

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B13_5MHz_ERP

Band: 13 / Bandwidth: 5MHz / NTV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	779.5	1	0	21.89	-1.54	18.20	<=34.77	Pass		
			13	21.91	-1.54	18.22	<=34.77	Pass		
			24	21.95	-1.54	18.26	<=34.77	Pass		
		12	0	21.22	-1.54	17.53	<=34.77	Pass		
			6	21.33	-1.54	17.64	<=34.77	Pass		
			13	21.34	-1.54	17.65	<=34.77	Pass		
		25	0	21.30	-1.54	17.61	<=34.77	Pass		
		782	1	0	21.85	-1.54	18.16	<=34.77	Pass	
				13	21.85	-1.54	18.16	<=34.77	Pass	
	24			21.65	-1.54	17.96	<=34.77	Pass		
	12		0	21.31	-1.54	17.62	<=34.77	Pass		
			6	21.03	-1.54	17.34	<=34.77	Pass		
			13	21.04	-1.54	17.35	<=34.77	Pass		
	25	0	20.95	-1.54	17.26	<=34.77	Pass			
	784.5	1	0	21.90	-1.54	18.21	<=34.77	Pass		
			13	21.83	-1.54	18.14	<=34.77	Pass		
			24	22.00	-1.54	18.31	<=34.77	Pass		
		12	0	21.11	-1.54	17.42	<=34.77	Pass		
			6	20.98	-1.54	17.29	<=34.77	Pass		
			13	21.08	-1.54	17.39	<=34.77	Pass		
		25	0	20.99	-1.54	17.30	<=34.77	Pass		
		16QAM	779.5	1	0	20.71	-1.54	17.02	<=34.77	Pass
					13	20.80	-1.54	17.11	<=34.77	Pass
	24				20.49	-1.54	16.80	<=34.77	Pass	
12	0			20.23	-1.54	16.54	<=34.77	Pass		
	6			20.34	-1.54	16.65	<=34.77	Pass		
	13			20.32	-1.54	16.63	<=34.77	Pass		
25	0			20.44	-1.54	16.75	<=34.77	Pass		
782	1		0	21.74	-1.54	18.05	<=34.77	Pass		
			13	21.41	-1.54	17.72	<=34.77	Pass		
			24	21.43	-1.54	17.74	<=34.77	Pass		
	12		0	20.30	-1.54	16.61	<=34.77	Pass		
			6	20.27	-1.54	16.58	<=34.77	Pass		
			13	20.37	-1.54	16.68	<=34.77	Pass		
25	0		20.38	-1.54	16.69	<=34.77	Pass			
784.5	1		0	21.44	-1.54	17.75	<=34.77	Pass		
		13	21.68	-1.54	17.99	<=34.77	Pass			
		24	21.62	-1.54	17.93	<=34.77	Pass			
	12	0	20.32	-1.54	16.63	<=34.77	Pass			
		6	20.32	-1.54	16.63	<=34.77	Pass			
		13	20.10	-1.54	16.41	<=34.77	Pass			
	25	0	20.36	-1.54	16.67	<=34.77	Pass			
Note1: ERP=Conducted Power+Antenna Gain-2.15										

1.1.2 B13_10MHz_ERP

Band: 13 / Bandwidth: 10MHz / NTN

Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	782	1	0	21.77	-1.54	18.08	<=34.77	Pass
			25	21.94	-1.54	18.25	<=34.77	Pass
			49	22.01	-1.54	18.32	<=34.77	Pass
		25	0	21.37	-1.54	17.68	<=34.77	Pass
			13	21.12	-1.54	17.43	<=34.77	Pass
			25	21.01	-1.54	17.32	<=34.77	Pass
		50	0	20.99	-1.54	17.30	<=34.77	Pass
16QAM	782	1	0	22.35	-1.54	18.66	<=34.77	Pass
			25	22.08	-1.54	18.39	<=34.77	Pass
			49	22.18	-1.54	18.49	<=34.77	Pass
		25	0	20.40	-1.54	16.71	<=34.77	Pass
			13	20.41	-1.54	16.72	<=34.77	Pass
			25	20.36	-1.54	16.67	<=34.77	Pass
		50	0	20.35	-1.54	16.66	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. Frequency Stability

2.1 Test Result

2.1.1 B13_5MHz

Band: 13 / Bandwidth: 5MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	779.5	25	0	20	3.27	-35.148	-0.0451	-2.5 to 2.5	Pass
					3.85	-23.746	-0.0305	-2.5 to 2.5	Pass
					4.43	-41.342	-0.0530	-2.5 to 2.5	Pass
				-30	3.85	-5.722	-0.0073	-2.5 to 2.5	Pass
				-20	3.85	-48.666	-0.0624	-2.5 to 2.5	Pass
				-10	3.85	-19.155	-0.0246	-2.5 to 2.5	Pass
				0	3.85	-12.245	-0.0157	-2.5 to 2.5	Pass
				10	3.85	-47.750	-0.0613	-2.5 to 2.5	Pass
				30	3.85	-27.308	-0.0350	-2.5 to 2.5	Pass
				40	3.85	-4.692	-0.0060	-2.5 to 2.5	Pass
				50	3.85	-24.848	-0.0319	-2.5 to 2.5	Pass
	782	25	0	20	3.27	2.275	0.0029	-2.5 to 2.5	Pass
					3.85	-7.124	-0.0091	-2.5 to 2.5	Pass
					4.43	-24.776	-0.0317	-2.5 to 2.5	Pass
				-30	3.85	-45.090	-0.0577	-2.5 to 2.5	Pass
				-20	3.85	-15.907	-0.0203	-2.5 to 2.5	Pass
				-10	3.85	-37.408	-0.0478	-2.5 to 2.5	Pass
				0	3.85	4.520	0.0058	-2.5 to 2.5	Pass
				10	3.85	-8.154	-0.0104	-2.5 to 2.5	Pass
				30	3.85	-18.768	-0.0240	-2.5 to 2.5	Pass
				40	3.85	-24.290	-0.0311	-2.5 to 2.5	Pass
				50	3.85	-35.362	-0.0452	-2.5 to 2.5	Pass
	784.5	25	0	20	3.27	9.828	0.0125	-2.5 to 2.5	Pass
					3.85	11.029	0.0141	-2.5 to 2.5	Pass
					4.43	-1.316	-0.0017	-2.5 to 2.5	Pass
				-30	3.85	-12.188	-0.0155	-2.5 to 2.5	Pass
				-20	3.85	-22.044	-0.0281	-2.5 to 2.5	Pass
				-10	3.85	-34.490	-0.0440	-2.5 to 2.5	Pass
				0	3.85	-42.944	-0.0547	-2.5 to 2.5	Pass

16QAM				10	3.85	-2.346	-0.0030	-2.5 to 2.5	Pass
				30	3.85	-9.398	-0.0120	-2.5 to 2.5	Pass
				40	3.85	-14.691	-0.0187	-2.5 to 2.5	Pass
				50	3.85	-24.748	-0.0315	-2.5 to 2.5	Pass
	779.5	25	0	20	3.27	-46.778	-0.0600	-2.5 to 2.5	Pass
					3.85	-49.095	-0.0630	-2.5 to 2.5	Pass
					4.43	-3.505	-0.0045	-2.5 to 2.5	Pass
				-30	3.85	-5.965	-0.0077	-2.5 to 2.5	Pass
				-20	3.85	-9.913	-0.0127	-2.5 to 2.5	Pass
				-10	3.85	2.174	0.0028	-2.5 to 2.5	Pass
				0	3.85	-6.895	-0.0088	-2.5 to 2.5	Pass
				10	3.85	-15.349	-0.0197	-2.5 to 2.5	Pass
				30	3.85	-16.294	-0.0209	-2.5 to 2.5	Pass
				40	3.85	-37.451	-0.0480	-2.5 to 2.5	Pass
				50	3.85	-38.109	-0.0489	-2.5 to 2.5	Pass
	782	25	0	20	3.27	-38.009	-0.0486	-2.5 to 2.5	Pass
					3.85	-41.585	-0.0532	-2.5 to 2.5	Pass
					4.43	-37.007	-0.0473	-2.5 to 2.5	Pass
				-30	3.85	-34.590	-0.0442	-2.5 to 2.5	Pass
				-20	3.85	-48.523	-0.0620	-2.5 to 2.5	Pass
				-10	3.85	-48.223	-0.0617	-2.5 to 2.5	Pass
				0	3.85	2.332	0.0030	-2.5 to 2.5	Pass
				10	3.85	1.731	0.0022	-2.5 to 2.5	Pass
				30	3.85	3.877	0.0050	-2.5 to 2.5	Pass
				40	3.85	3.991	0.0051	-2.5 to 2.5	Pass
				50	3.85	8.039	0.0103	-2.5 to 2.5	Pass
	784.5	25	0	20	3.27	-36.421	-0.0464	-2.5 to 2.5	Pass
					3.85	-34.590	-0.0441	-2.5 to 2.5	Pass
					4.43	-31.443	-0.0401	-2.5 to 2.5	Pass
				-30	3.85	-26.808	-0.0342	-2.5 to 2.5	Pass
				-20	3.85	-24.061	-0.0307	-2.5 to 2.5	Pass
				-10	3.85	-21.343	-0.0272	-2.5 to 2.5	Pass
				0	3.85	-20.471	-0.0261	-2.5 to 2.5	Pass
				10	3.85	-17.266	-0.0220	-2.5 to 2.5	Pass
				30	3.85	-12.288	-0.0157	-2.5 to 2.5	Pass
				40	3.85	-13.046	-0.0166	-2.5 to 2.5	Pass
				50	3.85	-10.486	-0.0134	-2.5 to 2.5	Pass

2.1.2 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	-35.748	-0.0457	-2.5 to 2.5	Pass
					3.85	-31.056	-0.0397	-2.5 to 2.5	Pass
					4.43	-38.824	-0.0496	-2.5 to 2.5	Pass
				-30	3.85	-10.972	-0.0140	-2.5 to 2.5	Pass
				-20	3.85	-17.638	-0.0226	-2.5 to 2.5	Pass
				-10	3.85	-7.010	-0.0090	-2.5 to 2.5	Pass
				0	3.85	-24.276	-0.0310	-2.5 to 2.5	Pass
				10	3.85	-29.583	-0.0378	-2.5 to 2.5	Pass
				30	3.85	-24.762	-0.0317	-2.5 to 2.5	Pass
				40	3.85	-19.469	-0.0249	-2.5 to 2.5	Pass
				50	3.85	-8.154	-0.0104	-2.5 to 2.5	Pass
16QAM	782	50	0	20	3.27	-36.435	-0.0466	-2.5 to 2.5	Pass
					3.85	-50.912	-0.0651	-2.5 to 2.5	Pass
					4.43	-10.271	-0.0131	-2.5 to 2.5	Pass

				-30	3.85	-23.203	-0.0297	-2.5 to 2.5	Pass
				-20	3.85	-12.403	-0.0159	-2.5 to 2.5	Pass
				-10	3.85	-26.464	-0.0338	-2.5 to 2.5	Pass
				0	3.85	-45.590	-0.0583	-2.5 to 2.5	Pass
				10	3.85	-14.820	-0.0190	-2.5 to 2.5	Pass
				30	3.85	-22.445	-0.0287	-2.5 to 2.5	Pass
				40	3.85	-30.642	-0.0392	-2.5 to 2.5	Pass
				50	3.85	-36.263	-0.0464	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

3.1.1 B13_5MHz

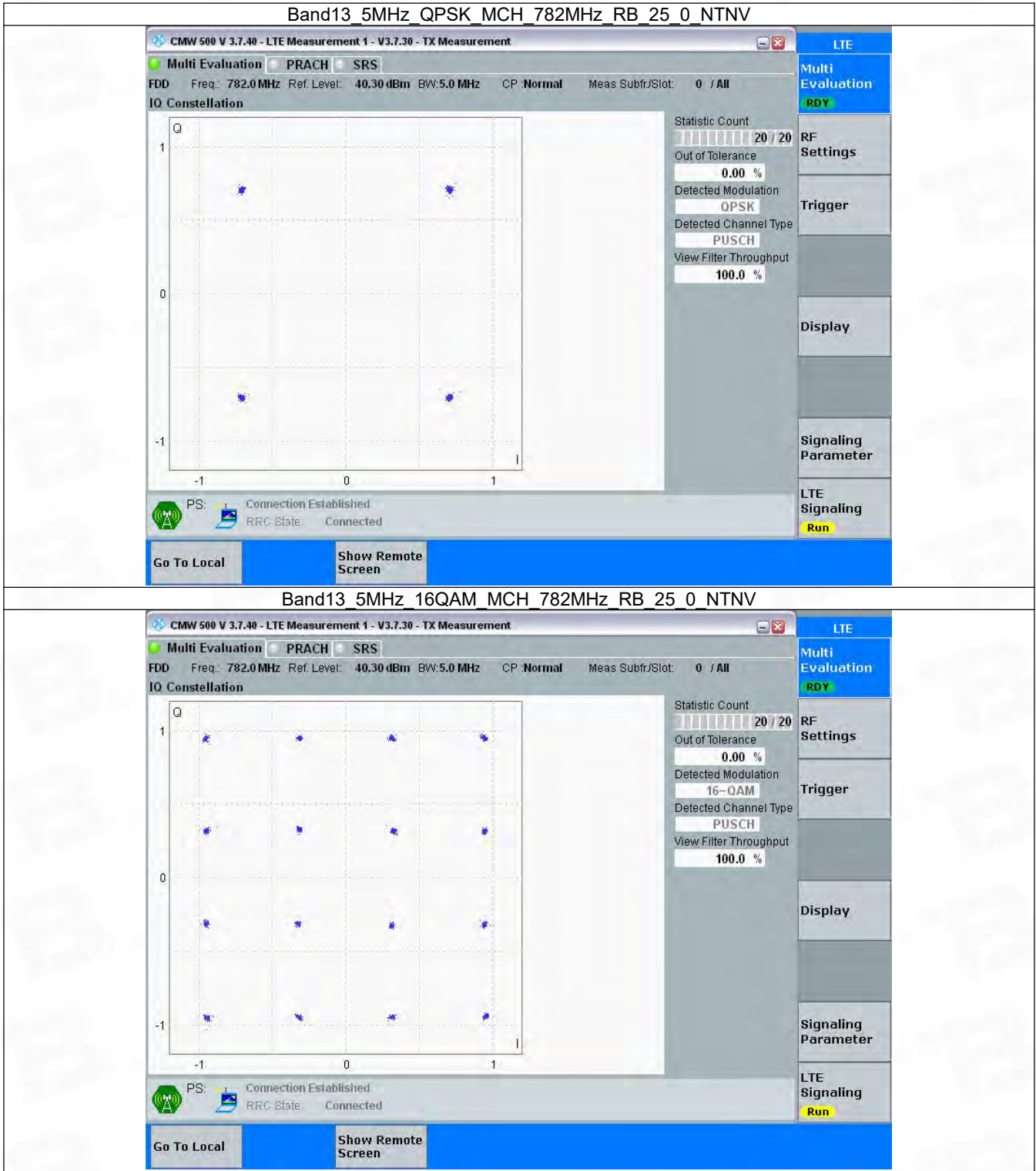
Band: 13 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	782	25	0	Refer To Test Graph		Pass
16QAM	782	25	0	Refer To Test Graph		Pass

