

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B17_5MHz_ERP

Band: 17 / Bandwidth: 5MHz / NTVN								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	706.5	1	0	22.97	-3.53	17.29	<=34.77	Pass
			13	23.17	-3.53	17.49	<=34.77	Pass
			24	22.90	-3.53	17.22	<=34.77	Pass
		12	0	22.14	-3.53	16.46	<=34.77	Pass
			6	22.28	-3.53	16.60	<=34.77	Pass
			13	22.03	-3.53	16.35	<=34.77	Pass
		25	0	22.19	-3.53	16.51	<=34.77	Pass
	710	1	0	23.16	-3.53	17.48	<=34.77	Pass
			13	23.34	-3.53	17.66	<=34.77	Pass
			24	23.15	-3.53	17.47	<=34.77	Pass
		12	0	22.15	-3.53	16.47	<=34.77	Pass
			6	22.15	-3.53	16.47	<=34.77	Pass
			13	22.19	-3.53	16.51	<=34.77	Pass
		25	0	22.23	-3.53	16.55	<=34.77	Pass
	713.5	1	0	23.25	-3.53	17.57	<=34.77	Pass
			13	23.33	-3.53	17.65	<=34.77	Pass
			24	23.19	-3.53	17.51	<=34.77	Pass
		12	0	22.20	-3.53	16.52	<=34.77	Pass
			6	22.22	-3.53	16.54	<=34.77	Pass
			13	21.99	-3.53	16.31	<=34.77	Pass
		25	0	22.15	-3.53	16.47	<=34.77	Pass
16QAM	706.5	1	0	21.56	-3.53	15.88	<=34.77	Pass
			13	21.98	-3.53	16.30	<=34.77	Pass
			24	21.65	-3.53	15.97	<=34.77	Pass
		12	0	21.14	-3.53	15.46	<=34.77	Pass
			6	21.33	-3.53	15.65	<=34.77	Pass
			13	21.15	-3.53	15.47	<=34.77	Pass
		25	0	21.34	-3.53	15.66	<=34.77	Pass
	710	1	0	22.09	-3.53	16.41	<=34.77	Pass
			13	21.99	-3.53	16.31	<=34.77	Pass
			24	21.34	-3.53	15.66	<=34.77	Pass
		12	0	21.14	-3.53	15.46	<=34.77	Pass
			6	21.32	-3.53	15.64	<=34.77	Pass
			13	20.99	-3.53	15.31	<=34.77	Pass
		25	0	21.04	-3.53	15.36	<=34.77	Pass
	713.5	1	0	21.67	-3.53	15.99	<=34.77	Pass
			13	22.01	-3.53	16.33	<=34.77	Pass
			24	21.53	-3.53	15.85	<=34.77	Pass
		12	0	21.29	-3.53	15.61	<=34.77	Pass
			6	21.32	-3.53	15.64	<=34.77	Pass
			13	21.01	-3.53	15.33	<=34.77	Pass
		25	0	21.22	-3.53	15.54	<=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	-3.53	17.41	<=34.77	Pass		
			25	23.42	-3.53	17.74	<=34.77	Pass		
			49	23.10	-3.53	17.42	<=34.77	Pass		
		25	0	22.34	-3.53	16.66	<=34.77	Pass		
			13	22.31	-3.53	16.63	<=34.77	Pass		
			25	22.19	-3.53	16.51	<=34.77	Pass		
		50	0	22.26	-3.53	16.58	<=34.77	Pass		
		710	1	0	23.30	-3.53	17.62	<=34.77	Pass	
				25	23.54	-3.53	17.86	<=34.77	Pass	
	49			23.30	-3.53	17.62	<=34.77	Pass		
	25		0	22.27	-3.53	16.59	<=34.77	Pass		
			13	22.22	-3.53	16.54	<=34.77	Pass		
			25	22.16	-3.53	16.48	<=34.77	Pass		
	50	0	22.24	-3.53	16.56	<=34.77	Pass			
	711	1	0	23.28	-3.53	17.60	<=34.77	Pass		
			25	23.69	-3.53	18.01	<=34.77	Pass		
			49	23.19	-3.53	17.51	<=34.77	Pass		
		25	0	22.24	-3.53	16.56	<=34.77	Pass		
			13	22.17	-3.53	16.49	<=34.77	Pass		
			25	22.17	-3.53	16.49	<=34.77	Pass		
		50	0	22.17	-3.53	16.49	<=34.77	Pass		
		16QAM	709	1	0	22.17	-3.53	16.49	<=34.77	Pass
					25	22.42	-3.53	16.74	<=34.77	Pass
	49				21.73	-3.53	16.05	<=34.77	Pass	
25	0			21.35	-3.53	15.67	<=34.77	Pass		
	13			21.42	-3.53	15.74	<=34.77	Pass		
	25			21.38	-3.53	15.70	<=34.77	Pass		
50	0			21.35	-3.53	15.67	<=34.77	Pass		
710	1		0	22.09	-3.53	16.41	<=34.77	Pass		
			25	22.31	-3.53	16.63	<=34.77	Pass		
			49	21.47	-3.53	15.79	<=34.77	Pass		
	25		0	21.23	-3.53	15.55	<=34.77	Pass		
			13	21.51	-3.53	15.83	<=34.77	Pass		
			25	21.16	-3.53	15.48	<=34.77	Pass		
50	0		21.24	-3.53	15.56	<=34.77	Pass			
711	1		0	22.05	-3.53	16.37	<=34.77	Pass		
			25	22.24	-3.53	16.56	<=34.77	Pass		
			49	21.75	-3.53	16.07	<=34.77	Pass		
	25		0	21.23	-3.53	15.55	<=34.77	Pass		
			13	21.18	-3.53	15.50	<=34.77	Pass		
			25	21.09	-3.53	15.41	<=34.77	Pass		
	50		0	21.18	-3.53	15.50	<=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	3.5	0.200	0.0003	-2.5 to 2.5	Pass
					3.87	1.200	0.0017	-2.5 to 2.5	Pass
					4.4	-0.100	-0.0001	-2.5 to 2.5	Pass
				-30	3.87	0.100	0.0001	-2.5 to 2.5	Pass
				-20	3.87	0.000	0.0000	-2.5 to 2.5	Pass
				-10	3.87	0.200	0.0003	-2.5 to 2.5	Pass
				0	3.87	-1.200	-0.0017	-2.5 to 2.5	Pass
				10	3.87	1.400	0.0020	-2.5 to 2.5	Pass
				30	3.87	1.100	0.0015	-2.5 to 2.5	Pass
				40	3.87	-0.100	-0.0001	-2.5 to 2.5	Pass
				50	3.87	-0.800	-0.0011	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band17_OBW

