

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B17_5MHz_ERP

Band: 17 / Bandwidth: 5MHz / NTN								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	706.5	1	0	23.77	-1.37	20.25	<=34.77	Pass
			13	23.66	-1.37	20.14	<=34.77	Pass
			24	23.61	-1.37	20.09	<=34.77	Pass
		12	0	22.73	-1.37	19.21	<=34.77	Pass
			6	22.75	-1.37	19.23	<=34.77	Pass
			13	22.66	-1.37	19.14	<=34.77	Pass
		25	0	22.65	-1.37	19.13	<=34.77	Pass
	710	1	0	23.64	-1.37	20.12	<=34.77	Pass
			13	23.53	-1.37	20.01	<=34.77	Pass
			24	23.39	-1.37	19.87	<=34.77	Pass
		12	0	22.43	-1.37	18.91	<=34.77	Pass
			6	22.51	-1.37	18.99	<=34.77	Pass
			13	22.41	-1.37	18.89	<=34.77	Pass
		25	0	22.43	-1.37	18.91	<=34.77	Pass
	713.5	1	0	23.54	-1.37	20.02	<=34.77	Pass
			13	23.65	-1.37	20.13	<=34.77	Pass
			24	23.39	-1.37	19.87	<=34.77	Pass
		12	0	22.60	-1.37	19.08	<=34.77	Pass
			6	22.57	-1.37	19.05	<=34.77	Pass
			13	22.55	-1.37	19.03	<=34.77	Pass
		25	0	22.67	-1.37	19.15	<=34.77	Pass
16QAM	706.5	1	0	22.92	-1.37	19.40	<=34.77	Pass
			13	22.86	-1.37	19.34	<=34.77	Pass
			24	22.79	-1.37	19.27	<=34.77	Pass
		12	0	21.91	-1.37	18.39	<=34.77	Pass
			6	21.72	-1.37	18.20	<=34.77	Pass
			13	21.69	-1.37	18.17	<=34.77	Pass
		25	0	21.68	-1.37	18.16	<=34.77	Pass
	710	1	0	22.78	-1.37	19.26	<=34.77	Pass
			13	22.68	-1.37	19.16	<=34.77	Pass
			24	22.62	-1.37	19.10	<=34.77	Pass
		12	0	21.49	-1.37	17.97	<=34.77	Pass
			6	21.47	-1.37	17.95	<=34.77	Pass
			13	21.47	-1.37	17.95	<=34.77	Pass
		25	0	21.57	-1.37	18.05	<=34.77	Pass
	713.5	1	0	22.57	-1.37	19.05	<=34.77	Pass
			13	23.01	-1.37	19.49	<=34.77	Pass
			24	22.65	-1.37	19.13	<=34.77	Pass
		12	0	21.70	-1.37	18.18	<=34.77	Pass
			6	21.52	-1.37	18.00	<=34.77	Pass
			13	21.53	-1.37	18.01	<=34.77	Pass
		25	0	21.55	-1.37	18.03	<=34.77	Pass
64QAM	706.5	1	0	22.85	-1.37	19.33	<=34.77	Pass
			13	22.91	-1.37	19.39	<=34.77	Pass
			24	22.55	-1.37	19.03	<=34.77	Pass
		12	0	21.69	-1.37	18.17	<=34.77	Pass
			6	21.56	-1.37	18.04	<=34.77	Pass
			13	21.60	-1.37	18.08	<=34.77	Pass
		25	0	21.59	-1.37	18.07	<=34.77	Pass
	710	1	0	22.40	-1.37	18.88	<=34.77	Pass
			13	22.68	-1.37	19.16	<=34.77	Pass
			24	22.52	-1.37	19.00	<=34.77	Pass
		12	0	21.45	-1.37	17.93	<=34.77	Pass
			6	21.41	-1.37	17.89	<=34.77	Pass

			13	21.53	-1.37	18.01	<=34.77	Pass	
		25	0	21.52	-1.37	18.00	<=34.77	Pass	
	713.5	1		0	22.63	-1.37	19.11	<=34.77	Pass
				13	22.91	-1.37	19.39	<=34.77	Pass
				24	22.46	-1.37	18.94	<=34.77	Pass
		12		0	21.56	-1.37	18.04	<=34.77	Pass
				6	21.53	-1.37	18.01	<=34.77	Pass
				13	21.49	-1.37	17.97	<=34.77	Pass
		25	0	21.47	-1.37	17.95	<=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	23.96	-1.37	20.44	<=34.77	Pass
			25	23.56	-1.37	20.04	<=34.77	Pass
			49	23.79	-1.37	20.27	<=34.77	Pass
		25	0	22.69	-1.37	19.17	<=34.77	Pass
			13	22.56	-1.37	19.04	<=34.77	Pass
			25	22.57	-1.37	19.05	<=34.77	Pass
		50	0	22.66	-1.37	19.14	<=34.77	Pass
	710	1	0	24.02	-1.37	20.50	<=34.77	Pass
			25	23.61	-1.37	20.09	<=34.77	Pass
			49	23.72	-1.37	20.20	<=34.77	Pass
		25	0	22.63	-1.37	19.11	<=34.77	Pass
			13	22.59	-1.37	19.07	<=34.77	Pass
			25	22.56	-1.37	19.04	<=34.77	Pass
		50	0	22.61	-1.37	19.09	<=34.77	Pass
	711	1	0	23.80	-1.37	20.28	<=34.77	Pass
			25	23.62	-1.37	20.10	<=34.77	Pass
			49	23.56	-1.37	20.04	<=34.77	Pass
		25	0	22.52	-1.37	19.00	<=34.77	Pass
			13	22.51	-1.37	18.99	<=34.77	Pass
			25	22.49	-1.37	18.97	<=34.77	Pass
		50	0	22.47	-1.37	18.95	<=34.77	Pass
16QAM	709	1	0	23.41	-1.37	19.89	<=34.77	Pass
			25	22.83	-1.37	19.31	<=34.77	Pass
			49	23.06	-1.37	19.54	<=34.77	Pass
		25	0	21.66	-1.37	18.14	<=34.77	Pass
			13	21.47	-1.37	17.95	<=34.77	Pass
			25	21.51	-1.37	17.99	<=34.77	Pass
		50	0	21.63	-1.37	18.11	<=34.77	Pass
	710	1	0	23.26	-1.37	19.74	<=34.77	Pass
			25	22.74	-1.37	19.22	<=34.77	Pass
			49	22.89	-1.37	19.37	<=34.77	Pass
		25	0	21.63	-1.37	18.11	<=34.77	Pass
			13	21.62	-1.37	18.10	<=34.77	Pass
			25	21.50	-1.37	17.98	<=34.77	Pass
		50	0	21.55	-1.37	18.03	<=34.77	Pass
	711	1	0	23.13	-1.37	19.61	<=34.77	Pass
			25	22.72	-1.37	19.20	<=34.77	Pass
			49	22.68	-1.37	19.16	<=34.77	Pass
		25	0	21.47	-1.37	17.95	<=34.77	Pass
			13	21.58	-1.37	18.06	<=34.77	Pass
			25	21.54	-1.37	18.02	<=34.77	Pass
		50	0	21.43	-1.37	17.91	<=34.77	Pass
64QAM	709	1	0	23.04	-1.37	19.52	<=34.77	Pass
			25	22.70	-1.37	19.18	<=34.77	Pass
			49	23.00	-1.37	19.48	<=34.77	Pass
		25	0	21.61	-1.37	18.09	<=34.77	Pass

