



# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 B12\_1.4MHz\_ERP

### 1.1.1 Test Result

Band: 12 / Bandwidth: 1.4MHz / NTVN										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	699.7	1	0	23.12	-0.92	20.05	<=34.77	Pass		
			2	23.13	-0.92	20.06	<=34.77	Pass		
			5	23.17	-0.92	20.10	<=34.77	Pass		
		3	0	23.07	-0.92	20.00	<=34.77	Pass		
			2	23.03	-0.92	19.96	<=34.77	Pass		
			3	23.06	-0.92	19.99	<=34.77	Pass		
		6	0	21.93	-0.92	18.86	<=34.77	Pass		
		707.5	1	0	22.92	-0.92	19.85	<=34.77	Pass	
				2	23.05	-0.92	19.98	<=34.77	Pass	
	5			23.13	-0.92	20.06	<=34.77	Pass		
	3		0	23.18	-0.92	20.11	<=34.77	Pass		
			2	23.08	-0.92	20.01	<=34.77	Pass		
			3	23.13	-0.92	20.06	<=34.77	Pass		
	6		0	22.13	-0.92	19.06	<=34.77	Pass		
	715.3		1	0	23.25	-0.92	20.18	<=34.77	Pass	
				2	23.30	-0.92	20.23	<=34.77	Pass	
		5		23.26	-0.92	20.19	<=34.77	Pass		
		3	0	23.37	-0.92	20.30	<=34.77	Pass		
			2	23.38	-0.92	20.31	<=34.77	Pass		
			3	23.25	-0.92	20.18	<=34.77	Pass		
		6	0	22.16	-0.92	19.09	<=34.77	Pass		
		16QAM	699.7	1	0	22.07	-0.92	19.00	<=34.77	Pass
					2	22.02	-0.92	18.95	<=34.77	Pass
	5				22.06	-0.92	18.99	<=34.77	Pass	
	3			0	21.73	-0.92	18.66	<=34.77	Pass	
				2	21.70	-0.92	18.63	<=34.77	Pass	
				3	21.73	-0.92	18.66	<=34.77	Pass	
6	0			21.28	-0.92	18.21	<=34.77	Pass		
707.5	1			0	22.73	-0.92	19.66	<=34.77	Pass	
				2	22.84	-0.92	19.77	<=34.77	Pass	
			5	22.89	-0.92	19.82	<=34.77	Pass		
	3		0	22.15	-0.92	19.08	<=34.77	Pass		
			2	22.06	-0.92	18.99	<=34.77	Pass		
			3	22.14	-0.92	19.07	<=34.77	Pass		
	6		0	21.17	-0.92	18.10	<=34.77	Pass		
	715.3		1	0	22.91	-0.92	19.84	<=34.77	Pass	
				2	22.89	-0.92	19.82	<=34.77	Pass	
5				22.85	-0.92	19.78	<=34.77	Pass		
3			0	22.13	-0.92	19.06	<=34.77	Pass		
			2	22.15	-0.92	19.08	<=34.77	Pass		
			3	22.05	-0.92	18.98	<=34.77	Pass		
6			0	21.31	-0.92	18.24	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15



### 1.2 B12\_3MHz\_ERP

#### 1.2.1 Test Result

Band: 12 / Bandwidth: 3MHz / NTV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	700.5	1	0	23.03	-0.92	19.96	<=34.77	Pass		
			7	23.07	-0.92	20.00	<=34.77	Pass		
			14	23.13	-0.92	20.06	<=34.77	Pass		
		8	0	22.11	-0.92	19.04	<=34.77	Pass		
			4	22.00	-0.92	18.93	<=34.77	Pass		
			7	22.14	-0.92	19.07	<=34.77	Pass		
		15	0	22.08	-0.92	19.01	<=34.77	Pass		
		707.5	1	0	23.21	-0.92	20.14	<=34.77	Pass	
				7	23.22	-0.92	20.15	<=34.77	Pass	
	14			23.21	-0.92	20.14	<=34.77	Pass		
	8		0	22.06	-0.92	18.99	<=34.77	Pass		
			4	22.14	-0.92	19.07	<=34.77	Pass		
			7	22.06	-0.92	18.99	<=34.77	Pass		
	15		0	22.24	-0.92	19.17	<=34.77	Pass		
	714.5		1	0	23.28	-0.92	20.21	<=34.77	Pass	
				7	23.33	-0.92	20.26	<=34.77	Pass	
		14		23.27	-0.92	20.20	<=34.77	Pass		
		8	0	22.33	-0.92	19.26	<=34.77	Pass		
			4	22.26	-0.92	19.19	<=34.77	Pass		
			7	22.22	-0.92	19.15	<=34.77	Pass		
		15	0	22.38	-0.92	19.31	<=34.77	Pass		
		16QAM	700.5	1	0	22.72	-0.92	19.65	<=34.77	Pass
					7	22.66	-0.92	19.59	<=34.77	Pass
	14				22.70	-0.92	19.63	<=34.77	Pass	
	8			0	21.51	-0.92	18.44	<=34.77	Pass	
				4	21.52	-0.92	18.45	<=34.77	Pass	
				7	21.19	-0.92	18.12	<=34.77	Pass	
15	0			21.40	-0.92	18.33	<=34.77	Pass		
707.5	1			0	22.39	-0.92	19.32	<=34.77	Pass	
				7	22.41	-0.92	19.34	<=34.77	Pass	
			14	22.41	-0.92	19.34	<=34.77	Pass		
	8		0	21.26	-0.92	18.19	<=34.77	Pass		
			4	21.24	-0.92	18.17	<=34.77	Pass		
			7	21.23	-0.92	18.16	<=34.77	Pass		
	15		0	21.05	-0.92	17.98	<=34.77	Pass		
	714.5		1	0	23.31	-0.92	20.24	<=34.77	Pass	
				7	23.30	-0.92	20.23	<=34.77	Pass	
14				23.17	-0.92	20.10	<=34.77	Pass		
8			0	21.35	-0.92	18.28	<=34.77	Pass		
			4	21.36	-0.92	18.29	<=34.77	Pass		
			7	21.35	-0.92	18.28	<=34.77	Pass		
15			0	21.28	-0.92	18.21	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

### 1.3 B12\_5MHz\_ERP



1.3.1 Test Result

Band: 12 / Bandwidth: 5MHz / NTNV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	701.5	1	0	23.17	-0.92	20.10	<=34.77	Pass		
			13	23.12	-0.92	20.05	<=34.77	Pass		
			24	23.14	-0.92	20.07	<=34.77	Pass		
		12	0	22.06	-0.92	18.99	<=34.77	Pass		
			6	22.19	-0.92	19.12	<=34.77	Pass		
			13	22.06	-0.92	18.99	<=34.77	Pass		
		25	0	22.08	-0.92	19.01	<=34.77	Pass		
		707.5	1	0	22.99	-0.92	19.92	<=34.77	Pass	
				13	23.12	-0.92	20.05	<=34.77	Pass	
	24			23.26	-0.92	20.19	<=34.77	Pass		
	12		0	22.12	-0.92	19.05	<=34.77	Pass		
			6	22.29	-0.92	19.22	<=34.77	Pass		
			13	22.10	-0.92	19.03	<=34.77	Pass		
	25		0	22.18	-0.92	19.11	<=34.77	Pass		
	713.5		1	0	23.13	-0.92	20.06	<=34.77	Pass	
				13	23.22	-0.92	20.15	<=34.77	Pass	
		24		23.31	-0.92	20.24	<=34.77	Pass		
		12	0	22.28	-0.92	19.21	<=34.77	Pass		
			6	22.40	-0.92	19.33	<=34.77	Pass		
			13	22.37	-0.92	19.30	<=34.77	Pass		
		25	0	22.39	-0.92	19.32	<=34.77	Pass		
		16QAM	701.5	1	0	22.64	-0.92	19.57	<=34.77	Pass
					13	22.64	-0.92	19.57	<=34.77	Pass
	24				22.66	-0.92	19.59	<=34.77	Pass	
12	0			21.34	-0.92	18.27	<=34.77	Pass		
	6			21.07	-0.92	18.00	<=34.77	Pass		
	13			21.17	-0.92	18.10	<=34.77	Pass		
25	0			21.15	-0.92	18.08	<=34.77	Pass		
707.5	1			0	22.61	-0.92	19.54	<=34.77	Pass	
				13	22.62	-0.92	19.55	<=34.77	Pass	
			24	22.68	-0.92	19.61	<=34.77	Pass		
	12		0	21.23	-0.92	18.16	<=34.77	Pass		
			6	21.12	-0.92	18.05	<=34.77	Pass		
			13	21.14	-0.92	18.07	<=34.77	Pass		
	25		0	21.16	-0.92	18.09	<=34.77	Pass		
	713.5		1	0	21.97	-0.92	18.90	<=34.77	Pass	
				13	22.15	-0.92	19.08	<=34.77	Pass	
24				21.94	-0.92	18.87	<=34.77	Pass		
12			0	21.18	-0.92	18.11	<=34.77	Pass		
			6	21.40	-0.92	18.33	<=34.77	Pass		
			13	21.35	-0.92	18.28	<=34.77	Pass		
25			0	21.46	-0.92	18.39	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.4 B12\_10MHz\_ERP

1.4.1 Test Result

Band: 12 / Bandwidth: 10MHz / NTNV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	704	1	0	23.18	-0.92	20.11	<=34.77	Pass		
			25	23.24	-0.92	20.17	<=34.77	Pass		
			49	23.30	-0.92	20.23	<=34.77	Pass		
		25	0	22.12	-0.92	19.05	<=34.77	Pass		
			13	22.12	-0.92	19.05	<=34.77	Pass		
			25	22.26	-0.92	19.19	<=34.77	Pass		
		50	0	22.21	-0.92	19.14	<=34.77	Pass		
		707.5	1	0	23.17	-0.92	20.10	<=34.77	Pass	
				25	23.18	-0.92	20.11	<=34.77	Pass	
	49			23.36	-0.92	20.29	<=34.77	Pass		
	25		0	22.36	-0.92	19.29	<=34.77	Pass		
			13	22.26	-0.92	19.19	<=34.77	Pass		
			25	22.45	-0.92	19.38	<=34.77	Pass		
	50		0	22.25	-0.92	19.18	<=34.77	Pass		
	711		1	0	23.18	-0.92	20.11	<=34.77	Pass	
				25	23.31	-0.92	20.24	<=34.77	Pass	
		49		23.46	-0.92	20.39	<=34.77	Pass		
		25	0	22.33	-0.92	19.26	<=34.77	Pass		
			13	22.37	-0.92	19.30	<=34.77	Pass		
			25	22.48	-0.92	19.41	<=34.77	Pass		
		50	0	22.33	-0.92	19.26	<=34.77	Pass		
		16QAM	704	1	0	22.76	-0.92	19.69	<=34.77	Pass
					25	22.68	-0.92	19.61	<=34.77	Pass
	49				22.88	-0.92	19.81	<=34.77	Pass	
25	0			21.23	-0.92	18.16	<=34.77	Pass		
	13			21.37	-0.92	18.30	<=34.77	Pass		
	25			21.28	-0.92	18.21	<=34.77	Pass		
50	0			21.36	-0.92	18.29	<=34.77	Pass		
707.5	1			0	23.01	-0.92	19.94	<=34.77	Pass	
				25	23.20	-0.92	20.13	<=34.77	Pass	
			49	23.25	-0.92	20.18	<=34.77	Pass		
	25		0	21.31	-0.92	18.24	<=34.77	Pass		
			13	21.26	-0.92	18.19	<=34.77	Pass		
			25	21.54	-0.92	18.47	<=34.77	Pass		
	50		0	21.23	-0.92	18.16	<=34.77	Pass		
	711		1	0	22.46	-0.92	19.39	<=34.77	Pass	
				25	22.60	-0.92	19.53	<=34.77	Pass	
49				22.61	-0.92	19.54	<=34.77	Pass		
25			0	21.32	-0.92	18.25	<=34.77	Pass		
			13	21.60	-0.92	18.53	<=34.77	Pass		
			25	21.74	-0.92	18.67	<=34.77	Pass		
50			0	21.45	-0.92	18.38	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

## 2. Frequency Stability

### 2.1 B12\_1.4MHz

#### 2.1.1 Test Result



Test Report Number: BTF240419R00204

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	42.958	0.0614	-2.5 to 2.5	Pass
					3.85	13.876	0.0198	-2.5 to 2.5	Pass
					4.43	10.228	0.0146	-2.5 to 2.5	Pass
				-30	3.85	38.309	0.0548	-2.5 to 2.5	Pass
				-20	3.85	33.073	0.0473	-2.5 to 2.5	Pass
				-10	3.85	6.008	0.0086	-2.5 to 2.5	Pass
				0	3.85	13.804	0.0197	-2.5 to 2.5	Pass
				10	3.85	22.774	0.0325	-2.5 to 2.5	Pass
				30	3.85	11.945	0.0171	-2.5 to 2.5	Pass
				40	3.85	5.093	0.0073	-2.5 to 2.5	Pass
	50	3.85	26.293	0.0376	-2.5 to 2.5	Pass			
	707.5	6	0	20	3.27	-26.493	-0.0374	-2.5 to 2.5	Pass
					3.85	-16.980	-0.0240	-2.5 to 2.5	Pass
					4.43	-0.329	-0.0005	-2.5 to 2.5	Pass
				-30	3.85	-24.762	-0.0350	-2.5 to 2.5	Pass
				-20	3.85	-16.837	-0.0238	-2.5 to 2.5	Pass
				-10	3.85	-10.357	-0.0146	-2.5 to 2.5	Pass
				0	3.85	-37.594	-0.0531	-2.5 to 2.5	Pass
				10	3.85	-12.589	-0.0178	-2.5 to 2.5	Pass
				30	3.85	-20.142	-0.0285	-2.5 to 2.5	Pass
				40	3.85	-27.566	-0.0390	-2.5 to 2.5	Pass
	50	3.85	-33.388	-0.0472	-2.5 to 2.5	Pass			
	715.3	6	0	20	3.27	-35.419	-0.0495	-2.5 to 2.5	Pass
					3.85	33.045	0.0462	-2.5 to 2.5	Pass
					4.43	49.224	0.0688	-2.5 to 2.5	Pass
				-30	3.85	18.353	0.0257	-2.5 to 2.5	Pass
				-20	3.85	17.281	0.0242	-2.5 to 2.5	Pass
				-10	3.85	43.373	0.0606	-2.5 to 2.5	Pass
				0	3.85	11.659	0.0163	-2.5 to 2.5	Pass
				10	3.85	15.750	0.0220	-2.5 to 2.5	Pass
30				3.85	37.708	0.0527	-2.5 to 2.5	Pass	
40				3.85	40.898	0.0572	-2.5 to 2.5	Pass	
50	3.85	28.481	0.0398	-2.5 to 2.5	Pass				
16QAM	699.7	6	0	20	3.27	2.489	0.0036	-2.5 to 2.5	Pass
					3.85	29.855	0.0427	-2.5 to 2.5	Pass
					4.43	45.075	0.0644	-2.5 to 2.5	Pass
				-30	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass
				-20	3.85	12.059	0.0172	-2.5 to 2.5	Pass
				-10	3.85	26.407	0.0377	-2.5 to 2.5	Pass
				0	3.85	-24.819	-0.0355	-2.5 to 2.5	Pass
				10	3.85	-30.298	-0.0433	-2.5 to 2.5	Pass
				30	3.85	-29.254	-0.0418	-2.5 to 2.5	Pass
				40	3.85	-23.761	-0.0340	-2.5 to 2.5	Pass
	50	3.85	-46.206	-0.0660	-2.5 to 2.5	Pass			
	707.5	6	0	20	3.27	-31.543	-0.0446	-2.5 to 2.5	Pass
					3.85	-5.193	-0.0073	-2.5 to 2.5	Pass
					4.43	-7.381	-0.0104	-2.5 to 2.5	Pass
				-30	3.85	-11.086	-0.0157	-2.5 to 2.5	Pass
				-20	3.85	-5.407	-0.0076	-2.5 to 2.5	Pass
				-10	3.85	1.259	0.0018	-2.5 to 2.5	Pass
				0	3.85	-37.937	-0.0536	-2.5 to 2.5	Pass
				10	3.85	-23.203	-0.0328	-2.5 to 2.5	Pass



	715.3	6	0	30	3.85	-9.713	-0.0137	-2.5 to 2.5	Pass
				40	3.85	-41.142	-0.0582	-2.5 to 2.5	Pass
				50	3.85	-15.621	-0.0221	-2.5 to 2.5	Pass
				20	3.27	21.086	0.0295	-2.5 to 2.5	Pass
					3.85	24.905	0.0348	-2.5 to 2.5	Pass
					4.43	45.991	0.0643	-2.5 to 2.5	Pass
				-30	3.85	17.695	0.0247	-2.5 to 2.5	Pass
				-20	3.85	32.601	0.0456	-2.5 to 2.5	Pass
				-10	3.85	41.542	0.0581	-2.5 to 2.5	Pass
				0	3.85	9.069	0.0127	-2.5 to 2.5	Pass
				10	3.85	17.824	0.0249	-2.5 to 2.5	Pass
				30	3.85	23.289	0.0326	-2.5 to 2.5	Pass
				40	3.85	33.474	0.0468	-2.5 to 2.5	Pass
				50	3.85	40.984	0.0573	-2.5 to 2.5	Pass

## 2.2 B12\_3MHz

### 2.2.1 Test Result

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	16.394	0.0234	-2.5 to 2.5	Pass			
					3.85	35.234	0.0503	-2.5 to 2.5	Pass			
					4.43	14.505	0.0207	-2.5 to 2.5	Pass			
				-30	3.85	26.121	0.0373	-2.5 to 2.5	Pass			
				-20	3.85	19.112	0.0273	-2.5 to 2.5	Pass			
				-10	3.85	39.597	0.0565	-2.5 to 2.5	Pass			
				0	3.85	27.695	0.0395	-2.5 to 2.5	Pass			
				10	3.85	25.363	0.0362	-2.5 to 2.5	Pass			
				30	3.85	34.461	0.0492	-2.5 to 2.5	Pass			
				40	3.85	-43.545	-0.0622	-2.5 to 2.5	Pass			
				50	3.85	-21.873	-0.0312	-2.5 to 2.5	Pass			
				707.5	15	0	20	3.27	-45.547	-0.0644	-2.5 to 2.5	Pass
								3.85	-41.027	-0.0580	-2.5 to 2.5	Pass
								4.43	-46.406	-0.0656	-2.5 to 2.5	Pass
							-30	3.85	-33.889	-0.0479	-2.5 to 2.5	Pass
	-20	3.85	-20.270				-0.0287	-2.5 to 2.5	Pass			
	-10	3.85	-42.944				-0.0607	-2.5 to 2.5	Pass			
	0	3.85	-14.391				-0.0203	-2.5 to 2.5	Pass			
	10	3.85	-19.341				-0.0273	-2.5 to 2.5	Pass			
	30	3.85	-23.589				-0.0333	-2.5 to 2.5	Pass			
	40	3.85	-27.137	-0.0384	-2.5 to 2.5	Pass						
	50	3.85	-6.094	-0.0086	-2.5 to 2.5	Pass						
	714.5	15	0	20	3.27	-8.440	-0.0118	-2.5 to 2.5	Pass			
					3.85	0.501	0.0007	-2.5 to 2.5	Pass			
					4.43	13.304	0.0186	-2.5 to 2.5	Pass			
				-30	3.85	28.839	0.0404	-2.5 to 2.5	Pass			
				-20	3.85	19.040	0.0266	-2.5 to 2.5	Pass			
				-10	3.85	30.956	0.0433	-2.5 to 2.5	Pass			
				0	3.85	6.566	0.0092	-2.5 to 2.5	Pass			
				10	3.85	35.262	0.0494	-2.5 to 2.5	Pass			
30				3.85	15.392	0.0215	-2.5 to 2.5	Pass				



				40	3.85	10.428	0.0146	-2.5 to 2.5	Pass
				50	3.85	34.161	0.0478	-2.5 to 2.5	Pass
16QAM	700.5	15	0	20	3.27	-32.258	-0.0460	-2.5 to 2.5	Pass
					3.85	-41.170	-0.0588	-2.5 to 2.5	Pass
					4.43	-22.588	-0.0322	-2.5 to 2.5	Pass
				-30	3.85	-42.501	-0.0607	-2.5 to 2.5	Pass
				-20	3.85	-42.129	-0.0601	-2.5 to 2.5	Pass
				-10	3.85	-46.234	-0.0660	-2.5 to 2.5	Pass
				0	3.85	0.401	0.0006	-2.5 to 2.5	Pass
				10	3.85	-31.657	-0.0452	-2.5 to 2.5	Pass
				30	3.85	-34.661	-0.0495	-2.5 to 2.5	Pass
				40	3.85	-31.629	-0.0452	-2.5 to 2.5	Pass
	50	3.85	-12.045	-0.0172	-2.5 to 2.5	Pass			
	707.5	15	0	20	3.27	-37.966	-0.0537	-2.5 to 2.5	Pass
					3.85	-21.329	-0.0301	-2.5 to 2.5	Pass
					4.43	-44.589	-0.0630	-2.5 to 2.5	Pass
				-30	3.85	-45.834	-0.0648	-2.5 to 2.5	Pass
				-20	3.85	-43.530	-0.0615	-2.5 to 2.5	Pass
				-10	3.85	-27.094	-0.0383	-2.5 to 2.5	Pass
				0	3.85	1.616	0.0023	-2.5 to 2.5	Pass
				10	3.85	-16.880	-0.0239	-2.5 to 2.5	Pass
				30	3.85	-30.355	-0.0429	-2.5 to 2.5	Pass
				40	3.85	-38.939	-0.0550	-2.5 to 2.5	Pass
	50	3.85	-45.047	-0.0637	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	17.009	0.0238	-2.5 to 2.5	Pass
					3.85	36.407	0.0510	-2.5 to 2.5	Pass
					4.43	8.240	0.0115	-2.5 to 2.5	Pass
				-30	3.85	31.314	0.0438	-2.5 to 2.5	Pass
				-20	3.85	12.817	0.0179	-2.5 to 2.5	Pass
				-10	3.85	39.854	0.0558	-2.5 to 2.5	Pass
				0	3.85	17.595	0.0246	-2.5 to 2.5	Pass
				10	3.85	45.648	0.0639	-2.5 to 2.5	Pass
30				3.85	20.313	0.0284	-2.5 to 2.5	Pass	
40				3.85	3.462	0.0048	-2.5 to 2.5	Pass	
50	3.85	32.487	0.0455	-2.5 to 2.5	Pass				

### 2.3 B12\_5MHz

#### 2.3.1 Test Result

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	11.272	0.0161	-2.5 to 2.5	Pass
					3.85	30.441	0.0434	-2.5 to 2.5	Pass
					4.43	10.471	0.0149	-2.5 to 2.5	Pass
				-30	3.85	34.060	0.0486	-2.5 to 2.5	Pass
				-20	3.85	29.297	0.0418	-2.5 to 2.5	Pass
				-10	3.85	13.018	0.0186	-2.5 to 2.5	Pass
				0	3.85	35.391	0.0505	-2.5 to 2.5	Pass
				10	3.85	22.101	0.0315	-2.5 to 2.5	Pass
				30	3.85	42.272	0.0603	-2.5 to 2.5	Pass
				40	3.85	25.377	0.0362	-2.5 to 2.5	Pass



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	707.5	25	0	50	3.85	1.903	0.0027	-2.5 to 2.5	Pass
				20	3.27	-40.269	-0.0569	-2.5 to 2.5	Pass
					3.85	-34.075	-0.0482	-2.5 to 2.5	Pass
					4.43	-33.960	-0.0480	-2.5 to 2.5	Pass
				-30	3.85	-30.255	-0.0428	-2.5 to 2.5	Pass
				-20	3.85	-24.948	-0.0353	-2.5 to 2.5	Pass
				-10	3.85	-17.695	-0.0250	-2.5 to 2.5	Pass
				0	3.85	-9.313	-0.0132	-2.5 to 2.5	Pass
				10	3.85	2.246	0.0032	-2.5 to 2.5	Pass
				30	3.85	13.061	0.0185	-2.5 to 2.5	Pass
	40	3.85	28.596	0.0404	-2.5 to 2.5	Pass			
	50	3.85	42.887	0.0606	-2.5 to 2.5	Pass			
	713.5	25	0	20	3.27	-38.953	-0.0546	-2.5 to 2.5	Pass
					3.85	38.495	0.0540	-2.5 to 2.5	Pass
					4.43	6.151	0.0086	-2.5 to 2.5	Pass
				-30	3.85	15.678	0.0220	-2.5 to 2.5	Pass
				-20	3.85	25.005	0.0350	-2.5 to 2.5	Pass
				-10	3.85	23.446	0.0329	-2.5 to 2.5	Pass
				0	3.85	21.544	0.0302	-2.5 to 2.5	Pass
				10	3.85	21.558	0.0302	-2.5 to 2.5	Pass
30				3.85	24.805	0.0348	-2.5 to 2.5	Pass	
40				3.85	17.481	0.0245	-2.5 to 2.5	Pass	
50	3.85	17.066	0.0239	-2.5 to 2.5	Pass				
16QAM	701.5	25	0	20	3.27	37.823	0.0539	-2.5 to 2.5	Pass
					3.85	9.713	0.0138	-2.5 to 2.5	Pass
					4.43	25.334	0.0361	-2.5 to 2.5	Pass
				-30	3.85	16.880	0.0241	-2.5 to 2.5	Pass
				-20	3.85	14.505	0.0207	-2.5 to 2.5	Pass
				-10	3.85	31.815	0.0454	-2.5 to 2.5	Pass
				0	3.85	40.326	0.0575	-2.5 to 2.5	Pass
				10	3.85	5.221	0.0074	-2.5 to 2.5	Pass
				30	3.85	11.244	0.0160	-2.5 to 2.5	Pass
				40	3.85	24.462	0.0349	-2.5 to 2.5	Pass
	50	3.85	34.332	0.0489	-2.5 to 2.5	Pass			
	707.5	25	0	20	3.27	6.537	0.0092	-2.5 to 2.5	Pass
					3.85	24.619	0.0348	-2.5 to 2.5	Pass
					4.43	42.472	0.0600	-2.5 to 2.5	Pass
				-30	3.85	19.197	0.0271	-2.5 to 2.5	Pass
				-20	3.85	36.907	0.0522	-2.5 to 2.5	Pass
				-10	3.85	9.127	0.0129	-2.5 to 2.5	Pass
				0	3.85	27.323	0.0386	-2.5 to 2.5	Pass
				10	3.85	45.304	0.0640	-2.5 to 2.5	Pass
				30	3.85	11.473	0.0162	-2.5 to 2.5	Pass
				40	3.85	30.613	0.0433	-2.5 to 2.5	Pass
	50	3.85	3.462	0.0049	-2.5 to 2.5	Pass			
	713.5	25	0	20	3.27	12.960	0.0182	-2.5 to 2.5	Pass
					3.85	10.300	0.0144	-2.5 to 2.5	Pass
					4.43	18.511	0.0259	-2.5 to 2.5	Pass
				-30	3.85	36.192	0.0507	-2.5 to 2.5	Pass
				-20	3.85	21.229	0.0298	-2.5 to 2.5	Pass
				-10	3.85	11.244	0.0158	-2.5 to 2.5	Pass
				0	3.85	45.991	0.0645	-2.5 to 2.5	Pass
				10	3.85	28.825	0.0404	-2.5 to 2.5	Pass
30				3.85	8.354	0.0117	-2.5 to 2.5	Pass	
40				3.85	41.313	0.0579	-2.5 to 2.5	Pass	





				50	3.85	26.793	0.0376	-2.5 to 2.5	Pass
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## 2.4 B12\_10MHz

### 2.4.1 Test Result

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	-38.667	-0.0549	-2.5 to 2.5	Pass
					3.85	-3.519	-0.0050	-2.5 to 2.5	Pass
					4.43	6.409	0.0091	-2.5 to 2.5	Pass
				-30	3.85	15.879	0.0226	-2.5 to 2.5	Pass
				-20	3.85	12.960	0.0184	-2.5 to 2.5	Pass
				-10	3.85	17.266	0.0245	-2.5 to 2.5	Pass
				0	3.85	11.616	0.0165	-2.5 to 2.5	Pass
				10	3.85	0.815	0.0012	-2.5 to 2.5	Pass
				30	3.85	37.708	0.0536	-2.5 to 2.5	Pass
	40	3.85	30.870	0.0438	-2.5 to 2.5	Pass			
	50	3.85	22.359	0.0318	-2.5 to 2.5	Pass			
	707.5	50	0	20	3.27	-11.230	-0.0159	-2.5 to 2.5	Pass
					3.85	24.233	0.0343	-2.5 to 2.5	Pass
					4.43	7.453	0.0105	-2.5 to 2.5	Pass
				-30	3.85	35.663	0.0504	-2.5 to 2.5	Pass
				-20	3.85	7.939	0.0112	-2.5 to 2.5	Pass
				-10	3.85	28.338	0.0401	-2.5 to 2.5	Pass
				0	3.85	47.908	0.0677	-2.5 to 2.5	Pass
				10	3.85	17.796	0.0252	-2.5 to 2.5	Pass
				30	3.85	37.451	0.0529	-2.5 to 2.5	Pass
	40	3.85	7.324	0.0104	-2.5 to 2.5	Pass			
	50	3.85	24.033	0.0340	-2.5 to 2.5	Pass			
	711	50	0	20	3.27	-5.693	-0.0080	-2.5 to 2.5	Pass
					3.85	24.433	0.0344	-2.5 to 2.5	Pass
					4.43	37.766	0.0531	-2.5 to 2.5	Pass
				-30	3.85	44.847	0.0631	-2.5 to 2.5	Pass
				-20	3.85	37.622	0.0529	-2.5 to 2.5	Pass
-10				3.85	32.616	0.0459	-2.5 to 2.5	Pass	
0				3.85	25.649	0.0361	-2.5 to 2.5	Pass	
10				3.85	8.798	0.0124	-2.5 to 2.5	Pass	
30				3.85	35.591	0.0501	-2.5 to 2.5	Pass	
40	3.85	13.976	0.0197	-2.5 to 2.5	Pass				
50	3.85	38.180	0.0537	-2.5 to 2.5	Pass				
16QAM	704	50	0	20	3.27	-1.245	-0.0018	-2.5 to 2.5	Pass
					3.85	-17.338	-0.0246	-2.5 to 2.5	Pass
					4.43	-19.884	-0.0282	-2.5 to 2.5	Pass
				-30	3.85	-22.645	-0.0322	-2.5 to 2.5	Pass
				-20	3.85	-21.329	-0.0303	-2.5 to 2.5	Pass
				-10	3.85	-18.024	-0.0256	-2.5 to 2.5	Pass
				0	3.85	-11.129	-0.0158	-2.5 to 2.5	Pass
				10	3.85	-7.224	-0.0103	-2.5 to 2.5	Pass
				30	3.85	1.001	0.0014	-2.5 to 2.5	Pass
40	3.85	9.556	0.0136	-2.5 to 2.5	Pass				
50	3.85	18.754	0.0266	-2.5 to 2.5	Pass				

	707.5	50	0	20	3.27	32.616	0.0461	-2.5 to 2.5	Pass	
					3.85	-7.238	-0.0102	-2.5 to 2.5	Pass	
					4.43	-35.563	-0.0503	-2.5 to 2.5	Pass	
				-30	3.85	-12.517	-0.0177	-2.5 to 2.5	Pass	
					-20	3.85	-30.241	-0.0427	-2.5 to 2.5	Pass
						-10	3.85	-40.054	-0.0566	-2.5 to 2.5
				0	3.85	-1.059	-0.0015	-2.5 to 2.5	Pass	
					10	3.85	-9.699	-0.0137	-2.5 to 2.5	Pass
					30	3.85	-18.125	-0.0256	-2.5 to 2.5	Pass
	711	50	0	20	3.27	6.652	0.0094	-2.5 to 2.5	Pass	
					3.85	-31.557	-0.0444	-2.5 to 2.5	Pass	
					4.43	-4.163	-0.0059	-2.5 to 2.5	Pass	
				-30	3.85	-20.084	-0.0282	-2.5 to 2.5	Pass	
					-20	3.85	31.185	0.0439	-2.5 to 2.5	Pass
						-10	3.85	3.033	0.0043	-2.5 to 2.5
				0	3.85	-1.702	-0.0024	-2.5 to 2.5	Pass	
					10	3.85	-19.183	-0.0270	-2.5 to 2.5	Pass
					30	3.85	-29.397	-0.0413	-2.5 to 2.5	Pass
50	3.85	-40.197	-0.0565	-2.5 to 2.5	Pass					
	50	3.85	3.247	0.0046	-2.5 to 2.5	Pass				
		50	3.85	3.247	0.0046	-2.5 to 2.5	Pass			

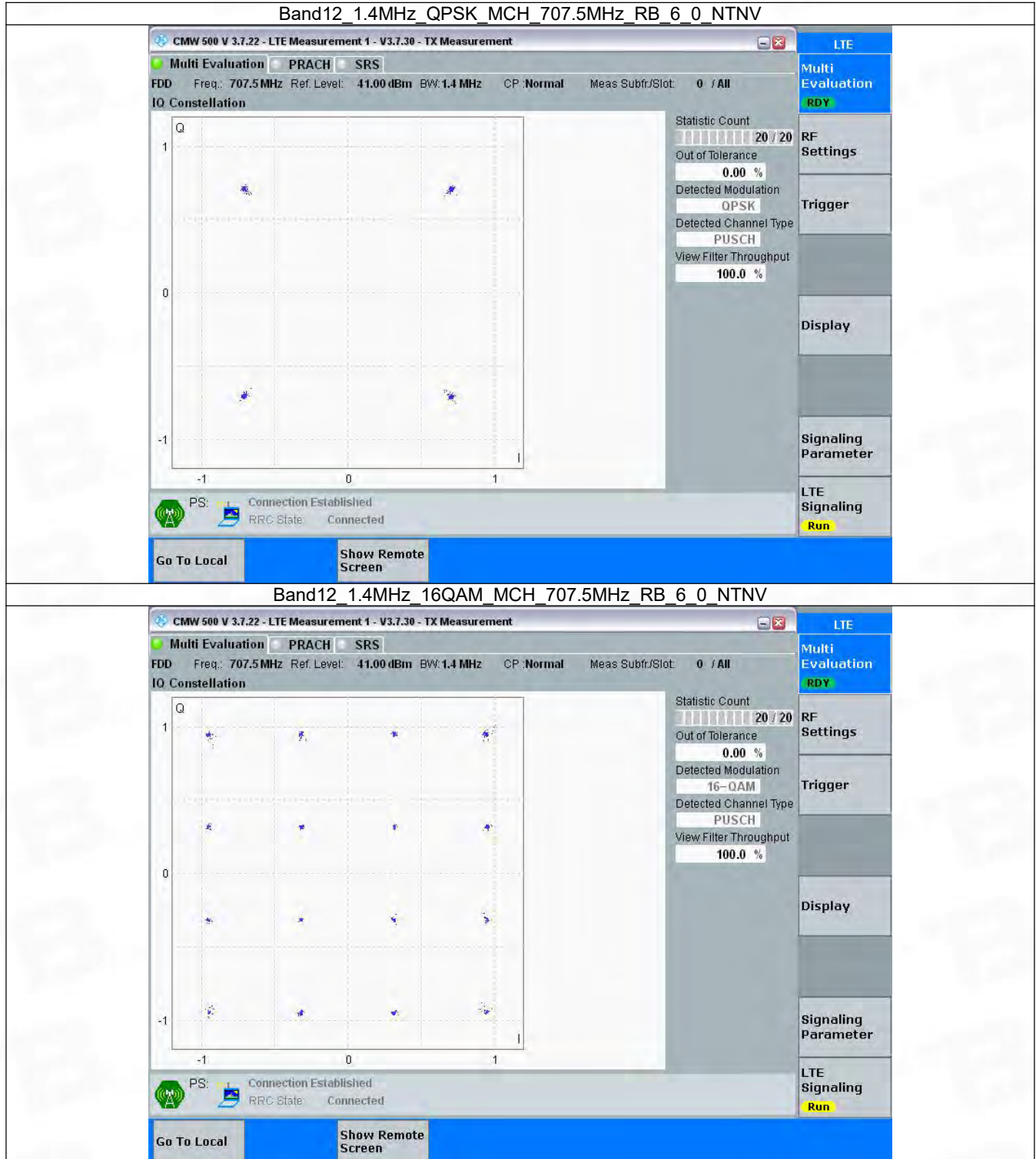
### 3. Modulation Characteristics

#### 3.1 B12\_1.4MHz

##### 3.1.1 Test Result

Band: 12 / Bandwidth: 1.4MHz / NTN						
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 Test Graph



