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	22.37	-3.42	16.80	<=34.77	Pass
			13	22.58	-3.42	17.01	<=34.77	Pass
			24	22.57	-3.42	17.00	<=34.77	Pass
		12	0	21.55	-3.42	15.98	<=34.77	Pass
			6	21.51	-3.42	15.94	<=34.77	Pass
			13	21.57	-3.42	16.00	<=34.77	Pass
		25	0	21.52	-3.42	15.95	<=34.77	Pass
	782	1	0	22.71	-3.42	17.14	<=34.77	Pass
			13	22.71	-3.42	17.14	<=34.77	Pass
			24	22.50	-3.42	16.93	<=34.77	Pass
		12	0	21.70	-3.42	16.13	<=34.77	Pass
			6	21.64	-3.42	16.07	<=34.77	Pass
			13	21.61	-3.42	16.04	<=34.77	Pass
		25	0	21.69	-3.42	16.12	<=34.77	Pass
	784.5	1	0	22.53	-3.42	16.96	<=34.77	Pass
			13	22.48	-3.42	16.91	<=34.77	Pass
			24	22.38	-3.42	16.81	<=34.77	Pass
		12	0	21.58	-3.42	16.01	<=34.77	Pass
			6	21.49	-3.42	15.92	<=34.77	Pass
			13	21.44	-3.42	15.87	<=34.77	Pass
		25	0	21.48	-3.42	15.91	<=34.77	Pass
16QAM	779.5	1	0	21.26	-3.42	15.69	<=34.77	Pass
			13	21.71	-3.42	16.14	<=34.77	Pass
			24	21.66	-3.42	16.09	<=34.77	Pass
		12	0	20.71	-3.42	15.14	<=34.77	Pass
			6	20.56	-3.42	14.99	<=34.77	Pass
			13	20.53	-3.42	14.96	<=34.77	Pass
		25	0	20.59	-3.42	15.02	<=34.77	Pass
	782	1	0	21.53	-3.42	15.96	<=34.77	Pass
			13	21.57	-3.42	16.00	<=34.77	Pass
			24	21.45	-3.42	15.88	<=34.77	Pass
		12	0	20.68	-3.42	15.11	<=34.77	Pass
			6	20.66	-3.42	15.09	<=34.77	Pass
			13	20.68	-3.42	15.11	<=34.77	Pass
		25	0	20.66	-3.42	15.09	<=34.77	Pass
	784.5	1	0	21.82	-3.42	16.25	<=34.77	Pass
			13	21.72	-3.42	16.15	<=34.77	Pass
			24	21.87	-3.42	16.30	<=34.77	Pass
		12	0	20.59	-3.42	15.02	<=34.77	Pass
			6	20.54	-3.42	14.97	<=34.77	Pass
			13	20.52	-3.42	14.95	<=34.77	Pass
		25	0	20.51	-3.42	14.94	<=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	23.14	-3.42	17.57	<=34.77	Pass
			25	22.54	-3.42	16.97	<=34.77	Pass
			49	22.60	-3.42	17.03	<=34.77	Pass
		25	0	21.95	-3.42	16.38	<=34.77	Pass
			13	21.73	-3.42	16.16	<=34.77	Pass
			25	21.56	-3.42	15.99	<=34.77	Pass
		50	0	21.76	-3.42	16.19	<=34.77	Pass
16QAM	782	1	0	22.22	-3.42	16.65	<=34.77	Pass
			25	22.12	-3.42	16.55	<=34.77	Pass
			49	22.21	-3.42	16.64	<=34.77	Pass
		25	0	20.90	-3.42	15.33	<=34.77	Pass
			13	20.80	-3.42	15.23	<=34.77	Pass
			25	20.65	-3.42	15.08	<=34.77	Pass
		50	0	20.82	-3.42	15.25	<=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	1.286	0.0016	-2.5 to 2.5	Pass
					3.85	0.824	0.0011	-2.5 to 2.5	Pass
					4.43	0.695	0.0009	-2.5 to 2.5	Pass
				-30	3.85	0.113	0.0001	-2.5 to 2.5	Pass
				-20	3.85	0.913	0.0012	-2.5 to 2.5	Pass
				-10	3.85	1.049	0.0013	-2.5 to 2.5	Pass
				0	3.85	0.721	0.0009	-2.5 to 2.5	Pass
				10	3.85	0.761	0.0010	-2.5 to 2.5	Pass
				30	3.85	1.360	0.0017	-2.5 to 2.5	Pass
				40	3.85	0.370	0.0005	-2.5 to 2.5	Pass
				50	3.85	1.286	0.0016	-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	4.511	/	Pass
	16QAM	782	25	0	4.535	/	Pass
10	QPSK	782	50	0	8.983	/	Pass
	16QAM	782	50	0	9.012	/	Pass

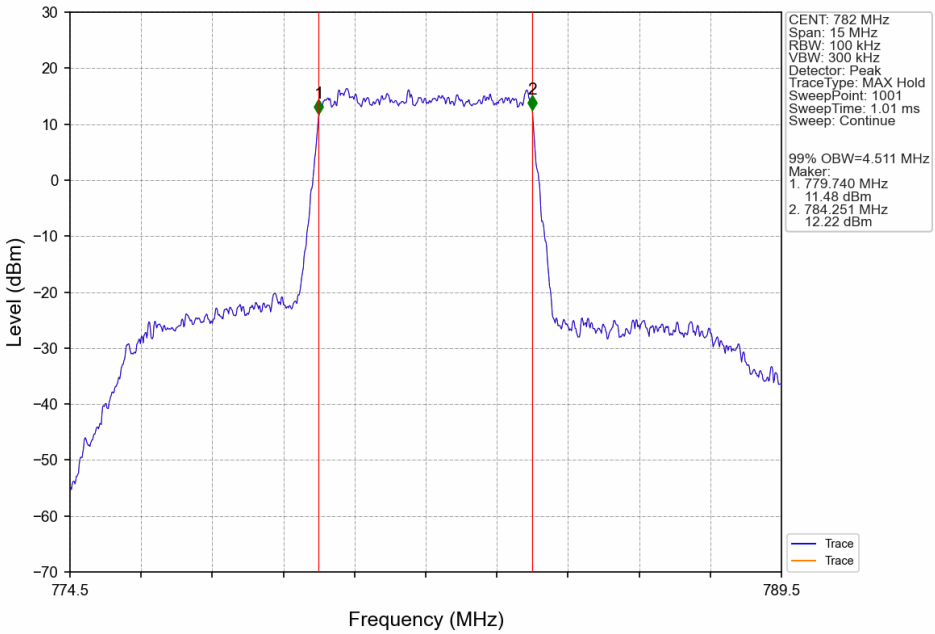
3.1.2 Band13_XDB

Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.008	/	Pass
	16QAM	782	25	0	5.036	/	Pass
10	QPSK	782	50	0	9.890	/	Pass
	16QAM	782	50	0	9.893	/	Pass