		50	13	21.49	-1.37	17.97	<=34.77	Pass
			25	21.52	-1.37	18.00	<=34.77	Pass
			0	21.64	-1.37	18.12	<=34.77	Pass
	710	1	0	23.20	-1.37	19.68	<=34.77	Pass
			25	22.70	-1.37	19.18	<=34.77	Pass
			49	22.65	-1.37	19.13	<=34.77	Pass
		25	0	21.32	-1.37	17.80	<=34.77	Pass
			13	21.51	-1.37	17.99	<=34.77	Pass
			25	21.37	-1.37	17.85	<=34.77	Pass
		50	0	21.50	-1.37	17.98	<=34.77	Pass
	711	1	0	22.95	-1.37	19.43	<=34.77	Pass
			25	22.60	-1.37	19.08	<=34.77	Pass
			49	22.64	-1.37	19.12	<=34.77	Pass
		25	0	21.50	-1.37	17.98	<=34.77	Pass
			13	21.56	-1.37	18.04	<=34.77	Pass
			25	21.43	-1.37	17.91	<=34.77	Pass
		50	0	21.51	-1.37	17.99	<=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 (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	710	50	0	20	3.4	0.700	0.0010	-2.5 to 2.5	Pass
					3.8	-0.300	-0.0004	-2.5 to 2.5	Pass
					4.2	0.100	0.0001	-2.5 to 2.5	Pass
				-30	3.8	0.900	0.0013	-2.5 to 2.5	Pass
				-20	3.8	-0.300	-0.0004	-2.5 to 2.5	Pass
				-10	3.8	-0.300	-0.0004	-2.5 to 2.5	Pass
				0	3.8	-0.500	-0.0007	-2.5 to 2.5	Pass
				10	3.8	-0.800	-0.0011	-2.5 to 2.5	Pass
				30	3.8	1.900	0.0027	-2.5 to 2.5	Pass
				40	3.8	0.100	0.0001	-2.5 to 2.5	Pass
				50	3.8	0.500	0.0007	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band17_OBW

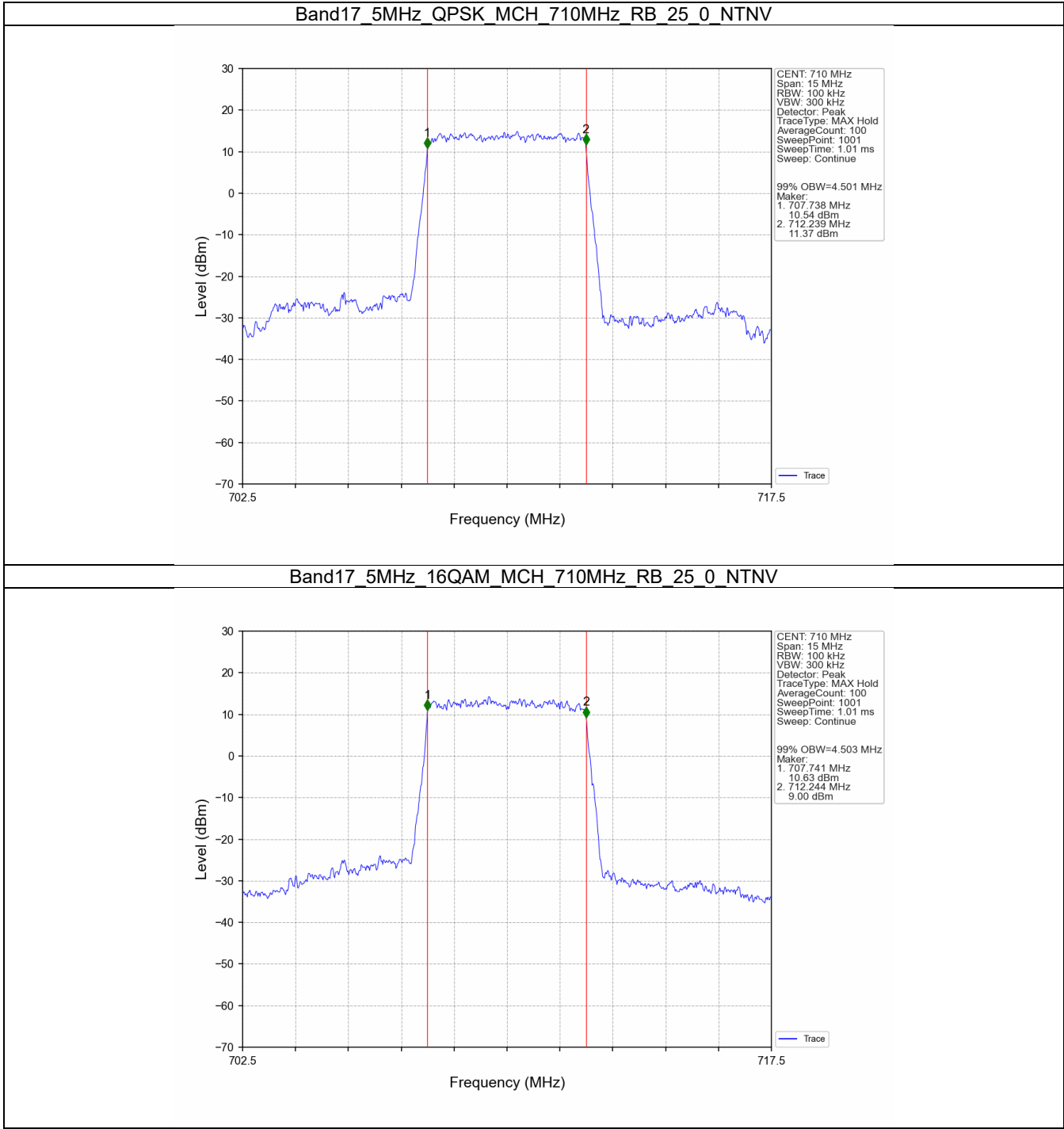
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.501	/	Pass
	16QAM	710	25	0	4.503	/	Pass
	64QAM	710	25	0	4.496	/	Pass
10	QPSK	710	50	0	8.978	/	Pass
	16QAM	710	50	0	8.968	/	Pass
	64QAM	710	50	0	8.999	/	Pass

3.1.2 Band17_XDB

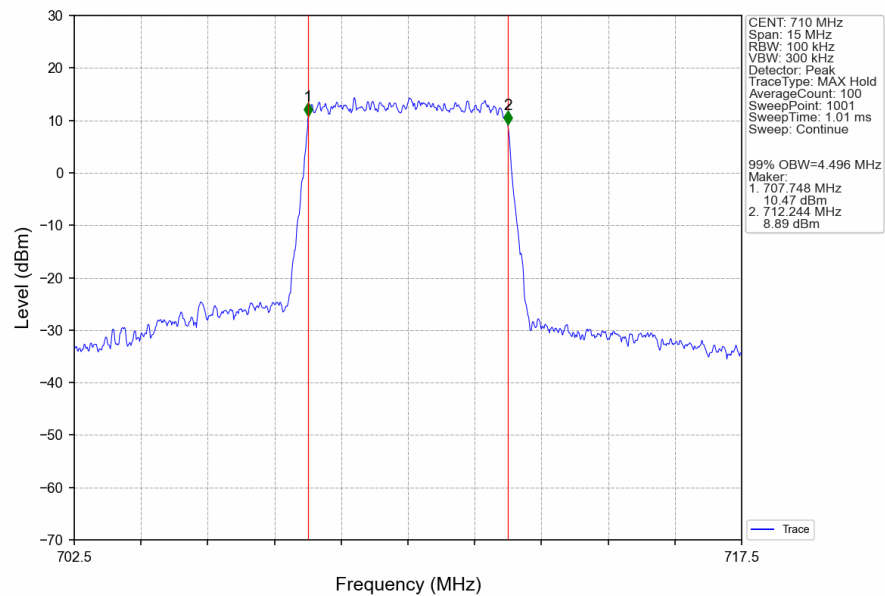
Band: 17 / NTN							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	5.036	/	Pass
	16QAM	710	25	0	5.019	/	Pass
	64QAM	710	25	0	4.986	/	Pass
10	QPSK	710	50	0	9.792	/	Pass
	16QAM	710	50	0	9.855	/	Pass
	64QAM	710	50	0	9.859	/	Pass

