

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B17_5MHz_ERP

Band: 17 / Bandwidth: 5MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	706.5	1	0	24.58	-1.52	20.91	<=34.77	Pass
			13	24.70	-1.52	21.03	<=34.77	Pass
			24	24.69	-1.52	21.02	<=34.77	Pass
		12	0	23.59	-1.52	19.92	<=34.77	Pass
			6	23.73	-1.52	20.06	<=34.77	Pass
			13	23.70	-1.52	20.03	<=34.77	Pass
		25	0	23.68	-1.52	20.01	<=34.77	Pass
	710	1	0	24.61	-1.52	20.94	<=34.77	Pass
			13	24.76	-1.52	21.09	<=34.77	Pass
			24	24.65	-1.52	20.98	<=34.77	Pass
		12	0	23.68	-1.52	20.01	<=34.77	Pass
			6	23.69	-1.52	20.02	<=34.77	Pass
			13	23.74	-1.52	20.07	<=34.77	Pass
		25	0	23.66	-1.52	19.99	<=34.77	Pass
	713.5	1	0	24.65	-1.52	20.98	<=34.77	Pass
			13	24.86	-1.52	21.19	<=34.77	Pass
			24	24.52	-1.52	20.85	<=34.77	Pass
		12	0	23.50	-1.52	19.83	<=34.77	Pass
			6	23.59	-1.52	19.92	<=34.77	Pass
			13	23.53	-1.52	19.86	<=34.77	Pass
		25	0	23.47	-1.52	19.80	<=34.77	Pass
16QAM	706.5	1	0	23.59	-1.52	19.92	<=34.77	Pass
			13	23.80	-1.52	20.13	<=34.77	Pass
			24	23.78	-1.52	20.11	<=34.77	Pass
		12	0	22.57	-1.52	18.90	<=34.77	Pass
			6	22.69	-1.52	19.02	<=34.77	Pass
			13	22.65	-1.52	18.98	<=34.77	Pass
		25	0	22.69	-1.52	19.02	<=34.77	Pass
	710	1	0	23.79	-1.52	20.12	<=34.77	Pass
			13	23.92	-1.52	20.25	<=34.77	Pass
			24	23.77	-1.52	20.10	<=34.77	Pass
		12	0	22.70	-1.52	19.03	<=34.77	Pass
			6	22.70	-1.52	19.03	<=34.77	Pass
			13	22.73	-1.52	19.06	<=34.77	Pass
		25	0	22.65	-1.52	18.98	<=34.77	Pass
	713.5	1	0	23.53	-1.52	19.86	<=34.77	Pass
			13	23.63	-1.52	19.96	<=34.77	Pass
			24	23.53	-1.52	19.86	<=34.77	Pass
		12	0	22.46	-1.52	18.79	<=34.77	Pass
			6	22.59	-1.52	18.92	<=34.77	Pass
			13	22.51	-1.52	18.84	<=34.77	Pass
		25	0	22.52	-1.52	18.85	<=34.77	Pass
64QAM	706.5	1	0	22.80	-1.52	19.13	<=34.77	Pass
			13	23.00	-1.52	19.33	<=34.77	Pass
			24	22.83	-1.52	19.16	<=34.77	Pass
		12	0	21.65	-1.52	17.98	<=34.77	Pass
			6	21.83	-1.52	18.16	<=34.77	Pass
			13	21.76	-1.52	18.09	<=34.77	Pass
		25	0	21.72	-1.52	18.05	<=34.77	Pass

	710	1	0	22.96	-1.52	19.29	<=34.77	Pass
			13	23.04	-1.52	19.37	<=34.77	Pass
			24	23.00	-1.52	19.33	<=34.77	Pass
		12	0	21.70	-1.52	18.03	<=34.77	Pass
			6	21.75	-1.52	18.08	<=34.77	Pass
			13	21.75	-1.52	18.08	<=34.77	Pass
		25	0	21.66	-1.52	17.99	<=34.77	Pass
	713.5	1	0	22.76	-1.52	19.09	<=34.77	Pass
			13	22.83	-1.52	19.16	<=34.77	Pass
			24	22.72	-1.52	19.05	<=34.77	Pass
		12	0	21.44	-1.52	17.77	<=34.77	Pass
			6	21.59	-1.52	17.92	<=34.77	Pass
			13	21.51	-1.52	17.84	<=34.77	Pass
		25	0	21.46	-1.52	17.79	<=34.77	Pass
256QAM	706.5	1	0	19.67	-1.52	16.00	<=34.77	Pass
			13	19.72	-1.52	16.05	<=34.77	Pass
			24	19.73	-1.52	16.06	<=34.77	Pass
		12	0	19.71	-1.52	16.04	<=34.77	Pass
			6	19.76	-1.52	16.09	<=34.77	Pass
			13	19.73	-1.52	16.06	<=34.77	Pass
		25	0	19.72	-1.52	16.05	<=34.77	Pass
	710	1	0	19.77	-1.52	16.10	<=34.77	Pass
			13	19.91	-1.52	16.24	<=34.77	Pass
			24	19.83	-1.52	16.16	<=34.77	Pass
		12	0	19.69	-1.52	16.02	<=34.77	Pass
			6	19.76	-1.52	16.09	<=34.77	Pass
			13	19.75	-1.52	16.08	<=34.77	Pass
		25	0	19.74	-1.52	16.07	<=34.77	Pass
	713.5	1	0	19.56	-1.52	15.89	<=34.77	Pass
			13	19.76	-1.52	16.09	<=34.77	Pass
			24	19.60	-1.52	15.93	<=34.77	Pass
		12	0	19.51	-1.52	15.84	<=34.77	Pass
			6	19.66	-1.52	15.99	<=34.77	Pass
			13	19.60	-1.52	15.93	<=34.77	Pass
		25	0	19.54	-1.52	15.87	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.2 B17_10MHz_ERP

Band: 17 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	709	1	0	24.45	-1.52	20.78	<=34.77	Pass
			25	24.46	-1.52	20.79	<=34.77	Pass
			49	24.46	-1.52	20.79	<=34.77	Pass
		25	0	23.47	-1.52	19.80	<=34.77	Pass
			13	23.56	-1.52	19.89	<=34.77	Pass
			25	23.49	-1.52	19.82	<=34.77	Pass
		50	0	23.53	-1.52	19.86	<=34.77	Pass
	710	1	0	24.40	-1.52	20.73	<=34.77	Pass
			25	24.48	-1.52	20.81	<=34.77	Pass
			49	24.52	-1.52	20.85	<=34.77	Pass
		25	0	23.43	-1.52	19.76	<=34.77	Pass
			13	23.57	-1.52	19.90	<=34.77	Pass
			25	23.51	-1.52	19.84	<=34.77	Pass
		50	0	23.53	-1.52	19.86	<=34.77	Pass
	711	1	0	24.45	-1.52	20.78	<=34.77	Pass

		25	25	24.53	-1.52	20.86	<=34.77	Pass
			49	24.48	-1.52	20.81	<=34.77	Pass
			0	23.48	-1.52	19.81	<=34.77	Pass
			13	23.57	-1.52	19.90	<=34.77	Pass
			25	23.57	-1.52	19.90	<=34.77	Pass
		50	0	23.55	-1.52	19.88	<=34.77	Pass
16QAM	709	1	0	23.64	-1.52	19.97	<=34.77	Pass
			25	23.64	-1.52	19.97	<=34.77	Pass
			49	23.58	-1.52	19.91	<=34.77	Pass
		25	0	22.47	-1.52	18.80	<=34.77	Pass
			13	22.59	-1.52	18.92	<=34.77	Pass
			25	22.53	-1.52	18.86	<=34.77	Pass
		50	0	22.54	-1.52	18.87	<=34.77	Pass
	710	1	0	23.57	-1.52	19.90	<=34.77	Pass
			25	23.61	-1.52	19.94	<=34.77	Pass
			49	23.59	-1.52	19.92	<=34.77	Pass
		25	0	22.45	-1.52	18.78	<=34.77	Pass
			13	22.55	-1.52	18.88	<=34.77	Pass
			25	22.52	-1.52	18.85	<=34.77	Pass
		50	0	22.51	-1.52	18.84	<=34.77	Pass
	711	1	0	23.59	-1.52	19.92	<=34.77	Pass
			25	23.62	-1.52	19.95	<=34.77	Pass
			49	23.59	-1.52	19.92	<=34.77	Pass
		25	0	22.51	-1.52	18.84	<=34.77	Pass
			13	22.61	-1.52	18.94	<=34.77	Pass
			25	22.54	-1.52	18.87	<=34.77	Pass
		50	0	22.56	-1.52	18.89	<=34.77	Pass
64QAM	709	1	0	22.64	-1.52	18.97	<=34.77	Pass
			25	22.73	-1.52	19.06	<=34.77	Pass
			49	22.72	-1.52	19.05	<=34.77	Pass
		25	0	21.49	-1.52	17.82	<=34.77	Pass
			13	21.58	-1.52	17.91	<=34.77	Pass
			25	21.55	-1.52	17.88	<=34.77	Pass
		50	0	21.56	-1.52	17.89	<=34.77	Pass
	710	1	0	22.53	-1.52	18.86	<=34.77	Pass
			25	22.65	-1.52	18.98	<=34.77	Pass
			49	22.66	-1.52	18.99	<=34.77	Pass
		25	0	21.47	-1.52	17.80	<=34.77	Pass
			13	21.55	-1.52	17.88	<=34.77	Pass
			25	21.53	-1.52	17.86	<=34.77	Pass
		50	0	21.52	-1.52	17.85	<=34.77	Pass
	711	1	0	22.68	-1.52	19.01	<=34.77	Pass
			25	22.83	-1.52	19.16	<=34.77	Pass
			49	22.79	-1.52	19.12	<=34.77	Pass
		25	0	21.52	-1.52	17.85	<=34.77	Pass
			13	21.57	-1.52	17.90	<=34.77	Pass
			25	21.54	-1.52	17.87	<=34.77	Pass
		50	0	21.58	-1.52	17.91	<=34.77	Pass
256QAM	709	1	0	19.63	-1.52	15.96	<=34.77	Pass
			25	19.60	-1.52	15.93	<=34.77	Pass
			49	19.77	-1.52	16.10	<=34.77	Pass
		25	0	19.53	-1.52	15.86	<=34.77	Pass
			13	19.58	-1.52	15.91	<=34.77	Pass
			25	19.63	-1.52	15.96	<=34.77	Pass
		50	0	19.56	-1.52	15.89	<=34.77	Pass
	710	1	0	19.57	-1.52	15.90	<=34.77	Pass
			25	19.67	-1.52	16.00	<=34.77	Pass
			49	19.68	-1.52	16.01	<=34.77	Pass
		25	0	19.49	-1.52	15.82	<=34.77	Pass

