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	24.65	-1.32	21.18	<=34.77	Pass
			13	24.74	-1.32	21.27	<=34.77	Pass
			24	24.65	-1.32	21.18	<=34.77	Pass
		12	0	23.58	-1.32	20.11	<=34.77	Pass
			6	23.70	-1.32	20.23	<=34.77	Pass
			13	23.64	-1.32	20.17	<=34.77	Pass
		25	0	23.67	-1.32	20.20	<=34.77	Pass
	782	1	0	24.67	-1.32	21.20	<=34.77	Pass
			13	24.66	-1.32	21.19	<=34.77	Pass
			24	24.51	-1.32	21.04	<=34.77	Pass
		12	0	23.60	-1.32	20.13	<=34.77	Pass
			6	23.59	-1.32	20.12	<=34.77	Pass
			13	23.60	-1.32	20.13	<=34.77	Pass
		25	0	23.56	-1.32	20.09	<=34.77	Pass
	784.5	1	0	24.65	-1.32	21.18	<=34.77	Pass
			13	24.66	-1.32	21.19	<=34.77	Pass
			24	24.49	-1.32	21.02	<=34.77	Pass
		12	0	23.53	-1.32	20.06	<=34.77	Pass
			6	23.50	-1.32	20.03	<=34.77	Pass
			13	23.52	-1.32	20.05	<=34.77	Pass
		25	0	23.48	-1.32	20.01	<=34.77	Pass
16QAM	779.5	1	0	23.71	-1.32	20.24	<=34.77	Pass
			13	23.73	-1.32	20.26	<=34.77	Pass
			24	23.70	-1.32	20.23	<=34.77	Pass
		12	0	22.52	-1.32	19.05	<=34.77	Pass
			6	22.64	-1.32	19.17	<=34.77	Pass
			13	22.59	-1.32	19.12	<=34.77	Pass
		25	0	22.66	-1.32	19.19	<=34.77	Pass
	782	1	0	23.85	-1.32	20.38	<=34.77	Pass
			13	23.74	-1.32	20.27	<=34.77	Pass
			24	23.70	-1.32	20.23	<=34.77	Pass
		12	0	22.58	-1.32	19.11	<=34.77	Pass
			6	22.63	-1.32	19.16	<=34.77	Pass
			13	22.61	-1.32	19.14	<=34.77	Pass
		25	0	22.57	-1.32	19.10	<=34.77	Pass
	784.5	1	0	23.81	-1.32	20.34	<=34.77	Pass
			13	23.70	-1.32	20.23	<=34.77	Pass
			24	23.62	-1.32	20.15	<=34.77	Pass
		12	0	22.57	-1.32	19.10	<=34.77	Pass
			6	22.59	-1.32	19.12	<=34.77	Pass
			13	22.54	-1.32	19.07	<=34.77	Pass
		25	0	22.51	-1.32	19.04	<=34.77	Pass
64QAM	779.5	1	0	22.81	-1.32	19.34	<=34.77	Pass
			13	23.02	-1.32	19.55	<=34.77	Pass
			24	22.87	-1.32	19.40	<=34.77	Pass
		12	0	21.63	-1.32	18.16	<=34.77	Pass
			6	21.64	-1.32	18.17	<=34.77	Pass
			13	21.66	-1.32	18.19	<=34.77	Pass
		25	0	21.68	-1.32	18.21	<=34.77	Pass

	782	1	0	23.06	-1.32	19.59	<=34.77	Pass
			13	22.94	-1.32	19.47	<=34.77	Pass
			24	22.92	-1.32	19.45	<=34.77	Pass
		12	0	21.64	-1.32	18.17	<=34.77	Pass
			6	21.63	-1.32	18.16	<=34.77	Pass
			13	21.63	-1.32	18.16	<=34.77	Pass
		25	0	21.62	-1.32	18.15	<=34.77	Pass
	784.5	1	0	22.98	-1.32	19.51	<=34.77	Pass
			13	22.85	-1.32	19.38	<=34.77	Pass
			24	22.80	-1.32	19.33	<=34.77	Pass
		12	0	21.58	-1.32	18.11	<=34.77	Pass
			6	21.59	-1.32	18.12	<=34.77	Pass
			13	21.52	-1.32	18.05	<=34.77	Pass
		25	0	21.51	-1.32	18.04	<=34.77	Pass
256QAM	779.5	1	0	19.64	-1.32	16.17	<=34.77	Pass
			13	19.80	-1.32	16.33	<=34.77	Pass
			24	19.71	-1.32	16.24	<=34.77	Pass
		12	0	19.62	-1.32	16.15	<=34.77	Pass
			6	19.70	-1.32	16.23	<=34.77	Pass
			13	19.69	-1.32	16.22	<=34.77	Pass
		25	0	19.72	-1.32	16.25	<=34.77	Pass
	782	1	0	19.78	-1.32	16.31	<=34.77	Pass
			13	19.82	-1.32	16.35	<=34.77	Pass
			24	19.89	-1.32	16.42	<=34.77	Pass
		12	0	19.61	-1.32	16.14	<=34.77	Pass
			6	19.69	-1.32	16.22	<=34.77	Pass
			13	19.68	-1.32	16.21	<=34.77	Pass
		25	0	19.63	-1.32	16.16	<=34.77	Pass
	784.5	1	0	19.64	-1.32	16.17	<=34.77	Pass
			13	19.67	-1.32	16.20	<=34.77	Pass
			24	19.57	-1.32	16.10	<=34.77	Pass
		12	0	19.55	-1.32	16.08	<=34.77	Pass
			6	19.59	-1.32	16.12	<=34.77	Pass
			13	19.58	-1.32	16.11	<=34.77	Pass
		25	0	19.57	-1.32	16.10	<=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	24.61	-1.32	21.14	<=34.77	Pass
			25	24.63	-1.32	21.16	<=34.77	Pass
			49	24.43	-1.32	20.96	<=34.77	Pass
		25	0	23.67	-1.32	20.20	<=34.77	Pass
			13	23.59	-1.32	20.12	<=34.77	Pass
			25	23.56	-1.32	20.09	<=34.77	Pass
		50	0	23.61	-1.32	20.14	<=34.77	Pass
16QAM	782	1	0	23.77	-1.32	20.30	<=34.77	Pass
			25	23.81	-1.32	20.34	<=34.77	Pass
			49	23.52	-1.32	20.05	<=34.77	Pass
		25	0	22.71	-1.32	19.24	<=34.77	Pass
			13	22.61	-1.32	19.14	<=34.77	Pass
			25	22.53	-1.32	19.06	<=34.77	Pass
		50	0	22.59	-1.32	19.12	<=34.77	Pass
64QAM	782	1	0	22.79	-1.32	19.32	<=34.77	Pass

			25	22.90	-1.32	19.43	<=34.77	Pass
			49	22.67	-1.32	19.20	<=34.77	Pass
		25	0	21.68	-1.32	18.21	<=34.77	Pass
			13	21.63	-1.32	18.16	<=34.77	Pass
			25	21.60	-1.32	18.13	<=34.77	Pass
		50	0	21.64	-1.32	18.17	<=34.77	Pass
256QAM	782	1	0	19.76	-1.32	16.29	<=34.77	Pass
			25	19.80	-1.32	16.33	<=34.77	Pass
			49	19.52	-1.32	16.05	<=34.77	Pass
		25	0	19.68	-1.32	16.21	<=34.77	Pass
			13	19.69	-1.32	16.22	<=34.77	Pass
			25	19.65	-1.32	16.18	<=34.77	Pass
		50	0	19.69	-1.32	16.22	<=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	1.708	0.0022	-2.5 to 2.5	Pass
					NV	-0.055	-0.0001	-2.5 to 2.5	Pass
					HV	-0.122	-0.0002	-2.5 to 2.5	Pass
				-30	NV	0.970	0.0012	-2.5 to 2.5	Pass
				-20	NV	0.938	0.0012	-2.5 to 2.5	Pass
				-10	NV	-0.083	-0.0001	-2.5 to 2.5	Pass
				0	NV	0.665	0.0009	-2.5 to 2.5	Pass
				10	NV	-0.599	-0.0008	-2.5 to 2.5	Pass
				30	NV	-0.192	-0.0002	-2.5 to 2.5	Pass
				40	NV	-0.156	-0.0002	-2.5 to 2.5	Pass
				50	NV	0.139	0.0002	-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	4.565	/	Pass
	16QAM	782	25	0	4.570	/	Pass
	64QAM	782	25	0	4.566	/	Pass
	256QAM	782	25	0	4.580	/	Pass
10	QPSK	782	50	0	9.060	/	Pass
	16QAM	782	50	0	9.051	/	Pass
	64QAM	782	50	0	9.031	/	Pass
	256QAM	782	50	0	9.054	/	Pass

