

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	23.30	0.80	21.95	<=34.77	Pass
			24	23.10	0.80	21.75	<=34.77	Pass
		25	0	22.40	0.80	21.05	<=34.77	Pass
	710	1	0	23.49	0.80	22.14	<=34.77	Pass
			24	23.34	0.80	21.99	<=34.77	Pass
		25	0	22.37	0.80	21.02	<=34.77	Pass
	713.5	1	0	23.22	0.80	21.87	<=34.77	Pass
			24	23.32	0.80	21.97	<=34.77	Pass
		25	0	22.34	0.80	20.99	<=34.77	Pass
16QAM	706.5	1	0	22.29	0.80	20.94	<=34.77	Pass
			24	22.38	0.80	21.03	<=34.77	Pass
		25	0	21.35	0.80	20.00	<=34.77	Pass
	710	1	0	22.53	0.80	21.18	<=34.77	Pass
			24	22.28	0.80	20.93	<=34.77	Pass
		25	0	21.40	0.80	20.05	<=34.77	Pass
	713.5	1	0	22.32	0.80	20.97	<=34.77	Pass
			24	22.25	0.80	20.90	<=34.77	Pass
		25	0	21.30	0.80	19.95	<=34.77	Pass
64QAM	706.5	1	0	21.30	0.80	19.95	<=34.77	Pass
			24	21.09	0.80	19.74	<=34.77	Pass
		25	0	20.37	0.80	19.02	<=34.77	Pass
	710	1	0	21.57	0.80	20.22	<=34.77	Pass
			24	20.95	0.80	19.60	<=34.77	Pass
		25	0	20.36	0.80	19.01	<=34.77	Pass
	713.5	1	0	20.68	0.80	19.33	<=34.77	Pass
			24	20.89	0.80	19.54	<=34.77	Pass
		25	0	20.26	0.80	18.91	<=34.77	Pass
256QAM	706.5	1	0	18.29	0.80	16.94	<=34.77	Pass
			24	18.36	0.80	17.01	<=34.77	Pass
		25	0	18.32	0.80	16.97	<=34.77	Pass
	710	1	0	18.34	0.80	16.99	<=34.77	Pass
			24	18.25	0.80	16.90	<=34.77	Pass
		25	0	18.36	0.80	17.01	<=34.77	Pass
	713.5	1	0	18.22	0.80	16.87	<=34.77	Pass
			24	18.26	0.80	16.91	<=34.77	Pass
		25	0	18.33	0.80	16.98	<=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	22.99	0.80	21.64	<=34.77	Pass
			49	23.35	0.80	22.00	<=34.77	Pass
		50	0	22.32	0.80	20.97	<=34.77	Pass
	710	1	0	23.31	0.80	21.96	<=34.77	Pass

			49	23.30	0.80	21.95	<=34.77	Pass
		50	0	22.34	0.80	20.99	<=34.77	Pass
	711	1	0	23.34	0.80	21.99	<=34.77	Pass
			49	23.25	0.80	21.90	<=34.77	Pass
		50	0	22.30	0.80	20.95	<=34.77	Pass
16QAM	709	1	0	22.59	0.80	21.24	<=34.77	Pass
			49	22.54	0.80	21.19	<=34.77	Pass
		50	0	21.29	0.80	19.94	<=34.77	Pass
	710	1	0	22.52	0.80	21.17	<=34.77	Pass
			49	22.49	0.80	21.14	<=34.77	Pass
		50	0	21.27	0.80	19.92	<=34.77	Pass
	711	1	0	22.50	0.80	21.15	<=34.77	Pass
			49	22.42	0.80	21.07	<=34.77	Pass
		50	0	21.30	0.80	19.95	<=34.77	Pass
64QAM	709	1	0	21.18	0.80	19.83	<=34.77	Pass
			49	21.41	0.80	20.06	<=34.77	Pass
		50	0	20.28	0.80	18.93	<=34.77	Pass
	710	1	0	21.18	0.80	19.83	<=34.77	Pass
			49	21.12	0.80	19.77	<=34.77	Pass
		50	0	20.30	0.80	18.95	<=34.77	Pass
	711	1	0	21.48	0.80	20.13	<=34.77	Pass
			49	21.29	0.80	19.94	<=34.77	Pass
		50	0	20.30	0.80	18.95	<=34.77	Pass
256QAM	709	1	0	18.46	0.80	17.11	<=34.77	Pass
			49	18.35	0.80	17.00	<=34.77	Pass
		50	0	18.27	0.80	16.92	<=34.77	Pass
	710	1	0	18.33	0.80	16.98	<=34.77	Pass
			49	18.41	0.80	17.06	<=34.77	Pass
		50	0	18.31	0.80	16.96	<=34.77	Pass
	711	1	0	18.43	0.80	17.08	<=34.77	Pass
			49	18.30	0.80	16.95	<=34.77	Pass
		50	0	18.27	0.80	16.92	<=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	LV	-4.200	-0.0059	-2.5 to 2.5	Pass
					NV	-3.000	-0.0042	-2.5 to 2.5	Pass
					HV	-1.700	-0.0024	-2.5 to 2.5	Pass
				-30	NV	-1.500	-0.0021	-2.5 to 2.5	Pass
				-20	NV	-5.400	-0.0076	-2.5 to 2.5	Pass
				-10	NV	-3.300	-0.0046	-2.5 to 2.5	Pass
				0	NV	-0.900	-0.0013	-2.5 to 2.5	Pass
				10	NV	-3.700	-0.0052	-2.5 to 2.5	Pass
				30	NV	-5.200	-0.0073	-2.5 to 2.5	Pass
				40	NV	0.600	0.0008	-2.5 to 2.5	Pass
				50	NV	-2.600	-0.0037	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band17_OBW