			13	19.57	-1.52	15.90	<=34.77	Pass
			25	19.59	-1.52	15.92	<=34.77	Pass
		50	0	19.56	-1.52	15.89	<=34.77	Pass
	711	1	0	19.61	-1.52	15.94	<=34.77	Pass
			25	19.76	-1.52	16.09	<=34.77	Pass
			49	19.65	-1.52	15.98	<=34.77	Pass
		25	0	19.51	-1.52	15.84	<=34.77	Pass
			13	19.55	-1.52	15.88	<=34.77	Pass
			25	19.63	-1.52	15.96	<=34.77	Pass
		50	0	19.57	-1.52	15.90	<=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	2.423	0.0034	-2.5 to 2.5	Pass
					NV	1.905	0.0027	-2.5 to 2.5	Pass
					HV	0.969	0.0014	-2.5 to 2.5	Pass
				-30	NV	1.104	0.0016	-2.5 to 2.5	Pass
				-20	NV	0.029	0.0000	-2.5 to 2.5	Pass
				-10	NV	0.711	0.0010	-2.5 to 2.5	Pass
				0	NV	1.404	0.0020	-2.5 to 2.5	Pass
				10	NV	-0.090	-0.0001	-2.5 to 2.5	Pass
				30	NV	-0.449	-0.0006	-2.5 to 2.5	Pass
				40	NV	0.523	0.0007	-2.5 to 2.5	Pass
				50	NV	0.046	0.0001	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band17_OBW

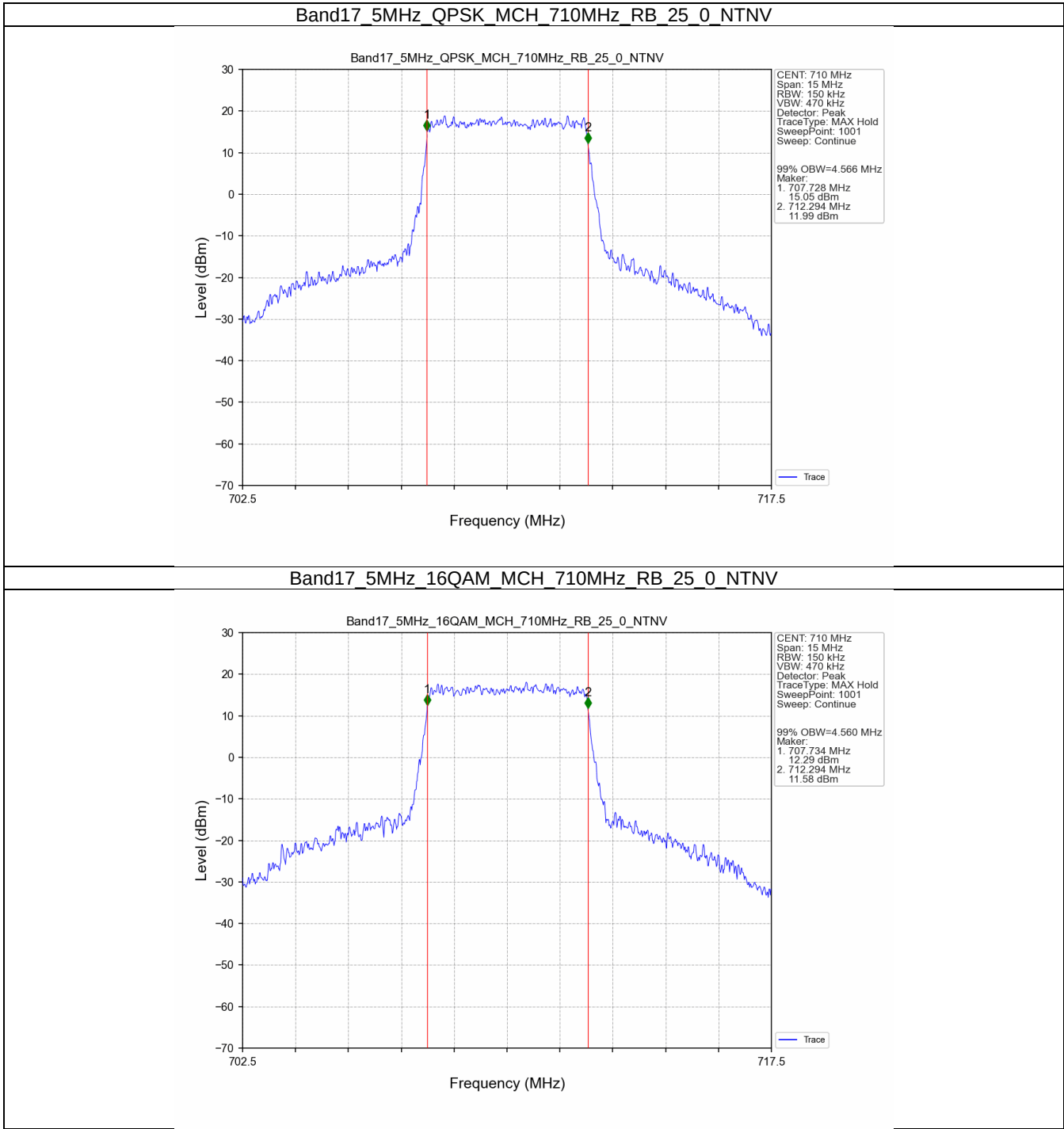
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.566	/	Pass
	16QAM	710	25	0	4.560	/	Pass
	64QAM	710	25	0	4.552	/	Pass
	256QAM	710	25	0	4.560	/	Pass
10	QPSK	710	50	0	9.031	/	Pass
	16QAM	710	50	0	9.036	/	Pass
	64QAM	710	50	0	9.049	/	Pass
	256QAM	710	50	0	9.028	/	Pass

3.1.2 Band17_XDB

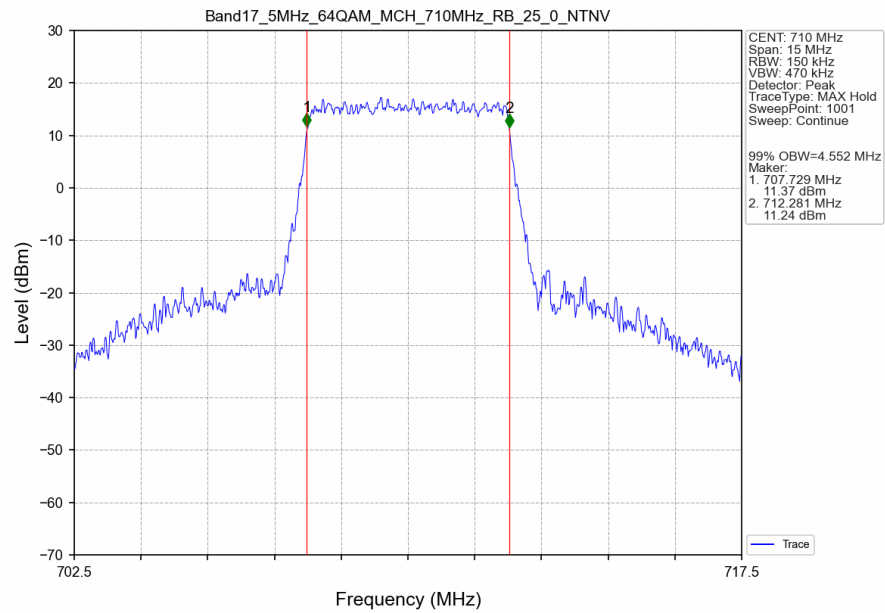
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	5.253	/	Pass
	16QAM	710	25	0	5.257	/	Pass
	64QAM	710	25	0	5.260	/	Pass
	256QAM	710	25	0	5.288	/	Pass
10	QPSK	710	50	0	10.100	/	Pass
	16QAM	710	50	0	10.176	/	Pass
	64QAM	710	50	0	10.146	/	Pass
	256QAM	710	50	0	10.072	/	Pass

