

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B5_1.4MHz_ERP

Band: 5 / Bandwidth: 1.4MHz / NTV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	824.7	1	0	22.58	5.17	25.60	<=38.45	Pass
			5	22.59	5.17	25.61	<=38.45	Pass
		6	0	21.61	5.17	24.63	<=38.45	Pass
	836.5	1	0	22.61	5.17	25.63	<=38.45	Pass
			5	22.52	5.17	25.54	<=38.45	Pass
		6	0	21.65	5.17	24.67	<=38.45	Pass
	848.3	1	0	22.88	5.17	25.90	<=38.45	Pass
			5	22.65	5.17	25.67	<=38.45	Pass
		6	0	21.65	5.17	24.67	<=38.45	Pass
16QAM	824.7	1	0	21.60	5.17	24.62	<=38.45	Pass
			5	21.64	5.17	24.66	<=38.45	Pass
		6	0	20.61	5.17	23.63	<=38.45	Pass
	836.5	1	0	21.53	5.17	24.55	<=38.45	Pass
			5	21.46	5.17	24.48	<=38.45	Pass
		6	0	20.70	5.17	23.72	<=38.45	Pass
	848.3	1	0	21.85	5.17	24.87	<=38.45	Pass
			5	21.72	5.17	24.74	<=38.45	Pass
		6	0	20.81	5.17	23.83	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.2 B5_3MHz_ERP

Band: 5 / Bandwidth: 3MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	825.5	1	0	22.50	5.17	25.52	<=38.45	Pass
			14	22.39	5.17	25.41	<=38.45	Pass
		15	0	21.57	5.17	24.59	<=38.45	Pass
	836.5	1	0	22.55	5.17	25.57	<=38.45	Pass
			14	22.35	5.17	25.37	<=38.45	Pass
		15	0	21.64	5.17	24.66	<=38.45	Pass
	847.5	1	0	22.87	5.17	25.89	<=38.45	Pass
			14	22.49	5.17	25.51	<=38.45	Pass
		15	0	21.77	5.17	24.79	<=38.45	Pass
16QAM	825.5	1	0	21.83	5.17	24.85	<=38.45	Pass
			14	21.78	5.17	24.80	<=38.45	Pass
		15	0	20.57	5.17	23.59	<=38.45	Pass
	836.5	1	0	21.66	5.17	24.68	<=38.45	Pass
			14	21.48	5.17	24.50	<=38.45	Pass
		15	0	20.70	5.17	23.72	<=38.45	Pass
	847.5	1	0	21.58	5.17	24.60	<=38.45	Pass
			14	21.28	5.17	24.30	<=38.45	Pass
		15	0	20.80	5.17	23.82	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.3 B5_5MHz_ERP

Band: 5 / Bandwidth: 5MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	826.5	1	0	22.72	5.17	25.74	<=38.45	Pass
			24	22.67	5.17	25.69	<=38.45	Pass
		25	0	21.75	5.17	24.77	<=38.45	Pass
	836.5	1	0	22.64	5.17	25.66	<=38.45	Pass
			24	22.42	5.17	25.44	<=38.45	Pass
		25	0	21.67	5.17	24.69	<=38.45	Pass
	846.5	1	0	22.88	5.17	25.90	<=38.45	Pass
			24	22.69	5.17	25.71	<=38.45	Pass
		25	0	21.88	5.17	24.90	<=38.45	Pass
16QAM	826.5	1	0	22.00	5.17	25.02	<=38.45	Pass
			24	22.01	5.17	25.03	<=38.45	Pass
		25	0	20.82	5.17	23.84	<=38.45	Pass
	836.5	1	0	21.88	5.17	24.90	<=38.45	Pass
			24	21.68	5.17	24.70	<=38.45	Pass
		25	0	20.76	5.17	23.78	<=38.45	Pass
	846.5	1	0	22.03	5.17	25.05	<=38.45	Pass
			24	21.91	5.17	24.93	<=38.45	Pass
		25	0	21.05	5.17	24.07	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.4 B5_10MHz_ERP

Band: 5 / Bandwidth: 10MHz / NTVN								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	829	1	0	22.86	5.17	25.88	<=38.45	Pass
			49	22.82	5.17	25.84	<=38.45	Pass
		50	0	21.79	5.17	24.81	<=38.45	Pass
	836.5	1	0	22.83	5.17	25.85	<=38.45	Pass
			49	22.60	5.17	25.62	<=38.45	Pass
		50	0	21.73	5.17	24.75	<=38.45	Pass
	844	1	0	22.63	5.17	25.65	<=38.45	Pass
			49	22.92	5.17	25.94	<=38.45	Pass
		50	0	21.77	5.17	24.79	<=38.45	Pass
16QAM	829	1	0	22.15	5.17	25.17	<=38.45	Pass
			49	22.15	5.17	25.17	<=38.45	Pass
	836.5	1	0	21.89	5.17	24.91	<=38.45	Pass
			49	21.71	5.17	24.73	<=38.45	Pass
	844	1	0	21.35	5.17	24.37	<=38.45	Pass
			49	21.71	5.17	24.73	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

2. Frequency Stability

2.1 Test Result

2.1.1 B5_10MHz

Band: 5 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	836.5	50	0	20	3.40	0.830	0.0010	-2.5 to 2.5	Pass
					3.80	0.257	0.0003	-2.5 to 2.5	Pass
					4.20	0.572	0.0007	-2.5 to 2.5	Pass
				-30	3.80	0.687	0.0008	-2.5 to 2.5	Pass
				-20	3.80	0.072	0.0001	-2.5 to 2.5	Pass
				-10	3.80	0.215	0.0003	-2.5 to 2.5	Pass
				0	3.80	0.658	0.0008	-2.5 to 2.5	Pass
				10	3.80	0.086	0.0001	-2.5 to 2.5	Pass
				30	3.80	0.429	0.0005	-2.5 to 2.5	Pass
				40	3.80	0.257	0.0003	-2.5 to 2.5	Pass
				50	3.80	0.043	0.0001	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band5_OBW

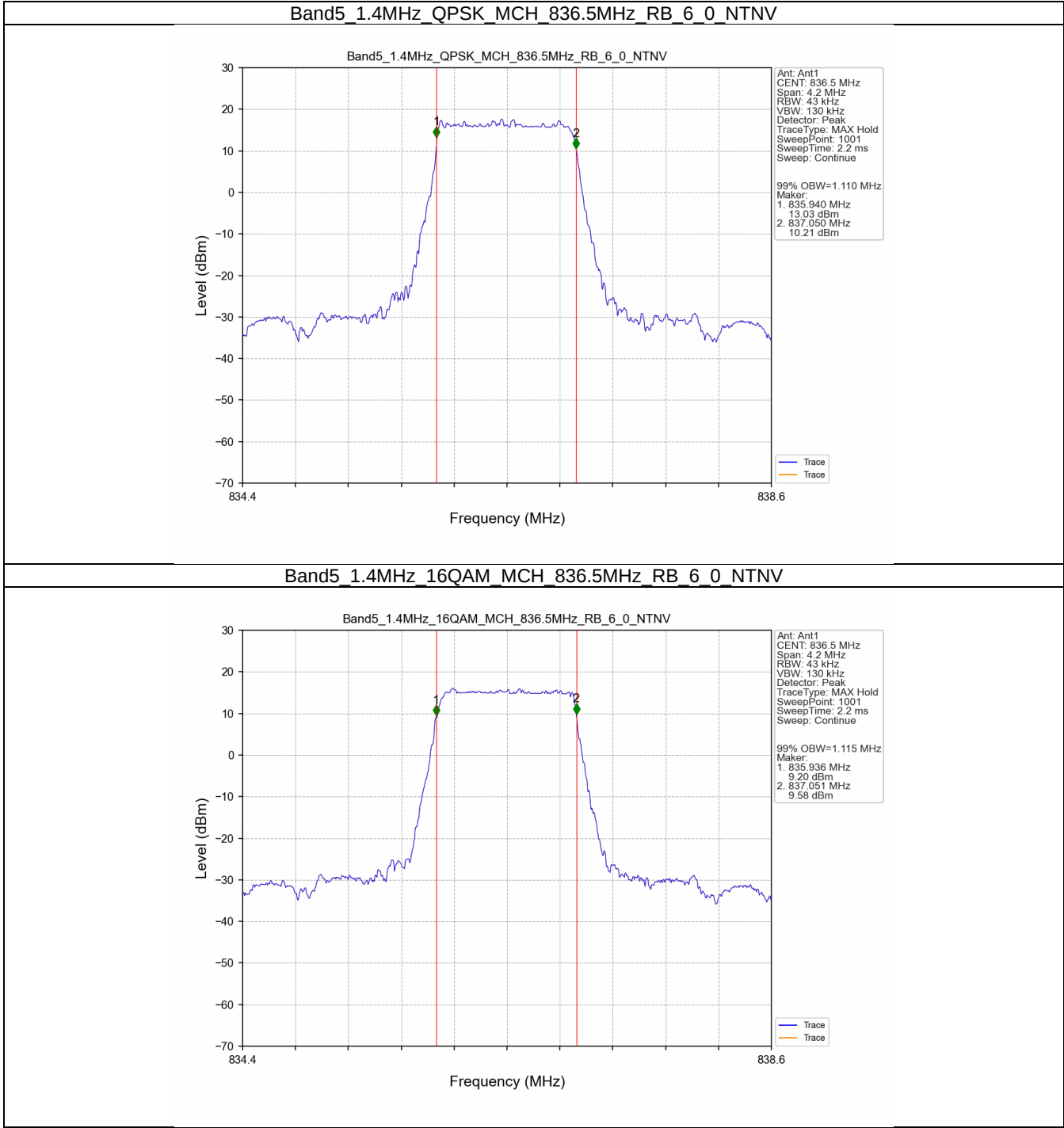
Band: 5 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	836.5	6	0	1.110	/	Pass
	16QAM	836.5	6	0	1.115	/	Pass
3	QPSK	836.5	15	0	2.745	/	Pass
	16QAM	836.5	15	0	2.746	/	Pass
5	QPSK	836.5	25	0	4.568	/	Pass
	16QAM	836.5	25	0	4.534	/	Pass
10	QPSK	836.5	50	0	9.069	/	Pass
	16QAM	836.5	27	0	5.074	/	Pass

