

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	23.06	-3.20	17.71	<=34.77	Pass
			13	23.24	-3.20	17.89	<=34.77	Pass
			24	23.14	-3.20	17.79	<=34.77	Pass
		12	0	22.20	-3.20	16.85	<=34.77	Pass
			6	22.28	-3.20	16.93	<=34.77	Pass
			13	22.24	-3.20	16.89	<=34.77	Pass
		25	0	22.25	-3.20	16.90	<=34.77	Pass
	782	1	0	23.17	-3.20	17.82	<=34.77	Pass
			13	23.26	-3.20	17.91	<=34.77	Pass
			24	23.19	-3.20	17.84	<=34.77	Pass
		12	0	22.28	-3.20	16.93	<=34.77	Pass
			6	22.26	-3.20	16.91	<=34.77	Pass
			13	22.23	-3.20	16.88	<=34.77	Pass
		25	0	22.24	-3.20	16.89	<=34.77	Pass
	784.5	1	0	23.16	-3.20	17.81	<=34.77	Pass
			13	23.32	-3.20	17.97	<=34.77	Pass
			24	23.24	-3.20	17.89	<=34.77	Pass
		12	0	22.20	-3.20	16.85	<=34.77	Pass
			6	22.26	-3.20	16.91	<=34.77	Pass
			13	22.27	-3.20	16.92	<=34.77	Pass
		25	0	22.28	-3.20	16.93	<=34.77	Pass
16QAM	779.5	1	0	22.34	-3.20	16.99	<=34.77	Pass
			13	22.44	-3.20	17.09	<=34.77	Pass
			24	22.36	-3.20	17.01	<=34.77	Pass
		12	0	21.23	-3.20	15.88	<=34.77	Pass
			6	21.31	-3.20	15.96	<=34.77	Pass
			13	21.23	-3.20	15.88	<=34.77	Pass
		25	0	21.25	-3.20	15.90	<=34.77	Pass
	782	1	0	22.34	-3.20	16.99	<=34.77	Pass
			13	22.47	-3.20	17.12	<=34.77	Pass
			24	22.30	-3.20	16.95	<=34.77	Pass
		12	0	21.19	-3.20	15.84	<=34.77	Pass
			6	21.23	-3.20	15.88	<=34.77	Pass
			13	21.20	-3.20	15.85	<=34.77	Pass
		25	0	21.24	-3.20	15.89	<=34.77	Pass
	784.5	1	0	22.44	-3.20	17.09	<=34.77	Pass
			13	22.58	-3.20	17.23	<=34.77	Pass
			24	22.46	-3.20	17.11	<=34.77	Pass
		12	0	21.12	-3.20	15.77	<=34.77	Pass
			6	21.21	-3.20	15.86	<=34.77	Pass
			13	21.24	-3.20	15.89	<=34.77	Pass
		25	0	21.27	-3.20	15.92	<=34.77	Pass
64QAM	779.5	1	0	21.51	-3.20	16.16	<=34.77	Pass
			13	21.62	-3.20	16.27	<=34.77	Pass
			24	21.48	-3.20	16.13	<=34.77	Pass
		12	0	20.26	-3.20	14.91	<=34.77	Pass
			6	20.33	-3.20	14.98	<=34.77	Pass
			13	20.26	-3.20	14.91	<=34.77	Pass
		25	0	20.25	-3.20	14.90	<=34.77	Pass

	782	1	0	21.61	-3.20	16.26	<=34.77	Pass
			13	21.80	-3.20	16.45	<=34.77	Pass
			24	21.65	-3.20	16.30	<=34.77	Pass
		12	0	20.31	-3.20	14.96	<=34.77	Pass
			6	20.35	-3.20	15.00	<=34.77	Pass
			13	20.30	-3.20	14.95	<=34.77	Pass
	784.5	25	0	20.38	-3.20	15.03	<=34.77	Pass
			0	21.14	-3.20	15.79	<=34.77	Pass
			13	21.32	-3.20	15.97	<=34.77	Pass
		1	24	21.19	-3.20	15.84	<=34.77	Pass
			0	20.20	-3.20	14.85	<=34.77	Pass
			6	20.28	-3.20	14.93	<=34.77	Pass
		12	13	20.28	-3.20	14.93	<=34.77	Pass
			25	0	20.25	14.90	<=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	23.23	-3.20	17.88	<=34.77	Pass
			25	23.38	-3.20	18.03	<=34.77	Pass
			49	23.23	-3.20	17.88	<=34.77	Pass
		25	0	22.31	-3.20	16.96	<=34.77	Pass
			13	22.28	-3.20	16.93	<=34.77	Pass
			25	22.32	-3.20	16.97	<=34.77	Pass
		50	0	22.31	-3.20	16.96	<=34.77	Pass
16QAM	782	1	0	22.40	-3.20	17.05	<=34.77	Pass
			25	22.55	-3.20	17.20	<=34.77	Pass
			49	22.43	-3.20	17.08	<=34.77	Pass
		25	0	21.38	-3.20	16.03	<=34.77	Pass
			13	21.32	-3.20	15.97	<=34.77	Pass
			25	21.38	-3.20	16.03	<=34.77	Pass
		50	0	21.27	-3.20	15.92	<=34.77	Pass
64QAM	782	1	0	21.44	-3.20	16.09	<=34.77	Pass
			25	21.61	-3.20	16.26	<=34.77	Pass
			49	21.47	-3.20	16.12	<=34.77	Pass
		25	0	20.32	-3.20	14.97	<=34.77	Pass
			13	20.28	-3.20	14.93	<=34.77	Pass
			25	20.34	-3.20	14.99	<=34.77	Pass
		50	0	20.32	-3.20	14.97	<=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	-5.150	-0.0066	-2.5 to 2.5	Pass
					NV	-5.922	-0.0076	-2.5 to 2.5	Pass
					HV	-9.184	-0.0117	-2.5 to 2.5	Pass
				-30	NV	-7.310	-0.0093	-2.5 to 2.5	Pass
				-20	NV	-9.670	-0.0124	-2.5 to 2.5	Pass
				-10	NV	-8.397	-0.0107	-2.5 to 2.5	Pass
				0	NV	-6.280	-0.0080	-2.5 to 2.5	Pass
				10	NV	-5.593	-0.0072	-2.5 to 2.5	Pass
				30	NV	-8.583	-0.0110	-2.5 to 2.5	Pass
				40	NV	-3.076	-0.0039	-2.5 to 2.5	Pass
				50	NV	-6.952	-0.0089	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