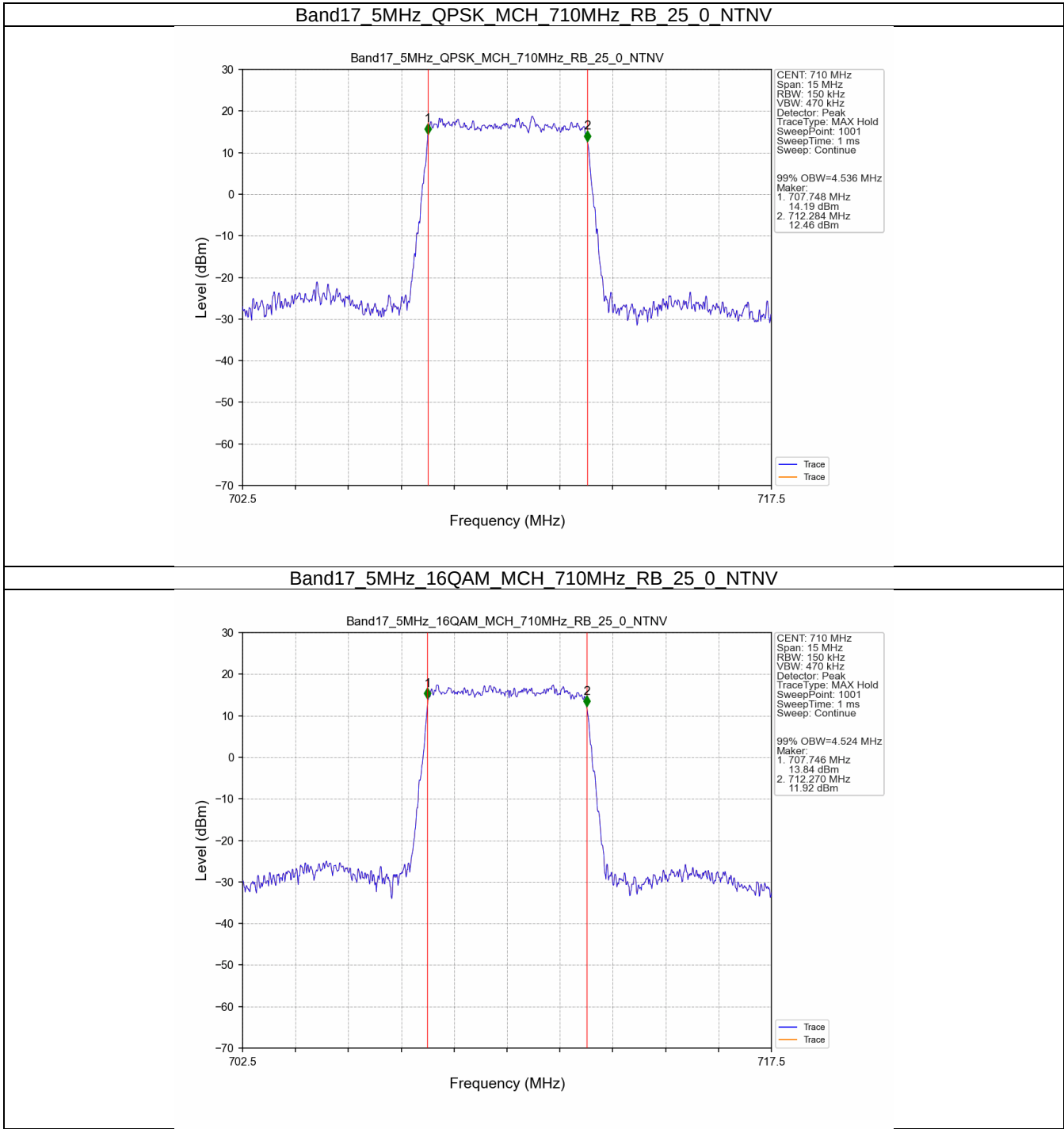
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.536	/	Pass
	16QAM	710	25	0	4.524	/	Pass
10	QPSK	710	50	0	9.030	/	Pass
	16QAM	710	50	0	9.017	/	Pass

3.1.2 Band17_XDB

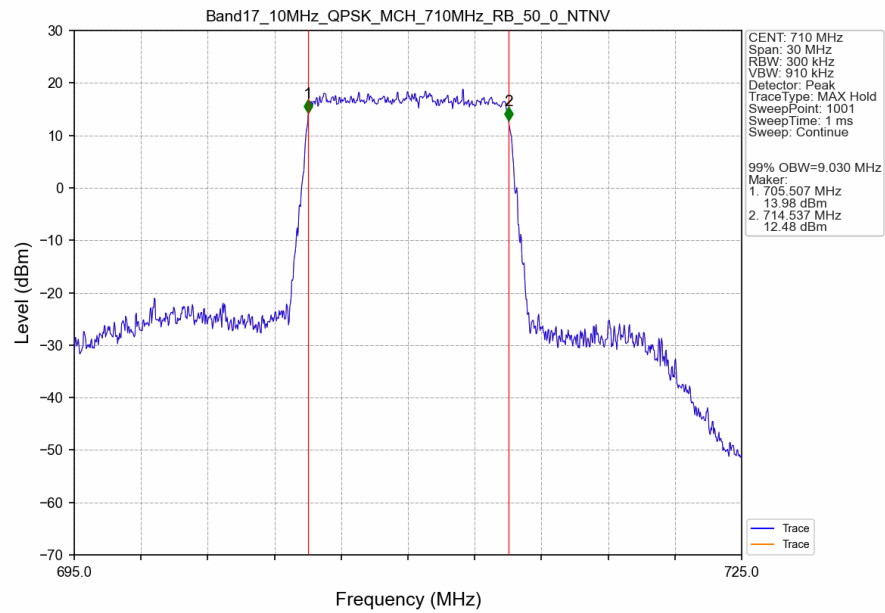
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	5.028	/	Pass
	16QAM	710	25	0	5.046	/	Pass
10	QPSK	710	50	0	9.907	/	Pass
	16QAM	710	50	0	9.884	/	Pass

