

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	22.93	3.00	23.78	<=34.77	Pass
			13	23.09	3.00	23.94	<=34.77	Pass
			24	22.84	3.00	23.69	<=34.77	Pass
		12	0	22.05	3.00	22.90	<=34.77	Pass
			6	22.16	3.00	23.01	<=34.77	Pass
			13	22.05	3.00	22.90	<=34.77	Pass
		25	0	22.05	3.00	22.90	<=34.77	Pass
	782	1	0	23.02	3.00	23.87	<=34.77	Pass
			13	22.95	3.00	23.80	<=34.77	Pass
			24	23.06	3.00	23.91	<=34.77	Pass
		12	0	22.06	3.00	22.91	<=34.77	Pass
			6	22.04	3.00	22.89	<=34.77	Pass
			13	22.10	3.00	22.95	<=34.77	Pass
		25	0	22.08	3.00	22.93	<=34.77	Pass
	784.5	1	0	23.00	3.00	23.85	<=34.77	Pass
			13	23.20	3.00	24.05	<=34.77	Pass
			24	23.10	3.00	23.95	<=34.77	Pass
		12	0	22.10	3.00	22.95	<=34.77	Pass
			6	22.05	3.00	22.90	<=34.77	Pass
			13	22.23	3.00	23.08	<=34.77	Pass
		25	0	22.12	3.00	22.97	<=34.77	Pass
16QAM	779.5	1	0	22.37	3.00	23.22	<=34.77	Pass
			13	22.10	3.00	22.95	<=34.77	Pass
			24	22.27	3.00	23.12	<=34.77	Pass
		12	0	21.09	3.00	21.94	<=34.77	Pass
			6	21.21	3.00	22.06	<=34.77	Pass
			13	21.13	3.00	21.98	<=34.77	Pass
		25	0	21.13	3.00	21.98	<=34.77	Pass
	782	1	0	22.09	3.00	22.94	<=34.77	Pass
			13	21.89	3.00	22.74	<=34.77	Pass
			24	21.92	3.00	22.77	<=34.77	Pass
		12	0	21.09	3.00	21.94	<=34.77	Pass
			6	21.04	3.00	21.89	<=34.77	Pass
			13	21.04	3.00	21.89	<=34.77	Pass
		25	0	21.01	3.00	21.86	<=34.77	Pass
	784.5	1	0	22.27	3.00	23.12	<=34.77	Pass
			13	22.62	3.00	23.47	<=34.77	Pass
			24	22.41	3.00	23.26	<=34.77	Pass
		12	0	21.11	3.00	21.96	<=34.77	Pass
			6	21.16	3.00	22.01	<=34.77	Pass
			13	21.23	3.00	22.08	<=34.77	Pass
		25	0	21.12	3.00	21.97	<=34.77	Pass
64QAM	779.5	1	0	21.01	3.00	21.86	<=34.77	Pass
			13	21.09	3.00	21.94	<=34.77	Pass
			24	20.86	3.00	21.71	<=34.77	Pass
		12	0	19.97	3.00	20.82	<=34.77	Pass

	782	25	6	20.00	3.00	20.85	<=34.77	Pass	
			13	19.98	3.00	20.83	<=34.77	Pass	
			0	19.93	3.00	20.78	<=34.77	Pass	
		12	1	0	21.00	3.00	21.85	<=34.77	Pass
				13	21.09	3.00	21.94	<=34.77	Pass
				24	21.00	3.00	21.85	<=34.77	Pass
			6	0	19.93	3.00	20.78	<=34.77	Pass
				6	19.70	3.00	20.55	<=34.77	Pass
				13	20.01	3.00	20.86	<=34.77	Pass
	25		0	19.89	3.00	20.74	<=34.77	Pass	
	784.5	1	0	21.13	3.00	21.98	<=34.77	Pass	
			13	20.83	3.00	21.68	<=34.77	Pass	
			24	21.44	3.00	22.29	<=34.77	Pass	
		12	0	19.92	3.00	20.77	<=34.77	Pass	
			6	19.96	3.00	20.81	<=34.77	Pass	
			13	20.20	3.00	21.05	<=34.77	Pass	
		25	0	19.94	3.00	20.79	<=34.77	Pass	
256QAM		779.5	1	0	17.96	3.00	18.81	<=34.77	Pass
				13	18.07	3.00	18.92	<=34.77	Pass
	24			17.87	3.00	18.72	<=34.77	Pass	
	12		0	17.95	3.00	18.80	<=34.77	Pass	
			6	18.05	3.00	18.90	<=34.77	Pass	
			13	17.94	3.00	18.79	<=34.77	Pass	
	25		0	18.08	3.00	18.93	<=34.77	Pass	
	782	1	0	17.72	3.00	18.57	<=34.77	Pass	
			13	18.19	3.00	19.04	<=34.77	Pass	
			24	17.95	3.00	18.80	<=34.77	Pass	
		12	0	17.75	3.00	18.60	<=34.77	Pass	
			6	17.92	3.00	18.77	<=34.77	Pass	
			13	18.03	3.00	18.88	<=34.77	Pass	
		25	0	17.82	3.00	18.67	<=34.77	Pass	
	784.5	1	0	17.91	3.00	18.76	<=34.77	Pass	
			13	18.02	3.00	18.87	<=34.77	Pass	
			24	17.98	3.00	18.83	<=34.77	Pass	
12		0	17.91	3.00	18.76	<=34.77	Pass		
		6	17.98	3.00	18.83	<=34.77	Pass		
		13	18.14	3.00	18.99	<=34.77	Pass		
25		0	17.96	3.00	18.81	<=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	23.13	3.00	23.98	<=34.77	Pass
			25	23.06	3.00	23.91	<=34.77	Pass
			49	23.15	3.00	24.00	<=34.77	Pass
		25	0	22.11	3.00	22.96	<=34.77	Pass
			13	22.10	3.00	22.95	<=34.77	Pass
			25	22.13	3.00	22.98	<=34.77	Pass
		50	0	22.03	3.00	22.88	<=34.77	Pass
16QAM	782	1	0	22.31	3.00	23.16	<=34.77	Pass
			25	22.36	3.00	23.21	<=34.77	Pass

			49	22.32	3.00	23.17	<=34.77	Pass
		25	0	21.18	3.00	22.03	<=34.77	Pass
			13	21.16	3.00	22.01	<=34.77	Pass
			25	21.06	3.00	21.91	<=34.77	Pass
		50	0	21.01	3.00	21.86	<=34.77	Pass
64QAM	782	1	0	20.68	3.00	21.53	<=34.77	Pass
			25	20.97	3.00	21.82	<=34.77	Pass
			49	20.16	3.00	21.01	<=34.77	Pass
		25	0	19.94	3.00	20.79	<=34.77	Pass
			13	19.80	3.00	20.65	<=34.77	Pass
			25	19.93	3.00	20.78	<=34.77	Pass
		50	0	19.97	3.00	20.82	<=34.77	Pass
256QAM	782	1	0	17.87	3.00	18.72	<=34.77	Pass
			25	17.99	3.00	18.84	<=34.77	Pass
			49	18.15	3.00	19.00	<=34.77	Pass
		25	0	17.96	3.00	18.81	<=34.77	Pass
			13	17.95	3.00	18.80	<=34.77	Pass
			25	17.95	3.00	18.80	<=34.77	Pass
		50	0	18.04	3.00	18.89	<=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	7.700	0.0098	-2.5 to 2.5	Pass
					NV	-2.600	-0.0033	-2.5 to 2.5	Pass
					HV	-0.300	-0.0004	-2.5 to 2.5	Pass
				0	NV	7.900	0.0101	-2.5 to 2.5	Pass
				10	NV	-1.800	-0.0023	-2.5 to 2.5	Pass
				30	NV	2.900	0.0037	-2.5 to 2.5	Pass
				40	NV	0.600	0.0008	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

