

# 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	22.00	-2.95	16.90	<=34.77	Pass		
			2	22.10	-2.95	17.00	<=34.77	Pass		
			5	22.03	-2.95	16.93	<=34.77	Pass		
		3	0	22.07	-2.95	16.97	<=34.77	Pass		
			2	22.07	-2.95	16.97	<=34.77	Pass		
			3	22.10	-2.95	17.00	<=34.77	Pass		
		6	0	21.04	-2.95	15.94	<=34.77	Pass		
		707.5	1	0	22.08	-2.95	16.98	<=34.77	Pass	
				2	22.19	-2.95	17.09	<=34.77	Pass	
	5			22.04	-2.95	16.94	<=34.77	Pass		
	3		0	22.14	-2.95	17.04	<=34.77	Pass		
			2	22.17	-2.95	17.07	<=34.77	Pass		
			3	22.13	-2.95	17.03	<=34.77	Pass		
	6		0	21.13	-2.95	16.03	<=34.77	Pass		
	715.3		1	0	22.09	-2.95	16.99	<=34.77	Pass	
				2	22.23	-2.95	17.13	<=34.77	Pass	
		5		22.10	-2.95	17.00	<=34.77	Pass		
		3	0	22.12	-2.95	17.02	<=34.77	Pass		
			2	22.10	-2.95	17.00	<=34.77	Pass		
			3	22.11	-2.95	17.01	<=34.77	Pass		
		6	0	21.15	-2.95	16.05	<=34.77	Pass		
		16QAM	699.7	1	0	21.11	-2.95	16.01	<=34.77	Pass
					2	21.21	-2.95	16.11	<=34.77	Pass
	5				21.15	-2.95	16.05	<=34.77	Pass	
3	0			21.01	-2.95	15.91	<=34.77	Pass		
	2			21.05	-2.95	15.95	<=34.77	Pass		
	3			21.07	-2.95	15.97	<=34.77	Pass		
6	0			20.02	-2.95	14.92	<=34.77	Pass		
707.5	1			0	21.06	-2.95	15.96	<=34.77	Pass	
				2	21.11	-2.95	16.01	<=34.77	Pass	
			5	21.03	-2.95	15.93	<=34.77	Pass		
	3		0	21.29	-2.95	16.19	<=34.77	Pass		
			2	21.34	-2.95	16.24	<=34.77	Pass		
			3	21.33	-2.95	16.23	<=34.77	Pass		
	6		0	20.10	-2.95	15.00	<=34.77	Pass		
	715.3		1	0	21.01	-2.95	15.91	<=34.77	Pass	
				2	21.18	-2.95	16.08	<=34.77	Pass	
5				21.10	-2.95	16.00	<=34.77	Pass		
3			0	21.13	-2.95	16.03	<=34.77	Pass		
			2	21.13	-2.95	16.03	<=34.77	Pass		
			3	21.15	-2.95	16.05	<=34.77	Pass		
6			0	20.02	-2.95	14.92	<=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	22.19	-2.95	17.09	<=34.77	Pass		
			7	22.34	-2.95	17.24	<=34.77	Pass		
			14	22.22	-2.95	17.12	<=34.77	Pass		
		8	0	21.12	-2.95	16.02	<=34.77	Pass		
			4	21.21	-2.95	16.11	<=34.77	Pass		
			7	21.18	-2.95	16.08	<=34.77	Pass		
		15	0	21.16	-2.95	16.06	<=34.77	Pass		
		707.5	1	0	22.22	-2.95	17.12	<=34.77	Pass	
				7	22.36	-2.95	17.26	<=34.77	Pass	
	14			22.20	-2.95	17.10	<=34.77	Pass		
	8		0	21.21	-2.95	16.11	<=34.77	Pass		
			4	21.23	-2.95	16.13	<=34.77	Pass		
			7	21.18	-2.95	16.08	<=34.77	Pass		
	15		0	21.19	-2.95	16.09	<=34.77	Pass		
	714.5		1	0	22.23	-2.95	17.13	<=34.77	Pass	
				7	22.34	-2.95	17.24	<=34.77	Pass	
		14		22.21	-2.95	17.11	<=34.77	Pass		
		8	0	21.19	-2.95	16.09	<=34.77	Pass		
			4	21.26	-2.95	16.16	<=34.77	Pass		
			7	21.20	-2.95	16.10	<=34.77	Pass		
		15	0	21.16	-2.95	16.06	<=34.77	Pass		
		16QAM	700.5	1	0	21.16	-2.95	16.06	<=34.77	Pass
					7	21.30	-2.95	16.20	<=34.77	Pass
	14				21.16	-2.95	16.06	<=34.77	Pass	
8	0			20.13	-2.95	15.03	<=34.77	Pass		
	4			20.23	-2.95	15.13	<=34.77	Pass		
	7			20.19	-2.95	15.09	<=34.77	Pass		
15	0			20.17	-2.95	15.07	<=34.77	Pass		
707.5	1			0	21.33	-2.95	16.23	<=34.77	Pass	
				7	21.48	-2.95	16.38	<=34.77	Pass	
			14	21.37	-2.95	16.27	<=34.77	Pass		
	8		0	20.14	-2.95	15.04	<=34.77	Pass		
			4	20.17	-2.95	15.07	<=34.77	Pass		
			7	20.11	-2.95	15.01	<=34.77	Pass		
	15		0	20.13	-2.95	15.03	<=34.77	Pass		
	714.5		1	0	21.64	-2.95	16.54	<=34.77	Pass	
				7	21.74	-2.95	16.64	<=34.77	Pass	
14				21.61	-2.95	16.51	<=34.77	Pass		
8			0	20.26	-2.95	15.16	<=34.77	Pass		
			4	20.34	-2.95	15.24	<=34.77	Pass		
			7	20.30	-2.95	15.20	<=34.77	Pass		
15			0	20.16	-2.95	15.06	<=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
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Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	701.5	1	0	21.99	-2.95	16.89	<=34.77	Pass		
			13	22.15	-2.95	17.05	<=34.77	Pass		
			24	22.12	-2.95	17.02	<=34.77	Pass		
		12	0	20.97	-2.95	15.87	<=34.77	Pass		
			6	21.12	-2.95	16.02	<=34.77	Pass		
			13	21.10	-2.95	16.00	<=34.77	Pass		
		25	0	21.03	-2.95	15.93	<=34.77	Pass		
		707.5	1	0	22.00	-2.95	16.90	<=34.77	Pass	
				13	22.17	-2.95	17.07	<=34.77	Pass	
	24			22.03	-2.95	16.93	<=34.77	Pass		
	12		0	21.06	-2.95	15.96	<=34.77	Pass		
			6	21.12	-2.95	16.02	<=34.77	Pass		
			13	21.02	-2.95	15.92	<=34.77	Pass		
	25		0	21.09	-2.95	15.99	<=34.77	Pass		
	713.5		1	0	21.95	-2.95	16.85	<=34.77	Pass	
				13	22.13	-2.95	17.03	<=34.77	Pass	
		24		22.03	-2.95	16.93	<=34.77	Pass		
		12	0	21.01	-2.95	15.91	<=34.77	Pass		
			6	21.10	-2.95	16.00	<=34.77	Pass		
			13	21.07	-2.95	15.97	<=34.77	Pass		
		25	0	21.06	-2.95	15.96	<=34.77	Pass		
		16QAM	701.5	1	0	21.03	-2.95	15.93	<=34.77	Pass
					13	21.19	-2.95	16.09	<=34.77	Pass
	24				21.17	-2.95	16.07	<=34.77	Pass	
12	0			19.93	-2.95	14.83	<=34.77	Pass		
	6			20.07	-2.95	14.97	<=34.77	Pass		
	13			20.03	-2.95	14.93	<=34.77	Pass		
25	0			20.02	-2.95	14.92	<=34.77	Pass		
707.5	1			0	21.24	-2.95	16.14	<=34.77	Pass	
				13	21.36	-2.95	16.26	<=34.77	Pass	
			24	21.20	-2.95	16.10	<=34.77	Pass		
	12		0	20.07	-2.95	14.97	<=34.77	Pass		
			6	20.17	-2.95	15.07	<=34.77	Pass		
			13	20.04	-2.95	14.94	<=34.77	Pass		
	25		0	20.01	-2.95	14.91	<=34.77	Pass		
	713.5		1	0	20.79	-2.95	15.69	<=34.77	Pass	
				13	20.95	-2.95	15.85	<=34.77	Pass	
24				20.84	-2.95	15.74	<=34.77	Pass		
12			0	19.96	-2.95	14.86	<=34.77	Pass		
			6	20.11	-2.95	15.01	<=34.77	Pass		
			13	20.03	-2.95	14.93	<=34.77	Pass		
25			0	20.04	-2.95	14.94	<=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	22.24	-2.95	17.14	<=34.77	Pass
			25	22.56	-2.95	17.46	<=34.77	Pass

		25	49	22.37	-2.95	17.27	<=34.77	Pass		
			0	21.29	-2.95	16.19	<=34.77	Pass		
			13	21.38	-2.95	16.28	<=34.77	Pass		
			25	21.35	-2.95	16.25	<=34.77	Pass		
			50	21.32	-2.95	16.22	<=34.77	Pass		
	707.5	1	0	22.23	-2.95	17.13	<=34.77	Pass		
				25	22.45	-2.95	17.35	<=34.77	Pass	
				49	21.87	-2.95	16.77	<=34.77	Pass	
		25	0	20.88	-2.95	15.78	<=34.77	Pass		
				13	20.85	-2.95	15.75	<=34.77	Pass	
				25	20.85	-2.95	15.75	<=34.77	Pass	
		50	20.89	-2.95	15.79	<=34.77	Pass			
		711	1	0	21.75	-2.95	16.65	<=34.77	Pass	
					25	21.98	-2.95	16.88	<=34.77	Pass
	49				21.81	-2.95	16.71	<=34.77	Pass	
	25		0	20.86	-2.95	15.76	<=34.77	Pass		
				13	20.86	-2.95	15.76	<=34.77	Pass	
				25	20.94	-2.95	15.84	<=34.77	Pass	
	50		20.93	-2.95	15.83	<=34.77	Pass			
	16QAM		704	1	0	21.19	-2.95	16.09	<=34.77	Pass
					25	21.53	-2.95	16.43	<=34.77	Pass
		49			21.35	-2.95	16.25	<=34.77	Pass	
		25		0	20.29	-2.95	15.19	<=34.77	Pass	
					13	20.39	-2.95	15.29	<=34.77	Pass
					25	20.38	-2.95	15.28	<=34.77	Pass
		50		20.28	-2.95	15.18	<=34.77	Pass		
		707.5		1	0	20.85	-2.95	15.75	<=34.77	Pass
25						21.13	-2.95	16.03	<=34.77	Pass
49			20.92			-2.95	15.82	<=34.77	Pass	
25			0	19.96	-2.95	14.86	<=34.77	Pass		
				13	19.92	-2.95	14.82	<=34.77	Pass	
				25	19.90	-2.95	14.80	<=34.77	Pass	
50			19.93	-2.95	14.83	<=34.77	Pass			
711			1	0	21.30	-2.95	16.20	<=34.77	Pass	
					25	21.49	-2.95	16.39	<=34.77	Pass
		49			21.26	-2.95	16.16	<=34.77	Pass	
		25	0	19.97	-2.95	14.87	<=34.77	Pass		
				13	19.95	-2.95	14.85	<=34.77	Pass	
				25	20.02	-2.95	14.92	<=34.77	Pass	
		50	19.99	-2.95	14.89	<=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	-3.605	-0.0052	-2.5 to 2.5	Pass				
									3.85	-4.063	-0.0058	-2.5 to 2.5	Pass
									4.43	-5.050	-0.0072	-2.5 to 2.5	Pass

				-30	3.85	-4.435	-0.0063	-2.5 to 2.5	Pass			
				-20	3.85	-3.977	-0.0057	-2.5 to 2.5	Pass			
				-10	3.85	-5.679	-0.0081	-2.5 to 2.5	Pass			
				0	3.85	-7.267	-0.0104	-2.5 to 2.5	Pass			
				10	3.85	-5.107	-0.0073	-2.5 to 2.5	Pass			
				30	3.85	-6.566	-0.0094	-2.5 to 2.5	Pass			
				40	3.85	-6.309	-0.0090	-2.5 to 2.5	Pass			
	50	3.85	-4.606	-0.0066	-2.5 to 2.5	Pass						
	707.5	6	0	20	3.27	-8.683	-0.0123	-2.5 to 2.5	Pass			
					3.85	-6.380	-0.0090	-2.5 to 2.5	Pass			
					4.43	-8.440	-0.0119	-2.5 to 2.5	Pass			
				-30	3.85	-1.931	-0.0027	-2.5 to 2.5	Pass			
				-20	3.85	-9.513	-0.0134	-2.5 to 2.5	Pass			
				-10	3.85	-4.735	-0.0067	-2.5 to 2.5	Pass			
				0	3.85	-4.549	-0.0064	-2.5 to 2.5	Pass			
				10	3.85	-6.523	-0.0092	-2.5 to 2.5	Pass			
				30	3.85	-3.018	-0.0043	-2.5 to 2.5	Pass			
				40	3.85	-6.523	-0.0092	-2.5 to 2.5	Pass			
				50	3.85	-6.824	-0.0096	-2.5 to 2.5	Pass			
				715.3	6	0	20	3.27	-5.965	-0.0083	-2.5 to 2.5	Pass
								3.85	-0.429	-0.0006	-2.5 to 2.5	Pass
								4.43	-5.608	-0.0078	-2.5 to 2.5	Pass
	-30	3.85	-4.649				-0.0065	-2.5 to 2.5	Pass			
	-20	3.85	-7.625				-0.0107	-2.5 to 2.5	Pass			
	-10	3.85	-1.760				-0.0025	-2.5 to 2.5	Pass			
	0	3.85	-1.144				-0.0016	-2.5 to 2.5	Pass			
	10	3.85	-7.296				-0.0102	-2.5 to 2.5	Pass			
30	3.85	-5.836	-0.0082				-2.5 to 2.5	Pass				
40	3.85	-7.725	-0.0108				-2.5 to 2.5	Pass				
50	3.85	-5.579	-0.0078				-2.5 to 2.5	Pass				
16QAM	699.7	6	0	20	3.27	-4.277	-0.0061	-2.5 to 2.5	Pass			
					3.85	-5.307	-0.0076	-2.5 to 2.5	Pass			
					4.43	-5.107	-0.0073	-2.5 to 2.5	Pass			
				-30	3.85	-5.164	-0.0074	-2.5 to 2.5	Pass			
				-20	3.85	-3.233	-0.0046	-2.5 to 2.5	Pass			
				-10	3.85	-7.868	-0.0112	-2.5 to 2.5	Pass			
				0	3.85	-5.579	-0.0080	-2.5 to 2.5	Pass			
				10	3.85	-7.653	-0.0109	-2.5 to 2.5	Pass			
				30	3.85	-2.718	-0.0039	-2.5 to 2.5	Pass			
				40	3.85	-6.881	-0.0098	-2.5 to 2.5	Pass			
				50	3.85	-5.980	-0.0085	-2.5 to 2.5	Pass			
				707.5	6	0	20	3.27	-6.752	-0.0095	-2.5 to 2.5	Pass
								3.85	-7.854	-0.0111	-2.5 to 2.5	Pass
								4.43	-7.596	-0.0107	-2.5 to 2.5	Pass
	-30	3.85	-6.466				-0.0091	-2.5 to 2.5	Pass			
	-20	3.85	-3.576				-0.0051	-2.5 to 2.5	Pass			
	-10	3.85	-7.582				-0.0107	-2.5 to 2.5	Pass			
	0	3.85	-3.905				-0.0055	-2.5 to 2.5	Pass			
	10	3.85	-5.794				-0.0082	-2.5 to 2.5	Pass			
	30	3.85	-6.495				-0.0092	-2.5 to 2.5	Pass			
	40	3.85	-5.250				-0.0074	-2.5 to 2.5	Pass			
	50	3.85	-7.210				-0.0102	-2.5 to 2.5	Pass			
	715.3	6	0	20	3.27	-8.640	-0.0121	-2.5 to 2.5	Pass			
					3.85	-5.479	-0.0077	-2.5 to 2.5	Pass			
					4.43	-8.097	-0.0113	-2.5 to 2.5	Pass			
				-30	3.85	-8.497	-0.0119	-2.5 to 2.5	Pass			
				-20	3.85	-3.219	-0.0045	-2.5 to 2.5	Pass			

				-10	3.85	-2.861	-0.0040	-2.5 to 2.5	Pass
				0	3.85	-6.881	-0.0096	-2.5 to 2.5	Pass
				10	3.85	-8.025	-0.0112	-2.5 to 2.5	Pass
				30	3.85	-4.148	-0.0058	-2.5 to 2.5	Pass
				40	3.85	-6.094	-0.0085	-2.5 to 2.5	Pass
				50	3.85	-1.988	-0.0028	-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	-6.323	-0.0090	-2.5 to 2.5	Pass
					3.85	-4.349	-0.0062	-2.5 to 2.5	Pass
					4.43	-5.465	-0.0078	-2.5 to 2.5	Pass
				-30	3.85	-2.718	-0.0039	-2.5 to 2.5	Pass
				-20	3.85	-5.336	-0.0076	-2.5 to 2.5	Pass
				-10	3.85	-8.726	-0.0125	-2.5 to 2.5	Pass
				0	3.85	-6.495	-0.0093	-2.5 to 2.5	Pass
				10	3.85	-8.526	-0.0122	-2.5 to 2.5	Pass
				30	3.85	-4.420	-0.0063	-2.5 to 2.5	Pass
				40	3.85	-4.148	-0.0059	-2.5 to 2.5	Pass
	50	3.85	-6.666	-0.0095	-2.5 to 2.5	Pass			
	707.5	15	0	20	3.27	-1.359	-0.0019	-2.5 to 2.5	Pass
					3.85	-2.503	-0.0035	-2.5 to 2.5	Pass
					4.43	-3.219	-0.0045	-2.5 to 2.5	Pass
				-30	3.85	-3.805	-0.0054	-2.5 to 2.5	Pass
				-20	3.85	-3.490	-0.0049	-2.5 to 2.5	Pass
				-10	3.85	-4.964	-0.0070	-2.5 to 2.5	Pass
				0	3.85	-5.236	-0.0074	-2.5 to 2.5	Pass
				10	3.85	-6.967	-0.0098	-2.5 to 2.5	Pass
				30	3.85	-8.454	-0.0119	-2.5 to 2.5	Pass
				40	3.85	-5.350	-0.0076	-2.5 to 2.5	Pass
	50	3.85	-4.506	-0.0064	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	-3.190	-0.0045	-2.5 to 2.5	Pass
					3.85	-5.379	-0.0075	-2.5 to 2.5	Pass
					4.43	-5.035	-0.0070	-2.5 to 2.5	Pass
				-30	3.85	-13.261	-0.0186	-2.5 to 2.5	Pass
				-20	3.85	-5.836	-0.0082	-2.5 to 2.5	Pass
				-10	3.85	-6.294	-0.0088	-2.5 to 2.5	Pass
				0	3.85	-5.050	-0.0071	-2.5 to 2.5	Pass
				10	3.85	-5.779	-0.0081	-2.5 to 2.5	Pass
30				3.85	-6.123	-0.0086	-2.5 to 2.5	Pass	
40				3.85	-9.184	-0.0129	-2.5 to 2.5	Pass	
50	3.85	-5.665	-0.0079	-2.5 to 2.5	Pass				
16QAM	700.5	15	0	20	3.27	-9.499	-0.0136	-2.5 to 2.5	Pass
					3.85	-6.981	-0.0100	-2.5 to 2.5	Pass
					4.43	-1.416	-0.0020	-2.5 to 2.5	Pass
				-30	3.85	-6.967	-0.0099	-2.5 to 2.5	Pass
				-20	3.85	-4.892	-0.0070	-2.5 to 2.5	Pass
				-10	3.85	-3.819	-0.0055	-2.5 to 2.5	Pass
				0	3.85	-6.824	-0.0097	-2.5 to 2.5	Pass
10	3.85	-4.749	-0.0068	-2.5 to 2.5	Pass				

	707.5	15	0	30	3.85	-5.264	-0.0075	-2.5 to 2.5	Pass
				40	3.85	-6.795	-0.0097	-2.5 to 2.5	Pass
				50	3.85	-8.197	-0.0117	-2.5 to 2.5	Pass
				20	3.27	-4.191	-0.0059	-2.5 to 2.5	Pass
					3.85	-5.465	-0.0077	-2.5 to 2.5	Pass
					4.43	-9.813	-0.0139	-2.5 to 2.5	Pass
				-30	3.85	-8.898	-0.0126	-2.5 to 2.5	Pass
				-20	3.85	-2.789	-0.0039	-2.5 to 2.5	Pass
				-10	3.85	-3.405	-0.0048	-2.5 to 2.5	Pass
				0	3.85	-7.668	-0.0108	-2.5 to 2.5	Pass
				10	3.85	-4.478	-0.0063	-2.5 to 2.5	Pass
				30	3.85	-9.313	-0.0132	-2.5 to 2.5	Pass
	40	3.85	-8.097	-0.0114	-2.5 to 2.5	Pass			
	50	3.85	-5.651	-0.0080	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	-9.427	-0.0132	-2.5 to 2.5	Pass
					3.85	-10.371	-0.0145	-2.5 to 2.5	Pass
					4.43	-7.753	-0.0109	-2.5 to 2.5	Pass
				-30	3.85	-8.225	-0.0115	-2.5 to 2.5	Pass
				-20	3.85	-6.809	-0.0095	-2.5 to 2.5	Pass
				-10	3.85	-4.978	-0.0070	-2.5 to 2.5	Pass
				0	3.85	-8.082	-0.0113	-2.5 to 2.5	Pass
				10	3.85	-5.322	-0.0074	-2.5 to 2.5	Pass
				30	3.85	-3.262	-0.0046	-2.5 to 2.5	Pass
				40	3.85	-11.158	-0.0156	-2.5 to 2.5	Pass
50				3.85	-4.864	-0.0068	-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	-4.478	-0.0064	-2.5 to 2.5	Pass
					3.85	-5.536	-0.0079	-2.5 to 2.5	Pass
					4.43	-5.836	-0.0083	-2.5 to 2.5	Pass
				-30	3.85	-7.768	-0.0111	-2.5 to 2.5	Pass
				-20	3.85	-4.349	-0.0062	-2.5 to 2.5	Pass
				-10	3.85	-6.866	-0.0098	-2.5 to 2.5	Pass
				0	3.85	-7.839	-0.0112	-2.5 to 2.5	Pass
				10	3.85	-6.008	-0.0086	-2.5 to 2.5	Pass
				30	3.85	-5.150	-0.0073	-2.5 to 2.5	Pass
				40	3.85	-6.480	-0.0092	-2.5 to 2.5	Pass
				50	3.85	-5.794	-0.0083	-2.5 to 2.5	Pass
				707.5	25	0	20	3.27	-1.130
	3.85	-4.020	-0.0057					-2.5 to 2.5	Pass
	4.43	-7.524	-0.0106					-2.5 to 2.5	Pass
	-30	3.85	-6.237				-0.0088	-2.5 to 2.5	Pass
	-20	3.85	-8.183				-0.0116	-2.5 to 2.5	Pass
	-10	3.85	-6.452				-0.0091	-2.5 to 2.5	Pass
	0	3.85	-6.781				-0.0096	-2.5 to 2.5	Pass
	10	3.85	-4.821				-0.0068	-2.5 to 2.5	Pass
	30	3.85	-3.061				-0.0043	-2.5 to 2.5	Pass
	40	3.85	-3.562				-0.0050	-2.5 to 2.5	Pass
	50	3.85	-3.762				-0.0053	-2.5 to 2.5	Pass

	713.5	25	0	20	3.27	-0.901	-0.0013	-2.5 to 2.5	Pass					
					3.85	-4.120	-0.0058	-2.5 to 2.5	Pass					
					4.43	-6.208	-0.0087	-2.5 to 2.5	Pass					
								-30	3.85	-6.323	-0.0089	-2.5 to 2.5	Pass	
								-20	3.85	-9.642	-0.0135	-2.5 to 2.5	Pass	
								-10	3.85	-7.610	-0.0107	-2.5 to 2.5	Pass	
								0	3.85	-8.712	-0.0122	-2.5 to 2.5	Pass	
								10	3.85	-7.896	-0.0111	-2.5 to 2.5	Pass	
								30	3.85	-10.099	-0.0142	-2.5 to 2.5	Pass	
								40	3.85	-6.309	-0.0088	-2.5 to 2.5	Pass	
50	3.85	-6.523	-0.0091	-2.5 to 2.5	Pass									
16QAM	701.5	25	0	20	3.27	-4.678	-0.0067	-2.5 to 2.5	Pass					
					3.85	-3.505	-0.0050	-2.5 to 2.5	Pass					
					4.43	-4.878	-0.0070	-2.5 to 2.5	Pass					
								-30	3.85	-5.765	-0.0082	-2.5 to 2.5	Pass	
								-20	3.85	-5.279	-0.0075	-2.5 to 2.5	Pass	
								-10	3.85	-4.463	-0.0064	-2.5 to 2.5	Pass	
								0	3.85	-5.193	-0.0074	-2.5 to 2.5	Pass	
								10	3.85	-3.762	-0.0054	-2.5 to 2.5	Pass	
								30	3.85	-9.341	-0.0133	-2.5 to 2.5	Pass	
								40	3.85	-6.680	-0.0095	-2.5 to 2.5	Pass	
	50	3.85	-5.364	-0.0076	-2.5 to 2.5	Pass								
		707.5	25	0	20	3.27	-6.680	-0.0094	-2.5 to 2.5	Pass				
						3.85	-3.333	-0.0047	-2.5 to 2.5	Pass				
						4.43	-3.076	-0.0043	-2.5 to 2.5	Pass				
									-30	3.85	-8.898	-0.0126	-2.5 to 2.5	Pass
									-20	3.85	-4.134	-0.0058	-2.5 to 2.5	Pass
									-10	3.85	-3.548	-0.0050	-2.5 to 2.5	Pass
									0	3.85	-9.084	-0.0128	-2.5 to 2.5	Pass
									10	3.85	-4.177	-0.0059	-2.5 to 2.5	Pass
									30	3.85	-5.164	-0.0073	-2.5 to 2.5	Pass
									40	3.85	-8.183	-0.0116	-2.5 to 2.5	Pass
	50	3.85	-6.080	-0.0086	-2.5 to 2.5	Pass								
		713.5	25	0	20	3.27	-6.909	-0.0097	-2.5 to 2.5	Pass				
						3.85	-9.198	-0.0129	-2.5 to 2.5	Pass				
						4.43	-5.307	-0.0074	-2.5 to 2.5	Pass				
									-30	3.85	-3.033	-0.0043	-2.5 to 2.5	Pass
									-20	3.85	-3.219	-0.0045	-2.5 to 2.5	Pass
									-10	3.85	-5.121	-0.0072	-2.5 to 2.5	Pass
									0	3.85	-1.974	-0.0028	-2.5 to 2.5	Pass
									10	3.85	-11.287	-0.0158	-2.5 to 2.5	Pass
30									3.85	-3.905	-0.0055	-2.5 to 2.5	Pass	
40									3.85	-10.114	-0.0142	-2.5 to 2.5	Pass	
50	3.85	-6.123	-0.0086	-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	-3.977	-0.0056	-2.5 to 2.5	Pass
					3.85	-4.821	-0.0068	-2.5 to 2.5	Pass
					4.43	-5.622	-0.0080	-2.5 to 2.5	Pass



				-30	3.85	-5.851	-0.0083	-2.5 to 2.5	Pass			
				-20	3.85	-4.621	-0.0066	-2.5 to 2.5	Pass			
				-10	3.85	-5.593	-0.0079	-2.5 to 2.5	Pass			
				0	3.85	-4.735	-0.0067	-2.5 to 2.5	Pass			
				10	3.85	-4.635	-0.0066	-2.5 to 2.5	Pass			
				30	3.85	-5.808	-0.0083	-2.5 to 2.5	Pass			
				40	3.85	-6.366	-0.0090	-2.5 to 2.5	Pass			
	50	3.85	-5.765	-0.0082	-2.5 to 2.5	Pass						
	707.5	50	0	20	3.27	-7.482	-0.0106	-2.5 to 2.5	Pass			
					3.85	-6.495	-0.0092	-2.5 to 2.5	Pass			
					4.43	-8.426	-0.0119	-2.5 to 2.5	Pass			
				-30	3.85	-5.207	-0.0074	-2.5 to 2.5	Pass			
				-20	3.85	-9.141	-0.0129	-2.5 to 2.5	Pass			
				-10	3.85	-5.679	-0.0080	-2.5 to 2.5	Pass			
				0	3.85	-4.921	-0.0070	-2.5 to 2.5	Pass			
				10	3.85	-4.721	-0.0067	-2.5 to 2.5	Pass			
				30	3.85	-5.364	-0.0076	-2.5 to 2.5	Pass			
				40	3.85	-2.174	-0.0031	-2.5 to 2.5	Pass			
				50	3.85	-8.554	-0.0121	-2.5 to 2.5	Pass			
				711	50	0	20	3.27	-6.509	-0.0092	-2.5 to 2.5	Pass
								3.85	-6.323	-0.0089	-2.5 to 2.5	Pass
								4.43	-3.576	-0.0050	-2.5 to 2.5	Pass
	-30	3.85	-7.553				-0.0106	-2.5 to 2.5	Pass			
	-20	3.85	-7.811				-0.0110	-2.5 to 2.5	Pass			
	-10	3.85	-6.523				-0.0092	-2.5 to 2.5	Pass			
	0	3.85	-11.144				-0.0157	-2.5 to 2.5	Pass			
	10	3.85	-2.861				-0.0040	-2.5 to 2.5	Pass			
	30	3.85	-7.496				-0.0105	-2.5 to 2.5	Pass			
	40	3.85	-3.033				-0.0043	-2.5 to 2.5	Pass			
	50	3.85	-6.909				-0.0097	-2.5 to 2.5	Pass			
16QAM	704	50	0	20	3.27	-3.548	-0.0050	-2.5 to 2.5	Pass			
					3.85	-4.864	-0.0069	-2.5 to 2.5	Pass			
					4.43	-6.695	-0.0095	-2.5 to 2.5	Pass			
				-30	3.85	-7.339	-0.0104	-2.5 to 2.5	Pass			
				-20	3.85	-3.834	-0.0054	-2.5 to 2.5	Pass			
				-10	3.85	-4.077	-0.0058	-2.5 to 2.5	Pass			
				0	3.85	-7.524	-0.0107	-2.5 to 2.5	Pass			
				10	3.85	-5.836	-0.0083	-2.5 to 2.5	Pass			
				30	3.85	-6.623	-0.0094	-2.5 to 2.5	Pass			
				40	3.85	-4.749	-0.0067	-2.5 to 2.5	Pass			
				50	3.85	-4.363	-0.0062	-2.5 to 2.5	Pass			
	707.5	50	0	20	3.27	-11.659	-0.0165	-2.5 to 2.5	Pass			
					3.85	-3.004	-0.0042	-2.5 to 2.5	Pass			
					4.43	-8.812	-0.0125	-2.5 to 2.5	Pass			
				-30	3.85	-6.809	-0.0096	-2.5 to 2.5	Pass			
				-20	3.85	-3.948	-0.0056	-2.5 to 2.5	Pass			
				-10	3.85	-6.523	-0.0092	-2.5 to 2.5	Pass			
				0	3.85	-8.340	-0.0118	-2.5 to 2.5	Pass			
				10	3.85	-3.433	-0.0049	-2.5 to 2.5	Pass			
				30	3.85	-6.180	-0.0087	-2.5 to 2.5	Pass			
				40	3.85	-8.311	-0.0117	-2.5 to 2.5	Pass			
				50	3.85	-5.794	-0.0082	-2.5 to 2.5	Pass			
	711	50	0	20	3.27	-8.483	-0.0119	-2.5 to 2.5	Pass			
					3.85	-7.124	-0.0100	-2.5 to 2.5	Pass			
					4.43	-3.805	-0.0054	-2.5 to 2.5	Pass			
				-30	3.85	-7.038	-0.0099	-2.5 to 2.5	Pass			
				-20	3.85	-3.805	-0.0054	-2.5 to 2.5	Pass			

				-10	3.85	-7.925	-0.0111	-2.5 to 2.5	Pass
				0	3.85	-9.928	-0.0140	-2.5 to 2.5	Pass
				10	3.85	-4.292	-0.0060	-2.5 to 2.5	Pass
				30	3.85	-10.600	-0.0149	-2.5 to 2.5	Pass
				40	3.85	-4.706	-0.0066	-2.5 to 2.5	Pass
				50	3.85	-5.379	-0.0076	-2.5 to 2.5	Pass