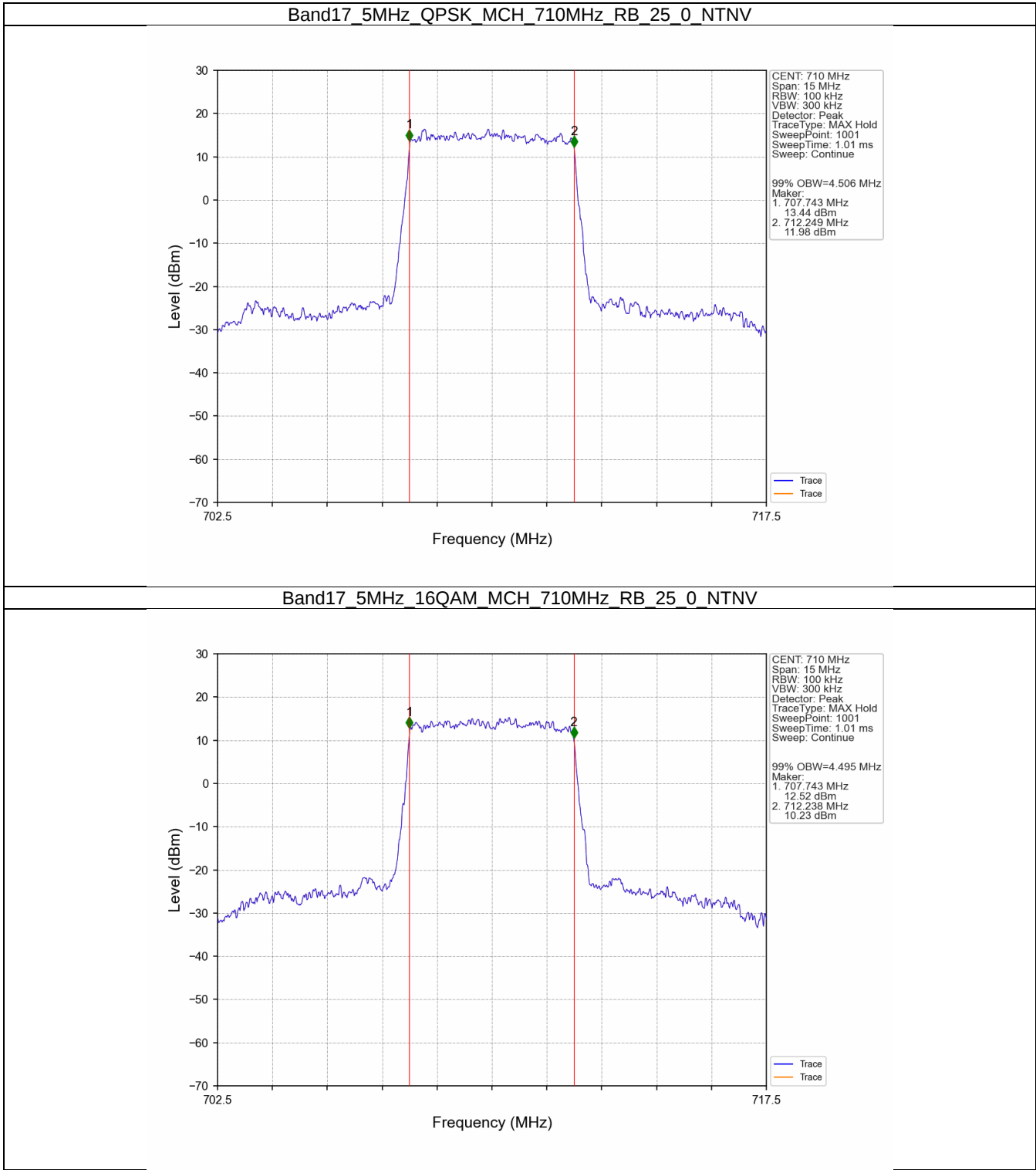
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.506	/	Pass
	16QAM	710	25	0	4.495	/	Pass
10	QPSK	710	50	0	8.962	/	Pass
	16QAM	710	50	0	8.960	/	Pass

3.1.2 Band17_XDB

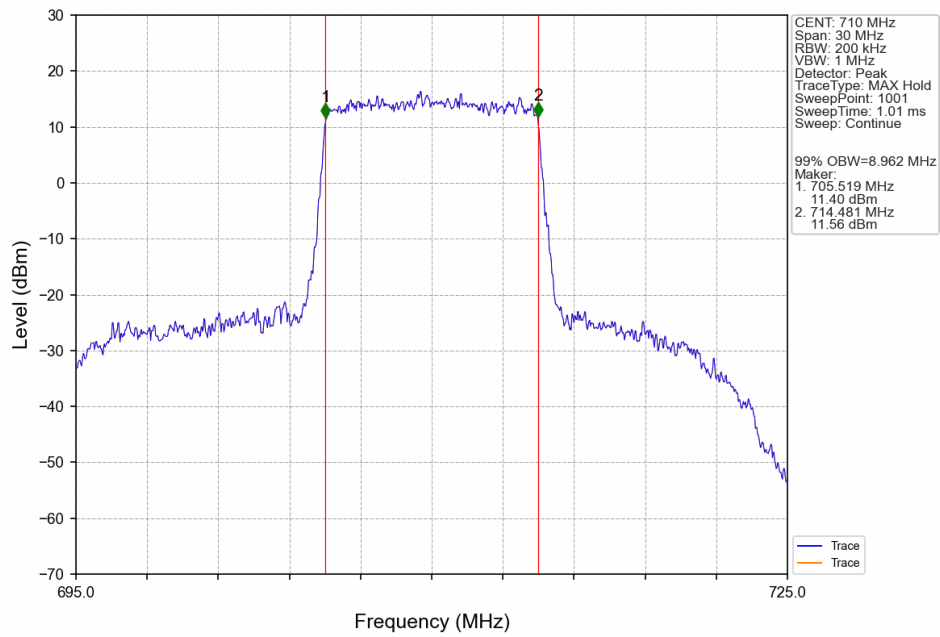
Band: 17 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	710	25	0	4.997	/	Pass
	16QAM	710	25	0	5.013	/	Pass
10	QPSK	710	50	0	9.783	/	Pass
	16QAM	710	50	0	9.722	/	Pass