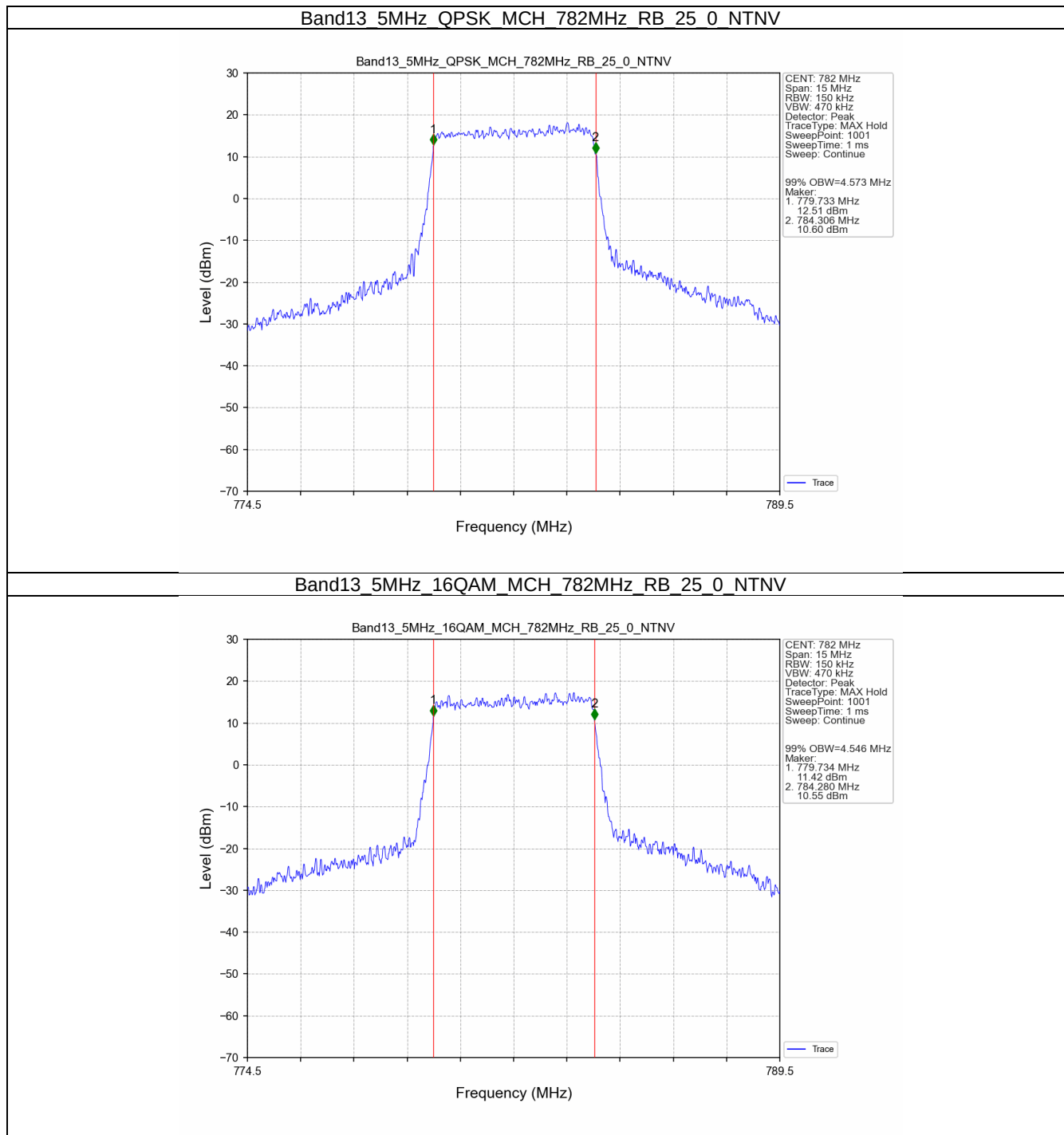
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.573	/	Pass
	16QAM	782	25	0	4.546	/	Pass
	64QAM	782	25	0	4.550	/	Pass
	256QAM	782	25	0	4.549	/	Pass
10	QPSK	782	50	0	9.069	/	Pass
	16QAM	782	50	0	9.052	/	Pass
	64QAM	782	50	0	9.064	/	Pass
	256QAM	782	50	0	9.072	/	Pass

3.1.2 Band13_XDB

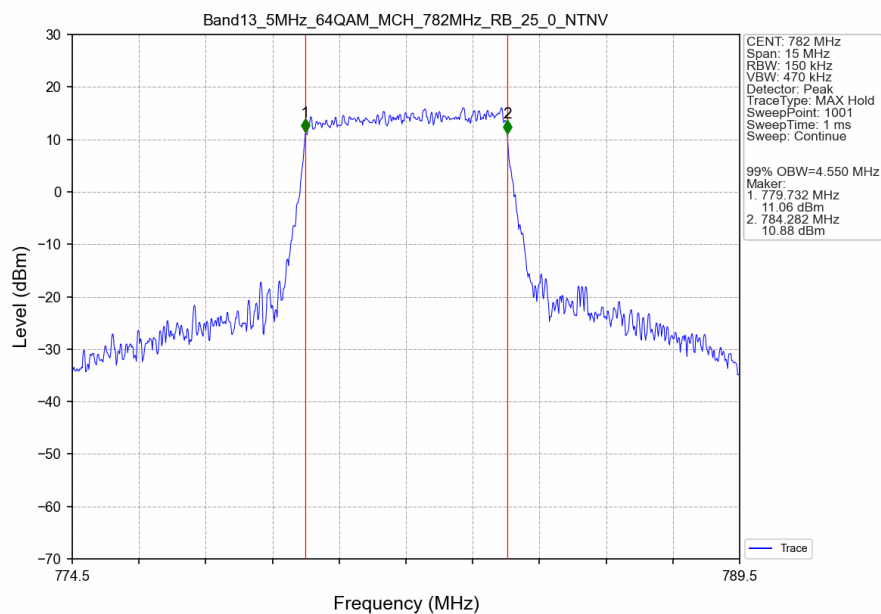
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.160	/	Pass
	16QAM	782	25	0	5.253	/	Pass
	64QAM	782	25	0	5.242	/	Pass
	256QAM	782	25	0	5.210	/	Pass
10	QPSK	782	50	0	10.134	/	Pass
	16QAM	782	50	0	10.214	/	Pass
	64QAM	782	50	0	10.159	/	Pass
	256QAM	782	50	0	10.173	/	Pass

