

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	24.31	-5.61	16.55	<=34.77	Pass	
			13	24.41	-5.61	16.65	<=34.77	Pass	
			24	24.31	-5.61	16.55	<=34.77	Pass	
		12	0	23.25	-5.61	15.49	<=34.77	Pass	
			6	23.35	-5.61	15.59	<=34.77	Pass	
			13	23.31	-5.61	15.55	<=34.77	Pass	
		25	0	23.29	-5.61	15.53	<=34.77	Pass	
		782	1	0	24.26	-5.61	16.50	<=34.77	Pass
				13	24.33	-5.61	16.57	<=34.77	Pass
	24			24.25	-5.61	16.49	<=34.77	Pass	
	12		0	23.23	-5.61	15.47	<=34.77	Pass	
			6	23.29	-5.61	15.53	<=34.77	Pass	
			13	23.27	-5.61	15.51	<=34.77	Pass	
	25	0	23.24	-5.61	15.48	<=34.77	Pass		
	784.5	1	0	24.26	-5.61	16.50	<=34.77	Pass	
			13	24.33	-5.61	16.57	<=34.77	Pass	
			24	24.26	-5.61	16.50	<=34.77	Pass	
		12	0	23.25	-5.61	15.49	<=34.77	Pass	
6			23.29	-5.61	15.53	<=34.77	Pass		
13			23.26	-5.61	15.50	<=34.77	Pass		
25		0	23.24	-5.61	15.48	<=34.77	Pass		
16QAM		779.5	1	0	23.11	-5.61	15.35	<=34.77	Pass
				13	23.25	-5.61	15.49	<=34.77	Pass
	24			23.12	-5.61	15.36	<=34.77	Pass	
	12		0	22.22	-5.61	14.46	<=34.77	Pass	
			6	22.30	-5.61	14.54	<=34.77	Pass	
			13	22.27	-5.61	14.51	<=34.77	Pass	
	25		0	22.33	-5.61	14.57	<=34.77	Pass	
	782		1	0	23.49	-5.61	15.73	<=34.77	Pass
				13	23.57	-5.61	15.81	<=34.77	Pass
		24		23.48	-5.61	15.72	<=34.77	Pass	
		12	0	22.27	-5.61	14.51	<=34.77	Pass	
			6	22.32	-5.61	14.56	<=34.77	Pass	
			13	22.29	-5.61	14.53	<=34.77	Pass	
	25	0	22.26	-5.61	14.50	<=34.77	Pass		
	784.5	1	0	23.31	-5.61	15.55	<=34.77	Pass	
			13	23.38	-5.61	15.62	<=34.77	Pass	
			24	23.32	-5.61	15.56	<=34.77	Pass	
		12	0	22.23	-5.61	14.47	<=34.77	Pass	
6			22.26	-5.61	14.50	<=34.77	Pass		
13			22.23	-5.61	14.47	<=34.77	Pass		
25		0	22.30	-5.61	14.54	<=34.77	Pass		
64QAM		779.5	1	0	22.22	-5.61	14.46	<=34.77	Pass
				13	22.30	-5.61	14.54	<=34.77	Pass
	24			22.24	-5.61	14.48	<=34.77	Pass	
	12		0	21.26	-5.61	13.50	<=34.77	Pass	
			6	21.33	-5.61	13.57	<=34.77	Pass	
			13	21.33	-5.61	13.57	<=34.77	Pass	
	25		0	21.31	-5.61	13.55	<=34.77	Pass	

	782	1	0	22.64	-5.61	14.88	<=34.77	Pass	
			13	22.70	-5.61	14.94	<=34.77	Pass	
			24	22.60	-5.61	14.84	<=34.77	Pass	
		12	0	21.20	-5.61	13.44	<=34.77	Pass	
			6	21.26	-5.61	13.50	<=34.77	Pass	
			13	21.23	-5.61	13.47	<=34.77	Pass	
		25	0	21.28	-5.61	13.52	<=34.77	Pass	
		784.5	1	0	22.47	-5.61	14.71	<=34.77	Pass
				13	22.56	-5.61	14.80	<=34.77	Pass
	24			22.51	-5.61	14.75	<=34.77	Pass	
	12		0	21.34	-5.61	13.58	<=34.77	Pass	
			6	21.40	-5.61	13.64	<=34.77	Pass	
			13	21.36	-5.61	13.60	<=34.77	Pass	
	25	0	21.35	-5.61	13.59	<=34.77	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.2 B13_10MHz_ERP

Band: 13 / Bandwidth: 10MHz / NTV										
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict		
		Size	Offset			Result	Limit			
QPSK	782	1	0	24.26	-5.61	16.50	<=34.77	Pass		
			25	24.31	-5.61	16.55	<=34.77	Pass		
			49	24.26	-5.61	16.50	<=34.77	Pass		
		25	0	23.20	-5.61	15.44	<=34.77	Pass		
			13	23.29	-5.61	15.53	<=34.77	Pass		
			25	23.23	-5.61	15.47	<=34.77	Pass		
		50	0	23.23	-5.61	15.47	<=34.77	Pass		
		16QAM	782	1	0	23.72	-5.61	15.96	<=34.77	Pass
					25	23.81	-5.61	16.05	<=34.77	Pass
49	23.72				-5.61	15.96	<=34.77	Pass		
25	0			22.27	-5.61	14.51	<=34.77	Pass		
	13			22.34	-5.61	14.58	<=34.77	Pass		
	25			22.31	-5.61	14.55	<=34.77	Pass		
50	0			22.22	-5.61	14.46	<=34.77	Pass		
64QAM	782			1	0	22.54	-5.61	14.78	<=34.77	Pass
					25	22.60	-5.61	14.84	<=34.77	Pass
		49	22.54		-5.61	14.78	<=34.77	Pass		
		25	0	21.26	-5.61	13.50	<=34.77	Pass		
			13	21.39	-5.61	13.63	<=34.77	Pass		
			25	21.33	-5.61	13.57	<=34.77	Pass		
		50	0	21.26	-5.61	13.50	<=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	-2.203	-0.0028	-2.5 to 2.5	Pass
					NV	-4.077	-0.0052	-2.5 to 2.5	Pass
					HV	-0.529	-0.0007	-2.5 to 2.5	Pass
				-30	NV	-1.960	-0.0025	-2.5 to 2.5	Pass
				-20	NV	-3.576	-0.0046	-2.5 to 2.5	Pass
				-10	NV	-1.373	-0.0018	-2.5 to 2.5	Pass
				0	NV	-0.143	-0.0002	-2.5 to 2.5	Pass
				10	NV	-2.146	-0.0027	-2.5 to 2.5	Pass
				30	NV	-2.117	-0.0027	-2.5 to 2.5	Pass
				40	NV	-1.717	-0.0022	-2.5 to 2.5	Pass
50	NV	-2.761	-0.0035	-2.5 to 2.5	Pass				

