

## 1. Effective (Isotropic) Radiated Power Output Data

### 1.1 Test Result

#### 1.1.1 B12\_1.4MHz\_ERP

Band: 12 / Bandwidth: 1.4MHz / NTNV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	699.7	1	0	21.72	-1.85	17.72	<=34.77	Pass		
			2	21.88	-1.85	17.88	<=34.77	Pass		
			5	21.80	-1.85	17.80	<=34.77	Pass		
		3	0	21.80	-1.85	17.80	<=34.77	Pass		
			2	21.75	-1.85	17.75	<=34.77	Pass		
			3	21.67	-1.85	17.67	<=34.77	Pass		
		6	0	20.71	-1.85	16.71	<=34.77	Pass		
		707.5	1	0	21.64	-1.85	17.64	<=34.77	Pass	
				2	21.71	-1.85	17.71	<=34.77	Pass	
	5			21.65	-1.85	17.65	<=34.77	Pass		
	3		0	21.72	-1.85	17.72	<=34.77	Pass		
			2	21.80	-1.85	17.80	<=34.77	Pass		
			3	21.73	-1.85	17.73	<=34.77	Pass		
	6		0	20.78	-1.85	16.78	<=34.77	Pass		
	715.3		1	0	21.78	-1.85	17.78	<=34.77	Pass	
				2	21.72	-1.85	17.72	<=34.77	Pass	
		5		21.69	-1.85	17.69	<=34.77	Pass		
		3	0	21.66	-1.85	17.66	<=34.77	Pass		
			2	21.64	-1.85	17.64	<=34.77	Pass		
			3	21.54	-1.85	17.54	<=34.77	Pass		
		6	0	20.57	-1.85	16.57	<=34.77	Pass		
		16QAM	699.7	1	0	20.36	-1.85	16.36	<=34.77	Pass
					2	20.36	-1.85	16.36	<=34.77	Pass
	5				20.39	-1.85	16.39	<=34.77	Pass	
3	0			20.53	-1.85	16.53	<=34.77	Pass		
	2			20.50	-1.85	16.50	<=34.77	Pass		
	3			20.50	-1.85	16.50	<=34.77	Pass		
6	0			19.72	-1.85	15.72	<=34.77	Pass		
707.5	1			0	21.58	-1.85	17.58	<=34.77	Pass	
				2	21.49	-1.85	17.49	<=34.77	Pass	
			5	21.44	-1.85	17.44	<=34.77	Pass		
	3		0	20.67	-1.85	16.67	<=34.77	Pass		
			2	20.67	-1.85	16.67	<=34.77	Pass		
			3	20.58	-1.85	16.58	<=34.77	Pass		
	6		0	19.74	-1.85	15.74	<=34.77	Pass		
	715.3		1	0	20.24	-1.85	16.24	<=34.77	Pass	
				2	20.26	-1.85	16.26	<=34.77	Pass	
5				20.19	-1.85	16.19	<=34.77	Pass		
3			0	20.33	-1.85	16.33	<=34.77	Pass		
			2	20.38	-1.85	16.38	<=34.77	Pass		
			3	20.19	-1.85	16.19	<=34.77	Pass		
6			0	19.46	-1.85	15.46	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

#### 1.1.2 B12\_3MHz\_ERP

Band: 12 / Bandwidth: 3MHz / NTNV								
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Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	700.5	1	0	21.74	-1.85	17.74	<=34.77	Pass		
			7	21.76	-1.85	17.76	<=34.77	Pass		
			14	21.68	-1.85	17.68	<=34.77	Pass		
		8	0	20.66	-1.85	16.66	<=34.77	Pass		
			4	20.67	-1.85	16.67	<=34.77	Pass		
			7	20.70	-1.85	16.70	<=34.77	Pass		
		15	0	20.59	-1.85	16.59	<=34.77	Pass		
		707.5	1	0	21.52	-1.85	17.52	<=34.77	Pass	
				7	21.72	-1.85	17.72	<=34.77	Pass	
	14			21.42	-1.85	17.42	<=34.77	Pass		
	8		0	20.49	-1.85	16.49	<=34.77	Pass		
			4	20.49	-1.85	16.49	<=34.77	Pass		
			7	20.49	-1.85	16.49	<=34.77	Pass		
	15		0	20.40	-1.85	16.40	<=34.77	Pass		
	714.5		1	0	21.42	-1.85	17.42	<=34.77	Pass	
				7	21.35	-1.85	17.35	<=34.77	Pass	
		14		21.33	-1.85	17.33	<=34.77	Pass		
		8	0	20.42	-1.85	16.42	<=34.77	Pass		
			4	20.45	-1.85	16.45	<=34.77	Pass		
			7	20.45	-1.85	16.45	<=34.77	Pass		
		15	0	20.39	-1.85	16.39	<=34.77	Pass		
		16QAM	700.5	1	0	20.50	-1.85	16.50	<=34.77	Pass
					7	20.44	-1.85	16.44	<=34.77	Pass
	14				20.53	-1.85	16.53	<=34.77	Pass	
8	0			19.82	-1.85	15.82	<=34.77	Pass		
	4			19.79	-1.85	15.79	<=34.77	Pass		
	7			19.75	-1.85	15.75	<=34.77	Pass		
15	0			19.55	-1.85	15.55	<=34.77	Pass		
707.5	1			0	20.93	-1.85	16.93	<=34.77	Pass	
				7	20.92	-1.85	16.92	<=34.77	Pass	
			14	20.93	-1.85	16.93	<=34.77	Pass		
	8		0	19.65	-1.85	15.65	<=34.77	Pass		
			4	19.72	-1.85	15.72	<=34.77	Pass		
			7	19.67	-1.85	15.67	<=34.77	Pass		
	15		0	19.59	-1.85	15.59	<=34.77	Pass		
	714.5		1	0	20.89	-1.85	16.89	<=34.77	Pass	
				7	20.81	-1.85	16.81	<=34.77	Pass	
14				20.76	-1.85	16.76	<=34.77	Pass		
8			0	19.68	-1.85	15.68	<=34.77	Pass		
			4	19.68	-1.85	15.68	<=34.77	Pass		
			7	19.72	-1.85	15.72	<=34.77	Pass		
15			0	19.61	-1.85	15.61	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

### 1.1.3 B12\_5MHz\_ERP

Band: 12 / Bandwidth: 5MHz / NTV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	701.5	1	0	21.60	-1.85	17.60	<=34.77	Pass
			13	21.55	-1.85	17.55	<=34.77	Pass
			24	21.56	-1.85	17.56	<=34.77	Pass
		12	0	20.69	-1.85	16.69	<=34.77	Pass
			6	20.65	-1.85	16.65	<=34.77	Pass
			13	20.60	-1.85	16.60	<=34.77	Pass

16QAM	707.5	25	0	20.75	-1.85	16.75	<=34.77	Pass	
			0	21.57	-1.85	17.57	<=34.77	Pass	
			1	13	21.58	-1.85	17.58	<=34.77	Pass
				24	21.64	-1.85	17.64	<=34.77	Pass
		12	0	20.59	-1.85	16.59	<=34.77	Pass	
			6	20.62	-1.85	16.62	<=34.77	Pass	
			13	20.58	-1.85	16.58	<=34.77	Pass	
		25	0	20.71	-1.85	16.71	<=34.77	Pass	
		713.5	1	0	21.49	-1.85	17.49	<=34.77	Pass
	13			21.46	-1.85	17.46	<=34.77	Pass	
	24			21.41	-1.85	17.41	<=34.77	Pass	
	0			20.64	-1.85	16.64	<=34.77	Pass	
	12		6	20.57	-1.85	16.57	<=34.77	Pass	
			13	20.56	-1.85	16.56	<=34.77	Pass	
			25	0	20.64	-1.85	16.64	<=34.77	Pass
	701.5		1	0	20.62	-1.85	16.62	<=34.77	Pass
				13	20.57	-1.85	16.57	<=34.77	Pass
		24		20.56	-1.85	16.56	<=34.77	Pass	
		0		19.82	-1.85	15.82	<=34.77	Pass	
		12	6	19.81	-1.85	15.81	<=34.77	Pass	
			13	19.71	-1.85	15.71	<=34.77	Pass	
			25	0	19.82	-1.85	15.82	<=34.77	Pass
		707.5	1	0	20.59	-1.85	16.59	<=34.77	Pass
				13	20.60	-1.85	16.60	<=34.77	Pass
24				20.62	-1.85	16.62	<=34.77	Pass	
12			0	19.78	-1.85	15.78	<=34.77	Pass	
			6	19.85	-1.85	15.85	<=34.77	Pass	
	13		19.84	-1.85	15.84	<=34.77	Pass		
25	0	19.72	-1.85	15.72	<=34.77	Pass			
713.5	1	0	20.13	-1.85	16.13	<=34.77	Pass		
		13	20.00	-1.85	16.00	<=34.77	Pass		
		24	20.03	-1.85	16.03	<=34.77	Pass		
	12	0	19.77	-1.85	15.77	<=34.77	Pass		
		6	19.73	-1.85	15.73	<=34.77	Pass		
		13	19.69	-1.85	15.69	<=34.77	Pass		
25	0	19.78	-1.85	15.78	<=34.77	Pass			

Note1: ERP=Conducted Power+Antenna Gain-2.15

### 1.1.4 B12\_10MHz\_ERP

Band: 12 / Bandwidth: 10MHz / NTNV									
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict	
		Size	Offset			Result	Limit		
QPSK	704	1	0	21.13	-1.85	17.13	<=34.77	Pass	
			25	21.06	-1.85	17.06	<=34.77	Pass	
			49	21.12	-1.85	17.12	<=34.77	Pass	
		25	0	20.44	-1.85	16.44	<=34.77	Pass	
			13	20.43	-1.85	16.43	<=34.77	Pass	
			25	20.47	-1.85	16.47	<=34.77	Pass	
		50	0	20.65	-1.85	16.65	<=34.77	Pass	
		707.5	1	0	21.02	-1.85	17.02	<=34.77	Pass
				25	21.08	-1.85	17.08	<=34.77	Pass
	49			21.10	-1.85	17.10	<=34.77	Pass	
	25		0	20.40	-1.85	16.40	<=34.77	Pass	
			13	20.42	-1.85	16.42	<=34.77	Pass	
			25	20.58	-1.85	16.58	<=34.77	Pass	
	50	0	20.66	-1.85	16.66	<=34.77	Pass		

Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict	
						Result	Limit		
16QAM	711	1	0	21.18	-1.85	17.18	<=34.77	Pass	
			25	21.24	-1.85	17.24	<=34.77	Pass	
			49	21.08	-1.85	17.08	<=34.77	Pass	
		25	0	20.37	-1.85	16.37	<=34.77	Pass	
			13	20.43	-1.85	16.43	<=34.77	Pass	
			25	20.40	-1.85	16.40	<=34.77	Pass	
		50	0	20.68	-1.85	16.68	<=34.77	Pass	
		704	1	0	20.60	-1.85	16.60	<=34.77	Pass
				25	20.51	-1.85	16.51	<=34.77	Pass
	49			20.58	-1.85	16.58	<=34.77	Pass	
	25		0	19.82	-1.85	15.82	<=34.77	Pass	
			13	19.84	-1.85	15.84	<=34.77	Pass	
			25	19.88	-1.85	15.88	<=34.77	Pass	
	50		0	19.76	-1.85	15.76	<=34.77	Pass	
	707.5		1	0	21.48	-1.85	17.48	<=34.77	Pass
				25	21.56	-1.85	17.56	<=34.77	Pass
		49		21.54	-1.85	17.54	<=34.77	Pass	
		25	0	19.75	-1.85	15.75	<=34.77	Pass	
			13	19.77	-1.85	15.77	<=34.77	Pass	
			25	19.81	-1.85	15.81	<=34.77	Pass	
		50	0	19.74	-1.85	15.74	<=34.77	Pass	
		711	1	0	20.88	-1.85	16.88	<=34.77	Pass
				25	20.91	-1.85	16.91	<=34.77	Pass
	49			20.79	-1.85	16.79	<=34.77	Pass	
	25		0	19.70	-1.85	15.70	<=34.77	Pass	
			13	19.71	-1.85	15.71	<=34.77	Pass	
			25	19.60	-1.85	15.60	<=34.77	Pass	
50	0		19.69	-1.85	15.69	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

## 2. Frequency Stability

### 2.1 Test Result

#### 2.1.1 B12\_1.4MHz

Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict	
		Size	Offset				Result	Limit		
QPSK	699.7	6	0	20	3.27	1.116	0.0016	-2.5 to 2.5	Pass	
					3.85	2.203	0.0031	-2.5 to 2.5	Pass	
					4.43	1.931	0.0028	-2.5 to 2.5	Pass	
				-30	3.85	2.046	0.0029	-2.5 to 2.5	Pass	
					-20	3.85	1.245	0.0018	-2.5 to 2.5	Pass
					-10	3.85	1.273	0.0018	-2.5 to 2.5	Pass
				0	0	3.85	1.845	0.0026	-2.5 to 2.5	Pass
					10	3.85	2.003	0.0029	-2.5 to 2.5	Pass
					30	3.85	0.744	0.0011	-2.5 to 2.5	Pass
	707.5	6	0	20	3.27	0.386	0.0005	-2.5 to 2.5	Pass	
					3.85	0.558	0.0008	-2.5 to 2.5	Pass	
					4.43	-0.215	-0.0003	-2.5 to 2.5	Pass	
				-30	3.85	0.515	0.0007	-2.5 to 2.5	Pass	
					-20	3.85	-0.157	-0.0002	-2.5 to 2.5	Pass
					-10	3.85	0.358	0.0005	-2.5 to 2.5	Pass

				0	3.85	-0.029	0.0000	-2.5 to 2.5	Pass				
				10	3.85	0.057	0.0001	-2.5 to 2.5	Pass				
				30	3.85	-0.730	-0.0010	-2.5 to 2.5	Pass				
				40	3.85	-0.415	-0.0006	-2.5 to 2.5	Pass				
				50	3.85	-0.329	-0.0005	-2.5 to 2.5	Pass				
	715.3	6	0	20	3.27	1.445	0.0020	-2.5 to 2.5	Pass				
					3.85	1.087	0.0015	-2.5 to 2.5	Pass				
					4.43	0.472	0.0007	-2.5 to 2.5	Pass				
				-30	3.85	0.787	0.0011	-2.5 to 2.5	Pass				
				-20	3.85	0.944	0.0013	-2.5 to 2.5	Pass				
				-10	3.85	0.830	0.0012	-2.5 to 2.5	Pass				
				0	3.85	0.644	0.0009	-2.5 to 2.5	Pass				
				10	3.85	0.057	0.0001	-2.5 to 2.5	Pass				
				30	3.85	0.501	0.0007	-2.5 to 2.5	Pass				
				40	3.85	0.157	0.0002	-2.5 to 2.5	Pass				
				50	3.85	0.358	0.0005	-2.5 to 2.5	Pass				
				16QAM	699.7	6	0	20	3.27	1.345	0.0019	-2.5 to 2.5	Pass
									3.85	1.373	0.0020	-2.5 to 2.5	Pass
									4.43	0.958	0.0014	-2.5 to 2.5	Pass
								-30	3.85	0.458	0.0007	-2.5 to 2.5	Pass
-20	3.85	1.001	0.0014					-2.5 to 2.5	Pass				
-10	3.85	1.330	0.0019					-2.5 to 2.5	Pass				
0	3.85	1.087	0.0016					-2.5 to 2.5	Pass				
10	3.85	1.903	0.0027					-2.5 to 2.5	Pass				
30	3.85	1.588	0.0023					-2.5 to 2.5	Pass				
40	3.85	1.531	0.0022					-2.5 to 2.5	Pass				
50	3.85	1.502	0.0021		-2.5 to 2.5	Pass							
707.5	6	0	20		3.27	0.715	0.0010	-2.5 to 2.5	Pass				
					3.85	-0.987	-0.0014	-2.5 to 2.5	Pass				
					4.43	-0.744	-0.0011	-2.5 to 2.5	Pass				
			-30		3.85	-1.316	-0.0019	-2.5 to 2.5	Pass				
			-20		3.85	-0.858	-0.0012	-2.5 to 2.5	Pass				
			-10		3.85	-0.257	-0.0004	-2.5 to 2.5	Pass				
			0		3.85	-1.488	-0.0021	-2.5 to 2.5	Pass				
			10		3.85	-0.916	-0.0013	-2.5 to 2.5	Pass				
			30		3.85	-0.887	-0.0013	-2.5 to 2.5	Pass				
			40	3.85	-0.844	-0.0012	-2.5 to 2.5	Pass					
50	3.85	-0.944	-0.0013	-2.5 to 2.5	Pass								
715.3	6	0	20	3.27	0.830	0.0012	-2.5 to 2.5	Pass					
				3.85	1.330	0.0019	-2.5 to 2.5	Pass					
				4.43	0.730	0.0010	-2.5 to 2.5	Pass					
			-30	3.85	0.901	0.0013	-2.5 to 2.5	Pass					
			-20	3.85	0.114	0.0002	-2.5 to 2.5	Pass					
			-10	3.85	-0.443	-0.0006	-2.5 to 2.5	Pass					
			0	3.85	-0.157	-0.0002	-2.5 to 2.5	Pass					
			10	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass					
			30	3.85	-0.315	-0.0004	-2.5 to 2.5	Pass					
			40	3.85	-0.486	-0.0007	-2.5 to 2.5	Pass					
50	3.85	-0.415	-0.0006	-2.5 to 2.5	Pass								

## 2.1.2 B12\_3MHz

Band: 12 / Bandwidth: 3MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	700.5	15	0	20	3.27	-0.429	-0.0006	-2.5 to 2.5	Pass
					3.85	-0.515	-0.0007	-2.5 to 2.5	Pass

16QAM	707.5	15	0		4.43	-0.958	-0.0014	-2.5 to 2.5	Pass						
				-30	3.85	-0.844	-0.0012	-2.5 to 2.5	Pass						
				-20	3.85	-0.315	-0.0004	-2.5 to 2.5	Pass						
				-10	3.85	-0.486	-0.0007	-2.5 to 2.5	Pass						
				0	3.85	-0.558	-0.0008	-2.5 to 2.5	Pass						
				10	3.85	-0.200	-0.0003	-2.5 to 2.5	Pass						
				30	3.85	-0.072	-0.0001	-2.5 to 2.5	Pass						
				40	3.85	-0.358	-0.0005	-2.5 to 2.5	Pass						
	50	3.85	-0.501	-0.0007	-2.5 to 2.5	Pass									
	714.5	15	0	20	3.27	0.029	0.0000	-2.5 to 2.5	Pass						
					3.85	-0.615	-0.0009	-2.5 to 2.5	Pass						
					4.43	-1.073	-0.0015	-2.5 to 2.5	Pass						
				-30	3.85	-0.372	-0.0005	-2.5 to 2.5	Pass						
										-20	3.85	-0.501	-0.0007	-2.5 to 2.5	Pass
				0	3.85	-0.243	-0.0003	-2.5 to 2.5	Pass						
										10	3.85	-0.086	-0.0001	-2.5 to 2.5	Pass
	30	3.85	-0.386	-0.0005	-2.5 to 2.5	Pass									
	40	3.85	-0.429	-0.0006	-2.5 to 2.5	Pass									
	50	3.85	-0.672	-0.0009	-2.5 to 2.5	Pass									
	714.5	15	0	20	3.27	-0.086	-0.0001	-2.5 to 2.5	Pass						
					3.85	0.114	0.0002	-2.5 to 2.5	Pass						
					4.43	0.629	0.0009	-2.5 to 2.5	Pass						
				-30	3.85	0.730	0.0010	-2.5 to 2.5	Pass						
										-20	3.85	0.501	0.0007	-2.5 to 2.5	Pass
				0	3.85	0.086	0.0001	-2.5 to 2.5	Pass						
										10	3.85	0.429	0.0006	-2.5 to 2.5	Pass
30	3.85	-0.215	-0.0003	-2.5 to 2.5	Pass										
40	3.85	-0.229	-0.0003	-2.5 to 2.5	Pass										
50	3.85	0.615	0.0009	-2.5 to 2.5	Pass										
700.5	15	0	20	3.27	0.000	0.0000	-2.5 to 2.5	Pass							
				3.85	-0.315	-0.0004	-2.5 to 2.5	Pass							
				4.43	-0.372	-0.0005	-2.5 to 2.5	Pass							
			-30	3.85	-0.329	-0.0005	-2.5 to 2.5	Pass							
									-20	3.85	-0.143	-0.0002	-2.5 to 2.5	Pass	
															-10
			0	3.85	-0.014	0.0000	-2.5 to 2.5	Pass							
									10	3.85	-0.758	-0.0011	-2.5 to 2.5	Pass	
30	3.85	0.029	0.0000	-2.5 to 2.5	Pass										
40	3.85	0.443	0.0006	-2.5 to 2.5	Pass										
50	3.85	-0.544	-0.0008	-2.5 to 2.5	Pass										
707.5	15	0	20	3.27	0.286	0.0004	-2.5 to 2.5	Pass							
				3.85	1.216	0.0017	-2.5 to 2.5	Pass							
				4.43	1.030	0.0015	-2.5 to 2.5	Pass							
			-30	3.85	0.744	0.0011	-2.5 to 2.5	Pass							
									-20	3.85	0.429	0.0006	-2.5 to 2.5	Pass	
															-10
			0	3.85	0.415	0.0006	-2.5 to 2.5	Pass							
									10	3.85	0.715	0.0010	-2.5 to 2.5	Pass	
30	3.85	0.687	0.0010	-2.5 to 2.5	Pass										
40	3.85	0.873	0.0012	-2.5 to 2.5	Pass										
50	3.85	0.415	0.0006	-2.5 to 2.5	Pass										
714.5	15	0	20	3.27	-0.544	-0.0008	-2.5 to 2.5	Pass							
				3.85	-0.944	-0.0013	-2.5 to 2.5	Pass							
				4.43	-0.329	-0.0005	-2.5 to 2.5	Pass							
			-30	3.85	-0.615	-0.0009	-2.5 to 2.5	Pass							
-20	3.85	-0.930	-0.0013	-2.5 to 2.5	Pass										
-10	3.85	-1.402	-0.0020	-2.5 to 2.5	Pass										

				0	3.85	-0.672	-0.0009	-2.5 to 2.5	Pass
				10	3.85	-0.343	-0.0005	-2.5 to 2.5	Pass
				30	3.85	-1.273	-0.0018	-2.5 to 2.5	Pass
				40	3.85	-0.901	-0.0013	-2.5 to 2.5	Pass
				50	3.85	-0.916	-0.0013	-2.5 to 2.5	Pass

2.1.3 B12\_5MHz

Band: 12 / Bandwidth: 5MHz													
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict				
		Size	Offset				Result	Limit					
QPSK	701.5	25	0	20	3.27	0.601	0.0009	-2.5 to 2.5	Pass				
					3.85	0.601	0.0009	-2.5 to 2.5	Pass				
					4.43	0.286	0.0004	-2.5 to 2.5	Pass				
				-30	3.85	0.300	0.0004	-2.5 to 2.5	Pass				
					-20	3.85	-0.043	-0.0001	-2.5 to 2.5	Pass			
						-10	3.85	0.229	0.0003	-2.5 to 2.5	Pass		
				707.5	25	0	20	3.85	0.486	0.0007	-2.5 to 2.5	Pass	
								10	3.85	0.701	0.0010	-2.5 to 2.5	Pass
								30	3.85	0.114	0.0002	-2.5 to 2.5	Pass
	-30	40	3.85				0.100	0.0001	-2.5 to 2.5	Pass			
		-20	50				3.85	-0.629	-0.0009	-2.5 to 2.5	Pass		
			-10				3.27	-0.973	-0.0014	-2.5 to 2.5	Pass		
	713.5	25	0				20	3.85	-0.644	-0.0009	-2.5 to 2.5	Pass	
								4.43	-0.572	-0.0008	-2.5 to 2.5	Pass	
				-30	3.85	-0.286		-0.0004	-2.5 to 2.5	Pass			
				-20	3.85	-0.472	-0.0007	-2.5 to 2.5	Pass				
					-10	3.85	-0.958	-0.0014	-2.5 to 2.5	Pass			
						0	3.85	-0.858	-0.0012	-2.5 to 2.5	Pass		
				701.5	25	0	20	10	3.85	-0.930	-0.0013	-2.5 to 2.5	Pass
								30	3.85	-0.229	-0.0003	-2.5 to 2.5	Pass
	40	3.85	-0.644					-0.0009	-2.5 to 2.5	Pass			
	-30	50	3.85				-0.415	-0.0006	-2.5 to 2.5	Pass			
		-20	3.27				-1.159	-0.0016	-2.5 to 2.5	Pass			
			-10				3.85	-1.001	-0.0014	-2.5 to 2.5	Pass		
	16QAM	701.5	25				0	20	4.43	-1.030	-0.0014	-2.5 to 2.5	Pass
									-30	3.85	-0.458	-0.0006	-2.5 to 2.5
				-20	3.85	-1.159			-0.0016	-2.5 to 2.5	Pass		
-10					3.85	-0.315		-0.0004	-2.5 to 2.5	Pass			
707.5				25	0	20		0	3.85	-0.701	-0.0010	-2.5 to 2.5	Pass
								10	3.85	-1.087	-0.0015	-2.5 to 2.5	Pass
								30	3.85	-0.830	-0.0012	-2.5 to 2.5	Pass
						-30		40	3.85	-0.801	-0.0011	-2.5 to 2.5	Pass
	-20							50	3.85	-0.415	-0.0006	-2.5 to 2.5	Pass
		-10	3.27				-0.057	-0.0001	-2.5 to 2.5	Pass			
701.5	25	0	20	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass					
				4.43	-0.229	-0.0003	-2.5 to 2.5	Pass					
				-30	3.85	0.057	0.0001	-2.5 to 2.5	Pass				
			-20	3.85	-0.257	-0.0004	-2.5 to 2.5	Pass					
				-10	3.85	-0.014	0.0000	-2.5 to 2.5	Pass				
					0	3.85	0.386	0.0006	-2.5 to 2.5	Pass			
			707.5	25	0	20	10	3.85	-0.086	-0.0001	-2.5 to 2.5	Pass	
							30	3.85	0.072	0.0001	-2.5 to 2.5	Pass	
							40	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass	
-30	50	3.85				-0.572	-0.0008	-2.5 to 2.5	Pass				
	-20	3.27				-0.529	-0.0007	-2.5 to 2.5	Pass				
		-10				3.85	-0.873	-0.0012	-2.5 to 2.5	Pass			

					4.43	-0.944	-0.0013	-2.5 to 2.5	Pass	
				-30	3.85	-1.717	-0.0024	-2.5 to 2.5	Pass	
				-20	3.85	-1.144	-0.0016	-2.5 to 2.5	Pass	
				-10	3.85	-0.901	-0.0013	-2.5 to 2.5	Pass	
				0	3.85	-1.159	-0.0016	-2.5 to 2.5	Pass	
				10	3.85	-1.030	-0.0015	-2.5 to 2.5	Pass	
				30	3.85	-1.202	-0.0017	-2.5 to 2.5	Pass	
	713.5	25	0		40	3.85	-0.758	-0.0011	-2.5 to 2.5	Pass
					50	3.85	-0.672	-0.0009	-2.5 to 2.5	Pass
					20	3.27	-0.486	-0.0007	-2.5 to 2.5	Pass
						3.85	-1.216	-0.0017	-2.5 to 2.5	Pass
						4.43	-0.858	-0.0012	-2.5 to 2.5	Pass
					-30	3.85	-0.458	-0.0006	-2.5 to 2.5	Pass
					-20	3.85	-0.072	-0.0001	-2.5 to 2.5	Pass
-10	3.85	-0.529	-0.0007	-2.5 to 2.5	Pass					
				0	3.85	-0.515	-0.0007	-2.5 to 2.5	Pass	
				10	3.85	-0.529	-0.0007	-2.5 to 2.5	Pass	
				30	3.85	-0.858	-0.0012	-2.5 to 2.5	Pass	
				40	3.85	-0.372	-0.0005	-2.5 to 2.5	Pass	
				50	3.85	-0.873	-0.0012	-2.5 to 2.5	Pass	

### 2.1.4 B12\_10MHz

Band: 12 / Bandwidth: 10MHz												
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict			
		Size	Offset				Result	Limit				
QPSK	704	50	0	20	3.27	-0.672	-0.0010	-2.5 to 2.5	Pass			
					3.85	-1.001	-0.0014	-2.5 to 2.5	Pass			
					4.43	-0.644	-0.0009	-2.5 to 2.5	Pass			
				-30	3.85	-0.701	-0.0010	-2.5 to 2.5	Pass			
				-20	3.85	-0.901	-0.0013	-2.5 to 2.5	Pass			
				-10	3.85	-1.130	-0.0016	-2.5 to 2.5	Pass			
				0	3.85	-0.830	-0.0012	-2.5 to 2.5	Pass			
				10	3.85	-0.386	-0.0005	-2.5 to 2.5	Pass			
				30	3.85	-0.944	-0.0013	-2.5 to 2.5	Pass			
				40	3.85	-0.815	-0.0012	-2.5 to 2.5	Pass			
				50	3.85	-0.615	-0.0009	-2.5 to 2.5	Pass			
				707.5	50	0	20	3.27	-0.529	-0.0007	-2.5 to 2.5	Pass
								3.85	-1.159	-0.0016	-2.5 to 2.5	Pass
								4.43	-1.173	-0.0017	-2.5 to 2.5	Pass
	-30	3.85	-1.159				-0.0016	-2.5 to 2.5	Pass			
	-20	3.85	-1.159				-0.0016	-2.5 to 2.5	Pass			
	-10	3.85	-1.001				-0.0014	-2.5 to 2.5	Pass			
	0	3.85	-0.844				-0.0012	-2.5 to 2.5	Pass			
	10	3.85	-1.001				-0.0014	-2.5 to 2.5	Pass			
	30	3.85	-0.257				-0.0004	-2.5 to 2.5	Pass			
	40	3.85	0.529				0.0007	-2.5 to 2.5	Pass			
	50	3.85	0.329				0.0005	-2.5 to 2.5	Pass			
	711	50	0				20	3.27	0.286	0.0004	-2.5 to 2.5	Pass
								3.85	-0.086	-0.0001	-2.5 to 2.5	Pass
				4.43	0.043	0.0001		-2.5 to 2.5	Pass			
				-30	3.85	-0.887	-0.0012	-2.5 to 2.5	Pass			
				-20	3.85	-0.372	-0.0005	-2.5 to 2.5	Pass			
-10				3.85	-0.086	-0.0001	-2.5 to 2.5	Pass				
0				3.85	0.000	0.0000	-2.5 to 2.5	Pass				
10				3.85	0.029	0.0000	-2.5 to 2.5	Pass				
30				3.85	-0.186	-0.0003	-2.5 to 2.5	Pass				



16QAM	704	50	0	40	3.85	0.286	0.0004	-2.5 to 2.5	Pass			
				50	3.85	0.329	0.0005	-2.5 to 2.5	Pass			
				20	3.27	0.200	0.0003	-2.5 to 2.5	Pass			
					3.85	0.401	0.0006	-2.5 to 2.5	Pass			
					4.43	-0.172	-0.0002	-2.5 to 2.5	Pass			
				-30	3.85	-1.159	-0.0016	-2.5 to 2.5	Pass			
				-20	3.85	-0.272	-0.0004	-2.5 to 2.5	Pass			
				-10	3.85	-0.272	-0.0004	-2.5 to 2.5	Pass			
				0	3.85	-0.229	-0.0003	-2.5 to 2.5	Pass			
				10	3.85	0.057	0.0001	-2.5 to 2.5	Pass			
				30	3.85	-0.072	-0.0001	-2.5 to 2.5	Pass			
				40	3.85	-0.229	-0.0003	-2.5 to 2.5	Pass			
				50	3.85	-0.558	-0.0008	-2.5 to 2.5	Pass			
				707.5	50	0	20	3.27	-0.873	-0.0012	-2.5 to 2.5	Pass
								3.85	-0.515	-0.0007	-2.5 to 2.5	Pass
	4.43	-0.715	-0.0010					-2.5 to 2.5	Pass			
	-30	3.85	-1.130				-0.0016	-2.5 to 2.5	Pass			
	-20	3.85	-0.715				-0.0010	-2.5 to 2.5	Pass			
	-10	3.85	-1.616				-0.0023	-2.5 to 2.5	Pass			
	0	3.85	-1.116				-0.0016	-2.5 to 2.5	Pass			
	10	3.85	-1.330				-0.0019	-2.5 to 2.5	Pass			
	30	3.85	-1.073				-0.0015	-2.5 to 2.5	Pass			
	40	3.85	-1.159				-0.0016	-2.5 to 2.5	Pass			
	50	3.85	-1.459				-0.0021	-2.5 to 2.5	Pass			
	711	50	0				20	3.27	-0.386	-0.0005	-2.5 to 2.5	Pass
								3.85	-0.329	-0.0005	-2.5 to 2.5	Pass
								4.43	-0.572	-0.0008	-2.5 to 2.5	Pass
							-30	3.85	-0.472	-0.0007	-2.5 to 2.5	Pass
				-20	3.85	0.143	0.0002	-2.5 to 2.5	Pass			
				-10	3.85	0.086	0.0001	-2.5 to 2.5	Pass			
0				3.85	-0.229	-0.0003	-2.5 to 2.5	Pass				
10				3.85	-0.730	-0.0010	-2.5 to 2.5	Pass				
30				3.85	-0.315	-0.0004	-2.5 to 2.5	Pass				
40				3.85	-0.658	-0.0009	-2.5 to 2.5	Pass				
50				3.85	-0.029	0.0000	-2.5 to 2.5	Pass				

### 3. Modulation Characteristics

#### 3.1 Test Result

##### 3.1.1 B12\_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	6	0	Refer To Test Graph		Pass
16QAM	707.5	6	0	Refer To Test Graph		Pass

##### 3.1.2 B12\_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	15	0	Refer To Test Graph		Pass
16QAM	707.5	15	0	Refer To Test Graph		Pass

3.1.3 B12\_5MHz

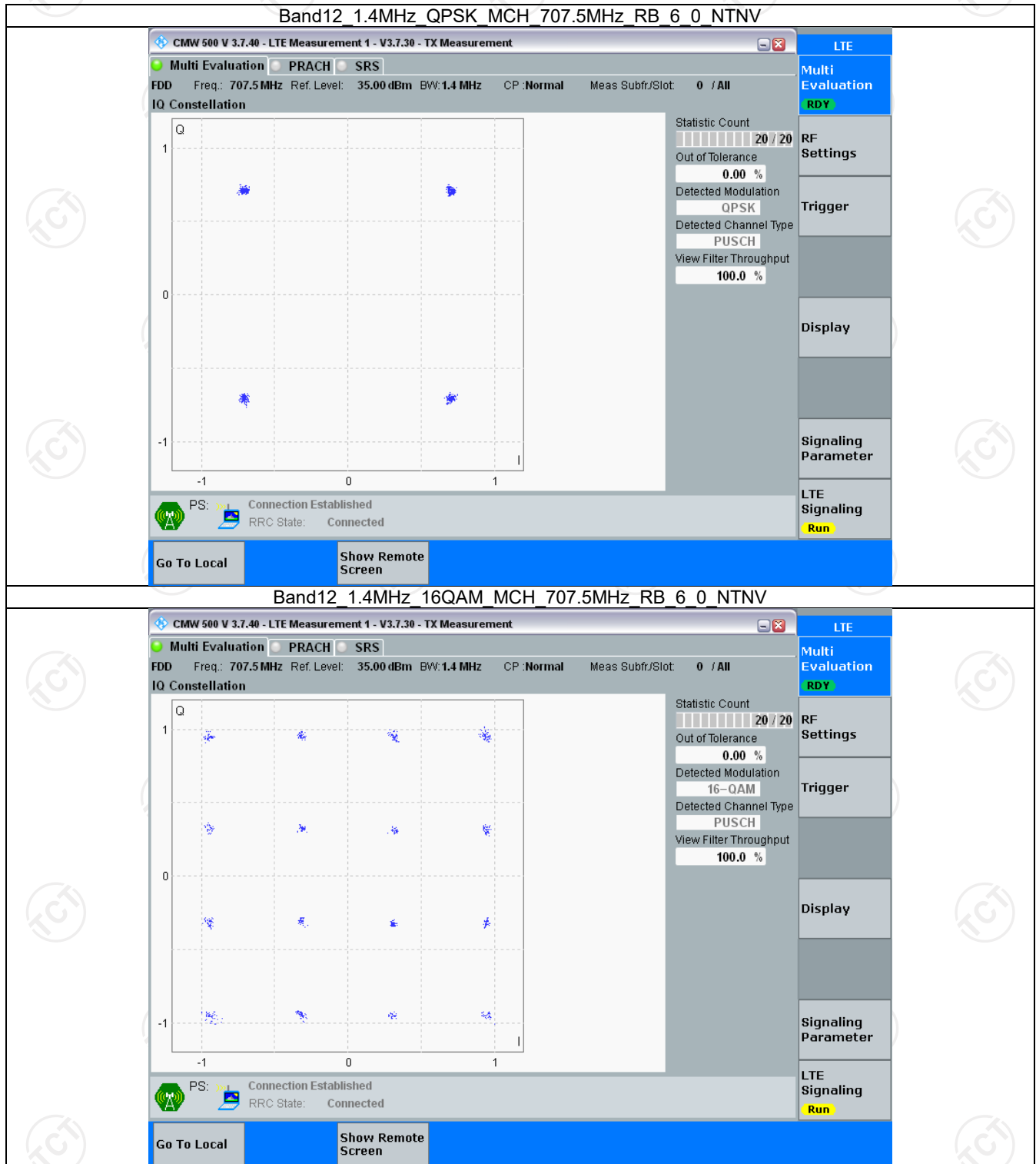
Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	25	0	Refer To Test Graph		Pass
16QAM	707.5	25	0	Refer To Test Graph		Pass

3.1.4 B12\_10MHz

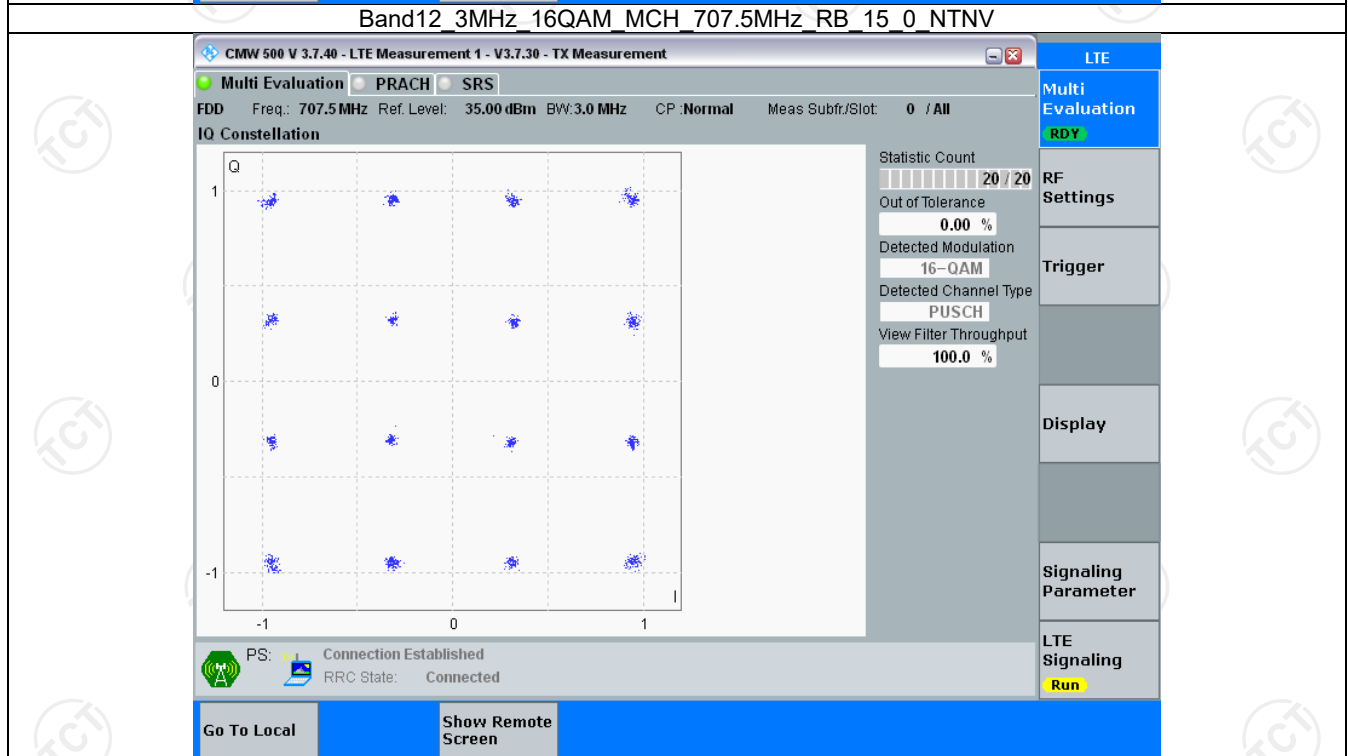
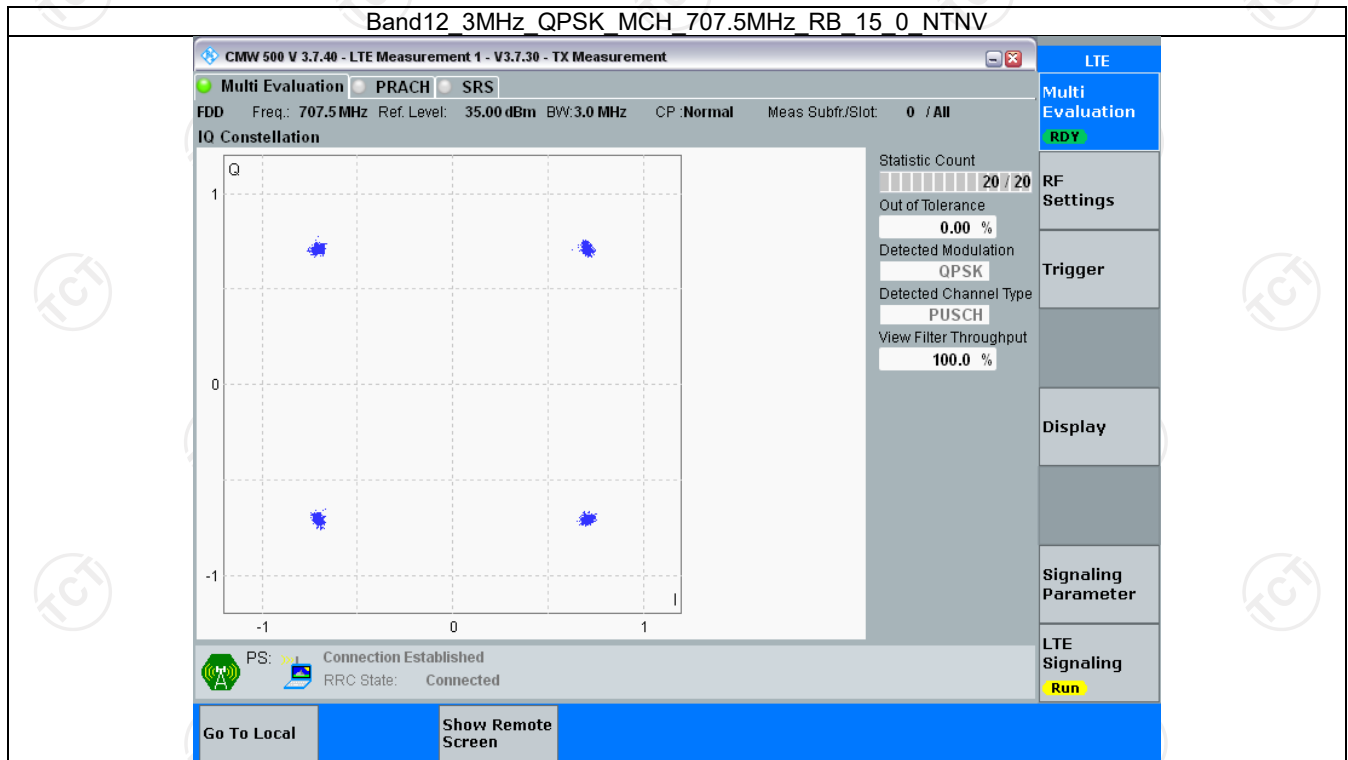
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	50	0	Refer To Test Graph		Pass
16QAM	707.5	50	0	Refer To Test Graph		Pass