3.2 Test Graph

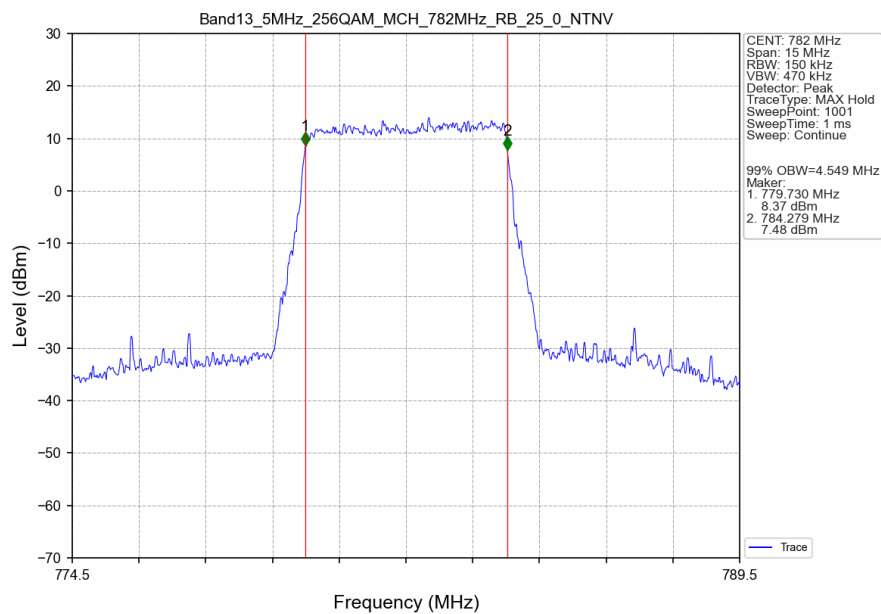
3.2.1 Band13_OBW



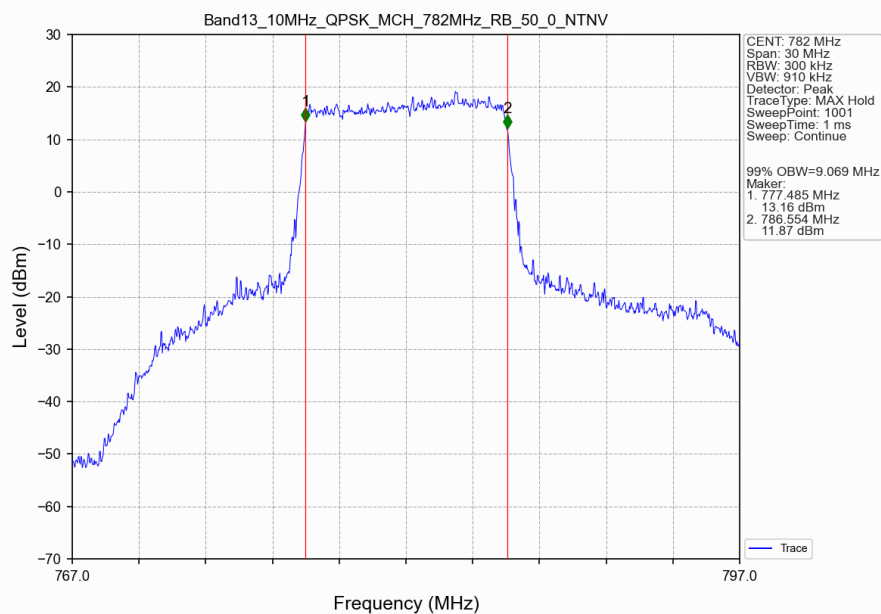
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



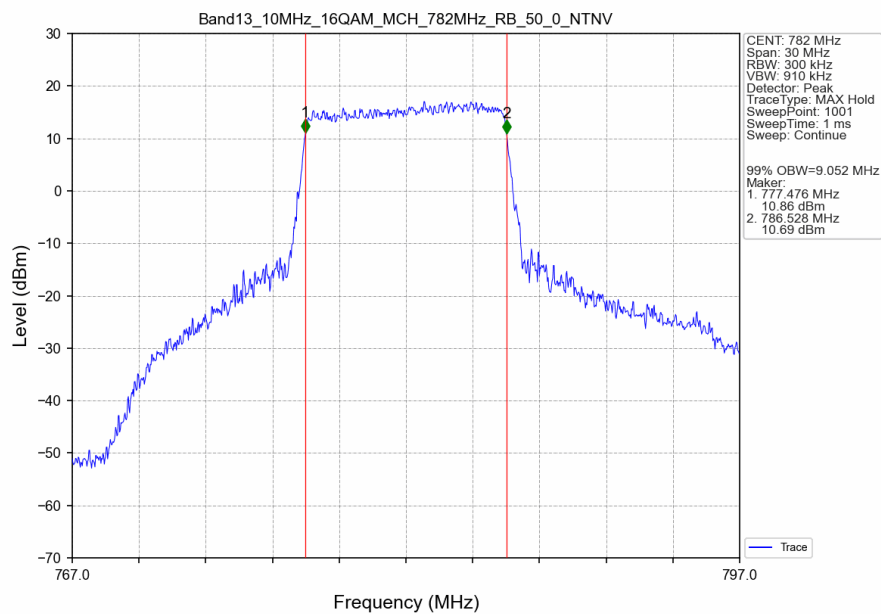
Band13_5MHz_256QAM_MCH_782MHz_RB_25_0_NTNV



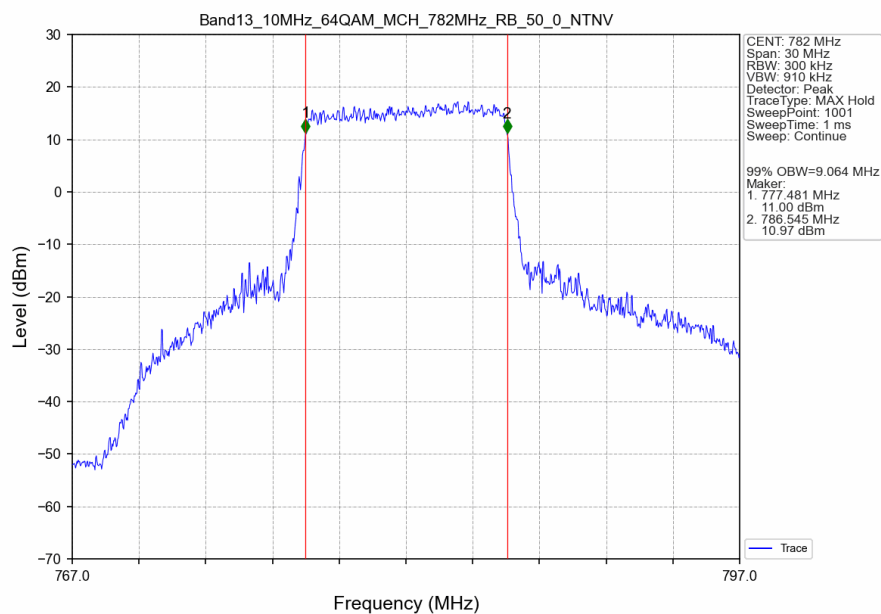
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



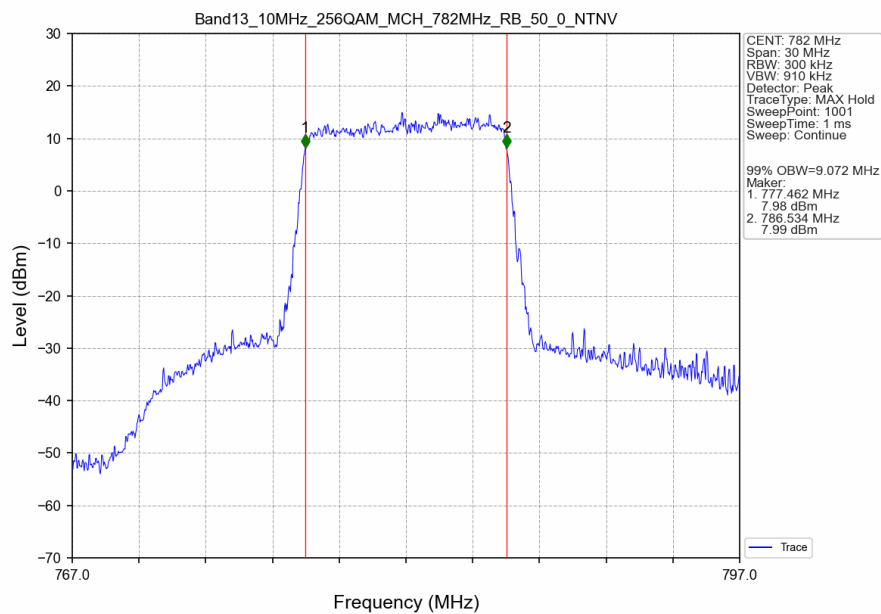
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