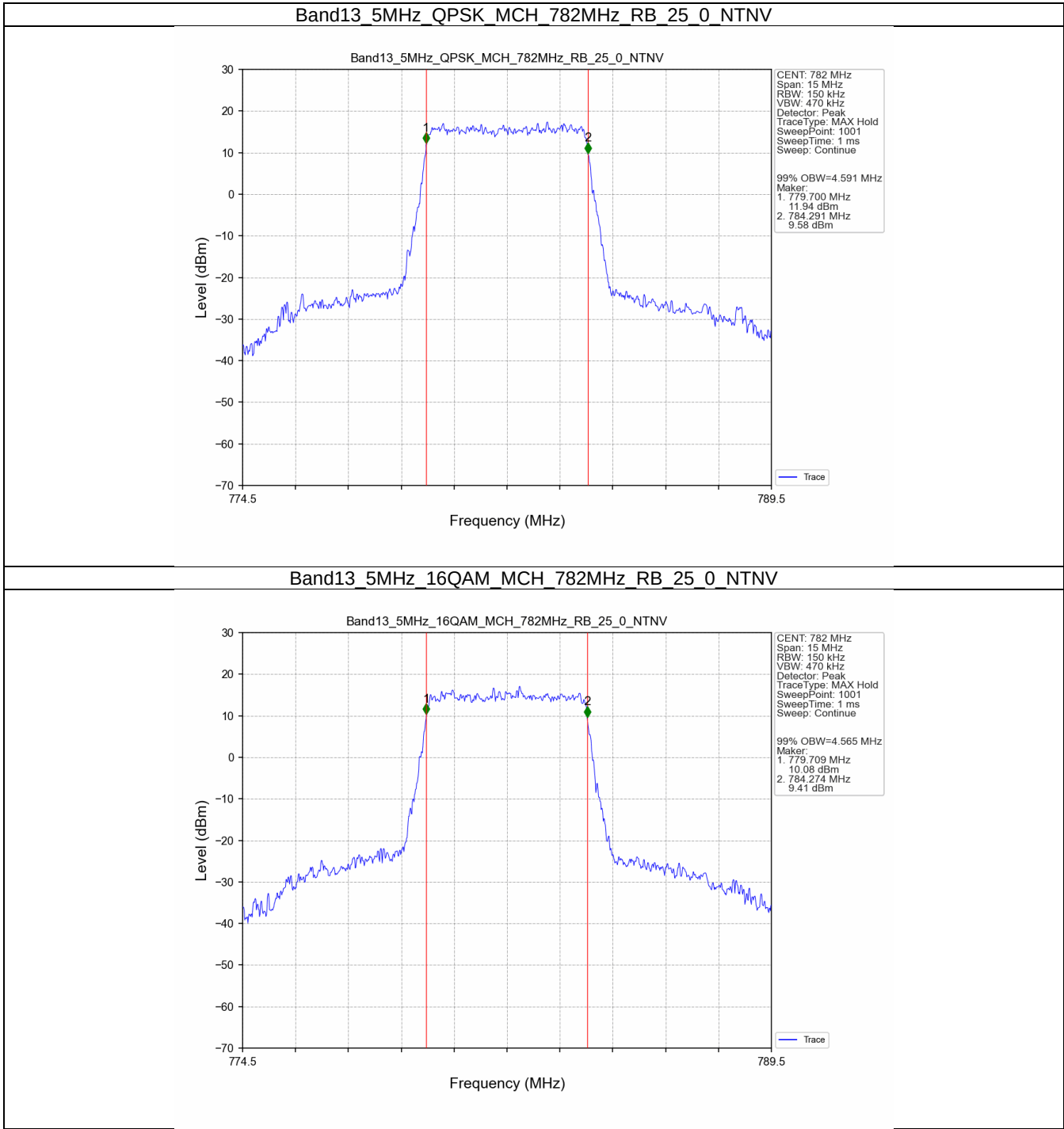
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.591	/	Pass
	16QAM	782	25	0	4.565	/	Pass
	64QAM	782	25	0	4.601	/	Pass
10	QPSK	782	50	0	9.110	/	Pass
	16QAM	782	50	0	9.059	/	Pass
	64QAM	782	50	0	9.039	/	Pass

3.1.2 Band13_XDB

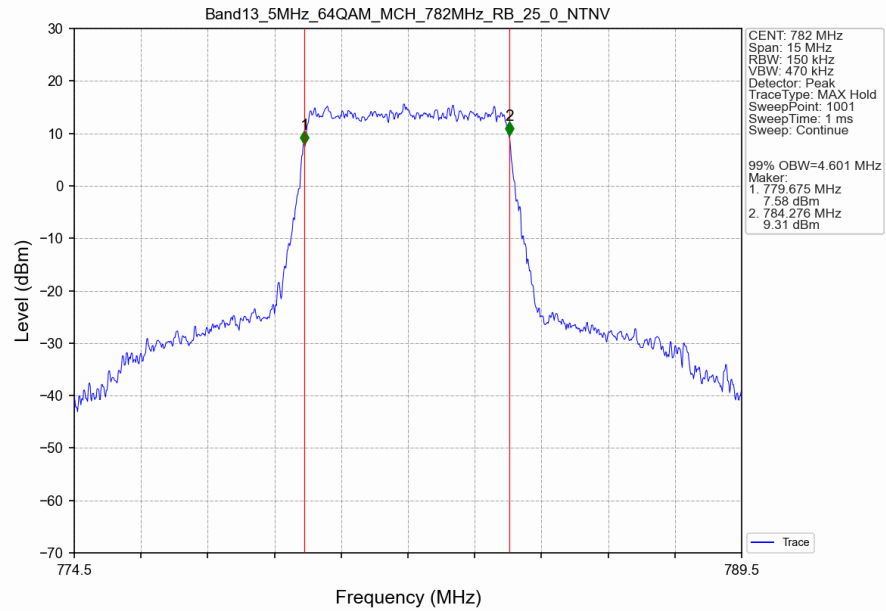
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.313	/	Pass
	16QAM	782	25	0	5.207	/	Pass
	64QAM	782	25	0	5.239	/	Pass
10	QPSK	782	50	0	10.185	/	Pass
	16QAM	782	50	0	10.341	/	Pass
	64QAM	782	50	0	10.332	/	Pass

