

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 Test Result

### 1.1.1 B17\_5MHz\_ERP

Band: 17 / Bandwidth: 5MHz / NTV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	706.5	1	0	24.11	-5.07	16.89	<=34.77	Pass		
			13	24.13	-5.07	16.91	<=34.77	Pass		
			24	24.06	-5.07	16.84	<=34.77	Pass		
		12	0	23.03	-5.07	15.81	<=34.77	Pass		
			6	23.10	-5.07	15.88	<=34.77	Pass		
			13	23.09	-5.07	15.87	<=34.77	Pass		
		25	0	23.06	-5.07	15.84	<=34.77	Pass		
		710	1	0	24.06	-5.07	16.84	<=34.77	Pass	
				13	24.14	-5.07	16.92	<=34.77	Pass	
	24			24.06	-5.07	16.84	<=34.77	Pass		
	12		0	23.05	-5.07	15.83	<=34.77	Pass		
			6	23.13	-5.07	15.91	<=34.77	Pass		
			13	23.04	-5.07	15.82	<=34.77	Pass		
	25		0	23.06	-5.07	15.84	<=34.77	Pass		
	713.5		1	0	24.14	-5.07	16.92	<=34.77	Pass	
				13	24.20	-5.07	16.98	<=34.77	Pass	
		24		24.15	-5.07	16.93	<=34.77	Pass		
		12	0	23.10	-5.07	15.88	<=34.77	Pass		
			6	23.16	-5.07	15.94	<=34.77	Pass		
			13	23.07	-5.07	15.85	<=34.77	Pass		
		25	0	23.08	-5.07	15.86	<=34.77	Pass		
		16QAM	706.5	1	0	22.92	-5.07	15.70	<=34.77	Pass
					13	22.93	-5.07	15.71	<=34.77	Pass
	24				22.93	-5.07	15.71	<=34.77	Pass	
12	0			21.97	-5.07	14.75	<=34.77	Pass		
	6			22.06	-5.07	14.84	<=34.77	Pass		
	13			22.05	-5.07	14.83	<=34.77	Pass		
25	0			22.08	-5.07	14.86	<=34.77	Pass		
710	1			0	23.31	-5.07	16.09	<=34.77	Pass	
				13	23.39	-5.07	16.17	<=34.77	Pass	
			24	23.32	-5.07	16.10	<=34.77	Pass		
	12		0	22.07	-5.07	14.85	<=34.77	Pass		
			6	22.16	-5.07	14.94	<=34.77	Pass		
			13	22.08	-5.07	14.86	<=34.77	Pass		
	25		0	22.07	-5.07	14.85	<=34.77	Pass		
	713.5		1	0	23.19	-5.07	15.97	<=34.77	Pass	
				13	23.28	-5.07	16.06	<=34.77	Pass	
24				23.16	-5.07	15.94	<=34.77	Pass		
12			0	22.11	-5.07	14.89	<=34.77	Pass		
			6	22.14	-5.07	14.92	<=34.77	Pass		
			13	22.05	-5.07	14.83	<=34.77	Pass		
25			0	22.14	-5.07	14.92	<=34.77	Pass		
64QAM			706.5	1	0	22.42	-5.07	15.20	<=34.77	Pass
					13	22.44	-5.07	15.22	<=34.77	Pass
	24				22.07	-5.07	14.85	<=34.77	Pass	
	12	0		21.05	-5.07	13.83	<=34.77	Pass		
		6		21.15	-5.07	13.93	<=34.77	Pass		
		13		21.14	-5.07	13.92	<=34.77	Pass		
	25	0		21.09	-5.07	13.87	<=34.77	Pass		

	710	1	0	22.43	-5.07	15.21	<=34.77	Pass
			13	22.52	-5.07	15.30	<=34.77	Pass
			24	22.45	-5.07	15.23	<=34.77	Pass
		12	0	21.03	-5.07	13.81	<=34.77	Pass
			6	21.09	-5.07	13.87	<=34.77	Pass
			13	21.02	-5.07	13.80	<=34.77	Pass
	25	0	21.10	-5.07	13.88	<=34.77	Pass	
	713.5	1	0	22.33	-5.07	15.11	<=34.77	Pass
			13	22.46	-5.07	15.24	<=34.77	Pass
			24	22.34	-5.07	15.12	<=34.77	Pass
		12	0	21.20	-5.07	13.98	<=34.77	Pass
			6	21.26	-5.07	14.04	<=34.77	Pass
			13	21.19	-5.07	13.97	<=34.77	Pass
		25	0	21.20	-5.07	13.98	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

### 1.1.2 B17\_10MHz\_ERP

Band: 17 / Bandwidth: 10MHz / NTV									
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict	
		Size	Offset			Result	Limit		
QPSK	709	1	0	24.11	-5.07	16.89	<=34.77	Pass	
			25	24.22	-5.07	17.00	<=34.77	Pass	
			49	24.08	-5.07	16.86	<=34.77	Pass	
		25	0	23.03	-5.07	15.81	<=34.77	Pass	
			13	23.15	-5.07	15.93	<=34.77	Pass	
			25	23.06	-5.07	15.84	<=34.77	Pass	
		50	0	23.06	-5.07	15.84	<=34.77	Pass	
		710	1	0	24.10	-5.07	16.88	<=34.77	Pass
				25	24.22	-5.07	17.00	<=34.77	Pass
	49			24.14	-5.07	16.92	<=34.77	Pass	
	25		0	23.05	-5.07	15.83	<=34.77	Pass	
			13	23.15	-5.07	15.93	<=34.77	Pass	
			25	23.00	-5.07	15.78	<=34.77	Pass	
	50		0	23.03	-5.07	15.81	<=34.77	Pass	
	711		1	0	24.09	-5.07	16.87	<=34.77	Pass
				25	24.16	-5.07	16.94	<=34.77	Pass
		49		24.14	-5.07	16.92	<=34.77	Pass	
		25	0	23.08	-5.07	15.86	<=34.77	Pass	
			13	23.17	-5.07	15.95	<=34.77	Pass	
			25	23.04	-5.07	15.82	<=34.77	Pass	
	50	0	23.08	-5.07	15.86	<=34.77	Pass		
	16QAM	709	1	0	23.24	-5.07	16.02	<=34.77	Pass
				25	23.36	-5.07	16.14	<=34.77	Pass
				49	23.24	-5.07	16.02	<=34.77	Pass
25			0	22.06	-5.07	14.84	<=34.77	Pass	
			13	22.20	-5.07	14.98	<=34.77	Pass	
			25	22.09	-5.07	14.87	<=34.77	Pass	
50			0	22.04	-5.07	14.82	<=34.77	Pass	
710			1	0	23.08	-5.07	15.86	<=34.77	Pass
				25	23.20	-5.07	15.98	<=34.77	Pass
		49		23.10	-5.07	15.88	<=34.77	Pass	
		25	0	22.13	-5.07	14.91	<=34.77	Pass	
			13	22.22	-5.07	15.00	<=34.77	Pass	
			25	22.10	-5.07	14.88	<=34.77	Pass	
50		0	22.06	-5.07	14.84	<=34.77	Pass		
711		1	0	23.57	-5.07	16.35	<=34.77	Pass	