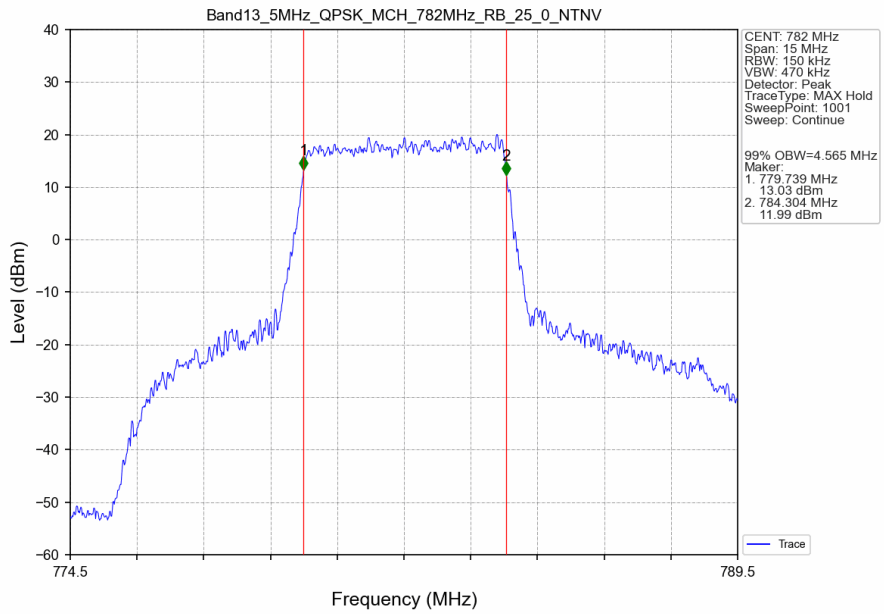
3.1.2 Band13_XDB

Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	5.272	/	Pass
	16QAM	782	25	0	5.303	/	Pass
	64QAM	782	25	0	5.268	/	Pass
	256QAM	782	25	0	5.230	/	Pass
10	QPSK	782	50	0	10.094	/	Pass
	16QAM	782	50	0	10.022	/	Pass
	64QAM	782	50	0	9.986	/	Pass
	256QAM	782	50	0	10.083	/	Pass

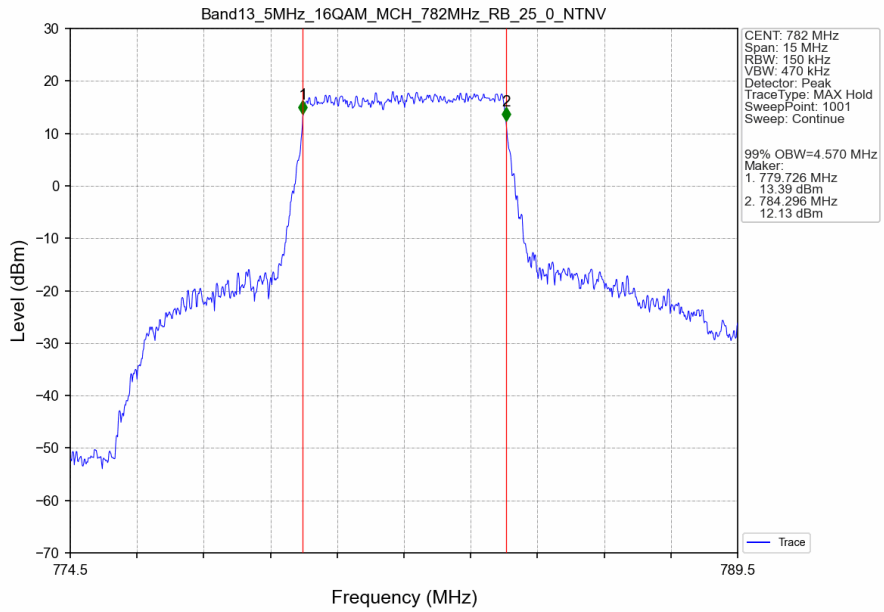
3.2 Test Graph

3.2.1 Band13_OBW

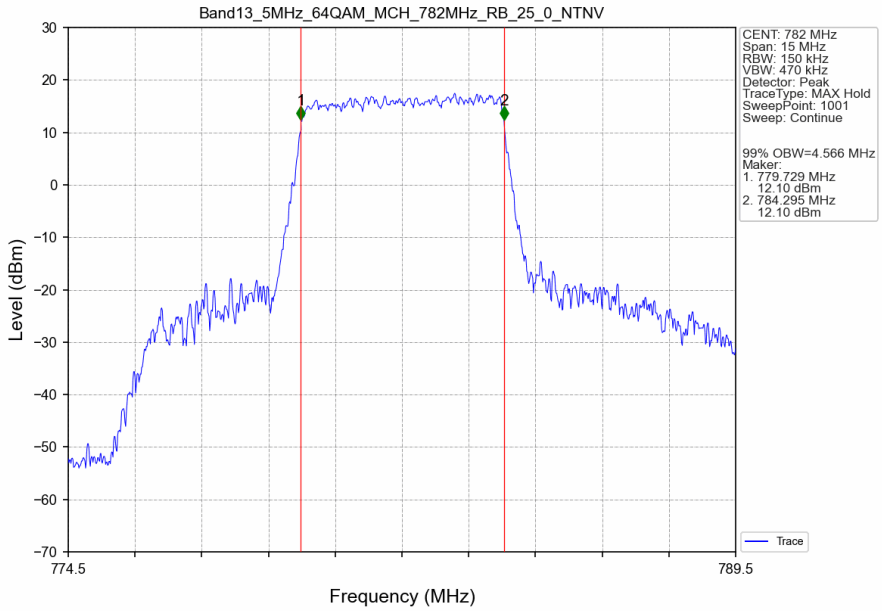
Band13_5MHz_QPSK_MCH_782MHz_RB_25_0_NTNV



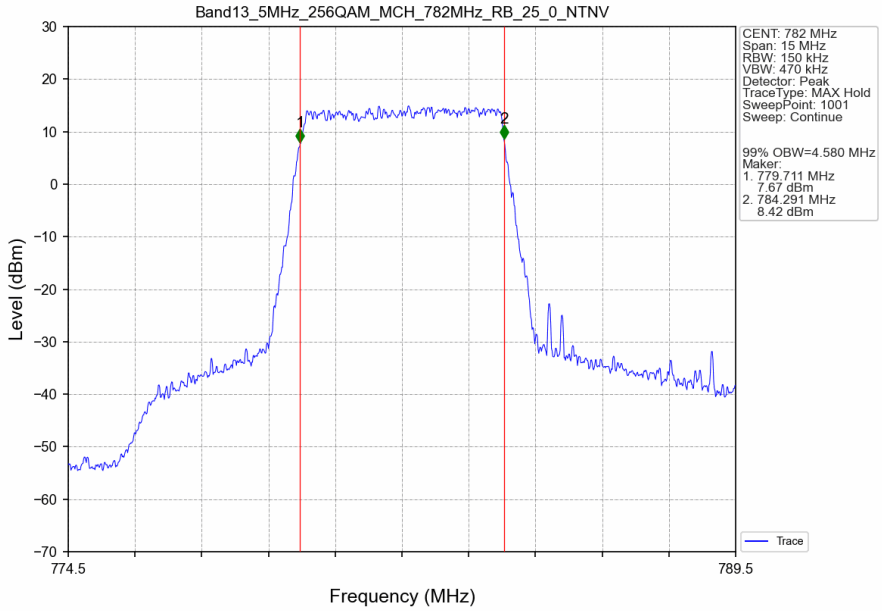
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