### 3.2 Test Graph

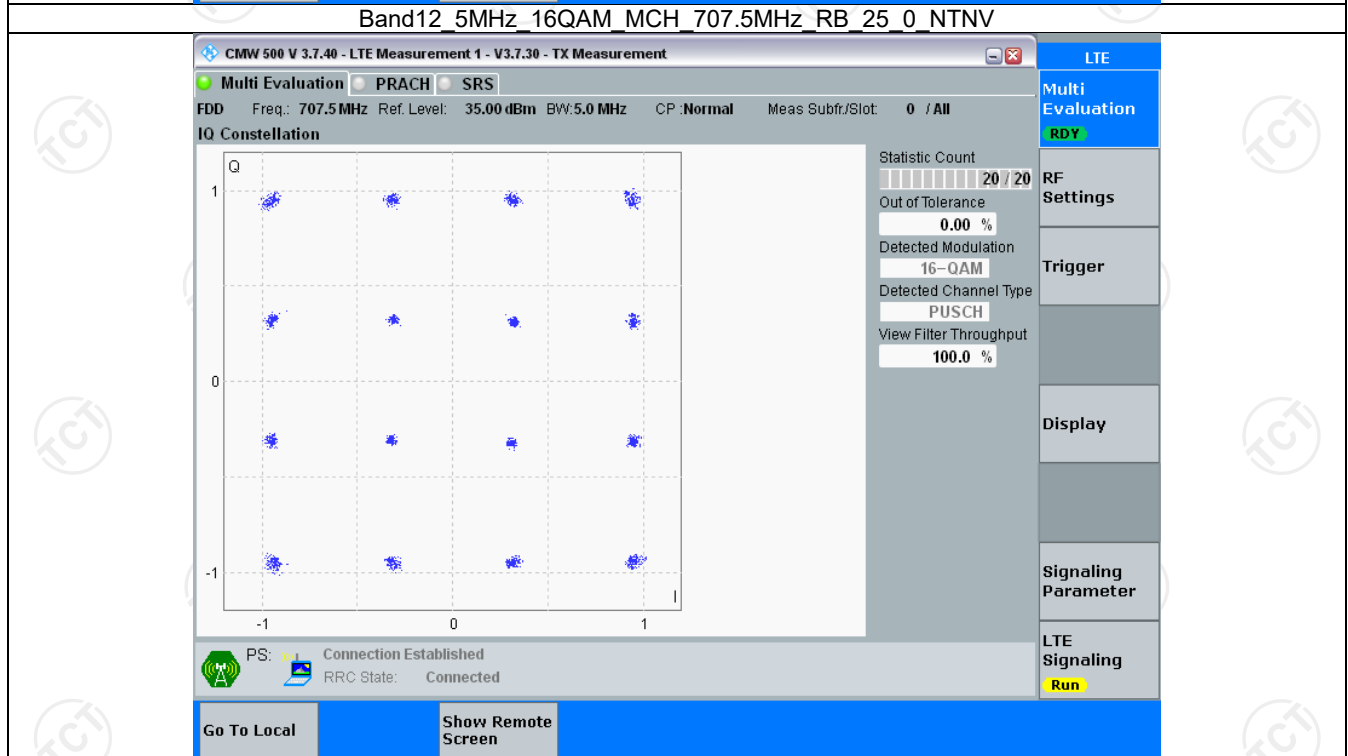
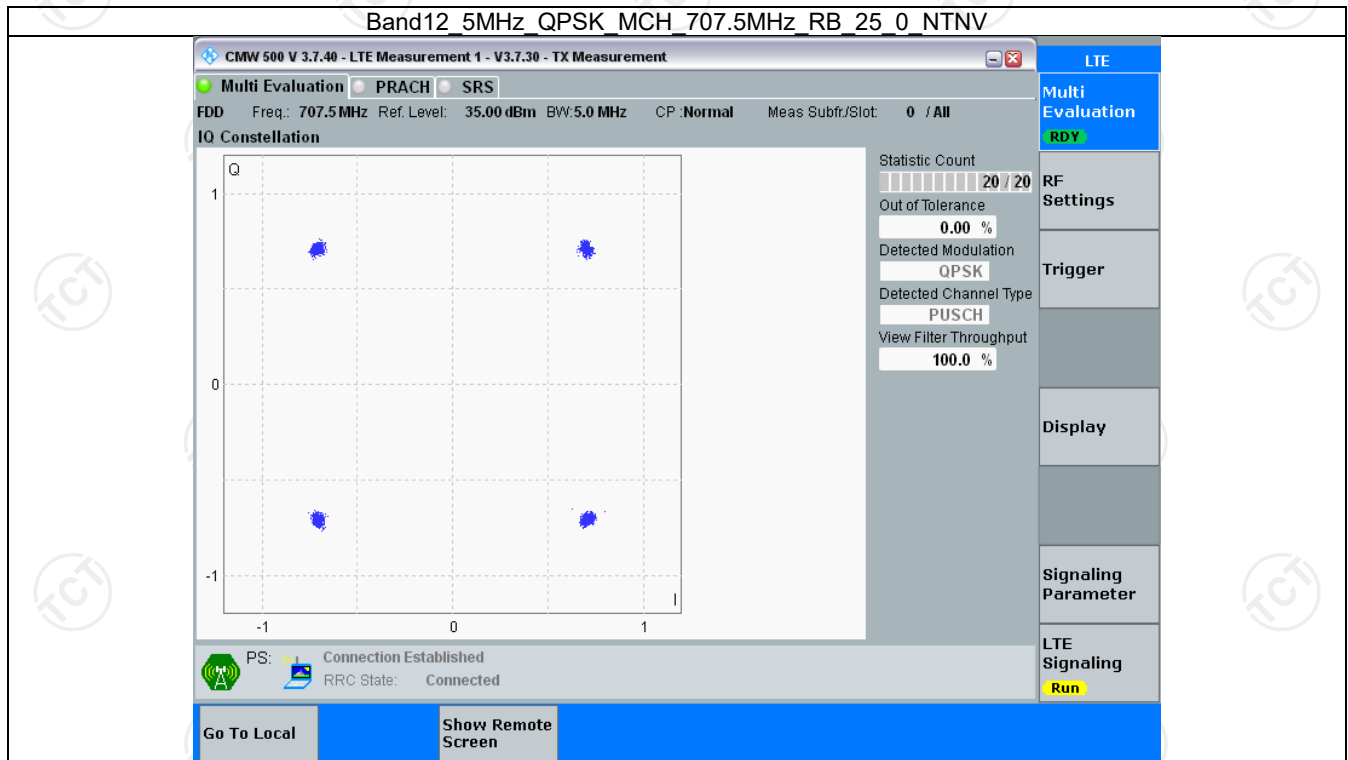
#### 3.2.1 B12\_1.4MHz



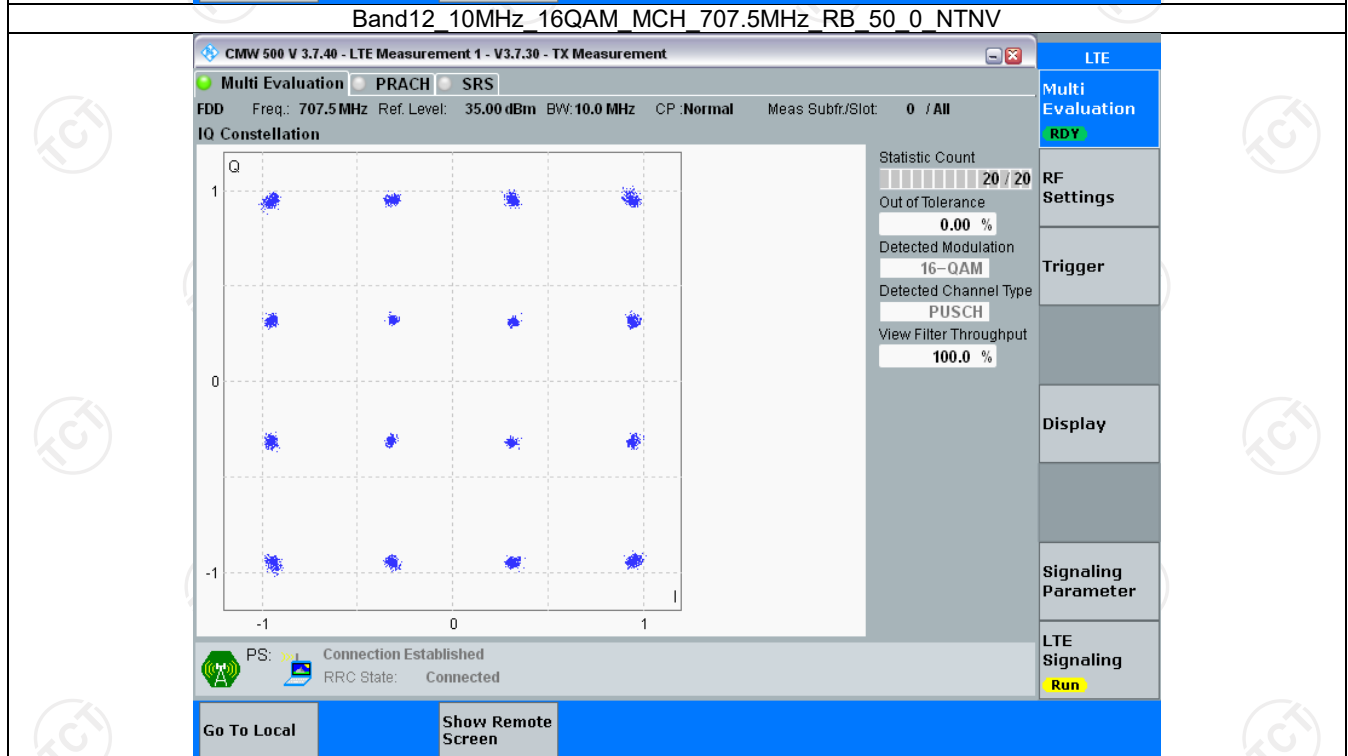
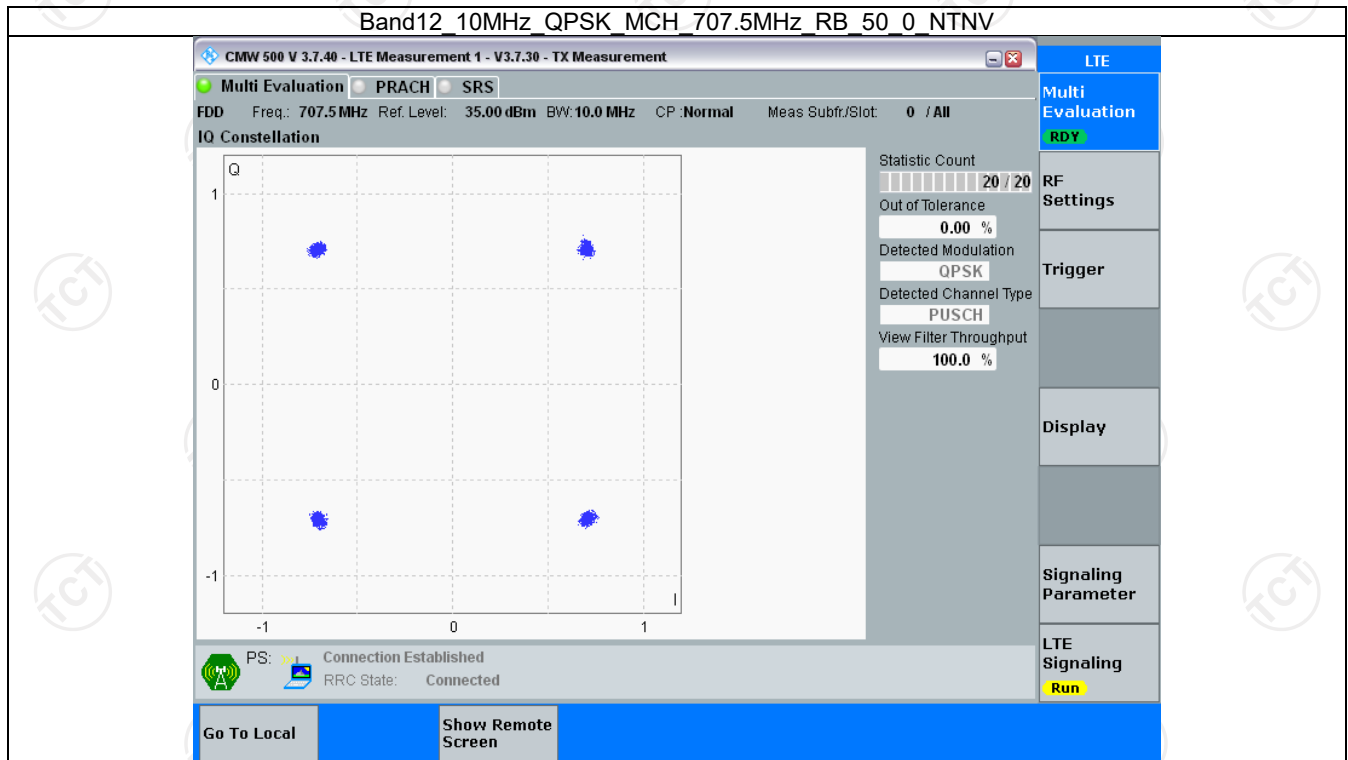
3.2.2 B12\_3MHz



3.2.3 B12\_5MHz



3.2.4 B12\_10MHz



## 4. 99% & 26dB Bandwidth

### 4.1 Test Result

#### 4.1.1 Band12\_OBW

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.110	/	Pass
		707.5	6	0	1.096	/	Pass
		715.3	6	0	1.102	/	Pass
	16QAM	699.7	6	0	1.100	/	Pass
		707.5	6	0	1.103	/	Pass
		715.3	6	0	1.110	/	Pass
3	QPSK	700.5	15	0	2.714	/	Pass
		707.5	15	0	2.719	/	Pass
		714.5	15	0	2.722	/	Pass
	16QAM	700.5	15	0	2.708	/	Pass
		707.5	15	0	2.714	/	Pass
		714.5	15	0	2.712	/	Pass
5	QPSK	701.5	25	0	4.554	/	Pass
		707.5	25	0	4.558	/	Pass
		713.5	25	0	4.573	/	Pass
	16QAM	701.5	25	0	4.587	/	Pass
		707.5	25	0	4.562	/	Pass
		713.5	25	0	4.571	/	Pass
10	QPSK	704	50	0	9.097	/	Pass
		707.5	50	0	9.038	/	Pass
		711	50	0	9.049	/	Pass
	16QAM	704	50	0	9.083	/	Pass
		707.5	50	0	9.066	/	Pass
		711	50	0	9.045	/	Pass

#### 4.1.2 Band12\_XDB

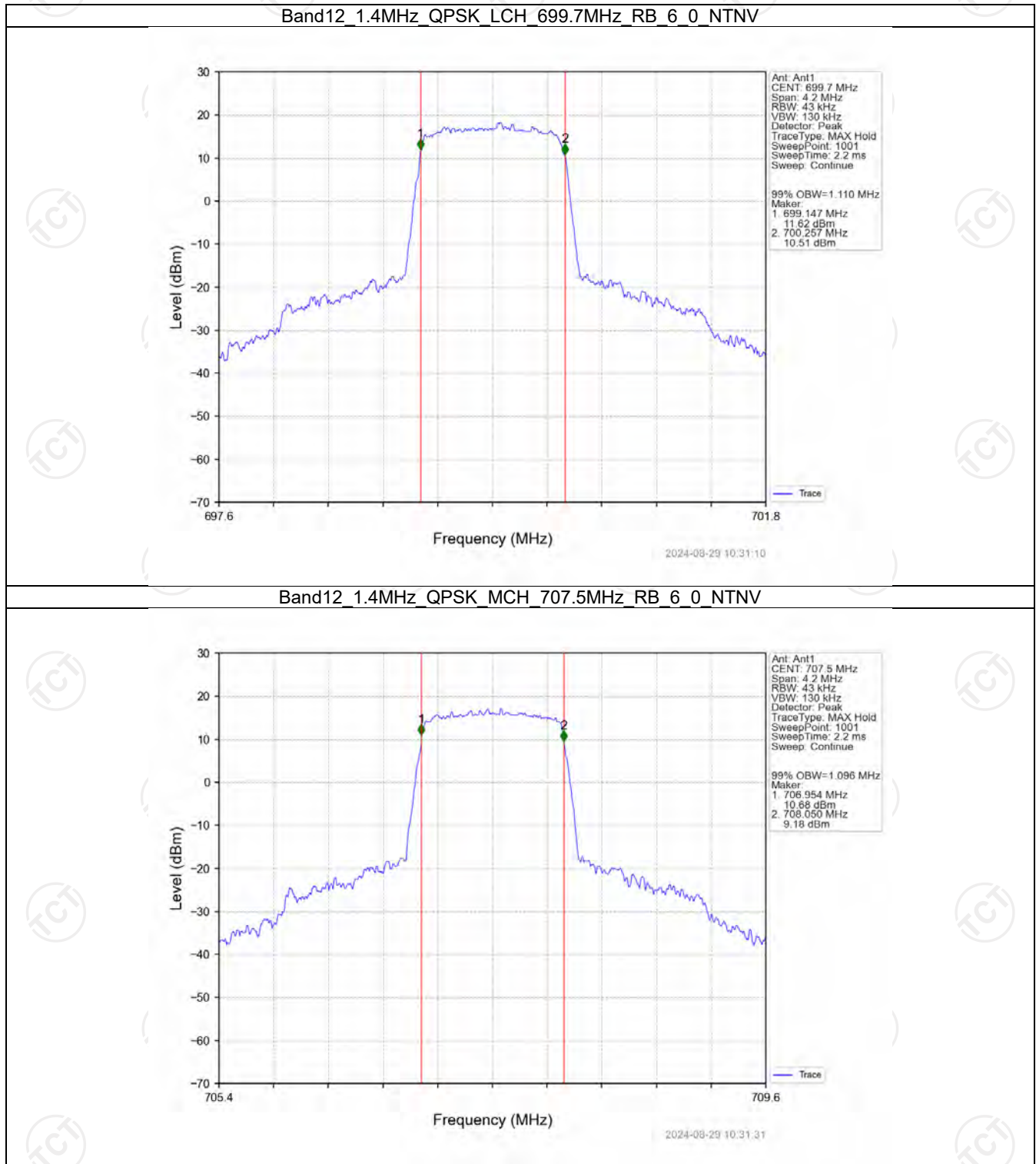
Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	699.7	6	0	1.260	/	Pass
		707.5	6	0	1.263	/	Pass
		715.3	6	0	1.270	/	Pass
	16QAM	699.7	6	0	1.254	/	Pass
		707.5	6	0	1.261	/	Pass
		715.3	6	0	1.260	/	Pass
3	QPSK	700.5	15	0	2.956	/	Pass
		707.5	15	0	2.973	/	Pass
		714.5	15	0	2.980	/	Pass
	16QAM	700.5	15	0	2.975	/	Pass
		707.5	15	0	2.964	/	Pass
		714.5	15	0	2.986	/	Pass
5	QPSK	701.5	25	0	5.038	/	Pass
		707.5	25	0	5.062	/	Pass
		713.5	25	0	5.073	/	Pass

10	16QAM	701.5	25	0	5.071	/	Pass
		707.5	25	0	5.070	/	Pass
		713.5	25	0	5.062	/	Pass
	QPSK	704	50	0	10.089	/	Pass
		707.5	50	0	10.086	/	Pass
		711	50	0	10.077	/	Pass
	16QAM	704	50	0	10.110	/	Pass
		707.5	50	0	10.085	/	Pass
		711	50	0	10.109	/	Pass

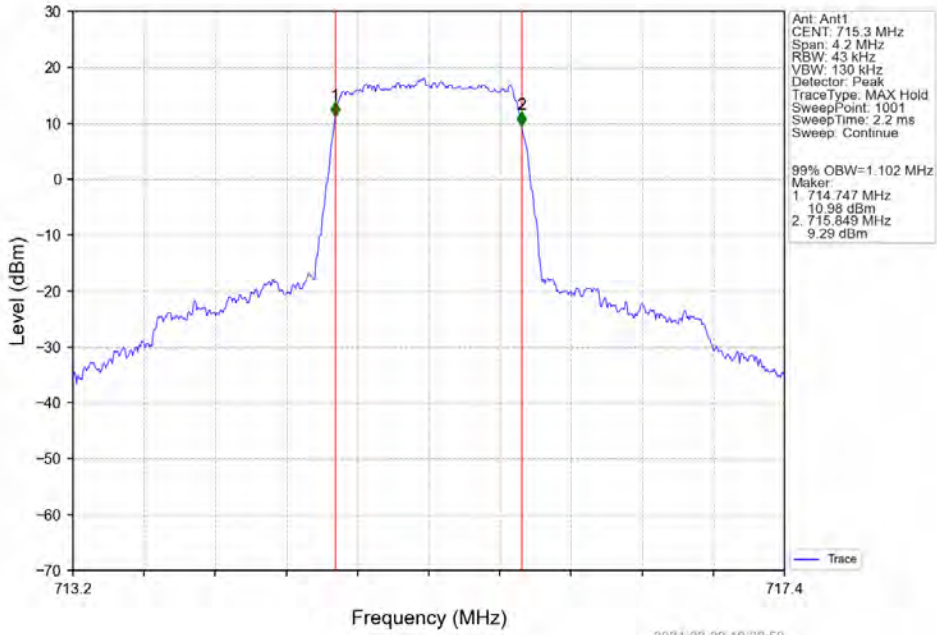


## 4.2 Test Graph

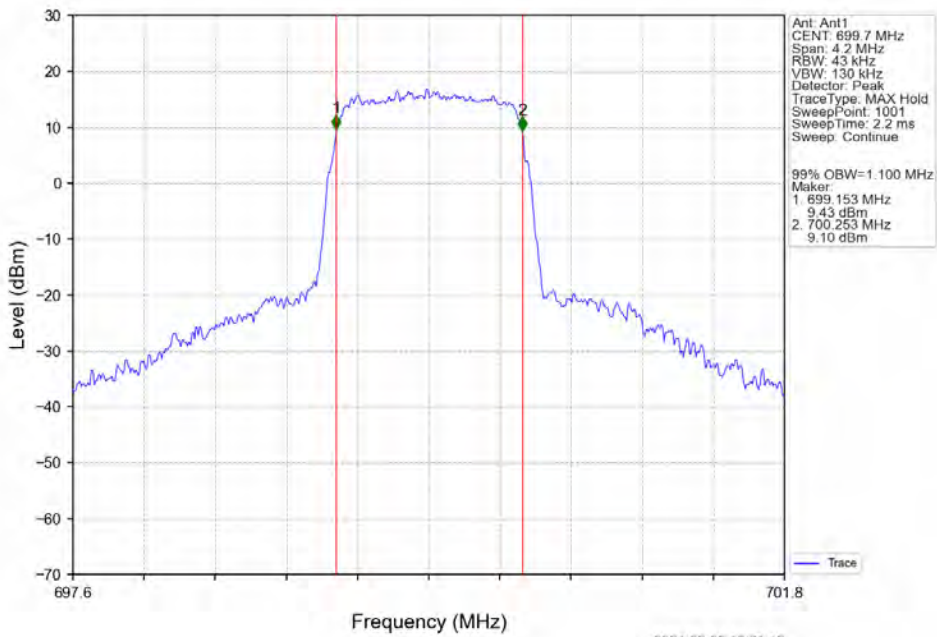
### 4.2.1 Band12\_OBW



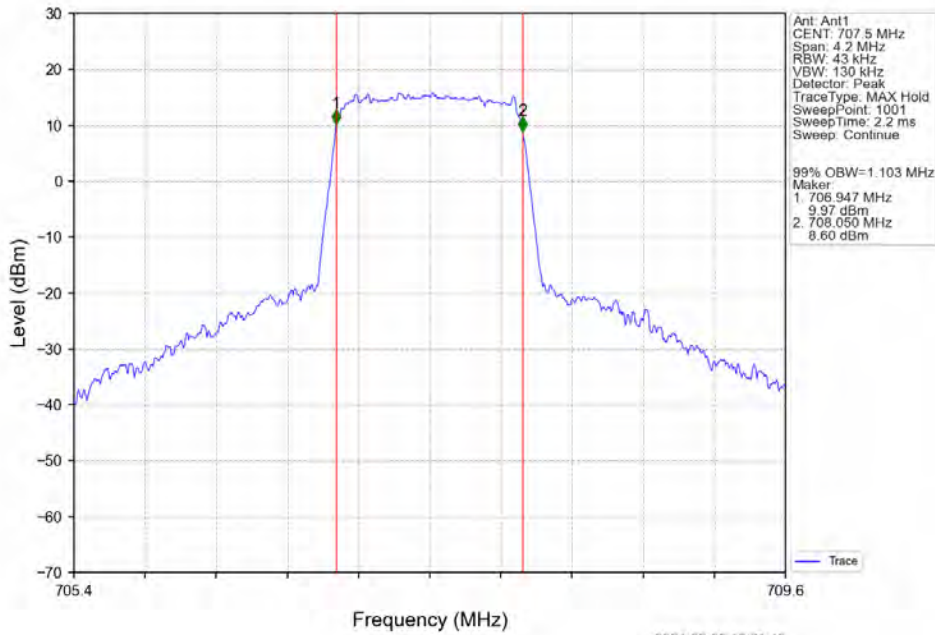
Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTV



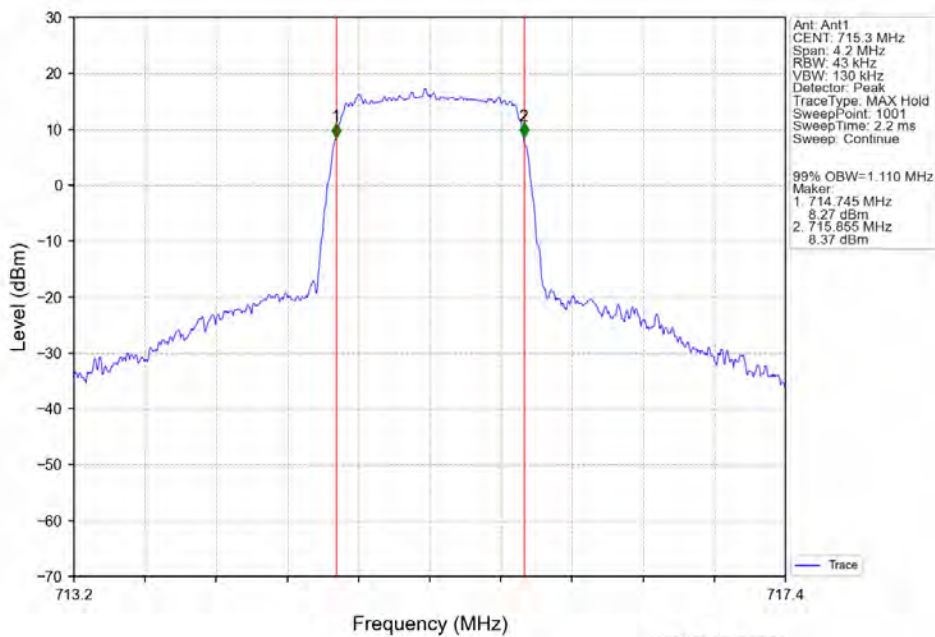
Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTV



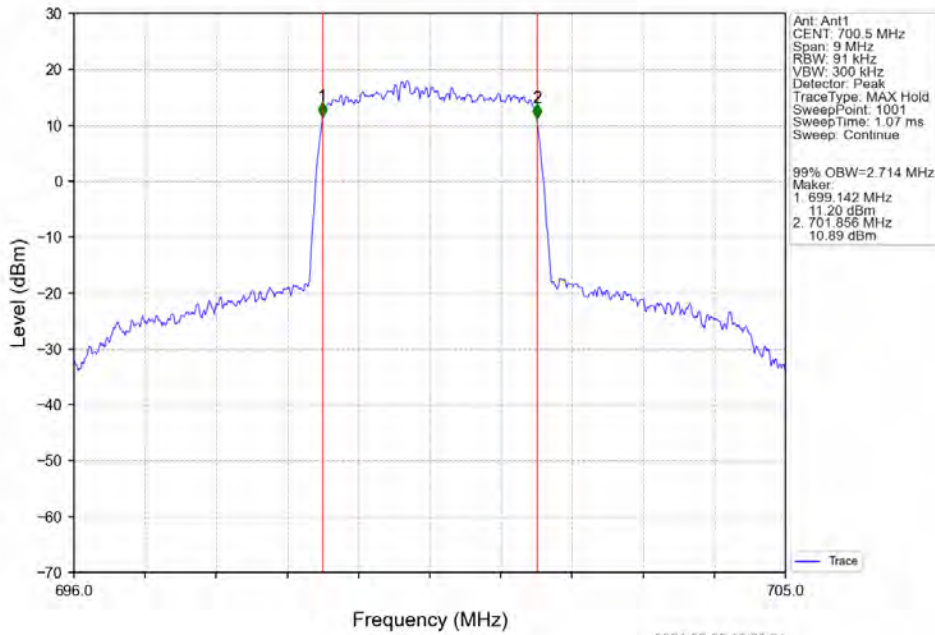
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTN



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

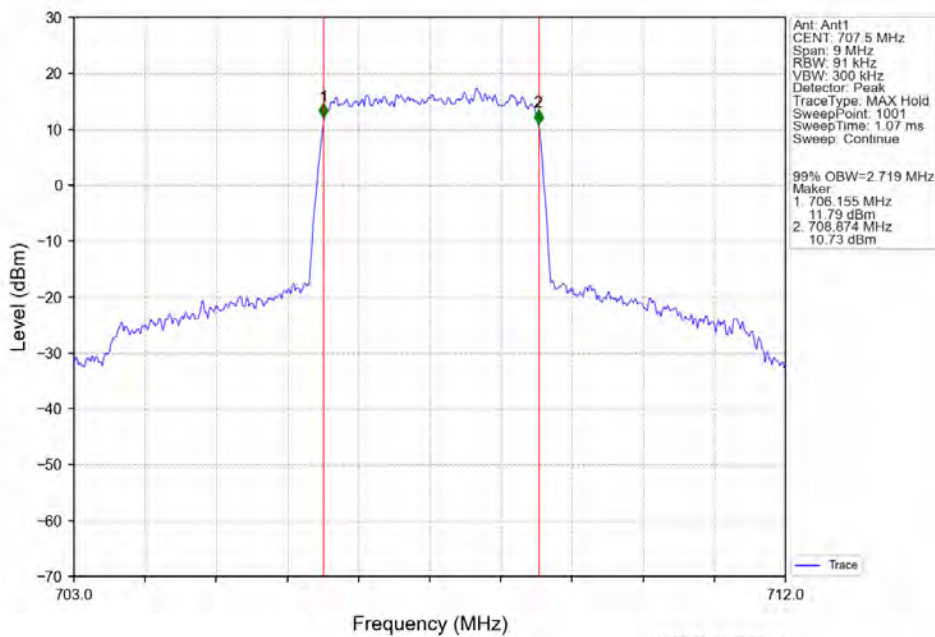


Band12 3MHz QPSK LCH 700.5MHz RB 15 0 NTV



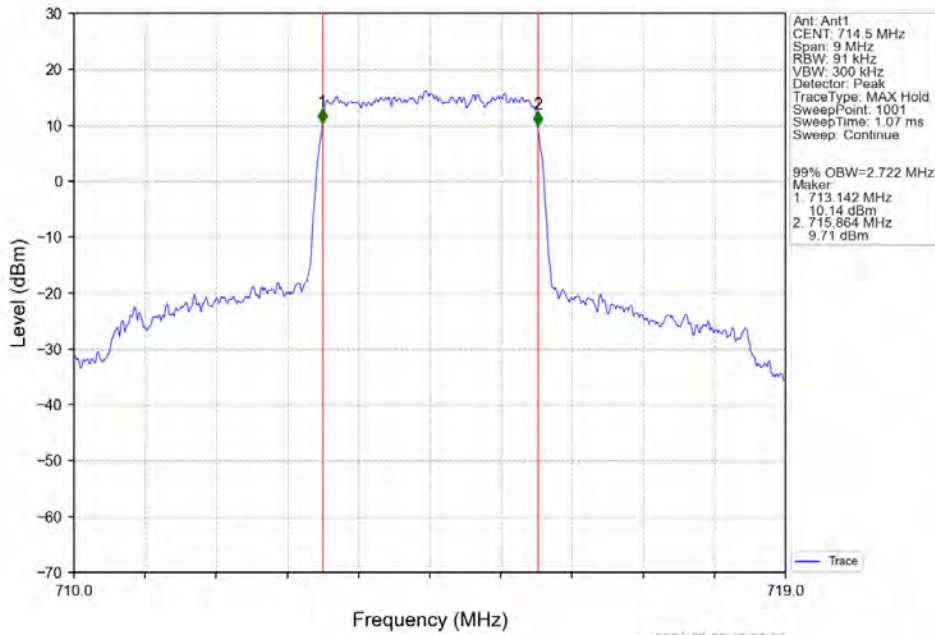
2024-08-29 10:35:21

Band12 3MHz QPSK MCH 707.5MHz RB 15 0 NTV

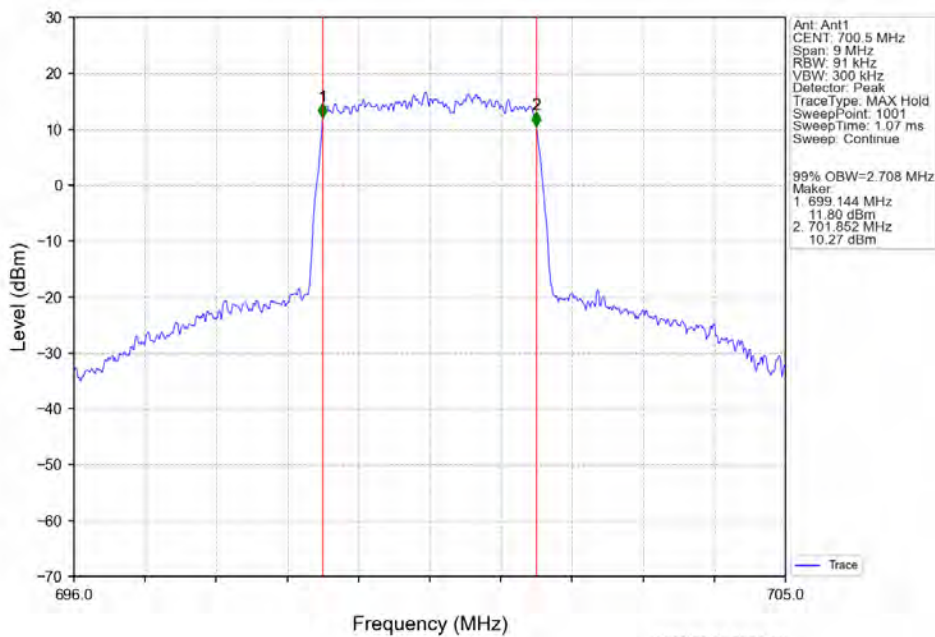


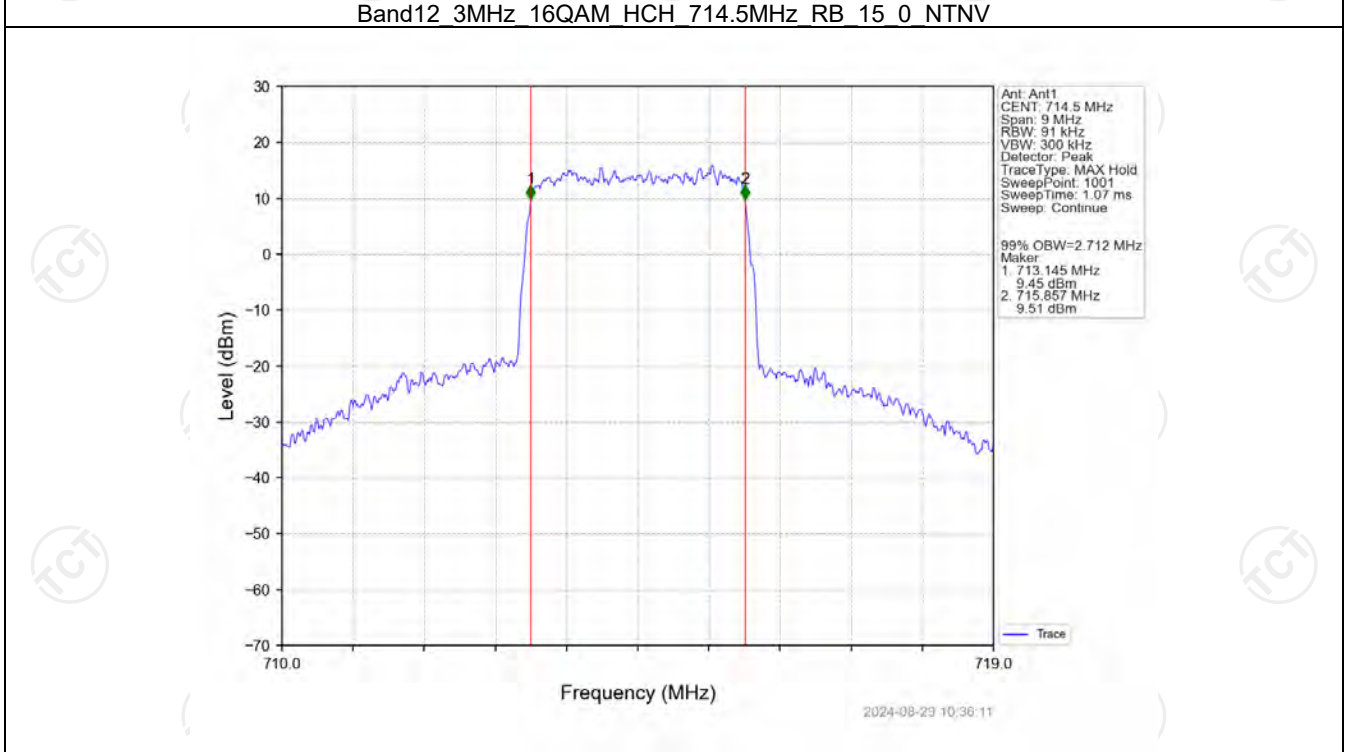
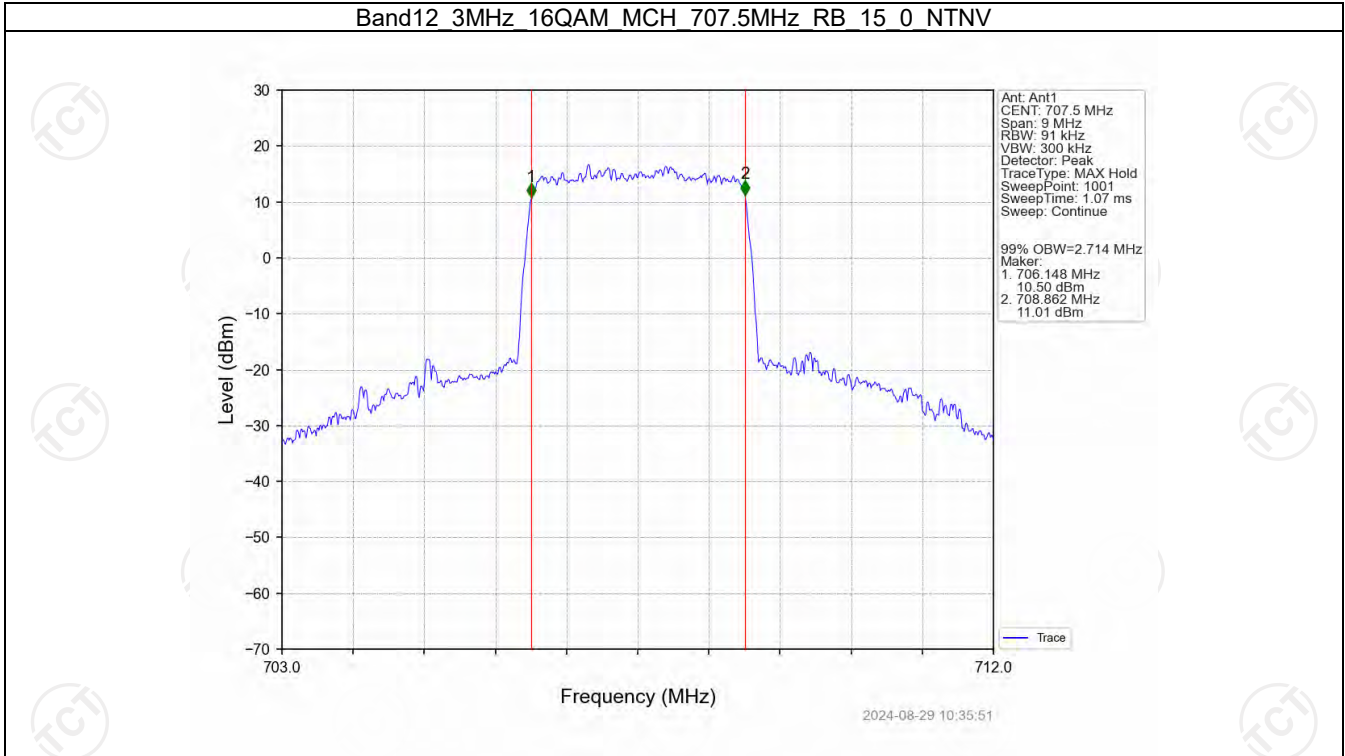
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Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTV

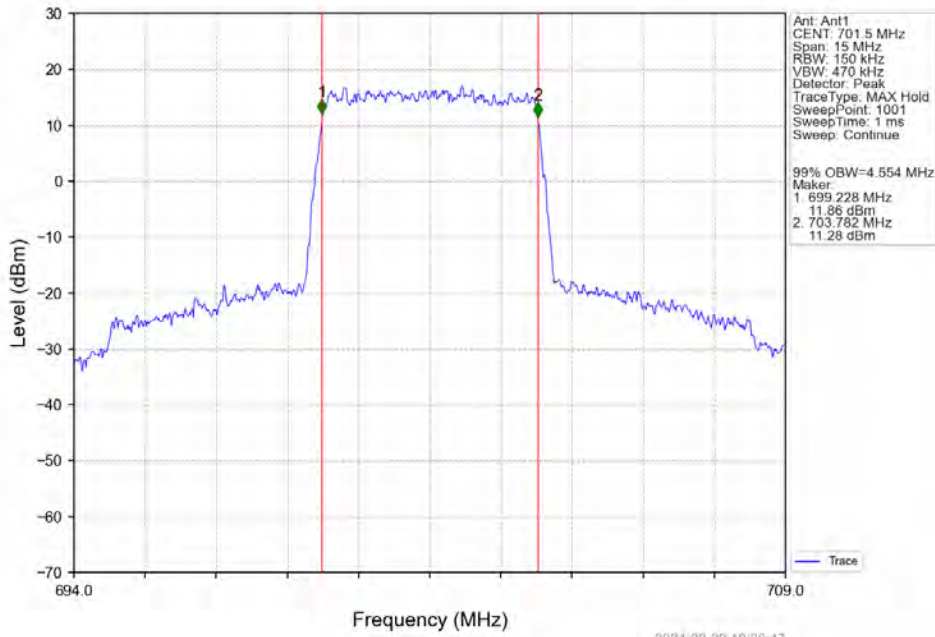


Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTV

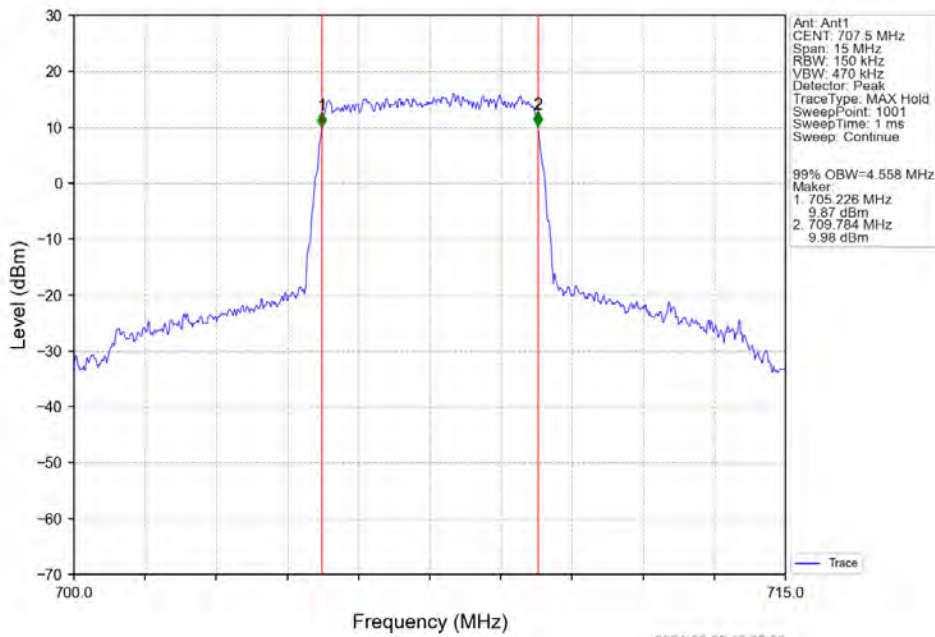




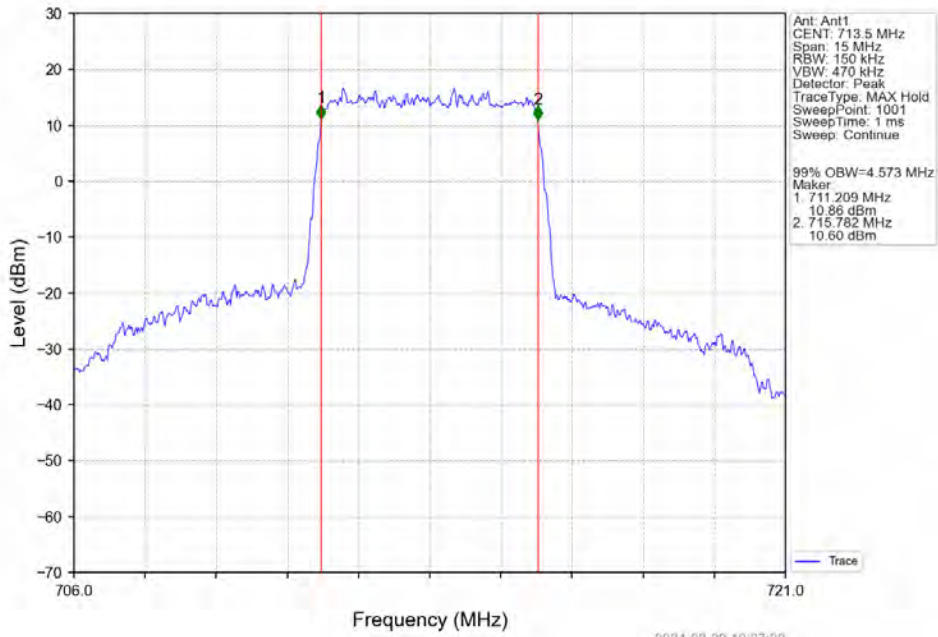
Band12 5MHz QPSK LCH 701.5MHz RB 25 0 NTV



Band12 5MHz QPSK MCH 707.5MHz RB 25 0 NTV

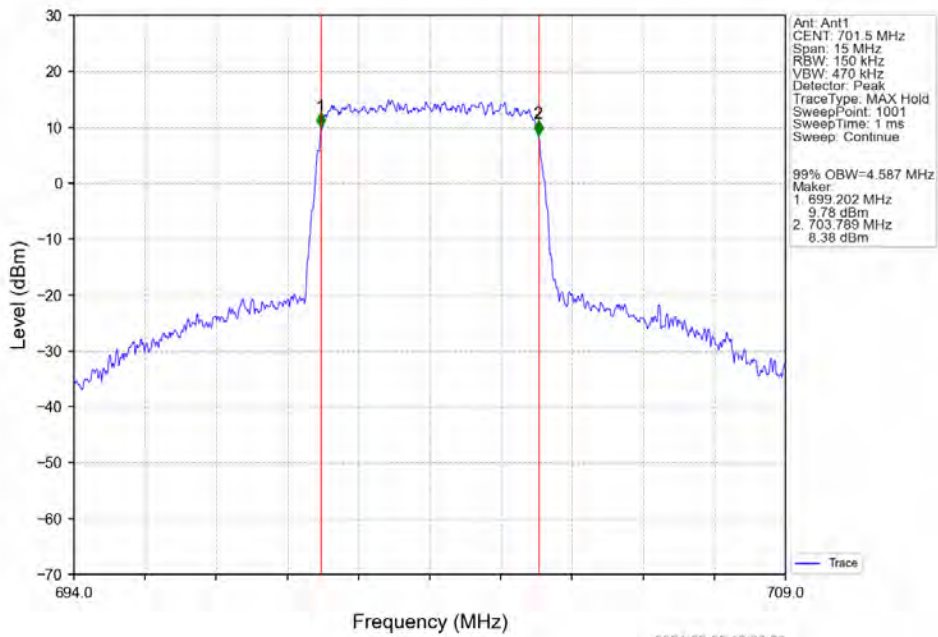


Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTNV



2024-08-29 10:37:29

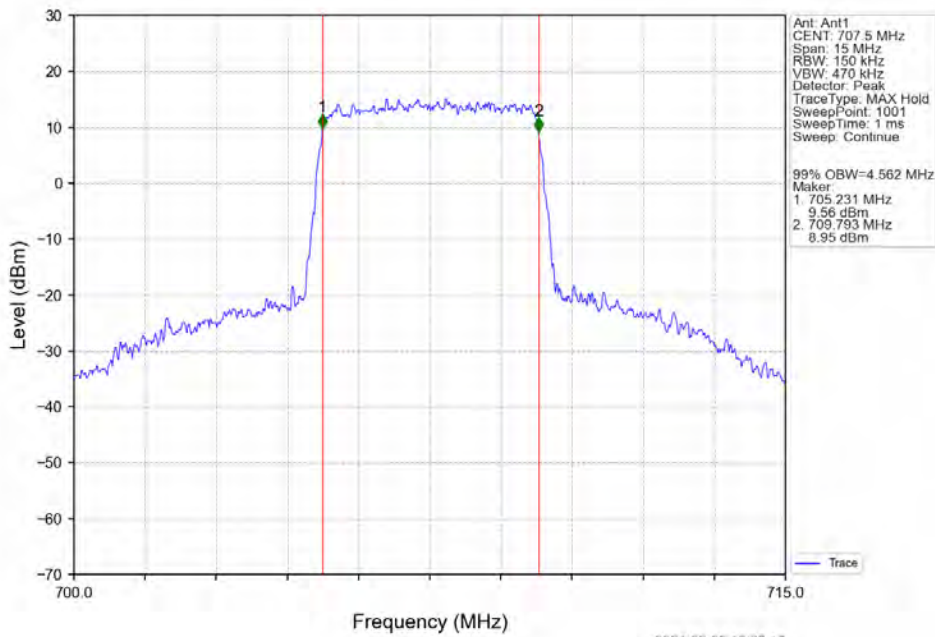
Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTNV



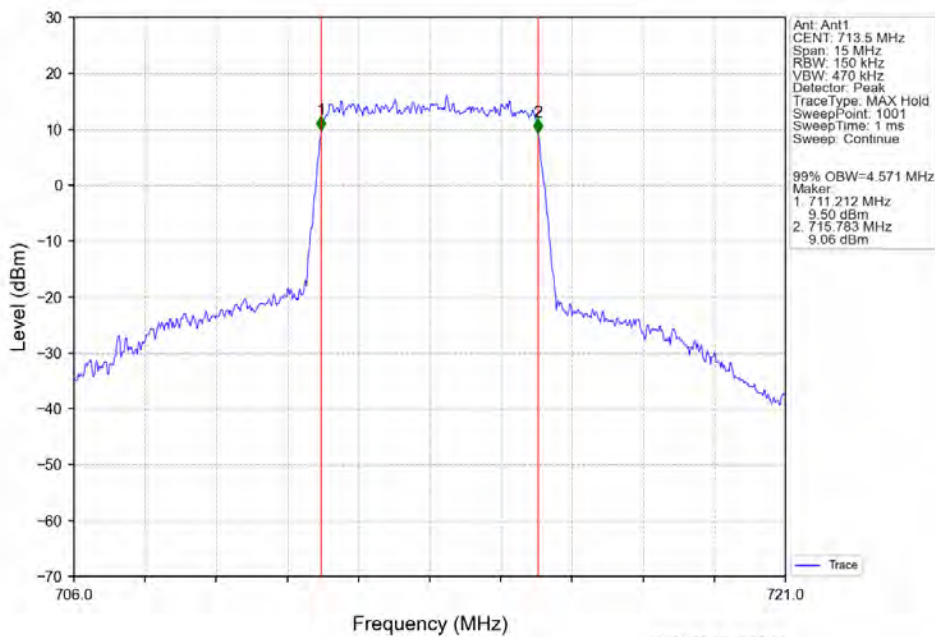
2024-08-29 10:36:56



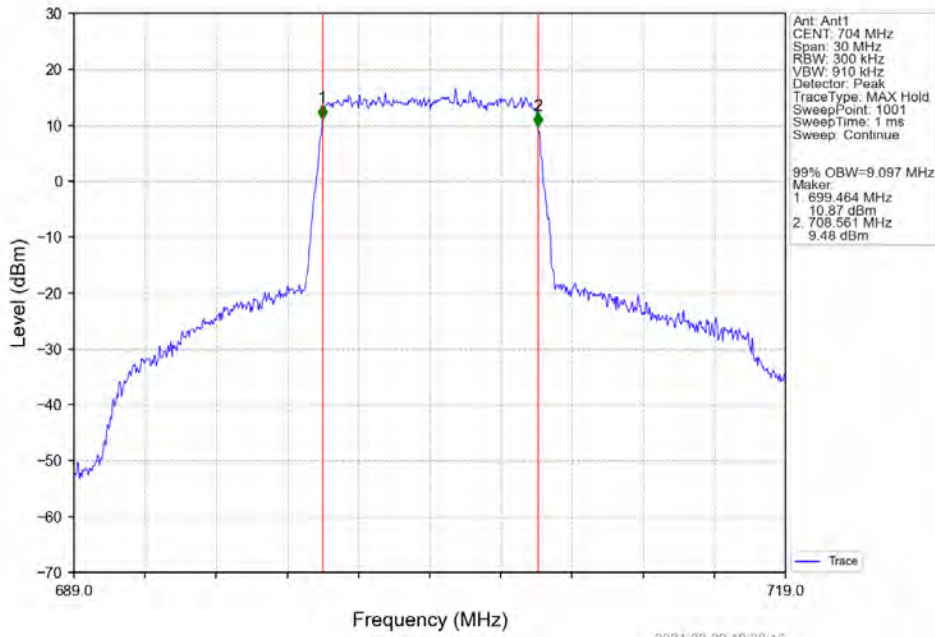
Band12 5MHz 16QAM MCH 707.5MHz RB 25 0 NTNV



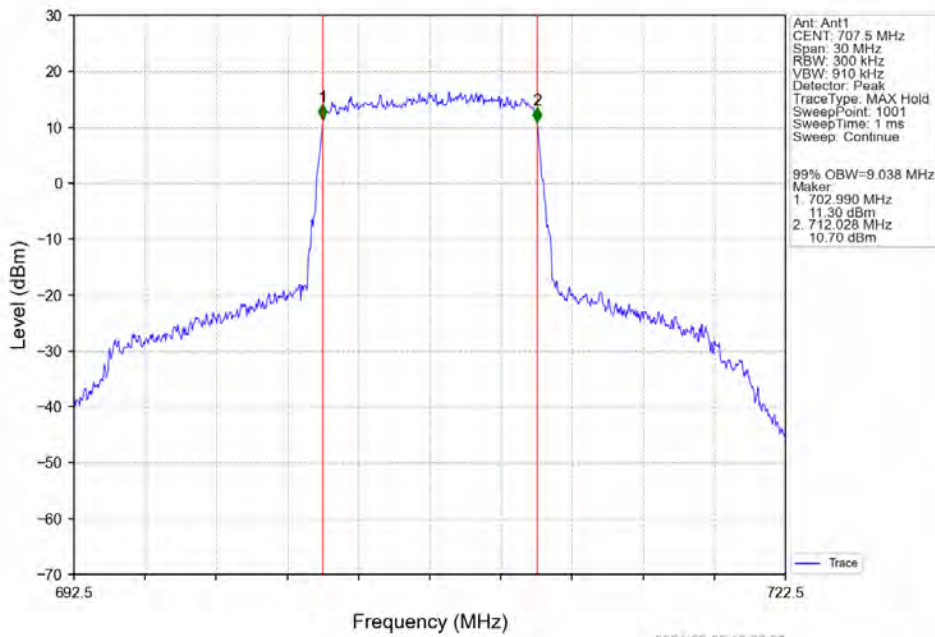
Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTNV



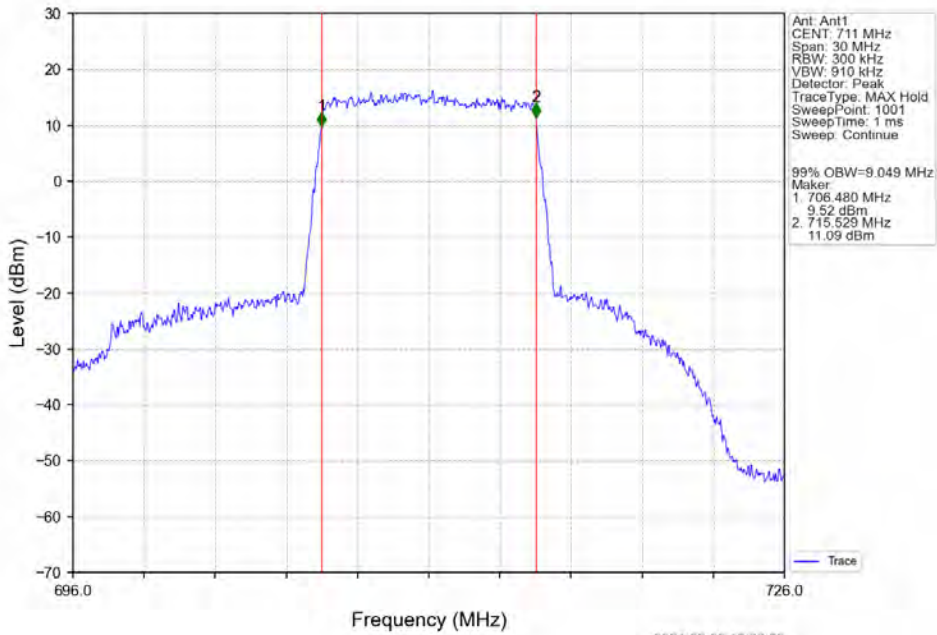
Band12 10MHz QPSK LCH 704MHz RB 50 0 NTV



Band12 10MHz QPSK MCH 707.5MHz RB 50 0 NTV

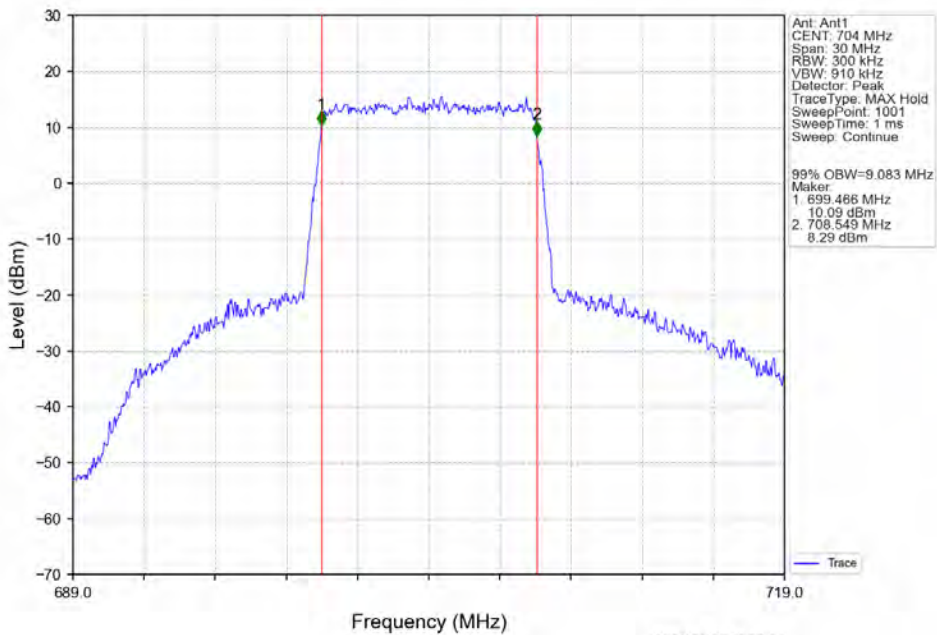


Band12 10MHz QPSK HCH 711MHz RB 50 0 NTV



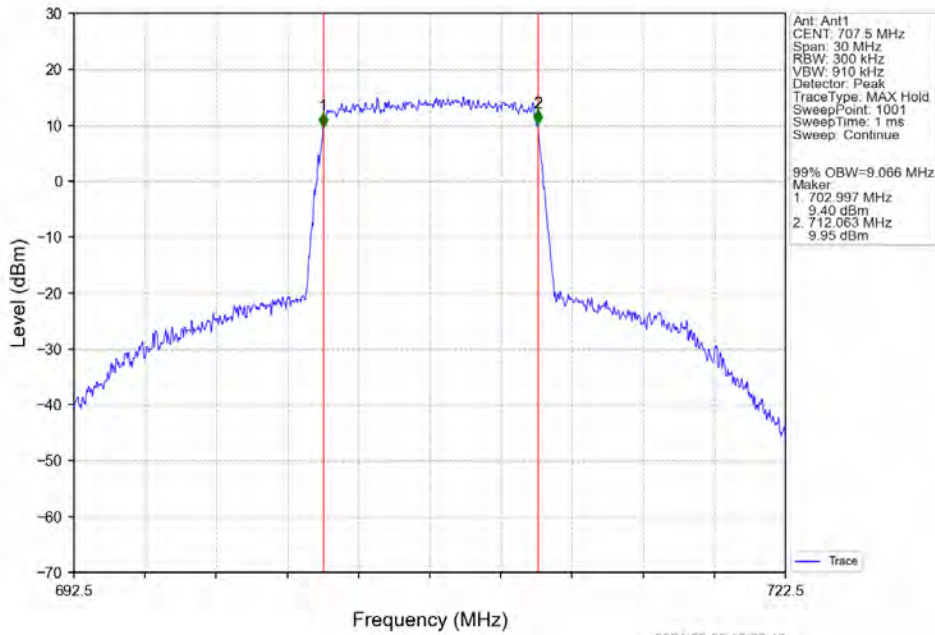
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Band12 10MHz 16QAM LCH 704MHz RB 50 0 NTV

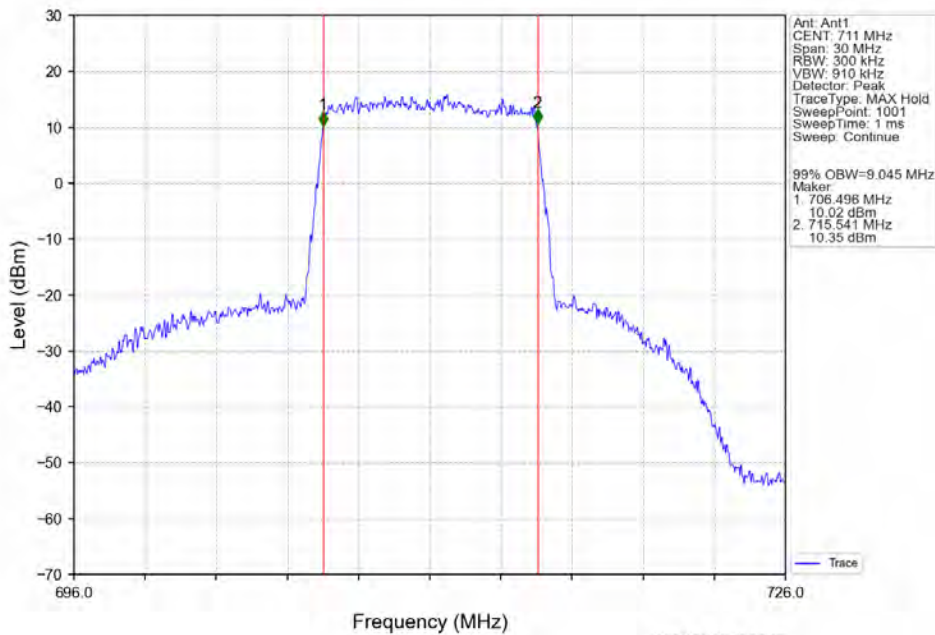


2024-08-29 10:38:25

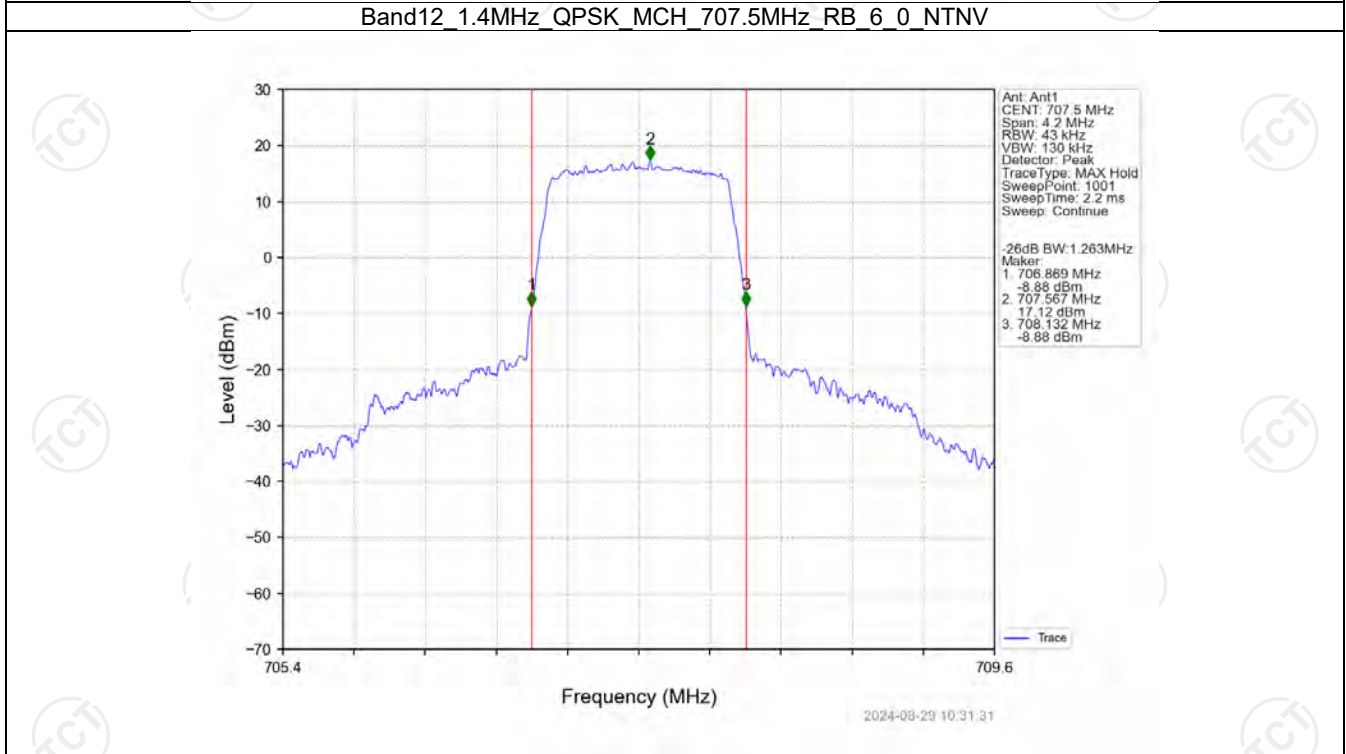
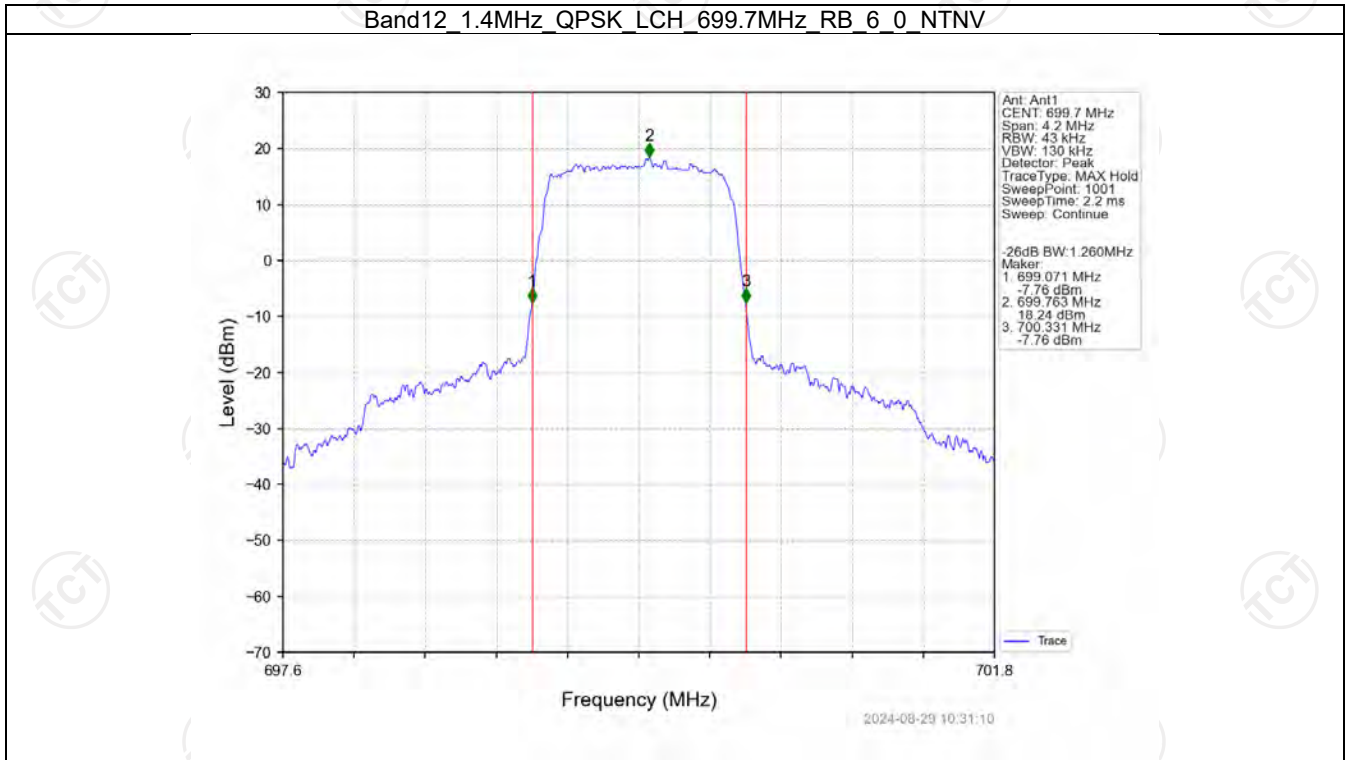
Band12 10MHz 16QAM MCH 707.5MHz RB 50 0 NTN



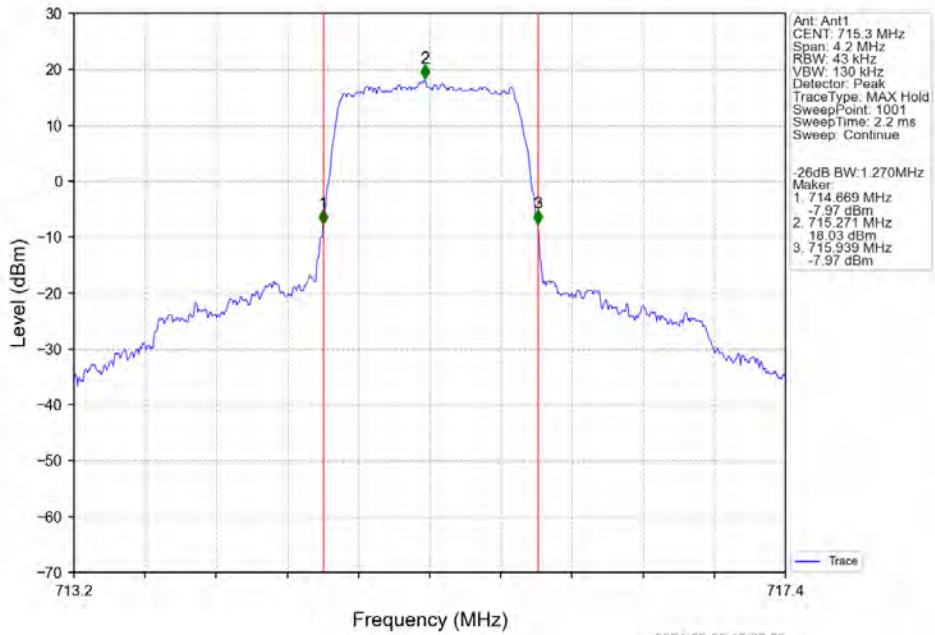
Band12 10MHz 16QAM HCH 711MHz RB 50 0 NTN



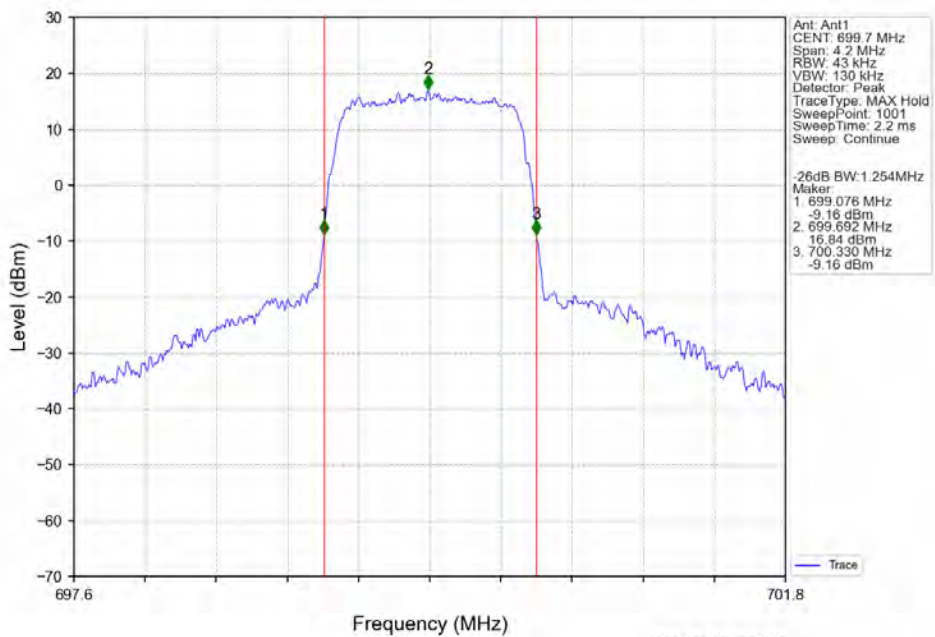
4.2.2 Band12\_XDB



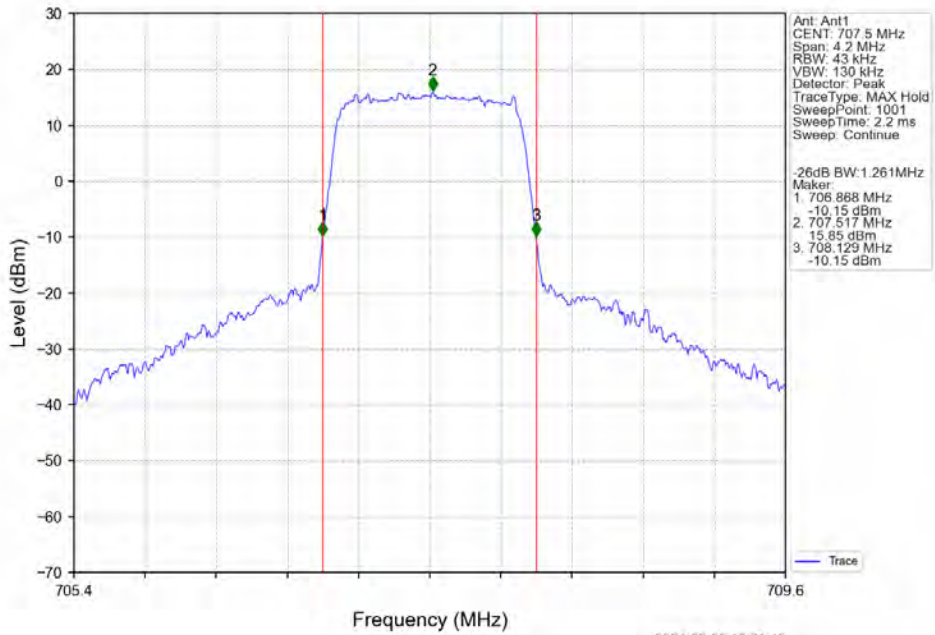
Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTV



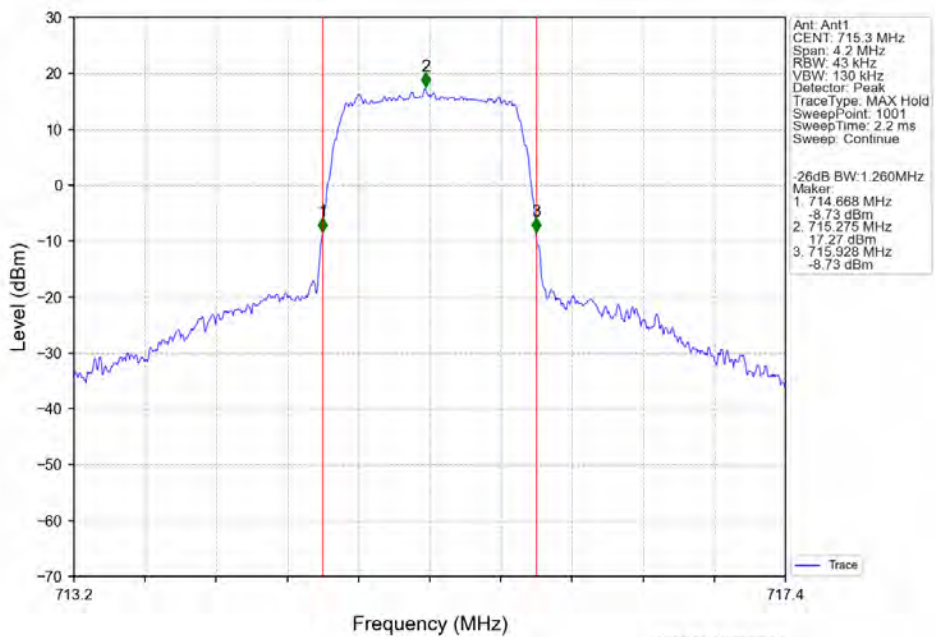
Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTV



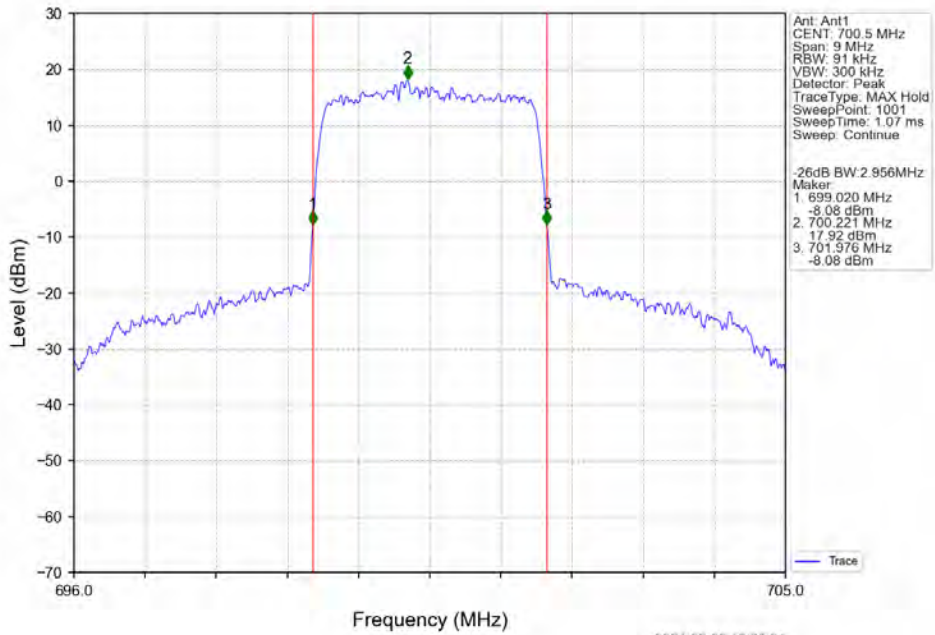
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTN



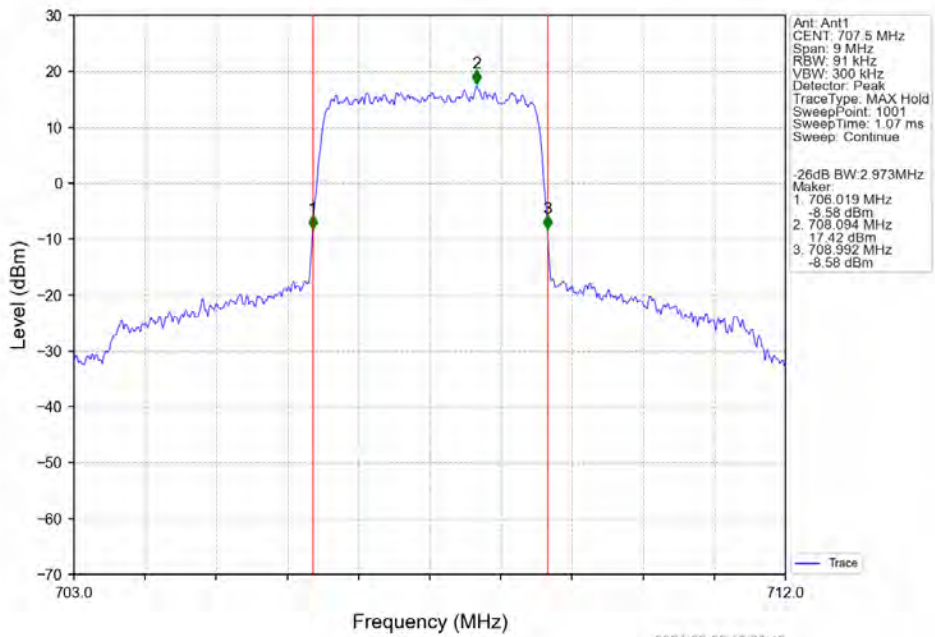
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTN



Band12 3MHz QPSK LCH 700.5MHz RB 15 0 NTV

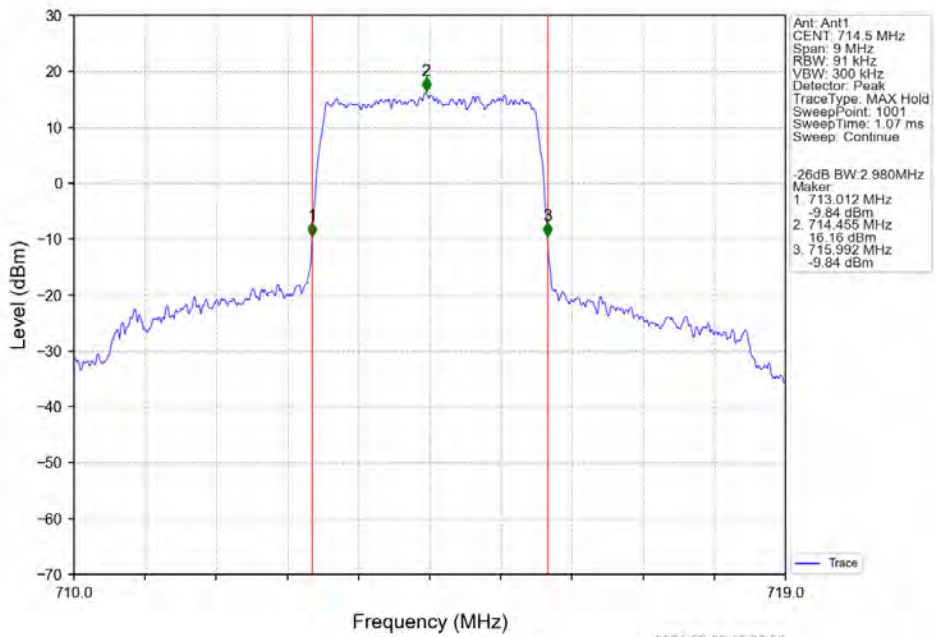


Band12 3MHz QPSK MCH 707.5MHz RB 15 0 NTV

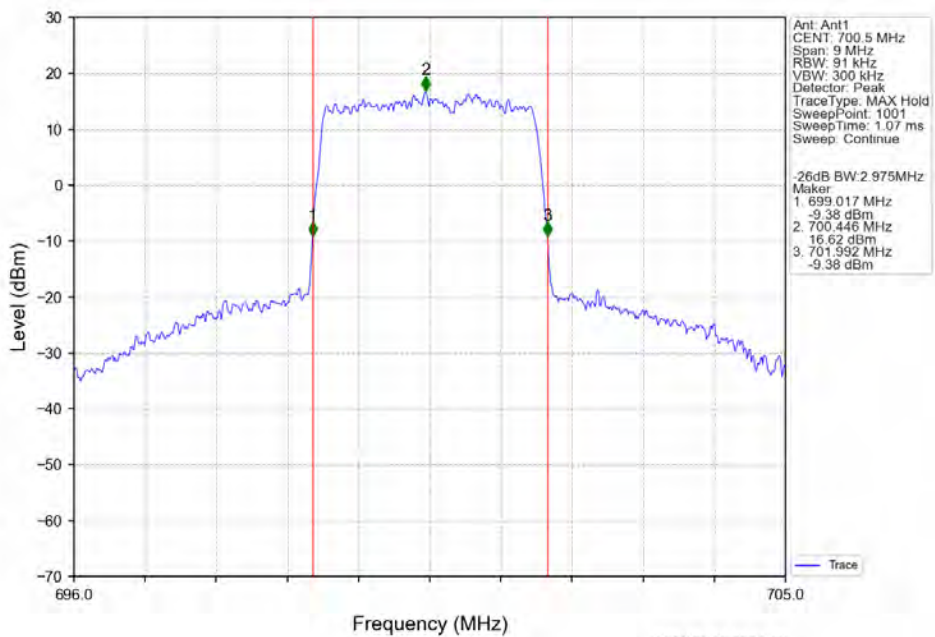


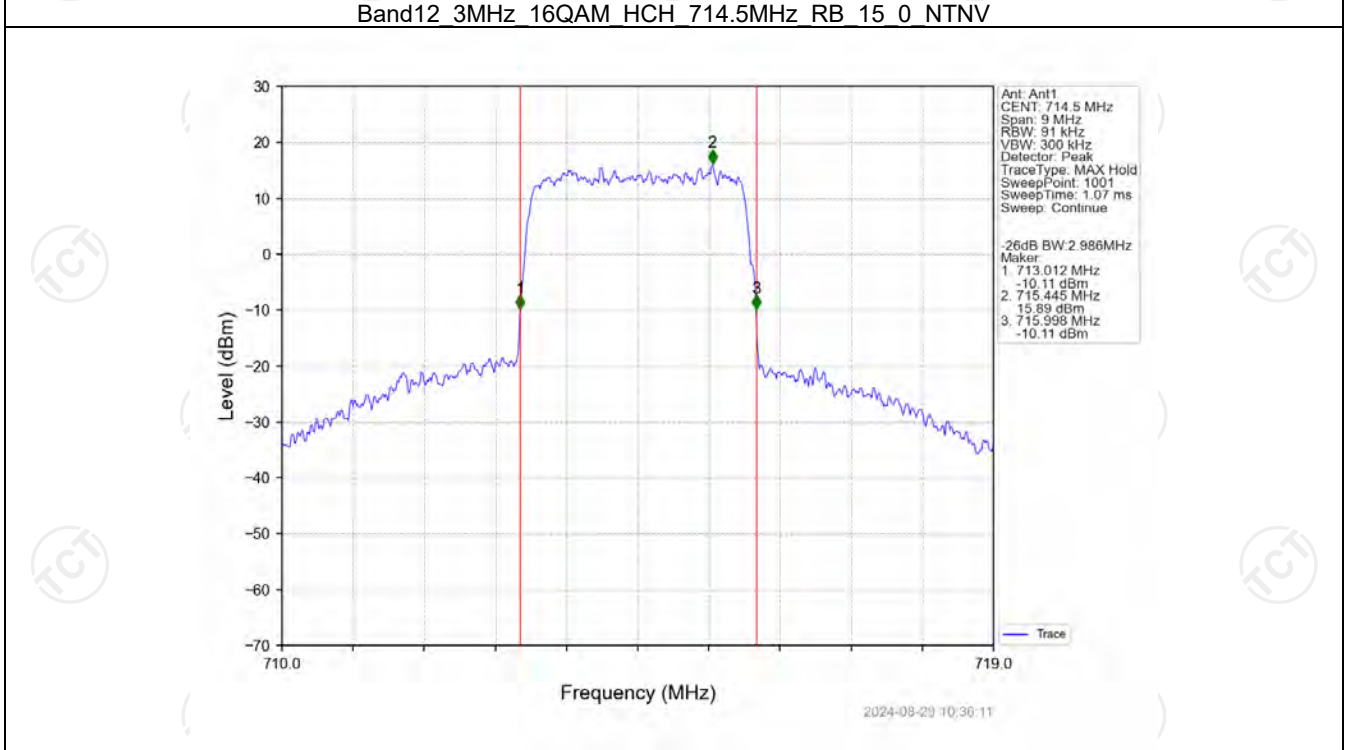
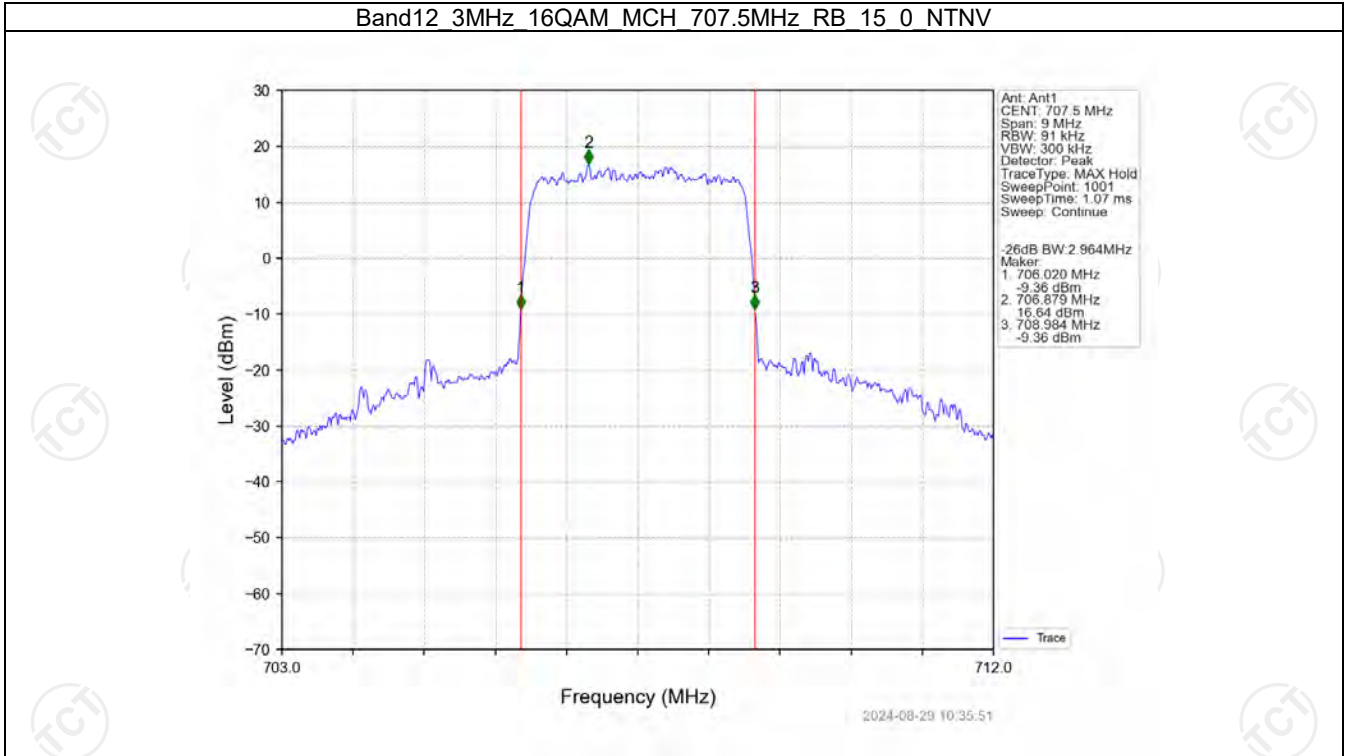


Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTV

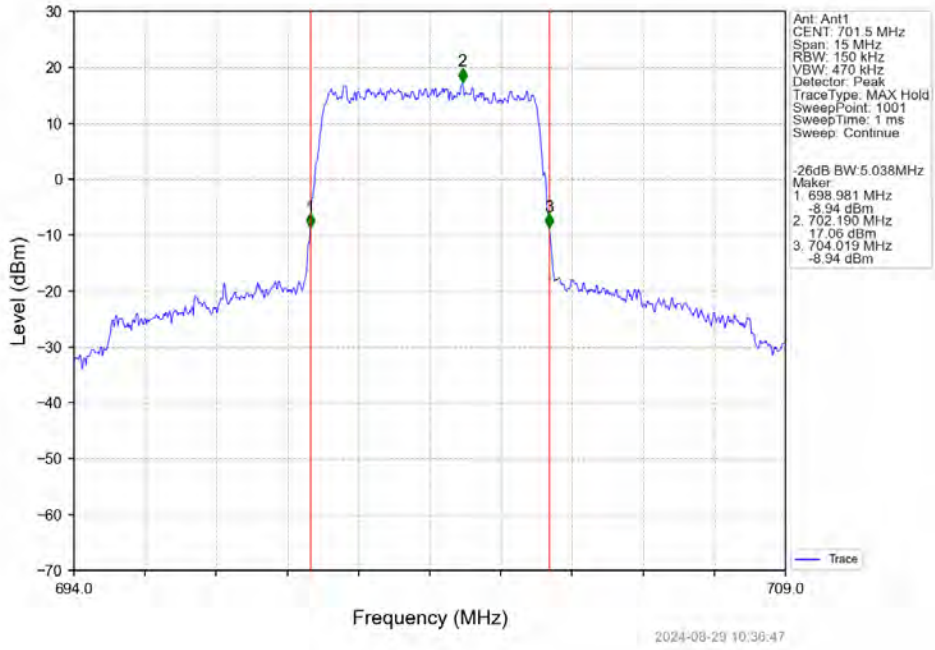


Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTV

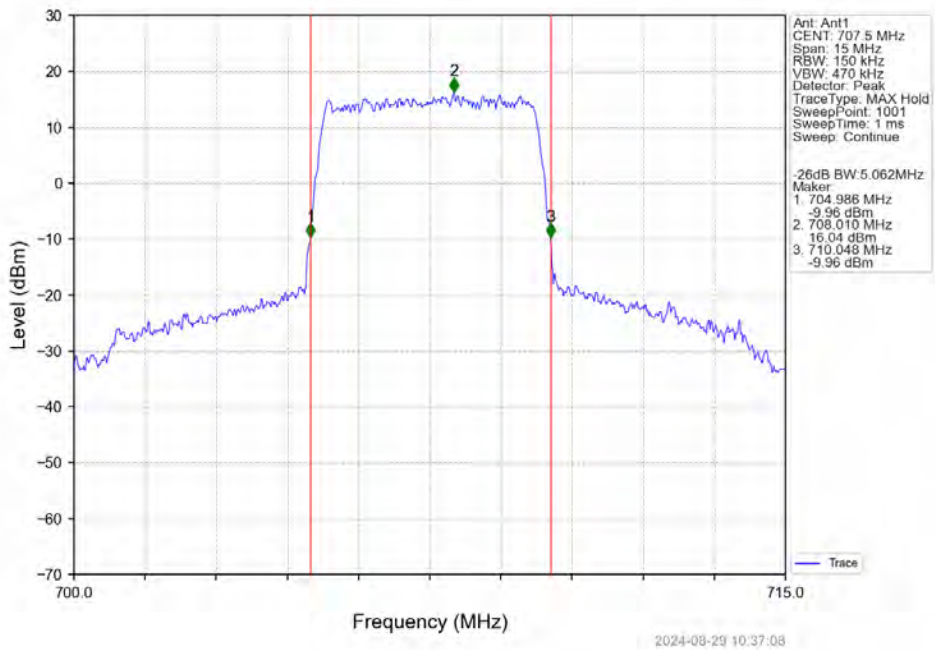




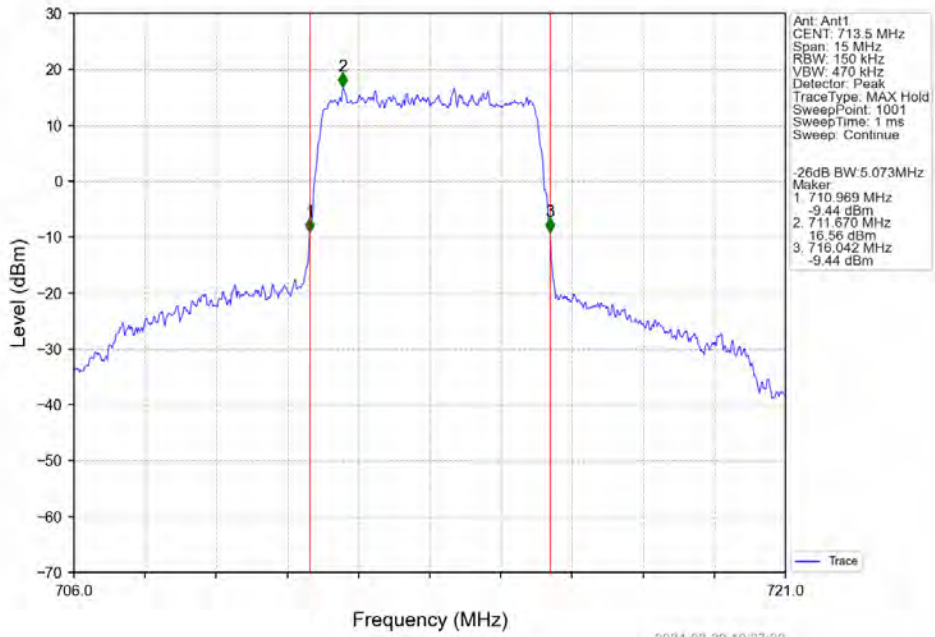
Band12 5MHz QPSK LCH 701.5MHz RB 25 0 NTNV



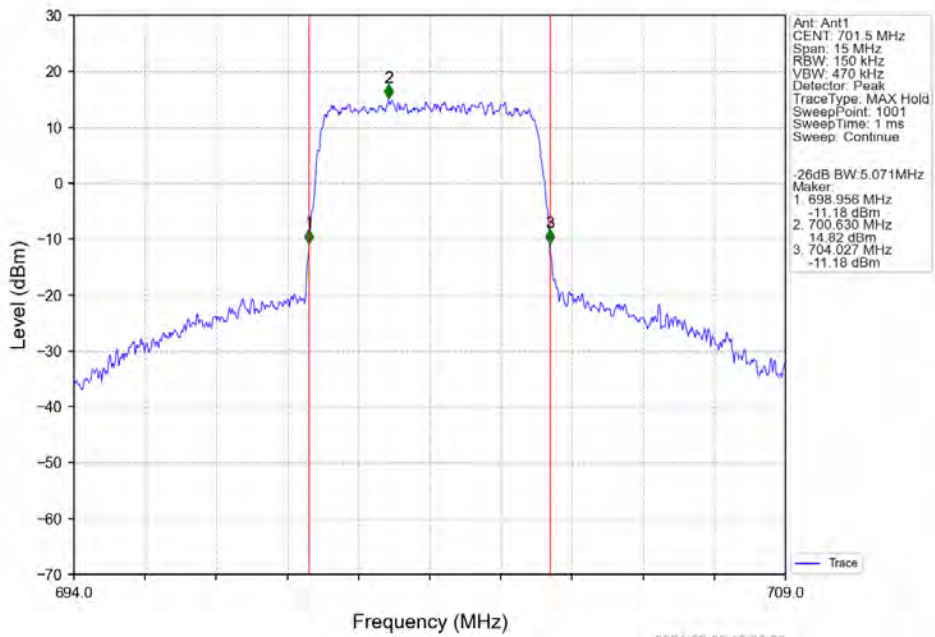
Band12 5MHz QPSK MCH 707.5MHz RB 25 0 NTNV



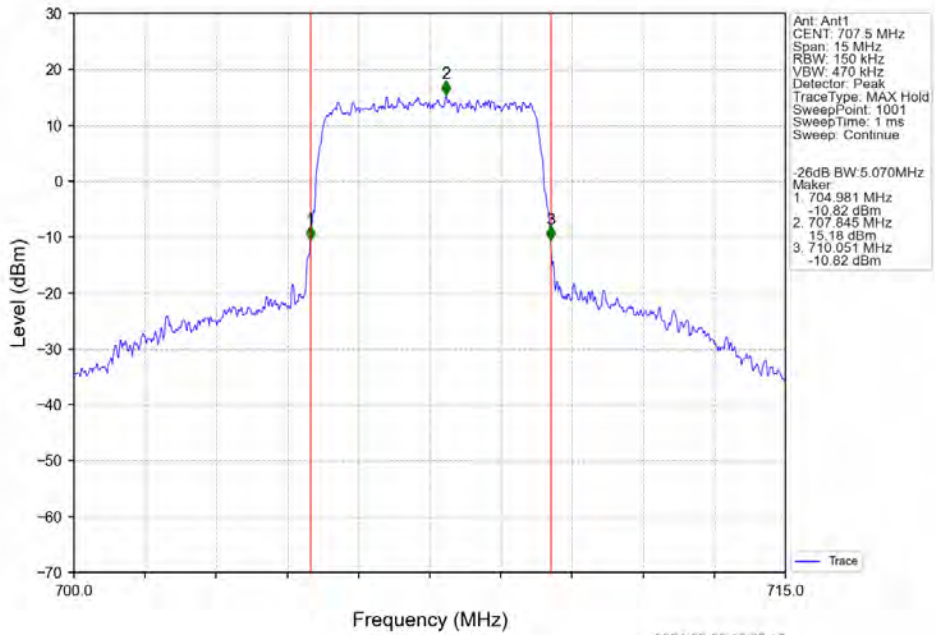
Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTV



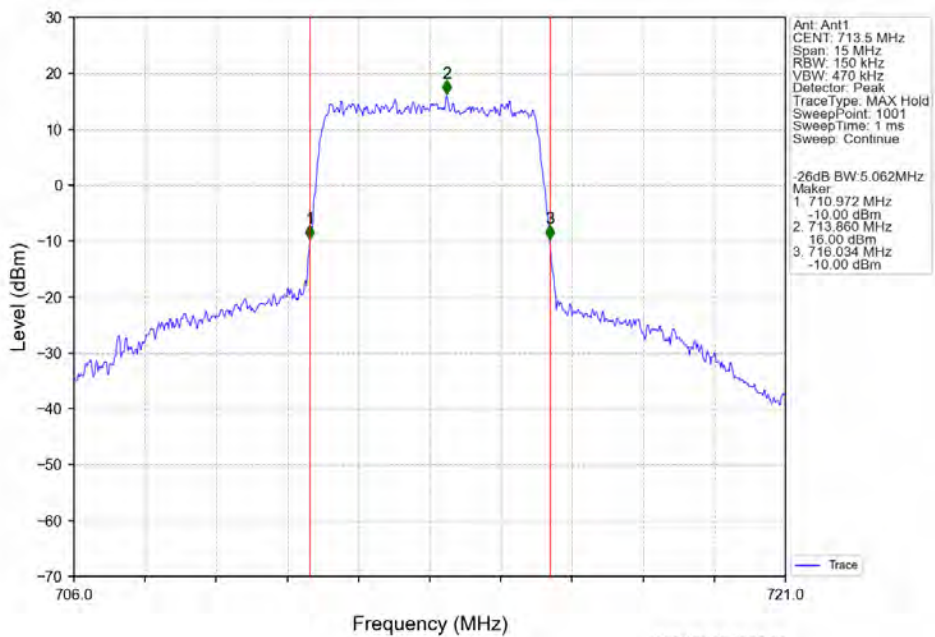
Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTV



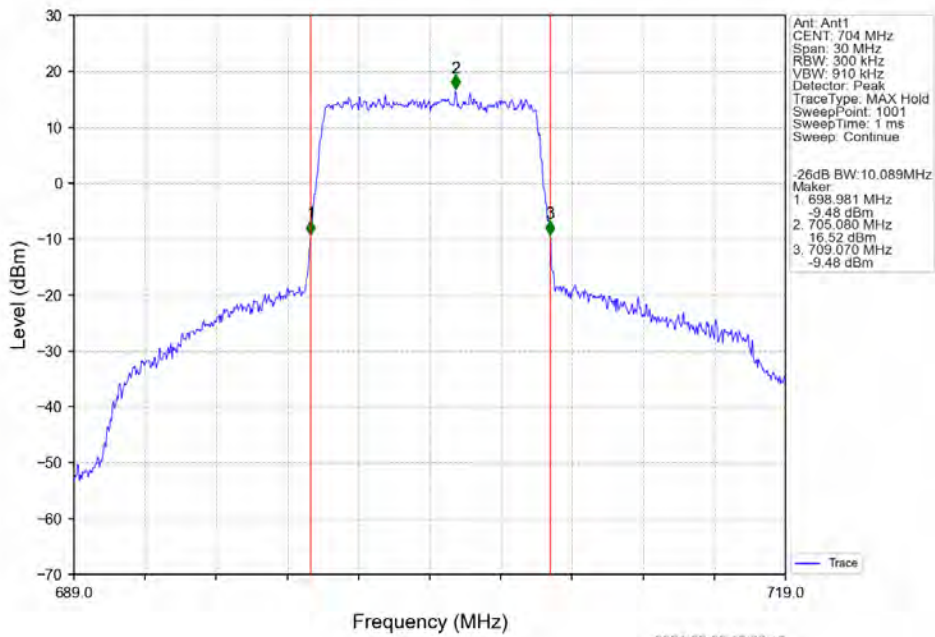
Band12 5MHz 16QAM MCH 707.5MHz RB 25 0 NTNV



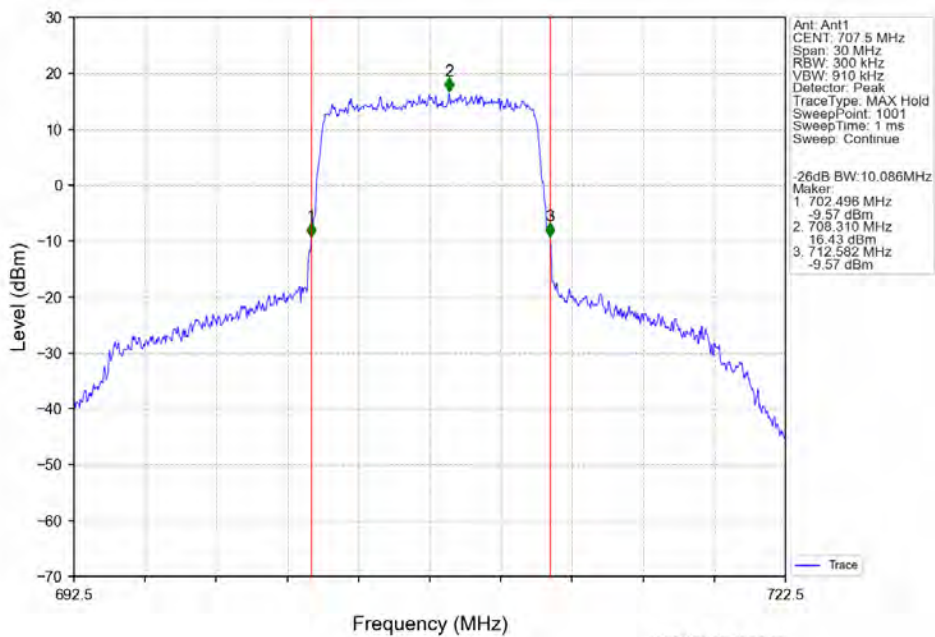
Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTNV



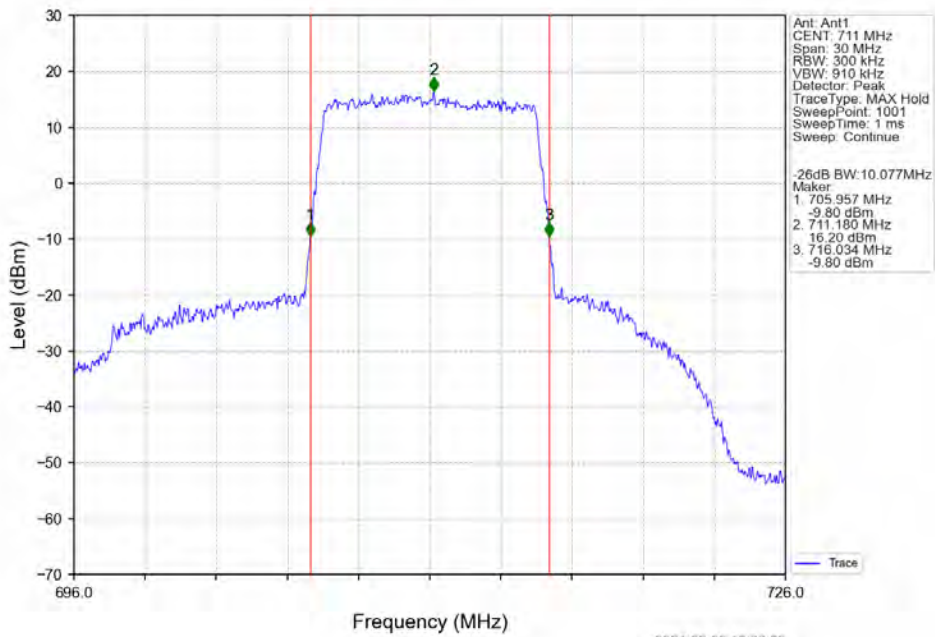
Band12 10MHz QPSK LCH 704MHz RB 50 0 NTV



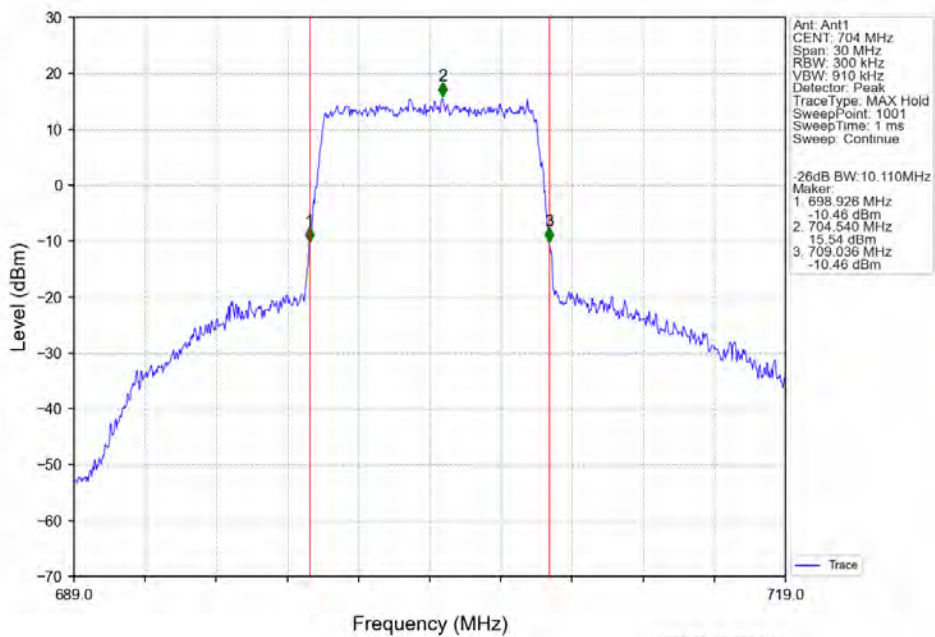
Band12 10MHz QPSK MCH 707.5MHz RB 50 0 NTV



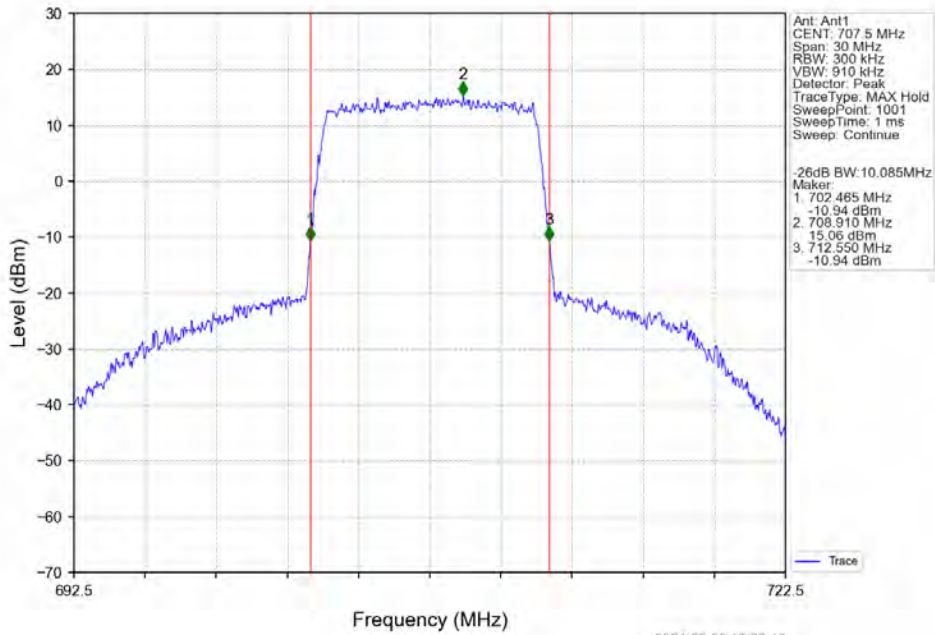
Band12 10MHz QPSK HCH 711MHz RB 50 0 NTV



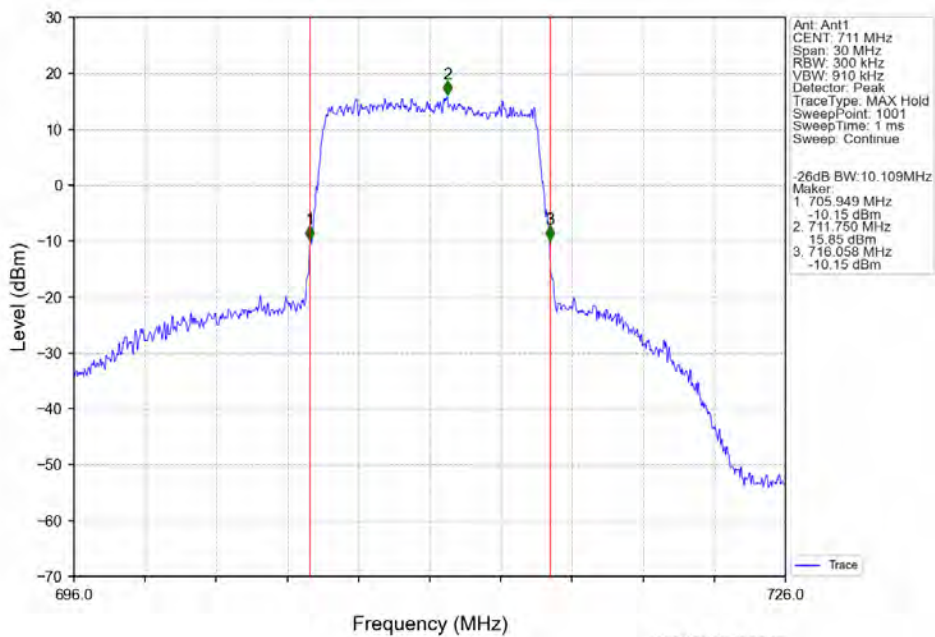
Band12 10MHz 16QAM LCH 704MHz RB 50 0 NTV



Band12 10MHz 16QAM MCH 707.5MHz RB 50 0 NTN



Band12 10MHz 16QAM HCH 711MHz RB 50 0 NTN





## 5. Peak-Average Ratio

### 5.1 Test Result

#### 5.1.1 B12\_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	6	0	5.34	<=13	Pass
	707.5	6	0	5.35	<=13	Pass
	715.3	6	0	5.20	<=13	Pass
16QAM	699.7	6	0	6.12	<=13	Pass
	707.5	6	0	6.15	<=13	Pass
	715.3	6	0	6.15	<=13	Pass

#### 5.1.2 B12\_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	15	0	5.31	<=13	Pass
	707.5	15	0	5.41	<=13	Pass
	714.5	15	0	5.50	<=13	Pass
16QAM	700.5	15	0	6.14	<=13	Pass
	707.5	15	0	6.33	<=13	Pass
	714.5	15	0	6.28	<=13	Pass

#### 5.1.3 B12\_5MHz

Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	25	0	5.59	<=13	Pass
	707.5	25	0	5.57	<=13	Pass
	713.5	25	0	5.60	<=13	Pass
16QAM	701.5	25	0	6.33	<=13	Pass
	707.5	25	0	6.30	<=13	Pass
	713.5	25	0	6.25	<=13	Pass

#### 5.1.4 B12\_10MHz

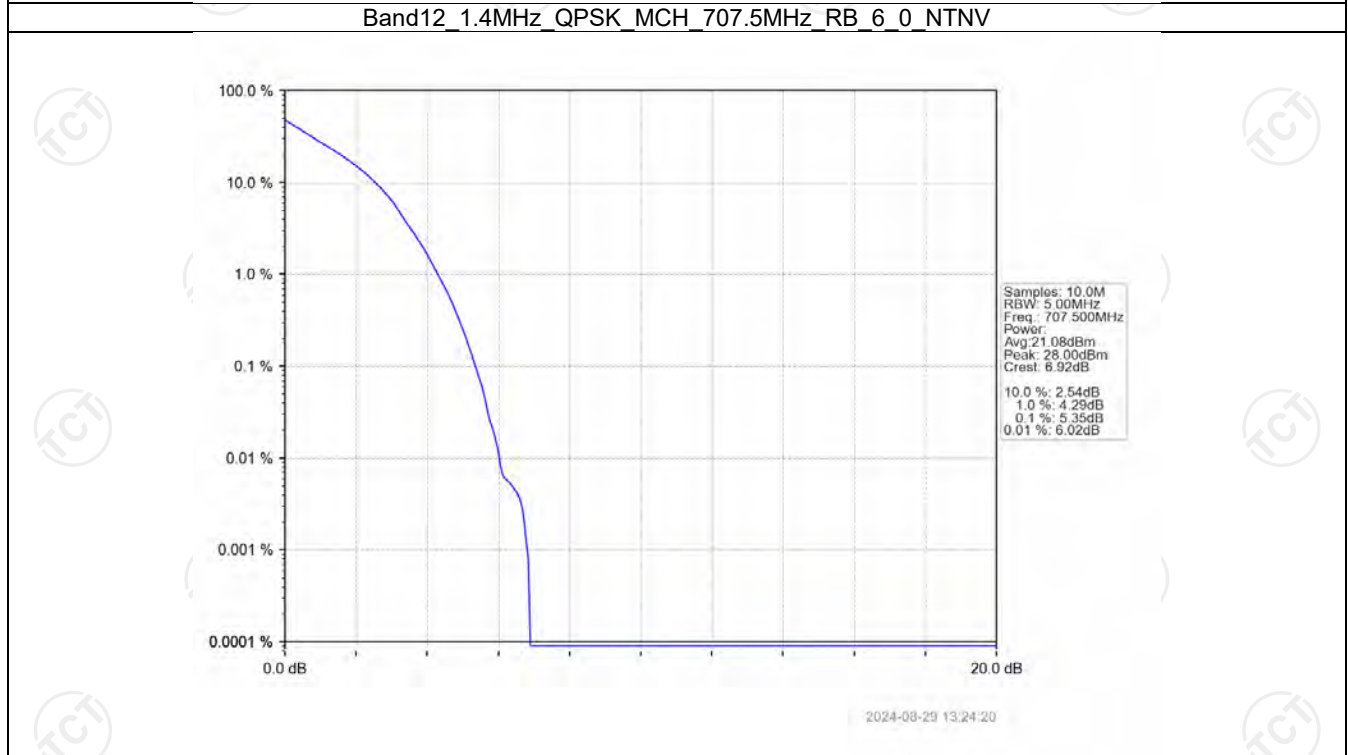
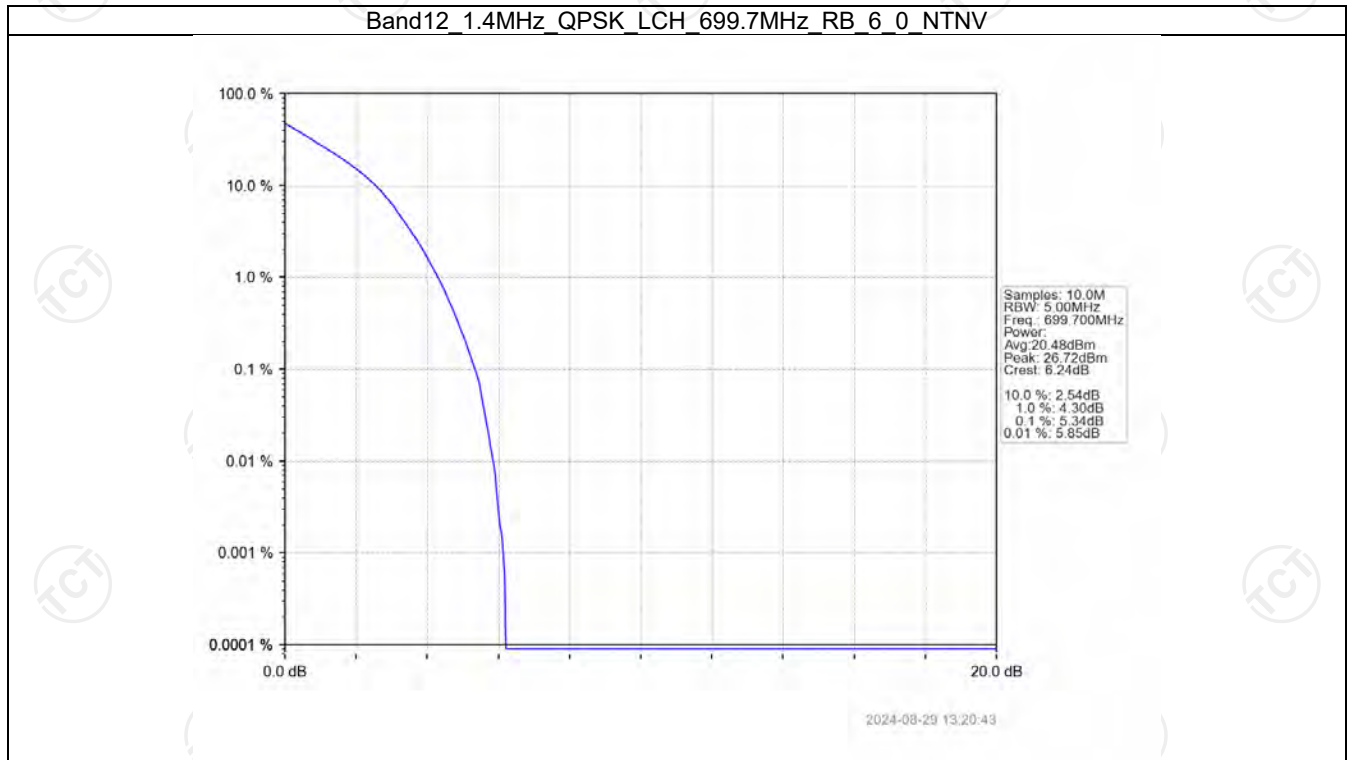
Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	704	50	0	5.62	<=13	Pass
	707.5	50	0	5.47	<=13	Pass
	711	50	0	5.48	<=13	Pass
16QAM	704	50	0	6.35	<=13	Pass
	707.5	50	0	6.30	<=13	Pass