64QAM	709	25	25	23.71	-5.07	16.49	<=34.77	Pass		
			49	23.55	-5.07	16.33	<=34.77	Pass		
			0	22.11	-5.07	14.89	<=34.77	Pass		
		50	1	13	22.23	-5.07	15.01	<=34.77	Pass	
				25	22.11	-5.07	14.89	<=34.77	Pass	
				0	22.08	-5.07	14.86	<=34.77	Pass	
		710	1	0	22.27	-5.07	15.05	<=34.77	Pass	
				25	22.37	-5.07	15.15	<=34.77	Pass	
				49	22.28	-5.07	15.06	<=34.77	Pass	
			25	0	21.12	-5.07	13.90	<=34.77	Pass	
				13	21.26	-5.07	14.04	<=34.77	Pass	
				25	21.16	-5.07	13.94	<=34.77	Pass	
			711	1	0	21.11	-5.07	13.89	<=34.77	Pass
					0	22.25	-5.07	15.03	<=34.77	Pass
					25	22.35	-5.07	15.13	<=34.77	Pass
710	1	49	22.29	-5.07	15.07	<=34.77	Pass			
		0	21.14	-5.07	13.92	<=34.77	Pass			
		13	21.27	-5.07	14.05	<=34.77	Pass			
	25	25	21.12	-5.07	13.90	<=34.77	Pass			
		0	21.05	-5.07	13.83	<=34.77	Pass			
		0	22.35	-5.07	15.13	<=34.77	Pass			
711	1	25	22.51	-5.07	15.29	<=34.77	Pass			
		49	22.41	-5.07	15.19	<=34.77	Pass			
		0	21.14	-5.07	13.92	<=34.77	Pass			
	25	13	21.21	-5.07	13.99	<=34.77	Pass			
		25	21.09	-5.07	13.87	<=34.77	Pass			
		0	21.10	-5.07	13.88	<=34.77	Pass			

Note1: ERP=Conducted Power+Antenna Gain-2.15

## 2. Frequency Stability

### 2.1 Test Result

#### 2.1.1 B17\_10MHz

Band: 17 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	710	50	0	20	LV	-2.947	-0.0042	-2.5 to 2.5	Pass
					NV	-2.747	-0.0039	-2.5 to 2.5	Pass
					HV	-3.905	-0.0055	-2.5 to 2.5	Pass
				-30	NV	-3.462	-0.0049	-2.5 to 2.5	Pass
					-20	NV	-4.106	-0.0058	-2.5 to 2.5
				-10	NV	-2.918	-0.0041	-2.5 to 2.5	Pass
					0	NV	-3.047	-0.0043	-2.5 to 2.5
				10	NV	-5.293	-0.0075	-2.5 to 2.5	Pass
				30	NV	-3.133	-0.0044	-2.5 to 2.5	Pass
				40	NV	-3.676	-0.0052	-2.5 to 2.5	Pass
				50	NV	-2.718	-0.0038	-2.5 to 2.5	Pass

### 3. 99% & 26dB Bandwidth

#### 3.1 Test Result

##### 3.1.1 Band17\_OBW

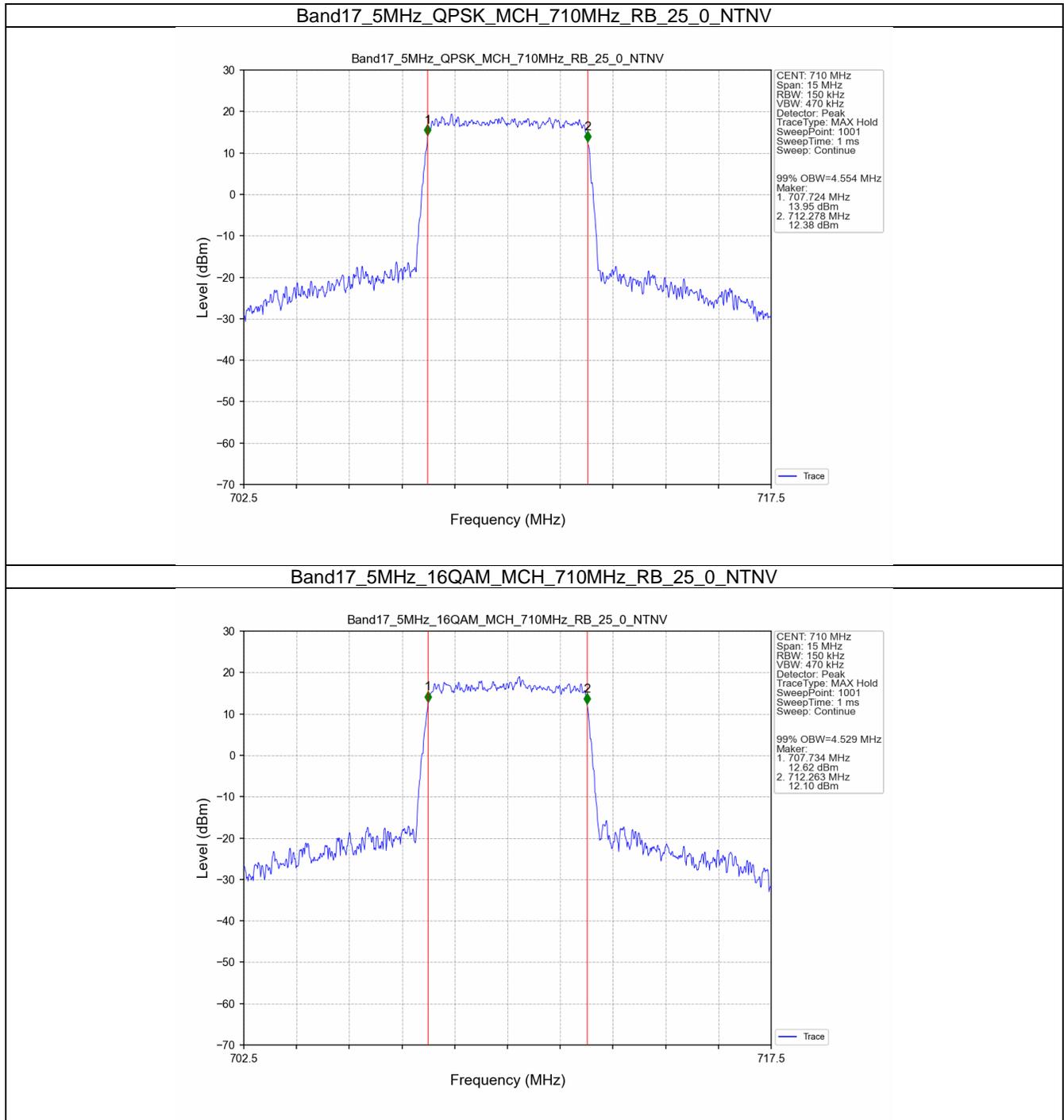
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.554	/	Pass
	16QAM	710	25	0	4.529	/	Pass
	64QAM	710	25	0	4.539	/	Pass
10	QPSK	710	50	0	9.024	/	Pass
	16QAM	710	50	0	9.009	/	Pass
	64QAM	710	50	0	9.029	/	Pass

##### 3.1.2 Band17\_XDB

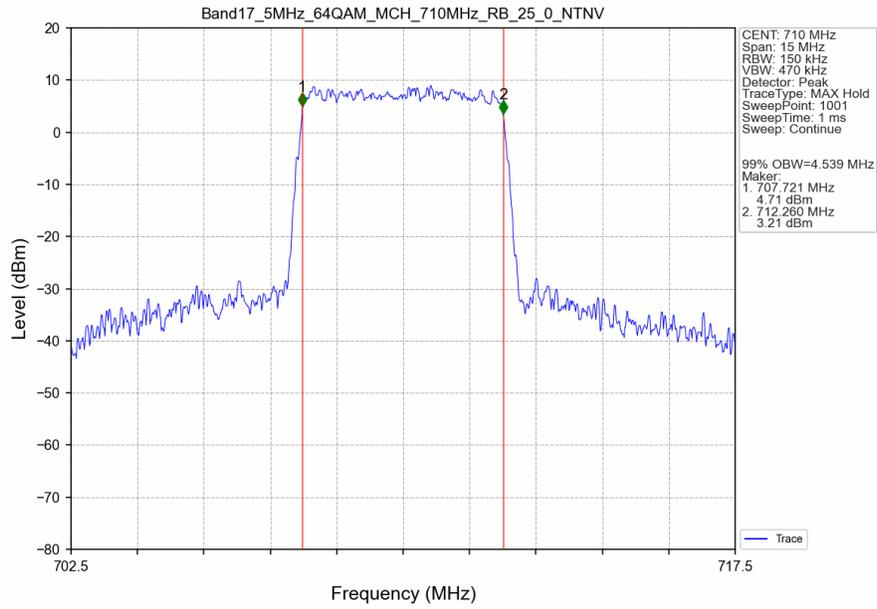
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	5.015	/	Pass
	16QAM	710	25	0	4.995	/	Pass
	64QAM	710	25	0	4.983	/	Pass
10	QPSK	710	50	0	9.897	/	Pass
	16QAM	710	50	0	9.890	/	Pass
	64QAM	710	50	0	9.896	/	Pass

