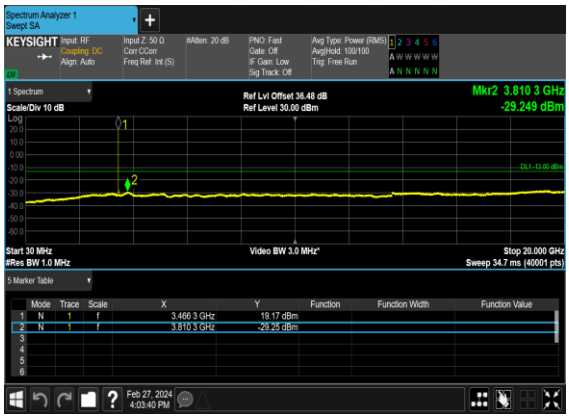
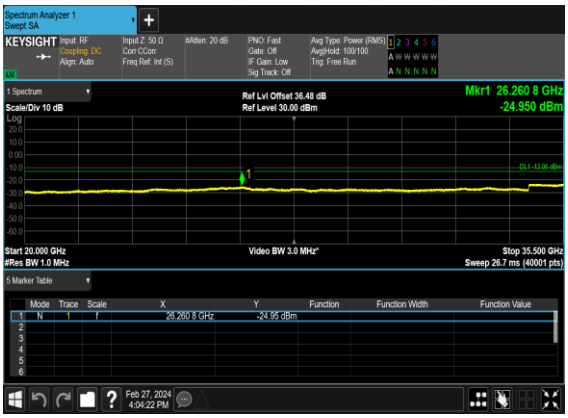
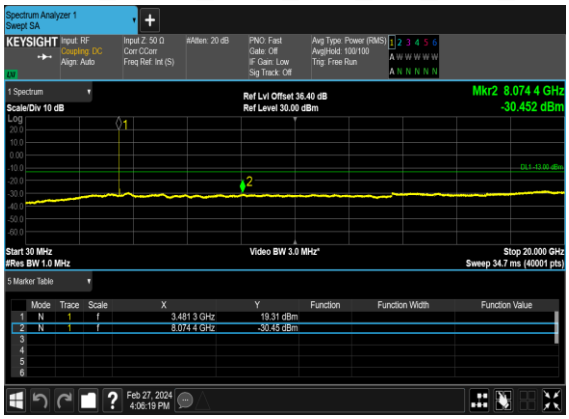
N78(70M)_CP-OFDM_16 QAM_Edge_1RB_Left_Mid_CH



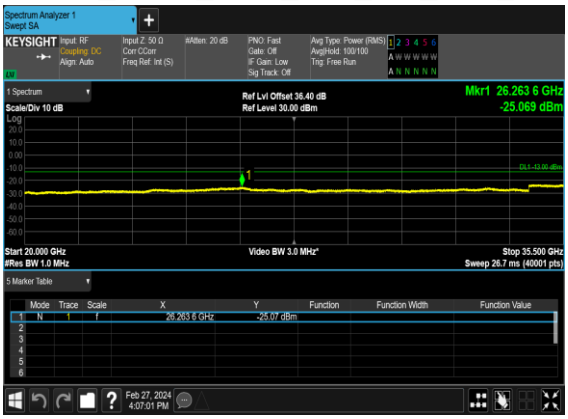
N78(70M)_CP-OFDM_16 QAM_Edge_1RB_Left_Mid_CH



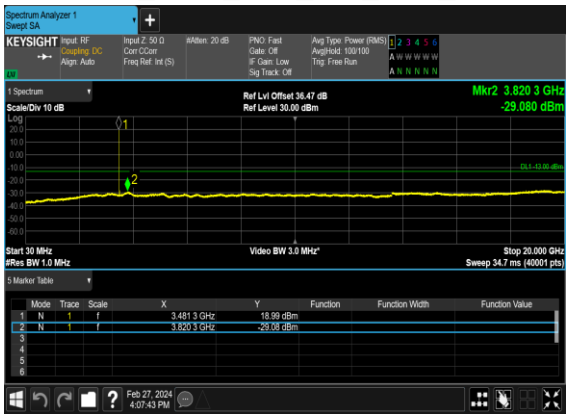
N78(70M)_CP-OFDM_QPSK_Edge_1RB_Left_High_CH



