Appendix A.11

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B13_5MHz_ERP

Band: 13 / Bandwidth: 5MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	779.5	1	0	23.17	-3.38	17.64	<=34.77	Pass
			13	23.52	-3.38	17.99	<=34.77	Pass
			24	23.12	-3.38	17.59	<=34.77	Pass
		12	0	22.17	-3.38	16.64	<=34.77	Pass
			6	22.31	-3.38	16.78	<=34.77	Pass
			13	22.20	-3.38	16.67	<=34.77	Pass
		25	0	22.05	-3.38	16.52	<=34.77	Pass
	782	1	0	23.19	-3.38	17.66	<=34.77	Pass
			13	23.50	-3.38	17.97	<=34.77	Pass
			24	23.07	-3.38	17.54	<=34.77	Pass
		12	0	22.19	-3.38	16.66	<=34.77	Pass
			6	22.28	-3.38	16.75	<=34.77	Pass
			13	22.12	-3.38	16.59	<=34.77	Pass
		25	0	22.12	-3.38	16.59	<=34.77	Pass
	784.5	1	0	23.18	-3.38	17.65	<=34.77	Pass
			13	23.44	-3.38	17.91	<=34.77	Pass
			24	23.22	-3.38	17.69	<=34.77	Pass
		12	0	22.15	-3.38	16.62	<=34.77	Pass
			6	22.24	-3.38	16.71	<=34.77	Pass
			13	22.20	-3.38	16.67	<=34.77	Pass
		25	0	22.17	-3.38	16.64	<=34.77	Pass
16QAM	779.5	1	0	22.38	-3.38	16.85	<=34.77	Pass
			13	22.31	-3.38	16.78	<=34.77	Pass
			24	21.71	-3.38	16.18	<=34.77	Pass
		12	0	21.01	-3.38	15.48	<=34.77	Pass
			6	21.16	-3.38	15.63	<=34.77	Pass
			13	21.26	-3.38	15.73	<=34.77	Pass
		25	0	21.08	-3.38	15.55	<=34.77	Pass
	782	1	0	21.85	-3.38	16.32	<=34.77	Pass
			13	22.00	-3.38	16.47	<=34.77	Pass
			24	21.76	-3.38	16.23	<=34.77	Pass
		12	0	21.24	-3.38	15.71	<=34.77	Pass
			6	21.41	-3.38	15.88	<=34.77	Pass
			13	21.15	-3.38	15.62	<=34.77	Pass
		25	0	21.16	-3.38	15.63	<=34.77	Pass
	784.5	1	0	22.07	-3.38	16.54	<=34.77	Pass
			13	22.28	-3.38	16.75	<=34.77	Pass
			24	21.95	-3.38	16.42	<=34.77	Pass
		12	0	21.03	-3.38	15.50	<=34.77	Pass
			6	21.16	-3.38	15.63	<=34.77	Pass

			13	21.02	-3.38	15.49	<=34.77	Pass
		25	0	21.08	-3.38	15.55	<=34.77	Pass
64QAM	779.5	1	0	21.91	-3.38	16.38	<=34.77	Pass
			13	21.93	-3.38	16.40	<=34.77	Pass
			24	21.81	-3.38	16.28	<=34.77	Pass
		12	0	20.85	-3.38	15.32	<=34.77	Pass
			6	21.23	-3.38	15.70	<=34.77	Pass
			13	21.20	-3.38	15.67	<=34.77	Pass
		25	0	21.17	-3.38	15.64	<=34.77	Pass
	782	1	0	22.05	-3.38	16.52	<=34.77	Pass
			13	21.90	-3.38	16.37	<=34.77	Pass
			24	21.89	-3.38	16.36	<=34.77	Pass
		12	0	21.10	-3.38	15.57	<=34.77	Pass
			6	21.13	-3.38	15.60	<=34.77	Pass
			13	21.04	-3.38	15.51	<=34.77	Pass
		25	0	21.25	-3.38	15.72	<=34.77	Pass
	784.5	1	0	21.96	-3.38	16.43	<=34.77	Pass
			13	21.61	-3.38	16.08	<=34.77	Pass
			24	21.61	-3.38	16.08	<=34.77	Pass
		12	0	20.90	-3.38	15.37	<=34.77	Pass
			6	21.23	-3.38	15.70	<=34.77	Pass
			13	21.07	-3.38	15.54	<=34.77	Pass
		25	0	21.15	-3.38	15.62	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.2 B13_10MHz_ERP

Band: 13 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	782	1	0	23.02	-3.38	17.49	<=34.77	Pass
			25	23.40	-3.38	17.87	<=34.77	Pass
			49	23.35	-3.38	17.82	<=34.77	Pass
		25	0	22.17	-3.38	16.64	<=34.77	Pass
			13	22.24	-3.38	16.71	<=34.77	Pass
			25	22.11	-3.38	16.58	<=34.77	Pass
		50	0	22.24	-3.38	16.71	<=34.77	Pass
16QAM	782	1	0	21.98	-3.38	16.45	<=34.77	Pass
			25	22.51	-3.38	16.98	<=34.77	Pass
			49	22.12	-3.38	16.59	<=34.77	Pass
		25	0	21.13	-3.38	15.60	<=34.77	Pass
			13	21.25	-3.38	15.72	<=34.77	Pass
			25	21.11	-3.38	15.58	<=34.77	Pass
		50	0	21.20	-3.38	15.67	<=34.77	Pass
64QAM	782	1	0	21.81	-3.38	16.28	<=34.77	Pass
			25	21.92	-3.38	16.39	<=34.77	Pass
			49	21.43	-3.38	15.90	<=34.77	Pass
		25	0	21.08	-3.38	15.55	<=34.77	Pass
			13	21.26	-3.38	15.73	<=34.77	Pass
			25	21.17	-3.38	15.64	<=34.77	Pass
		50	0	21.30	-3.38	15.77	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. Frequency Stability

2.1 Test Result

2.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	782	50	0	20	8.8	-1.300	-0.0017	-2.5 to 2.5	Pass
					7.7	-0.500	-0.0006	-2.5 to 2.5	Pass
					6.6	-1.500	-0.0019	-2.5 to 2.5	Pass
				-30	7.7	0.500	0.0006	-2.5 to 2.5	Pass
				-20	7.7	1.200	0.0015	-2.5 to 2.5	Pass
				-10	7.7	-0.100	-0.0001	-2.5 to 2.5	Pass
				0	7.7	-2.100	-0.0027	-2.5 to 2.5	Pass
				10	7.7	0.400	0.0005	-2.5 to 2.5	Pass
				30	7.7	-1.600	-0.0020	-2.5 to 2.5	Pass
				40	7.7	-1.100	-0.0014	-2.5 to 2.5	Pass
				50	7.7	0.700	0.0009	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.482	/	Pass
	16QAM	782	25	0	4.483	/	Pass
	64QAM	782	25	0	4.482	/	Pass
10	QPSK	782	50	0	8.942	/	Pass
	16QAM	782	50	0	8.934	/	Pass
	64QAM	782	50	0	8.950	/	Pass

