1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B12_1.4MHz_ERP

Band: 12 / Bandwidth: 1.4MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	699.7	1	0	22.68	3.17	23.70	<=34.77	Pass
			5	22.65	3.17	23.67	<=34.77	Pass
		6	0	21.73	3.17	22.75	<=34.77	Pass
	707.5	1	0	22.81	3.17	23.83	<=34.77	Pass
			5	22.59	3.17	23.61	<=34.77	Pass
		6	0	21.68	3.17	22.70	<=34.77	Pass
	715.3	1	0	22.12	3.17	23.14	<=34.77	Pass
			5	21.97	3.17	22.99	<=34.77	Pass
		6	0	21.15	3.17	22.17	<=34.77	Pass
16QAM	699.7	1	0	21.81	3.17	22.83	<=34.77	Pass
			5	21.84	3.17	22.86	<=34.77	Pass
		6	0	20.74	3.17	21.76	<=34.77	Pass
	707.5	1	0	21.81	3.17	22.83	<=34.77	Pass
			5	21.60	3.17	22.62	<=34.77	Pass
		6	0	20.85	3.17	21.87	<=34.77	Pass
	715.3	1	0	20.98	3.17	22.00	<=34.77	Pass
			5	20.88	3.17	21.90	<=34.77	Pass
		6	0	20.17	3.17	21.19	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.2 B12_3MHz_ERP

Band: 12 / Bandwidth: 3MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	700.5	1	0	22.59	3.17	23.61	<=34.77	Pass
			14	22.36	3.17	23.38	<=34.77	Pass
		15	0	21.56	3.17	22.58	<=34.77	Pass
	707.5	1	0	22.89	3.17	23.91	<=34.77	Pass
			14	22.22	3.17	23.24	<=34.77	Pass
		15	0	21.61	3.17	22.63	<=34.77	Pass
	714.5	1	0	21.71	3.17	22.73	<=34.77	Pass
			14	21.98	3.17	23.00	<=34.77	Pass
		15	0	21.16	3.17	22.18	<=34.77	Pass
16QAM	700.5	1	0	21.91	3.17	22.93	<=34.77	Pass
			14	21.67	3.17	22.69	<=34.77	Pass
		15	0	20.67	3.17	21.69	<=34.77	Pass
	707.5	1	0	21.89	3.17	22.91	<=34.77	Pass
			14	21.23	3.17	22.25	<=34.77	Pass
		15	0	20.77	3.17	21.79	<=34.77	Pass
	714.5	1	0	20.52	3.17	21.54	<=34.77	Pass
			14	20.87	3.17	21.89	<=34.77	Pass
		15	0	20.23	3.17	21.25	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.3 B12_5MHz_ERP

Band: 12 / Bandwidth: 5MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	701.5	1	0	22.92	3.17	23.94	<=34.77	Pass
			24	23.08	3.17	24.10	<=34.77	Pass
		25	0	21.90	3.17	22.92	<=34.77	Pass
	707.5	1	0	23.10	3.17	24.12	<=34.77	Pass
			24	22.38	3.17	23.40	<=34.77	Pass
		25	0	21.77	3.17	22.79	<=34.77	Pass
	713.5	1	0	21.84	3.17	22.86	<=34.77	Pass
			24	22.62	3.17	23.64	<=34.77	Pass
		25	0	21.36	3.17	22.38	<=34.77	Pass
16QAM	701.5	1	0	22.23	3.17	23.25	<=34.77	Pass
			24	22.32	3.17	23.34	<=34.77	Pass
		25	0	21.08	3.17	22.10	<=34.77	Pass
	707.5	1	0	22.23	3.17	23.25	<=34.77	Pass
			24	21.53	3.17	22.55	<=34.77	Pass
		25	0	20.96	3.17	21.98	<=34.77	Pass
	713.5	1	0	21.02	3.17	22.04	<=34.77	Pass
			24	21.89	3.17	22.91	<=34.77	Pass
		25	0	20.52	3.17	21.54	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.4 B12_10MHz_ERP

Band: 12 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	704	1	0	22.95	3.17	23.97	<=34.77	Pass
			49	22.69	3.17	23.71	<=34.77	Pass
		50	0	21.92	3.17	22.94	<=34.77	Pass
	707.5	1	0	22.93	3.17	23.95	<=34.77	Pass
			49	22.63	3.17	23.65	<=34.77	Pass
		50	0	21.78	3.17	22.80	<=34.77	Pass
	711	1	0	23.20	3.17	24.22	<=34.77	Pass
			49	23.41	3.17	24.43	<=34.77	Pass
		50	0	21.88	3.17	22.90	<=34.77	Pass
16QAM	704	1	0	22.21	3.17	23.23	<=34.77	Pass
			49	21.97	3.17	22.99	<=34.77	Pass
	707.5	1	0	21.91	3.17	22.93	<=34.77	Pass
			49	21.63	3.17	22.65	<=34.77	Pass
	711	1	0	22.02	3.17	23.04	<=34.77	Pass
			49	22.36	3.17	23.38	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

2. Frequency Stability

2.1 Test Result

2.1.1 B12_10MHz

Band: 12 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	707.5	50	0	20	3.40	-0.129	-0.0002	-2.5 to 2.5	Pass
					3.80	0.286	0.0004	-2.5 to 2.5	Pass
					4.20	0.072	0.0001	-2.5 to 2.5	Pass
				-30	3.80	-0.672	-0.0009	-2.5 to 2.5	Pass
				-20	3.80	-0.186	-0.0003	-2.5 to 2.5	Pass
				-10	3.80	-0.100	-0.0001	-2.5 to 2.5	Pass
				0	3.80	-0.114	-0.0002	-2.5 to 2.5	Pass
				10	3.80	-0.257	-0.0004	-2.5 to 2.5	Pass
				30	3.80	-0.157	-0.0002	-2.5 to 2.5	Pass
				40	3.80	0.129	0.0002	-2.5 to 2.5	Pass
				50	3.80	0.515	0.0007	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band12_OBW

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	707.5	6	0	1.109	/	Pass
	16QAM	707.5	6	0	1.107	/	Pass
3	QPSK	707.5	15	0	2.742	/	Pass
	16QAM	707.5	15	0	2.748	/	Pass
5	QPSK	707.5	25	0	4.559	/	Pass
	16QAM	707.5	25	0	4.554	/	Pass
10	QPSK	707.5	50	0	9.066	/	Pass
	16QAM	707.5	27	0	5.093	/	Pass

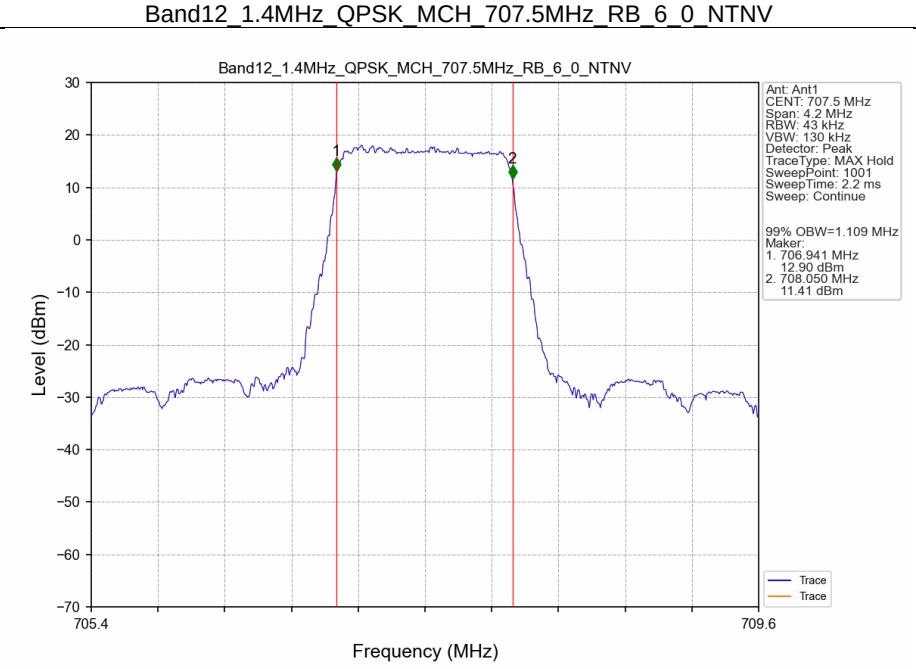
3.1.2 Band12_XDB

Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	707.5	6	0	1.330	/	Pass
	16QAM	707.5	6	0	1.309	/	Pass
3	QPSK	707.5	15	0	3.046	/	Pass
	16QAM	707.5	15	0	3.041	/	Pass
5	QPSK	707.5	25	0	5.099	/	Pass
	16QAM	707.5	25	0	5.093	/	Pass
10	QPSK	707.5	50	0	10.304	/	Pass
	16QAM	707.5	27	0	6.264	/	Pass

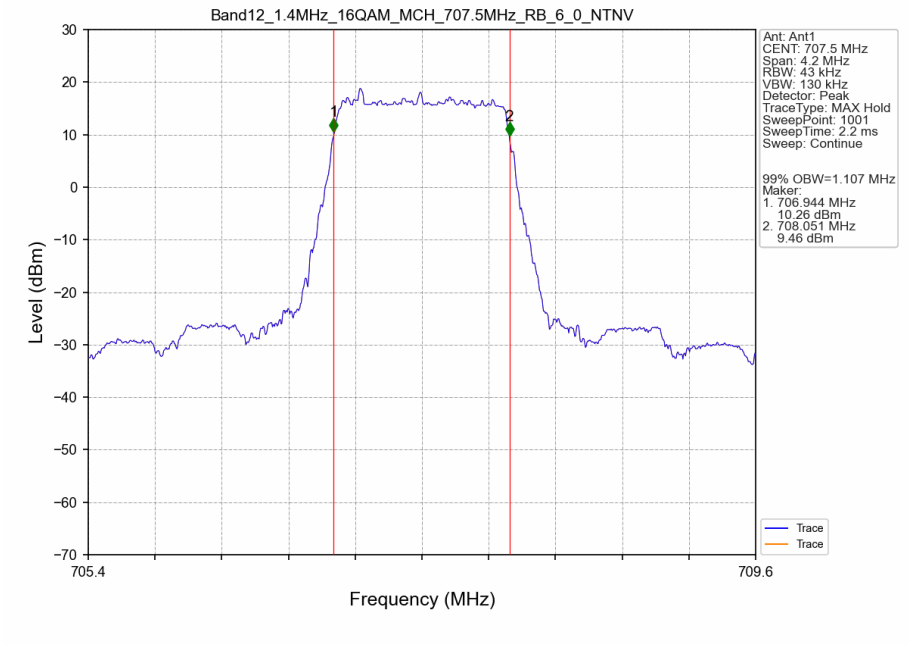
3.2 Test Graph

3.2.1 Band12_OBW

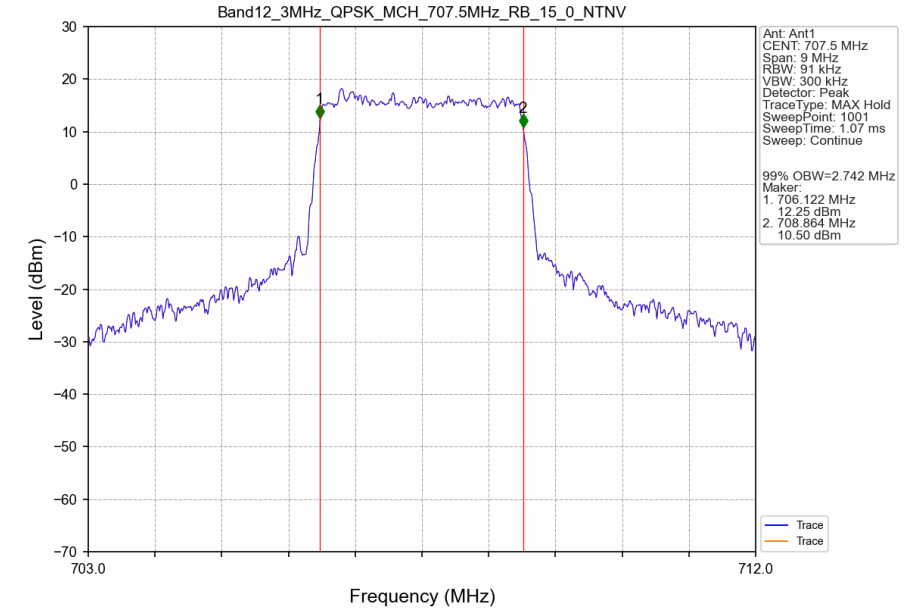
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV



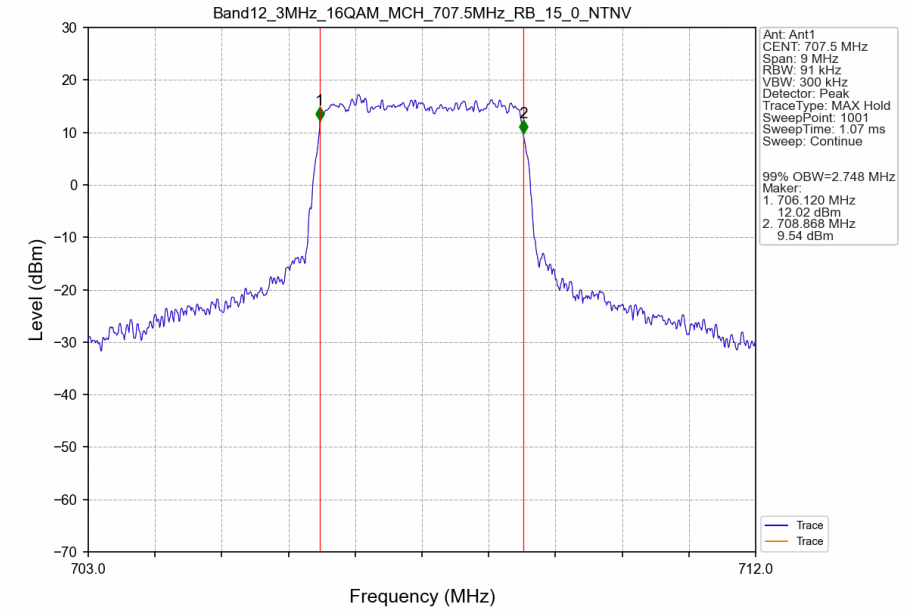
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV

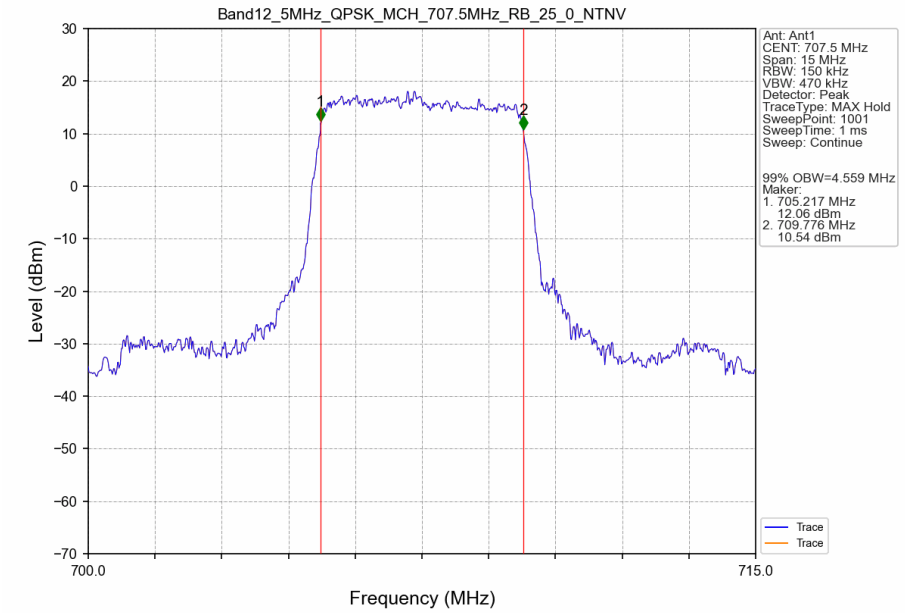


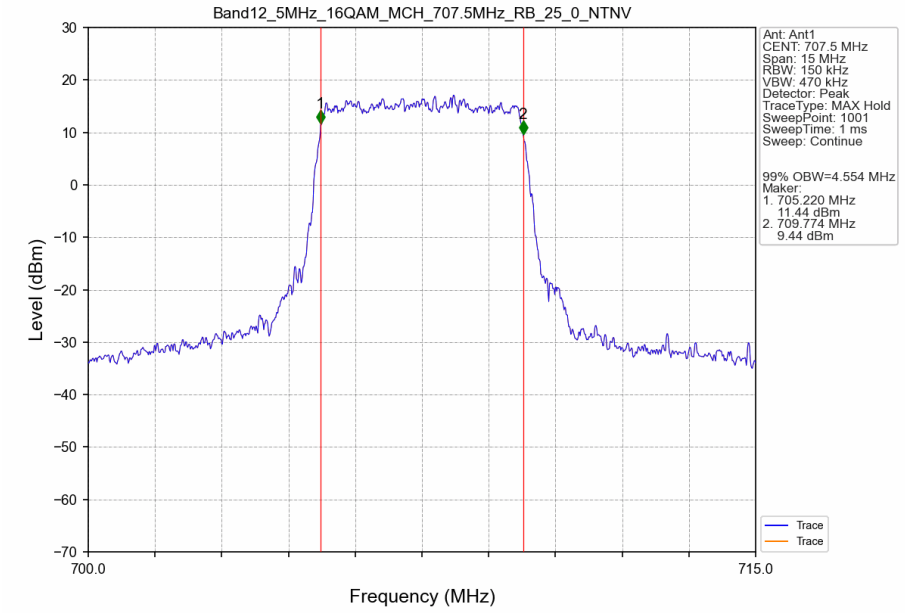
Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



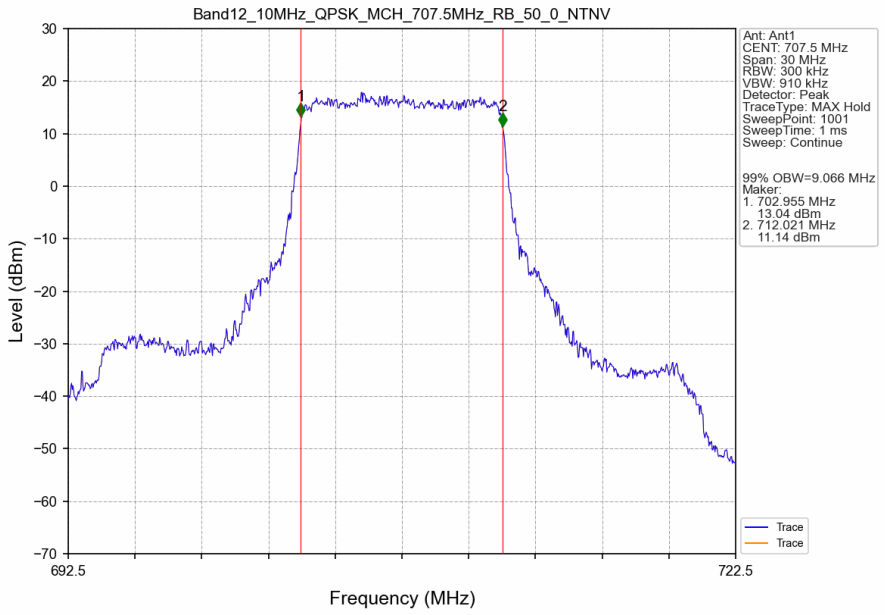
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



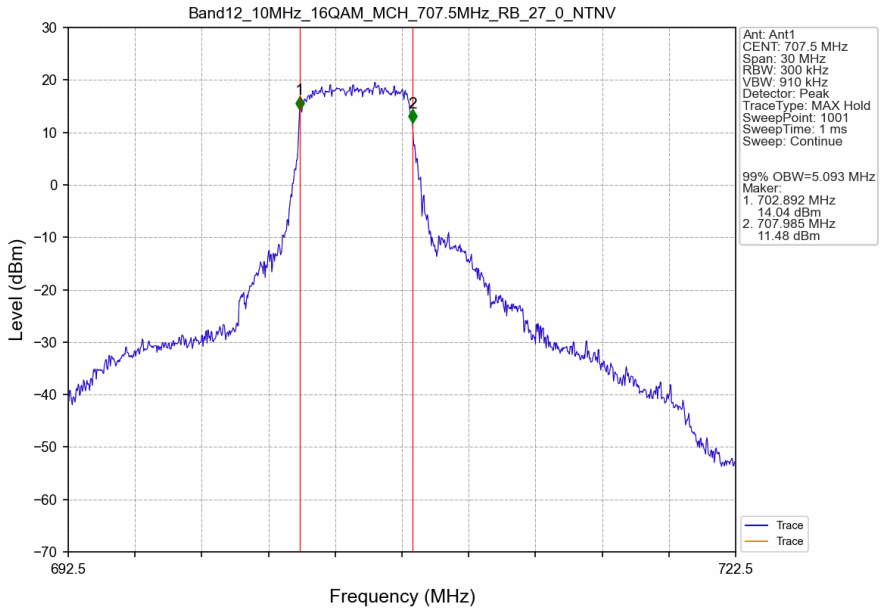
Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV


Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV


Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV

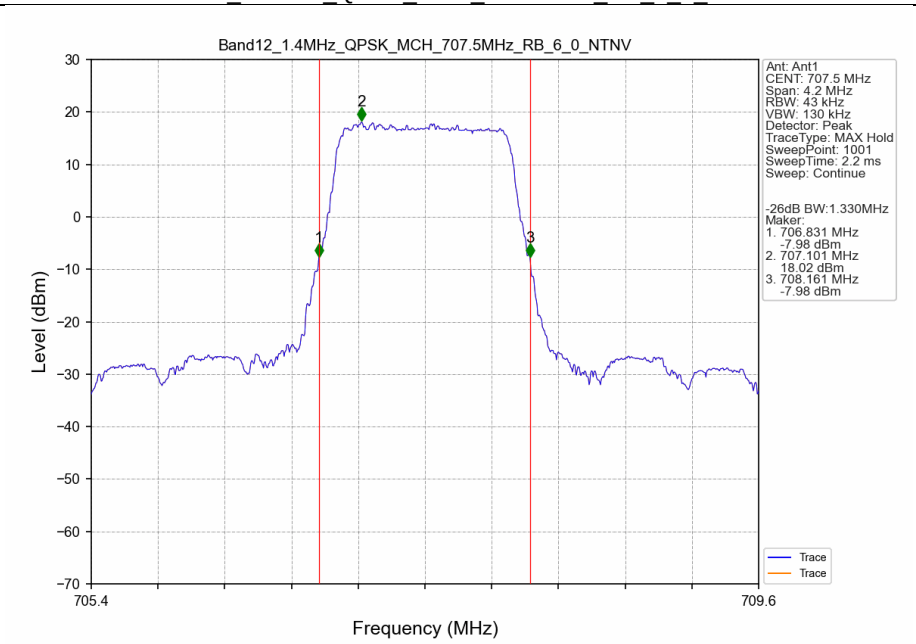


Band12_10MHz_16QAM_MCH_707.5MHz_RB_27_0_NTNV

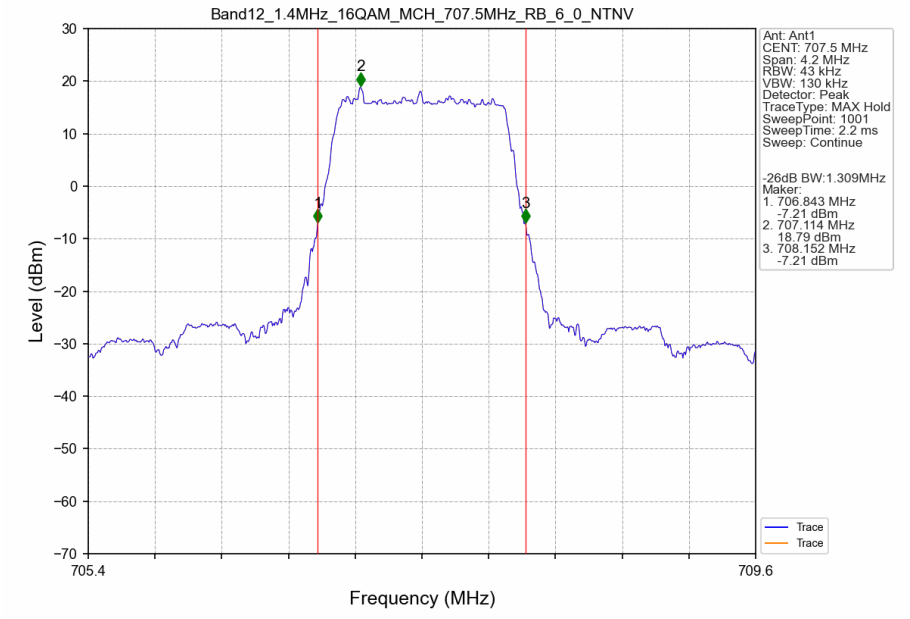


3.2.2 Band12_XDB

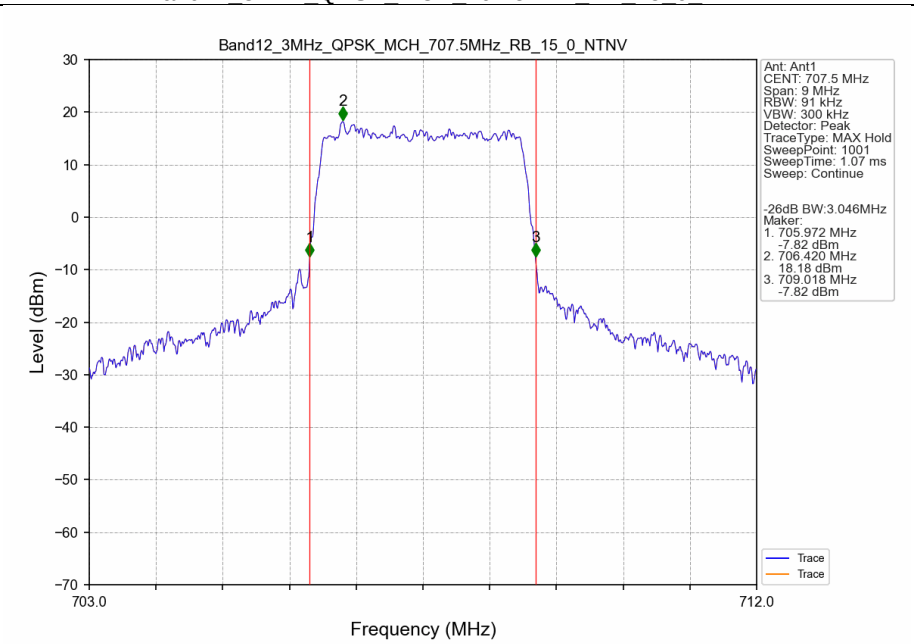
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV



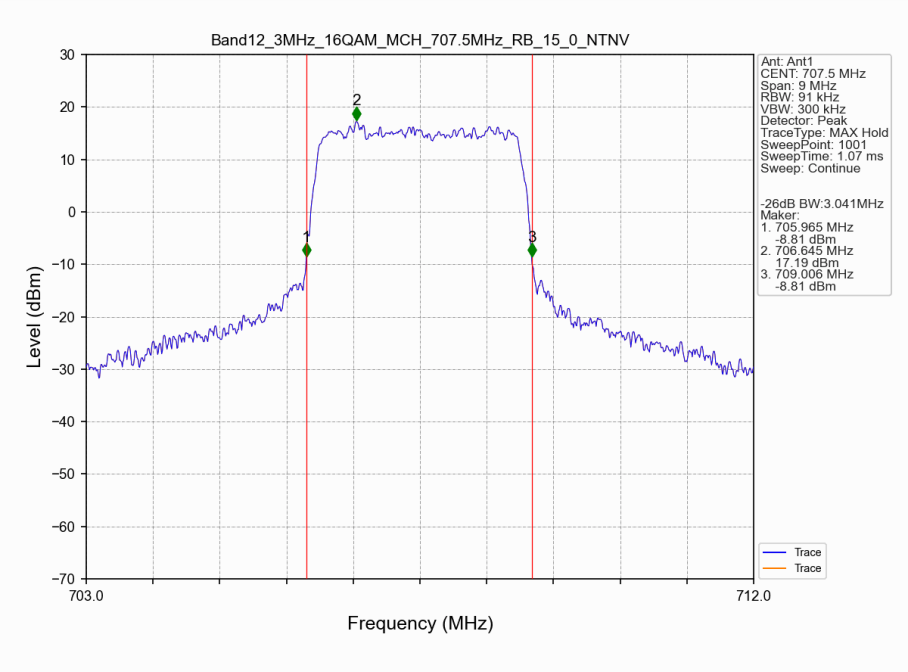
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



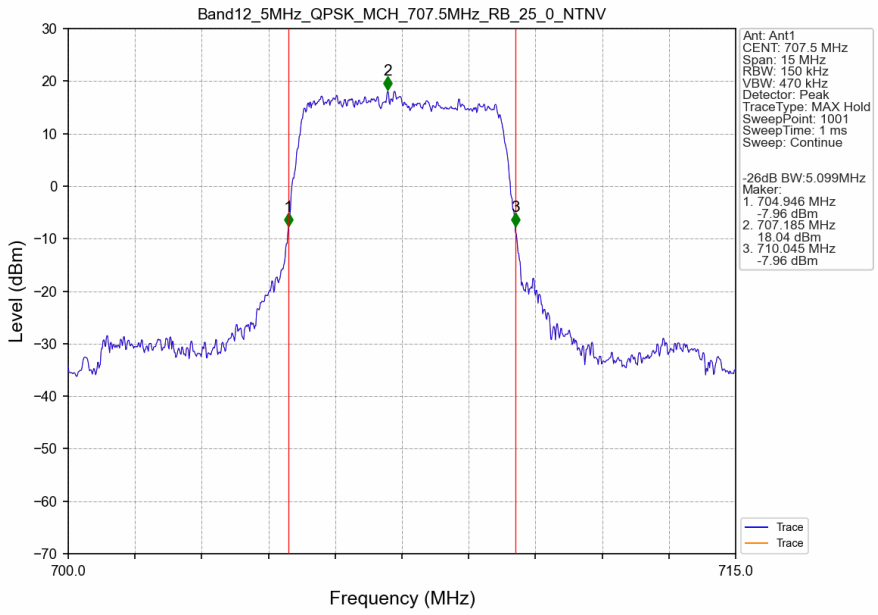
Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



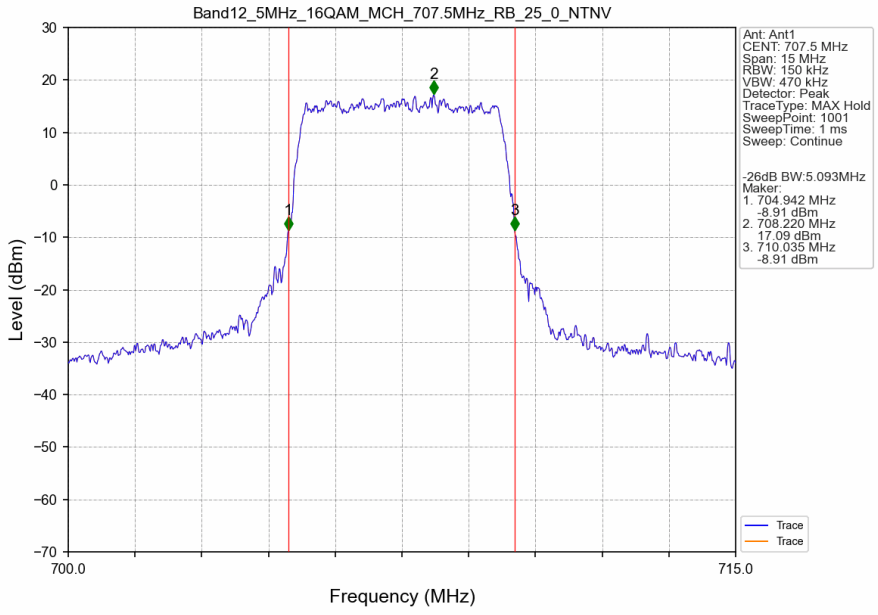
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



