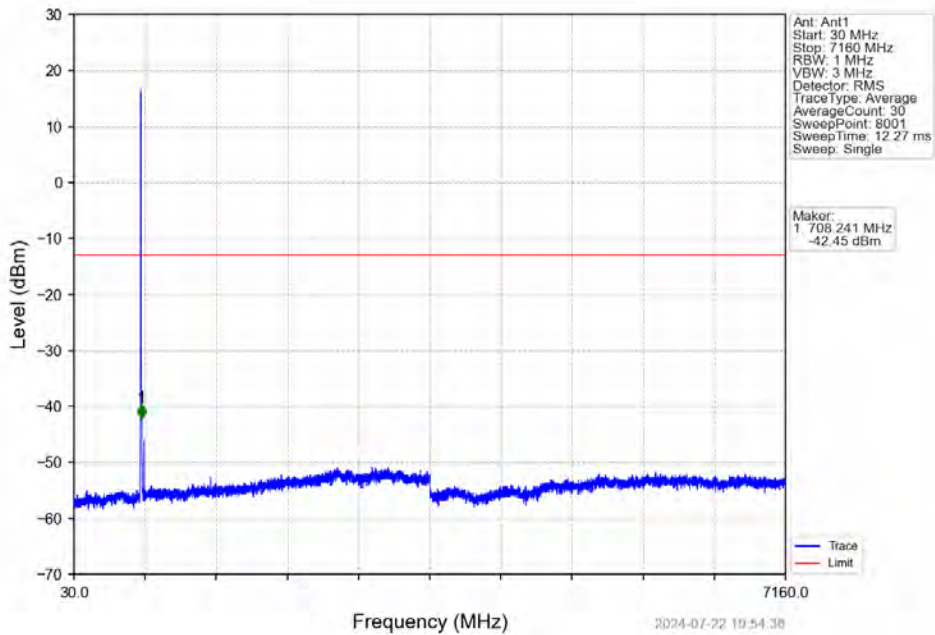
6.2.2 B12_3MHz

Band12_3MHz_QPSK_LCH_700.5MHz_RB_1_0_NTNV

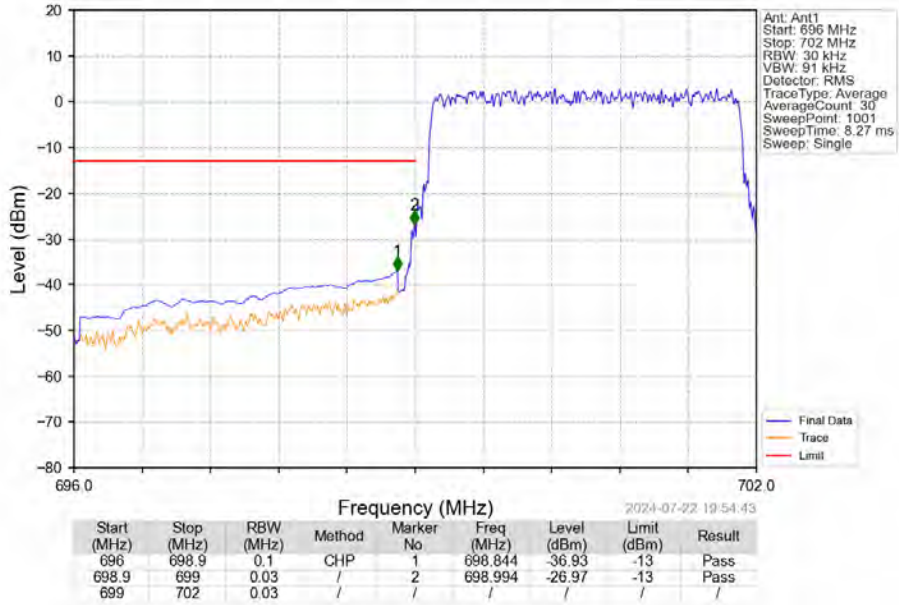


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.826	-37.76	-13	Pass
698.9	699	0.03	/	2	698.994	-26.45	-13	Pass
699	702	0.03	/	/	/	/	/	/

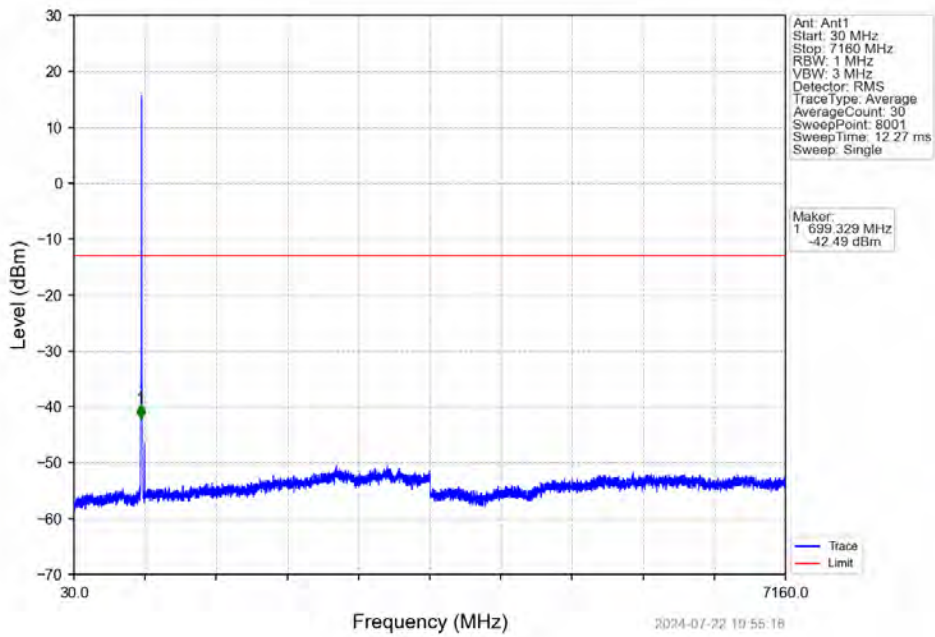
Band12_3MHz_QPSK_LCH_700.5MHz_RB_1_0_NTNV



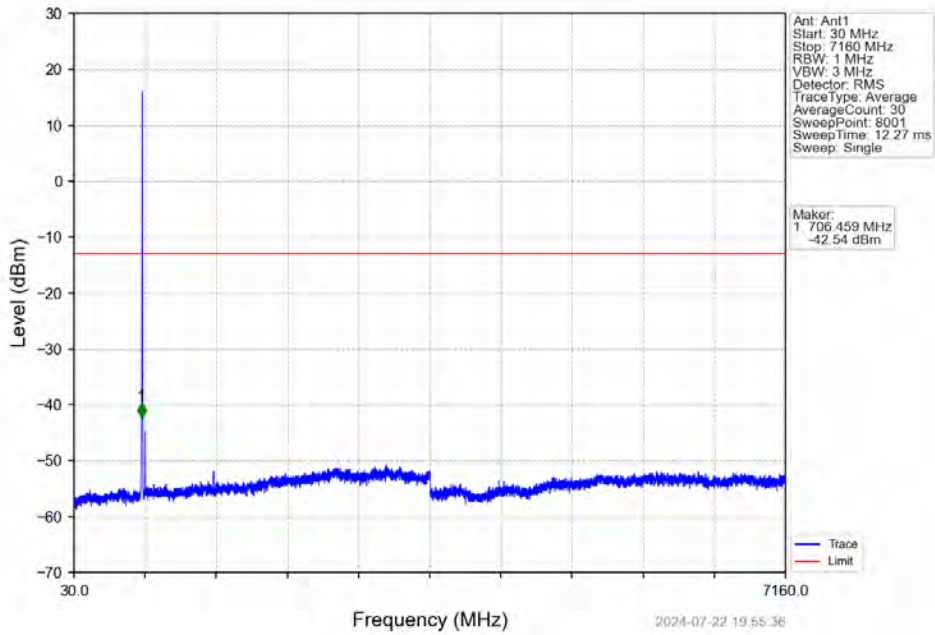
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



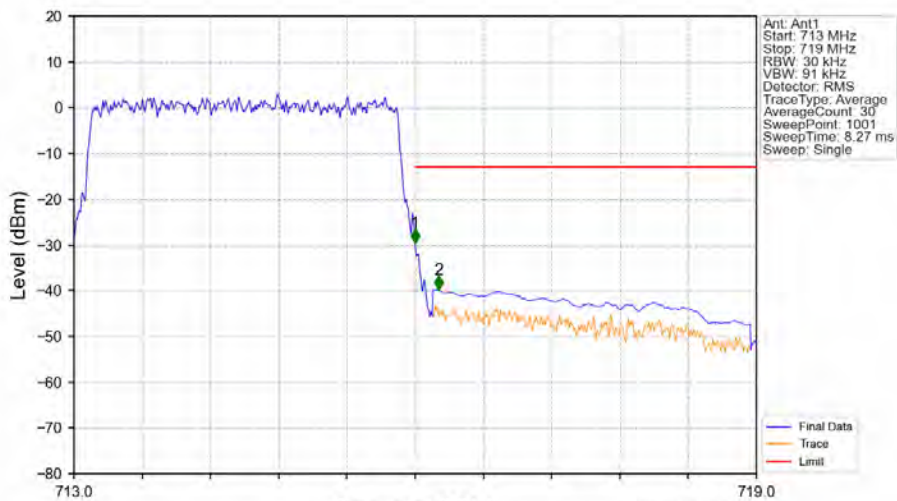
Band12_3MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_3MHz_QPSK_HCH_714.5MHz_RB_1_0_NTNV

