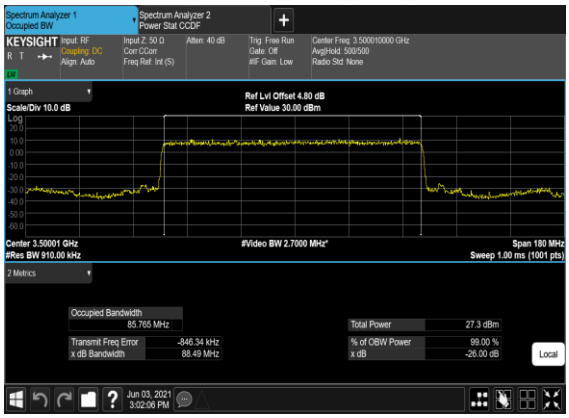
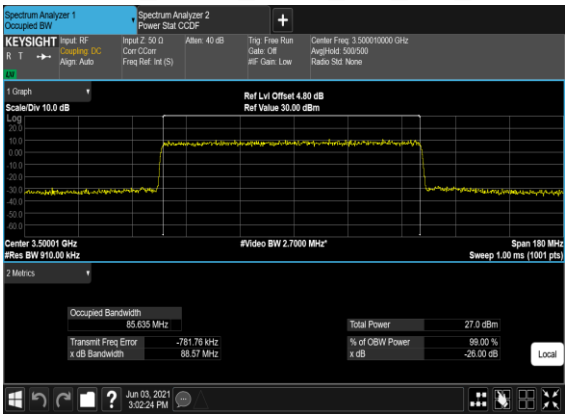
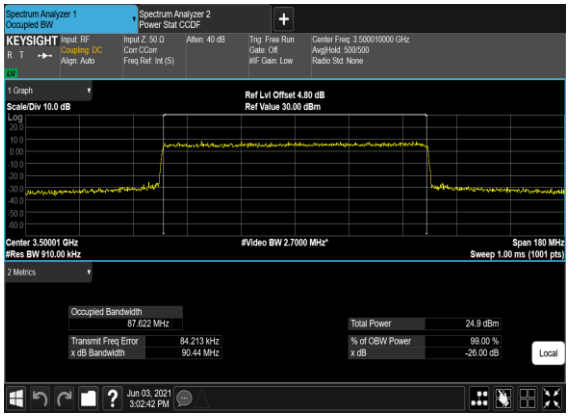
B5_N78(90M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



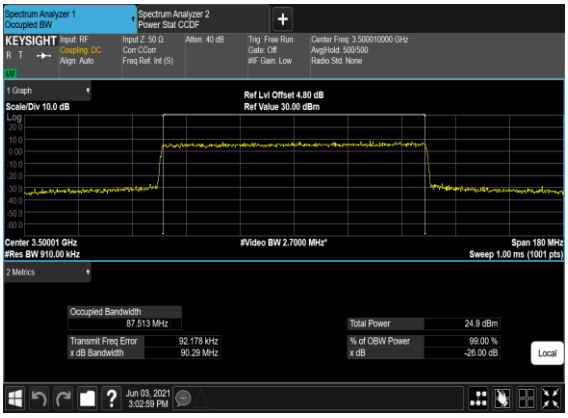
B5_N78(90M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



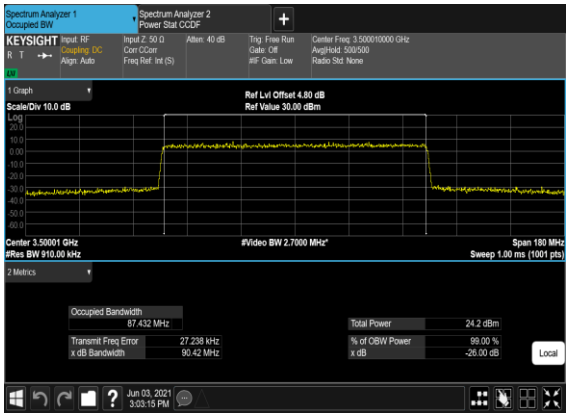
B5_N78(90M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



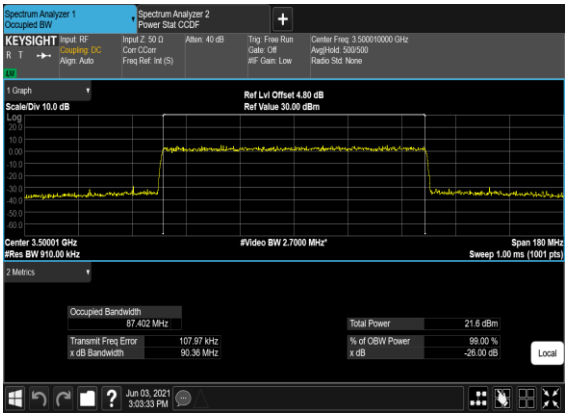
B5_N78(90M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



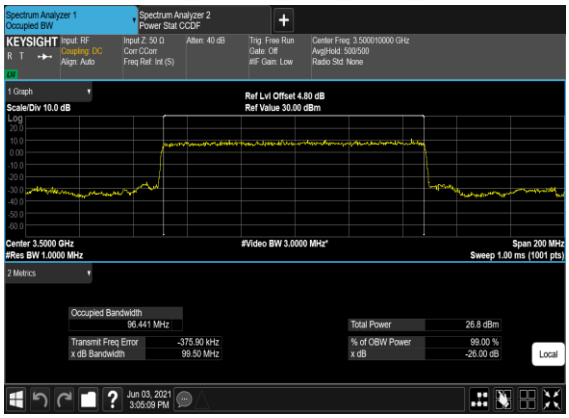
B5_N78(90M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



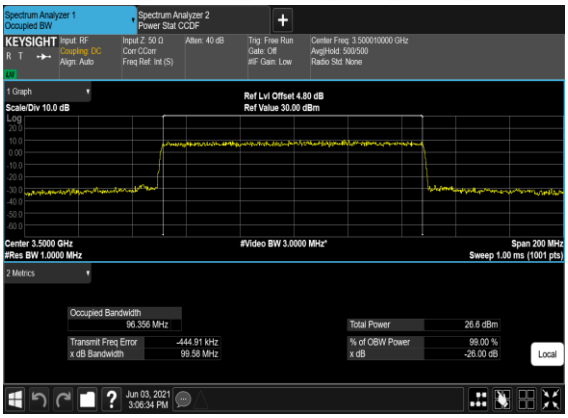
B5_N78(90M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



