

1. Transmitter Conducted Power Output

1.1 Test Result

1.1.1 15k_SISO_5MHz_NTNV_ERP

5G NR n26a SCS=15kHz SISO 5MHz NTN										
Modulation	Frequency (MHz)	RB Allocation	Conducted Power(dBm)			ERP(dBm)				Verdict
			Ant7	Ant2	Sum	Ant7	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	816.5	Edge_1RB_Left	20.93	/	/	16.41	/	/	<=50	Pass
		Edge_1RB_Right	21.22	/	/	16.70	/	/	<=50	Pass
		Outer_Full	21.03	/	/	16.51	/	/	<=50	Pass
		Inner_Full	21.51	/	/	16.99	/	/	<=50	Pass
		Inner_1RB_Left	21.40	/	/	16.88	/	/	<=50	Pass
		Inner_1RB_Right	21.48	/	/	16.96	/	/	<=50	Pass
	819	Edge_1RB_Left	20.90	/	/	16.38	/	/	<=50	Pass
		Edge_1RB_Right	20.94	/	/	16.42	/	/	<=50	Pass
		Outer_Full	20.99	/	/	16.47	/	/	<=50	Pass
		Inner_Full	21.54	/	/	17.02	/	/	<=50	Pass
		Inner_1RB_Left	21.35	/	/	16.83	/	/	<=50	Pass
		Inner_1RB_Right	21.40	/	/	16.88	/	/	<=50	Pass
	821.5	Edge_1RB_Left	20.88	/	/	16.36	/	/	<=50	Pass
		Edge_1RB_Right	20.83	/	/	16.31	/	/	<=50	Pass
		Outer_Full	20.98	/	/	16.46	/	/	<=50	Pass
		Inner_Full	21.38	/	/	16.86	/	/	<=50	Pass
		Inner_1RB_Left	21.30	/	/	16.78	/	/	<=50	Pass
		Inner_1RB_Right	21.31	/	/	16.79	/	/	<=50	Pass
DFT-s-OFDM QPSK	816.5	Edge_1RB_Left	20.66	/	/	16.14	/	/	<=50	Pass
		Edge_1RB_Right	20.74	/	/	16.22	/	/	<=50	Pass
		Outer_Full	20.49	/	/	15.97	/	/	<=50	Pass
		Inner_Full	21.47	/	/	16.95	/	/	<=50	Pass
		Inner_1RB_Left	21.65	/	/	17.13	/	/	<=50	Pass
		Inner_1RB_Right	21.44	/	/	16.92	/	/	<=50	Pass
	819	Edge_1RB_Left	20.77	/	/	16.25	/	/	<=50	Pass
		Edge_1RB_Right	20.53	/	/	16.01	/	/	<=50	Pass
		Outer_Full	20.54	/	/	16.02	/	/	<=50	Pass
		Inner_Full	21.39	/	/	16.87	/	/	<=50	Pass
		Inner_1RB_Left	21.37	/	/	16.85	/	/	<=50	Pass
		Inner_1RB_Right	21.33	/	/	16.81	/	/	<=50	Pass
	821.5	Edge_1RB_Left	20.38	/	/	15.86	/	/	<=50	Pass
		Edge_1RB_Right	20.45	/	/	15.93	/	/	<=50	Pass
		Outer_Full	20.50	/	/	15.98	/	/	<=50	Pass
		Inner_Full	21.33	/	/	16.81	/	/	<=50	Pass
		Inner_1RB_Left	21.35	/	/	16.83	/	/	<=50	Pass
		Inner_1RB_Right	21.37	/	/	16.85	/	/	<=50	Pass
DFT-s-OFDM 16 QAM	816.5	Edge_1RB_Left	19.37	/	/	14.85	/	/	<=50	Pass
		Edge_1RB_Right	19.43	/	/	14.91	/	/	<=50	Pass
		Outer_Full	19.74	/	/	15.22	/	/	<=50	Pass
		Inner_Full	20.50	/	/	15.98	/	/	<=50	Pass
		Inner_1RB_Left	20.39	/	/	15.87	/	/	<=50	Pass
		Inner_1RB_Right	20.71	/	/	16.19	/	/	<=50	Pass
	819	Edge_1RB_Left	19.50	/	/	14.98	/	/	<=50	Pass
		Edge_1RB_Right	19.42	/	/	14.90	/	/	<=50	Pass
		Outer_Full	19.79	/	/	15.27	/	/	<=50	Pass
		Inner_Full	20.48	/	/	15.96	/	/	<=50	Pass
		Inner_1RB_Left	20.42	/	/	15.90	/	/	<=50	Pass
		Inner_1RB_Right	20.47	/	/	15.95	/	/	<=50	Pass
	821.5	Edge_1RB_Left	19.41	/	/	14.89	/	/	<=50	Pass

		Edge_1RB_Right	19.36	/	/	14.84	/	/	<=50	Pass
		Outer_Full	19.40	/	/	14.88	/	/	<=50	Pass
		Inner_Full	20.48	/	/	15.96	/	/	<=50	Pass
		Inner_1RB_Left	20.42	/	/	15.90	/	/	<=50	Pass
		Inner_1RB_Right	20.36	/	/	15.84	/	/	<=50	Pass
DFT-s-OFDM 64 QAM	816.5	Edge_1RB_Left	19.20	/	/	14.68	/	/	<=50	Pass
		Edge_1RB_Right	18.94	/	/	14.42	/	/	<=50	Pass
		Outer_Full	19.05	/	/	14.53	/	/	<=50	Pass
		Inner_Full	18.99	/	/	14.47	/	/	<=50	Pass
		Inner_1RB_Left	18.93	/	/	14.41	/	/	<=50	Pass
		Inner_1RB_Right	18.99	/	/	14.47	/	/	<=50	Pass
	819	Edge_1RB_Left	19.04	/	/	14.52	/	/	<=50	Pass
		Edge_1RB_Right	18.96	/	/	14.44	/	/	<=50	Pass
		Outer_Full	19.01	/	/	14.49	/	/	<=50	Pass
		Inner_Full	18.95	/	/	14.43	/	/	<=50	Pass
		Inner_1RB_Left	18.97	/	/	14.45	/	/	<=50	Pass
		Inner_1RB_Right	18.93	/	/	14.41	/	/	<=50	Pass
	821.5	Edge_1RB_Left	18.91	/	/	14.39	/	/	<=50	Pass
		Edge_1RB_Right	18.90	/	/	14.38	/	/	<=50	Pass
		Outer_Full	19.00	/	/	14.48	/	/	<=50	Pass
		Inner_Full	19.04	/	/	14.52	/	/	<=50	Pass
		Inner_1RB_Left	18.98	/	/	14.46	/	/	<=50	Pass
		Inner_1RB_Right	18.87	/	/	14.35	/	/	<=50	Pass
DFT-s-OFDM 256 QAM	816.5	Edge_1RB_Left	16.83	/	/	12.31	/	/	<=50	Pass
		Edge_1RB_Right	16.86	/	/	12.34	/	/	<=50	Pass
		Outer_Full	16.94	/	/	12.42	/	/	<=50	Pass
		Inner_Full	16.98	/	/	12.46	/	/	<=50	Pass
		Inner_1RB_Left	16.83	/	/	12.31	/	/	<=50	Pass
		Inner_1RB_Right	16.84	/	/	12.32	/	/	<=50	Pass
	819	Edge_1RB_Left	16.86	/	/	12.34	/	/	<=50	Pass
		Edge_1RB_Right	16.86	/	/	12.34	/	/	<=50	Pass
		Outer_Full	16.90	/	/	12.38	/	/	<=50	Pass
		Inner_Full	16.99	/	/	12.47	/	/	<=50	Pass
		Inner_1RB_Left	16.85	/	/	12.33	/	/	<=50	Pass
		Inner_1RB_Right	16.87	/	/	12.35	/	/	<=50	Pass
	821.5	Edge_1RB_Left	16.88	/	/	12.36	/	/	<=50	Pass
		Edge_1RB_Right	16.83	/	/	12.31	/	/	<=50	Pass
		Outer_Full	16.99	/	/	12.47	/	/	<=50	Pass
		Inner_Full	17.06	/	/	12.54	/	/	<=50	Pass
		Inner_1RB_Left	16.91	/	/	12.39	/	/	<=50	Pass
		Inner_1RB_Right	16.87	/	/	12.35	/	/	<=50	Pass
CP-OFDM QPSK	816.5	Edge_1RB_Left	18.29	/	/	13.77	/	/	<=50	Pass
		Edge_1RB_Right	18.31	/	/	13.79	/	/	<=50	Pass
		Outer_Full	18.47	/	/	13.95	/	/	<=50	Pass
		Inner_Full	20.03	/	/	15.51	/	/	<=50	Pass
		Inner_1RB_Left	19.74	/	/	15.22	/	/	<=50	Pass
		Inner_1RB_Right	19.75	/	/	15.23	/	/	<=50	Pass
	819	Edge_1RB_Left	18.31	/	/	13.79	/	/	<=50	Pass
		Edge_1RB_Right	18.34	/	/	13.82	/	/	<=50	Pass
		Outer_Full	18.44	/	/	13.92	/	/	<=50	Pass
		Inner_Full	19.99	/	/	15.47	/	/	<=50	Pass
		Inner_1RB_Left	19.79	/	/	15.27	/	/	<=50	Pass
		Inner_1RB_Right	19.79	/	/	15.27	/	/	<=50	Pass
	821.5	Edge_1RB_Left	18.33	/	/	13.81	/	/	<=50	Pass
		Edge_1RB_Right	18.31	/	/	13.79	/	/	<=50	Pass
		Outer_Full	18.44	/	/	13.92	/	/	<=50	Pass
		Inner_Full	19.95	/	/	15.43	/	/	<=50	Pass
		Inner_1RB_Left	19.76	/	/	15.24	/	/	<=50	Pass
		Inner_1RB_Right	19.74	/	/	15.22	/	/	<=50	Pass

CP-OFDM 16 QAM	816.5	Edge_1RB_Left	18.55	/	/	14.03	/	/	<=50	Pass
		Edge_1RB_Right	18.58	/	/	14.06	/	/	<=50	Pass
		Outer_Full	18.55	/	/	14.03	/	/	<=50	Pass
		Inner_Full	19.45	/	/	14.93	/	/	<=50	Pass
		Inner_1RB_Left	19.52	/	/	15.00	/	/	<=50	Pass
		Inner_1RB_Right	19.55	/	/	15.03	/	/	<=50	Pass
	819	Edge_1RB_Left	18.56	/	/	14.04	/	/	<=50	Pass
		Edge_1RB_Right	18.59	/	/	14.07	/	/	<=50	Pass
		Outer_Full	18.47	/	/	13.95	/	/	<=50	Pass
		Inner_Full	19.42	/	/	14.90	/	/	<=50	Pass
		Inner_1RB_Left	19.58	/	/	15.06	/	/	<=50	Pass
		Inner_1RB_Right	19.56	/	/	15.04	/	/	<=50	Pass
	821.5	Edge_1RB_Left	18.56	/	/	14.04	/	/	<=50	Pass
		Edge_1RB_Right	18.58	/	/	14.06	/	/	<=50	Pass
		Outer_Full	18.47	/	/	13.95	/	/	<=50	Pass
		Inner_Full	19.39	/	/	14.87	/	/	<=50	Pass
		Inner_1RB_Left	19.56	/	/	15.04	/	/	<=50	Pass
		Inner_1RB_Right	19.56	/	/	15.04	/	/	<=50	Pass
CP-OFDM 64 QAM	816.5	Edge_1RB_Left	17.87	/	/	13.35	/	/	<=50	Pass
		Edge_1RB_Right	18.00	/	/	13.48	/	/	<=50	Pass
		Outer_Full	18.02	/	/	13.50	/	/	<=50	Pass
		Inner_Full	17.98	/	/	13.46	/	/	<=50	Pass
		Inner_1RB_Left	17.95	/	/	13.43	/	/	<=50	Pass
		Inner_1RB_Right	17.95	/	/	13.43	/	/	<=50	Pass
	819	Edge_1RB_Left	17.97	/	/	13.45	/	/	<=50	Pass
		Edge_1RB_Right	17.97	/	/	13.45	/	/	<=50	Pass
		Outer_Full	18.05	/	/	13.53	/	/	<=50	Pass
		Inner_Full	17.97	/	/	13.45	/	/	<=50	Pass
		Inner_1RB_Left	17.94	/	/	13.42	/	/	<=50	Pass
		Inner_1RB_Right	17.94	/	/	13.42	/	/	<=50	Pass
	821.5	Edge_1RB_Left	17.93	/	/	13.41	/	/	<=50	Pass
		Edge_1RB_Right	17.97	/	/	13.45	/	/	<=50	Pass
		Outer_Full	18.04	/	/	13.52	/	/	<=50	Pass
		Inner_Full	18.00	/	/	13.48	/	/	<=50	Pass
		Inner_1RB_Left	17.99	/	/	13.47	/	/	<=50	Pass
		Inner_1RB_Right	18.01	/	/	13.49	/	/	<=50	Pass
CP-OFDM 256 QAM	816.5	Edge_1RB_Left	14.99	/	/	10.47	/	/	<=50	Pass
		Edge_1RB_Right	15.03	/	/	10.51	/	/	<=50	Pass
		Outer_Full	14.98	/	/	10.46	/	/	<=50	Pass
		Inner_Full	15.01	/	/	10.49	/	/	<=50	Pass
		Inner_1RB_Left	14.97	/	/	10.45	/	/	<=50	Pass
		Inner_1RB_Right	14.98	/	/	10.46	/	/	<=50	Pass
	819	Edge_1RB_Left	14.98	/	/	10.46	/	/	<=50	Pass
		Edge_1RB_Right	15.01	/	/	10.49	/	/	<=50	Pass
		Outer_Full	14.96	/	/	10.44	/	/	<=50	Pass
		Inner_Full	14.95	/	/	10.43	/	/	<=50	Pass
		Inner_1RB_Left	14.96	/	/	10.44	/	/	<=50	Pass
		Inner_1RB_Right	14.92	/	/	10.40	/	/	<=50	Pass
	821.5	Edge_1RB_Left	15.05	/	/	10.53	/	/	<=50	Pass
		Edge_1RB_Right	15.05	/	/	10.53	/	/	<=50	Pass
		Outer_Full	14.97	/	/	10.45	/	/	<=50	Pass
		Inner_Full	15.01	/	/	10.49	/	/	<=50	Pass
		Inner_1RB_Left	14.97	/	/	10.45	/	/	<=50	Pass
		Inner_1RB_Right	14.98	/	/	10.46	/	/	<=50	Pass
Note1: Antenna Gain: Ant7: -2.37dBi;										
Note2: ERP=Conducted Power+Antenna Gain-2.15										

