

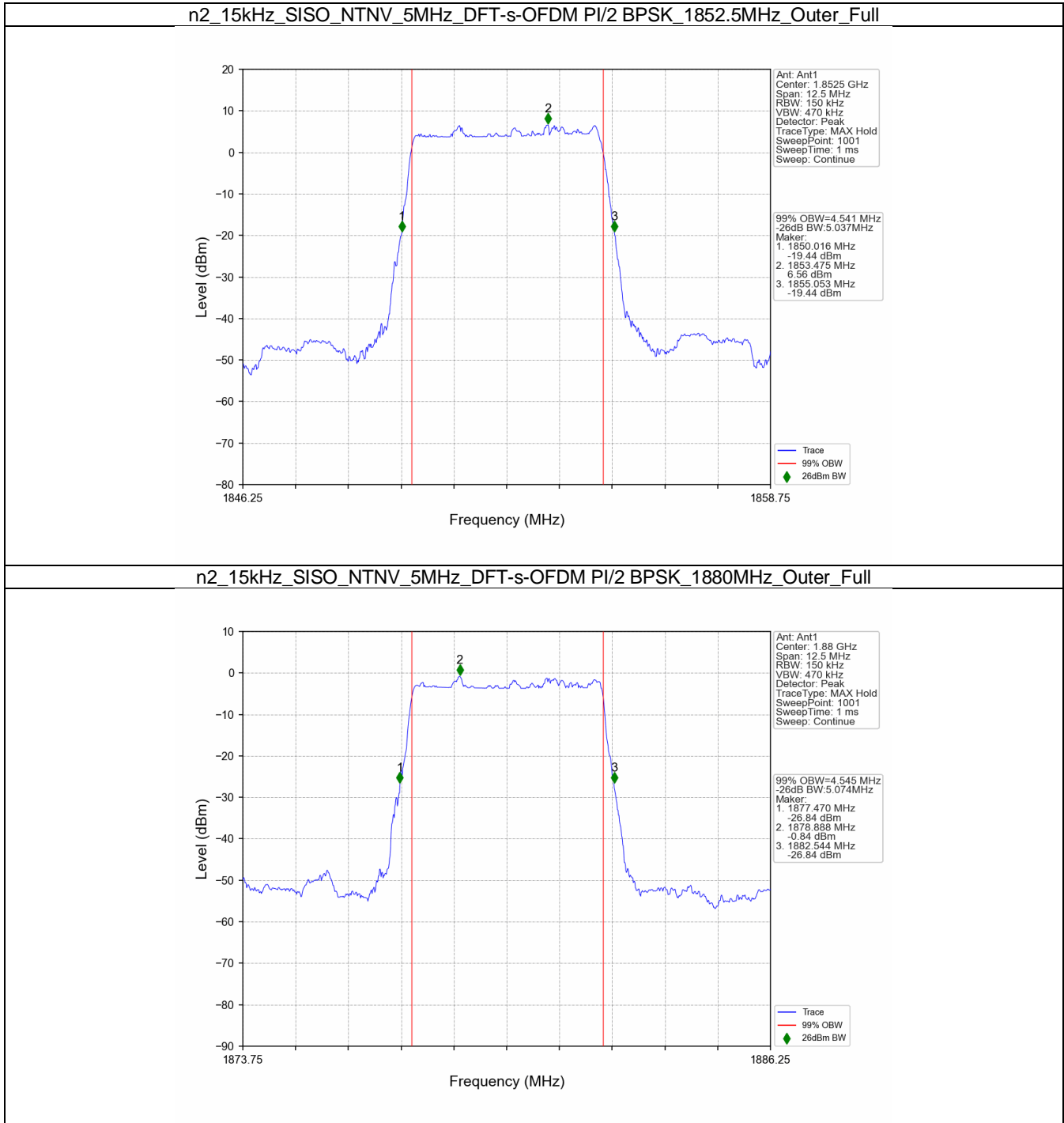
# 1. 99% & 26dB Bandwidth

## 1.1 15k\_SISO\_5MHz\_NTNV

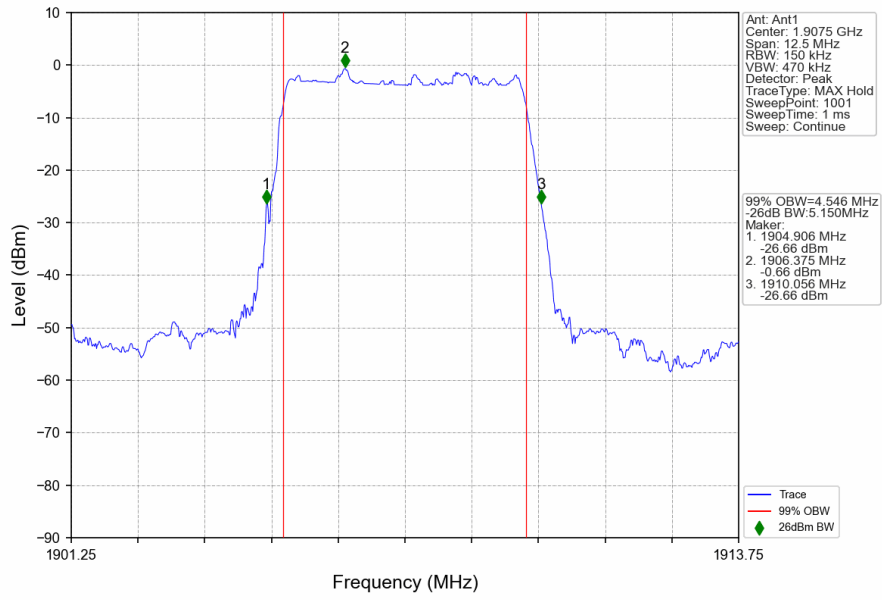
### 1.1.1 Test Result

5G NR n2 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	1852.5	Outer_Full	4.54	5.04	/	Pass
	1880	Outer_Full	4.54	5.07	/	Pass
	1907.5	Outer_Full	4.55	5.15	/	Pass
DFT-s-OFDM QPSK	1852.5	Outer_Full	4.53	5.04	/	Pass
	1880	Outer_Full	4.53	5.05	/	Pass
	1907.5	Outer_Full	4.52	5.05	/	Pass
DFT-s-OFDM 16 QAM	1852.5	Outer_Full	4.54	5.06	/	Pass
	1880	Outer_Full	4.54	5.12	/	Pass
	1907.5	Outer_Full	4.54	5.03	/	Pass
DFT-s-OFDM 64 QAM	1852.5	Outer_Full	4.53	5.05	/	Pass
	1880	Outer_Full	4.54	5.05	/	Pass
	1907.5	Outer_Full	4.53	5.06	/	Pass
DFT-s-OFDM 256 QAM	1852.5	Outer_Full	4.53	5.07	/	Pass
	1880	Outer_Full	4.54	5.08	/	Pass
	1907.5	Outer_Full	4.52	5.07	/	Pass
CP-OFDM QPSK	1852.5	Outer_Full	4.52	5.05	/	Pass
	1880	Outer_Full	4.53	5.12	/	Pass
	1907.5	Outer_Full	4.54	5.11	/	Pass
CP-OFDM 16 QAM	1852.5	Outer_Full	4.57	5.13	/	Pass
	1880	Outer_Full	4.56	5.09	/	Pass
	1907.5	Outer_Full	4.54	5.05	/	Pass
CP-OFDM 64 QAM	1852.5	Outer_Full	4.54	5.11	/	Pass
	1880	Outer_Full	4.54	5.13	/	Pass
	1907.5	Outer_Full	4.54	5.10	/	Pass
CP-OFDM 256 QAM	1852.5	Outer_Full	4.53	5.12	/	Pass
	1880	Outer_Full	4.54	5.09	/	Pass
	1907.5	Outer_Full	4.54	5.14	/	Pass

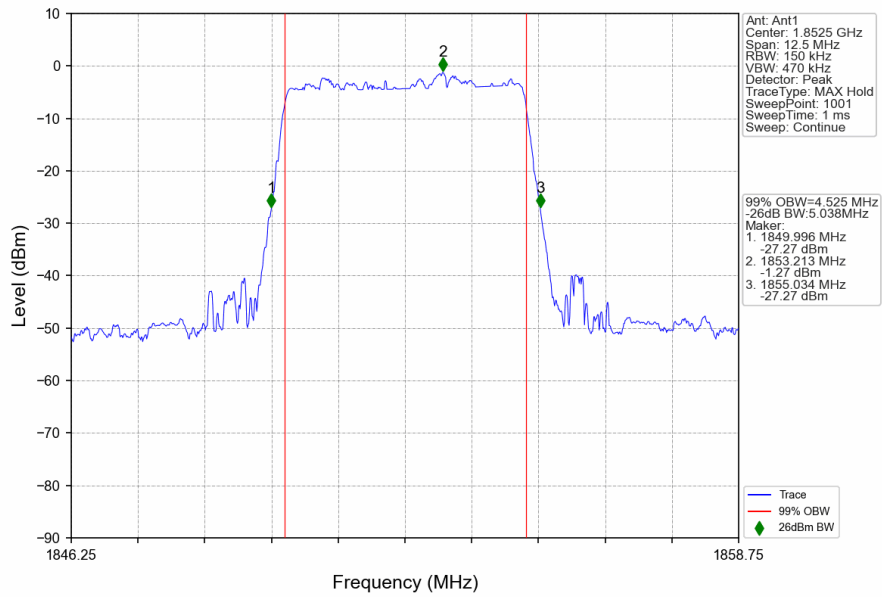
### 1.1.2 Test Graph



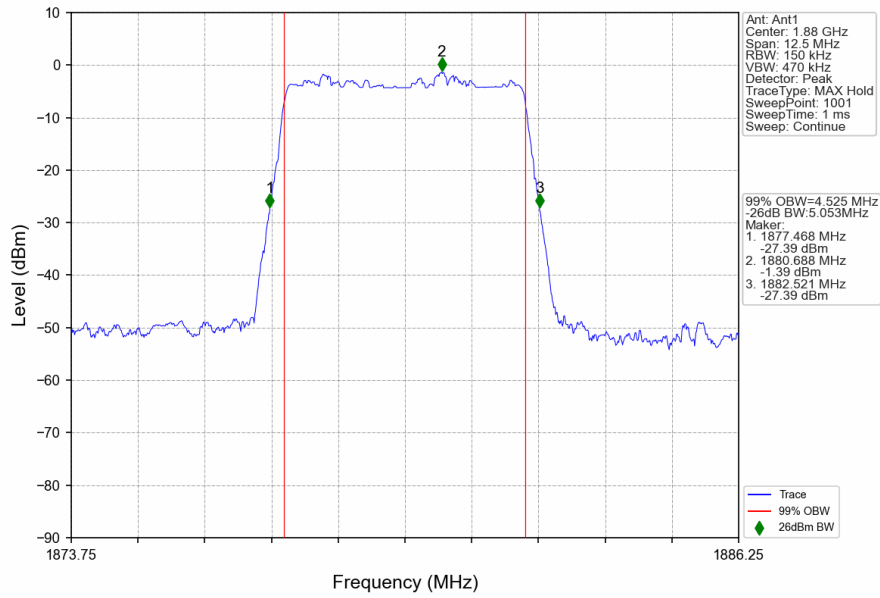
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM PI/2 BPSK\_1907.5MHz\_Outer\_Full



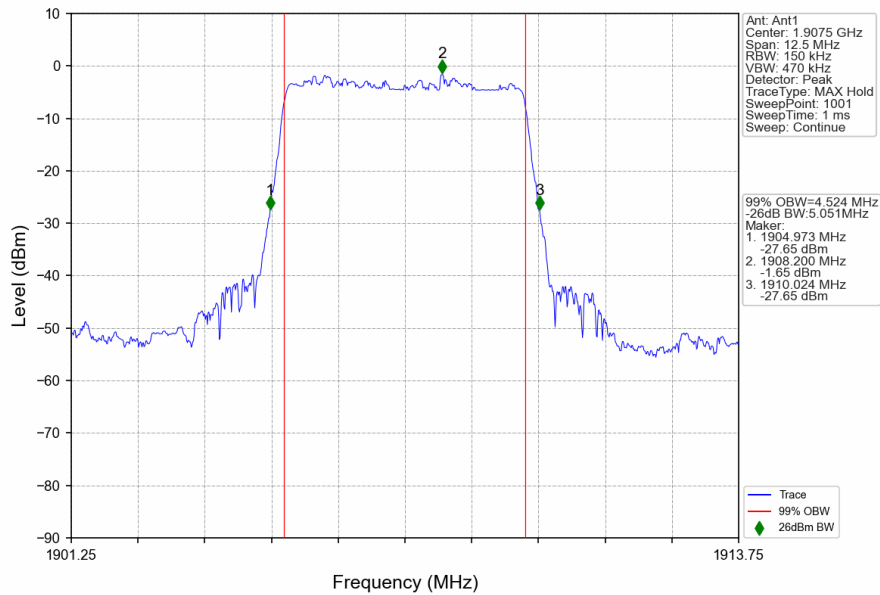
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM QPSK\_1852.5MHz\_Outer\_Full



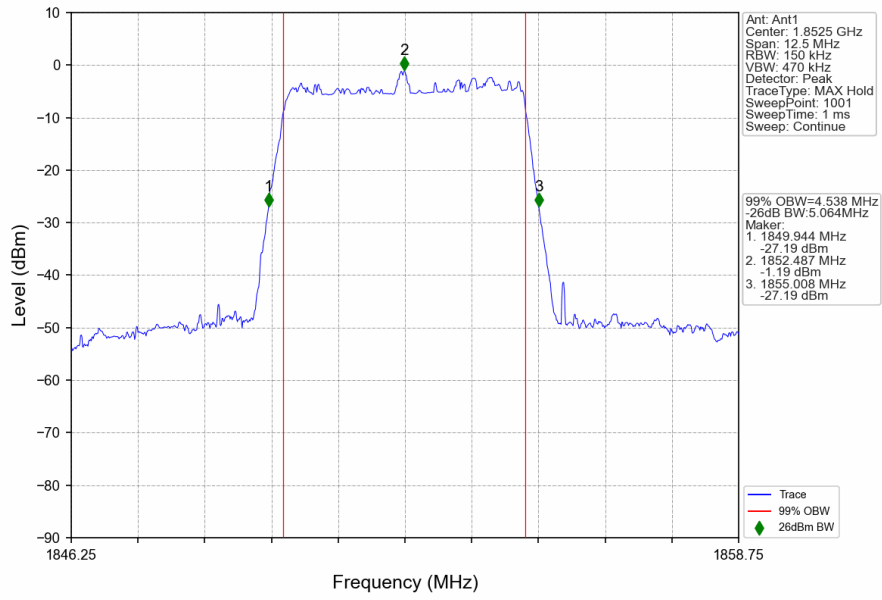
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM QPSK\_1880MHz\_Outer\_Full



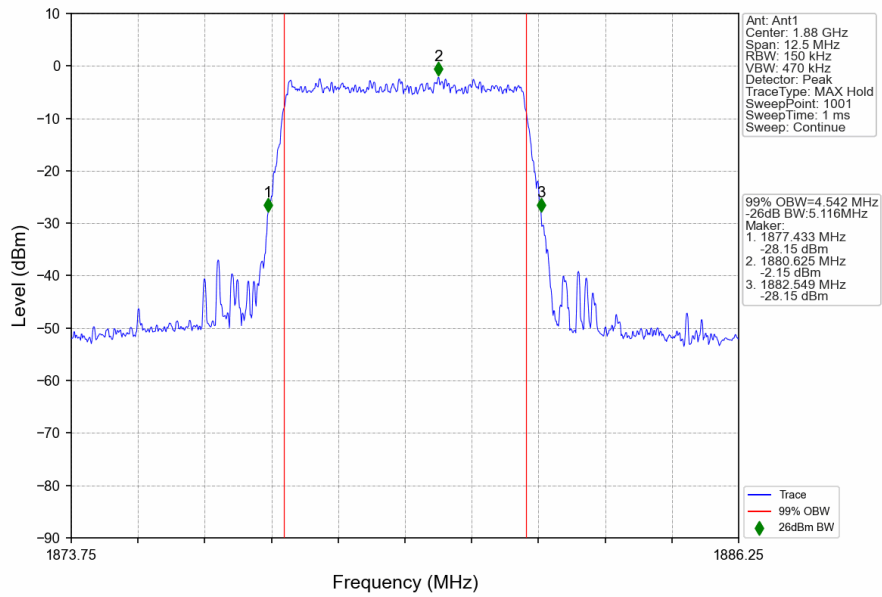
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM QPSK\_1907.5MHz\_Outer\_Full



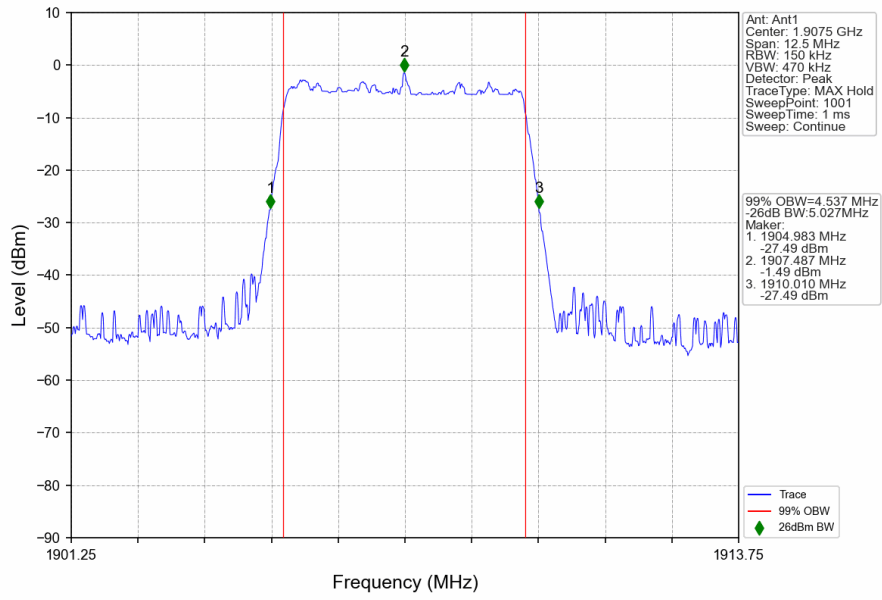
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM\_16\_QAM\_1852.5MHz\_Outer\_Full



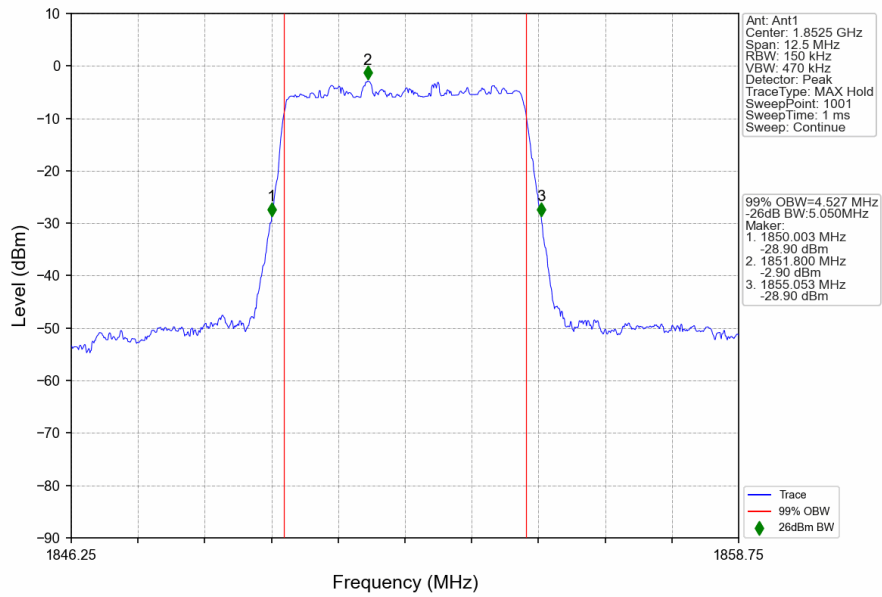
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM\_16\_QAM\_1880MHz\_Outer\_Full



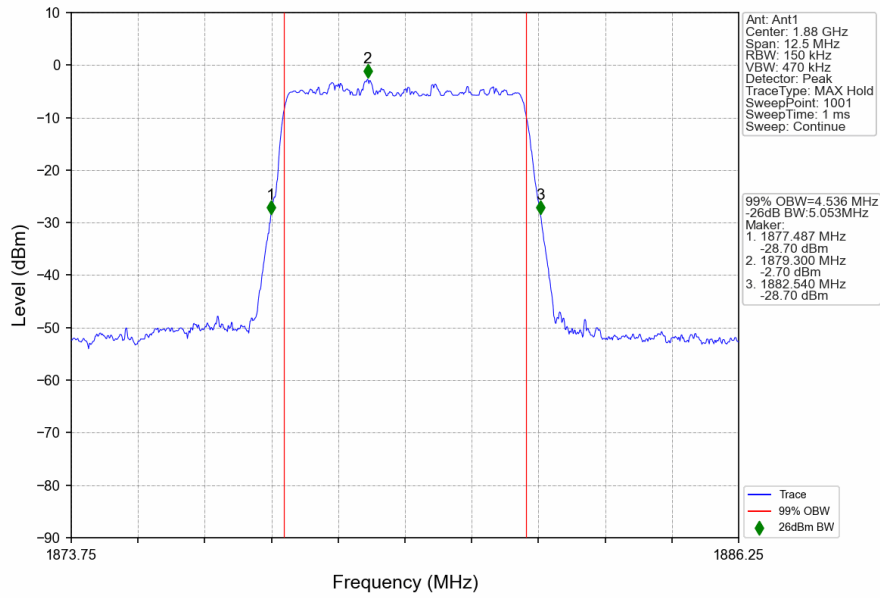
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 16 QAM\_1907.5MHz\_Outer\_Full