3.1.2 Band5_XDB

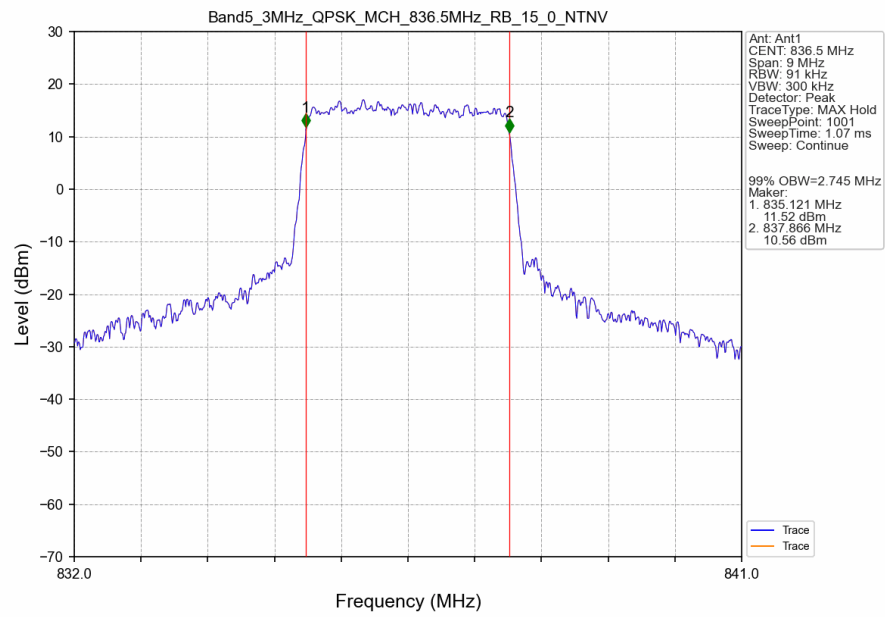
Band: 5 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
1.4	QPSK	836.5	6	0	1.332	/	Pass
	16QAM	836.5	6	0	1.335	/	Pass
3	QPSK	836.5	15	0	3.048	/	Pass
	16QAM	836.5	15	0	3.048	/	Pass
5	QPSK	836.5	25	0	5.133	/	Pass
	16QAM	836.5	25	0	5.074	/	Pass
10	QPSK	836.5	50	0	10.382	/	Pass
	16QAM	836.5	27	0	6.394	/	Pass

3.2 Test Graph

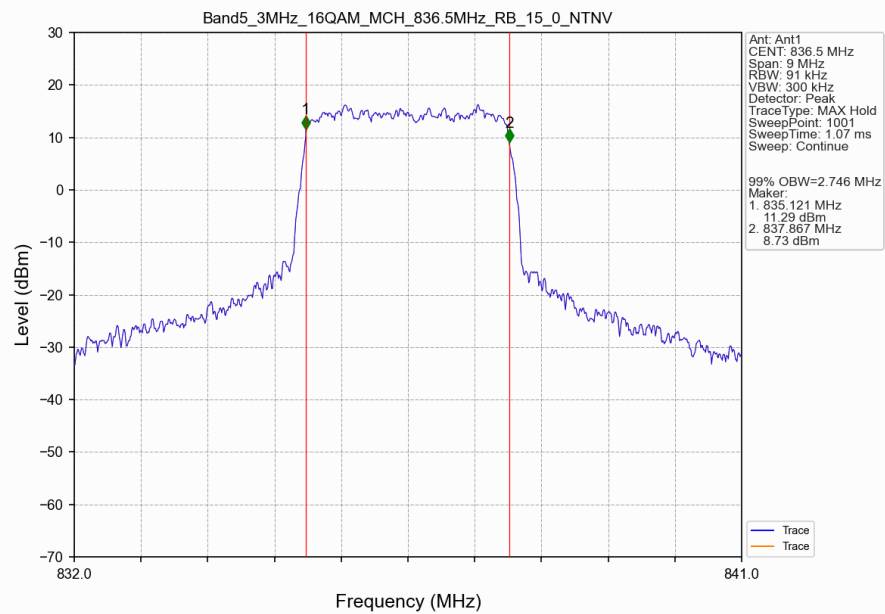
3.2.1 Band5_OBW



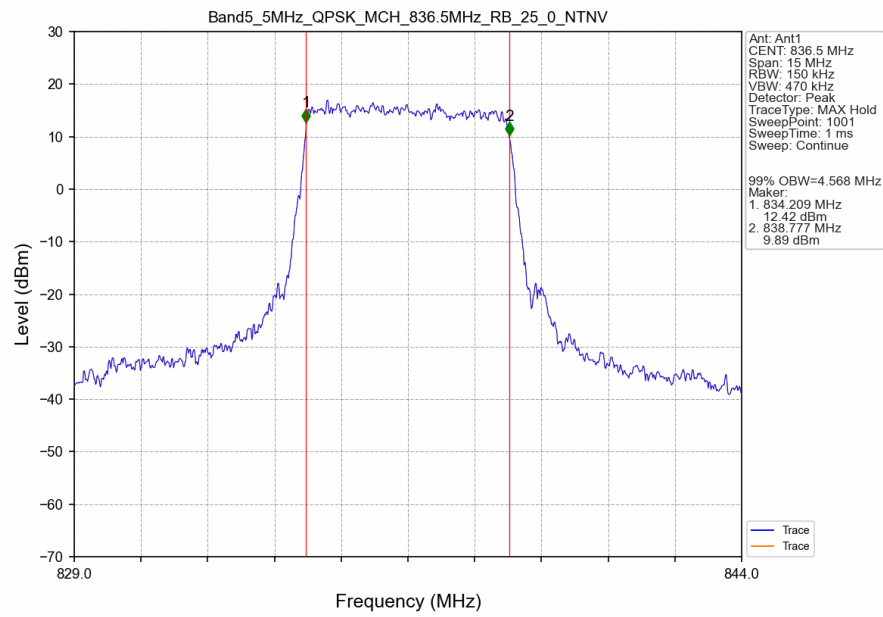
Band5_3MHz_QPSK_MCH_836.5MHz_RB_15_0_NTNV



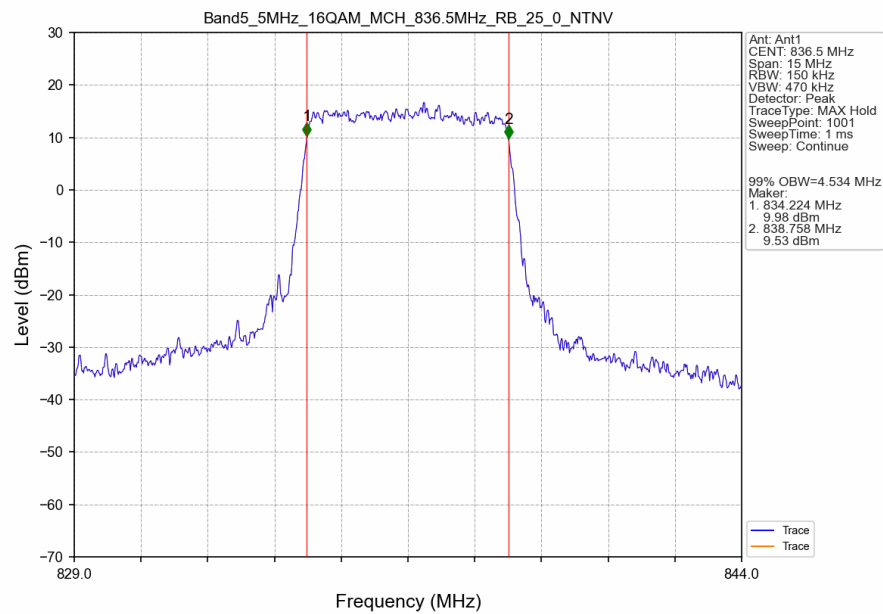
Band5_3MHz_16QAM_MCH_836.5MHz_RB_15_0_NTNV



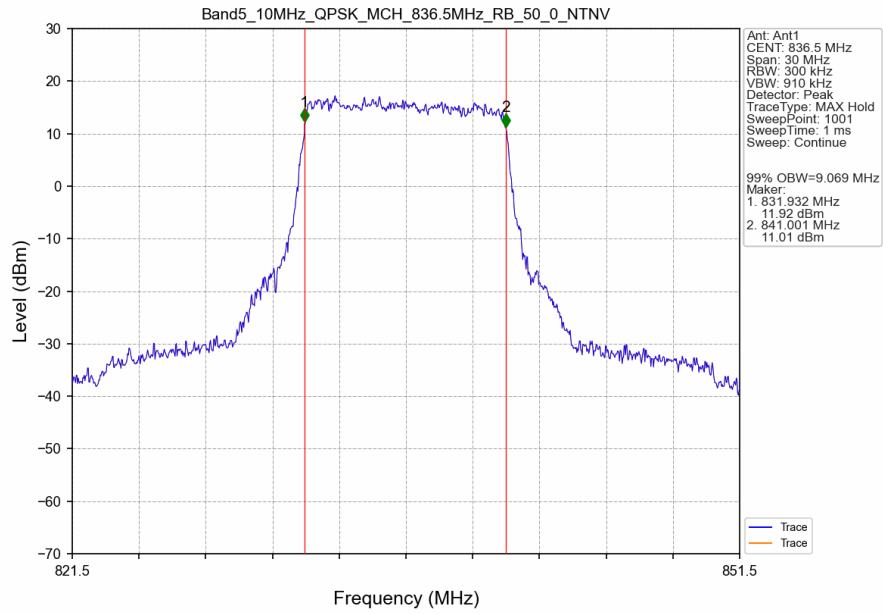
Band5 5MHz QPSK MCH 836.5MHz RB 25 0 NTN



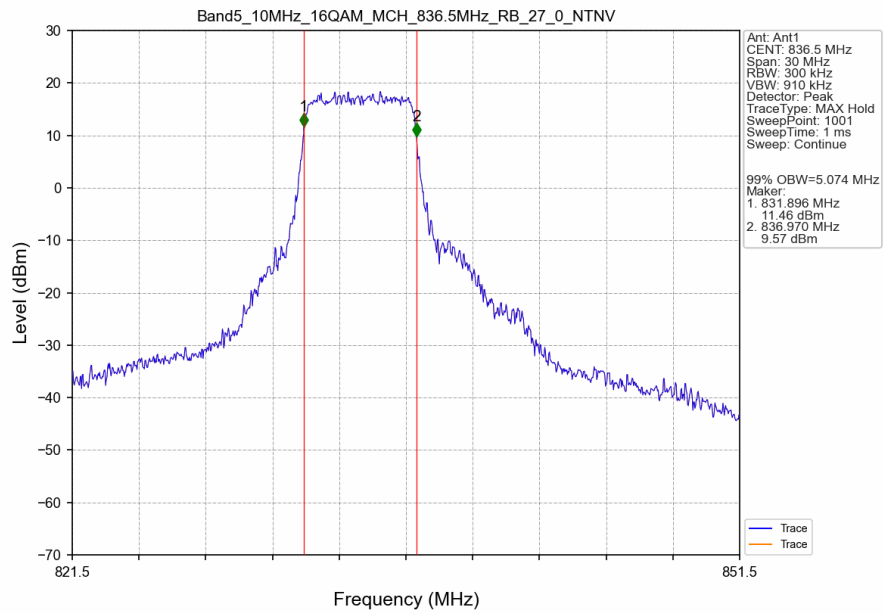
Band5 5MHz 16QAM MCH 836.5MHz RB 25 0 NTN