1.1.2 15k_SISO_10MHz_NTNV_ERP

5G NR n26a SCS=15kHz SISO 10MHz NTNv										
Modulation	Frequency (MHz)	RB Allocation	Conducted Power(dBm)			ERP(dBm)				Verdict
			Ant7	Ant2	Sum	Ant7	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	819	Edge_1RB_Left	20.88	/	/	16.36	/	/	<=50	Pass
		Edge_1RB_Right	20.91	/	/	16.39	/	/	<=50	Pass
		Outer_Full	20.99	/	/	16.47	/	/	<=50	Pass
		Inner_Full	21.47	/	/	16.95	/	/	<=50	Pass
		Inner_1RB_Left	21.40	/	/	16.88	/	/	<=50	Pass
		Inner_1RB_Right	21.39	/	/	16.87	/	/	<=50	Pass
DFT-s-OFDM QPSK	819	Edge_1RB_Left	20.44	/	/	15.92	/	/	<=50	Pass
		Edge_1RB_Right	20.47	/	/	15.95	/	/	<=50	Pass
		Outer_Full	20.52	/	/	16.00	/	/	<=50	Pass
		Inner_Full	21.41	/	/	16.89	/	/	<=50	Pass
		Inner_1RB_Left	21.44	/	/	16.92	/	/	<=50	Pass
		Inner_1RB_Right	21.44	/	/	16.92	/	/	<=50	Pass
DFT-s-OFDM 16 QAM	819	Edge_1RB_Left	19.48	/	/	14.96	/	/	<=50	Pass
		Edge_1RB_Right	19.47	/	/	14.95	/	/	<=50	Pass
		Outer_Full	19.48	/	/	14.96	/	/	<=50	Pass
		Inner_Full	20.49	/	/	15.97	/	/	<=50	Pass
		Inner_1RB_Left	20.50	/	/	15.98	/	/	<=50	Pass
		Inner_1RB_Right	20.43	/	/	15.91	/	/	<=50	Pass
DFT-s-OFDM 64 QAM	819	Edge_1RB_Left	19.01	/	/	14.49	/	/	<=50	Pass
		Edge_1RB_Right	18.96	/	/	14.44	/	/	<=50	Pass
		Outer_Full	18.99	/	/	14.47	/	/	<=50	Pass
		Inner_Full	19.07	/	/	14.55	/	/	<=50	Pass
		Inner_1RB_Left	18.98	/	/	14.46	/	/	<=50	Pass
		Inner_1RB_Right	19.06	/	/	14.54	/	/	<=50	Pass
DFT-s-OFDM 256 QAM	819	Edge_1RB_Left	16.91	/	/	12.39	/	/	<=50	Pass
		Edge_1RB_Right	16.91	/	/	12.39	/	/	<=50	Pass
		Outer_Full	16.99	/	/	12.47	/	/	<=50	Pass
		Inner_Full	17.02	/	/	12.50	/	/	<=50	Pass
		Inner_1RB_Left	16.91	/	/	12.39	/	/	<=50	Pass
		Inner_1RB_Right	16.89	/	/	12.37	/	/	<=50	Pass
CP-OFDM QPSK	819	Edge_1RB_Left	18.30	/	/	13.78	/	/	<=50	Pass
		Edge_1RB_Right	18.38	/	/	13.86	/	/	<=50	Pass
		Outer_Full	18.47	/	/	13.95	/	/	<=50	Pass
		Inner_Full	19.98	/	/	15.46	/	/	<=50	Pass
		Inner_1RB_Left	19.74	/	/	15.22	/	/	<=50	Pass
		Inner_1RB_Right	19.77	/	/	15.25	/	/	<=50	Pass
CP-OFDM 16 QAM	819	Edge_1RB_Left	18.61	/	/	14.09	/	/	<=50	Pass
		Edge_1RB_Right	18.59	/	/	14.07	/	/	<=50	Pass
		Outer_Full	18.51	/	/	13.99	/	/	<=50	Pass
		Inner_Full	19.46	/	/	14.94	/	/	<=50	Pass
		Inner_1RB_Left	19.55	/	/	15.03	/	/	<=50	Pass
		Inner_1RB_Right	19.61	/	/	15.09	/	/	<=50	Pass
CP-OFDM 64 QAM	819	Edge_1RB_Left	17.92	/	/	13.40	/	/	<=50	Pass
		Edge_1RB_Right	17.95	/	/	13.43	/	/	<=50	Pass
		Outer_Full	17.97	/	/	13.45	/	/	<=50	Pass
		Inner_Full	17.98	/	/	13.46	/	/	<=50	Pass
		Inner_1RB_Left	17.94	/	/	13.42	/	/	<=50	Pass
		Inner_1RB_Right	17.98	/	/	13.46	/	/	<=50	Pass
CP-OFDM 256 QAM	819	Edge_1RB_Left	14.93	/	/	10.41	/	/	<=50	Pass
		Edge_1RB_Right	15.00	/	/	10.48	/	/	<=50	Pass
		Outer_Full	14.94	/	/	10.42	/	/	<=50	Pass
		Inner_Full	14.95	/	/	10.43	/	/	<=50	Pass
		Inner_1RB_Left	14.89	/	/	10.37	/	/	<=50	Pass
		Inner_1RB_Right	15.01	/	/	10.49	/	/	<=50	Pass
Note1: Antenna Gain: Ant7: -2.37dBi; Note2: ERP=Conducted Power+Antenna Gain-2.15										

2. Frequency Stability

2.1 Test Result

2.1.1 15k_SISO_10MHz

5G NR n26a SCS=15kHz SISO 10MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM QPSK	819	Outer_Full	20	LV	-5.00	-0.0061	>=-2.5 & <=2.5	Pass
				HV	-3.00	-0.0037	>=-2.5 & <=2.5	Pass
			-30	NV	-5.50	-0.0067	>=-2.5 & <=2.5	Pass
			-20	NV	-2.70	-0.0033	>=-2.5 & <=2.5	Pass
			-10	NV	-5.50	-0.0067	>=-2.5 & <=2.5	Pass
			0	NV	-3.90	-0.0048	>=-2.5 & <=2.5	Pass
			10	NV	-4.20	-0.0051	>=-2.5 & <=2.5	Pass
			20	NV	-5.80	-0.0071	>=-2.5 & <=2.5	Pass
			30	NV	-5.20	-0.0063	>=-2.5 & <=2.5	Pass
			40	NV	-6.90	-0.0084	>=-2.5 & <=2.5	Pass
			50	NV	-9.20	-0.0112	>=-2.5 & <=2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 15k_SISO_5MHz_NTNV

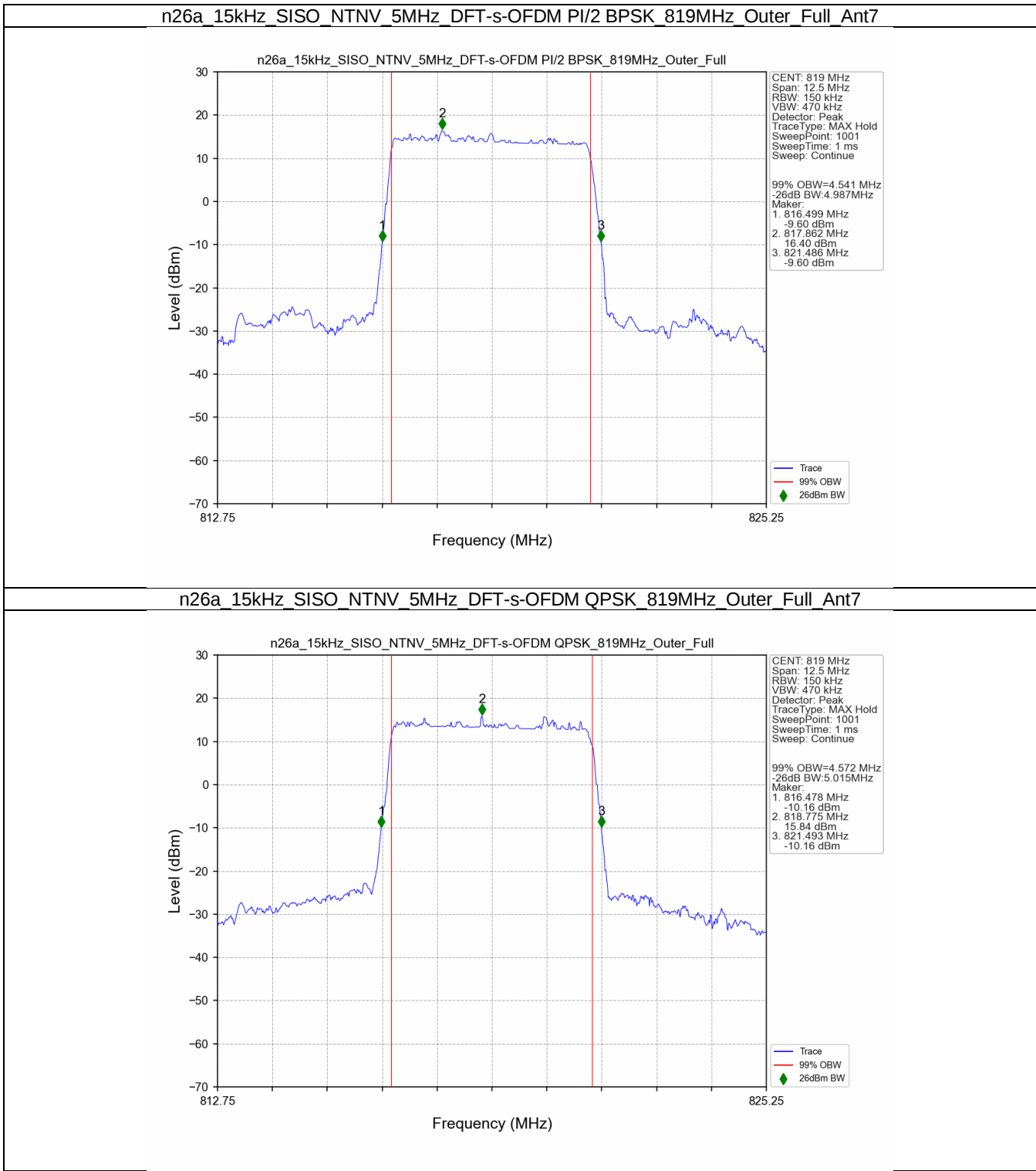
5G NR n26a SCS=15kHz SISO 5MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	819	Outer_Full	4.54	4.99	/	Pass
DFT-s-OFDM QPSK	819	Outer_Full	4.57	5.01	/	Pass
DFT-s-OFDM 16 QAM	819	Outer_Full	4.54	5.01	/	Pass
DFT-s-OFDM 64 QAM	819	Outer_Full	4.55	5.00	/	Pass
DFT-s-OFDM 256 QAM	819	Outer_Full	4.53	5.01	/	Pass
CP-OFDM QPSK	819	Outer_Full	4.50	4.98	/	Pass
CP-OFDM 16 QAM	819	Outer_Full	4.52	4.97	/	Pass
CP-OFDM 64 QAM	819	Outer_Full	4.50	5.01	/	Pass
CP-OFDM 256 QAM	819	Outer_Full	4.51	4.97	/	Pass

3.1.2 15k_SISO_10MHz_NTNV

5G NR n26a SCS=15kHz SISO 10MHz NTNv						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	819	Outer_Full	9.09	9.73	/	Pass
DFT-s-OFDM QPSK	819	Outer_Full	9.02	9.69	/	Pass
DFT-s-OFDM 16 QAM	819	Outer_Full	9.00	9.71	/	Pass
DFT-s-OFDM 64 QAM	819	Outer_Full	9.04	9.72	/	Pass
DFT-s-OFDM 256 QAM	819	Outer_Full	8.99	9.68	/	Pass
CP-OFDM QPSK	819	Outer_Full	9.31	10.03	/	Pass
CP-OFDM 16 QAM	819	Outer_Full	9.34	10.09	/	Pass
CP-OFDM 64 QAM	819	Outer_Full	9.36	10.04	/	Pass
CP-OFDM 256 QAM	819	Outer_Full	9.36	10.04	/	Pass

3.2 Test Graph

3.2.1 15k_SISO_5MHz_NTNV



n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_16_QAM_819MHz_Outer_Full

Level (dBm)

Frequency (MHz)

Trace
99% OBW
26dBm BW

CENT: 819 MHz
Span: 12.5 MHz
RBW: 150 kHz
VBW: 470 kHz
Detector: Peak
TraceType: MAX Hold
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Continue

99% OBW=4.535 MHz
-26dB BW:5.007MHz
Marker:
1. 816.490 MHz
-11.17 dBm
2. 817.138 MHz
14.83 dBm
3. 821.497 MHz
-11.17 dBm

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM 64 QAM_819MHz_Outer_Full

Level (dBm)

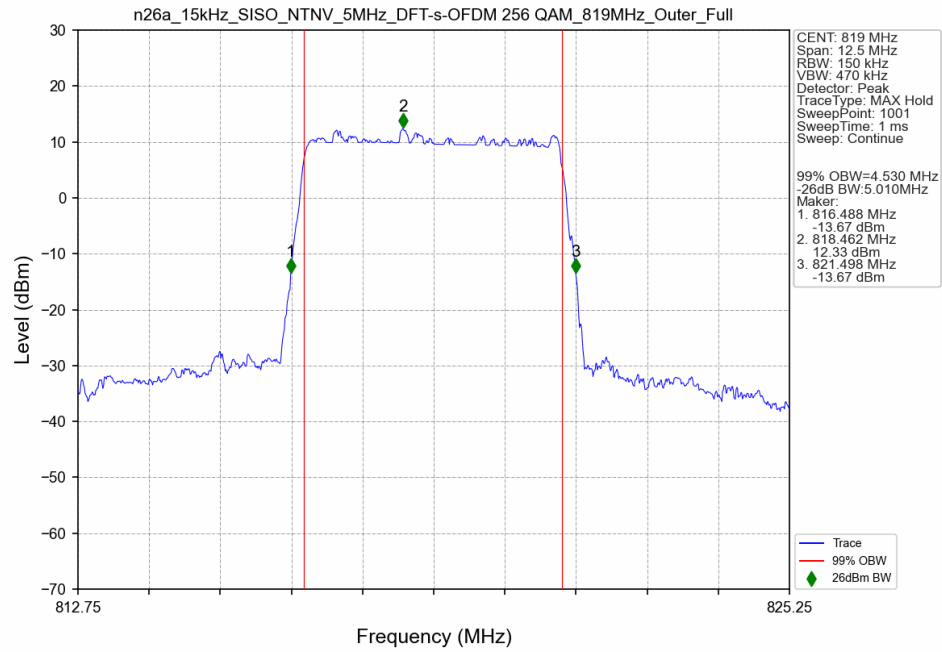
Frequency (MHz)

Trace
99% OBW
26dBm BW

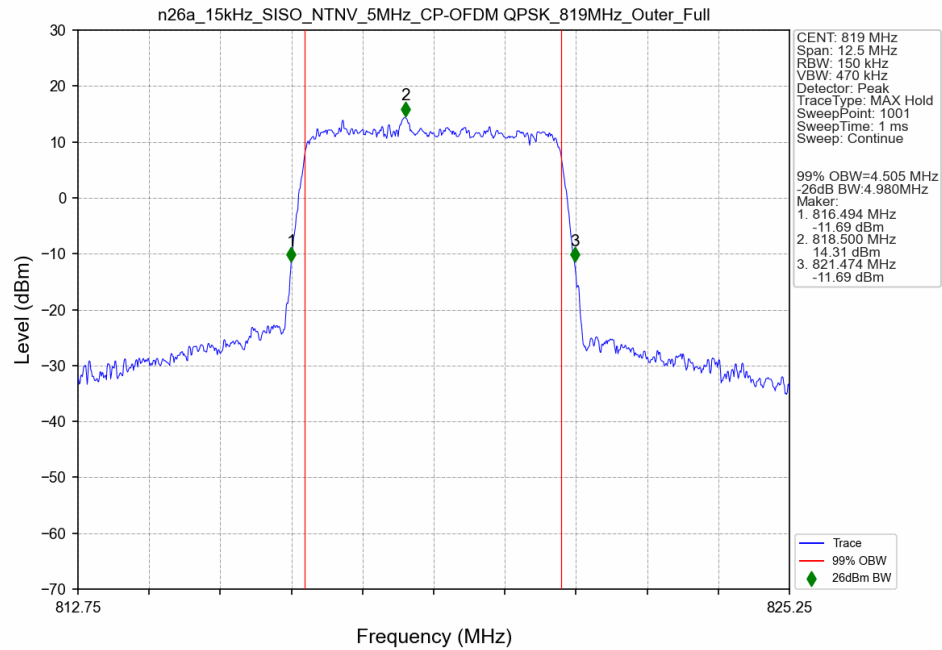
CENT: 819 MHz
Span: 12.5 MHz
RBW: 150 kHz
VBW: 470 kHz
Detector: Peak
TraceType: MAX Hold
SweepPoint: 1001
SweepTime: 1 ms
Sweep: Continue

99% OBW=4.553 MHz
-26dB BW:4.995MHz
Maker:
1. 816.495 MHz
-11.22 dBm
2. 819.050 MHz
14.78 dBm
3. 821.490 MHz
-11.22 dBm

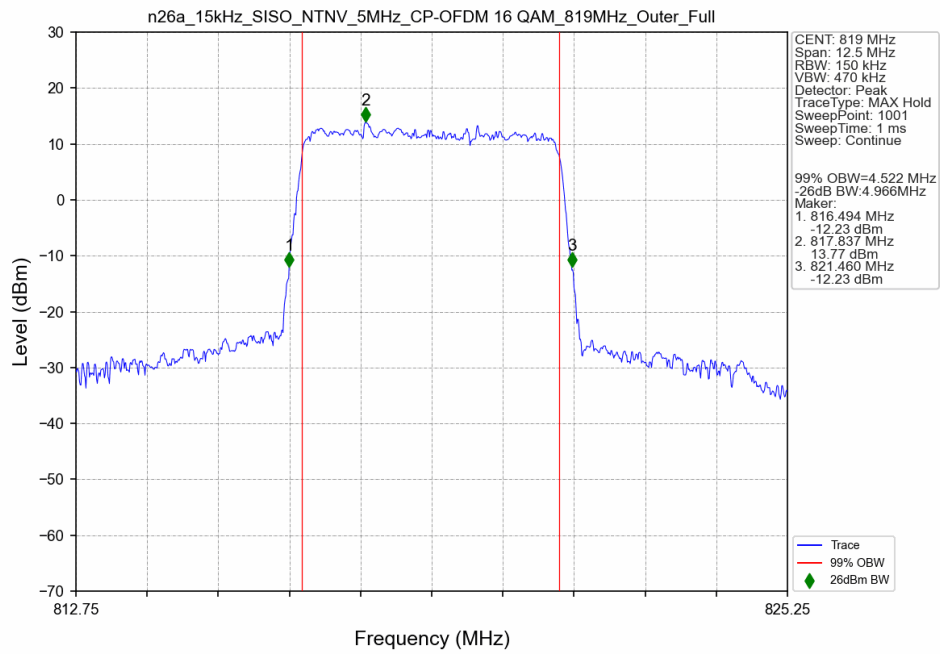
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_256_QAM_819MHz_Outer_Full_Ant7



