

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	23.93	-7.99	13.79	<=34.77	Pass
			13	24.04	-7.99	13.90	<=34.77	Pass
			24	24.08	-7.99	13.94	<=34.77	Pass
		12	0	22.93	-7.99	12.79	<=34.77	Pass
			6	22.95	-7.99	12.81	<=34.77	Pass
			13	22.94	-7.99	12.80	<=34.77	Pass
		25	0	22.92	-7.99	12.78	<=34.77	Pass
	782	1	0	23.98	-7.99	13.84	<=34.77	Pass
			13	24.22	-7.99	14.08	<=34.77	Pass
			24	23.86	-7.99	13.72	<=34.77	Pass
		12	0	22.90	-7.99	12.76	<=34.77	Pass
			6	23.03	-7.99	12.89	<=34.77	Pass
			13	22.97	-7.99	12.83	<=34.77	Pass
		25	0	22.92	-7.99	12.78	<=34.77	Pass
	784.5	1	0	24.03	-7.99	13.89	<=34.77	Pass
			13	23.95	-7.99	13.81	<=34.77	Pass
			24	24.02	-7.99	13.88	<=34.77	Pass
		12	0	22.99	-7.99	12.85	<=34.77	Pass
			6	22.97	-7.99	12.83	<=34.77	Pass
			13	22.96	-7.99	12.82	<=34.77	Pass
		25	0	22.93	-7.99	12.79	<=34.77	Pass
16QAM	779.5	1	0	23.29	-7.99	13.15	<=34.77	Pass
			13	23.30	-7.99	13.16	<=34.77	Pass
			24	23.14	-7.99	13.00	<=34.77	Pass
		12	0	21.89	-7.99	11.75	<=34.77	Pass
			6	22.02	-7.99	11.88	<=34.77	Pass
			13	22.01	-7.99	11.87	<=34.77	Pass
		25	0	22.01	-7.99	11.87	<=34.77	Pass
	782	1	0	23.07	-7.99	12.93	<=34.77	Pass
			13	23.18	-7.99	13.04	<=34.77	Pass
			24	22.58	-7.99	12.44	<=34.77	Pass
		12	0	21.92	-7.99	11.78	<=34.77	Pass
			6	22.08	-7.99	11.94	<=34.77	Pass
			13	21.99	-7.99	11.85	<=34.77	Pass
		25	0	21.99	-7.99	11.85	<=34.77	Pass
	784.5	1	0	22.98	-7.99	12.84	<=34.77	Pass
			13	23.09	-7.99	12.95	<=34.77	Pass
			24	23.45	-7.99	13.31	<=34.77	Pass
		12	0	21.93	-7.99	11.79	<=34.77	Pass
			6	22.00	-7.99	11.86	<=34.77	Pass
			13	22.03	-7.99	11.89	<=34.77	Pass
		25	0	21.93	-7.99	11.79	<=34.77	Pass
64QAM	779.5	1	0	22.96	-7.99	12.82	<=34.77	Pass
			13	22.99	-7.99	12.85	<=34.77	Pass
			24	23.10	-7.99	12.96	<=34.77	Pass
		12	0	21.95	-7.99	11.81	<=34.77	Pass
			6	22.06	-7.99	11.92	<=34.77	Pass
			13	21.95	-7.99	11.81	<=34.77	Pass
		25	0	21.98	-7.99	11.84	<=34.77	Pass

	782	1	0	23.03	-7.99	12.89	<=34.77	Pass
			13	23.18	-7.99	13.04	<=34.77	Pass
			24	22.65	-7.99	12.51	<=34.77	Pass
		12	0	21.90	-7.99	11.76	<=34.77	Pass
			6	22.07	-7.99	11.93	<=34.77	Pass
			13	22.03	-7.99	11.89	<=34.77	Pass
		25	0	21.97	-7.99	11.83	<=34.77	Pass
	784.5	1	0	23.07	-7.99	12.93	<=34.77	Pass
			13	23.12	-7.99	12.98	<=34.77	Pass
			24	22.39	-7.99	12.25	<=34.77	Pass
		12	0	21.95	-7.99	11.81	<=34.77	Pass
			6	22.02	-7.99	11.88	<=34.77	Pass
			13	21.95	-7.99	11.81	<=34.77	Pass
		25	0	21.89	-7.99	11.75	<=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	24.06	-7.99	13.92	<=34.77	Pass
			25	23.61	-7.99	13.47	<=34.77	Pass
			49	23.64	-7.99	13.50	<=34.77	Pass
		25	0	23.03	-7.99	12.89	<=34.77	Pass
			13	22.98	-7.99	12.84	<=34.77	Pass
			25	22.99	-7.99	12.85	<=34.77	Pass
		50	0	23.00	-7.99	12.86	<=34.77	Pass
16QAM	782	1	0	22.93	-7.99	12.79	<=34.77	Pass
			25	23.35	-7.99	13.21	<=34.77	Pass
			49	23.21	-7.99	13.07	<=34.77	Pass
		25	0	21.99	-7.99	11.85	<=34.77	Pass
			13	22.06	-7.99	11.92	<=34.77	Pass
			25	22.02	-7.99	11.88	<=34.77	Pass
		50	0	21.99	-7.99	11.85	<=34.77	Pass
64QAM	782	1	0	22.28	-7.99	12.14	<=34.77	Pass
			25	22.92	-7.99	12.78	<=34.77	Pass
			49	22.54	-7.99	12.40	<=34.77	Pass
		25	0	22.00	-7.99	11.86	<=34.77	Pass
			13	21.99	-7.99	11.85	<=34.77	Pass
			25	22.01	-7.99	11.87	<=34.77	Pass
		50	0	22.01	-7.99	11.87	<=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	1.300	0.0017	-2.5 to 2.5	Pass
					NV	2.400	0.0031	-2.5 to 2.5	Pass
					HV	2.300	0.0029	-2.5 to 2.5	Pass
				-30	NV	2.400	0.0031	-2.5 to 2.5	Pass
				-20	NV	1.600	0.0020	-2.5 to 2.5	Pass
				-10	NV	1.600	0.0020	-2.5 to 2.5	Pass
				0	NV	0.600	0.0008	-2.5 to 2.5	Pass
				10	NV	1.400	0.0018	-2.5 to 2.5	Pass
				30	NV	2.200	0.0028	-2.5 to 2.5	Pass
				40	NV	1.900	0.0024	-2.5 to 2.5	Pass
				50	NV	1.700	0.0022	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