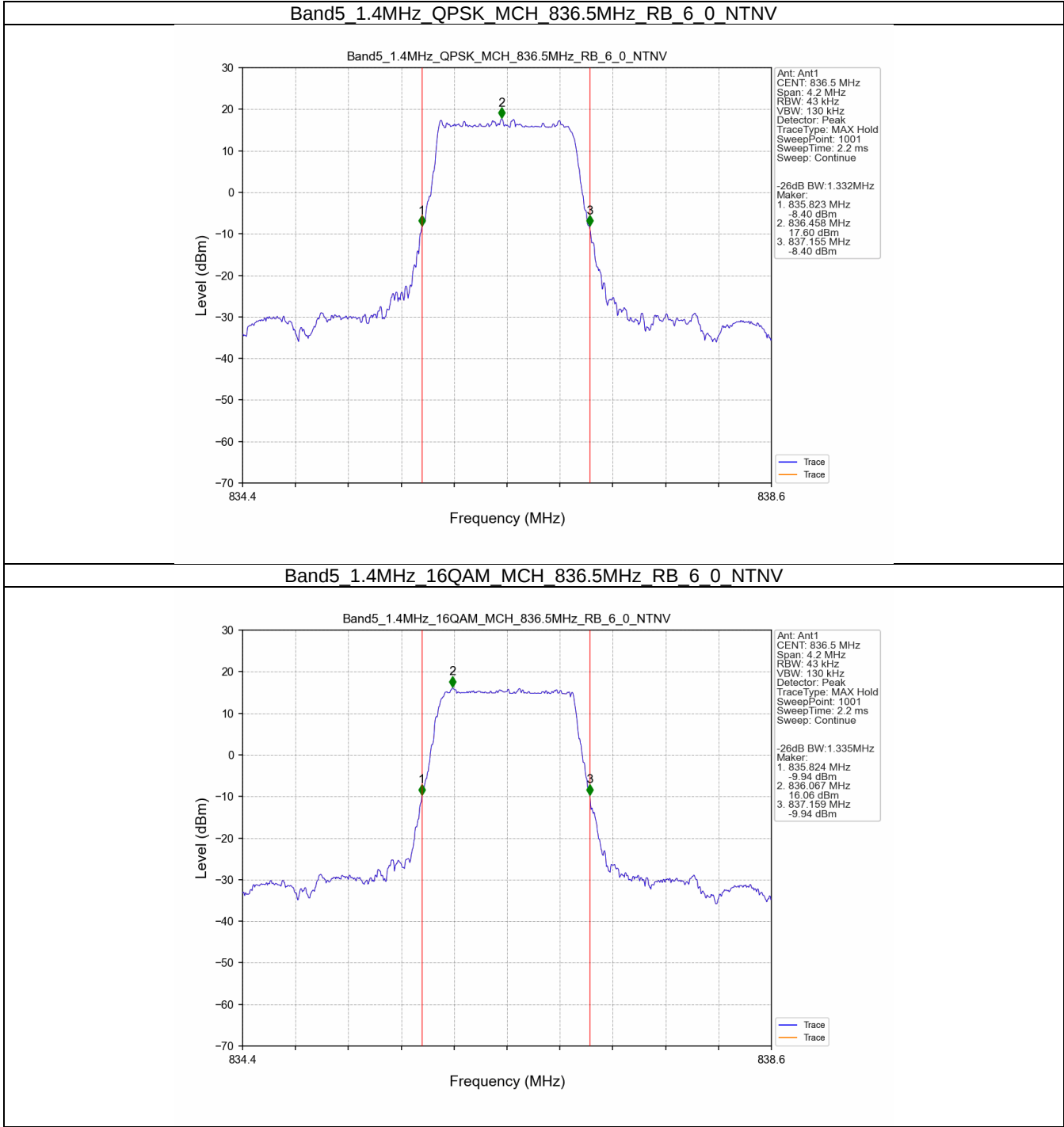
Band5_10MHz_QPSK_MCH_836.5MHz_RB_50_0_NTNV



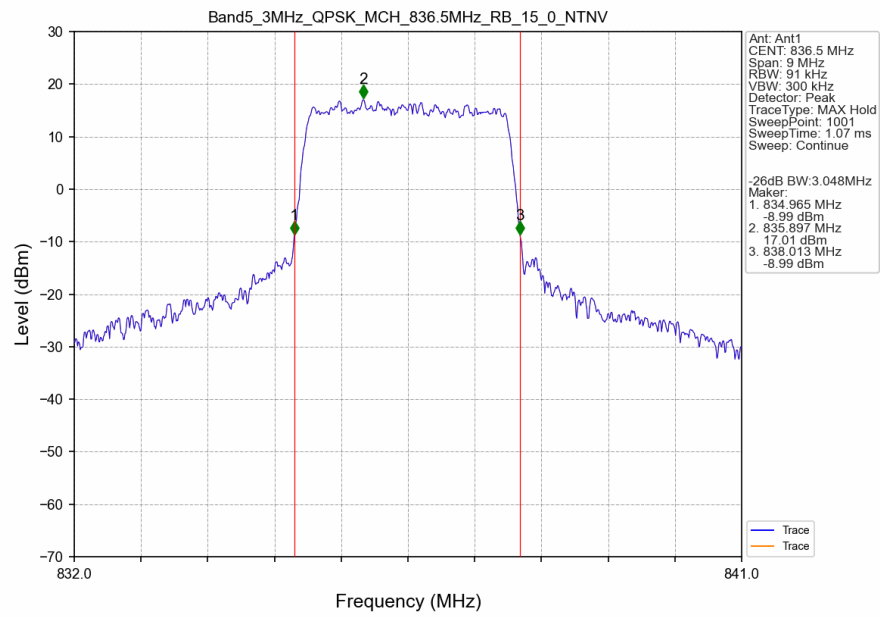
Band5_10MHz_16QAM_MCH_836.5MHz_RB_27_0_NTNV



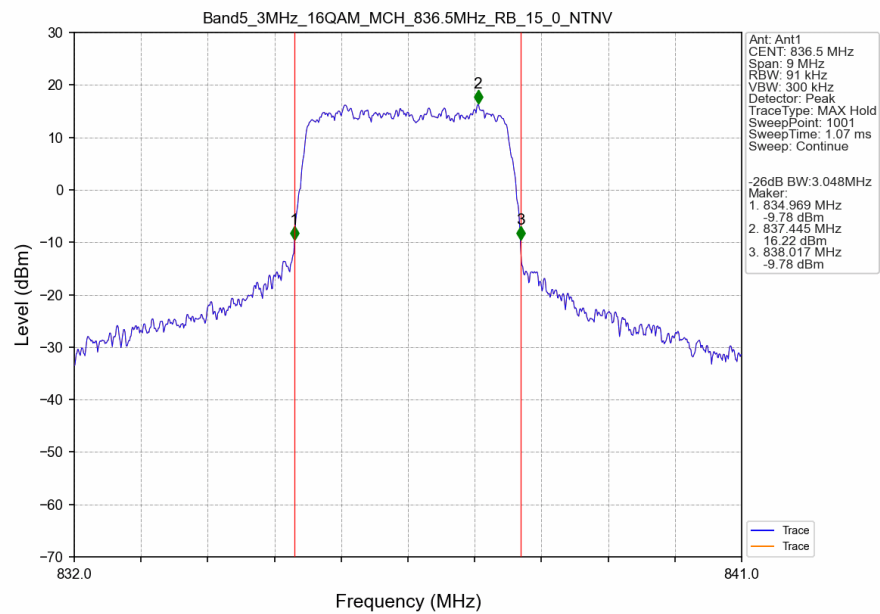
3.2.2 Band5_XDB



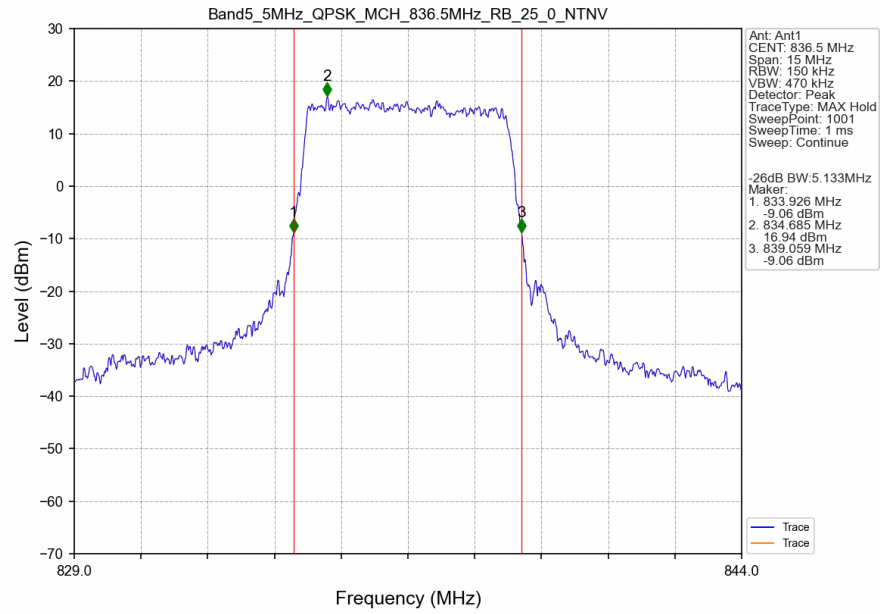
Band5_3MHz_QPSK_MCH_836.5MHz_RB_15_0_NTNV



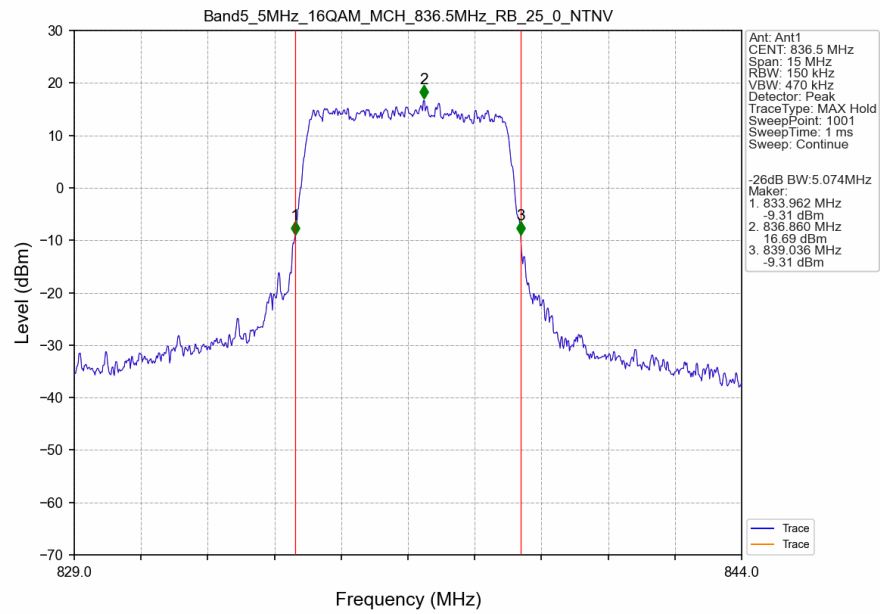
Band5_3MHz_16QAM_MCH_836.5MHz_RB_15_0_NTNV



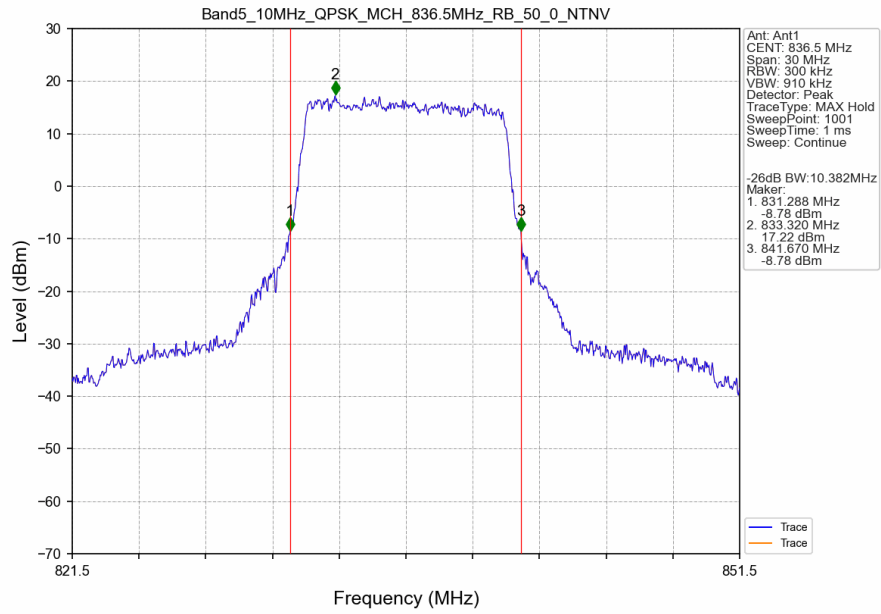
Band5 5MHz QPSK MCH 836.5MHz RB 25 0 NTN