3.1.2 B13_10MHz

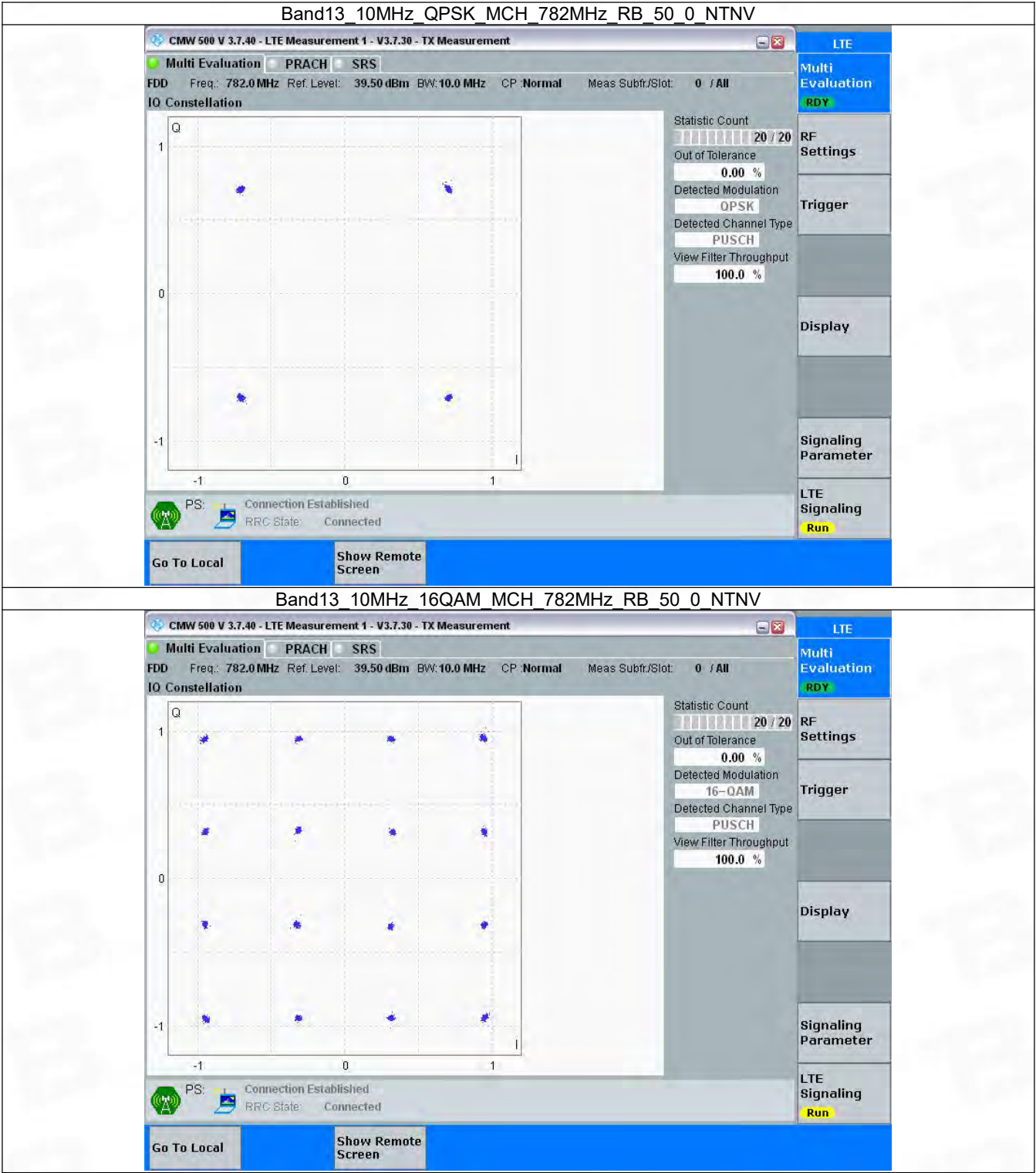
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	Refer To Test Graph		Pass
16QAM	782	50	0	Refer To Test Graph		Pass

3.2 Test Graph

3.2.1 B13_5MHz



3.2.2 B13_10MHz



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band13_OBW

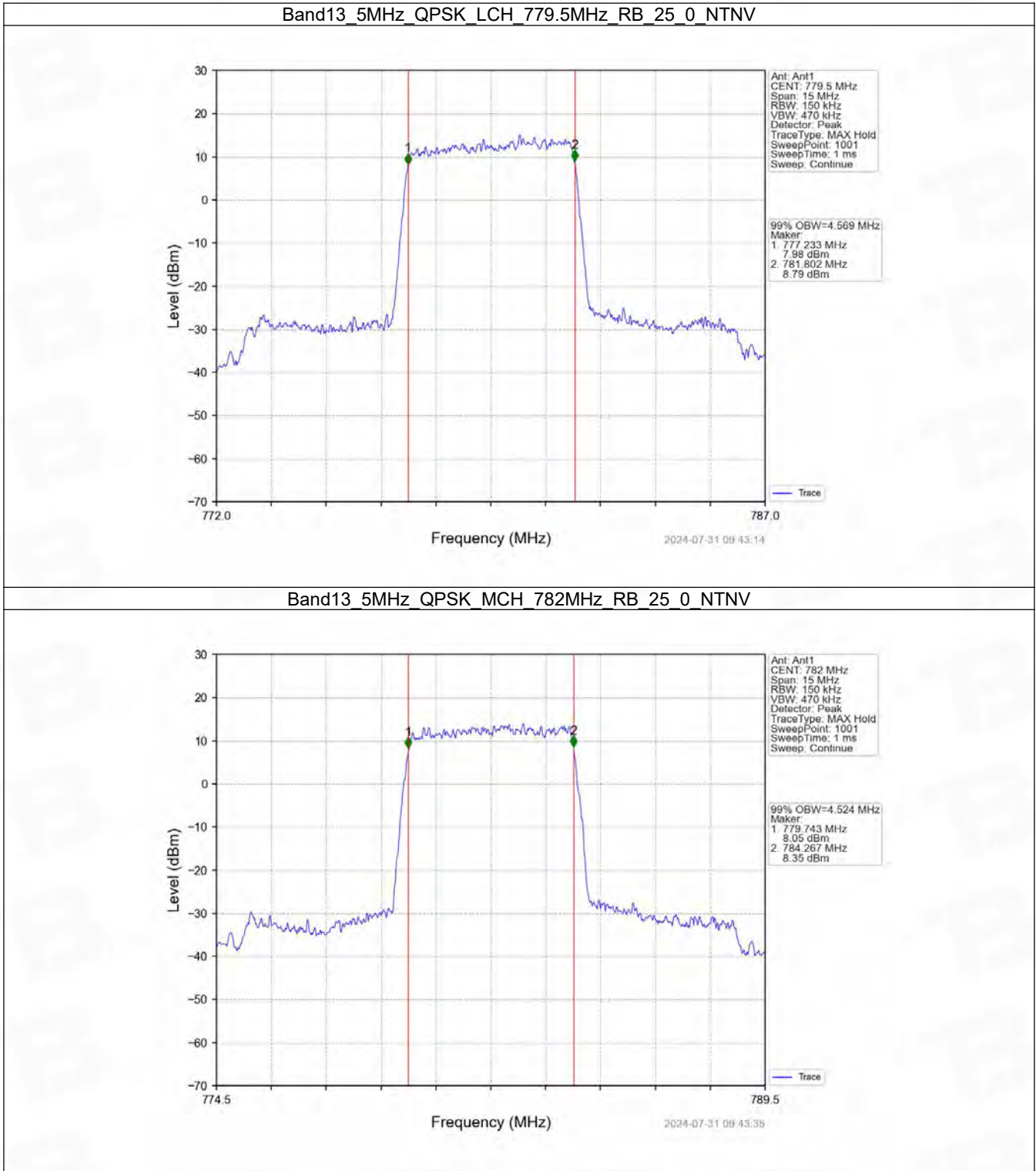
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	779.5	25	0	4.569	/	Pass
		782	25	0	4.524	/	Pass
		784.5	25	0	4.548	/	Pass
	16QAM	779.5	25	0	4.560	/	Pass
		782	25	0	4.538	/	Pass
		784.5	25	0	4.534	/	Pass
10	QPSK	782	50	0	9.040	/	Pass
	16QAM	782	50	0	8.999	/	Pass

4.1.2 Band13_XDB

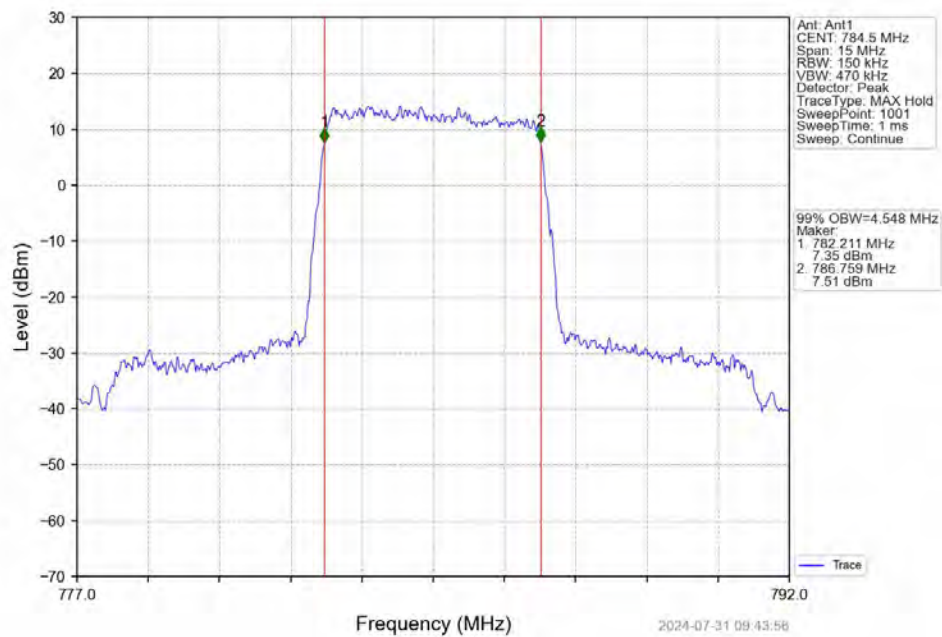
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	779.5	25	0	5.025	/	Pass
		782	25	0	5.039	/	Pass
		784.5	25	0	5.069	/	Pass
	16QAM	779.5	25	0	5.073	/	Pass
		782	25	0	5.057	/	Pass
		784.5	25	0	5.078	/	Pass
10	QPSK	782	50	0	9.954	/	Pass
	16QAM	782	50	0	9.973	/	Pass

4.2 Test Graph

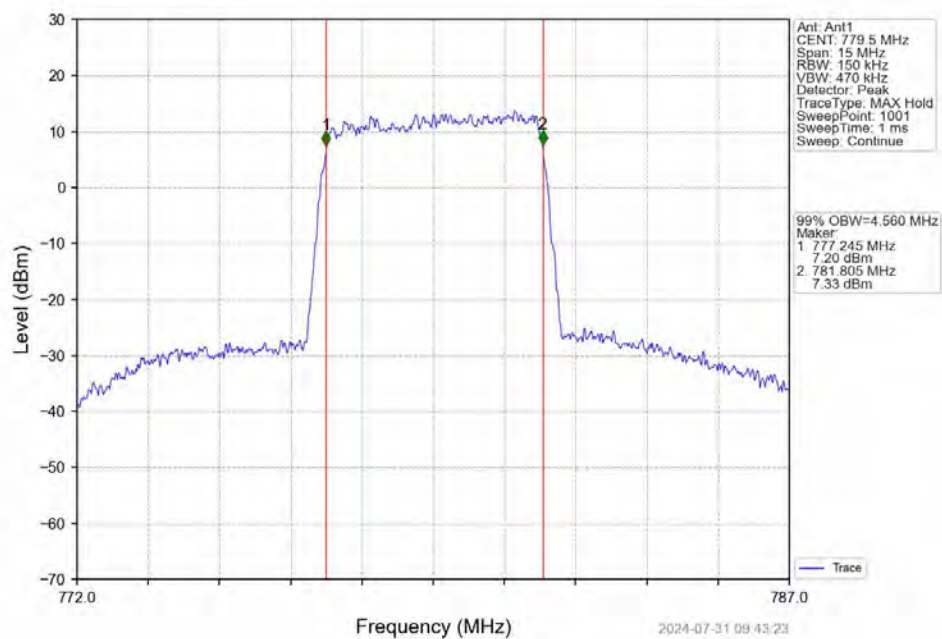
4.2.1 Band13_OBW



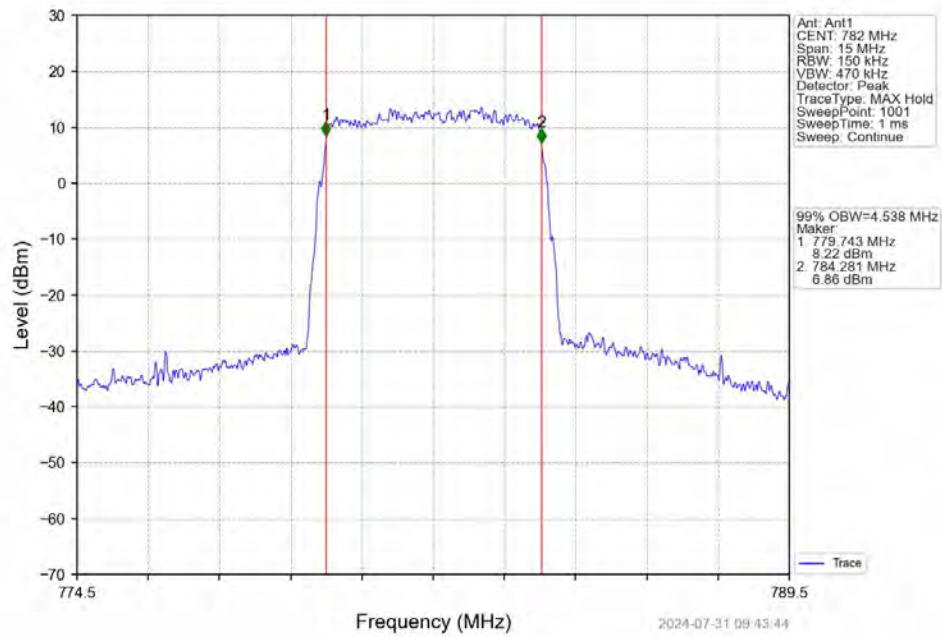
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