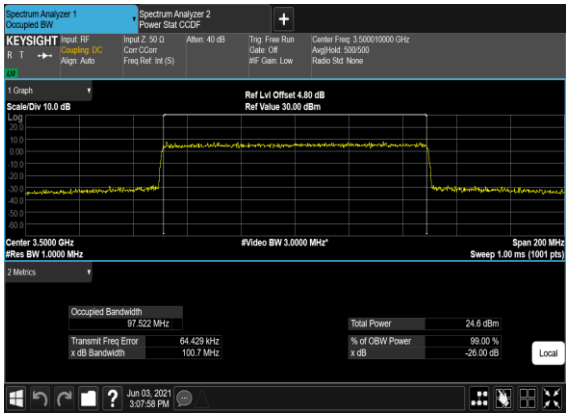
B5_N78(100M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



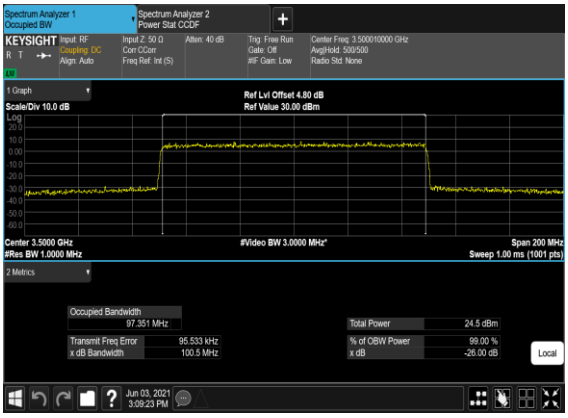
B5_N78(100M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



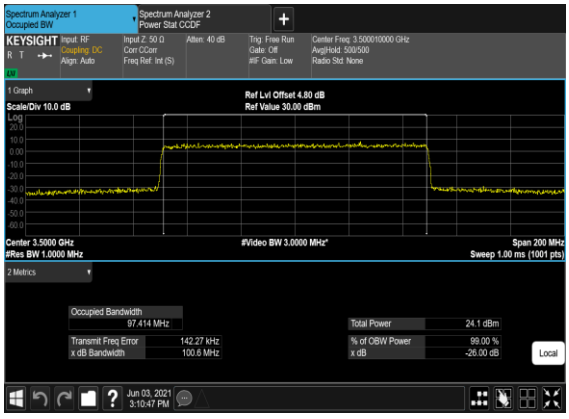
B5_N78(100M)_CP-OFDM_QPSK_Outer_Full_Low_CH



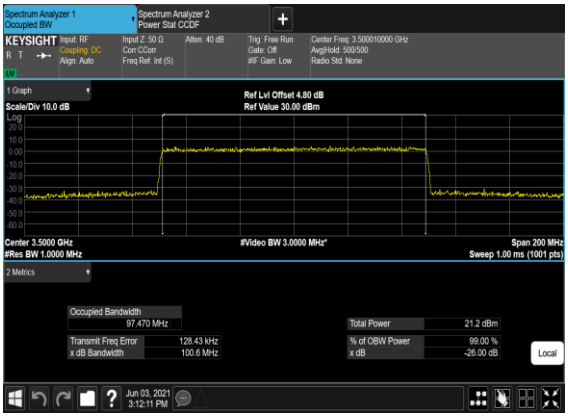
B5_N78(100M)_CP-OFDM_16 QAM_Outer_Full_Low_CH



B5_N78(100M)_CP-OFDM_64 QAM_Outer_Full_Low_CH



B5_N78(100M)_CP-OFDM_256 QAM_Outer_Full_Low_CH

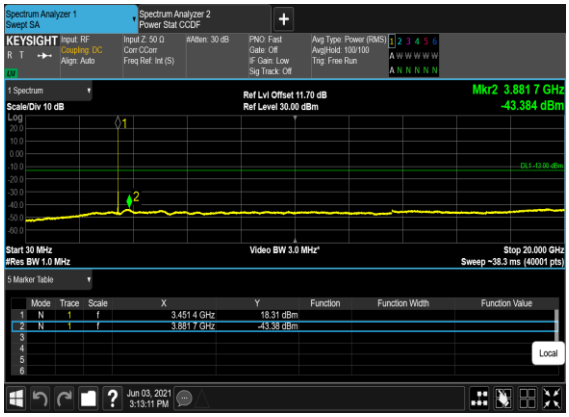


Conducted Spurious Emissions

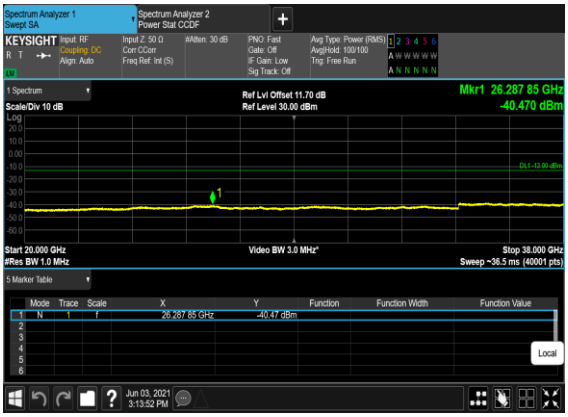
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	20	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	20	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	60	632000	3480.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM QPSK	1@0	see graph	---

78	30	60	632000	3480.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	60	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	60	634666	3519.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS

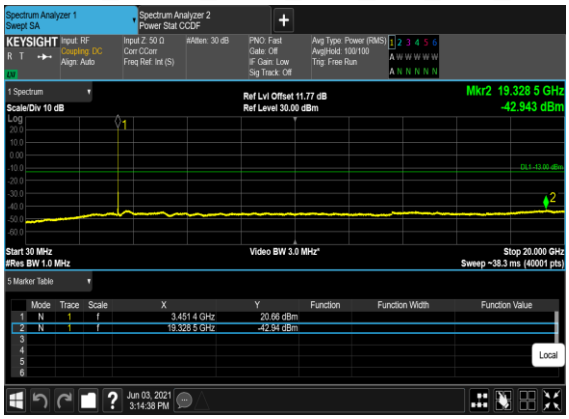
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