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

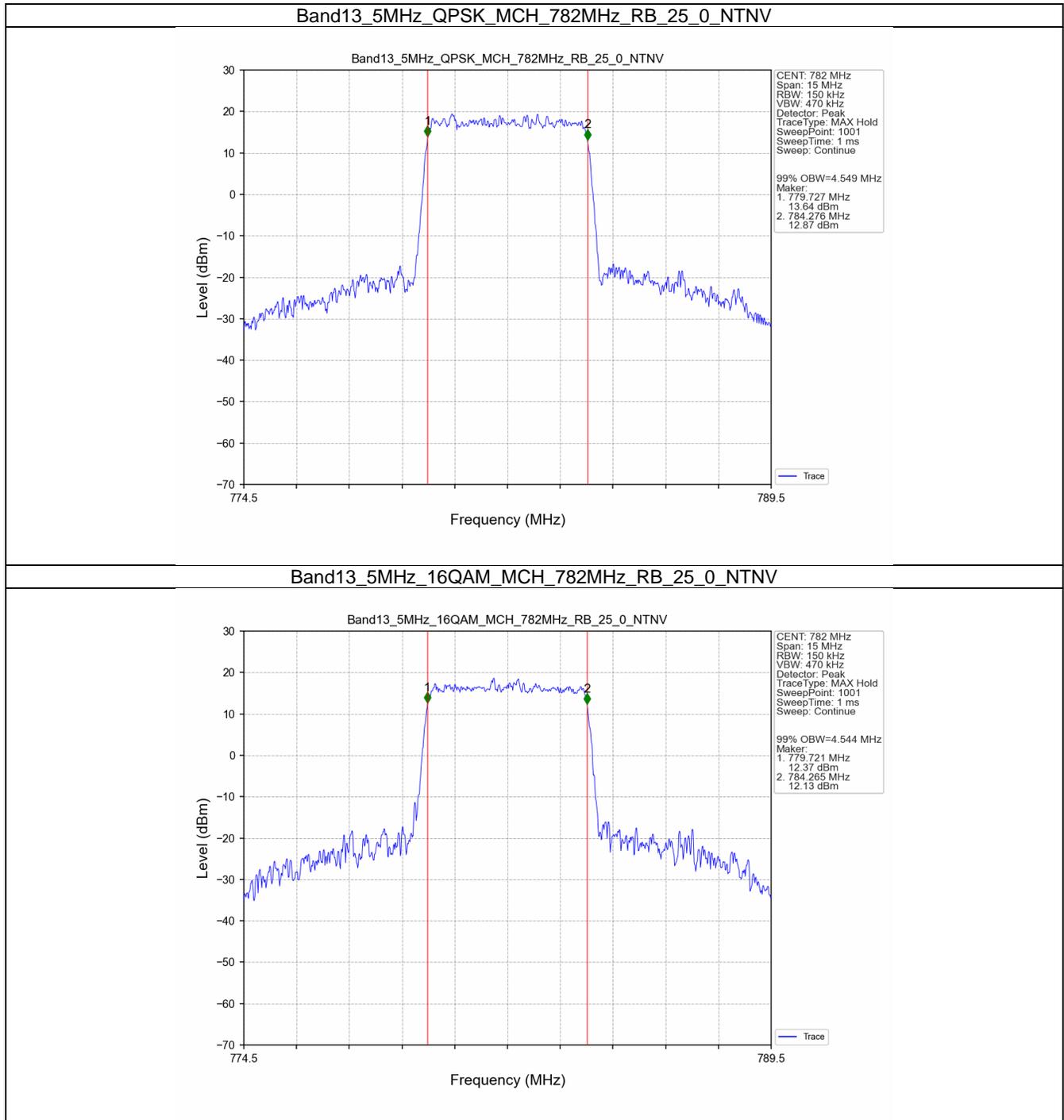
Band: 13 / NTV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.549	/	Pass
	16QAM	782	25	0	4.544	/	Pass
	64QAM	782	25	0	4.534	/	Pass
10	QPSK	782	50	0	9.032	/	Pass
	16QAM	782	50	0	9.025	/	Pass
	64QAM	782	50	0	9.034	/	Pass

3.1.2 Band13_XDB

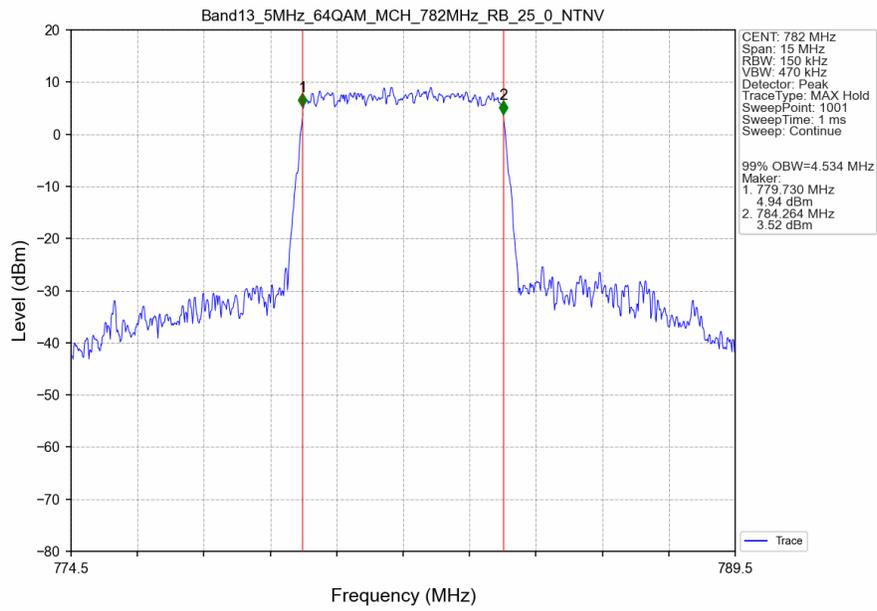
Band: 13 / NTV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	782	25	0	4.972	/	Pass
	16QAM	782	25	0	4.983	/	Pass
	64QAM	782	25	0	4.996	/	Pass
10	QPSK	782	50	0	9.930	/	Pass
	16QAM	782	50	0	9.846	/	Pass
	64QAM	782	50	0	9.895	/	Pass