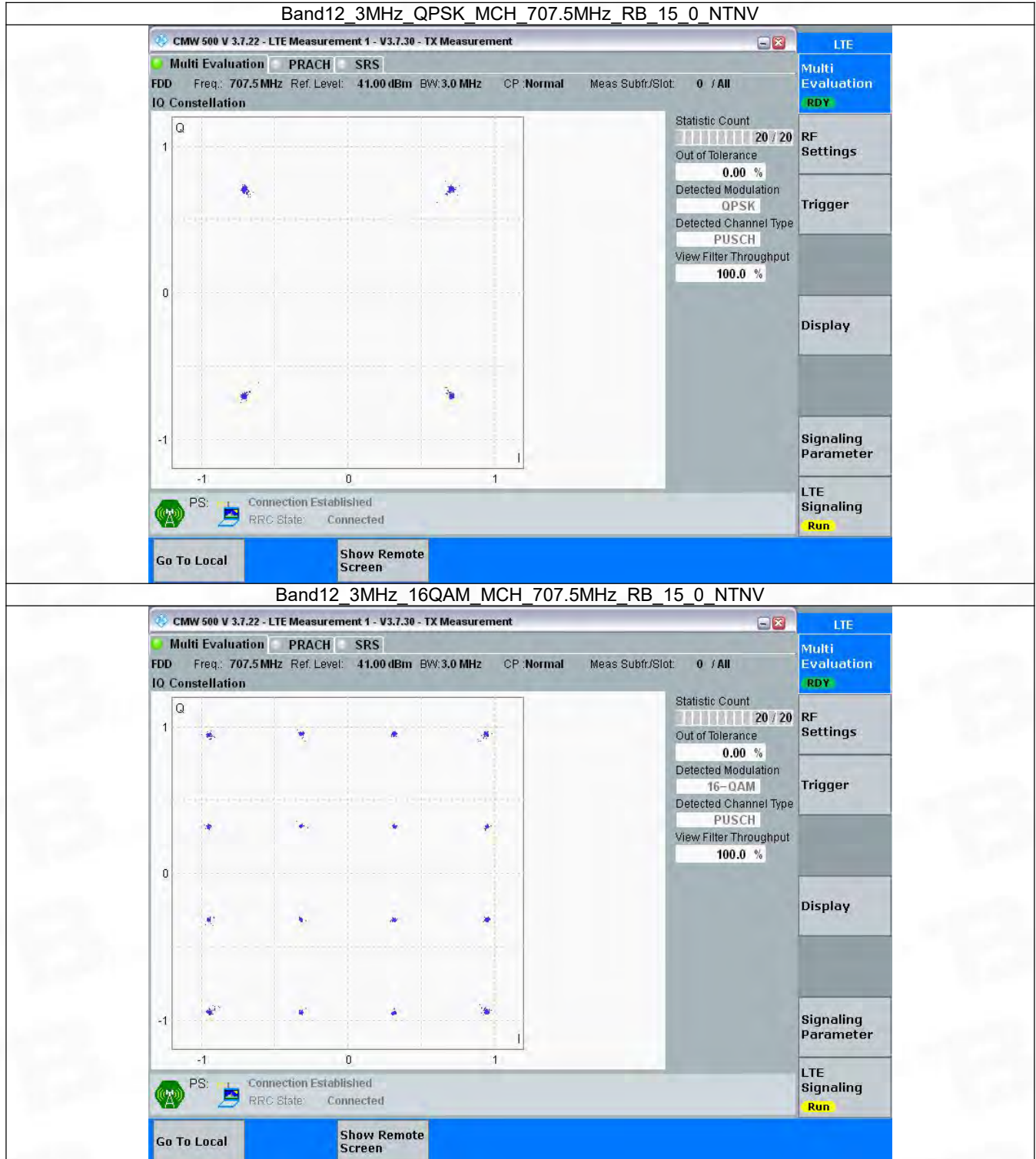


### 3.2 B12\_3MHz

#### 3.2.1 Test Result

Band: 12 / Bandwidth: 3MHz / NTN						
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

### 3.2.2 Test Graph

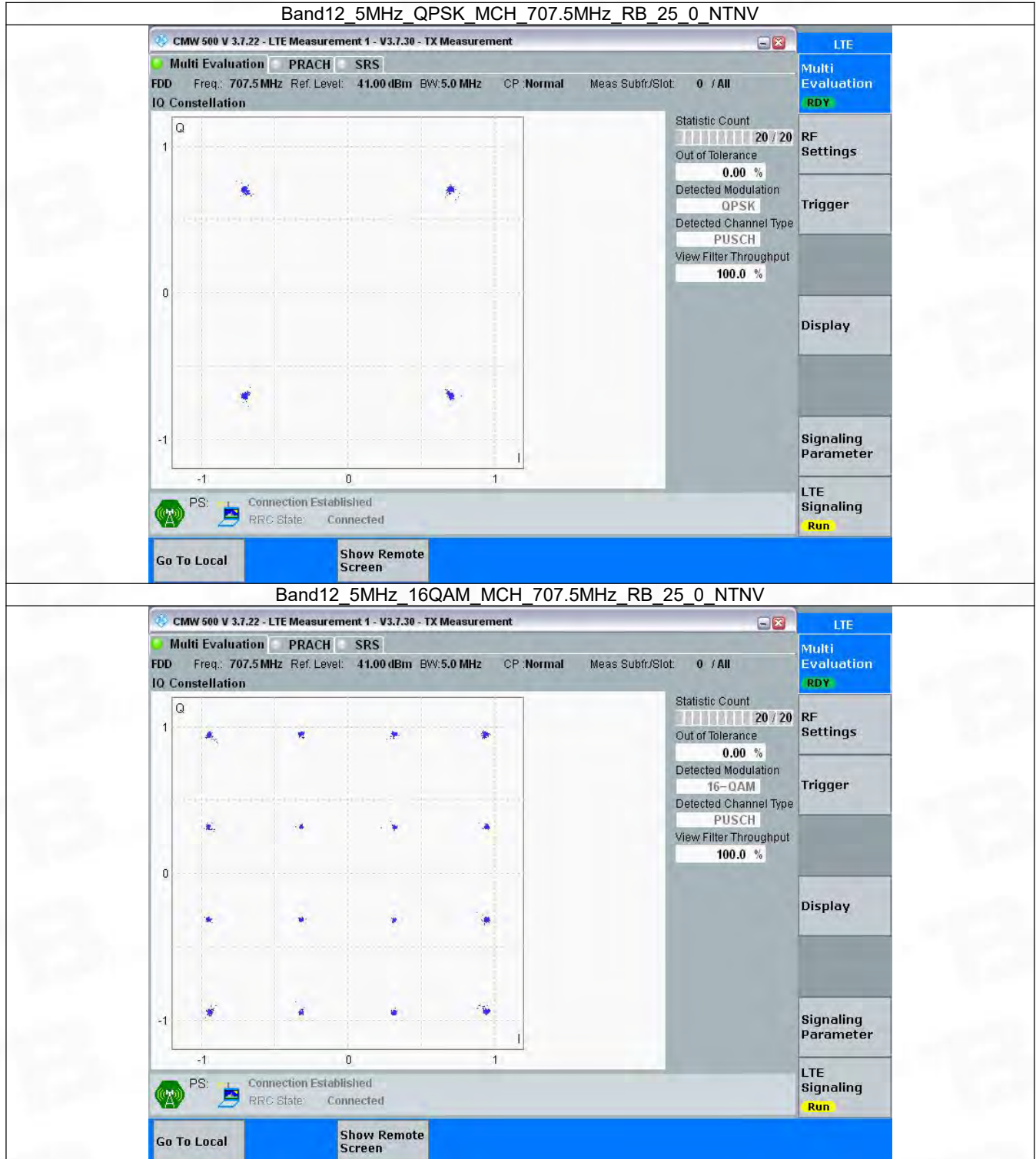


### 3.3 B12\_5MHz

#### 3.3.1 Test Result

Band: 12 / Bandwidth: 5MHz / NTN						
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

### 3.3.2 Test Graph



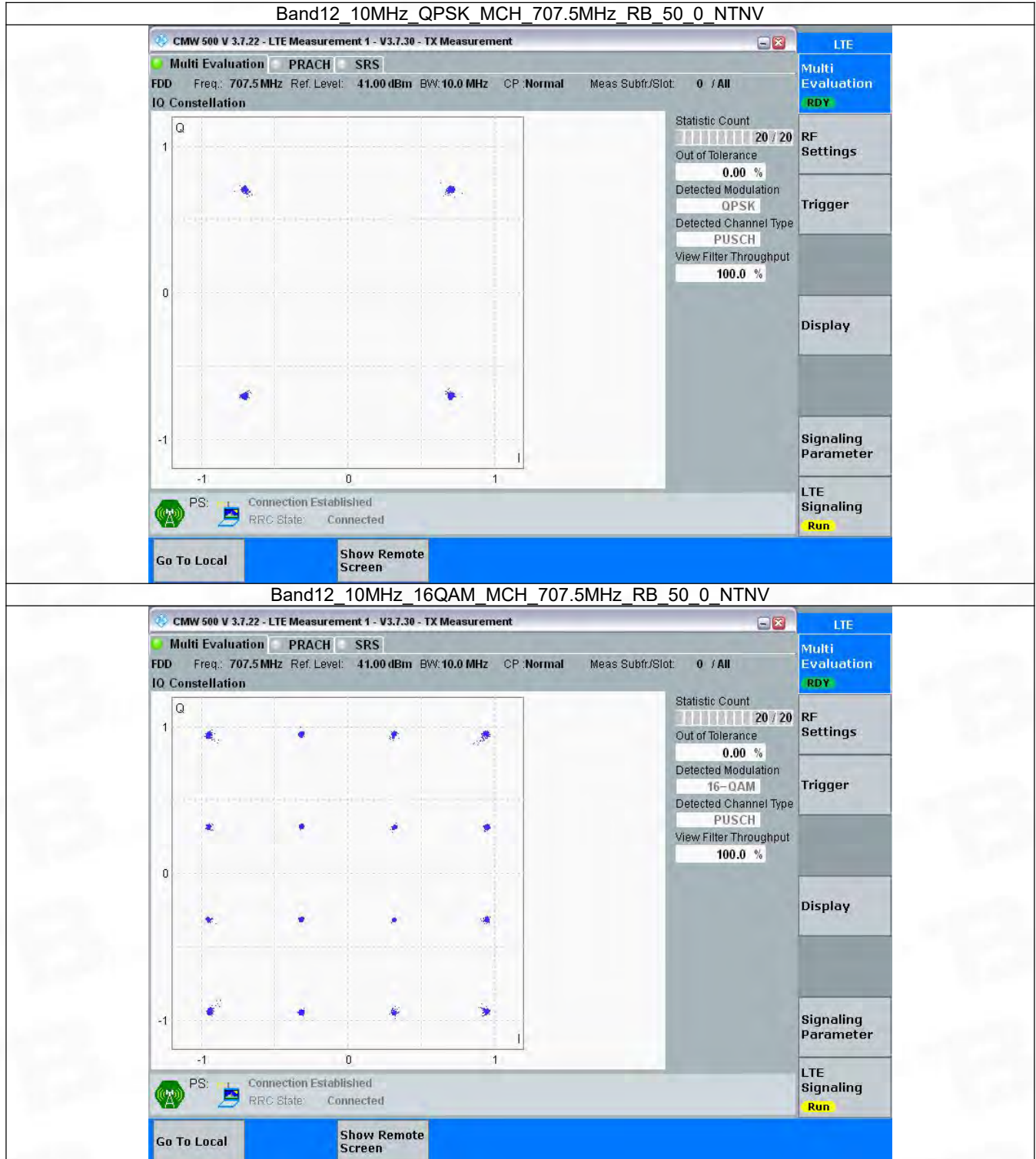
### 3.4 B12\_10MHz

#### 3.4.1 Test Result

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	50	0	Refer To Test Graph		Pass



### 3.4.2 Test Graph



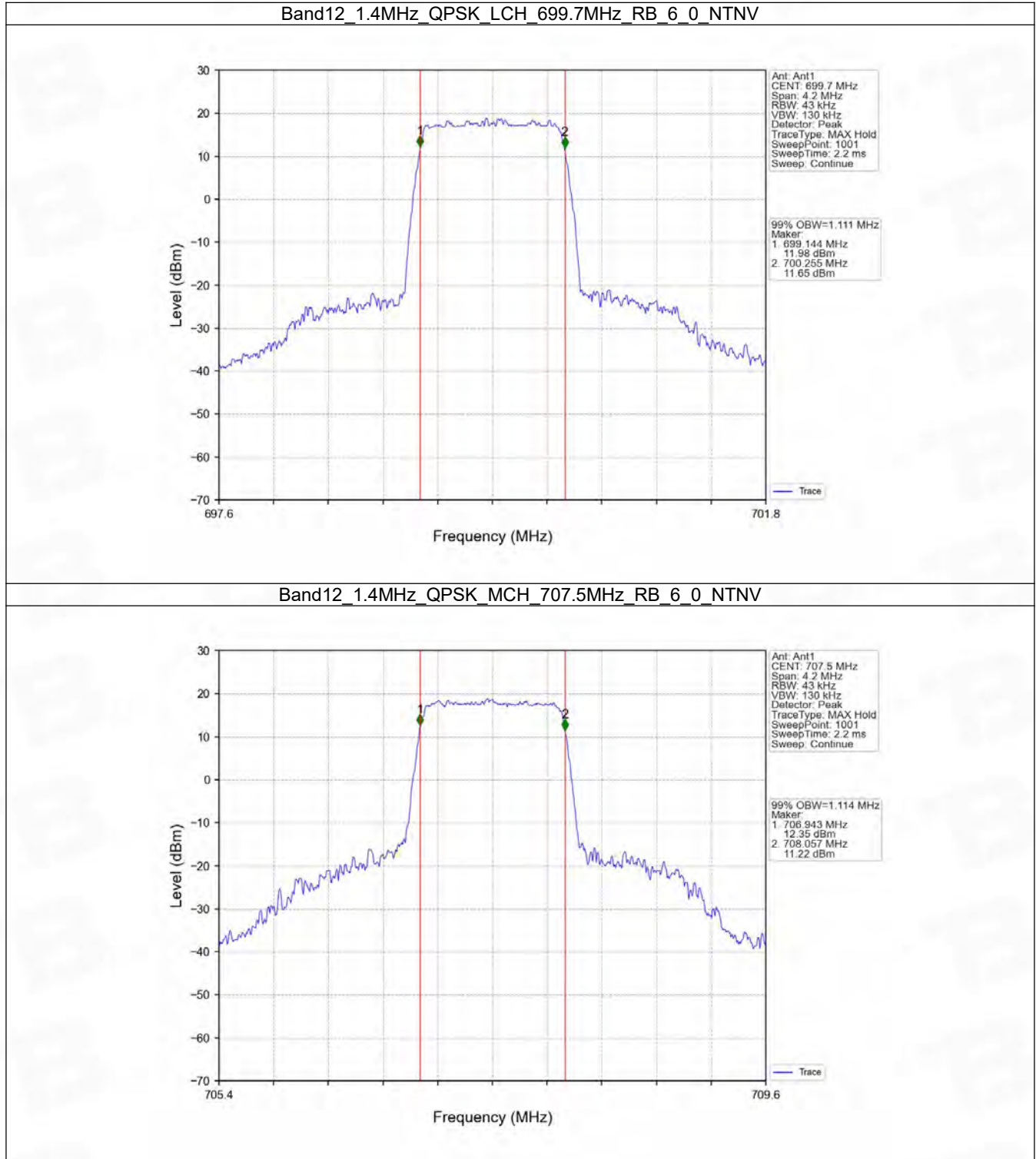
#### 4. 99% & 26dB Bandwidth

##### 4.1 Band12\_OBW

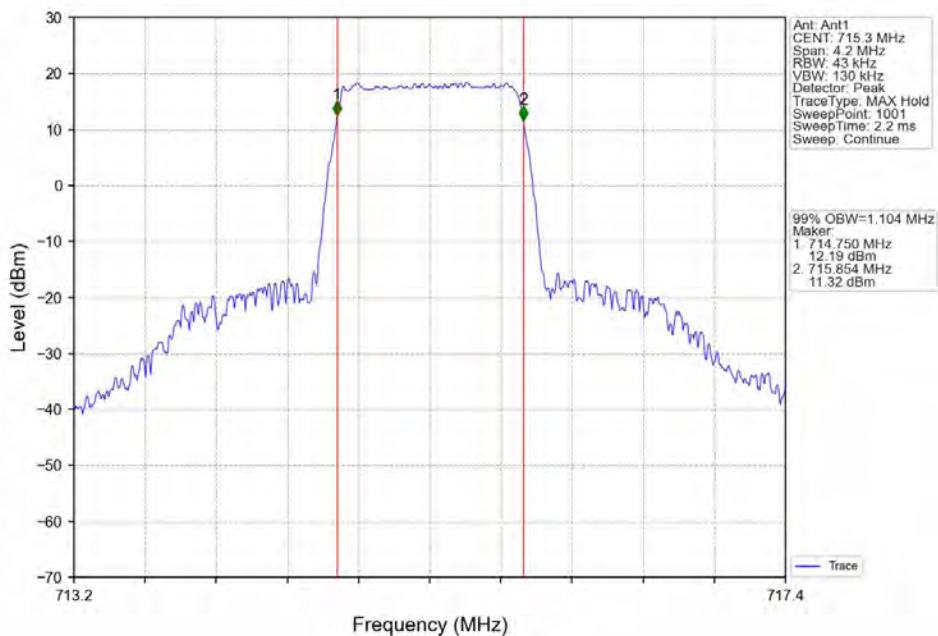
##### 4.1.1 Test Result

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	1.111	/	Pass
		707.5	6	0	1.114	/	Pass
		715.3	6	0	1.104	/	Pass
	16QAM	699.7	6	0	1.111	/	Pass
		707.5	6	0	1.107	/	Pass
		715.3	6	0	1.116	/	Pass
3	QPSK	700.5	15	0	2.750	/	Pass
		707.5	15	0	2.752	/	Pass
		714.5	15	0	2.764	/	Pass
	16QAM	700.5	15	0	2.760	/	Pass
		707.5	15	0	2.750	/	Pass
		714.5	15	0	2.775	/	Pass
5	QPSK	701.5	25	0	4.537	/	Pass
		707.5	25	0	4.532	/	Pass
		713.5	25	0	4.567	/	Pass
	16QAM	701.5	25	0	4.545	/	Pass
		707.5	25	0	4.569	/	Pass
		713.5	25	0	4.573	/	Pass
10	QPSK	704	50	0	9.039	/	Pass
		707.5	50	0	9.019	/	Pass
		711	50	0	9.084	/	Pass
	16QAM	704	50	0	9.017	/	Pass
		707.5	50	0	9.060	/	Pass
		711	50	0	9.100	/	Pass

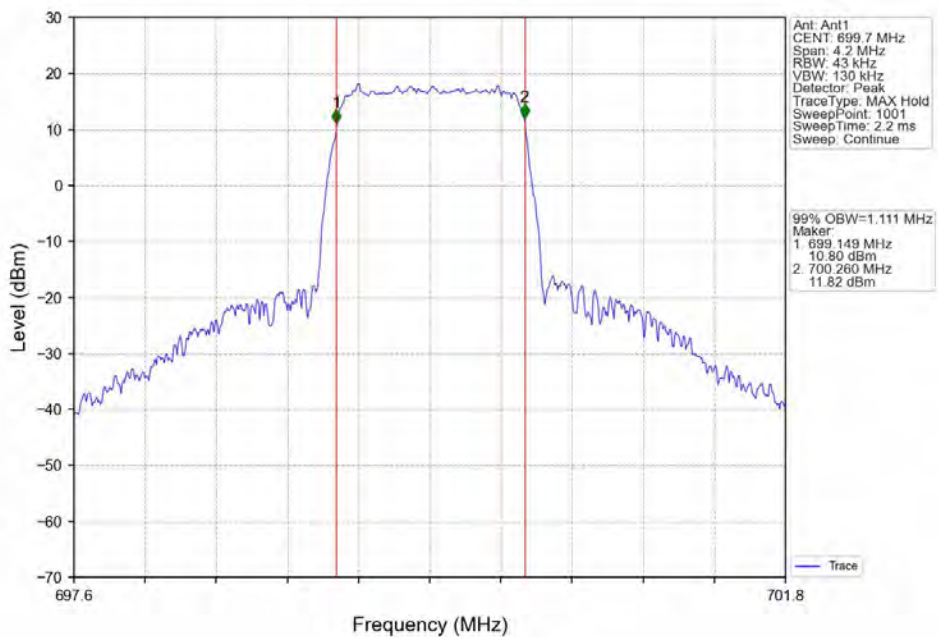
### 4.1.2 Test Graph



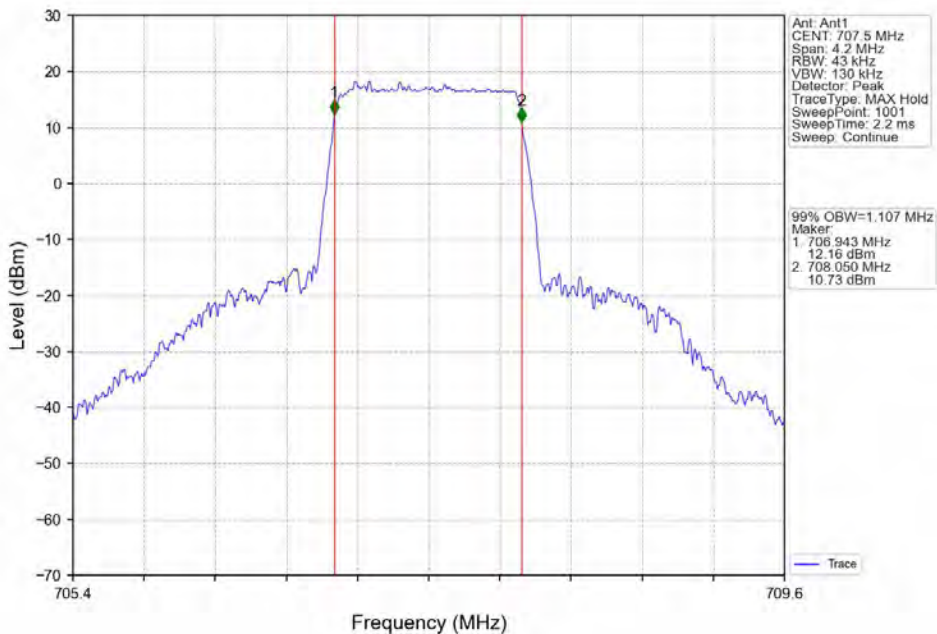
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



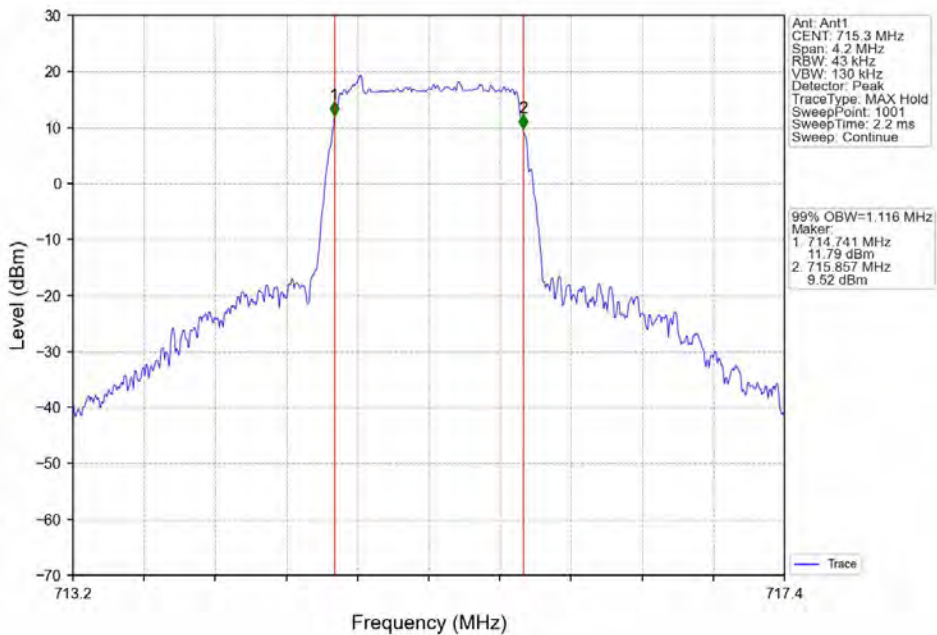
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



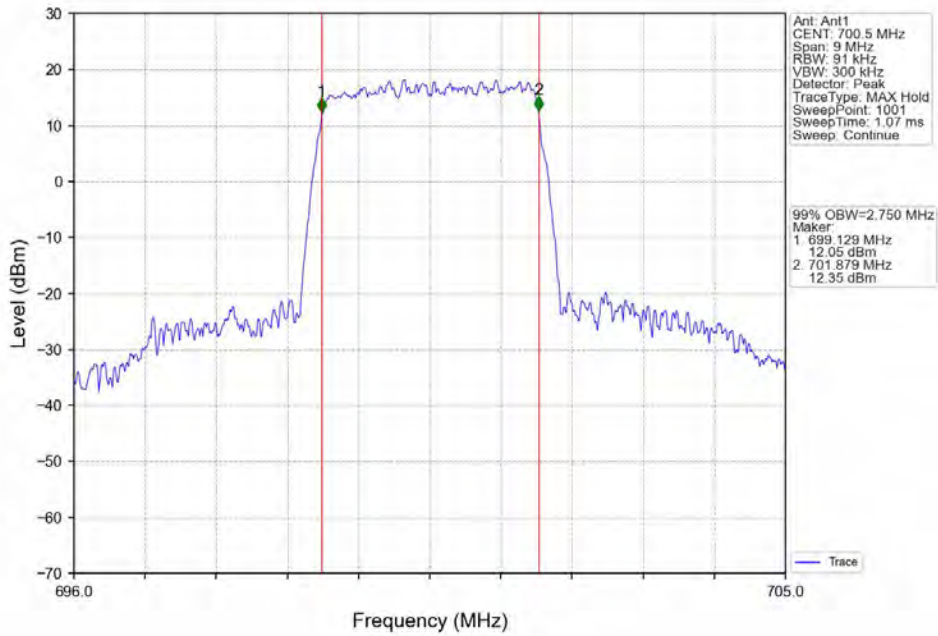
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTN



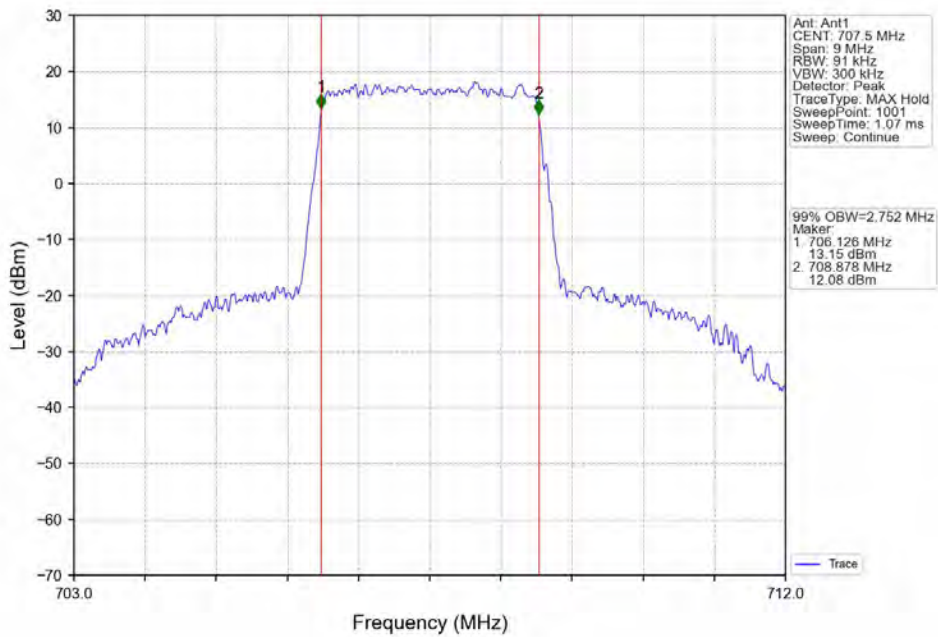
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTN



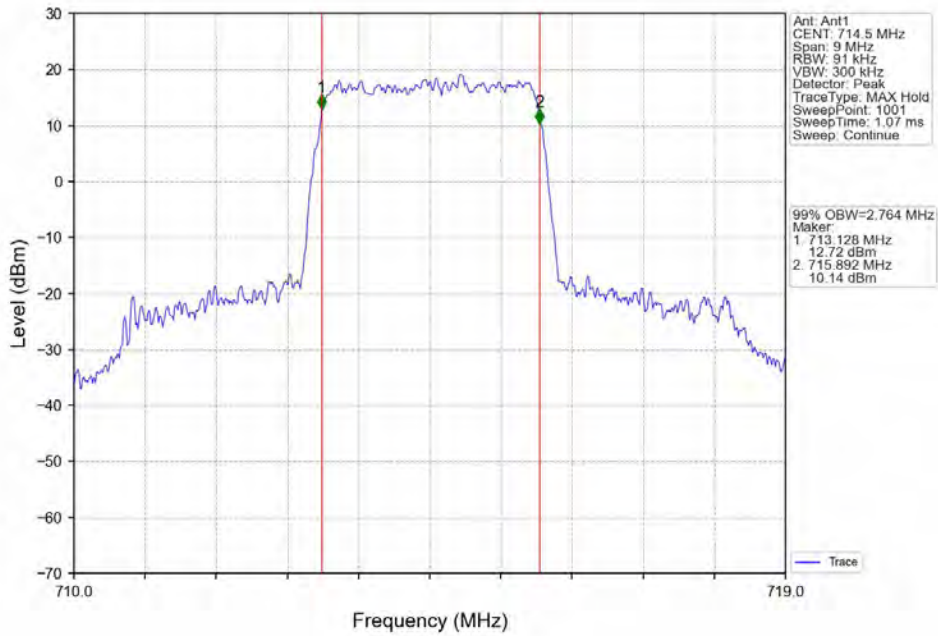
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



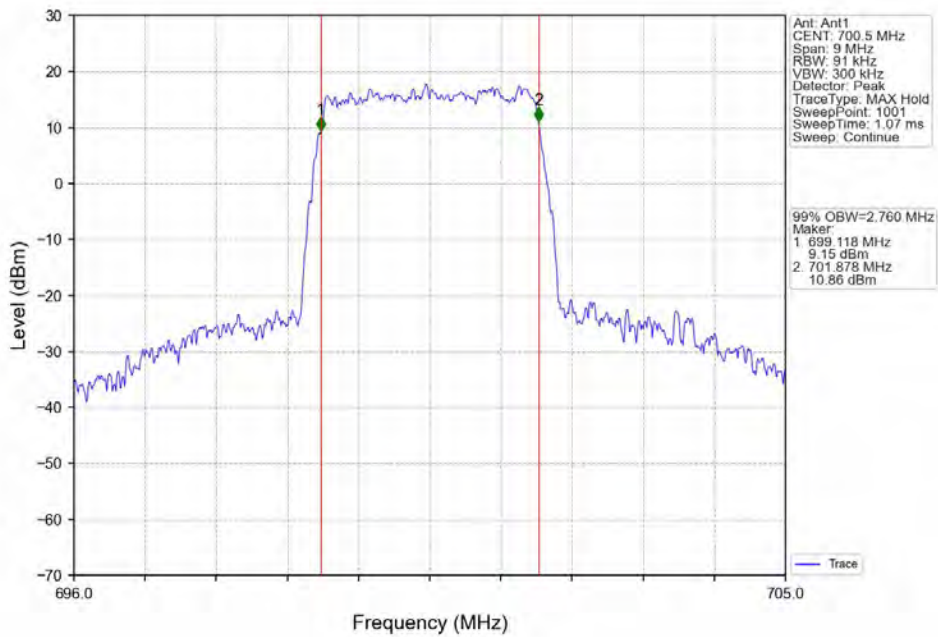
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



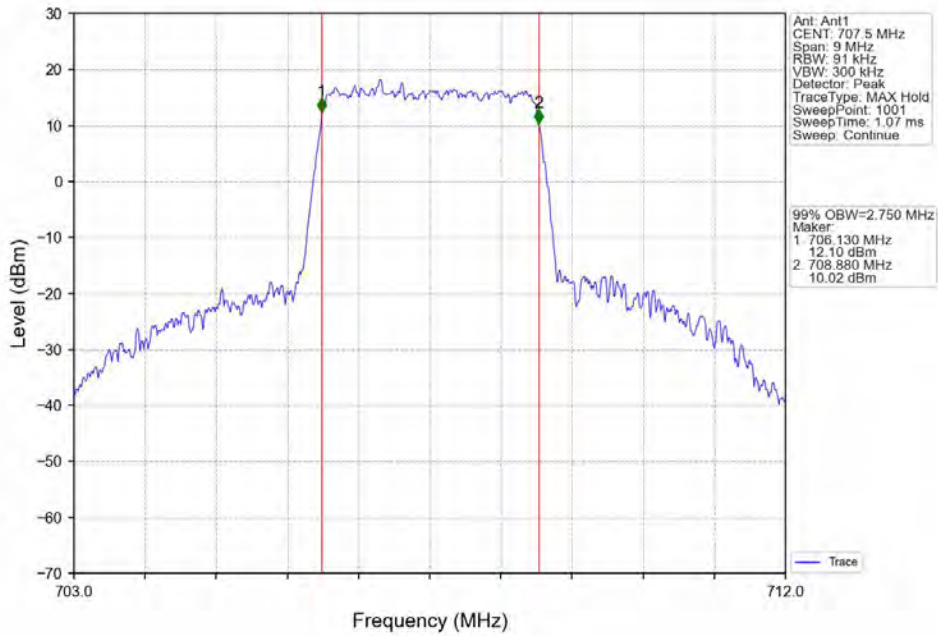
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



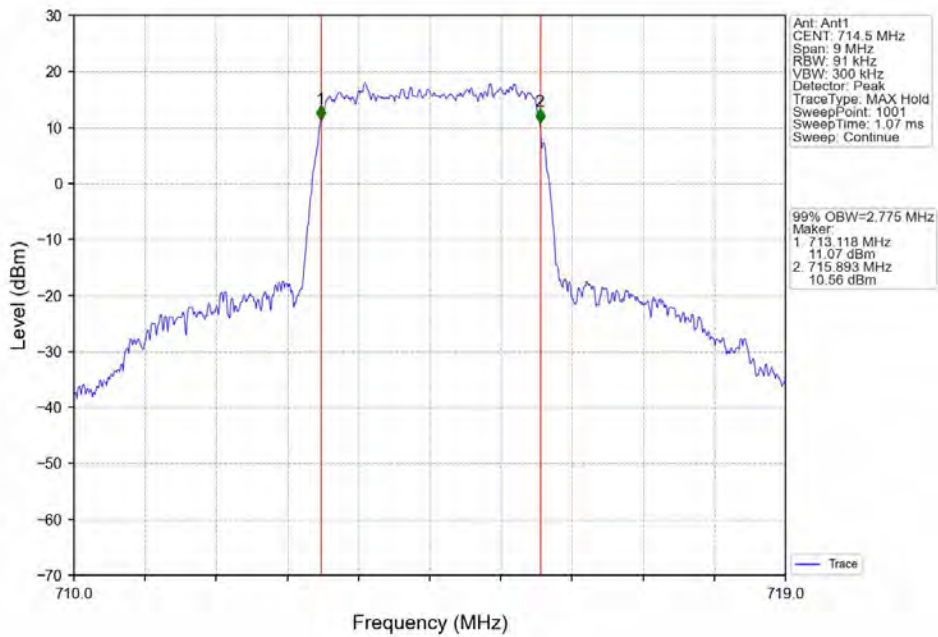
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_15\_0\_NTNV

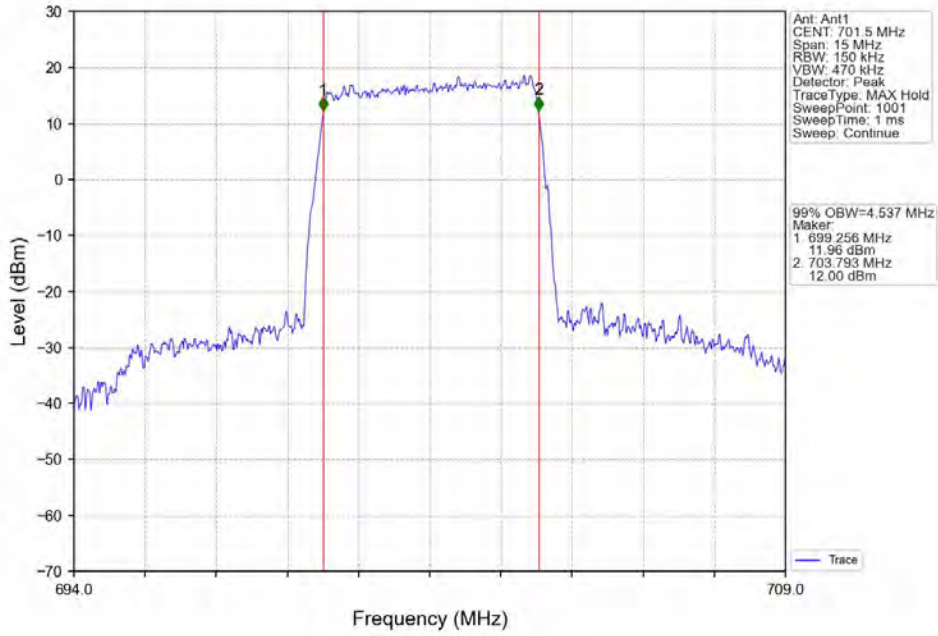


Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV

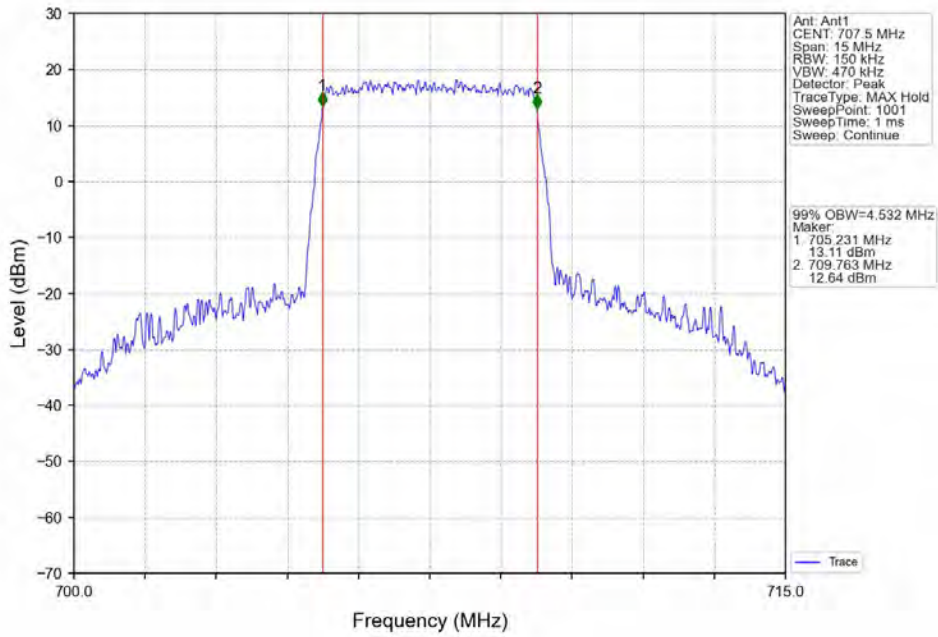




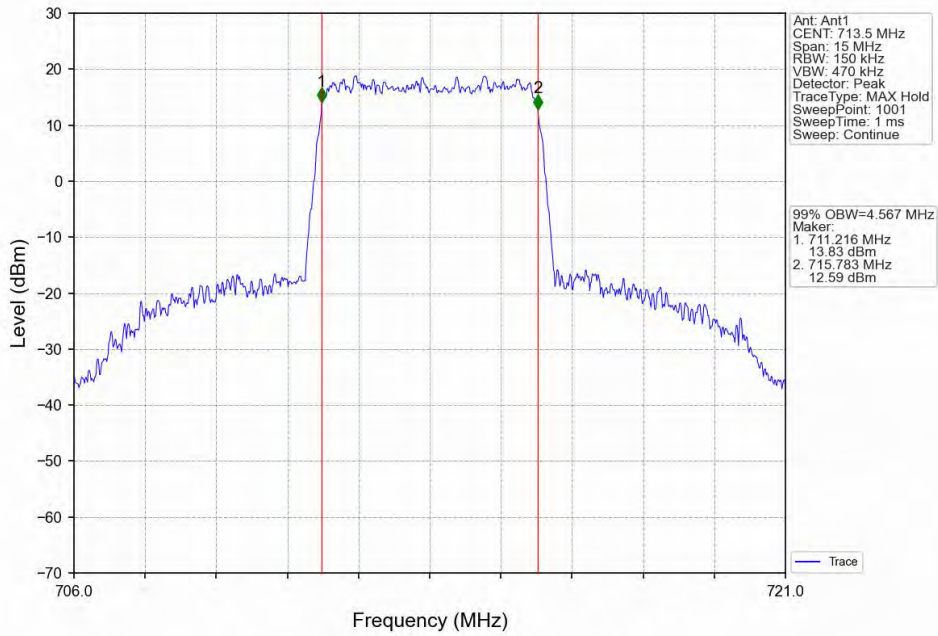
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