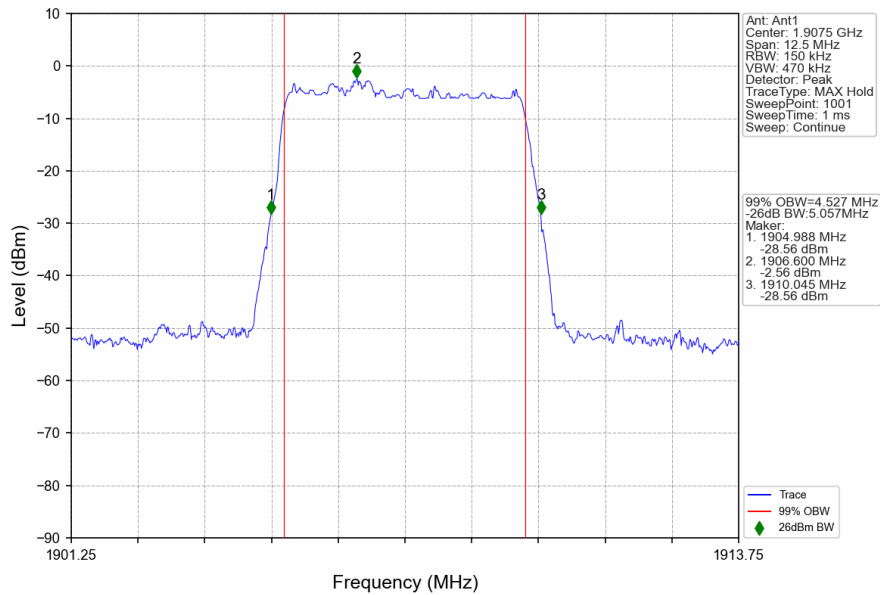
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 64 QAM\_1852.5MHz\_Outer\_Full



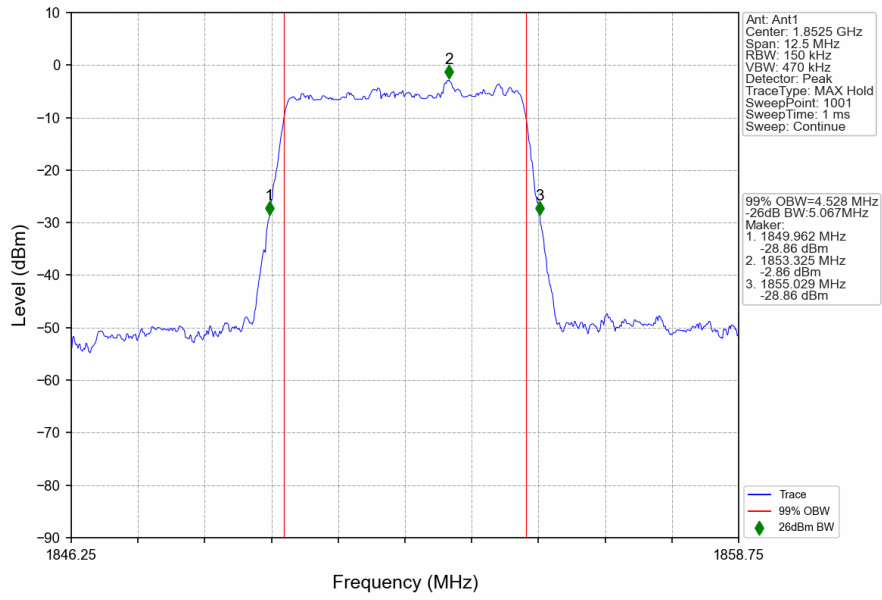
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 64 QAM\_1880MHz\_Outer\_Full



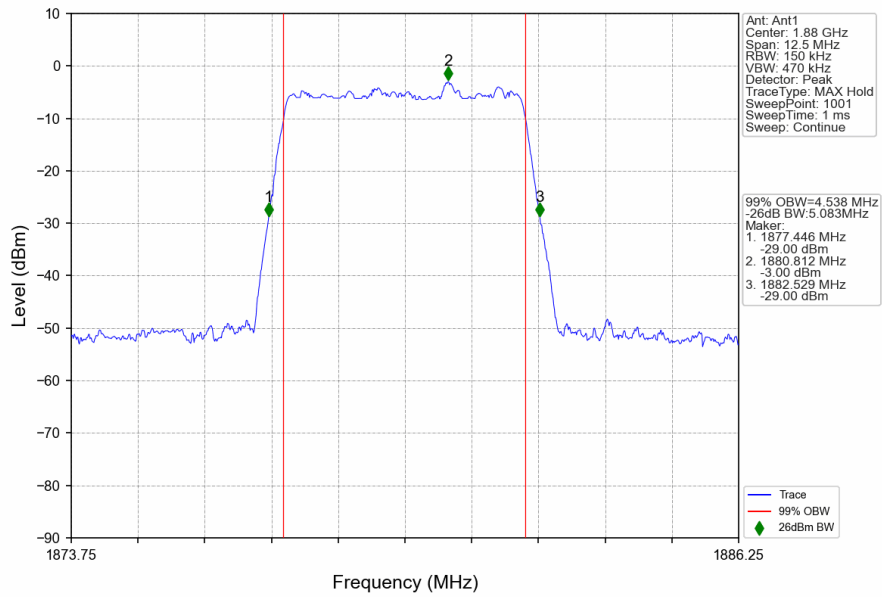
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 64 QAM\_1907.5MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 256 QAM\_1852.5MHz\_Outer\_Full

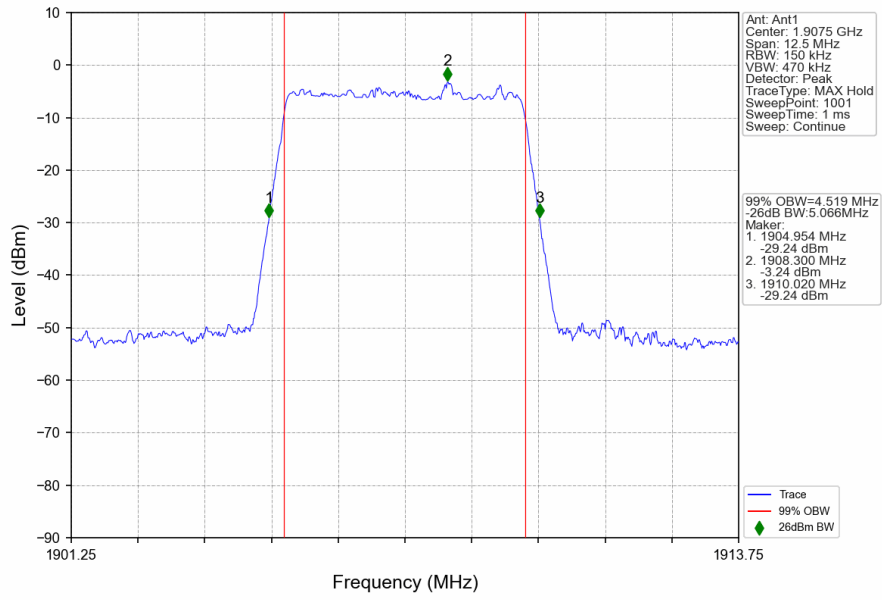


n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 256 QAM\_1880MHz\_Outer\_Full

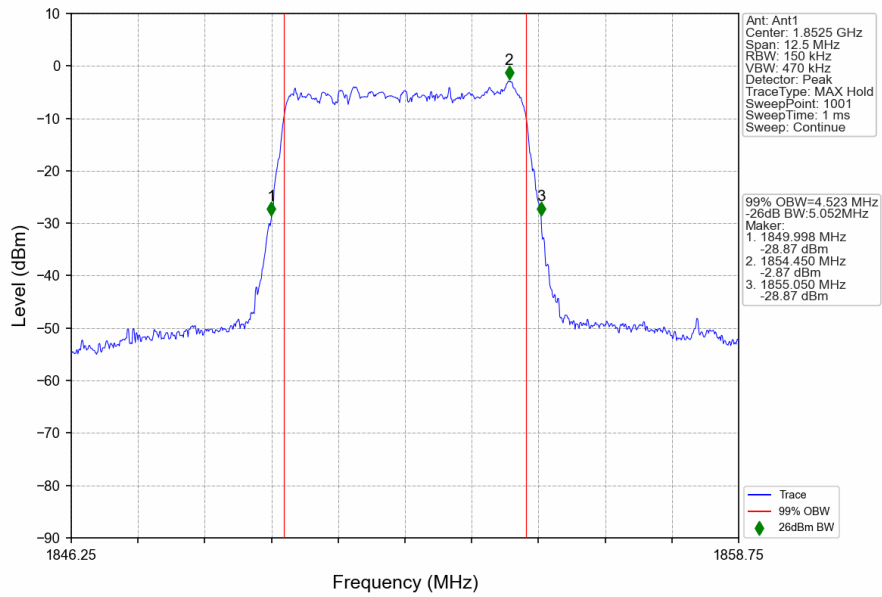




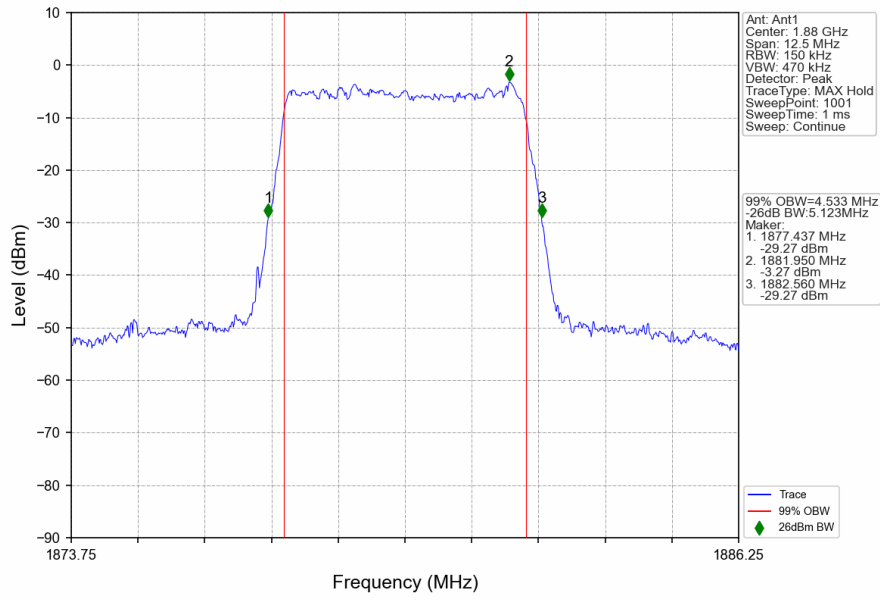
n2\_15kHz\_SISO\_NTNV\_5MHz\_DFT-s-OFDM 256 QAM\_1907.5MHz\_Outer\_Full



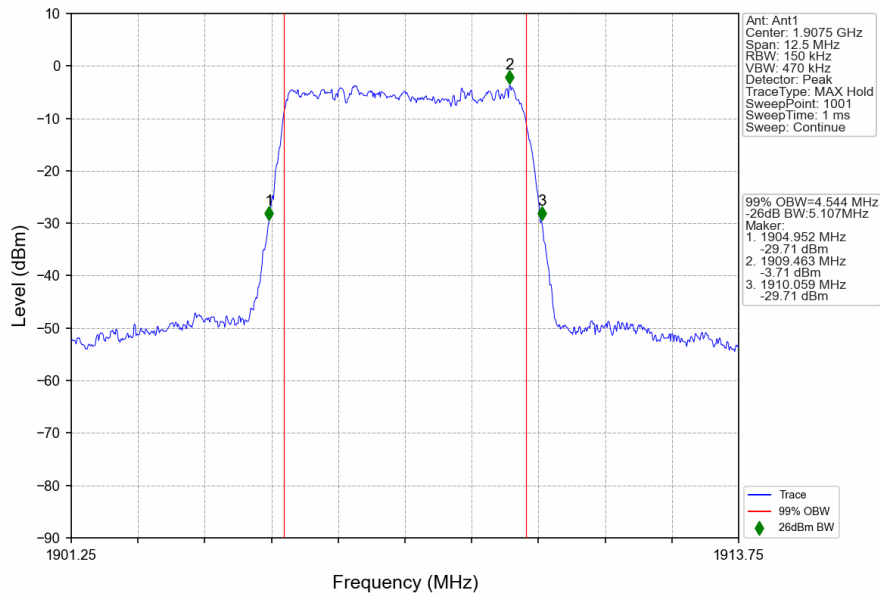
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM QPSK\_1852.5MHz\_Outer\_Full



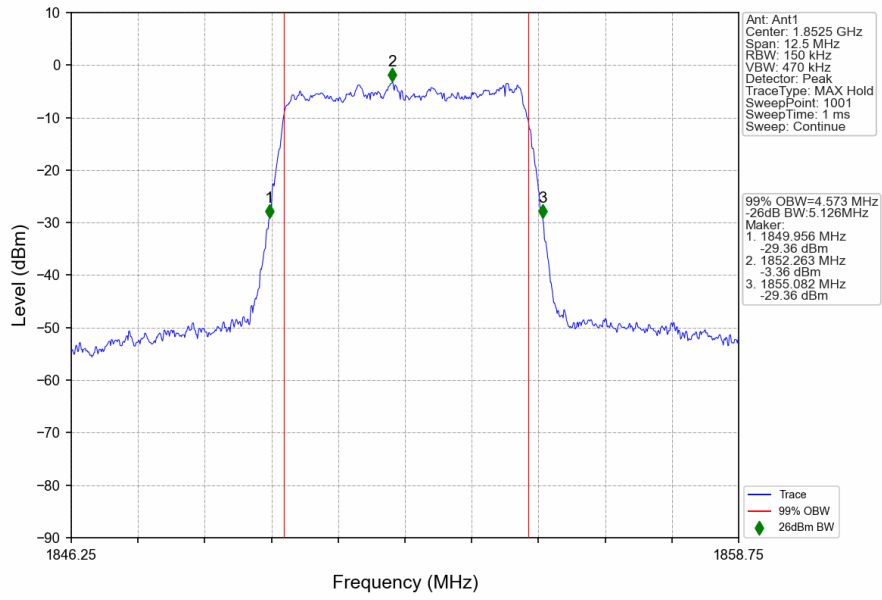
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM QPSK\_1880MHz\_Outer\_Full



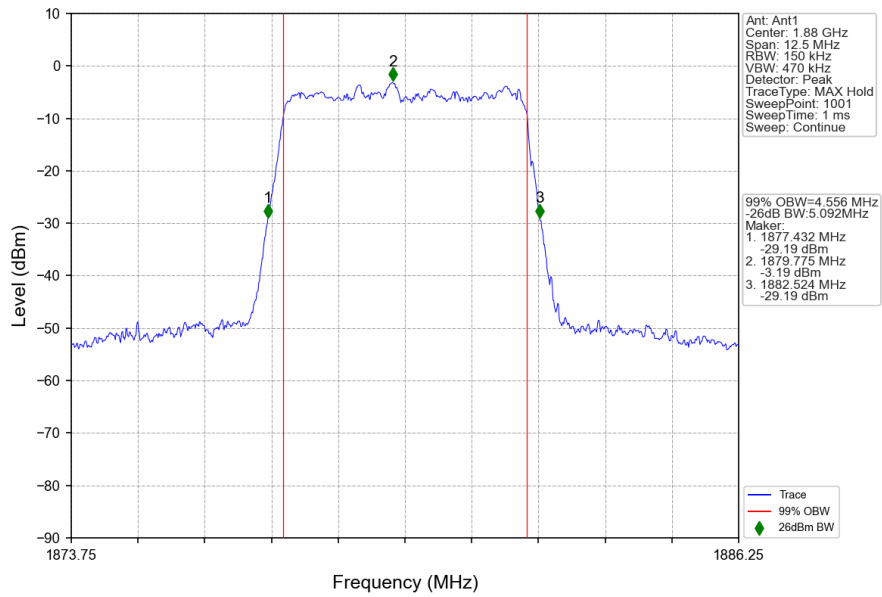
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM QPSK\_1907.5MHz\_Outer\_Full



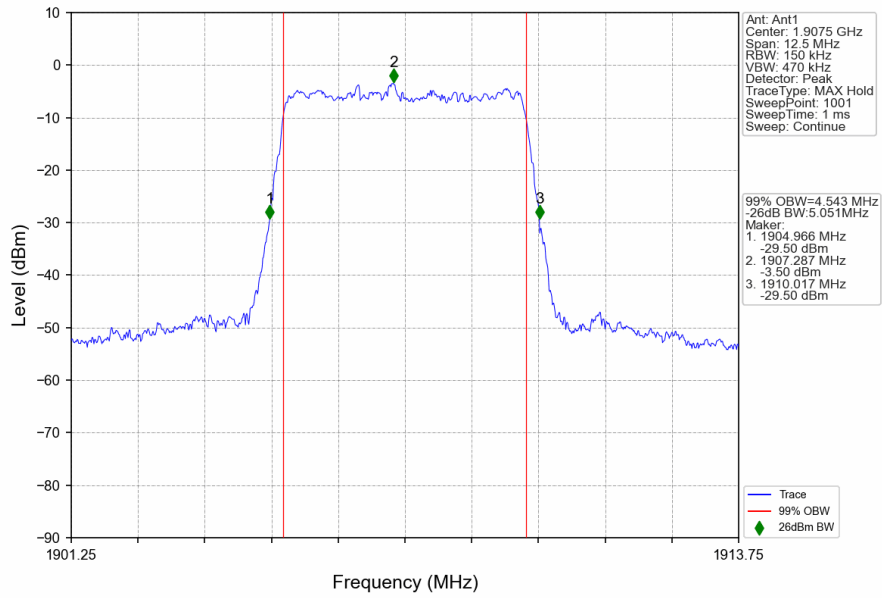
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 16 QAM\_1852.5MHz\_Outer\_Full



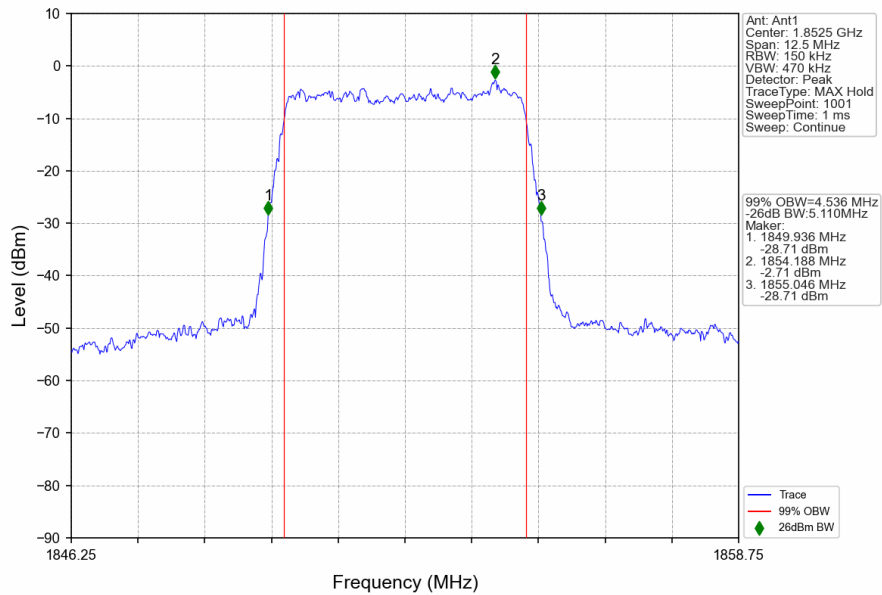
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 16 QAM\_1880MHz\_Outer\_Full