3.2 Test Graph

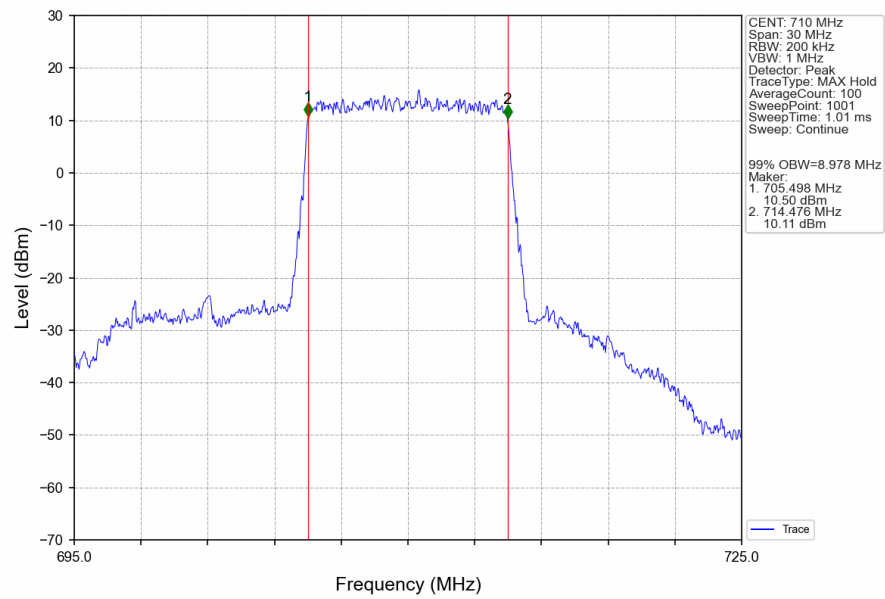
3.2.1 Band17_OBW



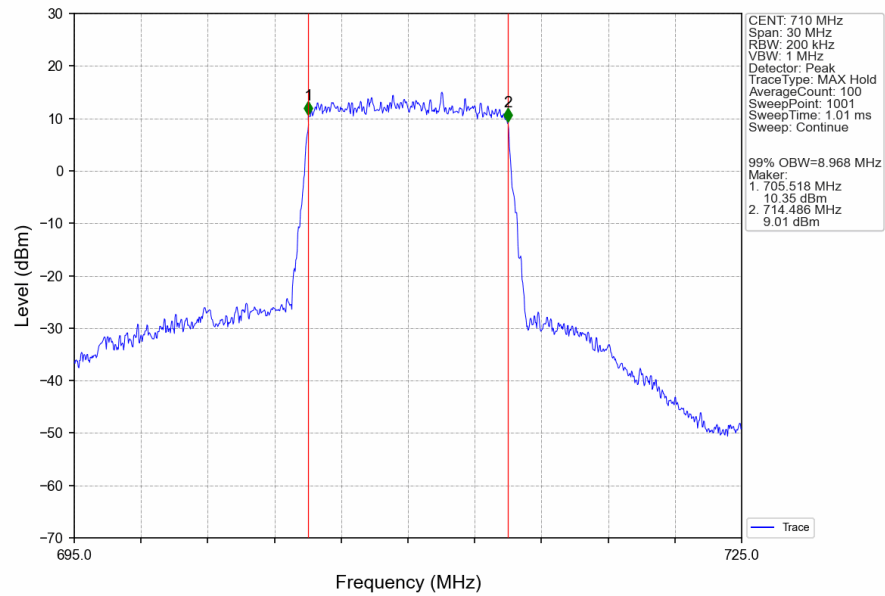
Band17_5MHz_64QAM_MCH_710MHz_RB_25_0_NTNV



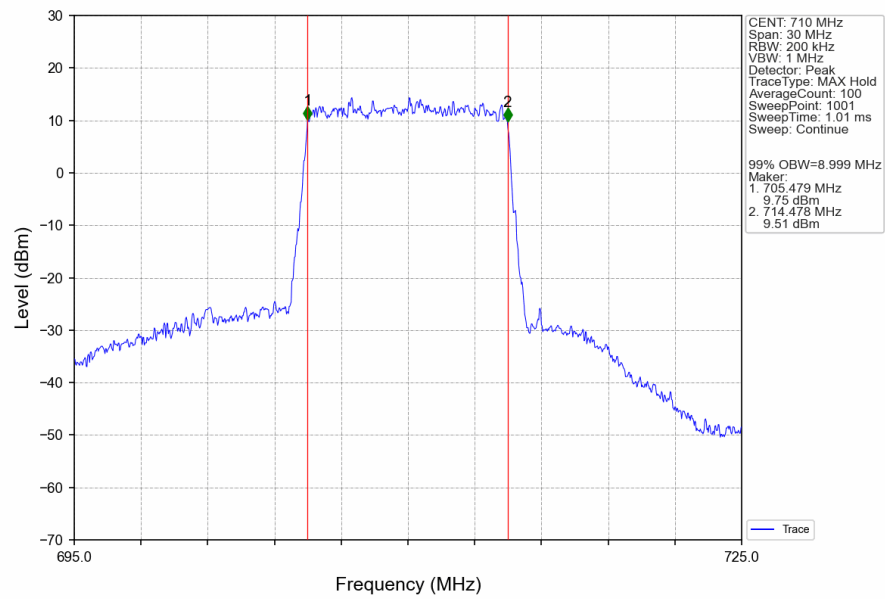
Band17_10MHz_QPSK_MCH_710MHz_RB_50_0_NTNV



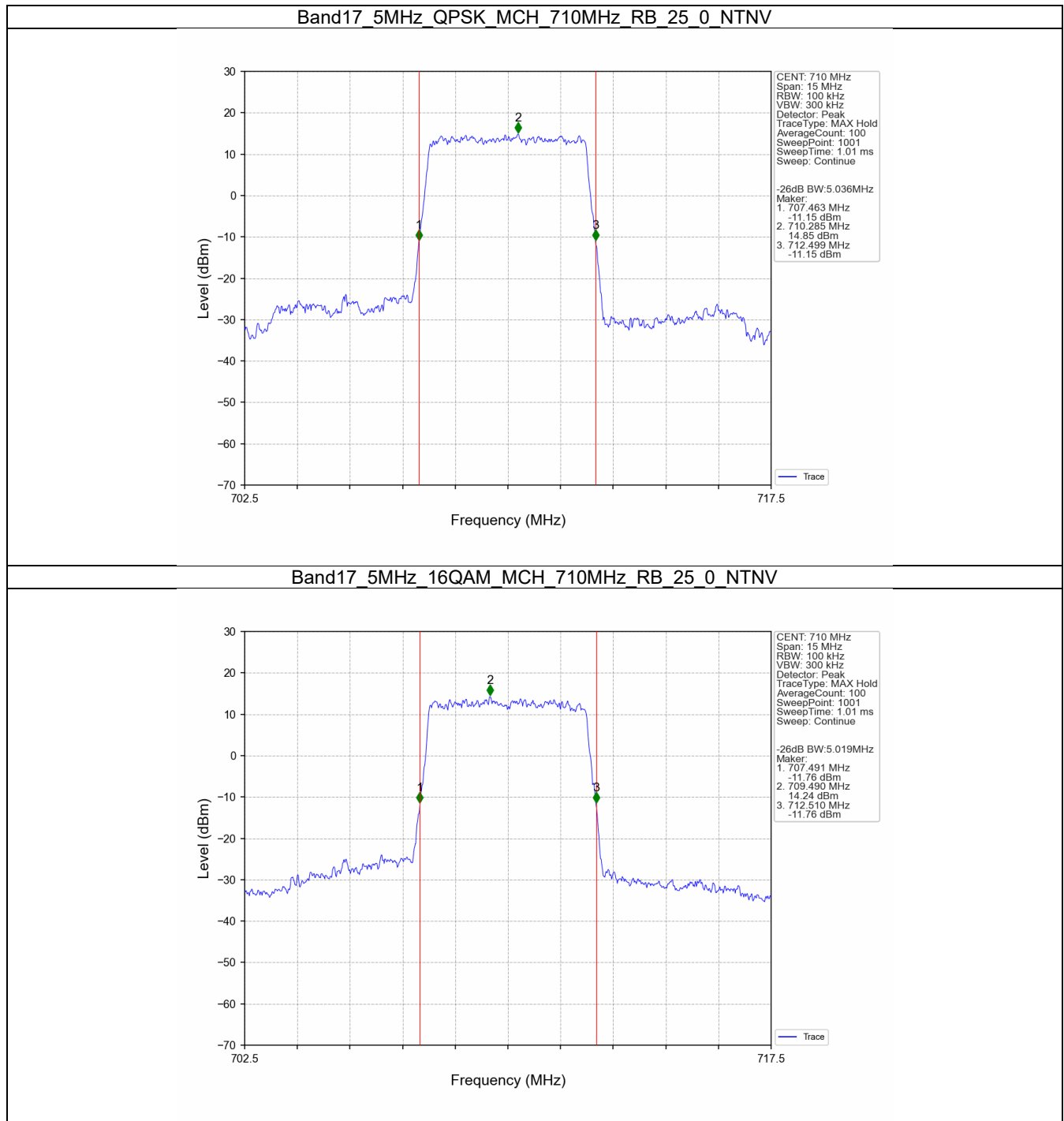
Band17_10MHz_16QAM_MCH_710MHz_RB_50_0_NTNV