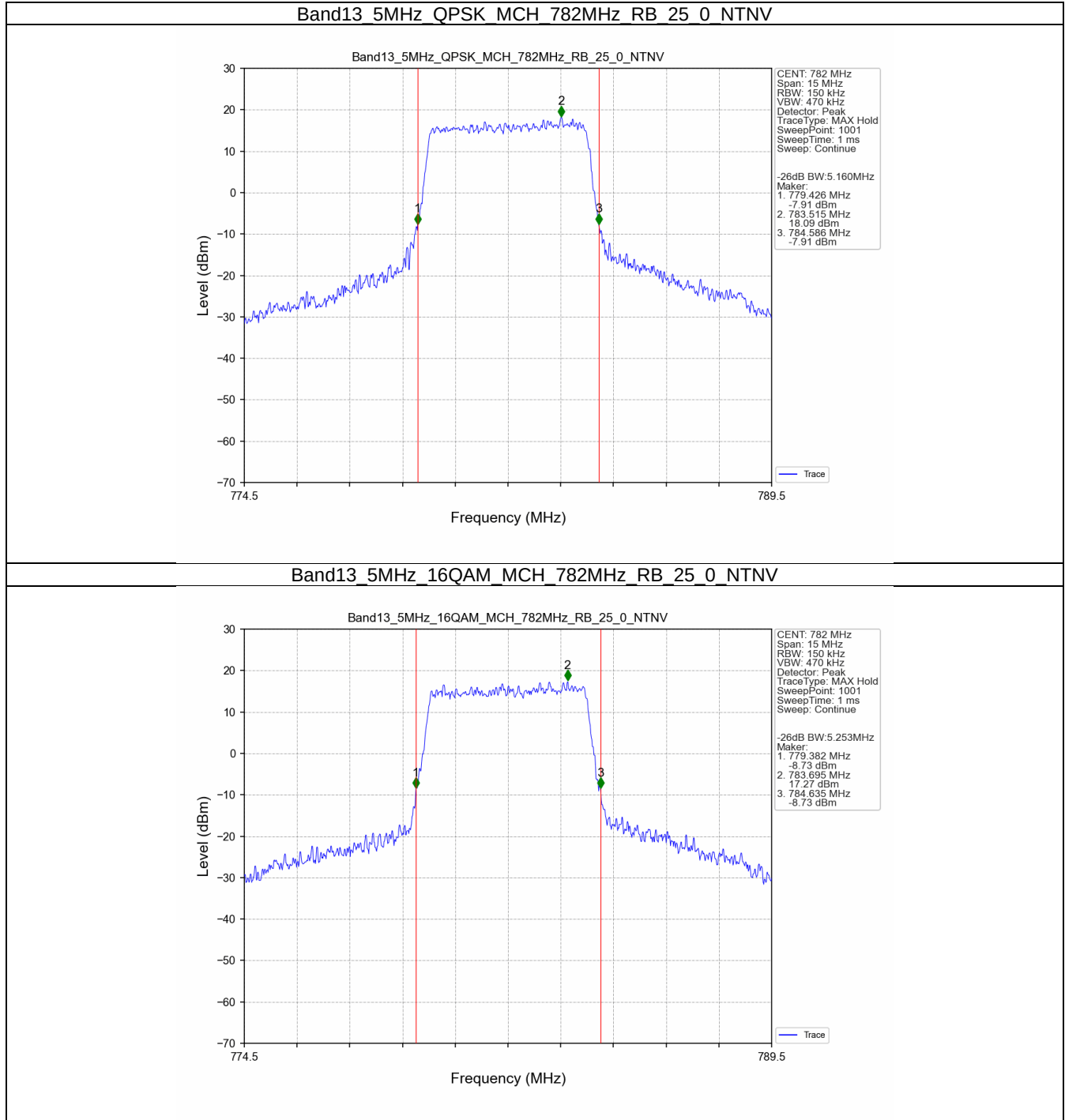
Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



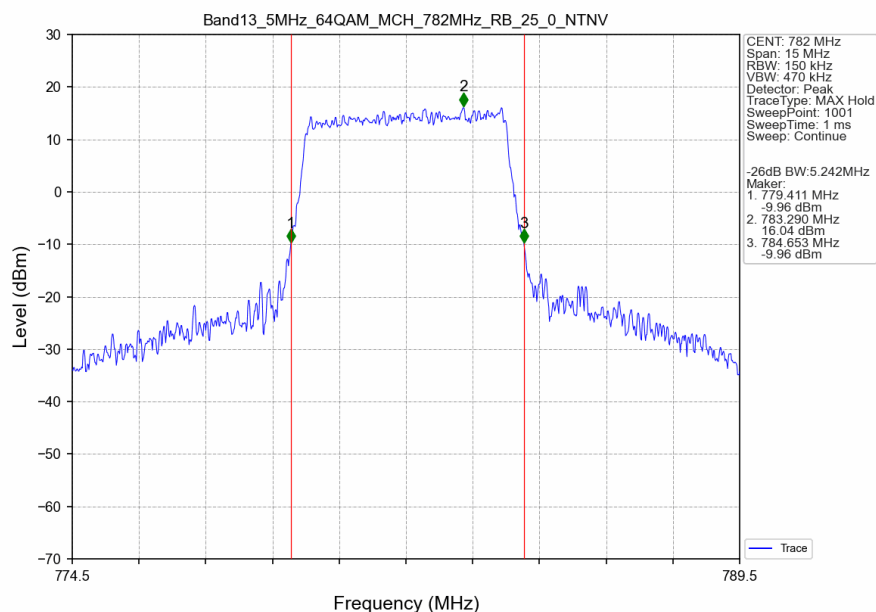
Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV



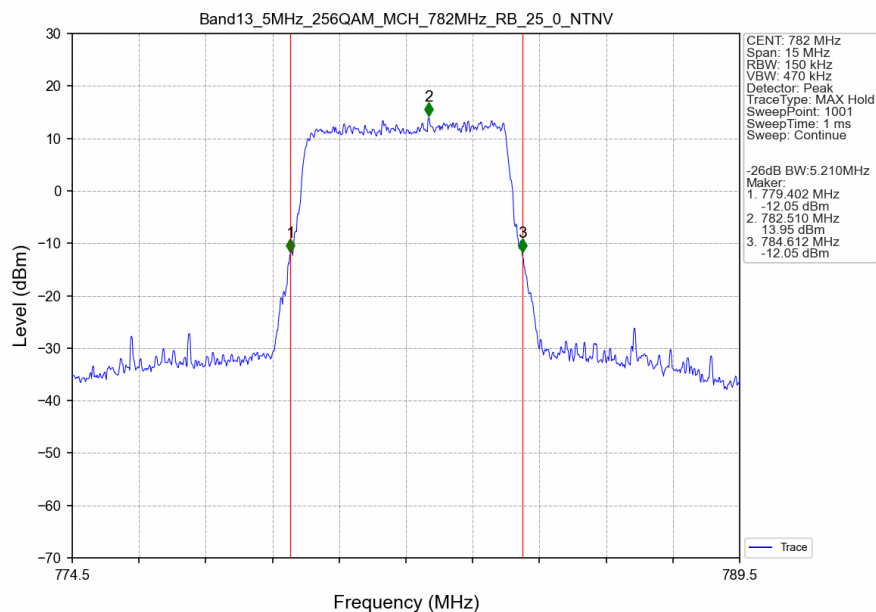
3.2.2 Band13_XDB



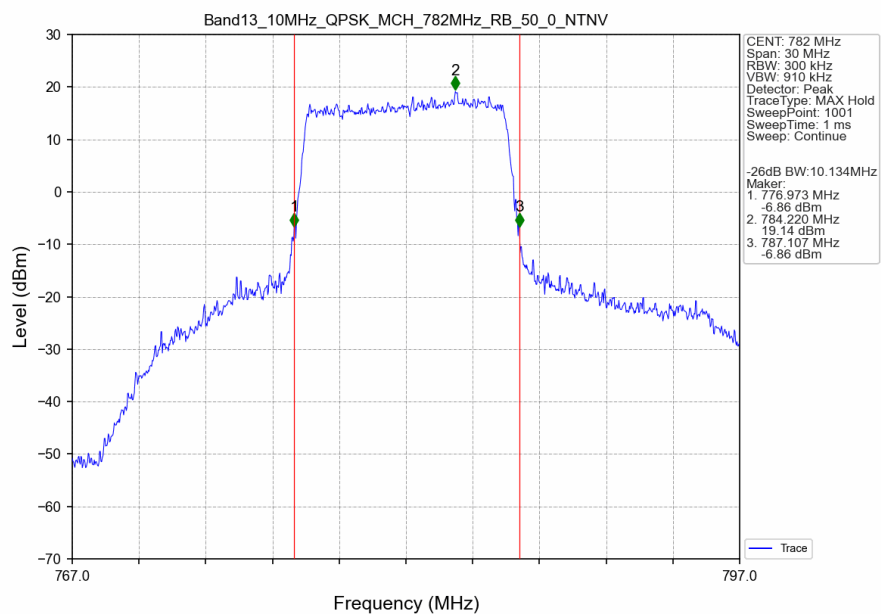
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