3.2 Test Graph

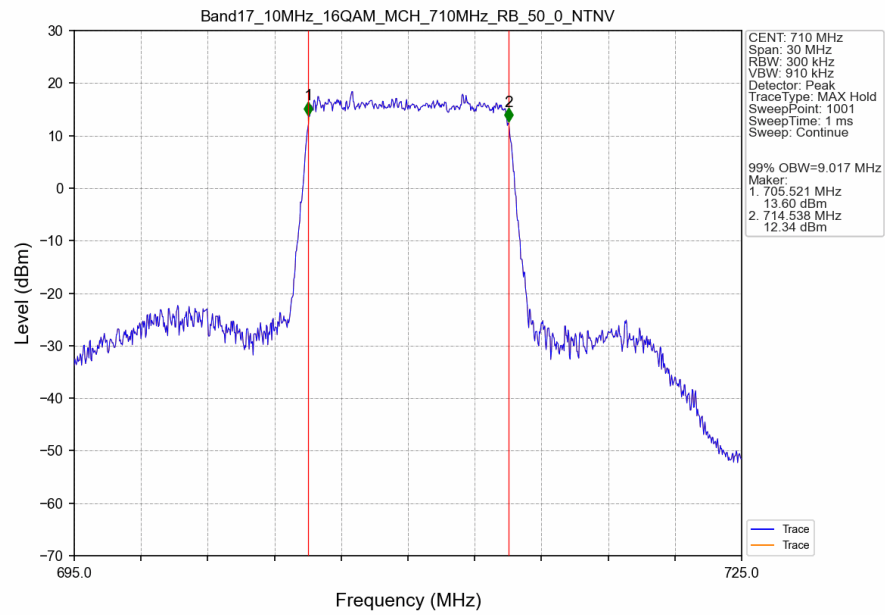
3.2.1 Band17_OBW



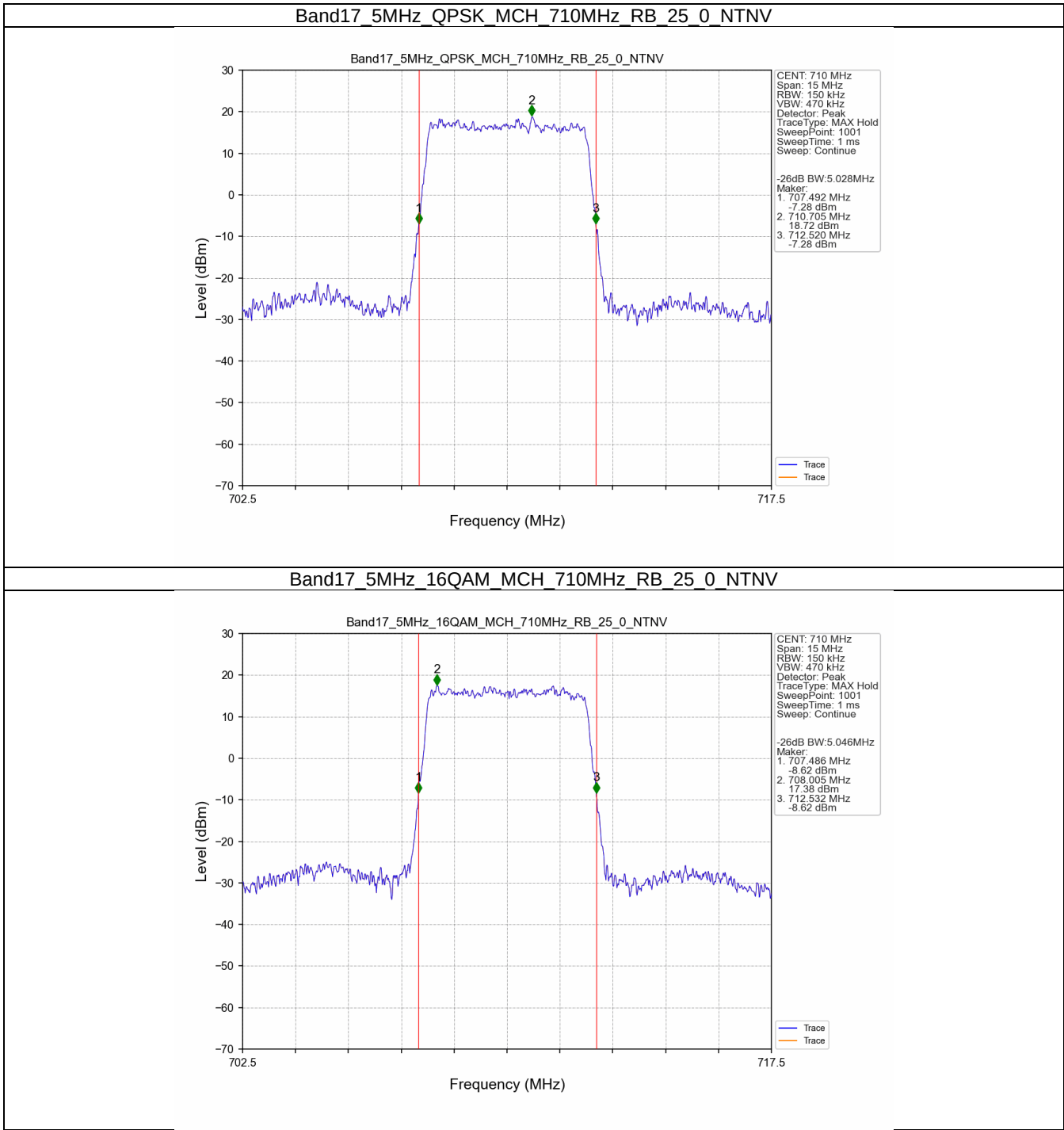
Band17 10MHz QPSK MCH 710MHz RB 50 0 NTNV



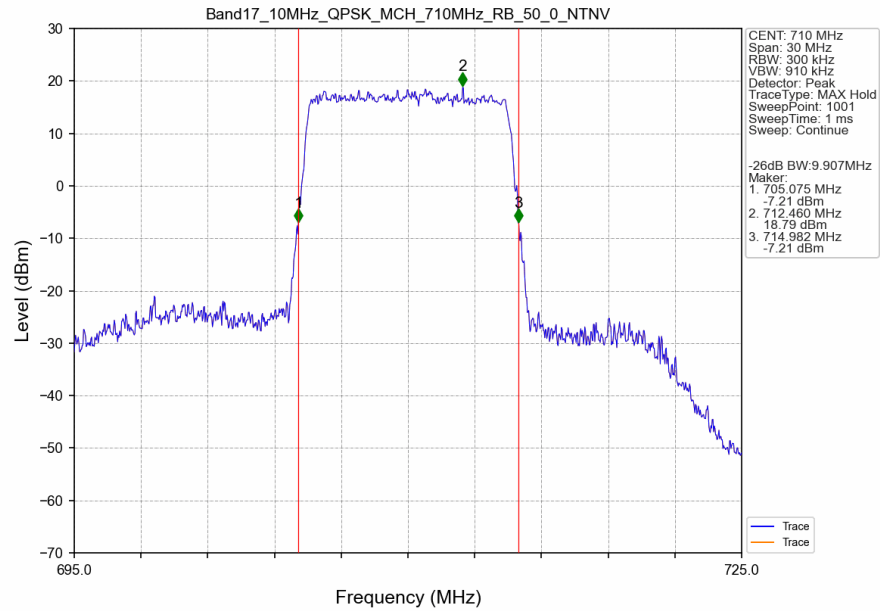
Band17 10MHz 16QAM MCH 710MHz RB 50 0 NTNV