3.2 Test Graph

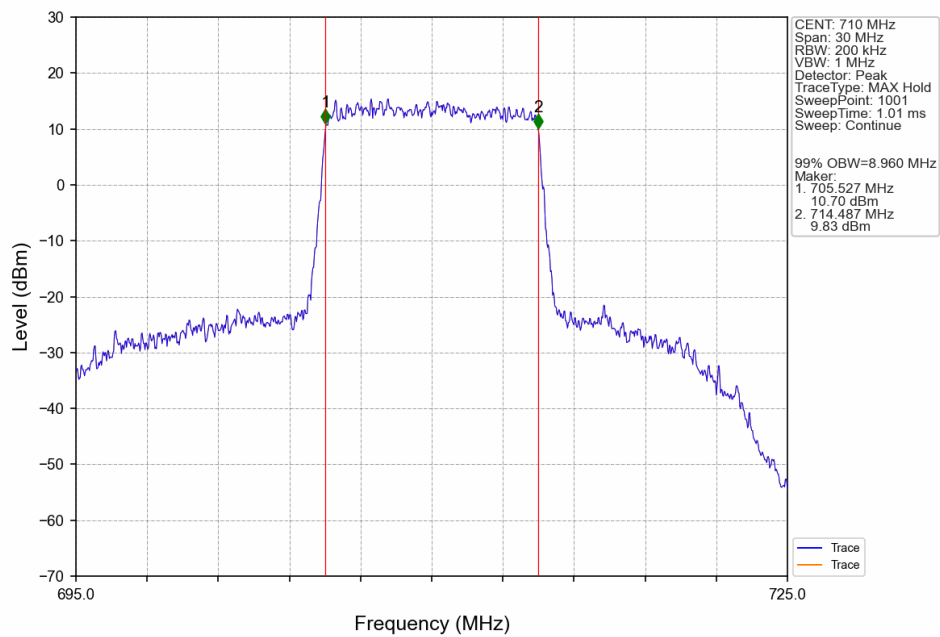
3.2.1 Band17_OBW



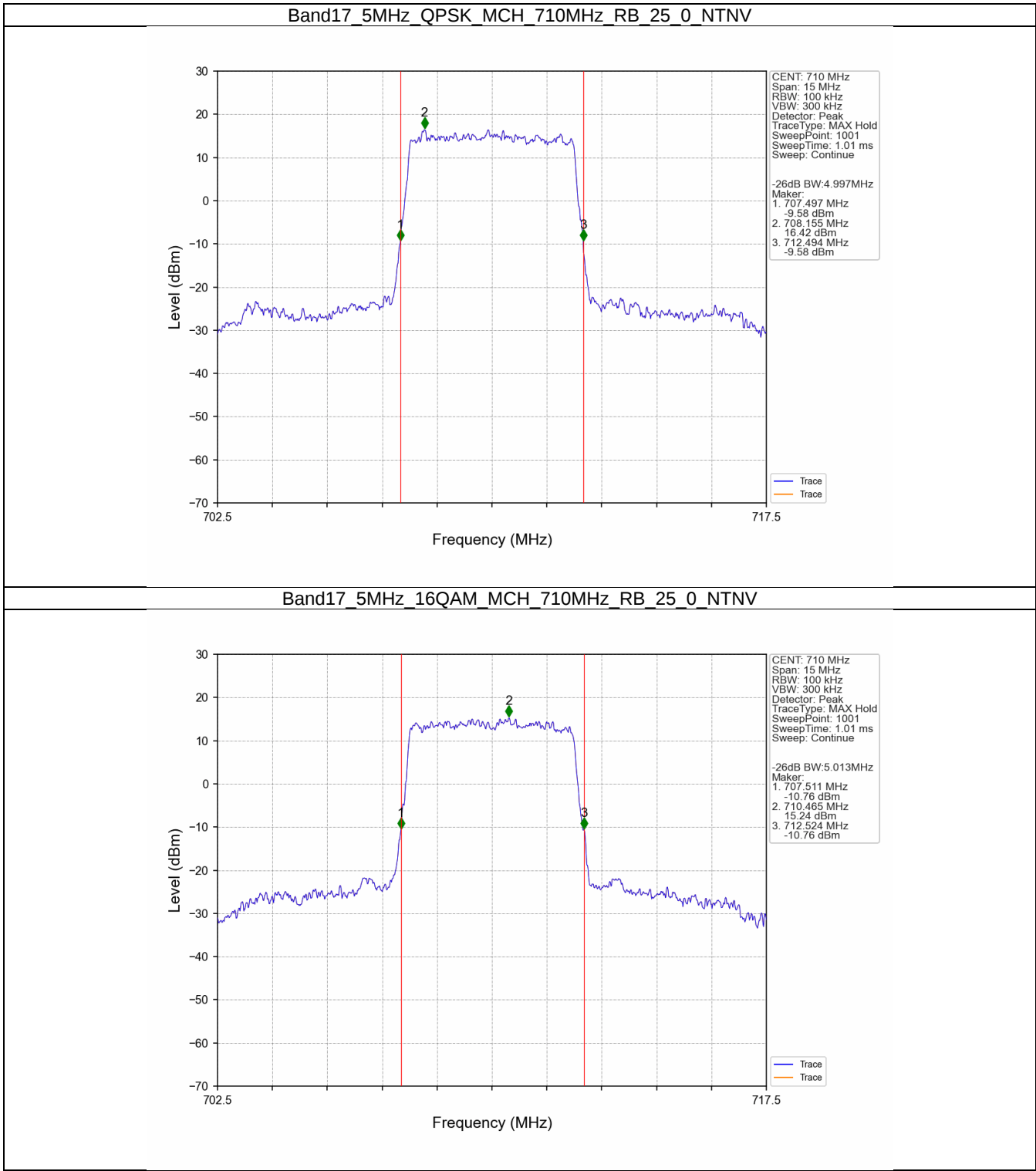
Band17_10MHz_QPSK_MCH_710MHz_RB_50_0_NTNV



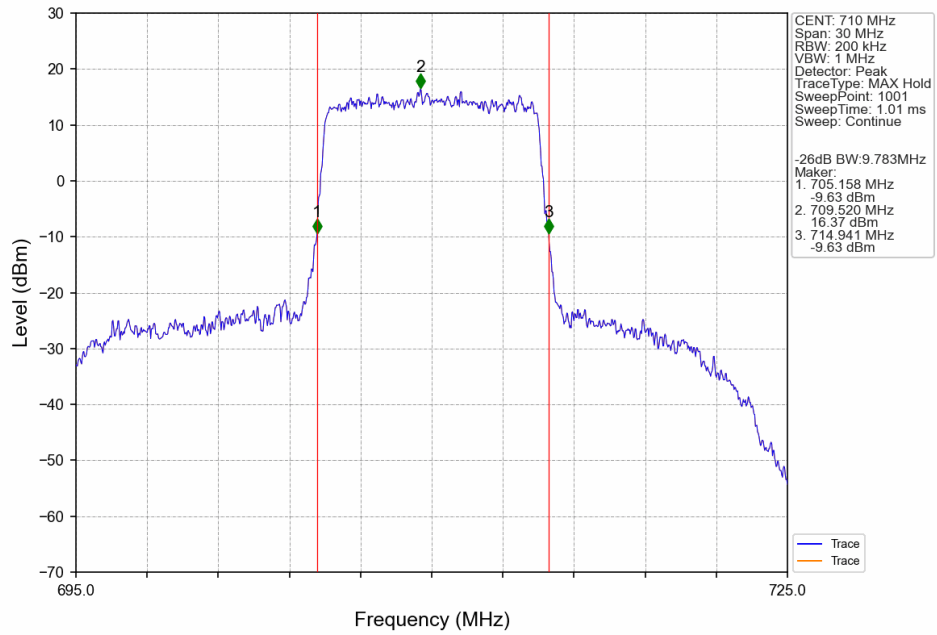
Band17_10MHz_16QAM_MCH_710MHz_RB_50_0_NTNV



