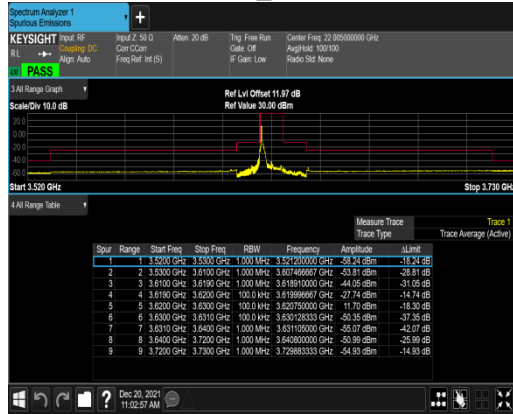
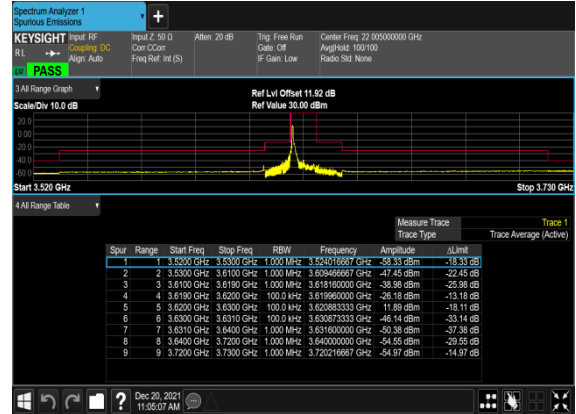




N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



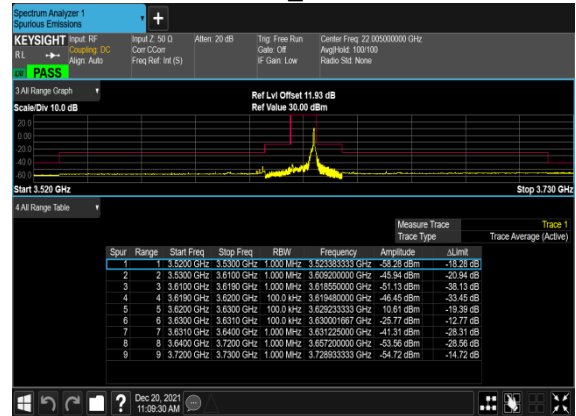
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



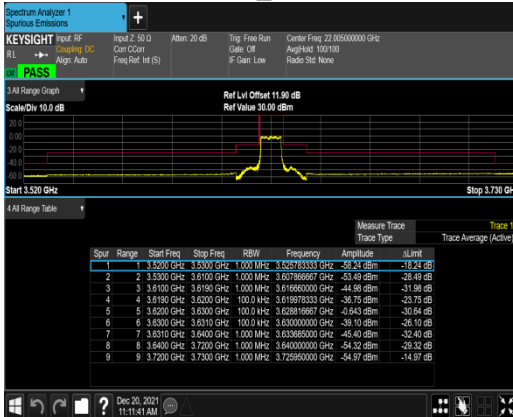
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Mid_CH



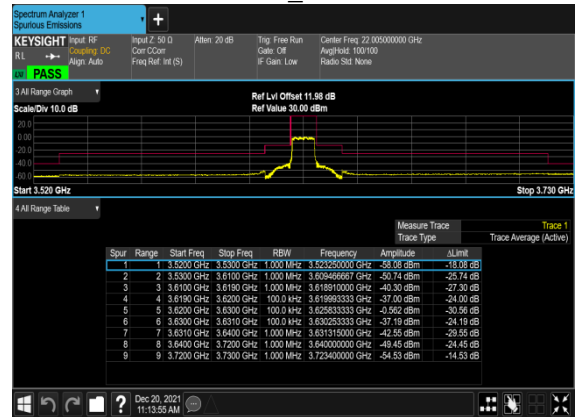
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH



N48(10M)_DFT-s-OFDM_BPSK_Outer_Full_Mid_CH

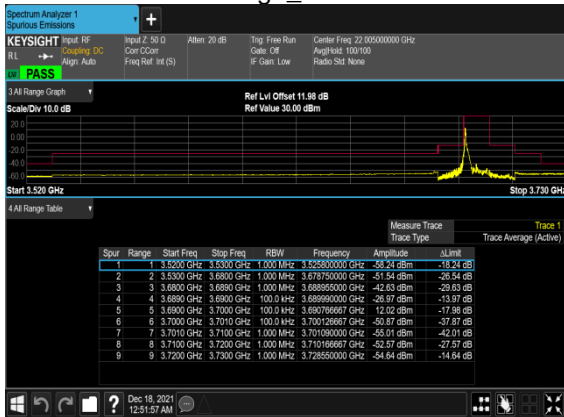


N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

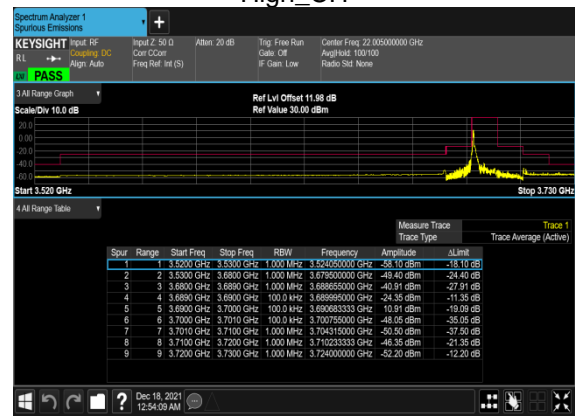




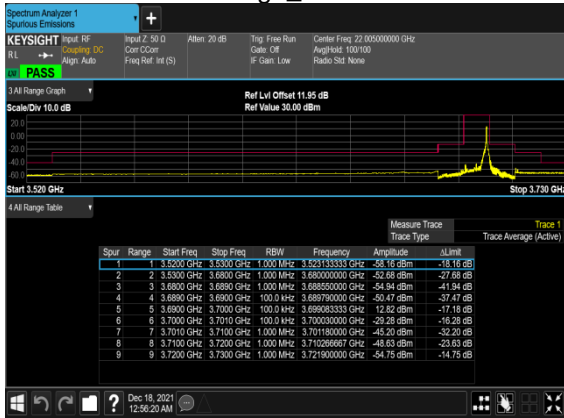
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



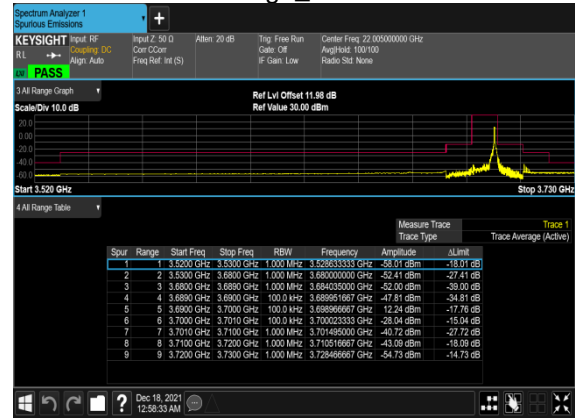
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



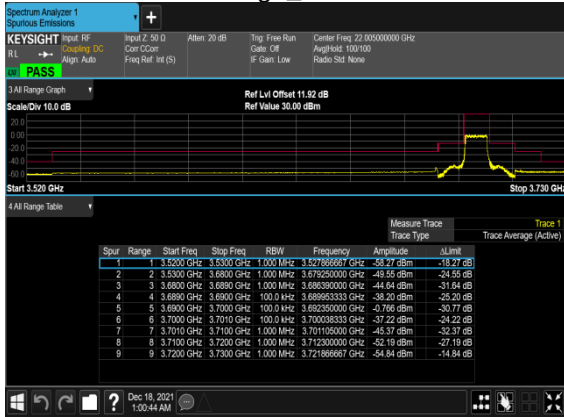
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



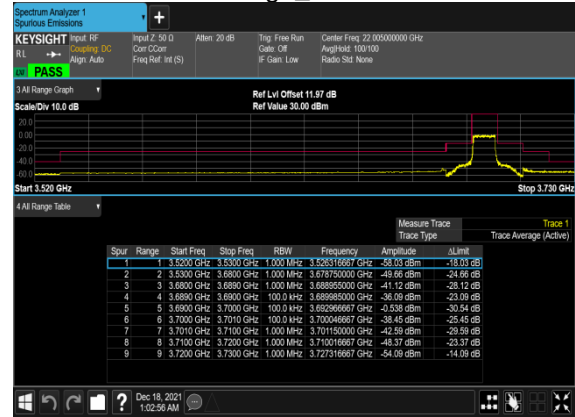
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N48(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



