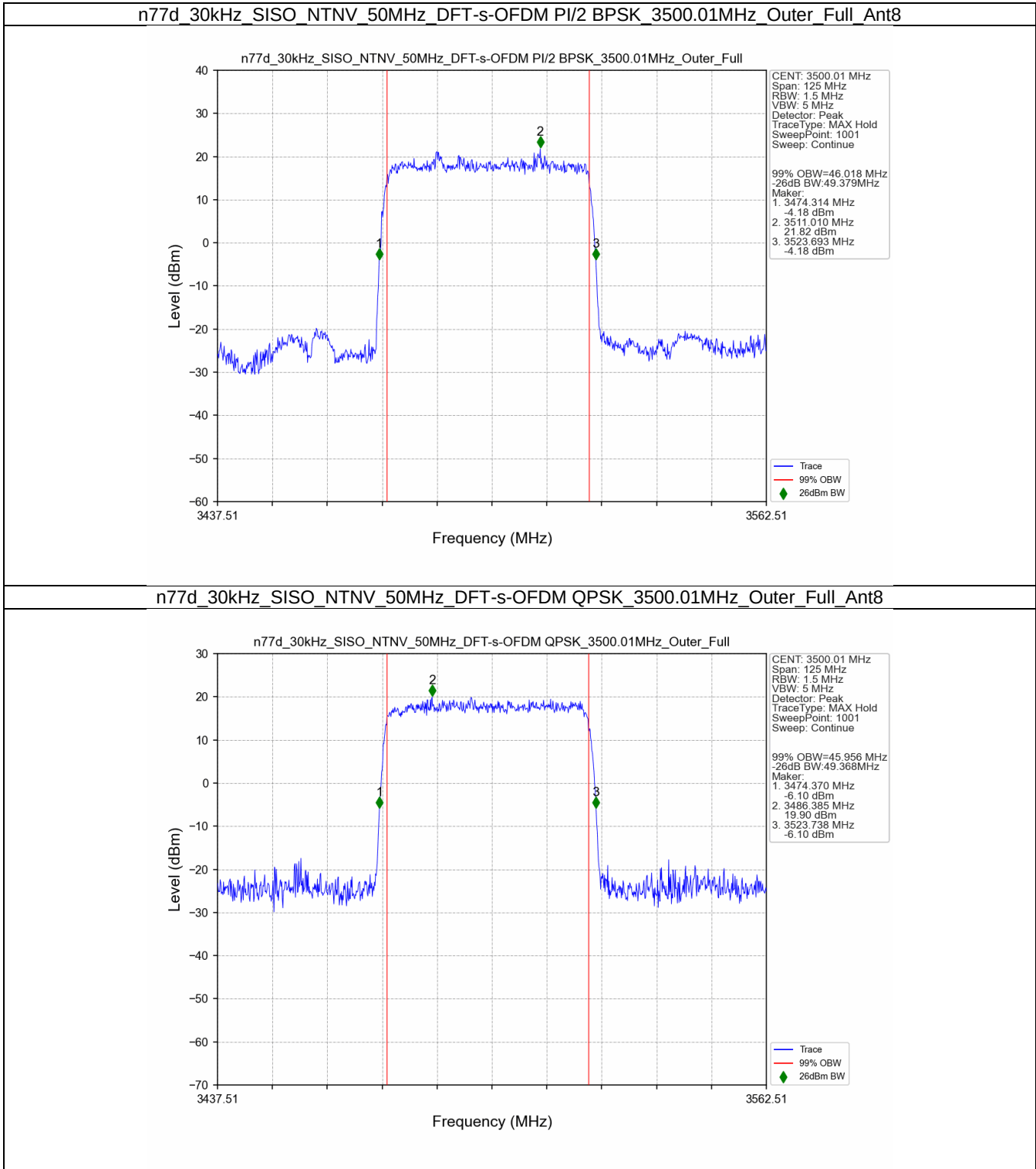
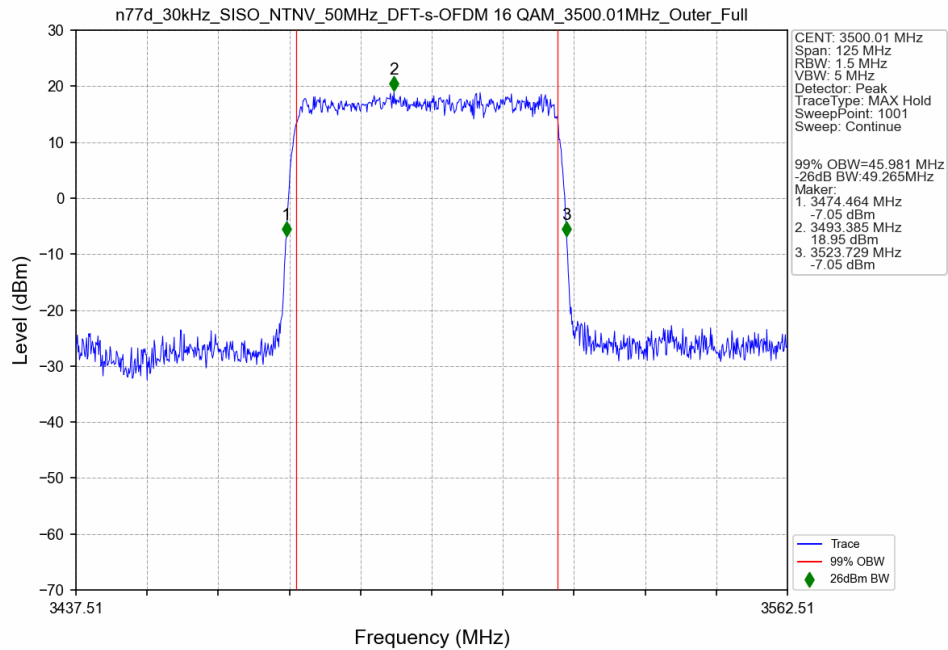


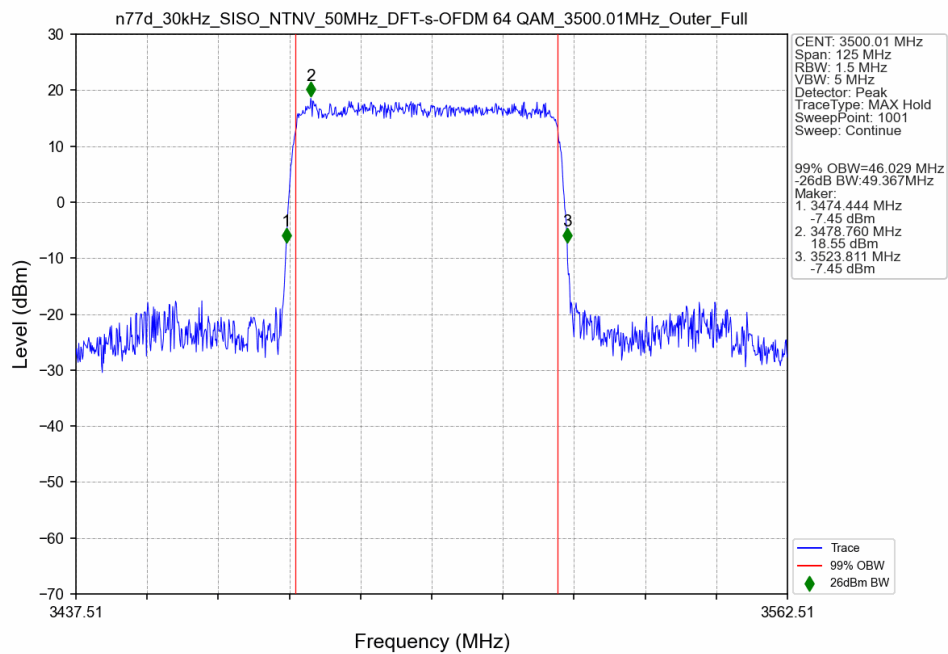
3.2.7 30_S_50M_NTNV



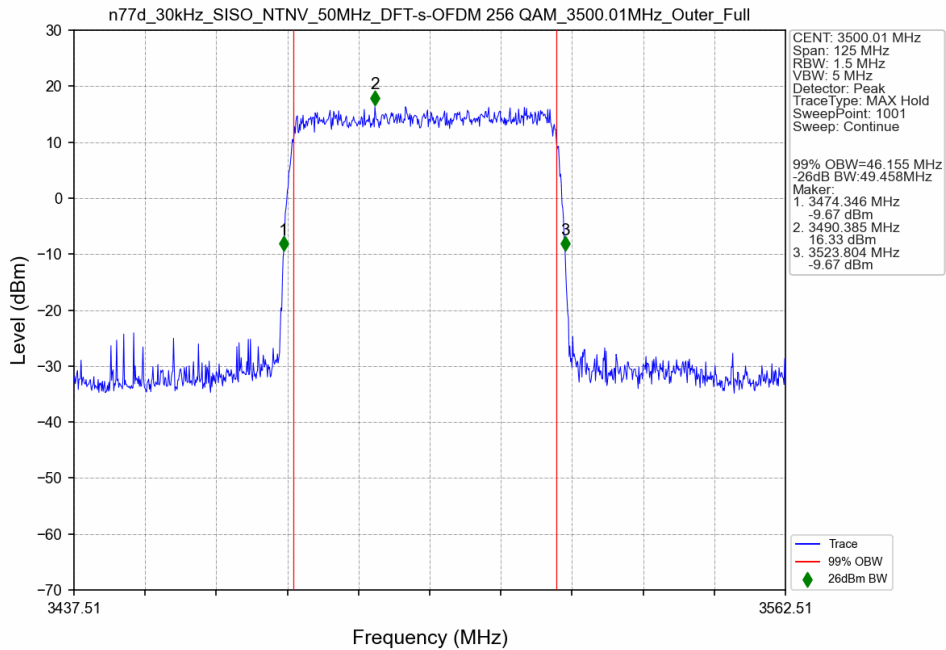
n77d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8



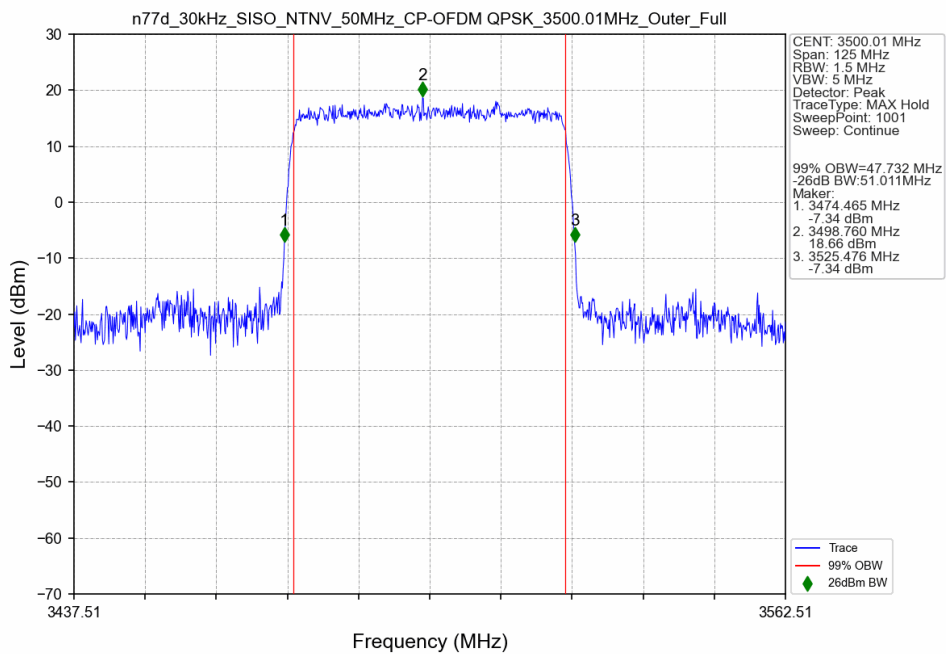
n77d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8



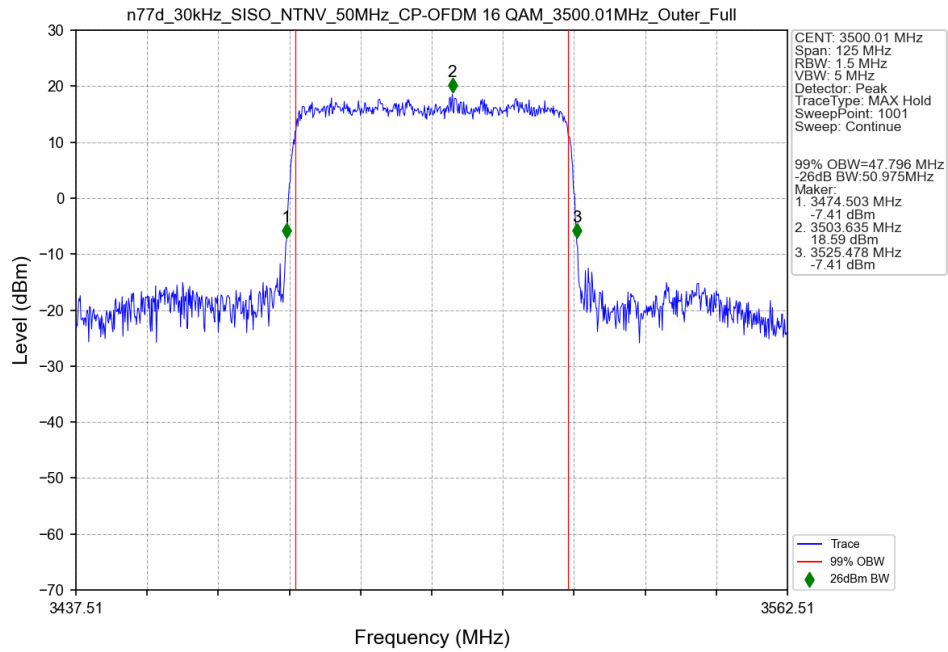
n77d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 256 QAM_3500.01MHz_Outer_Full_Ant8



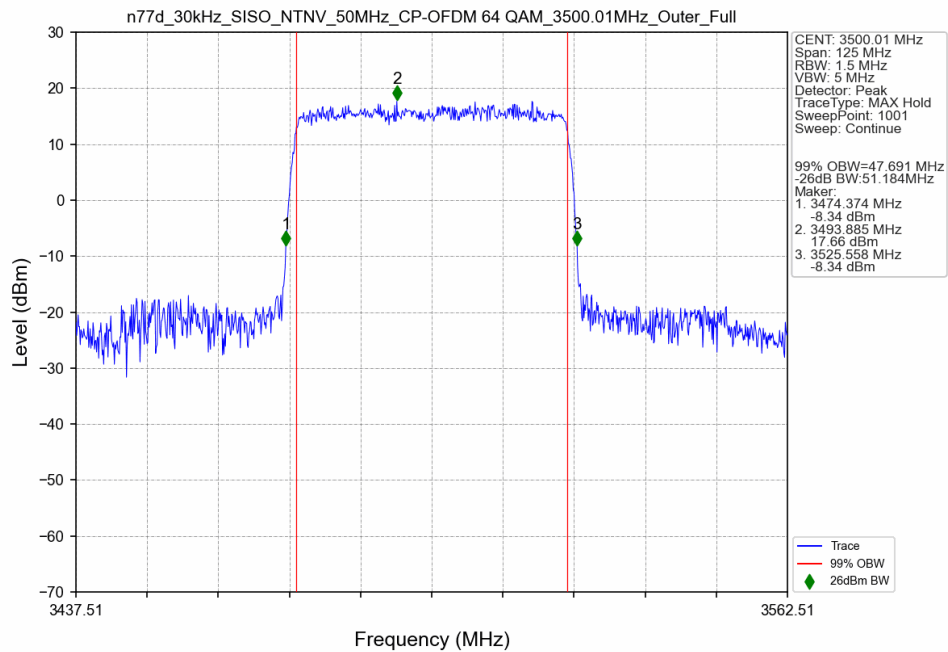
n77d_30kHz_SISO_NTNV_50MHz_CP-OFDM QPSK_3500.01MHz_Outer_Full_Ant8

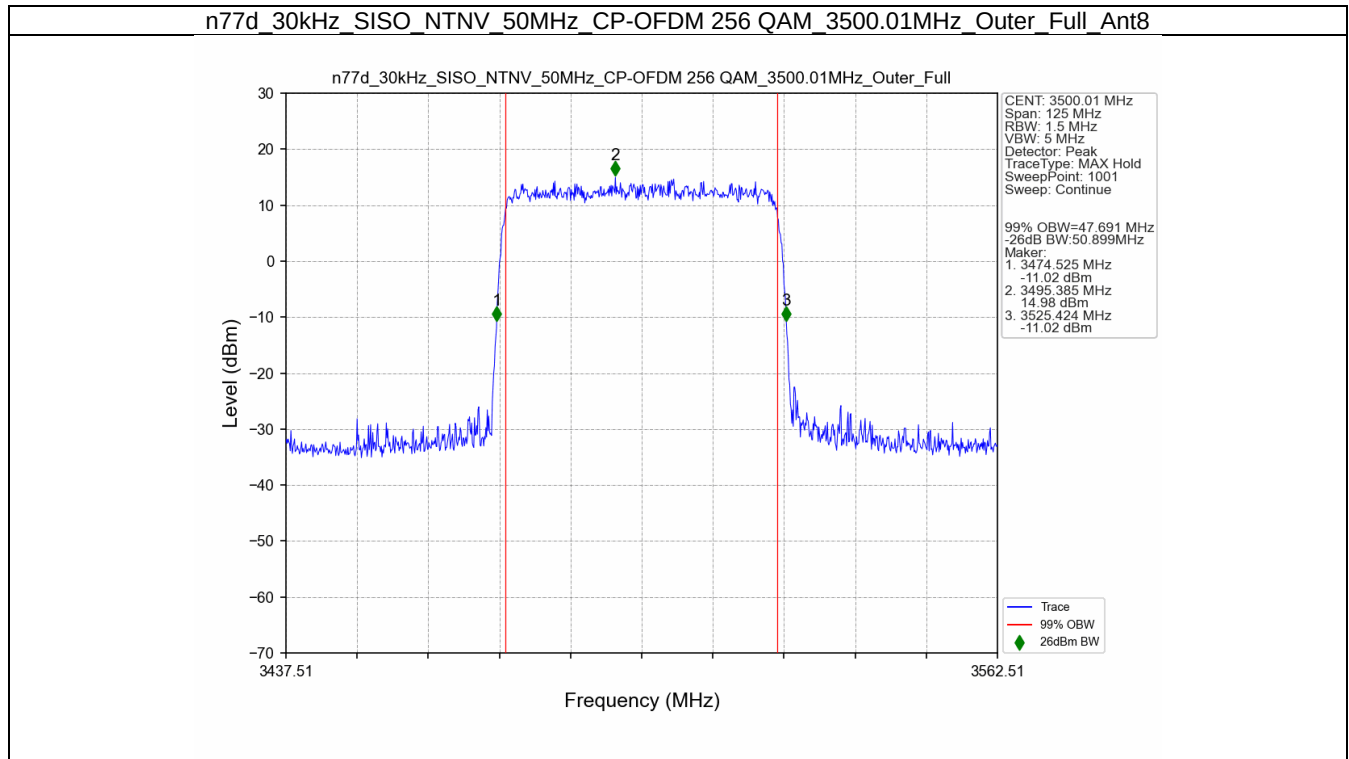


n77d_30kHz_SISO_NTNV_50MHz_CP-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8

