

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	22.91	-2.10	18.66	<=34.77	Pass
			13	23.02	-2.10	18.77	<=34.77	Pass
			24	23.07	-2.10	18.82	<=34.77	Pass
		12	0	22.10	-2.10	17.85	<=34.77	Pass
			6	22.08	-2.10	17.83	<=34.77	Pass
			13	22.01	-2.10	17.76	<=34.77	Pass
		25	0	22.07	-2.10	17.82	<=34.77	Pass
	710	1	0	23.11	-2.10	18.86	<=34.77	Pass
			13	23.08	-2.10	18.83	<=34.77	Pass
			24	22.87	-2.10	18.62	<=34.77	Pass
		12	0	21.97	-2.10	17.72	<=34.77	Pass
			6	22.00	-2.10	17.75	<=34.77	Pass
			13	22.04	-2.10	17.79	<=34.77	Pass
		25	0	21.96	-2.10	17.71	<=34.77	Pass
	713.5	1	0	22.92	-2.10	18.67	<=34.77	Pass
			13	23.05	-2.10	18.80	<=34.77	Pass
			24	22.91	-2.10	18.66	<=34.77	Pass
		12	0	22.08	-2.10	17.83	<=34.77	Pass
			6	22.01	-2.10	17.76	<=34.77	Pass
			13	22.12	-2.10	17.87	<=34.77	Pass
		25	0	22.01	-2.10	17.76	<=34.77	Pass
16QAM	706.5	1	0	22.20	-2.10	17.95	<=34.77	Pass
			13	22.30	-2.10	18.05	<=34.77	Pass
			24	21.76	-2.10	17.51	<=34.77	Pass
		12	0	21.11	-2.10	16.86	<=34.77	Pass
			6	21.15	-2.10	16.90	<=34.77	Pass
			13	21.05	-2.10	16.80	<=34.77	Pass
		25	0	21.04	-2.10	16.79	<=34.77	Pass
	710	1	0	21.43	-2.10	17.18	<=34.77	Pass
			13	22.23	-2.10	17.98	<=34.77	Pass
			24	21.92	-2.10	17.67	<=34.77	Pass
		12	0	21.02	-2.10	16.77	<=34.77	Pass
			6	21.06	-2.10	16.81	<=34.77	Pass
			13	21.01	-2.10	16.76	<=34.77	Pass
		25	0	21.00	-2.10	16.75	<=34.77	Pass
	713.5	1	0	22.35	-2.10	18.10	<=34.77	Pass
			13	22.04	-2.10	17.79	<=34.77	Pass
			24	22.29	-2.10	18.04	<=34.77	Pass
		12	0	21.04	-2.10	16.79	<=34.77	Pass
			6	21.08	-2.10	16.83	<=34.77	Pass
			13	21.05	-2.10	16.80	<=34.77	Pass
		25	0	21.09	-2.10	16.84	<=34.77	Pass
64QAM	706.5	1	0	21.75	-2.10	17.50	<=34.77	Pass
			13	21.90	-2.10	17.65	<=34.77	Pass
			24	21.80	-2.10	17.55	<=34.77	Pass
		12	0	21.10	-2.10	16.85	<=34.77	Pass
			6	21.07	-2.10	16.82	<=34.77	Pass
			13	21.07	-2.10	16.82	<=34.77	Pass
		25	0	21.00	-2.10	16.75	<=34.77	Pass

	710	1	0	21.89	-2.10	17.64	<=34.77	Pass	
			13	22.06	-2.10	17.81	<=34.77	Pass	
			24	21.34	-2.10	17.09	<=34.77	Pass	
		12	0	20.96	-2.10	16.71	<=34.77	Pass	
			6	21.02	-2.10	16.77	<=34.77	Pass	
			13	21.08	-2.10	16.83	<=34.77	Pass	
		25	0	21.00	-2.10	16.75	<=34.77	Pass	
		713.5	1	0	22.15	-2.10	17.90	<=34.77	Pass
				13	21.54	-2.10	17.29	<=34.77	Pass
	24			21.27	-2.10	17.02	<=34.77	Pass	
	12		0	21.10	-2.10	16.85	<=34.77	Pass	
			6	20.99	-2.10	16.74	<=34.77	Pass	
			13	21.09	-2.10	16.84	<=34.77	Pass	
	25	0	21.08	-2.10	16.83	<=34.77	Pass		
256QAM	706.5	1	0	17.81	-2.10	13.56	<=34.77	Pass	
			13	18.00	-2.10	13.75	<=34.77	Pass	
			24	18.10	-2.10	13.85	<=34.77	Pass	
		12	0	18.02	-2.10	13.77	<=34.77	Pass	
			6	18.11	-2.10	13.86	<=34.77	Pass	
			13	18.04	-2.10	13.79	<=34.77	Pass	
		25	0	18.13	-2.10	13.88	<=34.77	Pass	
	710	1	0	17.80	-2.10	13.55	<=34.77	Pass	
			13	18.02	-2.10	13.77	<=34.77	Pass	
			24	17.90	-2.10	13.65	<=34.77	Pass	
		12	0	18.10	-2.10	13.85	<=34.77	Pass	
			6	17.87	-2.10	13.62	<=34.77	Pass	
			13	17.89	-2.10	13.64	<=34.77	Pass	
		25	0	18.02	-2.10	13.77	<=34.77	Pass	
	713.5	1	0	17.91	-2.10	13.66	<=34.77	Pass	
			13	17.90	-2.10	13.65	<=34.77	Pass	
			24	17.64	-2.10	13.39	<=34.77	Pass	
		12	0	17.98	-2.10	13.73	<=34.77	Pass	
			6	18.06	-2.10	13.81	<=34.77	Pass	
			13	18.06	-2.10	13.81	<=34.77	Pass	
		25	0	18.02	-2.10	13.77	<=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	23.09	-2.10	18.84	<=34.77	Pass
			25	22.95	-2.10	18.70	<=34.77	Pass
			49	22.83	-2.10	18.58	<=34.77	Pass
		25	0	21.97	-2.10	17.72	<=34.77	Pass
			13	22.10	-2.10	17.85	<=34.77	Pass
			25	22.07	-2.10	17.82	<=34.77	Pass
		50	0	22.06	-2.10	17.81	<=34.77	Pass
	710	1	0	22.96	-2.10	18.71	<=34.77	Pass
			25	22.48	-2.10	18.23	<=34.77	Pass
			49	23.15	-2.10	18.90	<=34.77	Pass
		25	0	21.98	-2.10	17.73	<=34.77	Pass
			13	21.98	-2.10	17.73	<=34.77	Pass
			25	22.00	-2.10	17.75	<=34.77	Pass
		50	0	21.99	-2.10	17.74	<=34.77	Pass
	711	1	0	23.08	-2.10	18.83	<=34.77	Pass