## 3.2 Test Graph

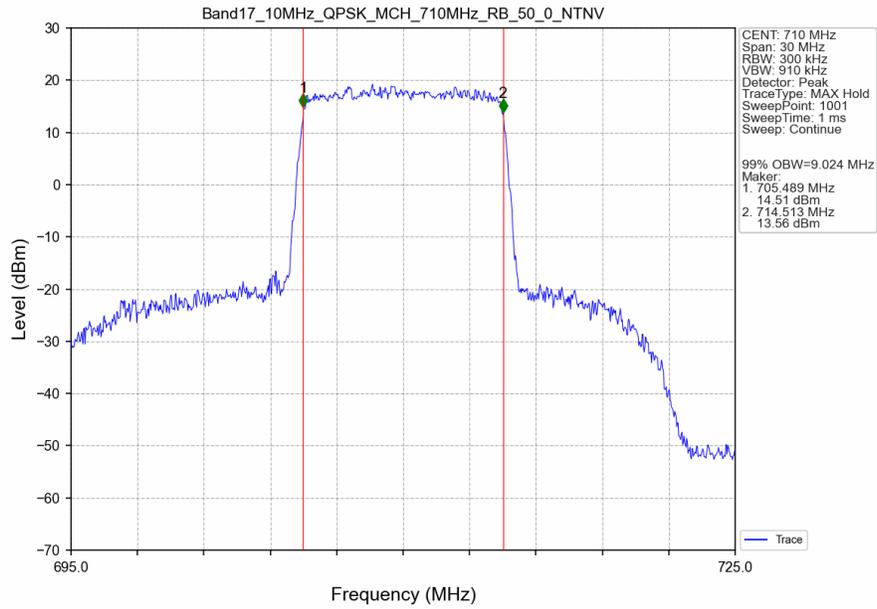
### 3.2.1 Band17\_OBW



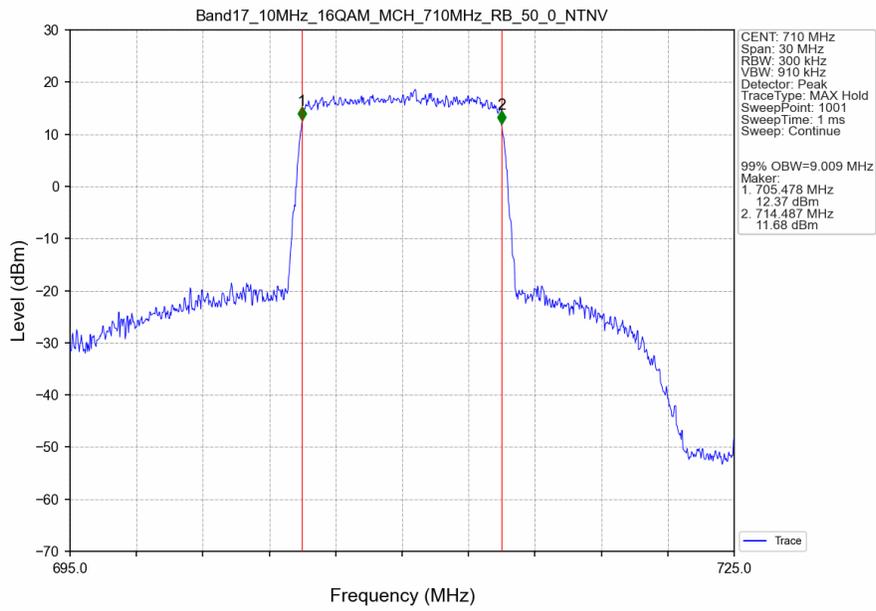
### Band17\_5MHz\_64QAM\_MCH\_710MHz\_RB\_25\_0\_NTNV



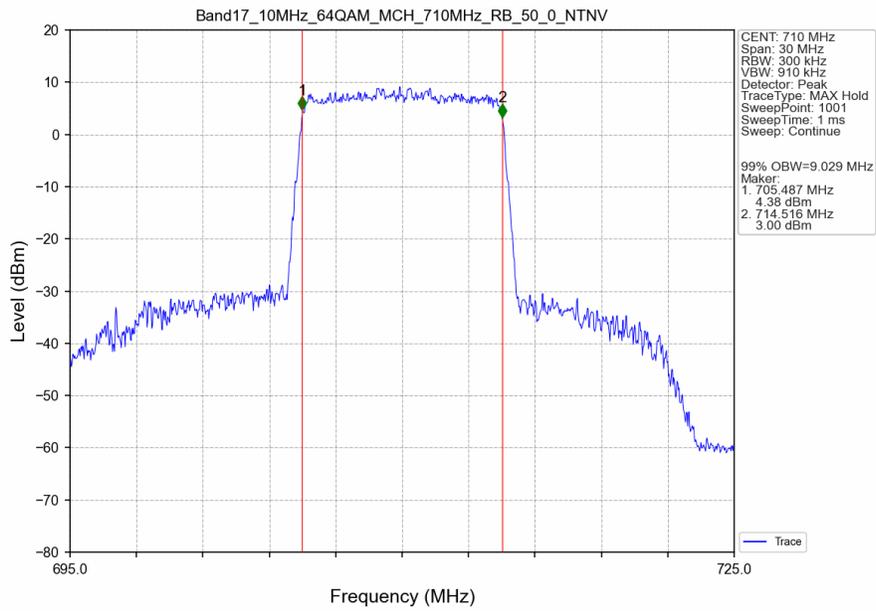
### Band17\_10MHz\_QPSK\_MCH\_710MHz\_RB\_50\_0\_NTNV