3.2 Test Graph

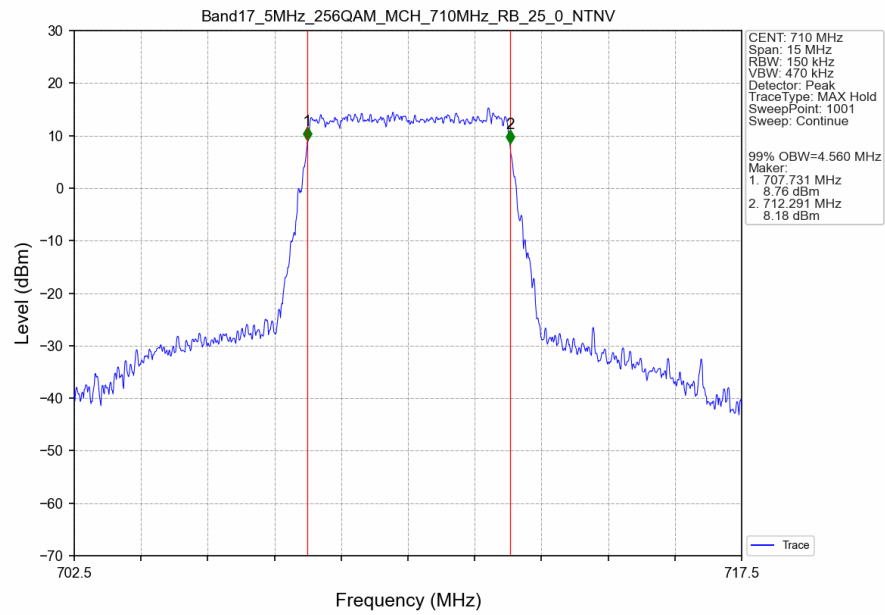
3.2.1 Band17_OBW



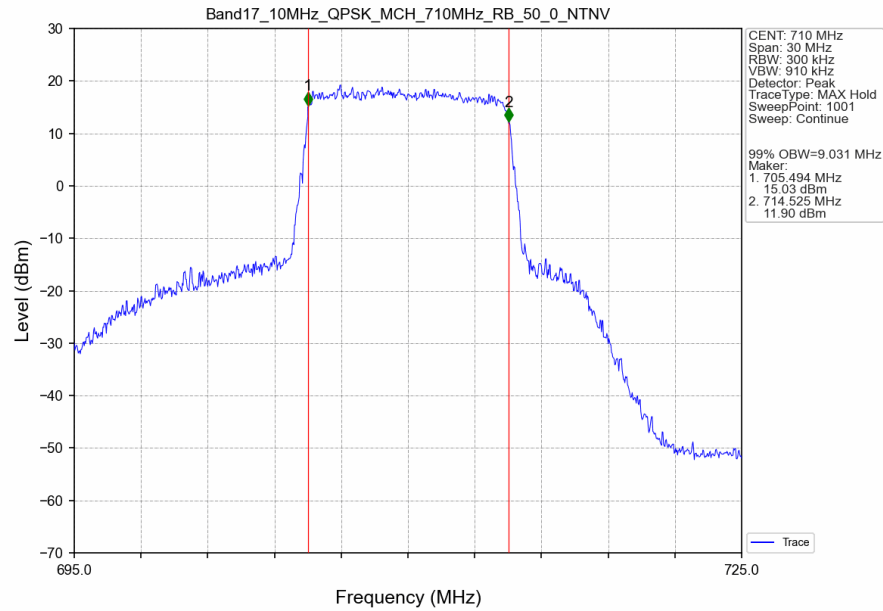
Band17 5MHz 64QAM MCH 710MHz RB 25 0 NTNV



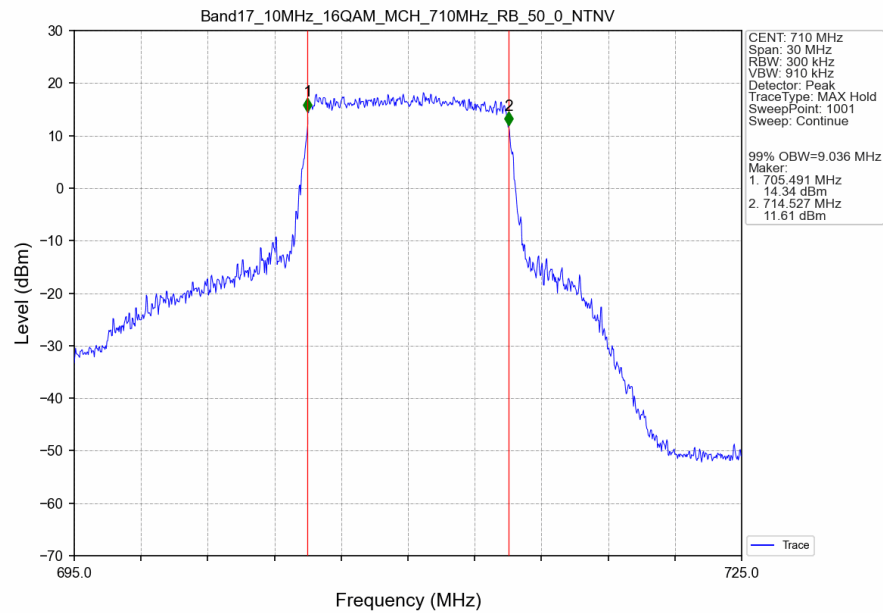
Band17 5MHz 256QAM MCH 710MHz RB 25 0 NTNV



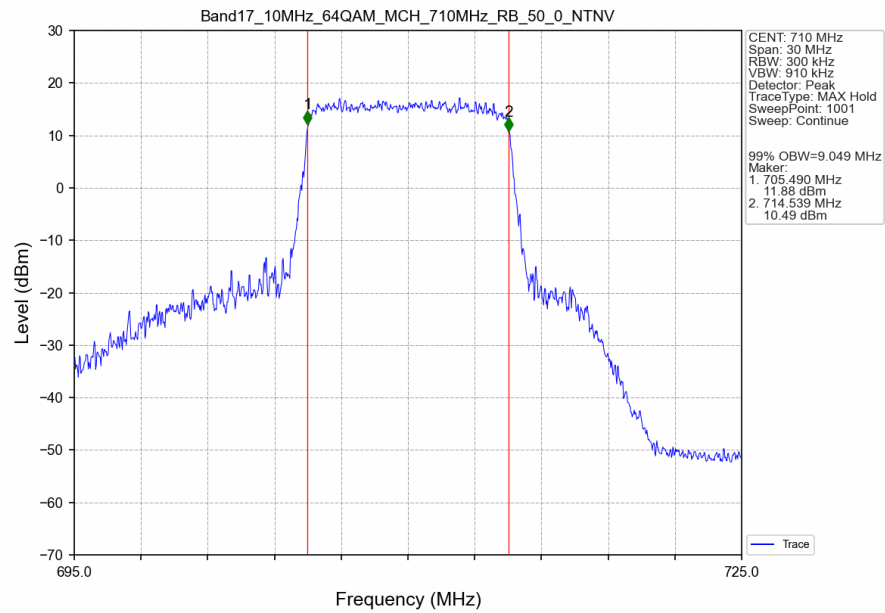
Band17 10MHz QPSK MCH 710MHz RB 50 0 NTNV



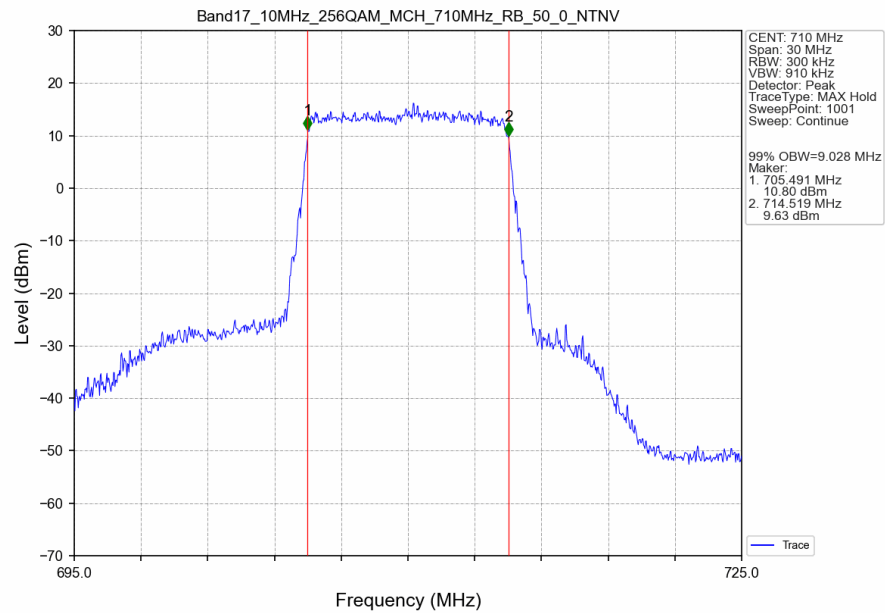
Band17 10MHz 16QAM MCH 710MHz RB 50 0 NTNV



