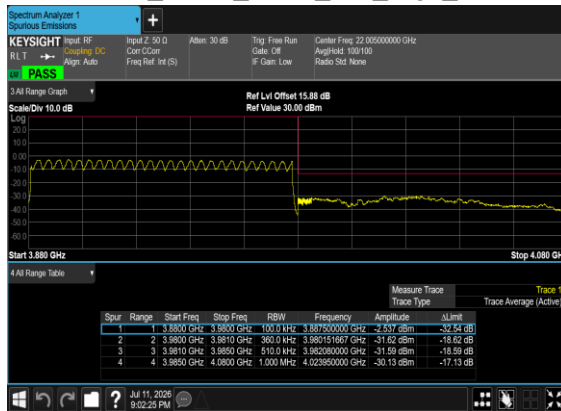
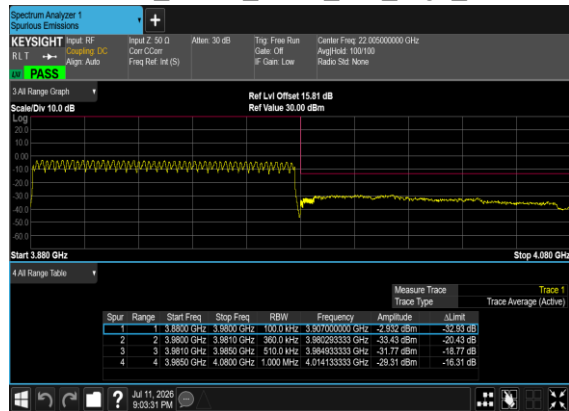




N77(100M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



N77(100M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH





Software Version: 23.06.1602

FR1 N78

Transmitter Conducted Output Power And EIRP, (G_T - L_c)= 2.99 dB

NR Band	SCS	Band Width	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
78	30	20	647334	3710.01	DFT-s-OFDM QPSK	25@12	24.28	27.27	0.5333
78	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	24.4	27.39	0.5483
78	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@49	24.28	27.27	0.5333
78	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	25@12	23.26	26.25	0.4217
78	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	23.4	26.39	0.4355
78	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@49	23.21	26.2	0.4169
78	30	20	650000	3750	DFT-s-OFDM QPSK	25@12	24.28	27.27	0.5333
78	30	20	650000	3750	DFT-s-OFDM QPSK	1@1	24.33	27.32	0.5395
78	30	20	650000	3750	DFT-s-OFDM QPSK	1@49	24.28	27.27	0.5333
78	30	20	650000	3750	DFT-s-OFDM 16 QAM	25@12	23.26	26.25	0.4217
78	30	20	650000	3750	DFT-s-OFDM 16 QAM	1@1	23.38	26.37	0.4335
78	30	20	650000	3750	DFT-s-OFDM 16 QAM	1@49	23.33	26.32	0.4285
78	30	20	652666	3789.99	DFT-s-OFDM QPSK	25@12	24.17	27.16	0.5200
78	30	20	652666	3789.99	DFT-s-OFDM QPSK	1@1	24.25	27.24	0.5297
78	30	20	652666	3789.99	DFT-s-OFDM QPSK	1@49	24.19	27.18	0.5224
78	30	20	652666	3789.99	DFT-s-OFDM 16 QAM	25@12	23.18	26.17	0.4140
78	30	20	652666	3789.99	DFT-s-OFDM 16 QAM	1@1	23.34	26.33	0.4295
78	30	20	652666	3789.99	DFT-s-OFDM 16 QAM	1@49	23.19	26.18	0.4150
78	30	40	648000	3720	DFT-s-OFDM QPSK	50@25	24.59	27.58	0.5728
78	30	40	648000	3720	DFT-s-OFDM QPSK	1@1	24.77	27.76	0.5970
78	30	40	648000	3720	DFT-s-OFDM QPSK	1@104	24.76	27.75	0.5957
78	30	40	648000	3720	DFT-s-OFDM 16 QAM	50@25	23.61	26.6	0.4571
78	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	23.88	26.87	0.4864
78	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@104	23.69	26.68	0.4656
78	30	40	650000	3750	DFT-s-OFDM QPSK	50@25	24.62	27.61	0.5768
78	30	40	650000	3750	DFT-s-OFDM QPSK	1@1	24.72	27.71	0.5902
78	30	40	650000	3750	DFT-s-OFDM QPSK	1@104	24.69	27.68	0.5861
78	30	40	650000	3750	DFT-s-OFDM 16 QAM	50@25	23.6	26.59	0.4560
78	30	40	650000	3750	DFT-s-OFDM 16 QAM	1@1	23.73	26.72	0.4699
78	30	40	650000	3750	DFT-s-OFDM 16 QAM	1@104	23.71	26.7	0.4677
78	30	40	652000	3780	DFT-s-OFDM QPSK	50@25	24.46	27.45	0.5559
78	30	40	652000	3780	DFT-s-OFDM QPSK	1@1	24.7	27.69	0.5875
78	30	40	652000	3780	DFT-s-OFDM QPSK	1@104	24.59	27.58	0.5728
78	30	40	652000	3780	DFT-s-OFDM 16 QAM	50@25	23.48	26.47	0.4436
78	30	40	652000	3780	DFT-s-OFDM 16 QAM	1@1	23.75	26.74	0.4721