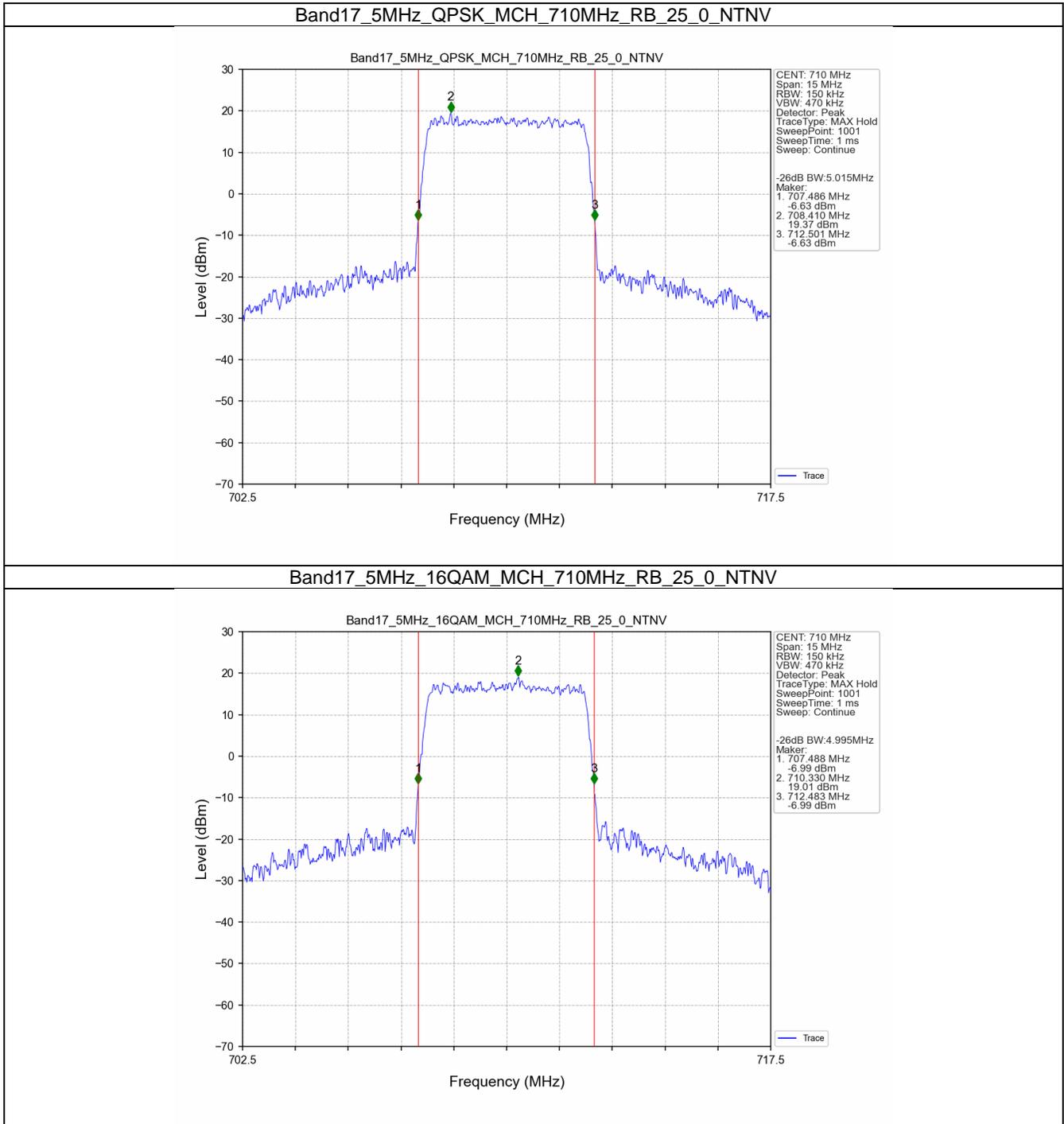
Band17\_10MHz\_16QAM\_MCH\_710MHz\_RB\_50\_0\_NTNV



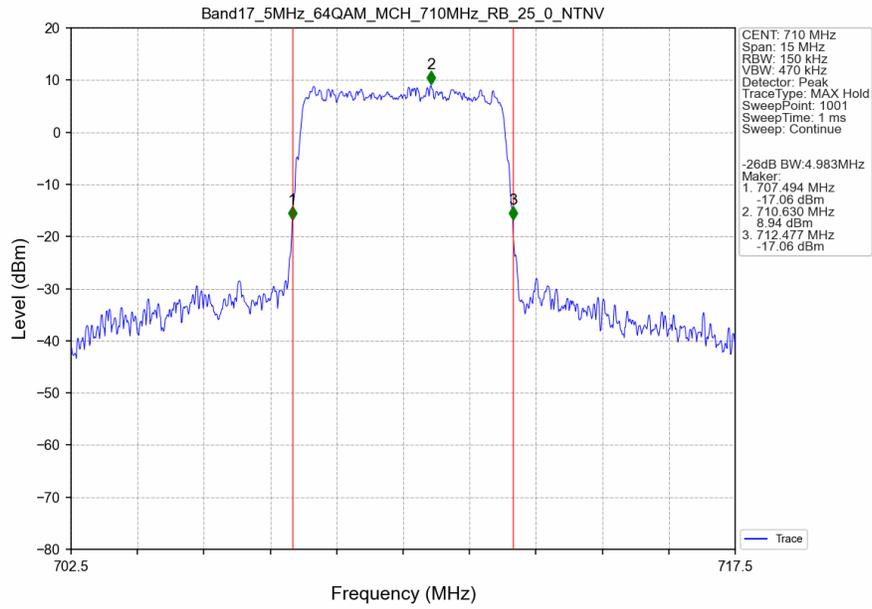
Band17\_10MHz\_64QAM\_MCH\_710MHz\_RB\_50\_0\_NTNV



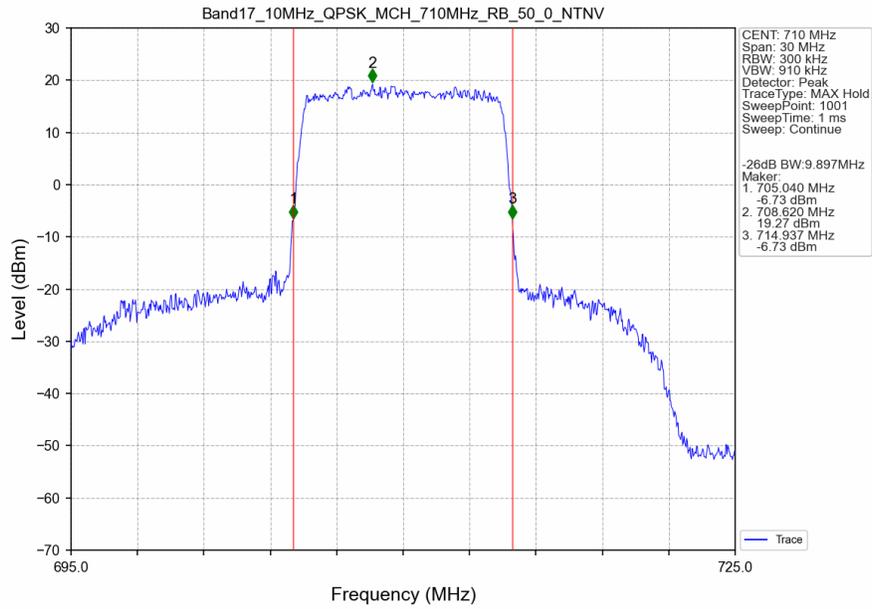
### 3.2.2 Band17\_XDB



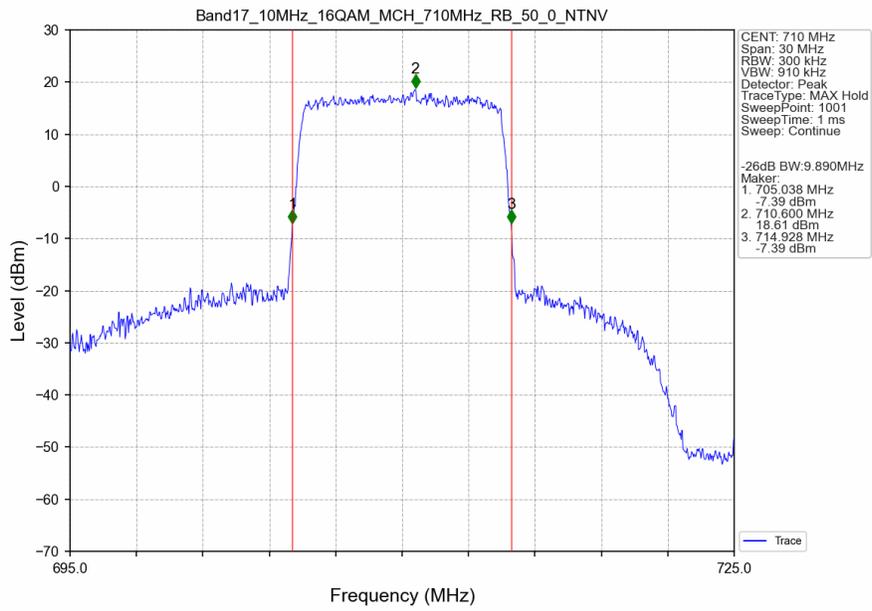
### Band17\_5MHz\_64QAM\_MCH\_710MHz\_RB\_25\_0\_NTNV