3.2 Test Graph

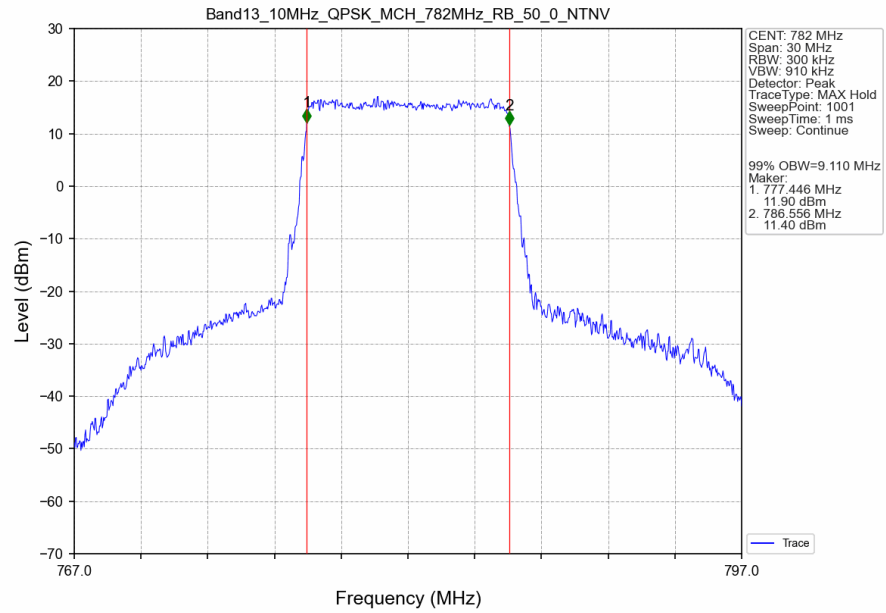
3.2.1 Band13_OBW



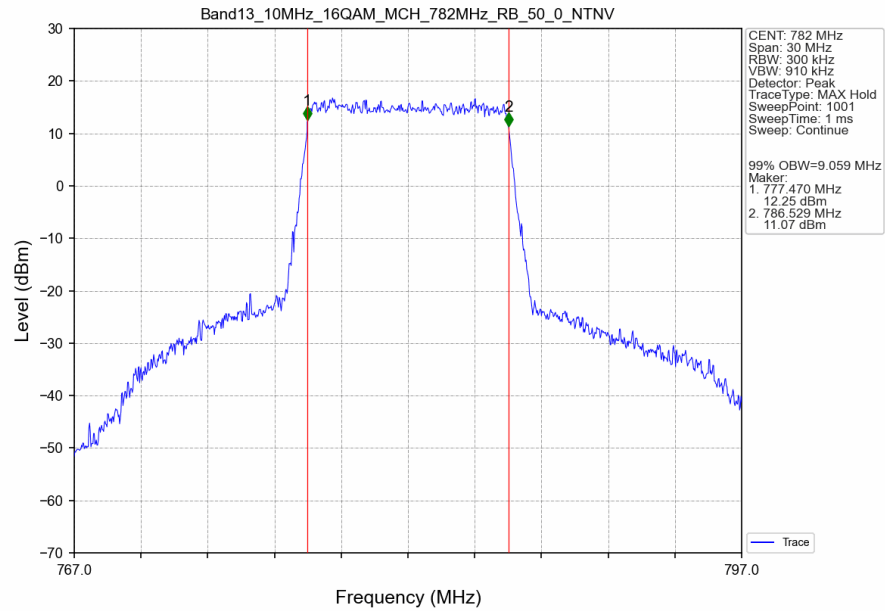
Band13 5MHz 64QAM MCH 782MHz RB 25 0 NTV



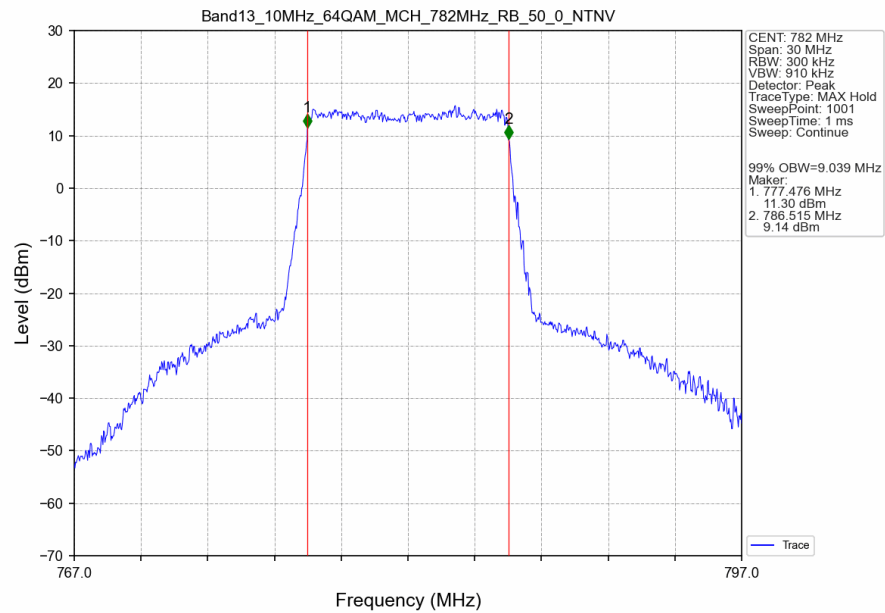
Band13 10MHz QPSK MCH 782MHz RB 50 0 NTV



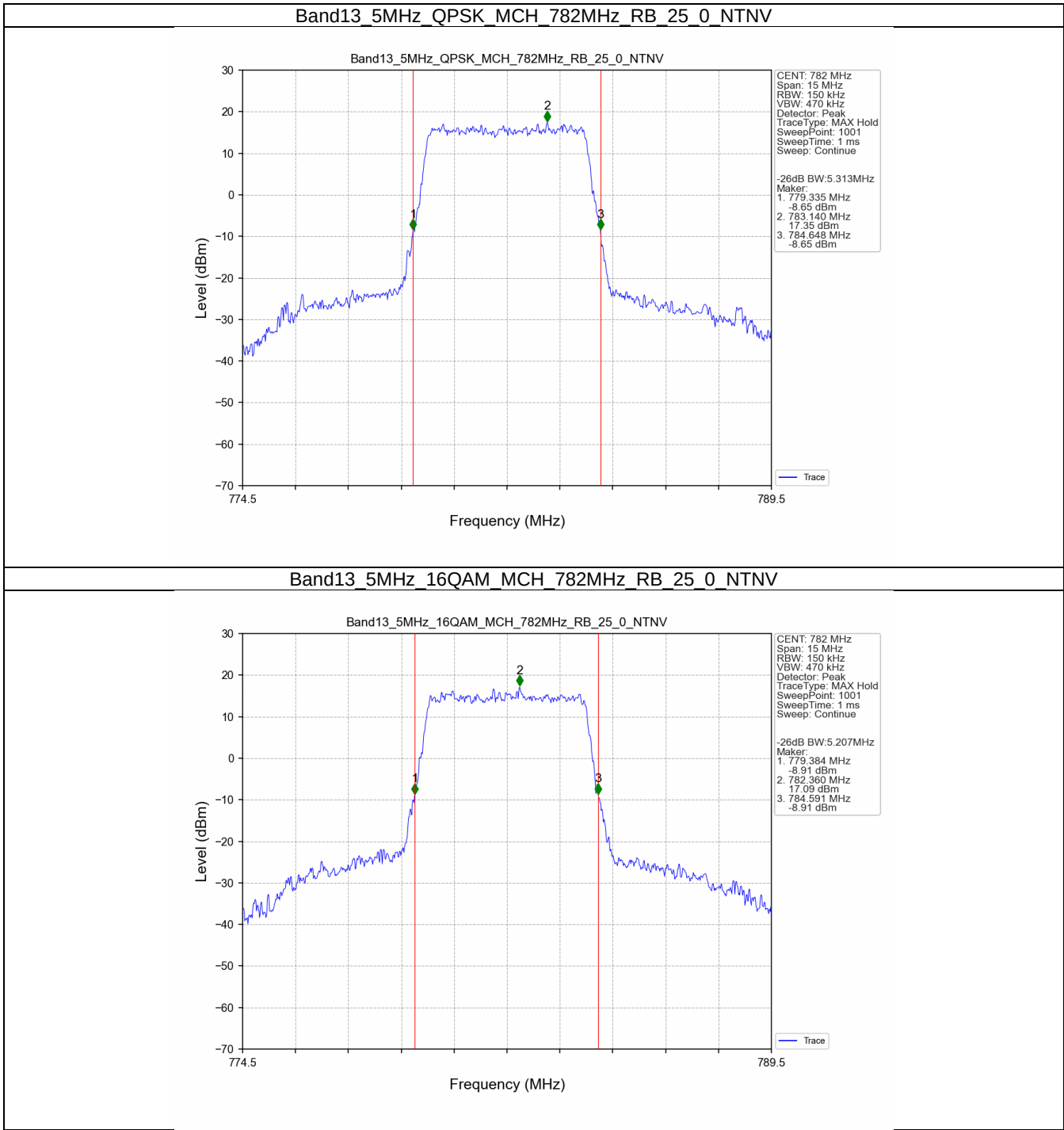
Band13 10MHz 16QAM MCH 782MHz RB 50 0 NTV