N78(70M)_CP-OFDM_QPSK_Edge_1RB_Left_High_CH



N78(70M)_CP-OFDM_16 QAM_Edge_1RB_Left_High_CH

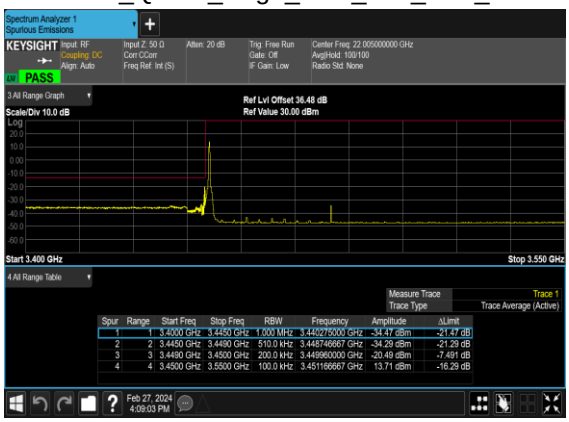


N78(70M)_CP-OFDM_16 QAM_Edge_1RB_Left_High_CH

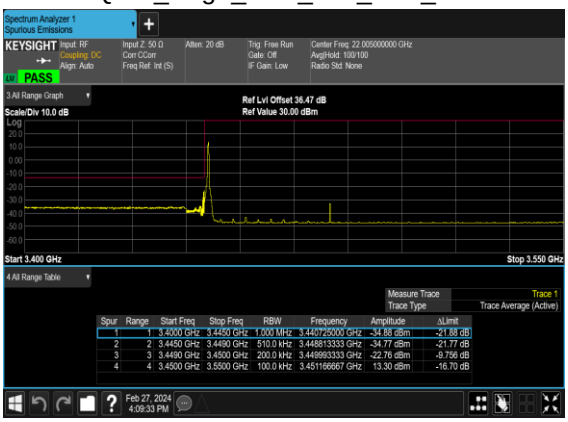
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	70	632334	3485.01	CP-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	632334	3485.01	CP-OFDM 16 QAM	1@0	see graph	**PASS**
78	30	70	632334	3485.01	CP-OFDM QPSK	189@0	see graph	**PASS**
78	30	70	632334	3485.01	CP-OFDM 16 QAM	189@0	see graph	**PASS**
78	30	70	634332	3514.98	CP-OFDM QPSK	1@188	see graph	**PASS**
78	30	70	634332	3514.98	CP-OFDM 16 QAM	1@188	see graph	**PASS**
78	30	70	634332	3514.98	CP-OFDM QPSK	189@0	see graph	**PASS**
78	30	70	634332	3514.98	CP-OFDM 16 QAM	189@0	see graph	**PASS**

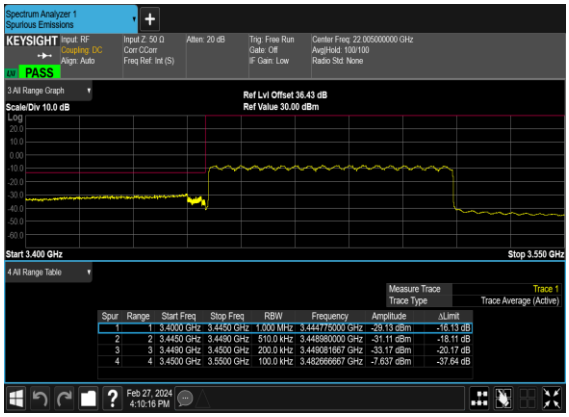
N78(70M)_CP-OFDM_QPSK_Edge_1RB_Left_Low_CH



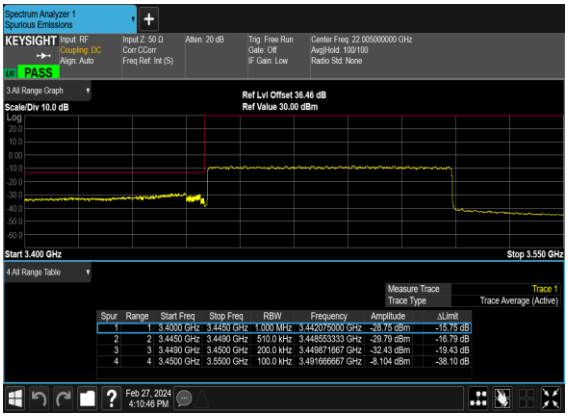
N78(70M)_CP-OFDM_16 QAM_Edge_1RB_Left_Low_CH