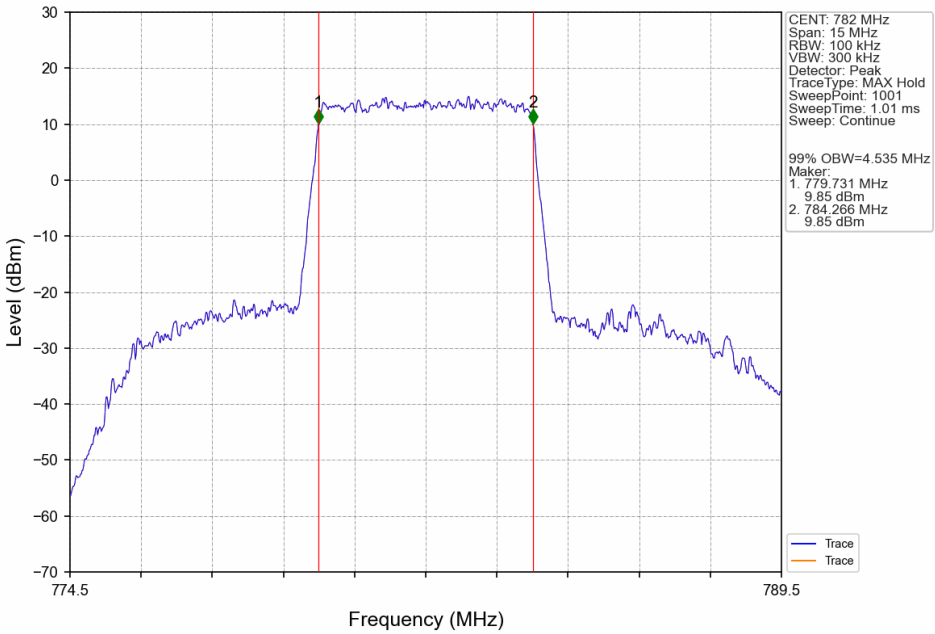
3.2 Test Graph

3.2.1 Band13_OBW

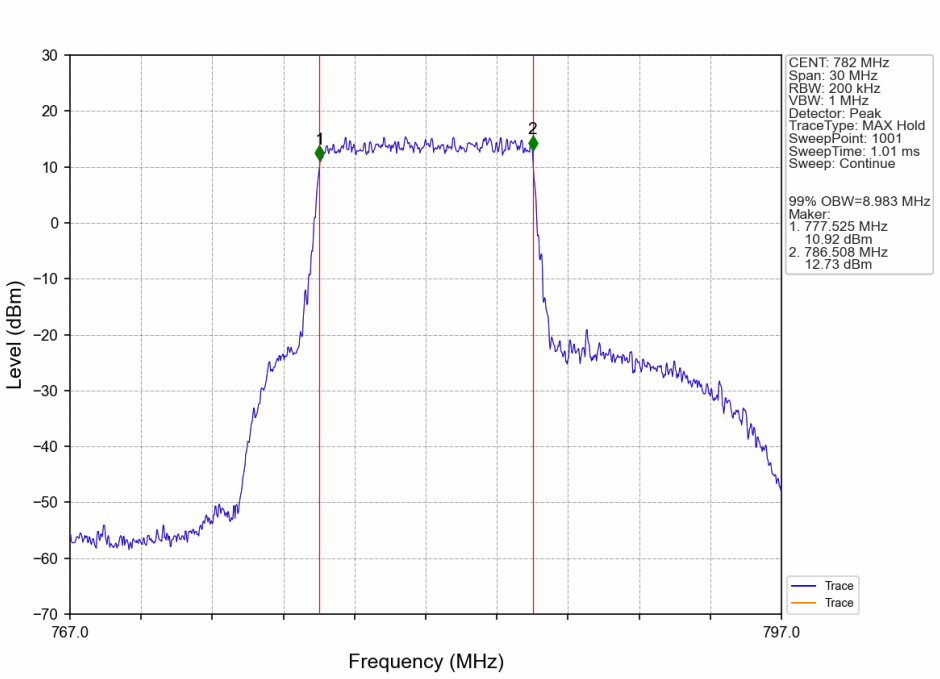
Band13_5MHz_QPSK_MCH_782MHz_RB_25_0_NTNV



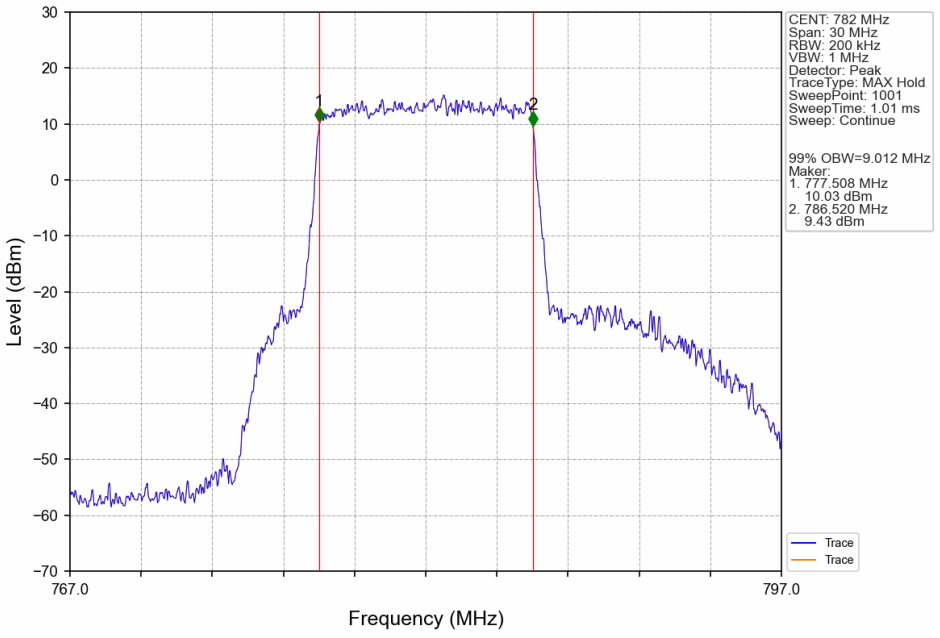
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



