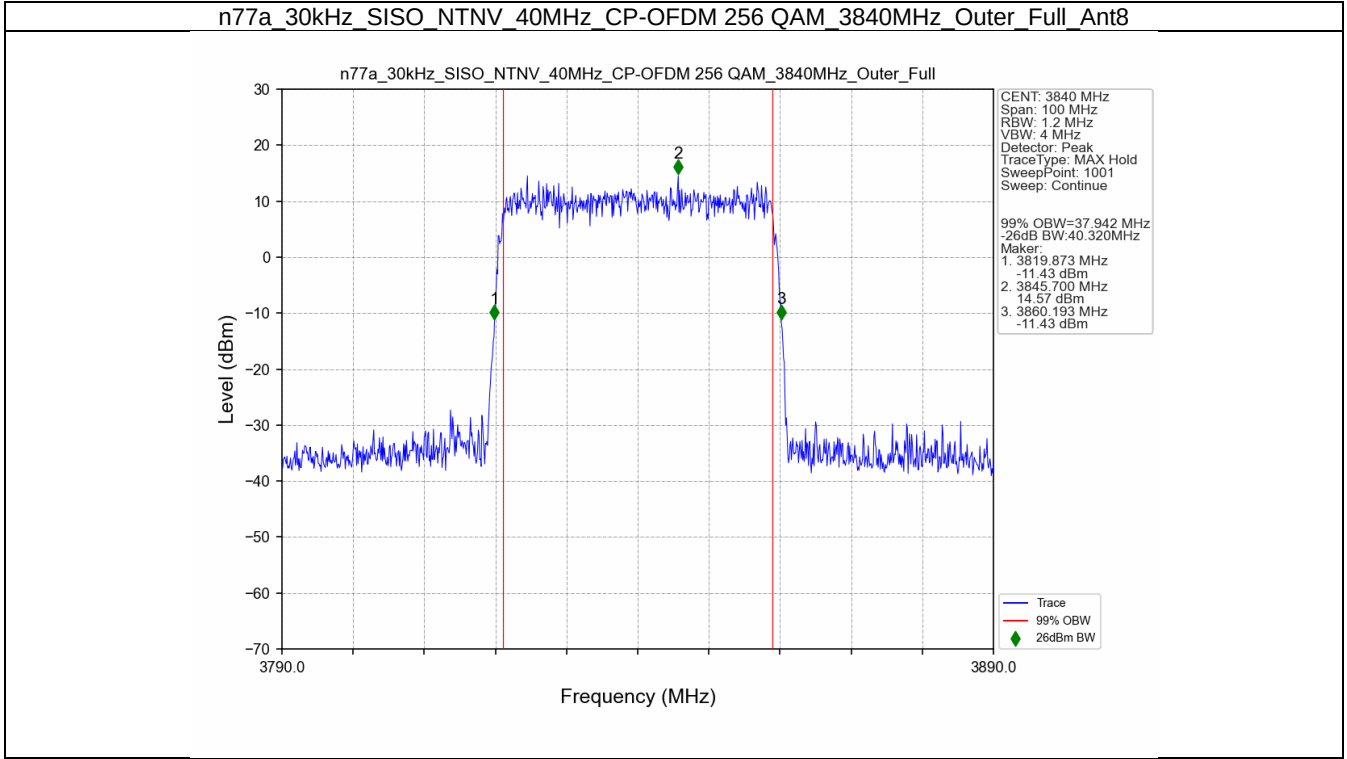
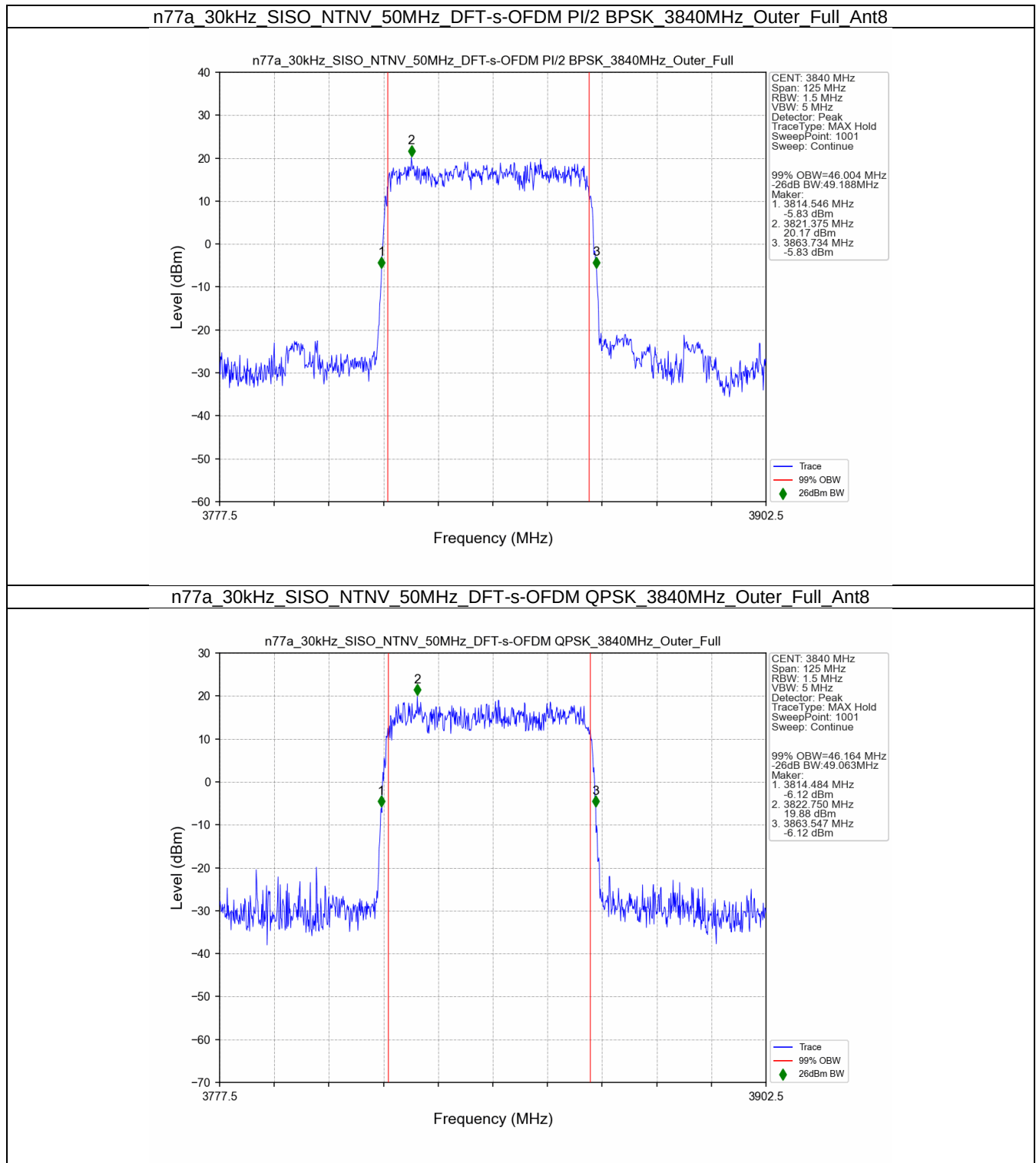
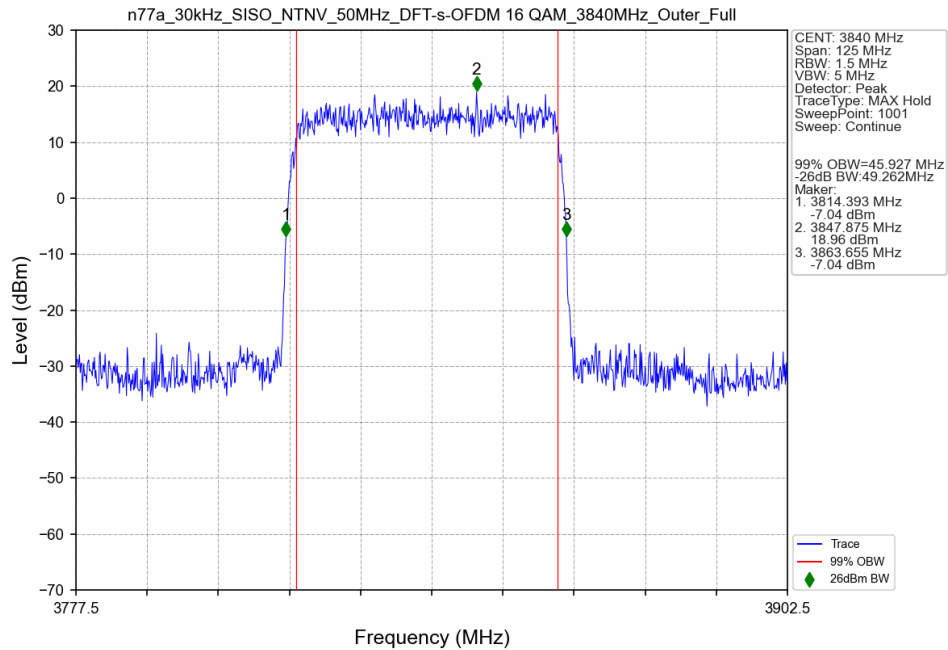




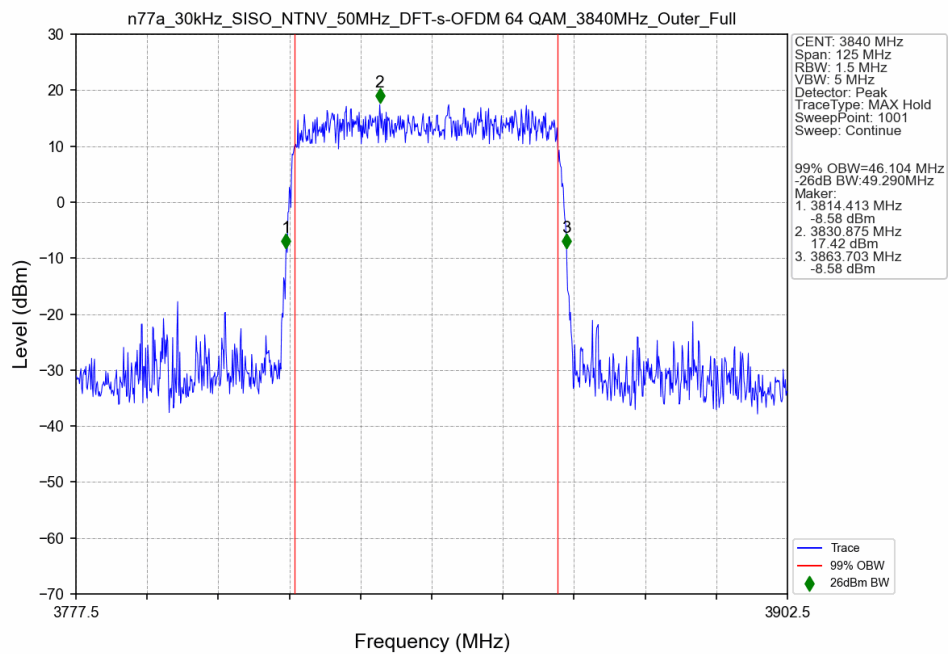
3.2.7 30_S_50M_NTNV



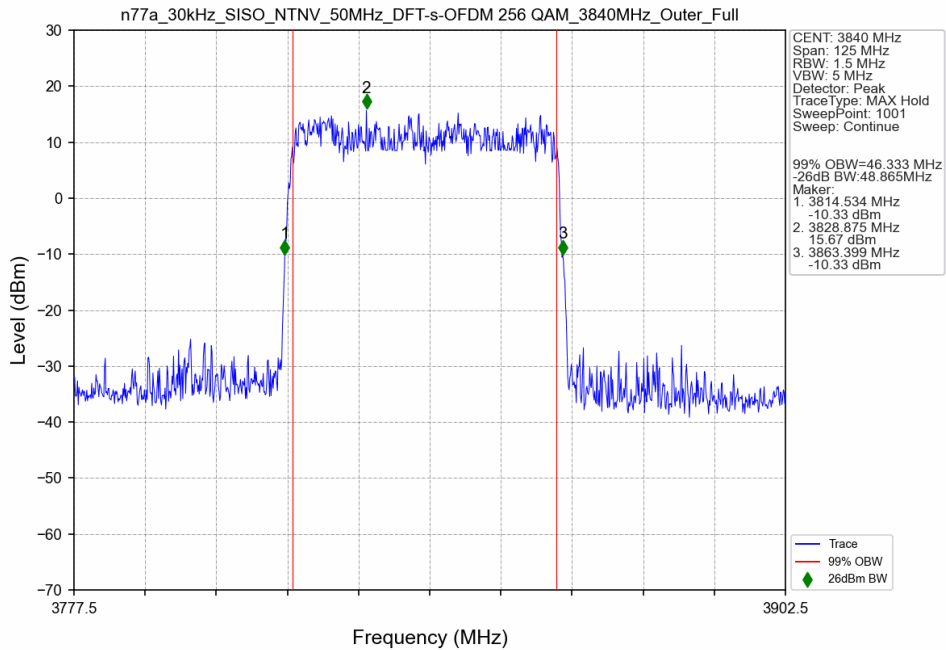
n77a_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 16 QAM_3840MHz_Outer_Full_Ant8



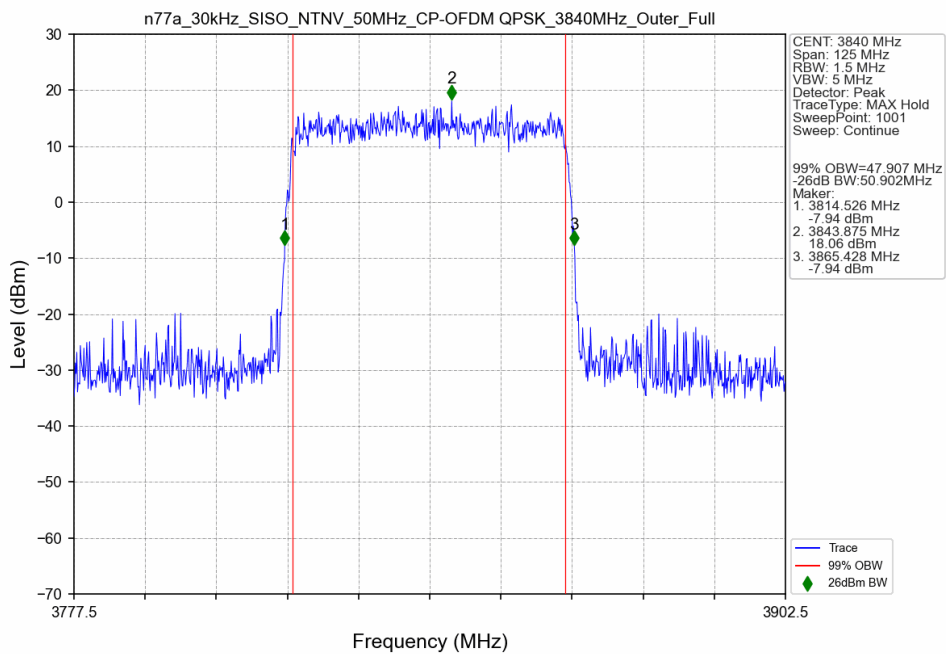
n77a_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 64 QAM_3840MHz_Outer_Full_Ant8



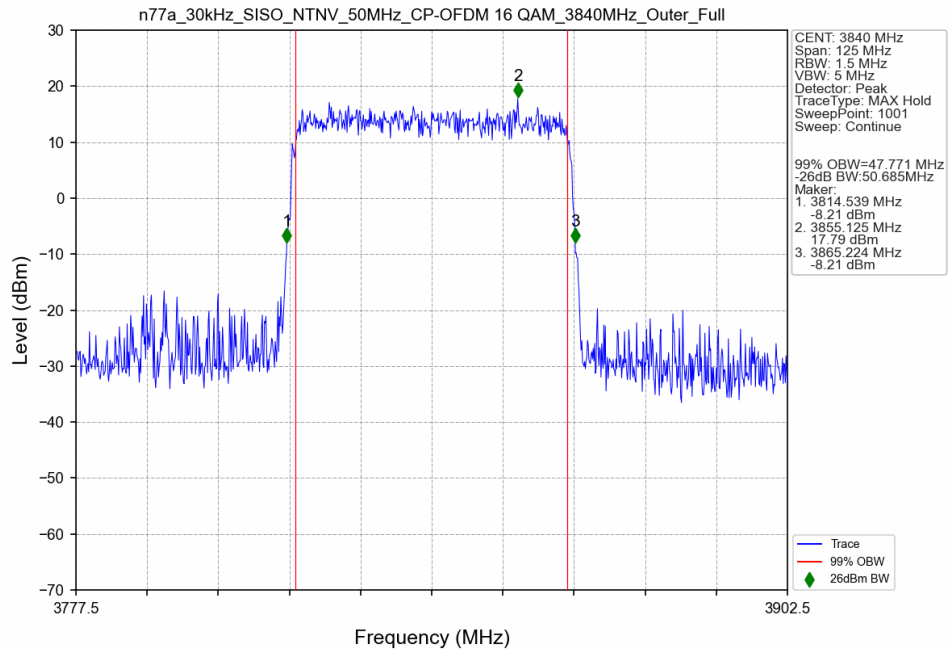
n77a_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM_256_QAM_3840MHz_Outer_Full_Ant8



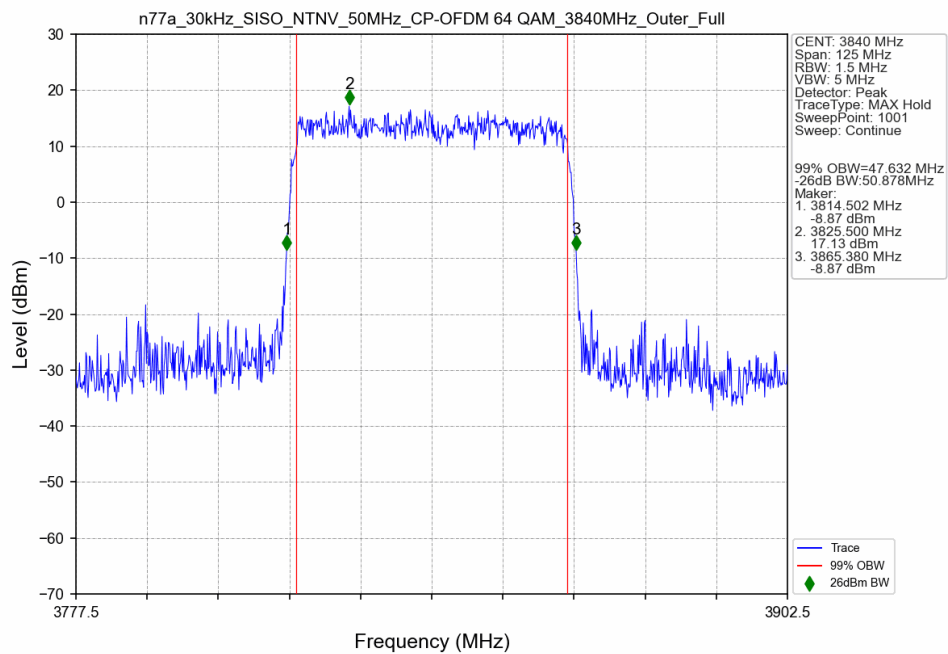
n77a_30kHz_SISO_NTNV_50MHz_CP-OFDM_QPSK_3840MHz_Outer_Full_Ant8