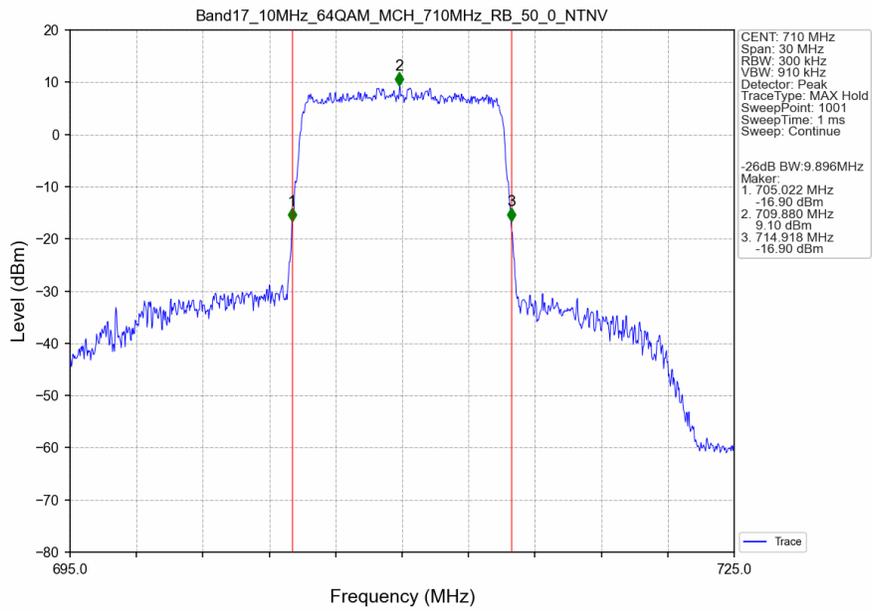
### Band17\_10MHz\_QPSK\_MCH\_710MHz\_RB\_50\_0\_NTNV



Band17\_10MHz\_16QAM\_MCH\_710MHz\_RB\_50\_0\_NTNV



Band17\_10MHz\_64QAM\_MCH\_710MHz\_RB\_50\_0\_NTNV



## 4. Peak-Average Ratio

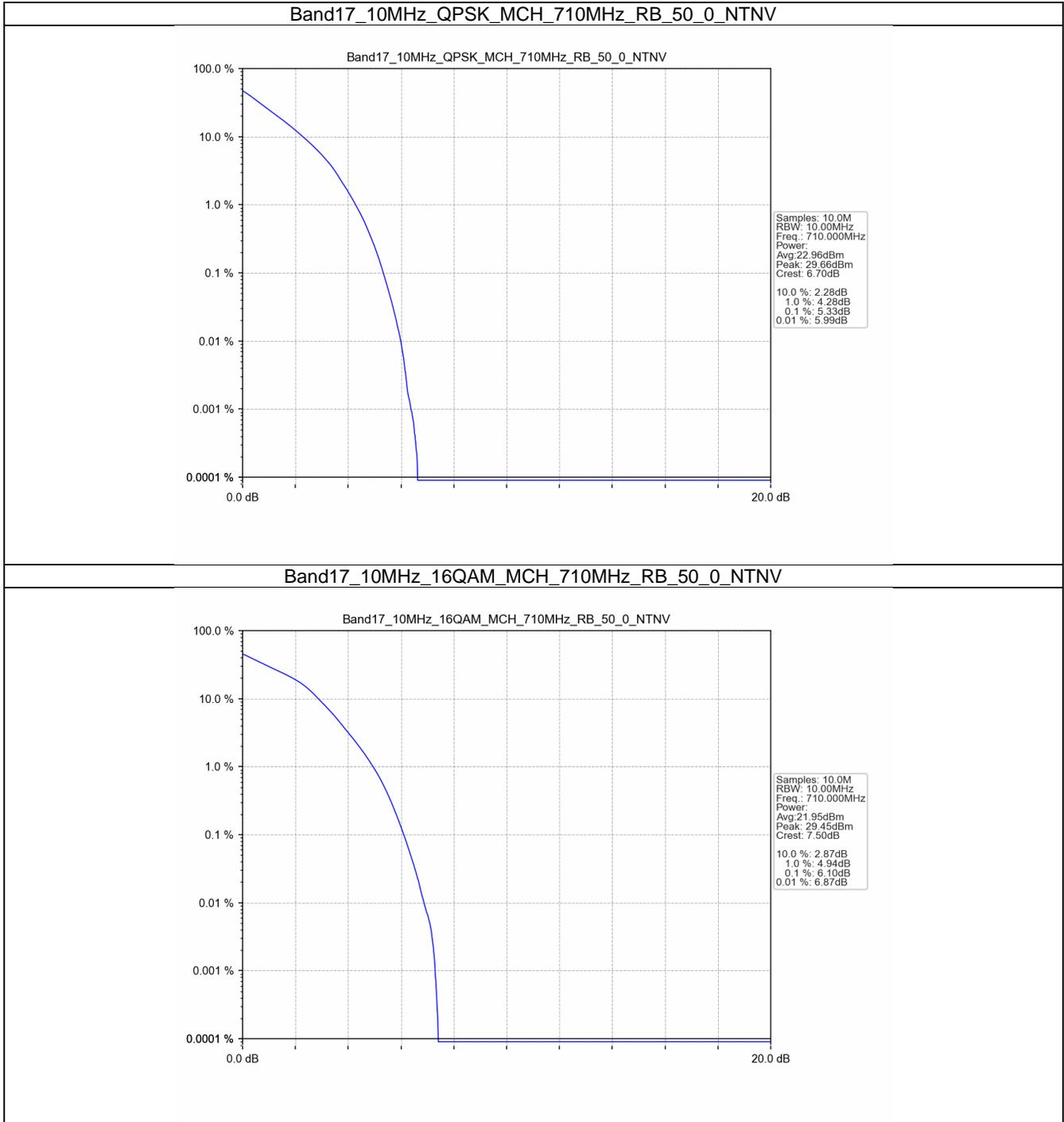
### 4.1 Test Result

#### 4.1.1 B17\_10MHz

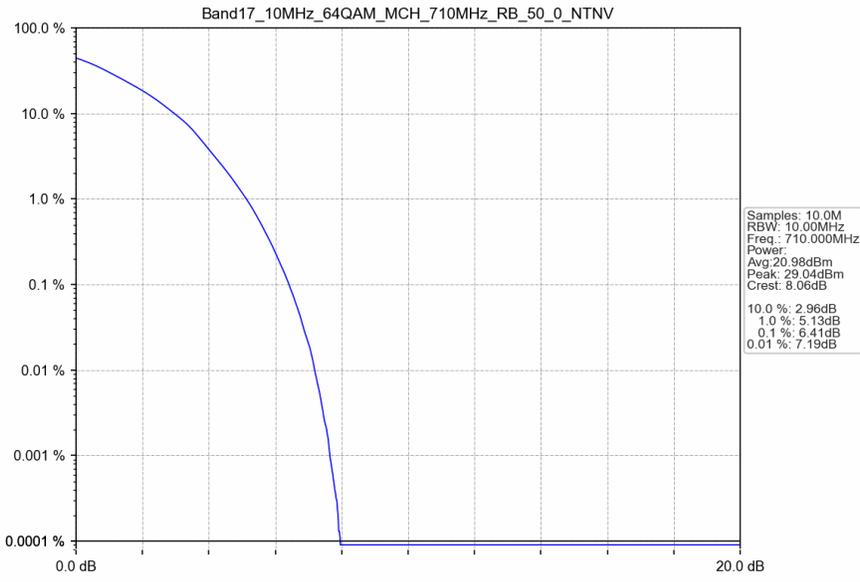
Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	710	50	0	5.33	<=13	Pass
16QAM	710	50	0	6.10	<=13	Pass
64QAM	710	50	0	6.41	<=13	Pass