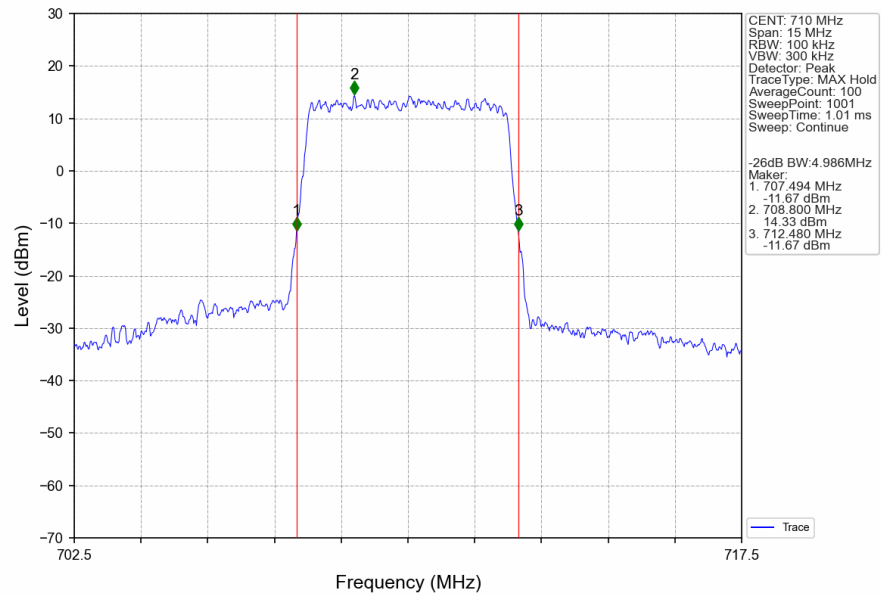
Band17_10MHz_64QAM_MCH_710MHz_RB_50_0_NTNV



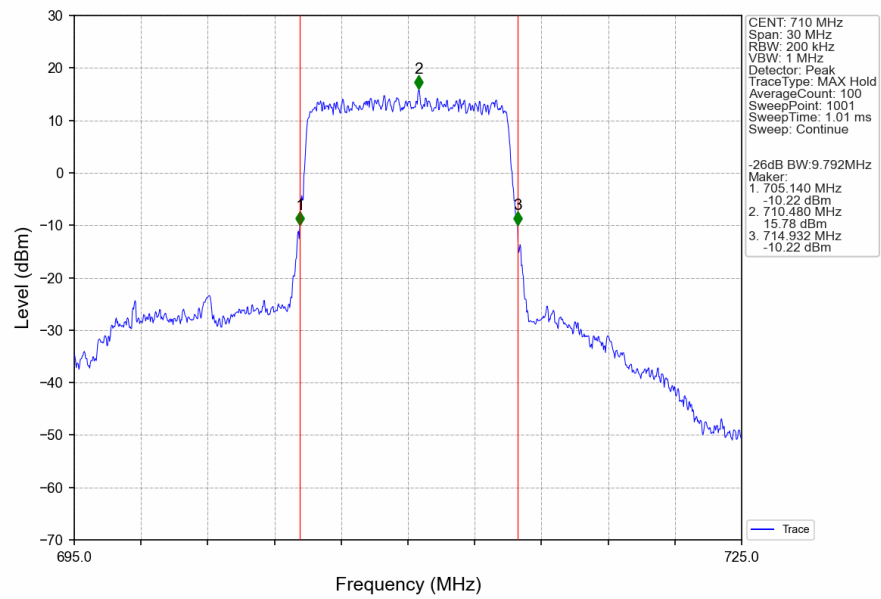
3.2.2 Band17_XDB



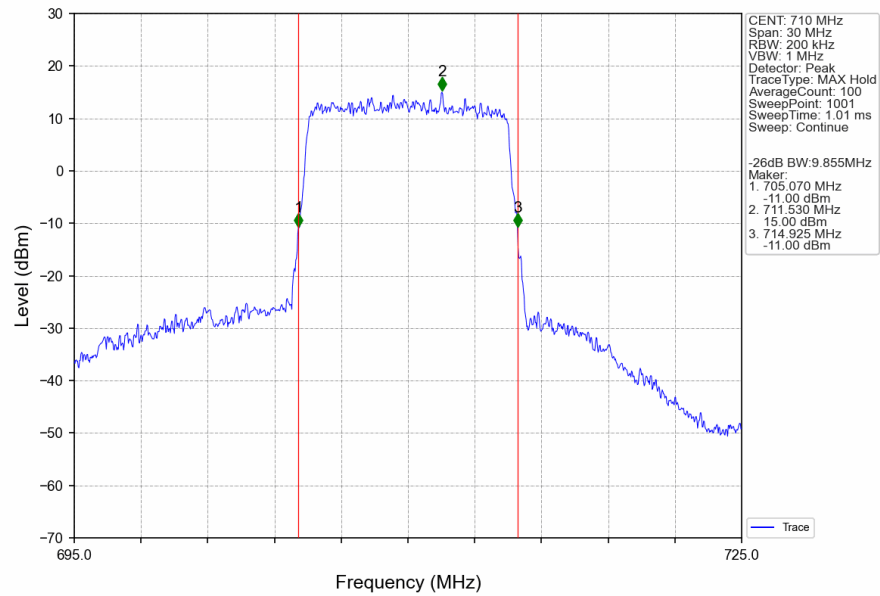
Band17_5MHz_64QAM_MCH_710MHz_RB_25_0_NTNV



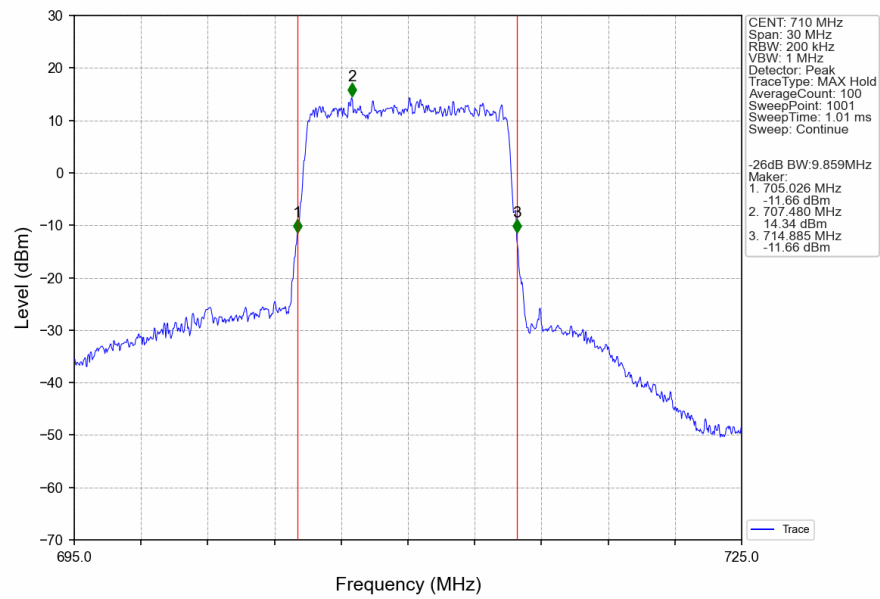
Band17_10MHz_QPSK_MCH_710MHz_RB_50_0_NTNV