		25	25	22.87	-2.10	18.62	<=34.77	Pass
			49	22.97	-2.10	18.72	<=34.77	Pass
			0	22.05	-2.10	17.80	<=34.77	Pass
			13	22.08	-2.10	17.83	<=34.77	Pass
			25	21.94	-2.10	17.69	<=34.77	Pass
		50	0	22.01	-2.10	17.76	<=34.77	Pass
16QAM	709	1	0	22.16	-2.10	17.91	<=34.77	Pass
			25	22.33	-2.10	18.08	<=34.77	Pass
			49	21.88	-2.10	17.63	<=34.77	Pass
		25	0	21.02	-2.10	16.77	<=34.77	Pass
			13	21.16	-2.10	16.91	<=34.77	Pass
			25	21.04	-2.10	16.79	<=34.77	Pass
		50	0	21.04	-2.10	16.79	<=34.77	Pass
	710	1	0	22.22	-2.10	17.97	<=34.77	Pass
			25	22.63	-2.10	18.38	<=34.77	Pass
			49	21.63	-2.10	17.38	<=34.77	Pass
		25	0	20.96	-2.10	16.71	<=34.77	Pass
			13	21.02	-2.10	16.77	<=34.77	Pass
			25	20.96	-2.10	16.71	<=34.77	Pass
		50	0	21.08	-2.10	16.83	<=34.77	Pass
	711	1	0	21.96	-2.10	17.71	<=34.77	Pass
			25	21.90	-2.10	17.65	<=34.77	Pass
			49	21.96	-2.10	17.71	<=34.77	Pass
		25	0	21.06	-2.10	16.81	<=34.77	Pass
			13	21.16	-2.10	16.91	<=34.77	Pass
			25	20.93	-2.10	16.68	<=34.77	Pass
		50	0	21.06	-2.10	16.81	<=34.77	Pass
64QAM	709	1	0	22.09	-2.10	17.84	<=34.77	Pass
			25	22.13	-2.10	17.88	<=34.77	Pass
			49	22.13	-2.10	17.88	<=34.77	Pass
		25	0	21.00	-2.10	16.75	<=34.77	Pass
			13	21.14	-2.10	16.89	<=34.77	Pass
			25	21.13	-2.10	16.88	<=34.77	Pass
		50	0	21.11	-2.10	16.86	<=34.77	Pass
	710	1	0	21.51	-2.10	17.26	<=34.77	Pass
			25	21.86	-2.10	17.61	<=34.77	Pass
			49	21.68	-2.10	17.43	<=34.77	Pass
		25	0	21.03	-2.10	16.78	<=34.77	Pass
			13	21.01	-2.10	16.76	<=34.77	Pass
			25	20.98	-2.10	16.73	<=34.77	Pass
		50	0	20.96	-2.10	16.71	<=34.77	Pass
	711	1	0	22.10	-2.10	17.85	<=34.77	Pass
			25	21.85	-2.10	17.60	<=34.77	Pass
			49	21.65	-2.10	17.40	<=34.77	Pass
		25	0	21.04	-2.10	16.79	<=34.77	Pass
			13	21.05	-2.10	16.80	<=34.77	Pass
			25	21.01	-2.10	16.76	<=34.77	Pass
		50	0	21.03	-2.10	16.78	<=34.77	Pass
256QAM	709	1	0	18.10	-2.10	13.85	<=34.77	Pass
			25	18.21	-2.10	13.96	<=34.77	Pass
			49	17.78	-2.10	13.53	<=34.77	Pass
		25	0	17.97	-2.10	13.72	<=34.77	Pass
			13	18.19	-2.10	13.94	<=34.77	Pass
			25	18.05	-2.10	13.80	<=34.77	Pass
		50	0	17.96	-2.10	13.71	<=34.77	Pass
	710	1	0	18.09	-2.10	13.84	<=34.77	Pass
			25	18.31	-2.10	14.06	<=34.77	Pass
			49	17.90	-2.10	13.65	<=34.77	Pass
		25	0	18.00	-2.10	13.75	<=34.77	Pass

			13	18.10	-2.10	13.85	<=34.77	Pass
			25	17.93	-2.10	13.68	<=34.77	Pass
		50	0	18.04	-2.10	13.79	<=34.77	Pass
	711	1	0	17.89	-2.10	13.64	<=34.77	Pass
			25	18.11	-2.10	13.86	<=34.77	Pass
			49	17.81	-2.10	13.56	<=34.77	Pass
		25	0	18.12	-2.10	13.87	<=34.77	Pass
			13	18.11	-2.10	13.86	<=34.77	Pass
			25	17.89	-2.10	13.64	<=34.77	Pass
		50	0	18.01	-2.10	13.76	<=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	0.800	0.0011	-2.5 to 2.5	Pass
					NV	0.500	0.0007	-2.5 to 2.5	Pass
					HV	-0.900	-0.0013	-2.5 to 2.5	Pass
				-30	NV	-0.400	-0.0006	-2.5 to 2.5	Pass
				-20	NV	-0.700	-0.0010	-2.5 to 2.5	Pass
				-10	NV	-2.000	-0.0028	-2.5 to 2.5	Pass
				0	NV	-0.400	-0.0006	-2.5 to 2.5	Pass
				10	NV	0.000	0.0000	-2.5 to 2.5	Pass
				30	NV	0.600	0.0008	-2.5 to 2.5	Pass
				40	NV	-0.700	-0.0010	-2.5 to 2.5	Pass
				50	NV	0.100	0.0001	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band17_OBW

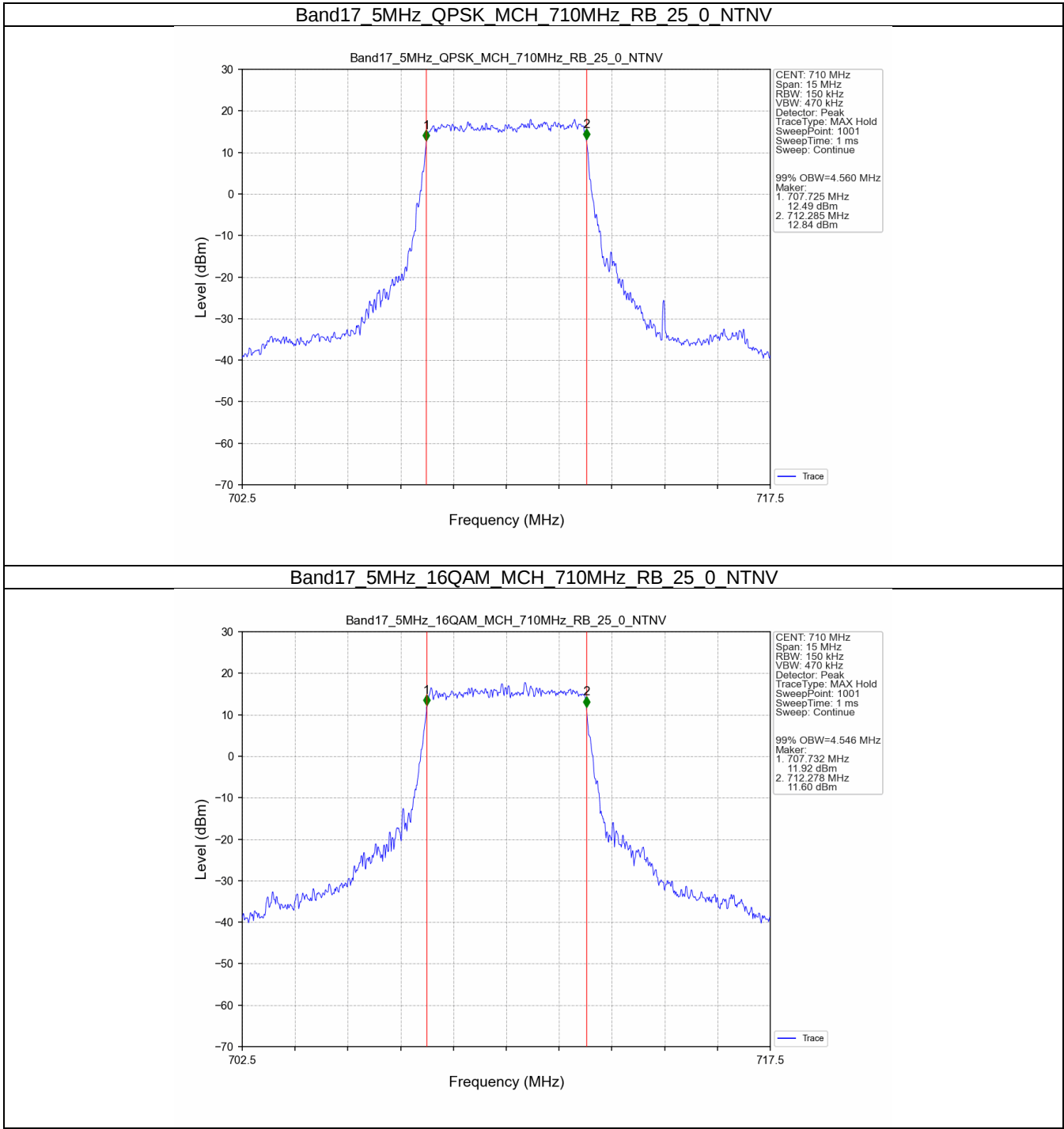
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.560	/	Pass
	16QAM	710	25	0	4.546	/	Pass
10	QPSK	710	50	0	9.071	/	Pass
	16QAM	710	50	0	9.058	/	Pass