3.1.2 Band13_XDB

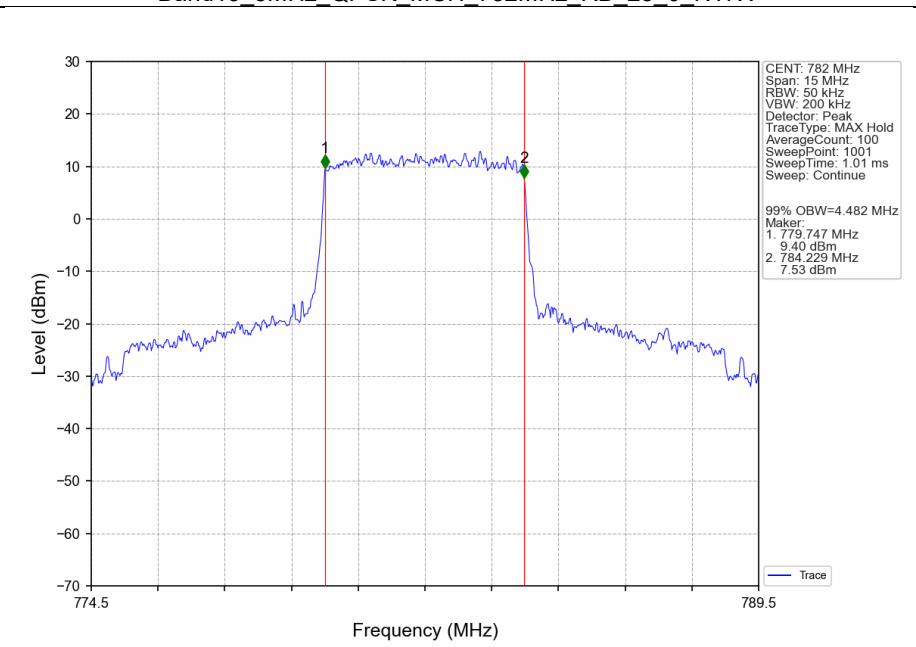
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.918	/	Pass

	16QAM	782	25	0	4.928	/	Pass
	64QAM	782	25	0	4.930	/	Pass
10	QPSK	782	50	0	9.723	/	Pass
	16QAM	782	50	0	9.620	/	Pass
	64QAM	782	50	0	9.688	/	Pass

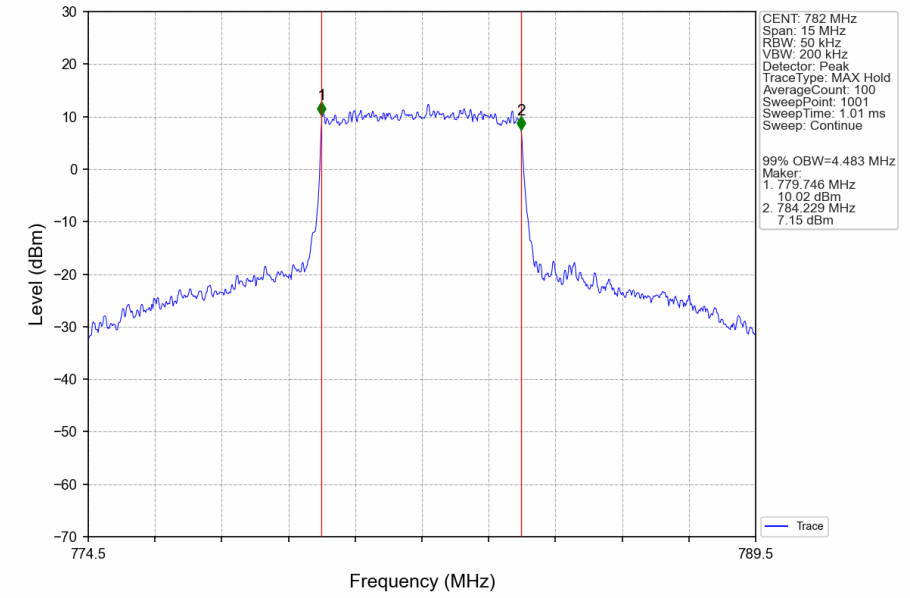
3.2 Test Graph

3.2.1 Band13_OBW

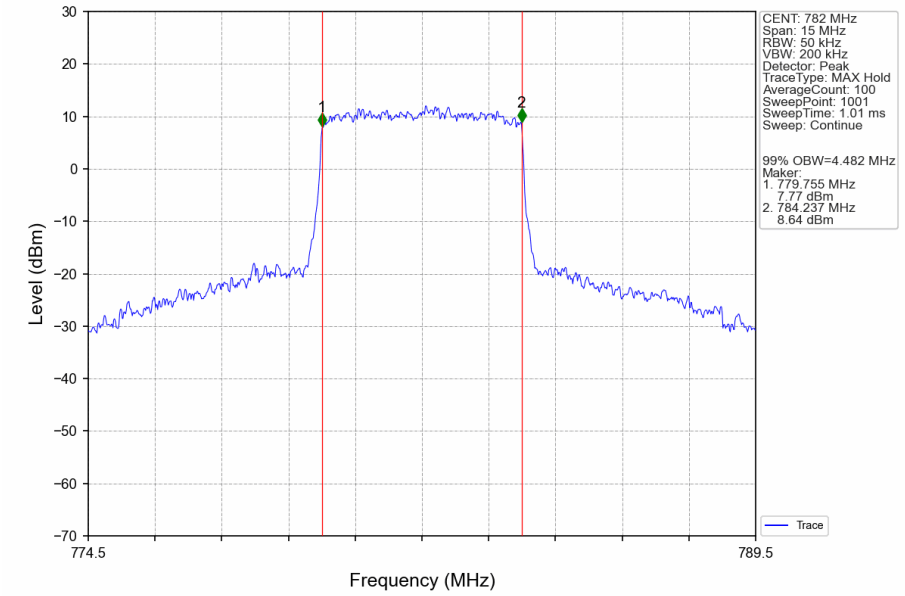
Band13_5MHz_QPSK_MCH_782MHz_RB_25_0_NTNV



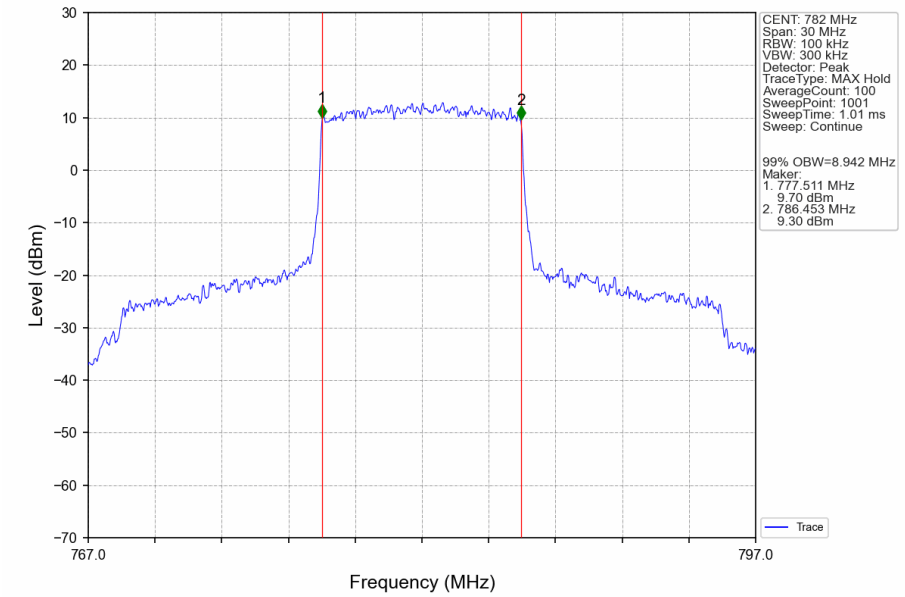
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