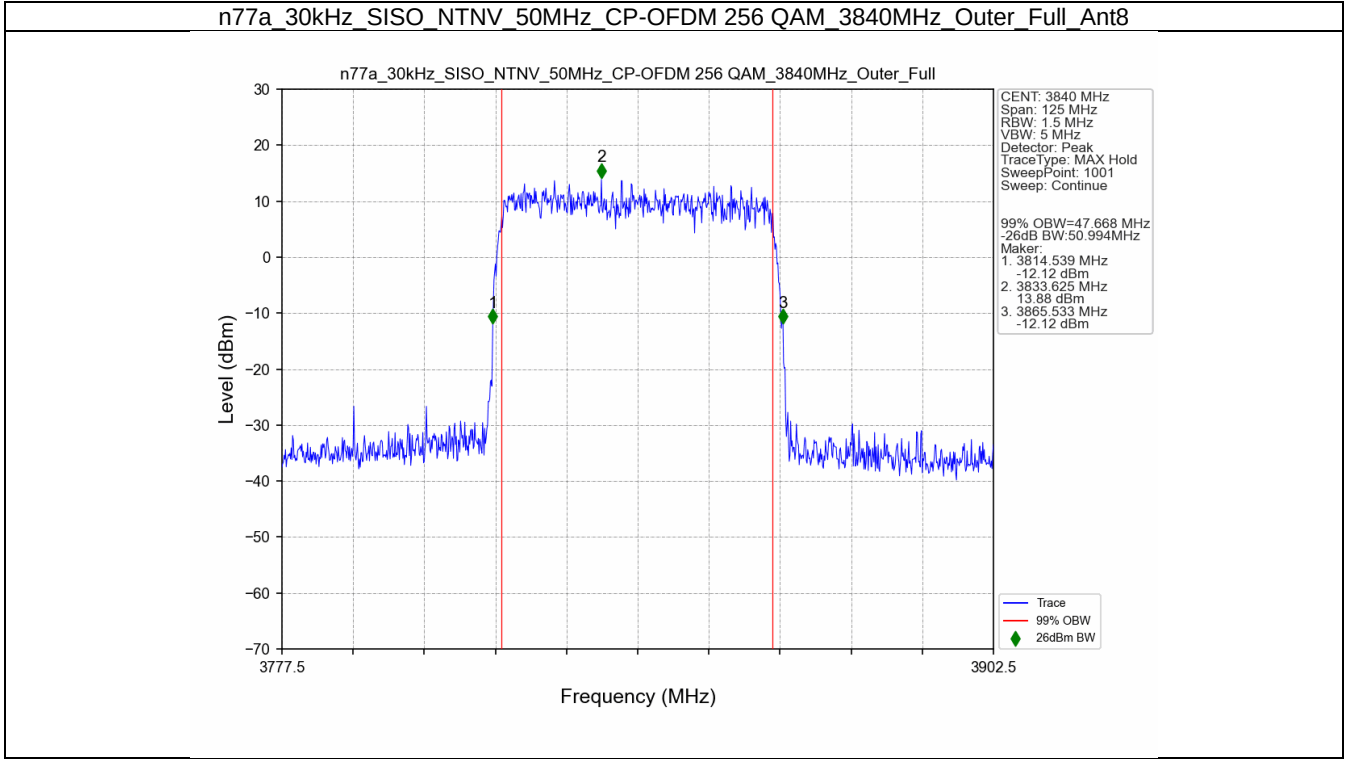


n77a_30kHz_SISO_NTNV_50MHz_CP-OFDM 16 QAM 3840MHz_Outer_Full_Ant8

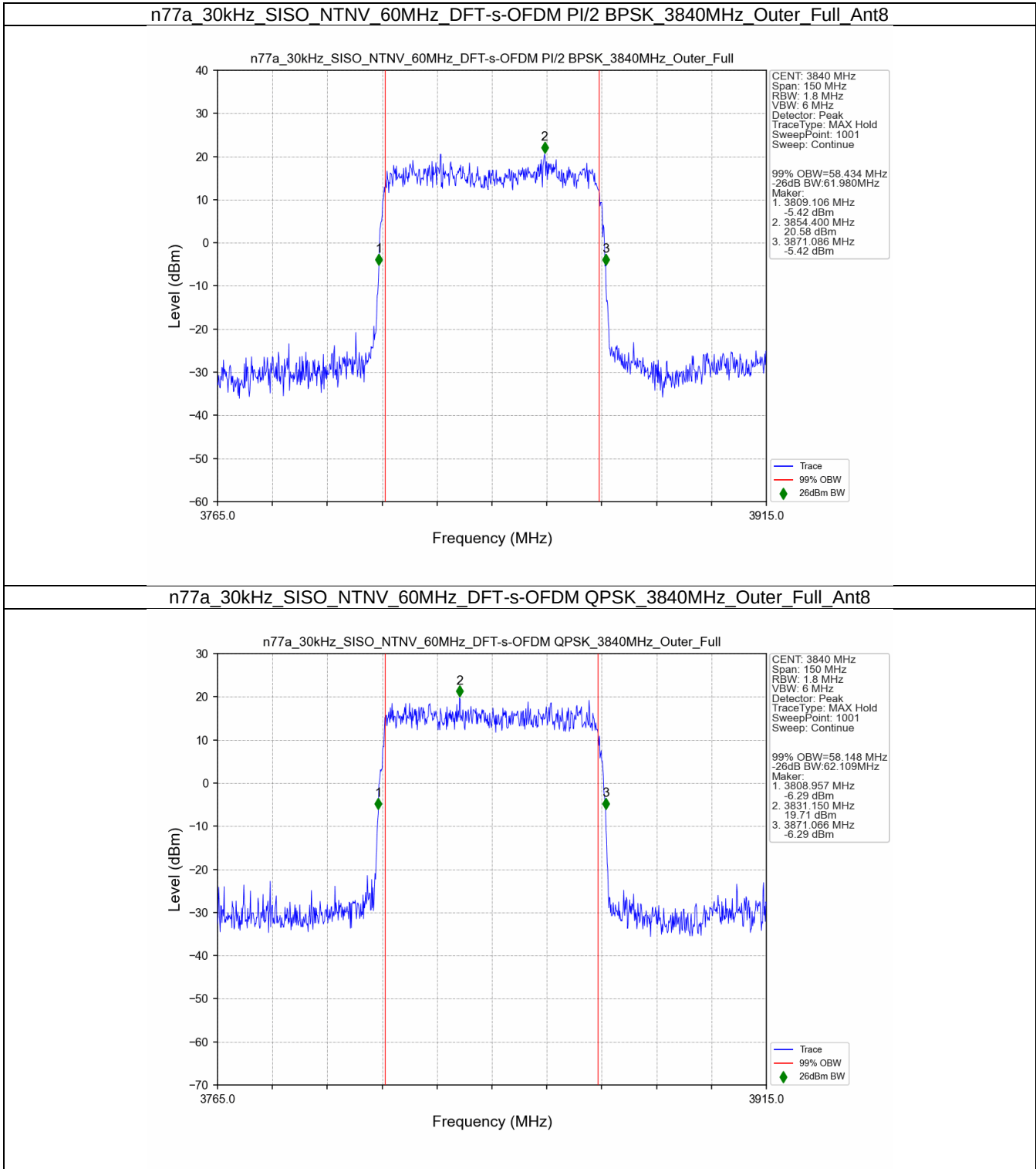


n77a_30kHz_SISO_NTNV_50MHz_CP-OFDM 64 QAM 3840MHz_Outer_Full_Ant8

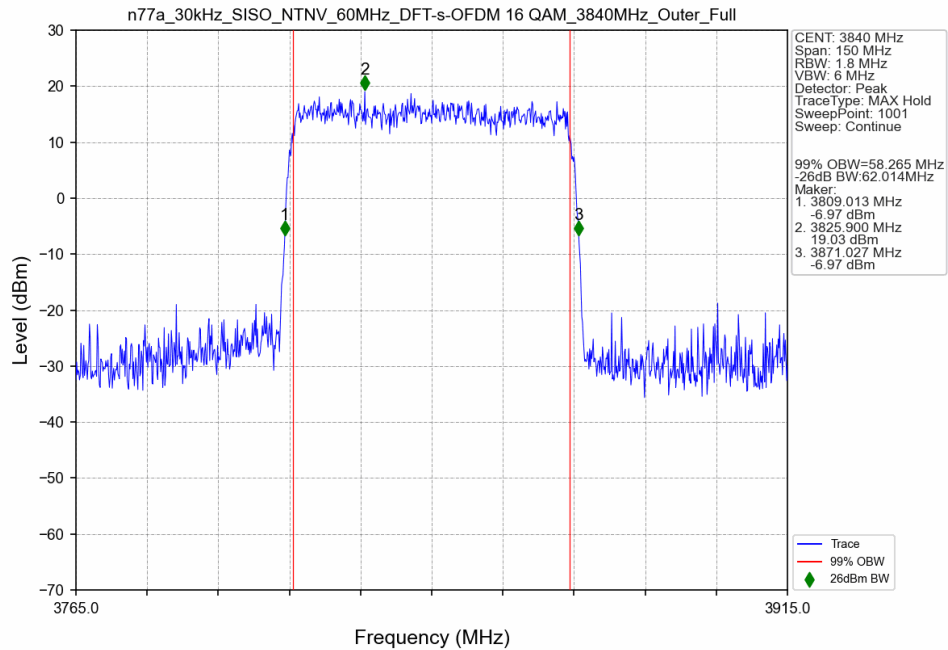




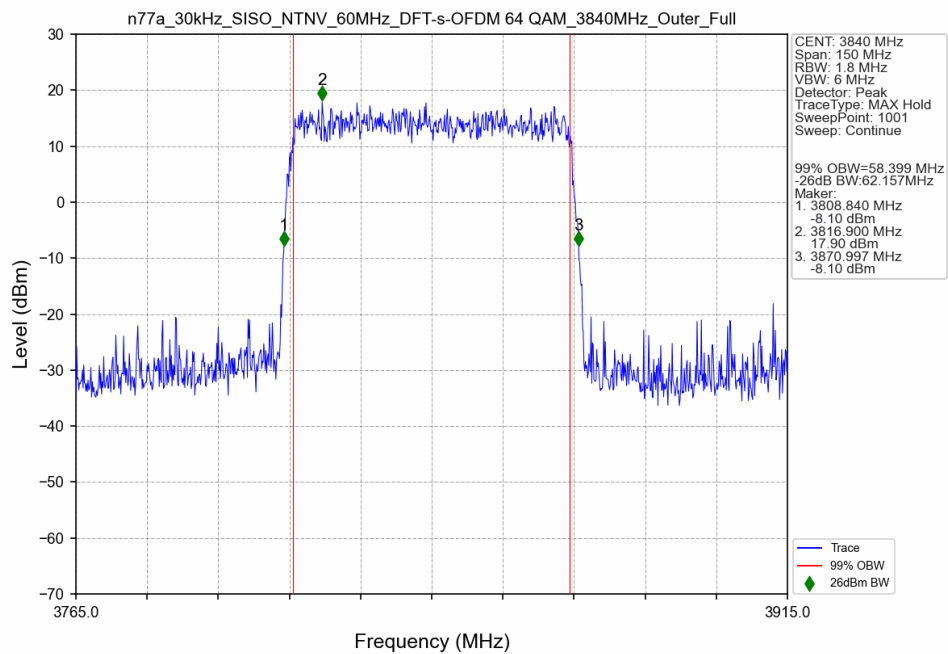
3.2.8 30_S_60M_NTNV



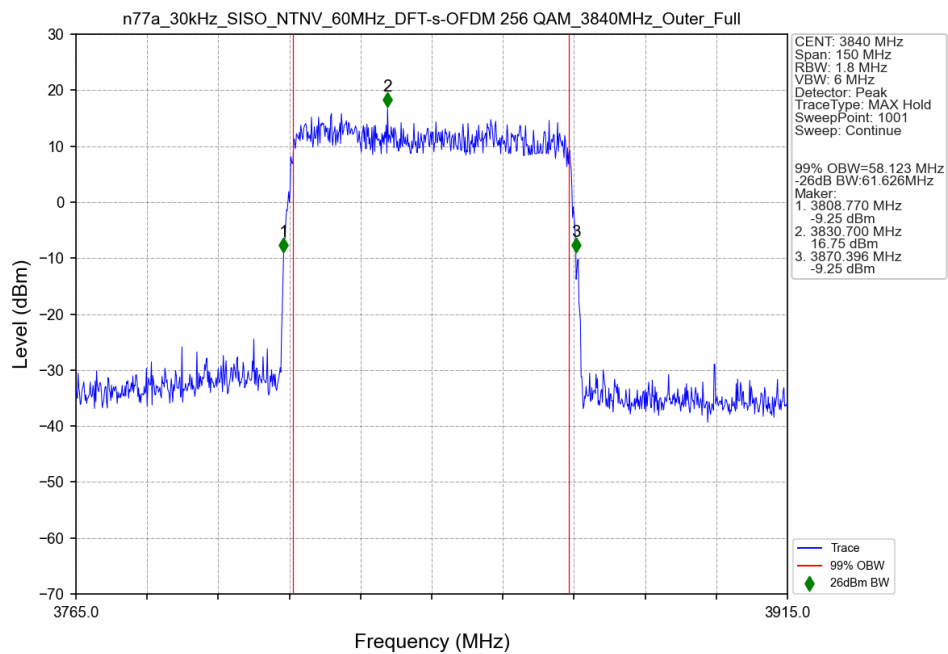
n77a_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM 16 QAM 3840MHz_Outer_Full_Ant8



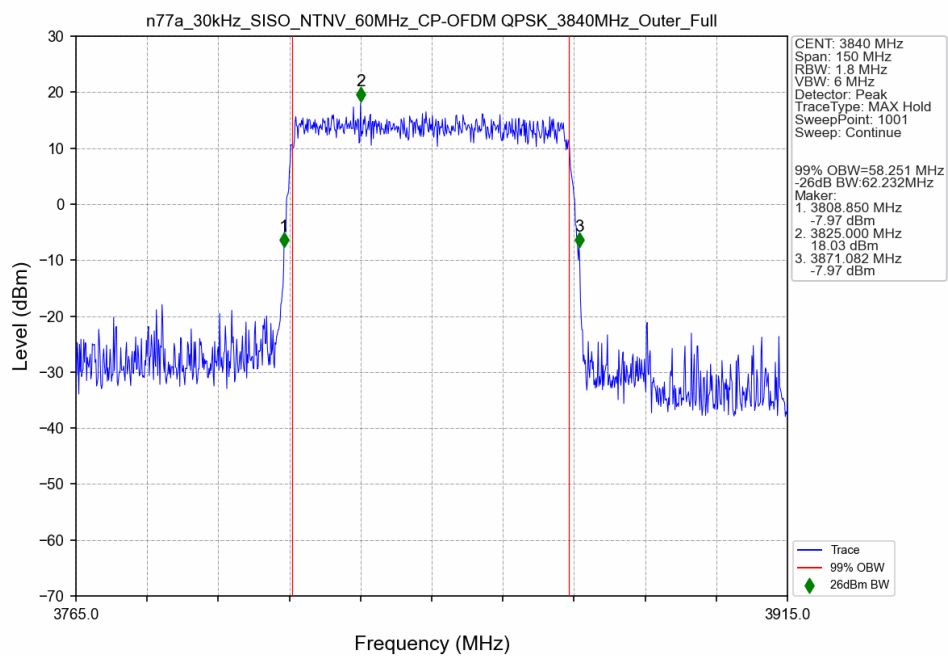
n77a_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM 64 QAM 3840MHz_Outer_Full_Ant8



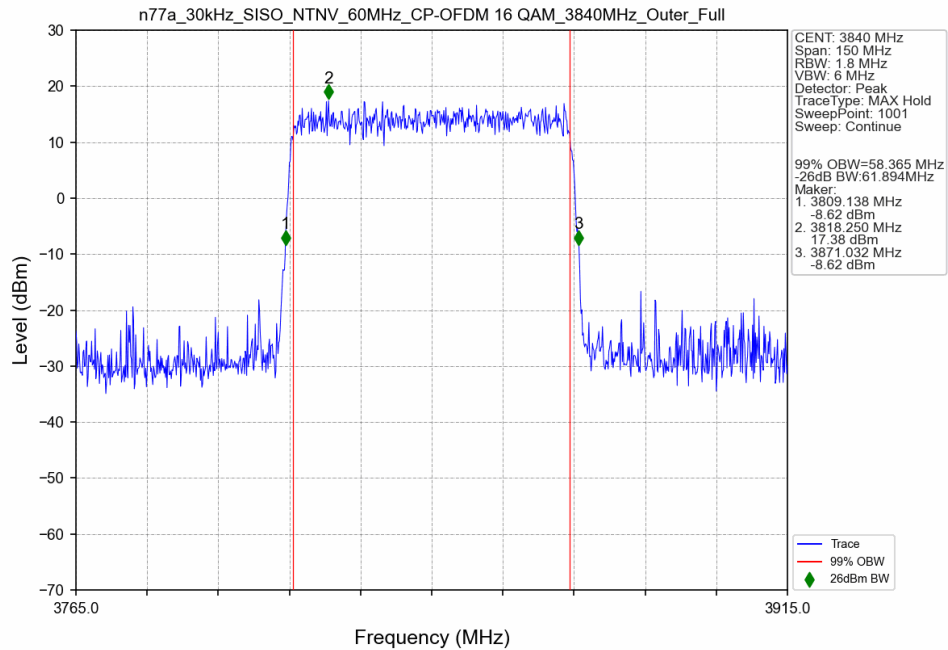
n77a_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM_256_QAM_3840MHz_Outer_Full_Ant8