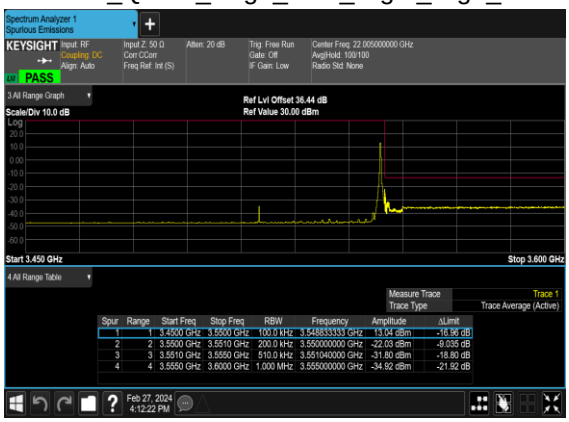
N78(70M)_CP-OFDM_QPSK_Outer_Full_Low_CH



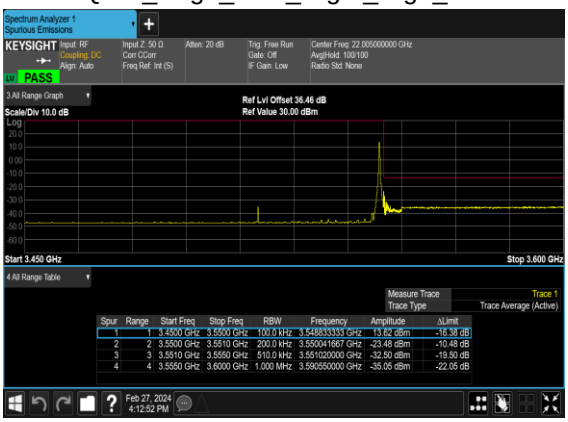
N78(70M)_CP-OFDM_16 QAM_Outer_Full_Low_CH



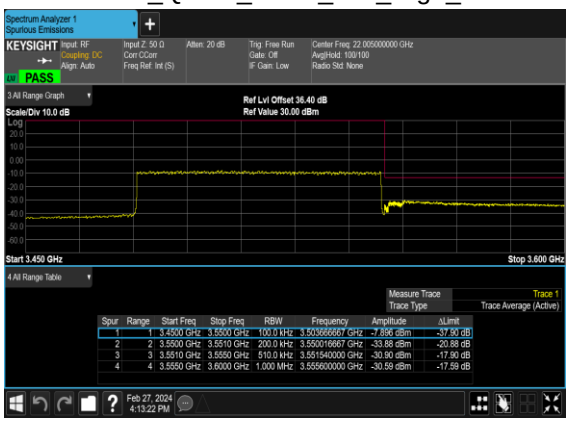
N78(70M)_CP-OFDM_QPSK_Edge_1RB_Right_High_CH



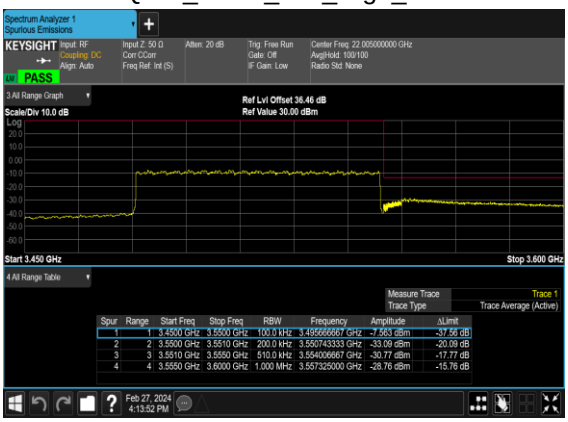
N78(70M)_CP-OFDM_16 QAM_Edge_1RB_Right_High_CH



N78(70M)_CP-OFDM_QPSK_Outer_Full_High_CH



N78(70M)_CP-OFDM_16 QAM_Outer_Full_High_CH



Software Version: 23.06.1602

FR1 N78(ANT0) for other PA

LTE Band: 5(ANT1), LTE BW: 10M, LTE ARFCN: Mid

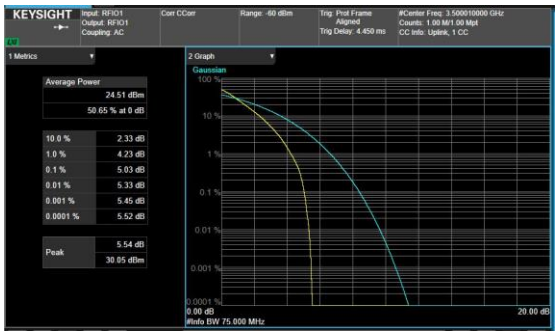
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0018	**PASS**	NV
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0024	**PASS**	LV
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0036	**PASS**	HV
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	-0.0014	**PASS**	-30℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0008	**PASS**	-20℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0017	**PASS**	-10℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	-0.0024	**PASS**	0℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0036	**PASS**	10℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	-0.0019	**PASS**	20℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0025	**PASS**	30℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0027	**PASS**	40℃
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	0.0013	**PASS**	50℃