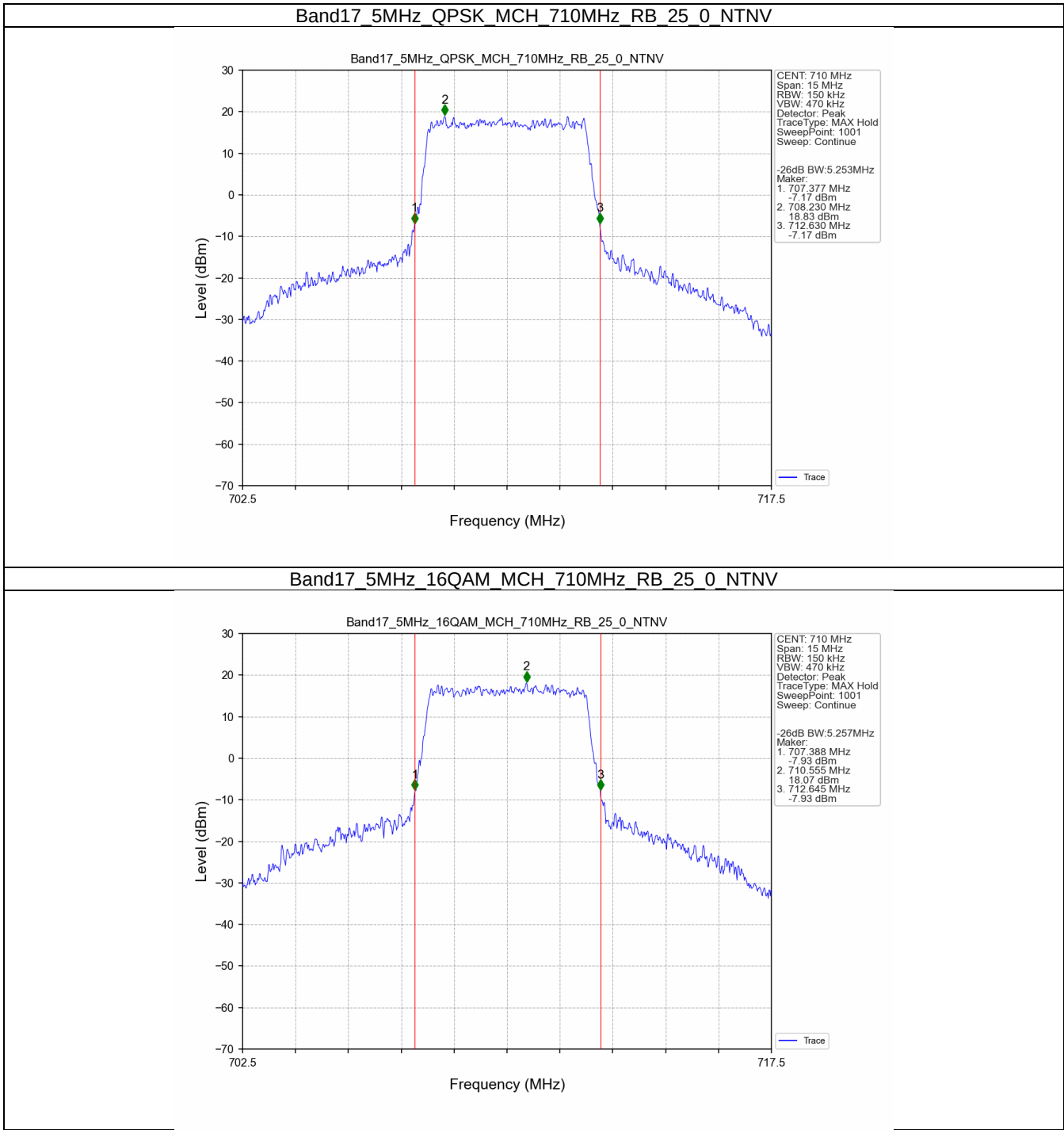
Band17 10MHz 64QAM MCH 710MHz RB 50 0 NTNV



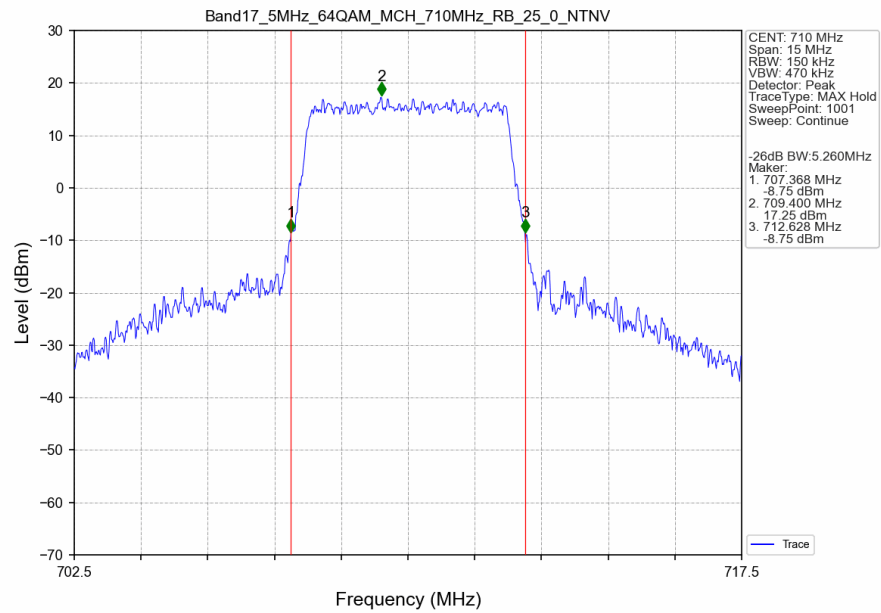
Band17 10MHz 256QAM MCH 710MHz RB 50 0 NTNV



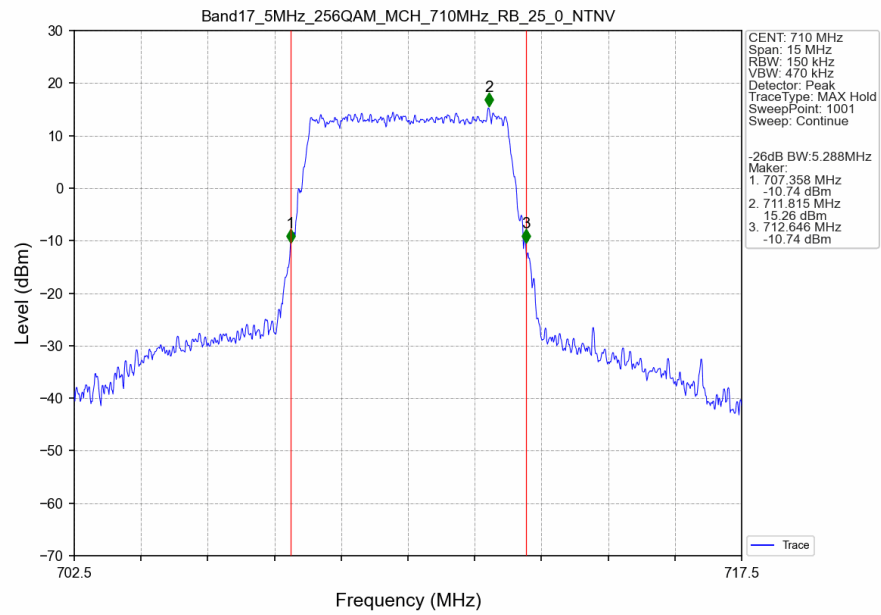
3.2.2 Band17_XDB



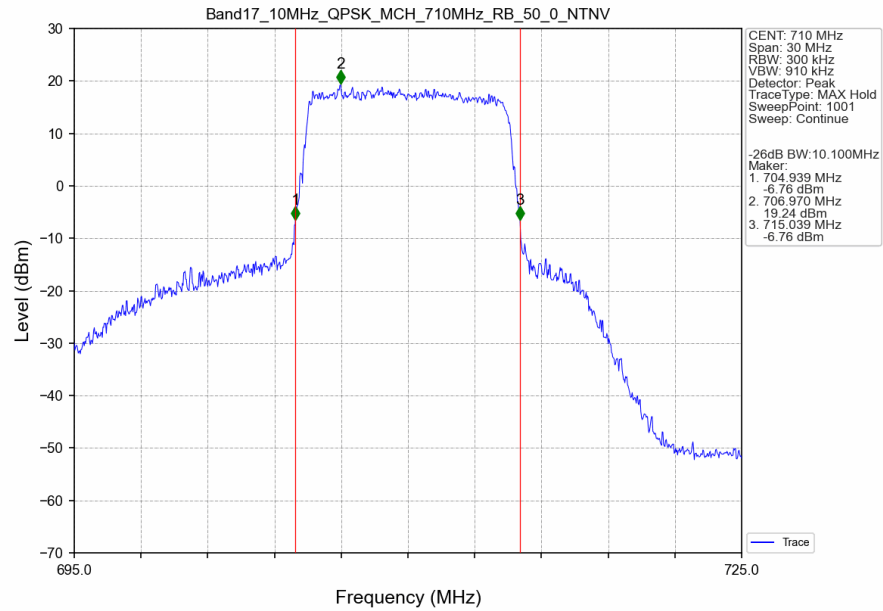
Band17 5MHz 64QAM MCH 710MHz RB 25 0 NTNV