3.1.2 Band17_XDB

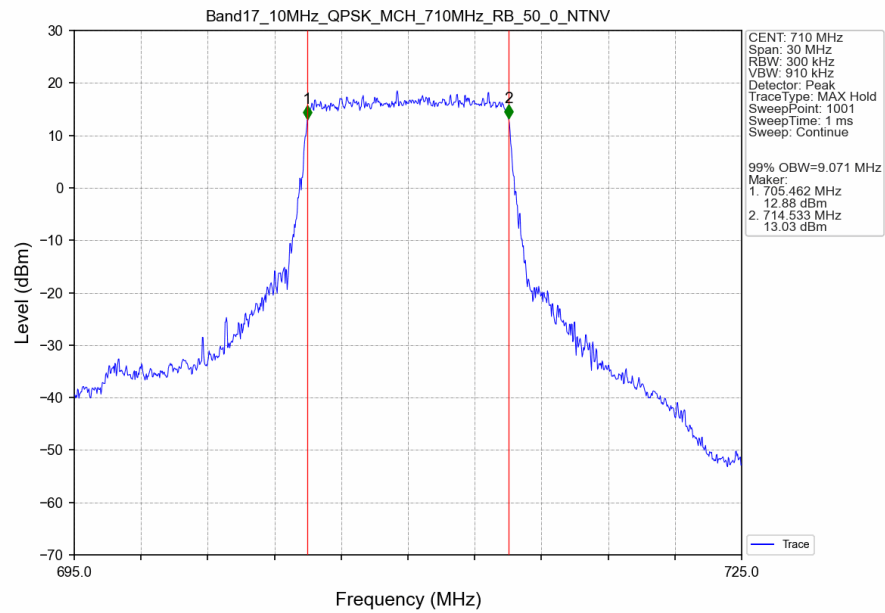
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	5.206	/	Pass
	16QAM	710	25	0	5.212	/	Pass
10	QPSK	710	50	0	10.171	/	Pass
	16QAM	710	50	0	10.189	/	Pass

3.2 Test Graph

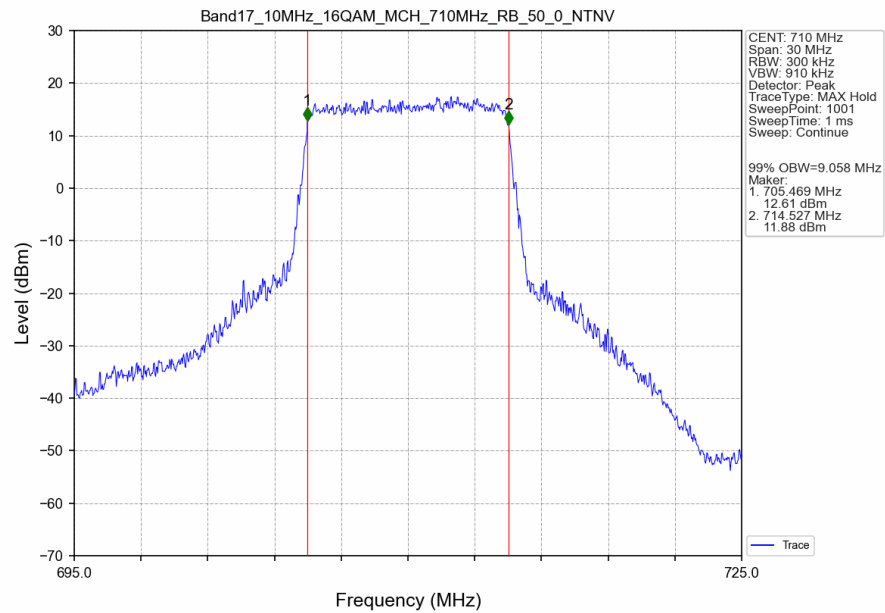
3.2.1 Band17_OBW



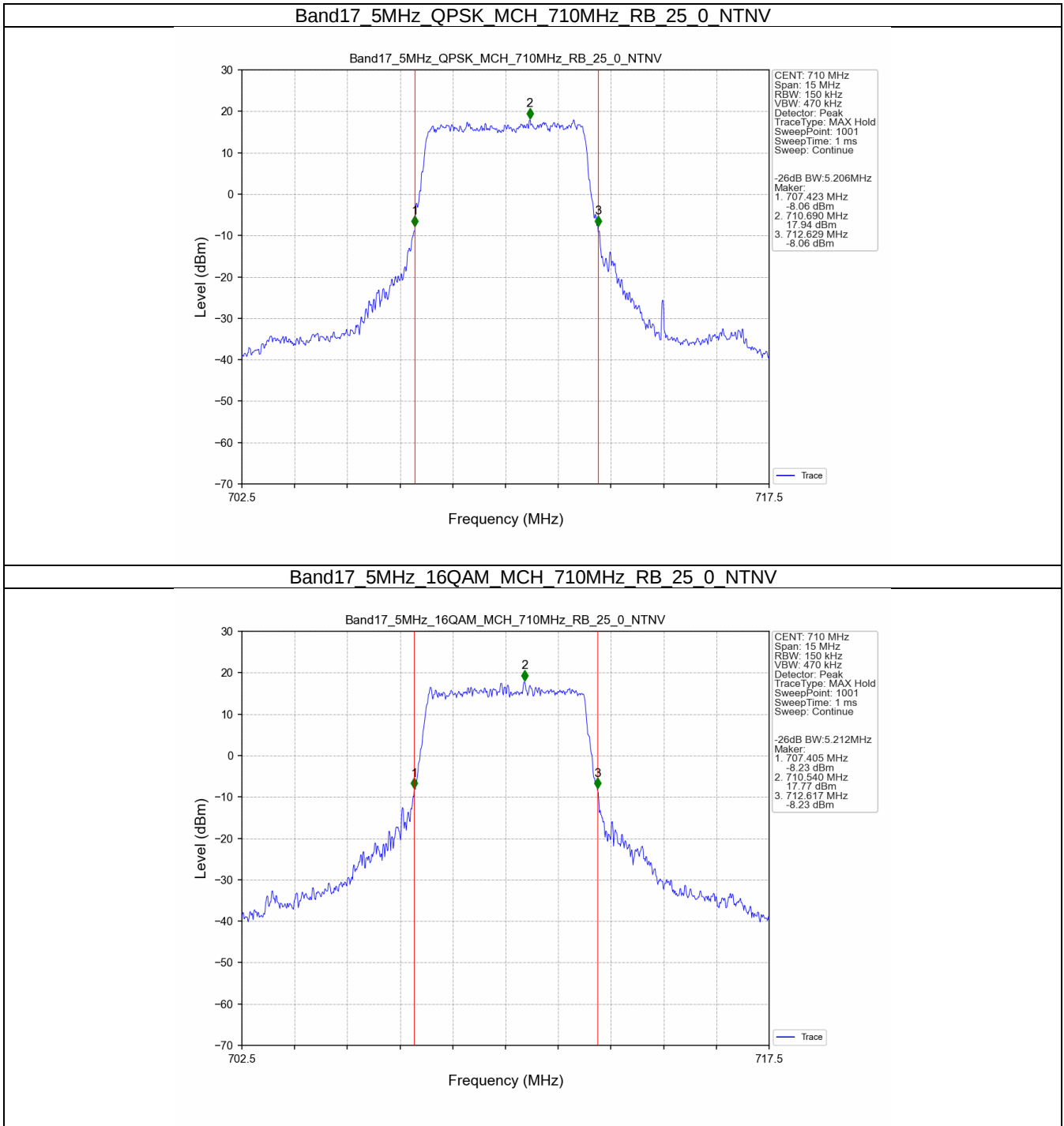
Band17 10MHz QPSK MCH 710MHz RB 50 0 NTV