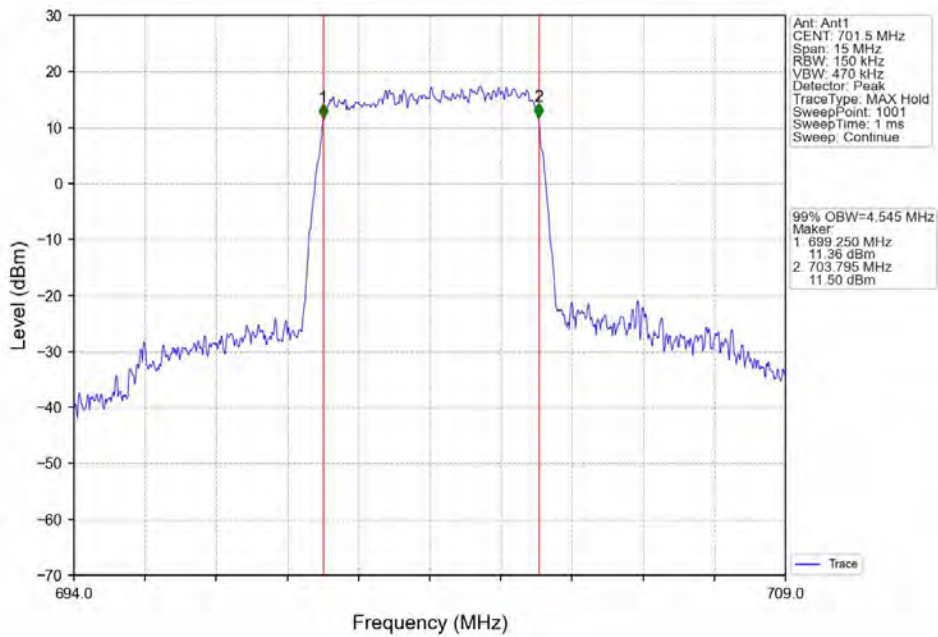
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV

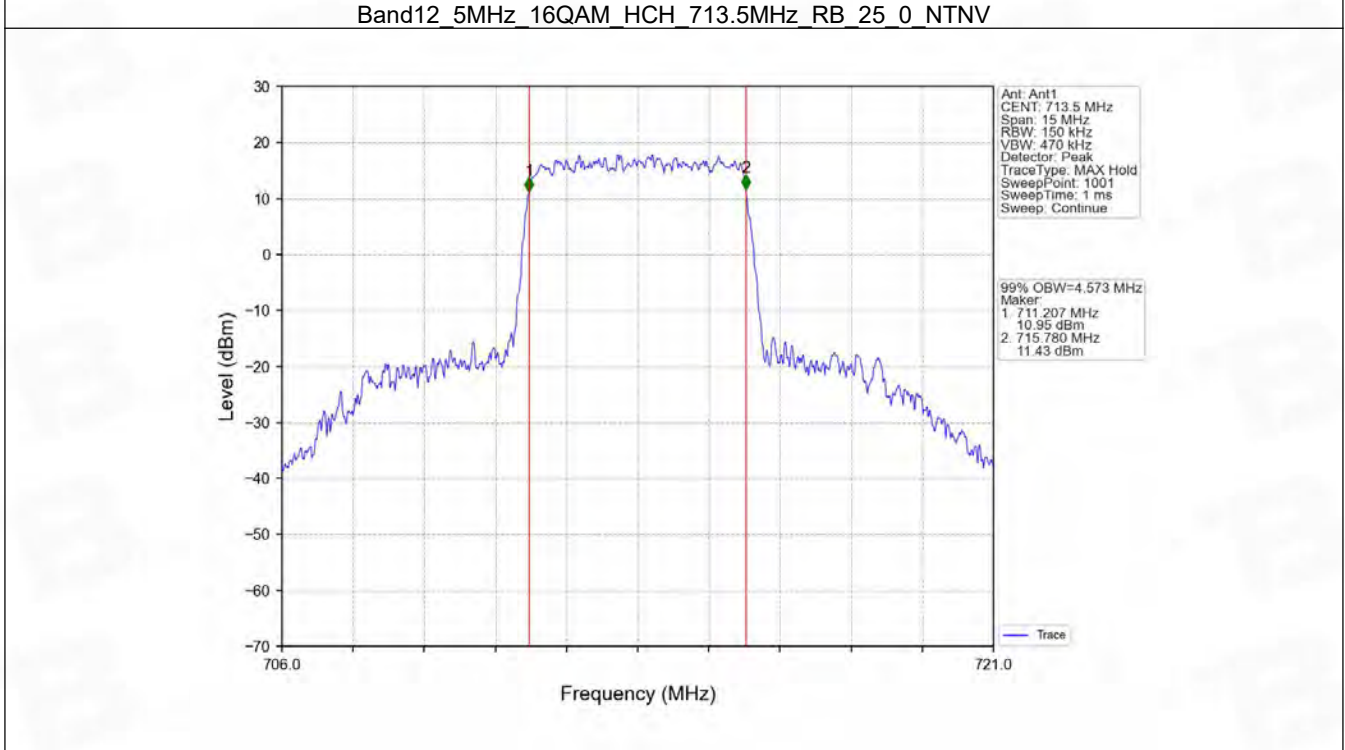
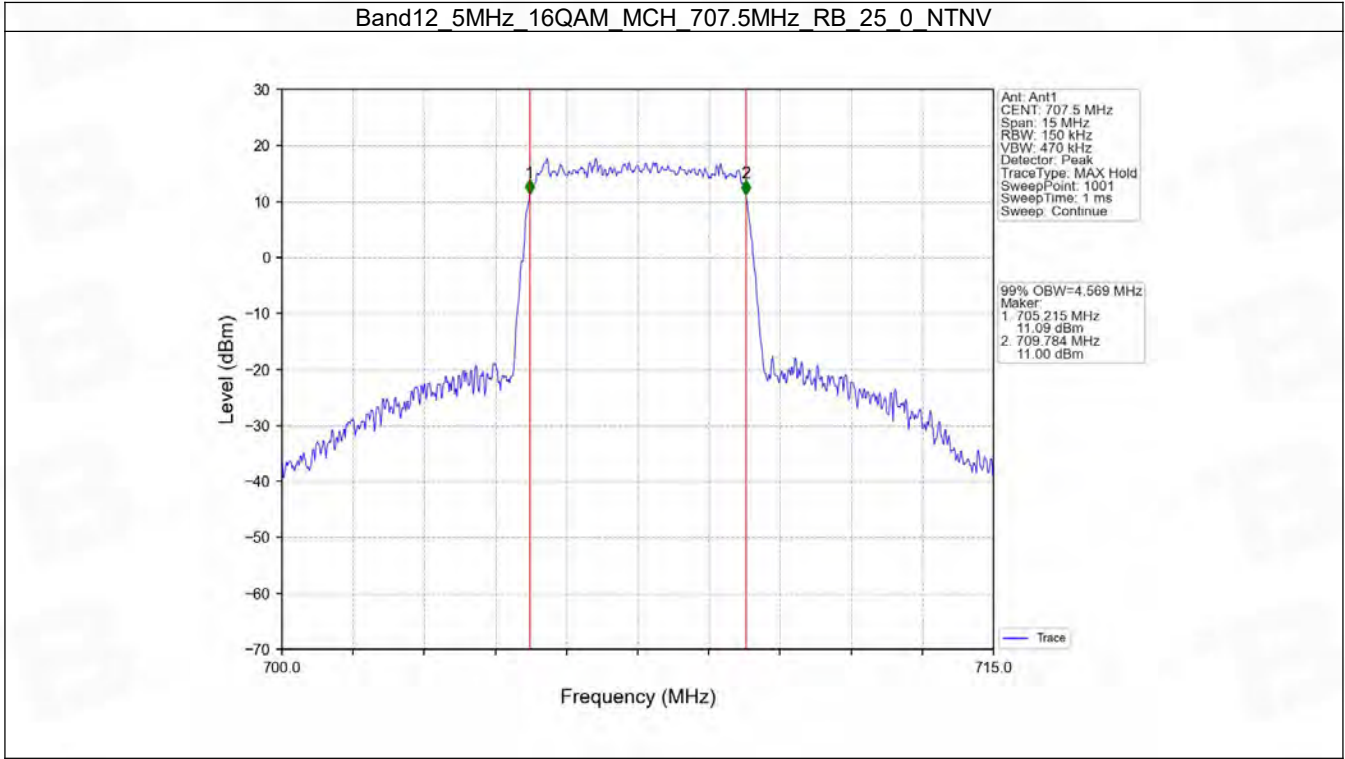


Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV

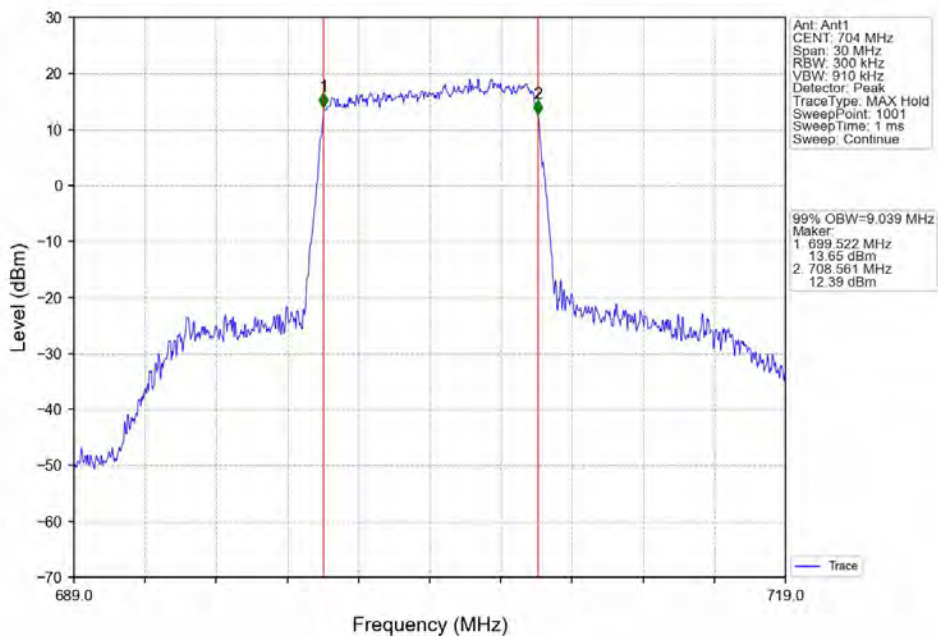


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV

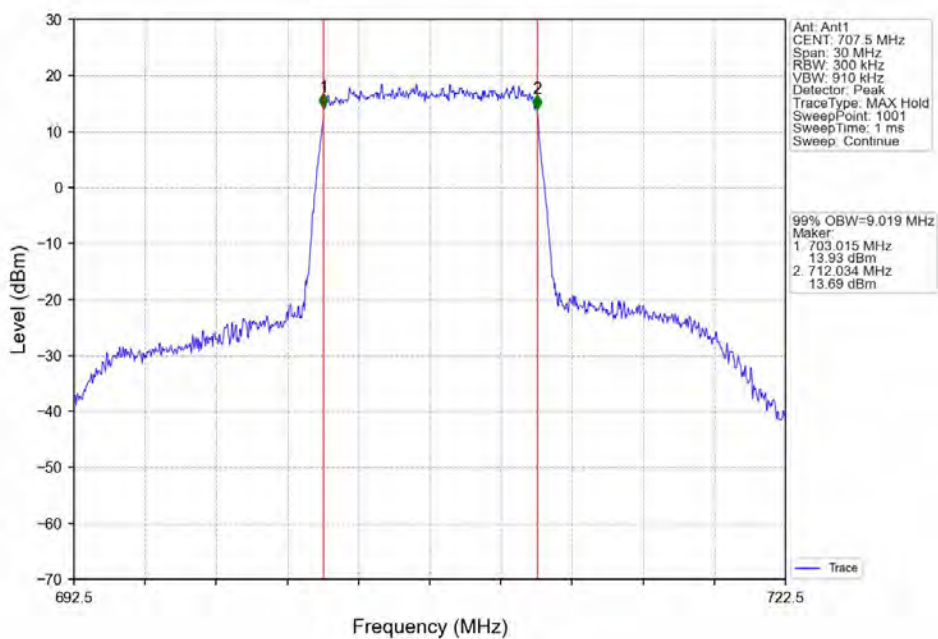




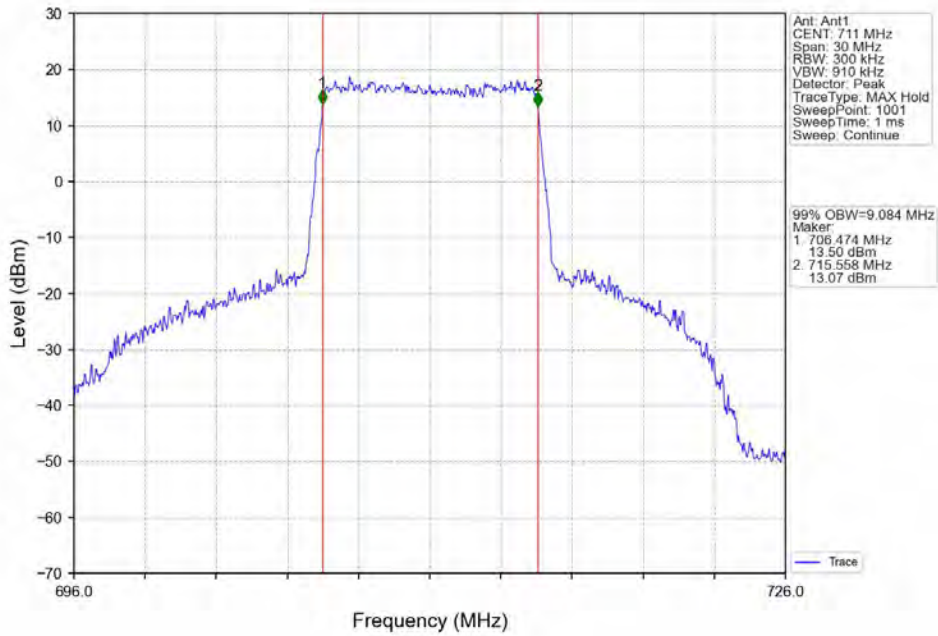
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



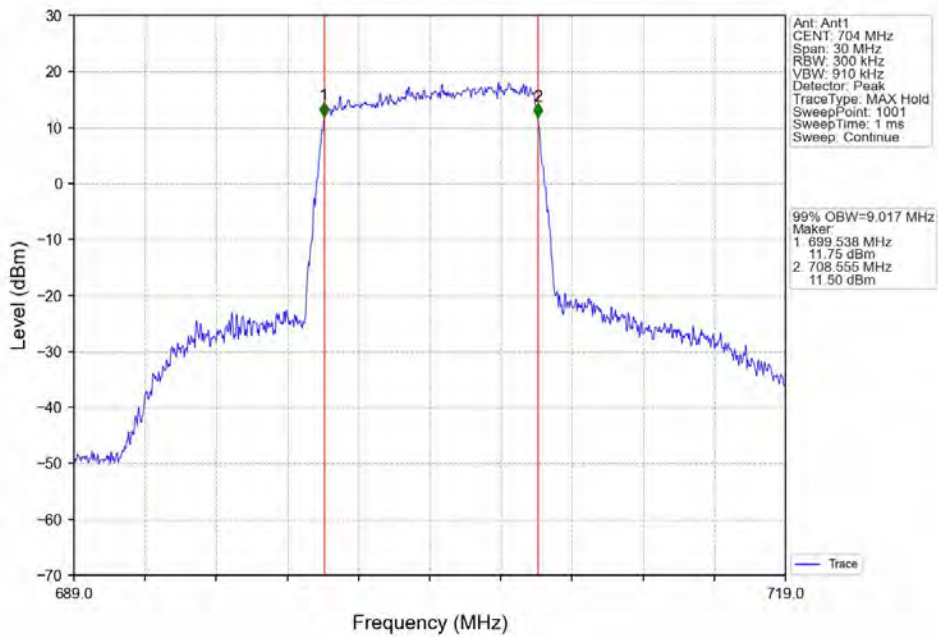
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



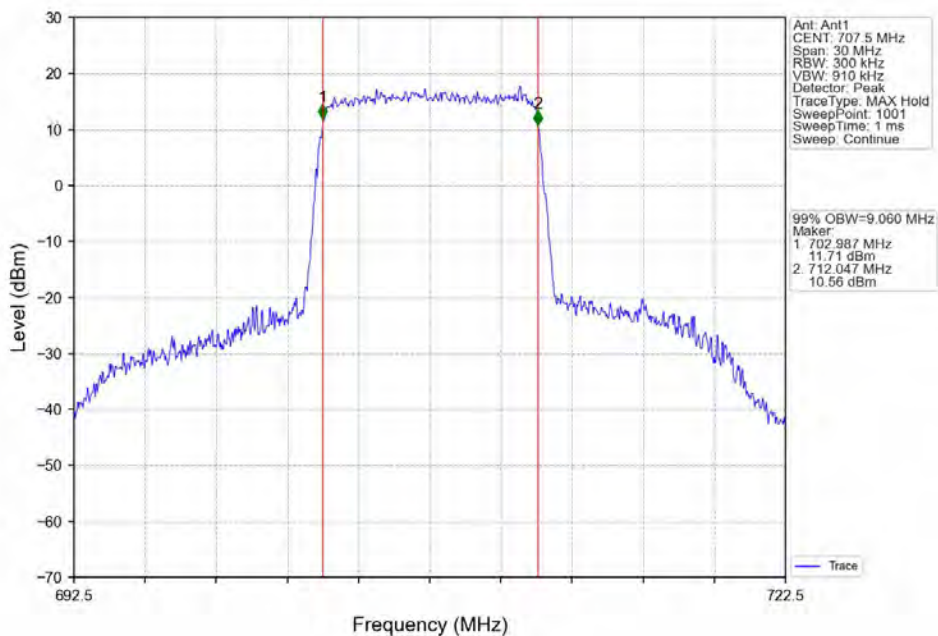
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



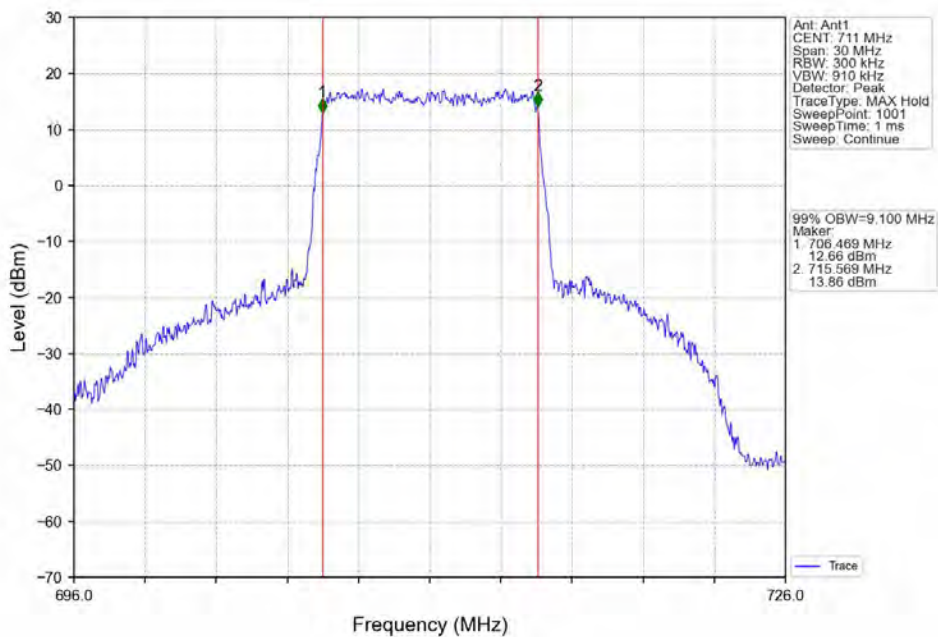
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



Band12\_10MHz\_16QAM\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_50\_0\_NTNV

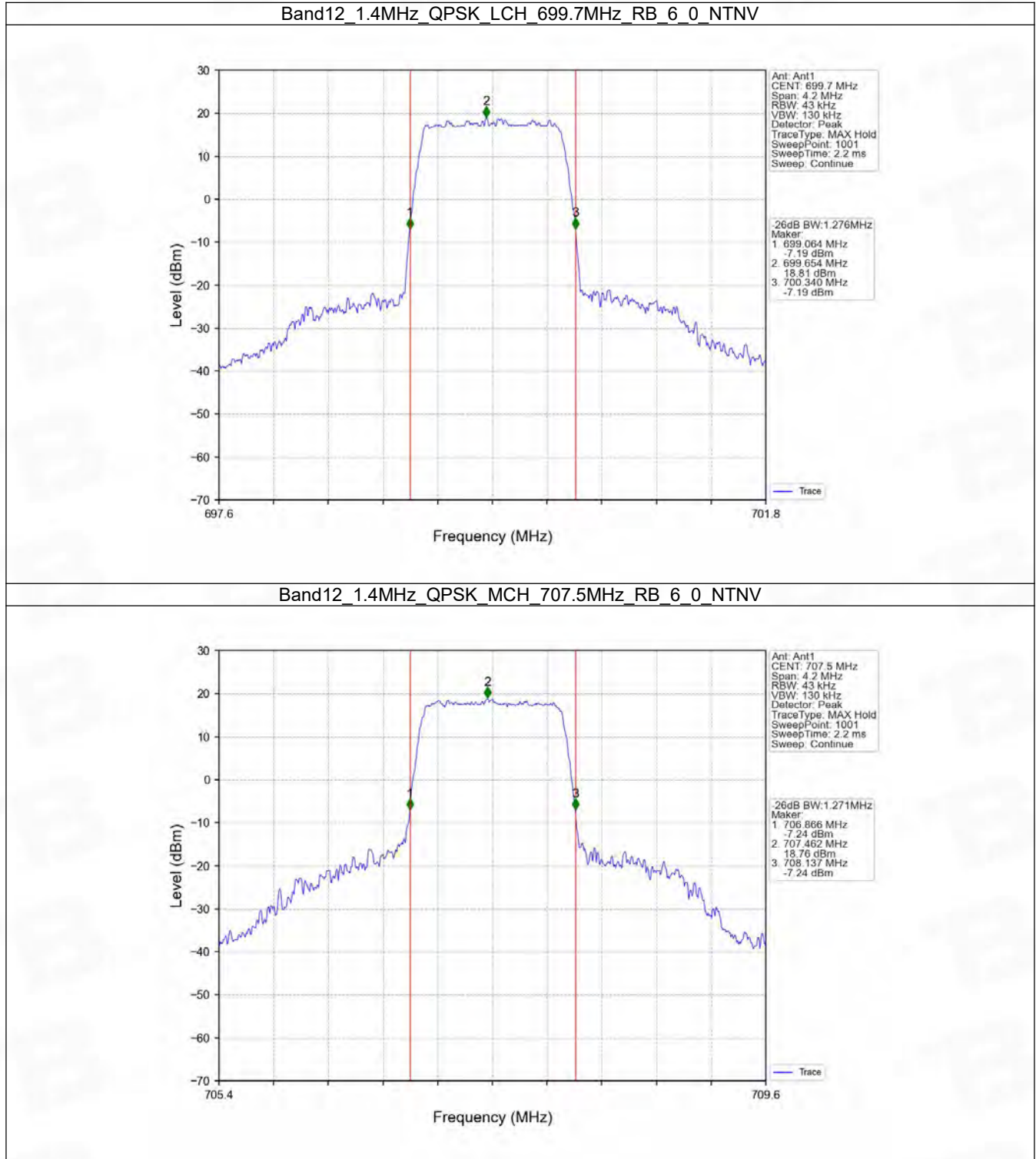


## 4.2 Band12\_XDB

### 4.2.1 Test Result

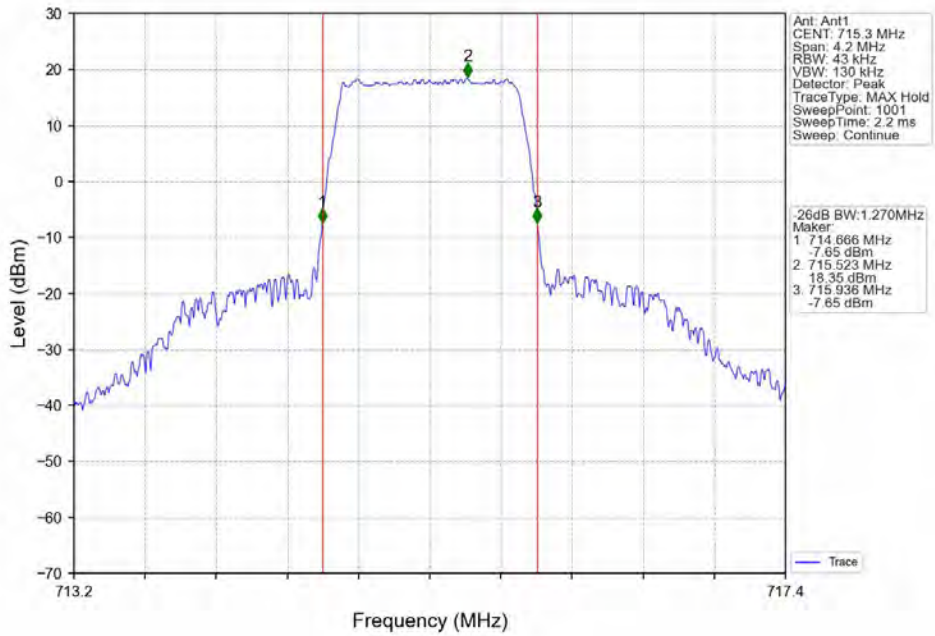
Band: 12 / NTV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.276	/	Pass
		707.5	6	0	1.271	/	Pass
		715.3	6	0	1.270	/	Pass
	16QAM	699.7	6	0	1.280	/	Pass
		707.5	6	0	1.269	/	Pass
		715.3	6	0	1.277	/	Pass
3	QPSK	700.5	15	0	3.107	/	Pass
		707.5	15	0	3.106	/	Pass
		714.5	15	0	3.092	/	Pass
	16QAM	700.5	15	0	3.124	/	Pass
		707.5	15	0	3.082	/	Pass
		714.5	15	0	3.116	/	Pass
5	QPSK	701.5	25	0	5.061	/	Pass
		707.5	25	0	5.066	/	Pass
		713.5	25	0	5.070	/	Pass
	16QAM	701.5	25	0	5.068	/	Pass
		707.5	25	0	5.051	/	Pass
		713.5	25	0	5.077	/	Pass
10	QPSK	704	50	0	9.950	/	Pass
		707.5	50	0	9.991	/	Pass
		711	50	0	10.089	/	Pass
	16QAM	704	50	0	9.999	/	Pass
		707.5	50	0	9.957	/	Pass
		711	50	0	10.021	/	Pass

4.2.2 Test Graph

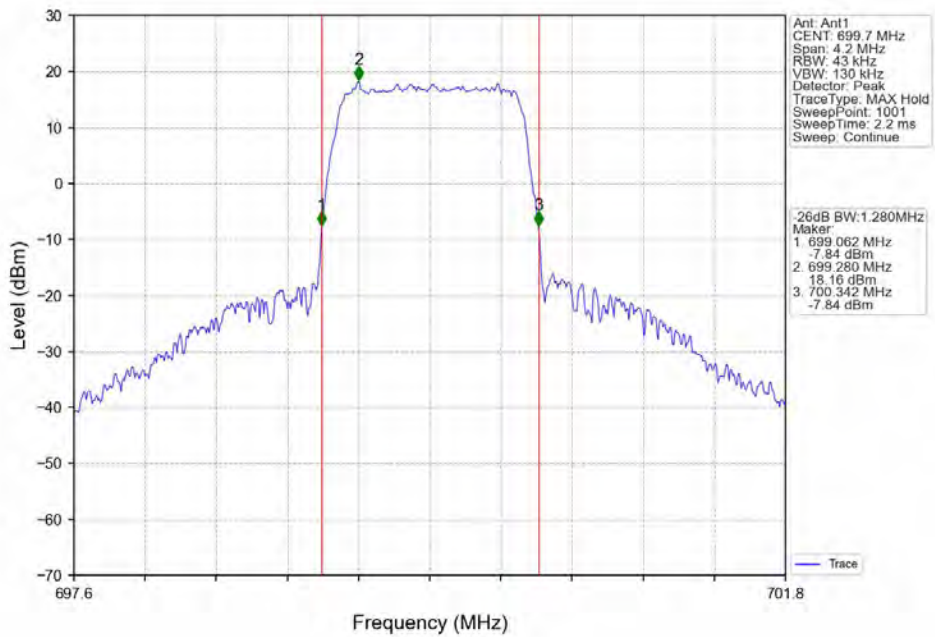




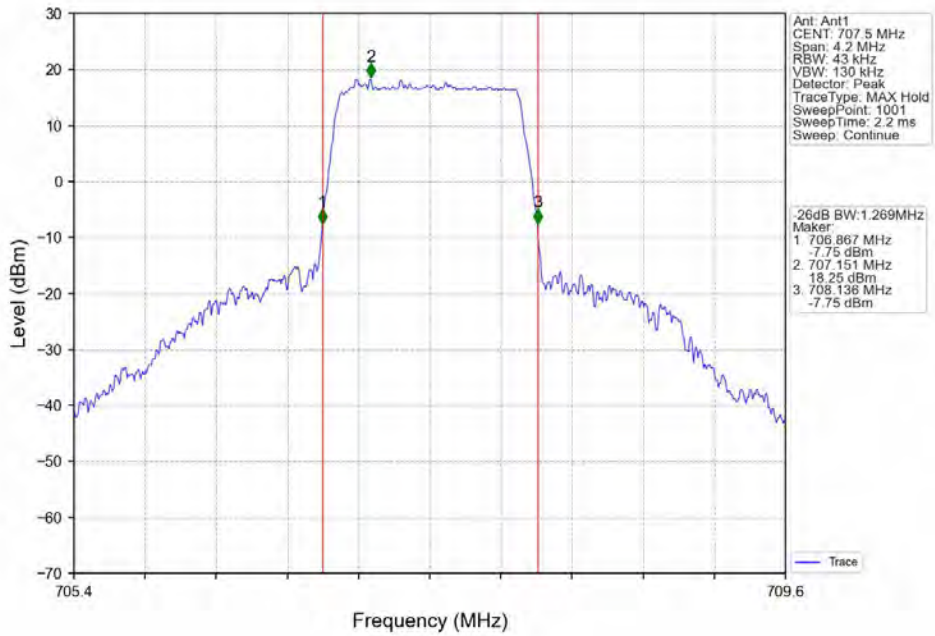
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



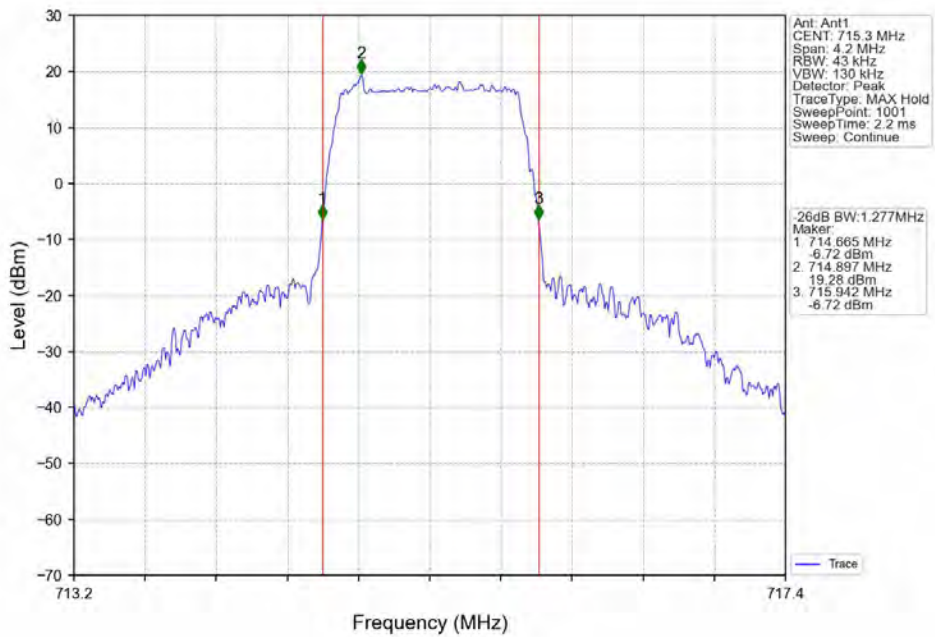
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



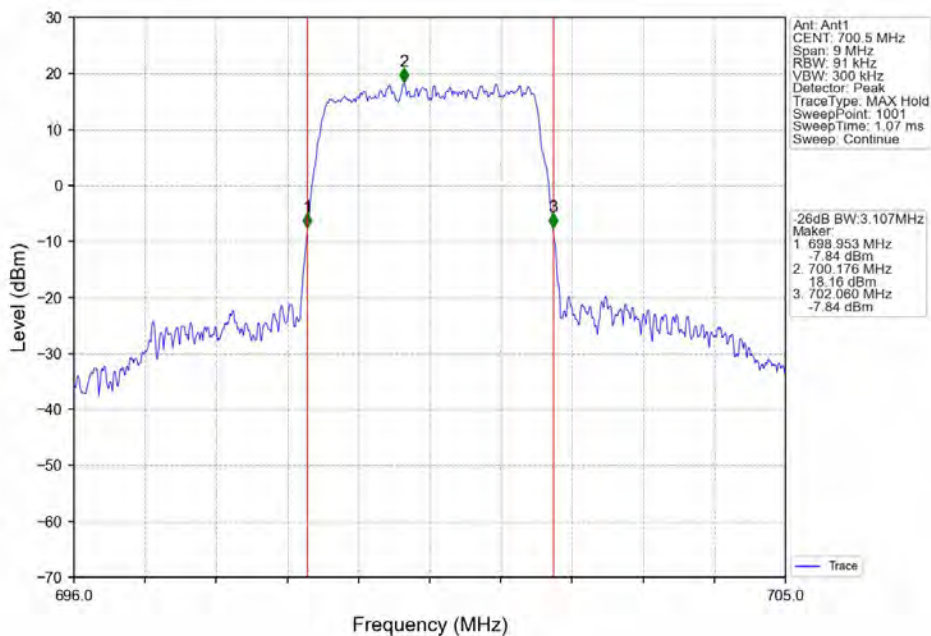
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTN



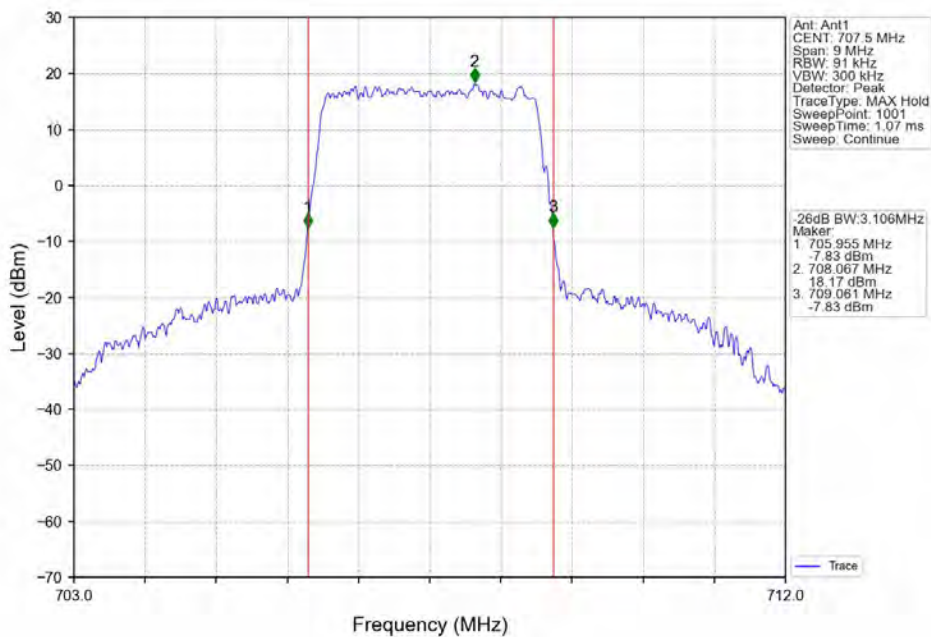
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTN



