

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 B12\_1.4MHz\_ERP

### 1.1.1 Test Result

Band: 12 / Bandwidth: 1.4MHz / NTN										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	699.7	1	0	21.25	-3.72	15.38	<=34.77	Pass		
			2	21.34	-3.72	15.47	<=34.77	Pass		
			5	21.25	-3.72	15.38	<=34.77	Pass		
		3	0	21.31	-3.72	15.44	<=34.77	Pass		
			2	21.35	-3.72	15.48	<=34.77	Pass		
			3	21.31	-3.72	15.44	<=34.77	Pass		
		6	0	20.24	-3.72	14.37	<=34.77	Pass		
		707.5	1	0	21.33	-3.72	15.46	<=34.77	Pass	
				2	21.50	-3.72	15.63	<=34.77	Pass	
	5			21.38	-3.72	15.51	<=34.77	Pass		
	3		0	21.41	-3.72	15.54	<=34.77	Pass		
			2	21.42	-3.72	15.55	<=34.77	Pass		
			3	21.40	-3.72	15.53	<=34.77	Pass		
	6		0	20.40	-3.72	14.53	<=34.77	Pass		
	715.3		1	0	21.41	-3.72	15.54	<=34.77	Pass	
				2	21.59	-3.72	15.72	<=34.77	Pass	
		5		21.48	-3.72	15.61	<=34.77	Pass		
		3	0	21.48	-3.72	15.61	<=34.77	Pass		
			2	21.50	-3.72	15.63	<=34.77	Pass		
			3	21.44	-3.72	15.57	<=34.77	Pass		
		6	0	20.55	-3.72	14.68	<=34.77	Pass		
		16QAM	699.7	1	0	20.11	-3.72	14.24	<=34.77	Pass
					2	20.20	-3.72	14.33	<=34.77	Pass
	5				20.13	-3.72	14.26	<=34.77	Pass	
3	0			20.41	-3.72	14.54	<=34.77	Pass		
	2			20.44	-3.72	14.57	<=34.77	Pass		
	3			20.42	-3.72	14.55	<=34.77	Pass		
6	0			19.26	-3.72	13.39	<=34.77	Pass		
707.5	1			0	20.30	-3.72	14.43	<=34.77	Pass	
				2	20.40	-3.72	14.53	<=34.77	Pass	
			5	20.33	-3.72	14.46	<=34.77	Pass		
	3		0	20.42	-3.72	14.55	<=34.77	Pass		
			2	20.45	-3.72	14.58	<=34.77	Pass		
			3	20.43	-3.72	14.56	<=34.77	Pass		
	6		0	19.35	-3.72	13.48	<=34.77	Pass		
	715.3		1	0	20.47	-3.72	14.60	<=34.77	Pass	
				2	20.62	-3.72	14.75	<=34.77	Pass	
5				20.50	-3.72	14.63	<=34.77	Pass		
3			0	20.39	-3.72	14.52	<=34.77	Pass		
			2	20.39	-3.72	14.52	<=34.77	Pass		
			3	20.35	-3.72	14.48	<=34.77	Pass		
6			0	19.51	-3.72	13.64	<=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 / NTNV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	700.5	1	0	21.37	-3.72	15.50	<=34.77	Pass		
			7	21.48	-3.72	15.61	<=34.77	Pass		
			14	21.38	-3.72	15.51	<=34.77	Pass		
		8	0	20.29	-3.72	14.42	<=34.77	Pass		
			4	20.32	-3.72	14.45	<=34.77	Pass		
			7	20.27	-3.72	14.40	<=34.77	Pass		
		15	0	20.25	-3.72	14.38	<=34.77	Pass		
		707.5	1	0	21.44	-3.72	15.57	<=34.77	Pass	
				7	22.27	-3.72	16.40	<=34.77	Pass	
	14			22.09	-3.72	16.22	<=34.77	Pass		
	8		0	20.99	-3.72	15.12	<=34.77	Pass		
			4	21.08	-3.72	15.21	<=34.77	Pass		
			7	21.09	-3.72	15.22	<=34.77	Pass		
	15		0	21.01	-3.72	15.14	<=34.77	Pass		
	714.5		1	0	22.04	-3.72	16.17	<=34.77	Pass	
				7	22.17	-3.72	16.30	<=34.77	Pass	
		14		22.12	-3.72	16.25	<=34.77	Pass		
		8	0	21.10	-3.72	15.23	<=34.77	Pass		
			4	21.11	-3.72	15.24	<=34.77	Pass		
			7	21.07	-3.72	15.20	<=34.77	Pass		
		15	0	21.06	-3.72	15.19	<=34.77	Pass		
		16QAM	700.5	1	0	20.28	-3.72	14.41	<=34.77	Pass
					7	20.45	-3.72	14.58	<=34.77	Pass
	14				20.32	-3.72	14.45	<=34.77	Pass	
8	0			19.36	-3.72	13.49	<=34.77	Pass		
	4			19.42	-3.72	13.55	<=34.77	Pass		
	7			19.37	-3.72	13.50	<=34.77	Pass		
15	0			19.34	-3.72	13.47	<=34.77	Pass		
707.5	1			0	21.00	-3.72	15.13	<=34.77	Pass	
				7	21.14	-3.72	15.27	<=34.77	Pass	
			14	20.95	-3.72	15.08	<=34.77	Pass		
	8		0	19.99	-3.72	14.12	<=34.77	Pass		
			4	20.06	-3.72	14.19	<=34.77	Pass		
			7	20.07	-3.72	14.20	<=34.77	Pass		
	15		0	20.02	-3.72	14.15	<=34.77	Pass		
	714.5		1	0	21.17	-3.72	15.30	<=34.77	Pass	
				7	21.28	-3.72	15.41	<=34.77	Pass	
14				21.16	-3.72	15.29	<=34.77	Pass		
8			0	20.03	-3.72	14.16	<=34.77	Pass		
			4	20.05	-3.72	14.18	<=34.77	Pass		
			7	19.97	-3.72	14.10	<=34.77	Pass		
15			0	19.95	-3.72	14.08	<=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	21.63	-3.72	15.76	<=34.77	Pass		
			13	21.80	-3.72	15.93	<=34.77	Pass		
			24	21.76	-3.72	15.89	<=34.77	Pass		
		12	0	20.66	-3.72	14.79	<=34.77	Pass		
			6	20.78	-3.72	14.91	<=34.77	Pass		
			13	20.54	-3.72	14.67	<=34.77	Pass		
		25	0	20.61	-3.72	14.74	<=34.77	Pass		
		707.5	1	0	21.74	-3.72	15.87	<=34.77	Pass	
				13	21.93	-3.72	16.06	<=34.77	Pass	
	24			21.82	-3.72	15.95	<=34.77	Pass		
	12		0	20.51	-3.72	14.64	<=34.77	Pass		
			6	20.42	-3.72	14.55	<=34.77	Pass		
			13	20.51	-3.72	14.64	<=34.77	Pass		
	25		0	20.39	-3.72	14.52	<=34.77	Pass		
	713.5		1	0	21.31	-3.72	15.44	<=34.77	Pass	
				13	21.48	-3.72	15.61	<=34.77	Pass	
		24		21.41	-3.72	15.54	<=34.77	Pass		
		12	0	20.69	-3.72	14.82	<=34.77	Pass		
			6	20.47	-3.72	14.60	<=34.77	Pass		
			13	20.30	-3.72	14.43	<=34.77	Pass		
		25	0	20.51	-3.72	14.64	<=34.77	Pass		
		16QAM	701.5	1	0	20.66	-3.72	14.79	<=34.77	Pass
					13	20.88	-3.72	15.01	<=34.77	Pass
	24				20.81	-3.72	14.94	<=34.77	Pass	
12	0			19.71	-3.72	13.84	<=34.77	Pass		
	6			19.84	-3.72	13.97	<=34.77	Pass		
	13			19.66	-3.72	13.79	<=34.77	Pass		
25	0			19.72	-3.72	13.85	<=34.77	Pass		
707.5	1			0	20.43	-3.72	14.56	<=34.77	Pass	
				13	20.60	-3.72	14.73	<=34.77	Pass	
			24	20.52	-3.72	14.65	<=34.77	Pass		
	12		0	19.36	-3.72	13.49	<=34.77	Pass		
			6	19.45	-3.72	13.58	<=34.77	Pass		
			13	19.63	-3.72	13.76	<=34.77	Pass		
	25		0	19.42	-3.72	13.55	<=34.77	Pass		
	713.5		1	0	20.12	-3.72	14.25	<=34.77	Pass	
				13	20.26	-3.72	14.39	<=34.77	Pass	
24				20.18	-3.72	14.31	<=34.77	Pass		
12			0	19.69	-3.72	13.82	<=34.77	Pass		
			6	19.54	-3.72	13.67	<=34.77	Pass		
			13	19.33	-3.72	13.46	<=34.77	Pass		
25			0	19.59	-3.72	13.72	<=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	21.16	-3.72	15.29	<=34.77	Pass
			25	21.53	-3.72	15.66	<=34.77	Pass

		25	49	21.40	-3.72	15.53	<=34.77	Pass		
			0	20.59	-3.72	14.72	<=34.77	Pass		
			13	20.38	-3.72	14.51	<=34.77	Pass		
			25	20.47	-3.72	14.60	<=34.77	Pass		
			50	20.52	-3.72	14.65	<=34.77	Pass		
	707.5	1	0	21.17	-3.72	15.30	<=34.77	Pass		
			25	21.61	-3.72	15.74	<=34.77	Pass		
			49	21.36	-3.72	15.49	<=34.77	Pass		
		25	0	20.40	-3.72	14.53	<=34.77	Pass		
			13	20.40	-3.72	14.53	<=34.77	Pass		
			25	20.54	-3.72	14.67	<=34.77	Pass		
		50	20.47	-3.72	14.60	<=34.77	Pass			
		711	1	0	21.26	-3.72	15.39	<=34.77	Pass	
				25	21.56	-3.72	15.69	<=34.77	Pass	
	49			21.47	-3.72	15.60	<=34.77	Pass		
	25		0	20.14	-3.72	14.27	<=34.77	Pass		
			13	20.40	-3.72	14.53	<=34.77	Pass		
			25	20.06	-3.72	14.19	<=34.77	Pass		
	50		20.11	-3.72	14.24	<=34.77	Pass			
	16QAM		704	1	0	20.12	-3.72	14.25	<=34.77	Pass
					25	20.50	-3.72	14.63	<=34.77	Pass
		49			20.36	-3.72	14.49	<=34.77	Pass	
		25		0	19.68	-3.72	13.81	<=34.77	Pass	
				13	19.49	-3.72	13.62	<=34.77	Pass	
				25	19.58	-3.72	13.71	<=34.77	Pass	
		50		19.60	-3.72	13.73	<=34.77	Pass		
		707.5		1	0	20.32	-3.72	14.45	<=34.77	Pass
25					20.71	-3.72	14.84	<=34.77	Pass	
49			20.49		-3.72	14.62	<=34.77	Pass		
25			0	19.47	-3.72	13.60	<=34.77	Pass		
			13	19.46	-3.72	13.59	<=34.77	Pass		
			25	19.58	-3.72	13.71	<=34.77	Pass		
50			19.57	-3.72	13.70	<=34.77	Pass			
711			1	0	20.74	-3.72	14.87	<=34.77	Pass	
				25	21.06	-3.72	15.19	<=34.77	Pass	
		49		20.79	-3.72	14.92	<=34.77	Pass		
		25	0	19.20	-3.72	13.33	<=34.77	Pass		
			13	19.48	-3.72	13.61	<=34.77	Pass		
			25	19.16	-3.72	13.29	<=34.77	Pass		
		50	19.19	-3.72	13.32	<=34.77	Pass			
		Note1: ERP=Conducted Power+Antenna Gain-2.15								

## 2. Frequency Stability

### 2.1 B12\_1.4MHz

#### 2.1.1 Test Result

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	1.845	0.0026	-2.5 to 2.5	Pass				
									3.85	5.836	0.0083	-2.5 to 2.5	Pass
									4.43	2.546	0.0036	-2.5 to 2.5	Pass

				-30	3.85	-0.830	-0.0012	-2.5 to 2.5	Pass			
				-20	3.85	-2.804	-0.0040	-2.5 to 2.5	Pass			
				-10	3.85	-2.604	-0.0037	-2.5 to 2.5	Pass			
				0	3.85	-6.080	-0.0087	-2.5 to 2.5	Pass			
				10	3.85	-4.334	-0.0062	-2.5 to 2.5	Pass			
				30	3.85	-4.692	-0.0067	-2.5 to 2.5	Pass			
				40	3.85	-10.500	-0.0150	-2.5 to 2.5	Pass			
	50	3.85	-4.377	-0.0063	-2.5 to 2.5	Pass						
	707.5	6	0	20	3.27	-5.436	-0.0077	-2.5 to 2.5	Pass			
					3.85	-4.706	-0.0067	-2.5 to 2.5	Pass			
					4.43	-6.409	-0.0091	-2.5 to 2.5	Pass			
				-30	3.85	-6.638	-0.0094	-2.5 to 2.5	Pass			
				-20	3.85	-4.177	-0.0059	-2.5 to 2.5	Pass			
				-10	3.85	-7.324	-0.0104	-2.5 to 2.5	Pass			
				0	3.85	-5.951	-0.0084	-2.5 to 2.5	Pass			
				10	3.85	-1.888	-0.0027	-2.5 to 2.5	Pass			
				30	3.85	-5.465	-0.0077	-2.5 to 2.5	Pass			
				40	3.85	-8.626	-0.0122	-2.5 to 2.5	Pass			
				50	3.85	-5.822	-0.0082	-2.5 to 2.5	Pass			
				715.3	6	0	20	3.27	2.460	0.0034	-2.5 to 2.5	Pass
								3.85	7.939	0.0111	-2.5 to 2.5	Pass
								4.43	4.621	0.0065	-2.5 to 2.5	Pass
	-30	3.85	-2.260				-0.0032	-2.5 to 2.5	Pass			
	-20	3.85	-5.493				-0.0077	-2.5 to 2.5	Pass			
	-10	3.85	-2.961				-0.0041	-2.5 to 2.5	Pass			
	0	3.85	-4.992				-0.0070	-2.5 to 2.5	Pass			
	10	3.85	-2.646				-0.0037	-2.5 to 2.5	Pass			
30	3.85	-3.977	-0.0056				-2.5 to 2.5	Pass				
40	3.85	-3.262	-0.0046				-2.5 to 2.5	Pass				
50	3.85	-4.406	-0.0062				-2.5 to 2.5	Pass				
16QAM	699.7	6	0	20	3.27	-6.108	-0.0087	-2.5 to 2.5	Pass			
					3.85	-12.374	-0.0177	-2.5 to 2.5	Pass			
					4.43	-8.011	-0.0114	-2.5 to 2.5	Pass			
				-30	3.85	-4.063	-0.0058	-2.5 to 2.5	Pass			
				-20	3.85	-6.795	-0.0097	-2.5 to 2.5	Pass			
				-10	3.85	-9.427	-0.0135	-2.5 to 2.5	Pass			
				0	3.85	-9.427	-0.0135	-2.5 to 2.5	Pass			
				10	3.85	-8.826	-0.0126	-2.5 to 2.5	Pass			
				30	3.85	-9.770	-0.0140	-2.5 to 2.5	Pass			
				40	3.85	-7.339	-0.0105	-2.5 to 2.5	Pass			
				50	3.85	-9.198	-0.0131	-2.5 to 2.5	Pass			
				707.5	6	0	20	3.27	-2.289	-0.0032	-2.5 to 2.5	Pass
								3.85	-3.862	-0.0055	-2.5 to 2.5	Pass
								4.43	-4.621	-0.0065	-2.5 to 2.5	Pass
	-30	3.85	-0.601				-0.0008	-2.5 to 2.5	Pass			
	-20	3.85	-2.890				-0.0041	-2.5 to 2.5	Pass			
	-10	3.85	-9.885				-0.0140	-2.5 to 2.5	Pass			
	0	3.85	-3.963				-0.0056	-2.5 to 2.5	Pass			
	10	3.85	-4.063				-0.0057	-2.5 to 2.5	Pass			
	30	3.85	-7.310				-0.0103	-2.5 to 2.5	Pass			
	40	3.85	-6.809				-0.0096	-2.5 to 2.5	Pass			
	50	3.85	-4.721				-0.0067	-2.5 to 2.5	Pass			
	715.3	6	0				20	3.27	-4.163	-0.0058	-2.5 to 2.5	Pass
								3.85	-2.832	-0.0040	-2.5 to 2.5	Pass
				4.43	-4.392	-0.0061		-2.5 to 2.5	Pass			
				-30	3.85	-4.406	-0.0062	-2.5 to 2.5	Pass			
				-20	3.85	-5.307	-0.0074	-2.5 to 2.5	Pass			

				-10	3.85	-5.894	-0.0082	-2.5 to 2.5	Pass
				0	3.85	-7.081	-0.0099	-2.5 to 2.5	Pass
				10	3.85	-7.710	-0.0108	-2.5 to 2.5	Pass
				30	3.85	-2.704	-0.0038	-2.5 to 2.5	Pass
				40	3.85	-6.967	-0.0097	-2.5 to 2.5	Pass
				50	3.85	-11.816	-0.0165	-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	-2.861	-0.0041	-2.5 to 2.5	Pass
					3.85	-0.501	-0.0007	-2.5 to 2.5	Pass
					4.43	-1.860	-0.0027	-2.5 to 2.5	Pass
				-30	3.85	-2.303	-0.0033	-2.5 to 2.5	Pass
				-20	3.85	0.858	0.0012	-2.5 to 2.5	Pass
				-10	3.85	-5.450	-0.0078	-2.5 to 2.5	Pass
				0	3.85	0.758	0.0011	-2.5 to 2.5	Pass
				10	3.85	-7.267	-0.0104	-2.5 to 2.5	Pass
				30	3.85	-5.980	-0.0085	-2.5 to 2.5	Pass
				40	3.85	-4.077	-0.0058	-2.5 to 2.5	Pass
	50	3.85	-13.504	-0.0193	-2.5 to 2.5	Pass			
	707.5	15	0	20	3.27	-10.171	-0.0144	-2.5 to 2.5	Pass
					3.85	-3.362	-0.0048	-2.5 to 2.5	Pass
					4.43	-7.310	-0.0103	-2.5 to 2.5	Pass
				-30	3.85	-3.848	-0.0054	-2.5 to 2.5	Pass
				-20	3.85	-5.679	-0.0080	-2.5 to 2.5	Pass
				-10	3.85	-8.054	-0.0114	-2.5 to 2.5	Pass
				0	3.85	-8.798	-0.0124	-2.5 to 2.5	Pass
				10	3.85	-11.415	-0.0161	-2.5 to 2.5	Pass
				30	3.85	-2.775	-0.0039	-2.5 to 2.5	Pass
				40	3.85	-9.270	-0.0131	-2.5 to 2.5	Pass
	50	3.85	-11.258	-0.0159	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	-9.327	-0.0131	-2.5 to 2.5	Pass
					3.85	-3.948	-0.0055	-2.5 to 2.5	Pass
					4.43	-8.426	-0.0118	-2.5 to 2.5	Pass
				-30	3.85	-11.473	-0.0161	-2.5 to 2.5	Pass
				-20	3.85	-9.699	-0.0136	-2.5 to 2.5	Pass
				-10	3.85	-11.172	-0.0156	-2.5 to 2.5	Pass
				0	3.85	-7.153	-0.0100	-2.5 to 2.5	Pass
				10	3.85	-7.582	-0.0106	-2.5 to 2.5	Pass
30				3.85	-9.284	-0.0130	-2.5 to 2.5	Pass	
40				3.85	-5.622	-0.0079	-2.5 to 2.5	Pass	
50	3.85	-5.164	-0.0072	-2.5 to 2.5	Pass				
16QAM	700.5	15	0	20	3.27	-4.306	-0.0061	-2.5 to 2.5	Pass
					3.85	-4.950	-0.0071	-2.5 to 2.5	Pass
					4.43	-5.879	-0.0084	-2.5 to 2.5	Pass
				-30	3.85	-10.014	-0.0143	-2.5 to 2.5	Pass
				-20	3.85	-1.373	-0.0020	-2.5 to 2.5	Pass
				-10	3.85	-4.048	-0.0058	-2.5 to 2.5	Pass
				0	3.85	-7.796	-0.0111	-2.5 to 2.5	Pass
10	3.85	-9.885	-0.0141	-2.5 to 2.5	Pass				

	707.5	15	0	30	3.85	-5.407	-0.0077	-2.5 to 2.5	Pass
				40	3.85	-6.595	-0.0094	-2.5 to 2.5	Pass
				50	3.85	-10.057	-0.0144	-2.5 to 2.5	Pass
				20	3.27	-9.084	-0.0128	-2.5 to 2.5	Pass
					3.85	-9.084	-0.0128	-2.5 to 2.5	Pass
					4.43	-4.134	-0.0058	-2.5 to 2.5	Pass
				-30	3.85	-3.748	-0.0053	-2.5 to 2.5	Pass
				-20	3.85	-7.839	-0.0111	-2.5 to 2.5	Pass
				-10	3.85	-6.809	-0.0096	-2.5 to 2.5	Pass
				0	3.85	-4.349	-0.0061	-2.5 to 2.5	Pass
				10	3.85	-3.719	-0.0053	-2.5 to 2.5	Pass
				30	3.85	-7.854	-0.0111	-2.5 to 2.5	Pass
	40	3.85	-7.453	-0.0105	-2.5 to 2.5	Pass			
	50	3.85	-10.142	-0.0143	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	-9.384	-0.0131	-2.5 to 2.5	Pass
					3.85	-5.879	-0.0082	-2.5 to 2.5	Pass
					4.43	-6.652	-0.0093	-2.5 to 2.5	Pass
				-30	3.85	-2.689	-0.0038	-2.5 to 2.5	Pass
				-20	3.85	-6.695	-0.0094	-2.5 to 2.5	Pass
				-10	3.85	-3.376	-0.0047	-2.5 to 2.5	Pass
				0	3.85	-9.356	-0.0131	-2.5 to 2.5	Pass
				10	3.85	-2.475	-0.0035	-2.5 to 2.5	Pass
				30	3.85	-2.732	-0.0038	-2.5 to 2.5	Pass
				40	3.85	-5.579	-0.0078	-2.5 to 2.5	Pass
50				3.85	-9.785	-0.0137	-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	-7.439	-0.0106	-2.5 to 2.5	Pass
					3.85	-6.909	-0.0098	-2.5 to 2.5	Pass
					4.43	-6.452	-0.0092	-2.5 to 2.5	Pass
				-30	3.85	-5.293	-0.0075	-2.5 to 2.5	Pass
				-20	3.85	-2.632	-0.0038	-2.5 to 2.5	Pass
				-10	3.85	-5.221	-0.0074	-2.5 to 2.5	Pass
				0	3.85	-6.709	-0.0096	-2.5 to 2.5	Pass
				10	3.85	-5.865	-0.0084	-2.5 to 2.5	Pass
				30	3.85	-5.765	-0.0082	-2.5 to 2.5	Pass
				40	3.85	-9.184	-0.0131	-2.5 to 2.5	Pass
				50	3.85	-3.476	-0.0050	-2.5 to 2.5	Pass
				707.5	25	0	20	3.27	-6.380
	3.85	-3.290	-0.0047					-2.5 to 2.5	Pass
	4.43	-7.954	-0.0112					-2.5 to 2.5	Pass
	-30	3.85	-3.633				-0.0051	-2.5 to 2.5	Pass
	-20	3.85	-4.735				-0.0067	-2.5 to 2.5	Pass
	-10	3.85	-4.463				-0.0063	-2.5 to 2.5	Pass
	0	3.85	-5.507				-0.0078	-2.5 to 2.5	Pass
	10	3.85	-5.293				-0.0075	-2.5 to 2.5	Pass
	30	3.85	-2.189				-0.0031	-2.5 to 2.5	Pass
	40	3.85	-2.432				-0.0034	-2.5 to 2.5	Pass
	50	3.85	-7.439				-0.0105	-2.5 to 2.5	Pass

	713.5	25	0	20	3.27	-10.743	-0.0151	-2.5 to 2.5	Pass
					3.85	-6.223	-0.0087	-2.5 to 2.5	Pass
					4.43	-4.935	-0.0069	-2.5 to 2.5	Pass
				-30	3.85	-9.828	-0.0138	-2.5 to 2.5	Pass
					-20	3.85	-6.566	-0.0092	-2.5 to 2.5
				-10	3.85	-8.168	-0.0114	-2.5 to 2.5	Pass
					0	3.85	-7.267	-0.0102	-2.5 to 2.5
				10	3.85	-8.097	-0.0113	-2.5 to 2.5	Pass
					30	3.85	-5.436	-0.0076	-2.5 to 2.5
				40	3.85	-1.202	-0.0017	-2.5 to 2.5	Pass
50	3.85	-9.642	-0.0135		-2.5 to 2.5	Pass			
16QAM	701.5	25	0	20	3.27	-9.441	-0.0135	-2.5 to 2.5	Pass
					3.85	-6.080	-0.0087	-2.5 to 2.5	Pass
					4.43	-1.674	-0.0024	-2.5 to 2.5	Pass
				-30	3.85	-7.138	-0.0102	-2.5 to 2.5	Pass
					-20	3.85	-4.535	-0.0065	-2.5 to 2.5
				-10	3.85	-10.042	-0.0143	-2.5 to 2.5	Pass
					0	3.85	-9.041	-0.0129	-2.5 to 2.5
				10	3.85	-0.715	-0.0010	-2.5 to 2.5	Pass
					30	3.85	-5.722	-0.0082	-2.5 to 2.5
				40	3.85	-7.825	-0.0112	-2.5 to 2.5	Pass
	50	3.85	-6.680		-0.0095	-2.5 to 2.5	Pass		
	707.5	25	0	20	3.27	-4.520	-0.0064	-2.5 to 2.5	Pass
					3.85	-11.315	-0.0160	-2.5 to 2.5	Pass
					4.43	-6.194	-0.0088	-2.5 to 2.5	Pass
				-30	3.85	-5.550	-0.0078	-2.5 to 2.5	Pass
					-20	3.85	-4.005	-0.0057	-2.5 to 2.5
				-10	3.85	-2.704	-0.0038	-2.5 to 2.5	Pass
					0	3.85	-7.224	-0.0102	-2.5 to 2.5
				10	3.85	-8.140	-0.0115	-2.5 to 2.5	Pass
					30	3.85	-5.021	-0.0071	-2.5 to 2.5
				40	3.85	-7.110	-0.0100	-2.5 to 2.5	Pass
	50	3.85	-2.975		-0.0042	-2.5 to 2.5	Pass		
	713.5	25	0	20	3.27	-7.653	-0.0107	-2.5 to 2.5	Pass
					3.85	-5.894	-0.0083	-2.5 to 2.5	Pass
					4.43	-6.995	-0.0098	-2.5 to 2.5	Pass
				-30	3.85	-8.669	-0.0121	-2.5 to 2.5	Pass
					-20	3.85	-5.393	-0.0076	-2.5 to 2.5
				-10	3.85	-4.263	-0.0060	-2.5 to 2.5	Pass
0					3.85	-6.180	-0.0087	-2.5 to 2.5	Pass
10				3.85	-4.120	-0.0058	-2.5 to 2.5	Pass	
				30	3.85	-1.230	-0.0017	-2.5 to 2.5	Pass
40				3.85	-6.495	-0.0091	-2.5 to 2.5	Pass	
	50	3.85	-7.110	-0.0100	-2.5 to 2.5	Pass			

## 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	-4.463	-0.0063	-2.5 to 2.5	Pass
					3.85	-4.749	-0.0067	-2.5 to 2.5	Pass
					4.43	-4.964	-0.0071	-2.5 to 2.5	Pass



				-30	3.85	-6.709	-0.0095	-2.5 to 2.5	Pass			
				-20	3.85	-6.223	-0.0088	-2.5 to 2.5	Pass			
				-10	3.85	-7.367	-0.0105	-2.5 to 2.5	Pass			
				0	3.85	-7.982	-0.0113	-2.5 to 2.5	Pass			
				10	3.85	-3.390	-0.0048	-2.5 to 2.5	Pass			
				30	3.85	-7.167	-0.0102	-2.5 to 2.5	Pass			
				40	3.85	-6.437	-0.0091	-2.5 to 2.5	Pass			
	50	3.85	-7.896	-0.0112	-2.5 to 2.5	Pass						
	707.5	50	0	20	3.27	-7.010	-0.0099	-2.5 to 2.5	Pass			
					3.85	-3.862	-0.0055	-2.5 to 2.5	Pass			
					4.43	-3.648	-0.0052	-2.5 to 2.5	Pass			
				-30	3.85	-6.466	-0.0091	-2.5 to 2.5	Pass			
				-20	3.85	-5.722	-0.0081	-2.5 to 2.5	Pass			
				-10	3.85	-8.082	-0.0114	-2.5 to 2.5	Pass			
				0	3.85	-7.782	-0.0110	-2.5 to 2.5	Pass			
				10	3.85	-6.938	-0.0098	-2.5 to 2.5	Pass			
				30	3.85	-4.807	-0.0068	-2.5 to 2.5	Pass			
				40	3.85	-4.935	-0.0070	-2.5 to 2.5	Pass			
				50	3.85	-6.795	-0.0096	-2.5 to 2.5	Pass			
				711	50	0	20	3.27	-7.524	-0.0106	-2.5 to 2.5	Pass
								3.85	-3.662	-0.0052	-2.5 to 2.5	Pass
								4.43	-6.137	-0.0086	-2.5 to 2.5	Pass
	-30	3.85	-5.550				-0.0078	-2.5 to 2.5	Pass			
	-20	3.85	-5.536				-0.0078	-2.5 to 2.5	Pass			
	-10	3.85	-6.323				-0.0089	-2.5 to 2.5	Pass			
	0	3.85	-7.010				-0.0099	-2.5 to 2.5	Pass			
	10	3.85	-5.350				-0.0075	-2.5 to 2.5	Pass			
30	3.85	-4.935	-0.0069				-2.5 to 2.5	Pass				
40	3.85	-6.723	-0.0095				-2.5 to 2.5	Pass				
50	3.85	-6.223	-0.0088				-2.5 to 2.5	Pass				
16QAM	704	50	0	20	3.27	-7.639	-0.0109	-2.5 to 2.5	Pass			
					3.85	-7.367	-0.0105	-2.5 to 2.5	Pass			
					4.43	-5.593	-0.0079	-2.5 to 2.5	Pass			
				-30	3.85	-1.731	-0.0025	-2.5 to 2.5	Pass			
				-20	3.85	-5.250	-0.0075	-2.5 to 2.5	Pass			
				-10	3.85	-11.301	-0.0161	-2.5 to 2.5	Pass			
				0	3.85	-7.153	-0.0102	-2.5 to 2.5	Pass			
				10	3.85	-6.022	-0.0086	-2.5 to 2.5	Pass			
				30	3.85	-9.613	-0.0137	-2.5 to 2.5	Pass			
				40	3.85	-3.777	-0.0054	-2.5 to 2.5	Pass			
				50	3.85	-10.242	-0.0145	-2.5 to 2.5	Pass			
				707.5	50	0	20	3.27	-3.719	-0.0053	-2.5 to 2.5	Pass
								3.85	-5.693	-0.0080	-2.5 to 2.5	Pass
								4.43	-12.045	-0.0170	-2.5 to 2.5	Pass
	-30	3.85	-8.869				-0.0125	-2.5 to 2.5	Pass			
	-20	3.85	-5.994				-0.0085	-2.5 to 2.5	Pass			
	-10	3.85	-6.180				-0.0087	-2.5 to 2.5	Pass			
	0	3.85	-3.734				-0.0053	-2.5 to 2.5	Pass			
	10	3.85	-4.148				-0.0059	-2.5 to 2.5	Pass			
	30	3.85	-4.063				-0.0057	-2.5 to 2.5	Pass			
	40	3.85	-7.310				-0.0103	-2.5 to 2.5	Pass			
	50	3.85	-5.908				-0.0084	-2.5 to 2.5	Pass			
	711	50	0	20	3.27	-7.725	-0.0109	-2.5 to 2.5	Pass			
					3.85	-3.920	-0.0055	-2.5 to 2.5	Pass			
					4.43	-8.054	-0.0113	-2.5 to 2.5	Pass			
				-30	3.85	-3.319	-0.0047	-2.5 to 2.5	Pass			
	-20	3.85	-7.439	-0.0105	-2.5 to 2.5	Pass						

				-10	3.85	-8.340	-0.0117	-2.5 to 2.5	Pass
				0	3.85	-8.383	-0.0118	-2.5 to 2.5	Pass
				10	3.85	-5.479	-0.0077	-2.5 to 2.5	Pass
				30	3.85	-7.968	-0.0112	-2.5 to 2.5	Pass
				40	3.85	-8.841	-0.0124	-2.5 to 2.5	Pass
				50	3.85	-9.785	-0.0138	-2.5 to 2.5	Pass

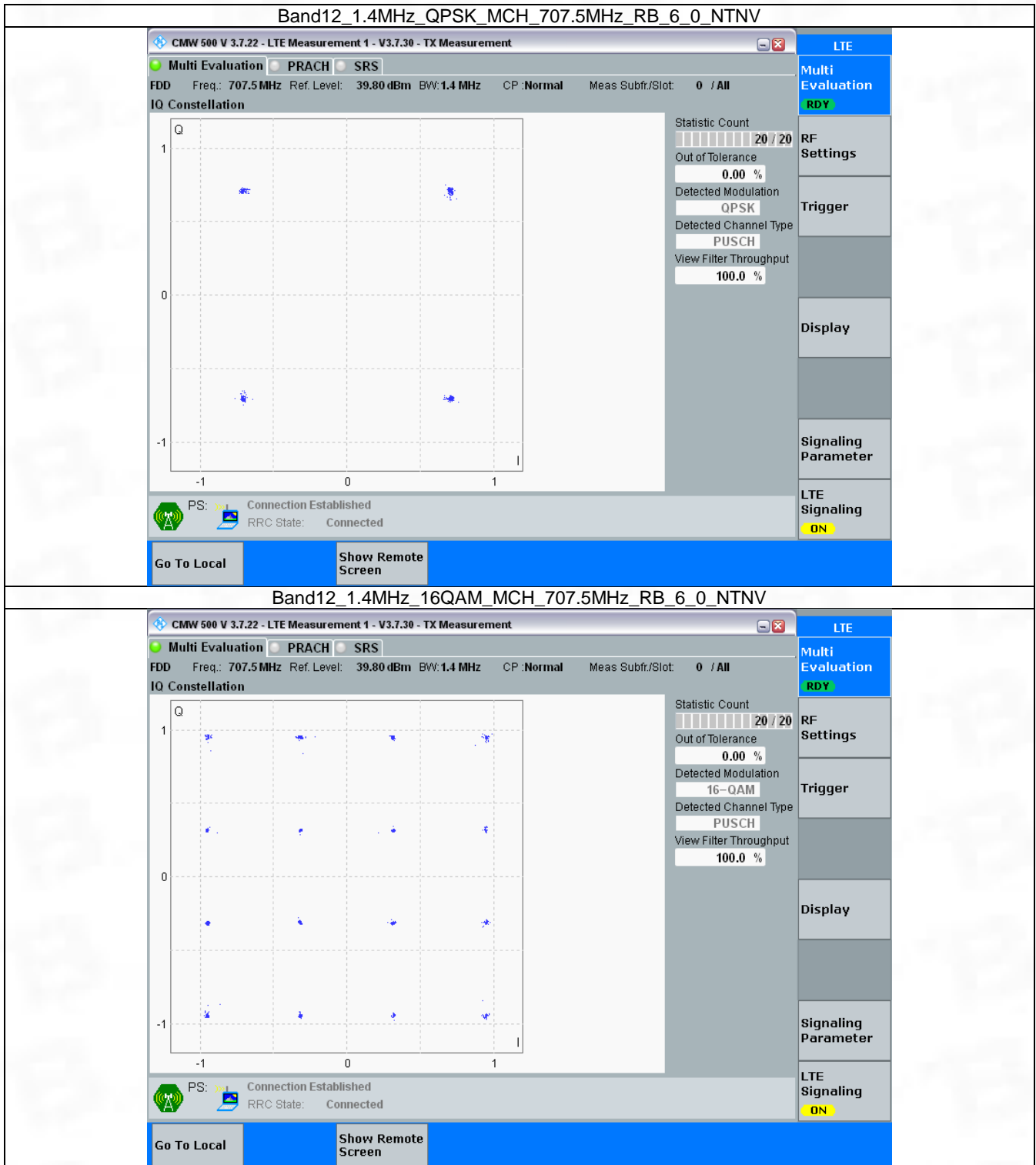
### 3. Modulation Characteristics

#### 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

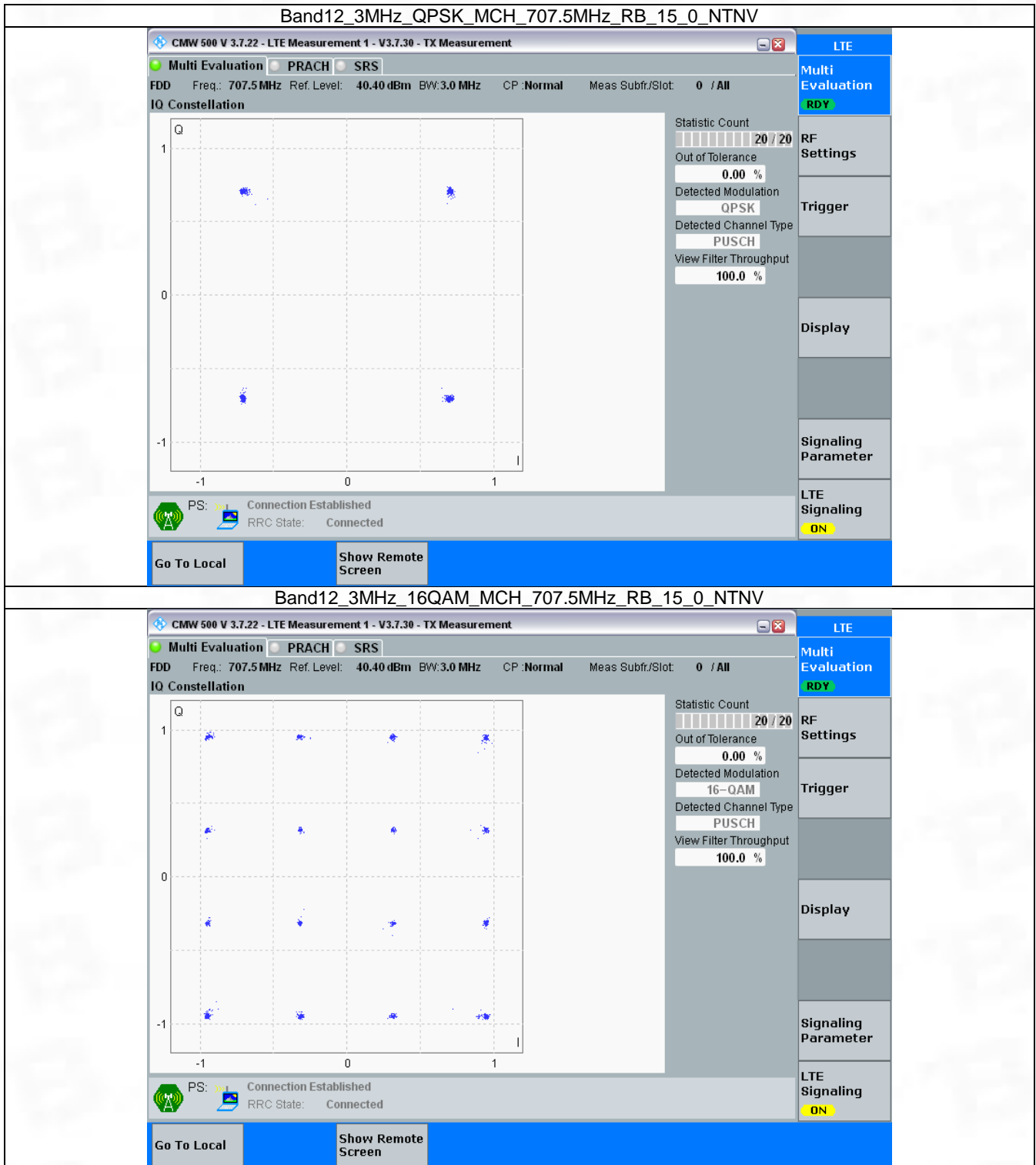


## 3.2 B12\_3MHz

### 3.2.1 Test Result

Band: 12 / Bandwidth: 3MHz / 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

