

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B13_5MHz_ERP

Band: 13 / Bandwidth: 5MHz / NTN								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	779.5	1	0	23.29	-4.84	16.30	<=34.77	Pass
			13	23.48	-4.84	16.49	<=34.77	Pass
			24	23.40	-4.84	16.41	<=34.77	Pass
		12	0	22.29	-4.84	15.30	<=34.77	Pass
			6	22.45	-4.84	15.46	<=34.77	Pass
			13	22.53	-4.84	15.54	<=34.77	Pass
		25	0	22.42	-4.84	15.43	<=34.77	Pass
	782	1	0	23.37	-4.84	16.38	<=34.77	Pass
			13	23.51	-4.84	16.52	<=34.77	Pass
			24	23.41	-4.84	16.42	<=34.77	Pass
		12	0	22.43	-4.84	15.44	<=34.77	Pass
			6	22.51	-4.84	15.52	<=34.77	Pass
			13	22.41	-4.84	15.42	<=34.77	Pass
		25	0	22.37	-4.84	15.38	<=34.77	Pass
	784.5	1	0	23.50	-4.84	16.51	<=34.77	Pass
			13	23.62	-4.84	16.63	<=34.77	Pass
			24	23.55	-4.84	16.56	<=34.77	Pass
		12	0	22.65	-4.84	15.66	<=34.77	Pass
			6	22.70	-4.84	15.71	<=34.77	Pass
			13	22.67	-4.84	15.68	<=34.77	Pass
		25	0	22.68	-4.84	15.69	<=34.77	Pass
16QAM	779.5	1	0	22.11	-4.84	15.12	<=34.77	Pass
			13	22.28	-4.84	15.29	<=34.77	Pass
			24	22.19	-4.84	15.20	<=34.77	Pass
		12	0	21.32	-4.84	14.33	<=34.77	Pass
			6	21.47	-4.84	14.48	<=34.77	Pass
			13	21.51	-4.84	14.52	<=34.77	Pass
		25	0	21.48	-4.84	14.49	<=34.77	Pass
	782	1	0	22.61	-4.84	15.62	<=34.77	Pass
			13	22.73	-4.84	15.74	<=34.77	Pass
			24	22.73	-4.84	15.74	<=34.77	Pass
		12	0	21.43	-4.84	14.44	<=34.77	Pass
			6	21.55	-4.84	14.56	<=34.77	Pass
			13	21.48	-4.84	14.49	<=34.77	Pass
		25	0	21.40	-4.84	14.41	<=34.77	Pass
	784.5	1	0	22.52	-4.84	15.53	<=34.77	Pass
			13	22.72	-4.84	15.73	<=34.77	Pass
			24	22.62	-4.84	15.63	<=34.77	Pass
		12	0	21.68	-4.84	14.69	<=34.77	Pass
			6	21.66	-4.84	14.67	<=34.77	Pass
			13	21.64	-4.84	14.65	<=34.77	Pass
		25	0	21.75	-4.84	14.76	<=34.77	Pass
64QAM	779.5	1	0	21.24	-4.84	14.25	<=34.77	Pass
			13	21.44	-4.84	14.45	<=34.77	Pass
			24	21.30	-4.84	14.31	<=34.77	Pass
		12	0	20.32	-4.84	13.33	<=34.77	Pass
			6	20.54	-4.84	13.55	<=34.77	Pass

			13	20.54	-4.84	13.55	<=34.77	Pass
		25	0	20.57	-4.84	13.58	<=34.77	Pass
	782	1	0	21.52	-4.84	14.53	<=34.77	Pass
			13	21.64	-4.84	14.65	<=34.77	Pass
			24	21.65	-4.84	14.66	<=34.77	Pass
		12	0	20.50	-4.84	13.51	<=34.77	Pass
			6	20.63	-4.84	13.64	<=34.77	Pass
			13	20.54	-4.84	13.55	<=34.77	Pass
		25	0	20.58	-4.84	13.59	<=34.77	Pass
	784.5	1	0	21.61	-4.84	14.62	<=34.77	Pass
			13	21.81	-4.84	14.82	<=34.77	Pass
			24	21.71	-4.84	14.72	<=34.77	Pass
		12	0	20.87	-4.84	13.88	<=34.77	Pass
			6	20.87	-4.84	13.88	<=34.77	Pass
			13	20.89	-4.84	13.90	<=34.77	Pass
		25	0	20.81	-4.84	13.82	<=34.77	Pass
256QAM	779.5	1	0	21.35	-4.84	14.36	<=34.77	Pass
			13	21.63	-4.84	14.64	<=34.77	Pass
			24	21.47	-4.84	14.48	<=34.77	Pass
		12	0	20.48	-4.84	13.49	<=34.77	Pass
			6	20.69	-4.84	13.7	<=34.77	Pass
			13	20.72	-4.84	13.73	<=34.77	Pass
		25	0	20.73	-4.84	13.74	<=34.77	Pass
	782	1	0	21.70	-4.84	14.71	<=34.77	Pass
			13	21.75	-4.84	14.76	<=34.77	Pass
			24	21.78	-4.84	14.79	<=34.77	Pass
		12	0	20.68	-4.84	13.69	<=34.77	Pass
			6	20.77	-4.84	13.78	<=34.77	Pass
			13	20.71	-4.84	13.72	<=34.77	Pass
		25	0	20.69	-4.84	13.7	<=34.77	Pass
	784.5	1	0	21.73	-4.84	14.74	<=34.77	Pass
			13	22.00	-4.84	15.01	<=34.77	Pass
			24	21.91	-4.84	14.92	<=34.77	Pass
		12	0	20.99	-4.84	14	<=34.77	Pass
			6	21.06	-4.84	14.07	<=34.77	Pass
			13	21.07	-4.84	14.08	<=34.77	Pass
		25	0	20.99	-4.84	14	<=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	23.44	-4.84	16.45	<=34.77	Pass
			25	23.69	-4.84	16.70	<=34.77	Pass
			49	23.47	-4.84	16.48	<=34.77	Pass
		25	0	22.29	-4.84	15.30	<=34.77	Pass
			13	22.49	-4.84	15.50	<=34.77	Pass
			25	22.53	-4.84	15.54	<=34.77	Pass
		50	0	22.44	-4.84	15.45	<=34.77	Pass
16QAM	782	1	0	22.87	-4.84	15.88	<=34.77	Pass
			25	23.08	-4.84	16.09	<=34.77	Pass
			49	23.14	-4.84	16.15	<=34.77	Pass
		25	0	21.32	-4.84	14.33	<=34.77	Pass
			13	21.58	-4.84	14.59	<=34.77	Pass