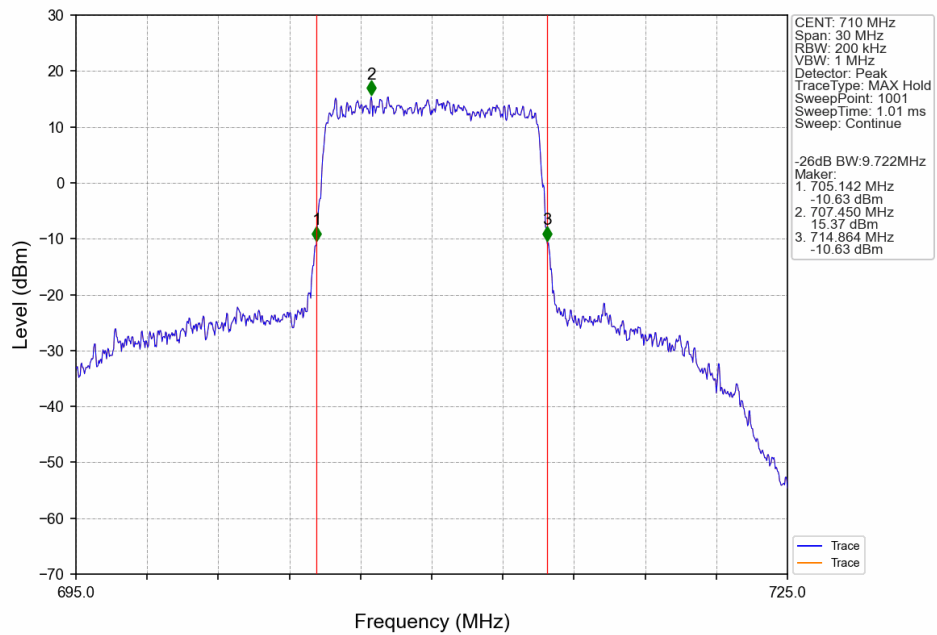
3.2.2 Band17_XDB



Band17_10MHz_QPSK_MCH_710MHz_RB_50_0_NTNV



Band17_10MHz_16QAM_MCH_710MHz_RB_50_0_NTNV



4. Peak-Average Ratio

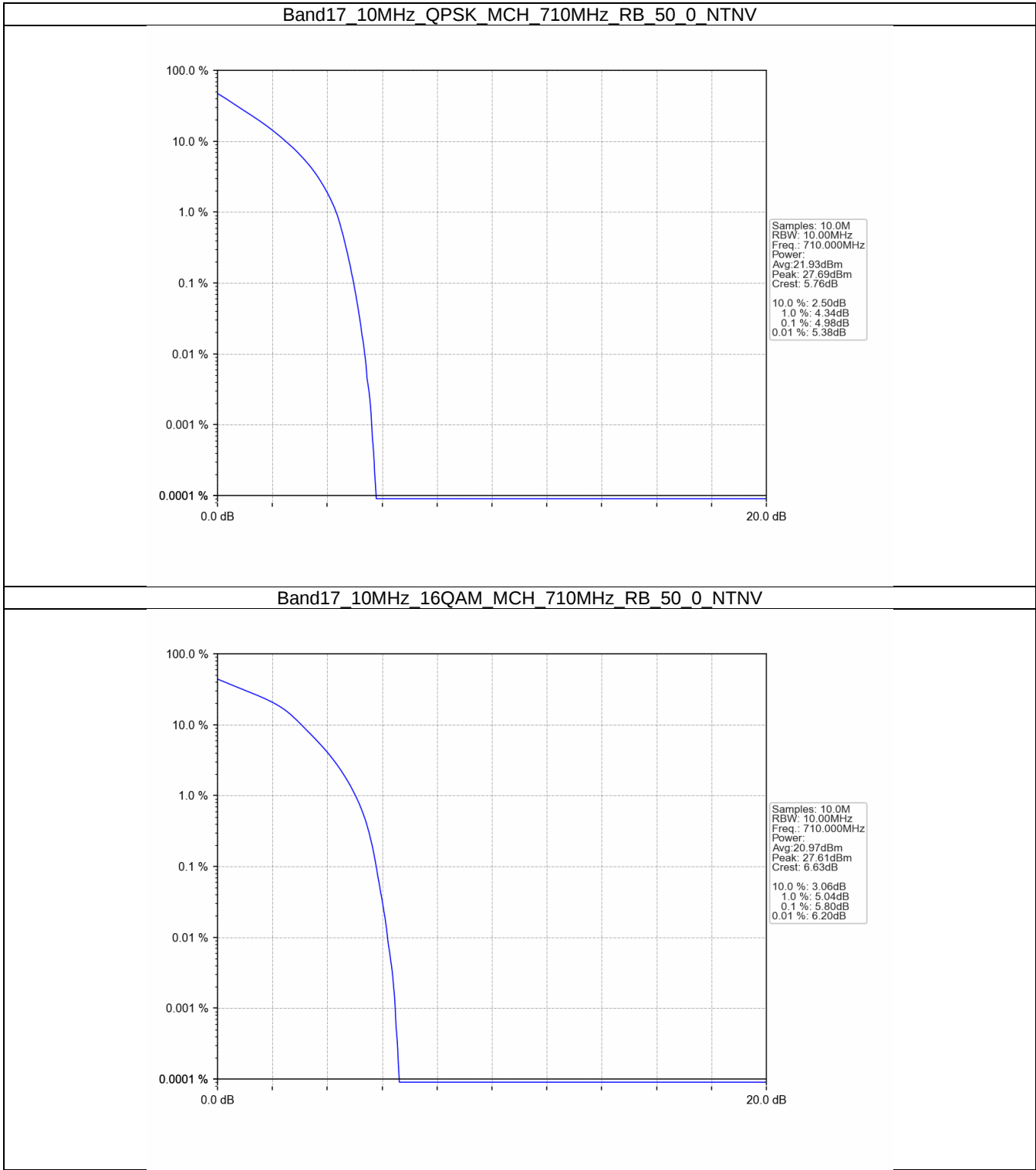
4.1 Test Result

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	4.98	<=13	Pass
16QAM	710	50	0	5.80	<=13	Pass