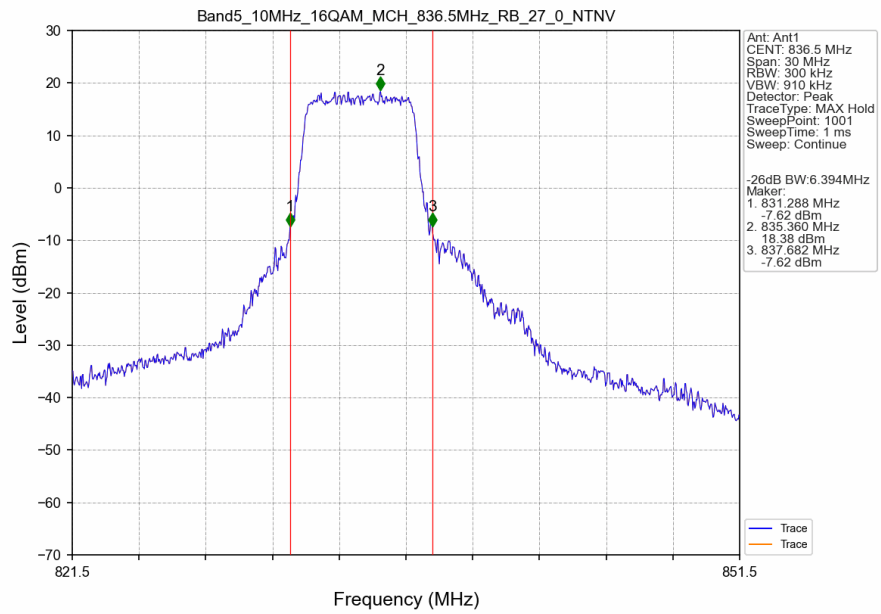
Band5 5MHz 16QAM MCH 836.5MHz RB 25 0 NTN



Band5_10MHz_QPSK_MCH_836.5MHz_RB_50_0_NTNV



Band5_10MHz_16QAM_MCH_836.5MHz_RB_27_0_NTNV



4. Peak-Average Ratio

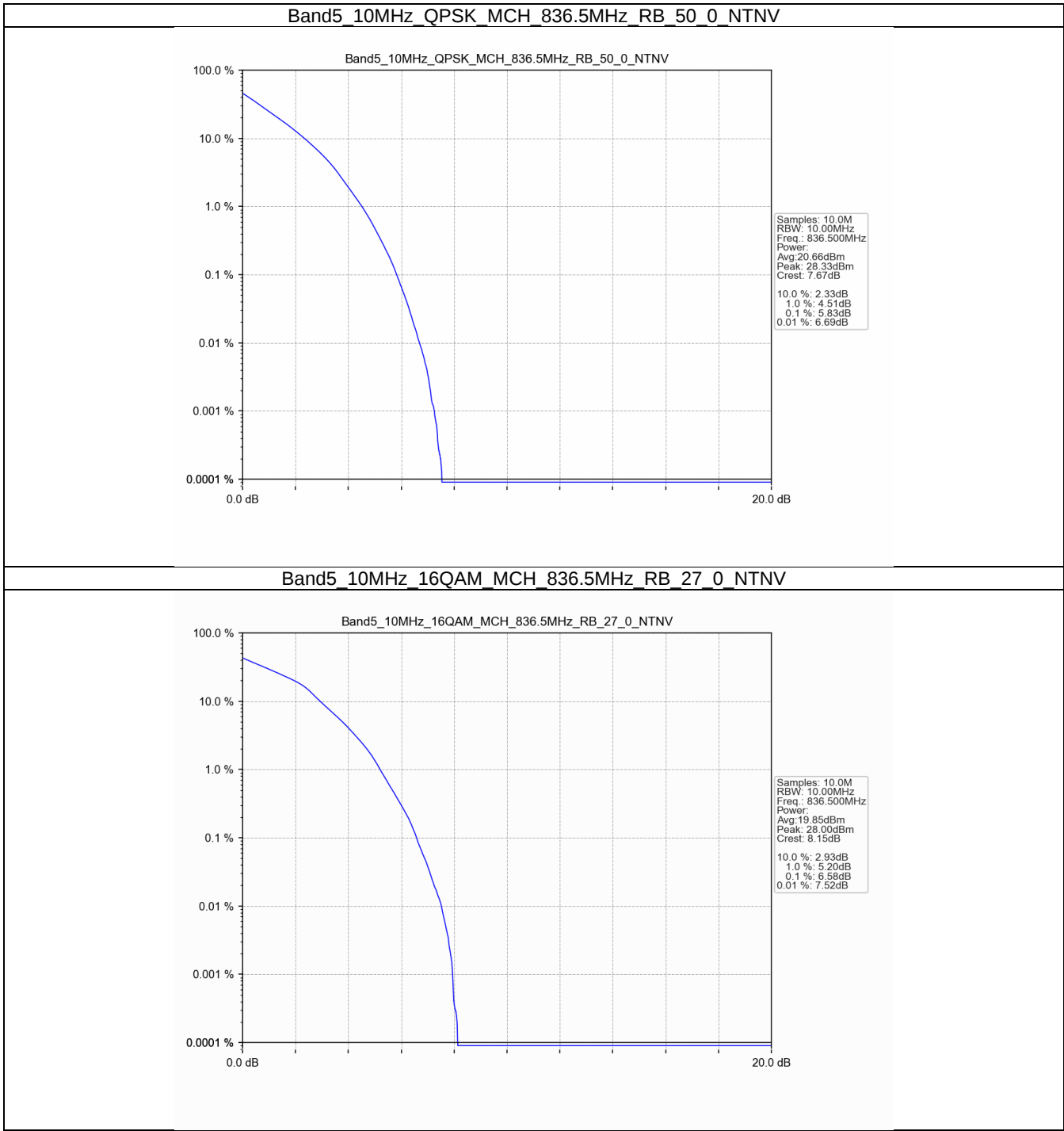
4.1 Test Result

4.1.1 B5_10MHz

Band: 5 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	836.5	50	0	5.83	<=13	Pass
16QAM	836.5	27	0	6.58	<=13	Pass

4.2 Test Graph

4.2.1 B5_10MHz



5. Spurious Emission

5.1 Test Result

5.1.1 B5_1.4MHz

Band: 5 / Bandwidth: 1.4MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	824.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
		848.3	1	0	Refer To Test Graph	
	5			Refer To Test Graph		Pass
	6		0	Refer To Test Graph		Pass

5.1.2 B5_3MHz

Band: 5 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	825.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
	847.5	1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass

5.1.3 B5_5MHz

Band: 5 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	826.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass
	846.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

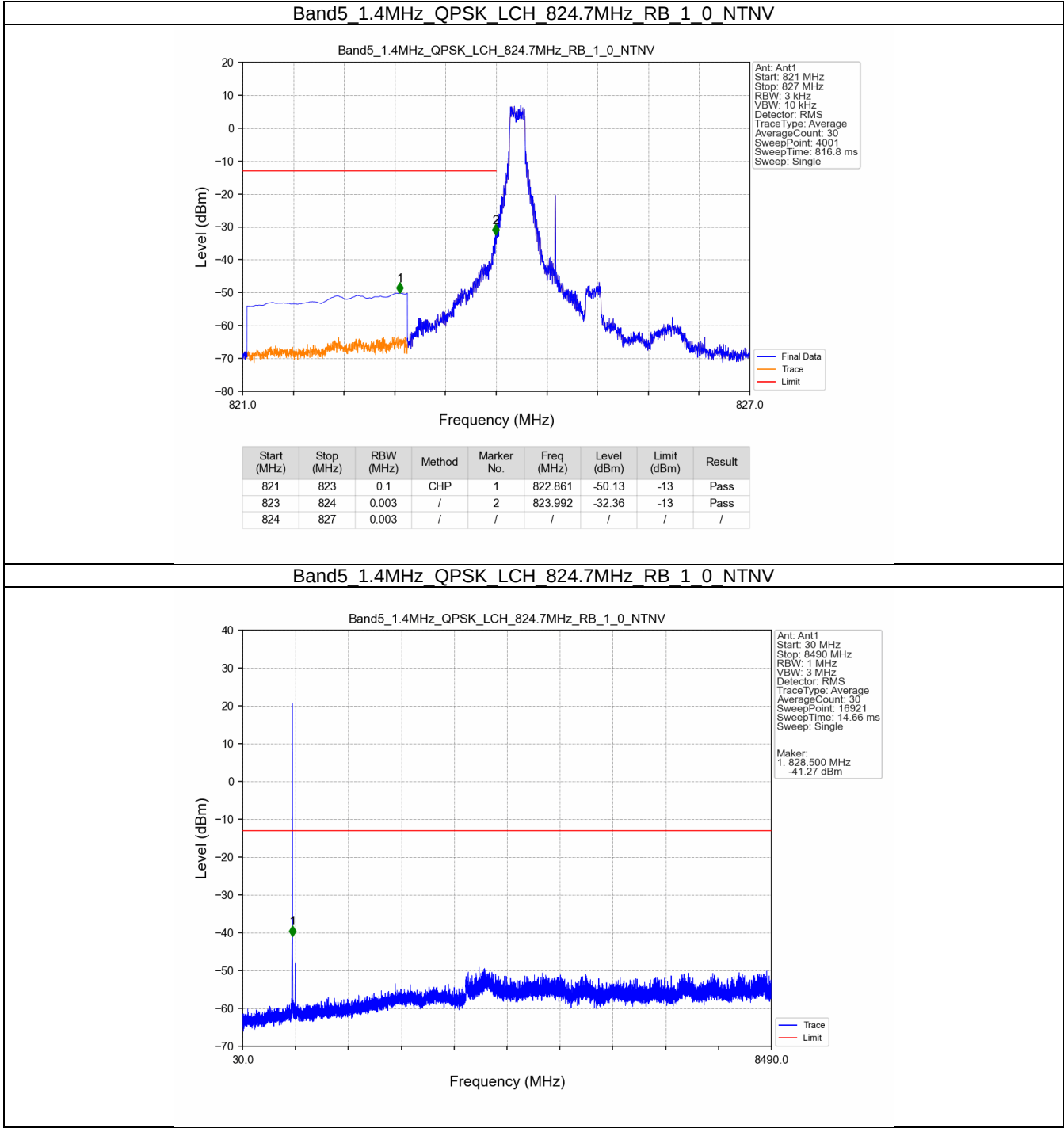
5.1.4 B5_10MHz

Band: 5 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	829	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	836.5	1	0	Refer To Test Graph		Pass

