

1. Effective (Isotropic) Radiated Power Output Data

1.1 B13_5MHz_ERP

1.1.1 Test Result

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	23.50	-0.28	21.07	<=34.77	Pass
			13	23.60	-0.28	21.17	<=34.77	Pass
			24	23.59	-0.28	21.16	<=34.77	Pass
		12	0	22.93	-0.28	20.50	<=34.77	Pass
			6	22.89	-0.28	20.46	<=34.77	Pass
			13	22.93	-0.28	20.50	<=34.77	Pass
		25	0	22.95	-0.28	20.52	<=34.77	Pass
	782	1	0	23.54	-0.28	21.11	<=34.77	Pass
			13	23.56	-0.28	21.13	<=34.77	Pass
			24	23.52	-0.28	21.09	<=34.77	Pass
		12	0	22.94	-0.28	20.51	<=34.77	Pass
			6	22.90	-0.28	20.47	<=34.77	Pass
			13	22.90	-0.28	20.47	<=34.77	Pass
		25	0	22.91	-0.28	20.48	<=34.77	Pass
	784.5	1	0	23.52	-0.28	21.09	<=34.77	Pass
			13	23.49	-0.28	21.06	<=34.77	Pass
			24	23.47	-0.28	21.04	<=34.77	Pass
		12	0	22.90	-0.28	20.47	<=34.77	Pass
			6	22.87	-0.28	20.44	<=34.77	Pass
			13	22.82	-0.28	20.39	<=34.77	Pass
		25	0	22.84	-0.28	20.41	<=34.77	Pass
16QAM	779.5	1	0	22.41	-0.28	19.98	<=34.77	Pass
			13	22.47	-0.28	20.04	<=34.77	Pass
			24	22.47	-0.28	20.04	<=34.77	Pass
		12	0	22.01	-0.28	19.58	<=34.77	Pass
			6	21.93	-0.28	19.50	<=34.77	Pass
			13	21.83	-0.28	19.40	<=34.77	Pass
		25	0	21.96	-0.28	19.53	<=34.77	Pass
	782	1	0	22.60	-0.28	20.17	<=34.77	Pass
			13	22.60	-0.28	20.17	<=34.77	Pass
			24	22.55	-0.28	20.12	<=34.77	Pass
		12	0	21.95	-0.28	19.52	<=34.77	Pass
			6	21.93	-0.28	19.50	<=34.77	Pass
			13	21.94	-0.28	19.51	<=34.77	Pass
		25	0	22.02	-0.28	19.59	<=34.77	Pass
	784.5	1	0	22.61	-0.28	20.18	<=34.77	Pass
			13	22.54	-0.28	20.11	<=34.77	Pass
			24	22.56	-0.28	20.13	<=34.77	Pass
		12	0	21.92	-0.28	19.49	<=34.77	Pass
			6	21.94	-0.28	19.51	<=34.77	Pass
			13	21.87	-0.28	19.44	<=34.77	Pass
		25	0	21.83	-0.28	19.40	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.2 B13_10MHz_ERP

1.2.1 Test Result

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	-0.28	21.01	<=34.77	Pass
			25	23.47	-0.28	21.04	<=34.77	Pass
			49	23.46	-0.28	21.03	<=34.77	Pass
		25	0	22.98	-0.28	20.55	<=34.77	Pass
			13	22.94	-0.28	20.51	<=34.77	Pass
			25	22.94	-0.28	20.51	<=34.77	Pass
		50	0	22.94	-0.28	20.51	<=34.77	Pass
16QAM	782	1	0	22.61	-0.28	20.18	<=34.77	Pass
			25	22.64	-0.28	20.21	<=34.77	Pass
			49	22.62	-0.28	20.19	<=34.77	Pass
		25	0	21.99	-0.28	19.56	<=34.77	Pass
			13	21.92	-0.28	19.49	<=34.77	Pass
			25	21.94	-0.28	19.51	<=34.77	Pass
		50	0	21.96	-0.28	19.53	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. Frequency Stability

2.1 B13_5MHz

2.1.1 Test Result

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	3.23	-0.787	-0.0010	-2.5 to 2.5	Pass
					3.8	-1.059	-0.0014	-2.5 to 2.5	Pass
					4.37	-0.958	-0.0012	-2.5 to 2.5	Pass
				-30	3.8	0.944	0.0012	-2.5 to 2.5	Pass
				-20	3.8	0.486	0.0006	-2.5 to 2.5	Pass
				-10	3.8	-0.086	-0.0001	-2.5 to 2.5	Pass
				0	3.8	0.715	0.0009	-2.5 to 2.5	Pass
				10	3.8	-2.089	-0.0027	-2.5 to 2.5	Pass
				30	3.8	-1.674	-0.0021	-2.5 to 2.5	Pass
				40	3.8	-3.619	-0.0046	-2.5 to 2.5	Pass
				50	3.8	-0.787	-0.0010	-2.5 to 2.5	Pass
	782	25	0	20	3.23	-0.100	-0.0001	-2.5 to 2.5	Pass
					3.8	-0.072	-0.0001	-2.5 to 2.5	Pass
					4.37	-2.389	-0.0031	-2.5 to 2.5	Pass
				-30	3.8	0.429	0.0005	-2.5 to 2.5	Pass
				-20	3.8	-1.359	-0.0017	-2.5 to 2.5	Pass
				-10	3.8	-0.958	-0.0012	-2.5 to 2.5	Pass
				0	3.8	1.216	0.0016	-2.5 to 2.5	Pass
				10	3.8	-0.701	-0.0009	-2.5 to 2.5	Pass
				30	3.8	3.061	0.0039	-2.5 to 2.5	Pass
				40	3.8	2.403	0.0031	-2.5 to 2.5	Pass
				50	3.8	1.502	0.0019	-2.5 to 2.5	Pass
	784.5	25	0	20	3.23	-0.186	-0.0002	-2.5 to 2.5	Pass
					3.8	-0.501	-0.0006	-2.5 to 2.5	Pass

					4.37	-2.332	-0.0030	-2.5 to 2.5	Pass
				-30	3.8	-0.029	0.0000	-2.5 to 2.5	Pass
				-20	3.8	-2.089	-0.0027	-2.5 to 2.5	Pass
				-10	3.8	-1.860	-0.0024	-2.5 to 2.5	Pass
				0	3.8	0.129	0.0002	-2.5 to 2.5	Pass
				10	3.8	-0.386	-0.0005	-2.5 to 2.5	Pass
				30	3.8	-0.873	-0.0011	-2.5 to 2.5	Pass
				40	3.8	-0.358	-0.0005	-2.5 to 2.5	Pass
				50	3.8	1.559	0.0020	-2.5 to 2.5	Pass
16QAM	779.5	25	0	20	3.23	0.172	0.0002	-2.5 to 2.5	Pass
					3.8	-2.346	-0.0030	-2.5 to 2.5	Pass
					4.37	-0.443	-0.0006	-2.5 to 2.5	Pass
				-30	3.8	-2.861	-0.0037	-2.5 to 2.5	Pass
				-20	3.8	-0.830	-0.0011	-2.5 to 2.5	Pass
				-10	3.8	0.315	0.0004	-2.5 to 2.5	Pass
				0	3.8	-3.247	-0.0042	-2.5 to 2.5	Pass
				10	3.8	-1.273	-0.0016	-2.5 to 2.5	Pass
				30	3.8	-1.860	-0.0024	-2.5 to 2.5	Pass
				40	3.8	-5.565	-0.0071	-2.5 to 2.5	Pass
				50	3.8	-3.161	-0.0041	-2.5 to 2.5	Pass
	782	25	0	20	3.23	-3.662	-0.0047	-2.5 to 2.5	Pass
					3.8	-0.973	-0.0012	-2.5 to 2.5	Pass
					4.37	0.215	0.0003	-2.5 to 2.5	Pass
				-30	3.8	-0.300	-0.0004	-2.5 to 2.5	Pass
				-20	3.8	0.529	0.0007	-2.5 to 2.5	Pass
				-10	3.8	0.958	0.0012	-2.5 to 2.5	Pass
				0	3.8	-1.960	-0.0025	-2.5 to 2.5	Pass
				10	3.8	-1.273	-0.0016	-2.5 to 2.5	Pass
				30	3.8	-4.649	-0.0059	-2.5 to 2.5	Pass
				40	3.8	-1.574	-0.0020	-2.5 to 2.5	Pass
				50	3.8	-0.501	-0.0006	-2.5 to 2.5	Pass
	784.5	25	0	20	3.23	0.730	0.0009	-2.5 to 2.5	Pass
					3.8	-3.190	-0.0041	-2.5 to 2.5	Pass
					4.37	-2.789	-0.0036	-2.5 to 2.5	Pass
				-30	3.8	-2.031	-0.0026	-2.5 to 2.5	Pass
				-20	3.8	0.386	0.0005	-2.5 to 2.5	Pass
				-10	3.8	-1.173	-0.0015	-2.5 to 2.5	Pass
				0	3.8	-0.086	-0.0001	-2.5 to 2.5	Pass
				10	3.8	1.330	0.0017	-2.5 to 2.5	Pass
				30	3.8	-0.157	-0.0002	-2.5 to 2.5	Pass
				40	3.8	-3.233	-0.0041	-2.5 to 2.5	Pass
				50	3.8	-0.887	-0.0011	-2.5 to 2.5	Pass

2.2 B13_10MHz

2.2.1 Test Result

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	3.23	0.758	0.0010	-2.5 to 2.5	Pass
					3.8	1.588	0.0020	-2.5 to 2.5	Pass
					4.37	-1.688	-0.0022	-2.5 to 2.5	Pass
				-30	3.8	-0.672	-0.0009	-2.5 to 2.5	Pass
				-20	3.8	0.300	0.0004	-2.5 to 2.5	Pass

16QAM	782	50	0	-10	3.8	-0.772	-0.0010	-2.5 to 2.5	Pass
				0	3.8	-0.601	-0.0008	-2.5 to 2.5	Pass
				10	3.8	-0.286	-0.0004	-2.5 to 2.5	Pass
				30	3.8	1.316	0.0017	-2.5 to 2.5	Pass
				40	3.8	-0.072	-0.0001	-2.5 to 2.5	Pass
				50	3.8	2.346	0.0030	-2.5 to 2.5	Pass
				20	3.23	0.658	0.0008	-2.5 to 2.5	Pass
					3.8	1.688	0.0022	-2.5 to 2.5	Pass
					4.37	-3.104	-0.0040	-2.5 to 2.5	Pass
				-30	3.8	-3.033	-0.0039	-2.5 to 2.5	Pass
				-20	3.8	-0.372	-0.0005	-2.5 to 2.5	Pass
				-10	3.8	-3.419	-0.0044	-2.5 to 2.5	Pass
				0	3.8	-2.060	-0.0026	-2.5 to 2.5	Pass
				10	3.8	1.574	0.0020	-2.5 to 2.5	Pass
				30	3.8	1.416	0.0018	-2.5 to 2.5	Pass
				40	3.8	0.644	0.0008	-2.5 to 2.5	Pass
				50	3.8	-0.730	-0.0009	-2.5 to 2.5	Pass

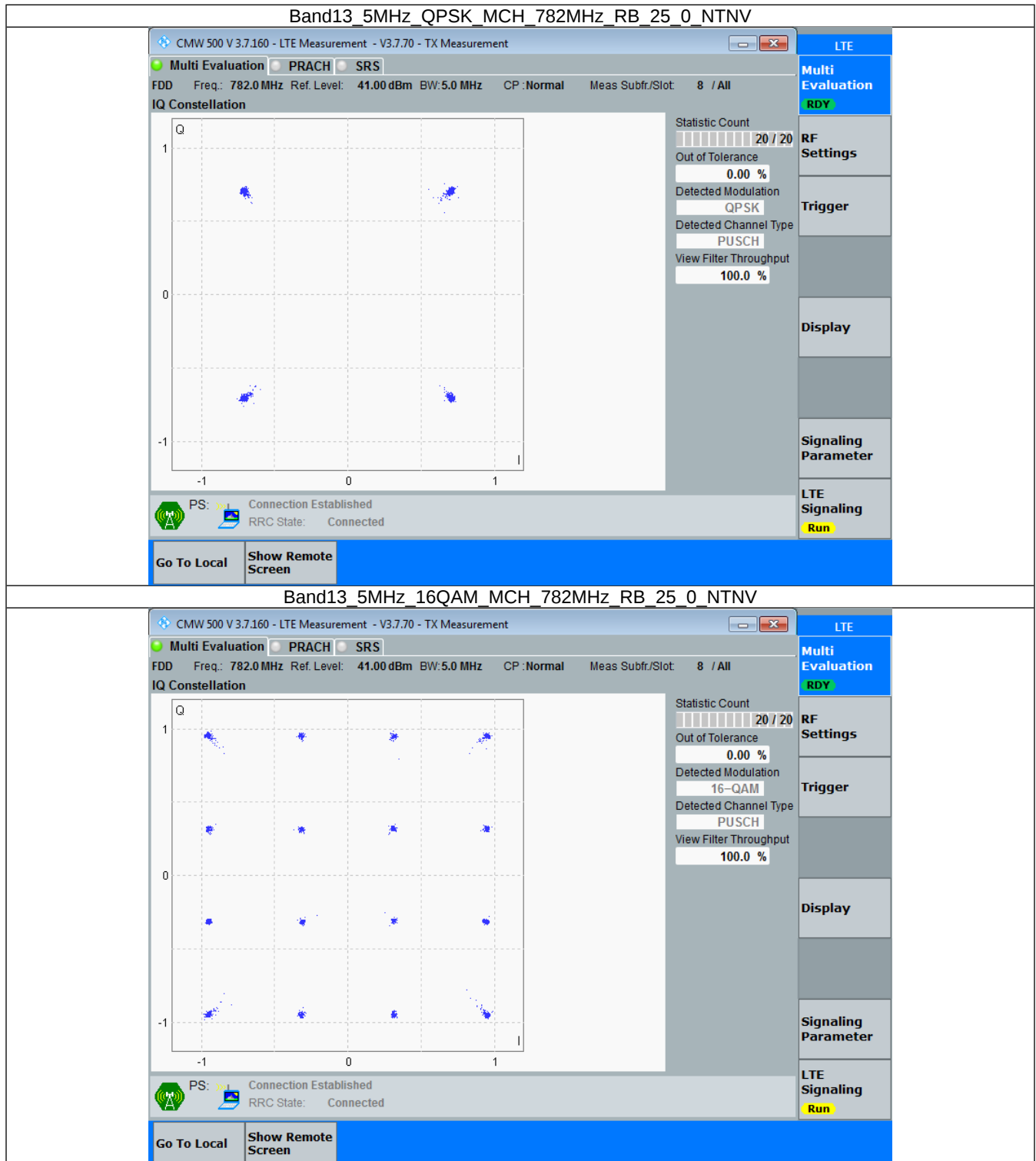
3. Modulation Characteristics

3.1 B13_5MHz

3.1.1 Test Result

Band: 13 / Bandwidth: 5MHz / NTV						
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 Test Graph