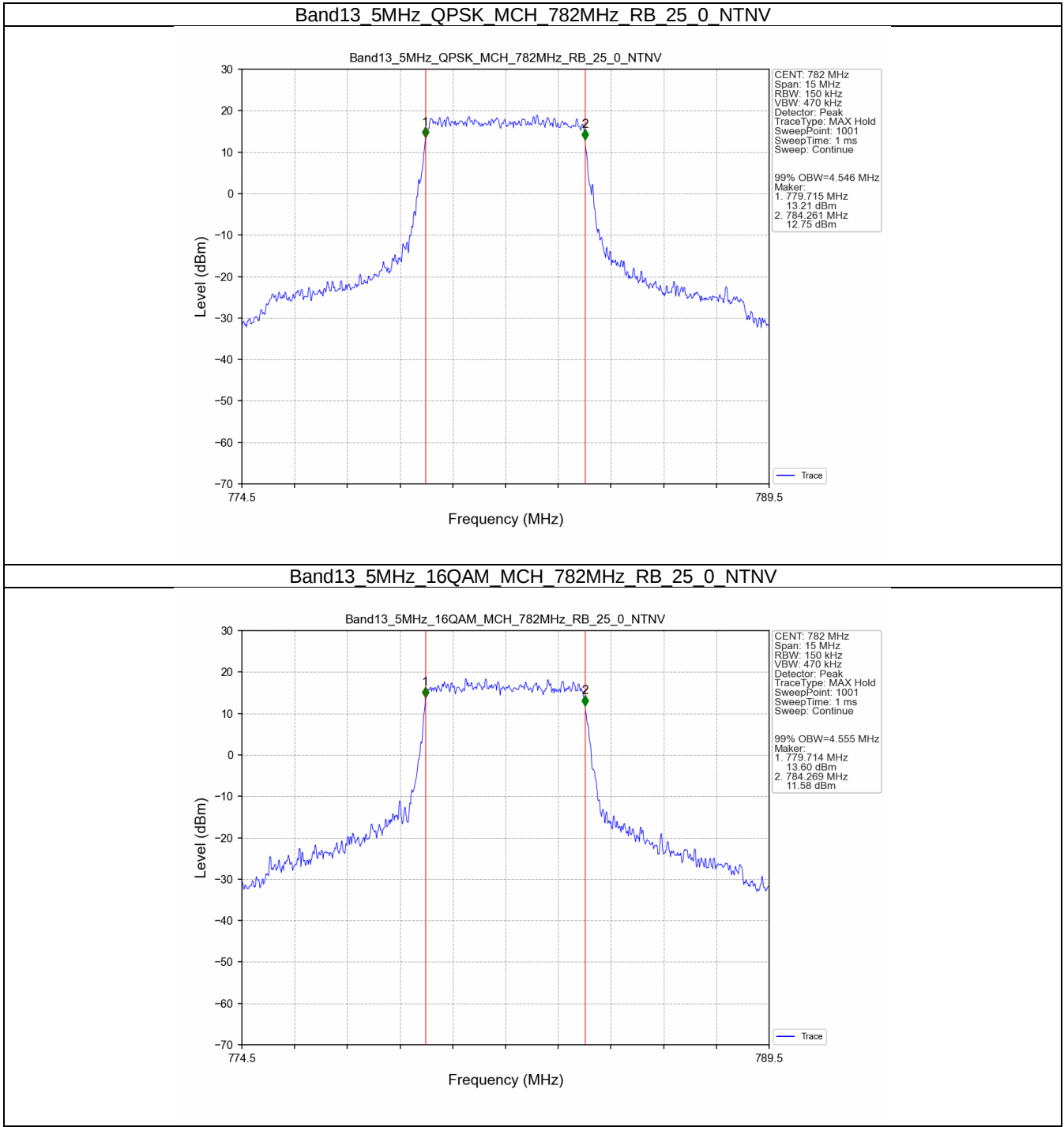
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.546	/	Pass
	16QAM	782	25	0	4.555	/	Pass
10	QPSK	782	50	0	9.078	/	Pass
	16QAM	782	50	0	9.080	/	Pass

3.1.2 Band13_XDB

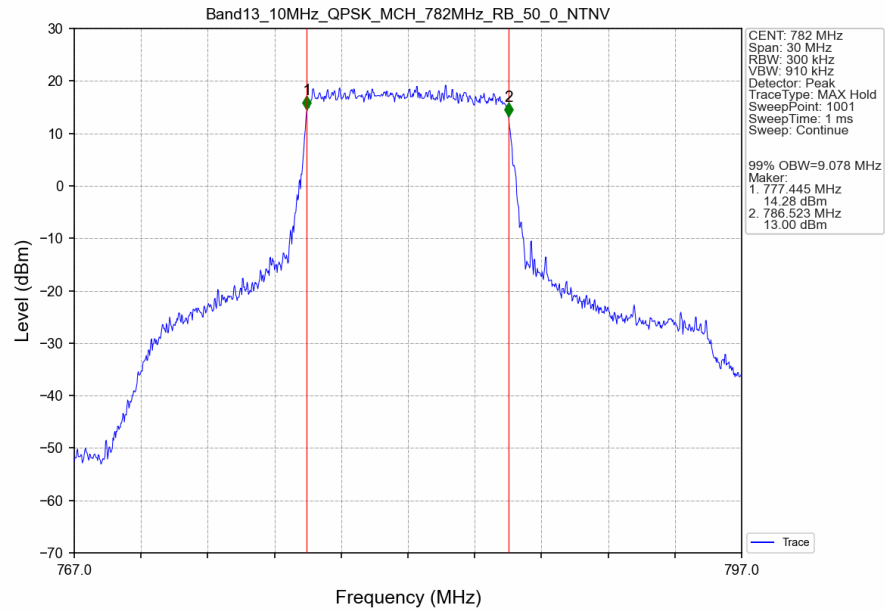
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.209	/	Pass
	16QAM	782	25	0	5.180	/	Pass
10	QPSK	782	50	0	10.112	/	Pass
	16QAM	782	50	0	10.115	/	Pass