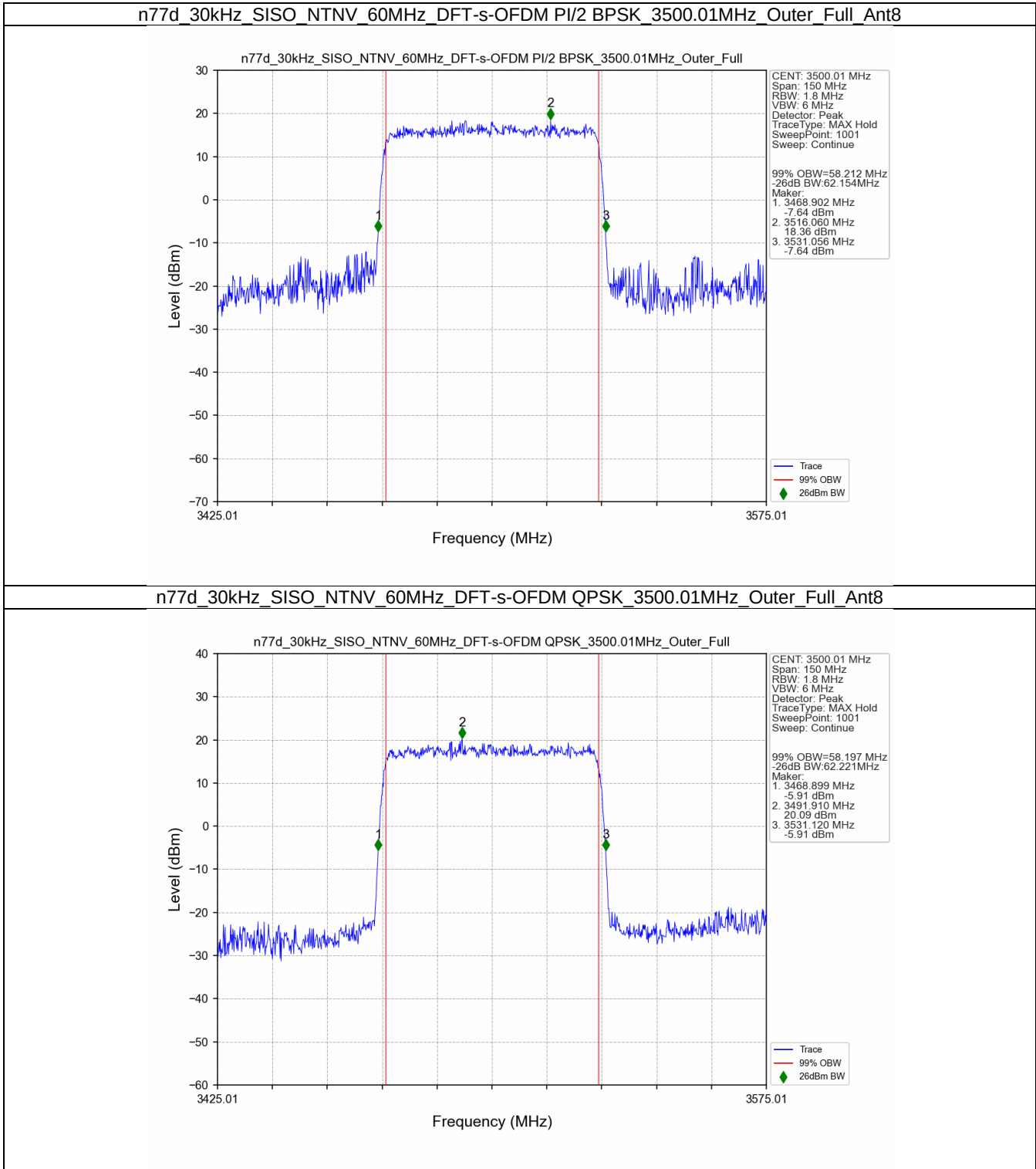


n77d_30kHz_SISO_NTNV_50MHz_CP-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8

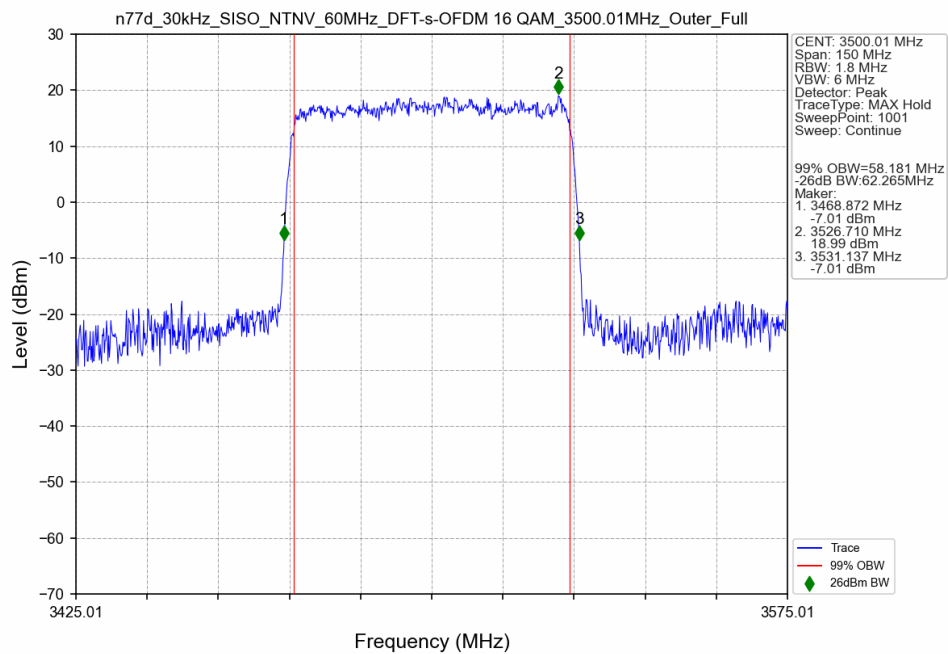




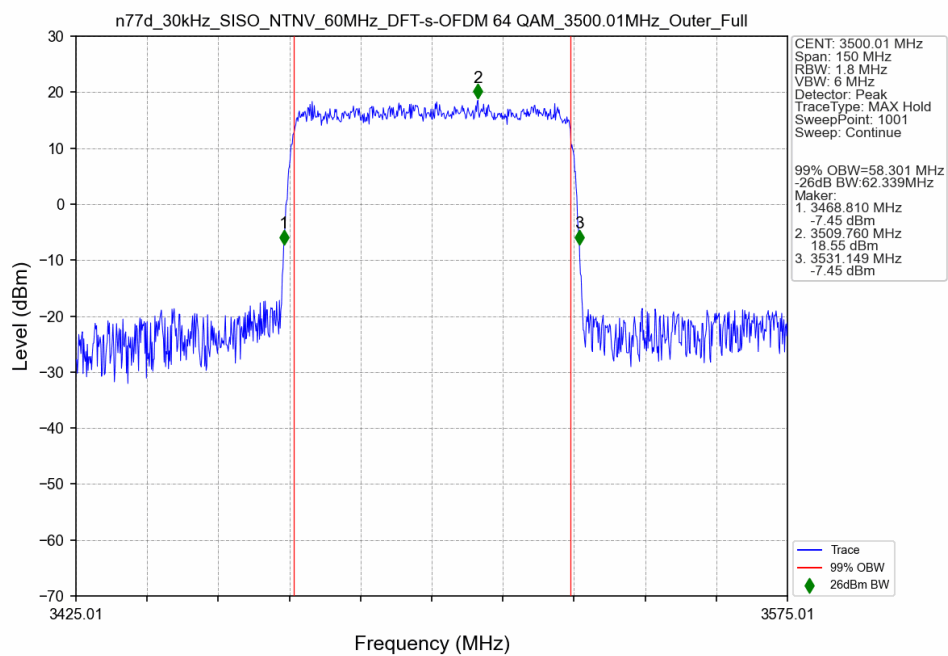
3.2.8 30_S_60M_NTNV



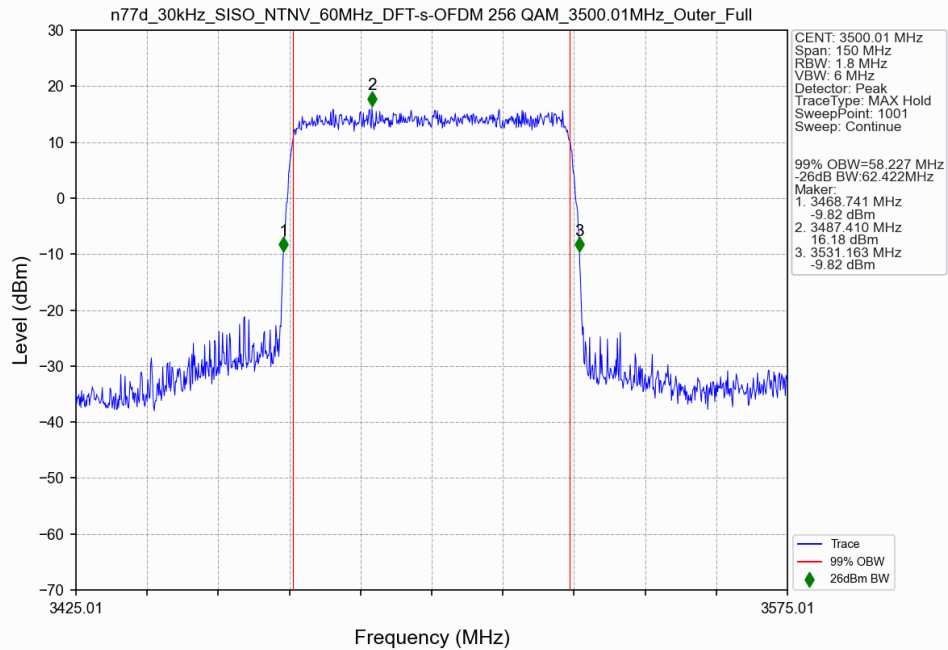
n77d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8



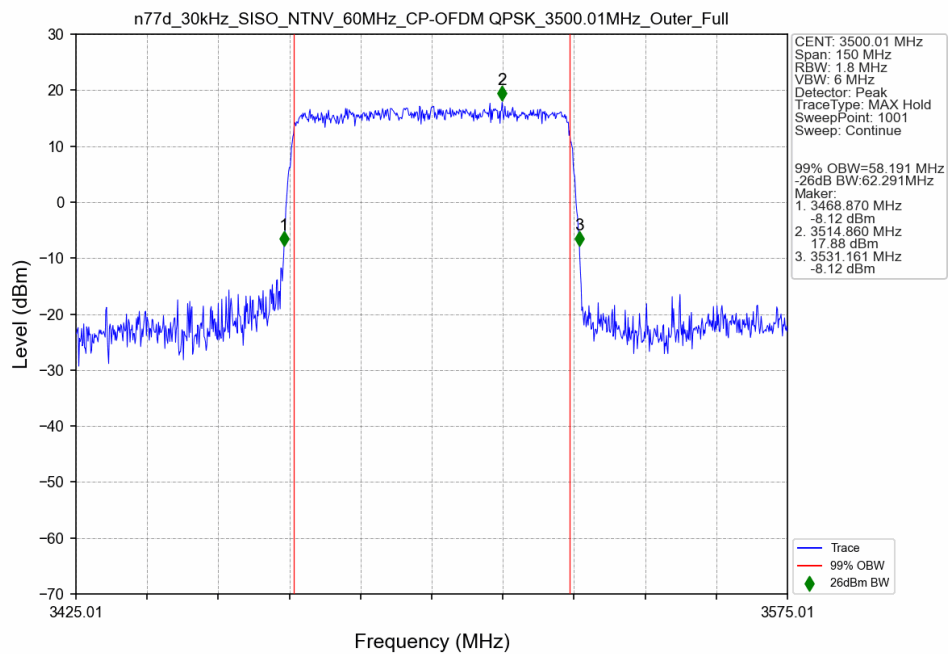
n77d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8



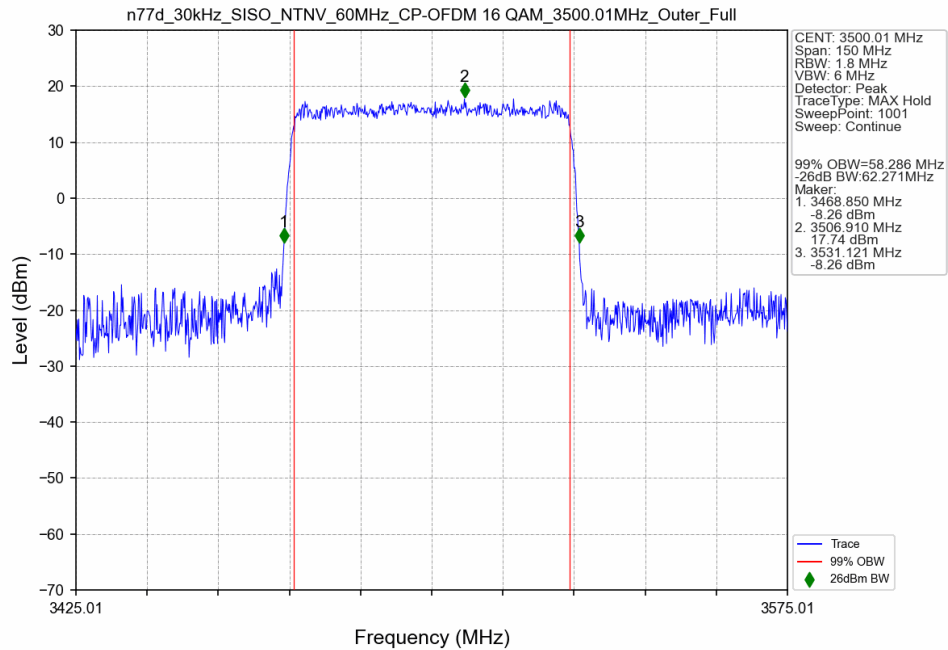
n77d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM_256_QAM_3500.01MHz_Outer_Full_Ant8



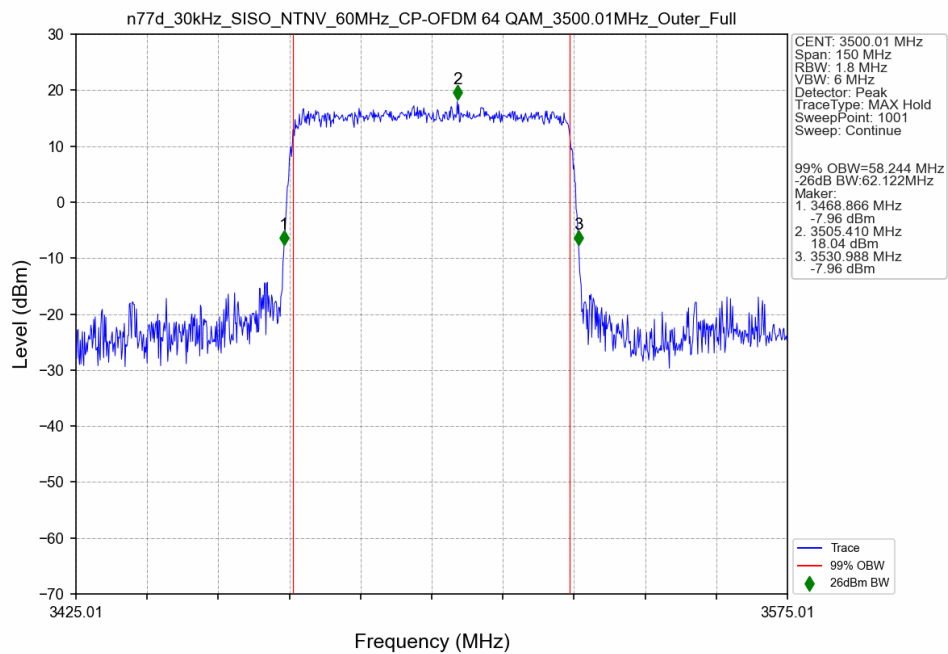
n77d_30kHz_SISO_NTNV_60MHz_CP-OFDM_QPSK_3500.01MHz_Outer_Full_Ant8