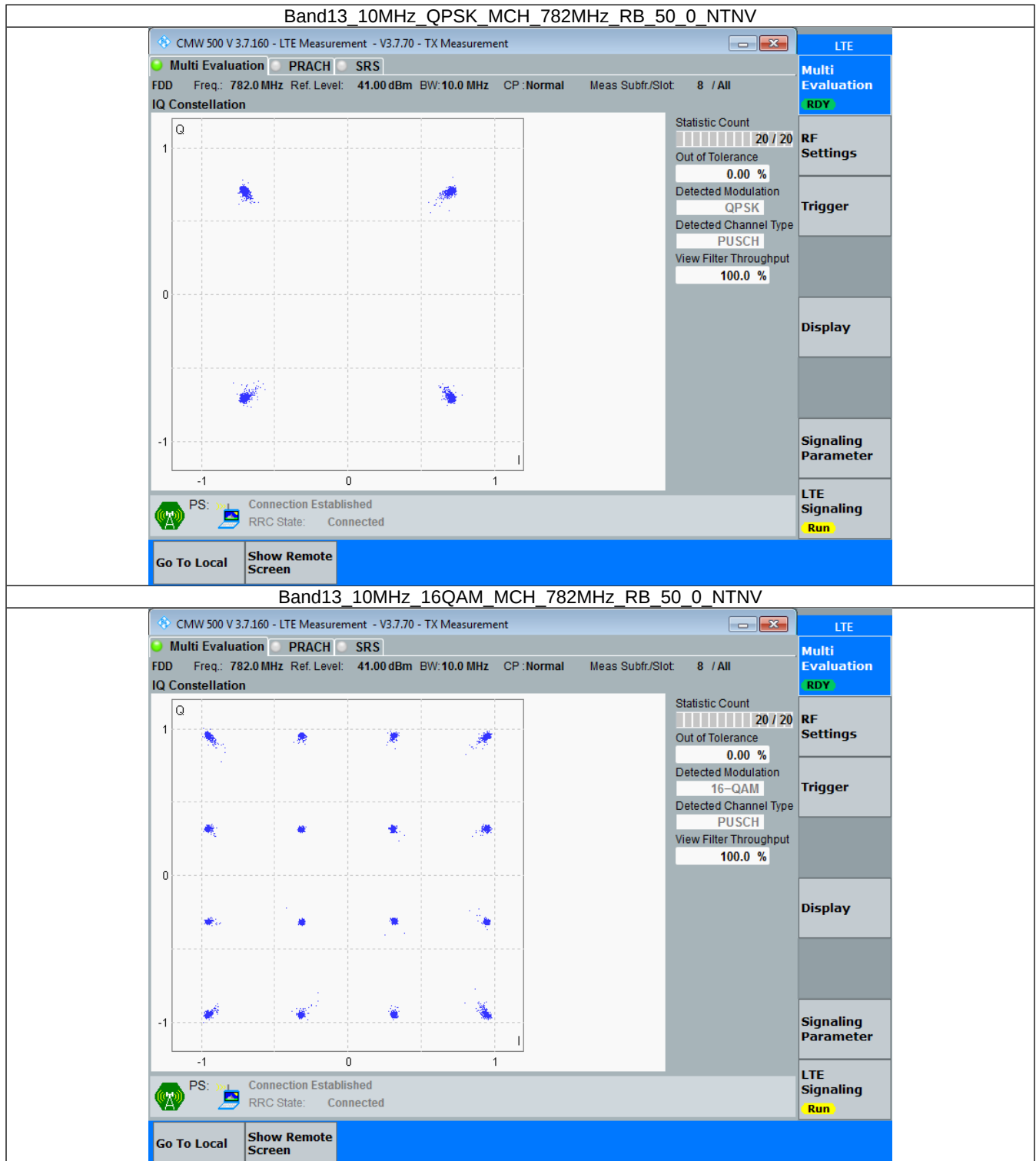


3.2 B13_10MHz

3.2.1 Test Result

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

3.2.2 Test Graph



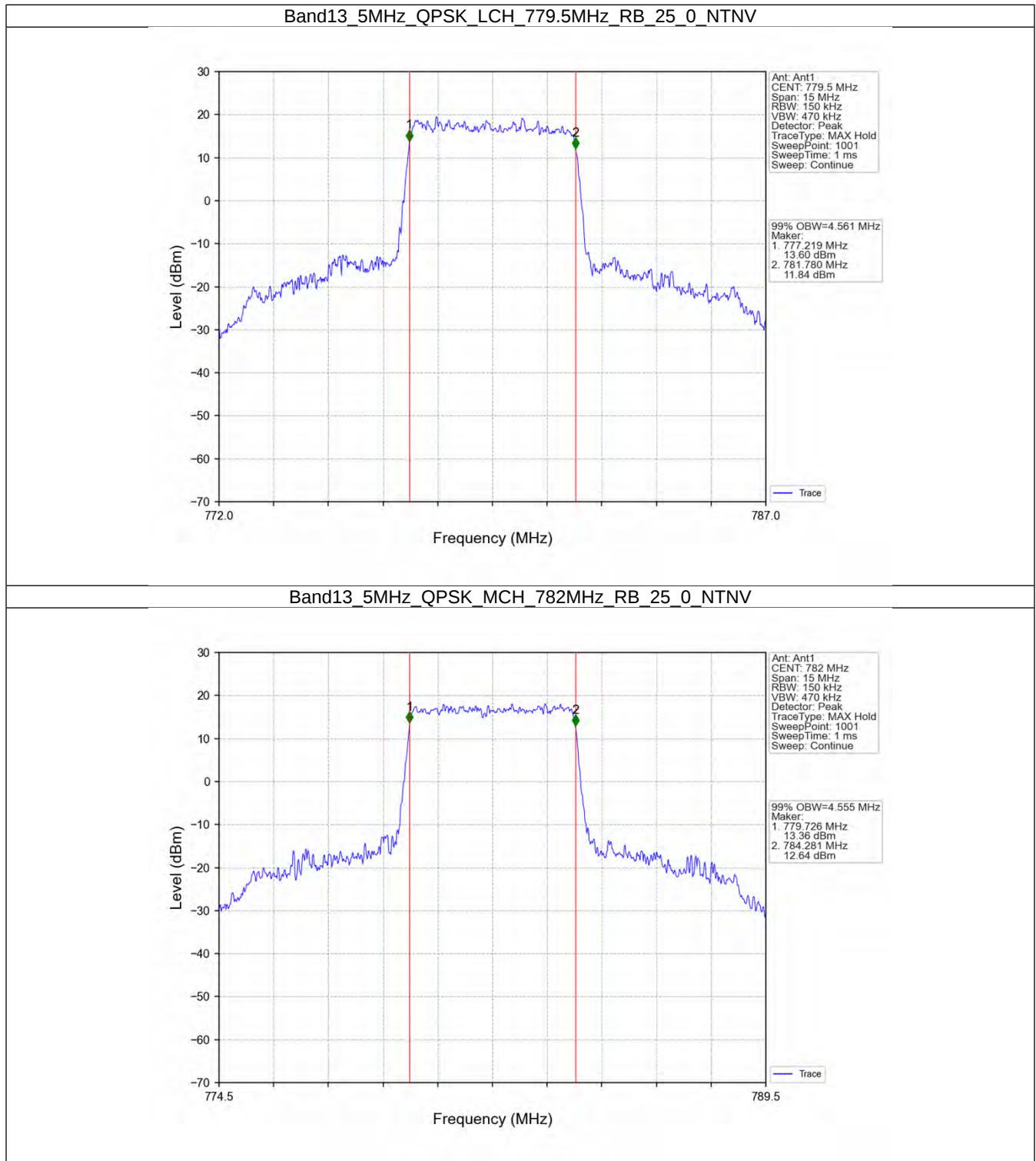
4. 99% & 26dB Bandwidth

4.1 Band13_OBW

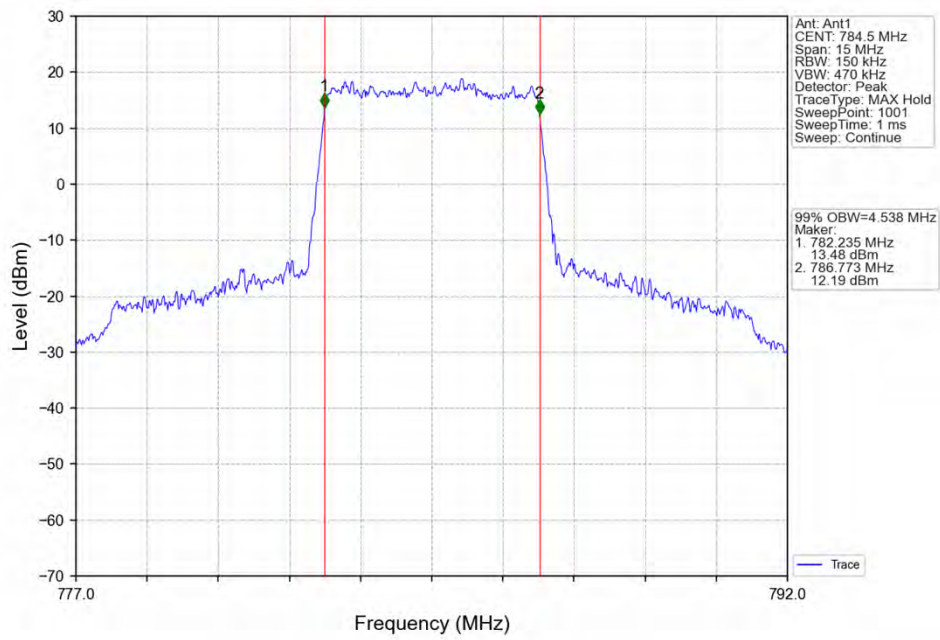
4.1.1 Test Result

Band: 13 / NTNV						
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)	Verdict
			Size	Offset	Result	
5	QPSK	779.5	25	0	4.561	Pass
		782	25	0	4.555	Pass
		784.5	25	0	4.538	Pass
	16QAM	779.5	25	0	4.552	Pass
		782	25	0	4.564	Pass
		784.5	25	0	4.537	Pass
10	QPSK	782	50	0	9.075	Pass
	16QAM	782	50	0	9.044	Pass

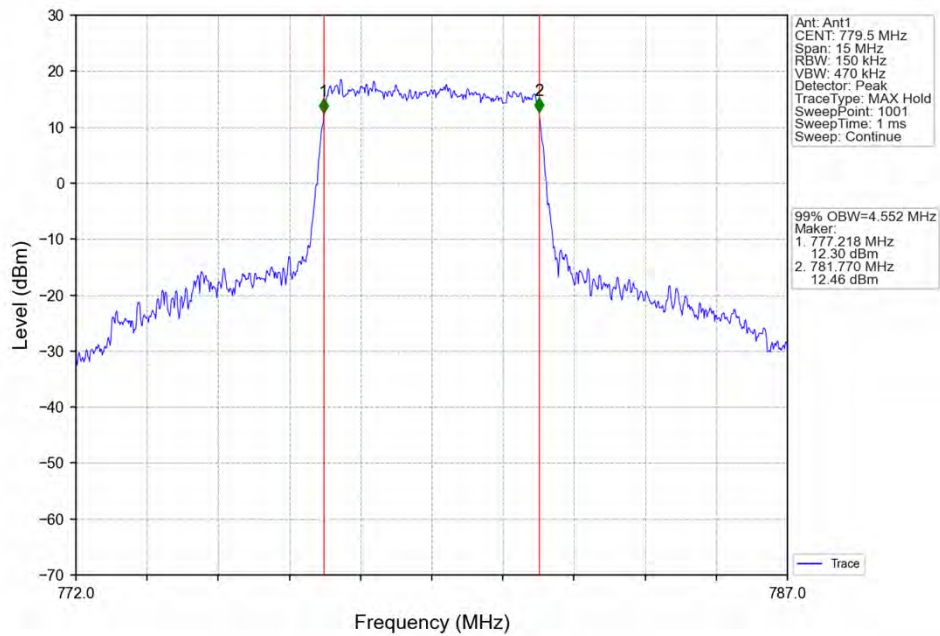
4.1.2 Test Graph



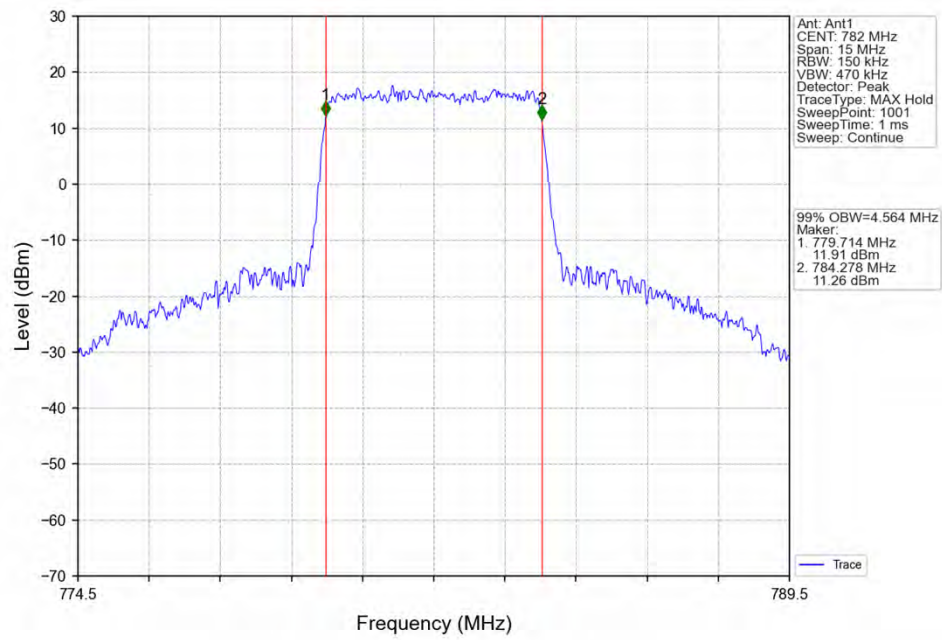
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