	711	50	0	6.22	<=13	Pass
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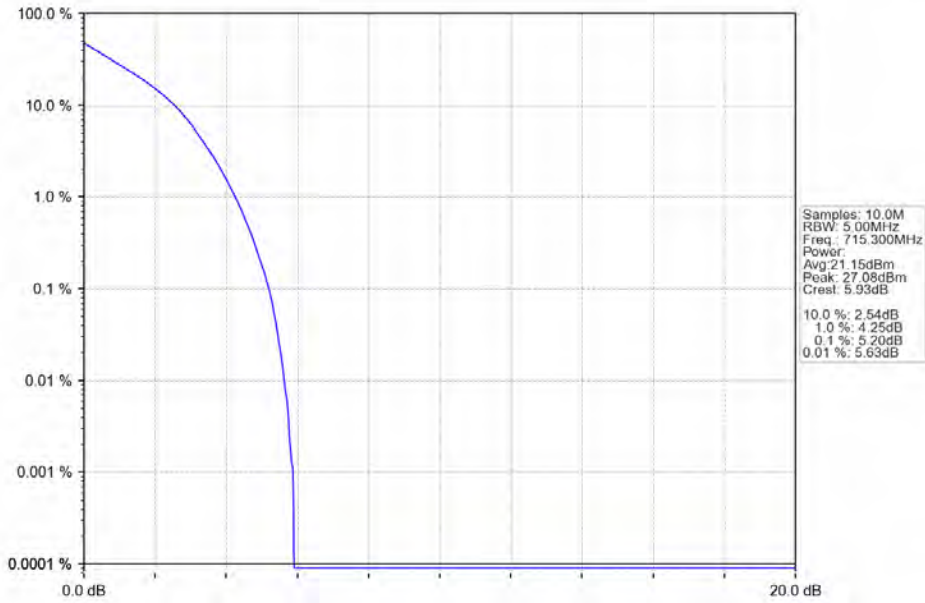


## 5.2 Test Graph

### 5.2.1 B12\_1.4MHz

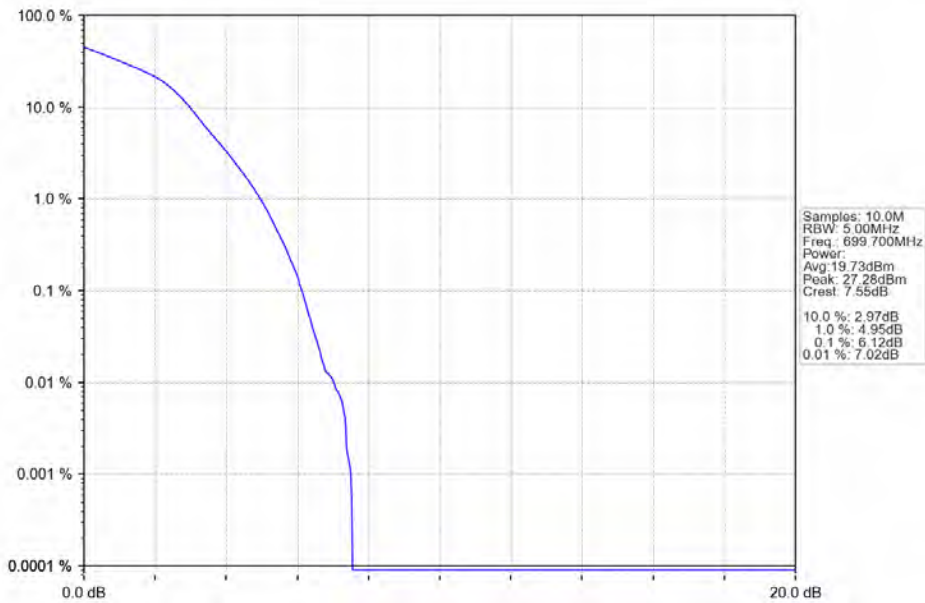


Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTV



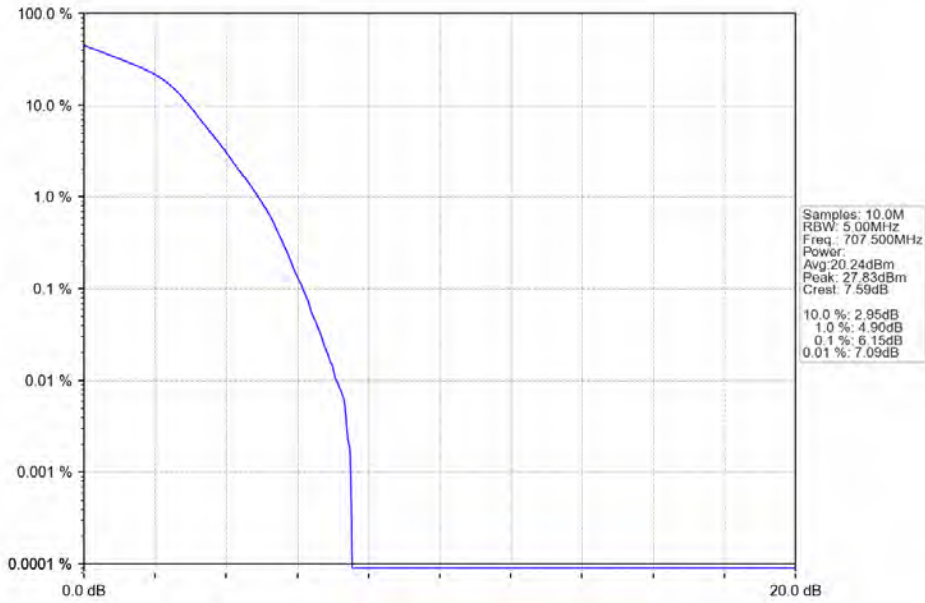
2024-08-29 13:24:48

Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTV



2024-08-29 13:20:56

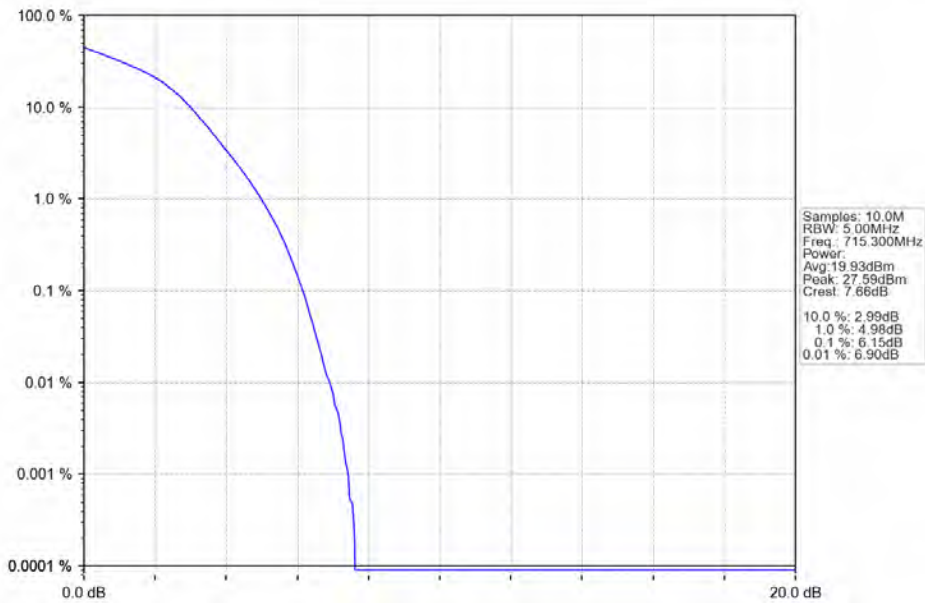
Band12 1.4MHz 16QAM MCH 707.5MHz RB 6 0 NTN



Samples: 10.0M  
RBW: 5.00MHz  
Freq.: 707.500MHz  
Power:  
Avg: 20.24dBm  
Peak: 27.83dBm  
Crest: 7.59dB  
10.0 %: 2.95dB  
1.0 %: 4.90dB  
0.1 %: 6.15dB  
0.01 %: 7.09dB

2024-08-29 13:24:33

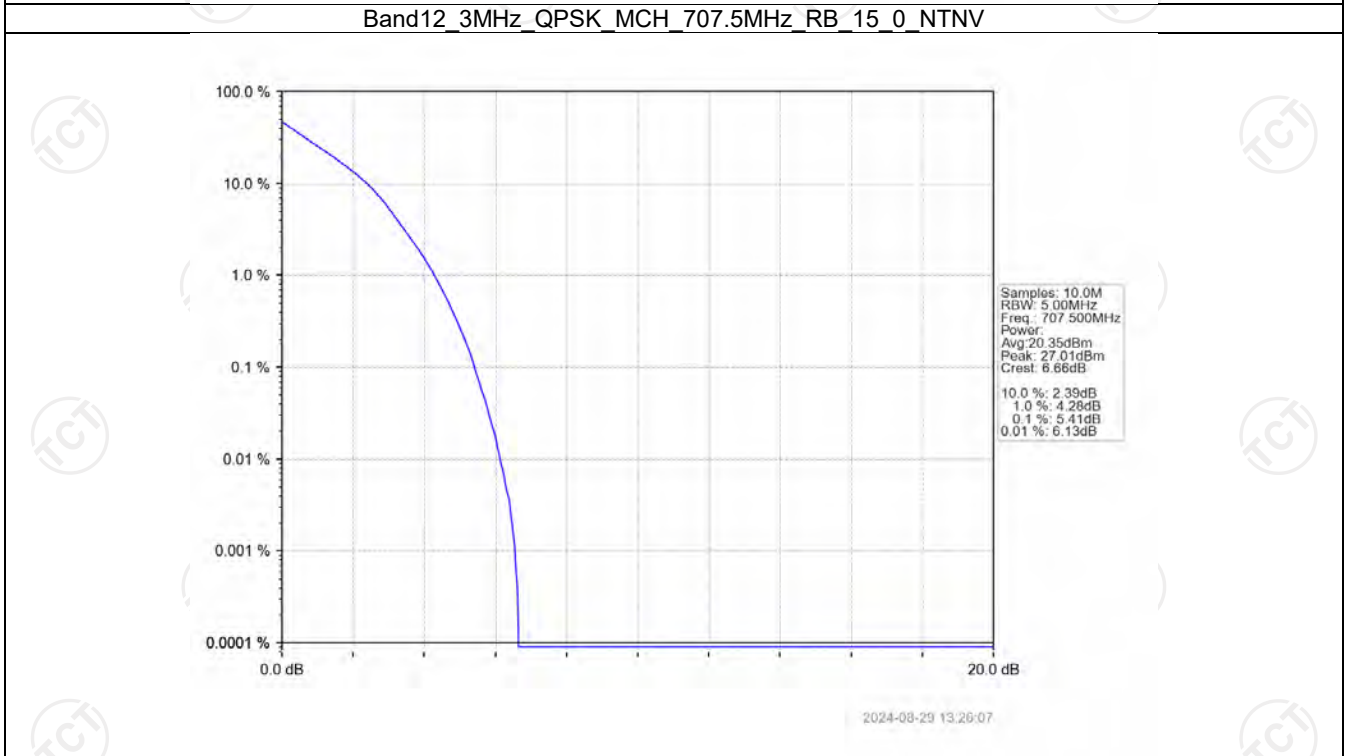
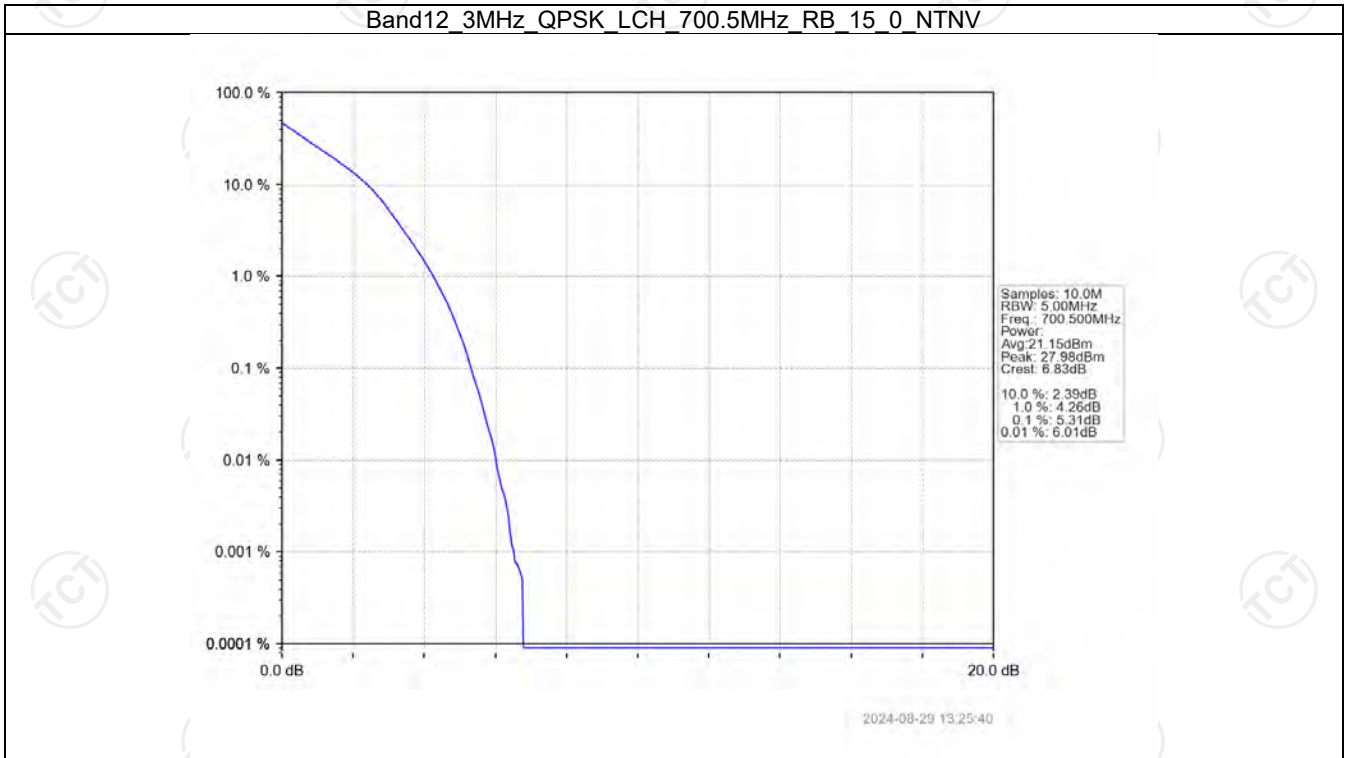
Band12 1.4MHz 16QAM HCH 715.3MHz RB 6 0 NTN



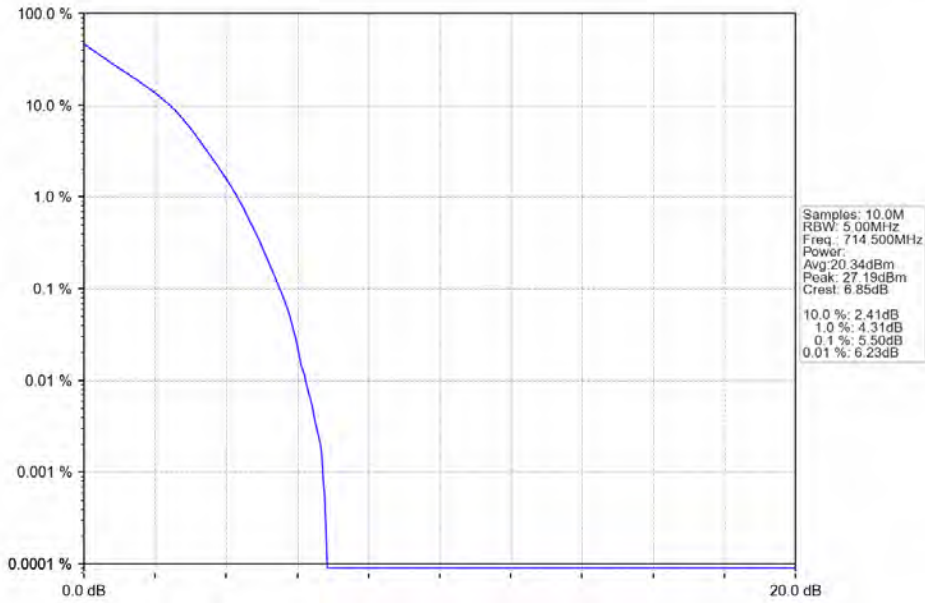
Samples: 10.0M  
RBW: 5.00MHz  
Freq.: 715.300MHz  
Power:  
Avg: 19.93dBm  
Peak: 27.59dBm  
Crest: 7.66dB  
10.0 %: 2.99dB  
1.0 %: 4.98dB  
0.1 %: 6.15dB  
0.01 %: 6.90dB

2024-08-29 13:25:00

5.2.2 B12\_3MHz

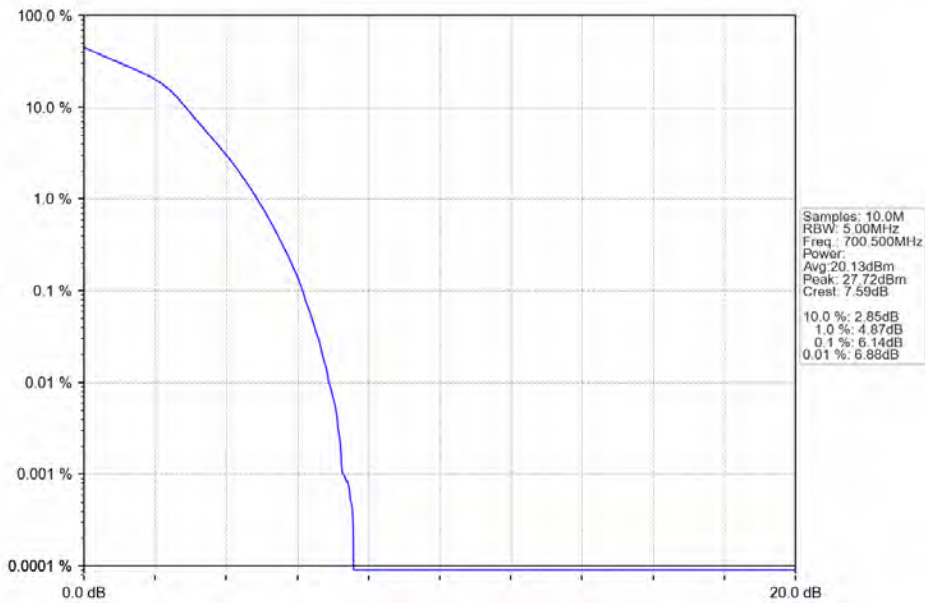


Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTV



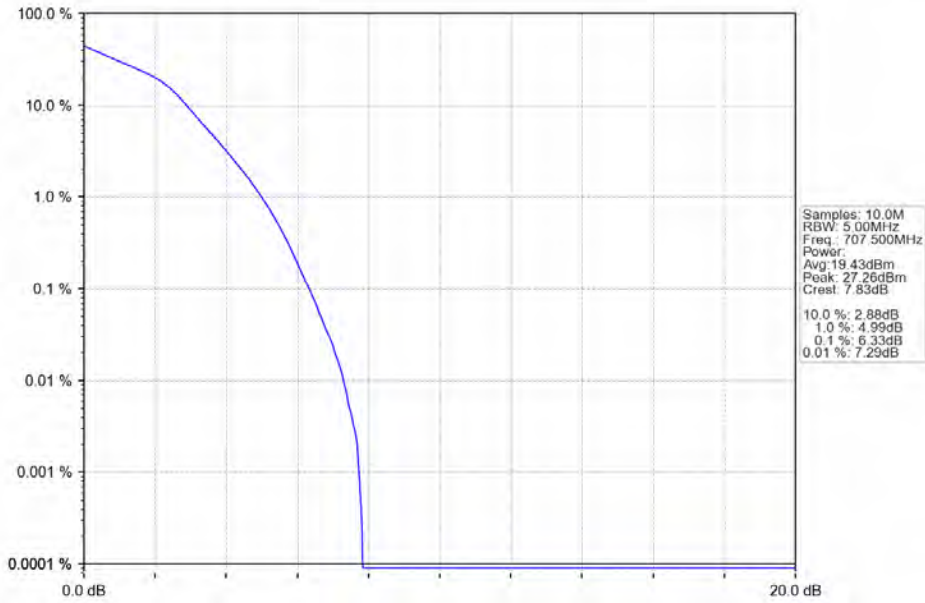
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Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTV



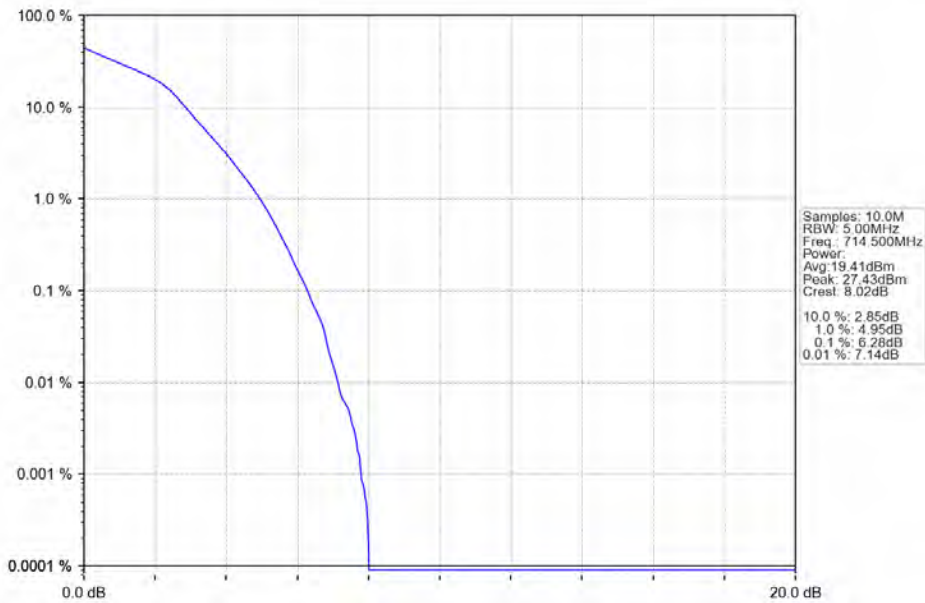
2024-08-29 13:25:53

Band12 3MHz 16QAM MCH 707.5MHz RB 15 0 NTNV



2024-08-29 13:26:20

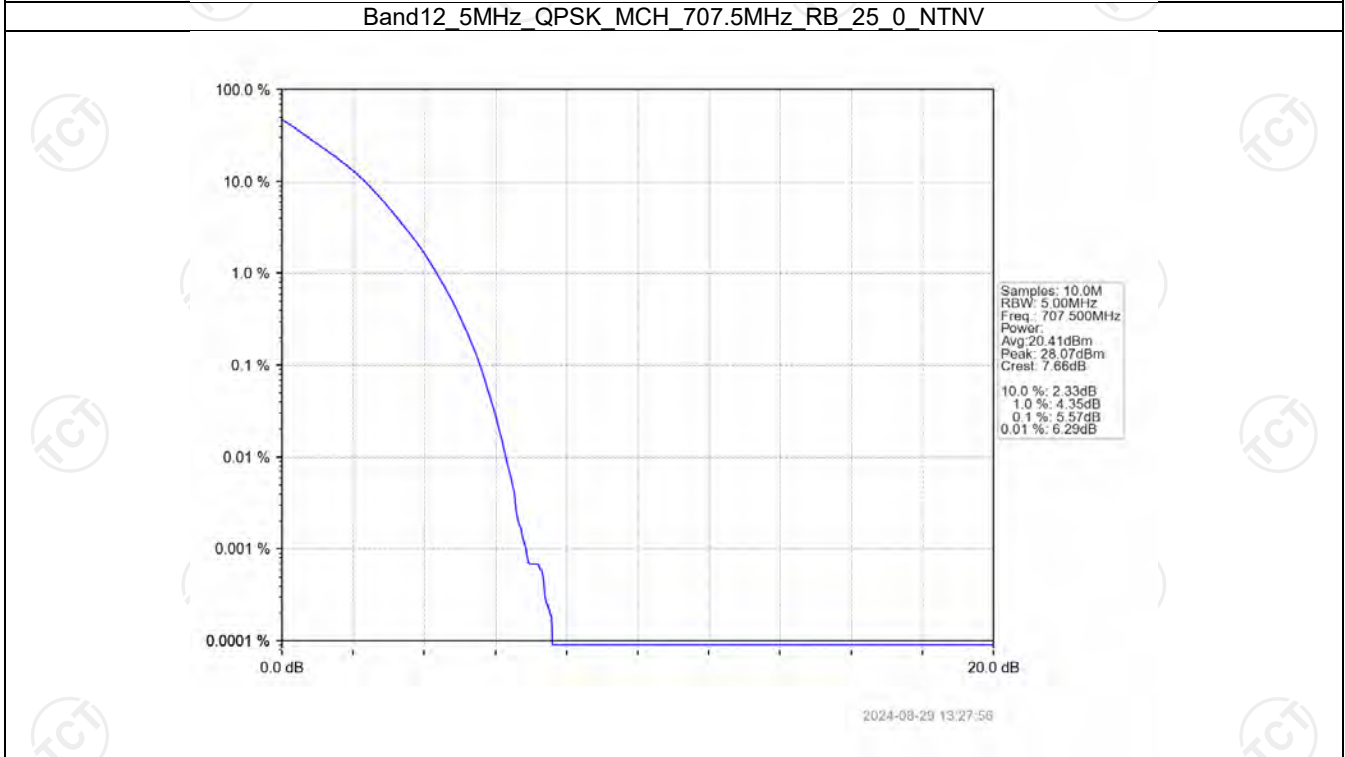
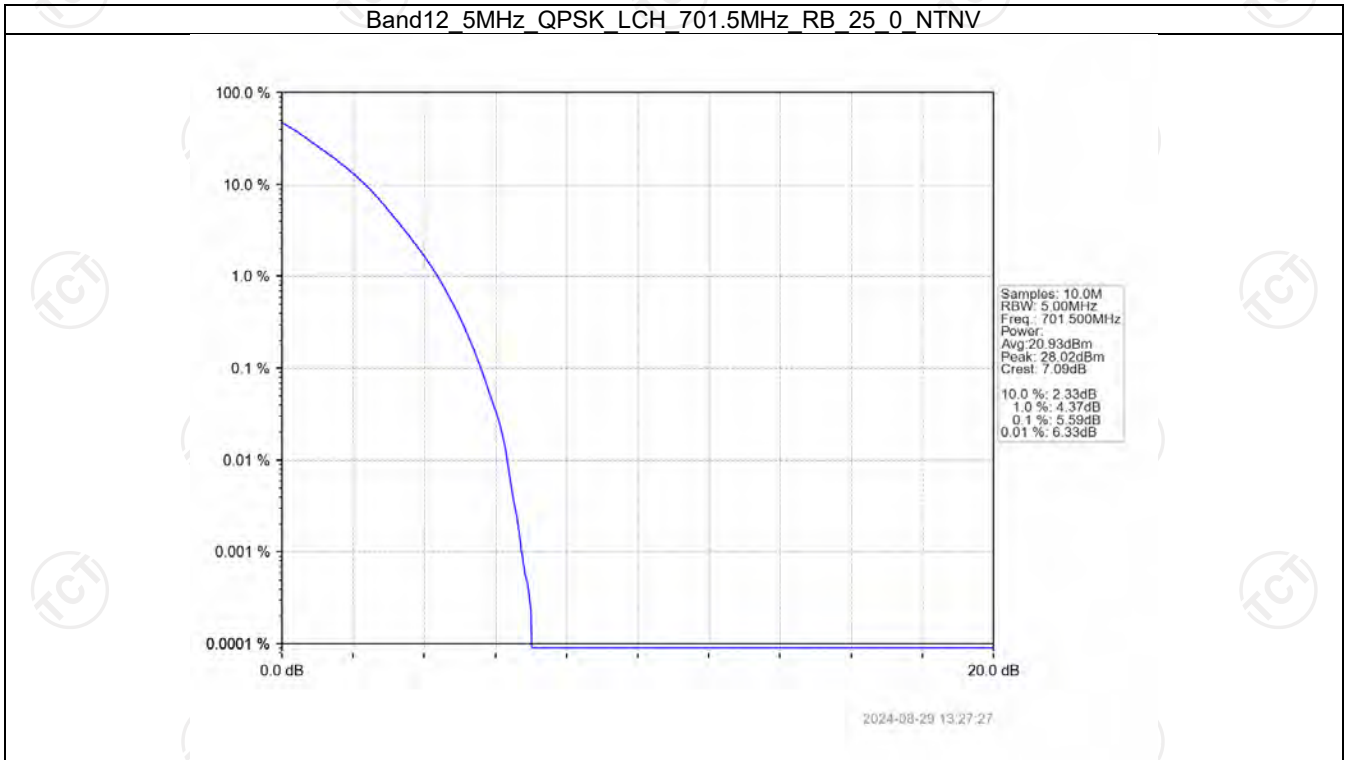
Band12 3MHz 16QAM HCH 714.5MHz RB 15 0 NTNV



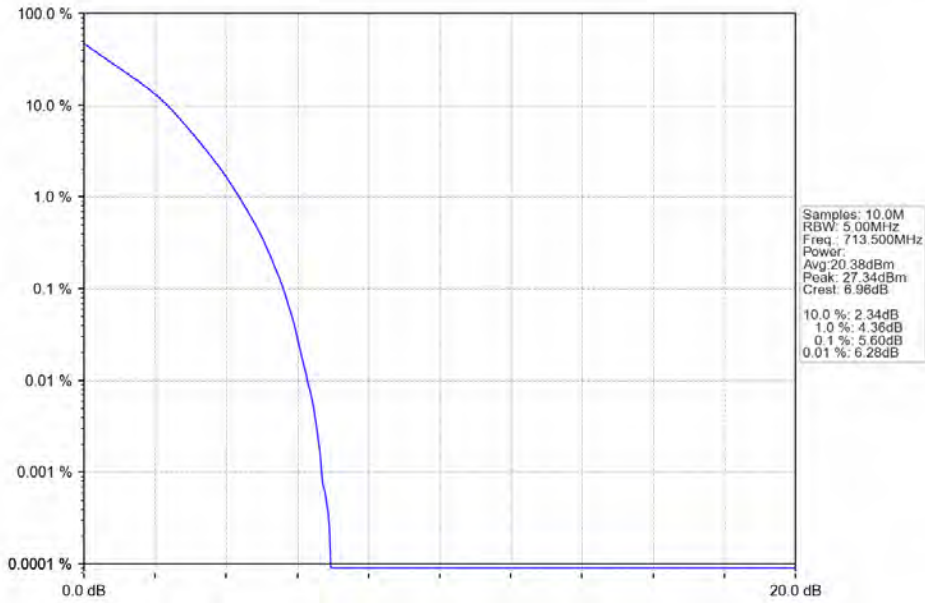
2024-08-29 13:26:48



5.2.3 B12\_5MHz

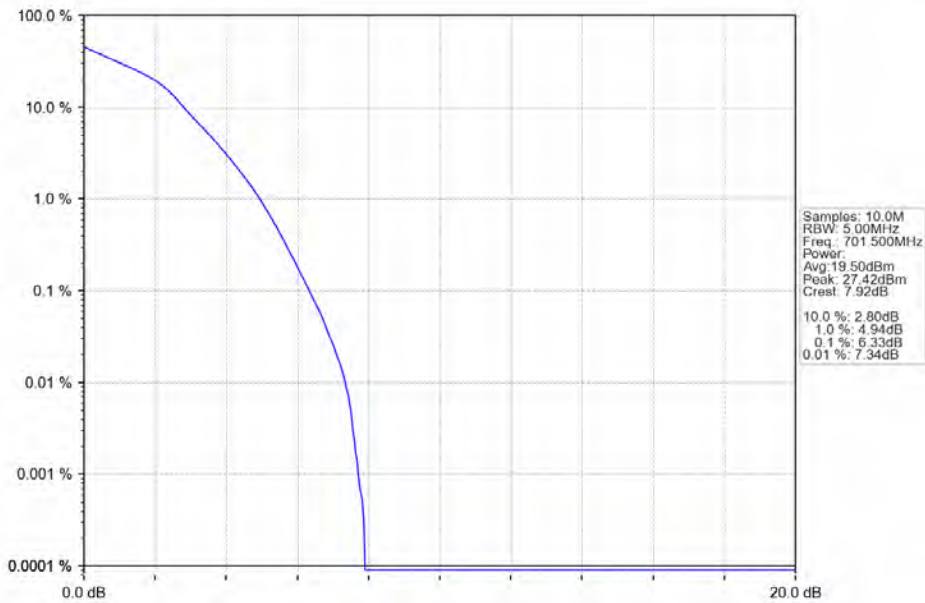


Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTV



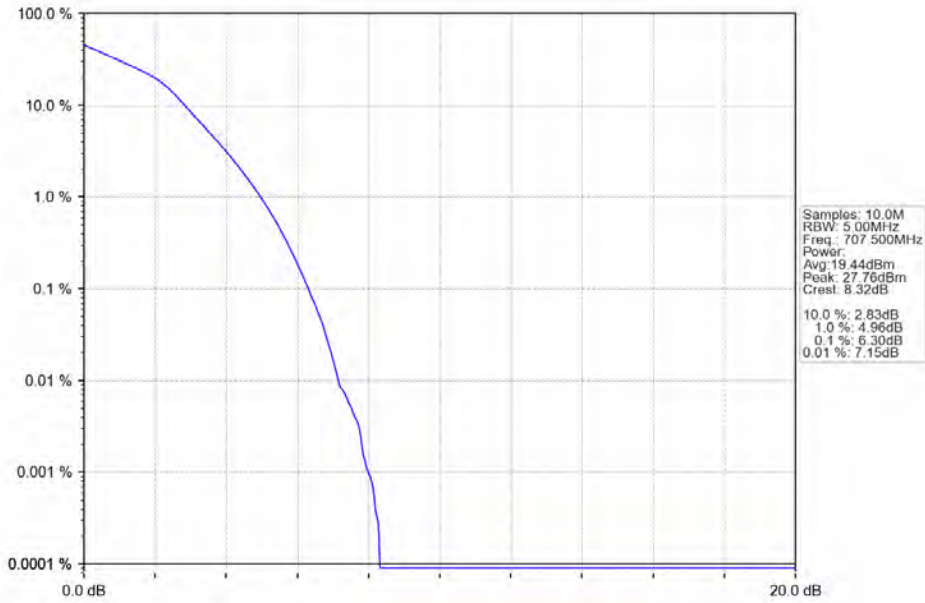
2024-08-29 13:28:24

Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTV



2024-08-29 13:27:40

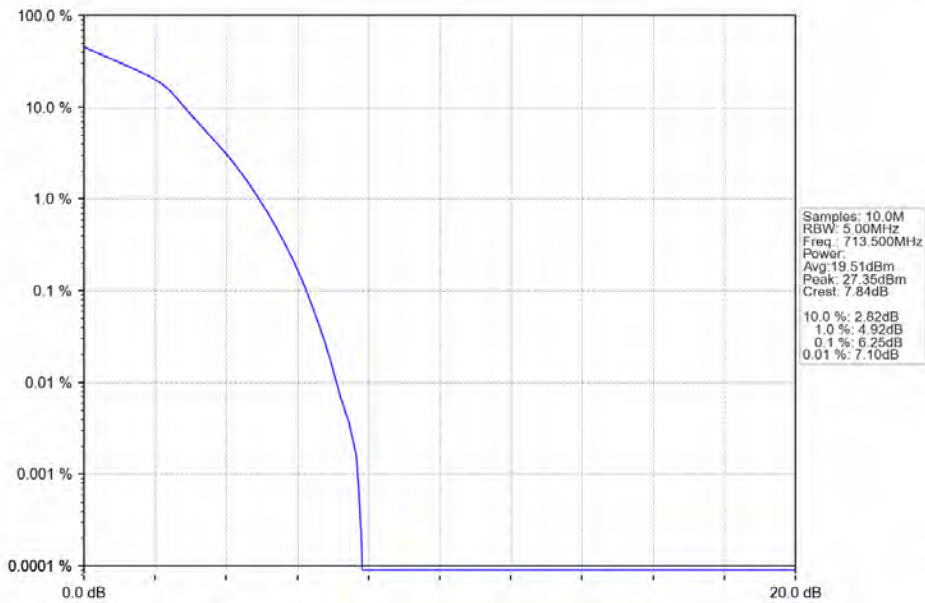
Band12 5MHz 16QAM MCH 707.5MHz RB 25 0 NTNV



Samples: 10.0M  
RBW: 5.00MHz  
Freq.: 707.500MHz  
Power:  
Avg: 19.44dBm  
Peak: 27.76dBm  
Crest: 8.32dB  
10.0 %: 2.83dB  
1.0 %: 4.96dB  
0.1 %: 6.30dB  
0.01 %: 7.15dB

2024-08-29 13:28:10

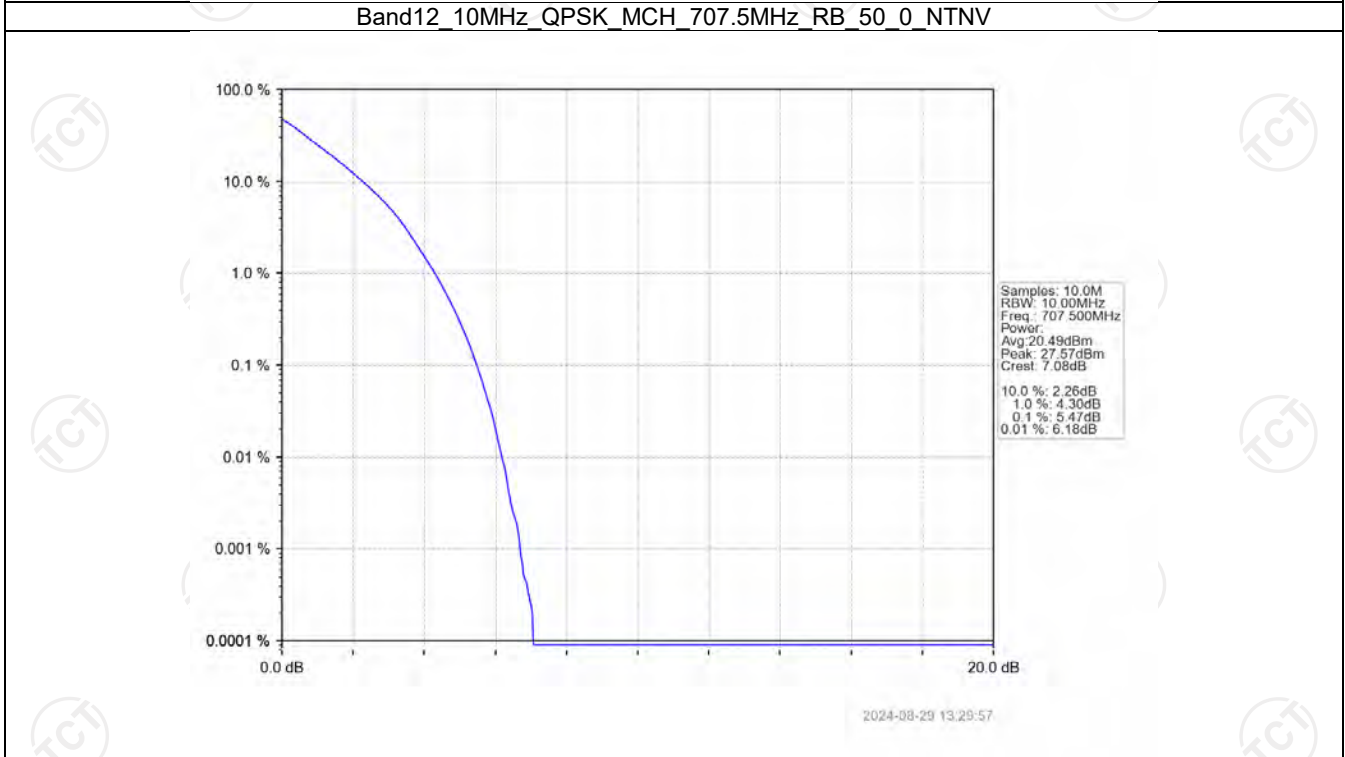
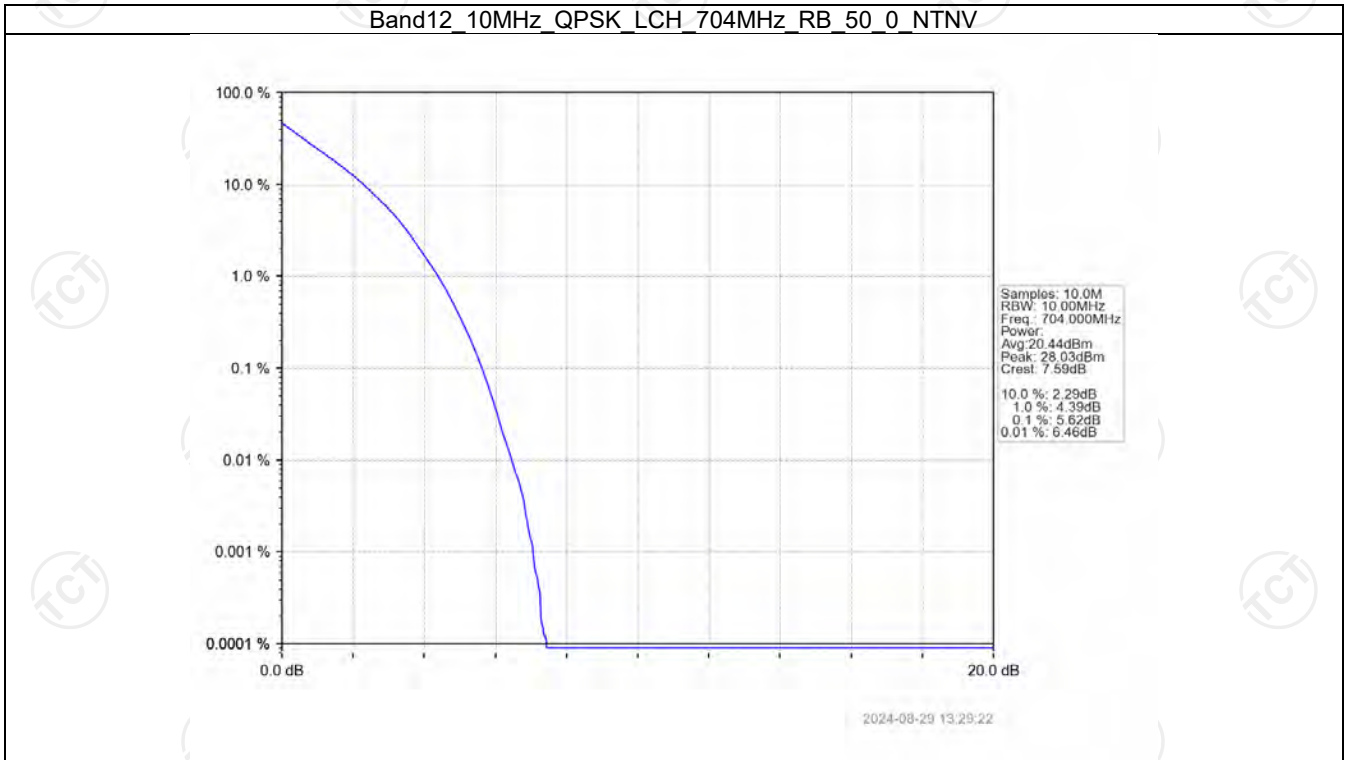
Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTNV