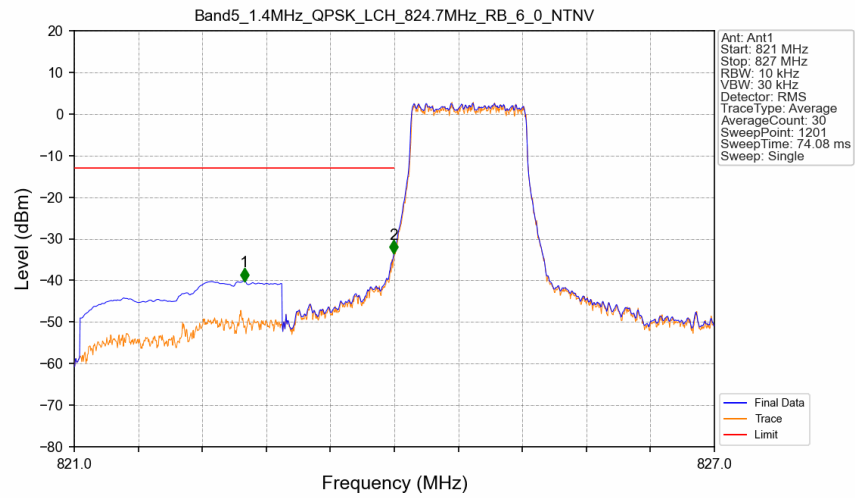
	844	1	0	Refer To Test Graph	Pass
			49	Refer To Test Graph	Pass
		50	0	Refer To Test Graph	Pass

5.2 Test Graph

5.2.1 B5_1.4MHz

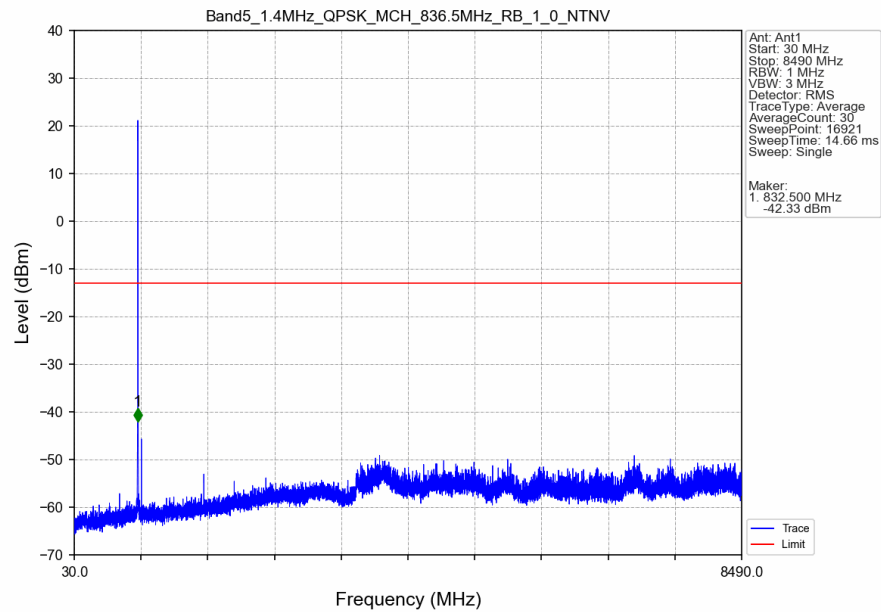


Band5_1.4MHz_QPSK_LCH_824.7MHz_RB_6_0_NTNV

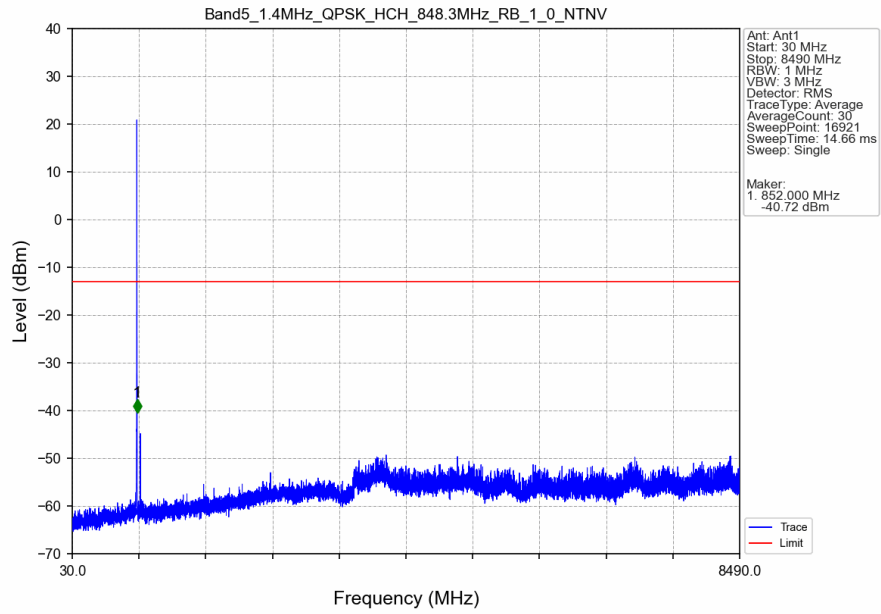


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
821	823	0.1	CHP	1	822.595	-40.15	-13	Pass
823	824	0.013	CHP	2	823.995	-33.53	-13	Pass
824	827	0.013	CHP	/	/	/	/	/

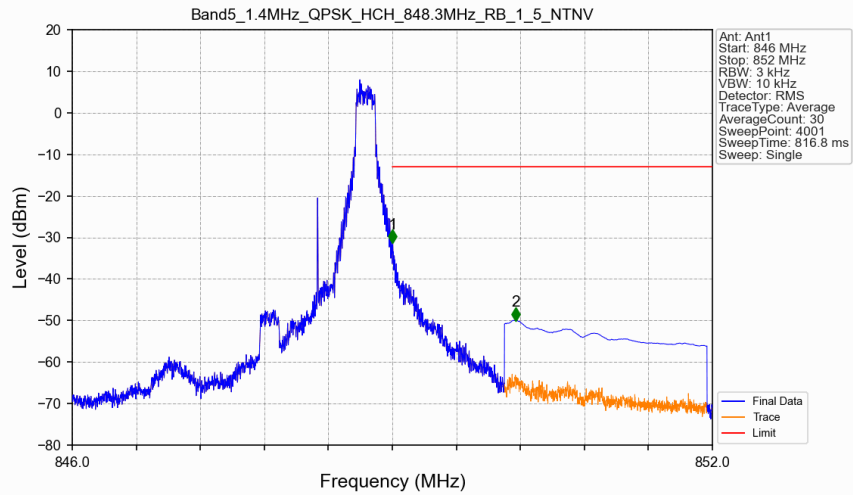
Band5_1.4MHz_QPSK_MCH_836.5MHz_RB_1_0_NTNV



Band5 1.4MHz QPSK HCH 848.3MHz RB 1 0 NTN

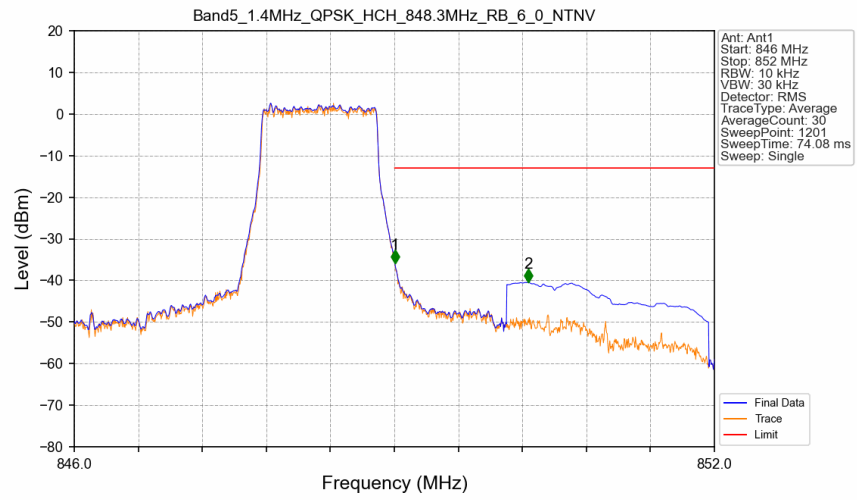


Band5 1.4MHz QPSK HCH 848.3MHz RB 1 5 NTN



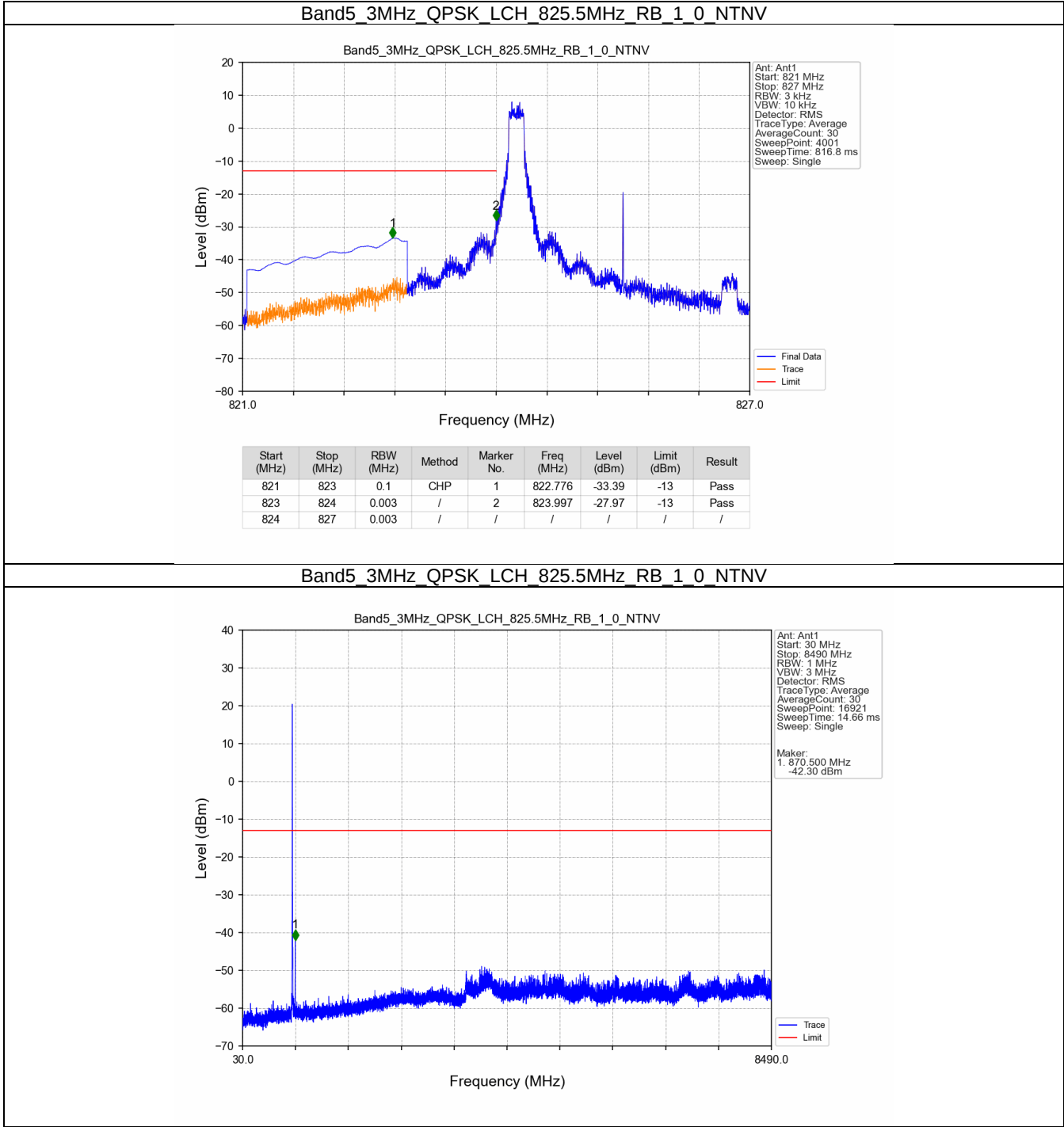
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.003	-31.37	-13	Pass
850	852	0.1	CHP	2	850.159	-49.98	-13	Pass

