

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 B12\_1.4MHz\_ERP

### 1.1.1 Test Result

Band: 12 / Bandwidth: 1.4MHz / NTV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	699.7	1	0	23.34	0.38	21.57	<=34.77	Pass		
			2	23.32	0.38	21.55	<=34.77	Pass		
			5	23.30	0.38	21.53	<=34.77	Pass		
		3	0	23.30	0.38	21.53	<=34.77	Pass		
			2	23.23	0.38	21.46	<=34.77	Pass		
			3	23.16	0.38	21.39	<=34.77	Pass		
		6	0	22.56	0.38	20.79	<=34.77	Pass		
		707.5	1	0	23.46	0.38	21.69	<=34.77	Pass	
				2	23.57	0.38	21.80	<=34.77	Pass	
	5			23.62	0.38	21.85	<=34.77	Pass		
	3		0	23.39	0.38	21.62	<=34.77	Pass		
			2	23.47	0.38	21.70	<=34.77	Pass		
			3	23.41	0.38	21.64	<=34.77	Pass		
	6		0	22.62	0.38	20.85	<=34.77	Pass		
	715.3		1	0	23.54	0.38	21.77	<=34.77	Pass	
				2	23.63	0.38	21.86	<=34.77	Pass	
		5		23.61	0.38	21.84	<=34.77	Pass		
		3	0	23.53	0.38	21.76	<=34.77	Pass		
			2	23.48	0.38	21.71	<=34.77	Pass		
			3	23.55	0.38	21.78	<=34.77	Pass		
		6	0	22.45	0.38	20.68	<=34.77	Pass		
		16QAM	699.7	1	0	21.98	0.38	20.21	<=34.77	Pass
					2	22.05	0.38	20.28	<=34.77	Pass
	5				22.08	0.38	20.31	<=34.77	Pass	
3	0			22.23	0.38	20.46	<=34.77	Pass		
	2			22.31	0.38	20.54	<=34.77	Pass		
	3			22.23	0.38	20.46	<=34.77	Pass		
6	0			21.58	0.38	19.81	<=34.77	Pass		
707.5	1			0	22.56	0.38	20.79	<=34.77	Pass	
				2	22.72	0.38	20.95	<=34.77	Pass	
			5	22.74	0.38	20.97	<=34.77	Pass		
	3		0	22.67	0.38	20.90	<=34.77	Pass		
			2	22.71	0.38	20.94	<=34.77	Pass		
			3	22.65	0.38	20.88	<=34.77	Pass		
	6		0	21.84	0.38	20.07	<=34.77	Pass		
	715.3		1	0	22.04	0.38	20.27	<=34.77	Pass	
				2	22.11	0.38	20.34	<=34.77	Pass	
5				22.06	0.38	20.29	<=34.77	Pass		
3			0	22.13	0.38	20.36	<=34.77	Pass		
			2	22.18	0.38	20.41	<=34.77	Pass		
			3	22.25	0.38	20.48	<=34.77	Pass		
6			0	21.77	0.38	20.00	<=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	23.35	0.38	21.58	<=34.77	Pass		
			7	23.19	0.38	21.42	<=34.77	Pass		
			14	23.53	0.38	21.76	<=34.77	Pass		
		8	0	22.59	0.38	20.82	<=34.77	Pass		
			4	22.65	0.38	20.88	<=34.77	Pass		
			7	22.63	0.38	20.86	<=34.77	Pass		
		15	0	22.57	0.38	20.80	<=34.77	Pass		
		707.5	1	0	23.55	0.38	21.78	<=34.77	Pass	
				7	23.55	0.38	21.78	<=34.77	Pass	
	14			23.51	0.38	21.74	<=34.77	Pass		
	8		0	22.42	0.38	20.65	<=34.77	Pass		
			4	22.62	0.38	20.85	<=34.77	Pass		
			7	22.65	0.38	20.88	<=34.77	Pass		
	15		0	22.64	0.38	20.87	<=34.77	Pass		
	714.5		1	0	23.47	0.38	21.70	<=34.77	Pass	
				7	23.49	0.38	21.72	<=34.77	Pass	
		14		23.49	0.38	21.72	<=34.77	Pass		
		8	0	22.65	0.38	20.88	<=34.77	Pass		
			4	22.56	0.38	20.79	<=34.77	Pass		
			7	22.35	0.38	20.58	<=34.77	Pass		
		15	0	22.32	0.38	20.55	<=34.77	Pass		
		16QAM	700.5	1	0	22.18	0.38	20.41	<=34.77	Pass
					7	22.22	0.38	20.45	<=34.77	Pass
	14				22.26	0.38	20.49	<=34.77	Pass	
8	0			21.75	0.38	19.98	<=34.77	Pass		
	4			21.72	0.38	19.95	<=34.77	Pass		
	7			21.82	0.38	20.05	<=34.77	Pass		
15	0			21.54	0.38	19.77	<=34.77	Pass		
707.5	1			0	22.60	0.38	20.83	<=34.77	Pass	
				7	22.80	0.38	21.03	<=34.77	Pass	
			14	22.71	0.38	20.94	<=34.77	Pass		
	8		0	21.81	0.38	20.04	<=34.77	Pass		
			4	21.76	0.38	19.99	<=34.77	Pass		
			7	21.79	0.38	20.02	<=34.77	Pass		
	15		0	21.69	0.38	19.92	<=34.77	Pass		
	714.5		1	0	22.67	0.38	20.90	<=34.77	Pass	
				7	22.61	0.38	20.84	<=34.77	Pass	
14				22.70	0.38	20.93	<=34.77	Pass		
8			0	21.87	0.38	20.10	<=34.77	Pass		
			4	21.88	0.38	20.11	<=34.77	Pass		
			7	21.84	0.38	20.07	<=34.77	Pass		
15			0	21.73	0.38	19.96	<=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	23.12	0.38	21.35	<=34.77	Pass		
			13	23.11	0.38	21.34	<=34.77	Pass		
			24	23.27	0.38	21.50	<=34.77	Pass		
		12	0	22.65	0.38	20.88	<=34.77	Pass		
			6	22.55	0.38	20.78	<=34.77	Pass		
			13	22.65	0.38	20.88	<=34.77	Pass		
		25	0	22.63	0.38	20.86	<=34.77	Pass		
		707.5	1	0	23.40	0.38	21.63	<=34.77	Pass	
				13	23.54	0.38	21.77	<=34.77	Pass	
	24			23.58	0.38	21.81	<=34.77	Pass		
	12		0	22.41	0.38	20.64	<=34.77	Pass		
			6	22.76	0.38	20.99	<=34.77	Pass		
			13	22.63	0.38	20.86	<=34.77	Pass		
	25		0	22.61	0.38	20.84	<=34.77	Pass		
	713.5		1	0	23.22	0.38	21.45	<=34.77	Pass	
				13	23.32	0.38	21.55	<=34.77	Pass	
		24		23.33	0.38	21.56	<=34.77	Pass		
		12	0	22.42	0.38	20.65	<=34.77	Pass		
			6	22.36	0.38	20.59	<=34.77	Pass		
			13	22.42	0.38	20.65	<=34.77	Pass		
		25	0	22.39	0.38	20.62	<=34.77	Pass		
		16QAM	701.5	1	0	22.54	0.38	20.77	<=34.77	Pass
					13	22.54	0.38	20.77	<=34.77	Pass
	24				22.65	0.38	20.88	<=34.77	Pass	
12	0			21.54	0.38	19.77	<=34.77	Pass		
	6			21.60	0.38	19.83	<=34.77	Pass		
	13			21.59	0.38	19.82	<=34.77	Pass		
25	0			21.62	0.38	19.85	<=34.77	Pass		
707.5	1			0	22.32	0.38	20.55	<=34.77	Pass	
				13	22.47	0.38	20.70	<=34.77	Pass	
			24	22.43	0.38	20.66	<=34.77	Pass		
	12		0	21.65	0.38	19.88	<=34.77	Pass		
			6	21.74	0.38	19.97	<=34.77	Pass		
			13	21.49	0.38	19.72	<=34.77	Pass		
	25		0	21.55	0.38	19.78	<=34.77	Pass		
	713.5		1	0	21.50	0.38	19.73	<=34.77	Pass	
				13	21.45	0.38	19.68	<=34.77	Pass	
24				21.48	0.38	19.71	<=34.77	Pass		
12			0	21.45	0.38	19.68	<=34.77	Pass		
			6	21.72	0.38	19.95	<=34.77	Pass		
			13	21.71	0.38	19.94	<=34.77	Pass		
25			0	21.83	0.38	20.06	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

## 1.4 B12\_10MHz\_ERP

### 1.4.1 Test Result

Band: 12 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	704	1	0	23.27	0.38	21.50	<=34.77	Pass
			25	23.50	0.38	21.73	<=34.77	Pass

		25	49	23.68	0.38	21.91	<=34.77	Pass		
			0	22.51	0.38	20.74	<=34.77	Pass		
			13	22.70	0.38	20.93	<=34.77	Pass		
			25	22.39	0.38	20.62	<=34.77	Pass		
		50	0	22.72	0.38	20.95	<=34.77	Pass		
			1	0	23.20	0.38	21.43	<=34.77	Pass	
				25	23.45	0.38	21.68	<=34.77	Pass	
		707.5	25	49	23.45	0.38	21.68	<=34.77	Pass	
				0	22.53	0.38	20.76	<=34.77	Pass	
				13	22.66	0.38	20.89	<=34.77	Pass	
	711	25	25	22.40	0.38	20.63	<=34.77	Pass		
			50	0	22.75	0.38	20.98	<=34.77	Pass	
			1	0	23.38	0.38	21.61	<=34.77	Pass	
	25	23.43		0.38	21.66	<=34.77	Pass			
	49	23.50		0.38	21.73	<=34.77	Pass			
	16QAM	704	1	0	22.70	0.38	20.93	<=34.77	Pass	
				13	22.49	0.38	20.72	<=34.77	Pass	
				25	22.63	0.38	20.86	<=34.77	Pass	
			25	50	0	22.50	0.38	20.73	<=34.77	Pass
				1	0	22.57	0.38	20.80	<=34.77	Pass
					25	22.66	0.38	20.89	<=34.77	Pass
			49		22.84	0.38	21.07	<=34.77	Pass	
			707.5	25	0	21.67	0.38	19.90	<=34.77	Pass
					13	21.78	0.38	20.01	<=34.77	Pass
					25	21.84	0.38	20.07	<=34.77	Pass
		711	25	50	0	21.71	0.38	19.94	<=34.77	Pass
				1	0	22.60	0.38	20.83	<=34.77	Pass
25					22.70	0.38	20.93	<=34.77	Pass	
704		25	49		22.64	0.38	20.87	<=34.77	Pass	
			0	21.75	0.38	19.98	<=34.77	Pass		
			13	21.62	0.38	19.85	<=34.77	Pass		
707.5		25	25	21.58	0.38	19.81	<=34.77	Pass		
			50	0	21.72	0.38	19.95	<=34.77	Pass	
			1	0	22.06	0.38	20.29	<=34.77	Pass	
25		22.20		0.38	20.43	<=34.77	Pass			
49		22.27		0.38	20.50	<=34.77	Pass			
711		25	0	21.76	0.38	19.99	<=34.77	Pass		
			13	21.64	0.38	19.87	<=34.77	Pass		
			25	21.89	0.38	20.12	<=34.77	Pass		
704		25	50	0	21.51	0.38	19.74	<=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	26.751	0.0382	-2.5 to 2.5	Pass				
									3.85	40.727	0.0582	-2.5 to 2.5	Pass
									4.43	32.144	0.0459	-2.5 to 2.5	Pass

				-30	3.85	18.268	0.0261	-2.5 to 2.5	Pass			
				-20	3.85	3.490	0.0050	-2.5 to 2.5	Pass			
				-10	3.85	-9.255	-0.0132	-2.5 to 2.5	Pass			
				0	3.85	-19.670	-0.0281	-2.5 to 2.5	Pass			
				10	3.85	-29.469	-0.0421	-2.5 to 2.5	Pass			
				30	3.85	-40.097	-0.0573	-2.5 to 2.5	Pass			
				40	3.85	-49.696	-0.0710	-2.5 to 2.5	Pass			
	50	3.85	-8.168	-0.0117	-2.5 to 2.5	Pass						
	707.5	6	0	20	3.27	6.065	0.0086	-2.5 to 2.5	Pass			
					3.85	15.564	0.0220	-2.5 to 2.5	Pass			
					4.43	10.214	0.0144	-2.5 to 2.5	Pass			
				-30	3.85	-1.245	-0.0018	-2.5 to 2.5	Pass			
				-20	3.85	-12.002	-0.0170	-2.5 to 2.5	Pass			
				-10	3.85	-24.004	-0.0339	-2.5 to 2.5	Pass			
				0	3.85	-33.731	-0.0477	-2.5 to 2.5	Pass			
				10	3.85	-42.429	-0.0600	-2.5 to 2.5	Pass			
				30	3.85	-1.273	-0.0018	-2.5 to 2.5	Pass			
				40	3.85	-9.913	-0.0140	-2.5 to 2.5	Pass			
				50	3.85	-15.907	-0.0225	-2.5 to 2.5	Pass			
				715.3	6	0	20	3.27	14.806	0.0207	-2.5 to 2.5	Pass
								3.85	24.834	0.0347	-2.5 to 2.5	Pass
								4.43	18.096	0.0253	-2.5 to 2.5	Pass
	-30	3.85	4.492				0.0063	-2.5 to 2.5	Pass			
	-20	3.85	-9.198				-0.0129	-2.5 to 2.5	Pass			
	-10	3.85	-23.017				-0.0322	-2.5 to 2.5	Pass			
	0	3.85	-35.262				-0.0493	-2.5 to 2.5	Pass			
	10	3.85	-6.638				-0.0093	-2.5 to 2.5	Pass			
30	3.85	-13.132	-0.0184				-2.5 to 2.5	Pass				
40	3.85	-21.601	-0.0302				-2.5 to 2.5	Pass				
50	3.85	-30.341	-0.0424				-2.5 to 2.5	Pass				
16QAM	699.7	6	0	20	3.27	-16.394	-0.0234	-2.5 to 2.5	Pass			
					3.85	-19.584	-0.0280	-2.5 to 2.5	Pass			
					4.43	-20.113	-0.0287	-2.5 to 2.5	Pass			
				-30	3.85	-20.142	-0.0288	-2.5 to 2.5	Pass			
				-20	3.85	-21.057	-0.0301	-2.5 to 2.5	Pass			
				-10	3.85	-22.988	-0.0329	-2.5 to 2.5	Pass			
				0	3.85	-22.845	-0.0326	-2.5 to 2.5	Pass			
				10	3.85	-23.003	-0.0329	-2.5 to 2.5	Pass			
				30	3.85	-23.088	-0.0330	-2.5 to 2.5	Pass			
				40	3.85	-23.060	-0.0330	-2.5 to 2.5	Pass			
				50	3.85	-23.246	-0.0332	-2.5 to 2.5	Pass			
				707.5	6	0	20	3.27	-25.191	-0.0356	-2.5 to 2.5	Pass
								3.85	-25.334	-0.0358	-2.5 to 2.5	Pass
								4.43	-27.223	-0.0385	-2.5 to 2.5	Pass
	-30	3.85	-27.995				-0.0396	-2.5 to 2.5	Pass			
	-20	3.85	-27.752				-0.0392	-2.5 to 2.5	Pass			
	-10	3.85	-27.881				-0.0394	-2.5 to 2.5	Pass			
	0	3.85	-27.795				-0.0393	-2.5 to 2.5	Pass			
	10	3.85	-29.683				-0.0420	-2.5 to 2.5	Pass			
	30	3.85	-29.769				-0.0421	-2.5 to 2.5	Pass			
	40	3.85	-29.826				-0.0422	-2.5 to 2.5	Pass			
	50	3.85	-31.772				-0.0449	-2.5 to 2.5	Pass			
	715.3	6	0				20	3.27	-40.970	-0.0573	-2.5 to 2.5	Pass
								3.85	-46.234	-0.0646	-2.5 to 2.5	Pass
				4.43	-3.705	-0.0052		-2.5 to 2.5	Pass			
				-30	3.85	-5.021	-0.0070	-2.5 to 2.5	Pass			
				-20	3.85	-6.495	-0.0091	-2.5 to 2.5	Pass			

				-10	3.85	-8.583	-0.0120	-2.5 to 2.5	Pass
				0	3.85	-9.012	-0.0126	-2.5 to 2.5	Pass
				10	3.85	-9.499	-0.0133	-2.5 to 2.5	Pass
				30	3.85	-8.669	-0.0121	-2.5 to 2.5	Pass
				40	3.85	-10.514	-0.0147	-2.5 to 2.5	Pass
				50	3.85	-12.031	-0.0168	-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	8.225	0.0117	-2.5 to 2.5	Pass
					3.85	1.416	0.0020	-2.5 to 2.5	Pass
					4.43	-25.291	-0.0361	-2.5 to 2.5	Pass
				-30	3.85	-13.189	-0.0188	-2.5 to 2.5	Pass
				-20	3.85	-46.778	-0.0668	-2.5 to 2.5	Pass
				-10	3.85	-19.798	-0.0283	-2.5 to 2.5	Pass
				0	3.85	-43.802	-0.0625	-2.5 to 2.5	Pass
				10	3.85	-19.698	-0.0281	-2.5 to 2.5	Pass
				30	3.85	-41.728	-0.0596	-2.5 to 2.5	Pass
				40	3.85	-15.092	-0.0215	-2.5 to 2.5	Pass
	50	3.85	-34.361	-0.0491	-2.5 to 2.5	Pass			
	707.5	15	0	20	3.27	7.381	0.0104	-2.5 to 2.5	Pass
					3.85	15.349	0.0217	-2.5 to 2.5	Pass
					4.43	8.368	0.0118	-2.5 to 2.5	Pass
				-30	3.85	-3.233	-0.0046	-2.5 to 2.5	Pass
				-20	3.85	-15.178	-0.0215	-2.5 to 2.5	Pass
				-10	3.85	-27.194	-0.0384	-2.5 to 2.5	Pass
				0	3.85	-38.967	-0.0551	-2.5 to 2.5	Pass
				10	3.85	-7.954	-0.0112	-2.5 to 2.5	Pass
				30	3.85	-19.040	-0.0269	-2.5 to 2.5	Pass
				40	3.85	-29.626	-0.0419	-2.5 to 2.5	Pass
	50	3.85	-37.265	-0.0527	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	3.619	0.0051	-2.5 to 2.5	Pass
					3.85	11.759	0.0165	-2.5 to 2.5	Pass
					4.43	5.493	0.0077	-2.5 to 2.5	Pass
				-30	3.85	-4.749	-0.0066	-2.5 to 2.5	Pass
				-20	3.85	-17.610	-0.0246	-2.5 to 2.5	Pass
				-10	3.85	-28.882	-0.0404	-2.5 to 2.5	Pass
				0	3.85	-47.336	-0.0663	-2.5 to 2.5	Pass
				10	3.85	-9.599	-0.0134	-2.5 to 2.5	Pass
30				3.85	-20.828	-0.0292	-2.5 to 2.5	Pass	
40				3.85	-30.026	-0.0420	-2.5 to 2.5	Pass	
50	3.85	-37.894	-0.0530	-2.5 to 2.5	Pass				
16QAM	700.5	15	0	20	3.27	3.376	0.0048	-2.5 to 2.5	Pass
					3.85	-6.080	-0.0087	-2.5 to 2.5	Pass
					4.43	-10.128	-0.0145	-2.5 to 2.5	Pass
				-30	3.85	-14.319	-0.0204	-2.5 to 2.5	Pass
				-20	3.85	-18.654	-0.0266	-2.5 to 2.5	Pass
				-10	3.85	-22.802	-0.0326	-2.5 to 2.5	Pass
				0	3.85	-26.522	-0.0379	-2.5 to 2.5	Pass
10	3.85	-31.171	-0.0445	-2.5 to 2.5	Pass				

	707.5	15	0	30	3.85	-35.377	-0.0505	-2.5 to 2.5	Pass
				40	3.85	-40.741	-0.0582	-2.5 to 2.5	Pass
				50	3.85	-44.031	-0.0629	-2.5 to 2.5	Pass
				20	3.27	-46.735	-0.0661	-2.5 to 2.5	Pass
					3.85	-5.865	-0.0083	-2.5 to 2.5	Pass
					4.43	-7.768	-0.0110	-2.5 to 2.5	Pass
				-30	3.85	-8.841	-0.0125	-2.5 to 2.5	Pass
				-20	3.85	-9.542	-0.0135	-2.5 to 2.5	Pass
				-10	3.85	-10.386	-0.0147	-2.5 to 2.5	Pass
				0	3.85	-11.287	-0.0160	-2.5 to 2.5	Pass
				10	3.85	-8.841	-0.0125	-2.5 to 2.5	Pass
				30	3.85	-9.985	-0.0141	-2.5 to 2.5	Pass
	40	3.85	-10.028	-0.0142	-2.5 to 2.5	Pass			
	50	3.85	-10.543	-0.0149	-2.5 to 2.5	Pass			
	714.5	15	0	20	3.27	-1.345	-0.0019	-2.5 to 2.5	Pass
					3.85	-5.622	-0.0079	-2.5 to 2.5	Pass
					4.43	-3.448	-0.0048	-2.5 to 2.5	Pass
				-30	3.85	-4.148	-0.0058	-2.5 to 2.5	Pass
				-20	3.85	-2.346	-0.0033	-2.5 to 2.5	Pass
				-10	3.85	-1.144	-0.0016	-2.5 to 2.5	Pass
				0	3.85	-0.730	-0.0010	-2.5 to 2.5	Pass
				10	3.85	-1.616	-0.0023	-2.5 to 2.5	Pass
				30	3.85	-2.661	-0.0037	-2.5 to 2.5	Pass
				40	3.85	-3.476	-0.0049	-2.5 to 2.5	Pass
50				3.85	-3.018	-0.0042	-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	5.908	0.0084	-2.5 to 2.5	Pass
					3.85	-0.143	-0.0002	-2.5 to 2.5	Pass
					4.43	-28.868	-0.0412	-2.5 to 2.5	Pass
				-30	3.85	-23.289	-0.0332	-2.5 to 2.5	Pass
				-20	3.85	-13.075	-0.0186	-2.5 to 2.5	Pass
				-10	3.85	-39.439	-0.0562	-2.5 to 2.5	Pass
				0	3.85	-14.119	-0.0201	-2.5 to 2.5	Pass
				10	3.85	-35.763	-0.0510	-2.5 to 2.5	Pass
				30	3.85	-8.297	-0.0118	-2.5 to 2.5	Pass
				40	3.85	-27.366	-0.0390	-2.5 to 2.5	Pass
				50	3.85	-44.775	-0.0638	-2.5 to 2.5	Pass
				707.5	25	0	20	3.27	3.448
	3.85	10.915	0.0154					-2.5 to 2.5	Pass
	4.43	5.178	0.0073					-2.5 to 2.5	Pass
	-30	3.85	-4.106				-0.0058	-2.5 to 2.5	Pass
	-20	3.85	-15.521				-0.0219	-2.5 to 2.5	Pass
	-10	3.85	-26.765				-0.0378	-2.5 to 2.5	Pass
	0	3.85	-36.335				-0.0514	-2.5 to 2.5	Pass
	10	3.85	-46.864				-0.0662	-2.5 to 2.5	Pass
	30	3.85	-9.398				-0.0133	-2.5 to 2.5	Pass
	40	3.85	-17.767				-0.0251	-2.5 to 2.5	Pass
	50	3.85	-26.636				-0.0376	-2.5 to 2.5	Pass

	713.5	25	0	20	3.27	10.271	0.0144	-2.5 to 2.5	Pass					
					3.85	22.030	0.0309	-2.5 to 2.5	Pass					
					4.43	20.227	0.0283	-2.5 to 2.5	Pass					
								-30	3.85	13.690	0.0192	-2.5 to 2.5	Pass	
								-20	3.85	5.908	0.0083	-2.5 to 2.5	Pass	
								-10	3.85	-1.602	-0.0022	-2.5 to 2.5	Pass	
								0	3.85	-9.656	-0.0135	-2.5 to 2.5	Pass	
								10	3.85	-17.195	-0.0241	-2.5 to 2.5	Pass	
								30	3.85	-21.071	-0.0295	-2.5 to 2.5	Pass	
								40	3.85	-26.622	-0.0373	-2.5 to 2.5	Pass	
50	3.85	-32.530	-0.0456	-2.5 to 2.5	Pass									
16QAM	701.5	25	0	20	3.27	-10.571	-0.0151	-2.5 to 2.5	Pass					
					3.85	-20.528	-0.0293	-2.5 to 2.5	Pass					
					4.43	-26.350	-0.0376	-2.5 to 2.5	Pass					
								-30	3.85	-32.301	-0.0460	-2.5 to 2.5	Pass	
								-20	3.85	-37.494	-0.0534	-2.5 to 2.5	Pass	
								-10	3.85	-42.400	-0.0604	-2.5 to 2.5	Pass	
								0	3.85	-1.330	-0.0019	-2.5 to 2.5	Pass	
								10	3.85	-5.322	-0.0076	-2.5 to 2.5	Pass	
								30	3.85	-9.985	-0.0142	-2.5 to 2.5	Pass	
								40	3.85	-13.719	-0.0196	-2.5 to 2.5	Pass	
	50	3.85	-16.451	-0.0235	-2.5 to 2.5	Pass								
		707.5	25	0	20	3.27	-38.023	-0.0537	-2.5 to 2.5	Pass				
						3.85	-38.853	-0.0549	-2.5 to 2.5	Pass				
						4.43	-38.123	-0.0539	-2.5 to 2.5	Pass				
									-30	3.85	-36.635	-0.0518	-2.5 to 2.5	Pass
									-20	3.85	-36.407	-0.0515	-2.5 to 2.5	Pass
									-10	3.85	-35.820	-0.0506	-2.5 to 2.5	Pass
									0	3.85	-35.505	-0.0502	-2.5 to 2.5	Pass
									10	3.85	-35.992	-0.0509	-2.5 to 2.5	Pass
									30	3.85	-35.949	-0.0508	-2.5 to 2.5	Pass
									40	3.85	-37.665	-0.0532	-2.5 to 2.5	Pass
	50	3.85	-37.537	-0.0531	-2.5 to 2.5	Pass								
		713.5	25	0	20	3.27	-37.322	-0.0523	-2.5 to 2.5	Pass				
						3.85	-40.441	-0.0567	-2.5 to 2.5	Pass				
						4.43	-41.914	-0.0587	-2.5 to 2.5	Pass				
									-30	3.85	-41.184	-0.0577	-2.5 to 2.5	Pass
									-20	3.85	-42.558	-0.0596	-2.5 to 2.5	Pass
									-10	3.85	-42.958	-0.0602	-2.5 to 2.5	Pass
									0	3.85	-43.416	-0.0608	-2.5 to 2.5	Pass
									10	3.85	-44.317	-0.0621	-2.5 to 2.5	Pass
30									3.85	-41.485	-0.0581	-2.5 to 2.5	Pass	
40									3.85	-38.824	-0.0544	-2.5 to 2.5	Pass	
50	3.85	-39.296	-0.0551	-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	2.947	0.0042	-2.5 to 2.5	Pass
					3.85	-22.058	-0.0313	-2.5 to 2.5	Pass
					4.43	-21.100	-0.0300	-2.5 to 2.5	Pass



				-30	3.85	-24.247	-0.0344	-2.5 to 2.5	Pass			
				-20	3.85	-17.624	-0.0250	-2.5 to 2.5	Pass			
				-10	3.85	-18.797	-0.0267	-2.5 to 2.5	Pass			
				0	3.85	-27.566	-0.0392	-2.5 to 2.5	Pass			
				10	3.85	-10.028	-0.0142	-2.5 to 2.5	Pass			
				30	3.85	-34.304	-0.0487	-2.5 to 2.5	Pass			
				40	3.85	-10.815	-0.0154	-2.5 to 2.5	Pass			
	50	3.85	-31.085	-0.0442	-2.5 to 2.5	Pass						
	707.5	50	0	20	3.27	10.257	0.0145	-2.5 to 2.5	Pass			
					3.85	19.312	0.0273	-2.5 to 2.5	Pass			
					4.43	5.093	0.0072	-2.5 to 2.5	Pass			
				-30	3.85	-9.670	-0.0137	-2.5 to 2.5	Pass			
				-20	3.85	-23.088	-0.0326	-2.5 to 2.5	Pass			
				-10	3.85	-34.533	-0.0488	-2.5 to 2.5	Pass			
				0	3.85	-23.518	-0.0332	-2.5 to 2.5	Pass			
				10	3.85	-6.809	-0.0096	-2.5 to 2.5	Pass			
				30	3.85	-13.118	-0.0185	-2.5 to 2.5	Pass			
				40	3.85	-18.768	-0.0265	-2.5 to 2.5	Pass			
				50	3.85	-26.135	-0.0369	-2.5 to 2.5	Pass			
				711	50	0	20	3.27	11.158	0.0157	-2.5 to 2.5	Pass
								3.85	20.056	0.0282	-2.5 to 2.5	Pass
								4.43	10.514	0.0148	-2.5 to 2.5	Pass
	-30	3.85	-0.143				-0.0002	-2.5 to 2.5	Pass			
	-20	3.85	-9.656				-0.0136	-2.5 to 2.5	Pass			
	-10	3.85	-18.682				-0.0263	-2.5 to 2.5	Pass			
	0	3.85	-25.392				-0.0357	-2.5 to 2.5	Pass			
	10	3.85	-34.032				-0.0479	-2.5 to 2.5	Pass			
30	3.85	-41.170	-0.0579				-2.5 to 2.5	Pass				
40	3.85	-47.679	-0.0671				-2.5 to 2.5	Pass				
50	3.85	-4.778	-0.0067				-2.5 to 2.5	Pass				
16QAM	704	50	0	20	3.27	-26.193	-0.0372	-2.5 to 2.5	Pass			
					3.85	-1.645	-0.0023	-2.5 to 2.5	Pass			
					4.43	-6.094	-0.0087	-2.5 to 2.5	Pass			
				-30	3.85	-10.314	-0.0147	-2.5 to 2.5	Pass			
				-20	3.85	-15.707	-0.0223	-2.5 to 2.5	Pass			
				-10	3.85	-20.671	-0.0294	-2.5 to 2.5	Pass			
				0	3.85	-23.589	-0.0335	-2.5 to 2.5	Pass			
				10	3.85	-27.308	-0.0388	-2.5 to 2.5	Pass			
				30	3.85	-29.998	-0.0426	-2.5 to 2.5	Pass			
				40	3.85	-34.719	-0.0493	-2.5 to 2.5	Pass			
				50	3.85	-38.896	-0.0553	-2.5 to 2.5	Pass			
				707.5	50	0	20	3.27	-33.703	-0.0476	-2.5 to 2.5	Pass
								3.85	-34.933	-0.0494	-2.5 to 2.5	Pass
								4.43	-31.657	-0.0447	-2.5 to 2.5	Pass
	-30	3.85	-27.852				-0.0394	-2.5 to 2.5	Pass			
	-20	3.85	-24.576				-0.0347	-2.5 to 2.5	Pass			
	-10	3.85	-22.345				-0.0316	-2.5 to 2.5	Pass			
	0	3.85	-20.685				-0.0292	-2.5 to 2.5	Pass			
	10	3.85	-19.841				-0.0280	-2.5 to 2.5	Pass			
	30	3.85	-18.911				-0.0267	-2.5 to 2.5	Pass			
	40	3.85	-17.624				-0.0249	-2.5 to 2.5	Pass			
	50	3.85	-12.960				-0.0183	-2.5 to 2.5	Pass			
	711	50	0	20	3.27	-10.629	-0.0149	-2.5 to 2.5	Pass			
					3.85	-8.998	-0.0127	-2.5 to 2.5	Pass			
					4.43	-3.204	-0.0045	-2.5 to 2.5	Pass			
				-30	3.85	2.332	0.0033	-2.5 to 2.5	Pass			
				-20	3.85	6.723	0.0095	-2.5 to 2.5	Pass			

				-10	3.85	9.742	0.0137	-2.5 to 2.5	Pass
				0	3.85	13.647	0.0192	-2.5 to 2.5	Pass
				10	3.85	19.312	0.0272	-2.5 to 2.5	Pass
				30	3.85	23.360	0.0329	-2.5 to 2.5	Pass
				40	3.85	25.134	0.0354	-2.5 to 2.5	Pass
				50	3.85	26.035	0.0366	-2.5 to 2.5	Pass