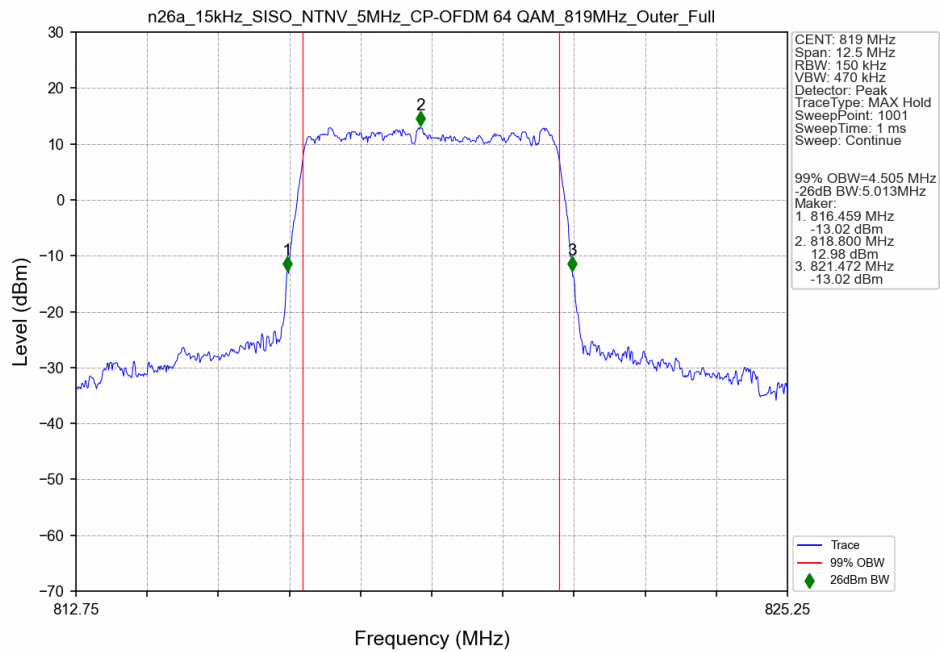
n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_819MHz_Outer_Full_Ant7



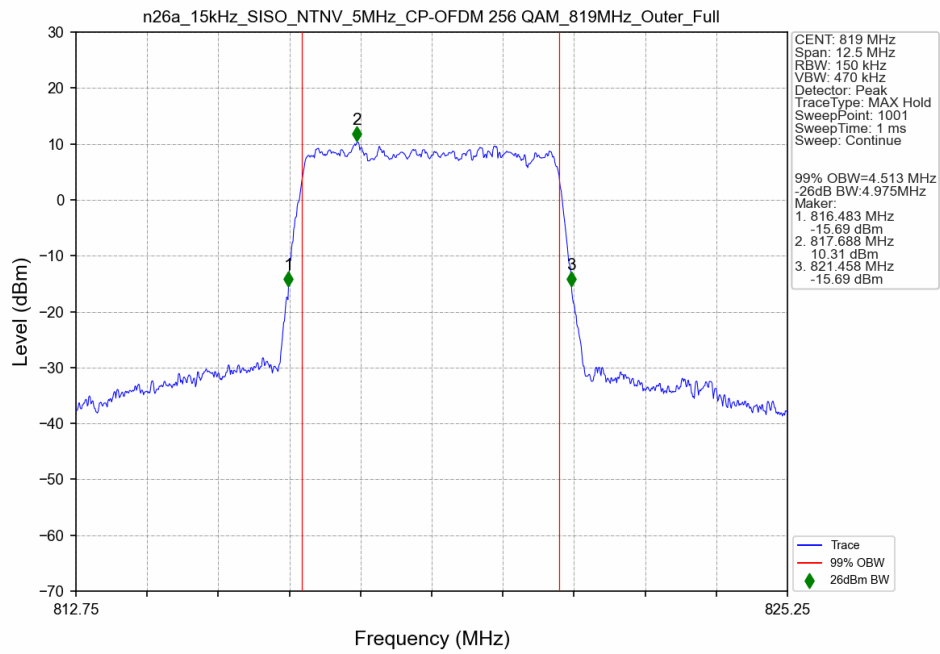
n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM 16 QAM 819MHz_Outer_Full_Ant7



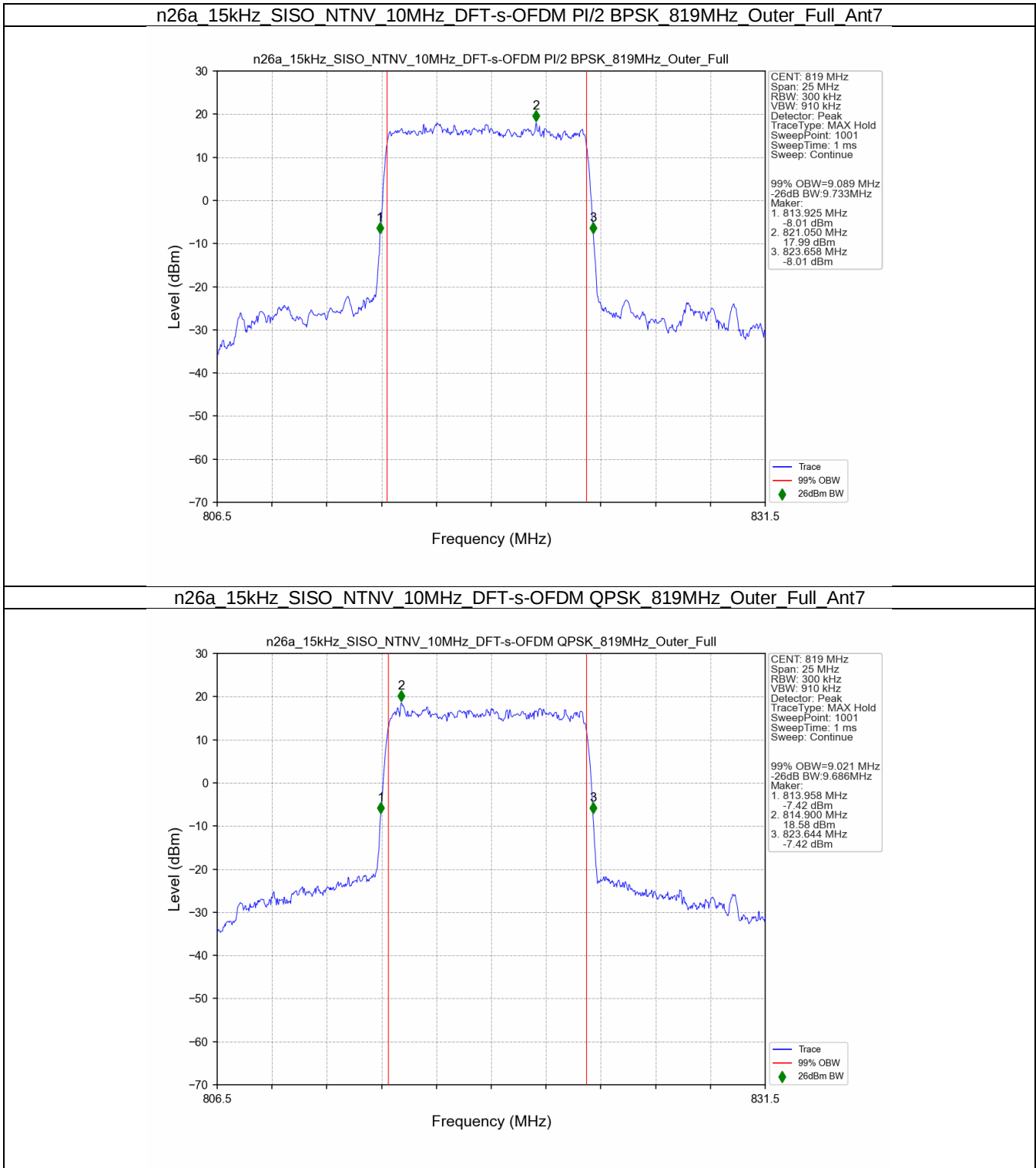
n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM 64 QAM 819MHz_Outer_Full_Ant7



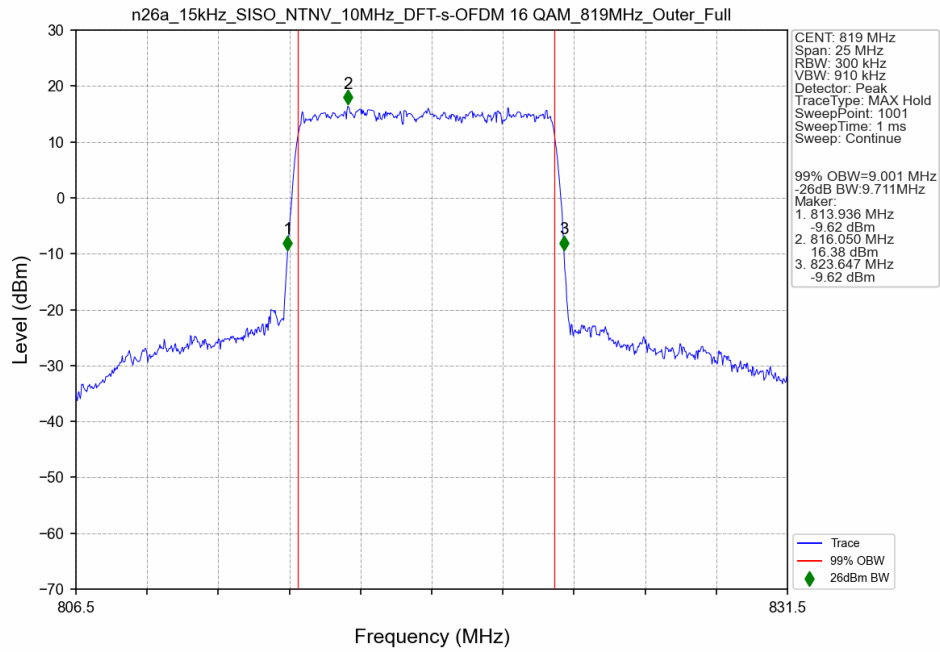
n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_256_QAM_819MHz_Outer_Full_Ant7



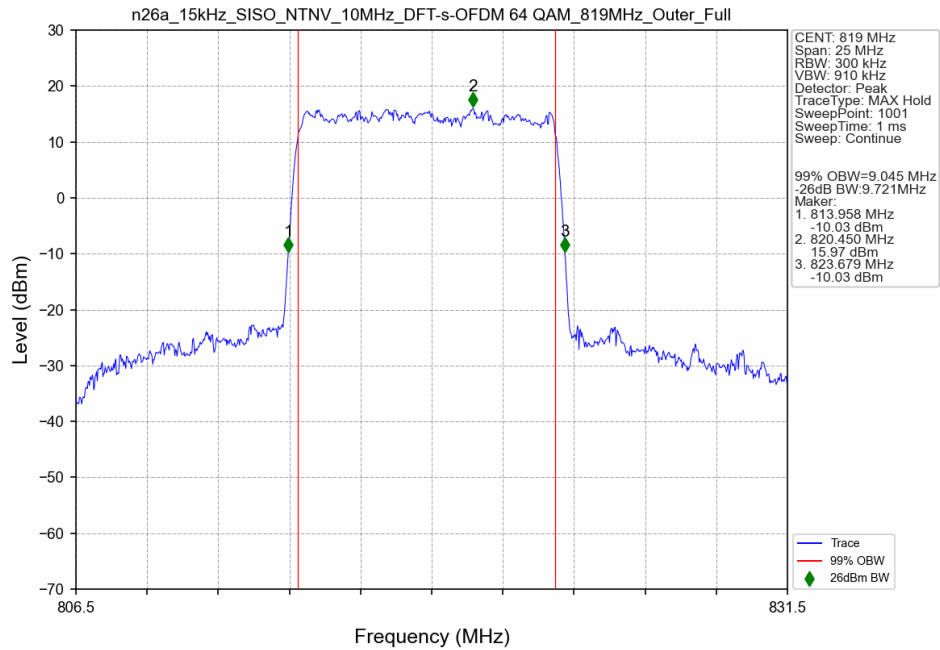
3.2.2 15k_SISO_10MHz_NTNV



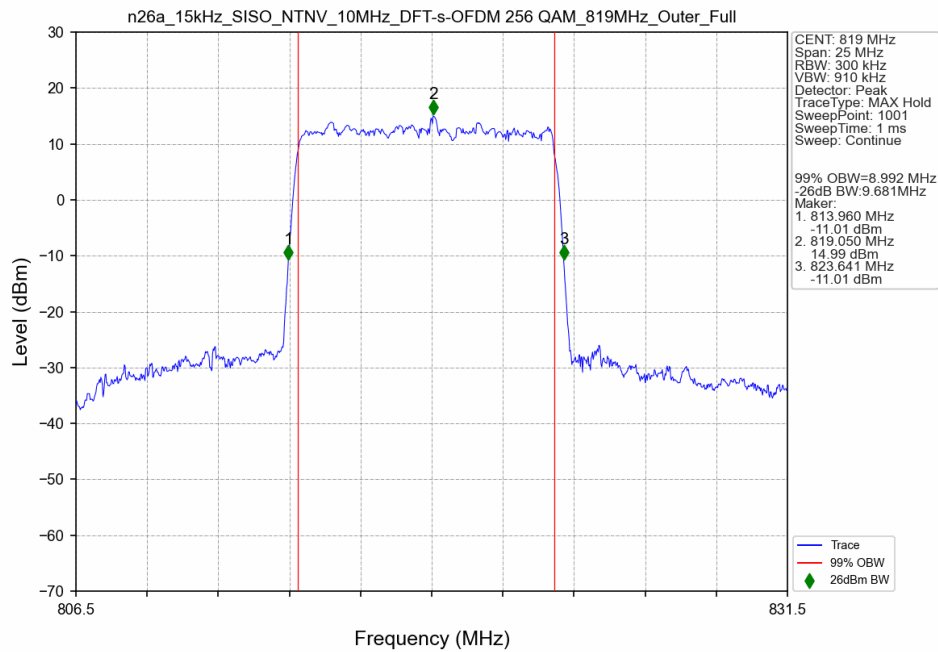
n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_16_QAM_819MHz_Outer_Full_Ant7



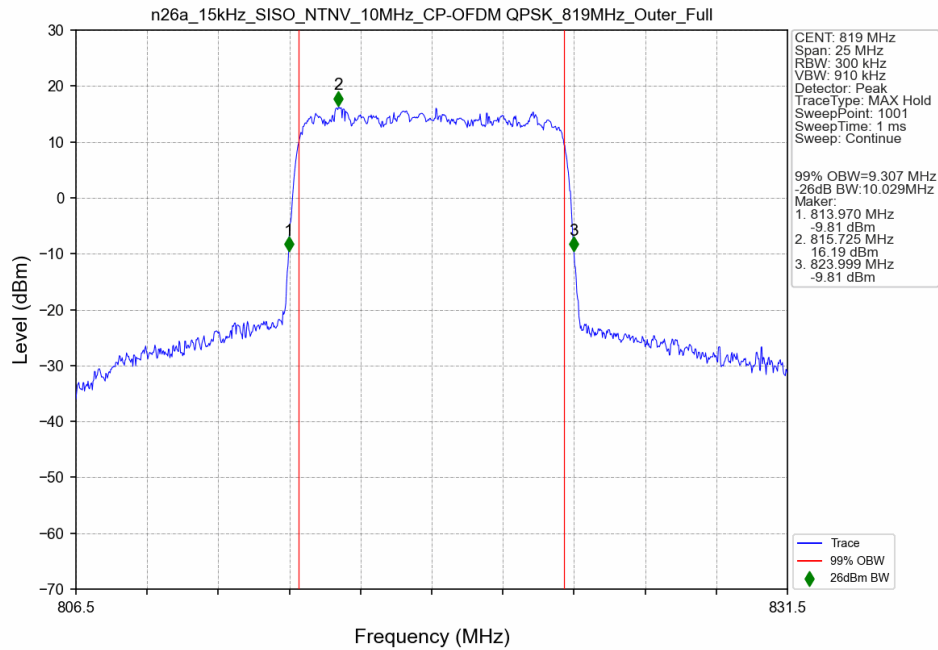
n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_64_QAM_819MHz_Outer_Full_Ant7



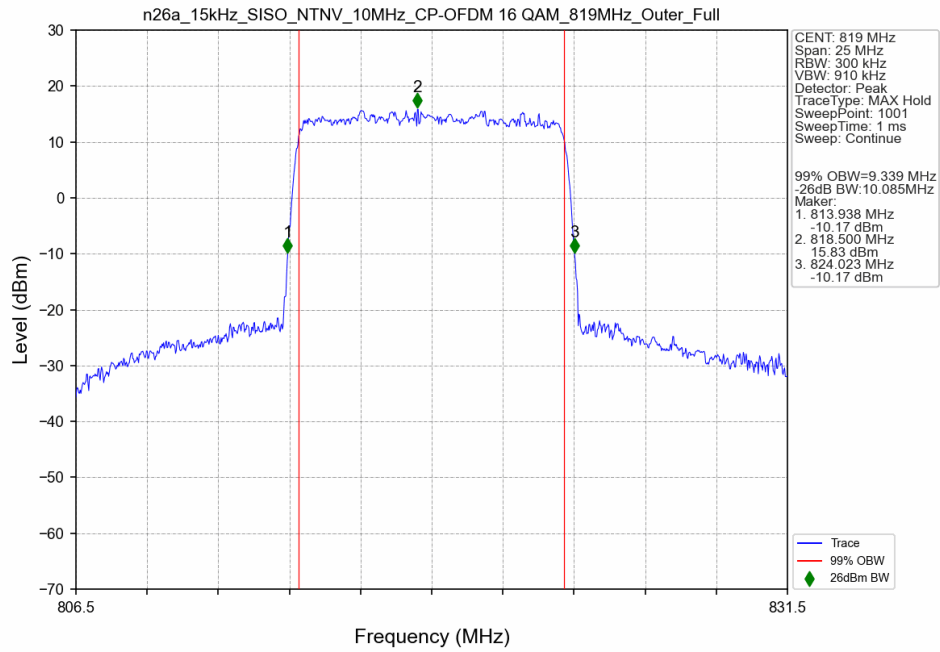
n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_256_QAM_819MHz_Outer_Full_Ant7