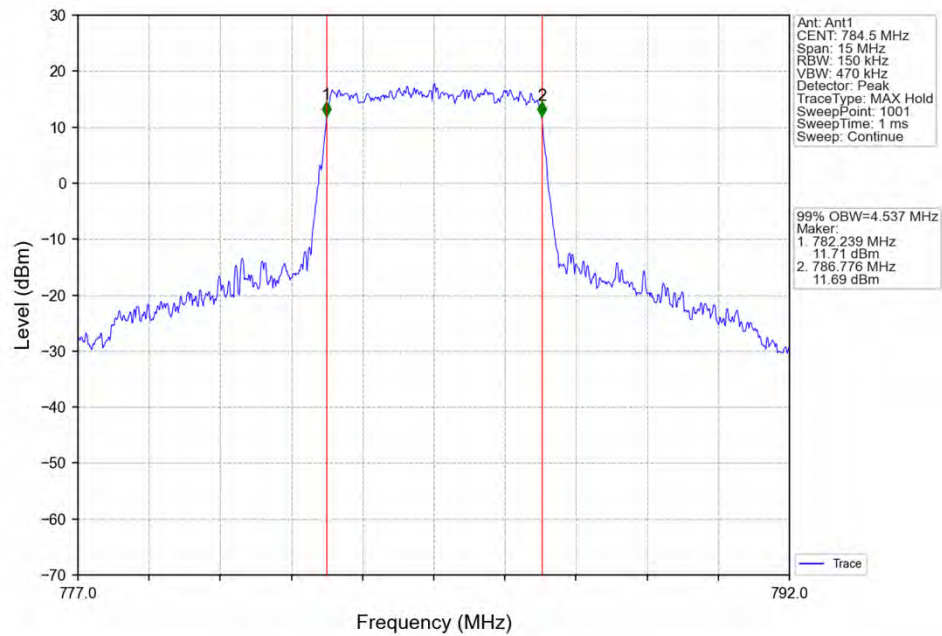
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



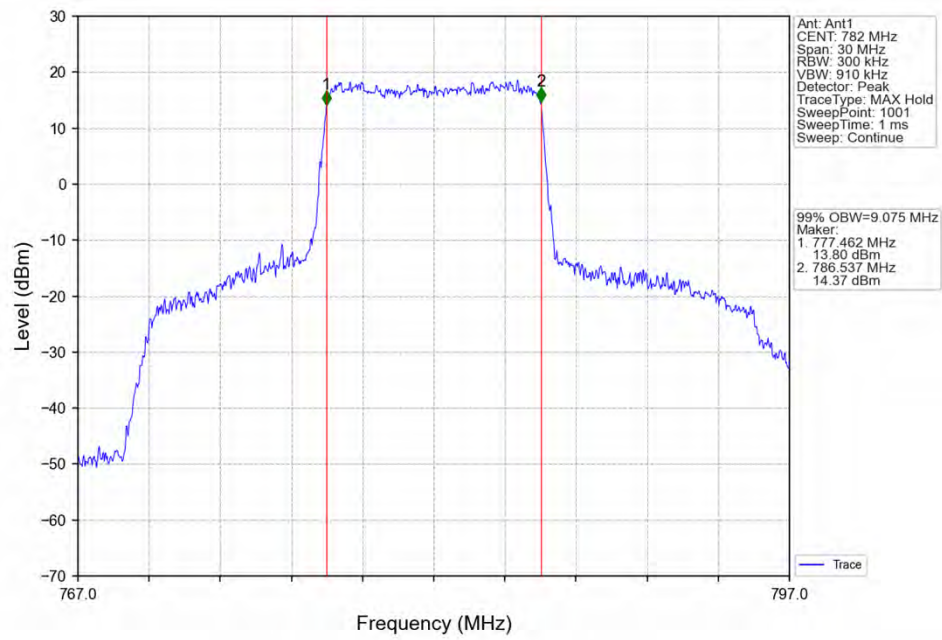
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



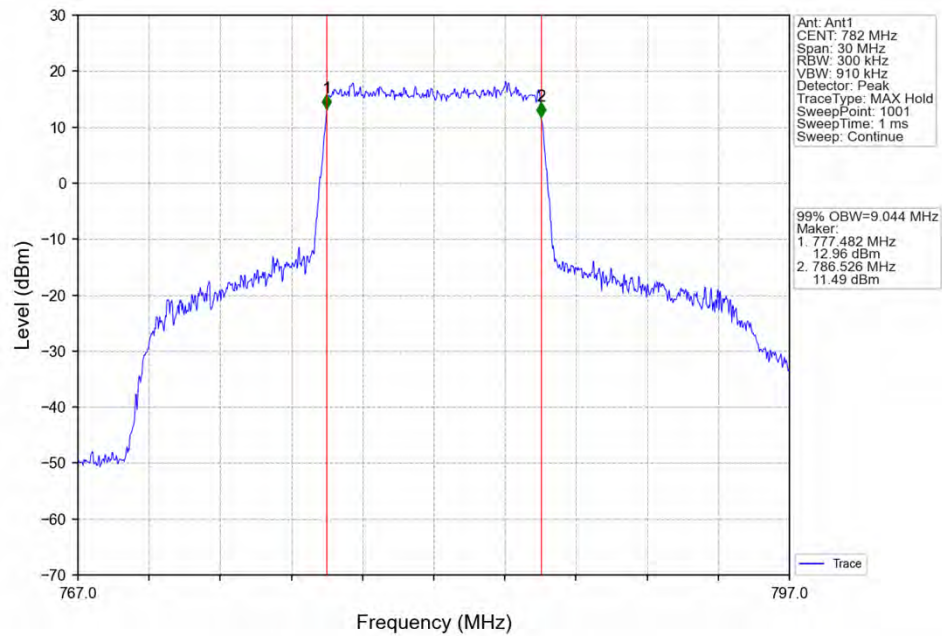
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Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV

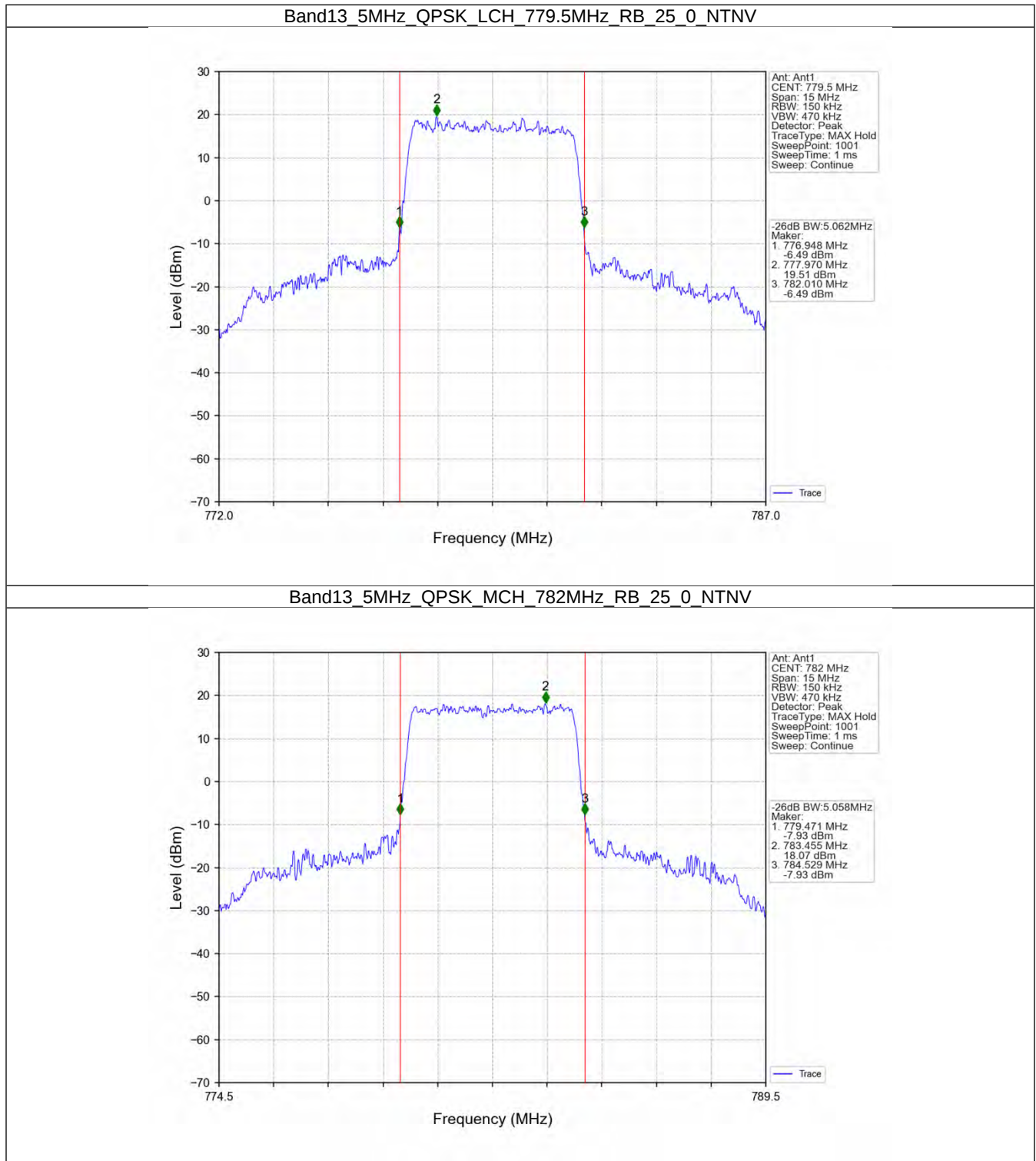


4.2 Band13_XDB

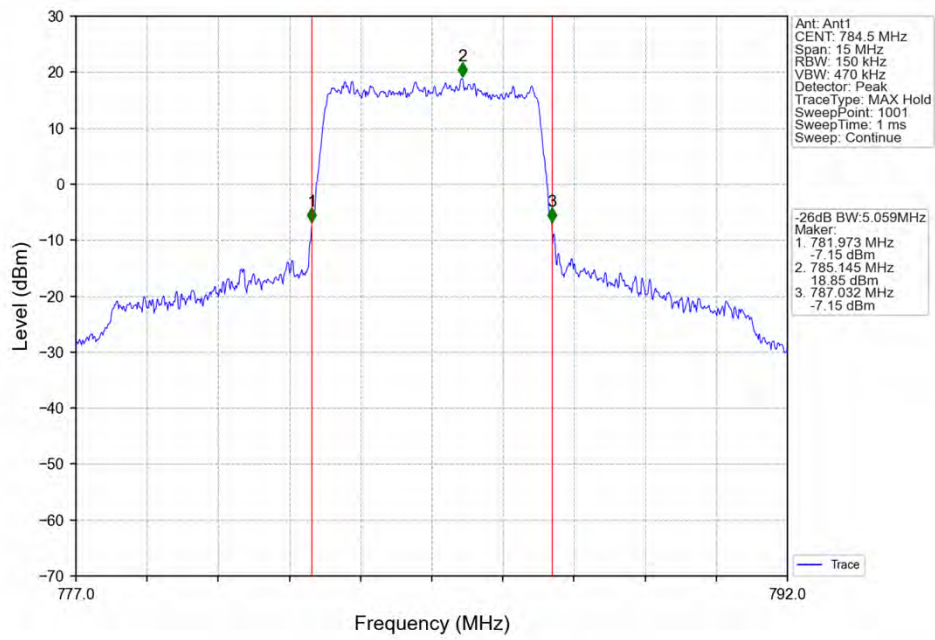
4.2.1 Test Result

Band: 13 / NTNV						
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)	Verdict
			Size	Offset	Result	
5	QPSK	779.5	25	0	5.062	Pass
		782	25	0	5.058	Pass
		784.5	25	0	5.059	Pass
	16QAM	779.5	25	0	5.048	Pass
		782	25	0	5.075	Pass
		784.5	25	0	5.084	Pass
10	QPSK	782	50	0	9.973	Pass
	16QAM	782	50	0	9.934	Pass