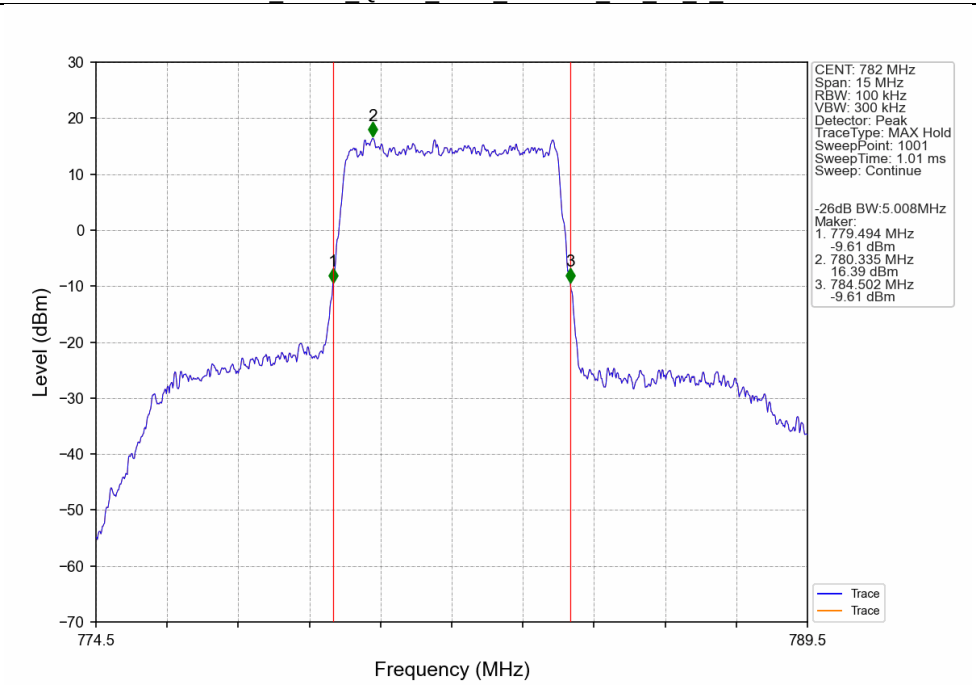
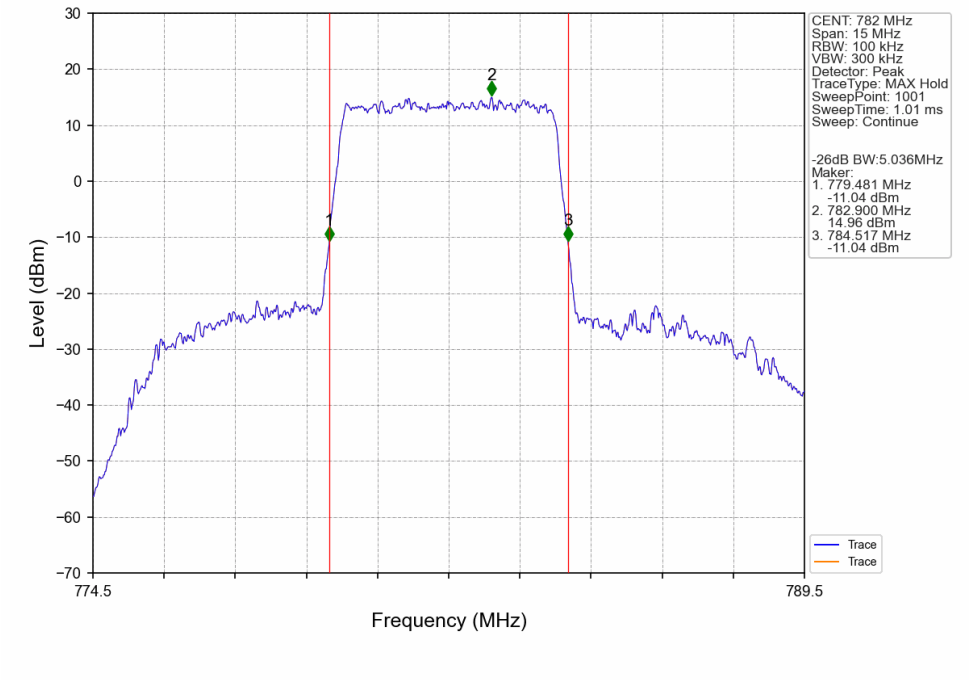
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



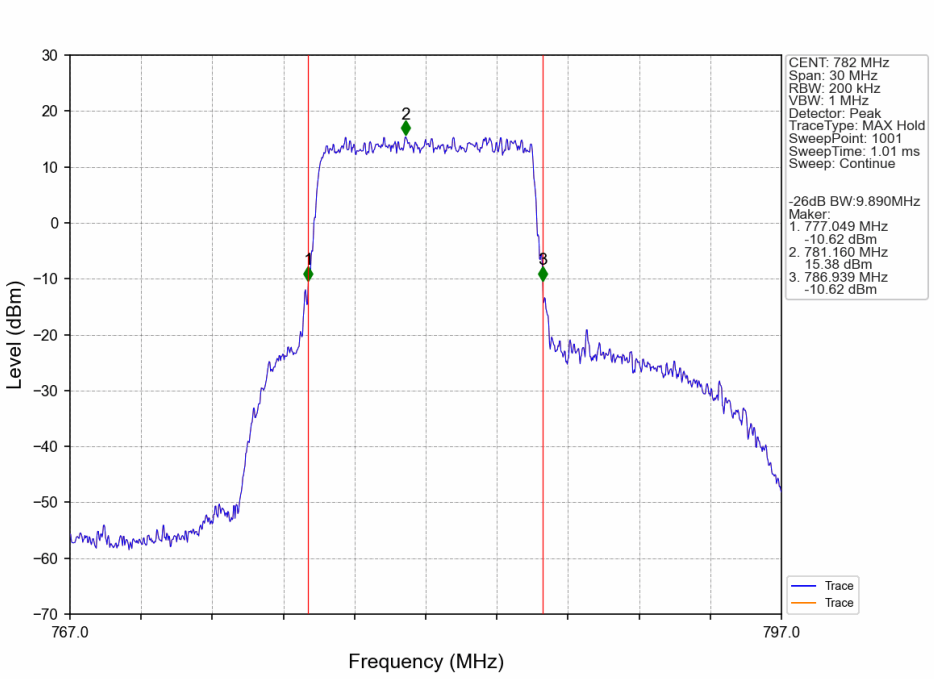
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