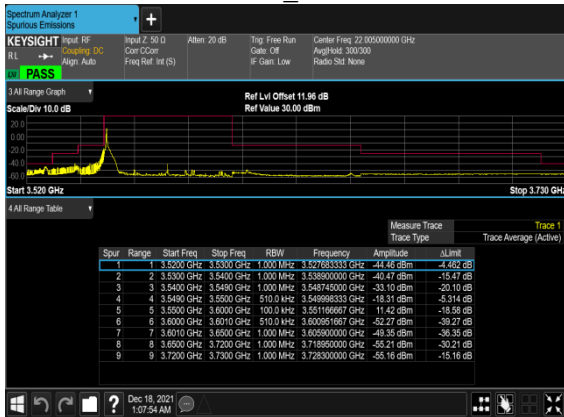
N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH





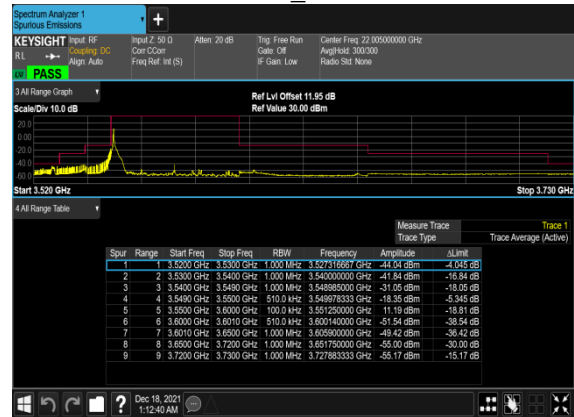
N48(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_

Low_CH



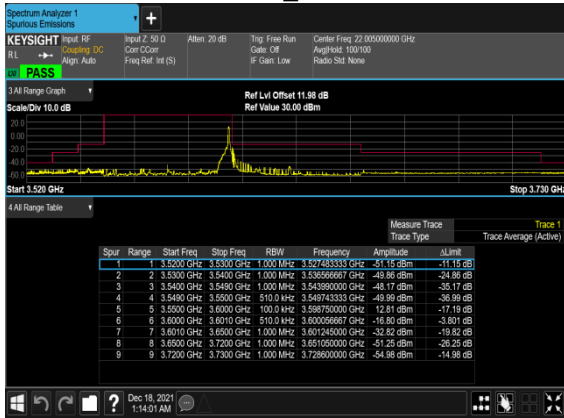
N48(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_

Low_CH



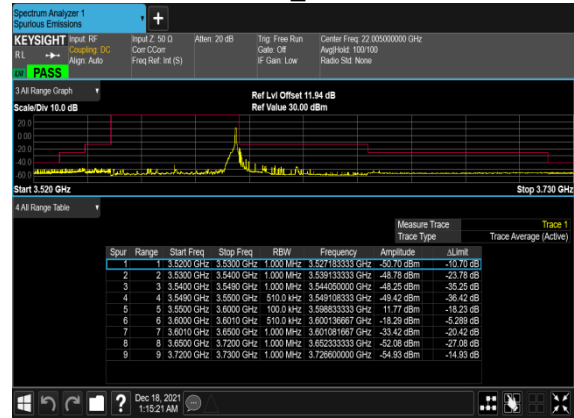
N48(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_

Low_CH



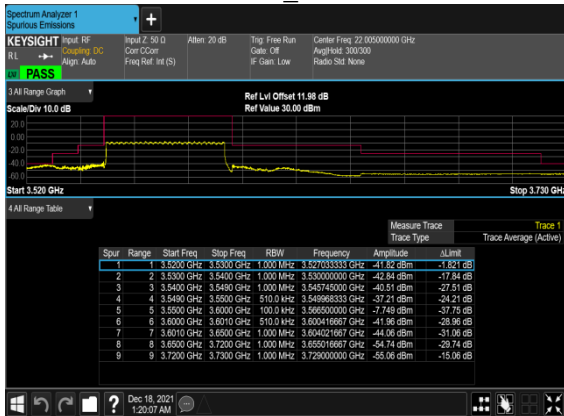
N48(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_

Low_CH



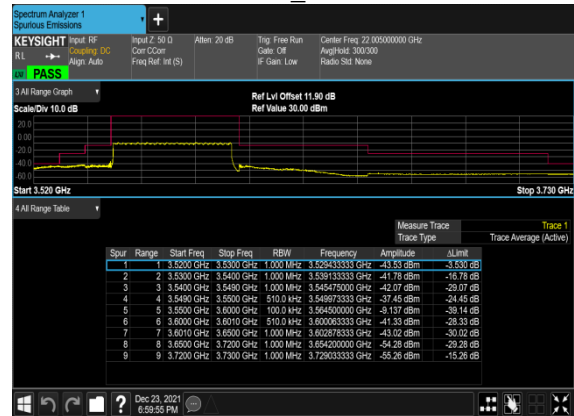
N48(50M)_DFT-s-OFDM_BPSK_Outer_Full_

Low_CH



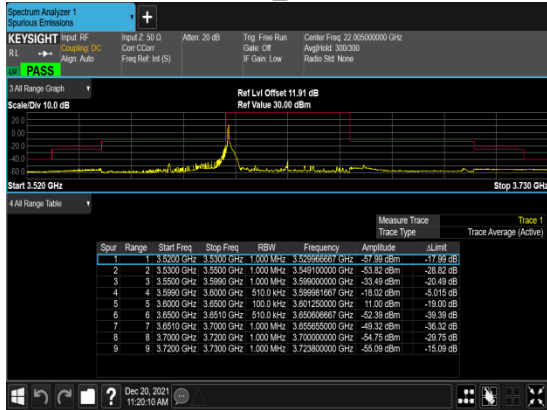
N48(50M)_DFT-s-OFDM_QPSK_Outer_Full_

Low_CH

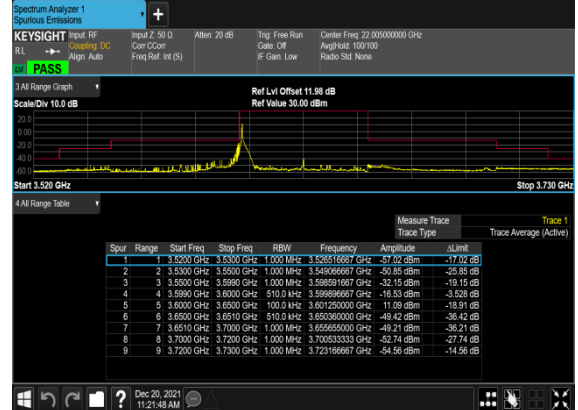




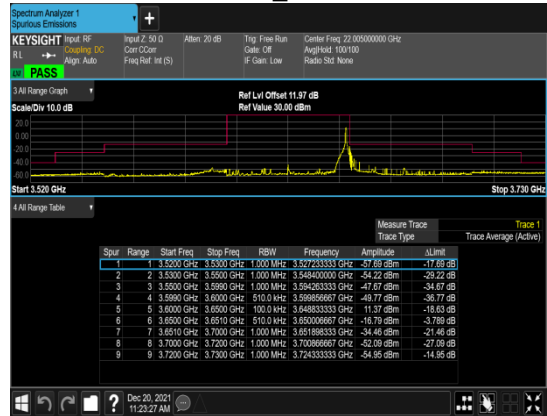
N48(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



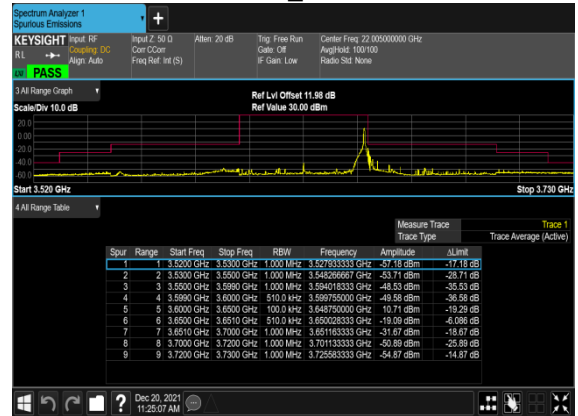
N48(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