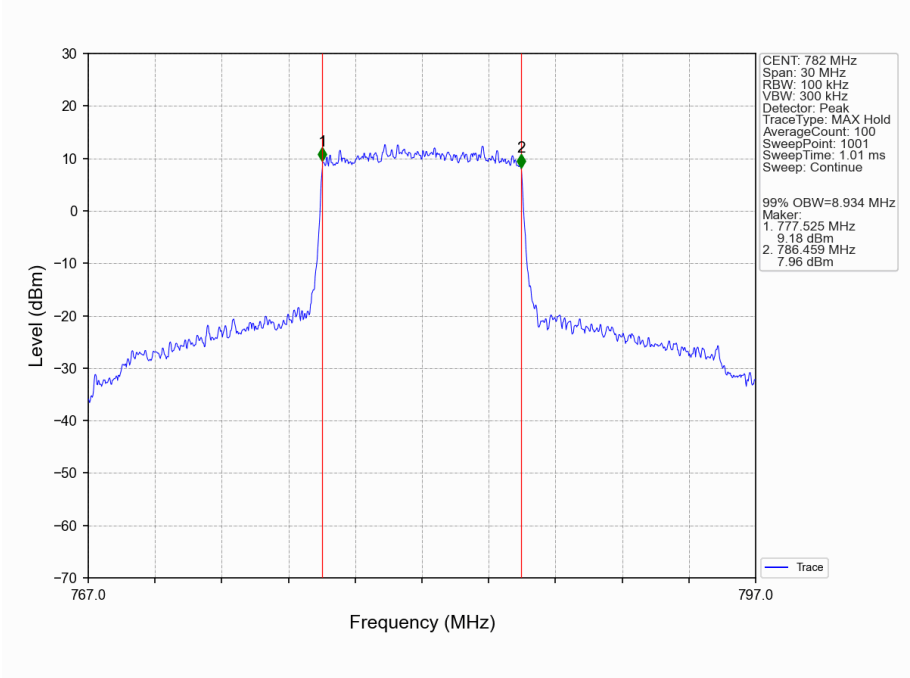
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



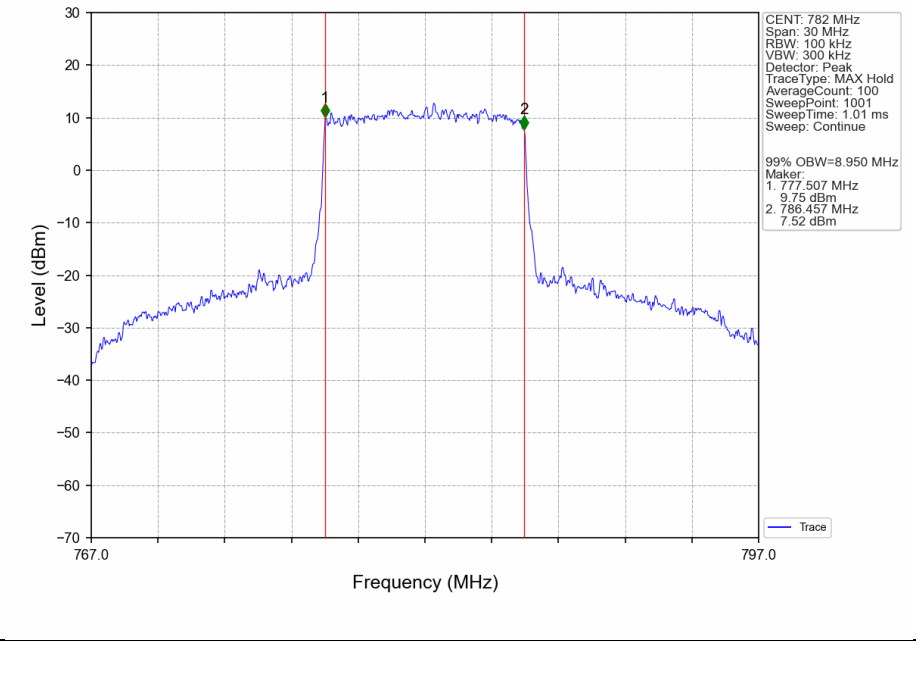
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV

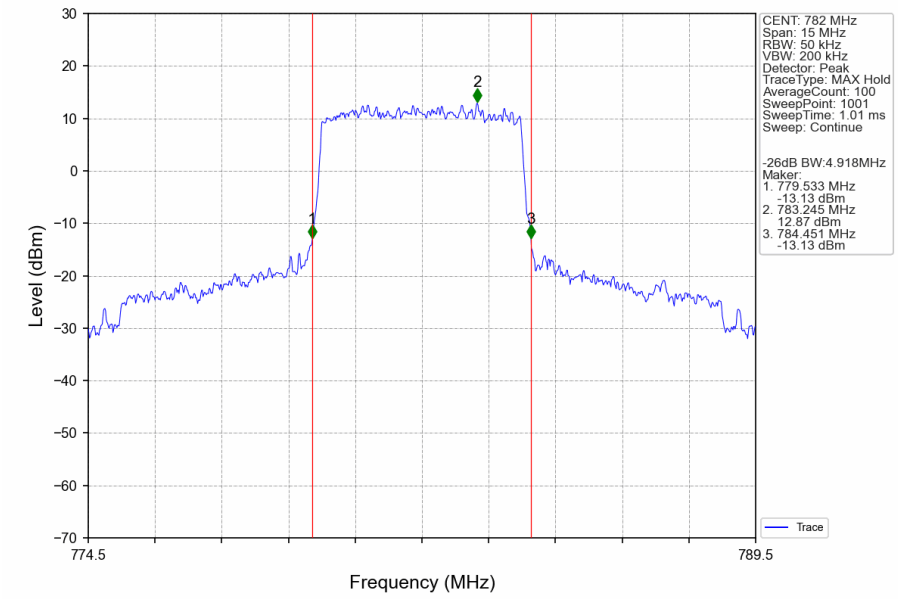


Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV

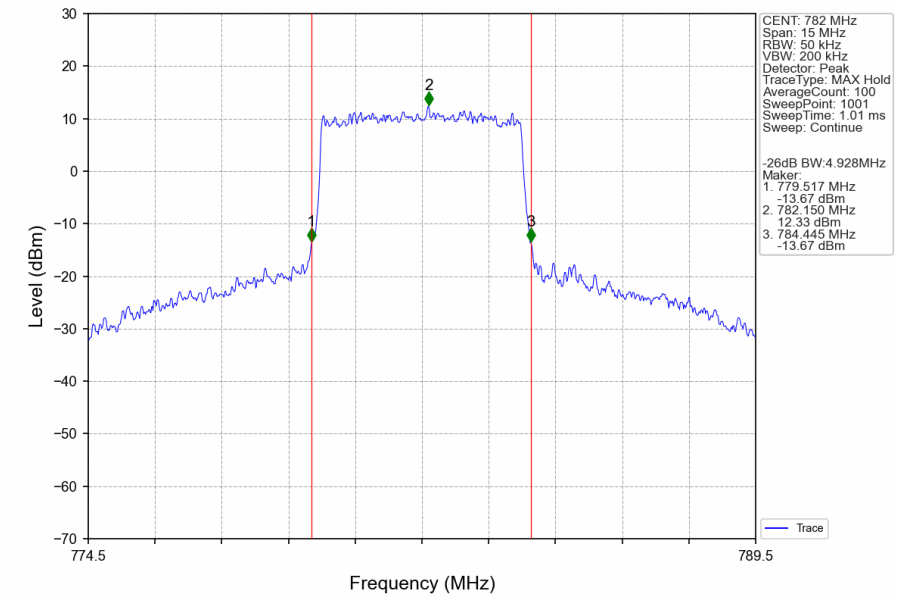


3.2.2 Band13_XDB

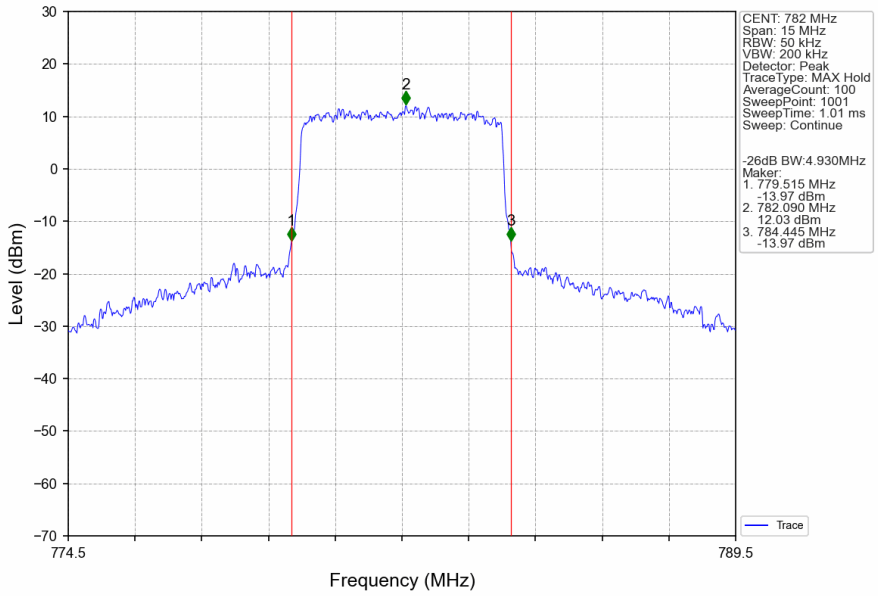
Band13_5MHz_QPSK_MCH_782MHz_RB_25_0_NTNV



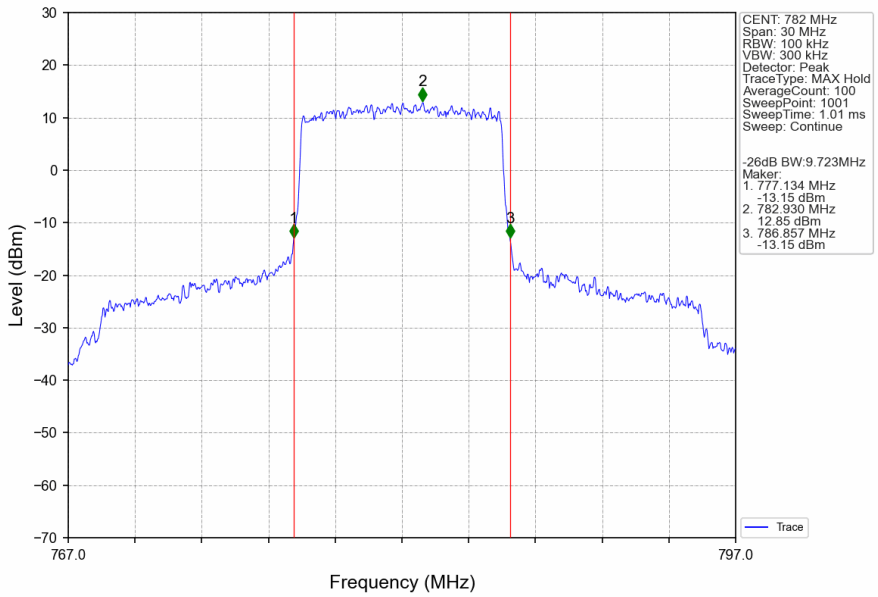
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



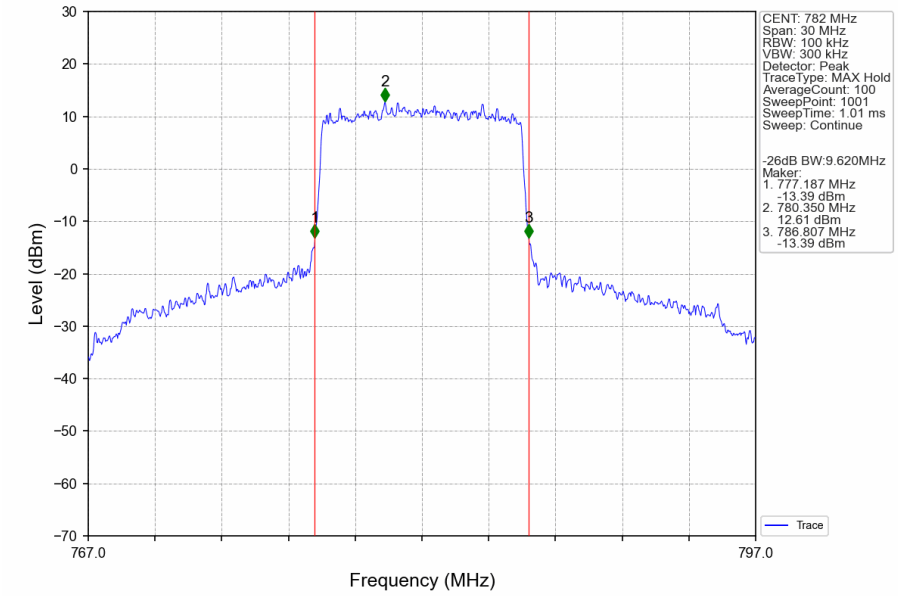
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