Band17_10MHz_16QAM_MCH_710MHz_RB_50_0_NTNV



Band17_10MHz_64QAM_MCH_710MHz_RB_50_0_NTNV



4. Peak-Average Ratio

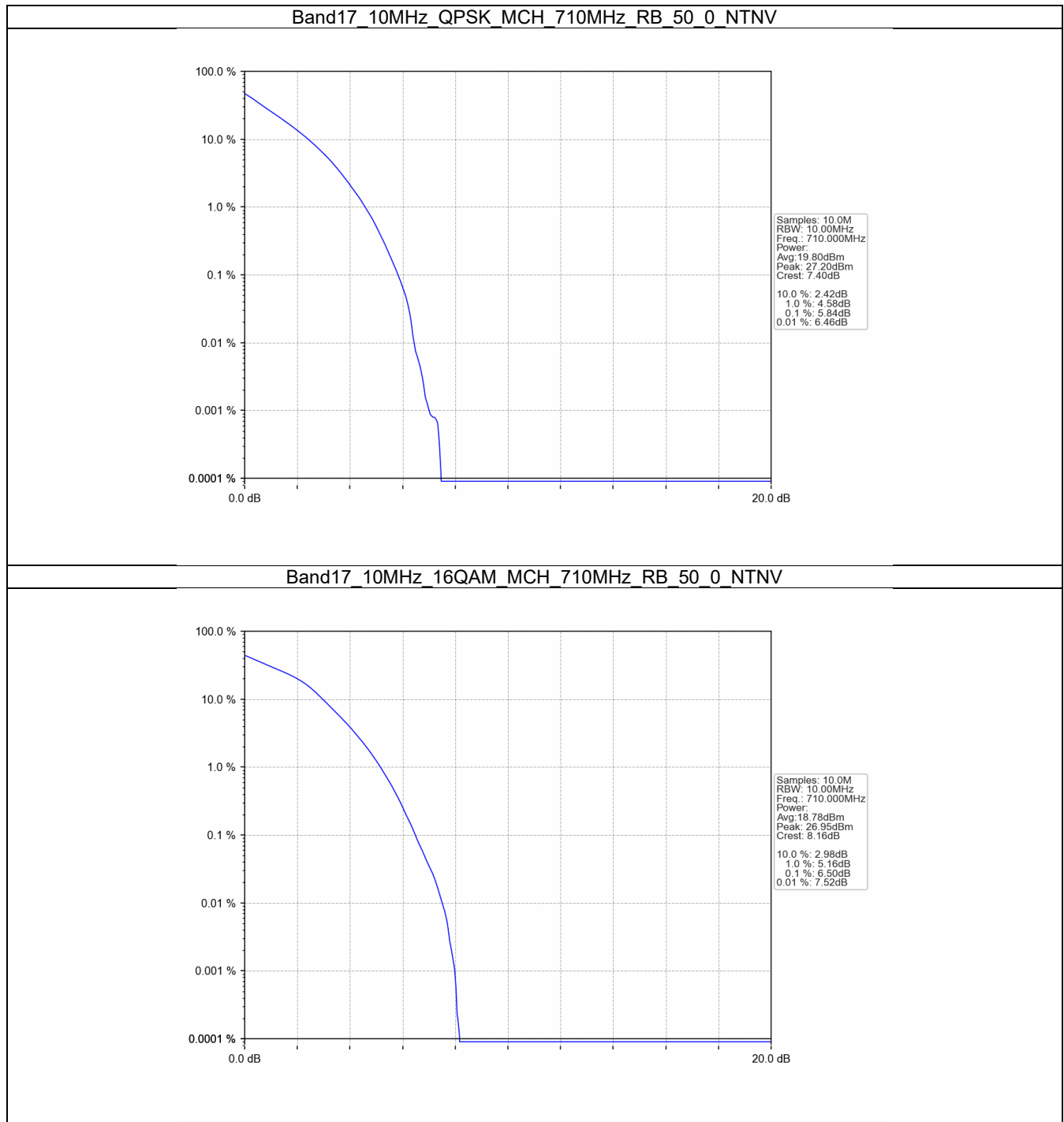
4.1 Test Result

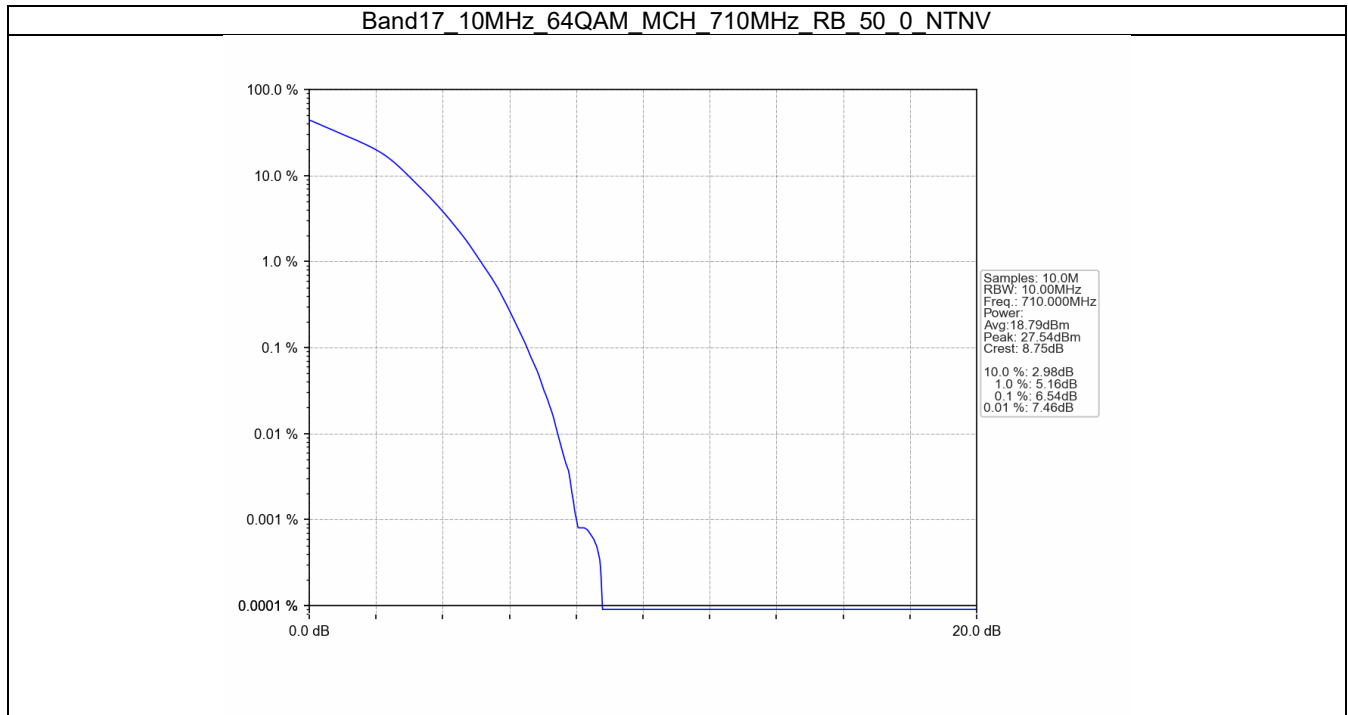
4.1.1 B17_10MHz

Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	710	50	0	5.84	<=13	Pass
16QAM	710	50	0	6.50	<=13	Pass
64QAM	710	50	0	6.54	<=13	Pass