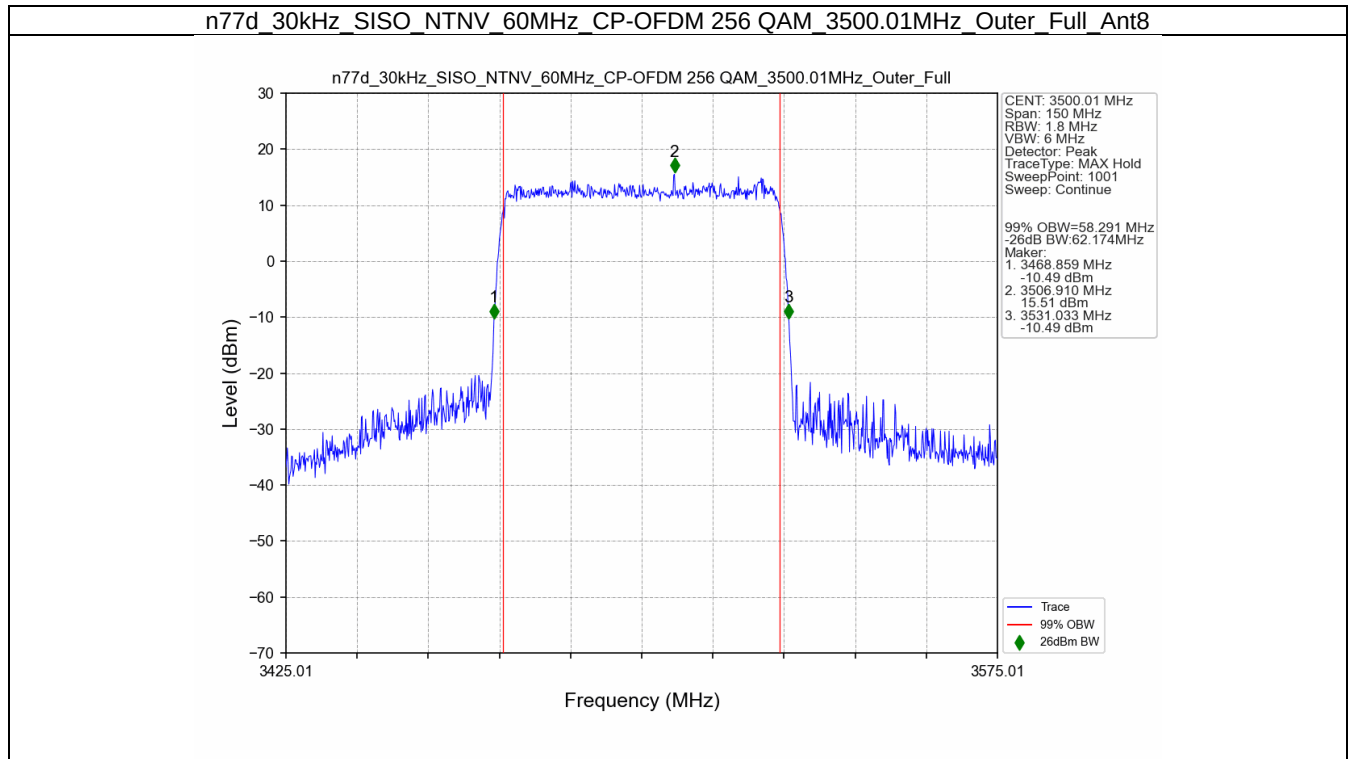


n77d_30kHz_SISO_NTNV_60MHz_CP-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8

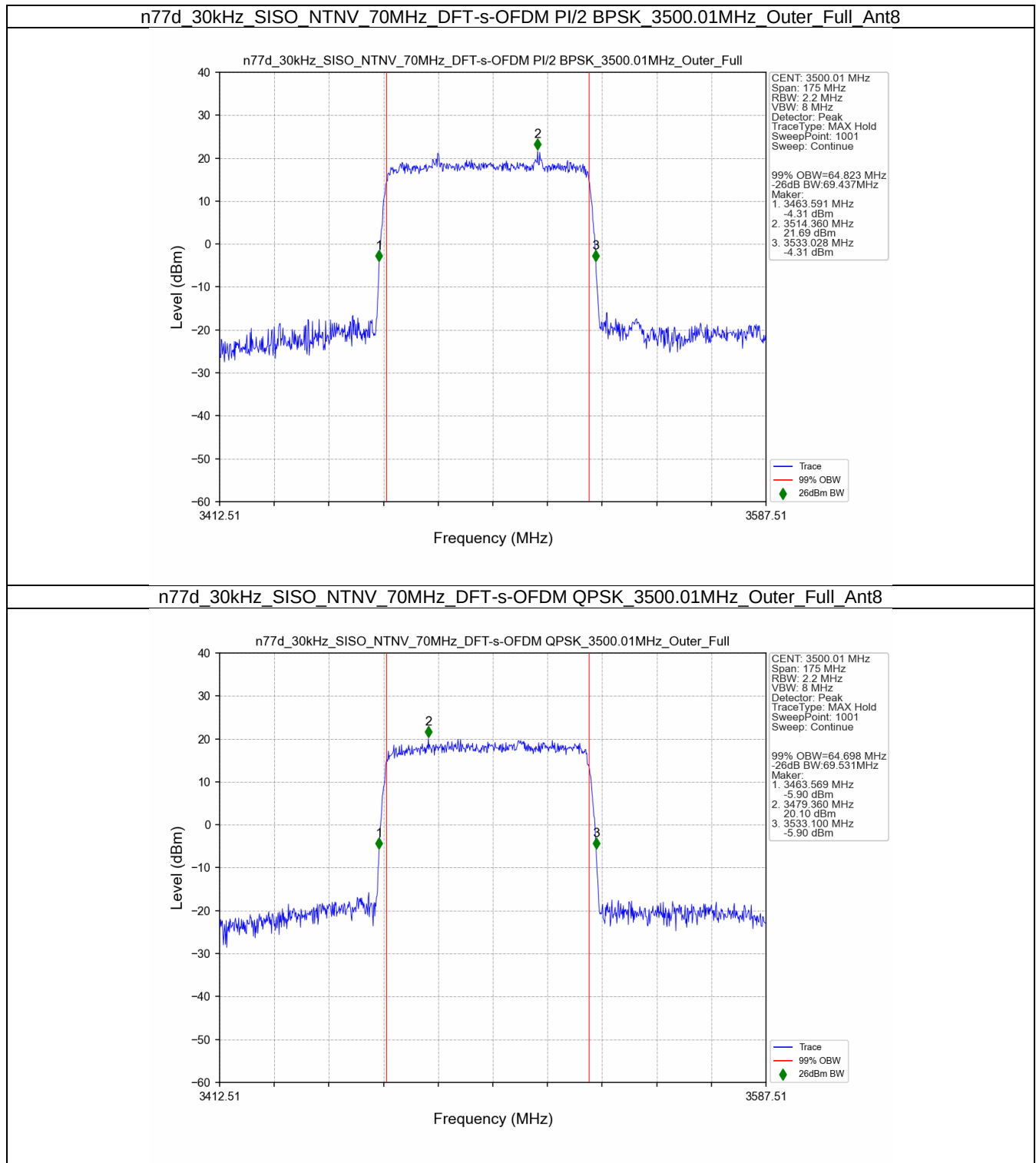


n77d_30kHz_SISO_NTNV_60MHz_CP-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8

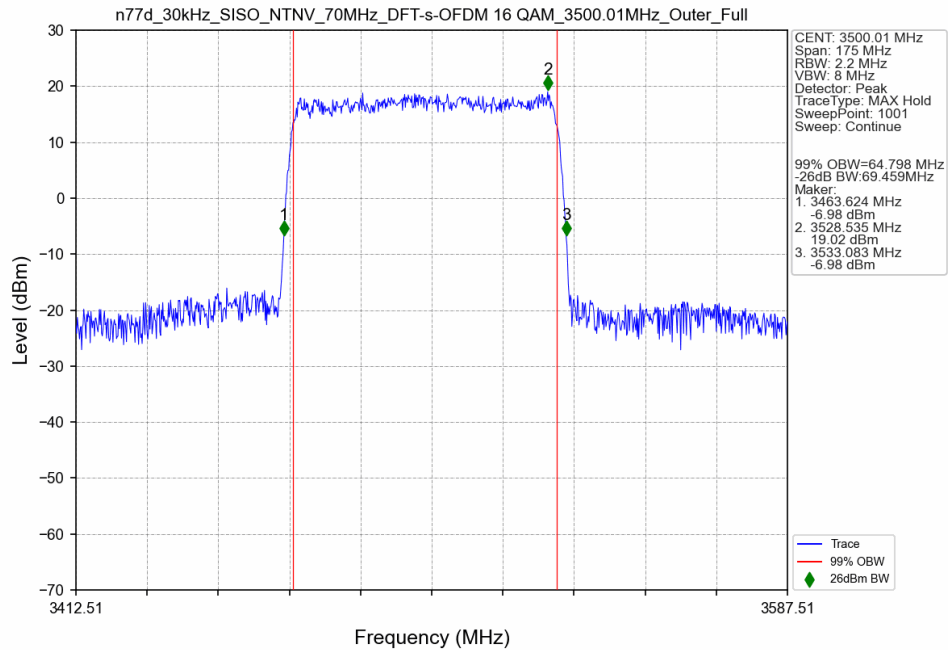




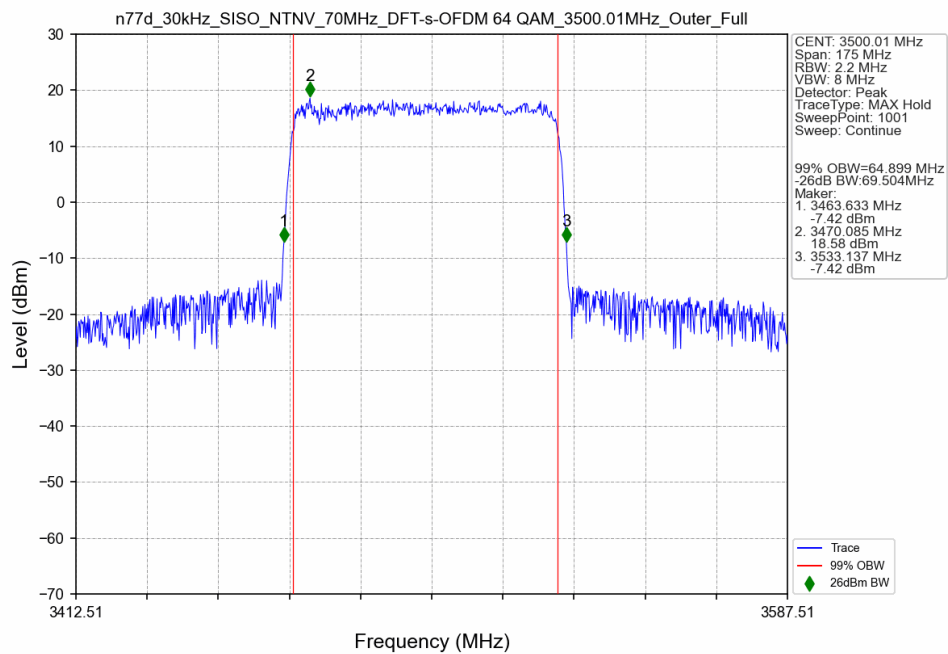
3.2.9 30_S_70M_NTNV



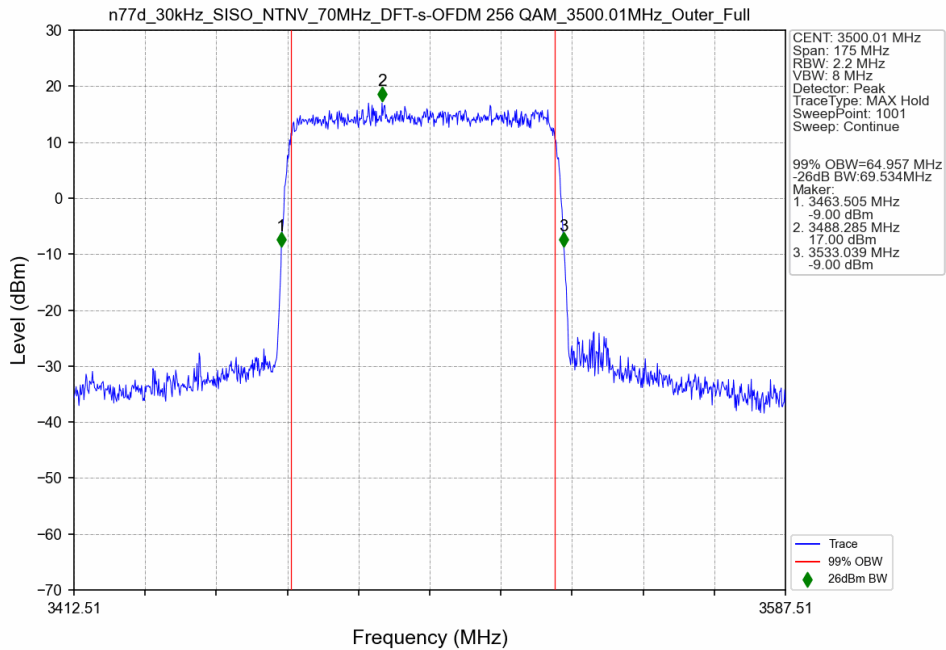
n77d_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8



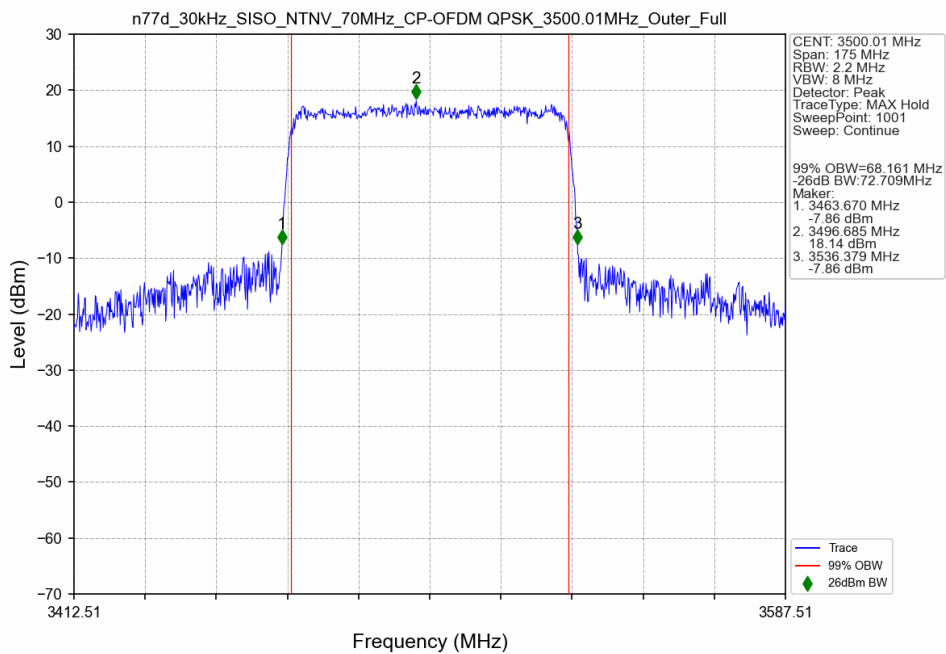
n77d_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8



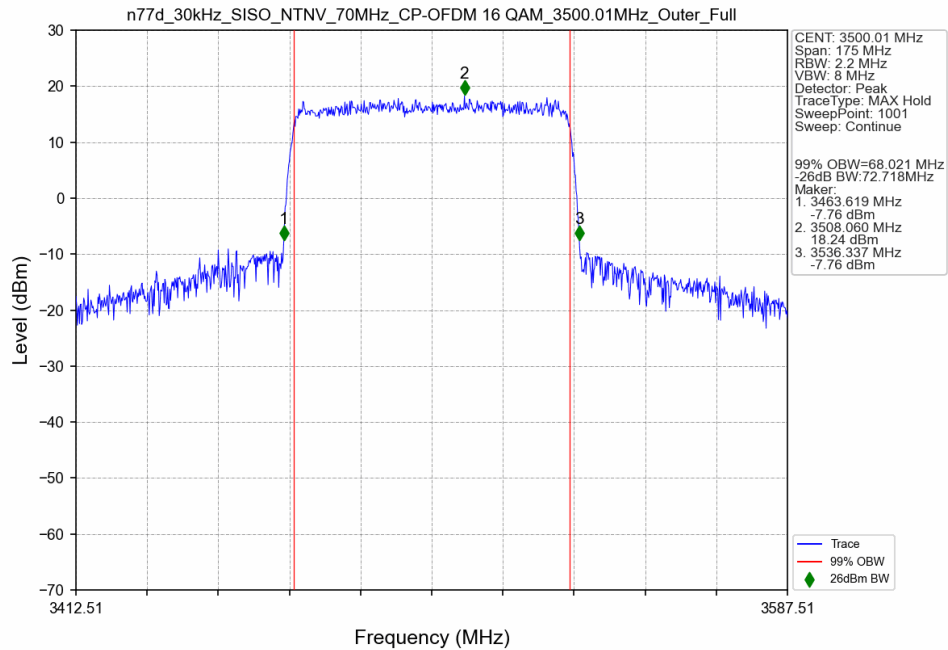
n77d_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM 256 QAM_3500.01MHz_Outer_Full_Ant8



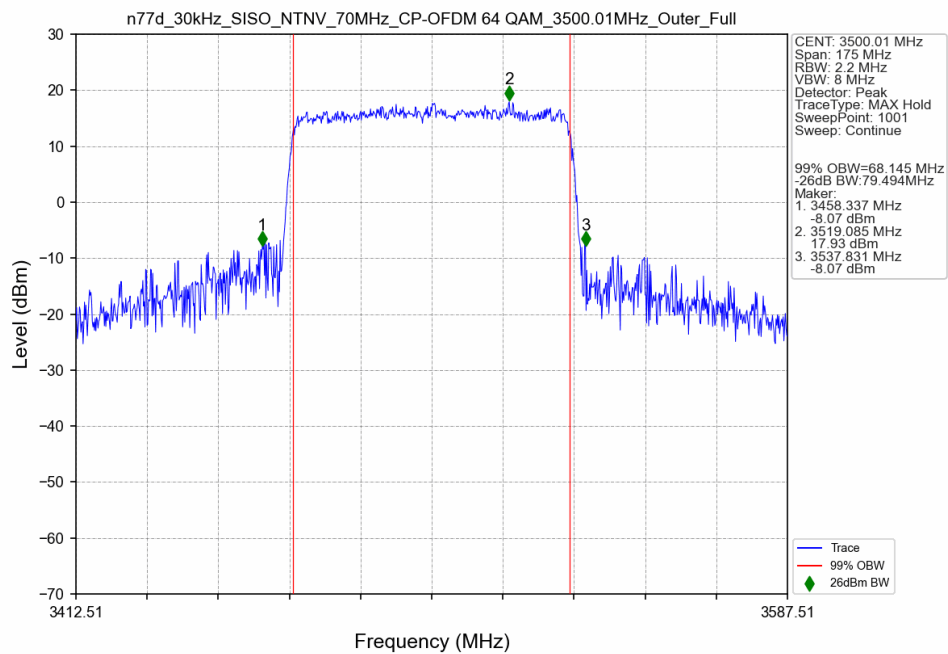
n77d_30kHz_SISO_NTNV_70MHz_CP-OFDM QPSK_3500.01MHz_Outer_Full_Ant8