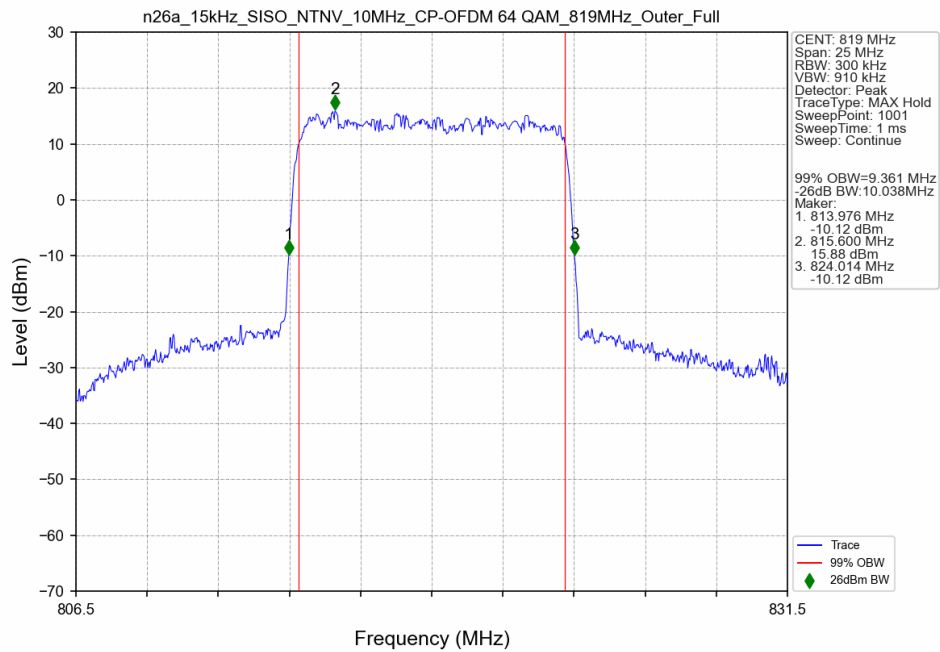
n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM_QPSK_819MHz_Outer_Full_Ant7

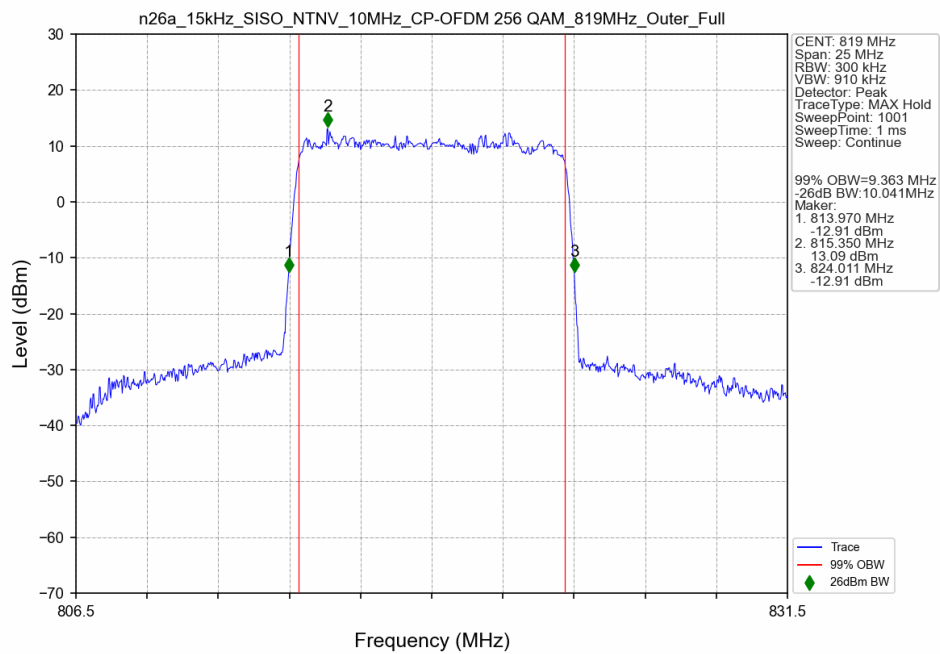


n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM 16 QAM 819MHz_Outer_Full Ant7



n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM 64 QAM 819MHz_Outer_Full Ant7





4. Peak-Average Ratio

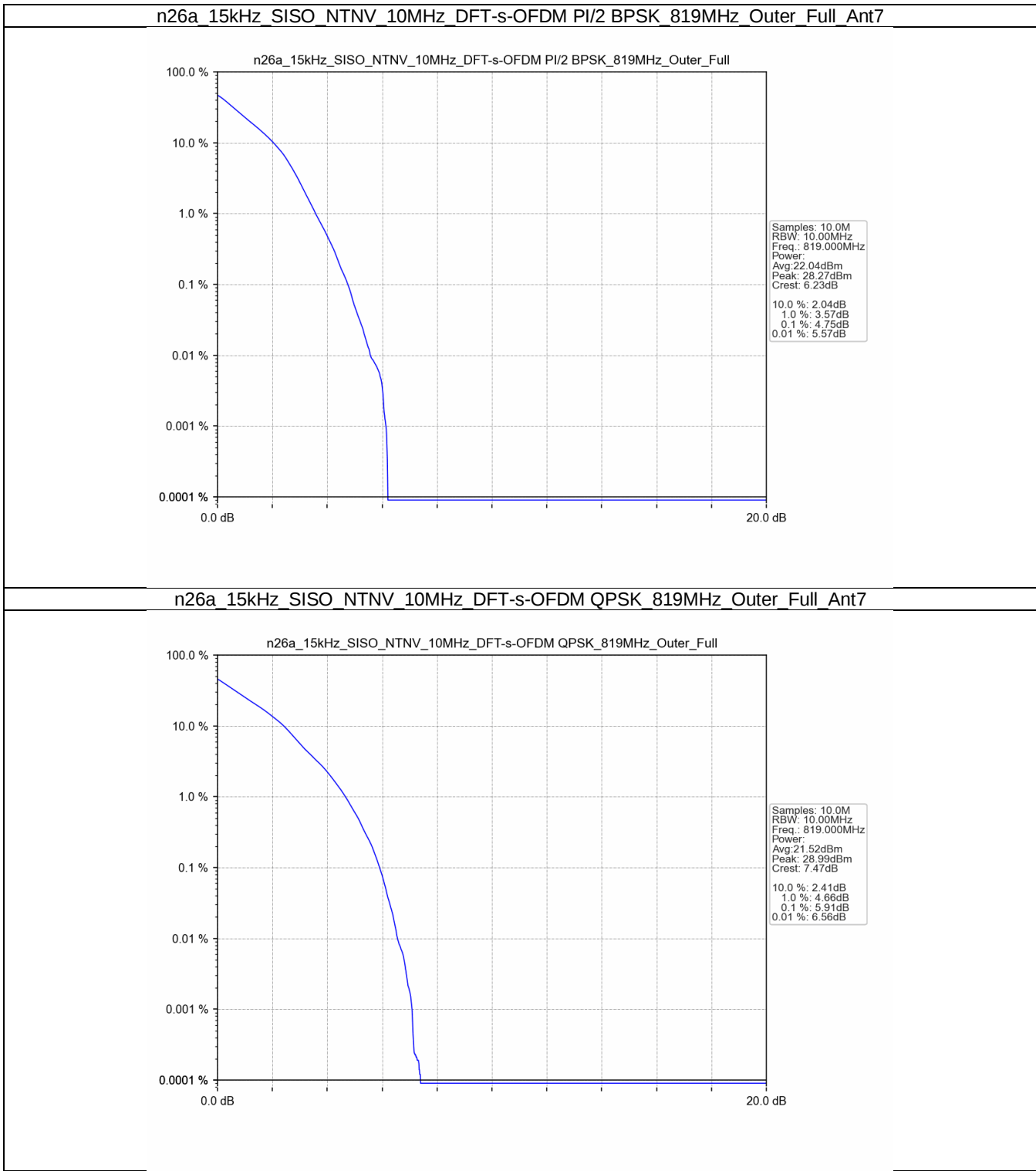
4.1 Test Result

4.1.1 15k_SISO_10MHz_NTNV

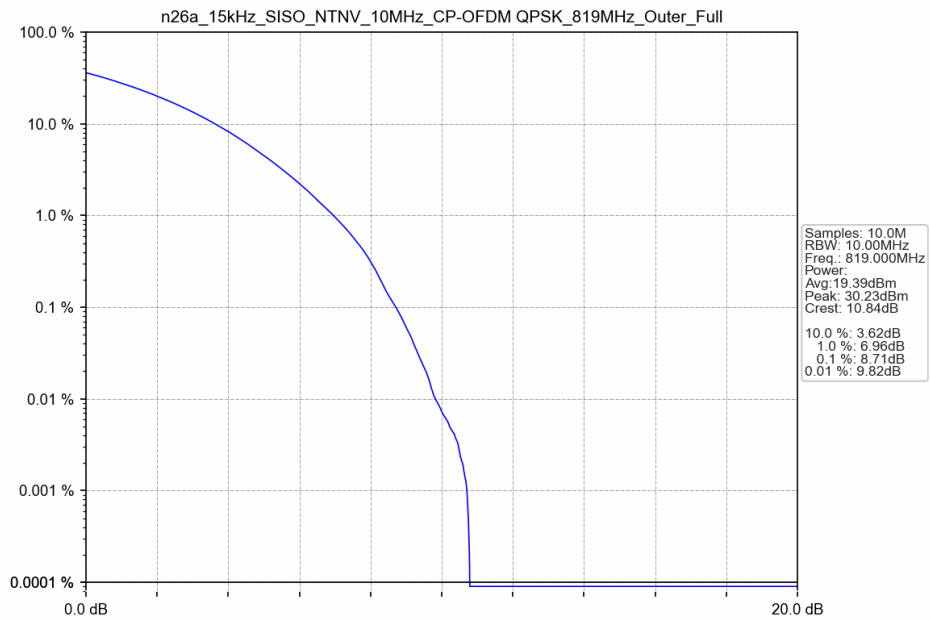
5G NR n26a SCS=15kHz SISO 10MHz NTNv							
Modulation	Frequency (MHz)	RB Allocation	Peak-Average Ratio (dB)				Verdict
			Ant7	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	819	Outer_Full	4.75	/	/	<=13	Pass
DFT-s-OFDM QPSK	819	Outer_Full	5.91	/	/	<=13	Pass
CP-OFDM QPSK	819	Outer_Full	8.71	/	/	<=13	Pass

4.2 Test Graph

4.2.1 15k_SISO_10MHz_NTNV



n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM_QPSK_819MHz_Outer_Full_Ant7



5. Spurious Emission

5.1 Test Result

5.1.1 15k_SISO_5MHz_NTNV

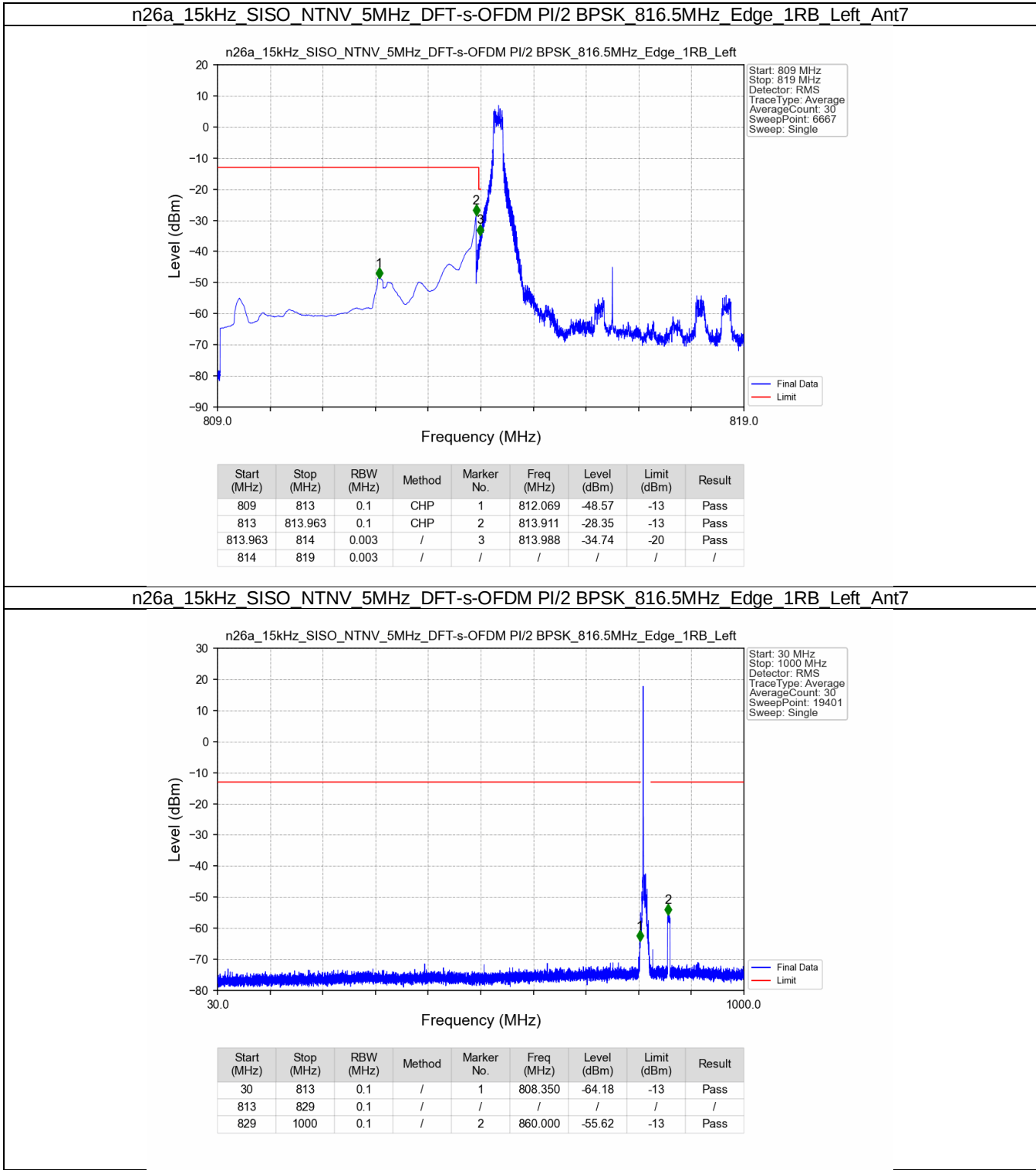
5G NR n26a SCS=15kHz SISO 5MHz NTN								
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict	
			Ant7	Ant2	Sum	Limit		
DFT-s-OFDM PI/2 BPSK	816.5	Edge_1RB_Left	Refer To Test Graph				Pass	
		Outer_Full	Refer To Test Graph				Pass	
	819	Edge_1RB_Left	Refer To Test Graph				Pass	
		821.5	Edge_1RB_Right	Refer To Test Graph				Pass
			Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	816.5	Edge_1RB_Left	Refer To Test Graph				Pass	
		Outer_Full	Refer To Test Graph				Pass	
	819	Edge_1RB_Left	Refer To Test Graph				Pass	
		821.5	Edge_1RB_Right	Refer To Test Graph				Pass
			Outer_Full	Refer To Test Graph				Pass
CP-OFDM QPSK	816.5	Edge_1RB_Left	Refer To Test Graph				Pass	
		Outer_Full	Refer To Test Graph				Pass	
	819	Edge_1RB_Left	Refer To Test Graph				Pass	
		821.5	Edge_1RB_Right	Refer To Test Graph				Pass
			Outer_Full	Refer To Test Graph				Pass