### 3.2.2 Test Graph

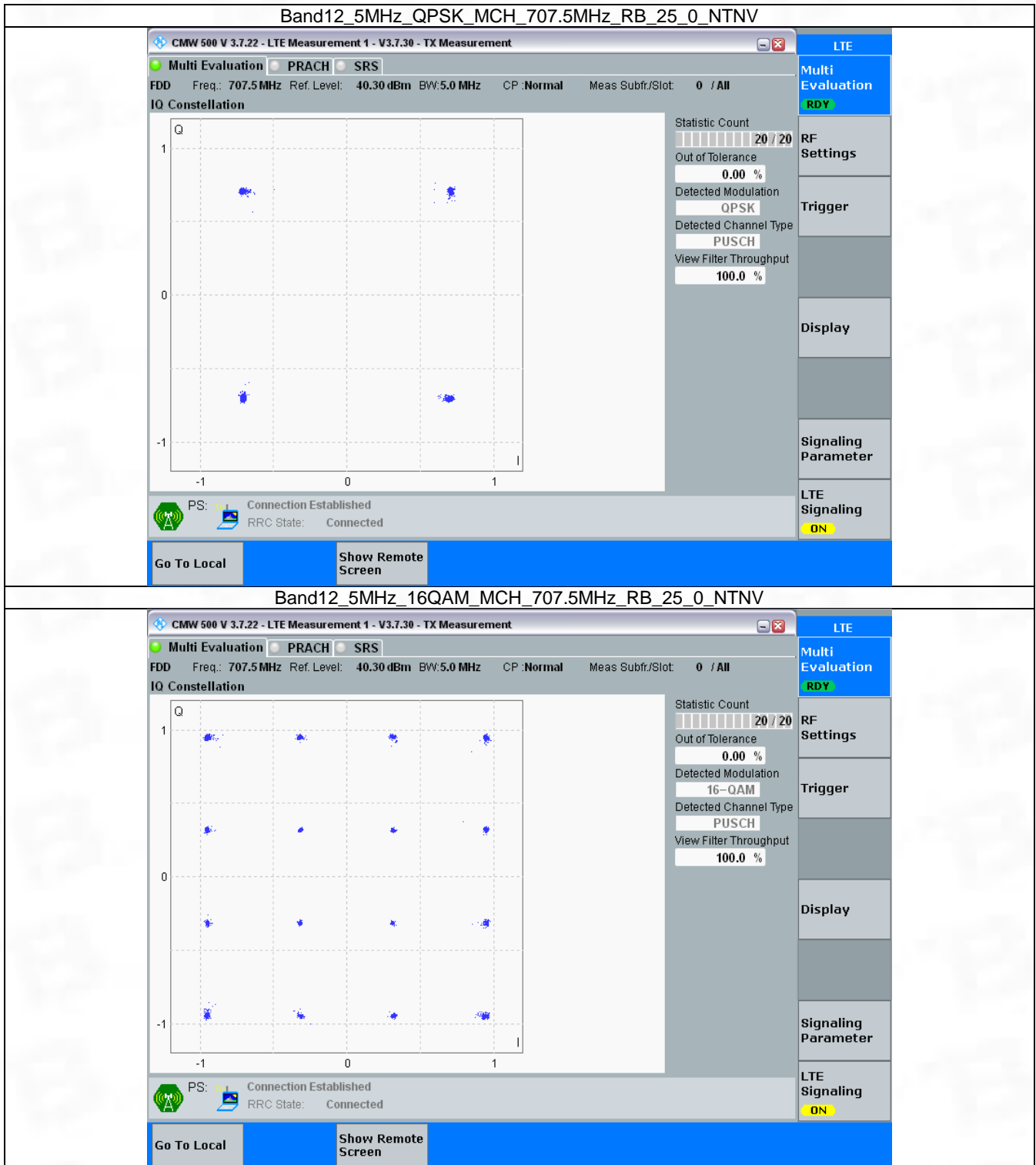


### 3.3 B12\_5MHz

#### 3.3.1 Test Result

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

### 3.3.2 Test Graph



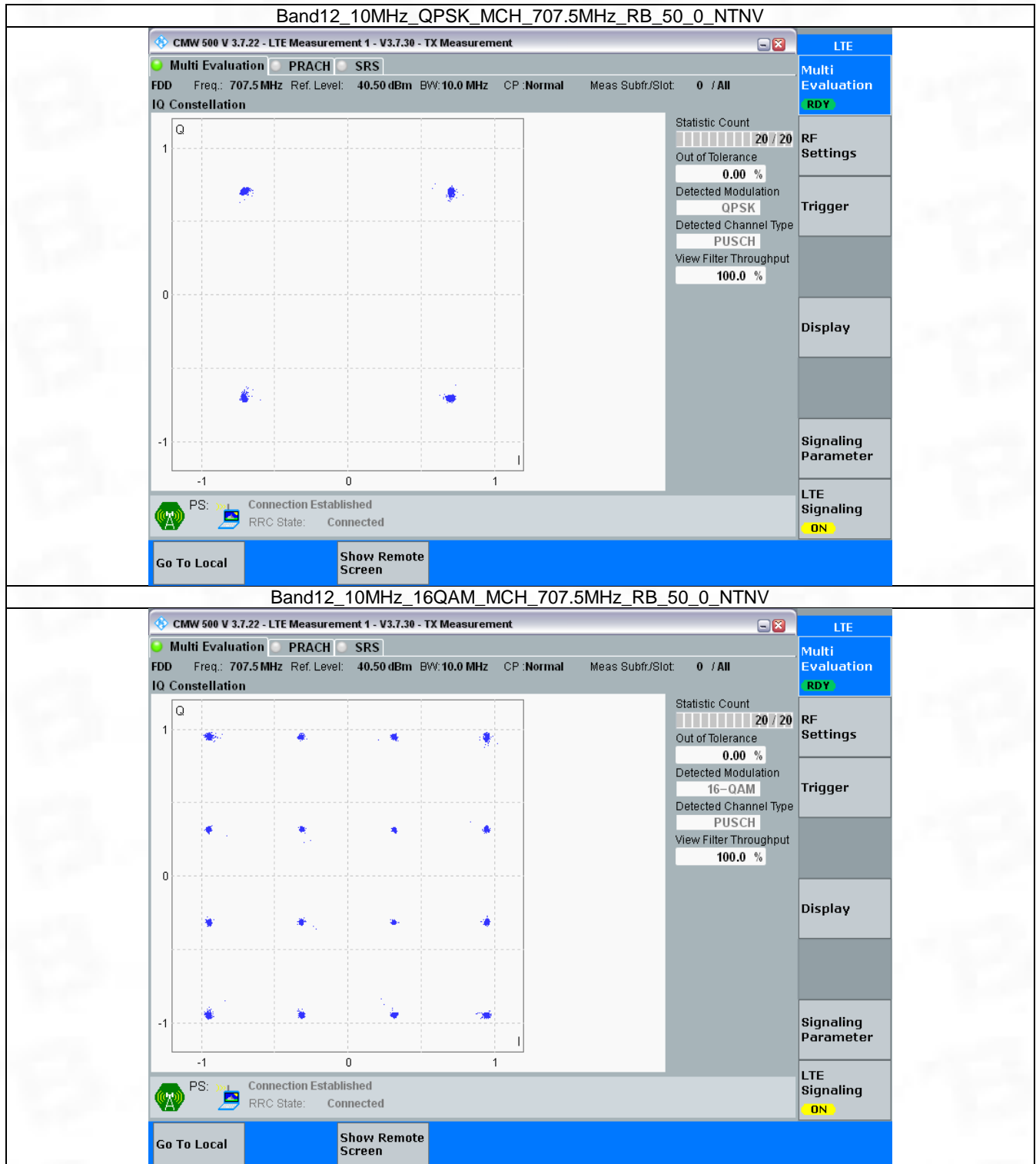
### 3.4 B12\_10MHz

#### 3.4.1 Test Result

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



### 3.4.2 Test Graph



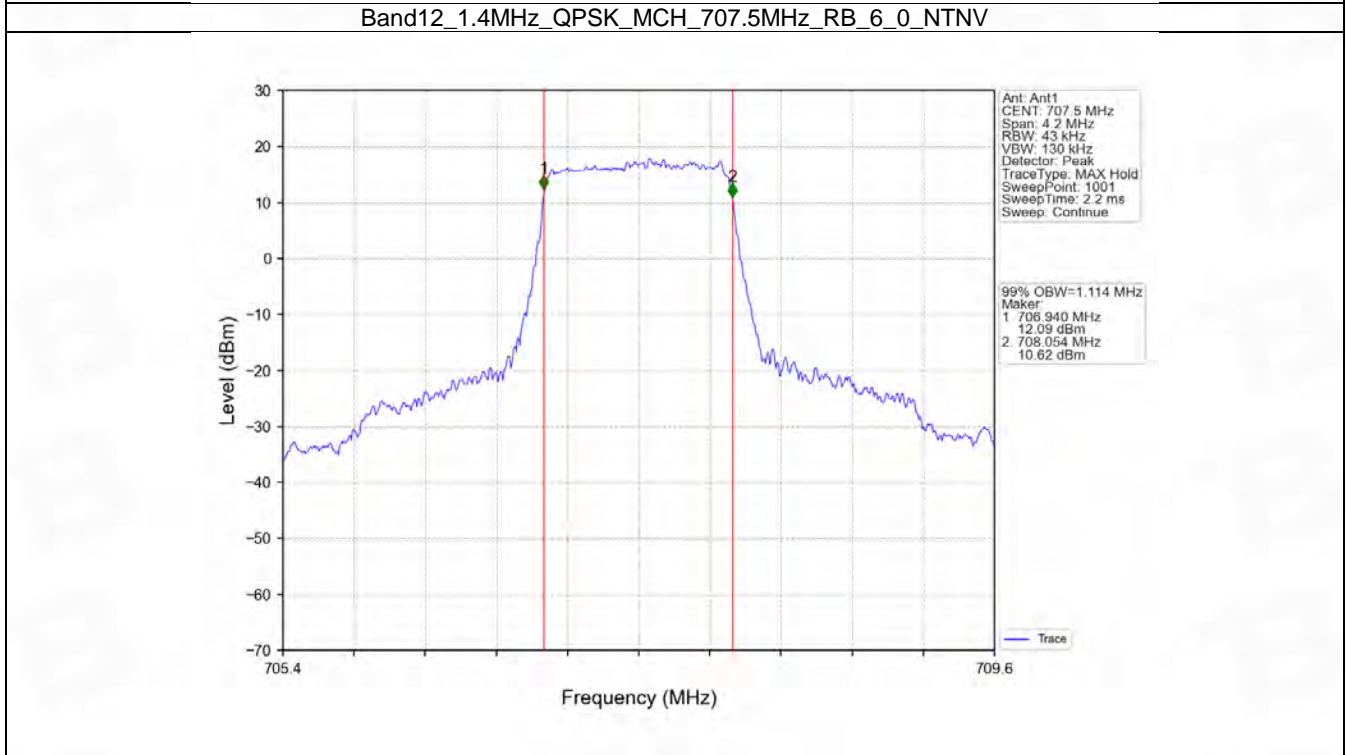
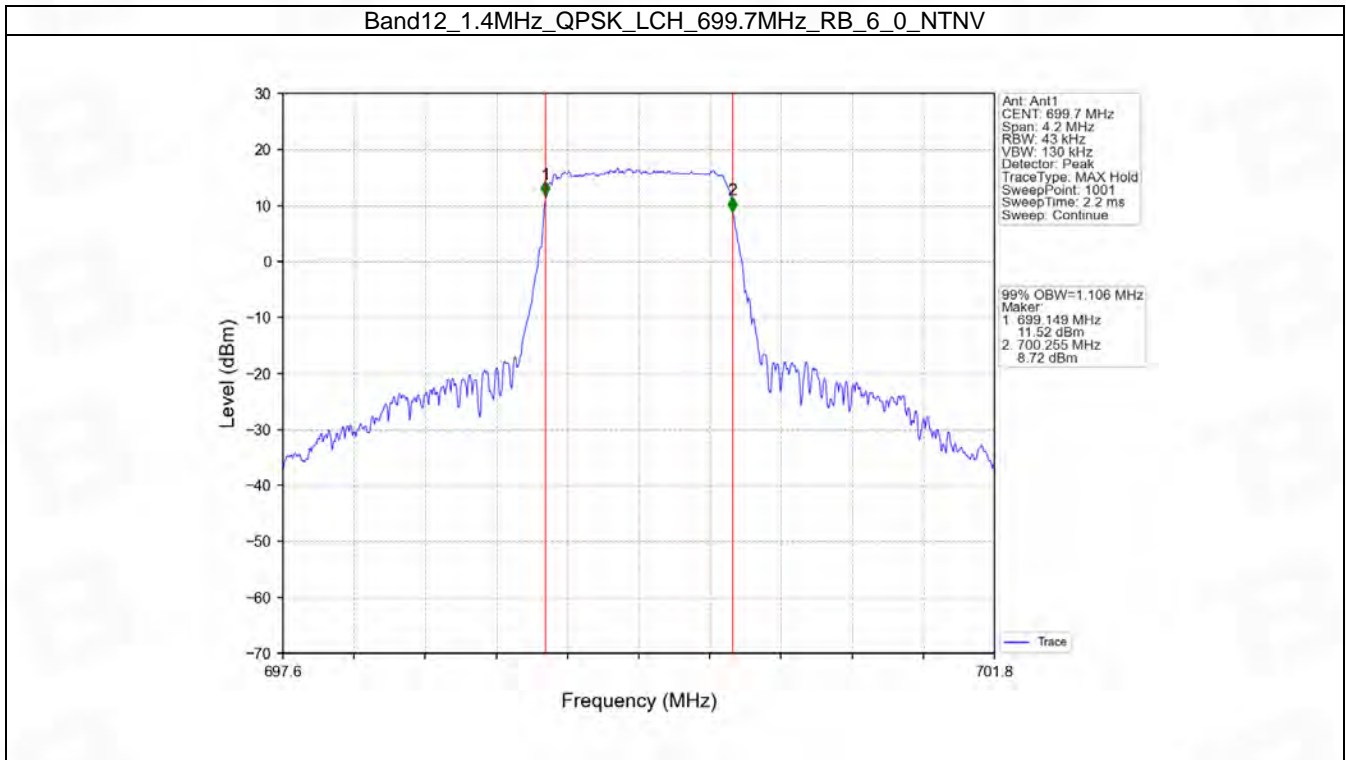
## 4. 99% & 26dB Bandwidth

### 4.1 Band12\_OBW

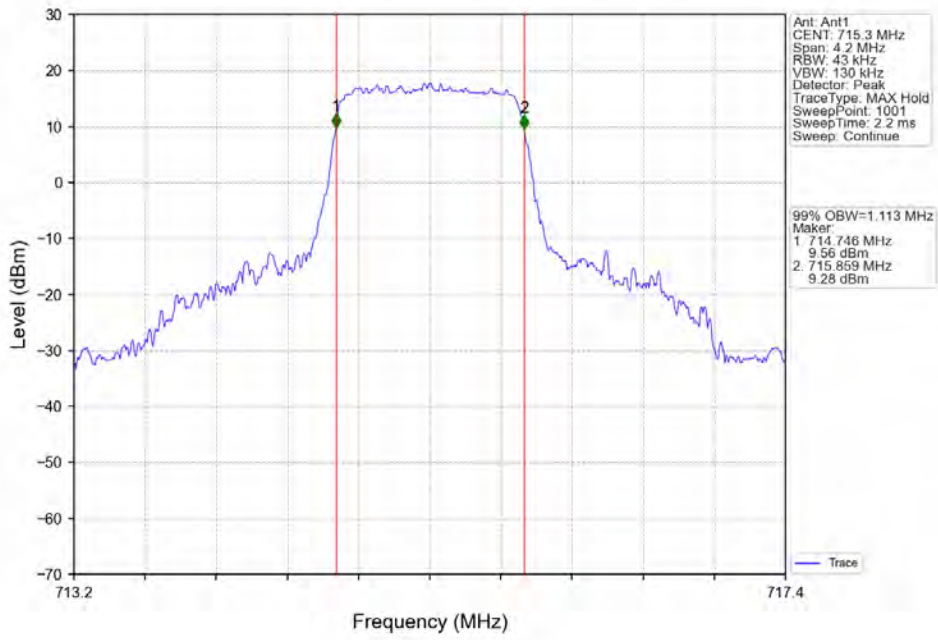
#### 4.1.1 Test Result

Band: 12 / NTV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.106	/	Pass
		707.5	6	0	1.114	/	Pass
		715.3	6	0	1.113	/	Pass
	16QAM	699.7	6	0	1.108	/	Pass
		707.5	6	0	1.107	/	Pass
		715.3	6	0	1.106	/	Pass
3	QPSK	700.5	15	0	2.723	/	Pass
		707.5	15	0	2.728	/	Pass
		714.5	15	0	2.728	/	Pass
	16QAM	700.5	15	0	2.712	/	Pass
		707.5	15	0	2.720	/	Pass
		714.5	15	0	2.727	/	Pass
5	QPSK	701.5	25	0	4.547	/	Pass
		707.5	25	0	4.578	/	Pass
		713.5	25	0	4.570	/	Pass
	16QAM	701.5	25	0	4.550	/	Pass
		707.5	25	0	4.580	/	Pass
		713.5	25	0	4.573	/	Pass
10	QPSK	704	50	0	9.134	/	Pass
		707.5	50	0	9.083	/	Pass
		711	50	0	9.014	/	Pass
	16QAM	704	50	0	9.108	/	Pass
		707.5	50	0	9.067	/	Pass
		711	50	0	9.001	/	Pass

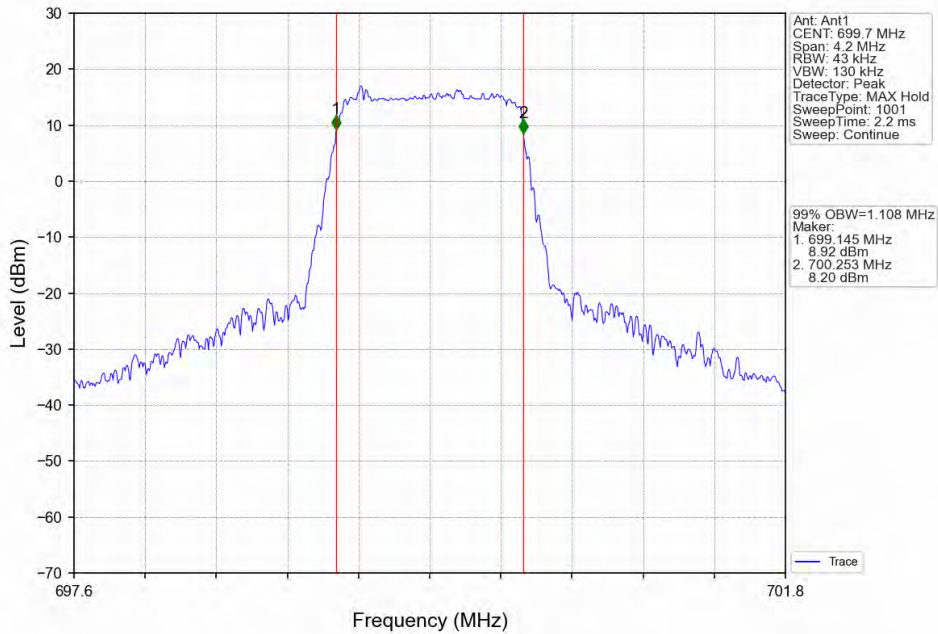
### 4.1.2 Test Graph



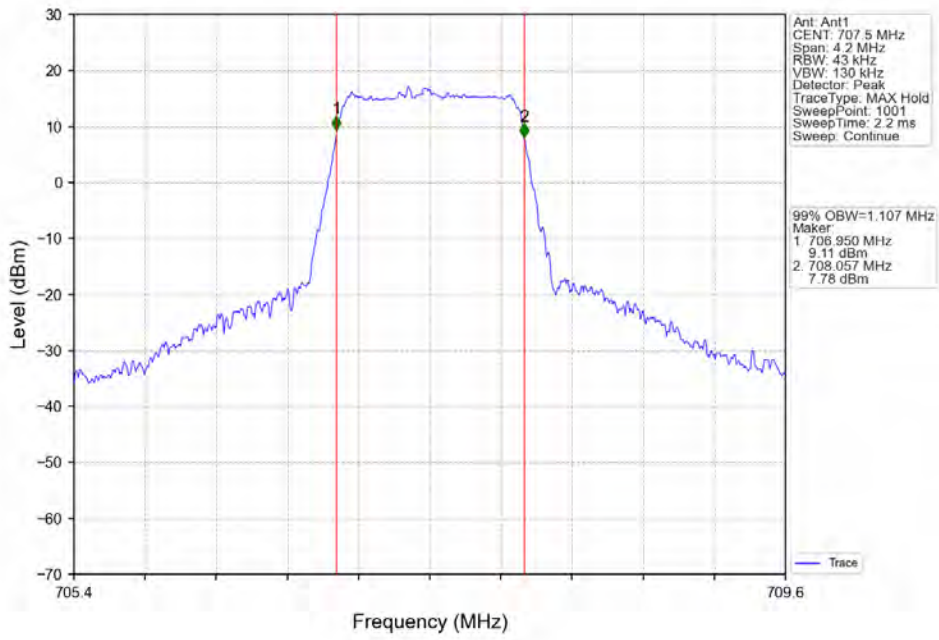
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



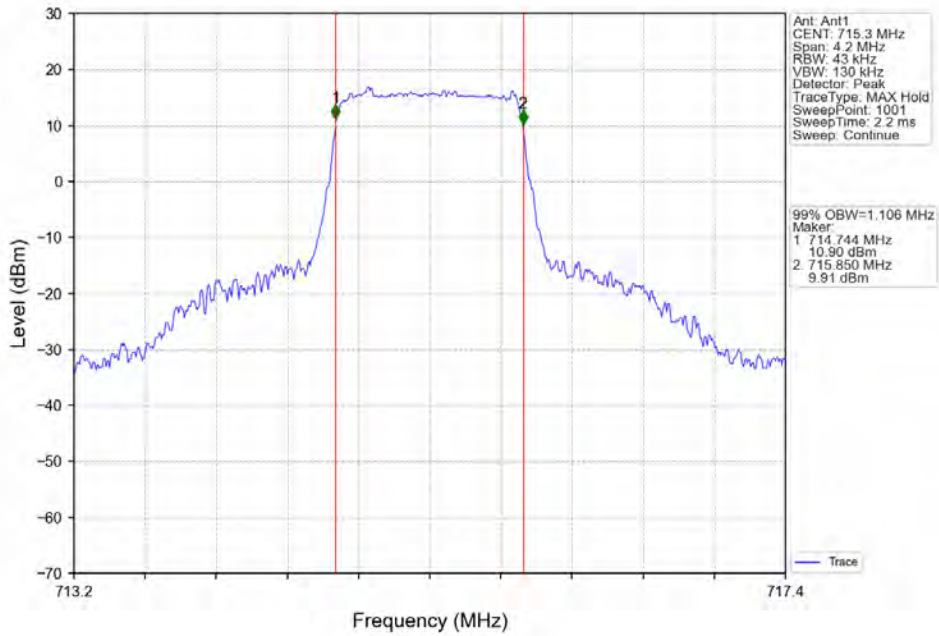
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



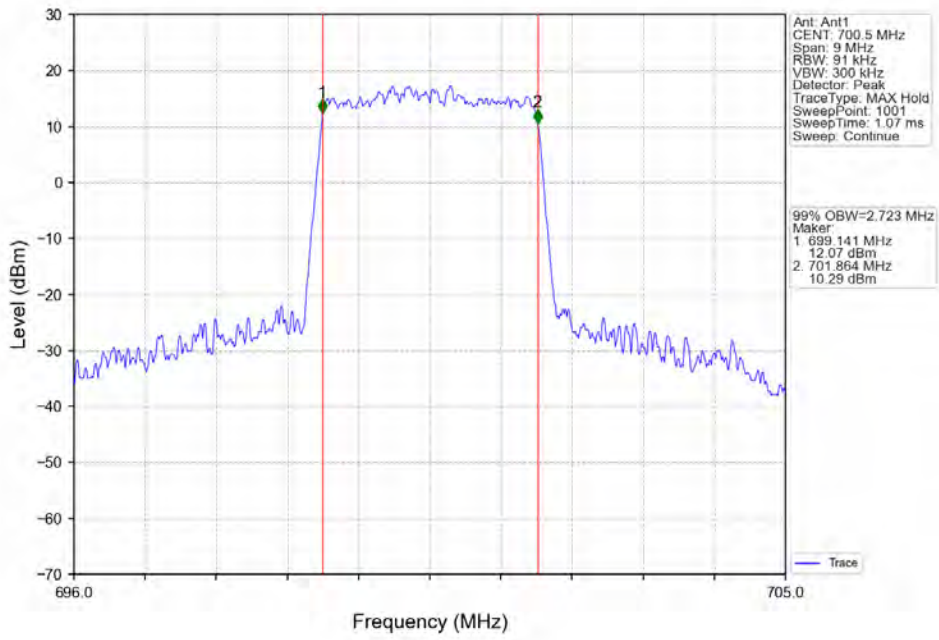
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



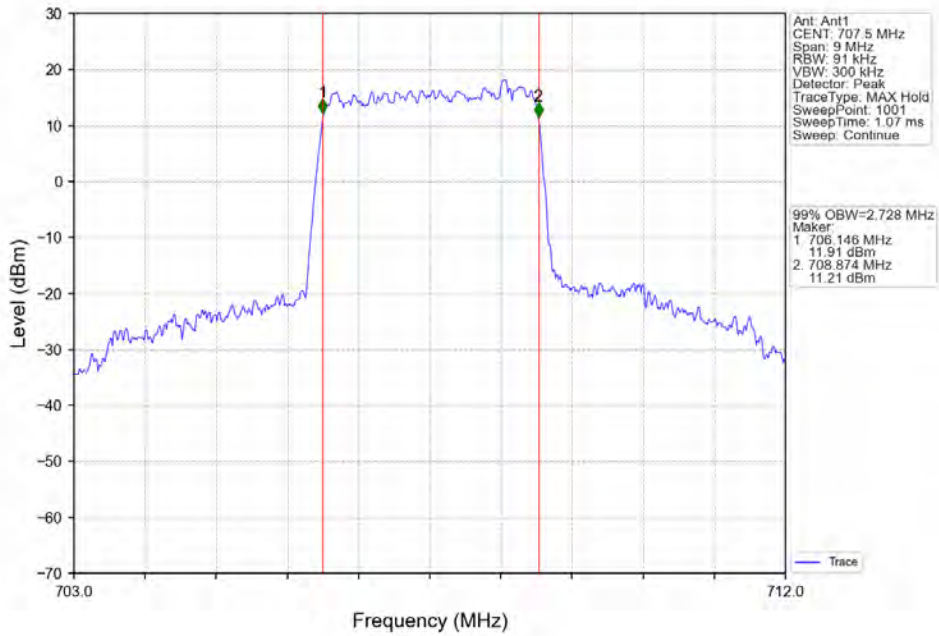
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



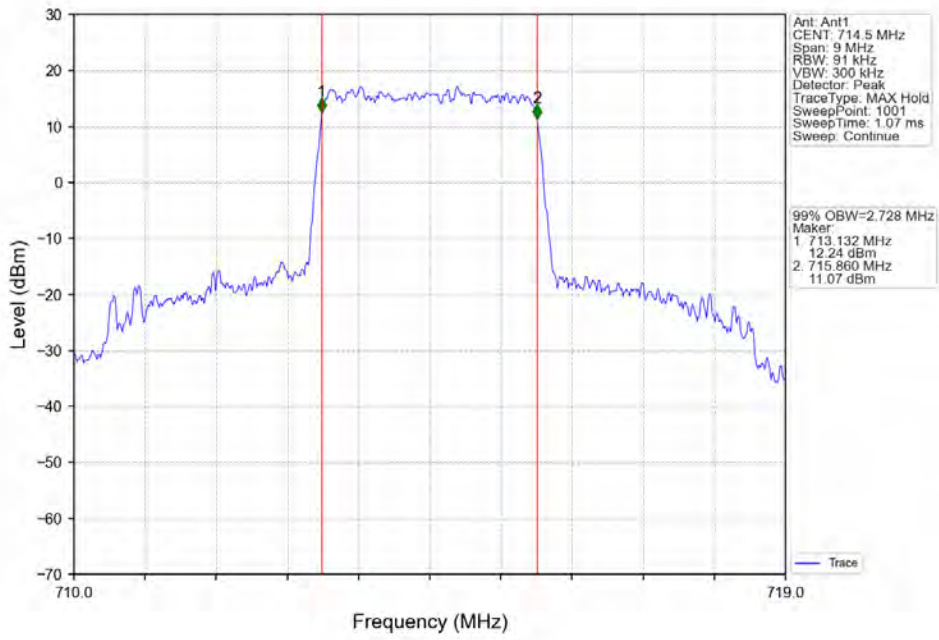
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



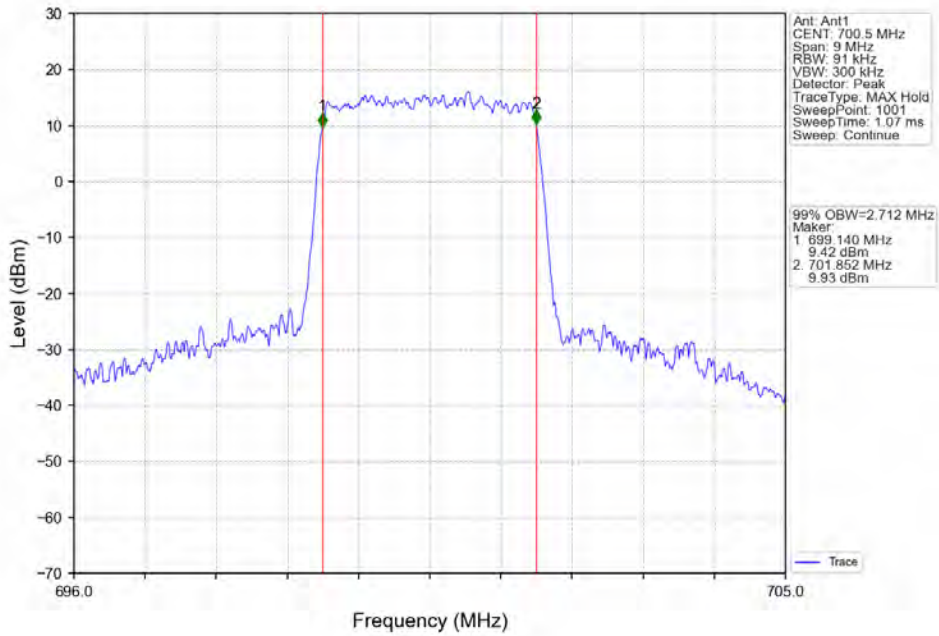
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



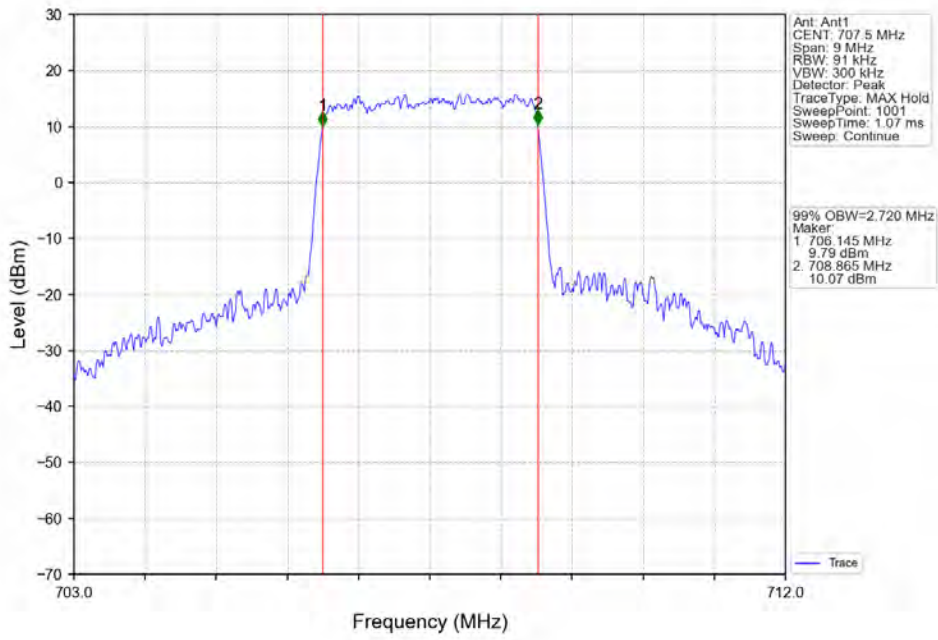
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



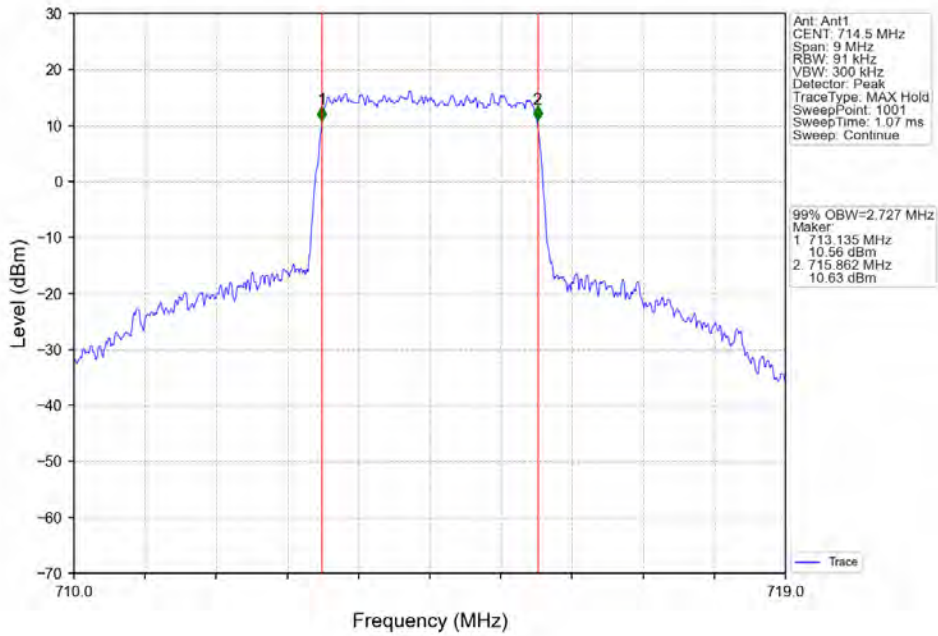
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