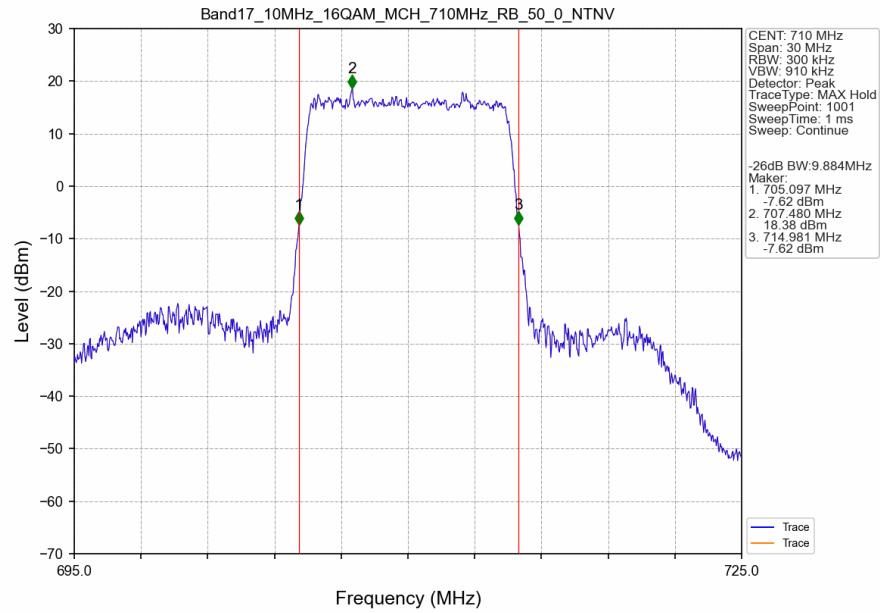
3.2.2 Band17_XDB



Band17 10MHz QPSK MCH 710MHz RB 50 0 NTV



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



4. Peak-Average Ratio

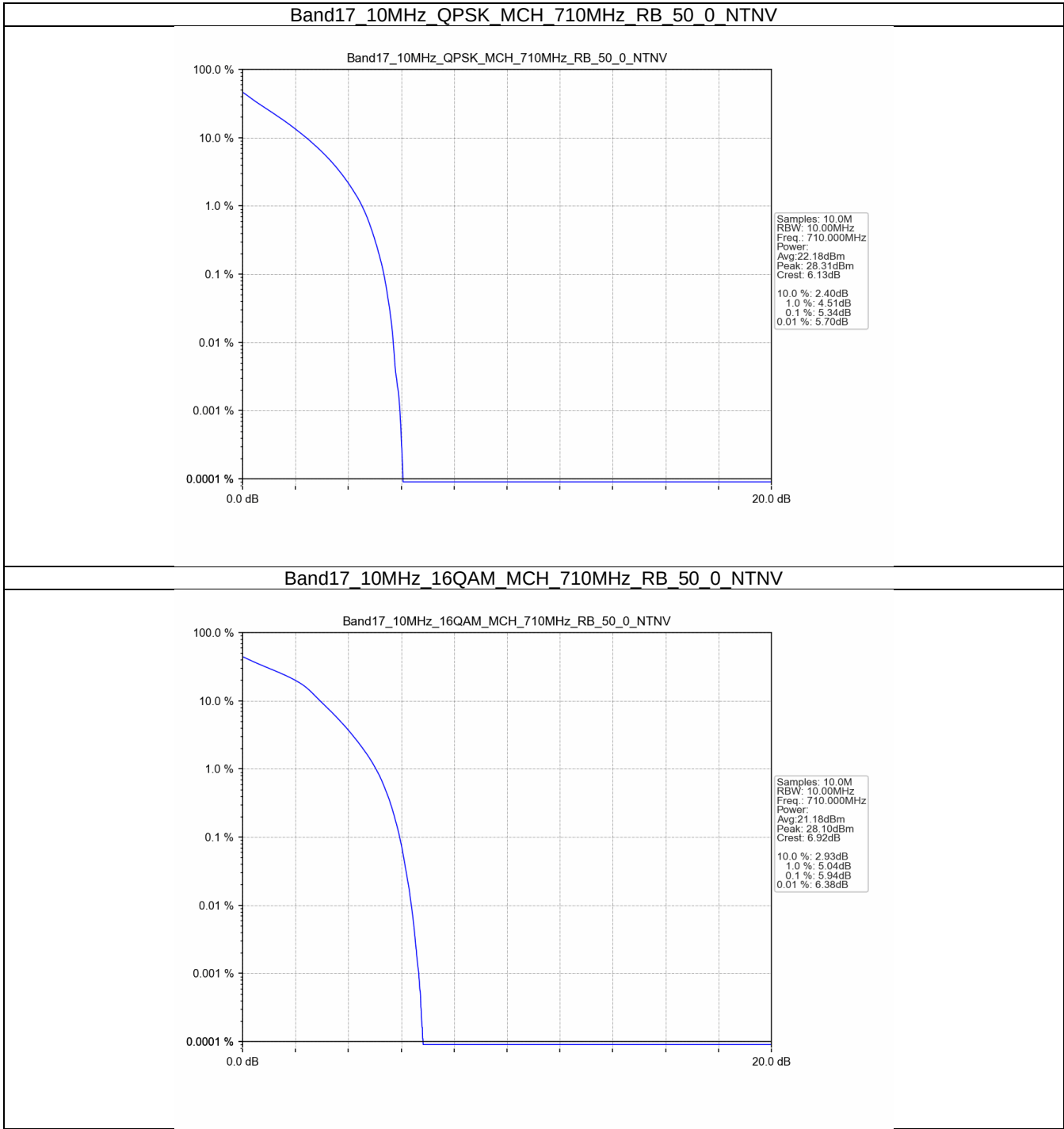
4.1 Test Result

4.1.1 B17_10MHz

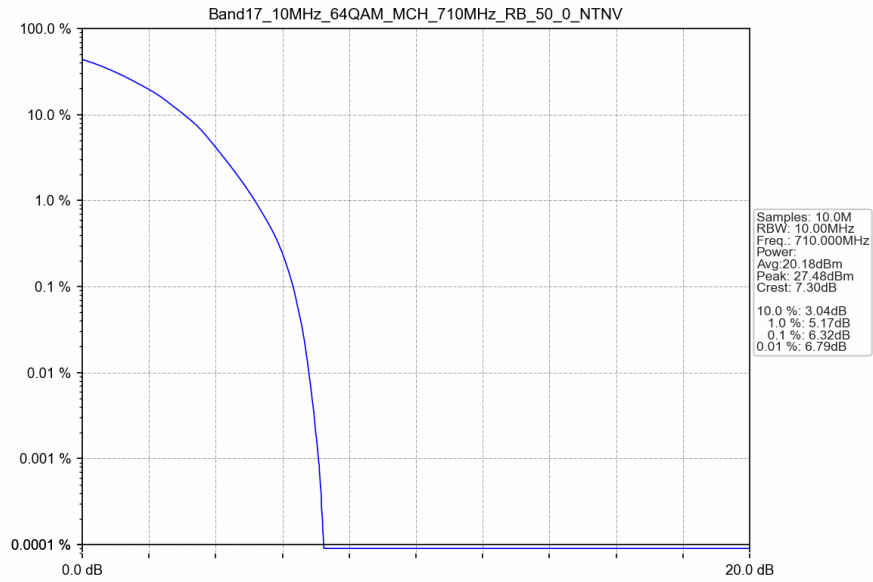
Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	710	50	0	5.34	<=13	Pass
16QAM	710	50	0	5.94	<=13	Pass
64QAM	710	50	0	6.32	<=13	Pass
256QAM	710	50	0	6.57	<=13	Pass