64QAM	782	50	25	21.60	-4.84	14.61	<=34.77	Pass
			0	21.48	-4.84	14.49	<=34.77	Pass
		1	0	21.67	-4.84	14.68	<=34.77	Pass
			25	21.84	-4.84	14.85	<=34.77	Pass
			49	21.81	-4.84	14.82	<=34.77	Pass
		25	0	20.46	-4.84	13.47	<=34.77	Pass
			13	20.67	-4.84	13.68	<=34.77	Pass
			25	20.71	-4.84	13.72	<=34.77	Pass
		50	0	20.64	-4.84	13.65	<=34.77	Pass
256QAM	782	1	0	23.07	-4.84	16.08	<=34.77	Pass
			25	23.24	-4.84	16.25	<=34.77	Pass
			49	23.26	-4.84	16.27	<=34.77	Pass
		25	0	21.45	-4.84	14.46	<=34.77	Pass
			13	21.74	-4.84	14.75	<=34.77	Pass
			25	21.79	-4.84	14.8	<=34.77	Pass
		50	0	21.64	-4.84	14.65	<=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	3.27	-8.254	-0.0106	-2.5 to 2.5	Pass
					3.85	-7.782	-0.0100	-2.5 to 2.5	Pass
					4.43	-2.589	-0.0033	-2.5 to 2.5	Pass
				-30	3.85	-5.379	-0.0069	-2.5 to 2.5	Pass
				-20	3.85	-6.566	-0.0084	-2.5 to 2.5	Pass
				-10	3.85	0.544	0.0007	-2.5 to 2.5	Pass
				0	3.85	-11.158	-0.0143	-2.5 to 2.5	Pass
				10	3.85	-10.657	-0.0136	-2.5 to 2.5	Pass
				30	3.85	-8.440	-0.0108	-2.5 to 2.5	Pass
				40	3.85	-8.140	-0.0104	-2.5 to 2.5	Pass
				50	3.85	-4.191	-0.0054	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

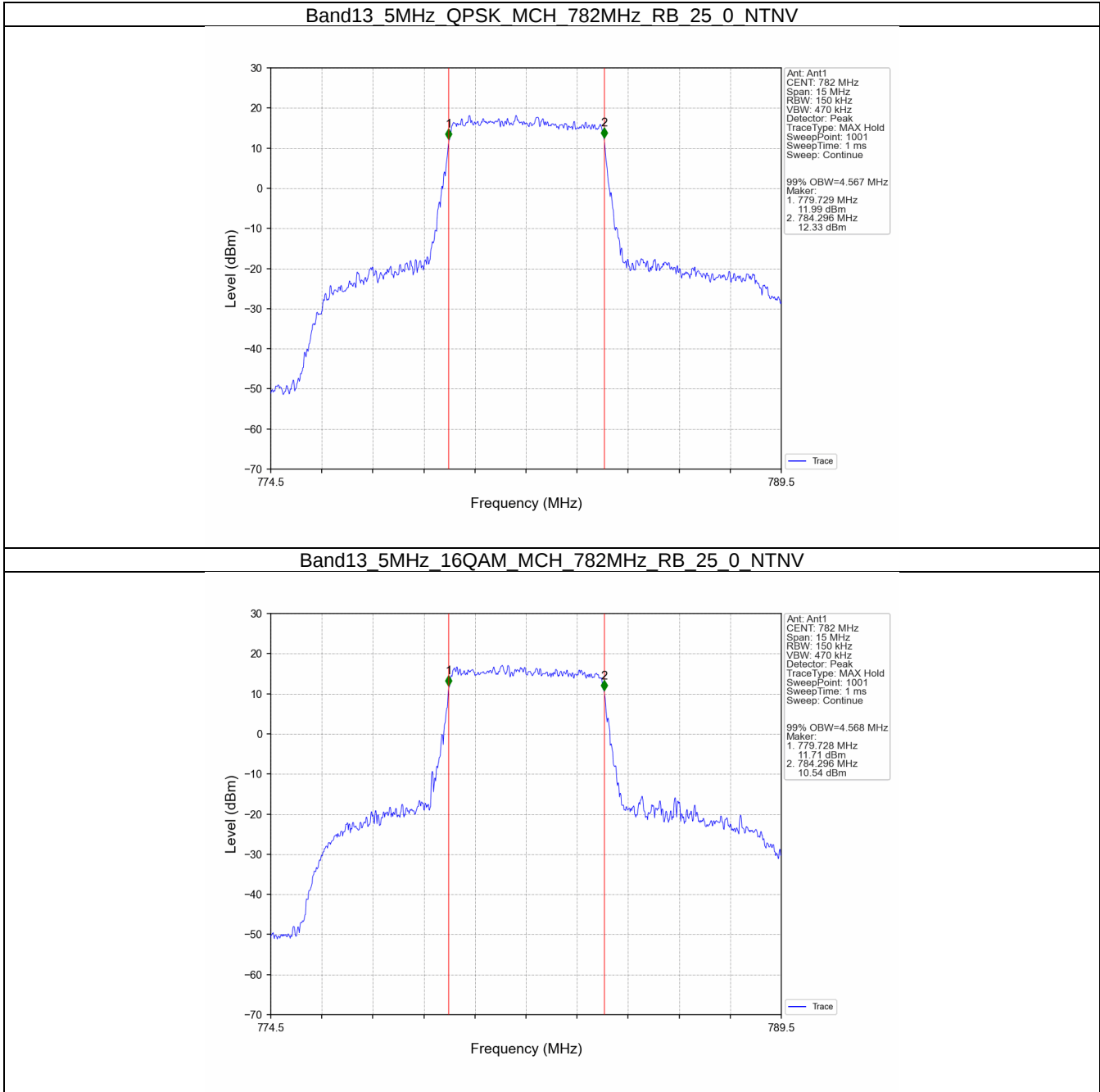
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.567	/	Pass
	16QAM	782	25	0	4.568	/	Pass
10	QPSK	782	50	0	9.038	/	Pass
	16QAM	782	50	0	9.086	/	Pass