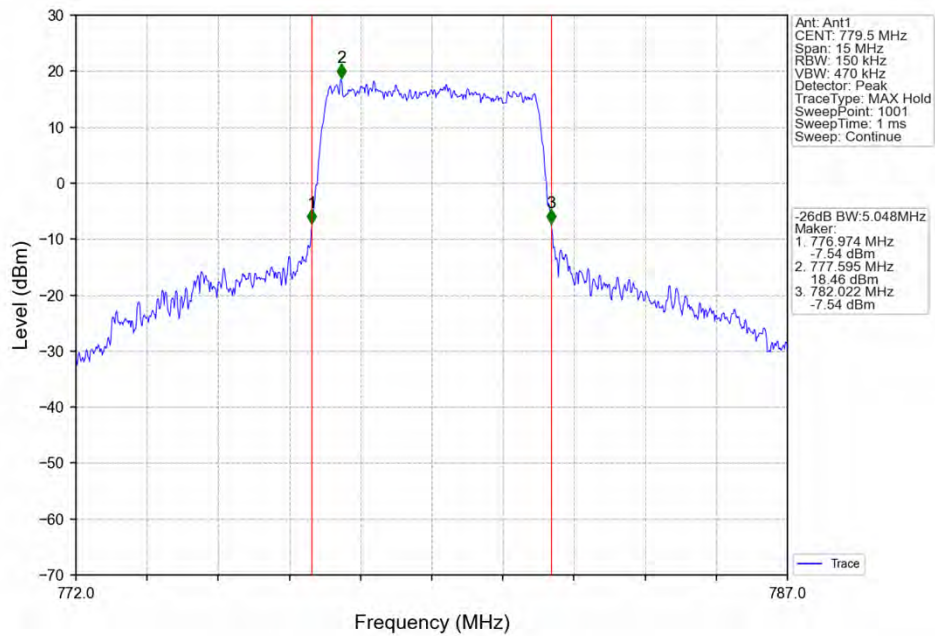
4.2.2 Test Graph



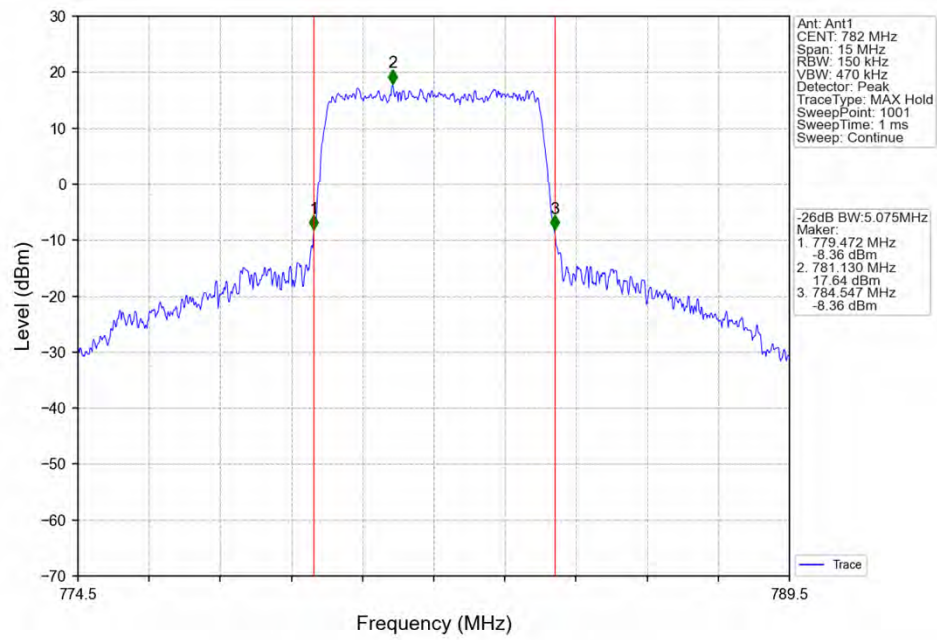
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



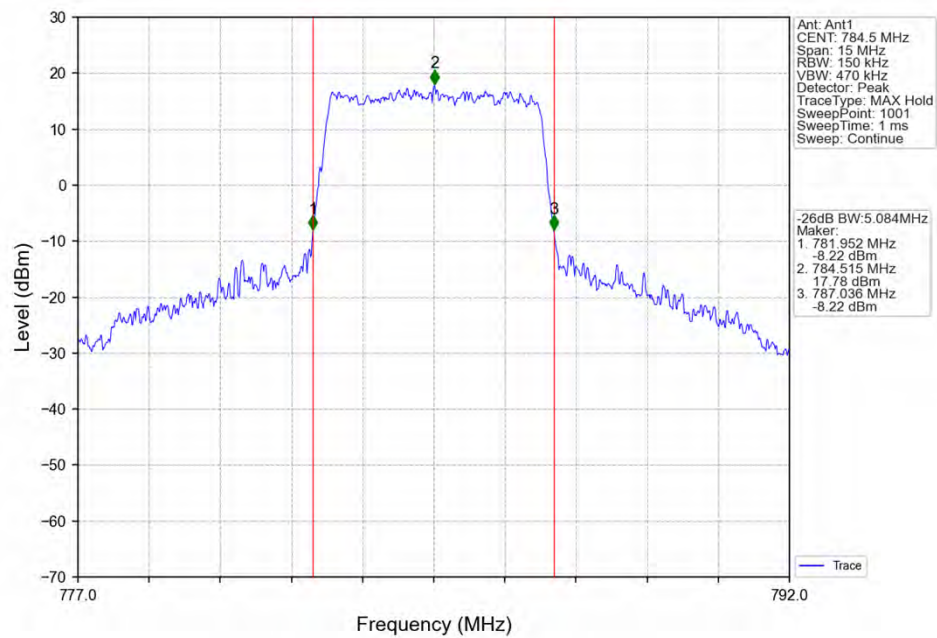
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



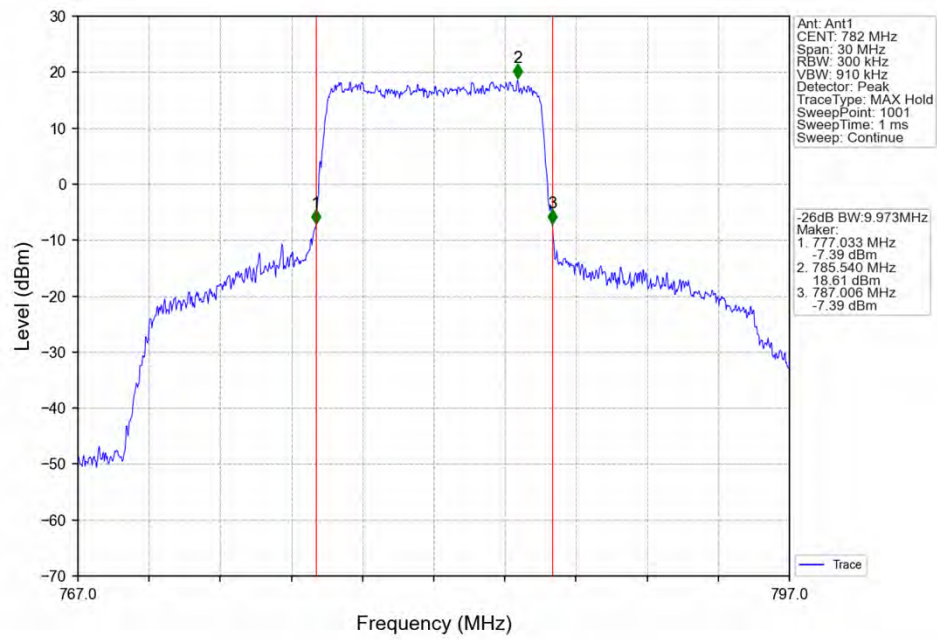
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



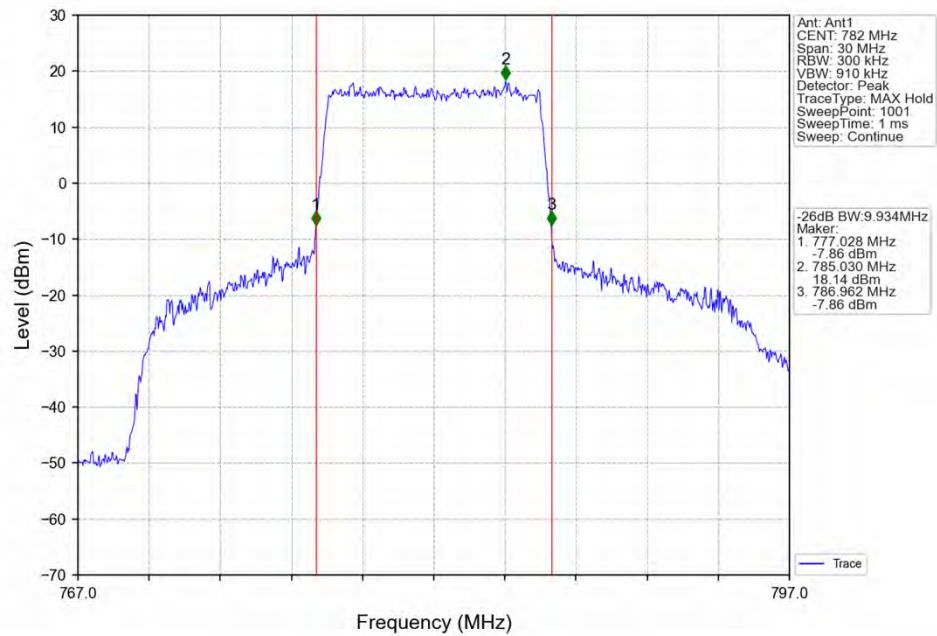
Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV



Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



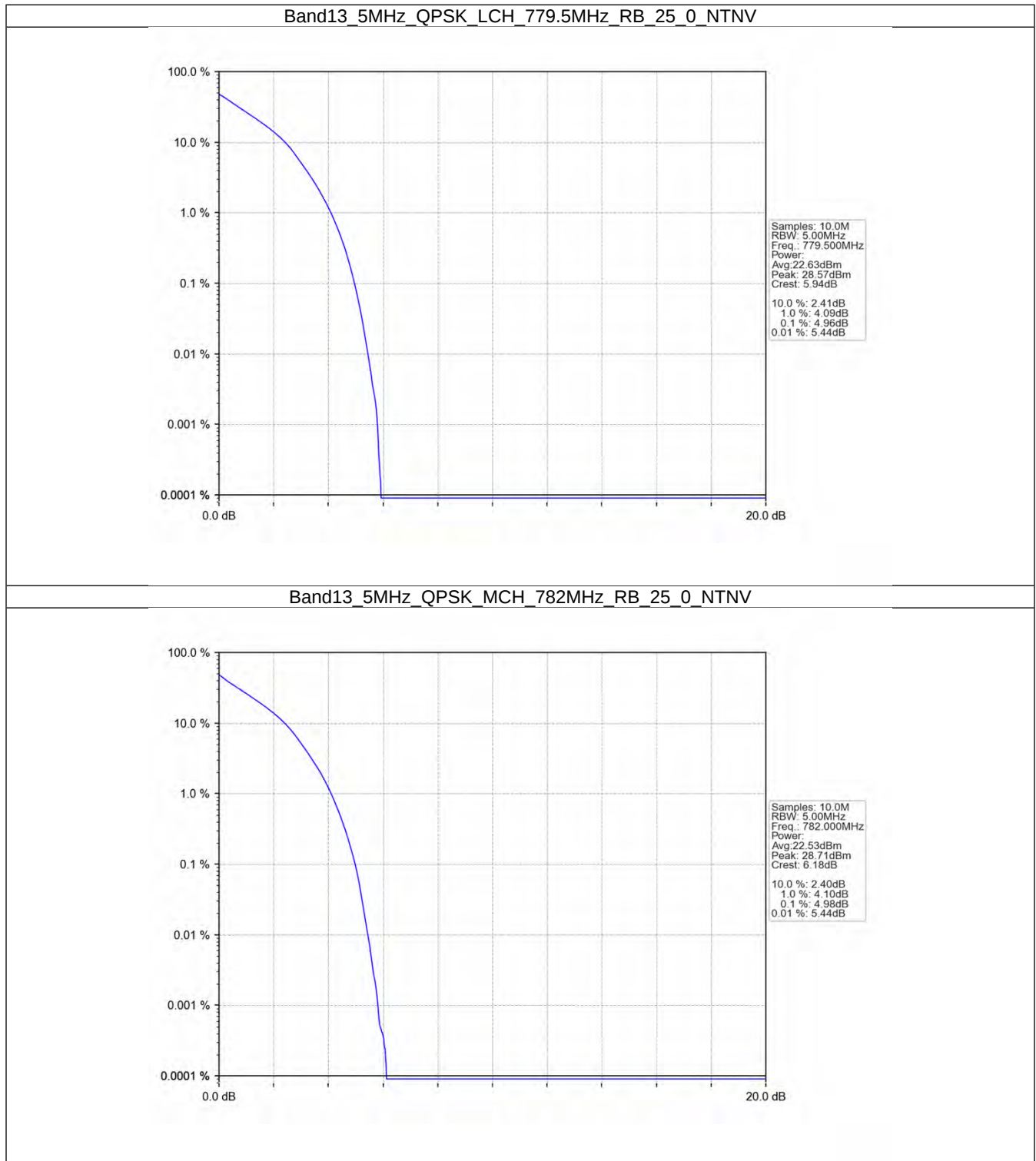
5. Peak-Average Ratio

5.1 B13_5MHz

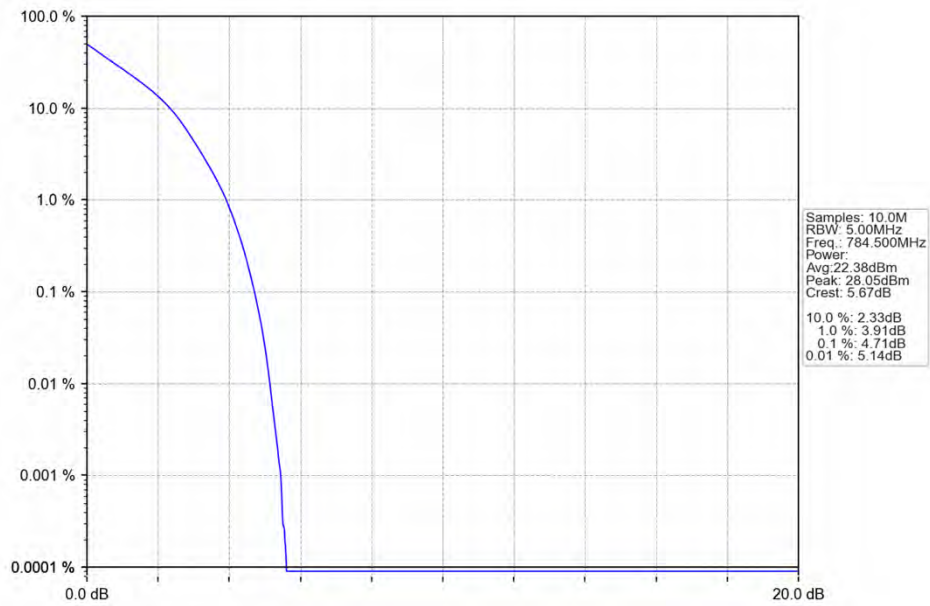
5.1.1 Test Result

Band: 13 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	25	0	4.96	<=13	Pass
	782	25	0	4.98	<=13	Pass
	784.5	25	0	4.71	<=13	Pass
16QAM	779.5	25	0	5.65	<=13	Pass
	782	25	0	5.71	<=13	Pass
	784.5	25	0	5.46	<=13	Pass