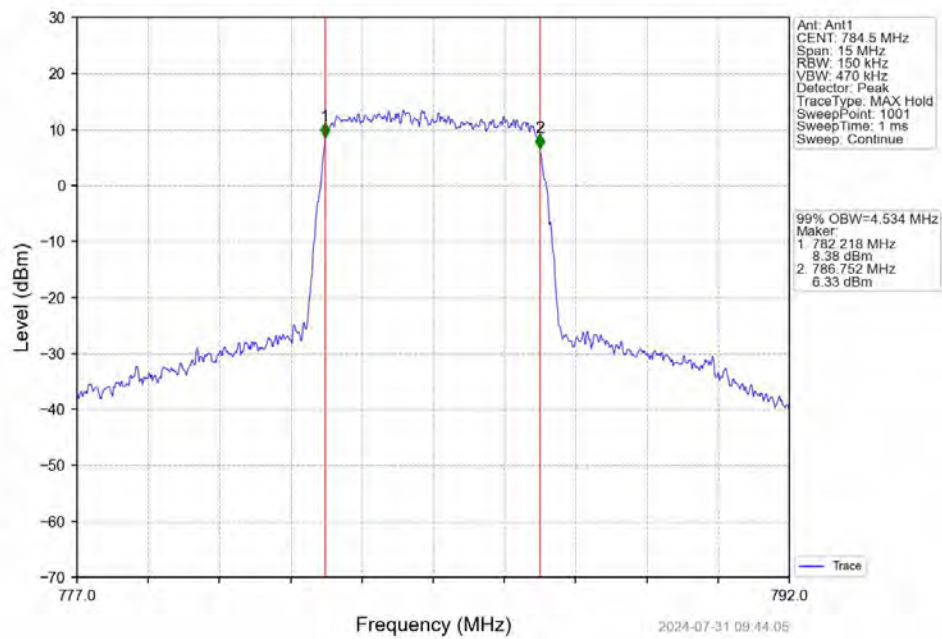
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



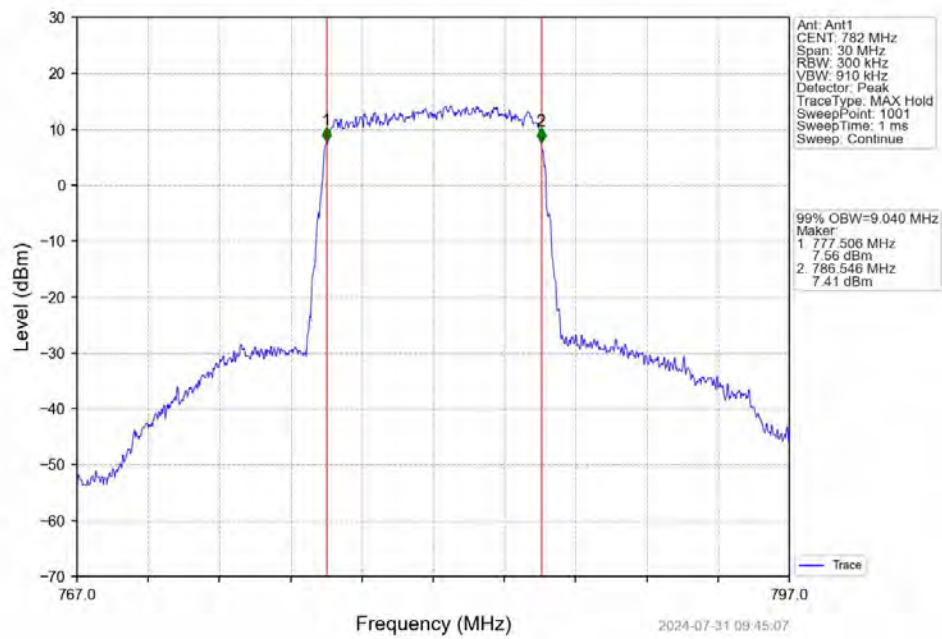
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



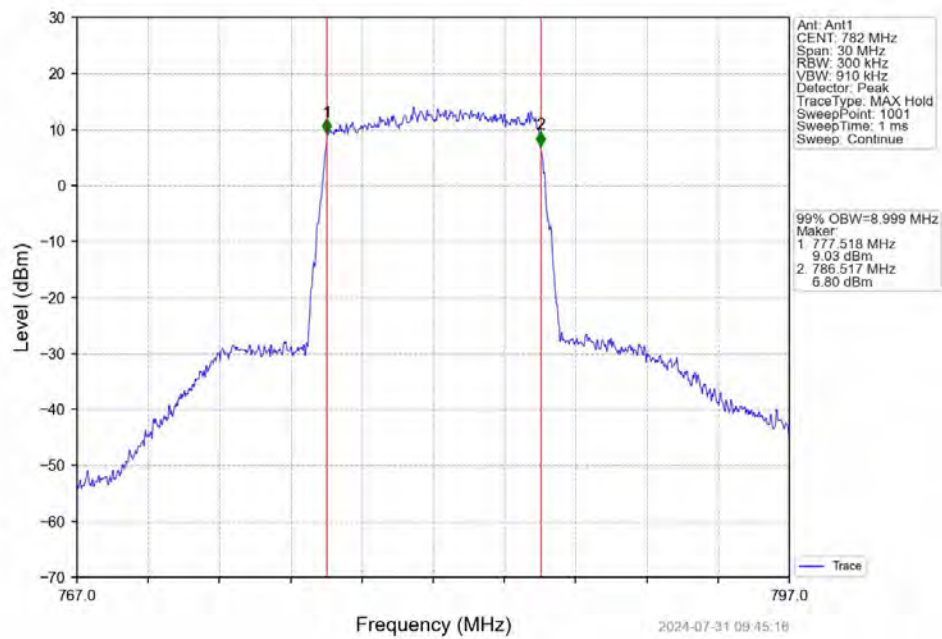
Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV



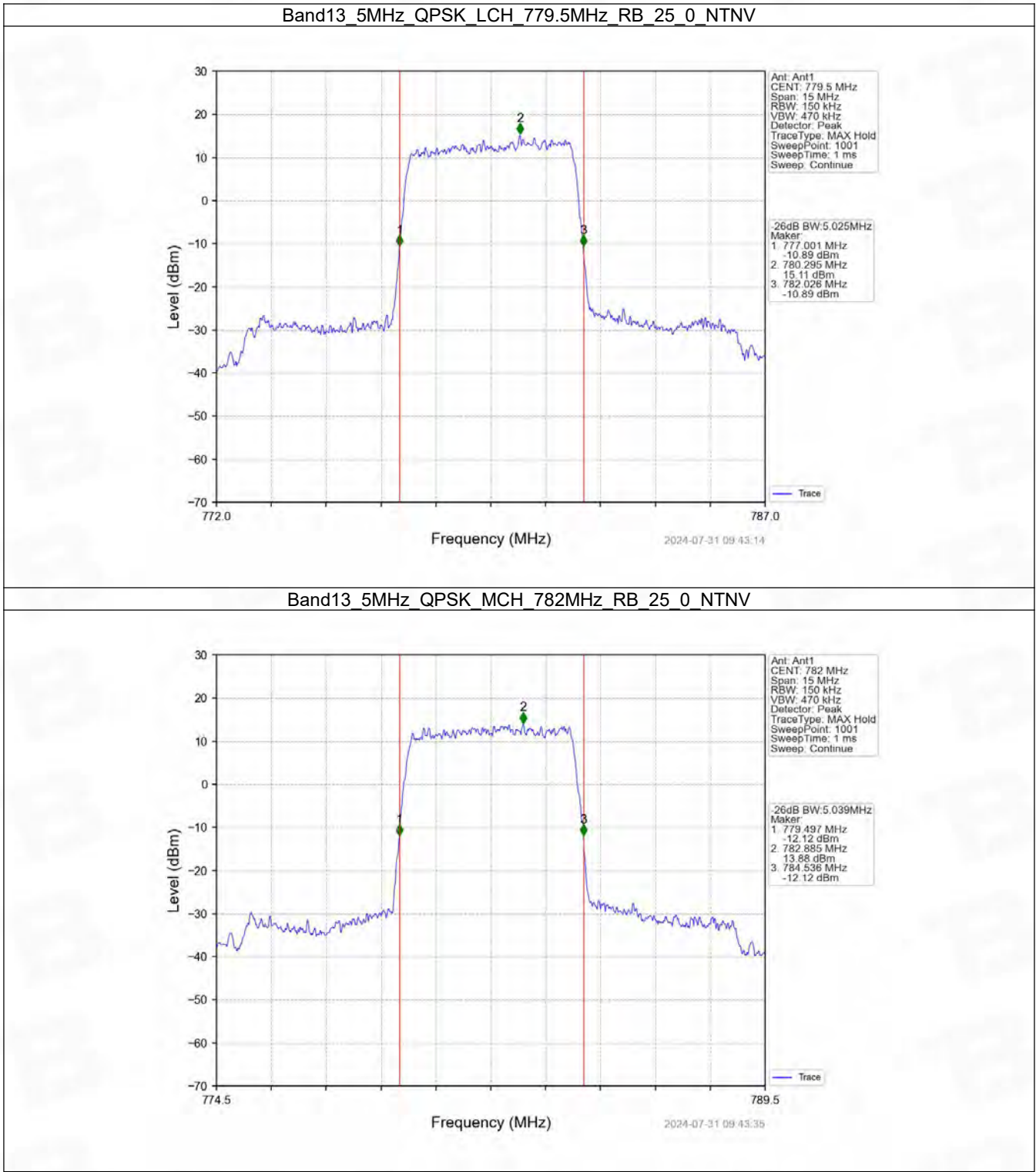
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



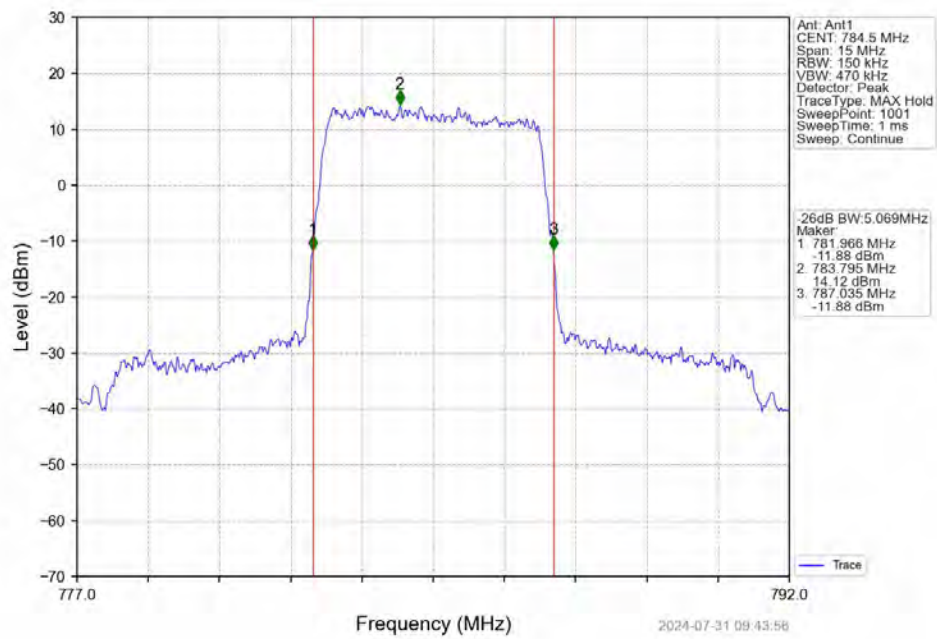
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