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

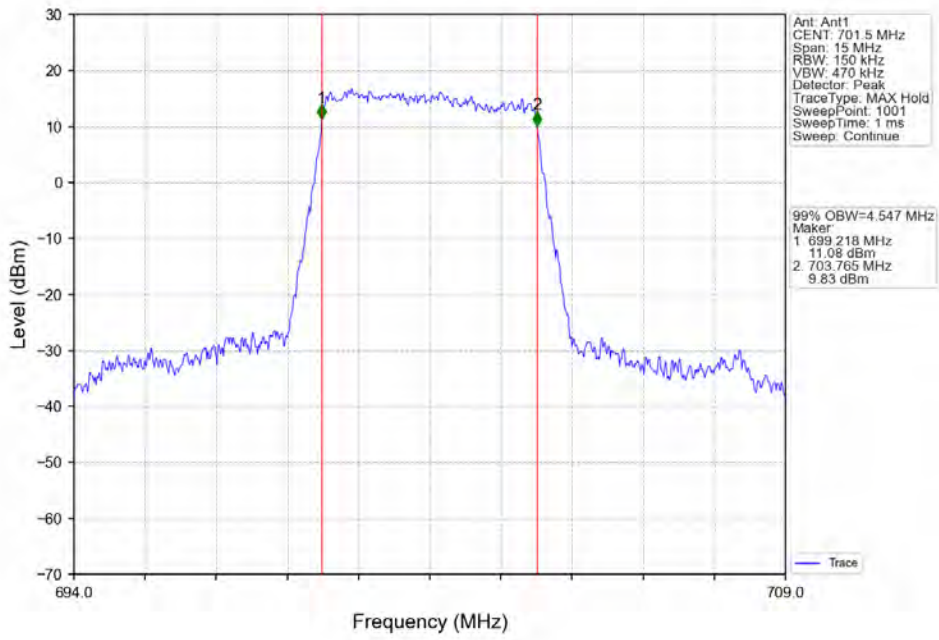


Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV

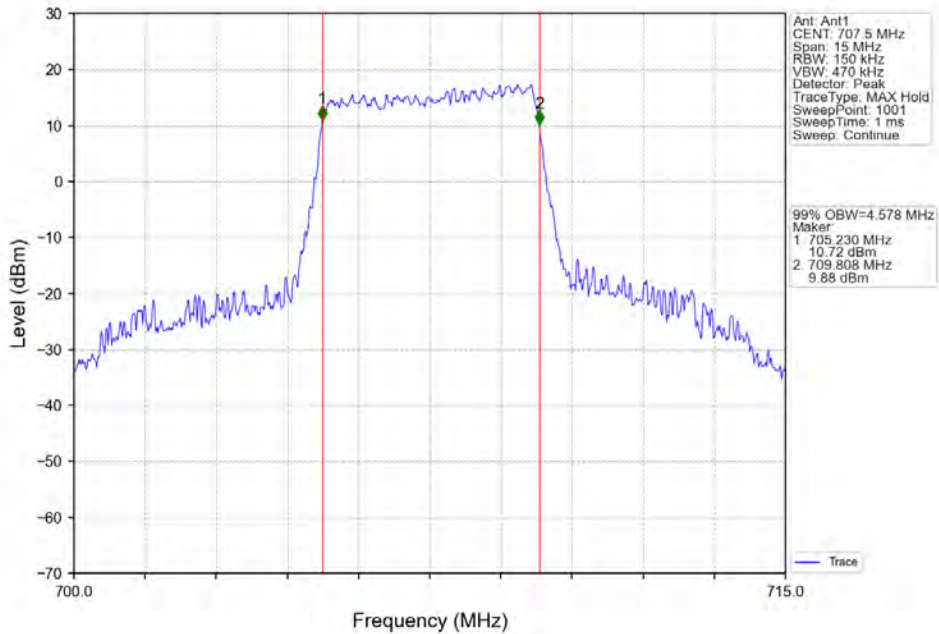




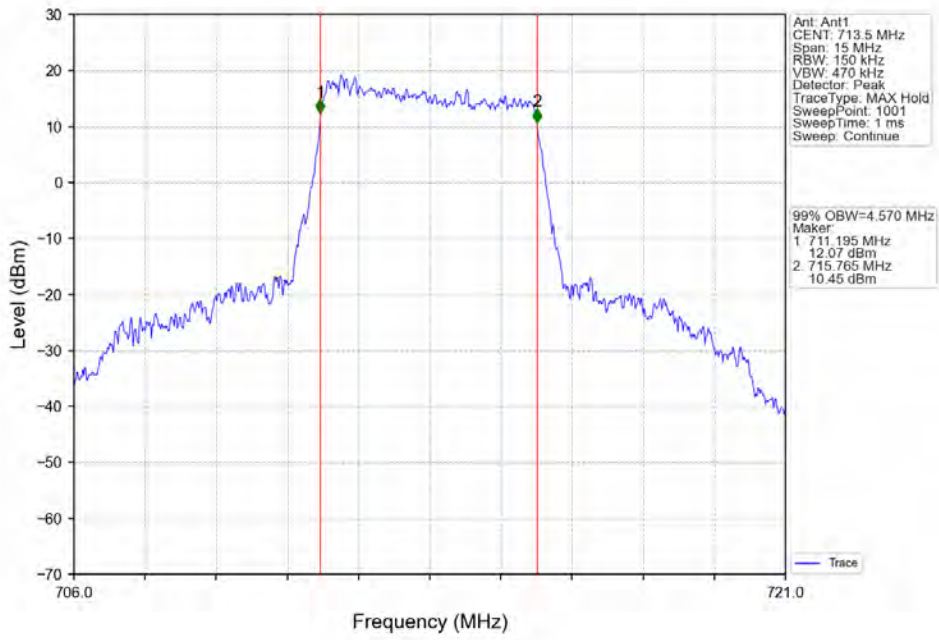
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



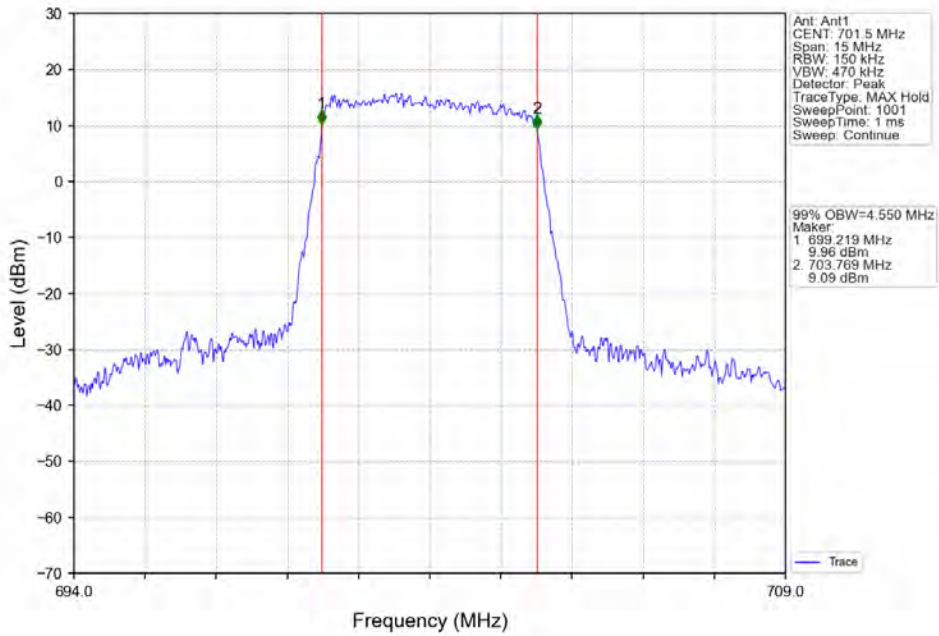
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



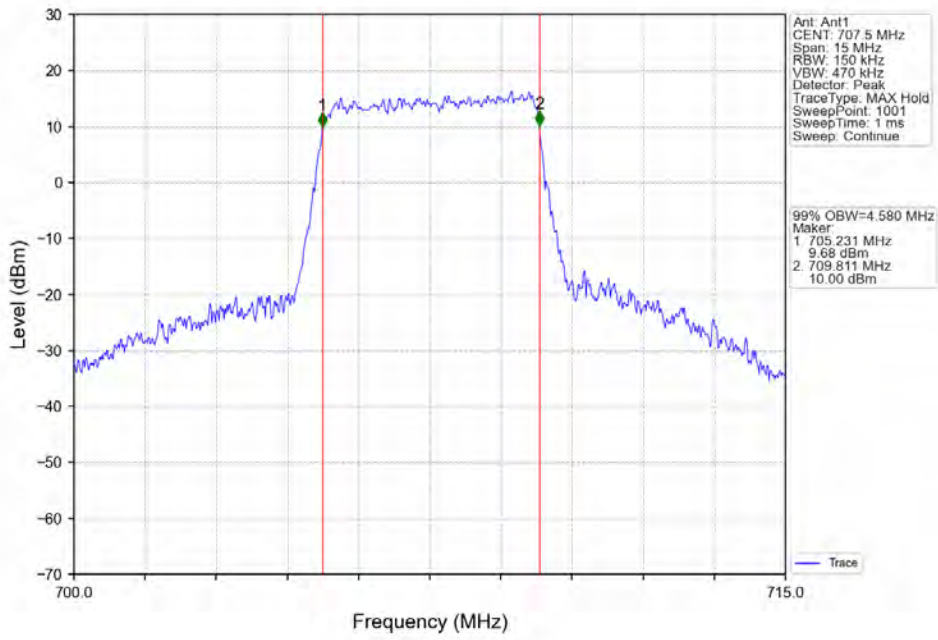
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



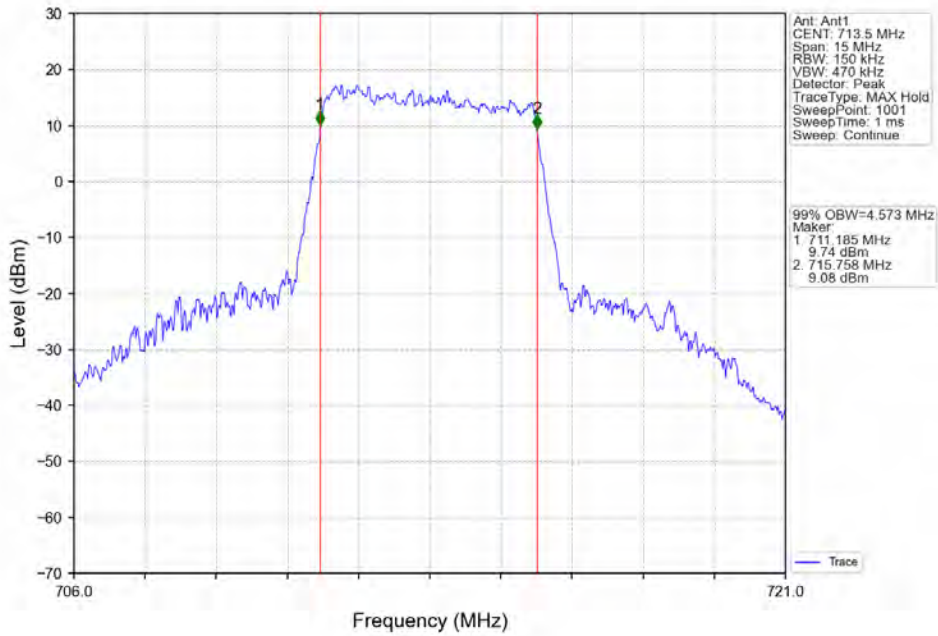
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



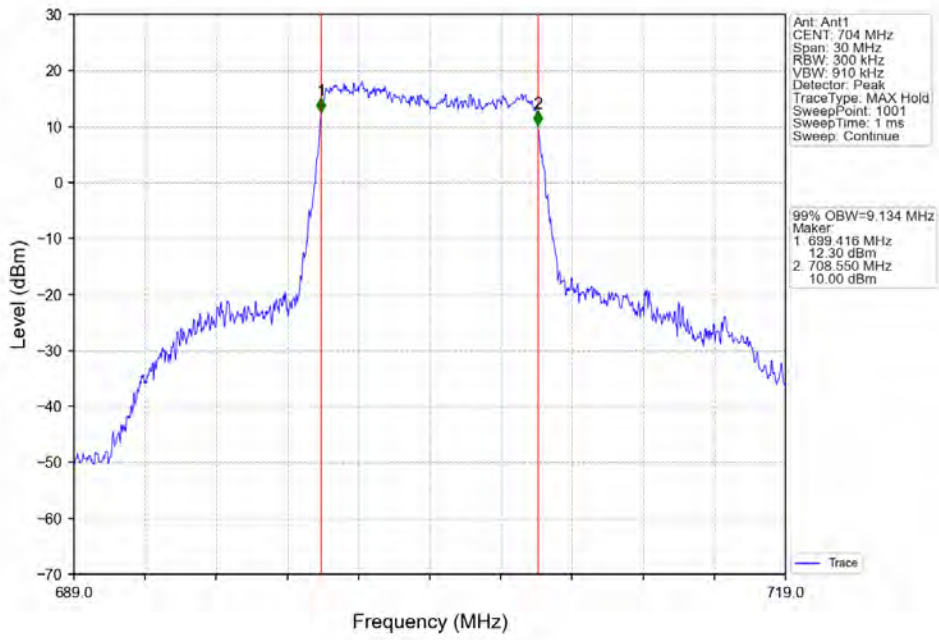
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



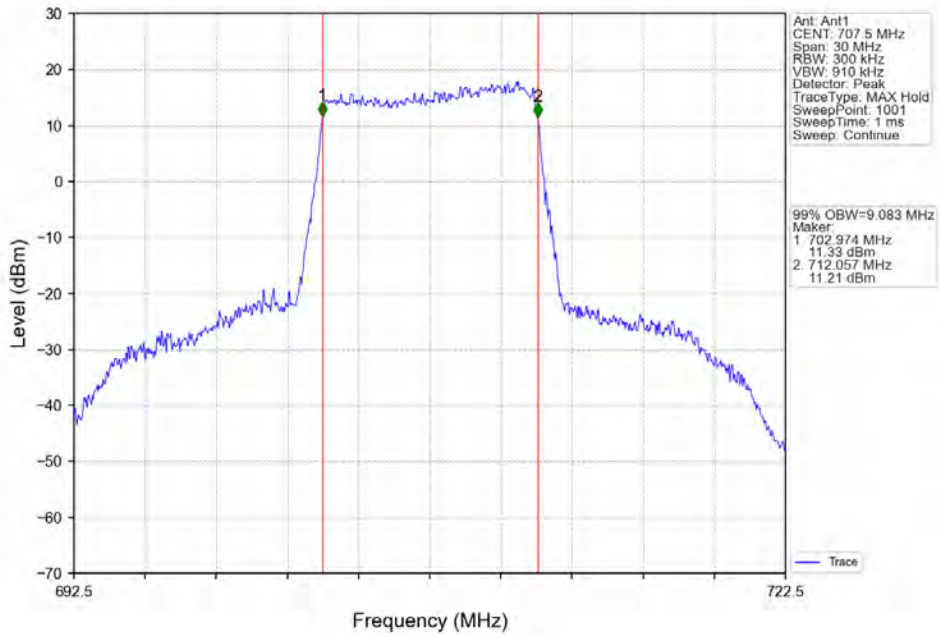
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



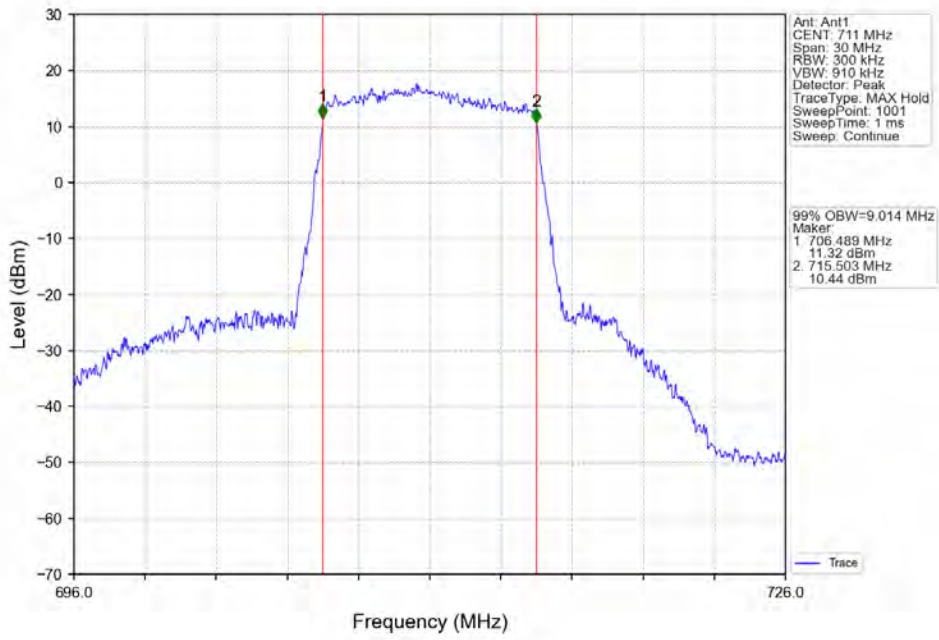
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



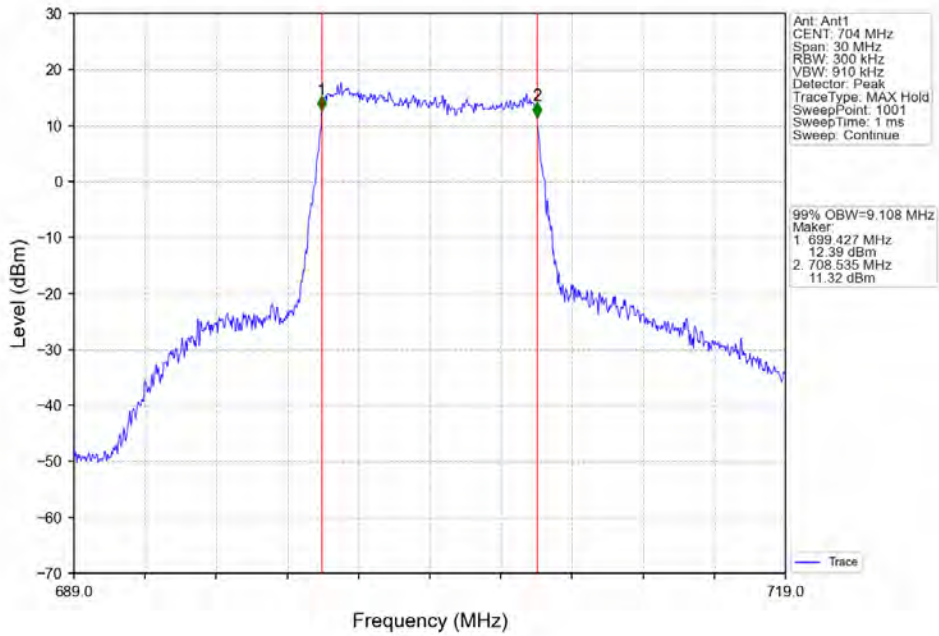
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



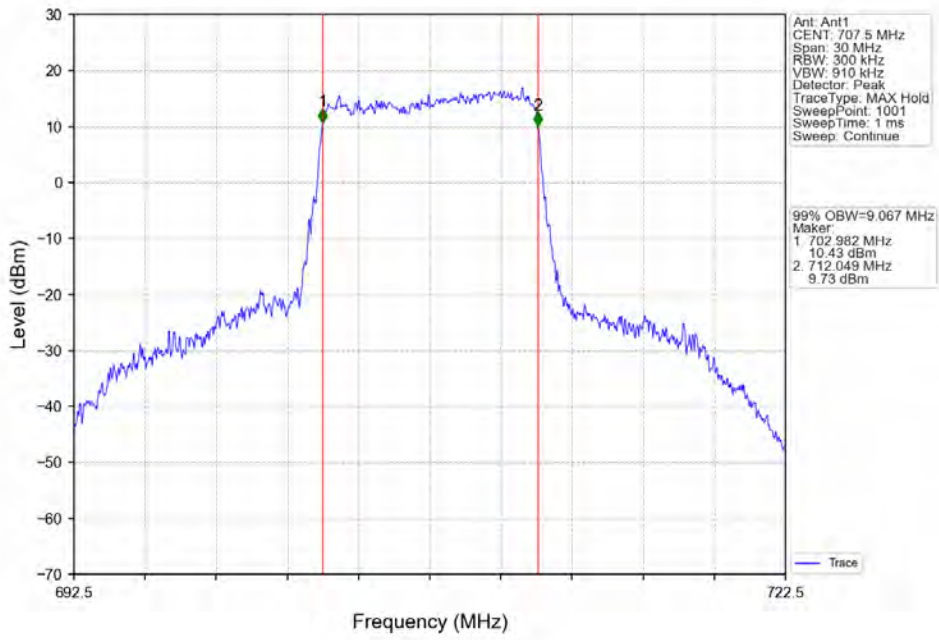
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



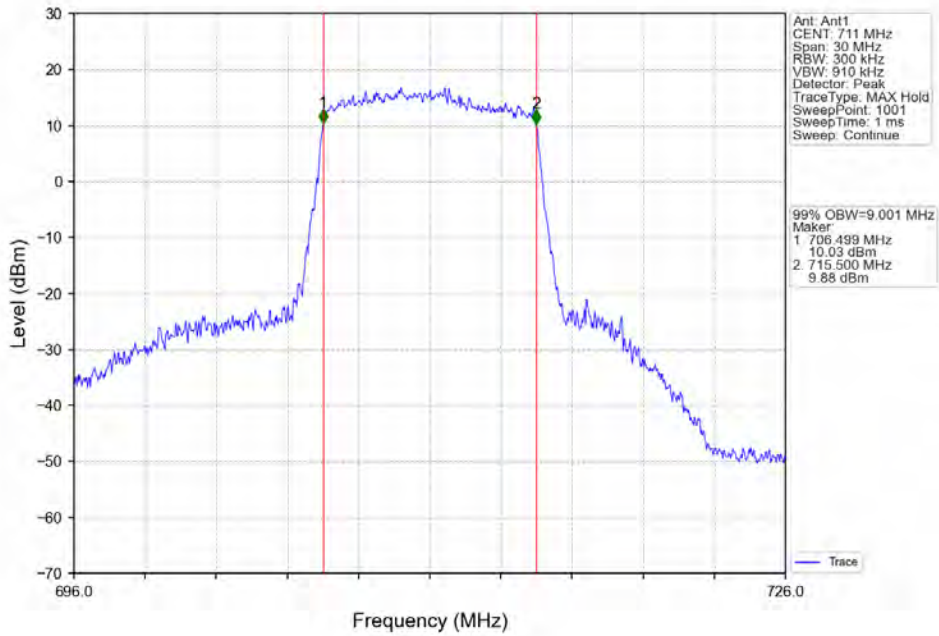
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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

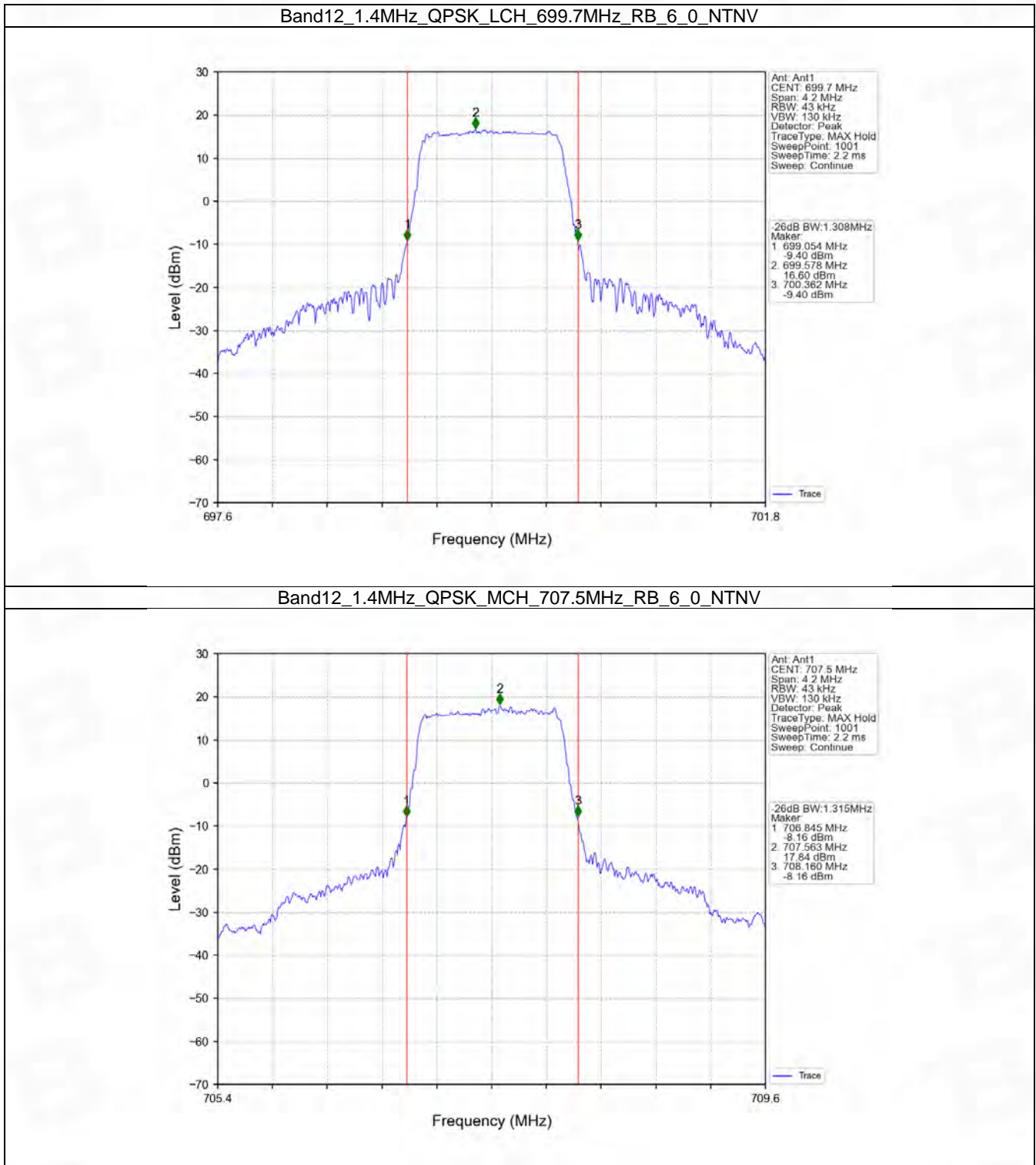


## 4.2 Band12\_XDB

### 4.2.1 Test Result

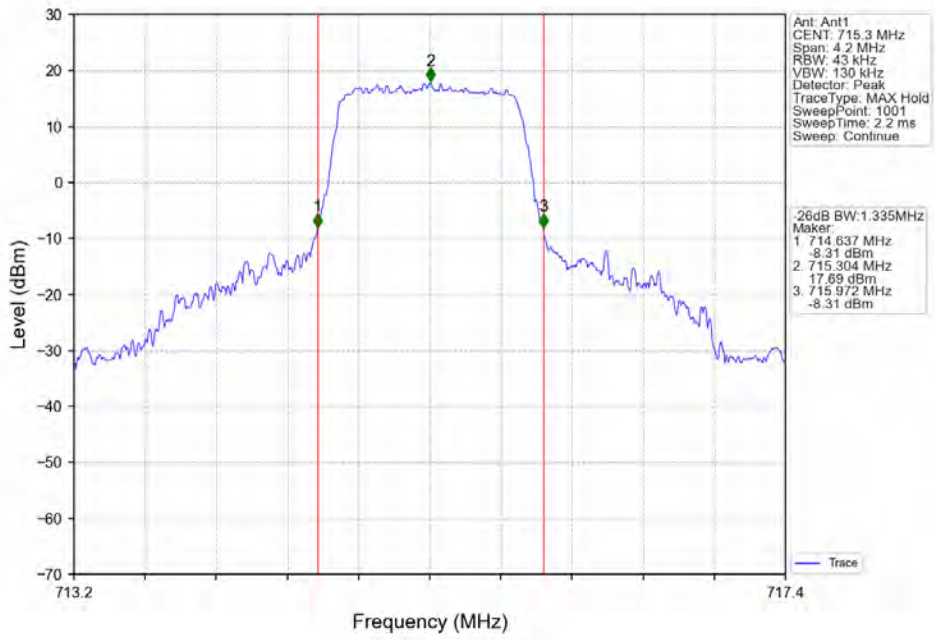
Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.308	/	Pass
		707.5	6	0	1.315	/	Pass
		715.3	6	0	1.335	/	Pass
	16QAM	699.7	6	0	1.326	/	Pass
		707.5	6	0	1.339	/	Pass
		715.3	6	0	1.302	/	Pass
3	QPSK	700.5	15	0	2.992	/	Pass
		707.5	15	0	2.982	/	Pass
		714.5	15	0	3.011	/	Pass
	16QAM	700.5	15	0	2.977	/	Pass
		707.5	15	0	2.990	/	Pass
		714.5	15	0	2.980	/	Pass
5	QPSK	701.5	25	0	5.220	/	Pass
		707.5	25	0	5.217	/	Pass
		713.5	25	0	5.238	/	Pass
	16QAM	701.5	25	0	5.185	/	Pass
		707.5	25	0	5.303	/	Pass
		713.5	25	0	5.222	/	Pass
10	QPSK	704	50	0	10.261	/	Pass
		707.5	50	0	10.268	/	Pass
		711	50	0	10.093	/	Pass
	16QAM	704	50	0	10.287	/	Pass
		707.5	50	0	10.206	/	Pass
		711	50	0	10.095	/	Pass

### 4.2.2 Test Graph

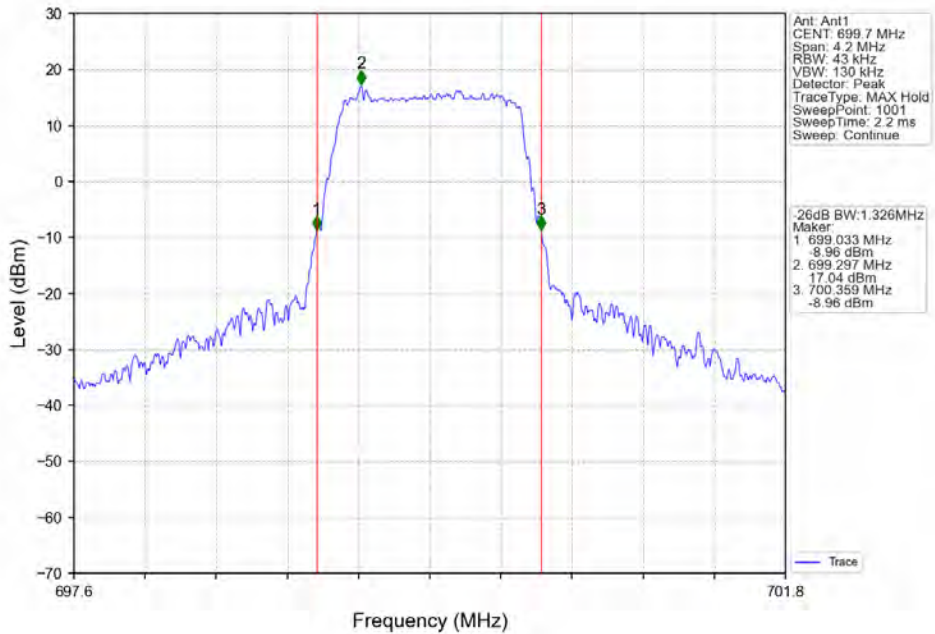




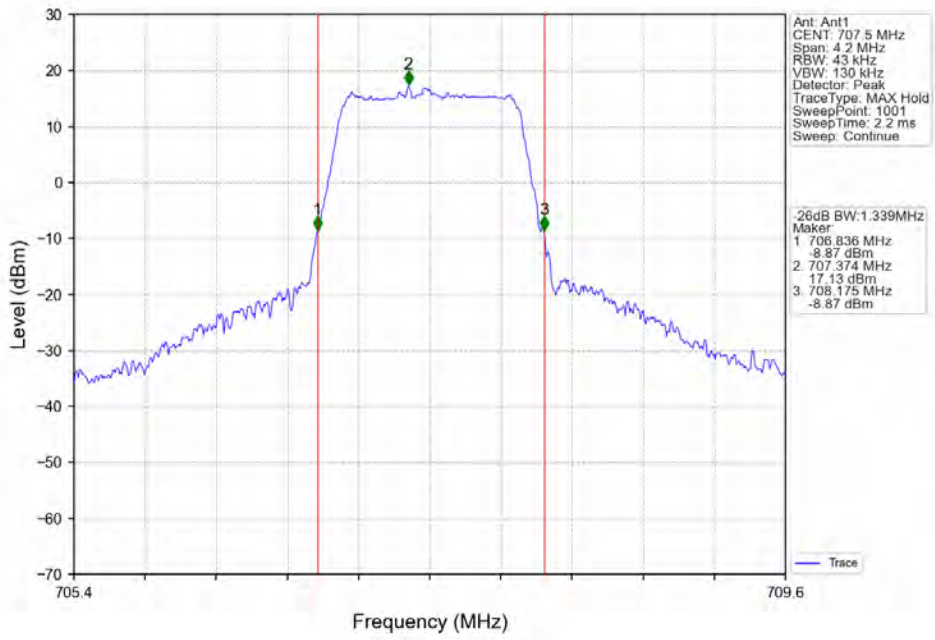
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



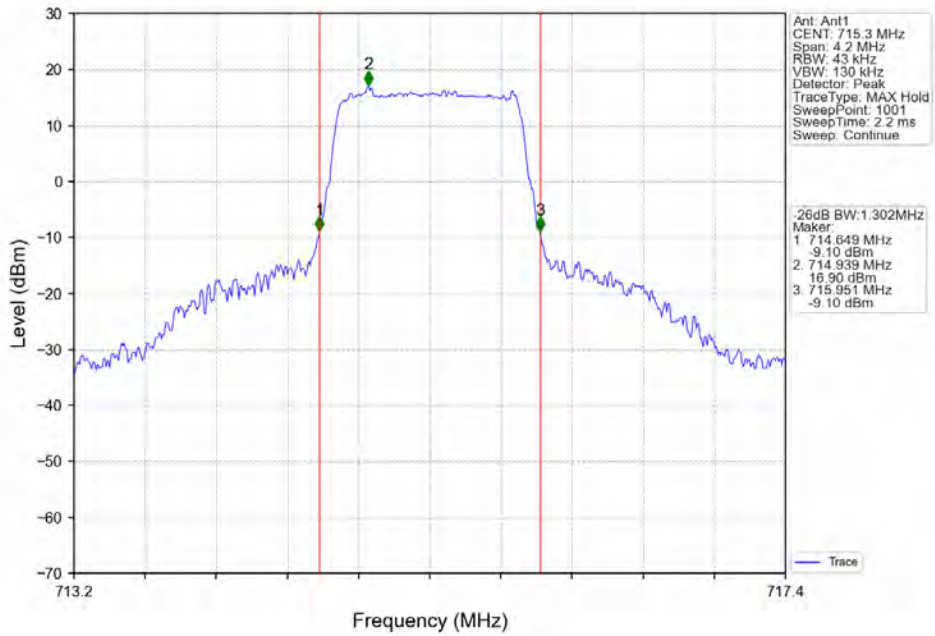
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



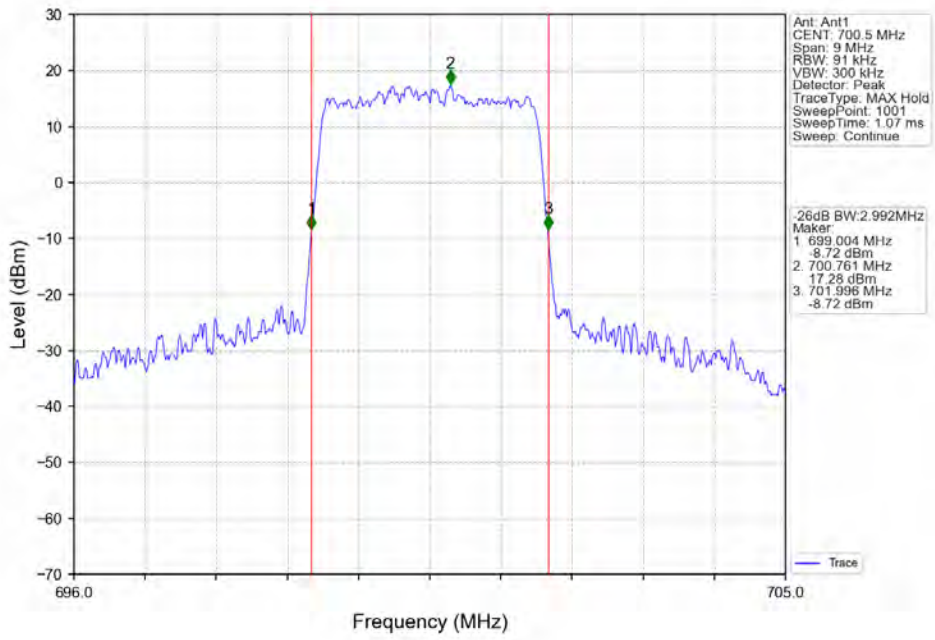
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



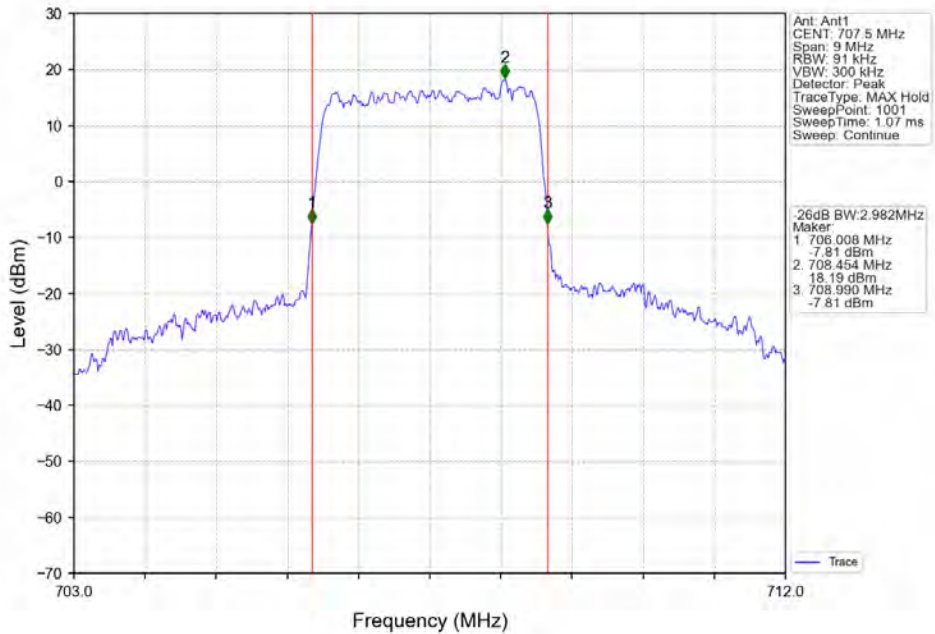
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