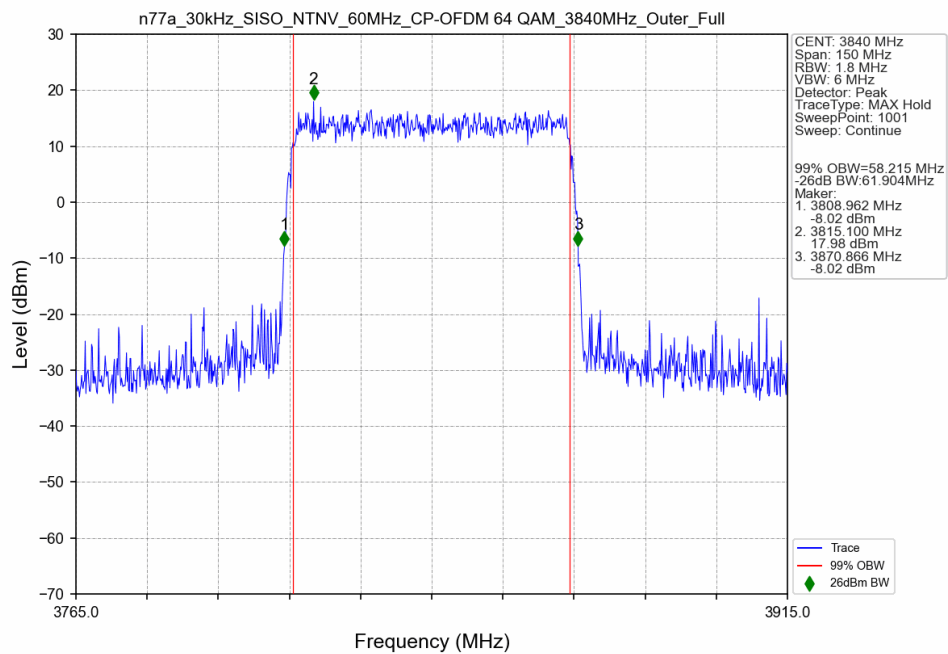
n77a_30kHz_SISO_NTNV_60MHz_CP-OFDM_QPSK_3840MHz_Outer_Full_Ant8



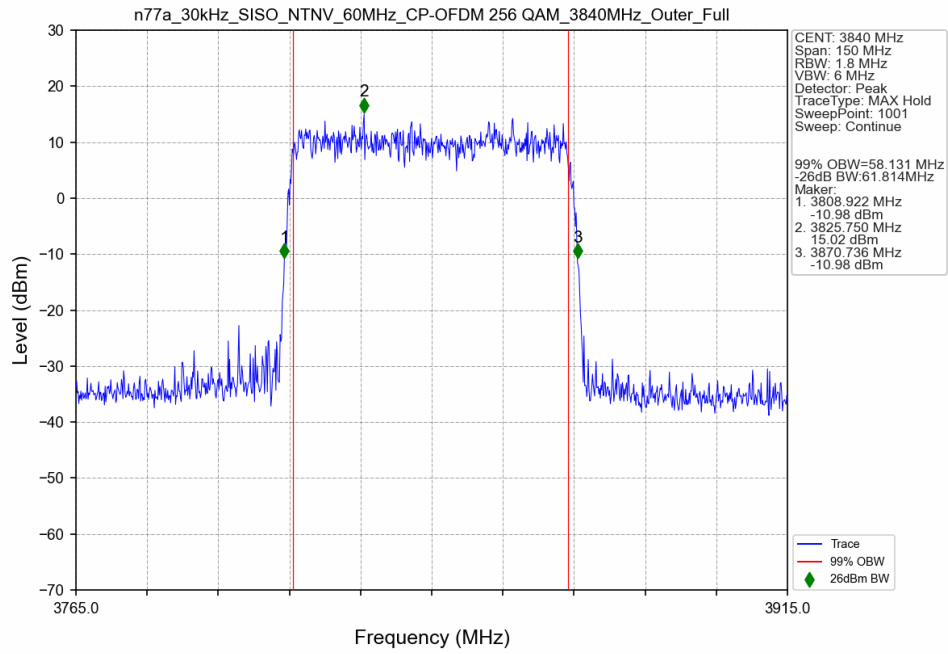
n77a_30kHz_SISO_NTNV_60MHz_CP-OFDM 16 QAM_3840MHz_Outer_Full_Ant8



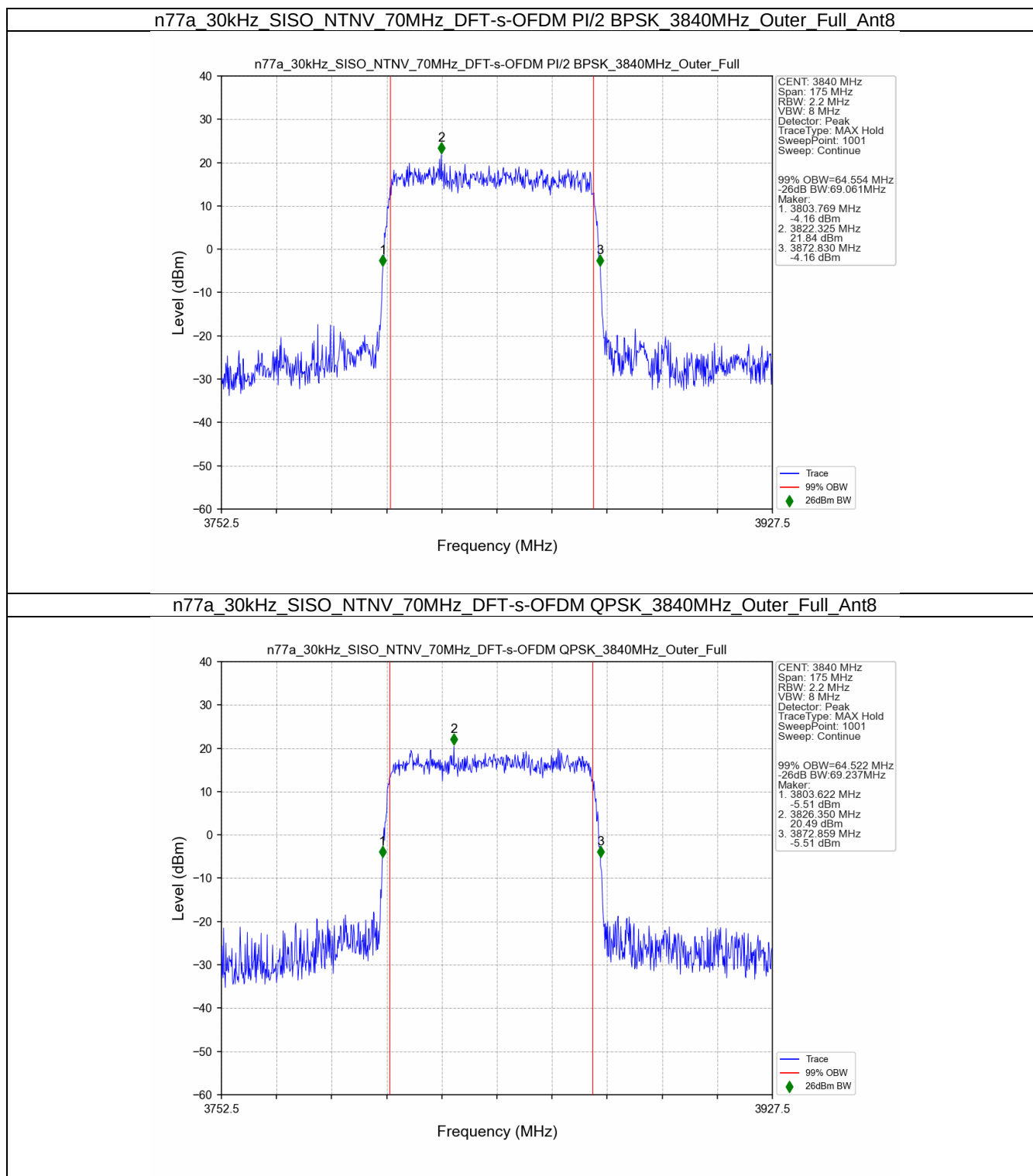
n77a_30kHz_SISO_NTNV_60MHz_CP-OFDM 64 QAM_3840MHz_Outer_Full_Ant8



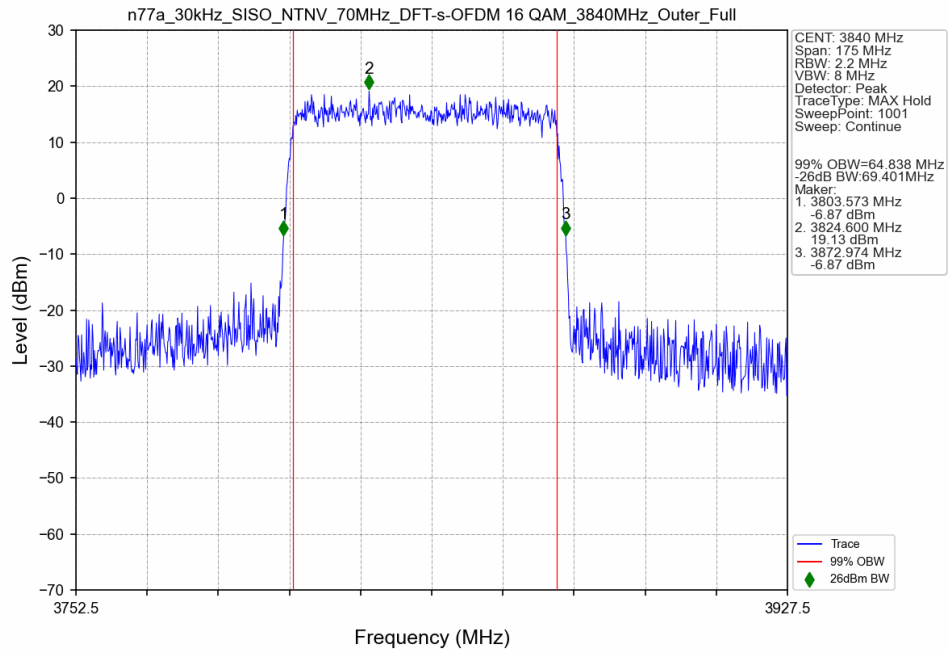
n77a_30kHz_SISO_NTNV_60MHz_CP-OFDM_256_QAM_3840MHz_Outer_Full_Ant8



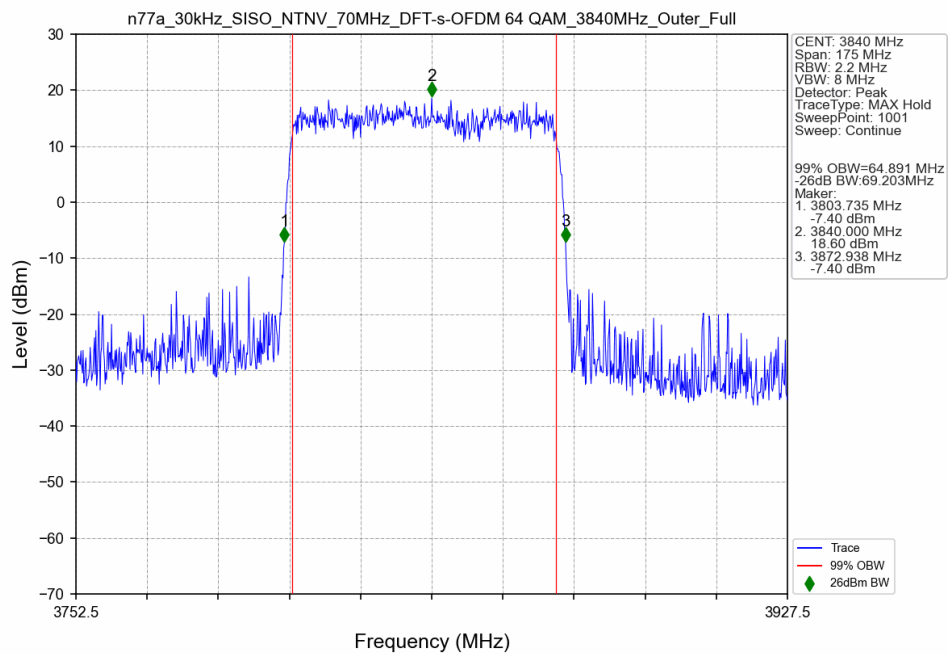
3.2.9 30_S_70M_NTNV



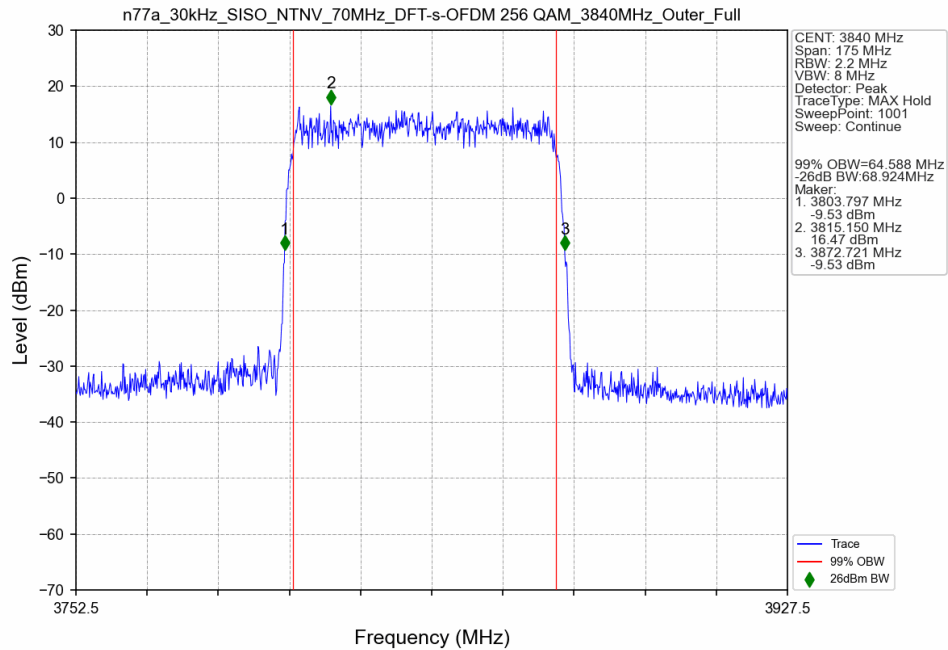
n77a_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM 16 QAM 3840MHz_Outer_Full_Ant8



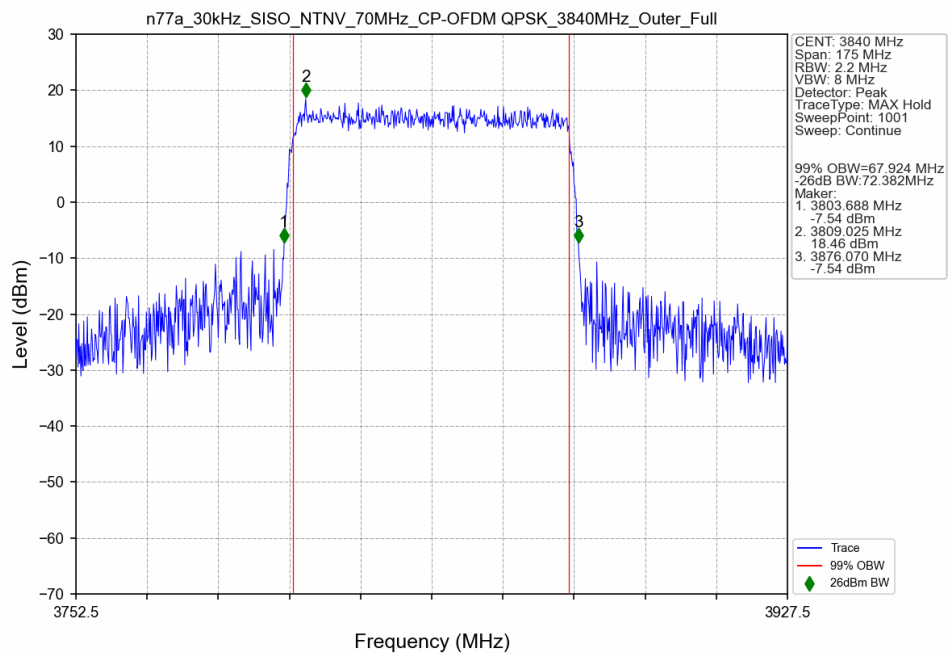
n77a_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM 64 QAM 3840MHz_Outer_Full_Ant8



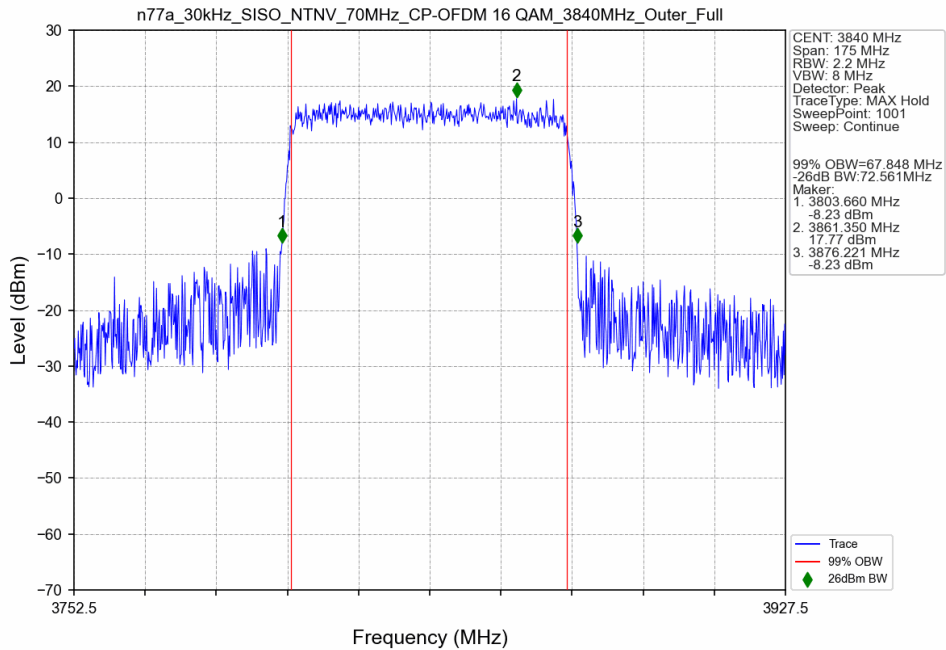
n77a_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM_256_QAM_3840MHz_Outer_Full_Ant8