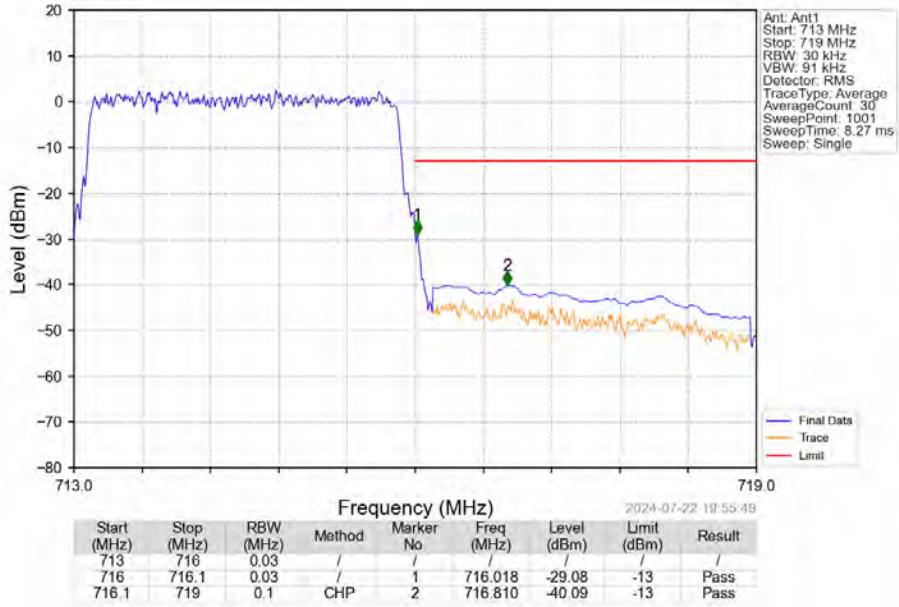


Band12_3MHz_QPSK_HCH_714.5MHz_RB_1_14_NTNV

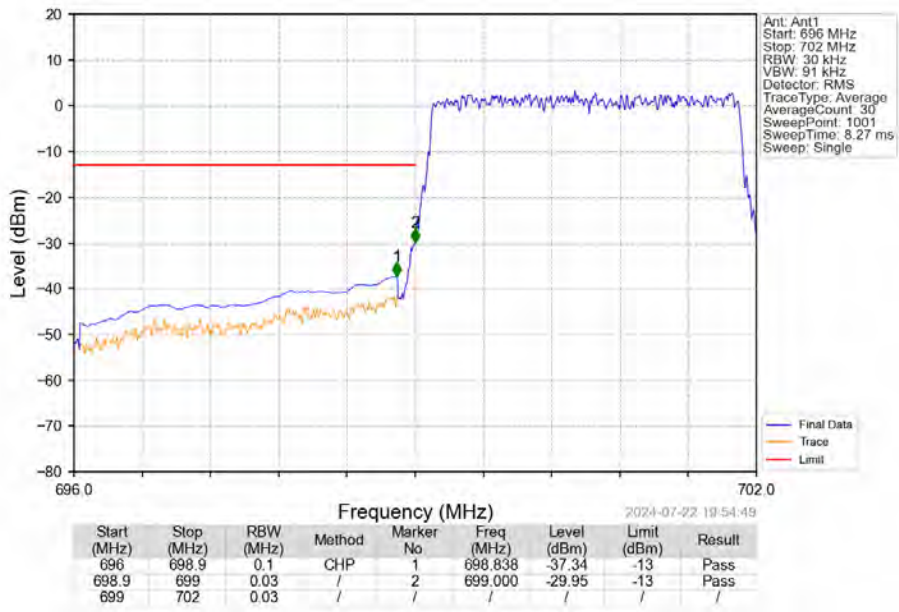


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	1	716.000	-29.59	-13	Pass
716.1	719	0.1	CHP	2	716.204	-39.85	-13	Pass

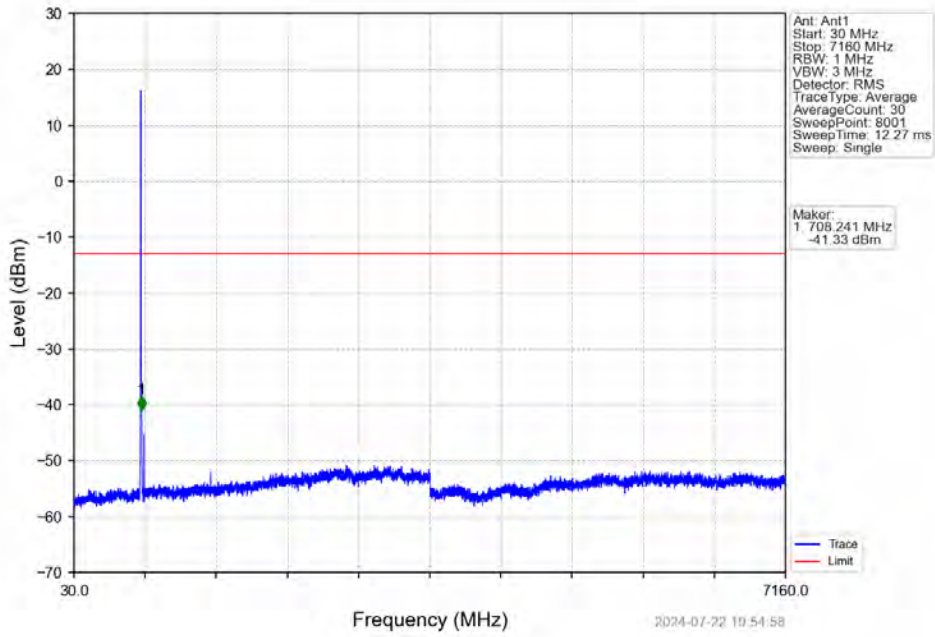
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



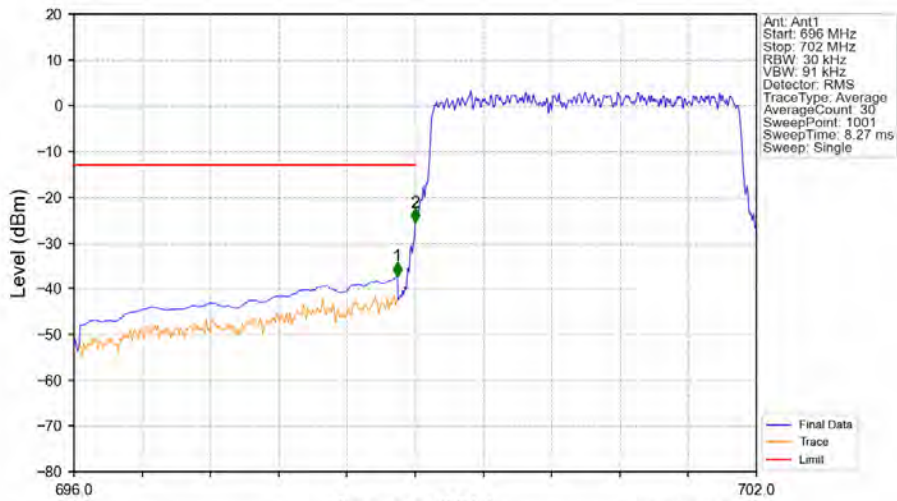
Band12_3MHz_16QAM_LCH_700.5MHz_RB_1_0_NTNV



Band12_3MHz_16QAM_LCH_700.5MHz_RB_1_0_NTNV

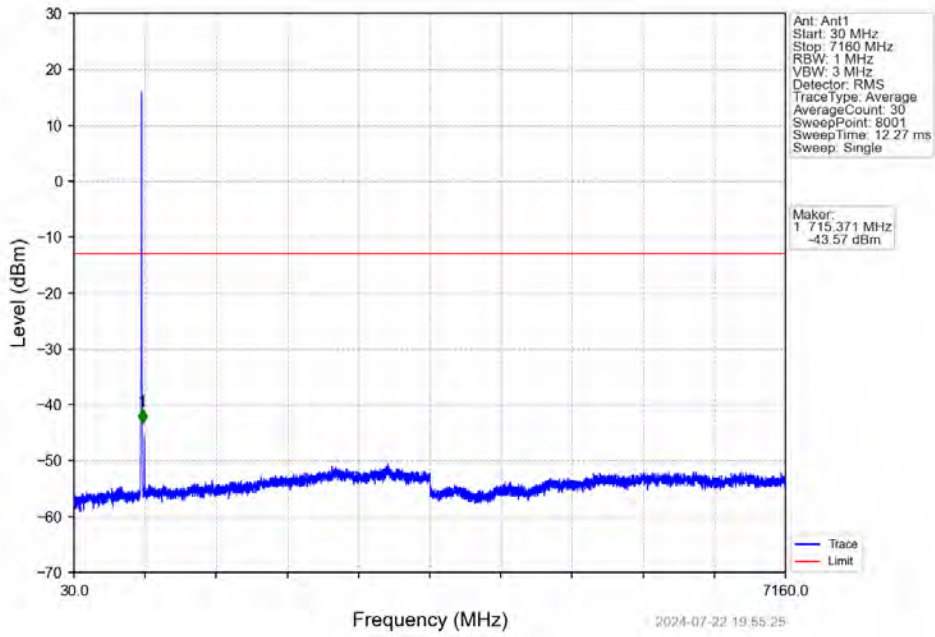


Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV

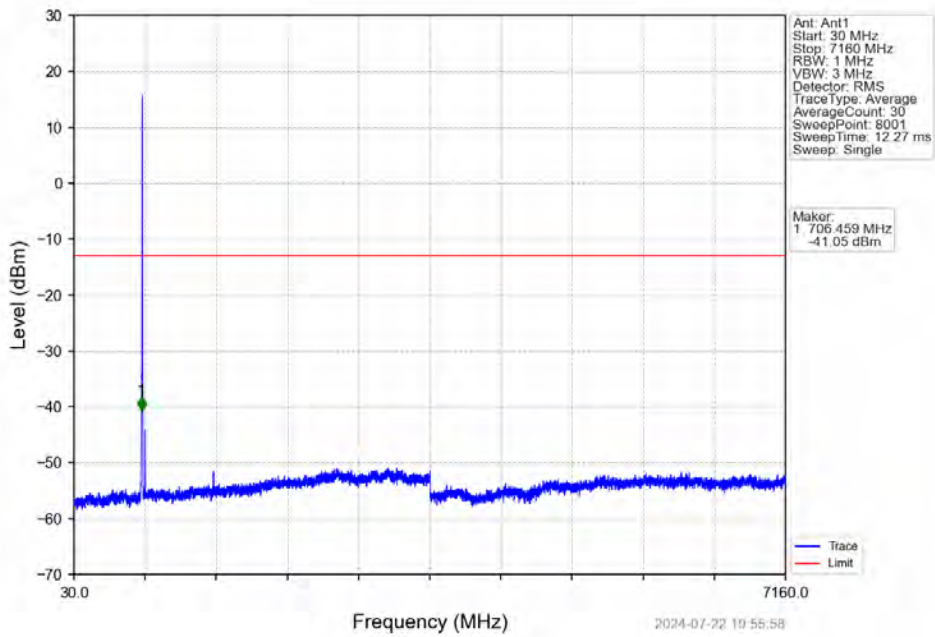


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.844	-37.23	-13	Pass
698.9	699	0.03	/	2	699.000	-25.54	-13	Pass
699	702	0.03	/	/	/	/	/	/