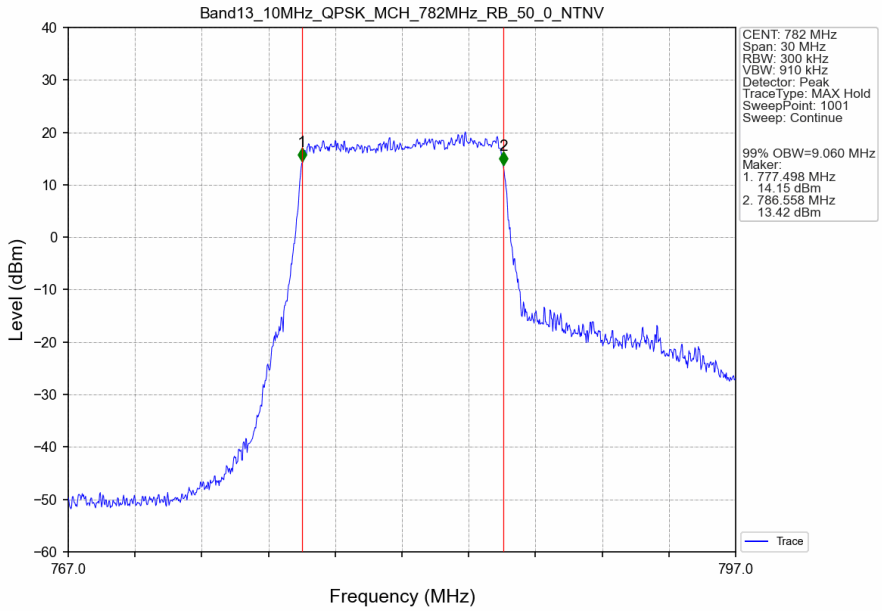
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



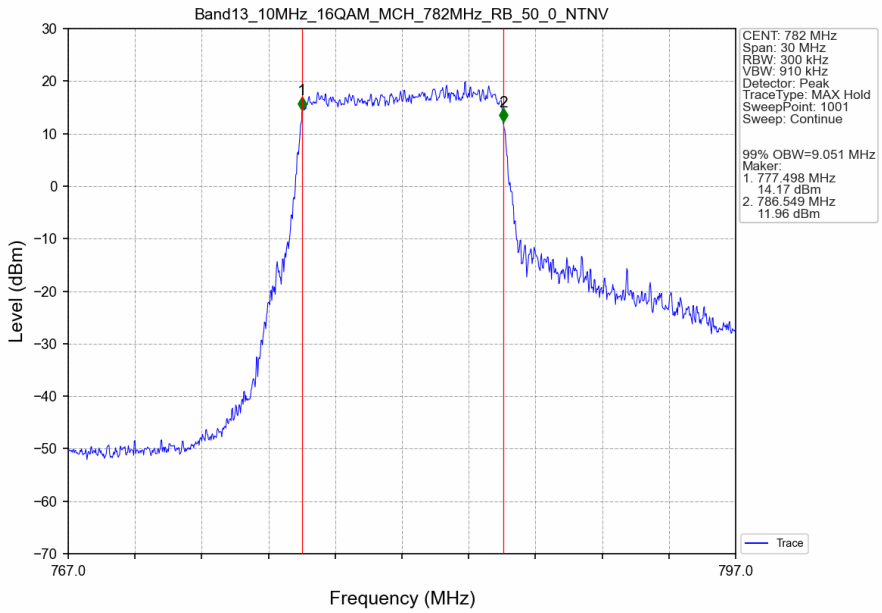
Band13_5MHz_256QAM_MCH_782MHz_RB_25_0_NTNV



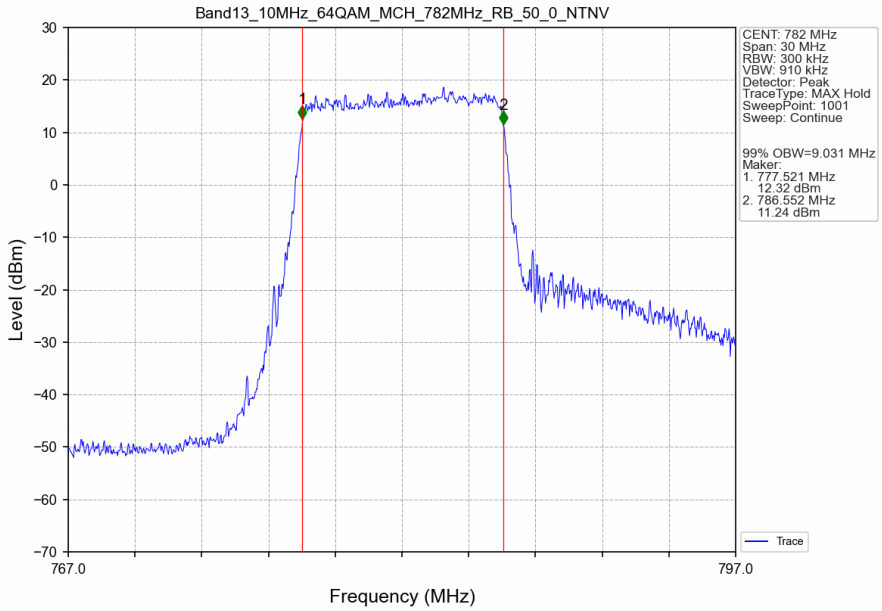
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



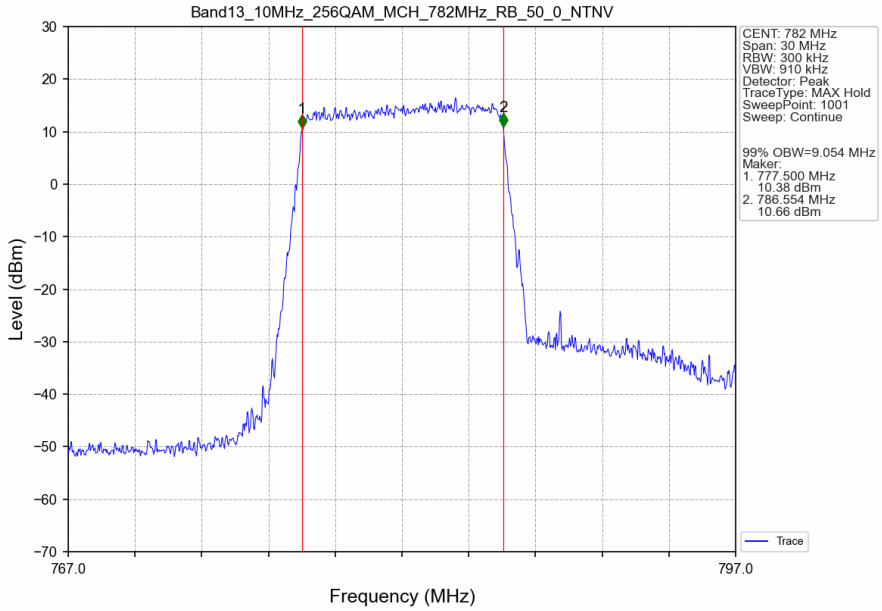
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV

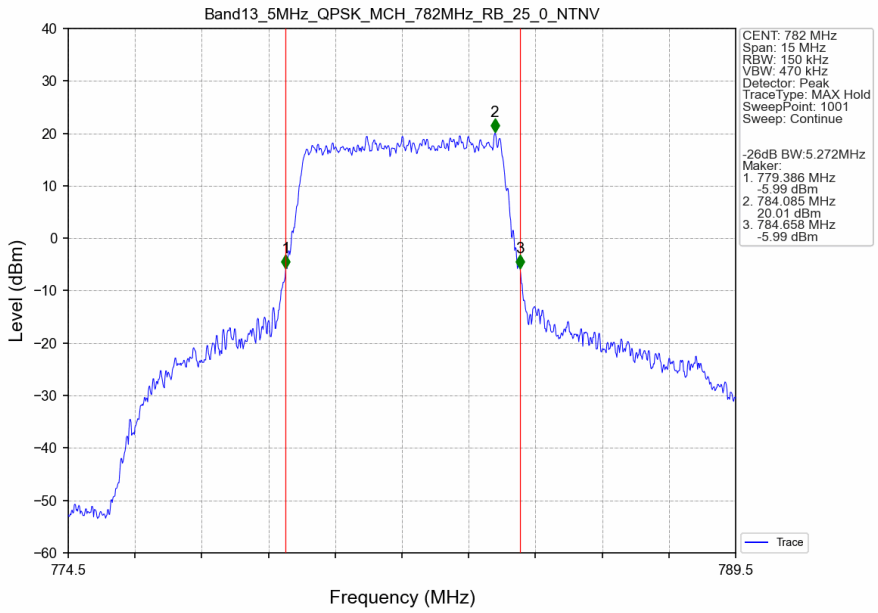


Band13_10MHz_256QAM_MCH_782MHz_RB_50_0_NTNV

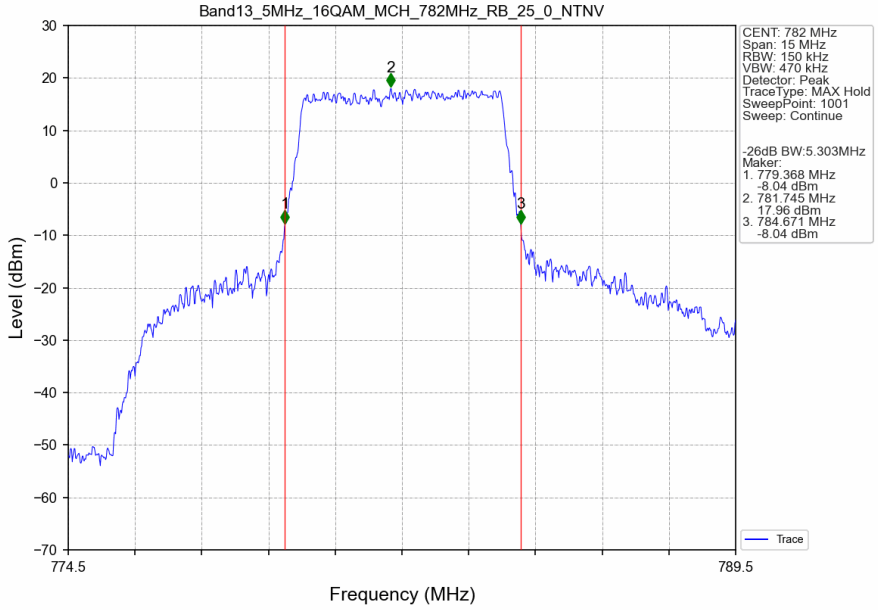


3.2.2 Band13_XDB

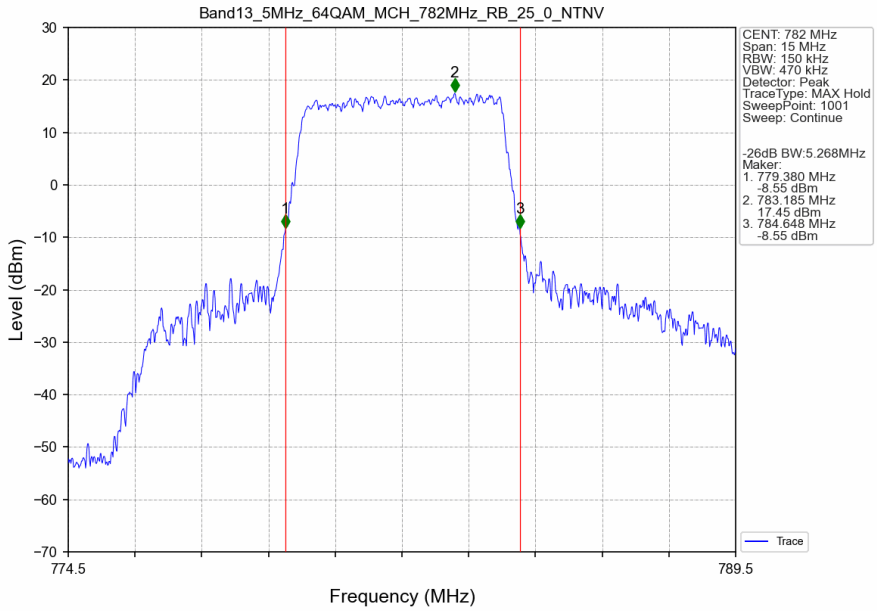
Band13_5MHz_QPSK_MCH_782MHz_RB_25_0_NTNV



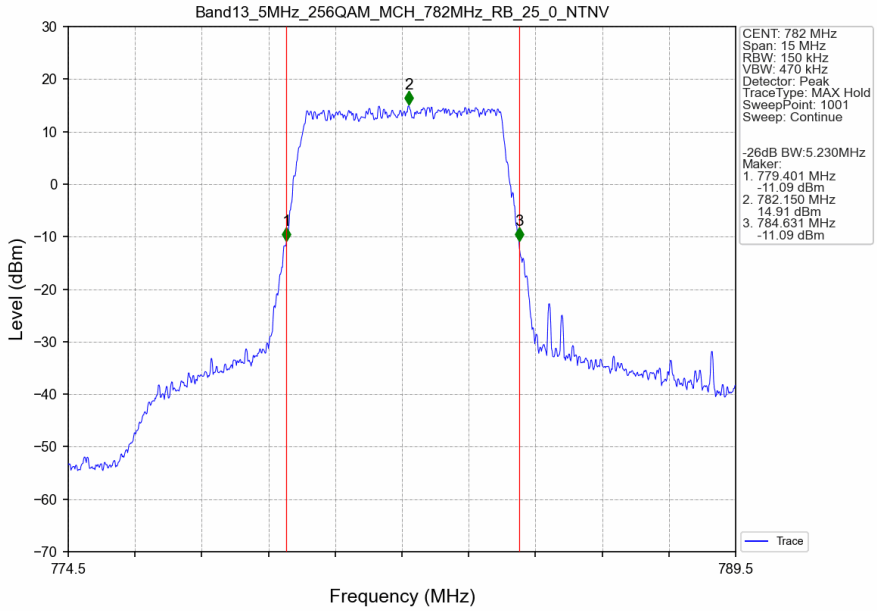
Band13_5MHz_16QAM_MCH_782MHz_RB_25_0_NTNV



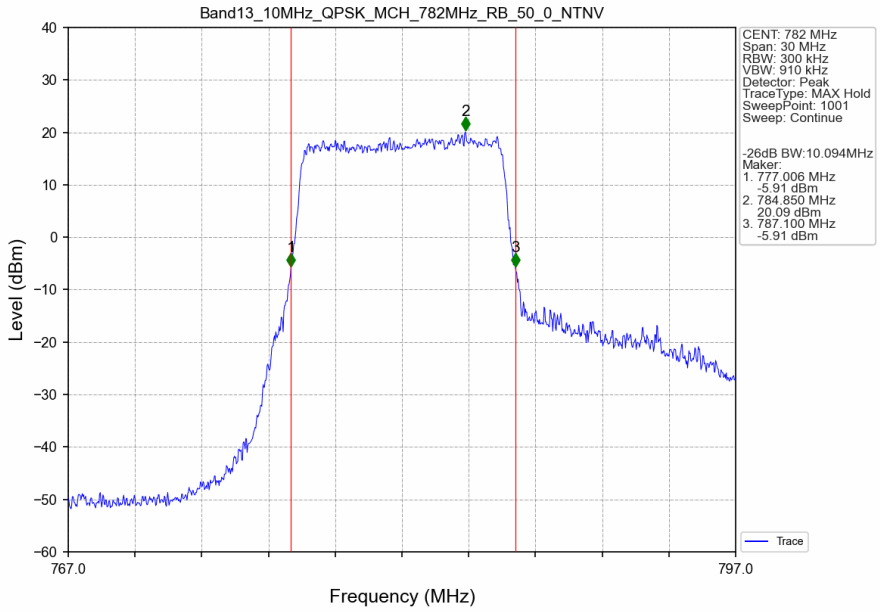
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