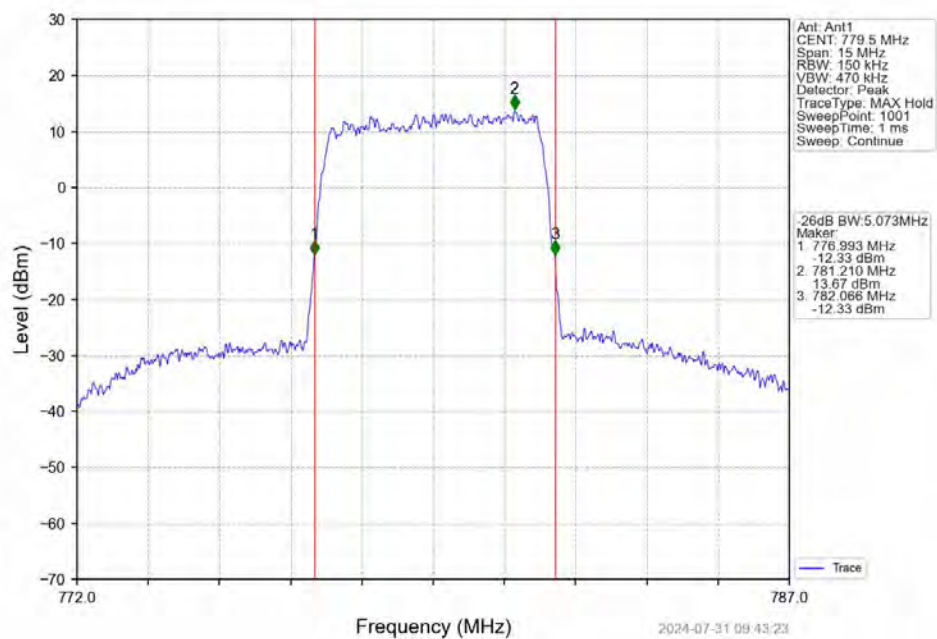
4.2.2 Band13_XDB



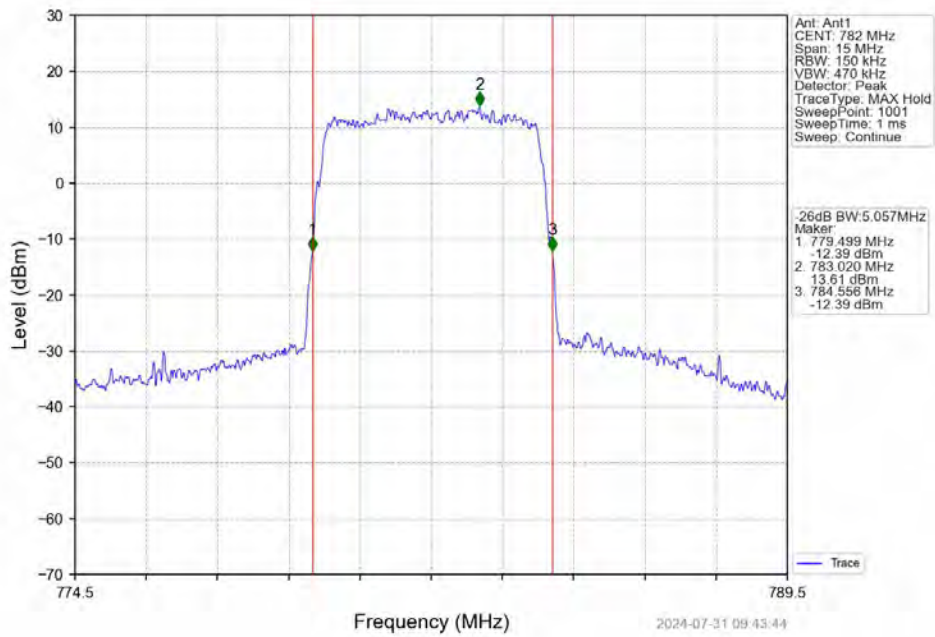
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



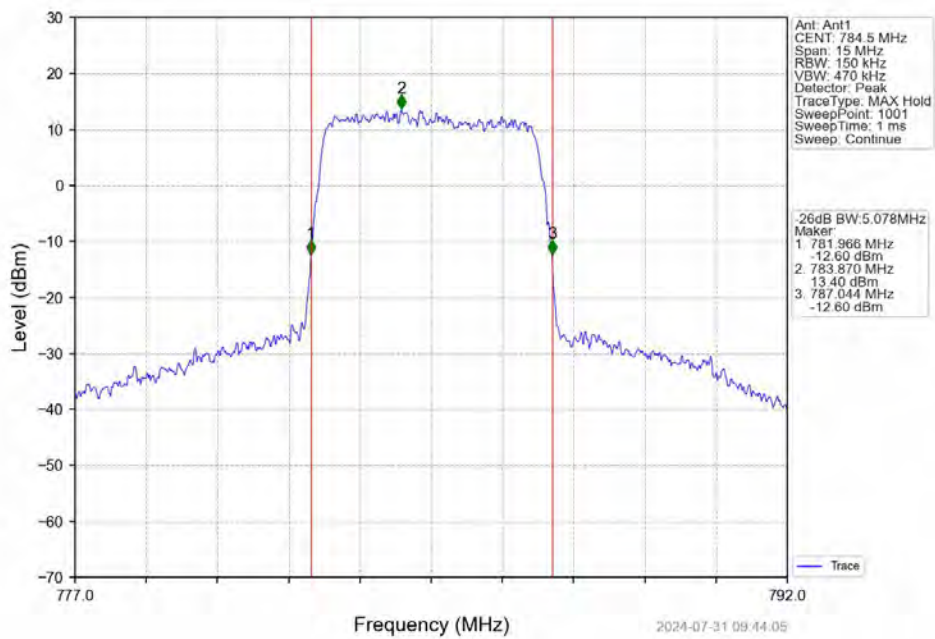
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



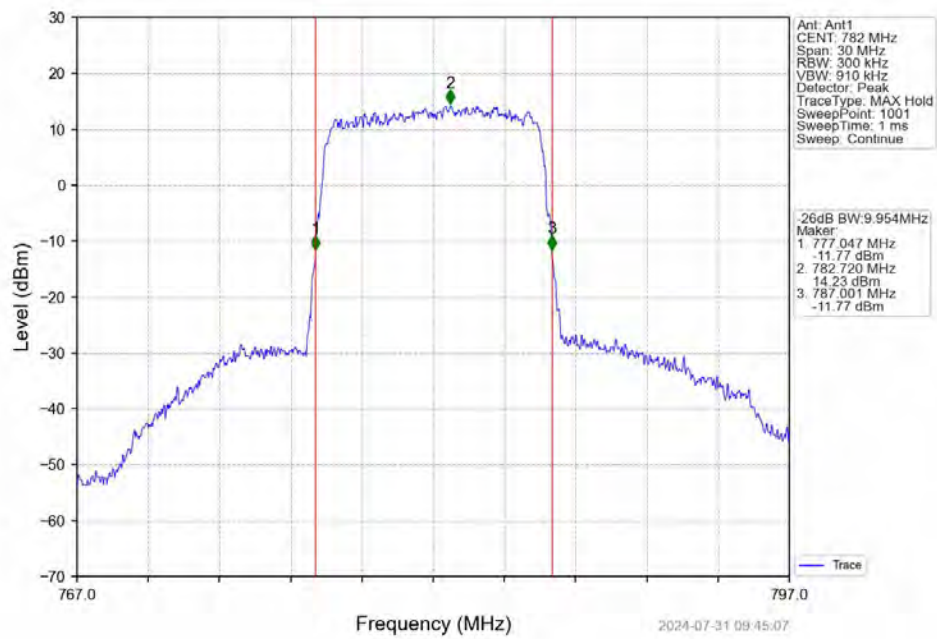
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



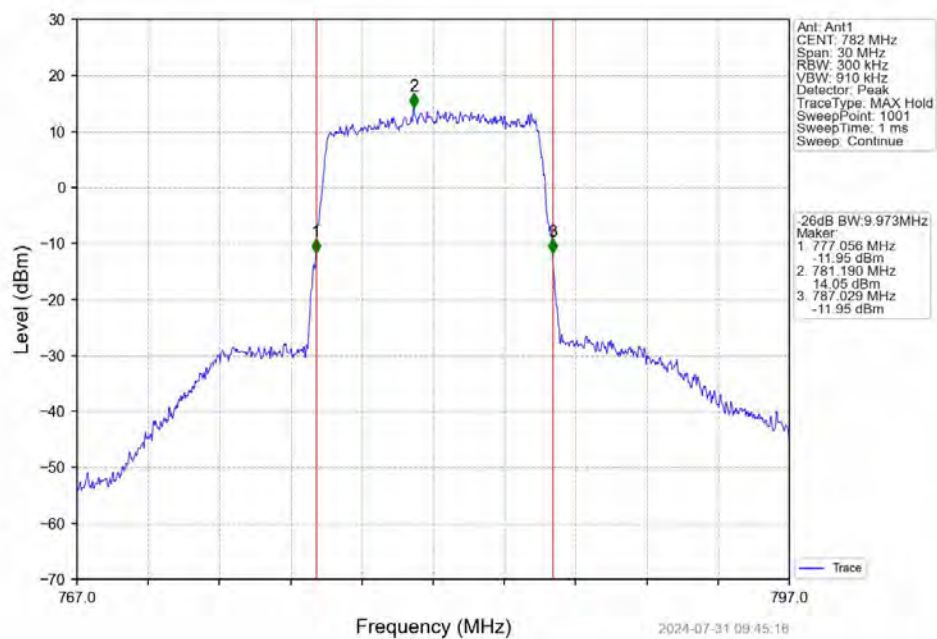
Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV



Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



5. Peak-Average Ratio

5.1 Test Result

5.1.1 B13_5MHz

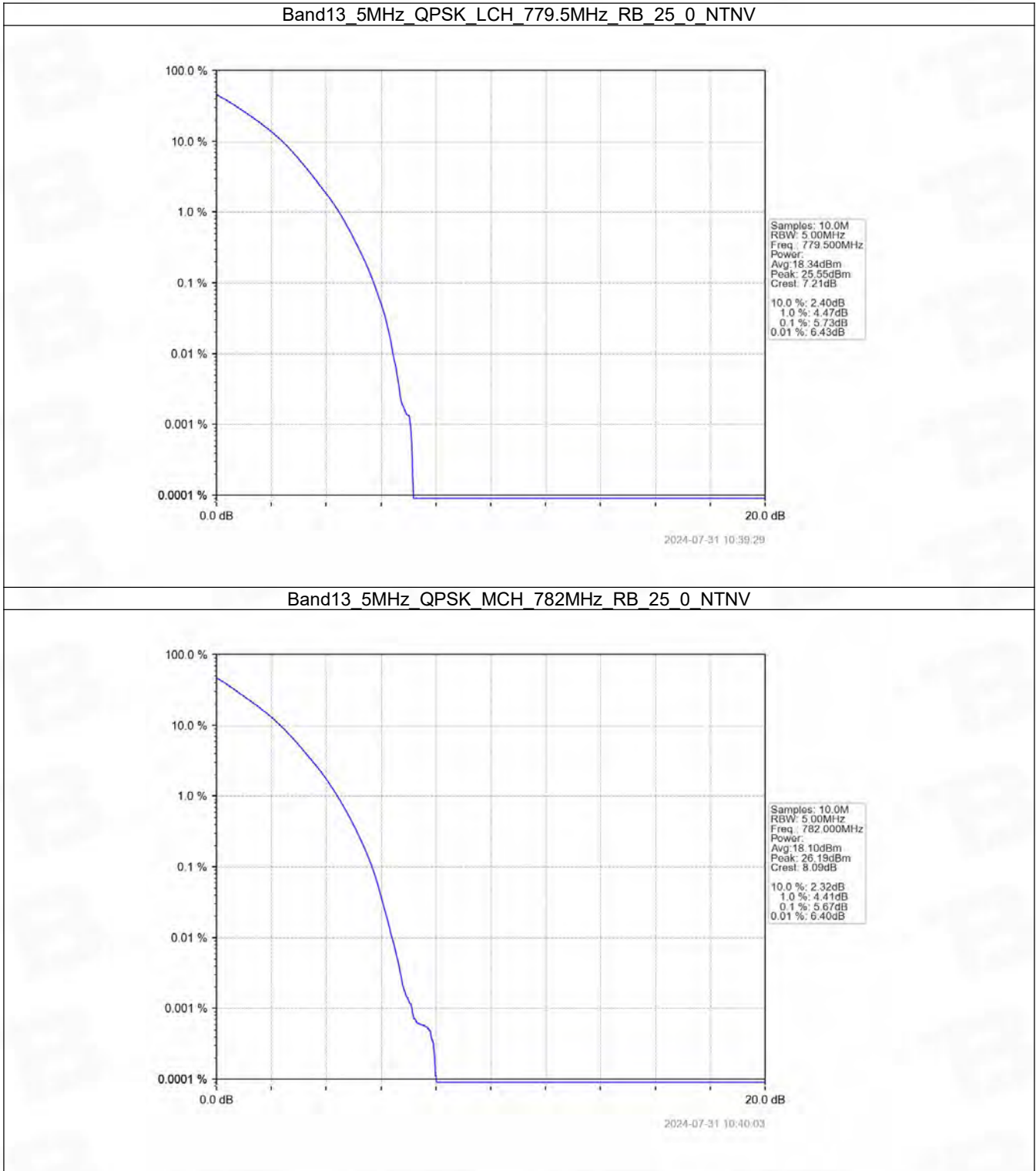
Band: 13 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	25	0	5.73	<=13	Pass
	782	25	0	5.67	<=13	Pass
	784.5	25	0	5.71	<=13	Pass
16QAM	779.5	25	0	6.51	<=13	Pass
	782	25	0	6.39	<=13	Pass
	784.5	25	0	6.38	<=13	Pass

5.1.2 B13_10MHz

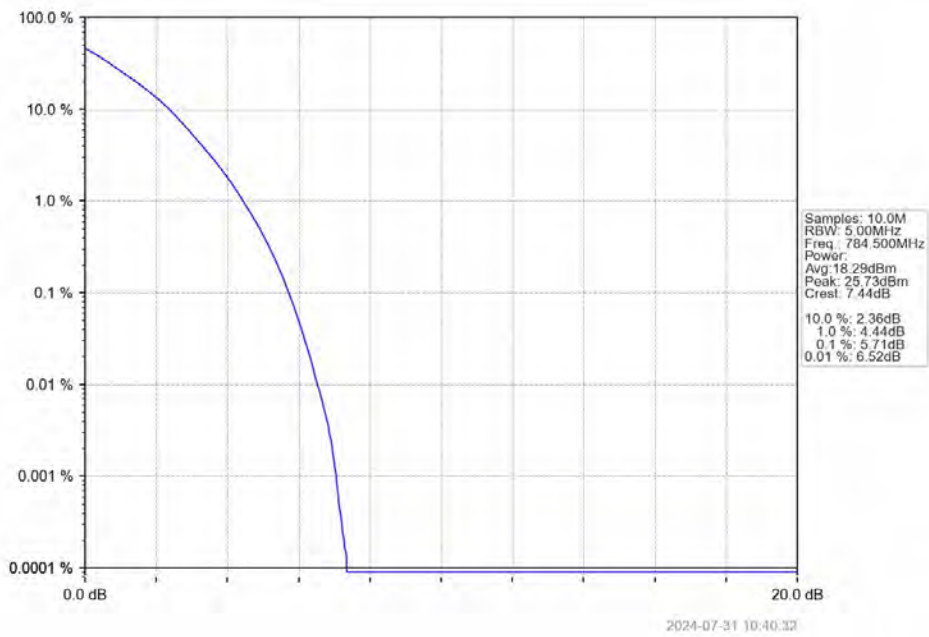
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.47	<=13	Pass
16QAM	782	50	0	6.35	<=13	Pass