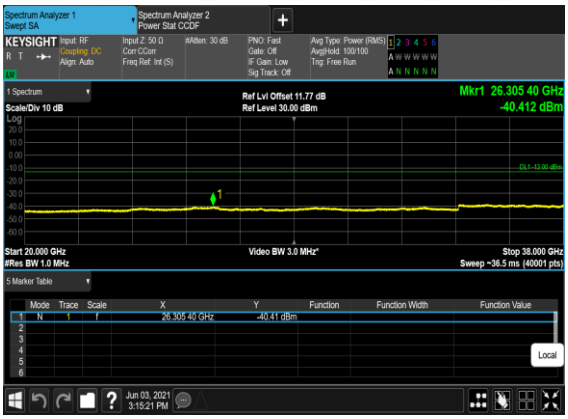
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



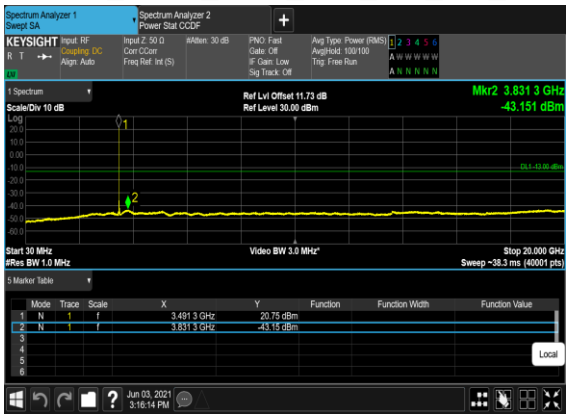
B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



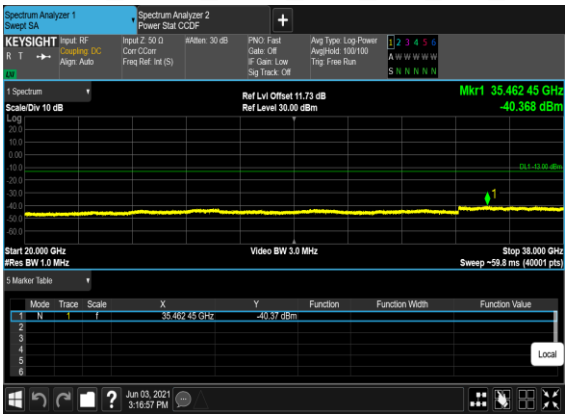
B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



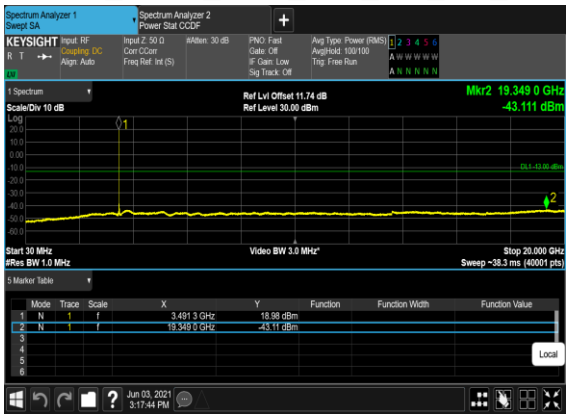
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



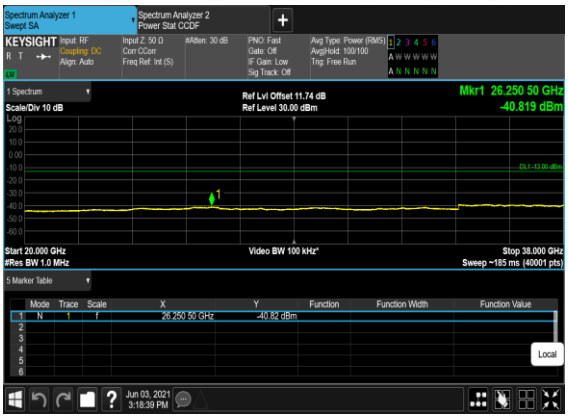
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

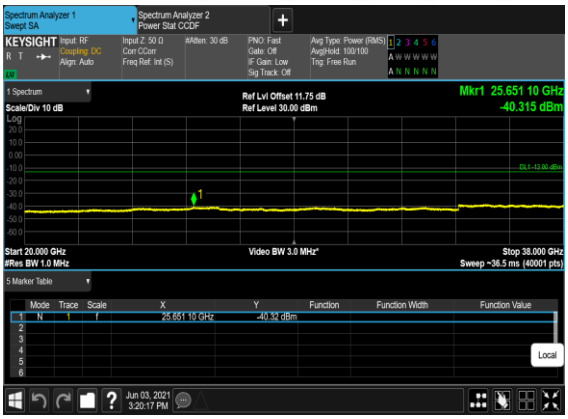


B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

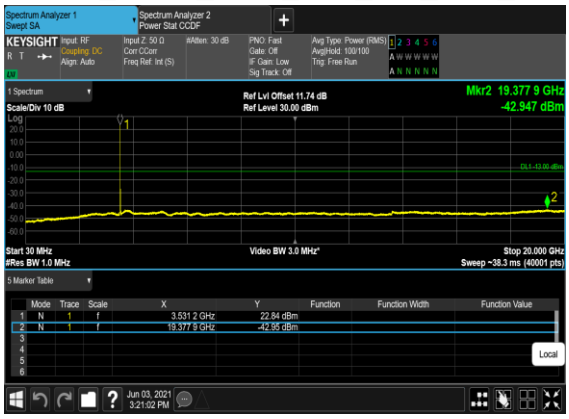


B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

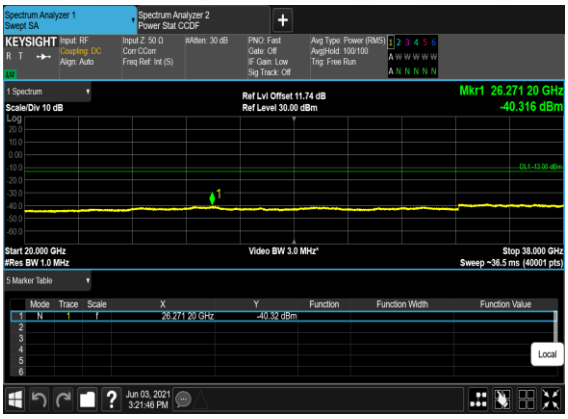
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



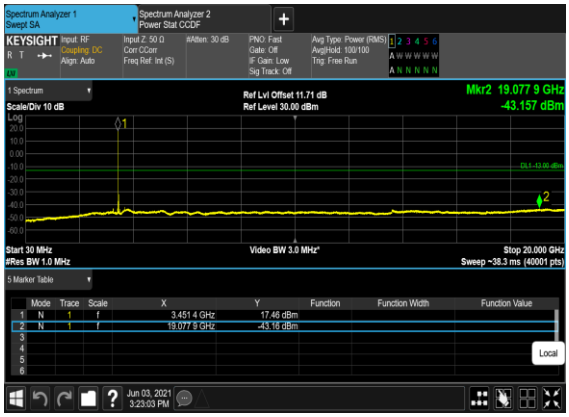
B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