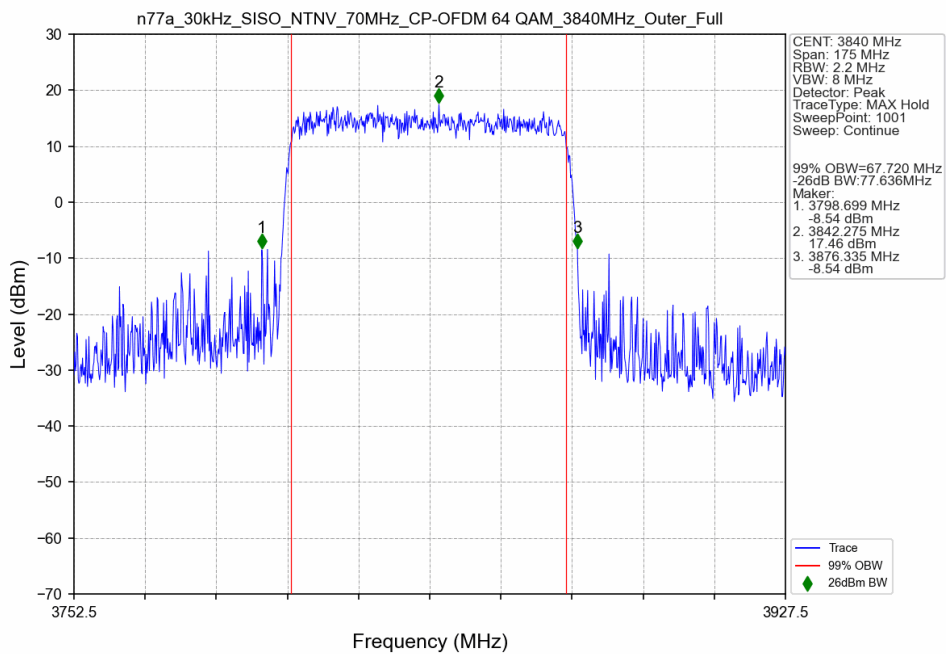
n77a_30kHz_SISO_NTNV_70MHz_CP-OFDM_QPSK_3840MHz_Outer_Full_Ant8

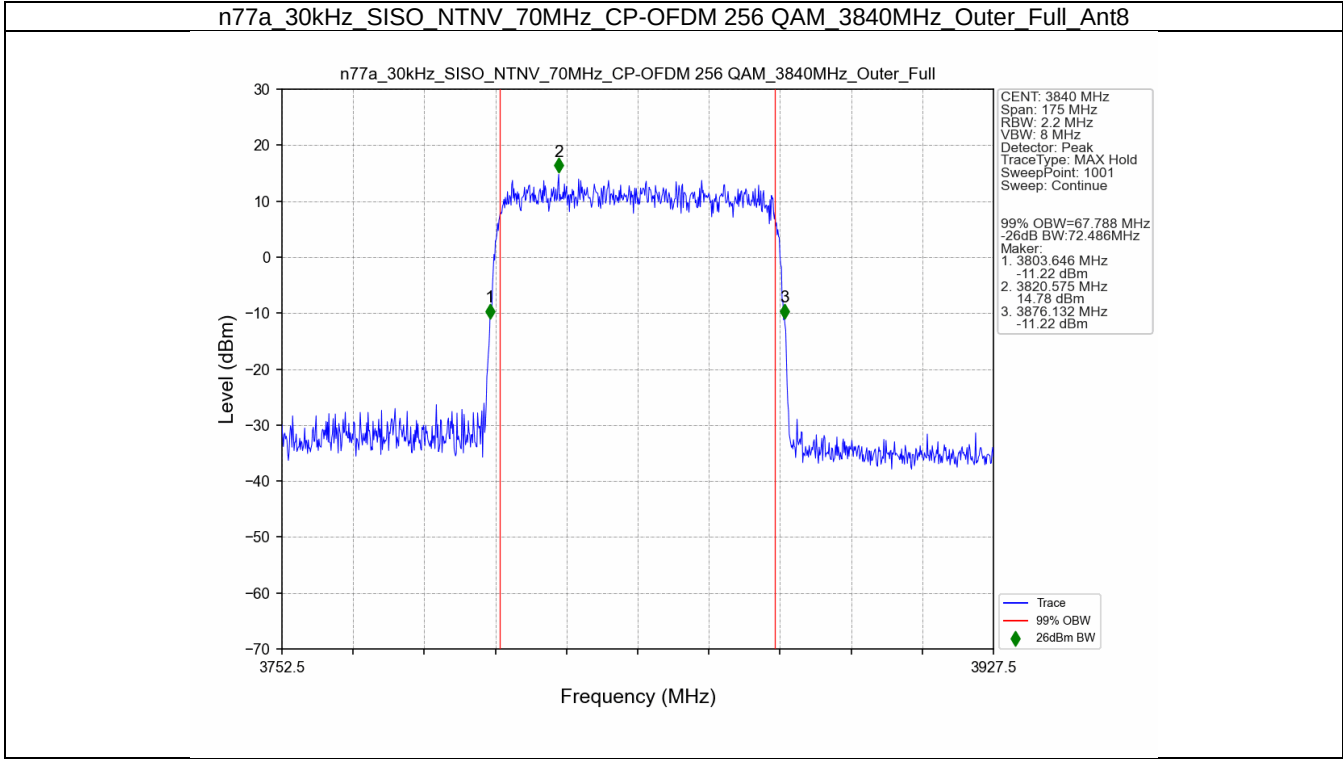


n77a_30kHz_SISO_NTNV_70MHz_CP-OFDM 16 QAM 3840MHz_Outer_Full_Ant8

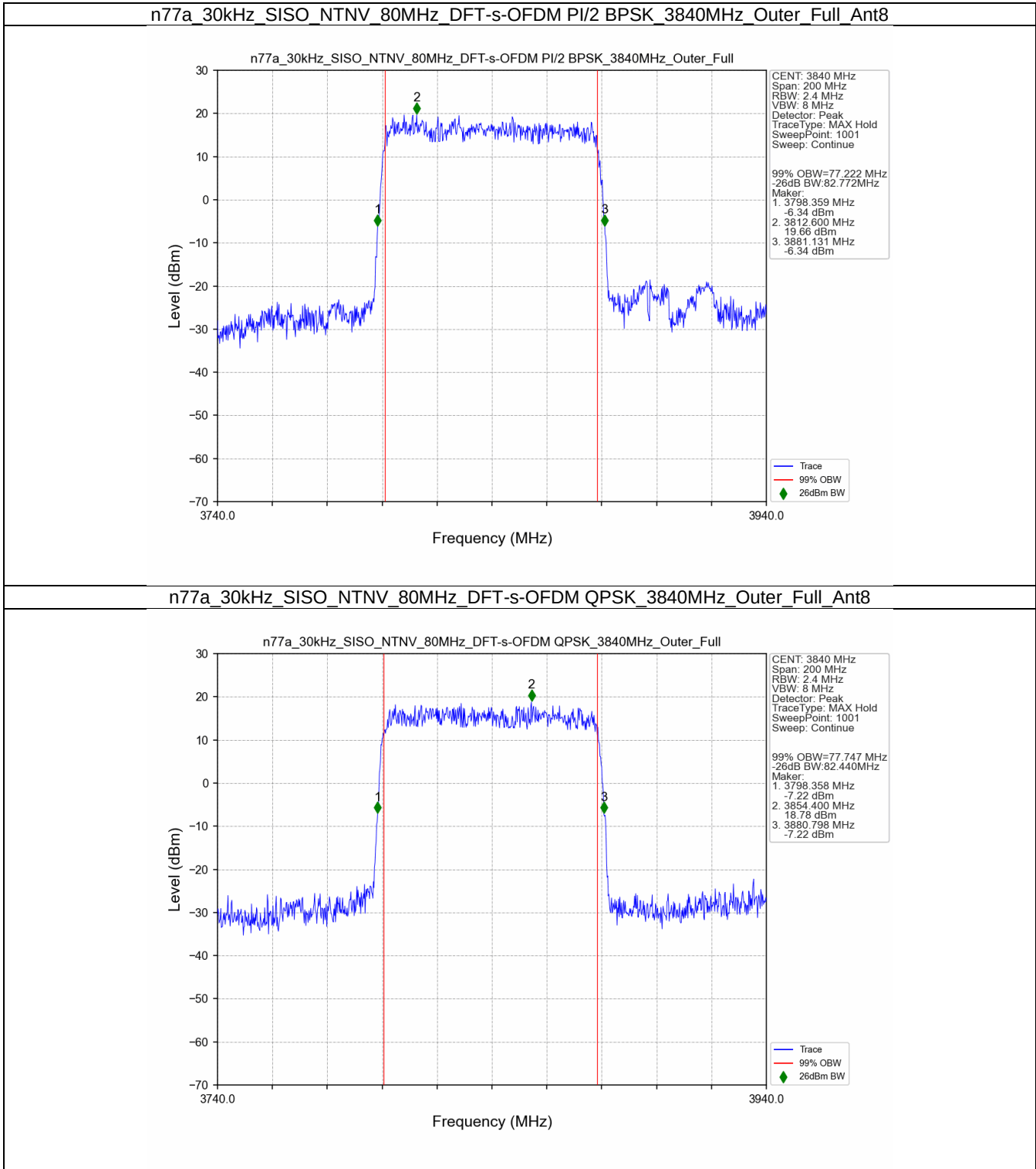


n77a_30kHz_SISO_NTNV_70MHz_CP-OFDM 64 QAM 3840MHz_Outer_Full_Ant8

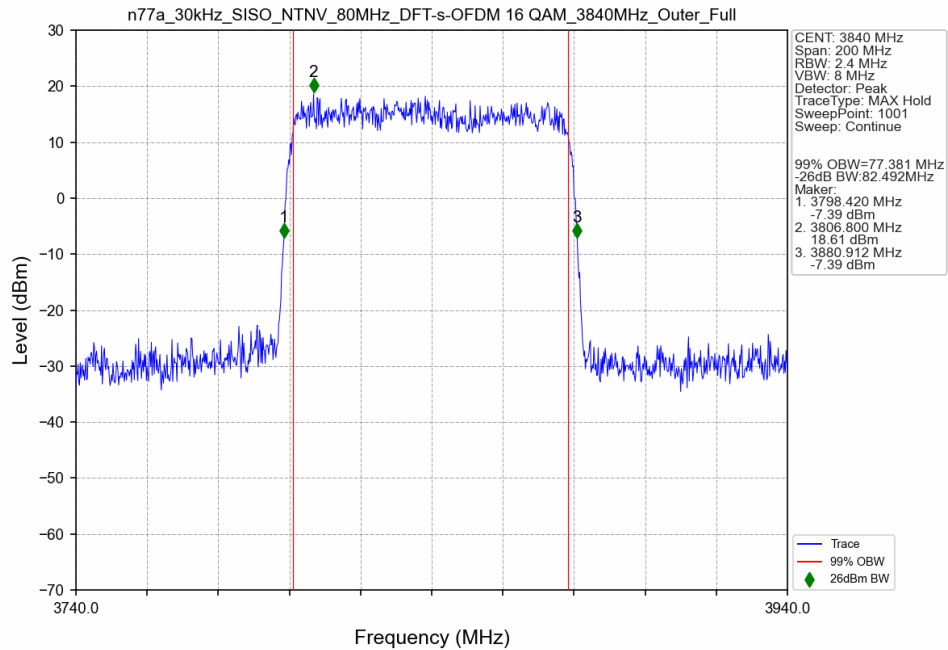




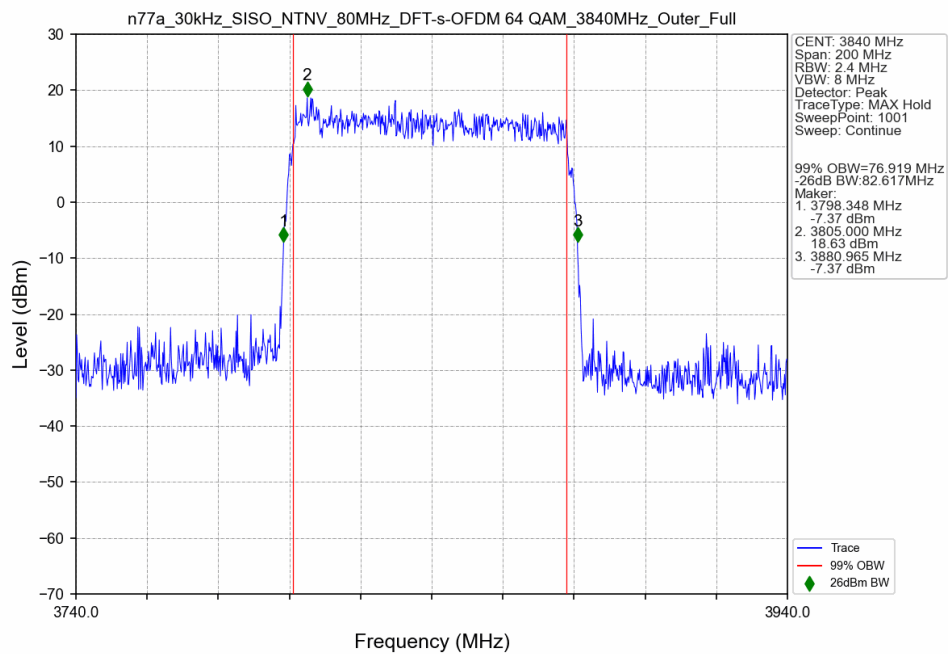
3.2.10 30_S_80M_NTNV



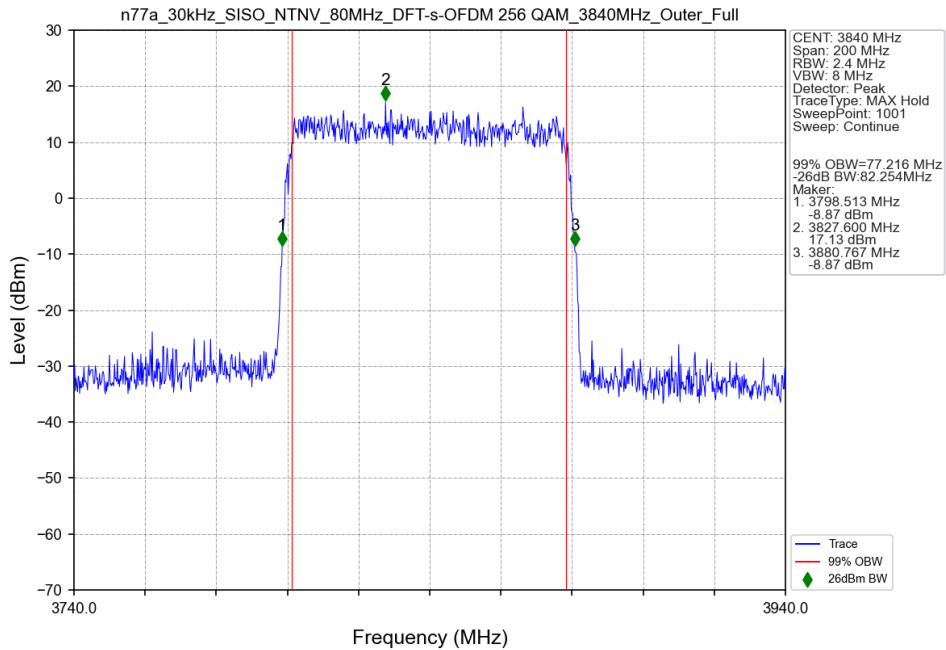
n77a_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 16 QAM_3840MHz_Outer_Full_Ant8



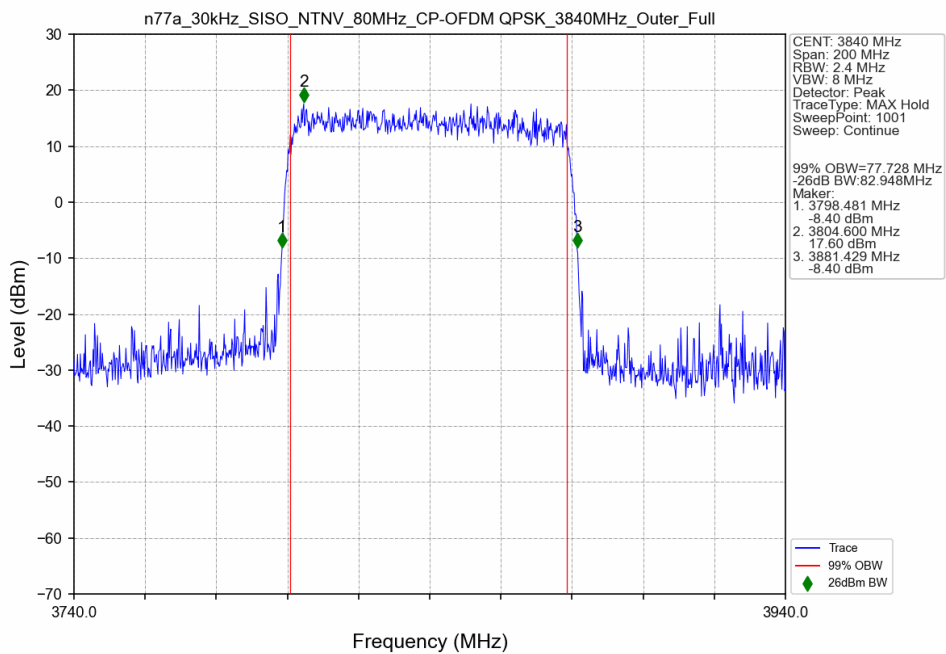
n77a_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 64 QAM_3840MHz_Outer_Full_Ant8



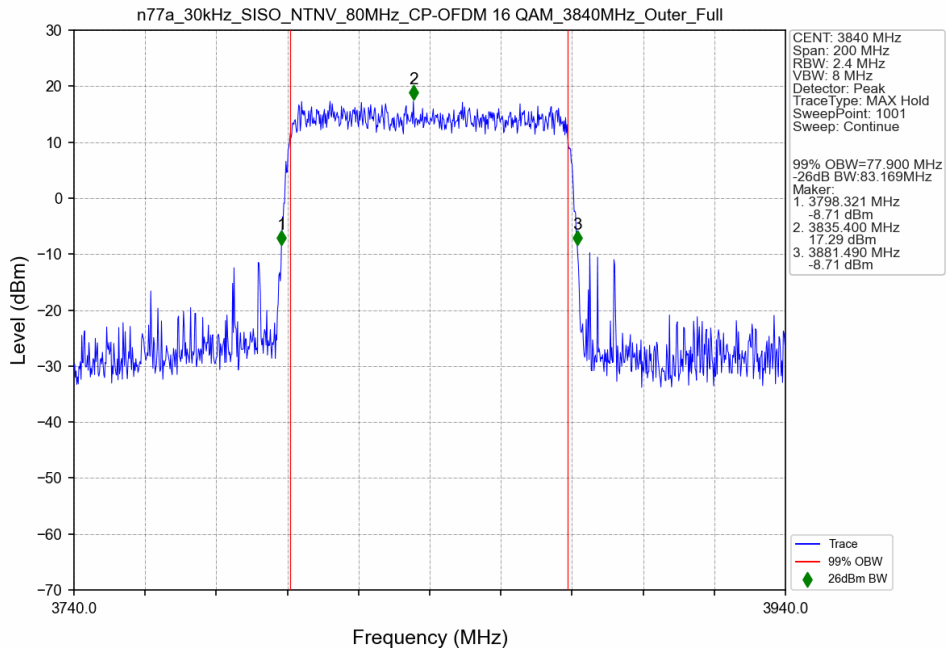
n77a_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM_256_QAM_3840MHz_Outer_Full_Ant8