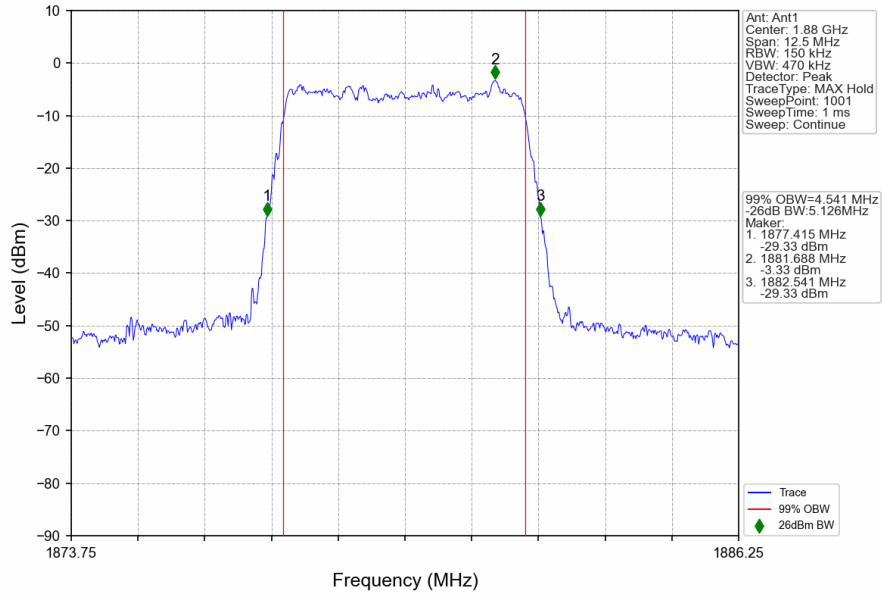
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 16 QAM\_1907.5MHz\_Outer\_Full



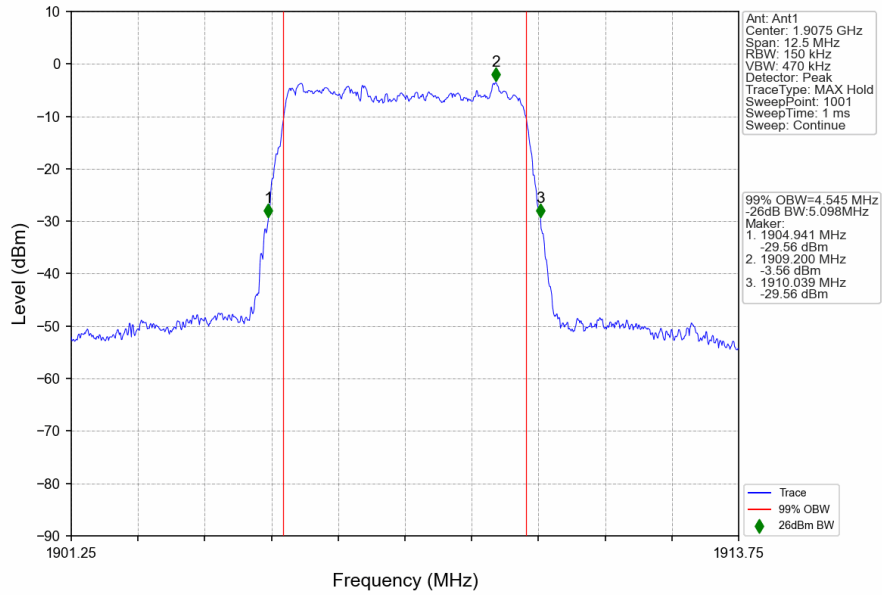
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 64 QAM\_1852.5MHz\_Outer\_Full



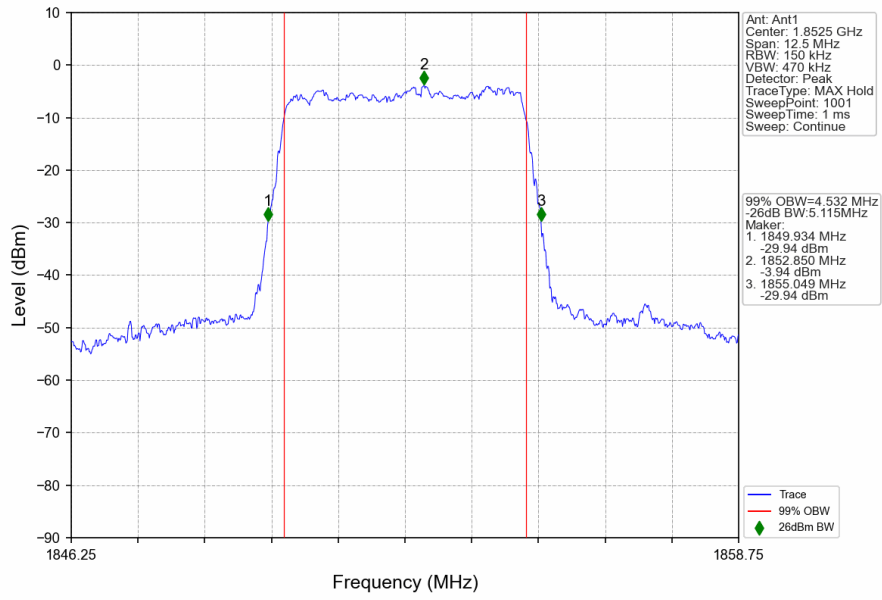
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 64 QAM\_1880MHz\_Outer\_Full



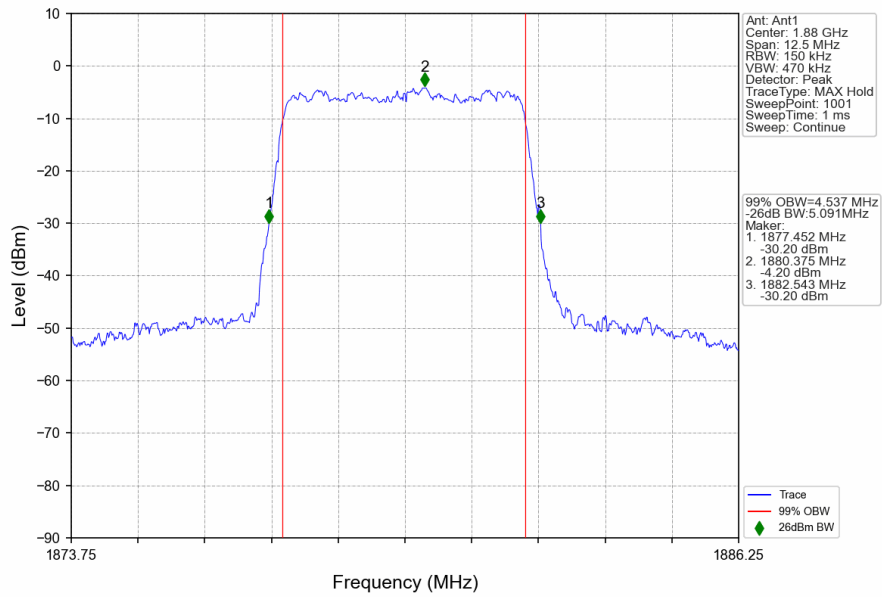
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 64 QAM\_1907.5MHz\_Outer\_Full



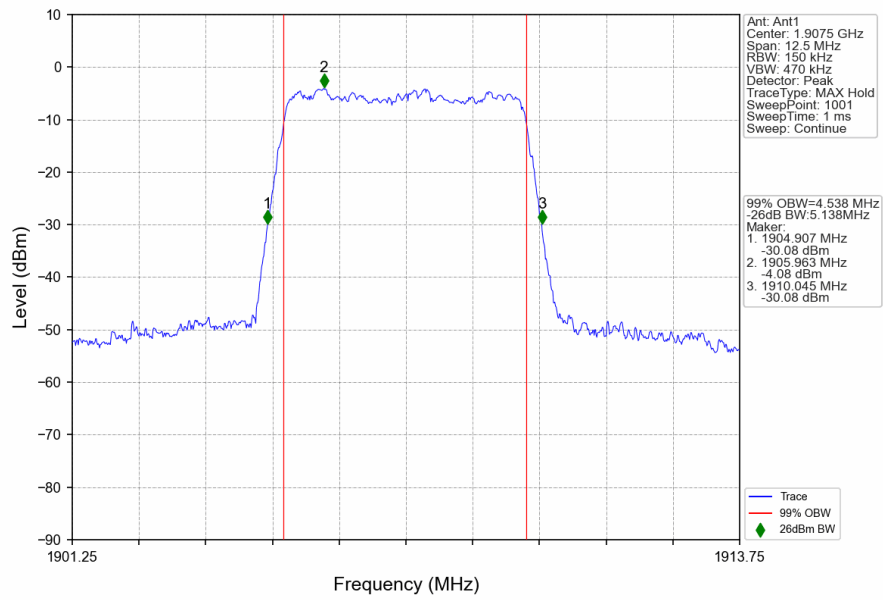
n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 256 QAM\_1852.5MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM 256 QAM\_1880MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_5MHz\_CP-OFDM\_256 QAM\_1907.5MHz\_Outer\_Full



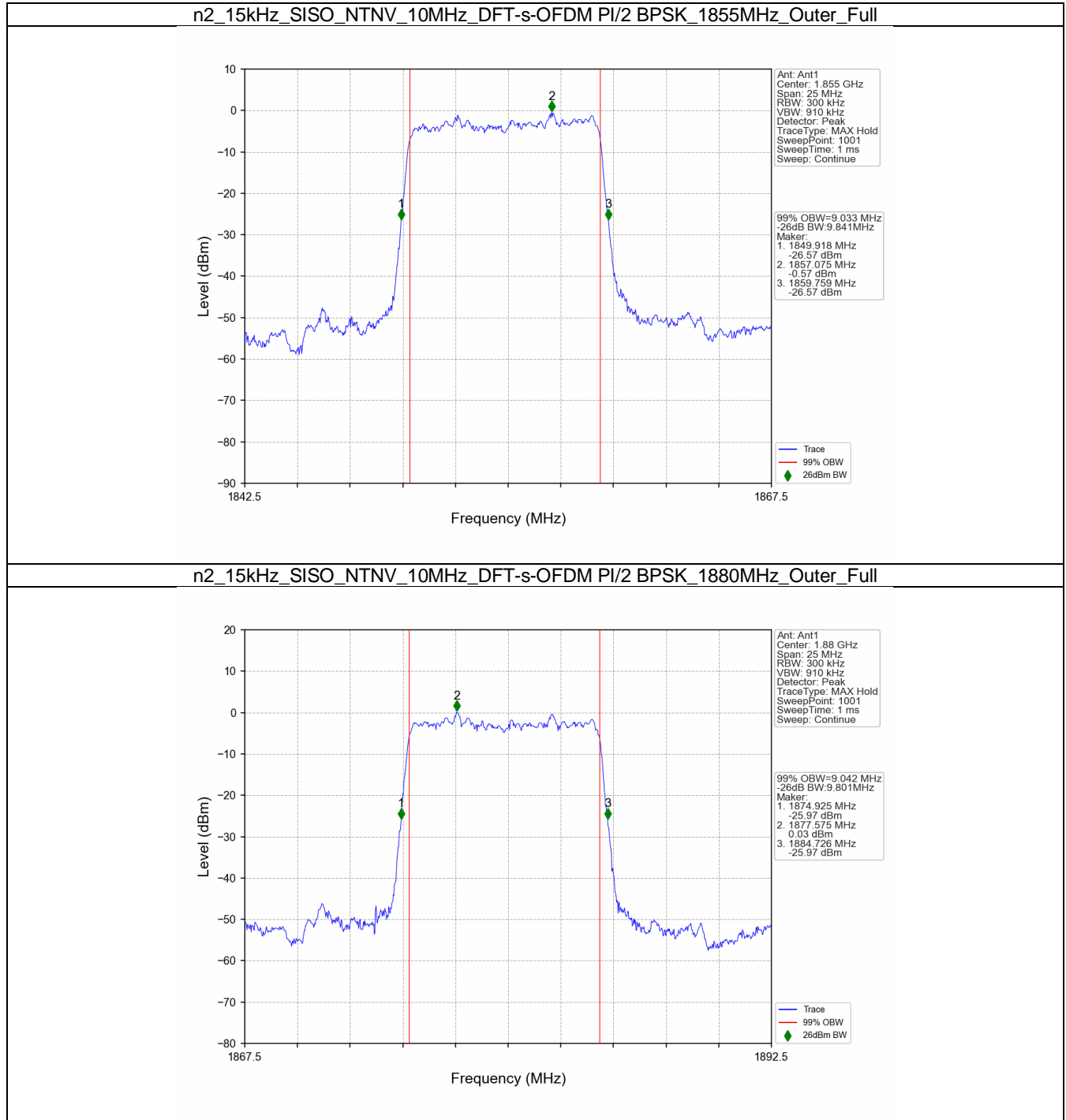
## 1.2 15k\_SISO\_10MHz\_NTNV

### 1.2.1 Test Result

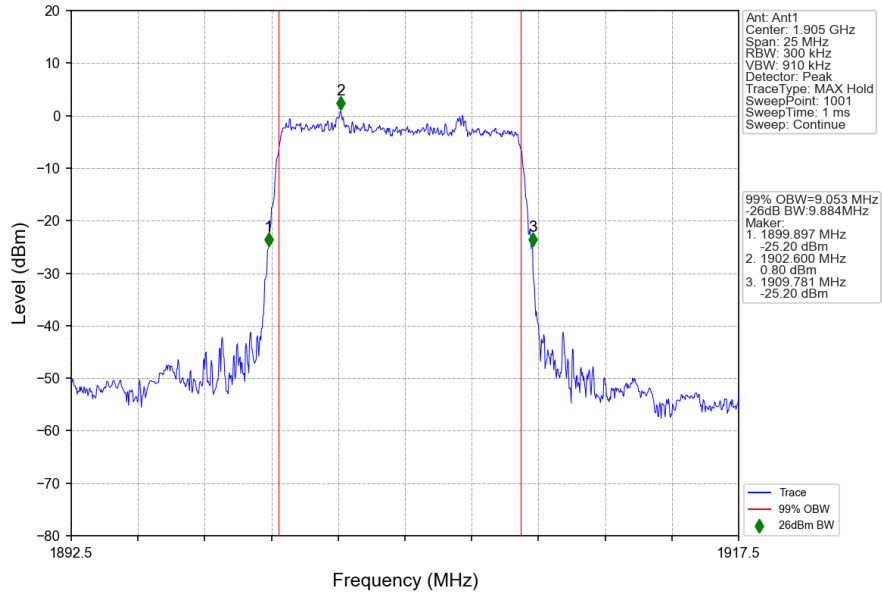
5G NR n2 SCS=15kHz SISO 10MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	1855	Outer_Full	9.03	9.84	/	Pass
	1880	Outer_Full	9.04	9.80	/	Pass
	1905	Outer_Full	9.05	9.88	/	Pass
DFT-s-OFDM QPSK	1855	Outer_Full	9.06	9.86	/	Pass
	1880	Outer_Full	9.07	9.91	/	Pass
	1905	Outer_Full	9.07	9.90	/	Pass
DFT-s-OFDM 16 QAM	1855	Outer_Full	9.07	9.84	/	Pass
	1880	Outer_Full	9.07	9.85	/	Pass
	1905	Outer_Full	9.05	9.85	/	Pass
DFT-s-OFDM 64 QAM	1855	Outer_Full	9.04	9.85	/	Pass
	1880	Outer_Full	9.05	9.90	/	Pass
	1905	Outer_Full	9.04	9.81	/	Pass
DFT-s-OFDM 256 QAM	1855	Outer_Full	9.04	9.83	/	Pass
	1880	Outer_Full	9.04	9.87	/	Pass
	1905	Outer_Full	9.05	9.90	/	Pass
CP-OFDM QPSK	1855	Outer_Full	9.36	10.27	/	Pass
	1880	Outer_Full	9.37	10.26	/	Pass
	1905	Outer_Full	9.36	10.25	/	Pass
CP-OFDM 16 QAM	1855	Outer_Full	9.37	10.22	/	Pass
	1880	Outer_Full	9.39	10.22	/	Pass
	1905	Outer_Full	9.37	10.26	/	Pass
CP-OFDM 64 QAM	1855	Outer_Full	9.35	10.22	/	Pass
	1880	Outer_Full	9.36	10.16	/	Pass
	1905	Outer_Full	9.35	10.13	/	Pass
CP-OFDM 256 QAM	1855	Outer_Full	9.40	10.26	/	Pass
	1880	Outer_Full	9.43	10.27	/	Pass
	1905	Outer_Full	9.41	10.24	/	Pass



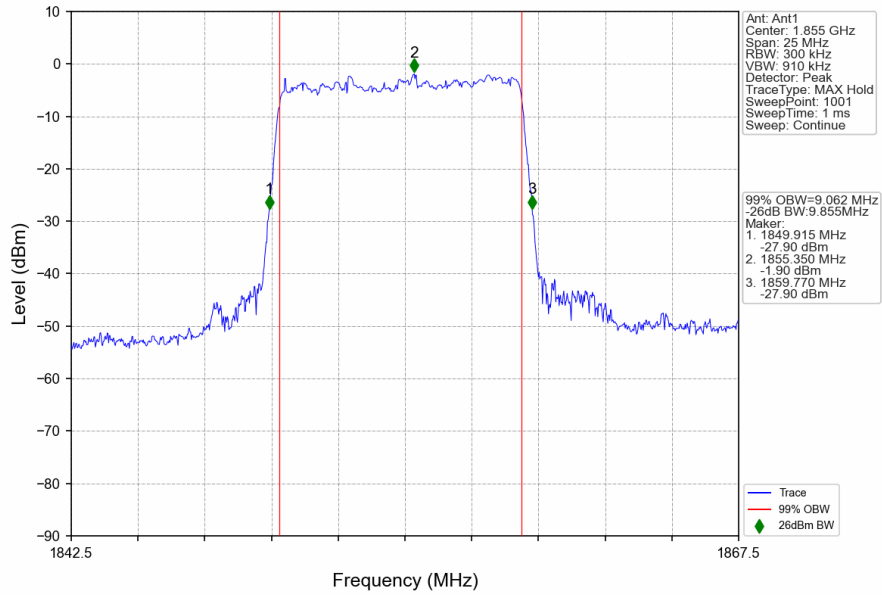
## 1.2.2 Test Graph



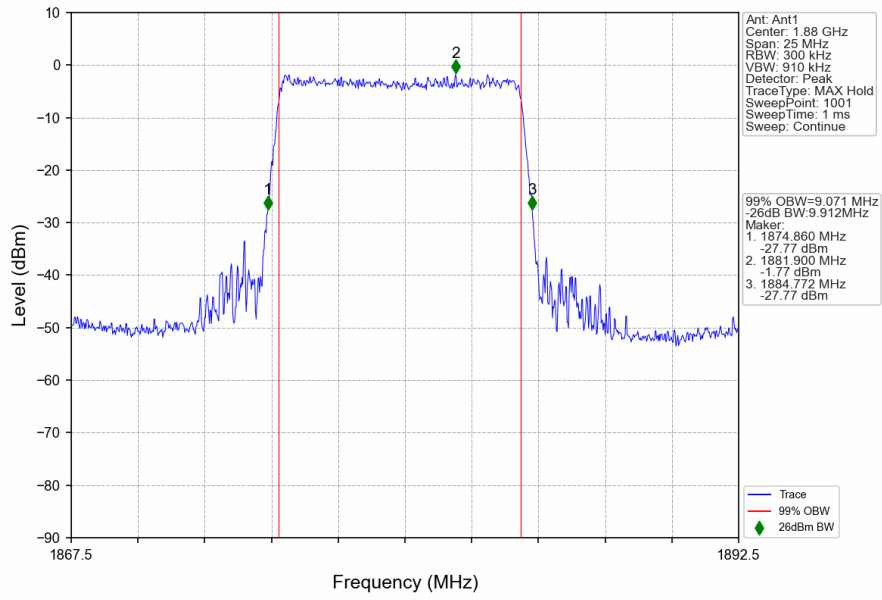
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM PI/2 BPSK\_1905MHz\_Outer\_Full



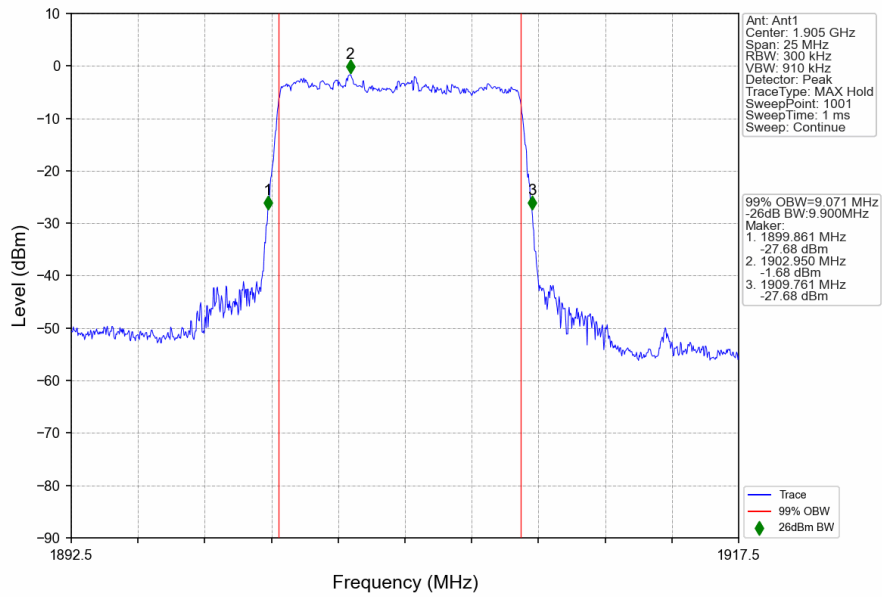
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM QPSK\_1855MHz\_Outer\_Full