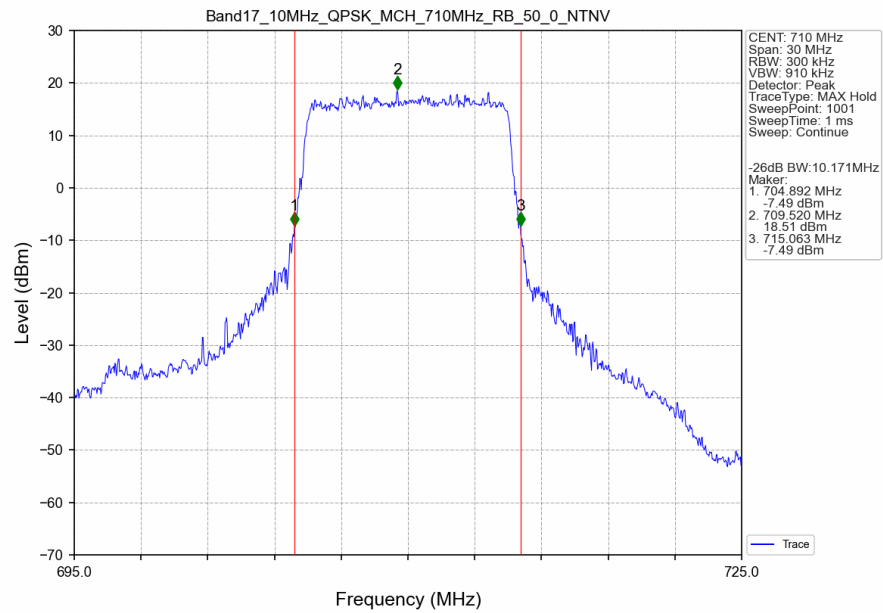
Band17 10MHz 16QAM MCH 710MHz RB 50 0 NTV