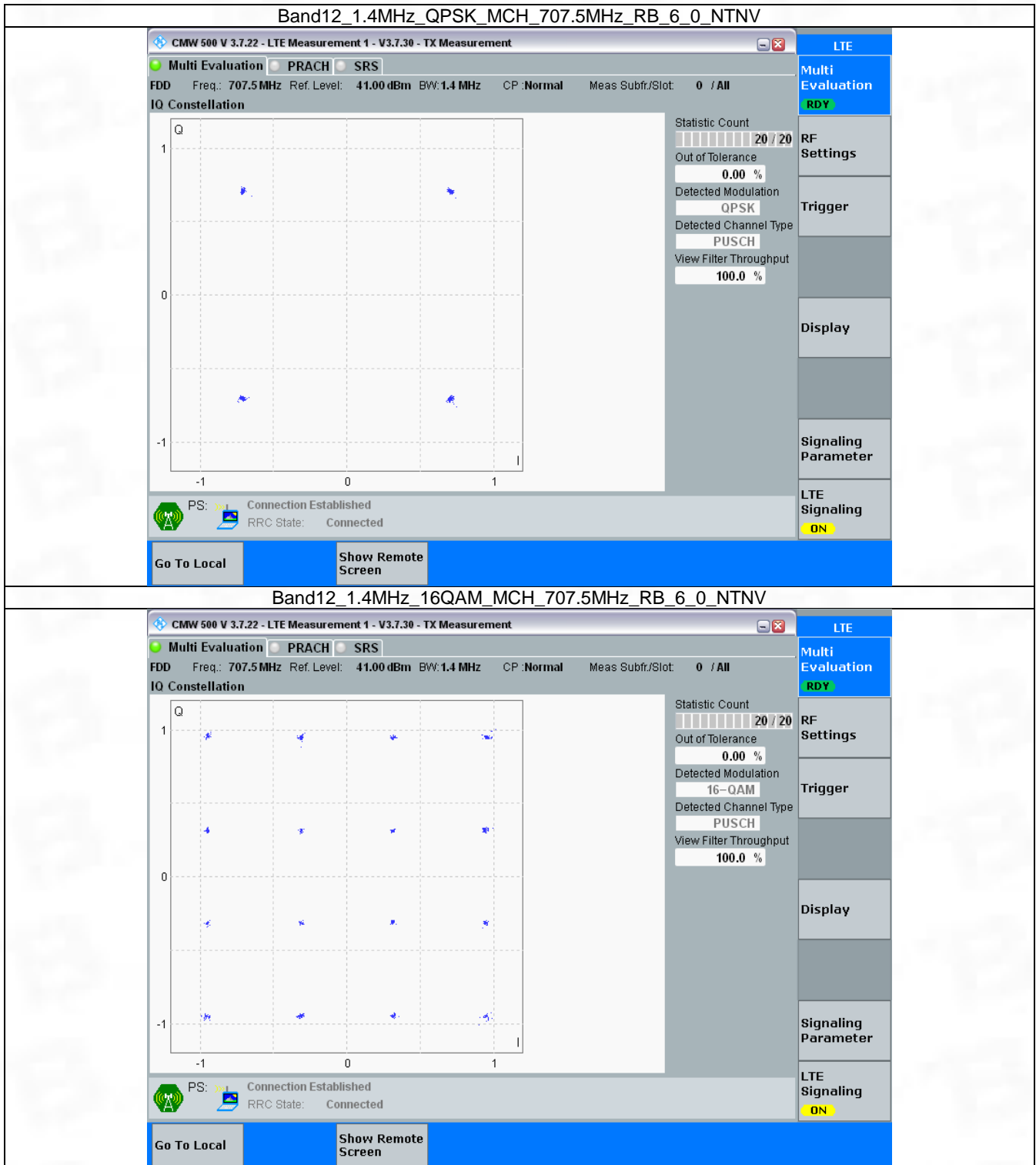
### 3. Modulation Characteristics

#### 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

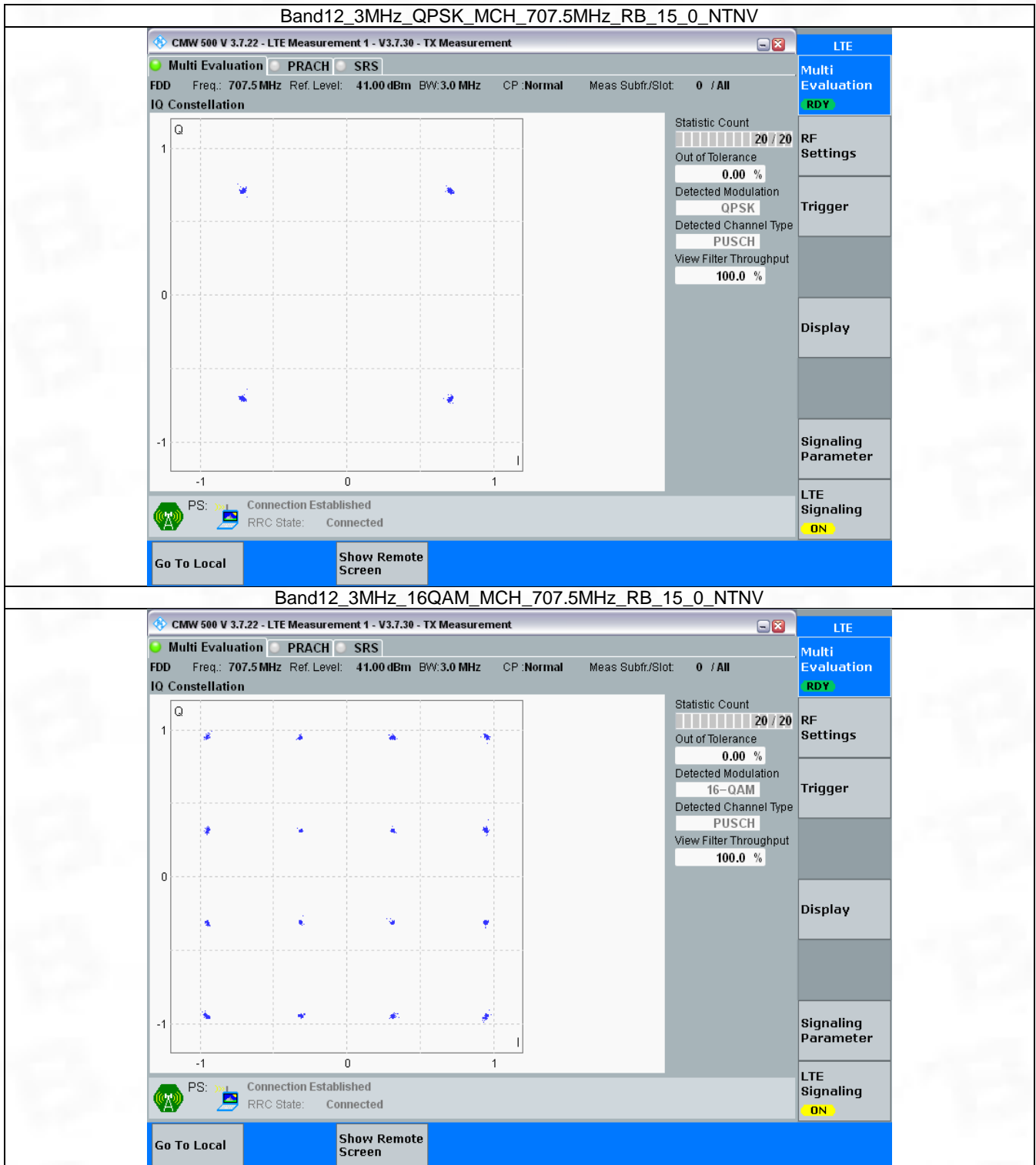


## 3.2 B12\_3MHz

### 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

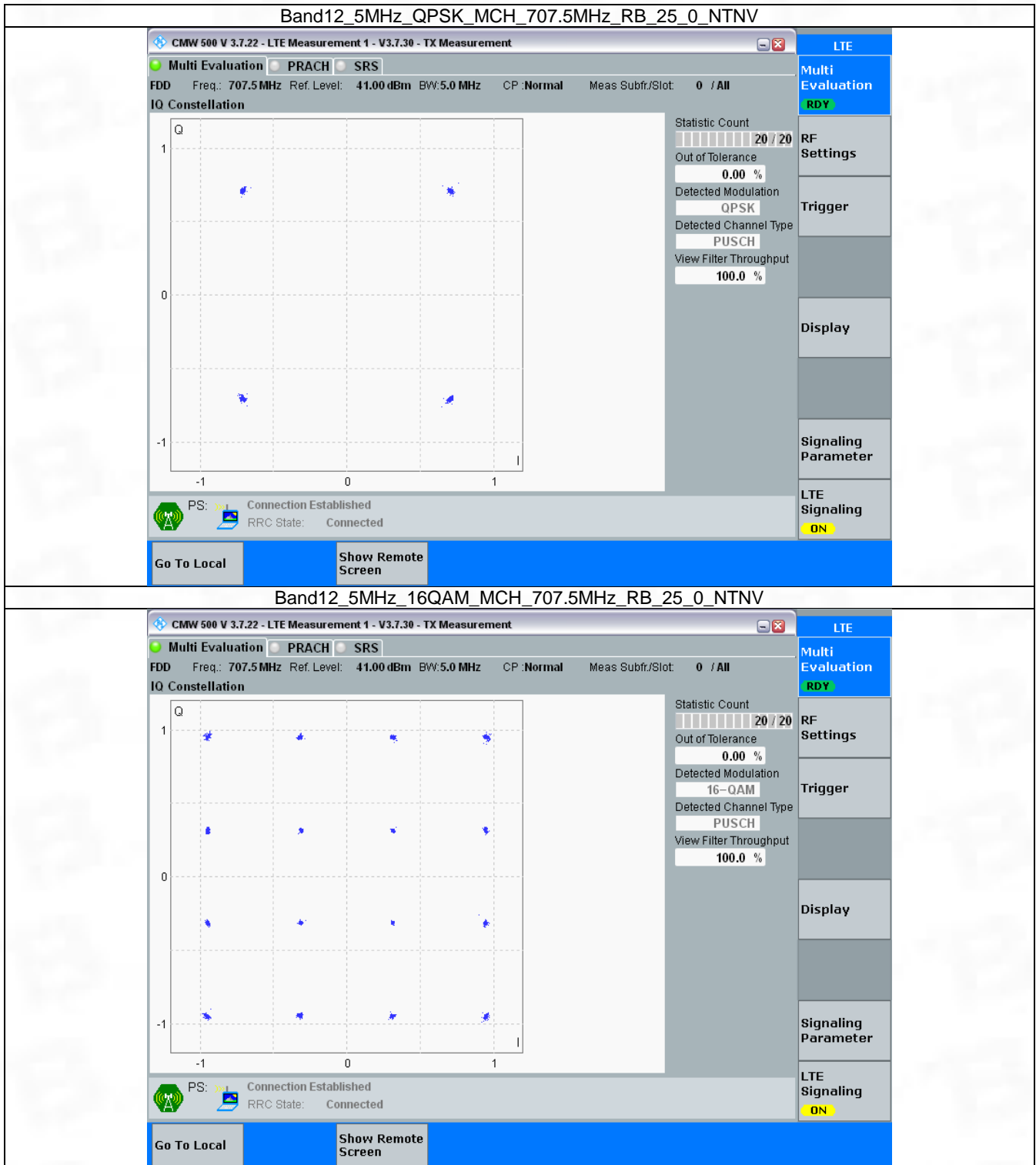


### 3.3 B12\_5MHz

#### 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



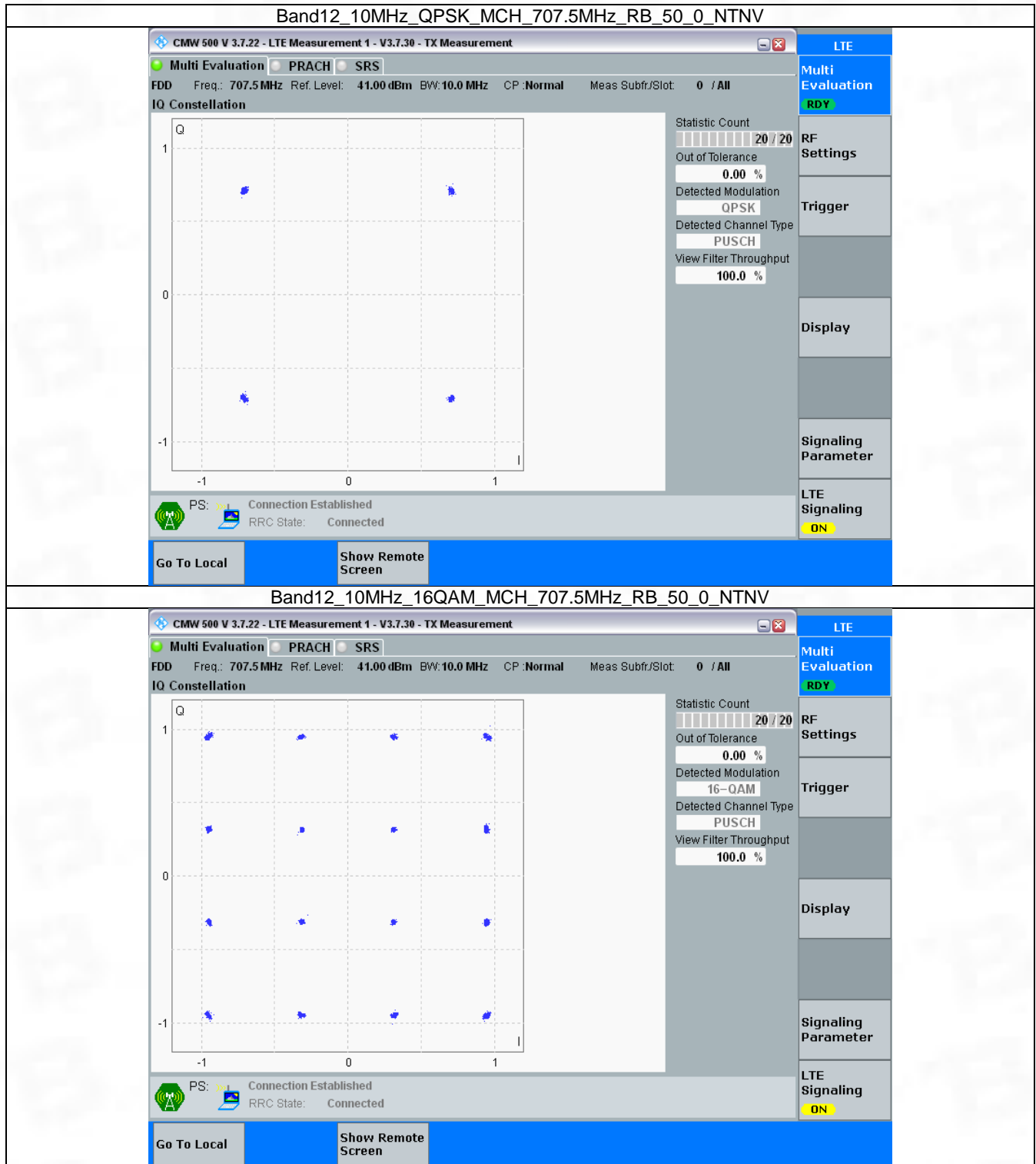
### 3.4 B12\_10MHz

#### 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



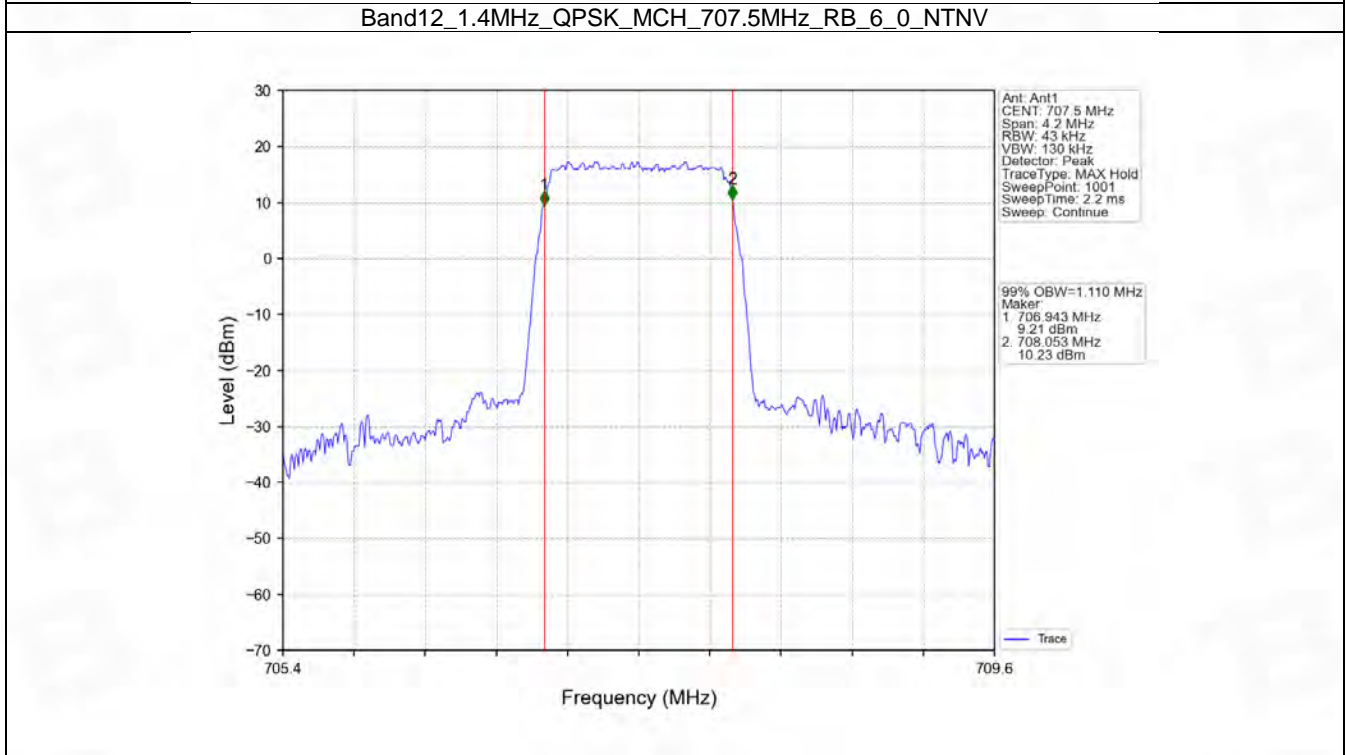
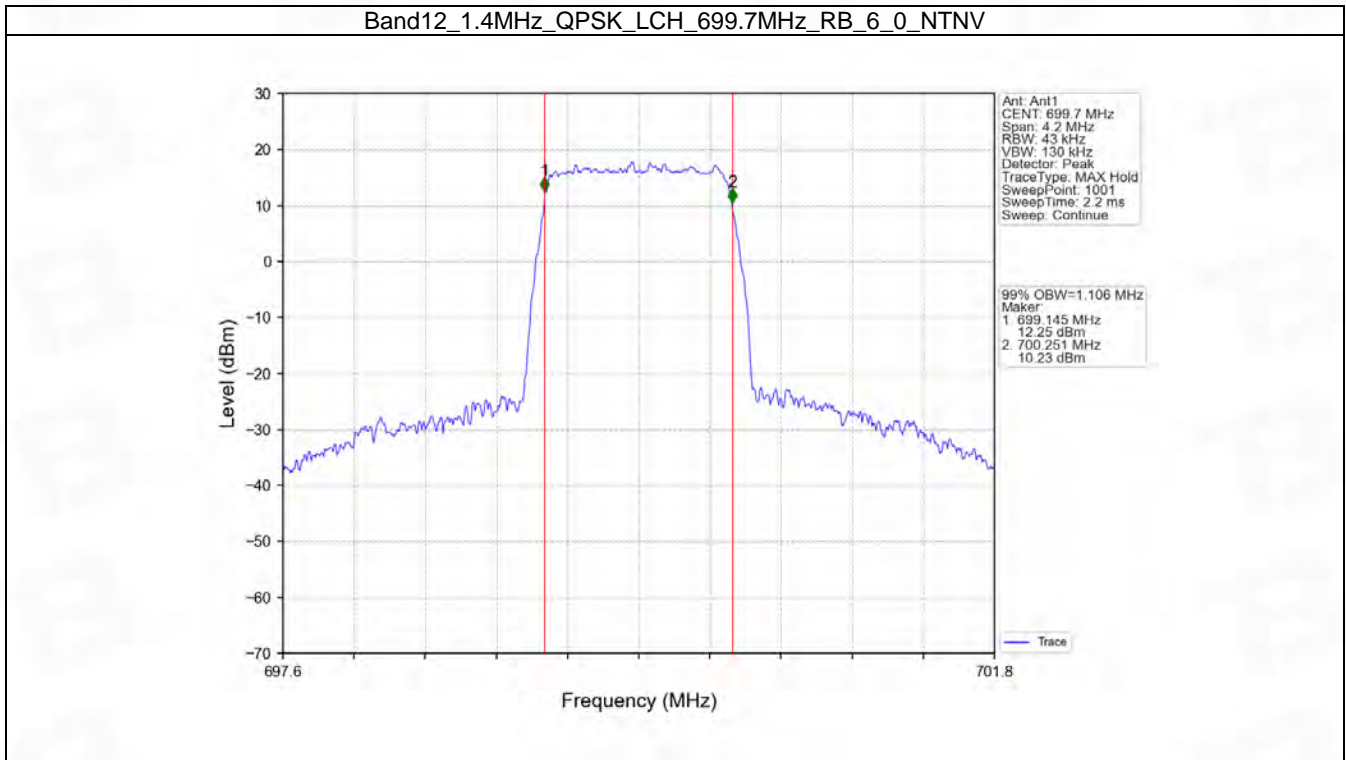
## 4. 99% & 26dB Bandwidth

### 4.1 Band12\_OBW

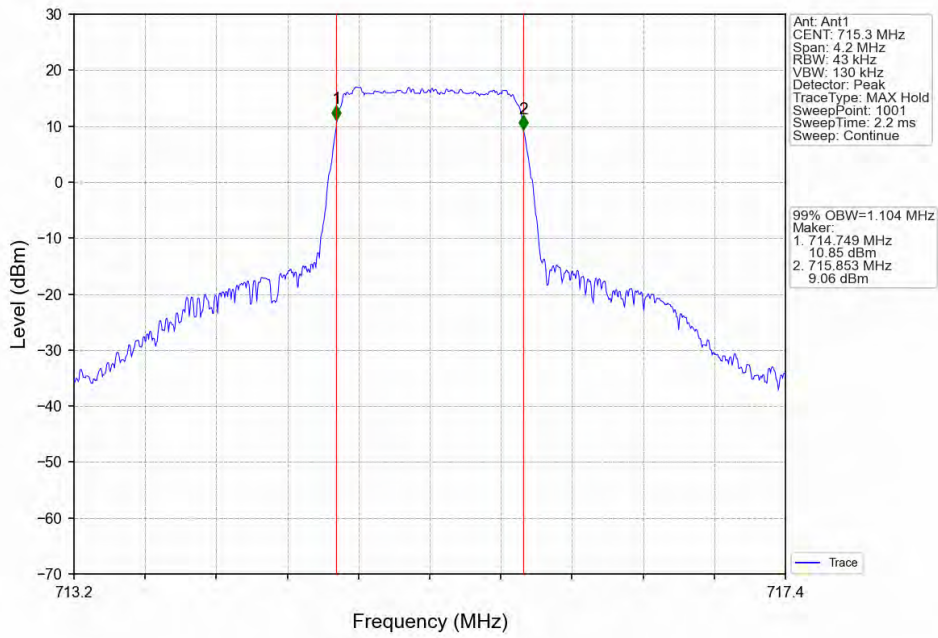
#### 4.1.1 Test Result

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.106	/	Pass
		707.5	6	0	1.110	/	Pass
		715.3	6	0	1.104	/	Pass
	16QAM	699.7	6	0	1.109	/	Pass
		707.5	6	0	1.113	/	Pass
		715.3	6	0	1.119	/	Pass
3	QPSK	700.5	15	0	2.754	/	Pass
		707.5	15	0	2.768	/	Pass
		714.5	15	0	2.764	/	Pass
	16QAM	700.5	15	0	2.749	/	Pass
		707.5	15	0	2.741	/	Pass
		714.5	15	0	2.755	/	Pass
5	QPSK	701.5	25	0	4.537	/	Pass
		707.5	25	0	4.546	/	Pass
		713.5	25	0	4.576	/	Pass
	16QAM	701.5	25	0	4.558	/	Pass
		707.5	25	0	4.549	/	Pass
		713.5	25	0	4.557	/	Pass
10	QPSK	704	50	0	9.080	/	Pass
		707.5	50	0	9.032	/	Pass
		711	50	0	9.041	/	Pass
	16QAM	704	50	0	9.061	/	Pass
		707.5	50	0	9.068	/	Pass
		711	50	0	9.028	/	Pass

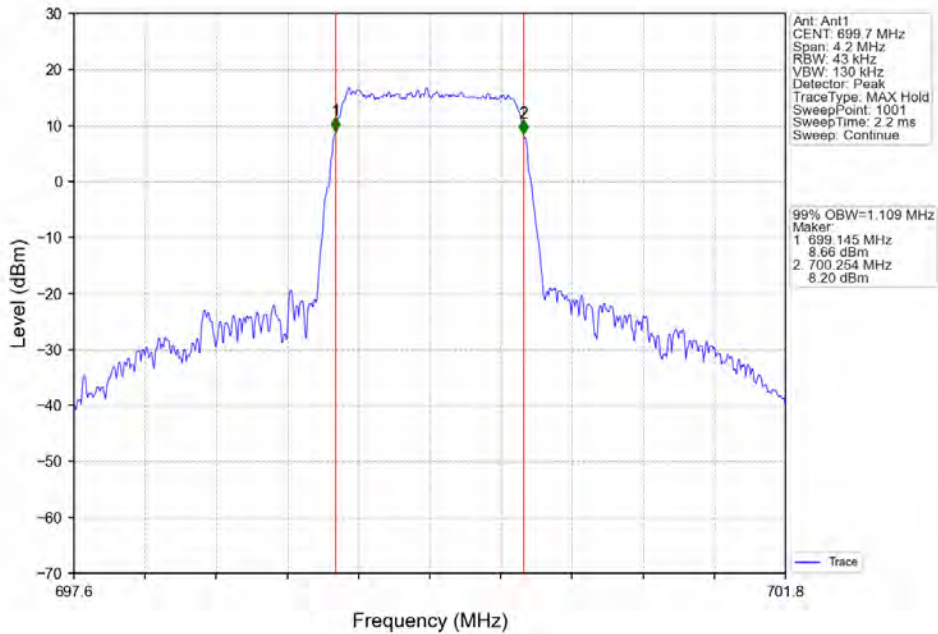
### 4.1.2 Test Graph



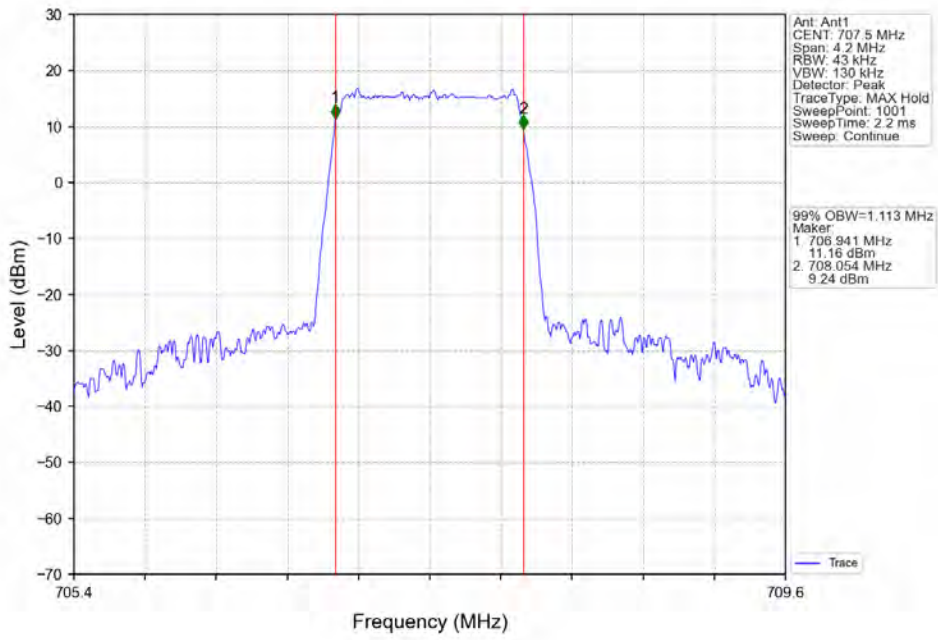
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



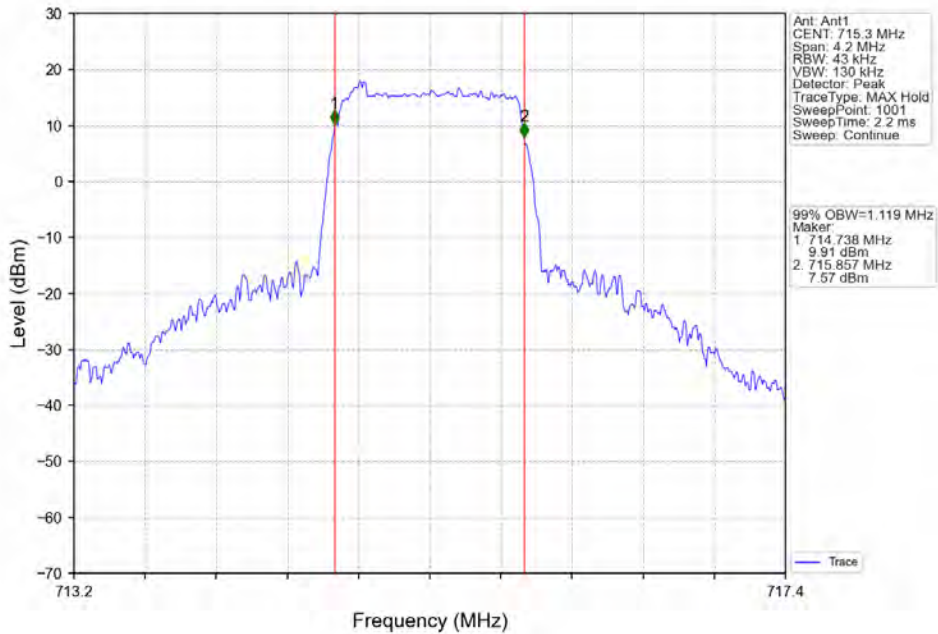
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



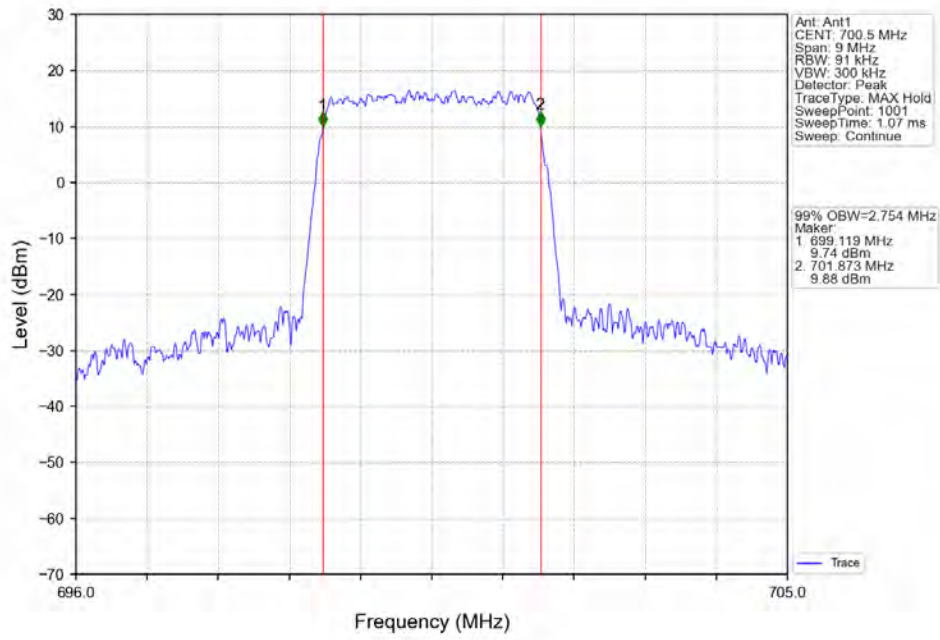
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



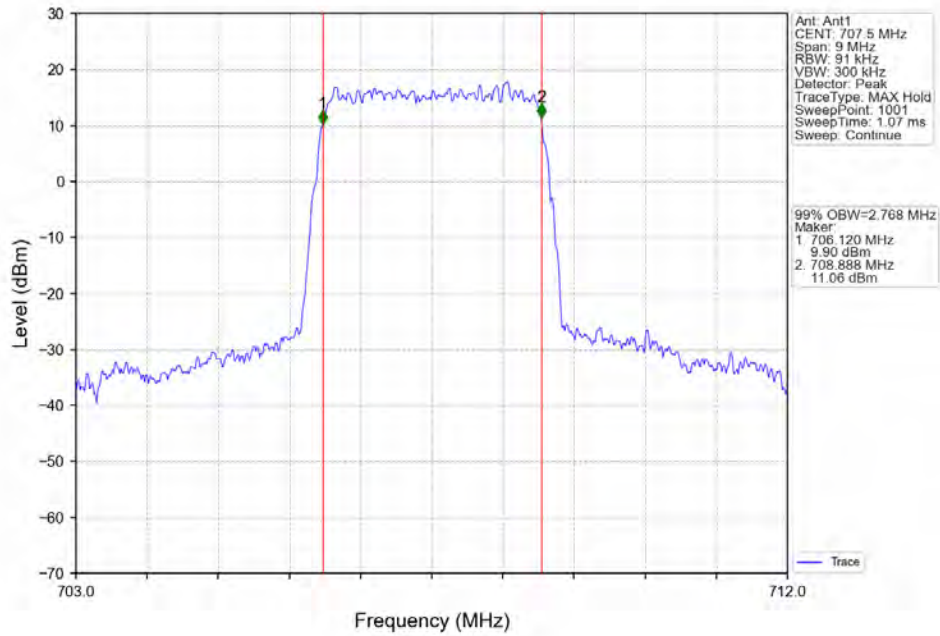
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



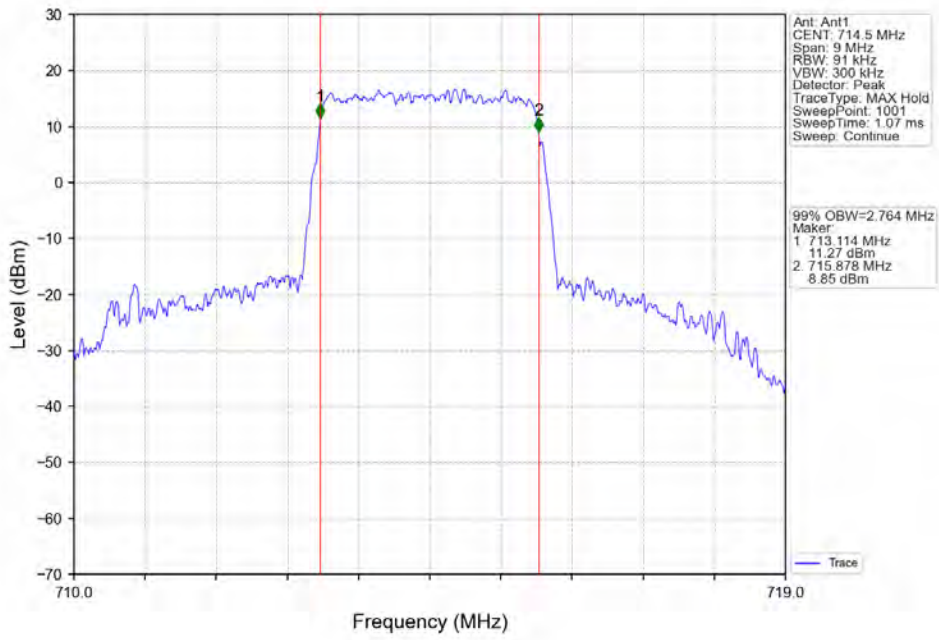
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



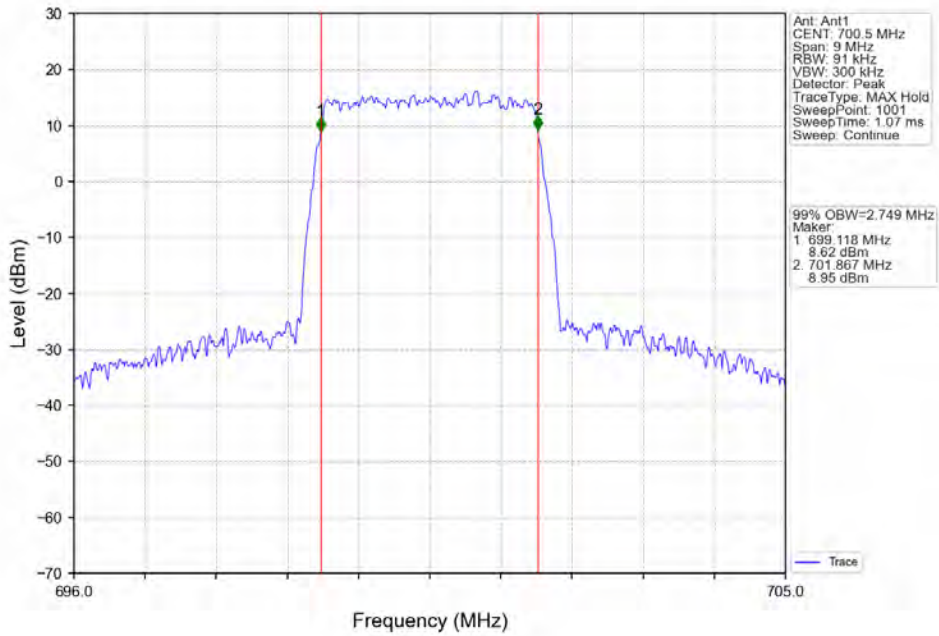
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



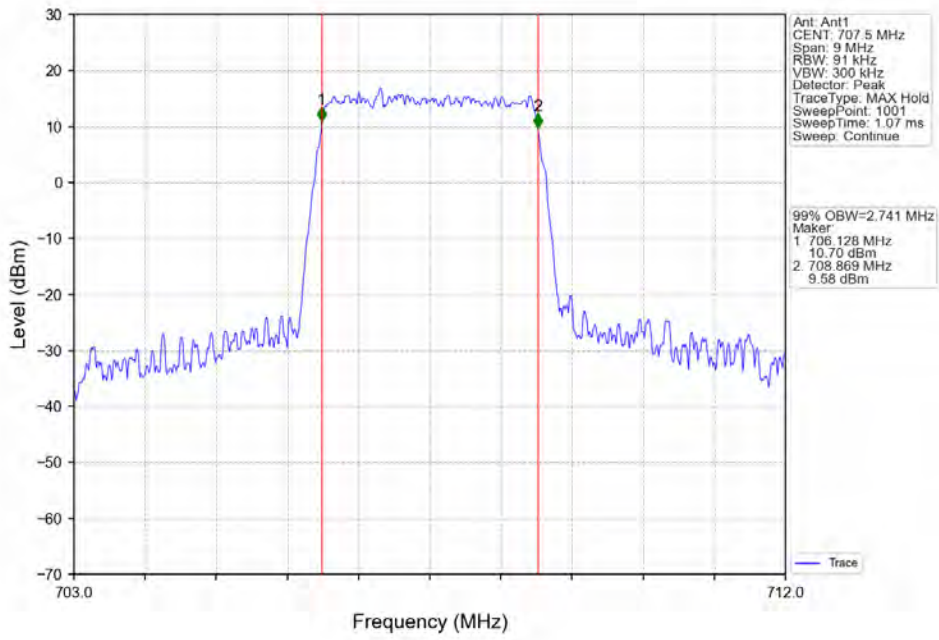
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



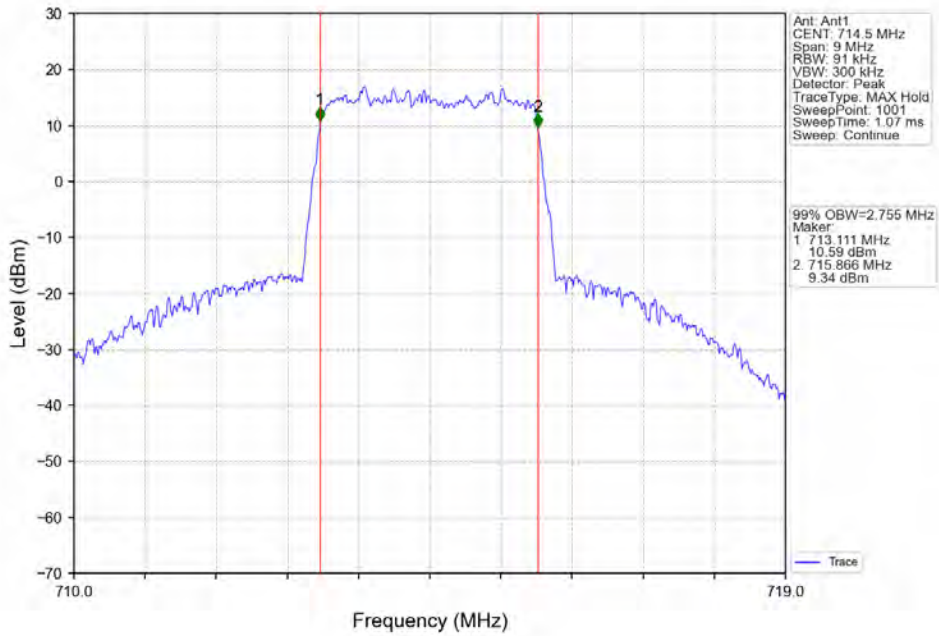
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



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

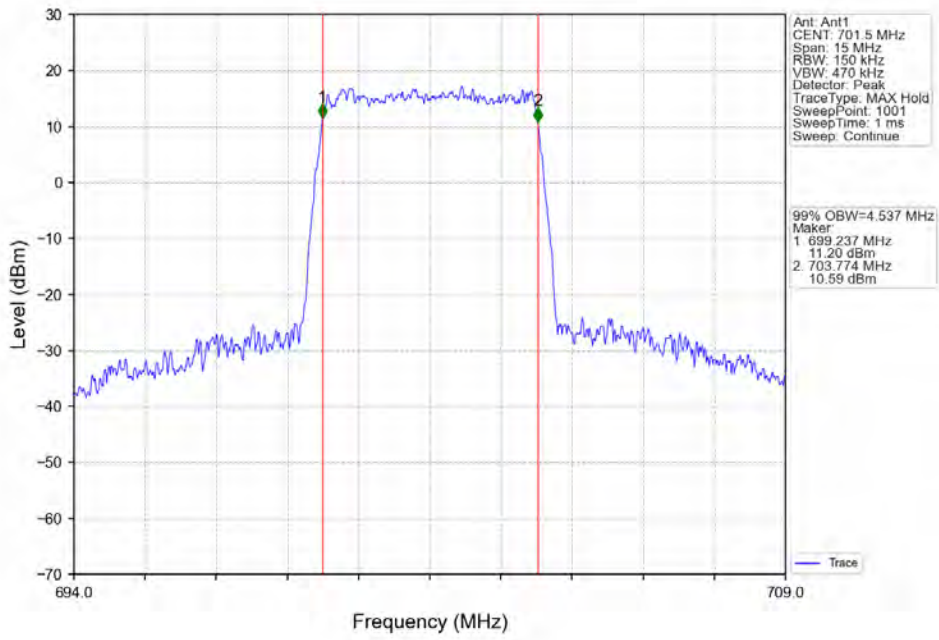


Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV

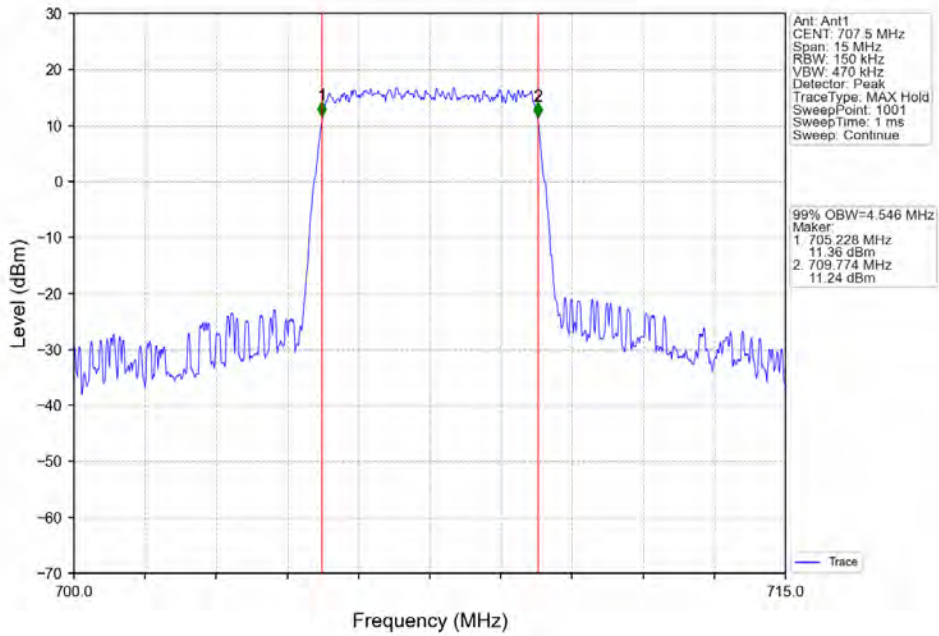




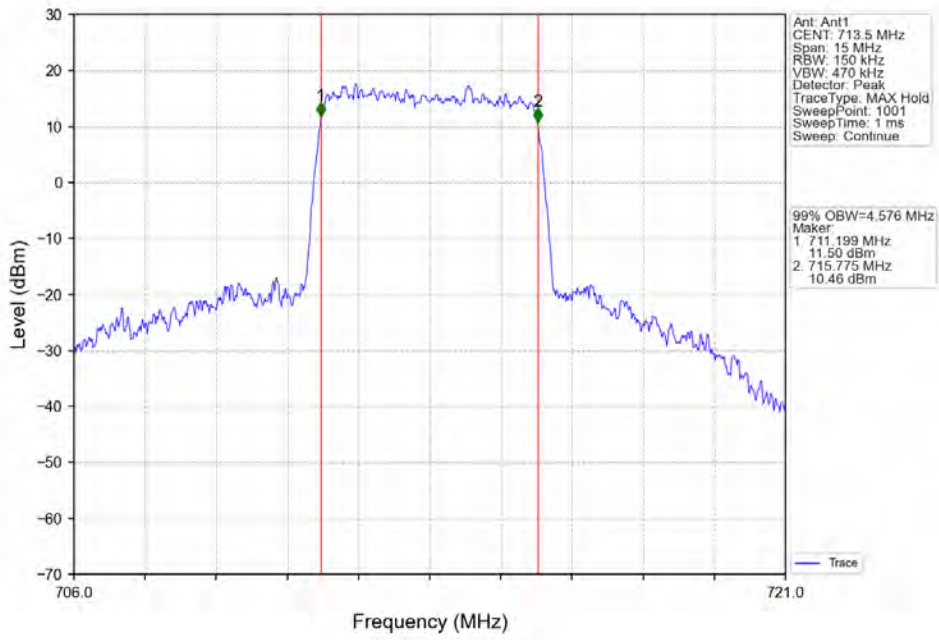
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