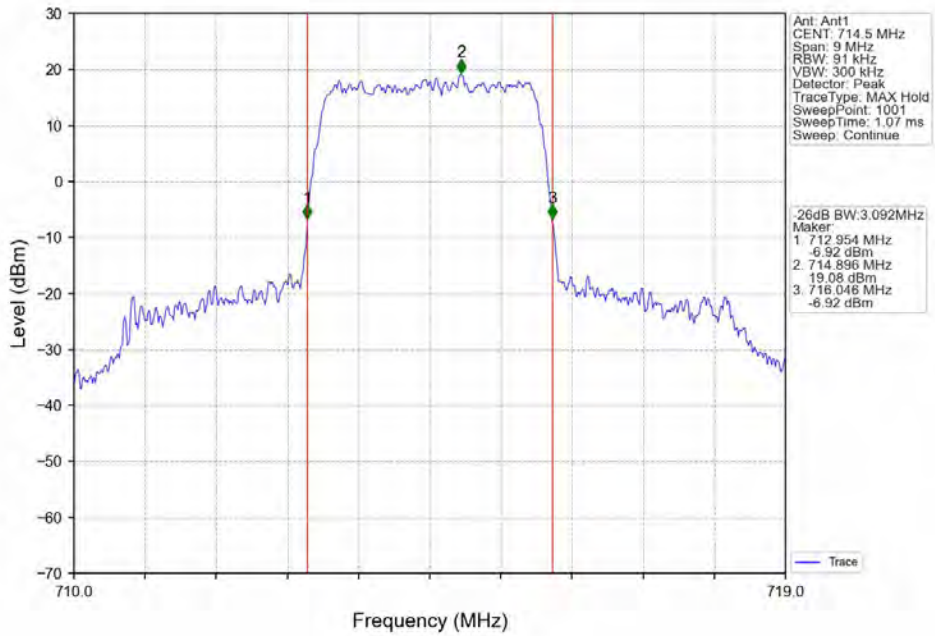
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



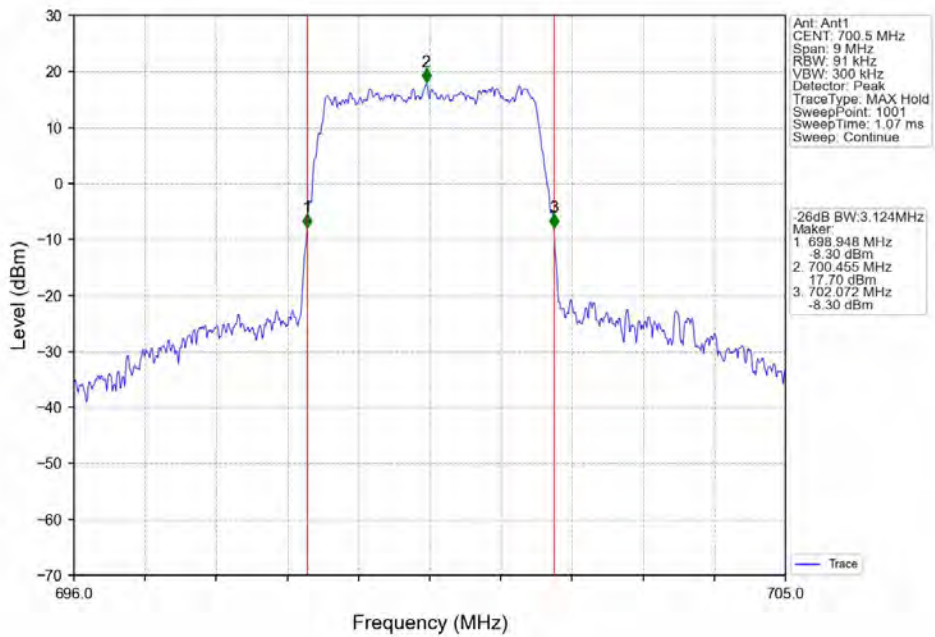
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV

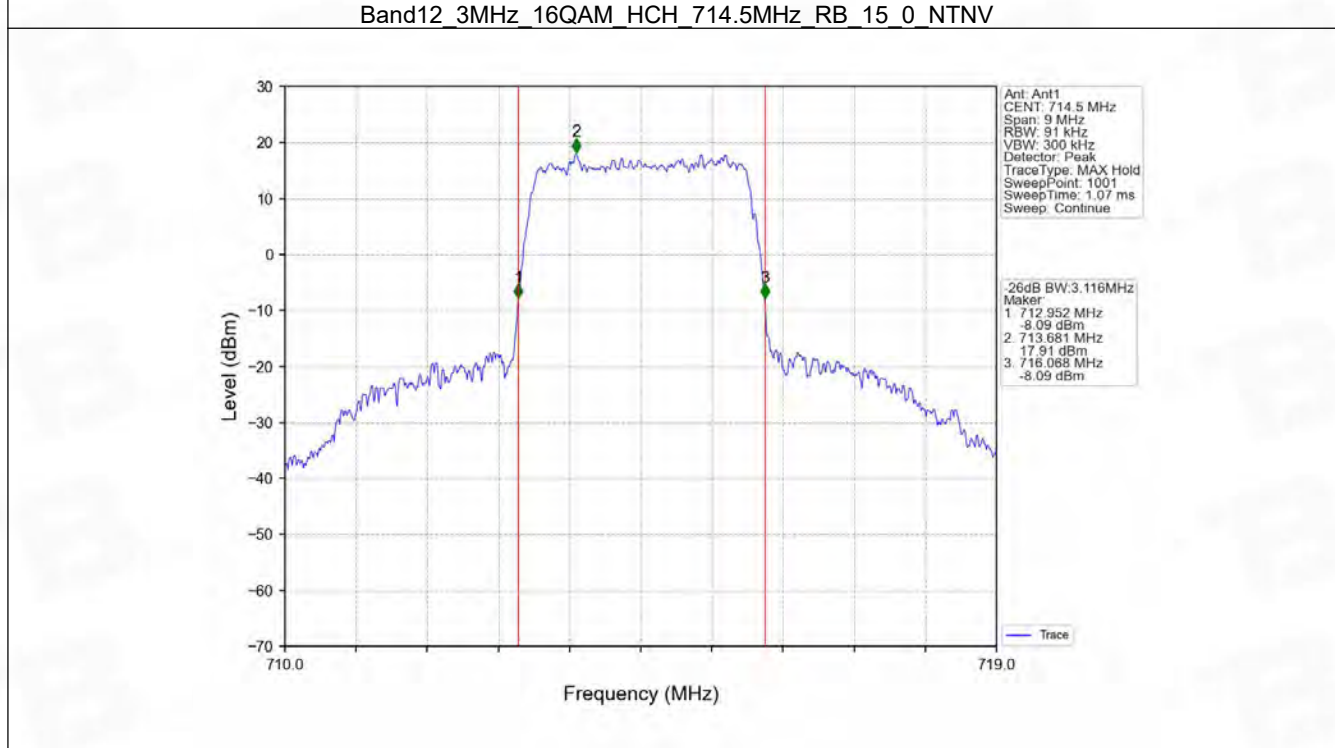
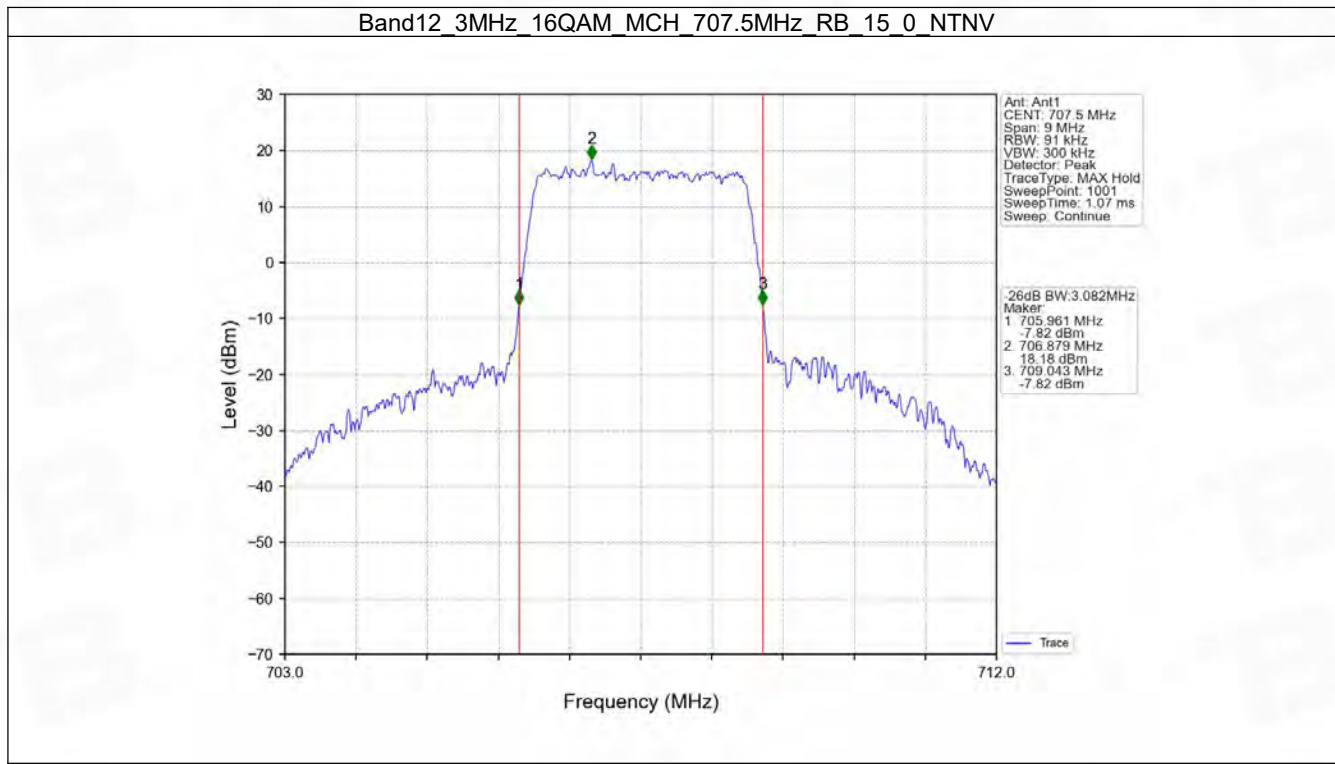


Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV

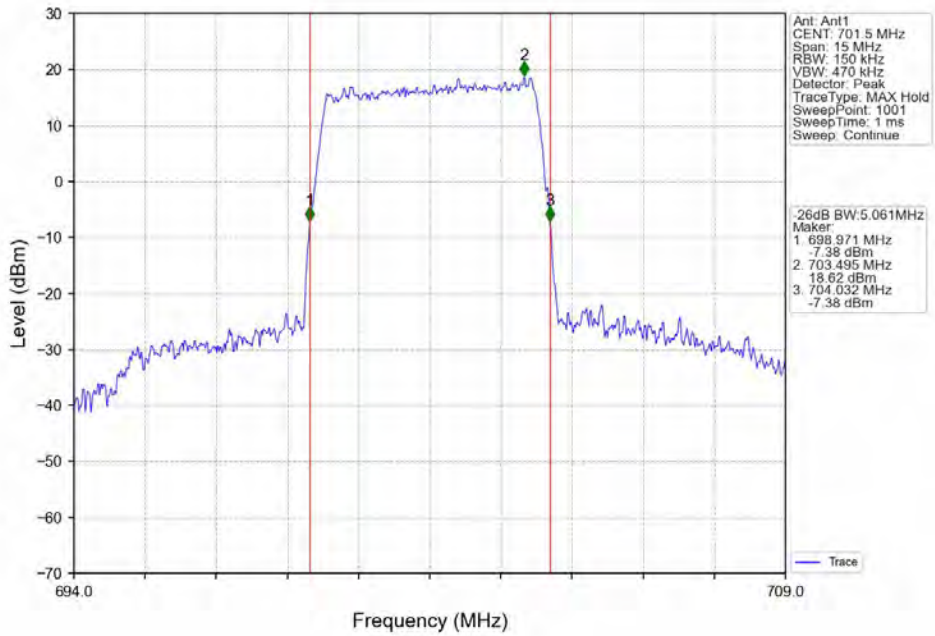


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV

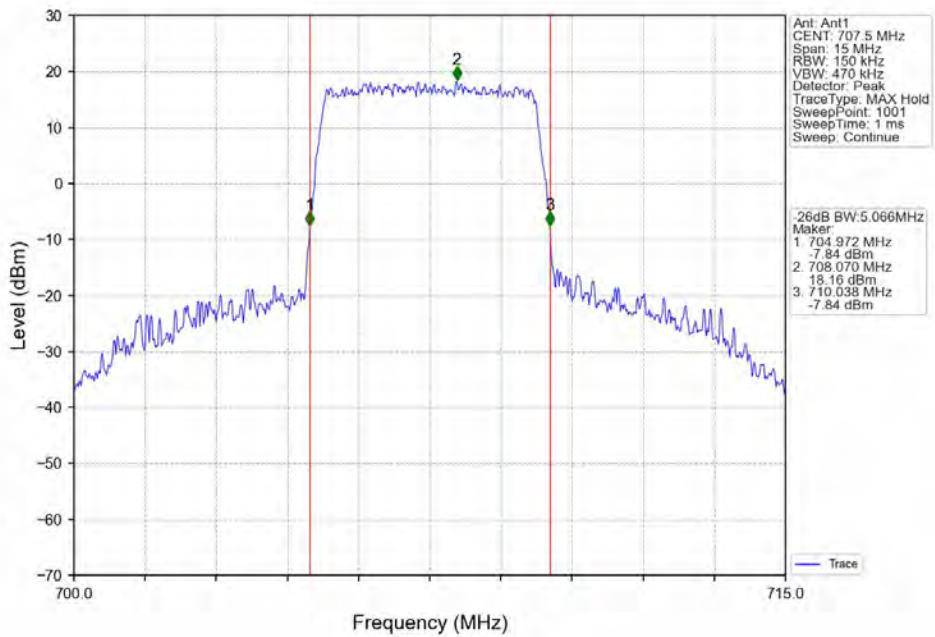




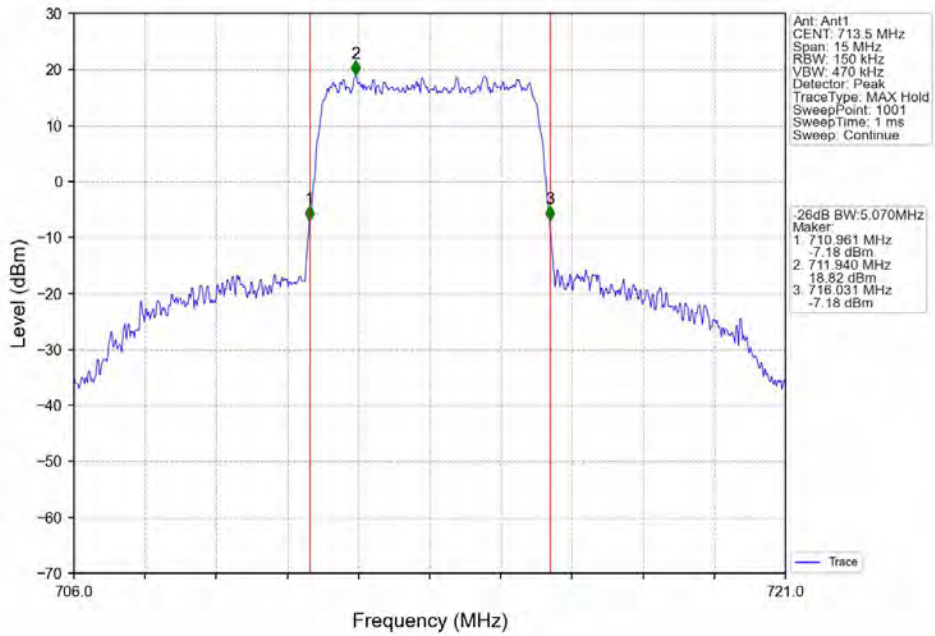
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



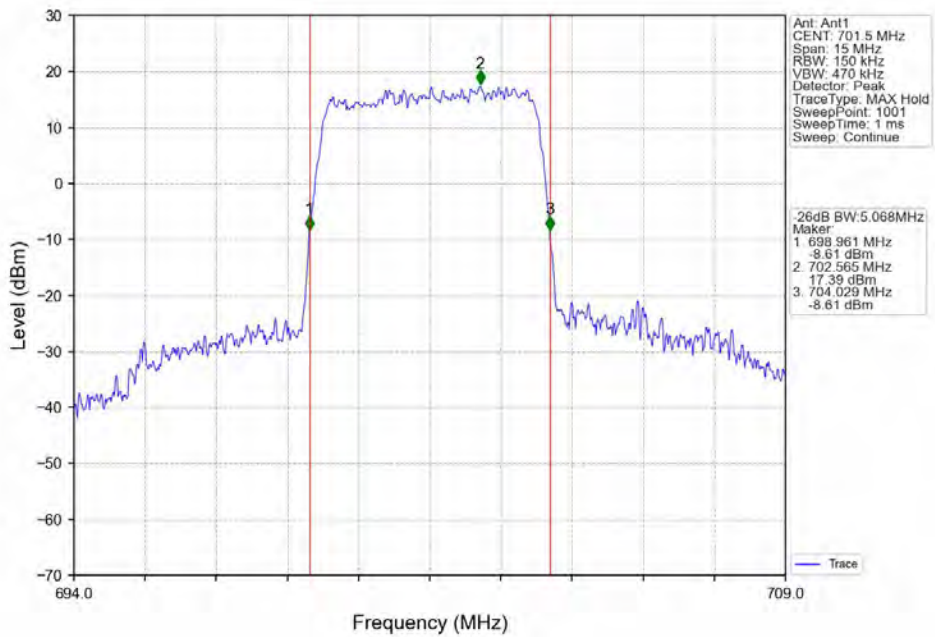
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



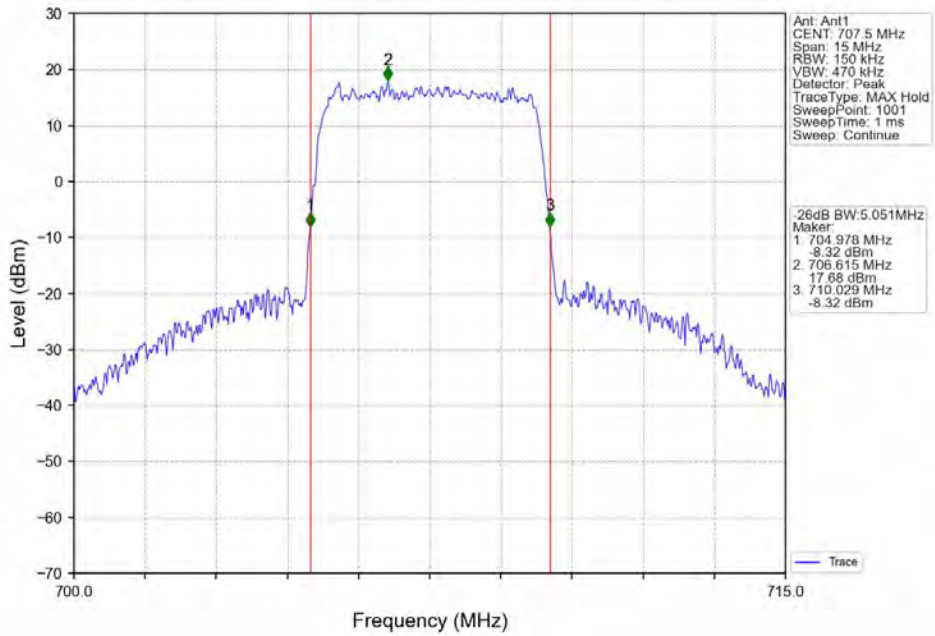
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



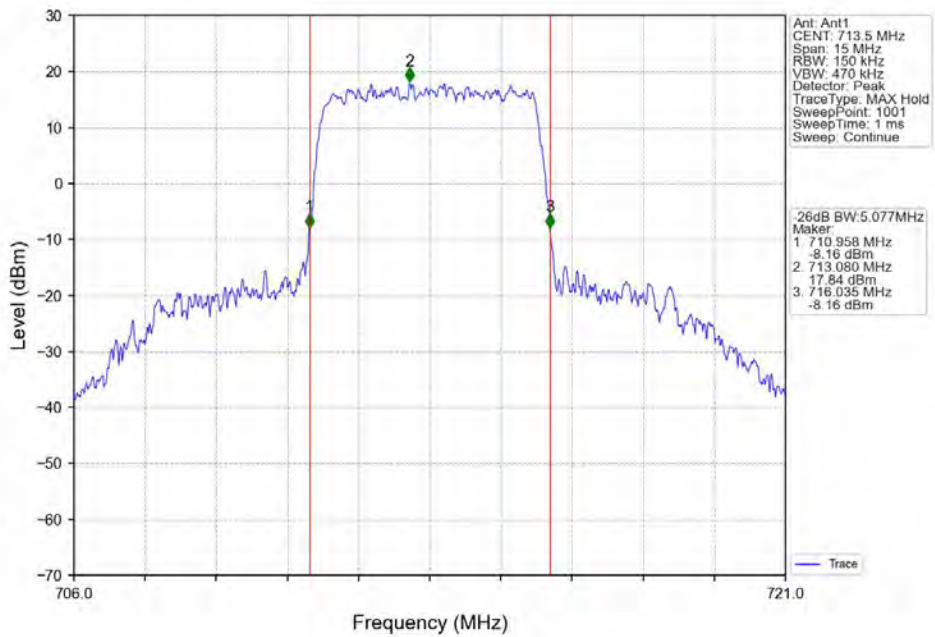
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_25\_0\_NTNV

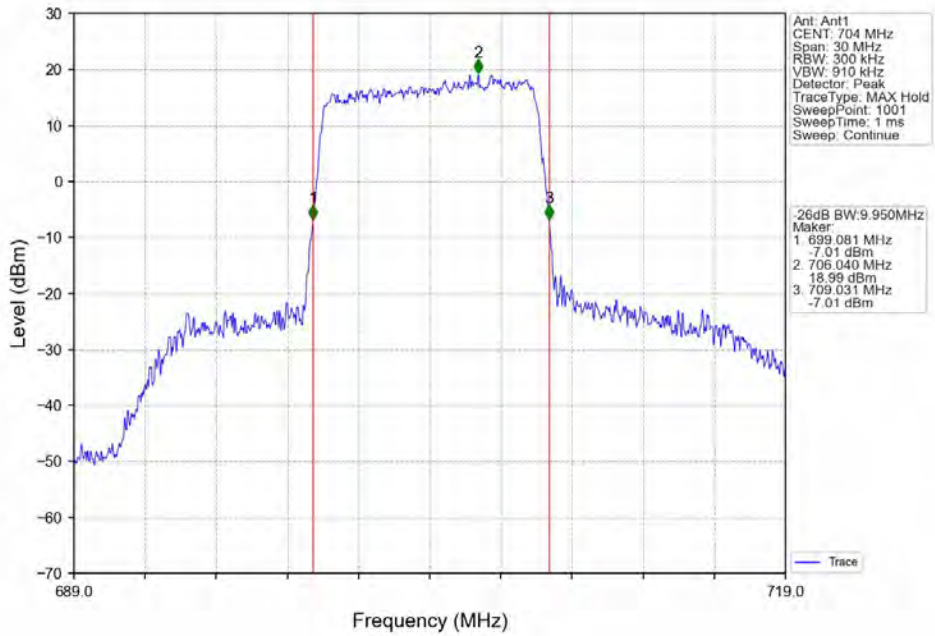


Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV

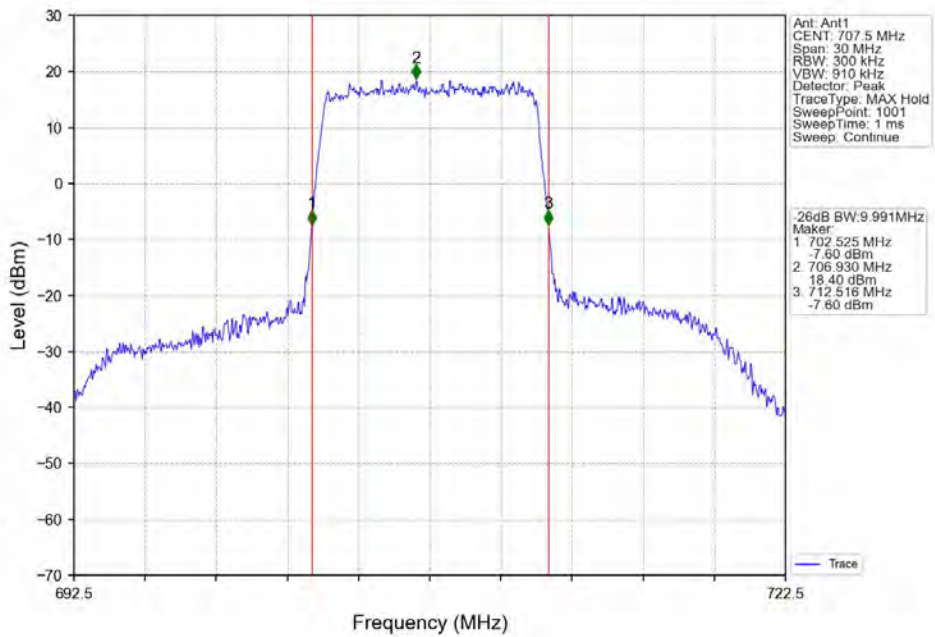




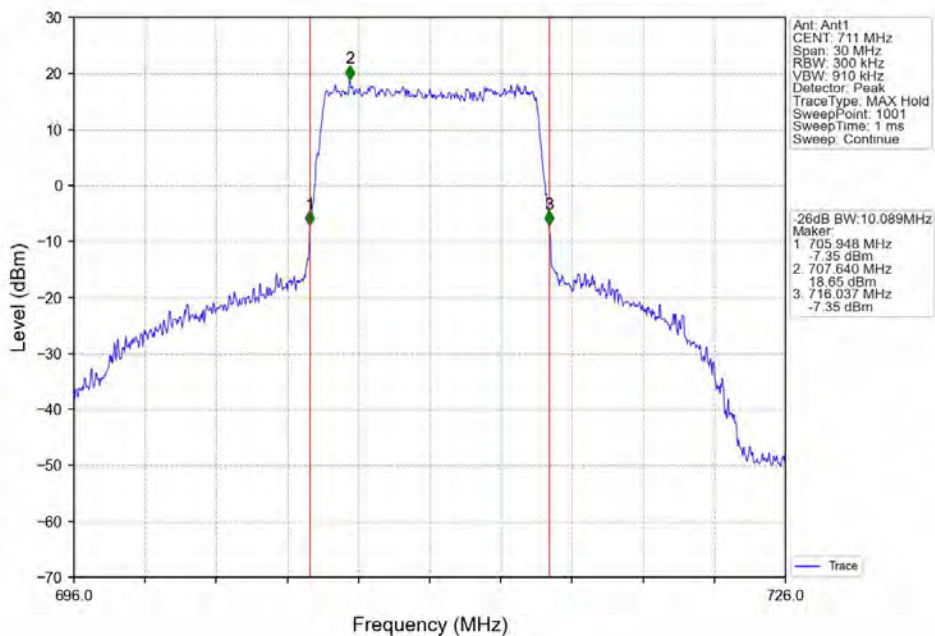
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



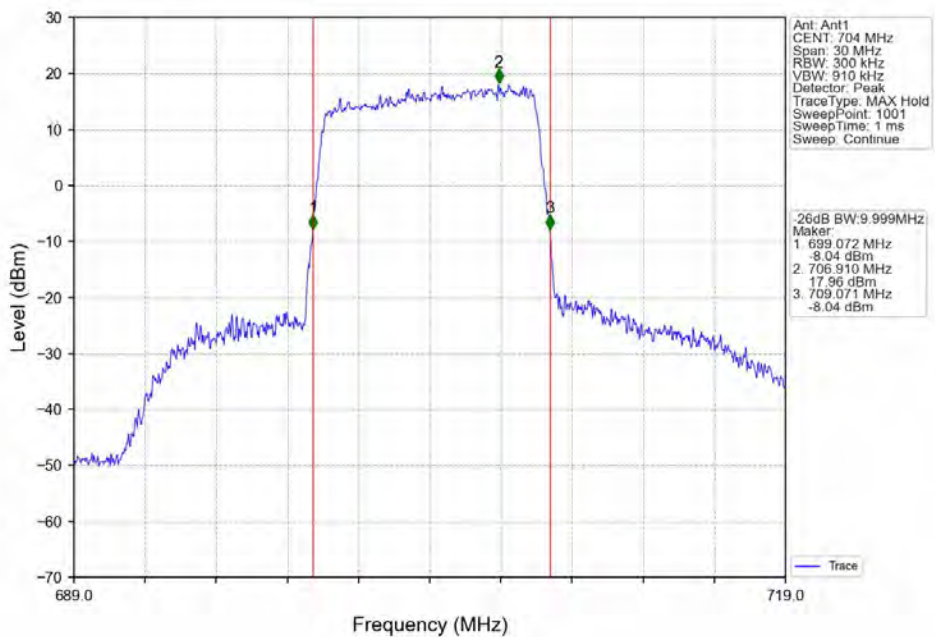
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



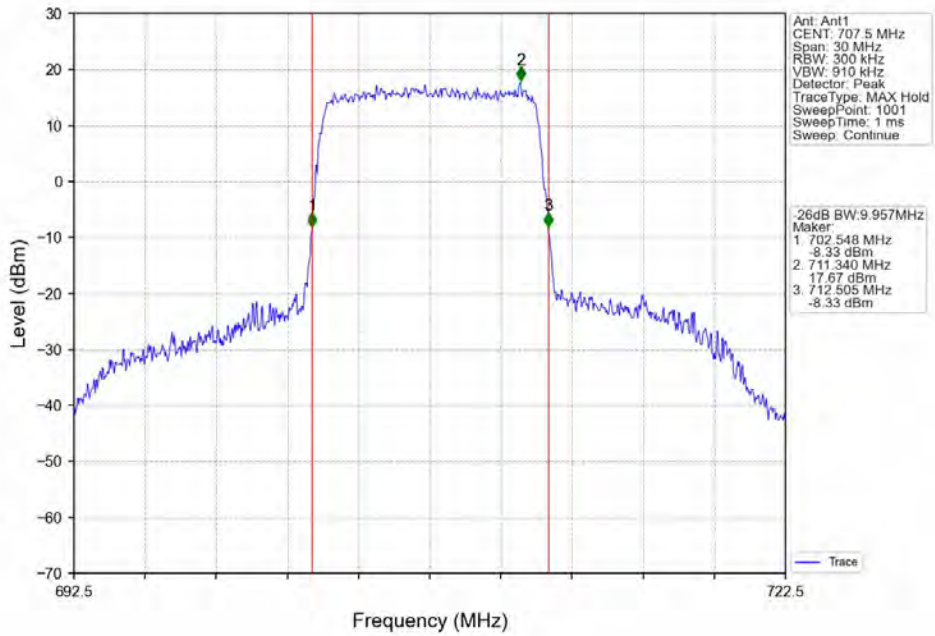
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



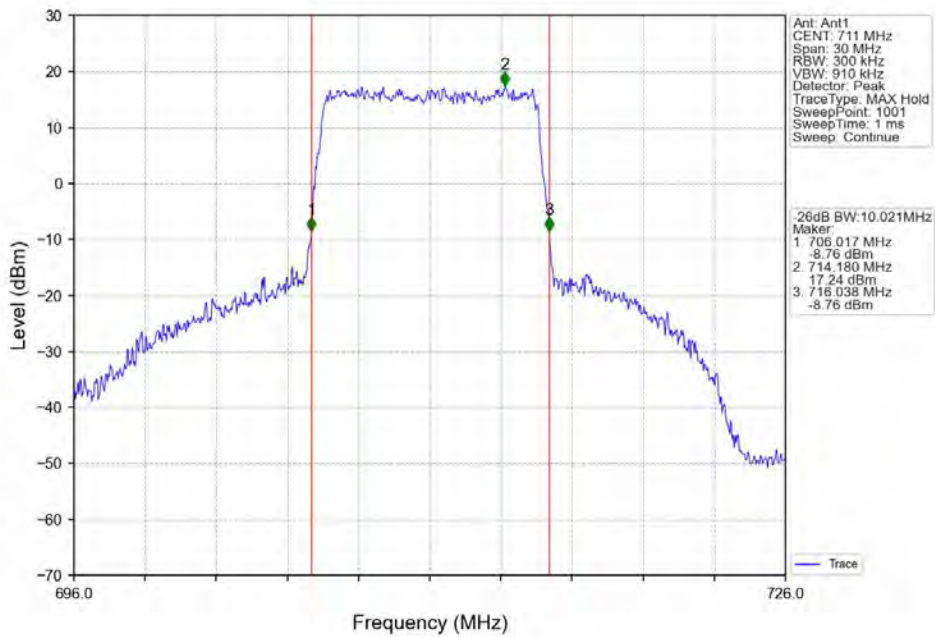
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



Band12\_10MHz\_16QAM\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_50\_0\_NTNV



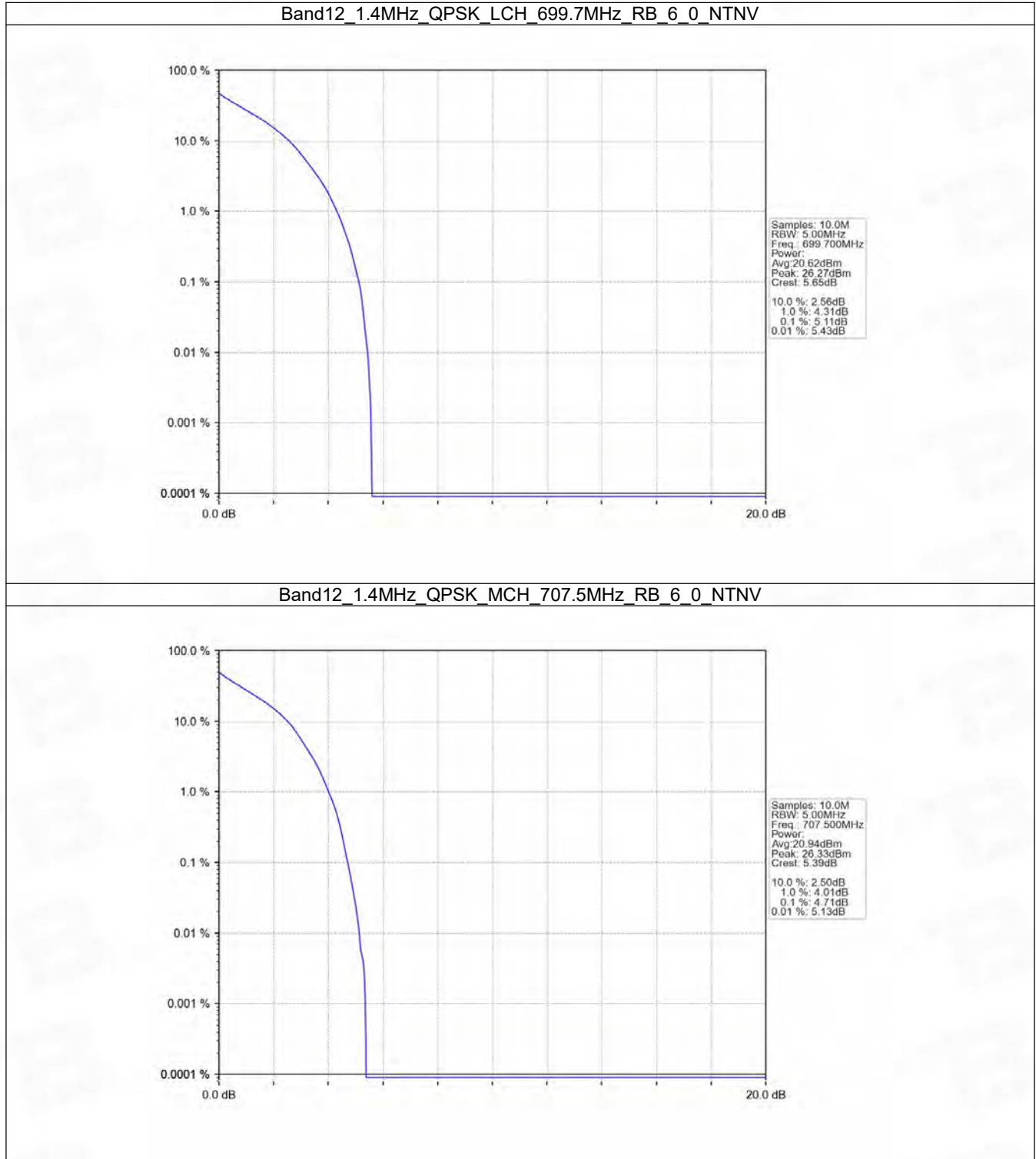
## 5. Peak-Average Ratio

### 5.1 B12\_1.4MHz

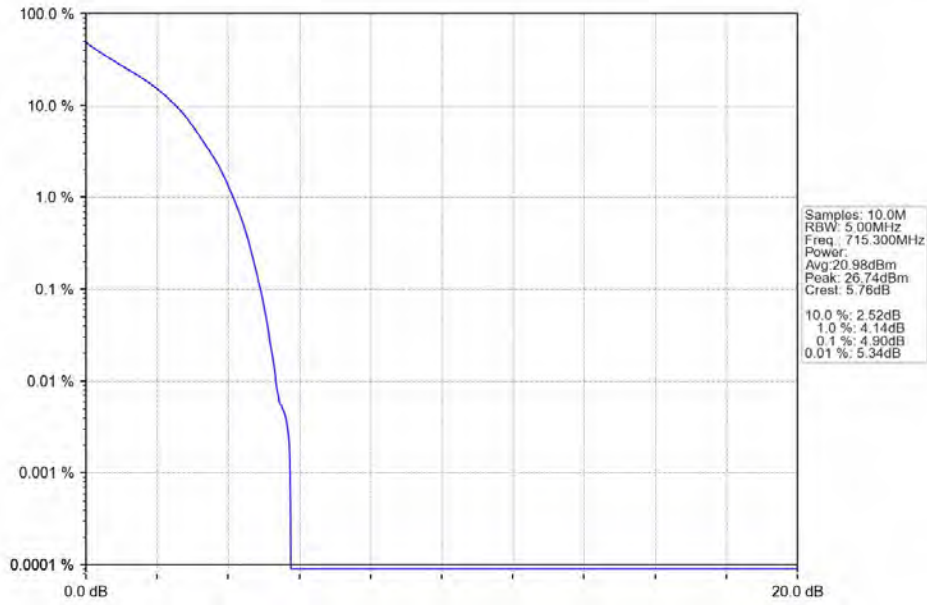
#### 5.1.1 Test Result

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	5.11	<=13	Pass
	707.5	6	0	4.71	<=13	Pass
	715.3	6	0	4.90	<=13	Pass
16QAM	699.7	6	0	5.73	<=13	Pass
	707.5	6	0	5.56	<=13	Pass
	715.3	6	0	5.65	<=13	Pass