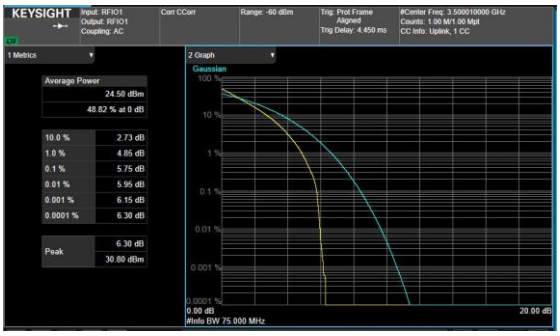
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
78	30	70	633334	3500.01	DFT-s-OFDM PI/2 BPSK	180@0	5.03	13	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@0	5.75	13	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	6.21	13	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@0	6.83	13	**PASS**

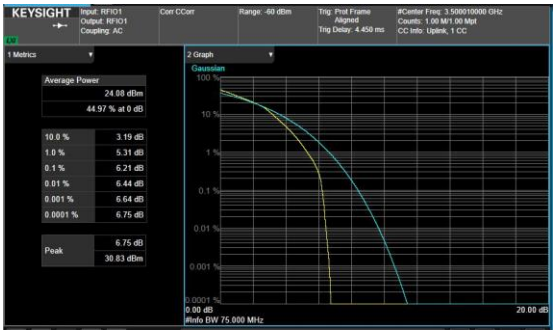
B5_N78(70M)_DFT-s-OFDM_PI_2-BPSK_Full_Mid_CH



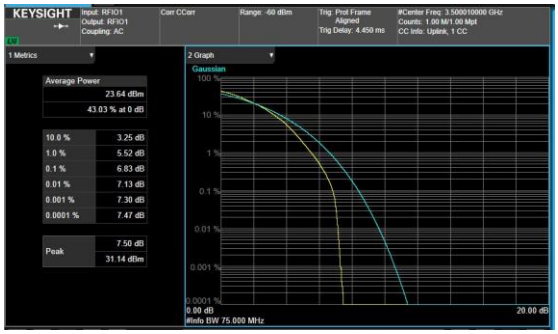
B5_N78(70M)_DFT-s-OFDM_PI_2-BPSK_1RB_Left_Mid_CH



B5_N78(70M)_DFT-s-OFDM_QPSK_Full_Mid_CH



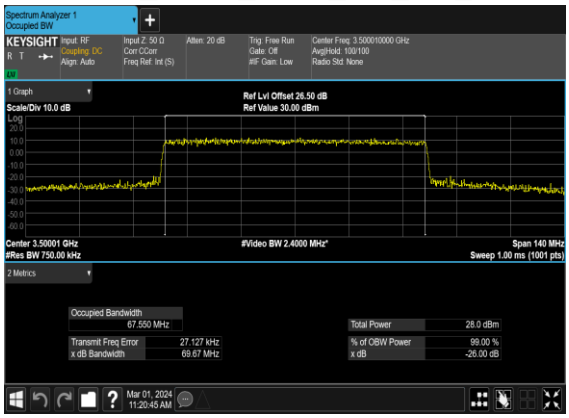
B5_N78(70M)_DFT-s-OFDM_QPSK_1RB_Left_Mid_CH



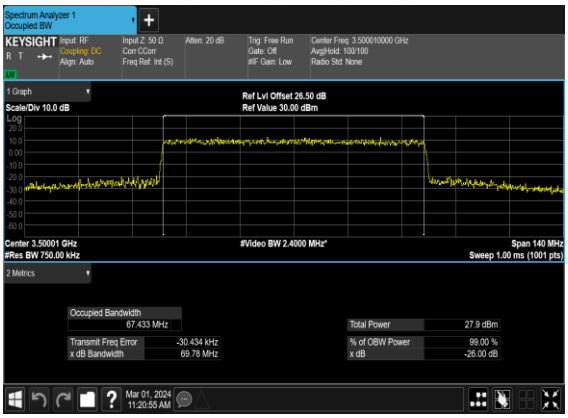
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
78	30	70	633334	3500.01	CP-OFDM QPSK	189@0	67.55	69.67
78	30	70	633334	3500.01	CP-OFDM 16 QAM	189@0	67.433	69.78
78	30	70	633334	3500.01	CP-OFDM 64 QAM	189@0	67.378	69.7
78	30	70	633334	3500.01	CP-OFDM 256 QAM	189@0	67.462	69.66

B5_N78(70M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



B5_N78(70M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



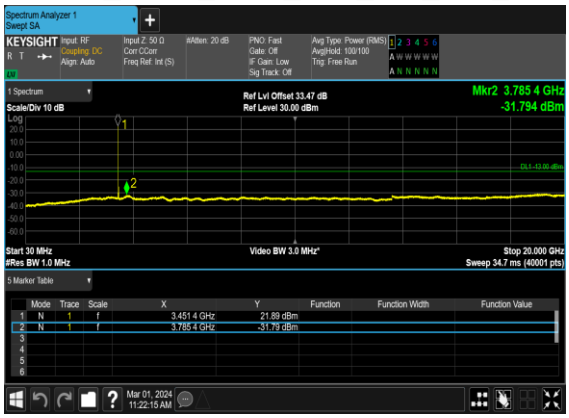
B5_N78(70M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