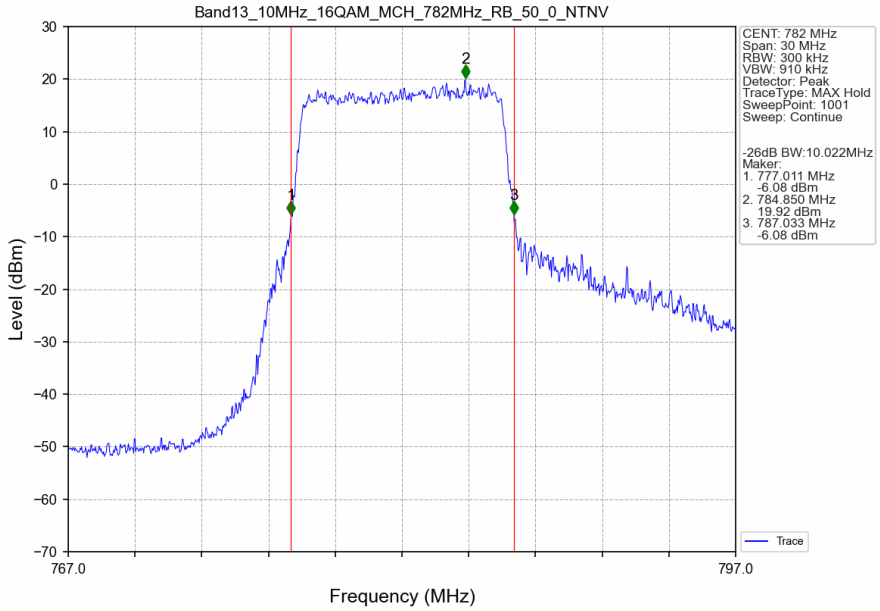
Band13_5MHz_256QAM_MCH_782MHz_RB_25_0_NTNV



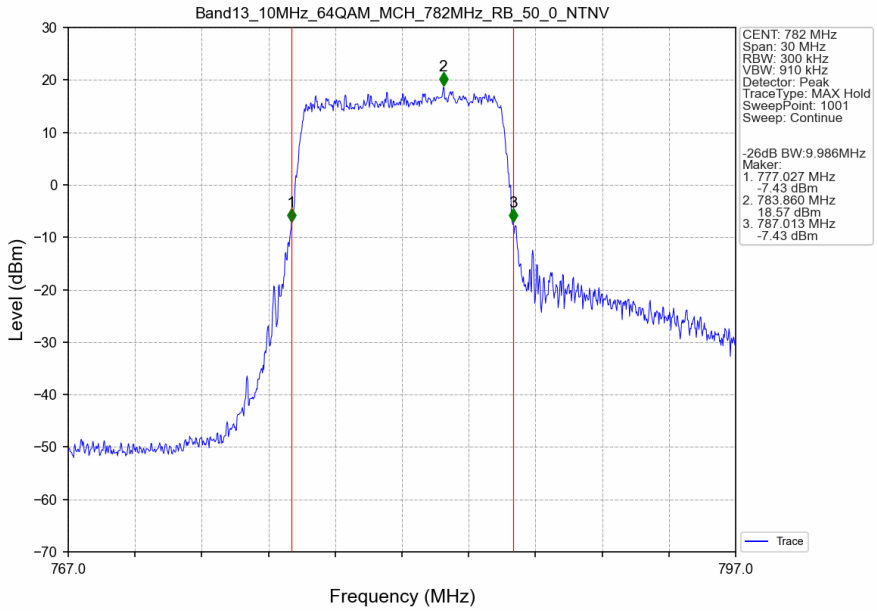
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



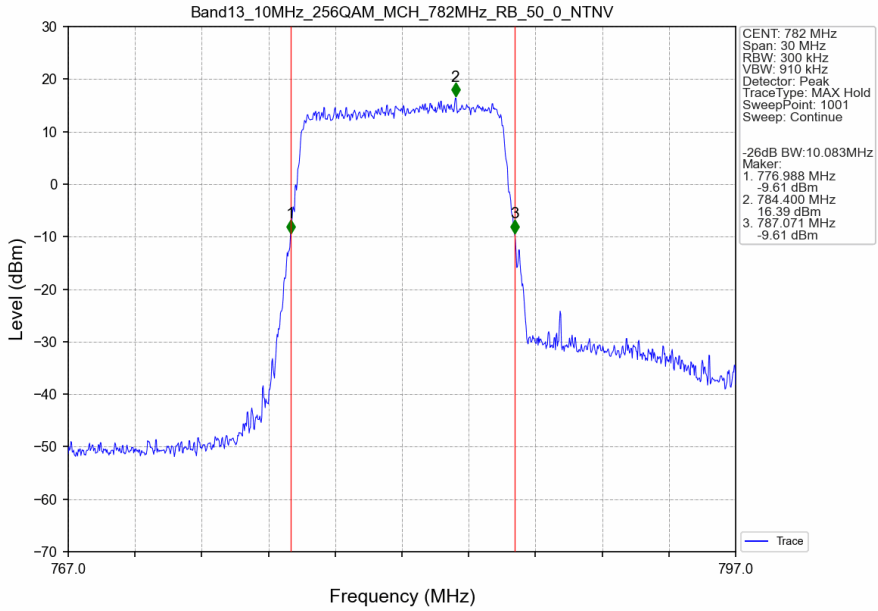
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



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

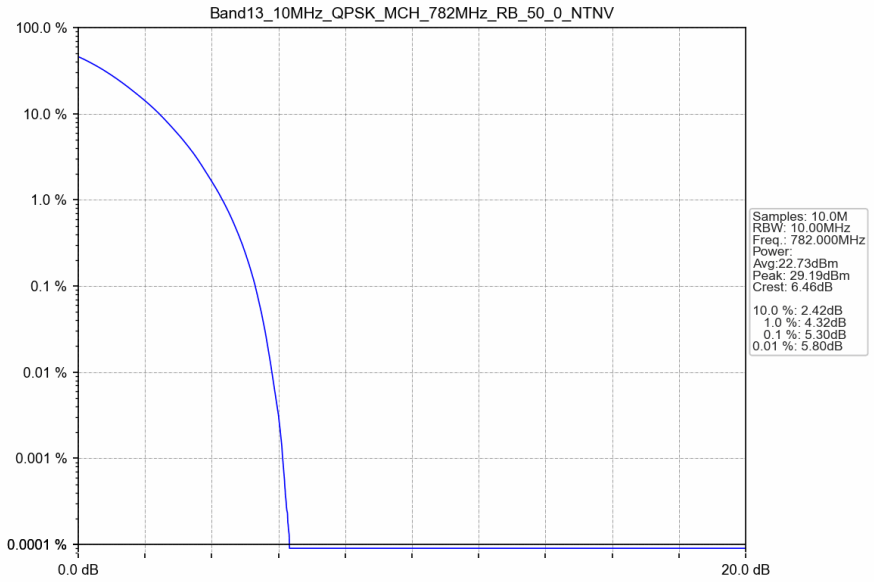
4.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.30	<=13	Pass
16QAM	782	50	0	6.09	<=13	Pass
64QAM	782	50	0	6.47	<=13	Pass
256QAM	782	50	0	6.72	<=13	Pass