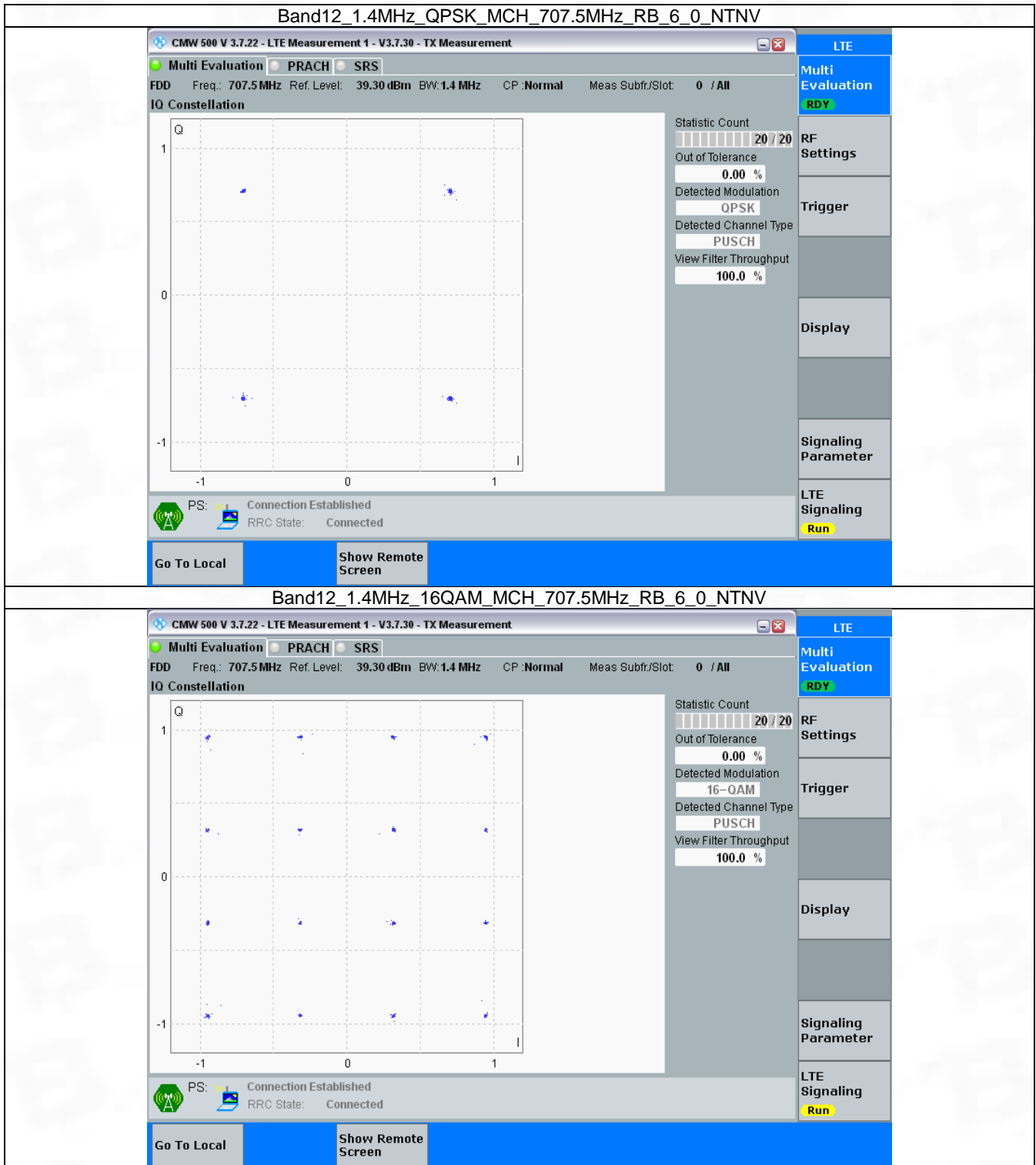
### 3. Modulation Characteristics

#### 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

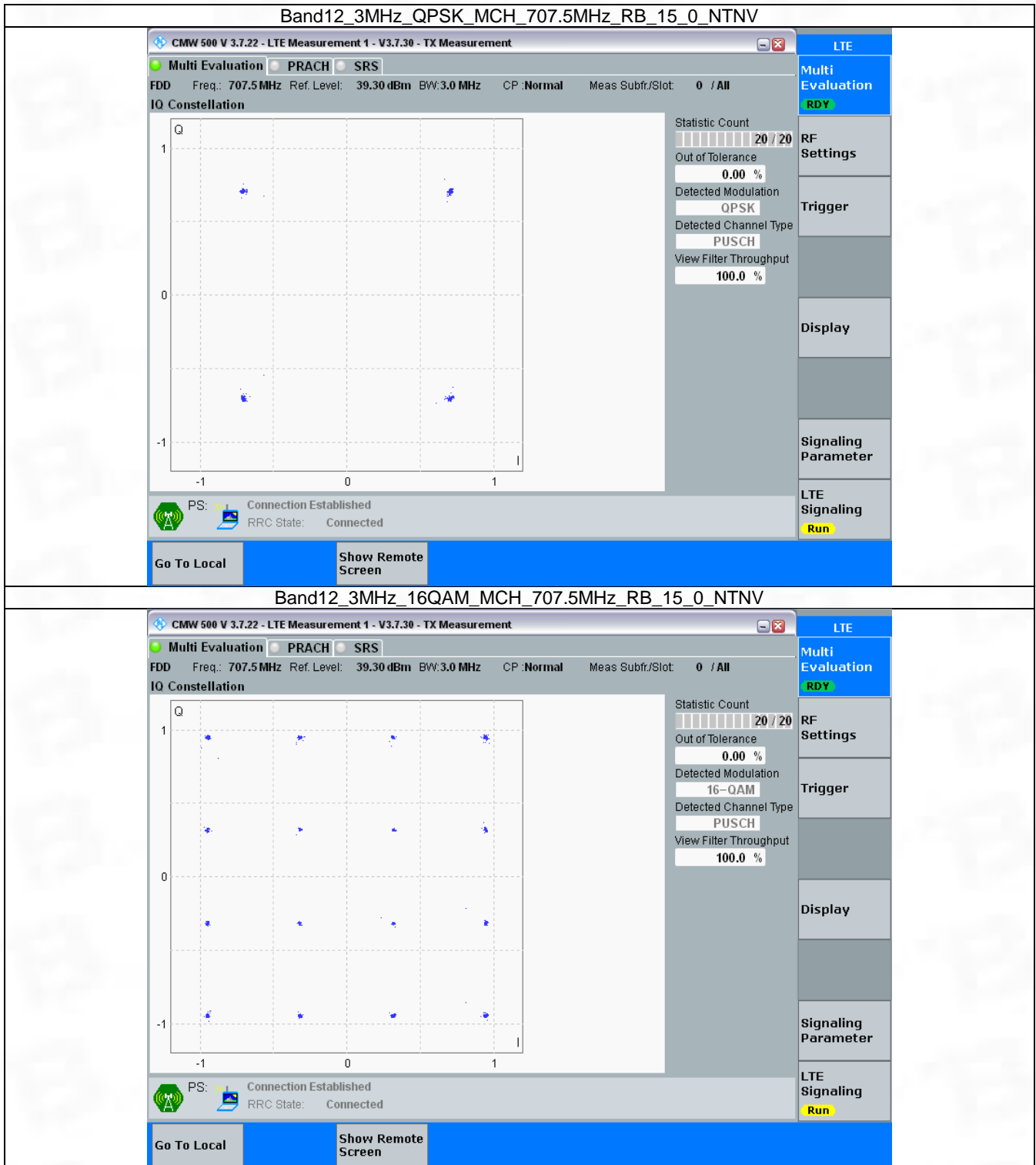


## 3.2 B12\_3MHz

### 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

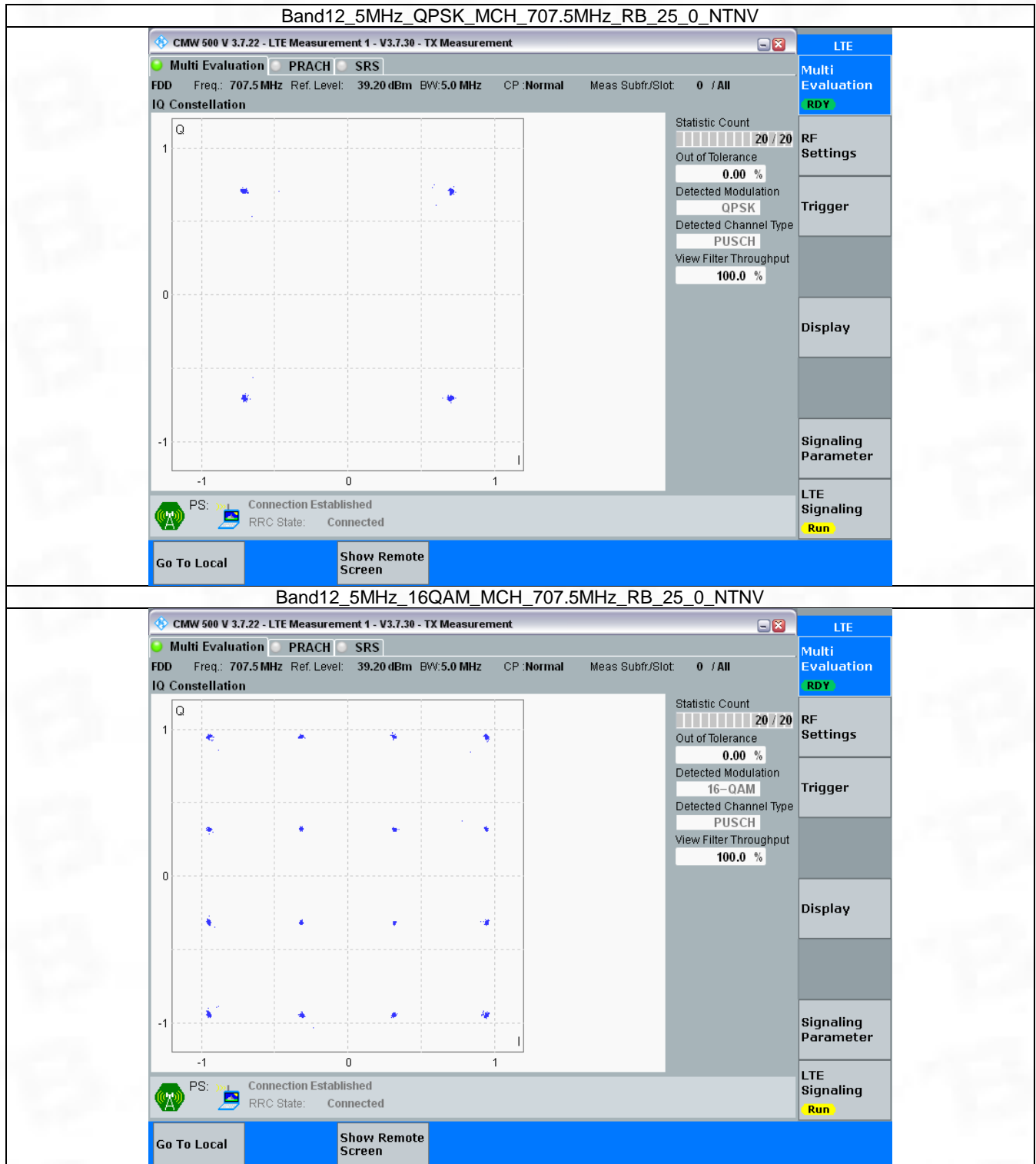


### 3.3 B12\_5MHz

#### 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



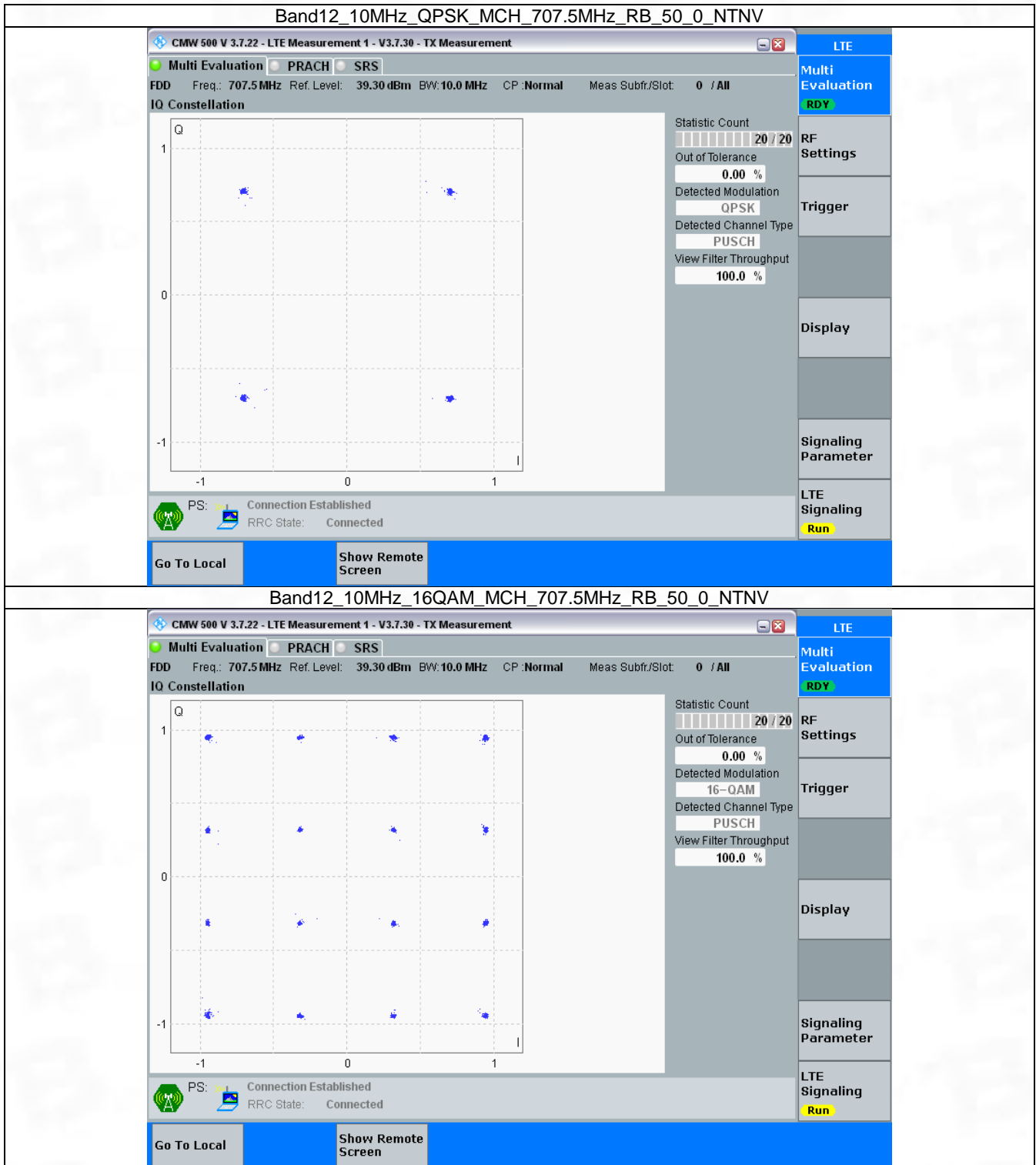
### 3.4 B12\_10MHz

#### 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



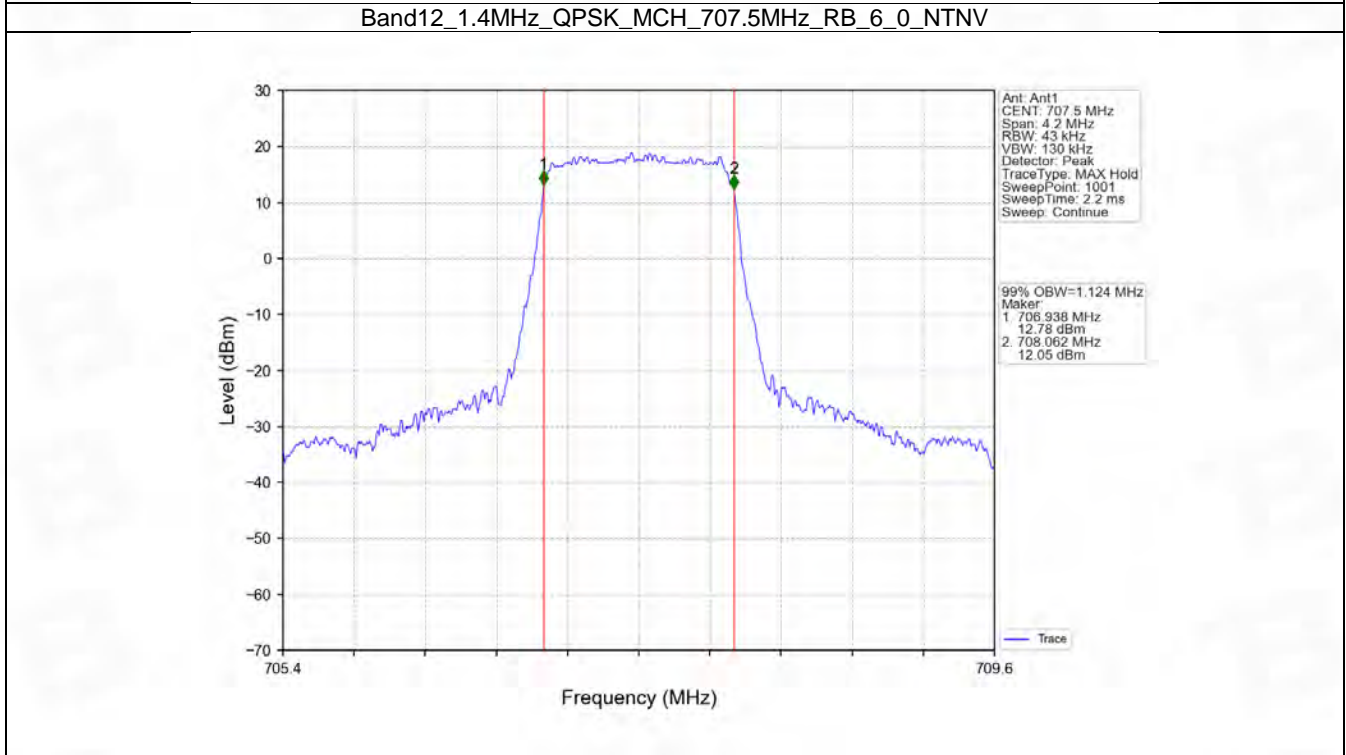
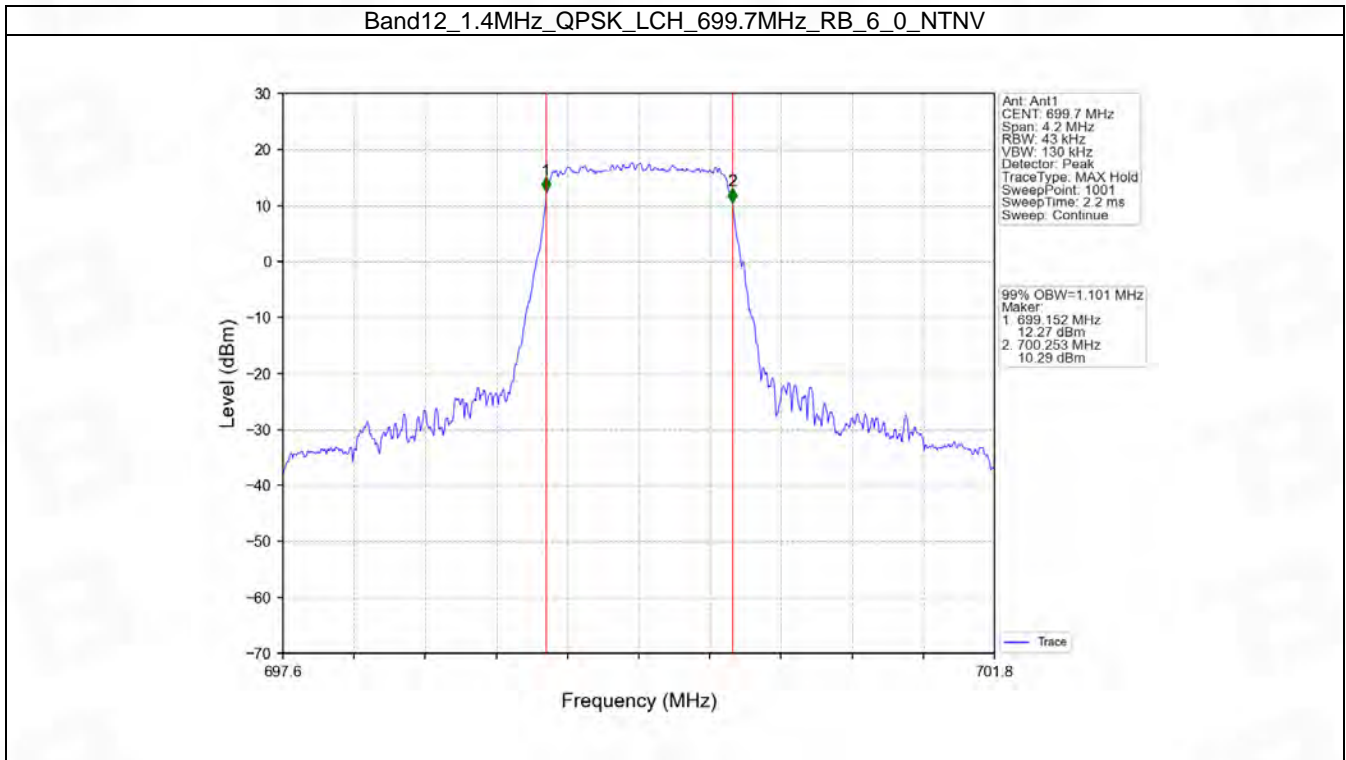
## 4. 99% & 26dB Bandwidth

### 4.1 Band12\_OBW

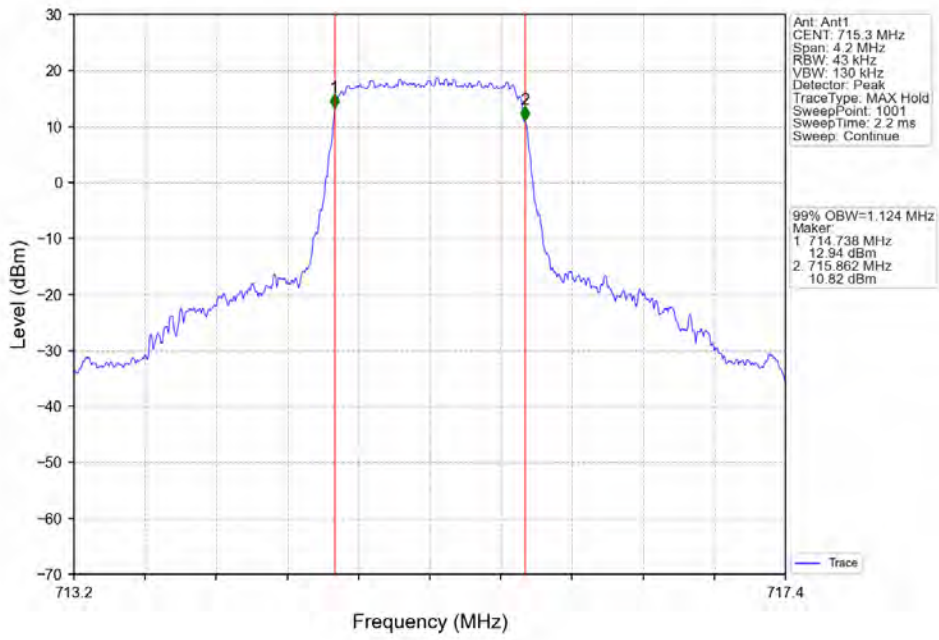
#### 4.1.1 Test Result

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	1.101	/	Pass
		707.5	6	0	1.124	/	Pass
		715.3	6	0	1.124	/	Pass
	16QAM	699.7	6	0	1.108	/	Pass
		707.5	6	0	1.109	/	Pass
		715.3	6	0	1.108	/	Pass
3	QPSK	700.5	15	0	2.726	/	Pass
		707.5	15	0	2.719	/	Pass
		714.5	15	0	2.725	/	Pass
	16QAM	700.5	15	0	2.715	/	Pass
		707.5	15	0	2.721	/	Pass
		714.5	15	0	2.719	/	Pass
5	QPSK	701.5	25	0	4.544	/	Pass
		707.5	25	0	4.551	/	Pass
		713.5	25	0	4.586	/	Pass
	16QAM	701.5	25	0	4.578	/	Pass
		707.5	25	0	4.583	/	Pass
		713.5	25	0	4.577	/	Pass
10	QPSK	704	50	0	9.082	/	Pass
		707.5	50	0	9.055	/	Pass
		711	50	0	9.101	/	Pass
	16QAM	704	50	0	9.048	/	Pass
		707.5	50	0	9.061	/	Pass
		711	50	0	9.101	/	Pass

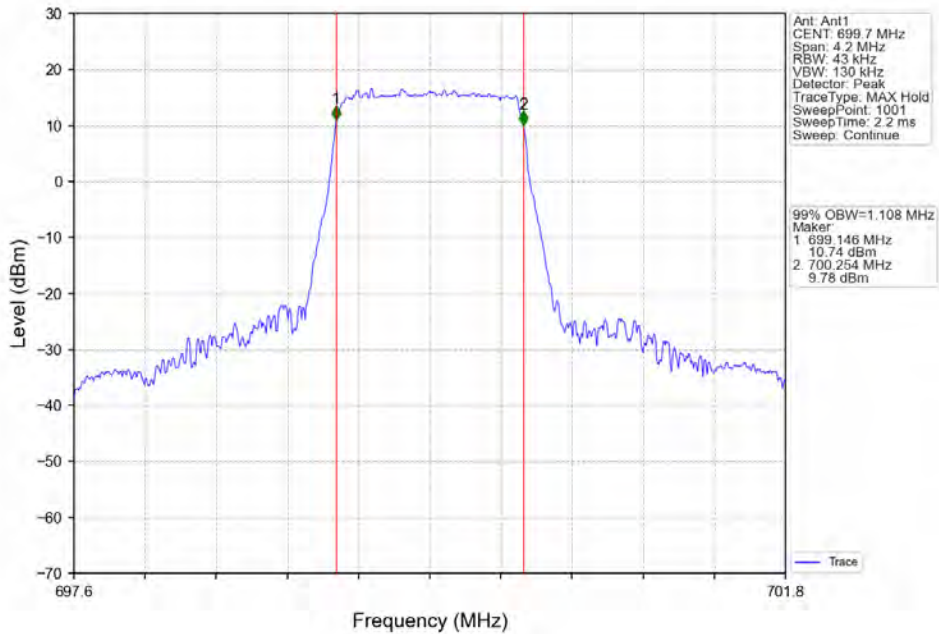
### 4.1.2 Test Graph



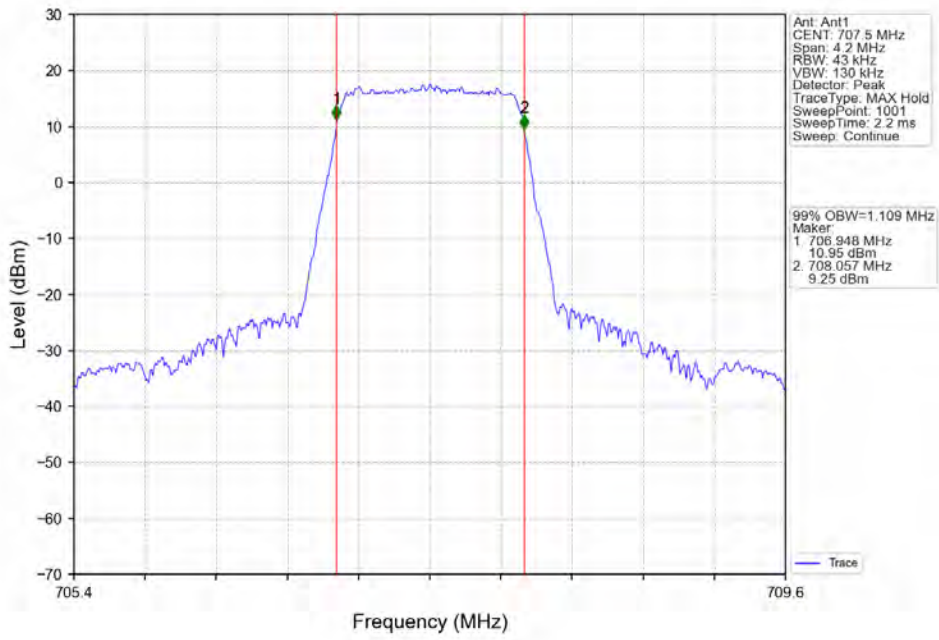
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



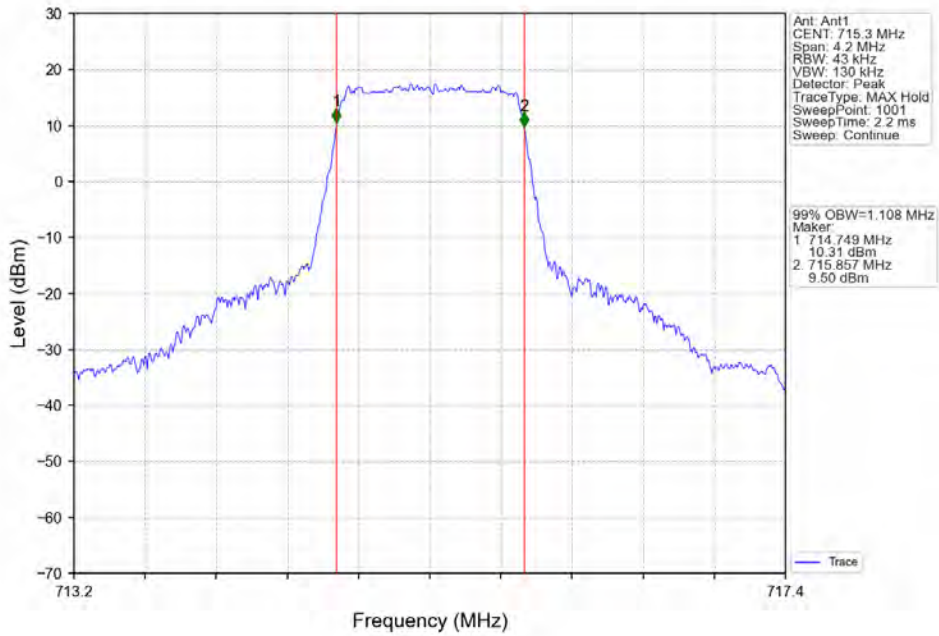
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



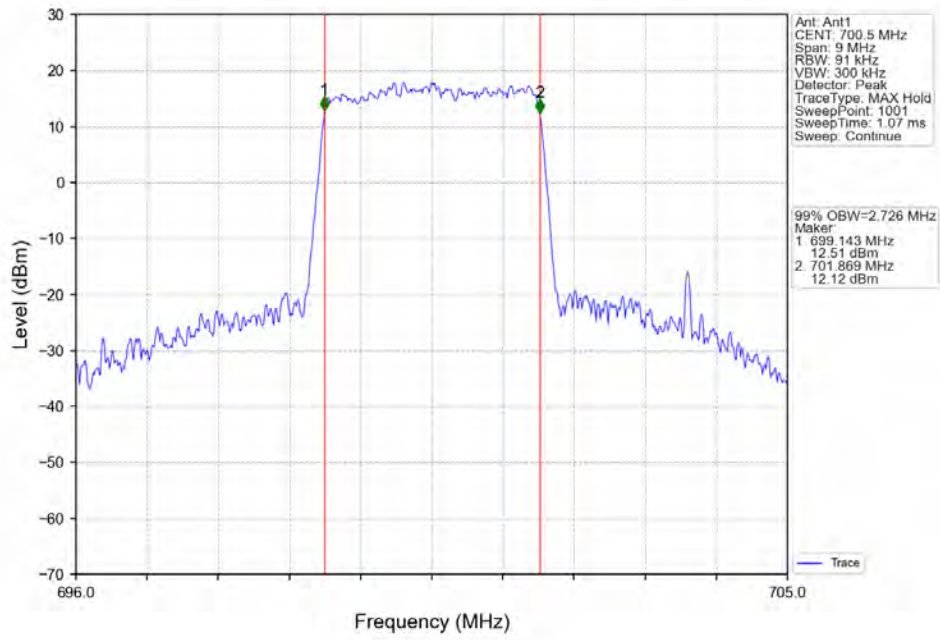
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



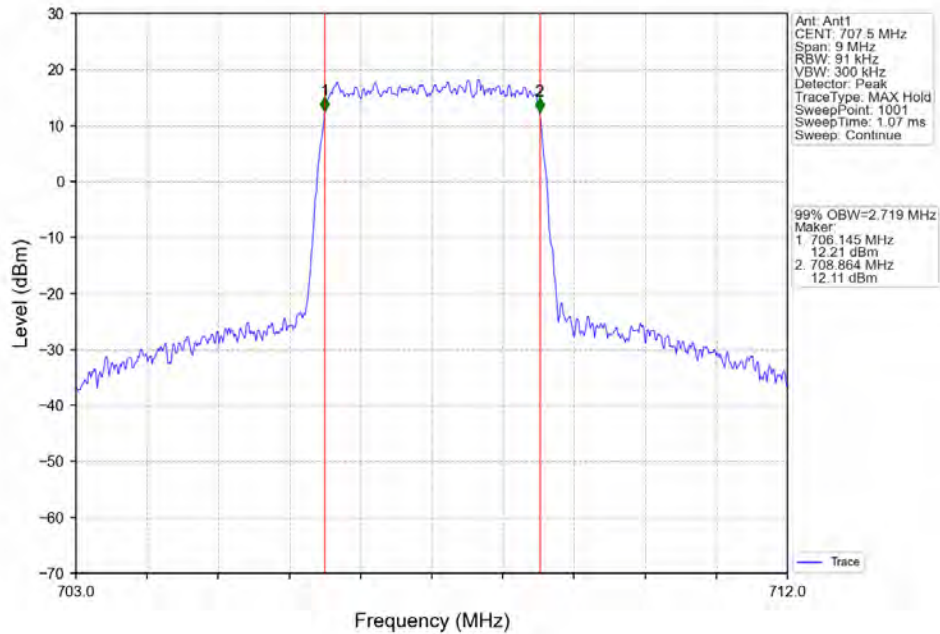
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



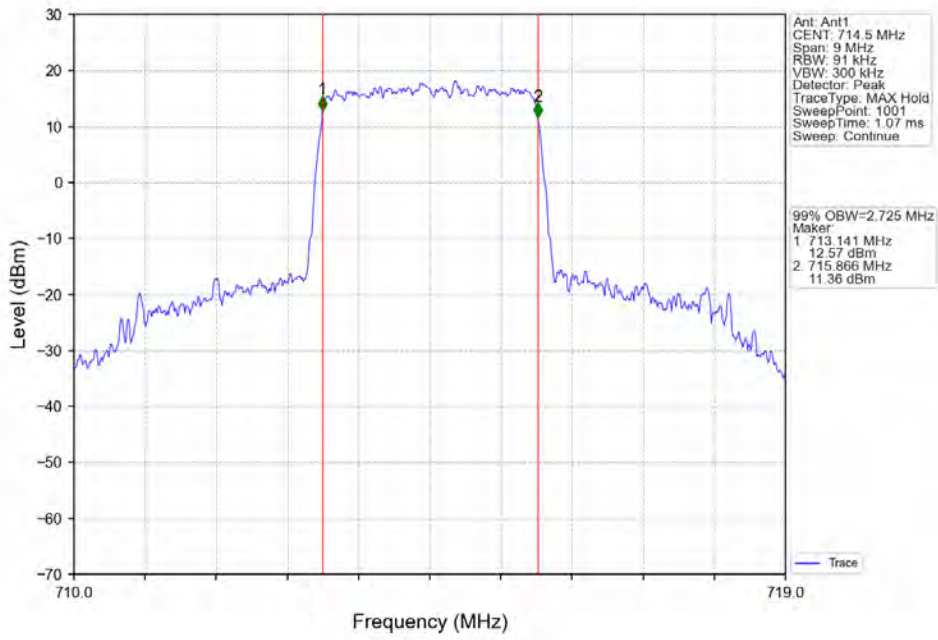
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



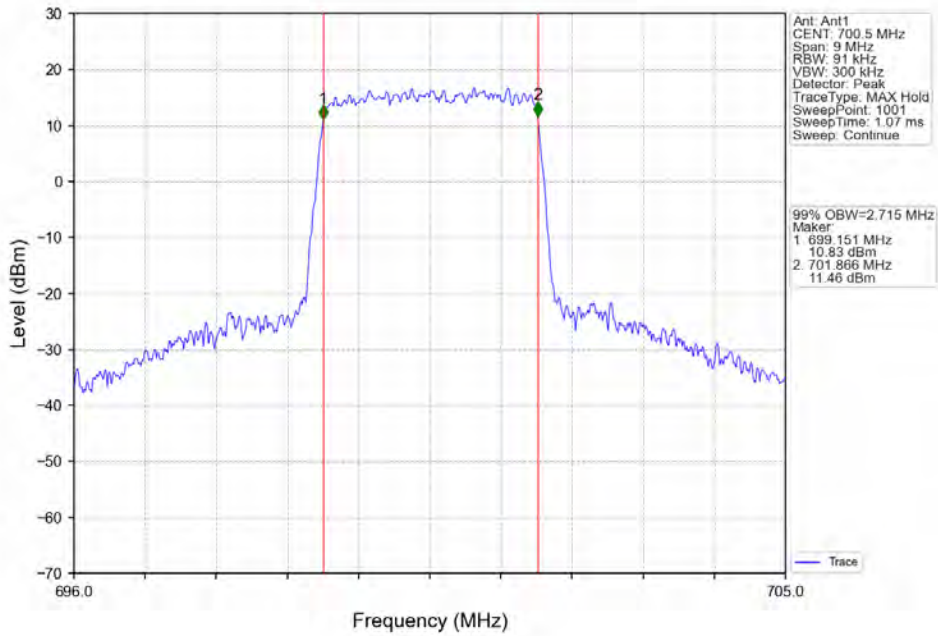
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



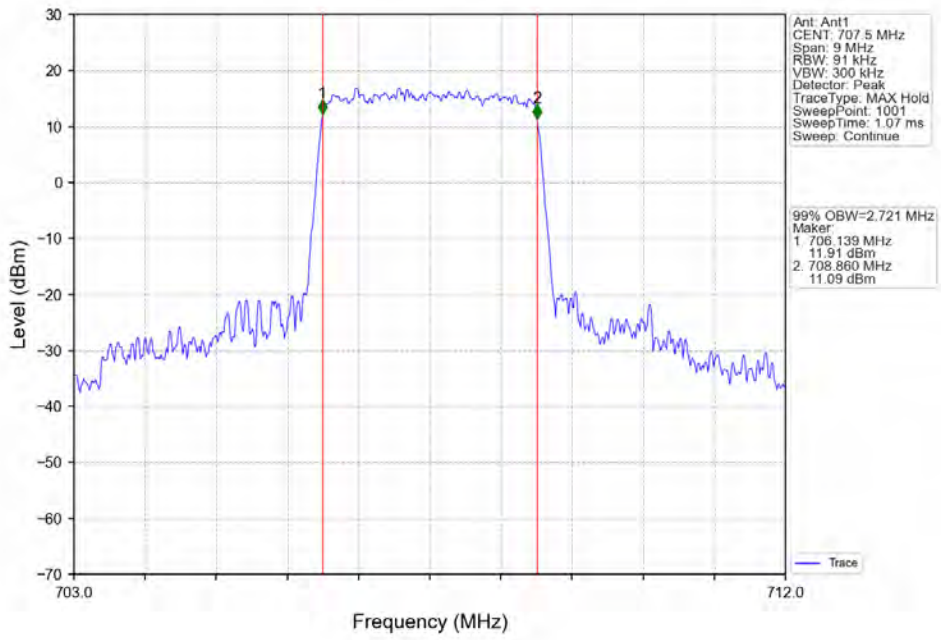
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



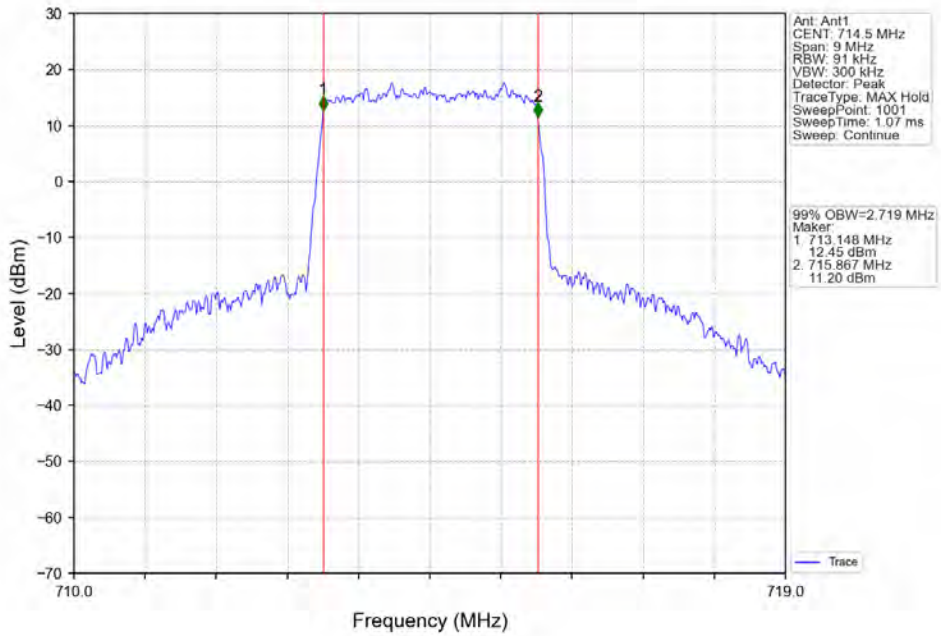
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



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

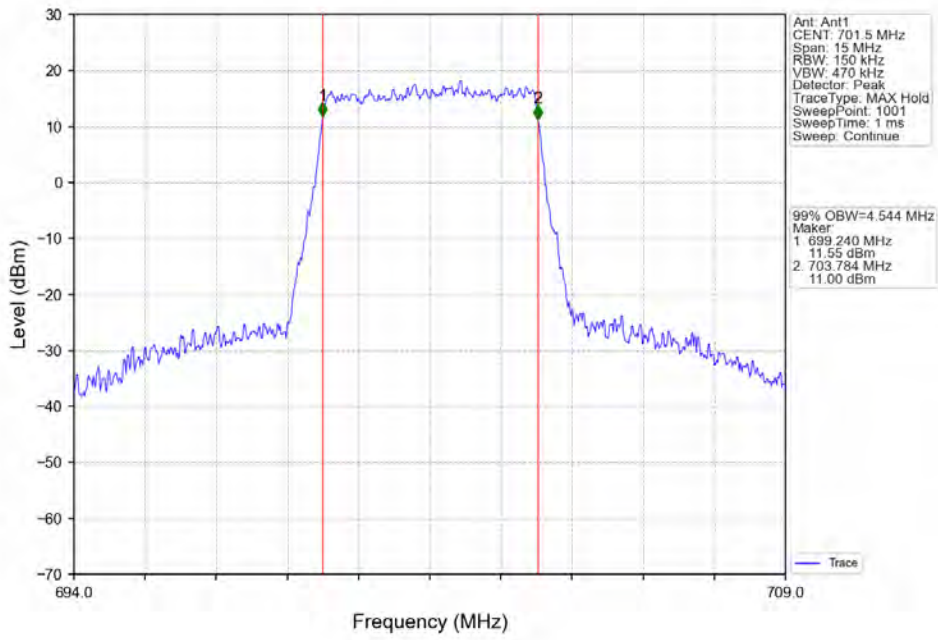


Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV

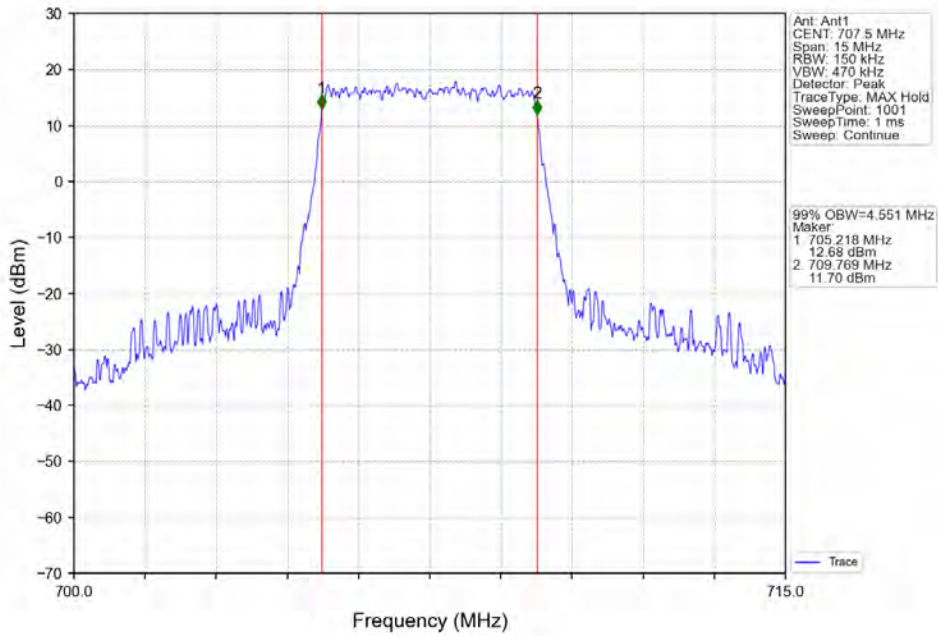




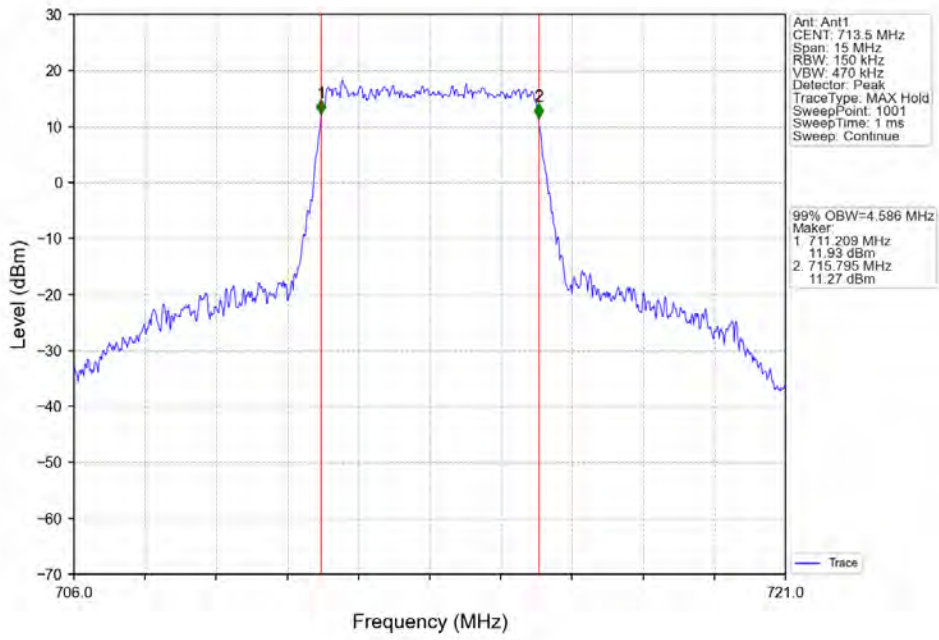
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