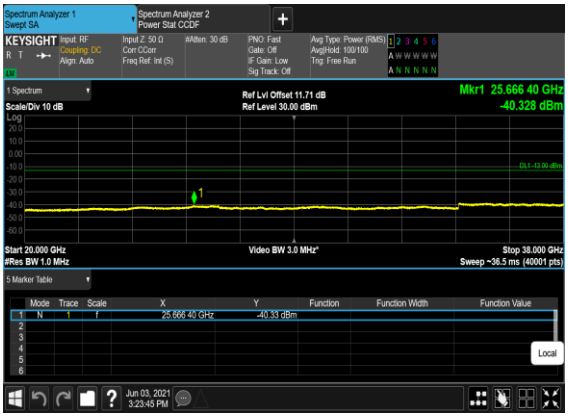
B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



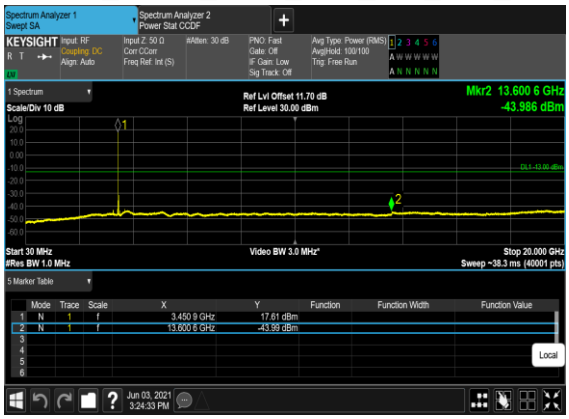
B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



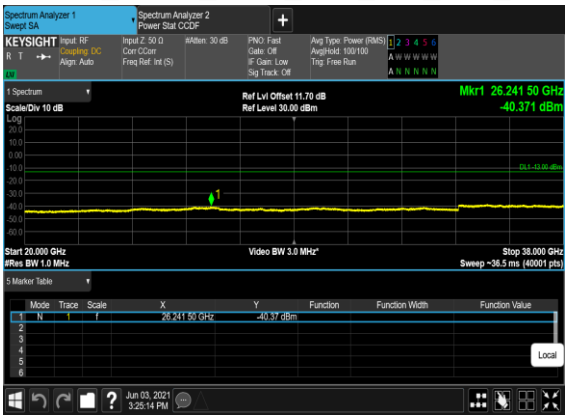
B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



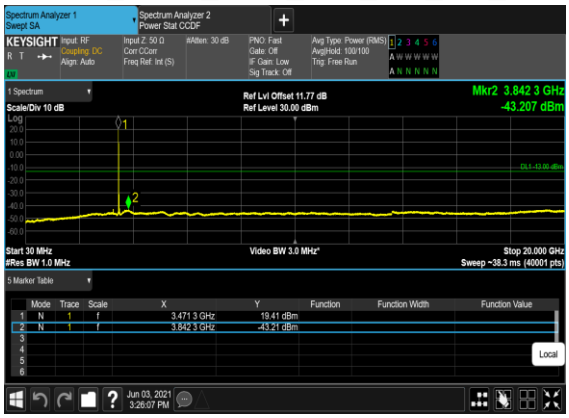
B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



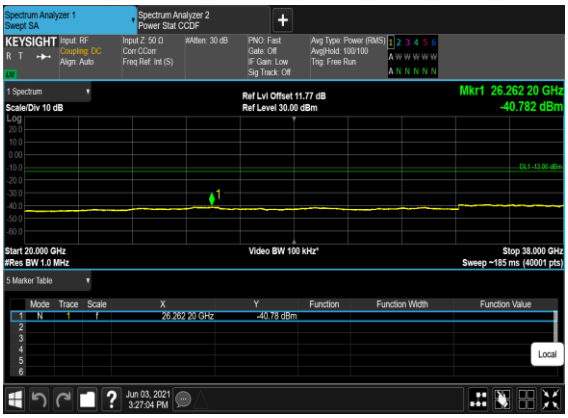
B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



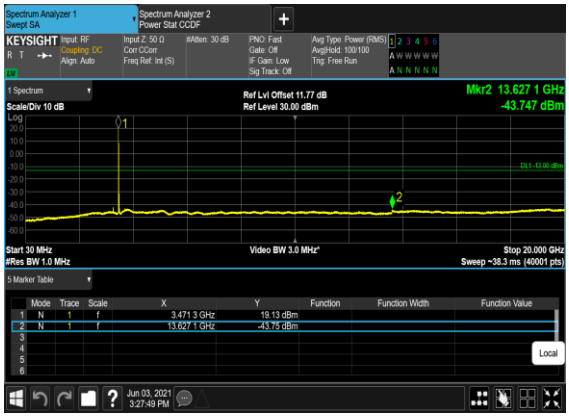
B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



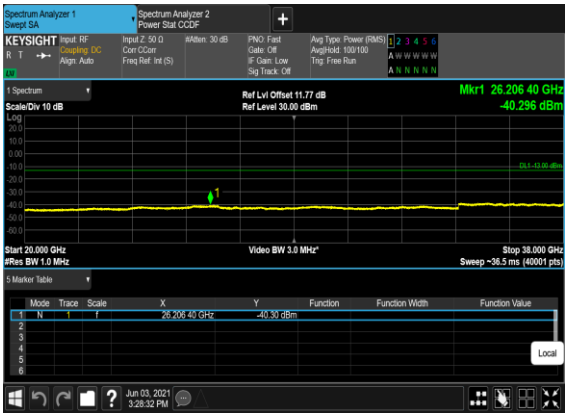
B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



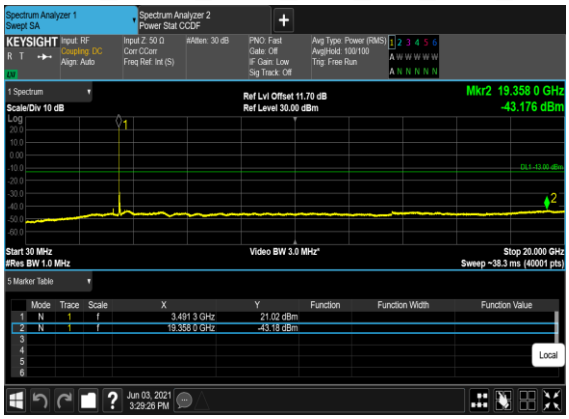
B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