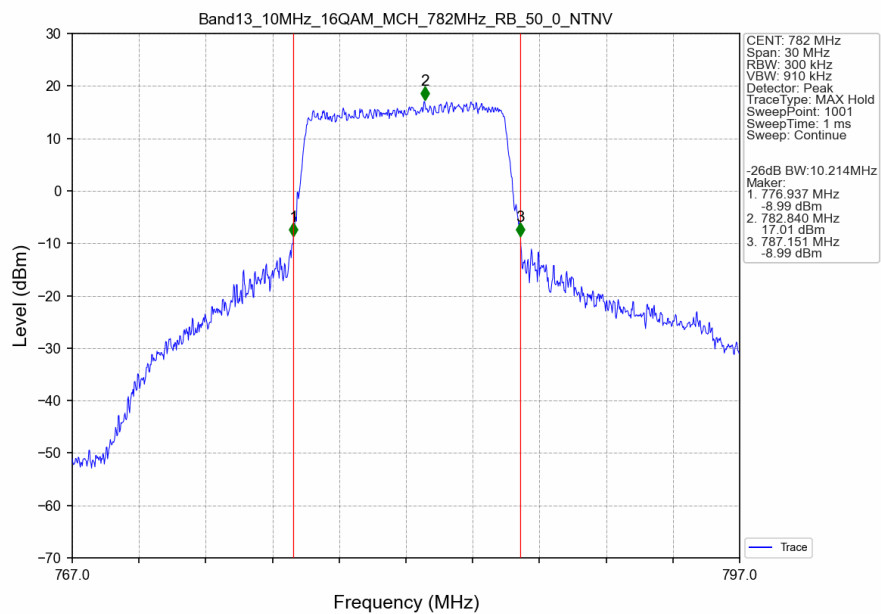
Band13_5MHz_256QAM_MCH_782MHz_RB_25_0_NTNV



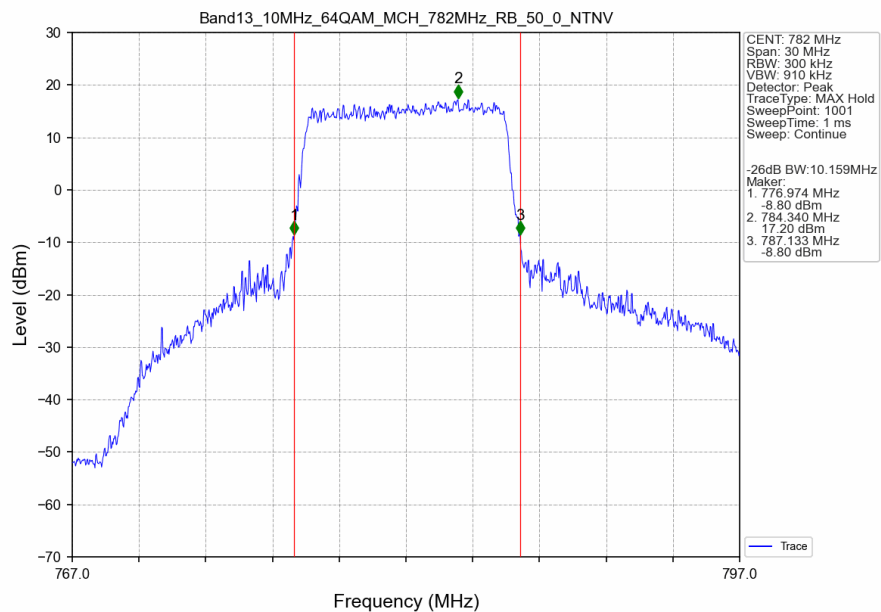
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



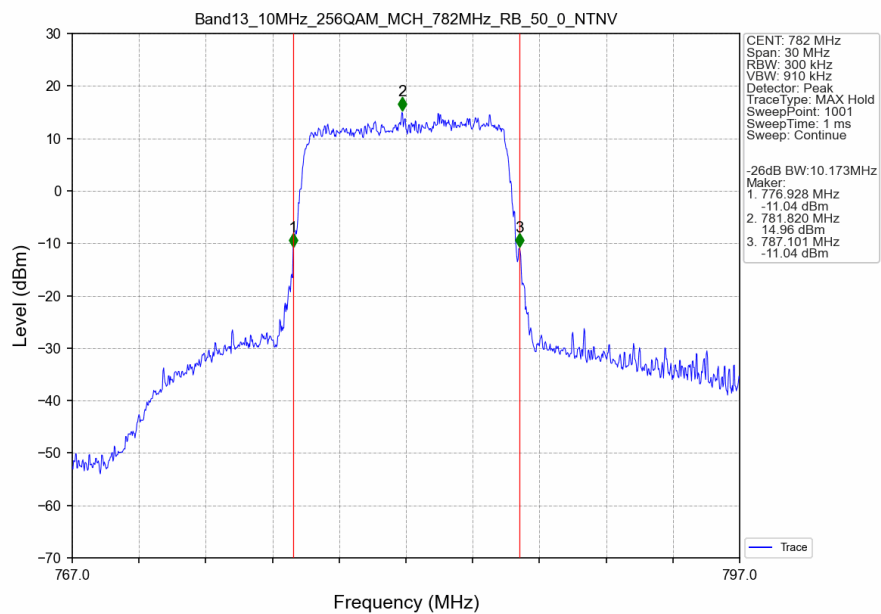
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV





4. Peak-Average Ratio

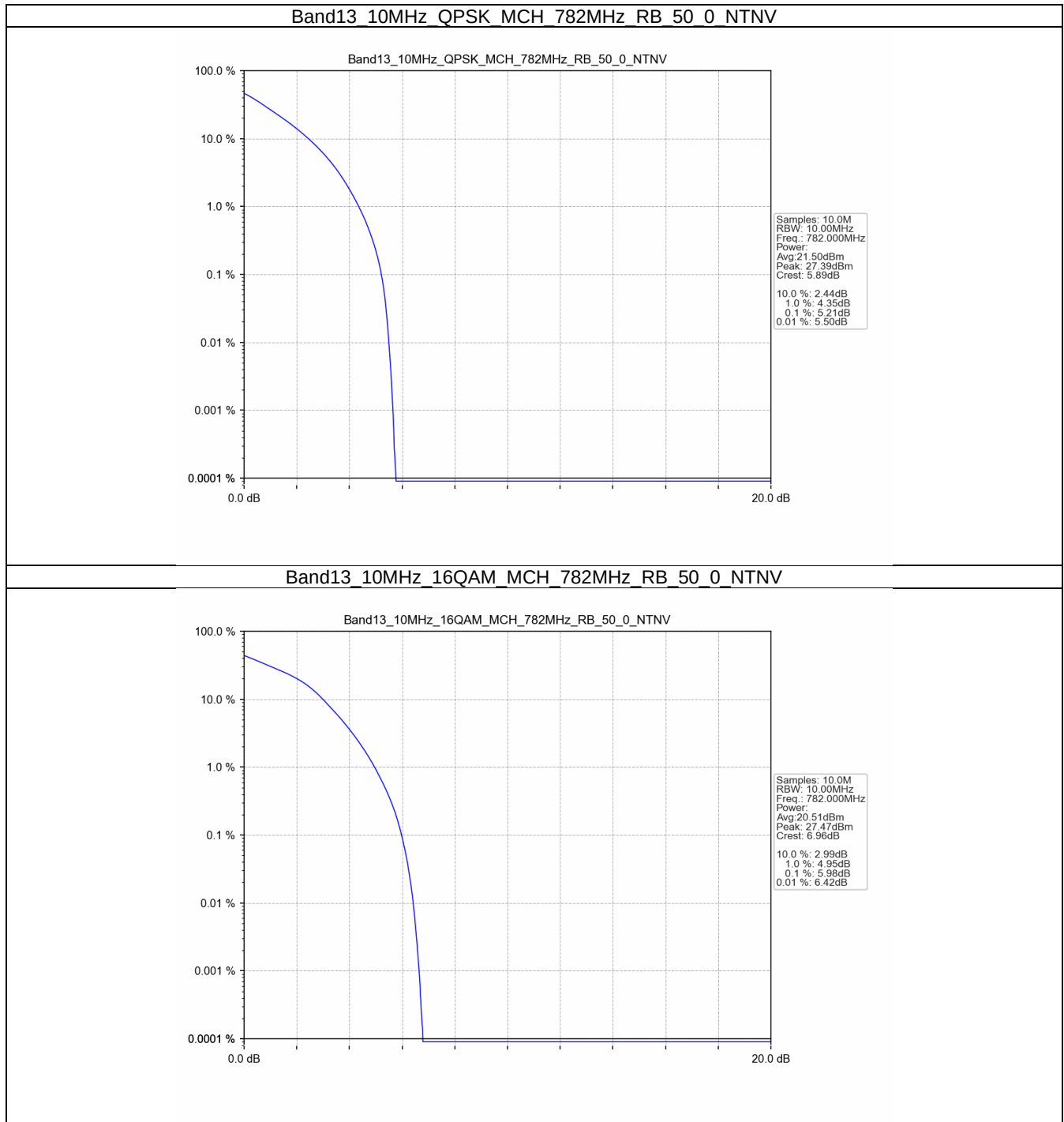
4.1 Test Result

4.1.1 B13_10MHz

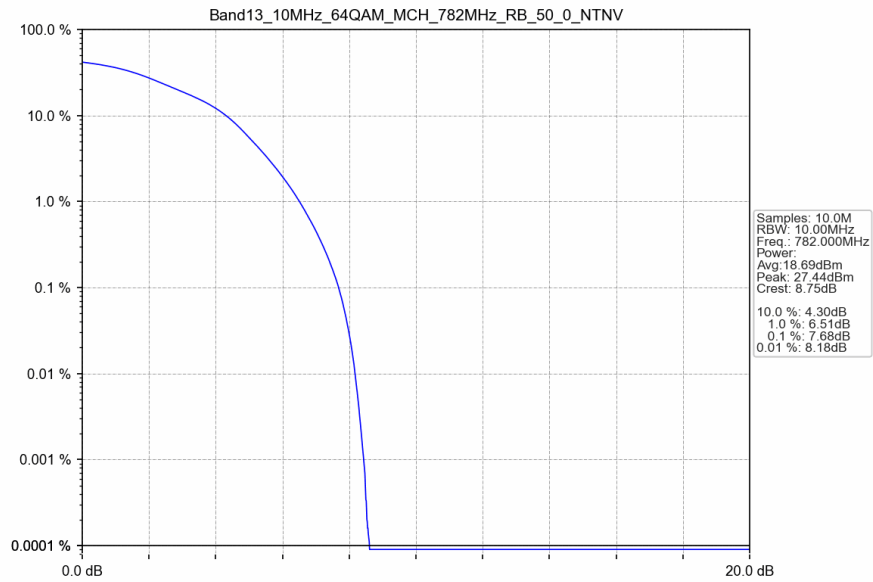
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.21	<=13	Pass
16QAM	782	50	0	5.98	<=13	Pass
64QAM	782	50	0	7.68	<=13	Pass
256QAM	782	50	0	6.65	<=13	Pass

4.2 Test Graph

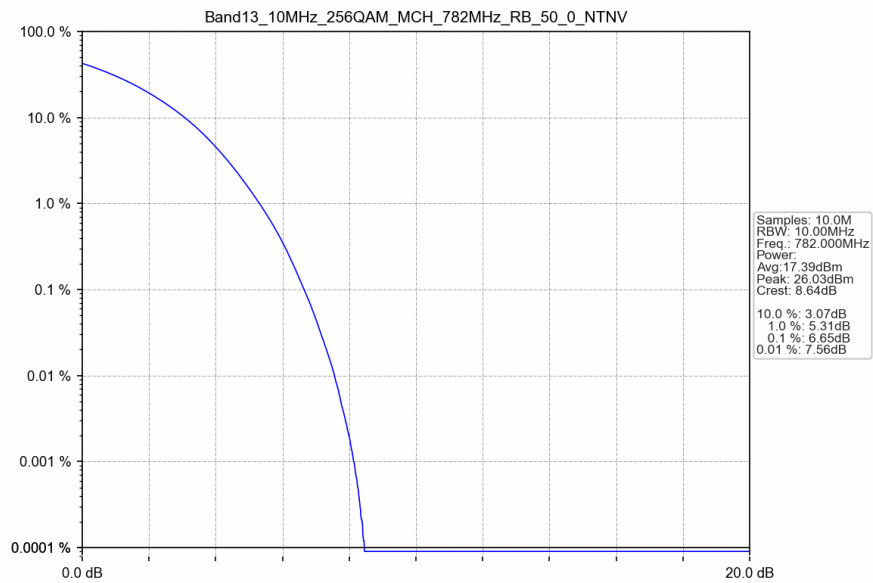
4.2.1 B13_10MHz



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

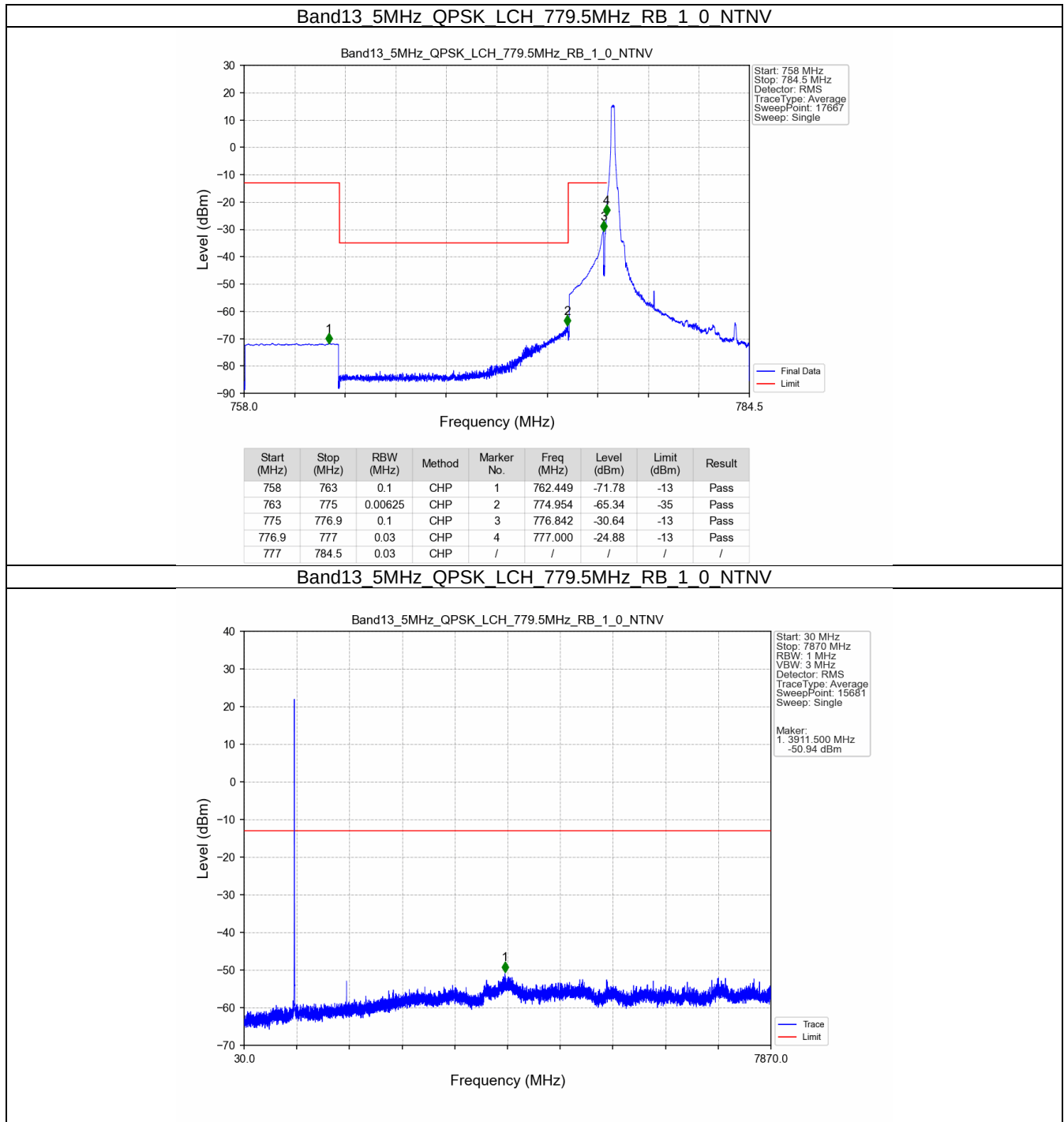
Band: 13 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test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