3.1.2 Band13_XDB

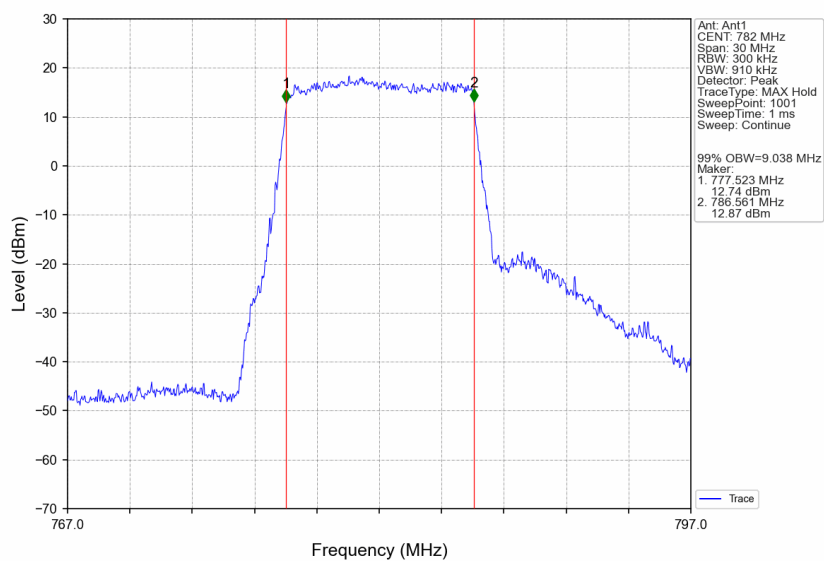
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.193	/	Pass
	16QAM	782	25	0	5.286	/	Pass
10	QPSK	782	50	0	10.182	/	Pass
	16QAM	782	50	0	10.247	/	Pass

3.2 Test Graph

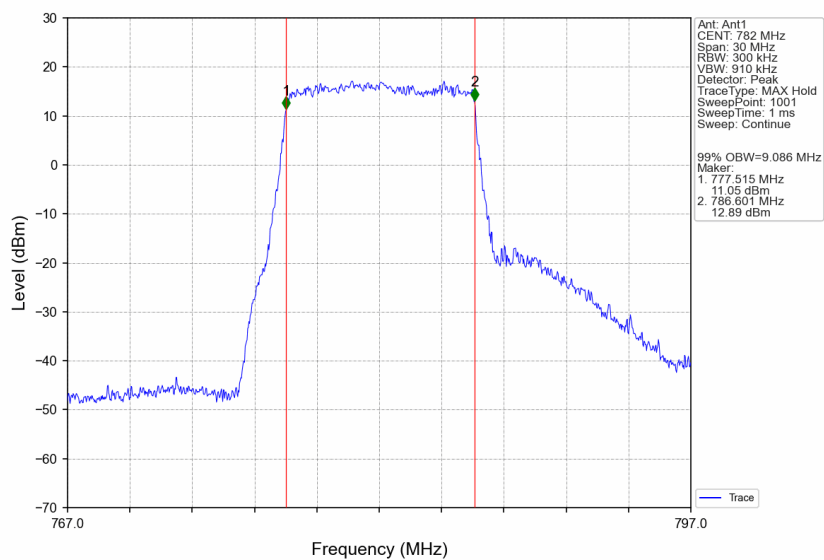
3.2.1 Band13_OBW



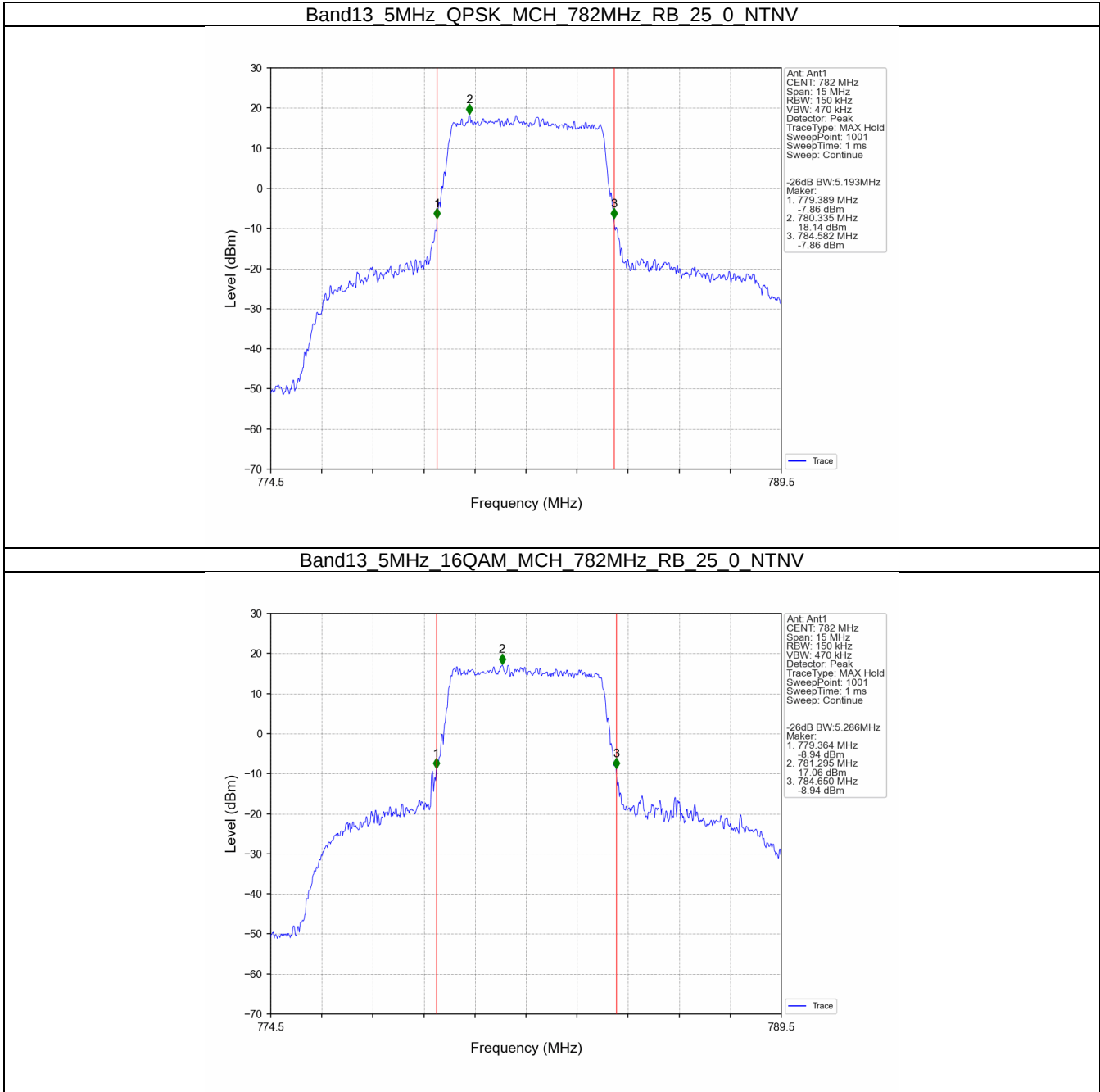
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