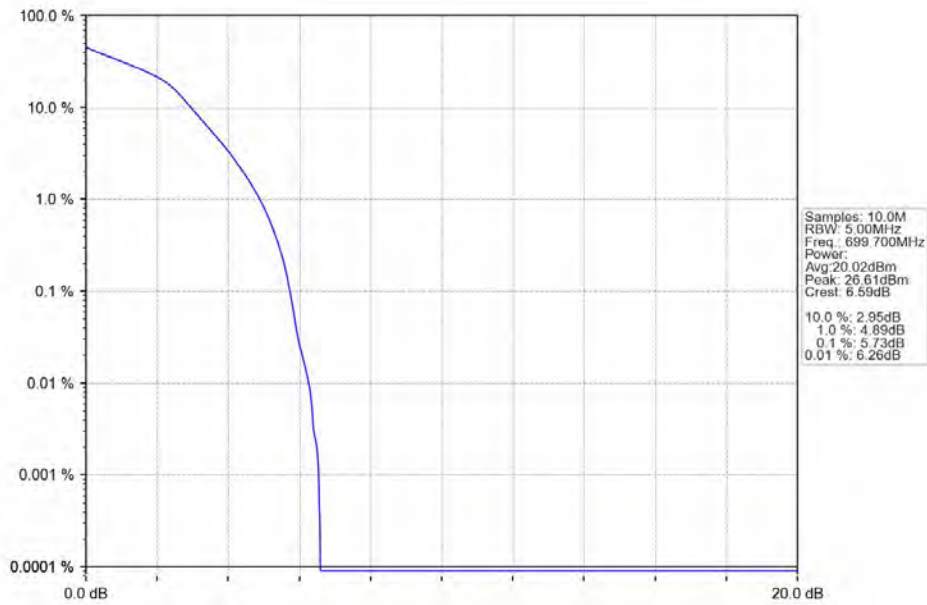
### 5.1.2 Test Graph



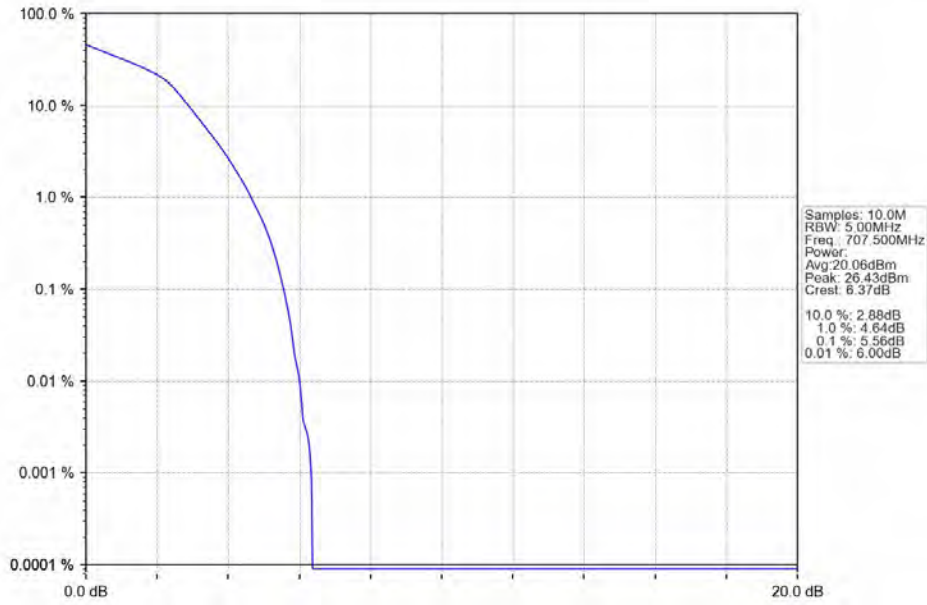
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



Band12 1.4MHz 16QAM MCH 707.5MHz RB 6\_0 NTN



Band12 1.4MHz 16QAM HCH 715.3MHz RB 6\_0 NTN



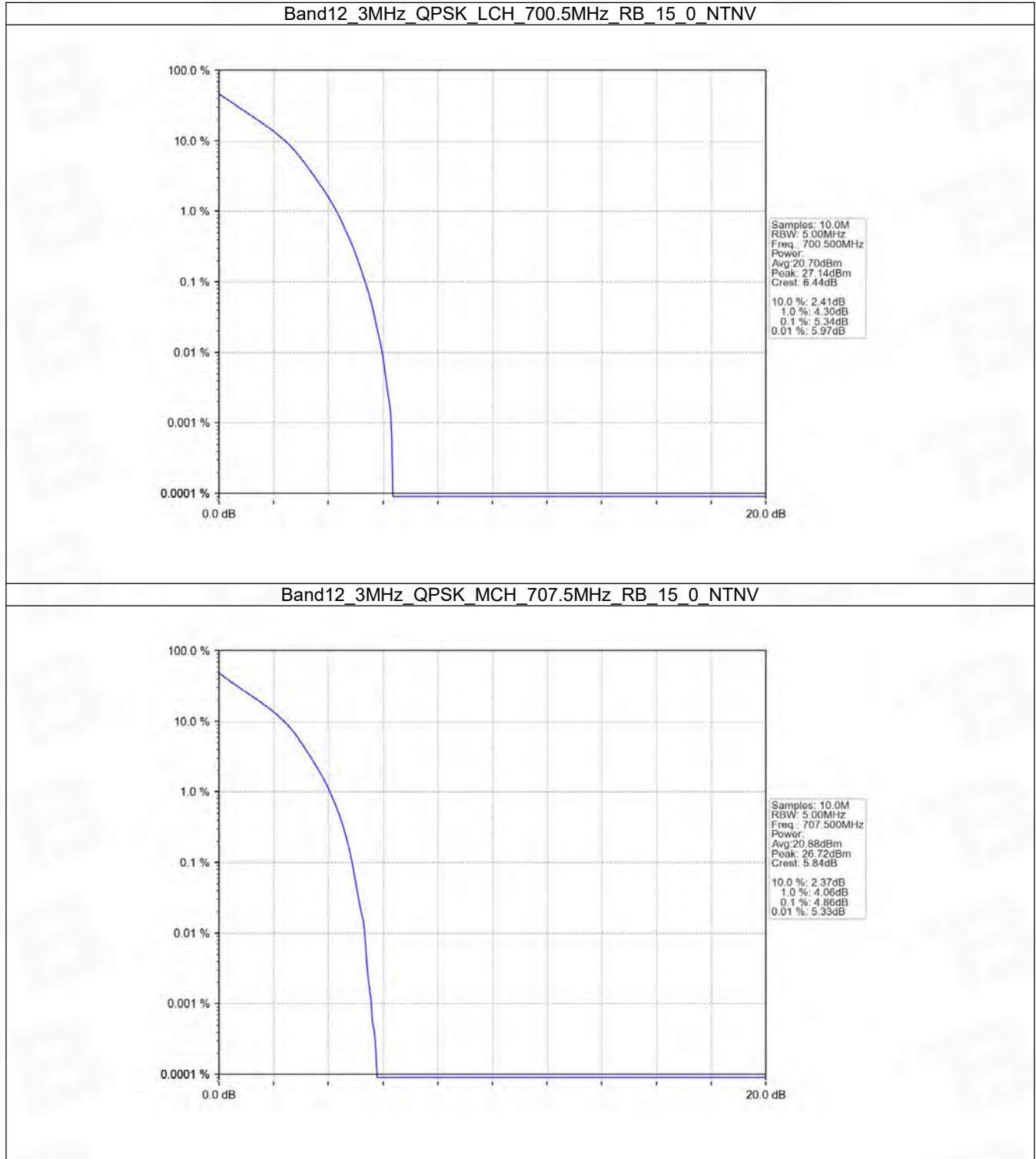
## 5.2 B12\_3MHz

### 5.2.1 Test Result

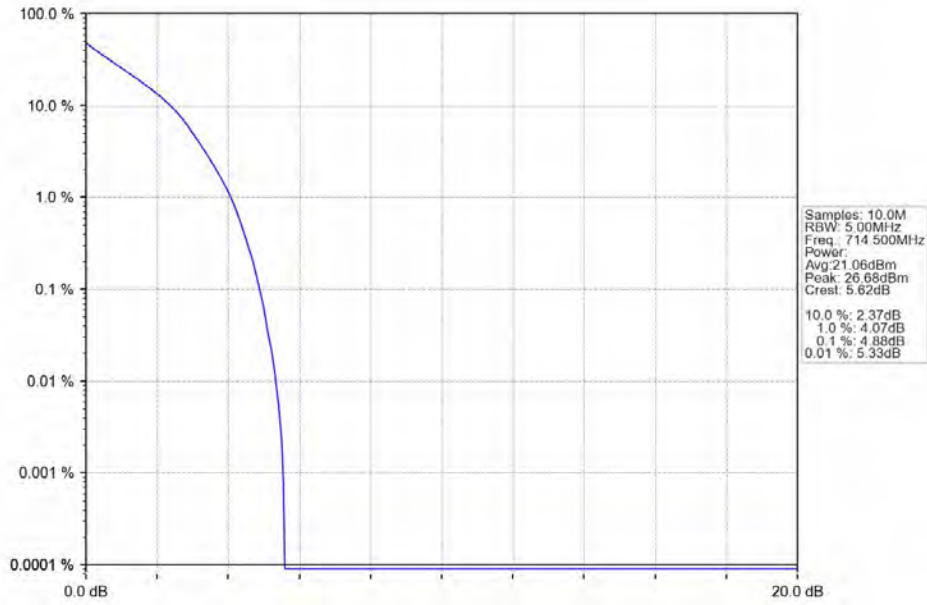
Band: 12 / Bandwidth: 3MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.34	<=13	Pass
	707.5	15	0	4.86	<=13	Pass
	714.5	15	0	4.88	<=13	Pass
16QAM	700.5	15	0	6.07	<=13	Pass
	707.5	15	0	5.71	<=13	Pass
	714.5	15	0	5.75	<=13	Pass



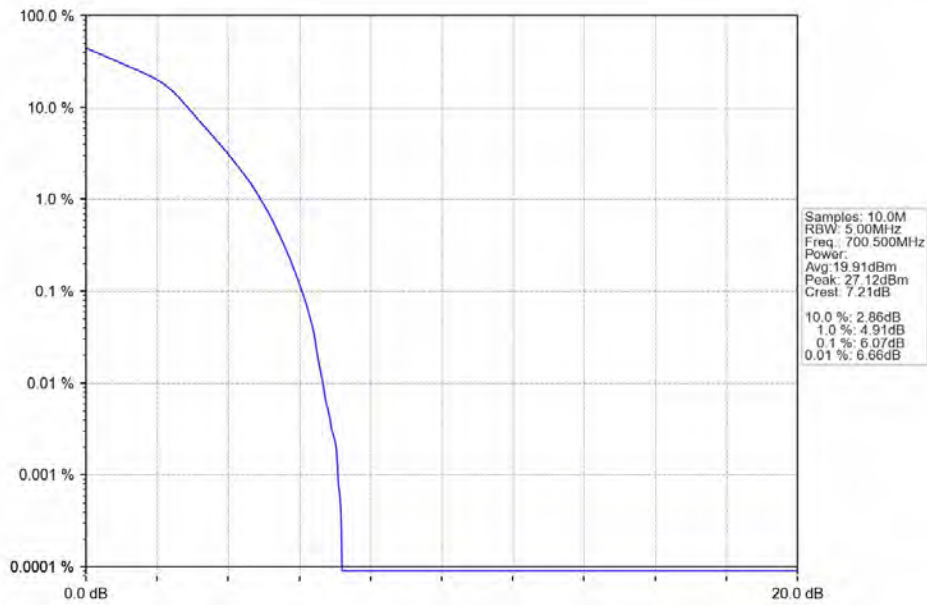
### 5.2.2 Test Graph



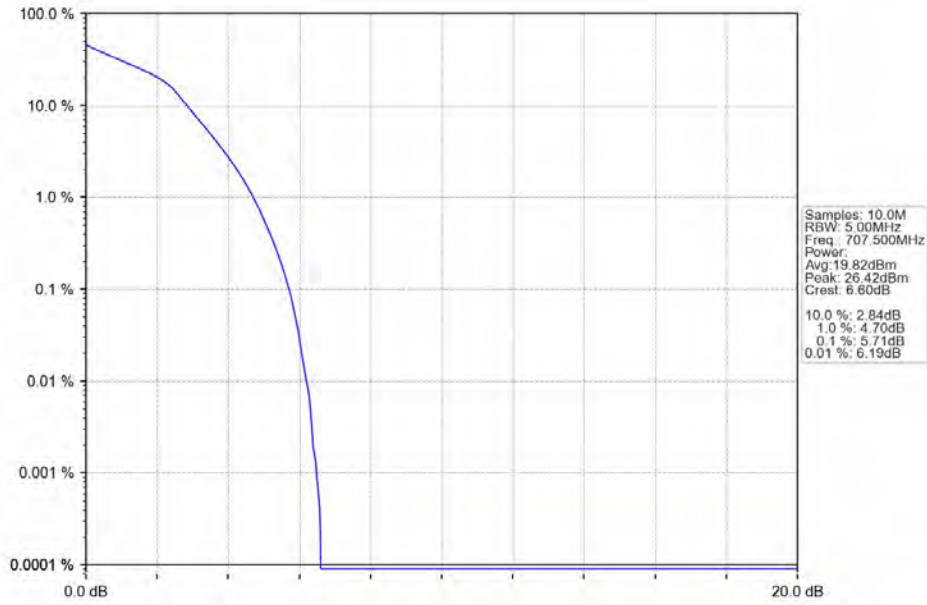
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



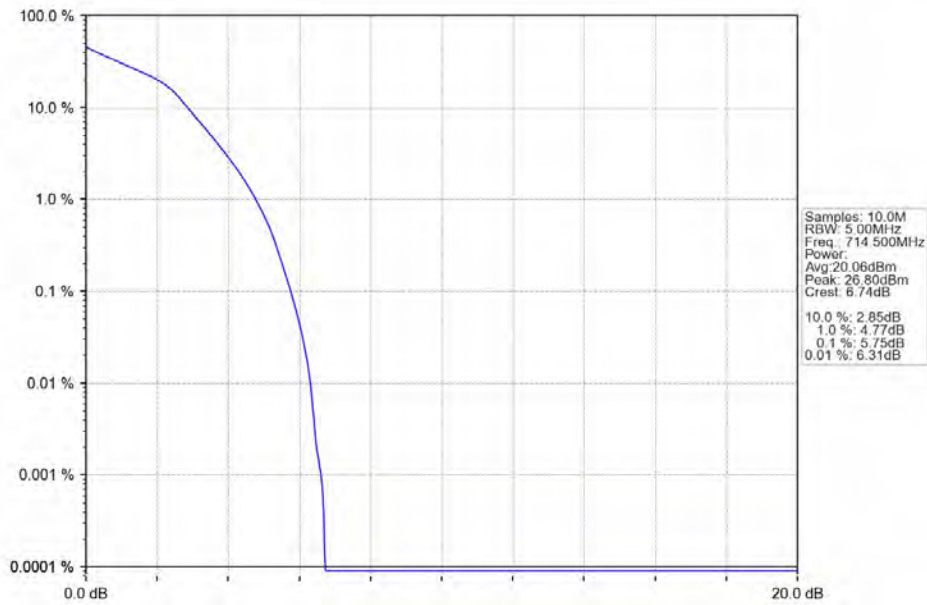
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



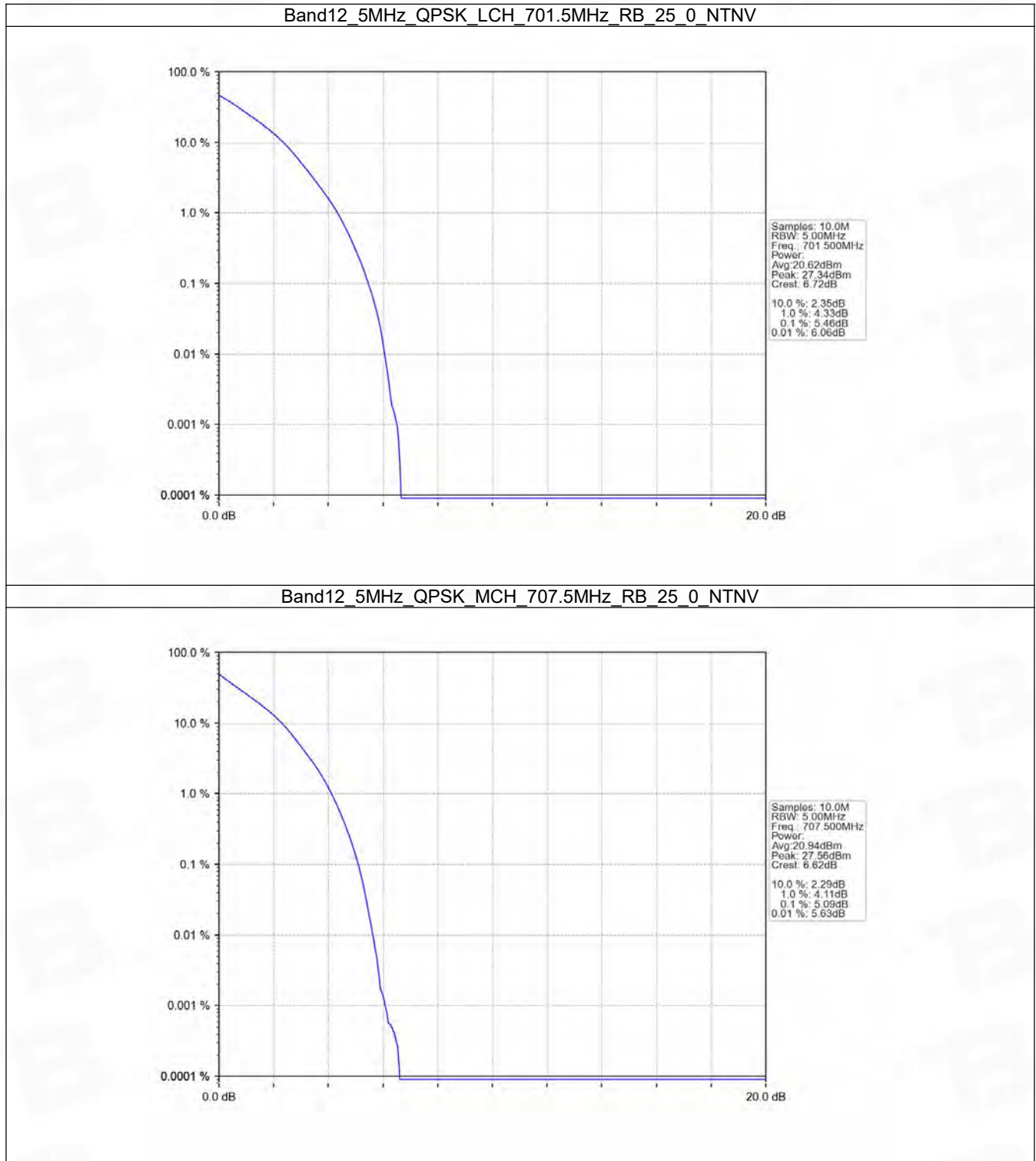


### 5.3 B12\_5MHz

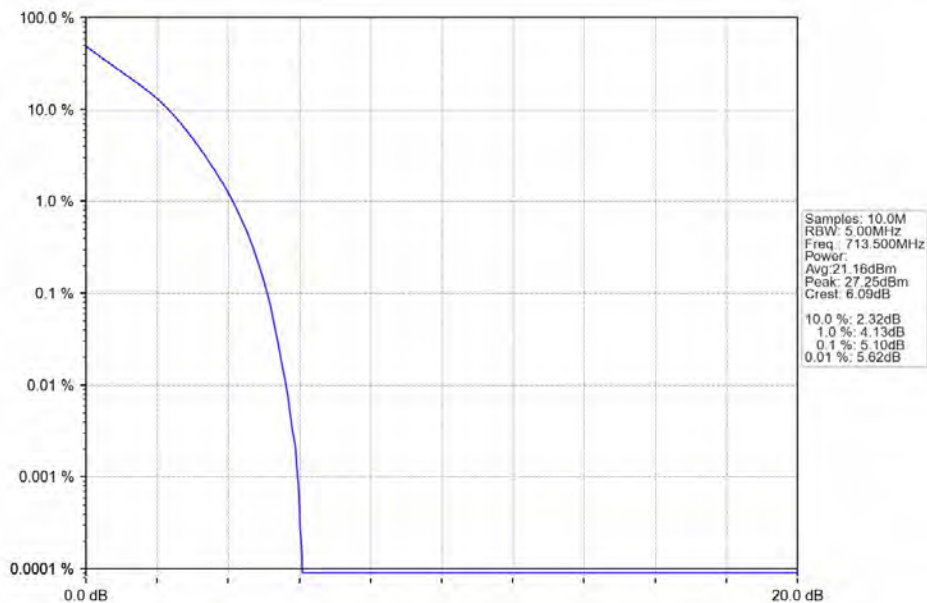
#### 5.3.1 Test Result

Band: 12 / Bandwidth: 5MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.46	<=13	Pass
	707.5	25	0	5.09	<=13	Pass
	713.5	25	0	5.10	<=13	Pass
16QAM	701.5	25	0	6.20	<=13	Pass
	707.5	25	0	5.88	<=13	Pass
	713.5	25	0	5.77	<=13	Pass

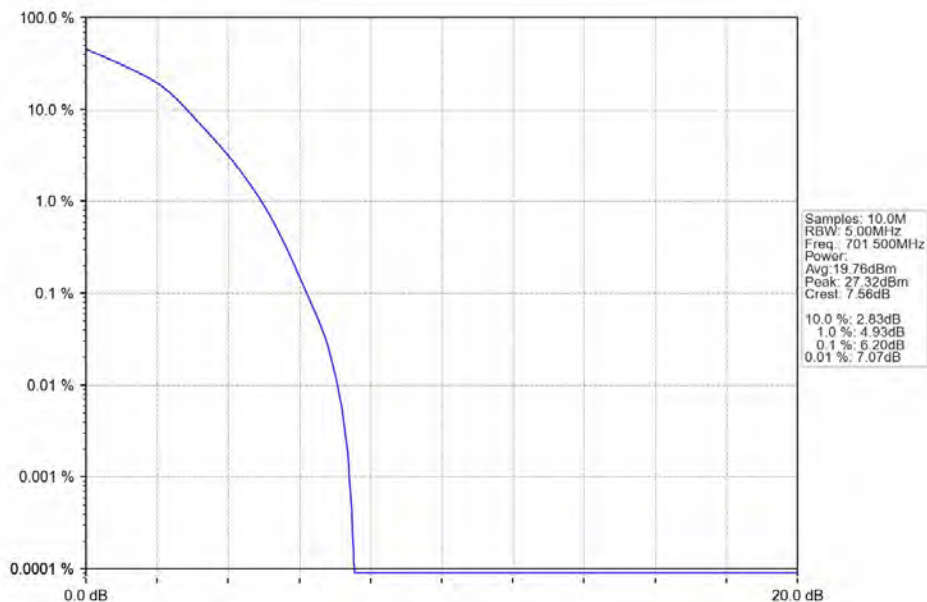
### 5.3.2 Test Graph



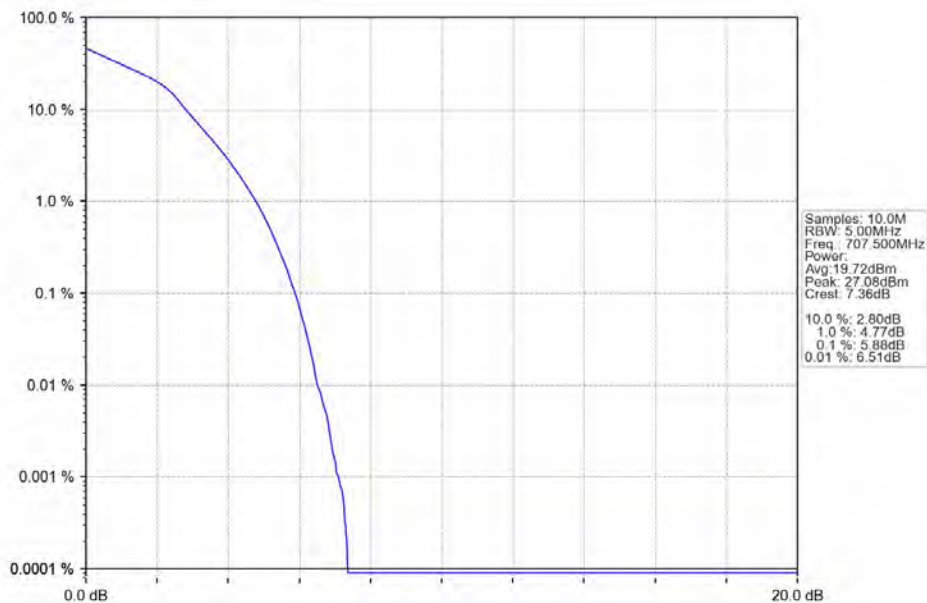
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



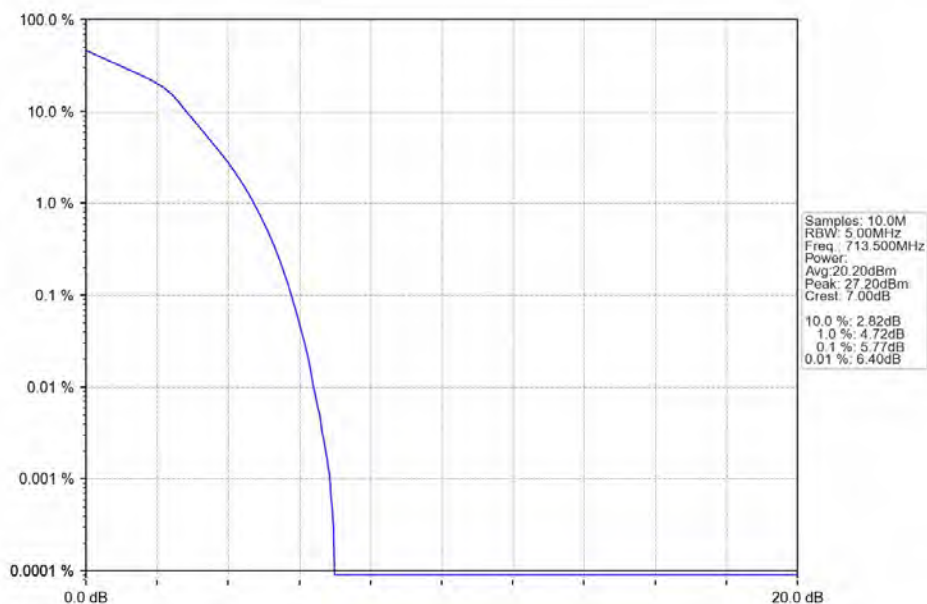
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV





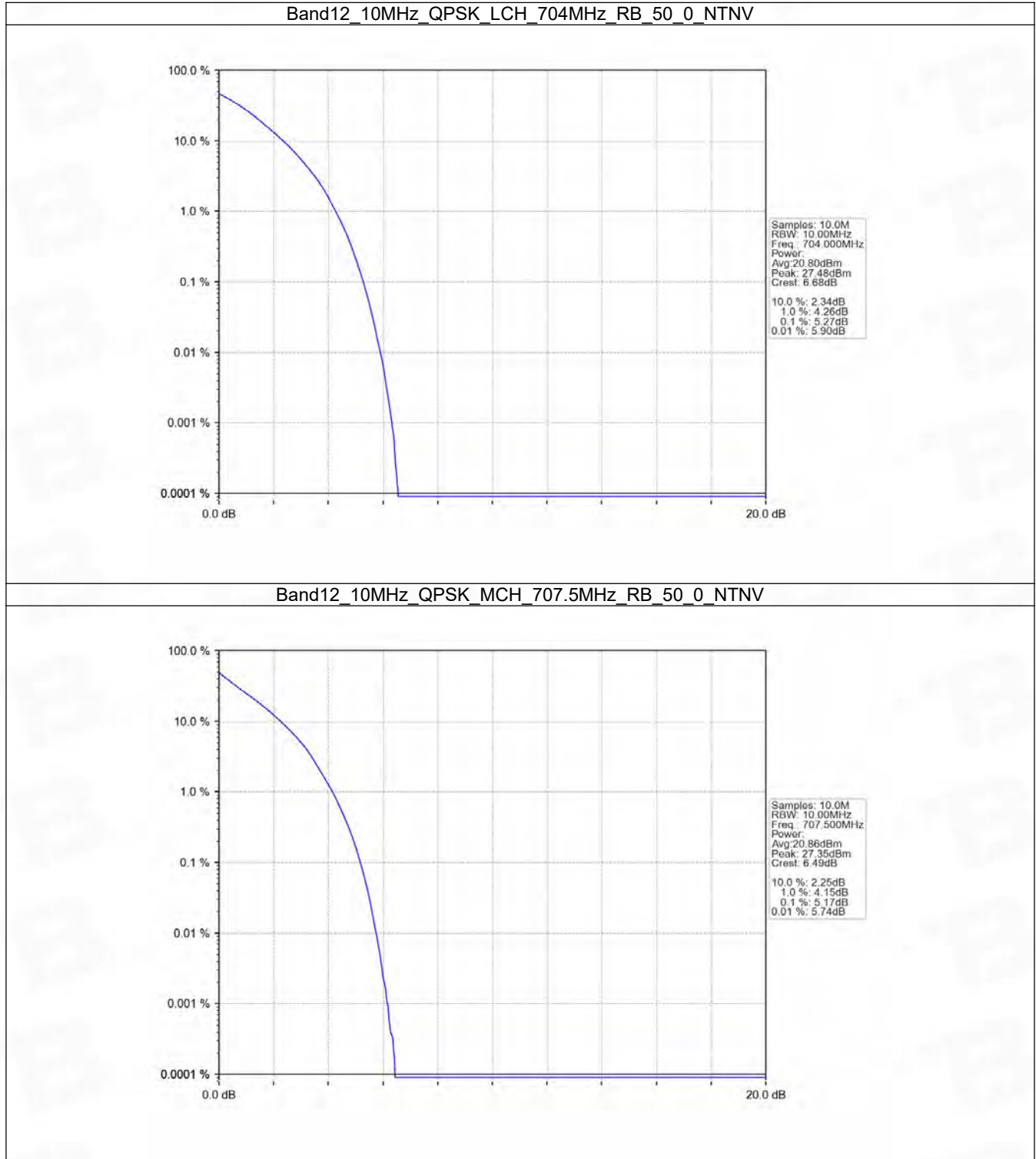
### 5.4 B12\_10MHz

#### 5.4.1 Test Result

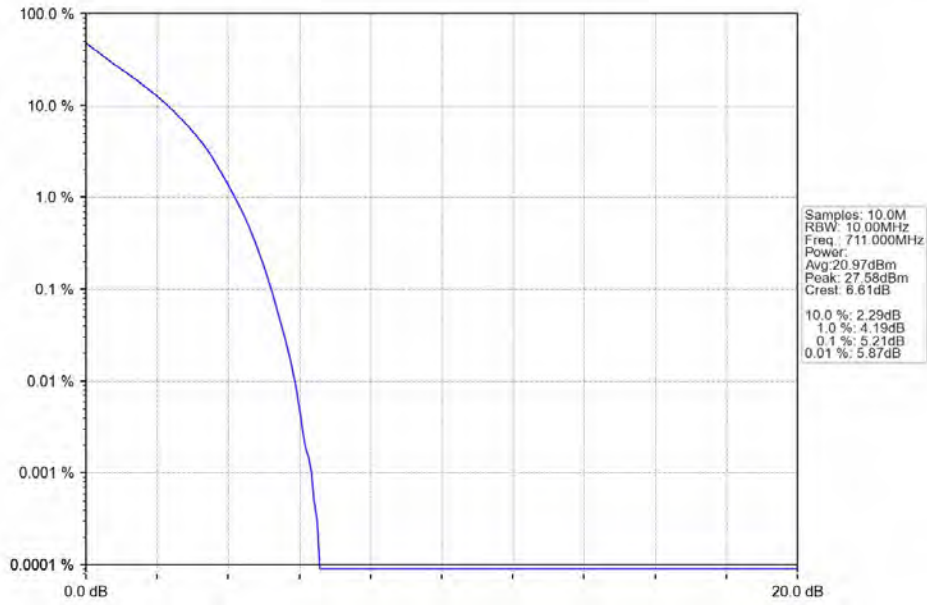
Band: 12 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.27	<=13	Pass
	707.5	50	0	5.17	<=13	Pass
	711	50	0	5.21	<=13	Pass
16QAM	704	50	0	5.27	<=13	Pass
	707.5	50	0	5.17	<=13	Pass
	711	50	0	5.19	<=13	Pass



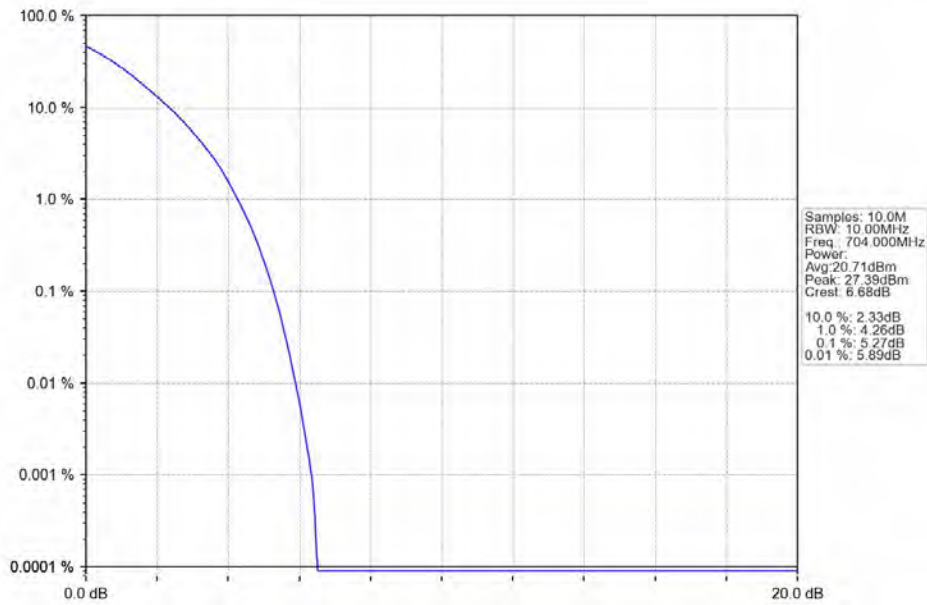
5.4.2 Test Graph



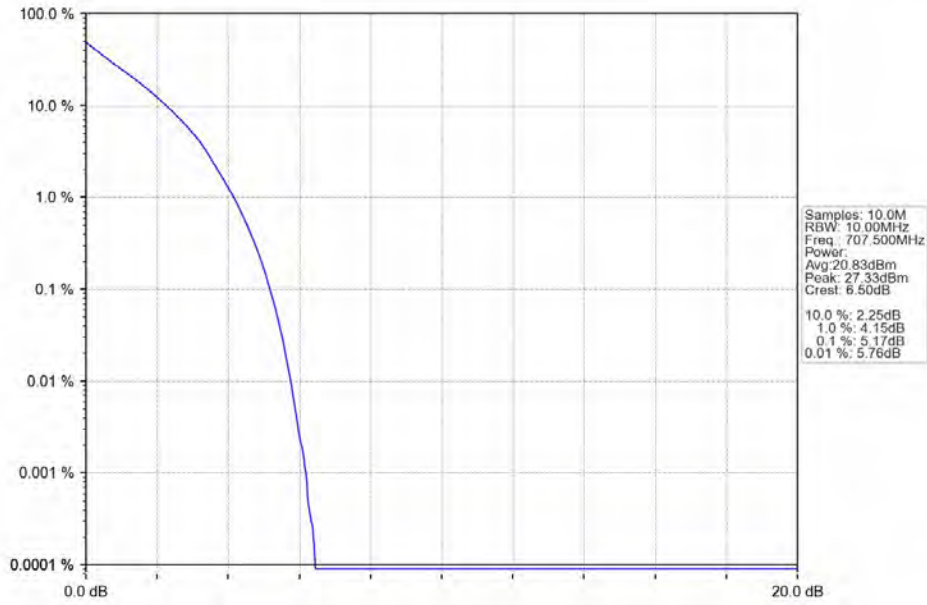
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



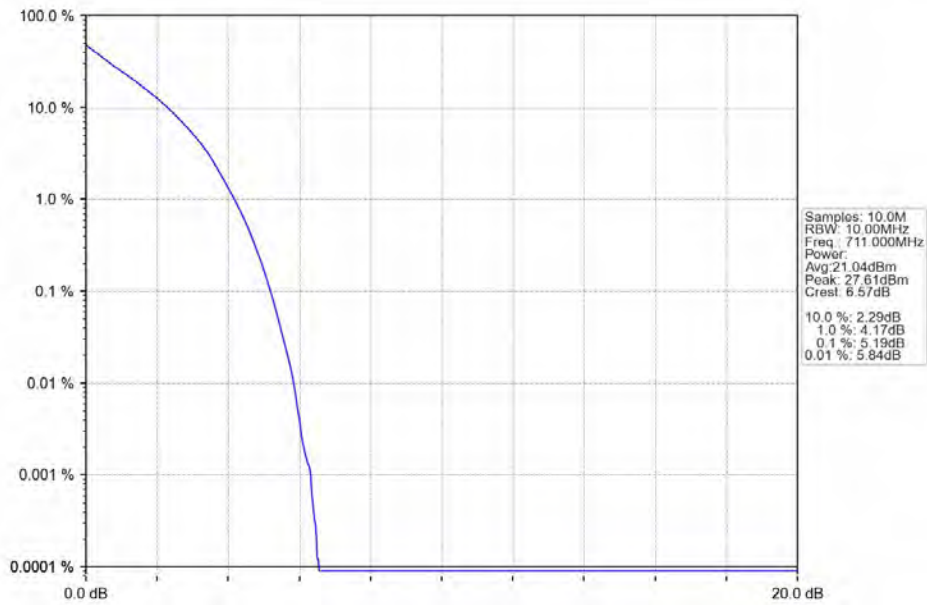
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



Band12\_10MHz\_16QAM\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_50\_0\_NTNV





