

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	24.14	-4.85	17.14	<=34.77	Pass
			13	24.24	-4.85	17.24	<=34.77	Pass
			24	24.19	-4.85	17.19	<=34.77	Pass
		12	0	23.00	-4.85	16.00	<=34.77	Pass
			6	23.06	-4.85	16.06	<=34.77	Pass
			13	23.06	-4.85	16.06	<=34.77	Pass
		25	0	23.10	-4.85	16.10	<=34.77	Pass
	782	1	0	24.16	-4.85	17.16	<=34.77	Pass
			13	24.04	-4.85	17.04	<=34.77	Pass
			24	24.08	-4.85	17.08	<=34.77	Pass
		12	0	23.07	-4.85	16.07	<=34.77	Pass
			6	23.04	-4.85	16.04	<=34.77	Pass
			13	23.01	-4.85	16.01	<=34.77	Pass
		25	0	23.09	-4.85	16.09	<=34.77	Pass
	784.5	1	0	24.09	-4.85	17.09	<=34.77	Pass
			13	24.02	-4.85	17.02	<=34.77	Pass
			24	24.05	-4.85	17.05	<=34.77	Pass
		12	0	23.03	-4.85	16.03	<=34.77	Pass
			6	22.98	-4.85	15.98	<=34.77	Pass
			13	22.98	-4.85	15.98	<=34.77	Pass
		25	0	23.05	-4.85	16.05	<=34.77	Pass
16QAM	779.5	1	0	22.88	-4.85	15.88	<=34.77	Pass
			13	23.00	-4.85	16.00	<=34.77	Pass
			24	22.97	-4.85	15.97	<=34.77	Pass
		12	0	22.10	-4.85	15.10	<=34.77	Pass
			6	22.10	-4.85	15.10	<=34.77	Pass
			13	22.11	-4.85	15.11	<=34.77	Pass
		25	0	22.12	-4.85	15.12	<=34.77	Pass
	782	1	0	23.32	-4.85	16.32	<=34.77	Pass
			13	23.31	-4.85	16.31	<=34.77	Pass
			24	23.28	-4.85	16.28	<=34.77	Pass
		12	0	22.13	-4.85	15.13	<=34.77	Pass
			6	22.09	-4.85	15.09	<=34.77	Pass
			13	22.06	-4.85	15.06	<=34.77	Pass
		25	0	22.05	-4.85	15.05	<=34.77	Pass
	784.5	1	0	23.17	-4.85	16.17	<=34.77	Pass
			13	23.10	-4.85	16.10	<=34.77	Pass
			24	23.09	-4.85	16.09	<=34.77	Pass
		12	0	22.05	-4.85	15.05	<=34.77	Pass
			6	21.99	-4.85	14.99	<=34.77	Pass
			13	21.97	-4.85	14.97	<=34.77	Pass
		25	0	22.01	-4.85	15.01	<=34.77	Pass
64QAM	779.5	1	0	22.00	-4.85	15.00	<=34.77	Pass
			13	22.00	-4.85	15.00	<=34.77	Pass
			24	21.99	-4.85	14.99	<=34.77	Pass
		12	0	21.12	-4.85	14.12	<=34.77	Pass
			6	21.15	-4.85	14.15	<=34.77	Pass
			13	21.11	-4.85	14.11	<=34.77	Pass
		25	0	21.09	-4.85	14.09	<=34.77	Pass

	782	1	0	22.43	-4.85	15.43	<=34.77	Pass
			13	22.40	-4.85	15.40	<=34.77	Pass
			24	22.40	-4.85	15.40	<=34.77	Pass
		12	0	21.05	-4.85	14.05	<=34.77	Pass
			6	21.03	-4.85	14.03	<=34.77	Pass
			13	21.00	-4.85	14.00	<=34.77	Pass
		25	0	21.05	-4.85	14.05	<=34.77	Pass
	784.5	1	0	22.28	-4.85	15.28	<=34.77	Pass
			13	22.25	-4.85	15.25	<=34.77	Pass
			24	22.25	-4.85	15.25	<=34.77	Pass
		12	0	21.17	-4.85	14.17	<=34.77	Pass
			6	21.17	-4.85	14.17	<=34.77	Pass
			13	21.15	-4.85	14.15	<=34.77	Pass
		25	0	21.15	-4.85	14.15	<=34.77	Pass
256QAM	779.5	1	0	18.89	-4.85	11.89	<=34.77	Pass
			13	18.87	-4.85	11.87	<=34.77	Pass
			24	18.84	-4.85	11.84	<=34.77	Pass
		12	0	19.08	-4.85	12.08	<=34.77	Pass
			6	19.13	-4.85	12.13	<=34.77	Pass
			13	19.11	-4.85	12.11	<=34.77	Pass
		25	0	19.17	-4.85	12.17	<=34.77	Pass
	782	1	0	19.29	-4.85	12.29	<=34.77	Pass
			13	19.26	-4.85	12.26	<=34.77	Pass
			24	19.25	-4.85	12.25	<=34.77	Pass
		12	0	19.12	-4.85	12.12	<=34.77	Pass
			6	19.10	-4.85	12.10	<=34.77	Pass
			13	19.08	-4.85	12.08	<=34.77	Pass
		25	0	19.10	-4.85	12.10	<=34.77	Pass
	784.5	1	0	19.13	-4.85	12.13	<=34.77	Pass
			13	19.10	-4.85	12.10	<=34.77	Pass
			24	19.05	-4.85	12.05	<=34.77	Pass
		12	0	19.11	-4.85	12.11	<=34.77	Pass
			6	19.10	-4.85	12.10	<=34.77	Pass
			13	19.08	-4.85	12.08	<=34.77	Pass
		25	0	19.13	-4.85	12.13	<=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	24.12	-4.85	17.12	<=34.77	Pass
			25	24.05	-4.85	17.05	<=34.77	Pass
			49	23.98	-4.85	16.98	<=34.77	Pass
		25	0	23.03	-4.85	16.03	<=34.77	Pass
			13	23.02	-4.85	16.02	<=34.77	Pass
			25	23.02	-4.85	16.02	<=34.77	Pass
		50	0	23.02	-4.85	16.02	<=34.77	Pass
16QAM	782	1	0	23.68	-4.85	16.68	<=34.77	Pass
			25	23.56	-4.85	16.56	<=34.77	Pass
			49	23.56	-4.85	16.56	<=34.77	Pass
		25	0	22.07	-4.85	15.07	<=34.77	Pass
			13	22.05	-4.85	15.05	<=34.77	Pass
			25	22.05	-4.85	15.05	<=34.77	Pass
		50	0	22.02	-4.85	15.02	<=34.77	Pass
64QAM	782	1	0	22.39	-4.85	15.39	<=34.77	Pass

			25	22.29	-4.85	15.29	<=34.77	Pass		
			49	22.25	-4.85	15.25	<=34.77	Pass		
		25	0	21.06	-4.85	14.06	<=34.77	Pass		
			13	21.11	-4.85	14.11	<=34.77	Pass		
			25	21.09	-4.85	14.09	<=34.77	Pass		
		50	0	21.06	-4.85	14.06	<=34.77	Pass		
		256QAM	782	1	0	19.57	-4.85	12.57	<=34.77	Pass
					25	19.45	-4.85	12.45	<=34.77	Pass
					49	19.45	-4.85	12.45	<=34.77	Pass
				25	0	19.08	-4.85	12.08	<=34.77	Pass
13	19.11				-4.85	12.11	<=34.77	Pass		
25	19.12				-4.85	12.12	<=34.77	Pass		
50	0			19.07	-4.85	12.07	<=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	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	782	50	0	20	LV	-0.494	-0.0006	-2.5 to 2.5	Pass
					NV	-0.365	-0.0005	-2.5 to 2.5	Pass
					HV	-2.324	-0.0030	-2.5 to 2.5	Pass
				-30	NV	-0.837	-0.0011	-2.5 to 2.5	Pass
				-20	NV	2.708	0.0035	-2.5 to 2.5	Pass
				-10	NV	1.245	0.0016	-2.5 to 2.5	Pass
				0	NV	0.957	0.0012	-2.5 to 2.5	Pass
				10	NV	-0.604	-0.0008	-2.5 to 2.5	Pass
				30	NV	-0.110	-0.0001	-2.5 to 2.5	Pass
				40	NV	1.703	0.0022	-2.5 to 2.5	Pass
				50	NV	0.103	0.0001	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