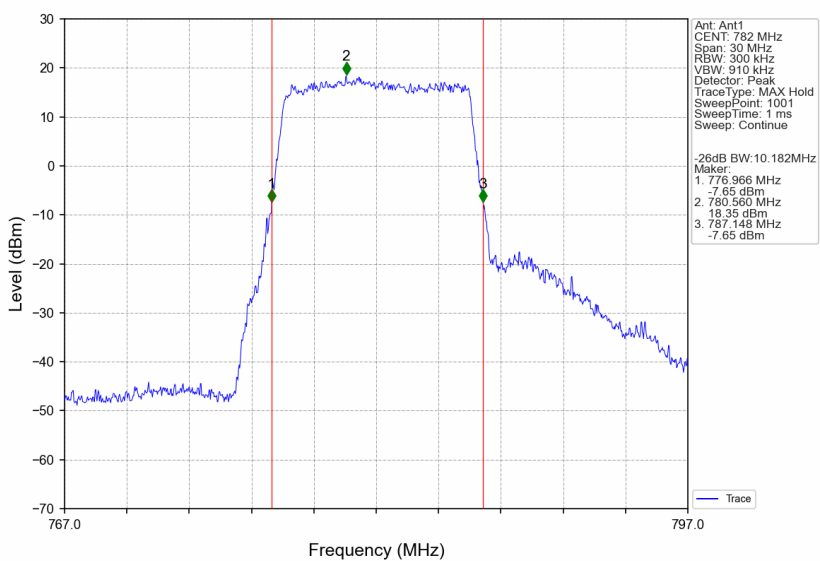
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