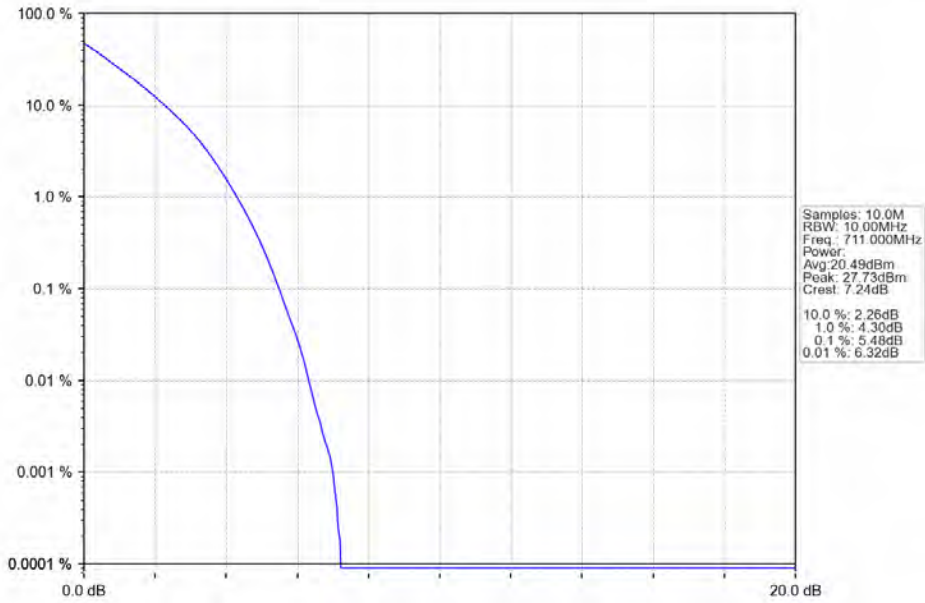
Samples: 10.0M  
RBW: 5.00MHz  
Freq.: 713.500MHz  
Power:  
Avg: 19.51dBm  
Peak: 27.35dBm  
Crest: 7.84dB  
10.0 %: 2.82dB  
1.0 %: 4.92dB  
0.1 %: 6.25dB  
0.01 %: 7.10dB

2024-08-29 13:28:38

5.2.4 B12\_10MHz

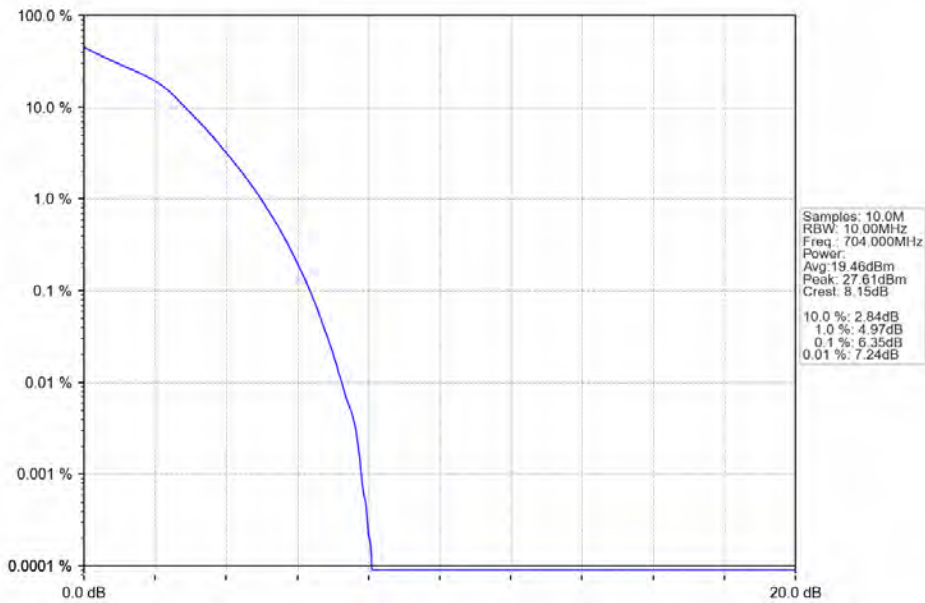


Band12 10MHz QPSK HCH 711MHz RB 50 0 NTV



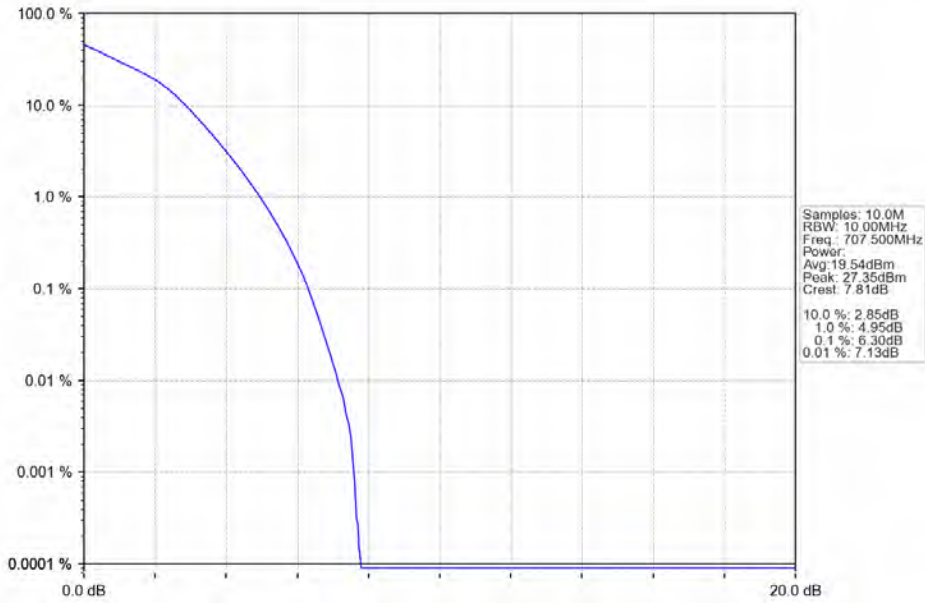
2024-08-29 13:30:31

Band12 10MHz 16QAM LCH 704MHz RB 50 0 NTV



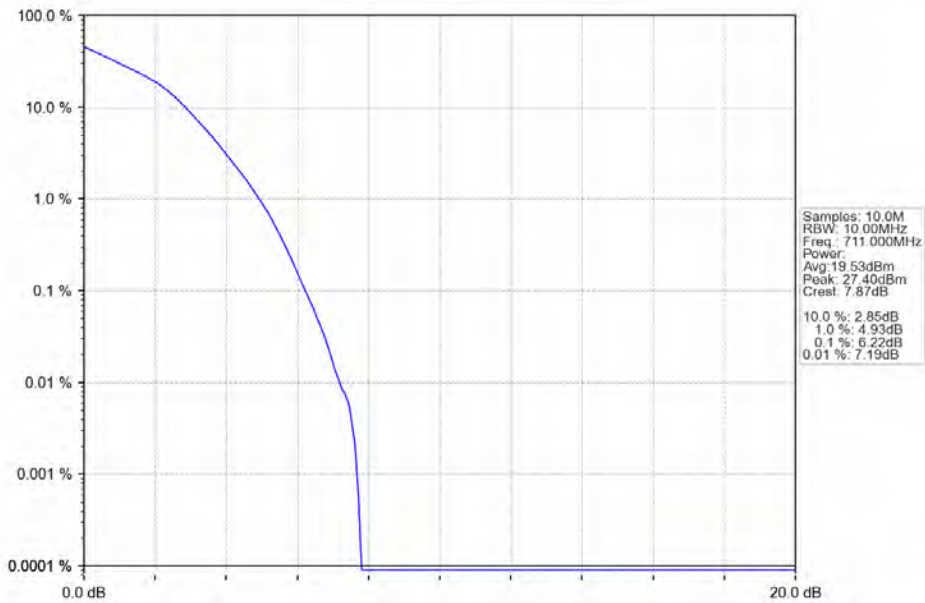
2024-08-29 13:29:38

Band12 10MHz 16QAM MCH 707.5MHz RB 50 0 NTN



2024-08-29 13:30:12

Band12 10MHz 16QAM HCH 711MHz RB 50 0 NTN



2024-08-29 13:30:46

## 6. Spurious Emission

### 6.1 Test Result

#### 6.1.1 B12\_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		715.3	1	0	Refer To Test Graph	
				5	Refer To Test Graph	
			6	0	Refer To Test Graph	
16QAM	699.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		715.3	1	0	Refer To Test Graph	
				5	Refer To Test Graph	
			6	0	Refer To Test Graph	

#### 6.1.2 B12\_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		714.5	1	0	Refer To Test Graph	
				14	Refer To Test Graph	
			15	0	Refer To Test Graph	
16QAM	700.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		714.5	1	0	Refer To Test Graph	
				14	Refer To Test Graph	
			15	0	Refer To Test Graph	

#### 6.1.3 B12\_5MHz

Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		713.5	1	0	Refer To Test Graph	
				24	Refer To Test Graph	
			25	0	Refer To Test Graph	
16QAM	701.5	1	0	Refer To Test Graph		Pass

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

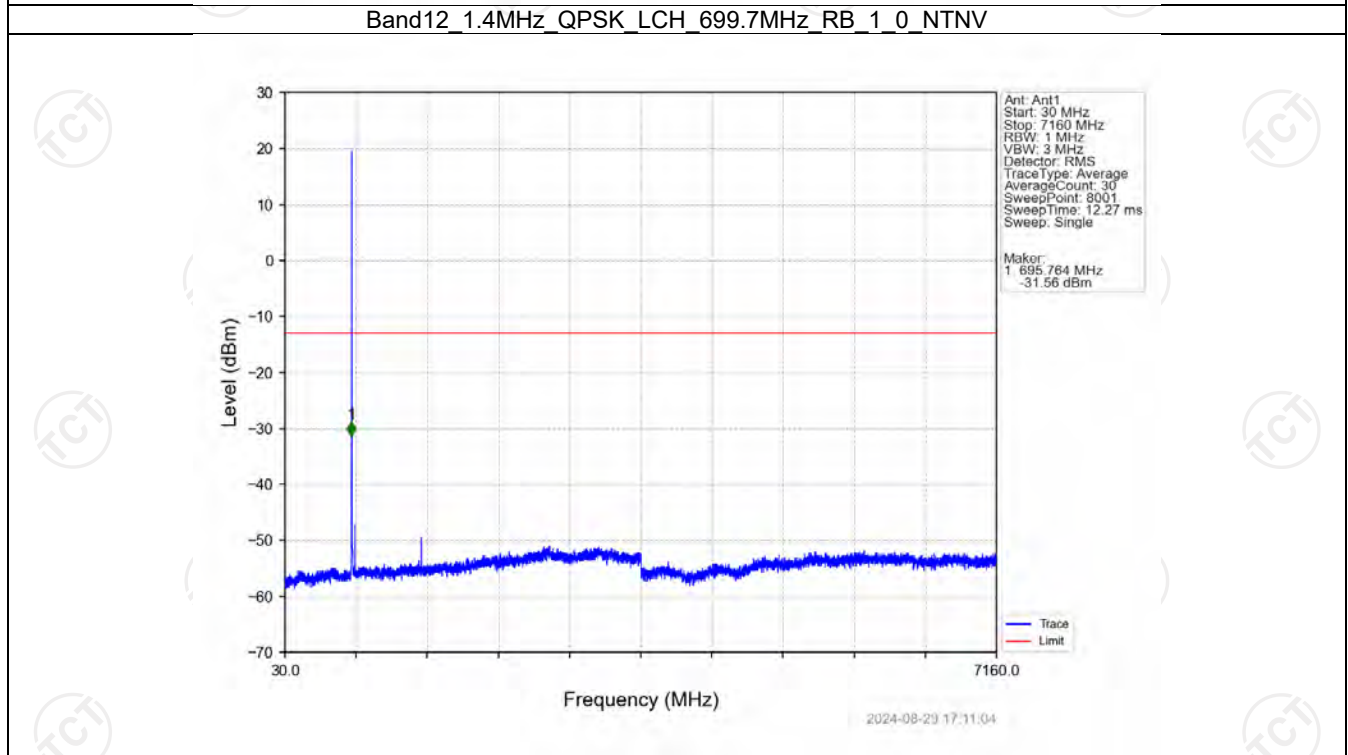
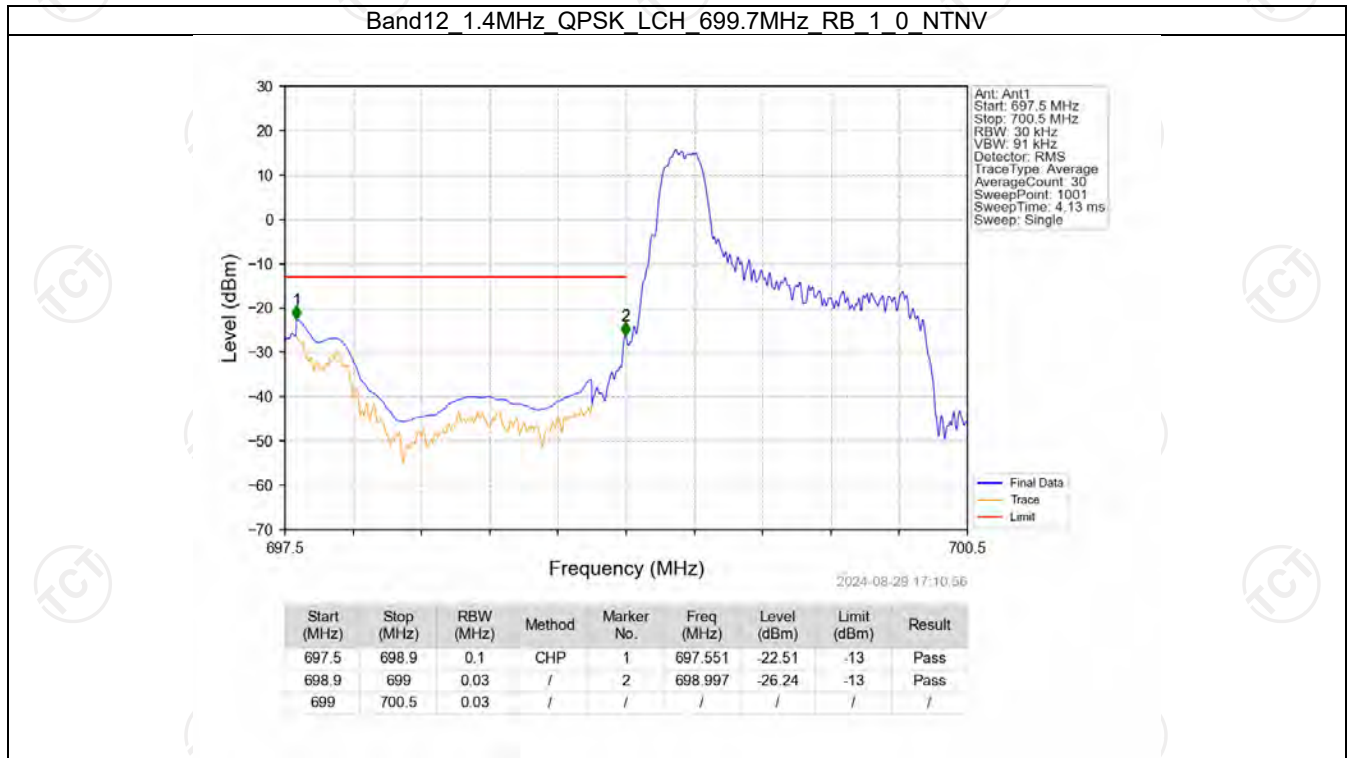
6.1.4 B12\_10MHz

Band: 12 / Bandwidth: 10MHz / 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
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	711		1	49	Refer To Test Graph	
		50		0	Refer To Test Graph	
16QAM	704	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
		1	0	Refer To Test Graph		Pass
	711		1	49	Refer To Test Graph	
		50		0	Refer To Test Graph	

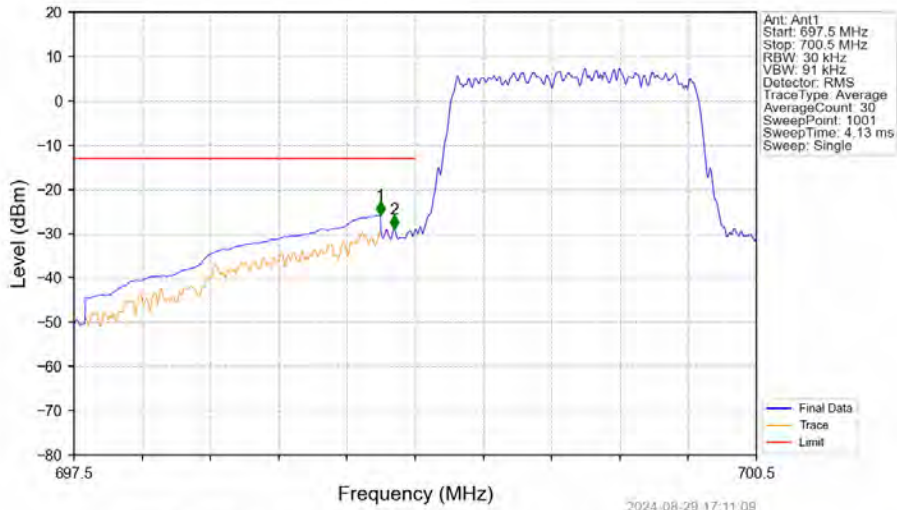


## 6.2 Test Graph

### 6.2.1 B12\_1.4MHz

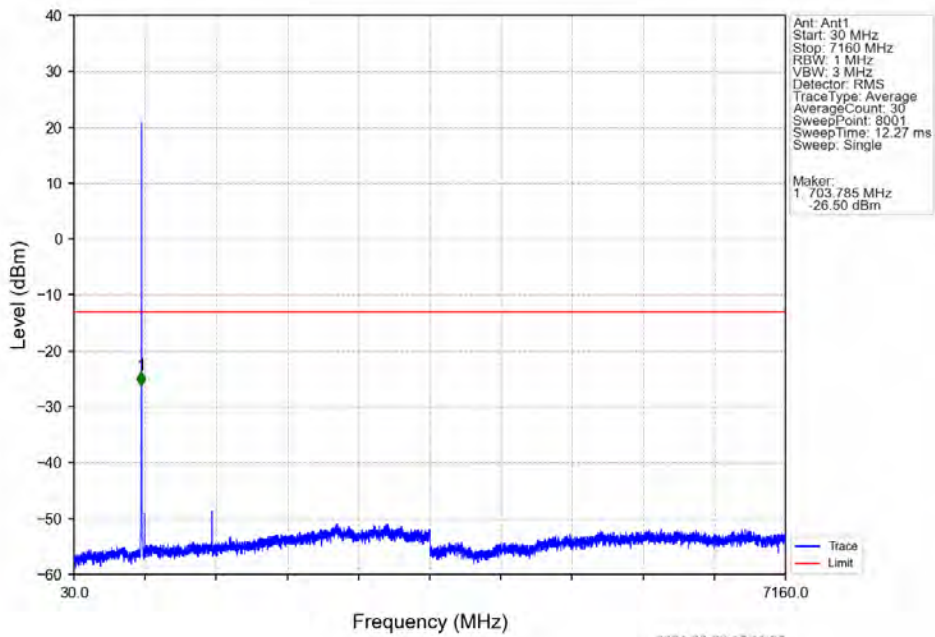


Band12 1.4MHz QPSK LCH 699.7MHz RB 6 0 NTV

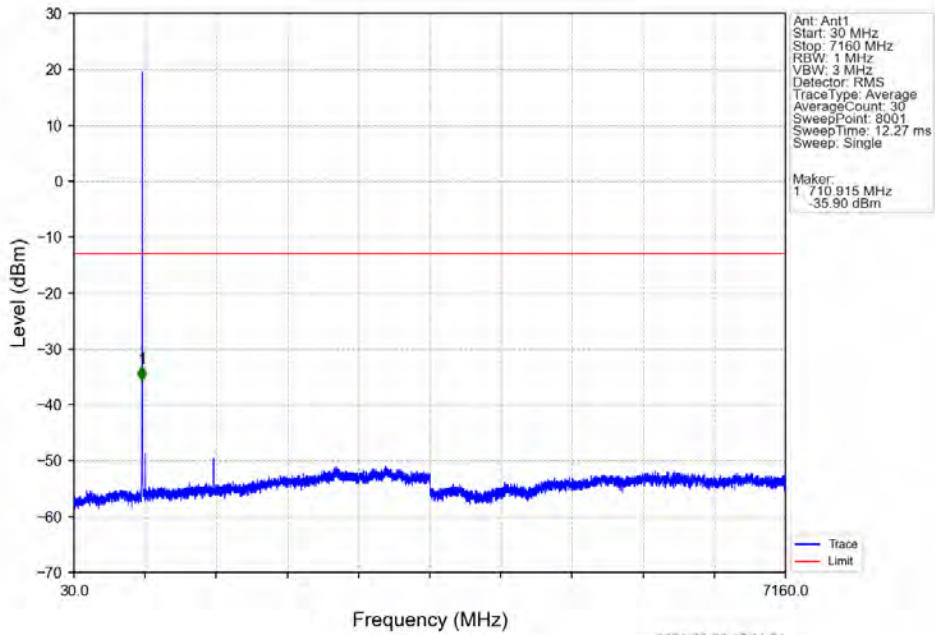


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.847	-25.90	-13	Pass
698.9	699	0.03	/	2	698.907	-28.89	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

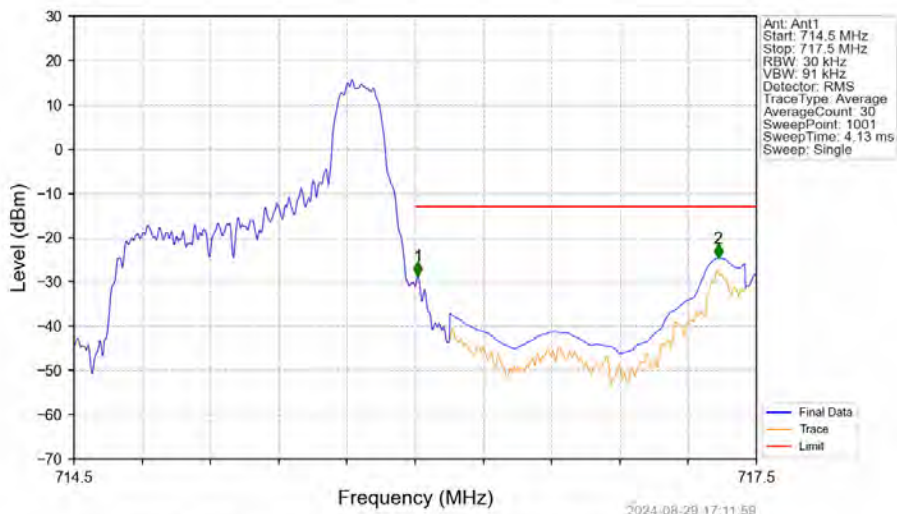
Band12 1.4MHz QPSK MCH 707.5MHz RB 1 0 NTV



Band12 1.4MHz QPSK HCH 715.3MHz RB 1 0 NTV

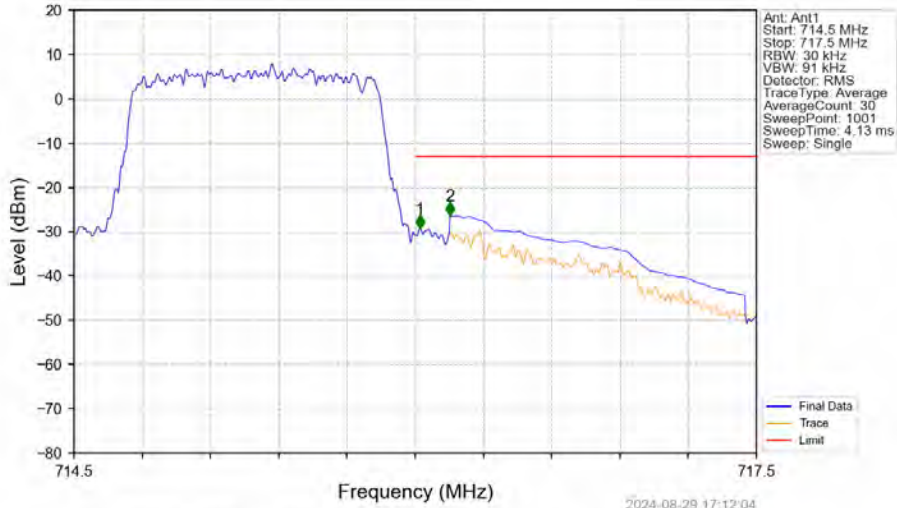


Band12 1.4MHz QPSK HCH 715.3MHz RB 1 5 NTV



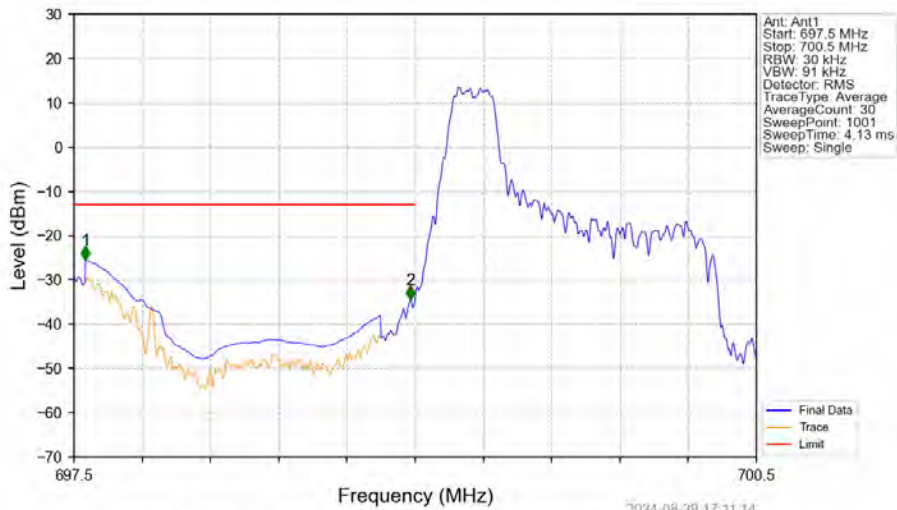
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.012	-28.64	-13	Pass
716.1	717.5	0.1	CHP	2	717.332	-24.62	-13	Pass

Band12 1.4MHz QPSK HCH 715.3MHz RB 6 0 NTV



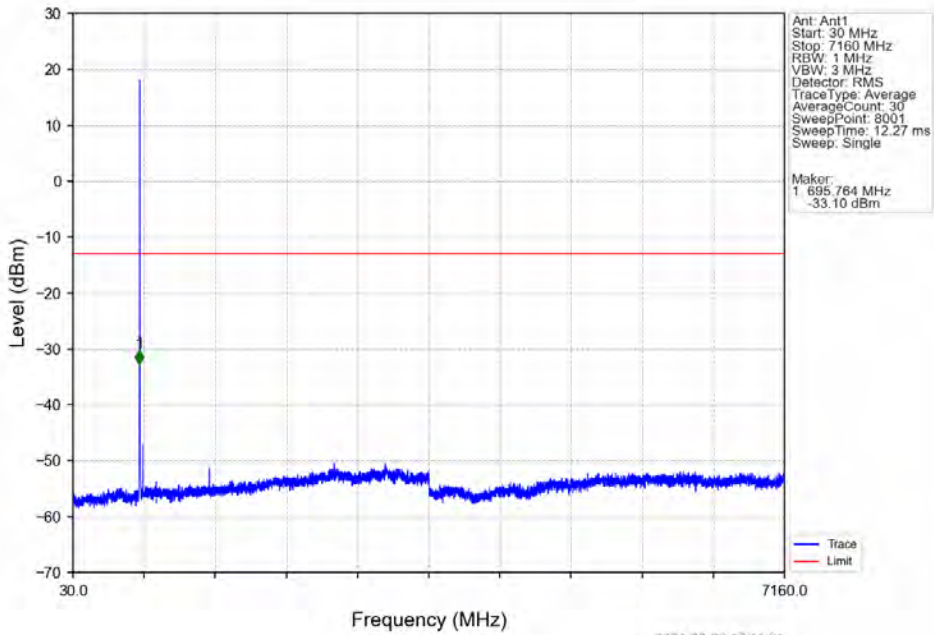
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.021	-29.31	-13	Pass
716.1	717.5	0.1	CHP	2	716.153	-26.42	-13	Pass

Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTV

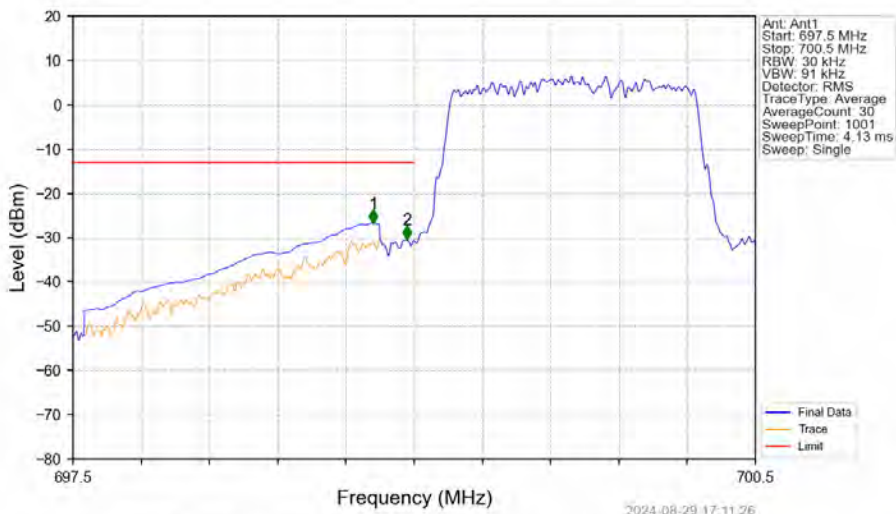


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	697.551	-25.56	-13	Pass
698.9	699	0.03	/	2	698.979	-34.37	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

Band12 1.4MHz 16QAM LCH 699.7MHz RB 1 0 NTNV

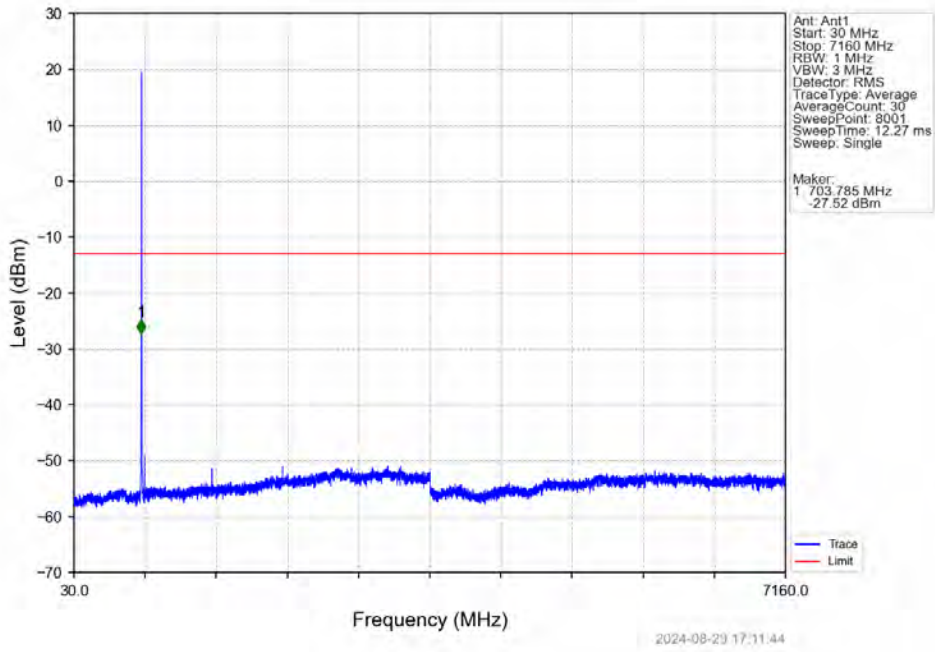


Band12 1.4MHz 16QAM LCH 699.7MHz RB 6 0 NTNV

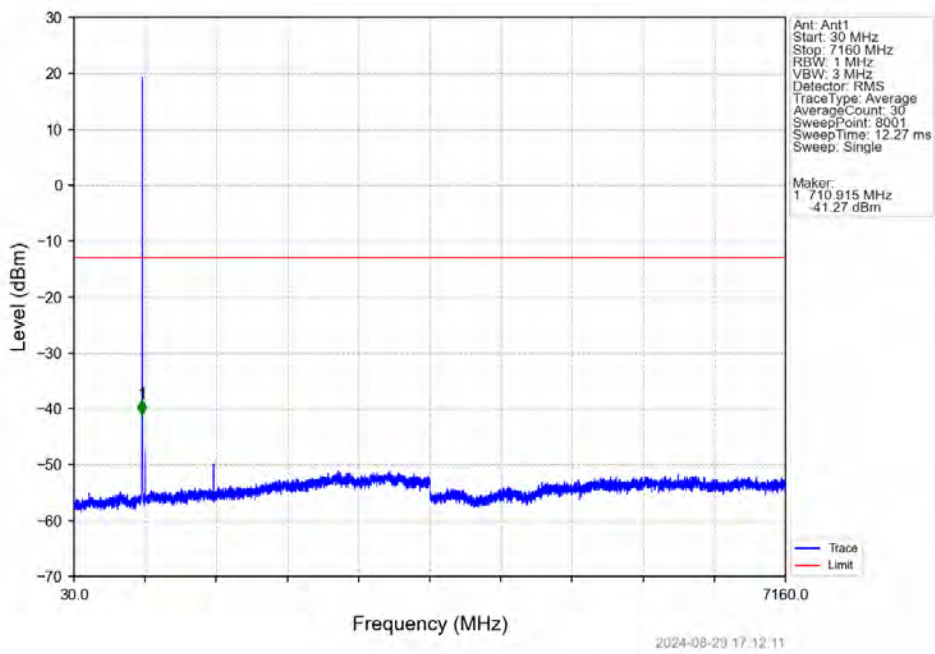


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
697.5	698.9	0.1	CHP	1	698.820	-26.70	-13	Pass
698.9	699	0.03	/	2	698.967	-30.46	-13	Pass
699	700.5	0.03	/	/	/	/	/	/

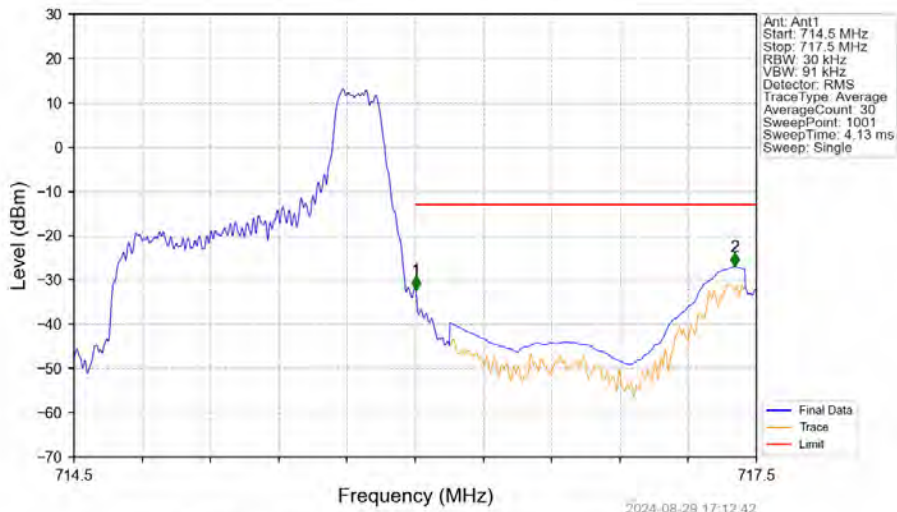
Band12 1.4MHz 16QAM MCH 707.5MHz RB 1 0 NTN



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

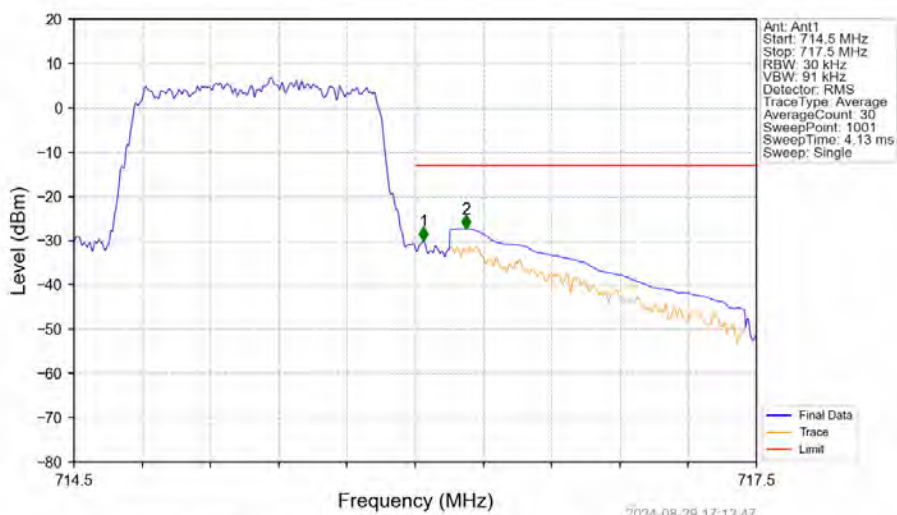


Band12 1.4MHz 16QAM HCH 715.3MHz RB 1 5 NTNV



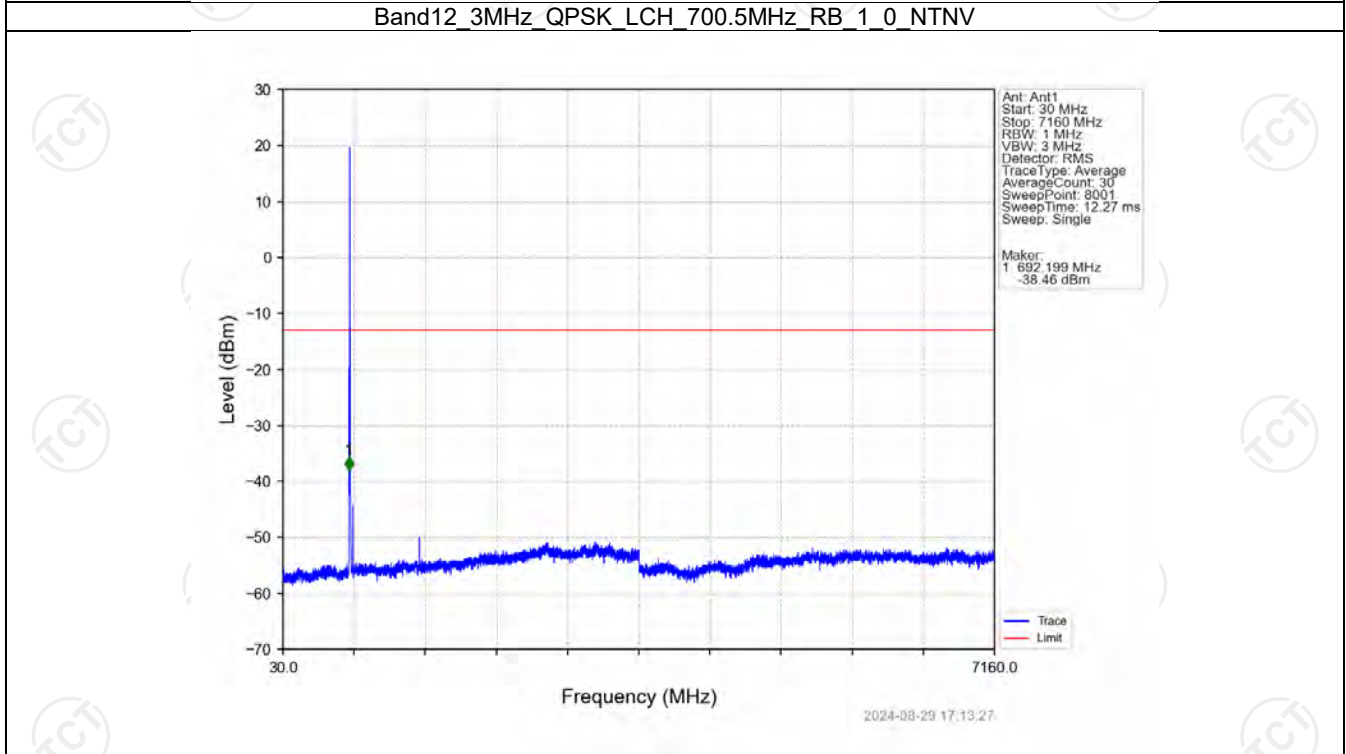
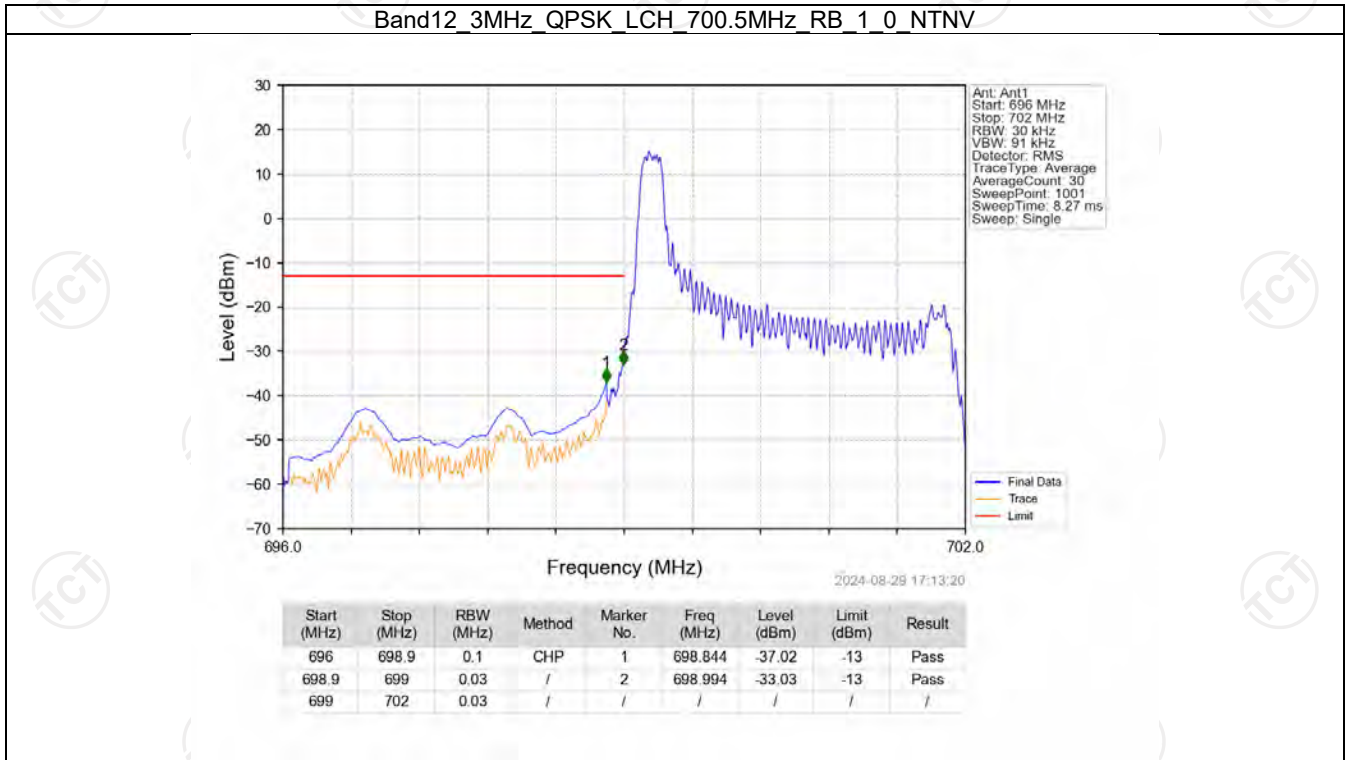
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.003	-32.20	-13	Pass
716.1	717.5	0.1	CHP	2	717.404	-27.00	-13	Pass