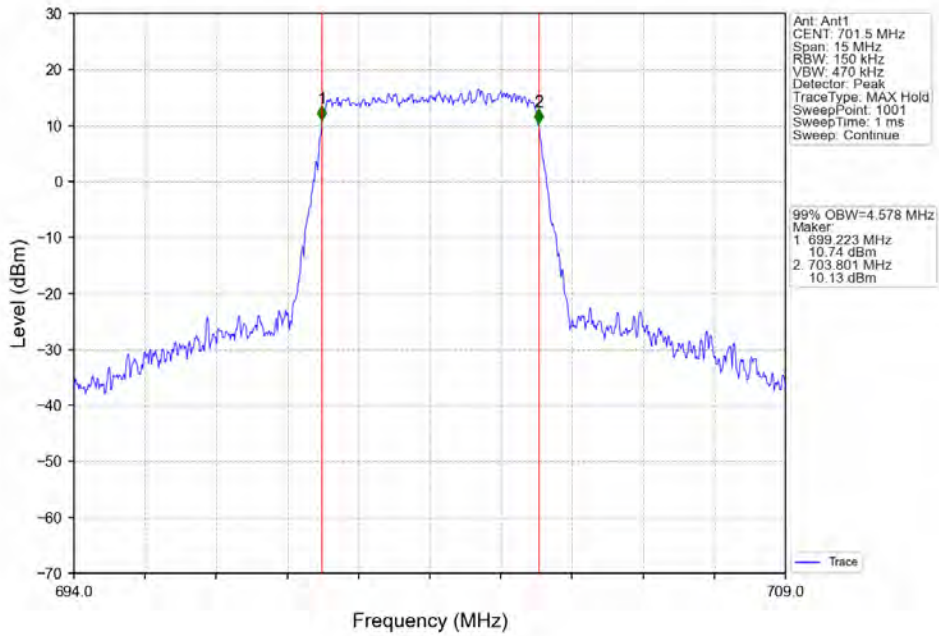
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



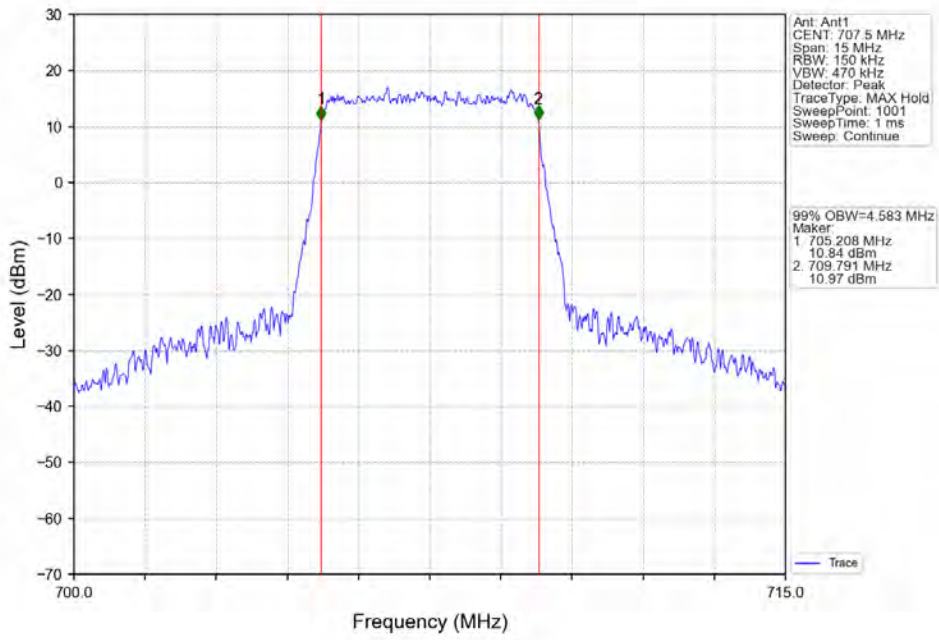
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



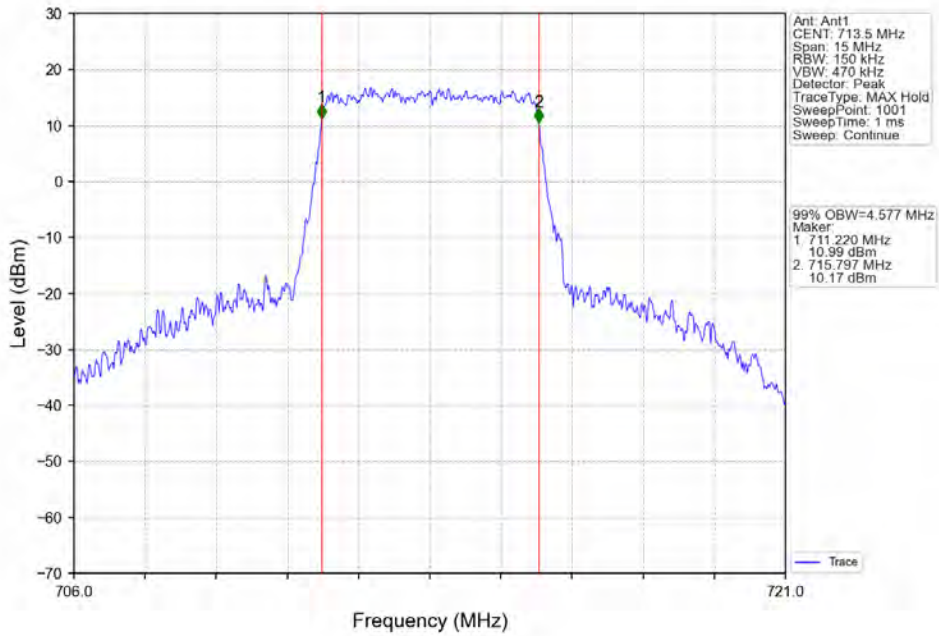
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



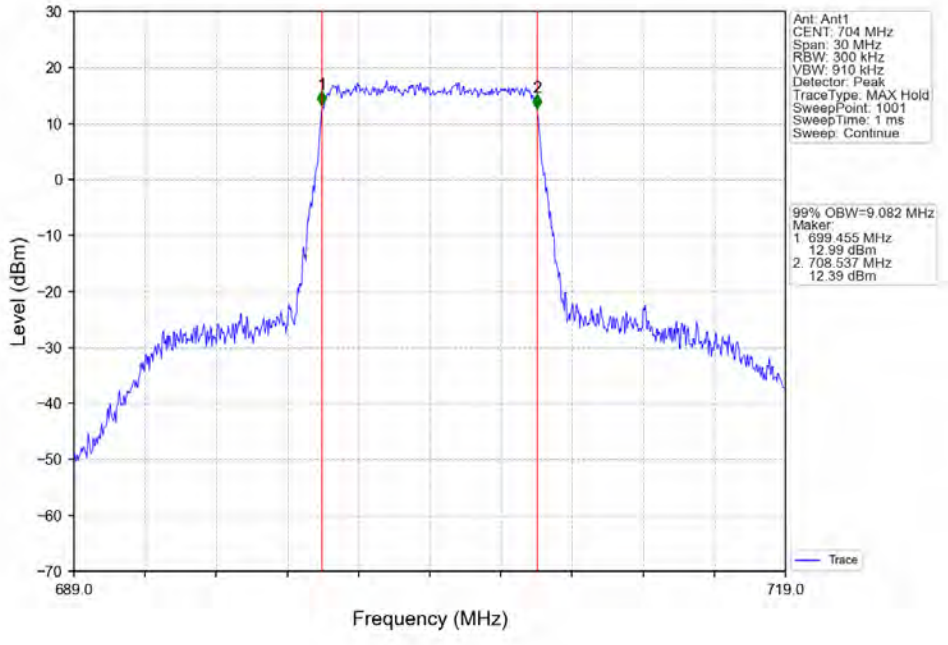
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



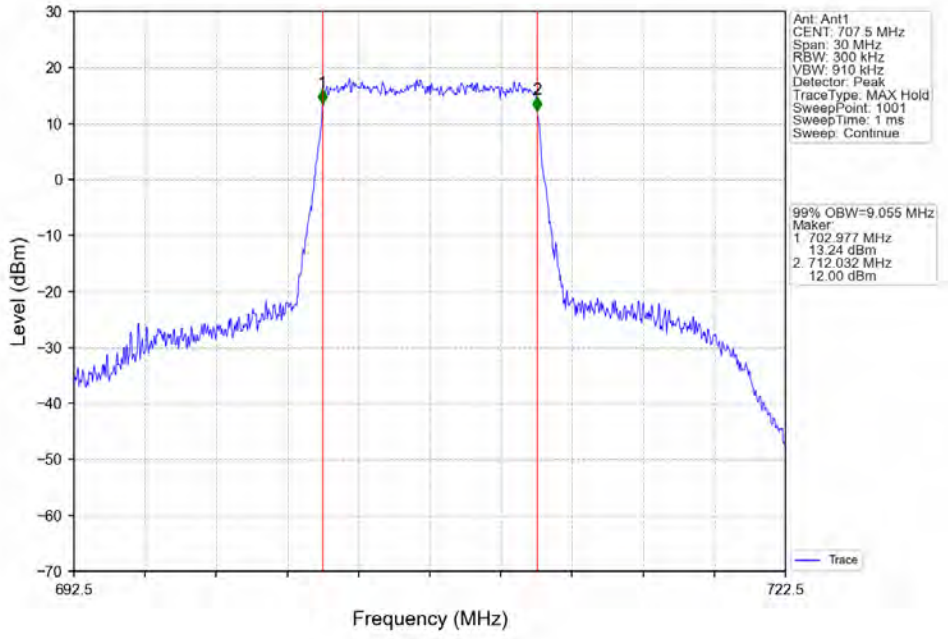
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



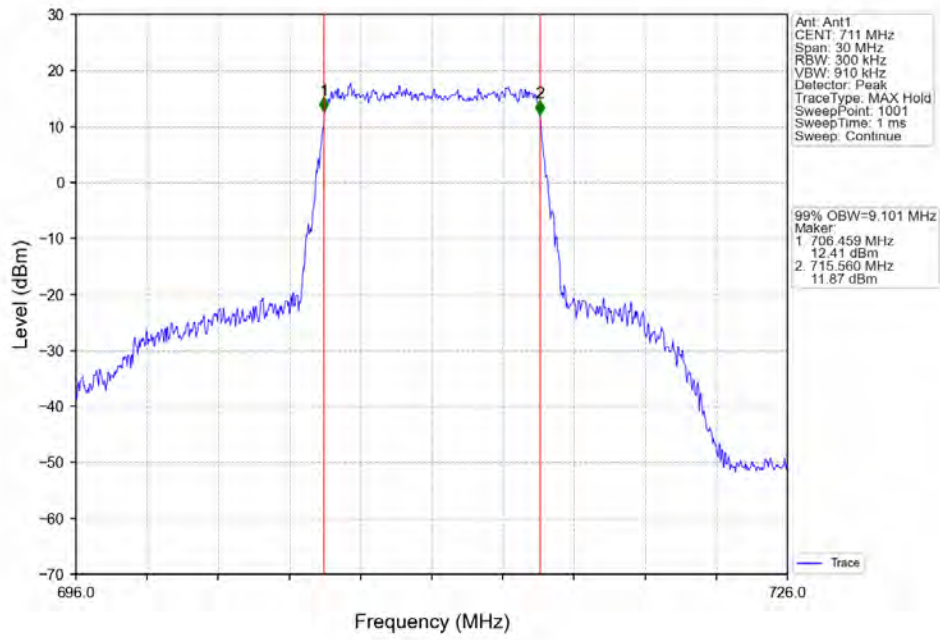
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



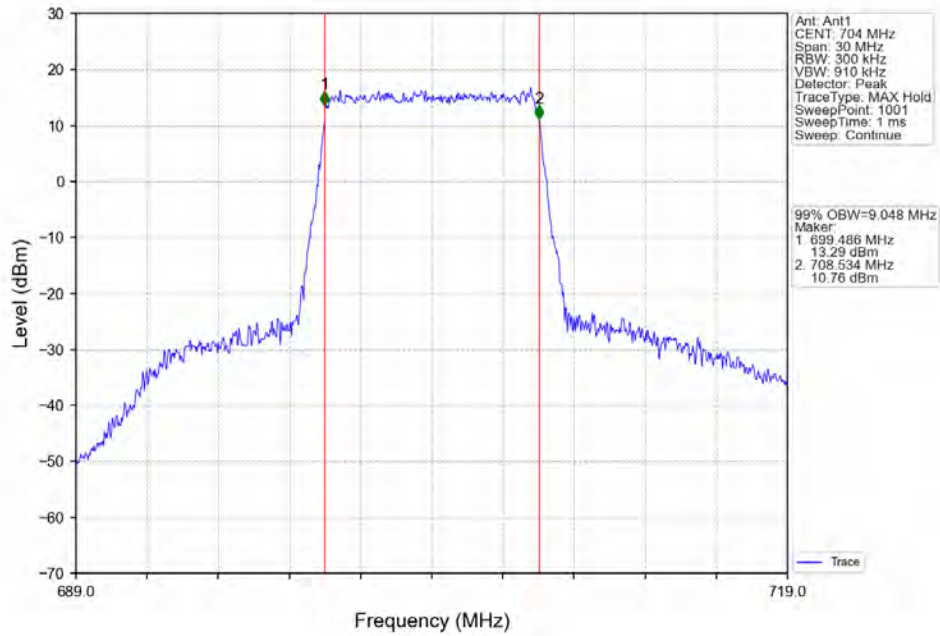
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



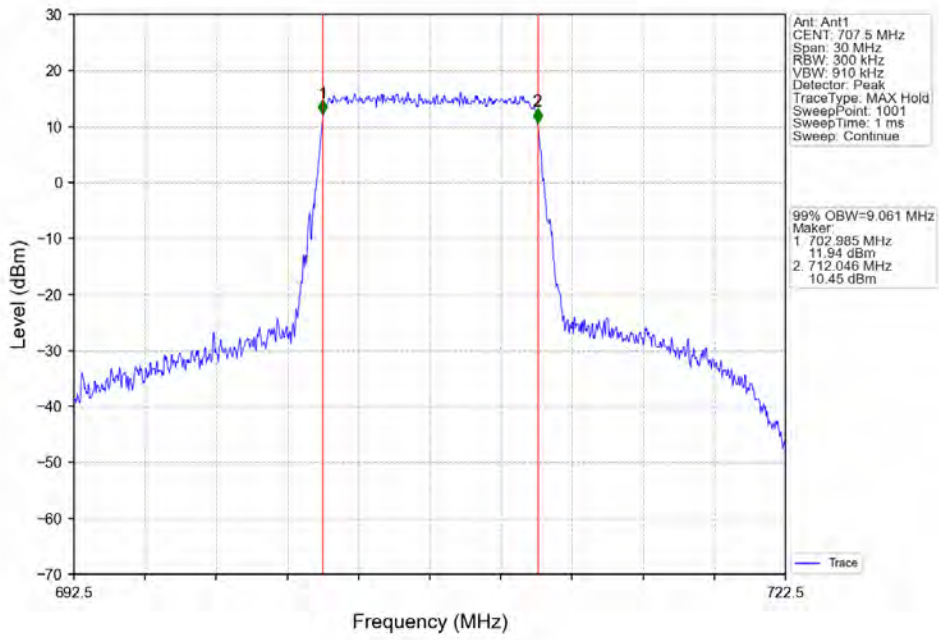
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



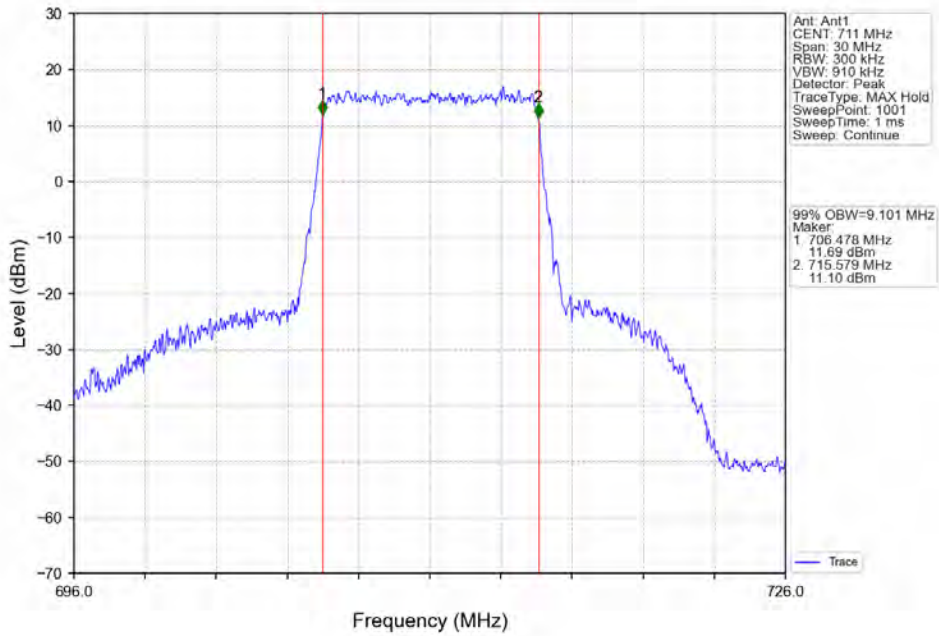
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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

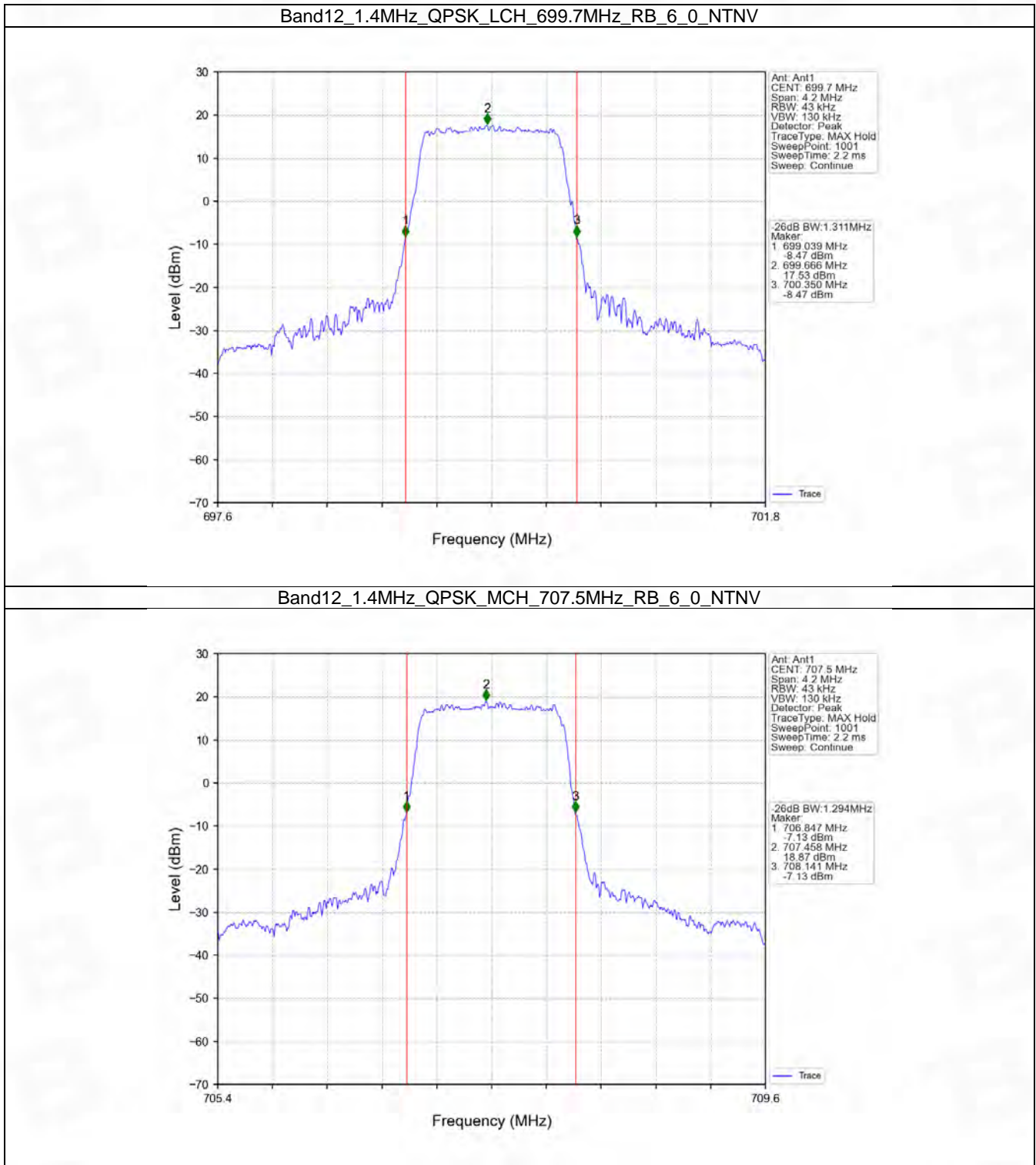


## 4.2 Band12\_XDB

### 4.2.1 Test Result

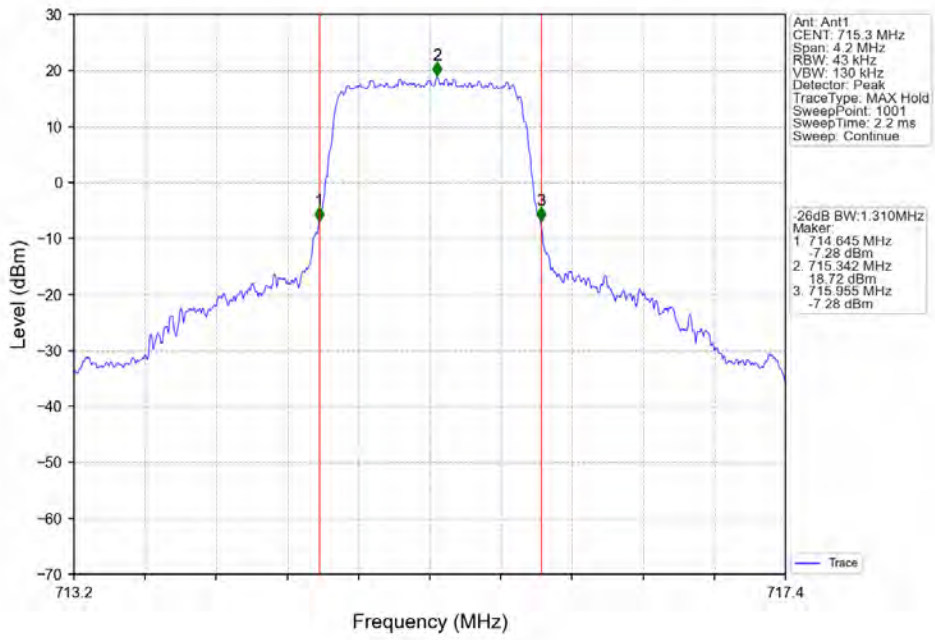
Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.311	/	Pass
		707.5	6	0	1.294	/	Pass
		715.3	6	0	1.310	/	Pass
	16QAM	699.7	6	0	1.309	/	Pass
		707.5	6	0	1.335	/	Pass
		715.3	6	0	1.317	/	Pass
3	QPSK	700.5	15	0	2.998	/	Pass
		707.5	15	0	2.977	/	Pass
		714.5	15	0	2.984	/	Pass
	16QAM	700.5	15	0	2.989	/	Pass
		707.5	15	0	2.997	/	Pass
		714.5	15	0	2.975	/	Pass
5	QPSK	701.5	25	0	5.157	/	Pass
		707.5	25	0	5.304	/	Pass
		713.5	25	0	5.226	/	Pass
	16QAM	701.5	25	0	5.294	/	Pass
		707.5	25	0	5.243	/	Pass
		713.5	25	0	5.354	/	Pass
10	QPSK	704	50	0	10.290	/	Pass
		707.5	50	0	10.236	/	Pass
		711	50	0	10.403	/	Pass
	16QAM	704	50	0	10.177	/	Pass
		707.5	50	0	10.324	/	Pass
		711	50	0	10.268	/	Pass

### 4.2.2 Test Graph

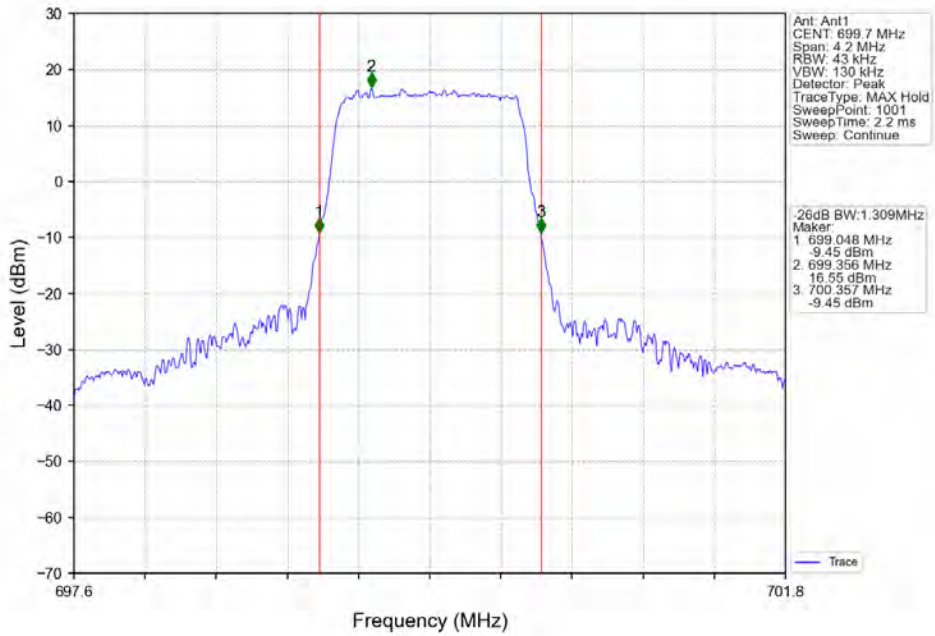




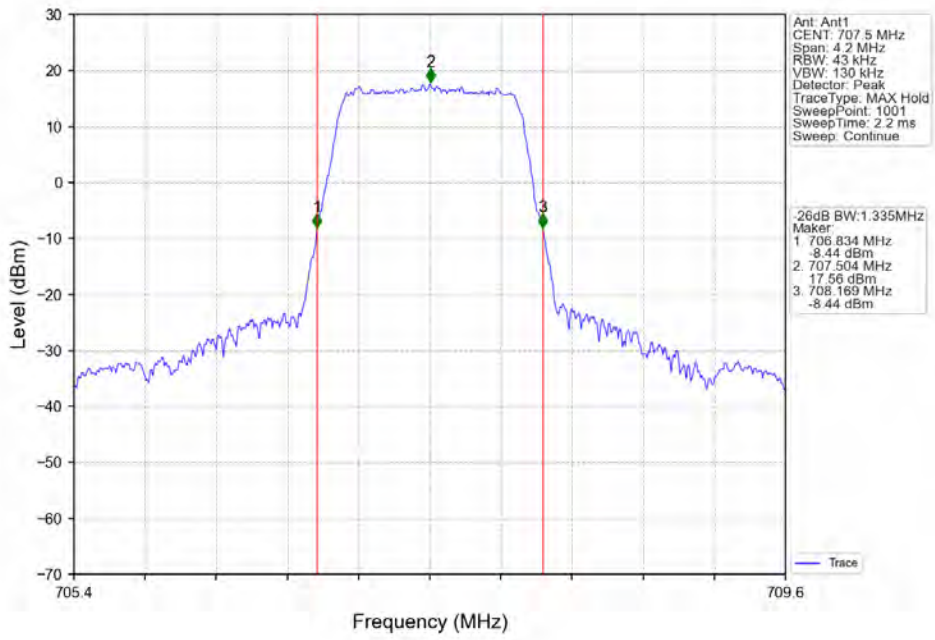
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



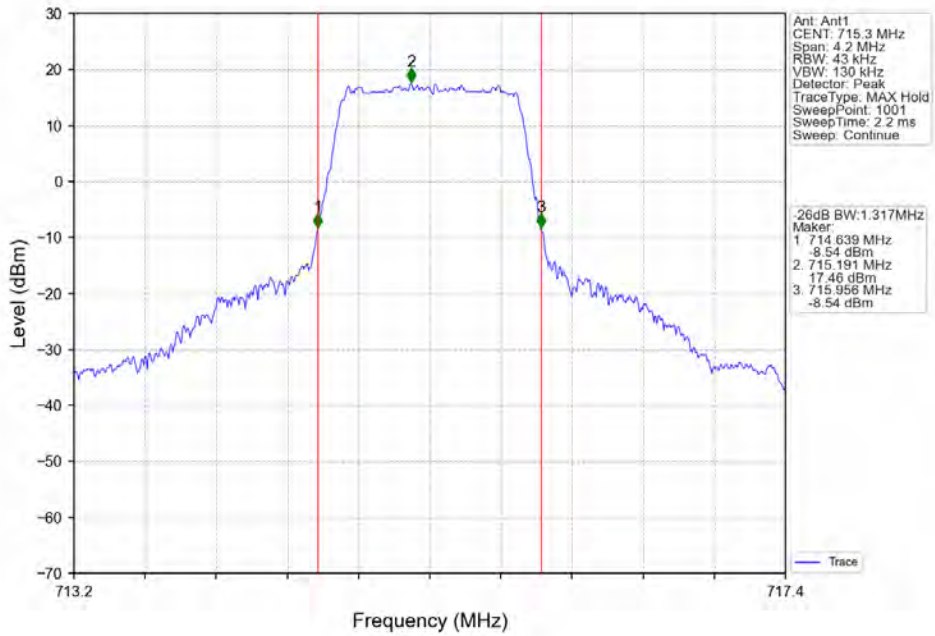
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



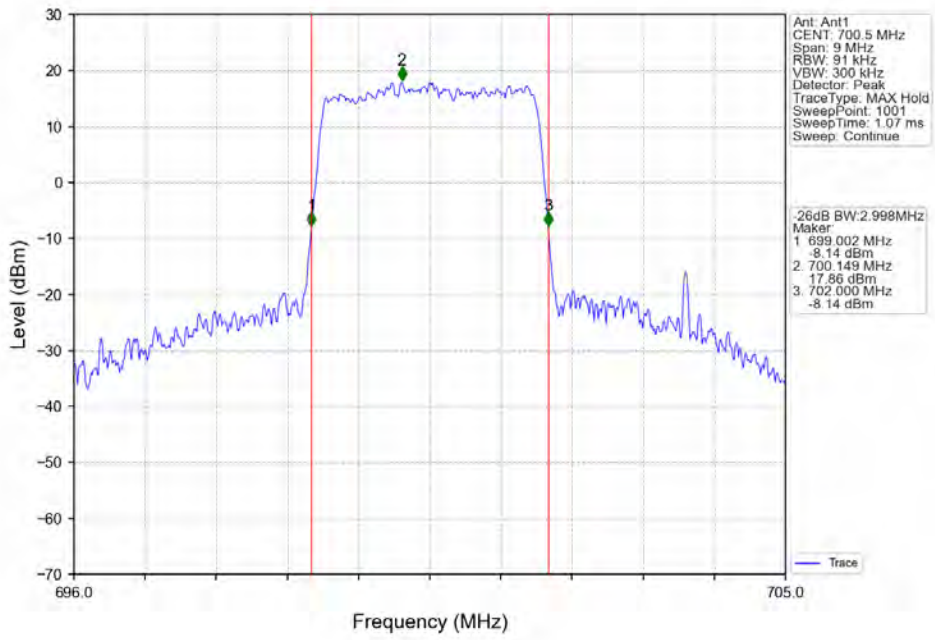
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



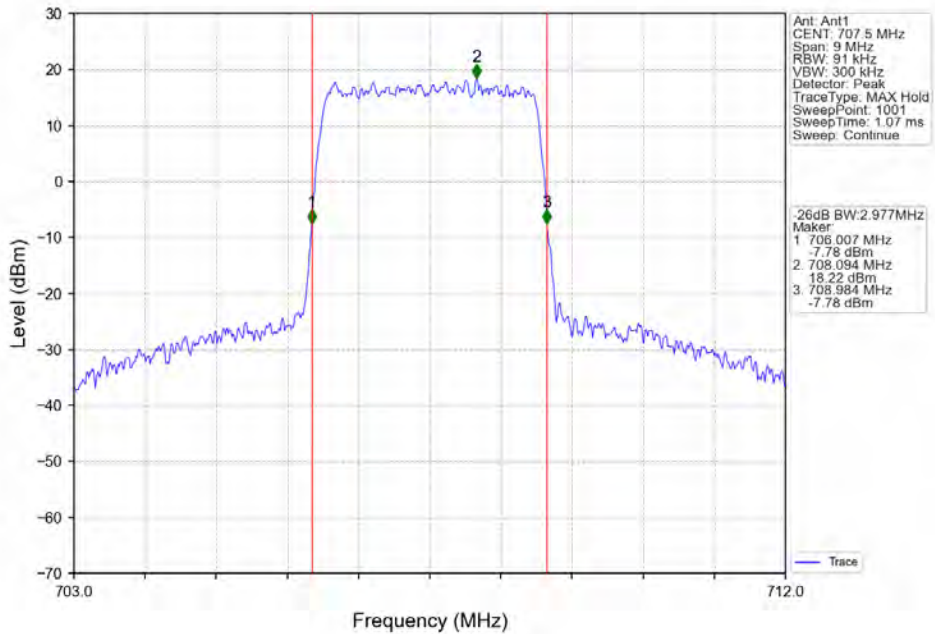
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



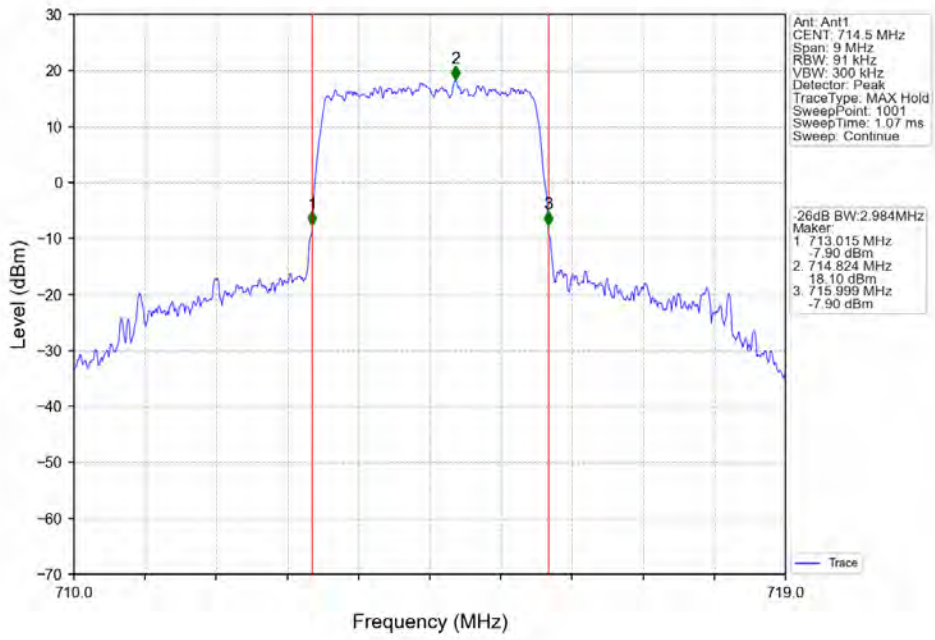
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