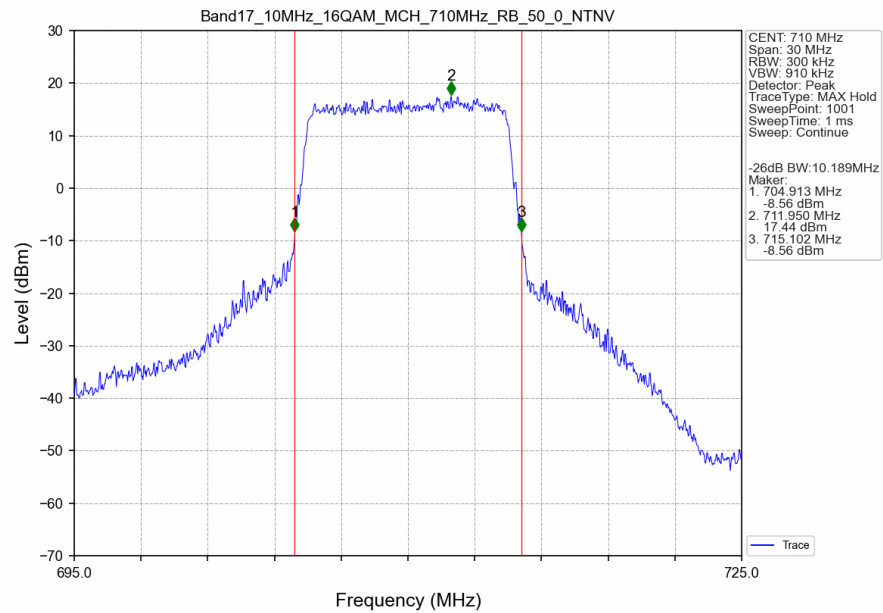
3.2.2 Band17_XDB



Band17 10MHz QPSK MCH 710MHz RB 50 0 NTV



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



4. Peak-Average Ratio

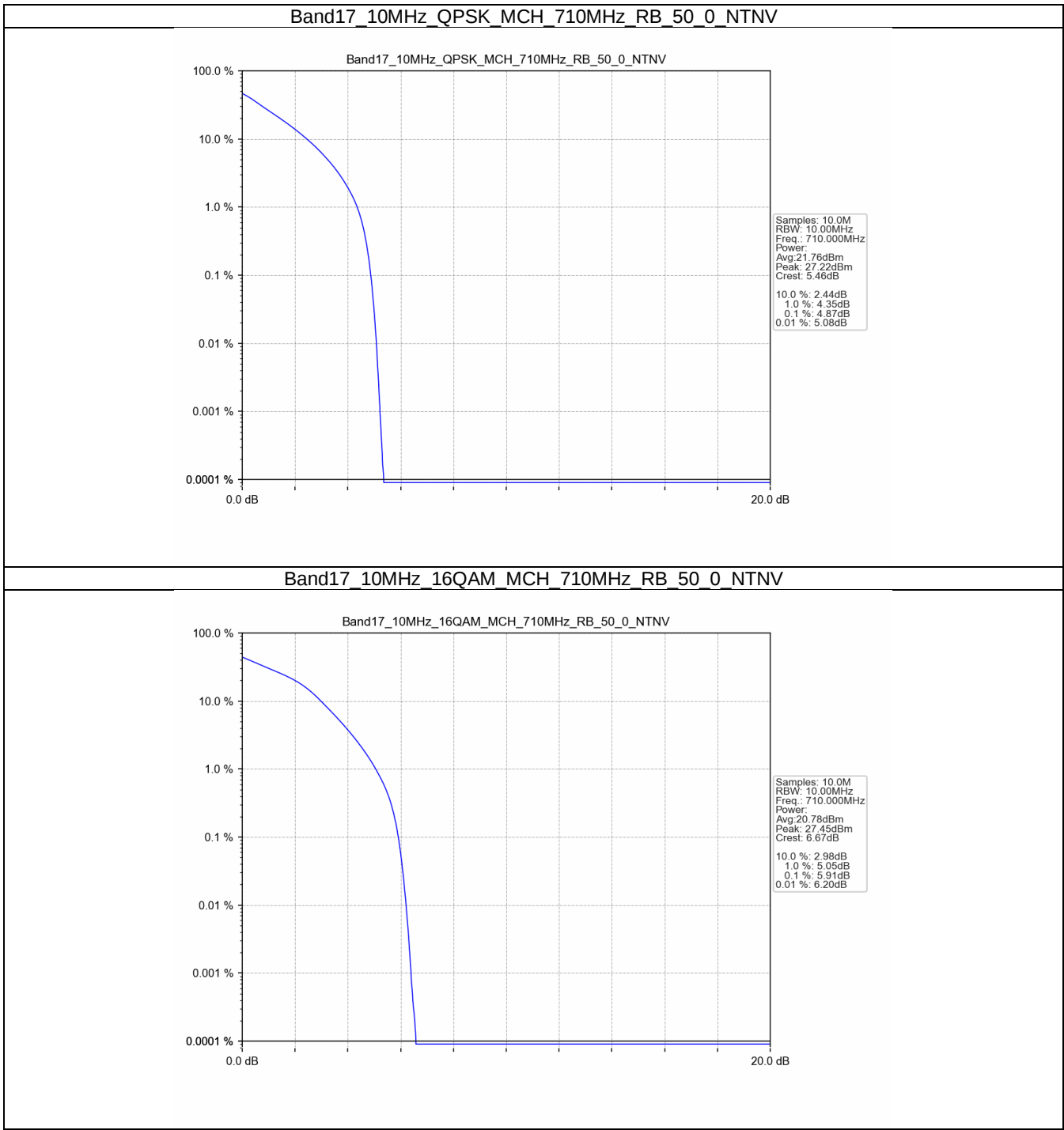
4.1 Test Result

4.1.1 B17_10MHz

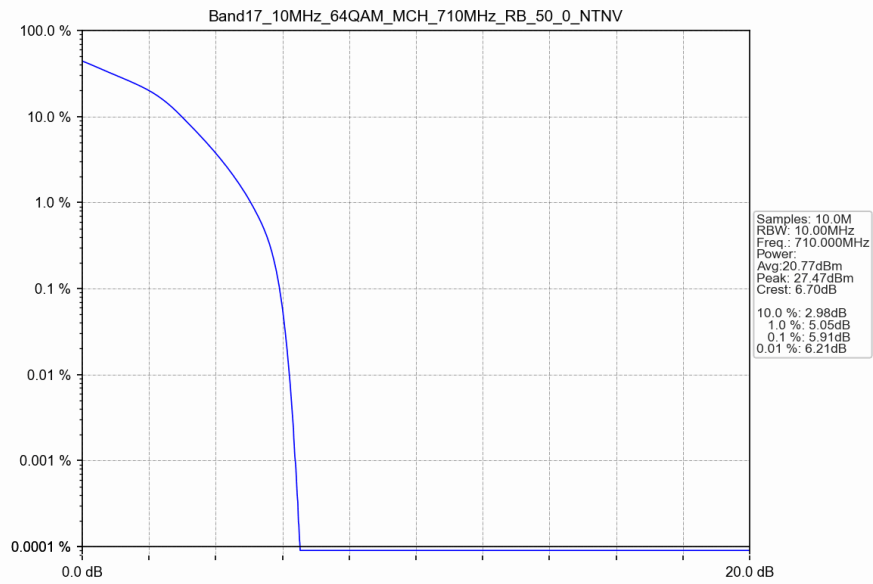
Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	710	50	0	4.87	<=13	Pass
16QAM	710	50	0	5.91	<=13	Pass
64QAM	710	50	0	5.91	<=13	Pass
256QAM	710	50	0	6.75	<=13	Pass

4.2 Test Graph

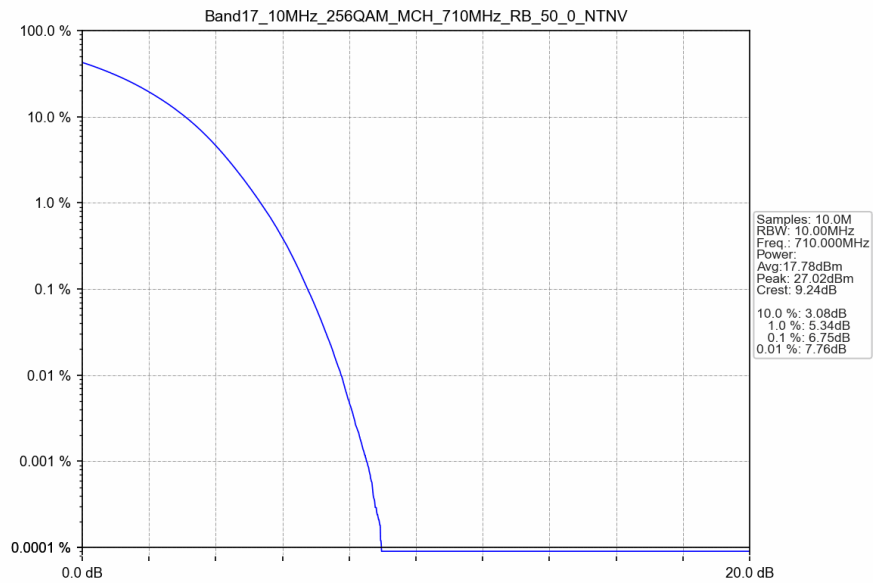
4.2.1 B17_10MHz



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



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



5. Spurious Emission

5.1 Test Result

5.1.1 B17_5MHz

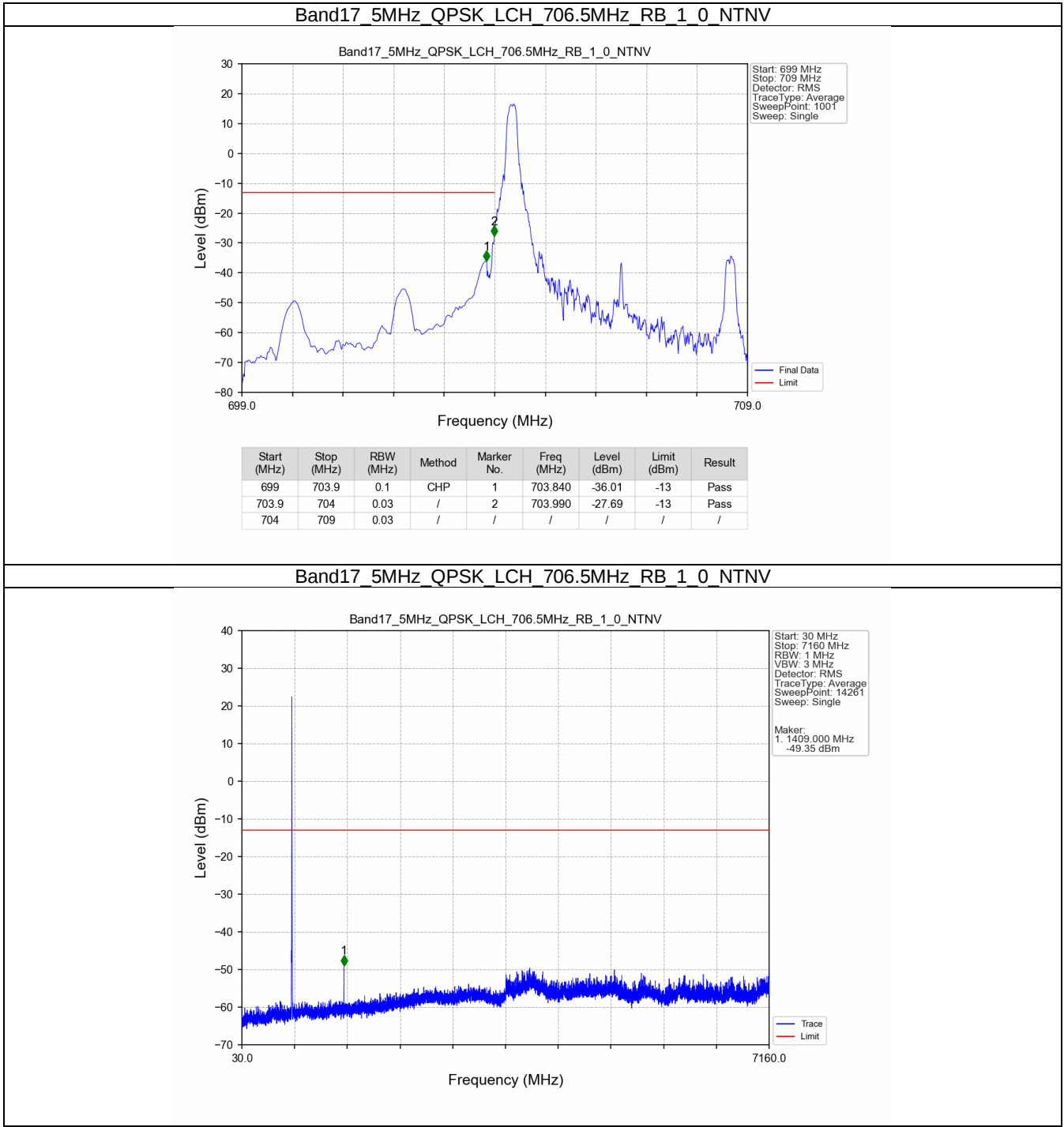
Band: 17 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	706.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	713.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B17_10MHz