3.2 Test Graph

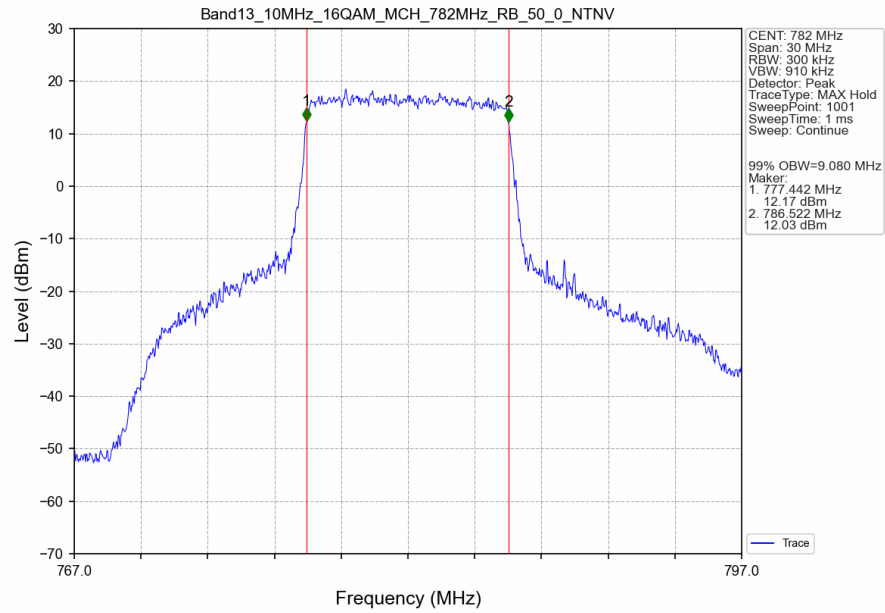
3.2.1 Band13_OBW



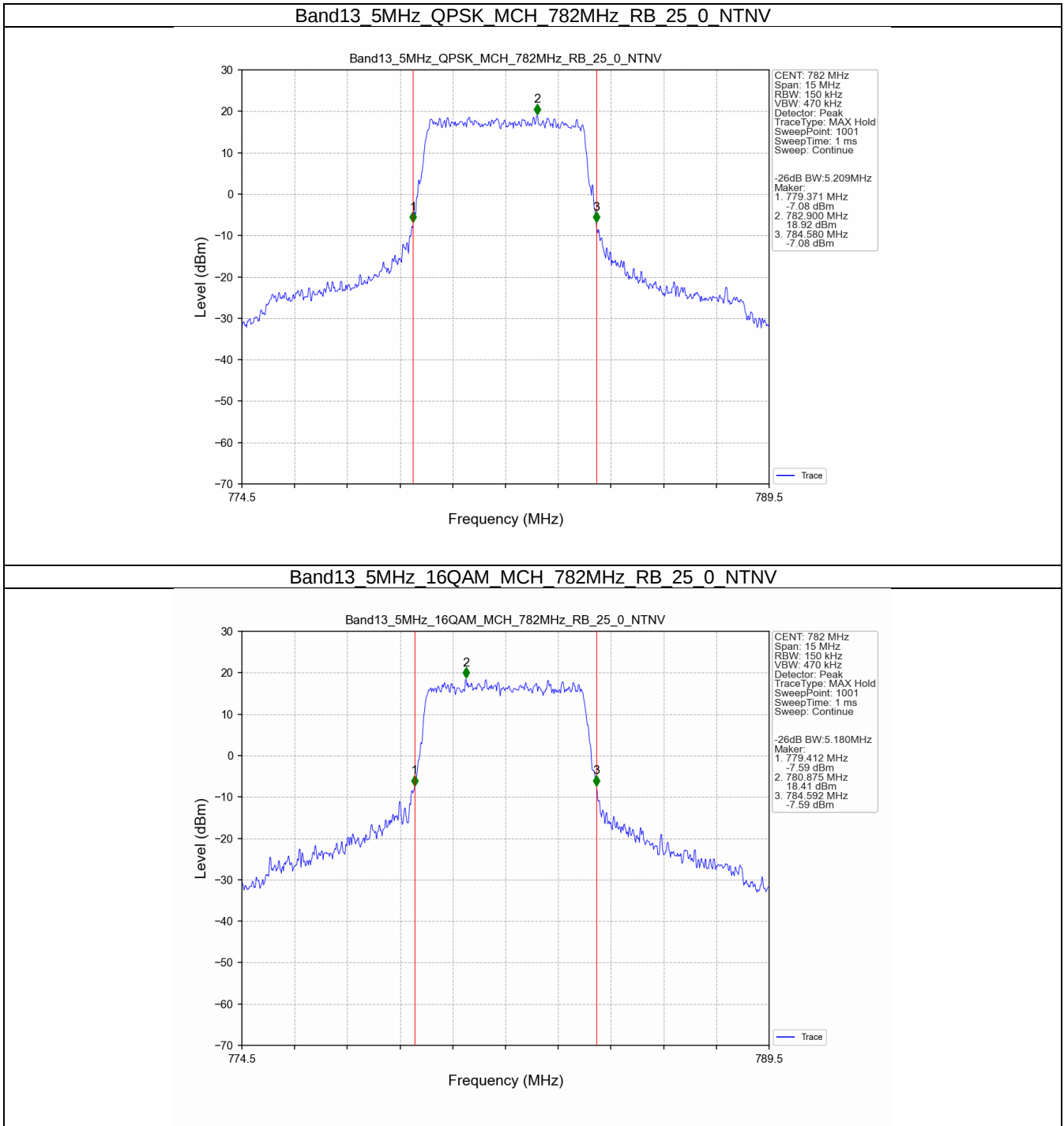
Band13 10MHz QPSK MCH 782MHz RB 50 0 NTV



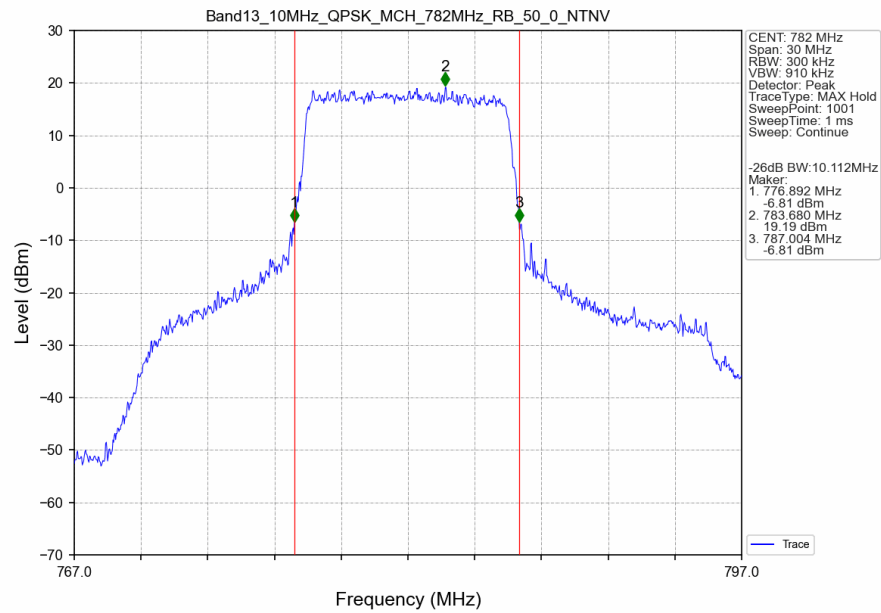
Band13 10MHz 16QAM MCH 782MHz RB 50 0 NTV