4.2 Test Graph

4.2.1 B17_10MHz



5. Spurious Emission

5.1 Test Result

5.1.1 B17_5MHz

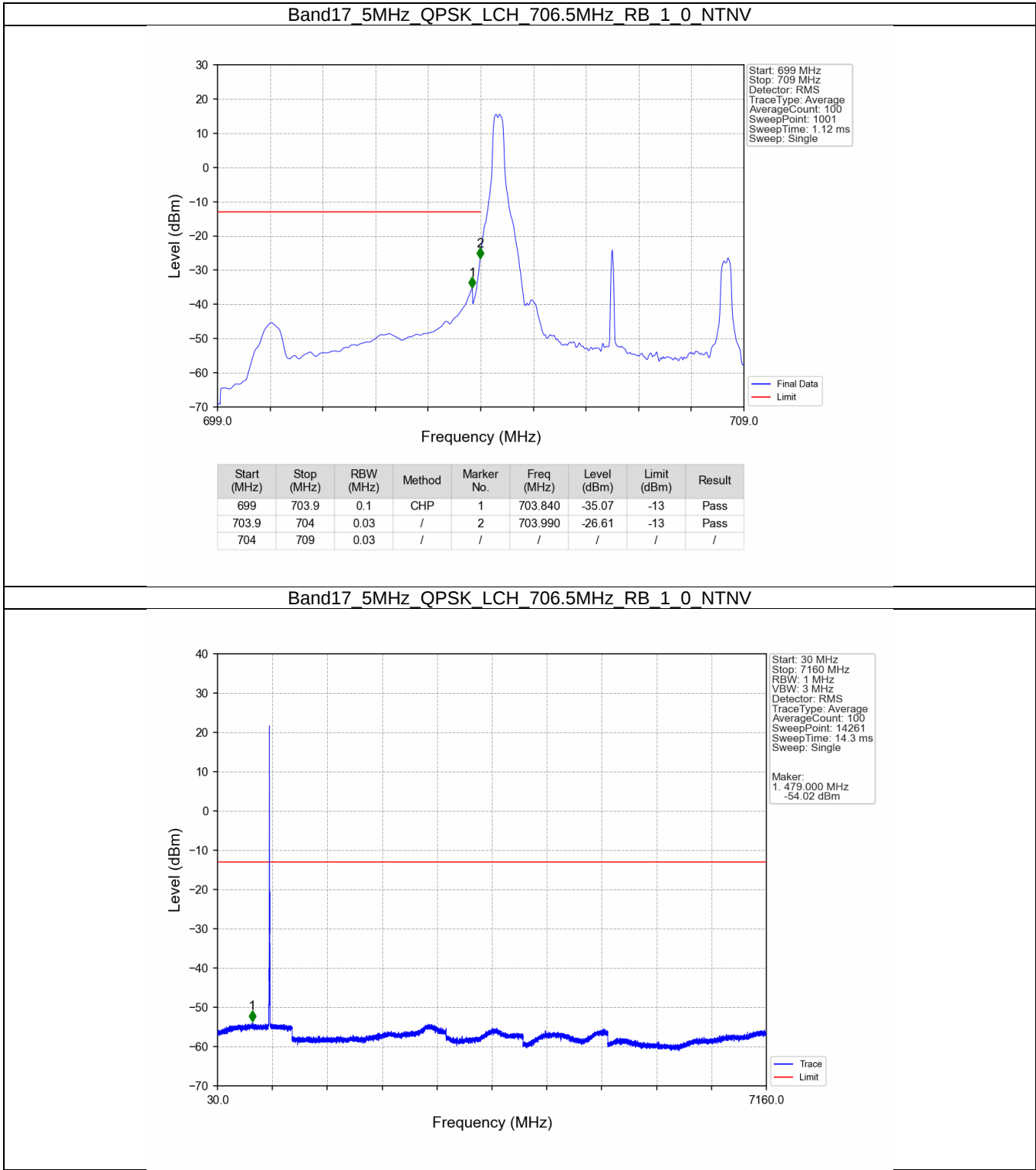
Band: 17 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	706.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	713.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B17_10MHz

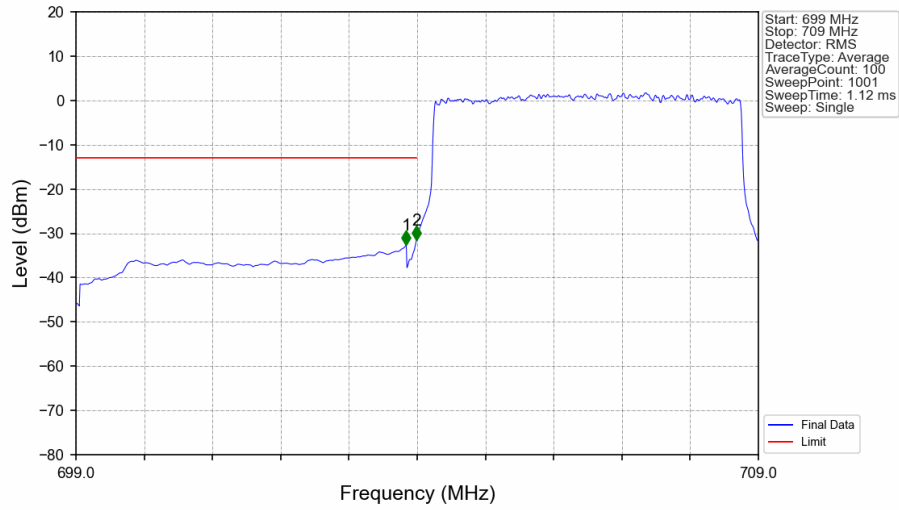
Band: 17 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	709	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	710	1	0	Refer To Test Graph		Pass
	711	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph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