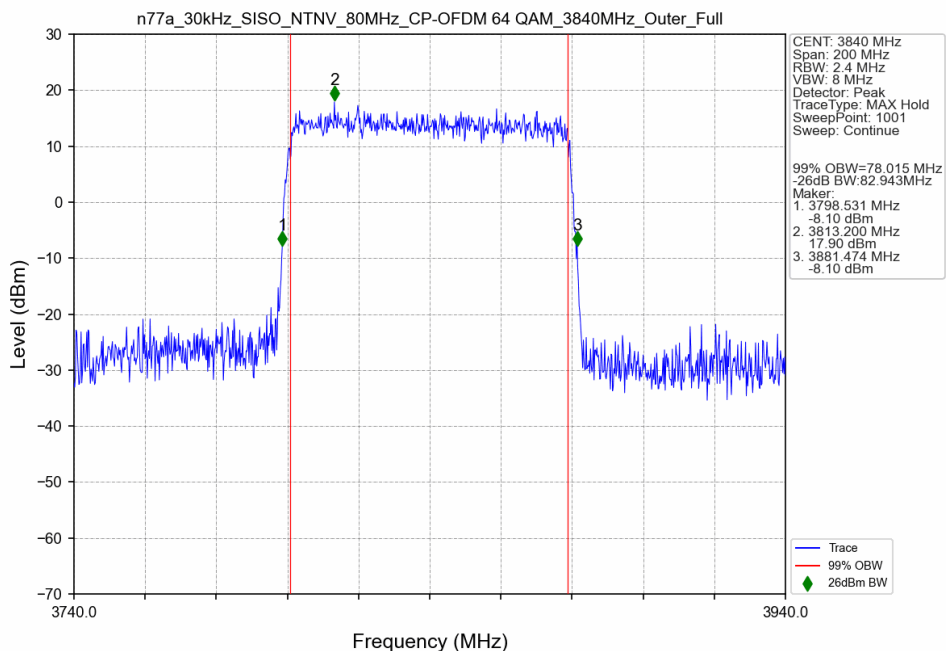
n77a_30kHz_SISO_NTNV_80MHz_CP-OFDM_QPSK_3840MHz_Outer_Full_Ant8



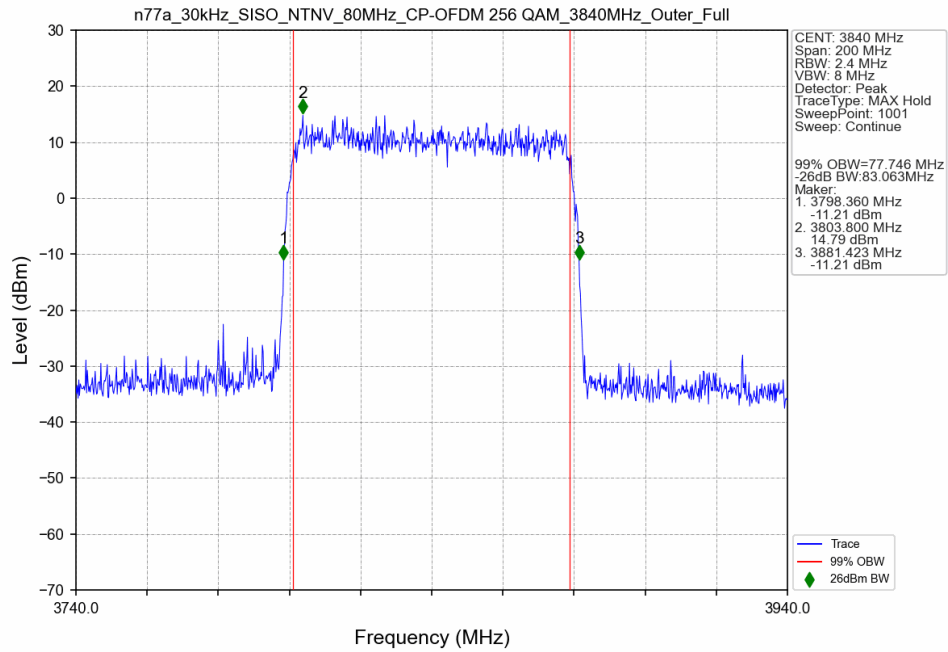
n77a_30kHz_SISO_NTNV_80MHz_CP-OFDM 16 QAM_3840MHz_Outer_Full_Ant8



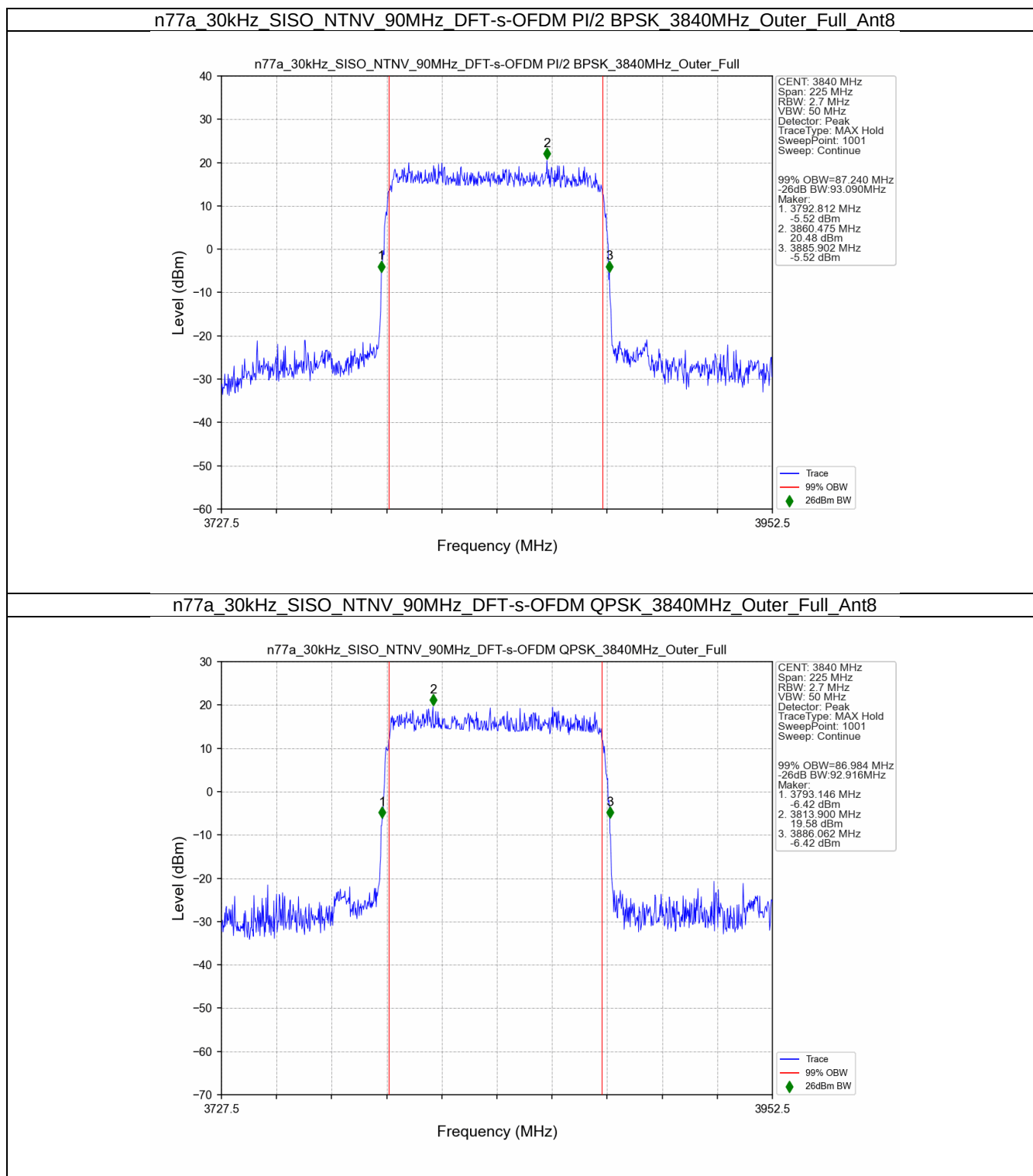
n77a_30kHz_SISO_NTNV_80MHz_CP-OFDM 64 QAM_3840MHz_Outer_Full_Ant8



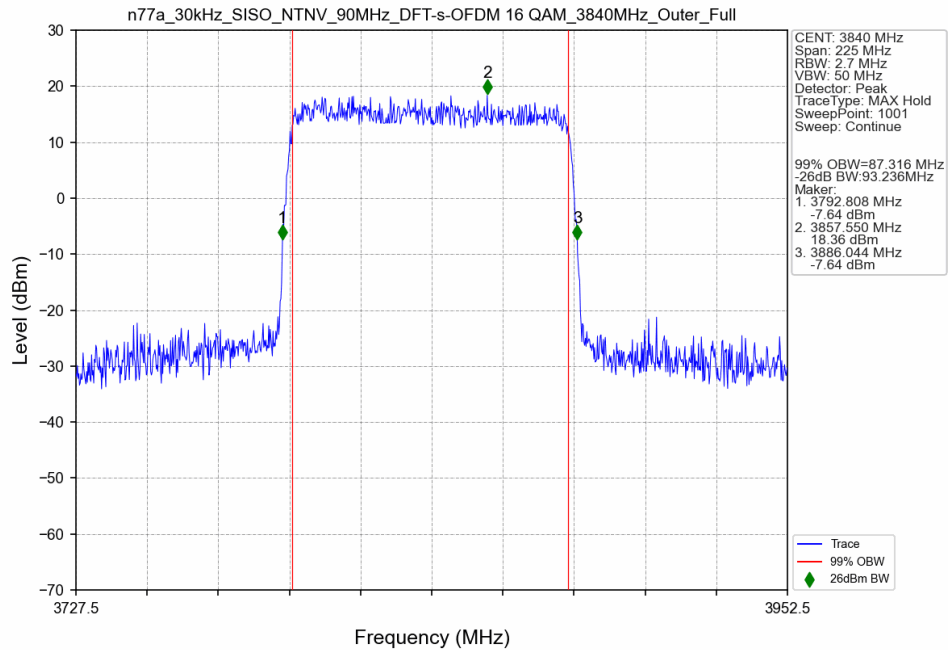
n77a_30kHz_SISO_NTNV_80MHz_CP-OFDM_256_QAM_3840MHz_Outer_Full_Ant8



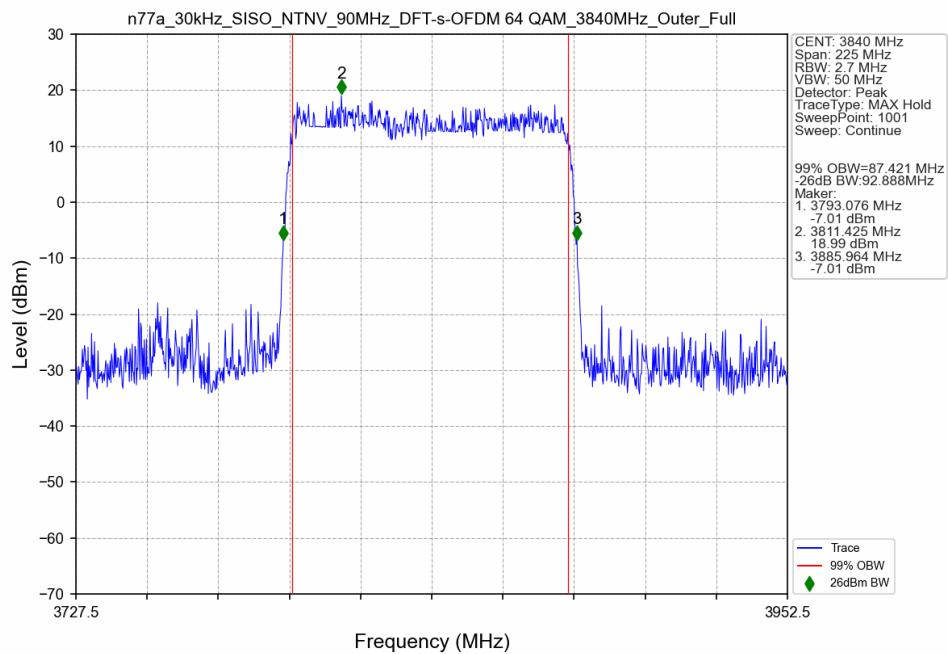
3.2.11 30_S_90M_NTNV



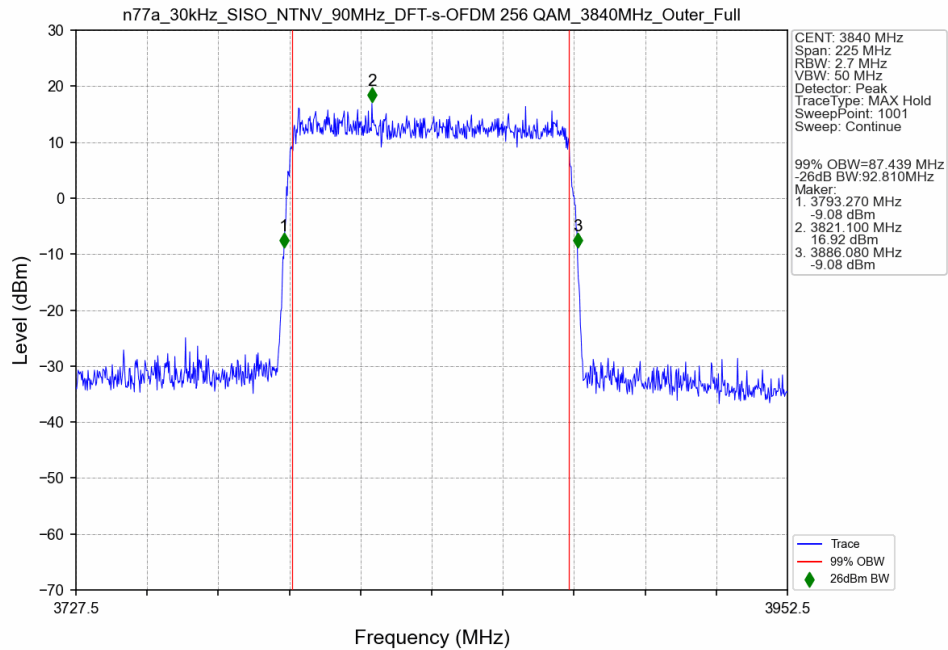
n77a_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 16 QAM_3840MHz_Outer_Full_Ant8



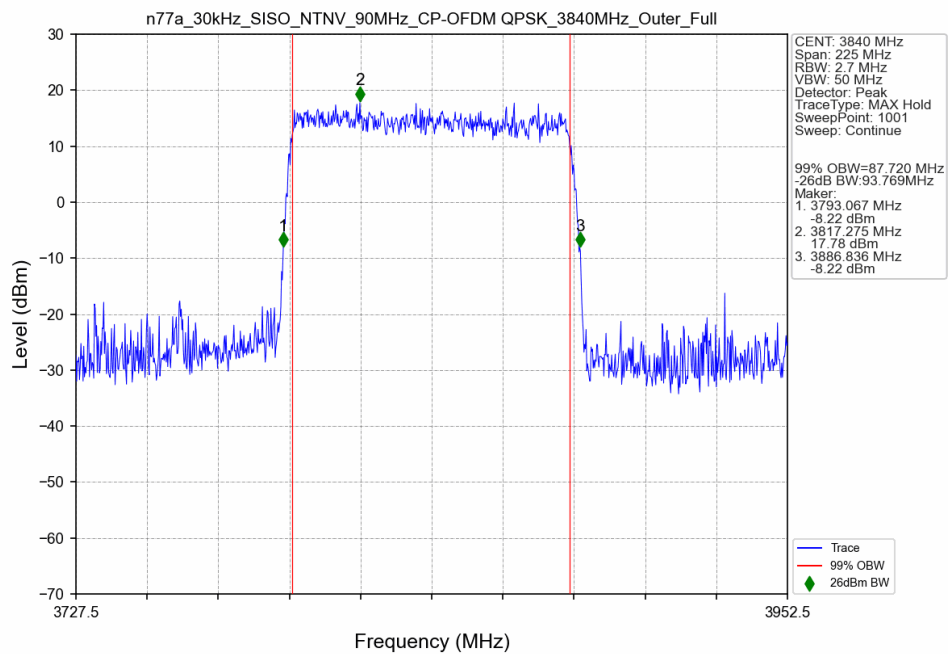
n77a_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 64 QAM_3840MHz_Outer_Full_Ant8



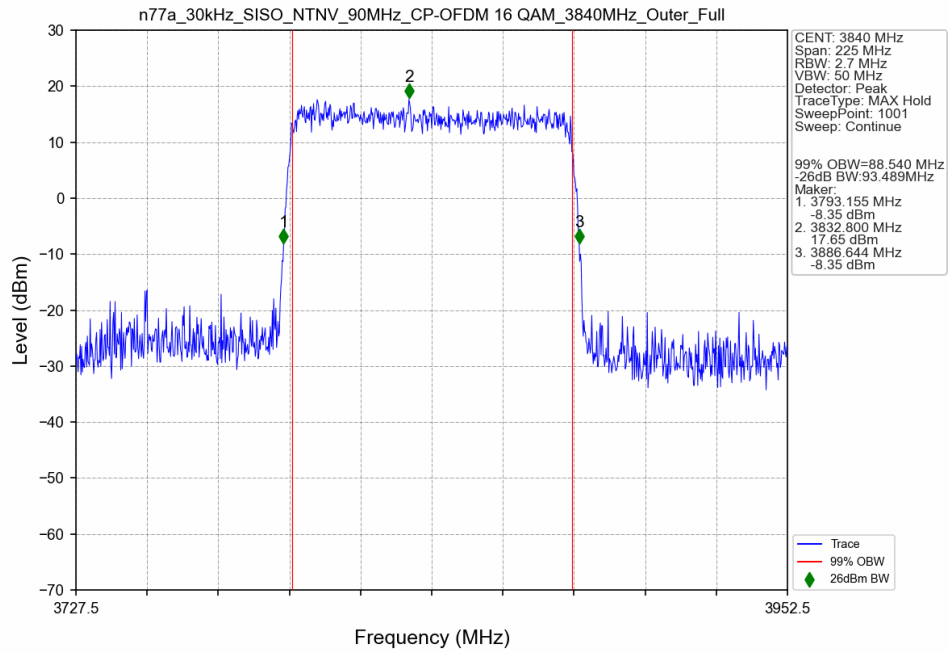
n77a_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 256 QAM_3840MHz_Outer_Full_Ant8