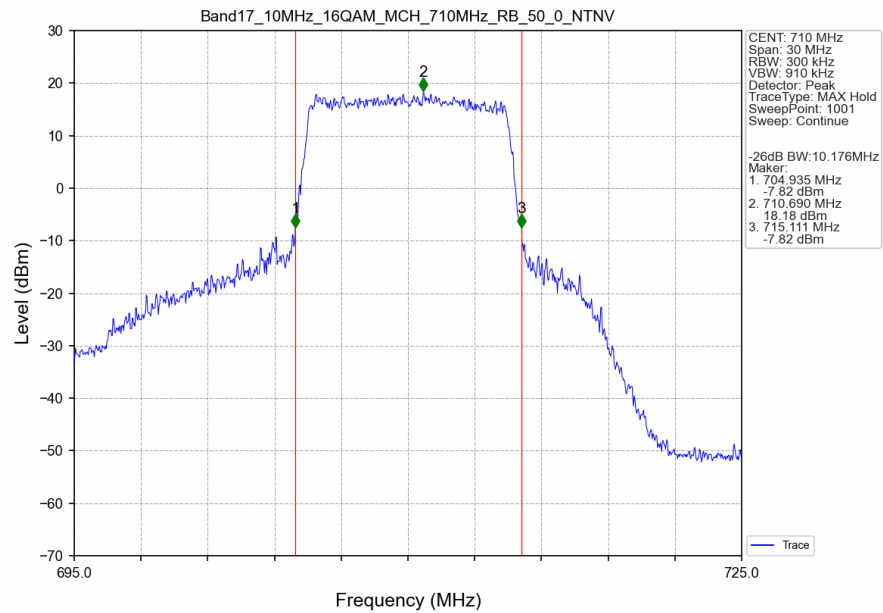
Band17 5MHz 256QAM MCH 710MHz RB 25 0 NTNV



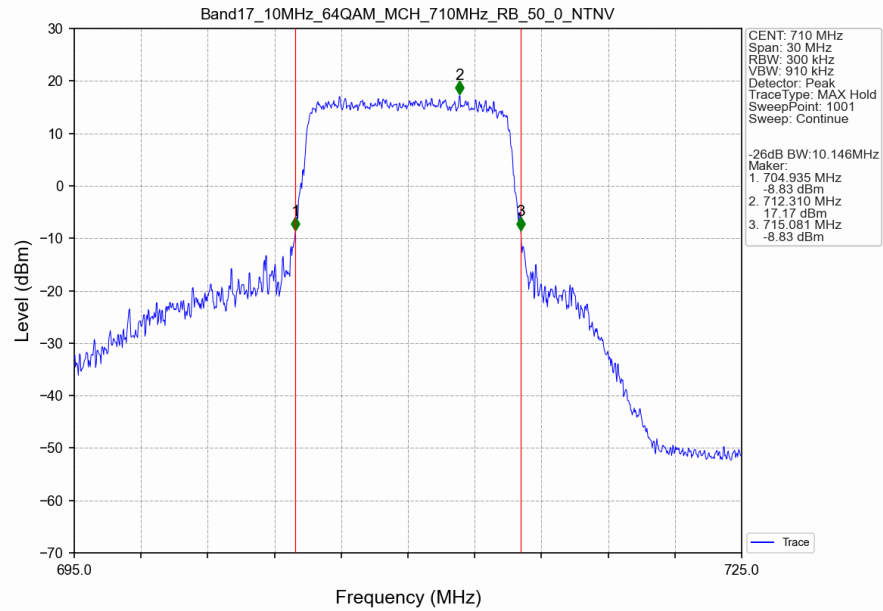
Band17_10MHz_QPSK_MCH_710MHz_RB_50_0_NTNV



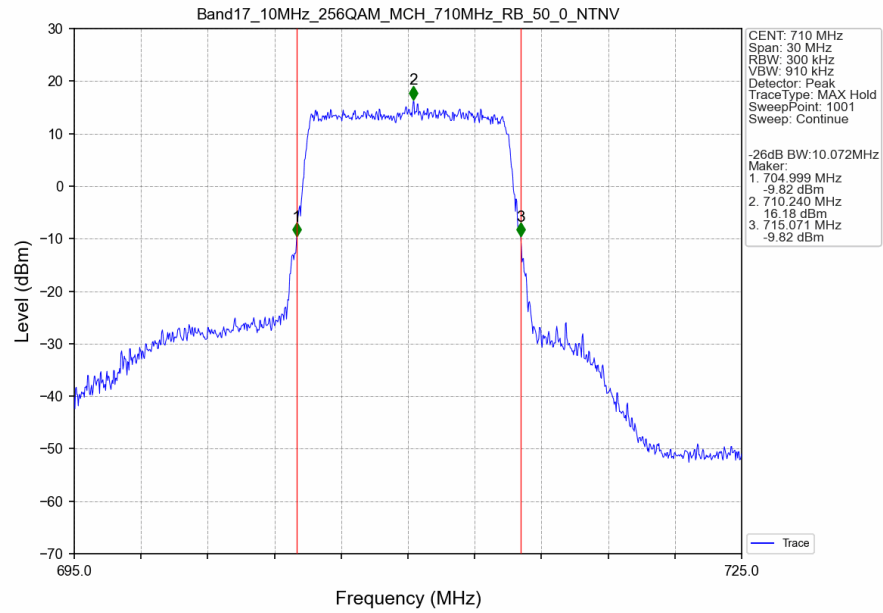
Band17_10MHz_16QAM_MCH_710MHz_RB_50_0_NTNV