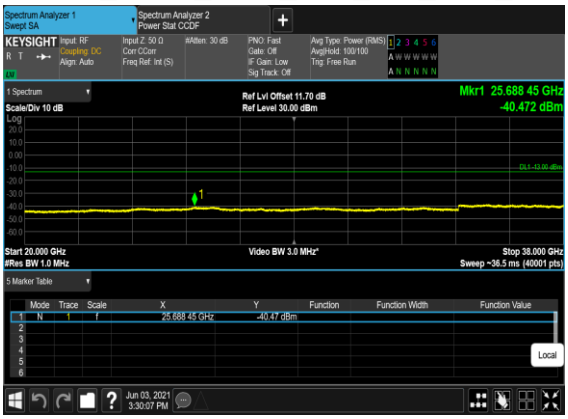
B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

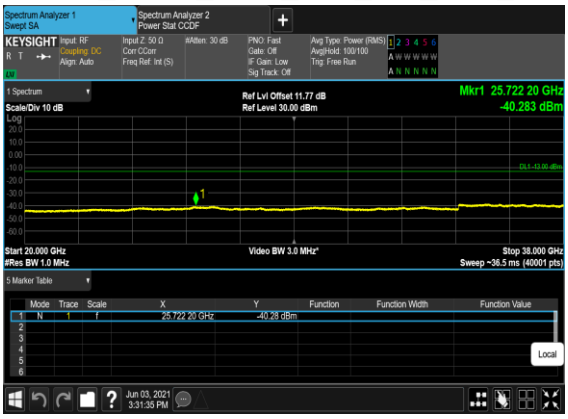


B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

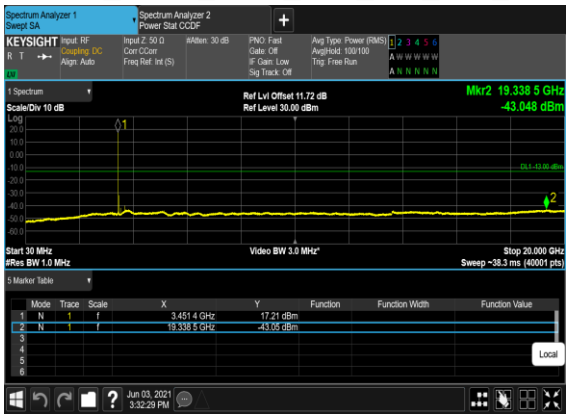


B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

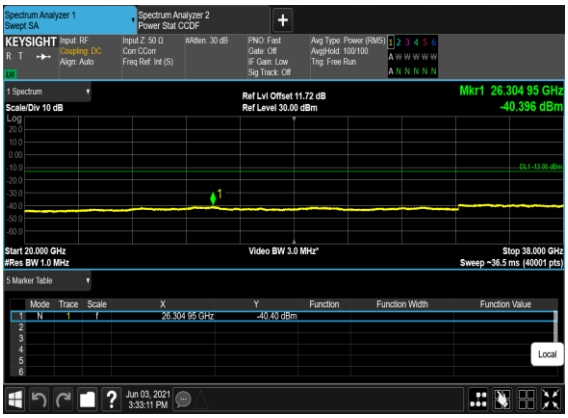
B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



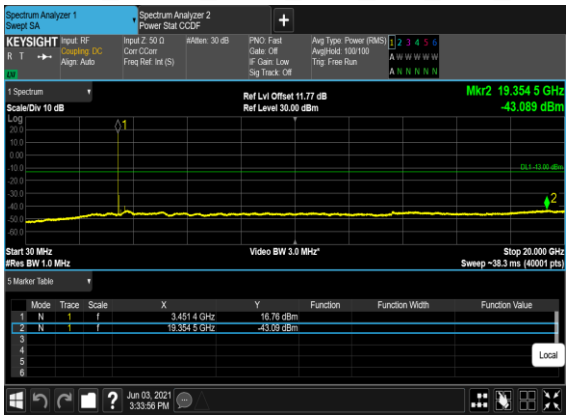
B5_N78(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



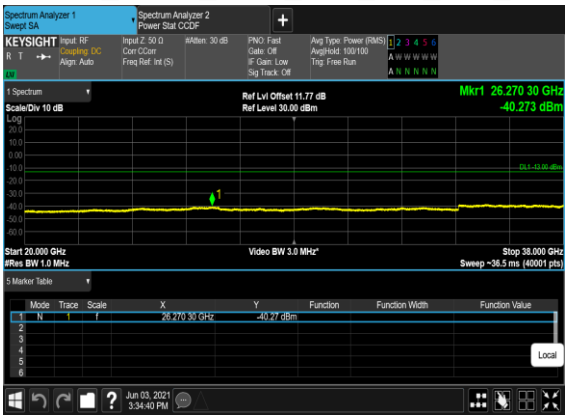
B5_N78(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



B5_N78(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



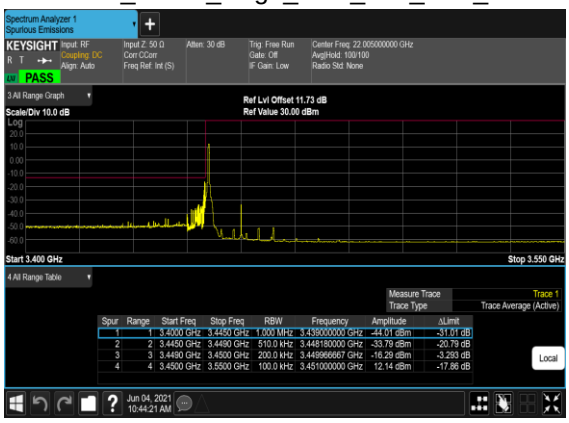
B5_N78(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