5.1.2 15k_SISO_10MHz_NTNV

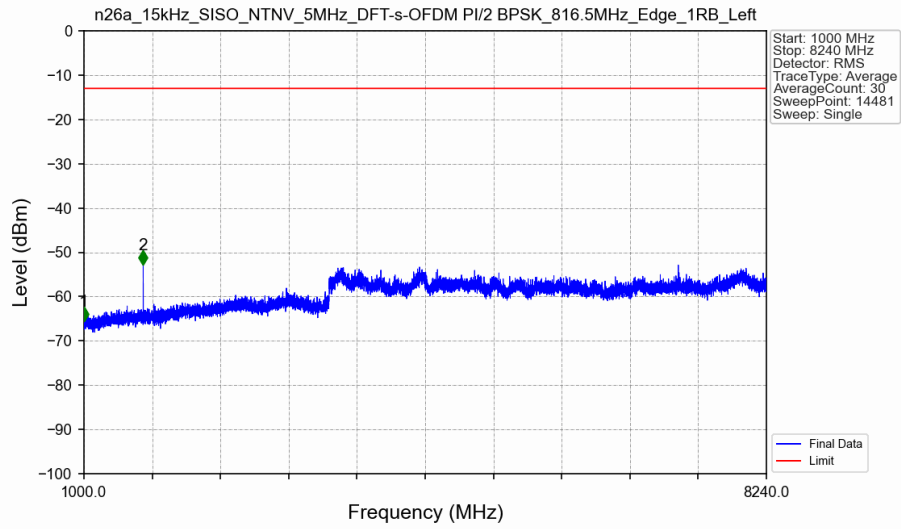
5G NR n26a SCS=15kHz SISO 10MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant7	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	819	Edge 1RB Left	Refer To Test Graph				Pass
		Outer Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	819	Edge 1RB Left	Refer To Test Graph				Pass
		Outer Full	Refer To Test Graph				Pass
CP-OFDM QPSK	819	Edge 1RB Left	Refer To Test Graph				Pass
		Outer Full	Refer To Test Graph				Pass

5.2 Test Graph

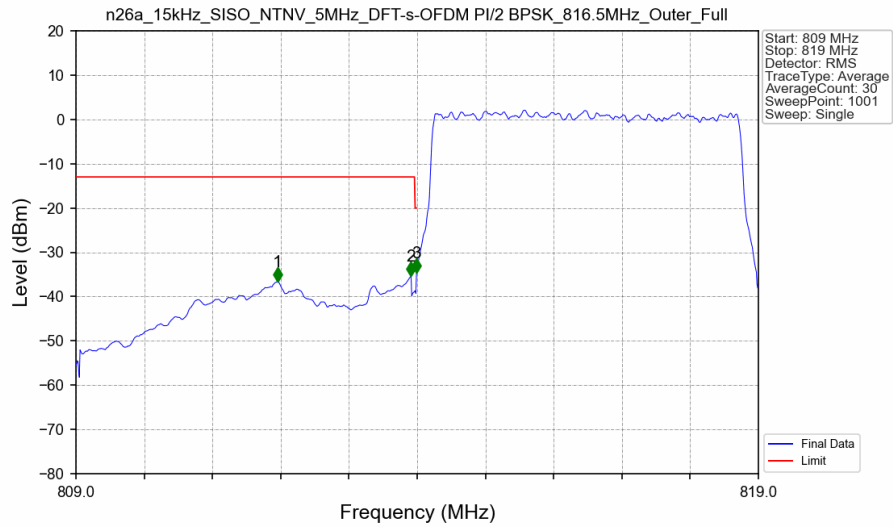
5.2.1 15k_SISO_5MHz_NTNV



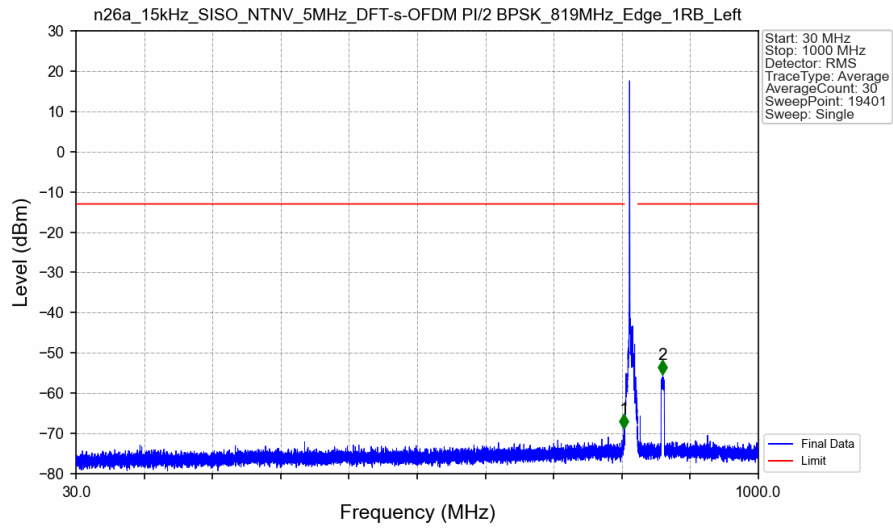
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM PI/2 BPSK_816.5MHz_Edge_1RB_Left_Ant7



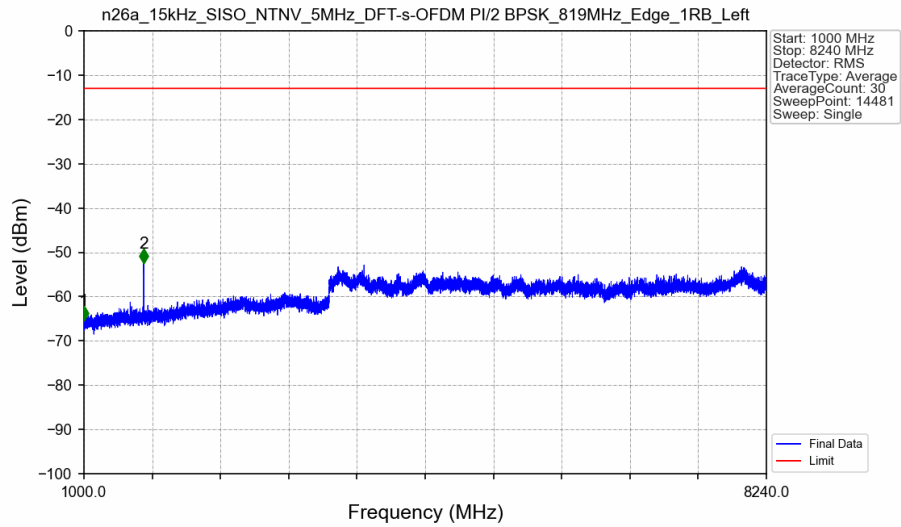
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM PI/2 BPSK_816.5MHz_Outer_Full_Ant7



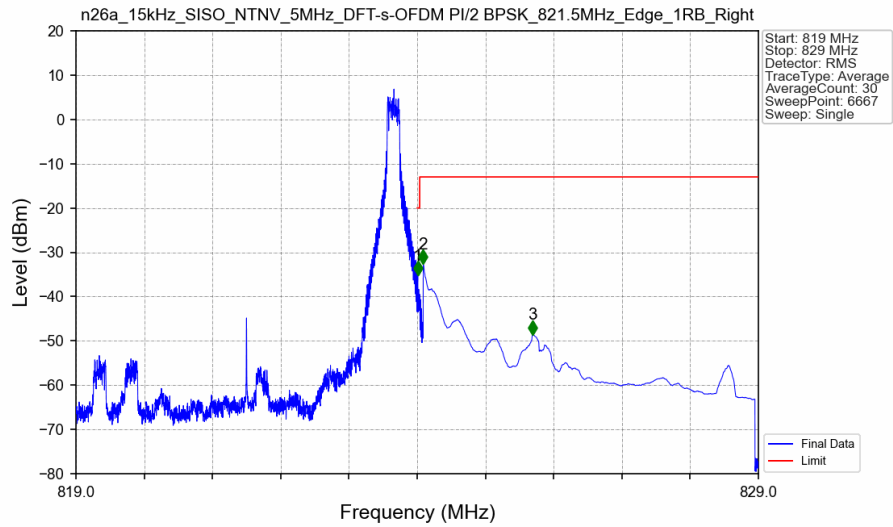
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_PI/2_BPSK_819MHz_Edge_1RB_Left_Ant7



n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_PI/2_BPSK_819MHz_Edge_1RB_Left_Ant7

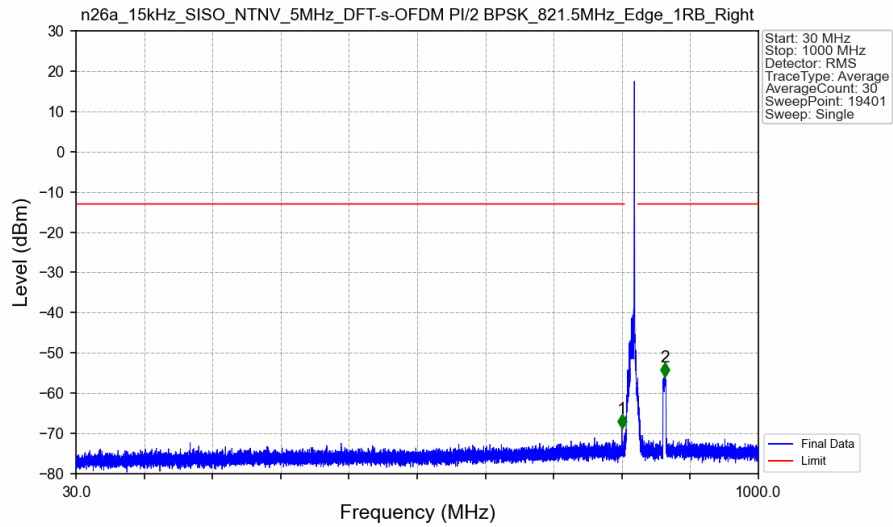


n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_PI/2_BPSK_821.5MHz_Edge_1RB_Right_Ant7



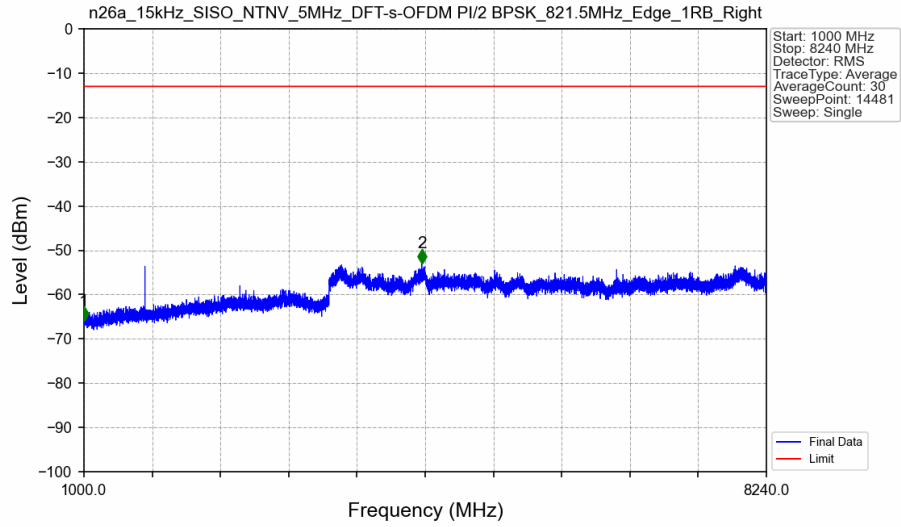
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	824	0.003	/	/	/	/	/	/
824	824.038	0.003	/	1	824.009	-35.21	-20	Pass
824.038	825	0.1	CHP	2	824.089	-32.53	-13	Pass
825	829	0.1	CHP	3	825.688	-48.52	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_PI/2_BPSK_821.5MHz_Edge_1RB_Right_Ant7



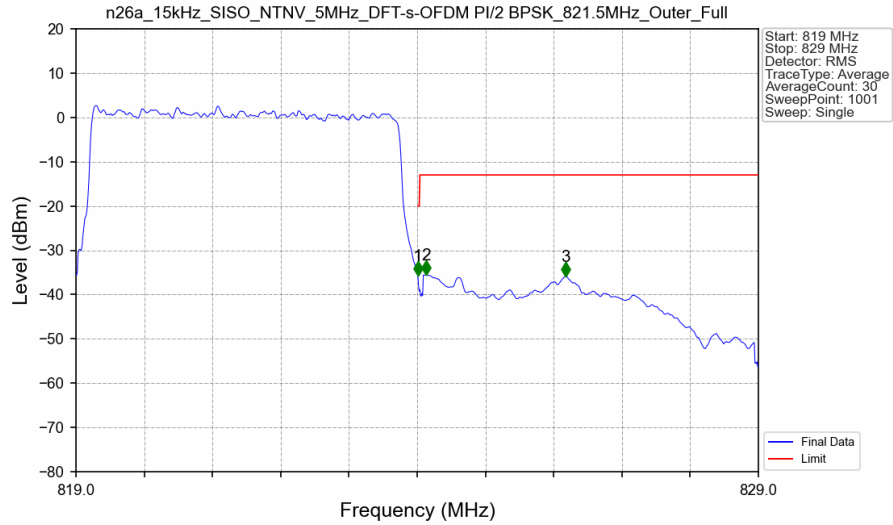
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	814	0.1	/	1	806.000	-68.71	-13	Pass
814	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	867.400	-55.96	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_PI/2_BPSK_821.5MHz_Edge_1RB_Right_Ant7



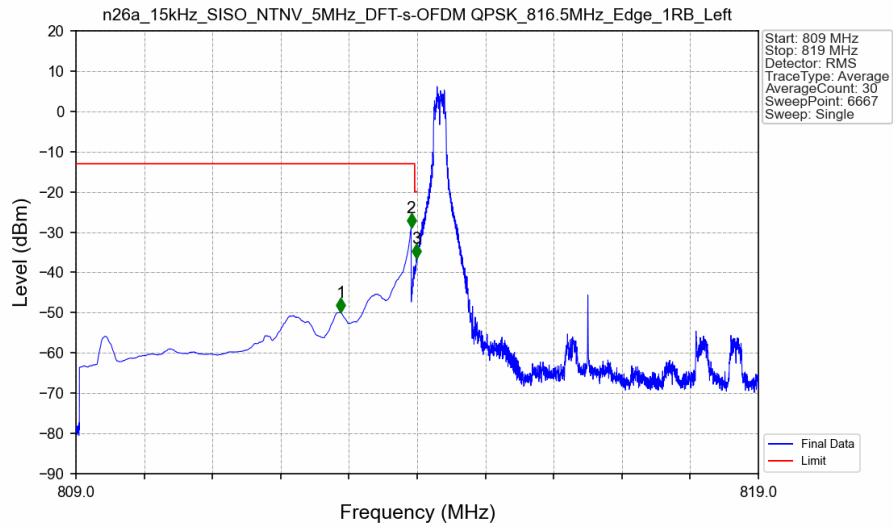
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-65.85	-13	Pass
1000	8240	1	/	2	4584.000	-52.86	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_PI/2_BPSK_821.5MHz_Outer_Full_Ant7



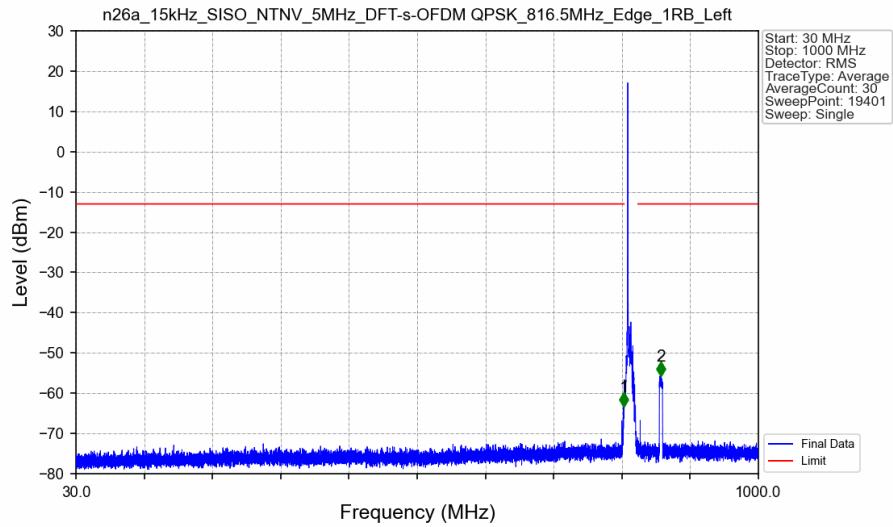
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	824	0.04987	CHP	/	/	/	/	/
824	824.038	0.04987	CHP	1	824.010	-35.67	-20	Pass
824.038	825	0.1	CHP	2	824.130	-35.45	-13	Pass
825	829	0.1	CHP	3	826.180	-35.82	-13	Pass

n26a 15kHz SISO NTN 5MHz DFT-s-OFDM QPSK 816.5MHz Edge 1RB Left Ant7



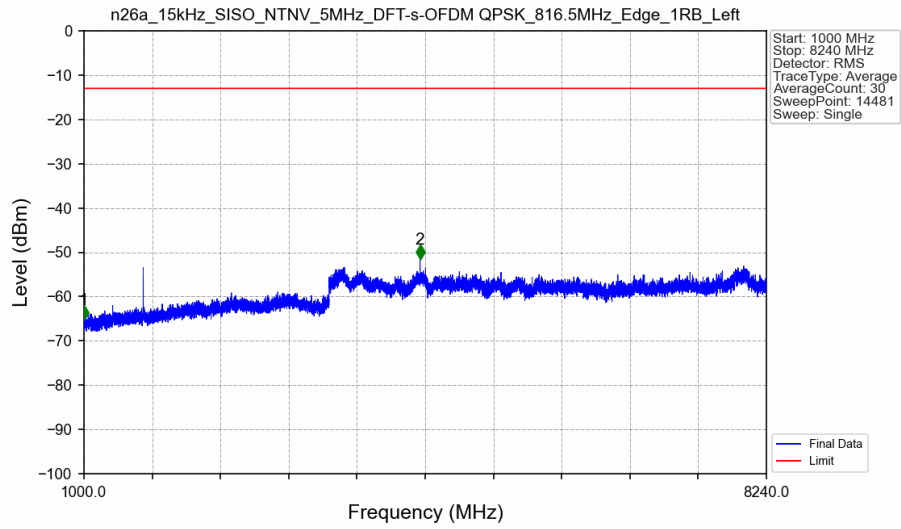
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.881	-49.94	-13	Pass
813	813.963	0.1	CHP	2	813.911	-28.84	-13	Pass
813.963	814	0.003	/	3	813.989	-36.37	-20	Pass
814	819	0.003	/	/	/	/	/	/

n26a 15kHz SISO NTN 5MHz DFT-s-OFDM QPSK 816.5MHz Edge 1RB Left Ant7

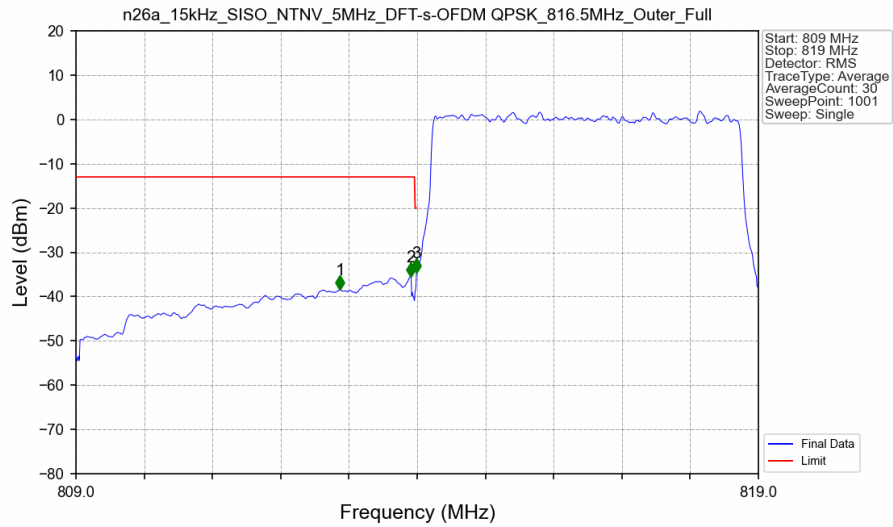


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	813	0.1	/	1	808.850	-63.34	-13	Pass
813	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	861.500	-55.74	-13	Pass