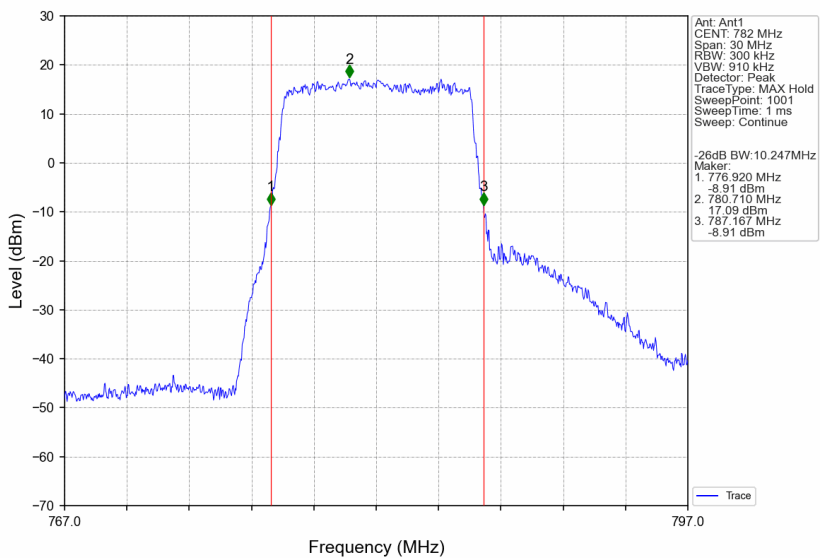
3.2.2 Band13_XDB



Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



4. Peak-Average Ratio

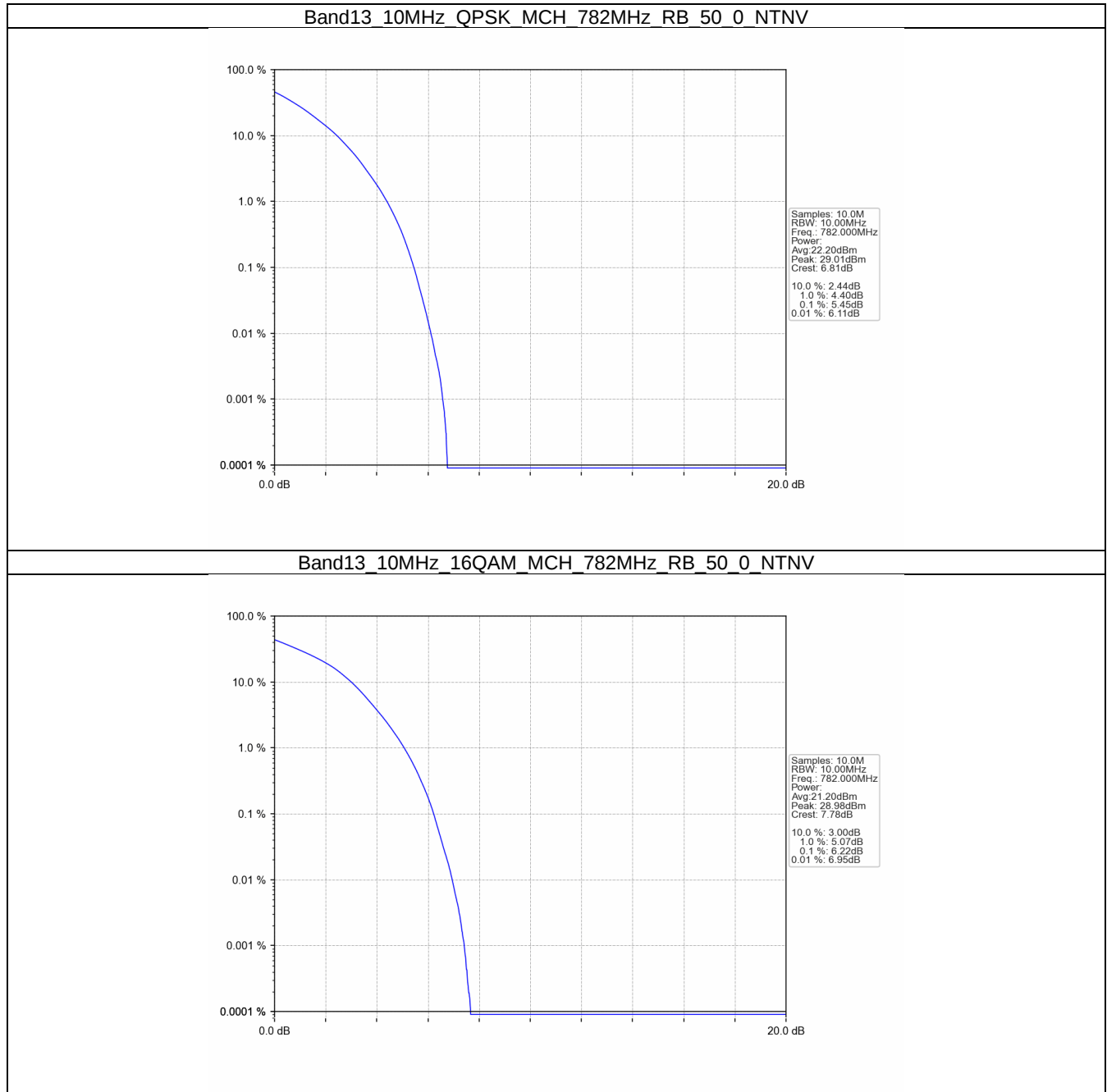
4.1 Test Result

4.1.1 B13_10MHz

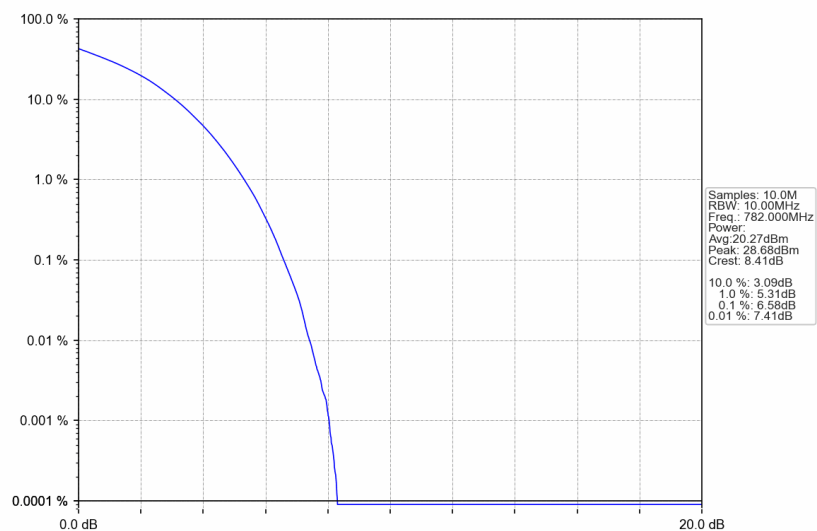
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.45	<=13	Pass
16QAM	782	50	0	6.22	<=13	Pass
64QAM	782	50	0	6.58	<=13	Pass
256QAM	782	50	0	9.05	<=13	Pass