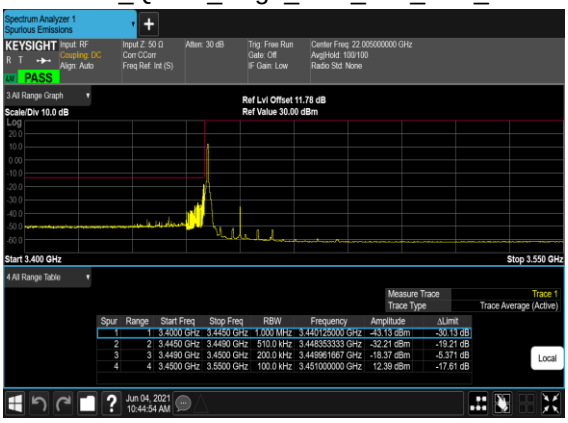
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	20	630668	3460.02	DFT-s-OFDM BPSK	50@0	see graph	PASS
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	50@0	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@50	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@50	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM BPSK	50@0	see graph	PASS
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	50@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM BPSK	162@0	see graph	PASS
78	30	60	632000	3480.0	DFT-s-OFDM QPSK	162@0	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM BPSK	1@161	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@161	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM BPSK	162@0	see graph	PASS
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	162@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@272	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@272	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM BPSK	270@0	see graph	PASS
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	270@0	see graph	PASS

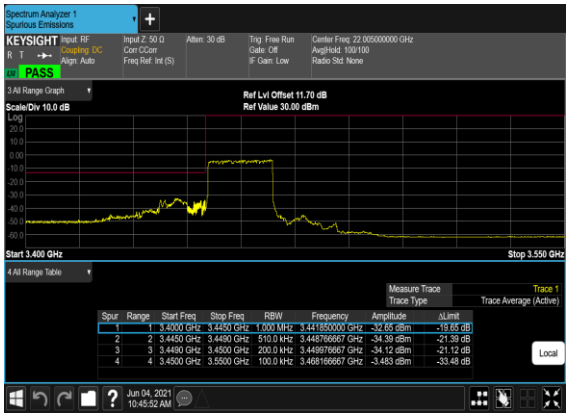
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



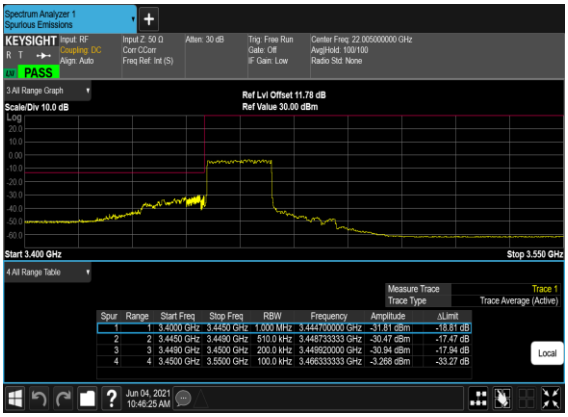
B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



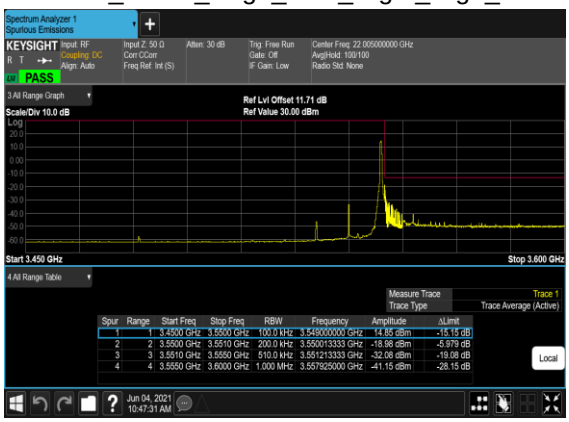
B5_N78(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



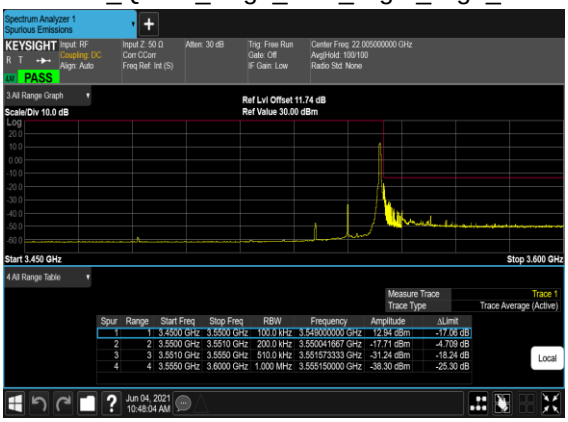
B5_N78(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



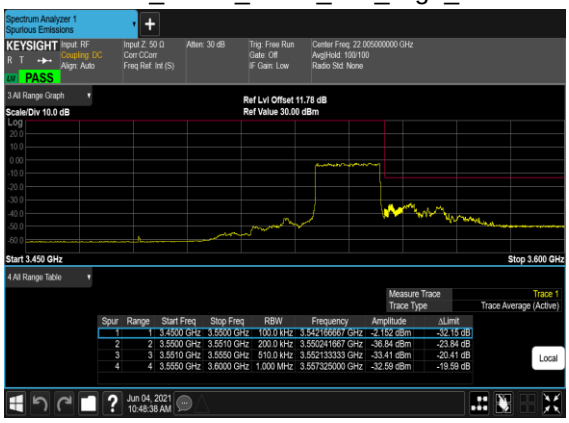
B5_N78(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



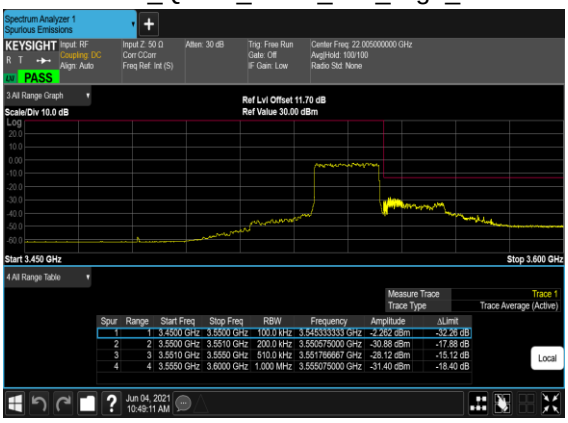
B5_N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



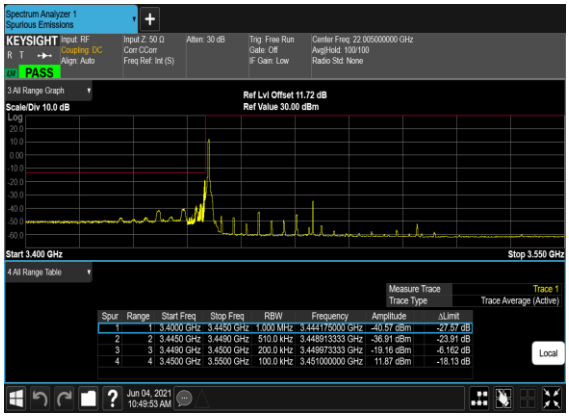
B5_N78(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