5.2 Test Graph

5.2.1 B17_5MHz

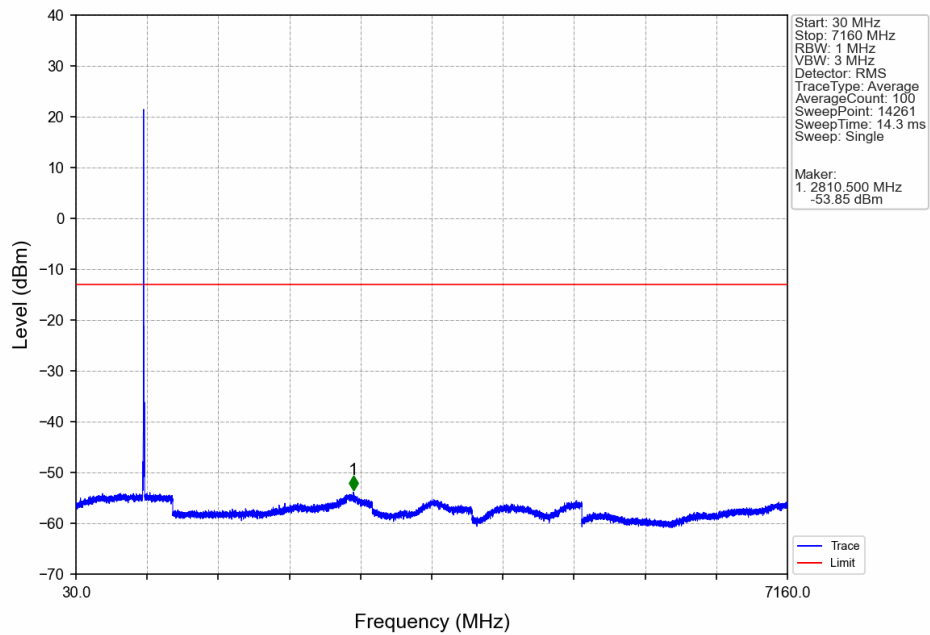


Band17_5MHz_QPSK_LCH_706.5MHz_RB_25_0_NTNV

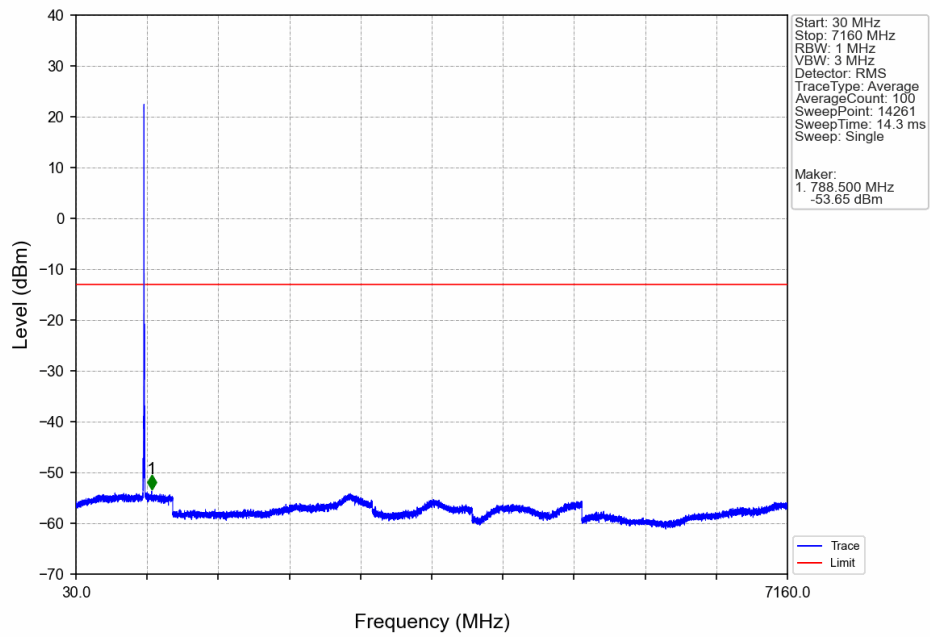


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
699	703.9	0.1	CHP	1	703.840	-32.63	-13	Pass
703.9	704	0.03	/	2	703.990	-31.42	-13	Pass
704	709	0.03	/	/	/	/	/	/

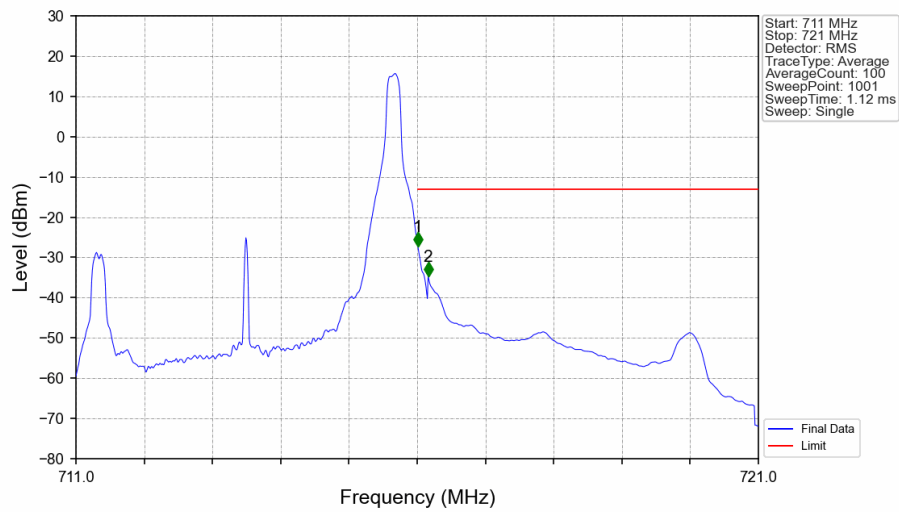
Band17_5MHz_QPSK_MCH_710MHz_RB_1_0_NTNV



Band17 5MHz QPSK HCH 713.5MHz RB_1_0 NTN

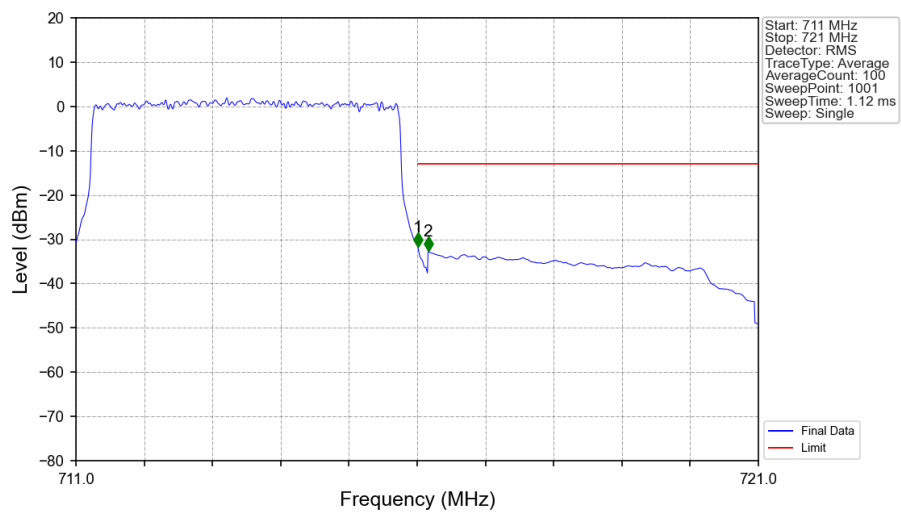


Band17 5MHz QPSK HCH 713.5MHz RB 1 24 NTN



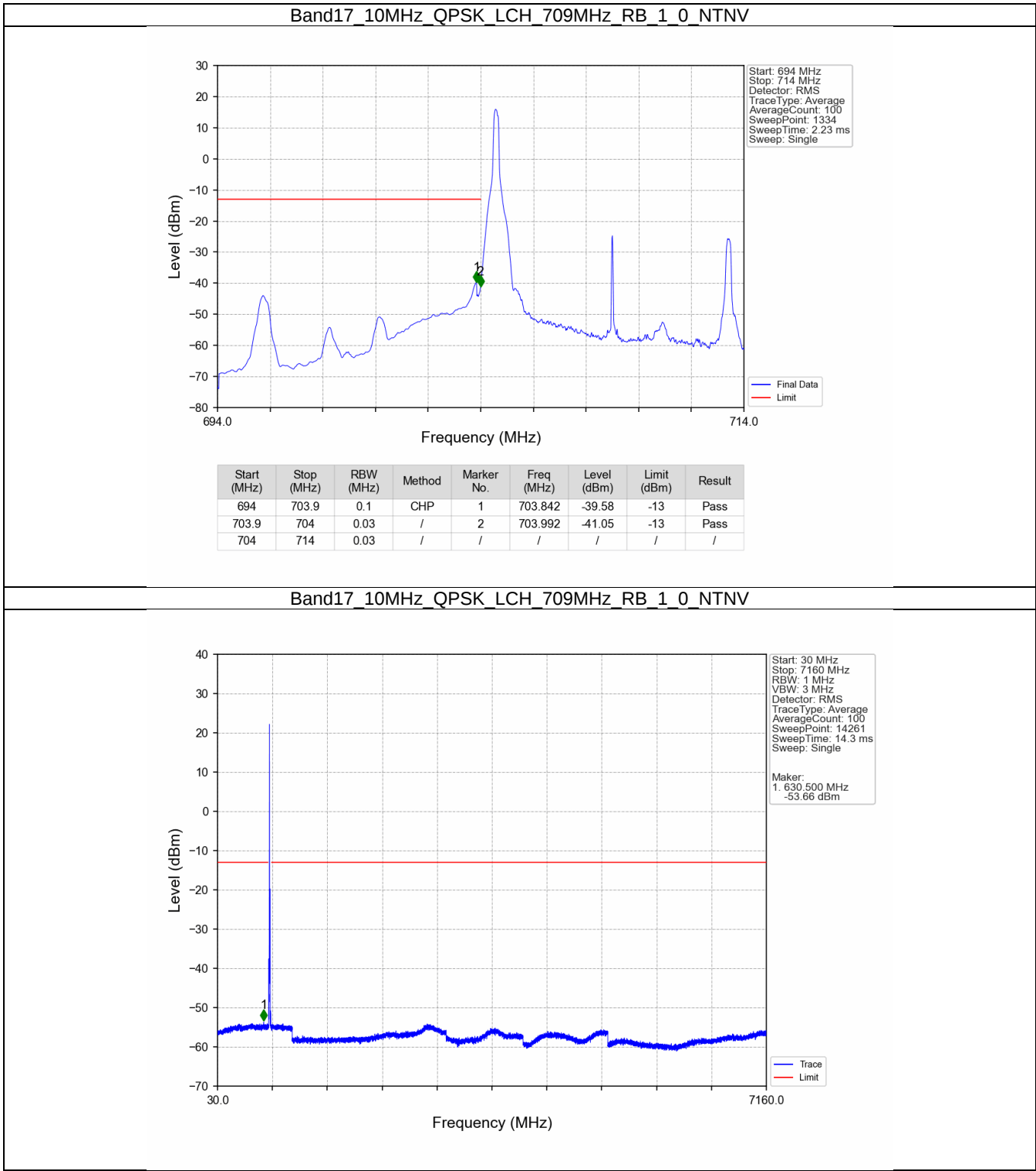
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-27.23	-13	Pass
716.1	721	0.1	CHP	2	716.160	-34.60	-13	Pass