5.2 Test Graph

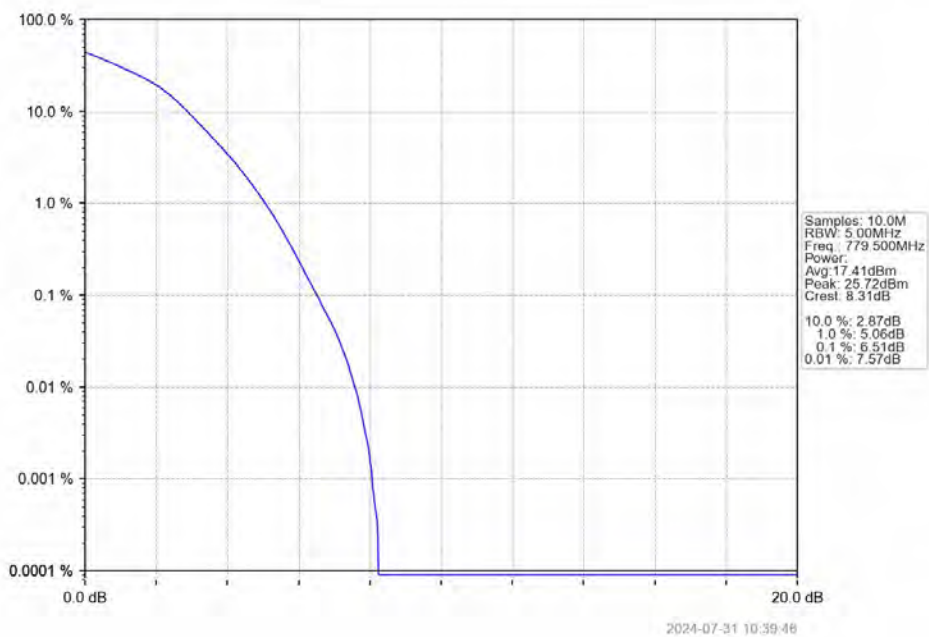
5.2.1 B13_5MHz



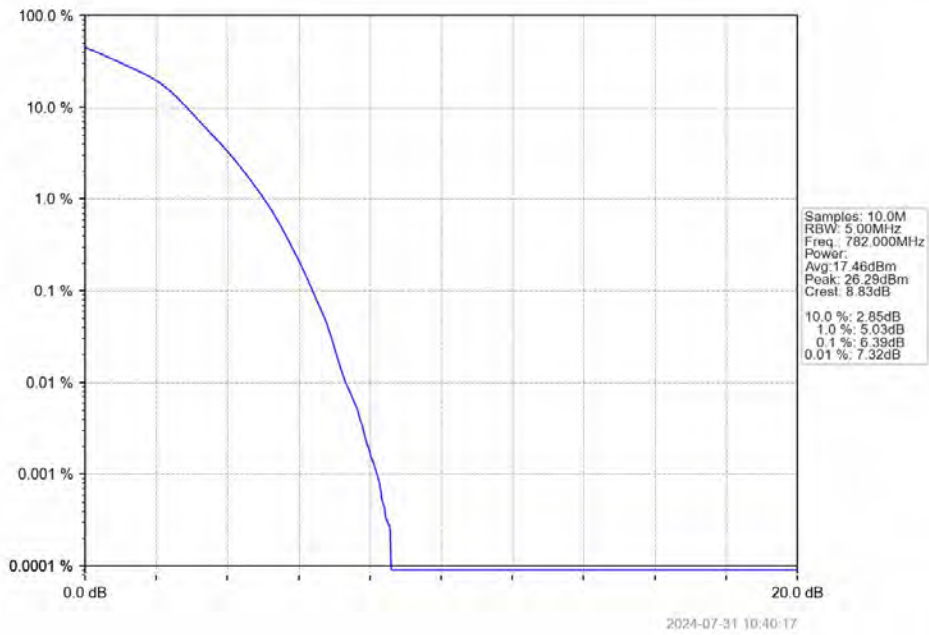
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



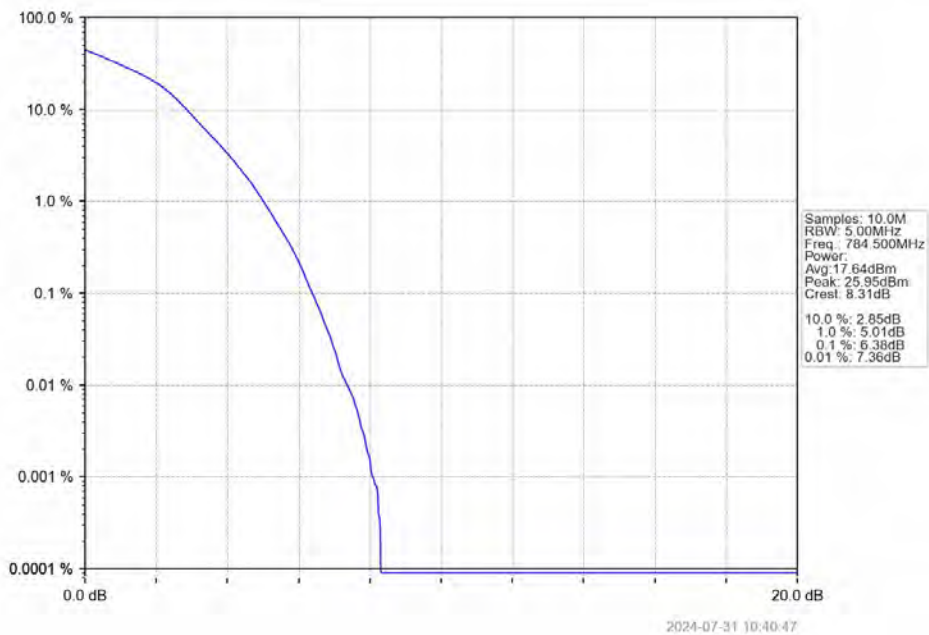
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



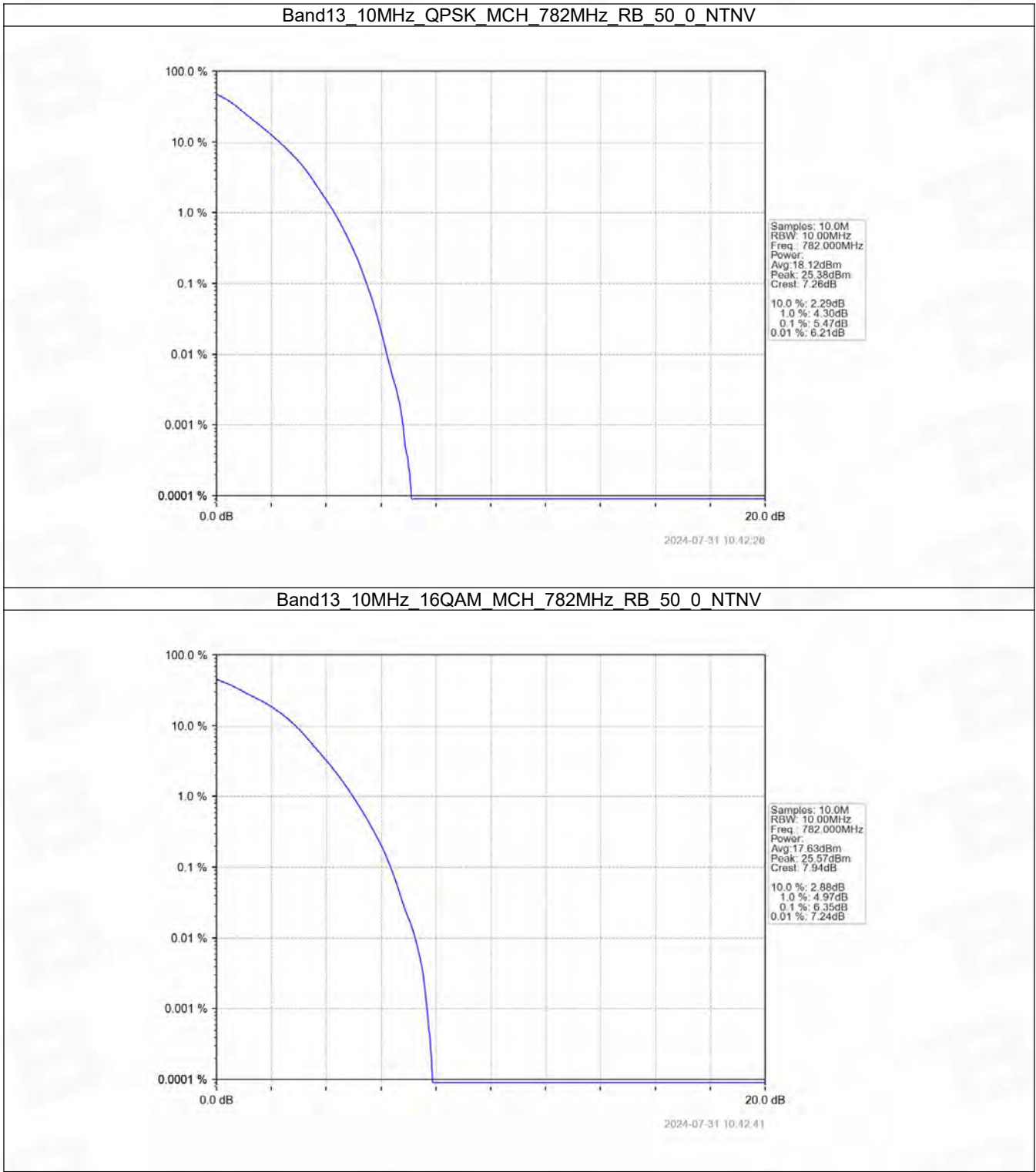
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV



5.2.2 B13_10MHz



6. Spurious Emission

6.1 Test Result

6.1.1 B13_5MHz

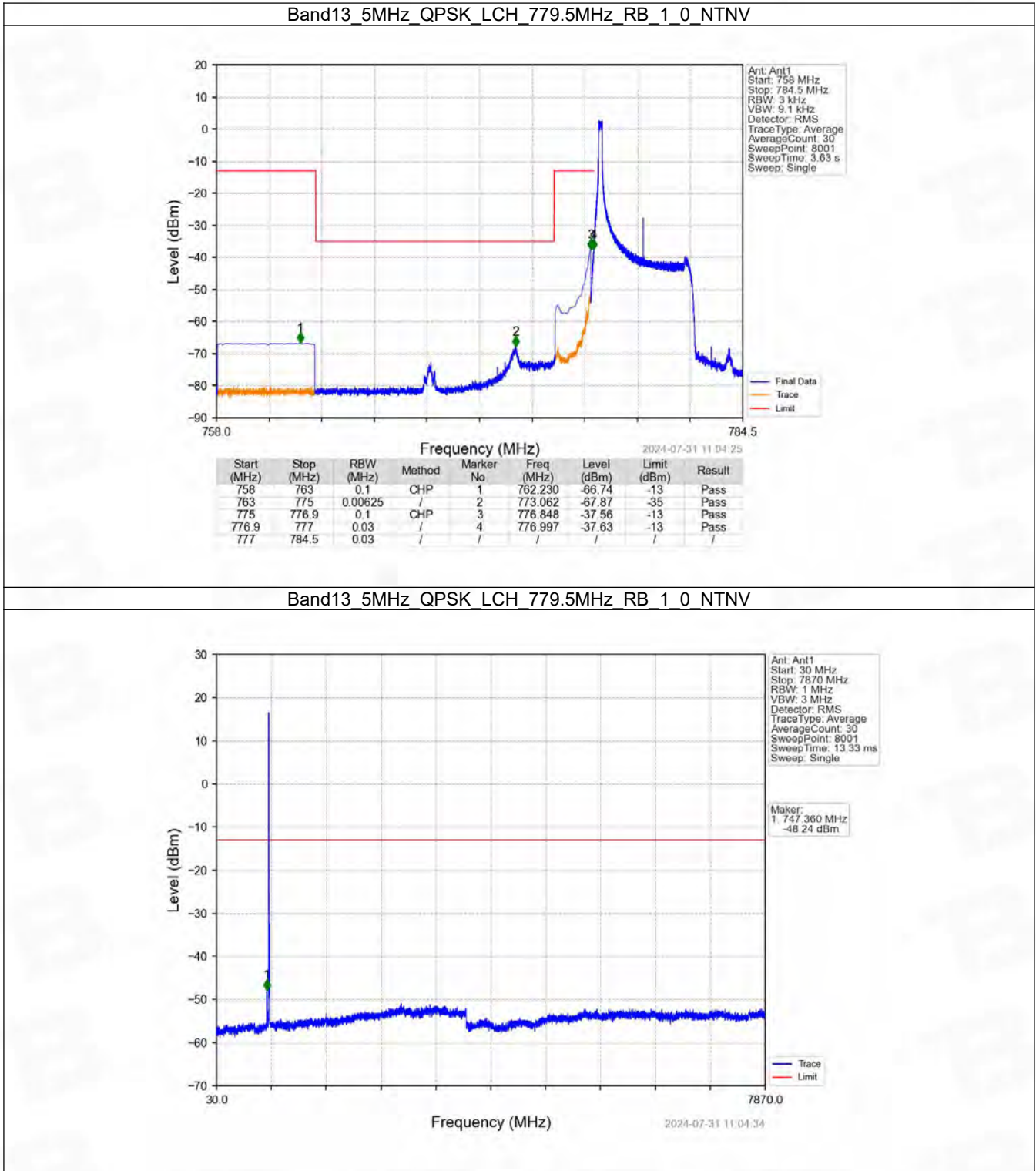
Band: 13 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
		1	24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
16QAM	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
		1	24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

6.1.2 B13_10MHz

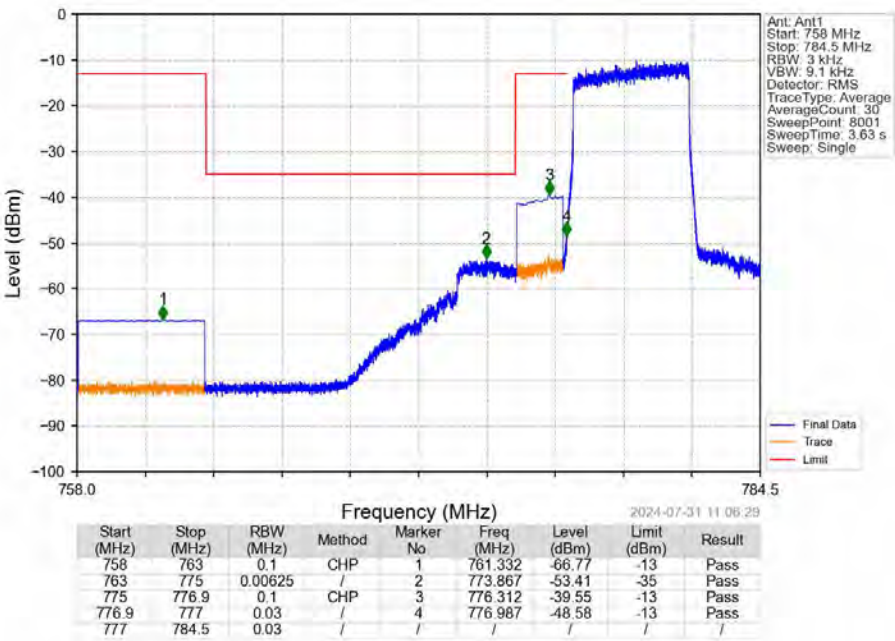
Band: 13 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	782	1	49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
16QAM	782	1	0	Refer To 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