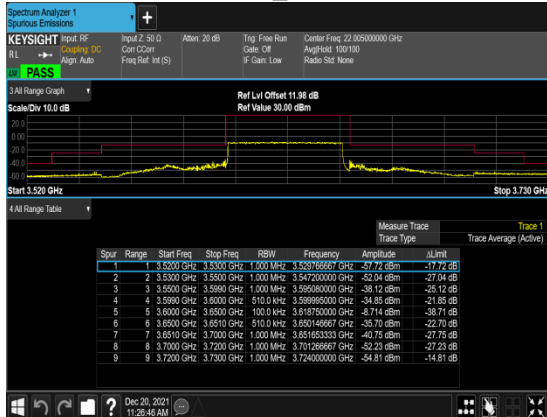
N48(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Mid_CH



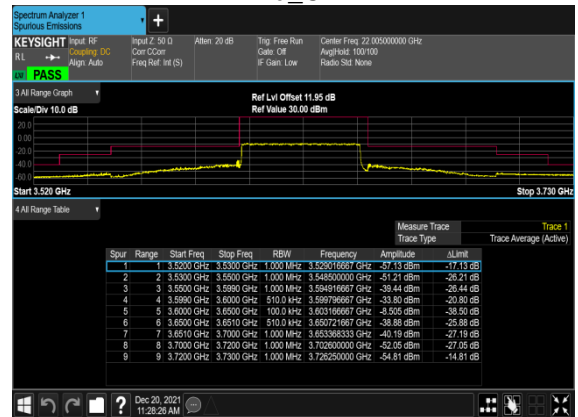
N48(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH



N48(50M)_DFT-s-OFDM_BPSK_Outer_Full_Mid_CH

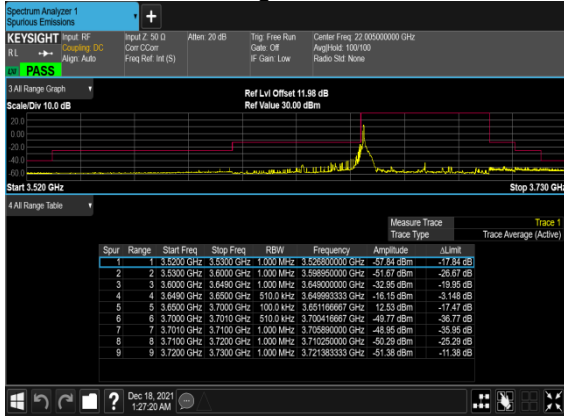


N48(50M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

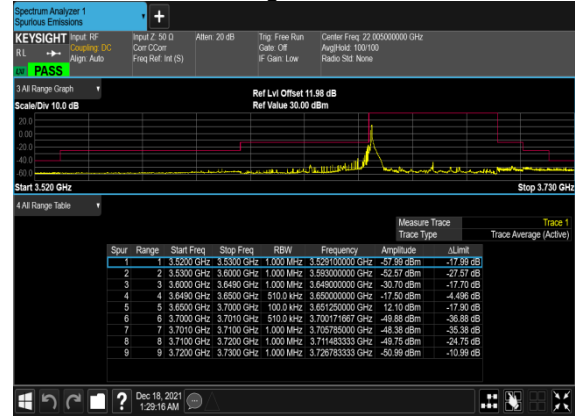




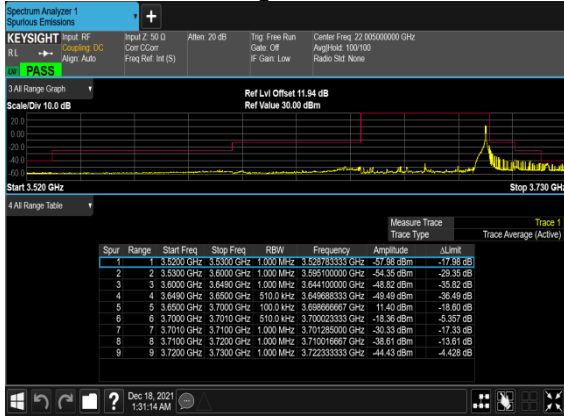
N48(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



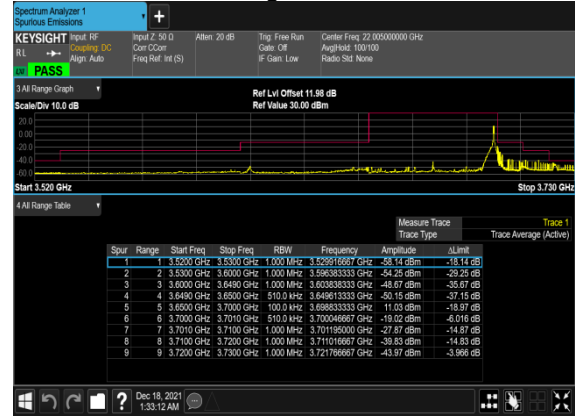
N48(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



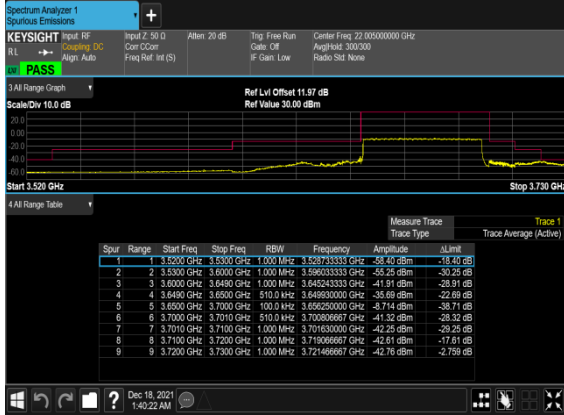
N48(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



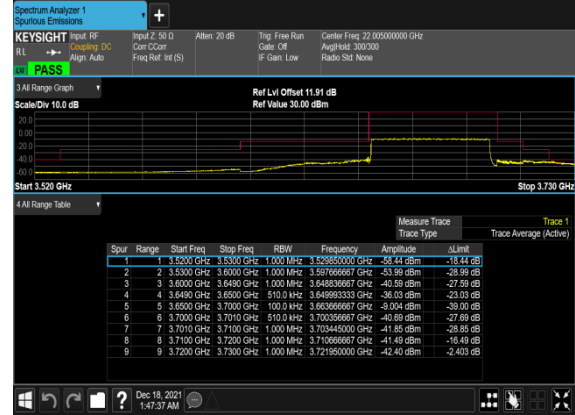
N48(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N48(50M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



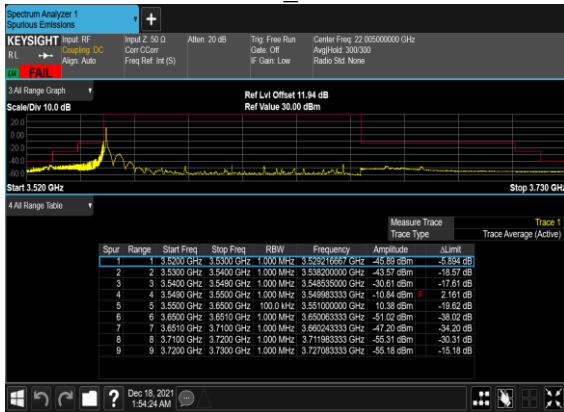
N48(50M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH





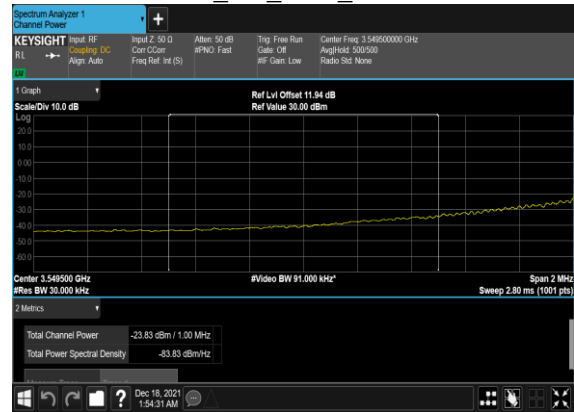
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_