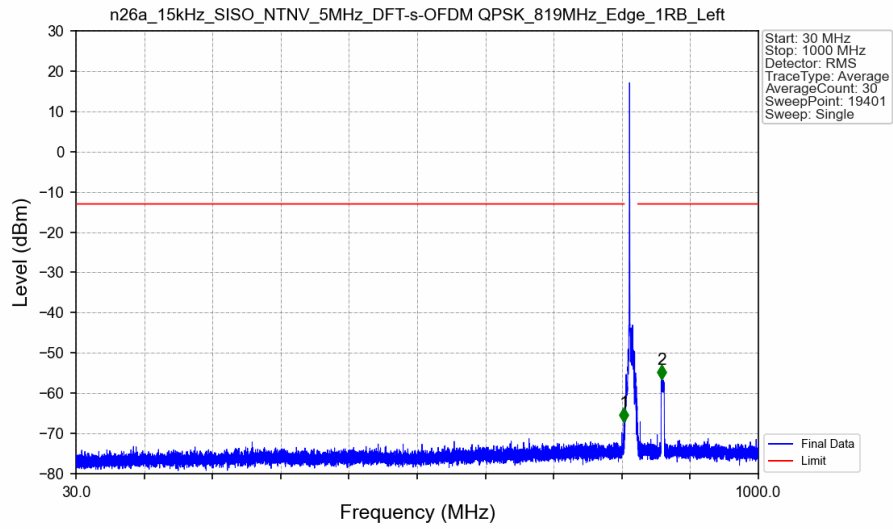
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_816.5MHz_Edge_1RB_Left_Ant7



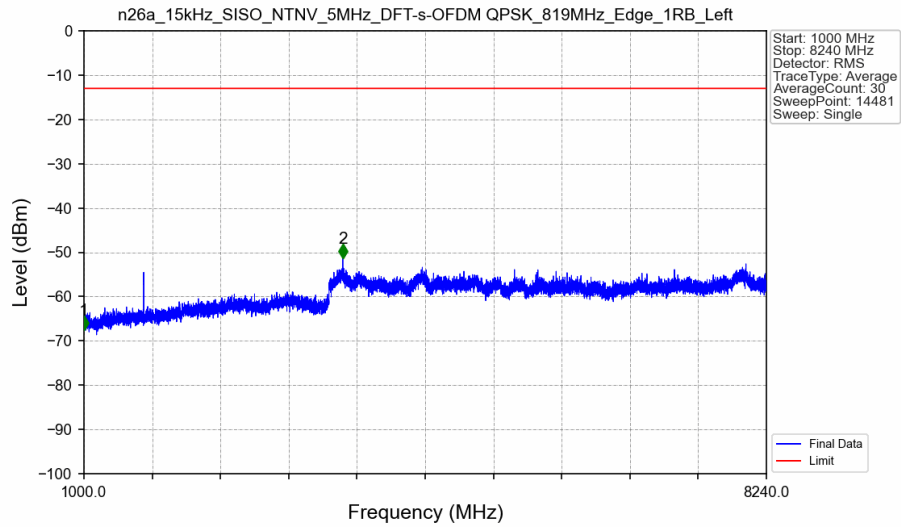
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_816.5MHz_Outer_Full_Ant7



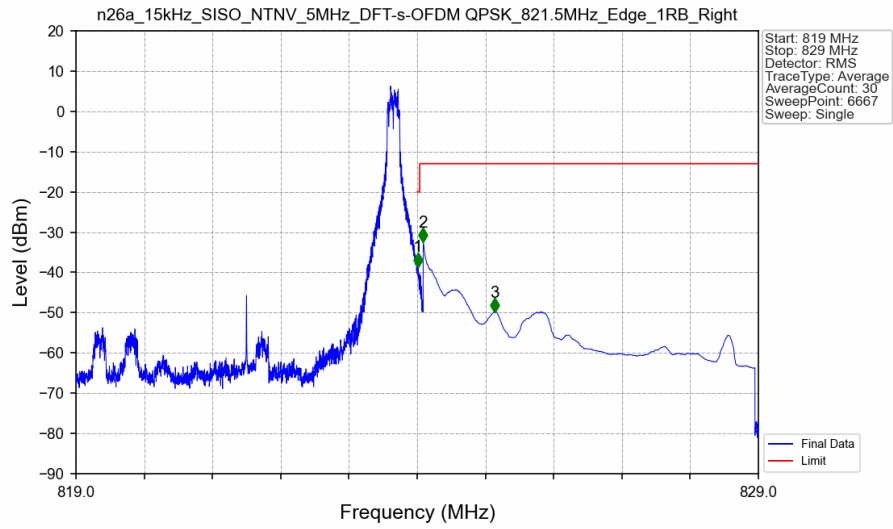
n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7



n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7

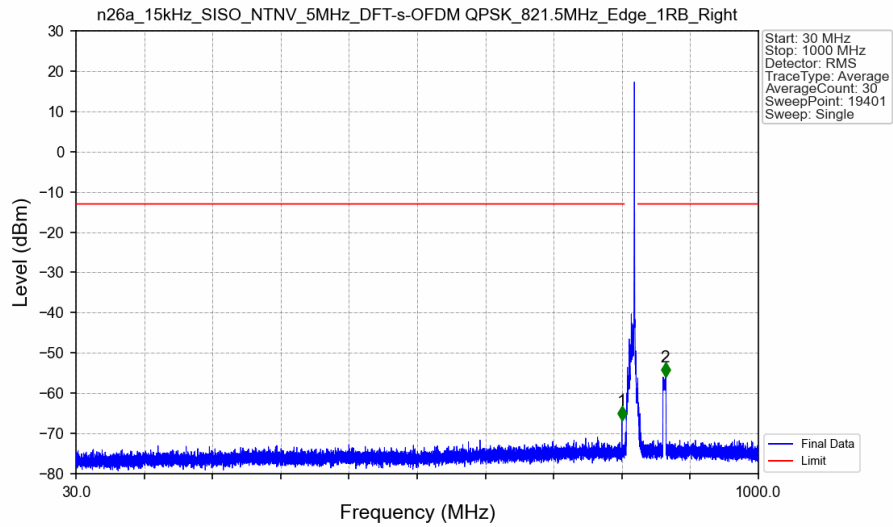


n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_821.5MHz_Edge_1RB_Right_Ant7



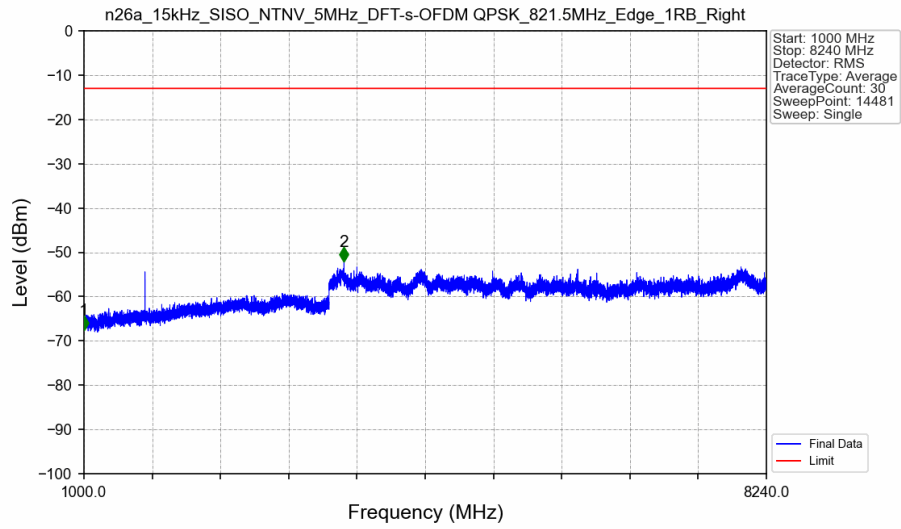
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	824	0.003	/	/	/	/	/	/
824	824.038	0.003	/	1	824.011	-38.54	-20	Pass
824.038	825	0.1	CHP	2	824.089	-32.49	-13	Pass
825	829	0.1	CHP	3	825.140	-49.79	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_821.5MHz_Edge_1RB_Right_Ant7



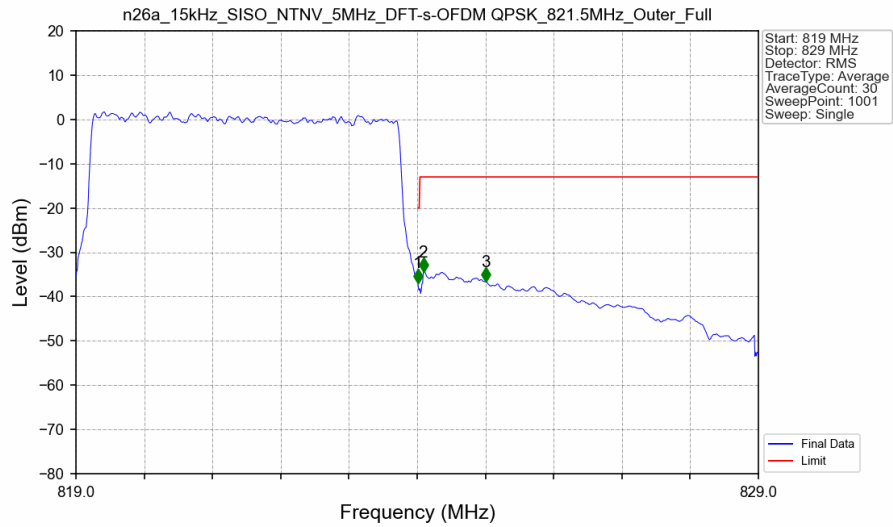
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	814	0.1	/	1	806.000	-66.72	-13	Pass
814	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	867.650	-55.97	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_821.5MHz_Edge_1RB_Right_Ant7



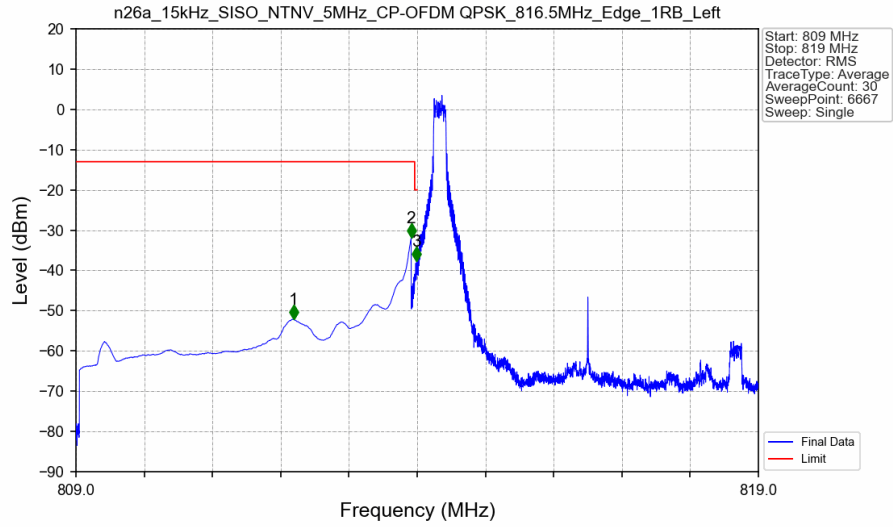
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-67.58	-13	Pass
1000	8240	1	/	2	3759.000	-52.08	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_DFT-s-OFDM_QPSK_821.5MHz_Outer_Full_Ant7



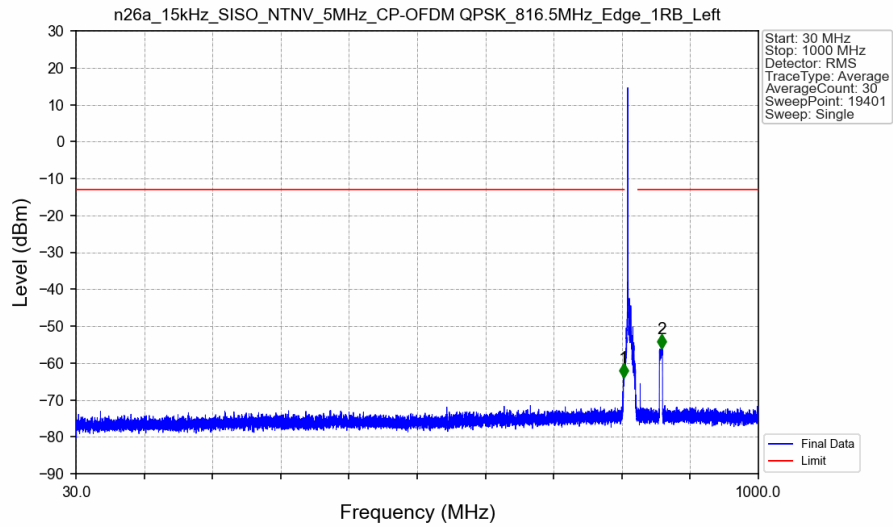
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	824	0.04987	CHP	/	/	/	/	/
824	824.038	0.04987	CHP	1	824.010	-36.87	-20	Pass
824.038	825	0.1	CHP	2	824.090	-34.36	-13	Pass
825	829	0.1	CHP	3	825.010	-36.65	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_816.5MHz_Edge_1RB_Left_Ant7



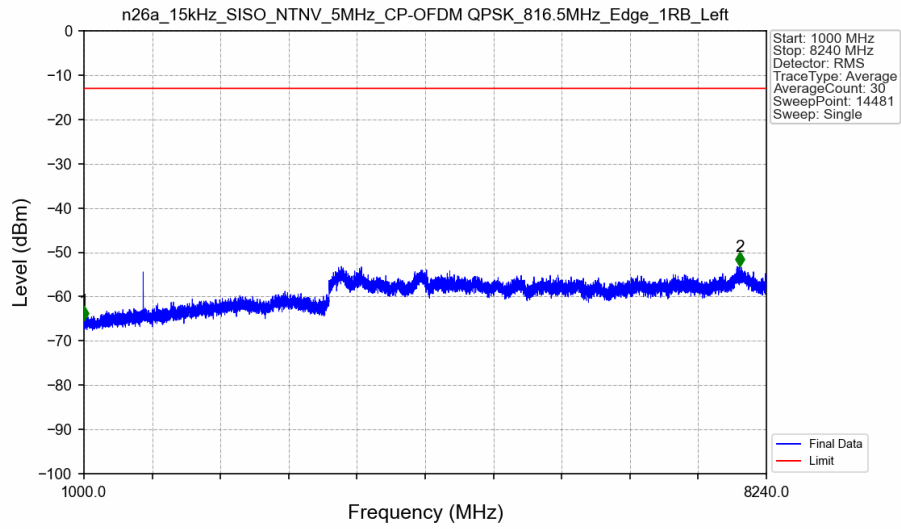
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.186	-52.12	-13	Pass
813	813.963	0.1	CHP	2	813.911	-31.89	-13	Pass
813.963	814	0.003	/	3	813.992	-37.73	-20	Pass
814	819	0.003	/	/	/	/	/	/