Band17 10MHz 64QAM MCH 710MHz RB 50 0 NTV



Band17 10MHz 256QAM MCH 710MHz RB 50 0 NTV



4. Peak-Average Ratio

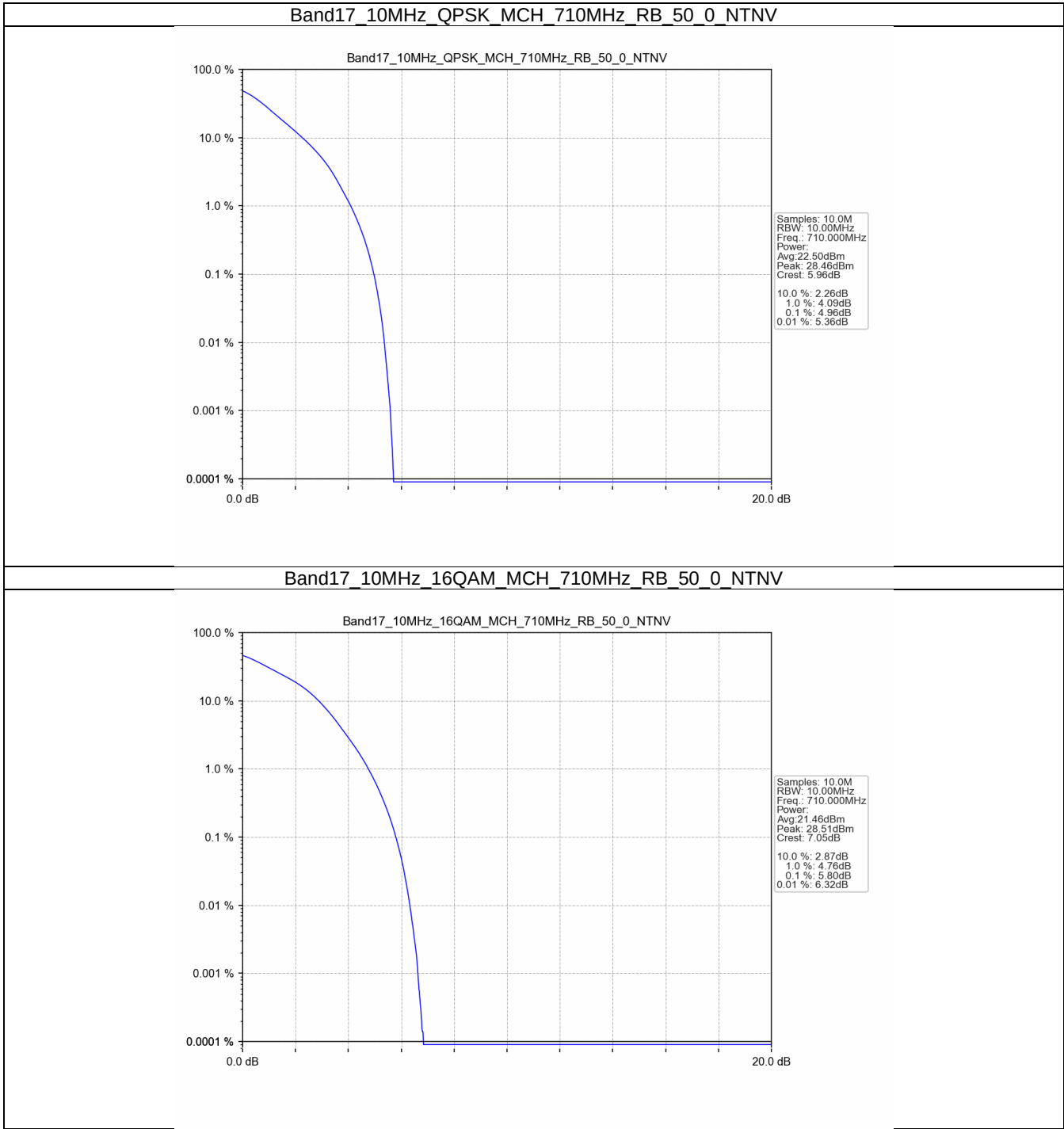
4.1 Test Result

4.1.1 B17_10MHz

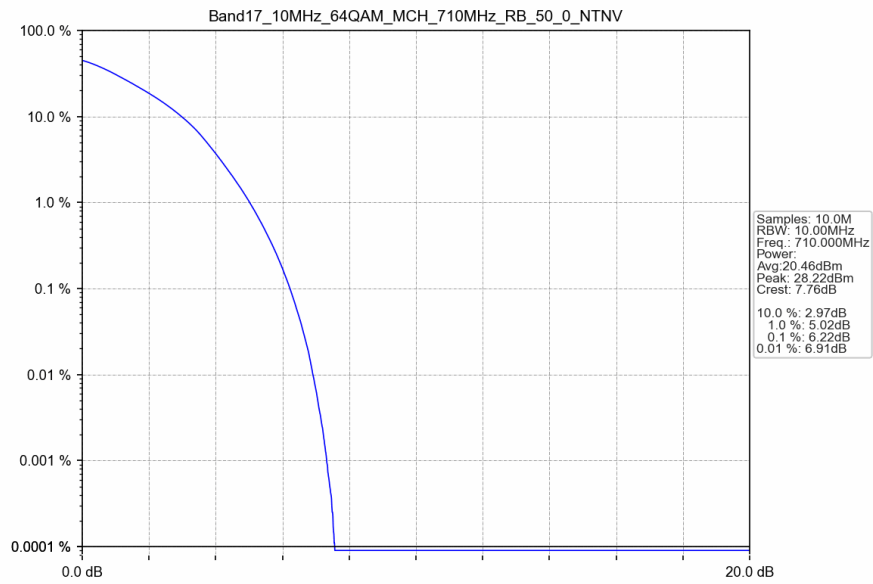
Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	710	50	0	4.96	<=13	Pass
16QAM	710	50	0	5.80	<=13	Pass
64QAM	710	50	0	6.22	<=13	Pass
256QAM	710	50	0	6.54	<=13	Pass

4.2 Test Graph

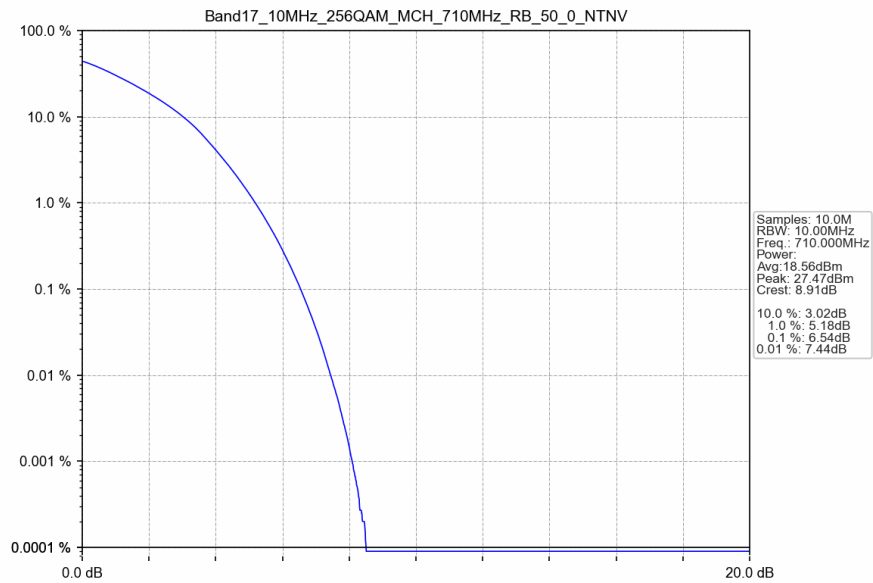
4.2.1 B17_10MHz



Band17 10MHz 64QAM MCH 710MHz RB 50 0 NTNV



Band17 10MHz 256QAM MCH 710MHz RB 50 0 NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B17_5MHz

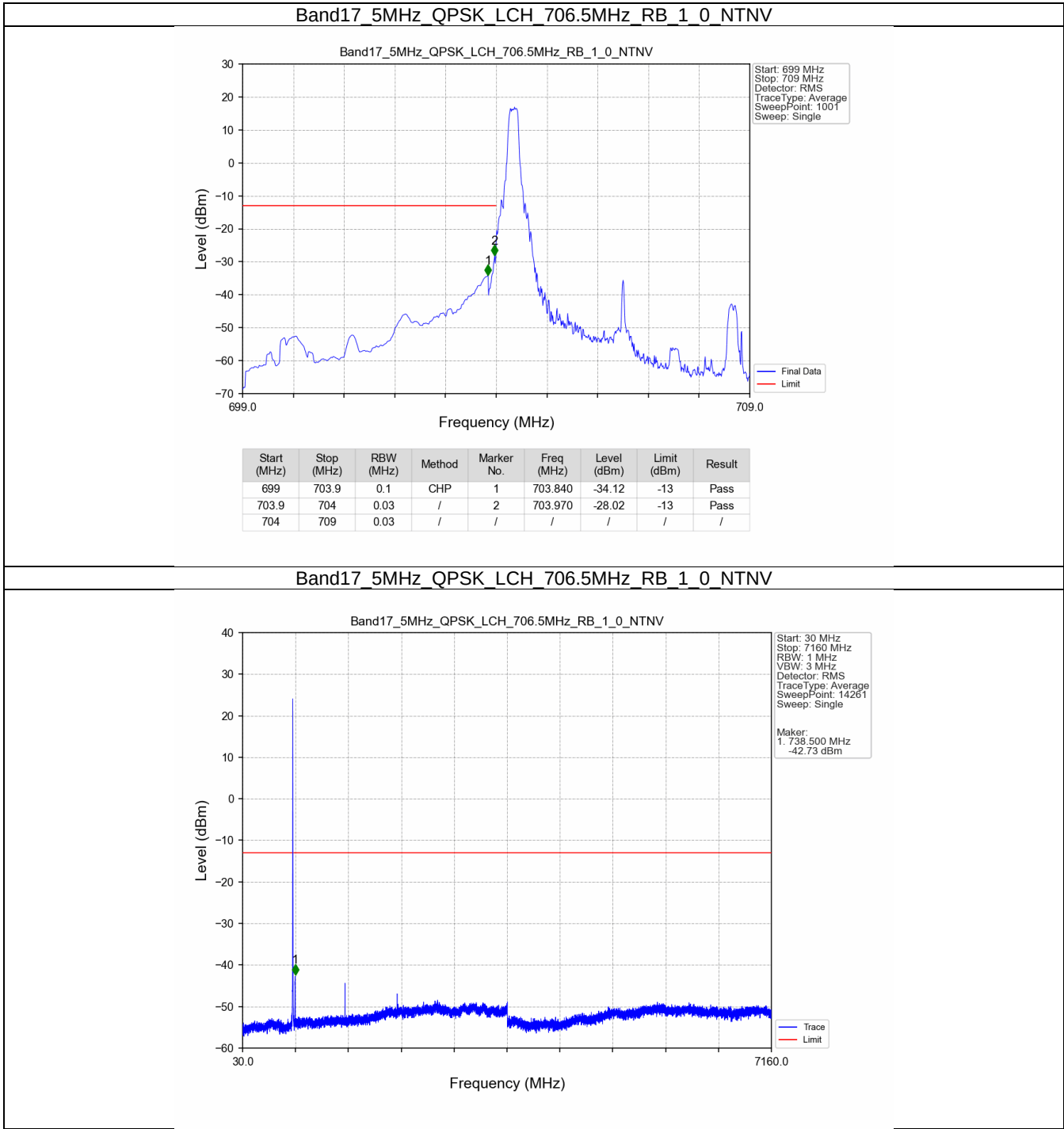
Band: 17 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	706.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	713.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B17_10MHz

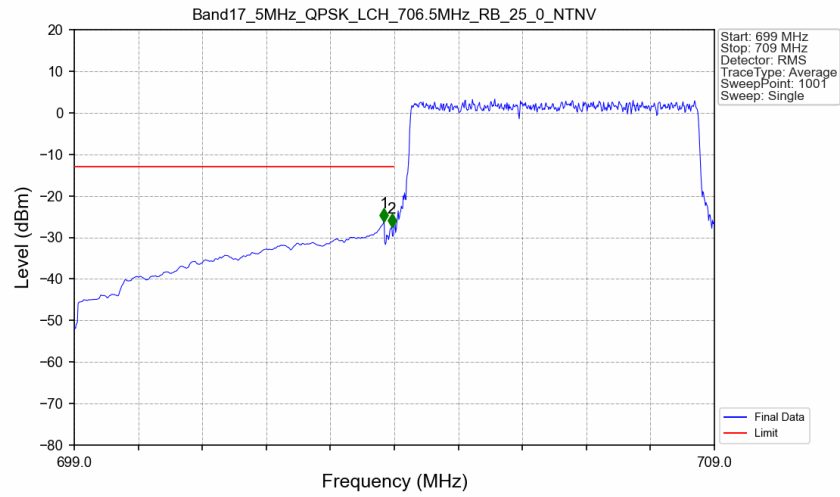
Band: 17 / Bandwidth: 10MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	709	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph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