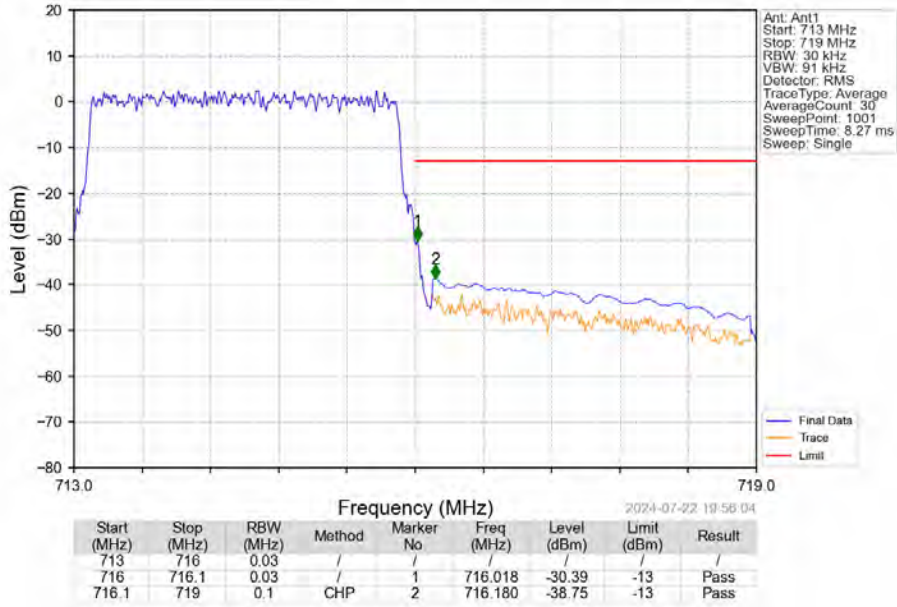
Band12_3MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



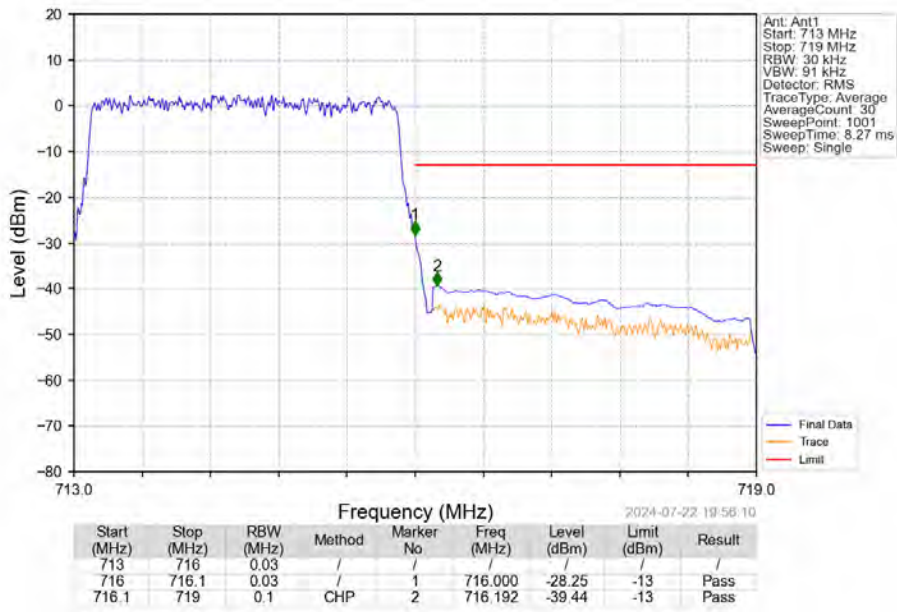
Band12_3MHz_16QAM_HCH_714.5MHz_RB_1_0_NTNV



Band12_3MHz_16QAM_HCH_714.5MHz_RB_1_14_NTV

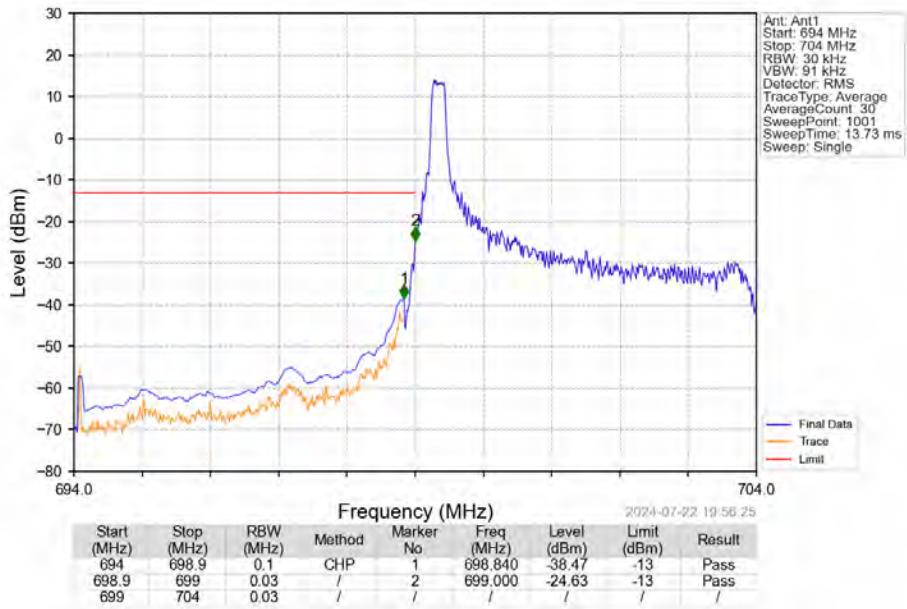


Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTV

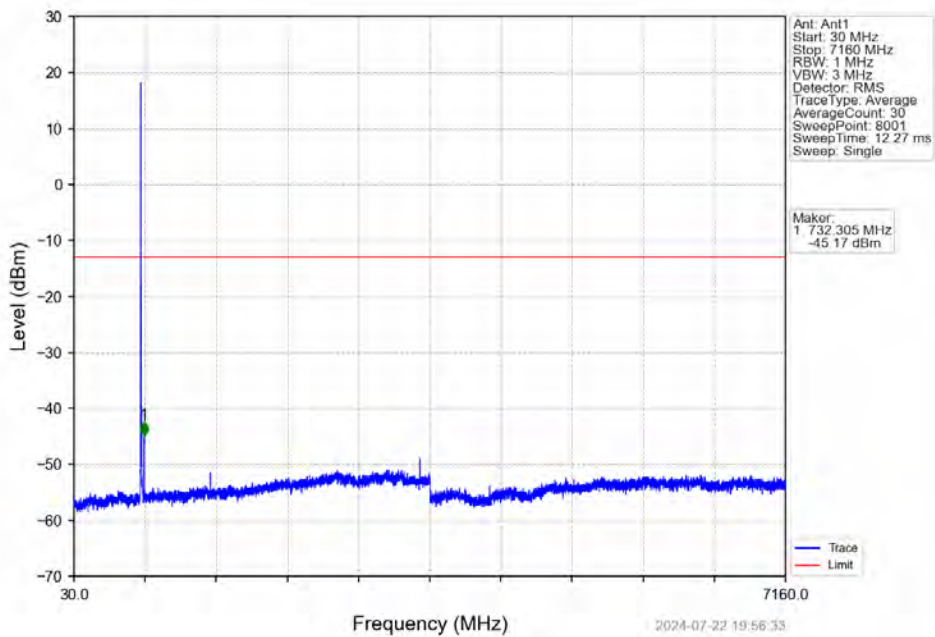


6.2.3 B12_5MHz

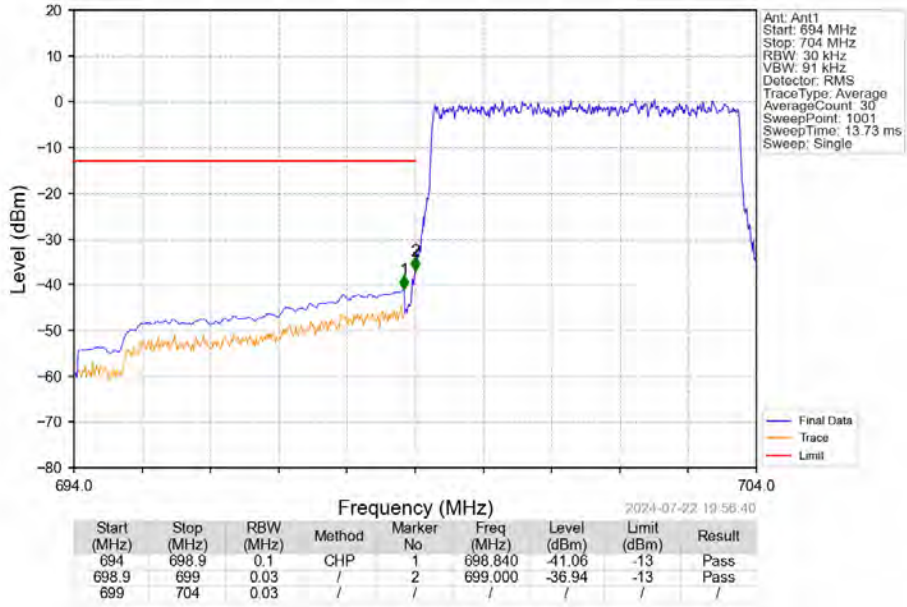
Band12_5MHz_QPSK_LCH_701.5MHz_RB_1_0_NTNV