Low_CH



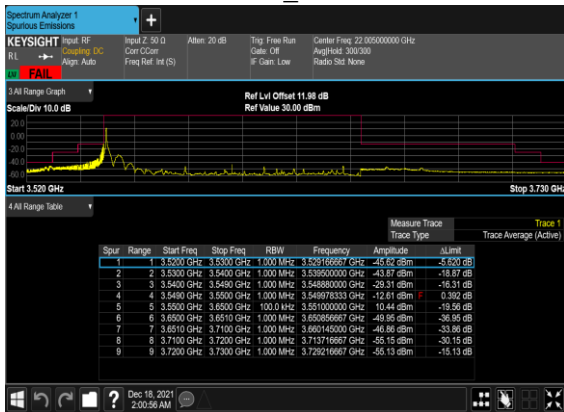
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_

Low_CH_CHP_PASS



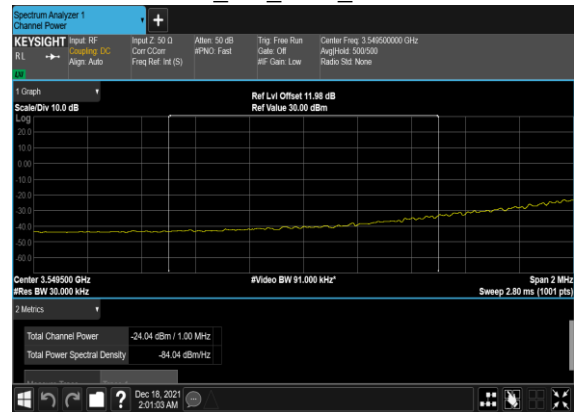
N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_

Low_CH



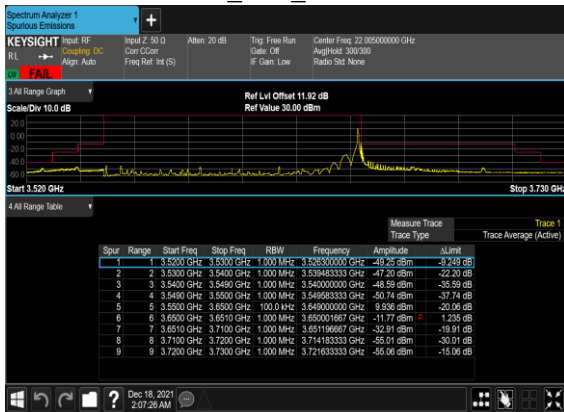
N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_

Low_CH_CHP_PASS



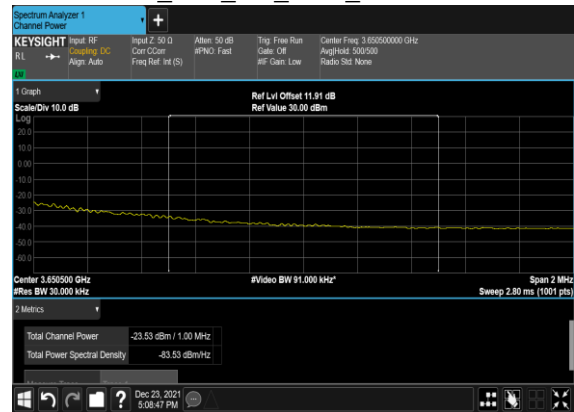
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right

Low_CH



N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right

Low_CH_CHP_PASS



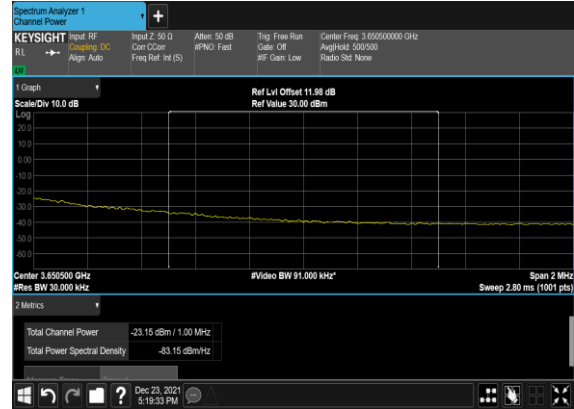
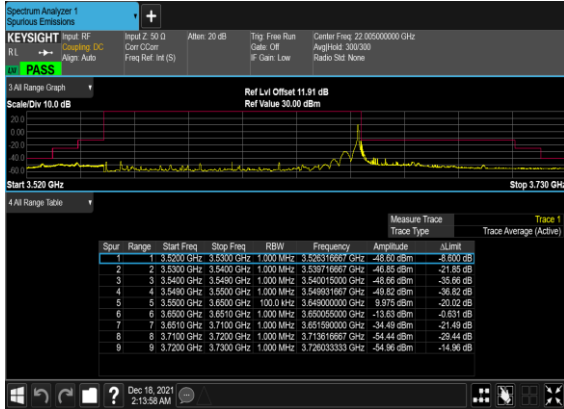


N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right

N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right

Low_CH

Low_CH_CHP_PASS

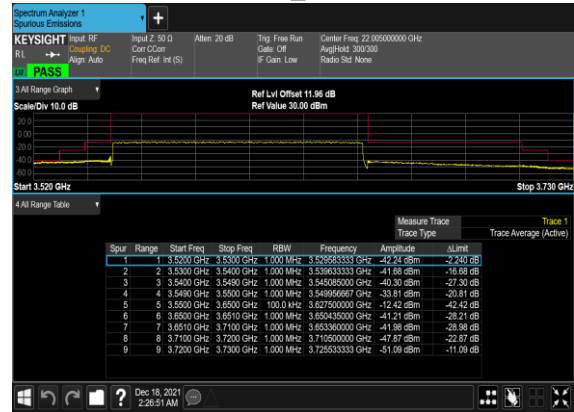
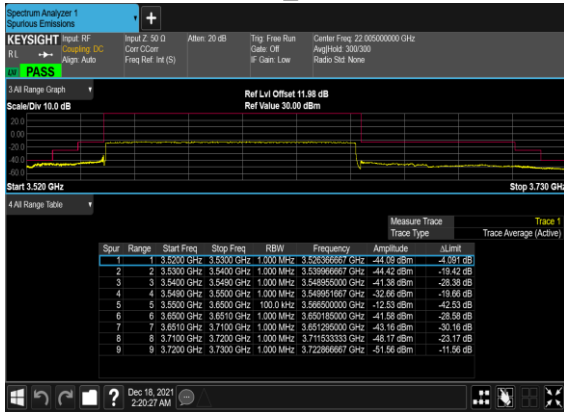


N48(100M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

N48(100M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

Low_CH

Low_CH

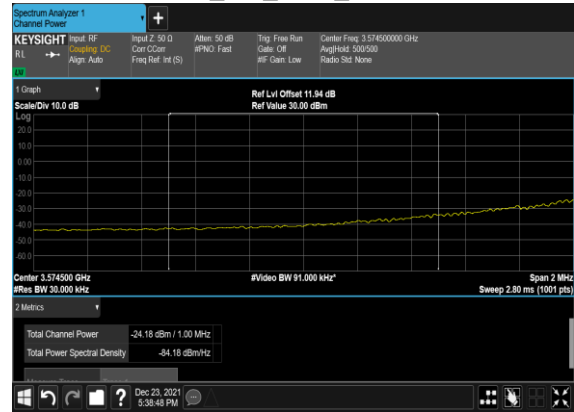
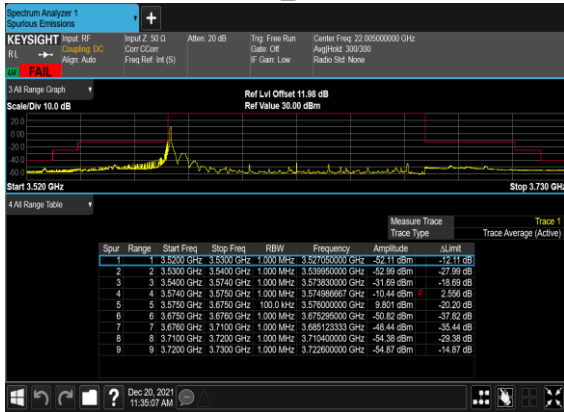