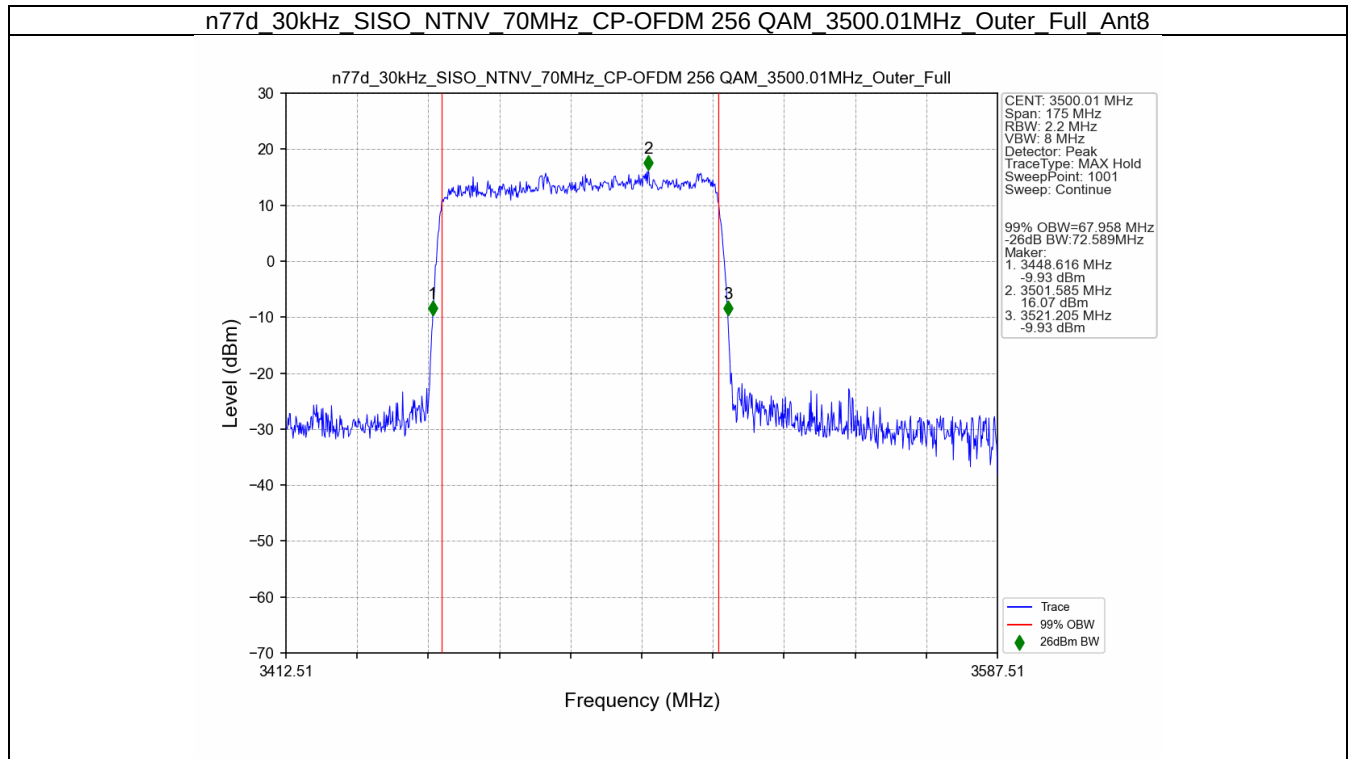


n77d_30kHz_SISO_NTNV_70MHz_CP-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8

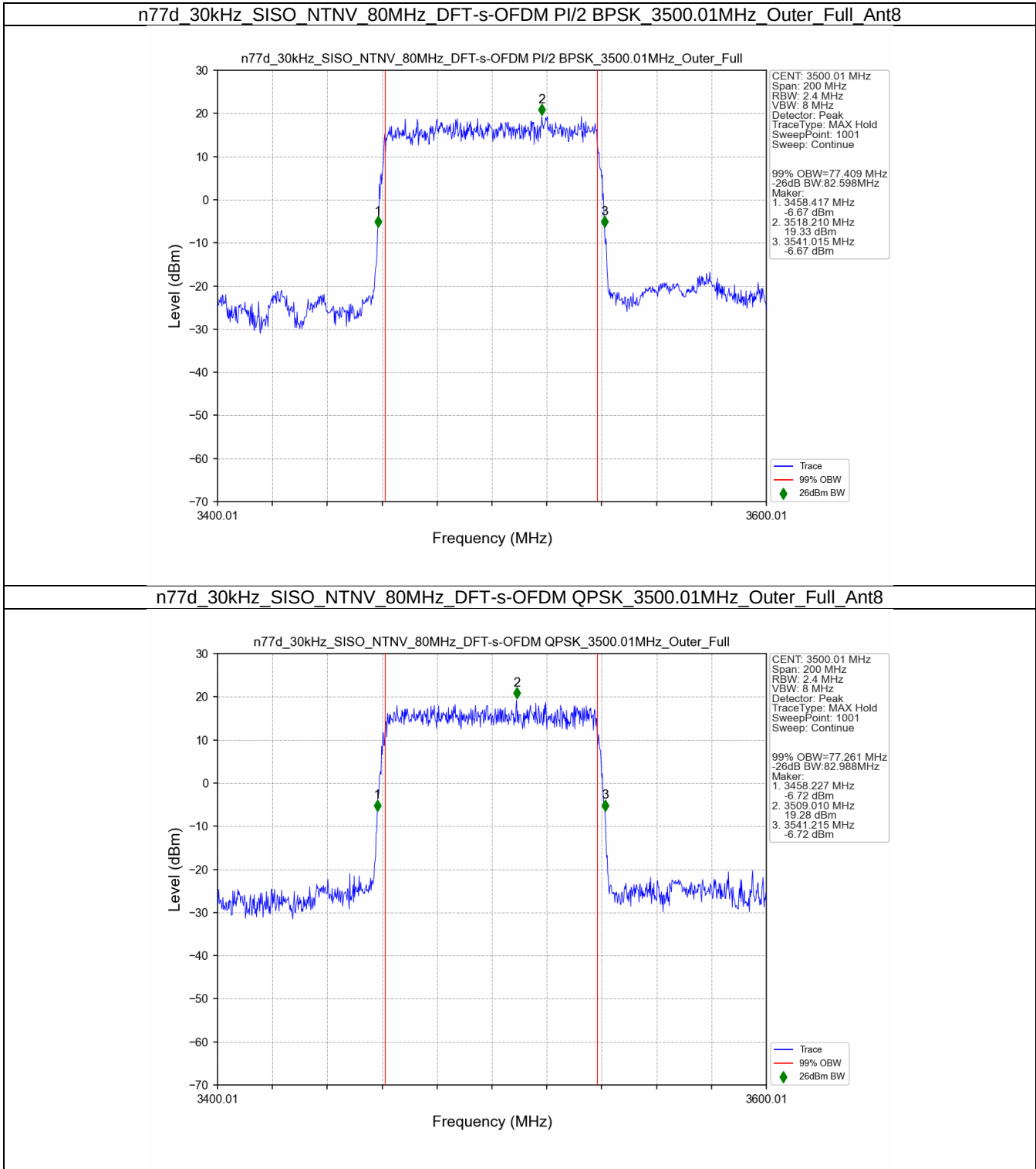


n77d_30kHz_SISO_NTNV_70MHz_CP-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8

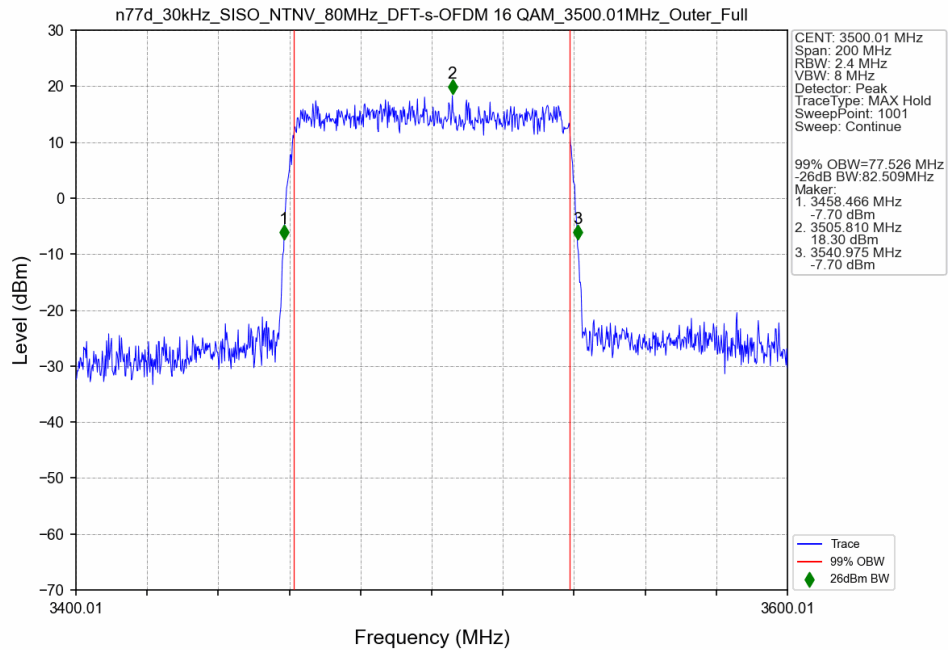




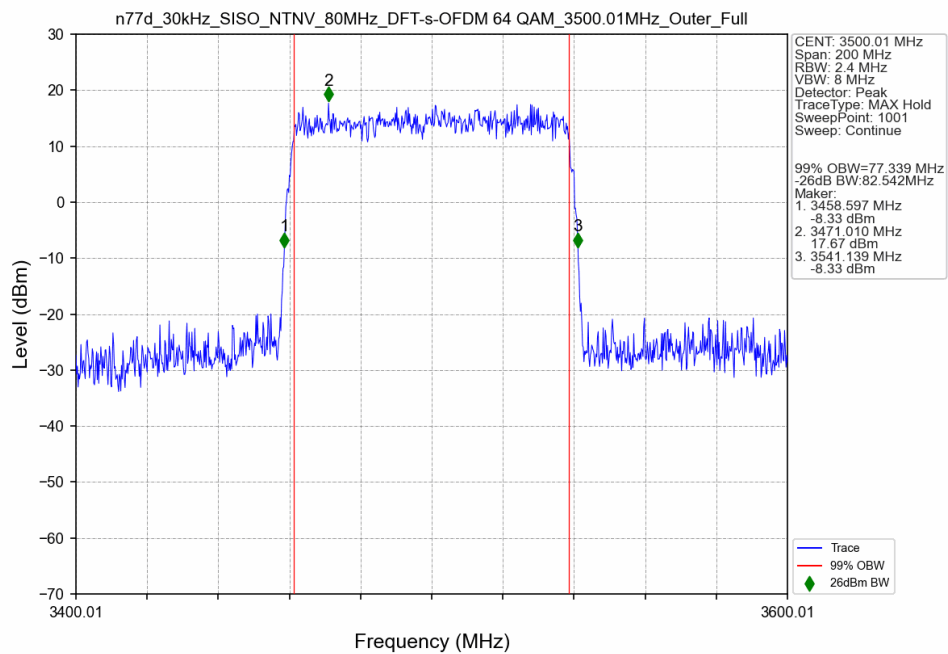
3.2.10 30_S_80M_NTNV



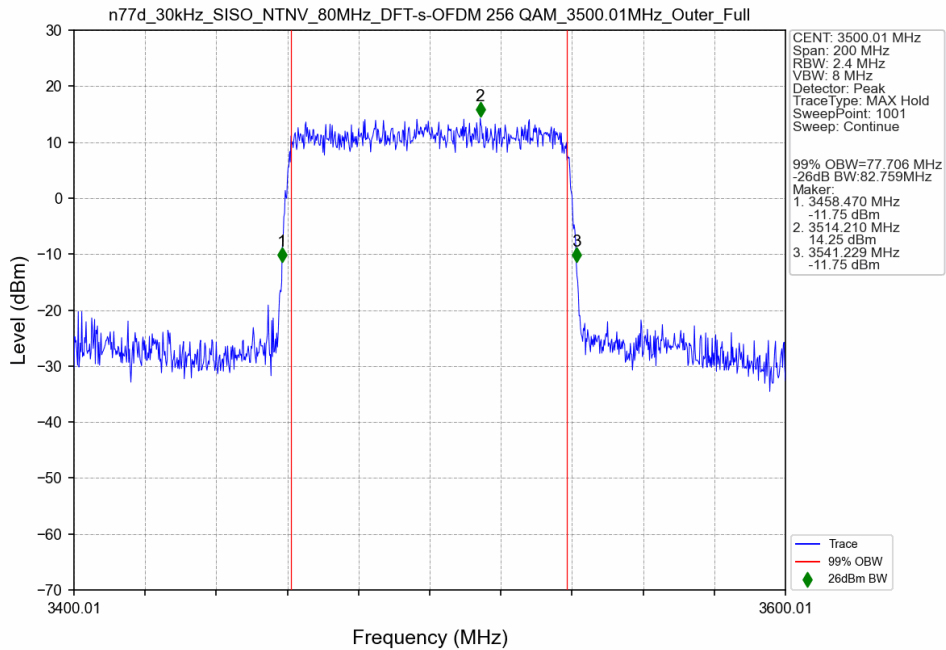
n77d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8



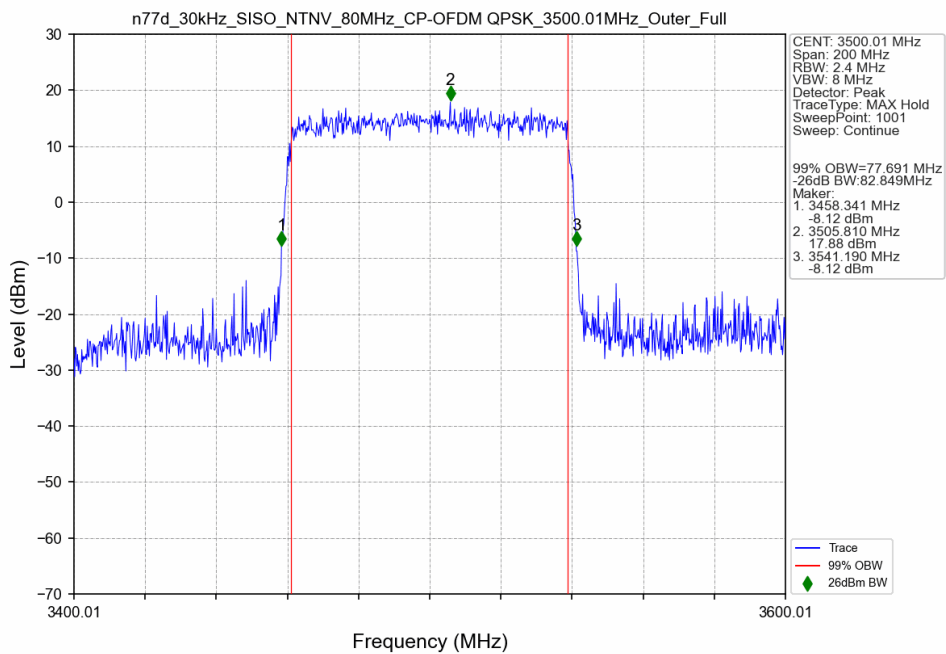
n77d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8