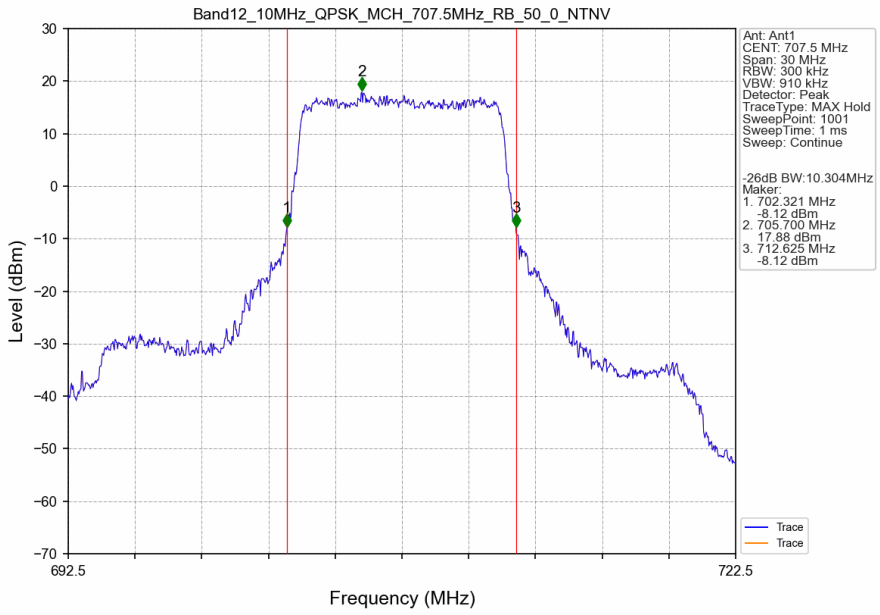
Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



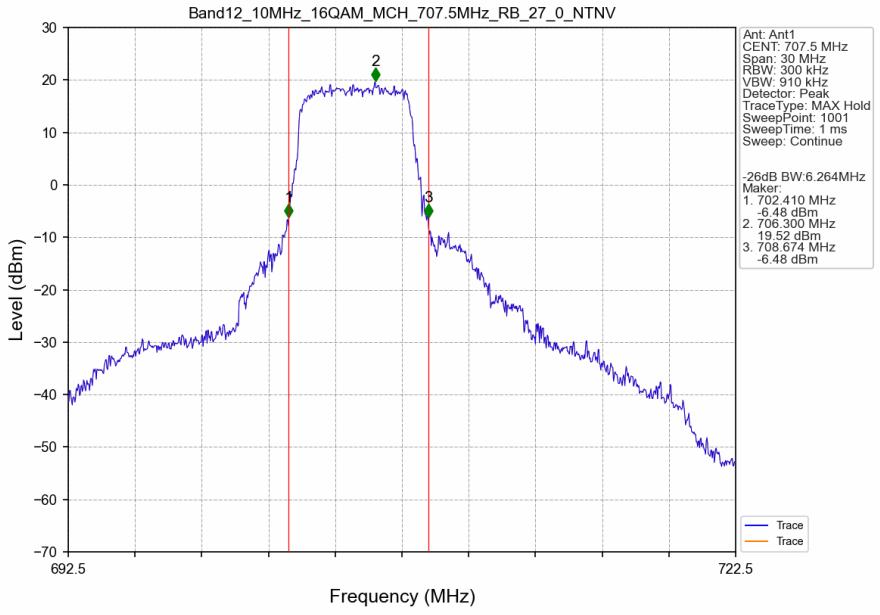
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_27_0_NTNV



4. Peak-Average Ratio

4.1 Test Result

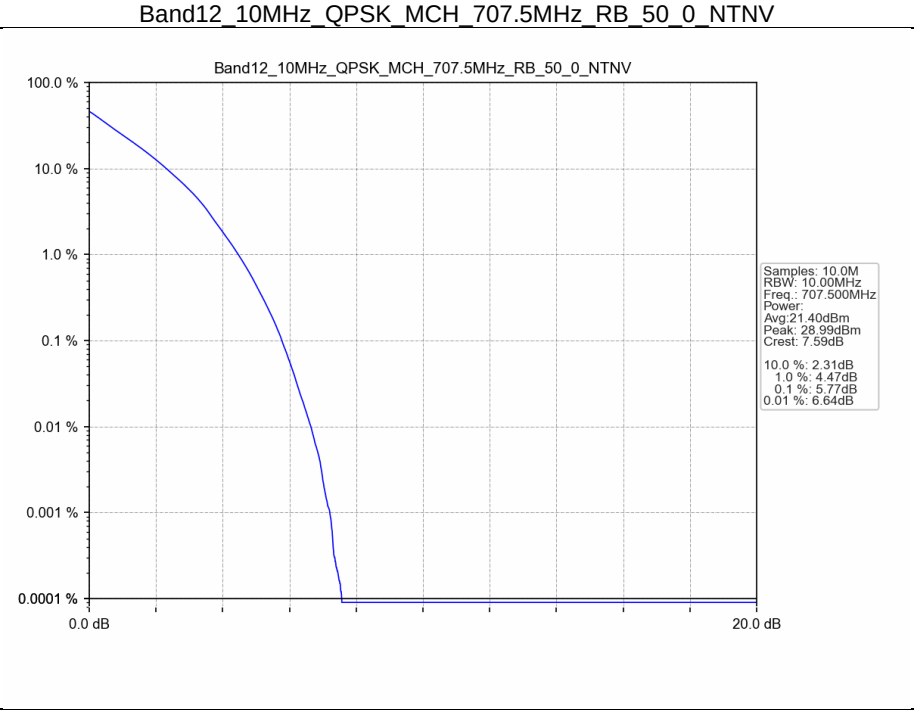
4.1.1 B12_10MHz

Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	50	0	5.77	<=13	Pass
16QAM	707.5	27	0	6.47	<=13	Pass

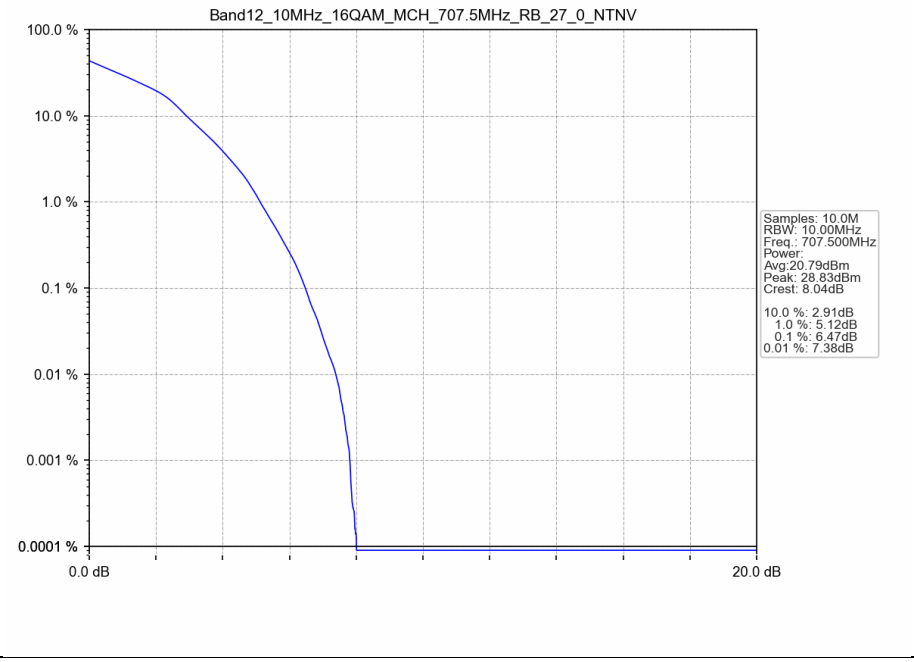
4.2 Test Graph

4.2.1 B12_10MHz

Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_27_0_NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	699.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
	715.3	1	0	Refer To Test Graph		Pass
			5	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass

5.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	700.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	707.5	1	0	Refer To Test Graph		Pass
	714.5	1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass

5.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	701.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	707.5	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

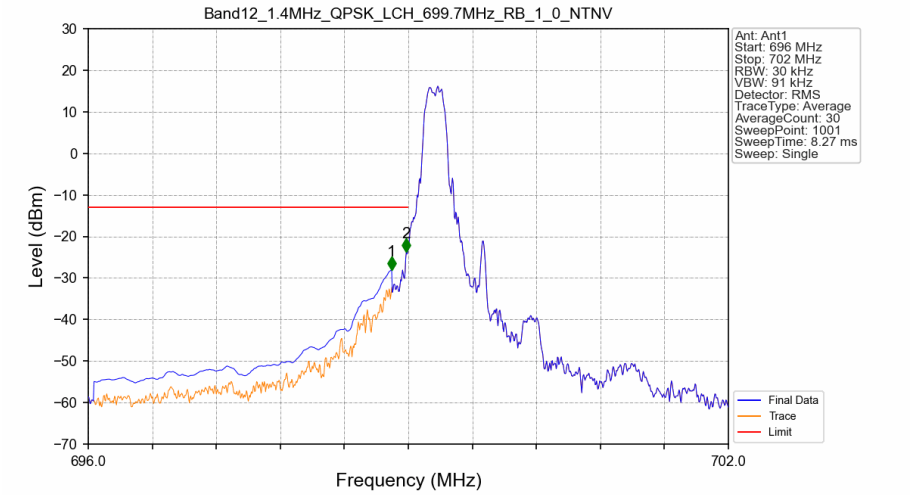
5.1.4 B12_10MHz

Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	704	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	707.5	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

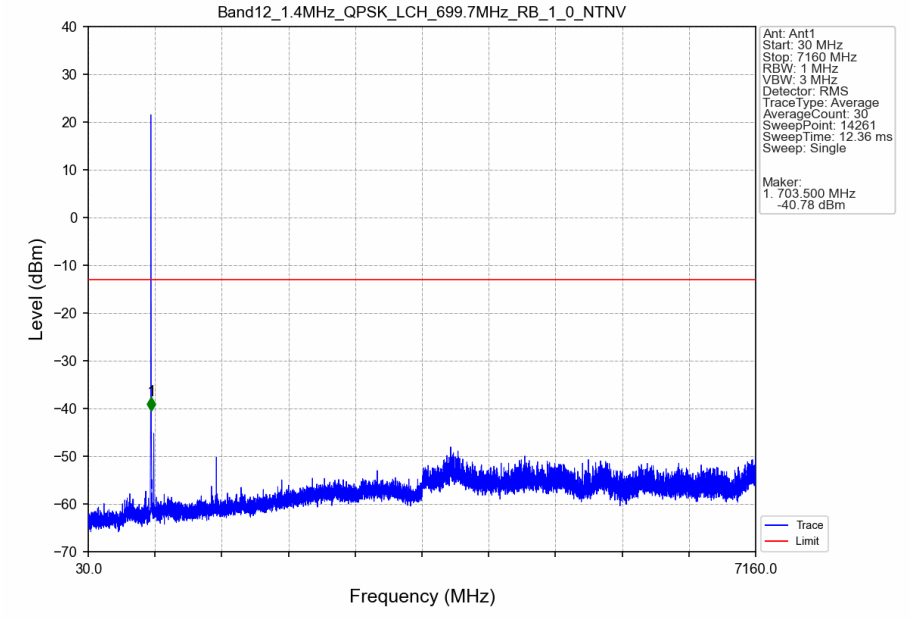
5.2.1 B12_1.4MHz

Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV

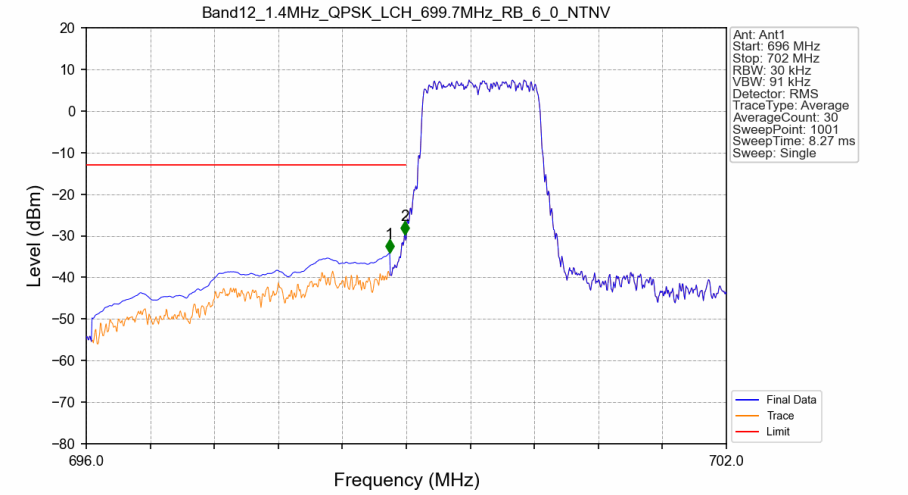


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.844	-28.03	-13	Pass
698.9	699	0.03	/	2	698.982	-23.63	-13	Pass
699	702	0.03	/	/	/	/	/	/

Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV

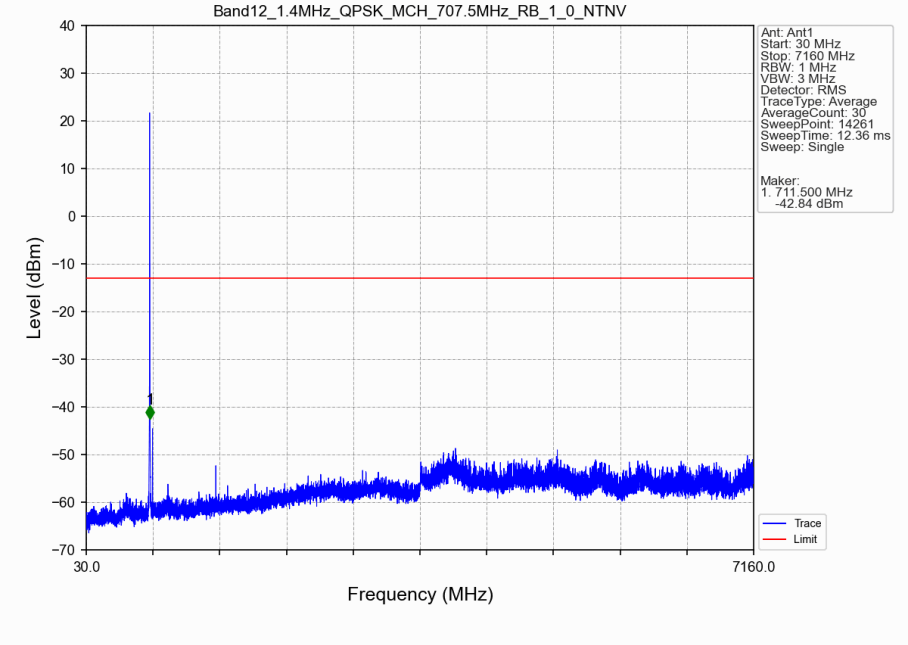


Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV

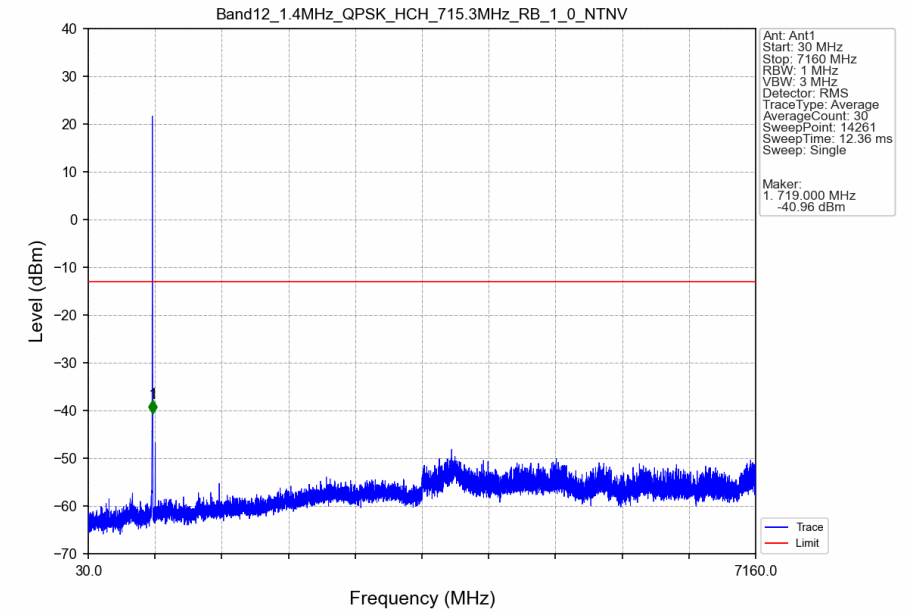


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.844	-33.99	-13	Pass
698.9	699	0.03	/	2	698.988	-29.71	-13	Pass
699	702	0.03	/	/	/	/	/	/

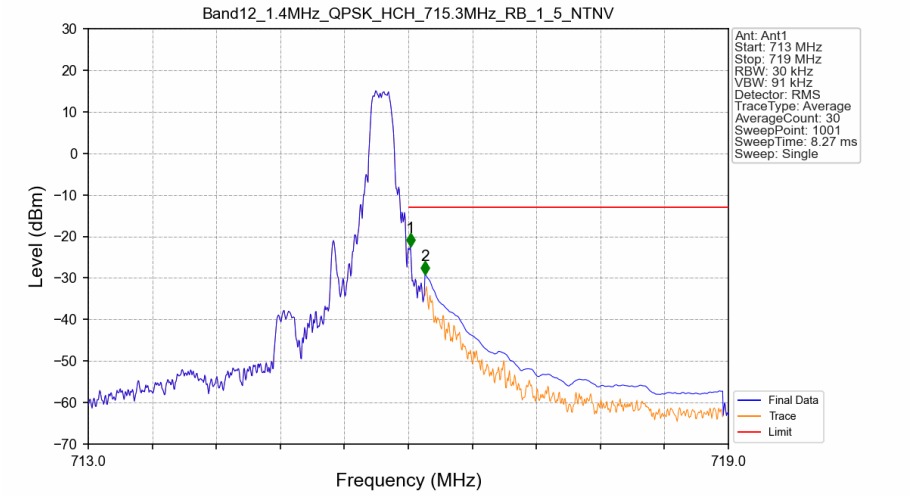
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_0_NTNV

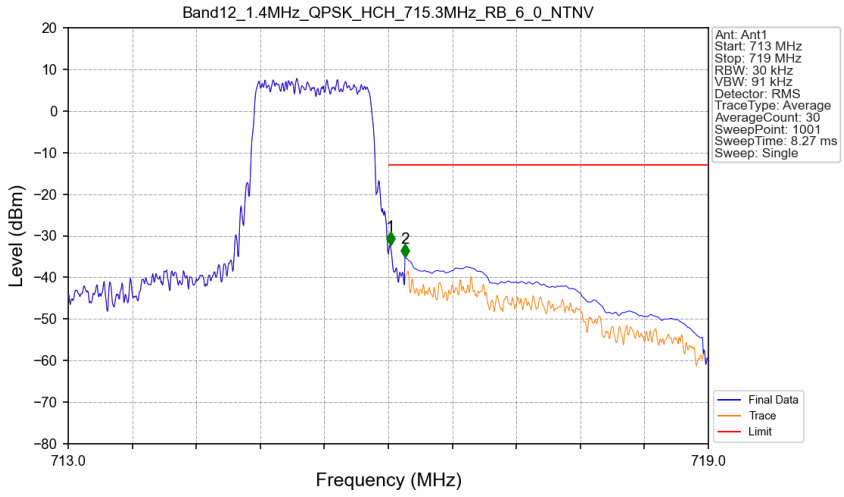


Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_5_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.018	-22.42	-13	Pass
716.1	719	0.1	CHP	2	716.156	-29.08	-13	Pass

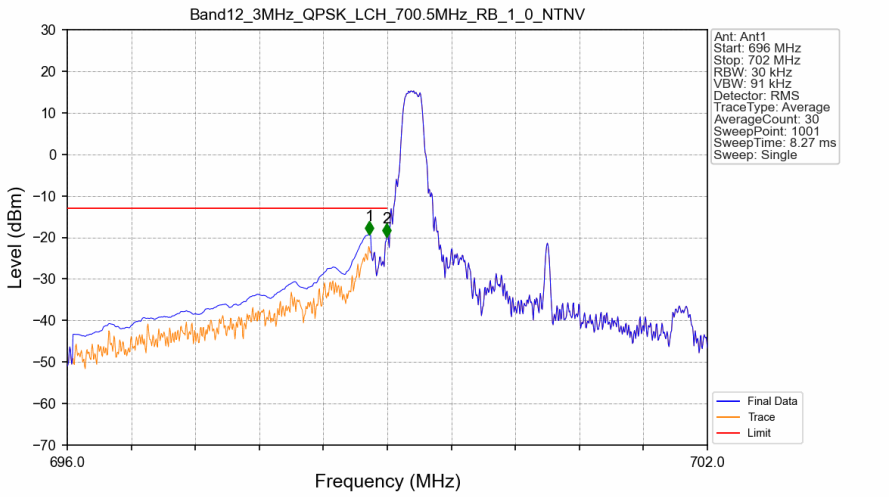
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.018	-32.24	-13	Pass
716.1	719	0.1	CHP	2	716.156	-35.18	-13	Pass