B5_N78(70M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

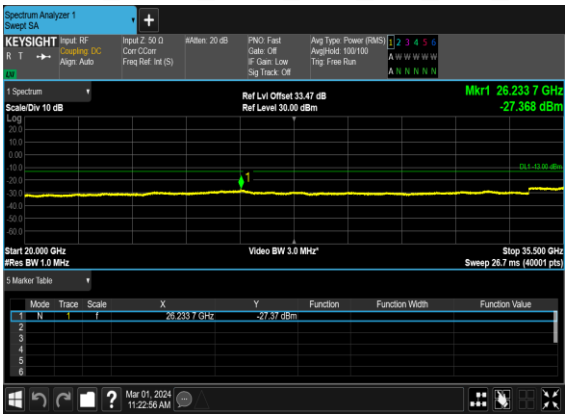
Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	70	632334	3485.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
78	30	70	632334	3485.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	632334	3485.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
78	30	70	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM BPSK	1@0	see graph	**---**
78	30	70	634332	3514.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@0	see graph	**---**
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

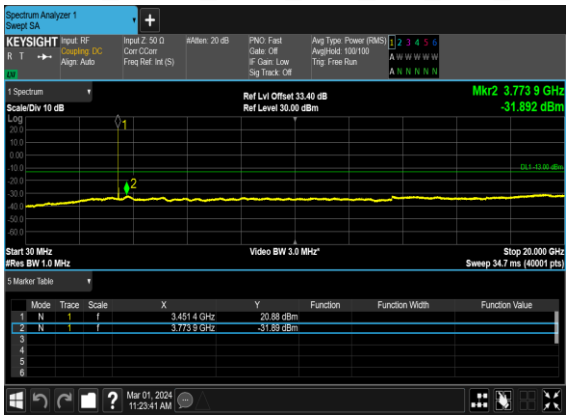
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



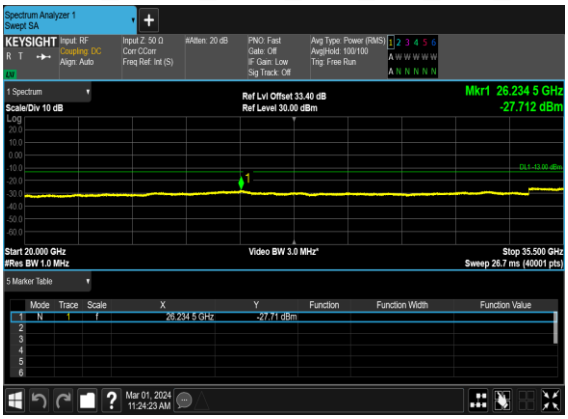
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



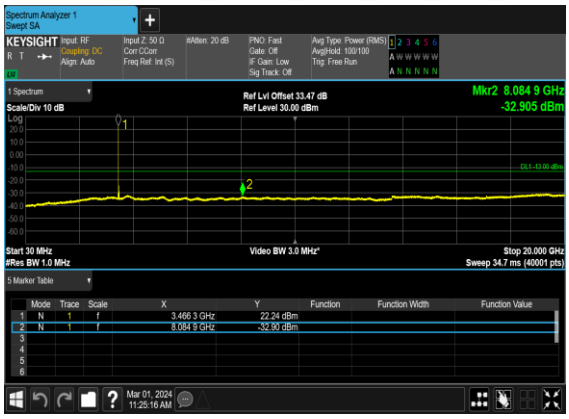
B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



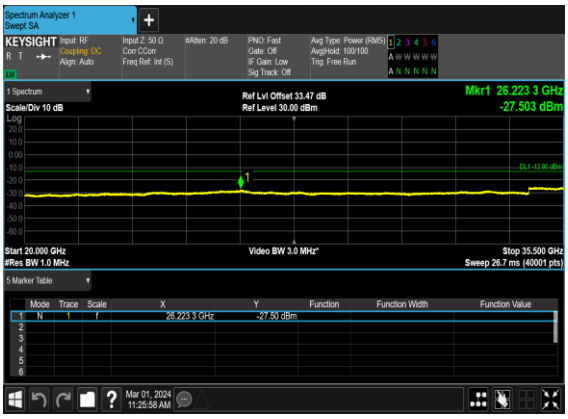
B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