6.2 Test Graph

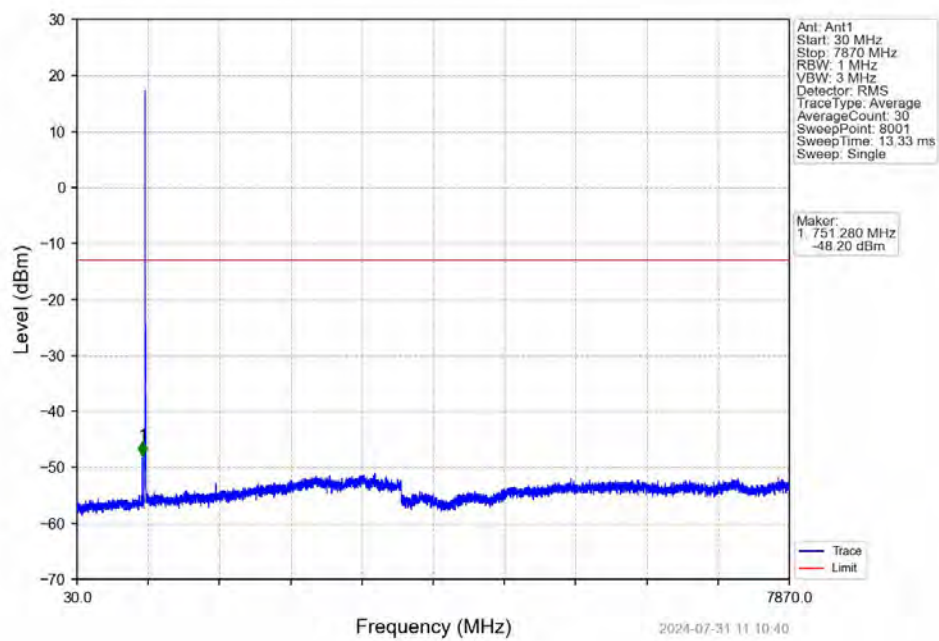
6.2.1 B13_5MHz



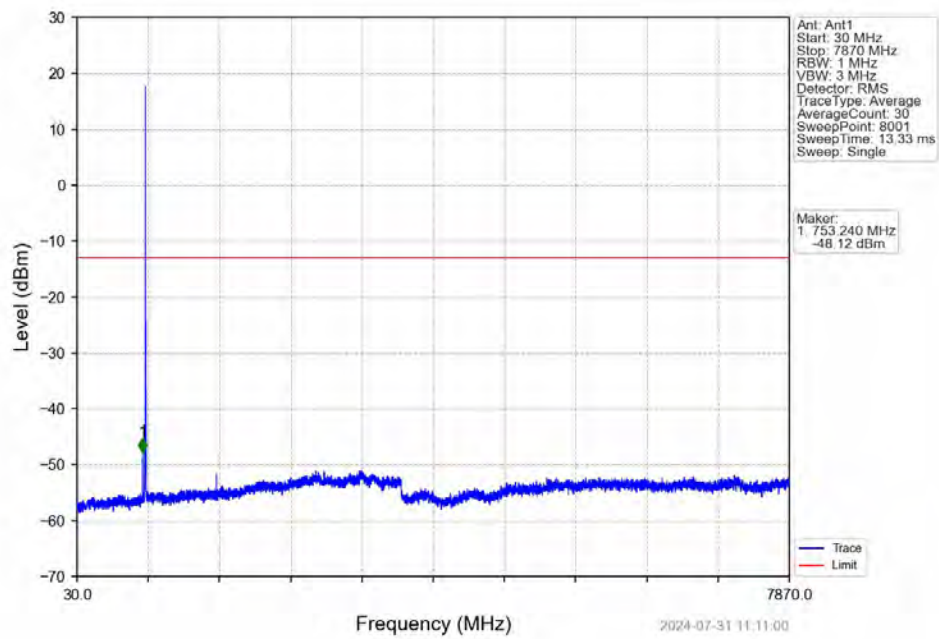
Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV



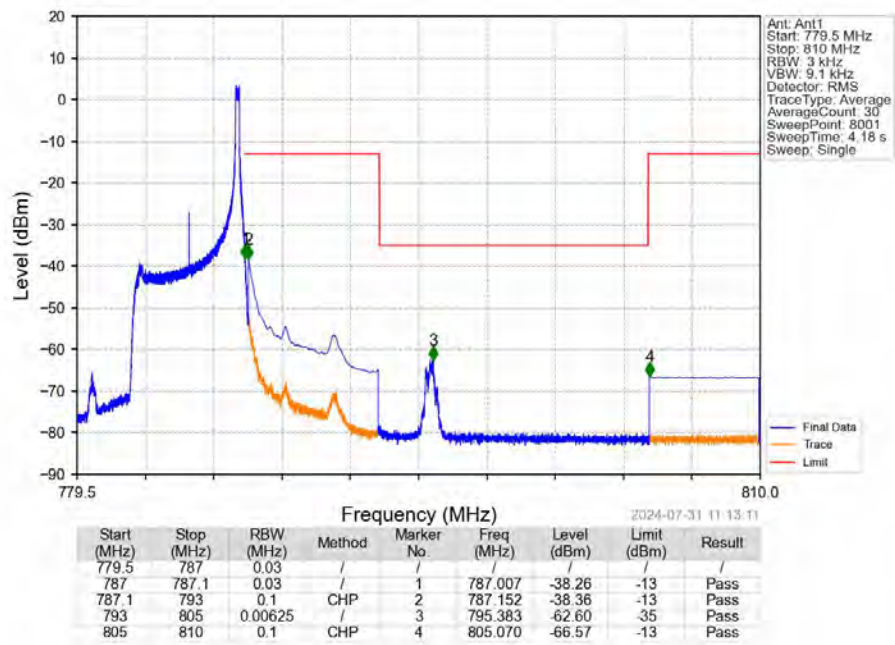
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



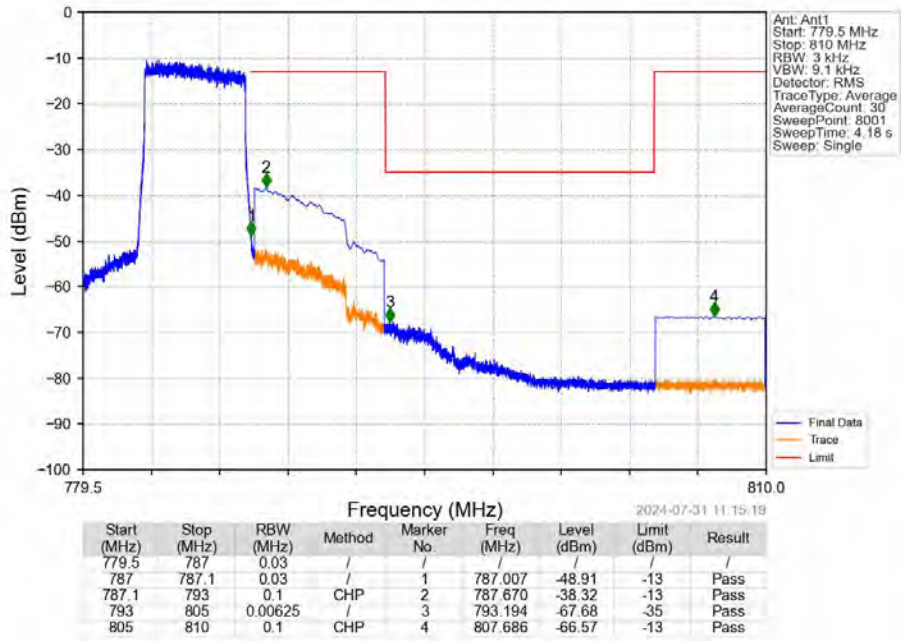
Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV



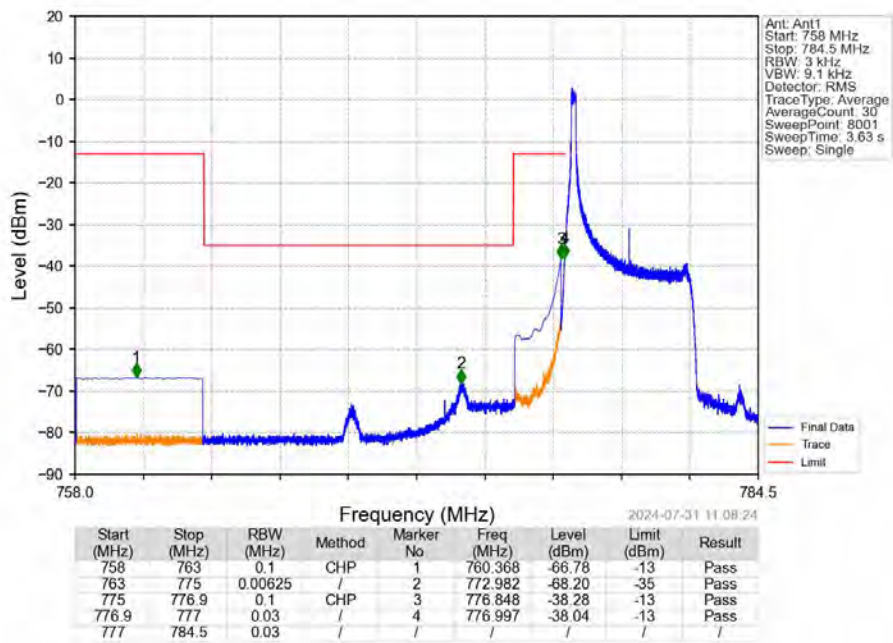
Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



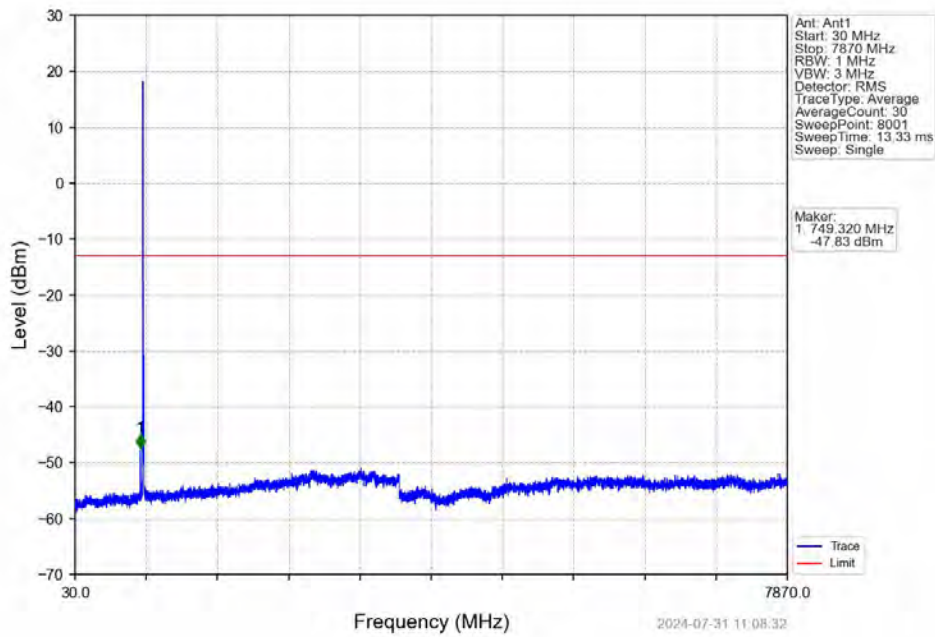
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



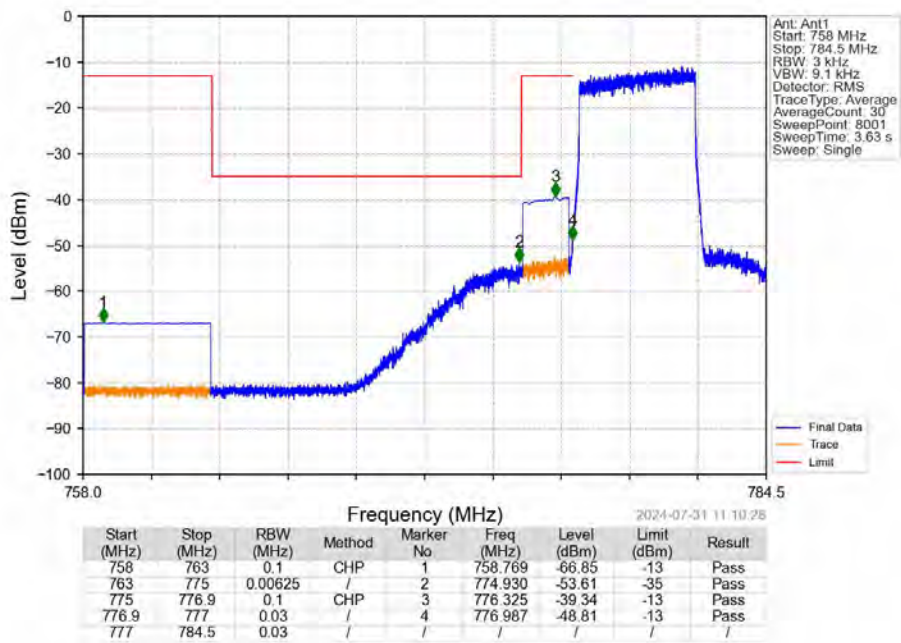
Band13_5MHz_16QAM_LCH_779.5MHz_RB_1_0_NTNV