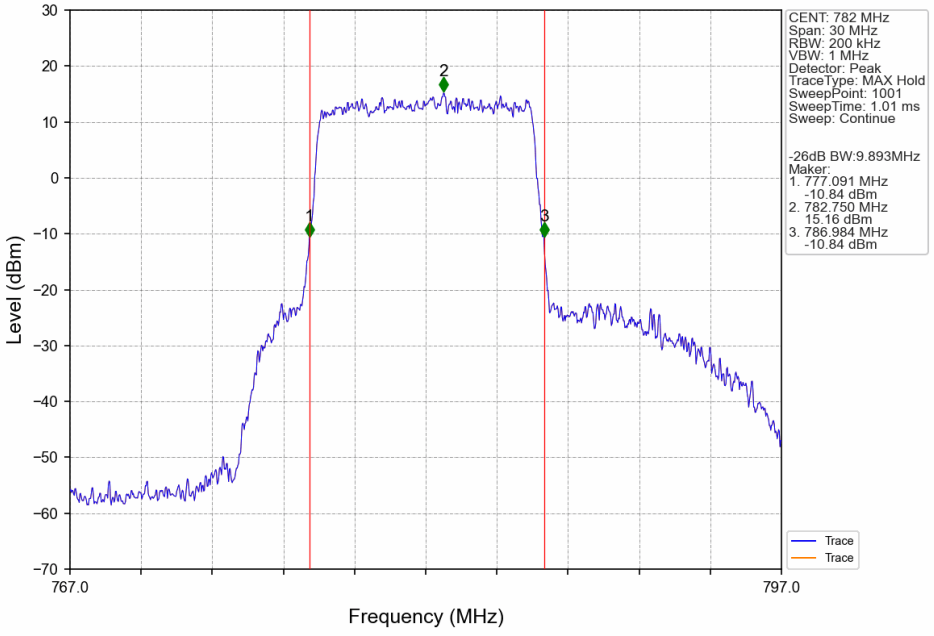
3.2.2 Band13_XDB

Band13_5MHz_QPSK_MCH_782MHz_RB_25_0_NTNV

Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV


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

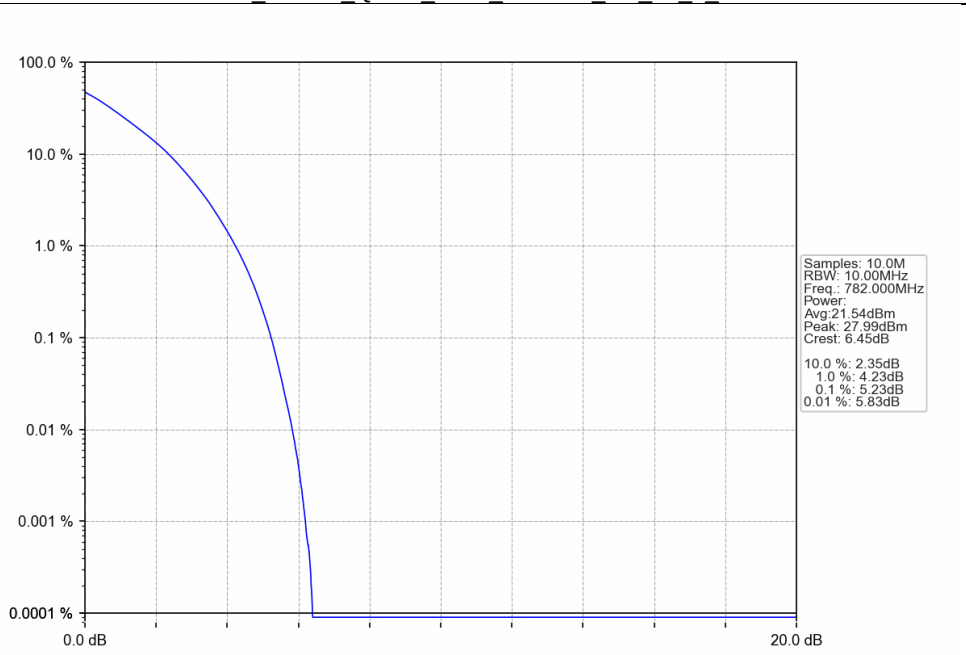
4.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.23	<=13	Pass
16QAM	782	50	0	6.02	<=13	Pass

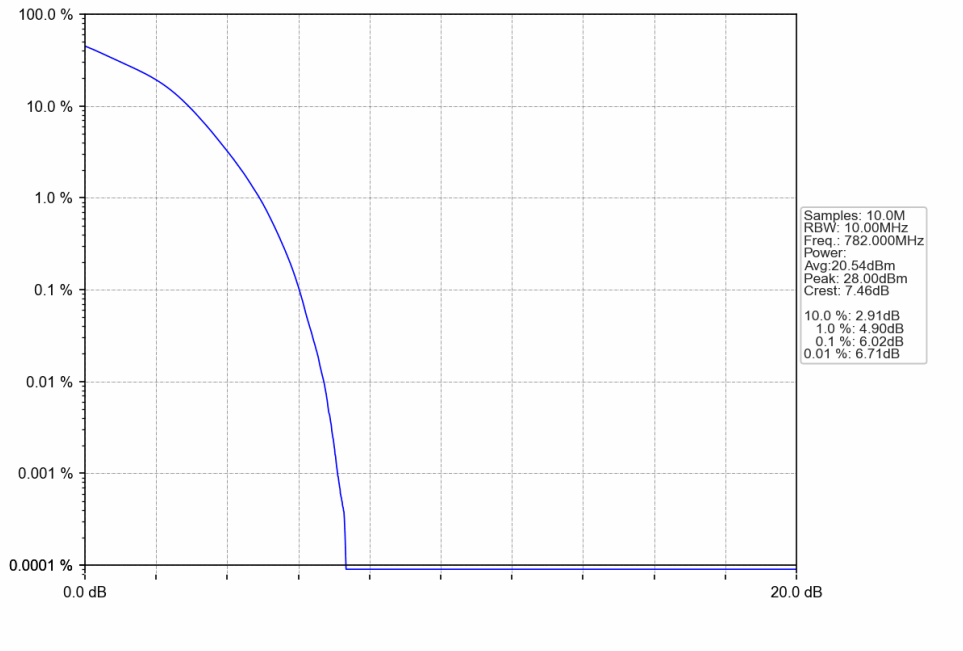
4.2 Test Graph

4.2.1 B13_10MHz

Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_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