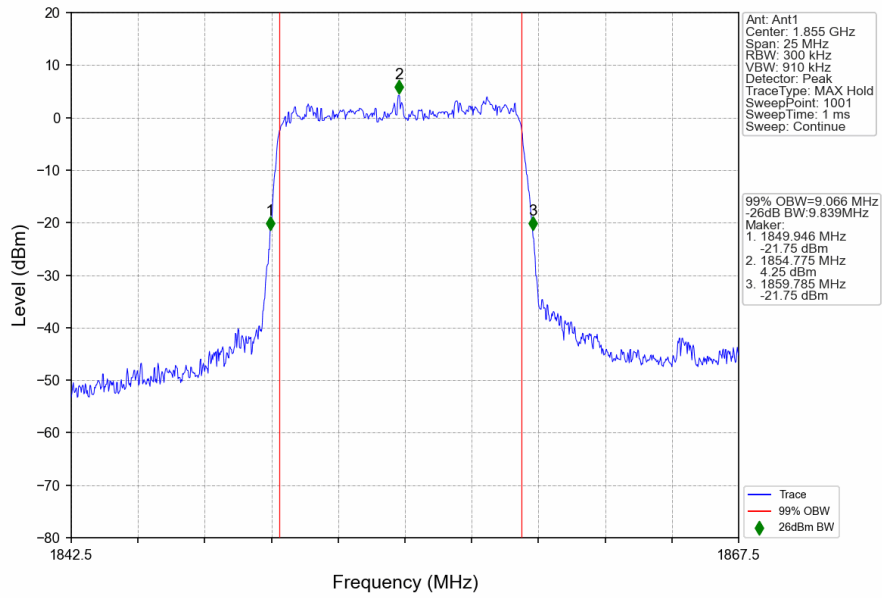
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM\_QPSK\_1880MHz\_Outer\_Full



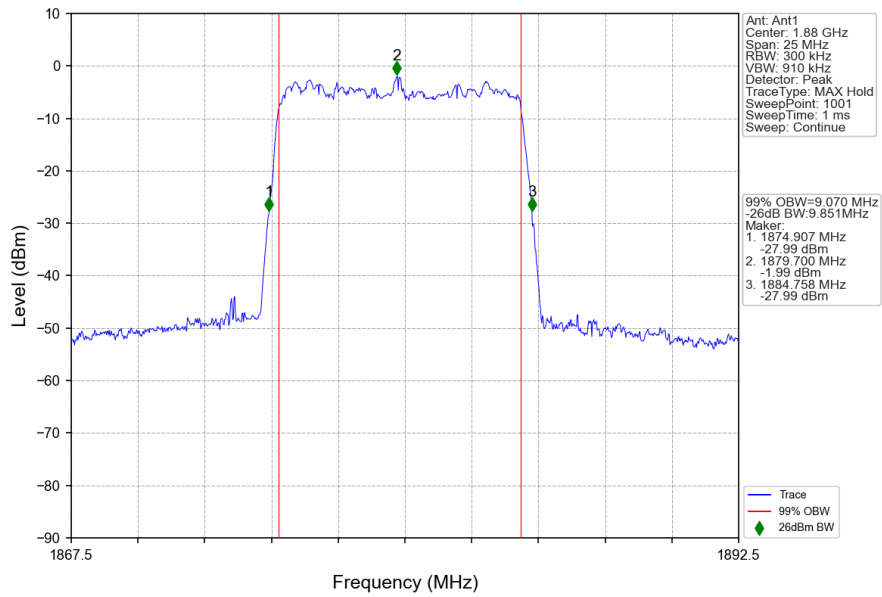
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM\_QPSK\_1905MHz\_Outer\_Full



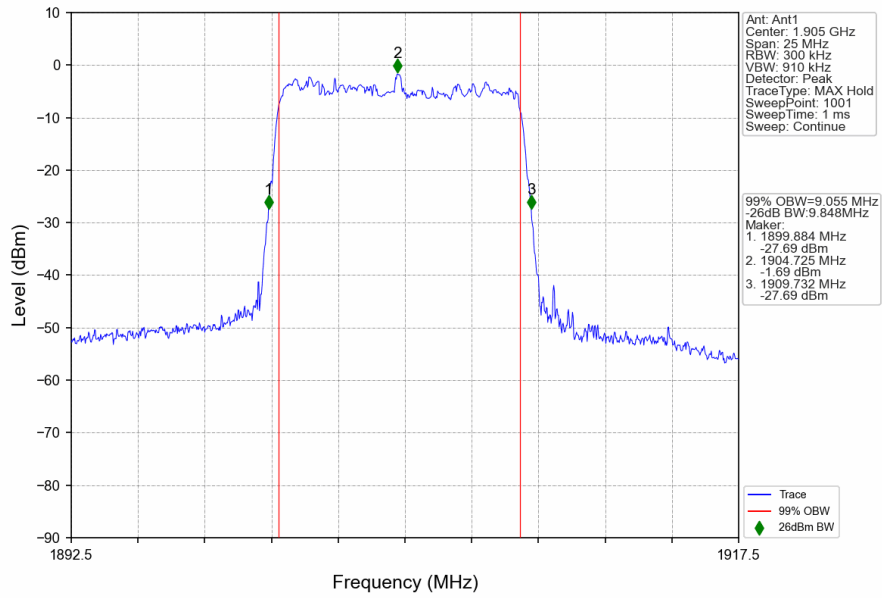
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM\_16 QAM\_1855MHz\_Outer\_Full



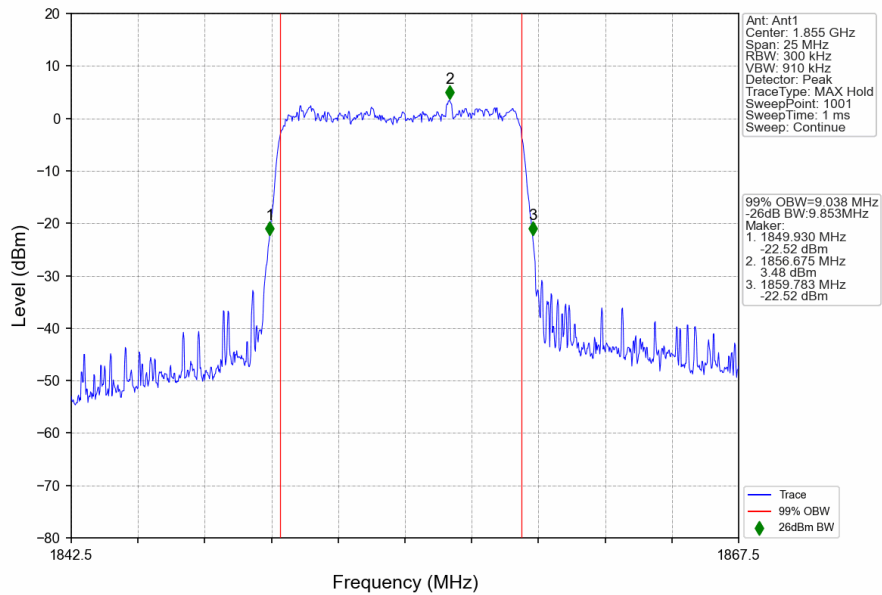
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM\_16 QAM\_1880MHz\_Outer\_Full



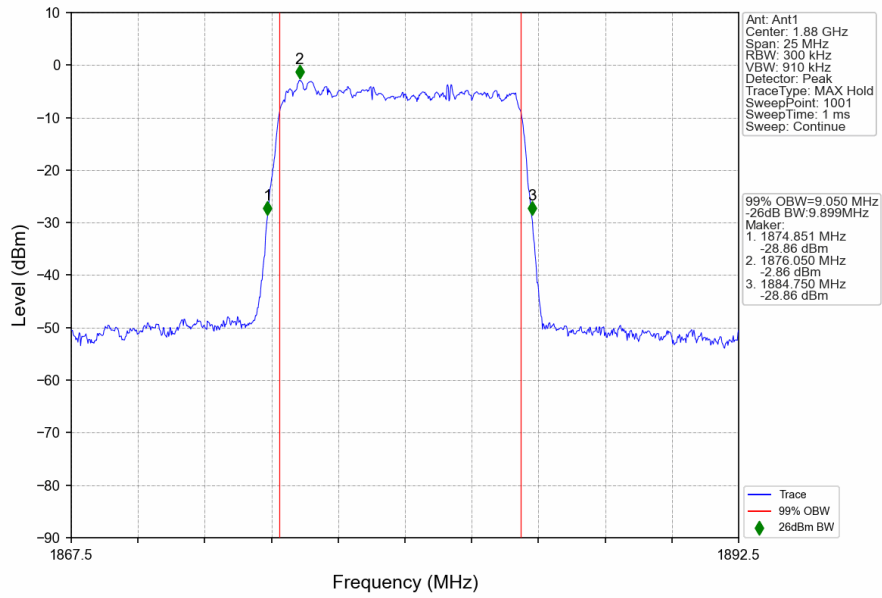
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 16 QAM\_1905MHz\_Outer\_Full



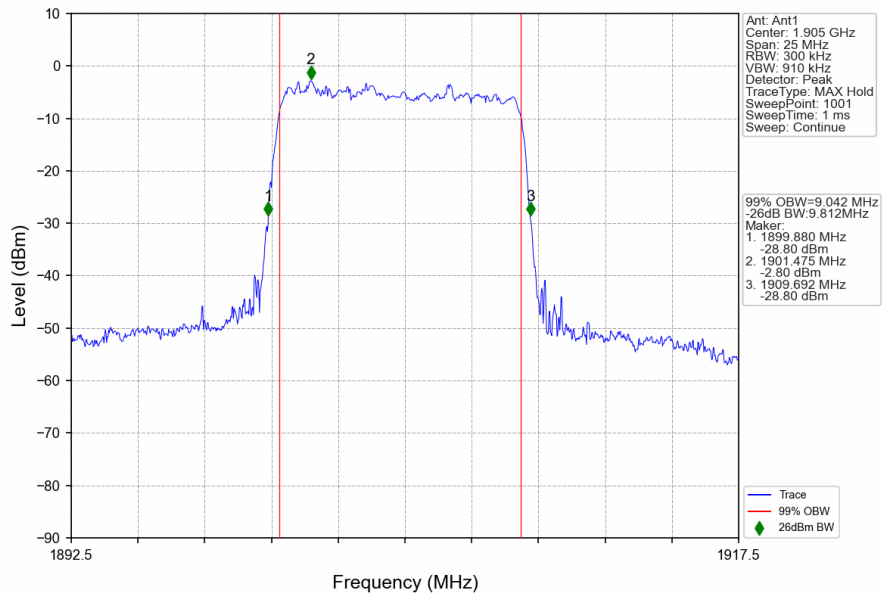
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 64 QAM\_1855MHz\_Outer\_Full



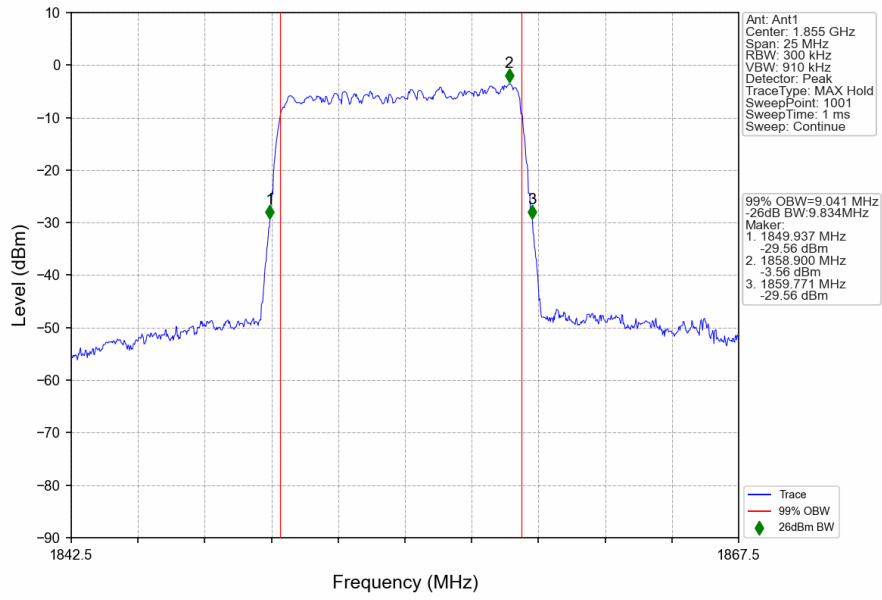
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 64 QAM\_1880MHz\_Outer\_Full



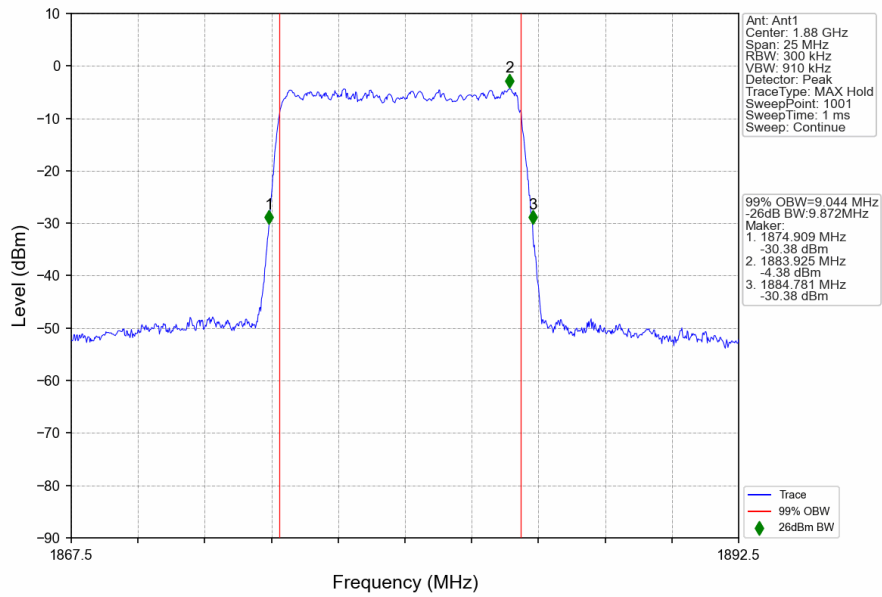
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 64 QAM\_1905MHz\_Outer\_Full



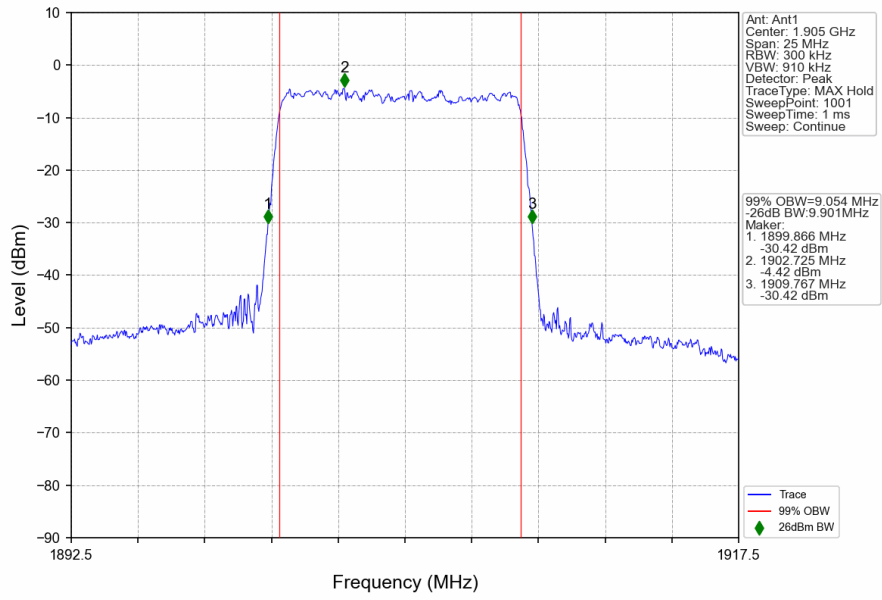
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 256 QAM\_1855MHz\_Outer\_Full



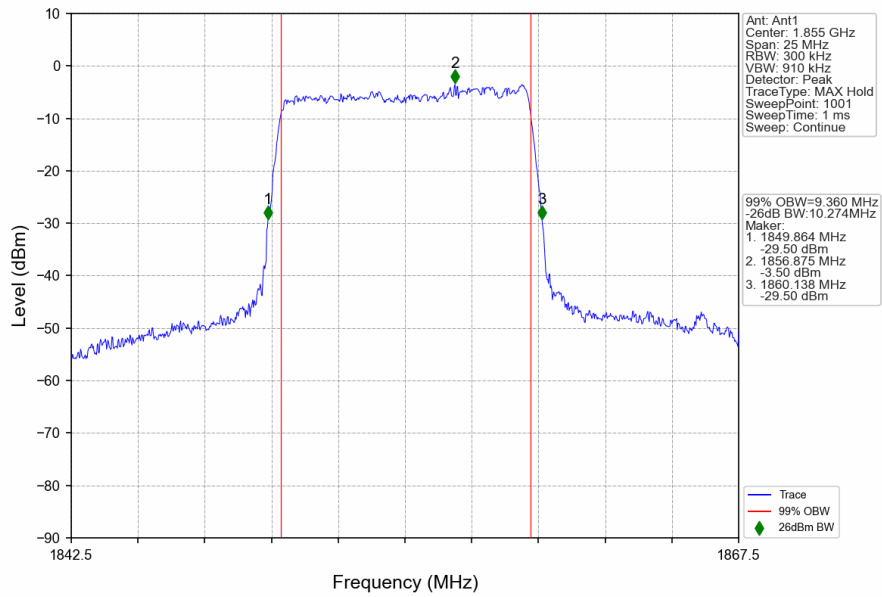
n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 256 QAM\_1880MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM 256 QAM\_1905MHz\_Outer\_Full

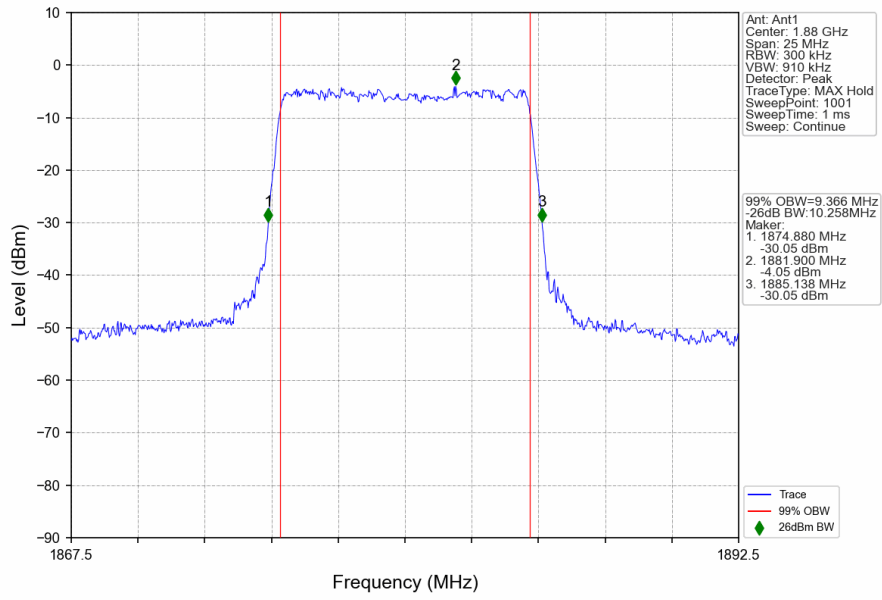


n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM QPSK\_1855MHz\_Outer\_Full

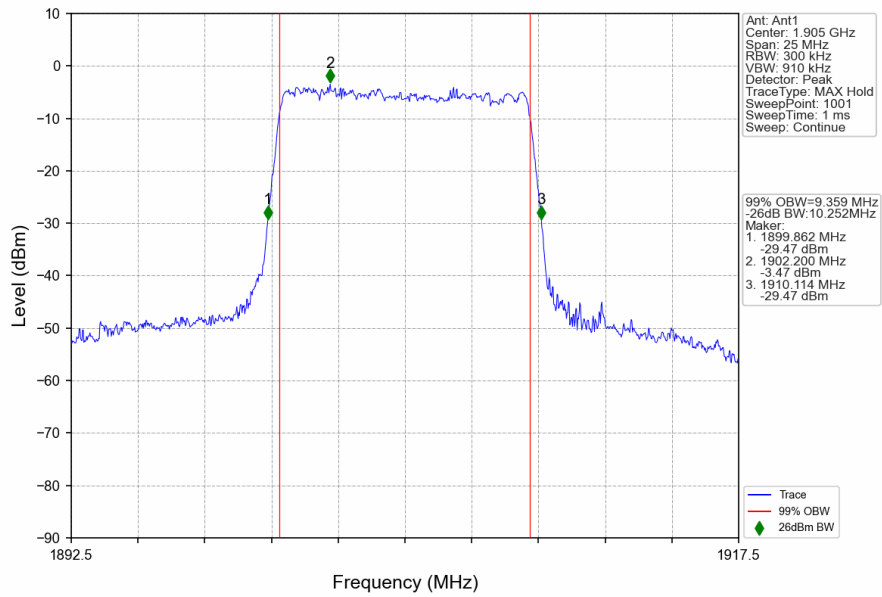




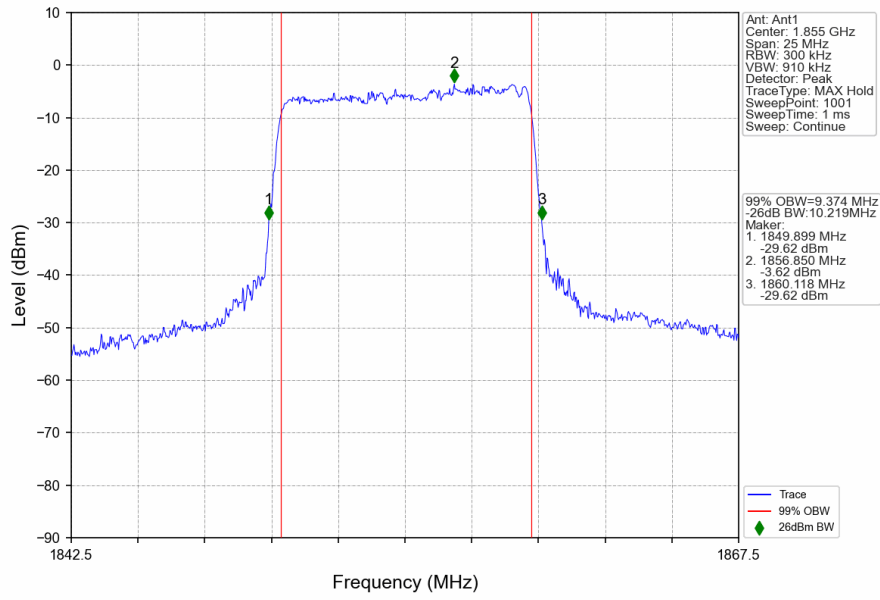
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM QPSK\_1880MHz\_Outer\_Full