4.2 Test Graph

4.2.1 B17_10MHz





5. Spurious Emission

5.1 Test Result

5.1.1 B17_5MHz

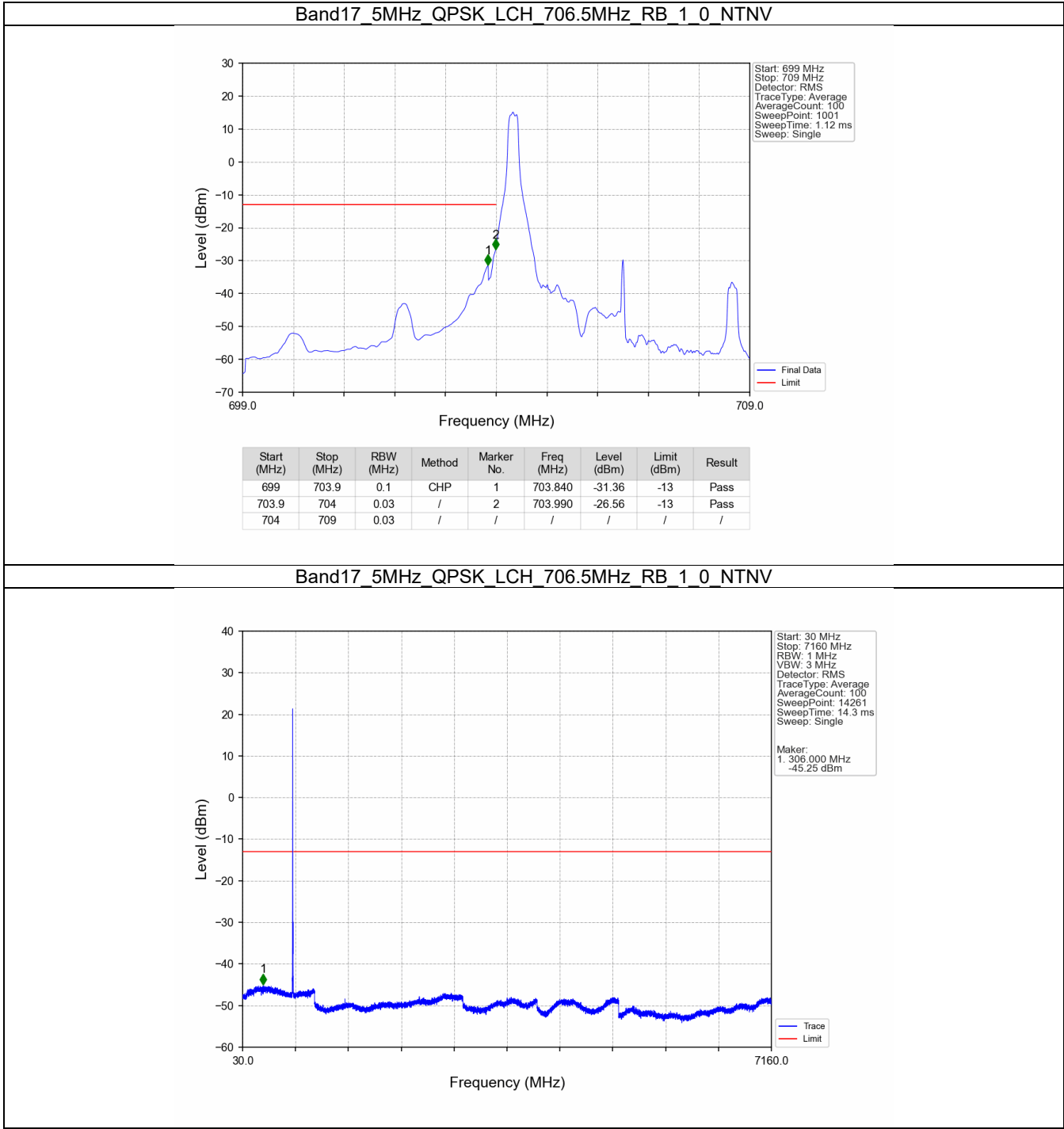
Band: 17 / Bandwidth: 5MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	706.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	713.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B17_10MHz

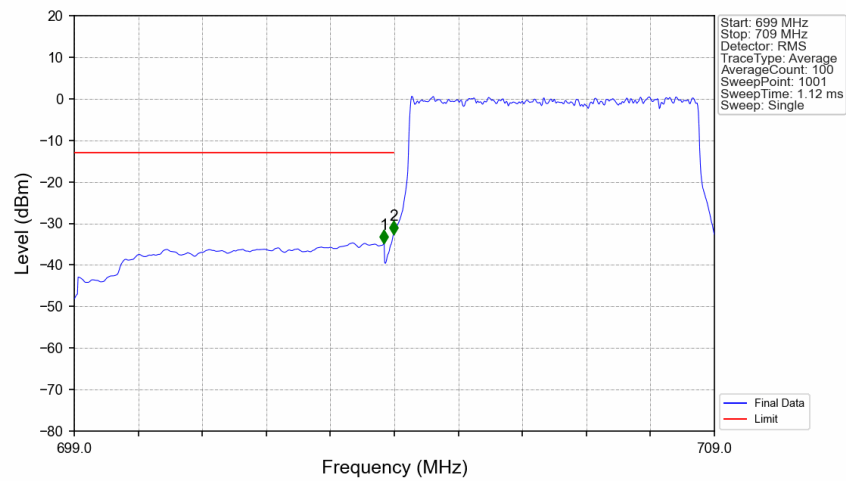
Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	709	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph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

5.2 Test Graph

5.2.1 B17_5MHz

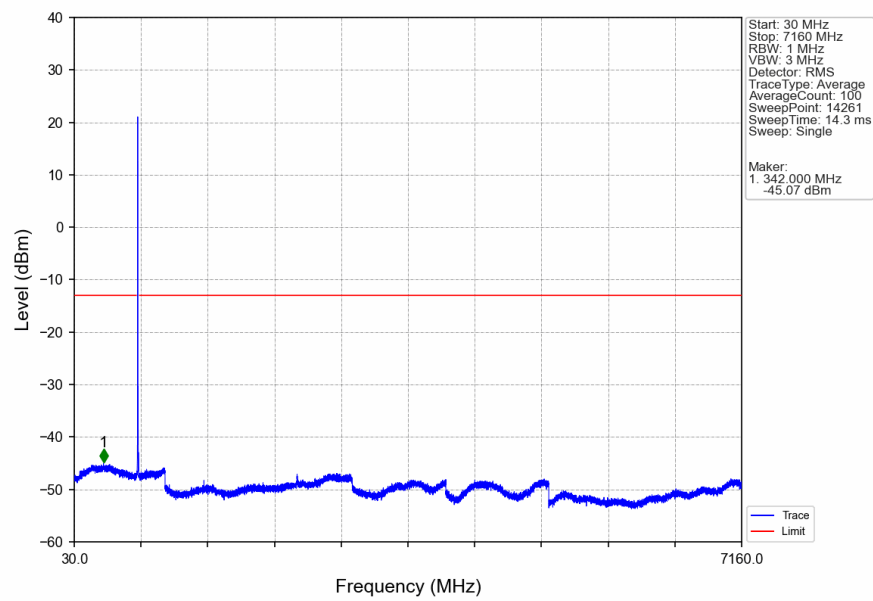


Band17_5MHz_QPSK_LCH_706.5MHz_RB_25_0_NTNV

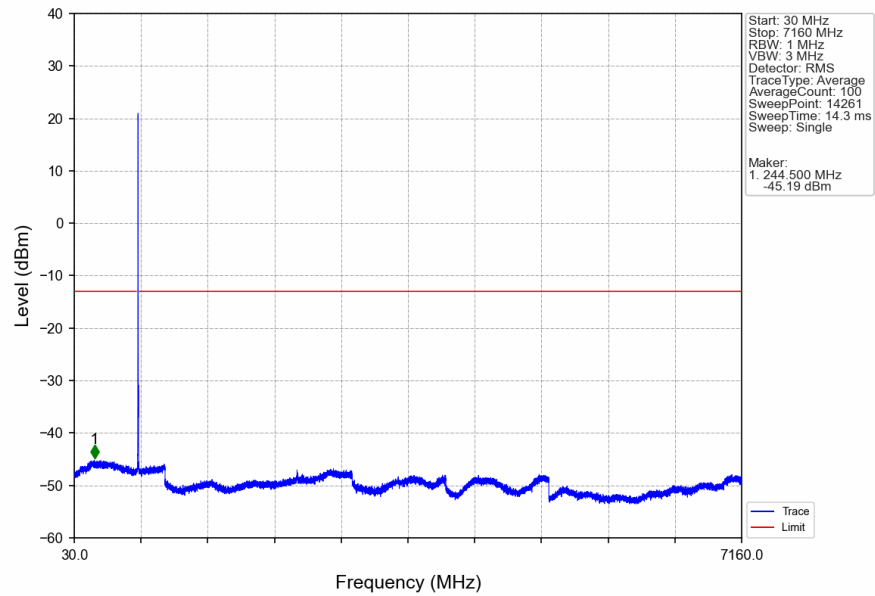


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
699	703.9	0.1	CHP	1	703.840	-34.70	-13	Pass
703.9	704	0.03	/	2	703.990	-32.55	-13	Pass
704	709	0.03	/	/	/	/	/	/