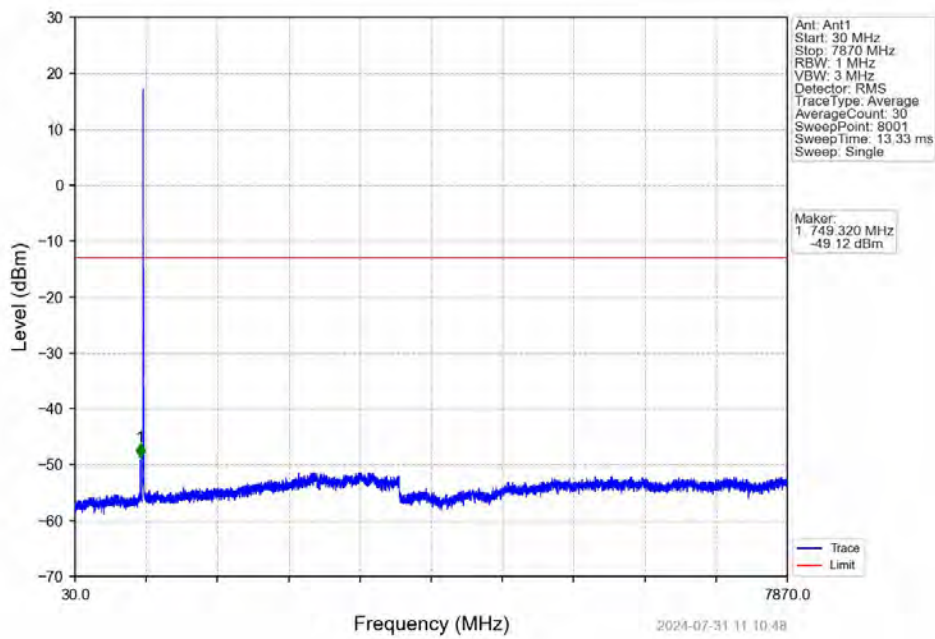
Band13_5MHz_16QAM_LCH_779.5MHz_RB_1_0_NTNV



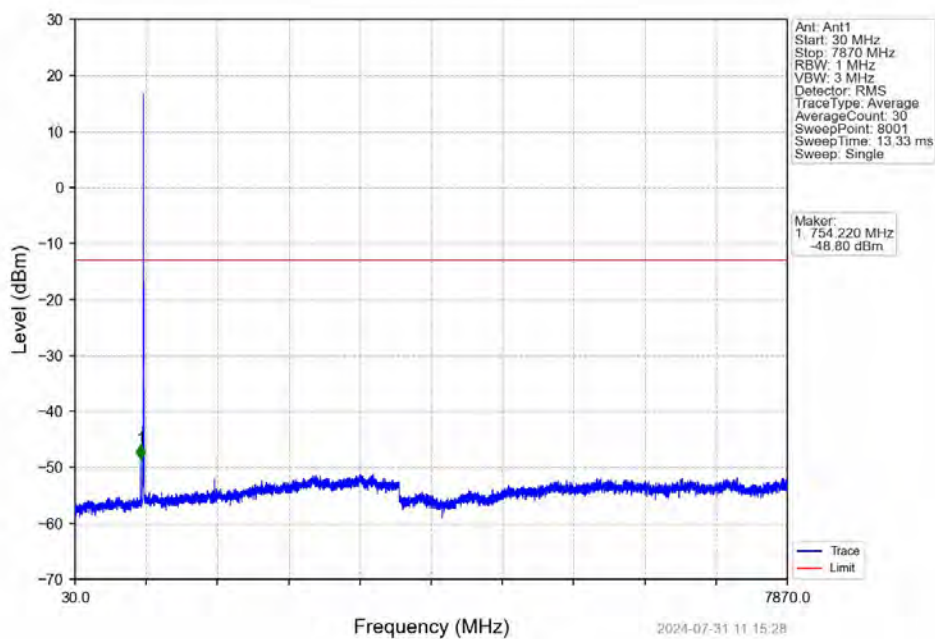
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



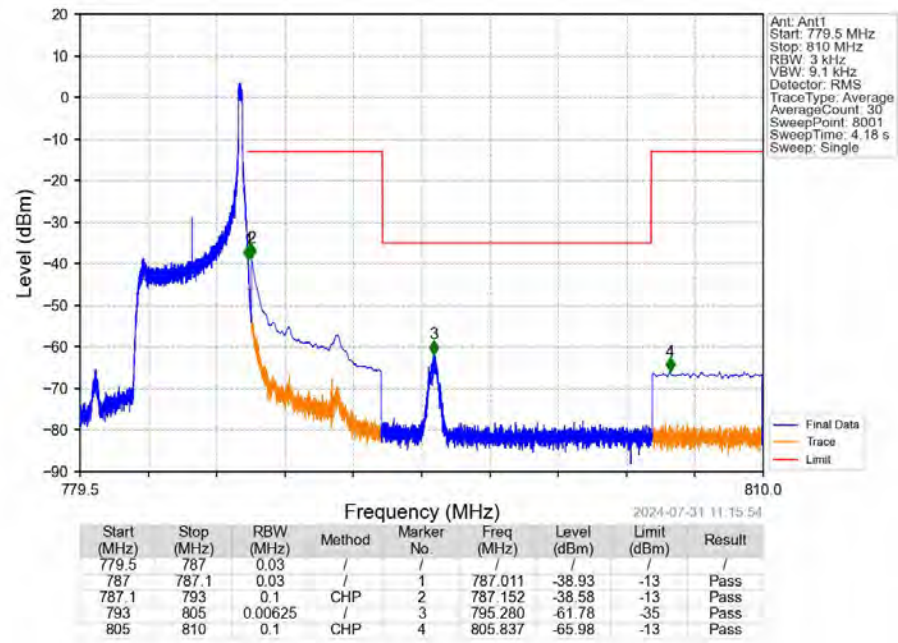
Band13_5MHz_16QAM_MCH_782MHz_RB_1_0_NTNV



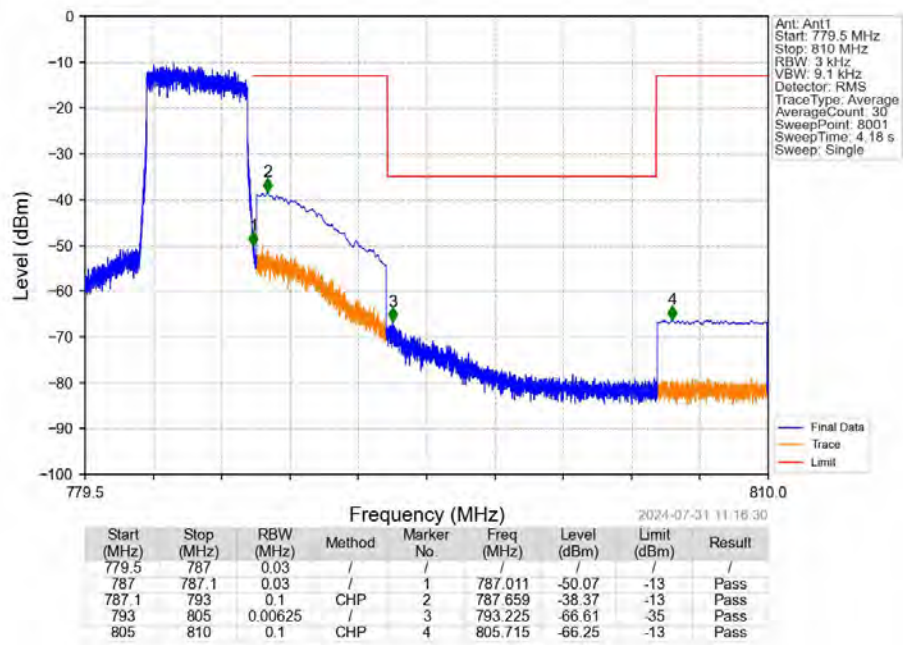
Band13_5MHz_16QAM_HCH_784.5MHz_RB_1_0_NTNV



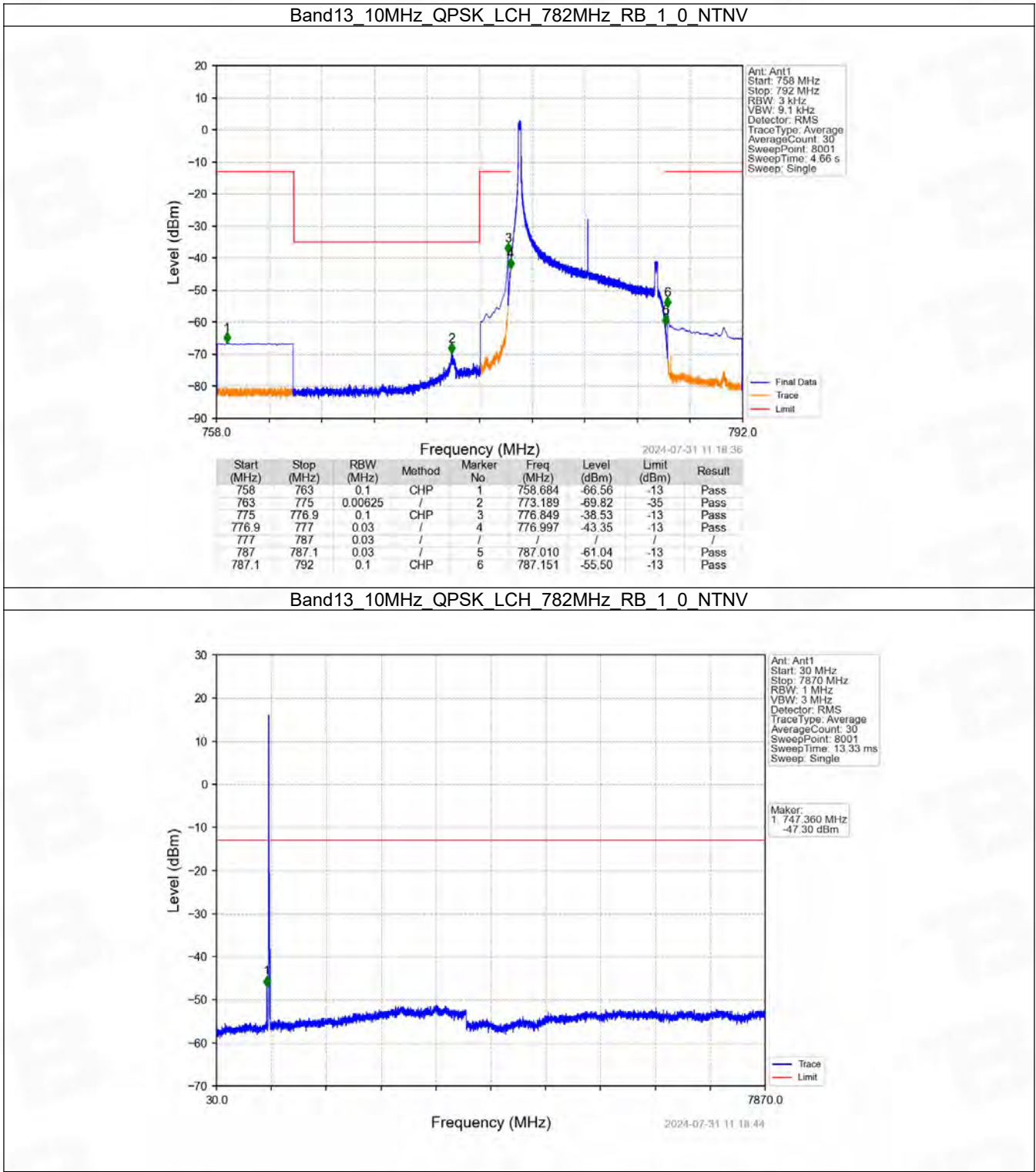
Band13_5MHz_16QAM_HCH_784.5MHz_RB_1_24_NTNV



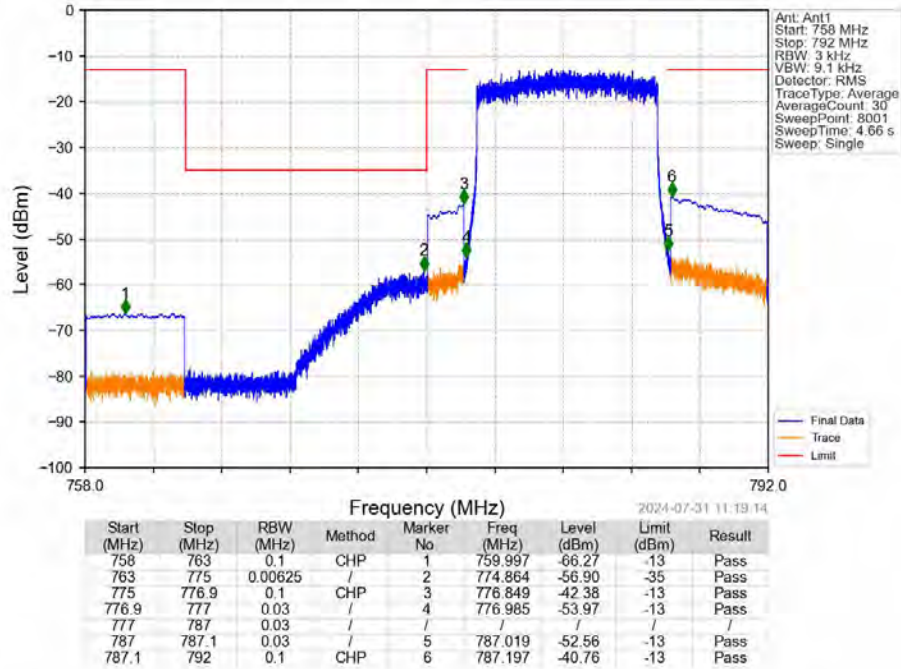
Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV