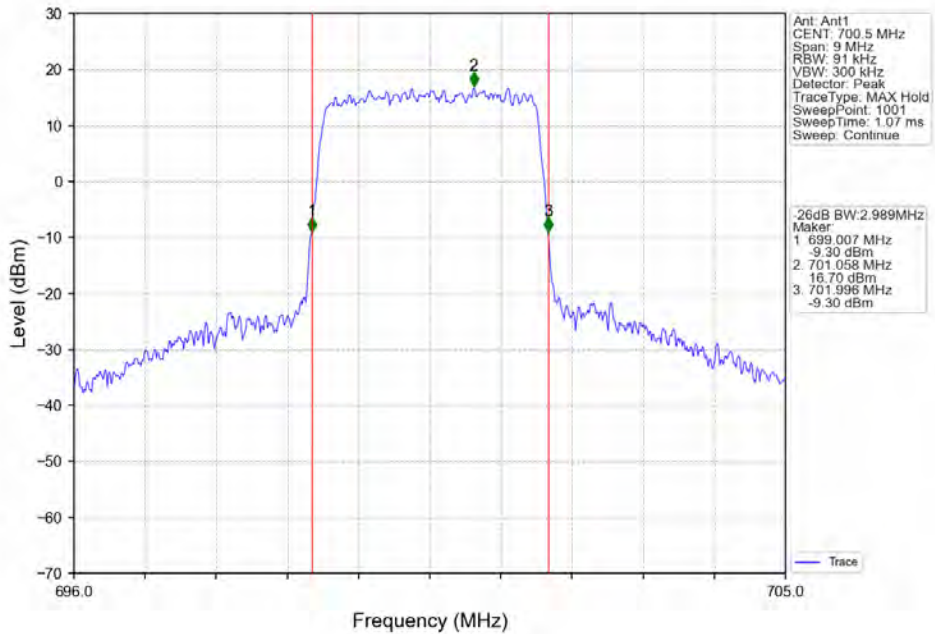
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



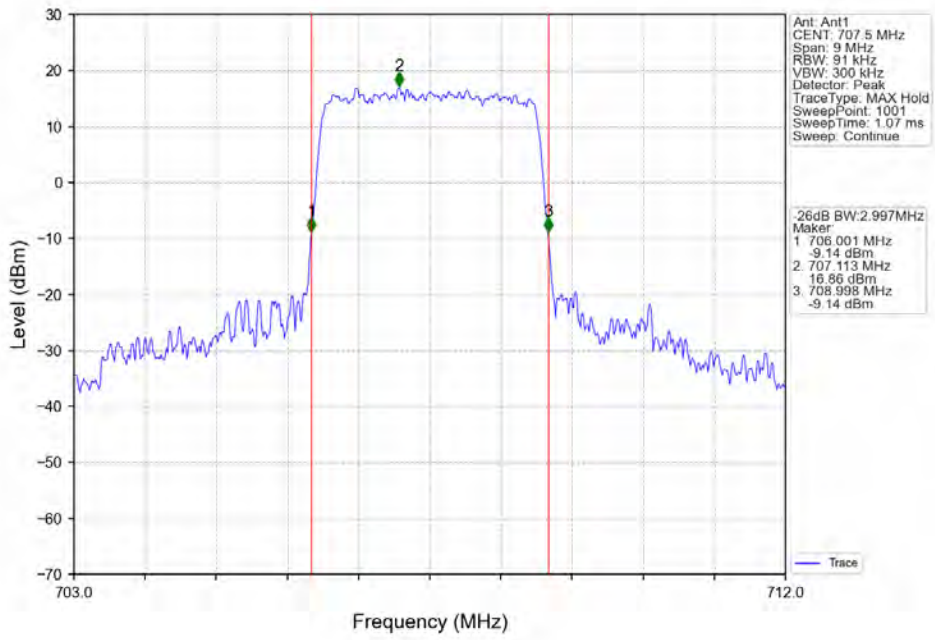
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



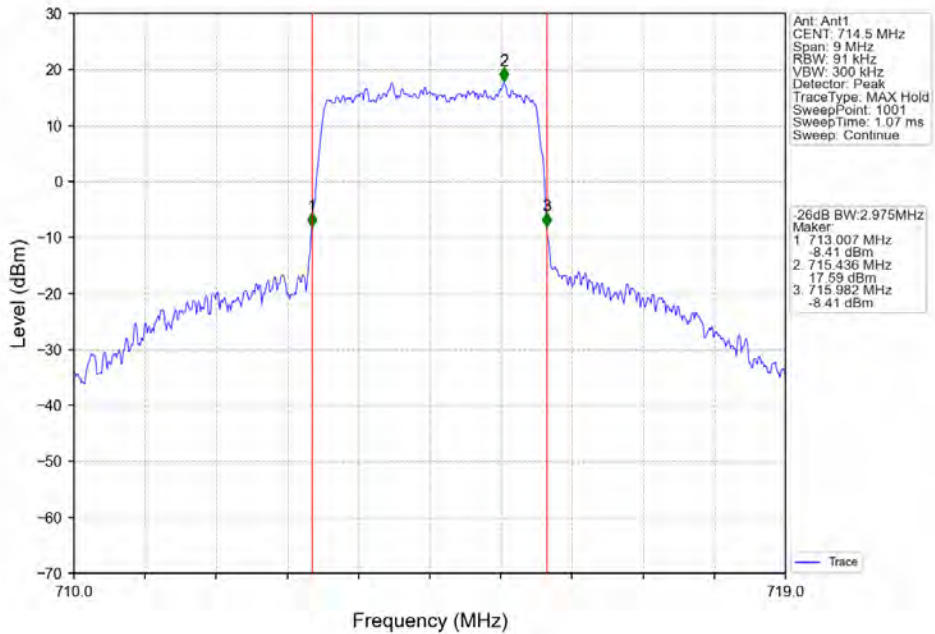
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



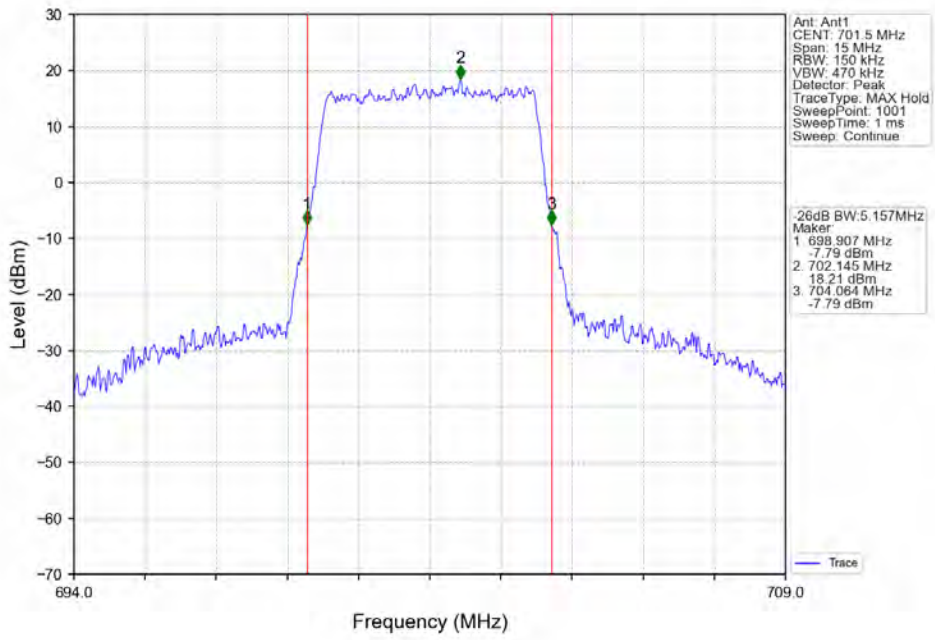
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



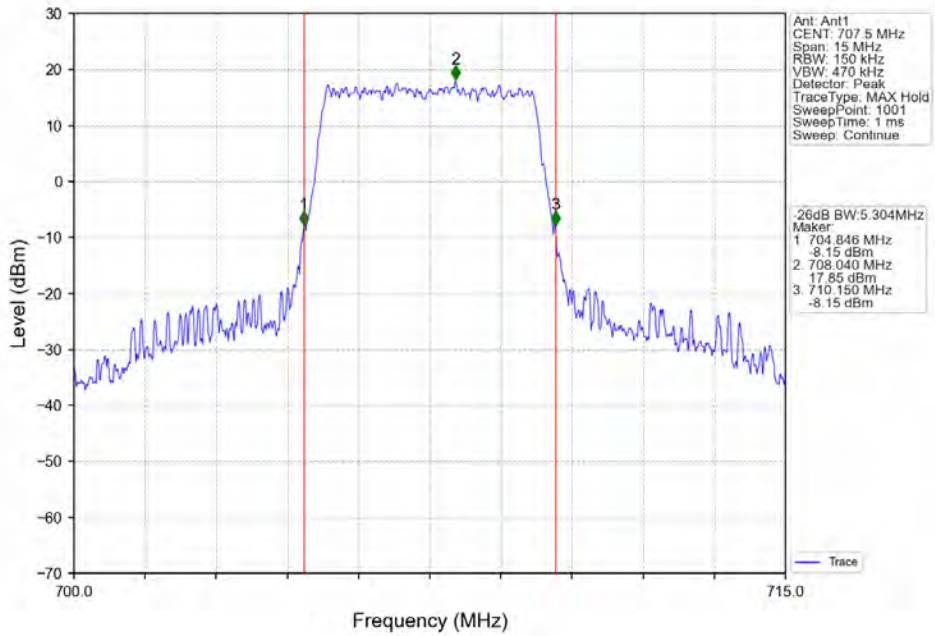
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



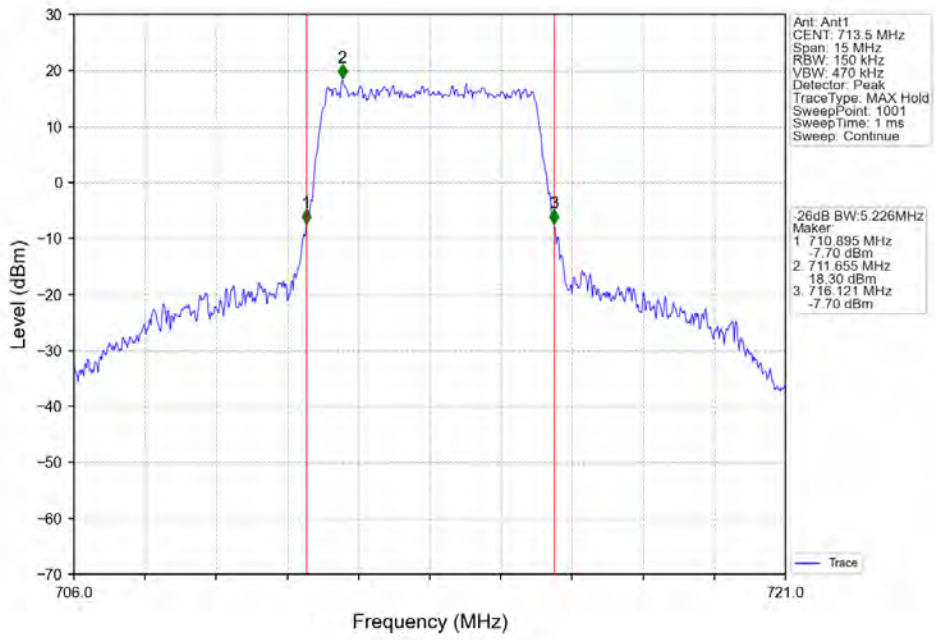
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



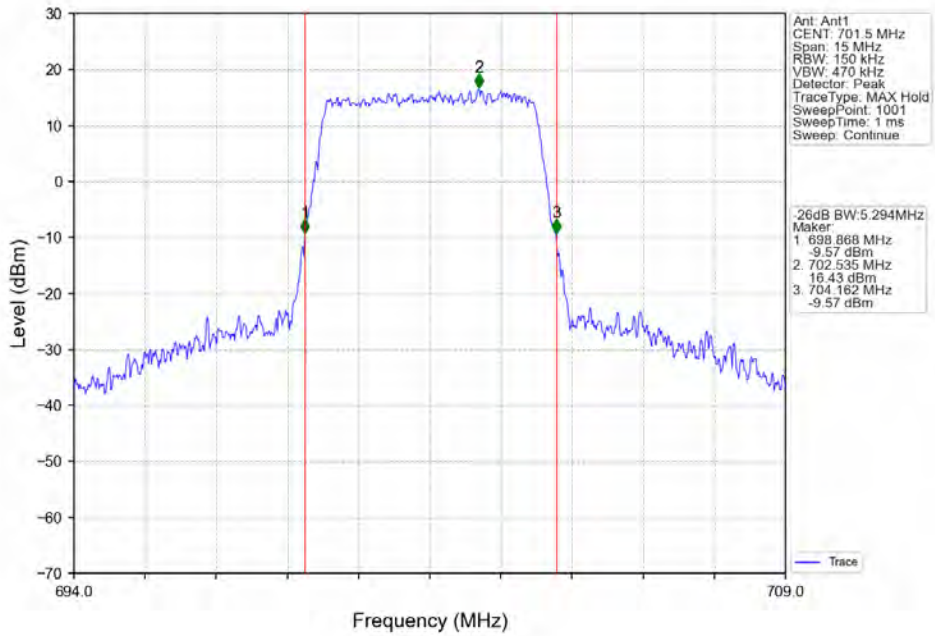
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



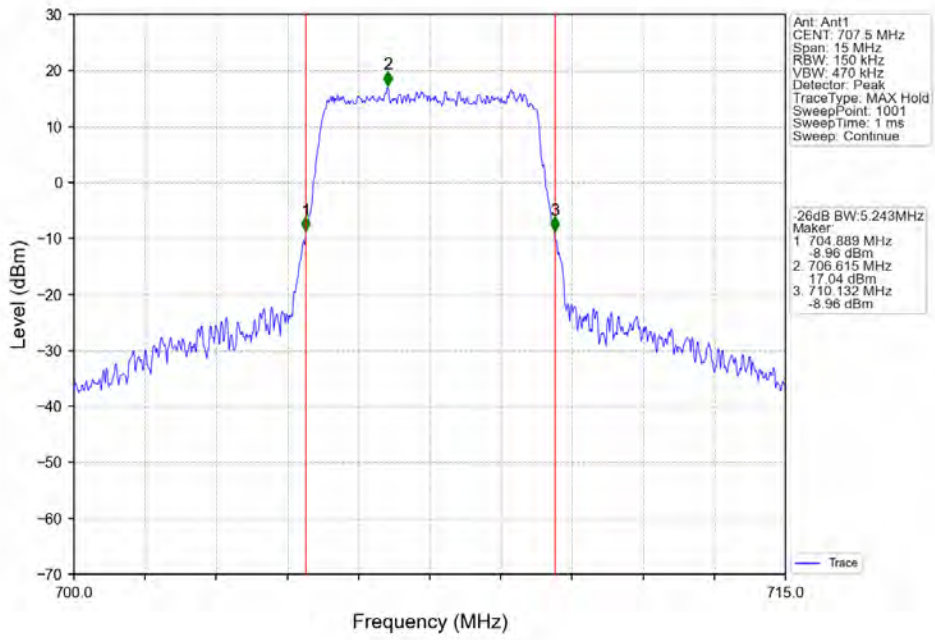
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



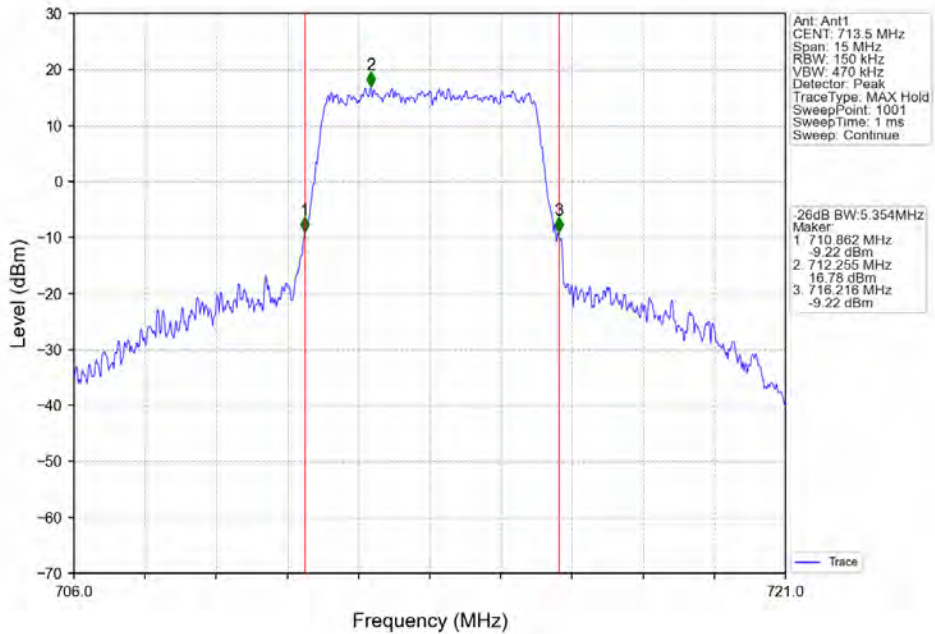
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



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

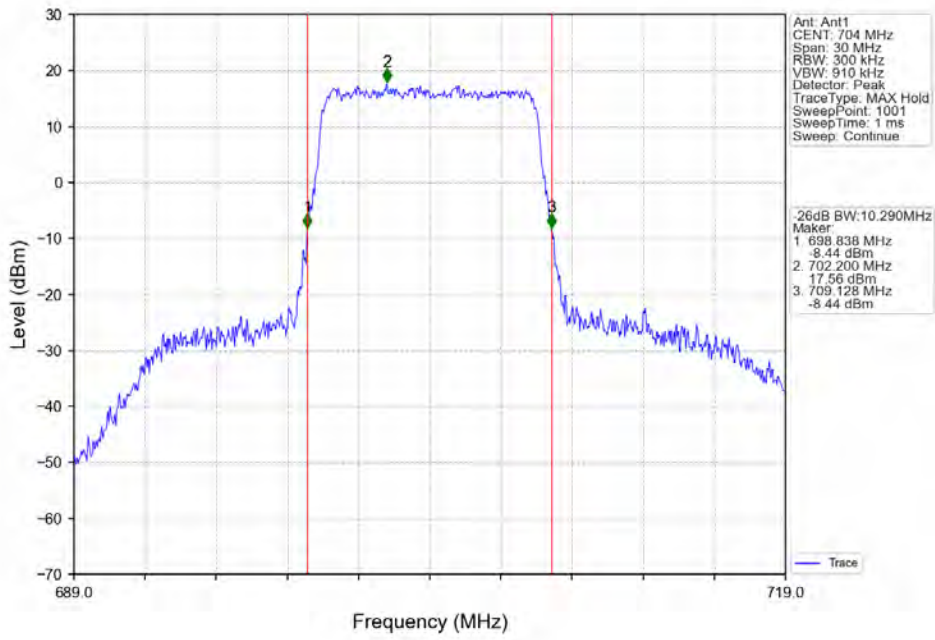


Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV

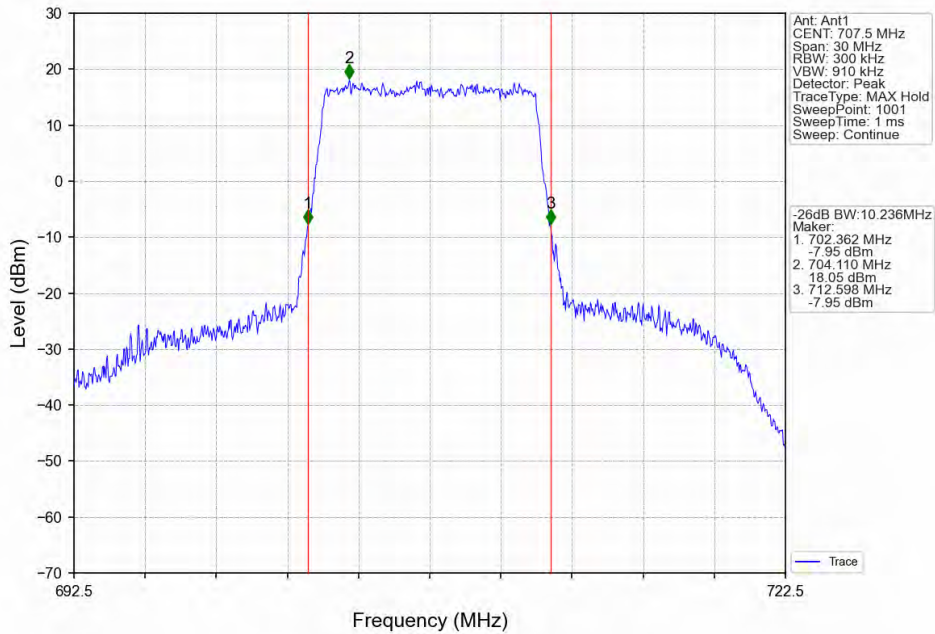




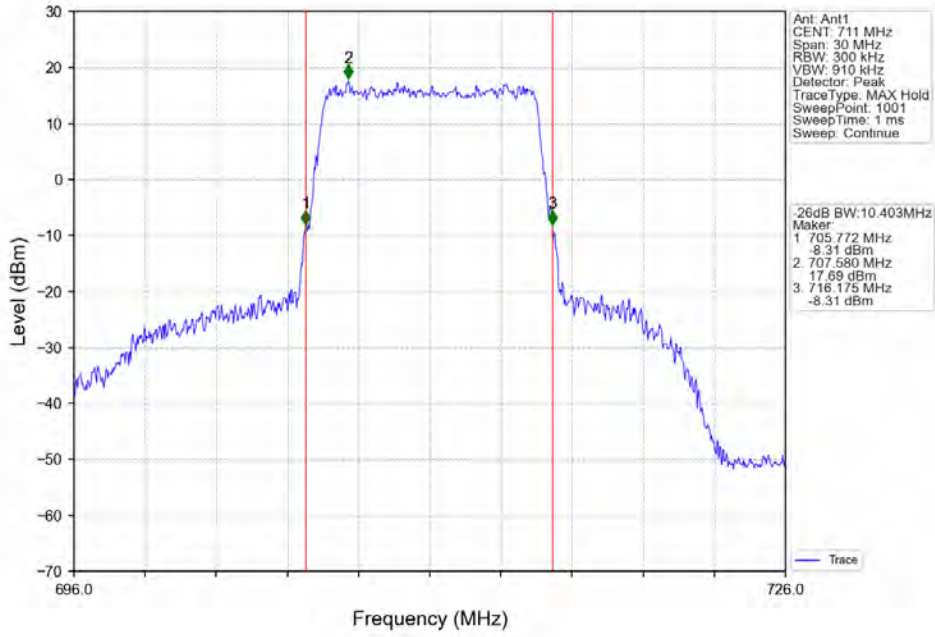
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



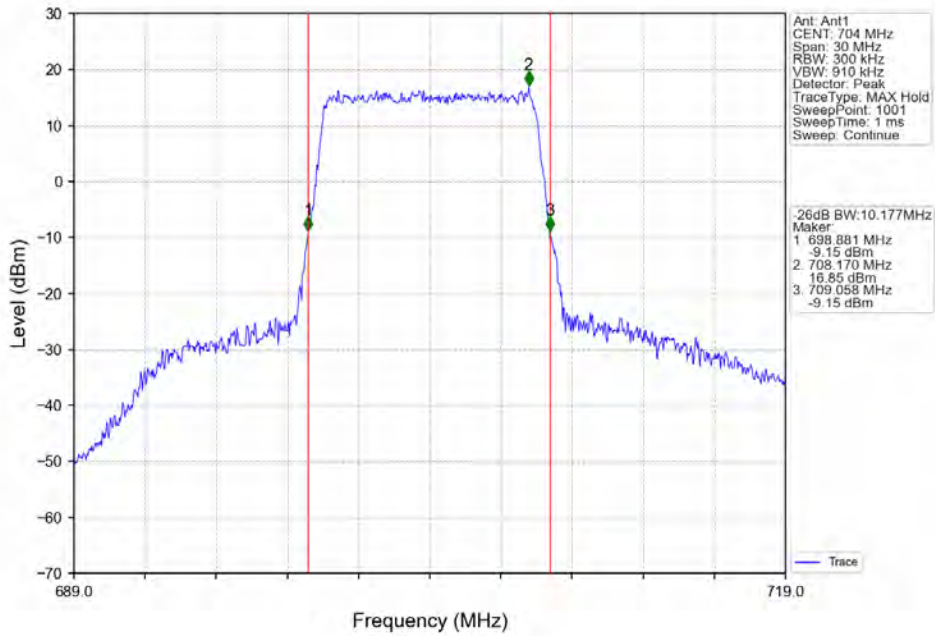
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



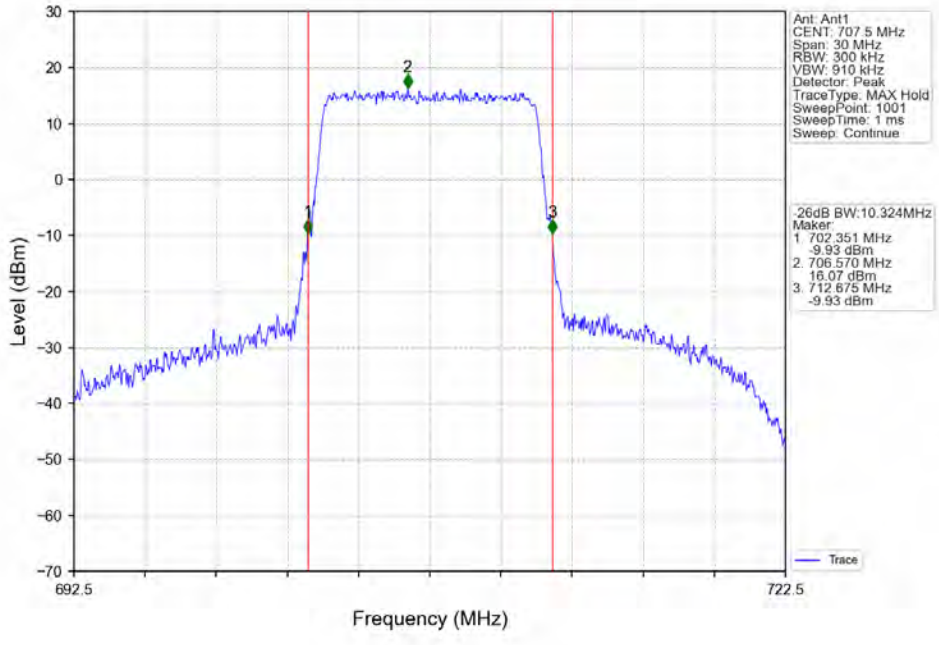
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



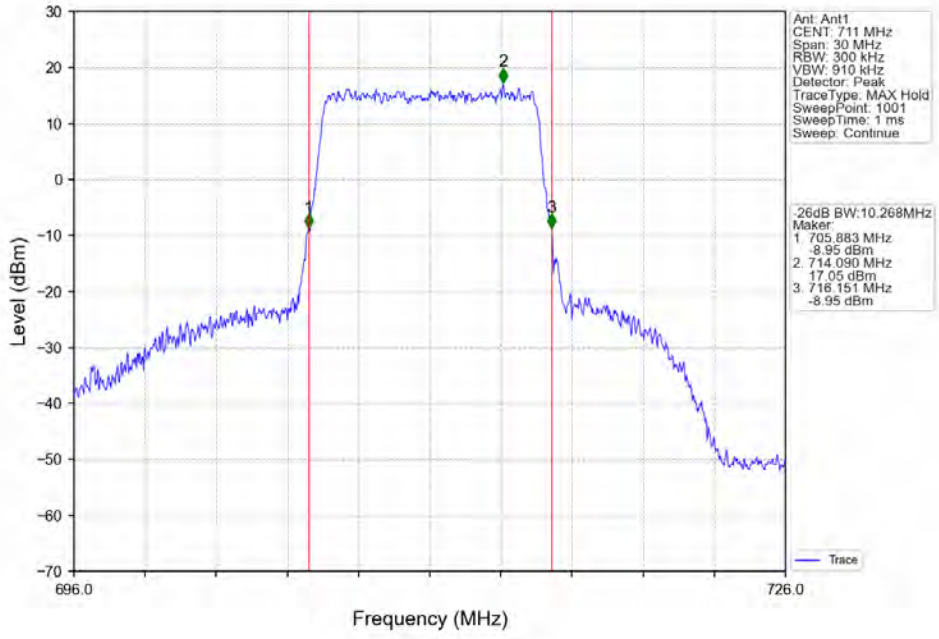
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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



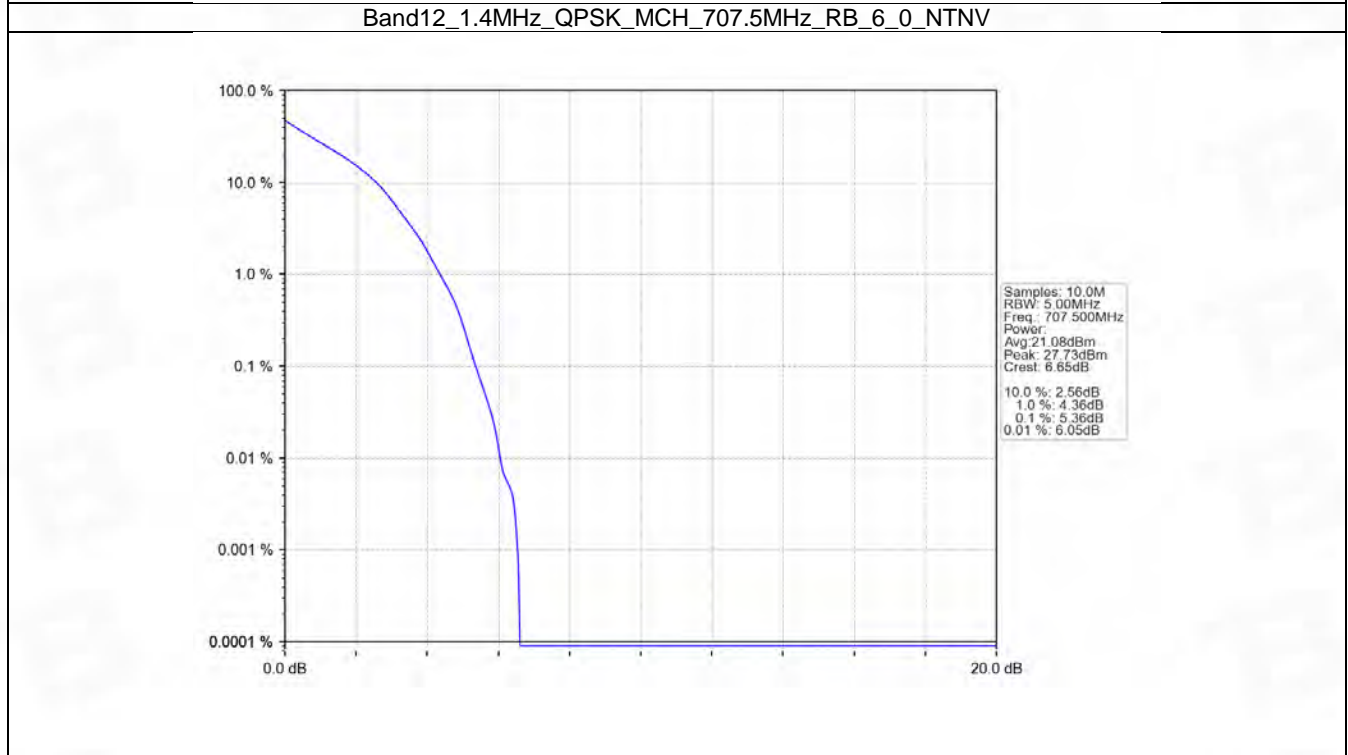
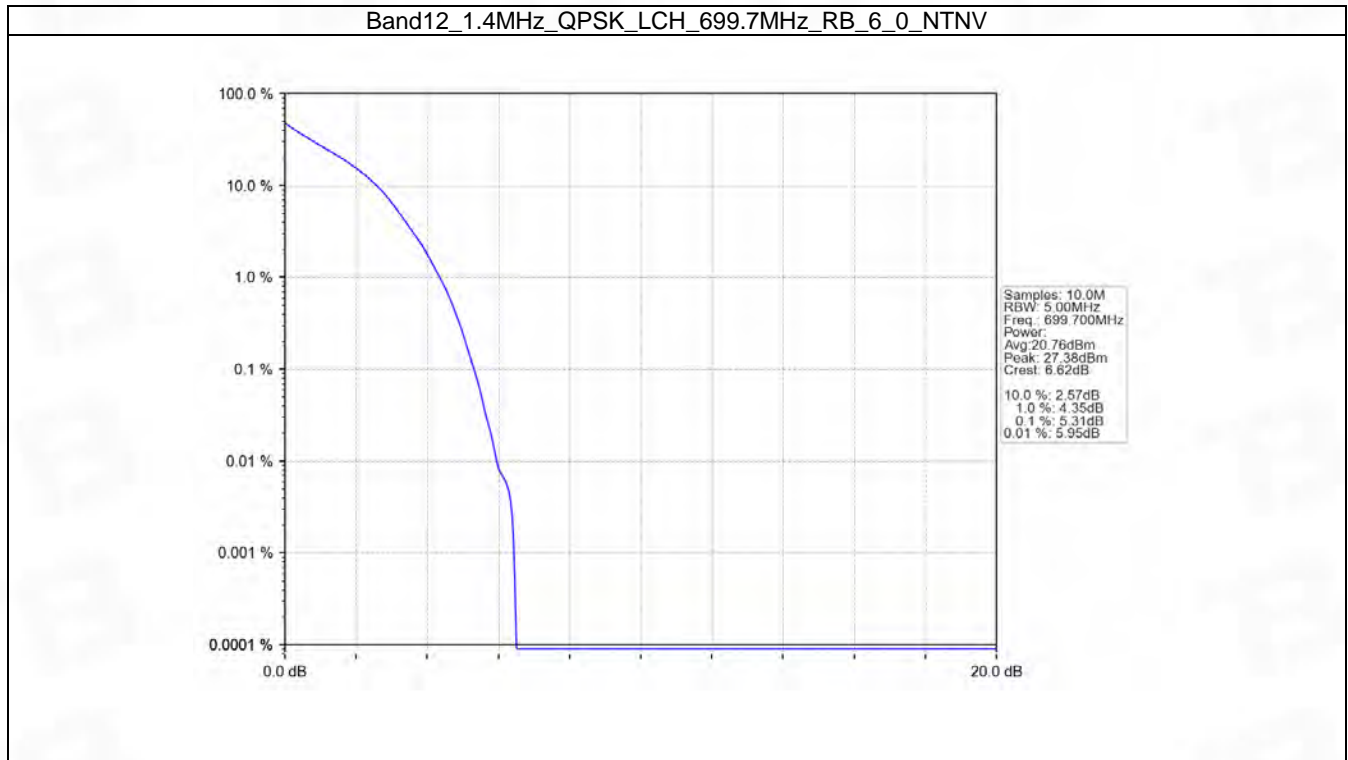
## 5. Peak-Average Ratio

### 5.1 B12\_1.4MHz

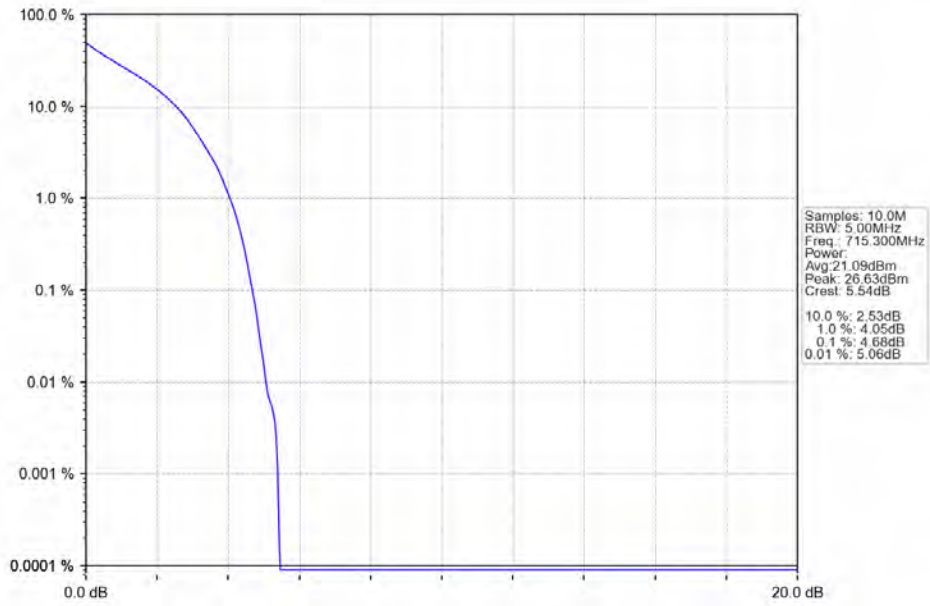
#### 5.1.1 Test Result

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	5.31	<=13	Pass
	707.5	6	0	5.36	<=13	Pass
	715.3	6	0	4.68	<=13	Pass
16QAM	699.7	6	0	6.04	<=13	Pass
	707.5	6	0	6.21	<=13	Pass
	715.3	6	0	5.48	<=13	Pass

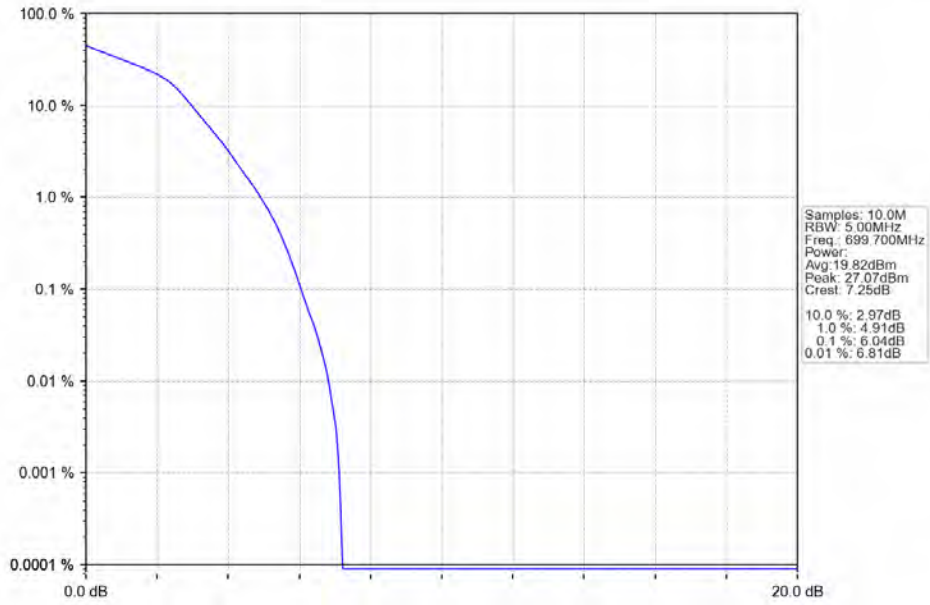
### 5.1.2 Test Graph



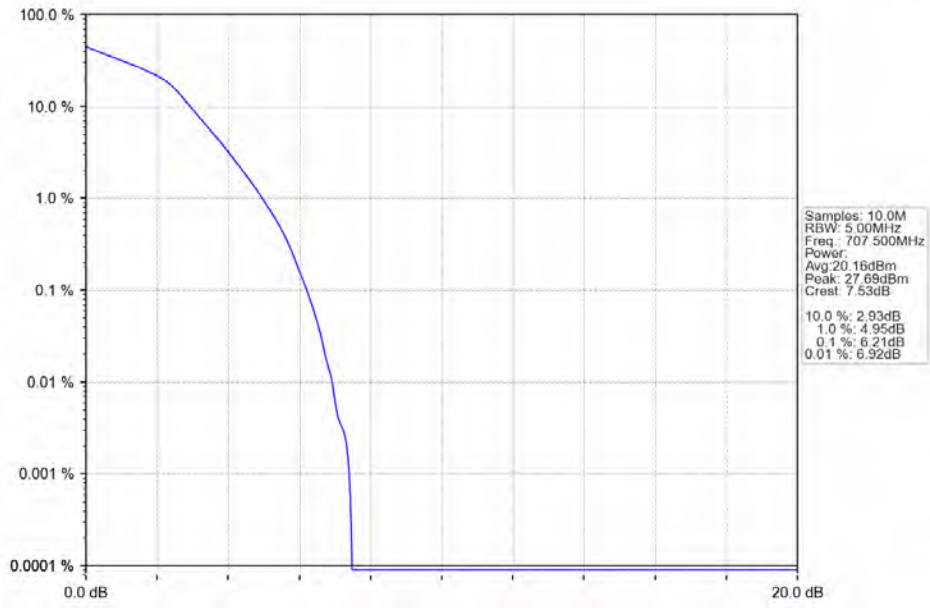
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