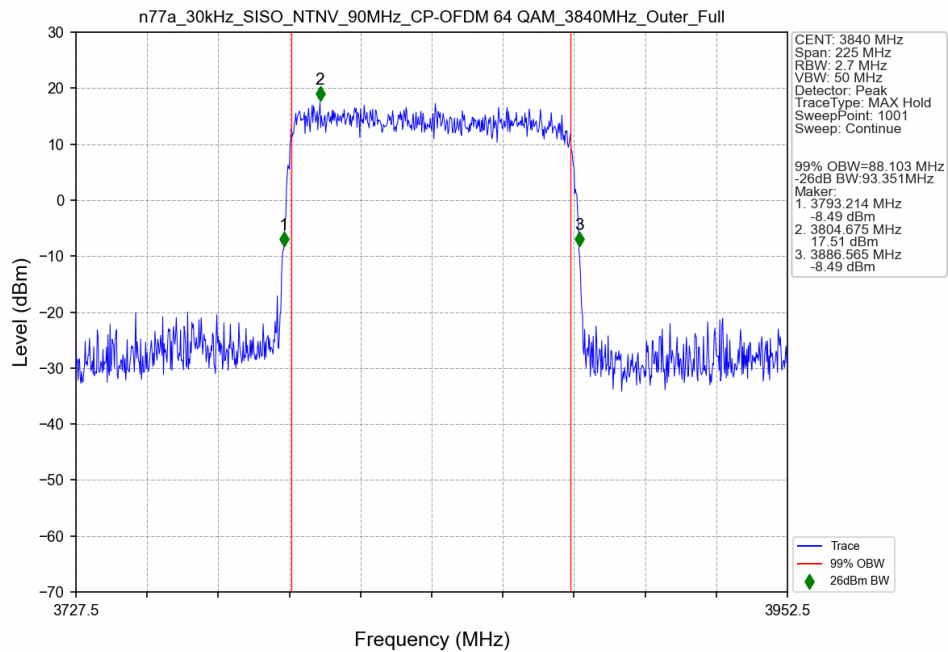
n77a_30kHz_SISO_NTNV_90MHz_CP-OFDM QPSK_3840MHz_Outer_Full_Ant8

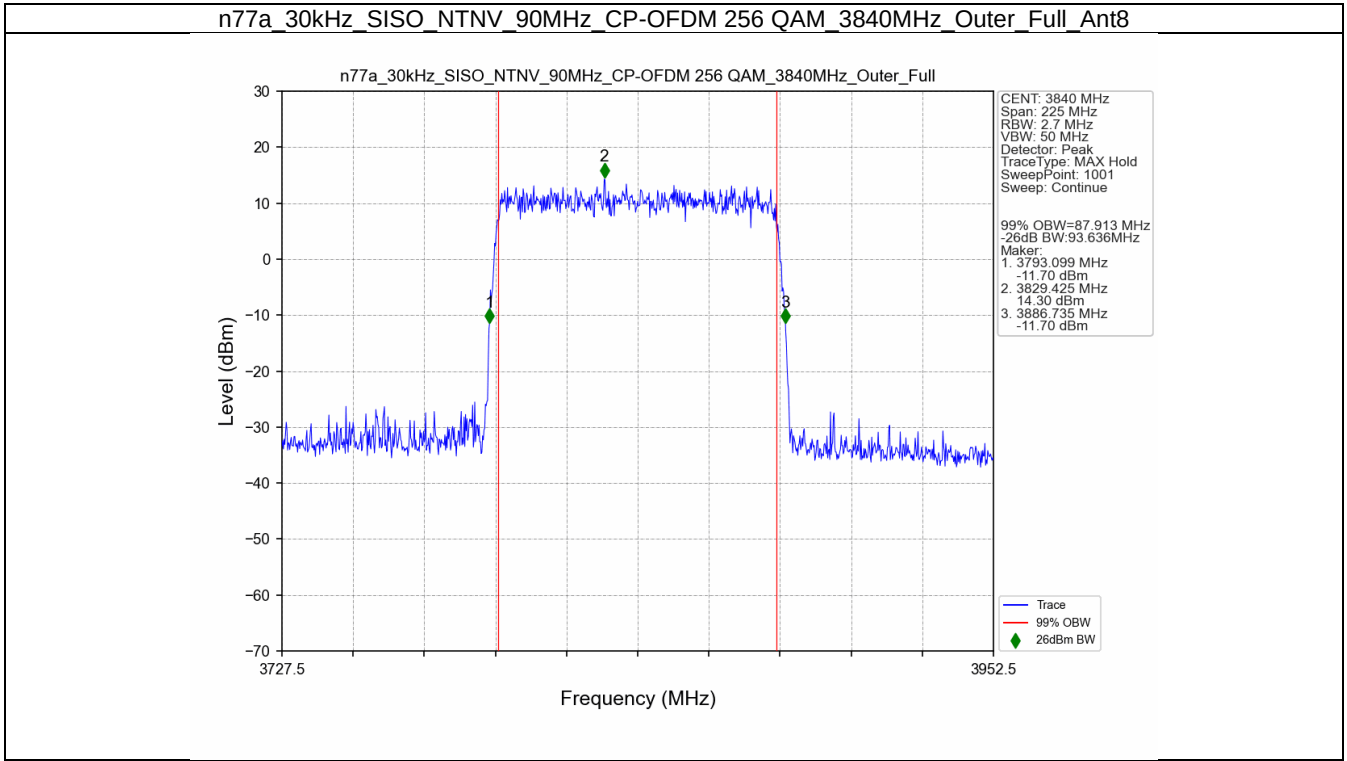


n77a_30kHz_SISO_NTNV_90MHz_CP-OFDM 16 QAM_3840MHz_Outer_Full_Ant8

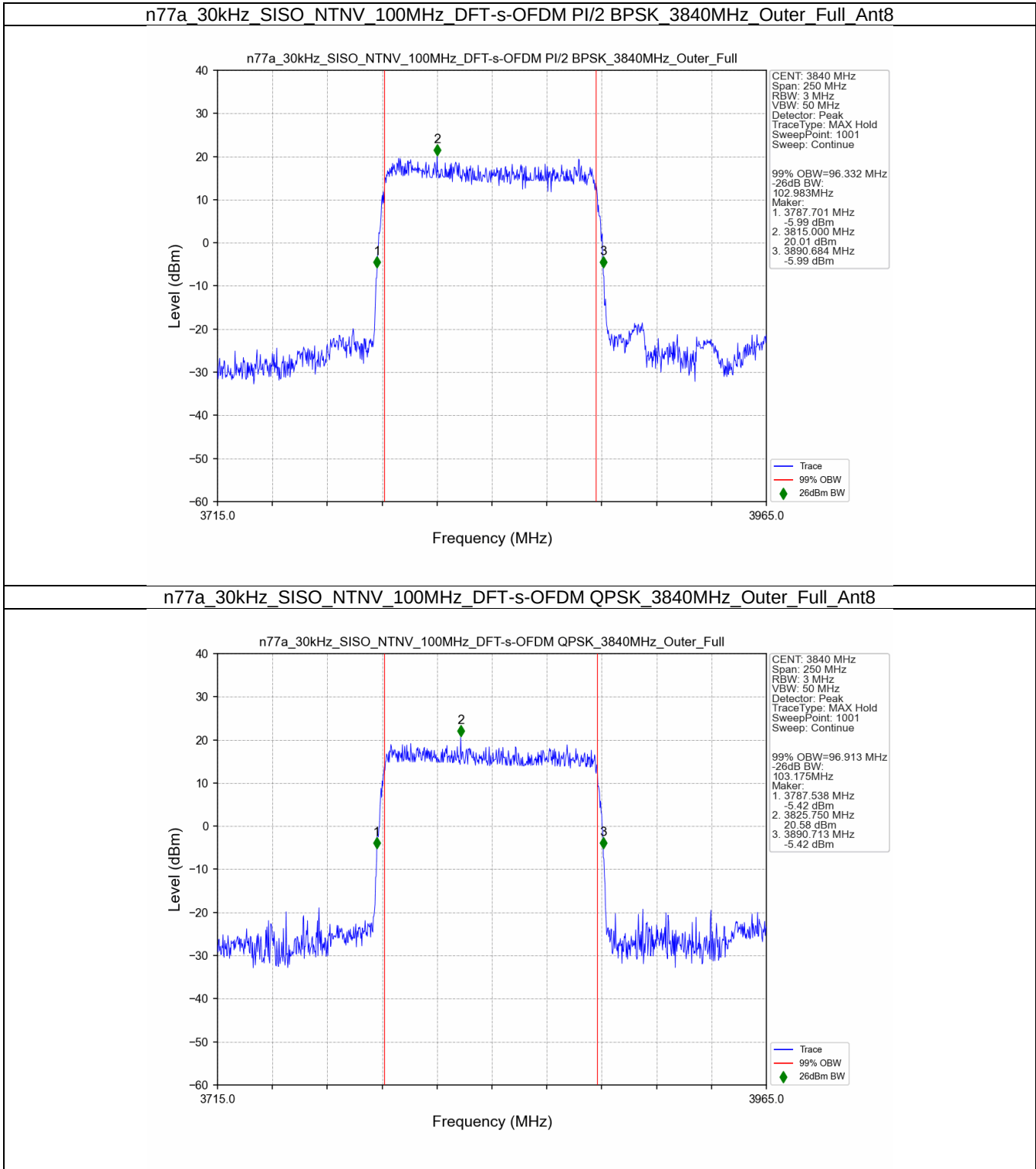


n77a_30kHz_SISO_NTNV_90MHz_CP-OFDM 64 QAM_3840MHz_Outer_Full_Ant8

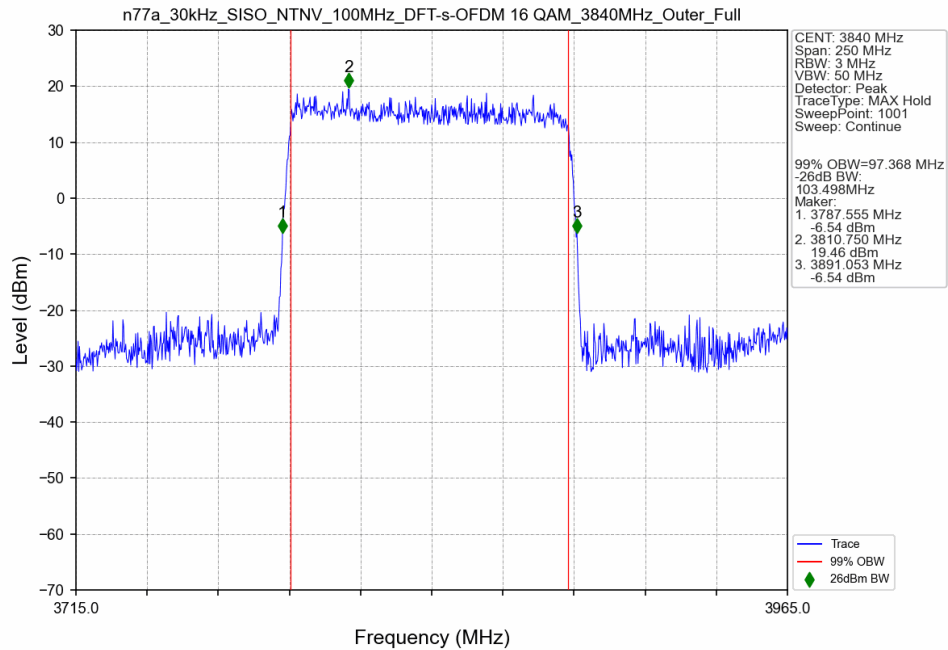




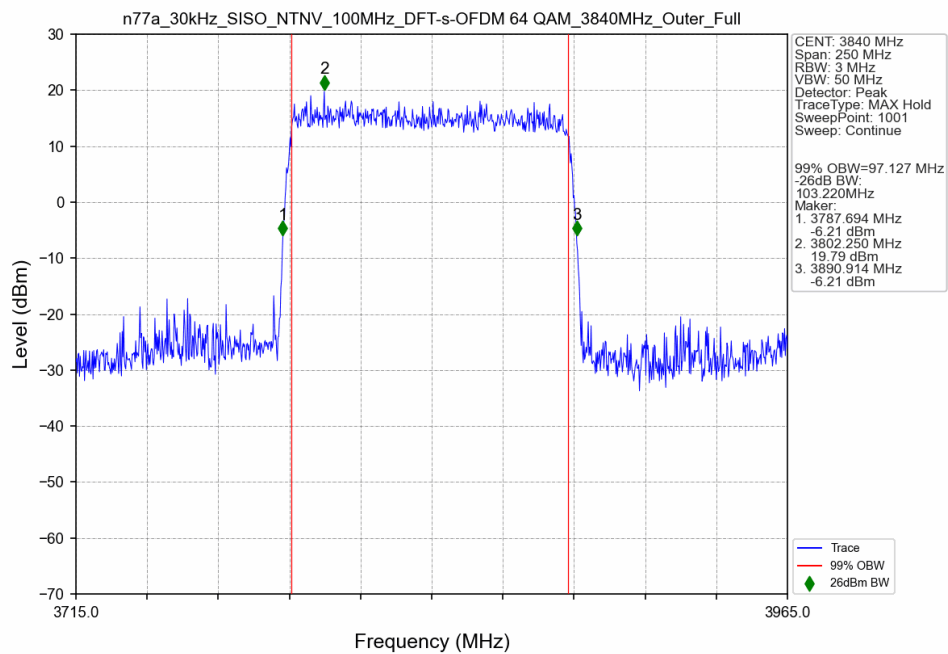
3.2.12 30_S_100M_NTNV



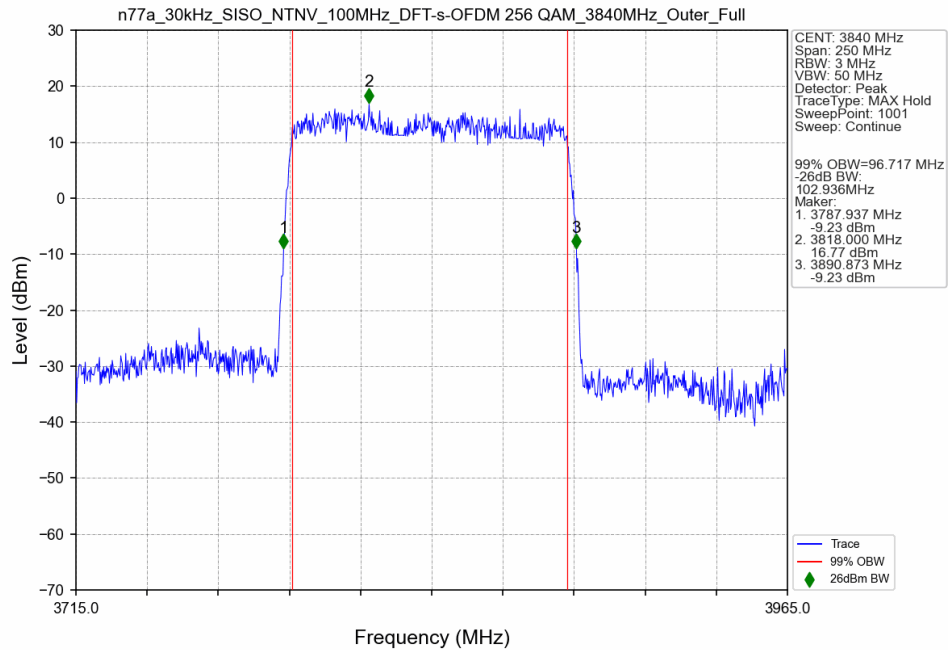
n77a_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM_16_QAM_3840MHz_Outer_Full_Ant8



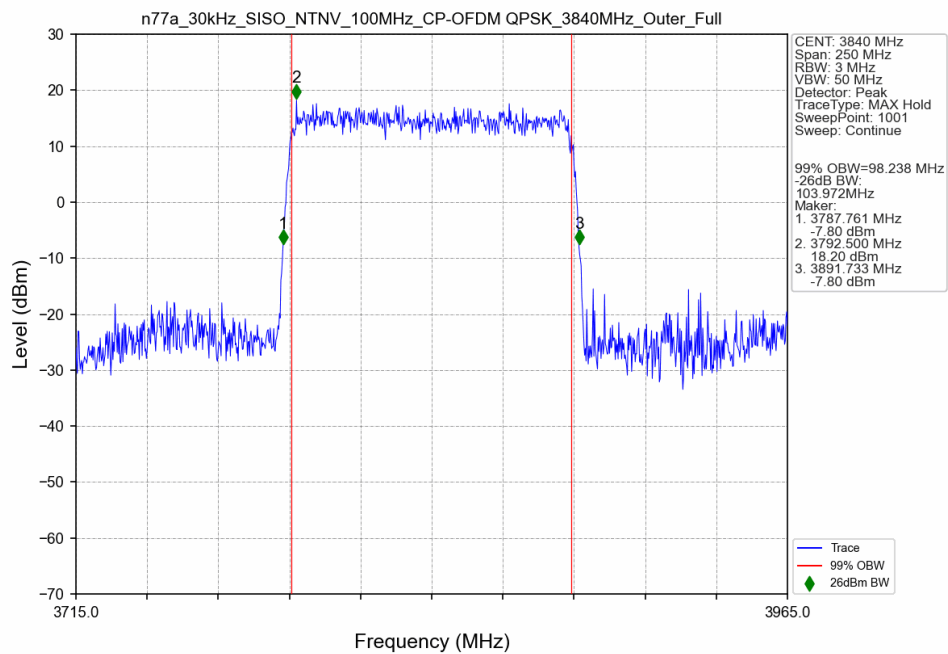
n77a_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM_64_QAM_3840MHz_Outer_Full_Ant8