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



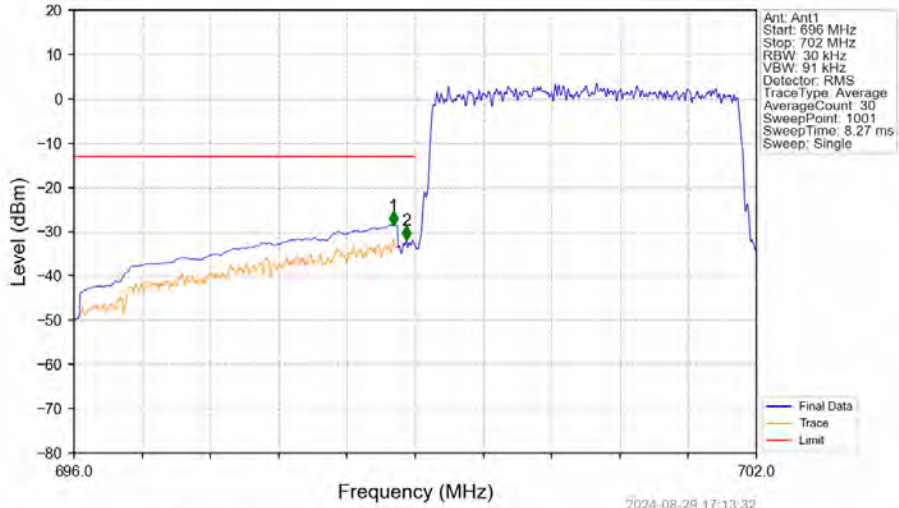
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
714.5	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.036	-30.10	-13	Pass
716.1	717.5	0.1	CHP	2	716.225	-27.27	-13	Pass

6.2.2 B12\_3MHz





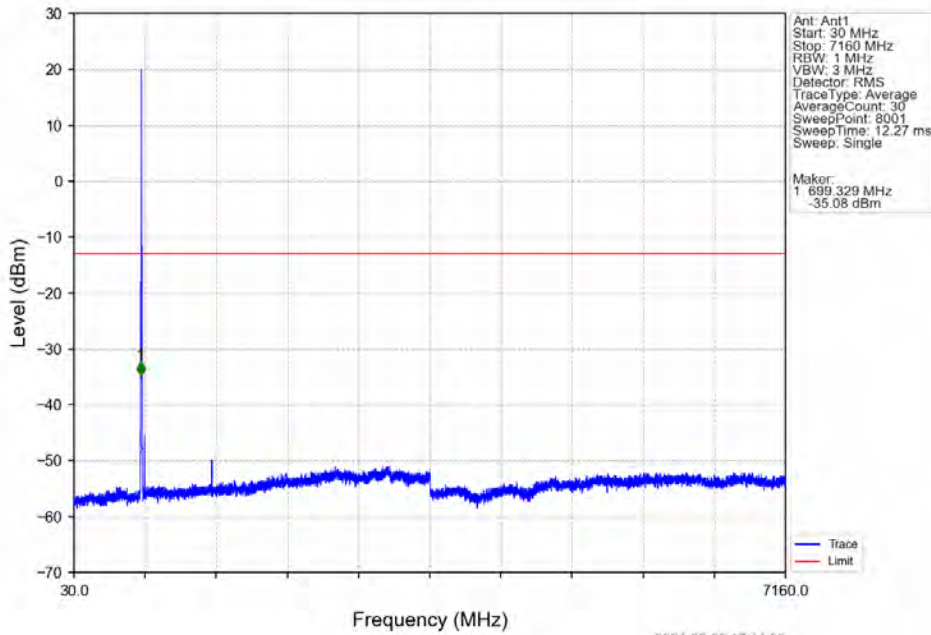
Band12 3MHz QPSK LCH 700.5MHz RB 15 0 NTN



2024-08-29 17:13:32

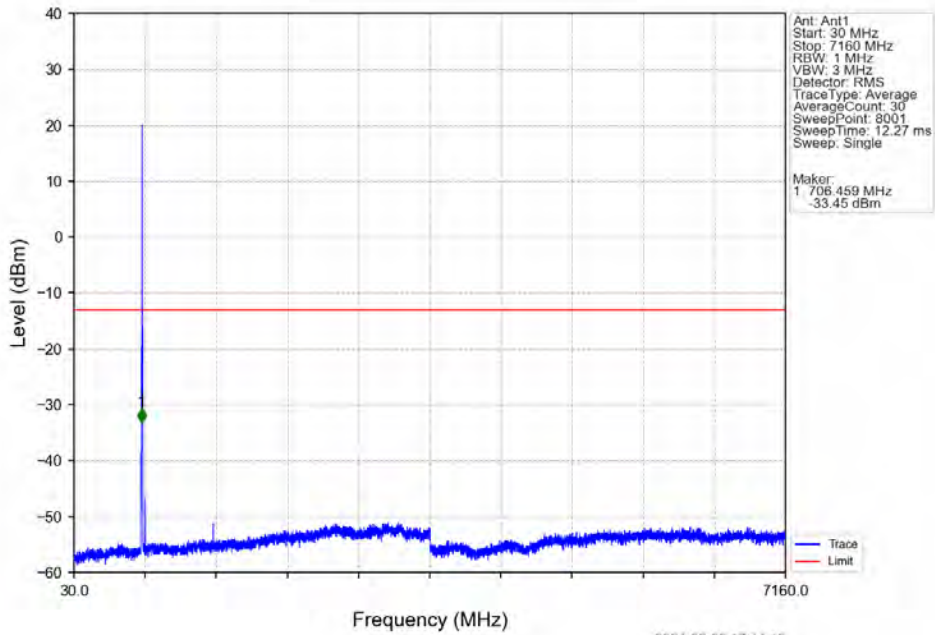
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.808	-28.52	-13	Pass
698.9	699	0.03	/	2	698.922	-31.88	-13	Pass
699	702	0.03	/	/	/	/	/	/

Band12 3MHz QPSK MCH 707.5MHz RB 1 0 NTN



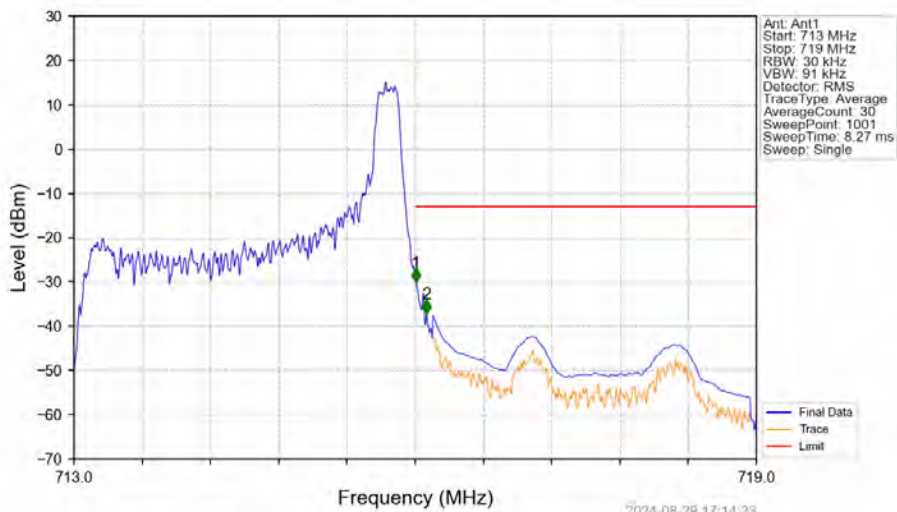
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Band12 3MHz QPSK HCH 714.5MHz RB 1 0 NTV



2024-08-29 17:14:18

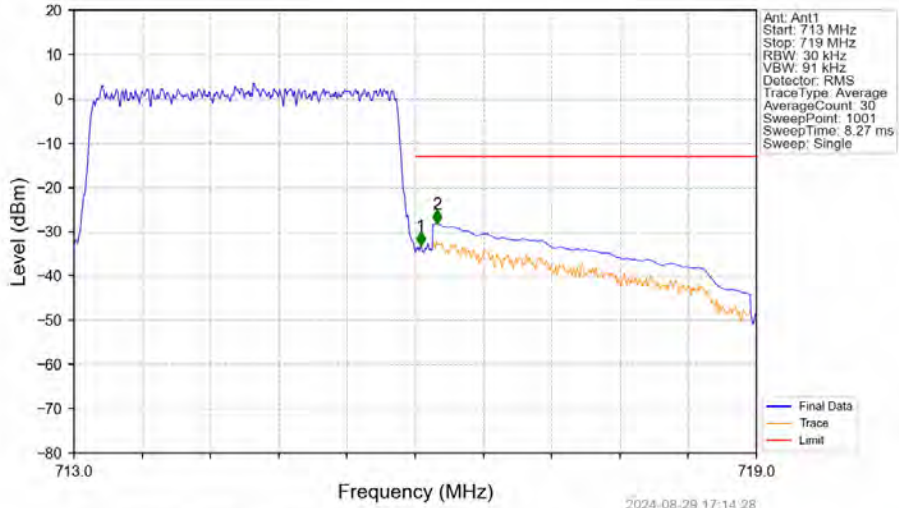
Band12 3MHz QPSK HCH 714.5MHz RB 1 14 NTV



2024-08-29 17:14:23

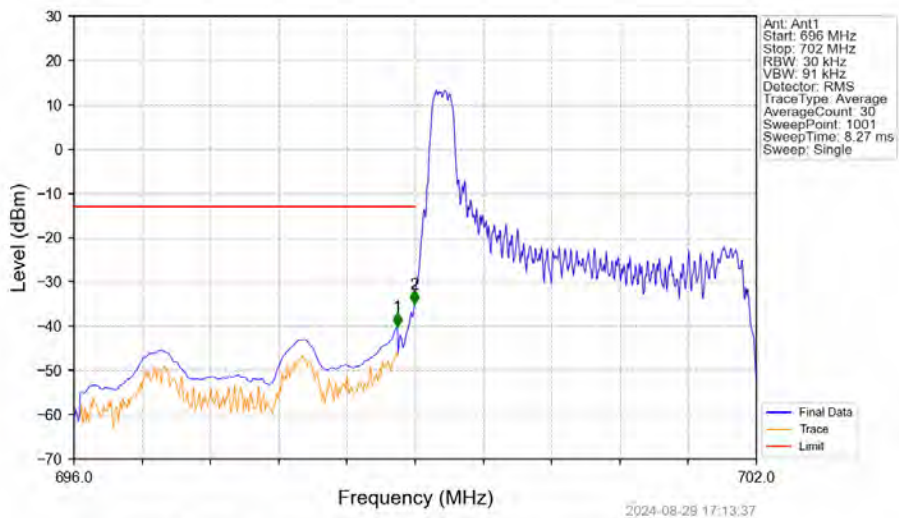
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.006	-29.99	-13	Pass
716.1	719	0.1	CHP	2	716.102	-37.21	-13	Pass

Band12 3MHz QPSK HCH 714.5MHz RB 15 0 NTV



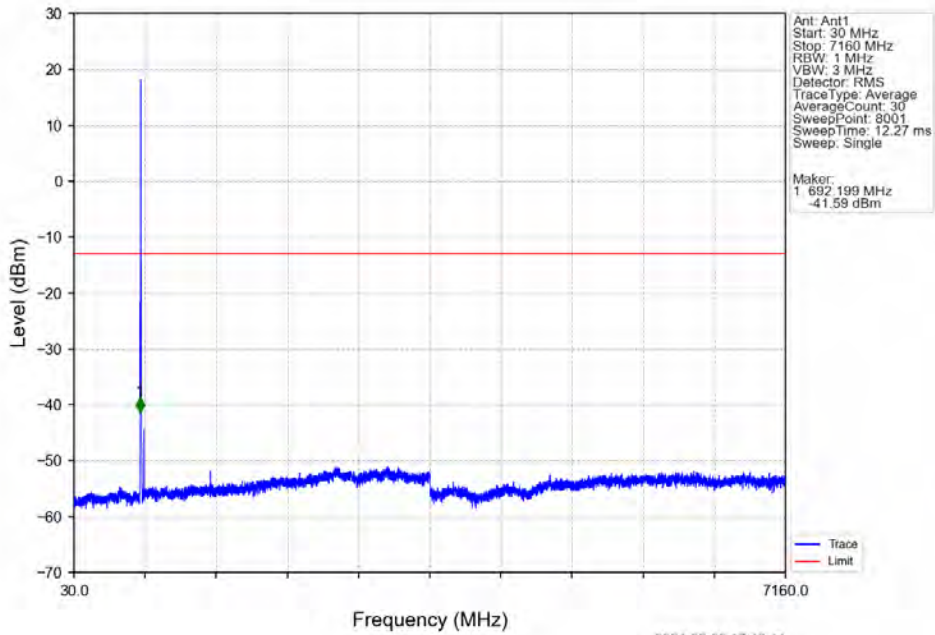
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.048	-33.17	-13	Pass
716.1	719	0.1	CHP	2	716.192	-28.16	-13	Pass

Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTV

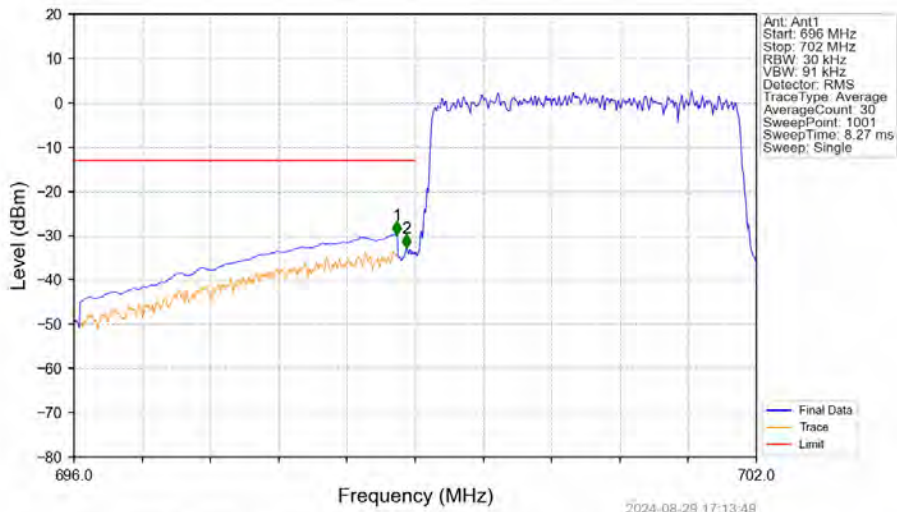


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.844	-40.11	-13	Pass
698.9	699	0.03	/	2	698.994	-34.91	-13	Pass
699	702	0.03	/	/	/	/	/	/

Band12 3MHz 16QAM LCH 700.5MHz RB 1 0 NTV

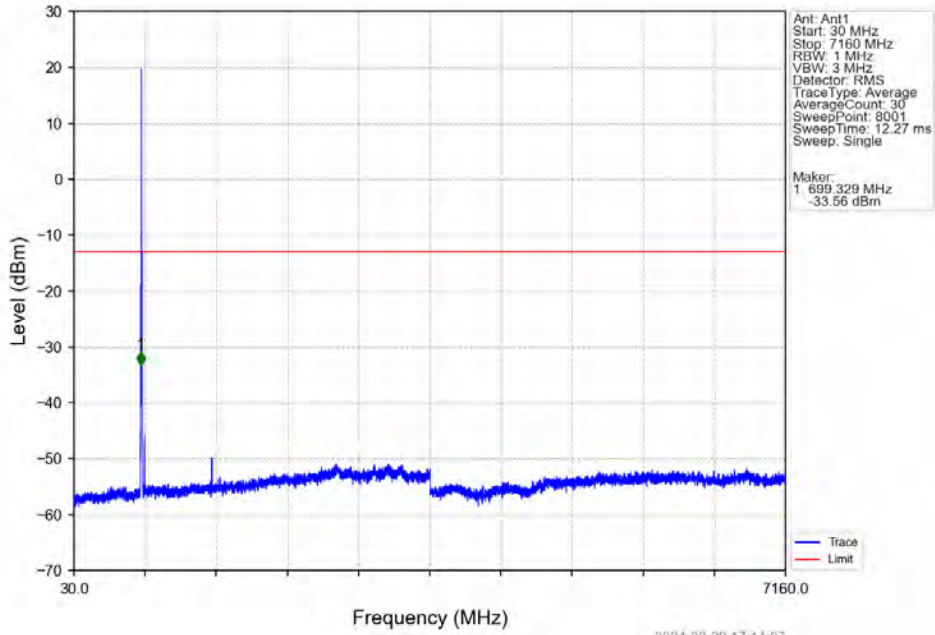


Band12 3MHz 16QAM LCH 700.5MHz RB 15 0 NTV



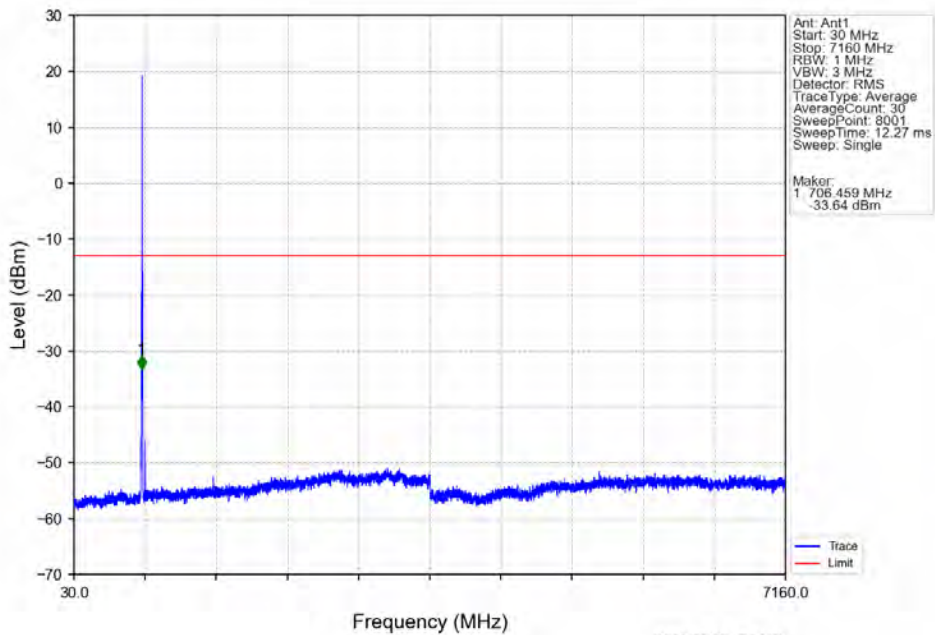
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.838	-29.82	-13	Pass
698.9	699	0.03	/	2	698.922	-32.70	-13	Pass
699	702	0.03	/	/	/	/	/	/

Band12 3MHz 16QAM MCH 707.5MHz RB 1 0 NTV



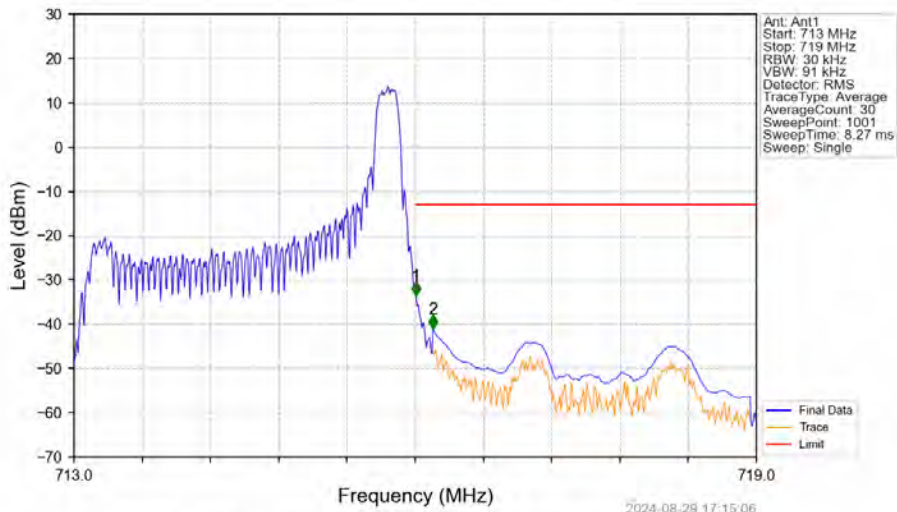
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Band12 3MHz 16QAM HCH 714.5MHz RB 1 0 NTV



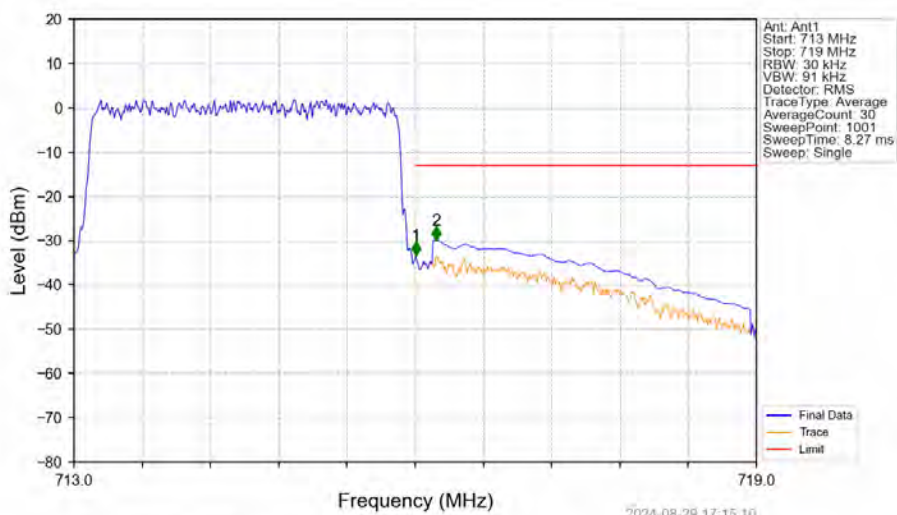
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Band12 3MHz 16QAM HCH 714.5MHz RB 1 14 NTV



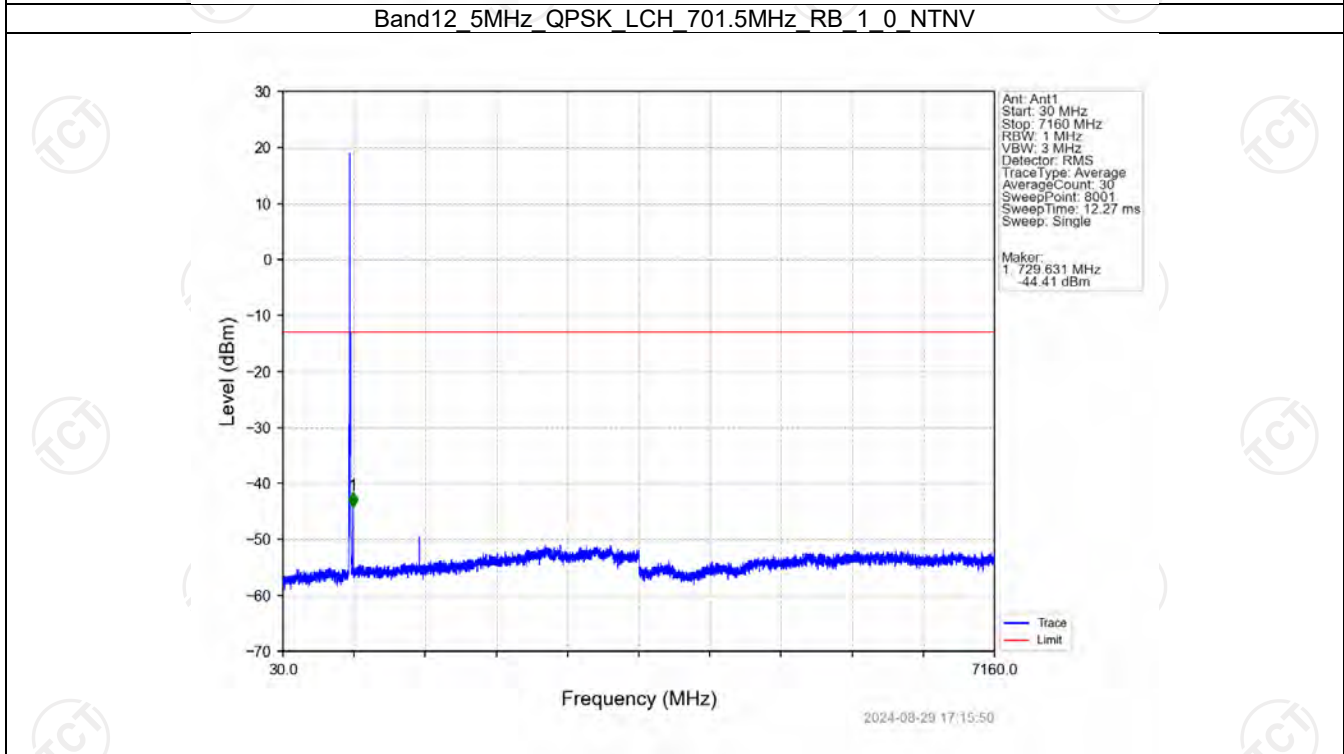
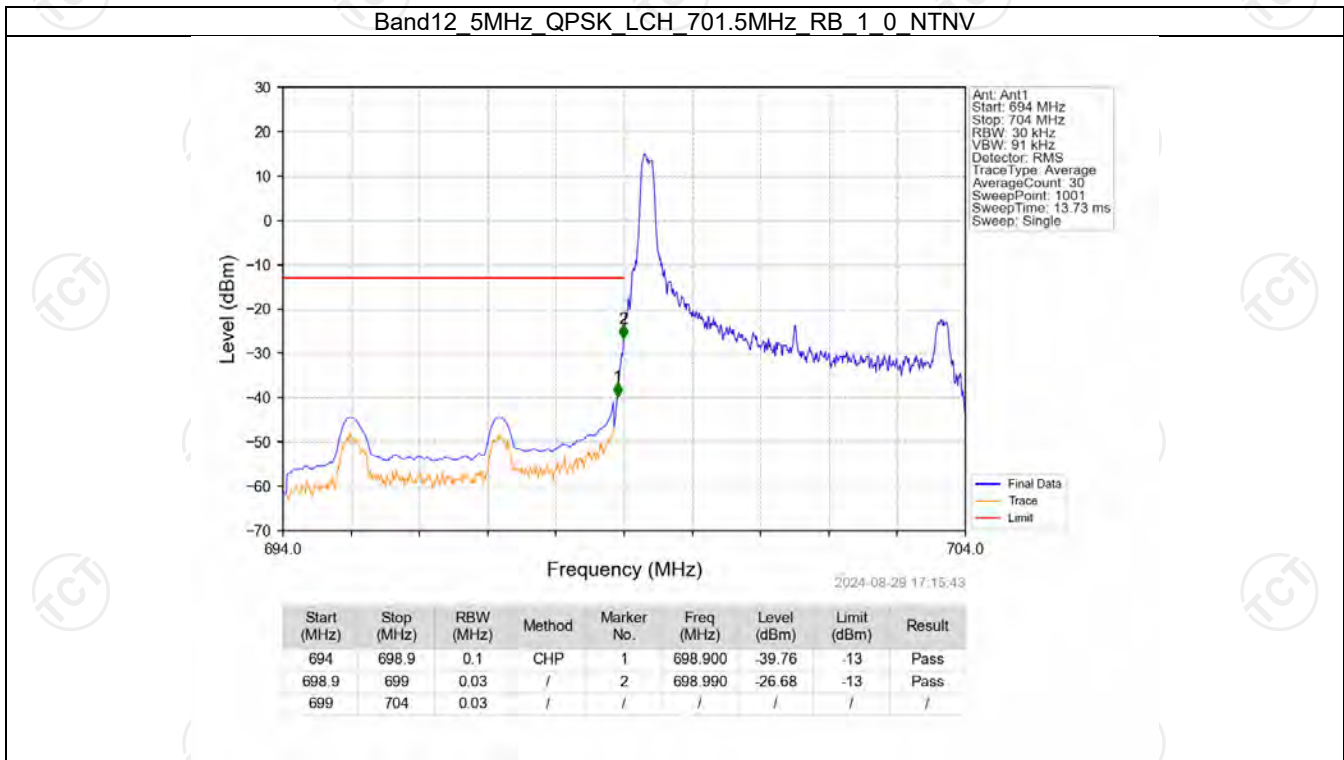
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.006	-33.48	-13	Pass
716.1	719	0.1	CHP	2	716.156	-41.02	-13	Pass

Band12 3MHz 16QAM HCH 714.5MHz RB 15 0 NTV

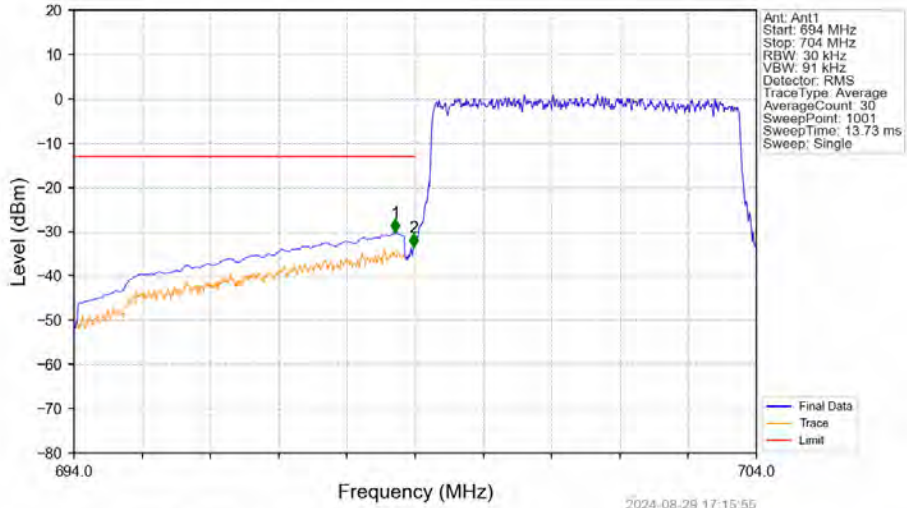


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.006	-33.39	-13	Pass
716.1	719	0.1	CHP	2	716.186	-29.89	-13	Pass

6.2.3 B12\_5MHz

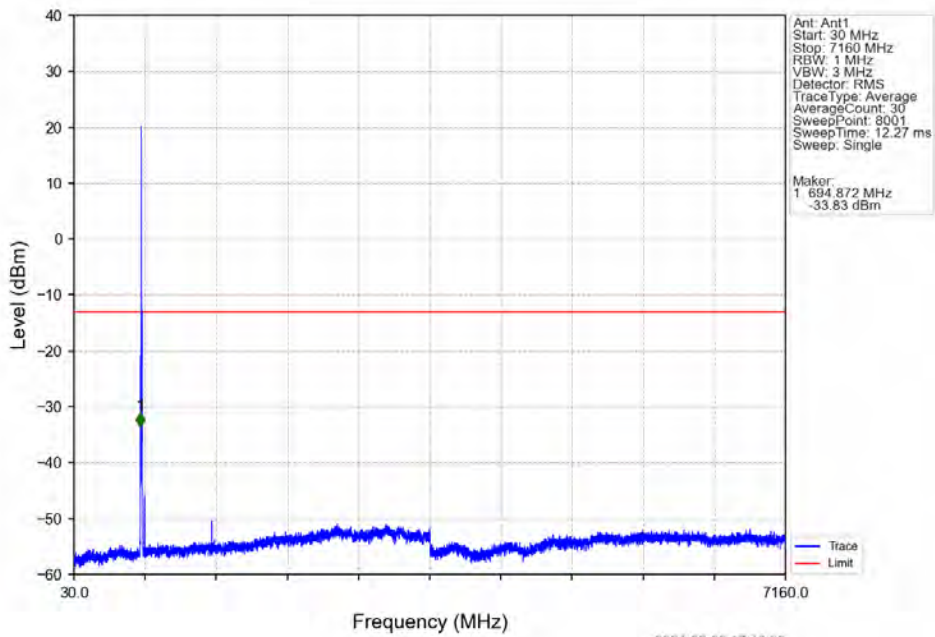


Band12 5MHz QPSK LCH 701.5MHz RB 25 0 NTN



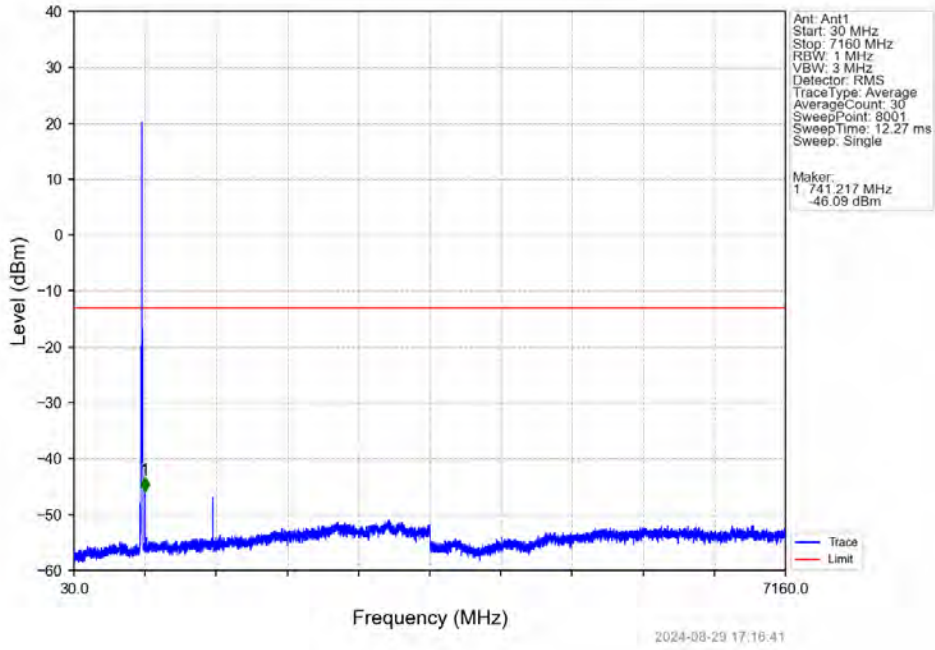
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.710	-30.30	-13	Pass
698.9	699	0.03	/	2	698.980	-33.43	-13	Pass
699	704	0.03	/	/	/	/	/	/

Band12 5MHz QPSK MCH 707.5MHz RB 1 0 NTN

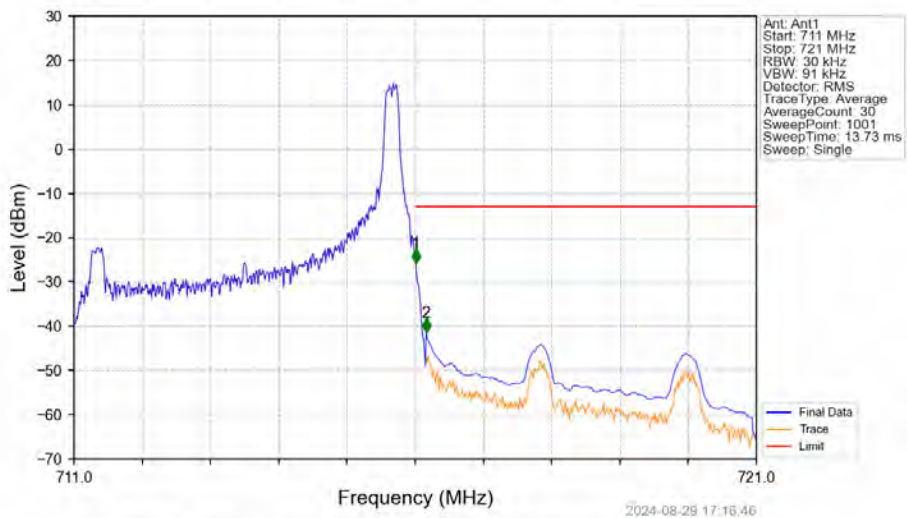




Band12 5MHz QPSK HCH 713.5MHz RB 1 0 NTV

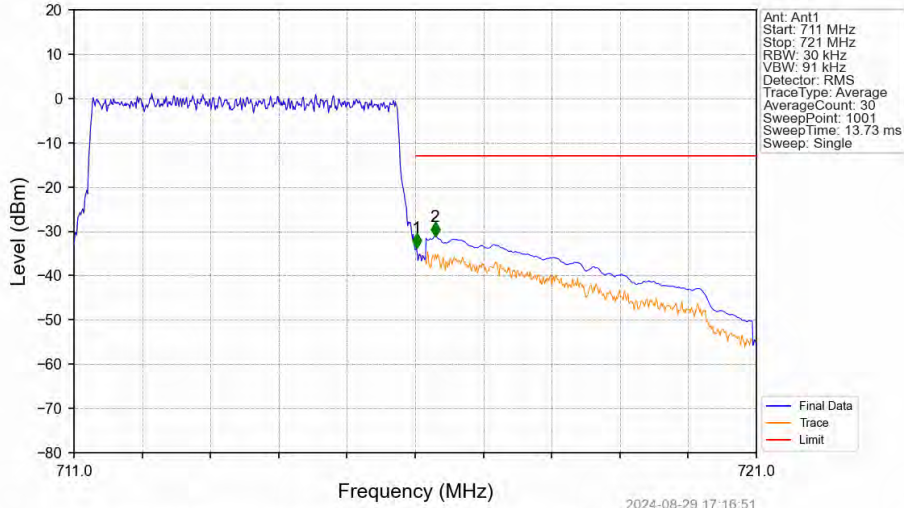


Band12 5MHz QPSK HCH 713.5MHz RB 1 24 NTV



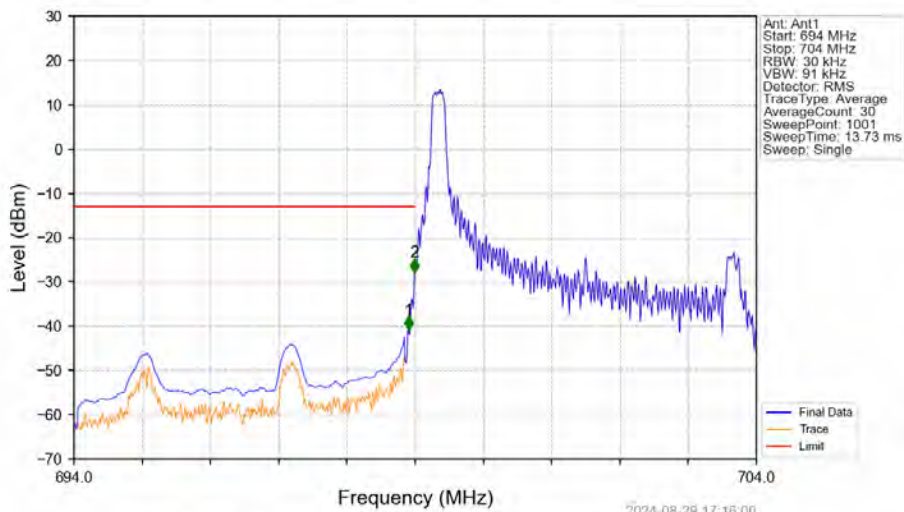
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-25.75	-13	Pass
716.1	721	0.1	CHP	2	716.160	-41.39	-13	Pass