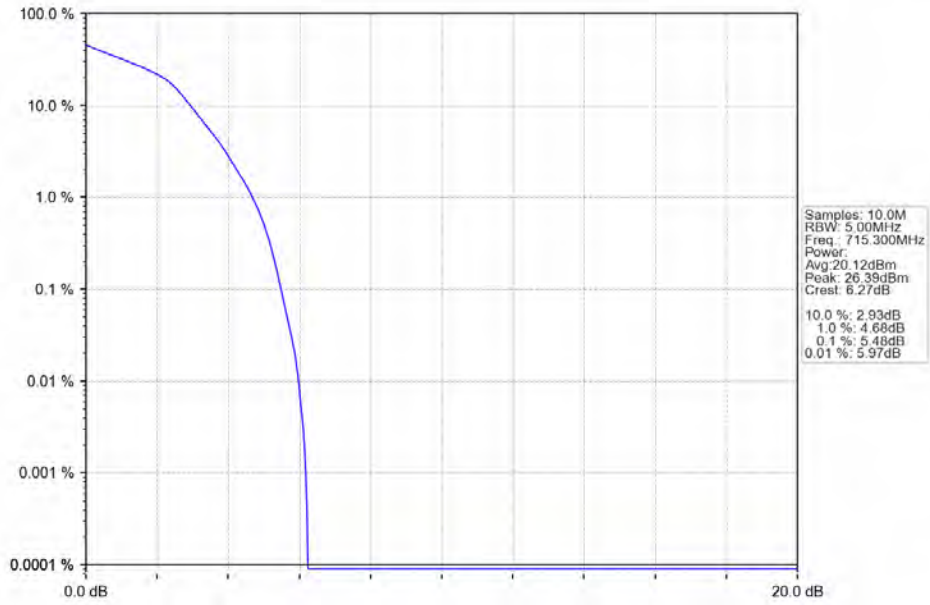
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



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



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



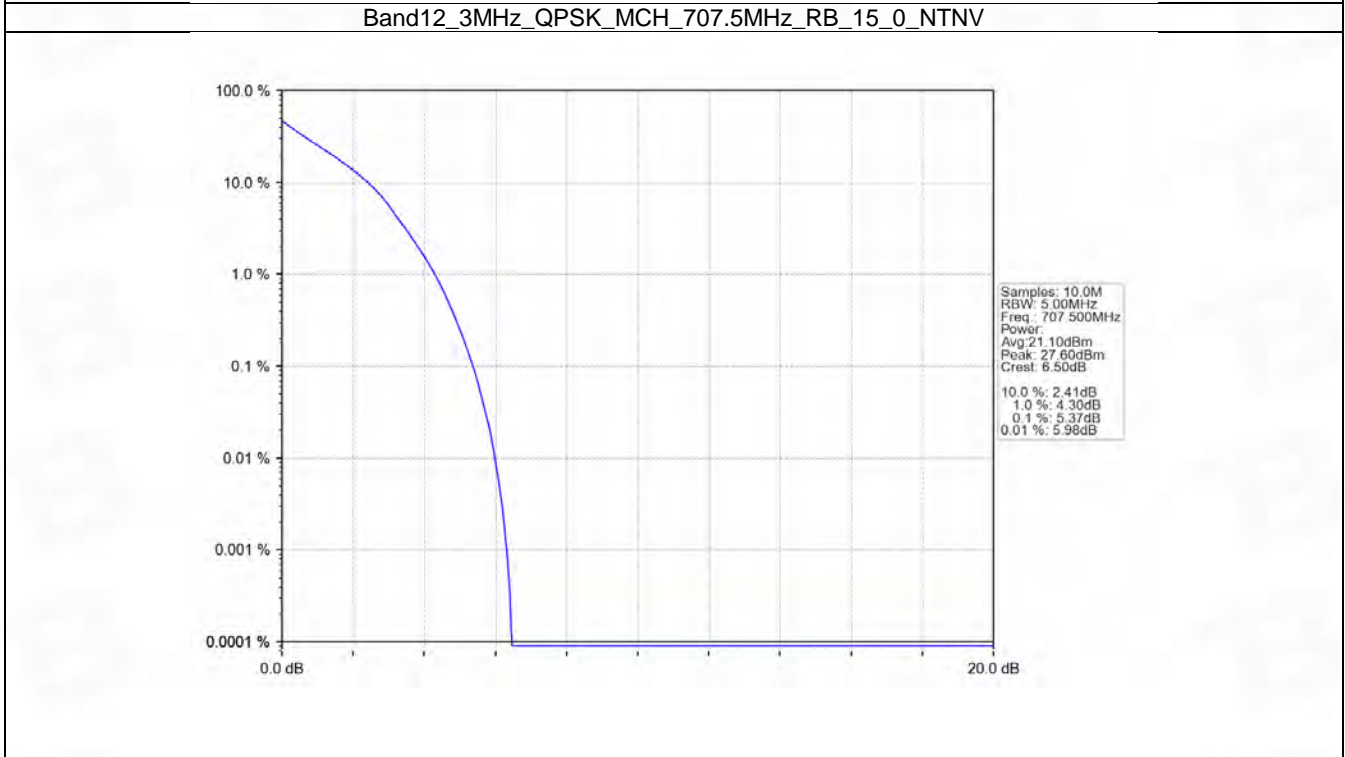
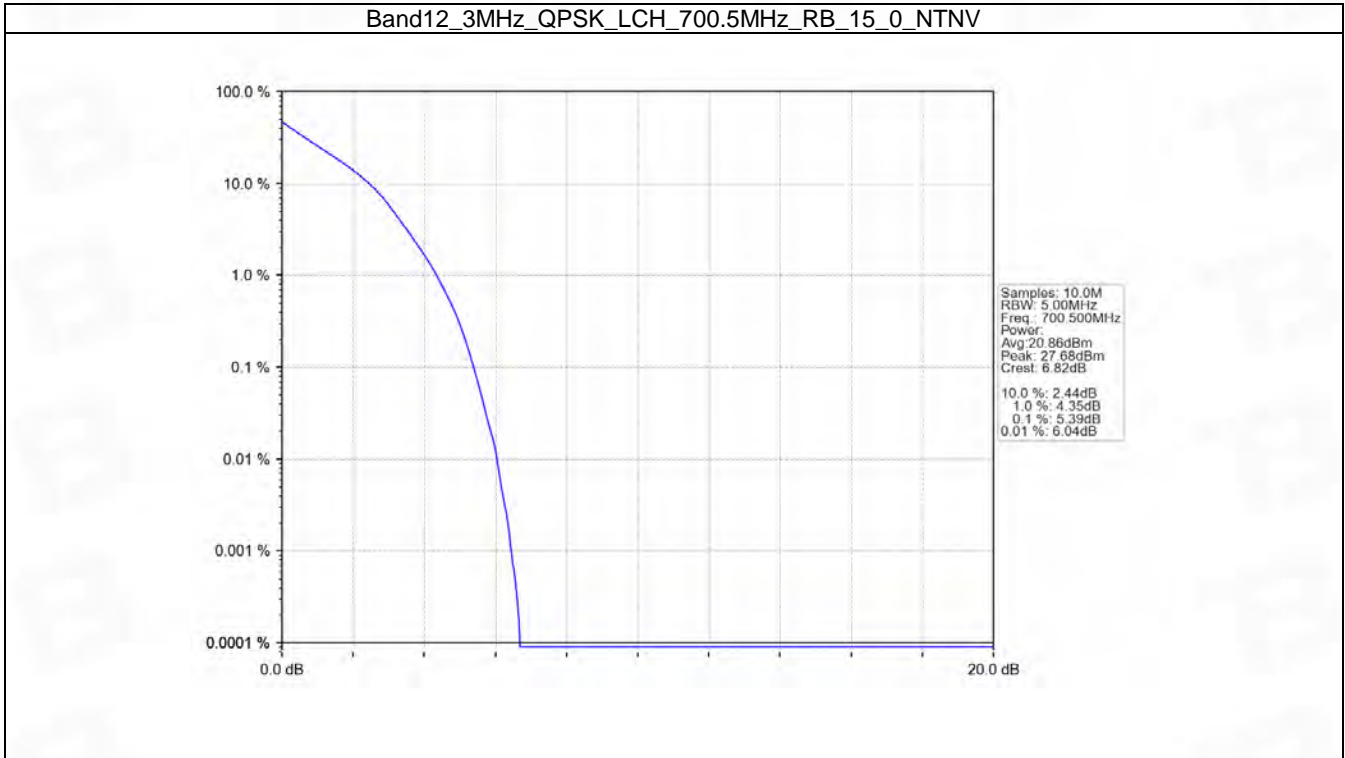
## 5.2 B12\_3MHz

### 5.2.1 Test Result

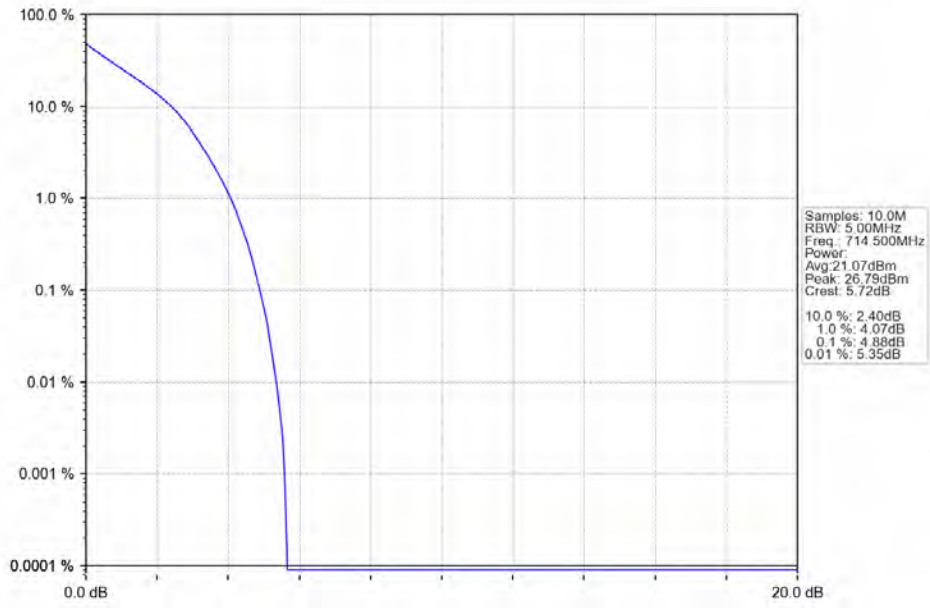
Band: 12 / Bandwidth: 3MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.39	<=13	Pass
	707.5	15	0	5.37	<=13	Pass
	714.5	15	0	4.88	<=13	Pass
16QAM	700.5	15	0	6.17	<=13	Pass
	707.5	15	0	6.21	<=13	Pass
	714.5	15	0	5.69	<=13	Pass



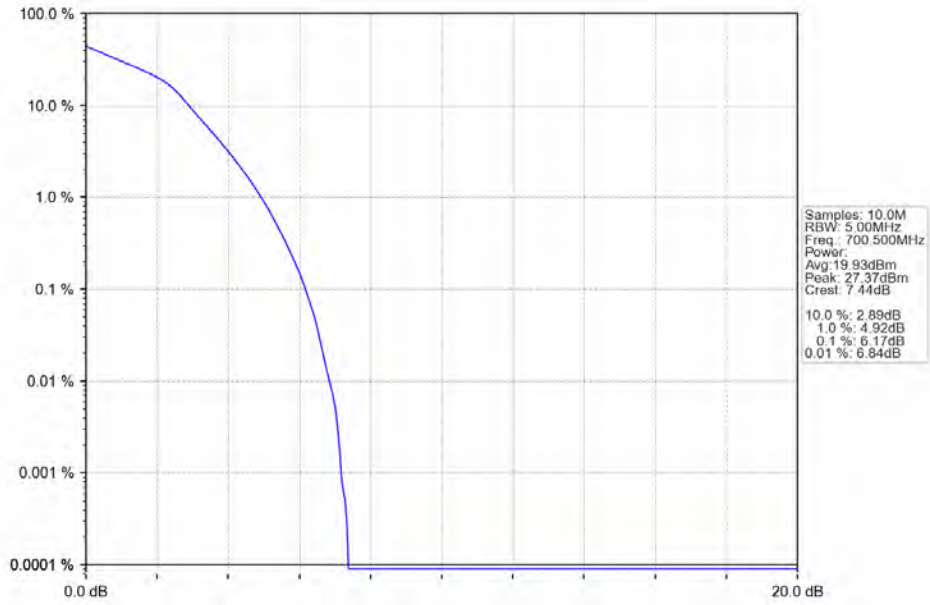
### 5.2.2 Test Graph



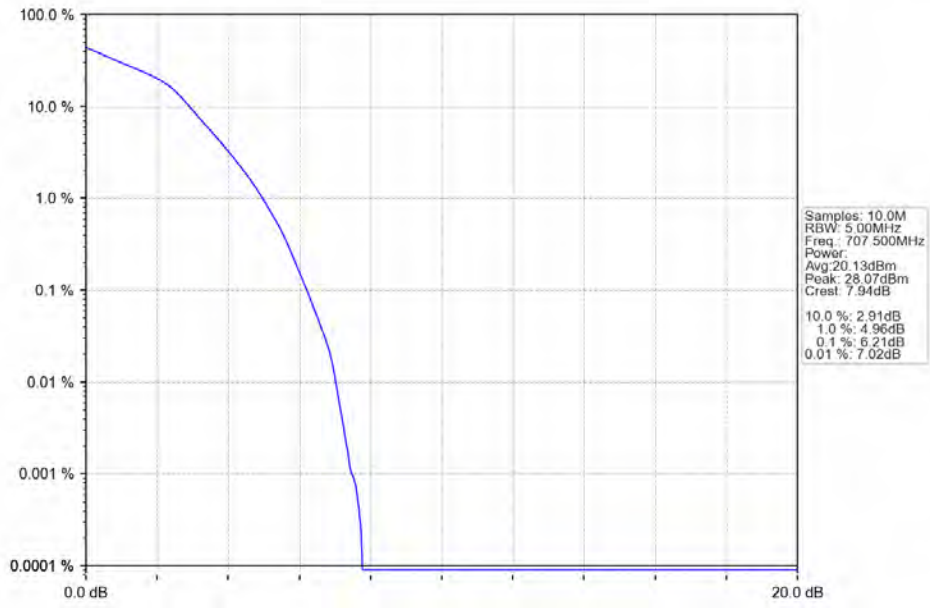
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



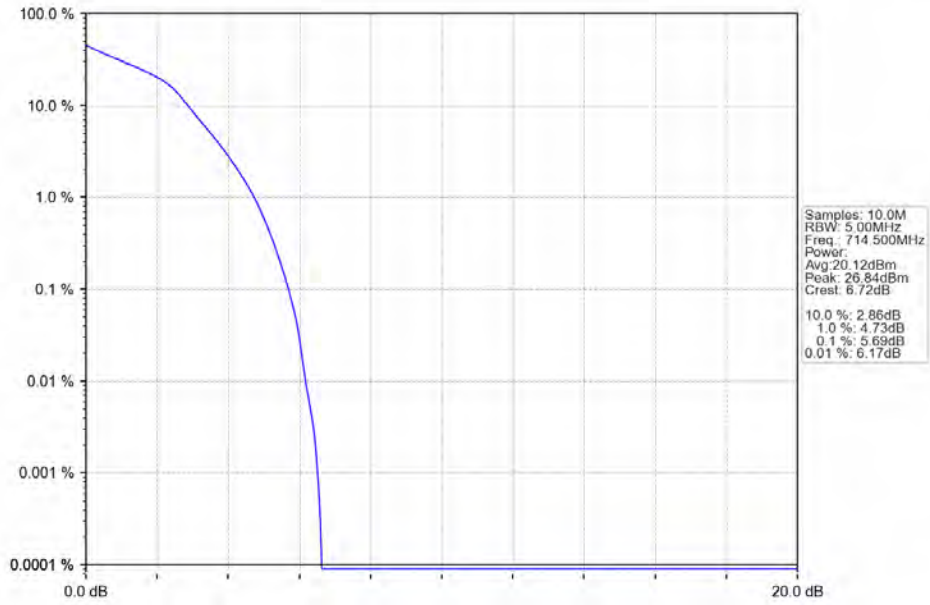
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



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



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

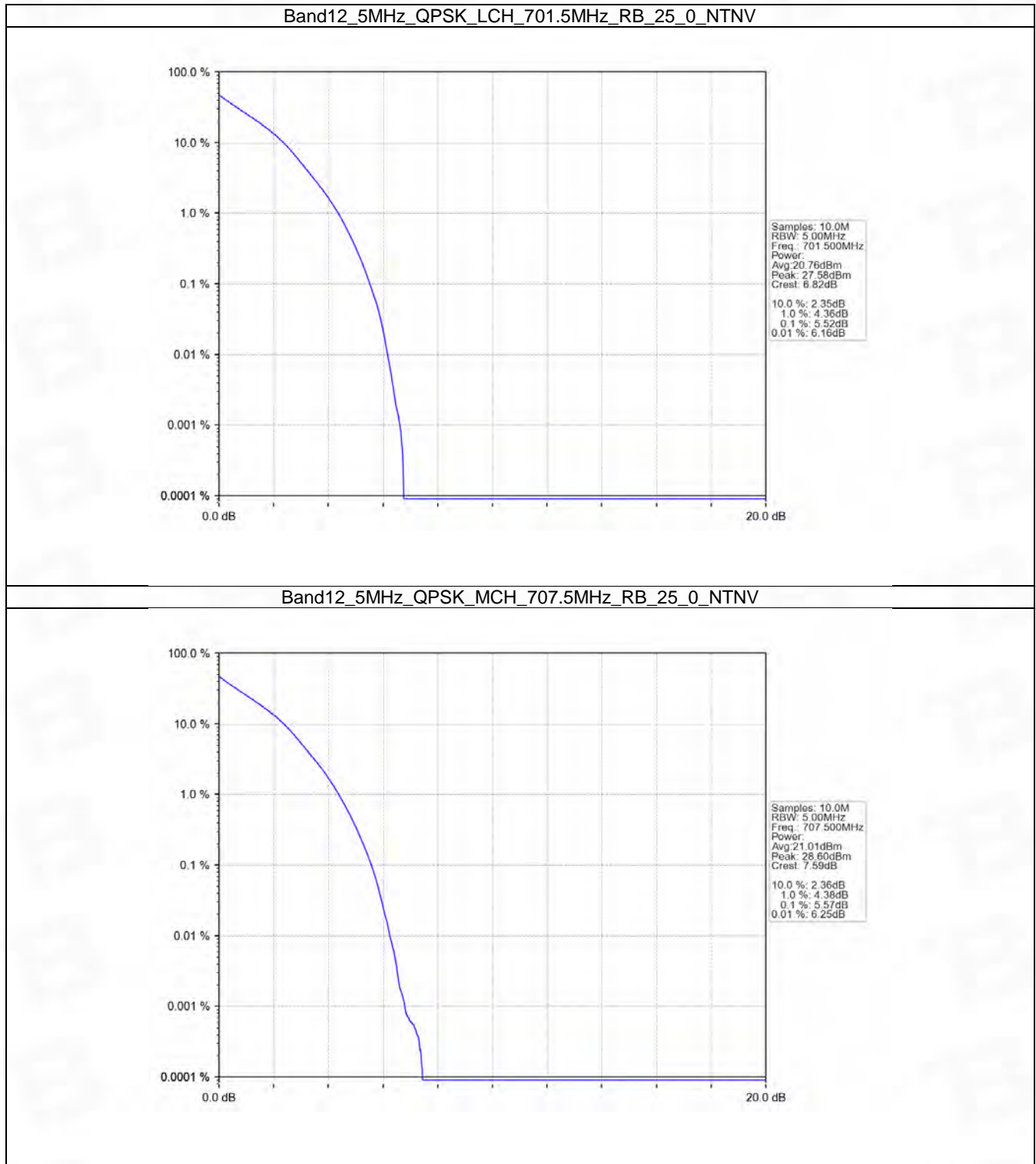


## 5.3 B12\_5MHz

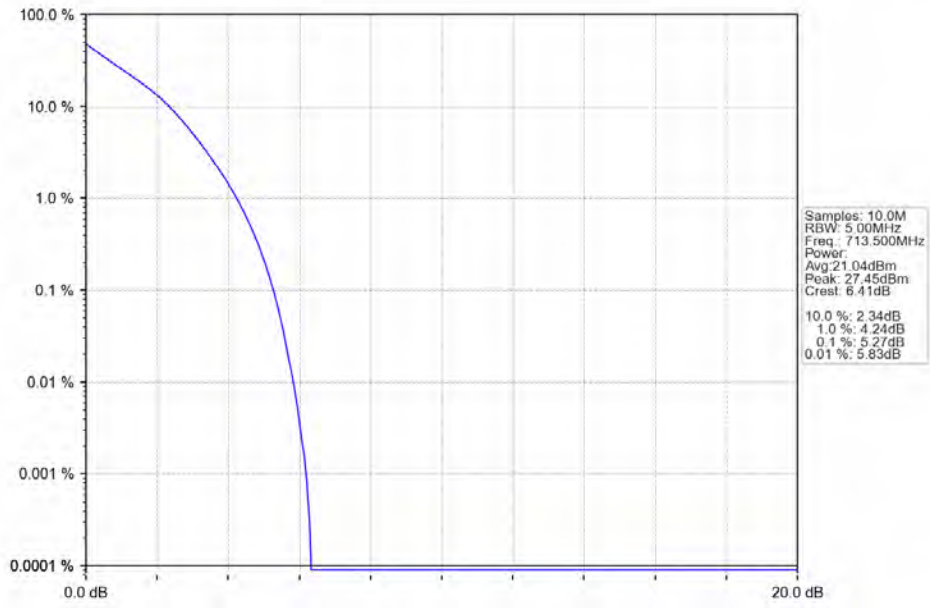
### 5.3.1 Test Result

Band: 12 / Bandwidth: 5MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.52	<=13	Pass
	707.5	25	0	5.57	<=13	Pass
	713.5	25	0	5.27	<=13	Pass
16QAM	701.5	25	0	6.23	<=13	Pass
	707.5	25	0	6.25	<=13	Pass
	713.5	25	0	5.94	<=13	Pass

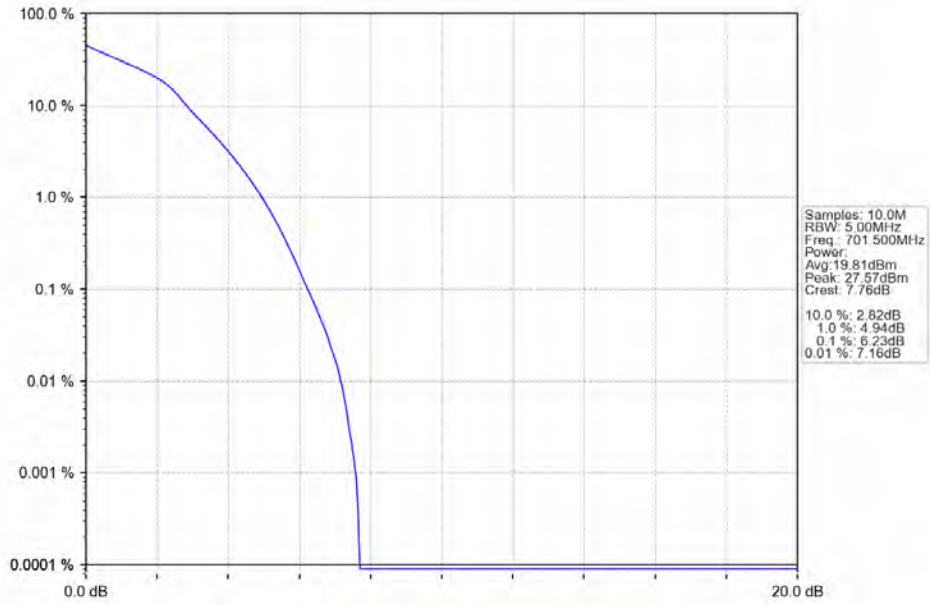
### 5.3.2 Test Graph



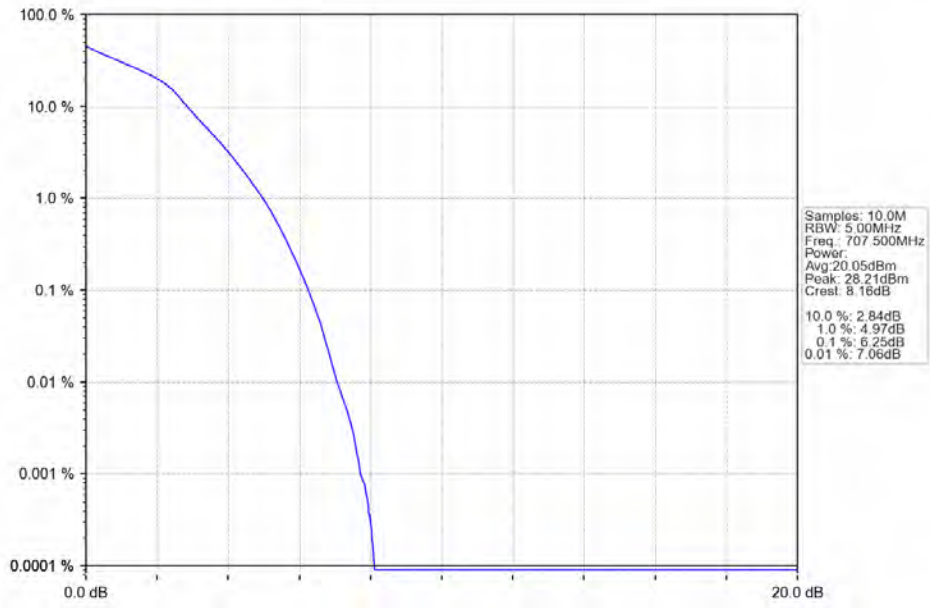
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



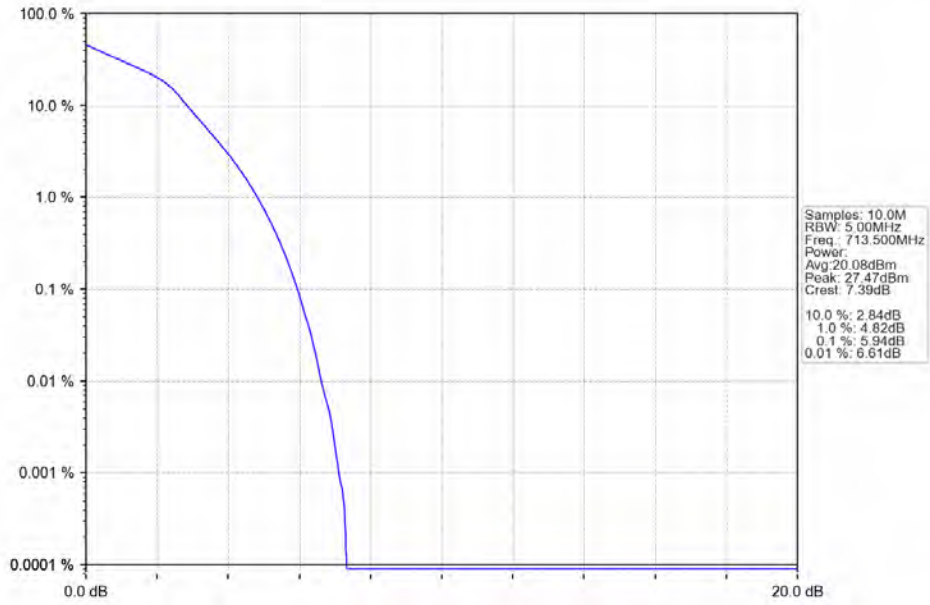
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



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



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



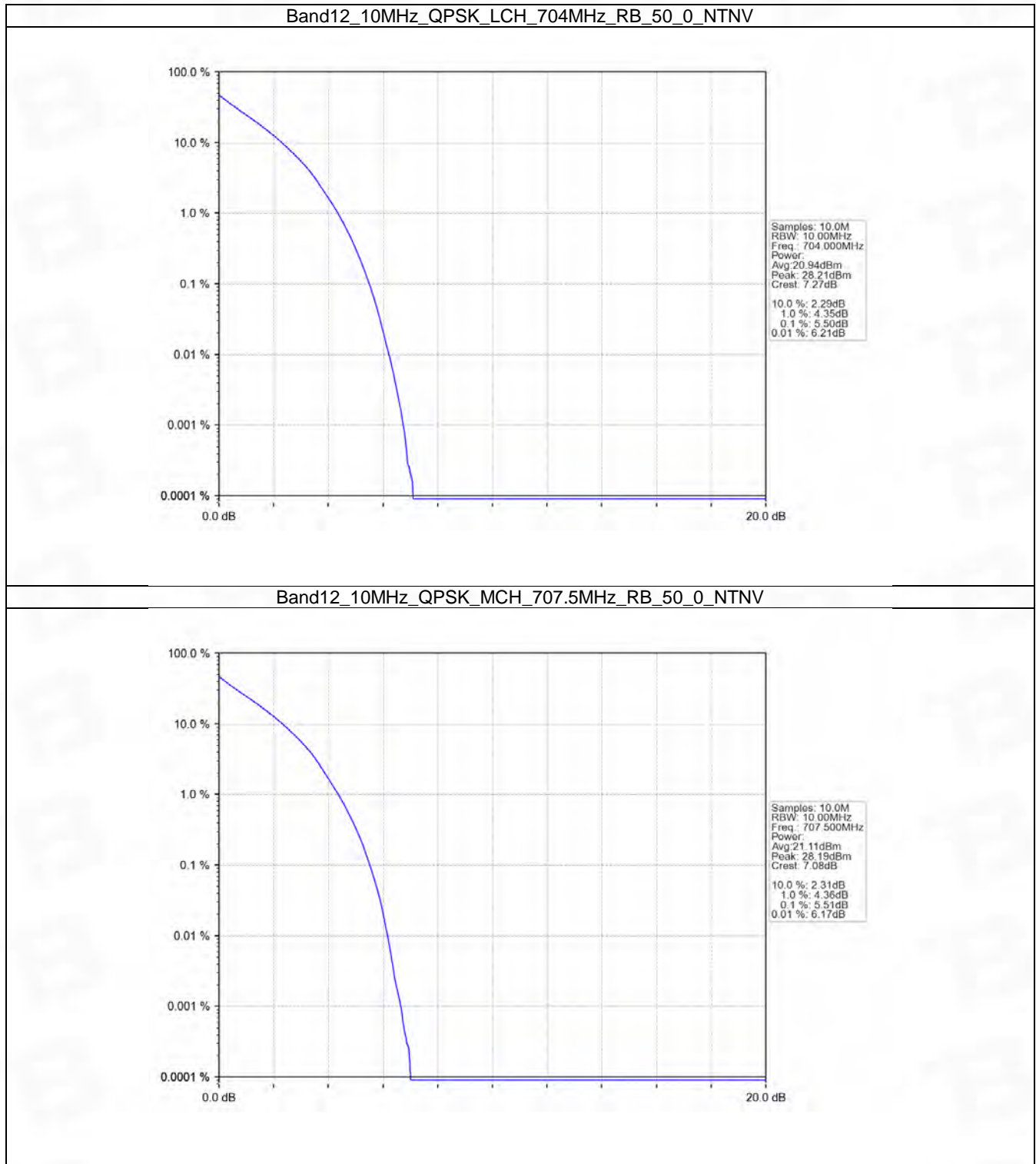
## 5.4 B12\_10MHz

### 5.4.1 Test Result

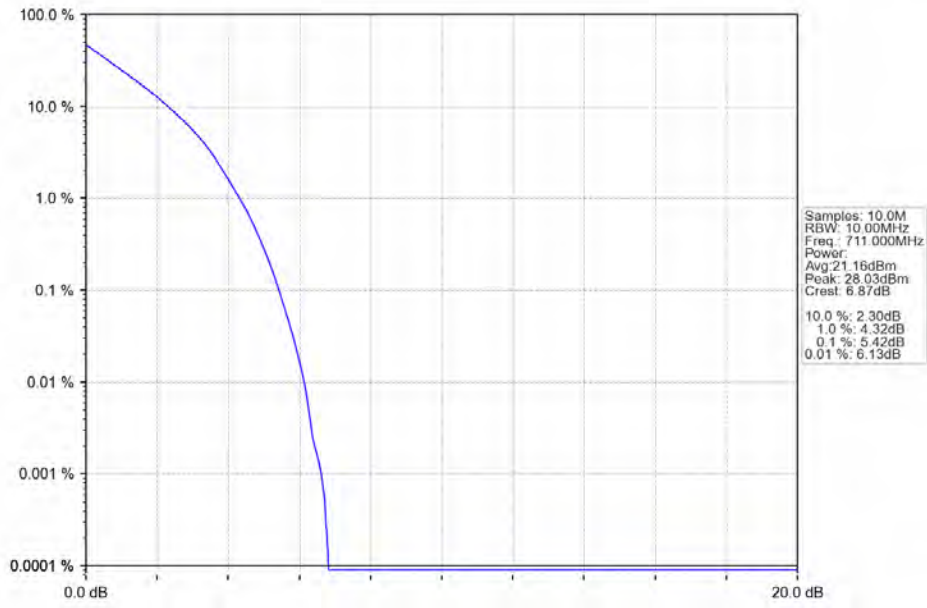
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.50	<=13	Pass
	707.5	50	0	5.51	<=13	Pass
	711	50	0	5.42	<=13	Pass
16QAM	704	50	0	6.25	<=13	Pass
	707.5	50	0	6.27	<=13	Pass
	711	50	0	6.12	<=13	Pass



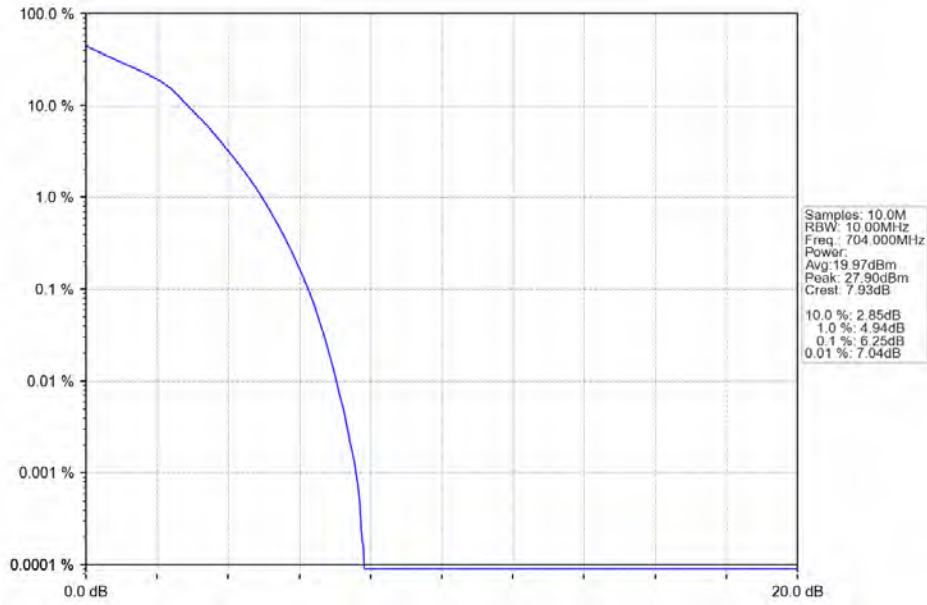
### 5.4.2 Test Graph



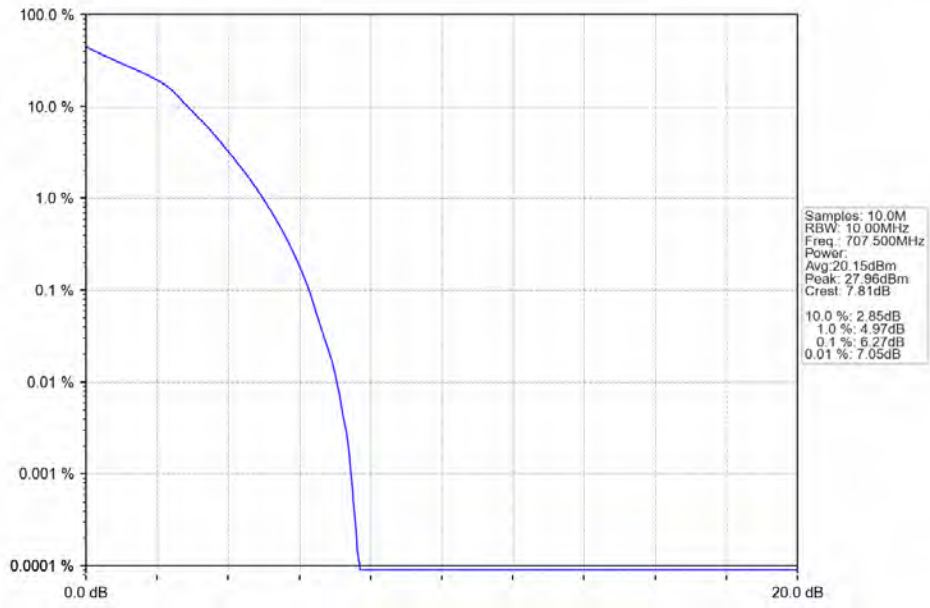
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