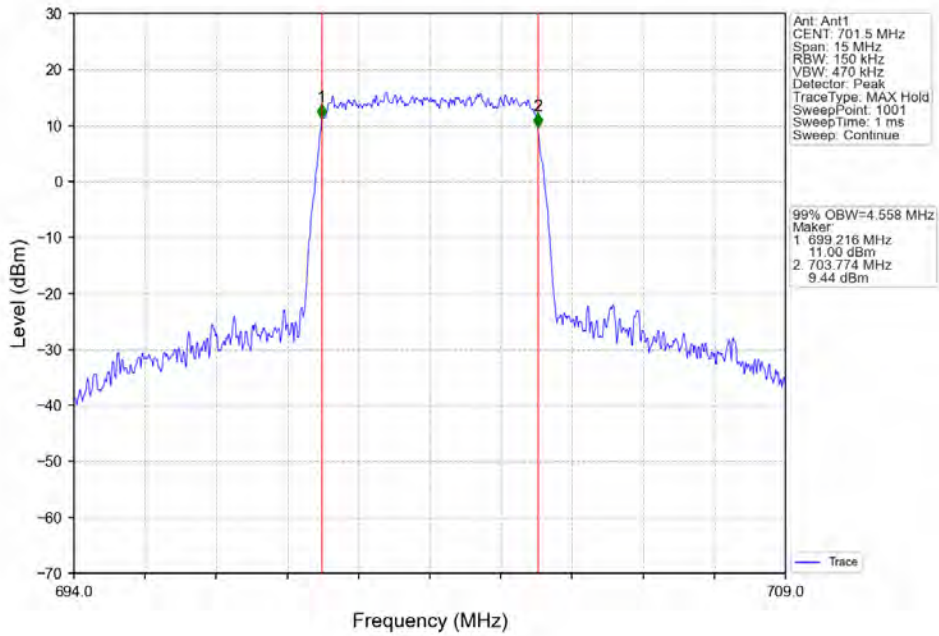
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



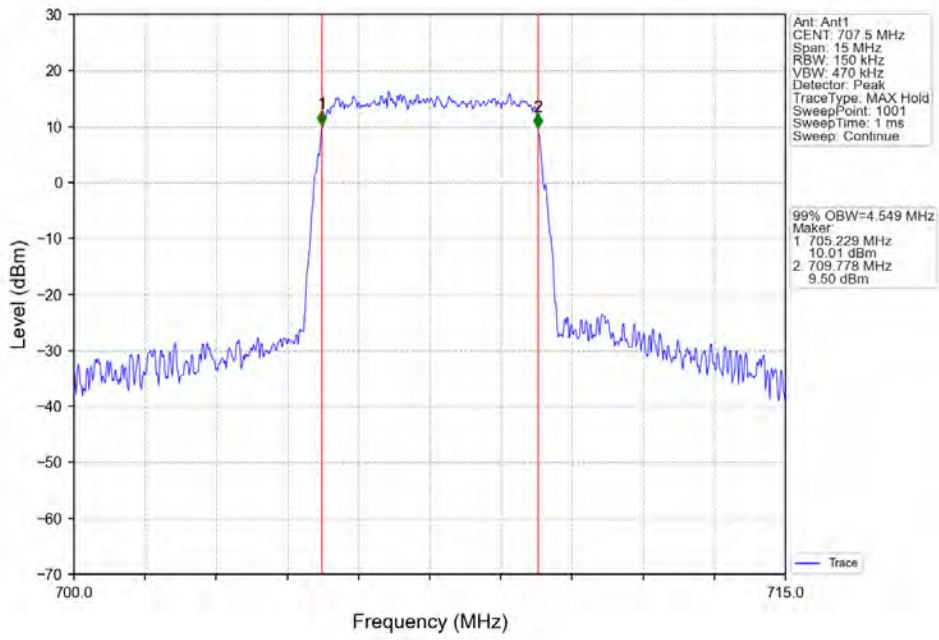
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



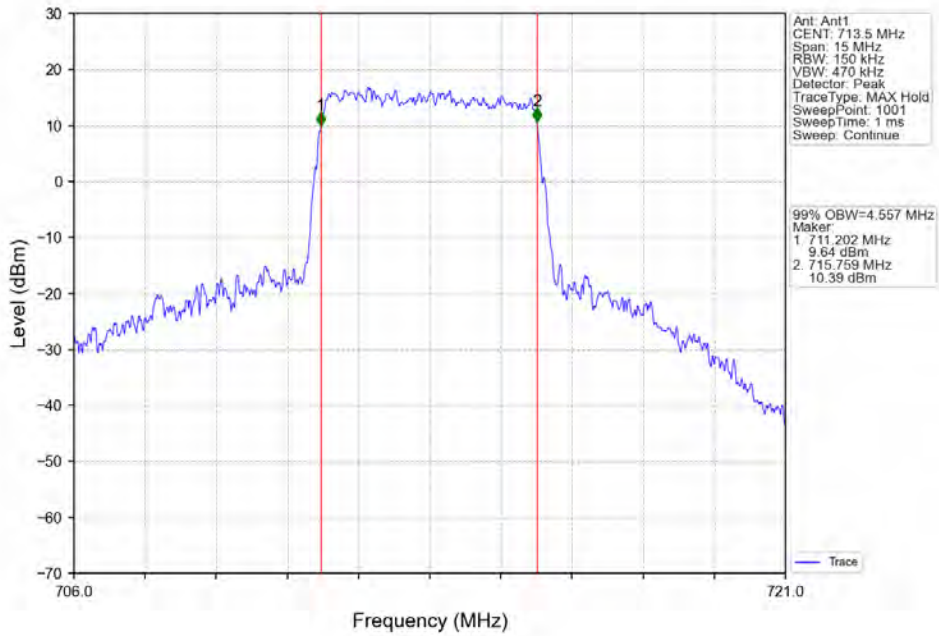
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



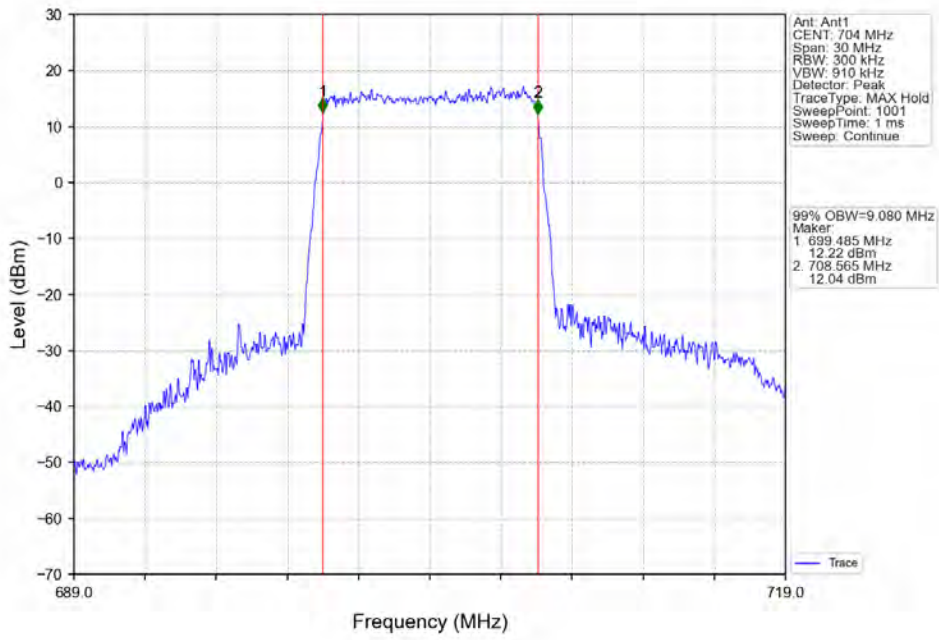
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



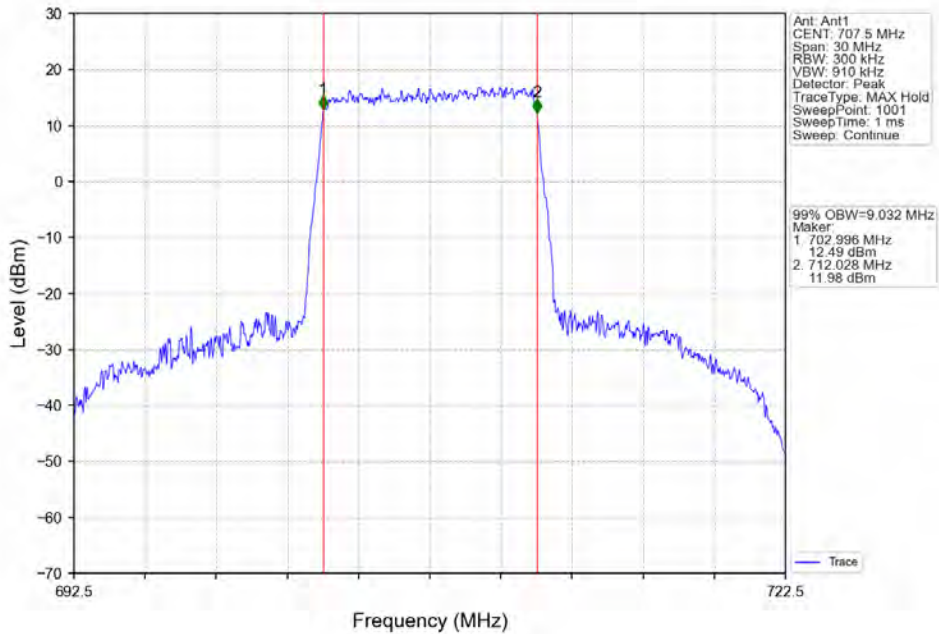
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



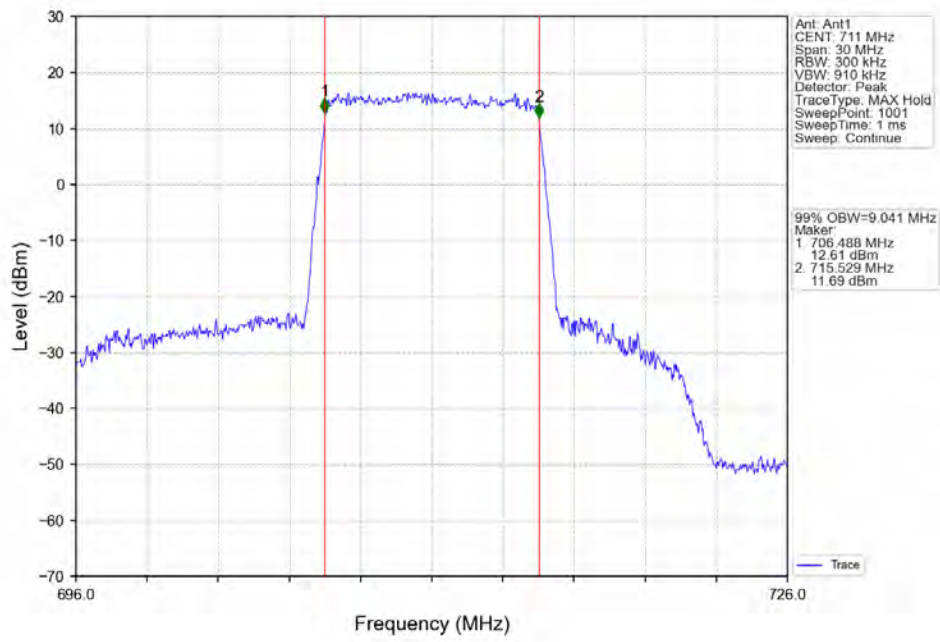
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



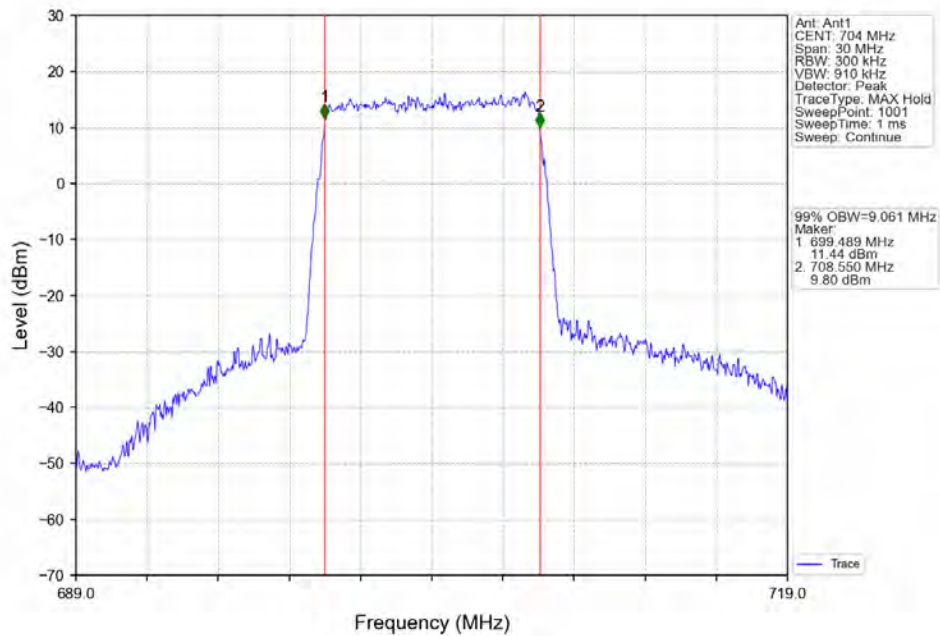
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



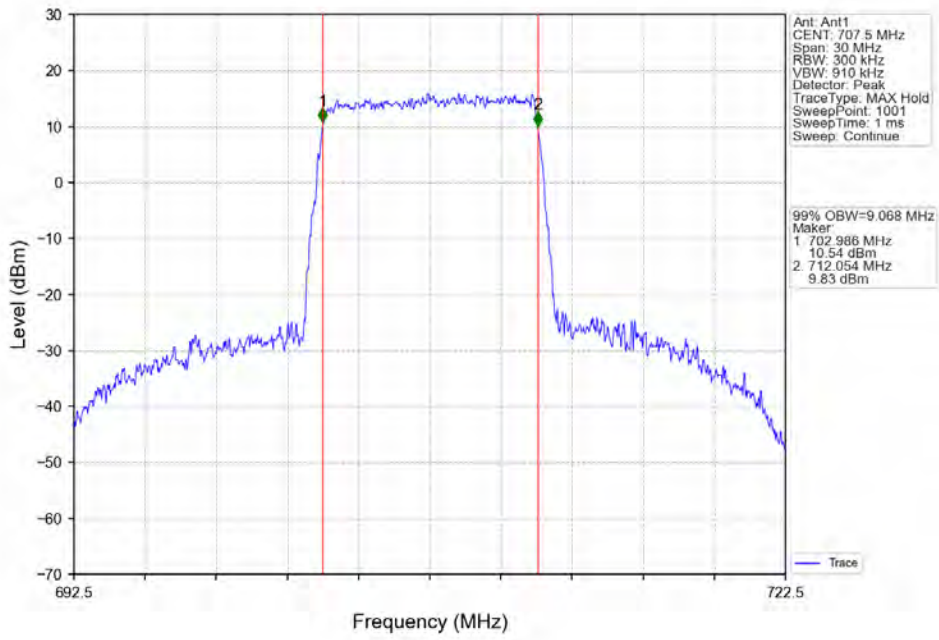
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



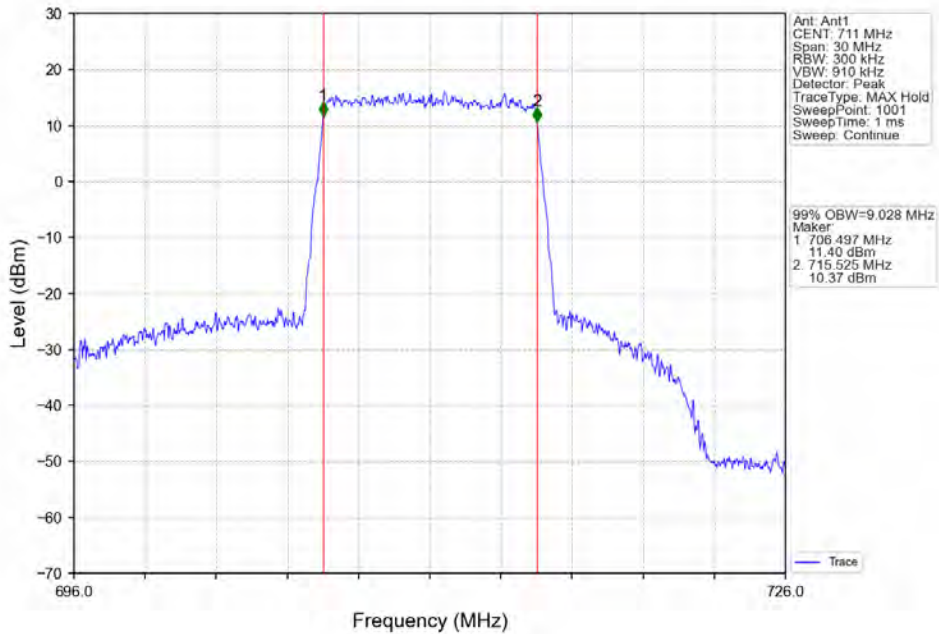
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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

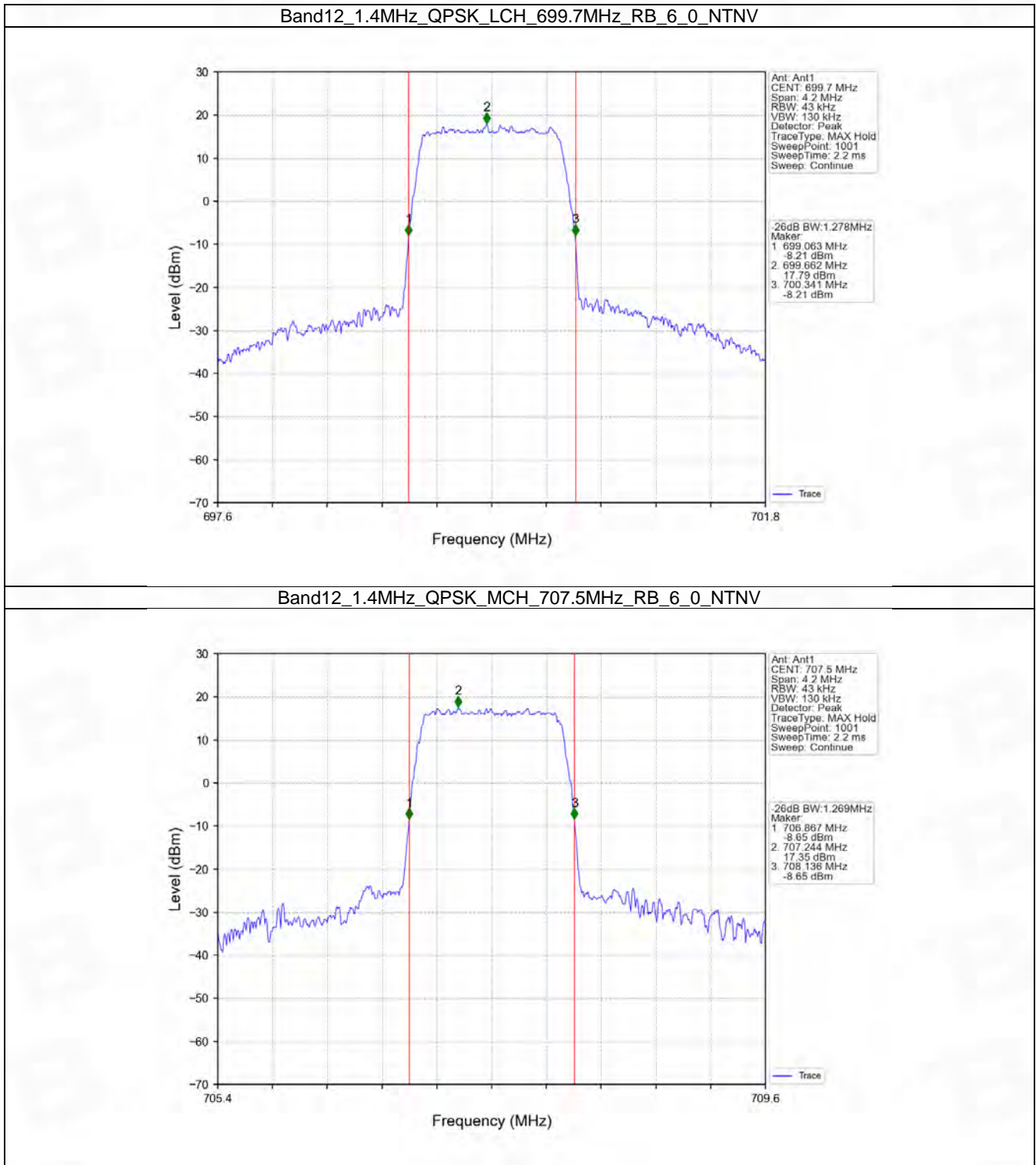


## 4.2 Band12\_XDB

### 4.2.1 Test Result

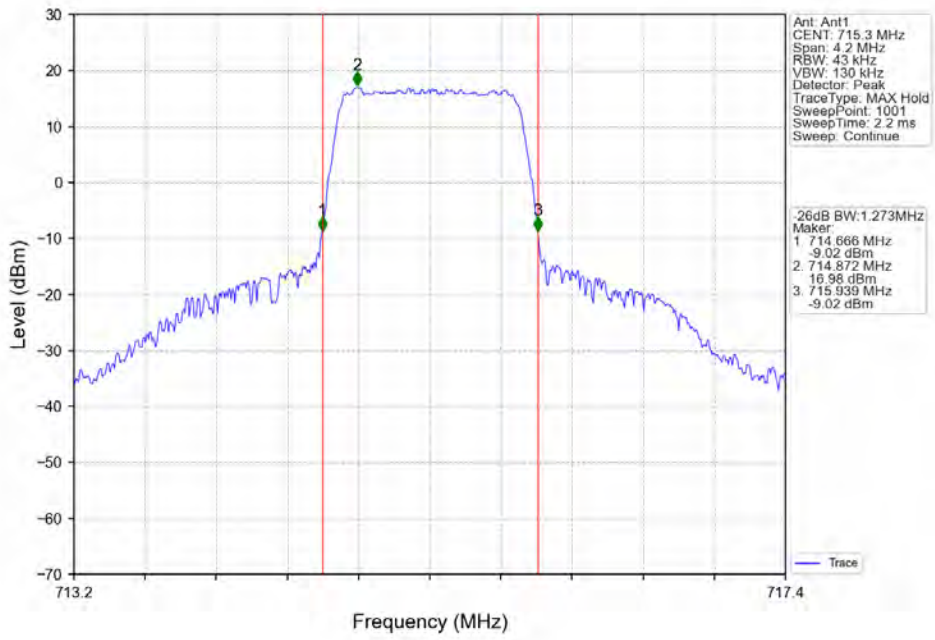
Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.278	/	Pass
		707.5	6	0	1.269	/	Pass
		715.3	6	0	1.273	/	Pass
	16QAM	699.7	6	0	1.268	/	Pass
		707.5	6	0	1.268	/	Pass
		715.3	6	0	1.282	/	Pass
3	QPSK	700.5	15	0	3.093	/	Pass
		707.5	15	0	3.091	/	Pass
		714.5	15	0	3.125	/	Pass
	16QAM	700.5	15	0	3.111	/	Pass
		707.5	15	0	3.077	/	Pass
		714.5	15	0	3.101	/	Pass
5	QPSK	701.5	25	0	5.042	/	Pass
		707.5	25	0	5.065	/	Pass
		713.5	25	0	5.032	/	Pass
	16QAM	701.5	25	0	5.064	/	Pass
		707.5	25	0	5.072	/	Pass
		713.5	25	0	5.041	/	Pass
10	QPSK	704	50	0	10.083	/	Pass
		707.5	50	0	10.062	/	Pass
		711	50	0	10.076	/	Pass
	16QAM	704	50	0	10.034	/	Pass
		707.5	50	0	10.098	/	Pass
		711	50	0	9.997	/	Pass

### 4.2.2 Test Graph

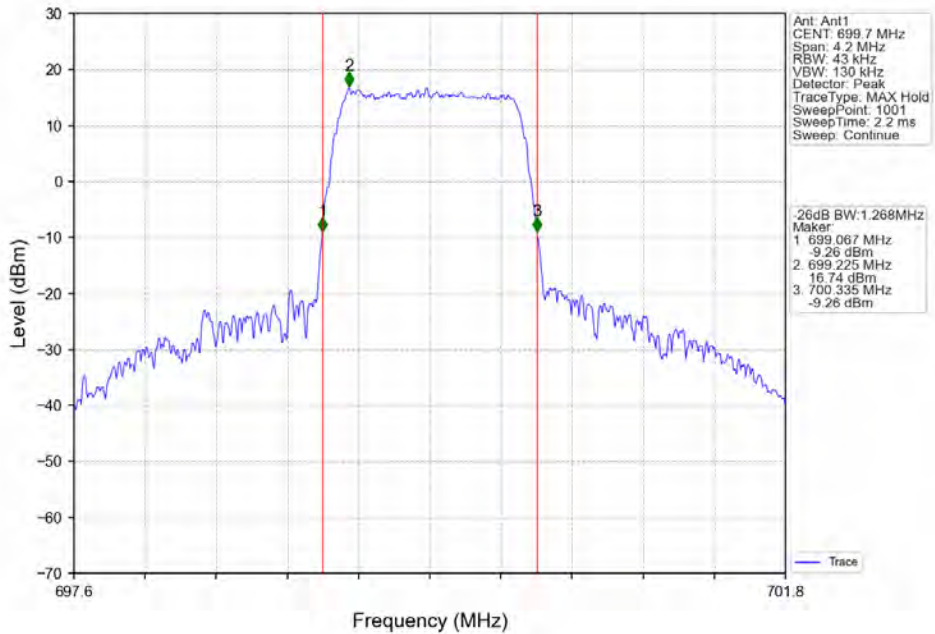




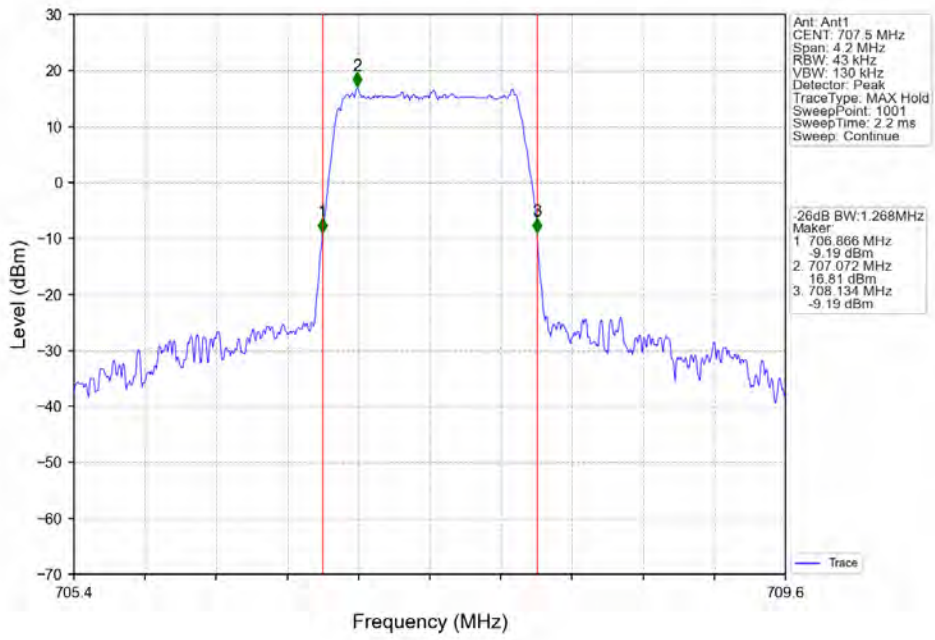
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



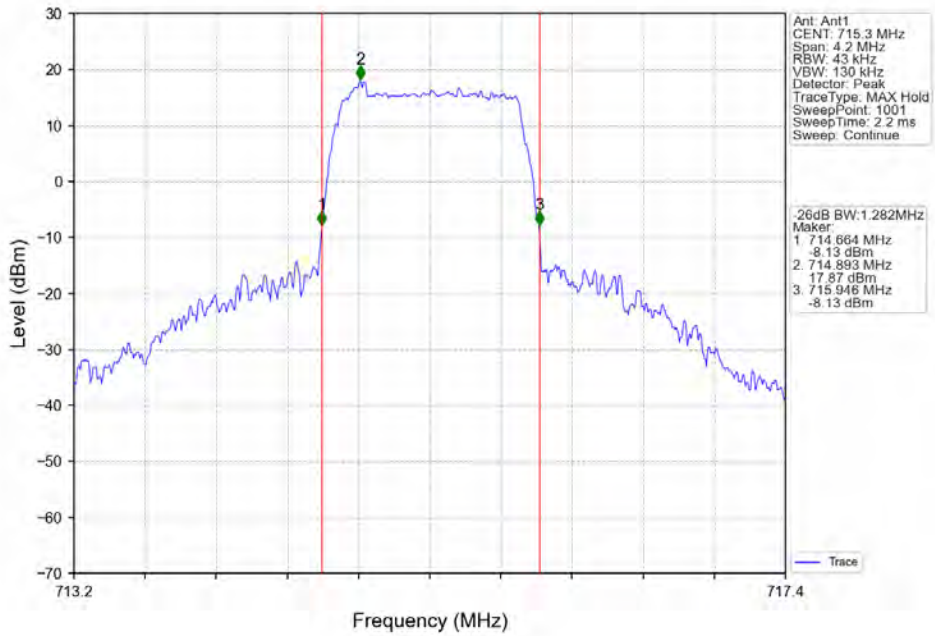
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



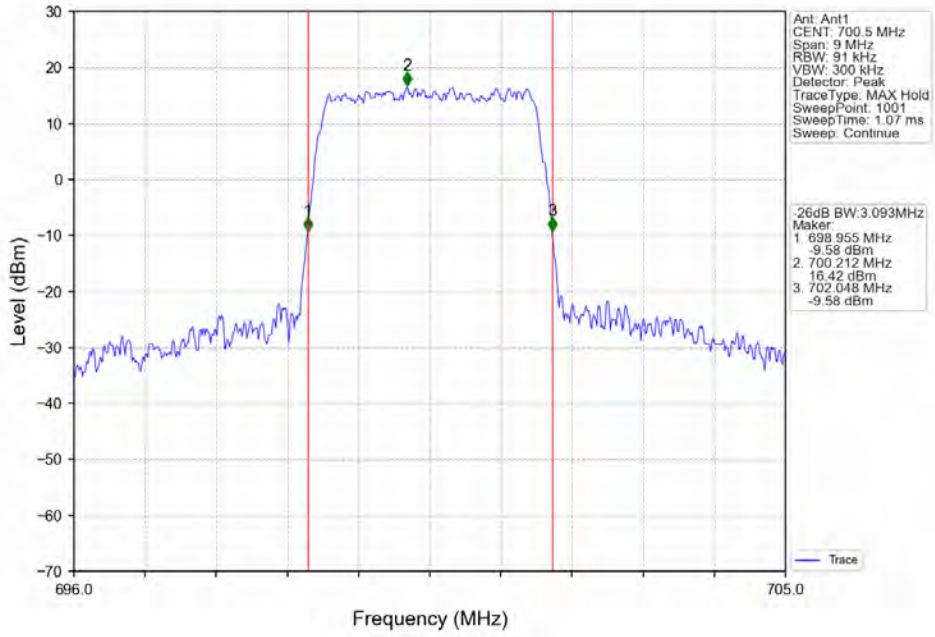
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_6\_0\_NTNV



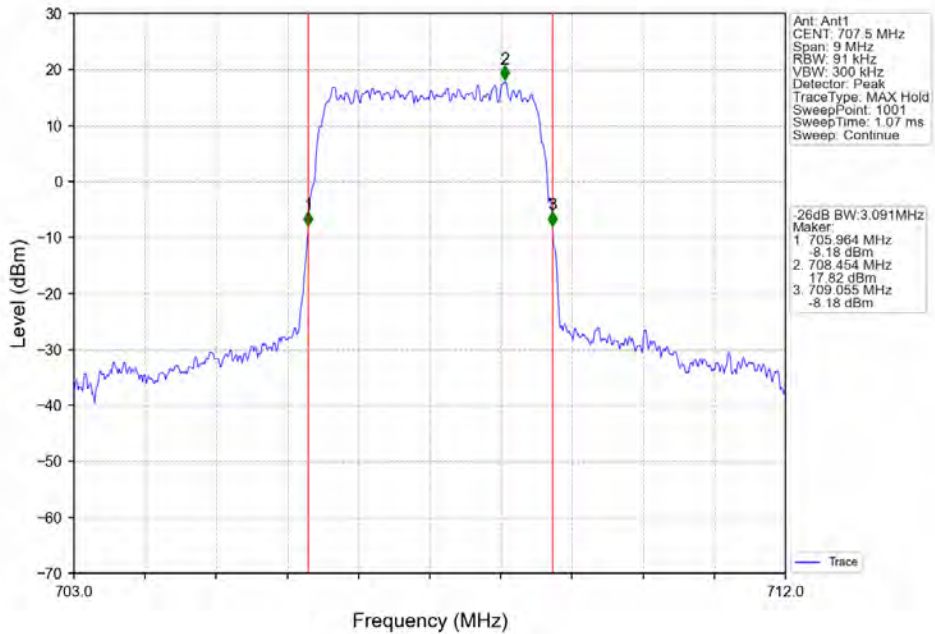
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



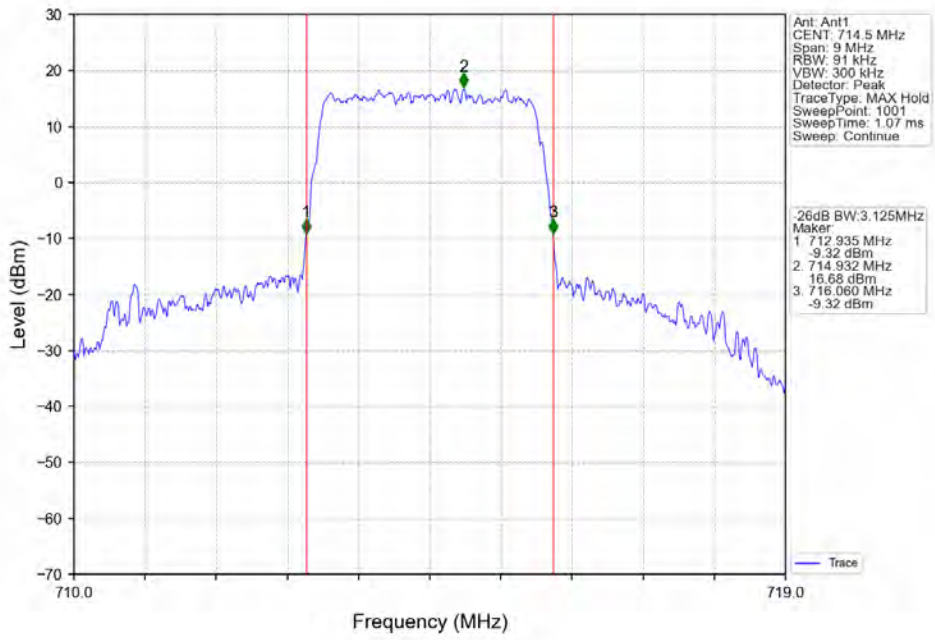
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