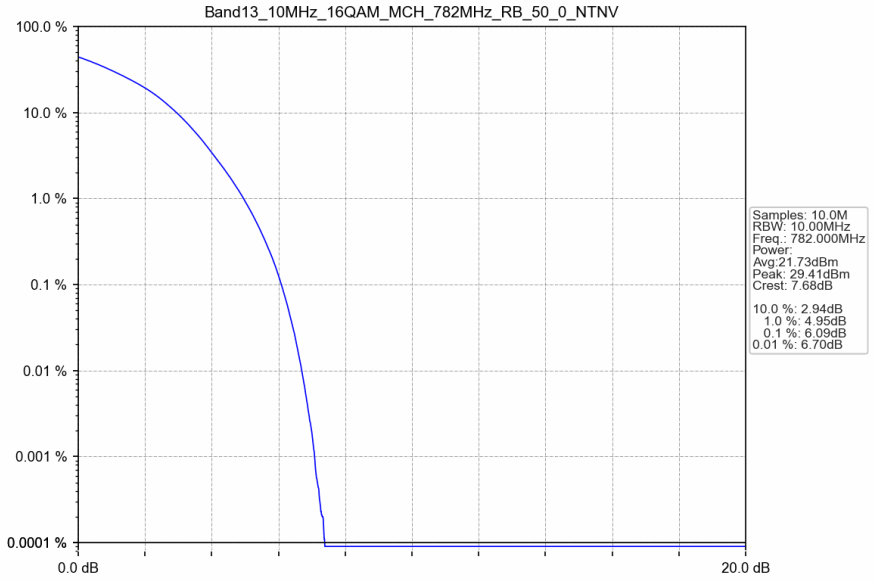
4.2 Test Graph

4.2.1 B13_10MHz

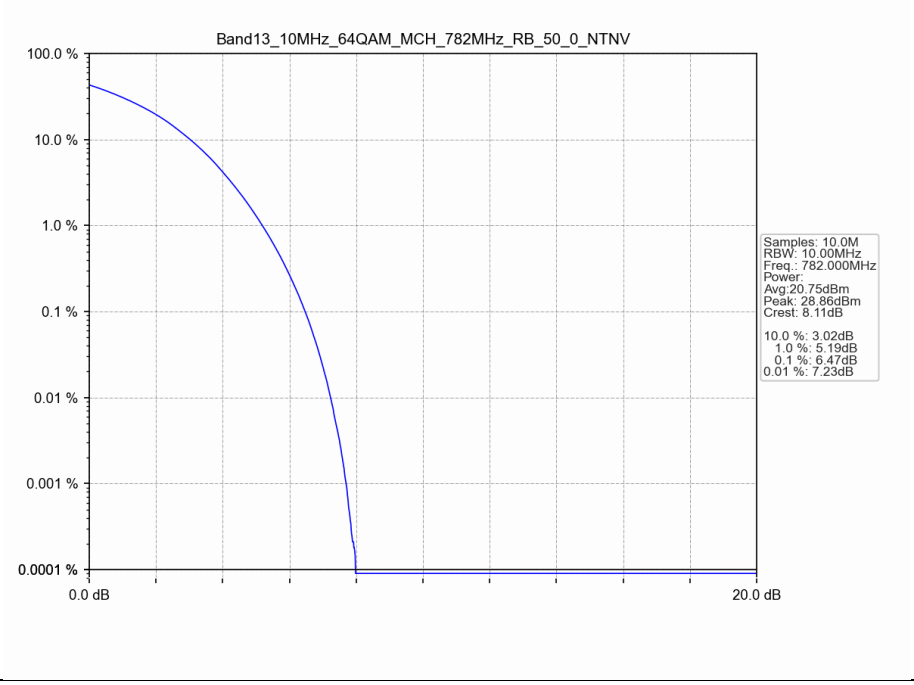
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



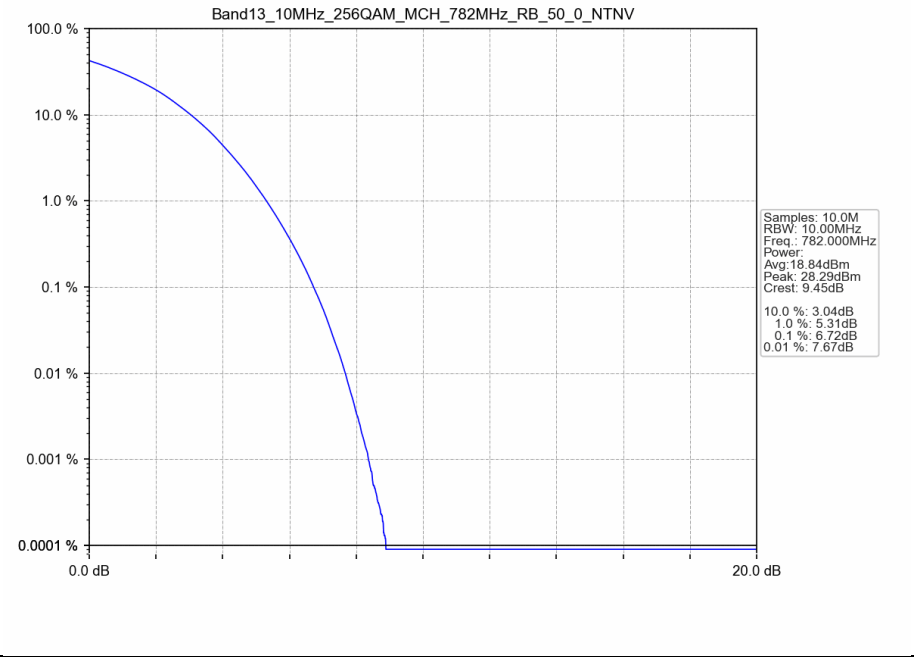
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



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

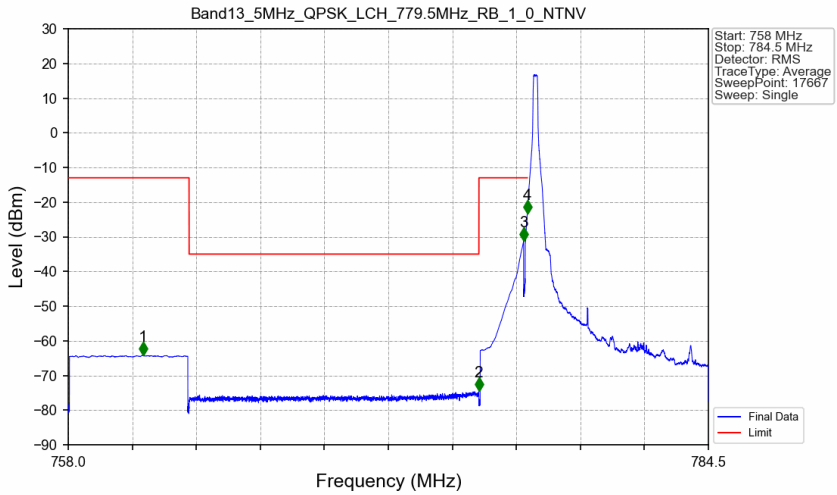
5.1.2 B13_10MHz

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

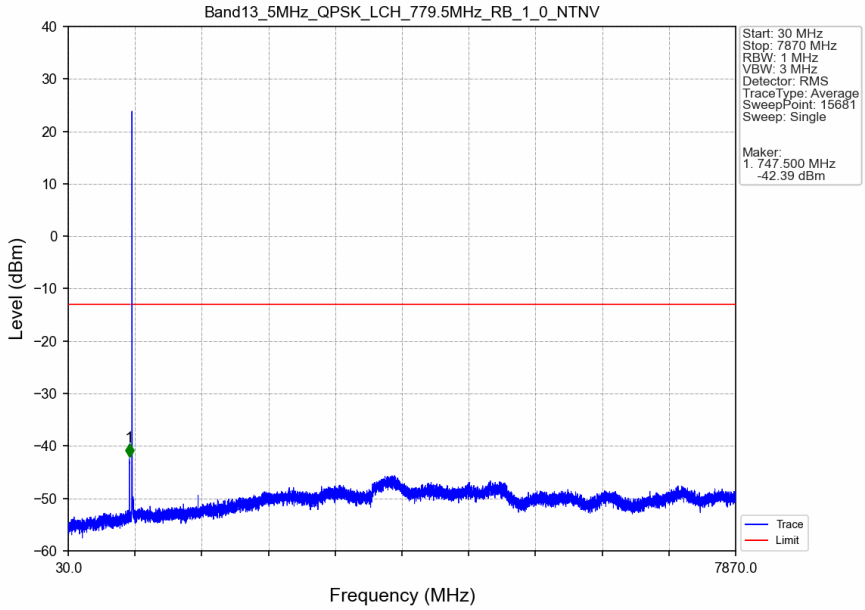
5.2.1 B13_5MHz

Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV

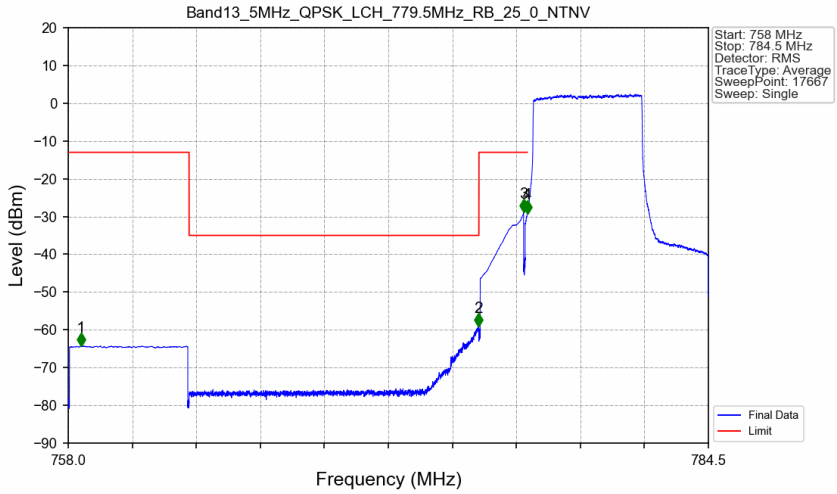


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.089	-64.19	-13	Pass
763	775	0.00625	CHP	2	774.996	-74.51	-35	Pass
775	776.9	0.1	CHP	3	776.850	-31.20	-13	Pass
776.9	777	0.03	CHP	4	777.000	-23.22	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