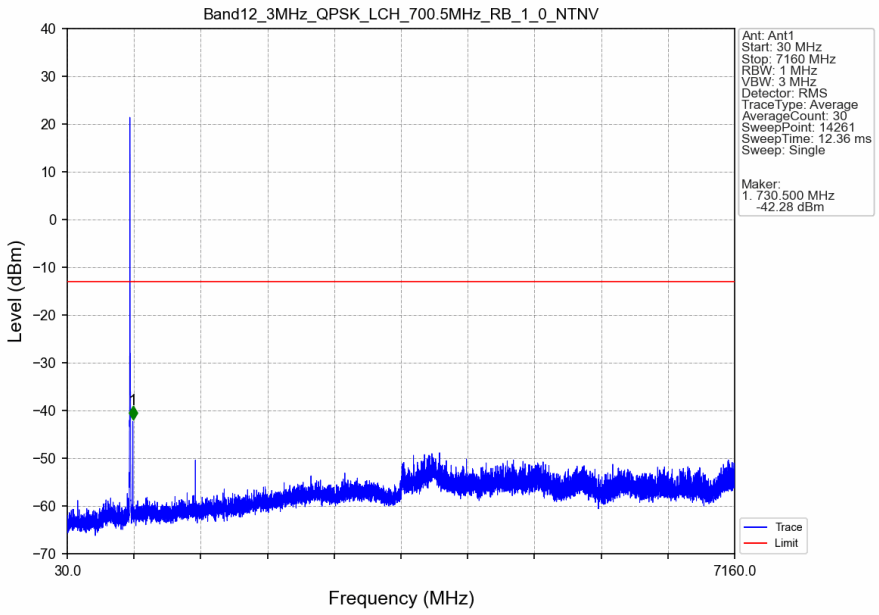
5.2.2 B12_3MHz

Band12_3MHz_QPSK_LCH_700.5MHz_RB_1_0_NTNV

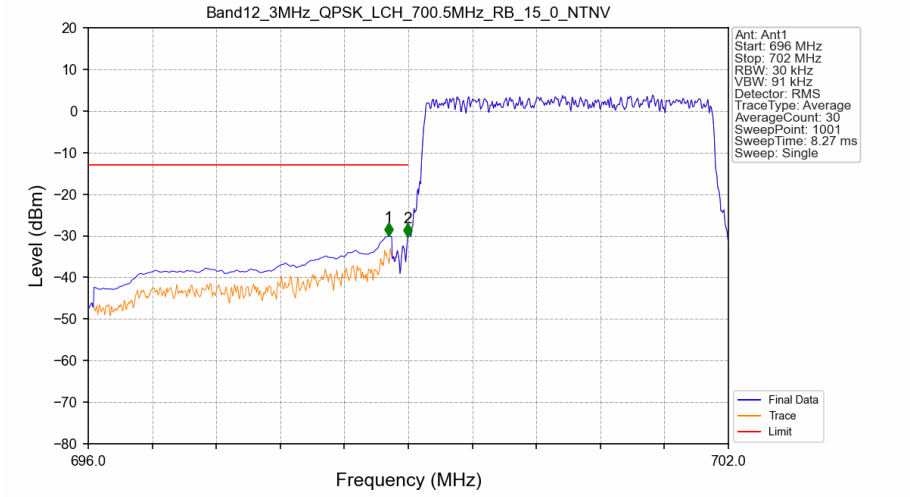


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.832	-19.30	-13	Pass
698.9	699	0.03	/	2	698.994	-19.92	-13	Pass
699	702	0.03	/	/	/	/	/	/

Band12_3MHz_QPSK_LCH_700.5MHz_RB_1_0_NTNV

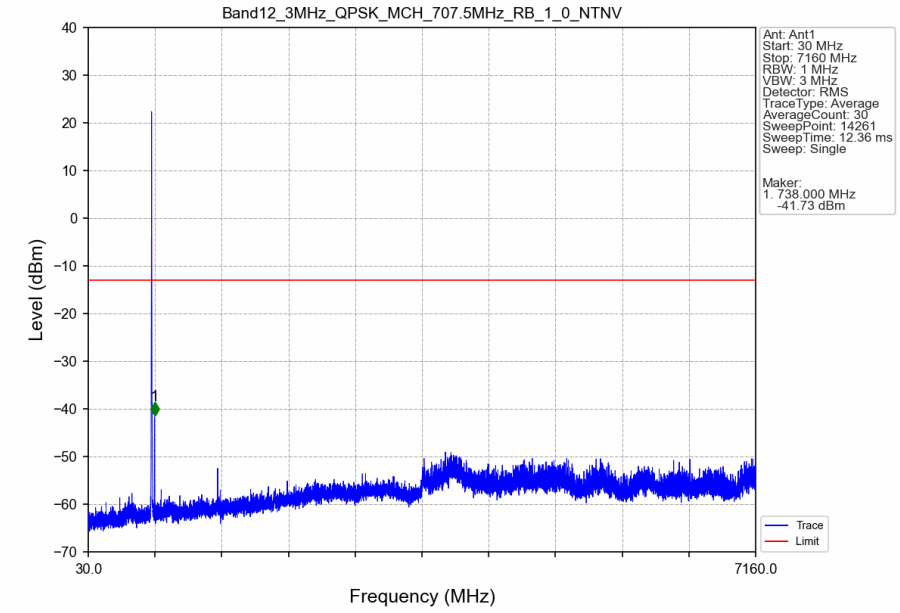


Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV

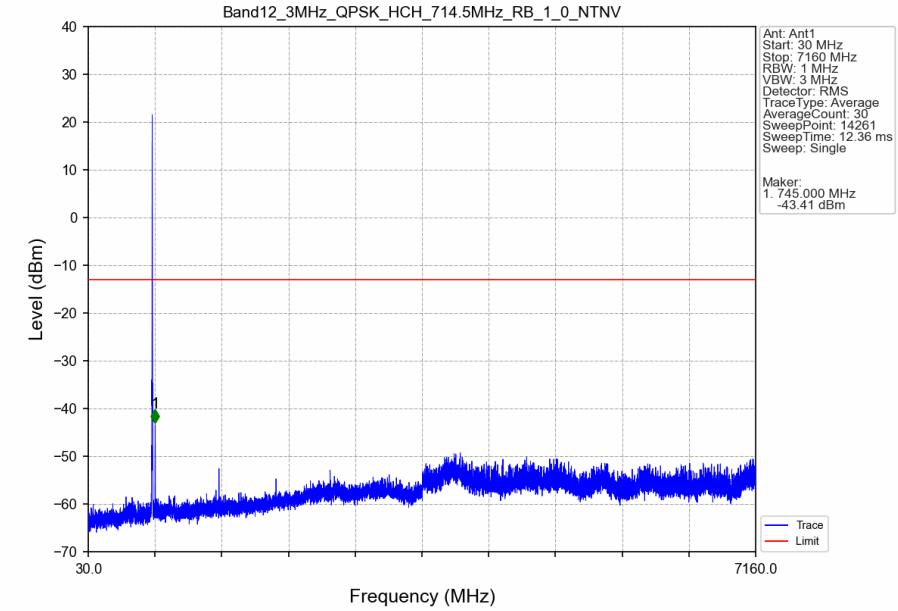


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
696	698.9	0.1	CHP	1	698.814	-30.08	-13	Pass
698.9	699	0.03	/	2	698.994	-30.19	-13	Pass
699	702	0.03	/	/	/	/	/	/

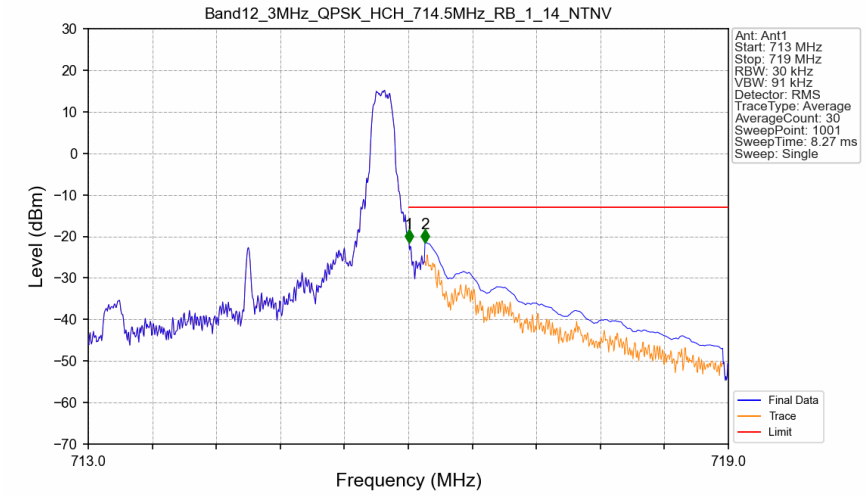
Band12_3MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_3MHz_QPSK_HCH_714.5MHz_RB_1_0_NTNV

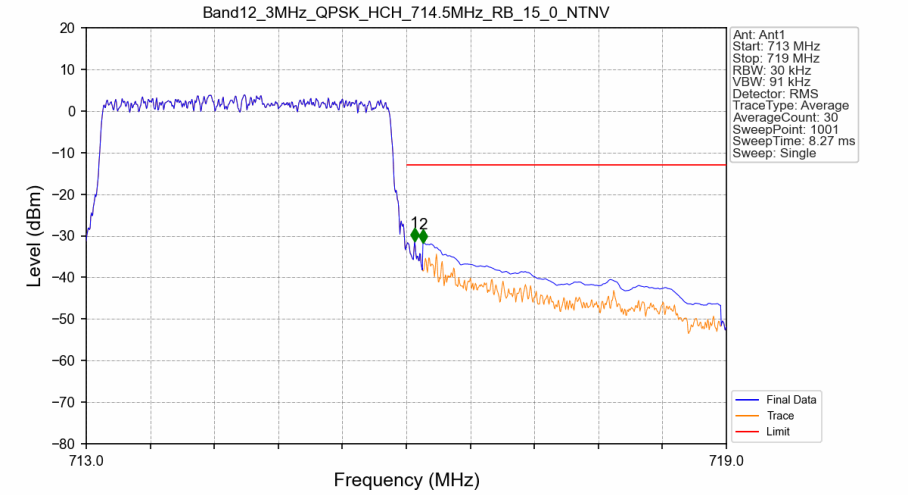


Band12_3MHz_QPSK_HCH_714.5MHz_RB_1_14_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.006	-21.42	-13	Pass
716.1	719	0.1	CHP	2	716.156	-21.41	-13	Pass

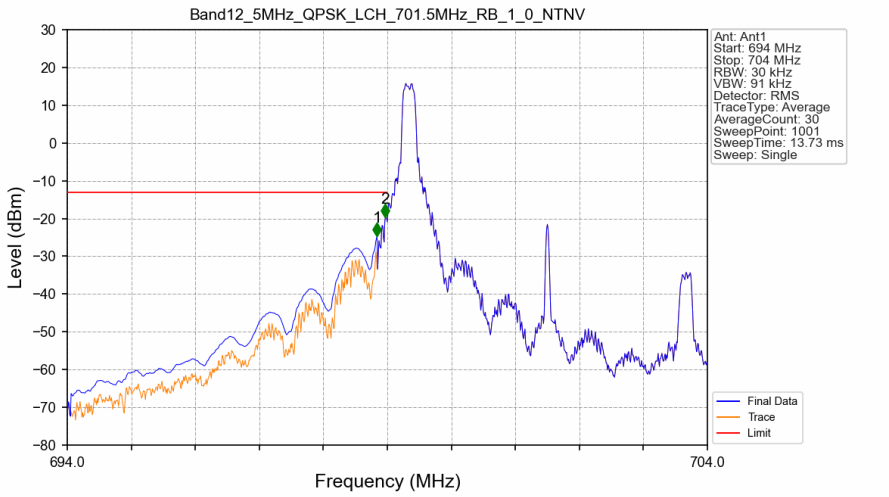
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
713	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.078	-31.39	-13	Pass
716.1	719	0.1	CHP	2	716.156	-31.67	-13	Pass