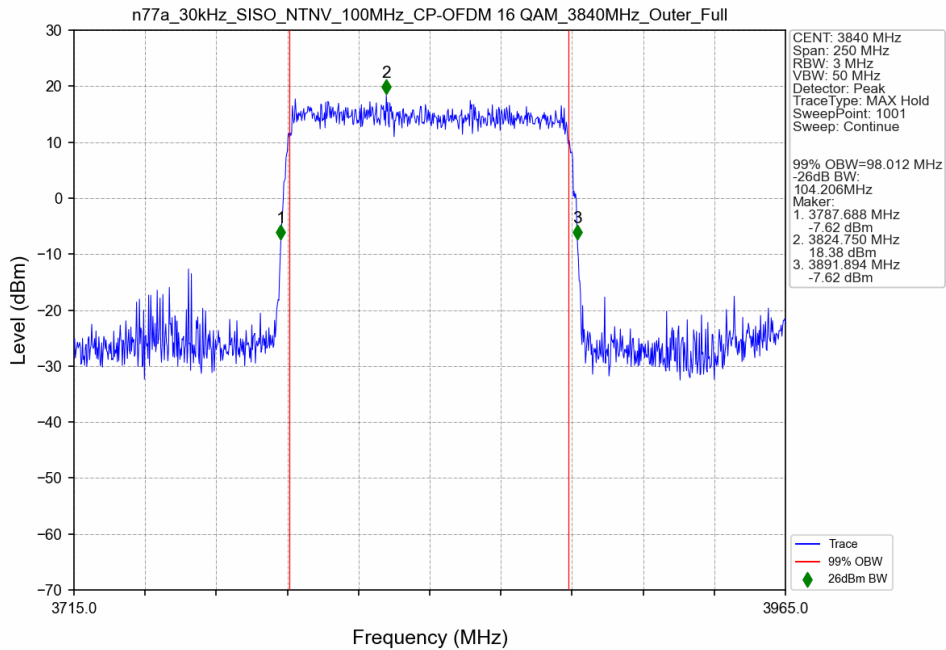
n77a_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM 256 QAM_3840MHz_Outer_Full_Ant8



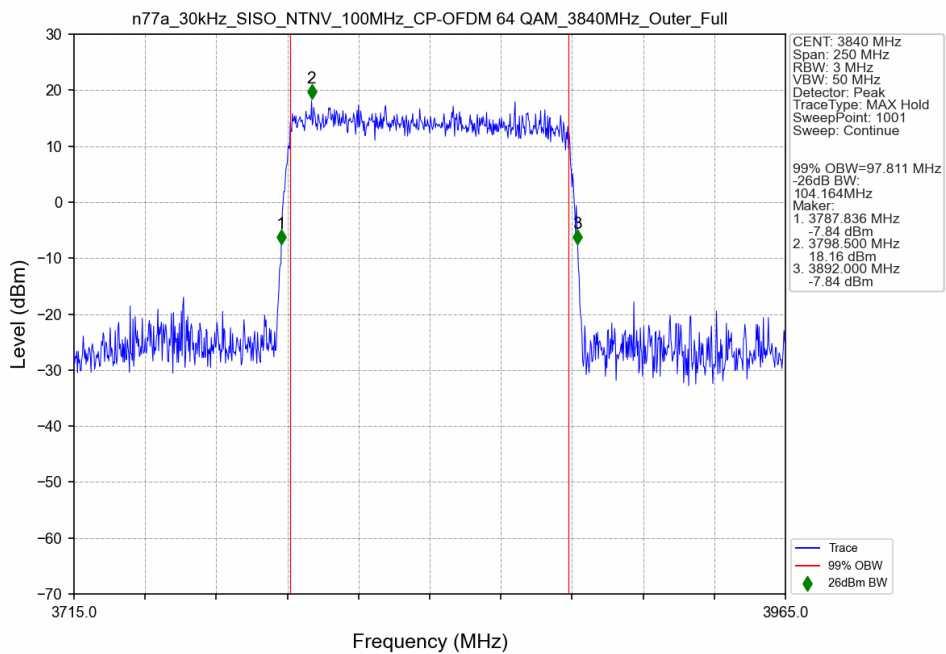
n77a_30kHz_SISO_NTNV_100MHz_CP-OFDM QPSK_3840MHz_Outer_Full_Ant8

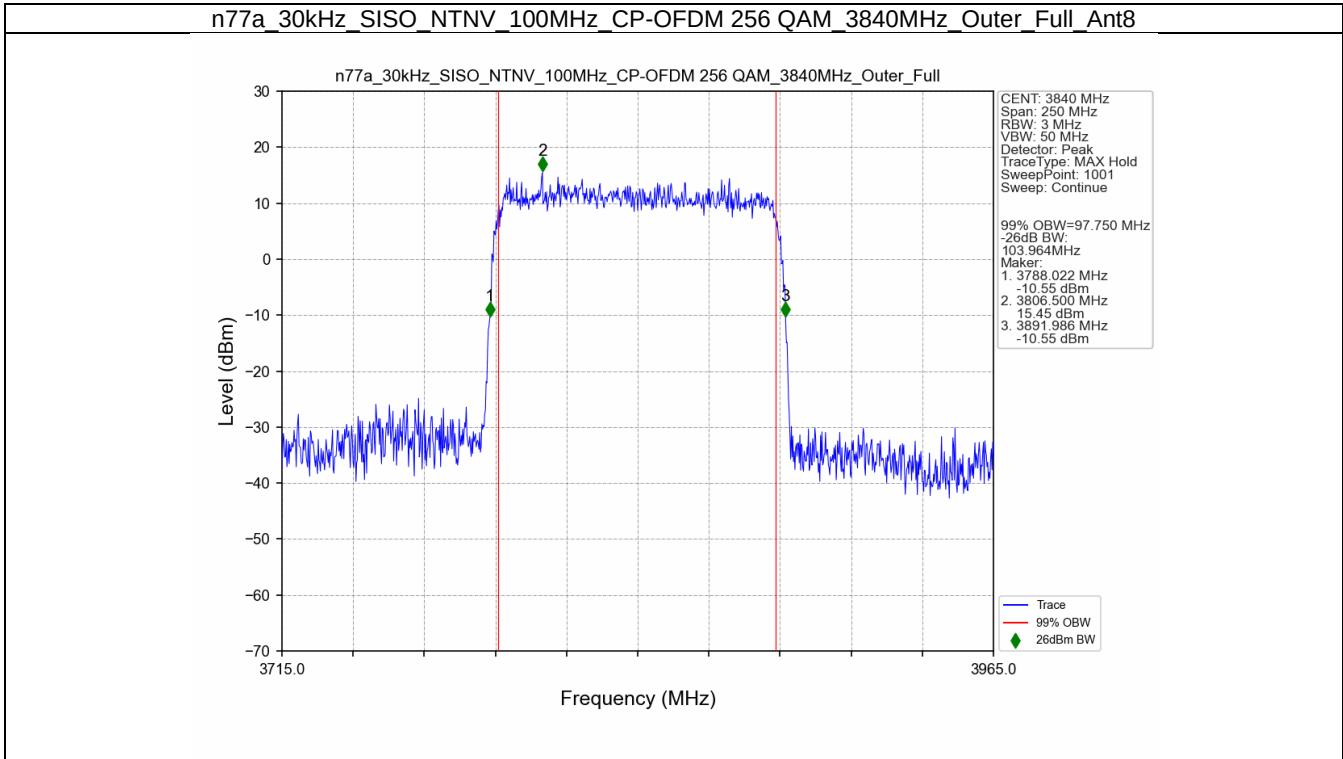


n77a_30kHz_SISO_NTNV_100MHz_CP-OFDM 16 QAM_3840MHz_Outer_Full_Ant8



n77a_30kHz_SISO_NTNV_100MHz_CP-OFDM 64 QAM_3840MHz_Outer_Full_Ant8





4. Peak-Average Ratio

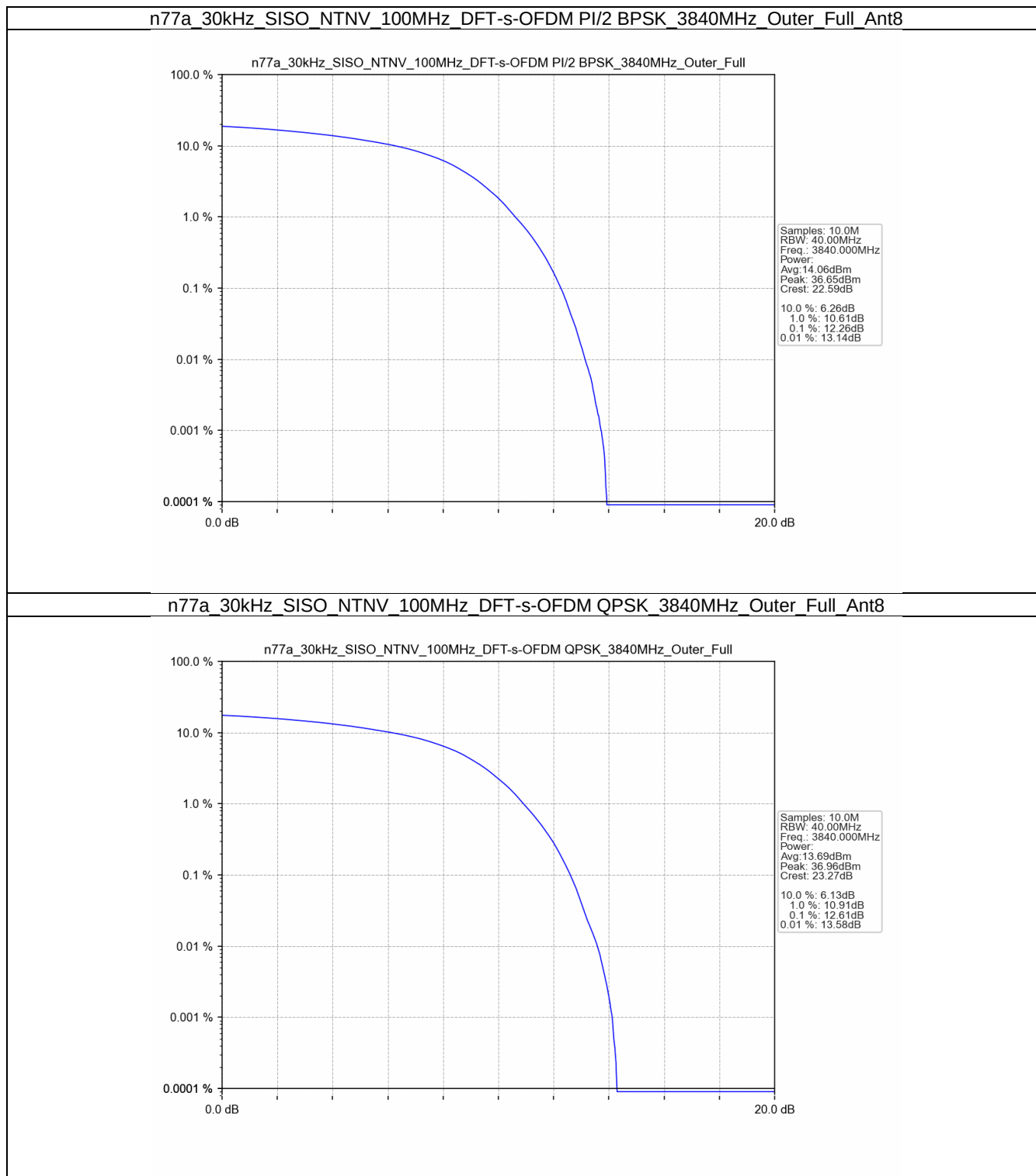
4.1 Test Result

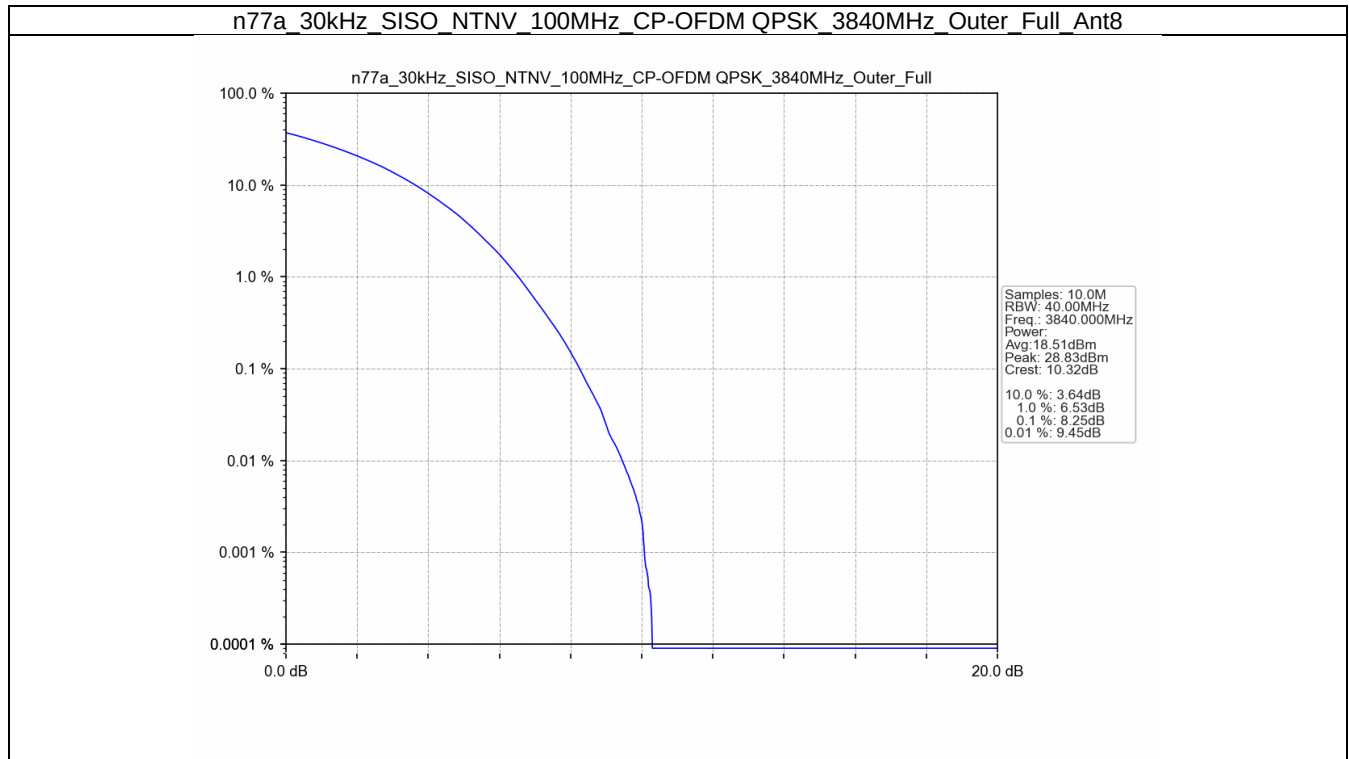
4.1.1 30_S_100M_NTNV

5G NR n77a 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	3840	Outer_Full	12.26	/	/	<=13	Pass
DFT-s-OFDM QPSK	3840	Outer_Full	12.61	/	/	<=13	Pass
CP-OFDM QPSK	3840	Outer_Full	8.25	/	/	<=13	Pass

4.2 Test Graph

4.2.1 30_S_100M_NTNV





5. Spurious Emission

5.1 Test Result

5.1.1 30_S_10M_NTNV

5G NR n77a SCS=30kHz SISO 10MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3705	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	3705	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
CP-OFDM QPSK	3705	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass

5.1.2 30_S_50M_NTNV

5G NR n77a SCS=30kHz SISO 50MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3725.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	3725.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
CP-OFDM QPSK	3725.01	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass

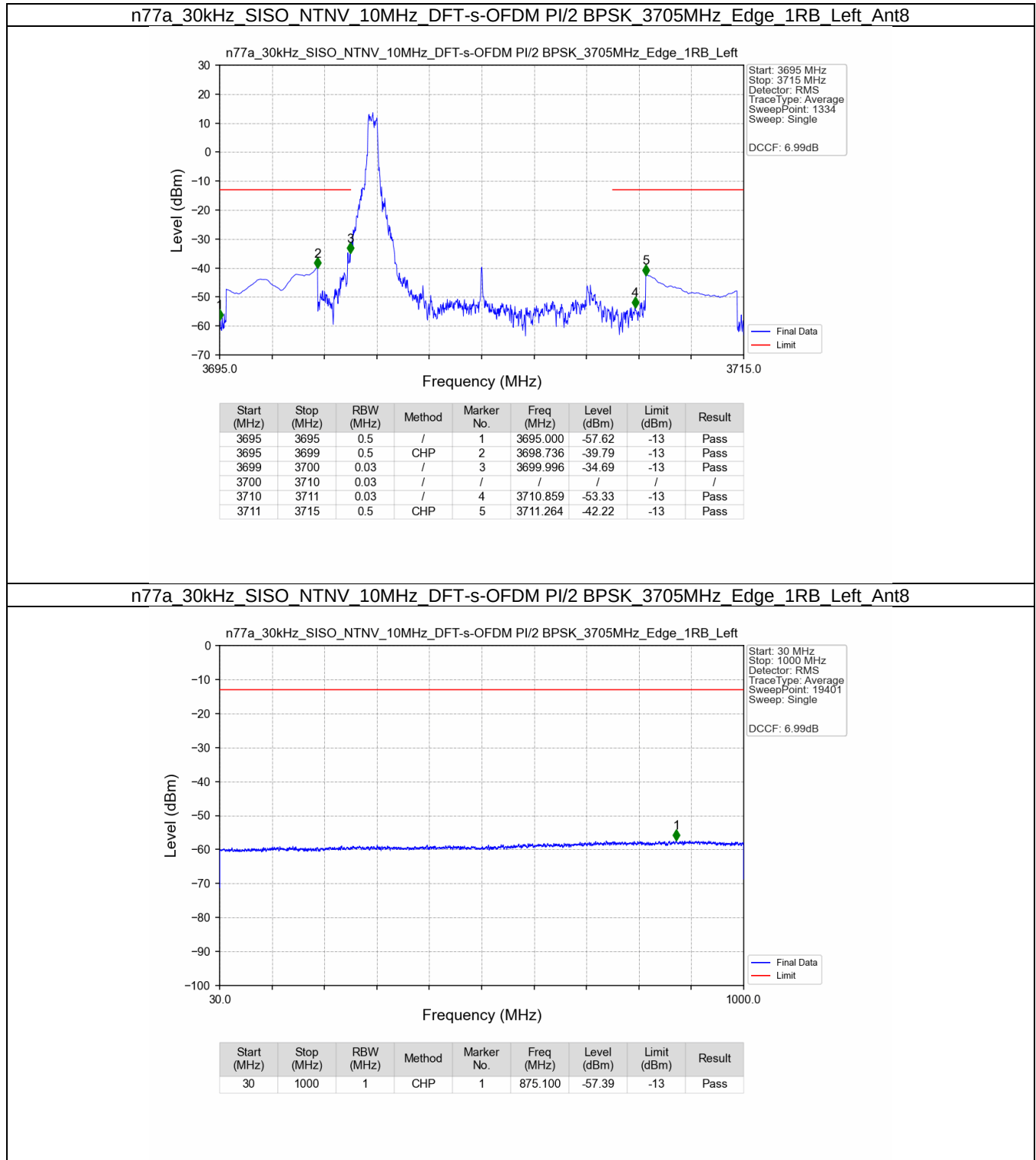
5.1.3 30_S_100M_NTNV

5G NR n77a SCS=30kHz SISO 100MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission				Verdict
			Ant8	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3750	Edge_1RB_Left	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
	3840	Edge_1RB_Left	Refer To Test Graph				Pass
		Edge_1RB_Right	Refer To Test Graph				Pass
		Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM QPSK	3750	Edge_1RB_Left	Refer To Test Graph				Pass