Band13_5MHz_QPSK_LCH_779.5MHz_RB_1_0_NTNV

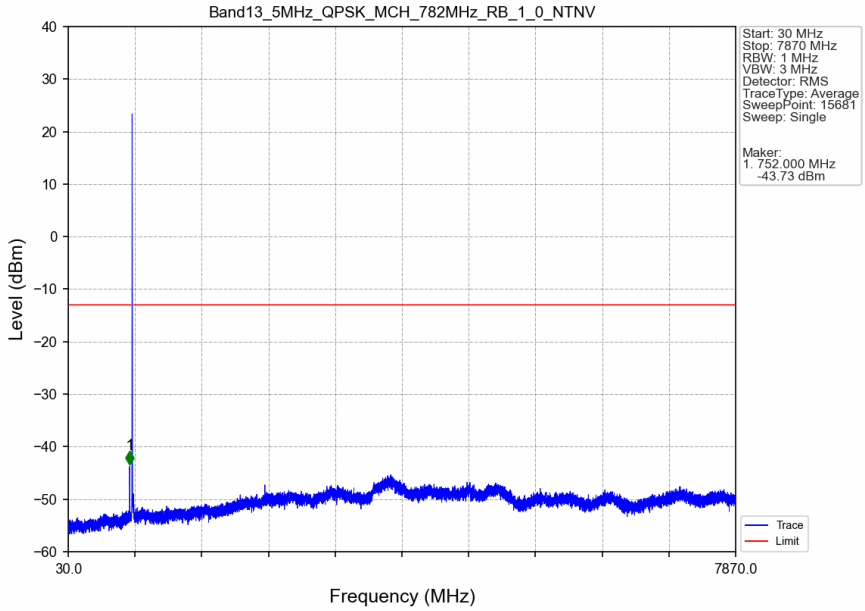


Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV

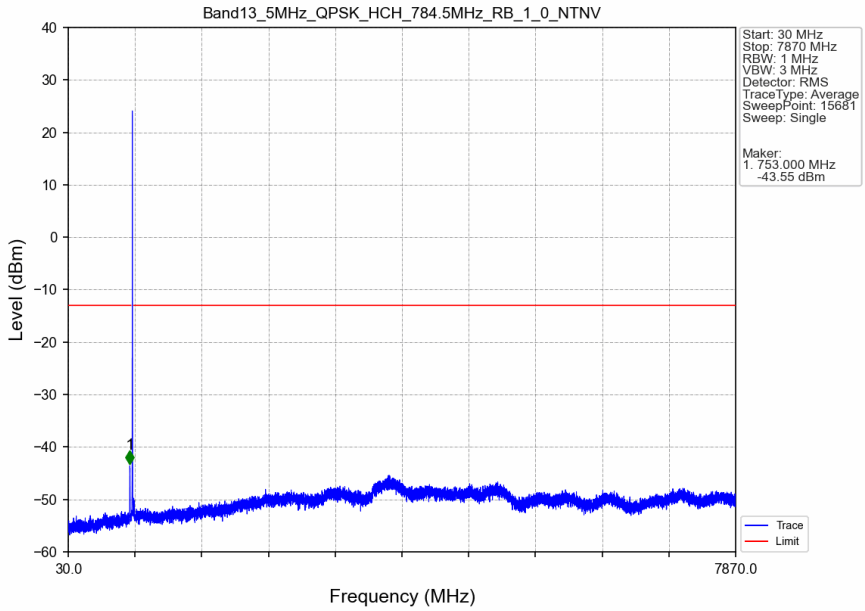


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	758.525	-64.28	-13	Pass
763	775	0.00625	CHP	2	774.991	-59.08	-35	Pass
775	776.9	0.1	CHP	3	776.850	-28.84	-13	Pass
776.9	777	0.03	CHP	4	777.000	-29.13	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

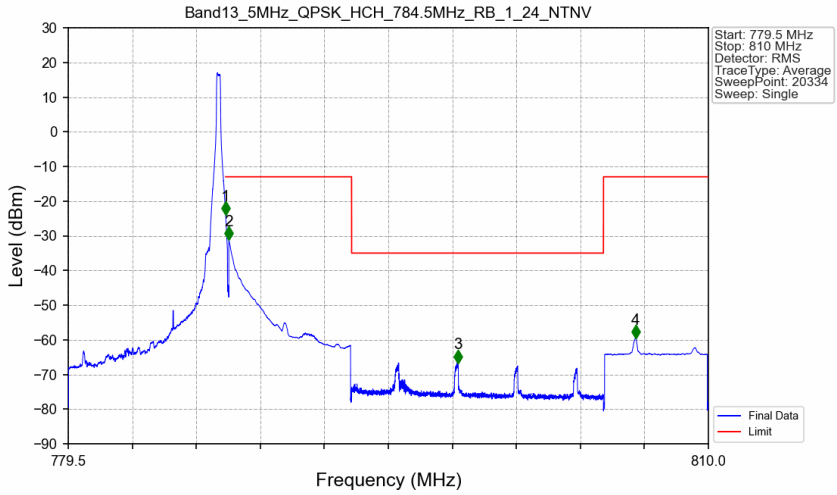
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV

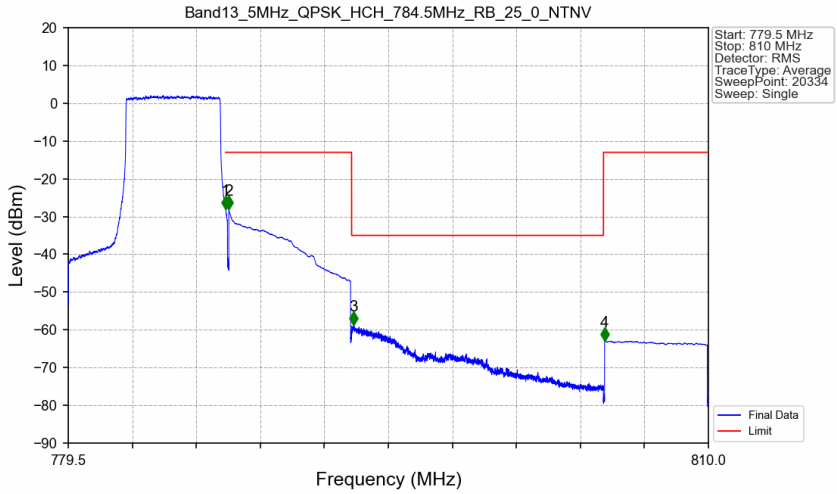


Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



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	-23.89	-13	Pass
787.1	793	0.1	CHP	2	787.150	-31.08	-13	Pass
793	805	0.00625	CHP	3	798.063	-66.66	-35	Pass
805	810	0.1	CHP	4	806.524	-59.49	-13	Pass