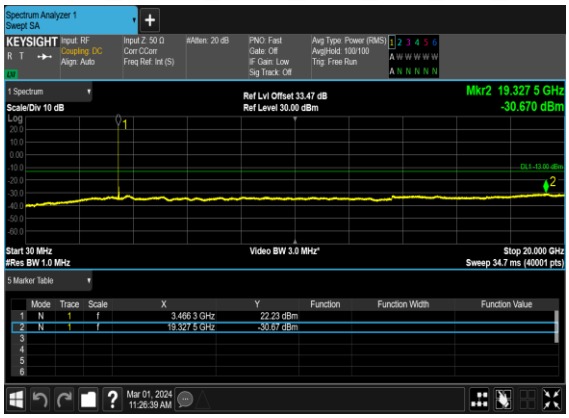
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



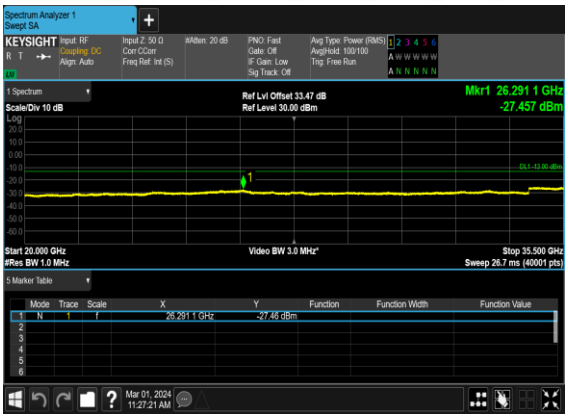
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



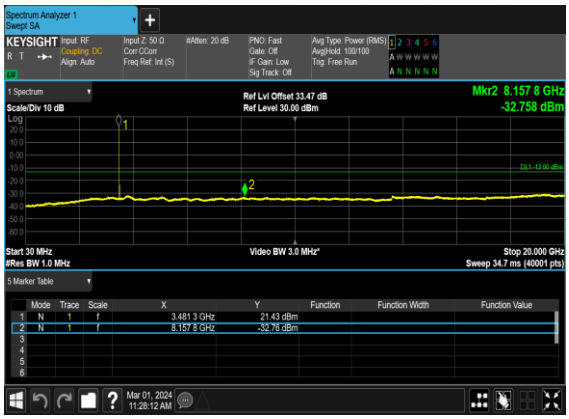
B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



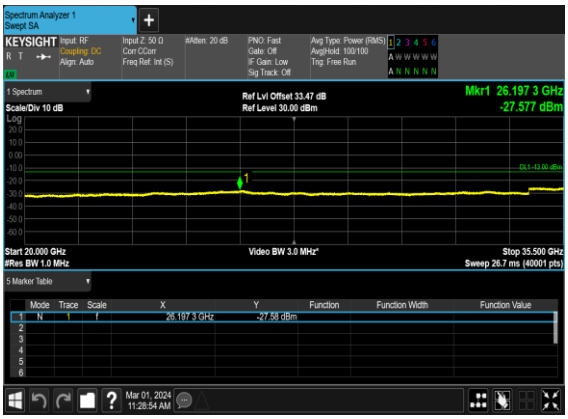
B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



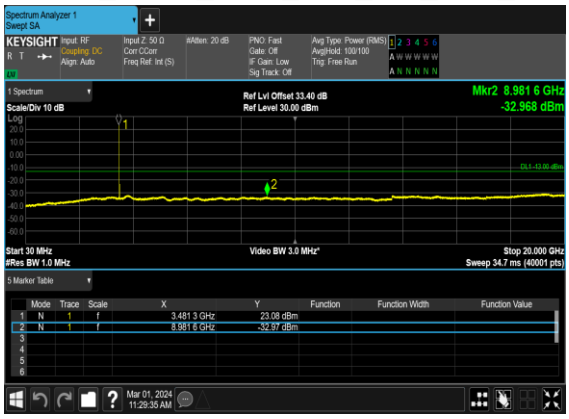
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