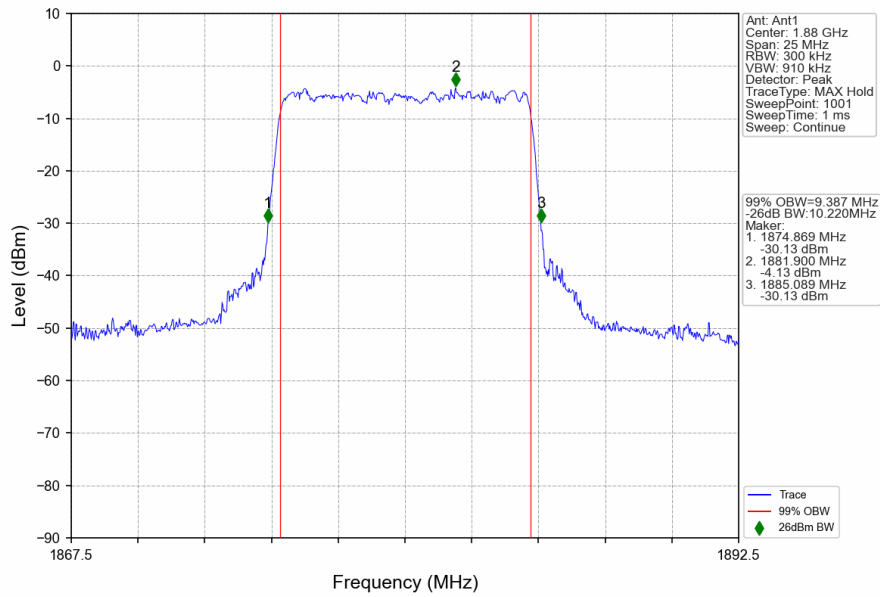
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM QPSK\_1905MHz\_Outer\_Full



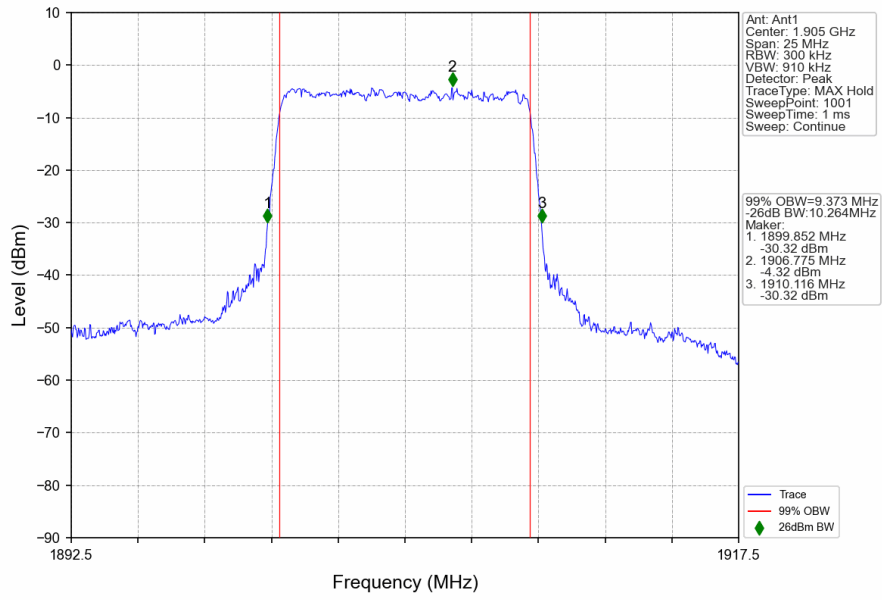
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 16 QAM\_1855MHz\_Outer\_Full



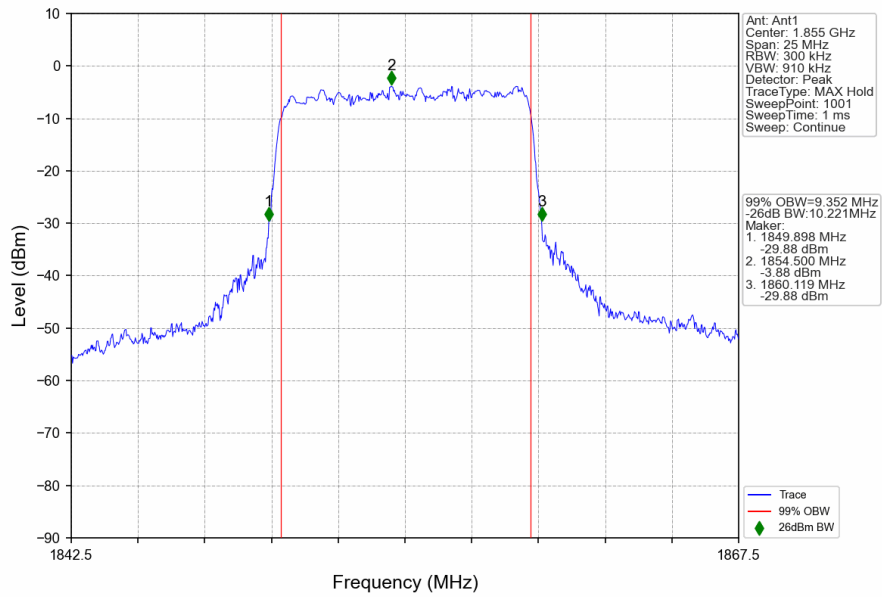
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 16 QAM\_1880MHz\_Outer\_Full



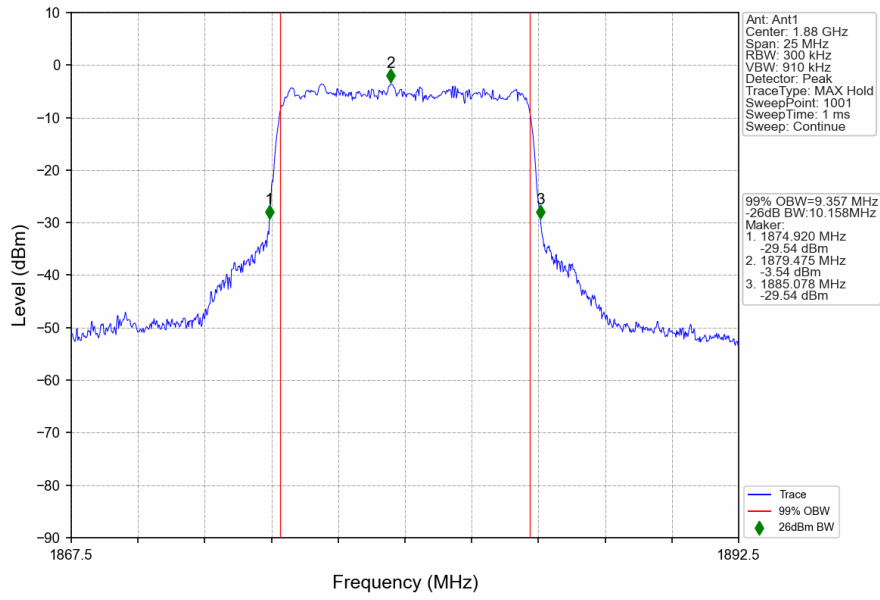
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 16 QAM\_1905MHz\_Outer\_Full



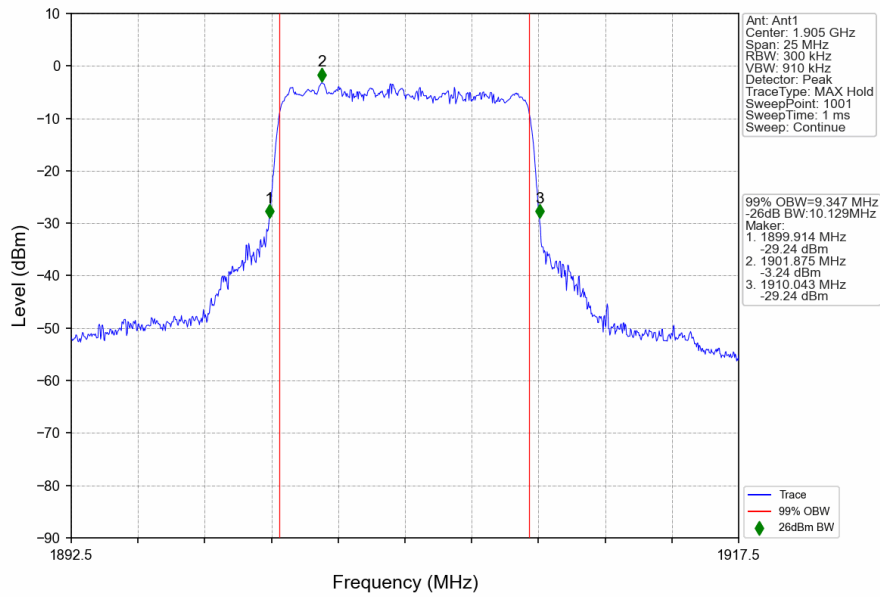
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 64 QAM\_1855MHz\_Outer\_Full



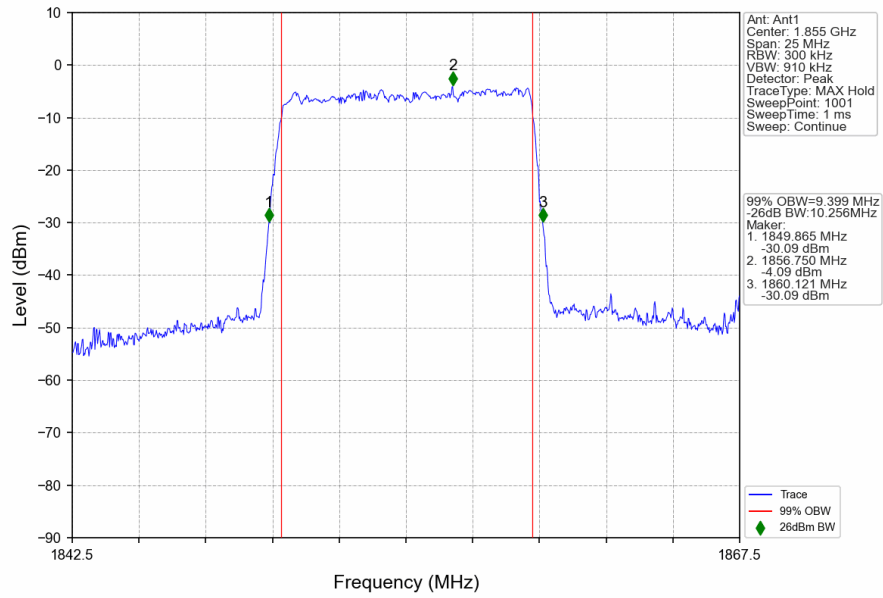
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 64 QAM\_1880MHz\_Outer\_Full



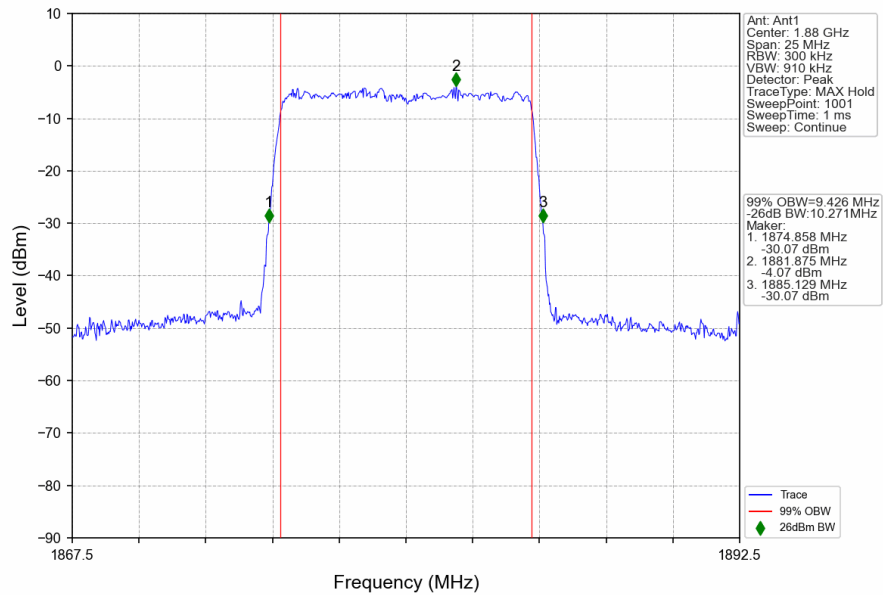
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 64 QAM\_1905MHz\_Outer\_Full



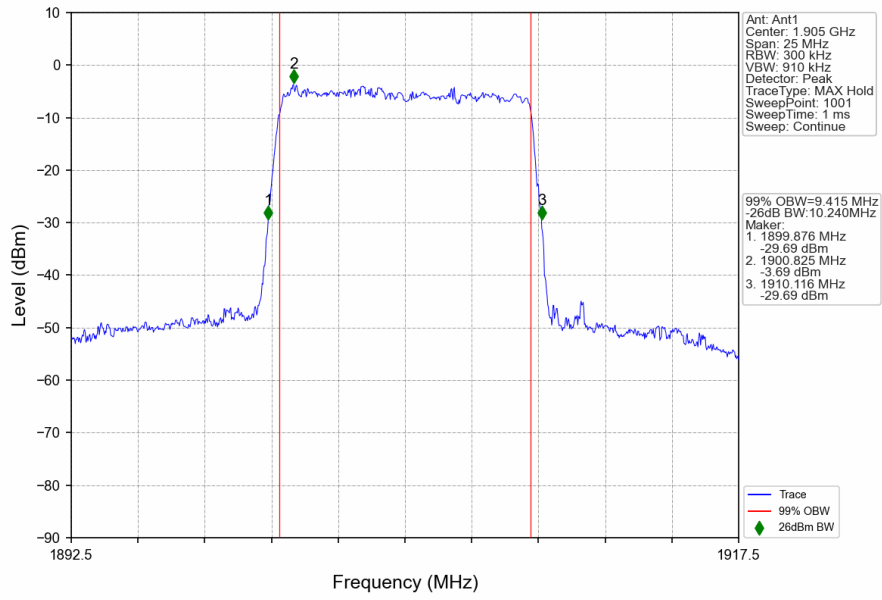
n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 256 QAM\_1855MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 256 QAM\_1880MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 256 QAM\_1905MHz\_Outer\_Full

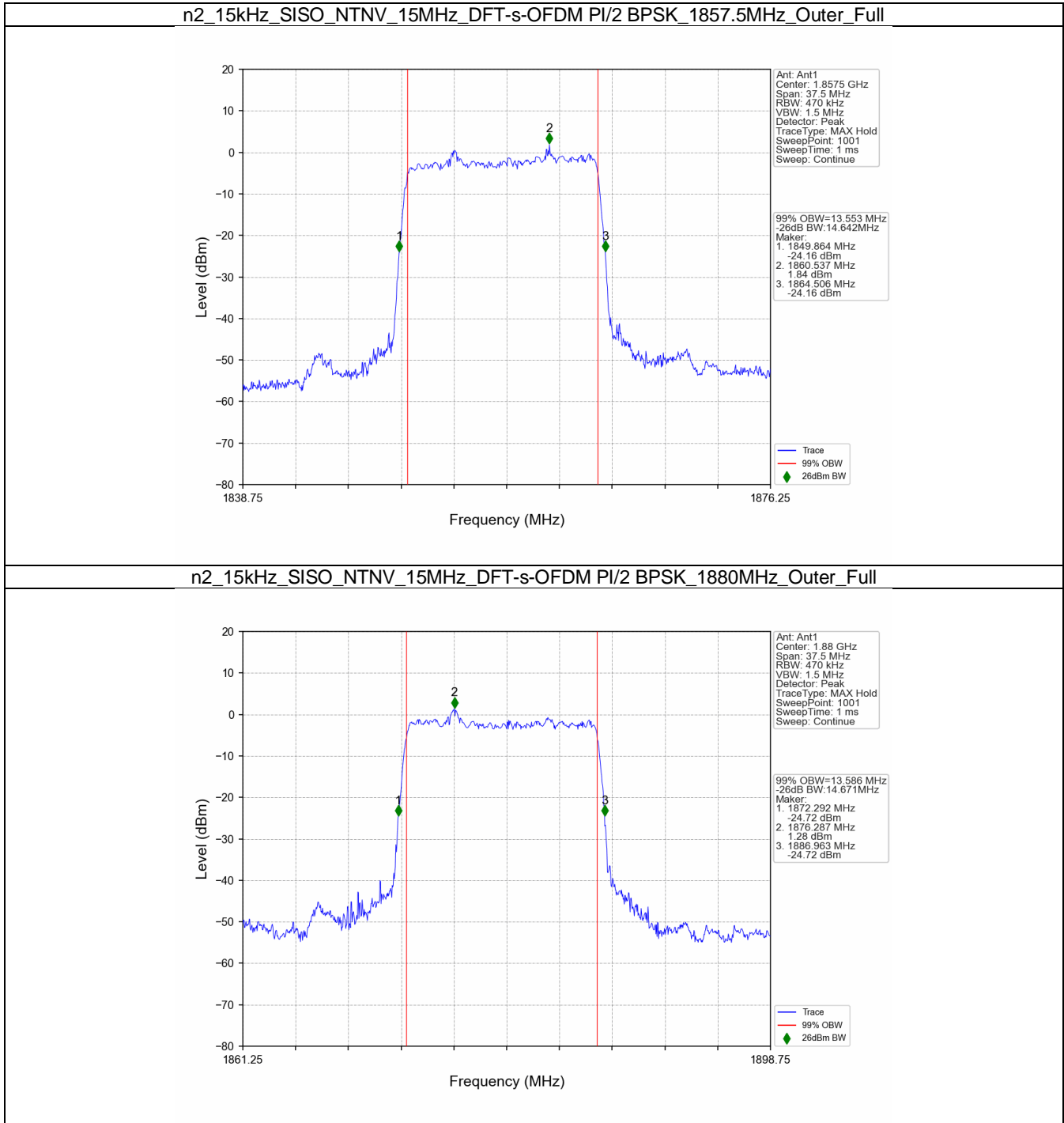


### 1.3 15k\_SISO\_15MHz\_NTNV

#### 1.3.1 Test Result

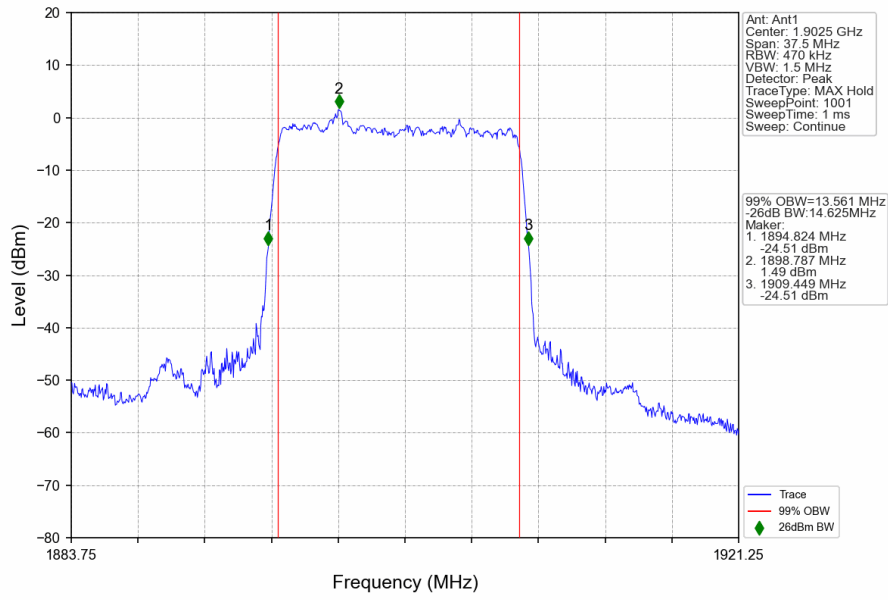
5G NR n2 SCS=15kHz SISO 15MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	1857.5	Outer_Full	13.55	14.64	/	Pass
	1880	Outer_Full	13.59	14.67	/	Pass
	1902.5	Outer_Full	13.56	14.62	/	Pass
DFT-s-OFDM QPSK	1857.5	Outer_Full	13.59	14.60	/	Pass
	1880	Outer_Full	13.62	14.64	/	Pass
	1902.5	Outer_Full	13.59	14.70	/	Pass
DFT-s-OFDM 16 QAM	1857.5	Outer_Full	13.64	14.66	/	Pass
	1880	Outer_Full	13.65	14.68	/	Pass
	1902.5	Outer_Full	13.63	14.64	/	Pass
DFT-s-OFDM 64 QAM	1857.5	Outer_Full	13.53	14.64	/	Pass
	1880	Outer_Full	13.57	14.66	/	Pass
	1902.5	Outer_Full	13.52	14.60	/	Pass
DFT-s-OFDM 256 QAM	1857.5	Outer_Full	13.55	14.69	/	Pass
	1880	Outer_Full	13.59	14.65	/	Pass
	1902.5	Outer_Full	13.59	14.71	/	Pass
CP-OFDM QPSK	1857.5	Outer_Full	14.21	15.32	/	Pass
	1880	Outer_Full	14.26	15.37	/	Pass
	1902.5	Outer_Full	14.23	15.37	/	Pass
CP-OFDM 16 QAM	1857.5	Outer_Full	14.22	15.32	/	Pass
	1880	Outer_Full	14.27	15.39	/	Pass
	1902.5	Outer_Full	14.24	15.34	/	Pass
CP-OFDM 64 QAM	1857.5	Outer_Full	14.29	15.43	/	Pass
	1880	Outer_Full	14.32	15.71	/	Pass
	1902.5	Outer_Full	14.29	15.64	/	Pass
CP-OFDM 256 QAM	1857.5	Outer_Full	14.22	15.37	/	Pass
	1880	Outer_Full	14.23	15.35	/	Pass
	1902.5	Outer_Full	14.22	15.40	/	Pass