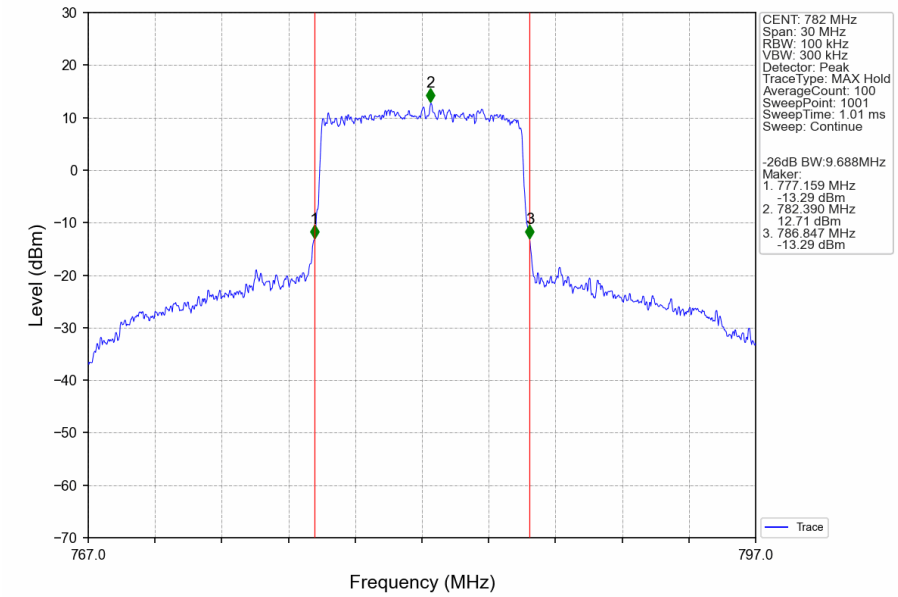
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



4. Peak-Average Ratio

4.1 Test Result

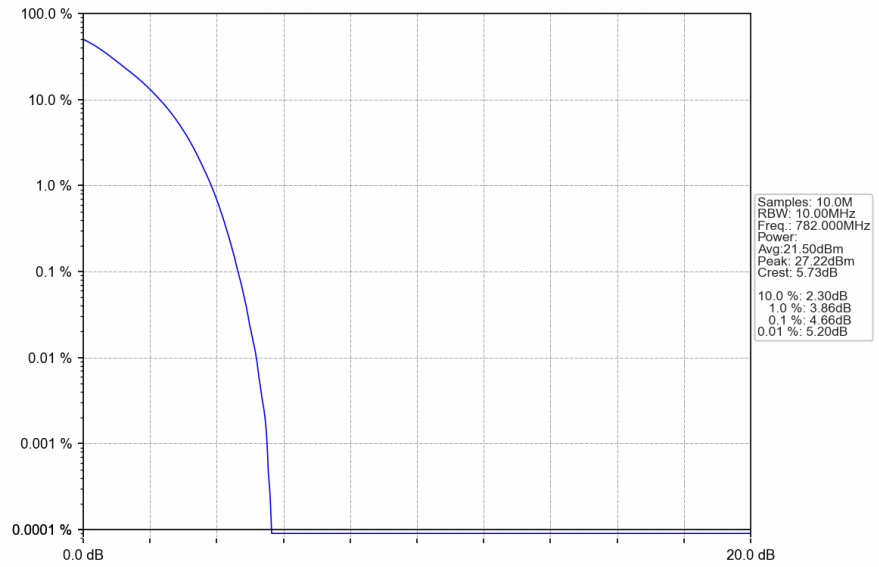
4.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	4.66	<=13	Pass
16QAM	782	50	0	5.42	<=13	Pass
64QAM	782	50	0	5.44	<=13	Pass

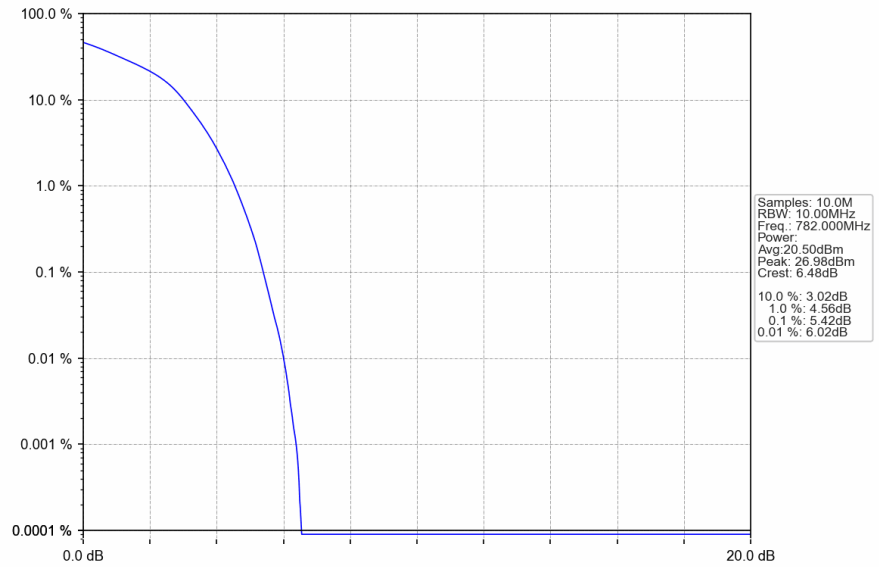
4.2 Test Graph

4.2.1 B13_10MHz

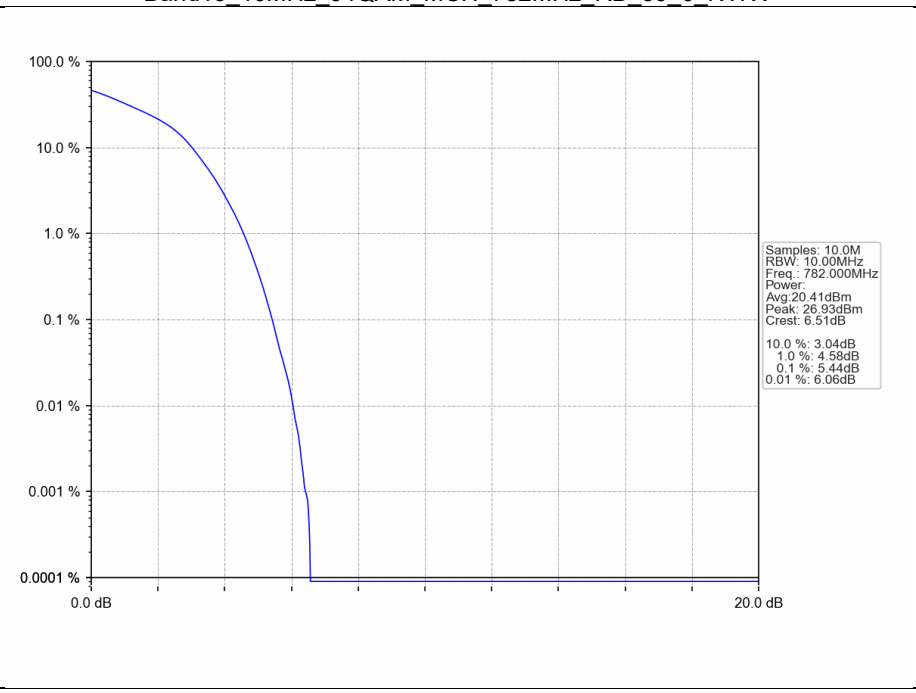
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B13_5MHz