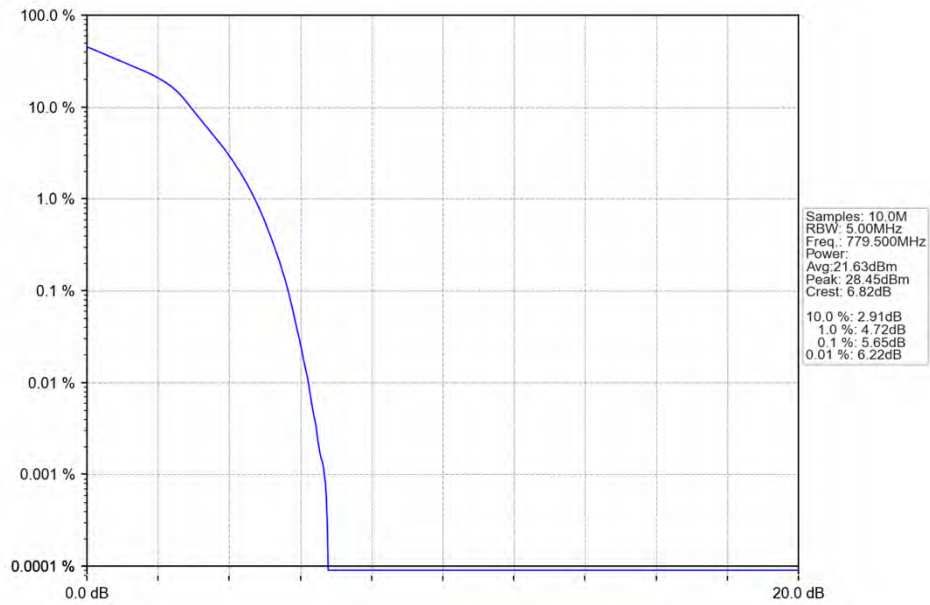
5.1.2 Test Graph



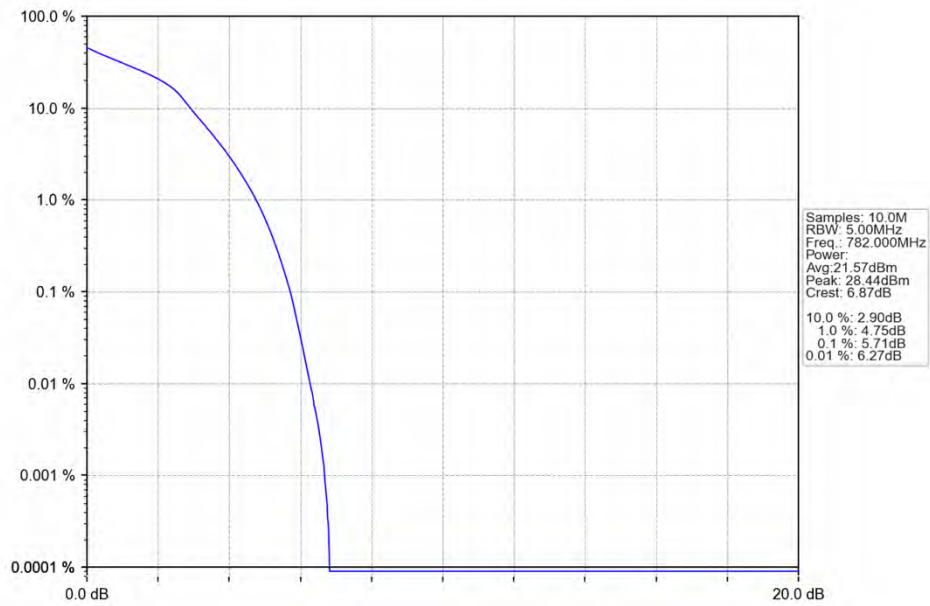
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



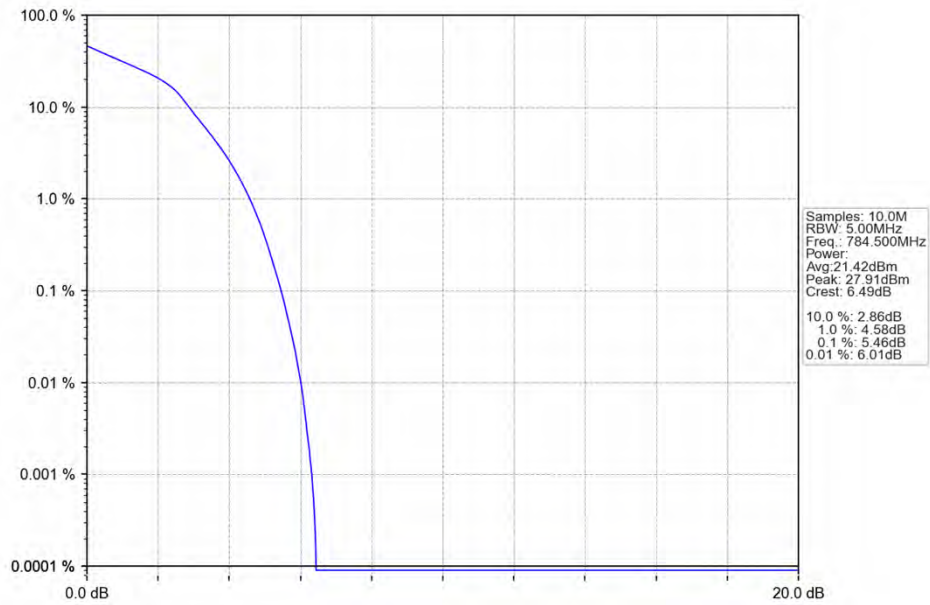
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV

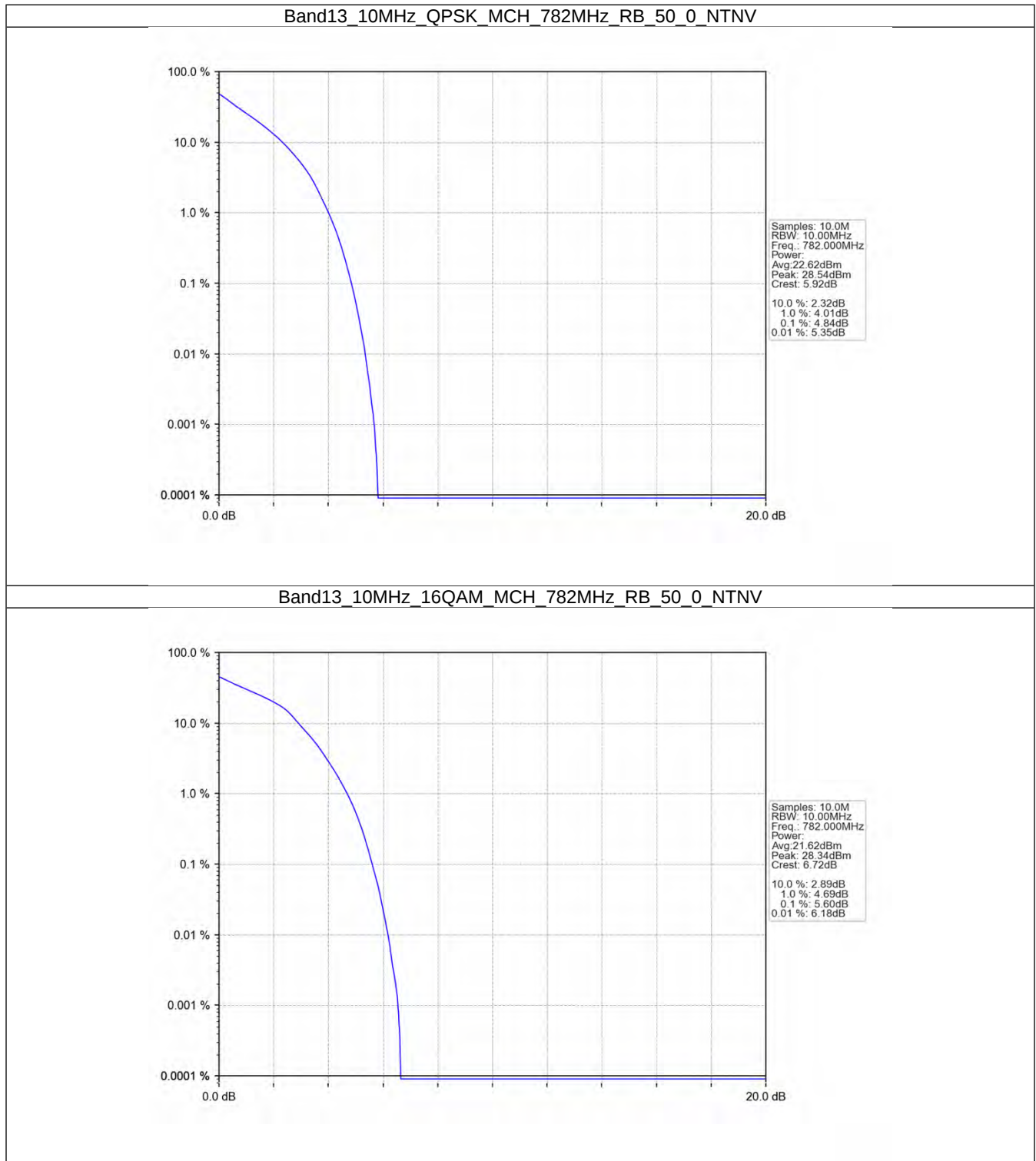


5.2 B13_10MHz

5.2.1 Test Result

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	4.84	<=13	Pass
16QAM	782	50	0	5.60	<=13	Pass

5.2.2 Test Graph



6. Spurious Emission

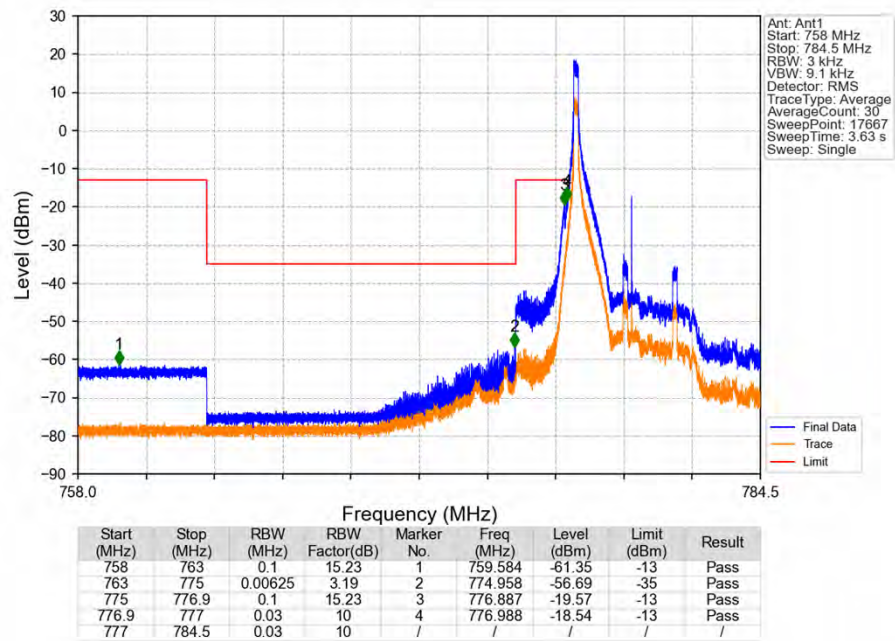
6.1 B13_5MHz

6.1.1 Test Result

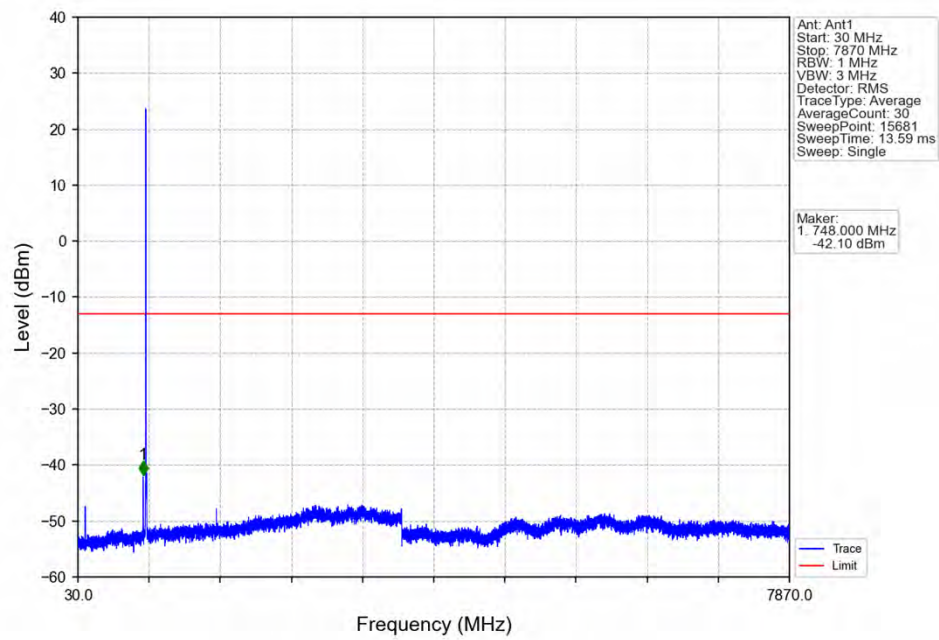
Band: 13 / Bandwidth: 5MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	782	1	0	Refer To Test Graph		Pass
	784.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
16QAM	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