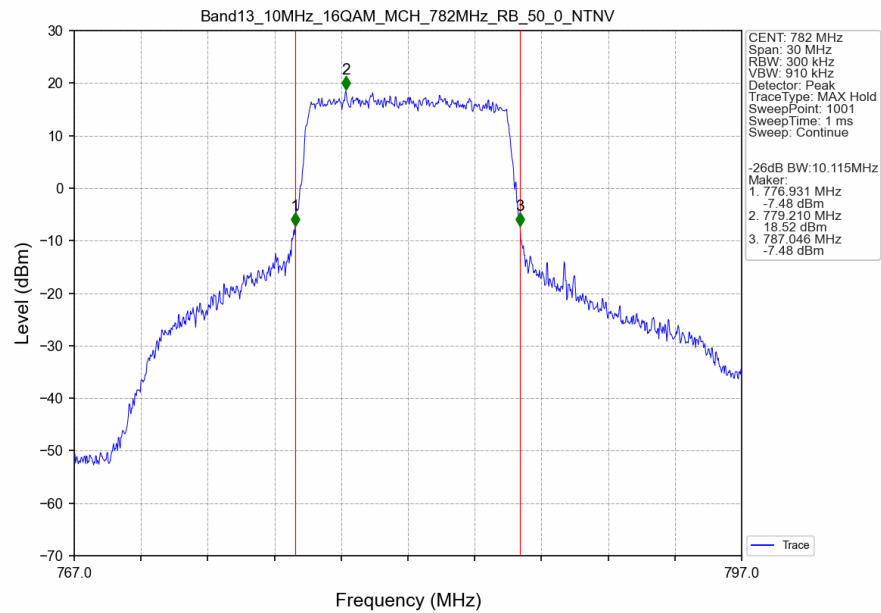
3.2.2 Band13_XDB



Band13 10MHz QPSK MCH 782MHz RB 50 0 NTNV



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



4. Peak-Average Ratio

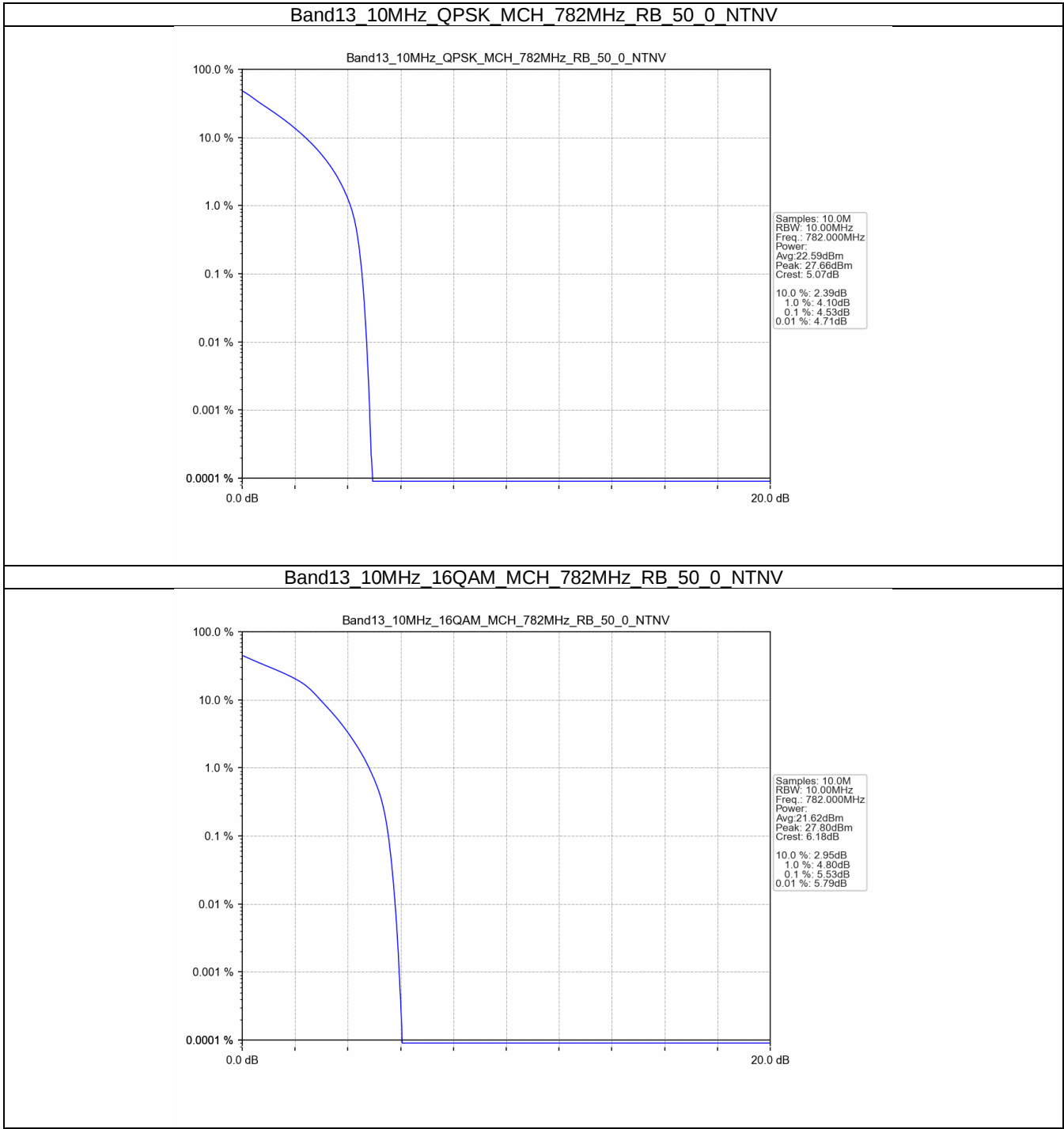
4.1 Test Result

4.1.1 B13_10MHz

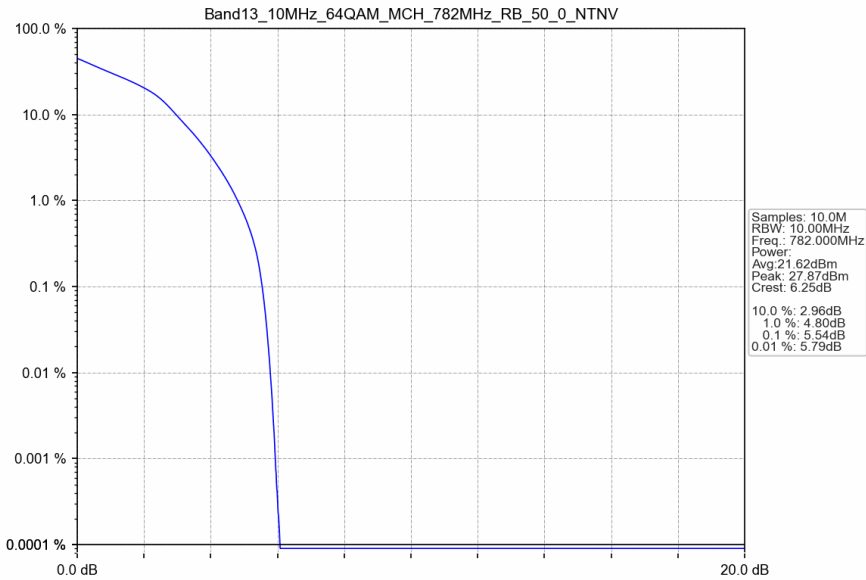
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	4.53	<=13	Pass