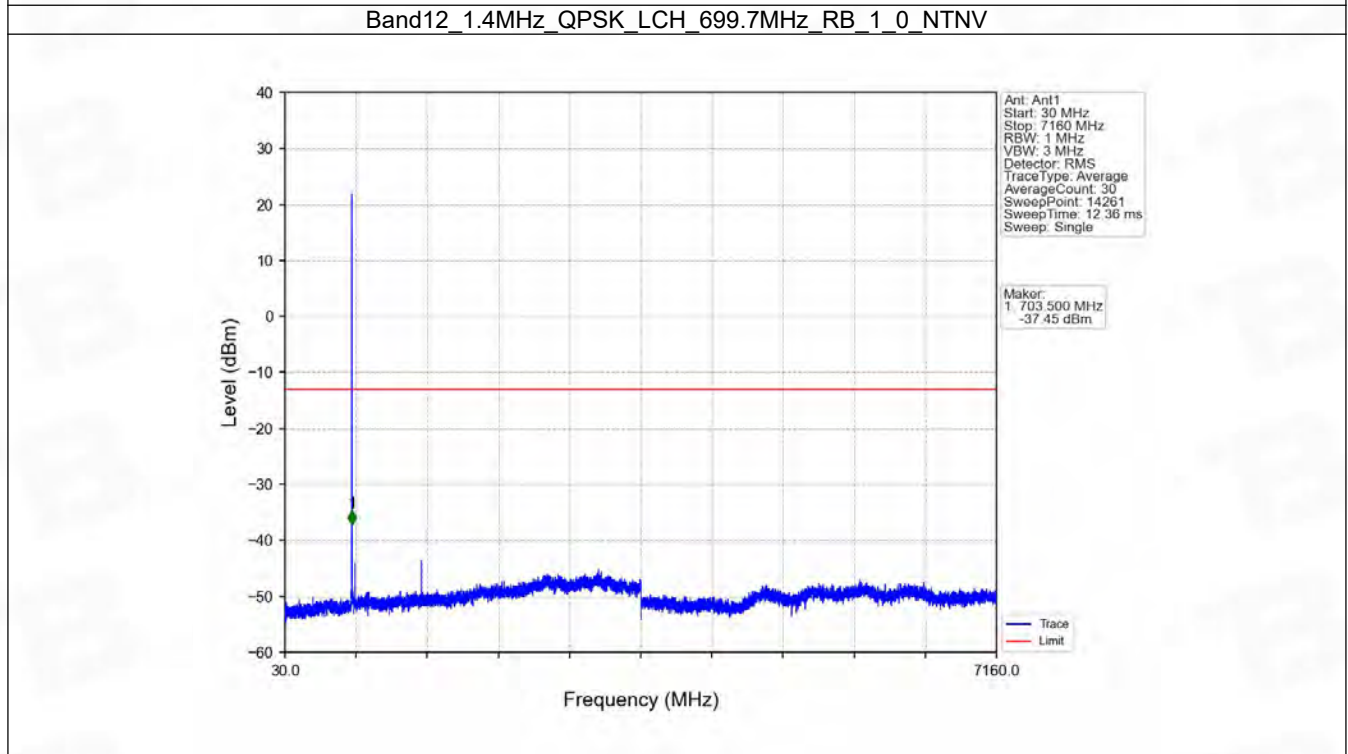
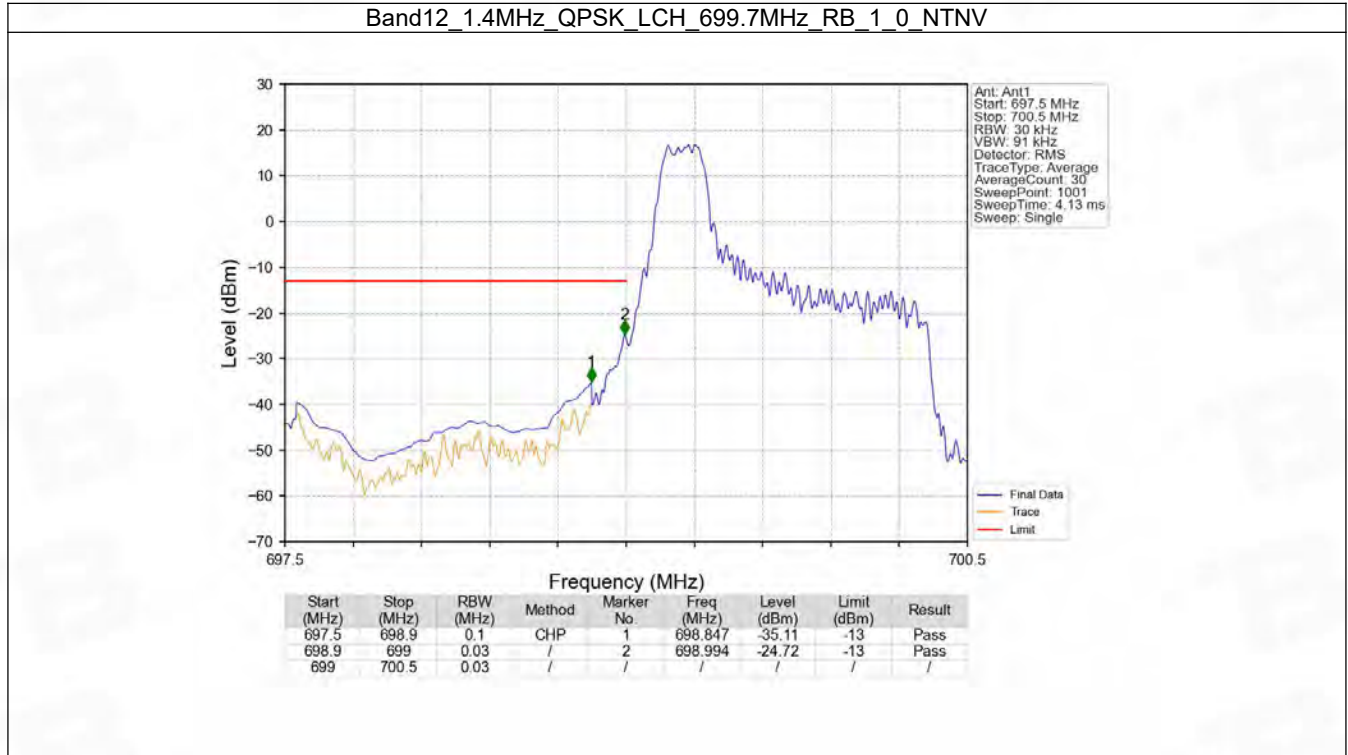
## 6. Spurious Emission

### 6.1 B12\_1.4MHz

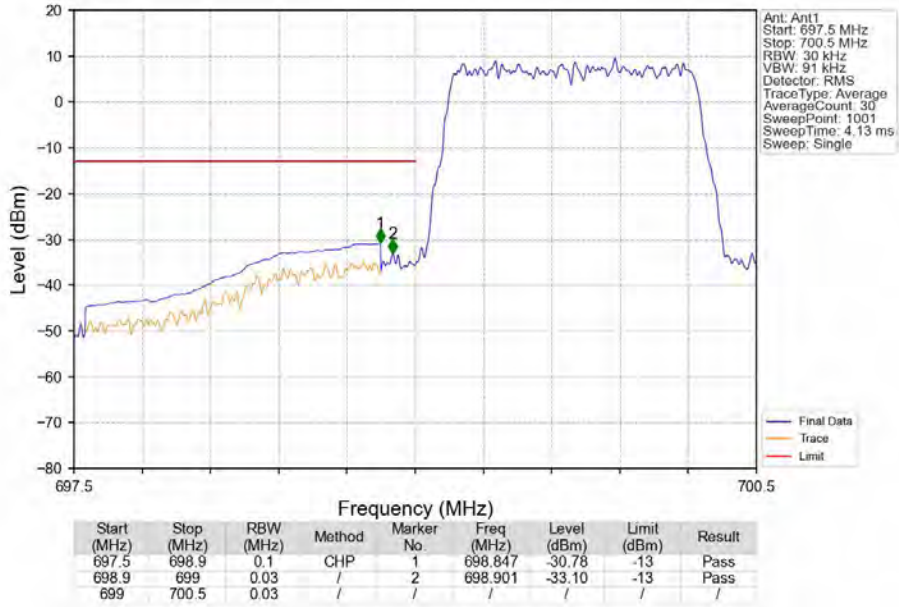
#### 6.1.1 Test Result

Band: 12 / Bandwidth: 1.4MHz / NTN						
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	

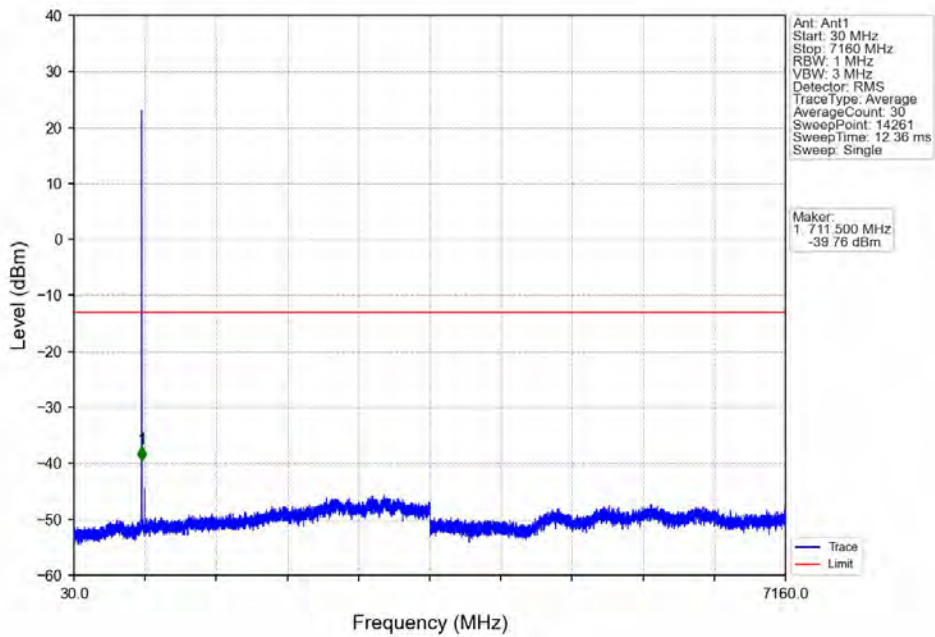
6.1.2 Test Graph



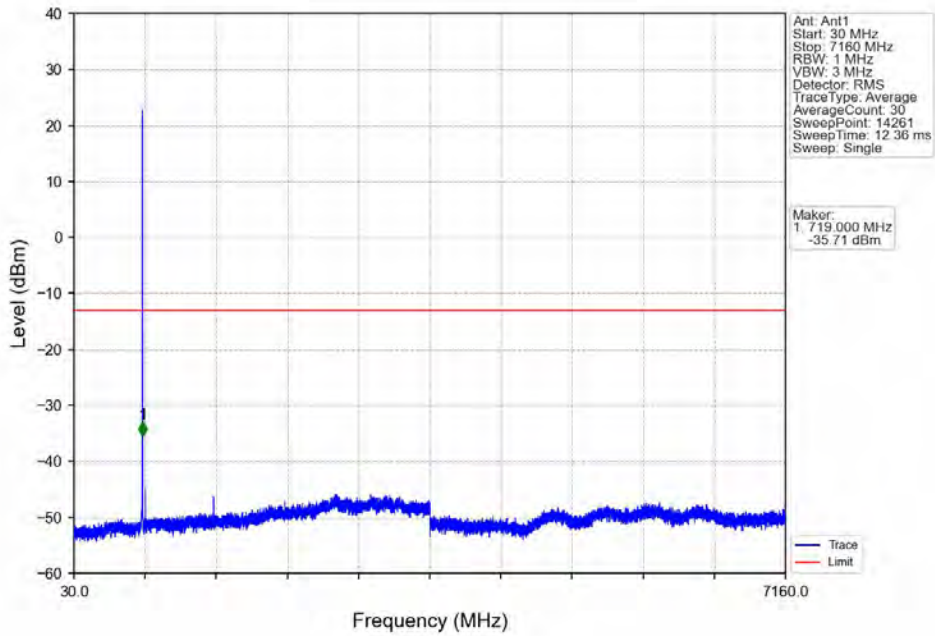
Band12\_1.4MHz\_QPSK\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



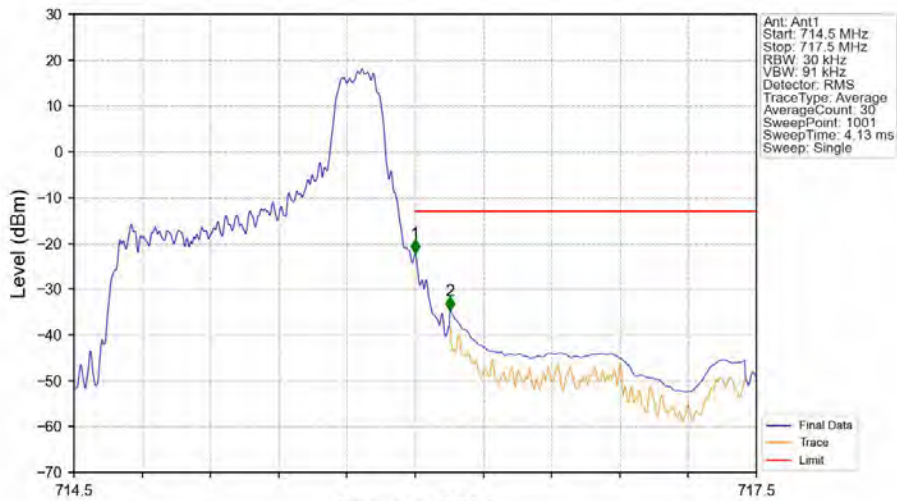
Band12\_1.4MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_1\_0\_NTNV

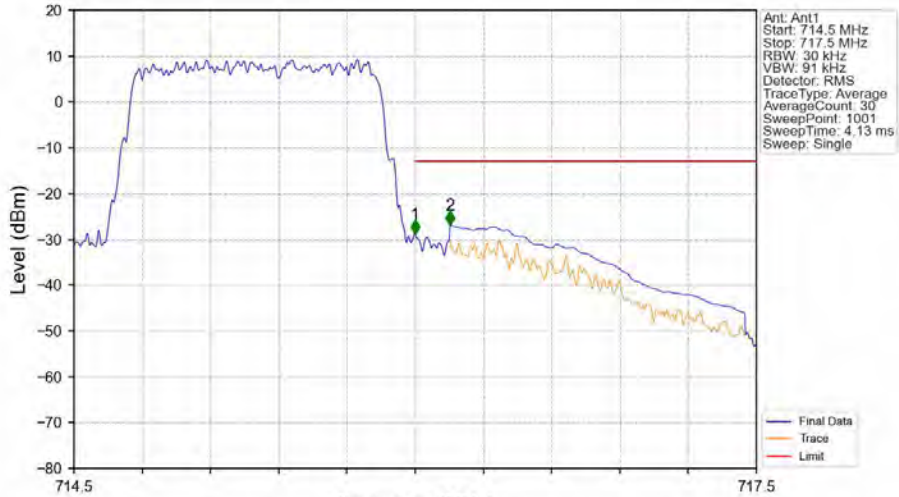


Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_1\_5\_NTNV



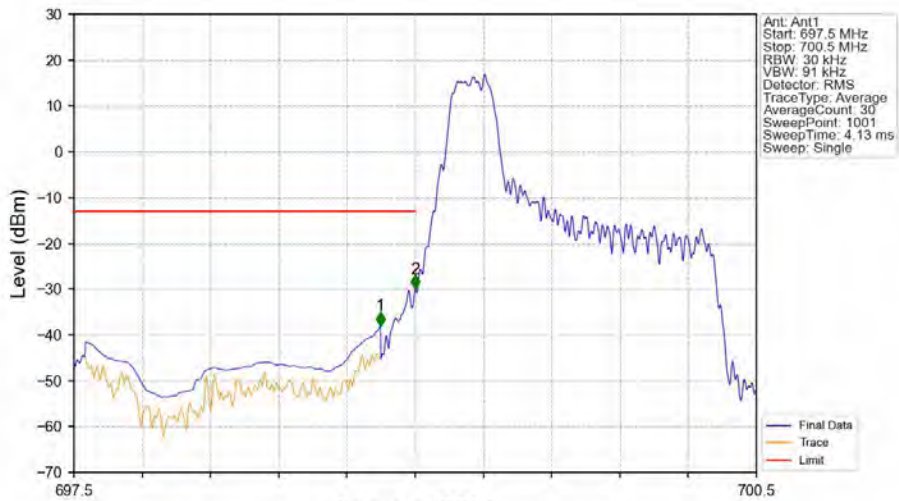
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.000	-22.17	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-34.70	-13	Pass

Band12\_1.4MHz\_QPSK\_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	/	/	/	/	/	/
716	716.1	0.03	/	1	716.000	-28.88	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-26.93	-13	Pass

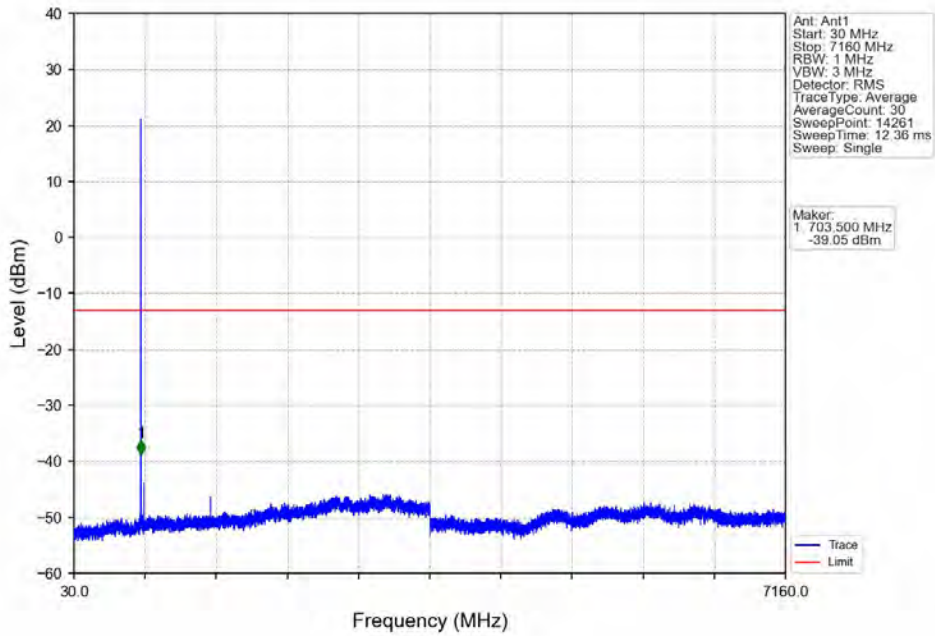
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV



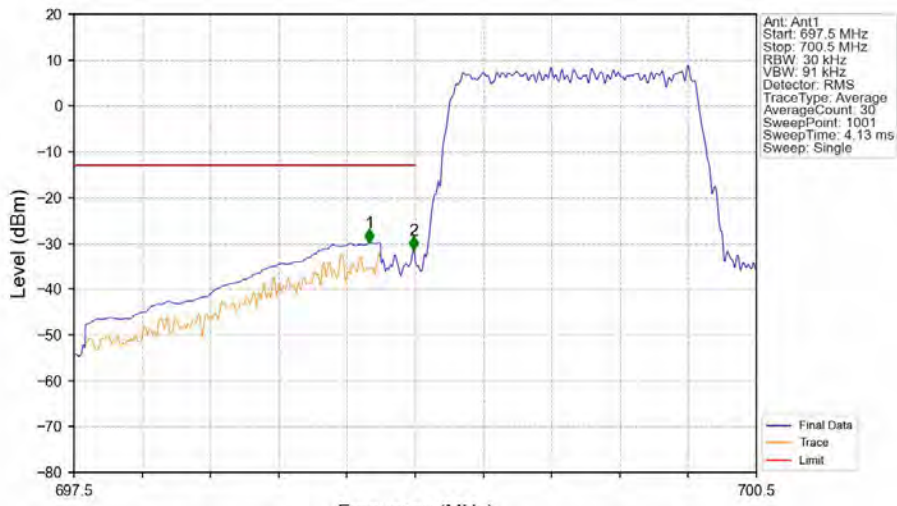
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.847	-38.00	-13	Pass
698.9	699	0.03	/	2	699.000	-30.00	-13	Pass
699	700.5	0.03	/	/	/	/	/	/



Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV

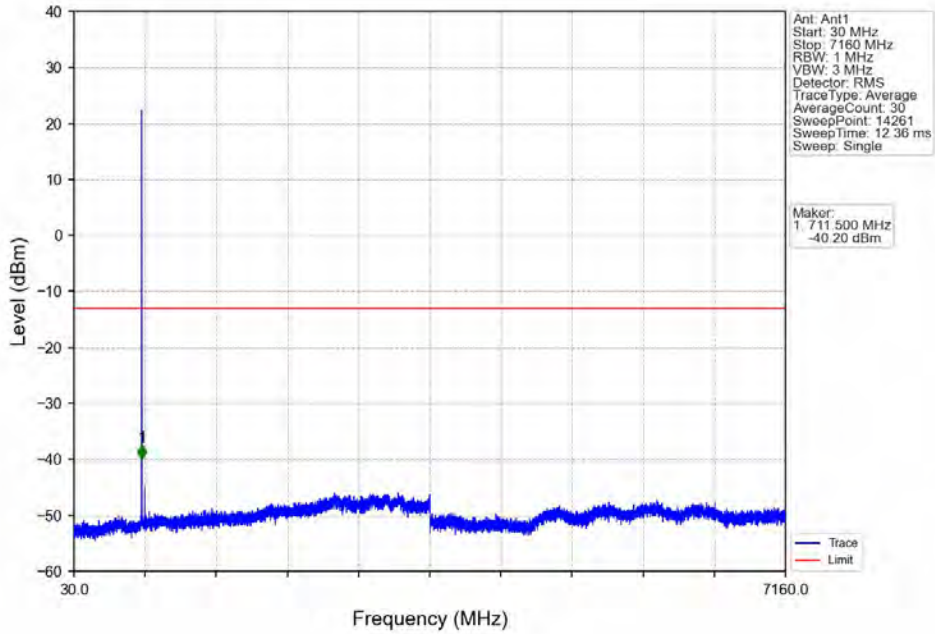


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV

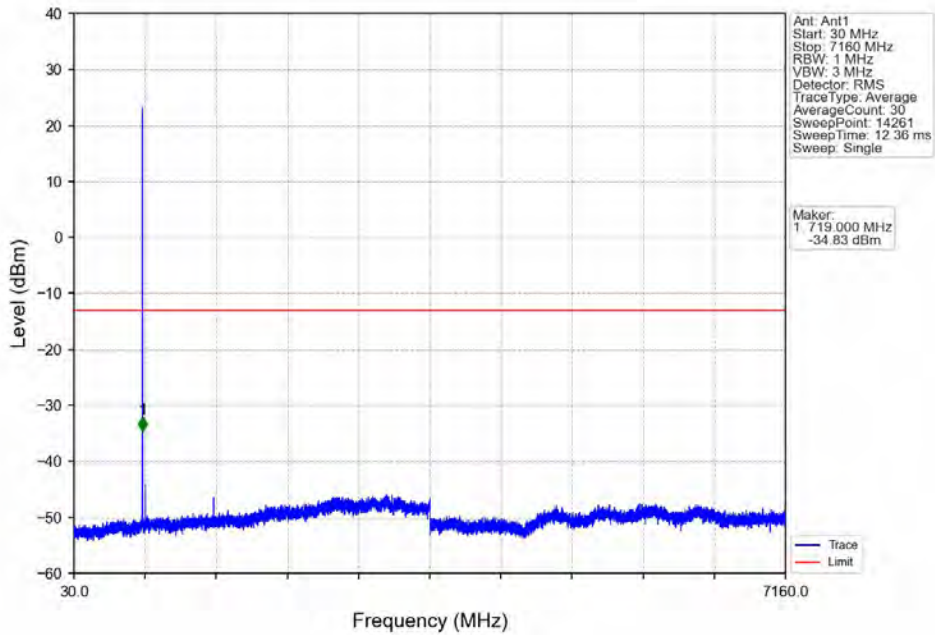


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.799	-29.88	-13	Pass
698.9	699	0.03	/	2	698.994	-31.47	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

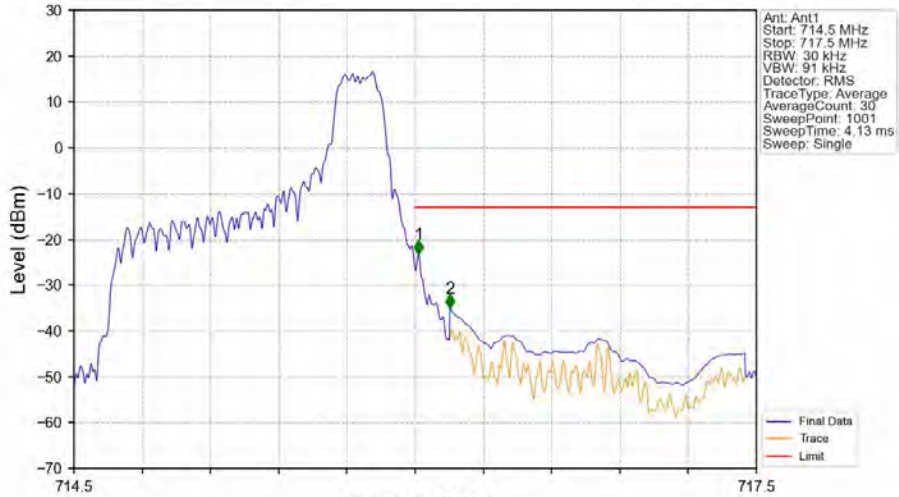
Band12 1.4MHz 16QAM MCH 707.5MHz RB 1 0 NTN



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

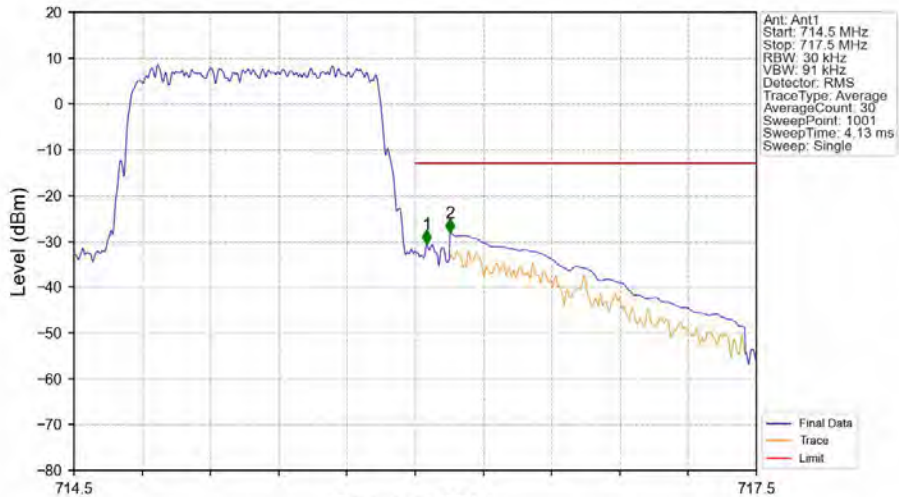


Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_1\_5\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.015	-23.28	-13	Pass
716	716.1	0.03	/	1	716.015	-23.28	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-35.12	-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	716.051	-30.56	-13	Pass
716	716.1	0.03	/	1	716.051	-30.56	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-28.20	-13	Pass

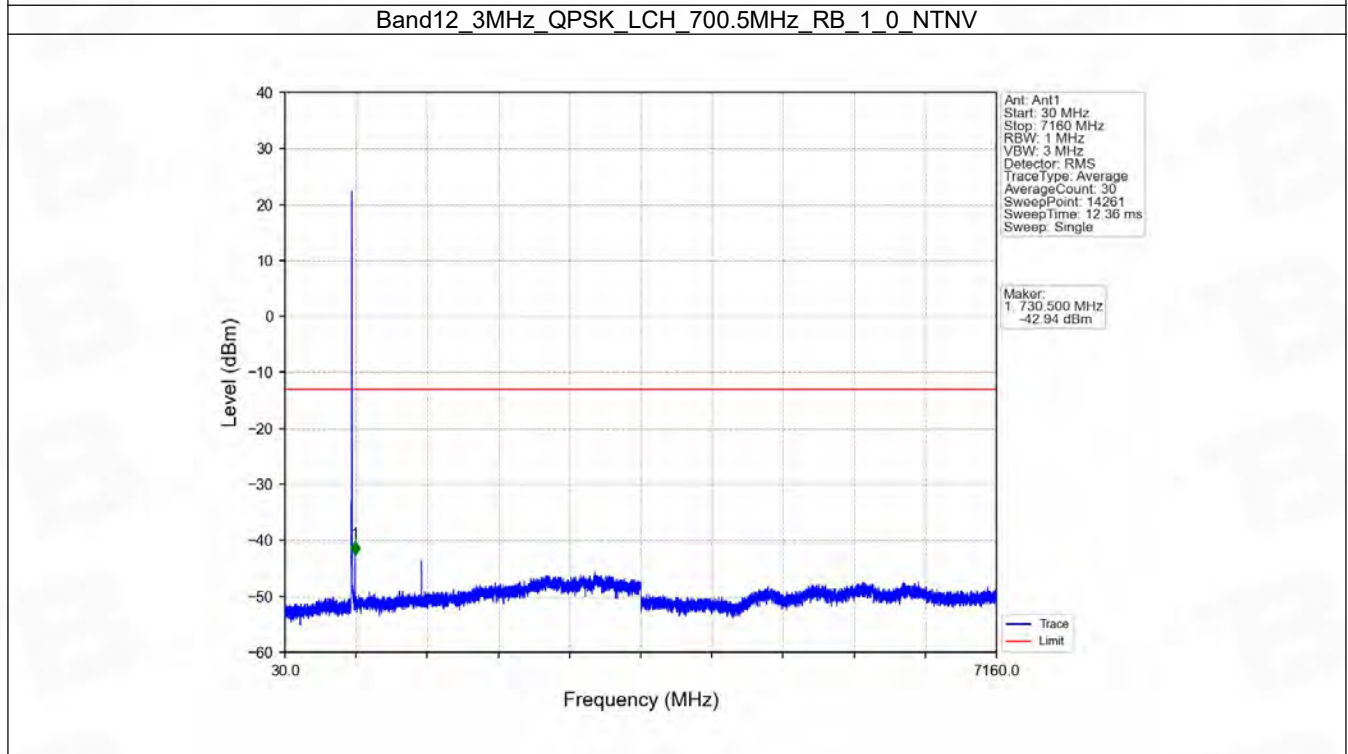
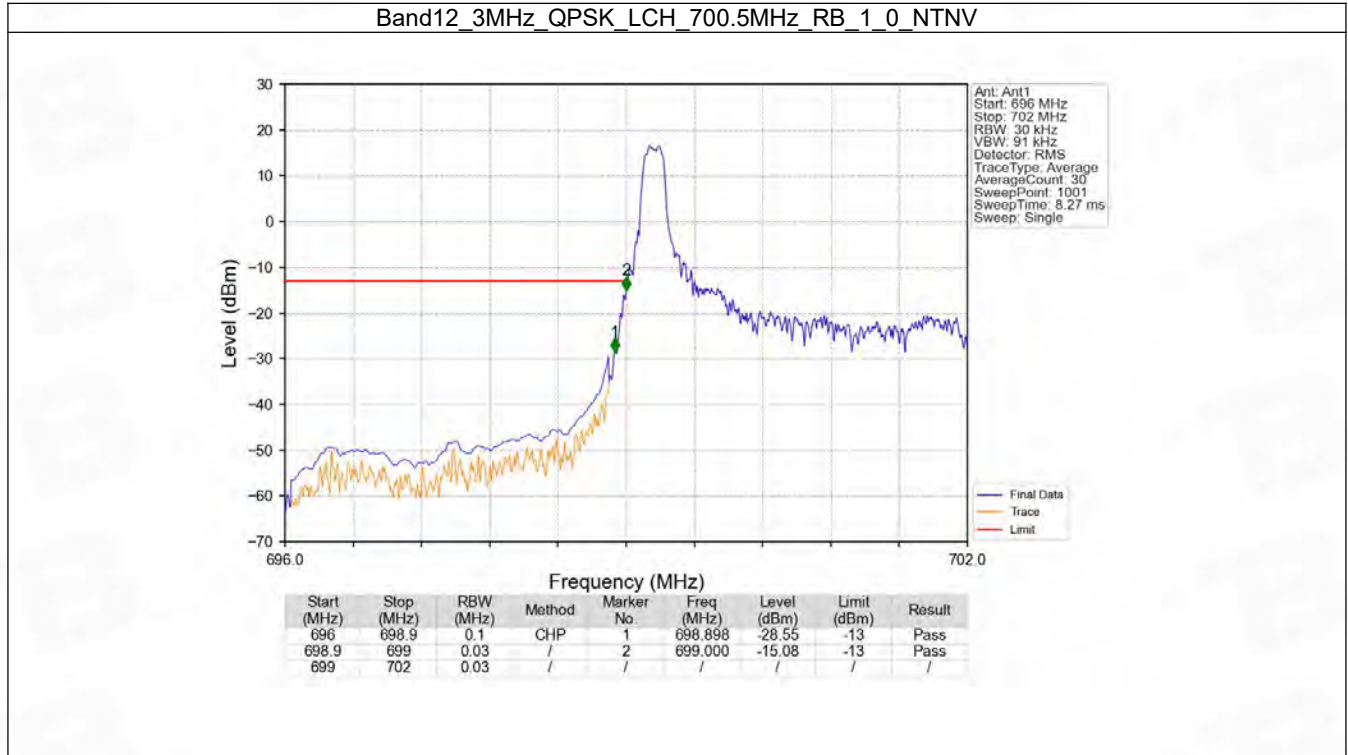


## 6.2 B12\_3MHz

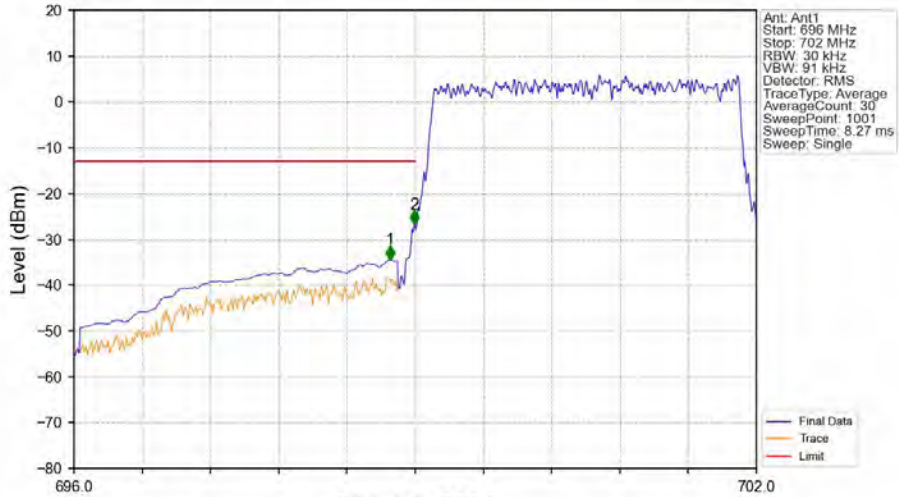
### 6.2.1 Test Result

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
	714.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			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
	714.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass

6.2.2 Test Graph

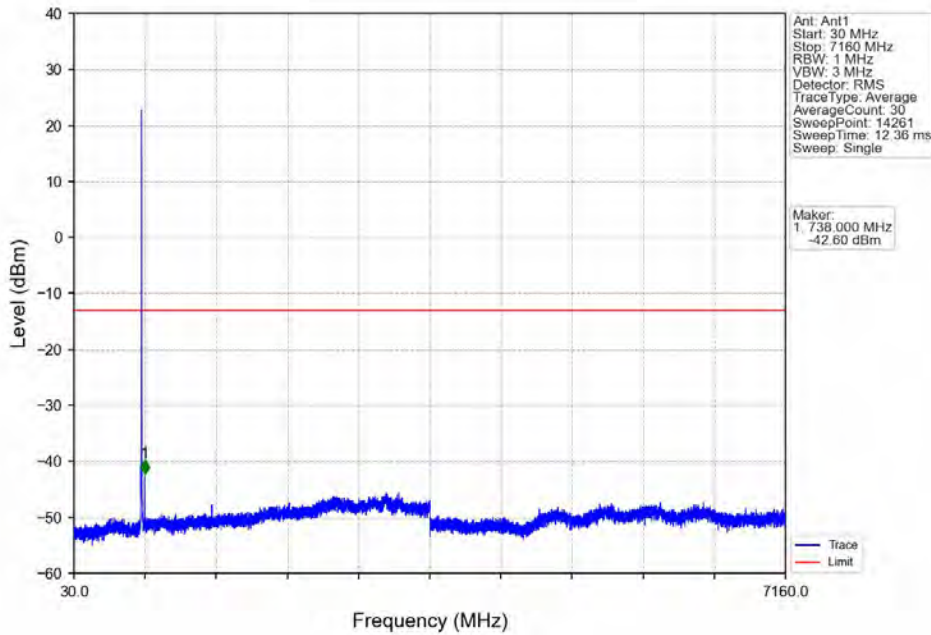


Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.778	-34.44	-13	Pass
698.9	699	0.03	/	2	698.994	-26.74	-13	Pass
699	702	0.03	/	/	/	/	/	/