## 4.2 Test Graph

### 4.2.1 B17\_10MHz



Band17\_10MHz\_64QAM\_MCH\_710MHz\_RB\_50\_0\_NTNV



## 5. Spurious Emission

### 5.1 Test Result

#### 5.1.1 B17\_5MHz

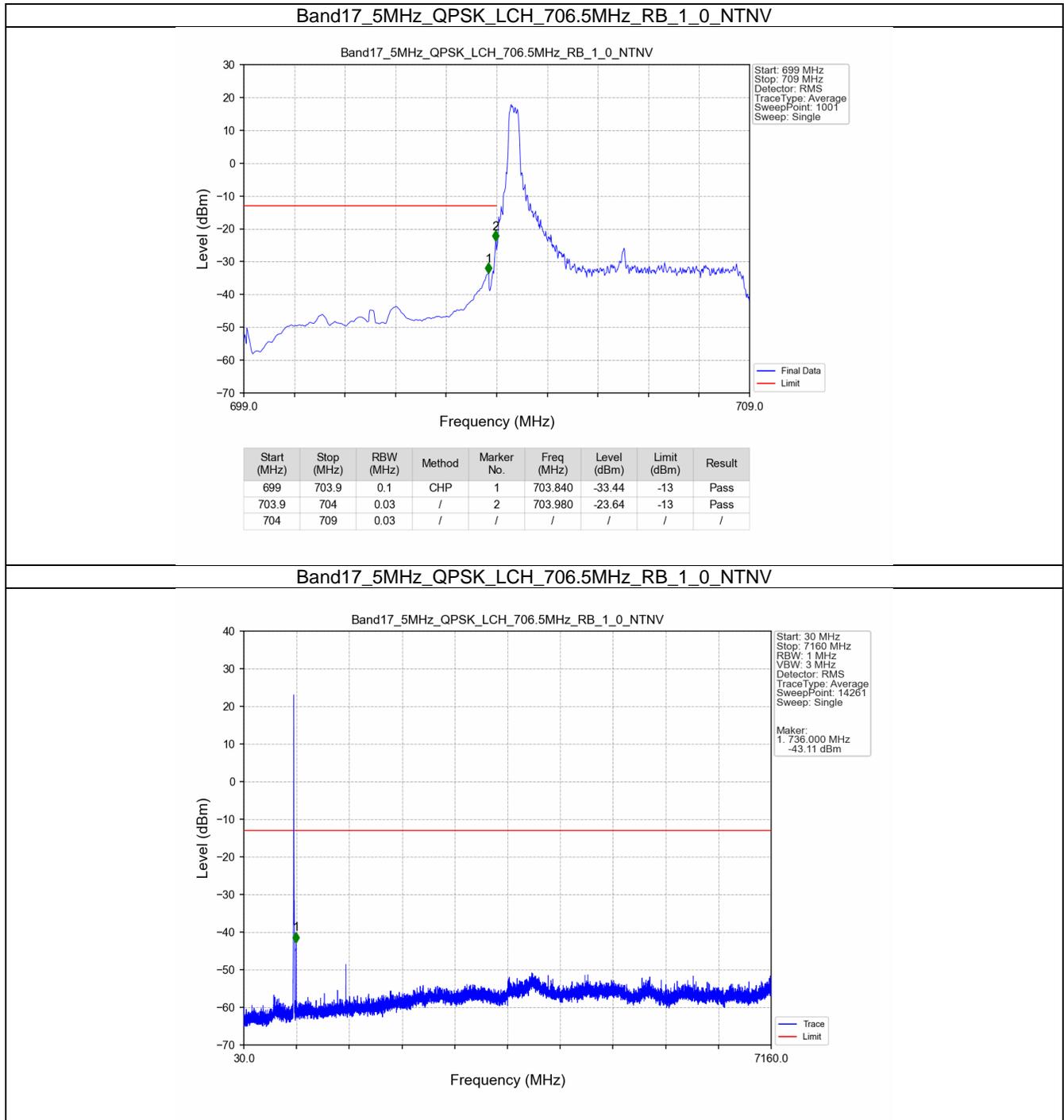
Band: 17 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	706.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	713.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

#### 5.1.2 B17\_10MHz

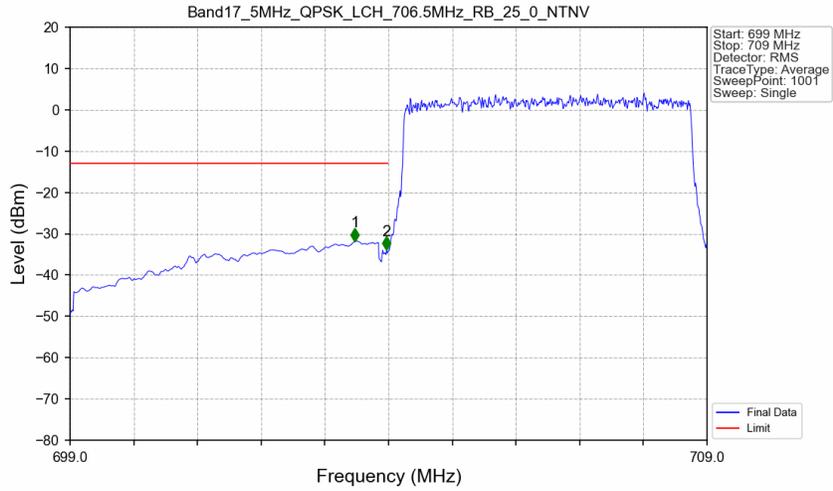
Band: 17 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	709	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

## 5.2 Test Graph

### 5.2.1 B17\_5MHz

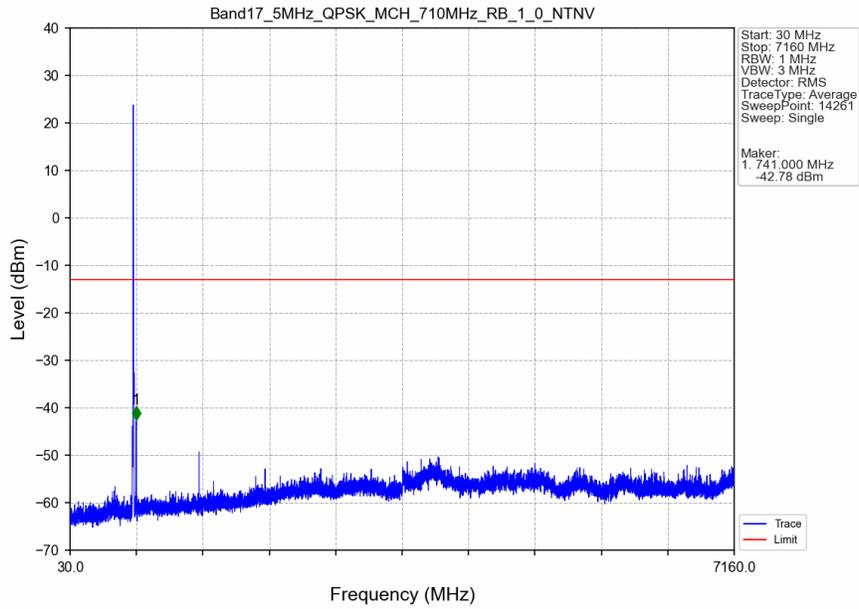


Band17\_5MHz\_QPSK\_LCH\_706.5MHz\_RB\_25\_0\_NTNV

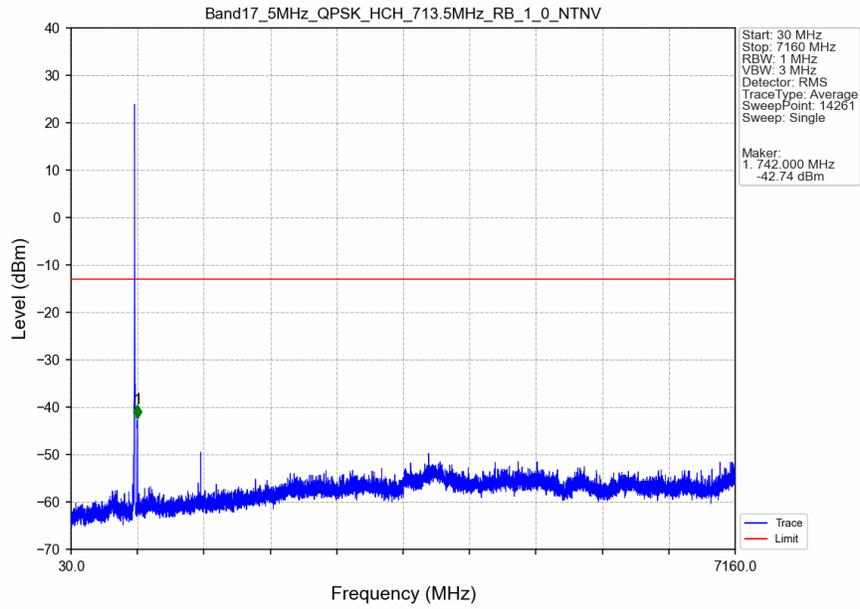


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
699	703.9	0.1	CHP	1	703.470	-31.77	-13	Pass
703.9	704	0.03	/	2	703.970	-33.91	-13	Pass
704	709	0.03	/	/	/	/	/	/