16QAM	782	50	0	5.53	<=13	Pass
64QAM	782	50	0	5.54	<=13	Pass

4.2 Test Graph

4.2.1 B13_10MHz



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



5. Spurious Emission

5.1 Test Result

5.1.1 B13_5MHz

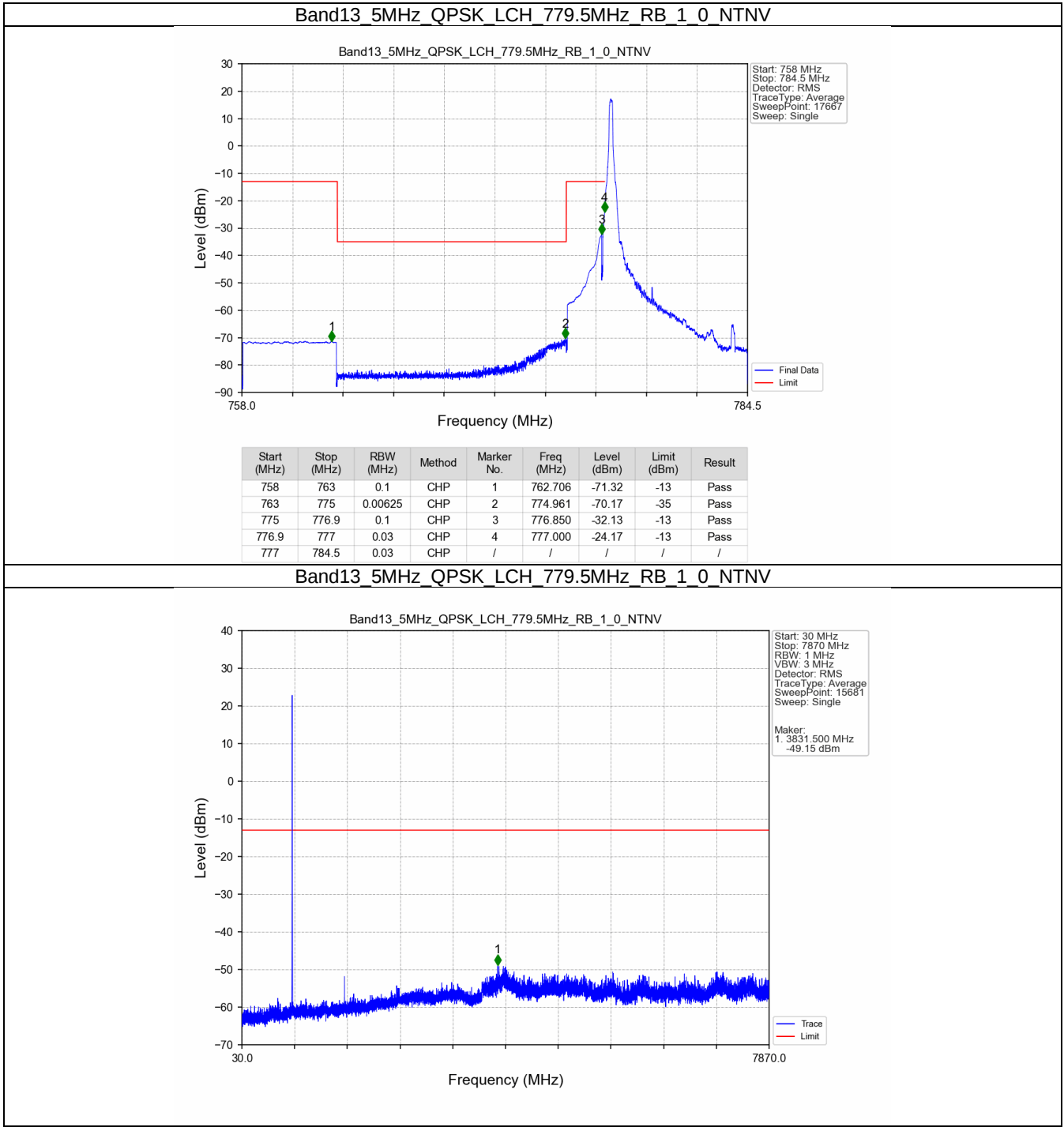
Band: 13 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B13_10MHz