Band5 1.4MHz QPSK HCH 848.3MHz RB 6 0 NTN

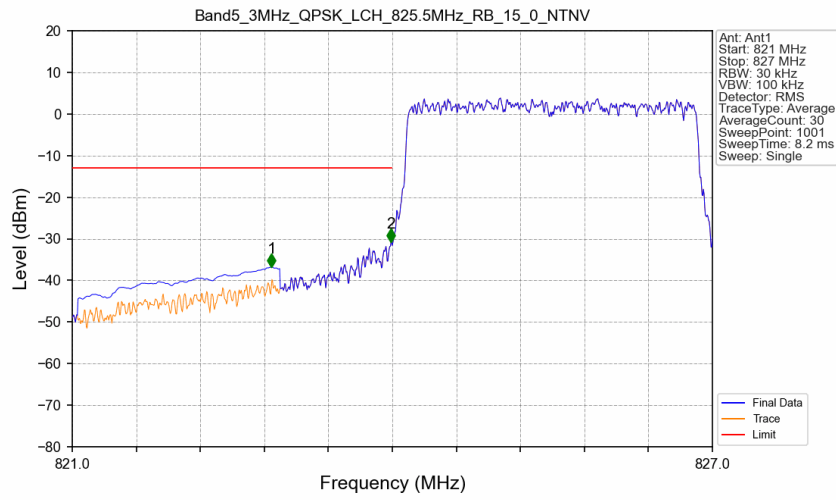


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.013	CHP	/	/	/	/	/
849	850	0.013	CHP	1	849.005	-35.90	-13	Pass
850	852	0.1	CHP	2	850.255	-40.48	-13	Pass

5.2.2 B5_3MHz

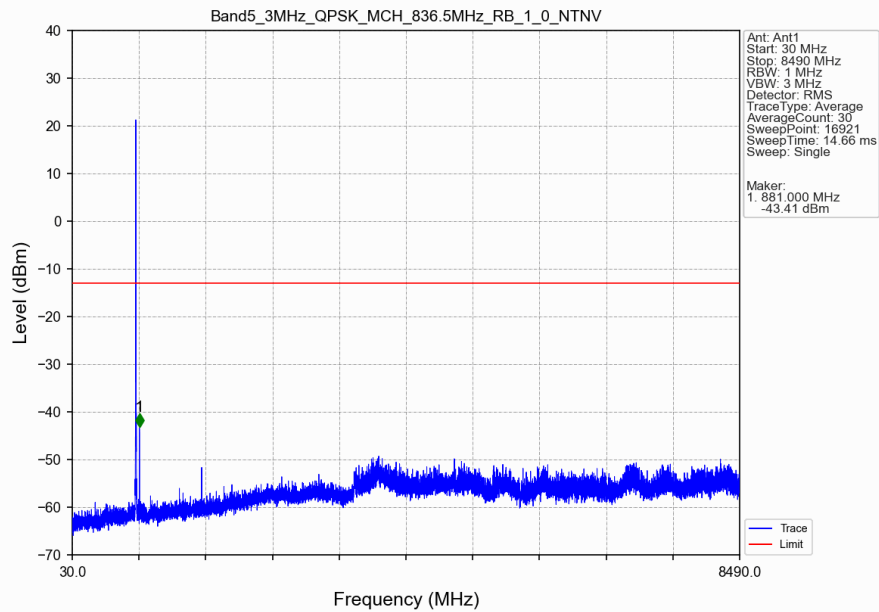


Band5_3MHz_QPSK_LCH_825.5MHz_RB_15_0_NTNV

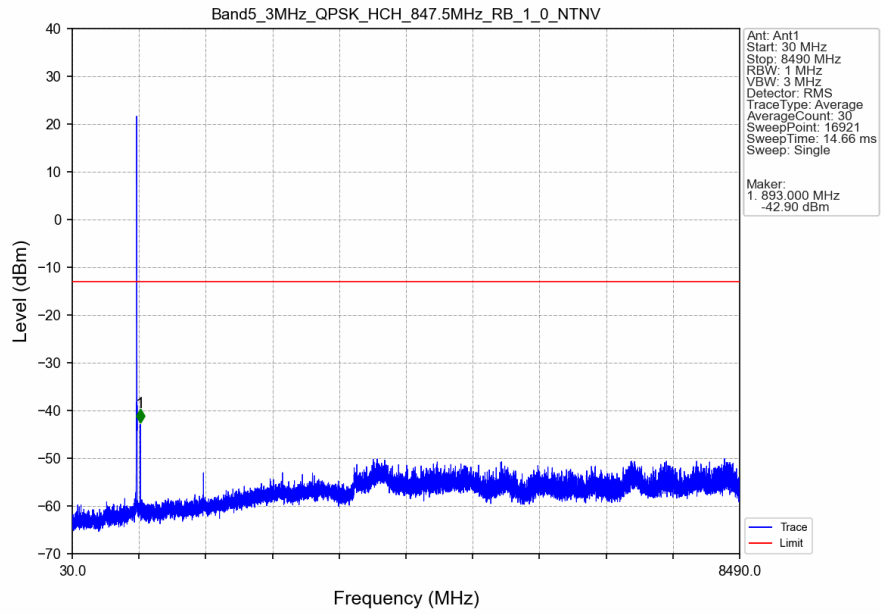


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
821	823	0.1	CHP	1	822.866	-36.78	-13	Pass
823	824	0.03	/	2	823.988	-30.80	-13	Pass
824	827	0.03	/	/	/	/	/	/

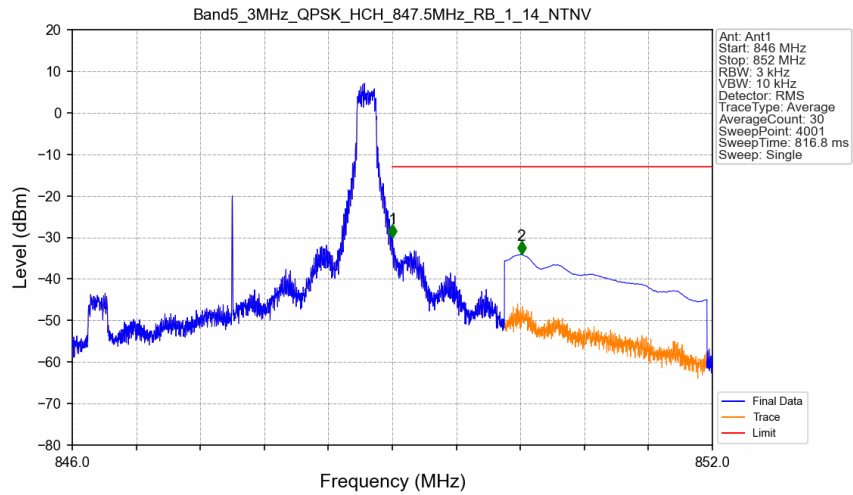
Band5_3MHz_QPSK_MCH_836.5MHz_RB_1_0_NTNV



Band5_3MHz_QPSK_HCH_847.5MHz_RB_1_0_NTNV

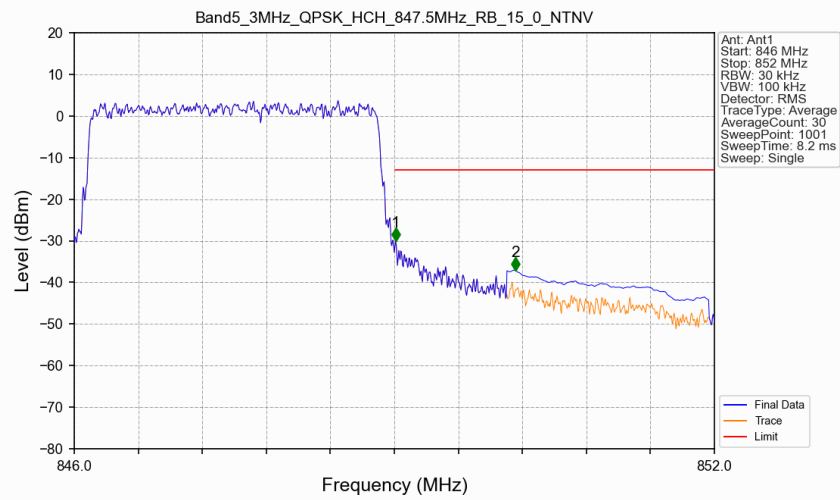


Band5_3MHz_QPSK_HCH_847.5MHz_RB_1_14_NTNV



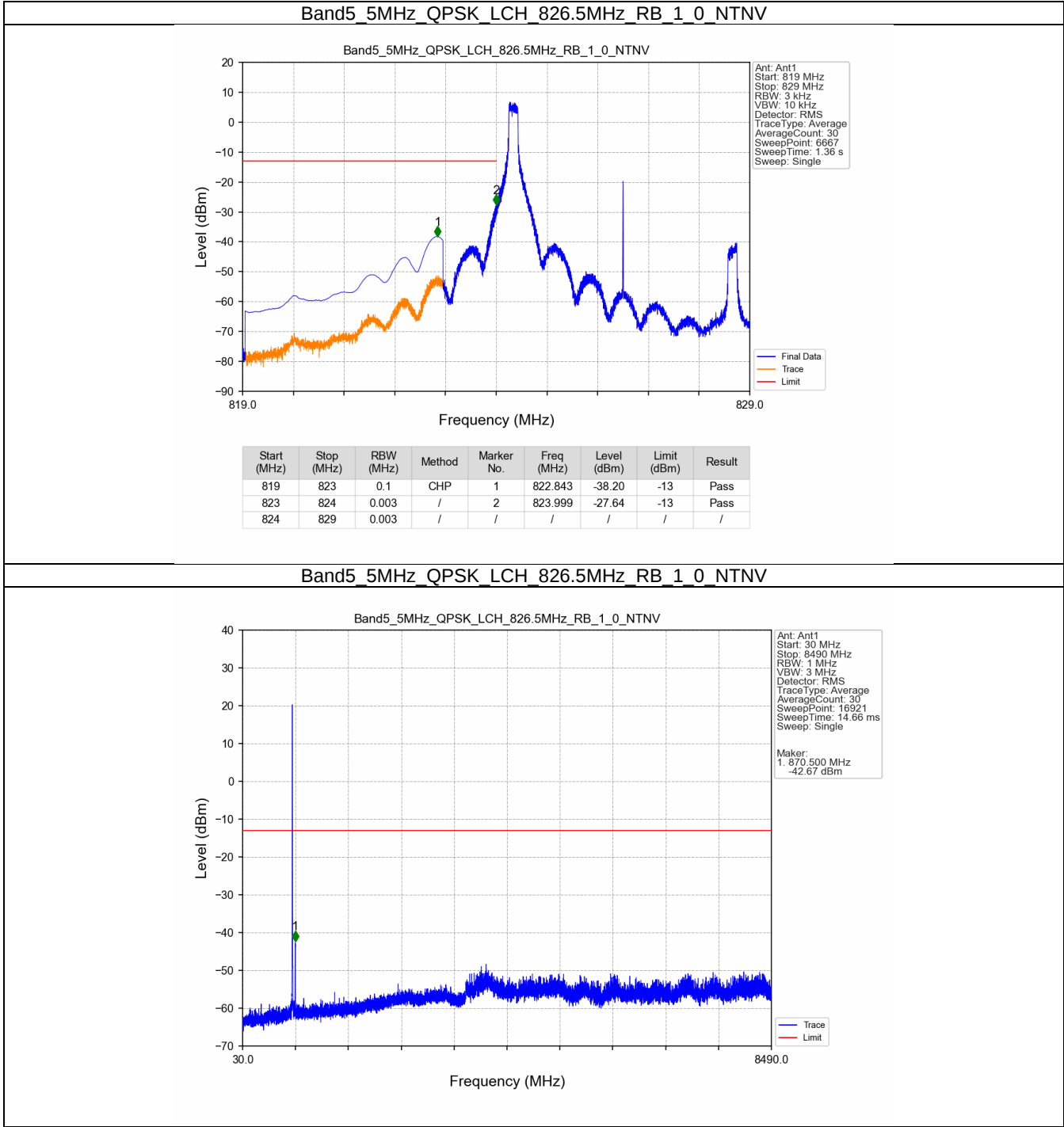
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.003	-30.03	-13	Pass
850	852	0.1	CHP	2	850.211	-34.09	-13	Pass