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_816.5MHz_Edge_1RB_Left_Ant7



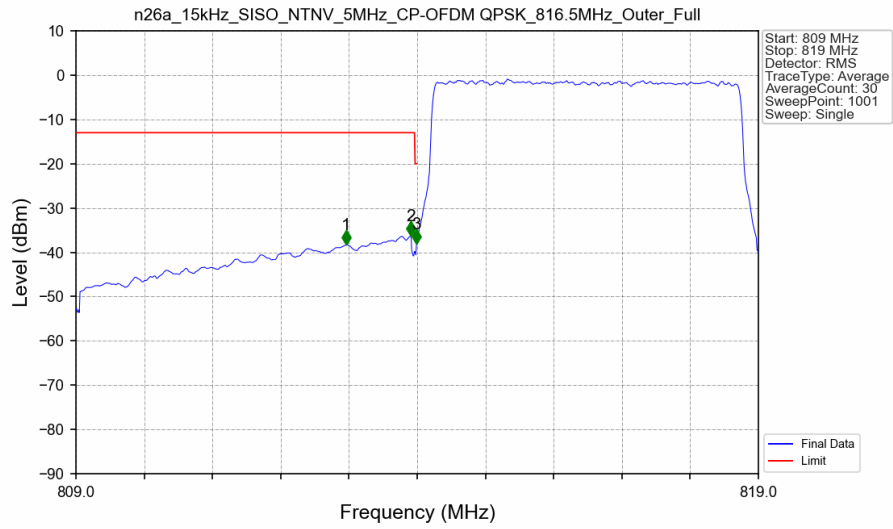
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	813	0.1	/	1	808.500	-63.89	-13	Pass
813	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	862.150	-56.00	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_816.5MHz_Edge_1RB_Left_Ant7



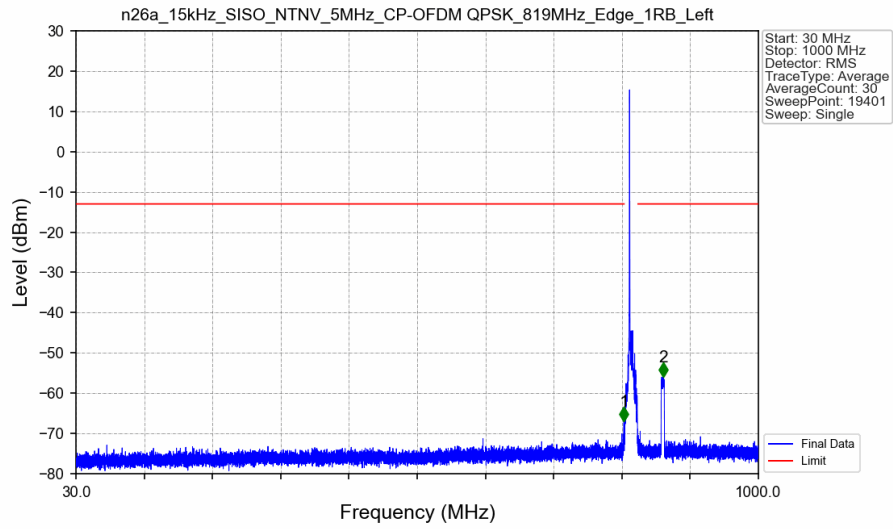
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-65.28	-13	Pass
1000	8240	1	/	2	7955.500	-53.14	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_816.5MHz_Outer_Full_Ant7

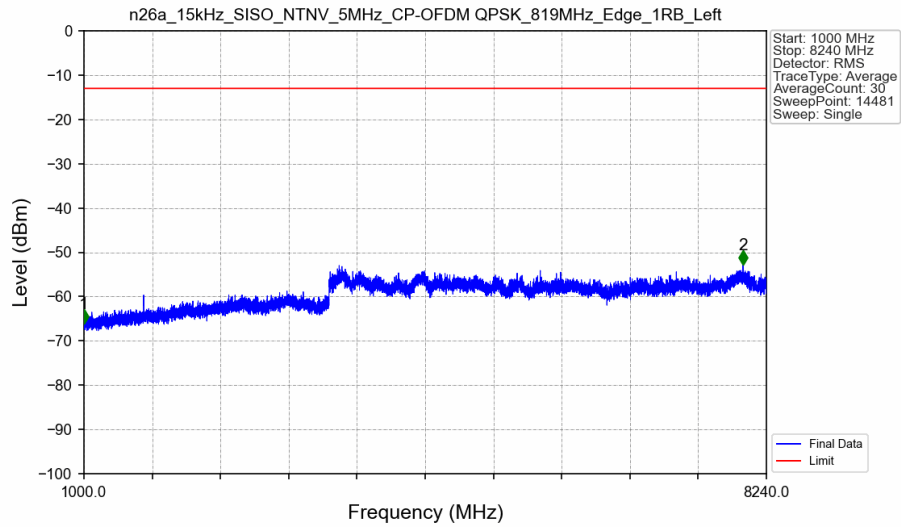


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.960	-38.29	-13	Pass
813	813.963	0.1	CHP	2	813.910	-36.13	-13	Pass
813.963	814	0.04987	CHP	3	813.990	-38.03	-20	Pass
814	819	0.04987	CHP	/	/	/	/	/

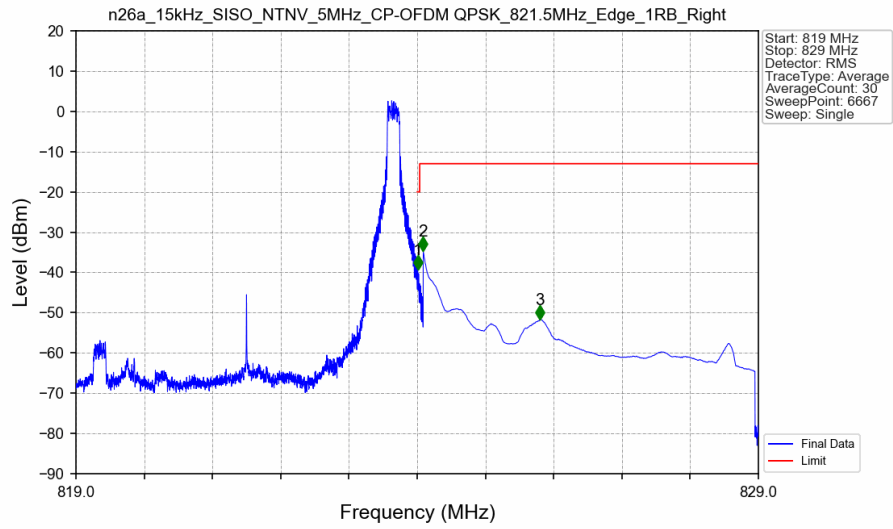
n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7



n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7

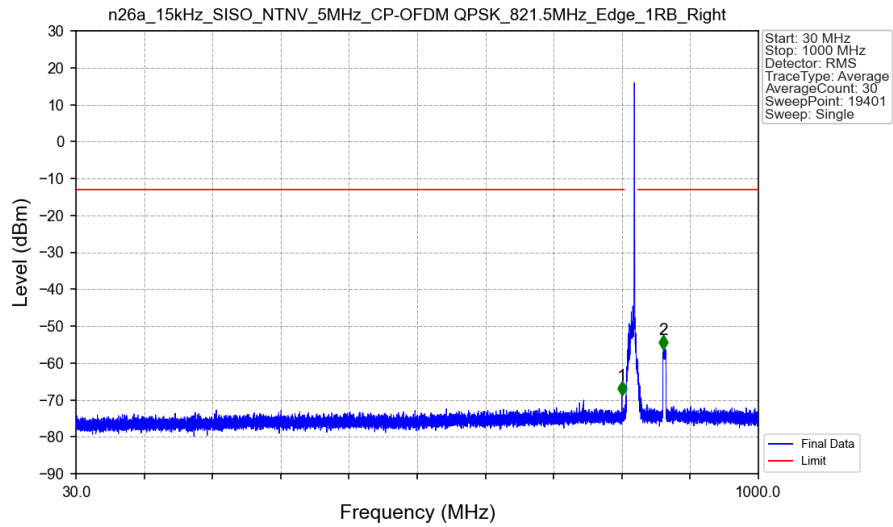


n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_821.5MHz_Edge_1RB_Right_Ant7



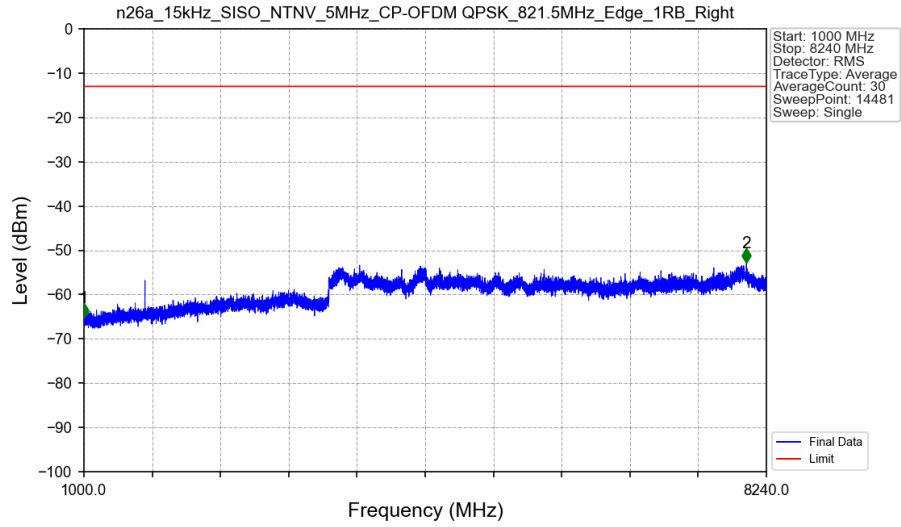
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	824	0.003	/	/	/	/	/	/
824	824.038	0.003	/	1	824.008	-39.19	-20	Pass
824.038	825	0.1	CHP	2	824.089	-34.69	-13	Pass
825	829	0.1	CHP	3	825.800	-51.71	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_821.5MHz_Edge_1RB_Right_Ant7



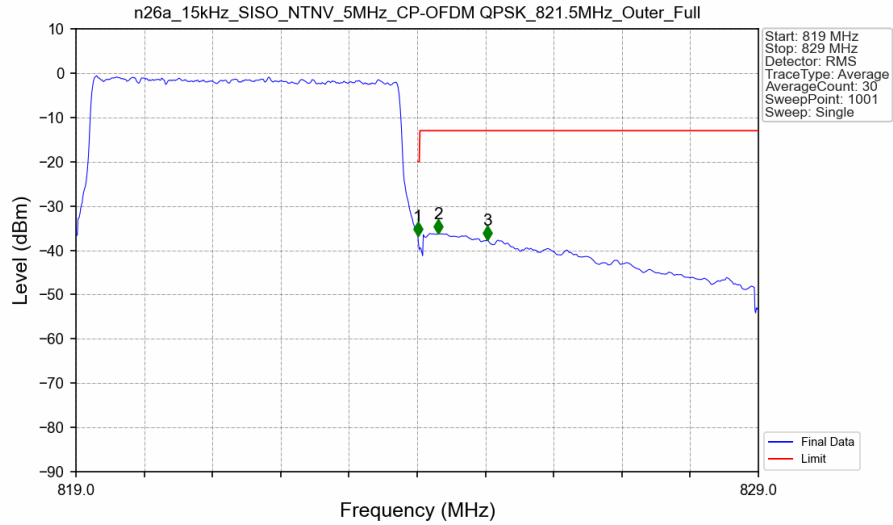
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	814	0.1	/	1	806.000	-68.81	-13	Pass
814	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	865.100	-56.29	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_821.5MHz_Edge_1RB_Right_Ant7



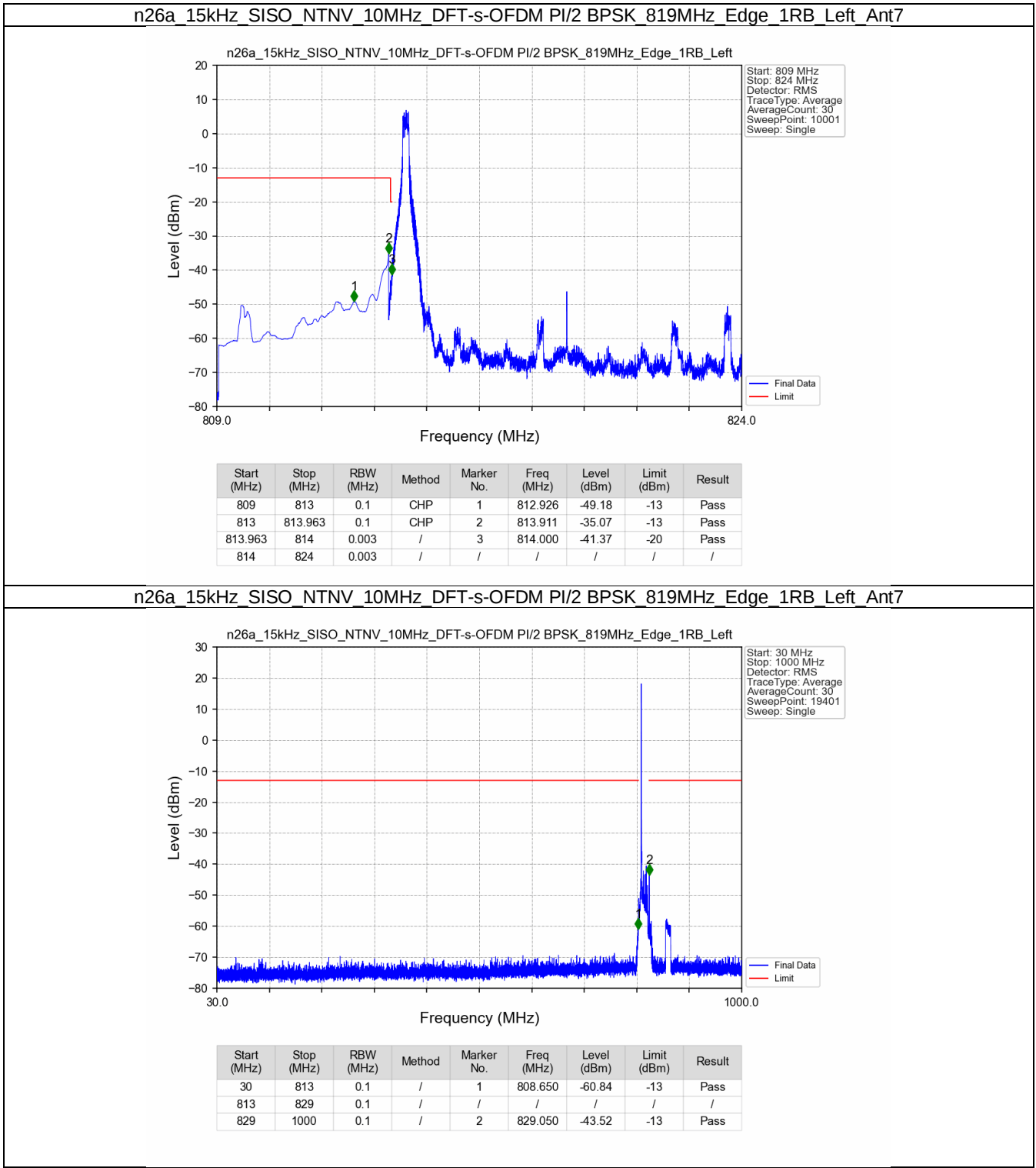
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-65.09	-13	Pass
1000	8240	1	/	2	8028.000	-52.85	-13	Pass

n26a_15kHz_SISO_NTNV_5MHz_CP-OFDM_QPSK_821.5MHz_Outer_Full_Ant7

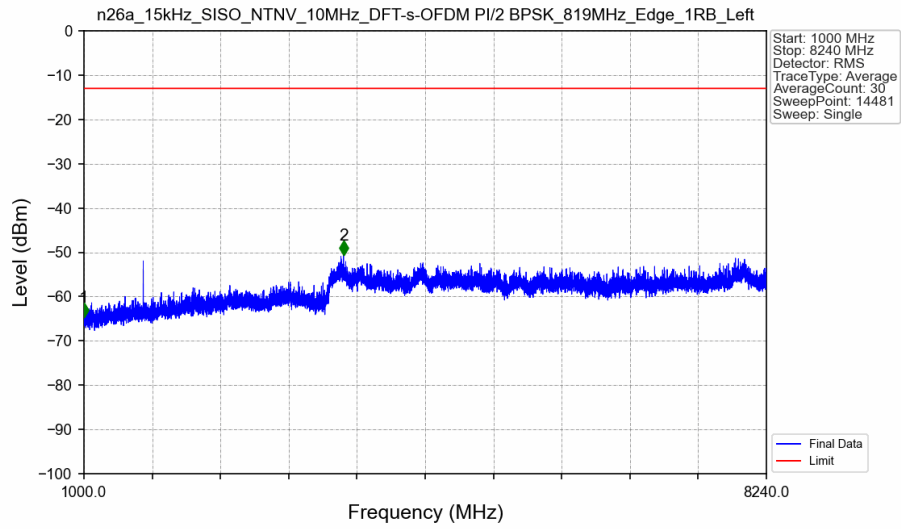


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
819	824	0.04987	CHP	/	/	/	/	/
824	824.038	0.04987	CHP	1	824.010	-36.84	-20	Pass
824.038	825	0.1	CHP	2	824.310	-36.22	-13	Pass
825	829	0.1	CHP	3	825.030	-37.73	-13	Pass