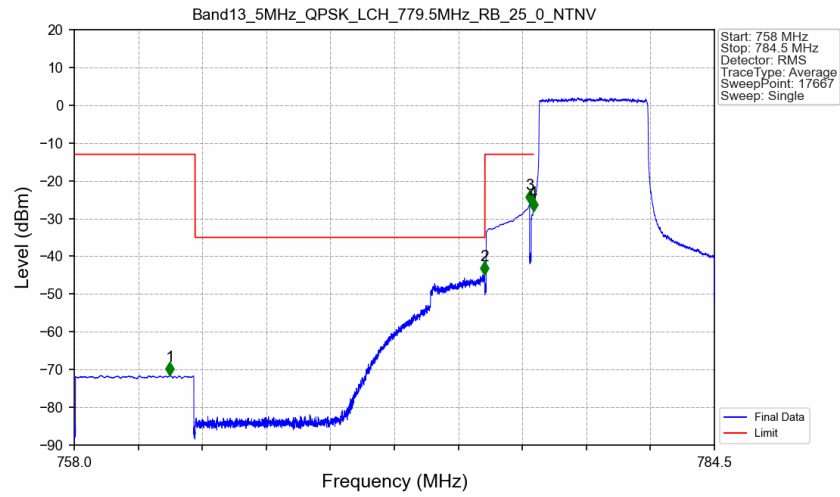
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	782	1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.2 Test Graph

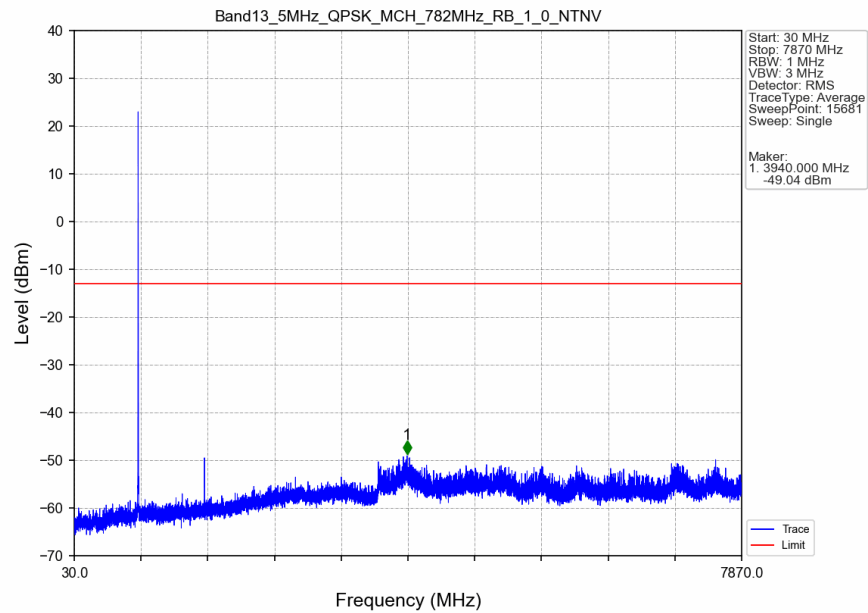
5.2.1 B13_5MHz



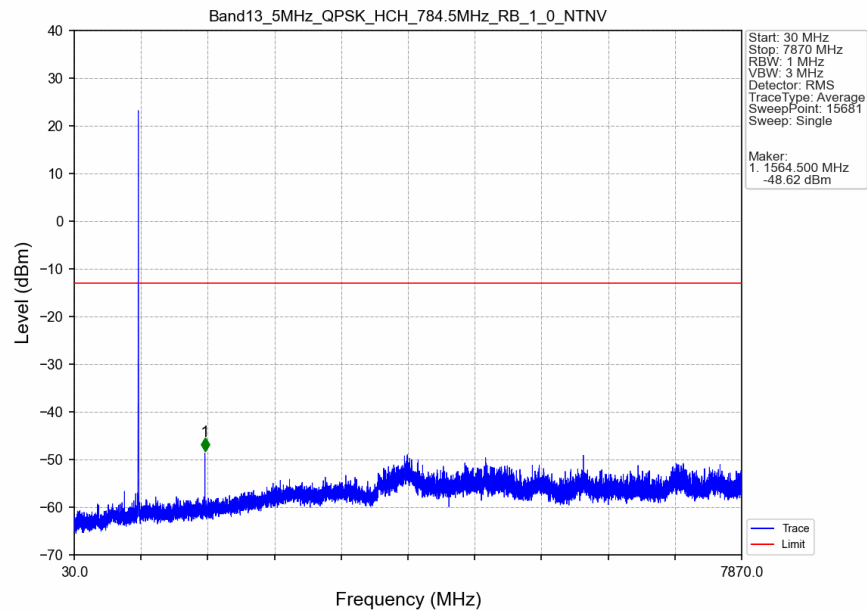
Band13 5MHz QPSK LCH 779.5MHz RB 25 0 NTV