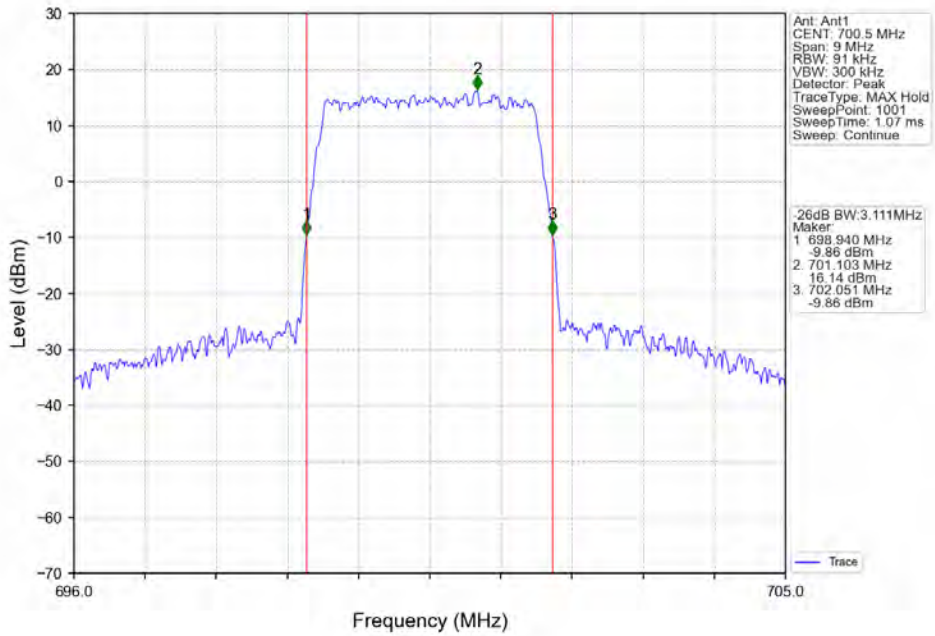
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



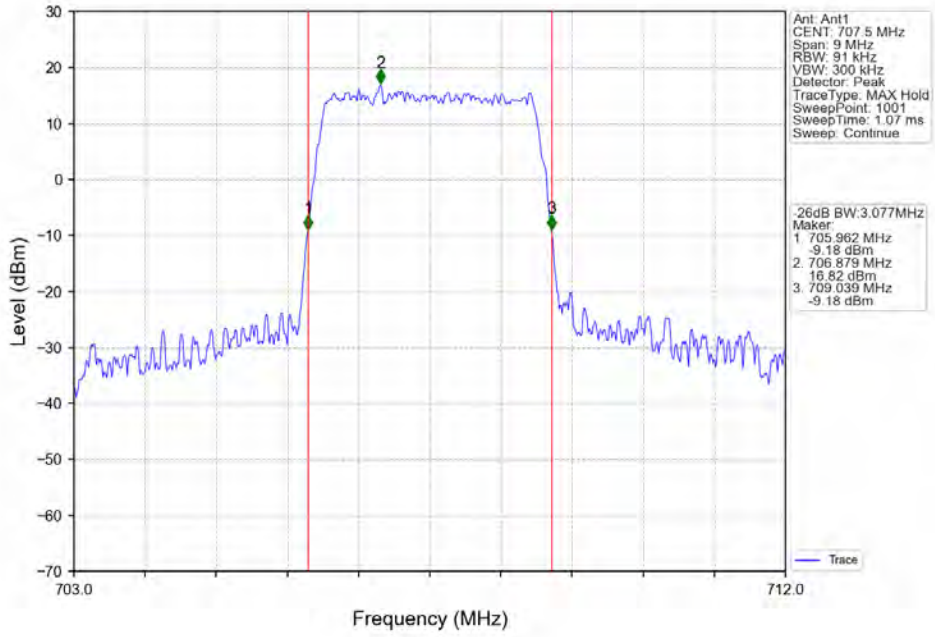
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



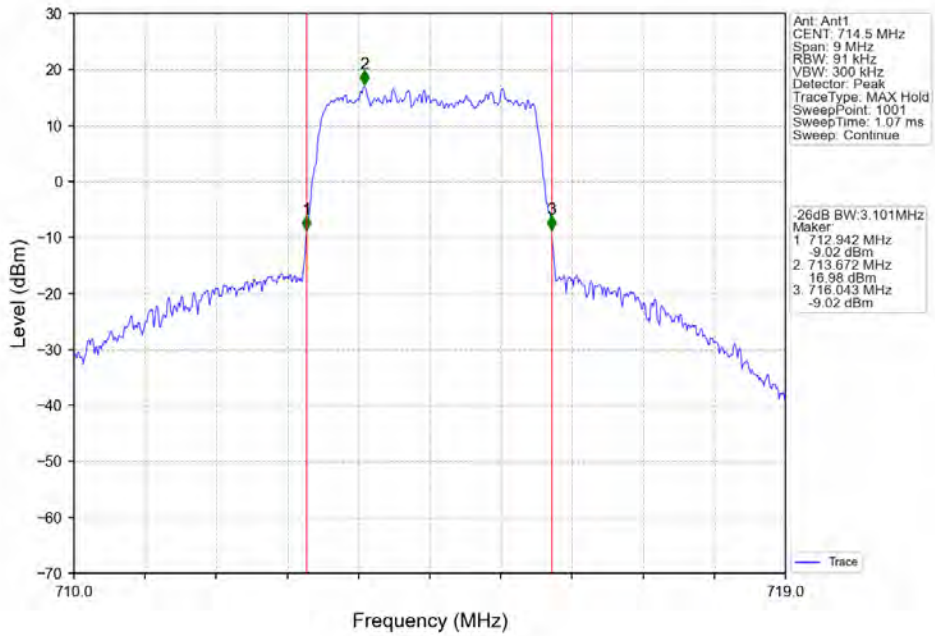
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



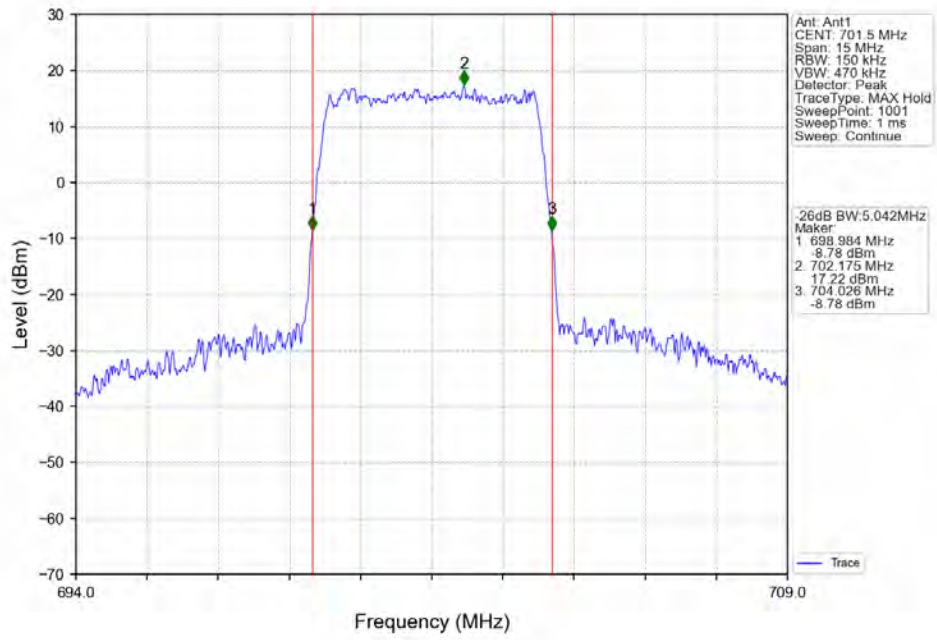
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



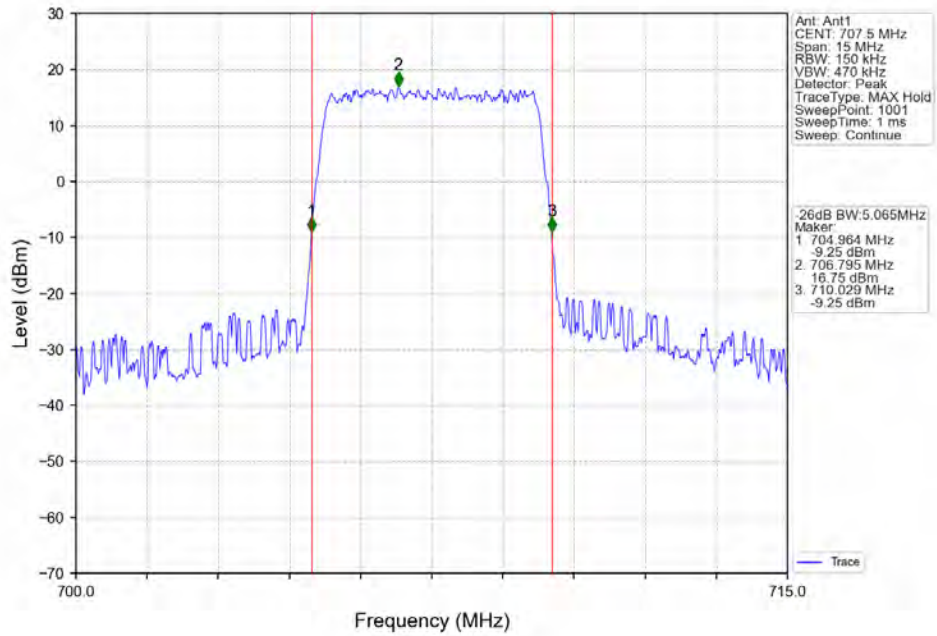
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



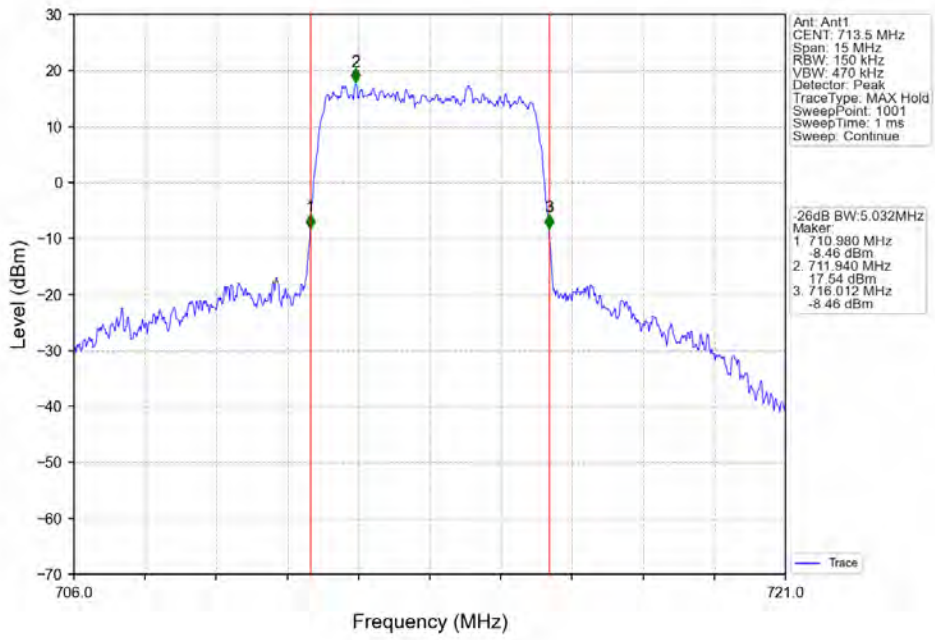
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



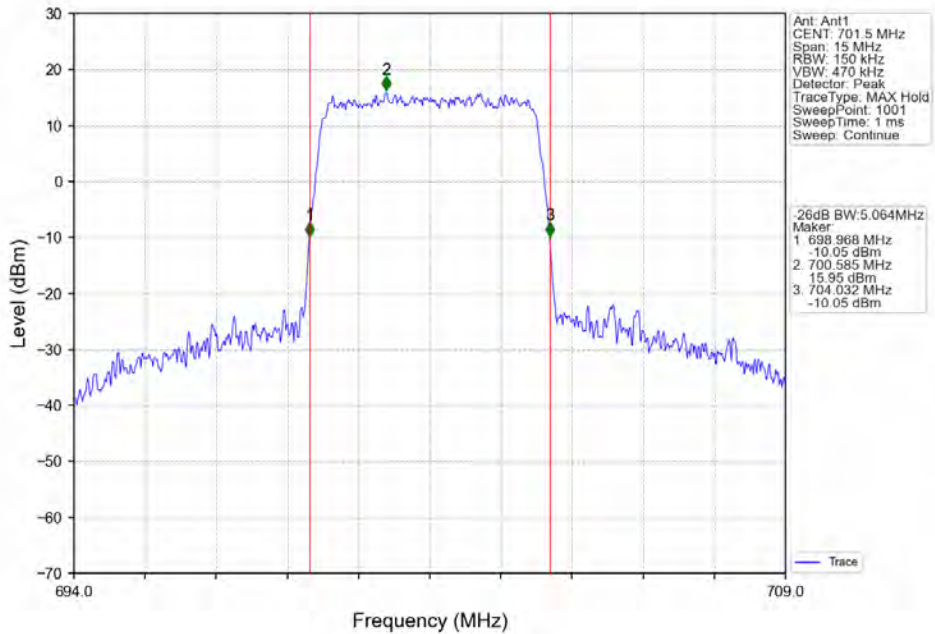
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_25\_0\_NTNV



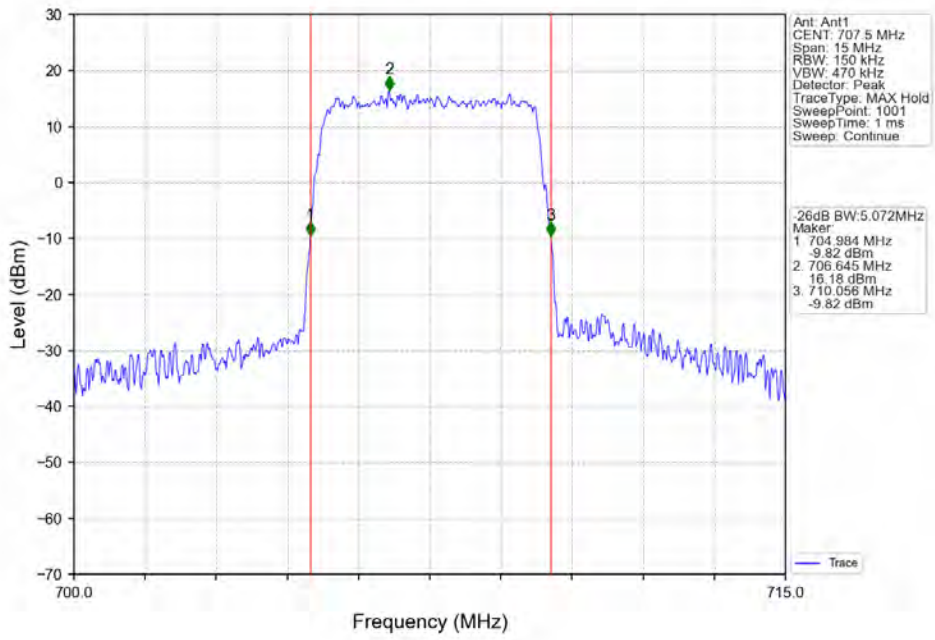
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



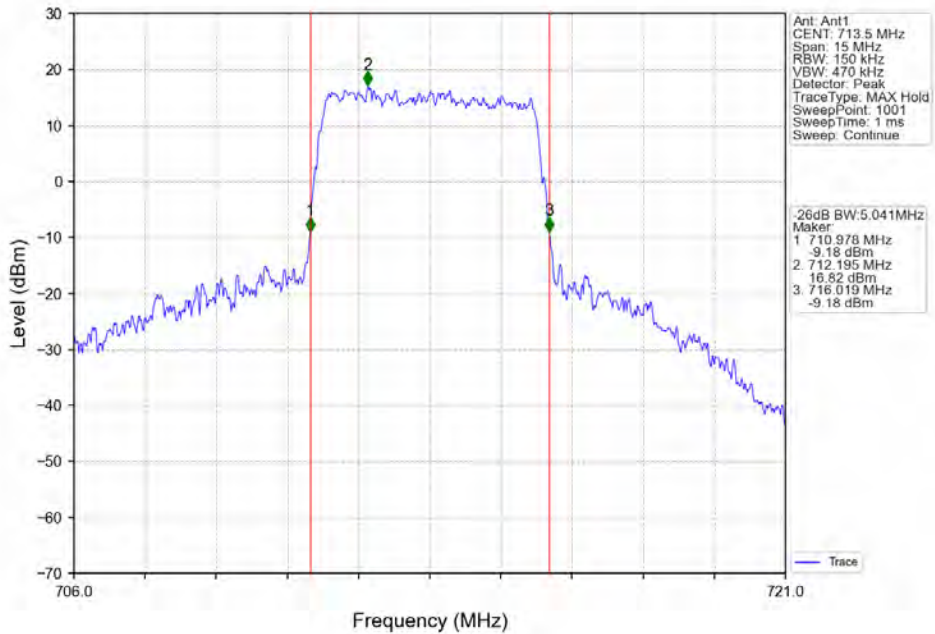
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



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

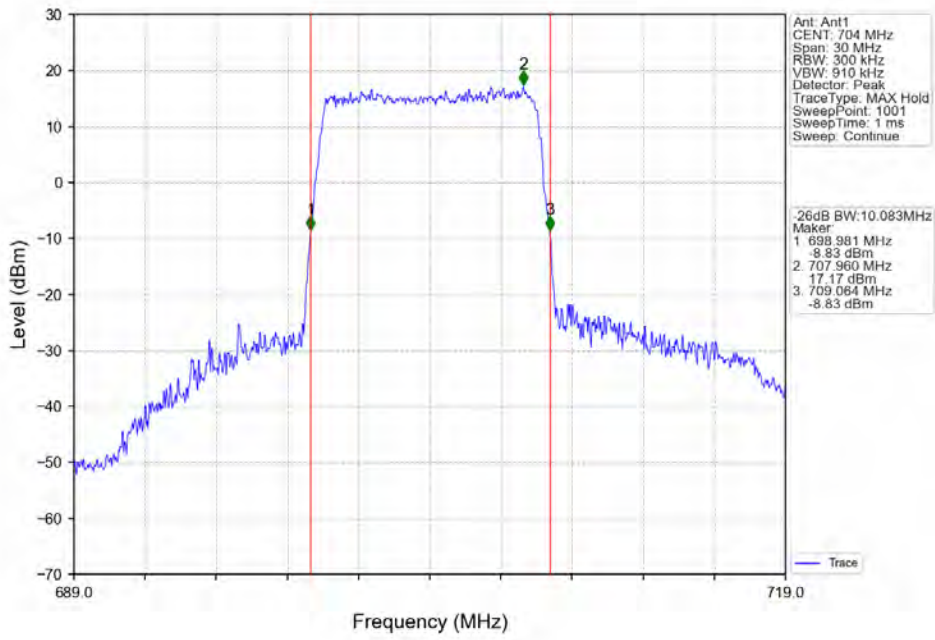


Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_25\_0\_NTNV

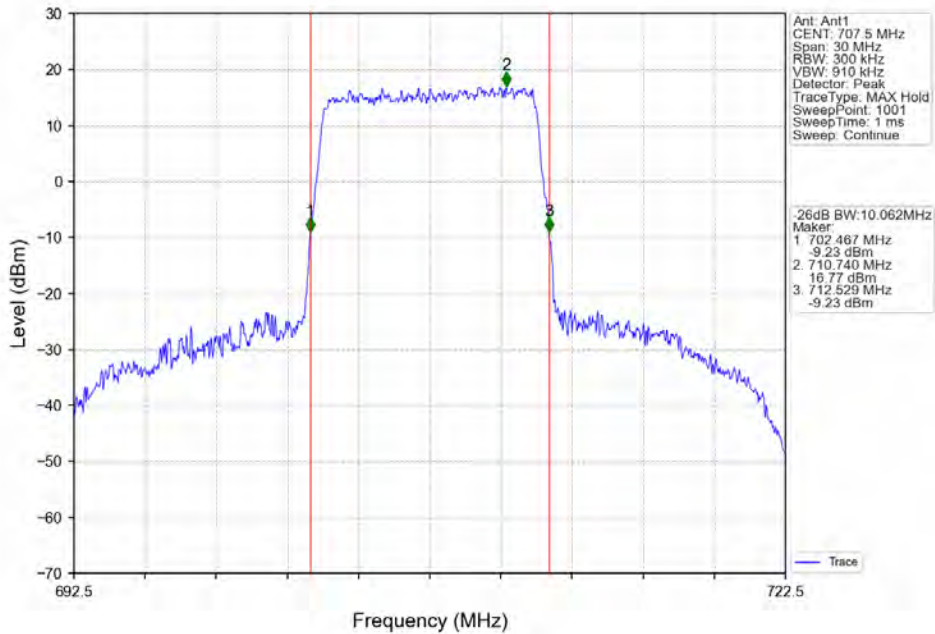




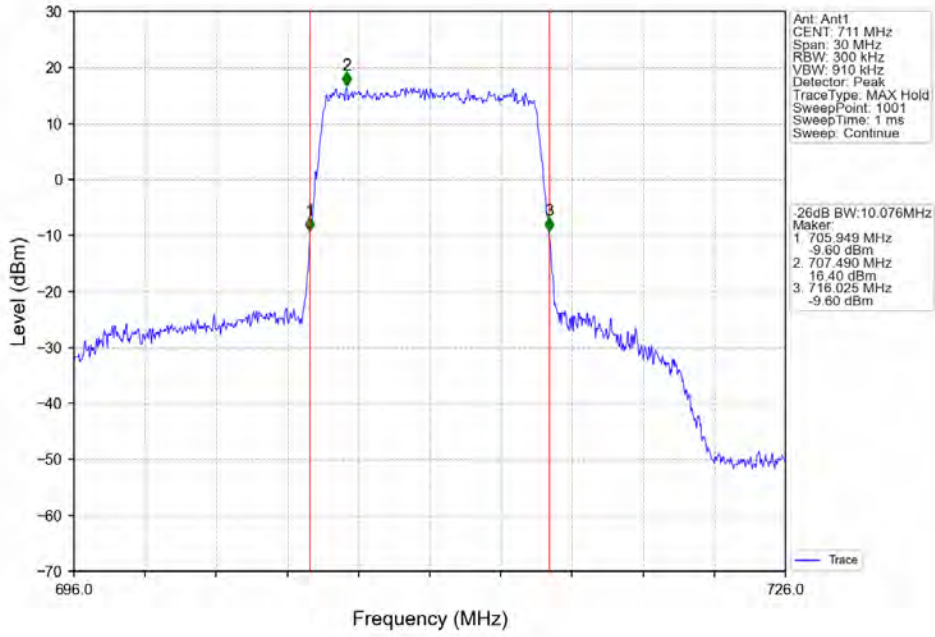
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



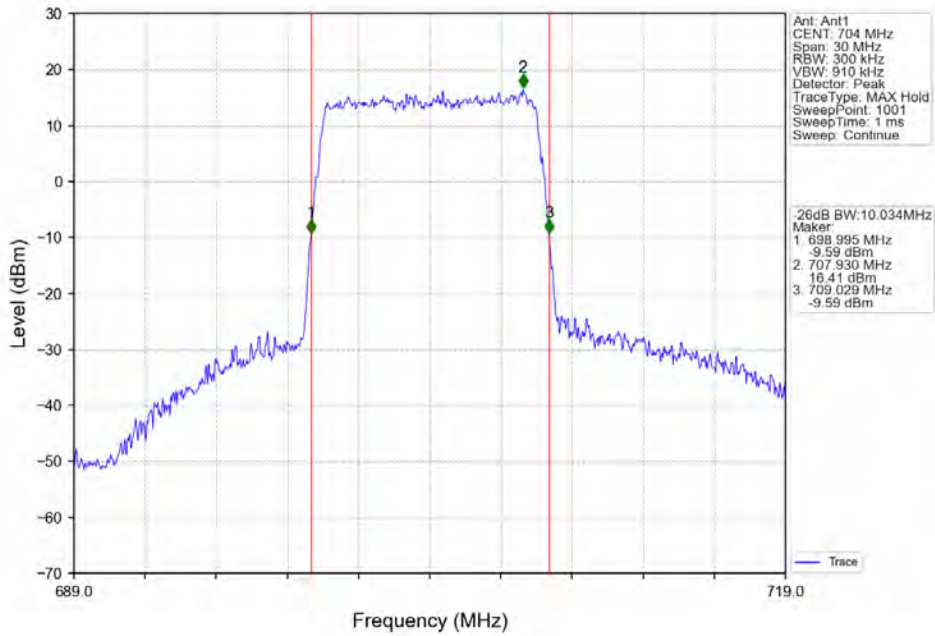
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_50\_0\_NTNV



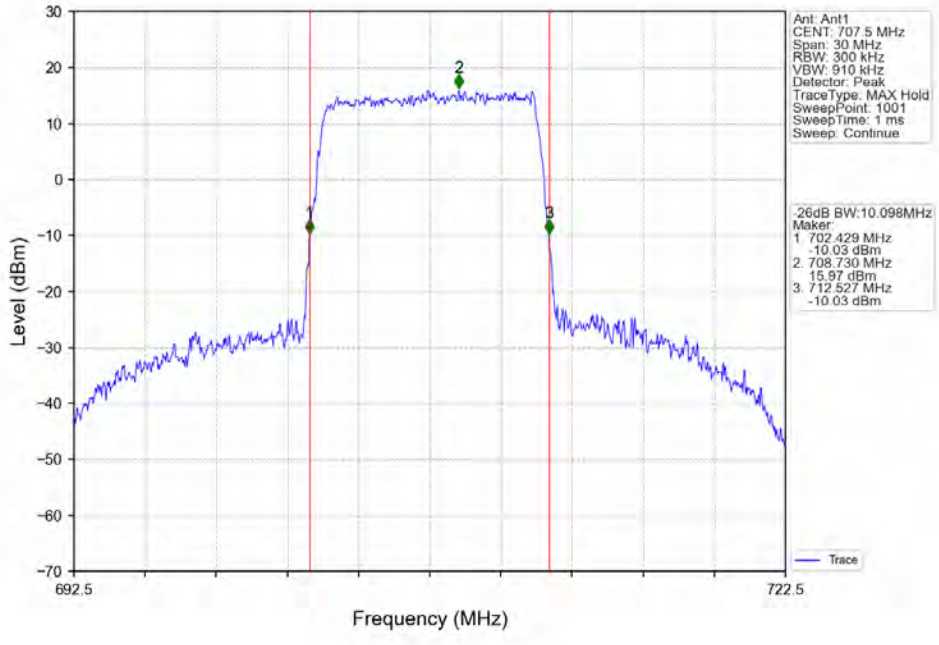
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



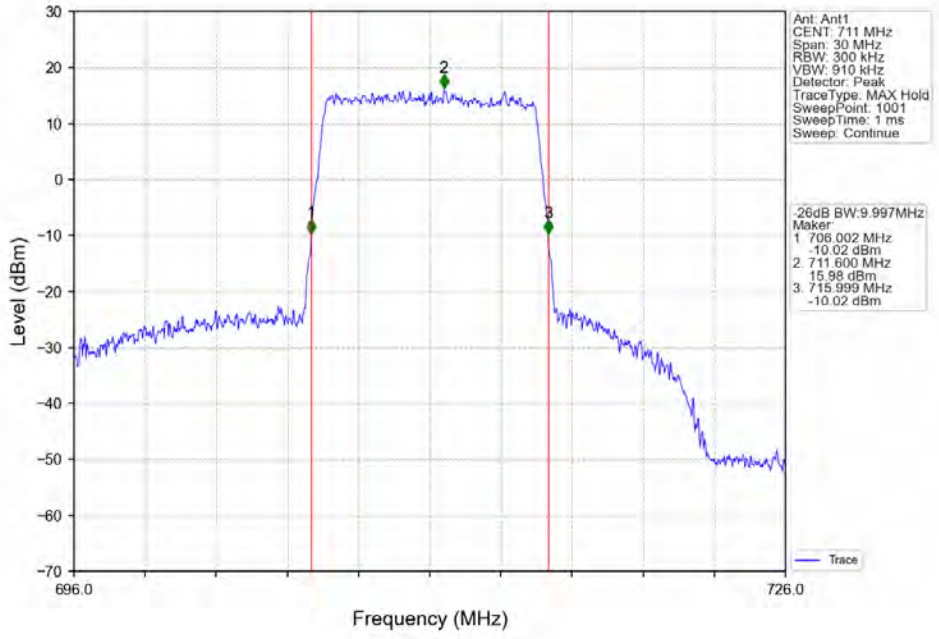
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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



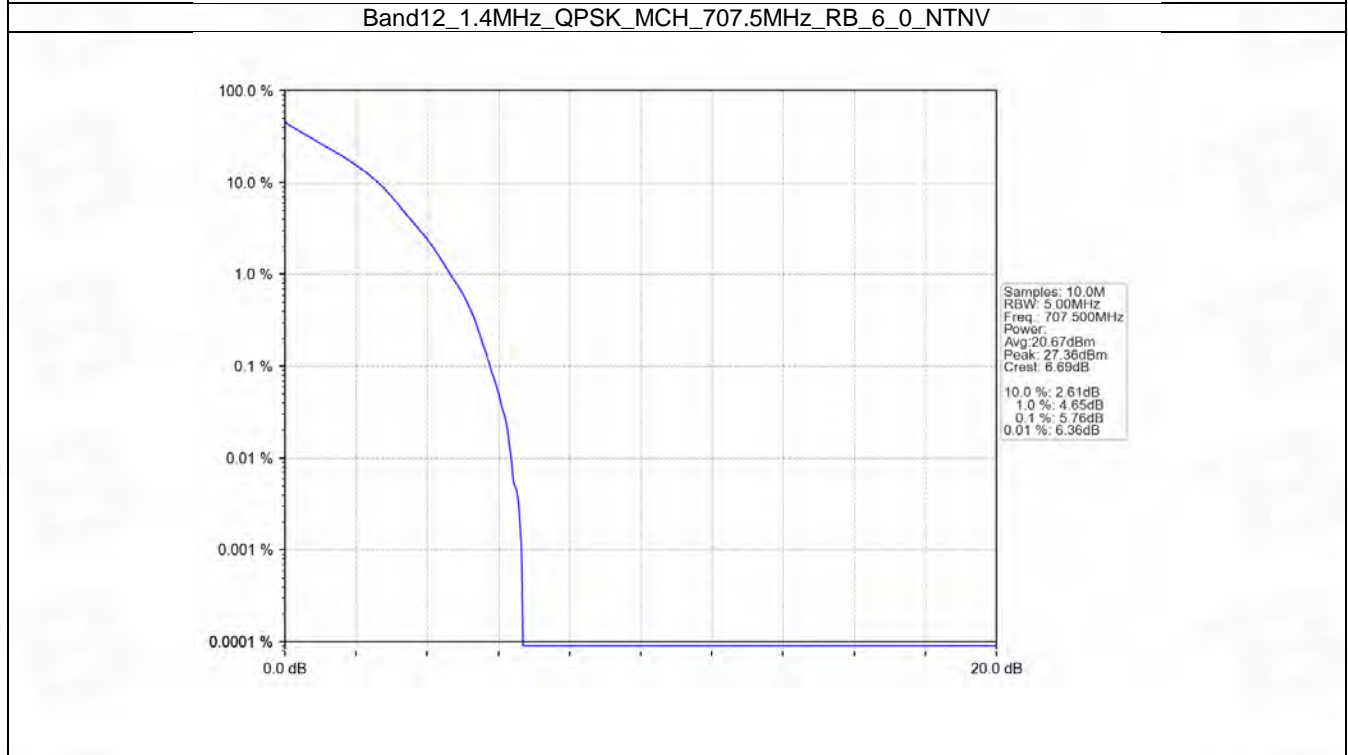
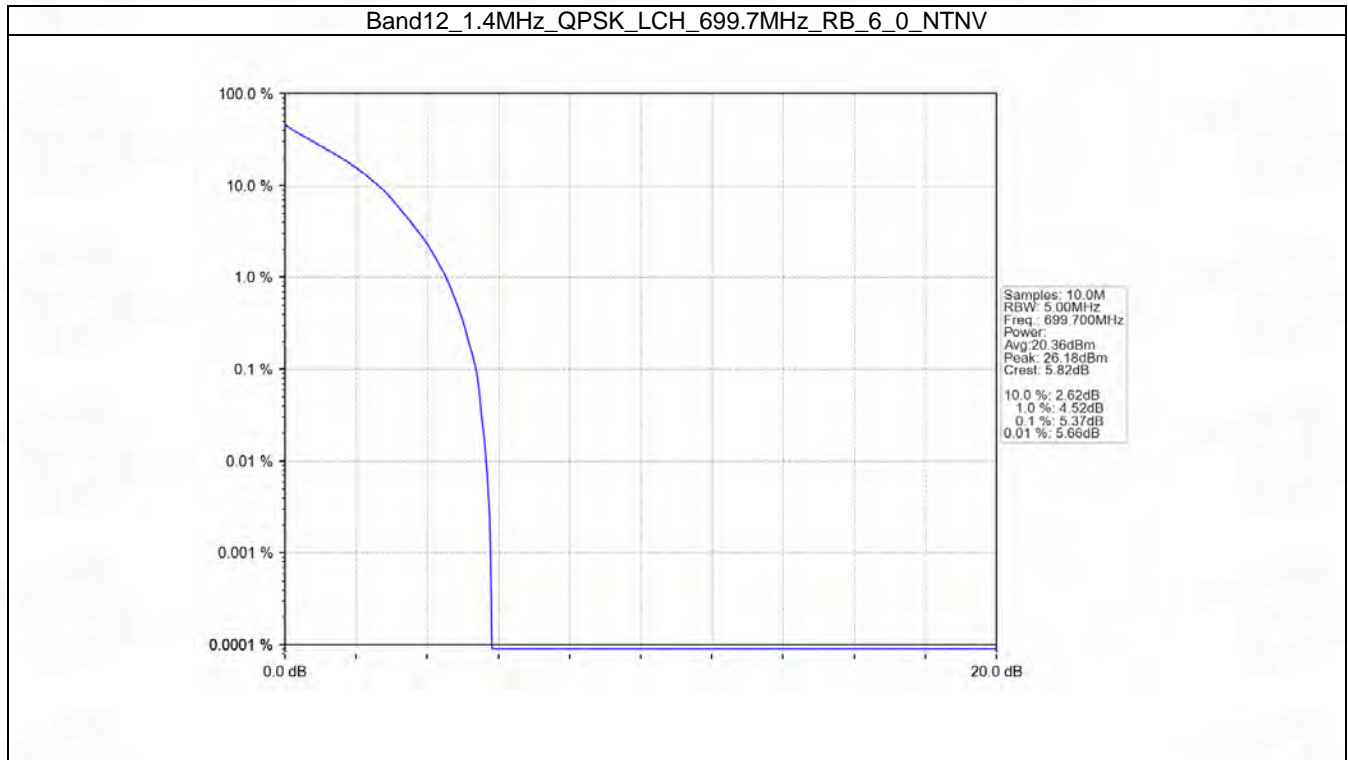
## 5. Peak-Average Ratio

### 5.1 B12\_1.4MHz

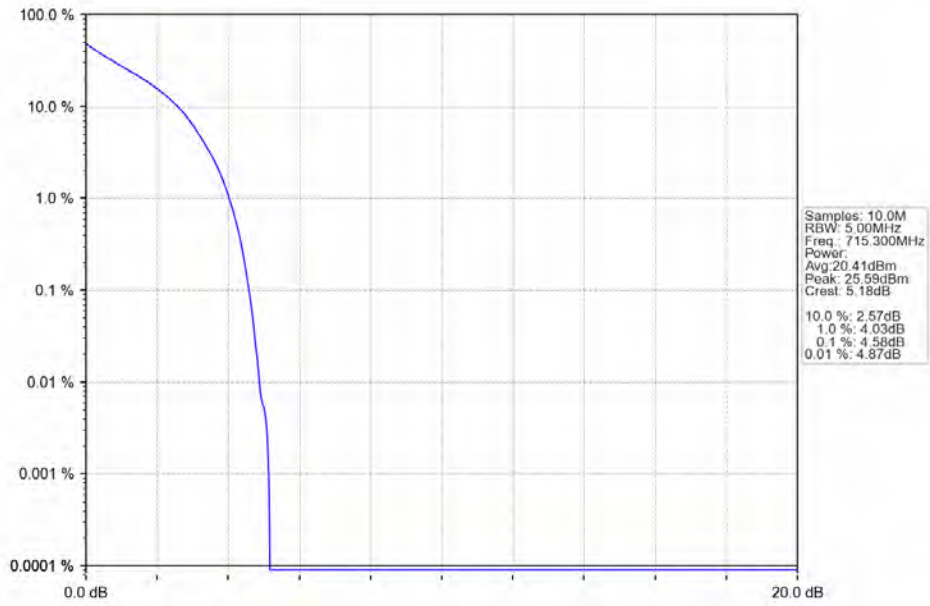
#### 5.1.1 Test Result

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	5.37	<=13	Pass
	707.5	6	0	5.76	<=13	Pass
	715.3	6	0	4.58	<=13	Pass
16QAM	699.7	6	0	6.11	<=13	Pass
	707.5	6	0	6.64	<=13	Pass
	715.3	6	0	5.36	<=13	Pass

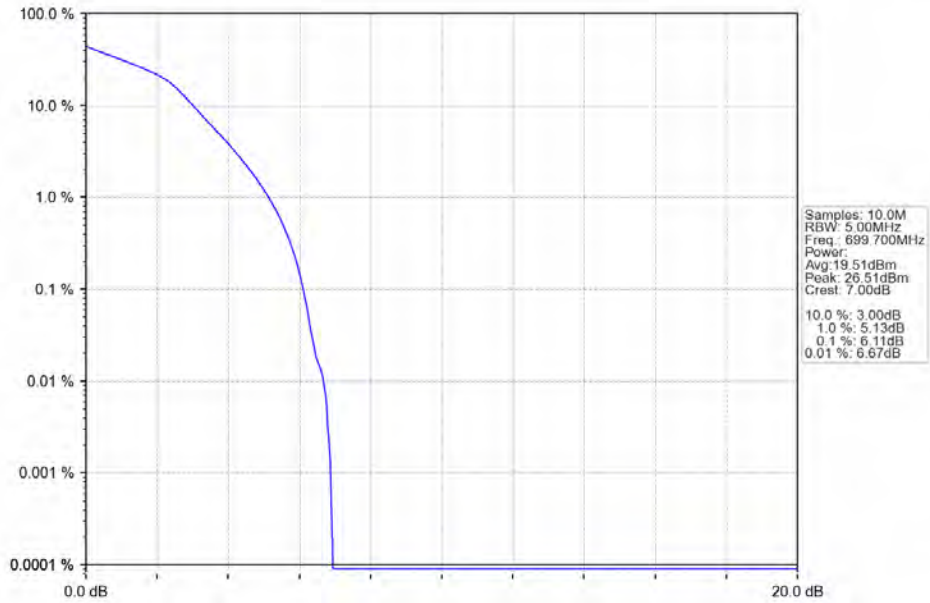
### 5.1.2 Test Graph



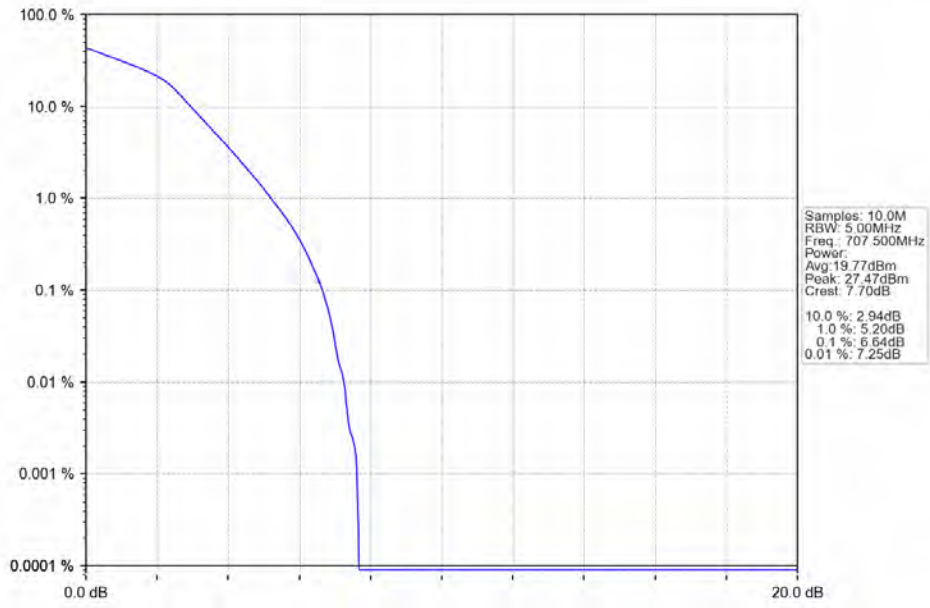
Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_6\_0\_NTNV