Band5_3MHz_QPSK_HCH_847.5MHz_RB_15_0_NTNV

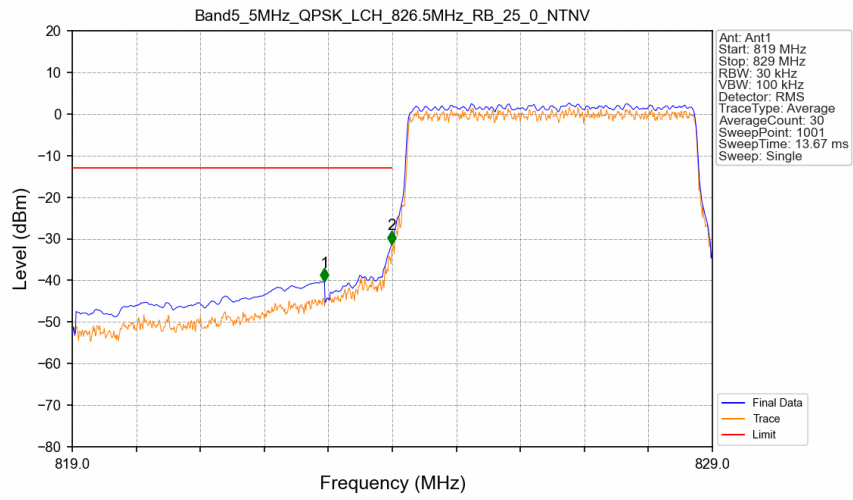


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
846	849	0.03	/	/	/	/	/	/
849	850	0.03	/	1	849.012	-30.10	-13	Pass
850	852	0.1	CHP	2	850.134	-37.08	-13	Pass

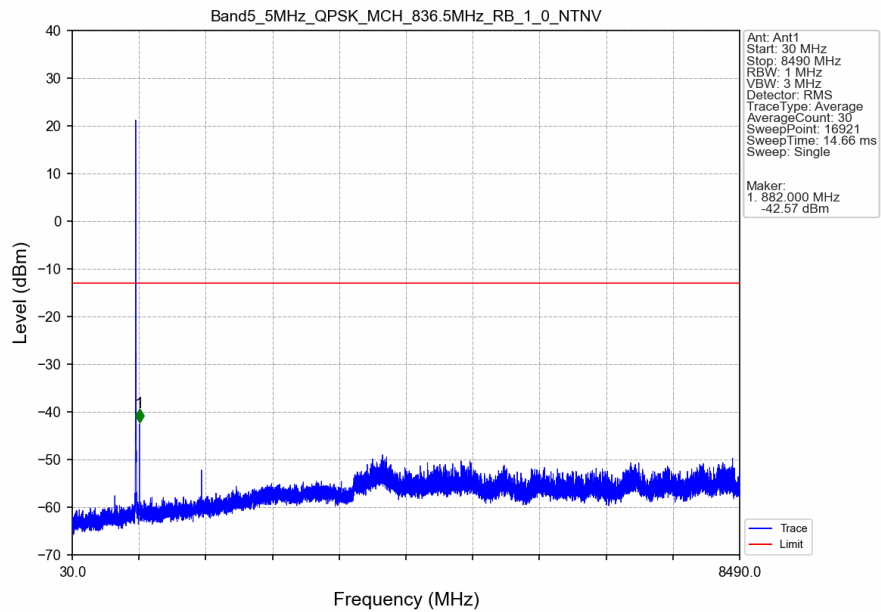
5.2.3 B5_5MHz



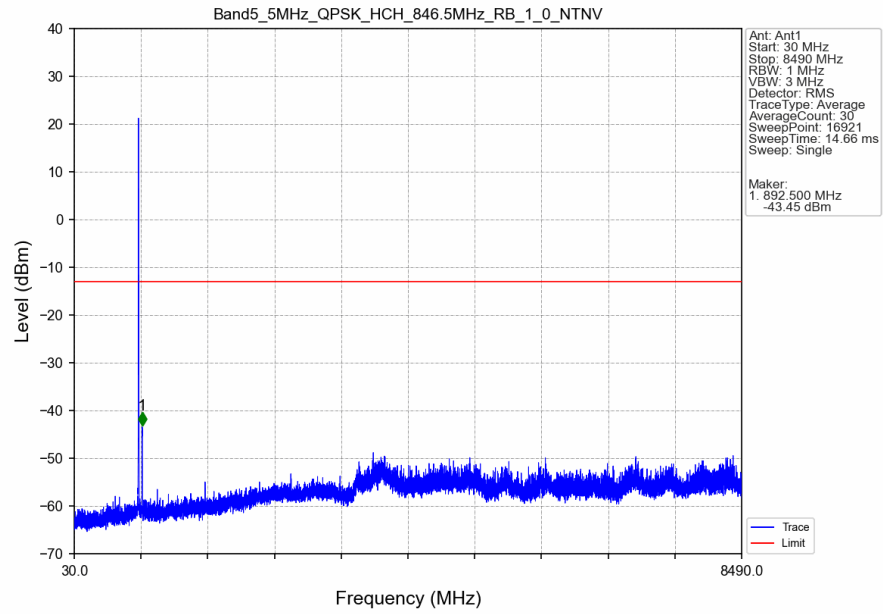
Band5_5MHz_QPSK_LCH_826.5MHz_RB_25_0_NTNV



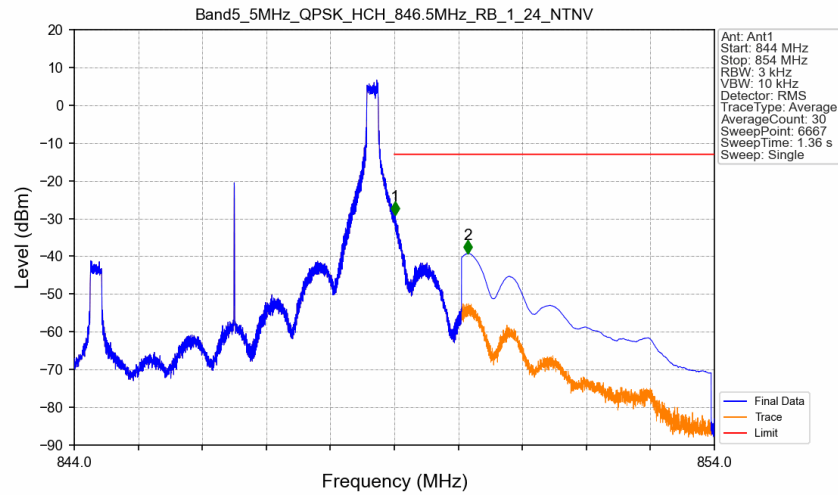
Band5_5MHz_QPSK_MCH_836.5MHz_RB_1_0_NTNV