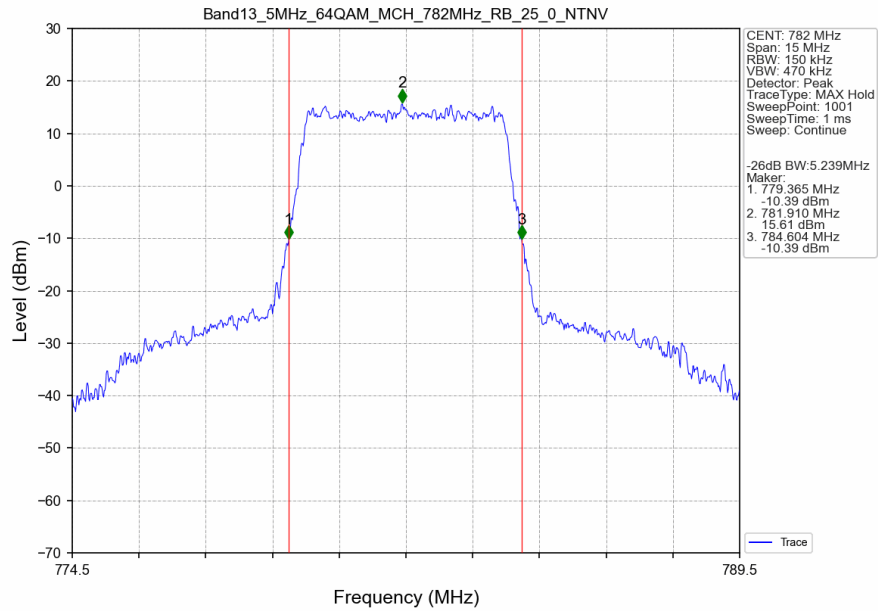
Band13 10MHz 64QAM MCH 782MHz RB 50 0 NTV



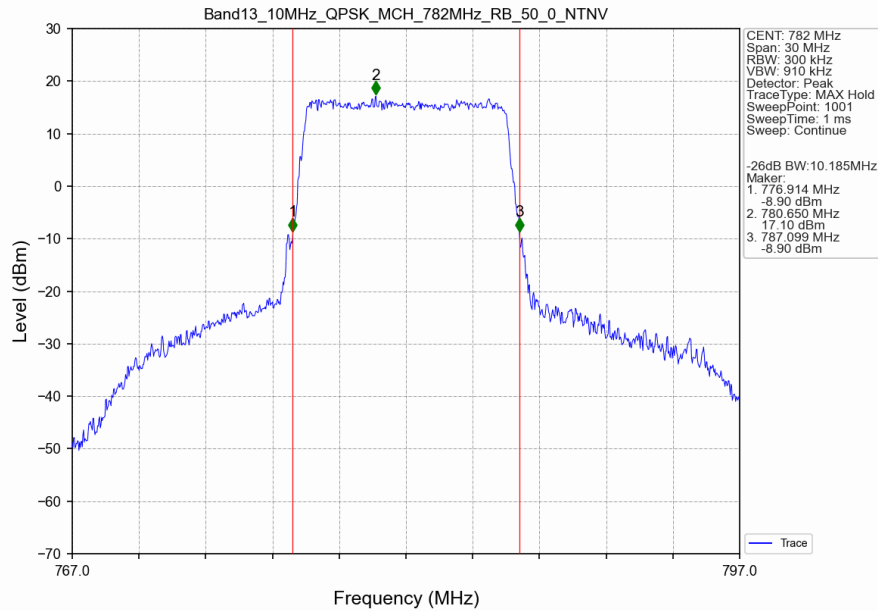
3.2.2 Band13_XDB



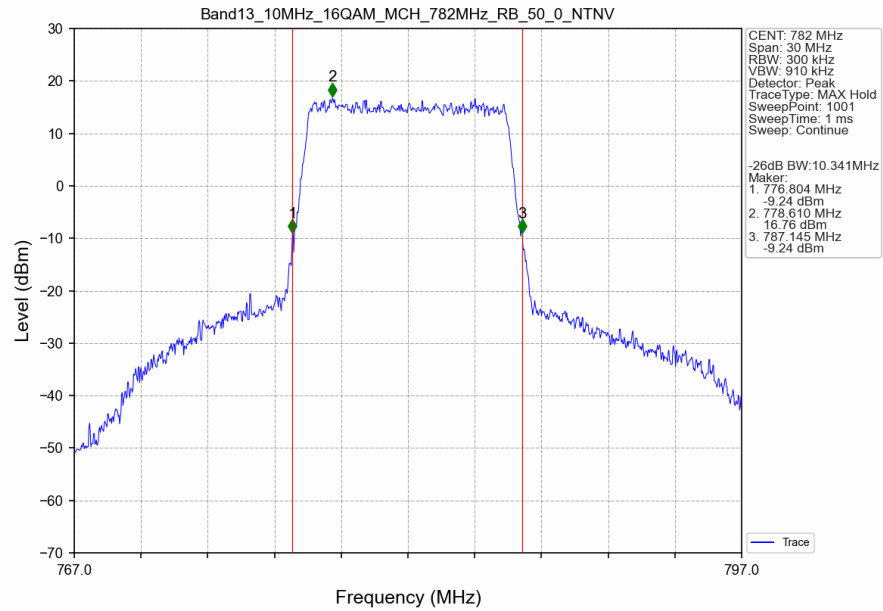
Band13 5MHz 64QAM MCH 782MHz RB 25 0 NTNV



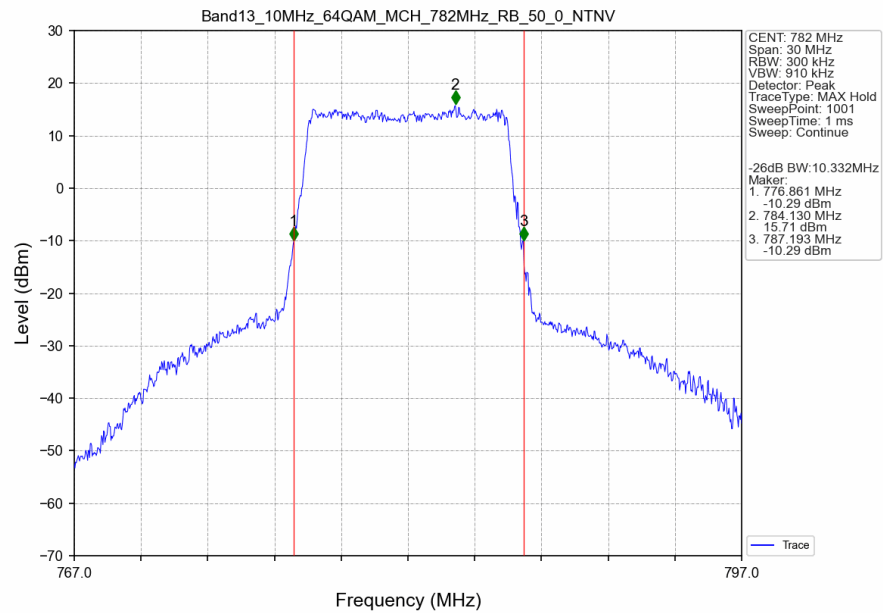
Band13 10MHz QPSK MCH 782MHz RB 50 0 NTNV