4.2 Test Graph

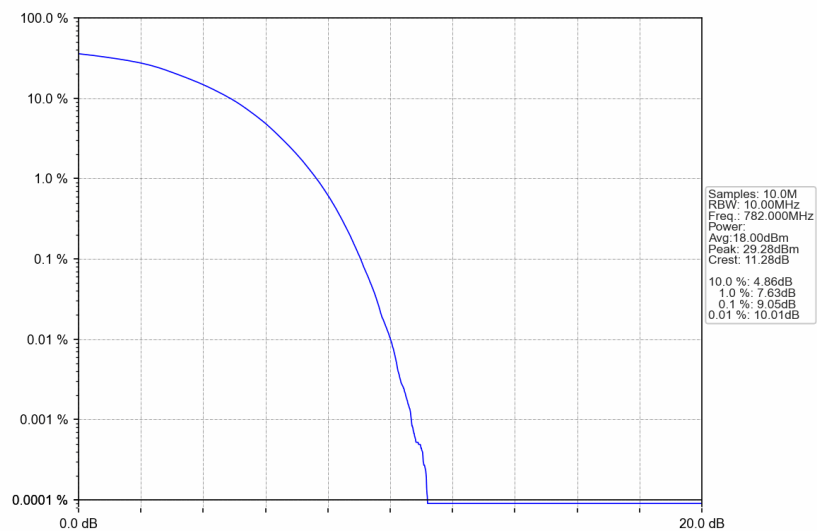
4.2.1 B13_10MHz



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B13_5MHz

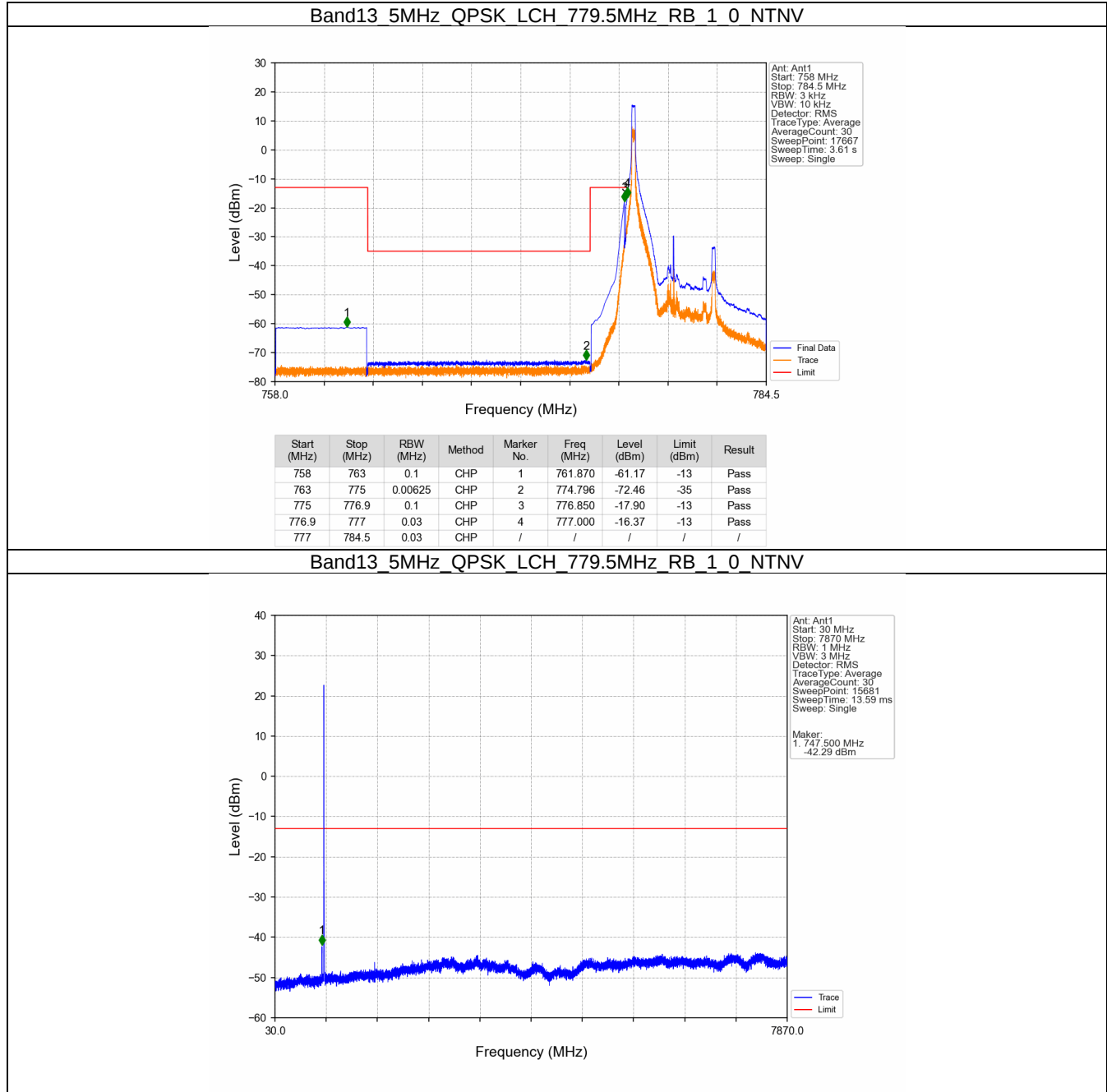
Band: 13 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B13_10MHz

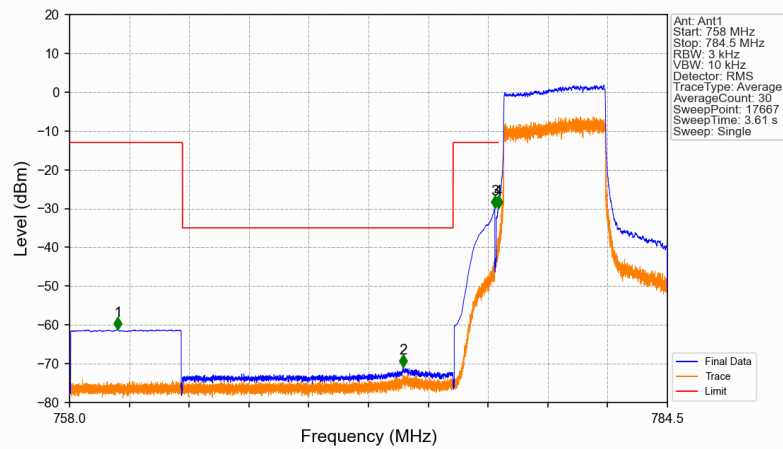
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	782	1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.2 Test Graph