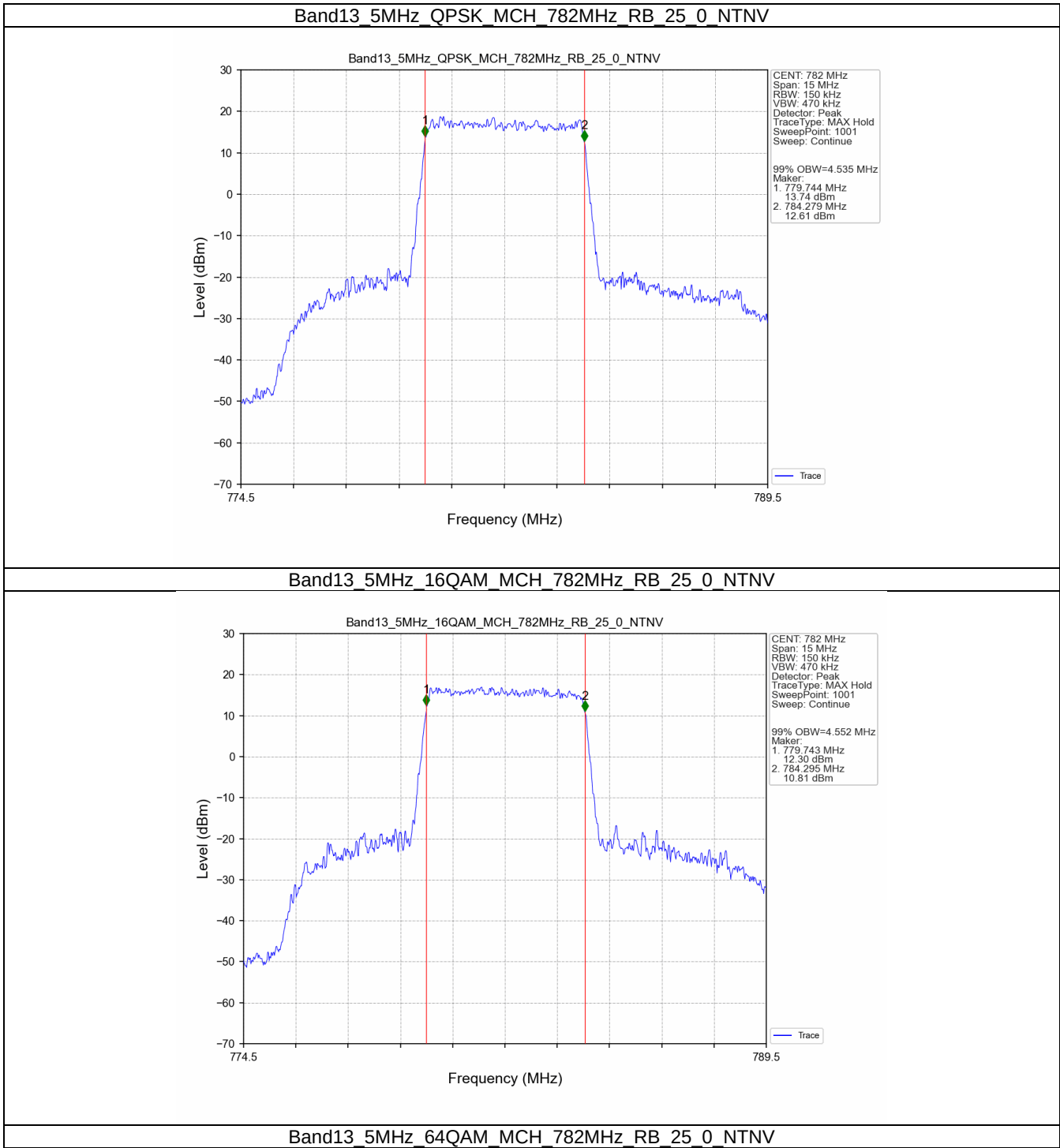
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.535	/	Pass
	16QAM	782	25	0	4.552	/	Pass
	64QAM	782	25	0	4.543	/	Pass
	256QAM	782	25	0	4.550	/	Pass
10	QPSK	782	50	0	9.044	/	Pass
	16QAM	782	50	0	9.047	/	Pass
	64QAM	782	50	0	9.000	/	Pass
	256QAM	782	50	0	9.028	/	Pass

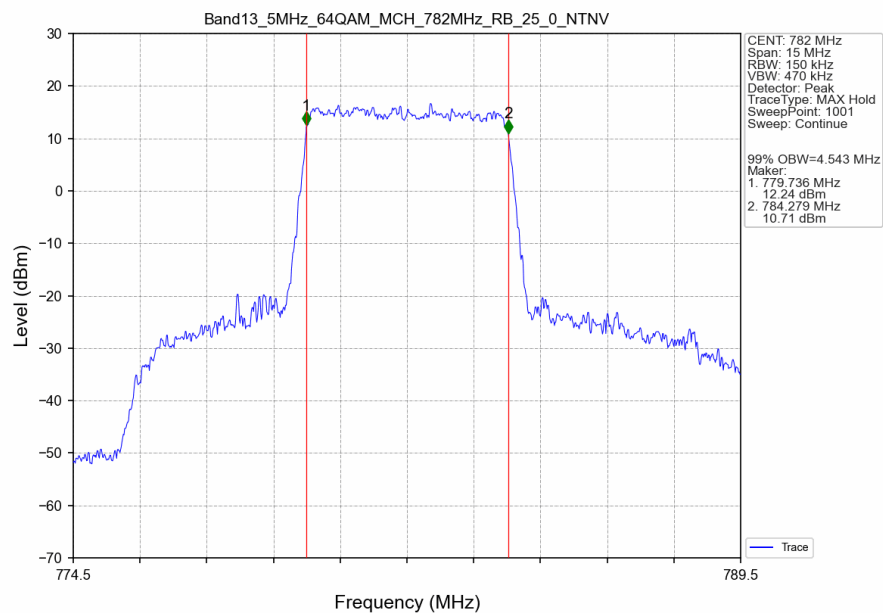
3.1.2 Band13_XDB

Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.049	/	Pass
	16QAM	782	25	0	5.059	/	Pass
	64QAM	782	25	0	5.056	/	Pass
	256QAM	782	25	0	5.040	/	Pass
10	QPSK	782	50	0	9.950	/	Pass
	16QAM	782	50	0	9.881	/	Pass
	64QAM	782	50	0	9.913	/	Pass
	256QAM	782	50	0	9.910	/	Pass