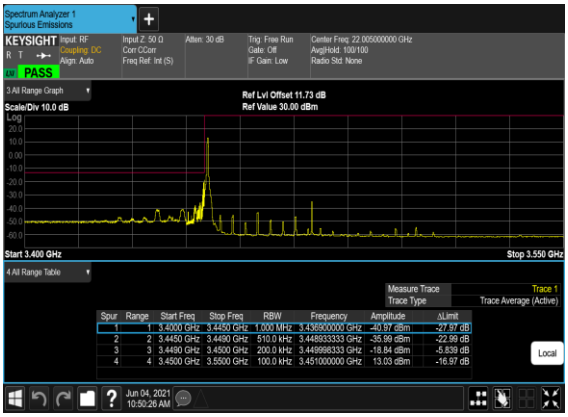
B5_N78(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



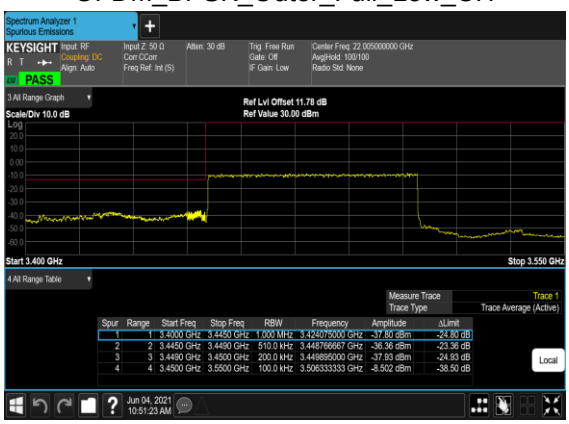
B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



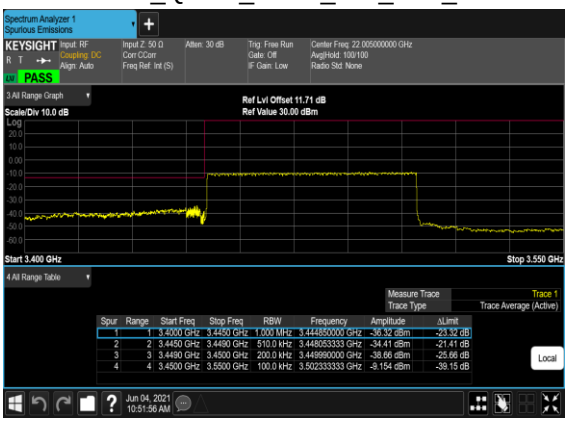
B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



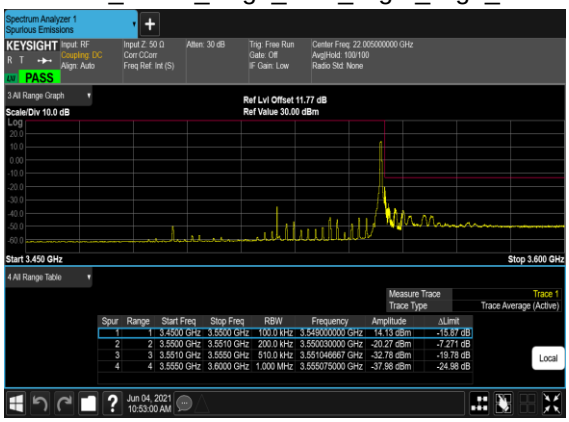
B5_N78(60M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



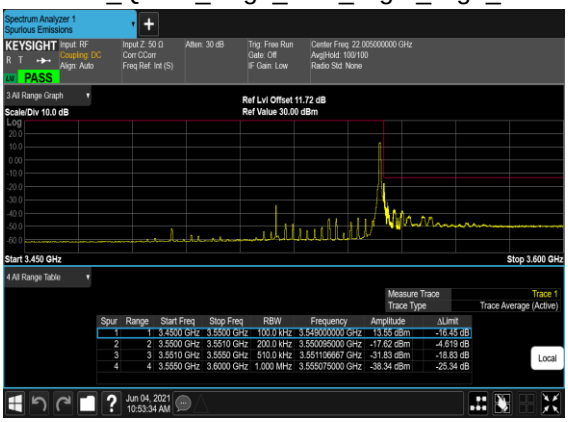
B5_N78(60M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



B5_N78(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH

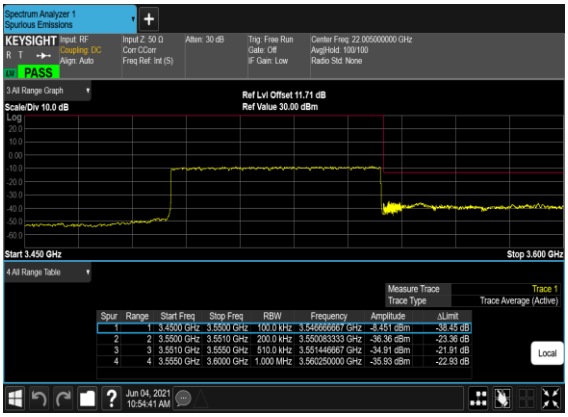


B5_N78(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

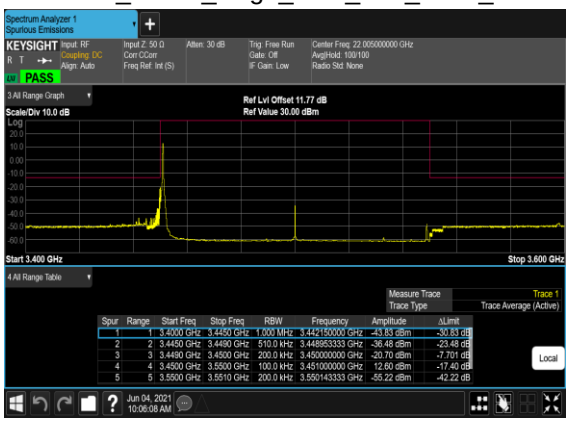


B5_N78(60M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

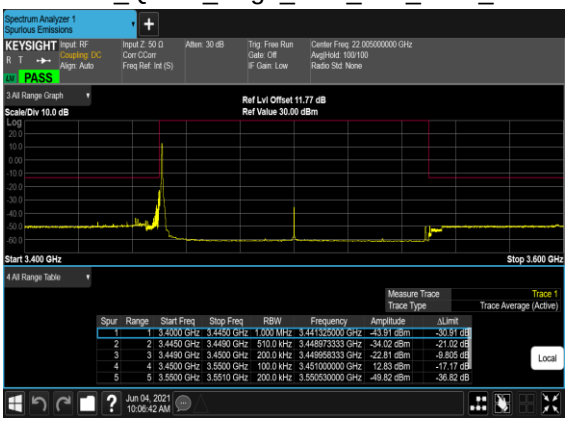
B5_N78(60M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