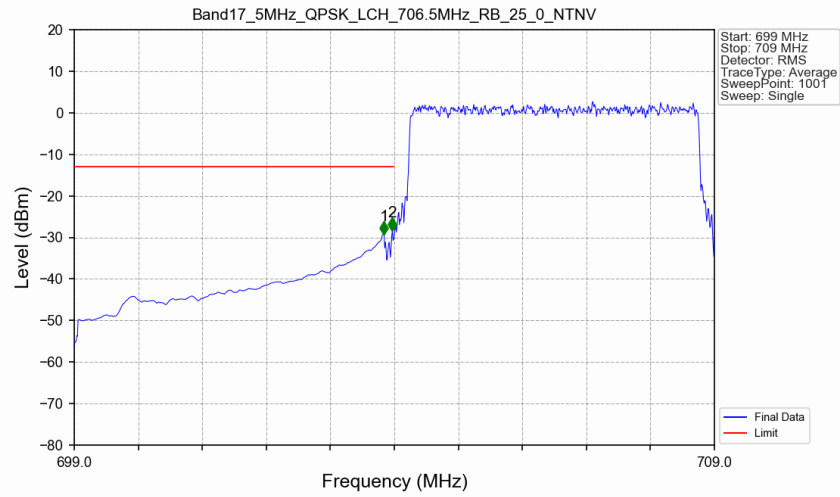
Band: 17 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	709	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph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

5.2 Test Graph

5.2.1 B17_5MHz

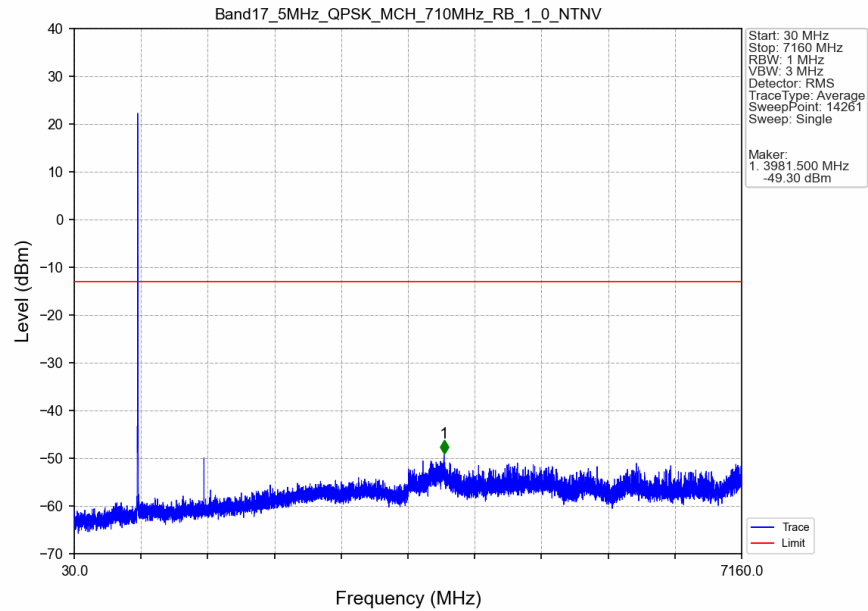


Band17_5MHz_QPSK_LCH_706.5MHz_RB_25_0_NTNV

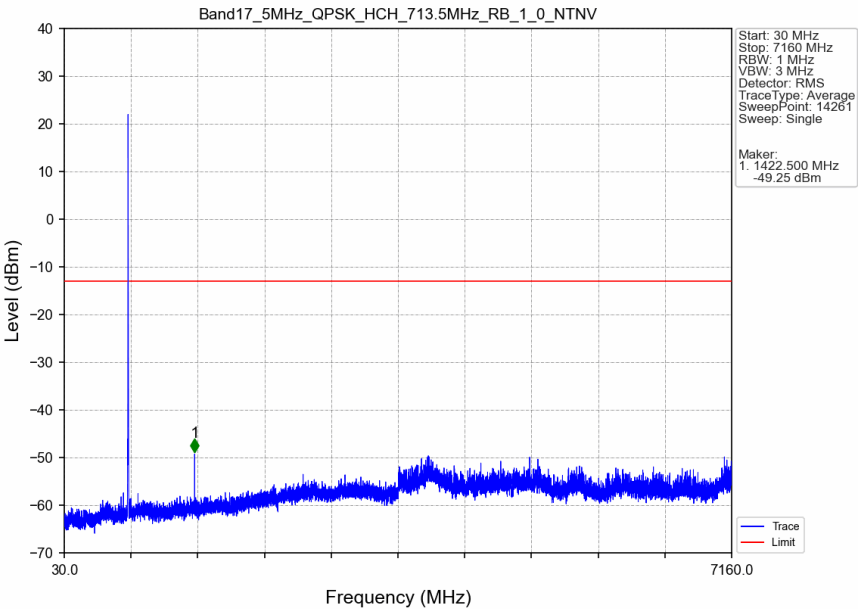


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
699	703.9	0.1	CHP	1	703.840	-29.27	-13	Pass
703.9	704	0.03	/	2	703.970	-28.46	-13	Pass
704	709	0.03	/	/	/	/	/	/