4.2 Test Graph

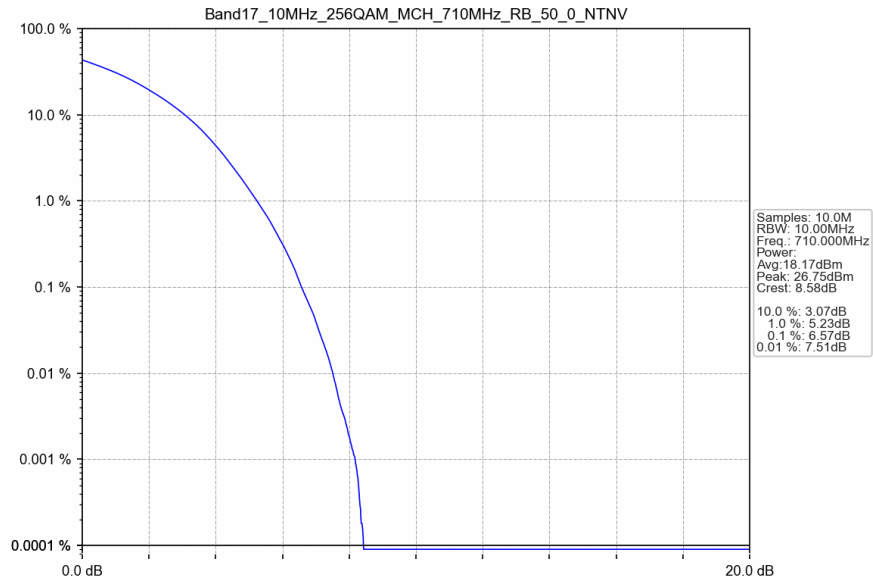
4.2.1 B17_10MHz



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

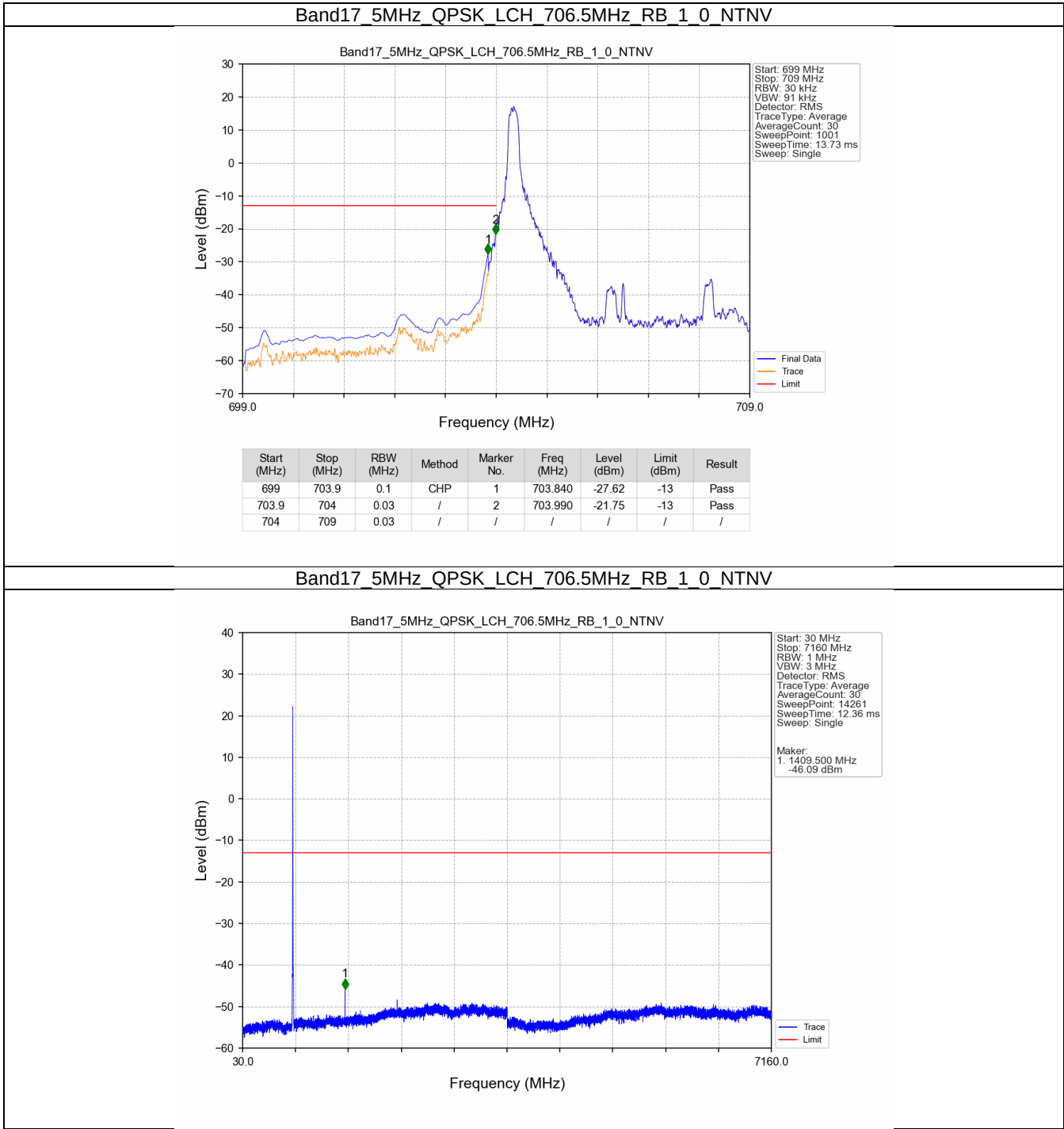
Band: 17 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	706.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	713.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B17_10MHz

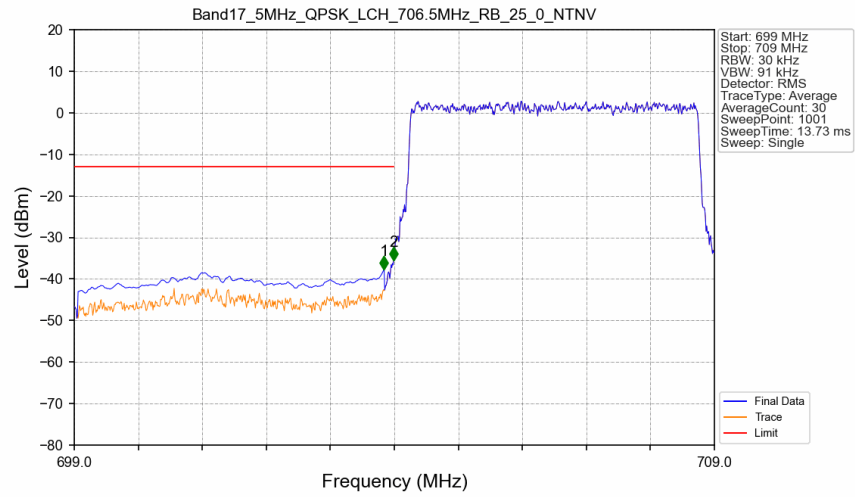
Band: 17 / Bandwidth: 10MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	709	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph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