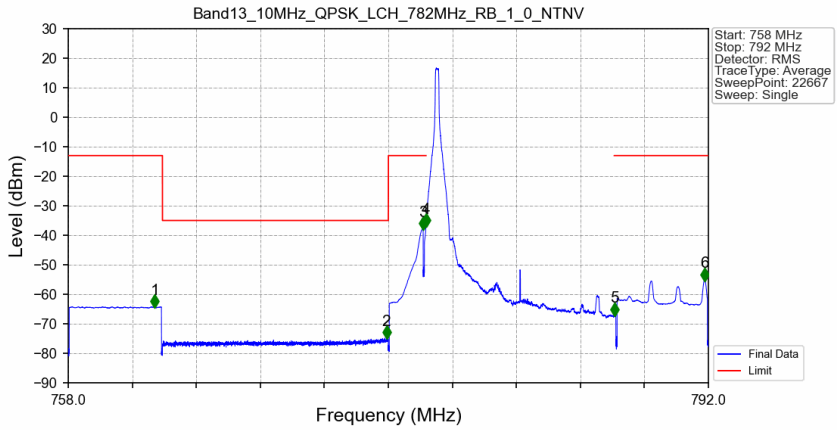
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



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	-28.08	-13	Pass
787.1	793	0.1	CHP	2	787.150	-28.10	-13	Pass
793	805	0.00625	CHP	3	793.101	-58.64	-35	Pass
805	810	0.1	CHP	4	805.062	-62.88	-13	Pass

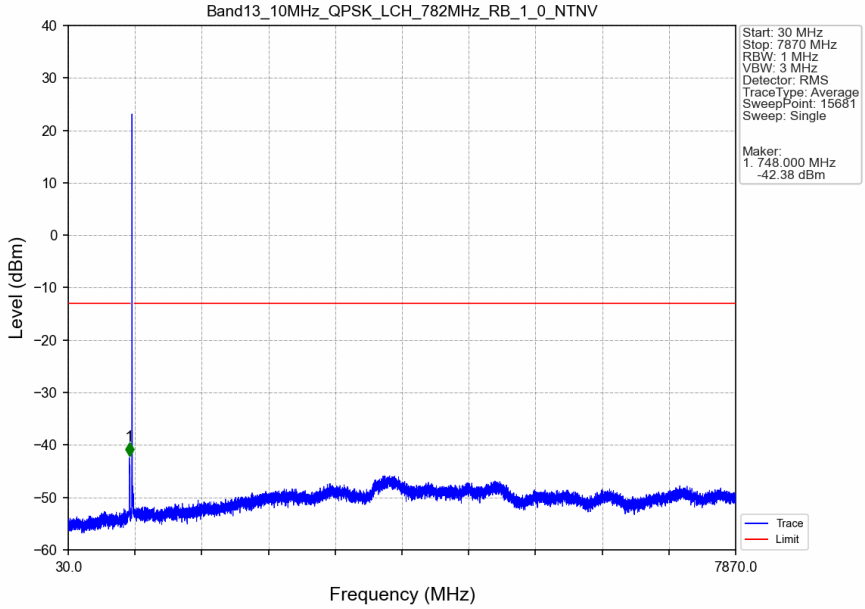
5.2.2 B13_10MHz

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

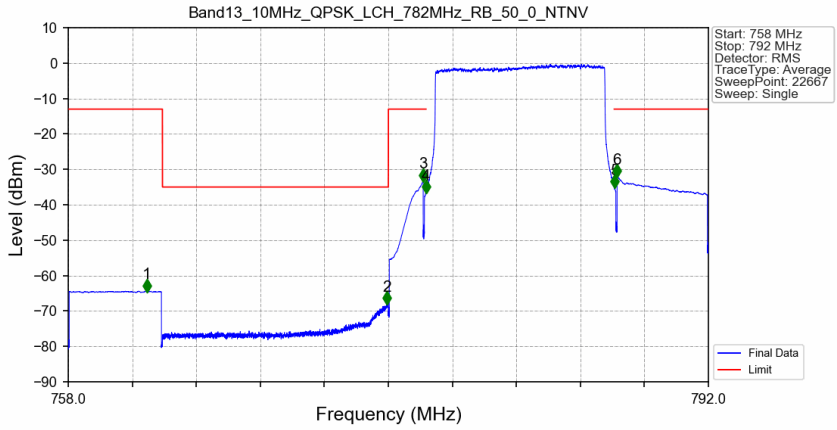


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	762.593	-64.22	-13	Pass
763	775	0.00625	CHP	2	774.904	-74.75	-35	Pass
775	776.9	0.1	CHP	3	776.847	-37.78	-13	Pass
776.9	777	0.03	CHP	4	777.000	-36.74	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.000	-66.91	-13	Pass
787.1	792	0.1	CHP	6	791.803	-55.13	-13	Pass

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

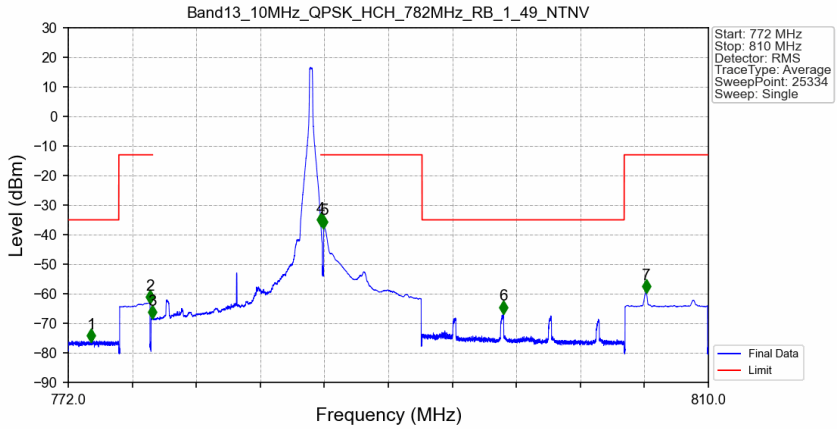


Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



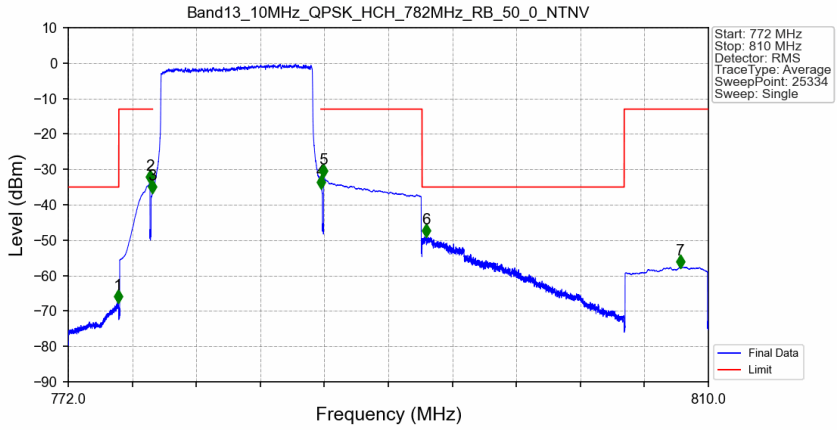
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	762.179	-64.34	-13	Pass
763	775	0.00625	CHP	2	774.910	-67.87	-35	Pass
775	776.9	0.1	CHP	3	776.850	-33.16	-13	Pass
776.9	777	0.03	CHP	4	776.995	-36.45	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.000	-35.03	-13	Pass
787.1	792	0.1	CHP	6	787.150	-31.93	-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	773.365	-75.95	-35	Pass
775	776.9	0.1	CHP	2	776.841	-62.94	-13	Pass
776.9	777	0.03	CHP	3	776.992	-68.18	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-36.87	-13	Pass
787.1	793	0.1	CHP	5	787.156	-37.44	-13	Pass
793	805	0.00625	CHP	6	797.823	-66.45	-35	Pass
805	810	0.1	CHP	7	806.301	-59.39	-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	774.943	-67.40	-35	Pass
775	776.9	0.1	CHP	2	776.850	-33.67	-13	Pass
776.9	777	0.03	CHP	3	777.000	-36.49	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.003	-35.13	-13	Pass
787.1	793	0.1	CHP	5	787.150	-31.95	-13	Pass
793	805	0.00625	CHP	6	793.228	-48.83	-35	Pass
805	810	0.1	CHP	7	808.330	-57.57	-13	Pass