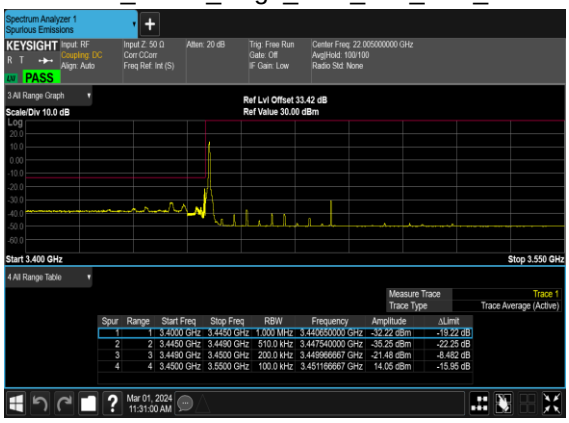


B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

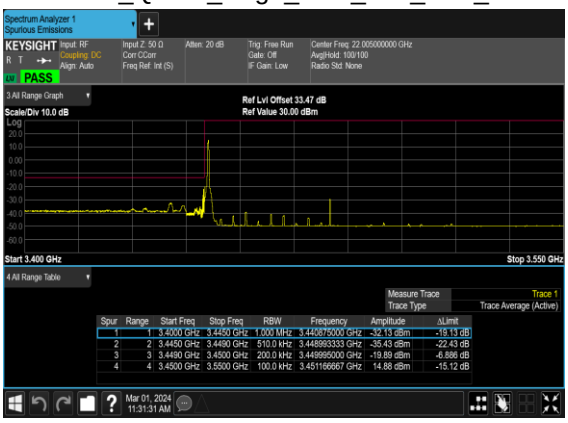
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	70	632334	3485.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
78	30	70	632334	3485.01	DFT-s-OFDM BPSK	180@0	see graph	**PASS**
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	180@0	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM BPSK	1@188	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@188	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM BPSK	180@0	see graph	**PASS**
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	180@0	see graph	**PASS**

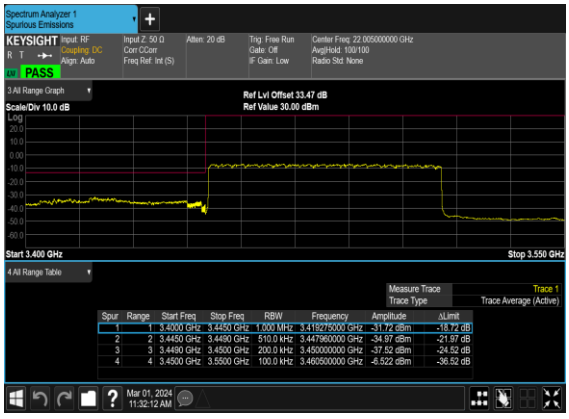
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



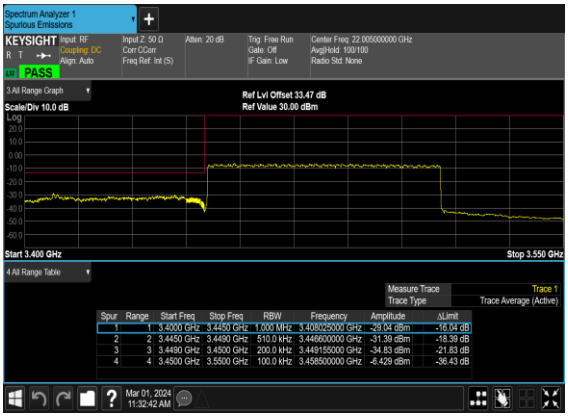
B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



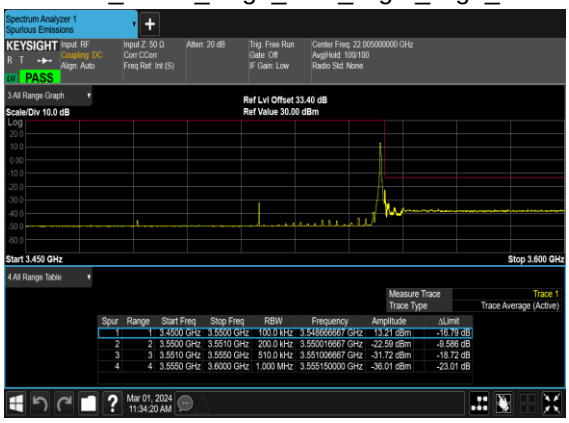
B5_N78(70M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



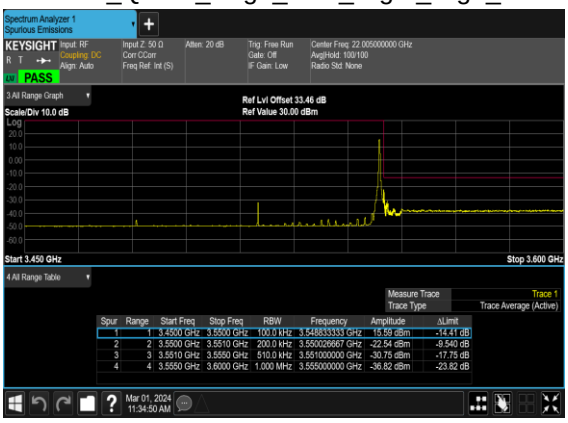
B5_N78(70M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