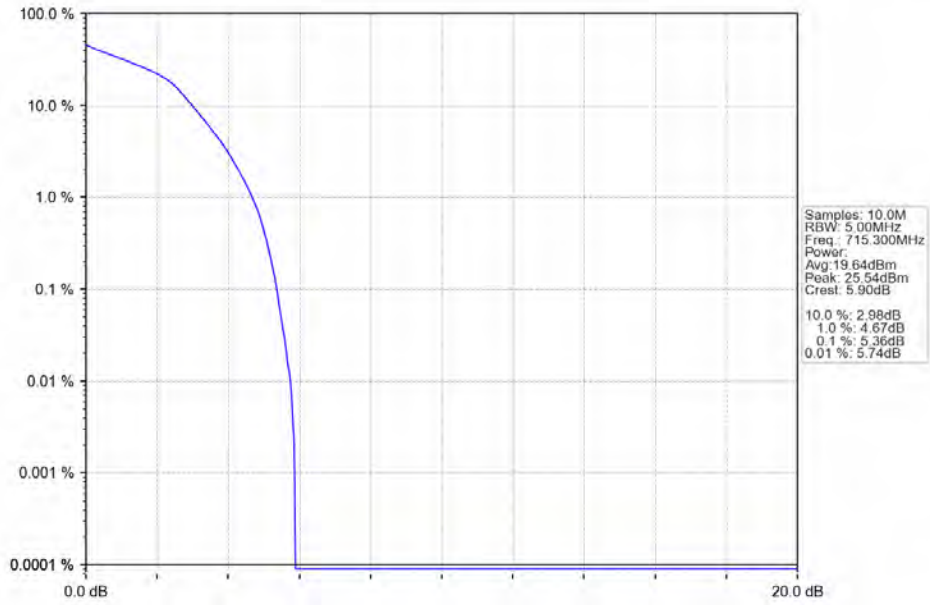
Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



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



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



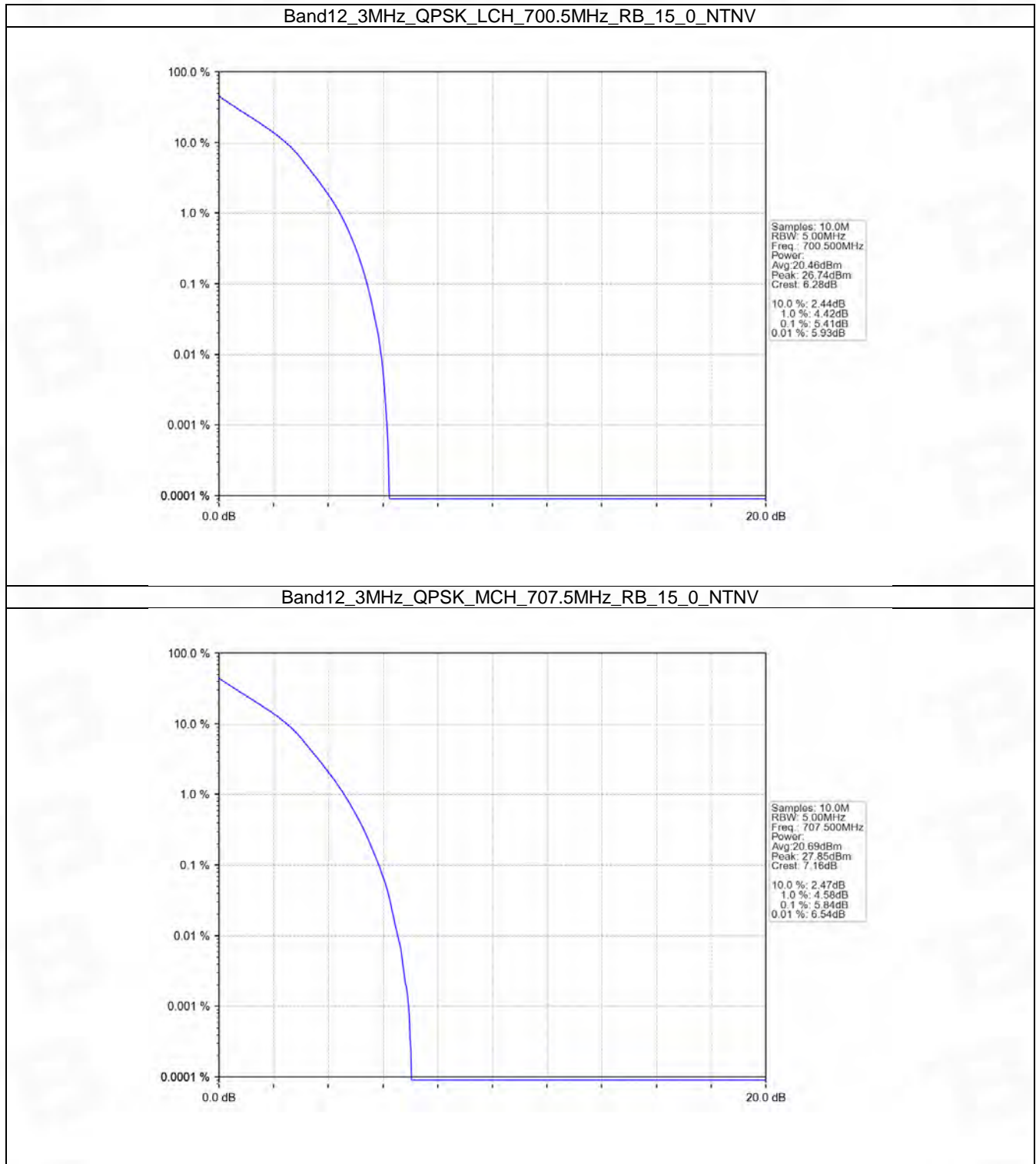
## 5.2 B12\_3MHz

### 5.2.1 Test Result

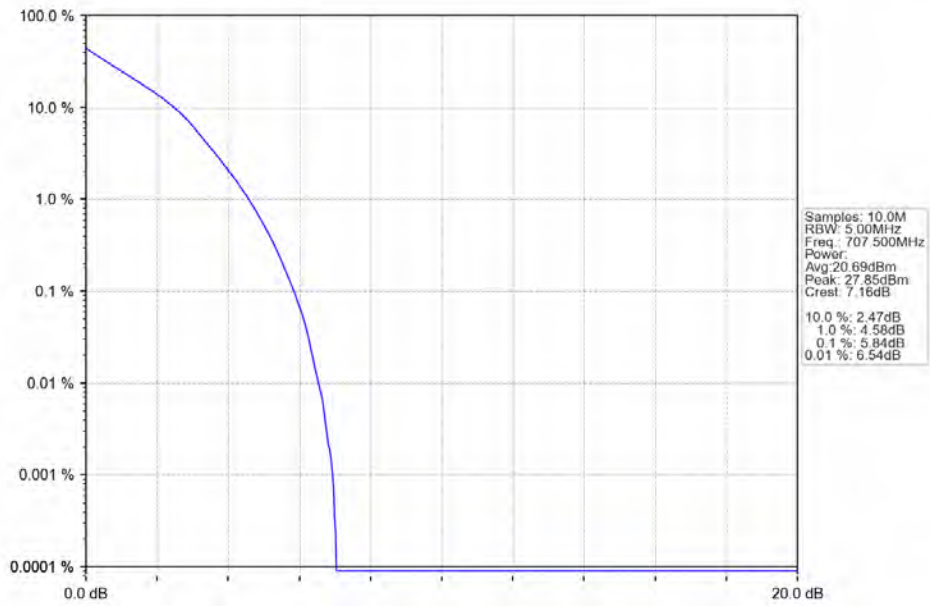
Band: 12 / Bandwidth: 3MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.41	<=13	Pass
	707.5	15	0	5.84	<=13	Pass
	714.5	15	0	4.76	<=13	Pass
16QAM	700.5	15	0	5.42	<=13	Pass
	707.5	15	0	5.83	<=13	Pass
	714.5	15	0	4.76	<=13	Pass



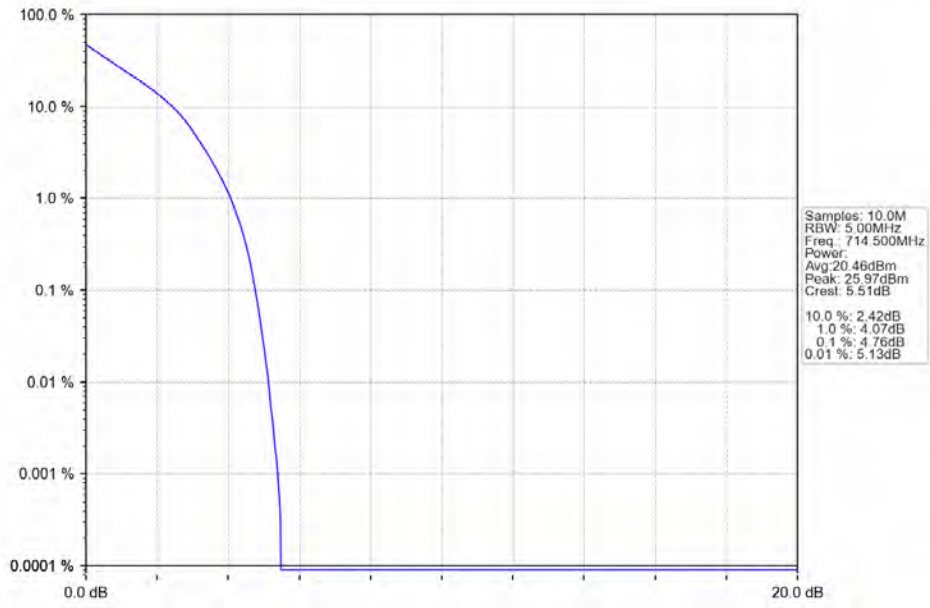
## 5.2.2 Test Graph



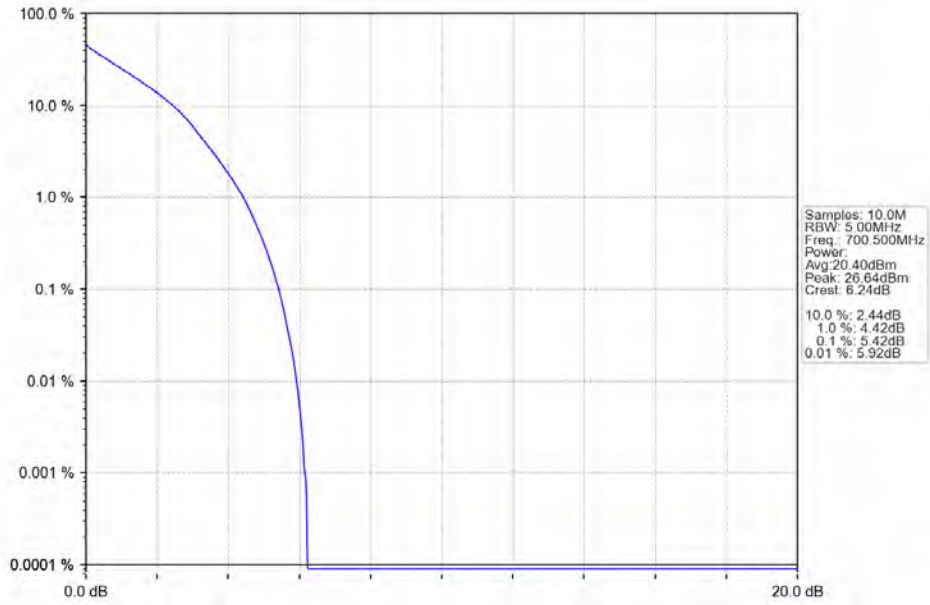
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_15\_0\_NTNV



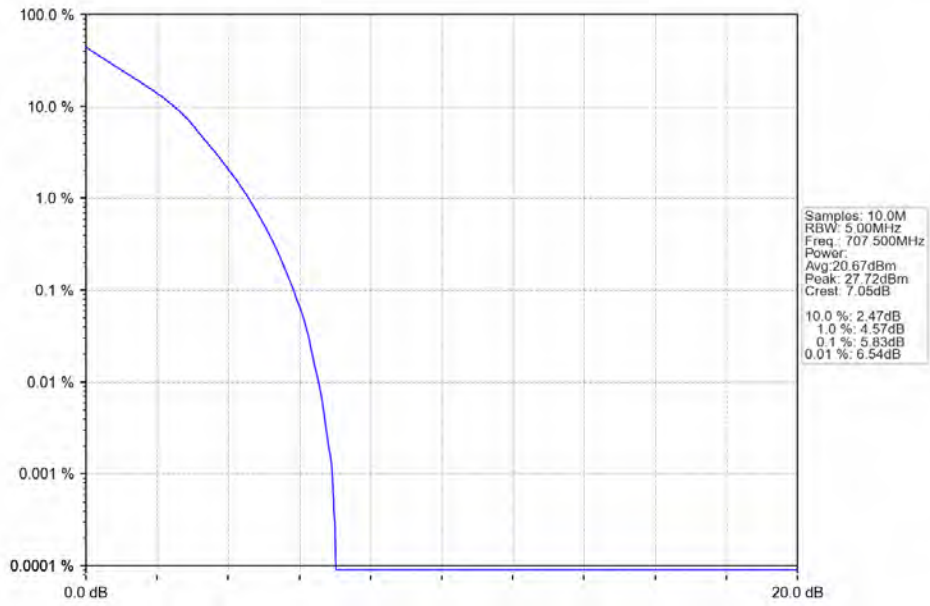
Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_15\_0\_NTNV



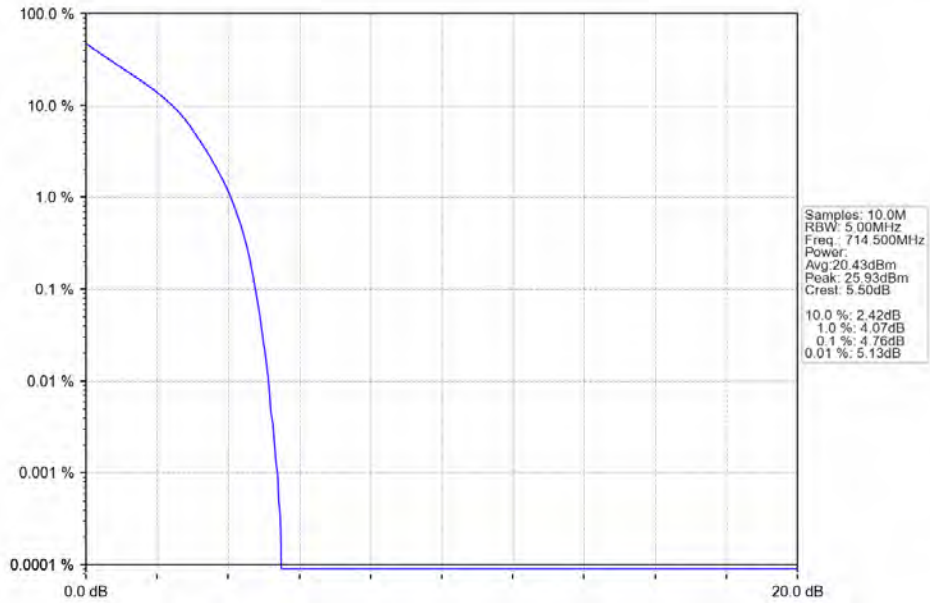
Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



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



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

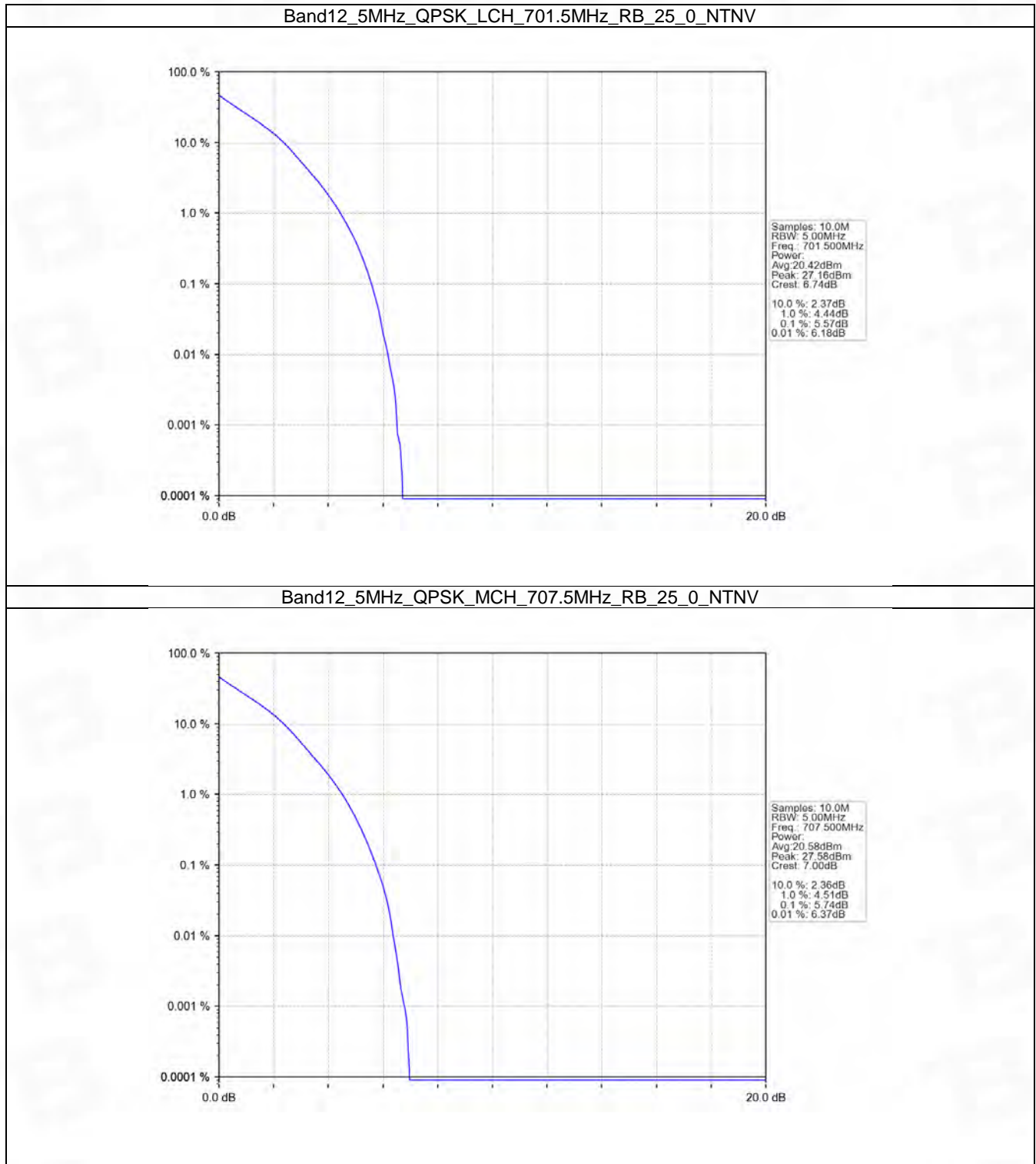


## 5.3 B12\_5MHz

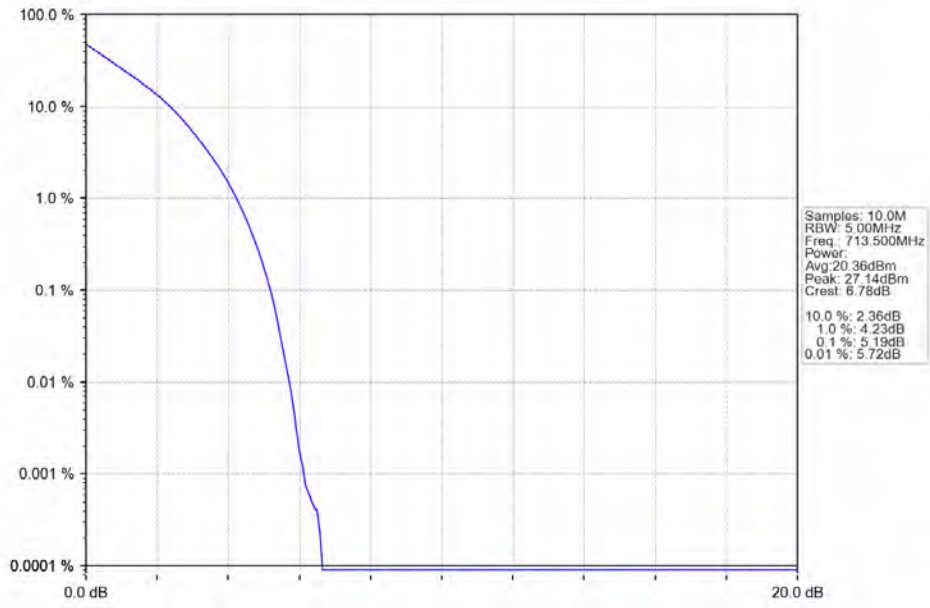
### 5.3.1 Test Result

Band: 12 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.57	<=13	Pass
	707.5	25	0	5.74	<=13	Pass
	713.5	25	0	5.19	<=13	Pass
16QAM	701.5	25	0	6.28	<=13	Pass
	707.5	25	0	6.55	<=13	Pass
	713.5	25	0	5.84	<=13	Pass

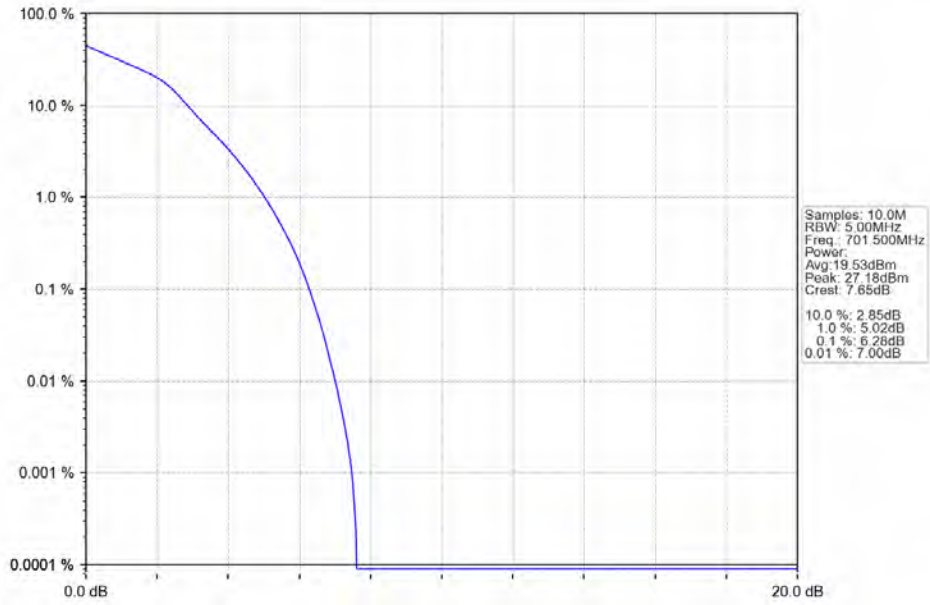
### 5.3.2 Test Graph



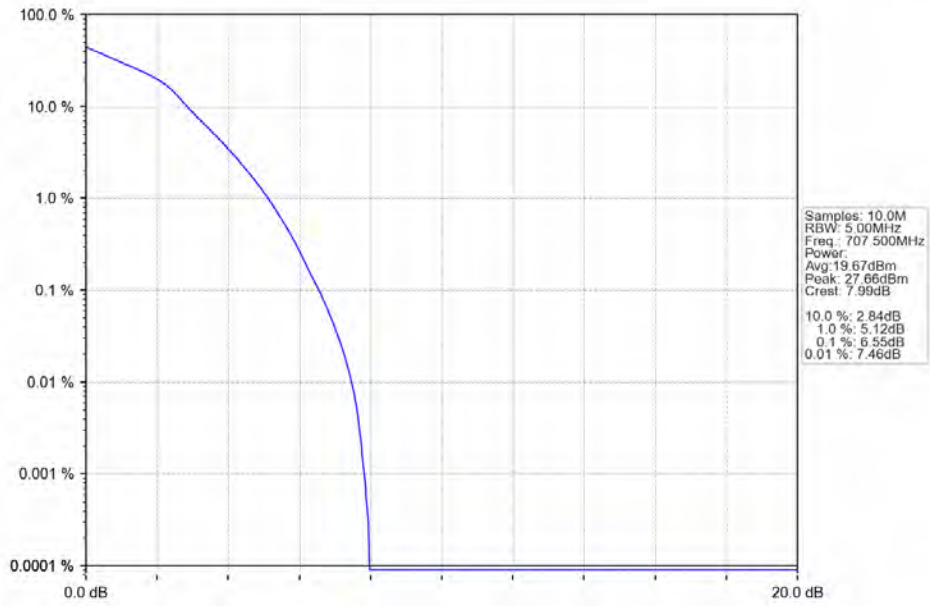
Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



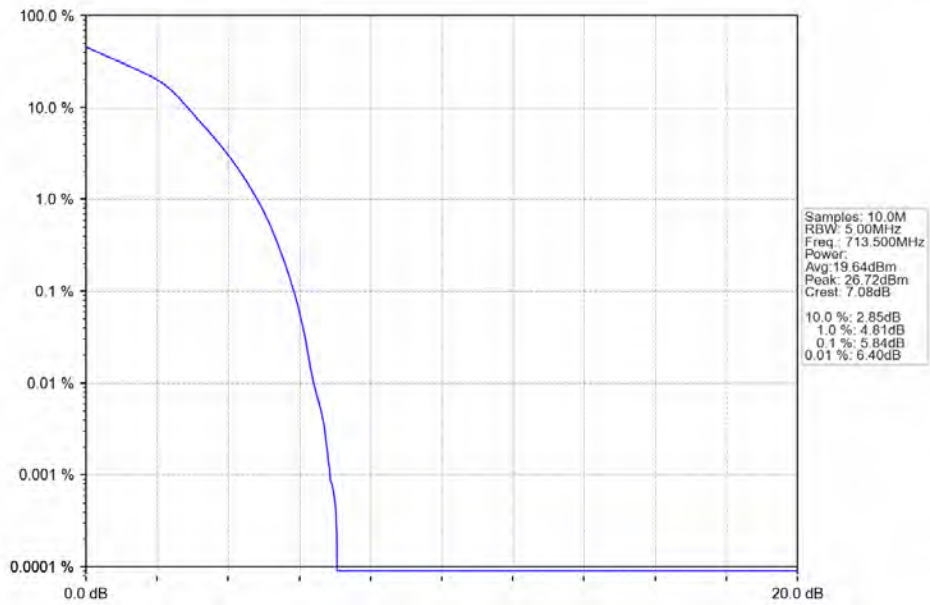
Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



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



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



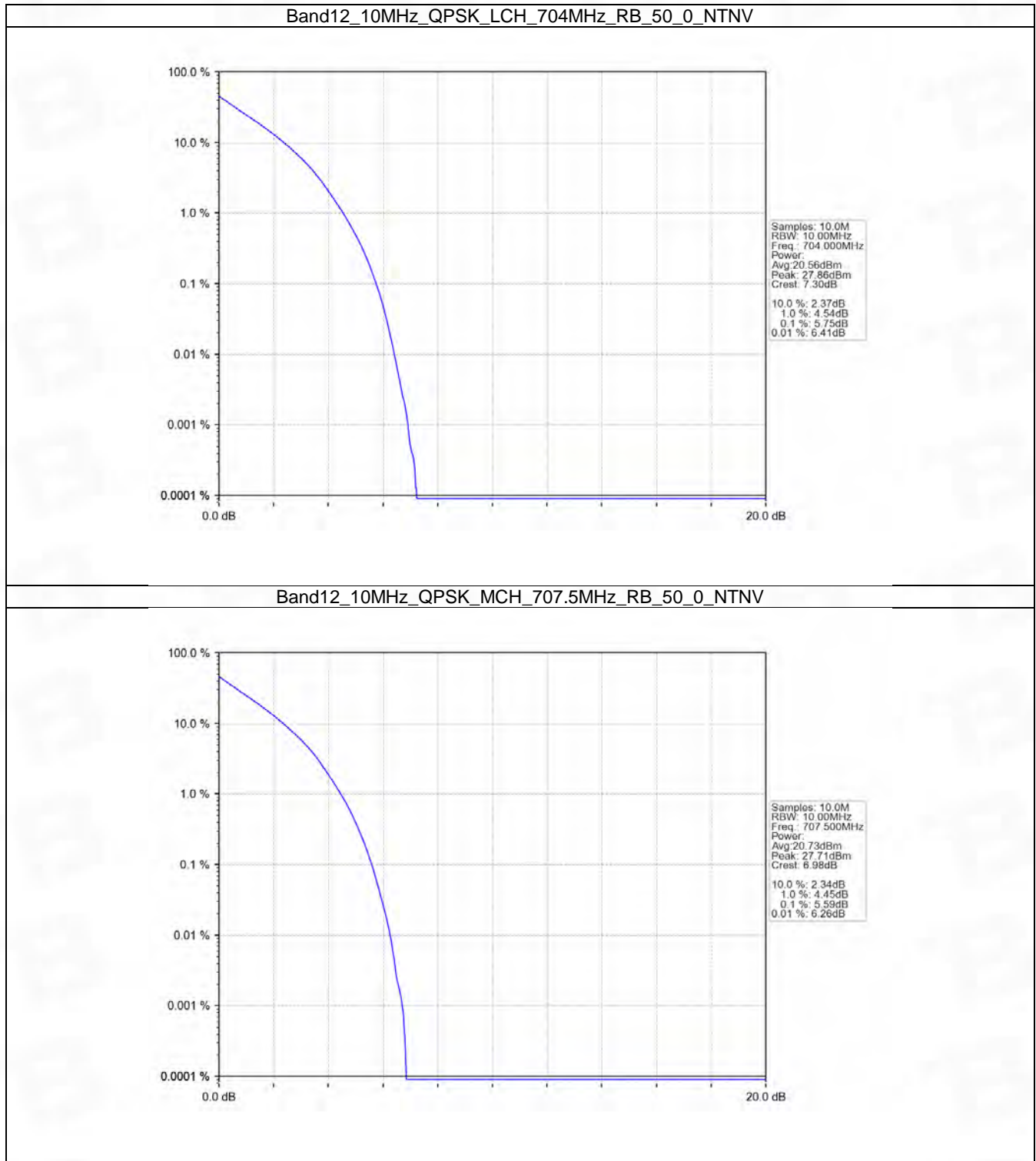
## 5.4 B12\_10MHz

### 5.4.1 Test Result

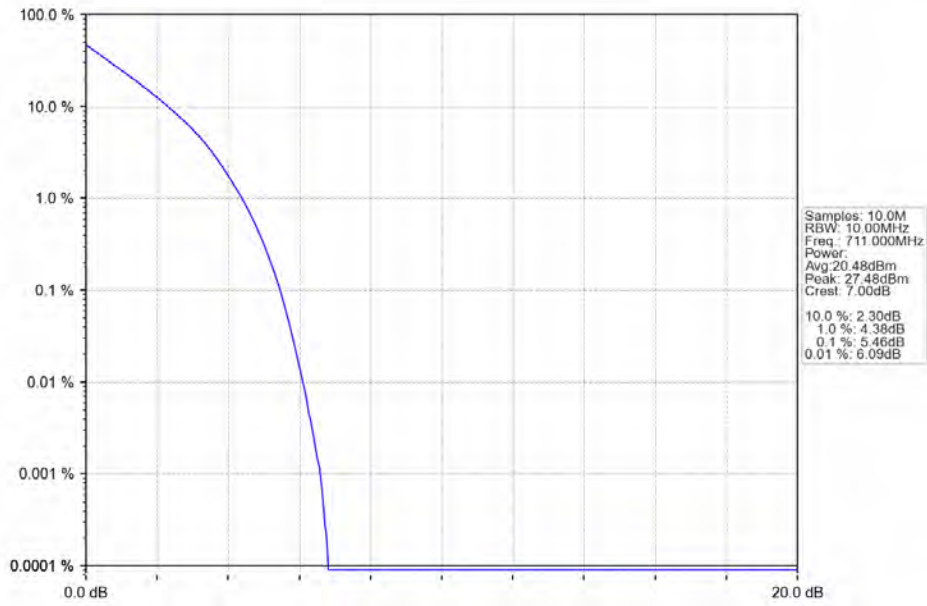
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.75	<=13	Pass
	707.5	50	0	5.59	<=13	Pass
	711	50	0	5.46	<=13	Pass
16QAM	704	50	0	6.51	<=13	Pass
	707.5	50	0	6.37	<=13	Pass
	711	50	0	6.24	<=13	Pass



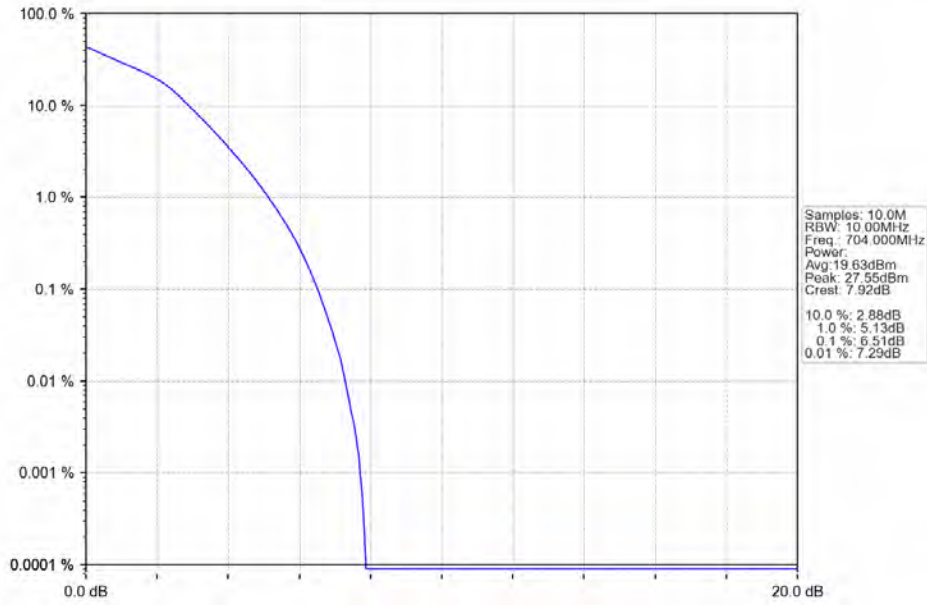
## 5.4.2 Test Graph



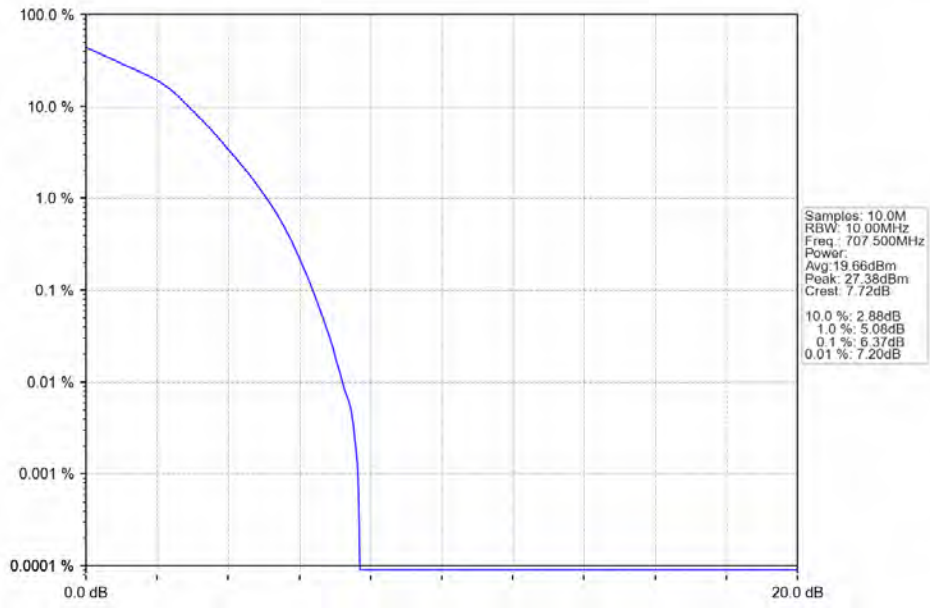
Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



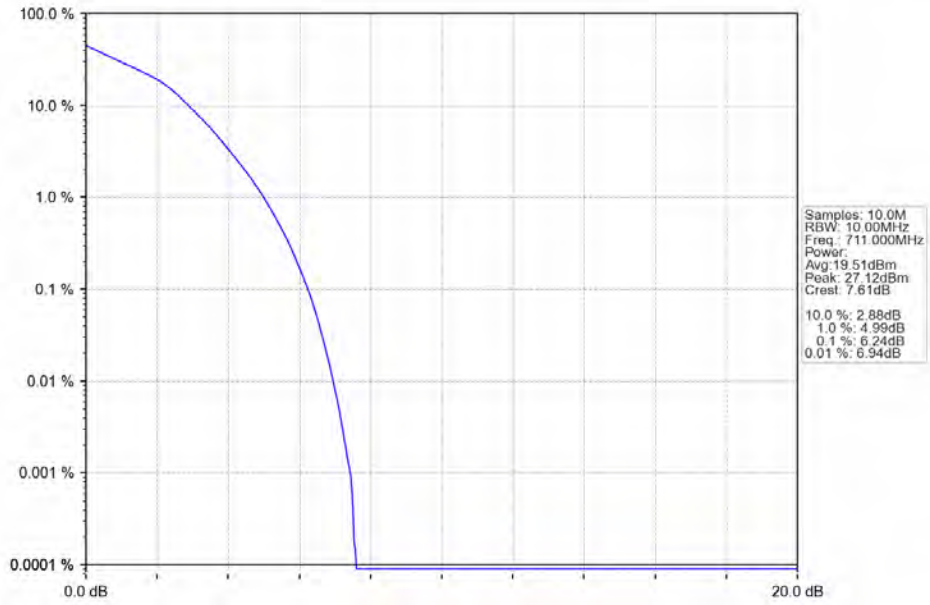
Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV



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



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



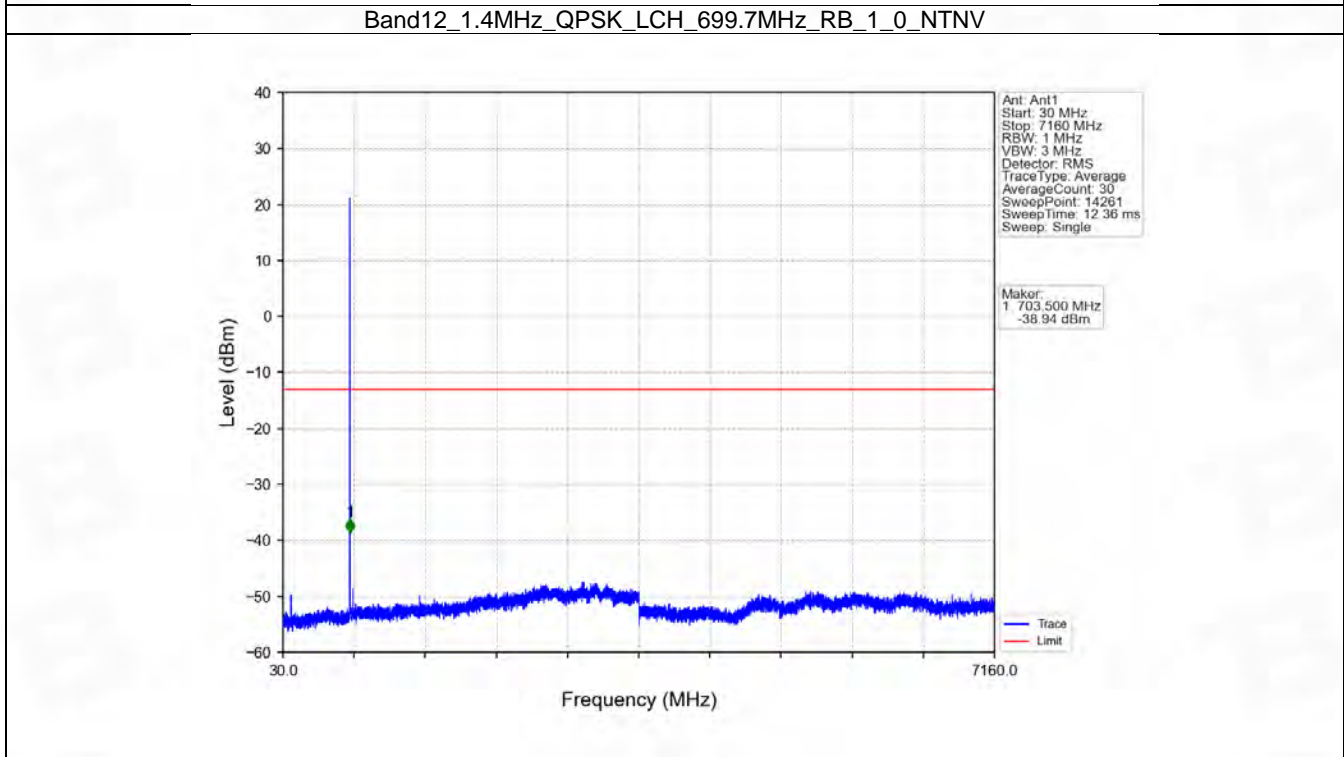
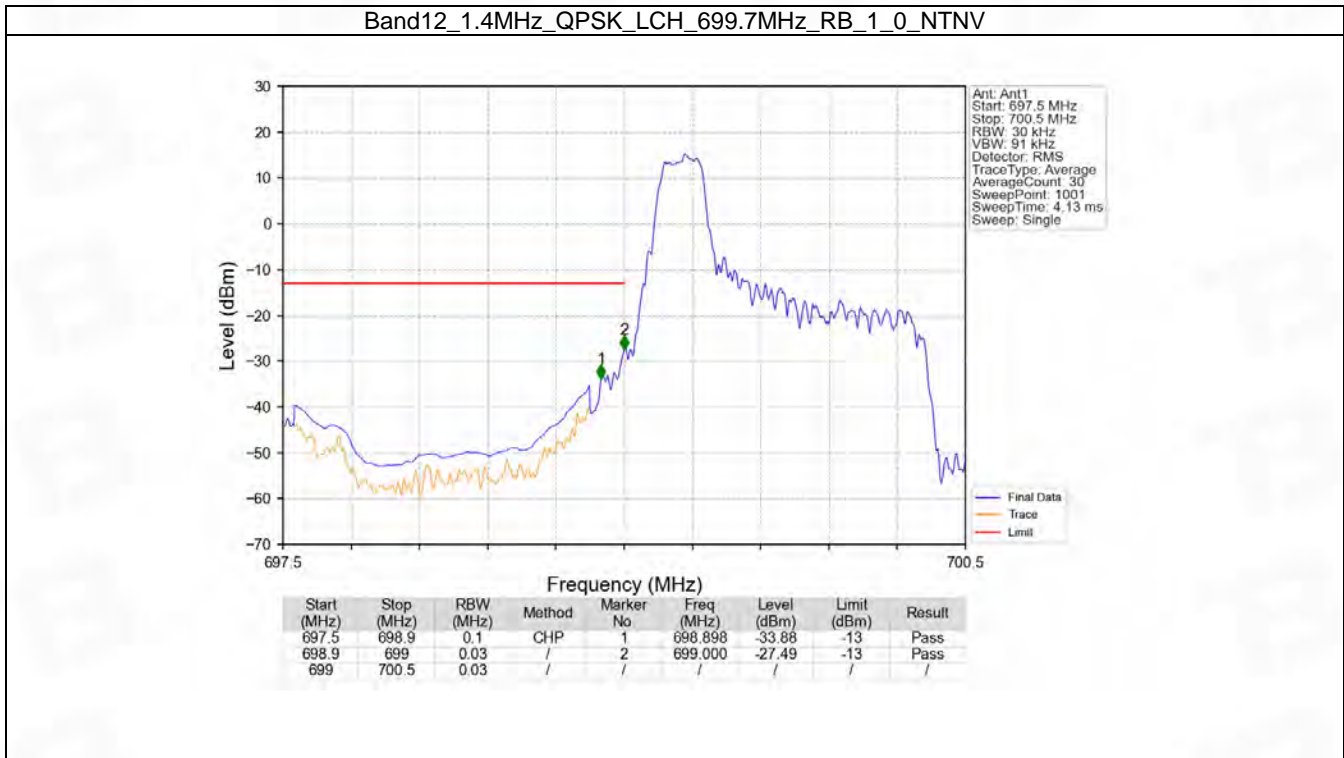
## 6. Spurious Emission

### 6.1 B12\_1.4MHz

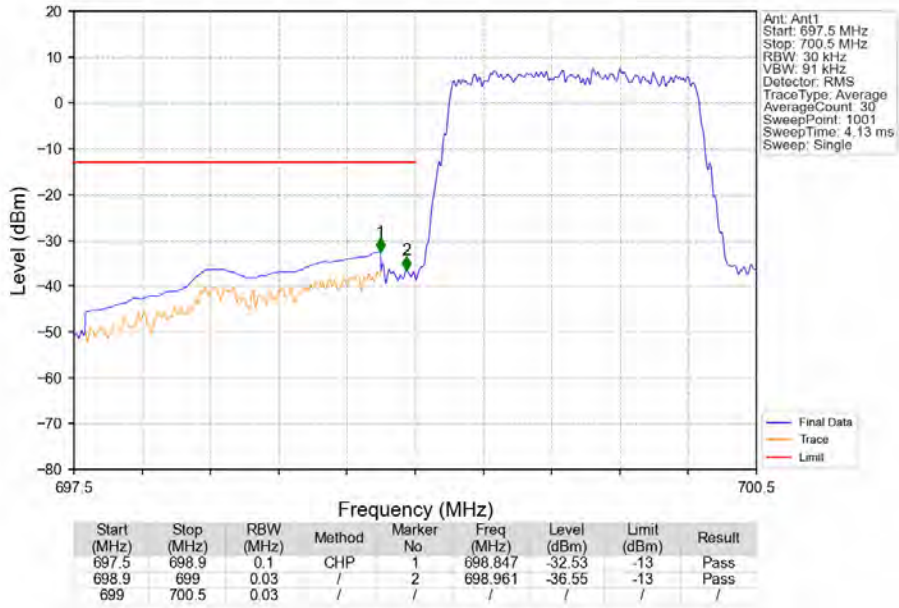
#### 6.1.1 Test Result

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	

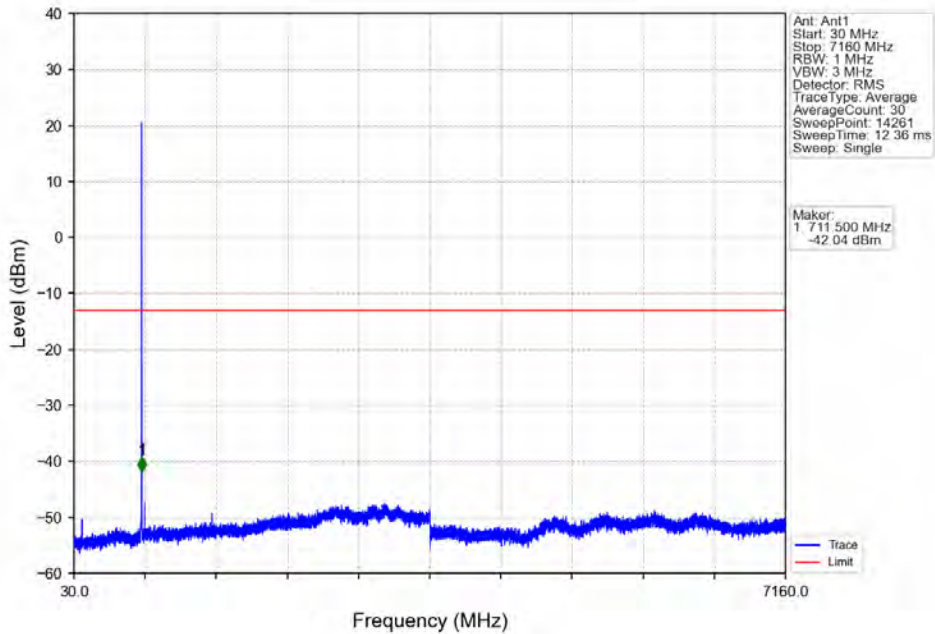
### 6.1.2 Test Graph



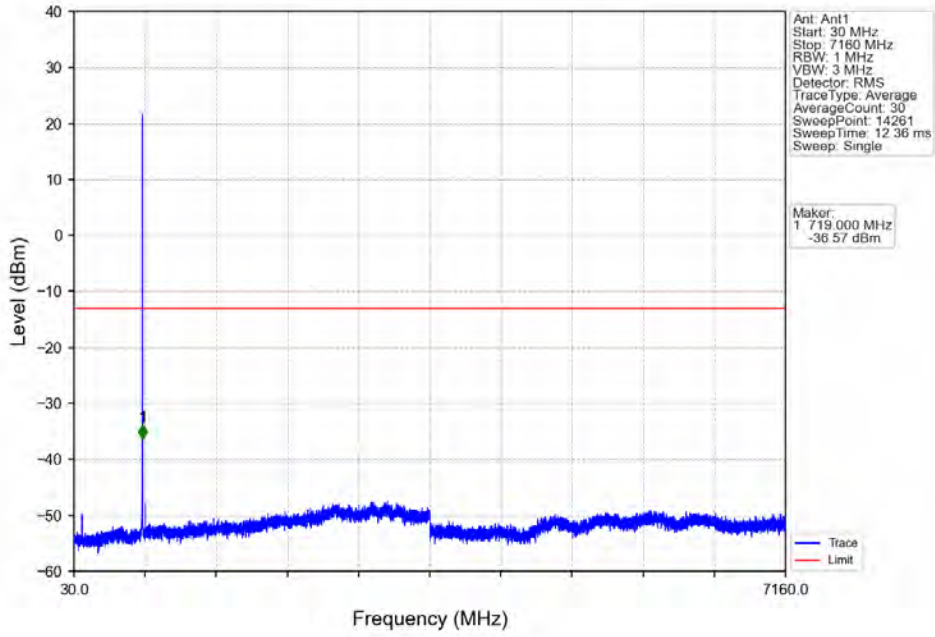
Band12\_1.4MHz\_QPSK\_LCH\_699.7MHz\_RB\_6\_0\_NTNV



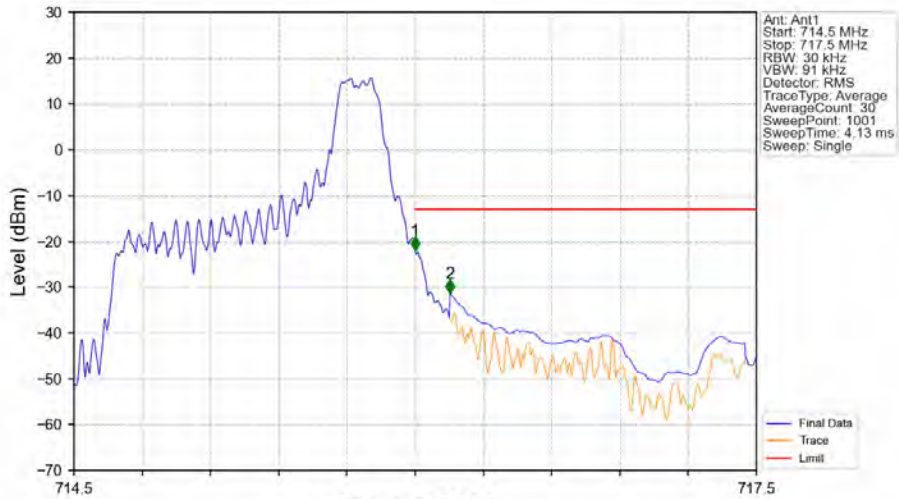
Band12\_1.4MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

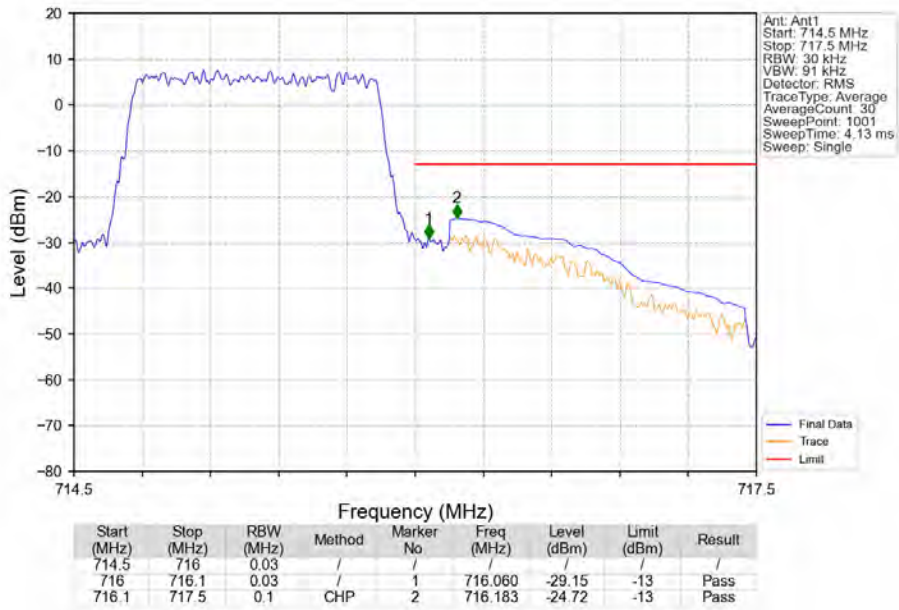


Band12\_1.4MHz\_QPSK\_HCH\_715.3MHz\_RB\_1\_5\_NTNV

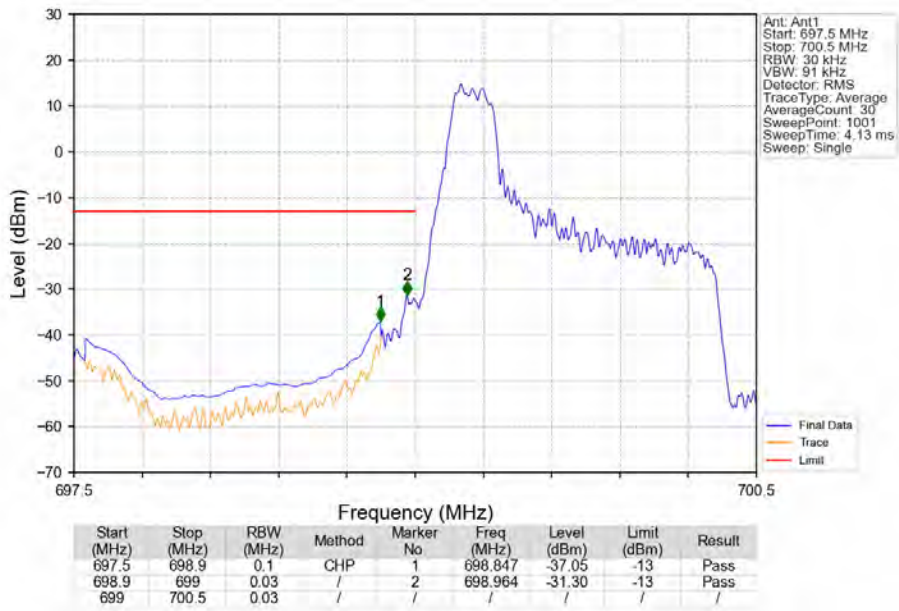


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	1	716.000	-22.06	-13	Pass
716	716.1	0.03	CHP	2	716.153	-31.44	-13	Pass

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

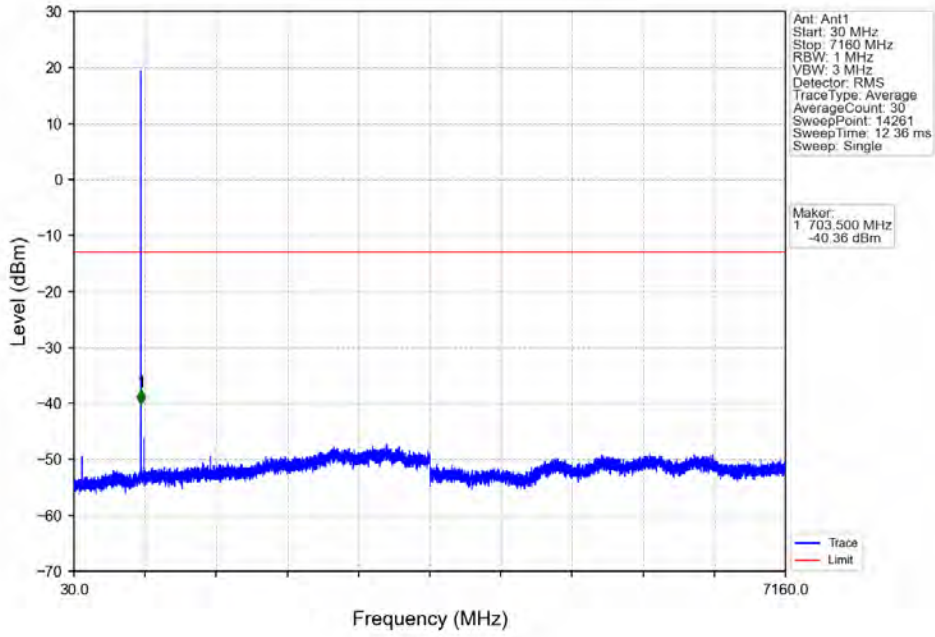


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV

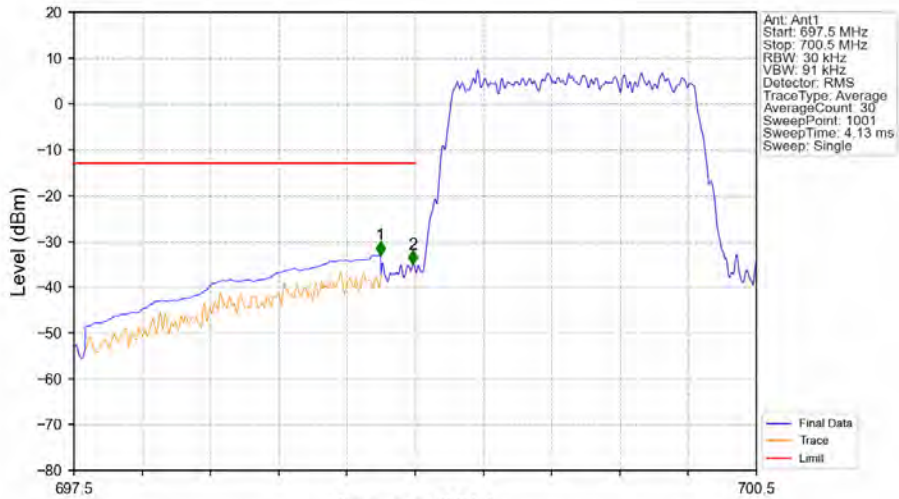




Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_1\_0\_NTNV

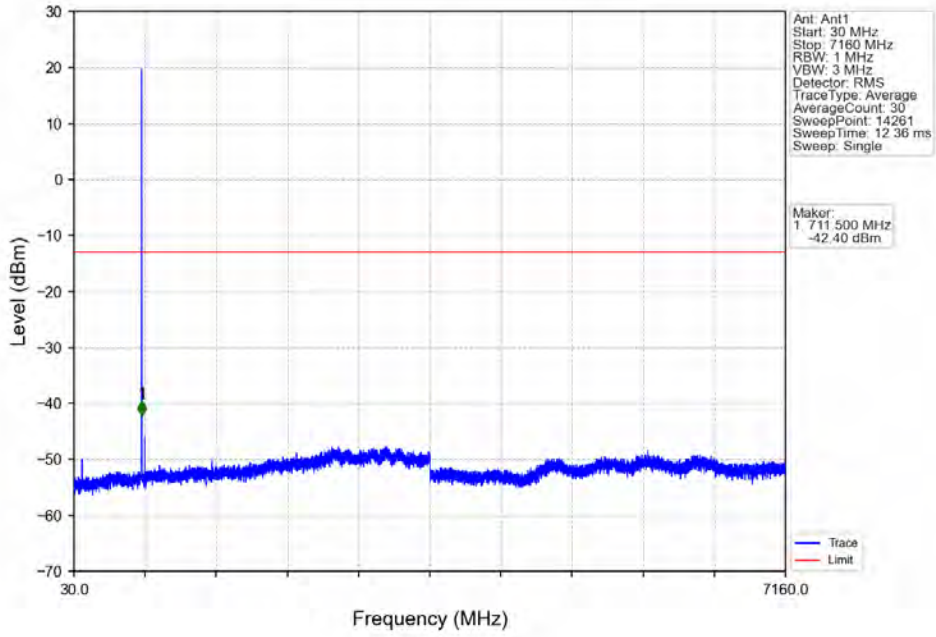


Band12\_1.4MHz\_16QAM\_LCH\_699.7MHz\_RB\_6\_0\_NTNV

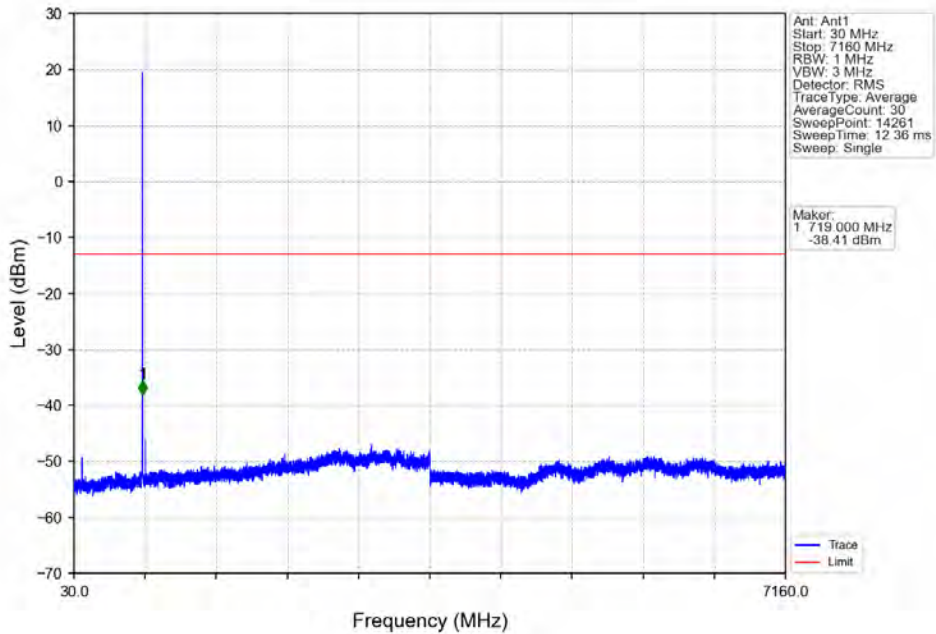


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.847	-33.02	-13	Pass
698.9	699	0.03	/	2	698.991	-34.97	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

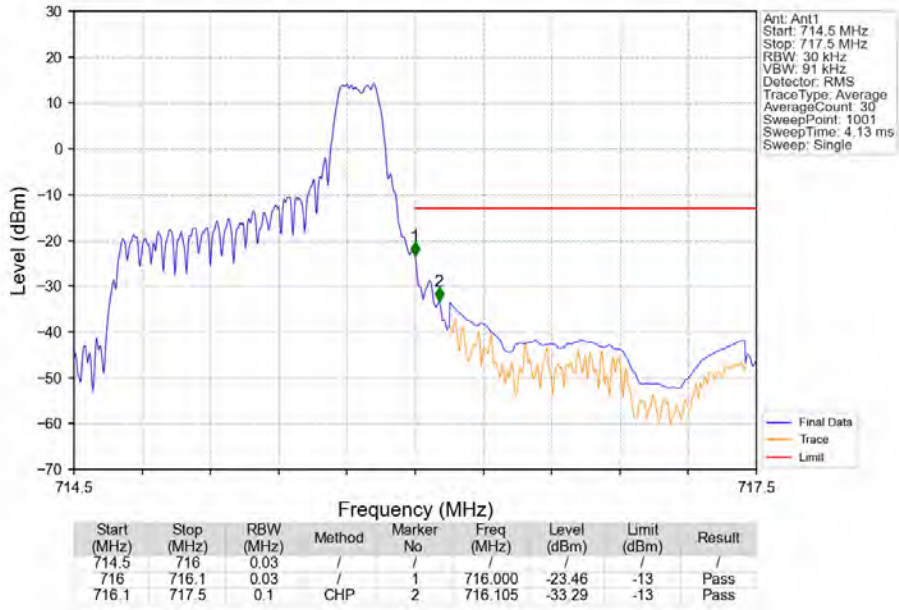
Band12\_1.4MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



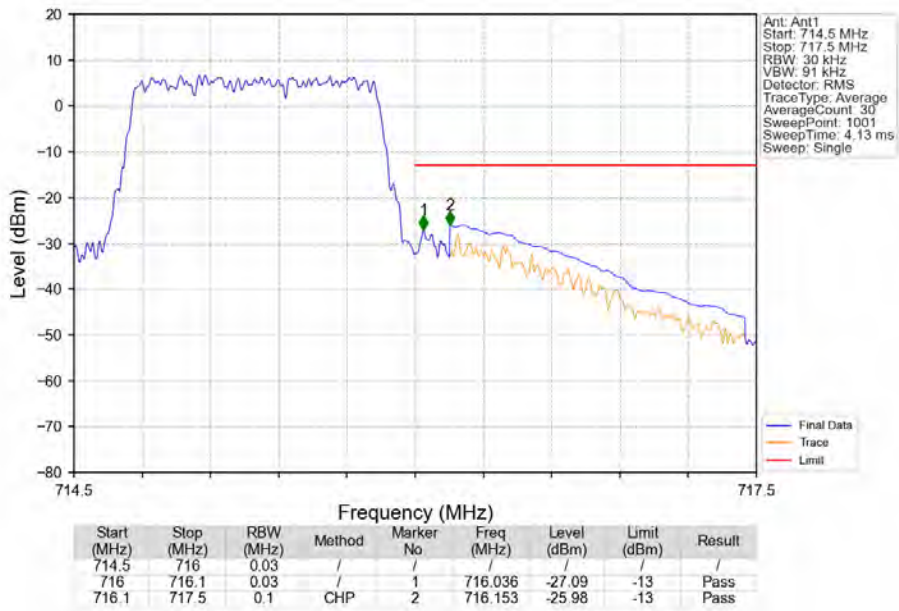
Band12\_1.4MHz\_16QAM\_HCH\_715.3MHz\_RB\_1\_0\_NTNV



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



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

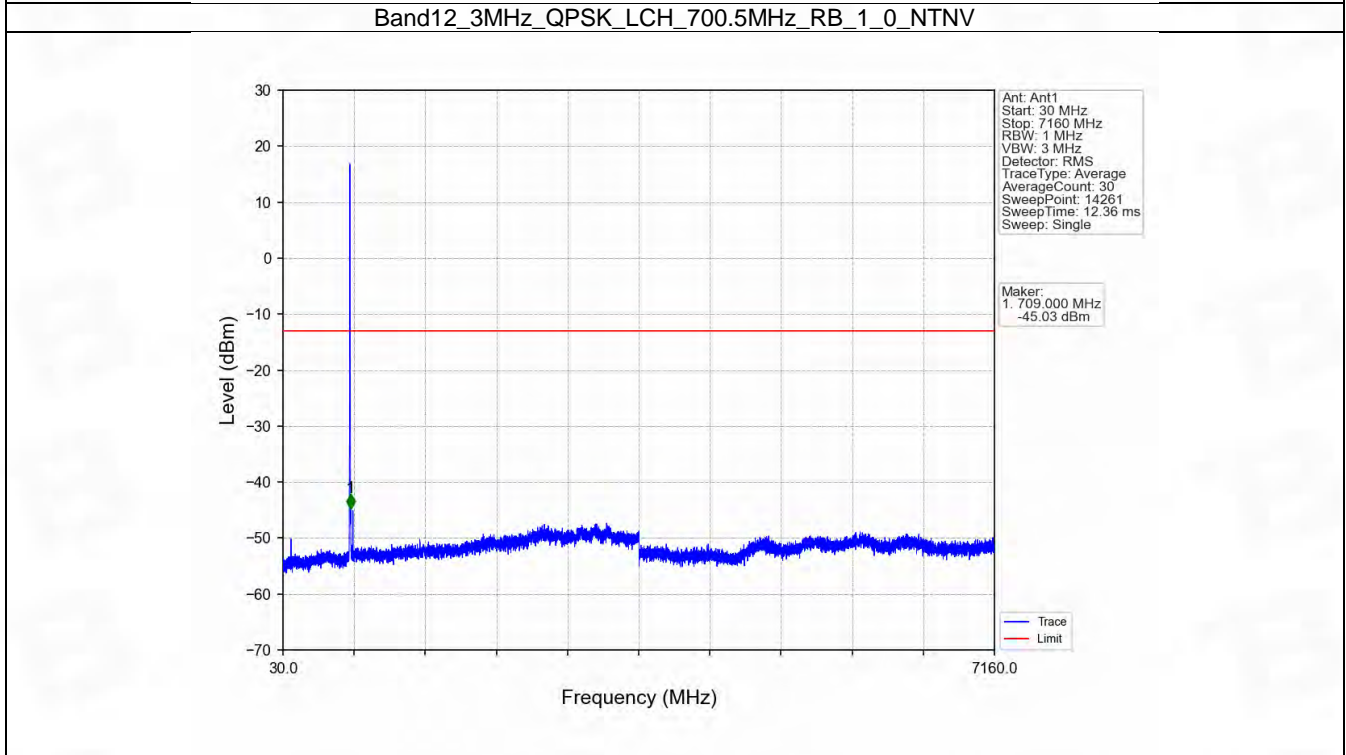
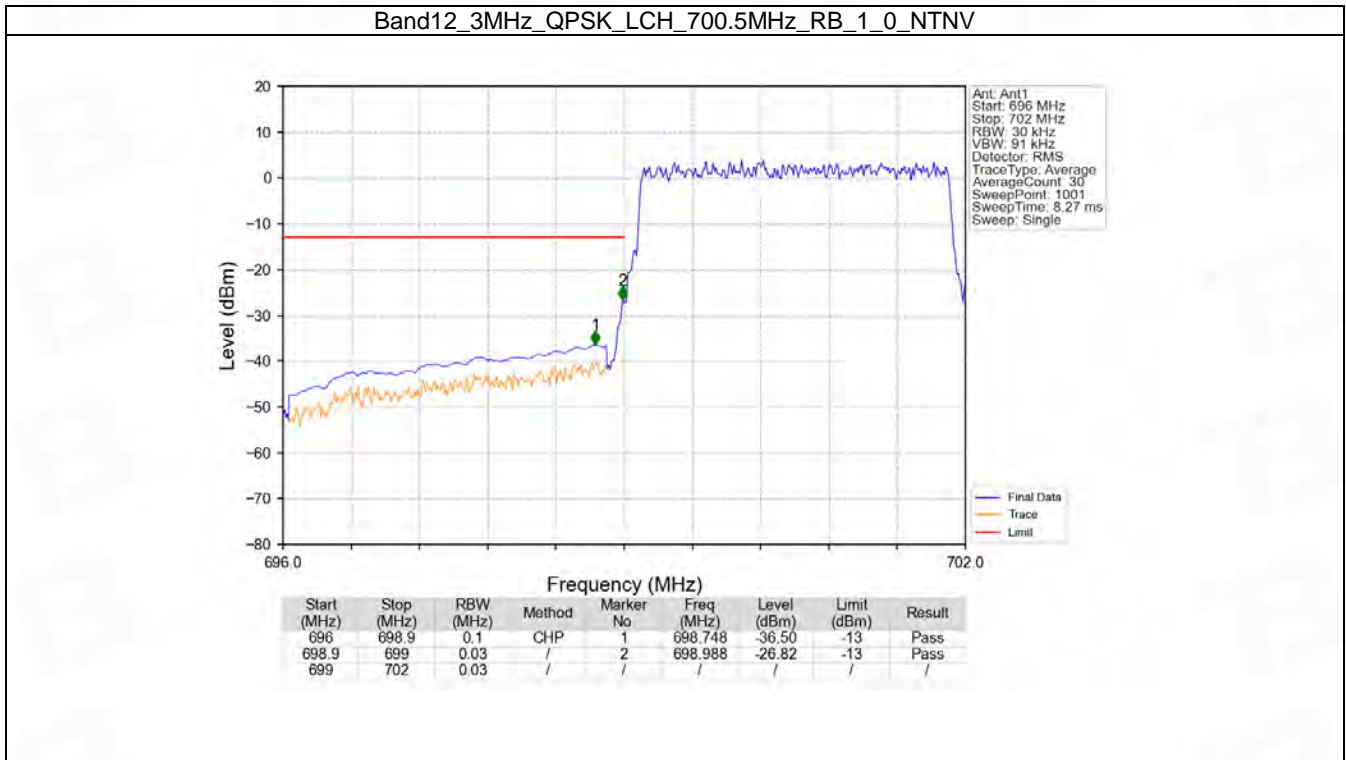


## 6.2 B12\_3MHz

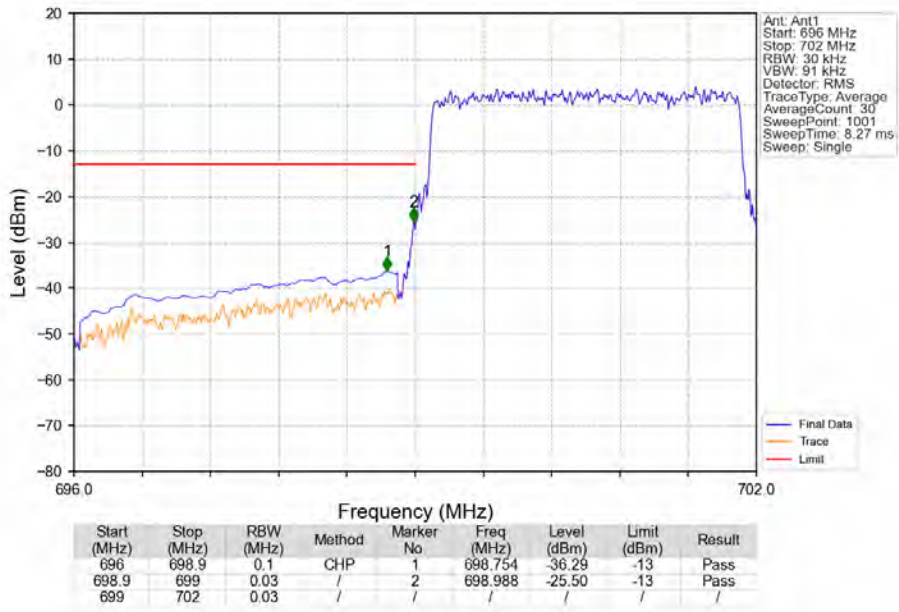
### 6.2.1 Test Result

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

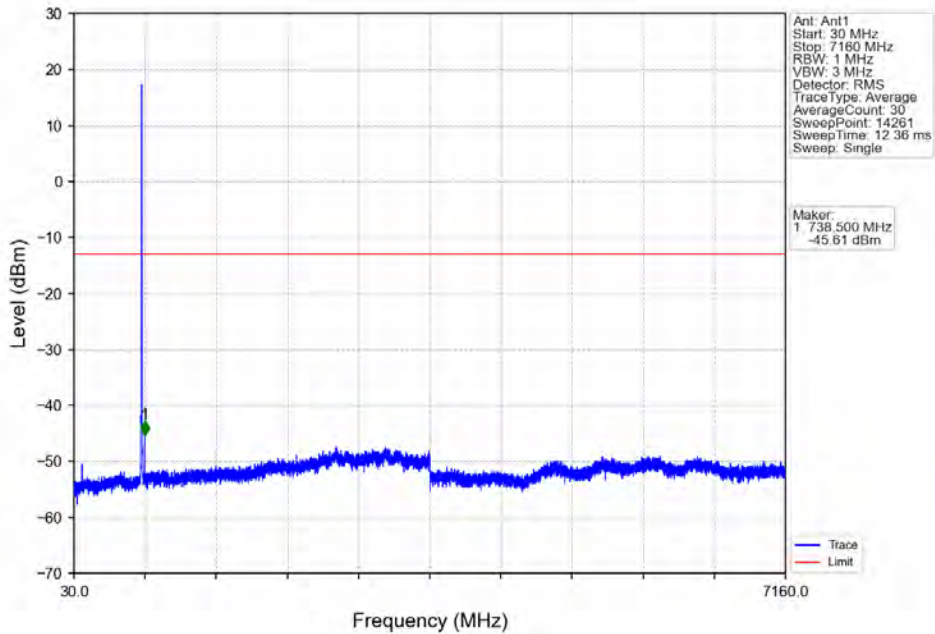
### 6.2.2 Test Graph



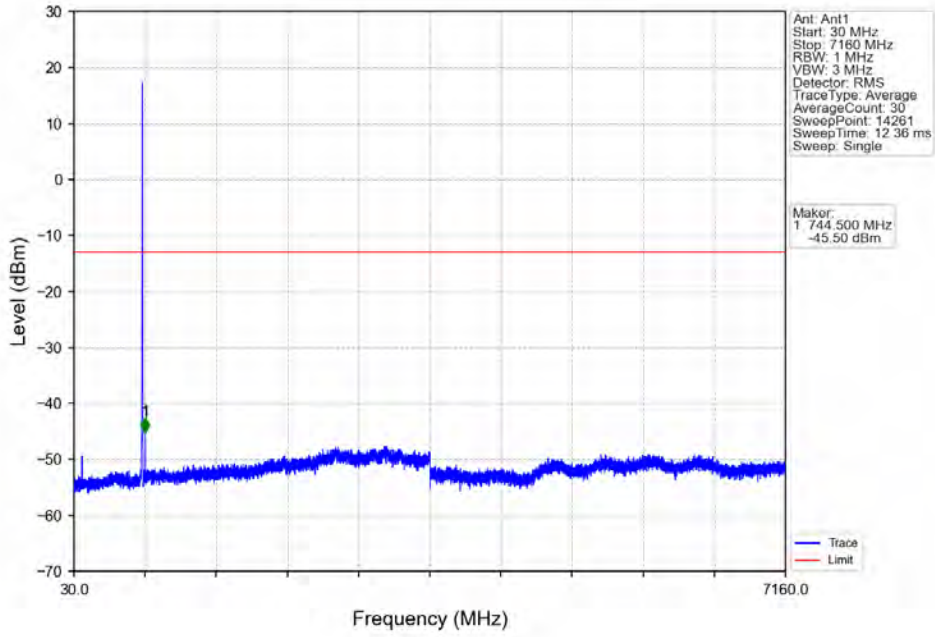
Band12\_3MHz\_QPSK\_LCH\_700.5MHz\_RB\_15\_0\_NTNV