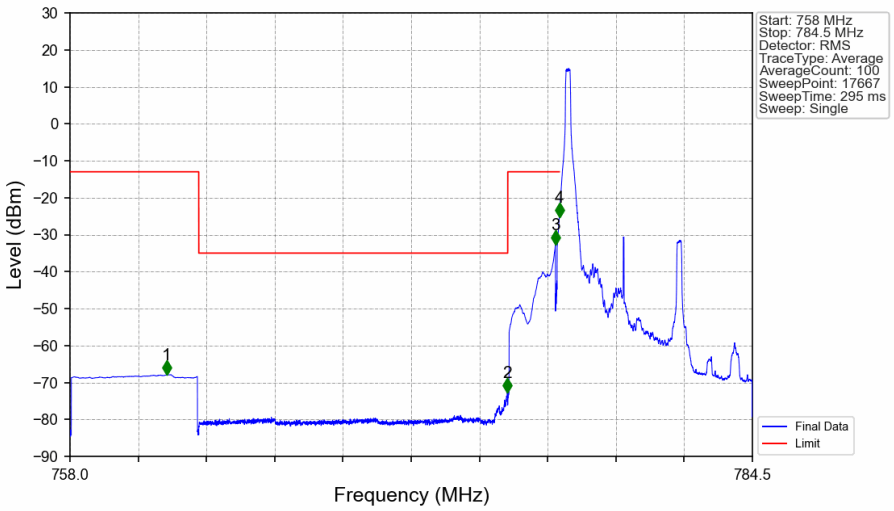
5.1.2 B13_10MHz

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

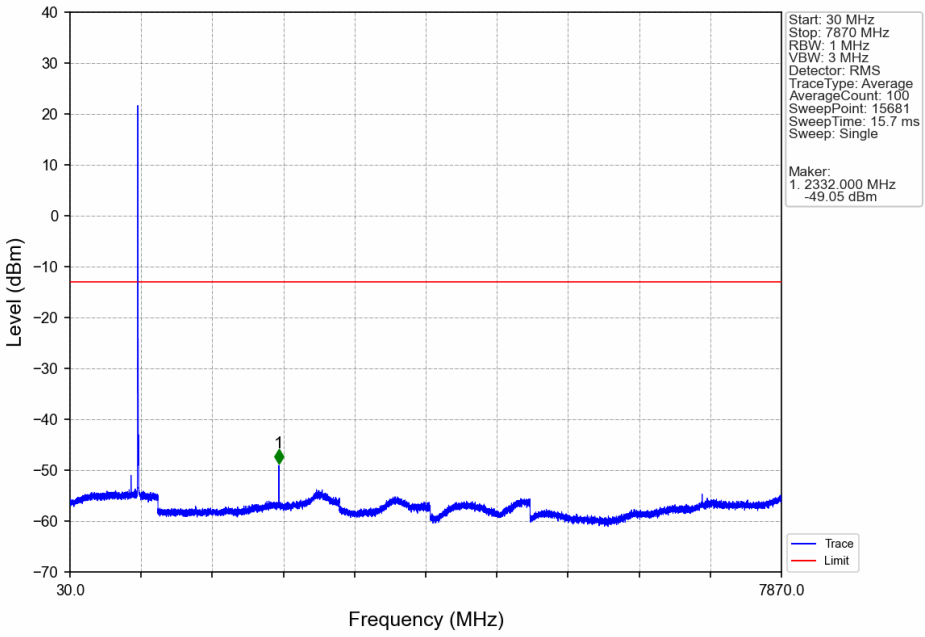
5.2.1 B13_5MHz

Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV

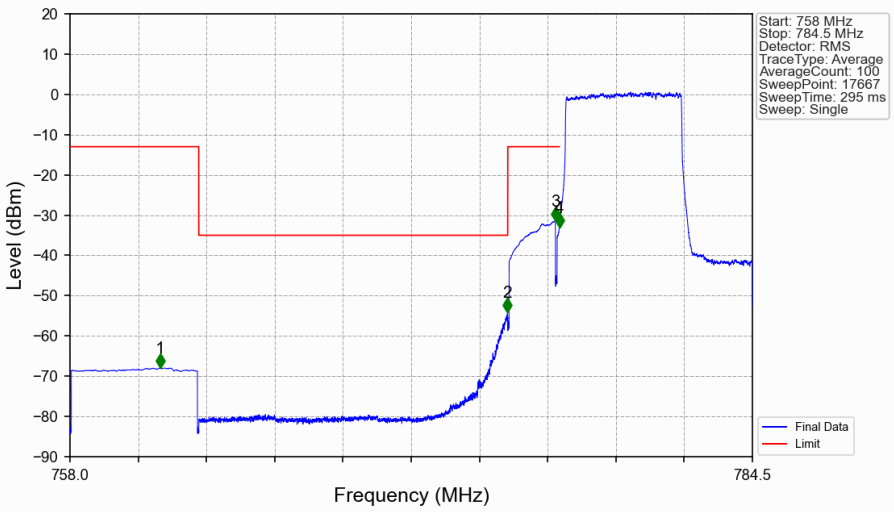


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.758	-67.89	-13	Pass
763	775	0.00625	CHP	2	774.993	-72.64	-35	Pass
775	776.9	0.1	CHP	3	776.850	-32.74	-13	Pass
776.9	777	0.03	CHP	4	777.000	-25.21	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV

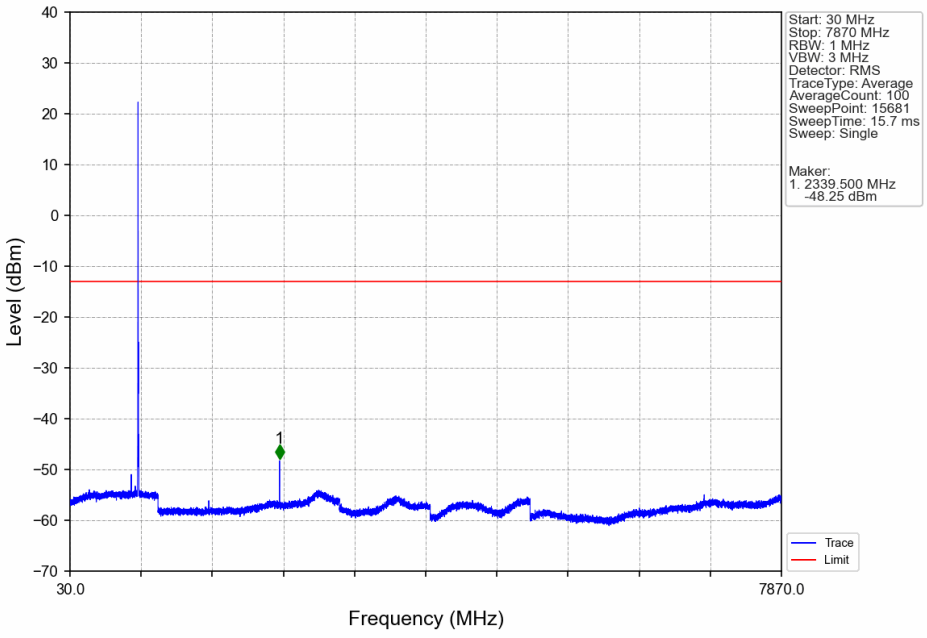


Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV

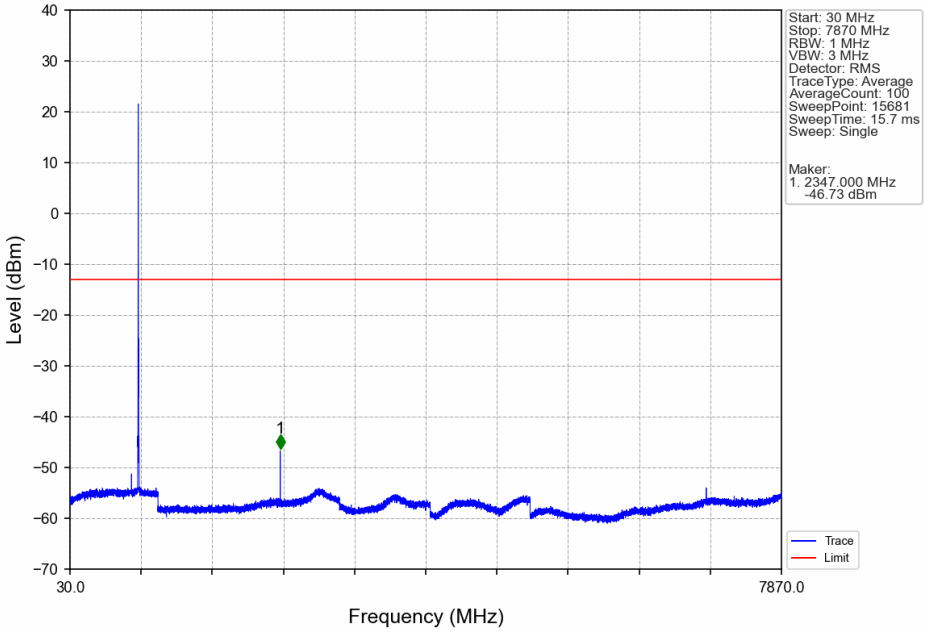


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.497	-67.96	-13	Pass
763	775	0.00625	CHP	2	774.991	-54.14	-35	Pass
775	776.9	0.1	CHP	3	776.850	-31.37	-13	Pass
776.9	777	0.03	CHP	4	777.000	-32.95	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

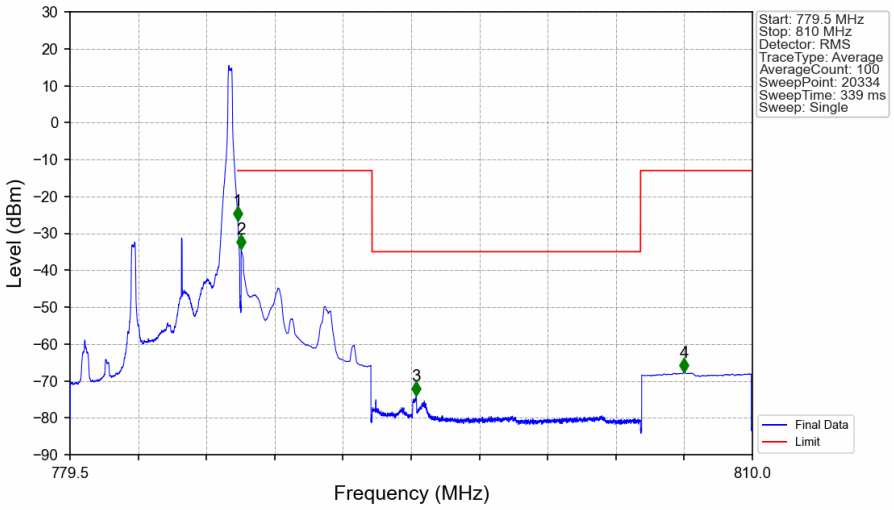
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV

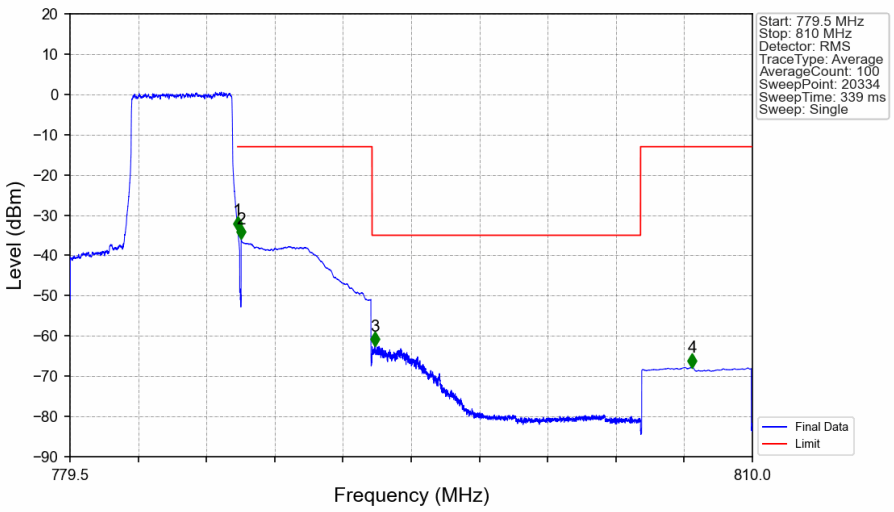


Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



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	-26.62	-13	Pass
787.1	793	0.1	CHP	2	787.150	-34.27	-13	Pass
793	805	0.00625	CHP	3	794.973	-74.03	-35	Pass
805	810	0.1	CHP	4	806.953	-67.68	-13	Pass

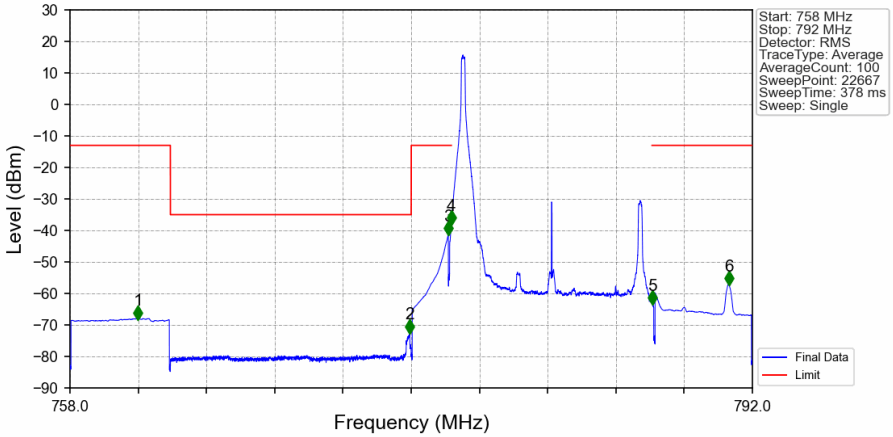
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