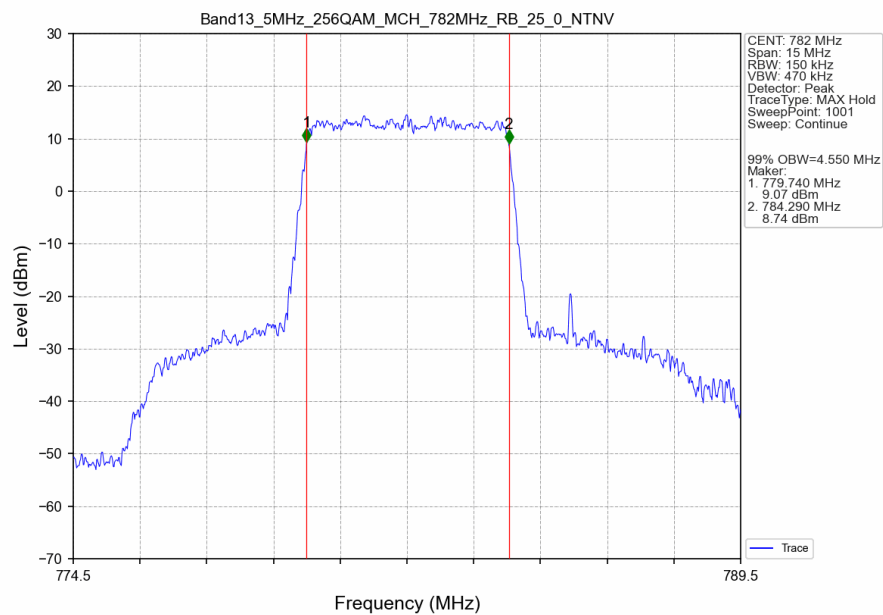
3.2 Test Graph

3.2.1 Band13_OBW

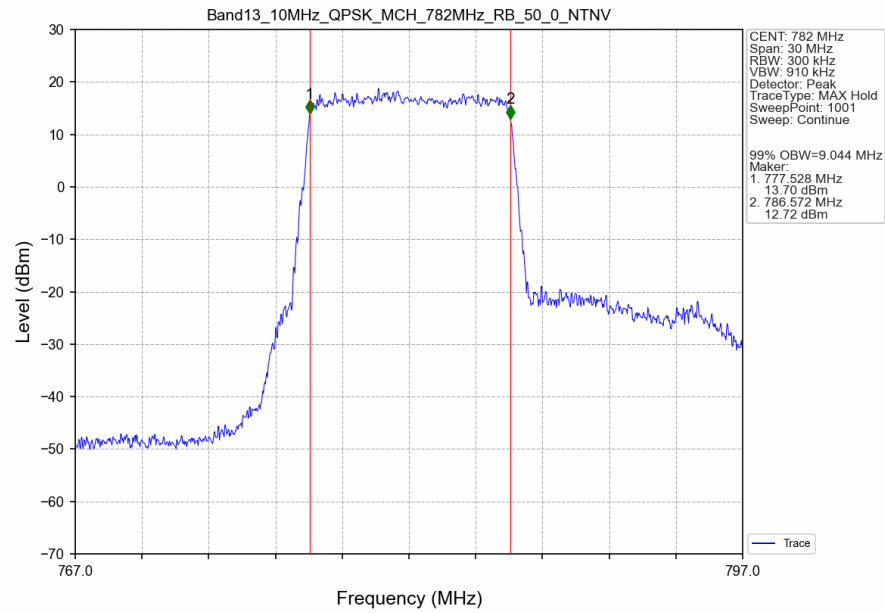




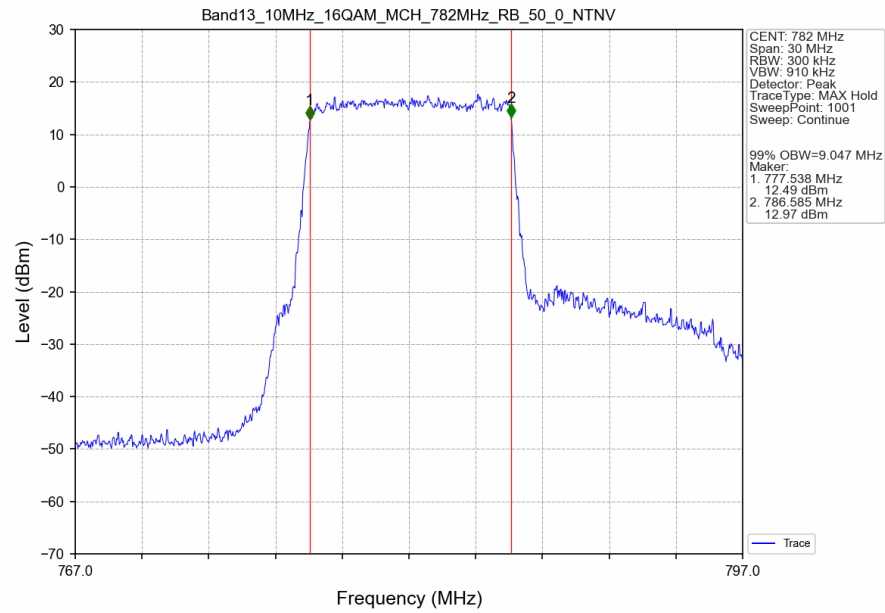
Band13_5MHz_256QAM_MCH_782MHz_RB_25_0_NTNV



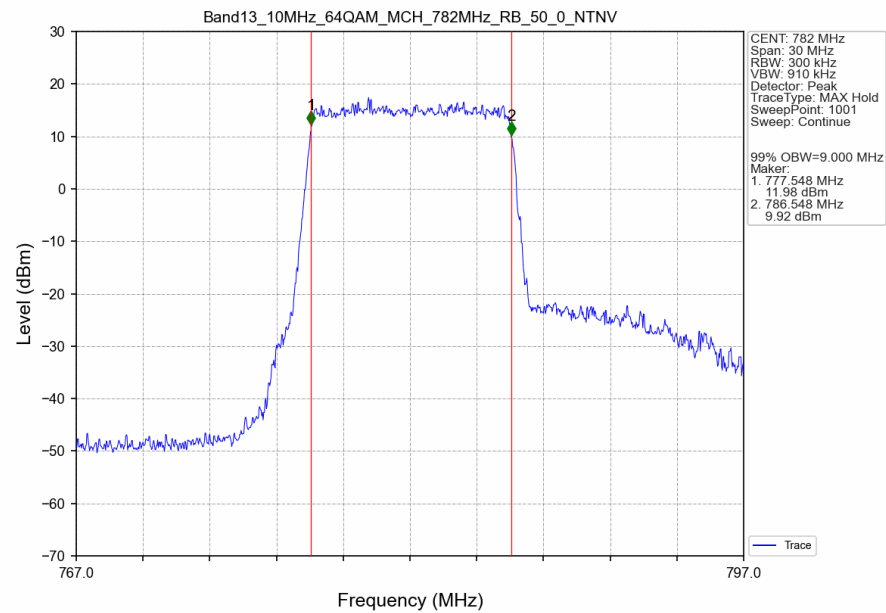
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



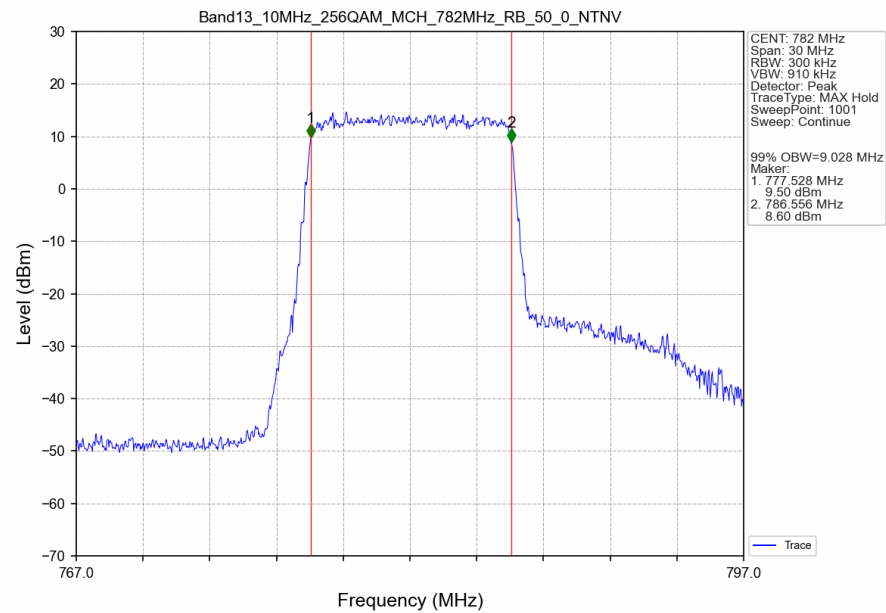
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