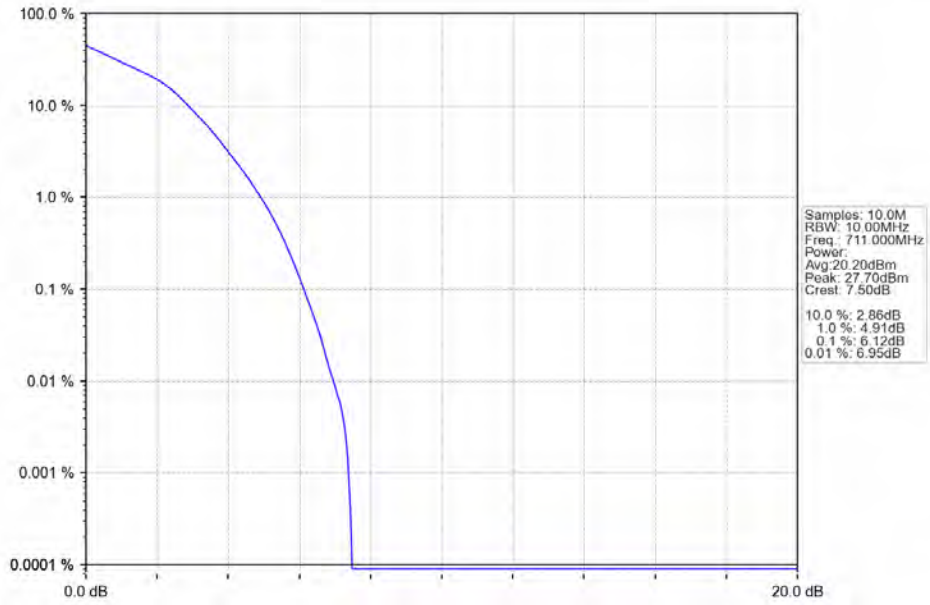
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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



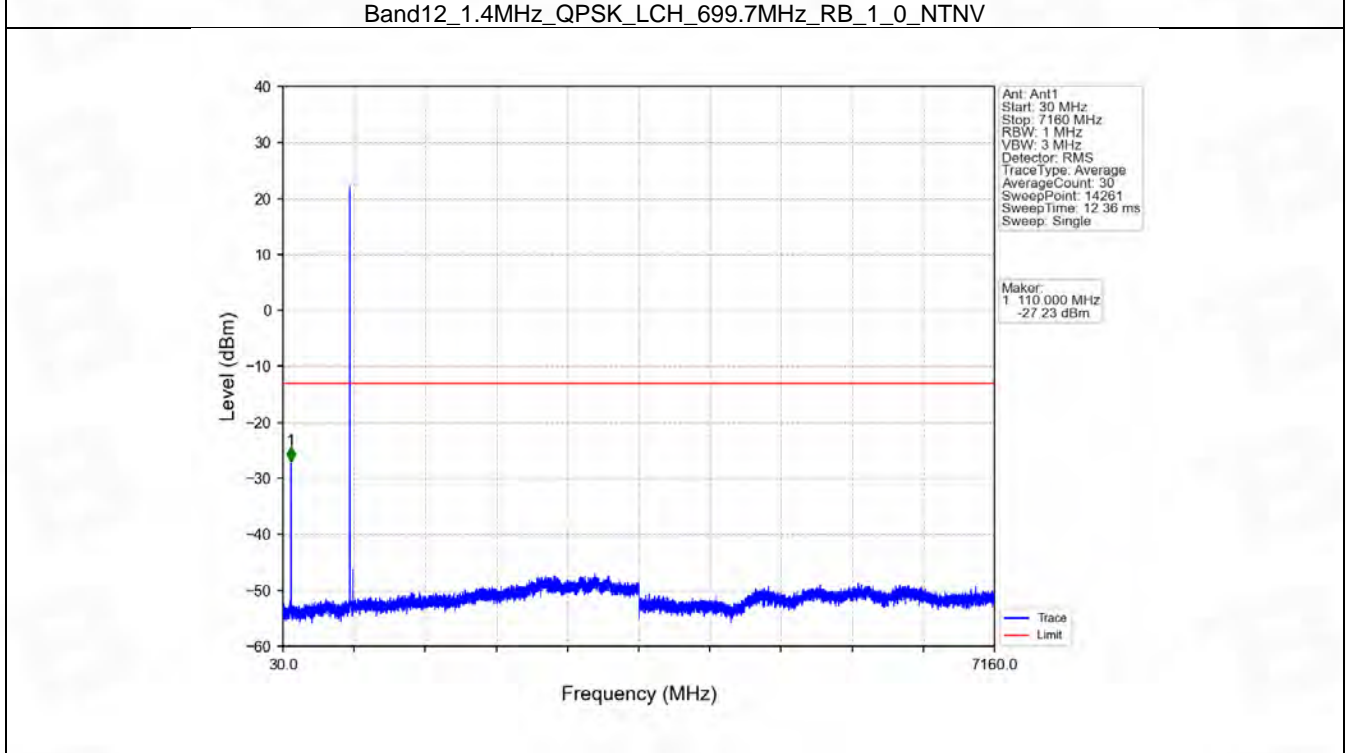
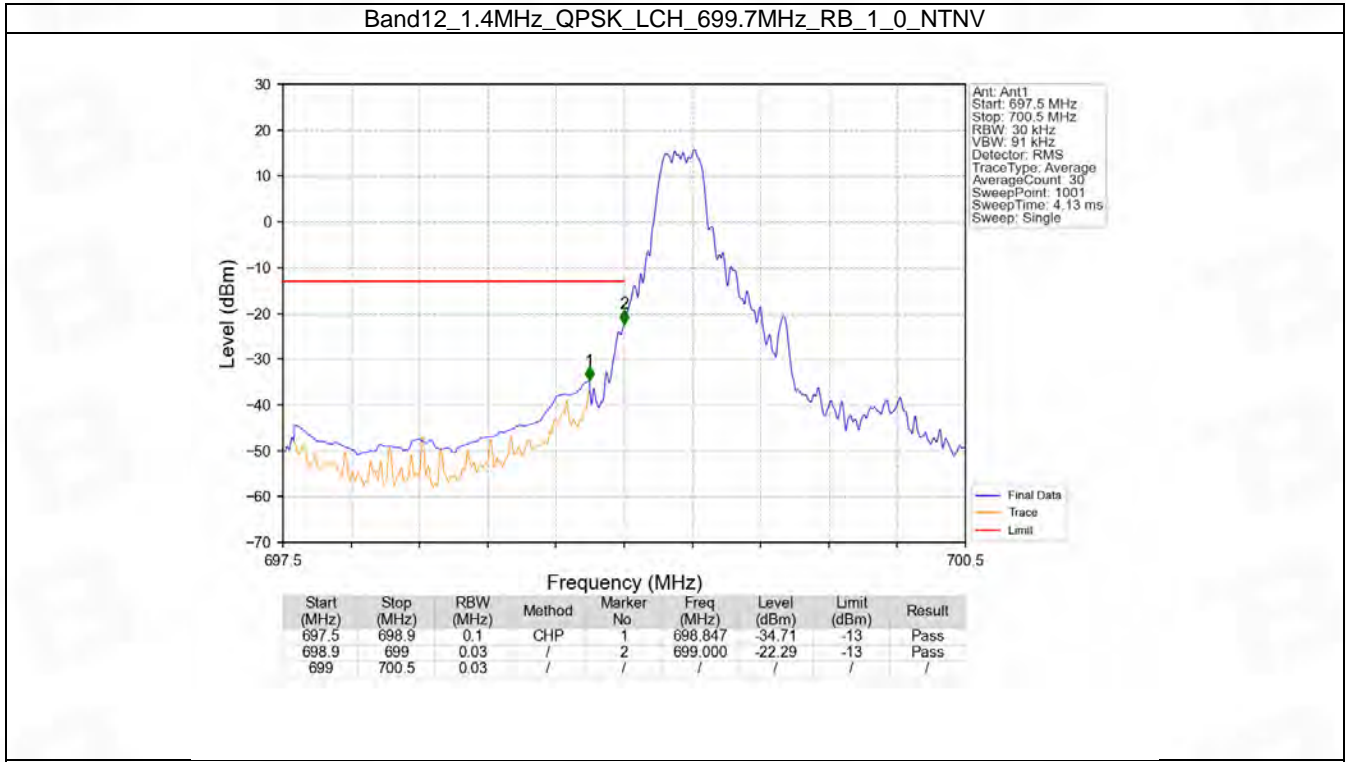
## 6. Spurious Emission

### 6.1 B12\_1.4MHz

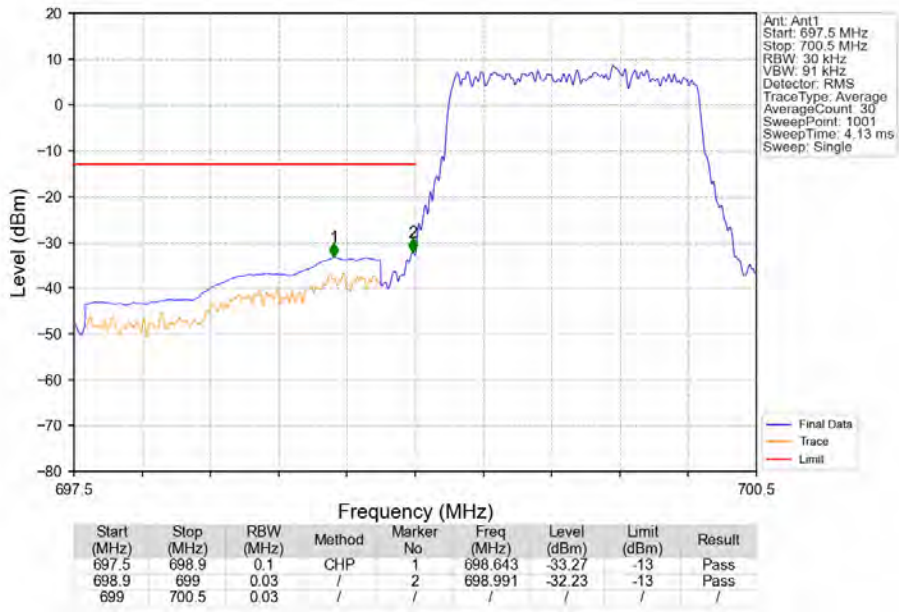
#### 6.1.1 Test Result

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	

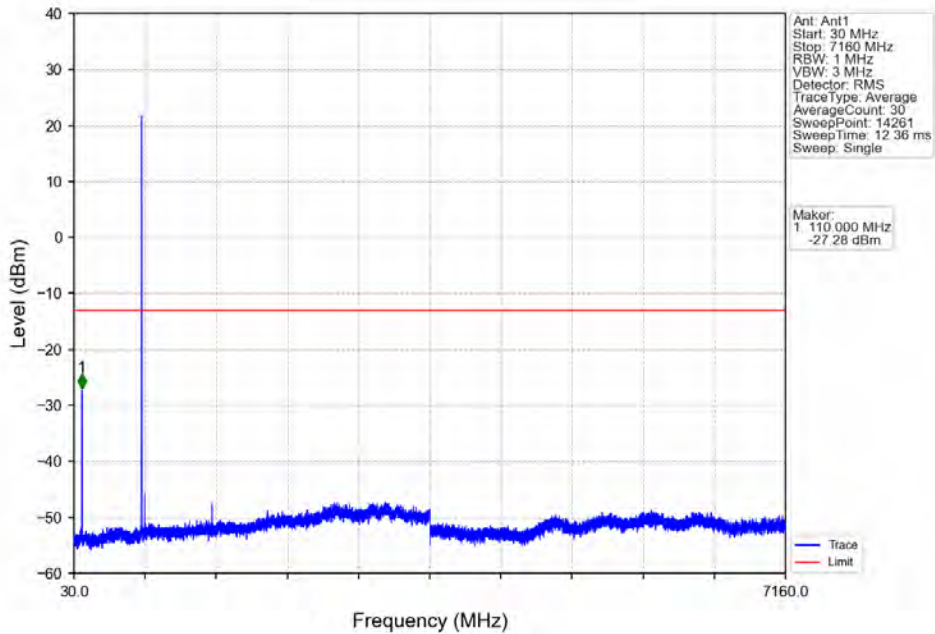
### 6.1.2 Test Graph



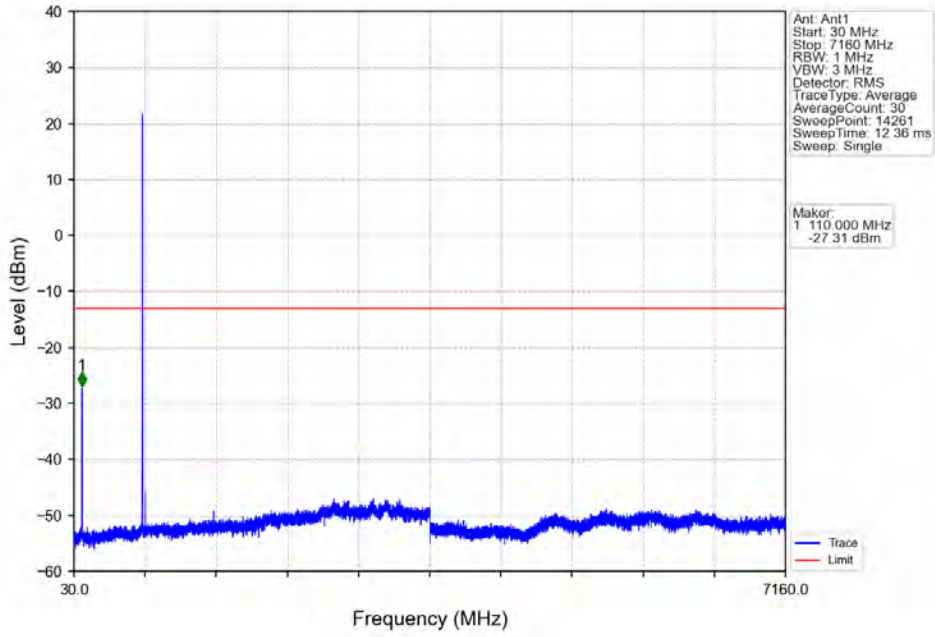
Band12\_1.4MHz\_QPSK\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



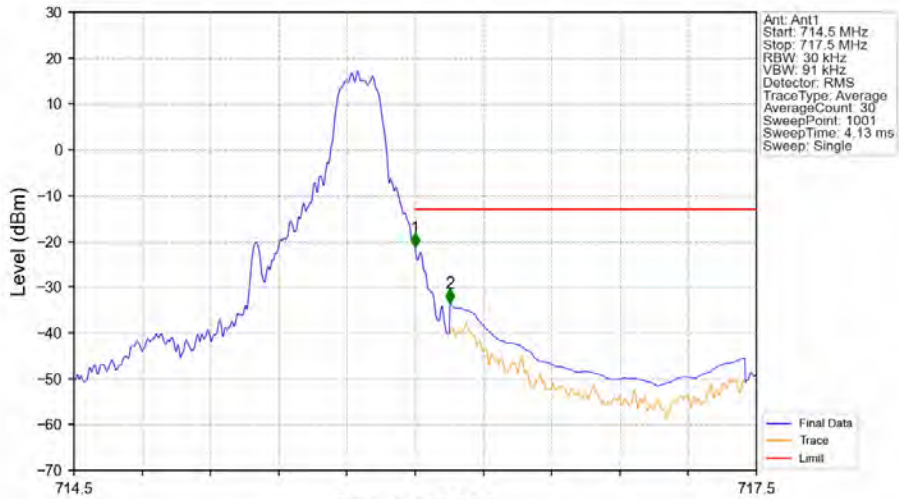
Band12\_1.4MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

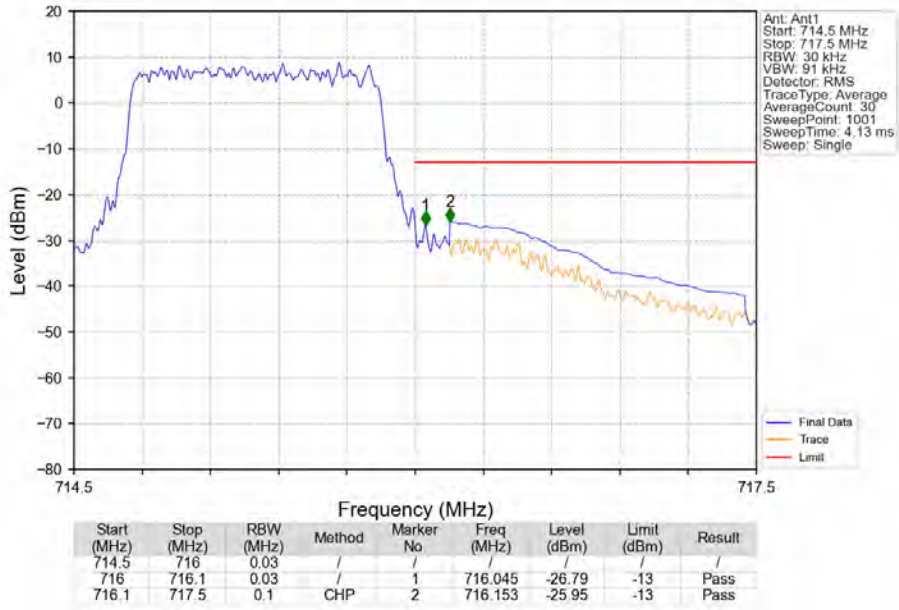


Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_1\_5\_NTNV

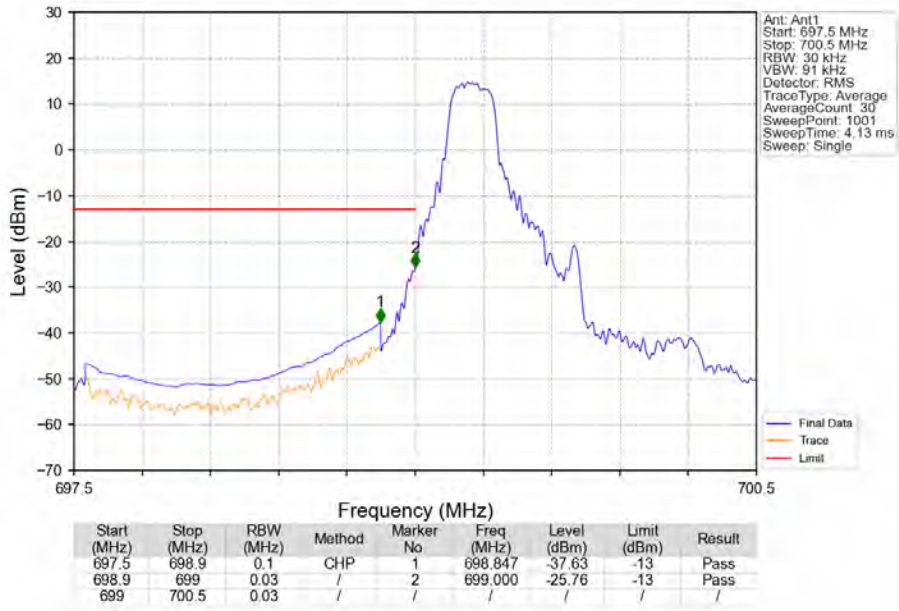


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.000	-21.33	-13	Pass
716	716.1	0.03	CHP	2	716.153	-33.56	-13	Pass

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

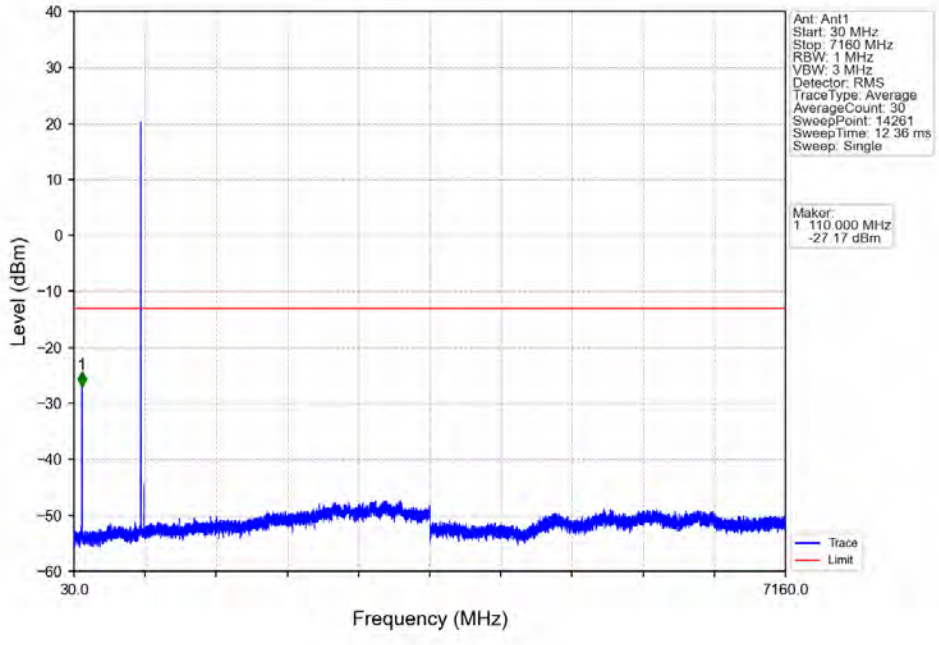


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV

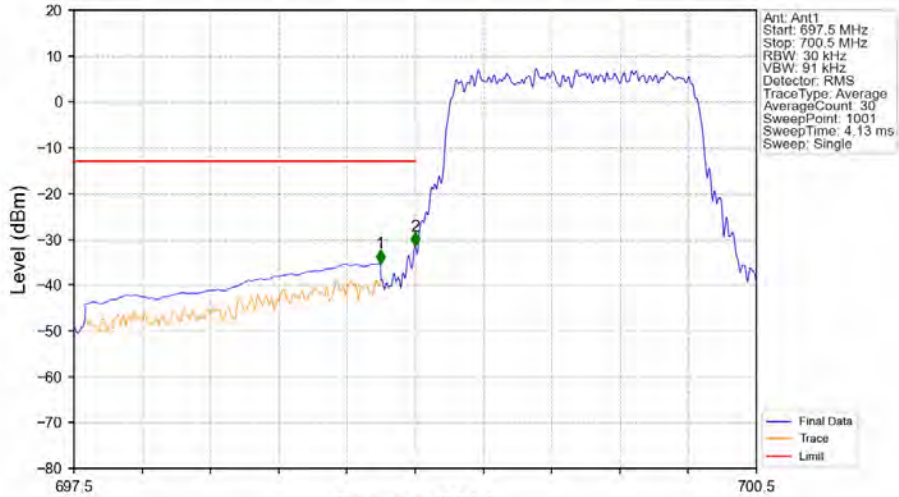




Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV

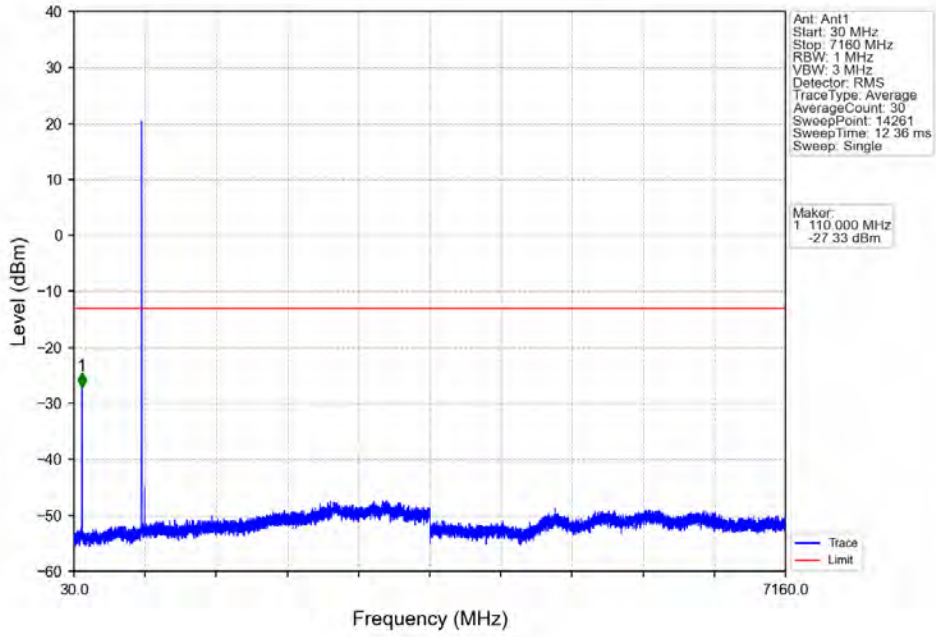


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV

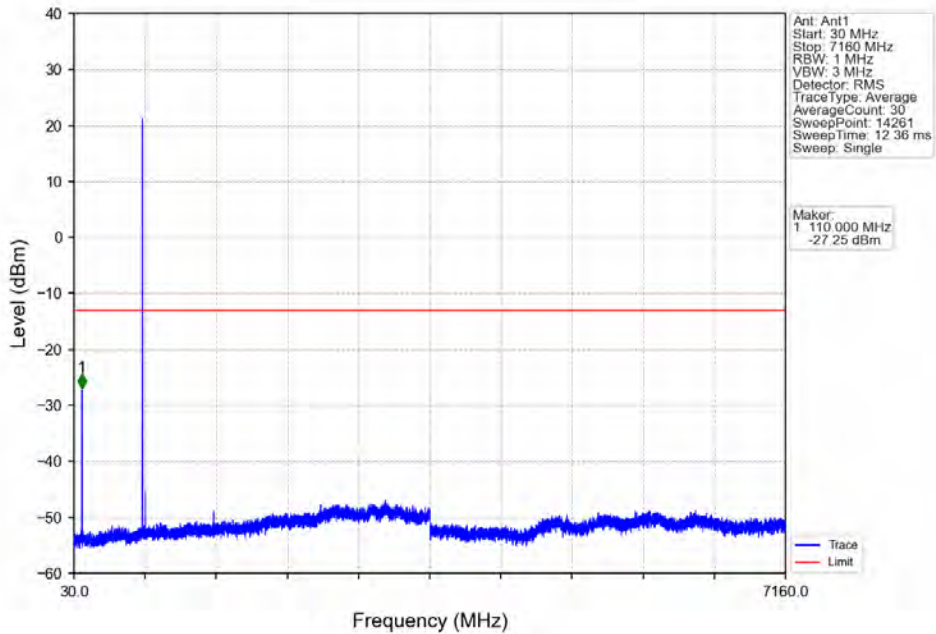


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.847	-35.32	-13	Pass
698.9	699	0.03	/	2	699.000	-31.45	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

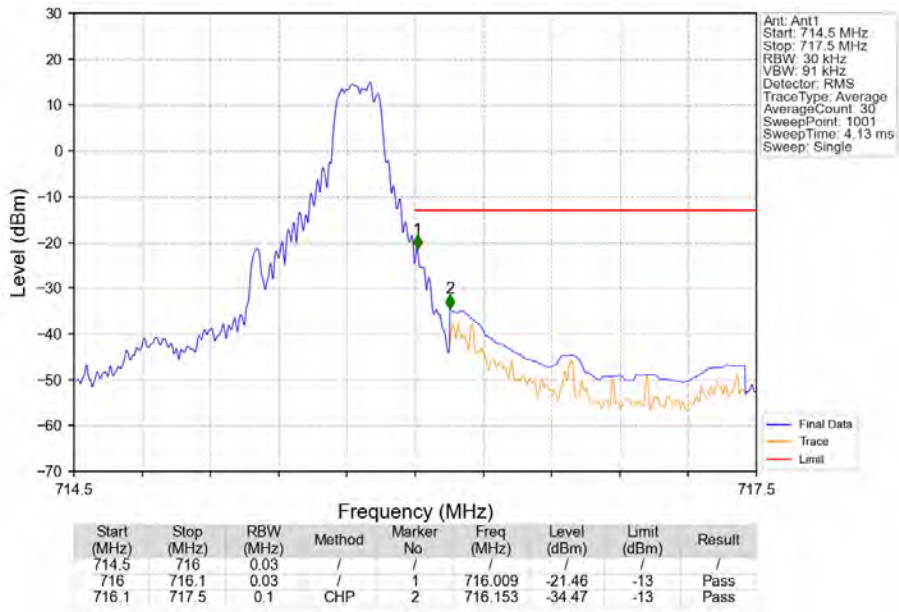
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



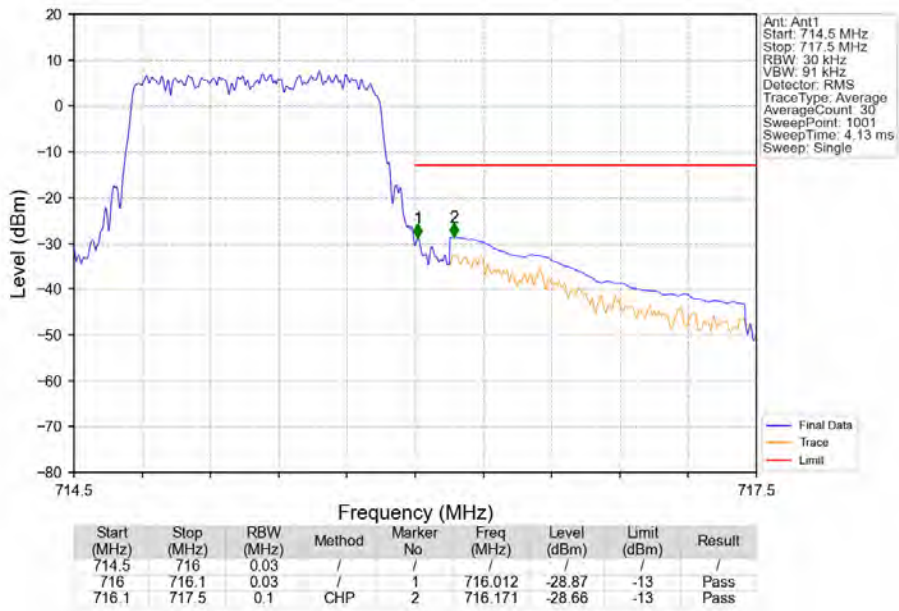
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_1\_0\_NTNV



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



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

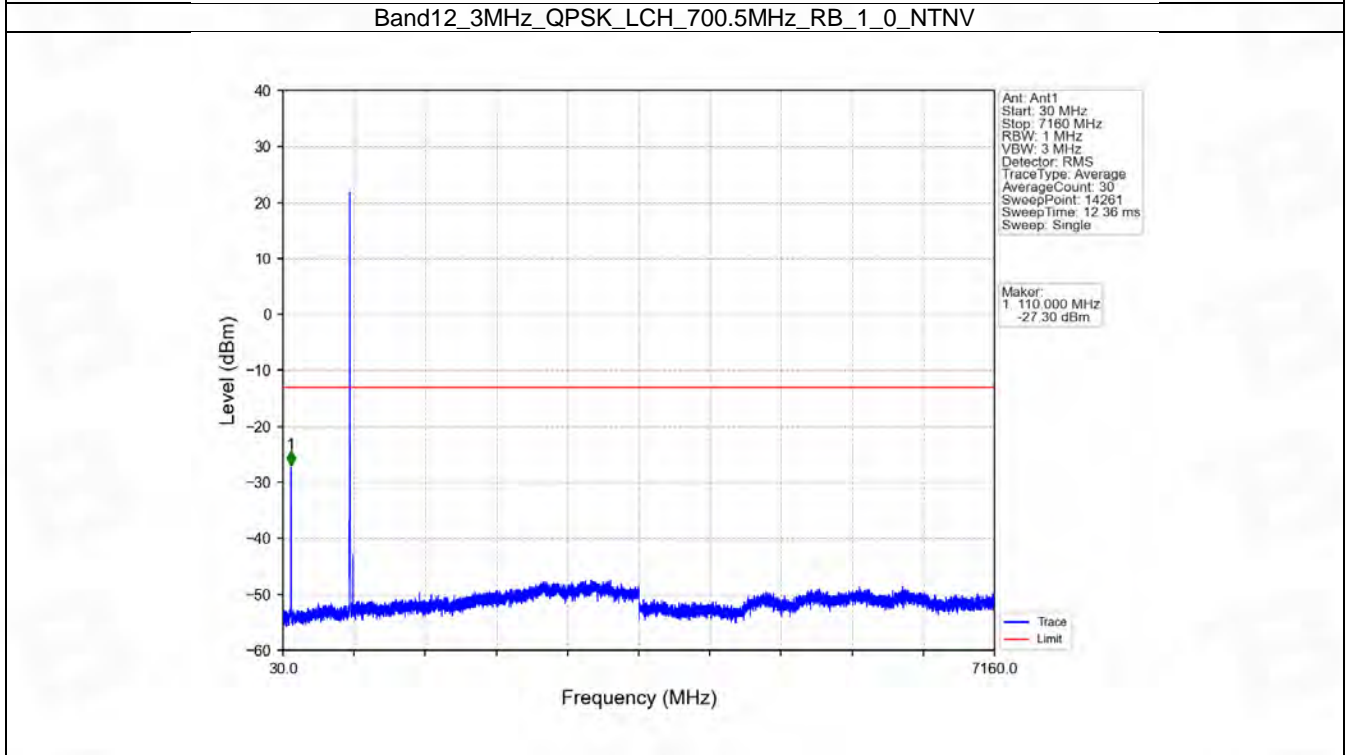
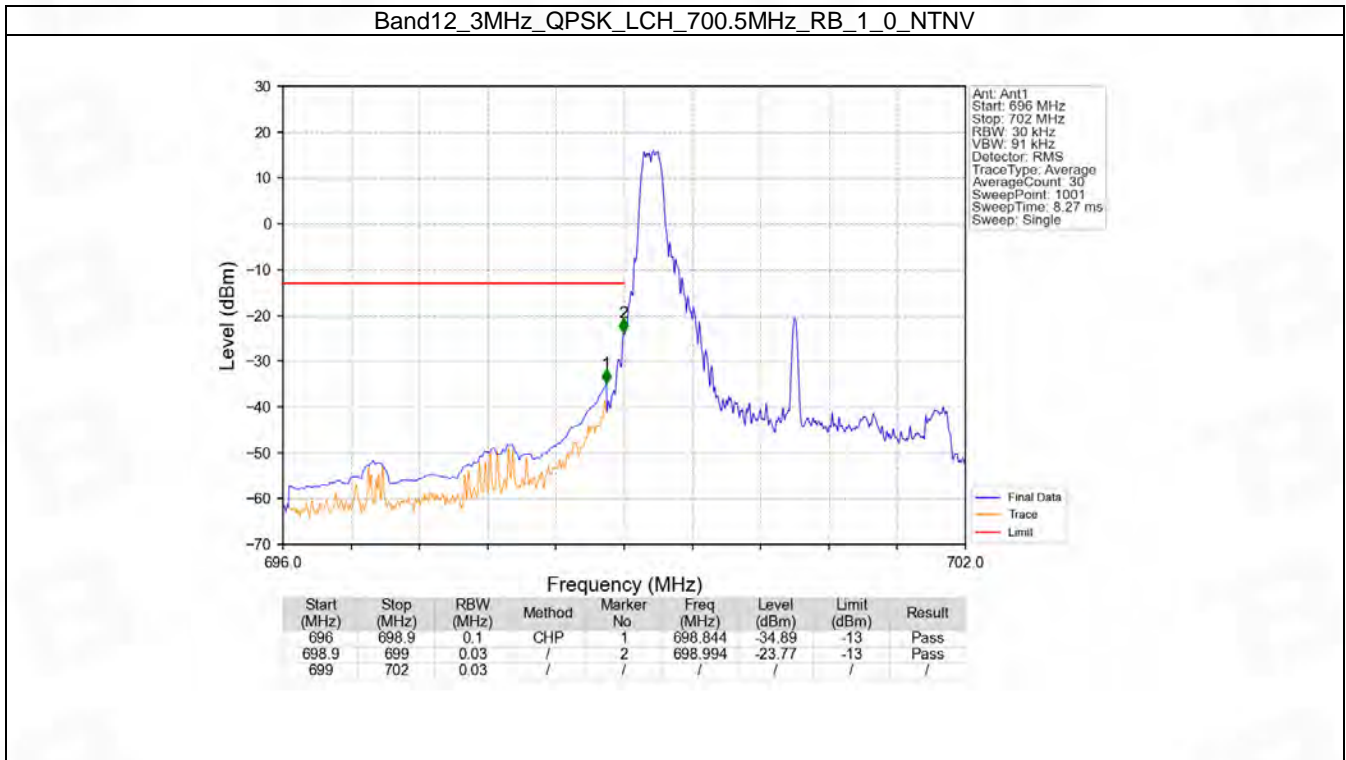