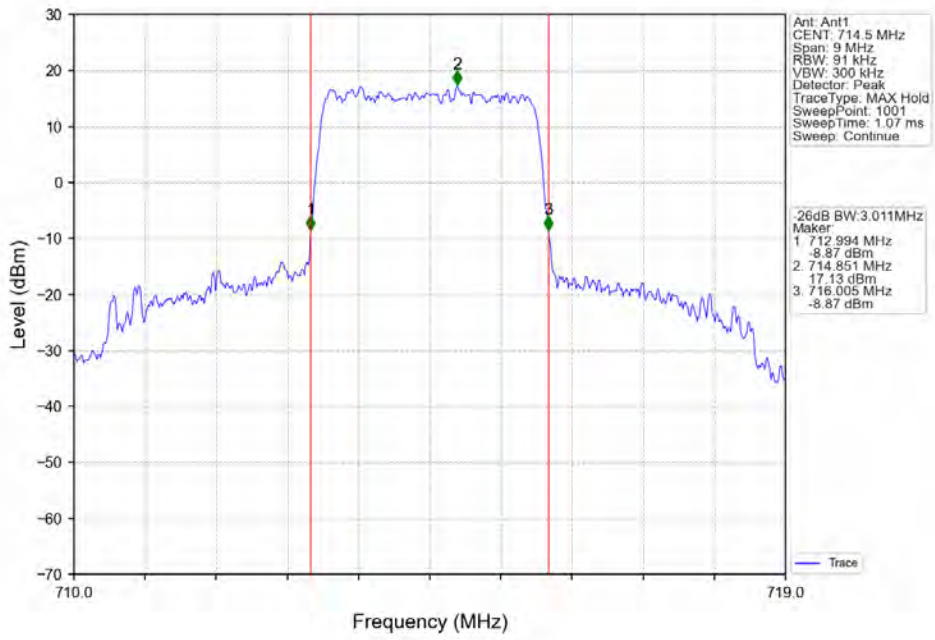
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



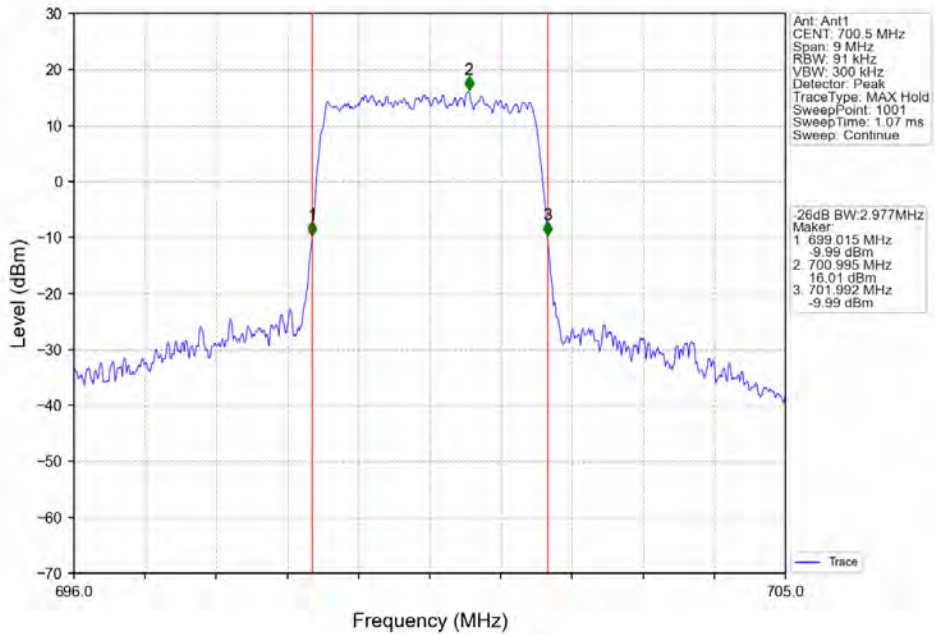
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



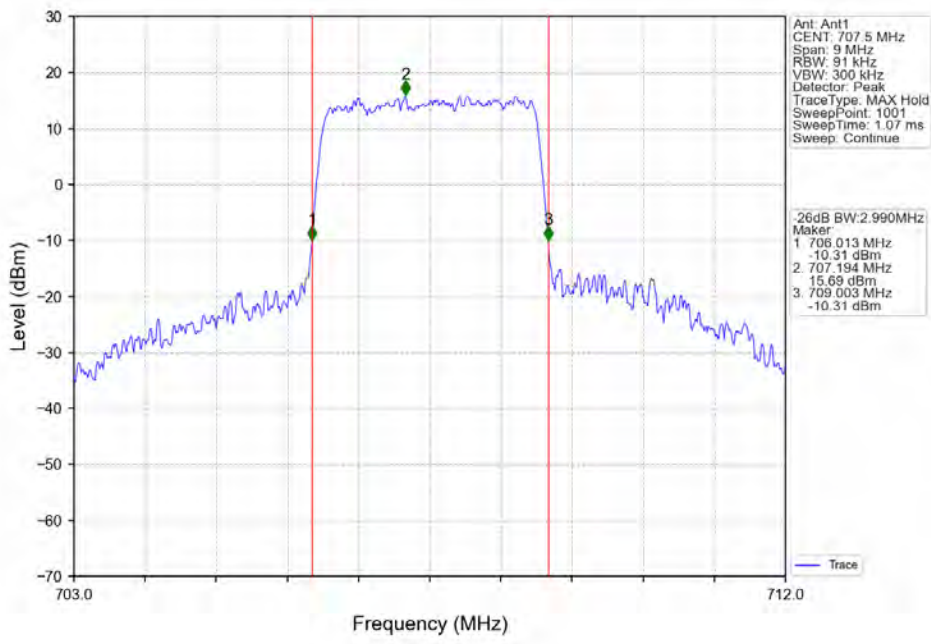
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



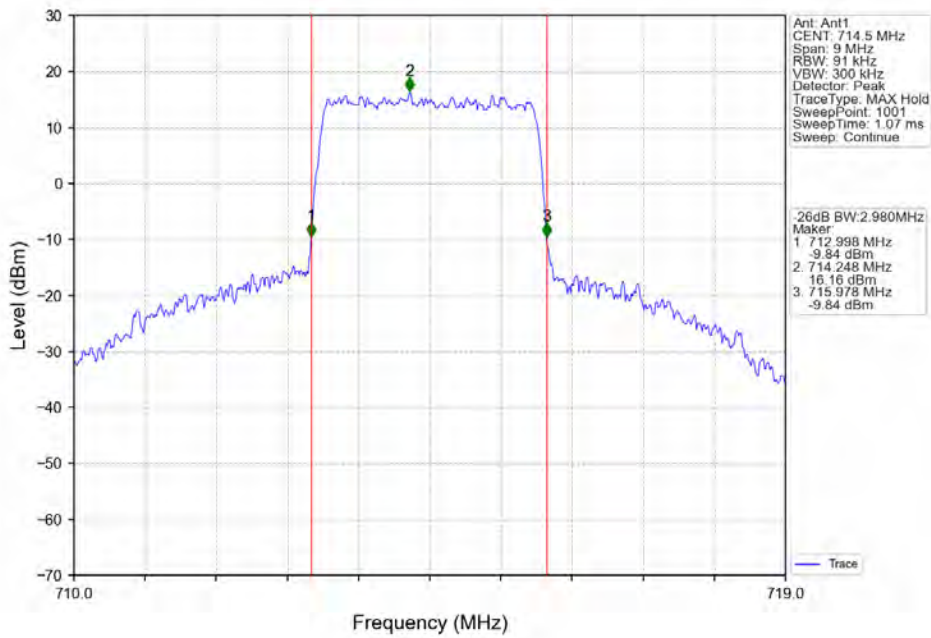
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



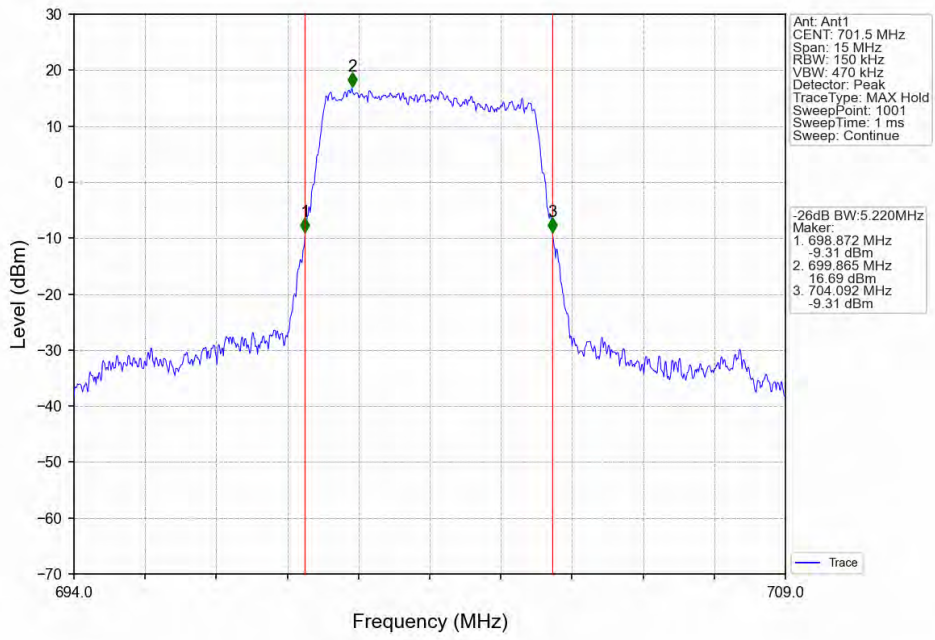
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



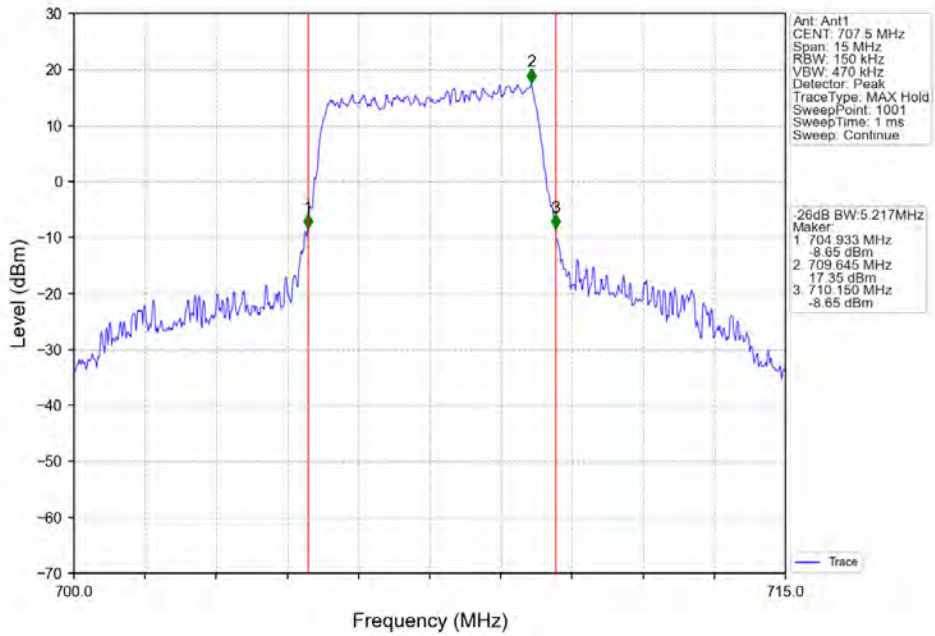
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



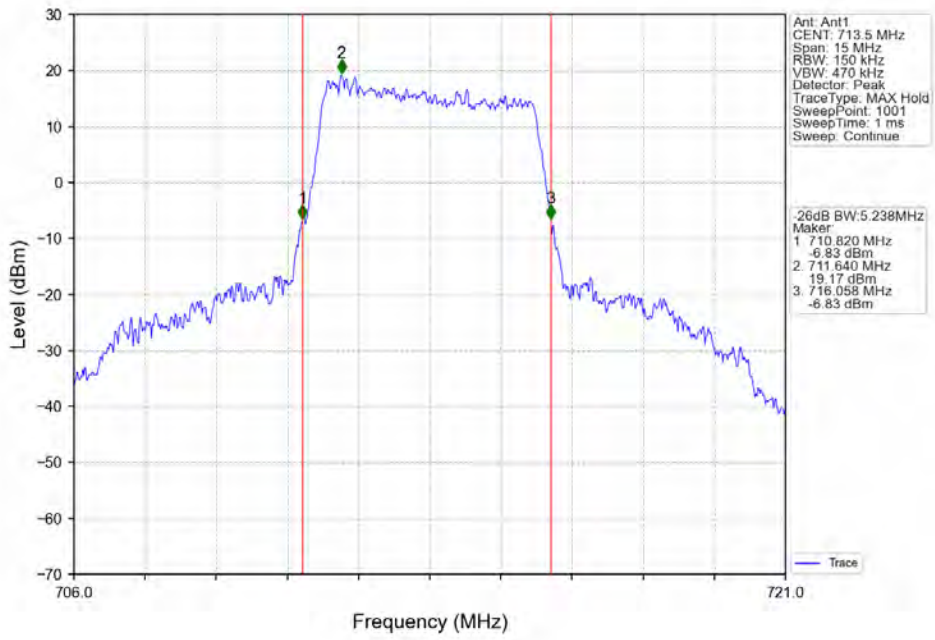
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



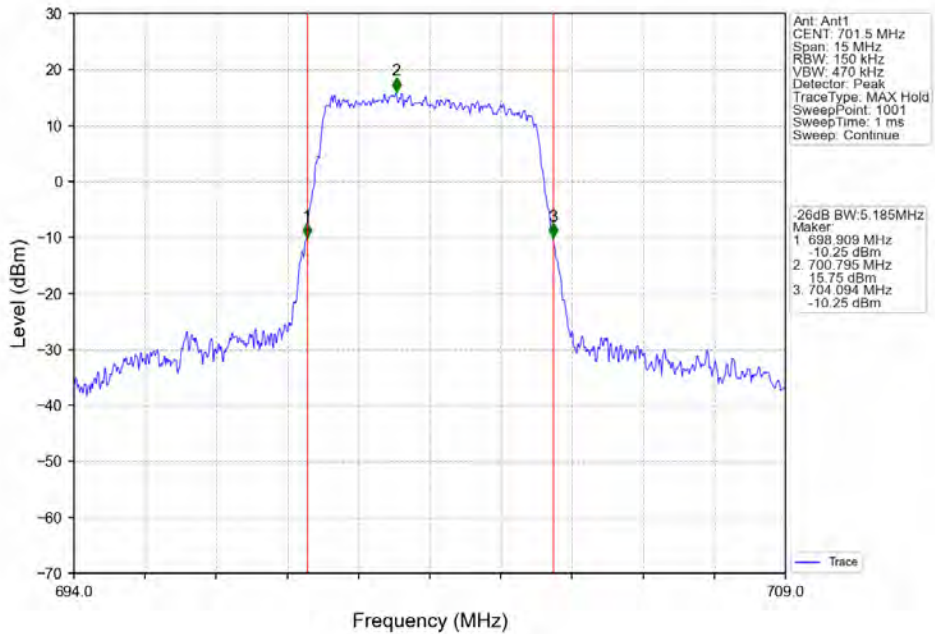
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



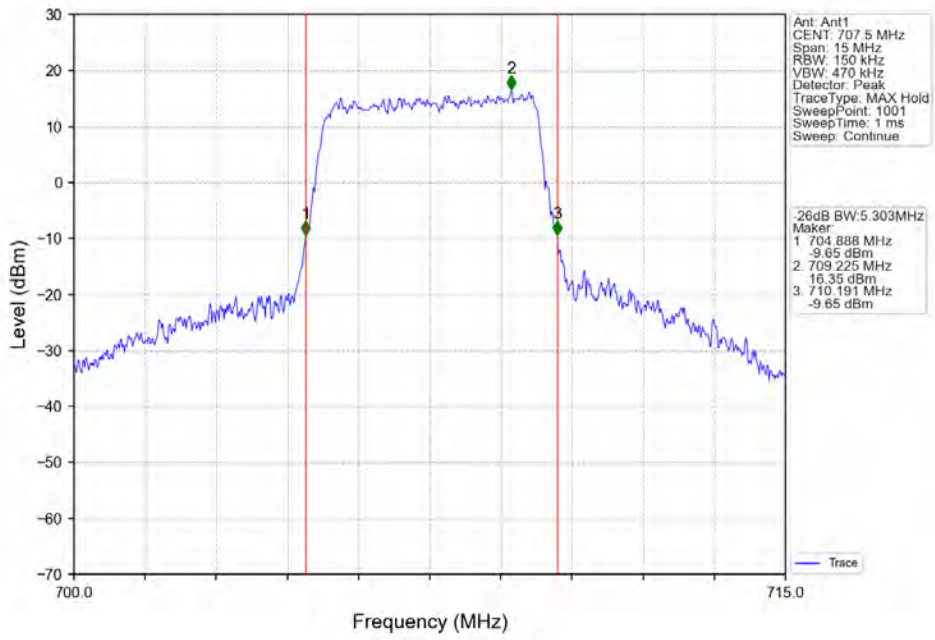
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



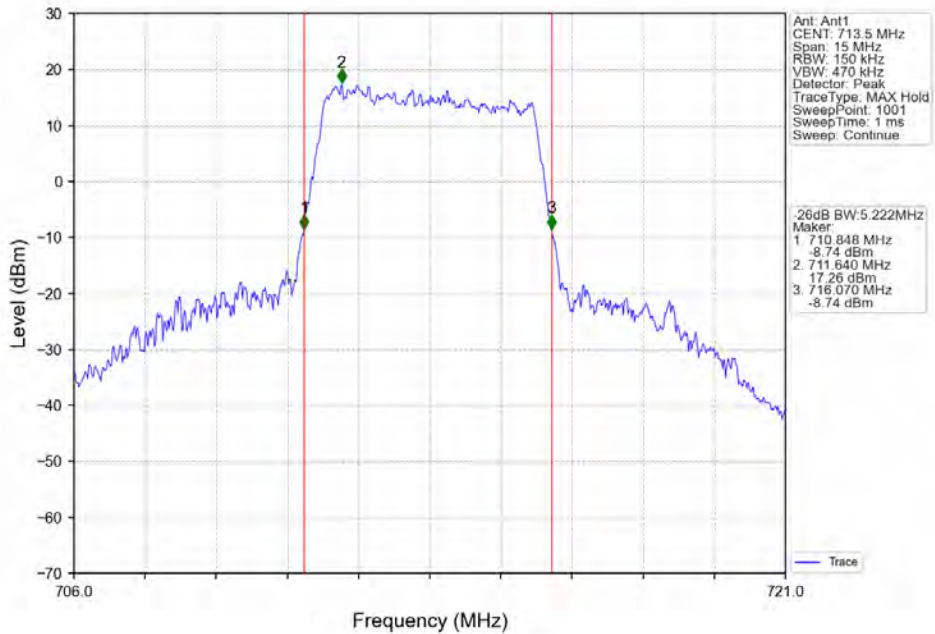
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



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

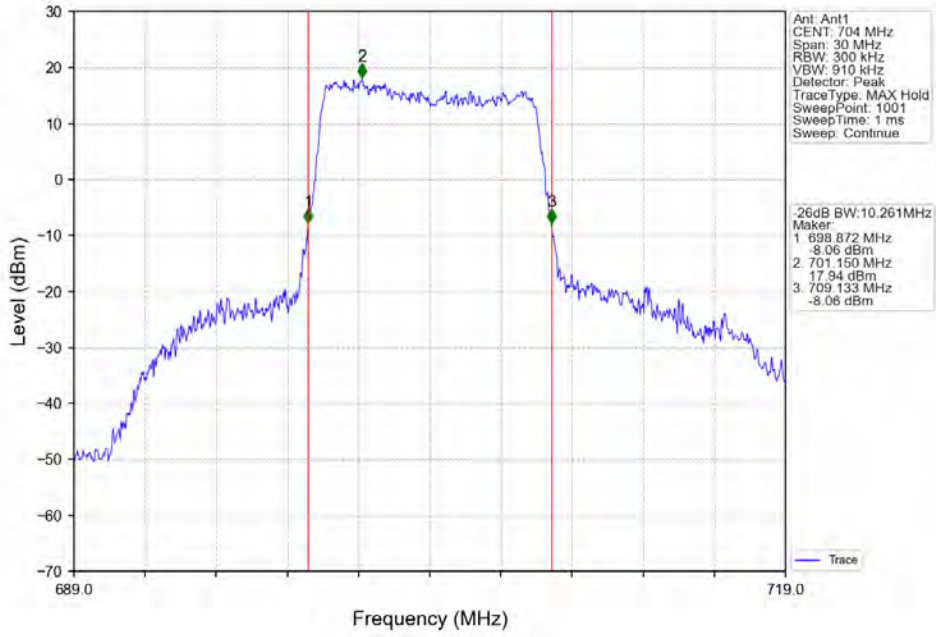


Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV

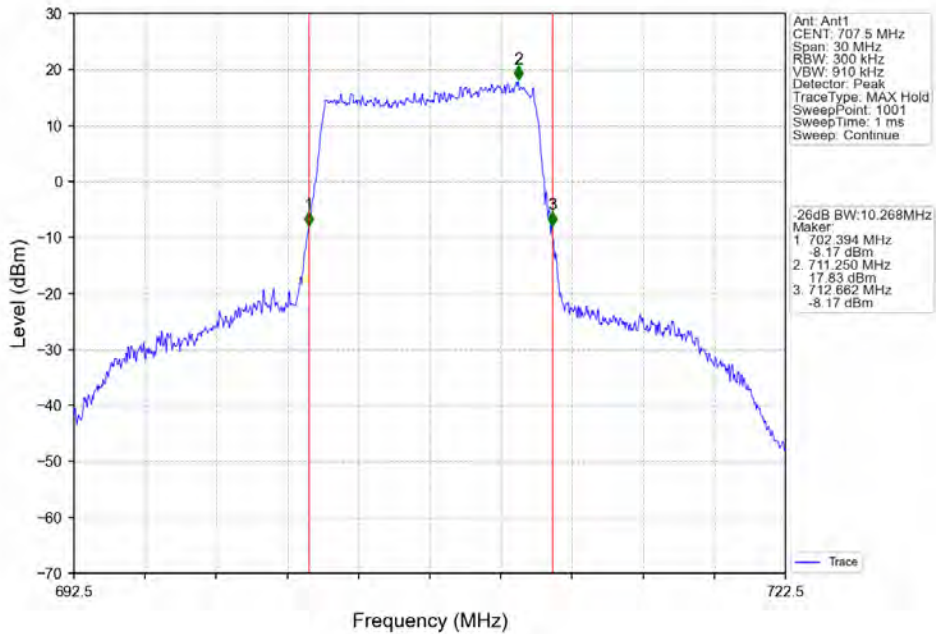




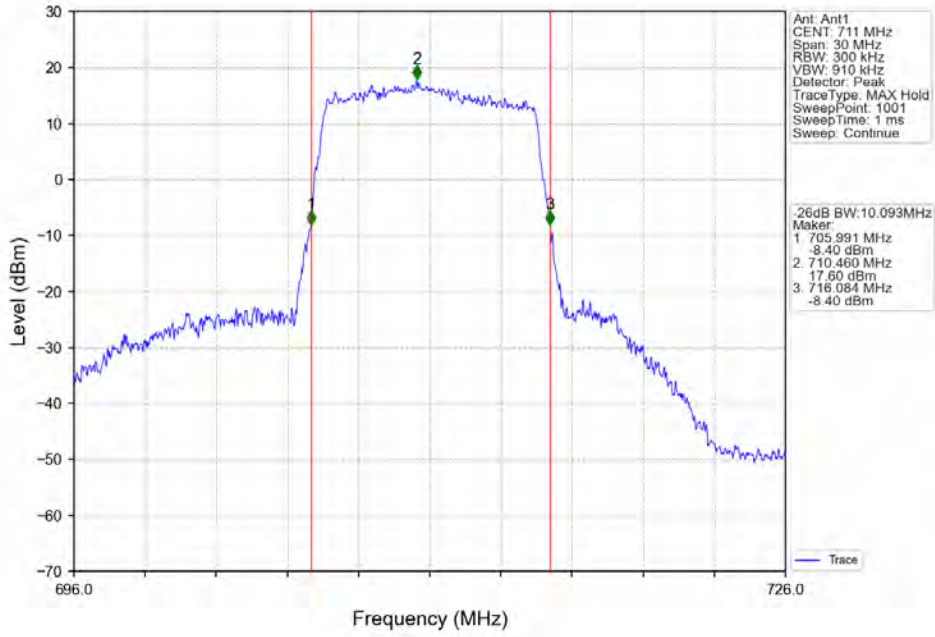
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



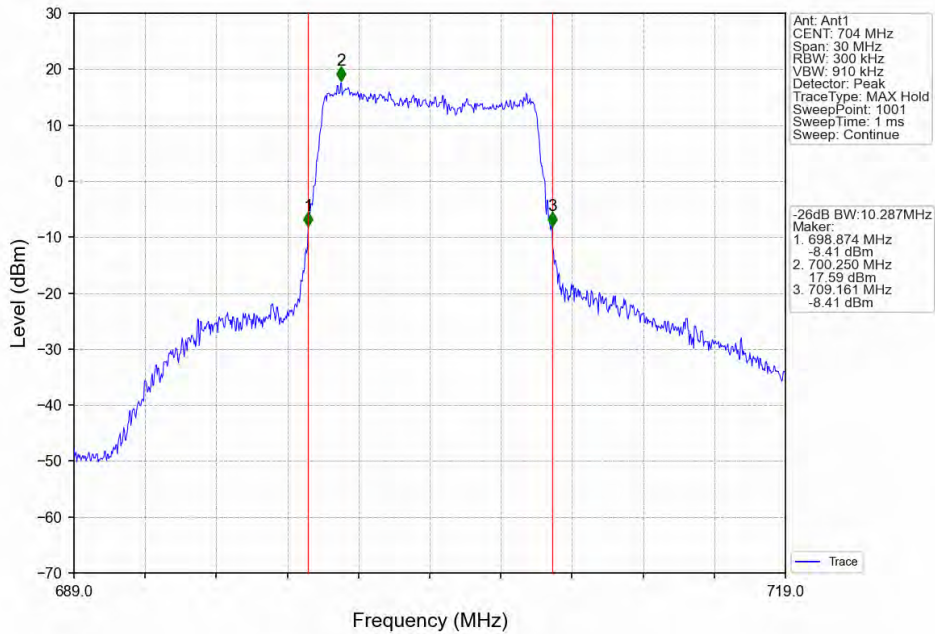
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



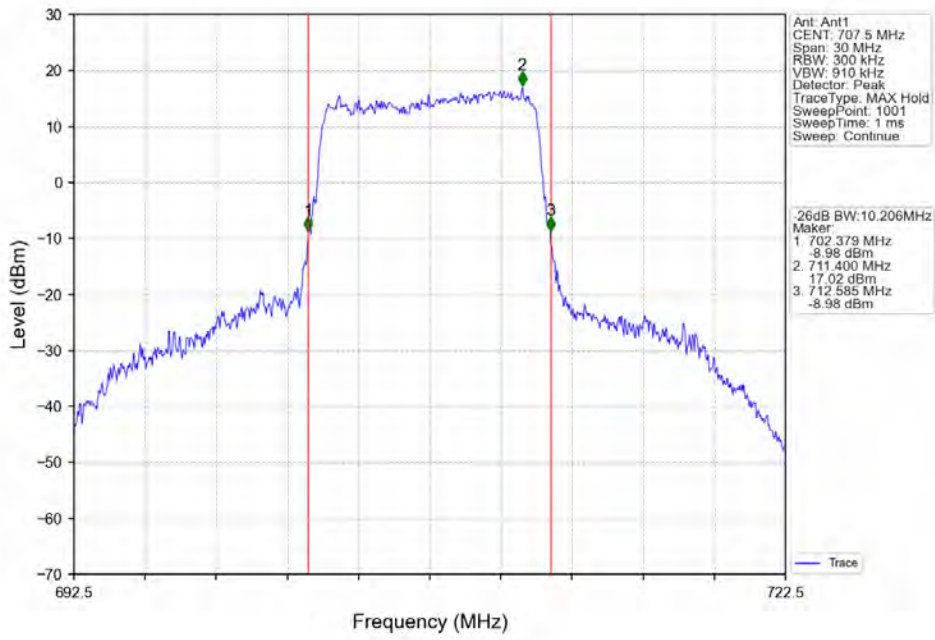
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



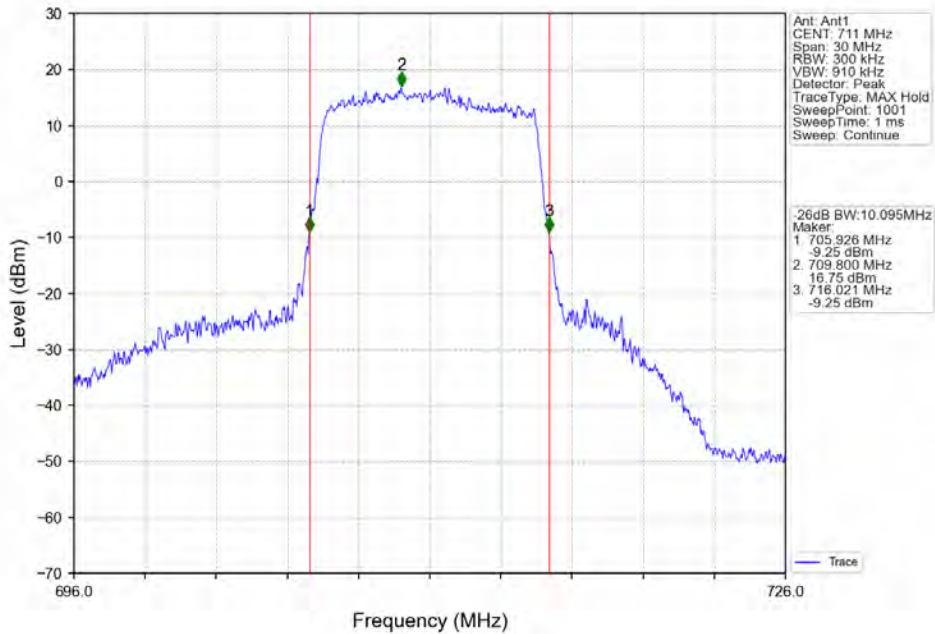
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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



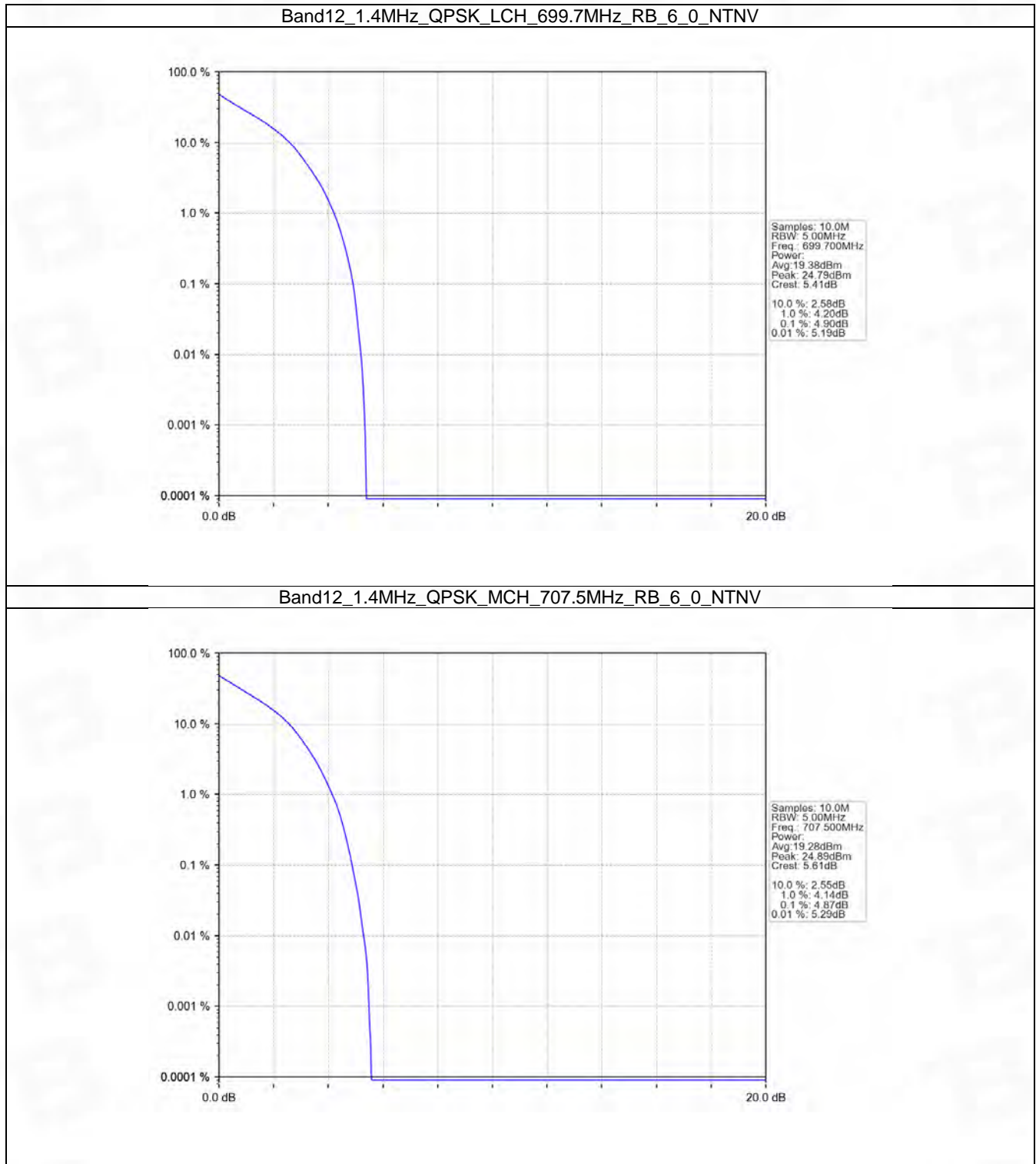
## 5. Peak-Average Ratio

### 5.1 B12\_1.4MHz

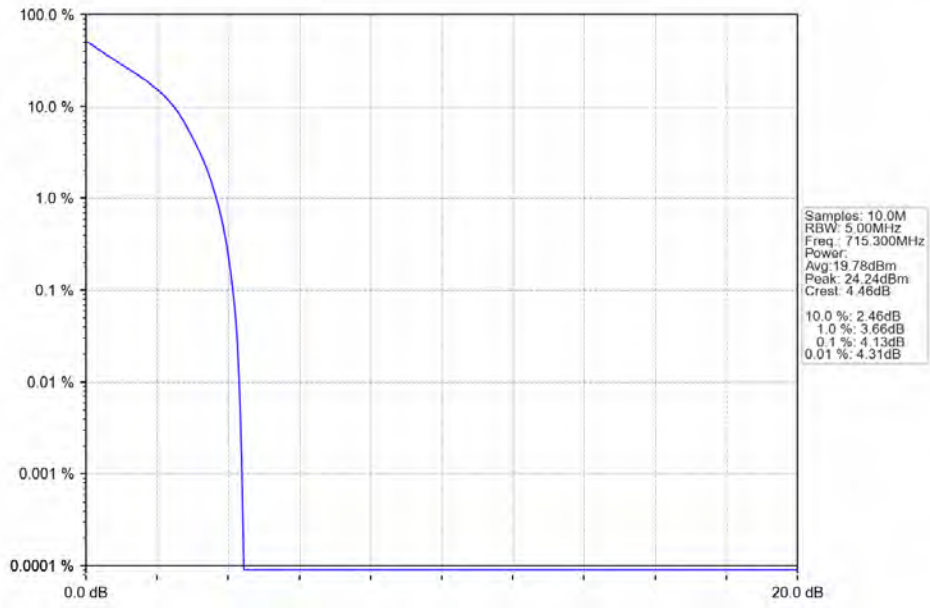
#### 5.1.1 Test Result

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	4.90	<=13	Pass
	707.5	6	0	4.87	<=13	Pass
	715.3	6	0	4.13	<=13	Pass
16QAM	699.7	6	0	5.74	<=13	Pass
	707.5	6	0	5.75	<=13	Pass
	715.3	6	0	5.28	<=13	Pass