Band17_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV

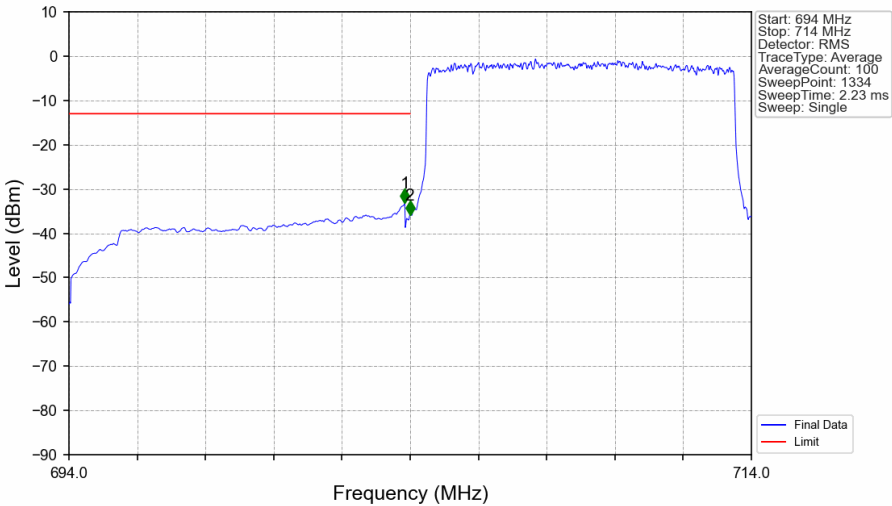


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
711	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.010	-31.70	-13	Pass
716.1	721	0.1	CHP	2	716.160	-32.66	-13	Pass

5.2.2 B17_10MHz

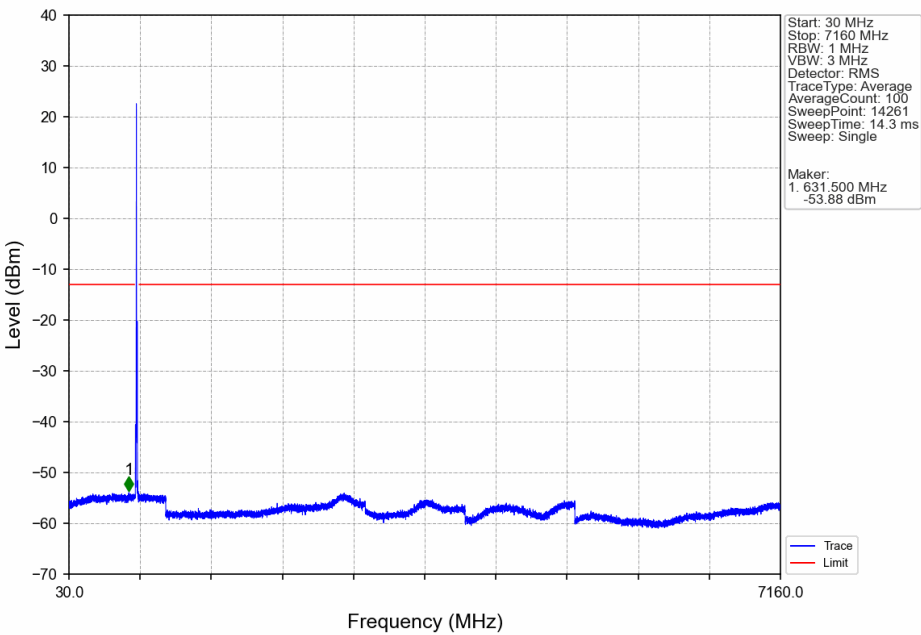


Band17_10MHz_QPSK_LCH_709MHz_RB_50_0_NTNV

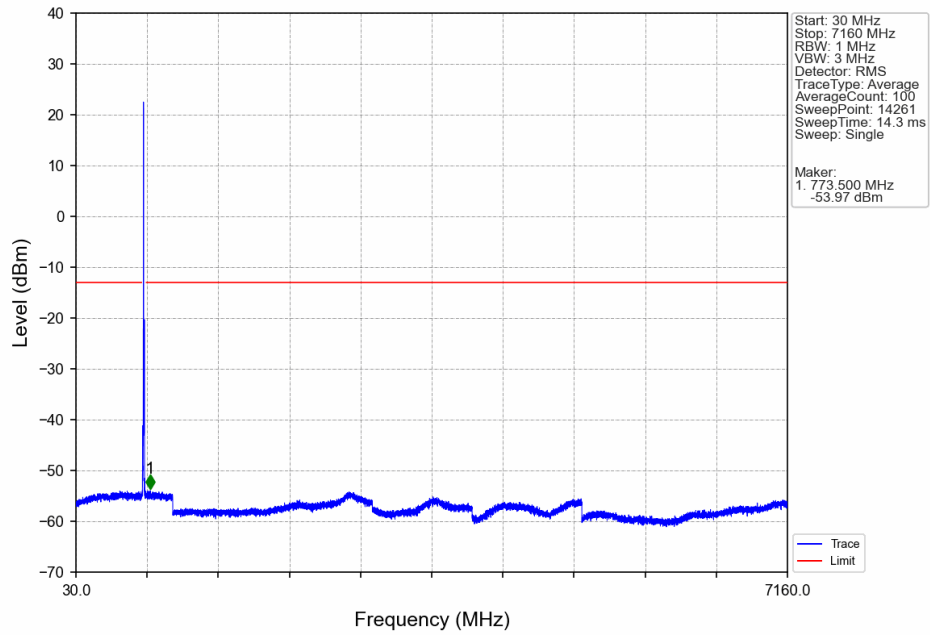


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	703.9	0.1	CHP	1	703.842	-33.19	-13	Pass
703.9	704	0.03	/	2	703.992	-35.82	-13	Pass
704	714	0.03	/	/	/	/	/	/