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	-33.74	-13	Pass
787.1	793	0.1	CHP	2	787.150	-35.89	-13	Pass
793	805	0.00625	CHP	3	793.131	-62.42	-35	Pass
805	810	0.1	CHP	4	807.307	-67.80	-13	Pass

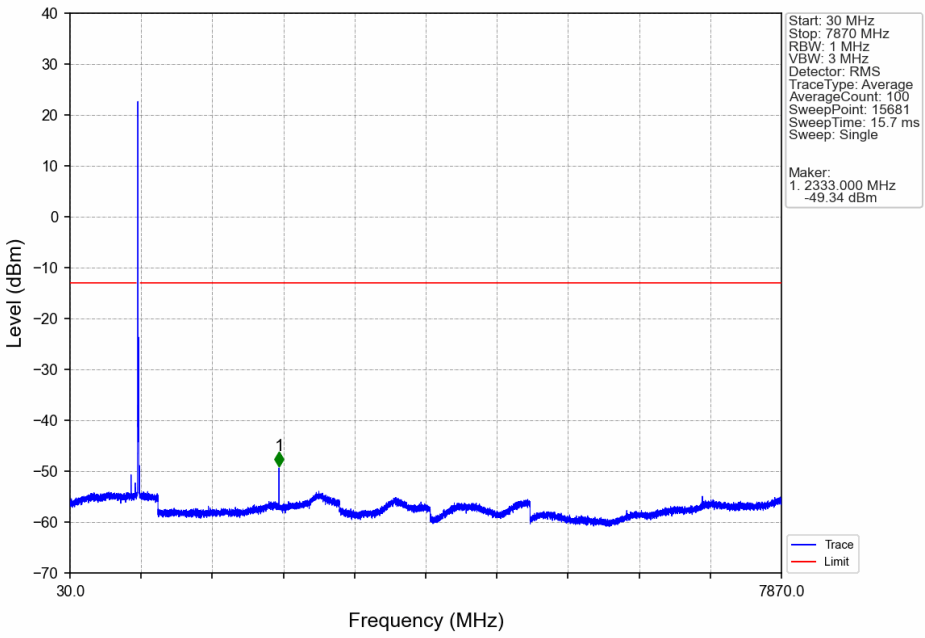
5.2.2 B13_10MHz

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

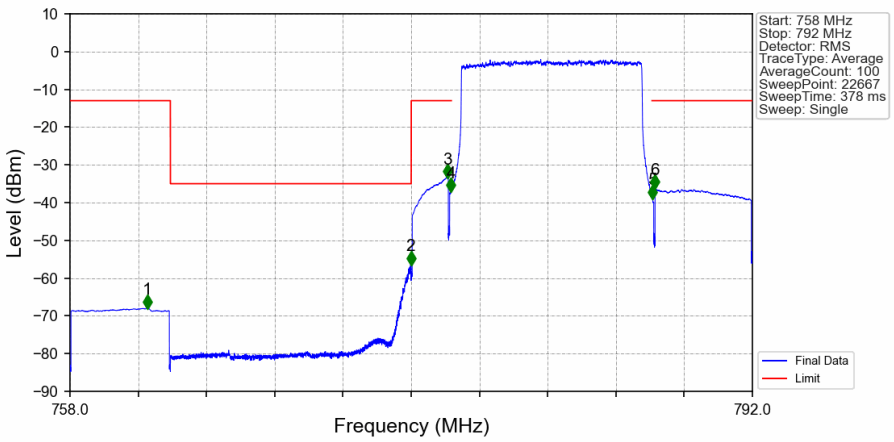


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.386	-67.98	-13	Pass
763	775	0.00625	CHP	2	774.920	-72.29	-35	Pass
775	776.9	0.1	CHP	3	776.850	-41.12	-13	Pass
776.9	777	0.03	CHP	4	777.000	-37.87	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.000	-63.18	-13	Pass
787.1	792	0.1	CHP	6	790.830	-57.01	-13	Pass

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

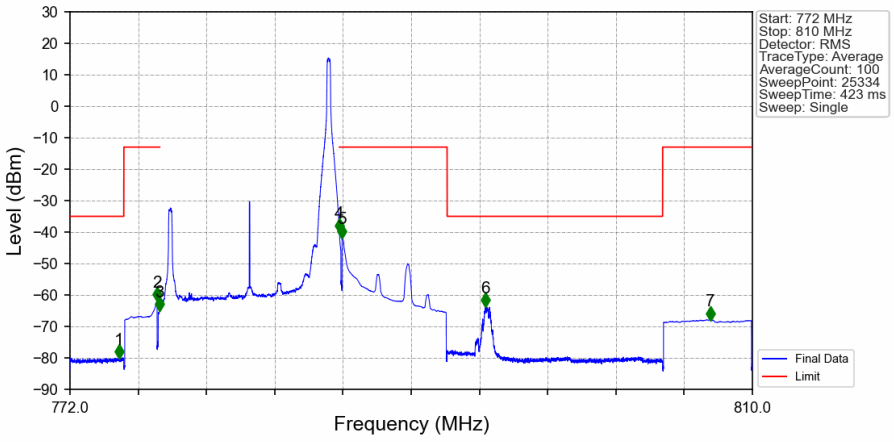


Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



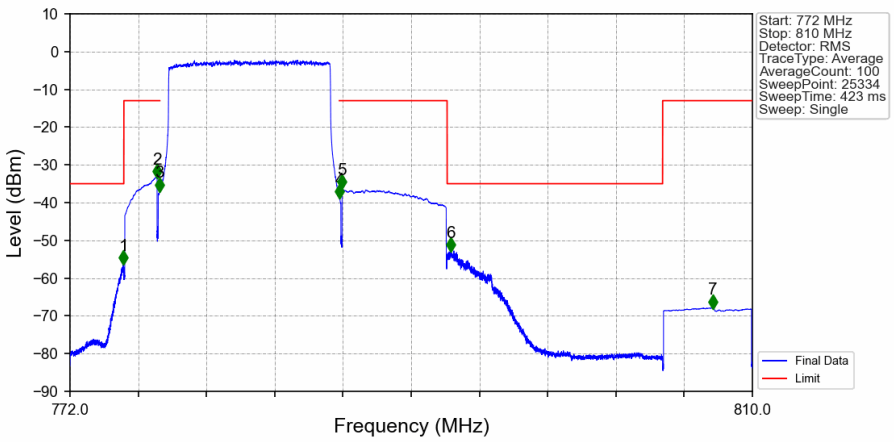
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.846	-67.77	-13	Pass
763	775	0.00625	CHP	2	774.984	-56.23	-35	Pass
775	776.9	0.1	CHP	3	776.800	-33.27	-13	Pass
776.9	777	0.03	CHP	4	776.989	-36.90	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.017	-38.71	-13	Pass
787.1	792	0.1	CHP	6	787.150	-36.01	-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	774.730	-79.85	-35	Pass
775	776.9	0.1	CHP	2	776.850	-61.71	-13	Pass
776.9	777	0.03	CHP	3	776.992	-64.68	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-39.73	-13	Pass
787.1	793	0.1	CHP	5	787.150	-41.52	-13	Pass
793	805	0.00625	CHP	6	795.120	-63.51	-35	Pass
805	810	0.1	CHP	7	807.658	-67.73	-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	774.984	-56.13	-35	Pass
775	776.9	0.1	CHP	2	776.850	-33.26	-13	Pass
776.9	777	0.03	CHP	3	776.986	-36.83	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.015	-38.60	-13	Pass
787.1	793	0.1	CHP	5	787.150	-36.07	-13	Pass
793	805	0.00625	CHP	6	793.195	-52.74	-35	Pass
805	810	0.1	CHP	7	807.799	-67.82	-13	Pass