6.1.2 Test Graph

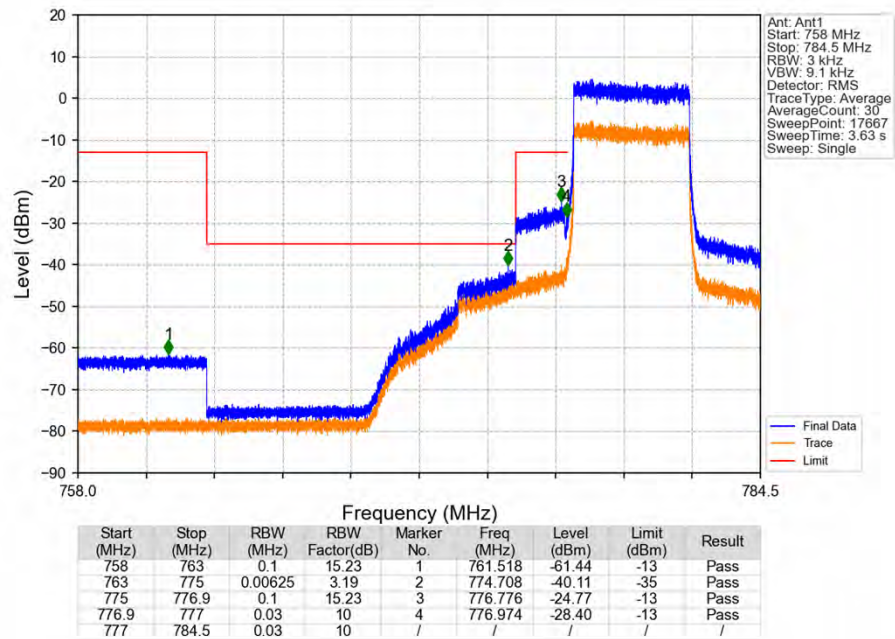
Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV



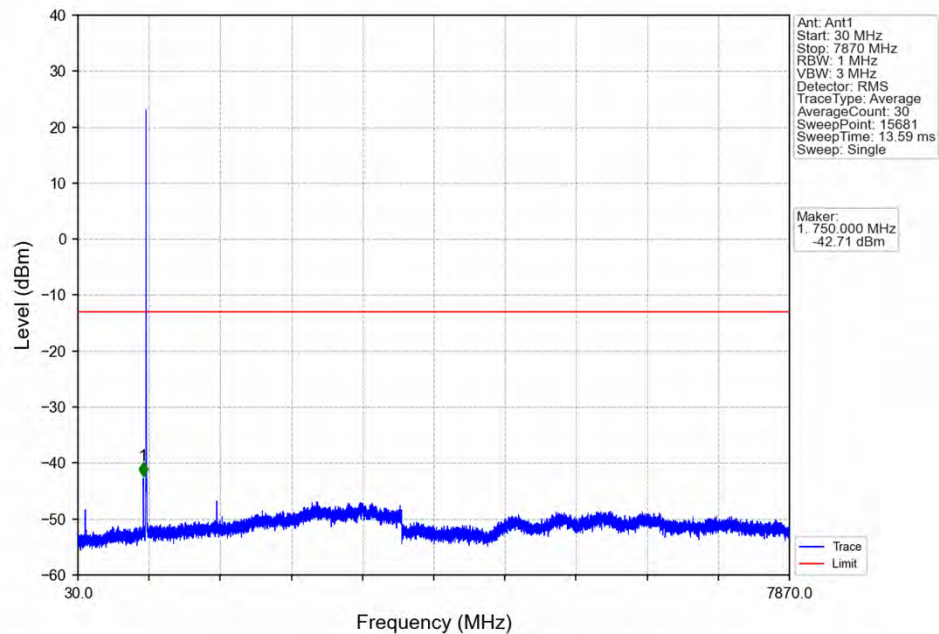
Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV



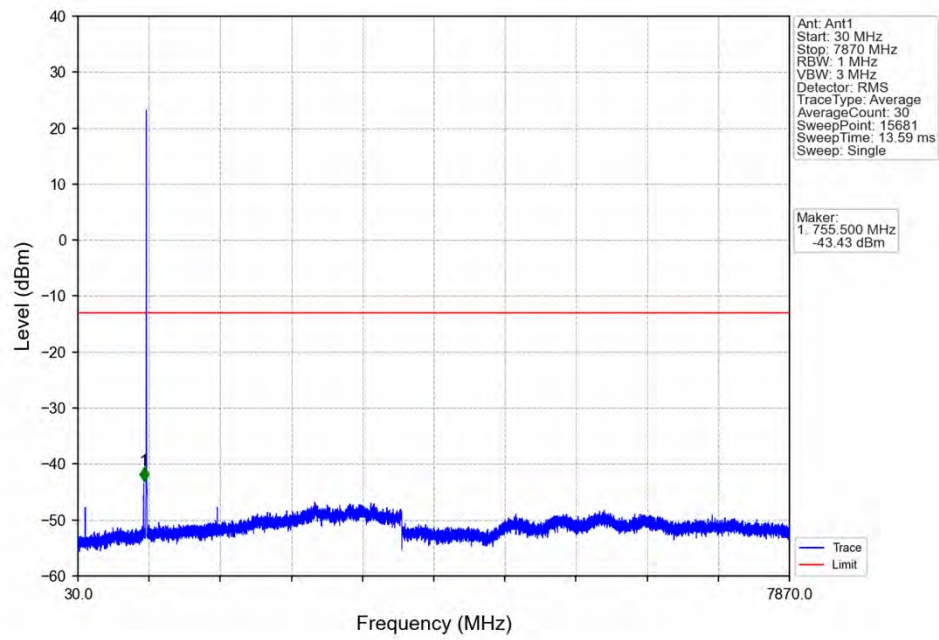
Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV



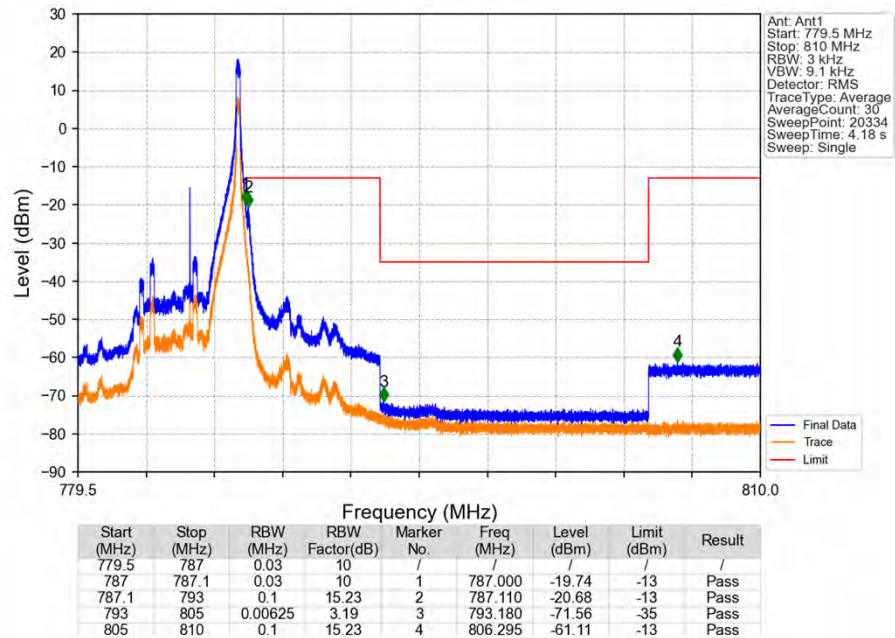
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



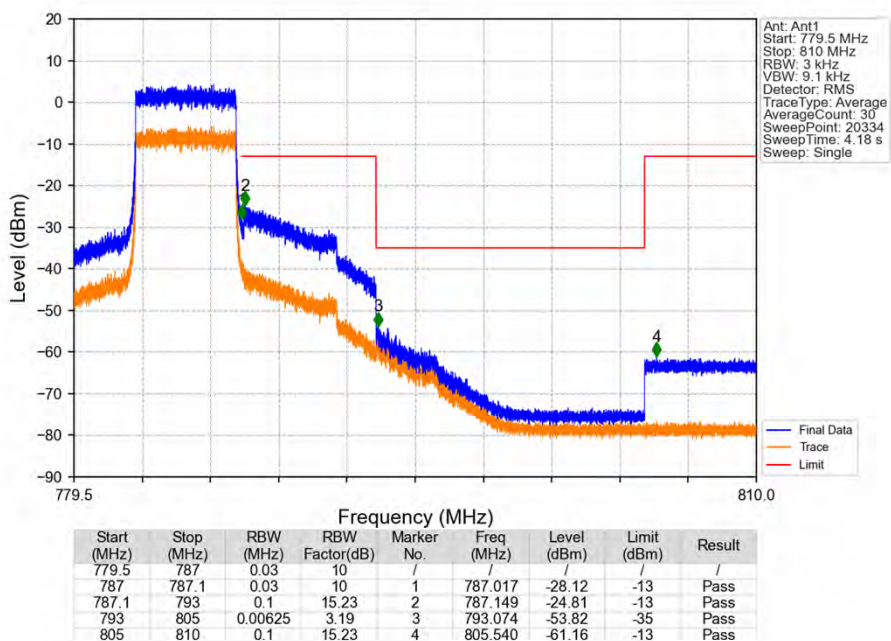
Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV



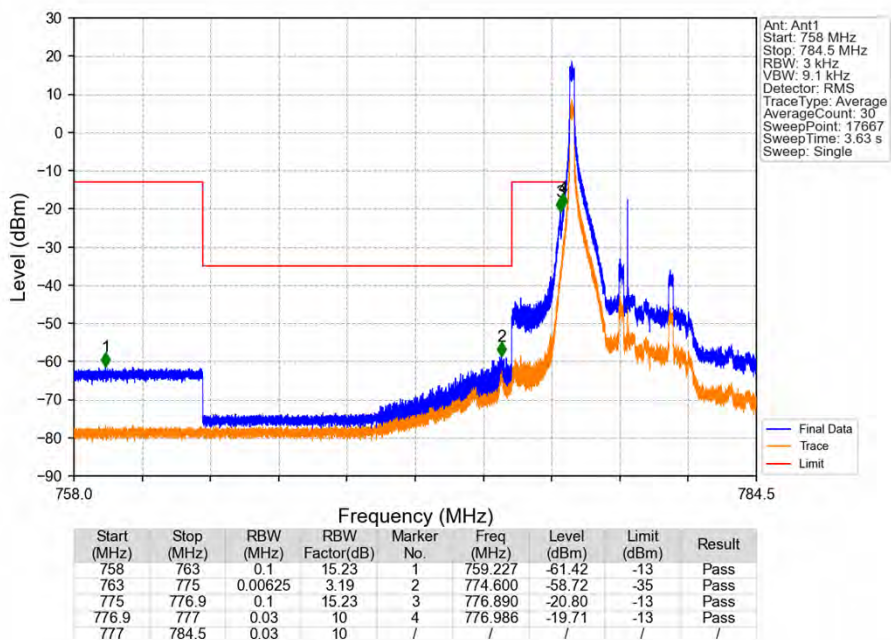
Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



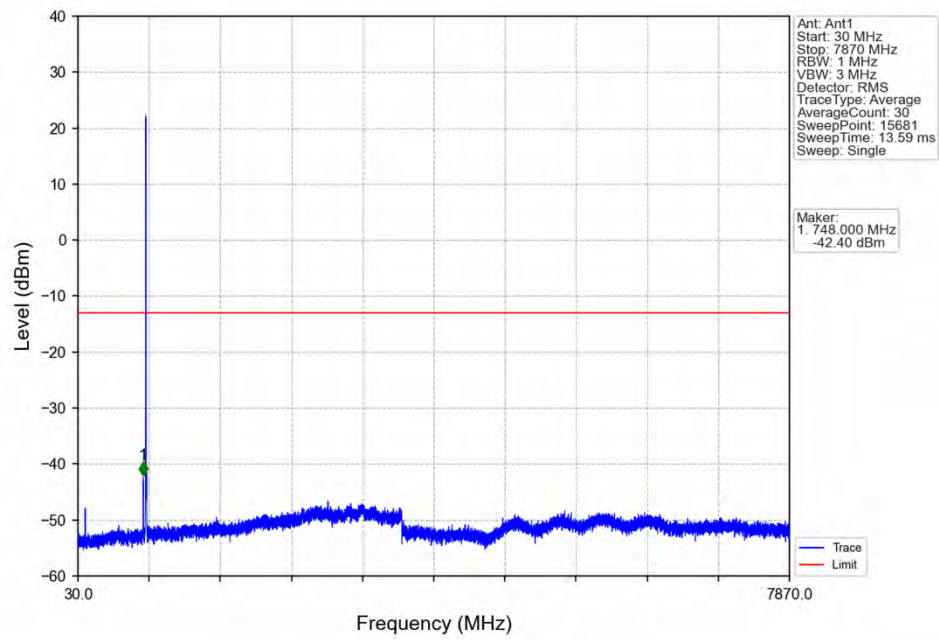
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