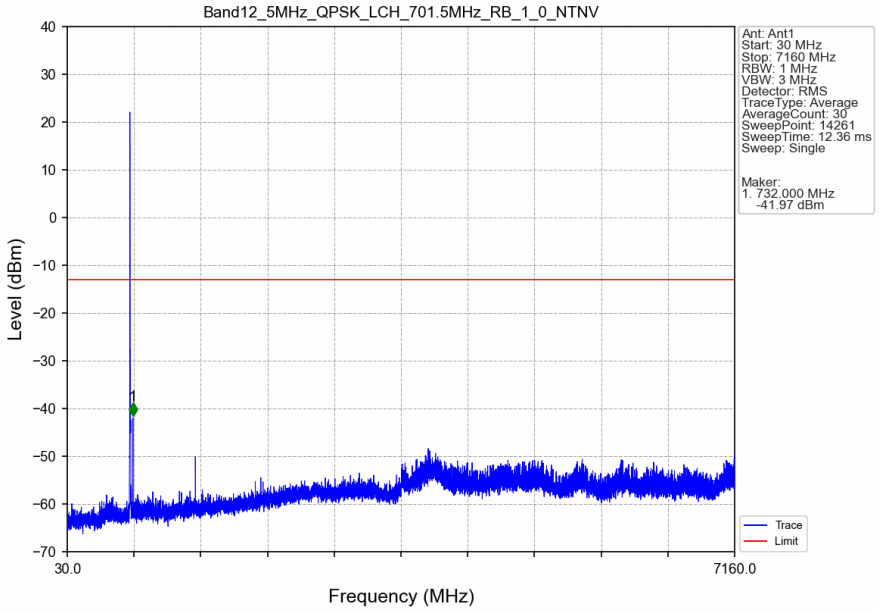
5.2.3 B12_5MHz

Band12_5MHz_QPSK_LCH_701.5MHz_RB_1_0_NTNV

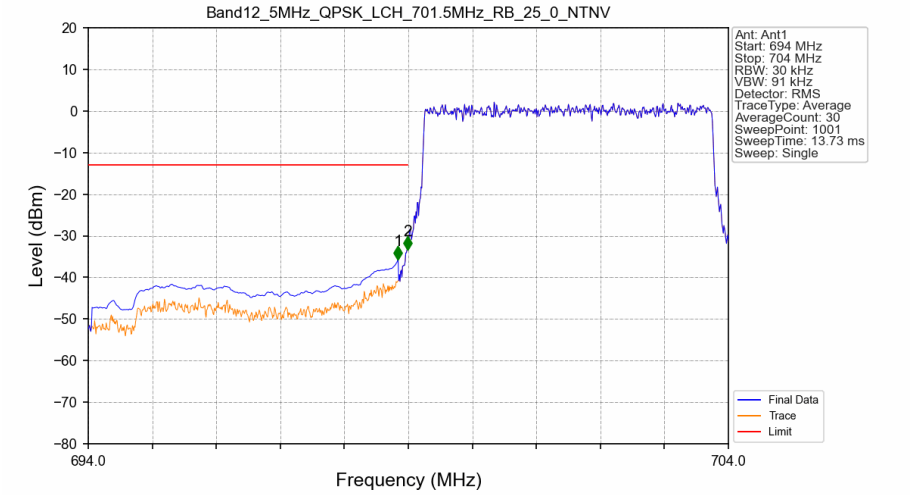


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.840	-24.72	-13	Pass
698.9	699	0.03	/	2	698.970	-19.61	-13	Pass
699	704	0.03	/	/	/	/	/	/

Band12_5MHz_QPSK_LCH_701.5MHz_RB_1_0_NTNV

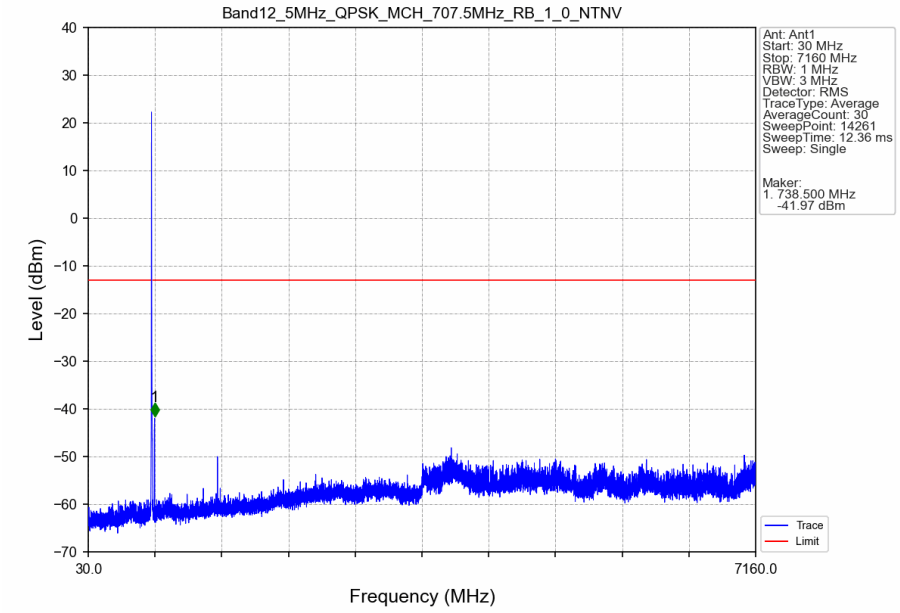


Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV

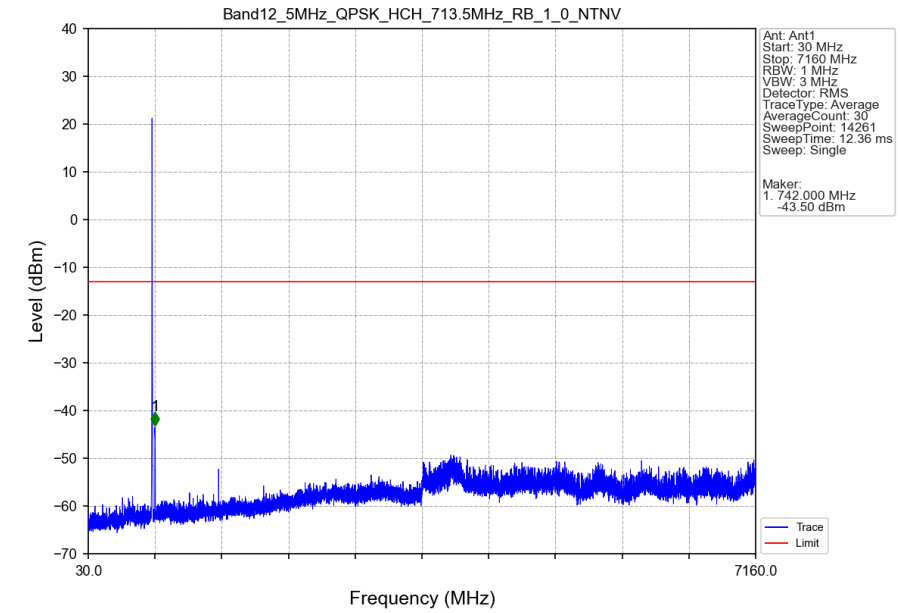


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
694	698.9	0.1	CHP	1	698.840	-35.61	-13	Pass
698.9	699	0.03	/	2	698.990	-33.23	-13	Pass
699	704	0.03	/	/	/	/	/	/

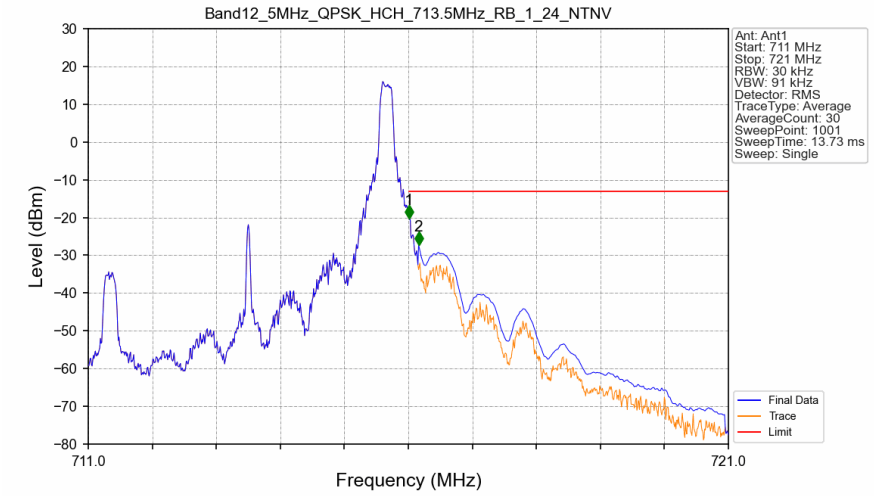
Band12_5MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_5MHz_QPSK_HCH_713.5MHz_RB_1_0_NTNV

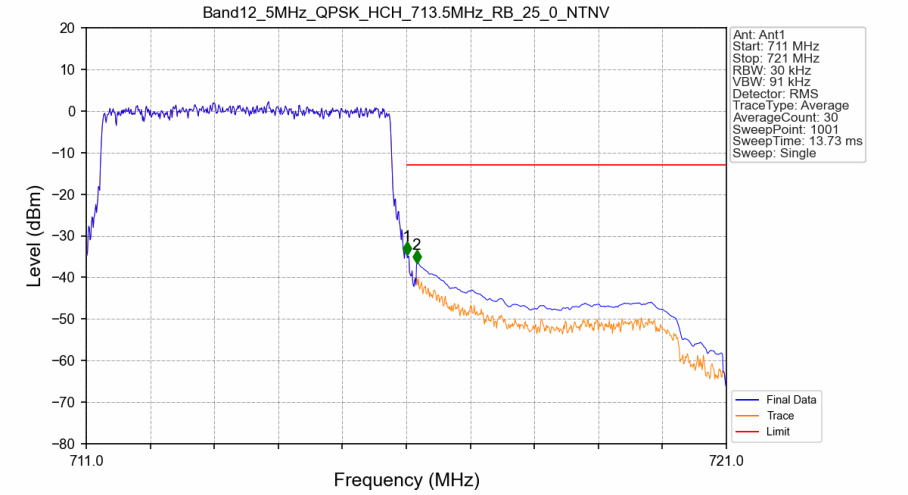


Band12_5MHz_QPSK_HCH_713.5MHz_RB_1_24_NTNV



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	-20.28	-13	Pass
716.1	721	0.1	CHP	2	716.160	-27.31	-13	Pass

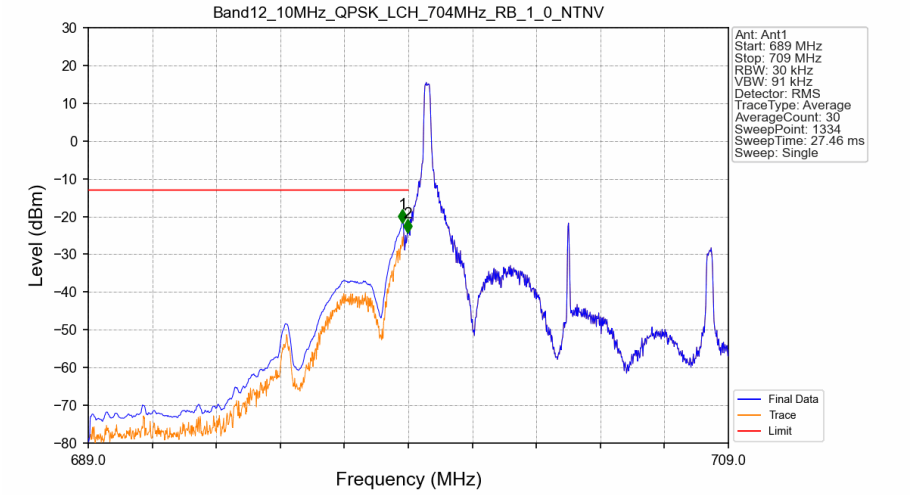
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