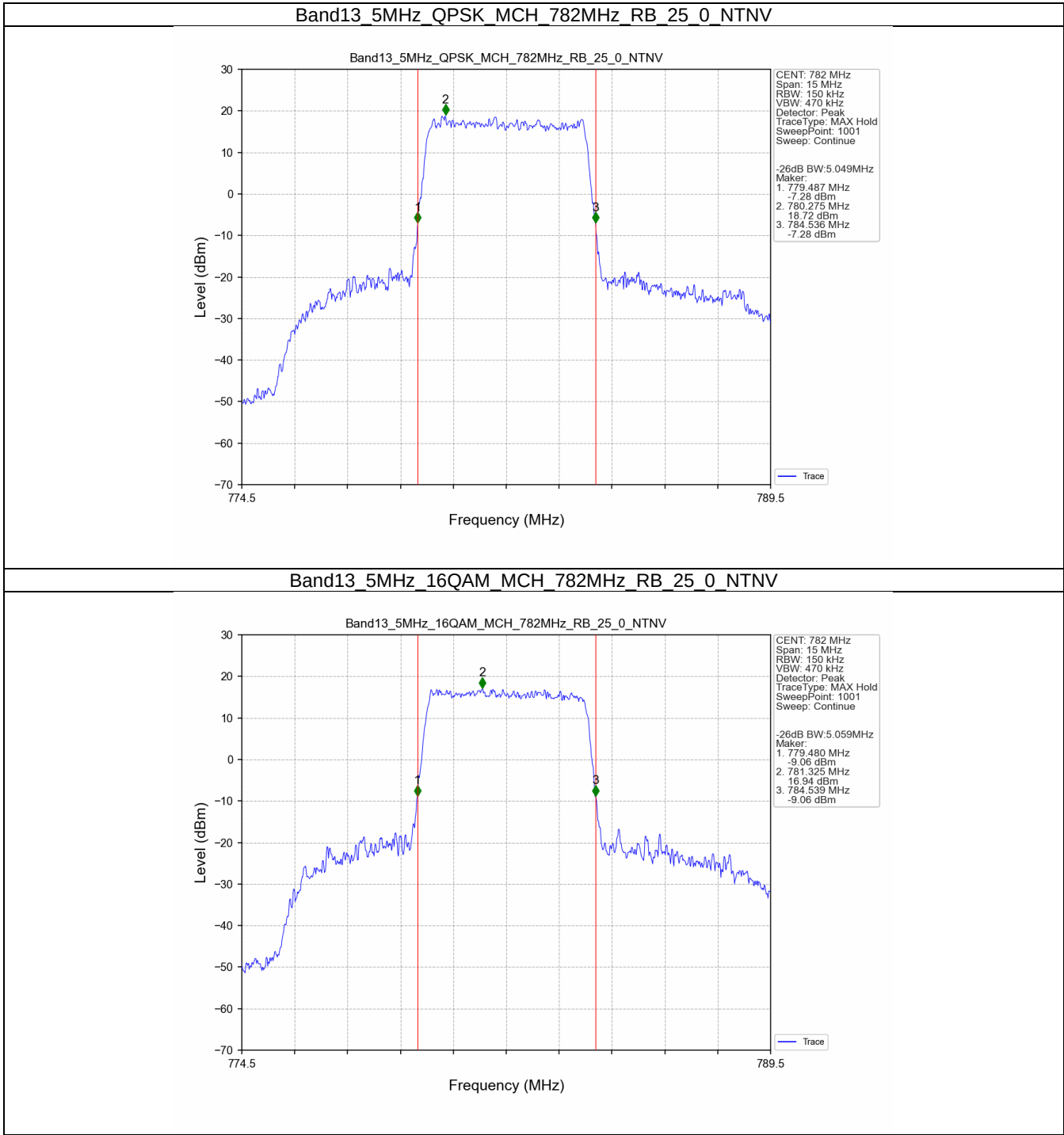
Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



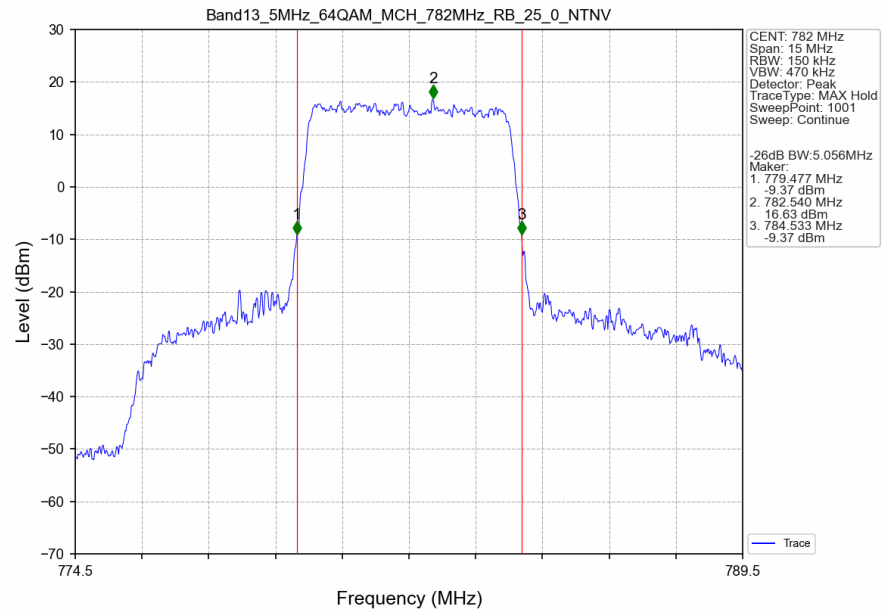
Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV



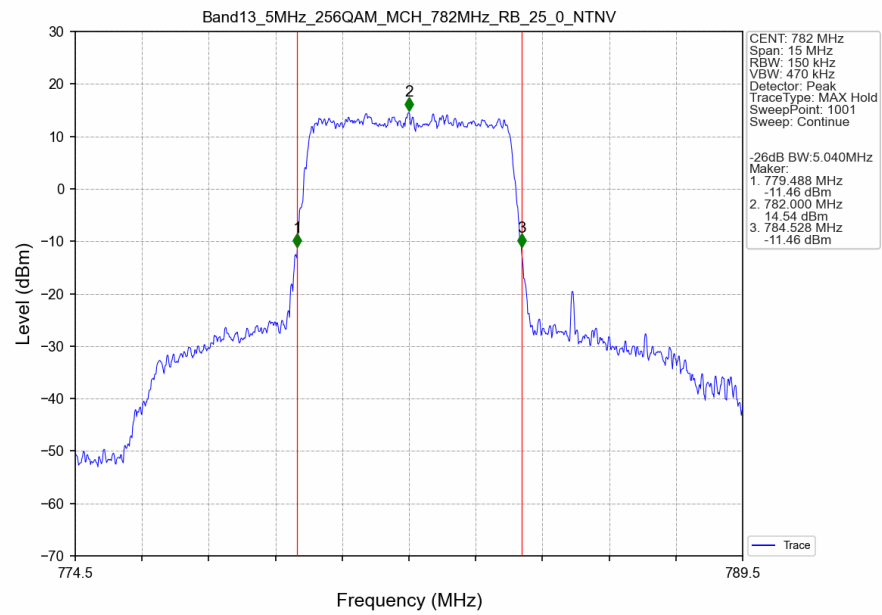
3.2.2 Band13_XDB



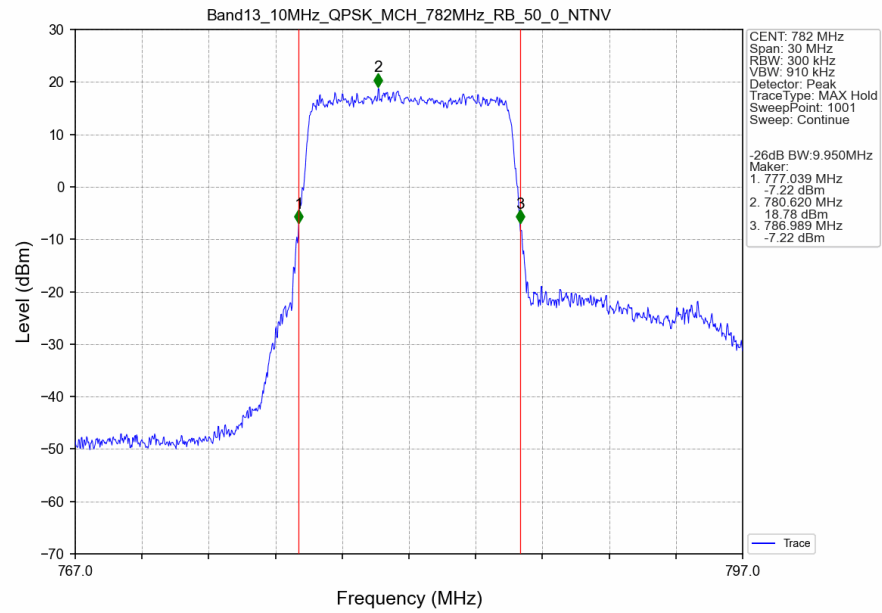
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