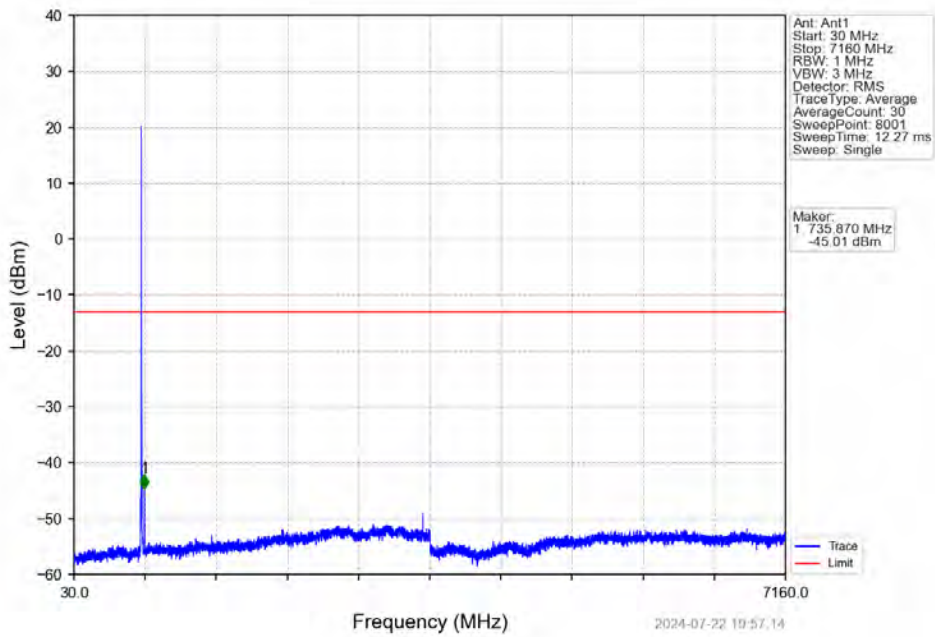
Band12_5MHz_QPSK_LCH_701.5MHz_RB_1_0_NTNV



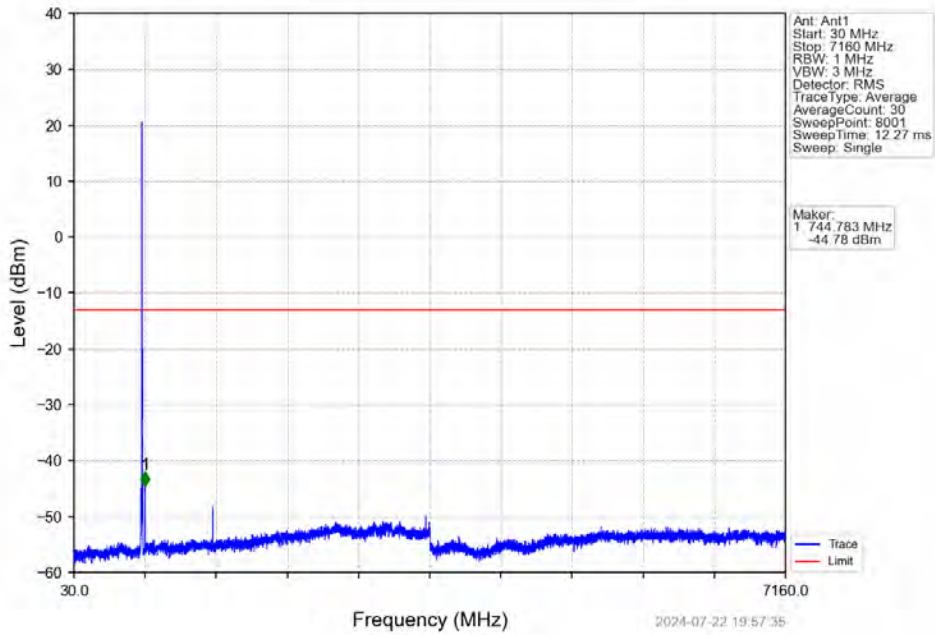
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



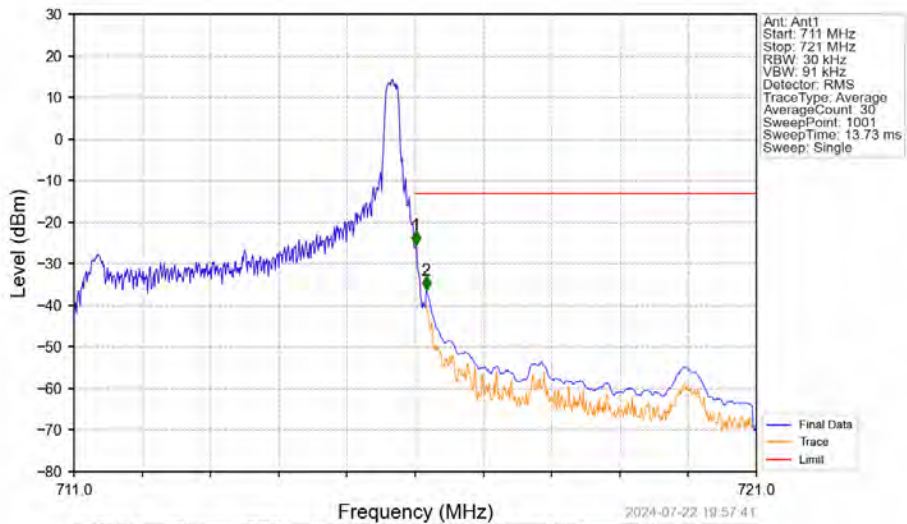
Band12_5MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_5MHz_QPSK_HCH_713.5MHz_RB_1_0_NTNV

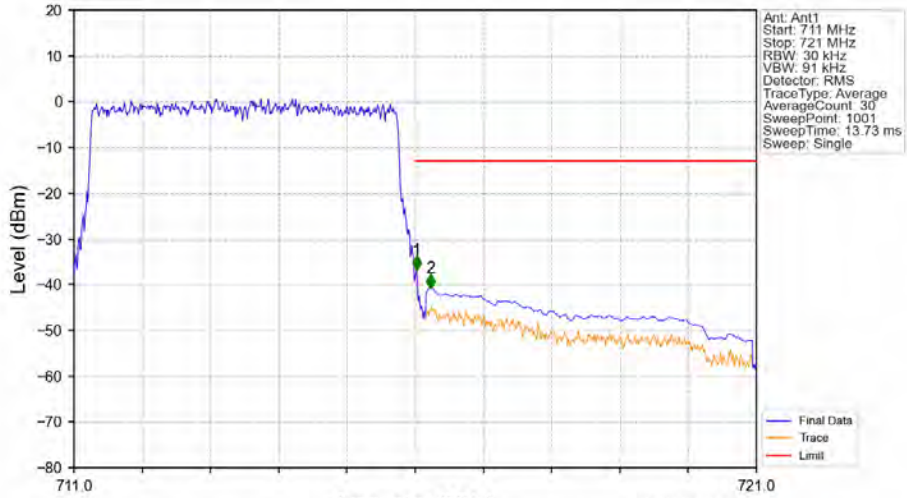


Band12_5MHz_QPSK_HCH_713.5MHz_RB_1_24_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	1	716.010	-25.45	-13	Pass
716	721	0.1	CHP	2	716.160	-36.39	-13	Pass

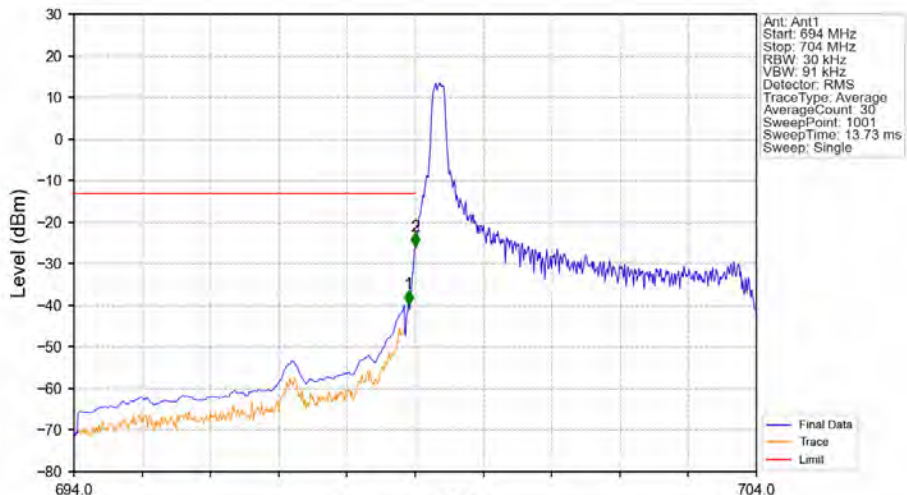
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



2024-07-22 19:57:47

Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	1	716.020	-36.84	-13	Pass
716.1	721	0.1	CHP	2	716.230	-40.77	-13	Pass