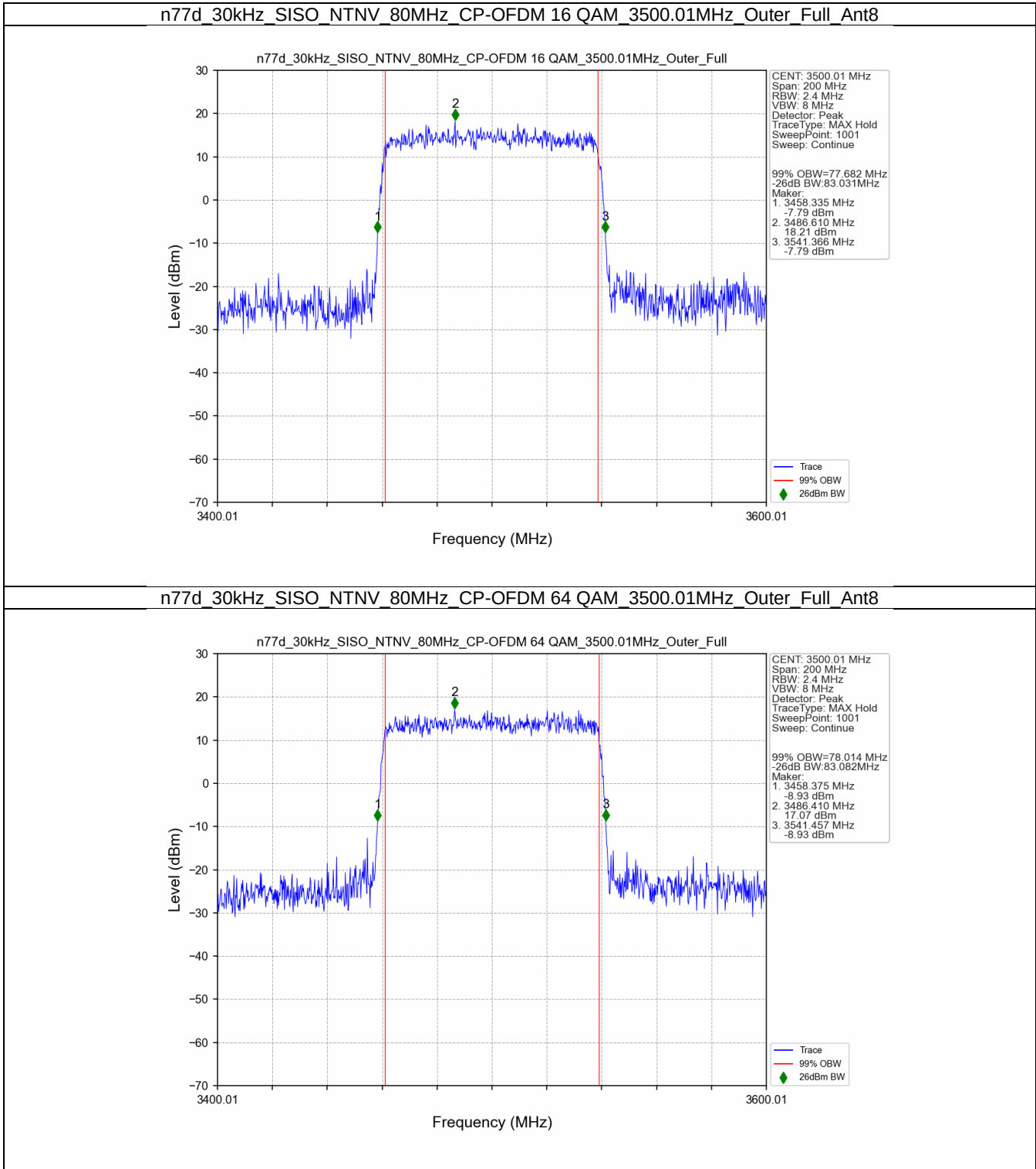


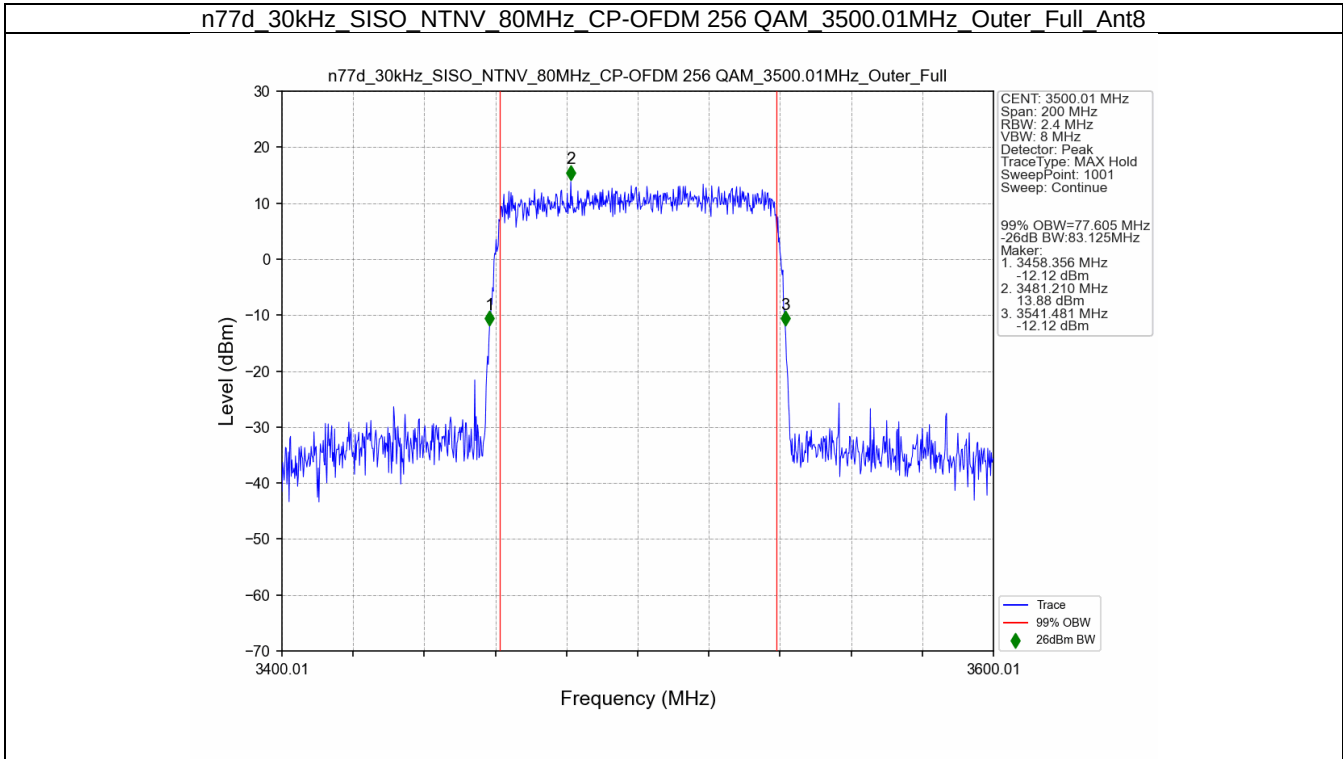
n77d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 256 QAM_3500.01MHz_Outer_Full_Ant8



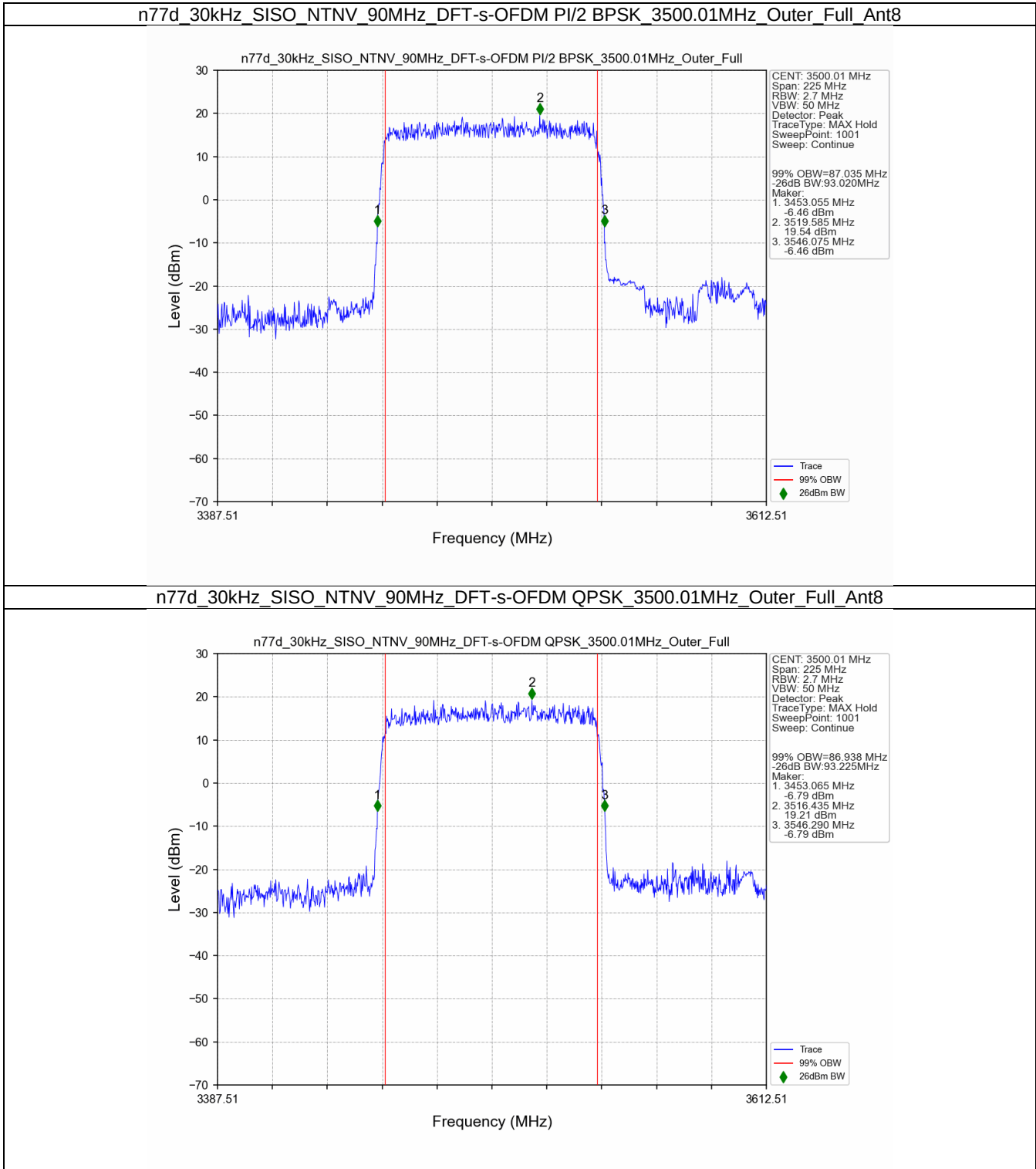
n77d_30kHz_SISO_NTNV_80MHz_CP-OFDM QPSK_3500.01MHz_Outer_Full_Ant8



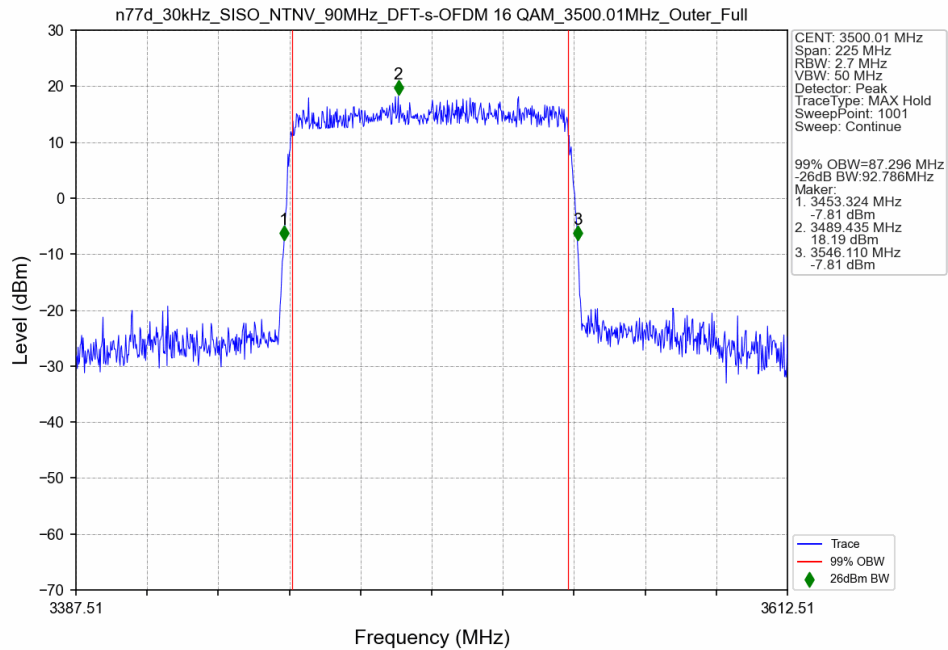




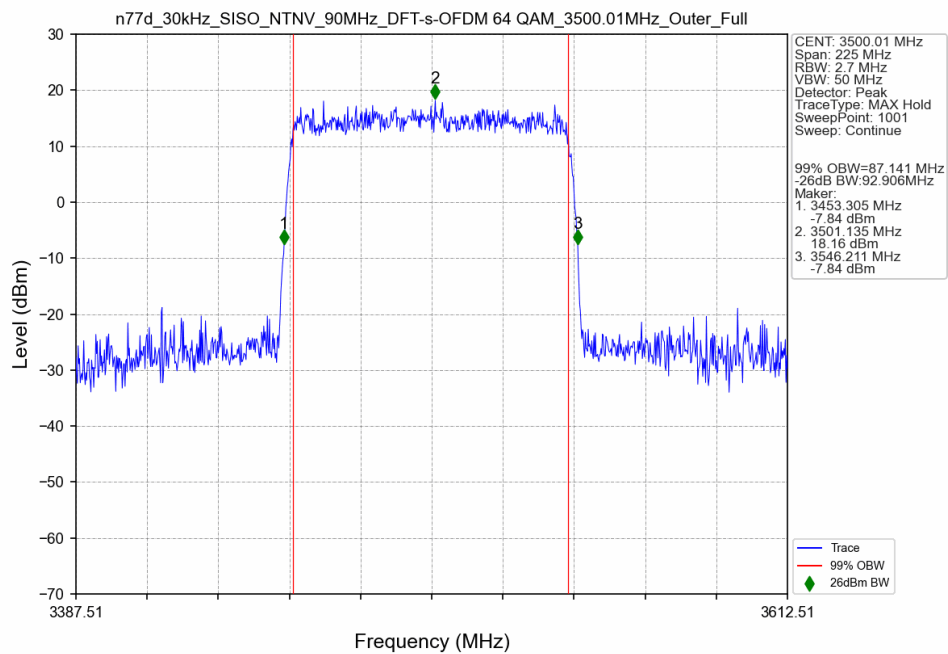
3.2.11 30_S_90M_NTNV



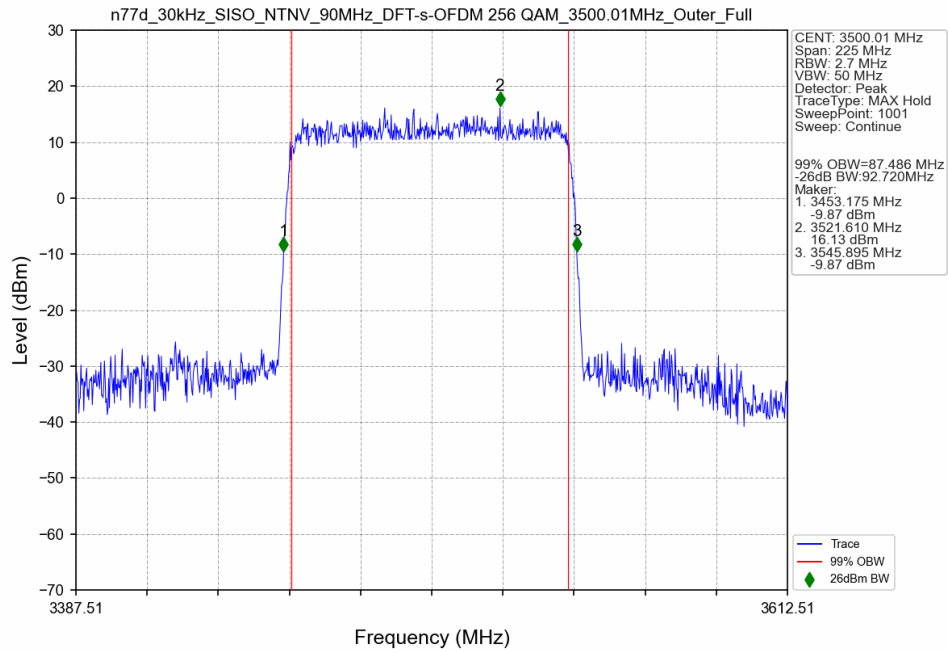
n77d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8



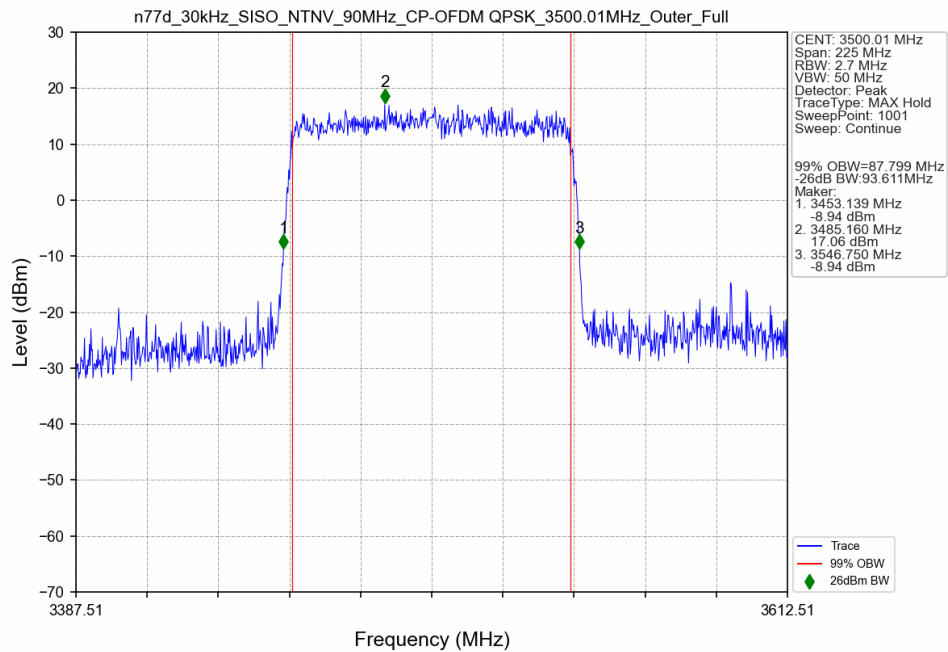
n77d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8



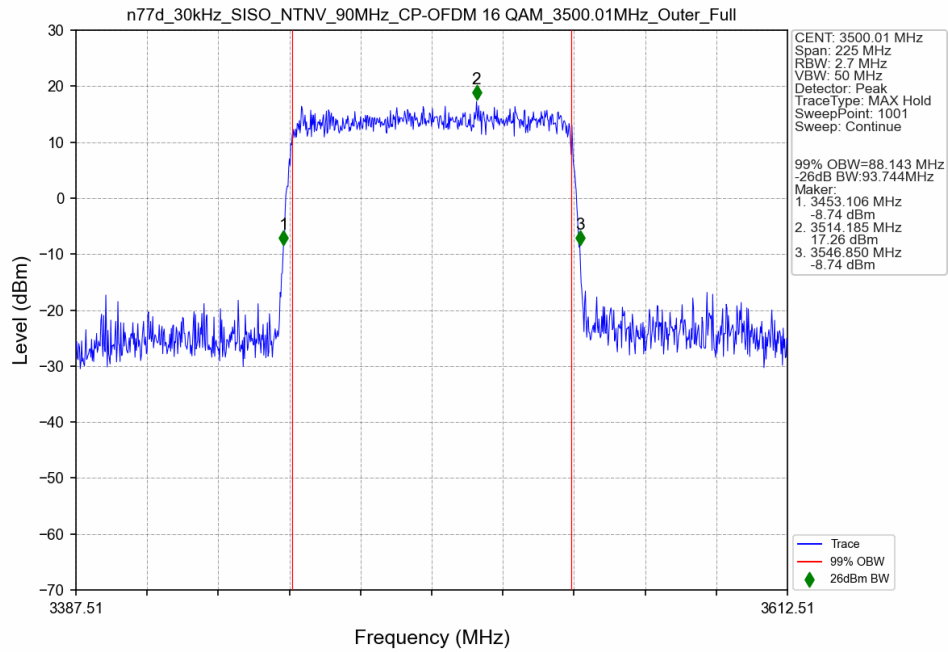
n77d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 256 QAM_3500.01MHz_Outer_Full_Ant8