5.2 Test Graph

5.2.1 B17_5MHz

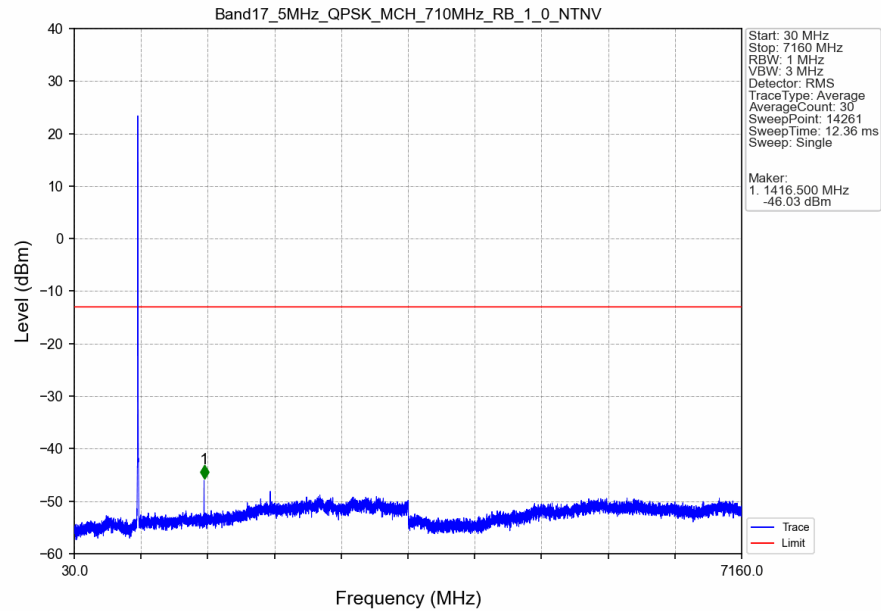


Band17 5MHz QPSK LCH 706.5MHz RB 25 0 NTV

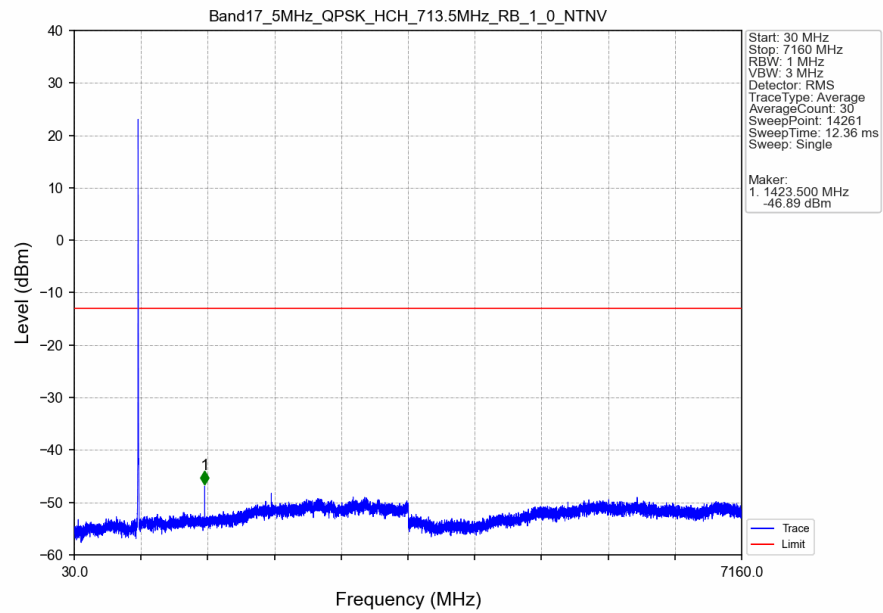


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
699	703.9	0.1	CHP	1	703.840	-37.62	-13	Pass
703.9	704	0.03	/	2	703.990	-35.46	-13	Pass
704	709	0.03	/	/	/	/	/	/