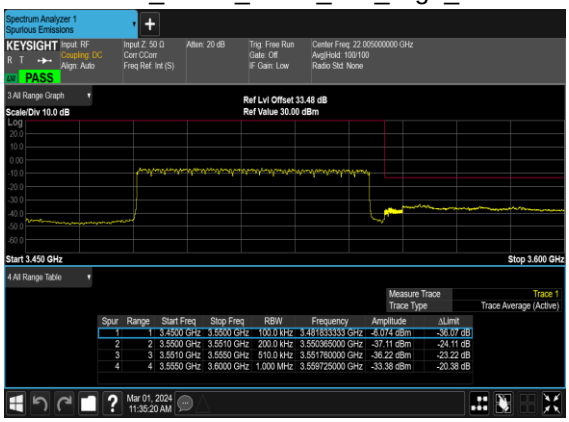
B5_N78(70M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



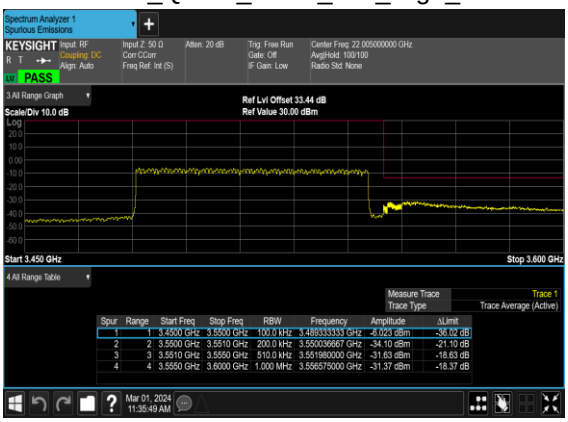
B5_N78(70M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



B5_N78(70M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



B5_N78(70M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Carl Ni	Temperature :	22~25℃
		Relative Humidity :	41~42%

RSE pre-scanned harmonic for different antennas, choose the worst antenna perform final test and record in the report.

n77 SA / NR 100MHz / QPSK(ANT2)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6900	-56.53	-13	-43.53	-66.74	3.03	13.24	H
	10356	-60.20	-13	-47.20	-69.65	3.56	13.01	H
	13800	-61.39	-13	-48.39	-70.91	3.92	13.44	H
	17256	-55.18	-13	-42.18	-64.32	4.51	13.65	H
	6900	-52.58	-13	-39.58	-62.79	3.03	13.24	V
	10356	-53.69	-13	-40.69	-63.14	3.56	13.01	V
	13800	-50.83	-13	-37.83	-60.35	3.92	13.44	V
	17256	-45.05	-13	-32.05	-54.19	4.51	13.65	V

EN-DC_41A_n77A / LTE 20MHz + NR 100MHz / QPSK(ANT0+2)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6900	-57.46	-13	-44.46	-67.67	3.03	13.24	H
	10356	-60.65	-13	-47.65	-70.10	3.56	13.01	H
	13800	-61.52	-13	-48.52	-71.04	3.92	13.44	H
	17256	-55.52	-13	-42.52	-64.66	4.51	13.65	H
	6900	-51.86	-13	-38.86	-62.07	3.03	13.24	V
	10356	-54.62	-13	-41.62	-64.07	3.56	13.01	V
	13800	-51.59	-13	-38.59	-61.11	3.92	13.44	V
	17256	-44.83	-13	-31.83	-53.97	4.51	13.65	V

EN-DC_26A_n77A / LTE 15MHz + NR 100MHz / QPSK(ANT1+0) - other PA								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6900	-63.40	-13	-50.40	-73.61	3.03	13.24	H
	10368	-60.88	-13	-47.88	-70.33	3.56	13.01	H
	13824	-60.78	-13	-47.78	-70.30	3.92	13.44	H
	6900	-57.78	-13	-44.78	-67.99	3.03	13.24	V
	10368	-61.22	-13	-48.22	-70.67	3.56	13.01	V
	13824	-61.72	-13	-48.72	-71.24	3.92	13.44	V

n77 UL MIMO / NR 100+100MHz / QPSK(ANT0+2)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6900	-60.52	-13	-47.52	-70.73	3.03	13.24	H
	10356	-61.45	-13	-48.45	-70.90	3.56	13.01	H
	13800	-61.64	-13	-48.64	-71.16	3.92	13.44	H
	17256	-55.06	-13	-42.06	-64.20	4.51	13.65	H
	6900	-56.41	-13	-43.41	-66.62	3.03	13.24	V
	10356	-57.85	-13	-44.85	-67.30	3.56	13.01	V
	13800	-55.96	-13	-42.96	-65.48	3.92	13.44	V
	17256	-49.34	-13	-36.34	-58.48	4.51	13.65	V

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