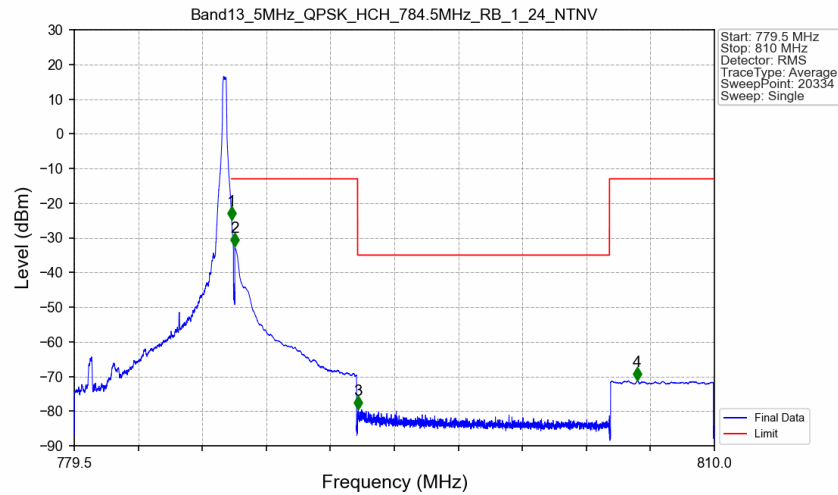
Band13 5MHz QPSK MCH 782MHz RB 1 0 NTV



Band13 5MHz QPSK HCH 784.5MHz RB 1 0 NTNV

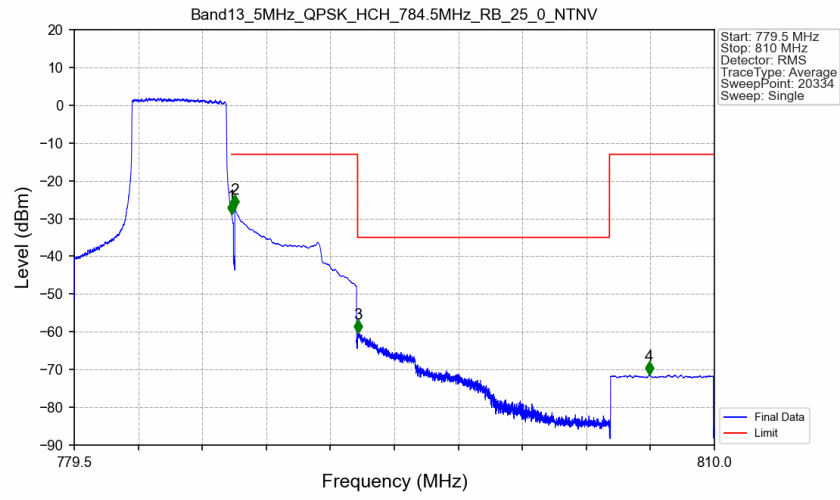


Band13 5MHz QPSK HCH 784.5MHz RB 1 24 NTNV



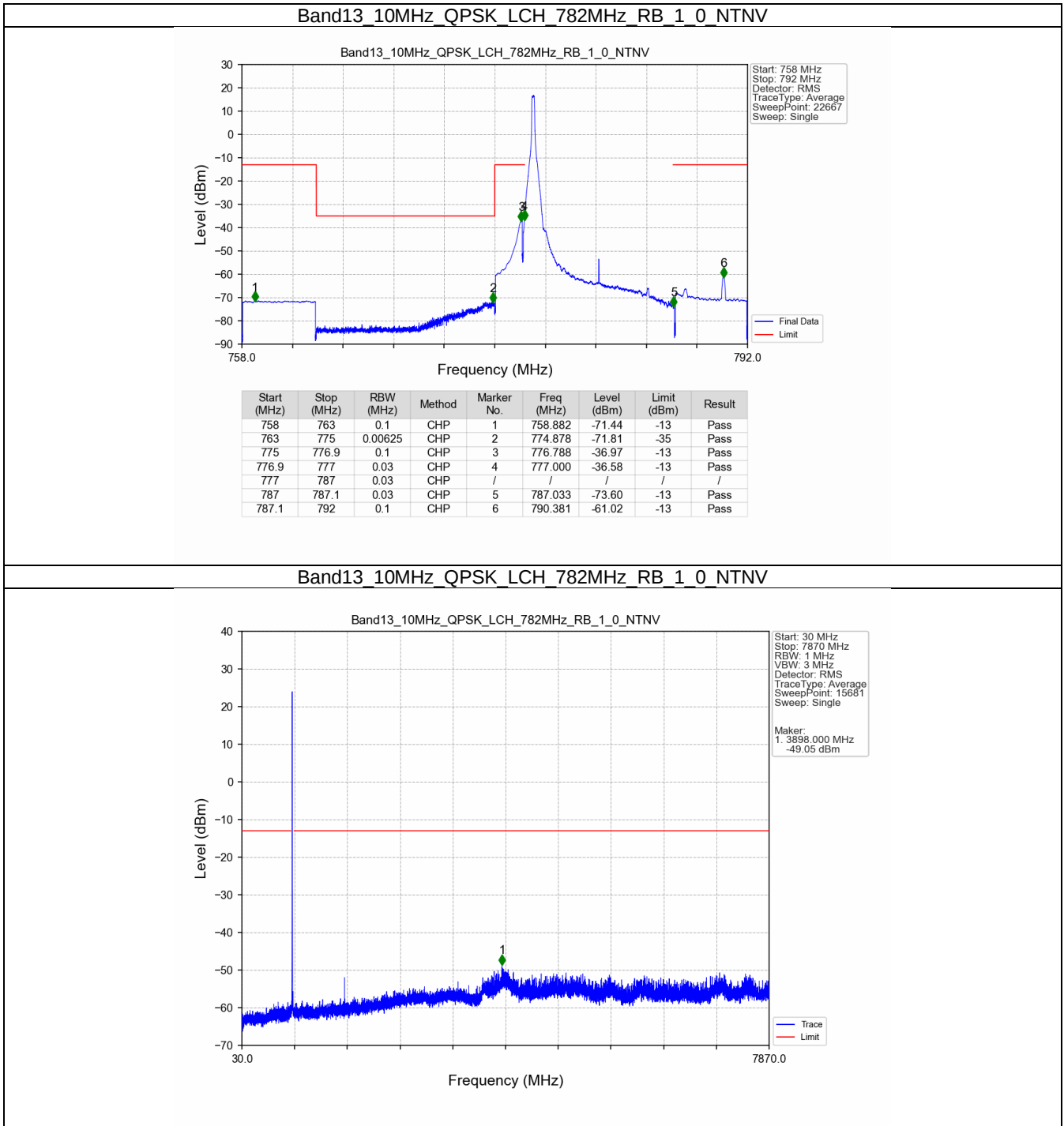
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-24.80	-13	Pass
787.1	793	0.1	CHP	2	787.150	-32.55	-13	Pass
793	805	0.00625	CHP	3	793.035	-79.49	-35	Pass
805	810	0.1	CHP	4	806.320	-71.23	-13	Pass

Band13 5MHz QPSK HCH 784.5MHz RB 25 0 NTN

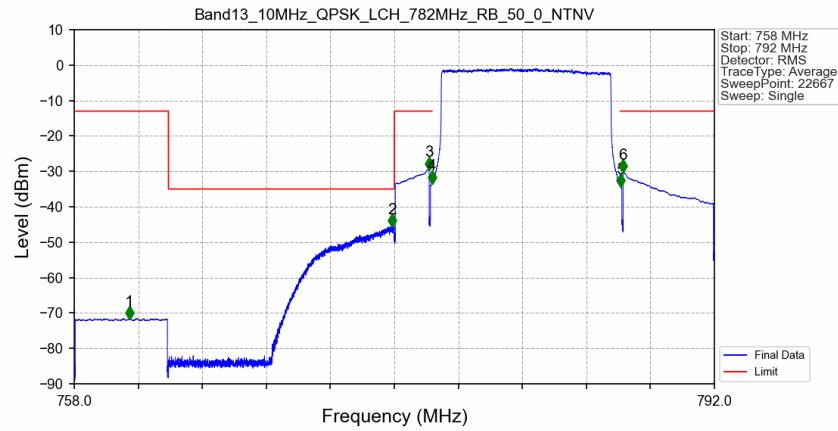


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-28.88	-13	Pass
787.1	793	0.1	CHP	2	787.150	-27.25	-13	Pass
793	805	0.00625	CHP	3	793.012	-60.37	-35	Pass
805	810	0.1	CHP	4	806.892	-71.40	-13	Pass