Band12 5MHz QPSK HCH 713.5MHz RB 25 0 NTV



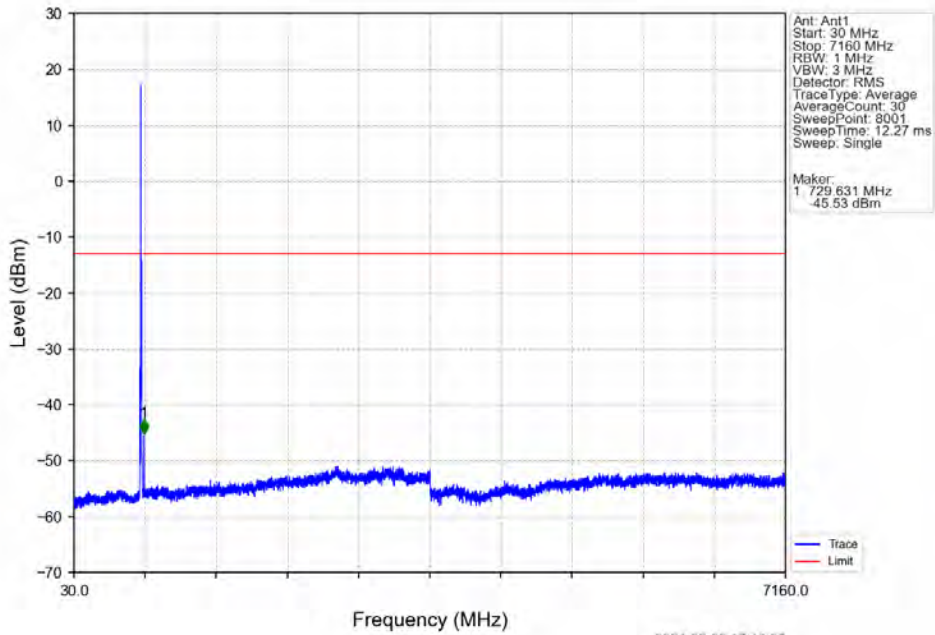
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.020	-33.72	-13	Pass
716.1	721	0.1	CHP	2	716.290	-31.07	-13	Pass

Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTV

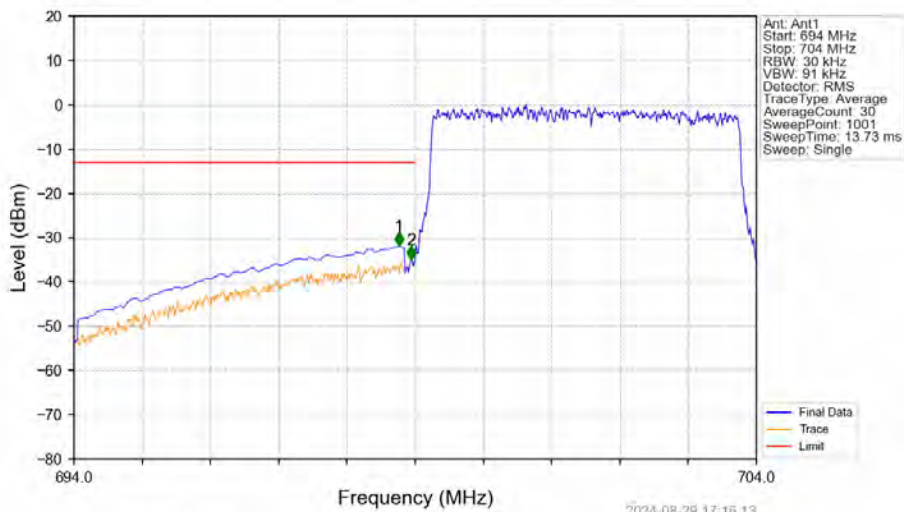


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.900	-40.79	-13	Pass
698.9	699	0.03	/	2	698.990	-27.78	-13	Pass
699	704	0.03	/	/	/	/	/	/

Band12 5MHz 16QAM LCH 701.5MHz RB 1 0 NTV

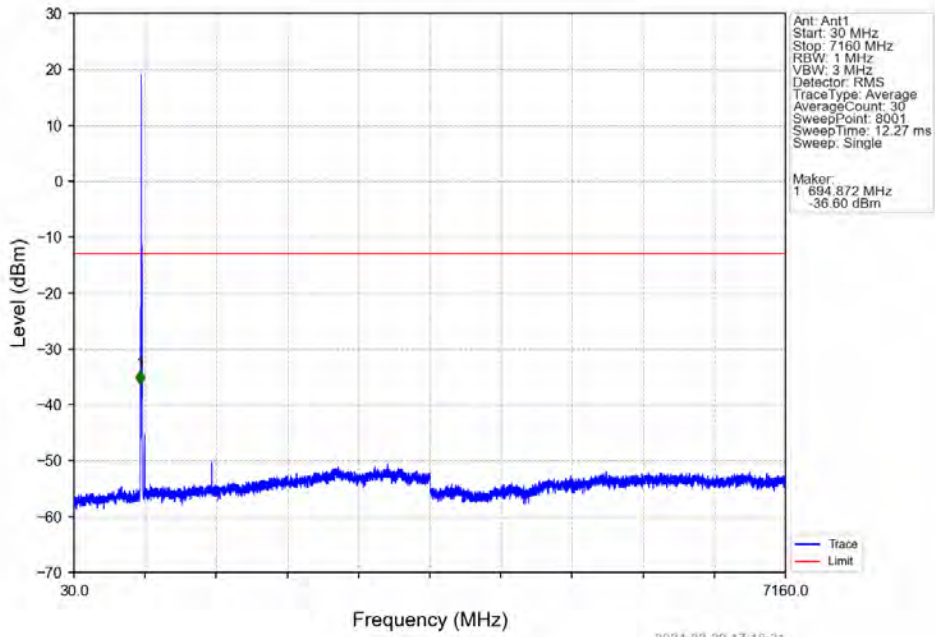


Band12 5MHz 16QAM LCH 701.5MHz RB 25 0 NTV

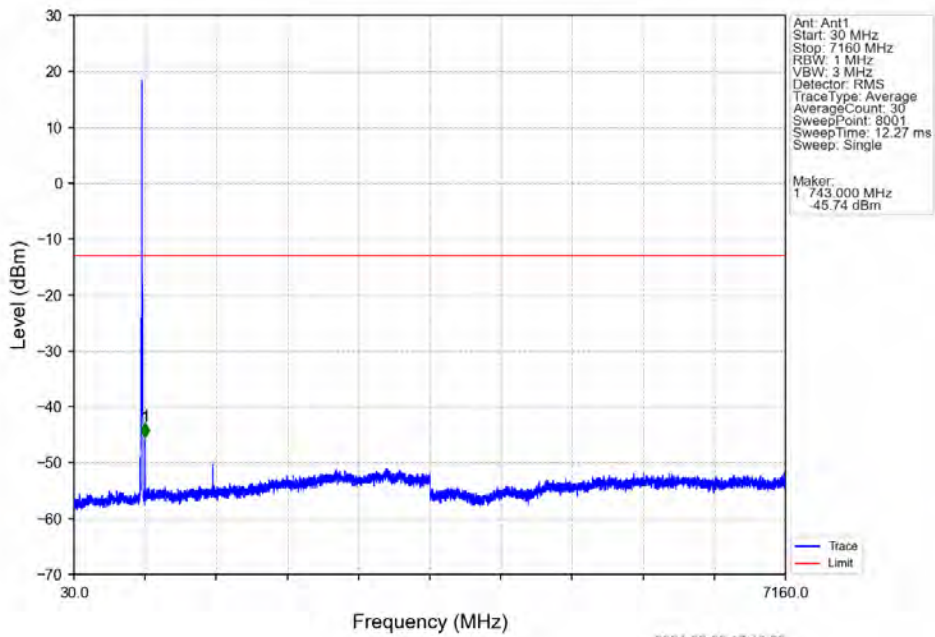


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.760	-31.85	-13	Pass
698.9	699	0.03	/	2	698.940	-34.92	-13	Pass
699	704	0.03	/	/	/	/	/	/

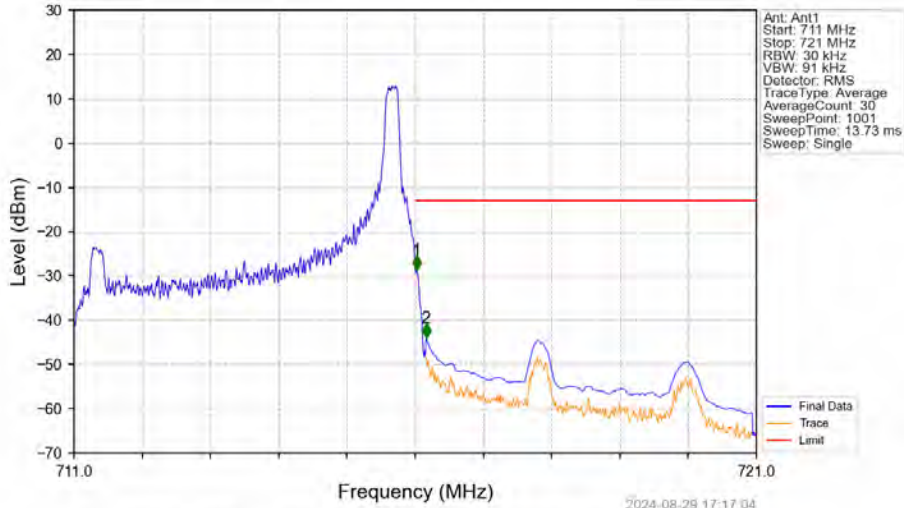
Band12 5MHz 16QAM MCH 707.5MHz RB 1 0 NTV



Band12 5MHz 16QAM HCH 713.5MHz RB 1 0 NTV

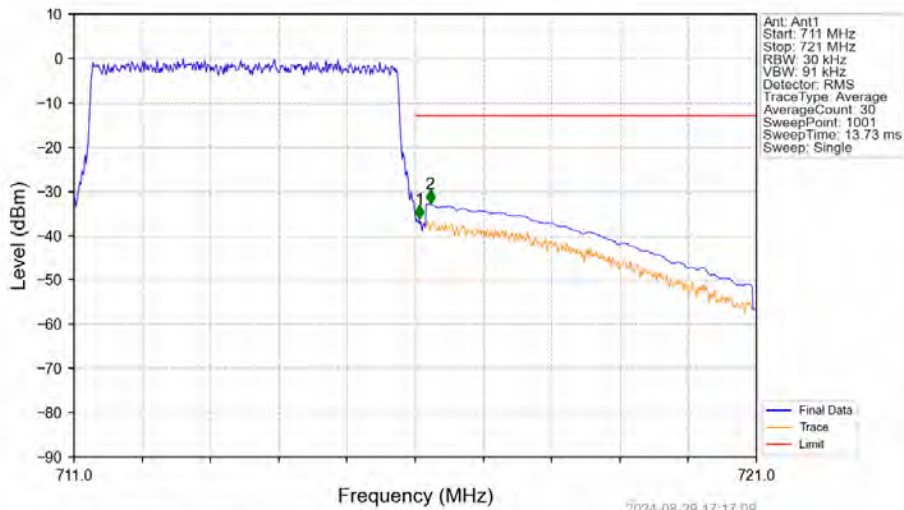


Band12 5MHz 16QAM HCH 713.5MHz RB 1 24 NTV



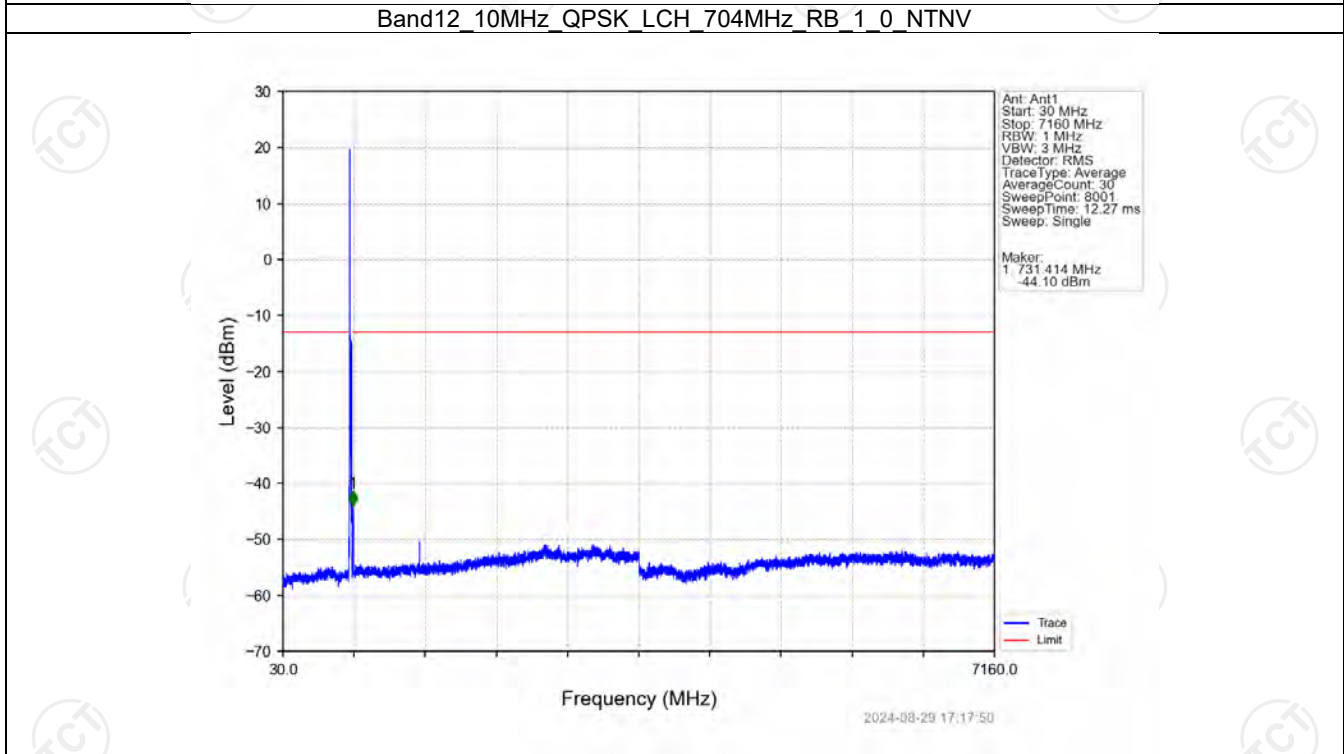
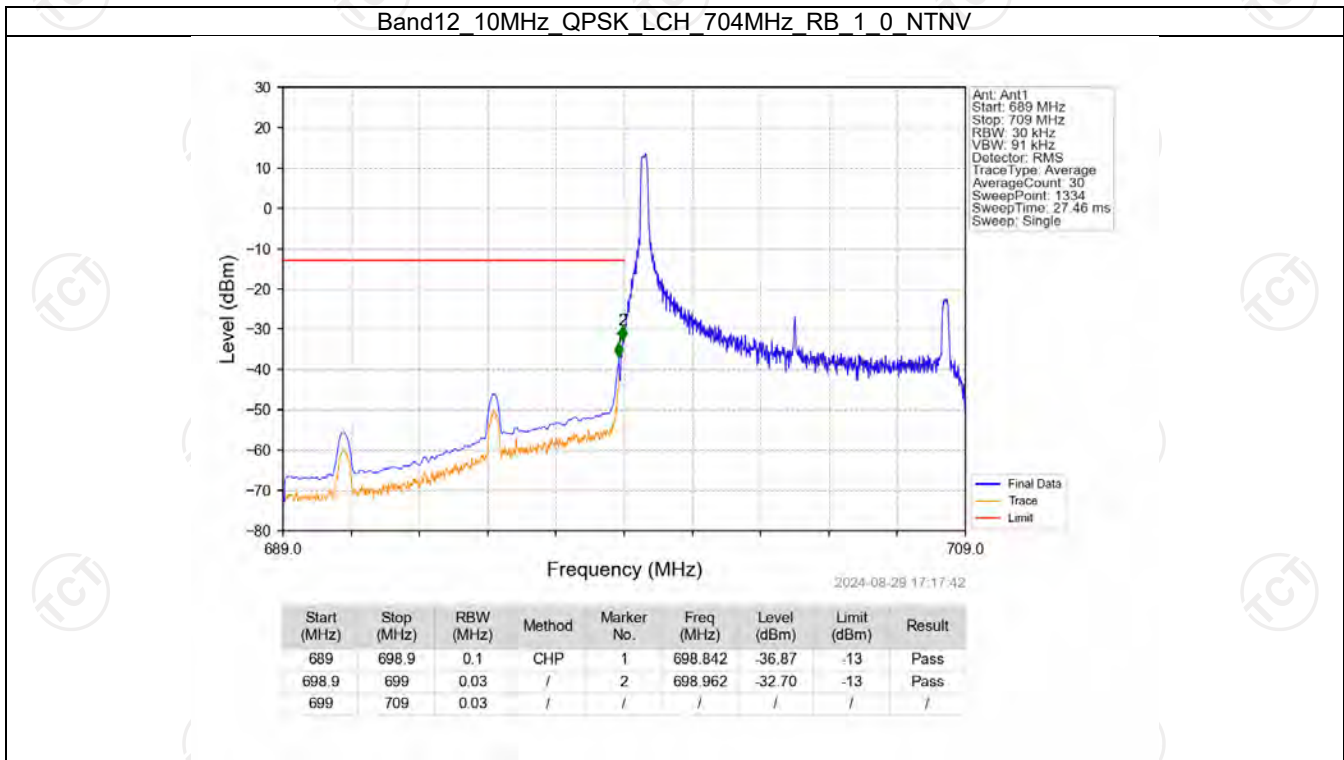
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.020	-28.61	-13	Pass
716.1	721	0.1	CHP	2	716.160	-43.82	-13	Pass

Band12 5MHz 16QAM HCH 713.5MHz RB 25 0 NTV

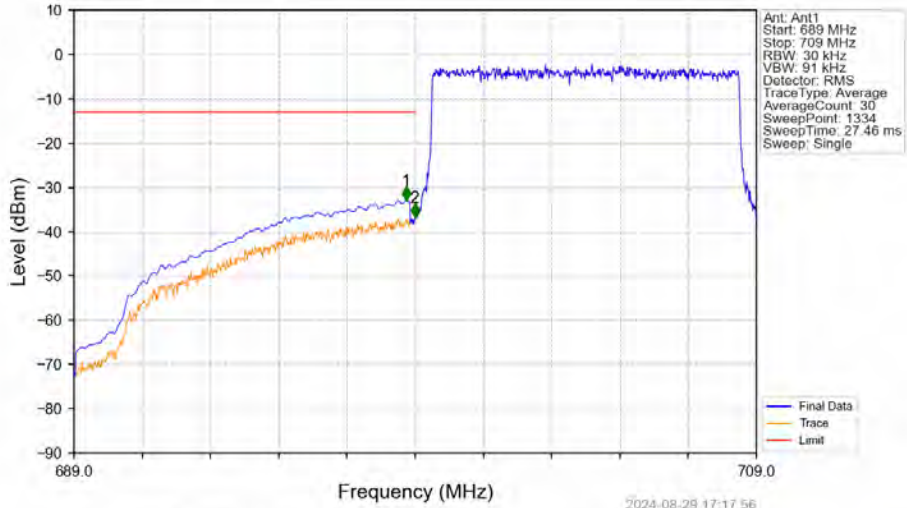


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.060	-36.21	-13	Pass
716.1	721	0.1	CHP	2	716.220	-32.82	-13	Pass

6.2.4 B12\_10MHz

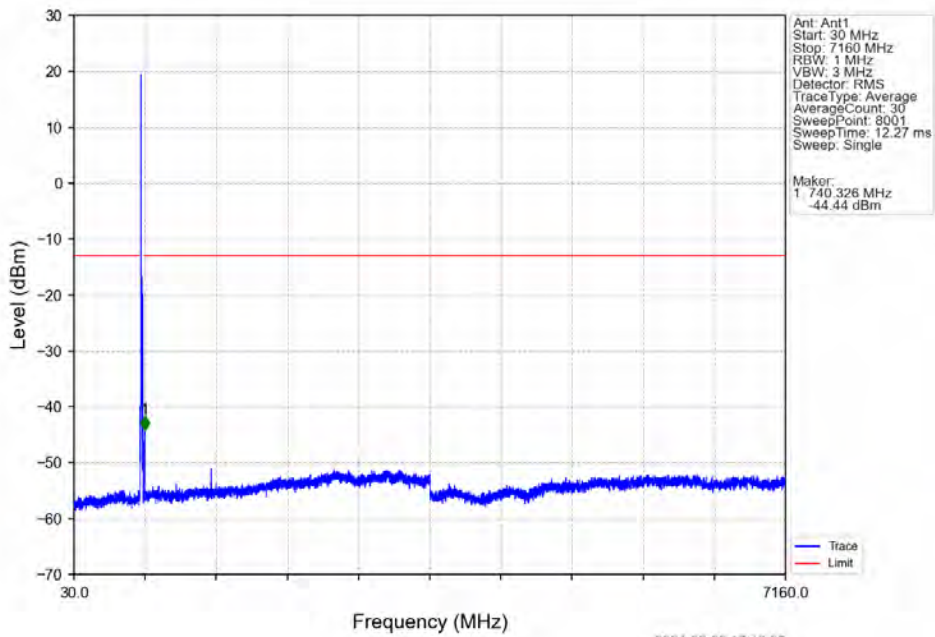


Band12 10MHz QPSK LCH 704MHz RB 50 0 NTN

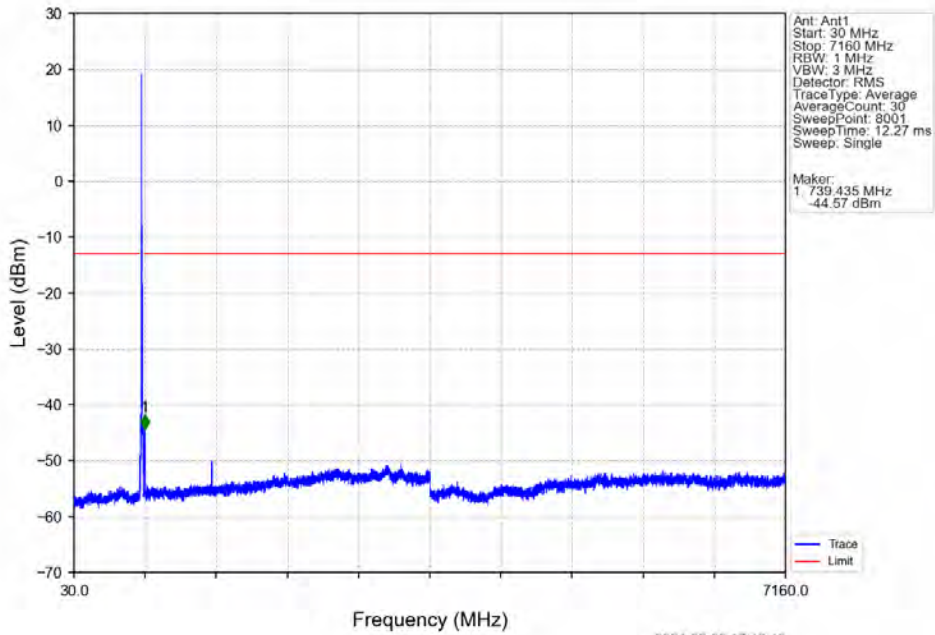


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.737	-32.95	-13	Pass
698.9	699	0.03	/	2	698.992	-36.83	-13	Pass
699	709	0.03	/	/	/	/	/	/

Band12 10MHz QPSK MCH 707.5MHz RB 1 0 NTN

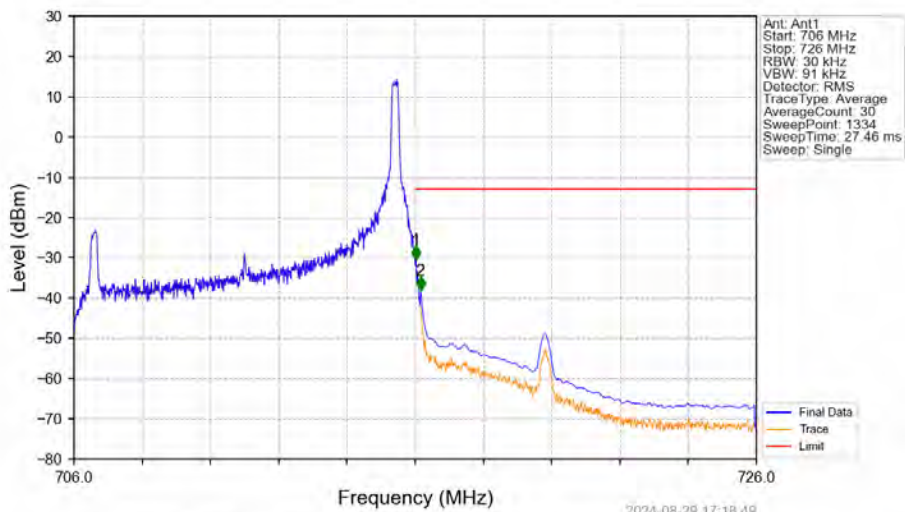


Band12 10MHz QPSK HCH 711MHz RB 1 0 NTNV



2024-08-29 17:18:43

Band12 10MHz QPSK HCH 711MHz RB 1 49 NTNV

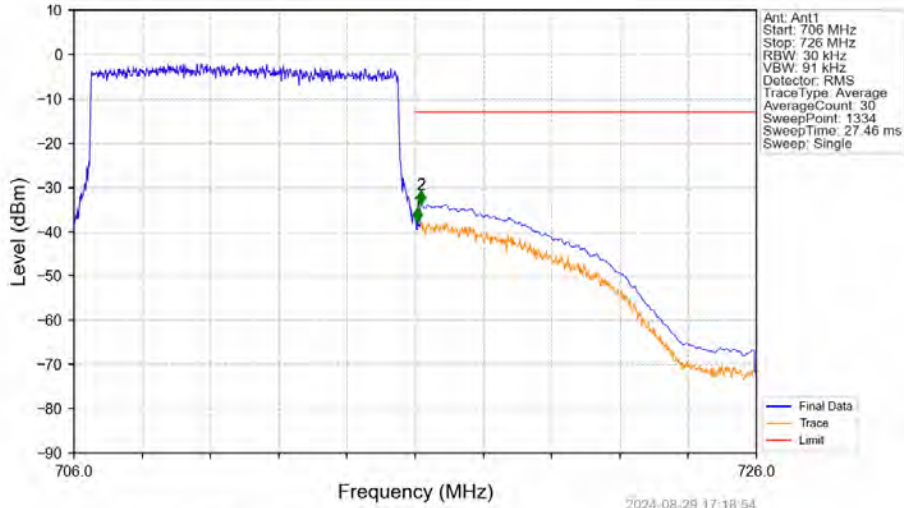


2024-08-29 17:18:49

Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.023	-30.54	-13	Pass
716.1	726	0.1	CHP	2	716.158	-38.13	-13	Pass

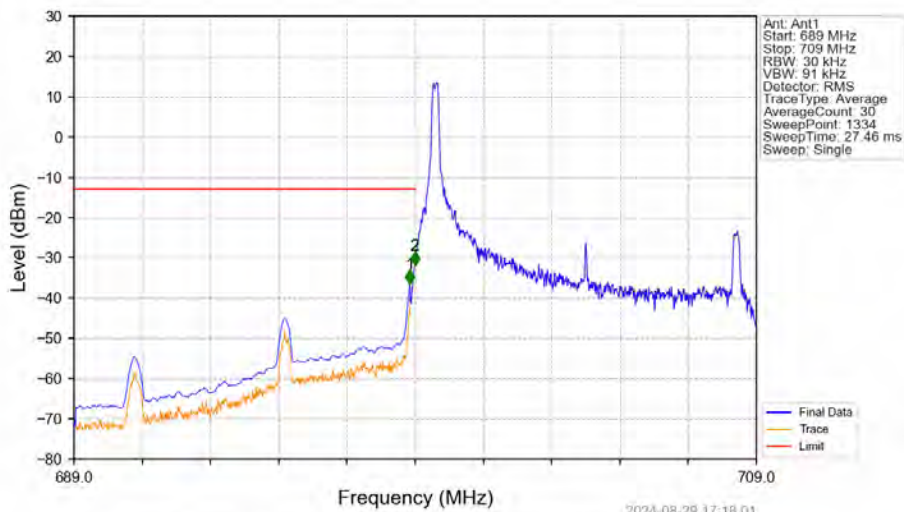


Band12 10MHz QPSK HCH 711MHz RB 50 0 NTN



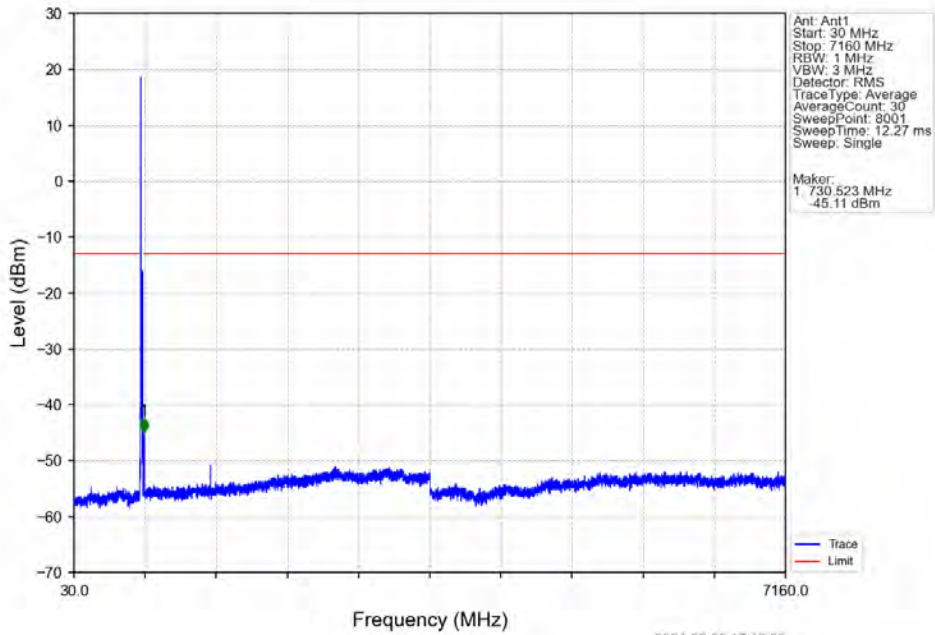
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.068	-37.68	-13	Pass
716.1	726	0.1	CHP	2	716.173	-33.80	-13	Pass

Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTN

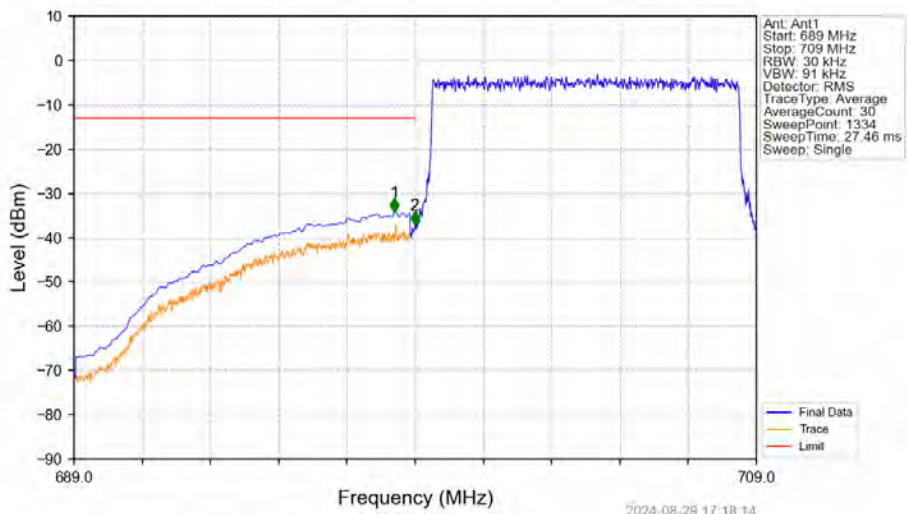


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-36.50	-13	Pass
698.9	699	0.03	/	2	698.992	-31.87	-13	Pass
699	709	0.03	/	/	/	/	/	/

Band12 10MHz 16QAM LCH 704MHz RB 1 0 NTV

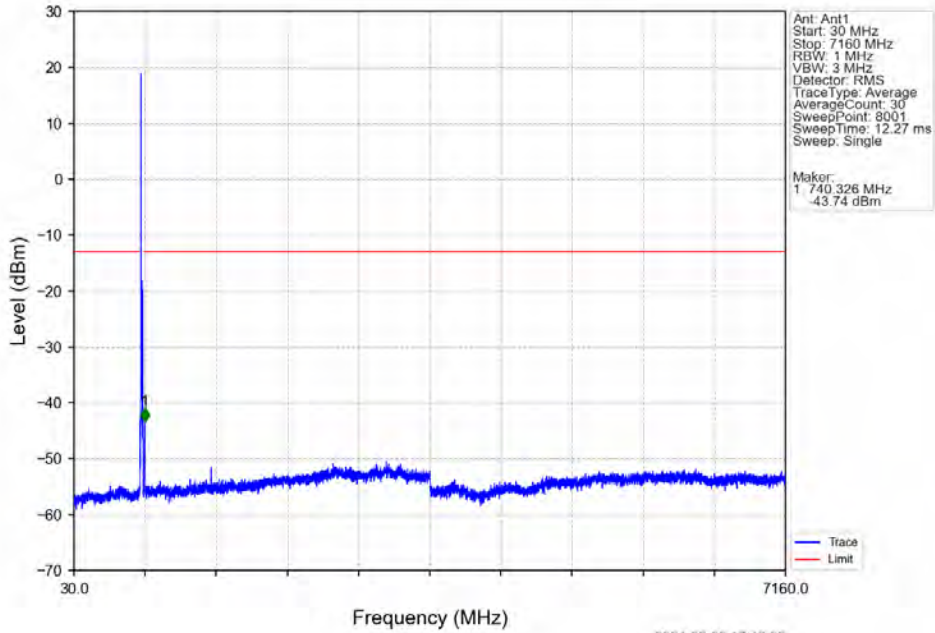


Band12 10MHz 16QAM LCH 704MHz RB 50 0 NTV

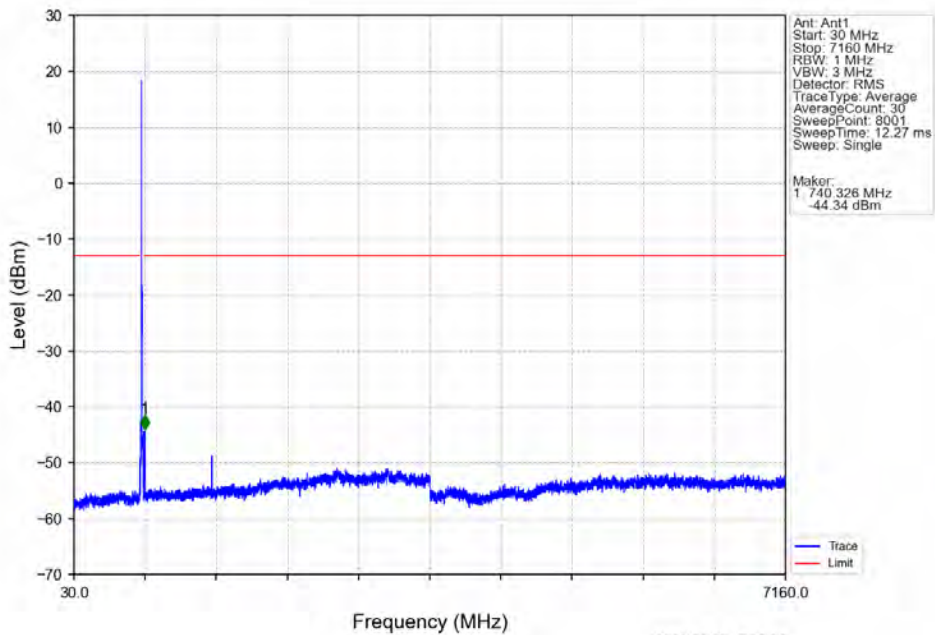


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.392	-34.13	-13	Pass
698.9	699	0.03	/	2	698.992	-37.20	-13	Pass
699	709	0.03	/	/	/	/	/	/

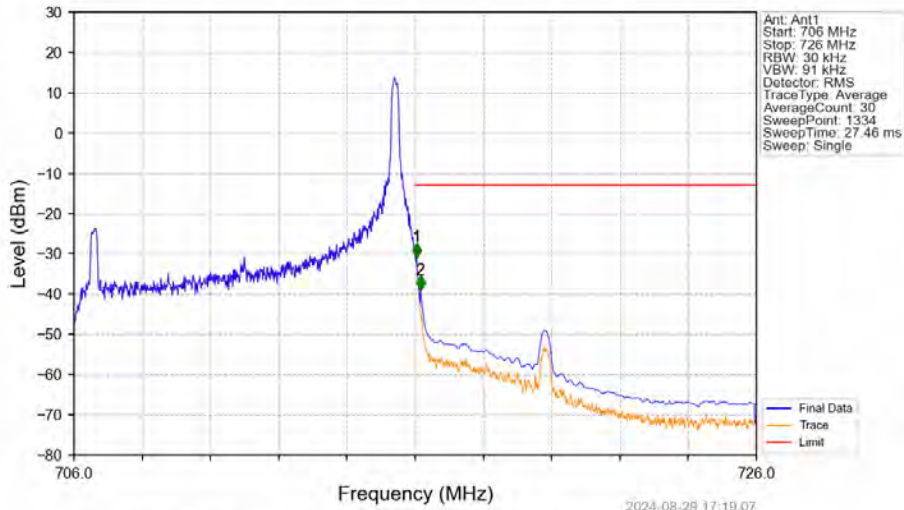
Band12 10MHz 16QAM MCH 707.5MHz RB 1 0 NTV



Band12 10MHz 16QAM HCH 711MHz RB 1 0 NTV

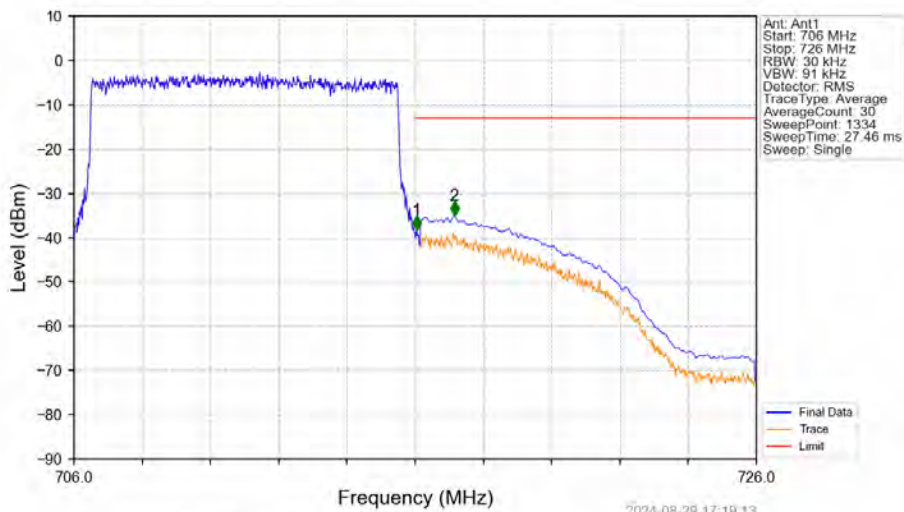


Band12 10MHz 16QAM HCH 711MHz RB 1 49 NTV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.038	-30.75	-13	Pass
716.1	726	0.1	CHP	2	716.158	-38.81	-13	Pass

Band12 10MHz 16QAM HCH 711MHz RB 50 0 NTV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.038	-38.30	-13	Pass
716.1	726	0.1	CHP	2	717.148	-34.99	-13	Pass

## 7. Form731

### 7.1 Test Result

#### 7.1.1 Form731\_Power

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
12	1.4	699.7	715.3	0.1542	0.0031	ppm	1M11G7D	27H	21.88
12	1.4	699.7	715.3	0.1439	0.0027	ppm	1M11W7D	27H	21.58
12	3	700.5	714.5	0.1500	0.0015	ppm	2M72G7D	27H	21.76
12	3	700.5	714.5	0.1239	0.0020	ppm	2M71W7D	27H	20.93
12	5	701.5	713.5	0.1459	0.0016	ppm	4M57G7D	27H	21.64
12	5	701.5	713.5	0.1153	0.0024	ppm	4M59W7D	27H	20.62
12	10	704	711	0.1330	0.0017	ppm	9M10G7D	27H	21.24
12	10	704	711	0.1432	0.0023	ppm	9M08W7D	27H	21.56

#### 7.1.2 Form731\_ERP

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
12	1.4	699.7	715.3	0.0614	0.0031	ppm	1M11G7D	27H	17.88
12	1.4	699.7	715.3	0.0573	0.0027	ppm	1M11W7D	27H	17.58
12	3	700.5	714.5	0.0597	0.0015	ppm	2M72G7D	27H	17.76
12	3	700.5	714.5	0.0493	0.0020	ppm	2M71W7D	27H	16.93
12	5	701.5	713.5	0.0581	0.0016	ppm	4M57G7D	27H	17.64
12	5	701.5	713.5	0.0459	0.0024	ppm	4M59W7D	27H	16.62
12	10	704	711	0.0530	0.0017	ppm	9M10G7D	27H	17.24
12	10	704	711	0.0570	0.0023	ppm	9M08W7D	27H	17.56