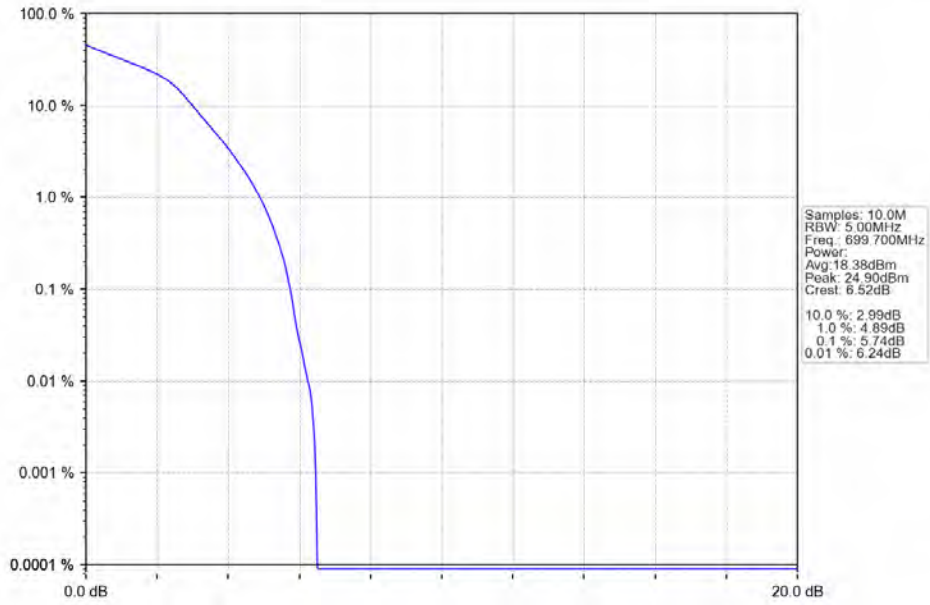
### 5.1.2 Test Graph



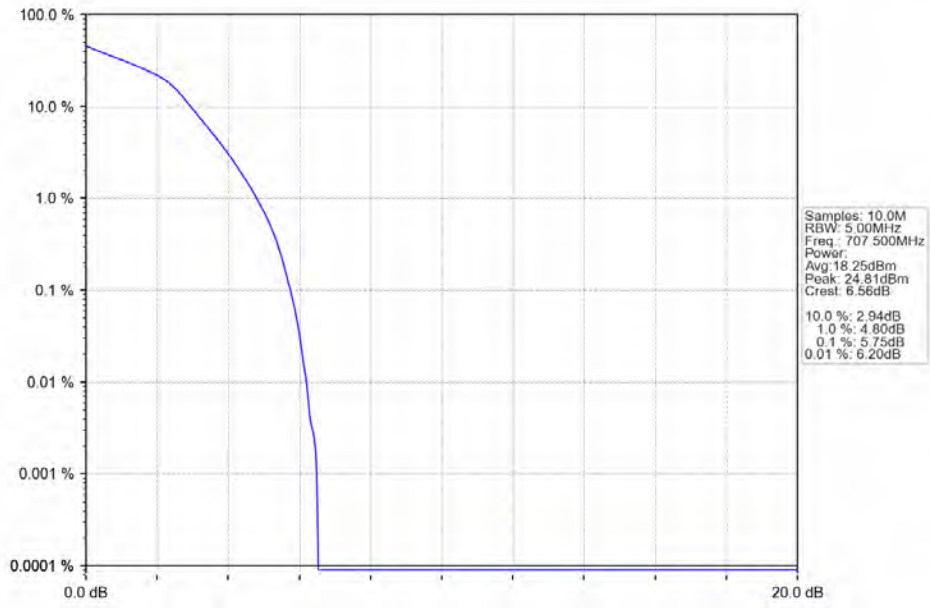
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



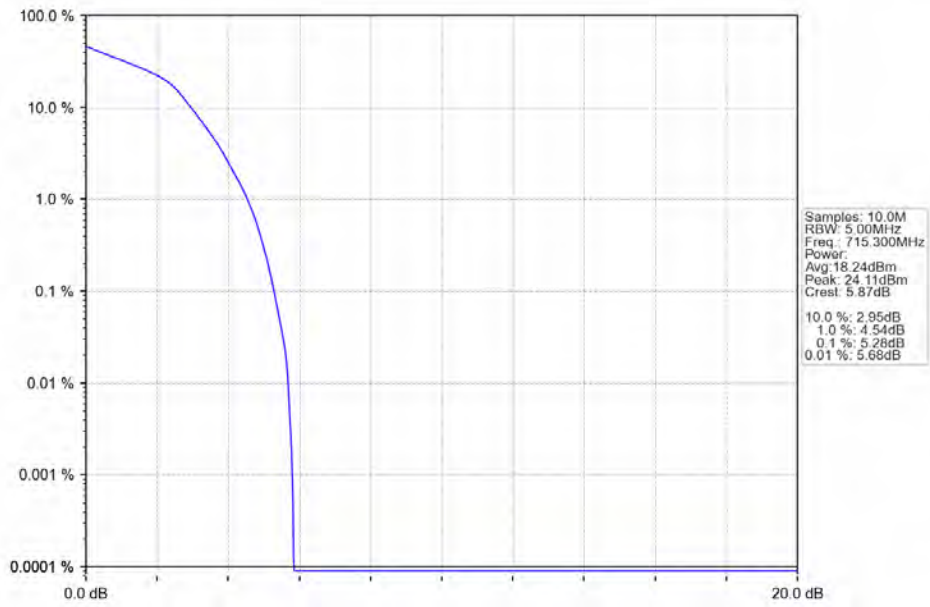
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



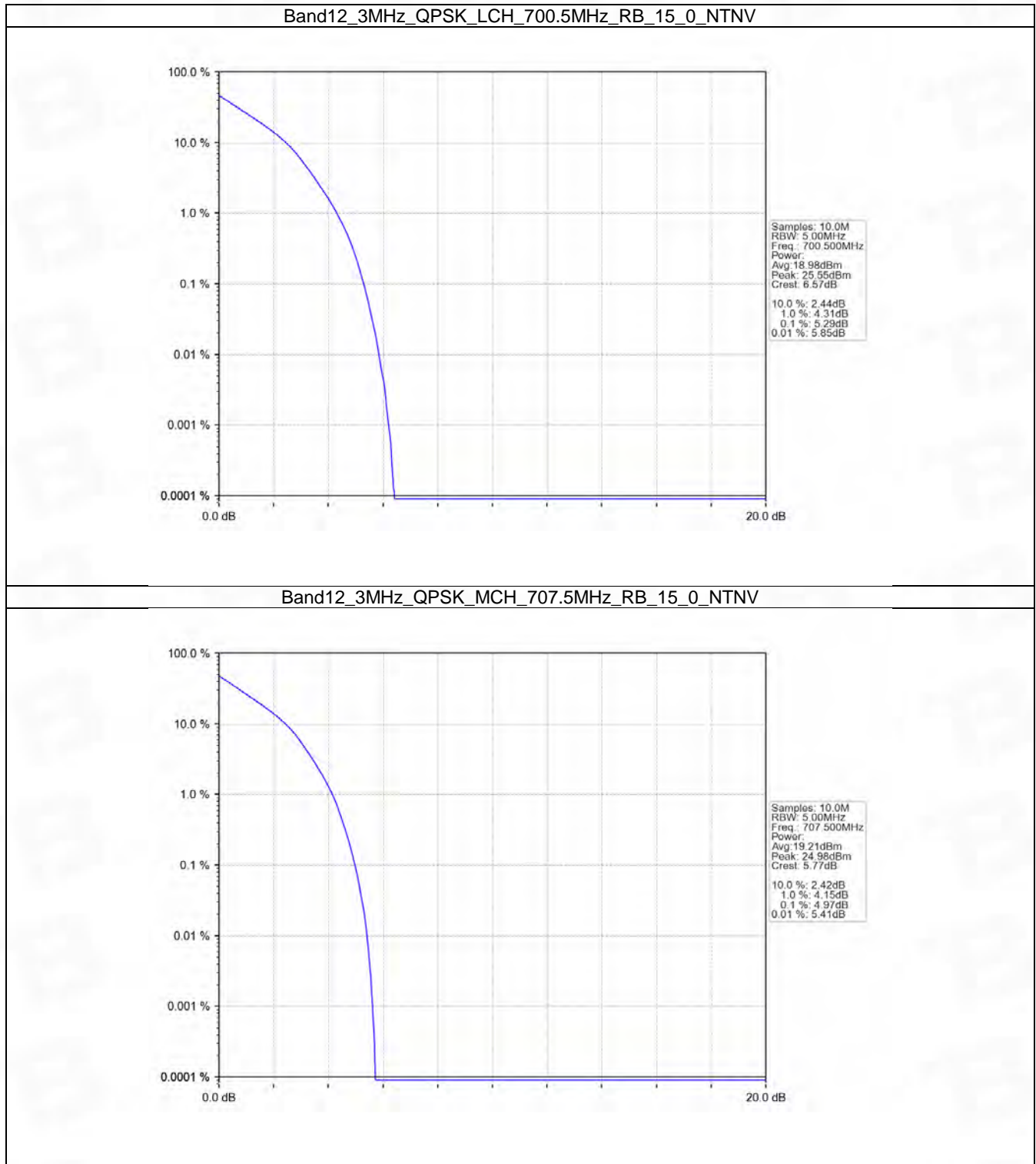
## 5.2 B12\_3MHz

### 5.2.1 Test Result

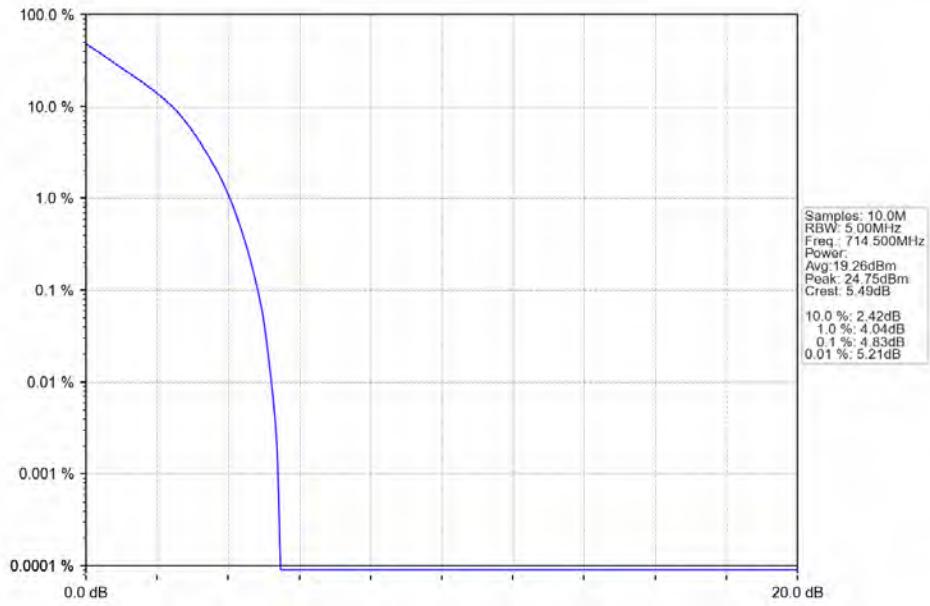
Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.29	<=13	Pass
	707.5	15	0	4.97	<=13	Pass
	714.5	15	0	4.83	<=13	Pass
16QAM	700.5	15	0	6.09	<=13	Pass
	707.5	15	0	5.81	<=13	Pass
	714.5	15	0	5.67	<=13	Pass



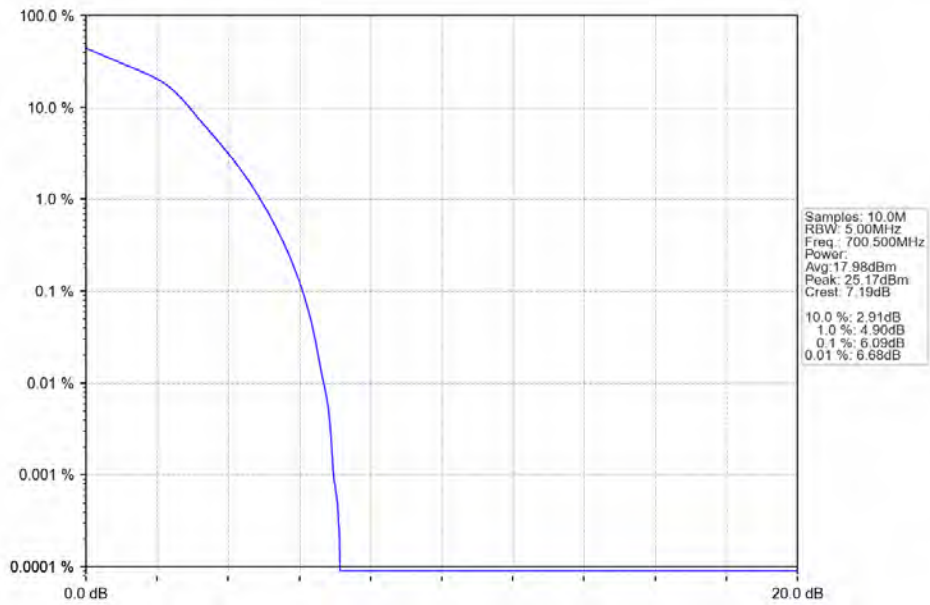
## 5.2.2 Test Graph



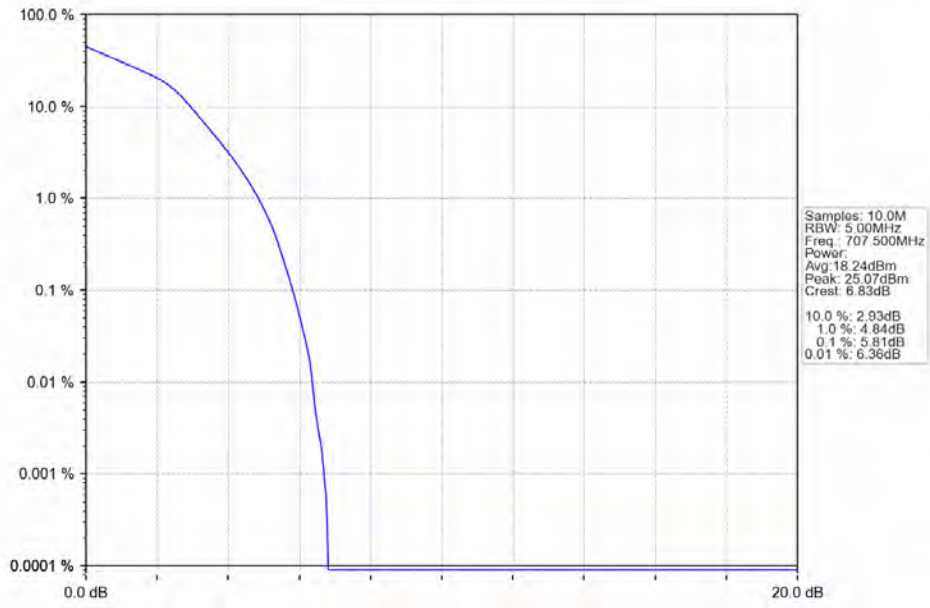
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



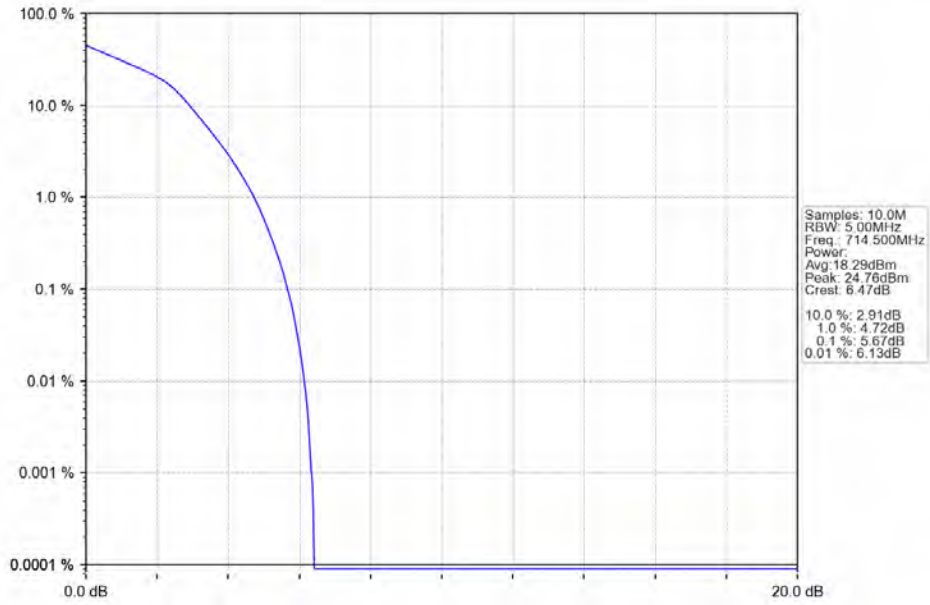
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



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



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

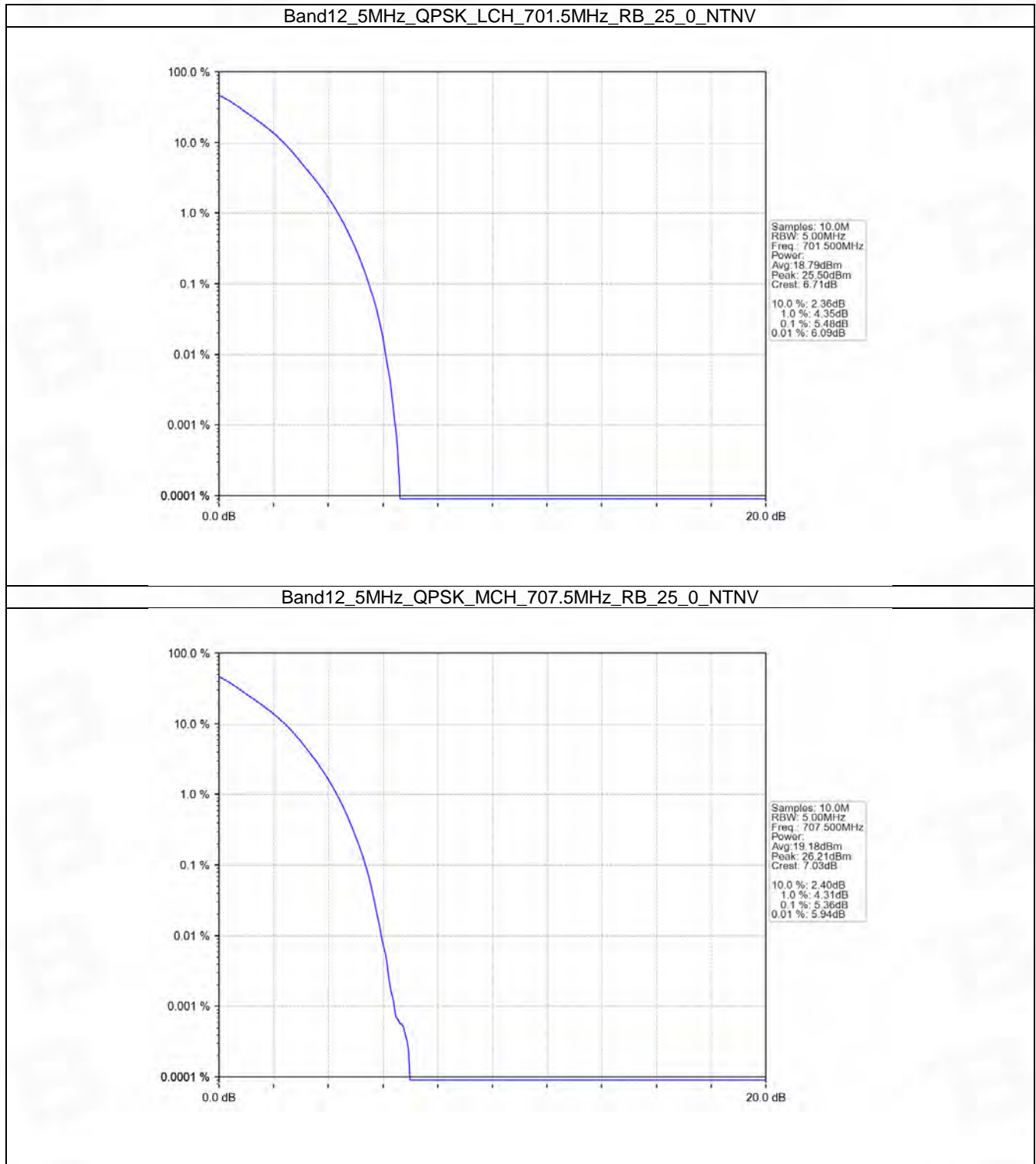


## 5.3 B12\_5MHz

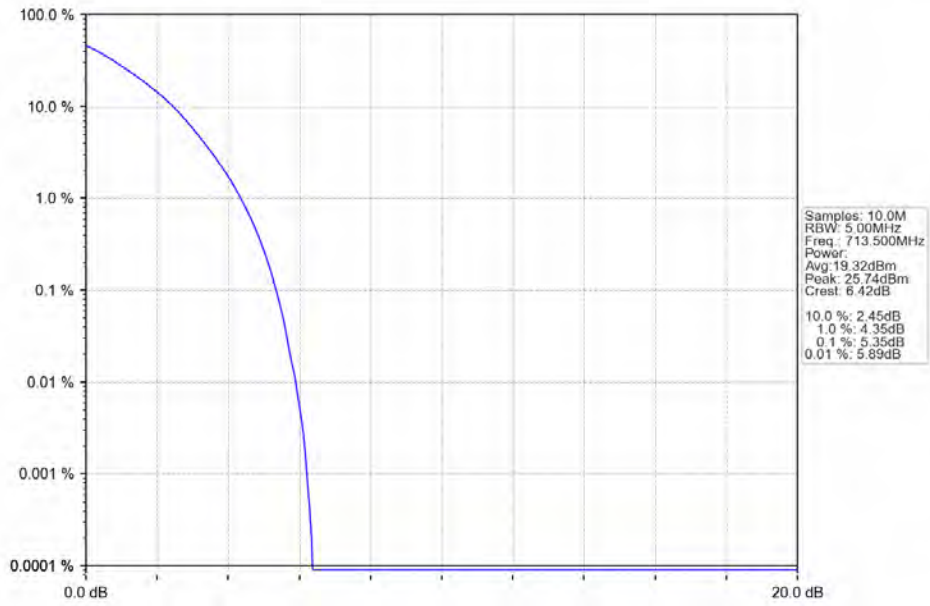
### 5.3.1 Test Result

Band: 12 / Bandwidth: 5MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.48	<=13	Pass
	707.5	25	0	5.36	<=13	Pass
	713.5	25	0	5.35	<=13	Pass
16QAM	701.5	25	0	6.25	<=13	Pass
	707.5	25	0	6.02	<=13	Pass
	713.5	25	0	6.07	<=13	Pass

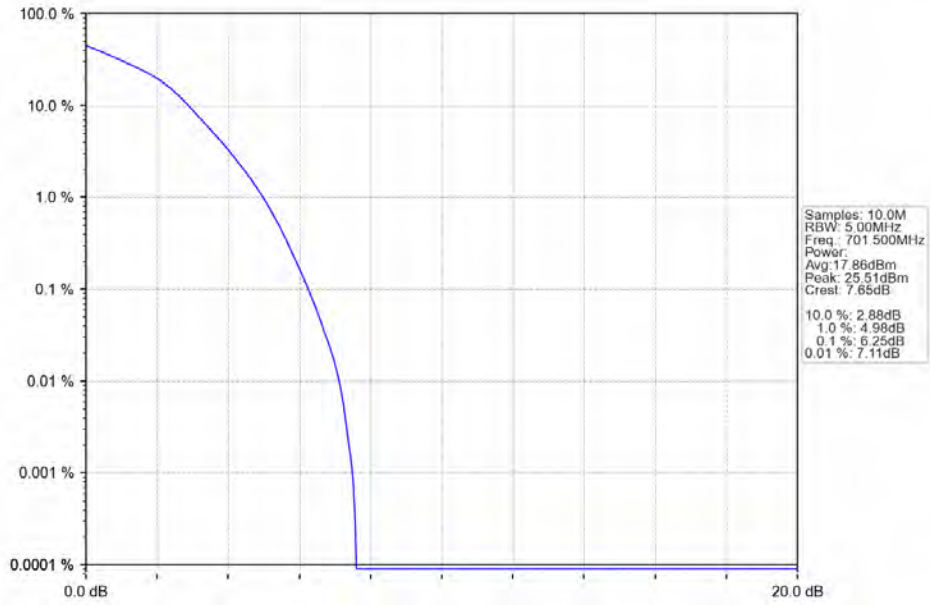
### 5.3.2 Test Graph



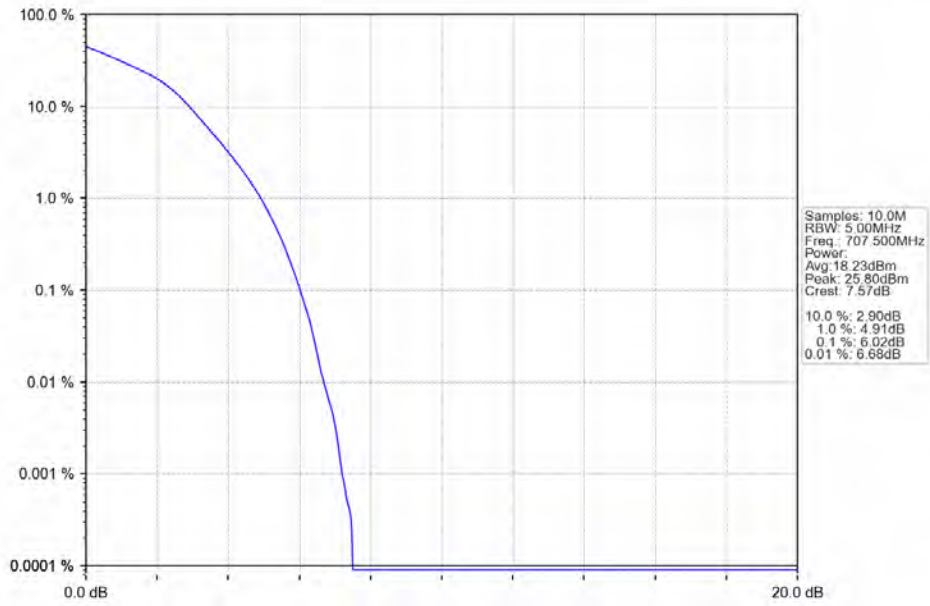
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



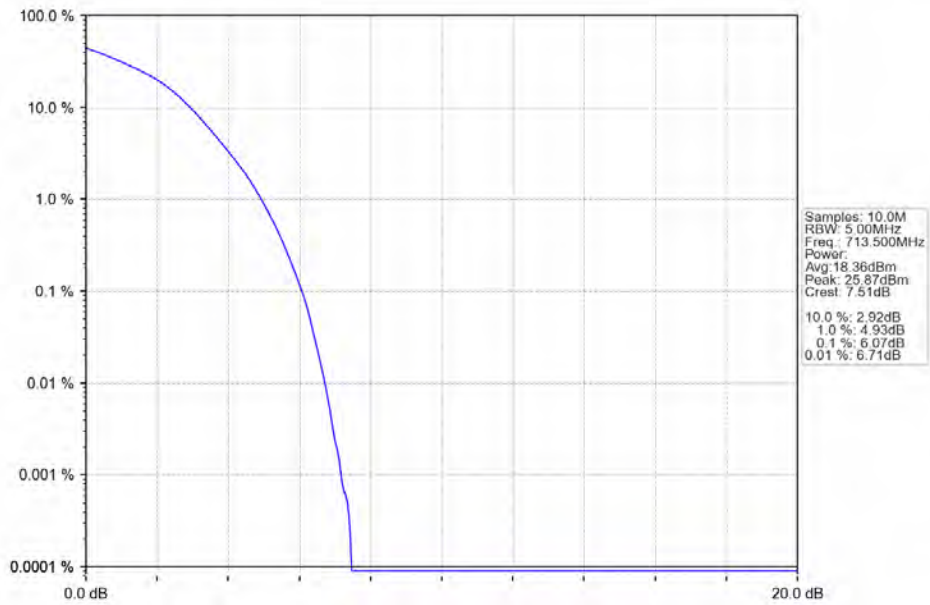
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



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



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



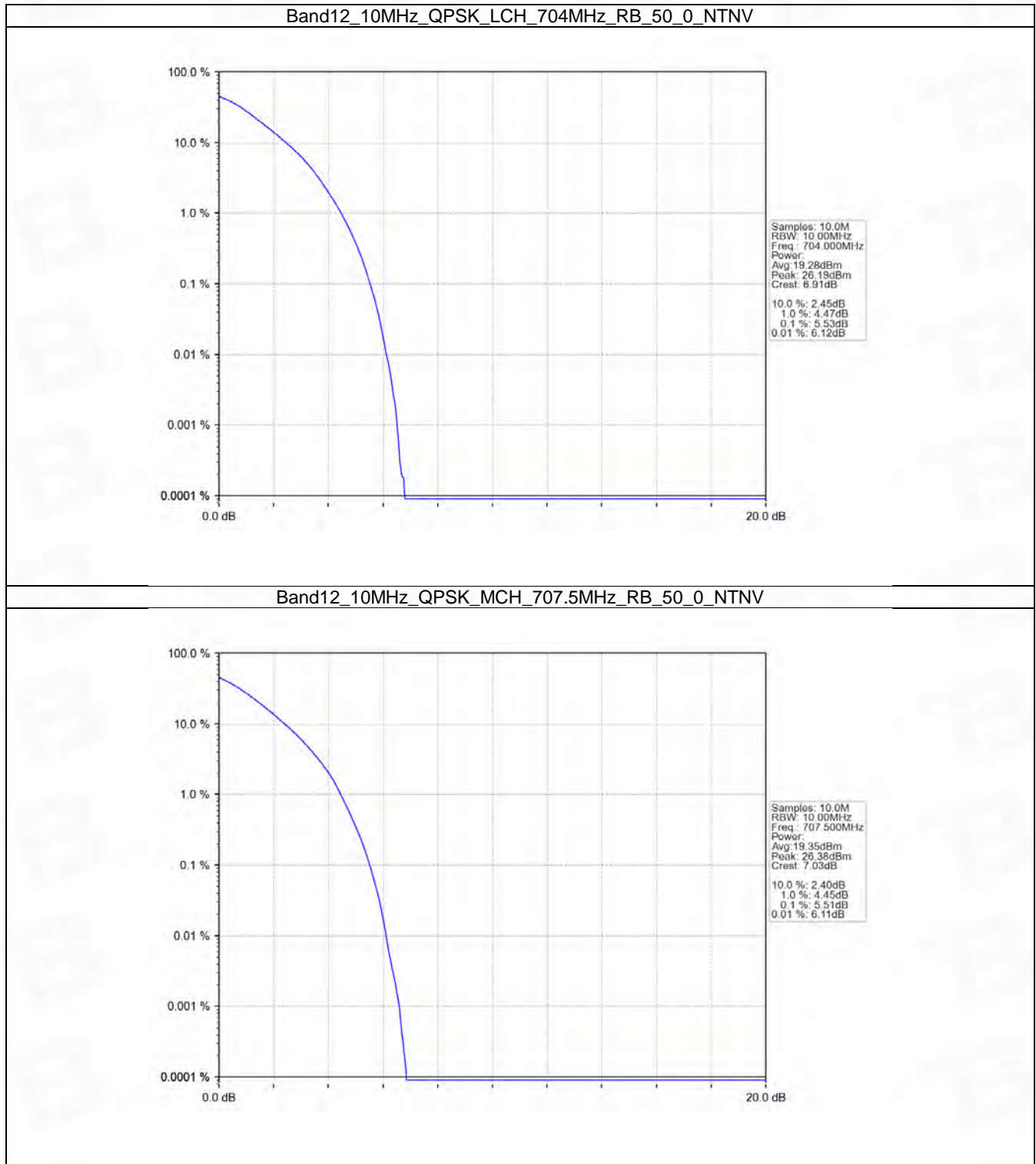
## 5.4 B12\_10MHz

### 5.4.1 Test Result

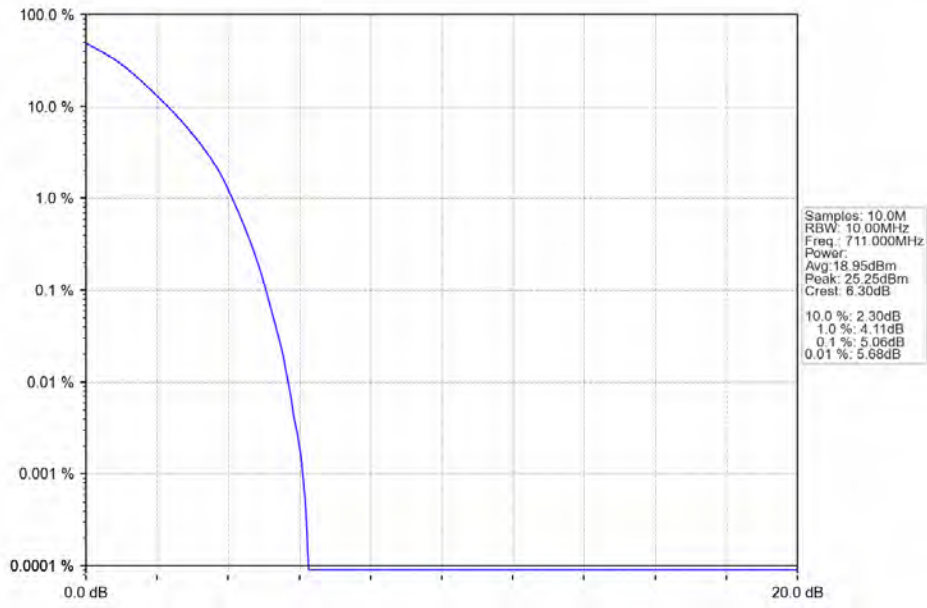
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.53	<=13	Pass
	707.5	50	0	5.51	<=13	Pass
	711	50	0	5.06	<=13	Pass
16QAM	704	50	0	6.28	<=13	Pass
	707.5	50	0	6.23	<=13	Pass
	711	50	0	5.96	<=13	Pass



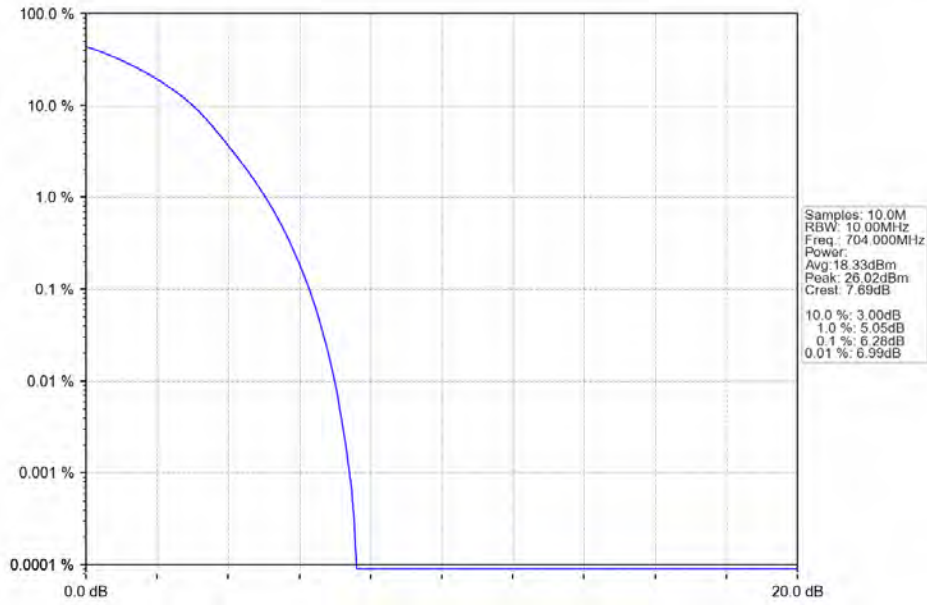
### 5.4.2 Test Graph



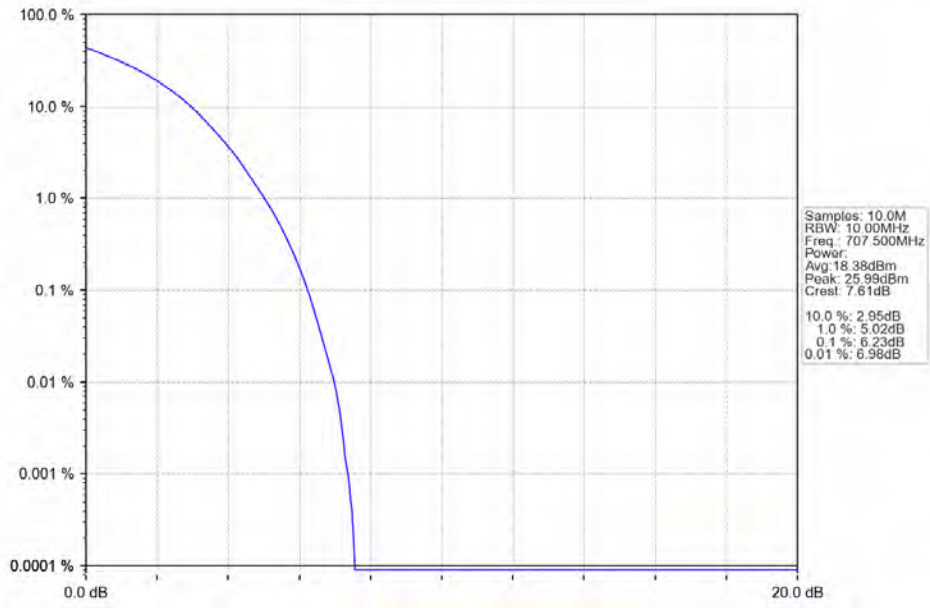
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



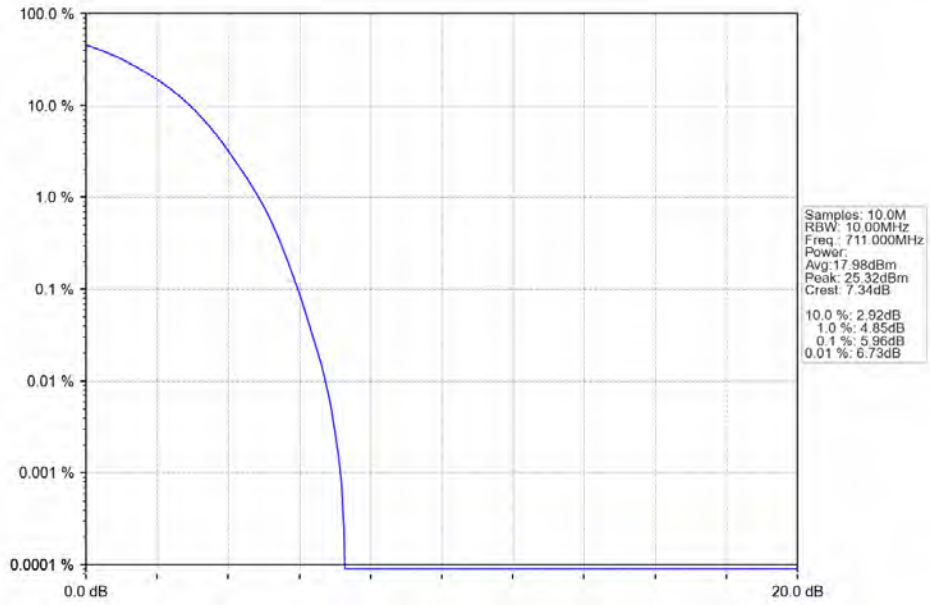
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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