Band: 13 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

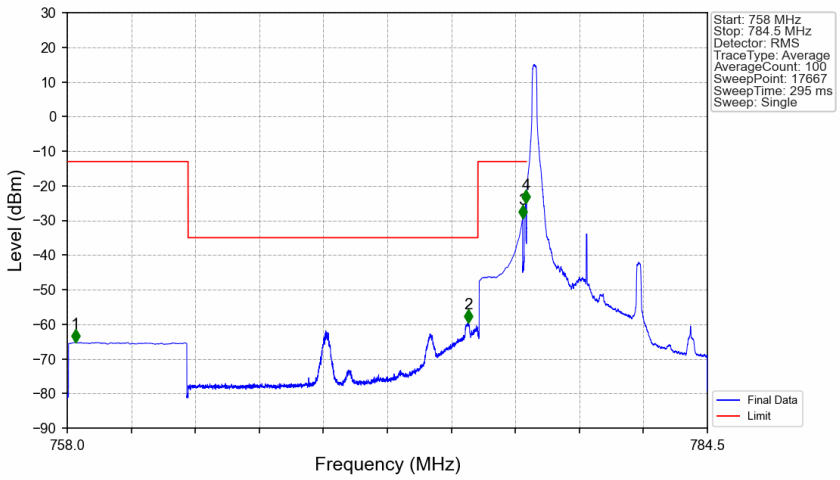
5.1.2 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	782	1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.2 Test Graph

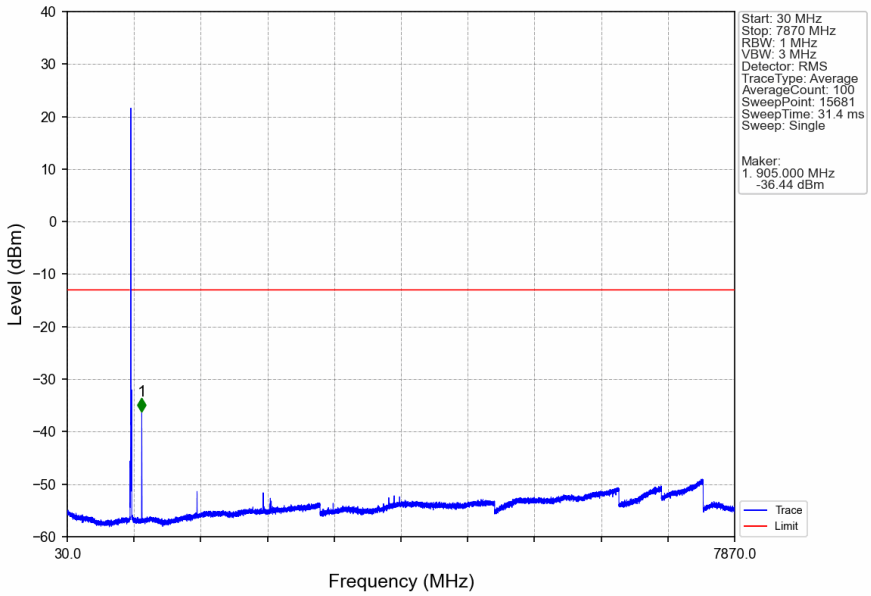
5.2.1 B13_5MHz

Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV

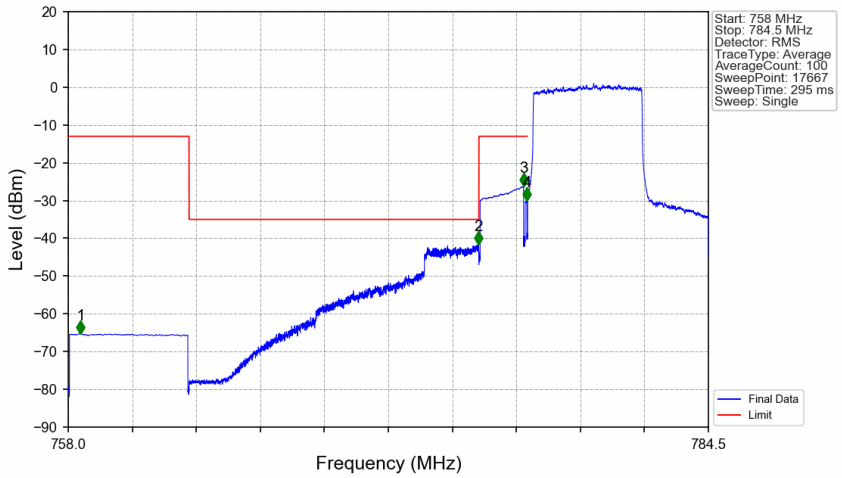


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	758.344	-65.14	-13	Pass
763	775	0.00625	CHP	2	774.601	-59.50	-35	Pass
775	776.9	0.1	CHP	3	776.850	-29.48	-13	Pass
776.9	777	0.03	CHP	4	776.985	-24.92	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV

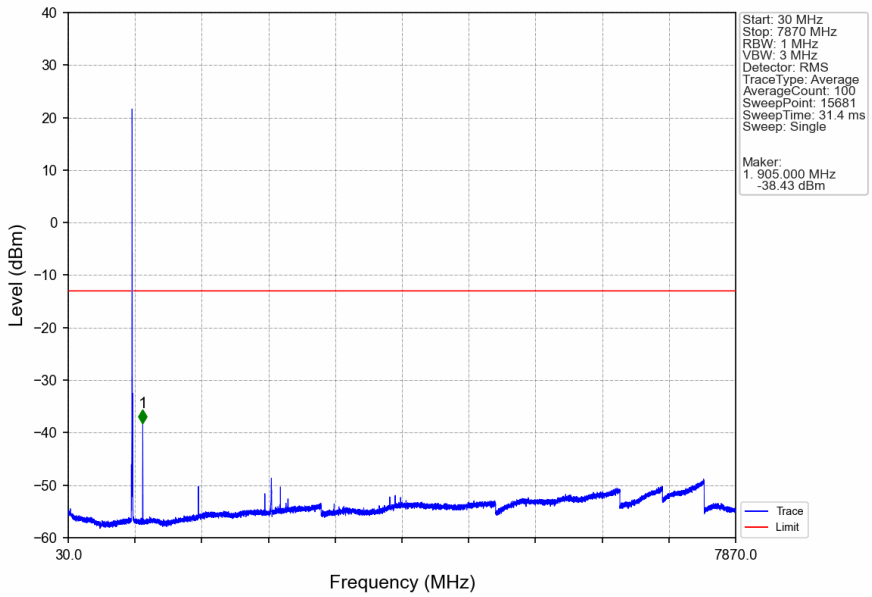


Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV

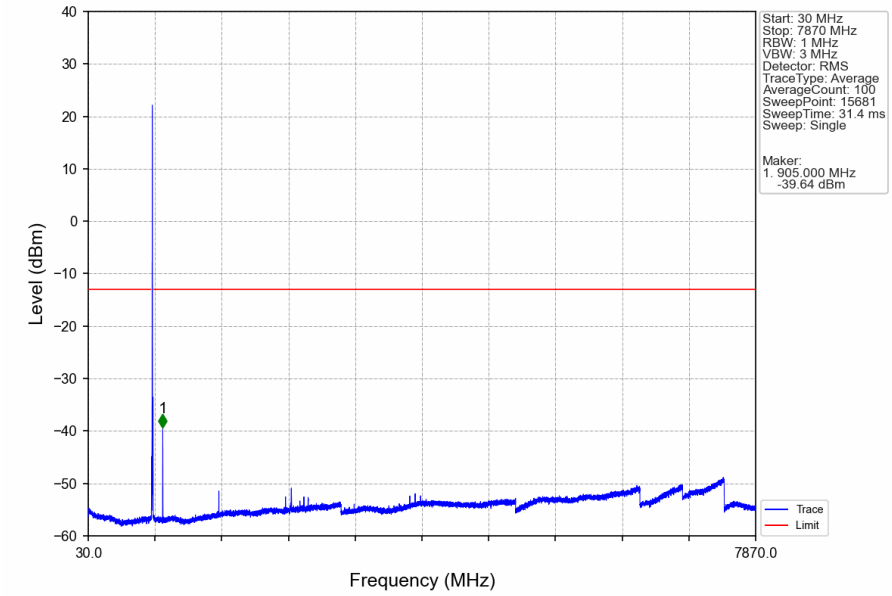


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	758.504	-65.21	-13	Pass
763	775	0.00625	CHP	2	774.990	-41.74	-35	Pass
775	776.9	0.1	CHP	3	776.850	-26.32	-13	Pass
776.9	777	0.03	CHP	4	776.985	-30.07	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

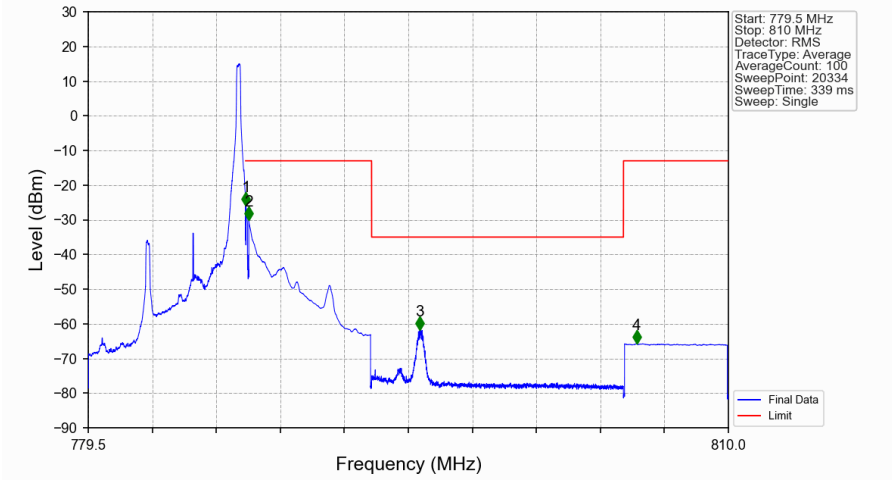
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV

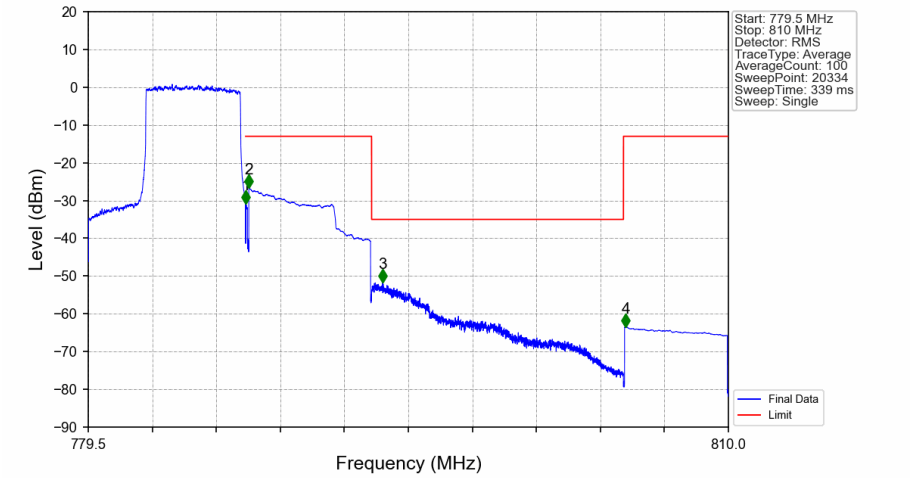


Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.015	-25.87	-13	Pass
787.1	793	0.1	CHP	2	787.150	-30.11	-13	Pass
793	805	0.00625	CHP	3	795.307	-61.65	-35	Pass
805	810	0.1	CHP	4	805.624	-65.76	-13	Pass

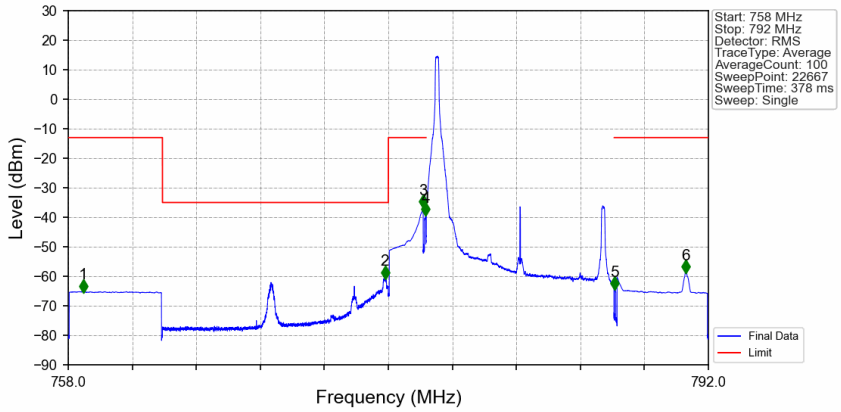
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.015	-30.86	-13	Pass
787.1	793	0.1	CHP	2	787.158	-26.65	-13	Pass
793	805	0.00625	CHP	3	793.516	-51.75	-35	Pass
805	810	0.1	CHP	4	805.101	-63.41	-13	Pass