N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left

N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left

Mid_CH

Mid_CH_CHP_PASS

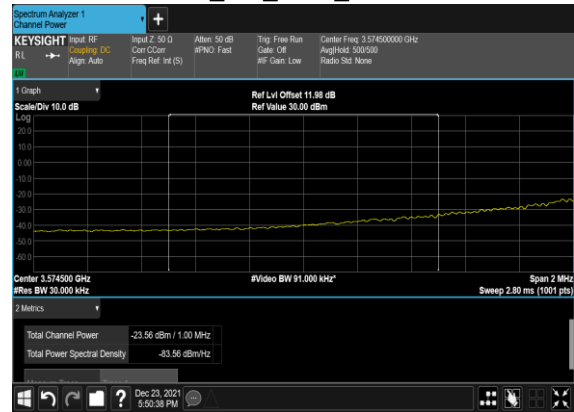




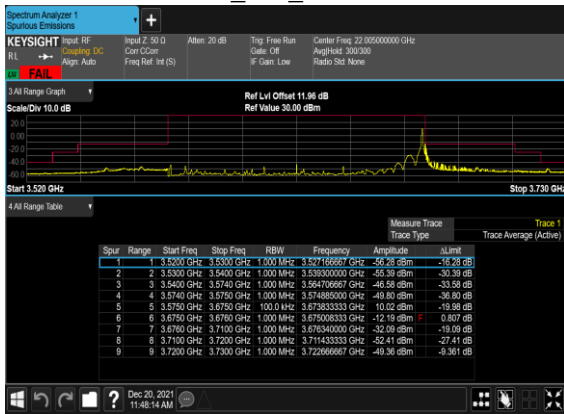
N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



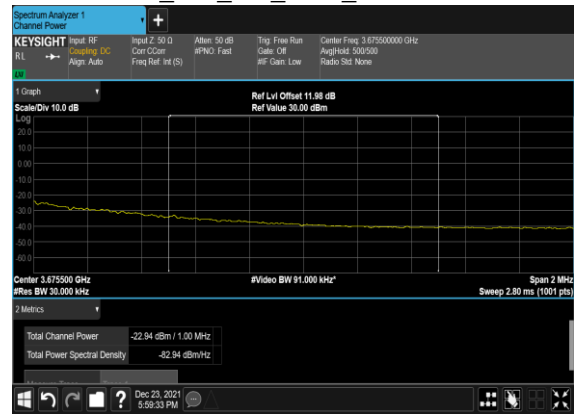
N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH_CHP_PASS



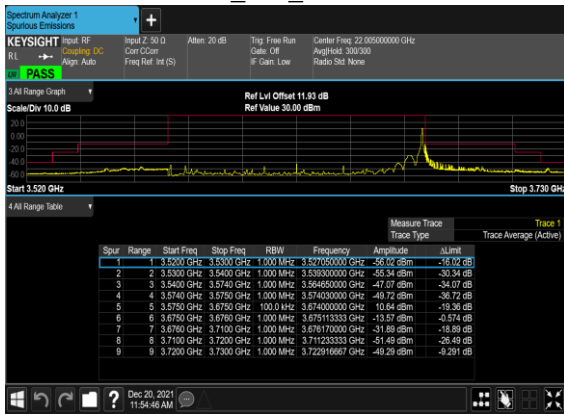
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Mid_CH



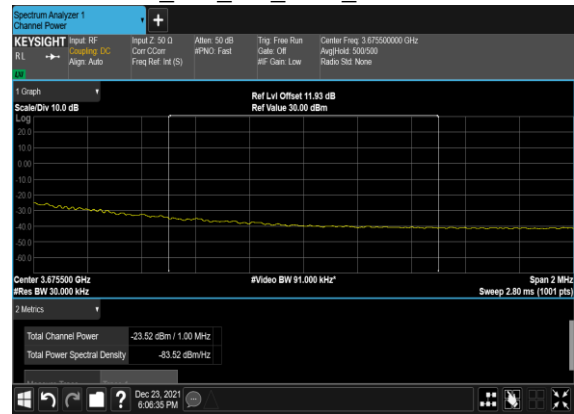
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Mid_CH_CHP_PASS



N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH

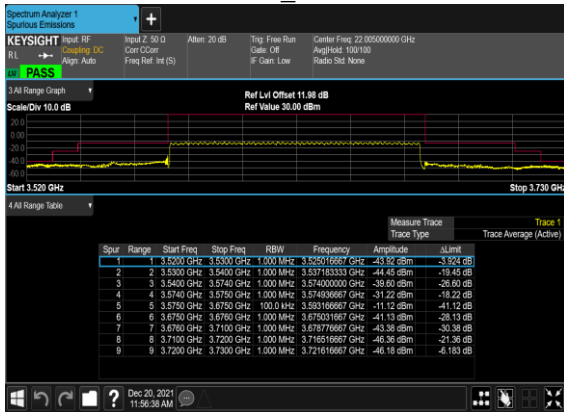


N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH_CHP_PASS

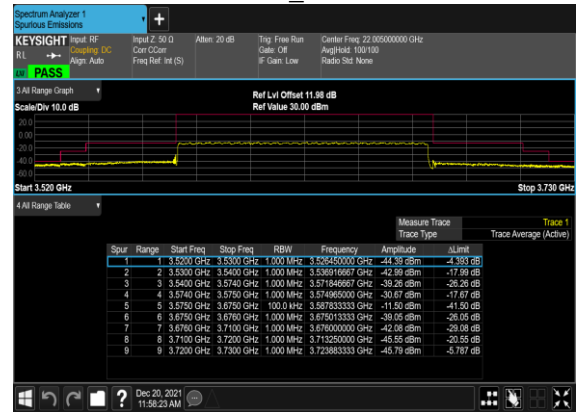




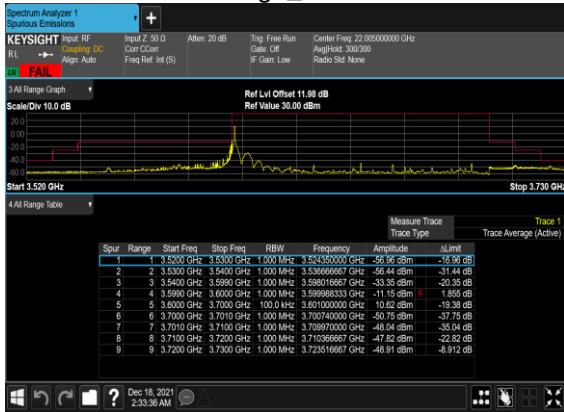
N48(100M)_DFT-s-OFDM_BPSK_Outer_Full_Mid_CH



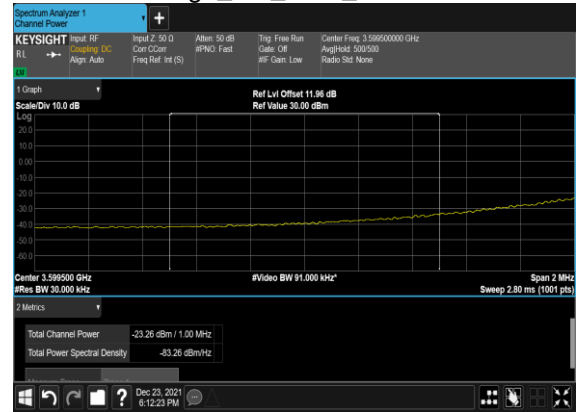
N48(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



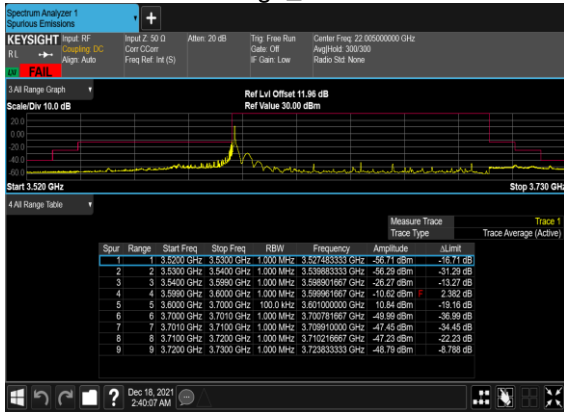
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



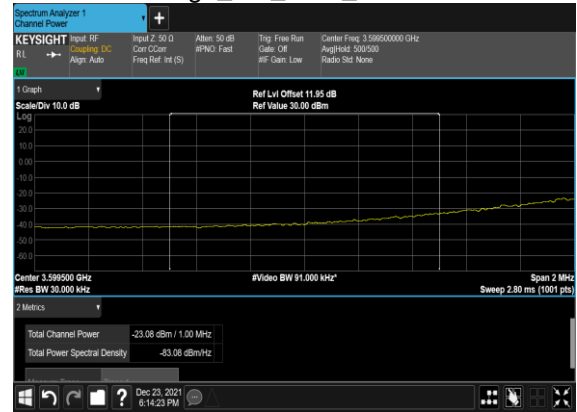
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH_CHP_PASS