### 1.3.2 Test Graph

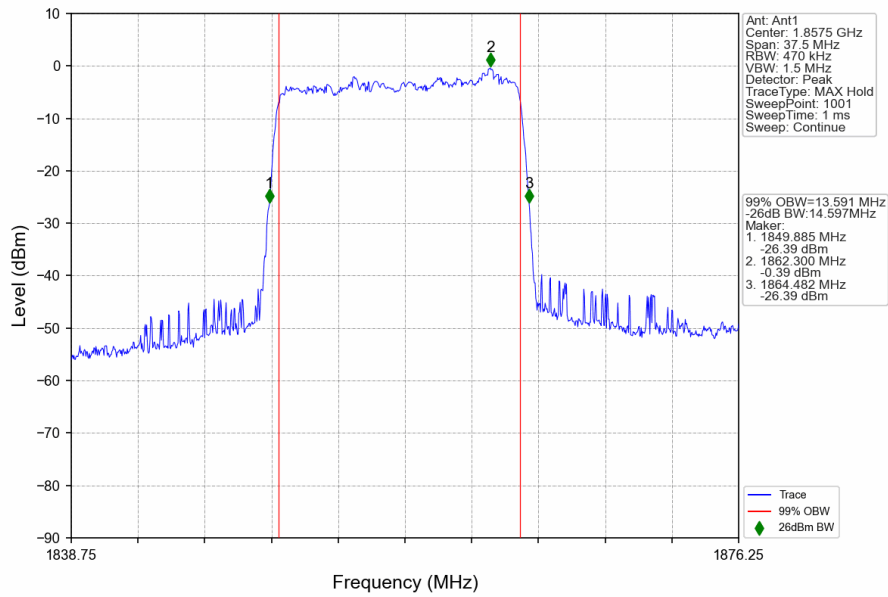




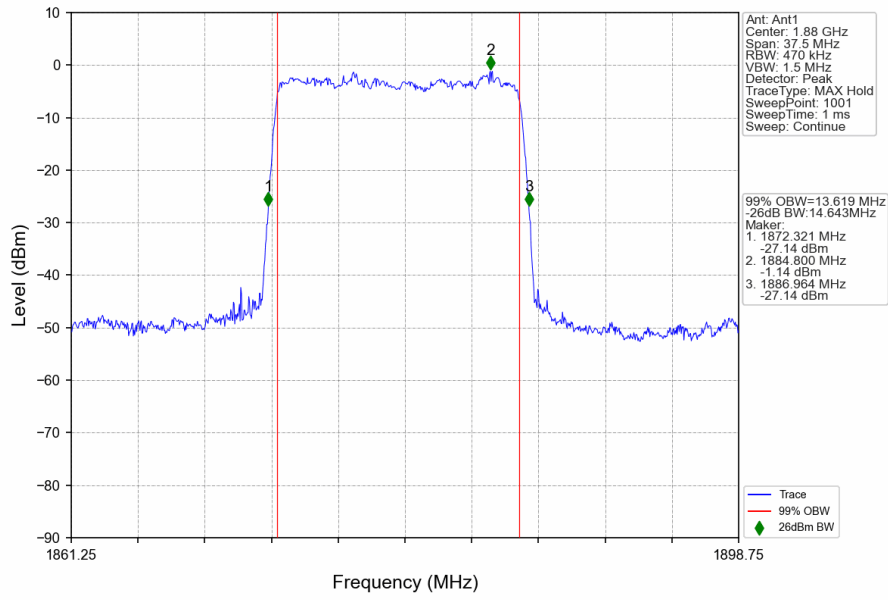
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM PI/2 BPSK\_1902.5MHz\_Outer\_Full



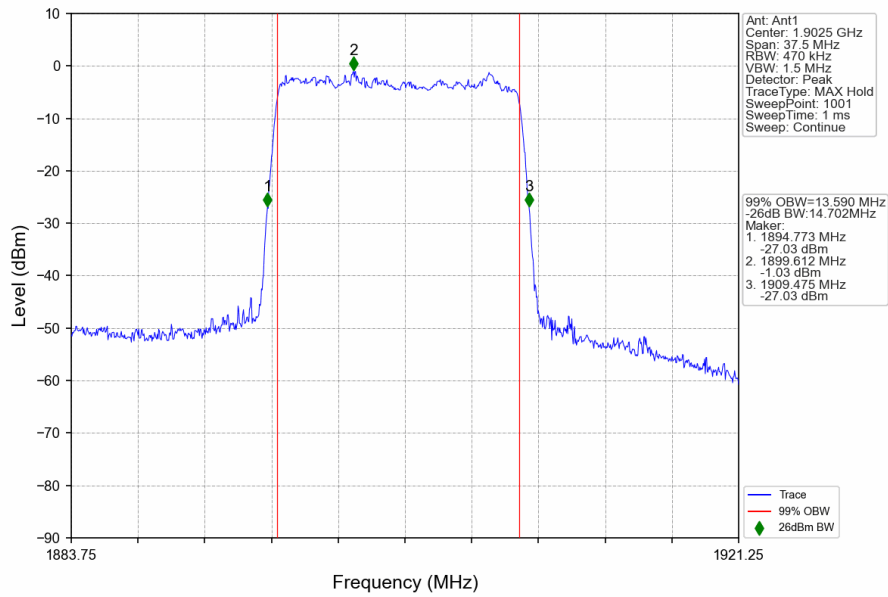
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM QPSK\_1857.5MHz\_Outer\_Full



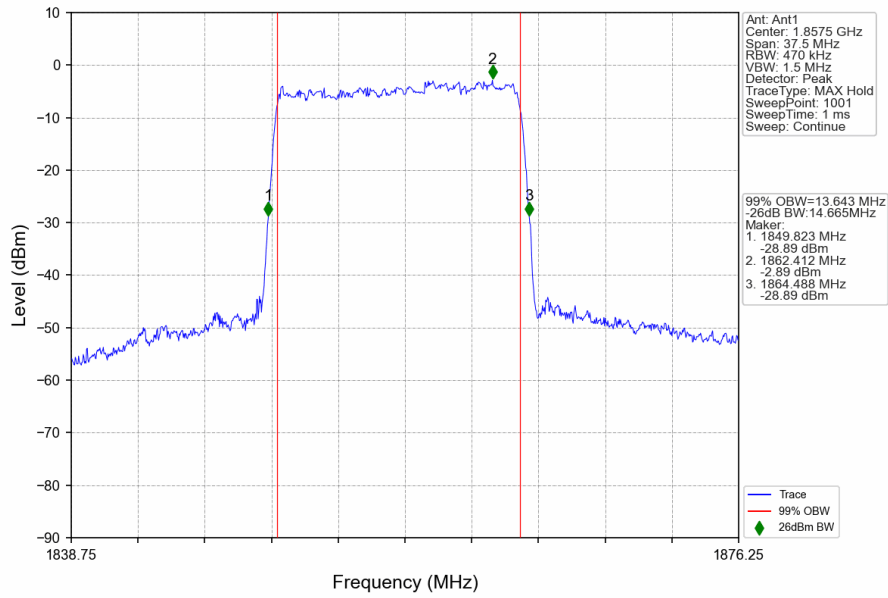
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM QPSK\_1880MHz\_Outer\_Full



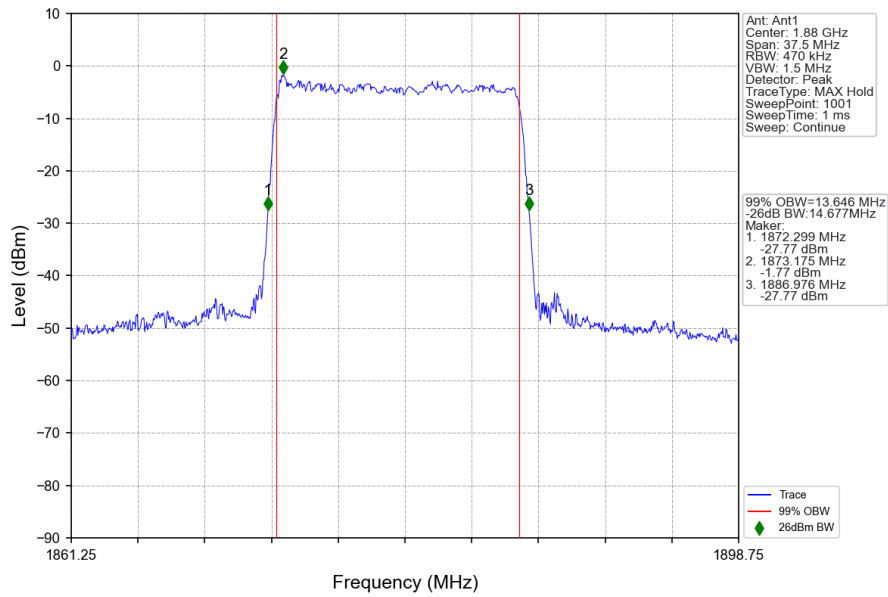
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM QPSK\_1902.5MHz\_Outer\_Full



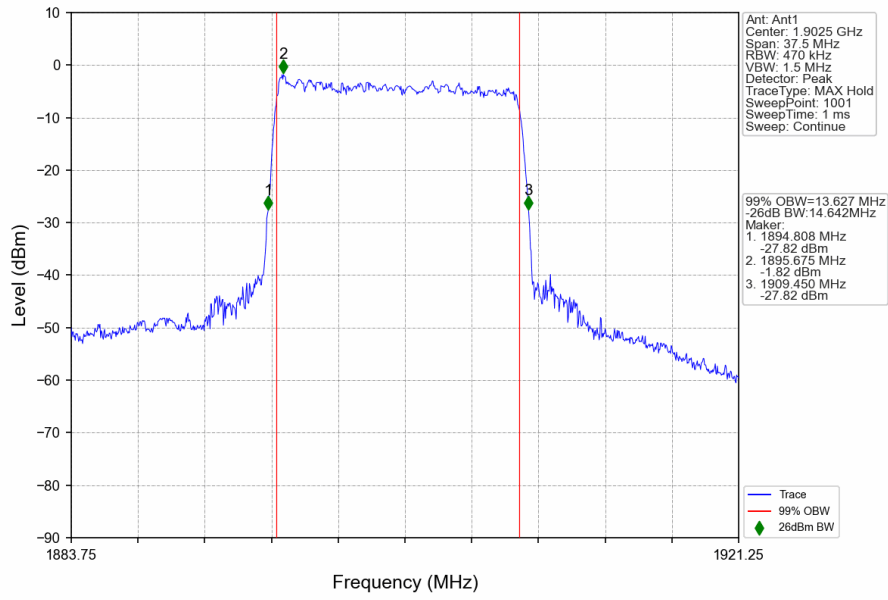
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM\_16 QAM\_1857.5MHz\_Outer\_Full



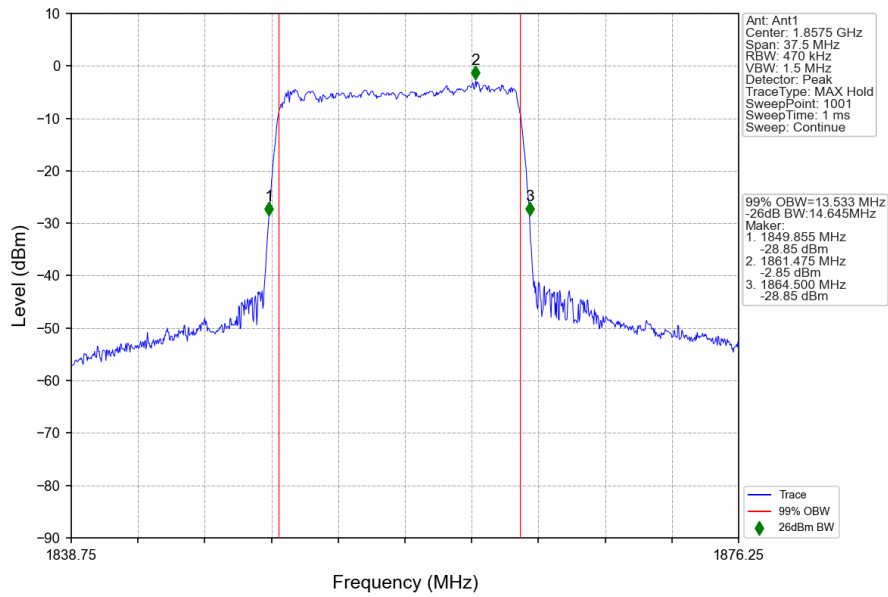
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM\_16 QAM\_1880MHz\_Outer\_Full



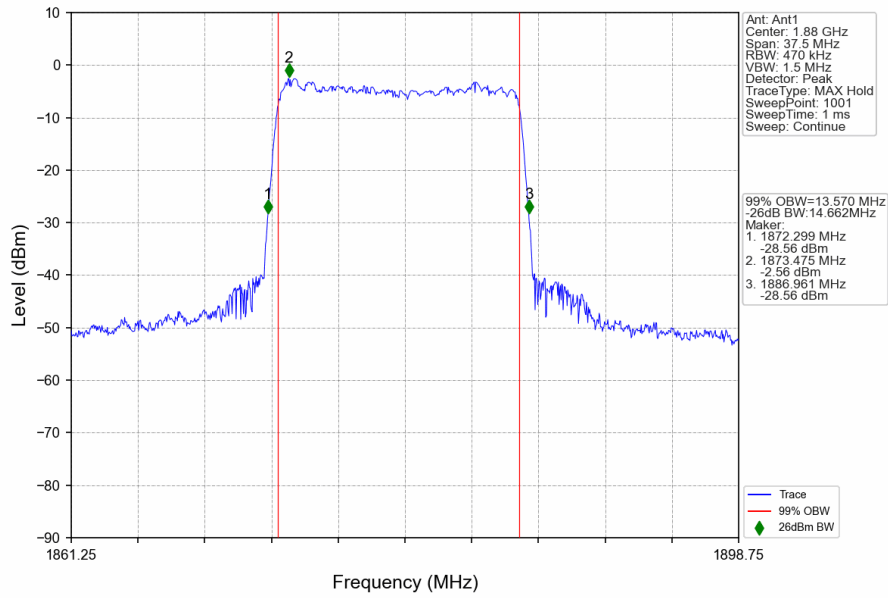
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 16 QAM\_1902.5MHz\_Outer\_Full



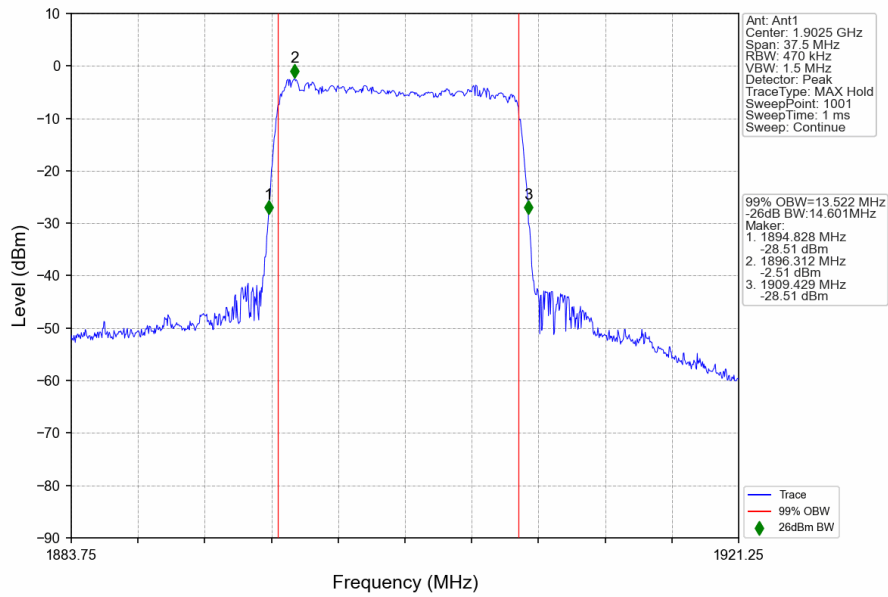
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 64 QAM\_1857.5MHz\_Outer\_Full



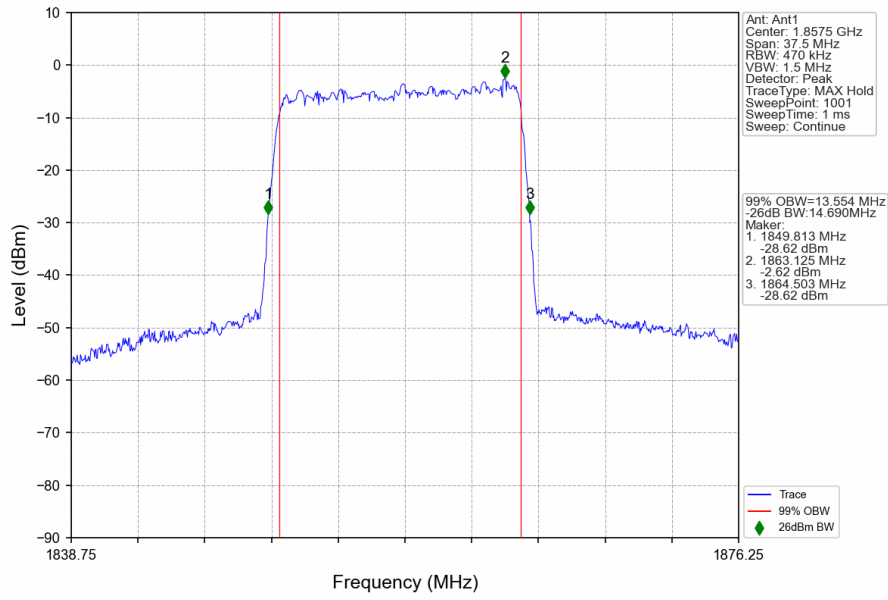
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 64 QAM\_1880MHz\_Outer\_Full



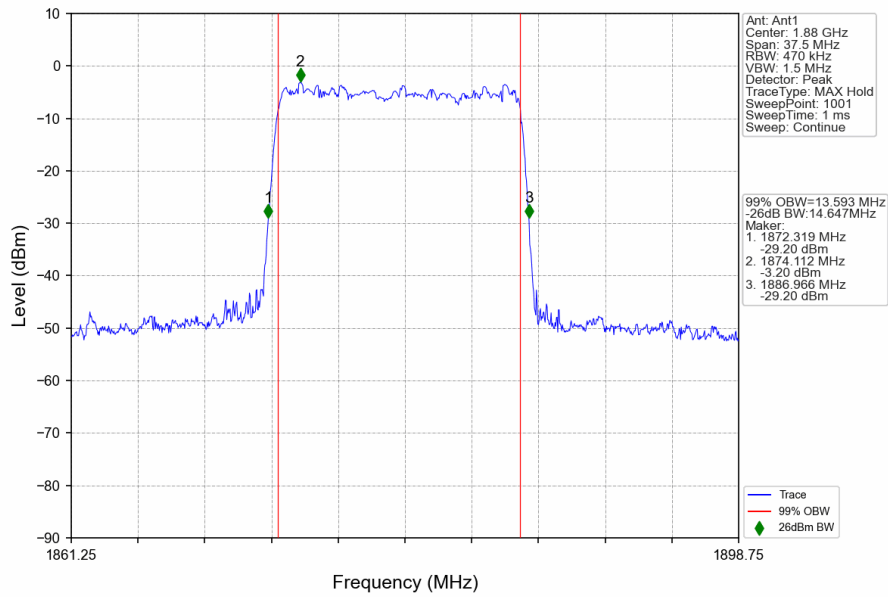
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 64 QAM\_1902.5MHz\_Outer\_Full