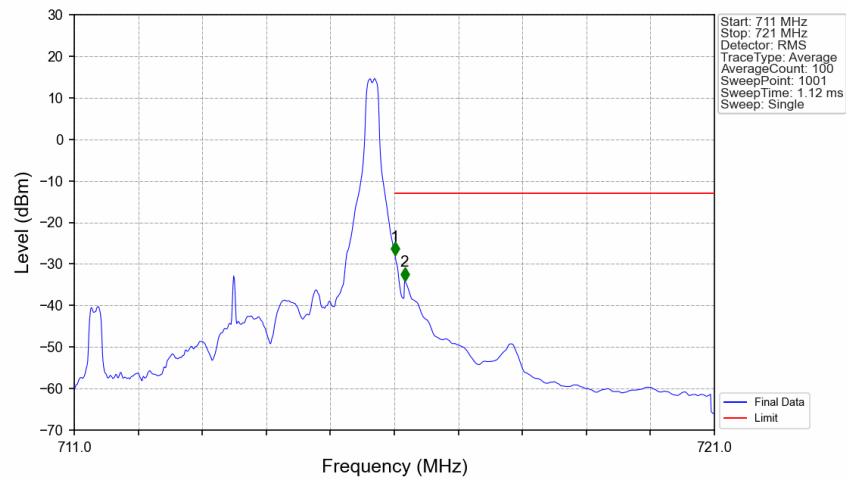
Band17_5MHz_QPSK_MCH_710MHz_RB_1_0_NTNV



Band17_5MHz_QPSK_HCH_713.5MHz_RB_1_0_NTNV

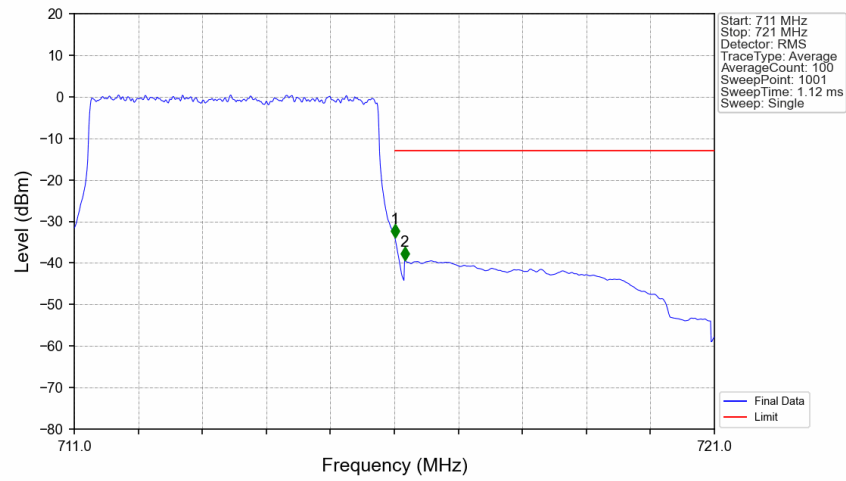


Band17_5MHz_QPSK_HCH_713.5MHz_RB_1_24_NTNV



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	716.010	-27.79	-13	Pass
716.1	721	0.1	CHP	2	716.160	-33.97	-13	Pass

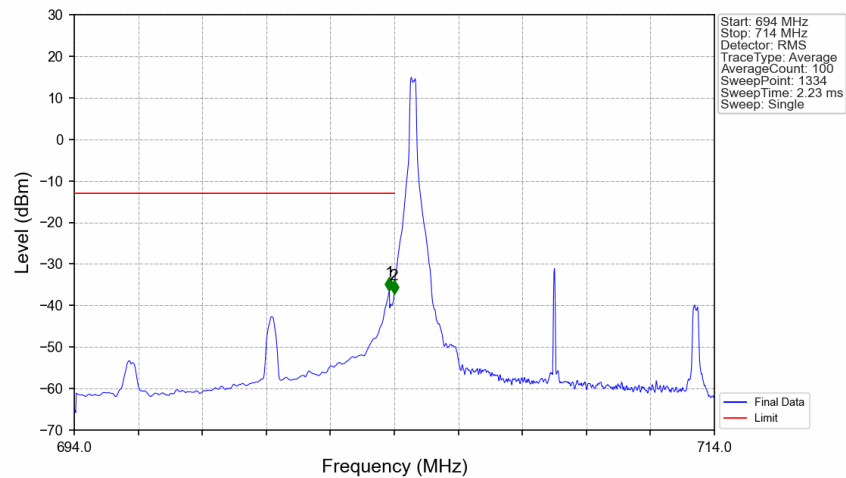
Band17_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



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	716.010	-33.88	-13	Pass
716.1	721	0.1	CHP	2	716.160	-39.24	-13	Pass

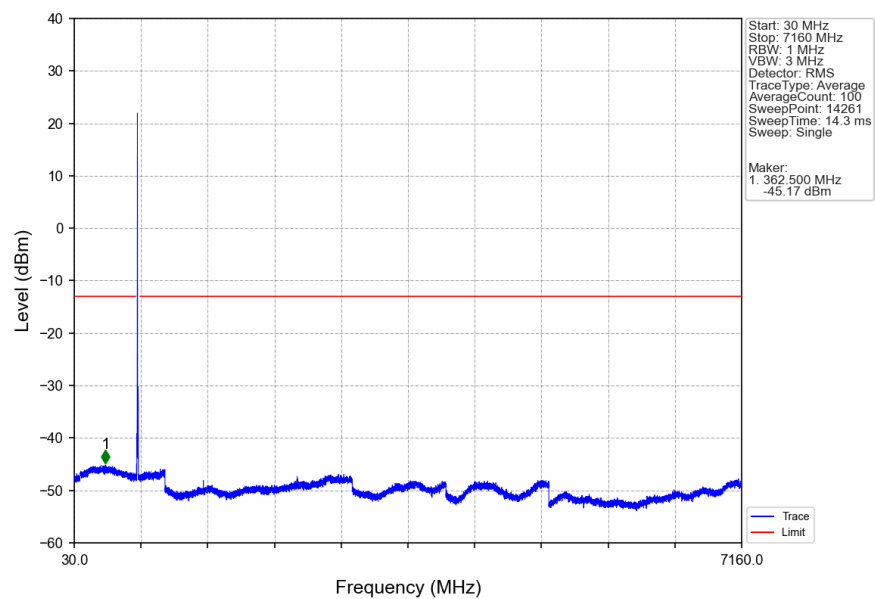
5.2.2 B17_10MHz

Band17_10MHz_QPSK_LCH_709MHz_RB_1_0_NTNV

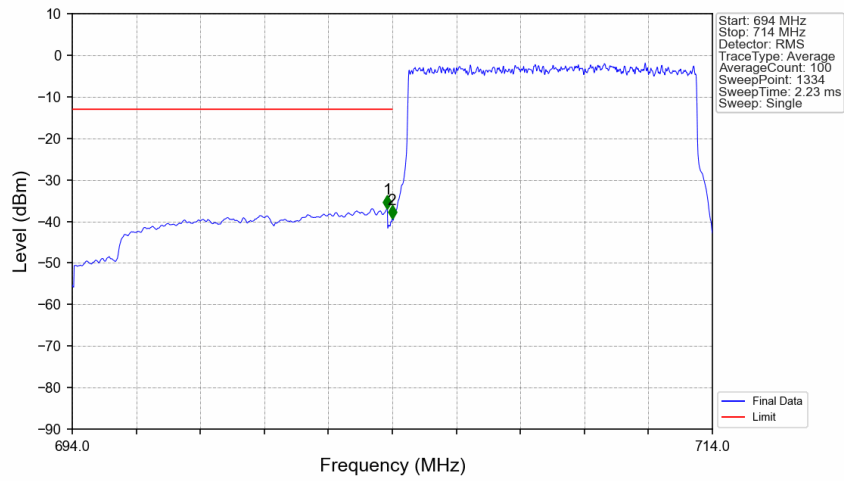


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-36.36	-13	Pass
703.9	704	0.03	/	2	703.992	-37.10	-13	Pass
704	714	0.03	/	/	/	/	/	/