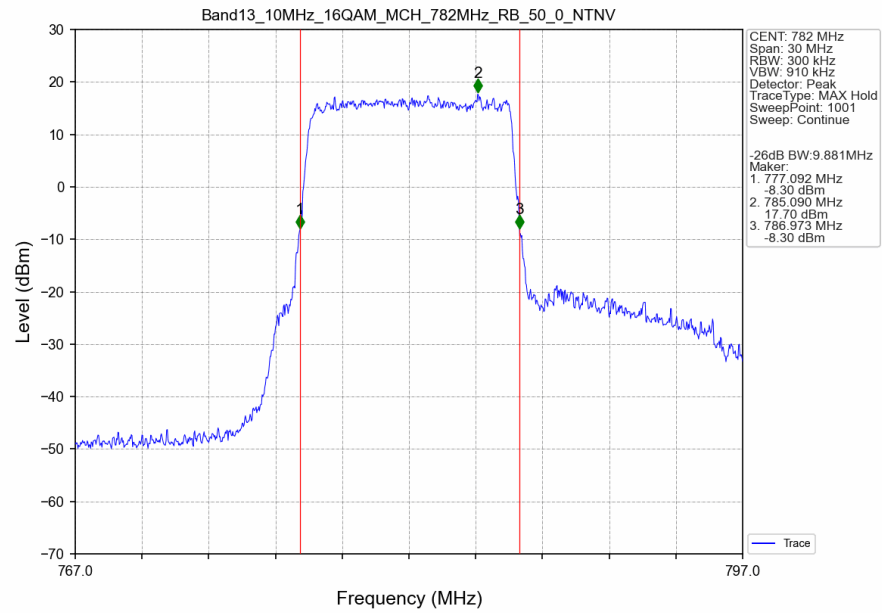
Band13_5MHz_256QAM_MCH_782MHz_RB_25_0_NTNV



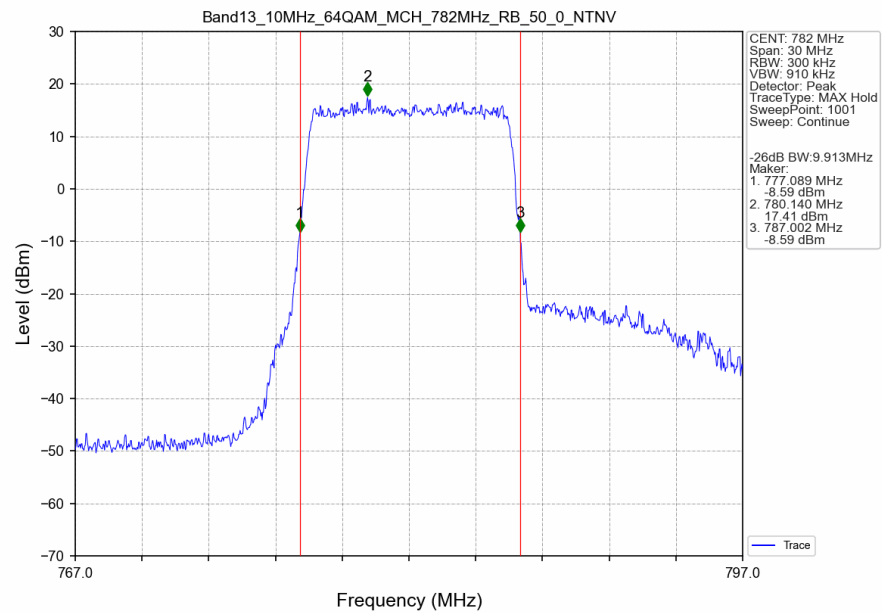
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



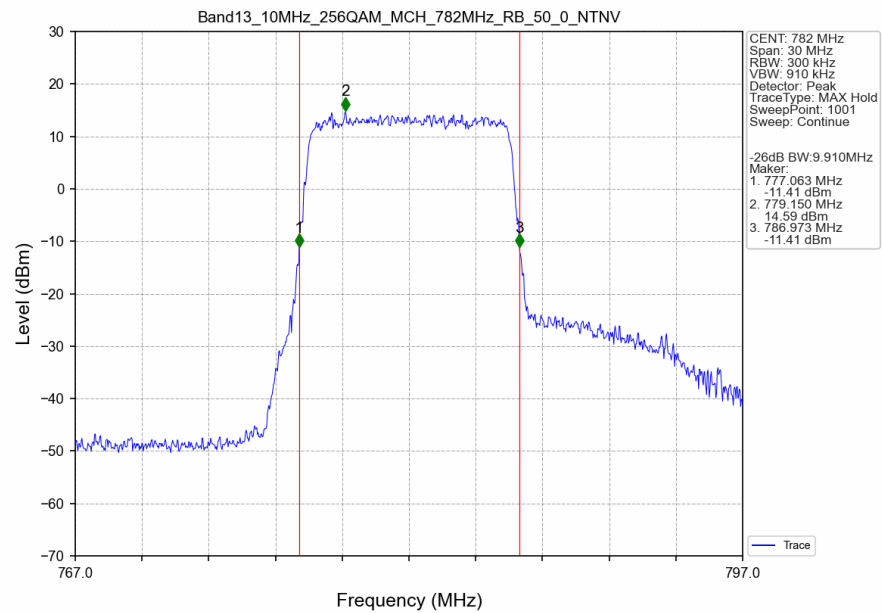
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV



4. Peak-Average Ratio

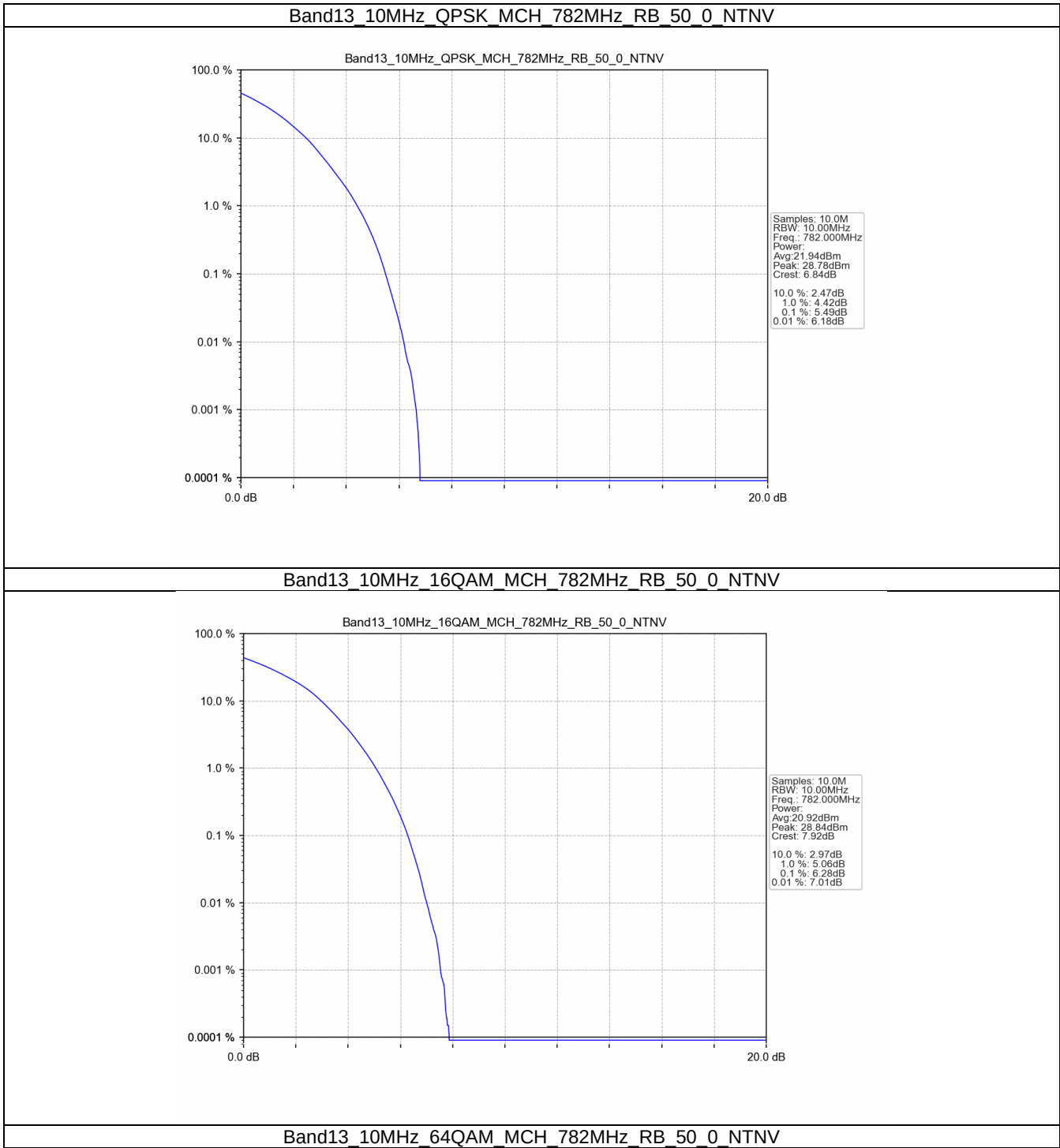
4.1 Test Result

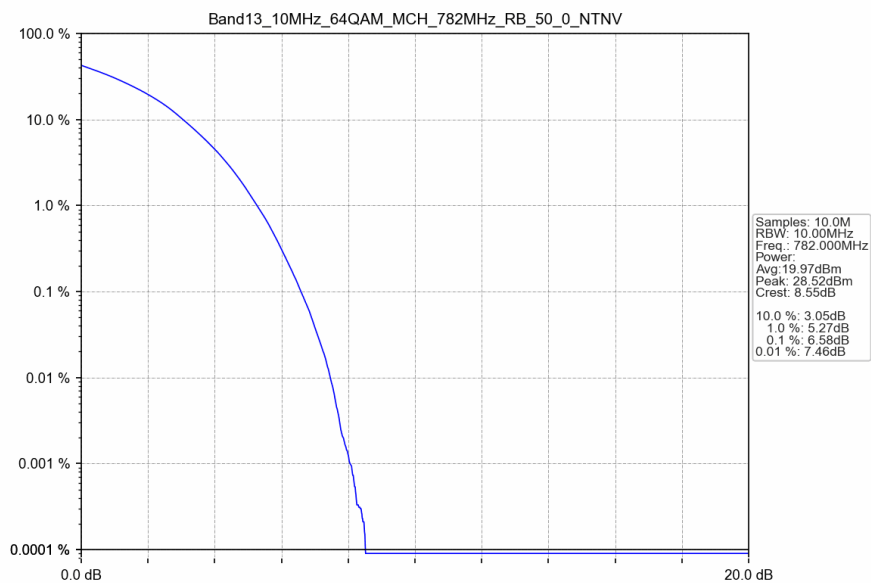
4.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.49	<=13	Pass
16QAM	782	50	0	6.28	<=13	Pass
64QAM	782	50	0	6.58	<=13	Pass
256QAM	782	50	0	6.81	<=13	Pass

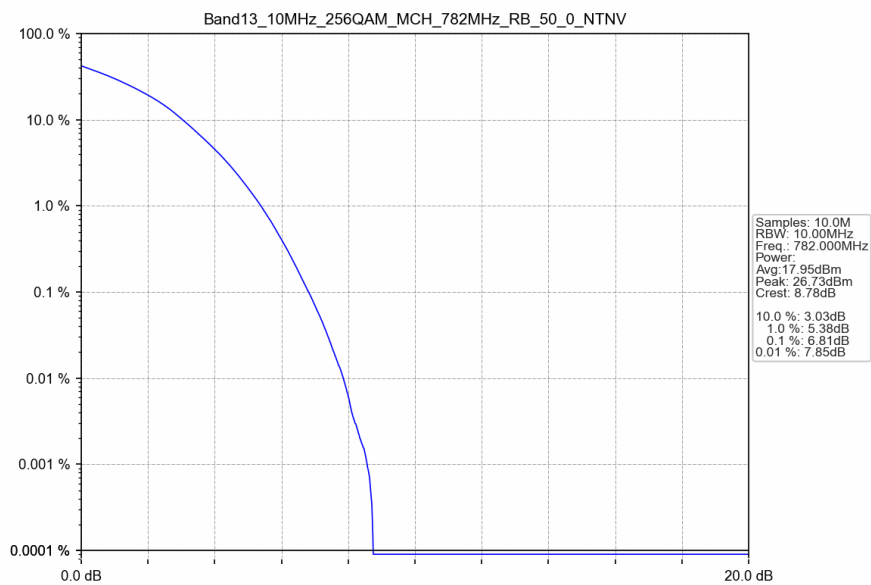
4.2 Test Graph

4.2.1 B13_10MHz





Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B13_5MHz

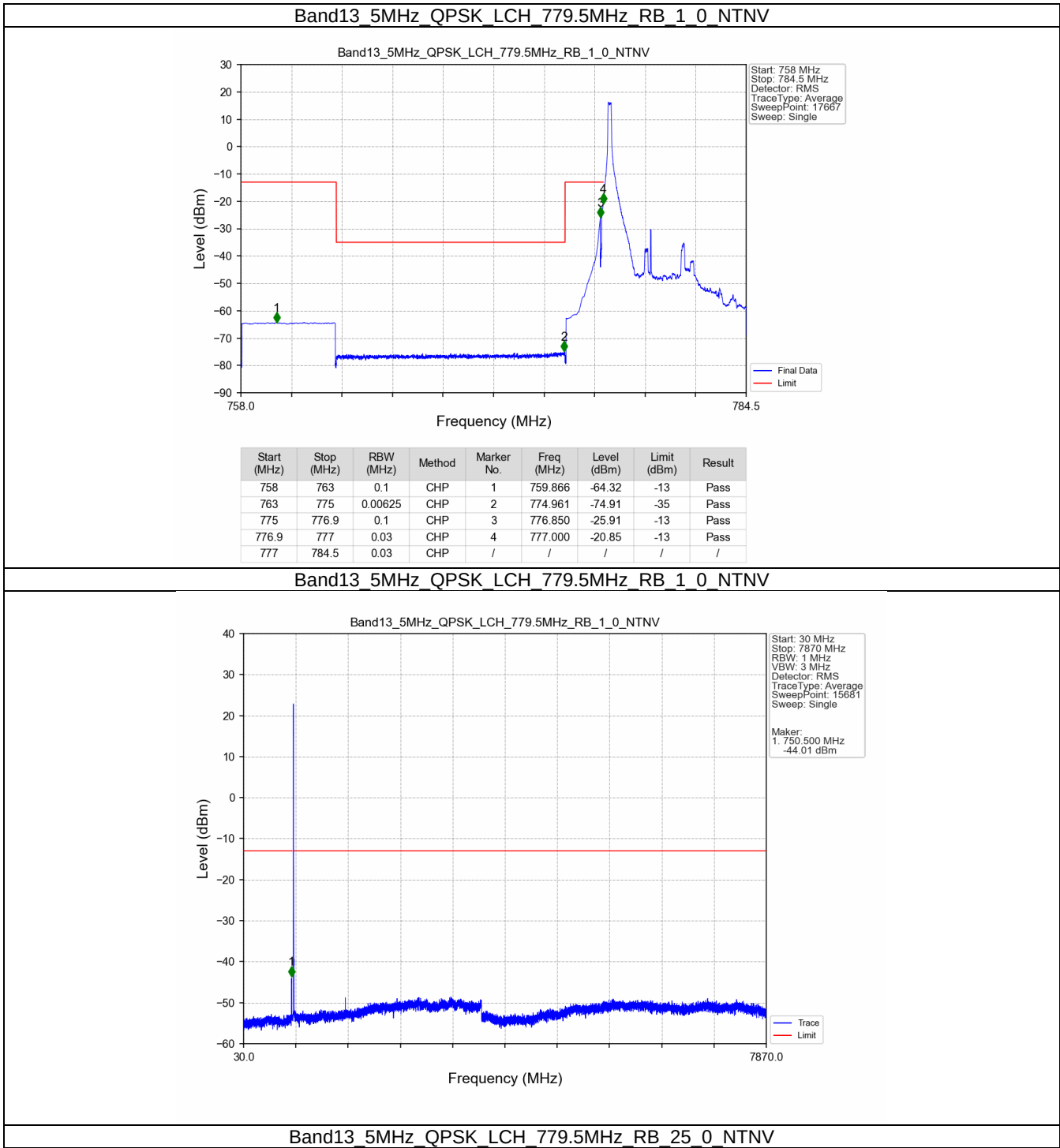
Band: 13 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