5.2.2 15k_SISO_10MHz_NTNV

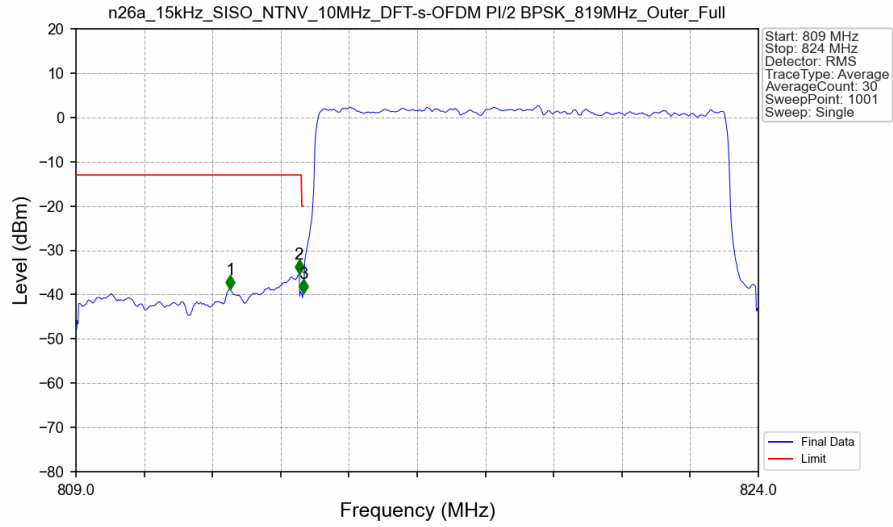


n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_819MHz_Edge_1RB_Left_Ant7



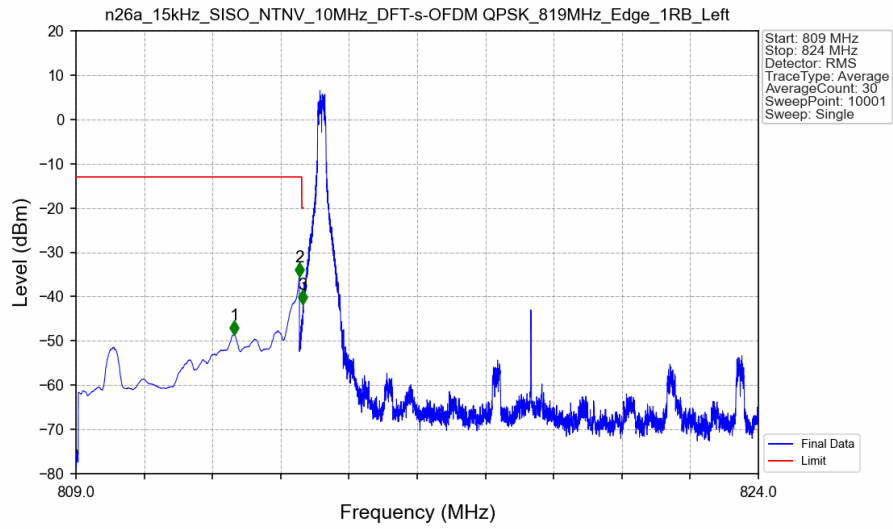
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-64.66	-13	Pass
1000	8240	1	/	2	3753.500	-50.59	-13	Pass

n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_819MHz_Outer_Full_Ant7



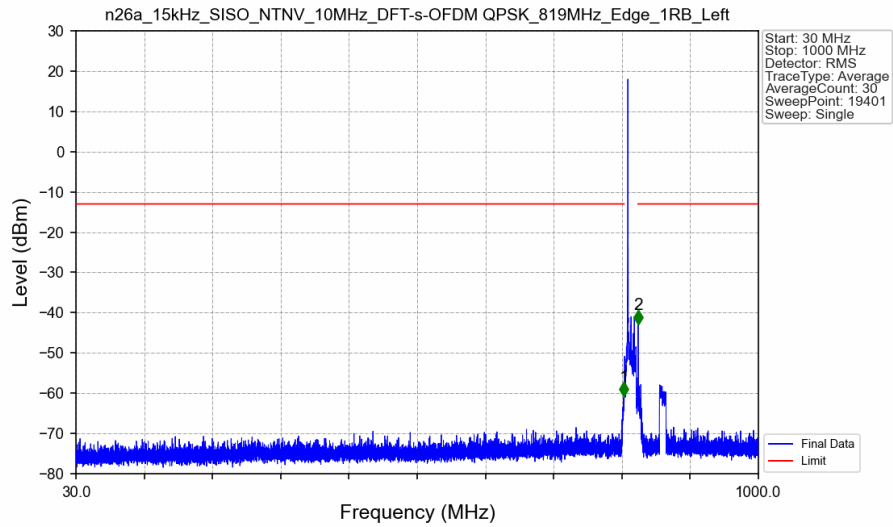
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.390	-38.73	-13	Pass
813	813.963	0.1	CHP	2	813.905	-35.31	-13	Pass
813.963	814	0.09733	CHP	3	813.995	-39.67	-20	Pass
814	824	0.09733	CHP	/	/	/	/	/

n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_819MHz_Edge_1RB_Left Ant7



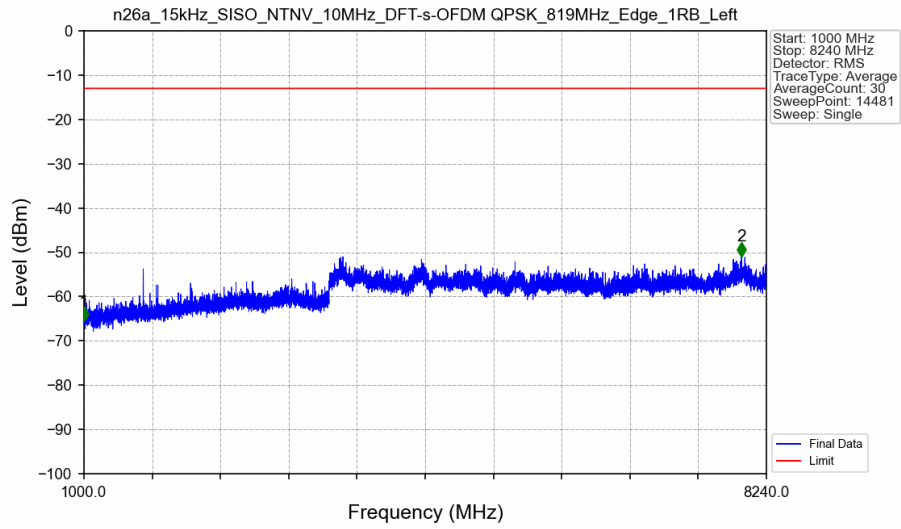
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.477	-48.64	-13	Pass
813	813.963	0.1	CHP	2	813.911	-35.57	-13	Pass
813.963	814	0.003	/	3	813.990	-41.65	-20	Pass
814	824	0.003	/	/	/	/	/	/

n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_819MHz_Edge_1RB_Left Ant7



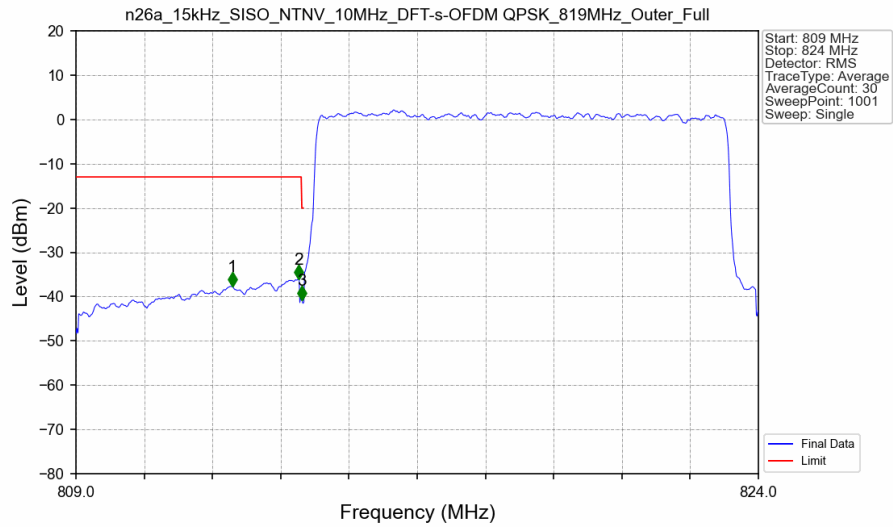
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	813	0.1	/	1	808.950	-60.71	-13	Pass
813	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	829.050	-42.86	-13	Pass

n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_819MHz_Edge_1RB_Left Ant7



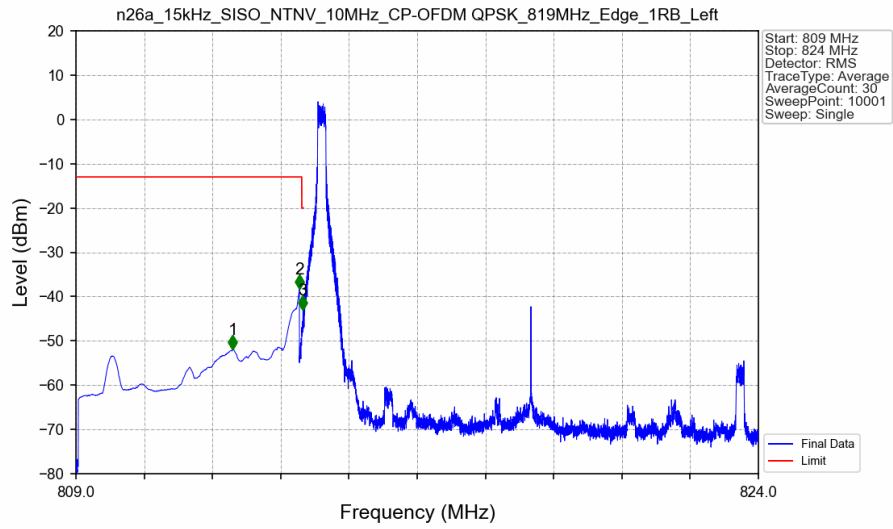
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-65.53	-13	Pass
1000	8240	1	/	2	7975.500	-50.86	-13	Pass

n26a_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_819MHz_Outer_Full Ant7



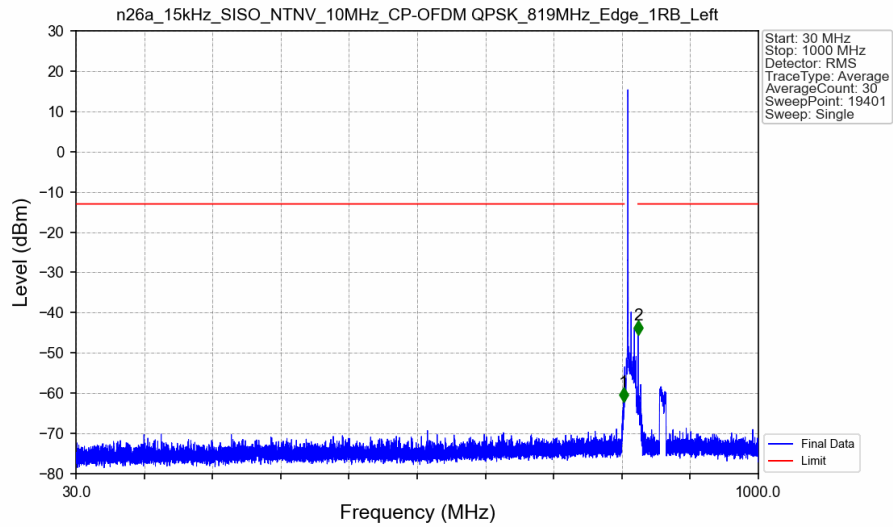
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.435	-37.70	-13	Pass
813	813.963	0.1	CHP	2	813.890	-36.04	-13	Pass
813.963	814	0.09686	CHP	3	813.965	-40.71	-20	Pass
814	824	0.09686	CHP	/	/	/	/	/

n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7



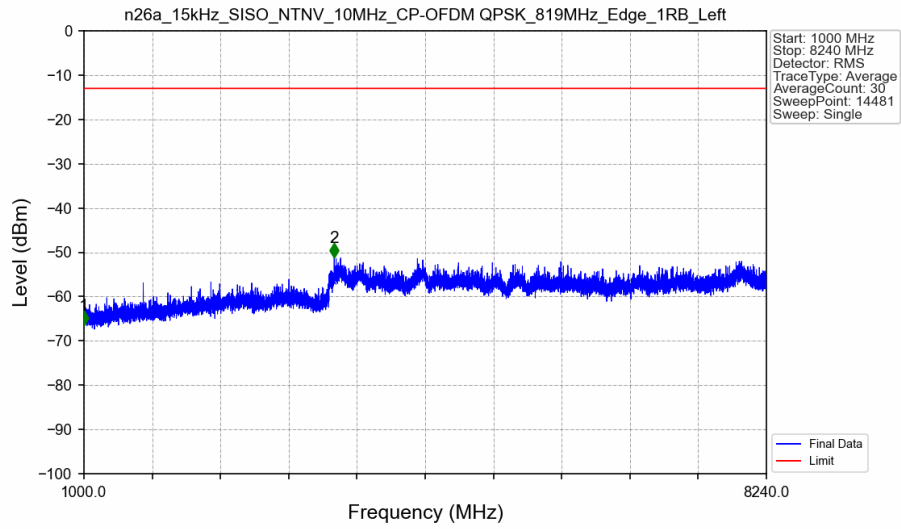
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	CHP	1	812.444	-51.88	-13	Pass
813	813.963	0.1	CHP	2	813.911	-38.22	-13	Pass
813.963	814	0.003	/	3	813.990	-43.01	-20	Pass
814	824	0.003	/	/	/	/	/	/

n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7



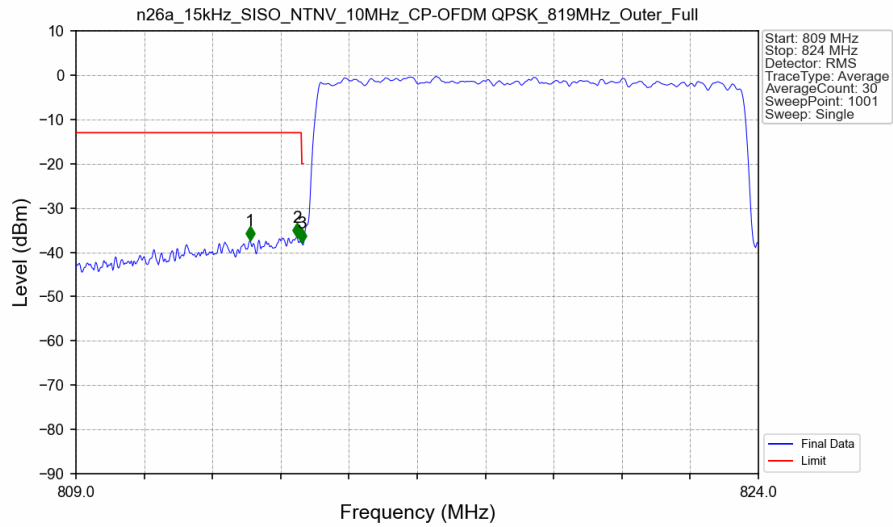
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	813	0.1	/	1	808.500	-62.12	-13	Pass
813	829	0.1	/	/	/	/	/	/
829	1000	0.1	/	2	829.050	-45.44	-13	Pass

n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM_QPSK_819MHz_Edge_1RB_Left_Ant7



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-66.39	-13	Pass
1000	8240	1	/	2	3655.000	-51.05	-13	Pass

n26a_15kHz_SISO_NTNV_10MHz_CP-OFDM_QPSK_819MHz_Outer_Full_Ant7



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
809	813	0.1	/	1	812.825	-37.38	-13	Pass
813	813.963	0.1	/	2	813.860	-36.66	-13	Pass
813.963	814	0.10029	/	3	813.965	-37.90	-20	Pass
814	824	0.10029	CHP	/	/	/	/	/

6. Field Strength of Spurious Radiation

NR N26a(814-824MHz)-Middle channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#1								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1629.0	-69.17	-13	-56.17	-72.1	2.62	5.55	Horizontal	Pass
2443.5	-66.34	-13	-53.34	-68.98	3.04	5.68	Horizontal	Pass
3258.0	-67.06	-13	-54.06	-71.34	3.28	7.56	Horizontal	Pass
1629.0	-70.93	-13	-57.93	-73.86	2.62	5.55	Vertical	Pass
2443.5	-68.48	-13	-55.48	-71.12	3.04	5.68	Vertical	Pass
3258.0	-66.86	-13	-53.86	-71.14	3.28	7.56	Vertical	Pass