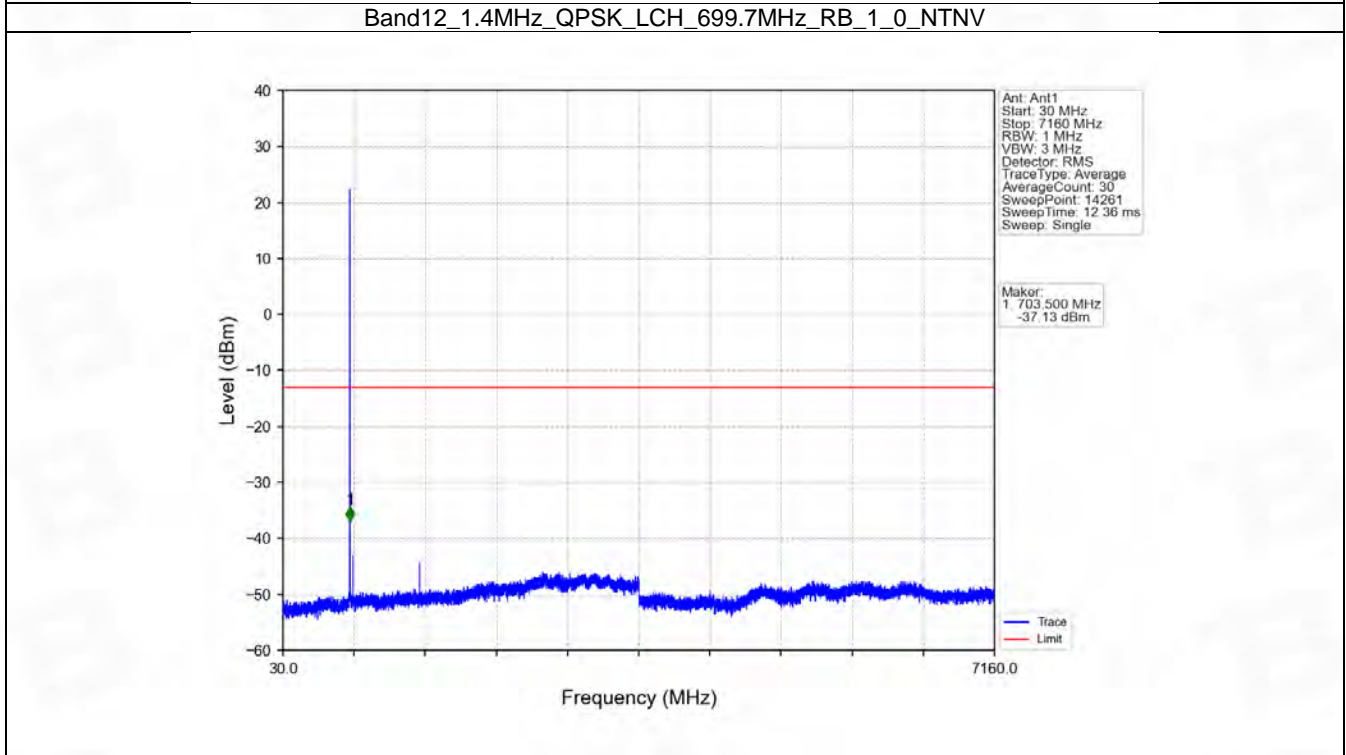
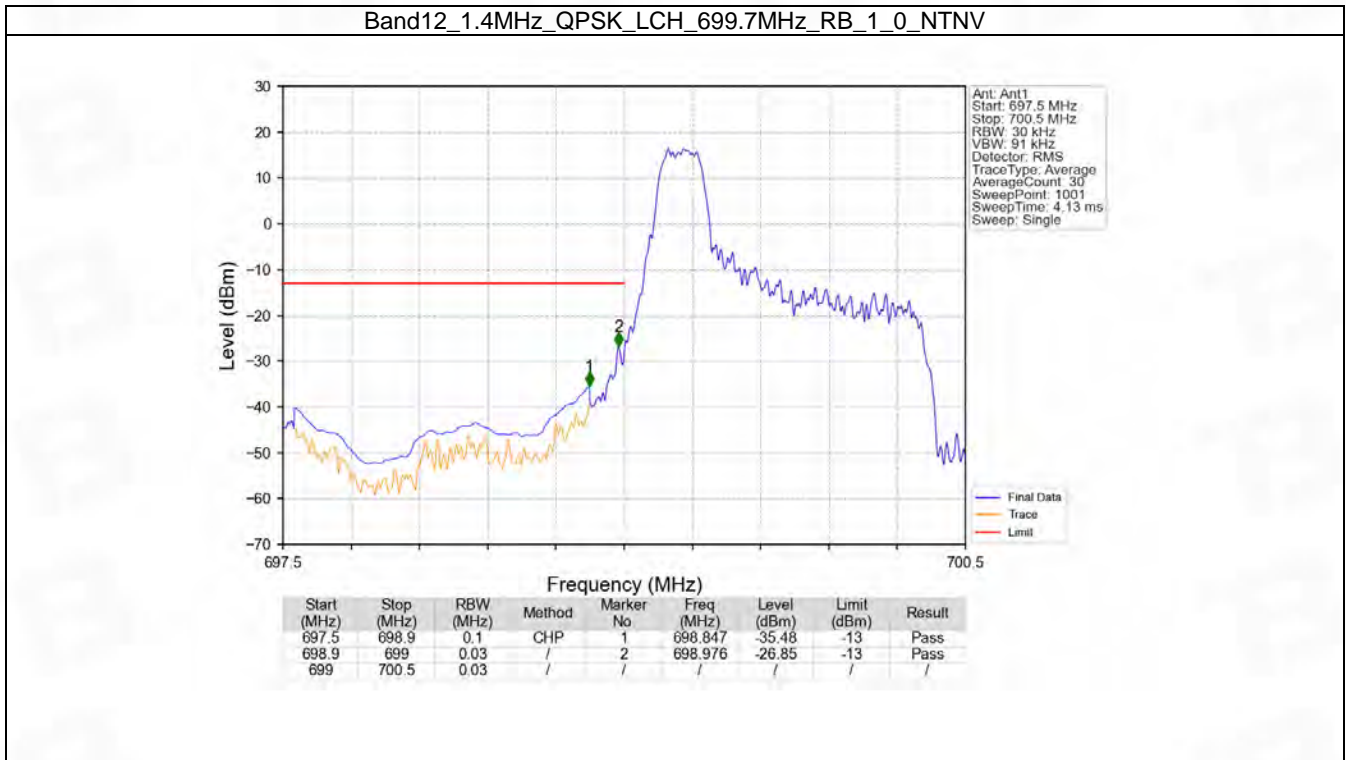
## 6. Spurious Emission

### 6.1 B12\_1.4MHz

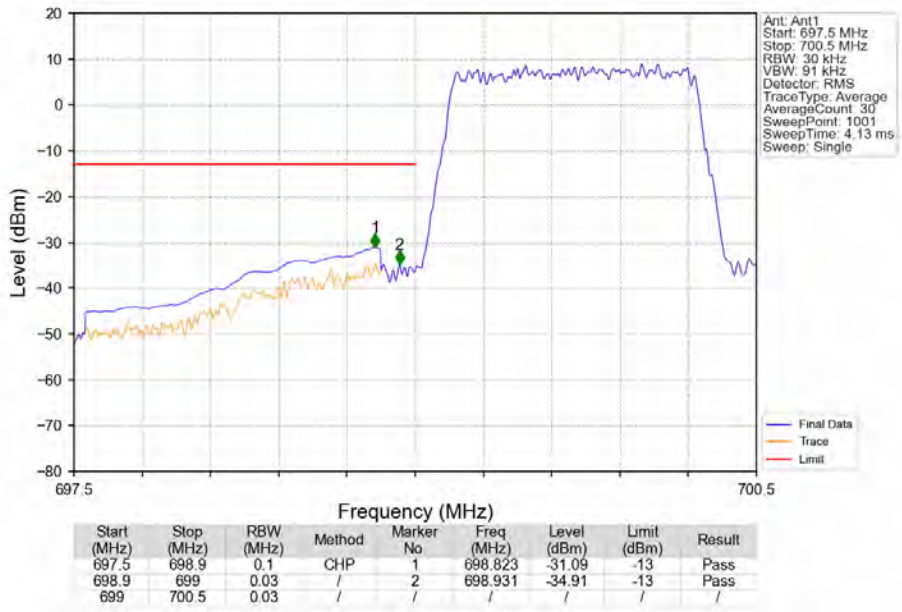
#### 6.1.1 Test Result

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	

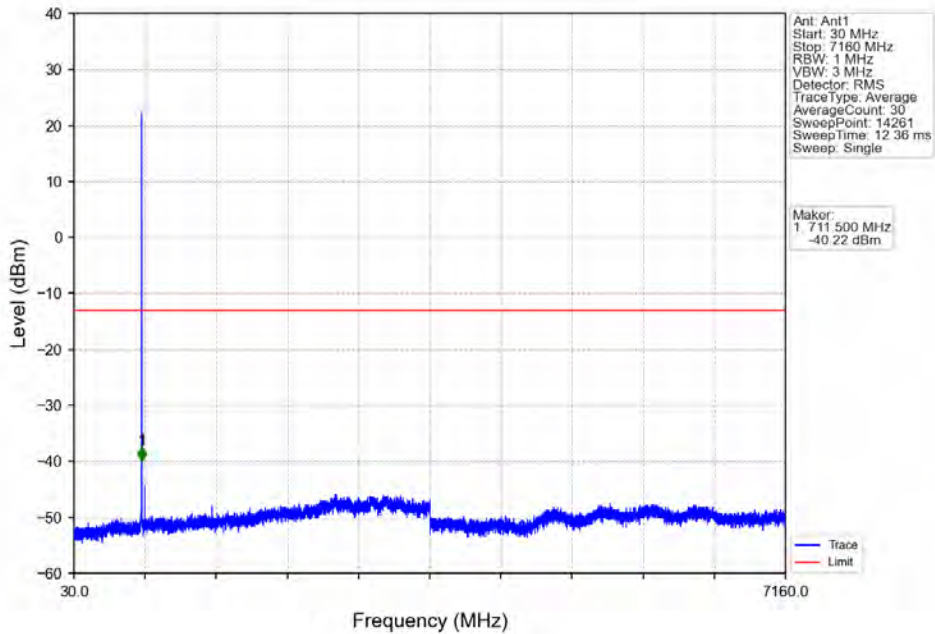
### 6.1.2 Test Graph



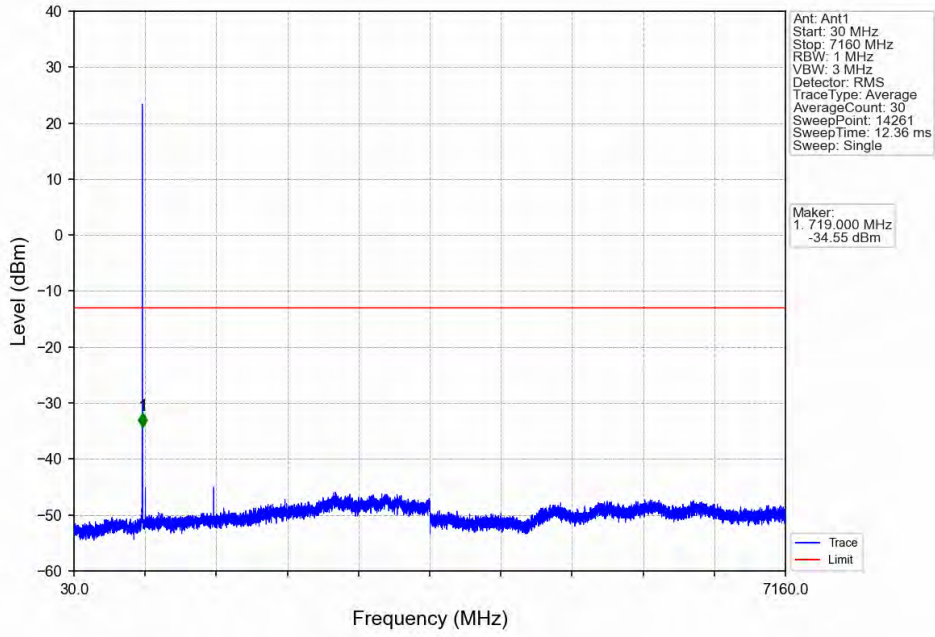
Band12\_1.4MHz\_QPSK\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



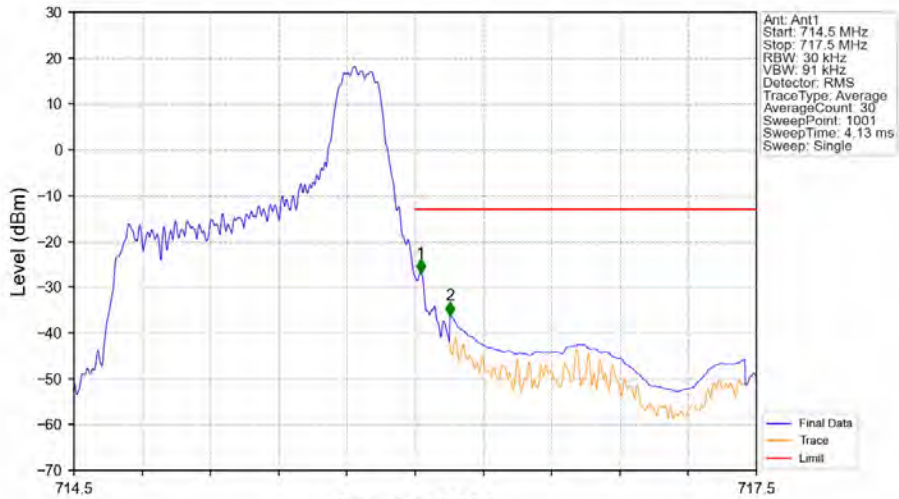
Band12\_1.4MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

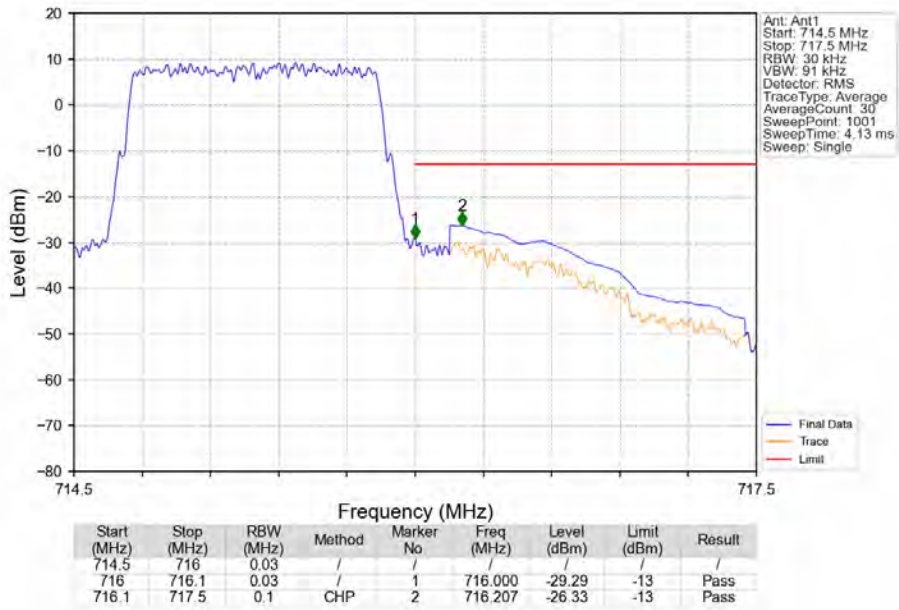


Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_1\_5\_NTNV

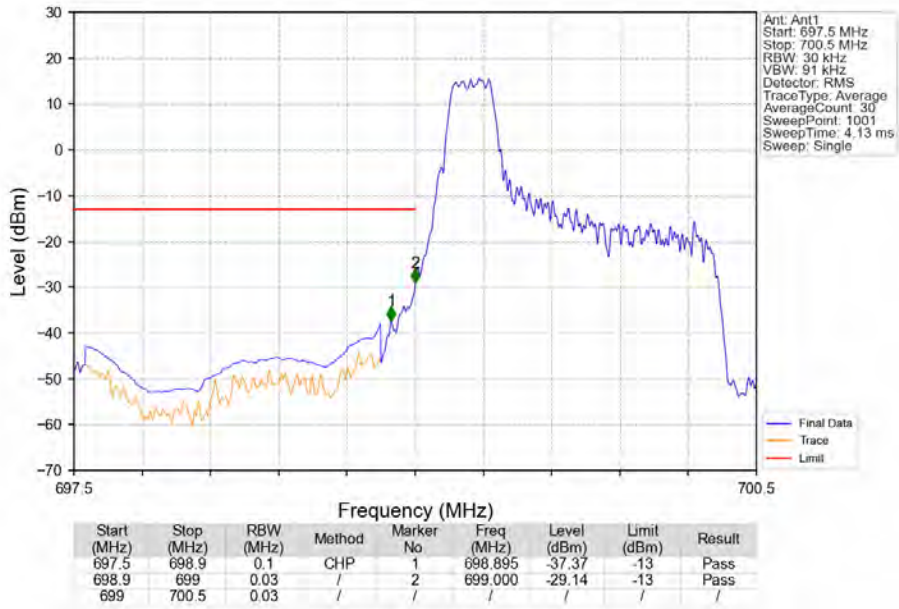


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.024	-26.92	-13	Pass
716	716.1	0.03	CHP	2	716.153	-36.23	-13	Pass

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

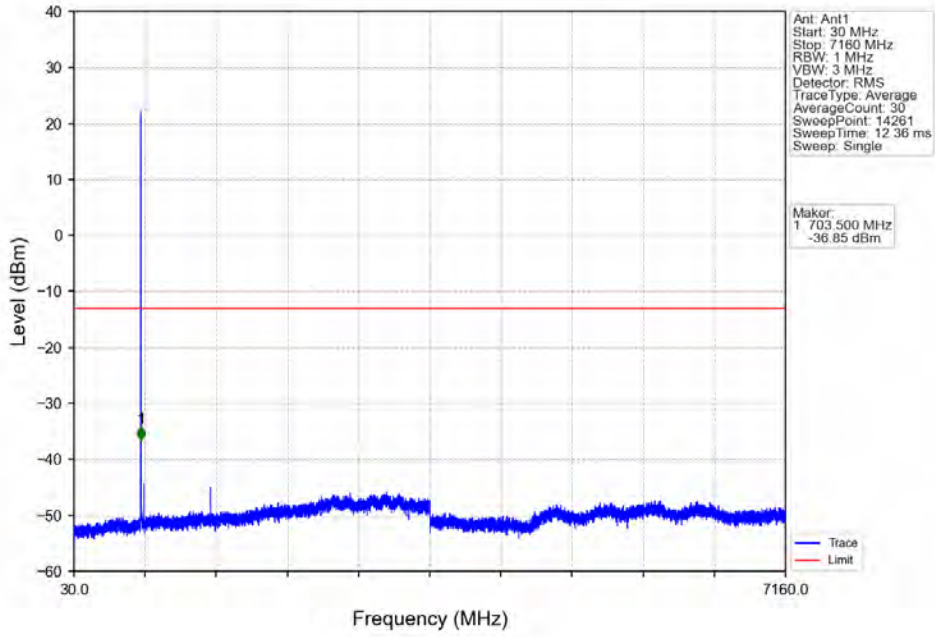


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTV

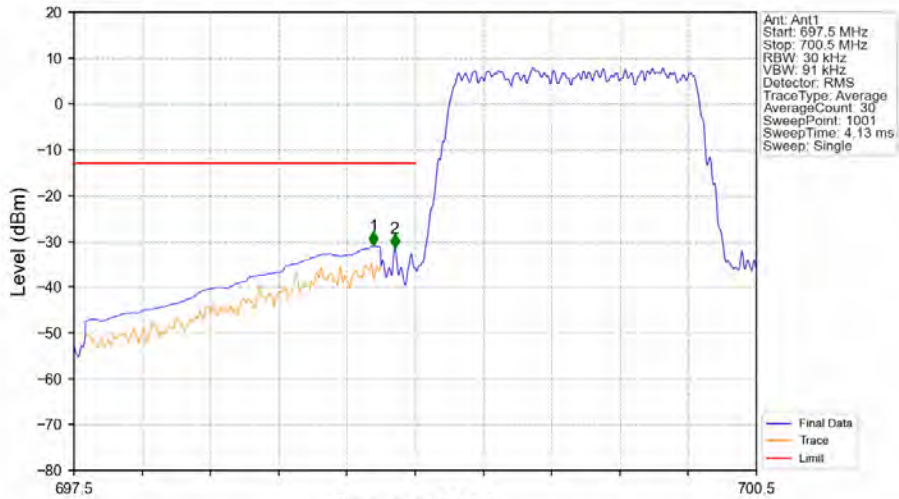




Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV

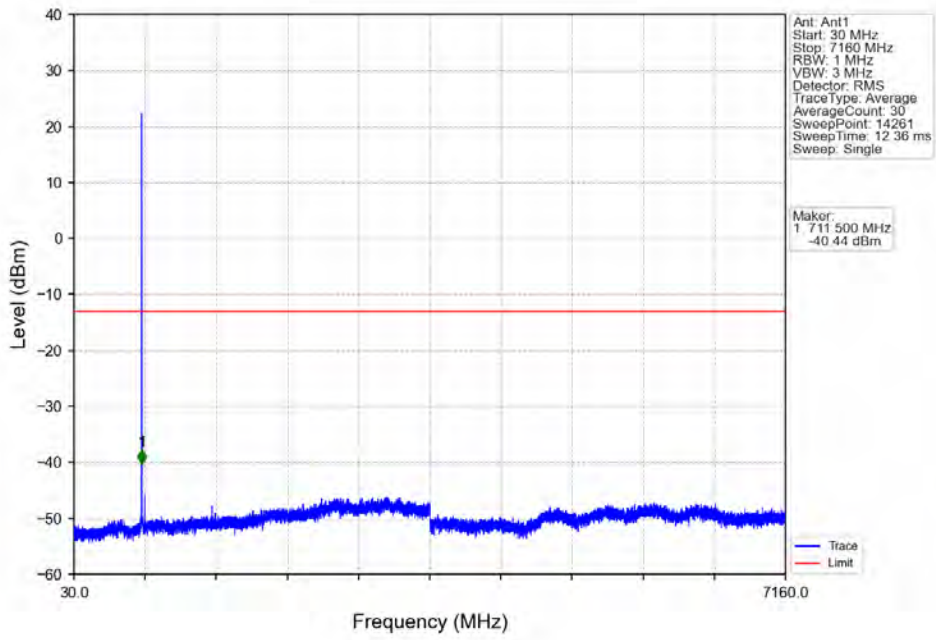


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV

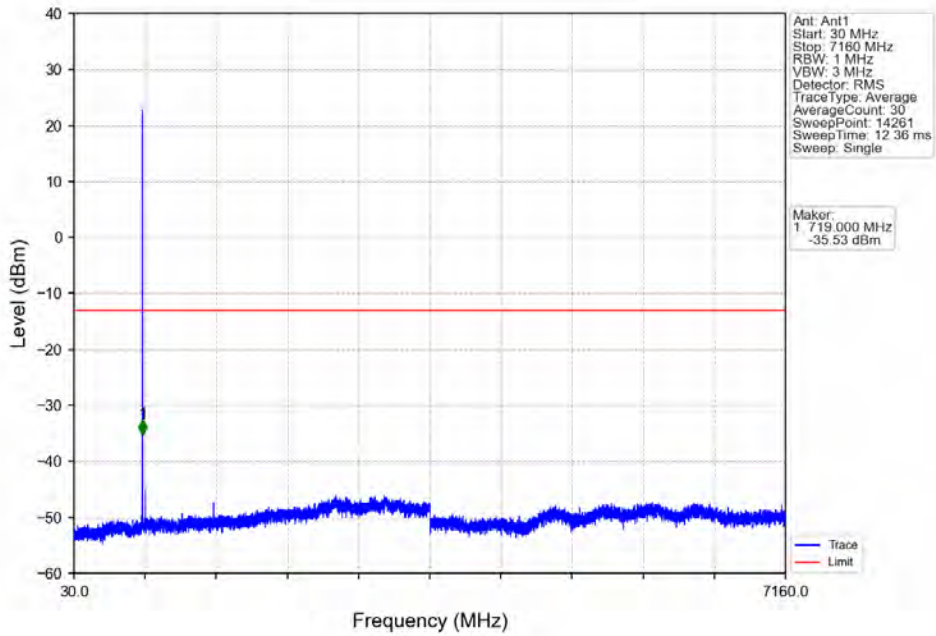


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.817	-31.04	-13	Pass
698.9	699	0.03	/	2	698.910	-31.55	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

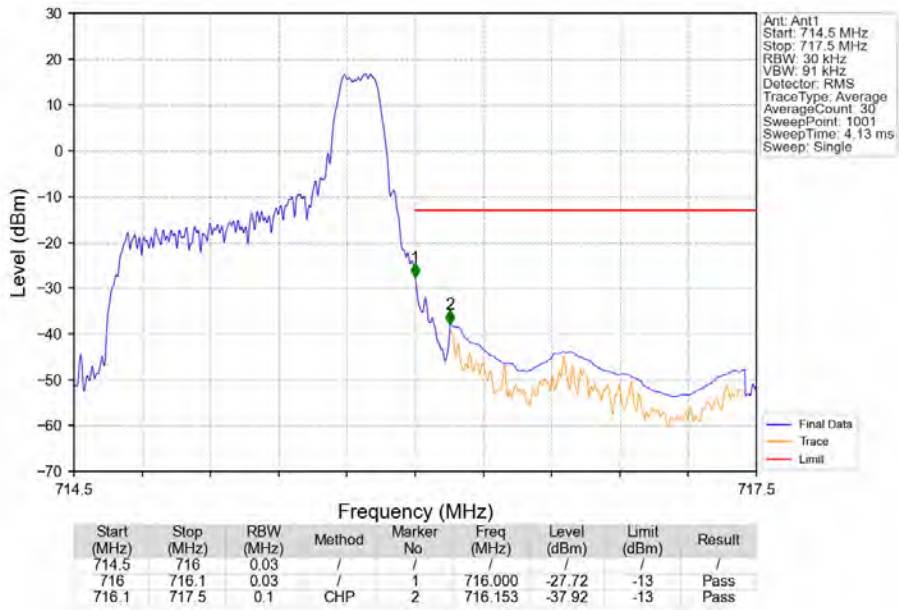
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



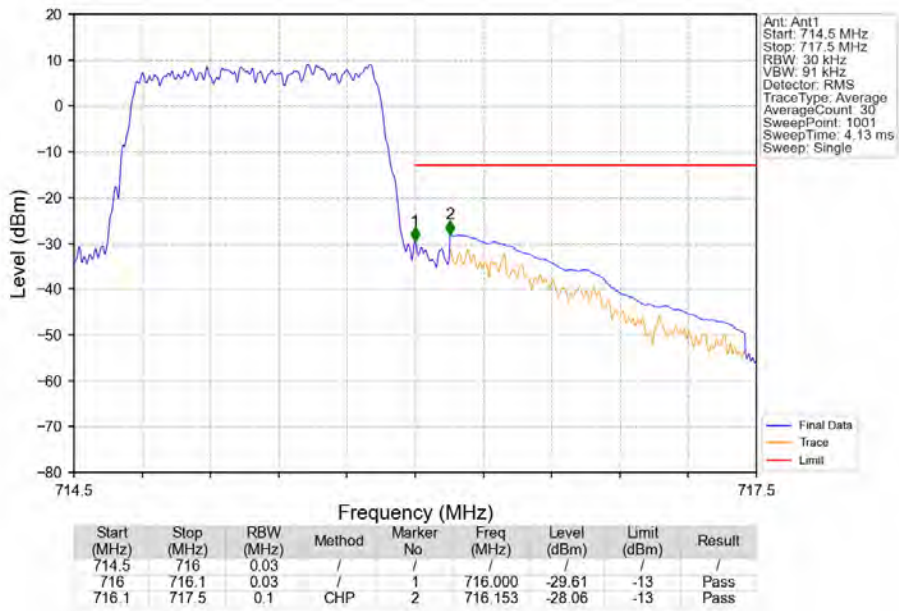
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_1\_0\_NTNV



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



Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV

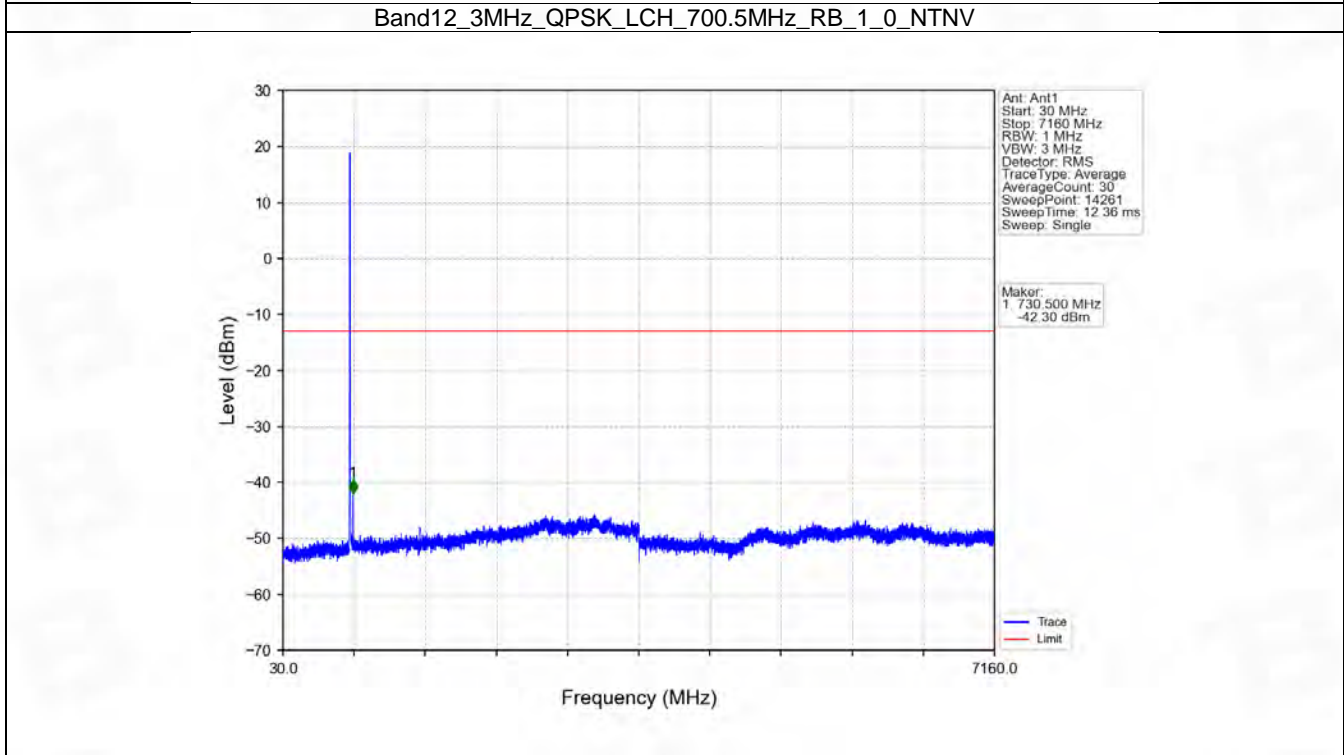
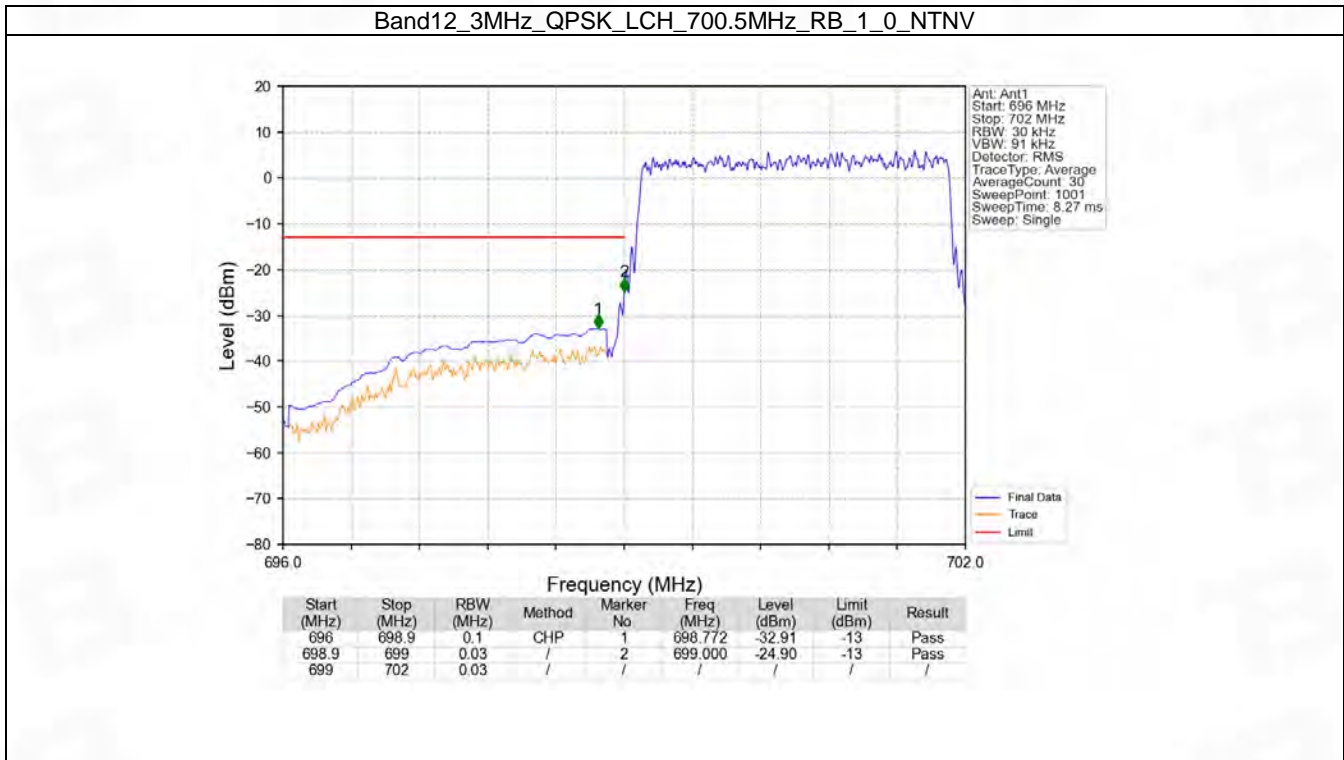


## 6.2 B12\_3MHz

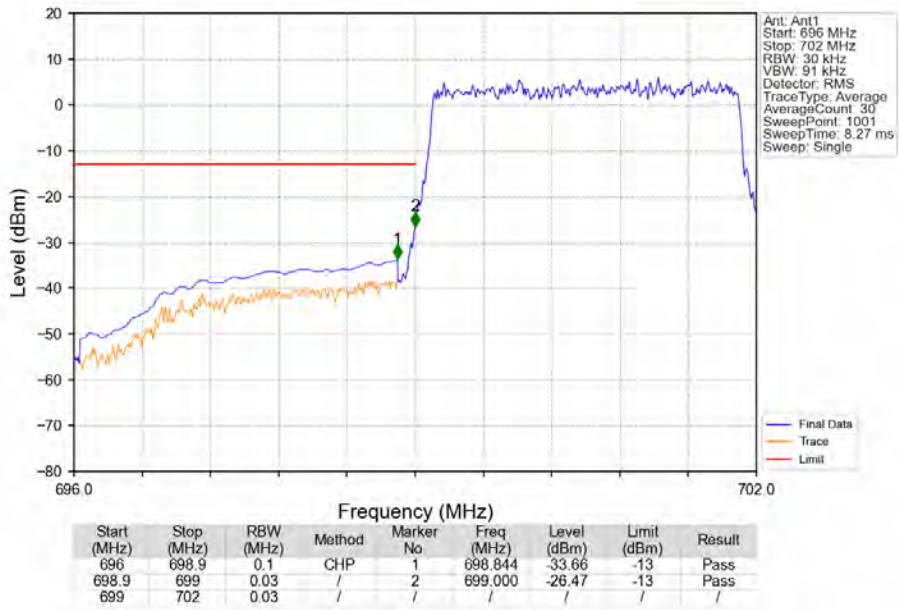
### 6.2.1 Test Result

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

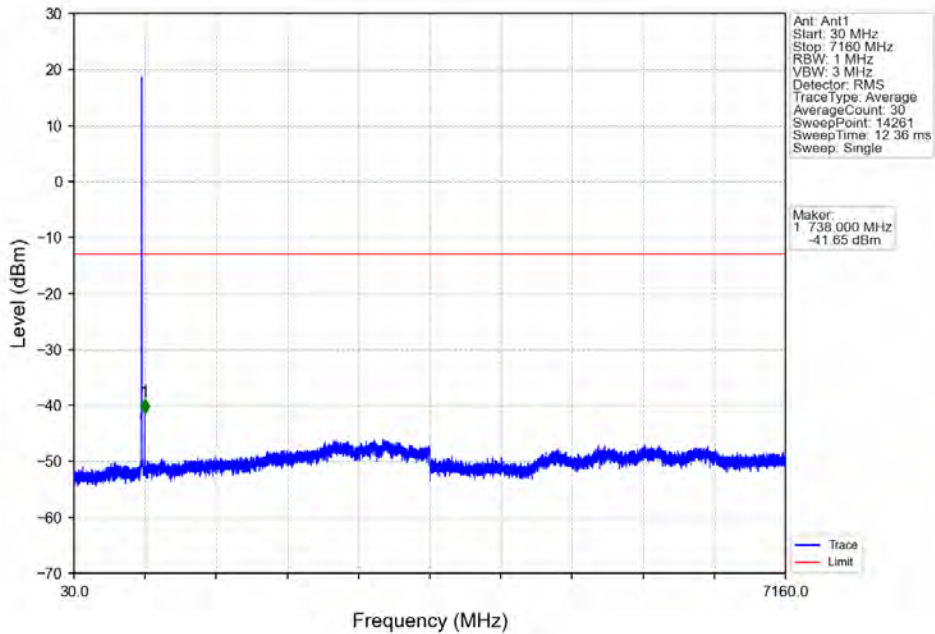
### 6.2.2 Test Graph



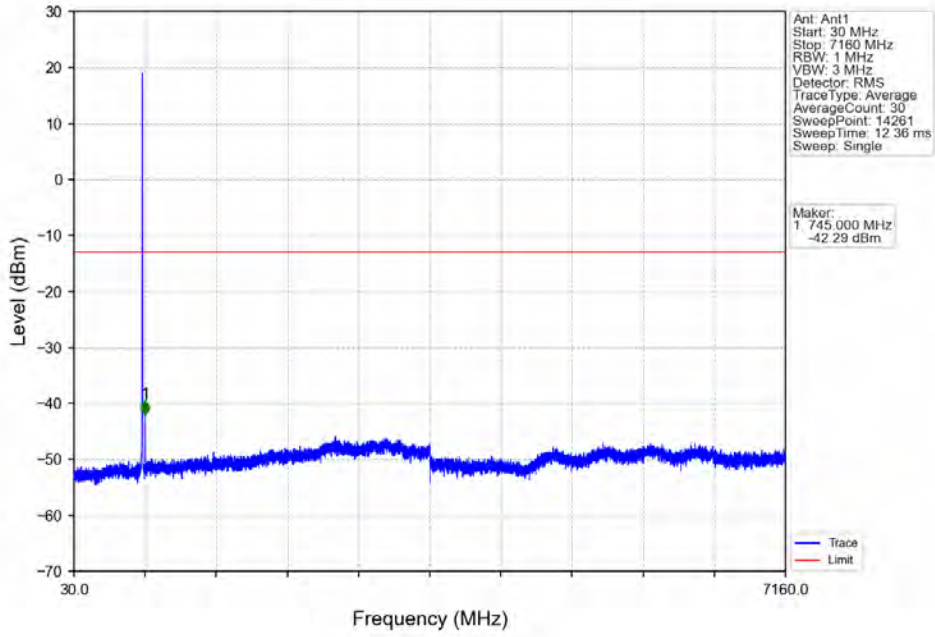
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