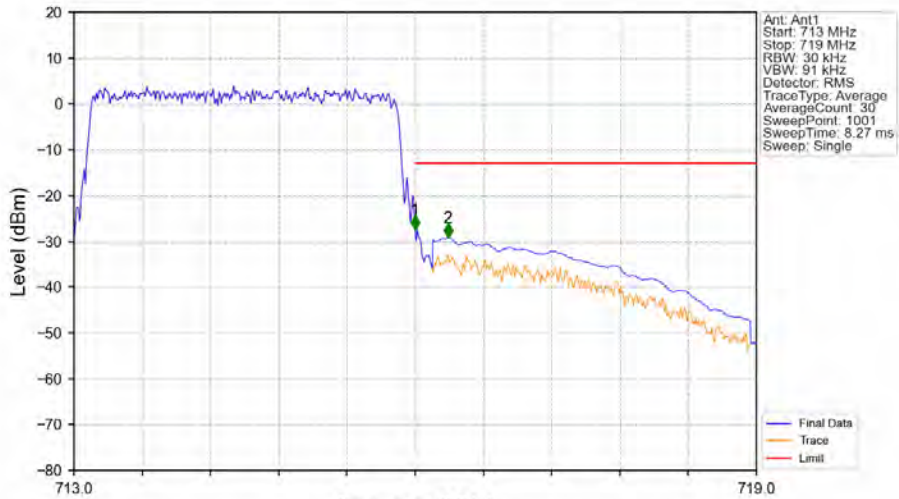
Band12\_3MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

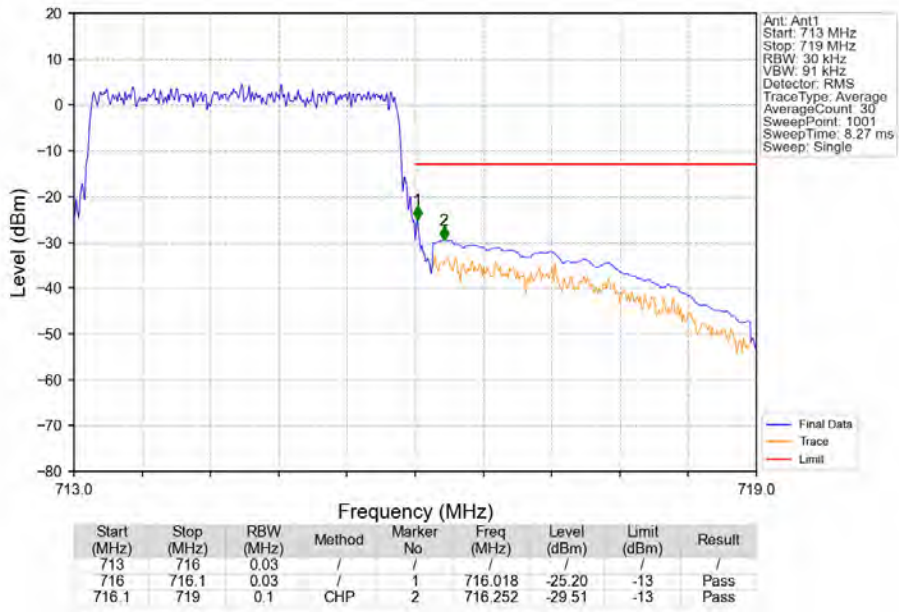


Band12\_3MHz\_QPSK\_HCH\_714.5MHz\_RB\_1\_14\_NTNV

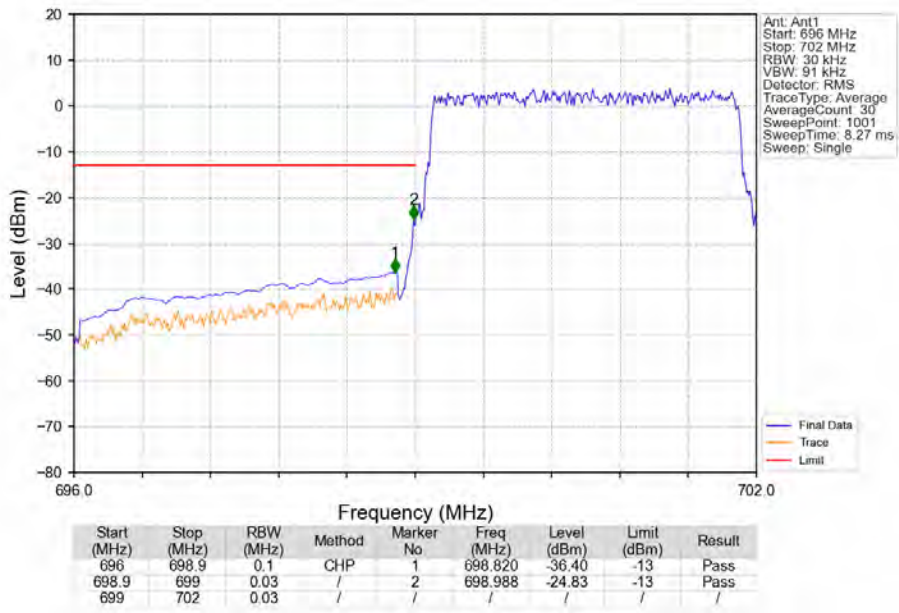


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	1	716.000	-27.47	-13	Pass
716.1	719	0.1	CHP	2	716.288	-29.28	-13	Pass

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

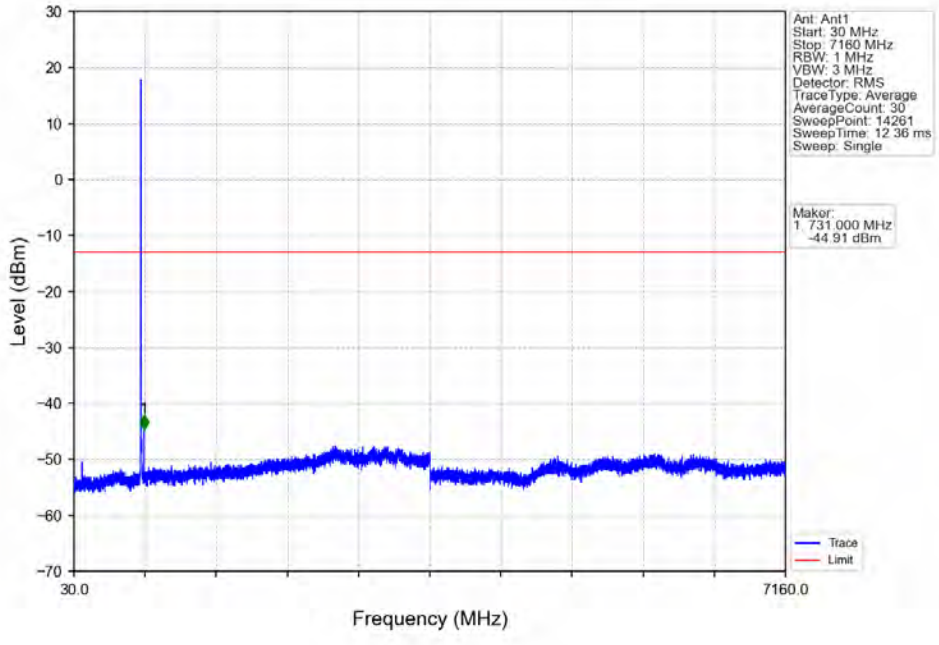


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

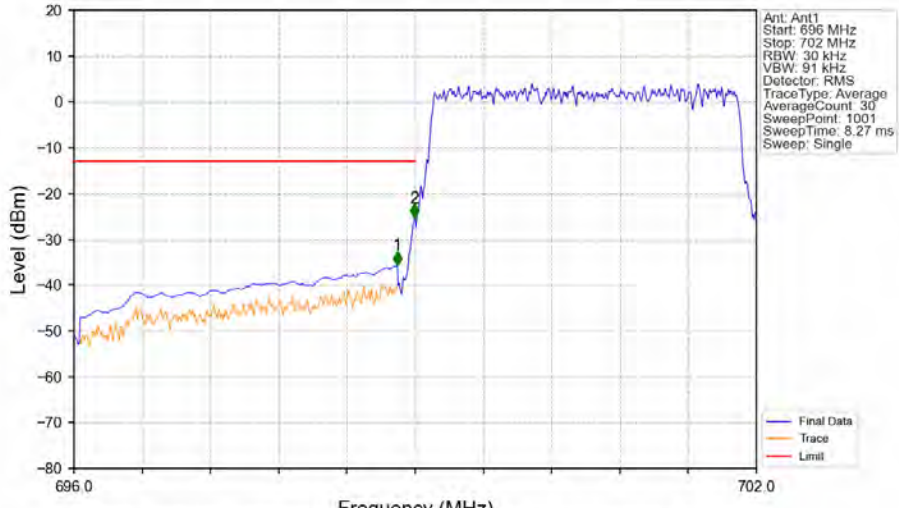




Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_1\_0\_NTNV

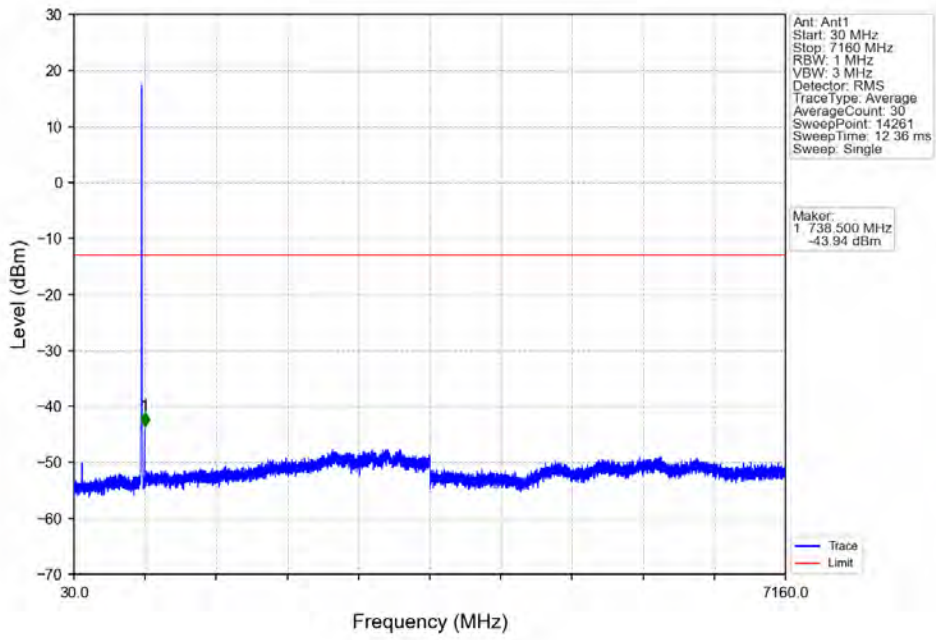


Band12\_3MHz\_16QAM\_LCH\_700.5MHz\_RB\_15\_0\_NTNV

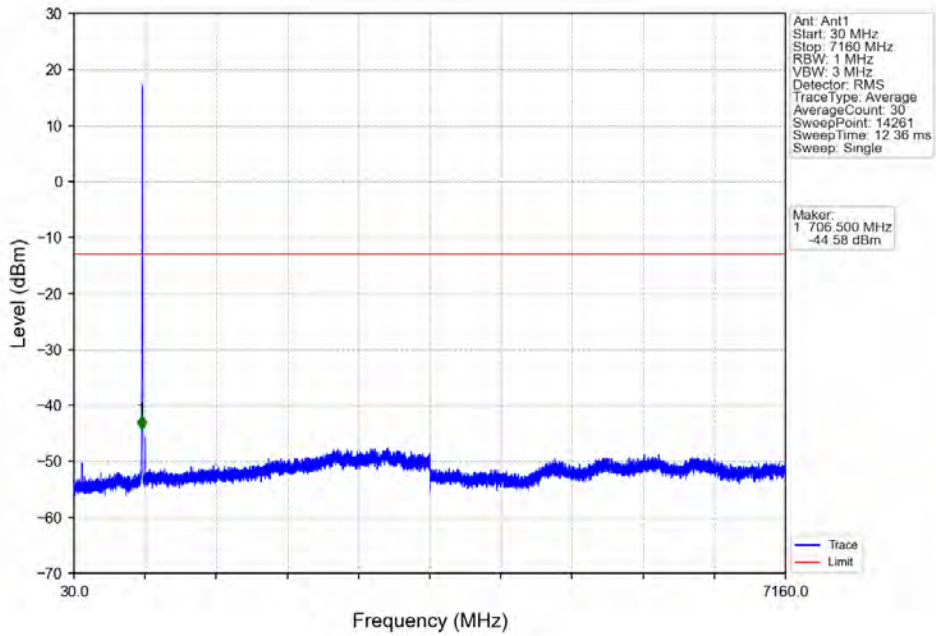


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.844	-35.66	-13	Pass
698.9	699	0.03	/	2	698.994	-25.39	-13	Pass
699	702	0.03	/	/	/	/	/	/

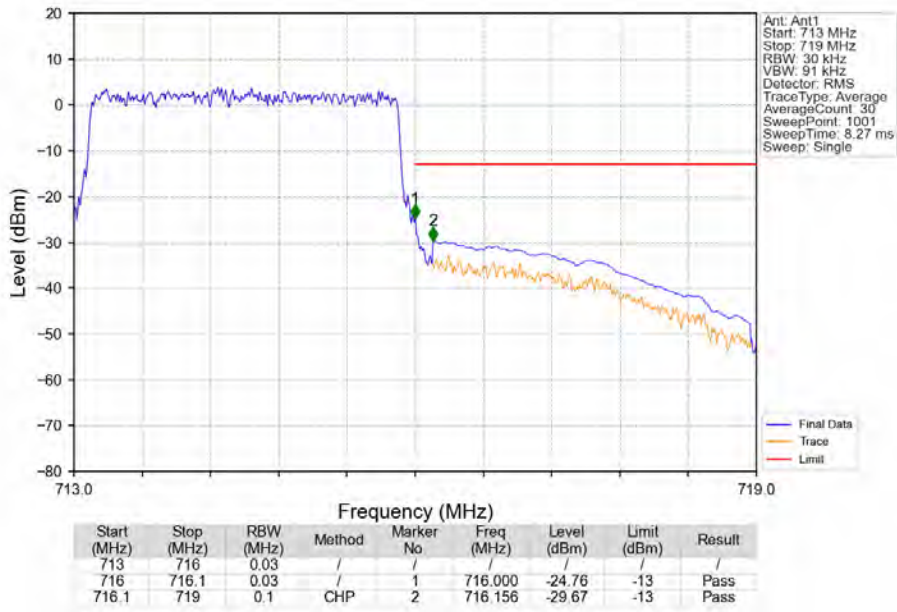
Band12\_3MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



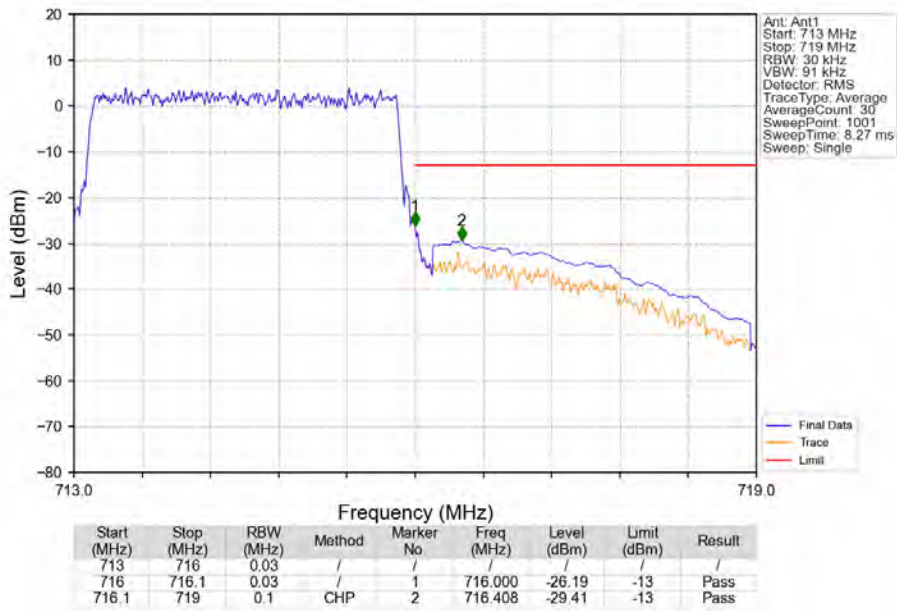
Band12\_3MHz\_16QAM\_HCH\_714.5MHz\_RB\_1\_0\_NTNV



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



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

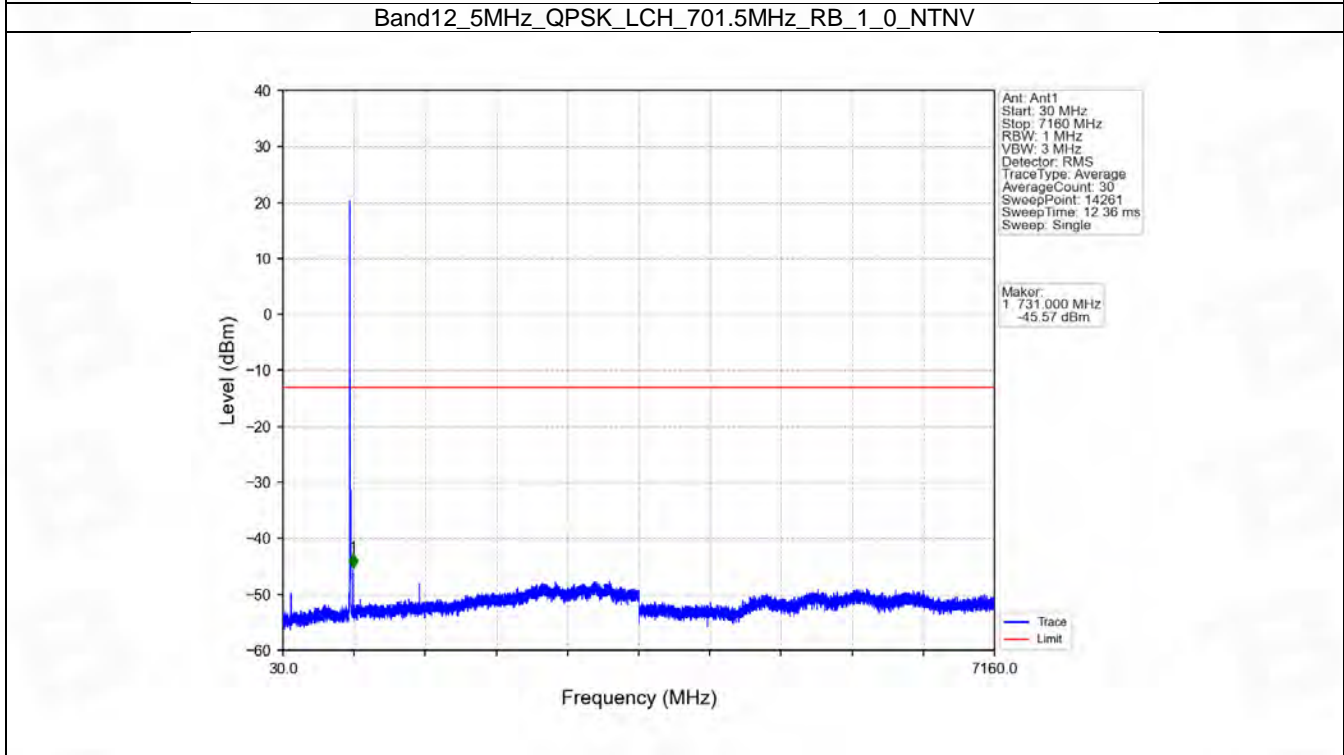
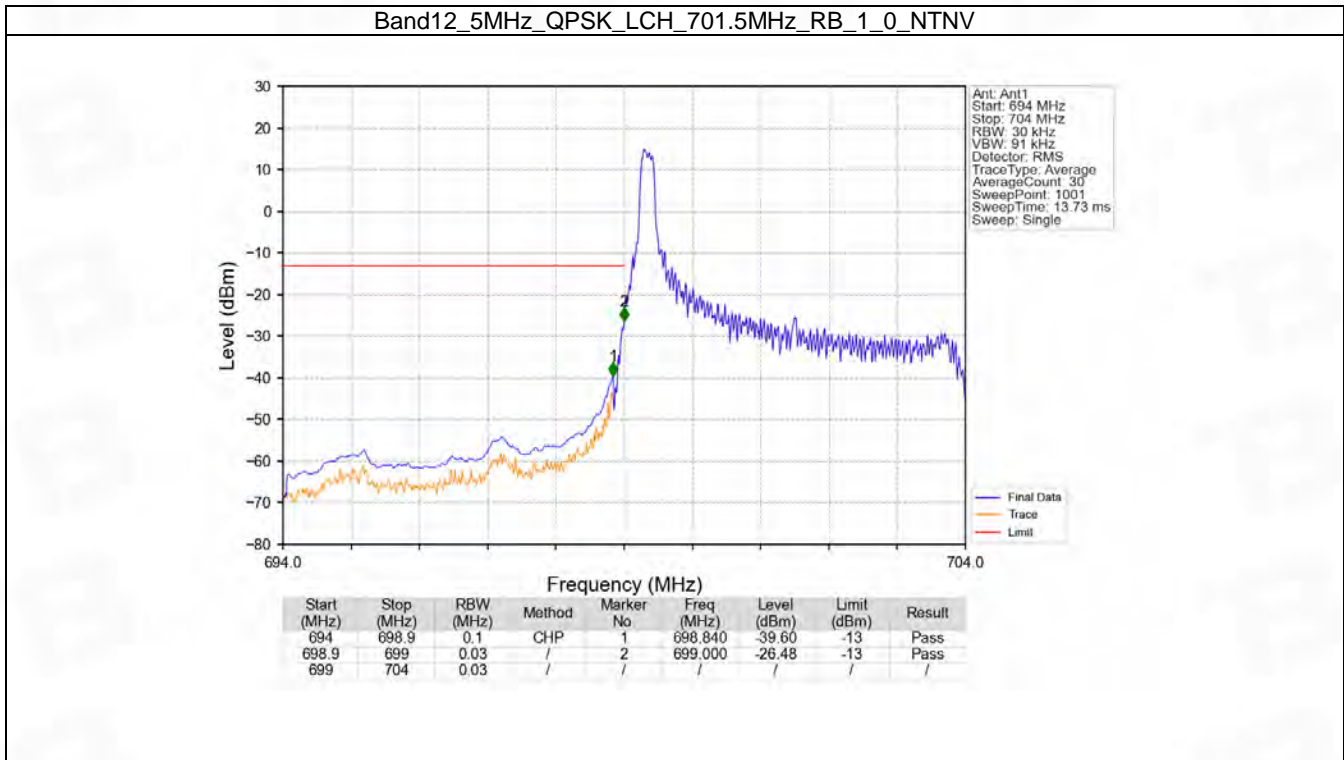


## 6.3 B12\_5MHz

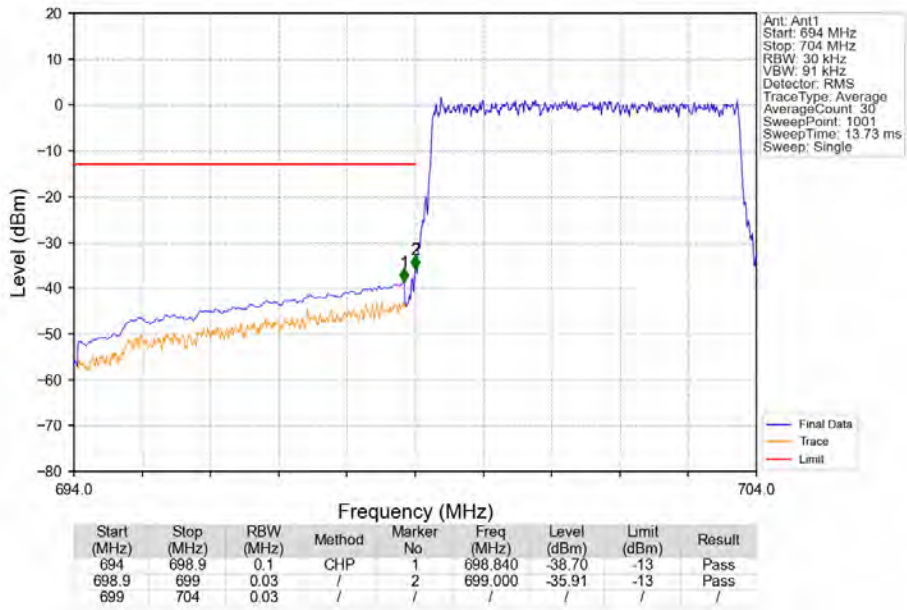
### 6.3.1 Test Result

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

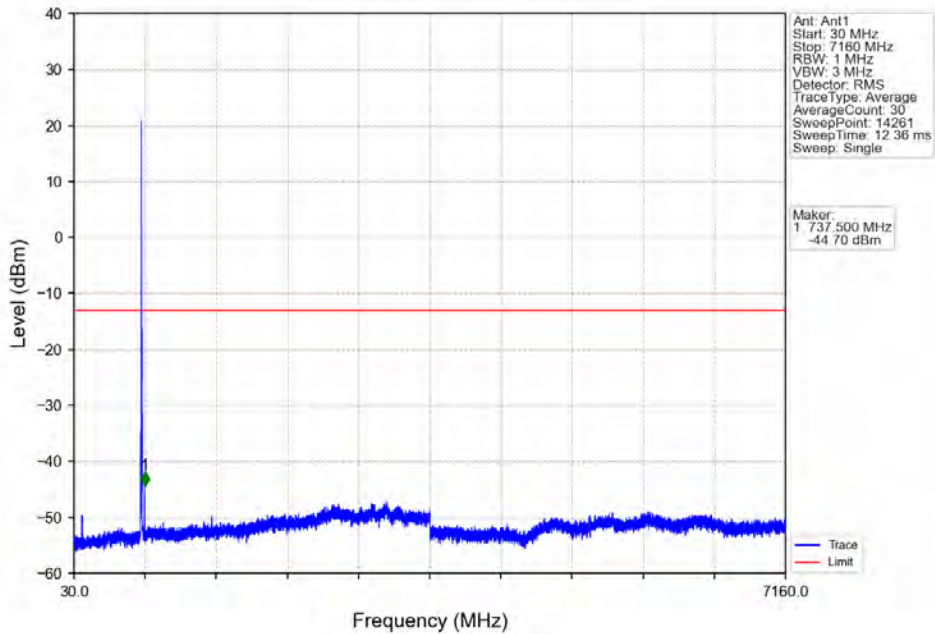
### 6.3.2 Test Graph



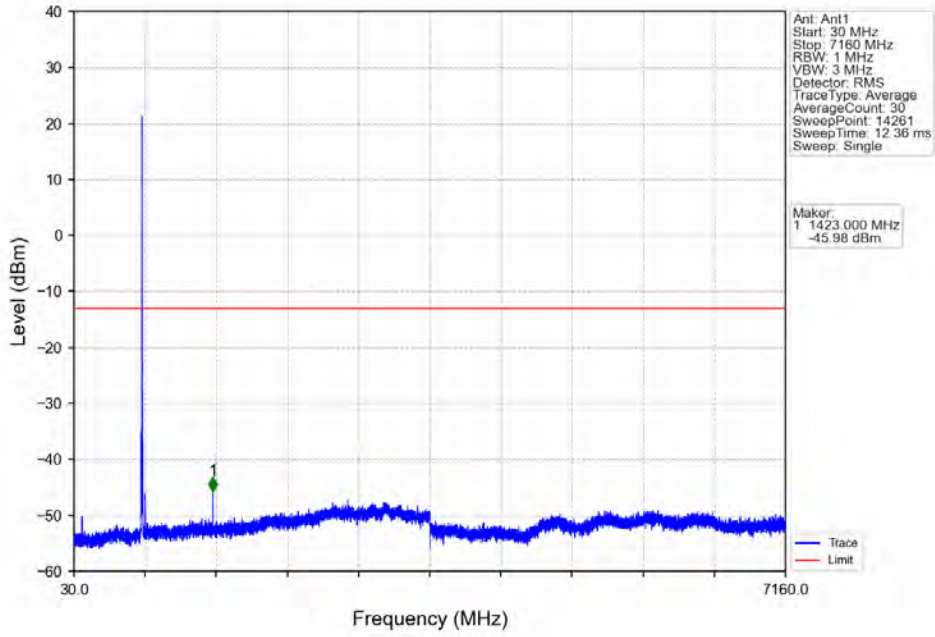
Band12\_5MHz\_QPSK\_LCH\_701.5MHz\_RB\_25\_0\_NTNV



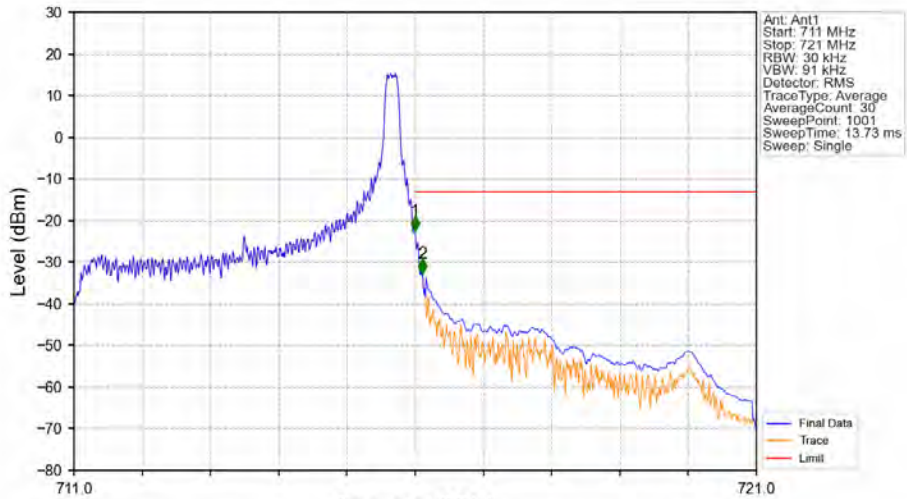
Band12\_5MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

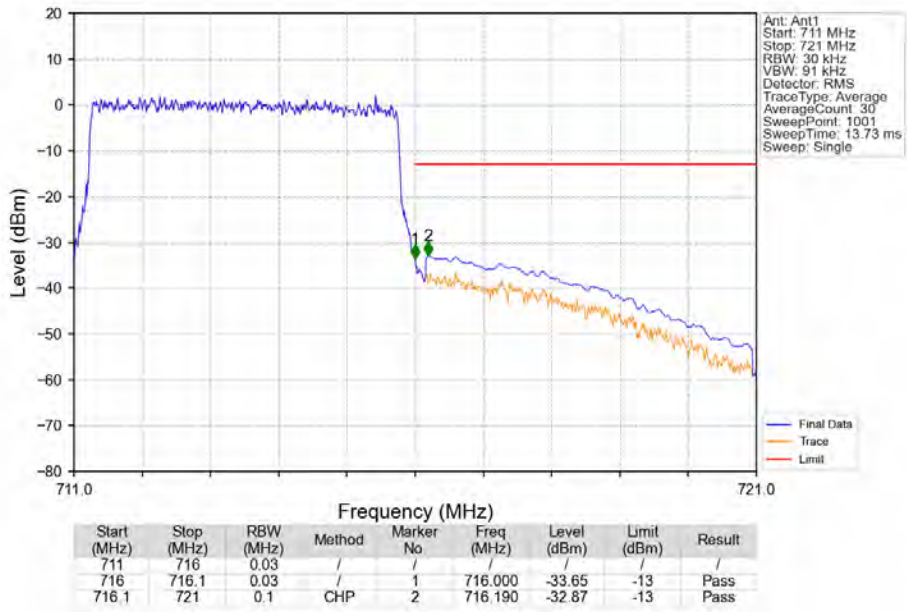


Band12\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_24\_NTNV

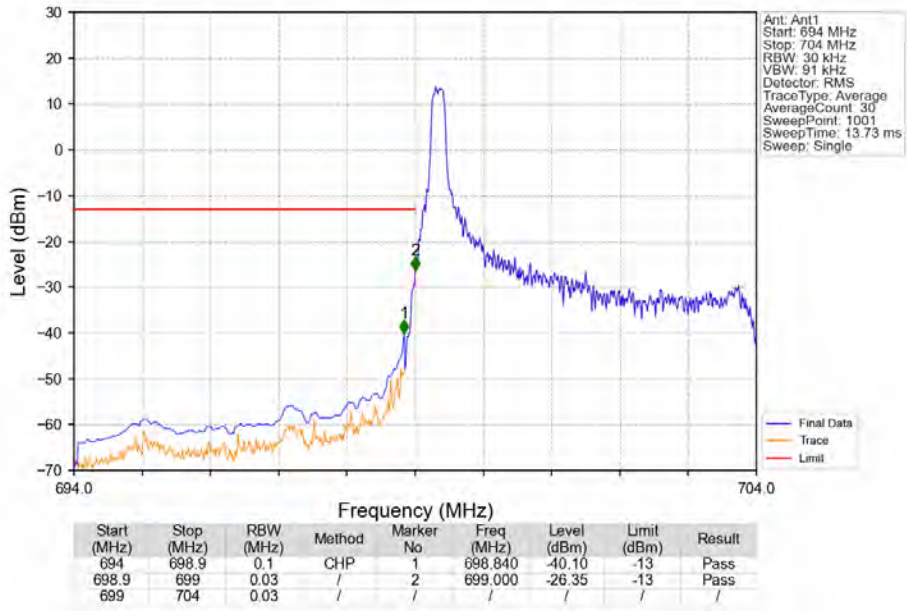


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	1	716.000	-22.33	-13	Pass
716.1	721	0.1	CHP	2	716.110	-32.75	-13	Pass