5.1.2 B13_10MHz

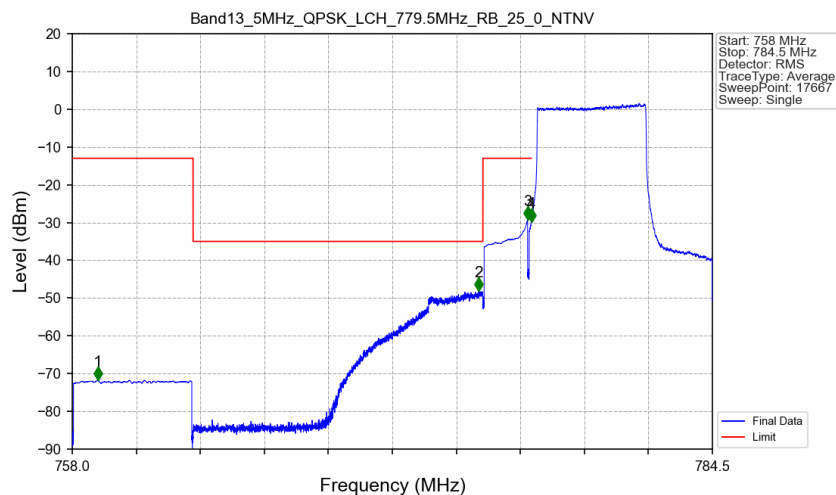
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	782	1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.2 Test Graph

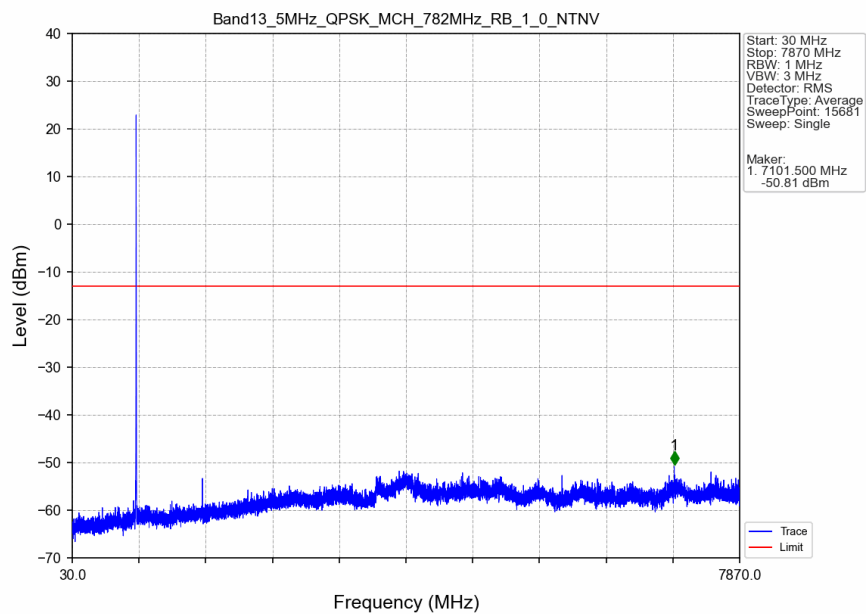
5.2.1 B13_5MHz



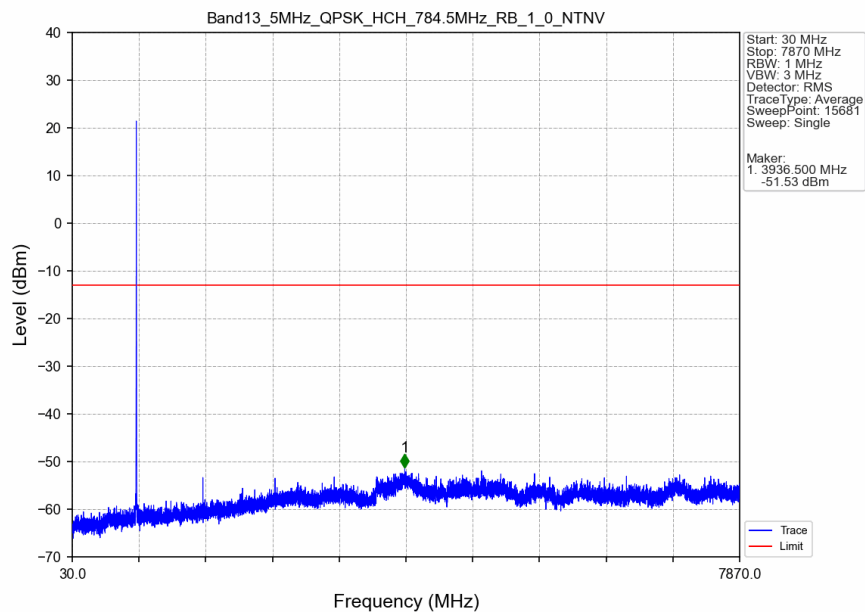
Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV



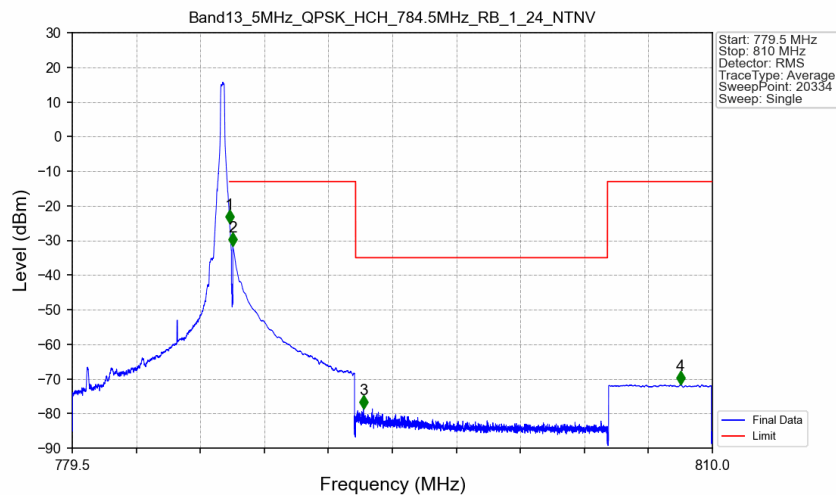
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV

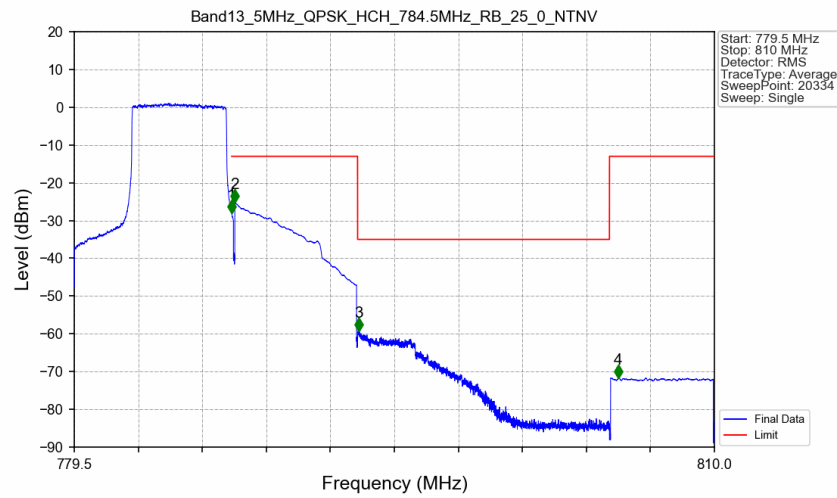


Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



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	-25.06	-13	Pass
787.1	793	0.1	CHP	2	787.150	-31.56	-13	Pass
793	805	0.00625	CHP	3	793.372	-78.55	-35	Pass
805	810	0.1	CHP	4	808.486	-71.65	-13	Pass