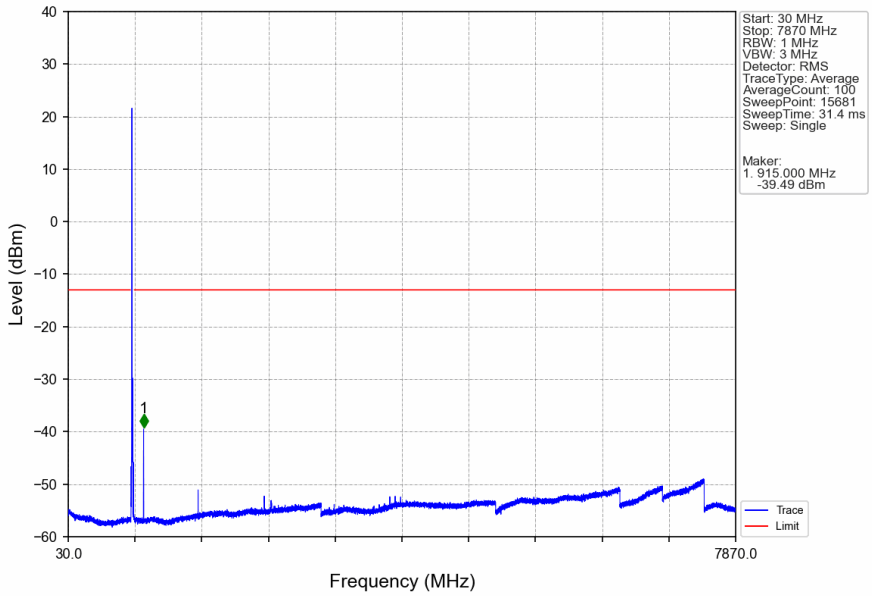
5.2.2 B13_10MHz

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

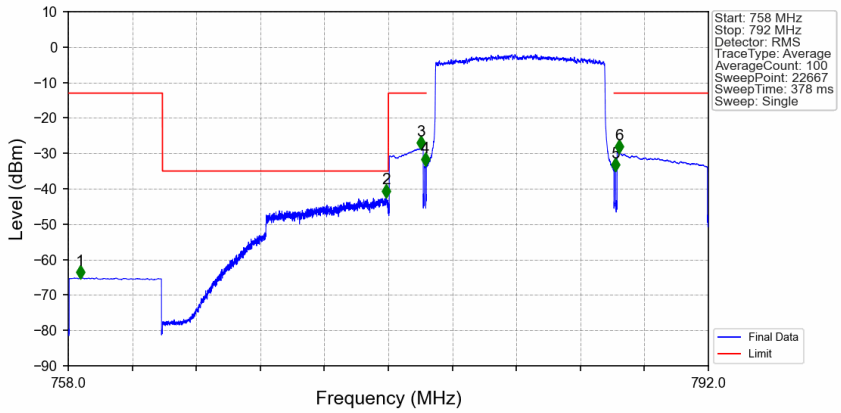


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	758.798	-65.15	-13	Pass
763	775	0.00625	CHP	2	774.823	-60.56	-35	Pass
775	776.9	0.1	CHP	3	776.850	-36.64	-13	Pass
776.9	777	0.03	CHP	4	776.985	-39.06	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.015	-64.25	-13	Pass
787.1	792	0.1	CHP	6	790.804	-58.69	-13	Pass

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

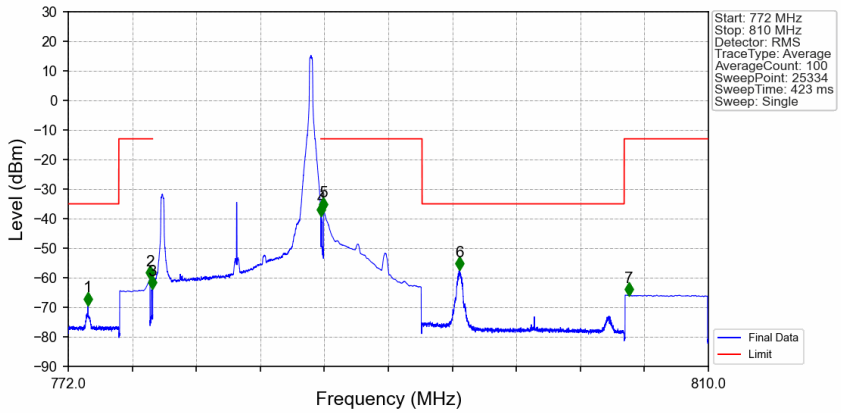


Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



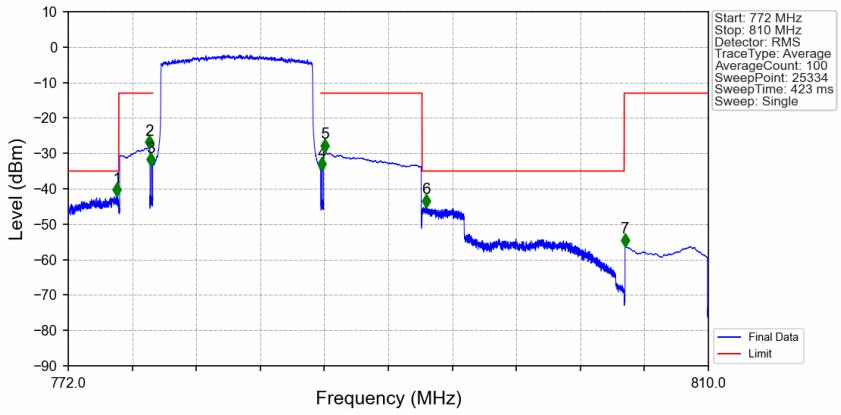
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	758.629	-65.14	-13	Pass
763	775	0.00625	CHP	2	774.895	-42.17	-35	Pass
775	776.9	0.1	CHP	3	776.743	-28.60	-13	Pass
776.9	777	0.03	CHP	4	776.967	-33.31	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.056	-34.72	-13	Pass
787.1	792	0.1	CHP	6	787.243	-29.59	-13	Pass

Band13_10MHz_QPSK_HCH_782MHz_RB_1_49_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
772	775	0.00625	CHP	1	773.166	-68.98	-35	Pass
775	776.9	0.1	CHP	2	776.850	-60.21	-13	Pass
776.9	777	0.03	CHP	3	776.985	-63.51	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.015	-38.72	-13	Pass
787.1	793	0.1	CHP	5	787.150	-36.96	-13	Pass
793	805	0.00625	CHP	6	795.240	-57.00	-35	Pass
805	810	0.1	CHP	7	805.276	-65.84	-13	Pass

Band13_10MHz_QPSK_HCH_782MHz_RB_50_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
772	775	0.00625	CHP	1	774.882	-41.87	-35	Pass
775	776.9	0.1	CHP	2	776.815	-28.33	-13	Pass
776.9	777	0.03	CHP	3	776.916	-33.26	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.066	-34.54	-13	Pass
787.1	793	0.1	CHP	5	787.228	-29.35	-13	Pass
793	805	0.00625	CHP	6	793.242	-44.93	-35	Pass
805	810	0.1	CHP	7	805.063	-56.02	-13	Pass

---End of Attachment---