Band13 10MHz 16QAM MCH 782MHz RB 50 0 NTN



Band13 10MHz 64QAM MCH 782MHz RB 50 0 NTN



4. Peak-Average Ratio

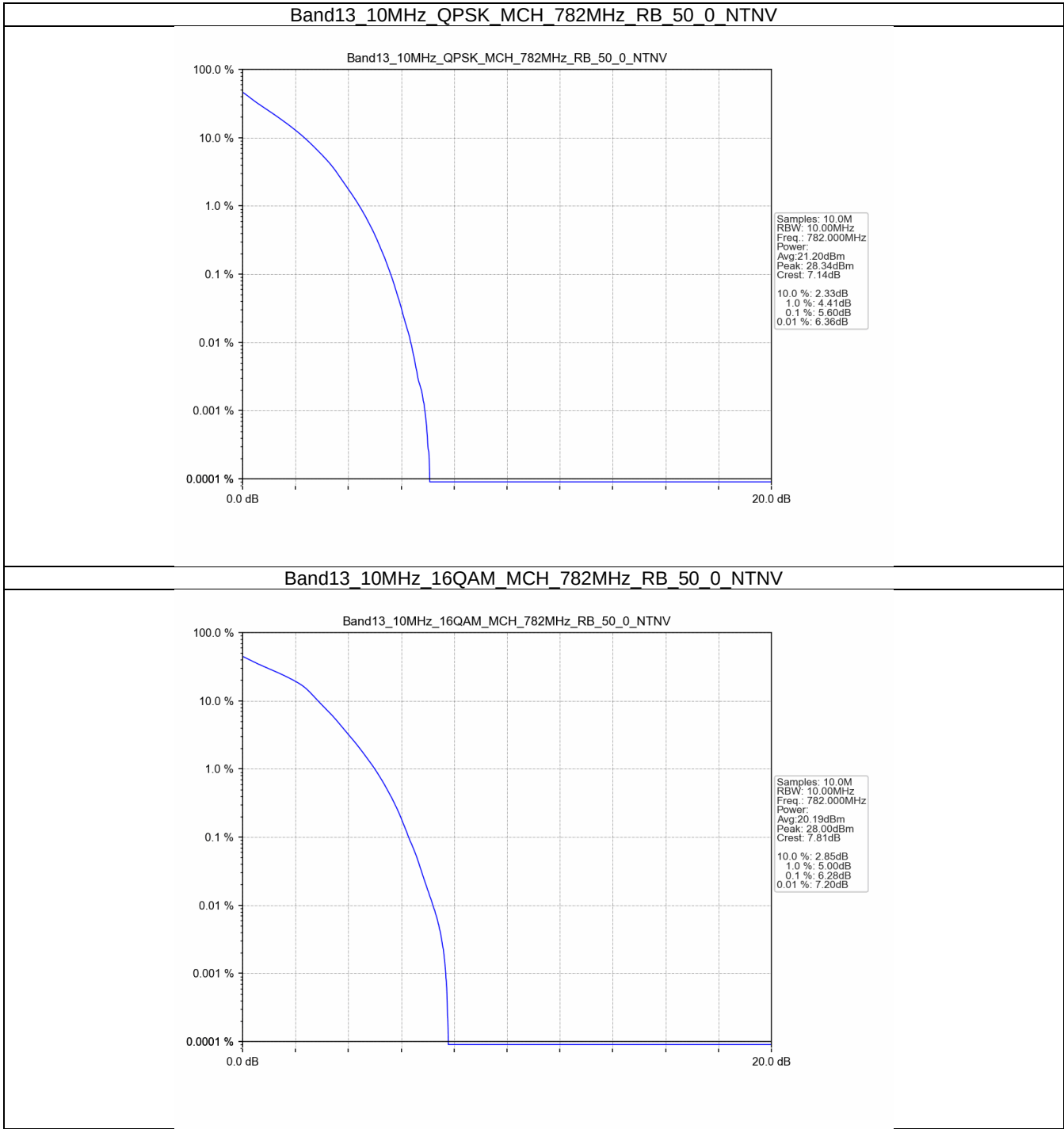
4.1 Test Result

4.1.1 B13_10MHz

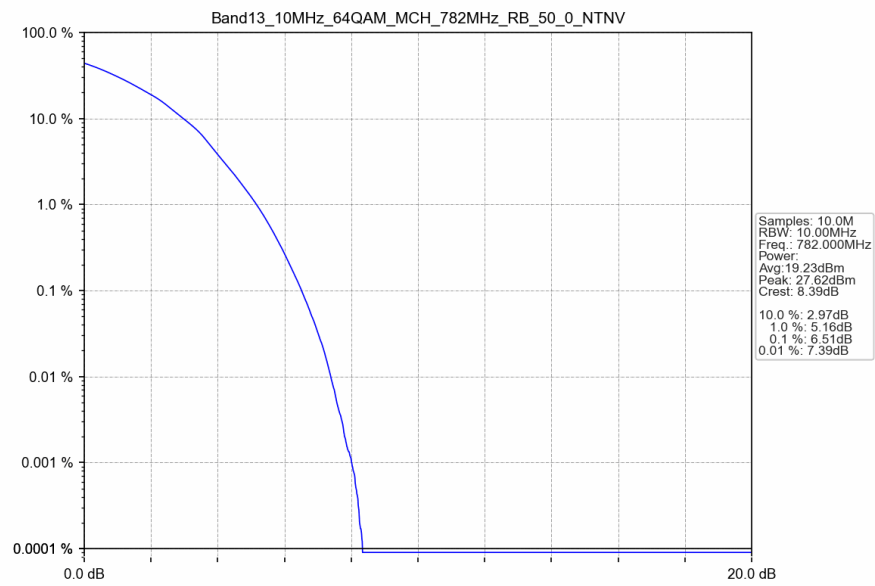
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.60	<=13	Pass
16QAM	782	50	0	6.28	<=13	Pass
64QAM	782	50	0	6.51	<=13	Pass

4.2 Test Graph

4.2.1 B13_10MHz



Band13 10MHz 64QAM MCH 782MHz RB 50 0 NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B13_5MHz