5.2 Test Graph

5.2.1 B17_5MHz

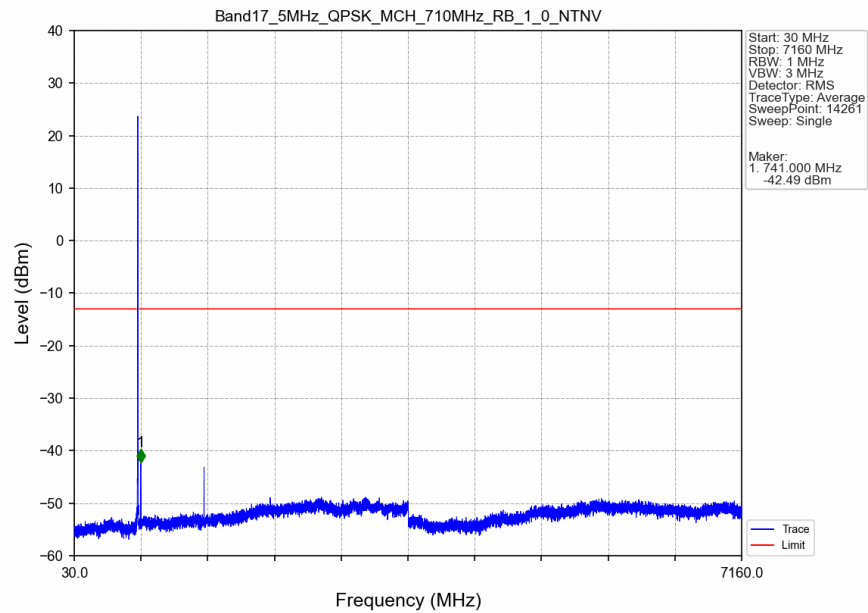


Band17 5MHz QPSK LCH 706.5MHz RB 25 0 NTV

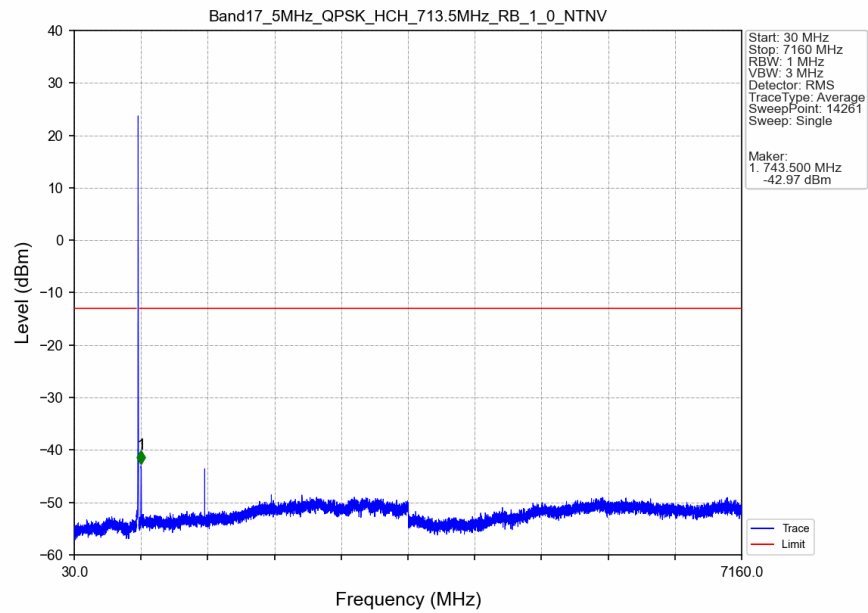


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
699	703.9	0.1	CHP	1	703.840	-26.27	-13	Pass
703.9	704	0.03	/	2	703.960	-27.42	-13	Pass
704	709	0.03	/	/	/	/	/	/

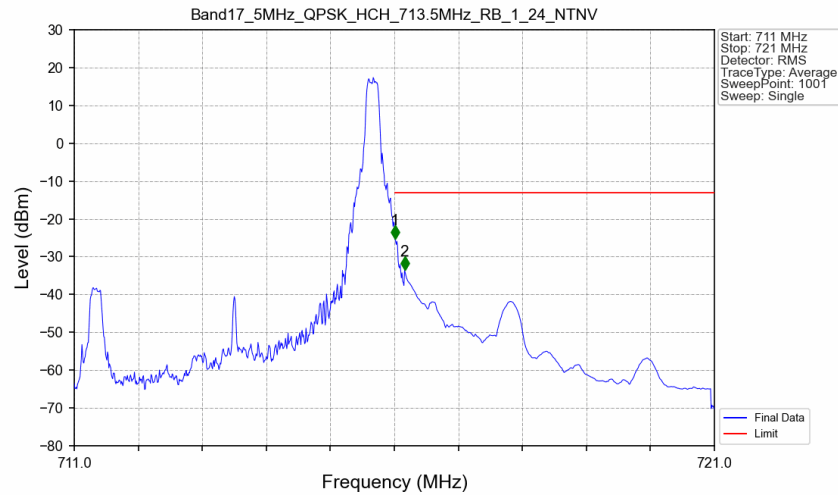
Band17 5MHz QPSK MCH 710MHz RB 1 0 NTV



Band17 5MHz QPSK HCH 713.5MHz RB 1 0 NTV

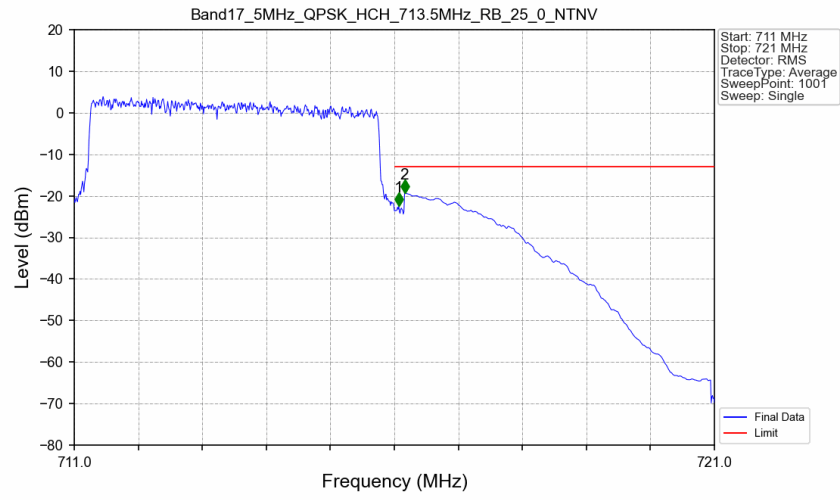


Band17 5MHz QPSK HCH 713.5MHz RB 1 24 NTV



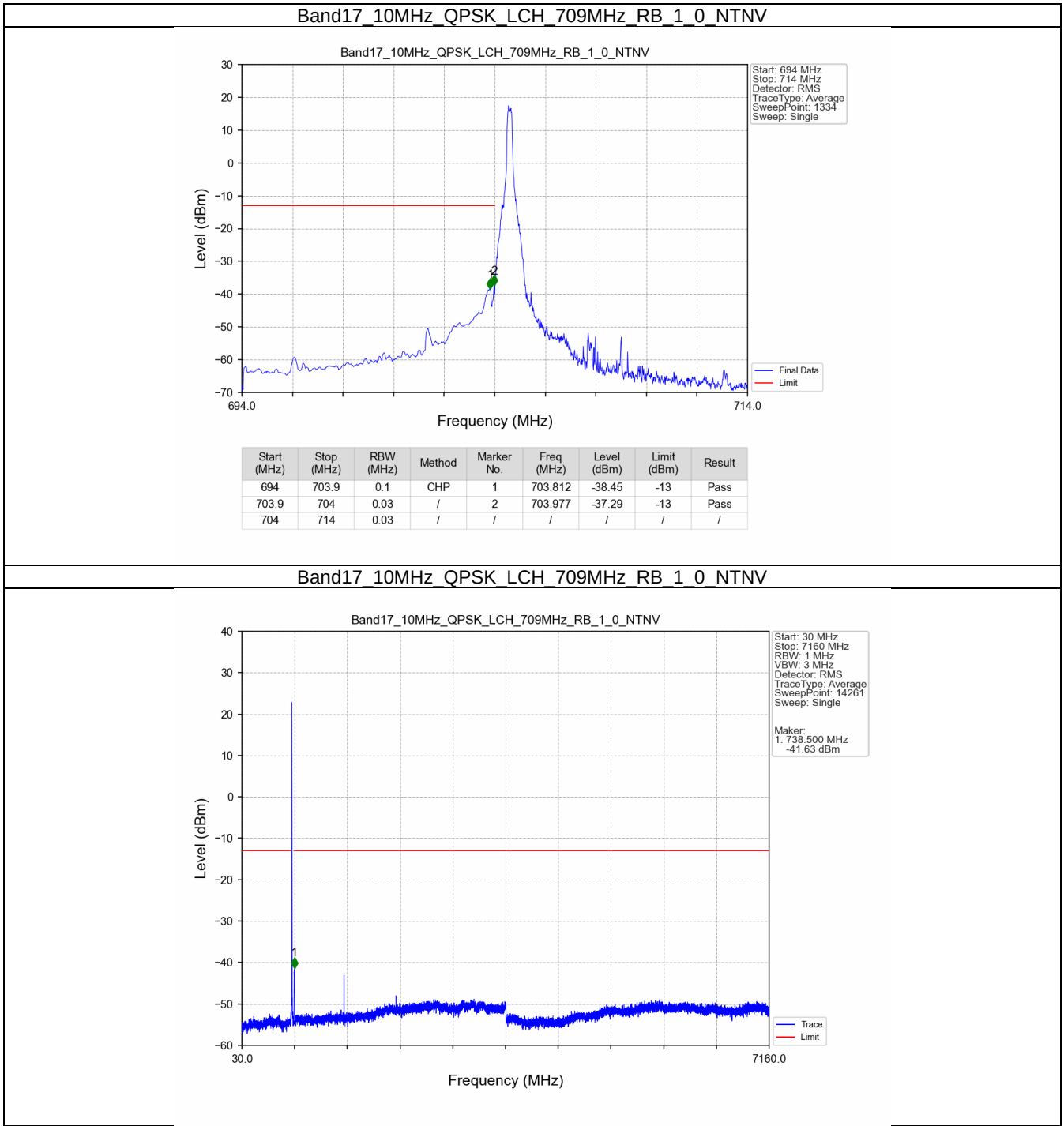
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-25.25	-13	Pass
716.1	721	0.1	CHP	2	716.160	-33.54	-13	Pass