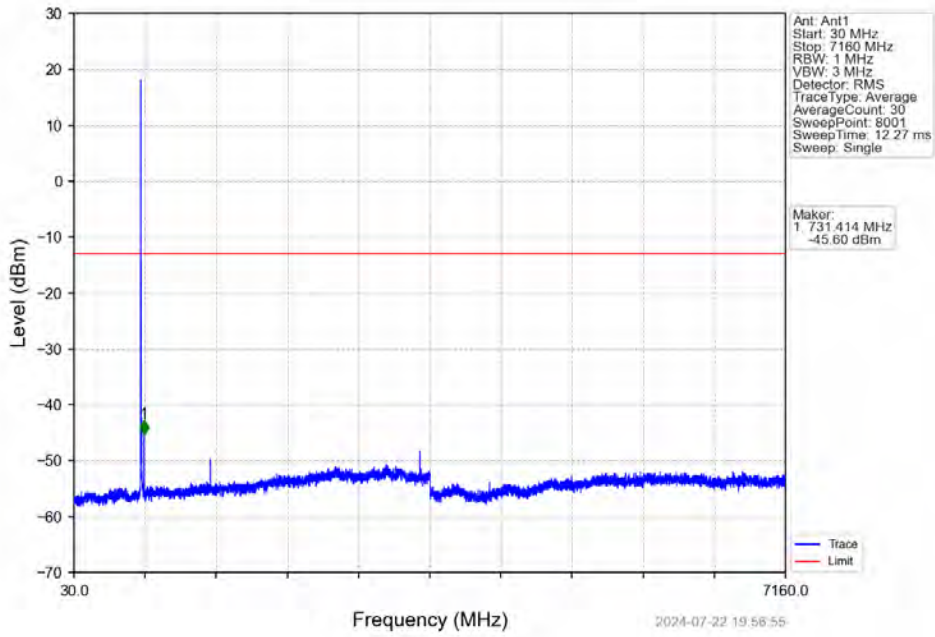
Band12_5MHz_16QAM_LCH_701.5MHz_RB_1_0_NTNV



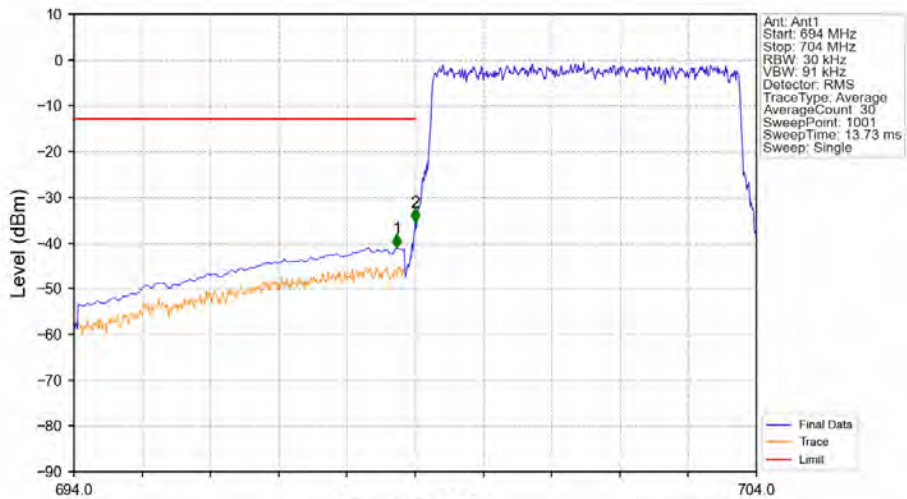
2024-07-22 19:58:46

Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.900	-39.77	-13	Pass
698.9	699	0.03	/	2	699.000	-25.95	-13	Pass
699	704	0.03	/	/	/	/	/	/

Band12_5MHz_16QAM_LCH_701.5MHz_RB_1_0_NTNV

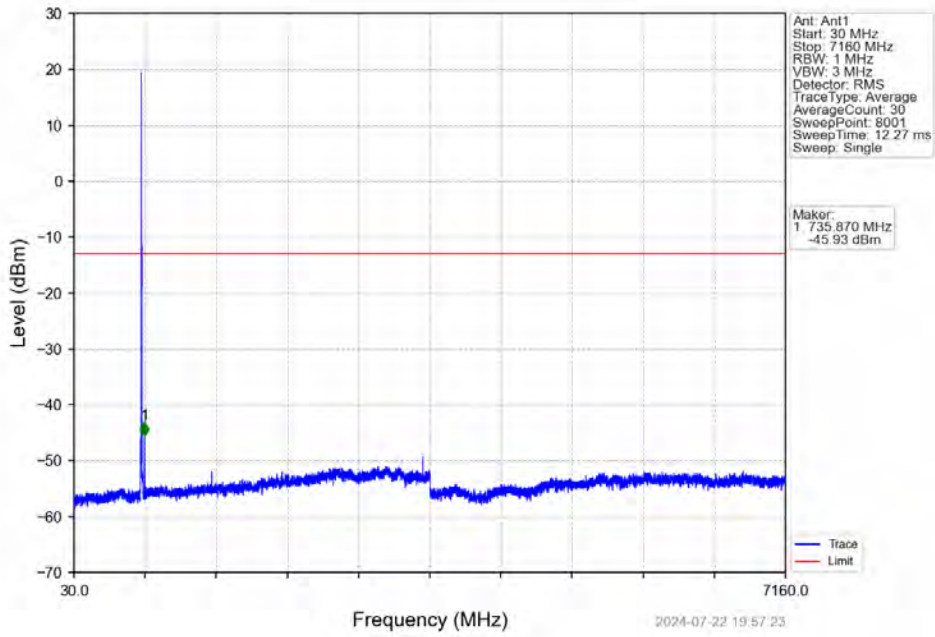


Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV

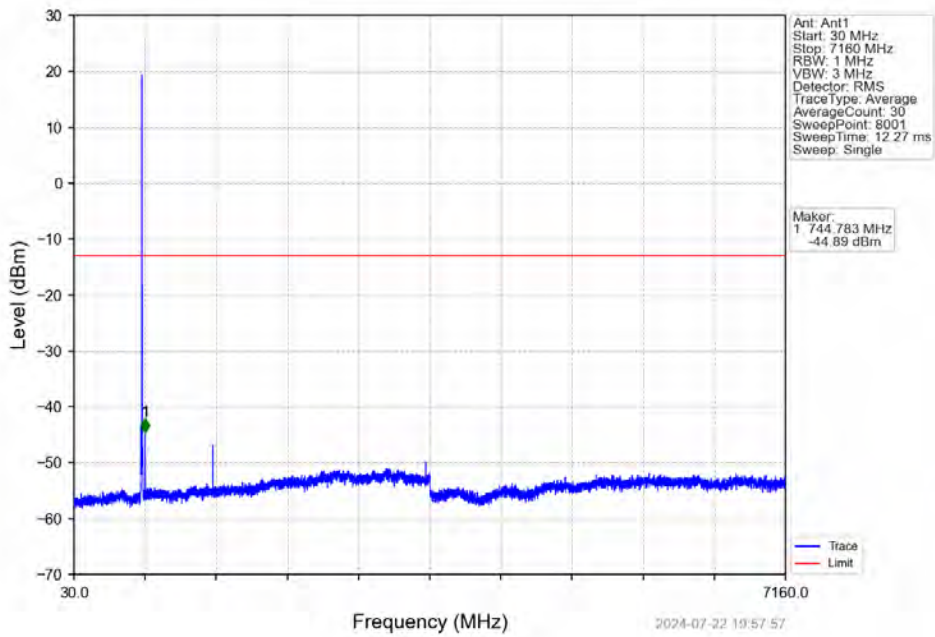


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.730	-41.11	-13	Pass
698.9	699	0.03	/	2	699.000	-35.53	-13	Pass
699	704	0.03	/	/	/	/	/	/

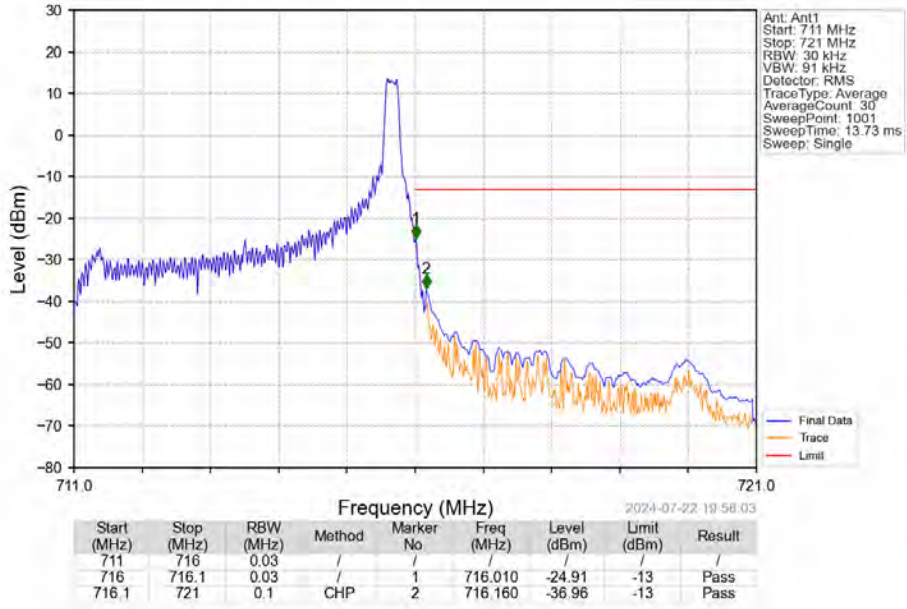
Band12_5MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