5.2.1 B13_5MHz

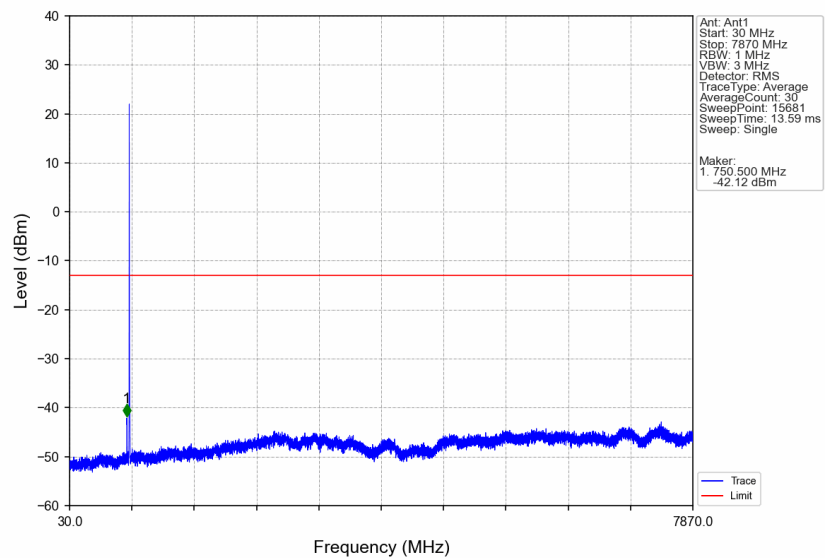


Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV

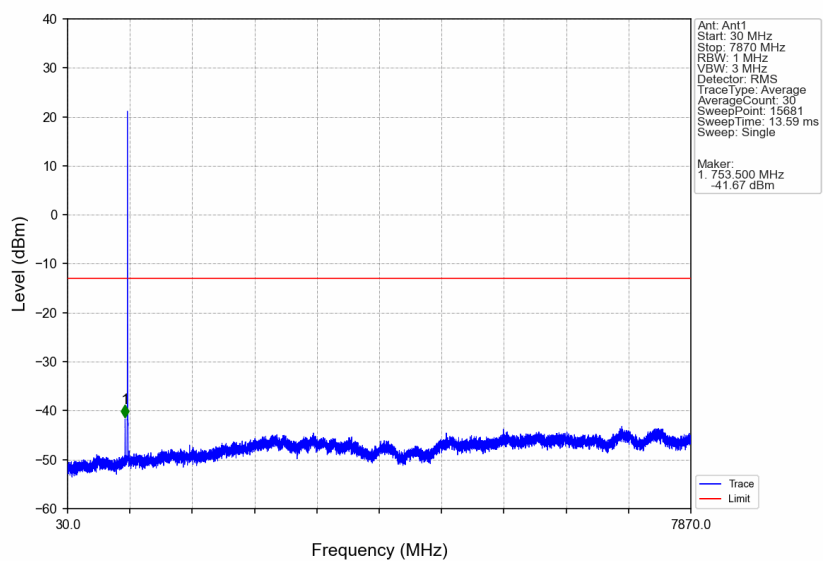


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	760.133	-61.22	-13	Pass
763	775	0.00625	CHP	2	772.786	-70.84	-35	Pass
775	776.9	0.1	CHP	3	776.850	-29.82	-13	Pass
776.9	777	0.03	CHP	4	777.000	-29.85	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

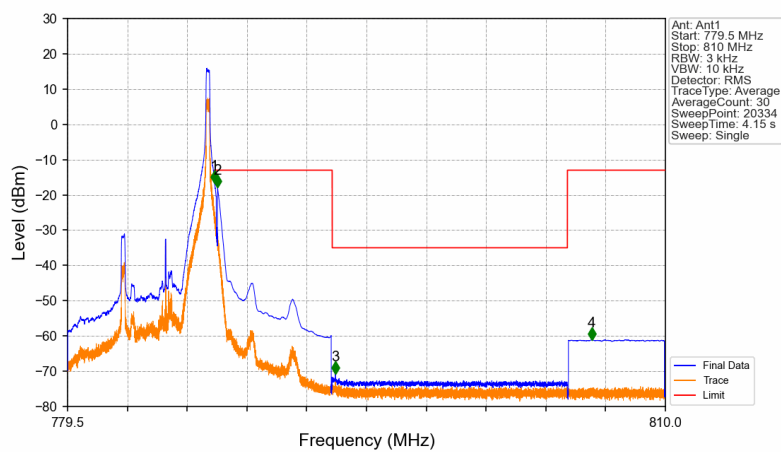
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



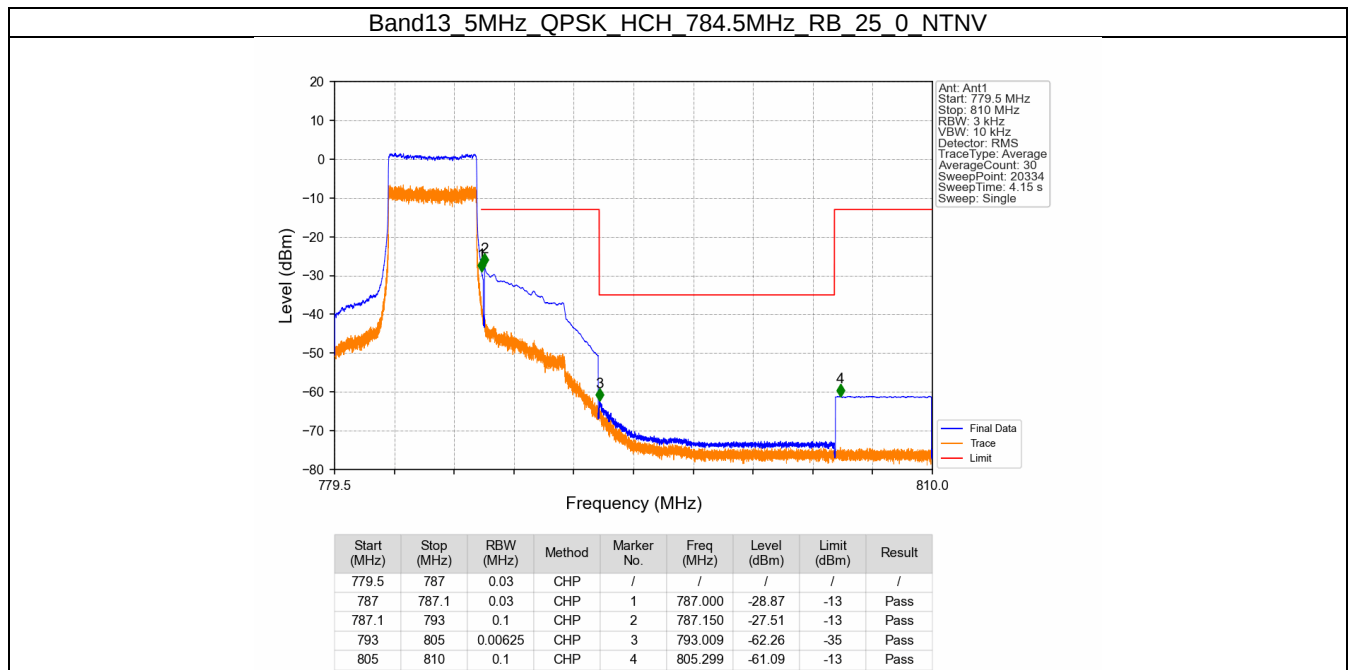
Band13 5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV



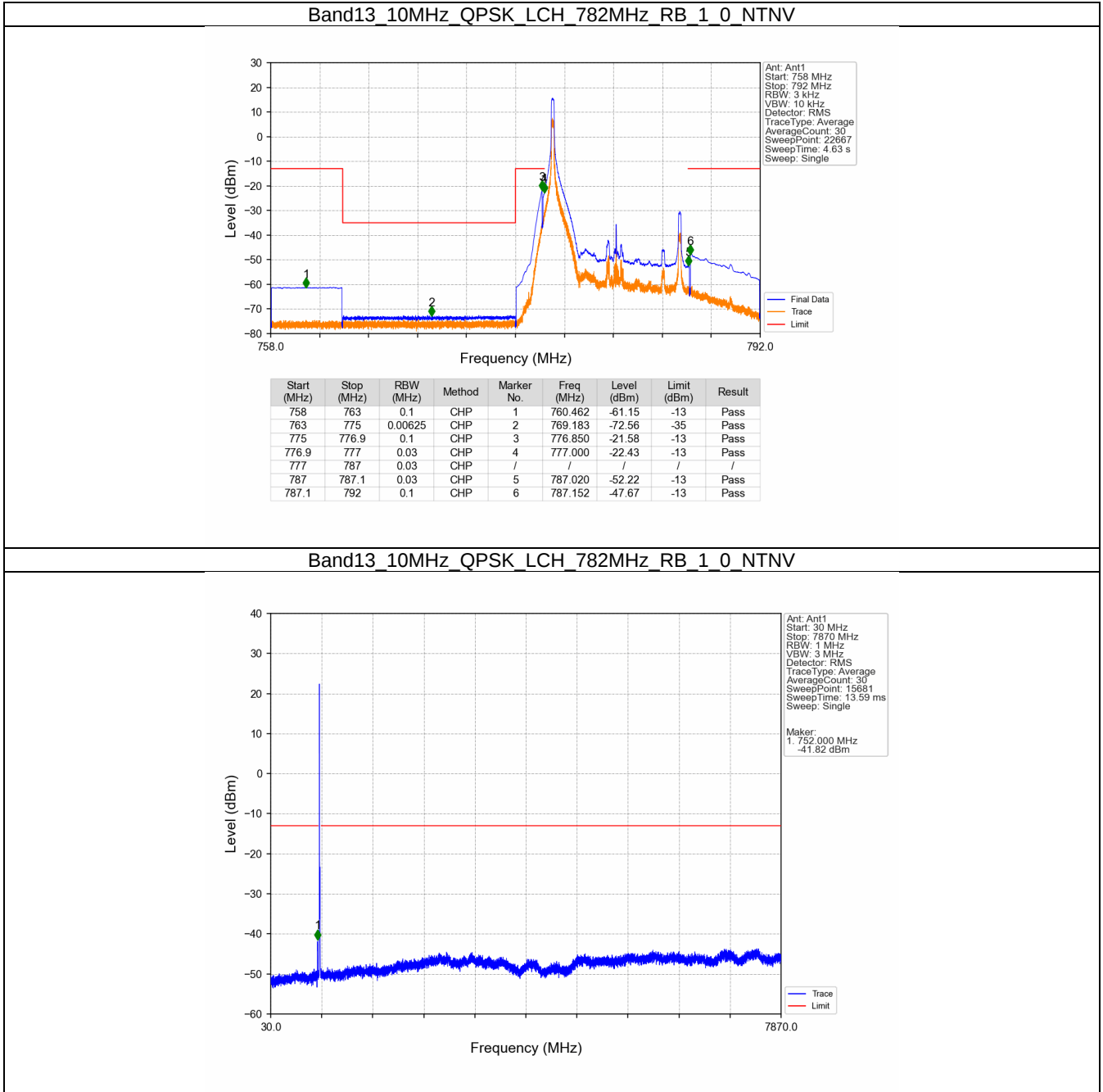
Band13 5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



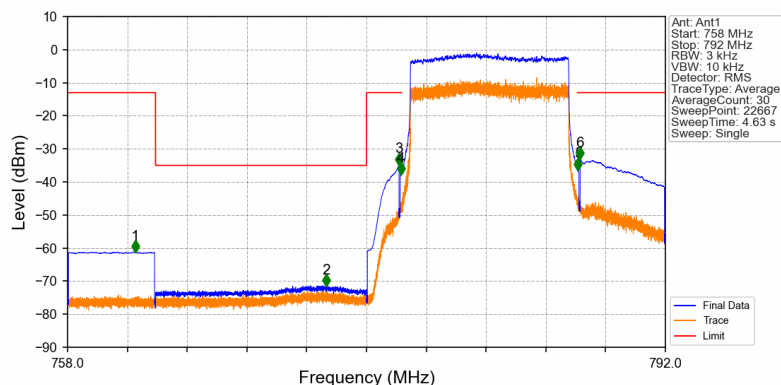
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-16.63	-13	Pass
787.1	793	0.1	CHP	2	787.150	-17.86	-13	Pass
793	805	0.00625	CHP	3	793.174	-70.74	-35	Pass
805	810	0.1	CHP	4	806.242	-61.08	-13	Pass



5.2.2 B13_10MHz

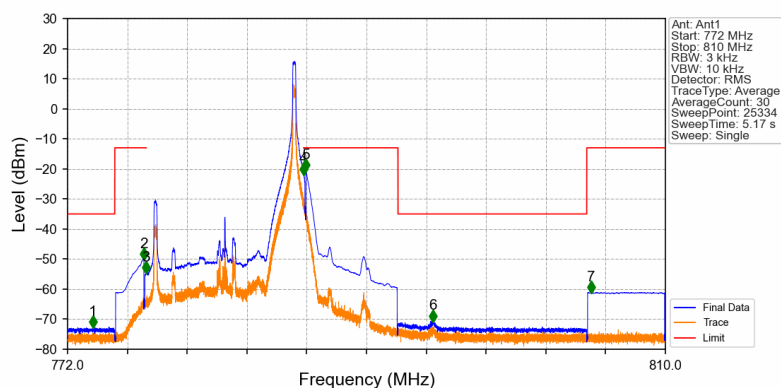


Band13 10MHz QPSK LCH 782MHz RB 50 0 NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.857	-61.12	-13	Pass
763	775	0.00625	CHP	2	772.708	-71.29	-35	Pass
775	776.9	0.1	CHP	3	776.850	-34.67	-13	Pass
776.9	777	0.03	CHP	4	776.956	-37.54	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.033	-36.15	-13	Pass
787.1	792	0.1	CHP	6	787.150	-32.90	-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	773.613	-72.66	-35	Pass
775	776.9	0.1	CHP	2	776.847	-50.02	-13	Pass
776.9	777	0.03	CHP	3	776.991	-54.47	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-21.69	-13	Pass
787.1	793	0.1	CHP	5	787.150	-20.42	-13	Pass
793	805	0.00625	CHP	6	795.213	-70.59	-35	Pass
805	810	0.1	CHP	7	805.284	-61.08	-13	Pass