3.2 Test Graph

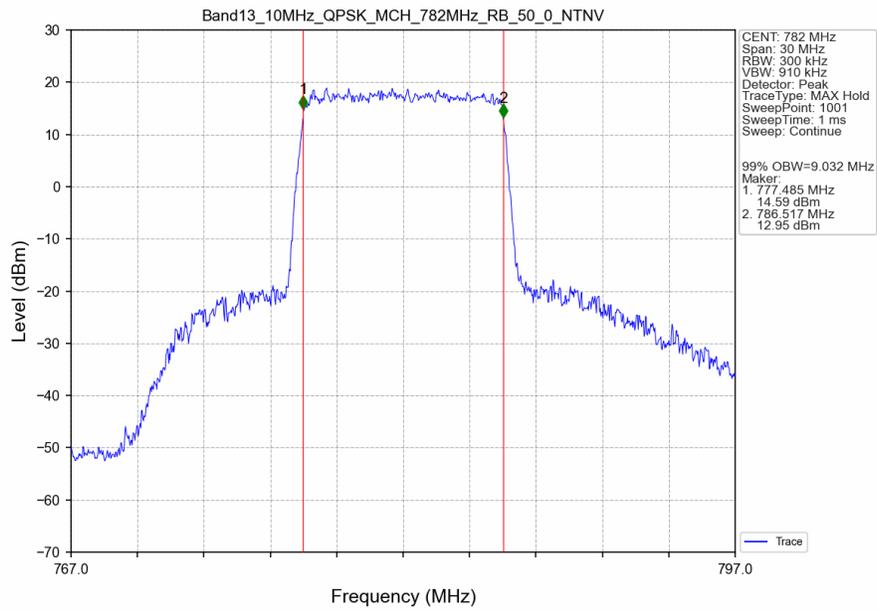
3.2.1 Band13_OBW



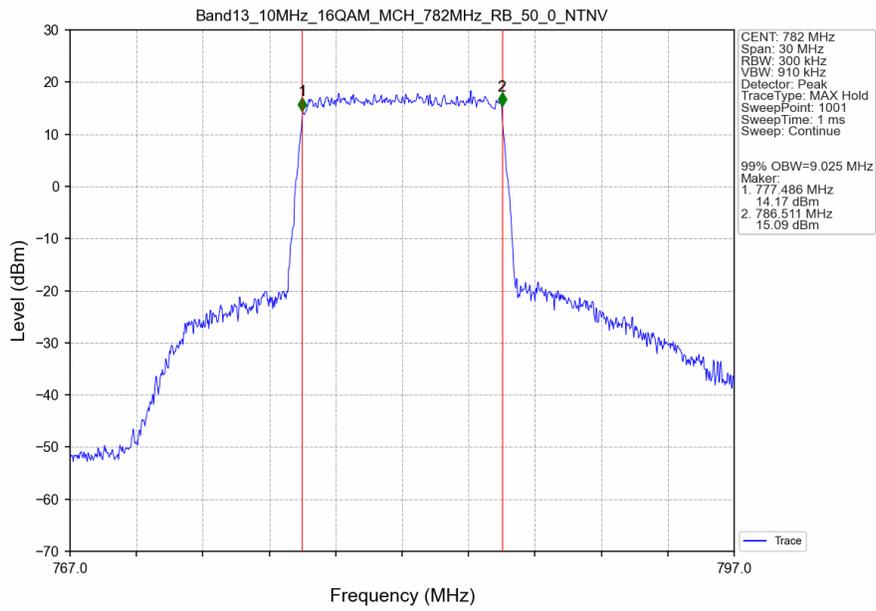
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



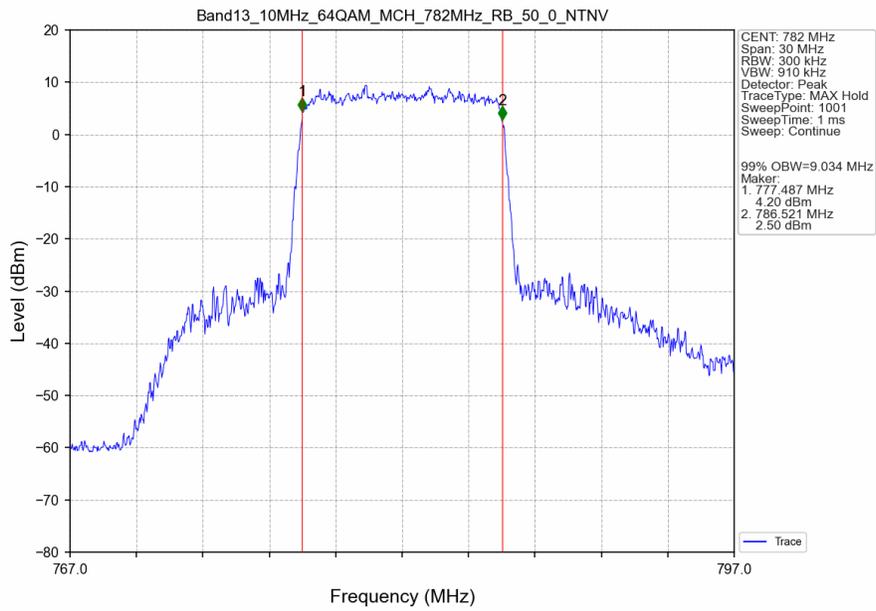
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



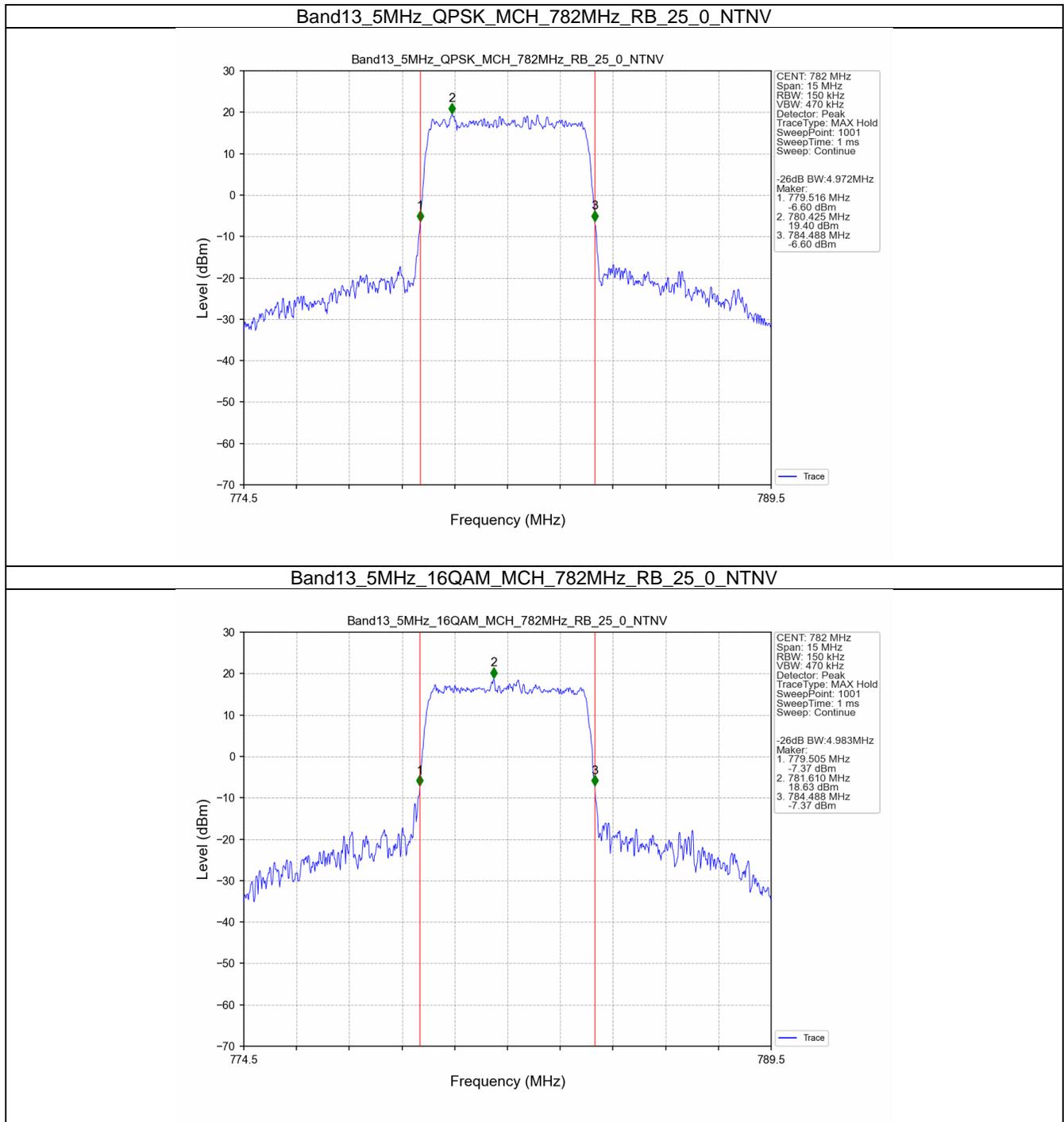
Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