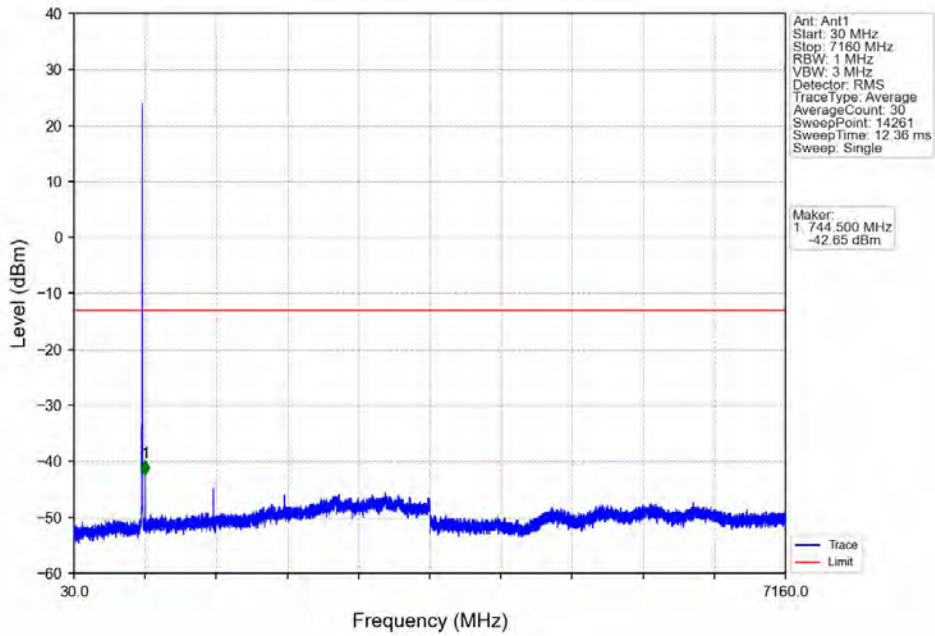
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



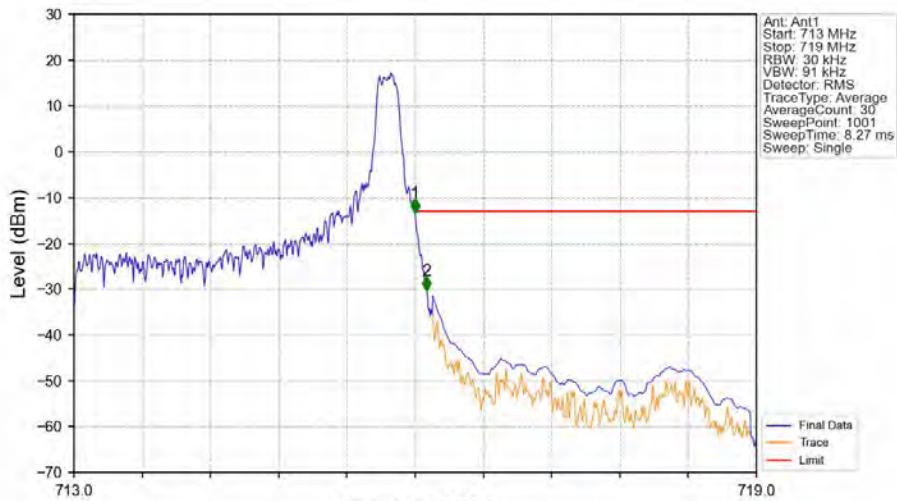
Ant: Ant1  
 Start: 30 MHz  
 Stop: 7160 MHz  
 RBW: 1 MHz  
 VBW: 3 MHz  
 Detector: RMS  
 TraceType: Average  
 AverageCount: 30  
 SweepPoint: 14261  
 SweepTime: 12.36 ms  
 Sweep: Single

Marker:  
 1 738.000 MHz  
 -42.60 dBm

Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_1\_0\_NTNV

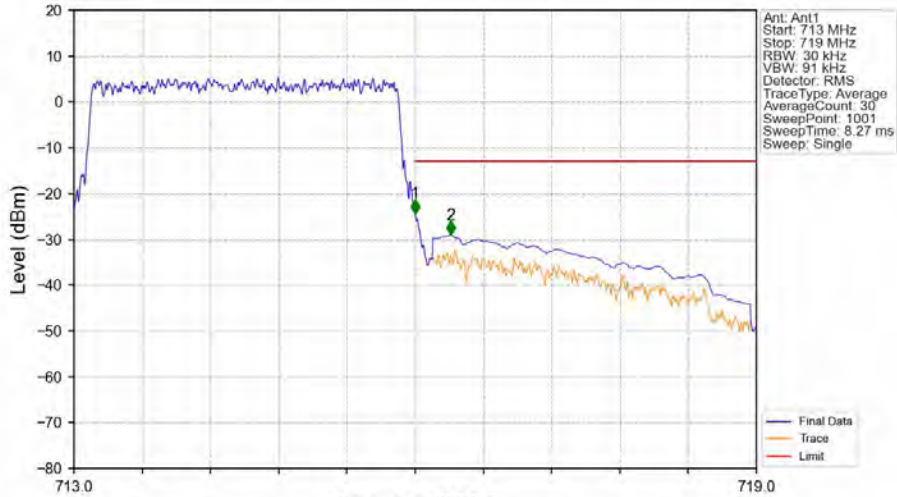


Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_1\_14\_NTNV



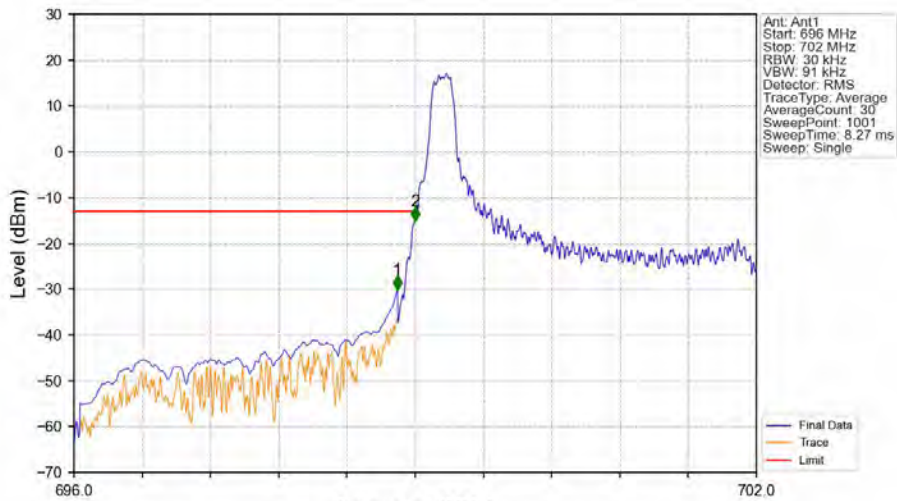
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	1	716.000	-13.45	-13	Pass
716.1	719	0.1	CHP	2	716.102	-30.30	-13	Pass

Band12\_3MHz\_QPSK\_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	716.000	-24.36	-13	Pass
716.1	719	0.1	CHP	2	716.312	-29.05	-13	Pass

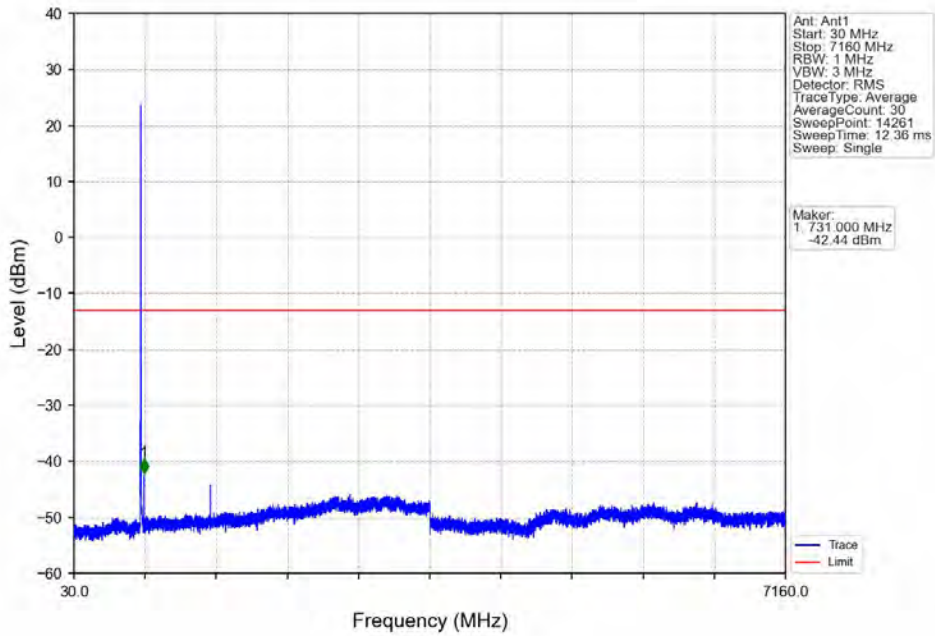
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV



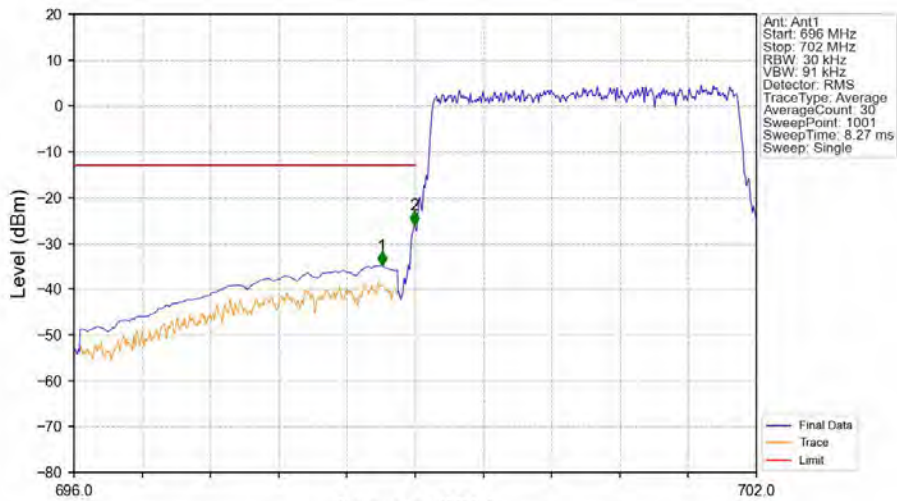
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	/	/	/	/	/
698.9	699	0.03	/	2	699.000	-15.11	-13	Pass
699	702	0.03	/	/	/	/	/	/



Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

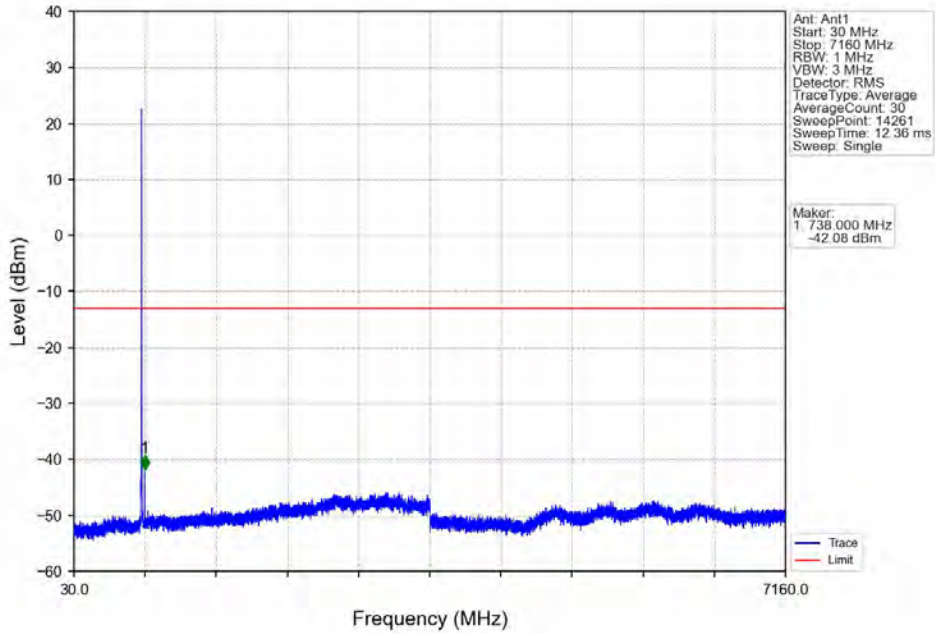


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV

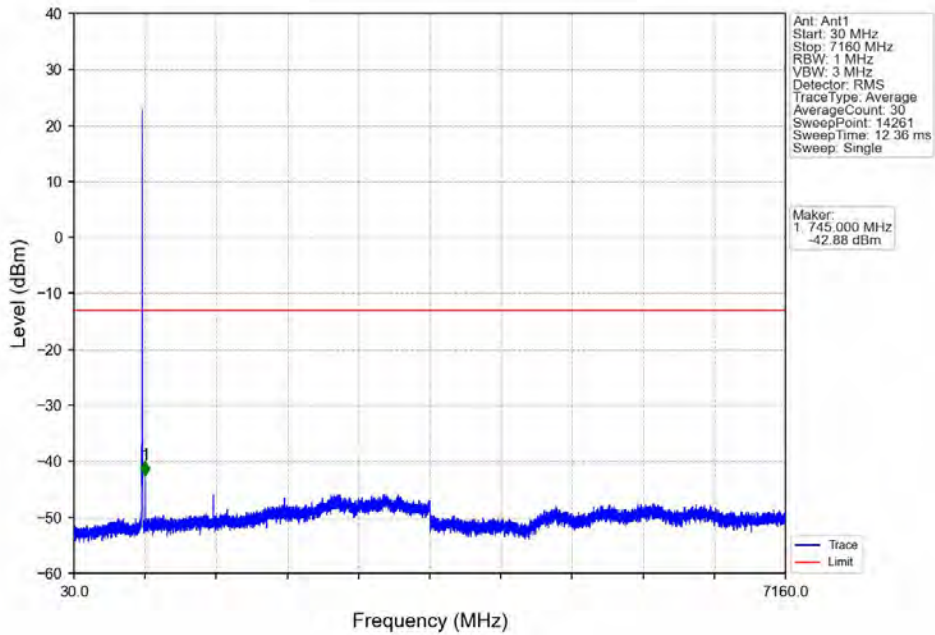


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.706	-34.87	-13	Pass
698.9	699	0.03	/	2	698.994	-26.07	-13	Pass
699	702	0.03	/	/	/	/	/	/

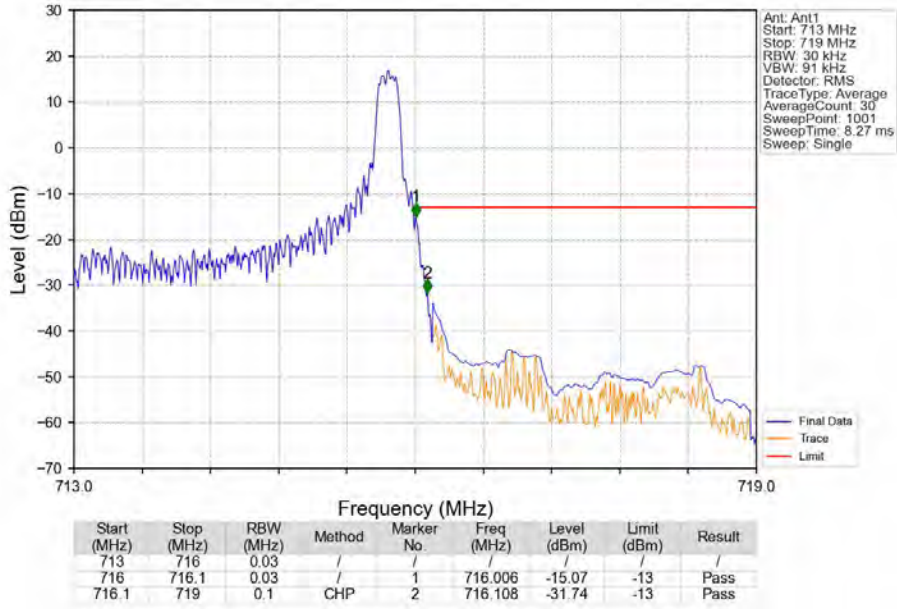
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



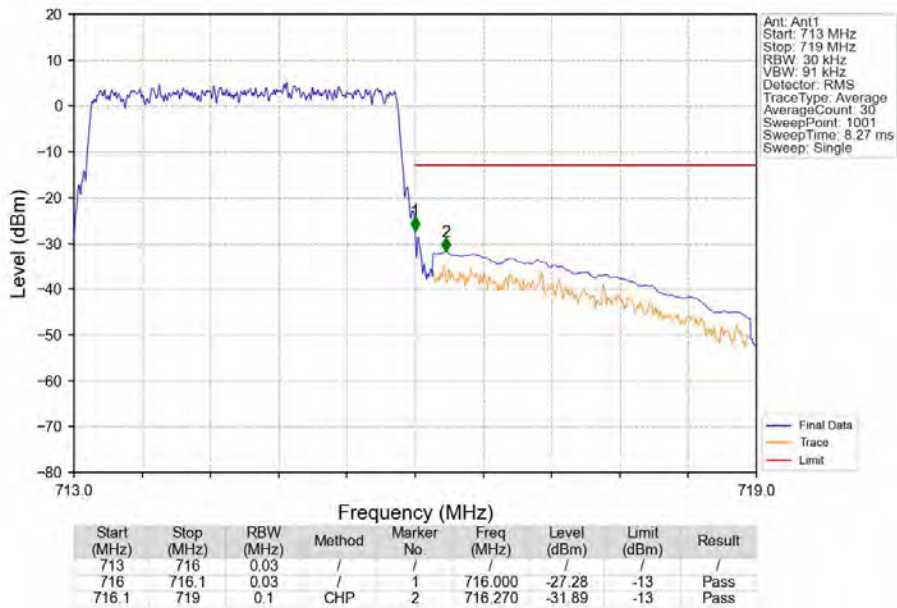
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_1\_0\_NTNV



Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_1\_14\_NTNV



Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV

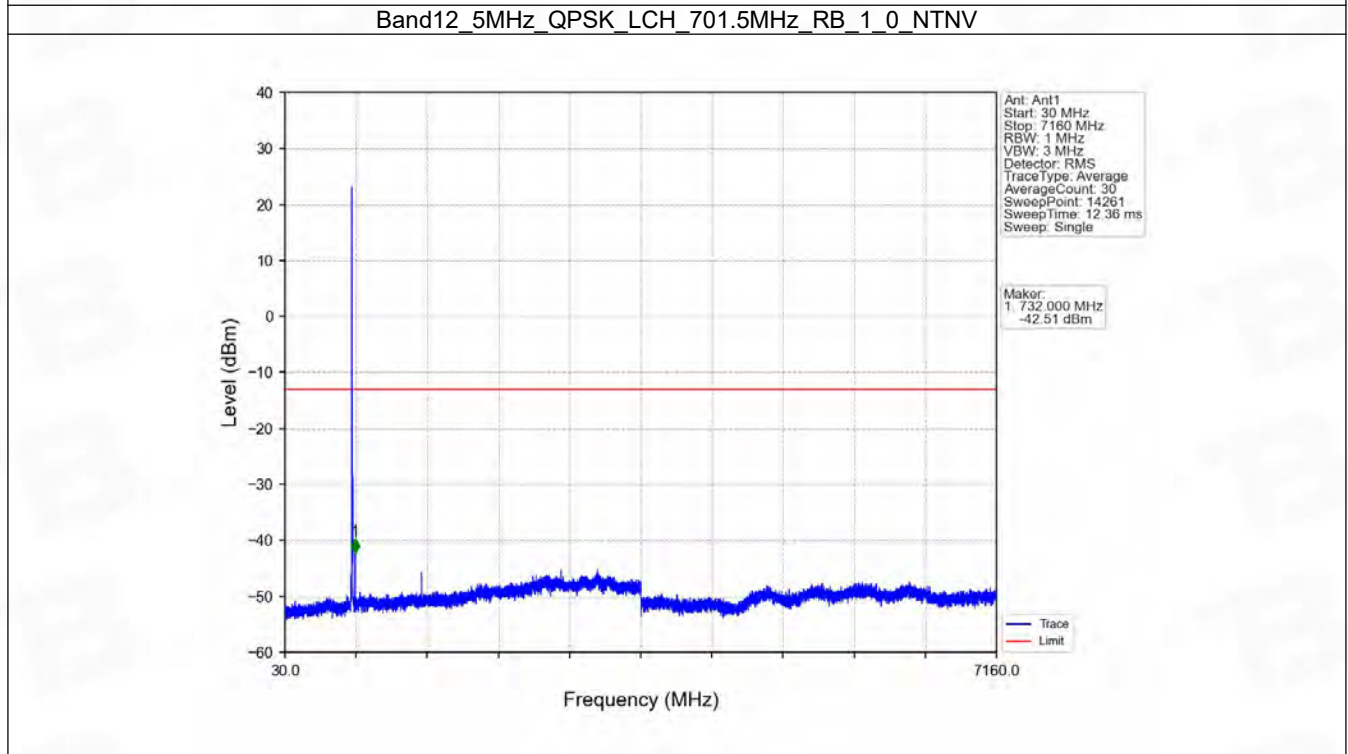
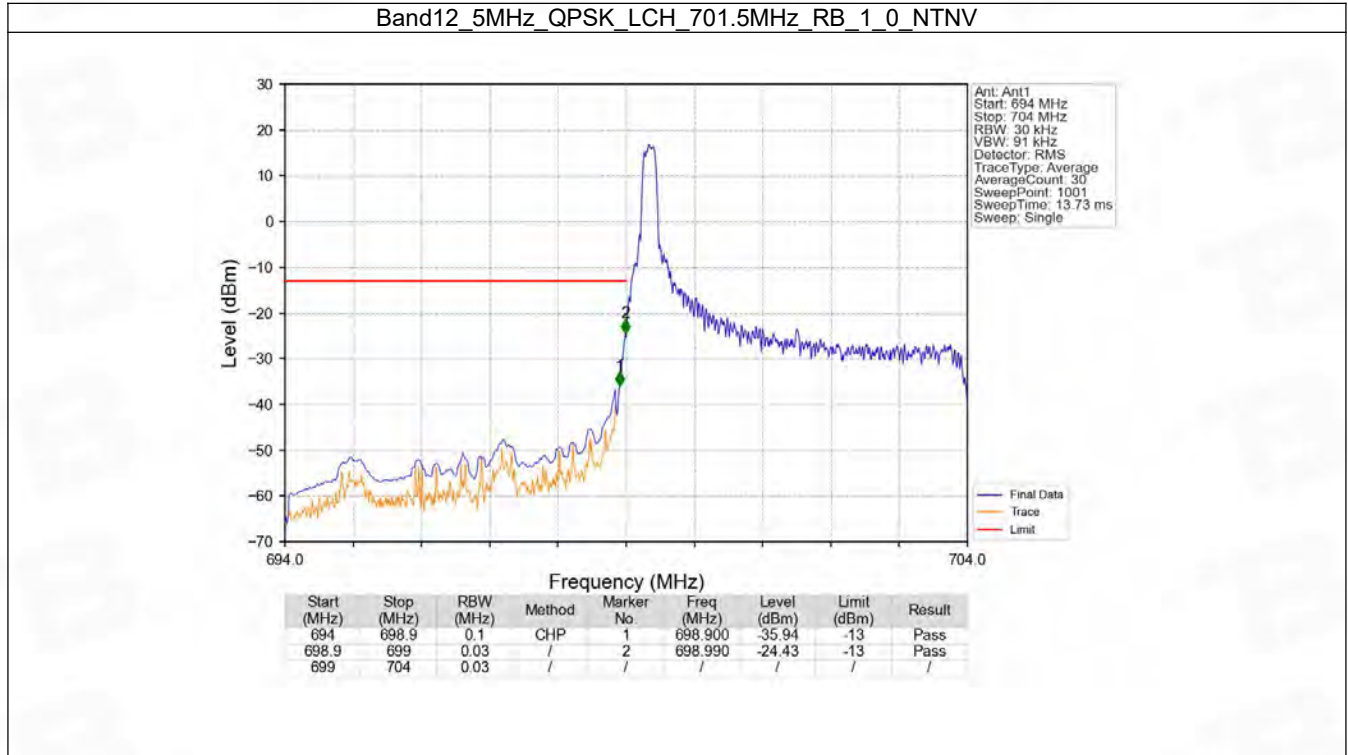


### 6.3 B12\_5MHz

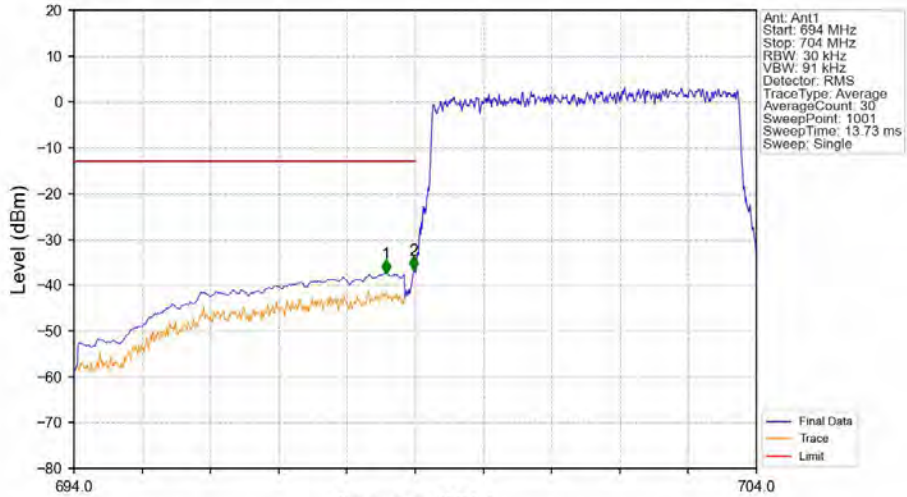
#### 6.3.1 Test Result

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

6.3.2 Test Graph

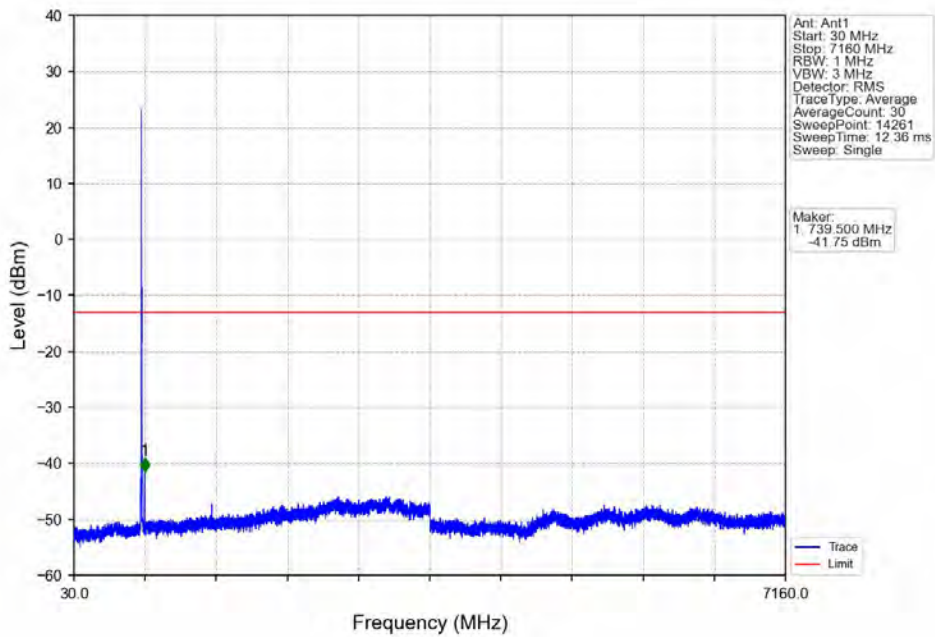


Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.570	-37.47	-13	Pass
698.9	699	0.03	/	2	698.980	-36.75	-13	Pass
699	704	0.03	/	/	/	/	/	/

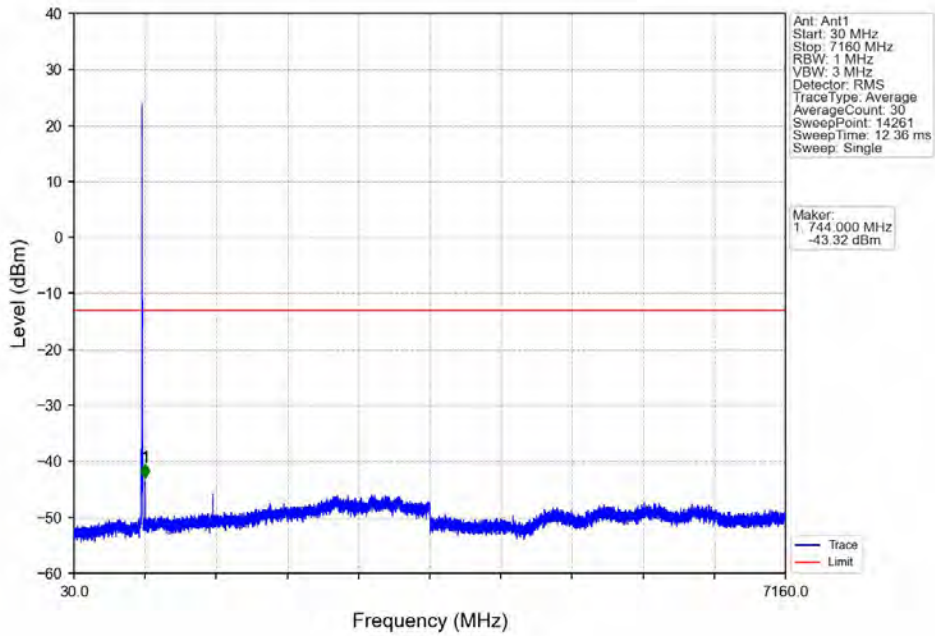
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



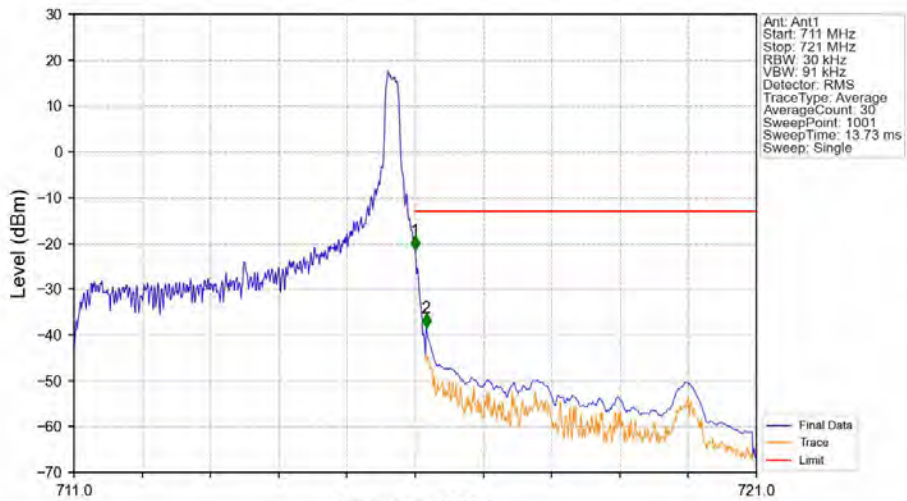
Ant: Ant1  
 Start: 30 MHz  
 Stop: 7160 MHz  
 RBW: 1 MHz  
 VBW: 3 MHz  
 Detector: RMS  
 TraceType: Average  
 AverageCount: 30  
 SweepPoint: 14261  
 SweepTime: 12.36 ms  
 Sweep: Single

Marker:  
 1: 739.500 MHz  
 -41.75 dBm

Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_0\_NTNV

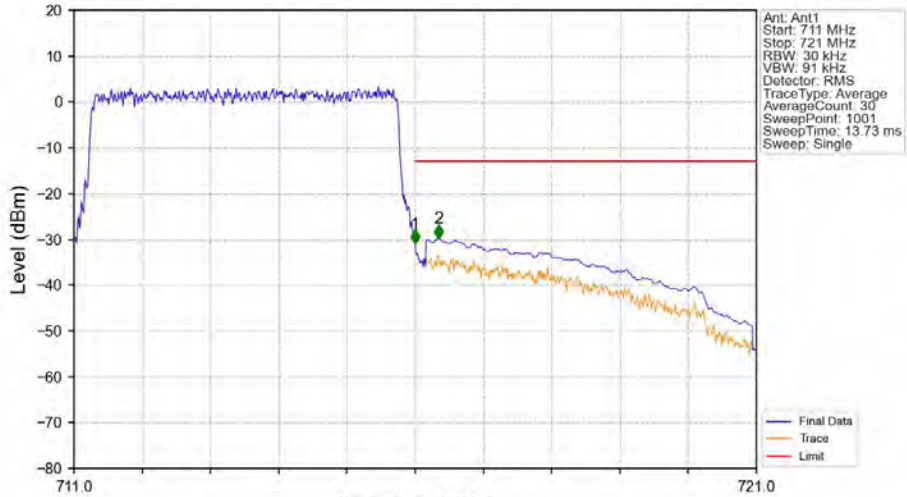


Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_24\_NTNV



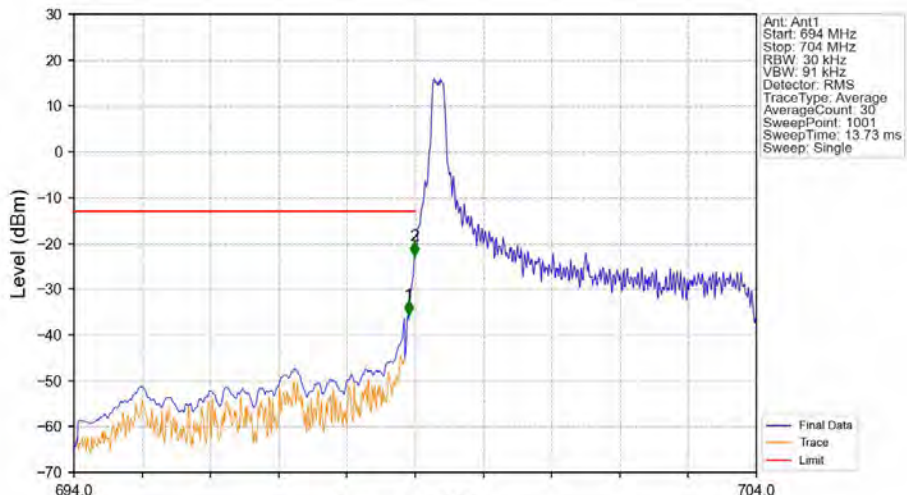
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	1	716.000	-21.55	-13	Pass
716.1	721	0.1	CHP	2	716.160	-38.39	-13	Pass

Band12\_5MHz\_QPSK\_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	/	1	716.000	-30.98	-13	Pass
716.1	721	0.1	CHP	2	716.340	-29.82	-13	Pass

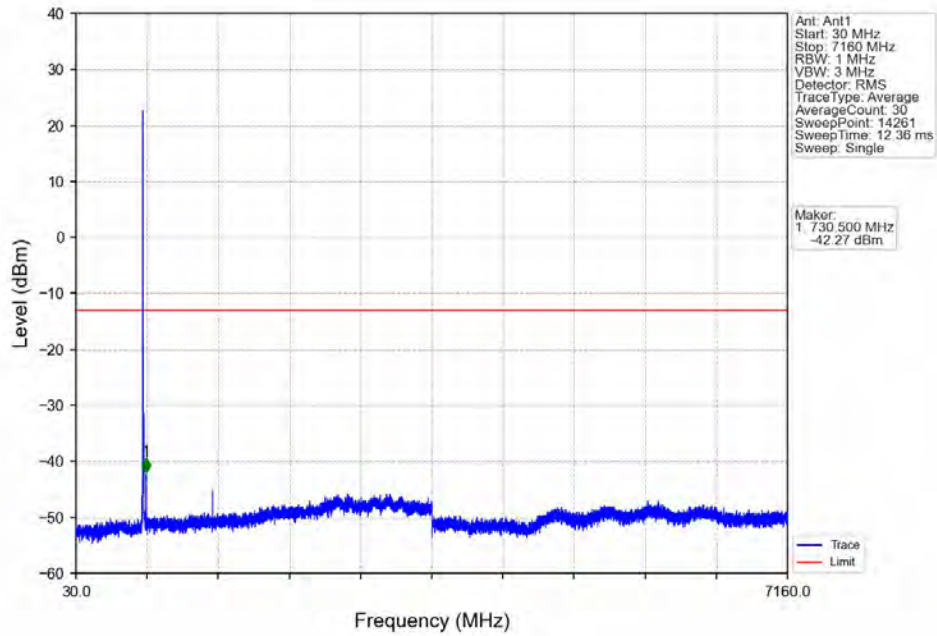
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV



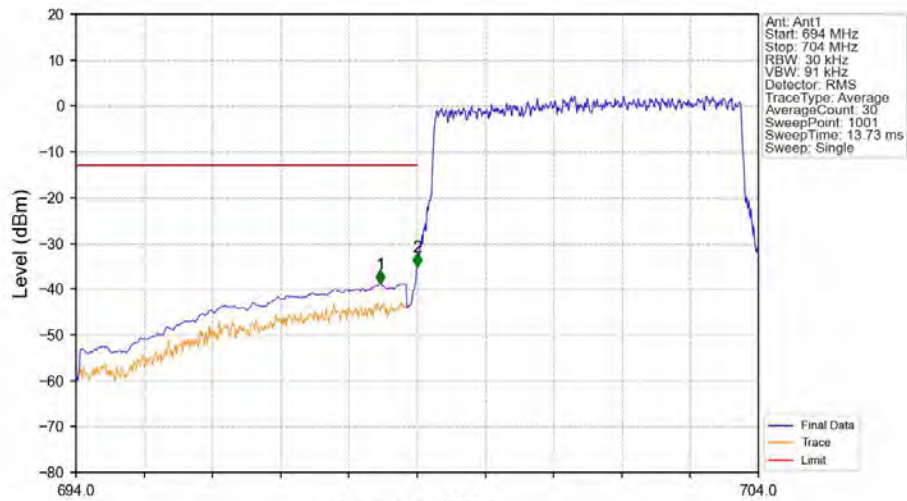
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.900	-35.58	-13	Pass
698.9	699	0.03	/	2	698.990	-22.78	-13	Pass
699	704	0.03	/	/	/	/	/	/



Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

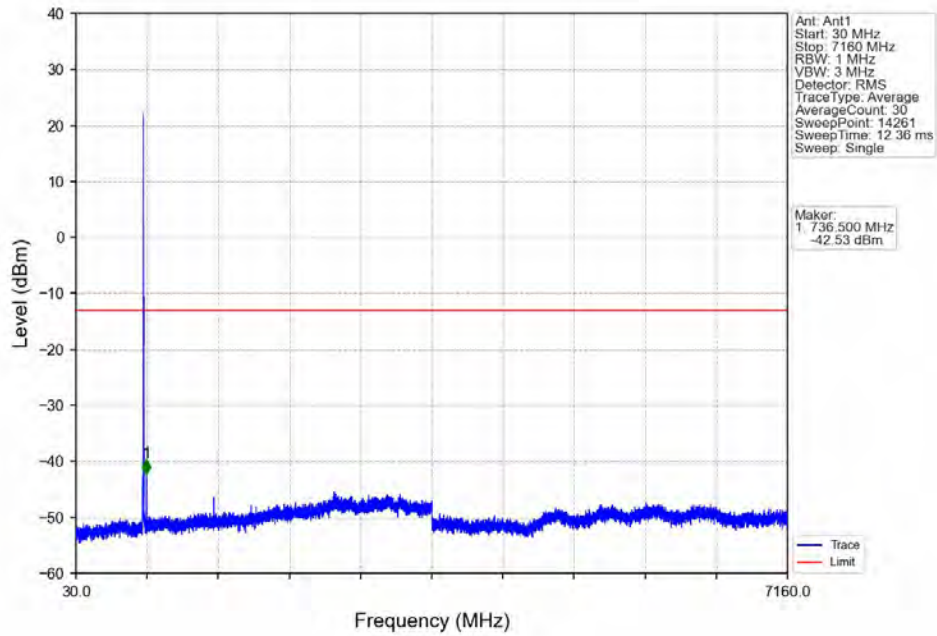


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV

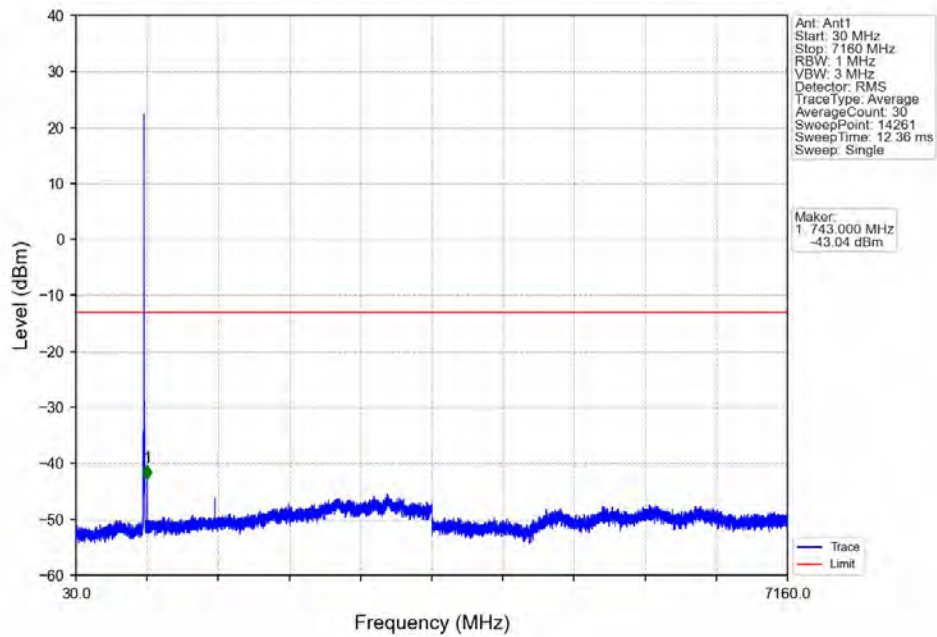


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.460	-38.91	-13	Pass
698.9	699	0.03	/	2	699.000	-35.16	-13	Pass
699	704	0.03	/	/	/	/	/	/

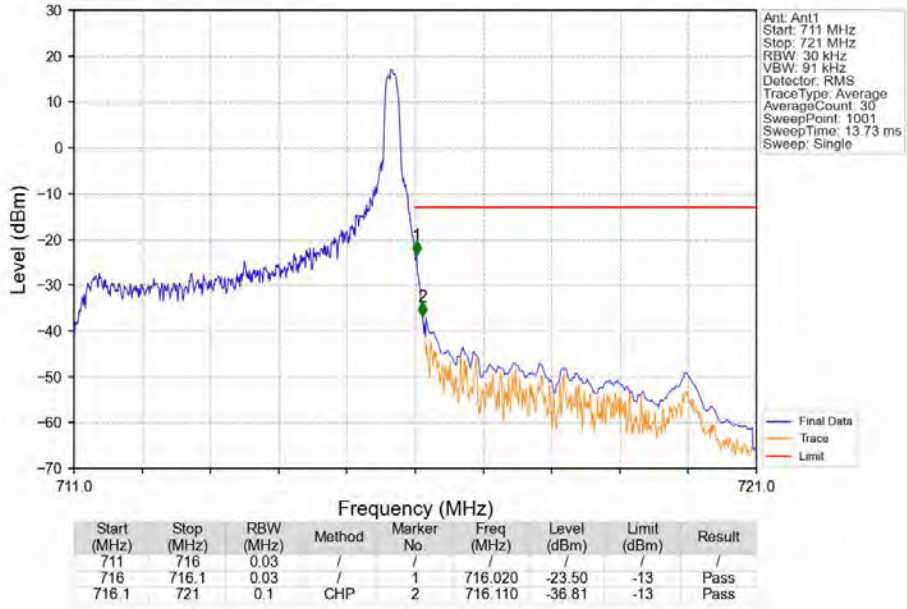
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



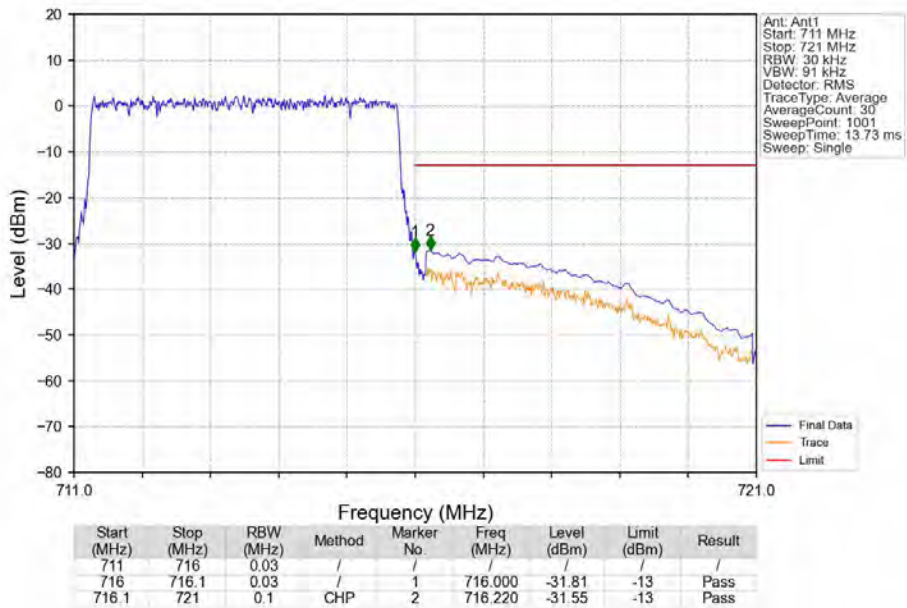
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_1\_0\_NTNV



Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_1\_24\_NTNV



Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



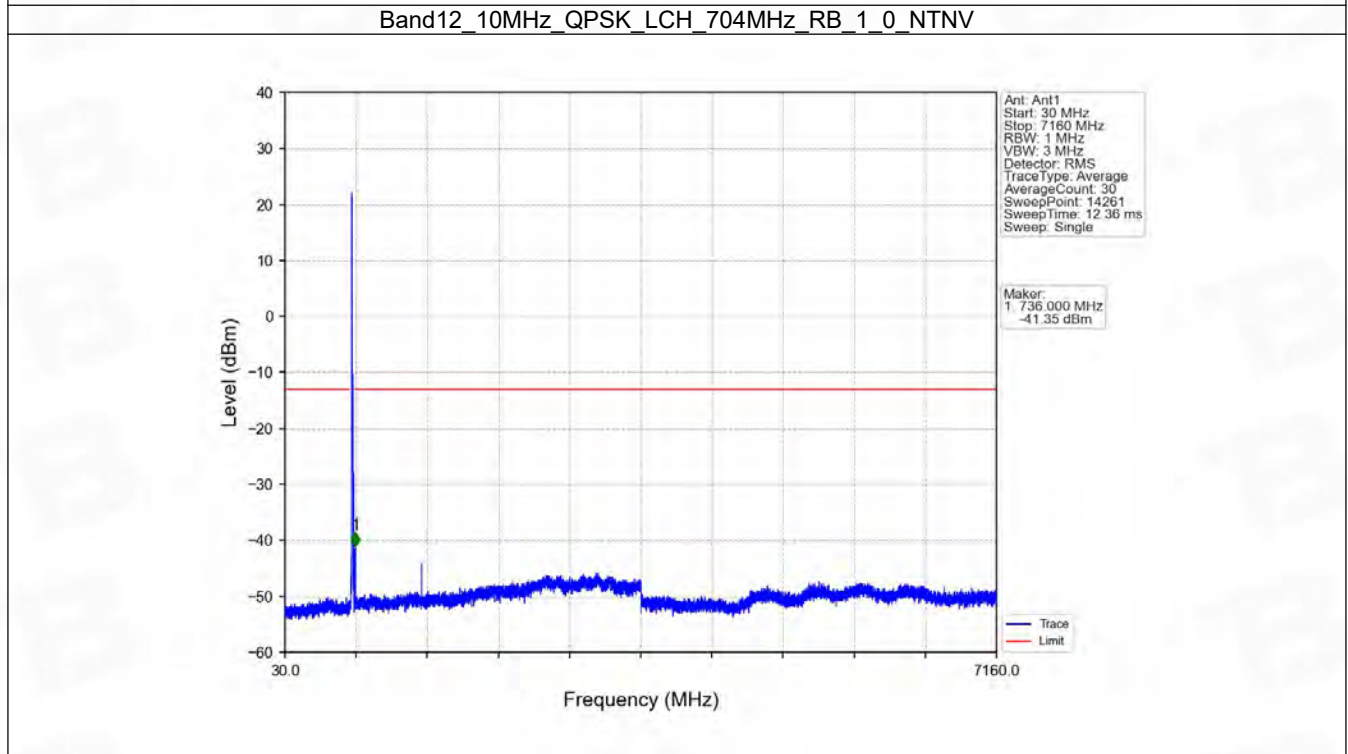
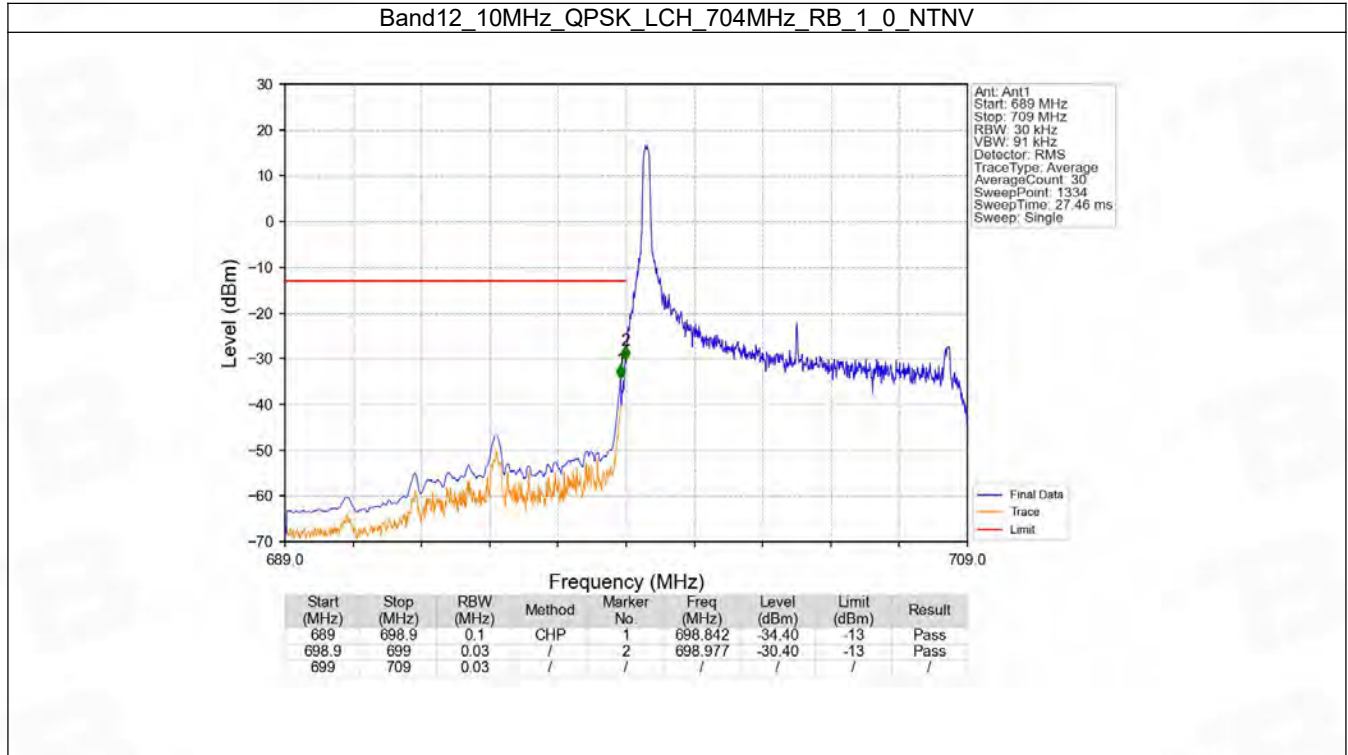


6.4 B12\_10MHz

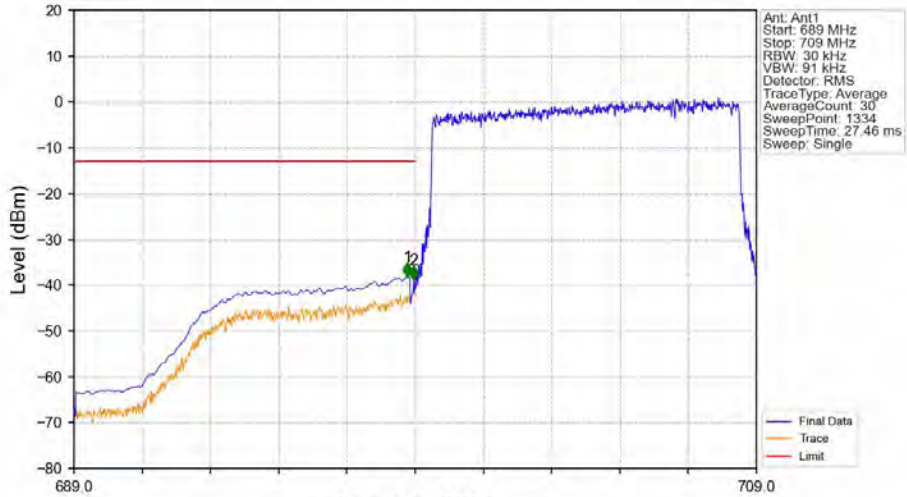
6.4.1 Test Result

Band: 12 / Bandwidth: 10MHz / NTV						
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

6.4.2 Test Graph

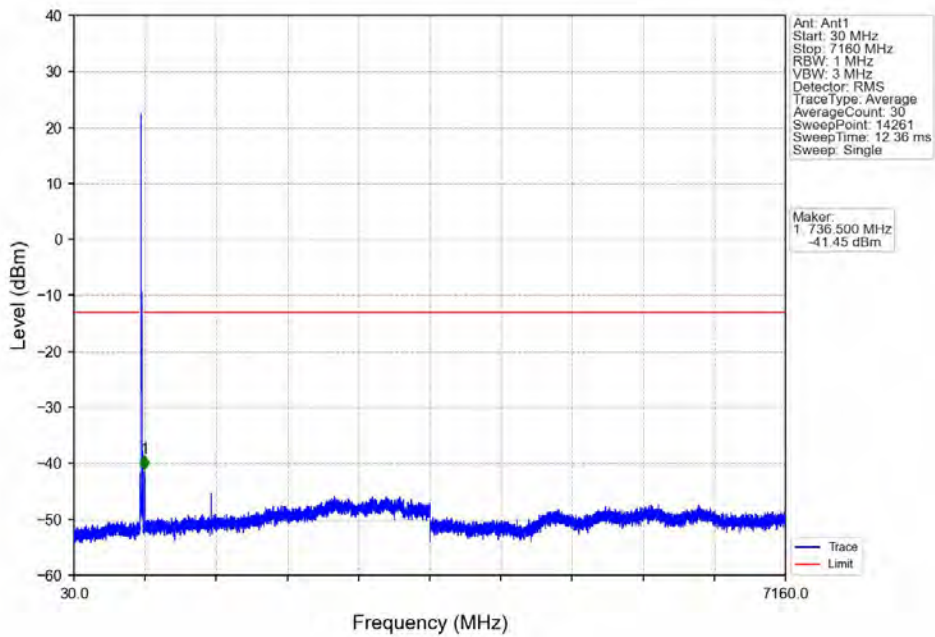


Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV

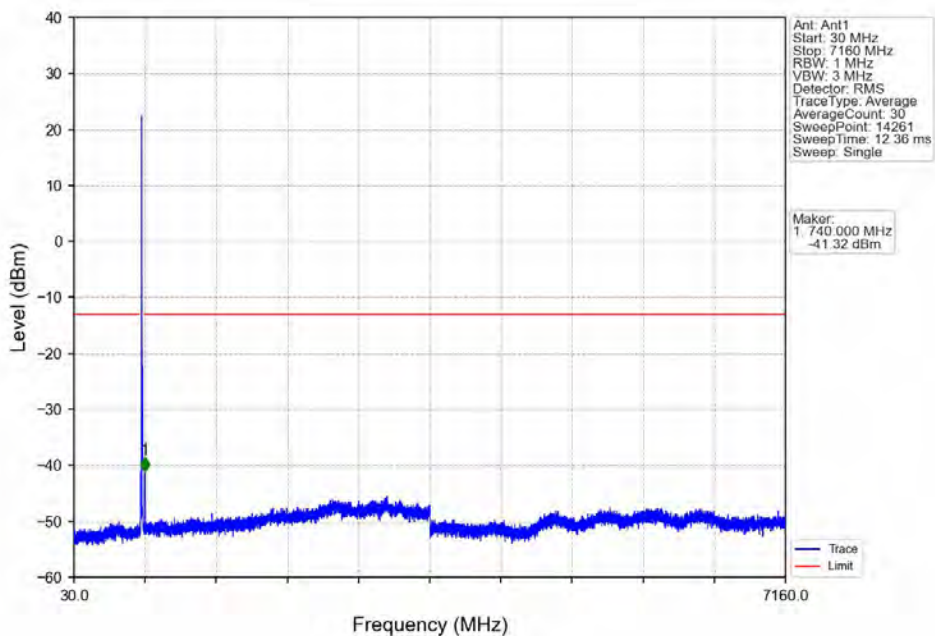


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.767	-38.26	-13	Pass
698.9	699	0.03	/	2	698.962	-38.96	-13	Pass
699	709	0.03	/	/	/	/	/	/

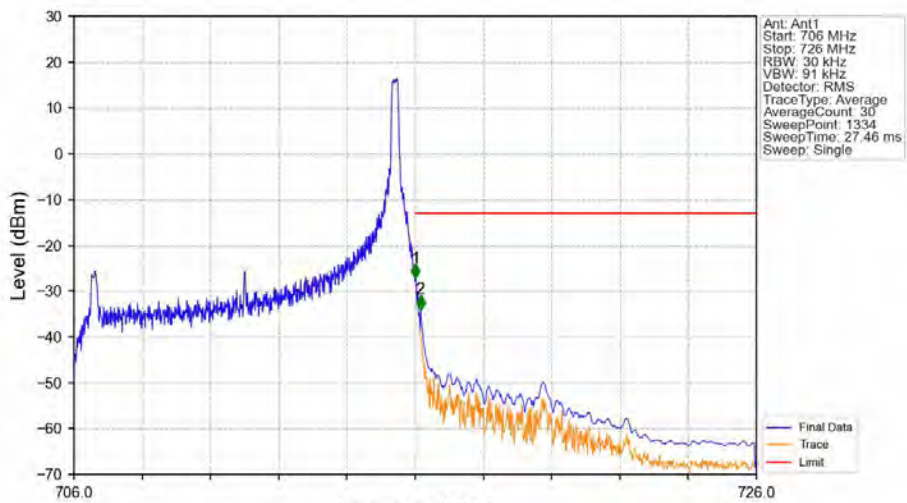
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_0\_NTNV

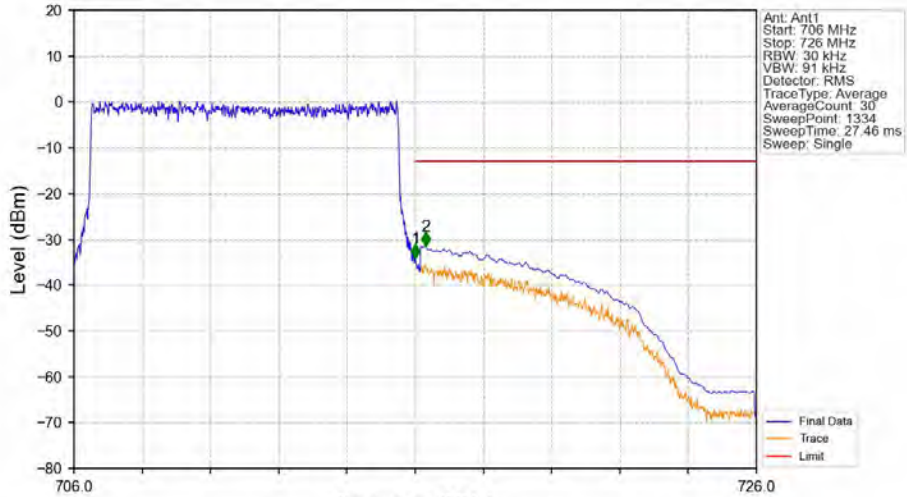


Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_49\_NTNV



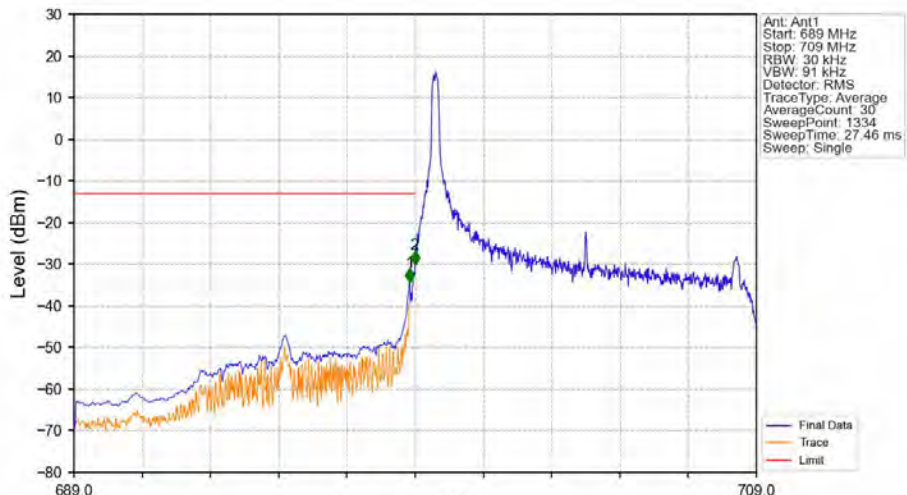
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.008	-27.16	-13	Pass
716.1	726	0.1	CHP	2	716.158	-33.94	-13	Pass

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	/	1	716.008	-34.11	-13	Pass
716	716.1	0.03	/	1	716.008	-34.11	-13	Pass
716.1	726	0.1	CHP	2	716.308	-31.45	-13	Pass

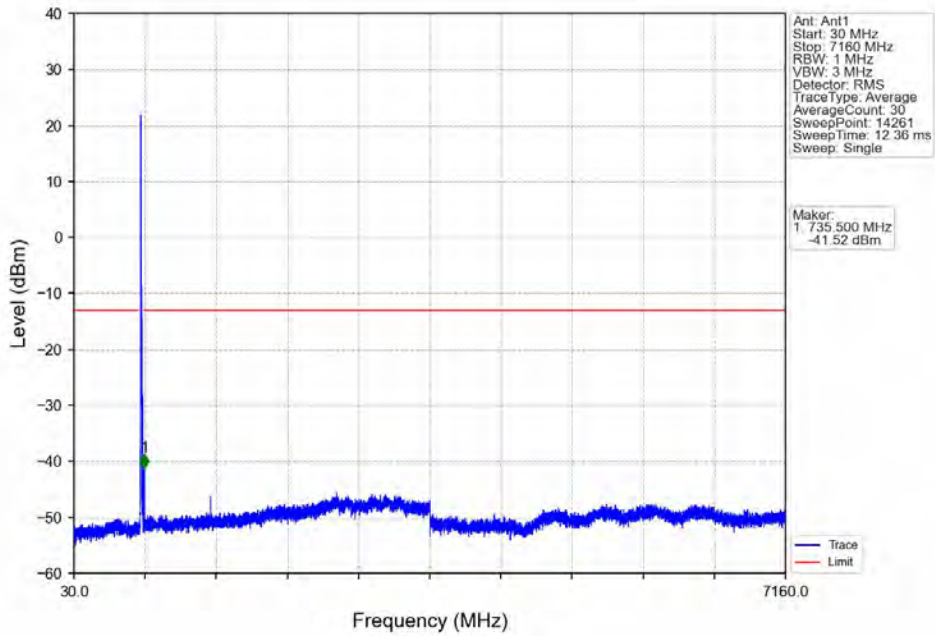
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV



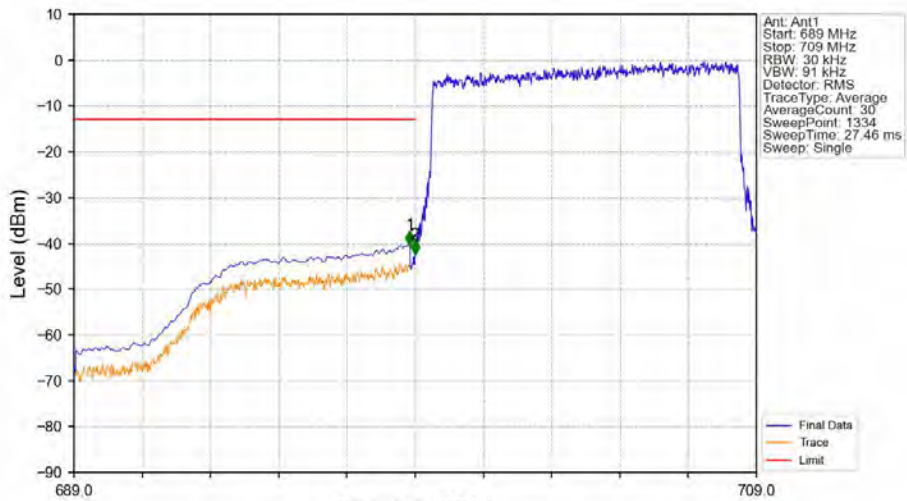
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-34.44	-13	Pass
698.9	699	0.03	/	2	698.992	-30.21	-13	Pass
699	709	0.03	/	/	/	/	/	/



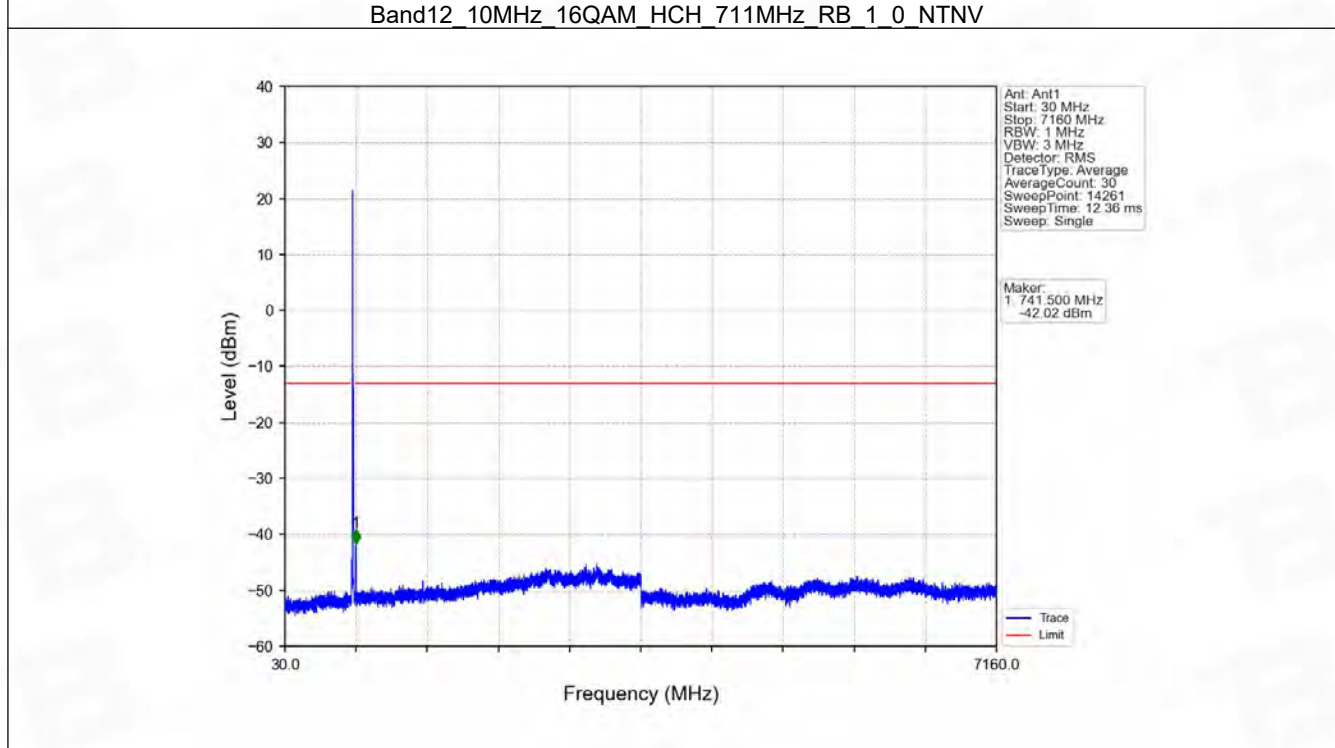
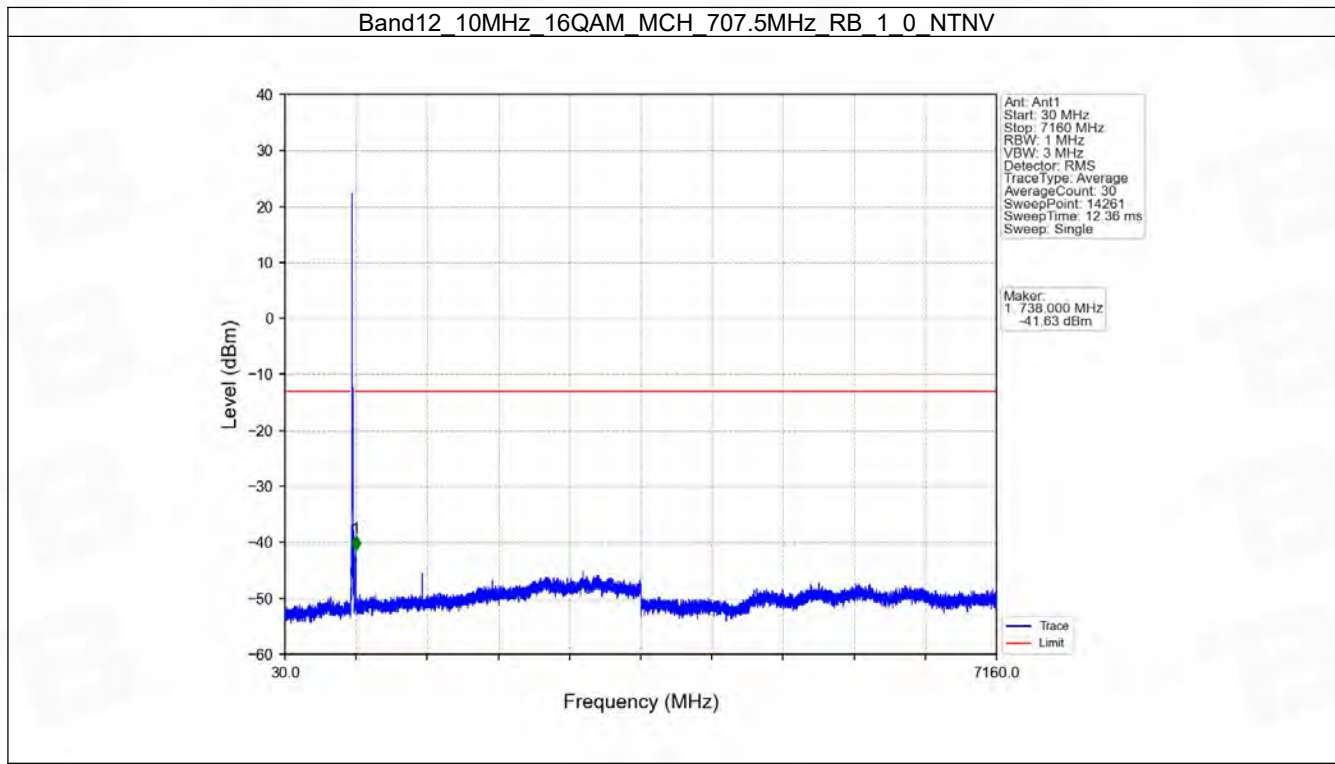
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV



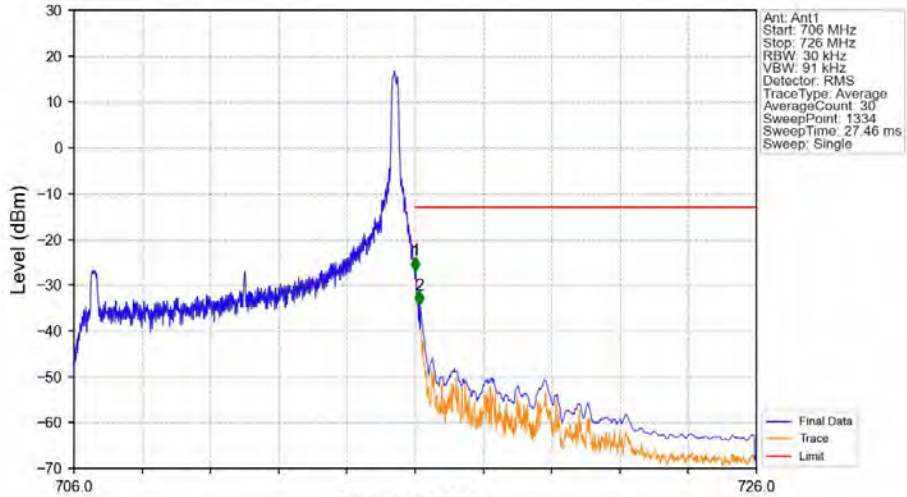
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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	-40.35	-13	Pass
698.9	699	0.03	/	2	698.992	-42.34	-13	Pass
699	709	0.03	/	/	/	/	/	/

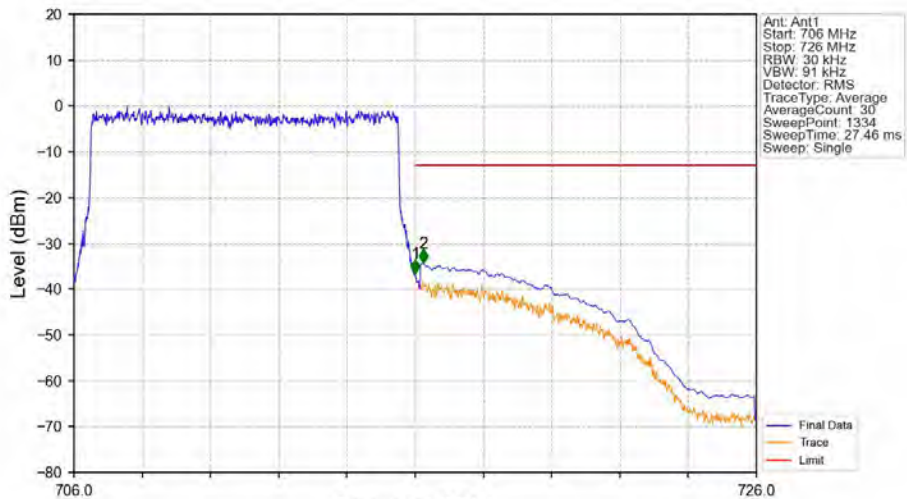


Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_1\_49\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	1	716.008	-26.89	-13	Pass
716.1	726	0.1	CHP	2	716.113	-34.45	-13	Pass

Band12\_10MHz\_16QAM\_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	/	1	716.008	-36.69	-13	Pass
716.1	726	0.1	CHP	2	716.248	-34.29	-13	Pass



## 7. Form731

### 7.1 Form731\_Power

#### 7.1.1 Test Result

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	0.2178	0.0688	ppm	1M11G7D	27H	23.38
12	1.4	699.7	715.3	0.1954	0.0660	ppm	1M12W7D	27H	22.91
12	3	700.5	714.5	0.2153	0.0656	ppm	2M76G7D	27H	23.33
12	3	700.5	714.5	0.2143	0.0660	ppm	2M77W7D	27H	23.31
12	5	701.5	713.5	0.2143	0.0606	ppm	4M57G7D	27H	23.31
12	5	701.5	713.5	0.1854	0.0645	ppm	4M57W7D	27H	22.68
12	10	704	711	0.2218	0.0677	ppm	9M08G7D	27H	23.46
12	10	704	711	0.2113	0.0566	ppm	9M10W7D	27H	23.25

## 7.2 Form731\_ERP

### 7.2.1 Test Result

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	0.1074	0.0688	ppm	1M11G7D	27H	20.31
12	1.4	699.7	715.3	0.0964	0.0660	ppm	1M12W7D	27H	19.84
12	3	700.5	714.5	0.1062	0.0656	ppm	2M76G7D	27H	20.26
12	3	700.5	714.5	0.1057	0.0660	ppm	2M77W7D	27H	20.24
12	5	701.5	713.5	0.1057	0.0606	ppm	4M57G7D	27H	20.24
12	5	701.5	713.5	0.0914	0.0645	ppm	4M57W7D	27H	19.61
12	10	704	711	0.1094	0.0677	ppm	9M08G7D	27H	20.39
12	10	704	711	0.1042	0.0566	ppm	9M10W7D	27H	20.18