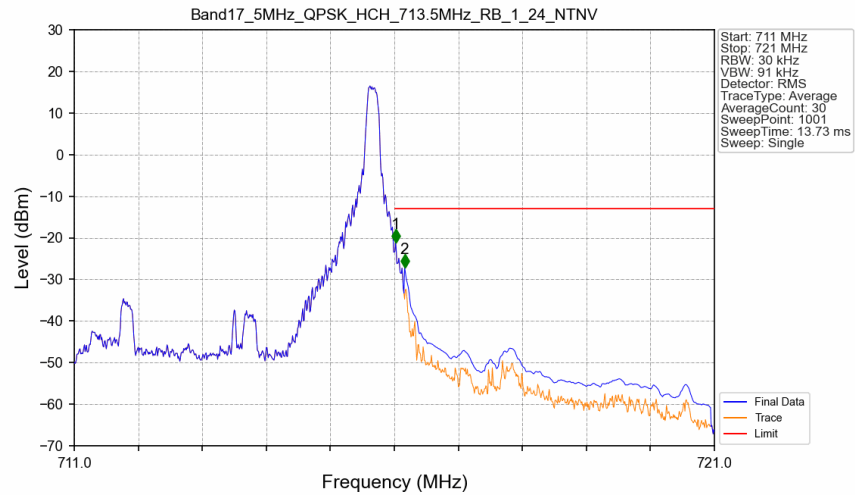
Band17 5MHz QPSK MCH 710MHz RB 1 0 NTV



Band17 5MHz QPSK HCH 713.5MHz RB 1 0 NTV

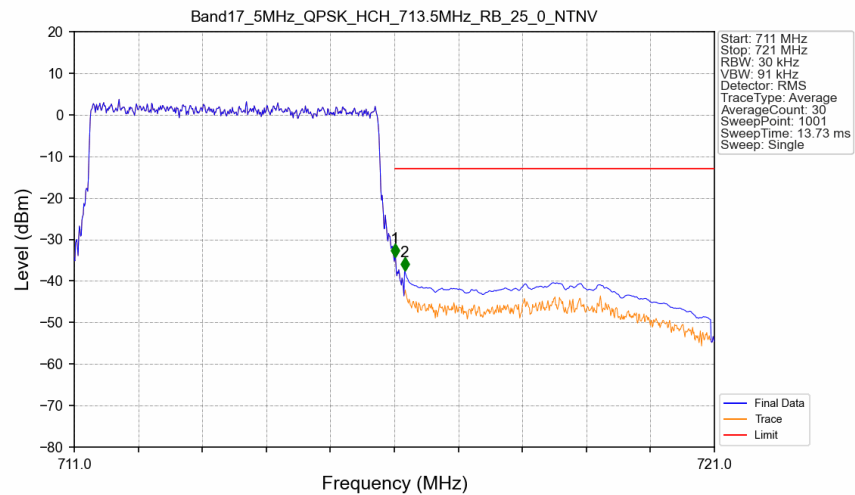


Band17 5MHz QPSK HCH 713.5MHz RB 1 24 NTV



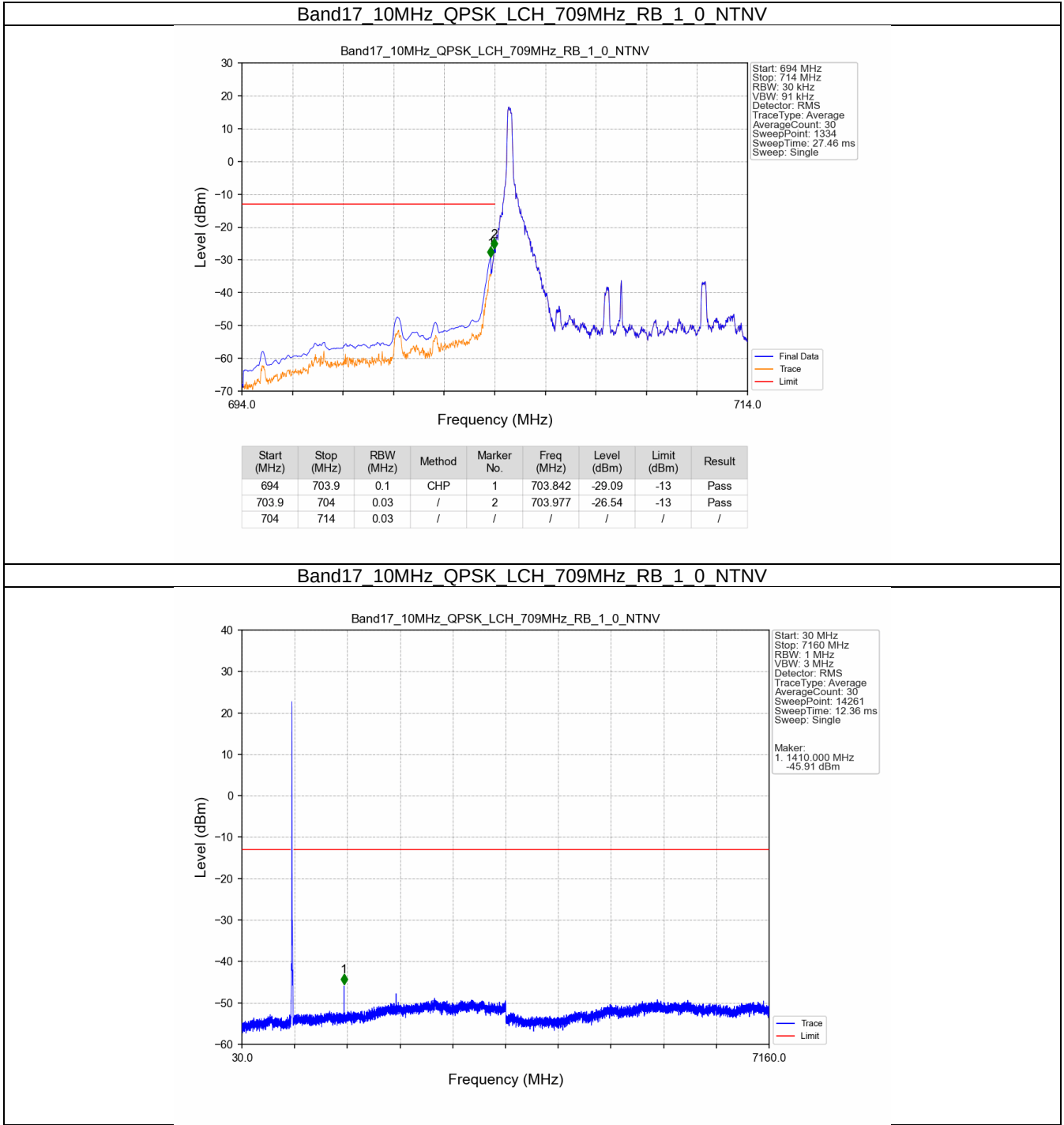
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.020	-21.07	-13	Pass
716.1	721	0.1	CHP	2	716.160	-27.06	-13	Pass

Band17 5MHz QPSK HCH 713.5MHz RB 25 0 NTN

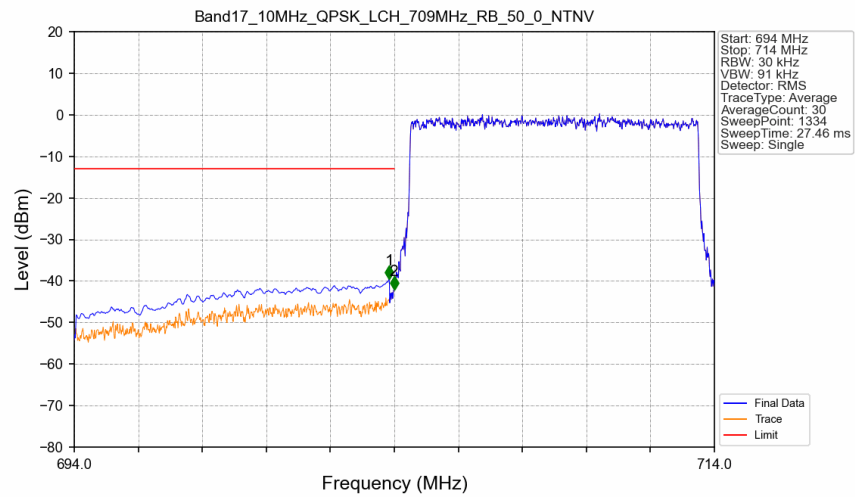


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-34.22	-13	Pass
716.1	721	0.1	CHP	2	716.160	-37.46	-13	Pass