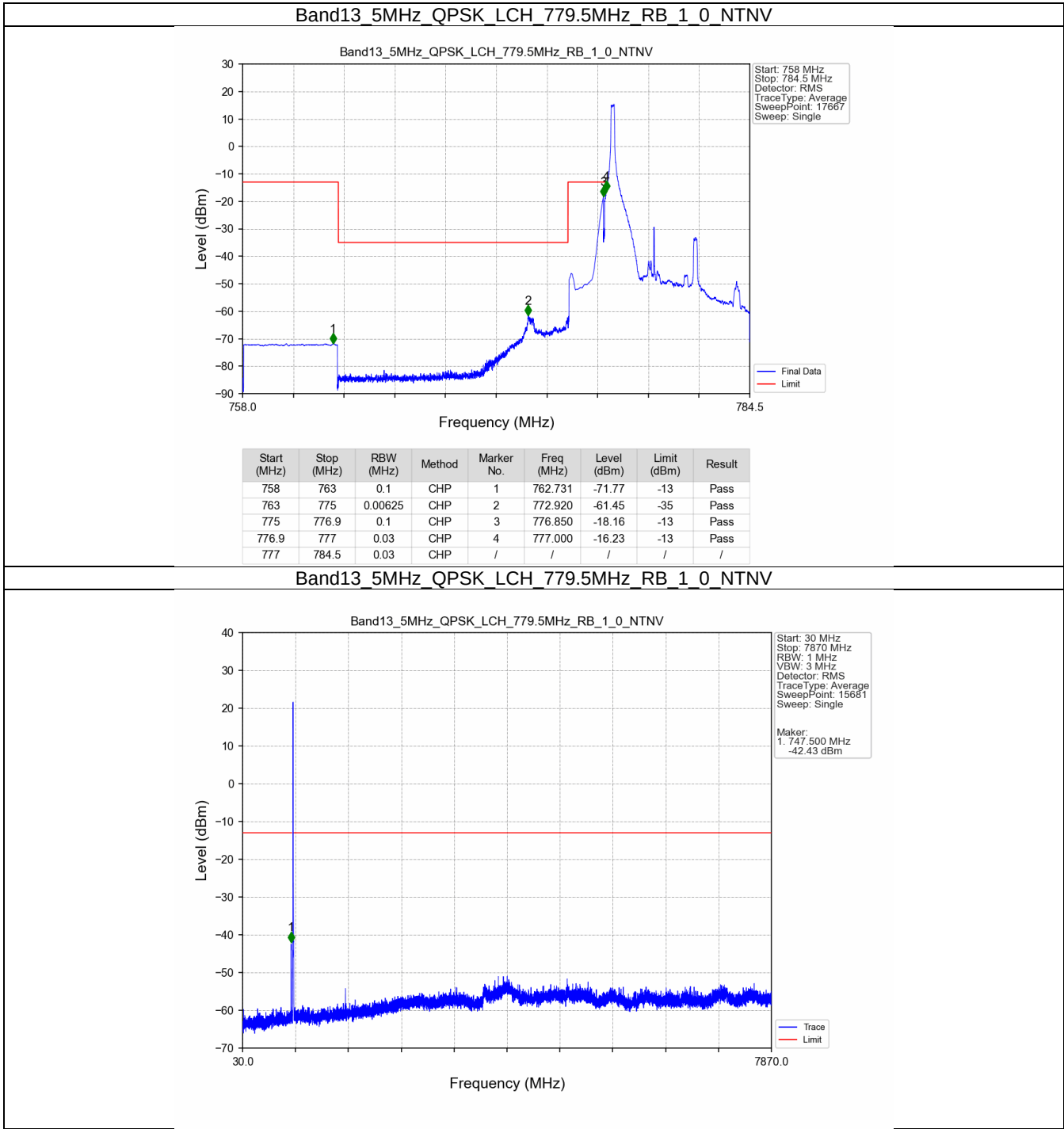
Band: 13 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
		784.5	1	0	Refer To Test Graph	
	24			Refer To Test Graph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

5.1.2 B13_10MHz

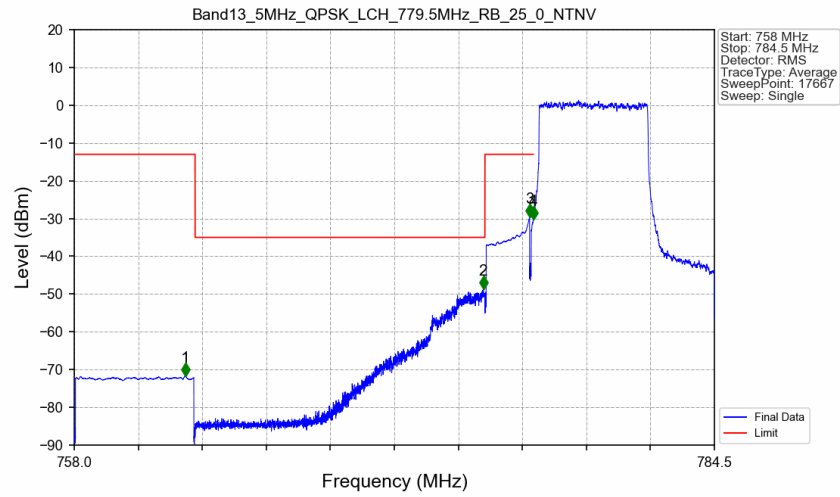
Band: 13 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	782	1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.2 Test Graph