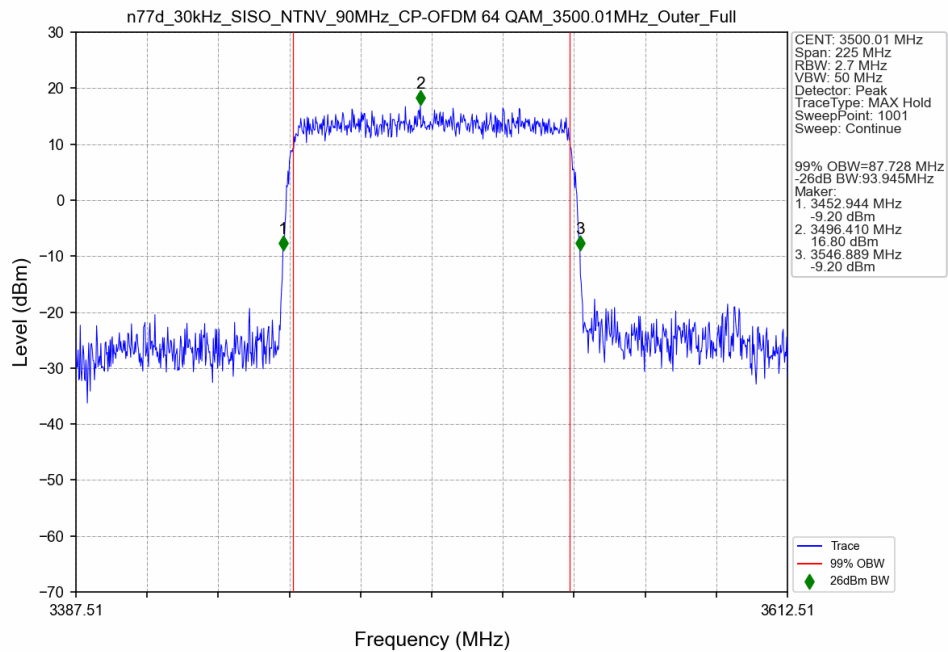
n77d_30kHz_SISO_NTNV_90MHz_CP-OFDM QPSK_3500.01MHz_Outer_Full_Ant8

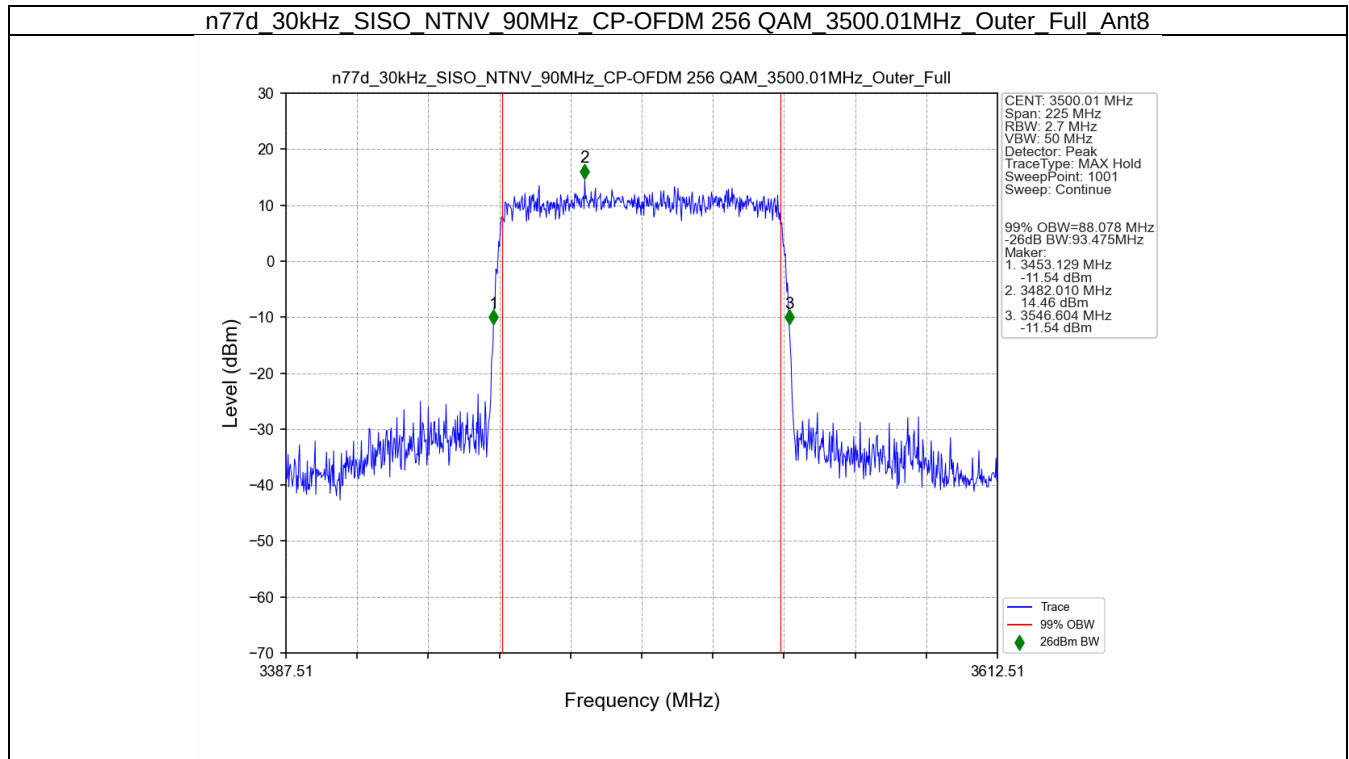


n77d_30kHz_SISO_NTNV_90MHz_CP-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8

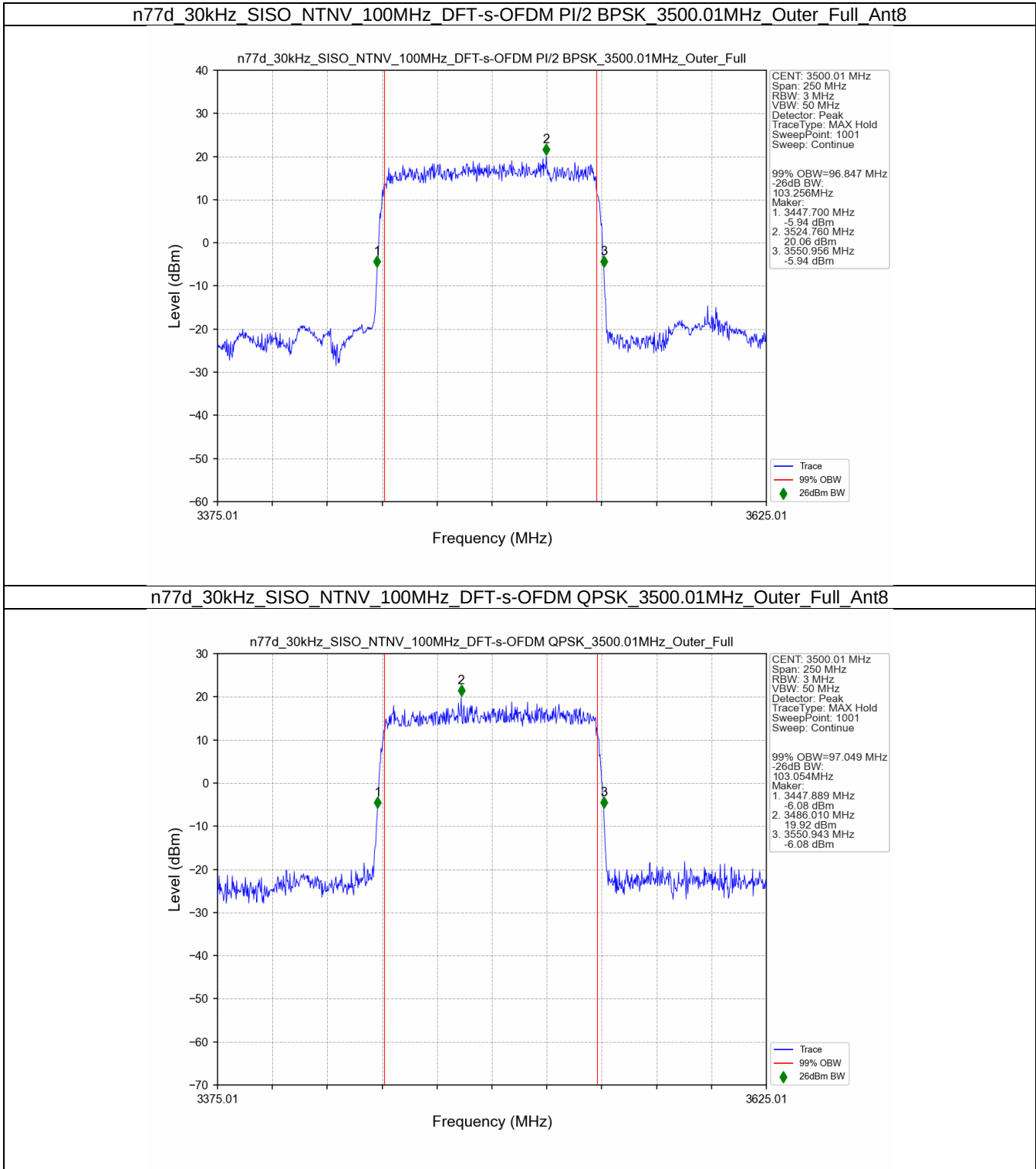


n77d_30kHz_SISO_NTNV_90MHz_CP-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8