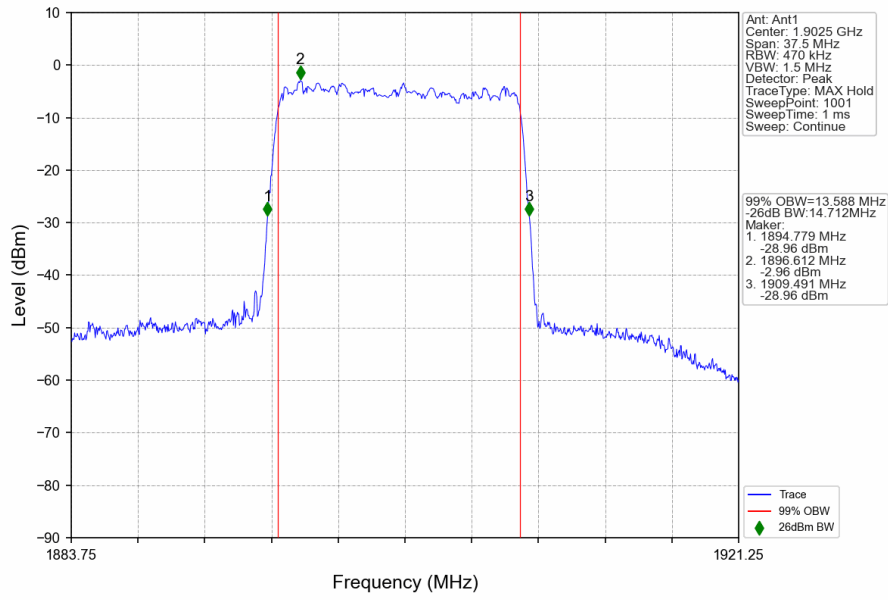
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 256 QAM\_1857.5MHz\_Outer\_Full



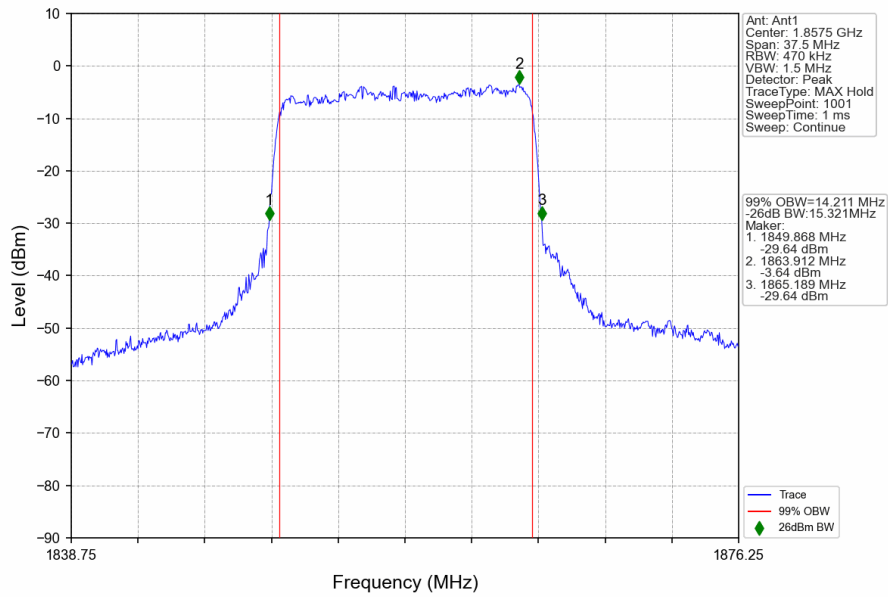
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 256 QAM\_1880MHz\_Outer\_Full



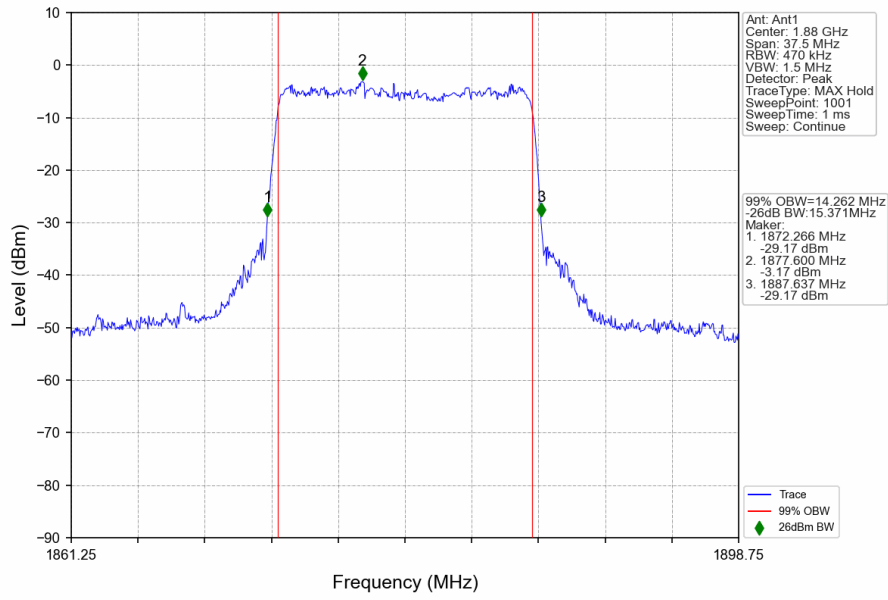
n2\_15kHz\_SISO\_NTNV\_15MHz\_DFT-s-OFDM 256 QAM\_1902.5MHz\_Outer\_Full



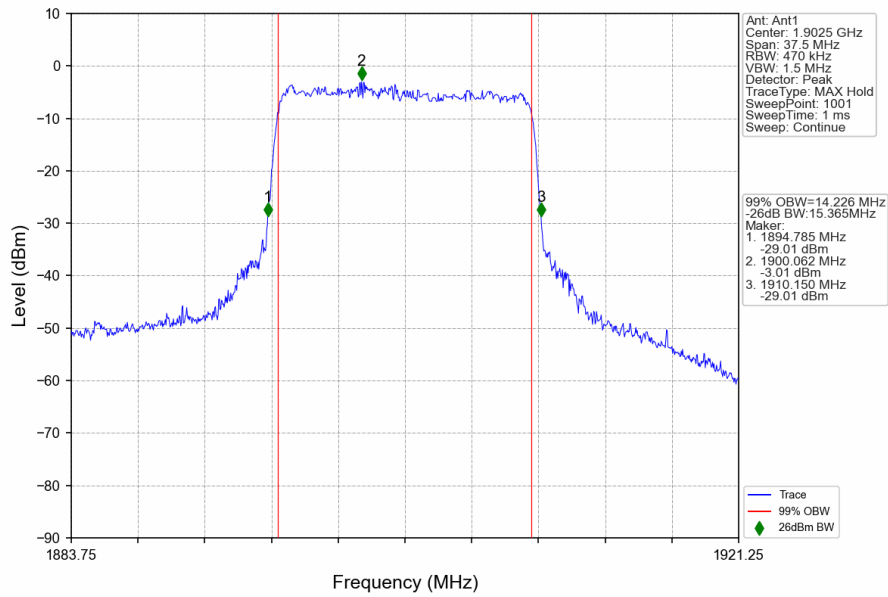
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM QPSK\_1857.5MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM QPSK\_1880MHz\_Outer\_Full

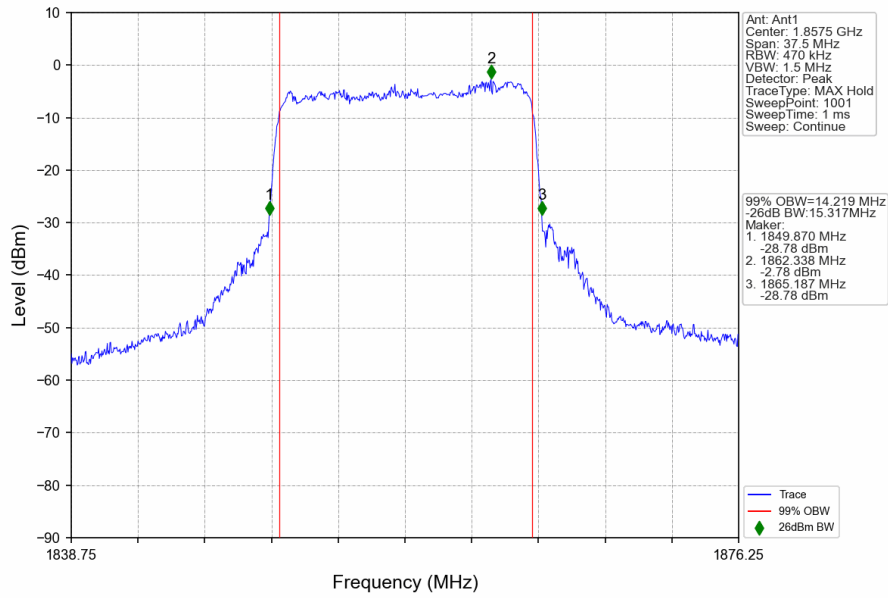


n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM QPSK\_1902.5MHz\_Outer\_Full

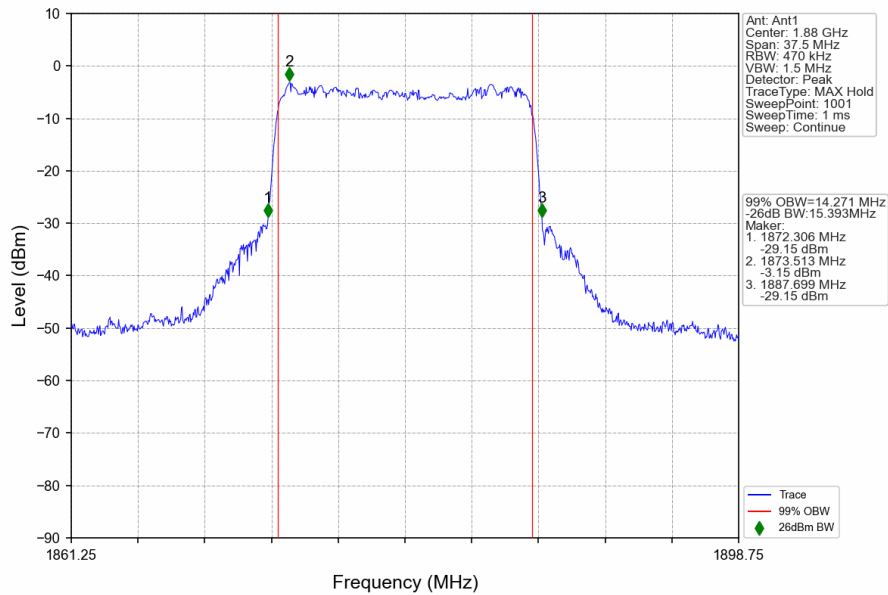




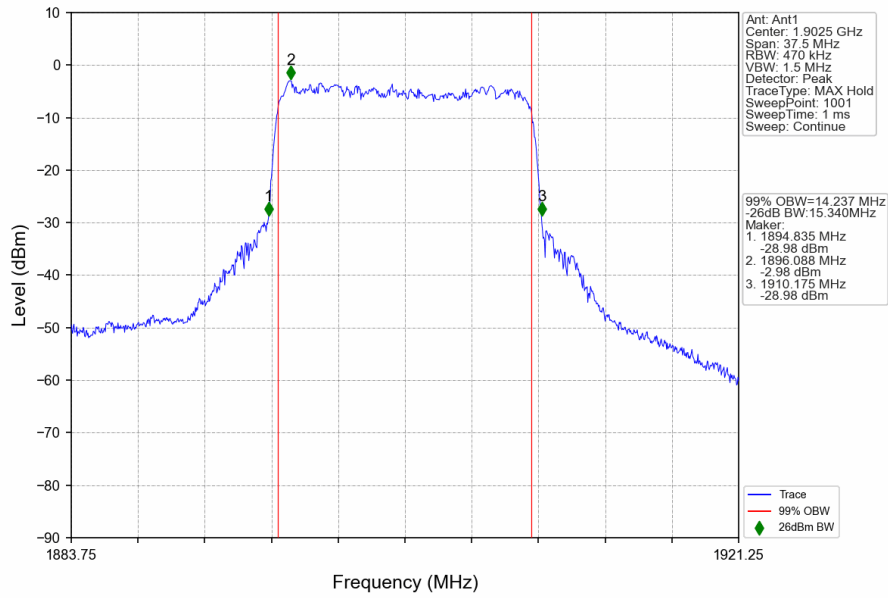
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM\_16QAM\_1857.5MHz\_Outer\_Full



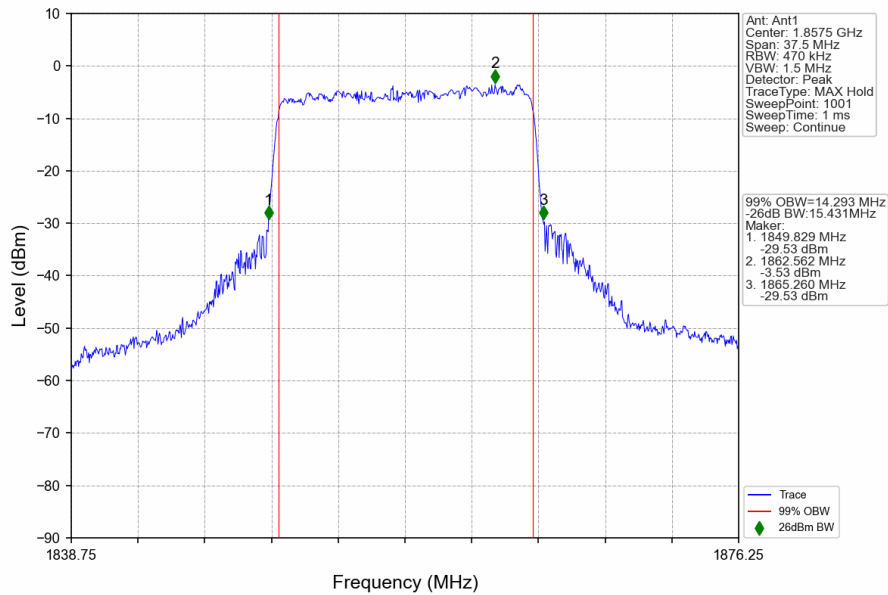
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM\_16QAM\_1880MHz\_Outer\_Full



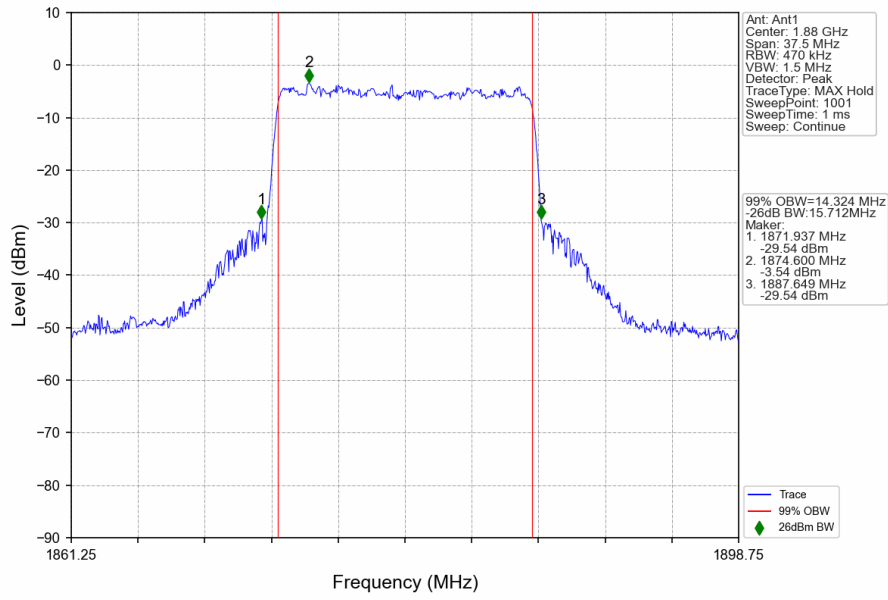
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 16 QAM\_1902.5MHz\_Outer\_Full



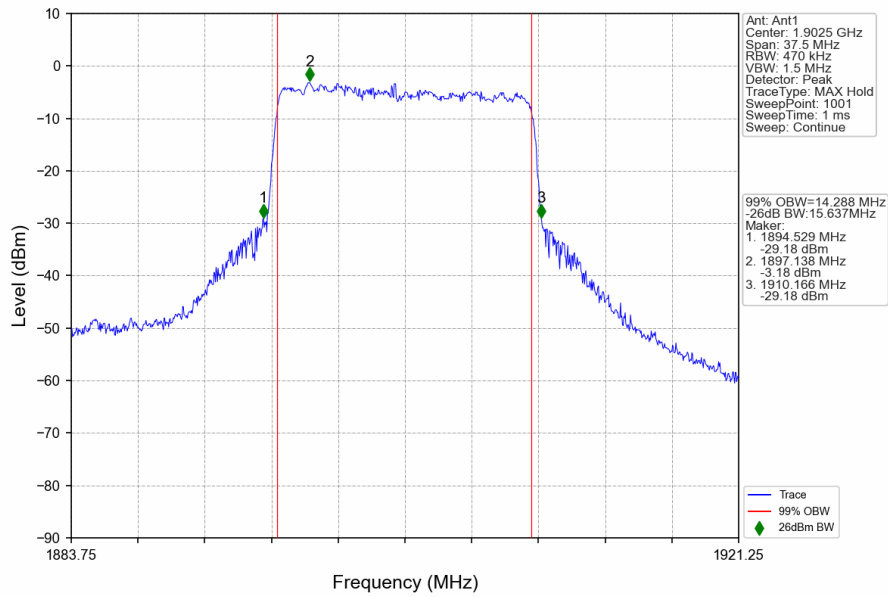
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 64 QAM\_1857.5MHz\_Outer\_Full



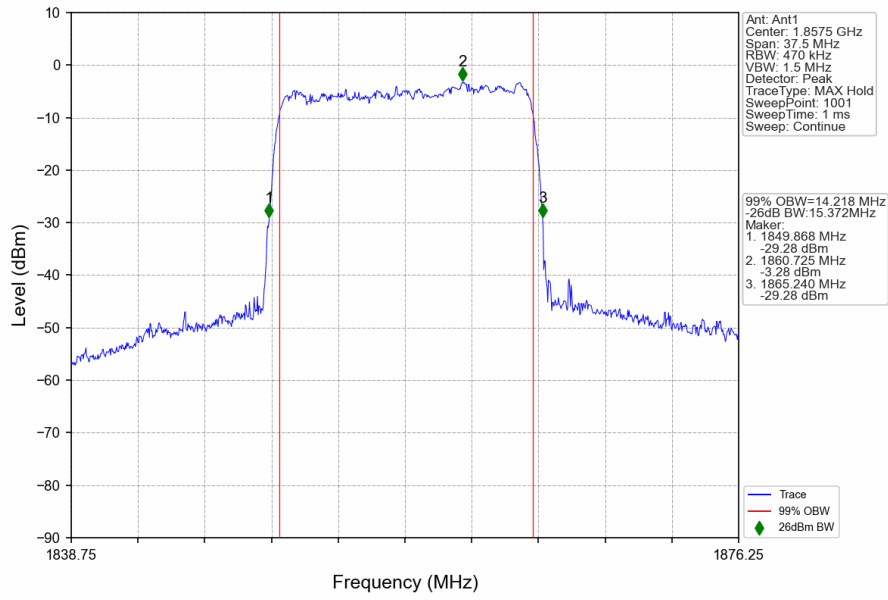
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 64 QAM\_1880MHz\_Outer\_Full