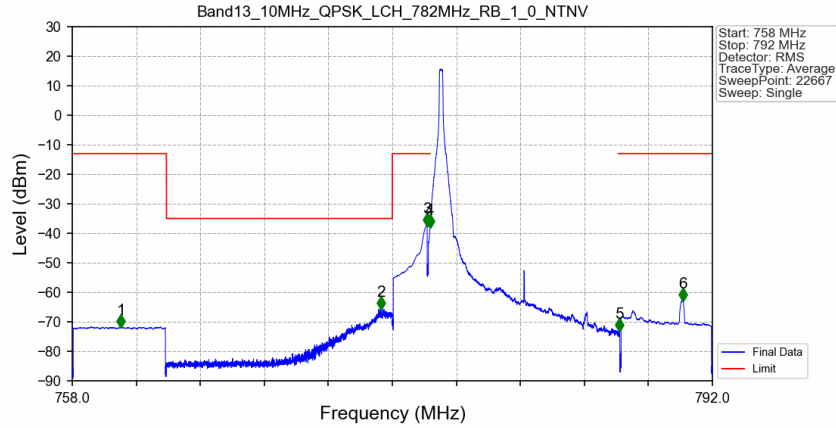
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



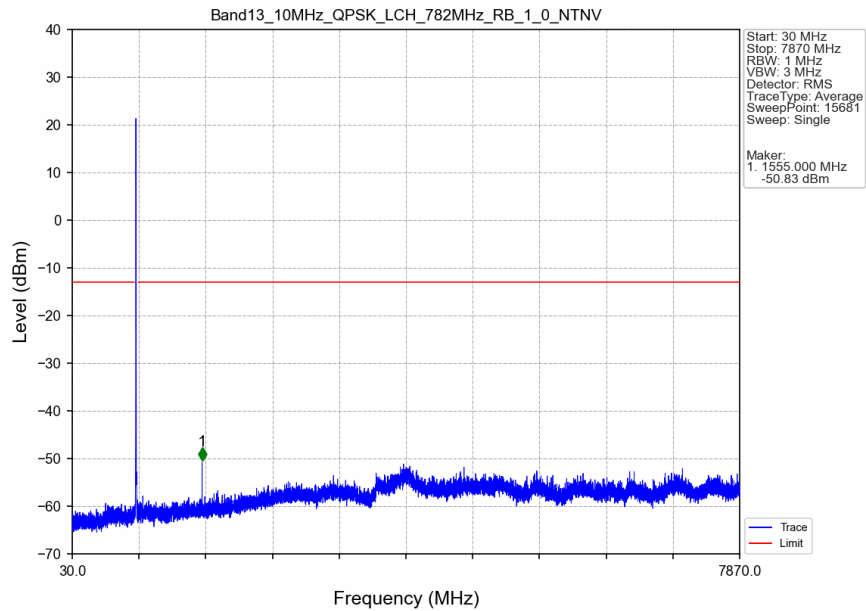
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
779.5	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	1	787.000	-28.12	-13	Pass
787.1	793	0.1	CHP	2	787.150	-25.18	-13	Pass
793	805	0.00625	CHP	3	793.057	-59.30	-35	Pass
805	810	0.1	CHP	4	805.419	-71.69	-13	Pass

5.2.2 B13_10MHz

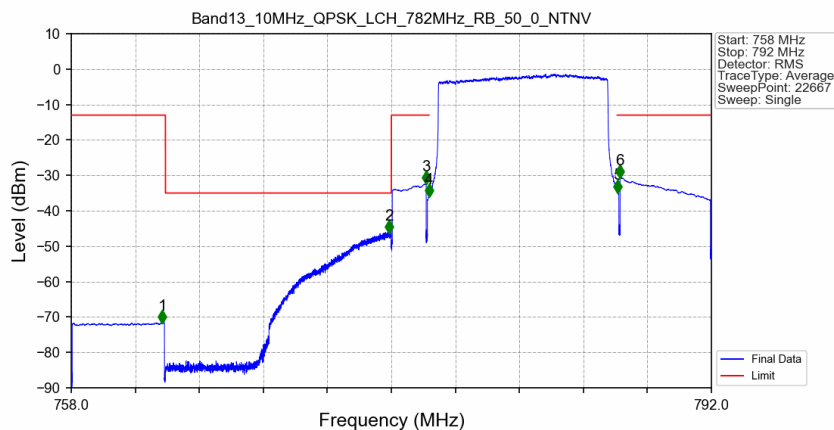
Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV



Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

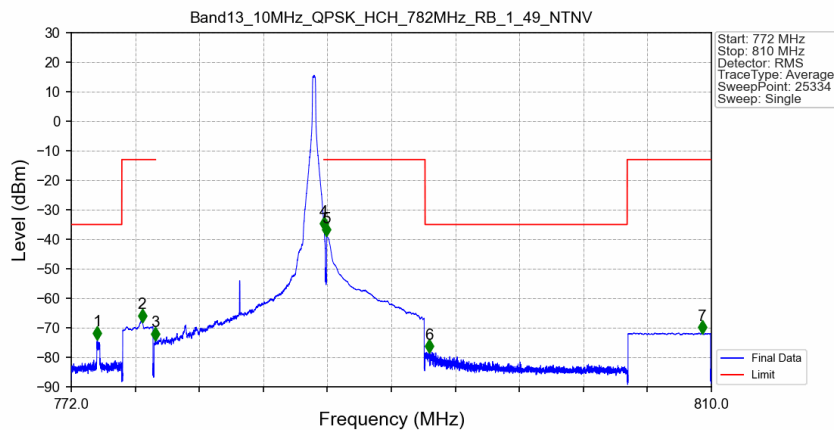


Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



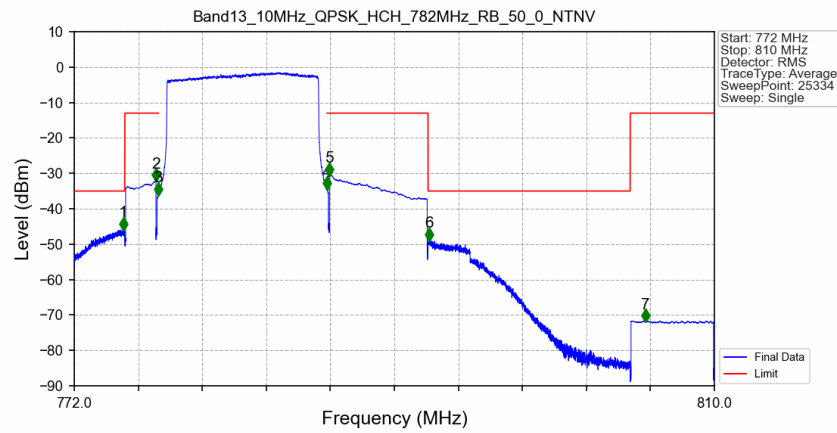
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	762.839	-71.47	-13	Pass
763	775	0.00625	CHP	2	774.895	-46.03	-35	Pass
775	776.9	0.1	CHP	3	776.850	-32.25	-13	Pass
776.9	777	0.03	CHP	4	777.000	-35.77	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.002	-34.64	-13	Pass
787.1	792	0.1	CHP	6	787.150	-30.48	-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	773.545	-73.57	-35	Pass
775	776.9	0.1	CHP	2	776.206	-67.73	-13	Pass
776.9	777	0.03	CHP	3	776.979	-73.84	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-36.41	-13	Pass
787.1	793	0.1	CHP	5	787.150	-38.56	-13	Pass
793	805	0.00625	CHP	6	793.233	-78.16	-35	Pass
805	810	0.1	CHP	7	809.470	-71.67	-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	774.909	-45.81	-35	Pass
775	776.9	0.1	CHP	2	776.848	-32.04	-13	Pass
776.9	777	0.03	CHP	3	777.000	-35.97	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.002	-34.41	-13	Pass
787.1	793	0.1	CHP	5	787.150	-30.42	-13	Pass
793	805	0.00625	CHP	6	793.060	-48.74	-35	Pass
805	810	0.1	CHP	7	805.897	-71.67	-13	Pass