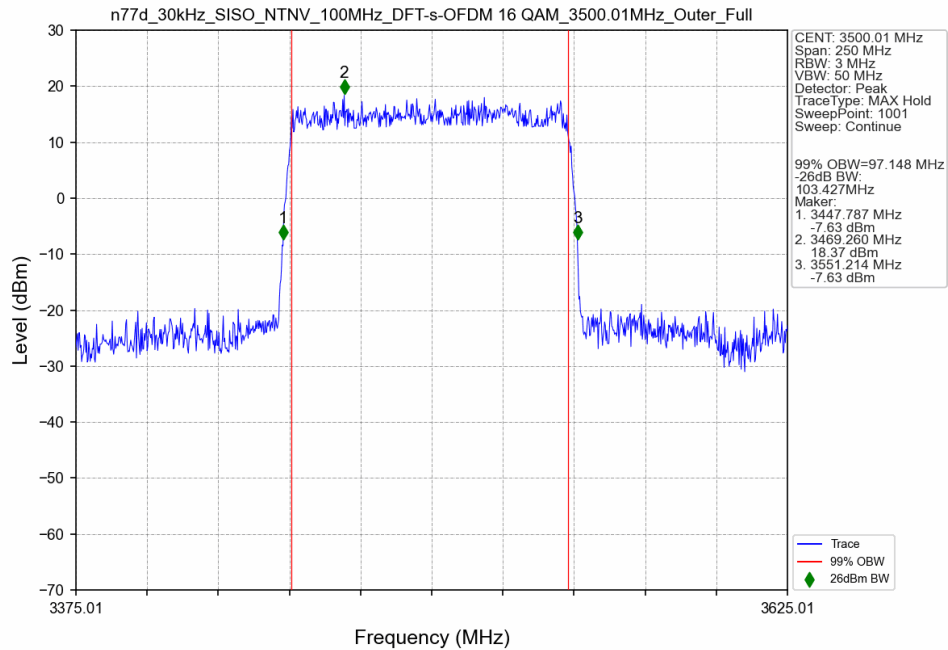




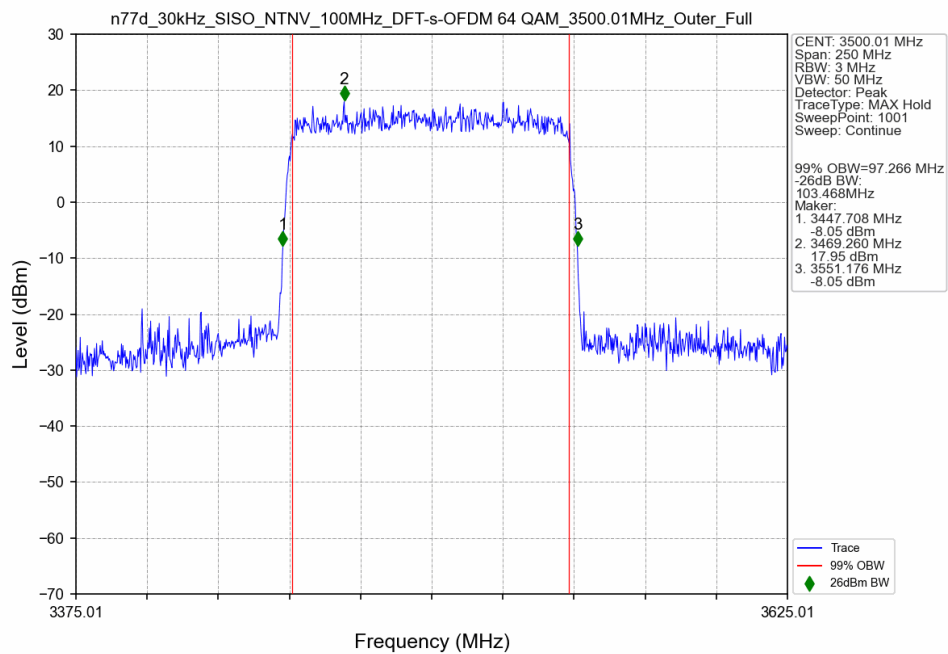
3.2.12 30_S_100M_NTNV

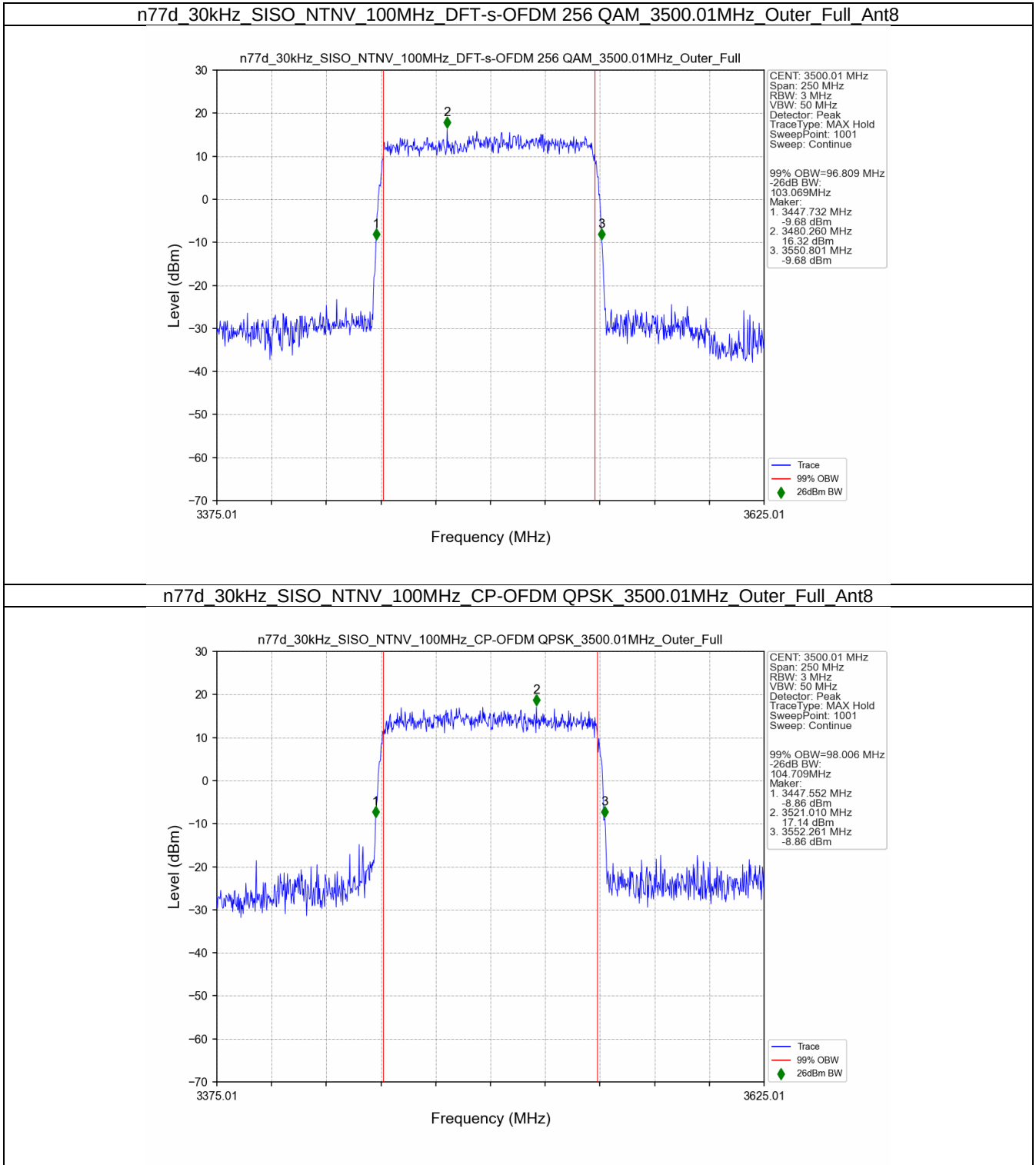


n77d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8

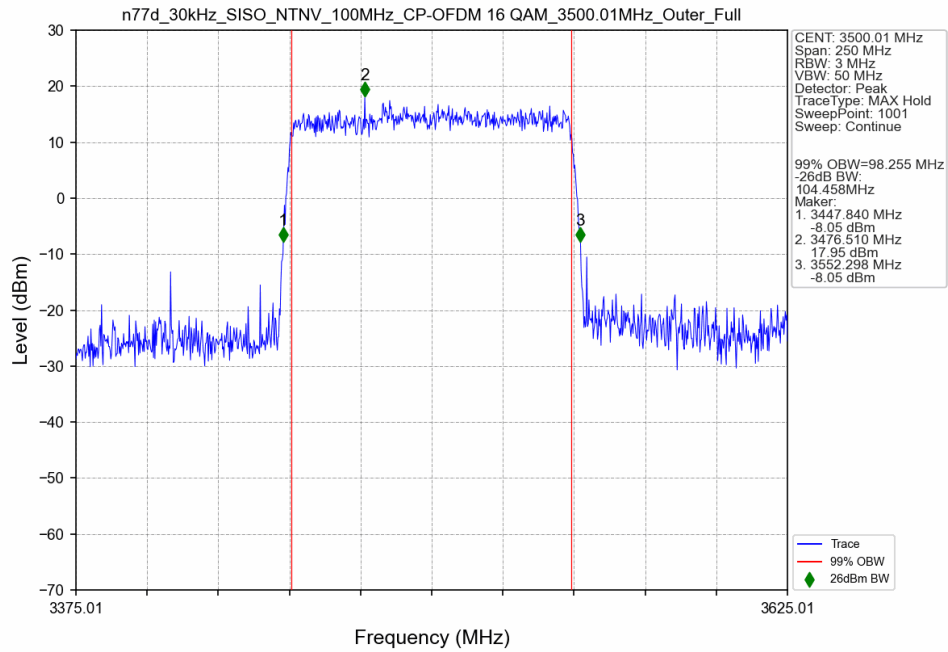


n77d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8

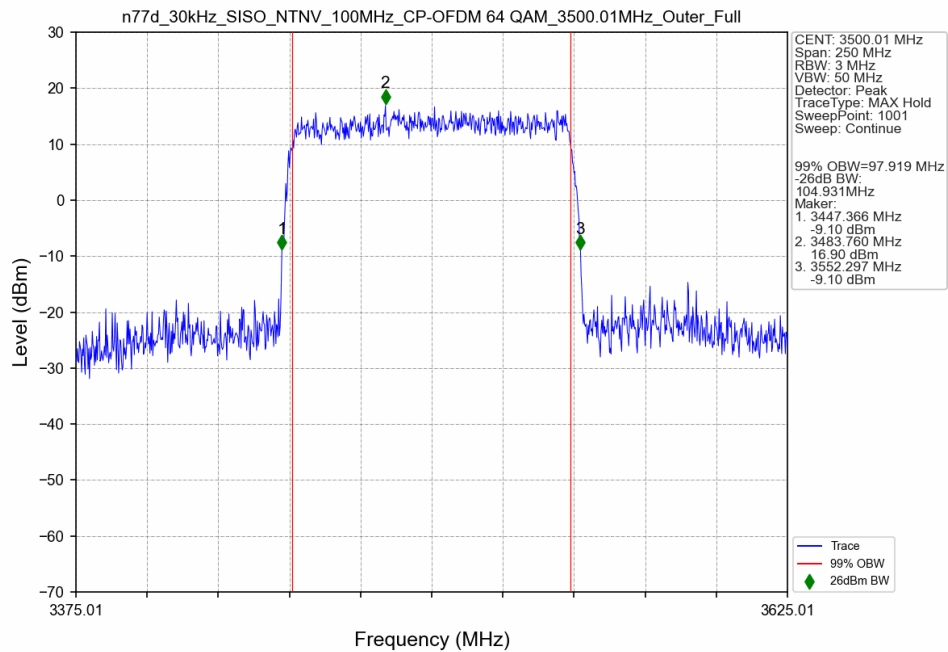


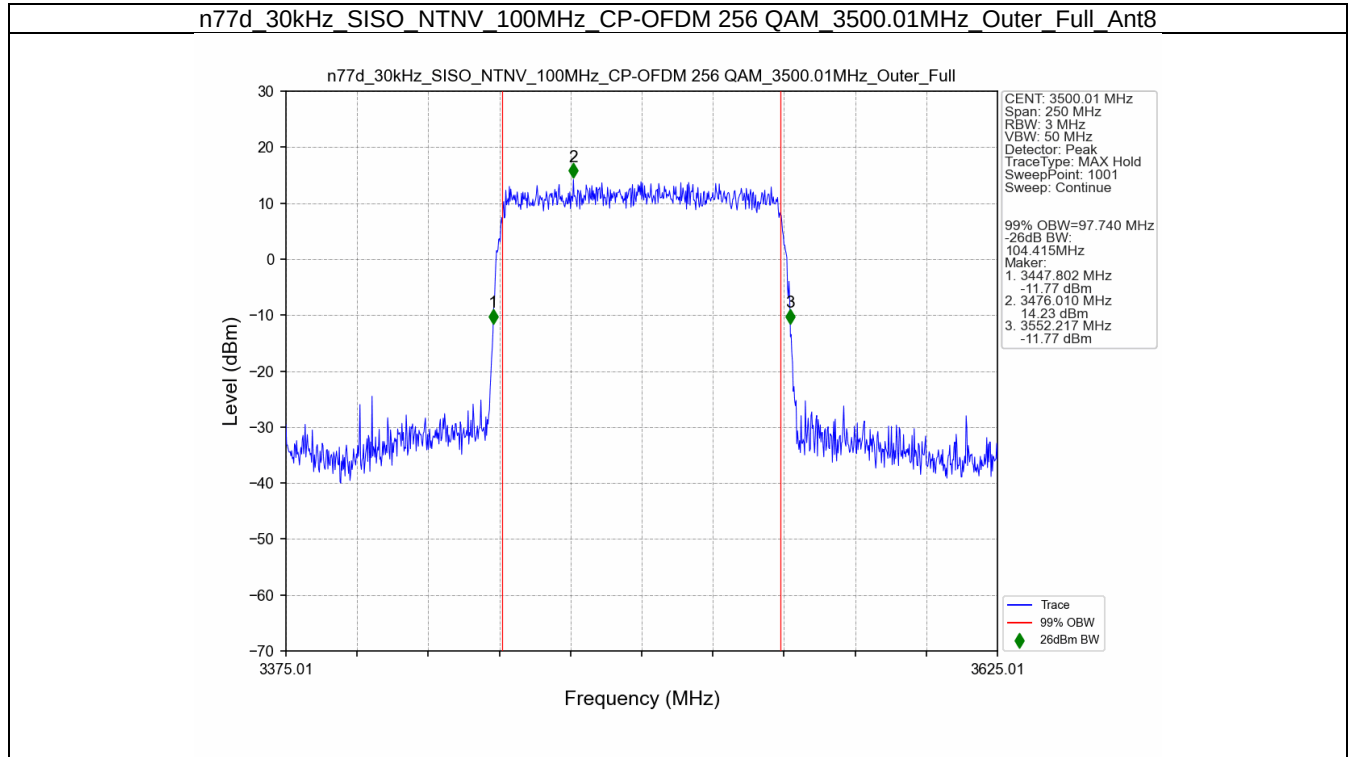


n77d_30kHz_SISO_NTNV_100MHz_CP-OFDM 16 QAM_3500.01MHz_Outer_Full_Ant8



n77d_30kHz_SISO_NTNV_100MHz_CP-OFDM 64 QAM_3500.01MHz_Outer_Full_Ant8





4. Peak-Average Ratio

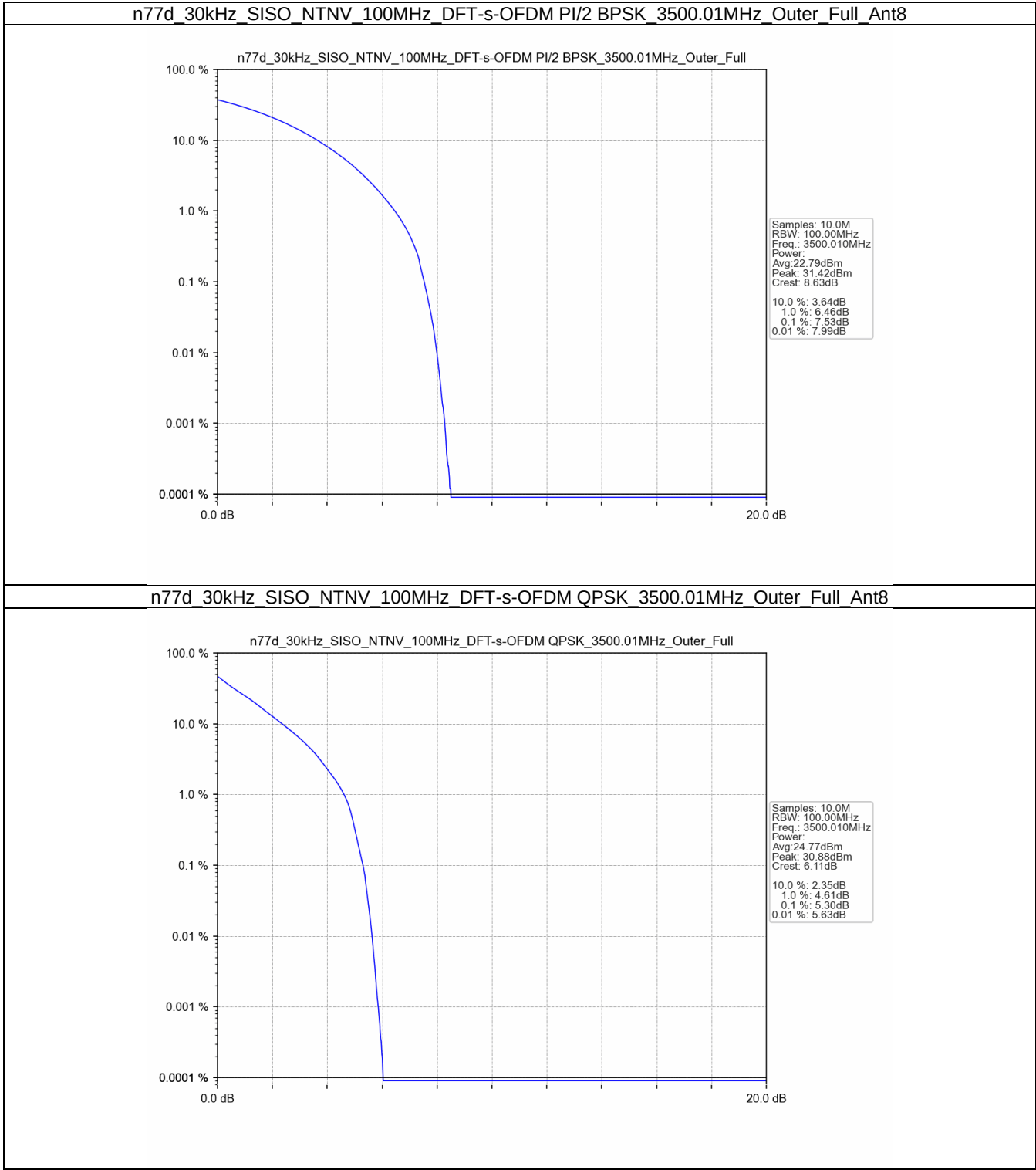
4.1 Test Result

4.1.1 30_S_100M_NTNV

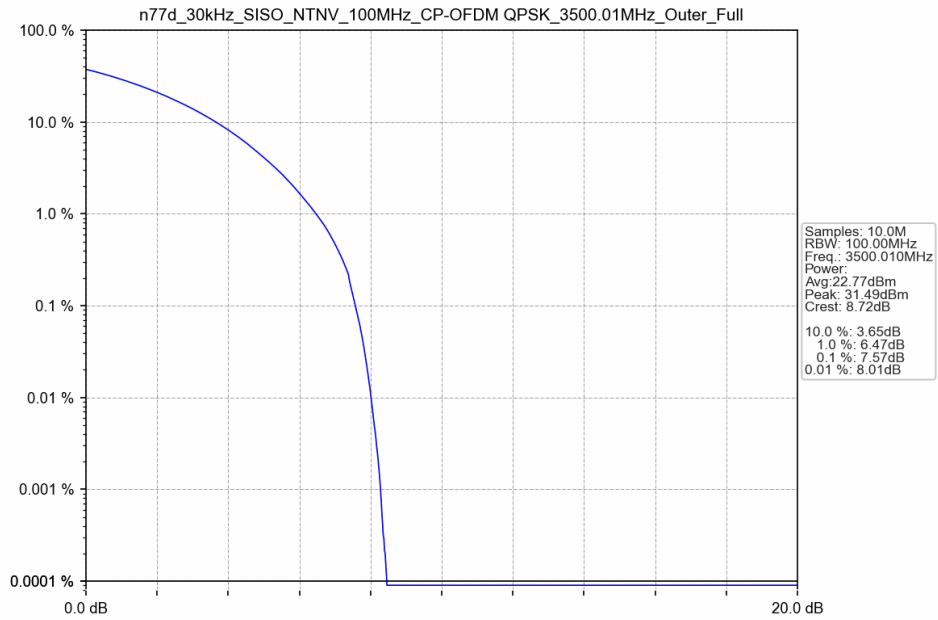
5G NR n77d SCS=30kHz SISO 100MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Peak-Average Ratio (dB)				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3500.01	Outer_Full	7.53	/	/	<=13	Pass
DFT-s-OFDM QPSK	3500.01	Outer_Full	5.30	/	/	<=13	Pass
CP-OFDM QPSK	3500.01	Outer_Full	7.57	/	/	<=13	Pass

4.2 Test Graph

4.2.1 30_S_100M_NTNV



n77d_30kHz_SISO_NTNV_100MHz_CP-OFDM QPSK_3500.01MHz_Outer_Full_Ant8



5. Spurious Emission

5.1 Test Result

5.1.1 30_S_10M_NTNV

5G NR n77d SCS=30kHz SISO 10MHz NTNv							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3455.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
	3544.98	Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	3455.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
	3544.98	Outer_Full	Refer To Test Graph				Pass
CP-OFDM QPSK	3455.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
	3544.98	Outer_Full	Refer To Test Graph				Pass

5.1.2 30_S_50M_NTNV

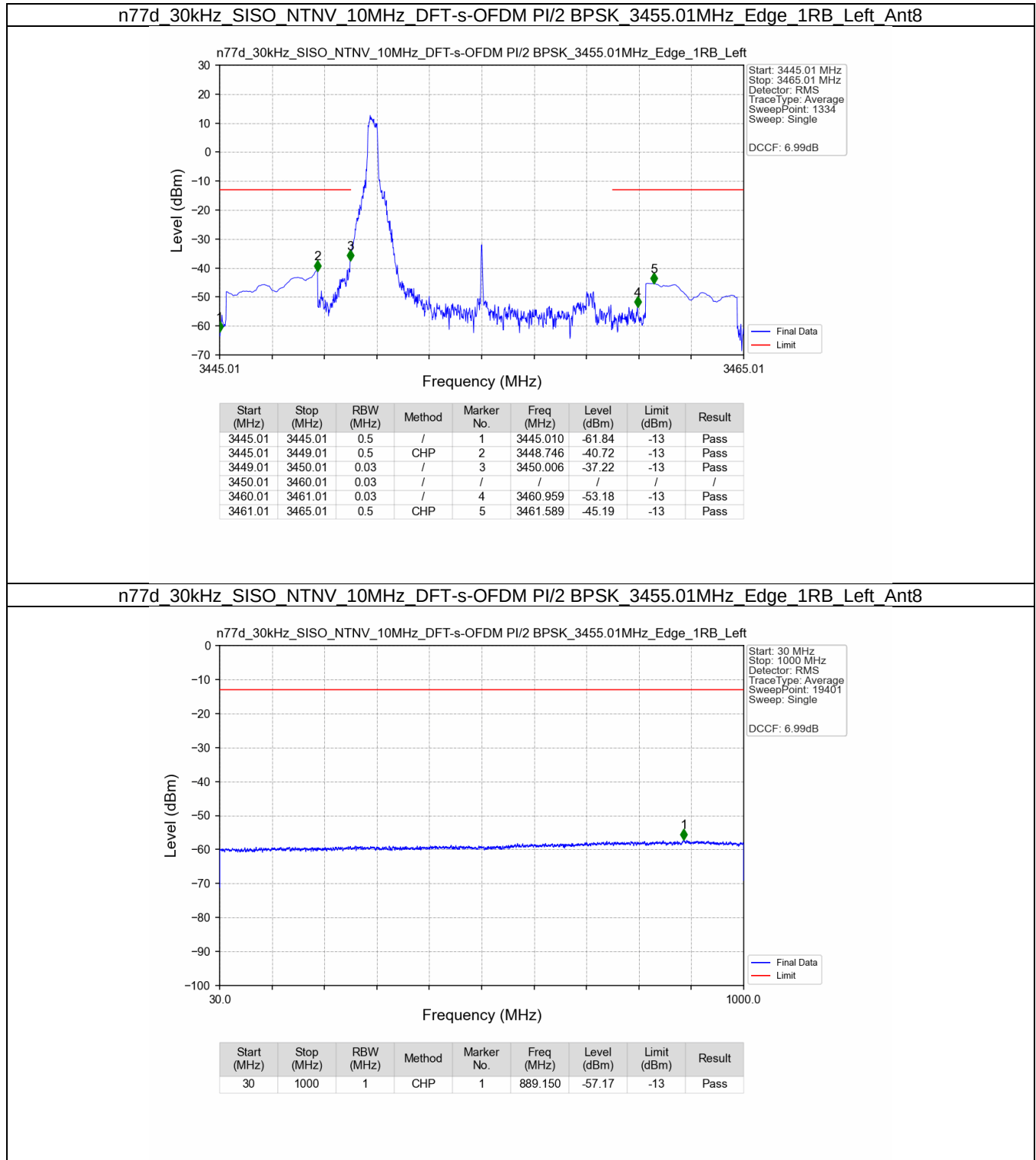
5G NR n77d SCS=30kHz SISO 50MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3475.02	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		3525	Edge_1RB_Right	Refer To Test Graph			
			Outer_Full	Refer To Test Graph			
	DFT-s-OFDM QPSK	3475.02	Edge_1RB_Left	Refer To Test Graph			
Outer_Full			Refer To Test Graph				Pass
3500.01		Edge_1RB_Left	Refer To Test Graph				Pass
		3525	Edge_1RB_Right	Refer To Test Graph			
			Outer_Full	Refer To Test Graph			
CP-OFDM QPSK		3475.02	Edge_1RB_Left	Refer To Test Graph			
	Outer_Full		Refer To Test Graph				Pass
	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		3525	Edge_1RB_Right	Refer To Test Graph			
			Outer_Full	Refer To Test Graph			