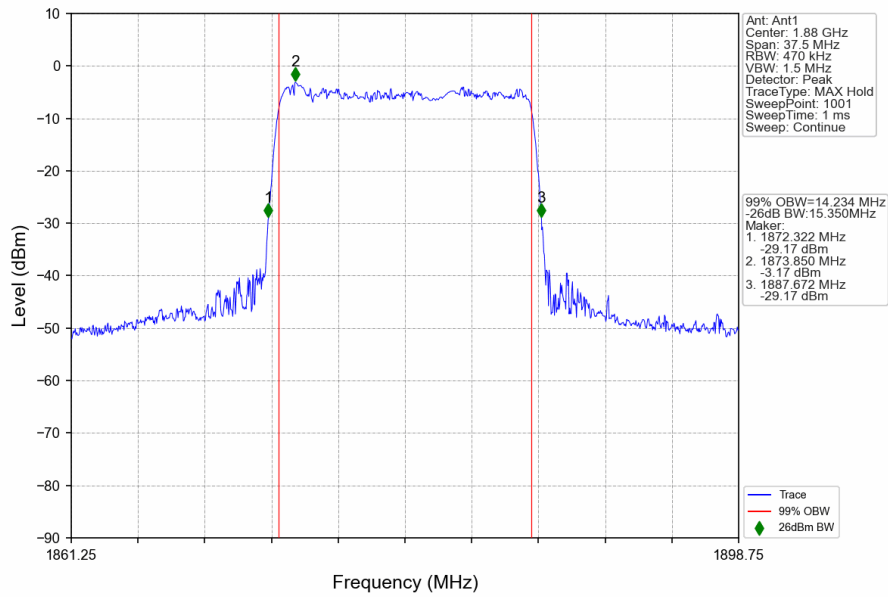
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 64 QAM\_1902.5MHz\_Outer\_Full



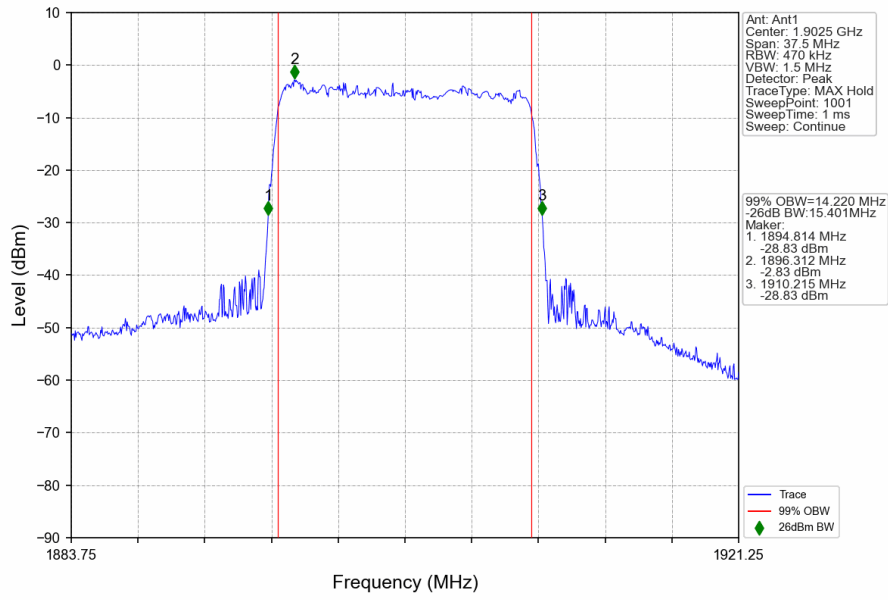
n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 256 QAM\_1857.5MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 256 QAM\_1880MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_15MHz\_CP-OFDM 256 QAM 1902.5MHz\_Outer\_Full

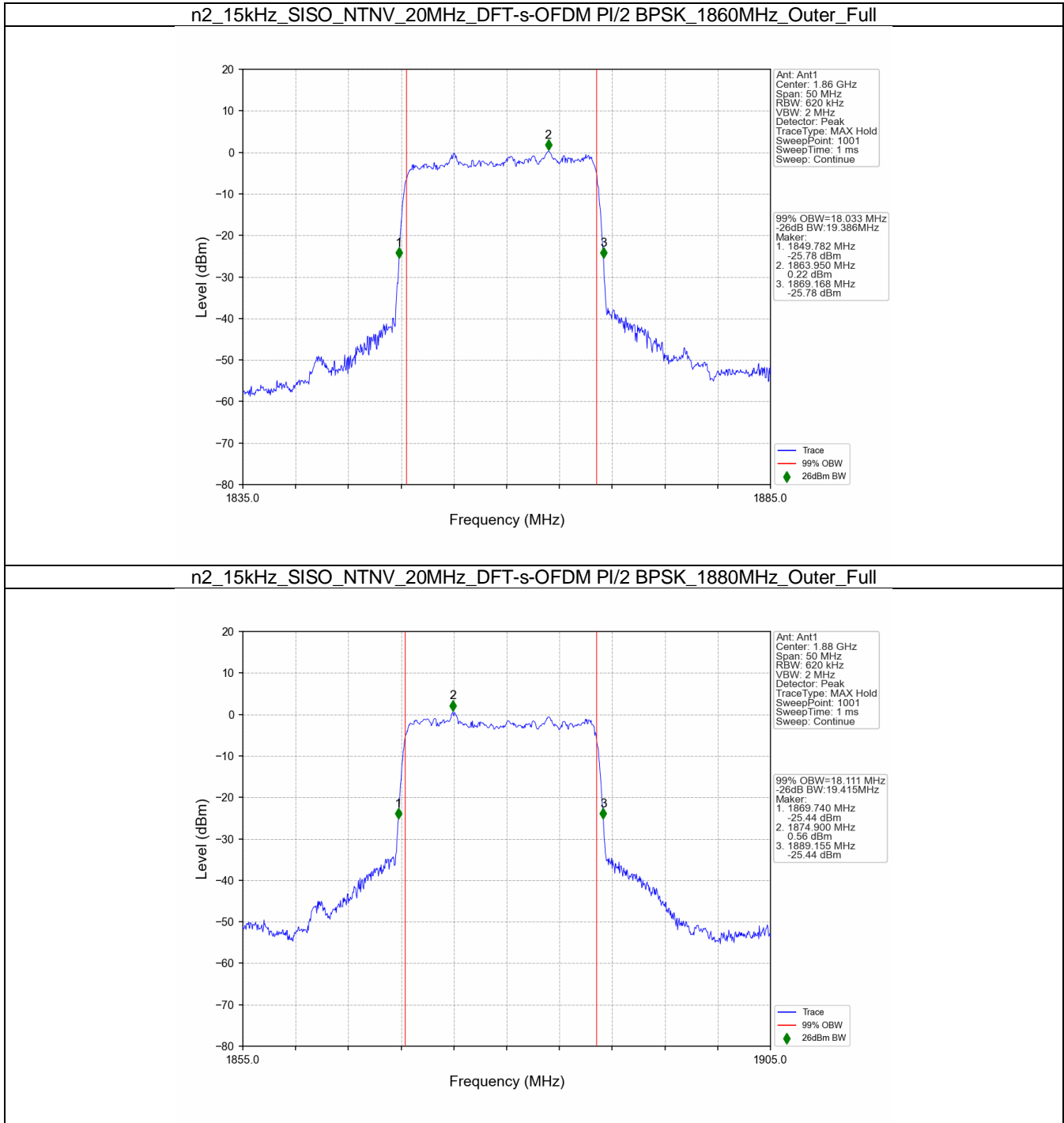


## 1.4 15k\_SISO\_20MHz\_NTNV

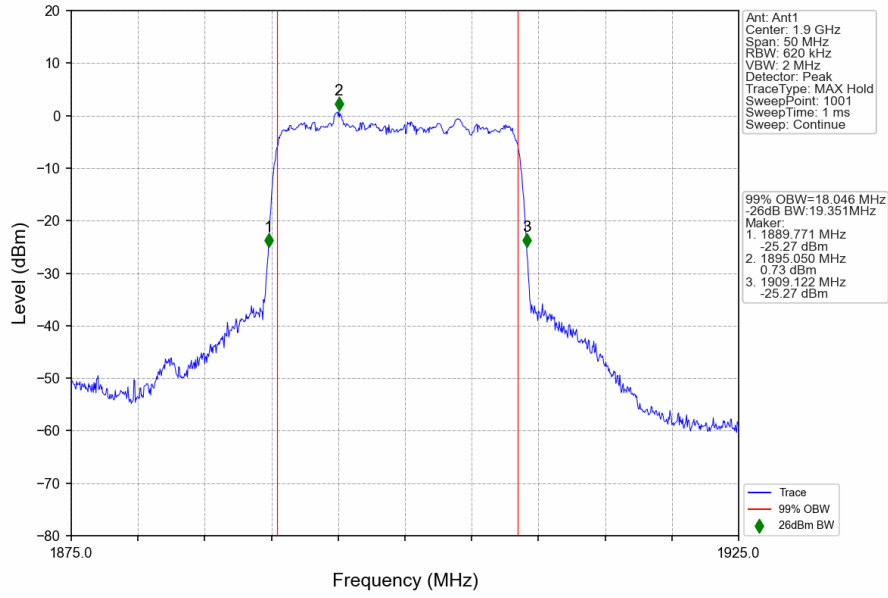
### 1.4.1 Test Result

5G NR n2 SCS=15kHz SISO 20MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	1860	Outer_Full	18.03	19.39	/	Pass
	1880	Outer_Full	18.11	19.41	/	Pass
	1900	Outer_Full	18.05	19.35	/	Pass
DFT-s-OFDM QPSK	1860	Outer_Full	18.00	19.39	/	Pass
	1880	Outer_Full	18.11	19.46	/	Pass
	1900	Outer_Full	18.01	19.39	/	Pass
DFT-s-OFDM 16 QAM	1860	Outer_Full	18.01	19.34	/	Pass
	1880	Outer_Full	18.08	19.42	/	Pass
	1900	Outer_Full	18.01	19.38	/	Pass
DFT-s-OFDM 64 QAM	1860	Outer_Full	18.01	19.46	/	Pass
	1880	Outer_Full	18.08	19.47	/	Pass
	1900	Outer_Full	18.02	19.44	/	Pass
DFT-s-OFDM 256 QAM	1860	Outer_Full	18.01	19.34	/	Pass
	1880	Outer_Full	18.08	19.39	/	Pass
	1900	Outer_Full	18.04	19.36	/	Pass
CP-OFDM QPSK	1860	Outer_Full	19.05	20.47	/	Pass
	1880	Outer_Full	19.09	22.72	/	Pass
	1900	Outer_Full	19.01	20.90	/	Pass
CP-OFDM 16 QAM	1860	Outer_Full	19.08	21.01	/	Pass
	1880	Outer_Full	19.18	22.97	/	Pass
	1900	Outer_Full	19.11	20.74	/	Pass
CP-OFDM 64 QAM	1860	Outer_Full	19.07	21.82	/	Pass
	1880	Outer_Full	19.21	23.58	/	Pass
	1900	Outer_Full	19.12	22.50	/	Pass
CP-OFDM 256 QAM	1860	Outer_Full	19.12	20.49	/	Pass
	1880	Outer_Full	19.21	20.60	/	Pass
	1900	Outer_Full	19.15	20.51	/	Pass

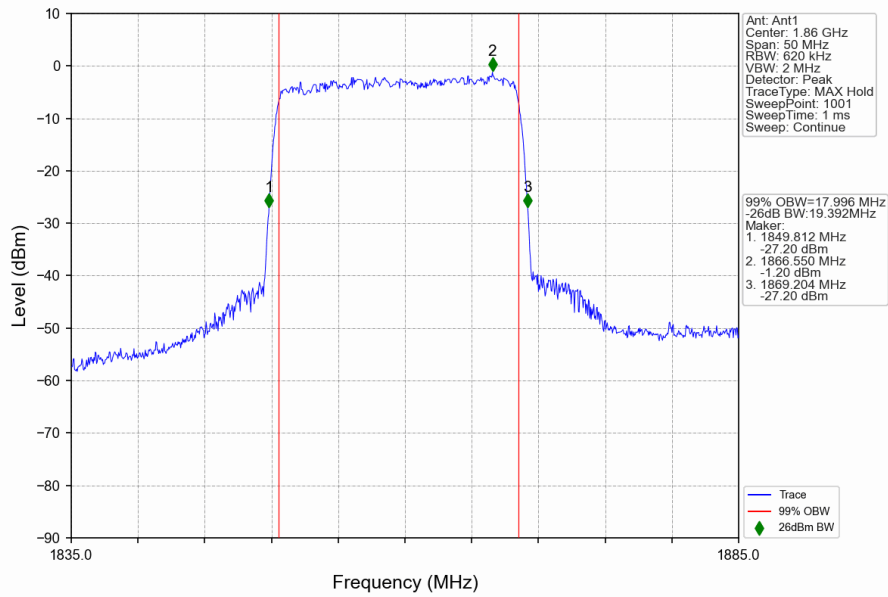
### 1.4.2 Test Graph



n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_1900MHz\_Outer\_Full

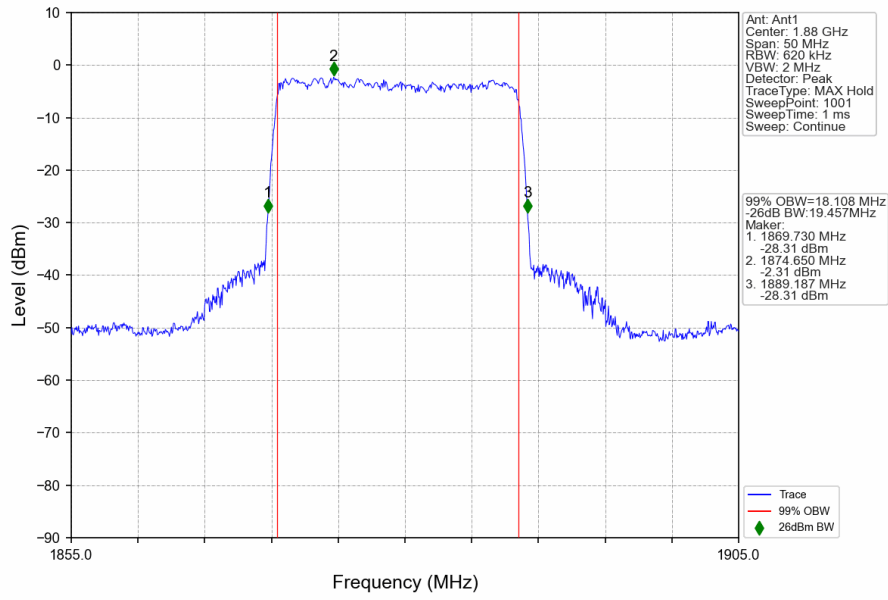


n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM QPSK\_1860MHz\_Outer\_Full

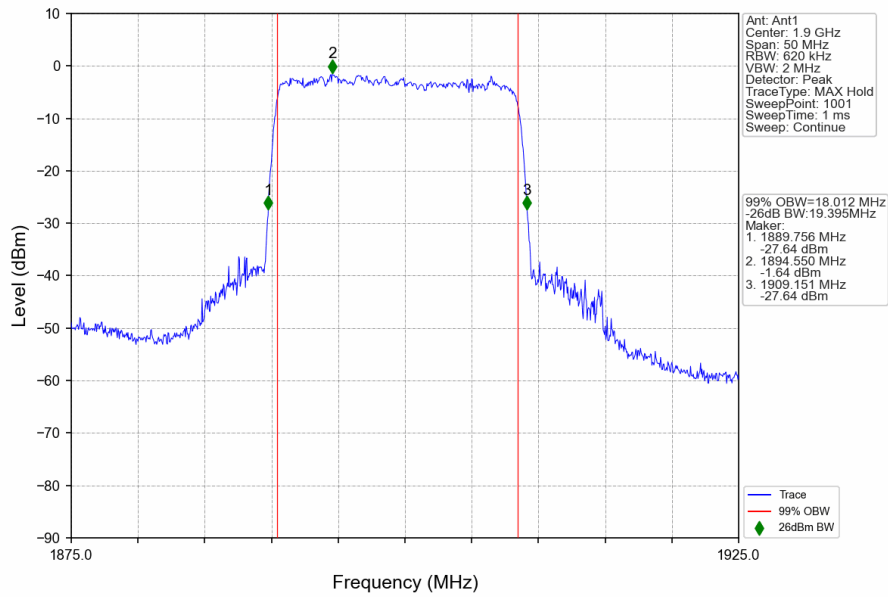




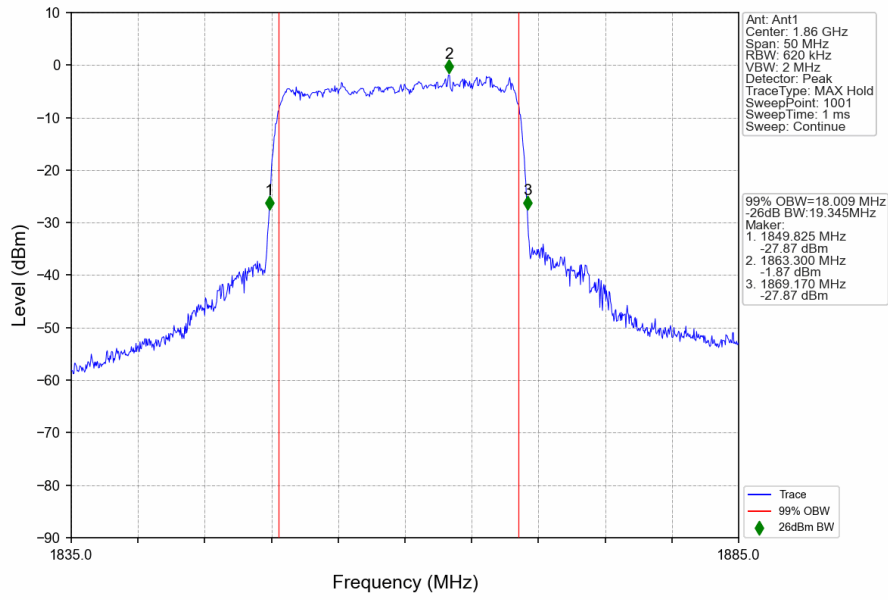
n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM\_QPSK\_1880MHz\_Outer\_Full



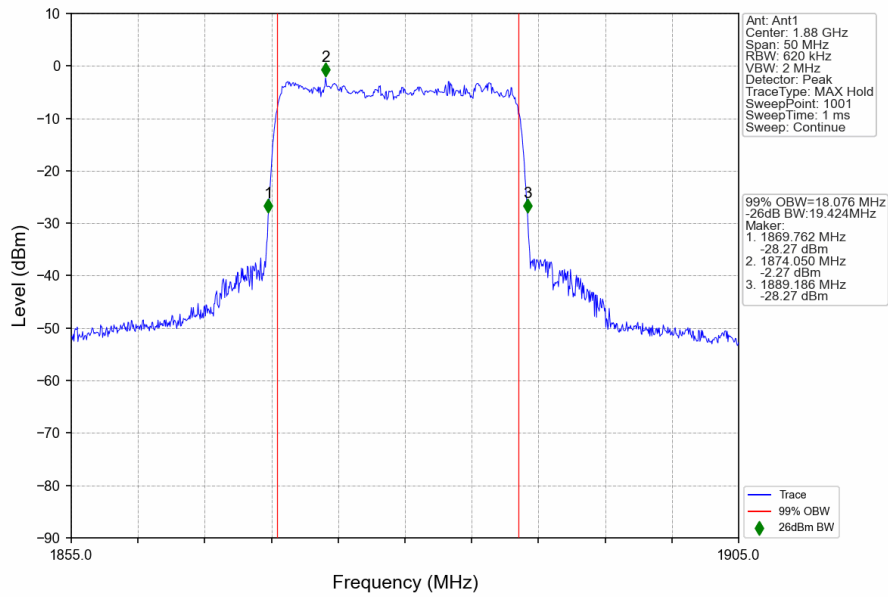
n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM\_QPSK\_1900MHz\_Outer\_Full



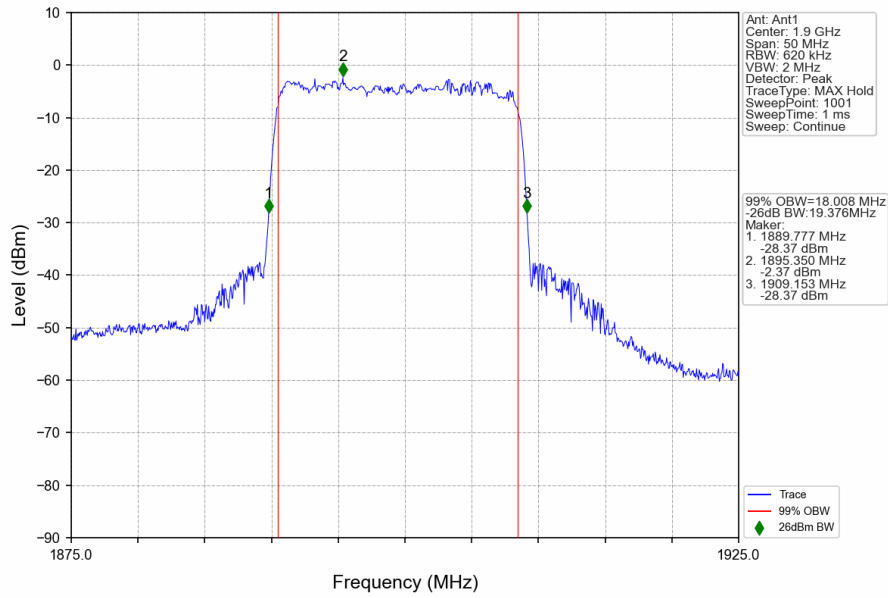
n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_1860MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_1880MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_1900MHz\_Outer\_Full



n2\_15kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 64 QAM\_1860MHz\_Outer\_Full