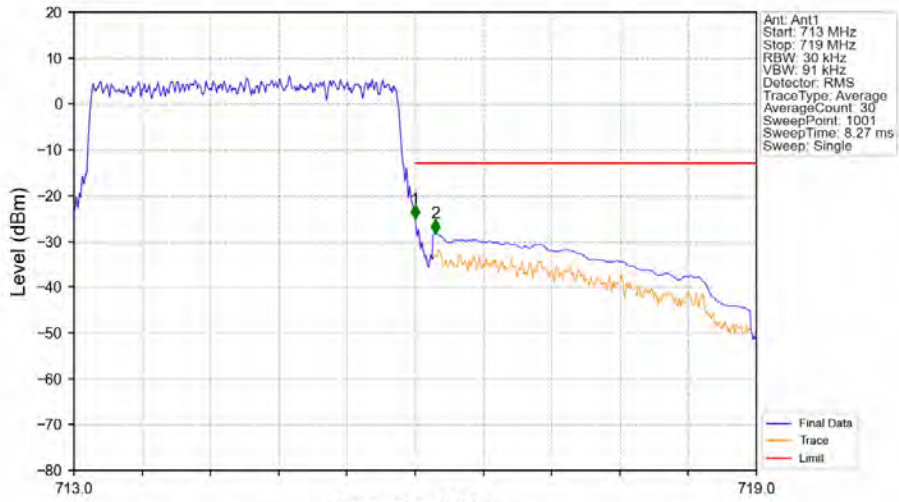
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

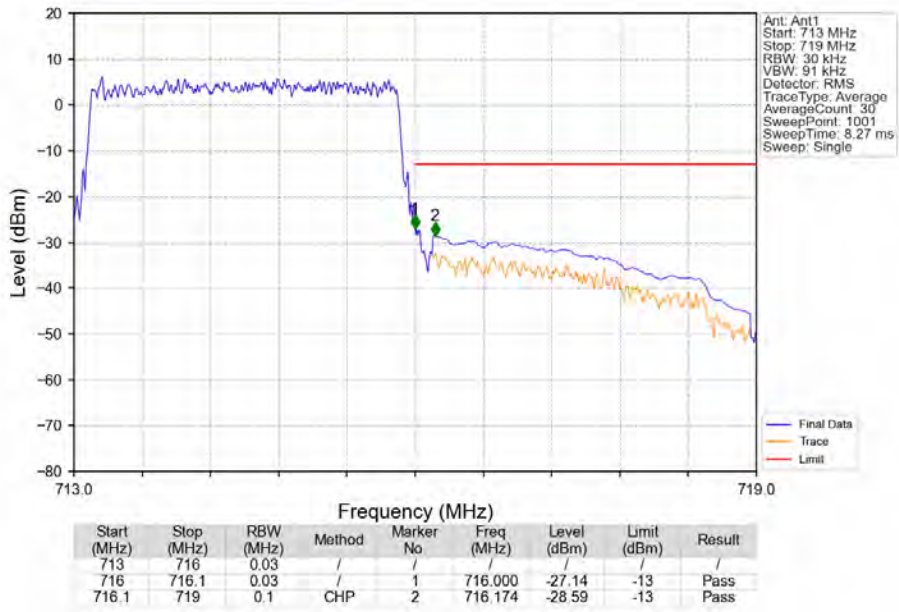


Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_1\_14\_NTNV

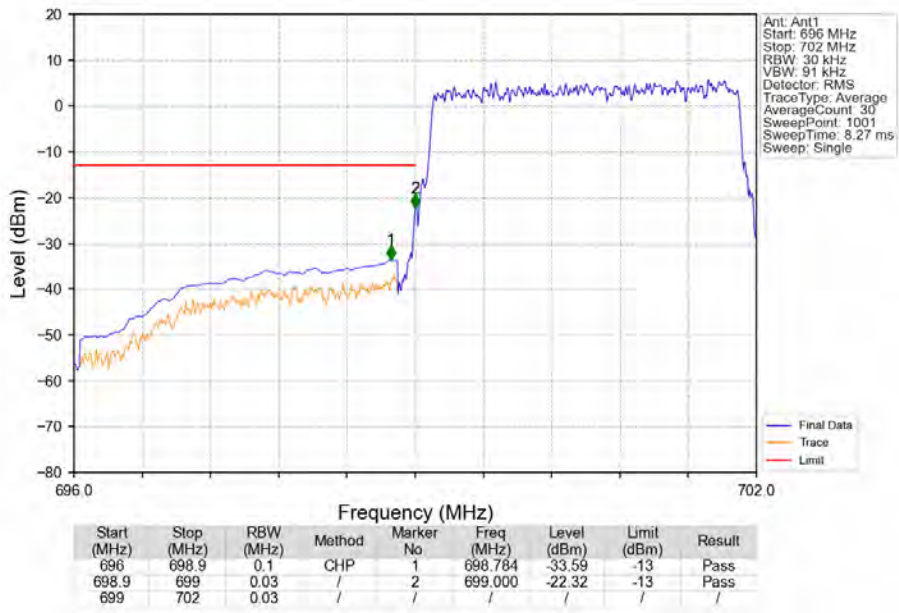


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.000	-25.15	-13	Pass
716.1	719	0.1	CHP	2	716.180	-28.23	-13	Pass

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

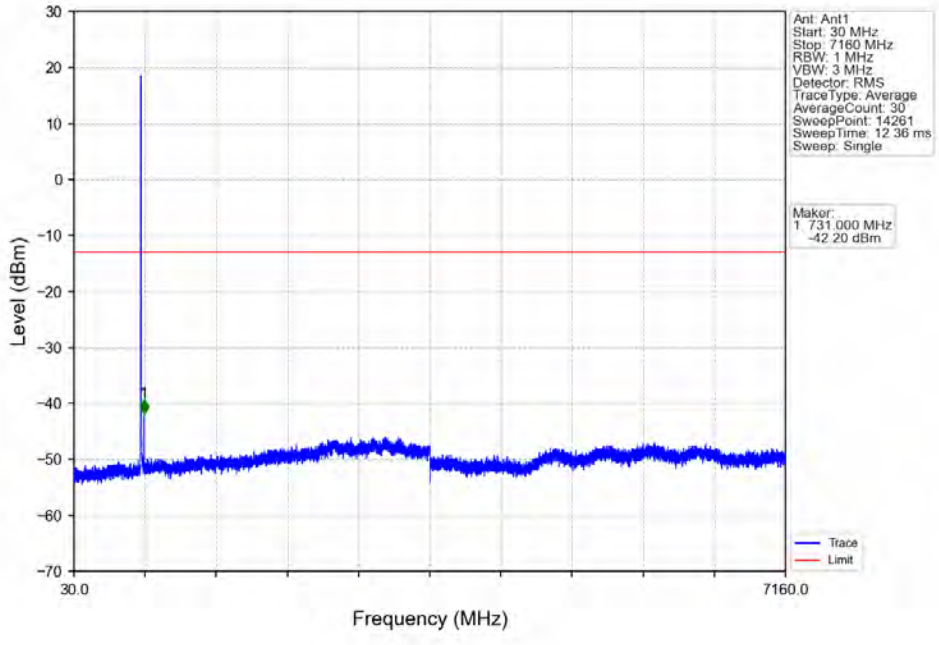


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

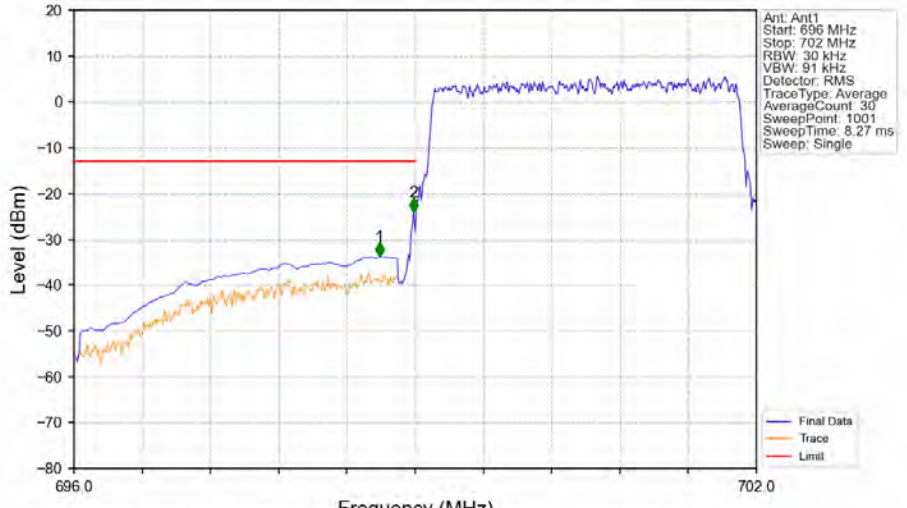




Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

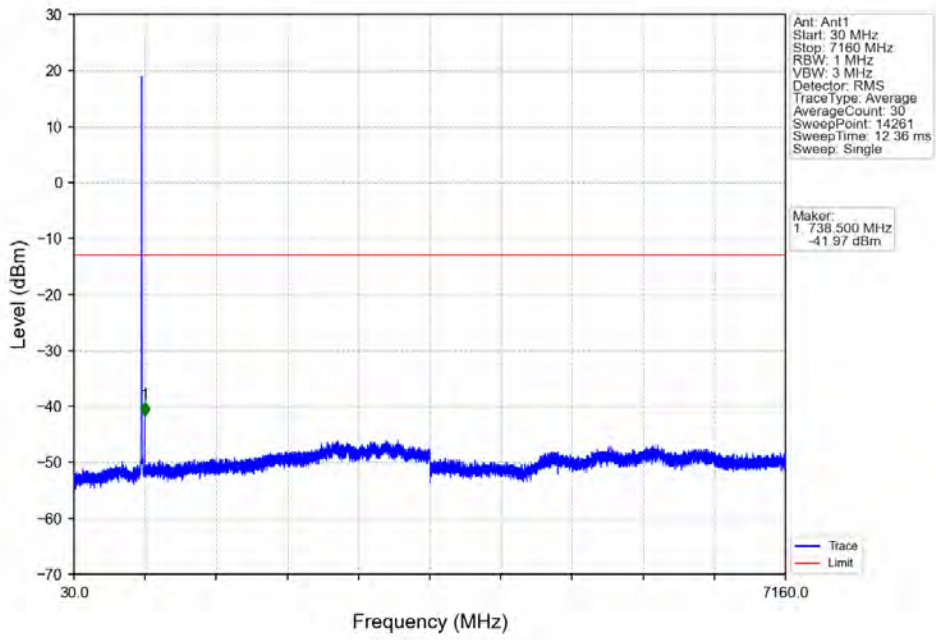


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV

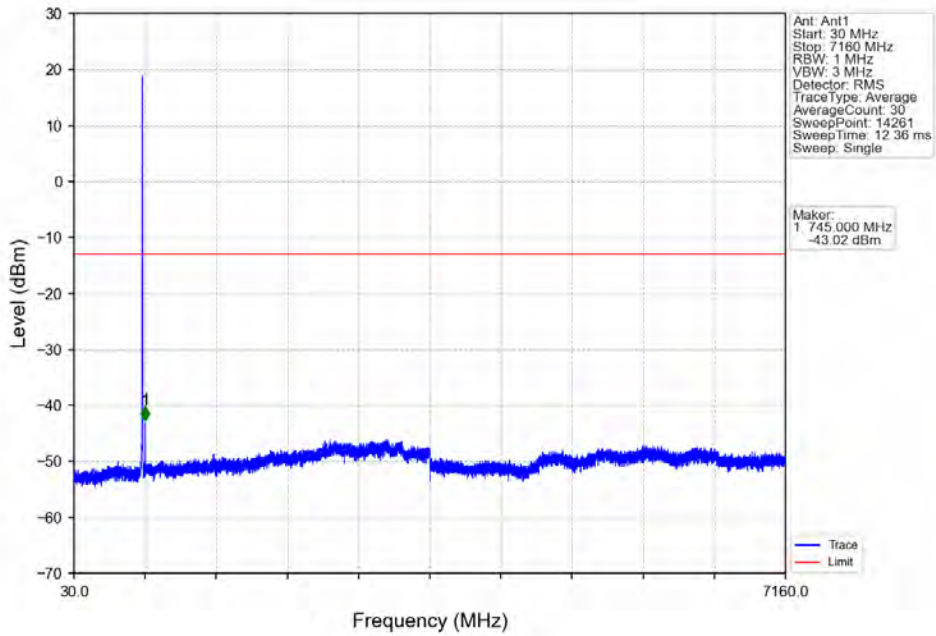


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.688	-33.85	-13	Pass
698.9	699	0.03	/	2	698.988	-24.08	-13	Pass
699	702	0.03	/	/	/	/	/	/

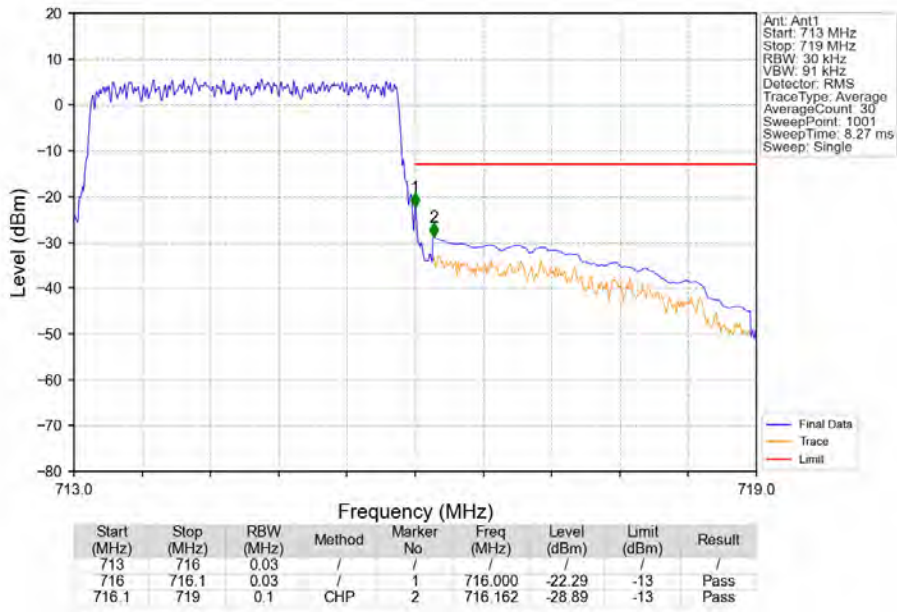
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



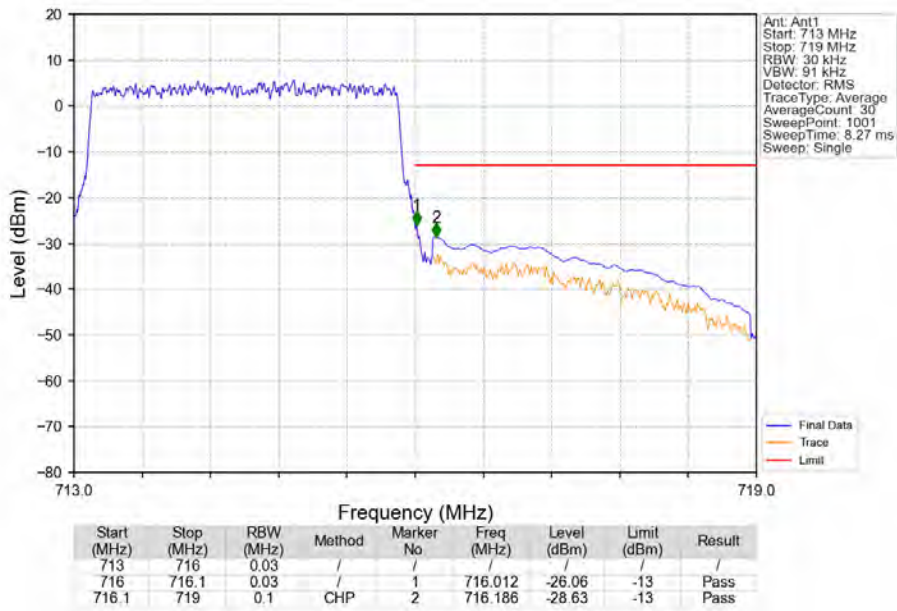
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_1\_0\_NTNV



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



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

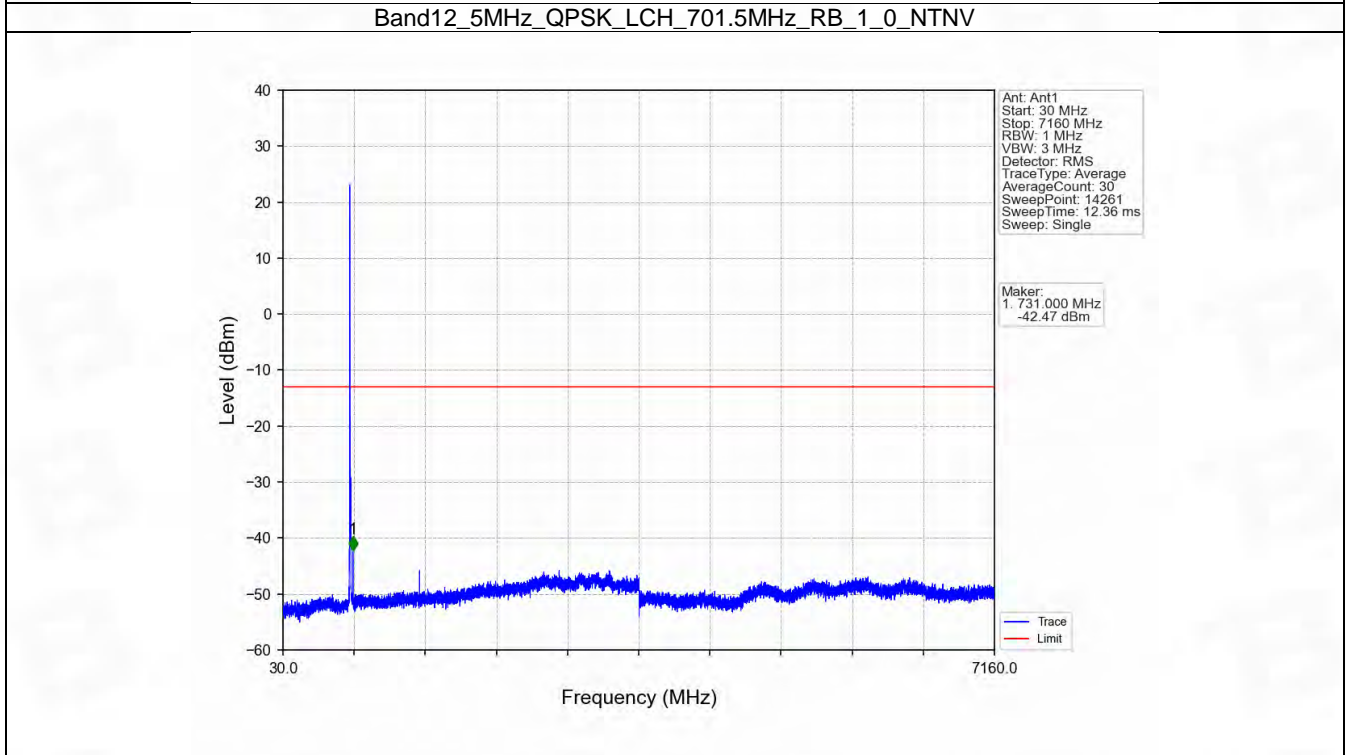
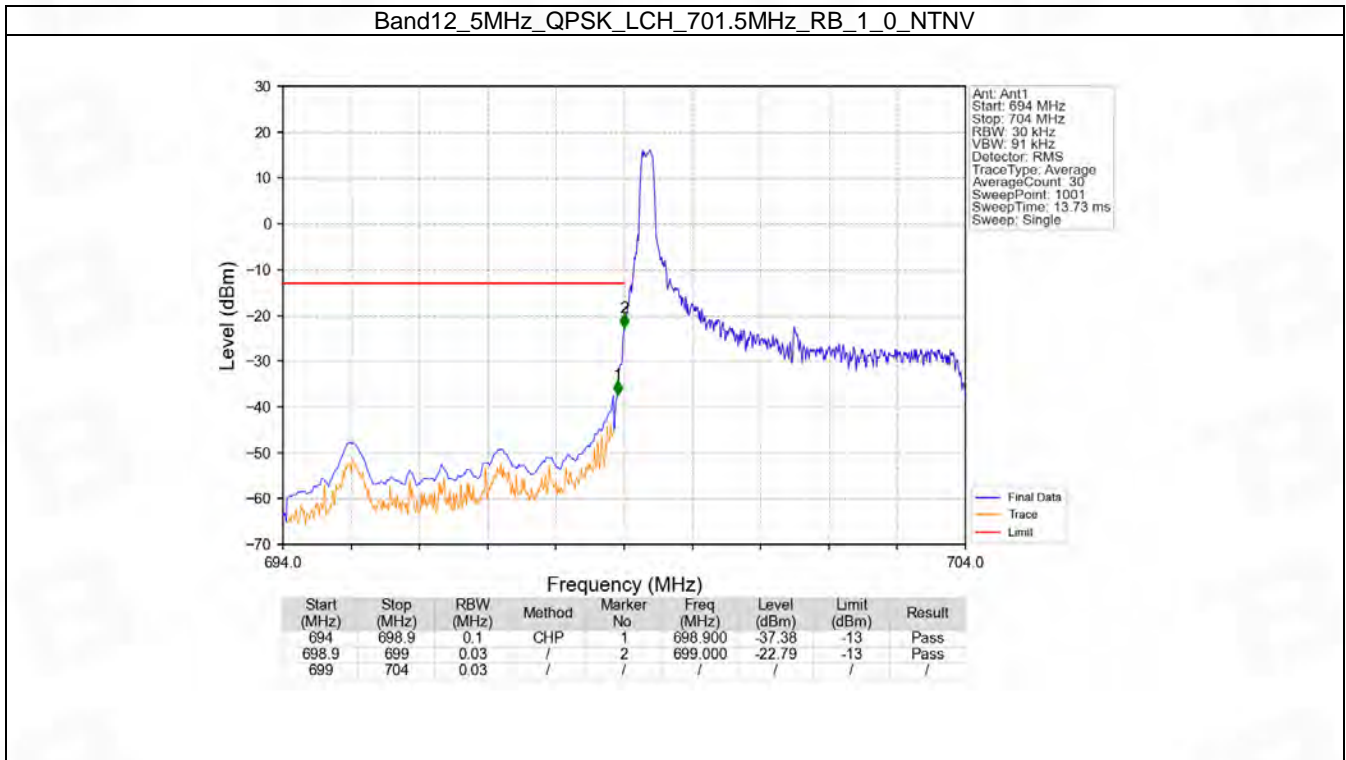


## 6.3 B12\_5MHz

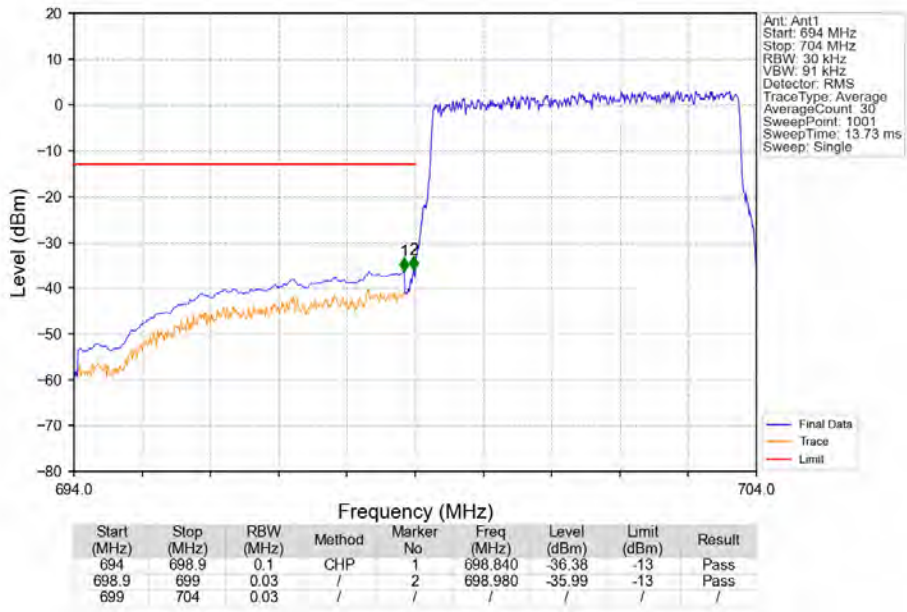
### 6.3.1 Test Result

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

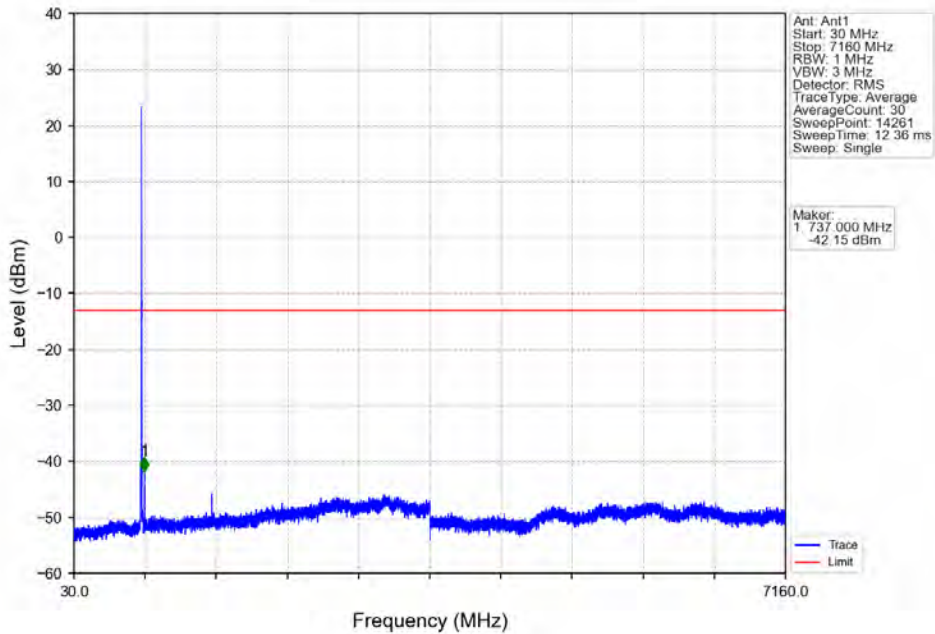
### 6.3.2 Test Graph



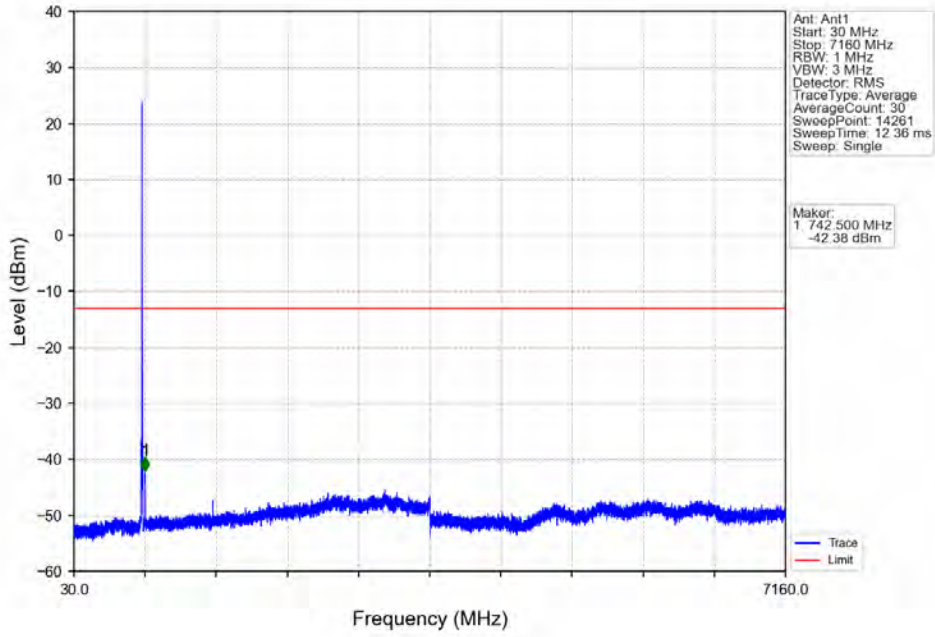
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



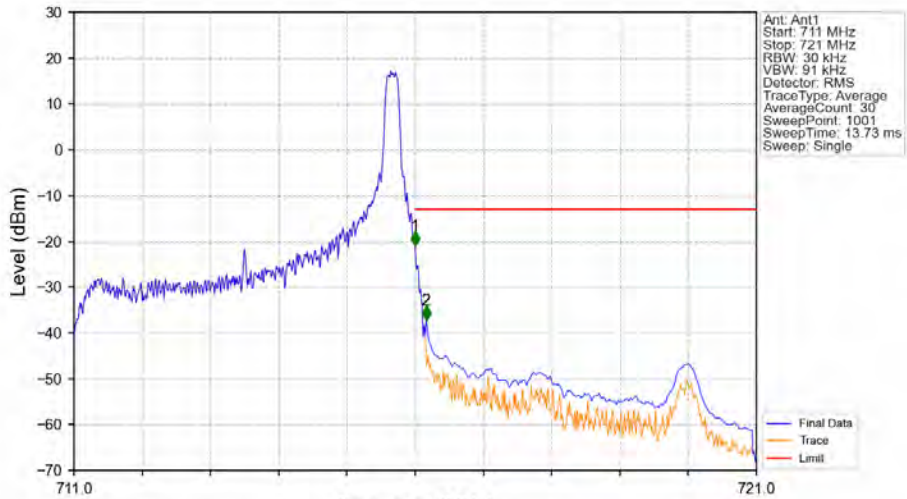
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

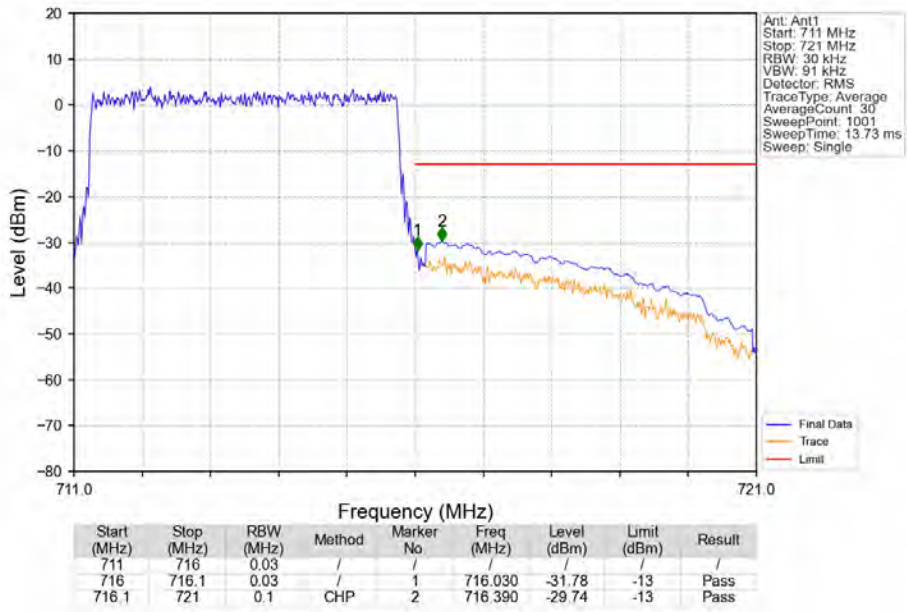


Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_24\_NTNV

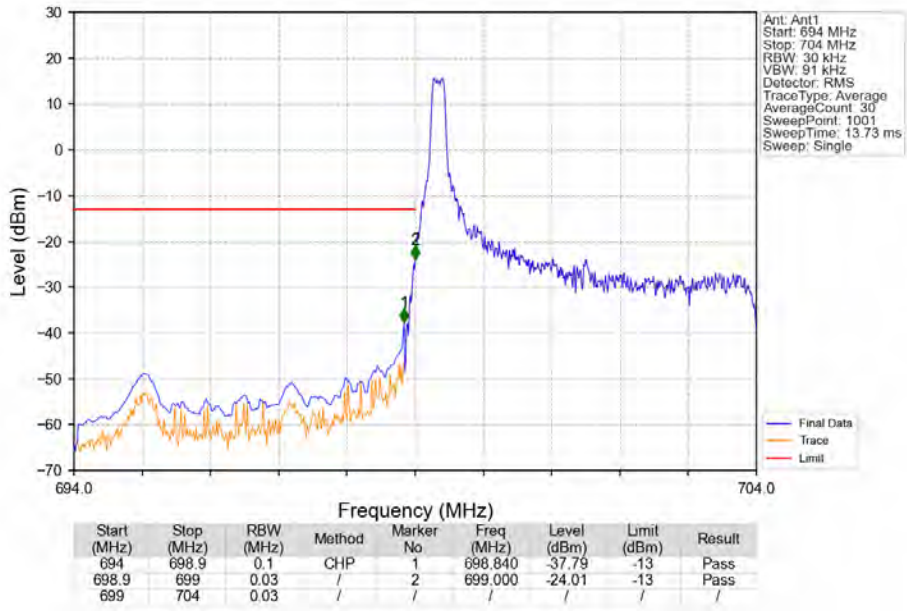


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	1	716.000	-20.99	-13	Pass
716.1	721	0.1	CHP	2	716.160	-37.21	-13	Pass