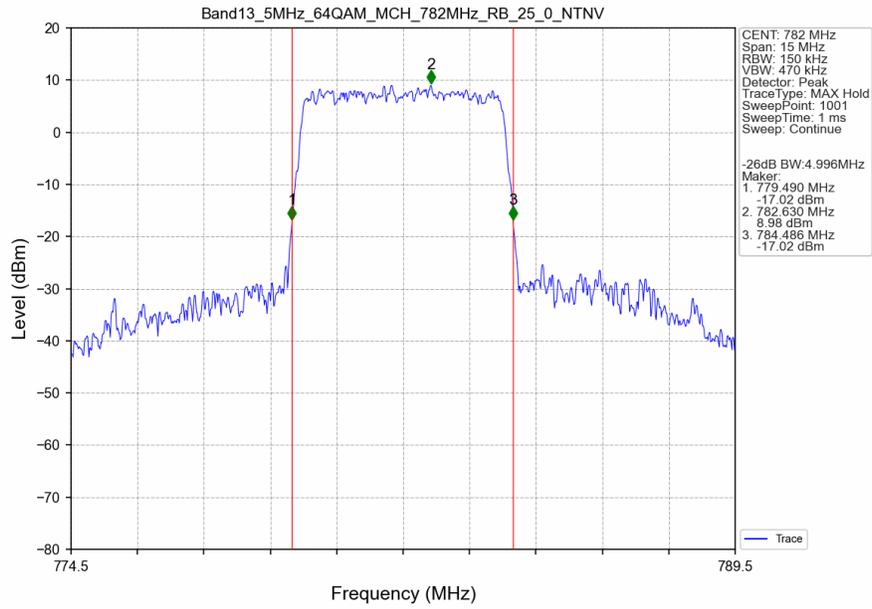
Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



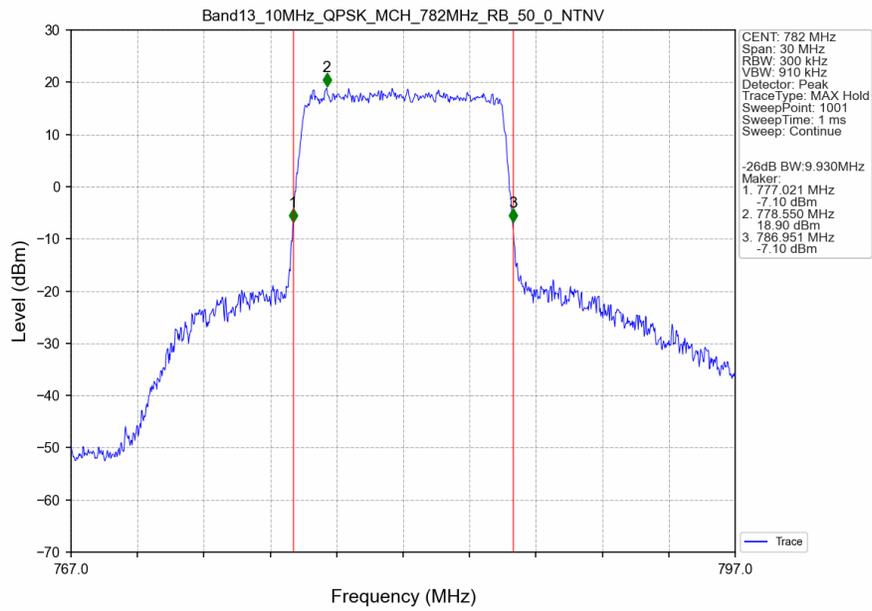
3.2.2 Band13_XDB



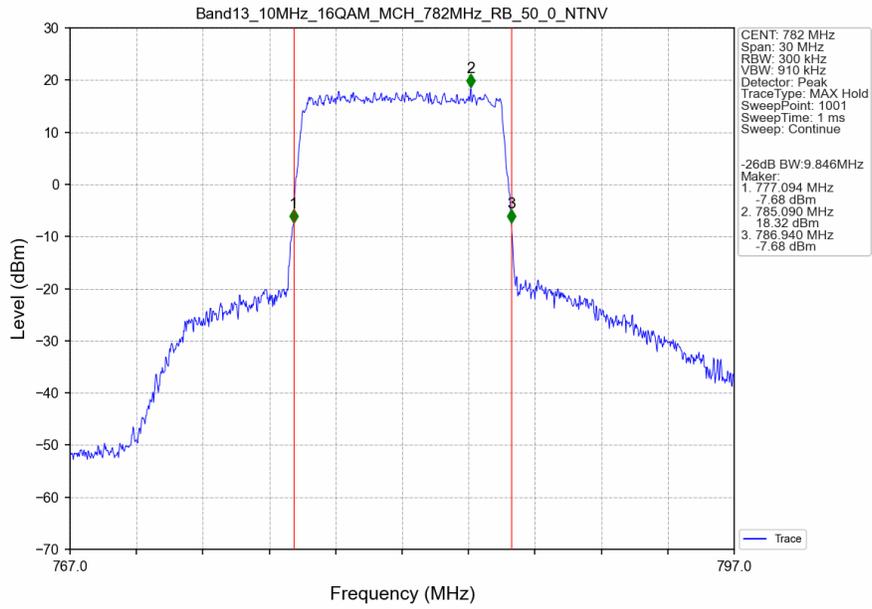
Band13_5MHz_64QAM_MCH_782MHz_RB_25_0_NTNV