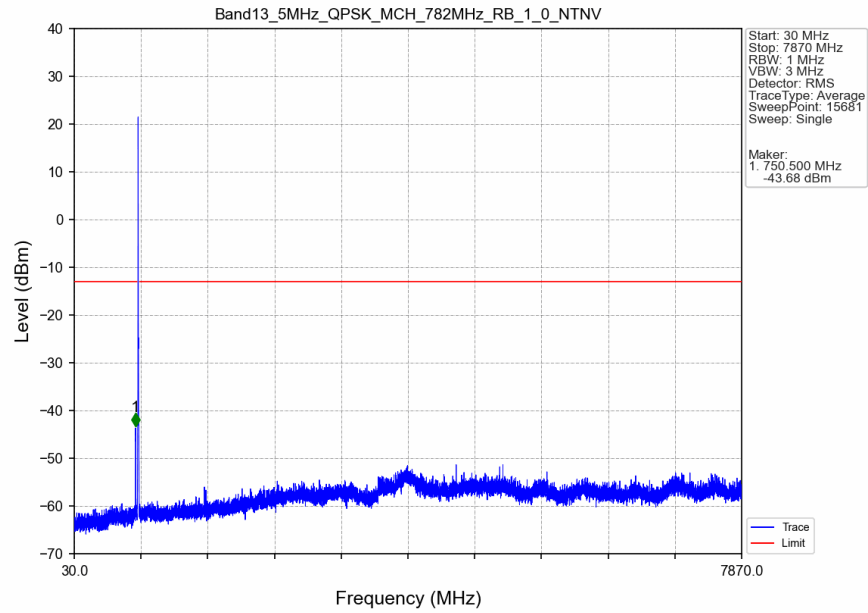
5.2.1 B13_5MHz



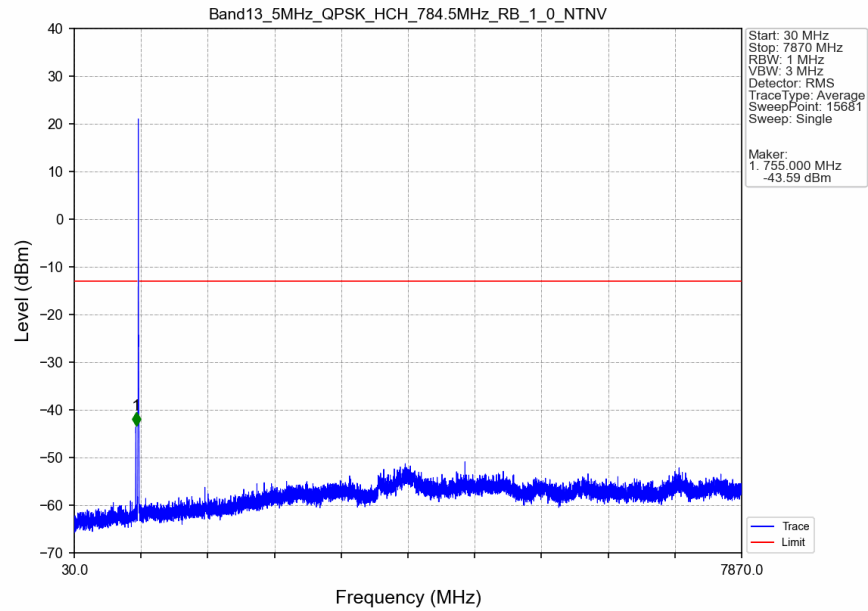
Band13 5MHz QPSK LCH 779.5MHz RB 25 0 NTNV



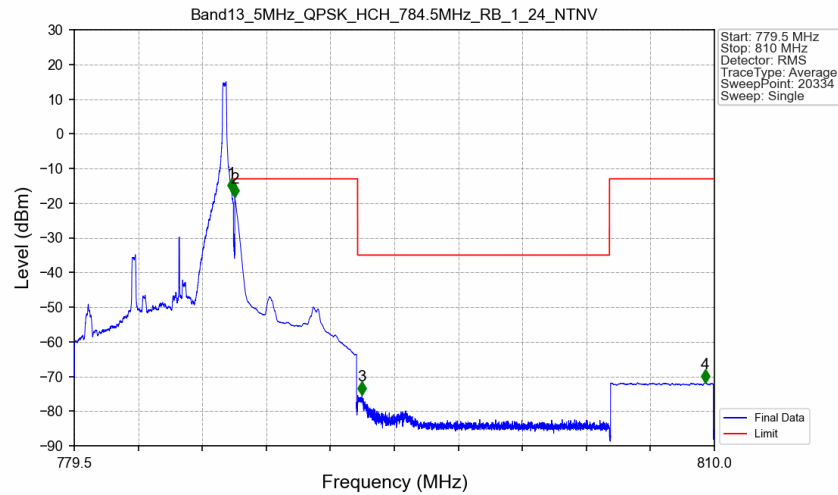
Band13 5MHz QPSK MCH 782MHz RB 1 0 NTNV



Band13 5MHz QPSK HCH 784.5MHz RB 1 0 NTV

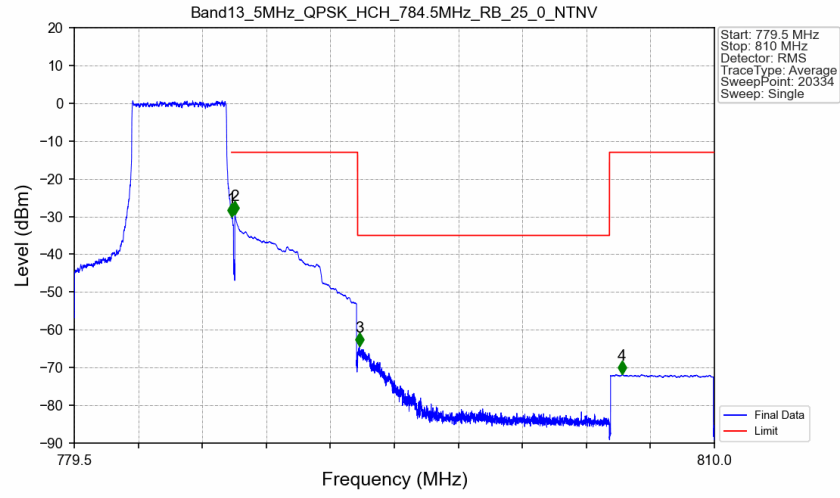


Band13 5MHz QPSK HCH 784.5MHz RB 1 24 NTV



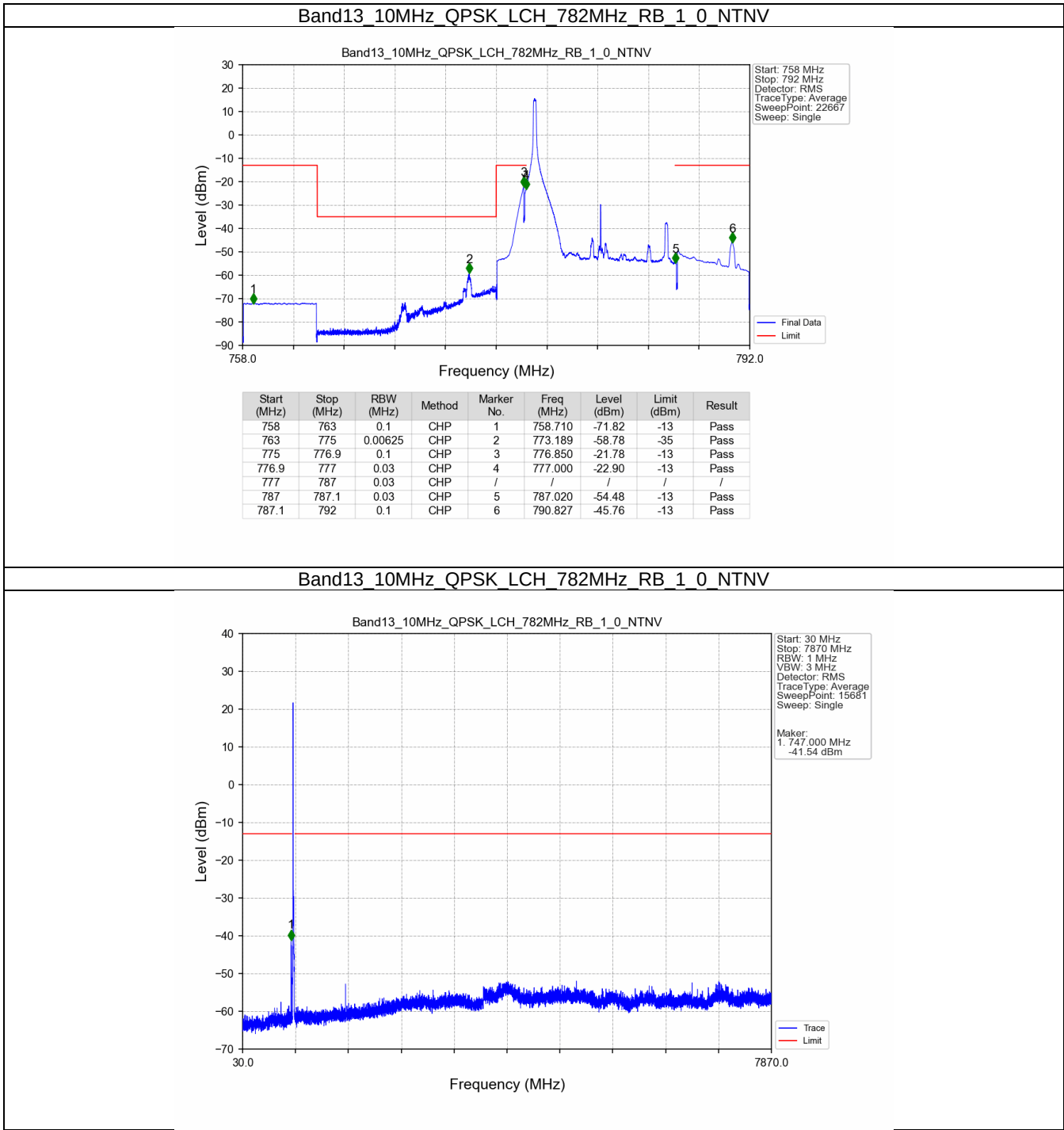
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-16.75	-13	Pass
787.1	793	0.1	CHP	2	787.150	-18.27	-13	Pass
793	805	0.00625	CHP	3	793.210	-75.29	-35	Pass
805	810	0.1	CHP	4	809.563	-71.84	-13	Pass