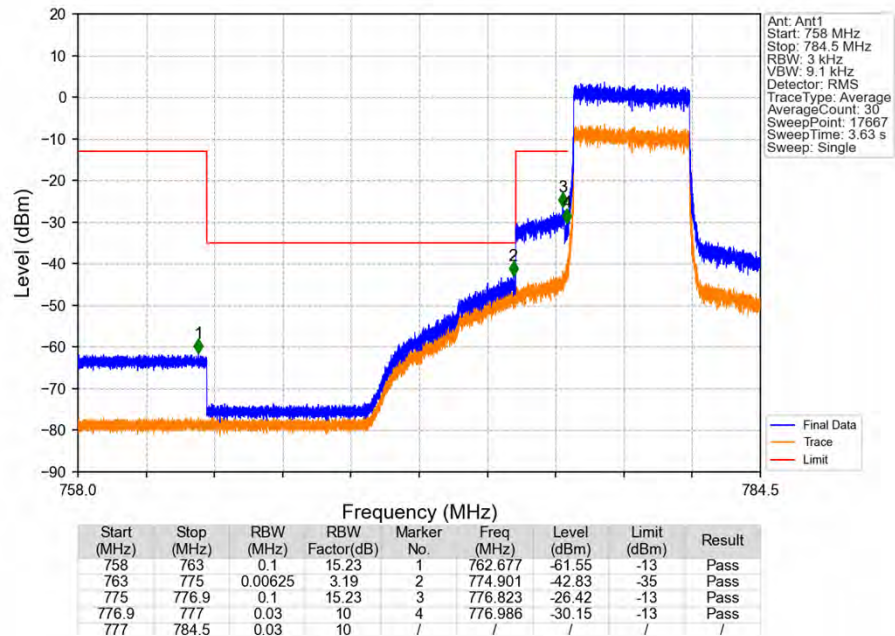
Band13_5MHz_16QAM_LCH_779.5MHz_RB_1_0_NTNV



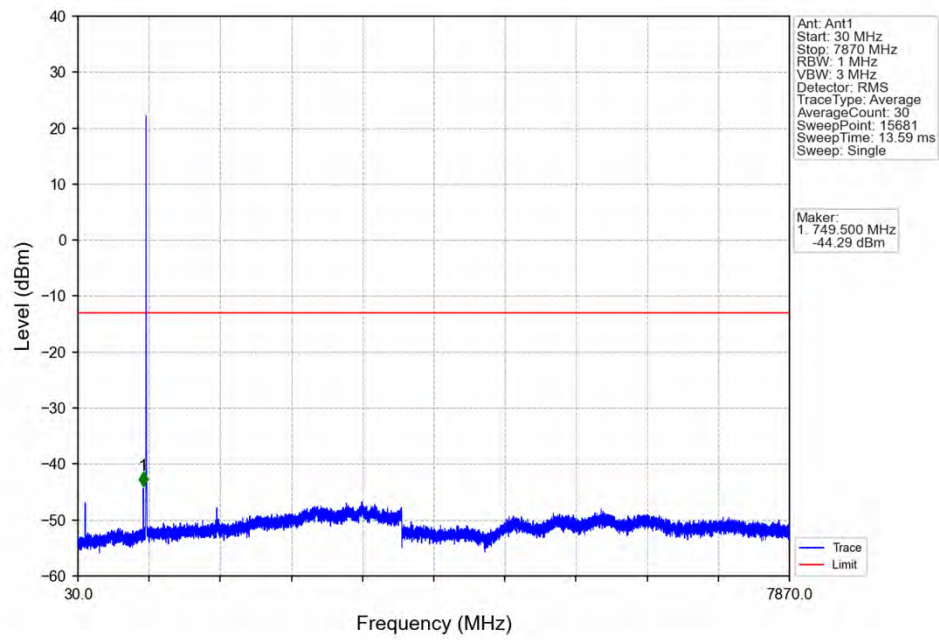
Band13_5MHz_16QAM_LCH_779.5MHz_RB_1_0_NTNV



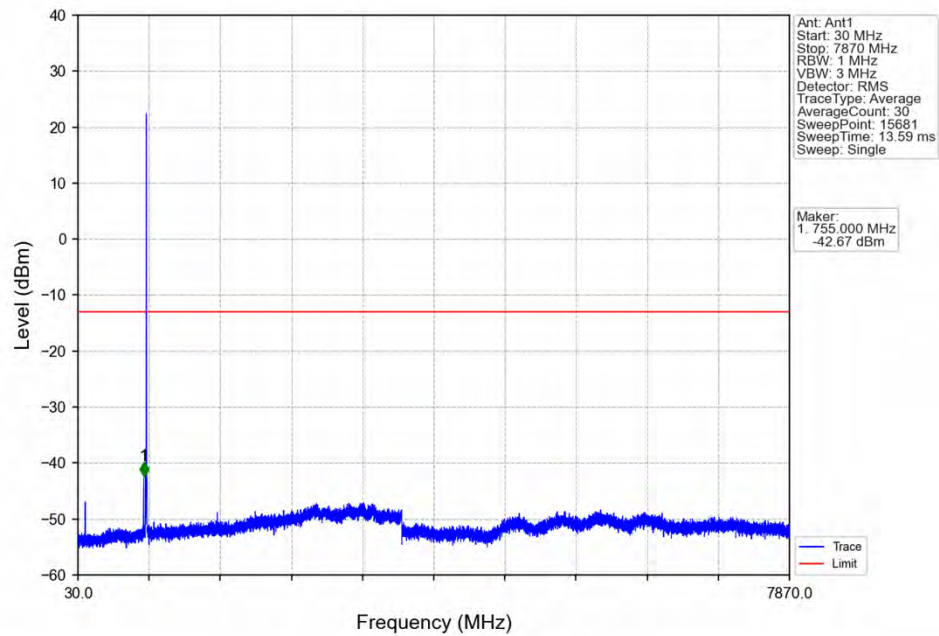
Band13_5MHz_16QAM_LCH_779.5MHz_RB_25_0_NTNV



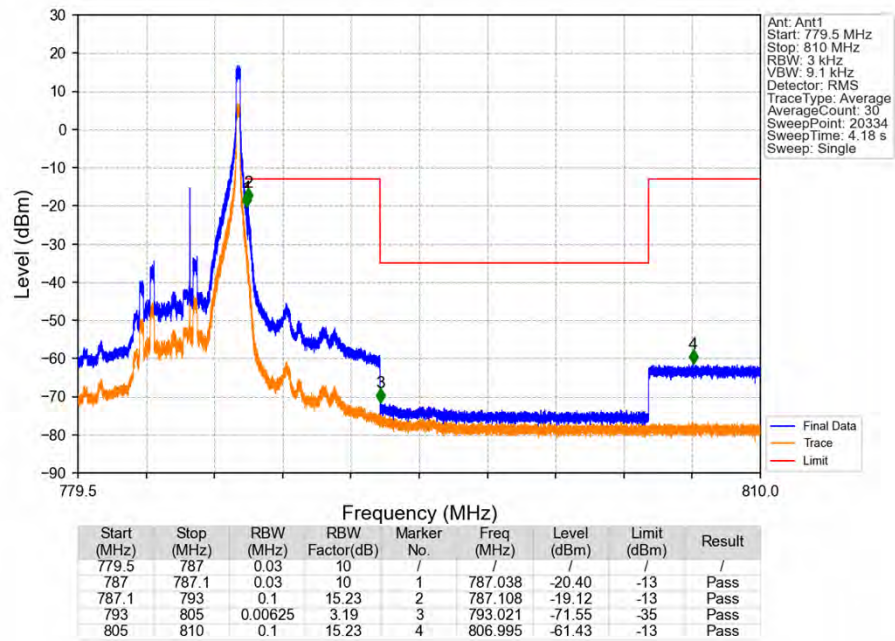
Band13_5MHz_16QAM_MCH_782MHz_RB_1_0_NTNV



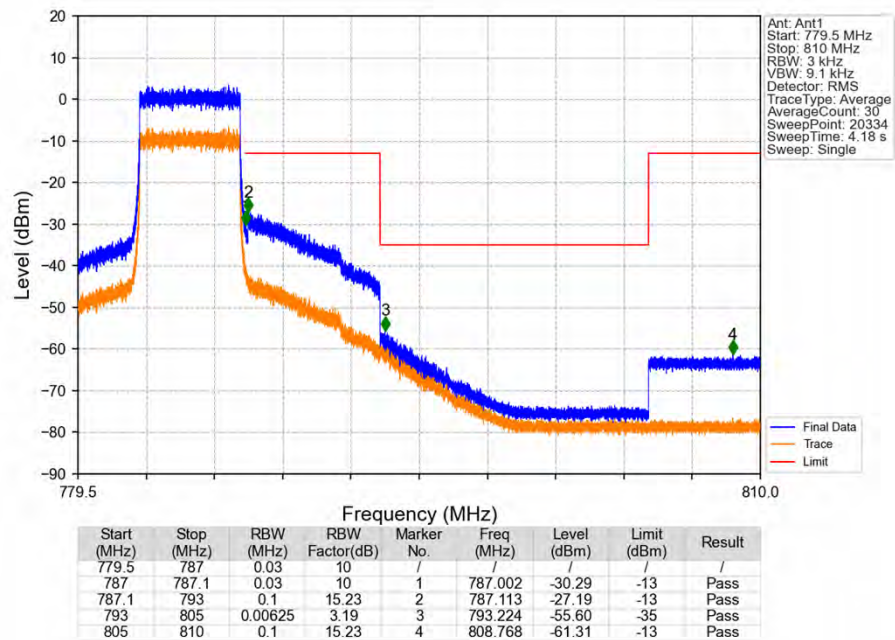
Band13_5MHz_16QAM_HCH_784.5MHz_RB_1_0_NTNV