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

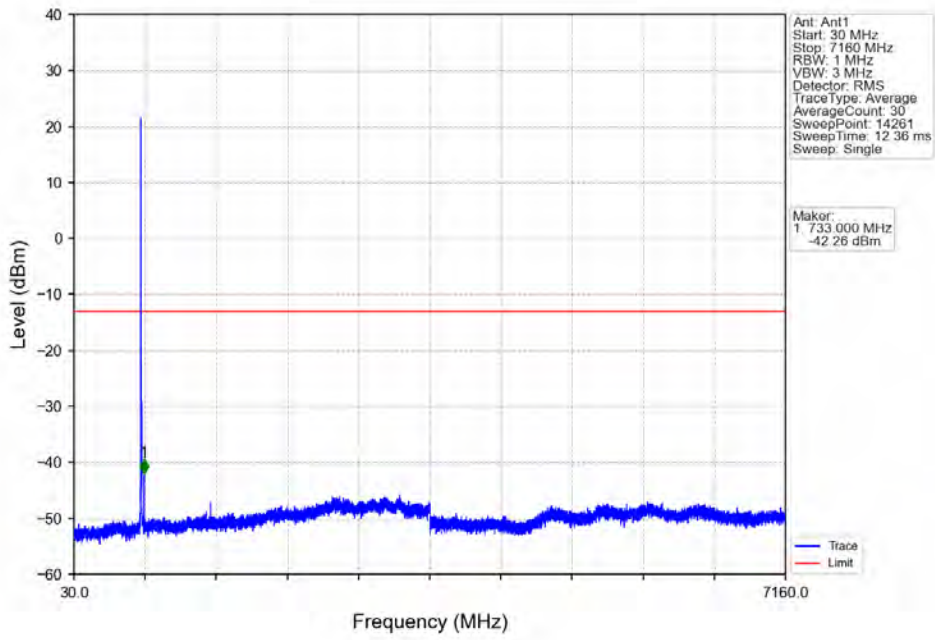


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

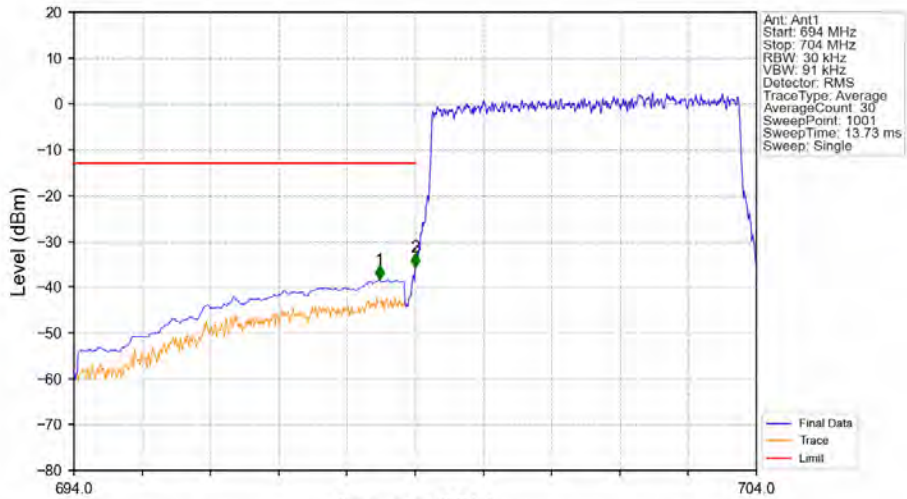




Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

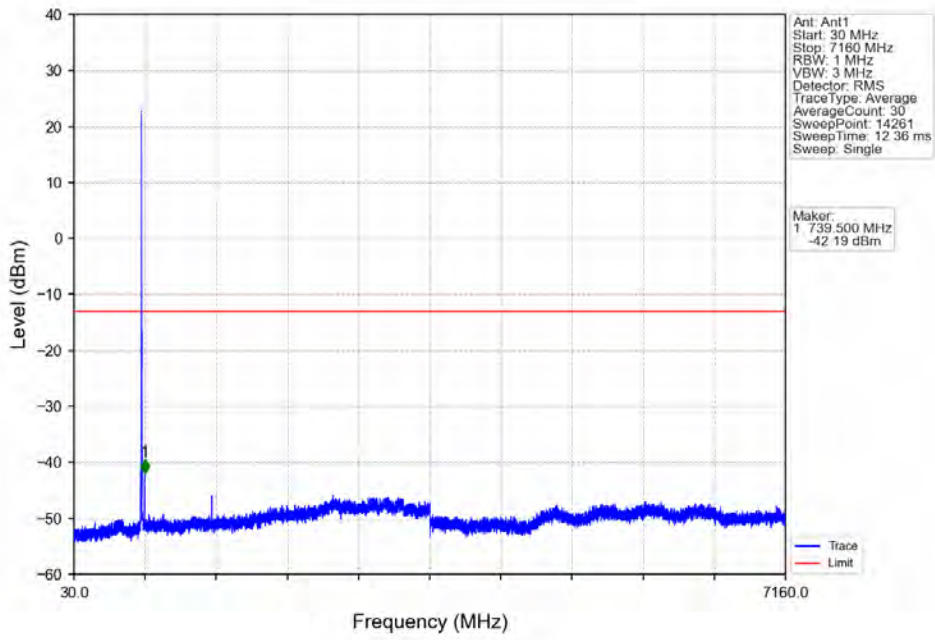


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV

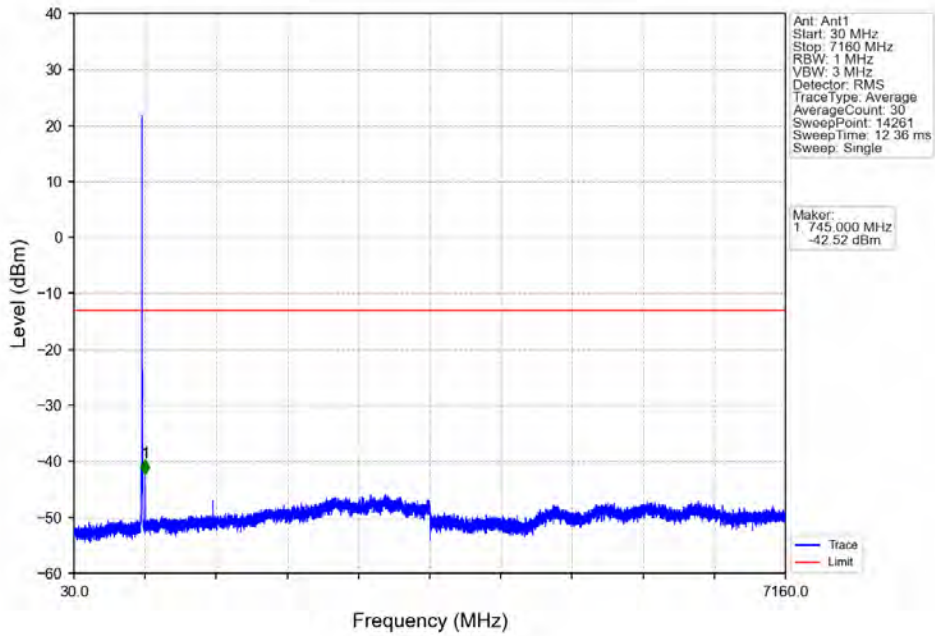


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.480	-38.41	-13	Pass
698.9	699	0.03	/	2	699.000	-35.67	-13	Pass
699	704	0.03	/	/	/	/	/	/

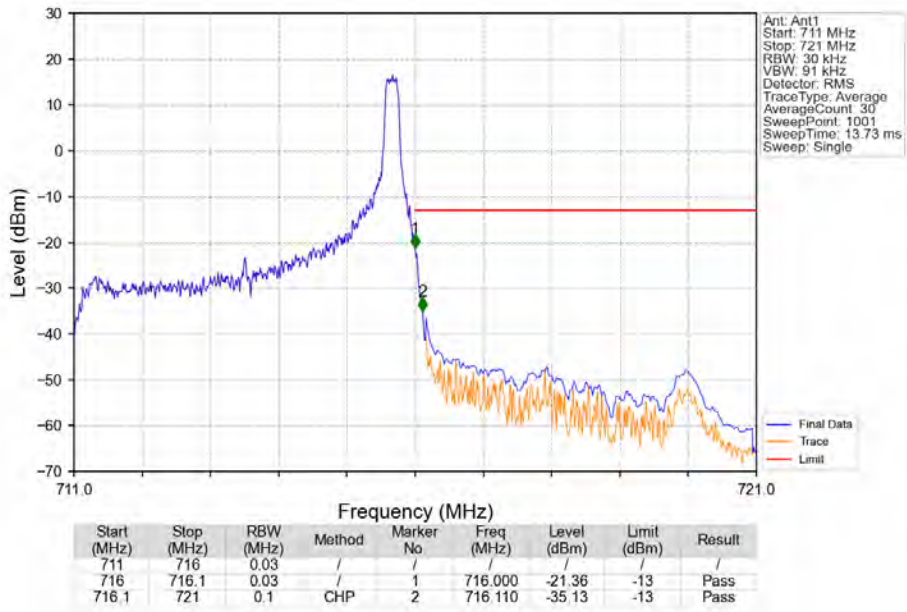
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



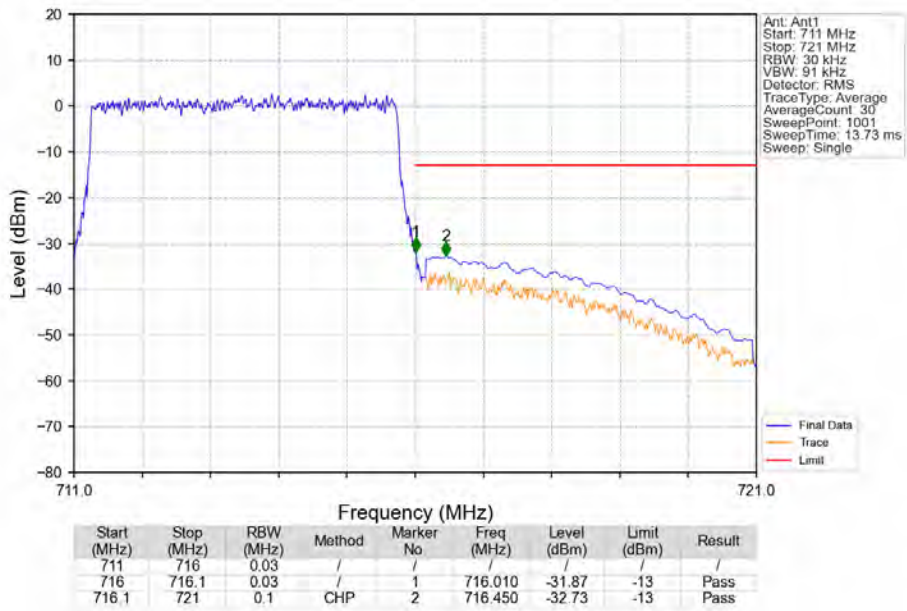
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_1\_0\_NTNV



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



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

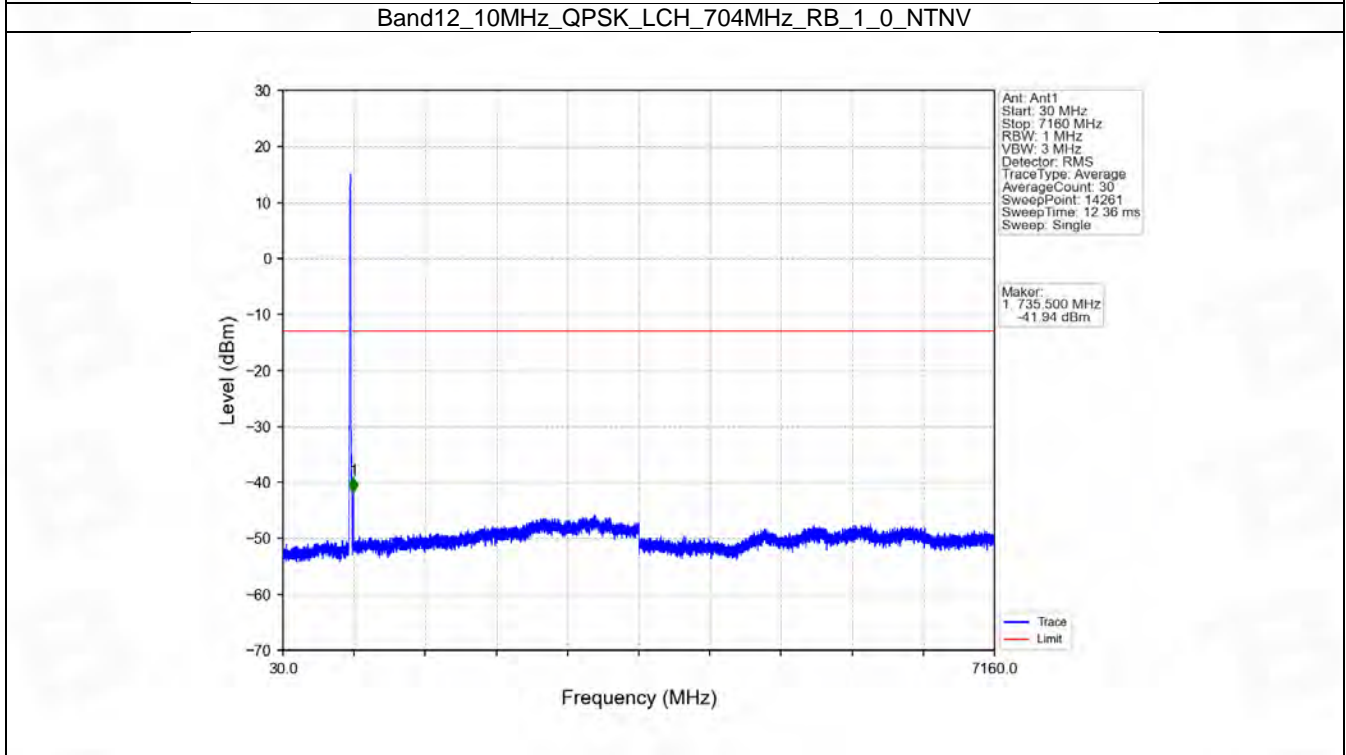
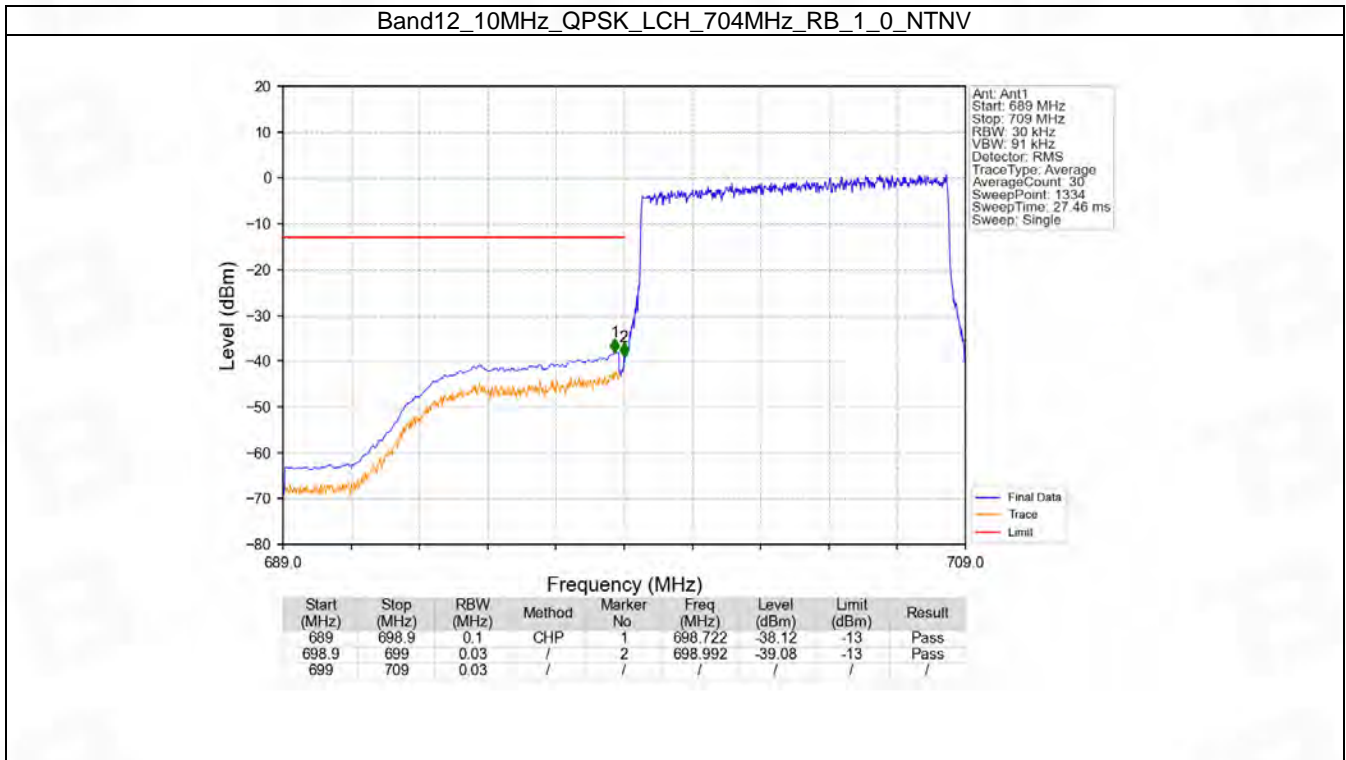


## 6.4 B12\_10MHz

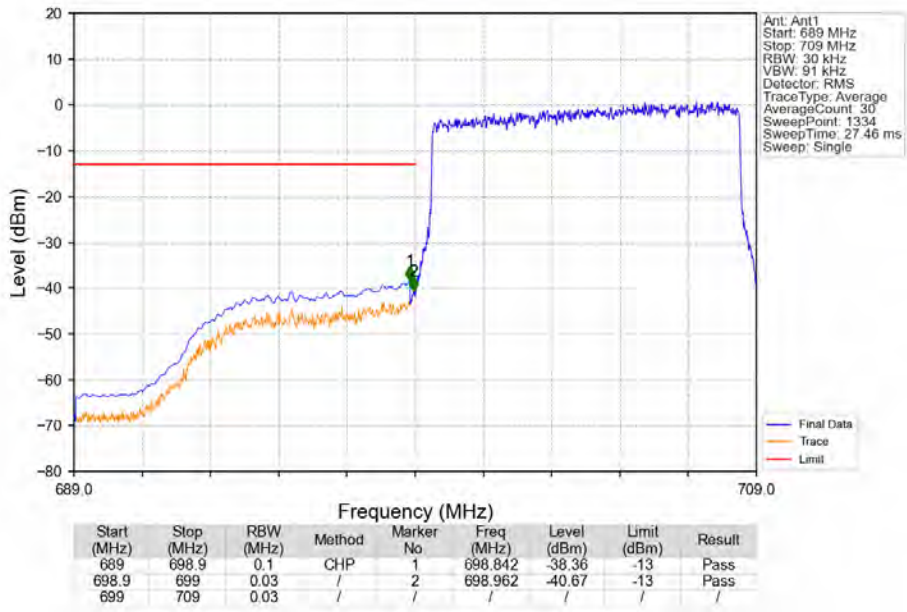
### 6.4.1 Test Result

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
		1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
		50	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
		1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

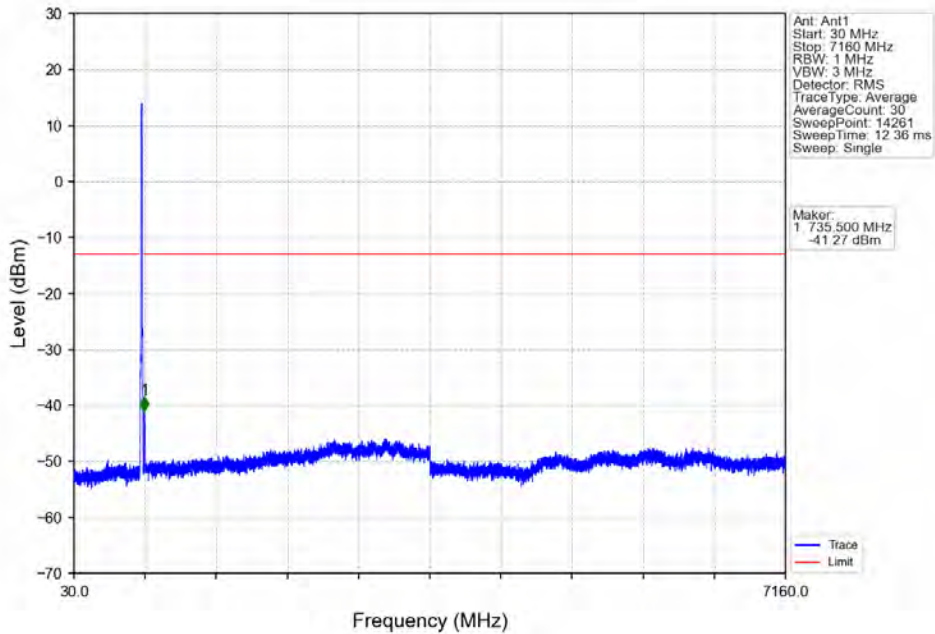
### 6.4.2 Test Graph



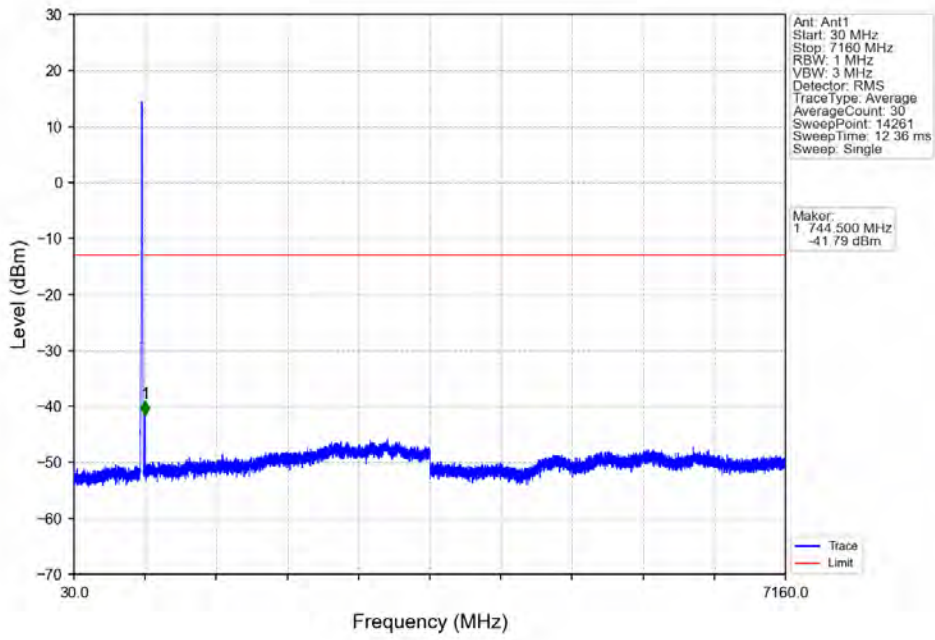
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



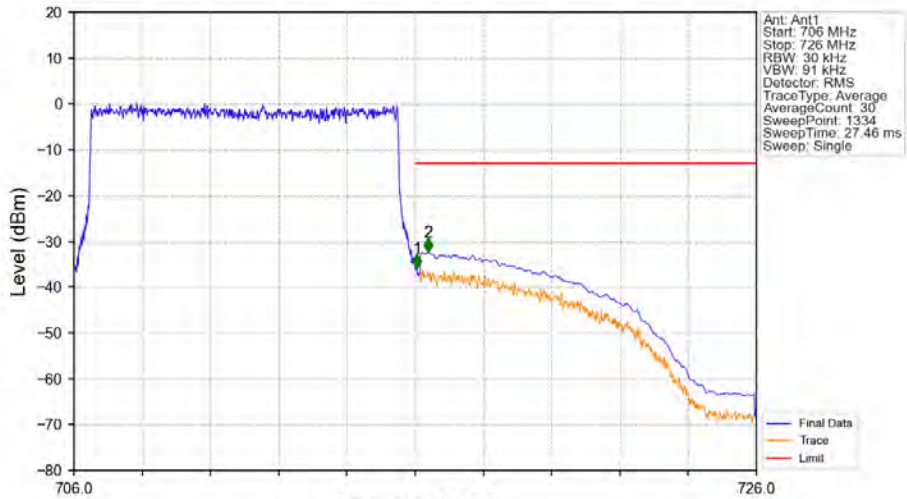
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

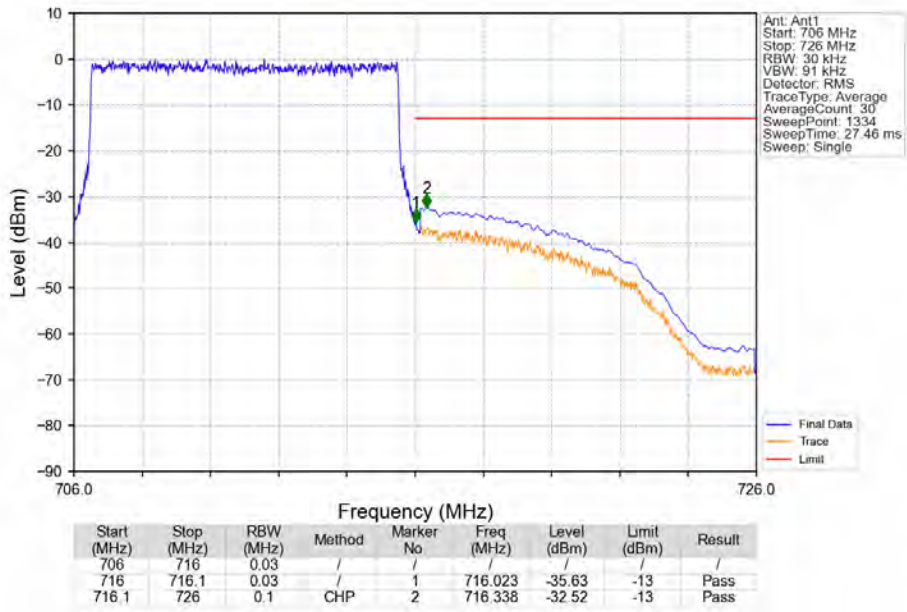


Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_49\_NTNV

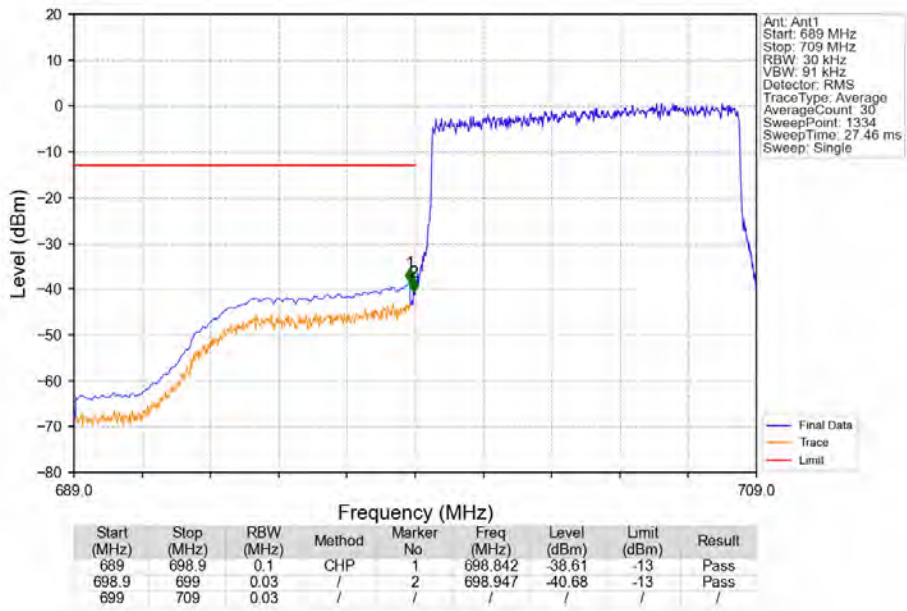


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	1	716.053	-35.97	-13	Pass
716	716.1	0.03	/	1	716.053	-35.97	-13	Pass
716.1	726	0.1	CHP	2	716.383	-32.39	-13	Pass

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

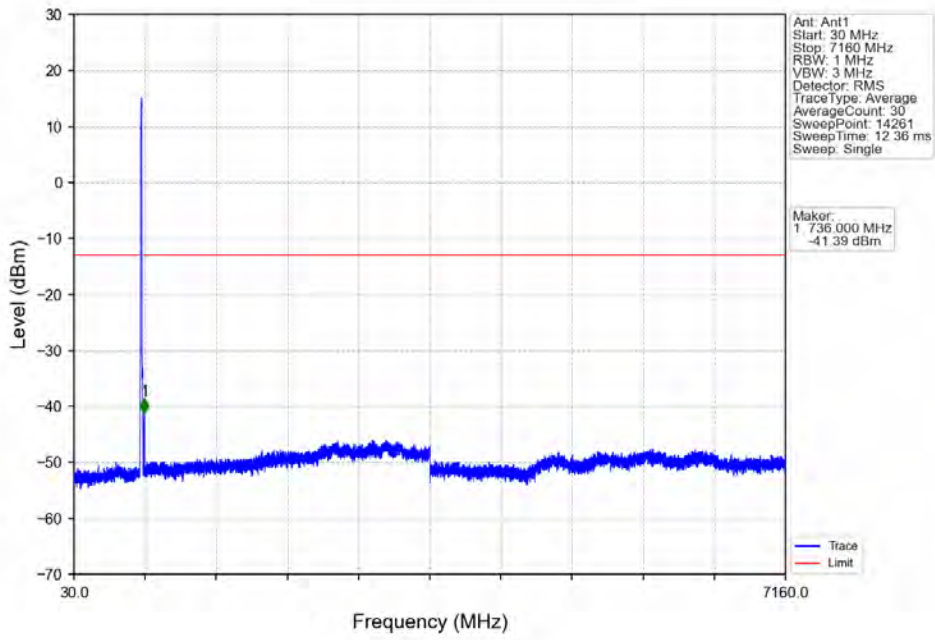


Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV

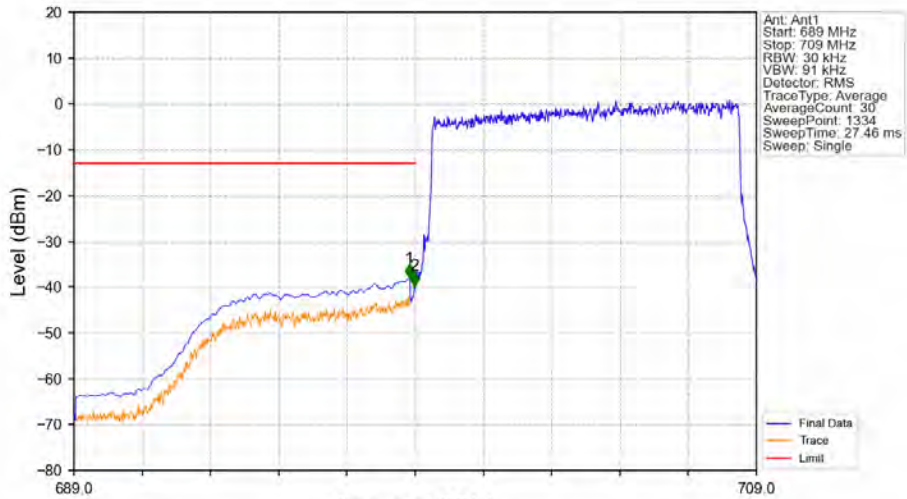




Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV

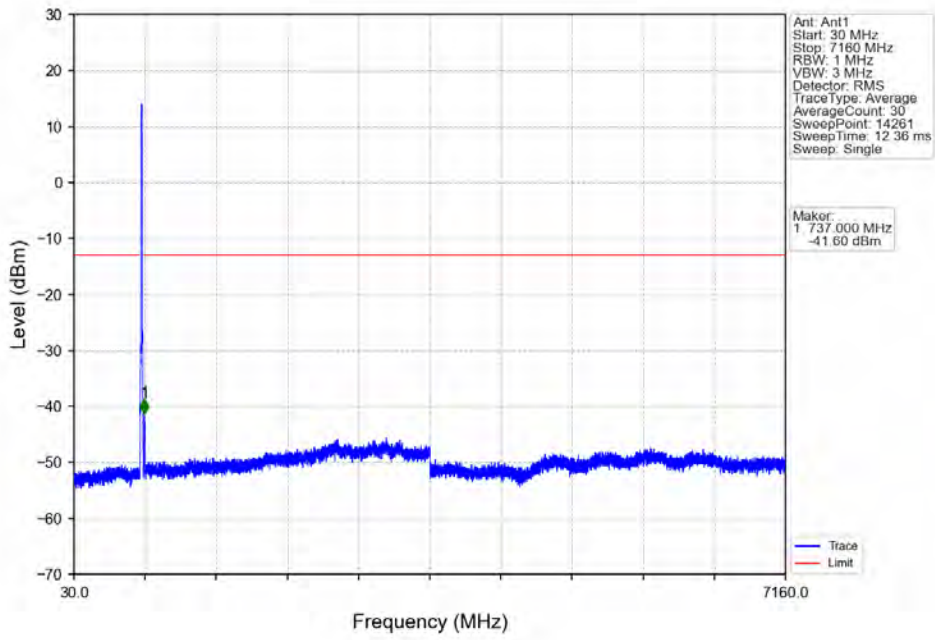


Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV

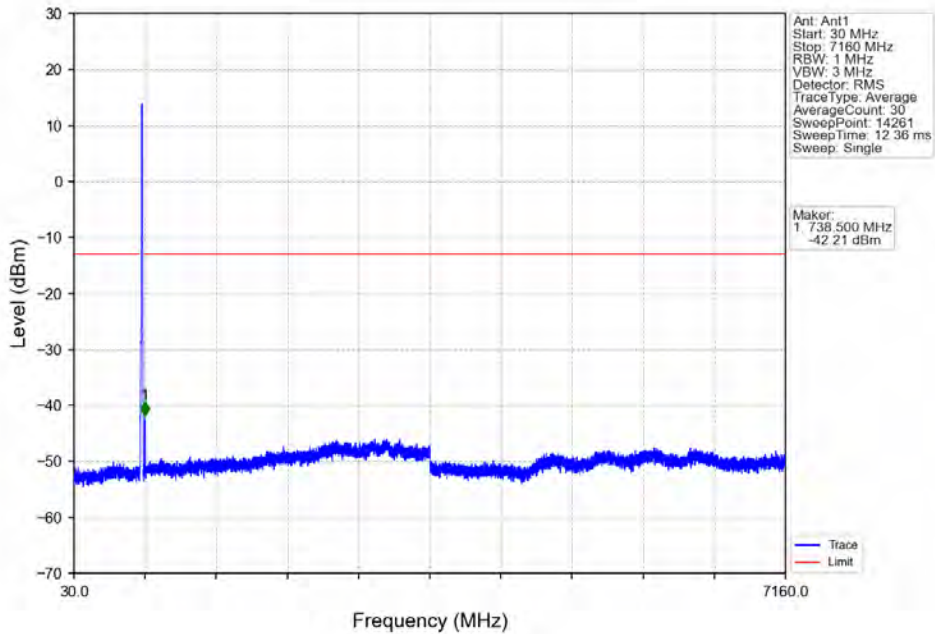


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.827	-38.05	-13	Pass
698.9	699	0.03	/	2	698.977	-39.73	-13	Pass
699	709	0.03	/	/	/	/	/	/

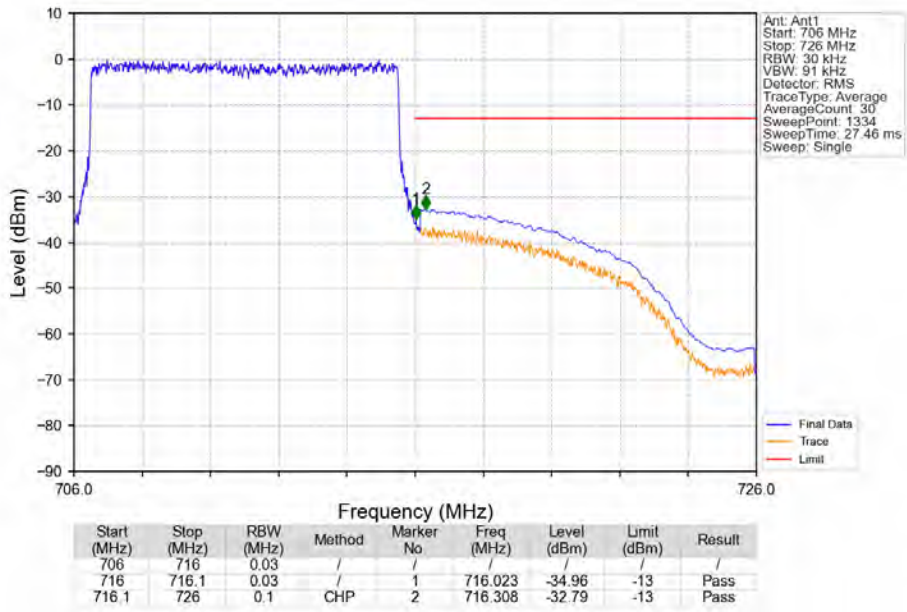
Band12\_10MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



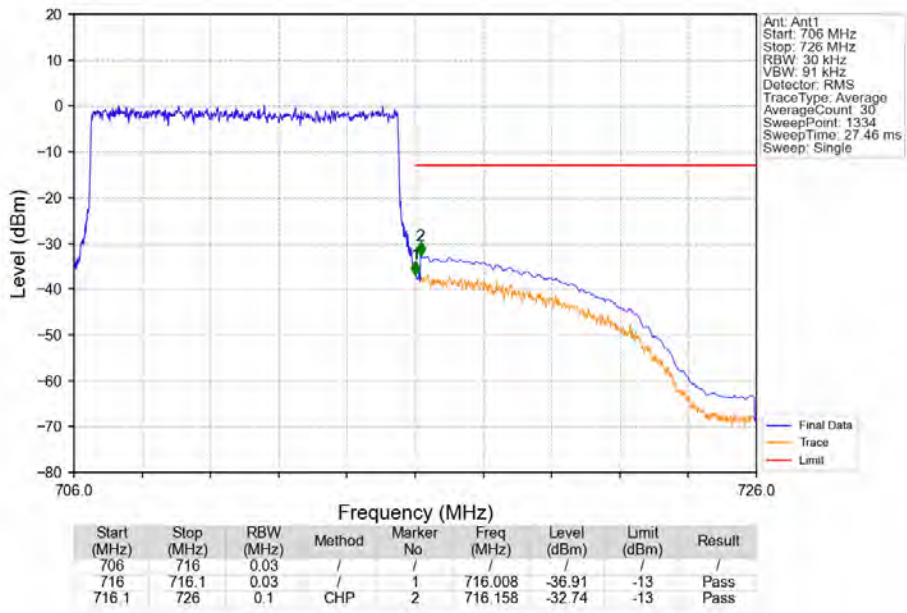
Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_1\_0\_NTNV



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



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



## 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	0.1442	0.0150	ppm	1M11G7D	27H	21.59
12	1.4	699.7	715.3	0.1153	0.0177	ppm	1M11W7D	27H	20.62
12	3	700.5	714.5	0.1687	0.0193	ppm	2M73G7D	27H	22.27
12	3	700.5	714.5	0.1343	0.0144	ppm	2M73W7D	27H	21.28
12	5	701.5	713.5	0.1560	0.0151	ppm	4M58G7D	27H	21.93
12	5	701.5	713.5	0.1225	0.0160	ppm	4M58W7D	27H	20.88
12	10	704	711	0.1449	0.0114	ppm	9M13G7D	27H	21.61
12	10	704	711	0.1276	0.0170	ppm	9M11W7D	27H	21.06

### 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	0.0373	0.0150	ppm	1M11G7D	27H	15.72
12	1.4	699.7	715.3	0.0299	0.0177	ppm	1M11W7D	27H	14.75
12	3	700.5	714.5	0.0437	0.0193	ppm	2M73G7D	27H	16.40
12	3	700.5	714.5	0.0348	0.0144	ppm	2M73W7D	27H	15.41
12	5	701.5	713.5	0.0404	0.0151	ppm	4M58G7D	27H	16.06
12	5	701.5	713.5	0.0317	0.0160	ppm	4M58W7D	27H	15.01
12	10	704	711	0.0375	0.0114	ppm	9M13G7D	27H	15.74
12	10	704	711	0.0330	0.0170	ppm	9M11W7D	27H	15.19