Band17_10MHz_QPSK_LCH_709MHz_RB_1_0_NTNV

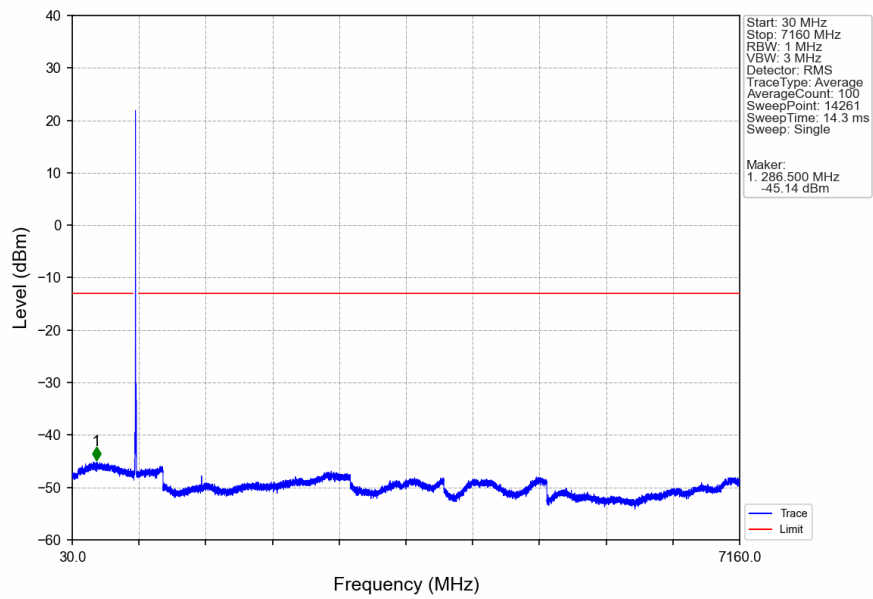


Band17_10MHz_QPSK_LCH_709MHz_RB_50_0_NTNV

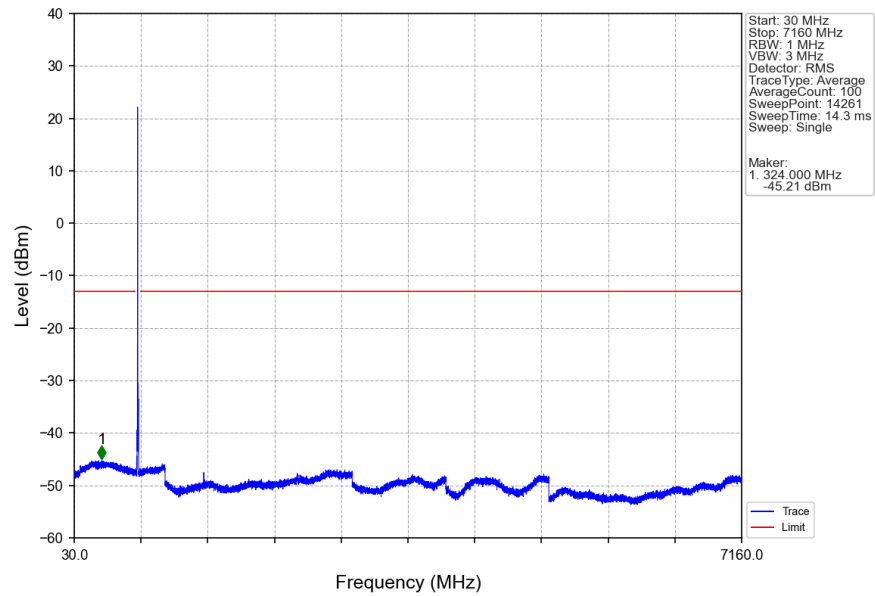


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-36.85	-13	Pass
703.9	704	0.03	/	2	703.992	-39.37	-13	Pass
704	714	0.03	/	/	/	/	/	/

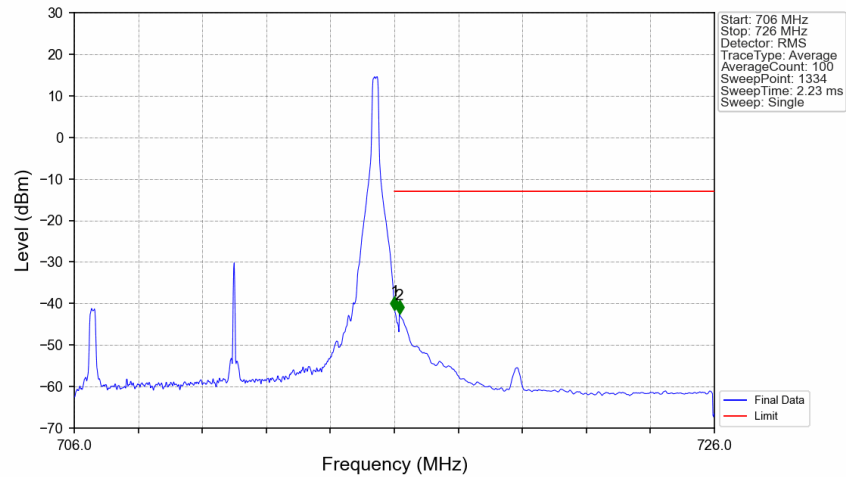
Band17_10MHz_QPSK_MCH_710MHz_RB_1_0_NTNV



Band17_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV

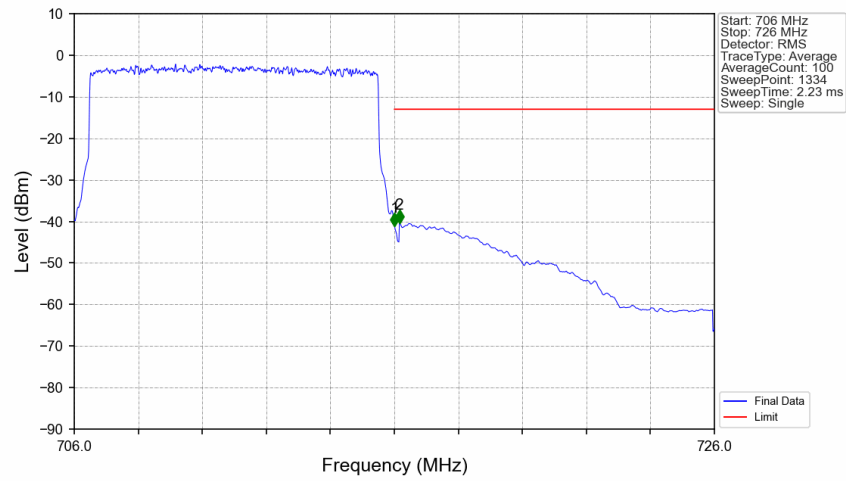


Band17_10MHz_QPSK_HCH_711MHz_RB_1_49_NTNV



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	-41.53	-13	Pass
716.1	726	0.1	CHP	2	716.158	-42.44	-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	716.008	-41.05	-13	Pass
716.1	726	0.1	CHP	2	716.158	-40.37	-13	Pass

---End of Attachment---