5.2.2 B13_10MHz

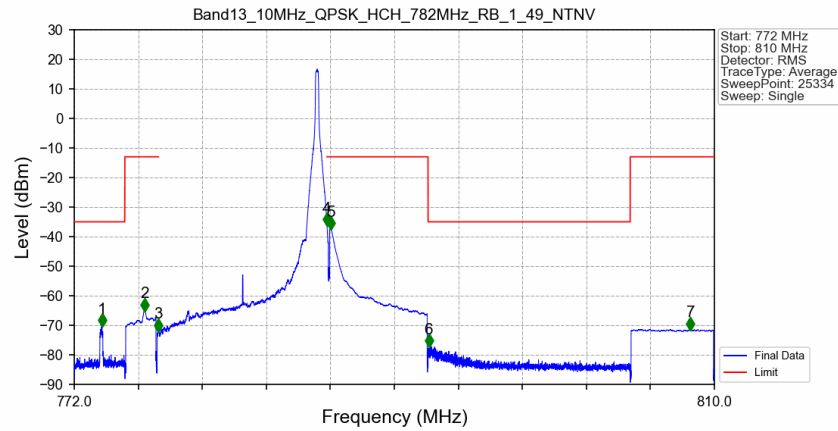


Band13 10MHz QPSK LCH 782MHz RB 50 0 NTNV



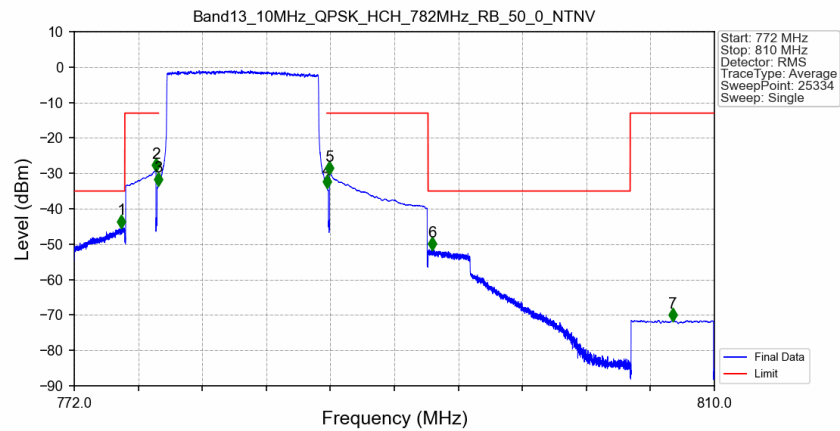
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	760.922	-71.54	-13	Pass
763	775	0.00625	CHP	2	774.898	-45.46	-35	Pass
775	776.9	0.1	CHP	3	776.850	-29.32	-13	Pass
776.9	777	0.03	CHP	4	776.991	-33.14	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.000	-34.12	-13	Pass
787.1	792	0.1	CHP	6	787.150	-30.05	-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	773.646	-70.21	-35	Pass
775	776.9	0.1	CHP	2	776.181	-64.89	-13	Pass
776.9	777	0.03	CHP	3	776.995	-71.78	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-36.10	-13	Pass
787.1	793	0.1	CHP	5	787.212	-37.24	-13	Pass
793	805	0.00625	CHP	6	793.044	-77.10	-35	Pass
805	810	0.1	CHP	7	808.578	-71.32	-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	774.807	-45.13	-35	Pass
775	776.9	0.1	CHP	2	776.850	-29.23	-13	Pass
776.9	777	0.03	CHP	3	776.979	-33.15	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-33.87	-13	Pass
787.1	793	0.1	CHP	5	787.150	-30.05	-13	Pass
793	805	0.00625	CHP	6	793.239	-51.39	-35	Pass
805	810	0.1	CHP	7	807.516	-71.47	-13	Pass

6. Field Strength of Spurious Radiation

LTE Band 13 ANT0-Middle channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1555.0	-66.65	-13	-53.65	-69.79	2.6	5.74	Horizontal	Pass
2332.5	-68.46	-13	-55.46	-70.92	2.96	5.42	Horizontal	Pass
3110.0	-65.34	-13	-52.34	-69.34	3.2	7.2	Horizontal	Pass
1555.0	-71.16	-13	-58.16	-74.3	2.6	5.74	Vertical	Pass
2332.5	-69.74	-13	-56.74	-72.2	2.96	5.42	Vertical	Pass
3110.0	-67.16	-13	-54.16	-71.16	3.2	7.2	Vertical	Pass

LTE Band 13 ANT0-Low channel, Modulation: QPSK, Bandwidth:5MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1554.5	-65.77	-13	-52.77	-68.91	2.6	5.74	Horizontal	Pass
2331.75	-68.29	-13	-55.29	-70.75	2.96	5.42	Horizontal	Pass
3109.0	-65.57	-13	-52.57	-69.56	3.2	7.19	Horizontal	Pass
1554.5	-71.02	-13	-58.02	-74.16	2.6	5.74	Vertical	Pass
2331.75	-69.75	-13	-56.75	-72.21	2.96	5.42	Vertical	Pass
3109.0	-66.77	-13	-53.77	-70.76	3.2	7.19	Vertical	Pass

LTE Band 13 ANT0-Middle channel, Modulation: QPSK, Bandwidth:5MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1559.5	-64.3	-40	-24.3	-67.43	2.6	5.73	Horizontal	Pass
2339.25	-66.34	-13	-53.34	-68.81	2.96	5.43	Horizontal	Pass
3119.0	-63.39	-13	-50.39	-67.4	3.21	7.22	Horizontal	Pass
1559.5	-70.24	-40	-30.24	-73.37	2.6	5.73	Vertical	Pass
2339.25	-69.4	-13	-56.4	-71.87	2.96	5.43	Vertical	Pass
3119.0	-65.31	-13	-52.31	-69.32	3.21	7.22	Vertical	Pass

LTE Band 13 ANT1-High channel, Modulation: QPSK, Bandwidth:5MHz, 1RB#0								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1564.5	-64.59	-40	-24.59	-67.71	2.6	5.72	Horizontal	Pass
2346.75	-64.21	-13	-51.21	-66.69	2.97	5.45	Horizontal	Pass
3129.0	-62.64	-13	-49.64	-66.67	3.21	7.24	Horizontal	Pass
1564.5	-70.18	-40	-30.18	-73.3	2.6	5.72	Vertical	Pass
2346.75	-67.61	-13	-54.61	-70.09	2.97	5.45	Vertical	Pass
3129.0	-65.59	-13	-52.59	-69.62	3.21	7.24	Vertical	Pass