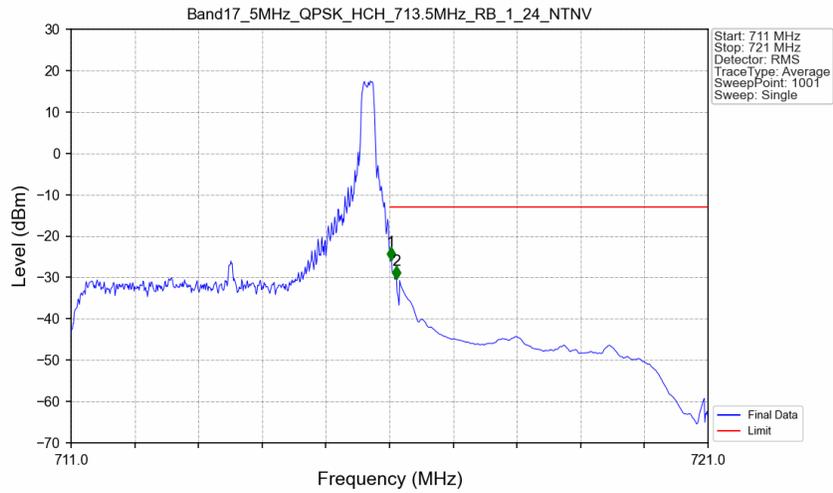
Band17\_5MHz\_QPSK\_MCH\_710MHz\_RB\_1\_0\_NTNV



Band17\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_0\_NTNV

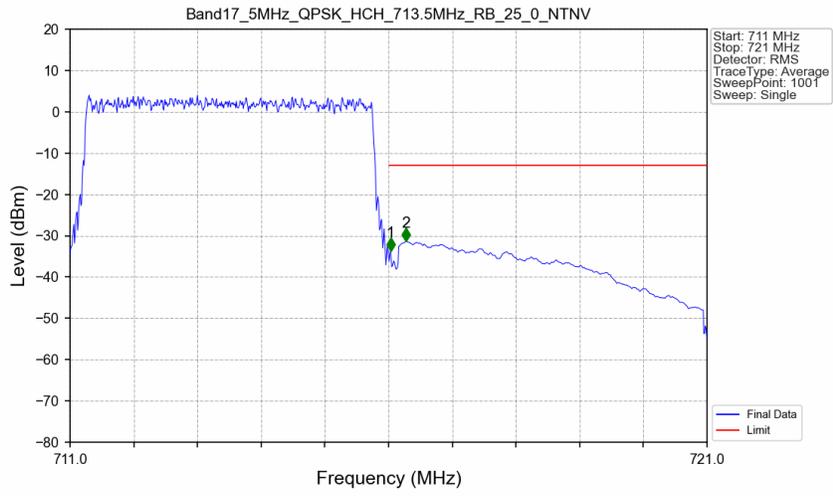


Band17\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_1\_24\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.020	-25.82	-13	Pass
716.1	721	0.1	CHP	2	716.110	-30.51	-13	Pass

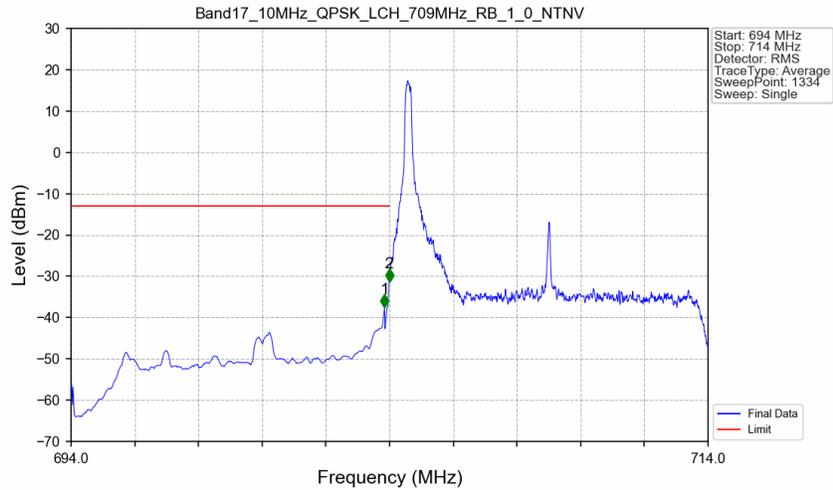
Band17\_5MHz\_QPSK\_HCH\_713.5MHz\_RB\_25\_0\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.030	-33.64	-13	Pass
716.1	721	0.1	CHP	2	716.270	-31.35	-13	Pass

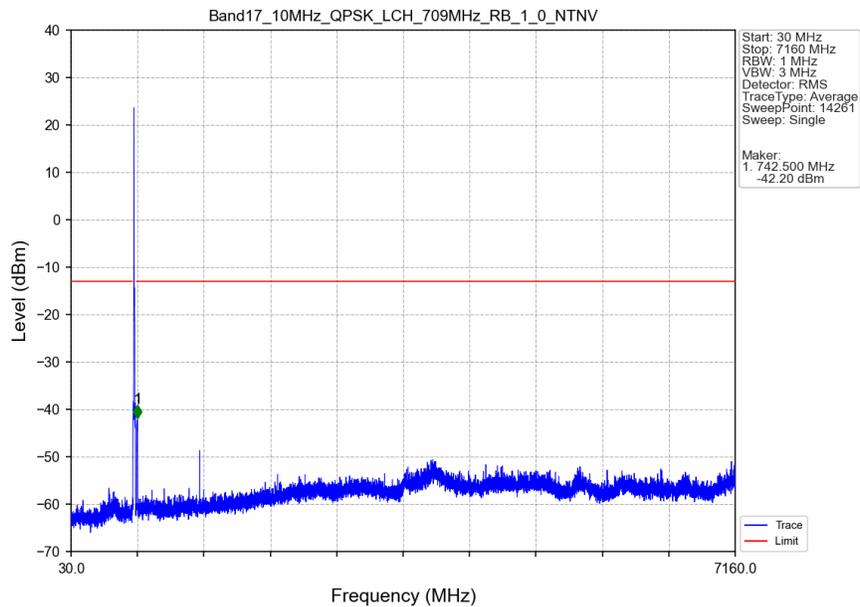
## 5.2.2 B17\_10MHz

Band17\_10MHz\_QPSK\_LCH\_709MHz\_RB\_1\_0\_NTNV

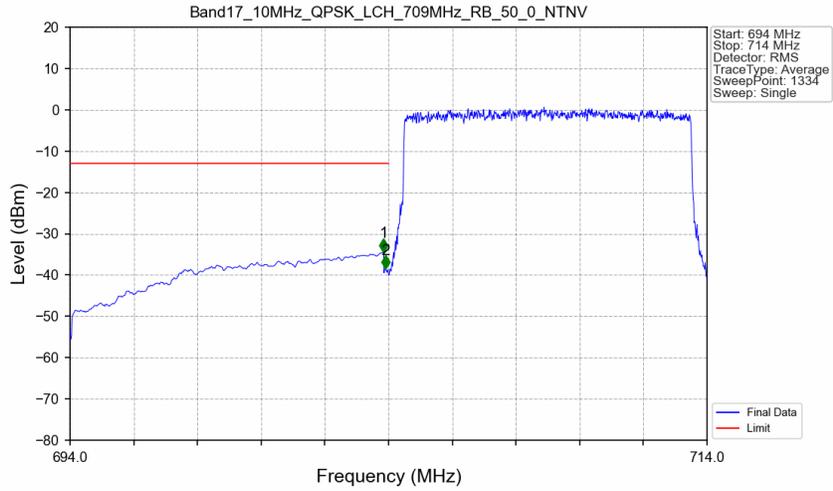


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-37.59	-13	Pass
703.9	704	0.03	/	2	703.992	-31.26	-13	Pass
704	714	0.03	/	/	/	/	/	/