5.1.3 30_S_100M_NTNV

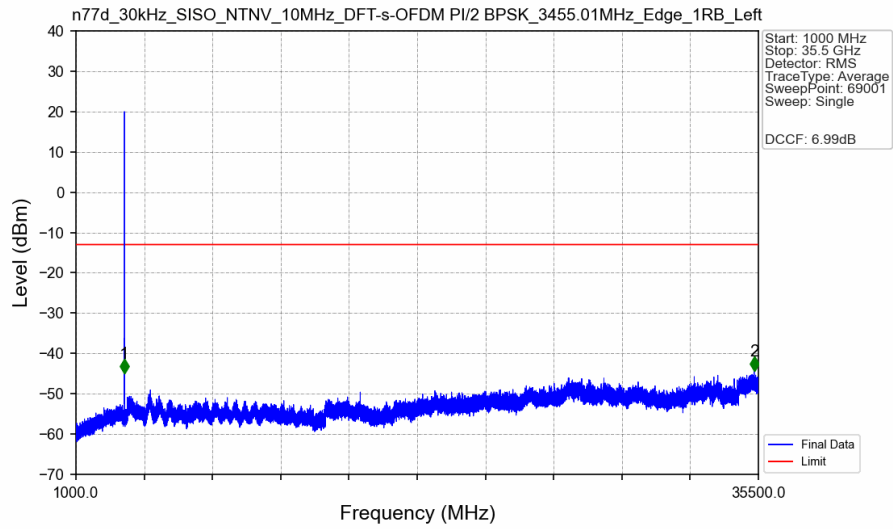
5G NR n77d SCS=30kHz SISO 100MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
CP-OFDM QPSK	3500.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass

5.2 Test Graph

5.2.1 30_S_10M_NTNV

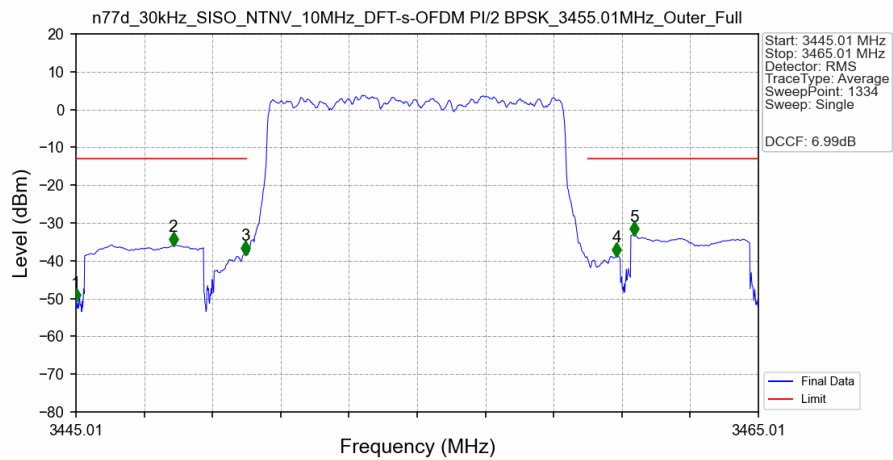


n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3455.01MHz_Edge_1RB_Left_Ant8



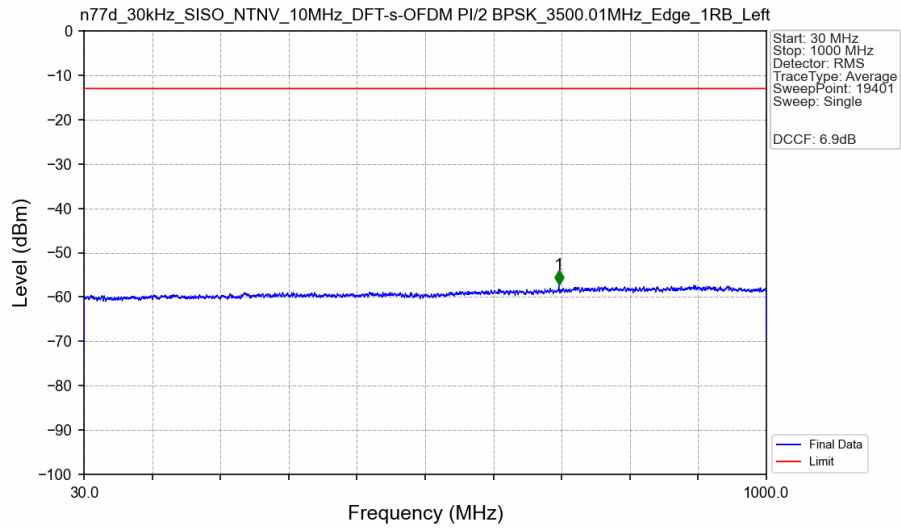
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	3445.01	1	/	1	3443.500	-44.84	-13	Pass
3445.01	3465.01	1	/	/	/	/	/	/
3465.01	35500	1	/	2	35287.000	-44.26	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3455.01MHz_Outer_Full_Ant8



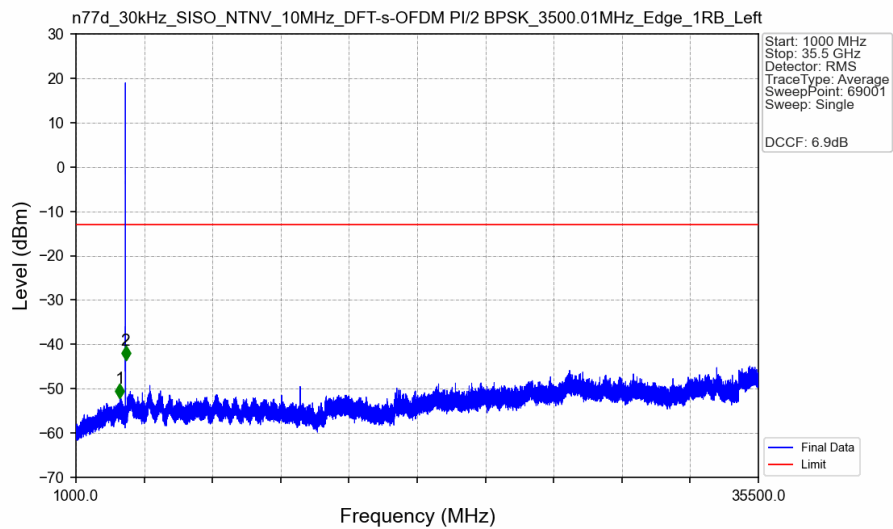
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3445.01	3445.01	0.5	/	1	3445.010	-50.58	-13	Pass
3445.01	3449.01	0.5	CHP	2	3447.861	-35.79	-13	Pass
3449.01	3450.01	0.09657	CHP	3	3449.976	-38.14	-13	Pass
3450.01	3460.01	0.09657	CHP	/	/	/	/	/
3460.01	3461.01	0.09657	CHP	4	3460.854	-38.57	-13	Pass
3461.01	3465.01	0.5	CHP	5	3461.364	-33.14	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3500.01MHz_Edge_1RB_Left_Ant8



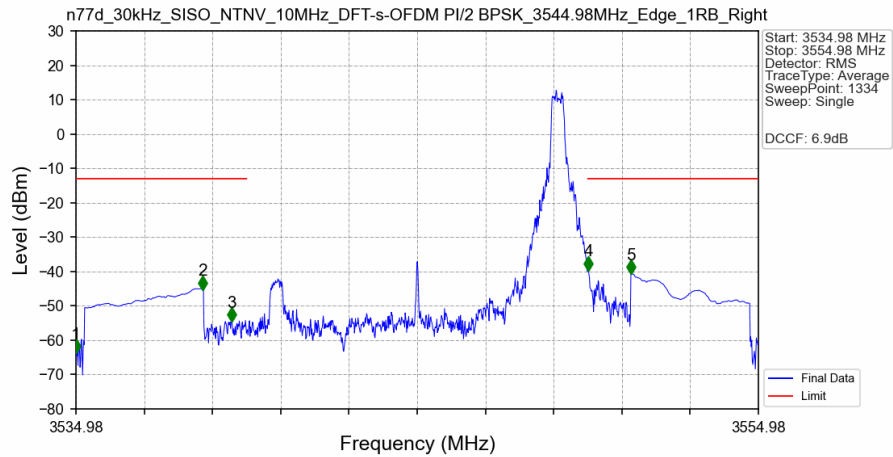
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	705.050	-57.19	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3500.01MHz_Edge_1RB_Left_Ant8



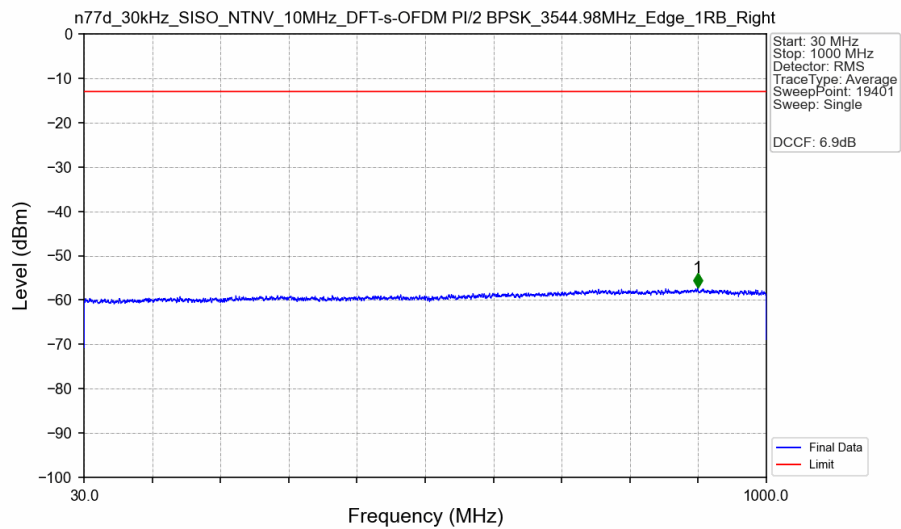
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	3490.01	1	/	1	3220.000	-52.14	-13	Pass
3490.01	3510.01	1	/	/	/	/	/	/
3510.01	35500	1	/	2	3510.500	-43.54	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3544.98MHz_Edge_1RB_Right_Ant8



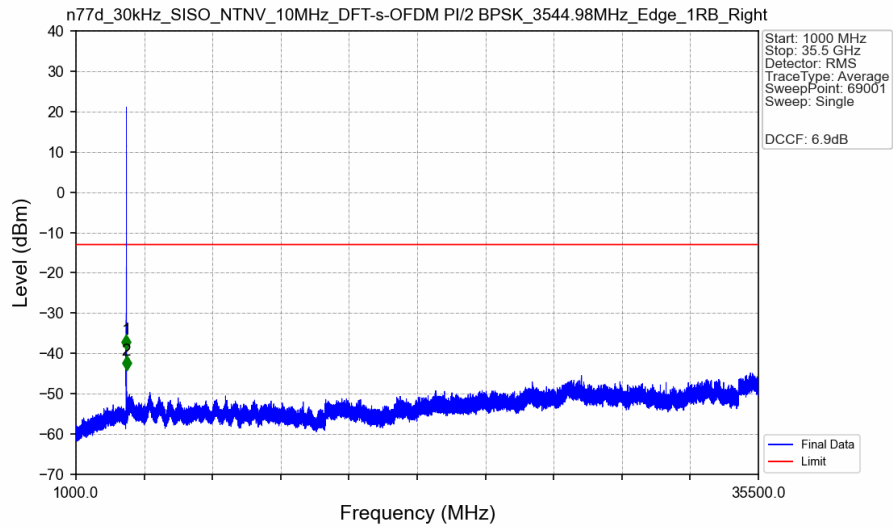
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3534.98	3534.98	0.5	/	1	3534.980	-63.40	-13	Pass
3534.98	3538.98	0.5	CHP	2	3538.701	-44.96	-13	Pass
3538.98	3539.98	0.03	/	3	3539.541	-54.21	-13	Pass
3539.98	3549.98	0.03	/	/	/	/	/	/
3549.98	3550.98	0.03	/	4	3549.999	-39.35	-13	Pass
3550.98	3554.98	0.5	CHP	5	3551.244	-40.35	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3544.98MHz_Edge_1RB_Right_Ant8



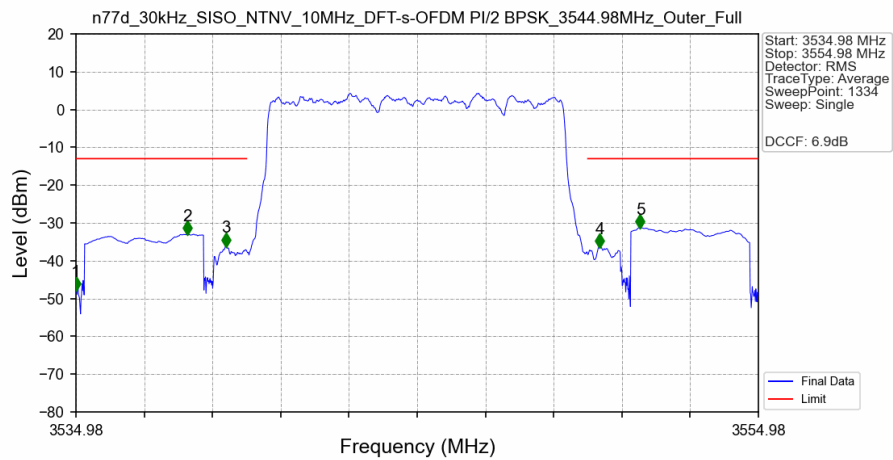
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	902.500	-57.19	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3544.98MHz_Edge_1RB_Right_Ant8



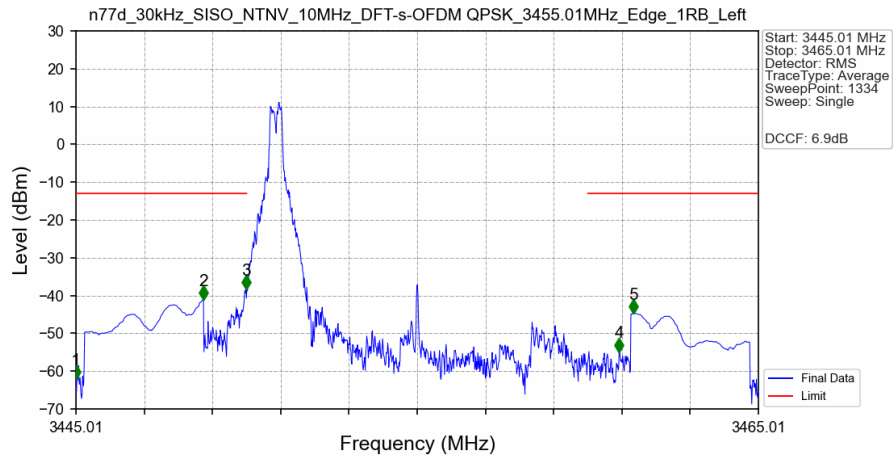
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	3534.98	1	/	1	3534.500	-38.80	-13	Pass
3534.98	3554.98	1	/	/	/	/	/	/
3554.98	35500	1	/	2	3555.500	-44.00	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3544.98MHz_Outer_Full_Ant8



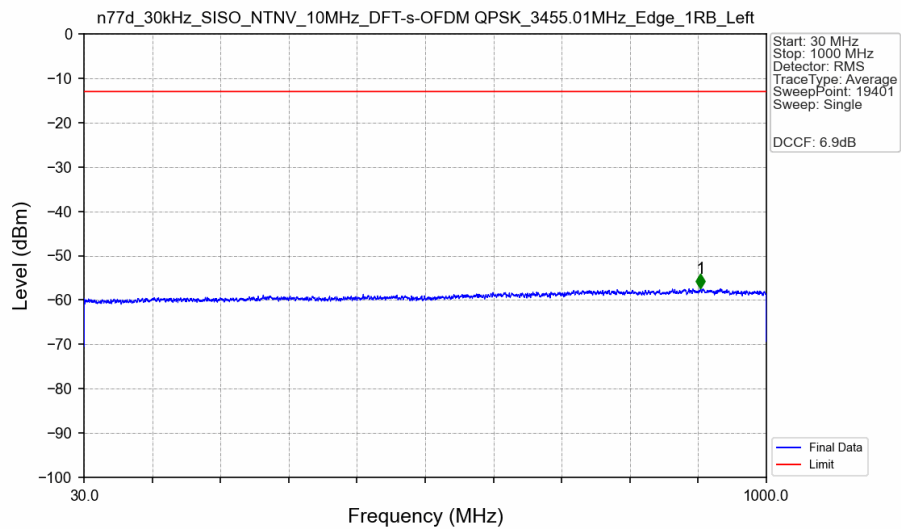
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3534.98	3534.98	0.5	/	1	3534.980	-47.60	-13	Pass
3534.98	3538.98	0.5	CHP	2	3538.251	-32.94	-13	Pass
3538.98	3539.98	0.09657	CHP	3	3539.376	-36.01	-13	Pass
3539.98	3549.98	0.09657	CHP	/	/	/	/	/
3549.98	3550.98	0.09657	CHP	4	3550.329	-36.33	-13	Pass
3550.98	3554.98	0.5	CHP	5	3551.514	-31.17	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_3455.01MHz_Edge_1RB_Left_Ant8



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3445.01	3445.01	0.5	/	1	3445.010	-61.82	-13	Pass
3445.01	3449.01	0.5	CHP	2	3448.746	-40.87	-13	Pass
3449.01	3450.01	0.03	/	3	3449.991	-38.12	-13	Pass
3450.01	3460.01	0.03	/	/	/	/	/	/
3460.01	3461.01	0.03	/	4	3460.929	-54.64	-13	Pass
3461.01	3465.01	0.5	CHP	5	3461.349	-44.43	-13	Pass

n77d_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_3455.01MHz_Edge_1RB_Left_Ant8



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	906.300	-57.37	-13	Pass