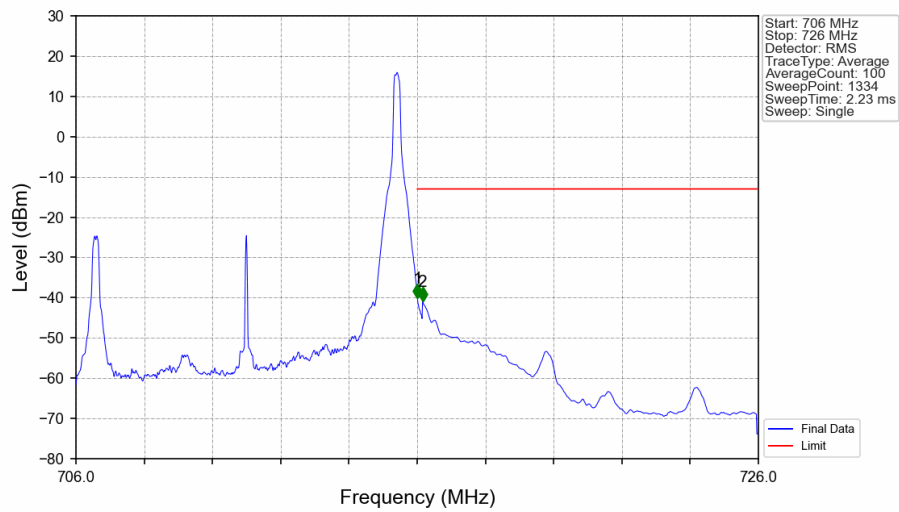
Band17_10MHz_QPSK_MCH_710MHz_RB_1_0_NTNV



Band17_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV

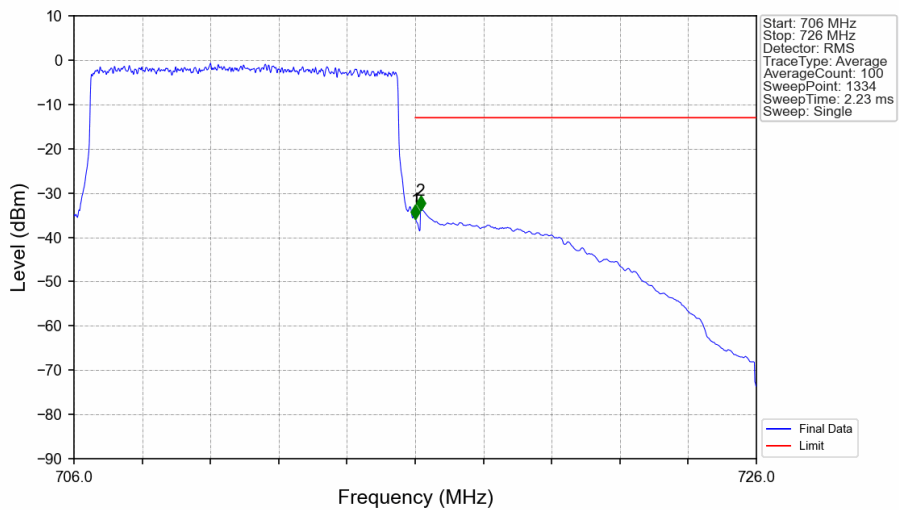


Band17_10MHz_QPSK_HCH_711MHz_RB_1_49_NTNV



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	-40.10	-13	Pass
716.1	726	0.1	CHP	2	716.158	-40.84	-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	-35.83	-13	Pass
716.1	726	0.1	CHP	2	716.158	-33.80	-13	Pass

6. Field Strength of Spurious Radiation

Test Band = LTE Band 17_ TM1

Test Channel = Low Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1409.18	47.61	-49.99	24.17	-73.48	-13.00	60.48	Horizontal
2	2113.77	48.66	-49.46	26.50	-69.56	-13.00	56.56	Horizontal
3	2818.36	49.86	-48.70	27.77	-66.33	-13.00	53.33	Horizontal
4	3522.95	48.55	-48.44	28.54	-66.61	-13.00	53.61	Horizontal
5	4227.54	48.85	-48.27	29.66	-65.01	-13.00	52.01	Horizontal
6	4932.13	48.98	-48.10	31.05	-63.33	-13.00	50.33	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1409.18	47.81	-49.99	24.17	-73.28	-13.00	60.28	Vertical
2	2113.77	48.46	-49.46	26.50	-69.76	-13.00	56.76	Vertical
3	2818.36	48.72	-48.70	27.77	-67.47	-13.00	54.47	Vertical
4	3522.95	48.83	-48.44	28.54	-66.33	-13.00	53.33	Vertical
5	4227.54	47.49	-48.27	29.66	-66.37	-13.00	53.37	Vertical
6	4932.13	48.82	-48.10	31.05	-63.49	-13.00	50.49	Vertical

Test Band = LTE Band 17_ TM1
Test Channel = Mid Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1411.18	48.21	-49.99	24.18	-72.86	-13.00	59.86	Horizontal
2	2116.77	48.73	-49.47	26.51	-69.48	-13.00	56.48	Horizontal
3	2822.36	48.95	-48.70	27.78	-67.23	-13.00	54.23	Horizontal
4	3527.95	48.70	-48.44	28.54	-66.46	-13.00	53.46	Horizontal
5	4233.54	48.54	-48.25	29.67	-65.29	-13.00	52.29	Horizontal
6	4939.13	49.38	-48.09	31.07	-62.90	-13.00	49.90	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1411.18	48.15	-49.99	24.18	-72.92	-13.00	59.92	Vertical
2	2116.77	48.00	-49.47	26.51	-70.21	-13.00	57.21	Vertical
3	2822.36	48.64	-48.70	27.78	-67.54	-13.00	54.54	Vertical
4	3527.95	47.48	-48.44	28.54	-67.68	-13.00	54.68	Vertical
5	4233.54	48.26	-48.25	29.67	-65.57	-13.00	52.57	Vertical
6	4939.13	49.00	-48.09	31.07	-63.28	-13.00	50.28	Vertical

Test Band = LTE Band 17_ TM1
Test Channel = High Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1411.18	48.40	-49.99	24.18	-72.67	-13.00	59.67	Horizontal
2	2116.77	48.84	-49.47	26.51	-69.37	-13.00	56.37	Horizontal
3	2822.36	49.12	-48.70	27.78	-67.06	-13.00	54.06	Horizontal
4	3527.95	48.20	-48.44	28.54	-66.96	-13.00	53.96	Horizontal
5	4233.54	48.05	-48.25	29.67	-65.78	-13.00	52.78	Horizontal
6	4939.13	48.87	-48.09	31.07	-63.41	-13.00	50.41	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1411.18	48.43	-49.99	24.18	-72.64	-13.00	59.64	Vertical
2	2116.77	48.04	-49.47	26.51	-70.17	-13.00	57.17	Vertical
3	2822.36	48.24	-48.70	27.78	-67.94	-13.00	54.94	Vertical
4	3527.95	47.47	-48.44	28.54	-67.69	-13.00	54.69	Vertical
5	4233.54	48.54	-48.25	29.67	-65.29	-13.00	52.29	Vertical
6	4939.13	48.91	-48.09	31.07	-63.37	-13.00	50.37	Vertical