6. Field Strength of Spurious Radiation

1.1. Test Band = LTE Band 13 BW 10M_ TM1
1.1.1. Test Channel = Mid Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1555	70.69	-49.89	25.19	-49.27	-13.00	36.27	Horizontal
2	2332.5	50.77	-49.24	26.90	-66.84	-13.00	53.84	Horizontal
3	3167	50.00	-48.72	28.23	-65.75	-13.00	52.75	Horizontal
4	4311	49.15	-48.03	29.80	-64.34	-13.00	51.34	Horizontal
5	5738	51.36	-47.58	32.70	-58.79	-13.00	45.79	Horizontal
6	6745	51.47	-46.81	35.09	-55.51	-13.00	42.51	Horizontal

1.2. Test Band = LTE Band 13 BW 10M_ TM1
1.2.1. Test Channel = Mid Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1555	52.96	-49.89	25.19	-67.00	-13.00	54.00	Vertical
2	2332.5	50.04	-49.24	26.90	-67.57	-13.00	54.57	Vertical
3	2999	48.42	-48.29	28.10	-67.04	-13.00	54.04	Vertical
4	4127.5	48.56	-48.29	29.50	-65.48	-13.00	52.48	Vertical
5	5704	51.17	-47.51	32.68	-58.92	-13.00	45.92	Vertical
6	7933	50.90	-45.14	36.31	-53.19	-13.00	40.19	Vertical

1.3. Test Band = LTE Band 13 BW 5 M_ TM1
1.3.1. Test Channel = Low Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1554.5	72.76	-49.88	25.18	-47.20	-13.00	34.20	Horizontal
2	1766.5	71.78	-49.80	25.75	-47.53	-13.00	34.53	Horizontal
3	2332	50.19	-49.24	26.90	-67.41	-13.00	54.41	Horizontal
4	3514.5	65.43	-48.44	28.52	-49.74	-13.00	36.74	Horizontal
5	4614.5	50.23	-48.05	30.35	-62.72	-13.00	49.72	Horizontal
6	6825	50.78	-46.83	35.22	-56.09	-13.00	43.09	Horizontal

1.4. Test Band = LTE Band 13 BW 5 M_ TM1
1.4.1. Test Channel = Low Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1554.5	51.79	-49.88	25.18	-68.17	-13.00	55.17	Vertical
2	1925	48.05	-49.73	26.11	-70.83	-13.00	57.83	Vertical
3	2332	49.29	-49.24	26.90	-68.31	-13.00	55.31	Vertical
4	3193.5	49.36	-48.64	28.25	-66.28	-13.00	53.28	Vertical
5	3755	49.11	-48.54	28.91	-65.78	-13.00	52.78	Vertical
6	6510	50.47	-47.08	34.72	-57.15	-13.00	44.15	Vertical

1.5. Test Band = LTE Band 13 BW 5 M_ TM1
1.5.1. Test Channel = Mid Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1559.5	77.69	-49.89	25.22	-42.24	-40.00	2.24	Horizontal
2	2432.5	58.82	-49.29	27.08	-58.65	-13.00	45.65	Horizontal
3	3570.5	61.15	-48.47	28.61	-53.96	-13.00	40.96	Horizontal
4	5061	51.21	-47.94	31.37	-60.61	-13.00	47.61	Horizontal
5	6119.5	50.84	-47.10	33.25	-58.27	-13.00	45.27	Horizontal
6	7018.5	52.44	-46.56	35.53	-53.85	-13.00	40.85	Horizontal

1.6. Test Band = LTE Band 13 BW 5 M_ TM1
1.6.1. Test Channel = Mid Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1560	53.13	-49.89	25.22	-66.80	-40.00	26.80	Vertical
2	2099.5	48.04	-49.46	26.48	-70.20	-13.00	57.20	Vertical
3	2723.5	49.18	-48.92	27.60	-67.40	-13.00	54.40	Vertical
4	3547.5	50.52	-48.45	28.58	-64.62	-13.00	51.62	Vertical
5	5085.5	50.22	-47.93	31.44	-61.53	-13.00	48.53	Vertical
6	6749.5	50.24	-46.82	35.10	-56.74	-13.00	43.74	Vertical

1.7. Test Band = LTE Band 13 BW 5 M_ TM1
1.7.1. Test Channel = High Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1564.5	77.53	-49.89	25.25	-42.37	-40.00	2.37	Horizontal
2	2037.5	49.30	-49.59	26.37	-69.18	-13.00	56.18	Horizontal
3	2595	50.81	-49.16	27.37	-66.24	-13.00	53.24	Horizontal
4	3155.5	50.31	-48.75	28.22	-65.48	-13.00	52.48	Horizontal
5	4550	49.63	-48.13	30.21	-63.55	-13.00	50.55	Horizontal
6	7041	53.15	-46.40	35.57	-52.94	-13.00	39.94	Horizontal

1.8. Test Band = LTE Band 13 BW 5 M_ TM1
1.8.1. Test Channel = High Channel

Final Data List								
NO.	Frequency [MHz]	Reading [dBµV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1564.5	52.68	-49.89	25.25	-67.22	-40.00	27.22	Vertical
2	1928	47.22	-49.73	26.12	-71.65	-13.00	58.65	Vertical
3	2432	48.57	-49.29	27.08	-68.91	-13.00	55.91	Vertical
4	3391	48.72	-48.68	28.41	-66.81	-13.00	53.81	Vertical
5	4770	50.09	-48.04	30.69	-62.51	-13.00	49.51	Vertical
6	7041	52.40	-46.40	35.57	-53.69	-13.00	40.69	Vertical