Band5_5MHz_QPSK_HCH_846.5MHz_RB_1_0_NTNV

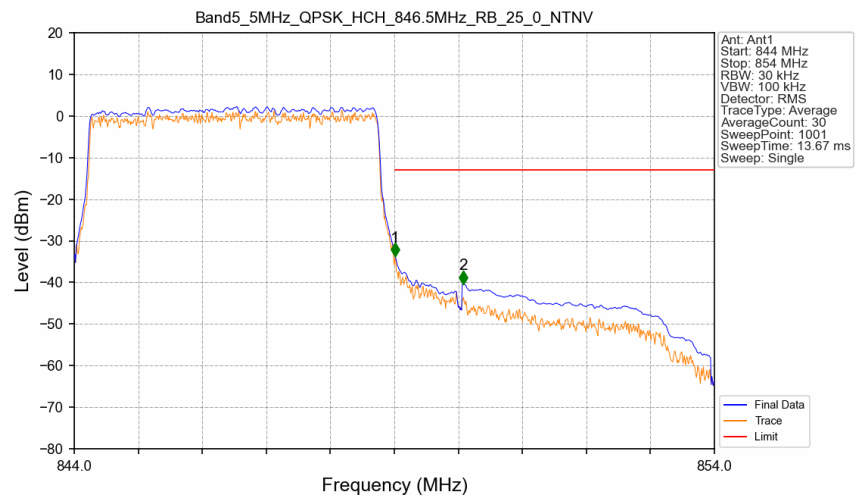


Band5_5MHz_QPSK_HCH_846.5MHz_RB_1_24_NTNV



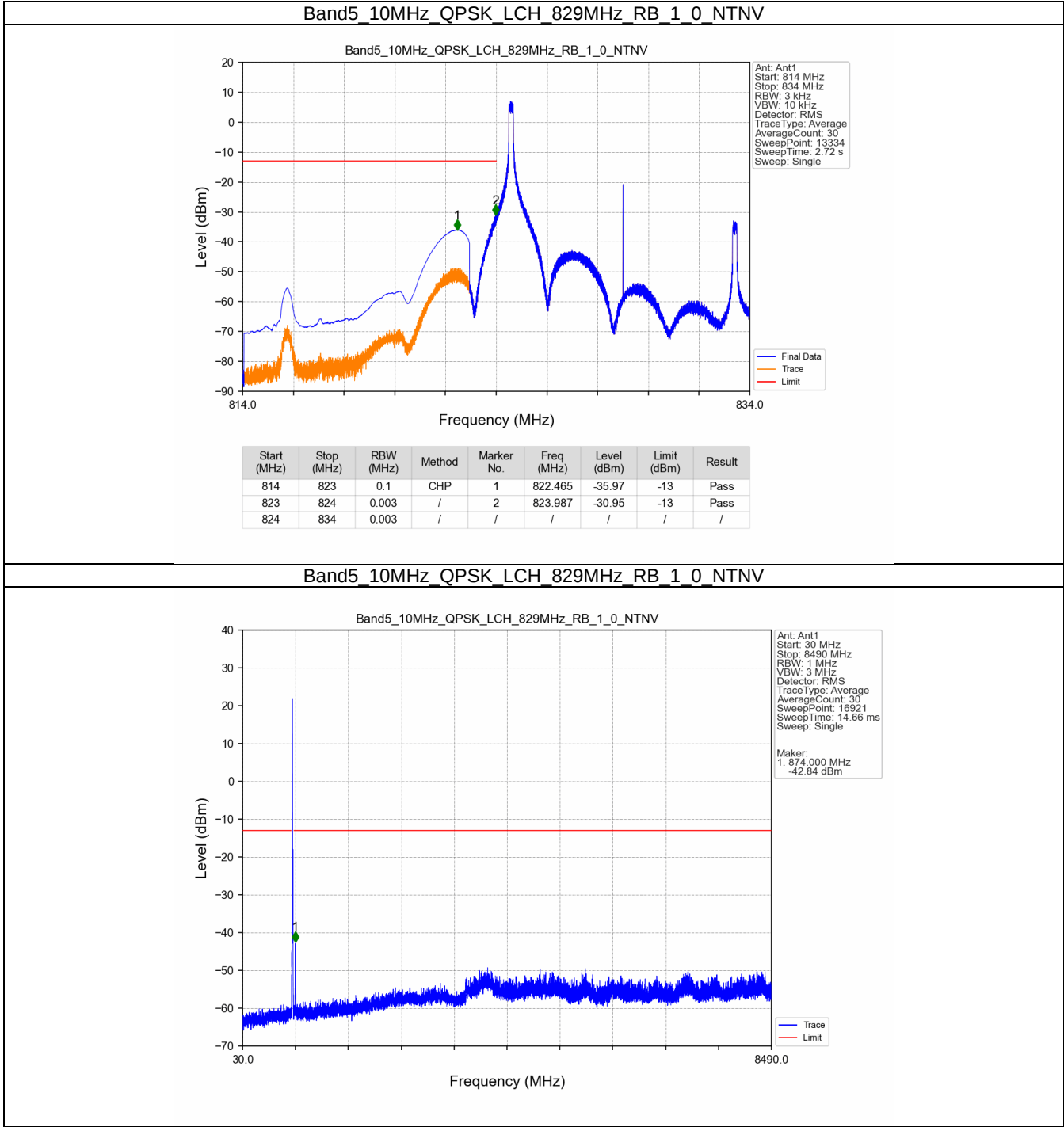
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
844	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.012	-29.08	-13	Pass
850	854	0.1	CHP	2	850.151	-39.20	-13	Pass

Band5 5MHz QPSK HCH 846.5MHz RB 25 0 NTNV

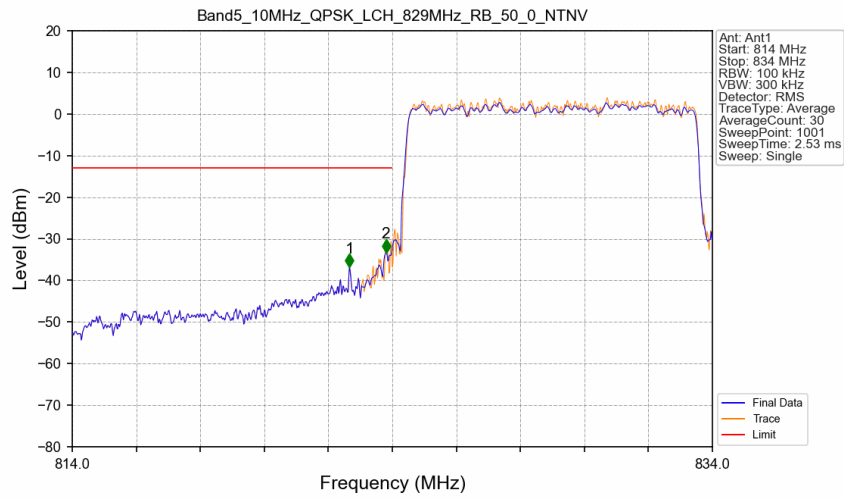


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
844	849	0.051	CHP	/	/	/	/	/
849	850	0.051	CHP	1	849.010	-33.64	-13	Pass
850	854	0.1	CHP	2	850.080	-40.33	-13	Pass

5.2.4 B5_10MHz

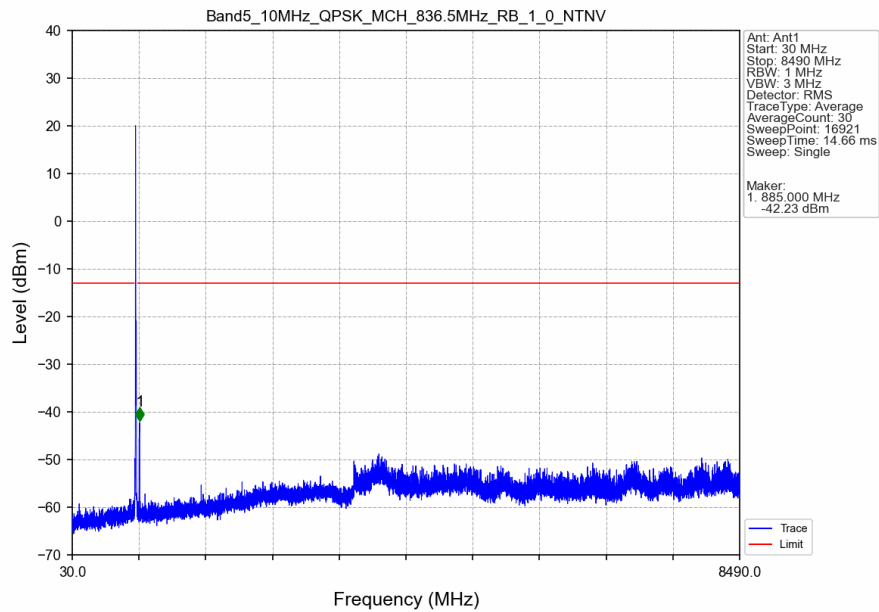


Band5_10MHz_QPSK_LCH_829MHz_RB_50_0_NTNV

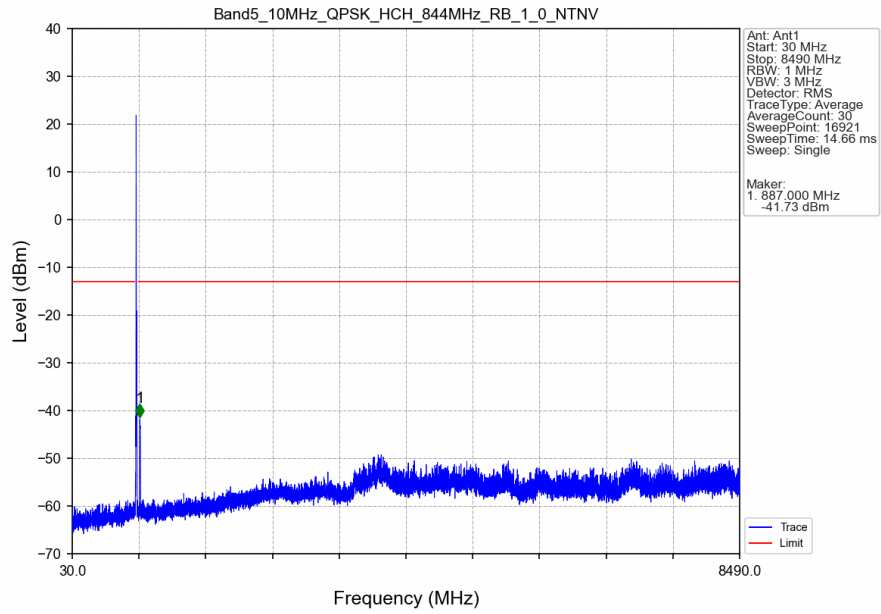


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
814	823	0.1	/	1	822.660	-36.78	-13	Pass
823	824	0.104	CHP	2	823.800	-33.22	-13	Pass
824	834	0.104	CHP	/	/	/	/	/

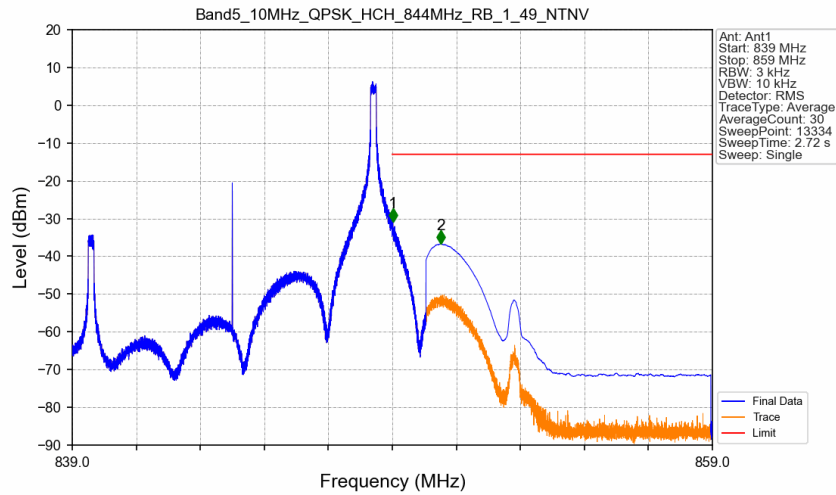
Band5_10MHz_QPSK_MCH_836.5MHz_RB_1_0_NTNV



Band5_10MHz_QPSK_HCH_844MHz_RB_1_0_NTNV

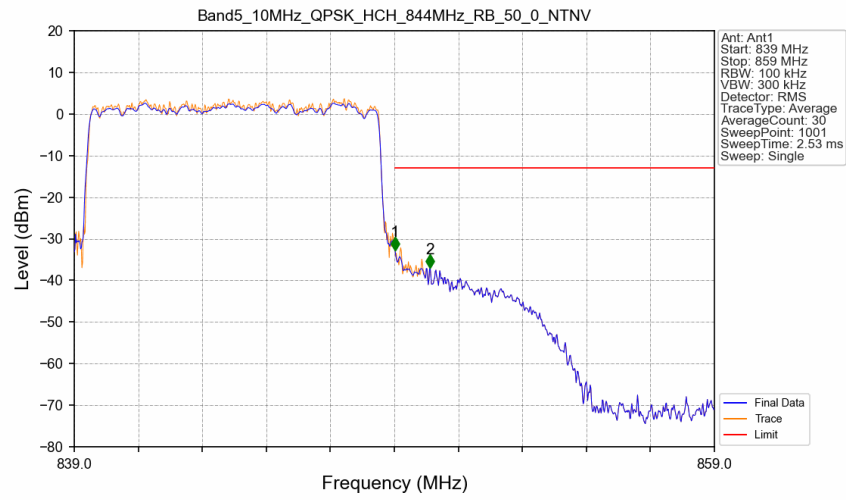


Band5_10MHz_QPSK_HCH_844MHz_RB_1_49_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
839	849	0.003	/	/	/	/	/	/
849	850	0.003	/	1	849.016	-30.77	-13	Pass
850	859	0.1	CHP	2	850.514	-36.67	-13	Pass

Band5_10MHz_QPSK_HCH_844MHz_RB_50_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
839	849	0.104	CHP	/	/	/	/	/
849	850	0.104	CHP	1	849.020	-32.79	-13	Pass
850	859	0.1	/	2	850.120	-36.97	-13	Pass