N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH_CHP_PASS

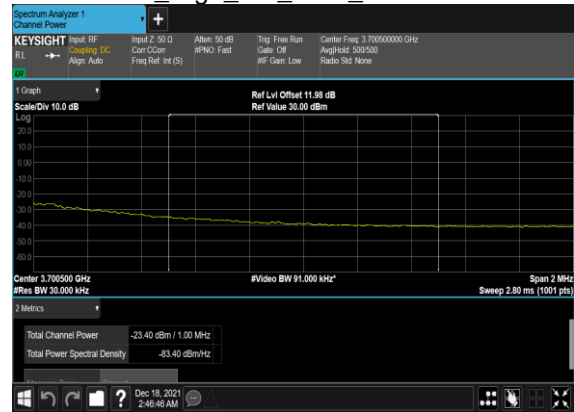




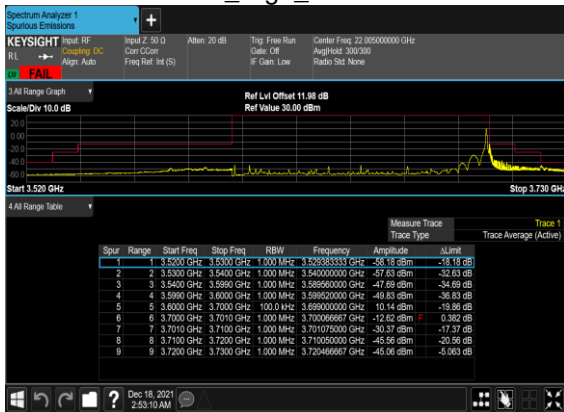
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



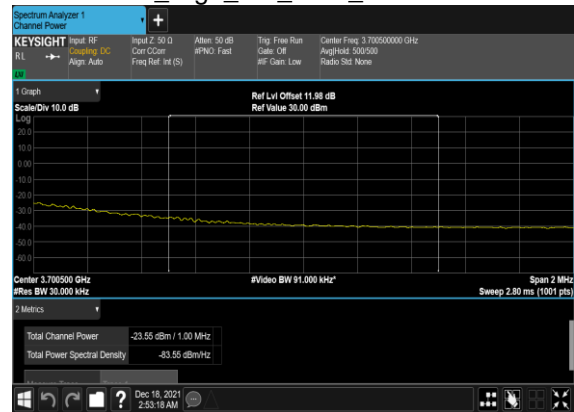
N48(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH_CHP_PASS



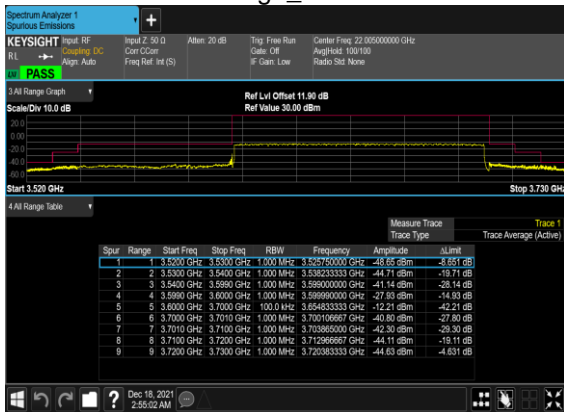
N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



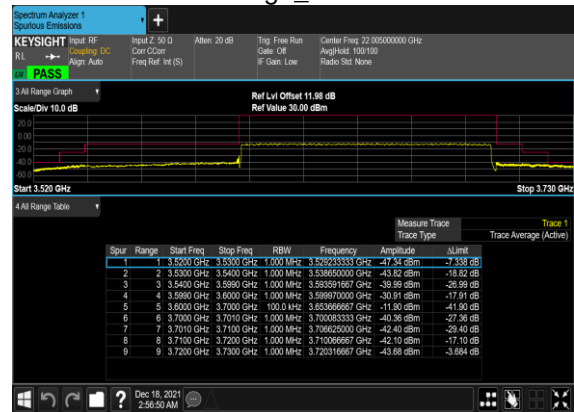
N48(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH_CHP_PASS



N48(100M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



N48(100M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH





A4. FR1 N48 MIMO-ANT5 – SCS 15kHz

A4.1 Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0506	PASS	NV
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0408	PASS	LV
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0298	PASS	HV
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0514	PASS	-30°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0241	PASS	-20°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0266	PASS	-10°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0255	PASS	0°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0519	PASS	10°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0213	PASS	20°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0687	PASS	30°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0227	PASS	40°C
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	0.0473	PASS	50°C

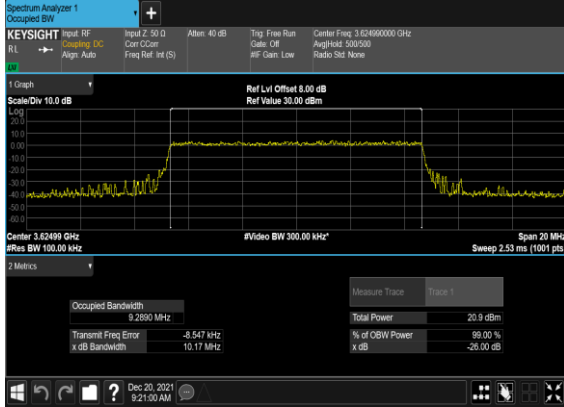


A4.2 Occupied Bandwidth

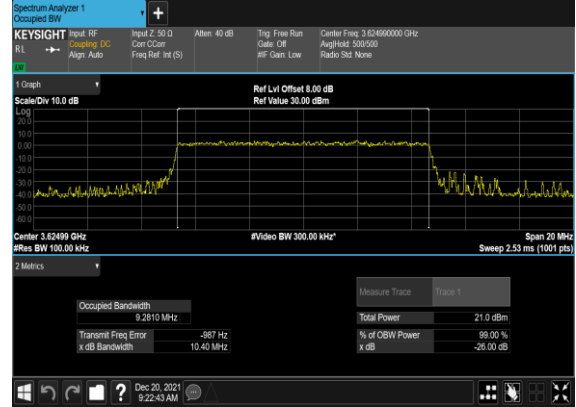
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
48	15	10	641666	3624.99	CP-OFDM QPSK	52@0	9.289	10.17
48	15	10	641666	3624.99	CP-OFDM 16 QAM	52@0	9.281	10.4
48	15	10	641666	3624.99	CP-OFDM 64 QAM	52@0	9.268	9.951
48	15	10	641666	3624.99	CP-OFDM 256 QAM	52@0	9.2883	9.758
48	15	15	641666	3624.99	CP-OFDM QPSK	79@0	14.1	14.73
48	15	15	641666	3624.99	CP-OFDM 16 QAM	79@0	14.081	14.67
48	15	15	641666	3624.99	CP-OFDM 64 QAM	79@0	14.081	14.77
48	15	15	641666	3624.99	CP-OFDM 256 QAM	79@0	14.083	14.73
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	18.897	20.0
48	15	20	641666	3624.99	CP-OFDM 16 QAM	106@0	18.903	19.69
48	15	20	641666	3624.99	CP-OFDM 64 QAM	106@0	18.901	19.86
48	15	20	641666	3624.99	CP-OFDM 256 QAM	106@0	18.946	19.73
48	15	40	641666	3624.99	CP-OFDM QPSK	216@0	38.542	39.95
48	15	40	641666	3624.99	CP-OFDM 16 QAM	216@0	38.471	39.93
48	15	40	641666	3624.99	CP-OFDM 64 QAM	216@0	38.515	39.93
48	15	40	641666	3624.99	CP-OFDM 256 QAM	216@0	38.511	39.97
48	15	50	641666	3624.99	CP-OFDM QPSK	270@0	48.152	49.75
48	15	50	641666	3624.99	CP-OFDM 16 QAM	270@0	48.06	49.93
48	15	50	641666	3624.99	CP-OFDM 64 QAM	270@0	48.142	49.91
48	15	50	641666	3624.99	CP-OFDM 256 QAM	270@0	48.208	50.01