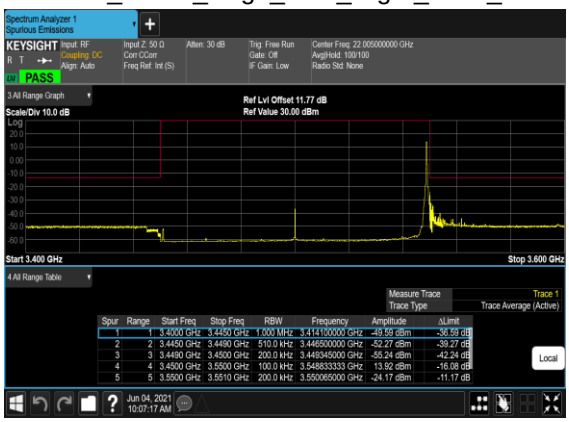
B5_N78(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_ Mid _CH



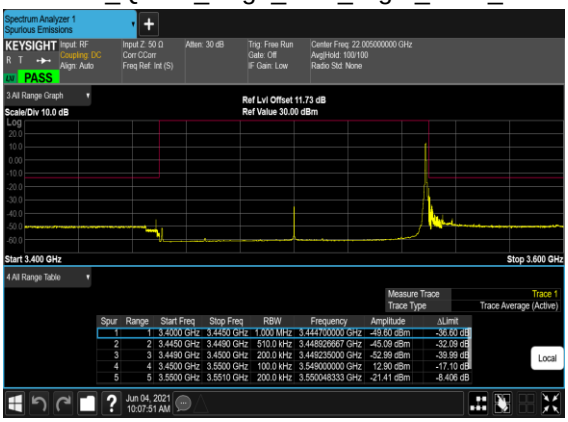
B5_N78(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_ Mid _CH



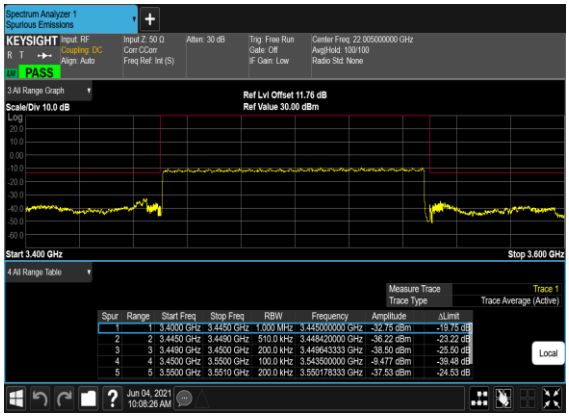
B5_N78(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_ Mid _CH



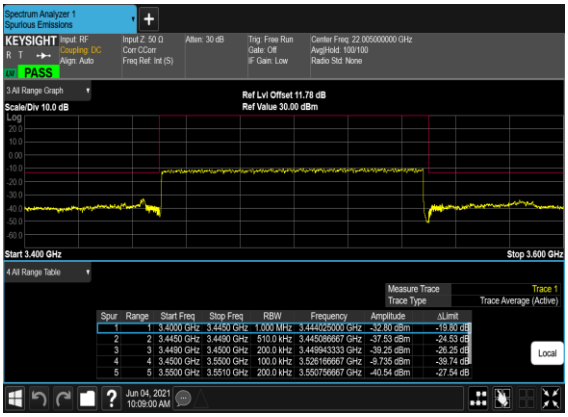
B5_N78(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_ Mid _CH



B5_N78(100M)_DFT-s-OFDM_BPSK_Outer_Full_Mid _CH



B5_N78(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid _CH



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

EN-DC_12A_n77A / LTE 10MHz + NR 100MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n77 Middle	7000.02	-56.92	-13	-43.92	-63.69	-62.48	7.14	12.70	H
	10500.03	-54.65	-13	-41.65	-66.55	-57.95	8.30	11.60	H
	14000.04	-53.62	-13	-40.62	-67.33	-55.14	10.48	12.00	H
	7000.02	-56.88	-13	-43.88	-63.83	-62.44	7.14	12.70	V
	10500.03	-52.21	-13	-39.21	-66.43	-55.51	8.30	11.60	V
	14000.04	-54.42	-13	-41.42	-67.35	-55.94	10.48	12.00	V
LTE Band12 Middle	1406	-65.30	-13	-52.30	-76.09	-68.55	4.00	9.40	H
	2109	-46.81	-13	-33.81	-64.28	-50.38	4.88	10.60	H
	2812	-55.11	-13	-42.11	-74.20	-60.04	5.52	12.60	H
	1406	-64.94	-13	-51.94	-76.79	-68.19	4.00	9.40	V
	2109	-45.85	-13	-32.85	-63.11	-49.42	4.88	10.60	V
	2812	-58.59	-13	-45.59	-78.49	-63.52	5.52	12.60	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC_5A_n78A / LTE 10MHz + NR 100MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n78 Middle	7000.00	-56.61	-13	-43.61	-63.38	-62.17	7.14	12.70	H
	10500.00	-53.91	-13	-40.91	-65.81	-57.21	8.30	11.60	H
	14000.00	-53.54	-13	-40.54	-67.25	-55.06	10.48	12.00	H
	7000.00	-56.52	-13	-43.52	-63.47	-62.08	7.14	12.70	V
	10500.00	-51.68	-13	-38.68	-65.9	-54.98	8.30	11.60	V
	14000.00	-56.33	-13	-43.33	-69.26	-57.85	10.48	12.00	V
LTE Band5 Middle	1664.18	-64.55	-13	-51.55	-76.20	-67.80	4.00	9.40	H
	2496.27	-58.66	-13	-45.66	-77.43	-62.23	4.88	10.60	H
	3328.36	-58.24	-13	-45.24	-79.21	-63.17	5.52	12.60	H
	1664.18	-64.35	-13	-51.35	-76.67	-67.60	4.00	9.40	V
	2496.27	-59.43	-13	-46.43	-78.46	-63.00	4.88	10.60	V
	3328.36	-57.97	-13	-44.97	-79.44	-62.90	5.52	12.60	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.