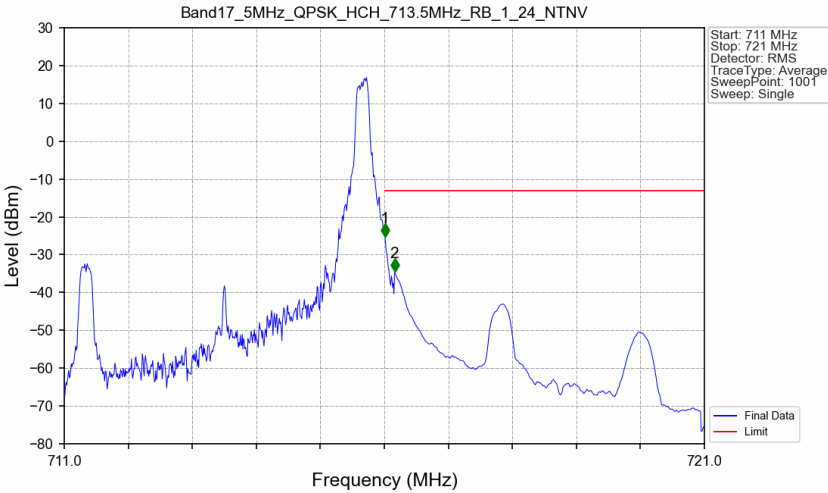
Band17_5MHz_QPSK_MCH_710MHz_RB_1_0_NTNV



Band17 5MHz QPSK HCH 713.5MHz RB 1 0 NTN

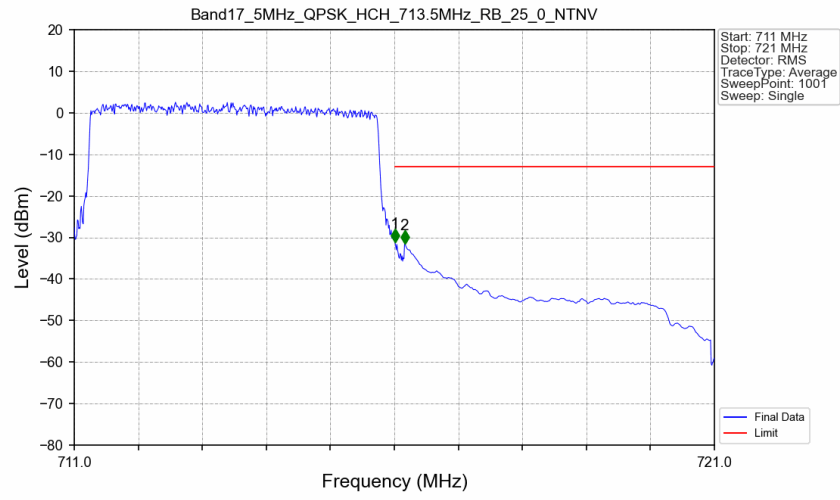


Band17 5MHz QPSK HCH 713.5MHz RB 1 24 NTN



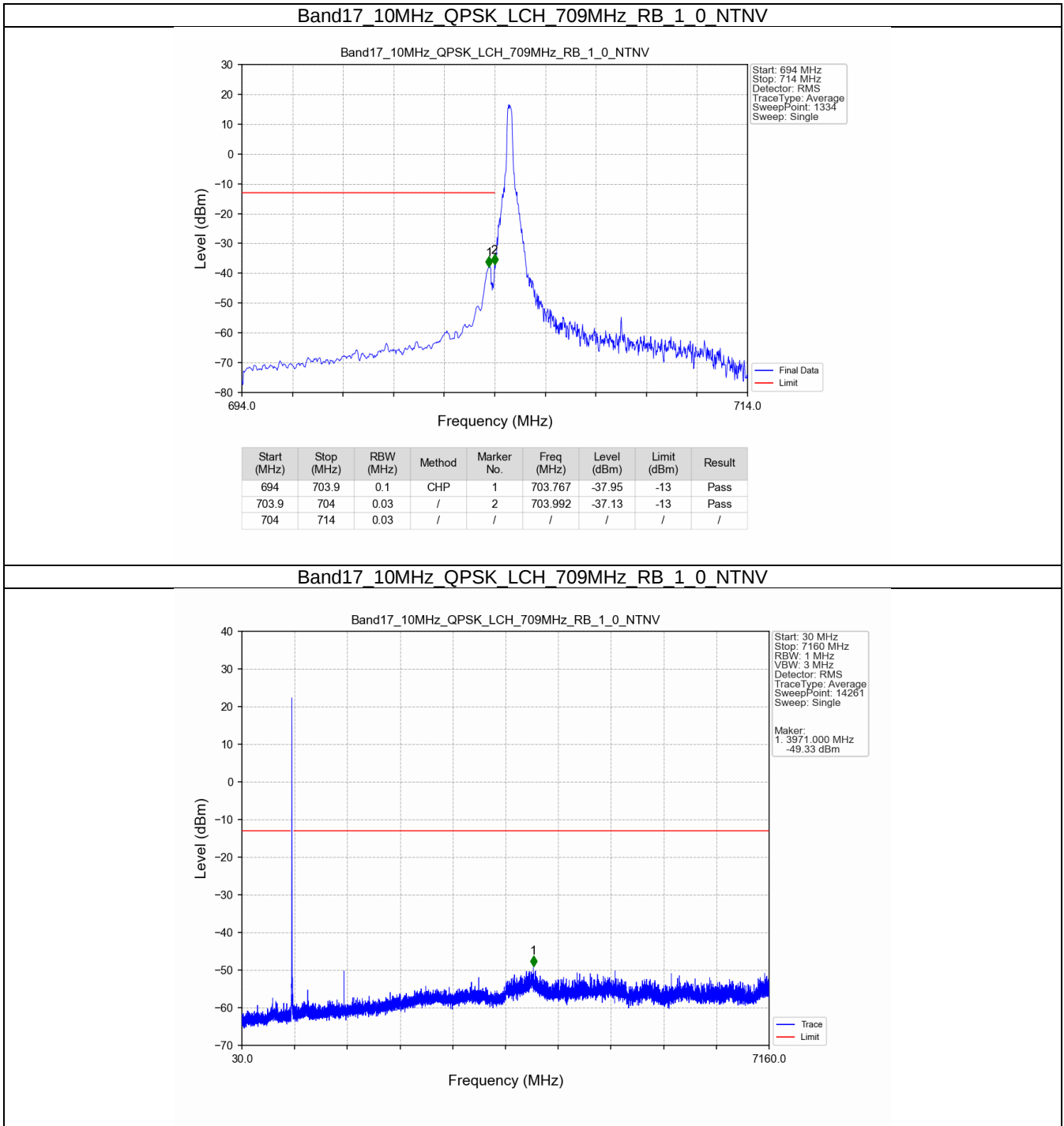
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-25.21	-13	Pass
716.1	721	0.1	CHP	2	716.160	-34.49	-13	Pass

Band17 5MHz QPSK HCH 713.5MHz RB 25 0 NTV

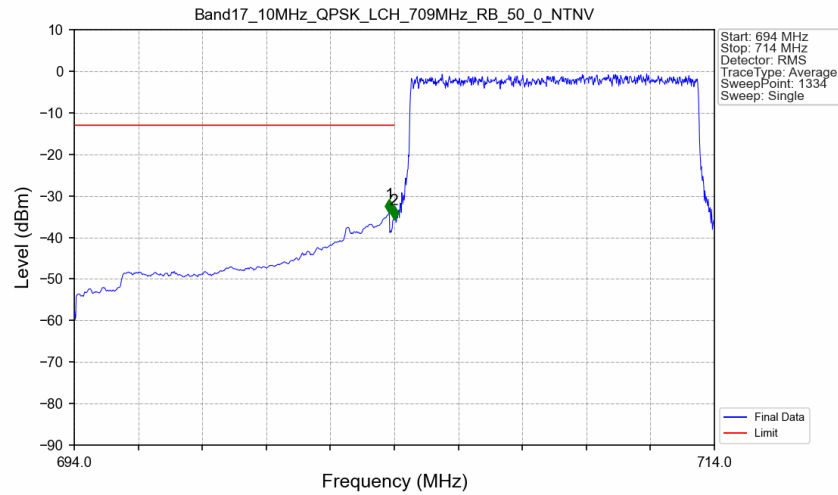


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-31.14	-13	Pass
716.1	721	0.1	CHP	2	716.160	-31.47	-13	Pass