Band13_5MHz_16QAM_HCH_784.5MHz_RB_1_24_NTNV



Band13_5MHz_16QAM_HCH_784.5MHz_RB_25_0_NTNV

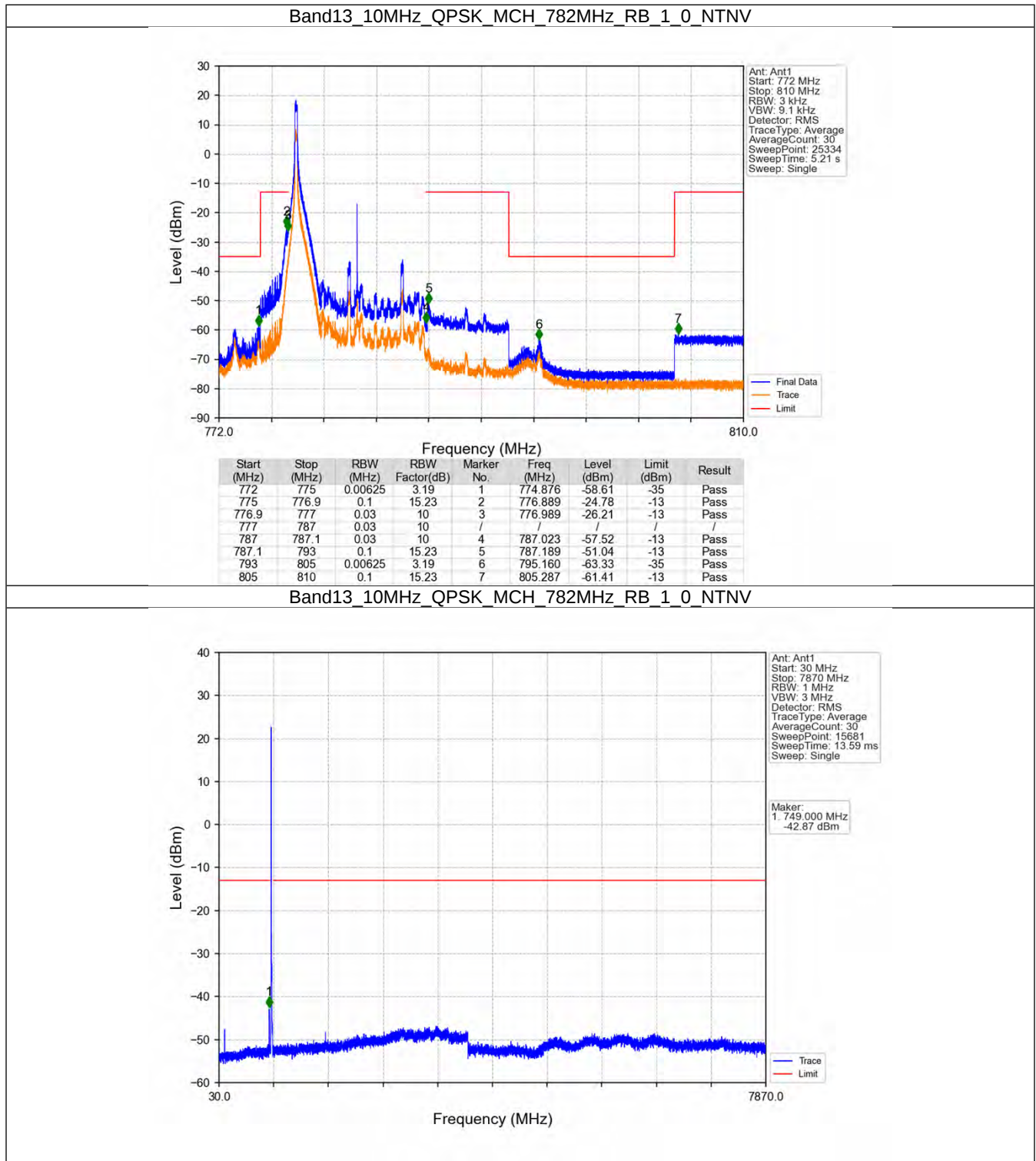


6.2 B13_10MHz

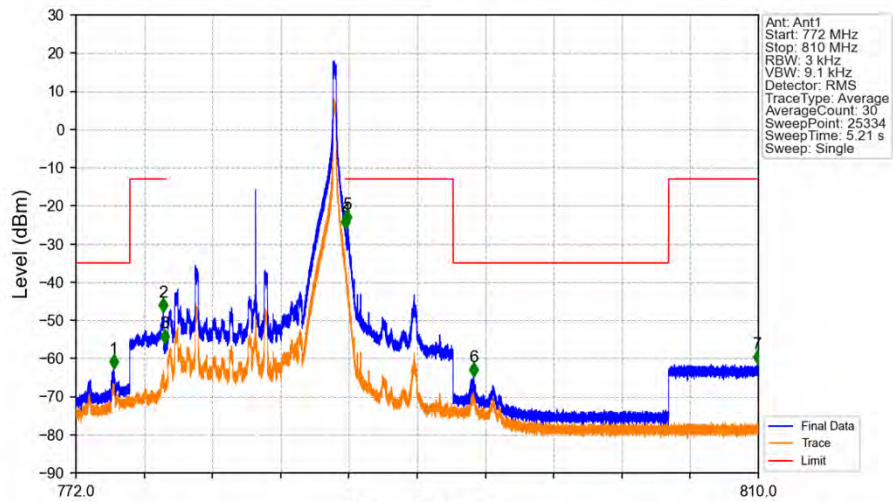
6.2.1 Test Result

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
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
16QAM	782	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

6.2.2 Test Graph

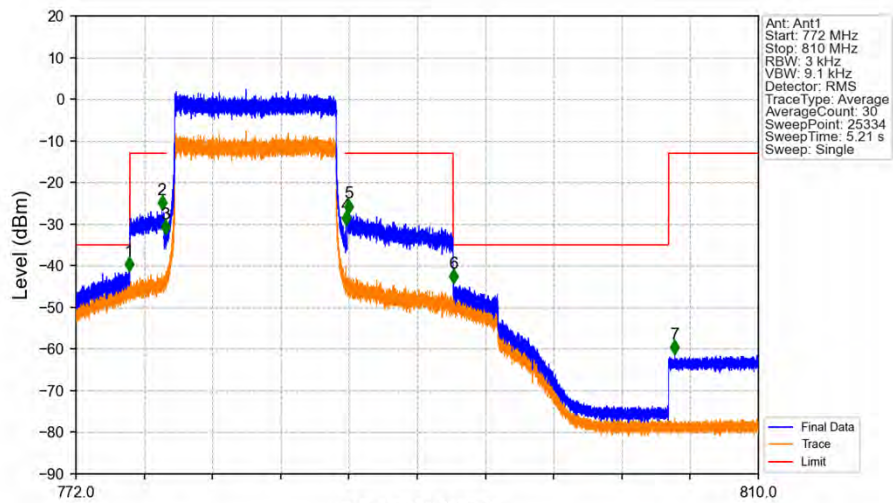


Band13_10MHz_QPSK_MCH_782MHz_RB_1_49_NTNV



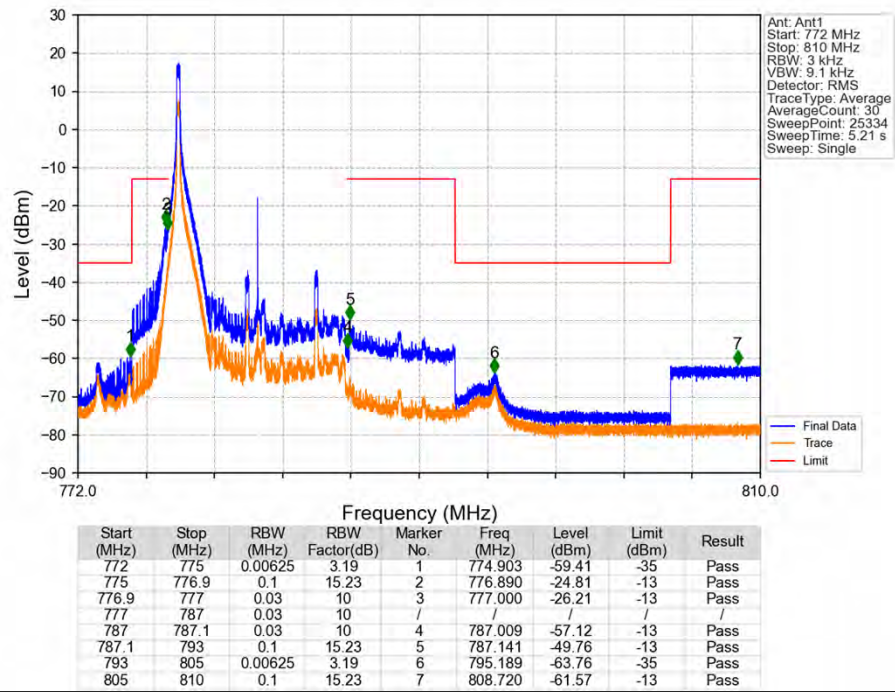
Start (MHz)	Stop (MHz)	RBW (MHz)	RBW Factor(dB)	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
772	775	0.00625	3.19	1	774.099	-62.74	-35	Pass
775	776.9	0.1	15.23	2	776.860	-47.95	-13	Pass
776.9	777	0.03	10	3	776.940	-56.03	-13	Pass
777	787	0.03	10	/	/	/	/	/
787	787.1	0.03	10	4	787.012	-26.18	-13	Pass
787.1	793	0.1	15.23	5	787.110	-24.86	-13	Pass
793	805	0.00625	3.19	6	794.145	-64.90	-35	Pass
805	810	0.1	15.23	7	809.946	-61.47	-13	Pass

Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV

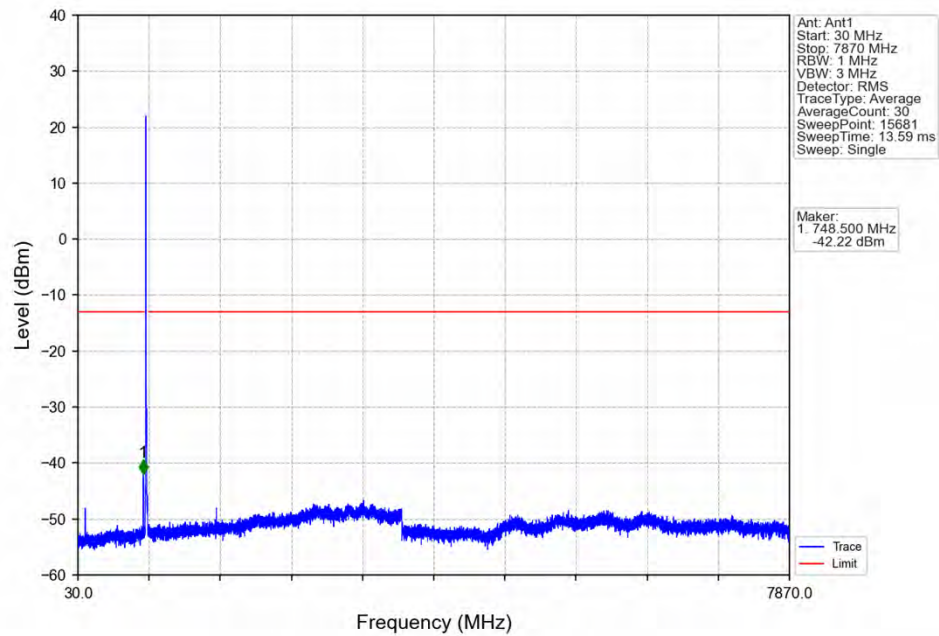


Start (MHz)	Stop (MHz)	RBW (MHz)	RBW Factor(dB)	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
772	775	0.00625	3.19	1	774.955	-41.29	-35	Pass
775	776.9	0.1	15.23	2	776.785	-26.58	-13	Pass
776.9	777	0.03	10	3	776.994	-32.40	-13	Pass
777	787	0.03	10	/	/	/	/	/
787	787.1	0.03	10	4	787.029	-30.24	-13	Pass
787.1	793	0.1	15.23	5	787.162	-27.44	-13	Pass
793	805	0.00625	3.19	6	793.012	-44.28	-35	Pass
805	810	0.1	15.23	7	805.347	-61.25	-13	Pass

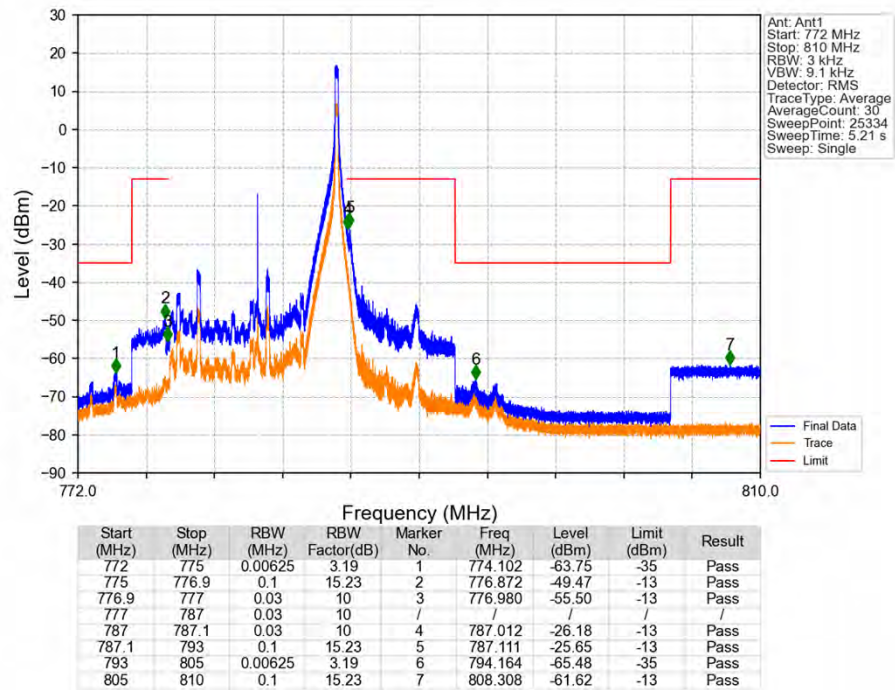
Band13_10MHz_16QAM_MCH_782MHz_RB_1_0_NTNV



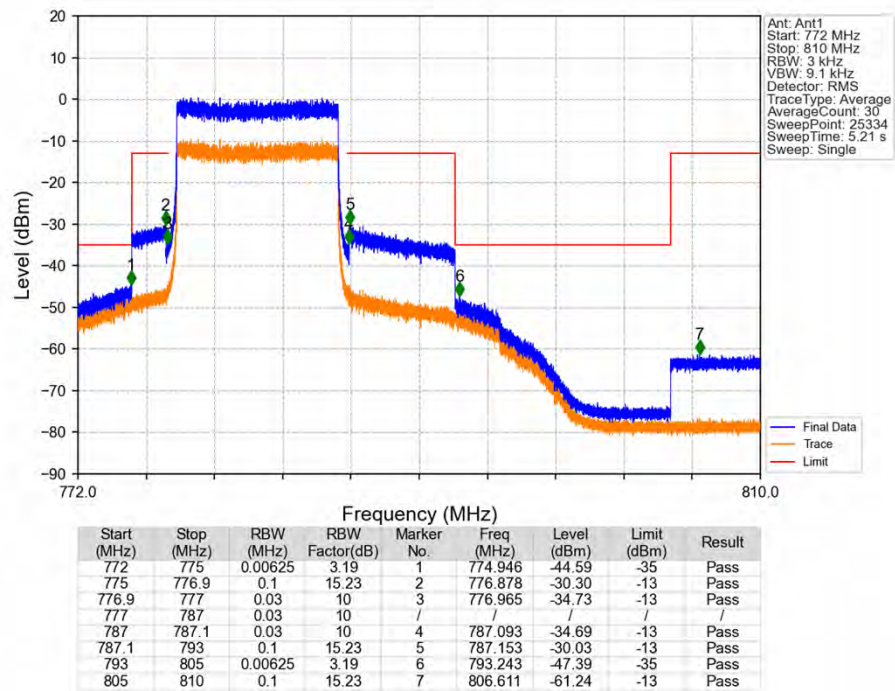
Band13_10MHz_16QAM_MCH_782MHz_RB_1_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_1_49_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



7. Form731

7.1 Form731_Power

7.1.1 Test Result

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	0.2291	0.0046	ppm	4M56G7D	27F	23.60
13	5	779.5	784.5	0.1824	0.0071	ppm	4M56W7D	27F	22.61
13	10	782	782	0.2223	0.0030	ppm	9M07G7D	27F	23.47
13	10	782	782	0.1837	0.0044	ppm	9M04W7D	27F	22.64

7.2 Form731_ERP

7.2.1 Test Result

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	0.1309	0.0046	ppm	4M56G7D	27F	21.17
13	5	779.5	784.5	0.1042	0.0071	ppm	4M56W7D	27F	20.18
13	10	782	782	0.1271	0.0030	ppm	9M07G7D	27F	21.04
13	10	782	782	0.1050	0.0044	ppm	9M04W7D	27F	20.21