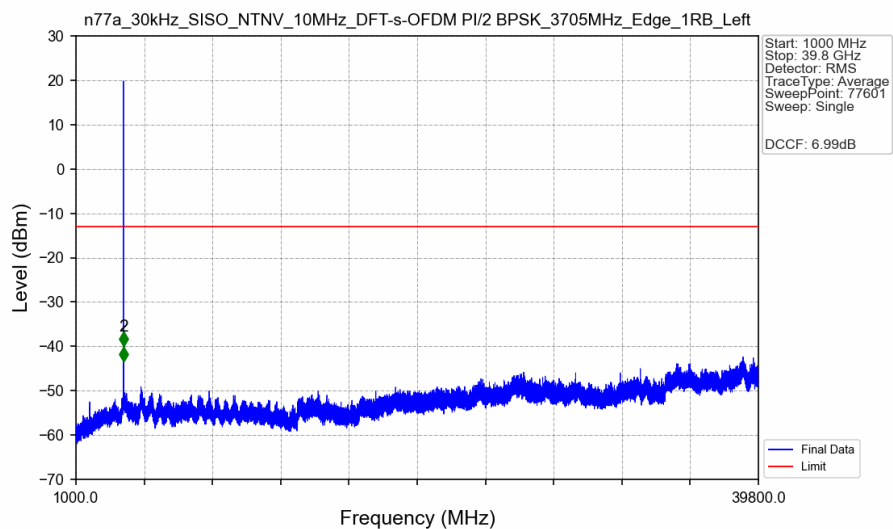
		Outer_Full	Refer To Test Graph	Pass
	3840	Edge_1RB_Left	Refer To Test Graph	Pass
	3930	Edge_1RB_Right	Refer To Test Graph	Pass
		Outer_Full	Refer To Test Graph	Pass
CP-OFDM QPSK	3750	Edge_1RB_Left	Refer To Test Graph	Pass
		Outer_Full	Refer To Test Graph	Pass
	3840	Edge_1RB_Left	Refer To Test Graph	Pass
	3930	Edge_1RB_Right	Refer To Test Graph	Pass
		Outer_Full	Refer To Test Graph	Pass

5.2 Test Graph

5.2.1 30_S_10M_NTNV

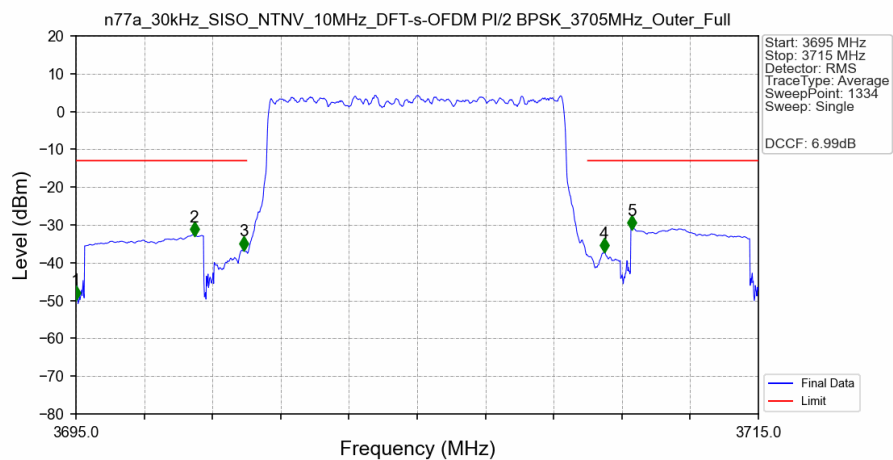


n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3705MHz_Edge_1RB_Left_Ant8



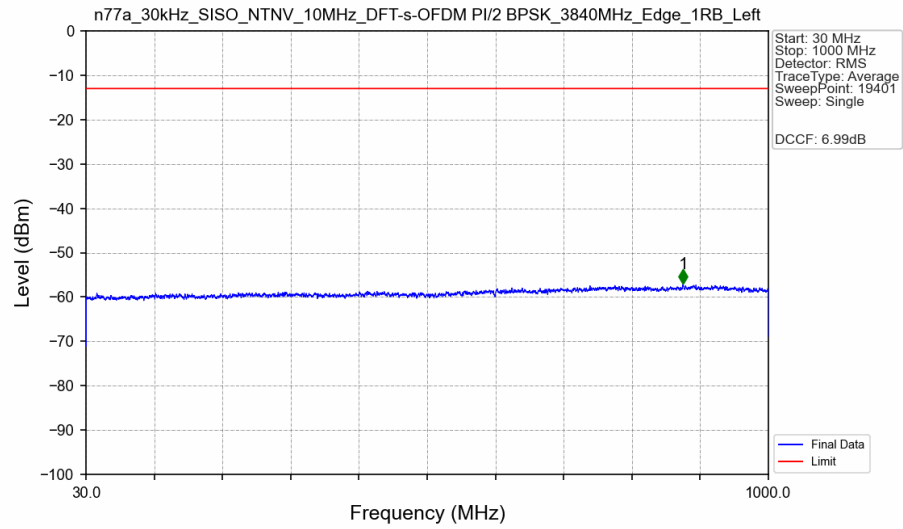
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	3695	1	/	1	3694.500	-43.38	-13	Pass
3695	3715	1	/	/	/	/	/	/
3715	39800	1	/	2	3715.500	-39.96	-13	Pass

n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3705MHz_Outer_Full_Ant8



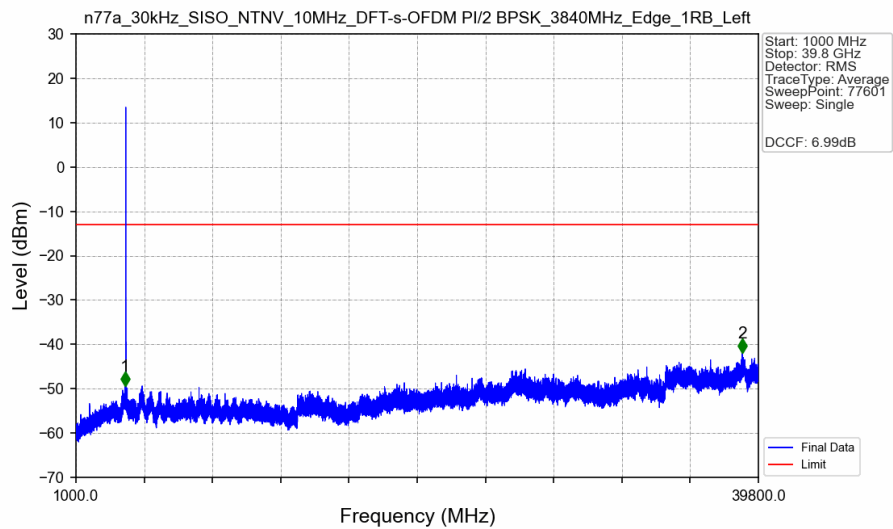
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3695	3695	0.5	/	1	3695.000	-49.43	-13	Pass
3695	3699	0.5	CHP	2	3698.466	-32.61	-13	Pass
3699	3700	0.09283	CHP	3	3699.921	-36.45	-13	Pass
3700	3710	0.09283	CHP	/	/	/	/	/
3710	3711	0.09283	CHP	4	3710.484	-36.98	-13	Pass
3711	3715	0.5	CHP	5	3711.294	-30.97	-13	Pass

n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3840MHz_Edge_1RB_Left_Ant8

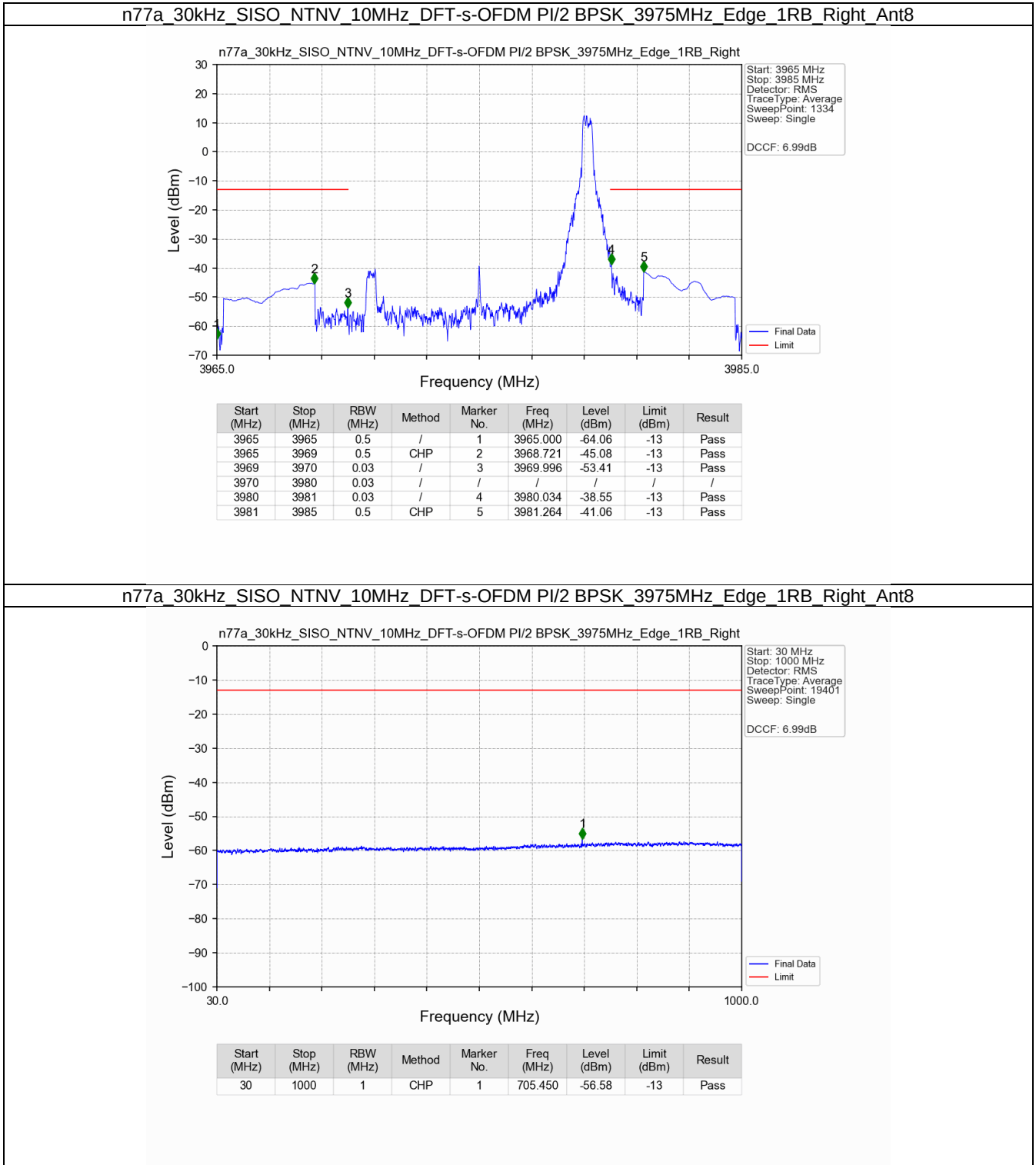


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	878.800	-57.03	-13	Pass

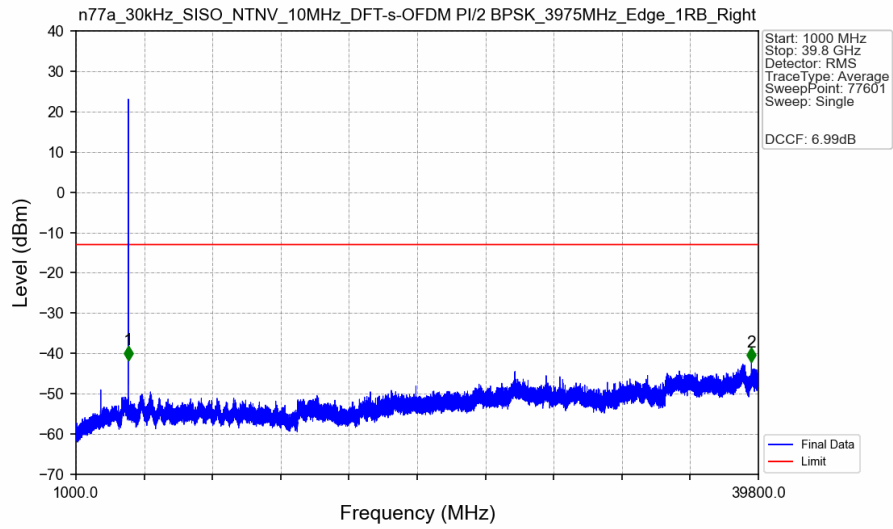
n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3840MHz_Edge_1RB_Left_Ant8



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	3830	1	/	1	3798.500	-49.43	-13	Pass
3830	3850	1	/	/	/	/	/	/
3850	39800	1	/	2	3882.000	-41.94	-13	Pass

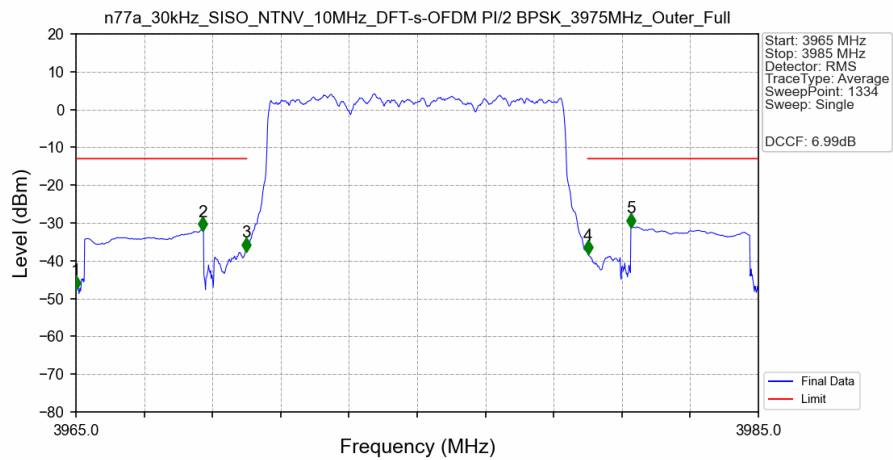


n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3975MHz_Edge_1RB_Right_Ant8



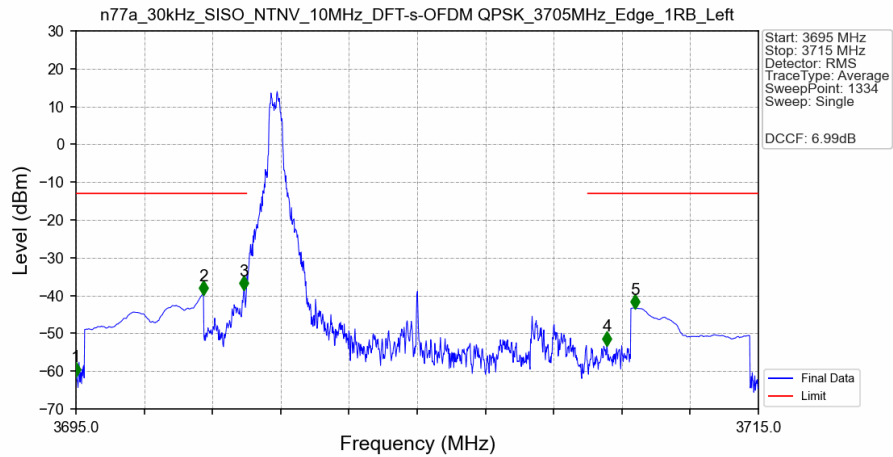
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	3965	1	/	1	3964.000	-41.59	-13	Pass
3965	3985	1	/	/	/	/	/	/
3985	39800	1	/	2	39403.000	-42.08	-13	Pass

n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_3975MHz_Outer_Full_Ant8



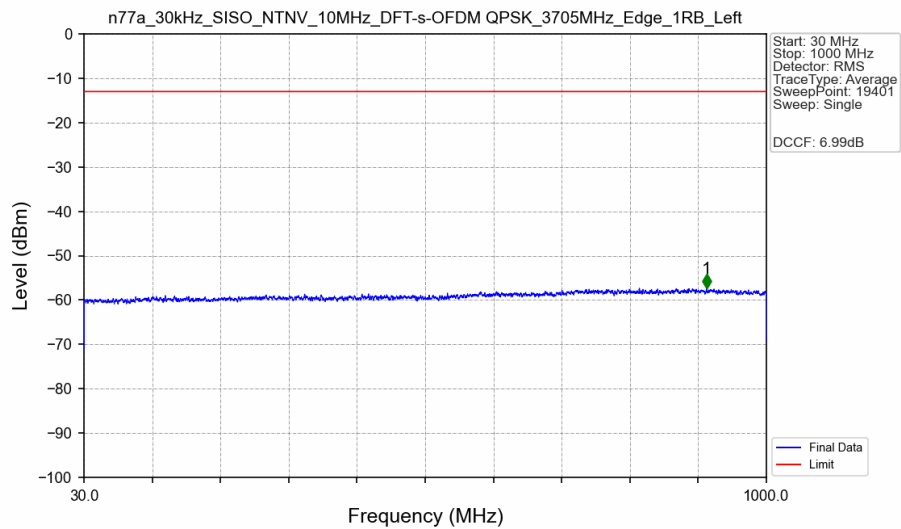
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3965	3965	0.5	/	1	3965.000	-47.34	-13	Pass
3965	3969	0.5	CHP	2	3968.721	-31.77	-13	Pass
3969	3970	0.09283	CHP	3	3969.981	-37.30	-13	Pass
3970	3980	0.09283	CHP	/	/	/	/	/
3980	3981	0.09283	CHP	4	3980.004	-37.99	-13	Pass
3981	3985	0.5	CHP	5	3981.264	-30.87	-13	Pass

n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_3705MHz_Edge_1RB_Left_Ant8



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3695	3695	0.5	/	1	3695.000	-61.04	-13	Pass
3695	3699	0.5	CHP	2	3698.736	-39.60	-13	Pass
3699	3700	0.03	/	3	3699.921	-38.21	-13	Pass
3700	3710	0.03	/	/	/	/	/	/
3710	3711	0.03	/	4	3710.559	-52.92	-13	Pass
3711	3715	0.5	CHP	5	3711.384	-43.23	-13	Pass

n77a_30kHz_SISO_NTNV_10MHz_DFT-s-OFDM_QPSK_3705MHz_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	914.800	-57.30	-13	Pass