## 6.2 B12\_3MHz

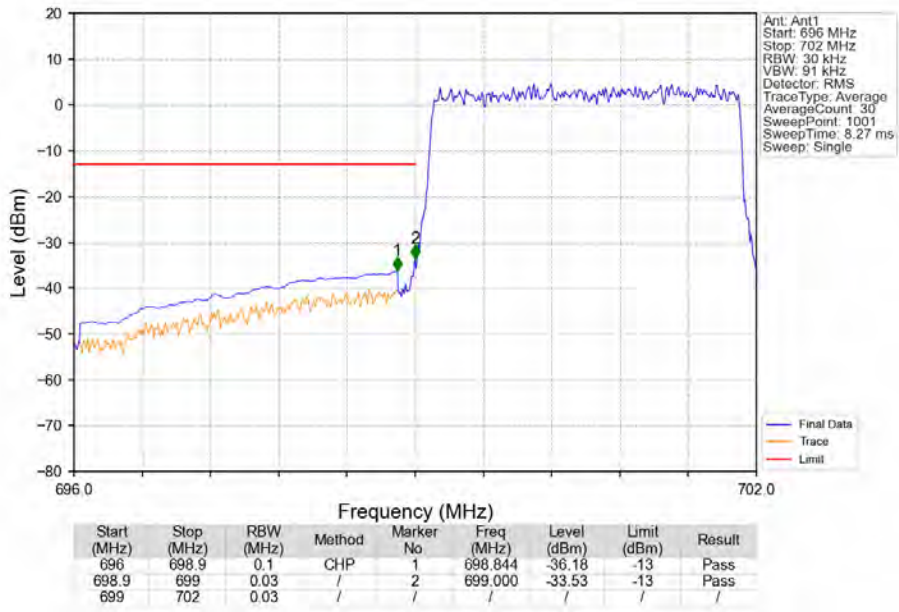
### 6.2.1 Test Result

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

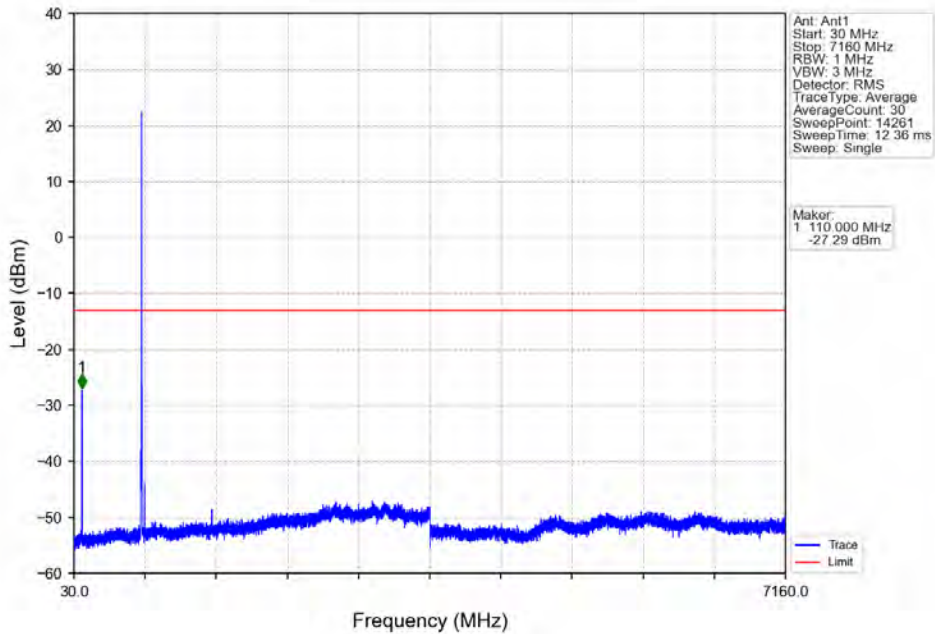
### 6.2.2 Test Graph



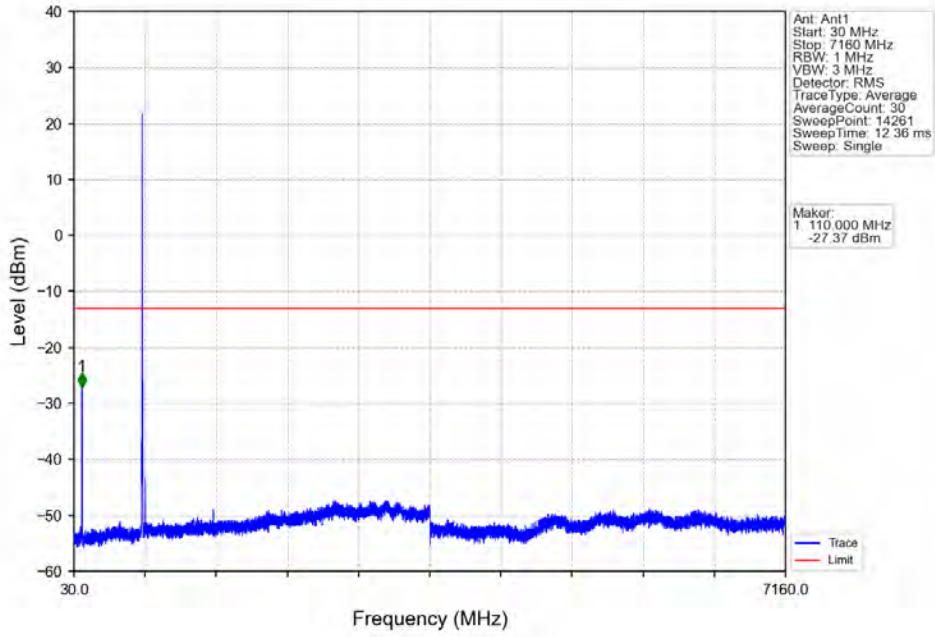
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



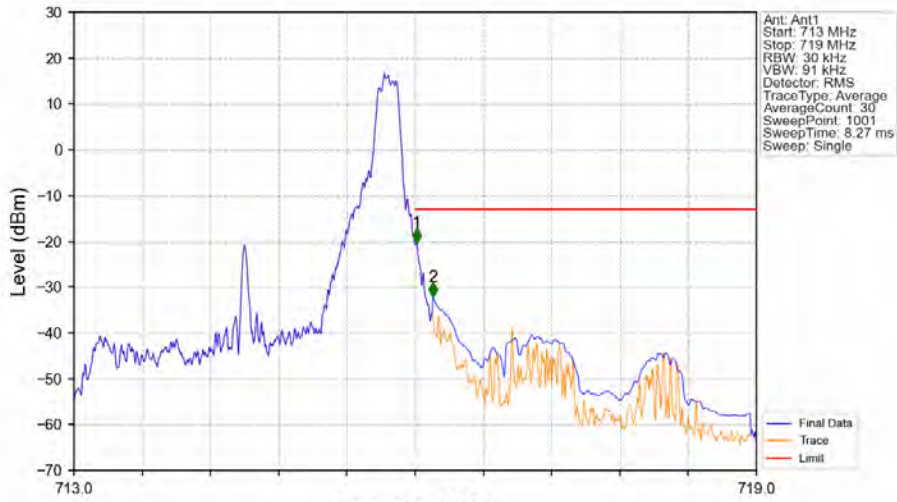
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

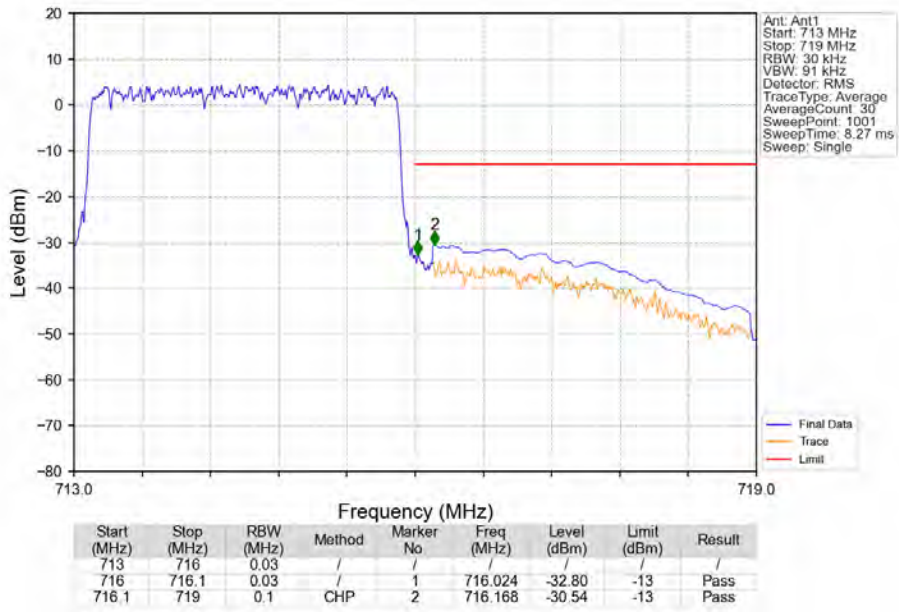


Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_1\_14\_NTNV

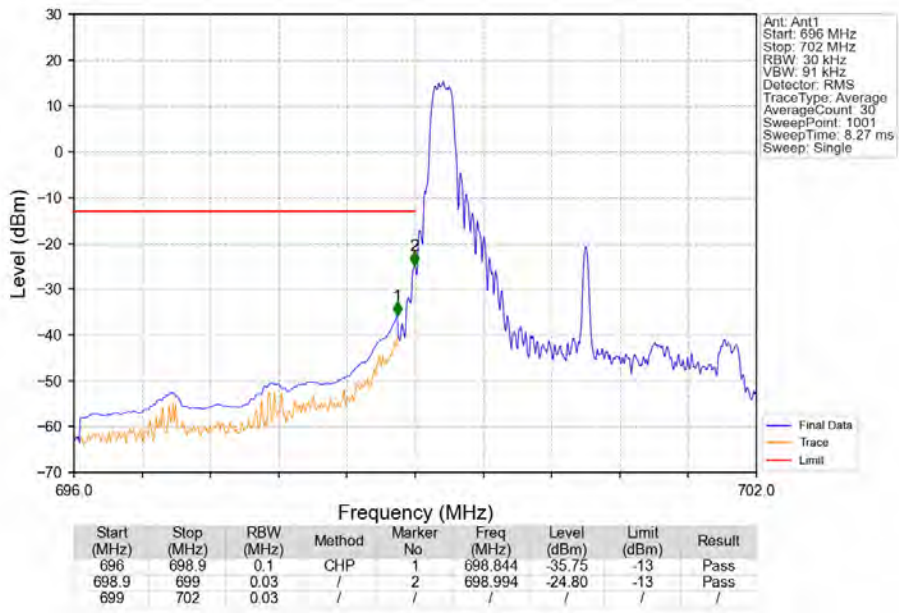


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.012	-20.26	-13	Pass
716.1	719	0.1	CHP	2	716.156	-32.15	-13	Pass

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

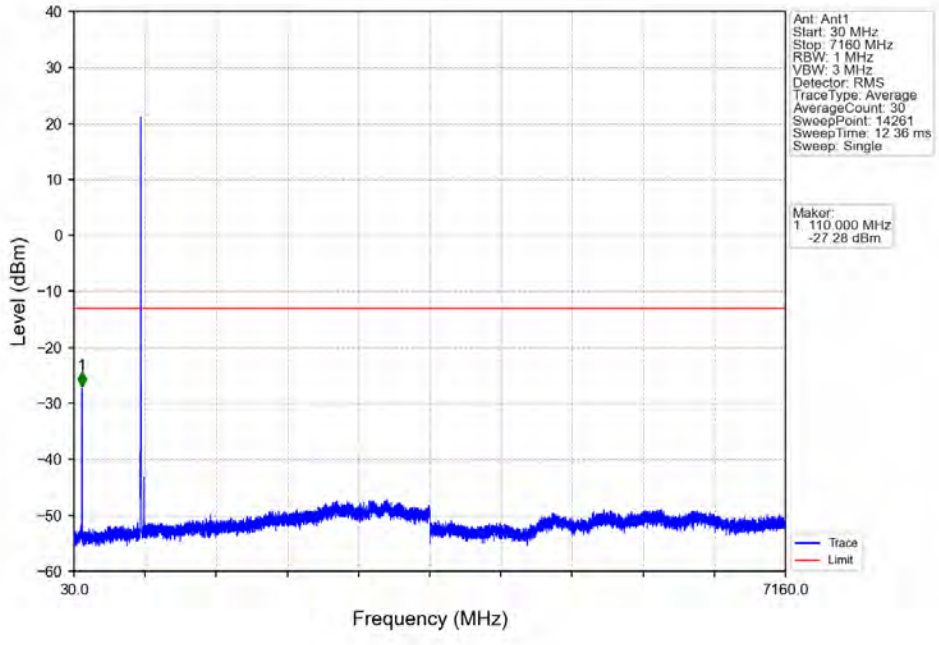


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

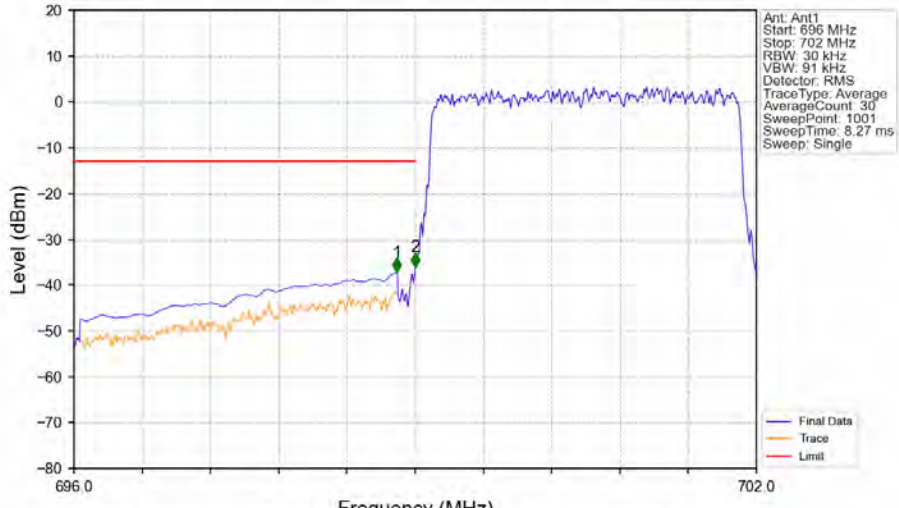




Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

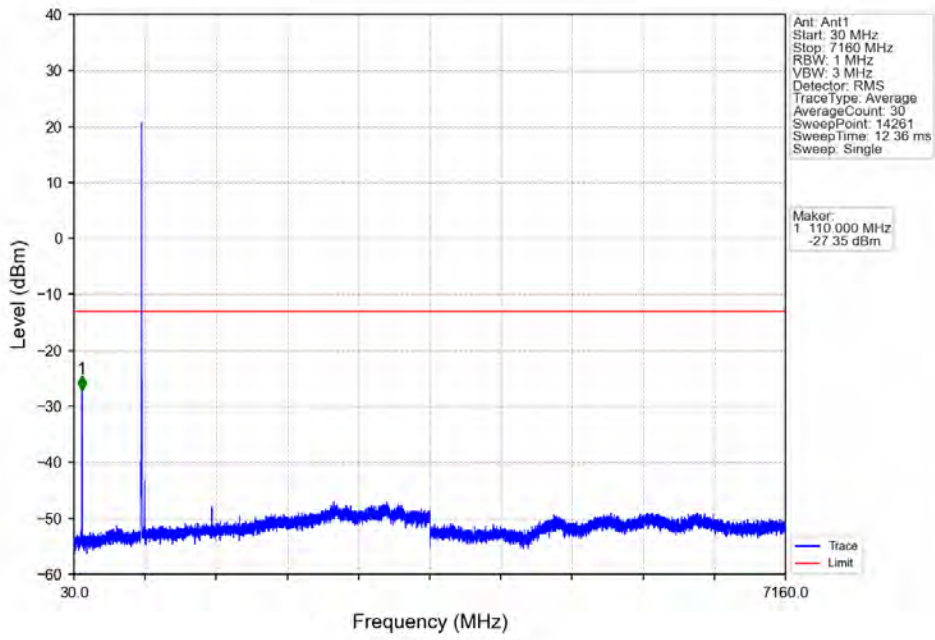


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV

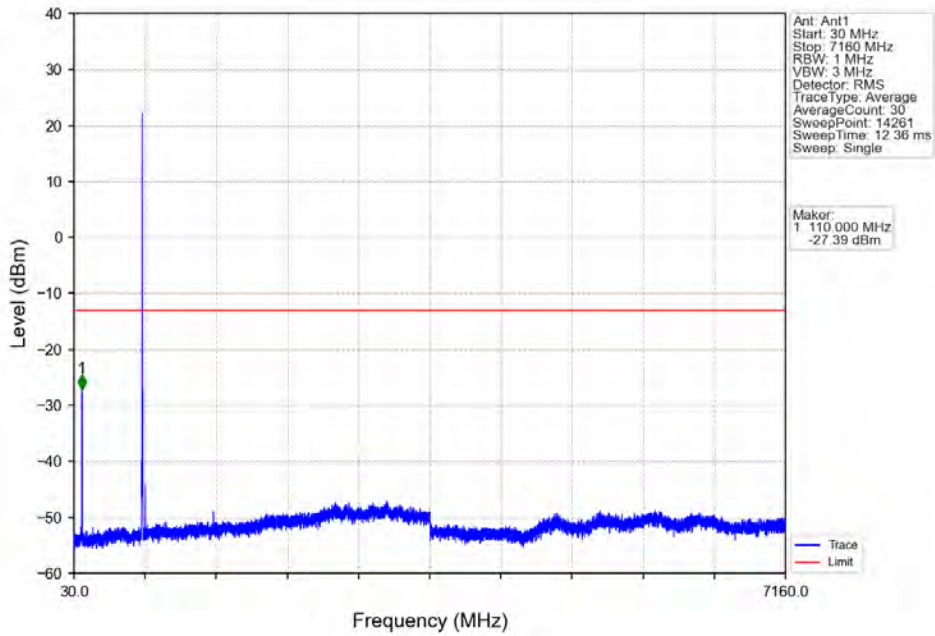


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.838	-37.22	-13	Pass
698.9	699	0.03	/	2	699.000	-36.00	-13	Pass
699	702	0.03	/	/	/	/	/	/

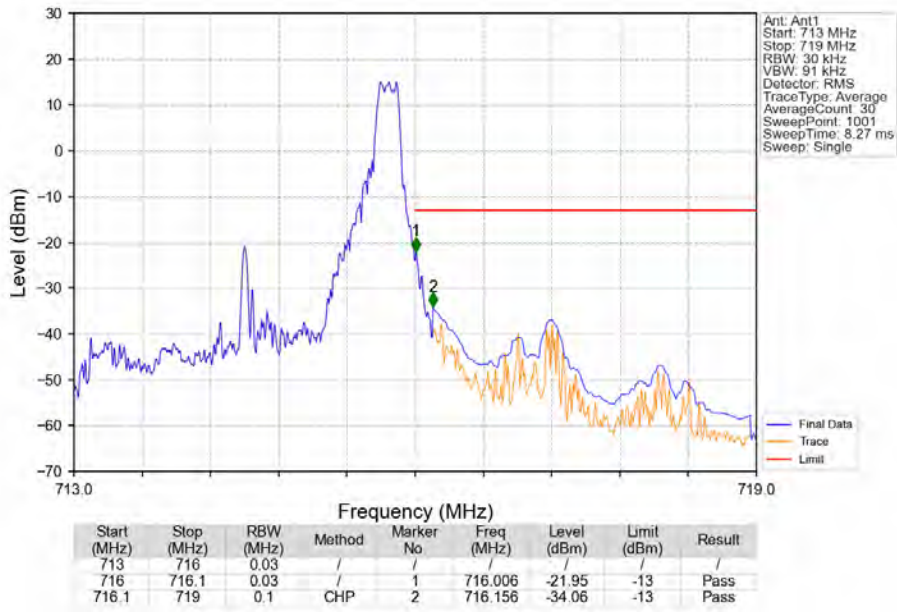
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



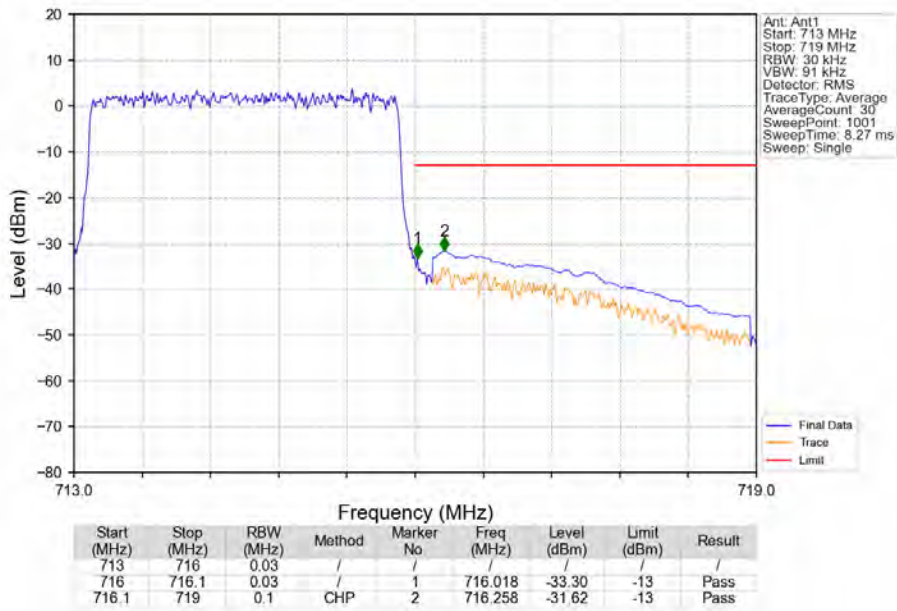
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_1\_0\_NTNV



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



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

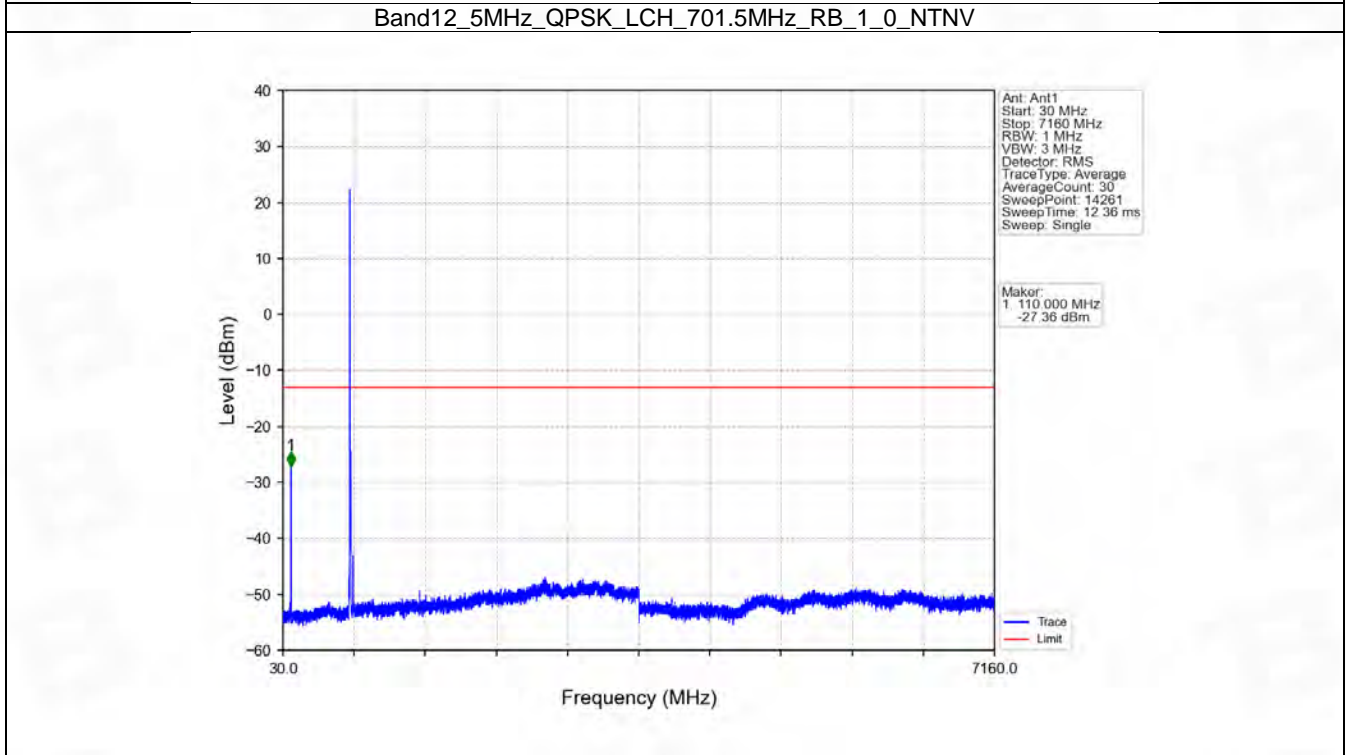
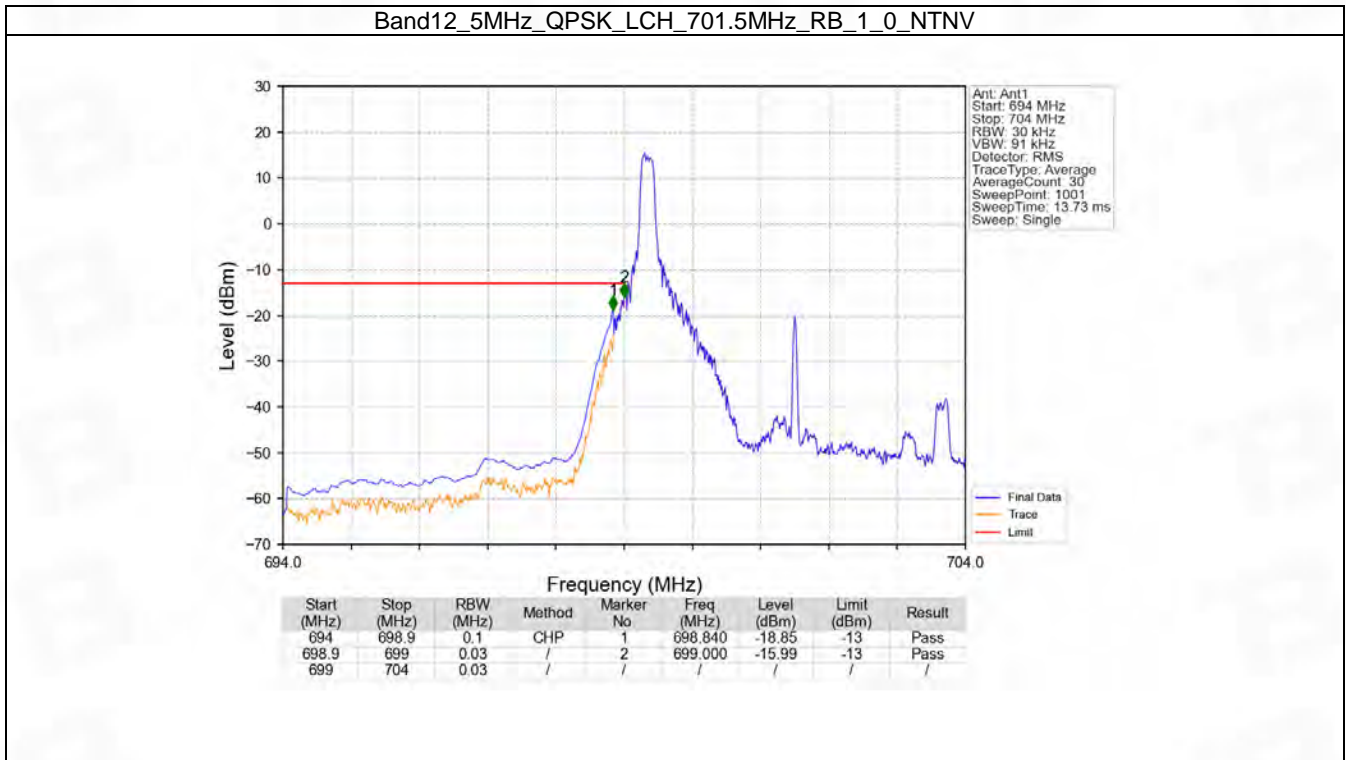


## 6.3 B12\_5MHz

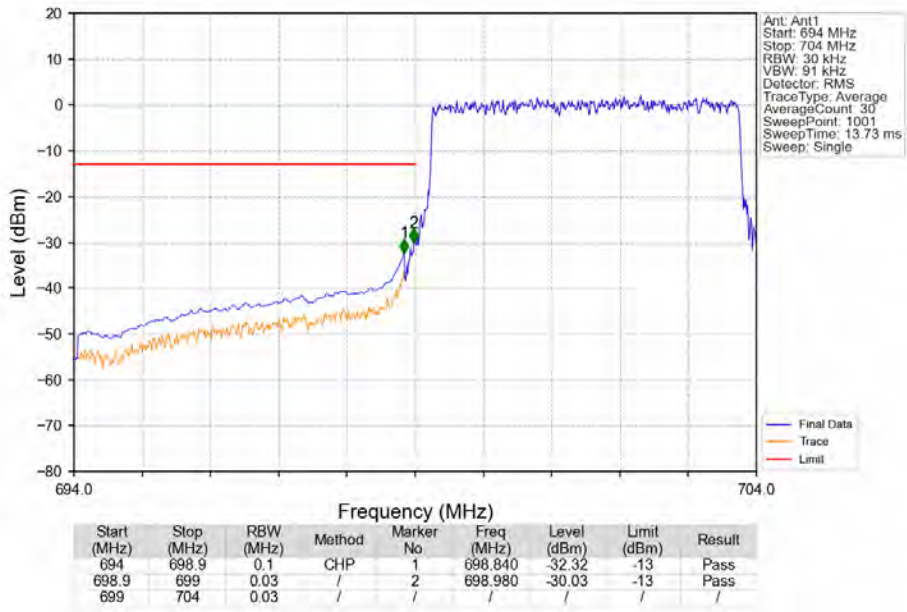
### 6.3.1 Test Result

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

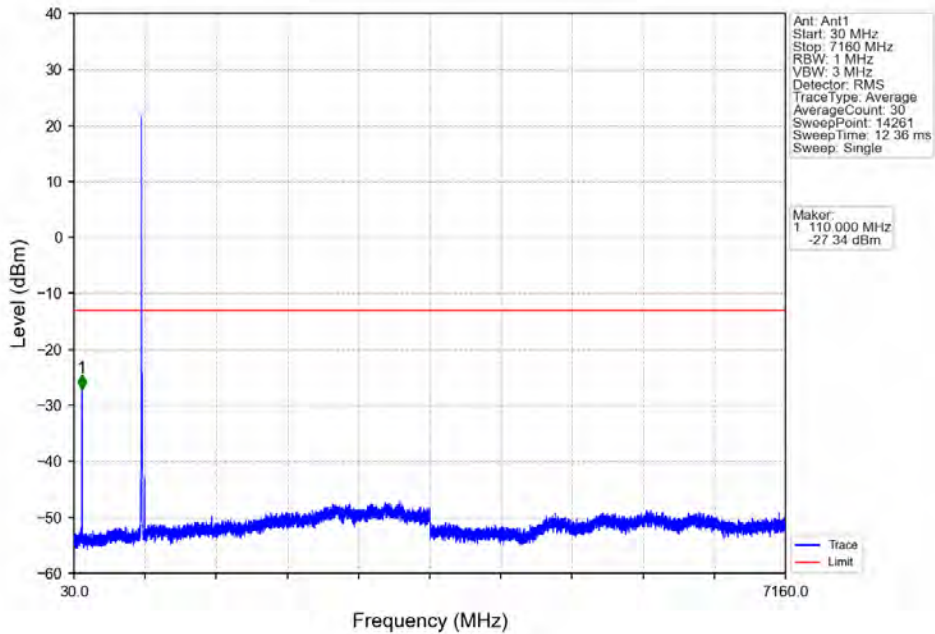
### 6.3.2 Test Graph



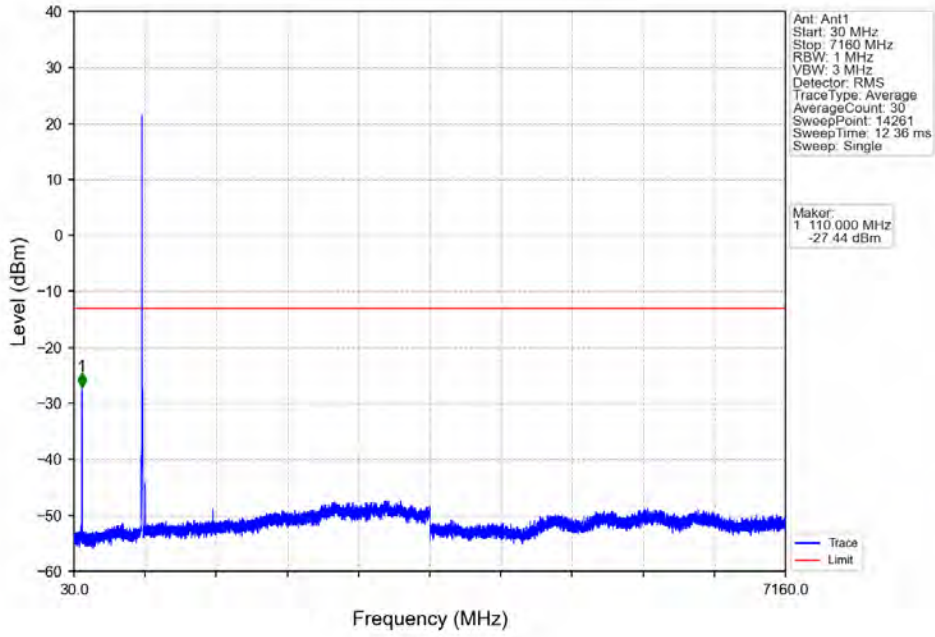
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



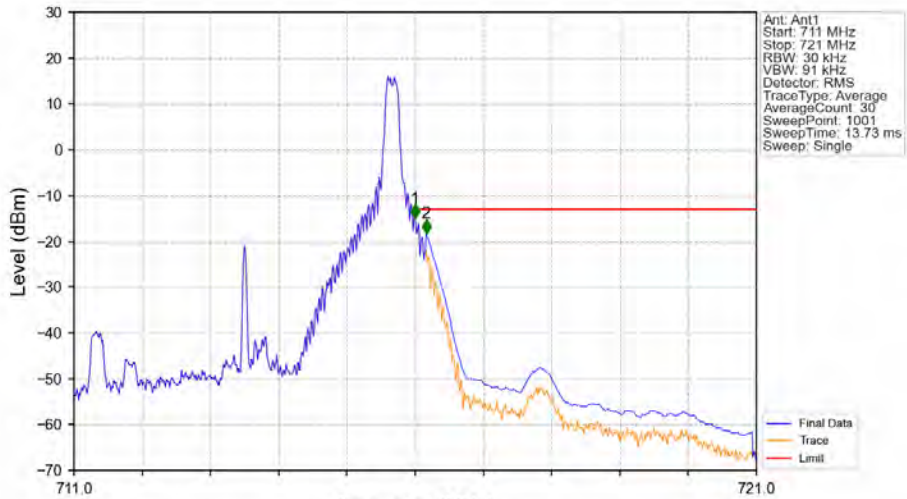
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

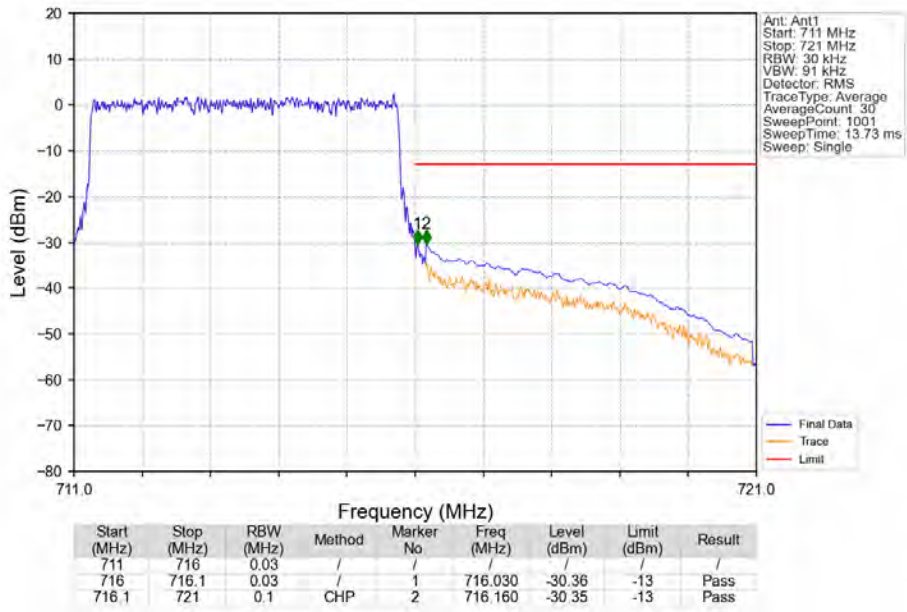


Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_24\_NTNV

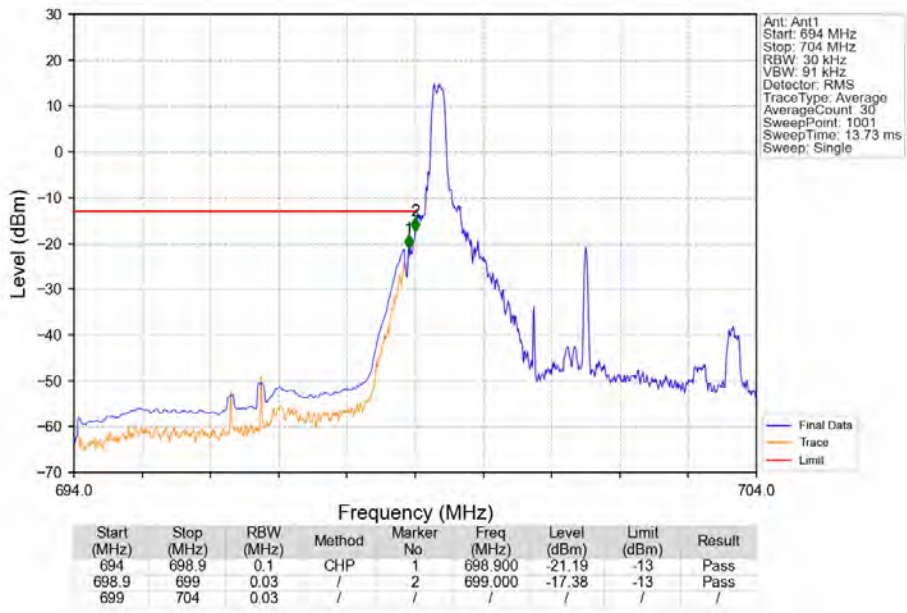


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	1	716.000	-14.98	-13	Pass
716	716.1	0.03	CHP	2	716.160	-18.26	-13	Pass