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

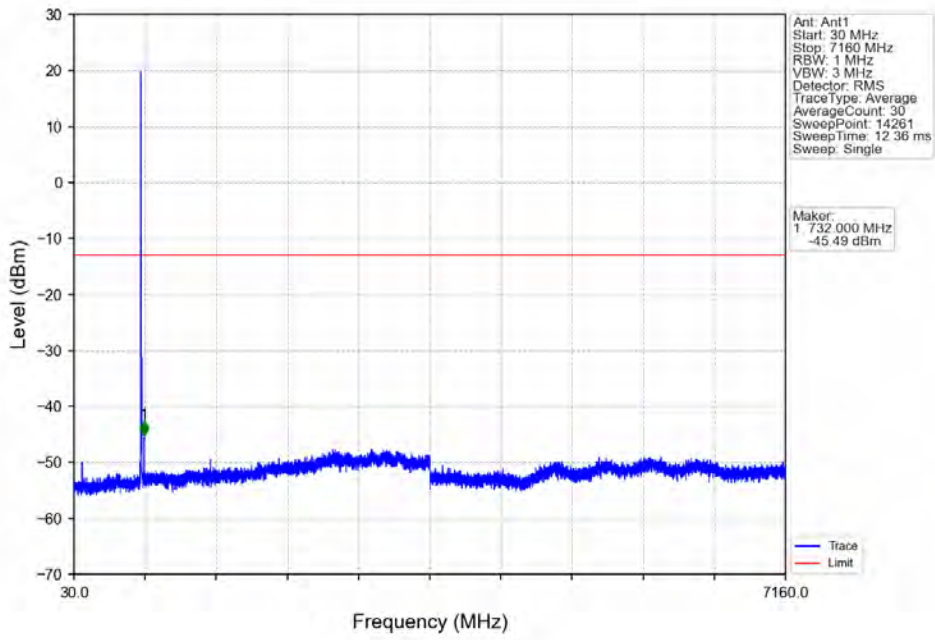


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

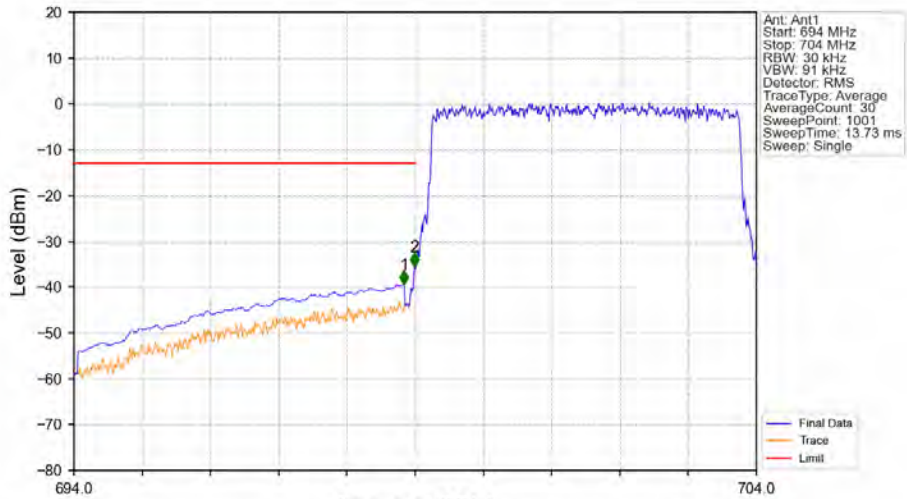




Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_1\_0\_NTNV

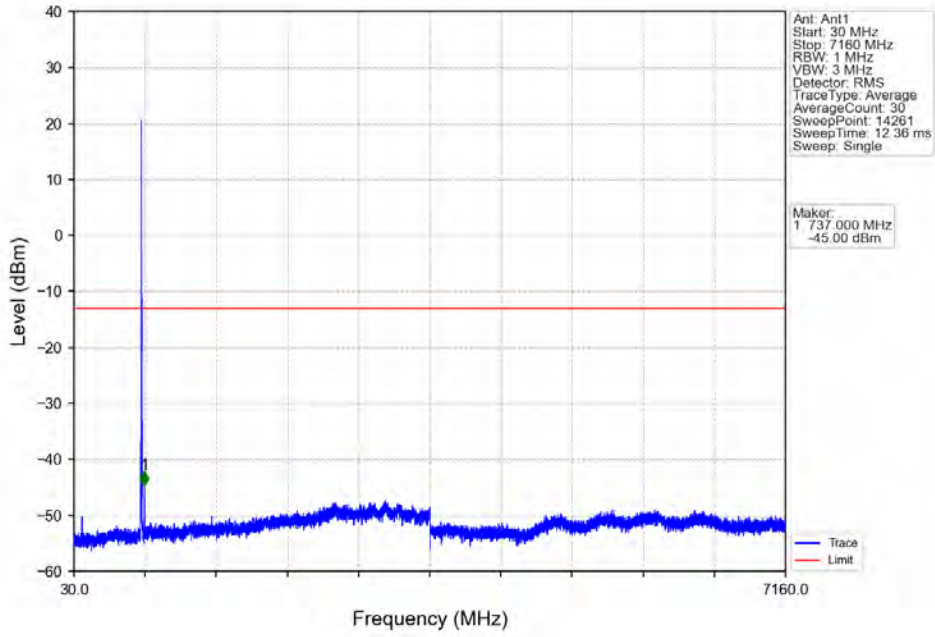


Band12\_5MHz\_16QAM\_LCH\_701.5MHz\_RB\_25\_0\_NTNV

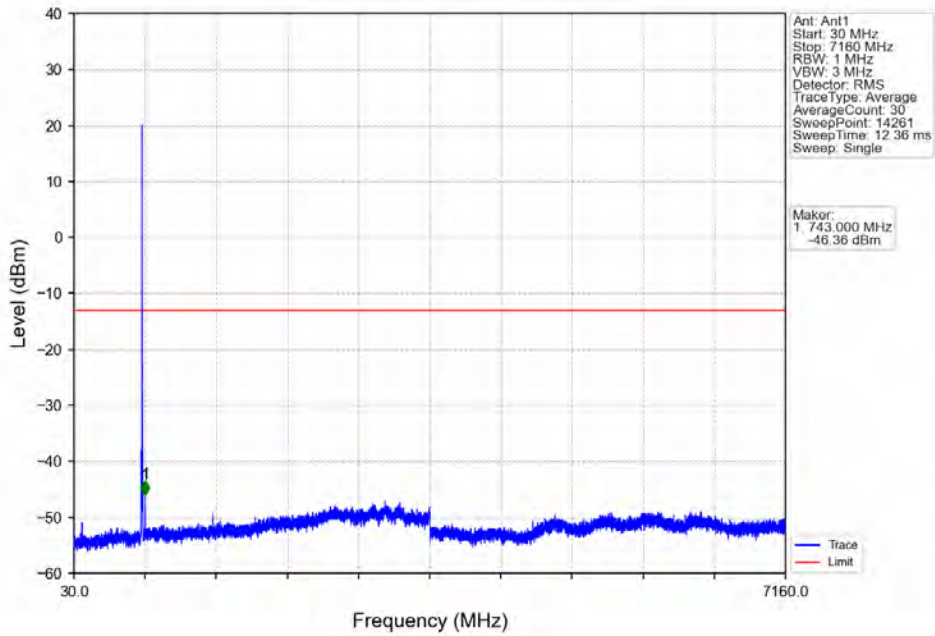


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.840	-39.40	-13	Pass
698.9	699	0.03	/	2	698.990	-35.51	-13	Pass
699	704	0.03	/	/	/	/	/	/

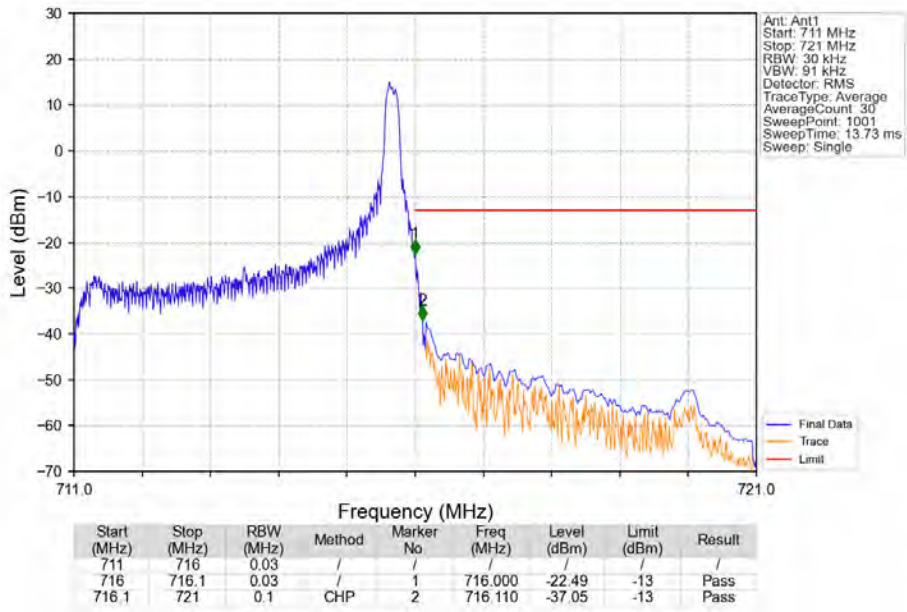
Band12\_5MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



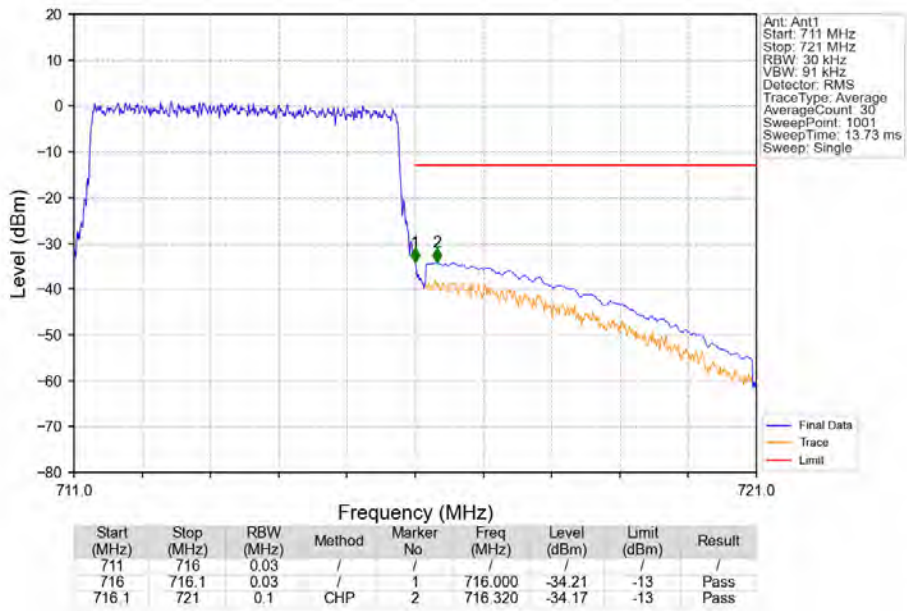
Band12\_5MHz\_16QAM\_HCH\_713.5MHz\_RB\_1\_0\_NTNV



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



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

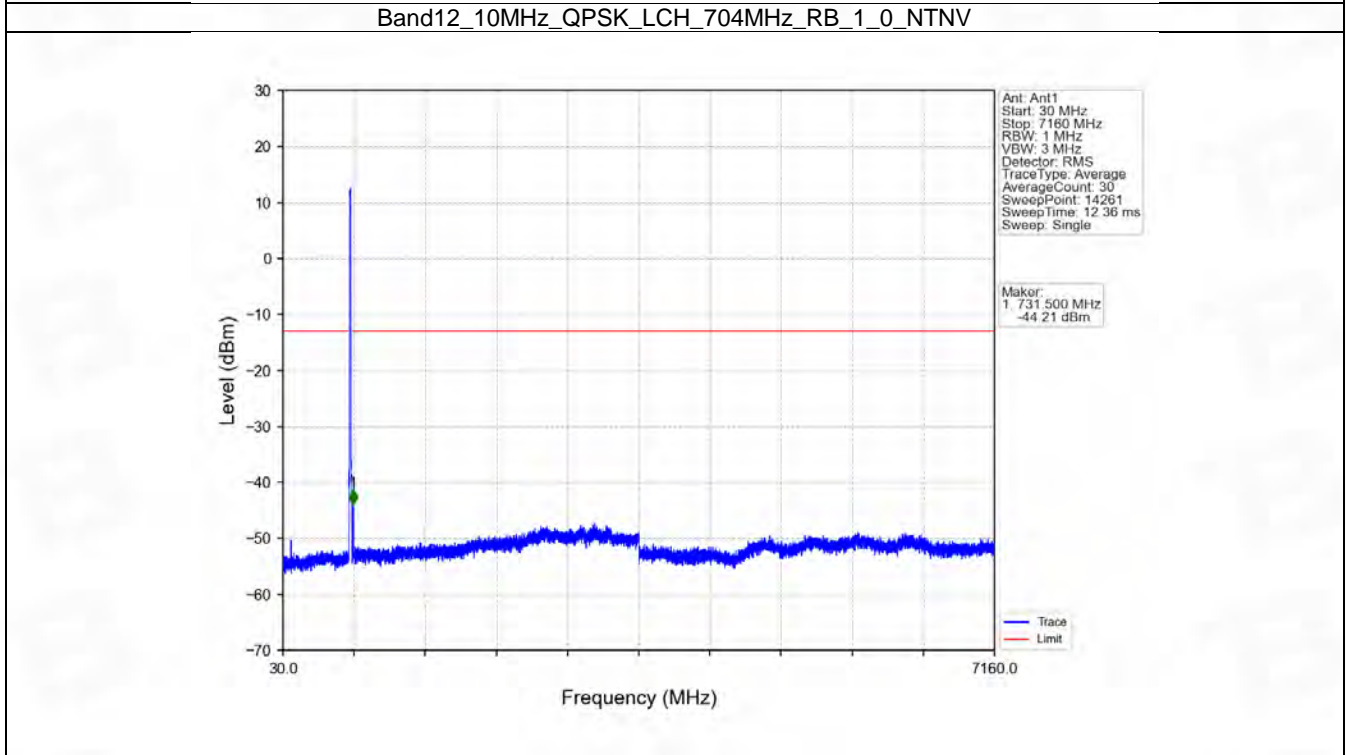
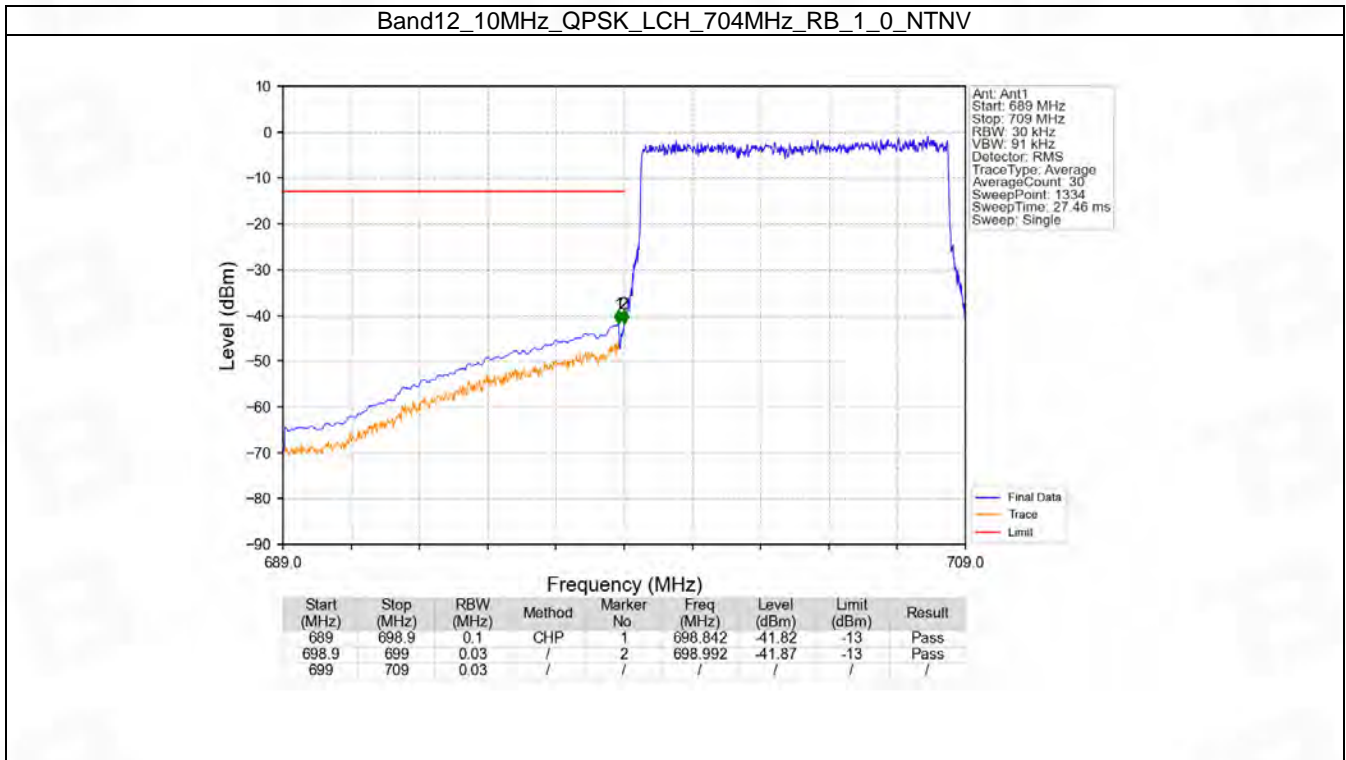


## 6.4 B12\_10MHz

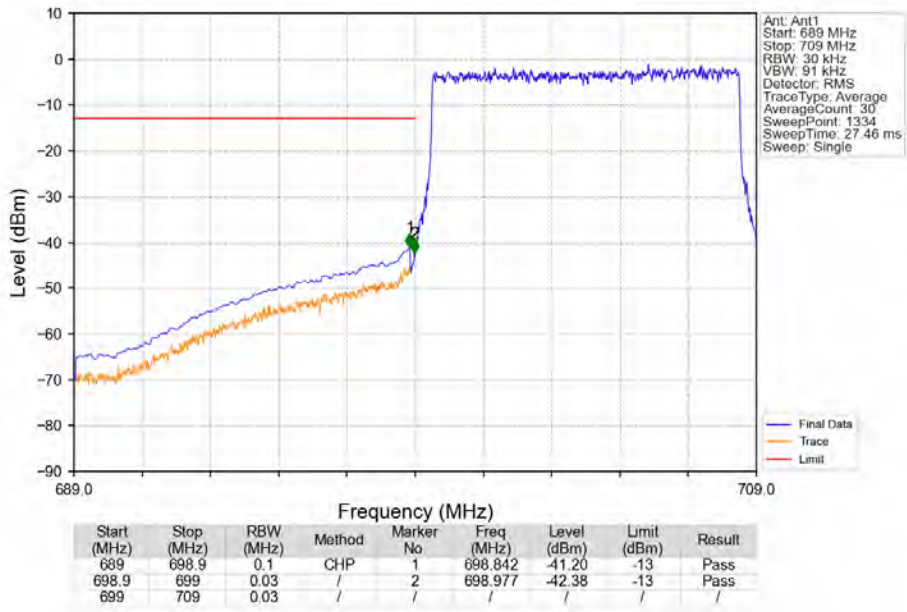
### 6.4.1 Test Result

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

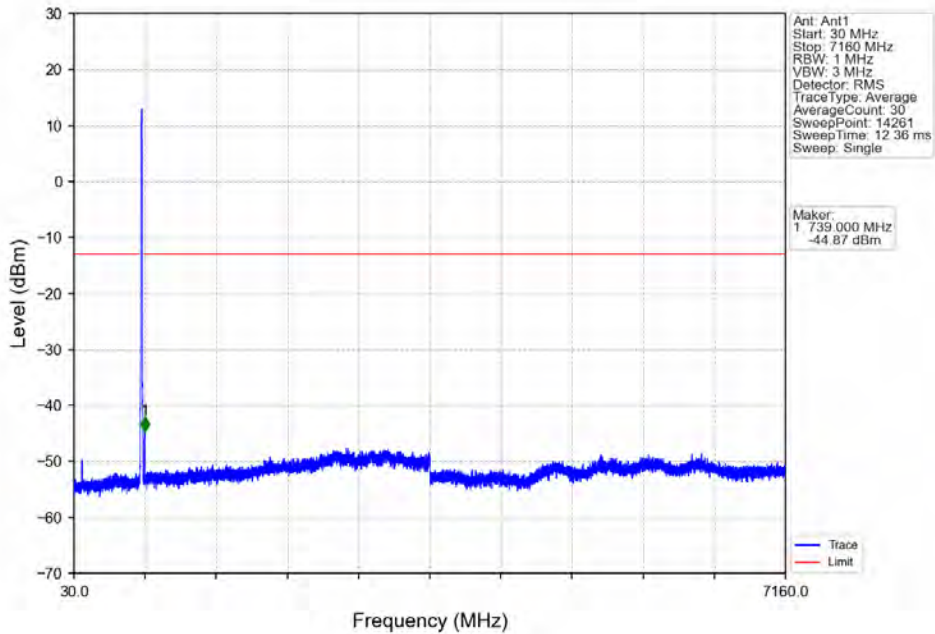
### 6.4.2 Test Graph



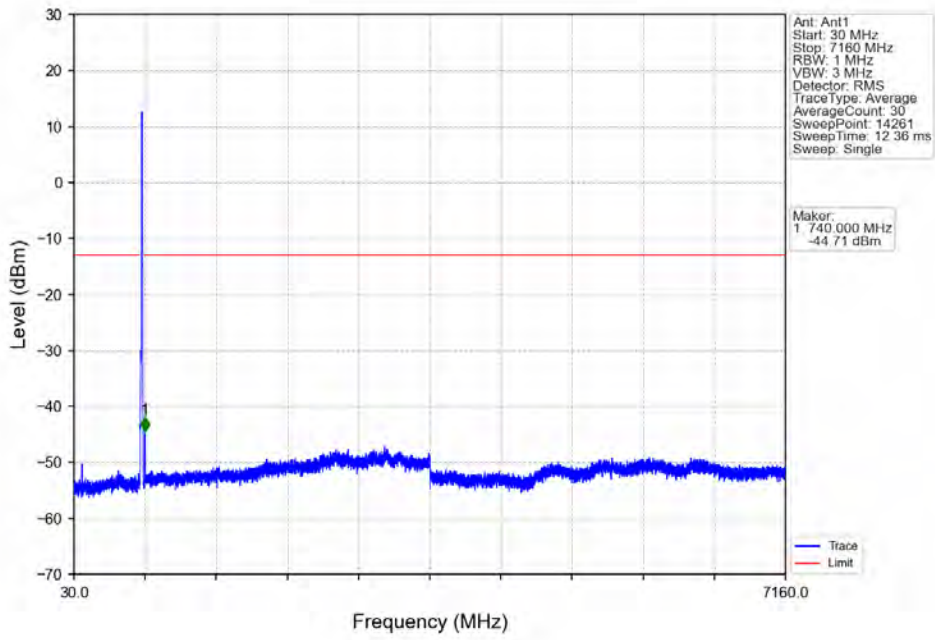
Band12\_10MHz\_QPSK\_LCH\_704MHz\_RB\_50\_0\_NTNV



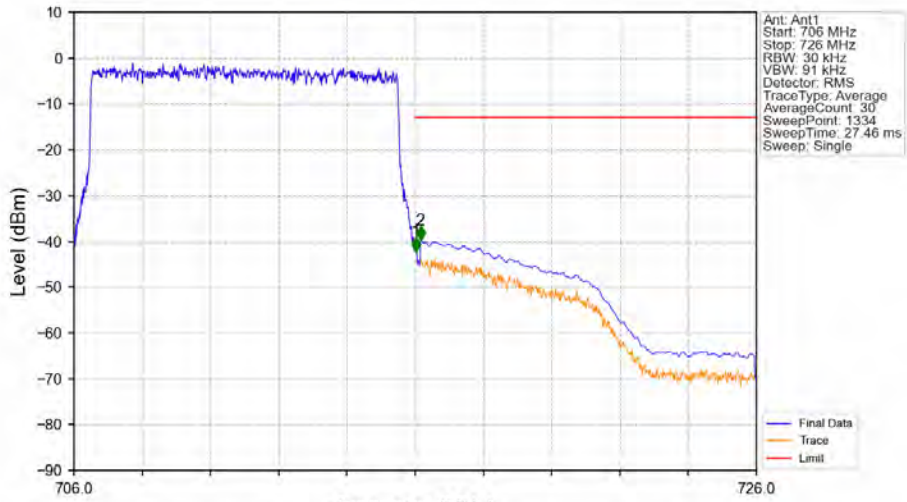
Band12\_10MHz\_QPSK\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



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

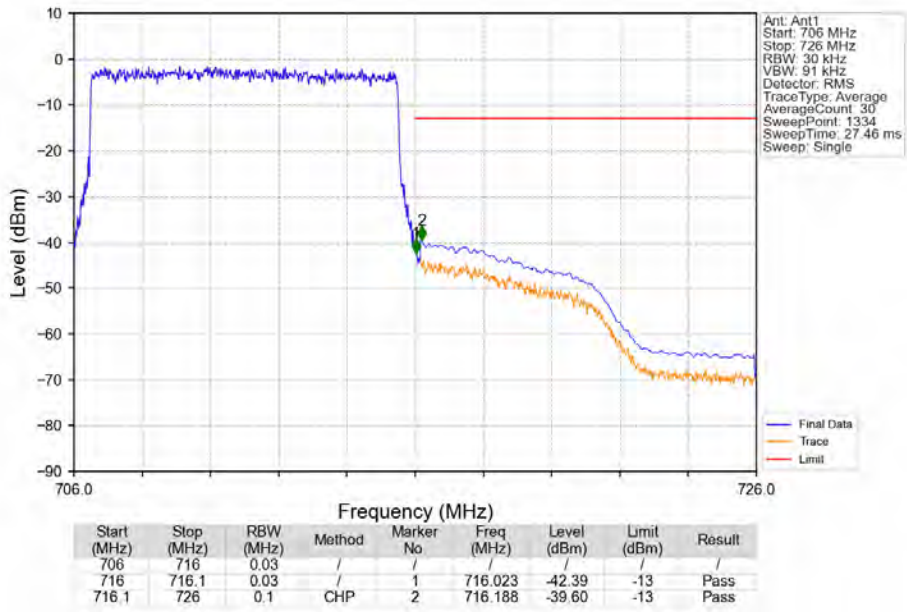


Band12\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_49\_NTNV

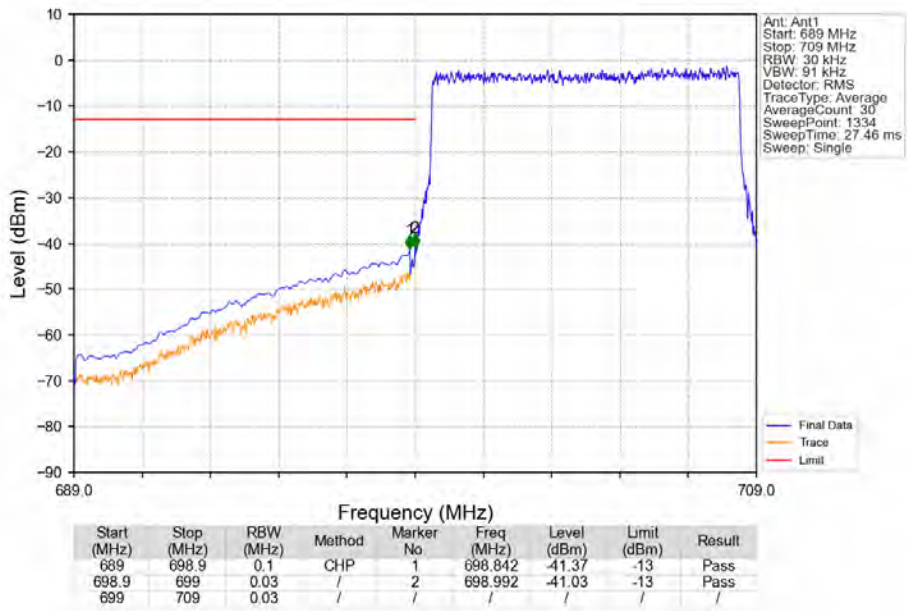


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	1	716.023	-42.12	-13	Pass
716.1	726	0.1	CHP	2	716.158	-39.72	-13	Pass

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

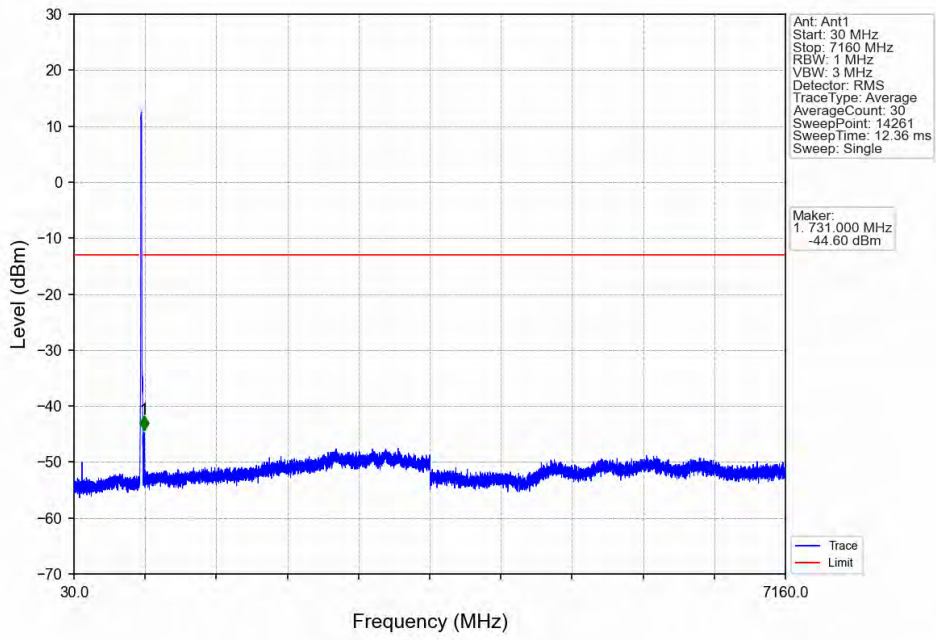


Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV

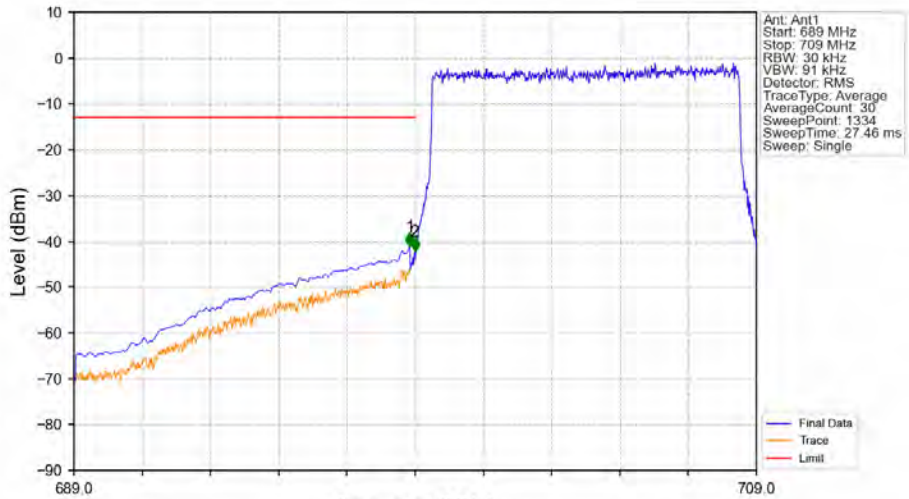




Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_1\_0\_NTNV

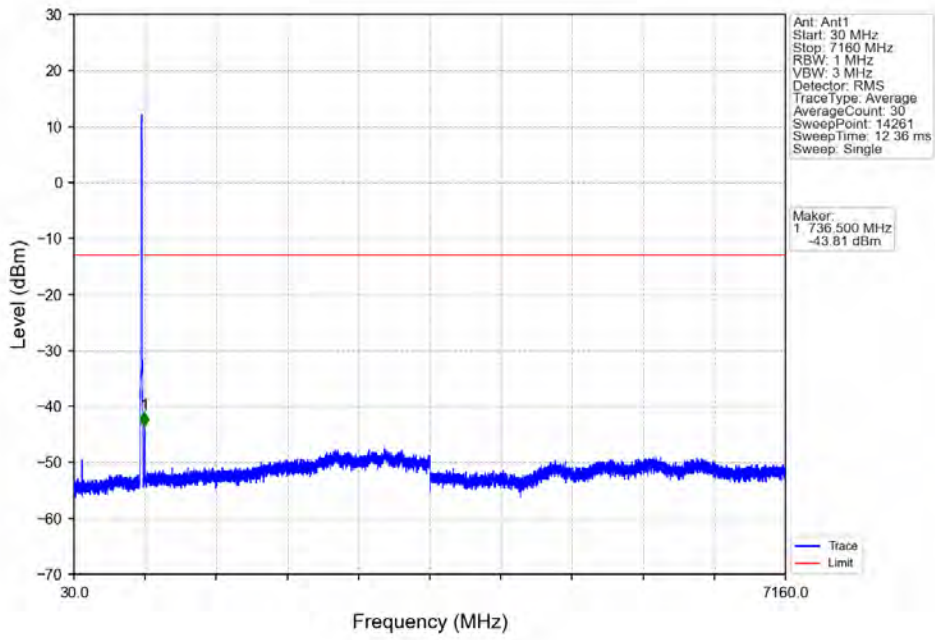


Band12\_10MHz\_16QAM\_LCH\_704MHz\_RB\_50\_0\_NTNV

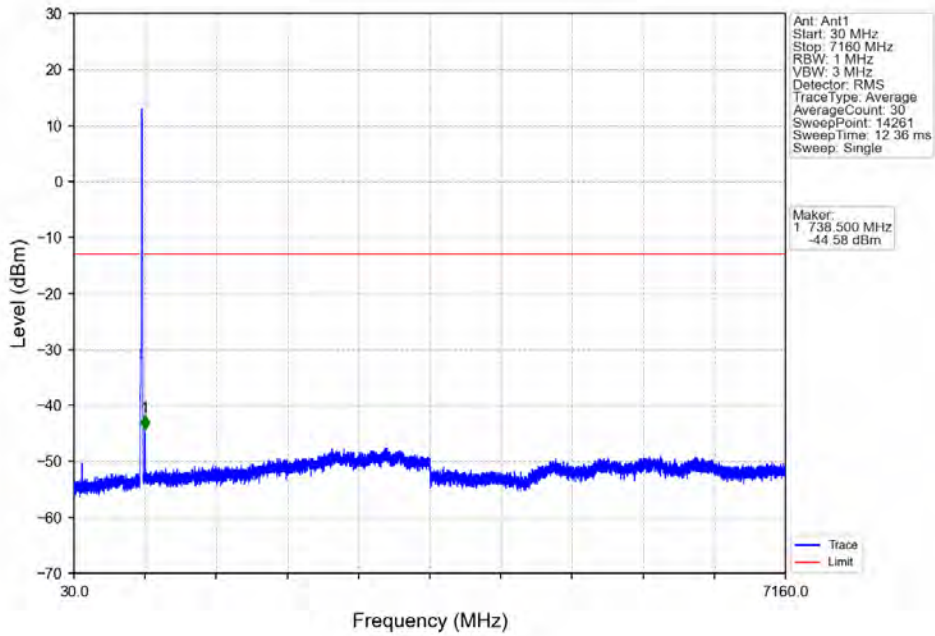


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-41.18	-13	Pass
698.9	699	0.03	/	2	698.992	-42.24	-13	Pass
699	709	0.03	/	/	/	/	/	/

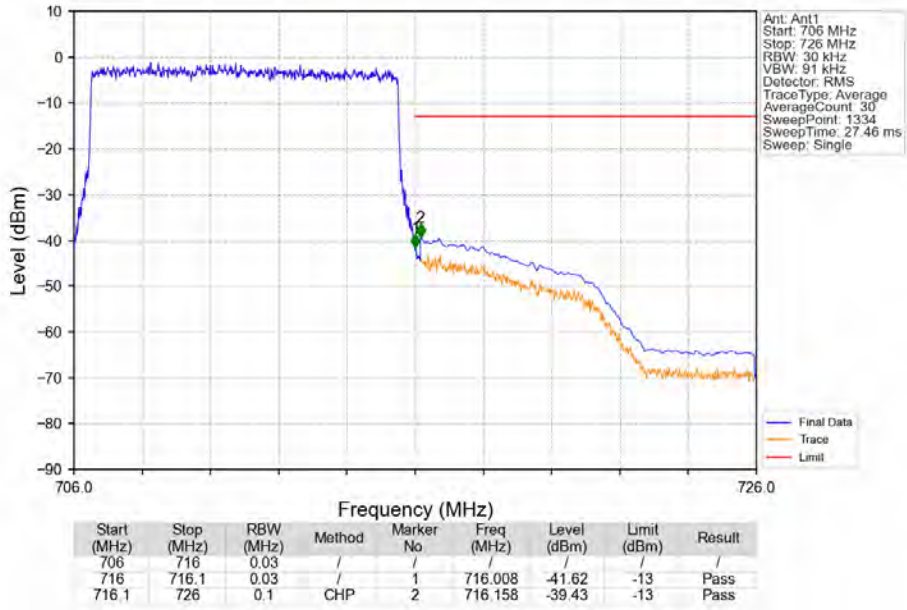
Band12\_10MHz\_16QAM\_MCH\_707.5MHz\_RB\_1\_0\_NTNV



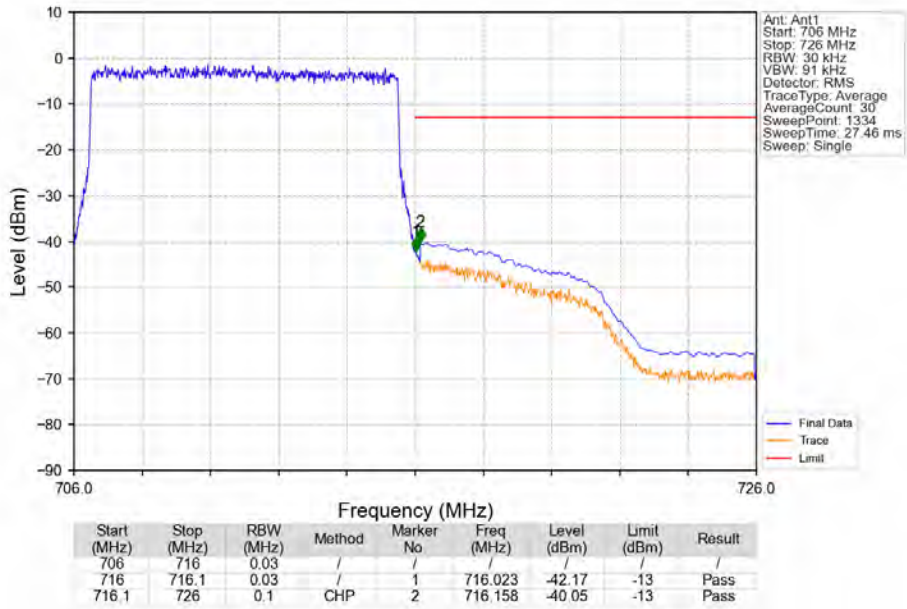
Band12\_10MHz\_16QAM\_HCH\_711MHz\_RB\_1\_0\_NTNV



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	0.2307	0.0710	ppm	1M11G7D	27H	23.63
12	1.4	699.7	715.3	0.1879	0.0646	ppm	1M12W7D	27H	22.74
12	3	700.5	714.5	0.2265	0.0668	ppm	2M77G7D	27H	23.55
12	3	700.5	714.5	0.1905	0.0661	ppm	2M75W7D	27H	22.80
12	5	701.5	713.5	0.2280	0.0662	ppm	4M58G7D	27H	23.58
12	5	701.5	713.5	0.1841	0.0621	ppm	4M56W7D	27H	22.65
12	10	704	711	0.2333	0.0671	ppm	9M08G7D	27H	23.68
12	10	704	711	0.1923	0.0553	ppm	9M07W7D	27H	22.84

## 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	0.1535	0.0710	ppm	1M11G7D	27H	21.86
12	1.4	699.7	715.3	0.1250	0.0646	ppm	1M12W7D	27H	20.97
12	3	700.5	714.5	0.1507	0.0668	ppm	2M77G7D	27H	21.78
12	3	700.5	714.5	0.1268	0.0661	ppm	2M75W7D	27H	21.03
12	5	701.5	713.5	0.1517	0.0662	ppm	4M58G7D	27H	21.81
12	5	701.5	713.5	0.1225	0.0621	ppm	4M56W7D	27H	20.88
12	10	704	711	0.1552	0.0671	ppm	9M08G7D	27H	21.91
12	10	704	711	0.1279	0.0553	ppm	9M07W7D	27H	21.07