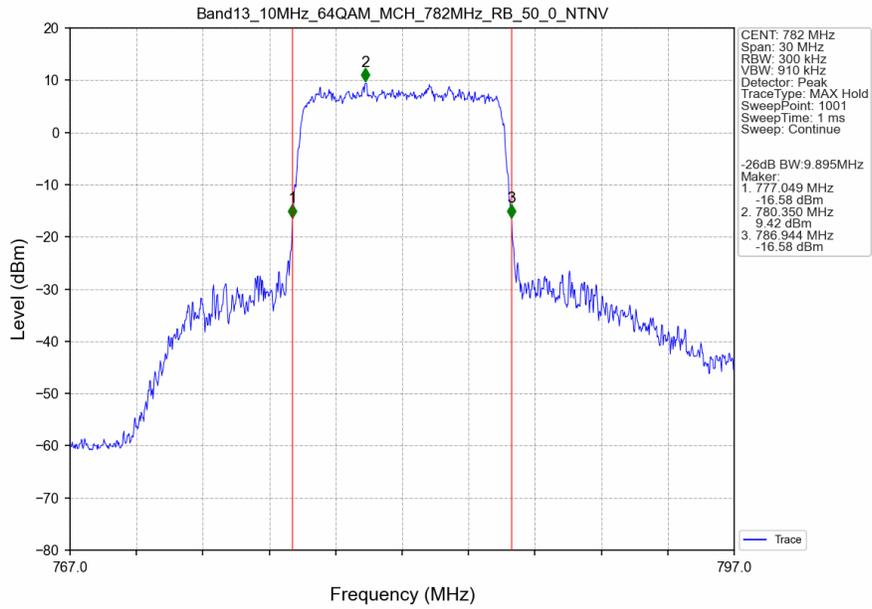
Band13_10MHz_QPSK_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_16QAM_MCH_782MHz_RB_50_0_NTNV



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



4. Peak-Average Ratio

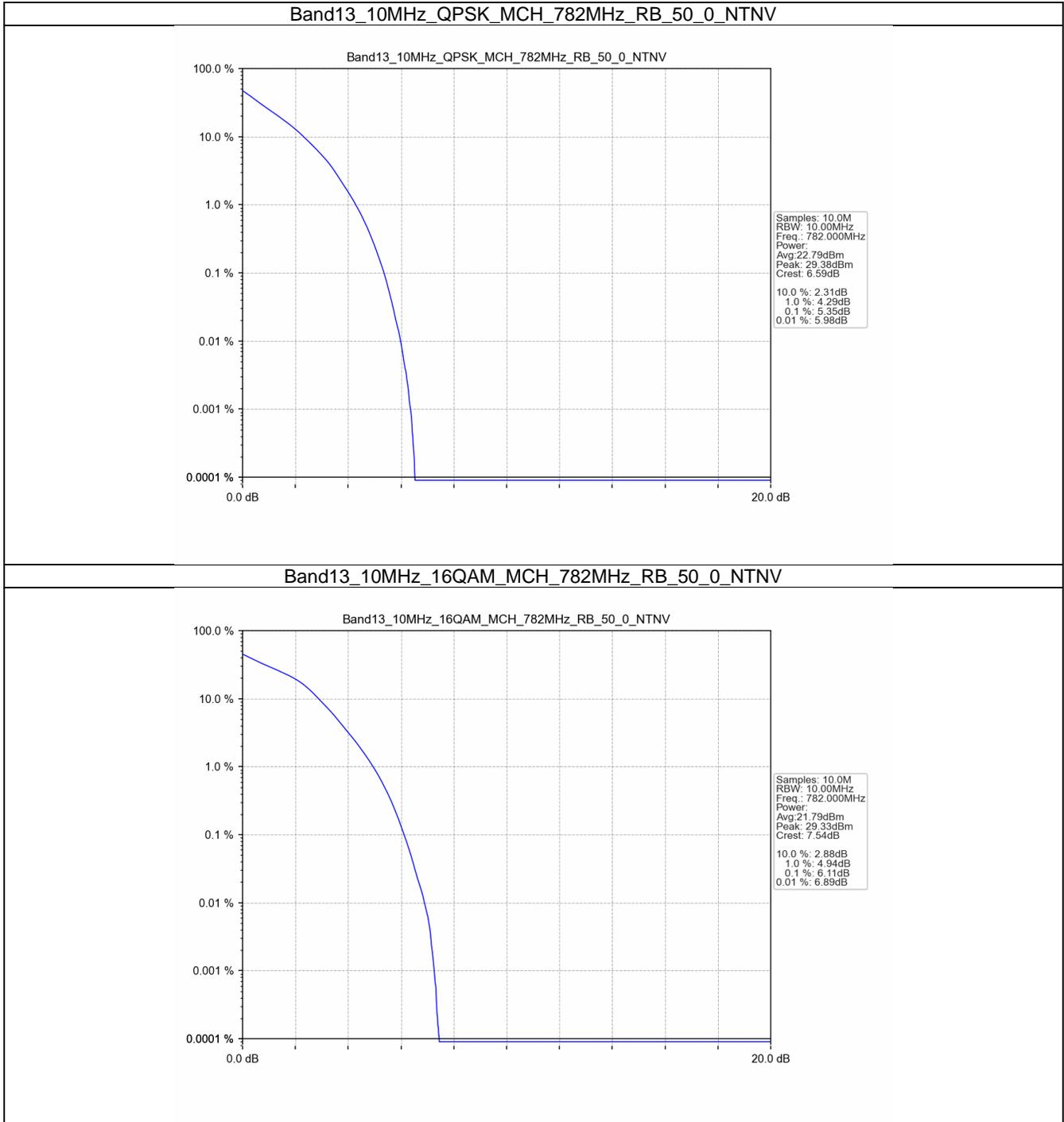
4.1 Test Result

4.1.1 B13_10MHz

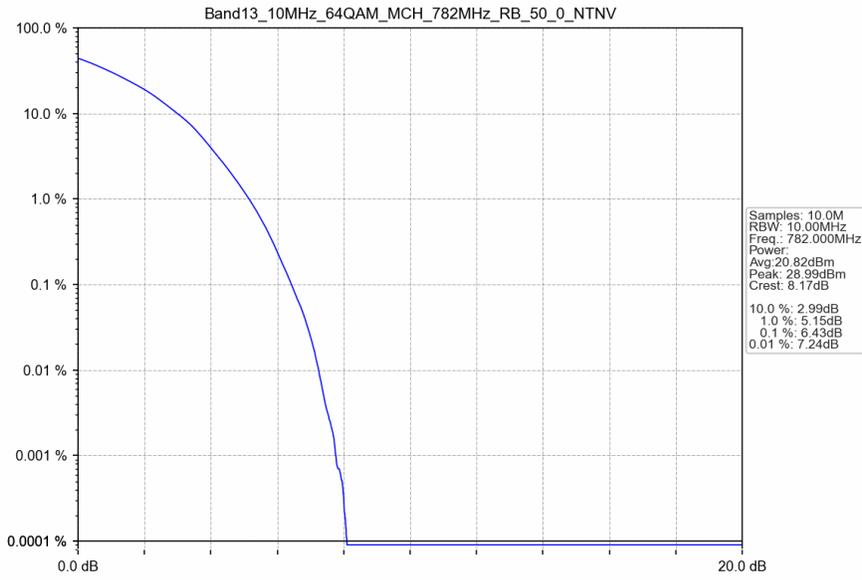
Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.35	<=13	Pass
16QAM	782	50	0	6.11	<=13	Pass
64QAM	782	50	0	6.43	<=13	Pass

4.2 Test Graph

4.2.1 B13_10MHz



Band13_10MHz_64QAM_MCH_782MHz_RB_50_0_NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B13_5MHz