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

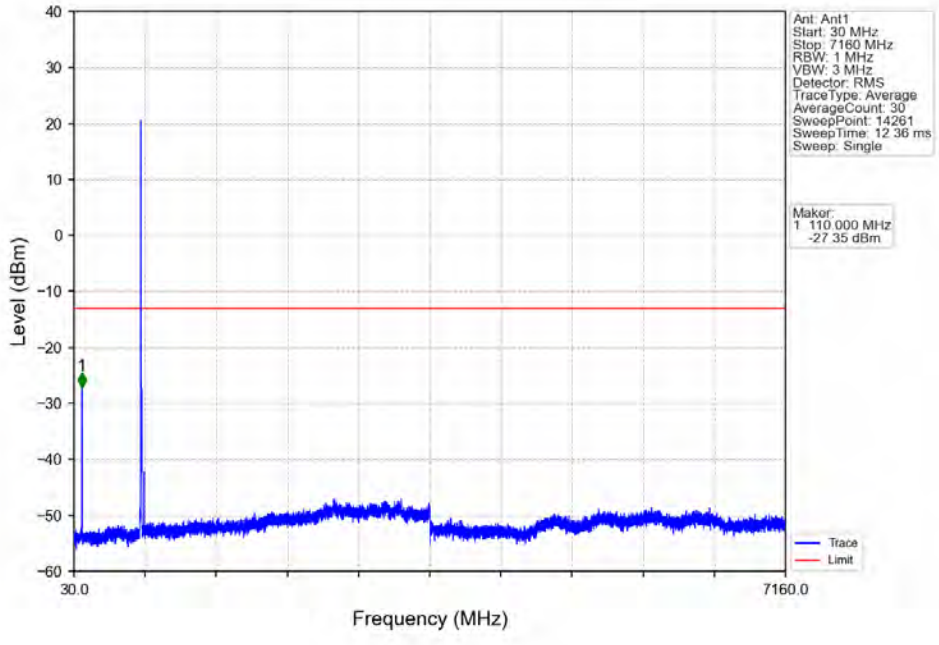


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

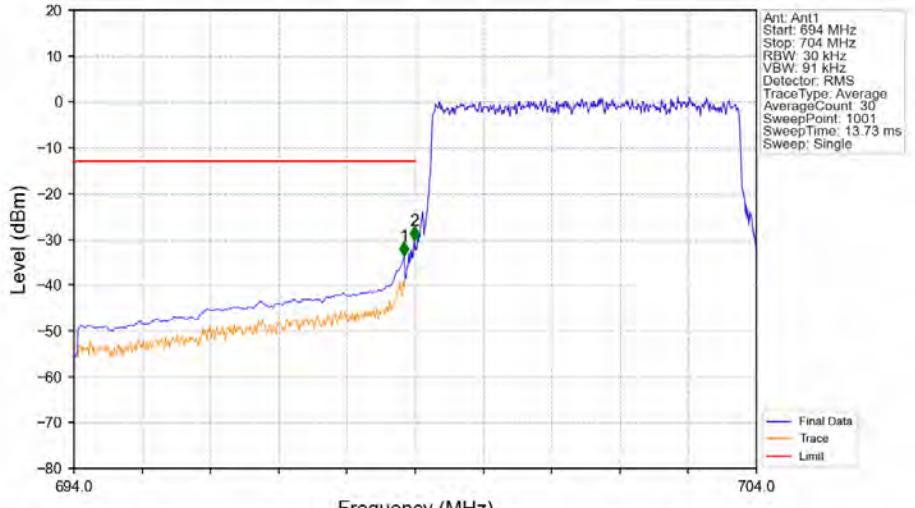




Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

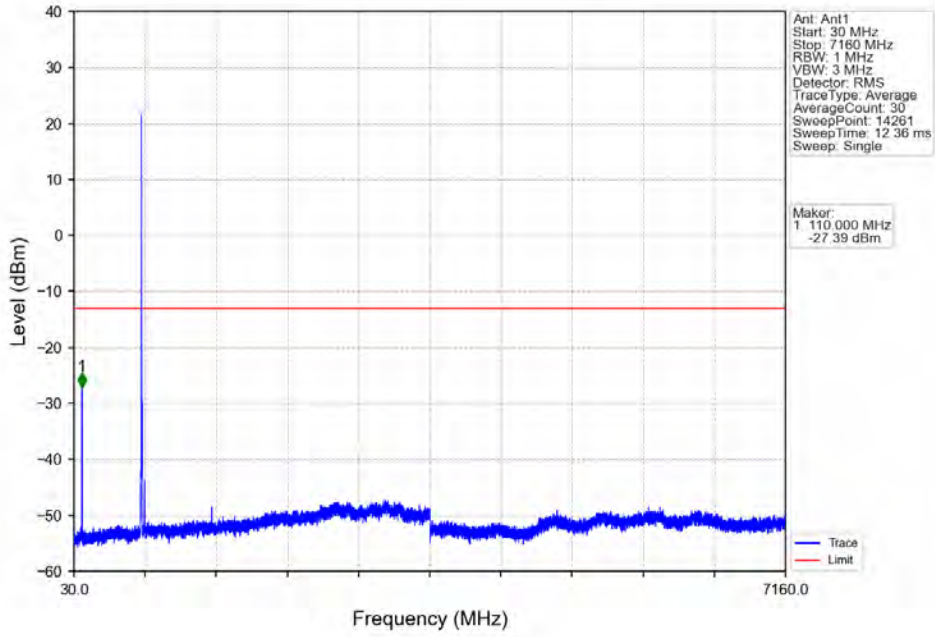


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV

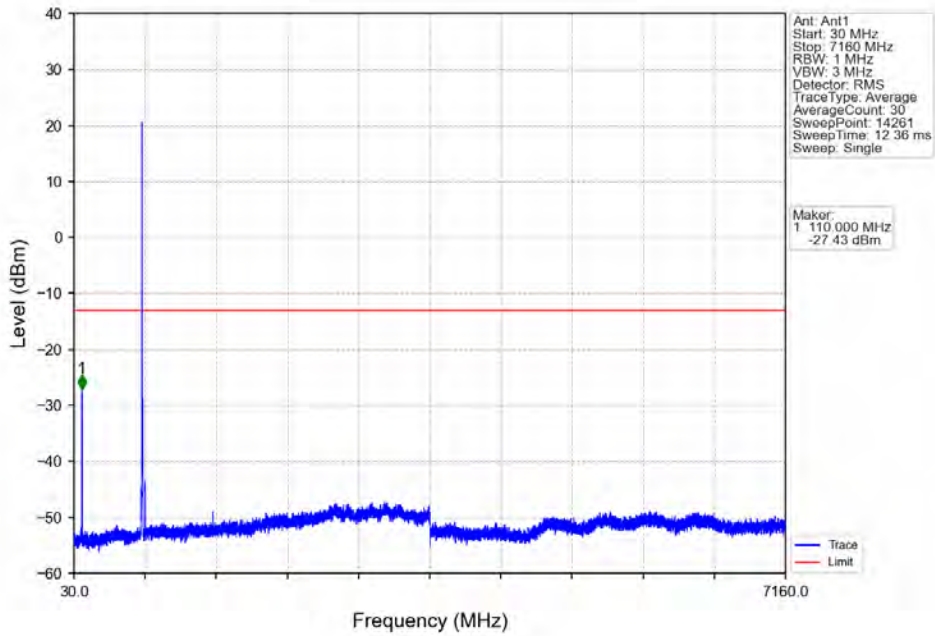


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.840	-33.67	-13	Pass
698.9	699	0.03	/	2	698.990	-30.32	-13	Pass
699	704	0.03	/	/	/	/	/	/

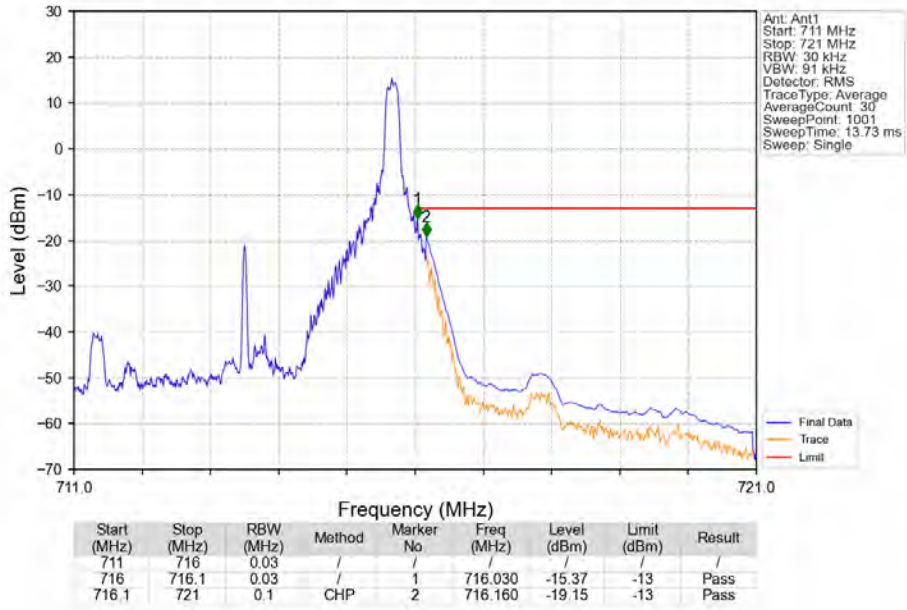
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



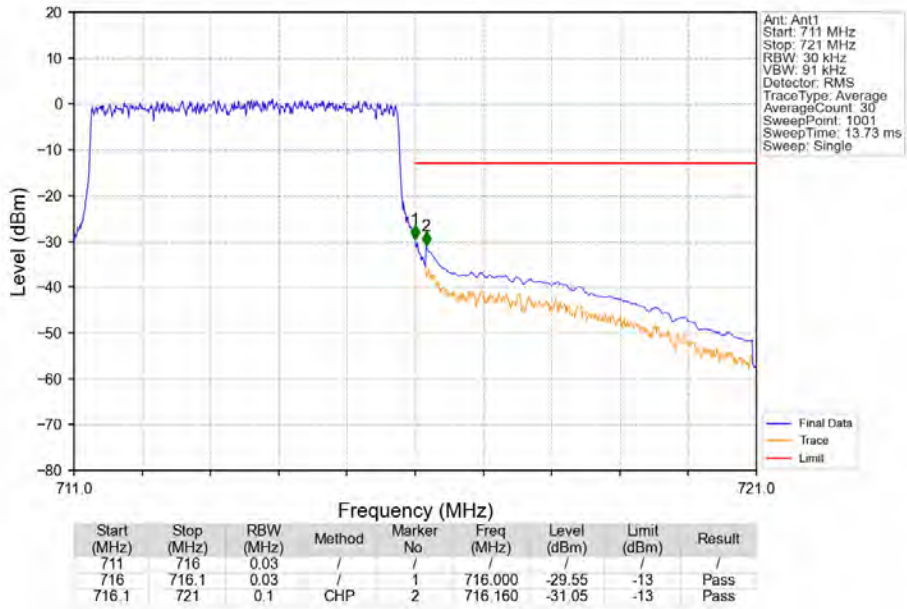
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_1\_0\_NTNV



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



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

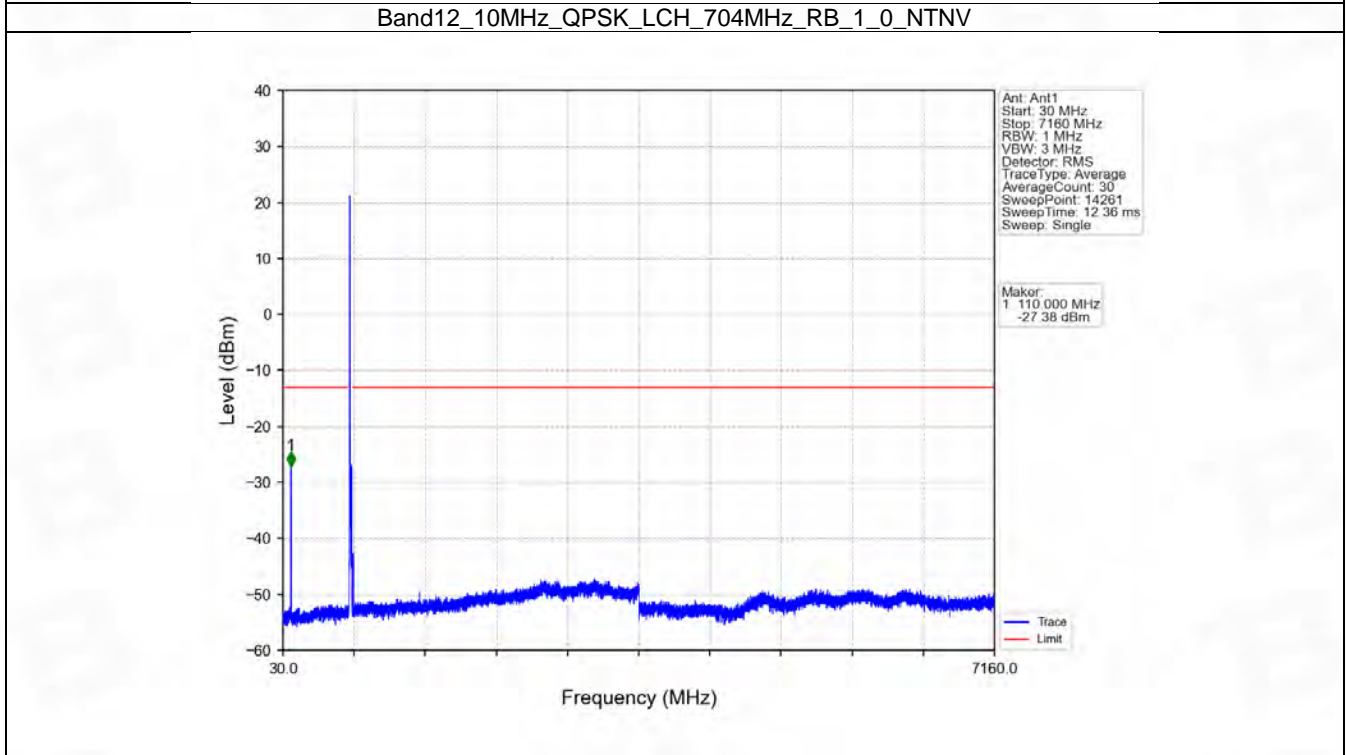
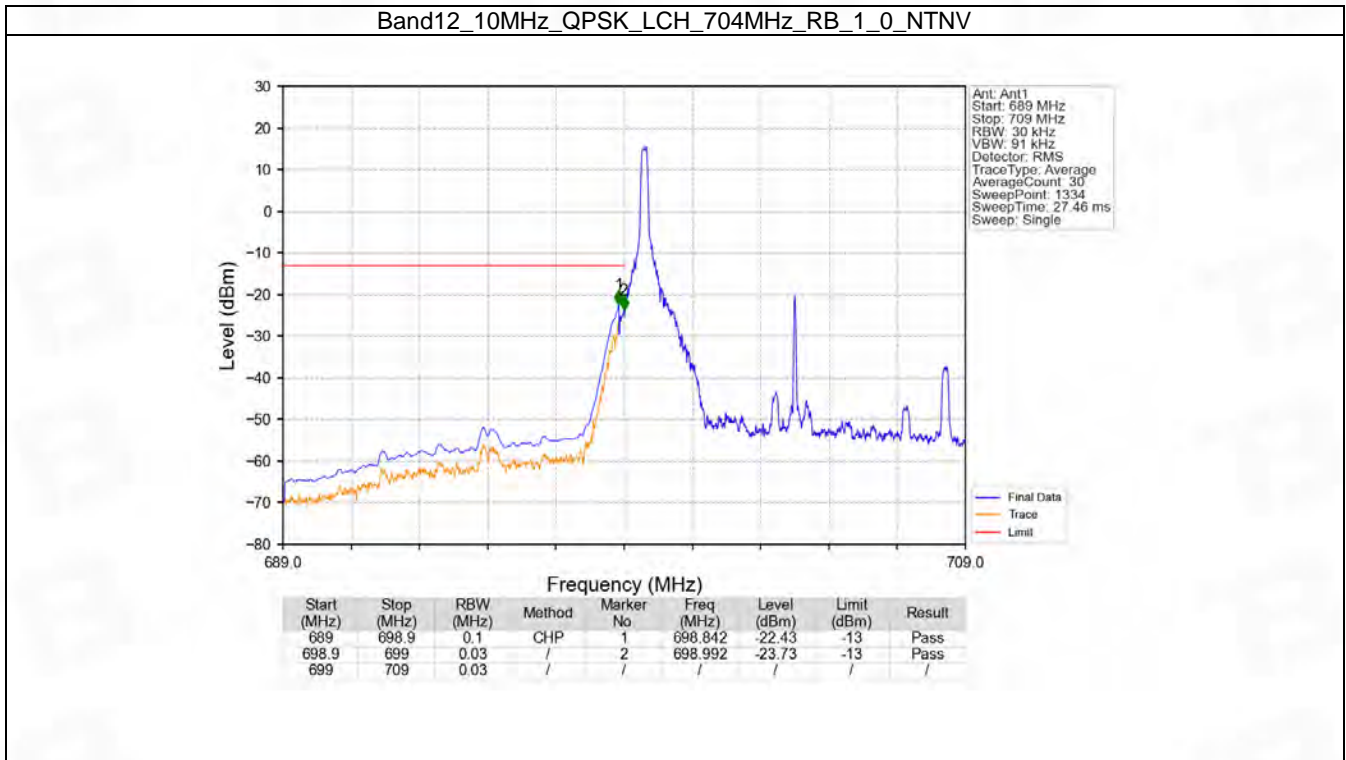


## 6.4 B12\_10MHz

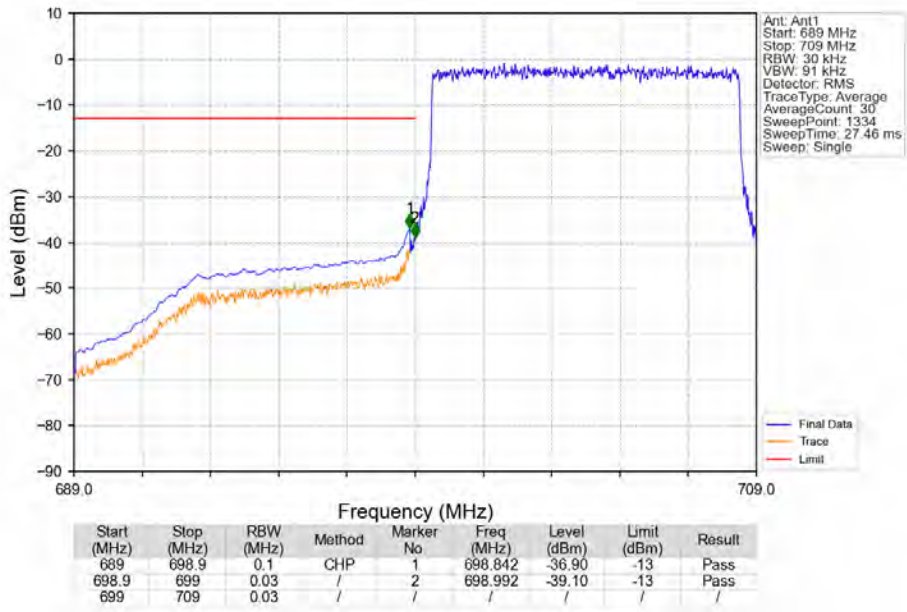
### 6.4.1 Test Result

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
		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

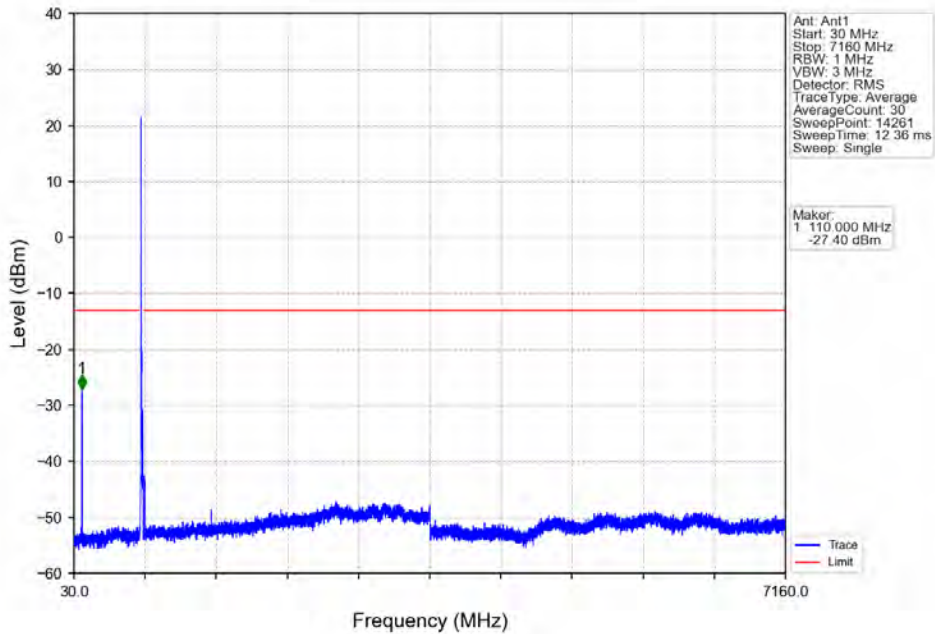
### 6.4.2 Test Graph



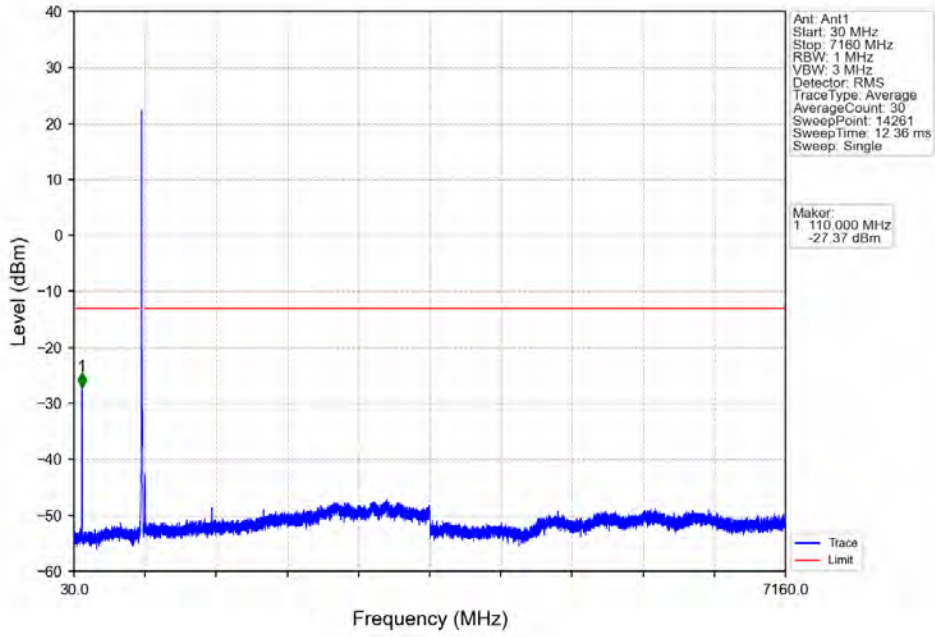
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



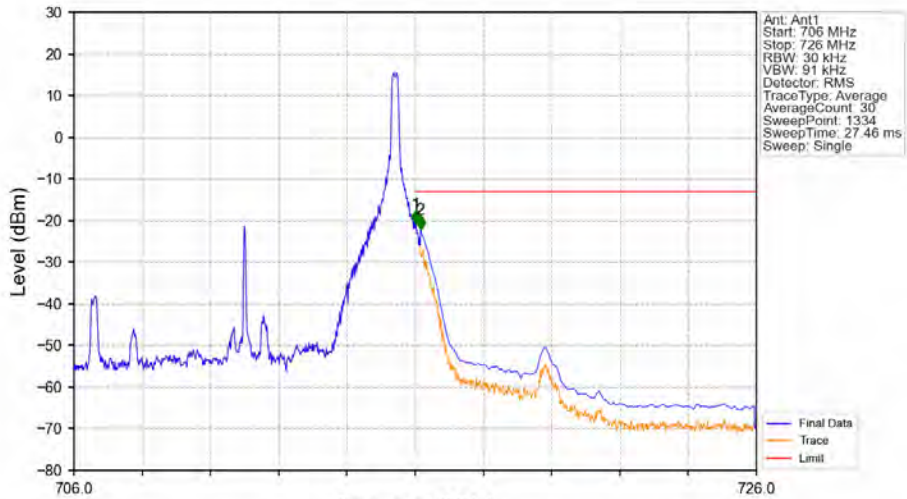
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

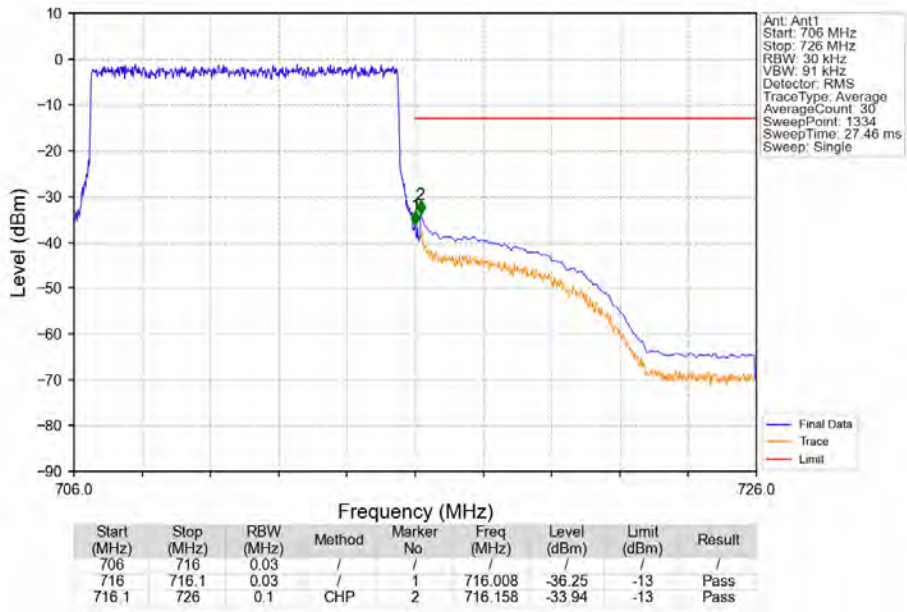


Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_49\_NTNV

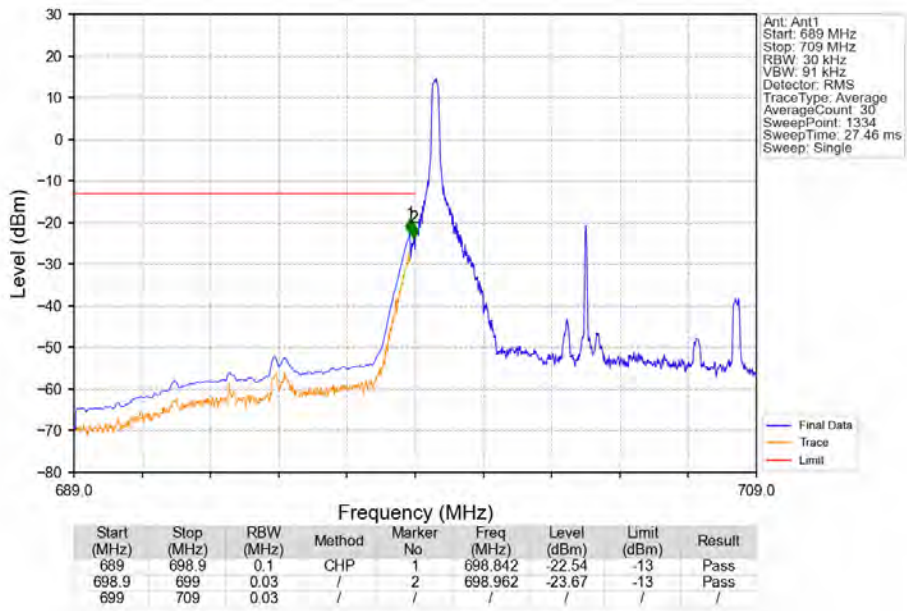


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	1	716.023	-20.80	-13	Pass
716	716.1	0.03	/	1	716.023	-20.80	-13	Pass
716.1	726	0.1	CHP	2	716.158	-22.14	-13	Pass

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

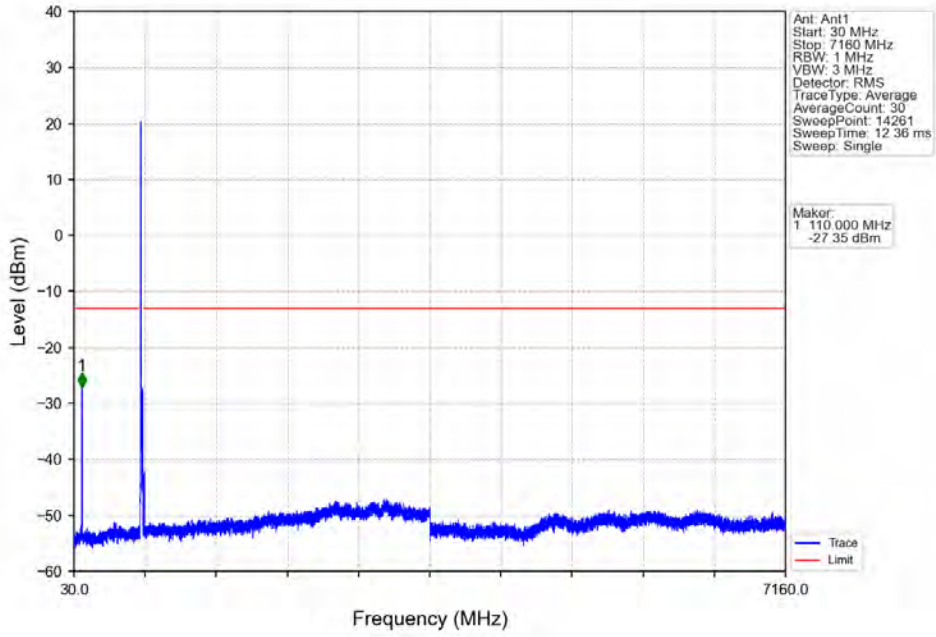


Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV

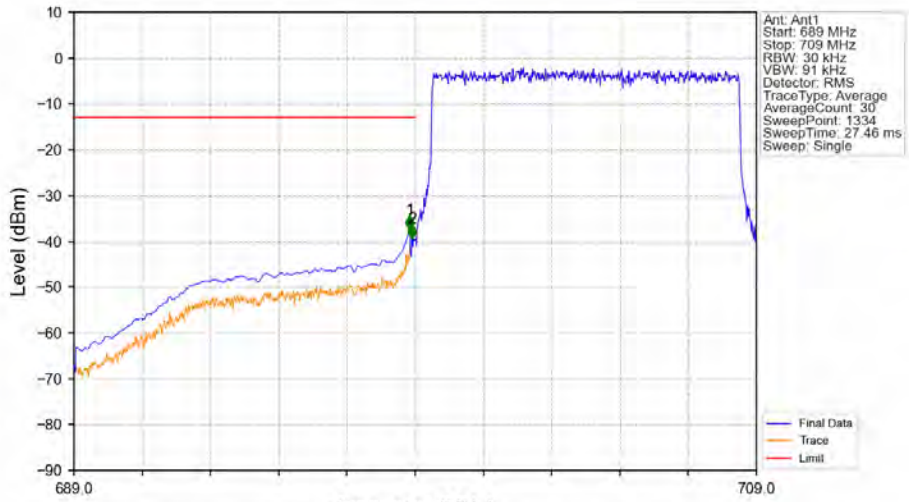




Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV

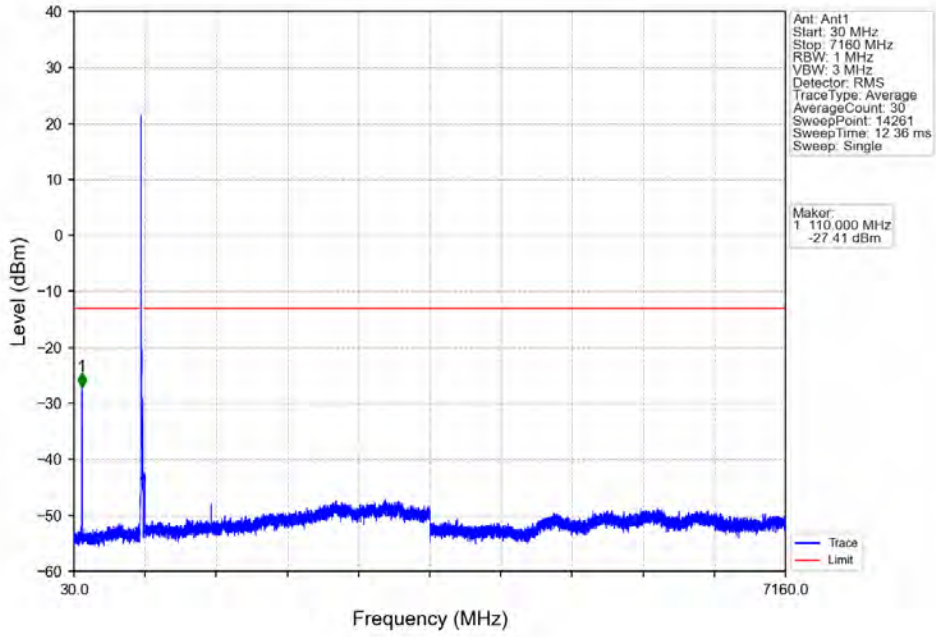


Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV

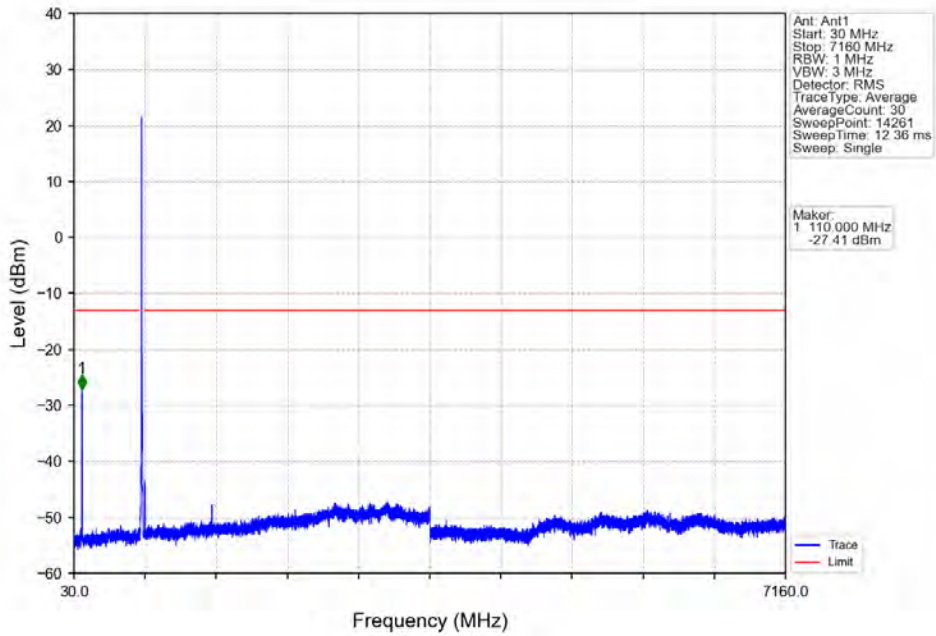


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-37.39	-13	Pass
698.9	699	0.03	/	2	698.902	-39.44	-13	Pass
699	709	0.03	/	/	/	/	/	/

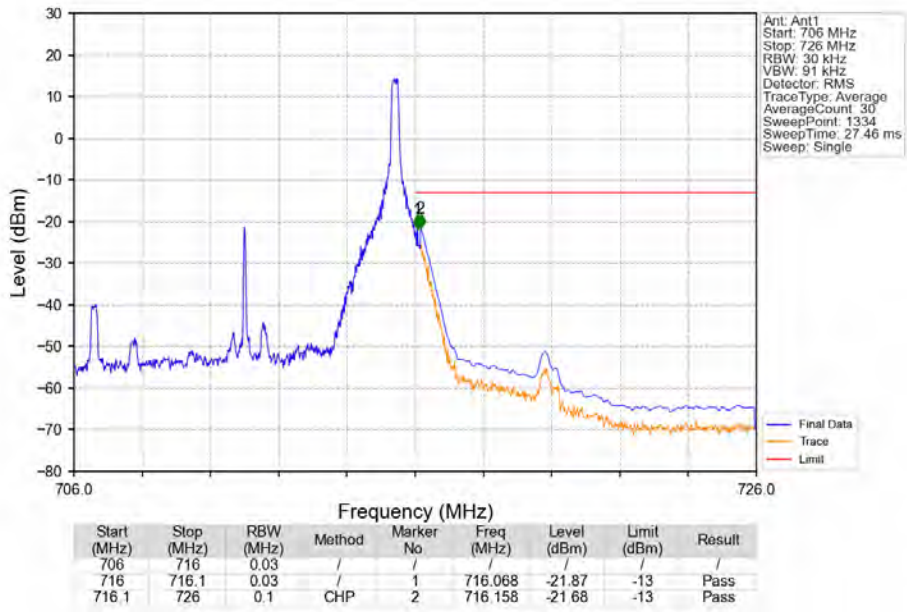
Band12\_10MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



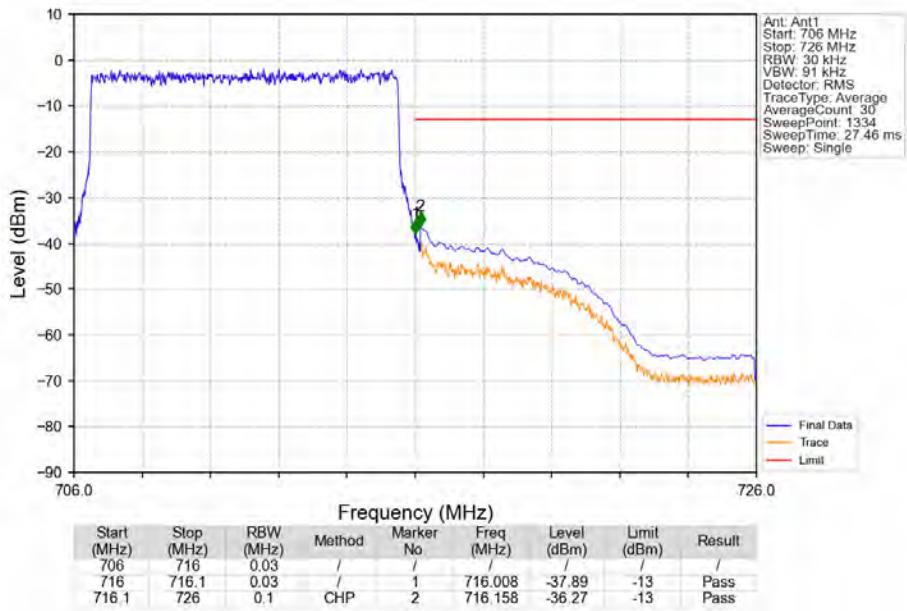
Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_1\_0\_NTNV



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	0.1671	0.0134	ppm	1M12G7D	27H	22.23
12	1.4	699.7	715.3	0.1361	0.0121	ppm	1M11W7D	27H	21.34
12	3	700.5	714.5	0.1722	0.0186	ppm	2M73G7D	27H	22.36
12	3	700.5	714.5	0.1493	0.0156	ppm	2M72W7D	27H	21.74
12	5	701.5	713.5	0.1648	0.0142	ppm	4M59G7D	27H	22.17
12	5	701.5	713.5	0.1368	0.0158	ppm	4M58W7D	27H	21.36
12	10	704	711	0.1803	0.0157	ppm	9M10G7D	27H	22.56
12	10	704	711	0.1422	0.0165	ppm	9M10W7D	27H	21.53

## 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	0.0516	0.0134	ppm	1M12G7D	27H	17.13
12	1.4	699.7	715.3	0.0421	0.0121	ppm	1M11W7D	27H	16.24
12	3	700.5	714.5	0.0532	0.0186	ppm	2M73G7D	27H	17.26
12	3	700.5	714.5	0.0461	0.0156	ppm	2M72W7D	27H	16.64
12	5	701.5	713.5	0.0509	0.0142	ppm	4M59G7D	27H	17.07
12	5	701.5	713.5	0.0423	0.0158	ppm	4M58W7D	27H	16.26
12	10	704	711	0.0557	0.0157	ppm	9M10G7D	27H	17.46
12	10	704	711	0.0440	0.0165	ppm	9M10W7D	27H	16.43