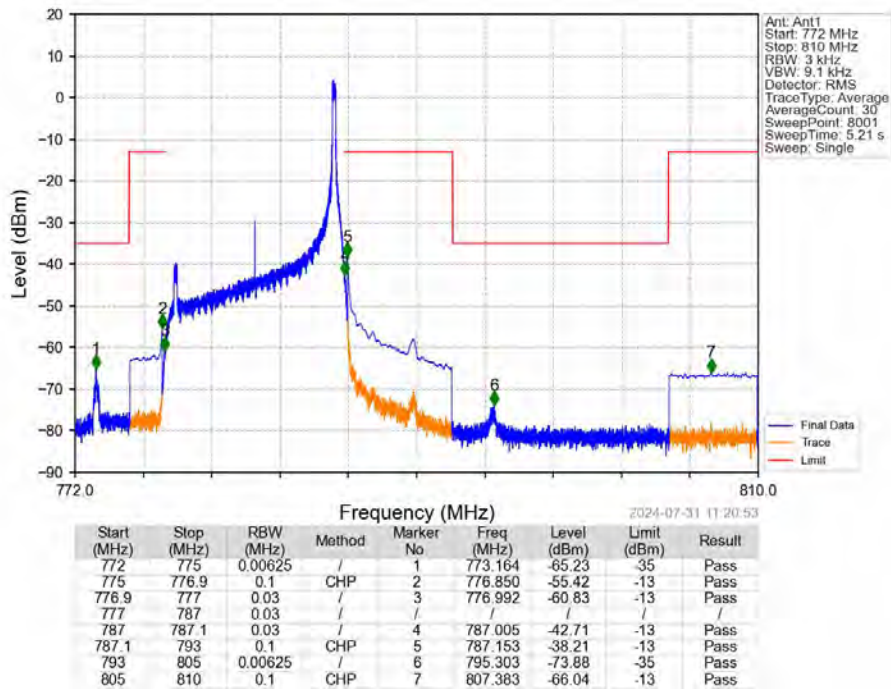
6.2.2 B13_10MHz



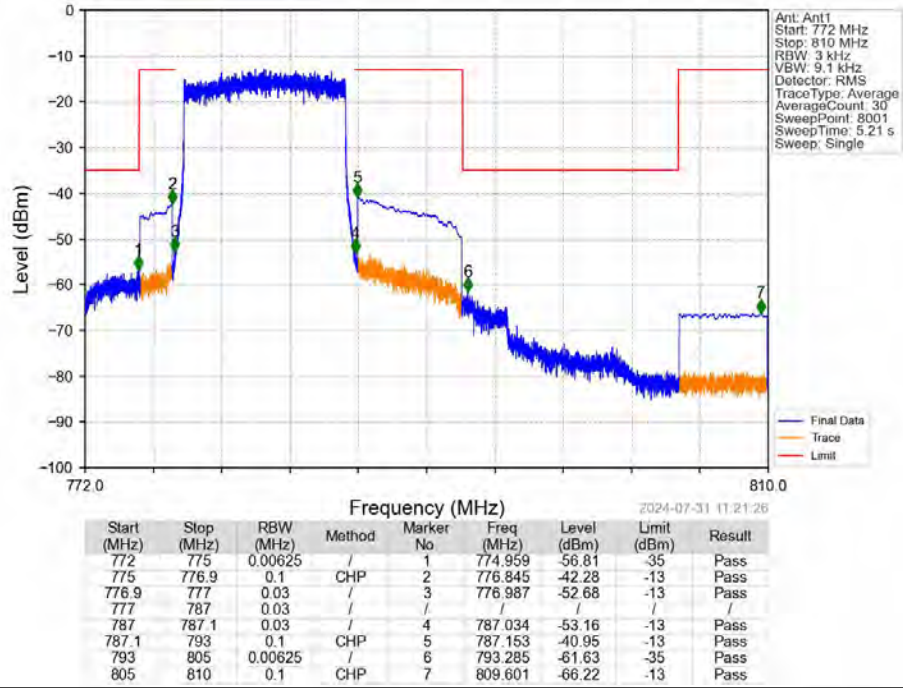
Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



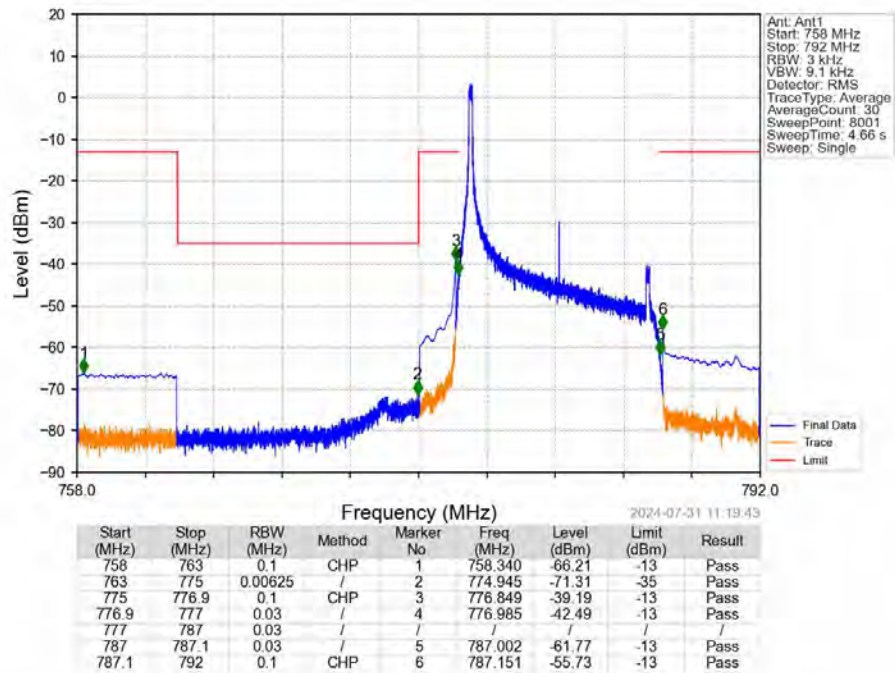
Band13_10MHz_QPSK_HCH_782MHz_RB_1_49_NTNV



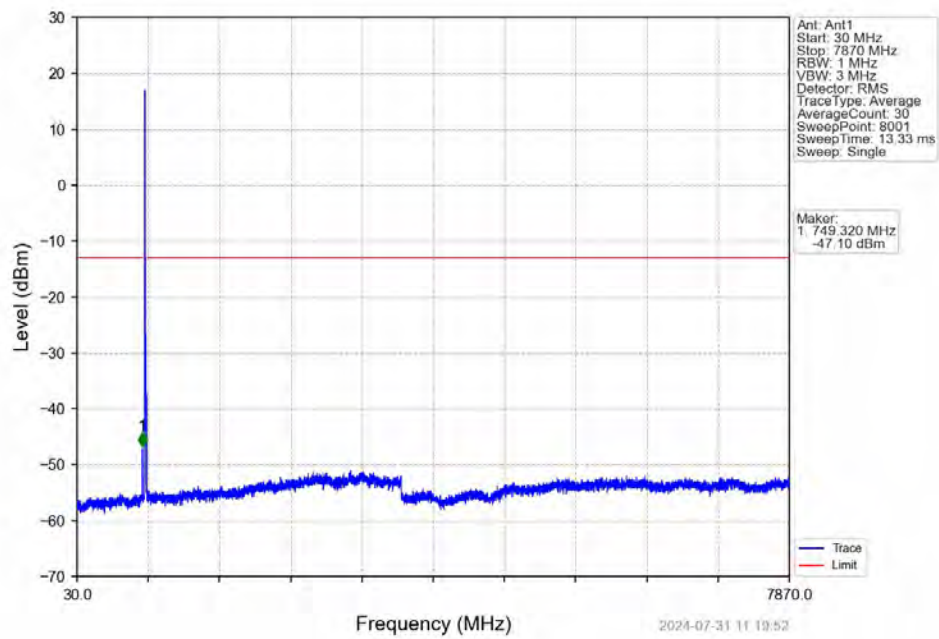
Band13_10MHz_QPSK_HCH_782MHz_RB_50_0_NTNV



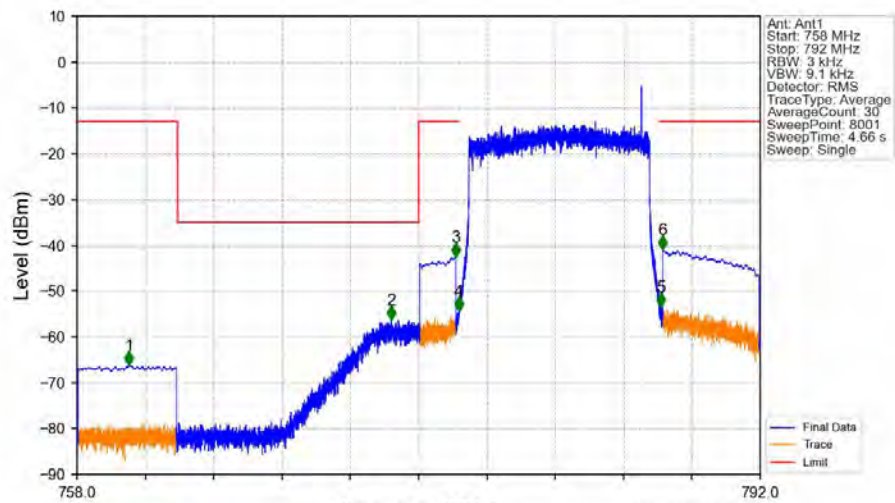
Band13_10MHz_16QAM_LCH_782MHz_RB_1_0_NTNV



Band13_10MHz_16QAM_LCH_782MHz_RB_1_0_NTNV

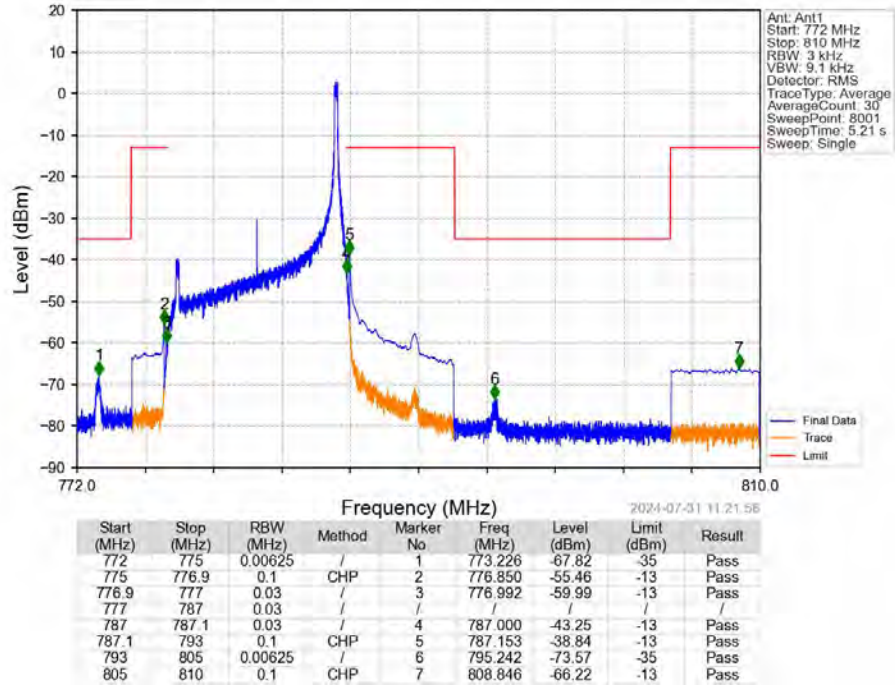


Band13_10MHz_16QAM_LCH_782MHz_RB_50_0_NTNV

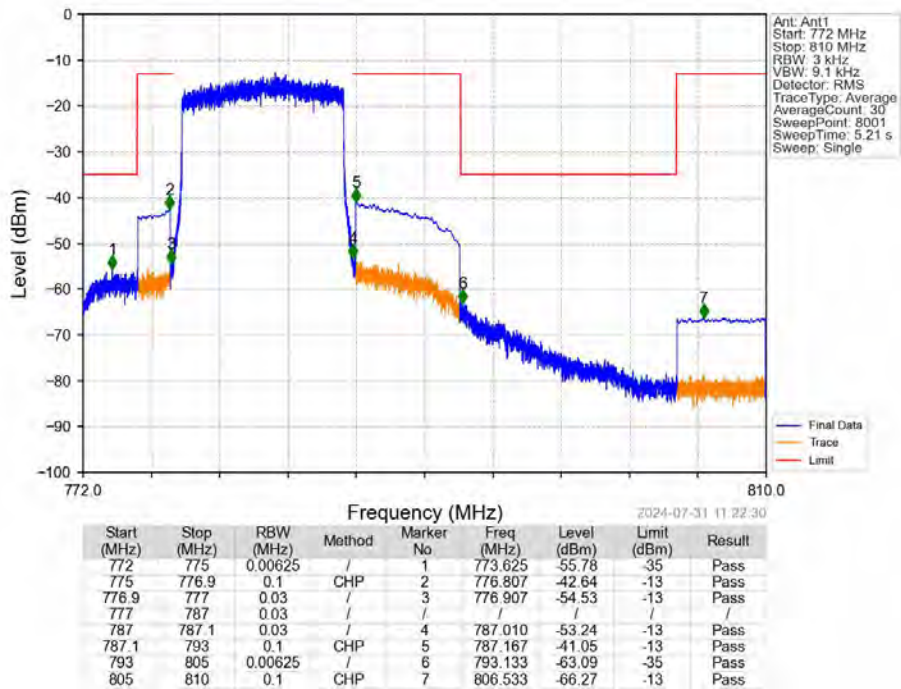


Frequency (MHz)								
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	760.584	-66.16	-13	Pass
763	775	0.00625	/	2	773.653	-56.28	-35	Pass
775	776.9	0.1	CHP	3	776.832	-42.58	-13	Pass
776.9	777	0.03	/	4	776.997	-54.45	-13	Pass
777	787	0.03	/	/	/	/	/	/
787	787.1	0.03	/	5	787.066	-53.51	-13	Pass
787.1	792	0.1	CHP	6	787.151	-41.05	-13	Pass

Band13_10MHz_16QAM_HCH_782MHz_RB_1_49_NTNV



Band13_10MHz_16QAM_HCH_782MHz_RB_50_0_NTNV



7. Form731

7.1 Test Result

7.1.1 Form731_Power

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
13	5	779.5	784.5	0.1585	0.0624	ppm	4M57G7D	27F	22.00
13	5	779.5	784.5	0.1493	0.0630	ppm	4M56W7D	27F	21.74
13	10	782	782	0.1589	0.0496	ppm	9M04G7D	27F	22.01
13	10	782	782	0.1718	0.0651	ppm	9M00W7D	27F	22.35

7.1.2 Form731_ERP

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
13	5	779.5	784.5	0.0678	0.0624	ppm	4M57G7D	27F	18.31
13	5	779.5	784.5	0.0638	0.0630	ppm	4M56W7D	27F	18.05
13	10	782	782	0.0679	0.0496	ppm	9M04G7D	27F	18.32
13	10	782	782	0.0735	0.0651	ppm	9M00W7D	27F	18.66