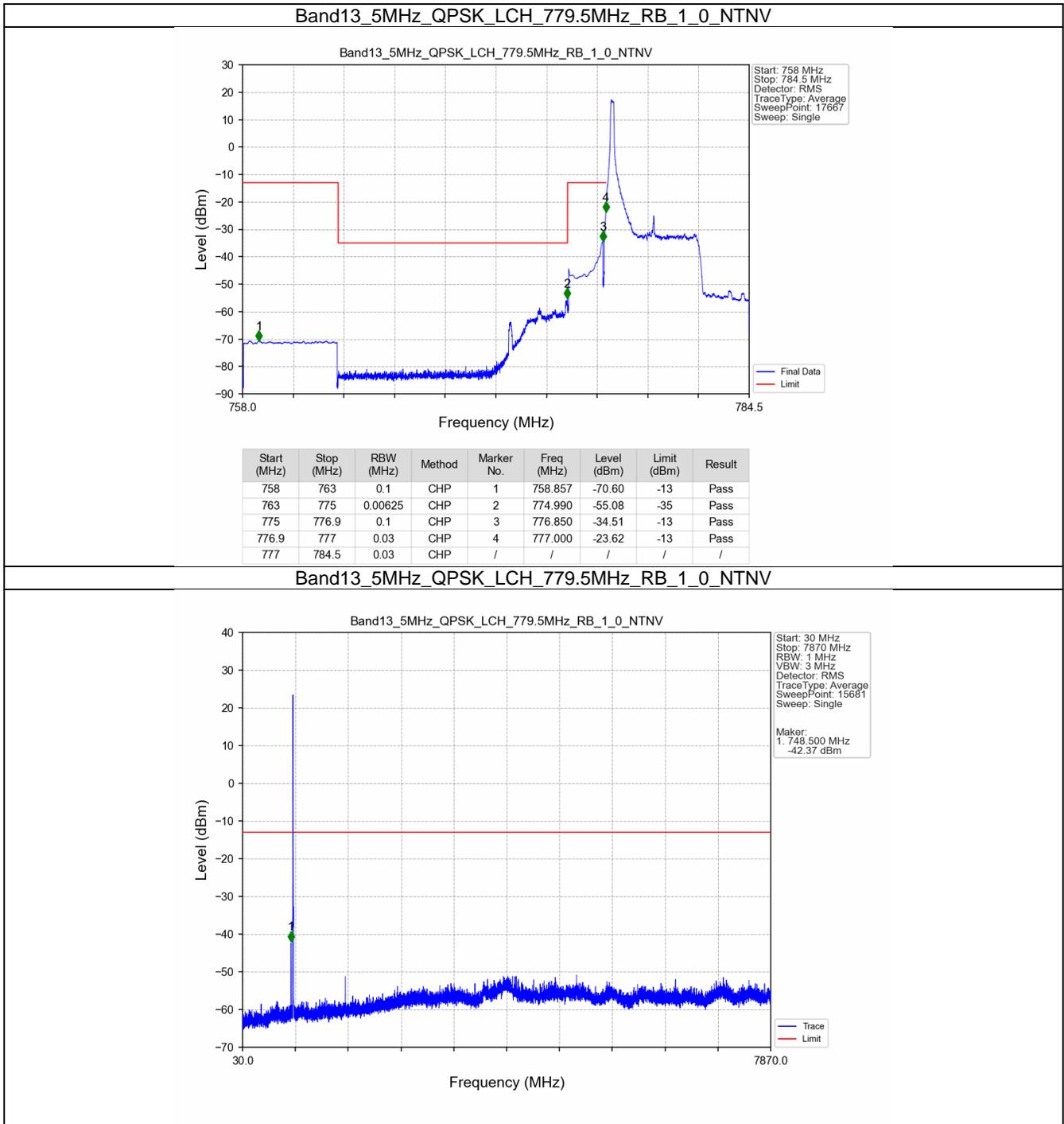
Band: 13 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	779.5	1	0	Refer To Test Graph	Pass	
		25	0	Refer To Test Graph	Pass	
	782	1	0	Refer To Test Graph	Pass	
	784.5	1	0	Refer To Test Graph	Pass	
			24	Refer To Test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

5.1.2 B13_10MHz

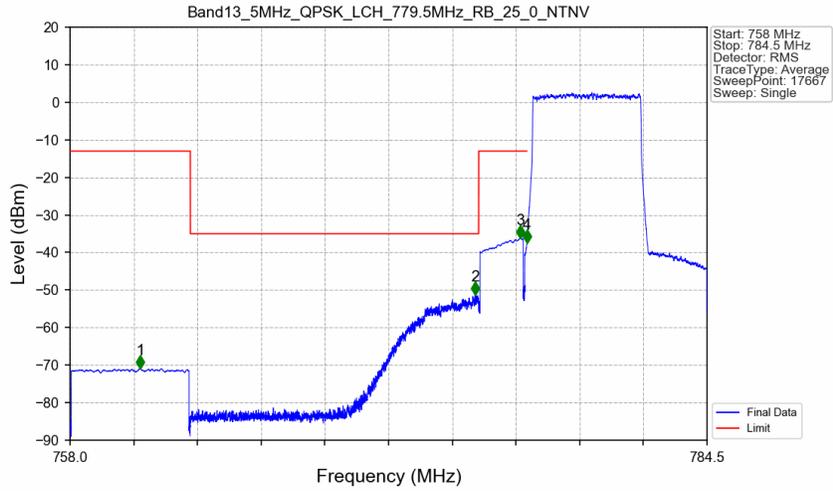
Band: 13 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph	Pass	
		50	0	Refer To Test Graph	Pass	
	782	1	49	Refer To Test Graph	Pass	
		50	0	Refer To Test Graph	Pass	