Band13 5MHz QPSK HCH 784.5MHz RB 25 0 NTN

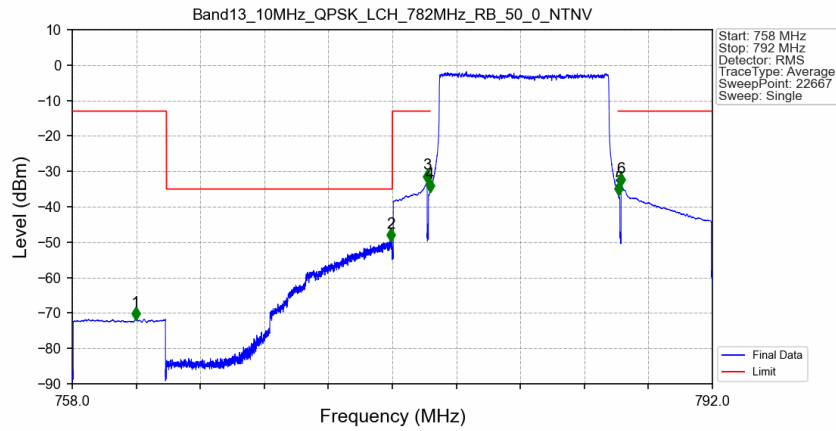


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-29.96	-13	Pass
787.1	793	0.1	CHP	2	787.150	-29.52	-13	Pass
793	805	0.00625	CHP	3	793.086	-64.30	-35	Pass
805	810	0.1	CHP	4	805.594	-71.73	-13	Pass

5.2.2 B13_10MHz

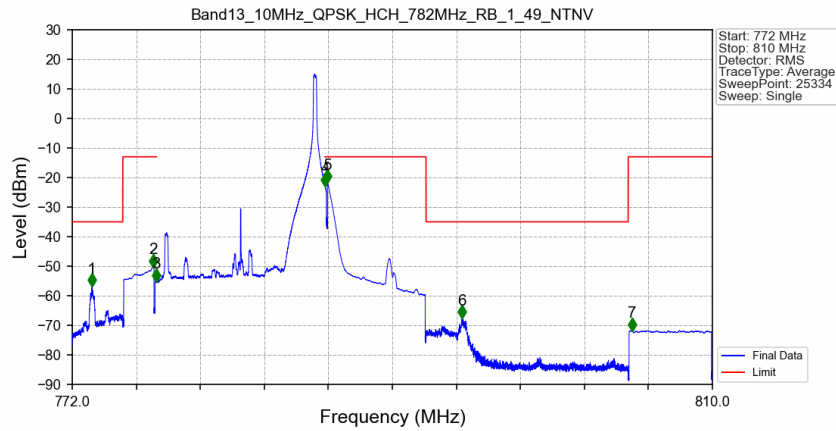


Band13 10MHz QPSK LCH 782MHz RB 50 0 NTN



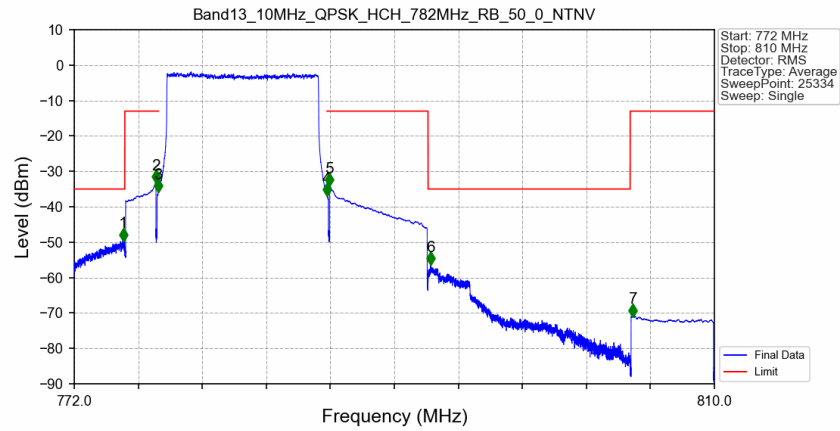
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.377	-71.74	-13	Pass
763	775	0.00625	CHP	2	774.911	-49.57	-35	Pass
775	776.9	0.1	CHP	3	776.850	-32.94	-13	Pass
776.9	777	0.03	CHP	4	776.995	-35.52	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.000	-36.53	-13	Pass
787.1	792	0.1	CHP	6	787.150	-33.90	-13	Pass

Band13 10MHz QPSK HCH 782MHz RB 1 49 NTN



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
772	775	0.00625	CHP	1	773.163	-56.47	-35	Pass
775	776.9	0.1	CHP	2	776.802	-49.98	-13	Pass
776.9	777	0.03	CHP	3	776.985	-54.92	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.011	-22.56	-13	Pass
787.1	793	0.1	CHP	5	787.150	-21.44	-13	Pass
793	805	0.00625	CHP	6	795.118	-67.30	-35	Pass
805	810	0.1	CHP	7	805.240	-71.55	-13	Pass

Band13 10MHz QPSK HCH 782MHz RB 50 0 NTN



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
772	775	0.00625	CHP	1	774.913	-49.44	-35	Pass
775	776.9	0.1	CHP	2	776.850	-33.02	-13	Pass
776.9	777	0.03	CHP	3	776.998	-35.59	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-36.73	-13	Pass
787.1	793	0.1	CHP	5	787.150	-33.97	-13	Pass
793	805	0.00625	CHP	6	793.150	-56.14	-35	Pass
805	810	0.1	CHP	7	805.167	-70.78	-13	Pass