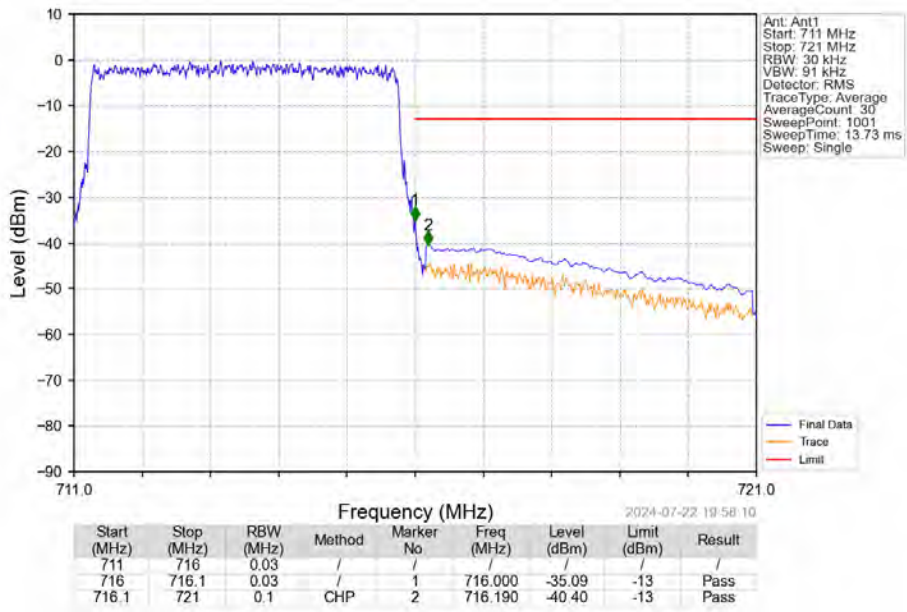
Band12_5MHz_16QAM_HCH_713.5MHz_RB_1_0_NTNV



Band12_5MHz_16QAM_HCH_713.5MHz_RB_1_24_NTNV

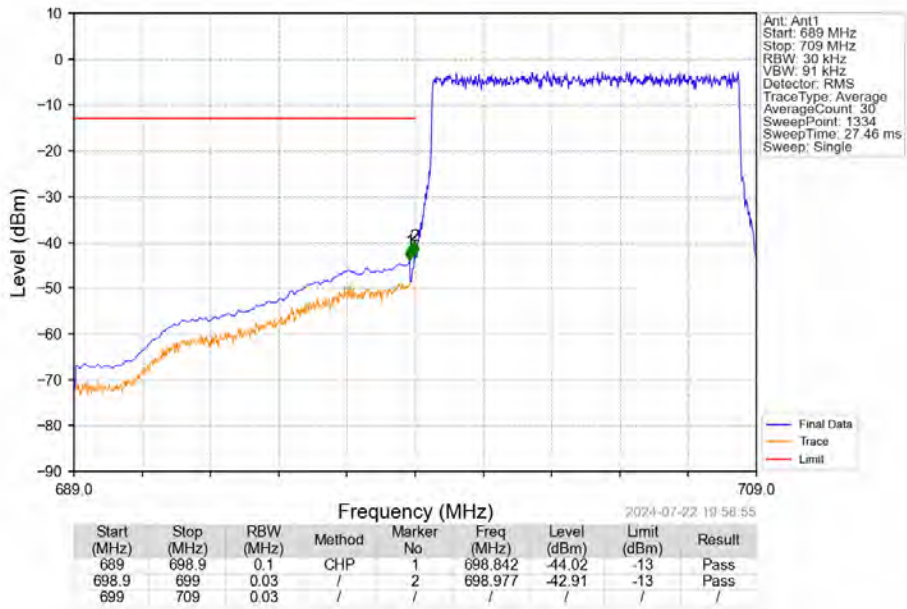


Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV

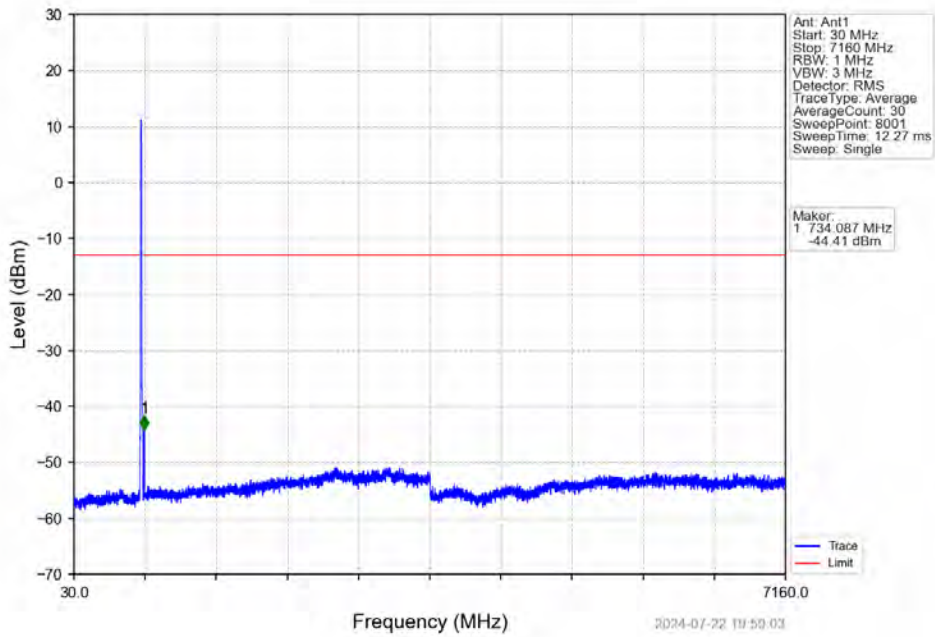


6.2.4 B12_10MHz

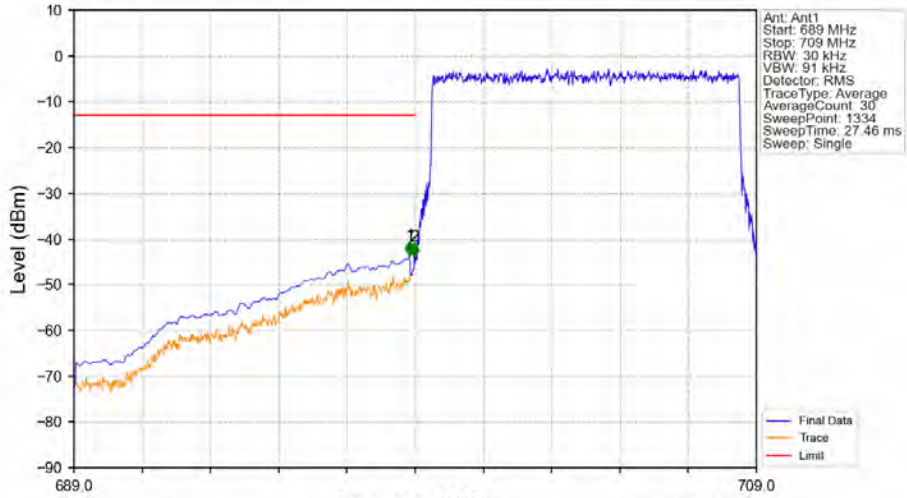
Band12_10MHz_QPSK_LCH_704MHz_RB_1_0_NTNV



Band12_10MHz_QPSK_LCH_704MHz_RB_1_0_NTNV

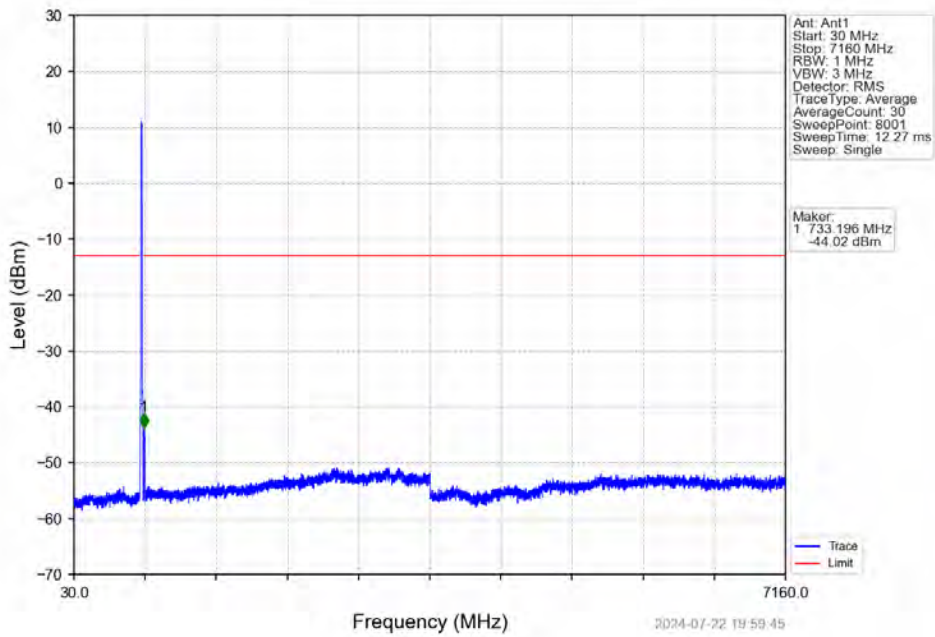


Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



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	-43.68	-13	Pass
698.9	699	0.03	/	2	698.977	-43.89	-13	Pass
699	709	0.03	/	/	/	/	/	/