5.2 Test Graph

5.2.1 B13_5MHz

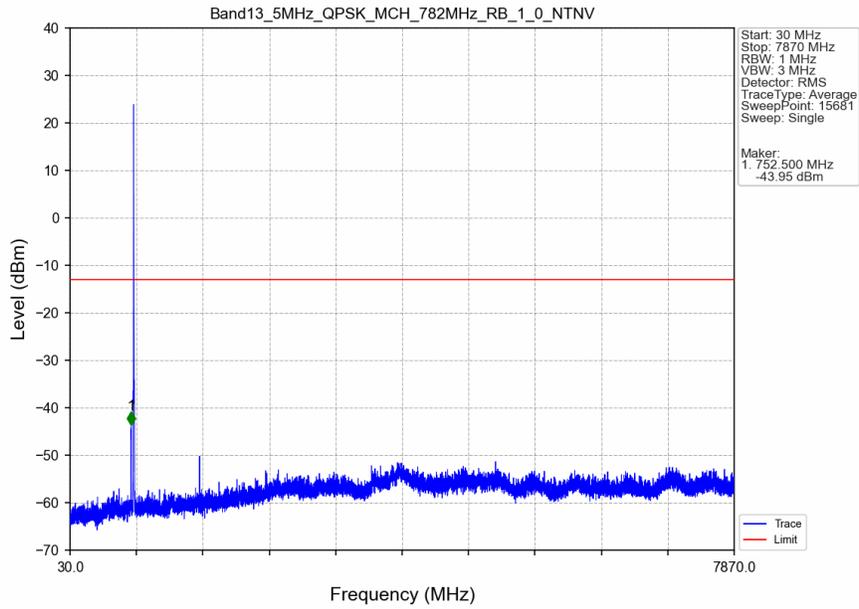


Band13_5MHz_QPSK_LCH_779.5MHz_RB_25_0_NTNV

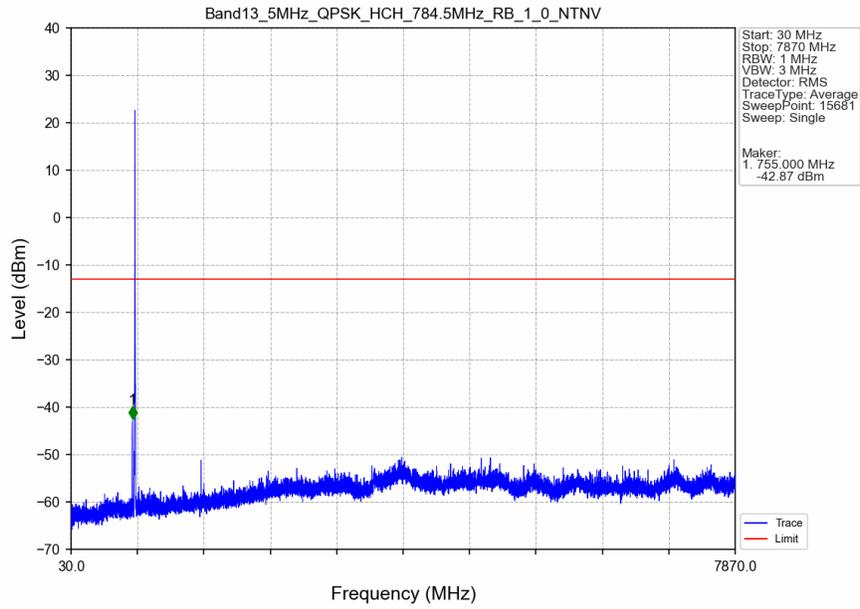


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	760.925	-70.96	-13	Pass
763	775	0.00625	CHP	2	774.855	-51.19	-35	Pass
775	776.9	0.1	CHP	3	776.716	-36.19	-13	Pass
776.9	777	0.03	CHP	4	777.000	-37.42	-13	Pass
777	784.5	0.03	CHP	/	/	/	/	/

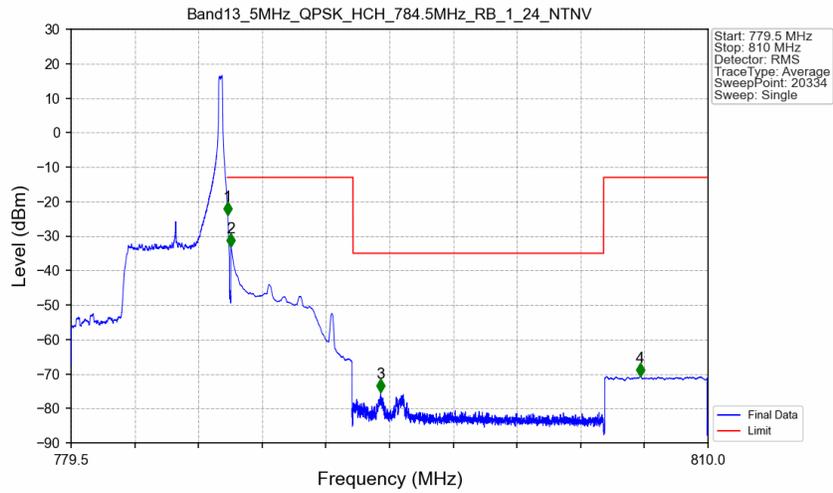
Band13_5MHz_QPSK_MCH_782MHz_RB_1_0_NTNV



Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_0_NTNV

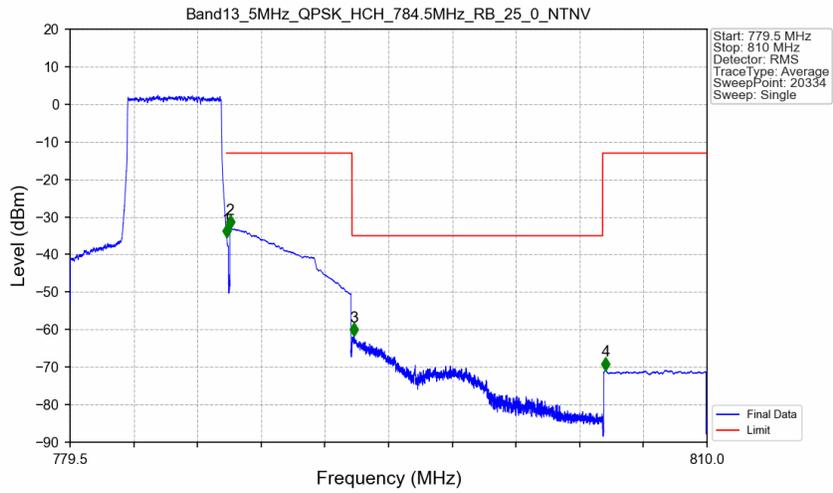


Band13_5MHz_QPSK_HCH_784.5MHz_RB_1_24_NTNV



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	-33.02	-13	Pass
793	805	0.00625	CHP	3	794.329	-75.37	-35	Pass
805	810	0.1	CHP	4	806.757	-70.74	-13	Pass

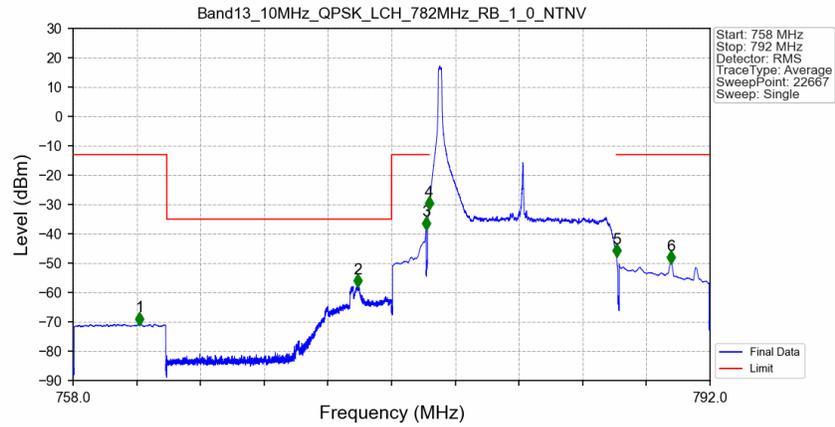
Band13_5MHz_QPSK_HCH_784.5MHz_RB_25_0_NTNV



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	-35.40	-13	Pass
787.1	793	0.1	CHP	2	787.167	-33.00	-13	Pass
793	805	0.00625	CHP	3	793.104	-61.68	-35	Pass
805	810	0.1	CHP	4	805.147	-70.81	-13	Pass