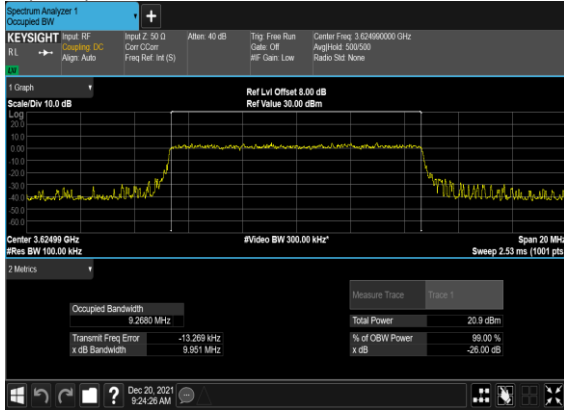
N48(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N48(10M)_CP-OFDM_16QAM_Outer_Full_Mid_CH



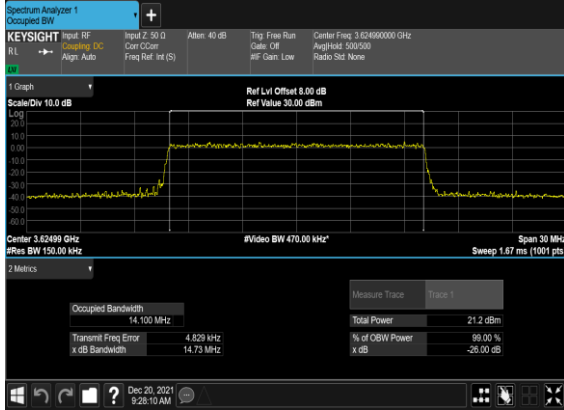
N48(10M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



N48(10M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



N48(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

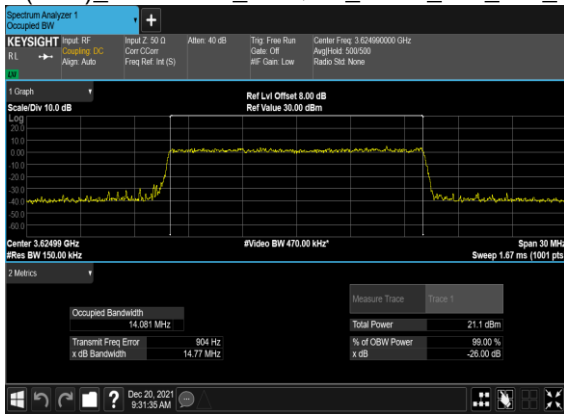


N48(15M)_CP-OFDM_16QAM_Outer_Full_Mid_CH

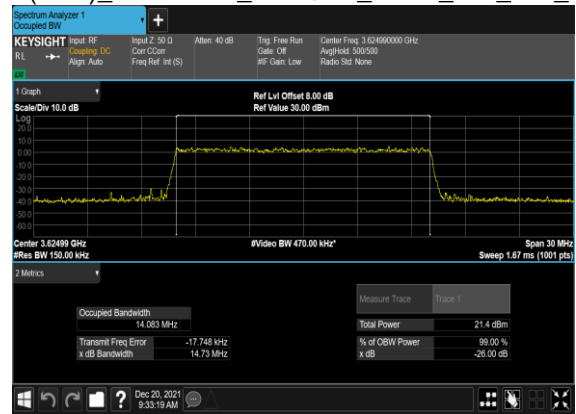




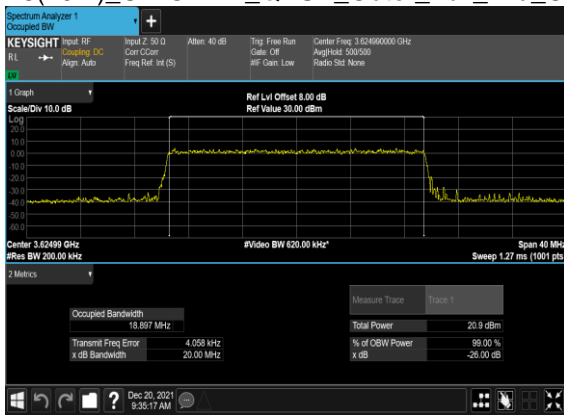
N48(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



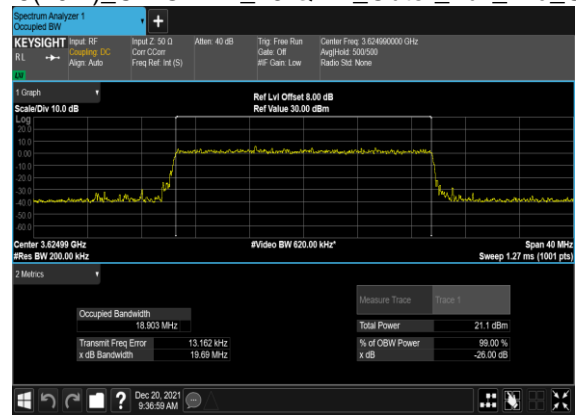
N48(15M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



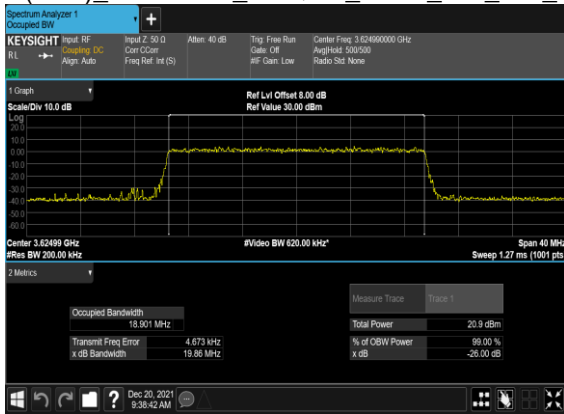
N48(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



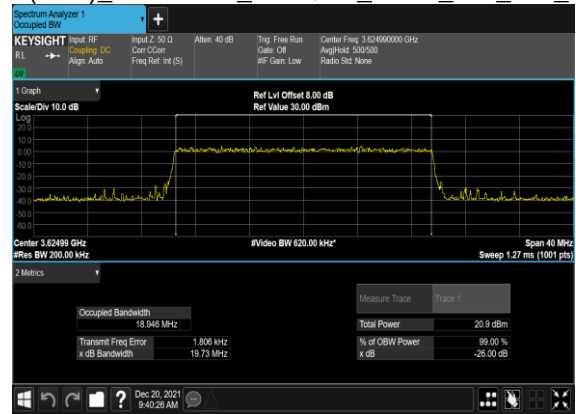
N48(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N48(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

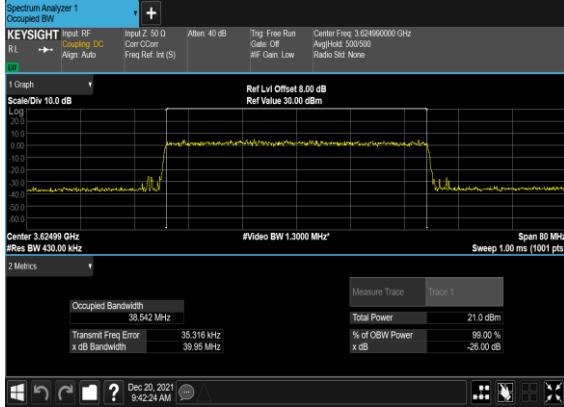


N48(20M)_CP-OFDM_256QAM_Outer_Full_Mid_CH

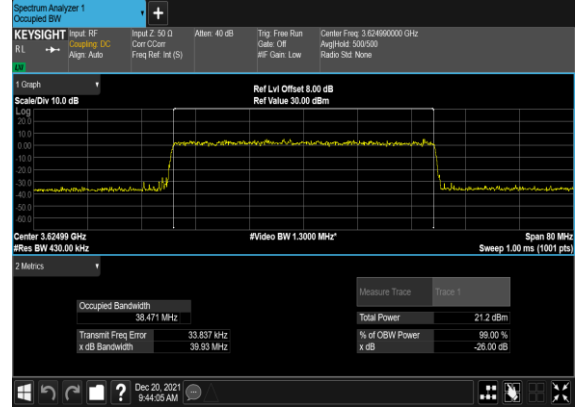




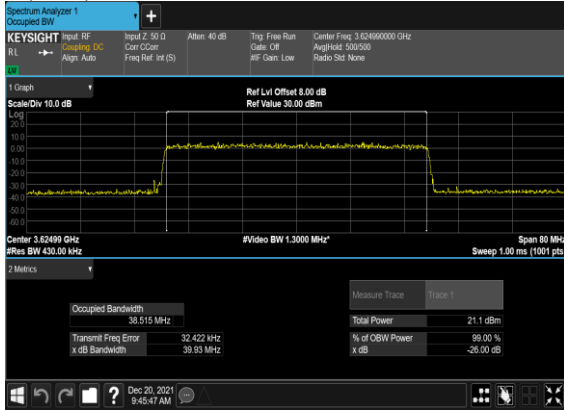
N48(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