Band17\_10MHz\_QPSK\_LCH\_709MHz\_RB\_1\_0\_NTNV

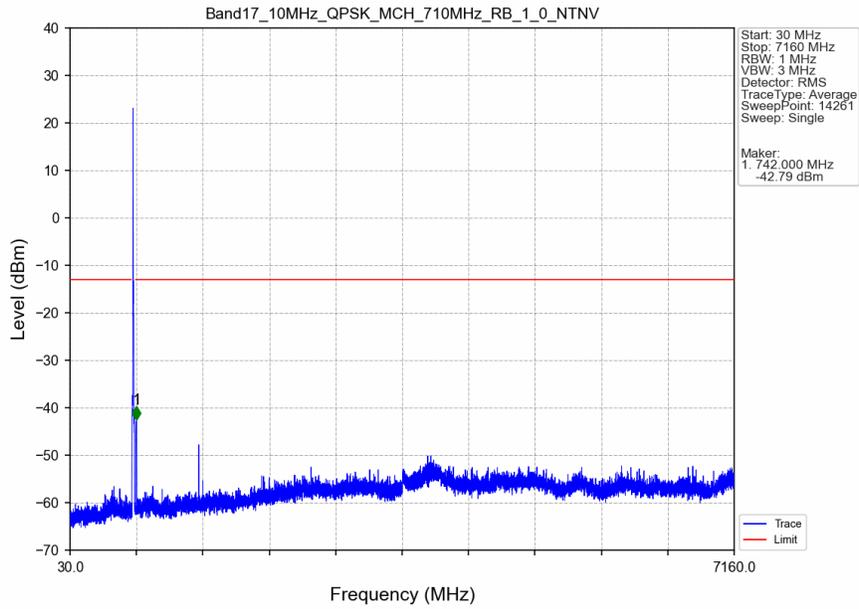


Band17\_10MHz\_QPSK\_LCH\_709MHz\_RB\_50\_0\_NTNV

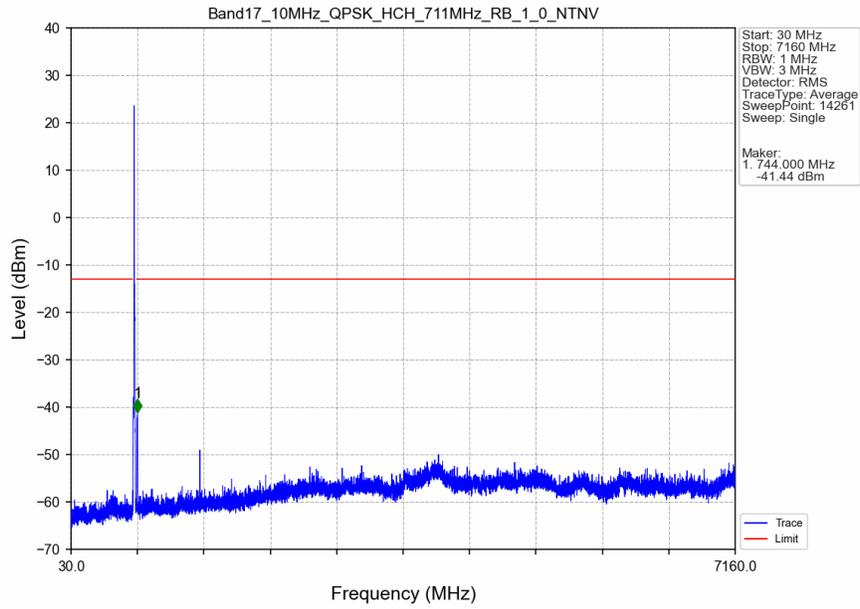


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-34.32	-13	Pass
703.9	704	0.03	/	2	703.902	-38.41	-13	Pass
704	714	0.03	/	/	/	/	/	/

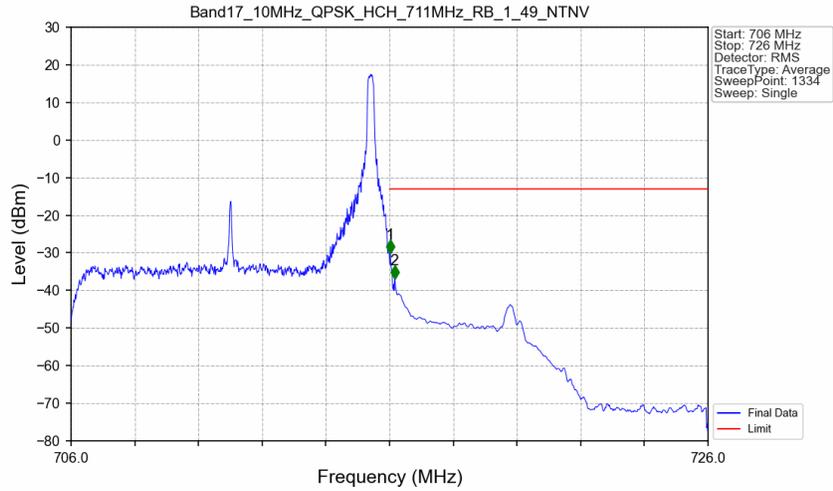
Band17\_10MHz\_QPSK\_MCH\_710MHz\_RB\_1\_0\_NTNV



Band17\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_0\_NTNV

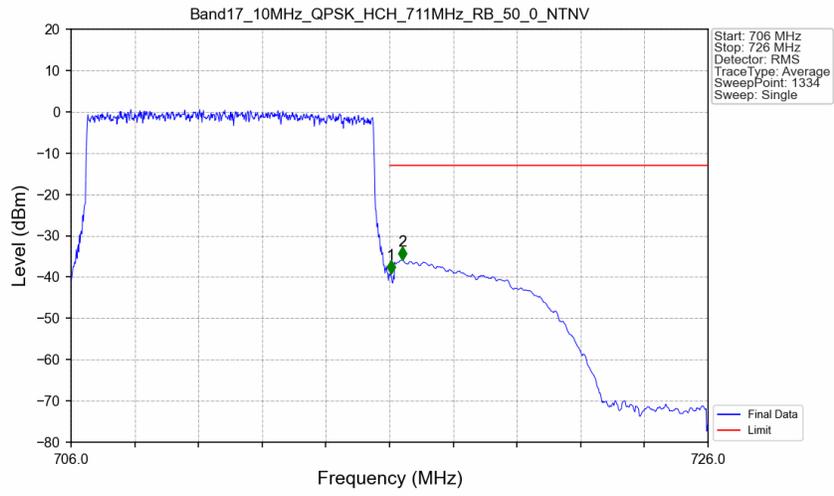


Band17\_10MHz\_QPSK\_HCH\_711MHz\_RB\_1\_49\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.023	-29.99	-13	Pass
716.1	726	0.1	CHP	2	716.158	-36.86	-13	Pass

Band17\_10MHz\_QPSK\_HCH\_711MHz\_RB\_50\_0\_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.038	-39.16	-13	Pass
716.1	726	0.1	CHP	2	716.398	-35.84	-13	Pass