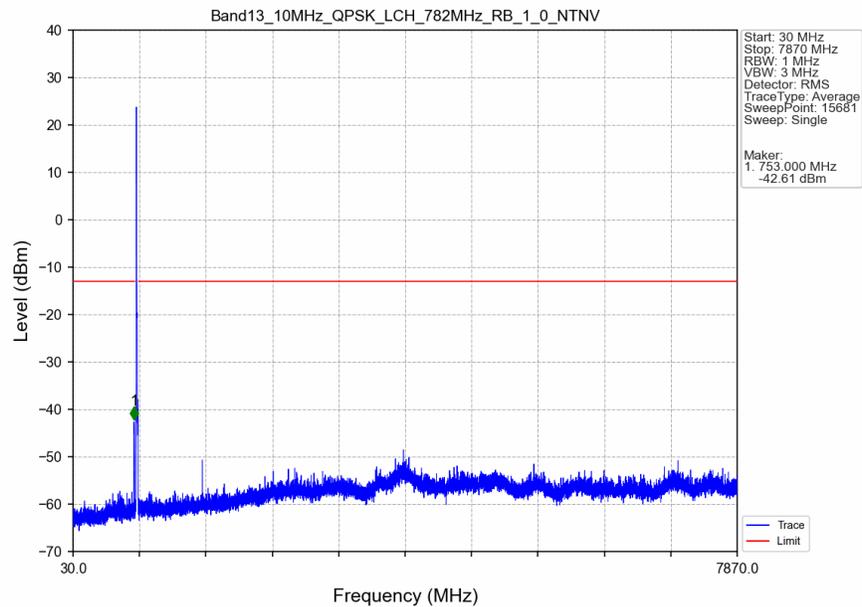
5.2.2 B13_10MHz

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

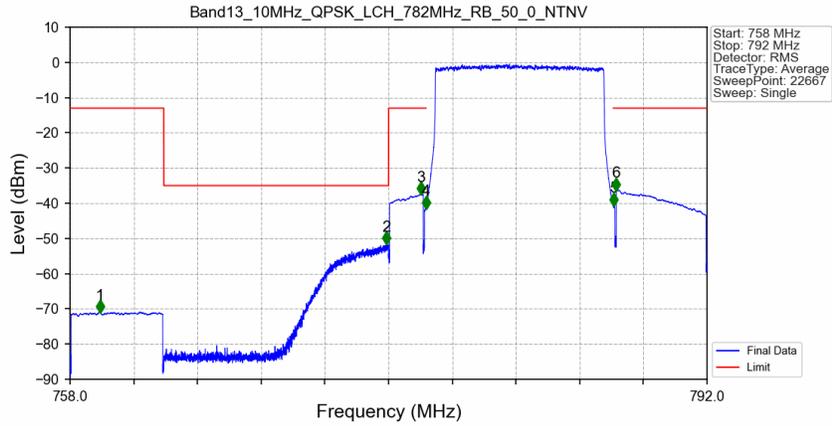


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	761.540	-70.75	-13	Pass
763	775	0.00625	CHP	2	773.191	-57.77	-35	Pass
775	776.9	0.1	CHP	3	776.850	-38.23	-13	Pass
776.9	777	0.03	CHP	4	777.000	-31.47	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.000	-47.64	-13	Pass
787.1	792	0.1	CHP	6	789.903	-49.91	-13	Pass

Band13_10MHz_QPSK_LCH_782MHz_RB_1_0_NTNV

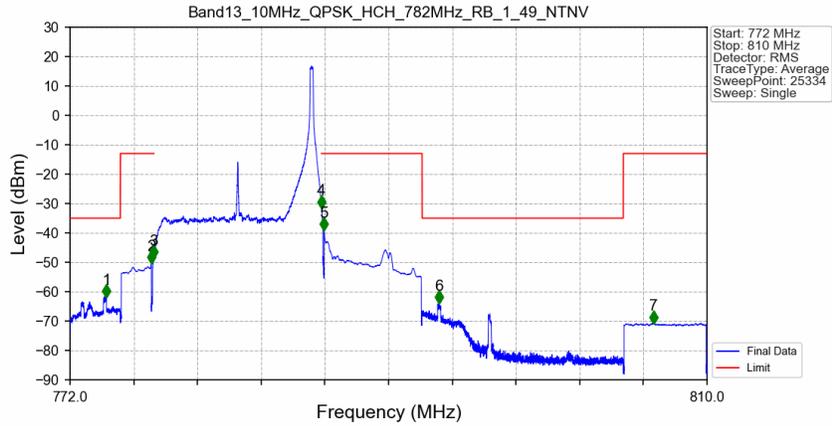


Band13_10MHz_QPSK_LCH_782MHz_RB_50_0_NTNV



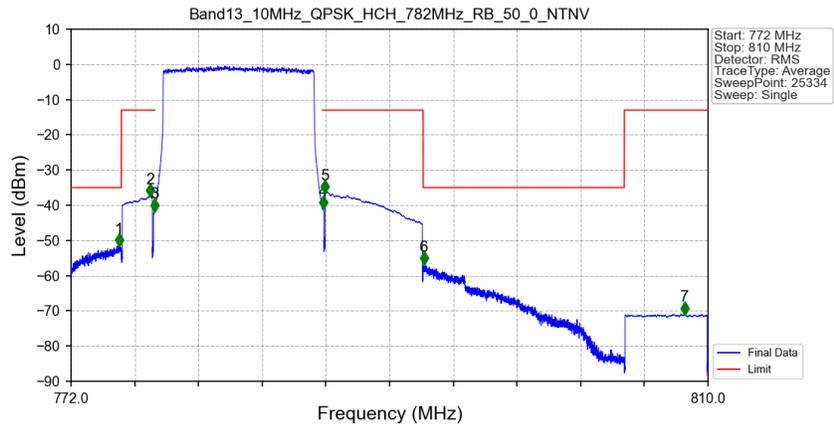
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
758	763	0.1	CHP	1	759.601	-70.82	-13	Pass
763	775	0.00625	CHP	2	774.877	-51.42	-35	Pass
775	776.9	0.1	CHP	3	776.725	-37.40	-13	Pass
776.9	777	0.03	CHP	4	777.000	-41.30	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	5	787.029	-40.44	-13	Pass
787.1	792	0.1	CHP	6	787.153	-36.19	-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	774.165	-61.59	-35	Pass
775	776.9	0.1	CHP	2	776.850	-50.20	-13	Pass
776.9	777	0.03	CHP	3	777.000	-48.36	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.000	-31.33	-13	Pass
787.1	793	0.1	CHP	5	787.150	-38.93	-13	Pass
793	805	0.00625	CHP	6	794.007	-63.76	-35	Pass
805	810	0.1	CHP	7	806.821	-70.54	-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	774.876	-51.49	-35	Pass
775	776.9	0.1	CHP	2	776.722	-37.33	-13	Pass
776.9	777	0.03	CHP	3	777.000	-41.50	-13	Pass
777	787	0.03	CHP	/	/	/	/	/
787	787.1	0.03	CHP	4	787.032	-40.70	-13	Pass
787.1	793	0.1	CHP	5	787.150	-36.22	-13	Pass
793	805	0.00625	CHP	6	793.045	-56.56	-35	Pass
805	810	0.1	CHP	7	808.611	-70.80	-13	Pass