5.2.2 B17_10MHz

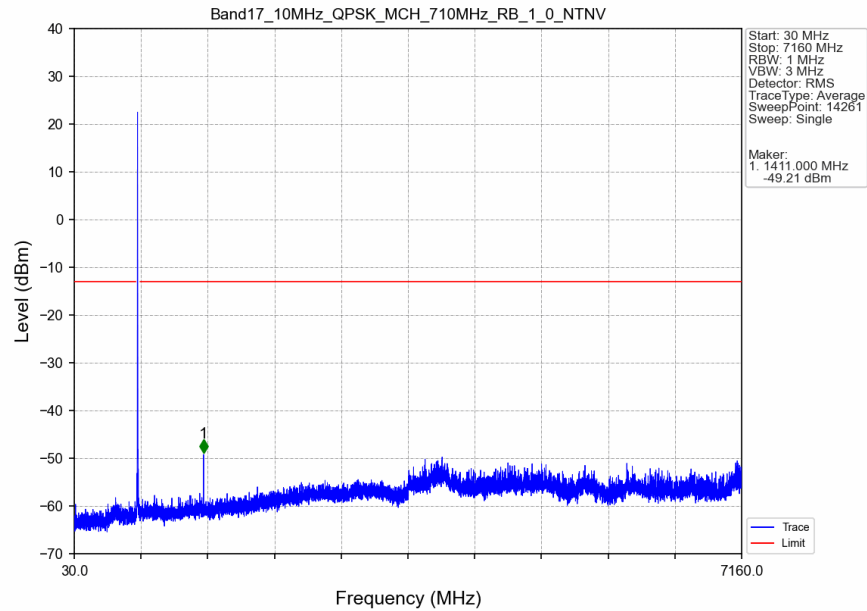


Band17 10MHz QPSK LCH 709MHz RB 50 0 NTN

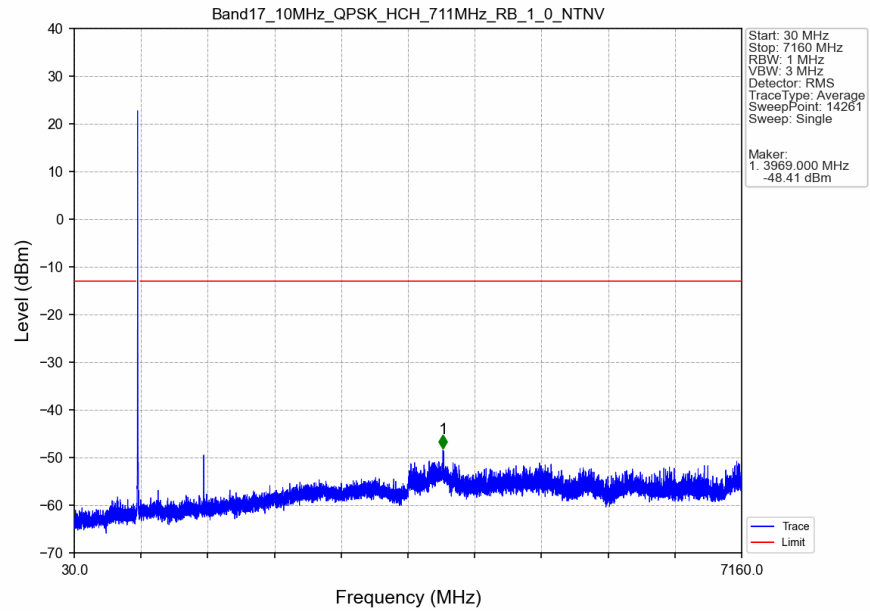


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-34.06	-13	Pass
703.9	704	0.03	/	2	703.992	-35.57	-13	Pass
704	714	0.03	/	/	/	/	/	/

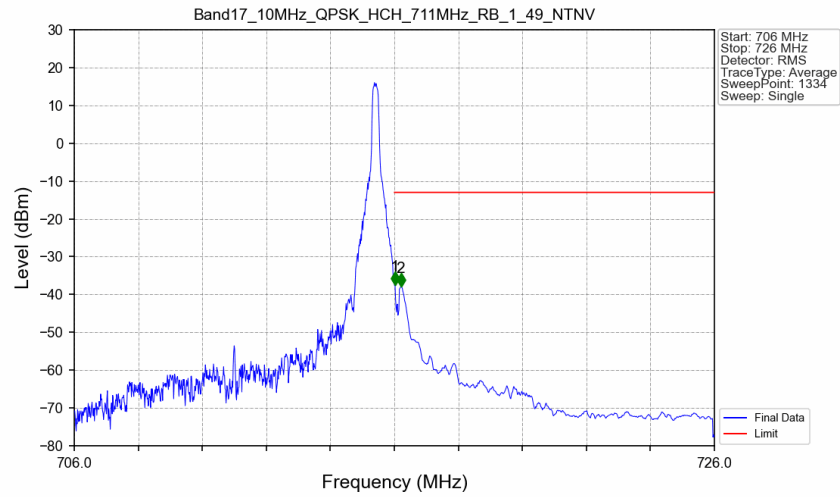
Band17 10MHz QPSK MCH 710MHz RB 1 0 NTN



Band17 10MHz QPSK HCH 711MHz RB 1 0 NTN

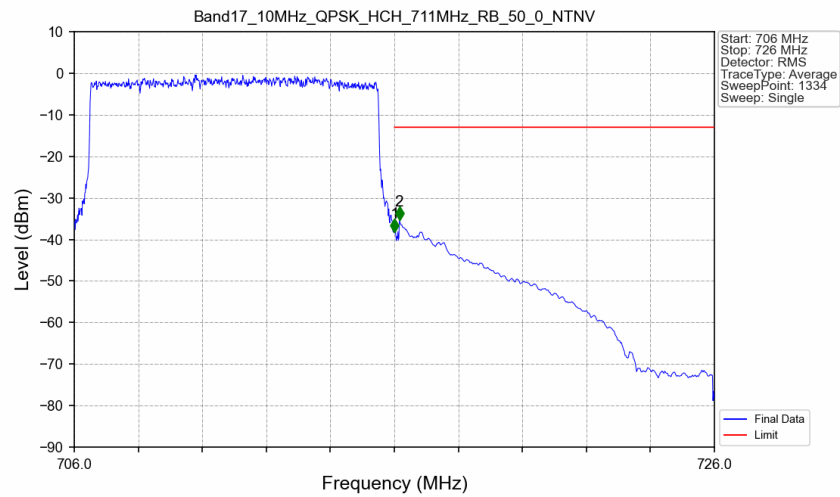


Band17 10MHz QPSK HCH 711MHz RB 1 49 NTN



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	716.023	-37.40	-13	Pass
716.1	726	0.1	CHP	2	716.203	-37.94	-13	Pass

Band17 10MHz QPSK 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	716.008	-38.15	-13	Pass
716.1	726	0.1	CHP	2	716.158	-35.38	-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	-66.84	-13	-53.84	-69.66	2.48	5.3	Horizontal	Pass
2113.5	-63.92	-13	-50.92	-66.01	2.8	4.89	Horizontal	Pass
2818.0	-62.76	-13	-49.76	-66.16	3.12	6.52	Horizontal	Pass
1409.0	-66.19	-13	-53.19	-69.01	2.48	5.3	Vertical	Pass
2113.5	-64.06	-13	-51.06	-66.15	2.8	4.89	Vertical	Pass
2818.0	-63.07	-13	-50.07	-66.47	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	-66.26	-13	-53.26	-69.09	2.49	5.32	Horizontal	Pass
2116.5	-62.04	-13	-49.04	-64.14	2.8	4.9	Horizontal	Pass
2822.0	-62.73	-13	-49.73	-66.13	3.13	6.53	Horizontal	Pass
1411.0	-66.24	-13	-53.24	-69.07	2.49	5.32	Vertical	Pass
2116.5	-61.12	-13	-48.12	-63.22	2.8	4.9	Vertical	Pass
2822.0	-61.46	-13	-48.46	-64.86	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	-67.03	-13	-54.03	-69.87	2.49	5.33	Horizontal	Pass
2119.5	-61.41	-13	-48.41	-63.51	2.81	4.91	Horizontal	Pass
2826.0	-62.07	-13	-49.07	-65.48	3.13	6.54	Horizontal	Pass
1413.0	-66.46	-13	-53.46	-69.3	2.49	5.33	Vertical	Pass
2119.5	-62.86	-13	-49.86	-64.96	2.81	4.91	Vertical	Pass
2826.0	-61.16	-13	-48.16	-64.57	3.13	6.54	Vertical	Pass