Band17 5MHz QPSK HCH 713.5MHz RB 25 0 NTN

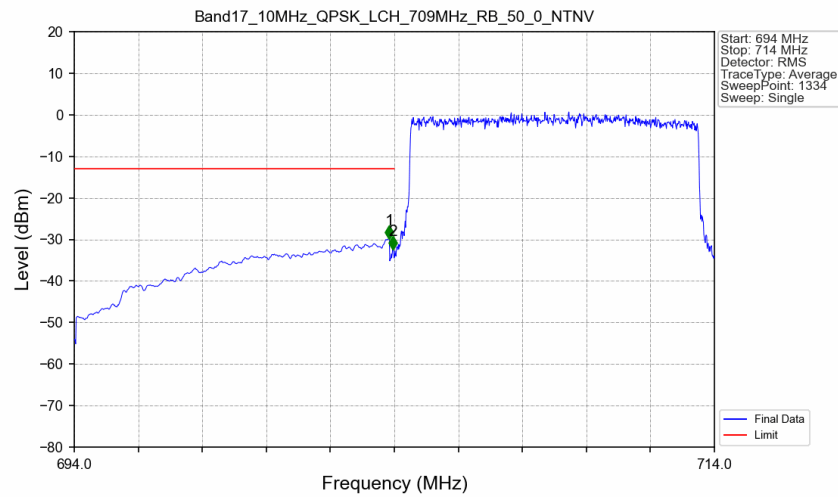


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.070	-22.42	-13	Pass
716.1	721	0.1	CHP	2	716.160	-19.33	-13	Pass

5.2.2 B17_10MHz

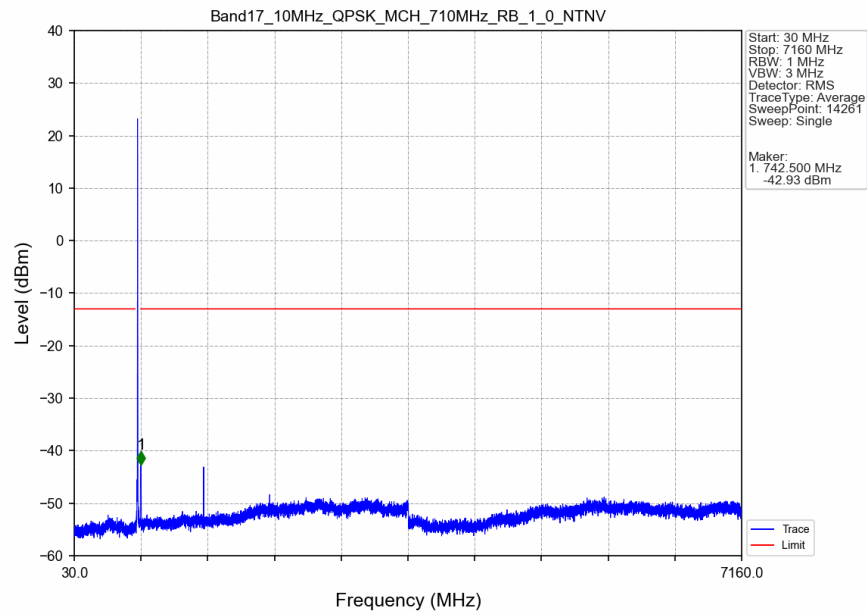


Band17 10MHz QPSK LCH 709MHz RB 50 0 NTNV

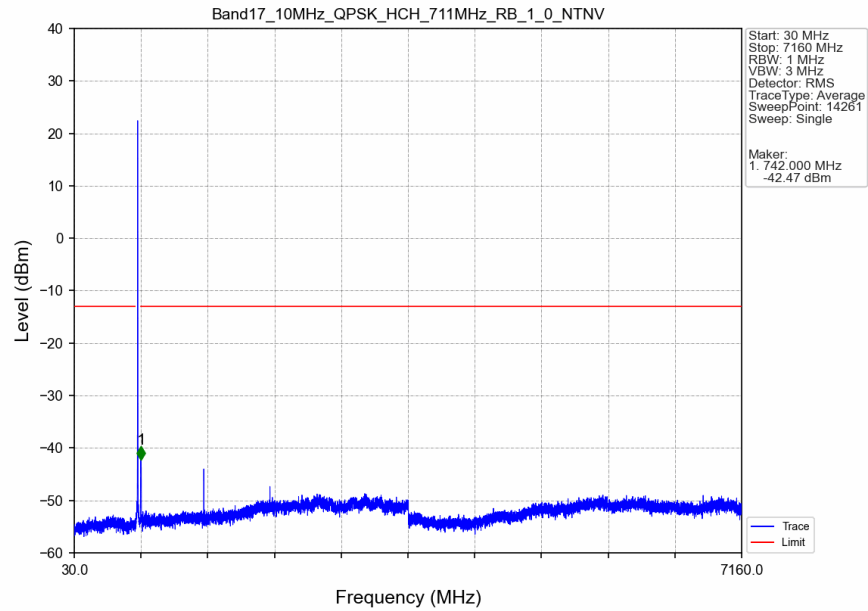


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-29.83	-13	Pass
703.9	704	0.03	/	2	703.947	-32.42	-13	Pass
704	714	0.03	/	/	/	/	/	/

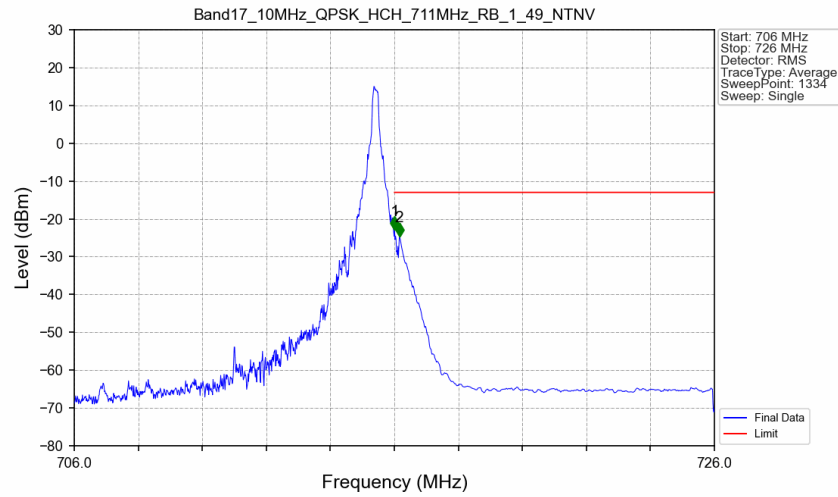
Band17 10MHz QPSK MCH 710MHz RB 1 0 NTNV



Band17 10MHz QPSK HCH 711MHz RB 1 0 NTNV

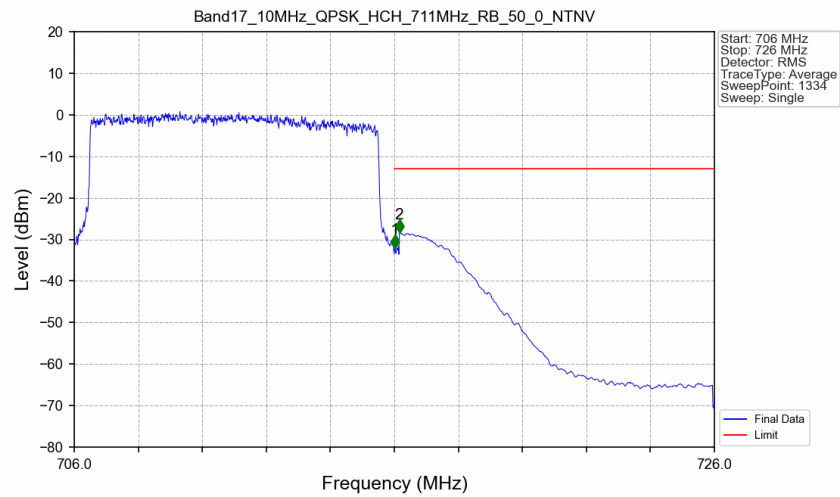


Band17 10MHz QPSK HCH 711MHz RB 1 49 NTNV



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	716.008	-22.91	-13	Pass
716.1	726	0.1	CHP	2	716.158	-24.54	-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	716.023	-31.97	-13	Pass
716.1	726	0.1	CHP	2	716.158	-28.34	-13	Pass