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	-34.62	-13	Pass
716.1	721	0.1	CHP	2	716.160	-36.54	-13	Pass

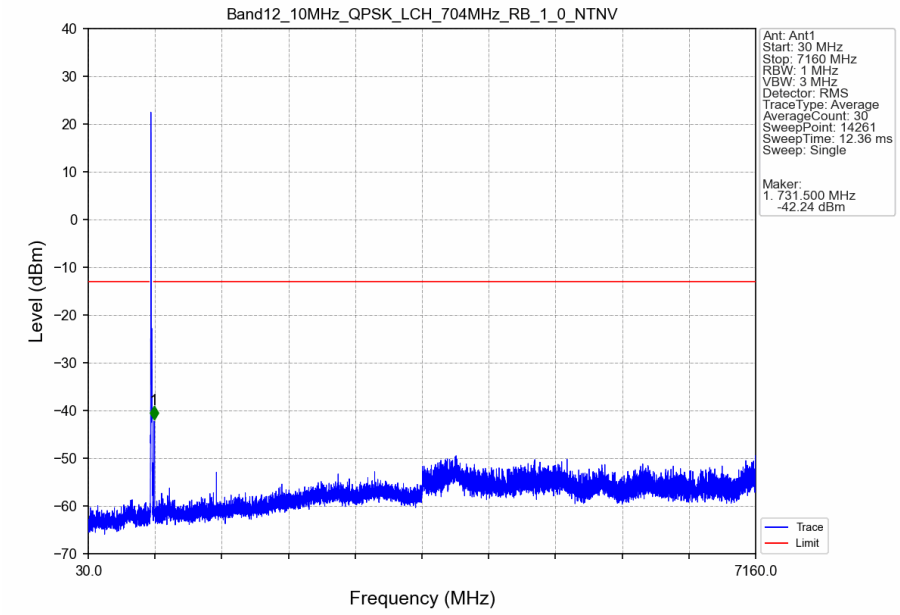
5.2.4 B12_10MHz

Band12_10MHz_QPSK_LCH_704MHz_RB_1_0_NTNV

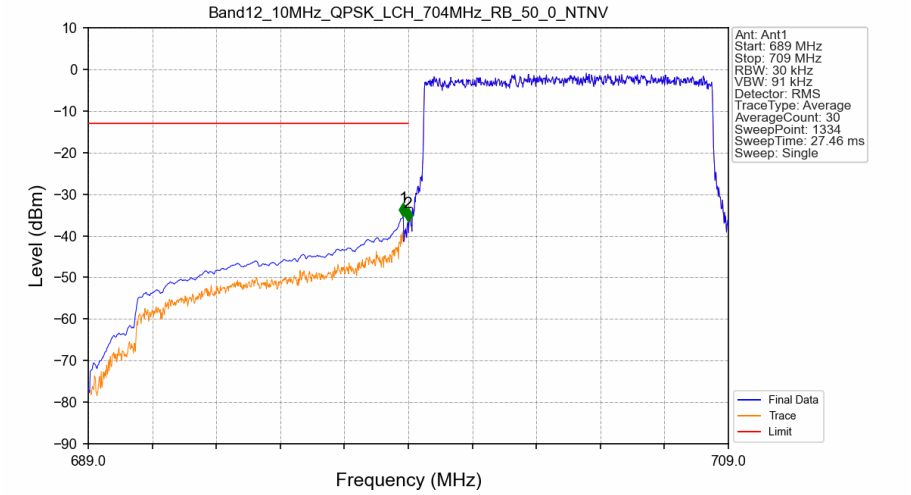


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.812	-21.71	-13	Pass
698.9	699	0.03	/	2	698.977	-24.14	-13	Pass
699	709	0.03	/	/	/	/	/	/

Band12_10MHz_QPSK_LCH_704MHz_RB_1_0_NTNV

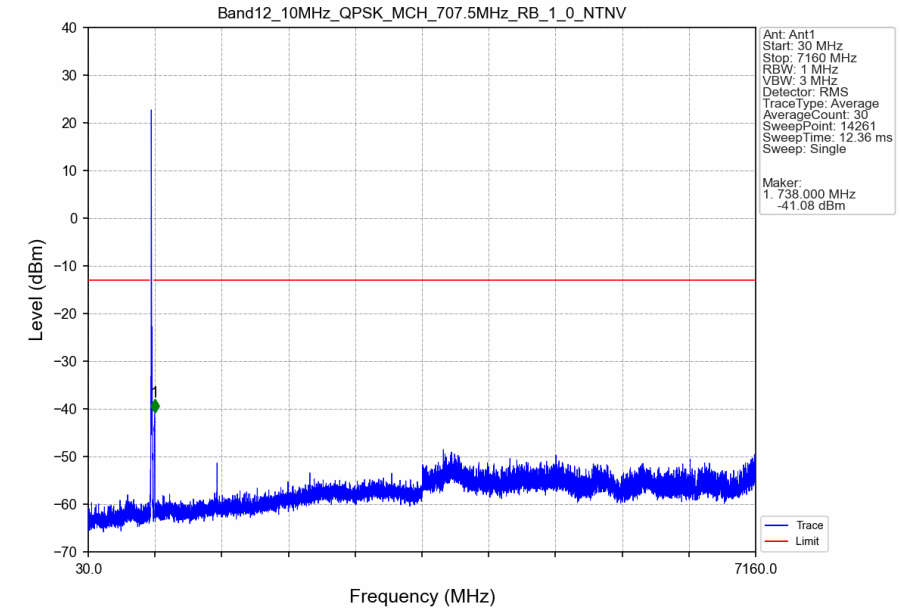


Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV

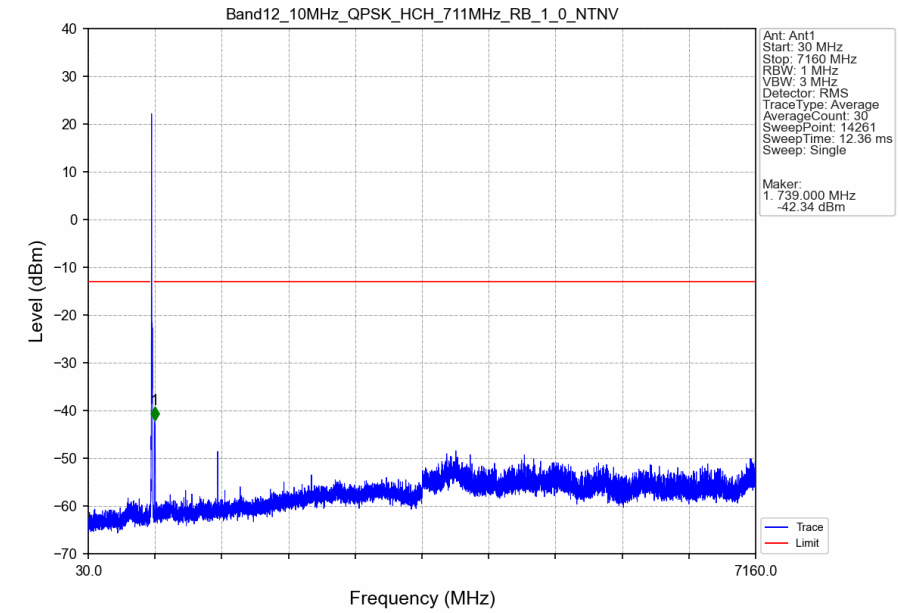


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-35.38	-13	Pass
698.9	699	0.03	/	2	698.992	-36.60	-13	Pass
699	709	0.03	/	/	/	/	/	/

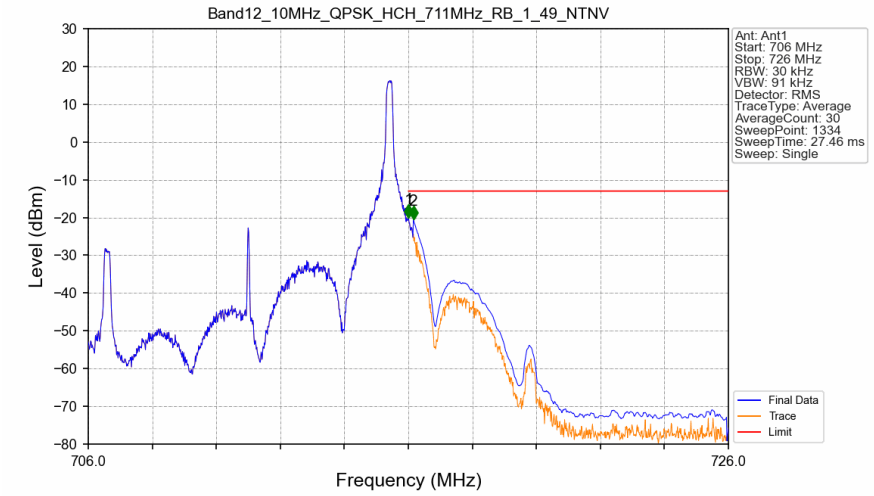
Band12_10MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



Band12_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV

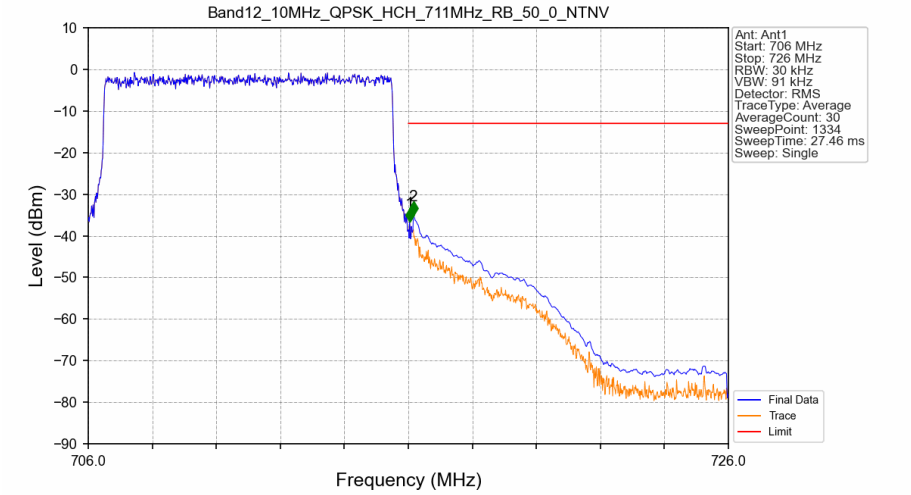


Band12_10MHz_QPSK_HCH_711MHz_RB_1_49_NTNV



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	-20.11	-13	Pass
716.1	726	0.1	CHP	2	716.158	-20.34	-13	Pass

Band12_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	716.038	-36.59	-13	Pass
716.1	726	0.1	CHP	2	716.158	-34.98	-13	Pass