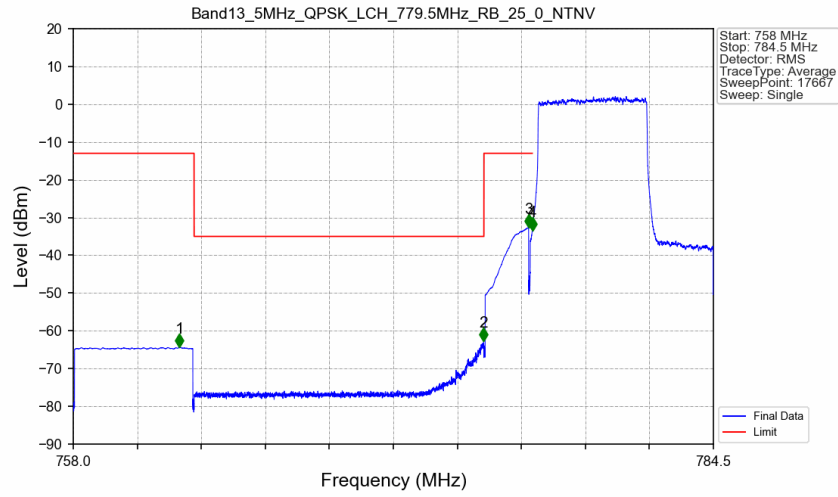
5.1.2 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTV						
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

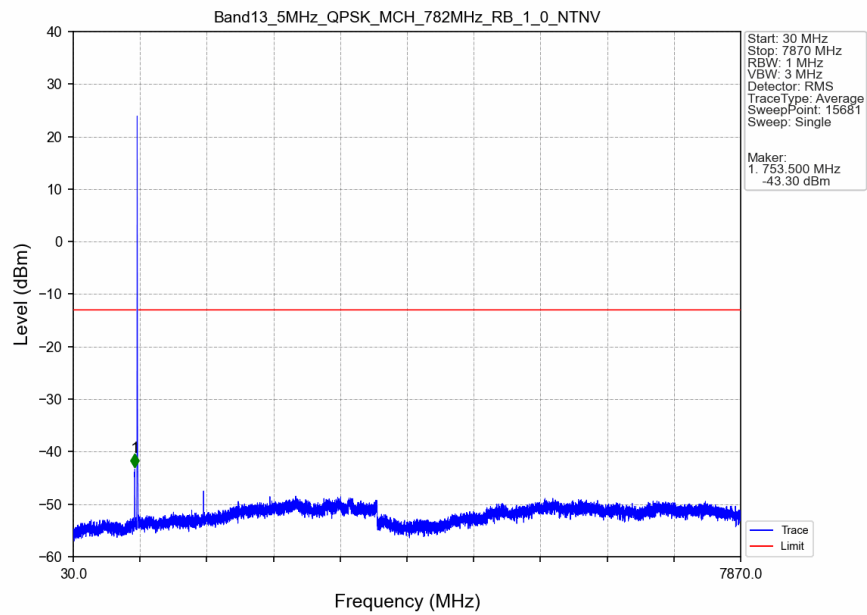
5.2.1 B13_5MHz



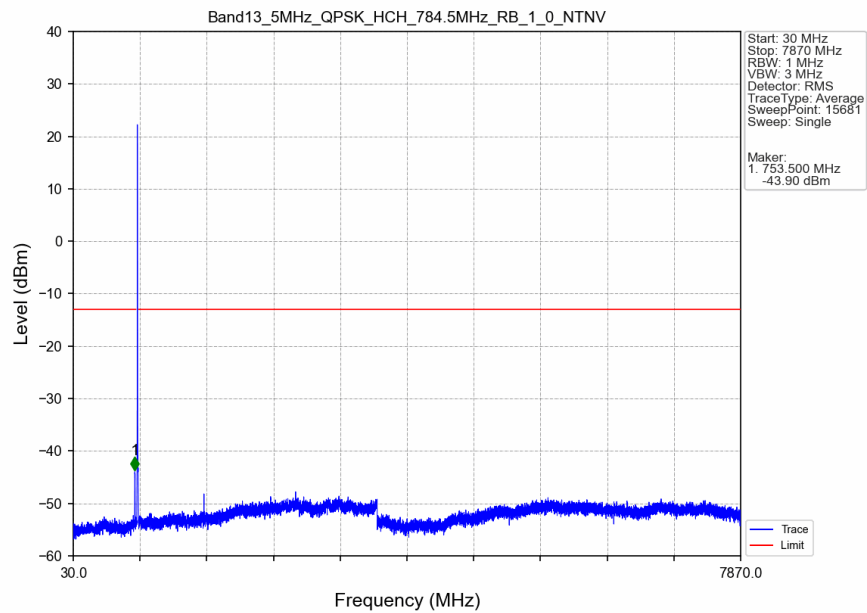


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	762.397	-64.36	-13	Pass
763	775	0.00625	CHP	2	774.990	-62.69	-35	Pass
775	776.9	0.1	CHP	3	776.850	-32.56	-13	Pass
776.9	777	0.03	CHP	4	777.000	-33.42	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

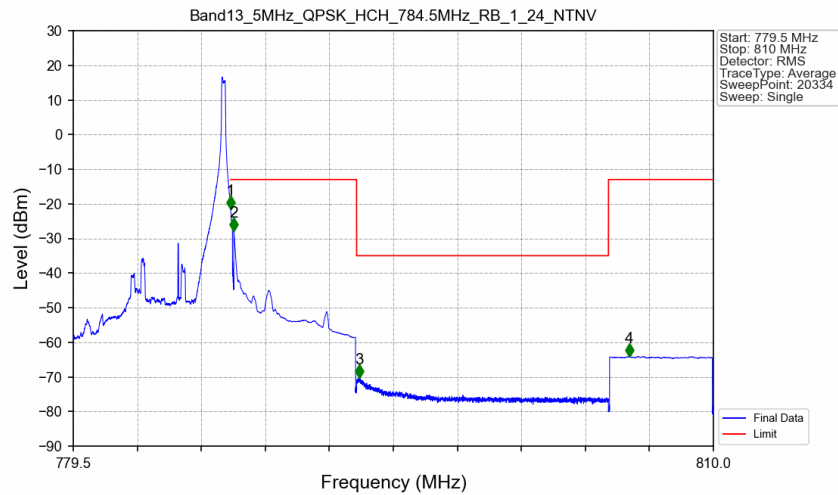
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV

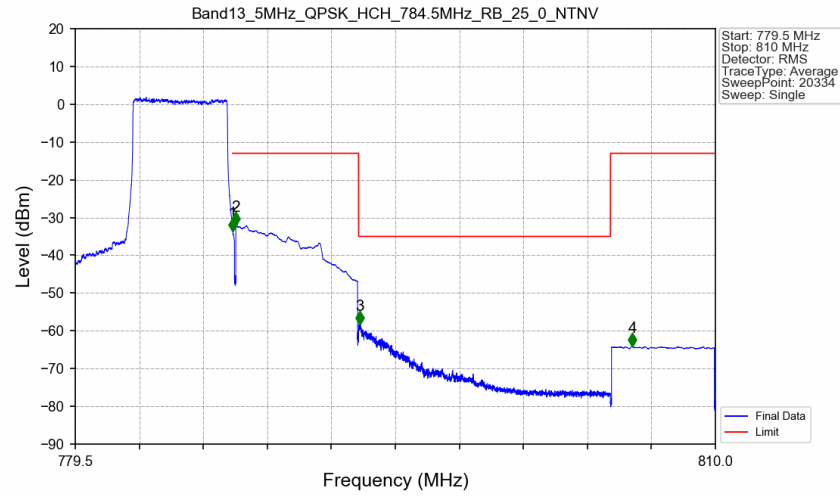


Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



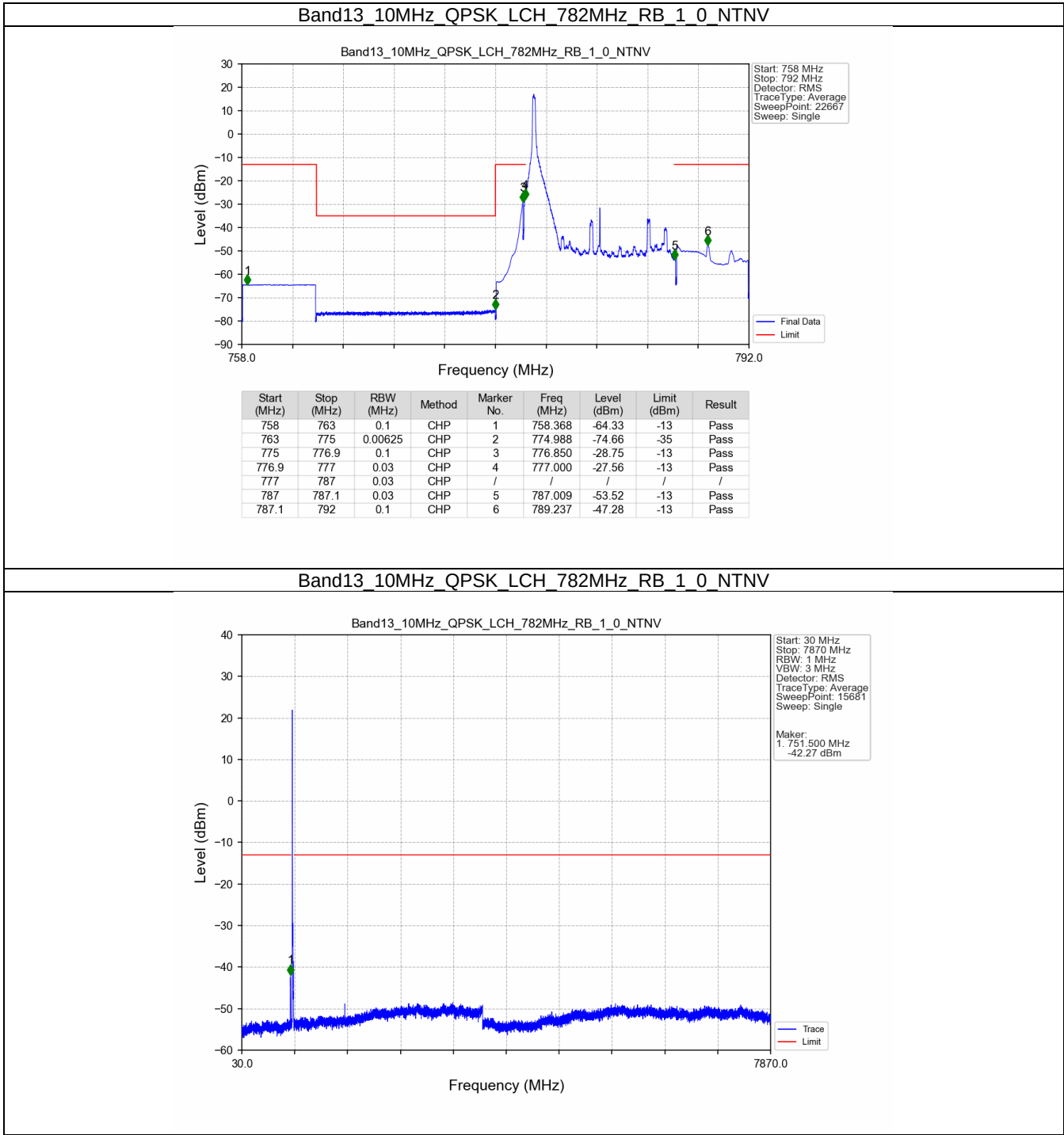
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-21.57	-13	Pass
787.1	793	0.1	CHP	2	787.150	-27.90	-13	Pass
793	805	0.00625	CHP	3	793.141	-70.21	-35	Pass
805	810	0.1	CHP	4	805.984	-64.09	-13	Pass

Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV

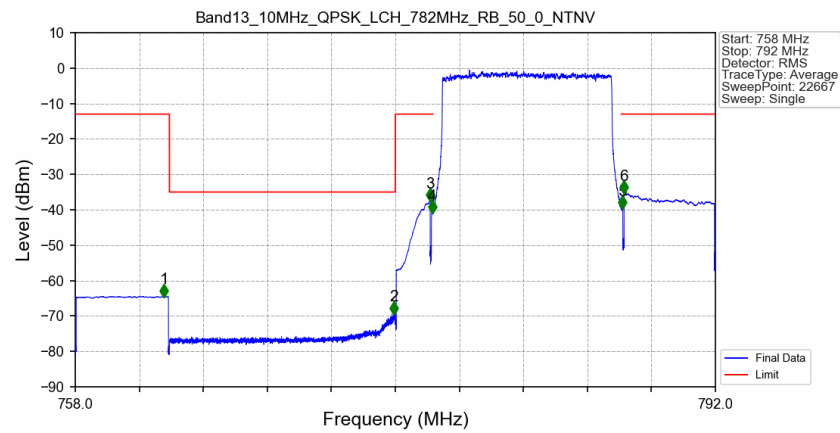


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-33.72	-13	Pass
787.1	793	0.1	CHP	2	787.150	-32.04	-13	Pass
793	805	0.00625	CHP	3	793.069	-58.22	-35	Pass
805	810	0.1	CHP	4	806.044	-64.11	-13	Pass

5.2.2 B13_10MHz

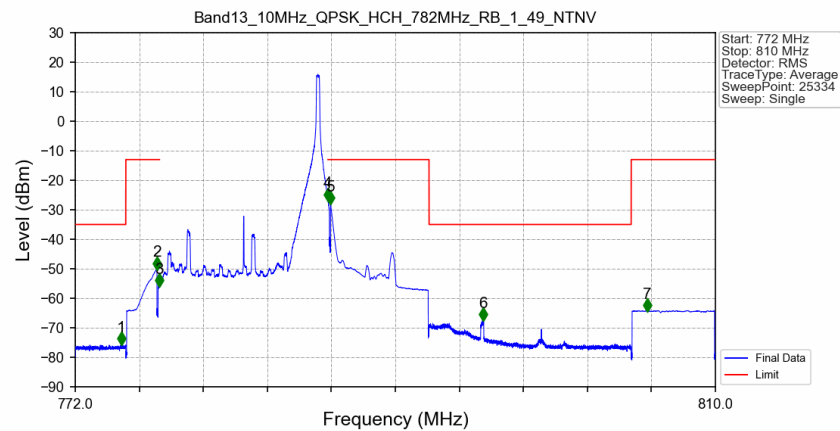


Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



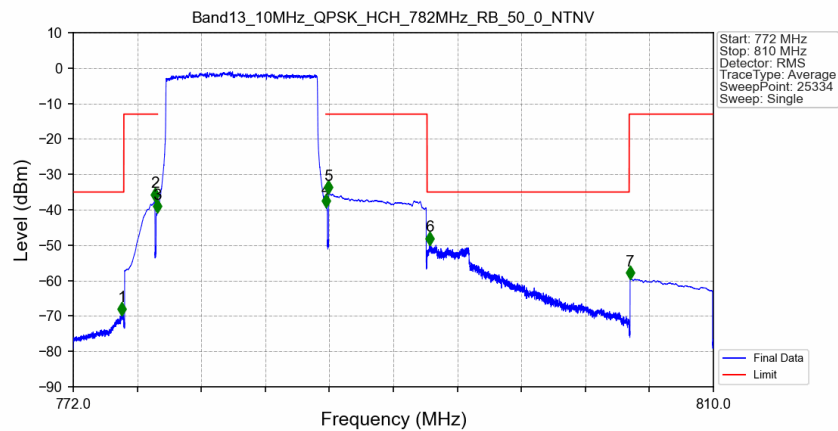
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	762.707	-64.38	-13	Pass
763	775	0.00625	CHP	2	774.911	-69.26	-35	Pass
775	776.9	0.1	CHP	3	776.848	-37.35	-13	Pass
776.9	777	0.03	CHP	4	776.953	-40.69	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.054	-39.44	-13	Pass
787.1	792	0.1	CHP	6	787.150	-35.16	-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	774.720	-75.51	-35	Pass
775	776.9	0.1	CHP	2	776.842	-50.01	-13	Pass
776.9	777	0.03	CHP	3	776.986	-55.87	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-26.68	-13	Pass
787.1	793	0.1	CHP	5	787.150	-27.86	-13	Pass
793	805	0.00625	CHP	6	796.212	-67.30	-35	Pass
805	810	0.1	CHP	7	805.951	-64.19	-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	774.883	-69.47	-35	Pass
775	776.9	0.1	CHP	2	776.850	-37.25	-13	Pass
776.9	777	0.03	CHP	3	776.992	-40.49	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-39.07	-13	Pass
787.1	793	0.1	CHP	5	787.150	-35.18	-13	Pass
793	805	0.00625	CHP	6	793.150	-49.62	-35	Pass
805	810	0.1	CHP	7	805.059	-59.39	-13	Pass