5.2.2 B17_10MHz

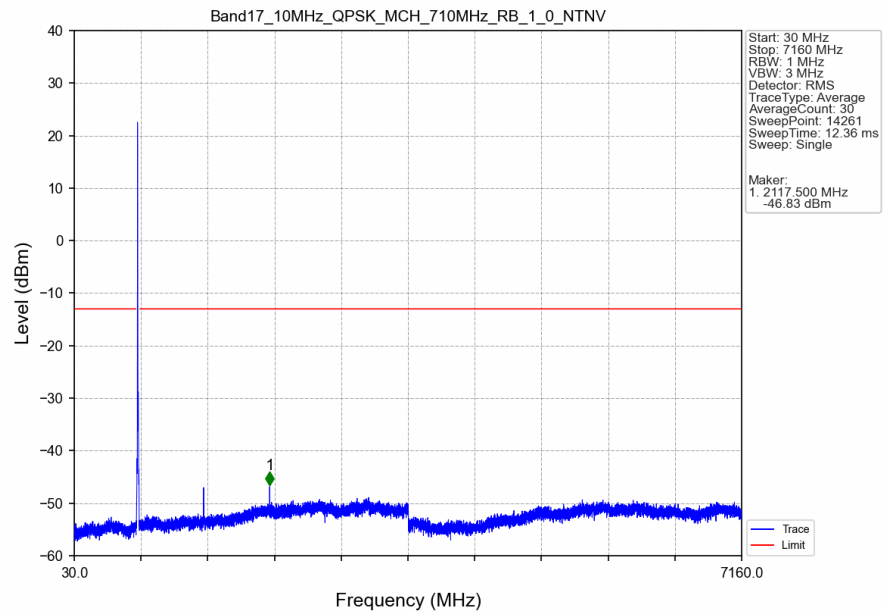


Band17 10MHz QPSK LCH 709MHz RB 50 0 NTN

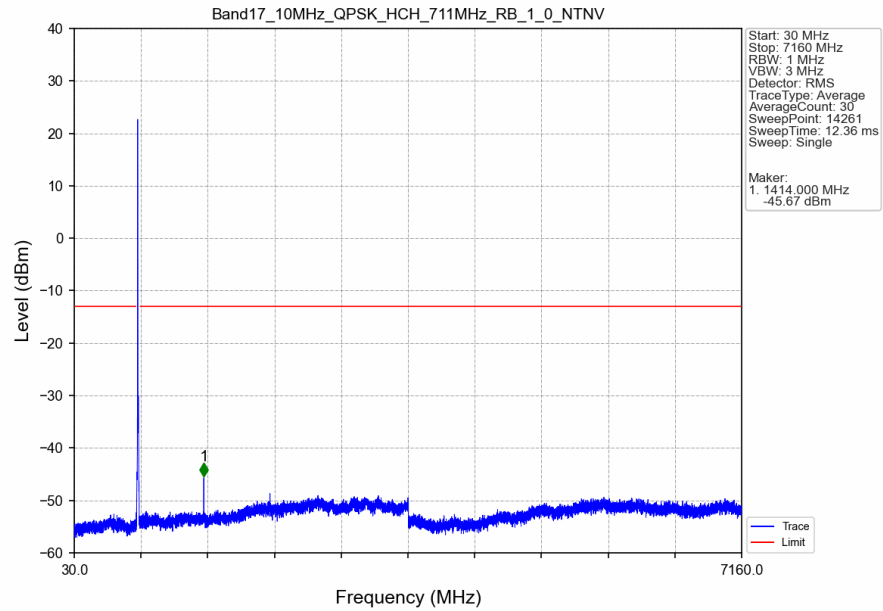


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-39.53	-13	Pass
703.9	704	0.03	/	2	703.992	-42.12	-13	Pass
704	714	0.03	/	/	/	/	/	/

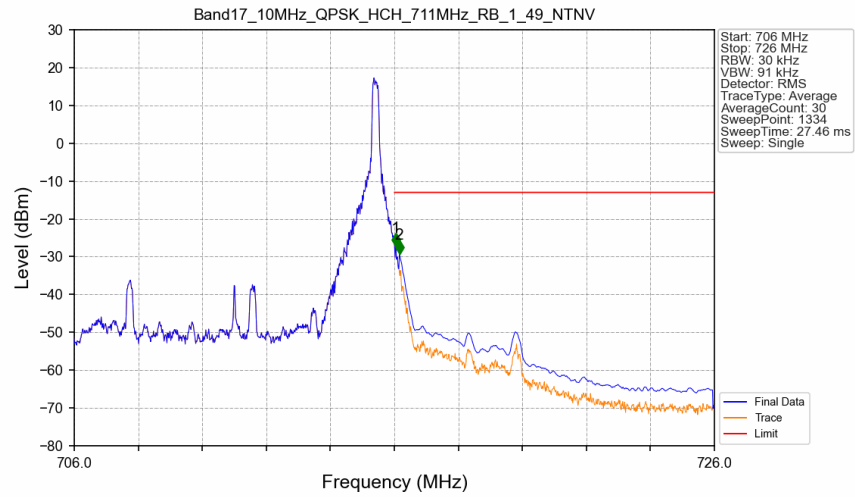
Band17 10MHz QPSK MCH 710MHz RB 1 0 NTN



Band17 10MHz QPSK HCH 711MHz RB 1 0 NTN

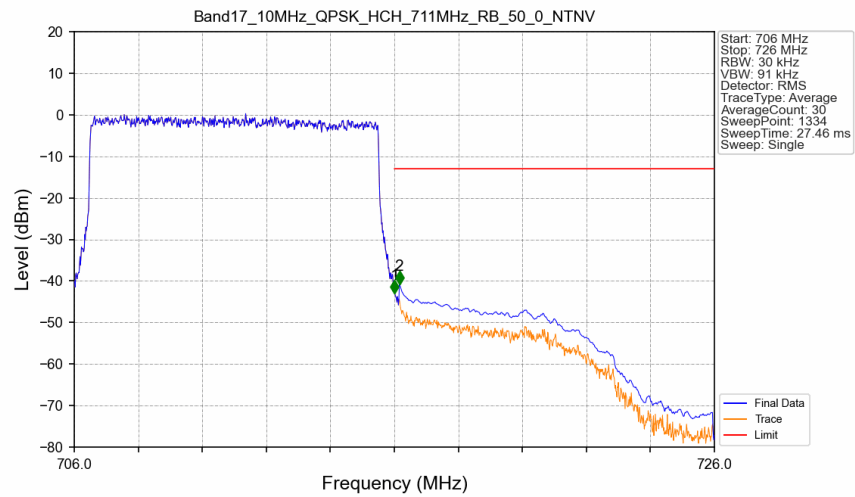


Band17 10MHz QPSK HCH 711MHz RB 1 49 NTN



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	716.038	-27.18	-13	Pass
716.1	726	0.1	CHP	2	716.158	-29.15	-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	-42.96	-13	Pass
716.1	726	0.1	CHP	2	716.158	-40.75	-13	Pass

6. Field Strength of Spurious Radiation

LTE Band 17-Low channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1409.0	-62.43	-13	-49.43	-65.25	2.48	5.3	Horizontal	Pass
2113.5	-53.43	-13	-40.43	-55.52	2.8	4.89	Horizontal	Pass
2818.0	-68.86	-13	-55.86	-72.26	3.12	6.52	Horizontal	Pass
1409.0	-61.85	-13	-48.85	-64.67	2.48	5.3	Vertical	Pass
2113.5	-52.71	-13	-39.71	-54.8	2.8	4.89	Vertical	Pass
2818.0	-68.65	-13	-55.65	-72.05	3.12	6.52	Vertical	Pass

LTE Band 17-Middle channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1411.0	-57.37	-13	-44.37	-60.2	2.49	5.32	Horizontal	Pass
2116.5	-52.65	-13	-39.65	-54.75	2.8	4.9	Horizontal	Pass
2822.0	-68.4	-13	-55.4	-71.8	3.13	6.53	Horizontal	Pass
1411.0	-59.82	-13	-46.82	-62.65	2.49	5.32	Vertical	Pass
2116.5	-51.79	-13	-38.79	-53.89	2.8	4.9	Vertical	Pass
2822.0	-68.58	-13	-55.58	-71.98	3.13	6.53	Vertical	Pass

LTE Band 17-High channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1413.0	-57.66	-13	-44.66	-60.5	2.49	5.33	Horizontal	Pass
2119.5	-50.78	-13	-37.78	-52.88	2.81	4.91	Horizontal	Pass
2826.0	-68.31	-13	-55.31	-71.72	3.13	6.54	Horizontal	Pass
1413.0	-60.64	-13	-47.64	-63.48	2.49	5.33	Vertical	Pass
2119.5	-51.03	-13	-38.03	-53.13	2.81	4.91	Vertical	Pass
2826.0	-68.46	-13	-55.46	-71.87	3.13	6.54	Vertical	Pass