Band12_10MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV

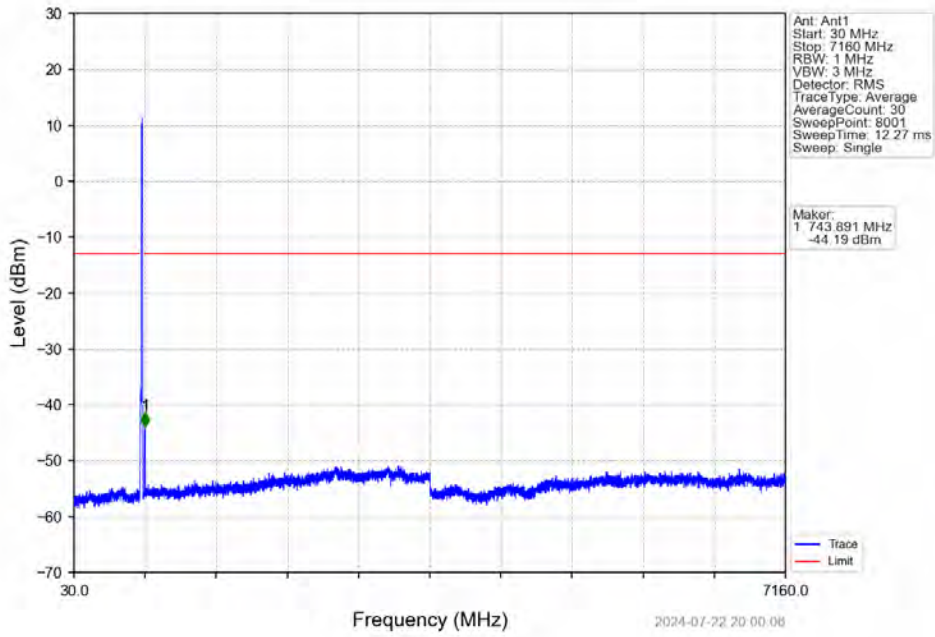


Ant: Ant1
 Start: 30 MHz
 Stop: 7160 MHz
 RBW: 1 MHz
 VBW: 3 MHz
 Detector: RMS
 TraceType: Average
 AverageCount: 30
 SweepPoint: 8001
 SweepTime: 12.27 ms
 Sweep: Single

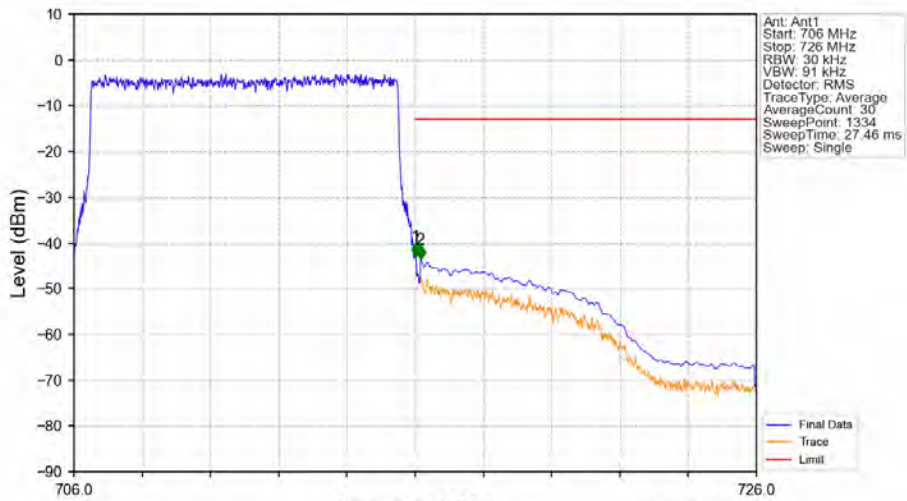
Marker:
 1 733.196 MHz
 -44.02 dBm

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Band12_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV

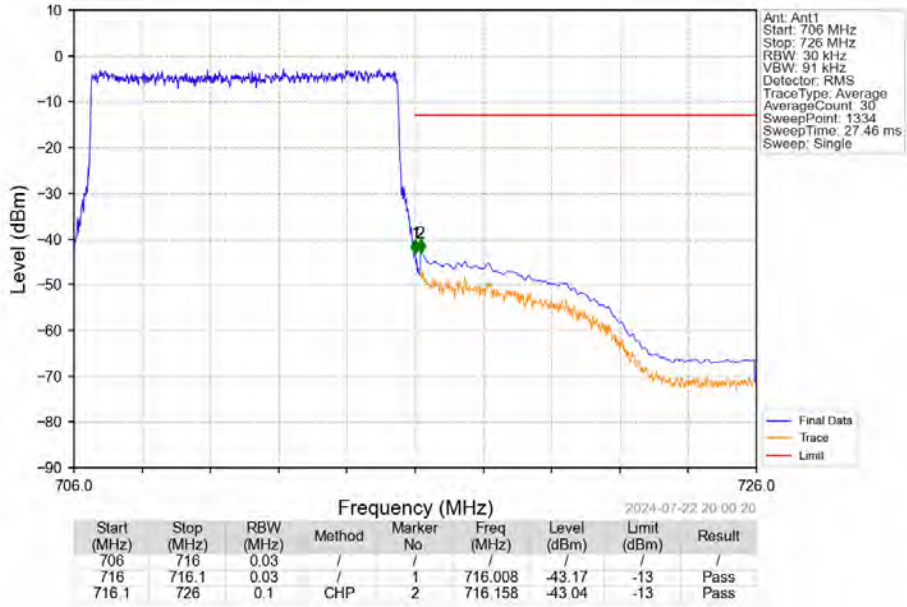


Band12_10MHz_QPSK_HCH_711MHz_RB_1_49_NTNV

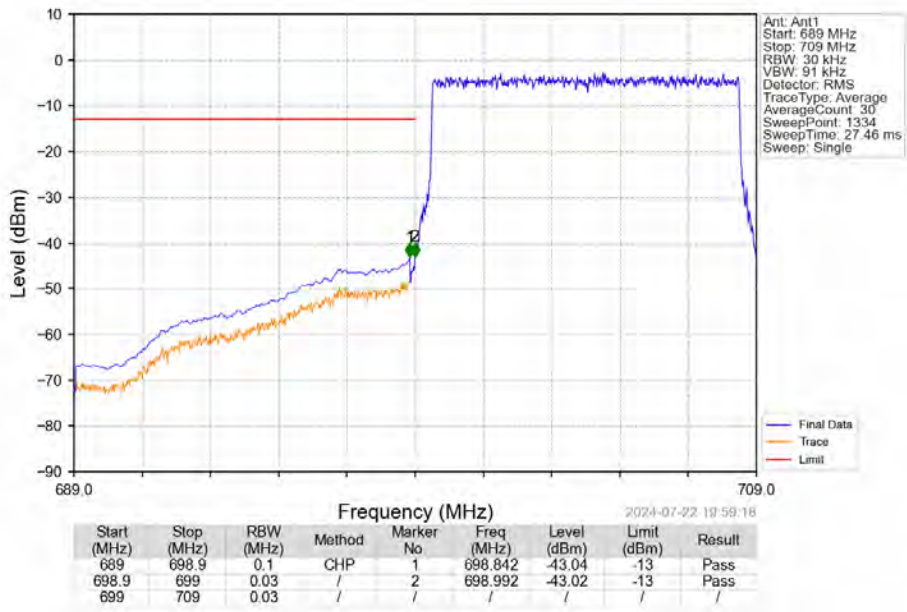


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	1	716.023	-42.86	-13	Pass
716	716.1	0.03	/	1	716.023	-42.86	-13	Pass
716.1	726	0.1	CHP	2	716.158	-43.61	-13	Pass

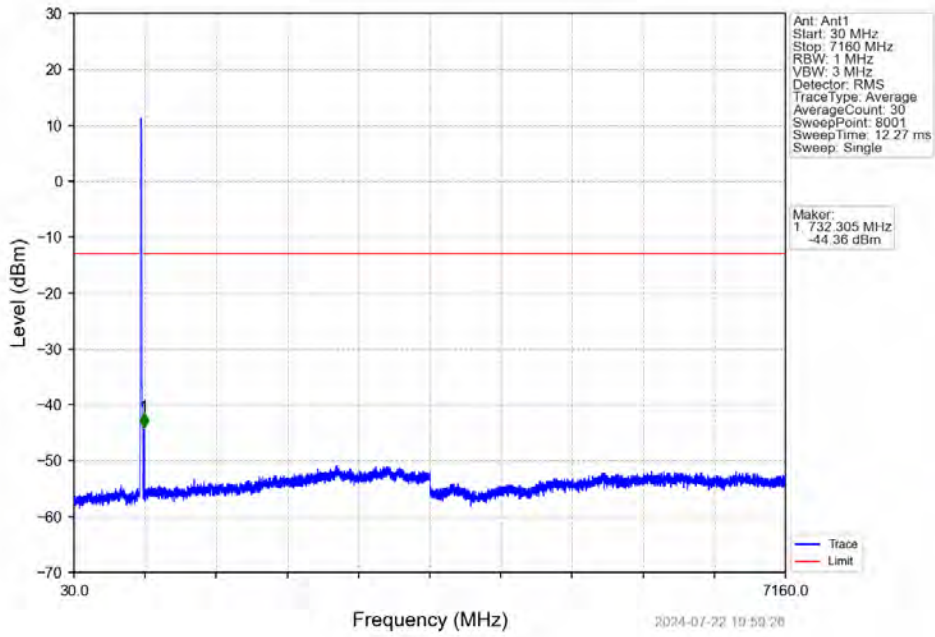
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



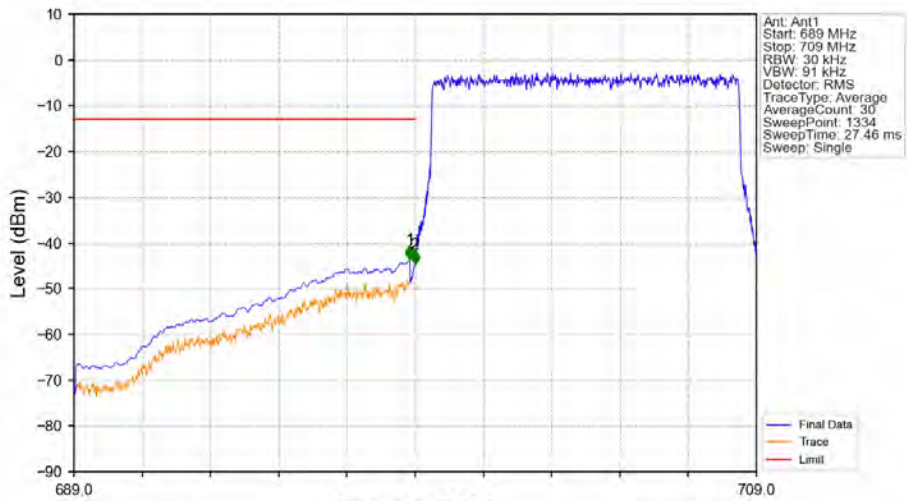
Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV



Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV

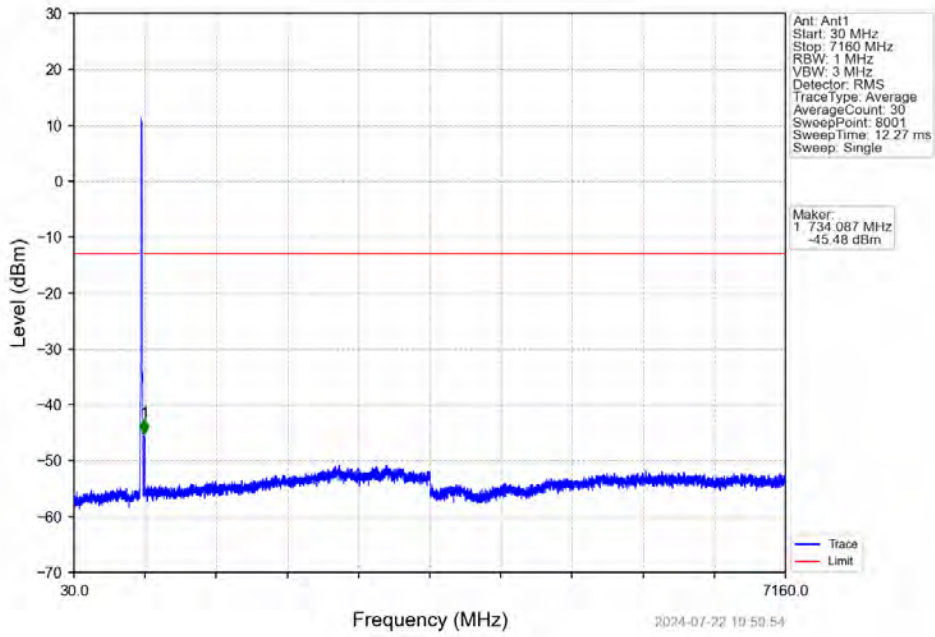


Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV

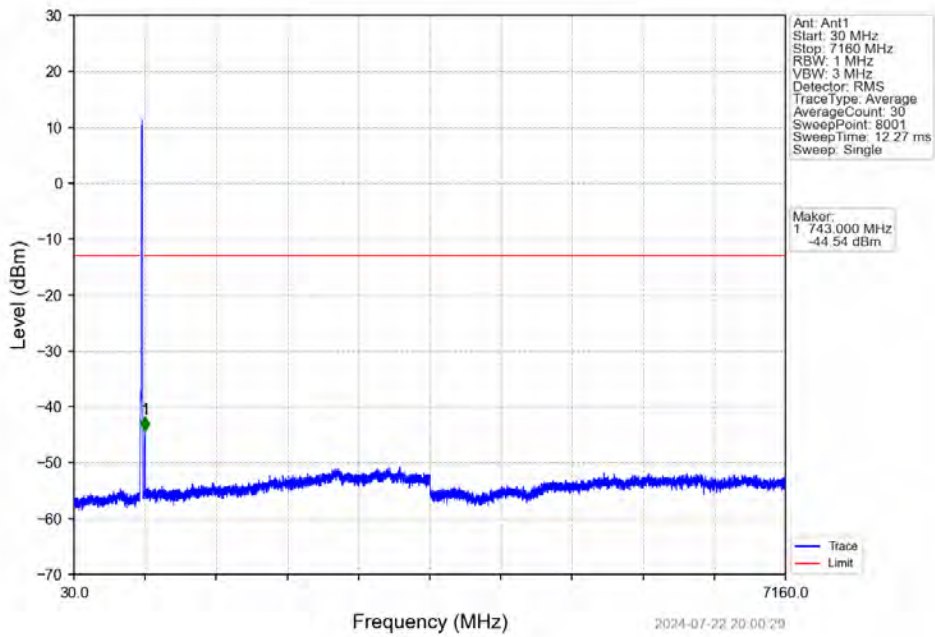


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-43.65	-13	Pass
698.9	699	0.03	/	2	698.992	-44.75	-13	Pass
699	709	0.03	/	/	/	/	/	/

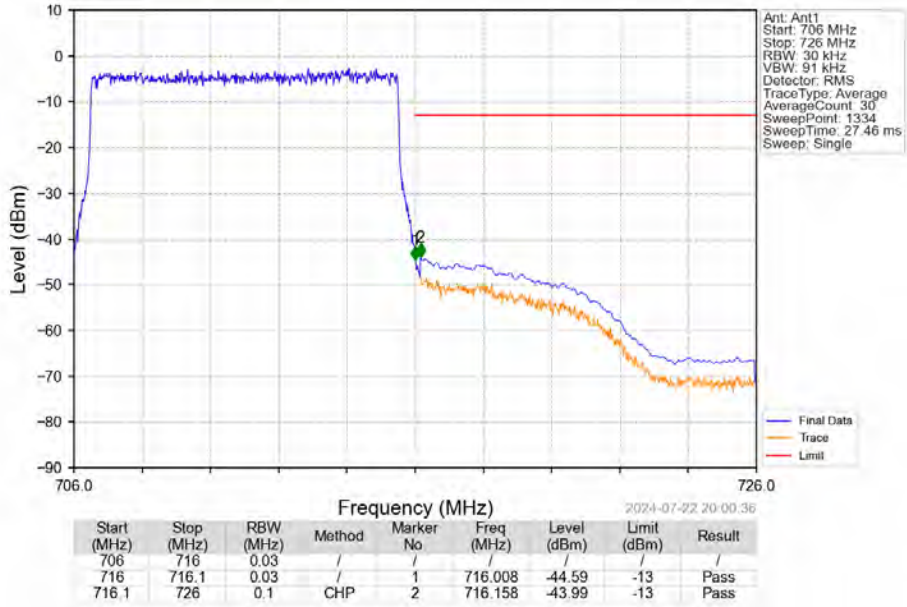
Band12_10MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



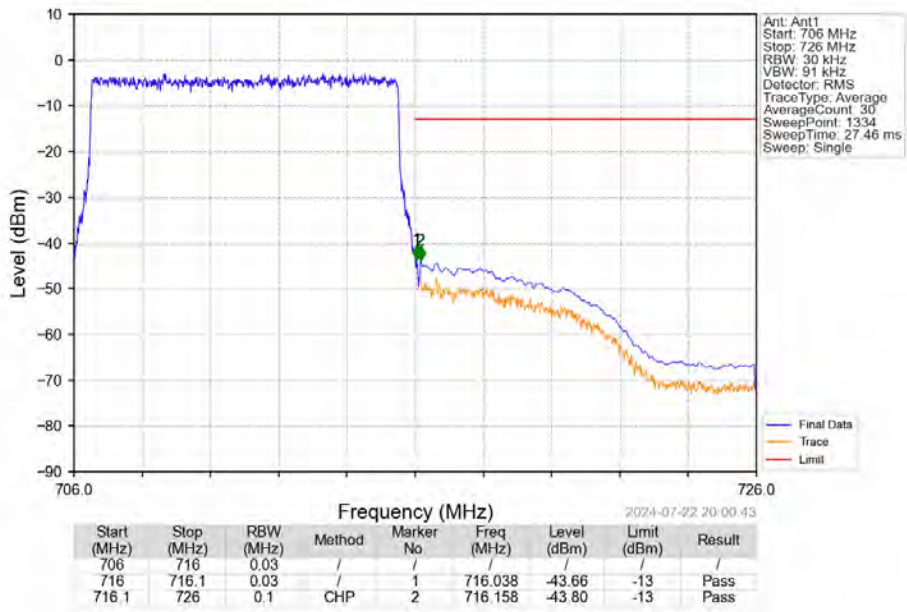
Band12_10MHz_16QAM_HCH_711MHz_RB_1_0_NTNV



Band12_10MHz_16QAM_HCH_711MHz_RB_1_49_NTV



Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTV



7. Form731

7.1 Test Result

7.1.1 Form731_Power

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
12	1.4	699.7	715.3	0.1449	0.0655	ppm	1M11G7D	27H	21.61
12	1.4	699.7	715.3	0.1413	0.0112	ppm	1M12W7D	27H	21.50
12	3	700.5	714.5	0.1236	0.0665	ppm	2M76G7D	27H	20.92
12	3	700.5	714.5	0.1233	0.0640	ppm	2M77W7D	27H	20.91
12	5	701.5	713.5	0.1426	0.0120	ppm	4M56G7D	27H	21.54
12	5	701.5	713.5	0.1282	0.0100	ppm	4M57W7D	27H	21.08
12	10	704	711	0.1429	0.0535	ppm	9M09G7D	27H	21.55
12	10	704	711	0.1282	0.0614	ppm	9M09W7D	27H	21.08

7.1.2 Form731_ERP

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
12	1.4	699.7	715.3	0.0665	0.0655	ppm	1M11G7D	27H	18.23
12	1.4	699.7	715.3	0.0648	0.0112	ppm	1M12W7D	27H	18.12
12	3	700.5	714.5	0.0567	0.0665	ppm	2M76G7D	27H	17.54
12	3	700.5	714.5	0.0566	0.0640	ppm	2M77W7D	27H	17.53
12	5	701.5	713.5	0.0654	0.0120	ppm	4M56G7D	27H	18.16
12	5	701.5	713.5	0.0588	0.0100	ppm	4M57W7D	27H	17.7
12	10	704	711	0.0656	0.0535	ppm	9M09G7D	27H	18.17
12	10	704	711	0.0588	0.0614	ppm	9M09W7D	27H	17.7