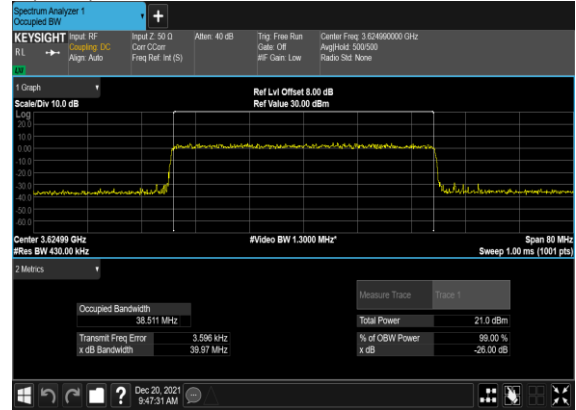
N48(40M)_CP-OFDM_16QAM_Outer_Full_Mid_CH



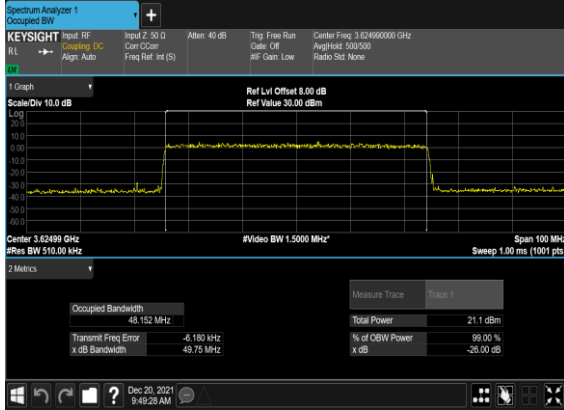
N48(40M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



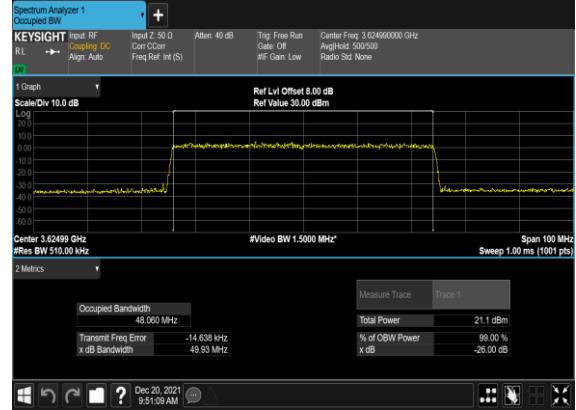
N48(40M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



N48(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



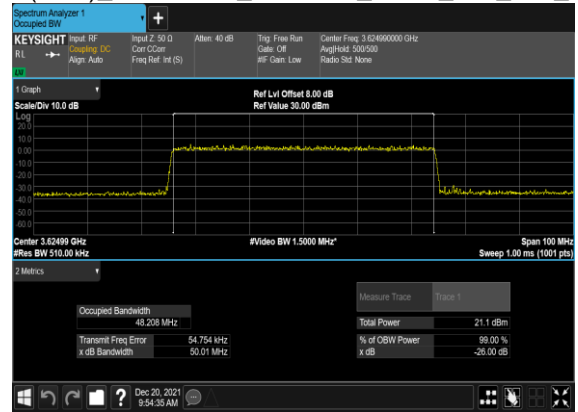
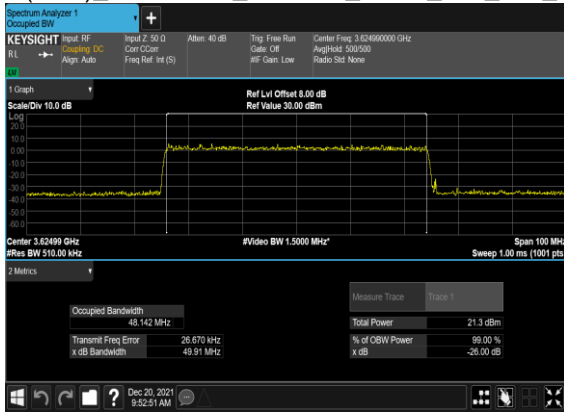
N48(50M)_CP-OFDM_16QAM_Outer_Full_Mid_CH





N48(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N48(50M)_CP-OFDM_256QAM_Outer_Full_Mid_CH





A4.3 Adjacent Channel Leakage Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Lower Margin	Upper Margin	Result	Verdict
48	15	10	637000	3555.0	CP-s-OFDM QPSK	52@0	-13.13	-13.57	see graph	PASS
48	15	10	637000	3555.0	CP-s-OFDM QPSK	1@0	-6.79	-18.35	see graph	PASS
48	15	10	637000	3555.0	CP-s-OFDM QPSK	1@51	-18.5	-7.95	see graph	PASS
48	15	10	641666	3624.99	CP-s-OFDM QPSK	52@0	-13.21	-12.75	see graph	PASS
48	15	10	641666	3624.99	CP-s-OFDM QPSK	1@0	-6.48	-17.2	see graph	PASS
48	15	10	641666	3624.99	CP-s-OFDM QPSK	1@51	-18.64	-7.33	see graph	PASS
48	15	10	646332	3694.98	CP-s-OFDM QPSK	52@0	-12.45	-13.15	see graph	PASS
48	15	10	646332	3694.98	CP-s-OFDM QPSK	1@0	-6.03	-16.71	see graph	PASS
48	15	10	646332	3694.98	CP-s-OFDM QPSK	1@51	-15.78	-6.77	see graph	PASS
48	15	20	637334	3560.01	CP-s-OFDM QPSK	106@0	-13.5	-14.01	see graph	PASS
48	15	20	637334	3560.01	CP-s-OFDM QPSK	1@0	-8.0	-16.45	see graph	PASS
48	15	20	637334	3560.01	CP-s-OFDM QPSK	1@105	-17.24	-7.59	see graph	PASS
48	15	20	641666	3624.99	CP-s-OFDM QPSK	106@0	-10.92	-11.28	see graph	PASS
48	15	20	641666	3624.99	CP-s-OFDM QPSK	1@0	-7.11	-15.62	see graph	PASS
48	15	20	641666	3624.99	CP-s-OFDM QPSK	1@105	-16.06	-8.68	see graph	PASS
48	15	20	646000	3690.0	CP-s-OFDM QPSK	106@0	-11.86	-12.33	see graph	PASS
48	15	20	646000	3690.0	CP-s-OFDM QPSK	1@0	-7.1	-14.91	see graph	PASS
48	15	20	646000	3690.0	CP-s-OFDM QPSK	1@105	-14.27	-8.28	see graph	PASS
48	15	50	638334	3575.01	CP-s-OFDM QPSK	270@0	-10.91	-10.39	see graph	PASS
48	15	50	638334	3575.01	CP-s-OFDM QPSK	1@0	-9.01	-10.66	see graph	PASS
48	15	50	638334	3575.01	CP-s-OFDM QPSK	1@269	-11.85	-9.62	see graph	PASS
48	15	50	641666	3624.99	CP-s-OFDM QPSK	270@0	-10.62	-9.85	see graph	PASS
48	15	50	641666	3624.99	CP-s-OFDM QPSK	1@0	-8.43	-9.99	see graph	PASS
48	15	50	641666	3624.99	CP-s-OFDM QPSK	1@269	-11.1	-8.26	see graph	PASS
48	15	50	645000	3675.0	CP-s-OFDM QPSK	270@0	-10.48	-9.63	see graph	PASS
48	15	50	645000	3675.0	CP-s-OFDM QPSK	1@0	-8.5	-9.72	see graph	PASS
48	15	50	645000	3675.0	CP-s-OFDM QPSK	1@269	-11.33	-8.53	see graph	PASS