78	30	40	652000	3780	DFT-s-OFDM 16 QAM	1@104	23.62	26.61	0.4581
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	64@32	24.2	27.19	0.5236
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	24.25	27.24	0.5297
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@131	24.05	27.04	0.5058
78	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	64@32	23.18	26.17	0.4140
78	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	23.27	26.26	0.4227
78	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@131	23.05	26.04	0.4018
78	30	50	650000	3750	DFT-s-OFDM QPSK	64@32	24.23	27.22	0.5272
78	30	50	650000	3750	DFT-s-OFDM QPSK	1@1	24.13	27.12	0.5152
78	30	50	650000	3750	DFT-s-OFDM QPSK	1@131	24.02	27.01	0.5023
78	30	50	650000	3750	DFT-s-OFDM 16 QAM	64@32	23.22	26.21	0.4178
78	30	50	650000	3750	DFT-s-OFDM 16 QAM	1@1	23.2	26.19	0.4159
78	30	50	650000	3750	DFT-s-OFDM 16 QAM	1@131	23.05	26.04	0.4018
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	64@32	24.1	27.09	0.5117
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@1	24.08	27.07	0.5093
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@131	23.89	26.88	0.4875
78	30	50	651666	3774.99	DFT-s-OFDM 16 QAM	64@32	23.1	26.09	0.4064
78	30	50	651666	3774.99	DFT-s-OFDM 16 QAM	1@1	23.07	26.06	0.4036
78	30	50	651666	3774.99	DFT-s-OFDM 16 QAM	1@131	22.85	25.84	0.3837
78	30	60	648668	3730.02	DFT-s-OFDM QPSK	81@40	24.13	27.12	0.5152
78	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@1	24.11	27.1	0.5129
78	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@160	24.02	27.01	0.5023
78	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	81@40	23.14	26.13	0.4102
78	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@1	23.16	26.15	0.4121
78	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@160	23.1	26.09	0.4064
78	30	60	650000	3750	DFT-s-OFDM QPSK	81@40	24.1	27.09	0.5117
78	30	60	650000	3750	DFT-s-OFDM QPSK	1@1	24.03	27.02	0.5035
78	30	60	650000	3750	DFT-s-OFDM QPSK	1@160	24.08	27.07	0.5093
78	30	60	650000	3750	DFT-s-OFDM 16 QAM	81@40	23.13	26.12	0.4093
78	30	60	650000	3750	DFT-s-OFDM 16 QAM	1@1	23	25.99	0.3972
78	30	60	650000	3750	DFT-s-OFDM 16 QAM	1@160	23.12	26.11	0.4083
78	30	60	651332	3769.98	DFT-s-OFDM QPSK	81@40	24.13	27.12	0.5152
78	30	60	651332	3769.98	DFT-s-OFDM QPSK	1@1	24.17	27.16	0.5200
78	30	60	651332	3769.98	DFT-s-OFDM QPSK	1@160	24	26.99	0.5000
78	30	60	651332	3769.98	DFT-s-OFDM 16 QAM	81@40	23.19	26.18	0.4150
78	30	60	651332	3769.98	DFT-s-OFDM 16 QAM	1@1	23.1	26.09	0.4064
78	30	60	651332	3769.98	DFT-s-OFDM 16 QAM	1@160	23	25.99	0.3972
78	30	80	649334	3740.01	DFT-s-OFDM QPSK	108@54	24.61	27.6	0.5754
78	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@1	24.58	27.57	0.5715
78	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@215	24.36	27.35	0.5433
78	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	108@54	23.63	26.62	0.4592
78	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@1	23.56	26.55	0.4519



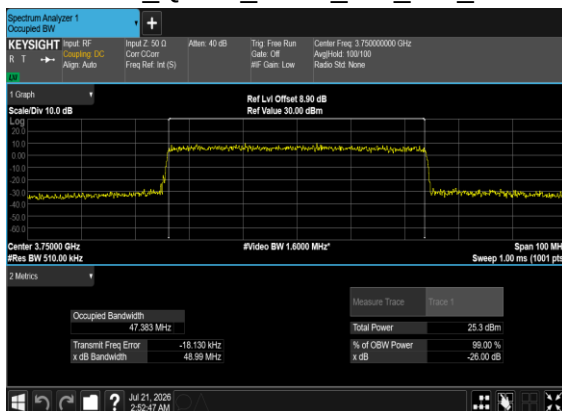
78	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@215	23.31	26.3	0.4266
78	30	80	650000	3750	DFT-s-OFDM QPSK	108@54	24.58	27.57	0.5715
78	30	80	650000	3750	DFT-s-OFDM QPSK	1@1	24.47	27.46	0.5572
78	30	80	650000	3750	DFT-s-OFDM QPSK	1@215	24.36	27.35	0.5433
78	30	80	650000	3750	DFT-s-OFDM 16 QAM	108@54	23.57	26.56	0.4529
78	30	80	650000	3750	DFT-s-OFDM 16 QAM	1@1	23.47	26.46	0.4426
78	30	80	650000	3750	DFT-s-OFDM 16 QAM	1@215	23.43	26.42	0.4385
78	30	80	650666	3759.99	DFT-s-OFDM QPSK	108@54	24.54	27.53	0.5662
78	30	80	650666	3759.99	DFT-s-OFDM QPSK	1@1	24.49	27.48	0.5598
78	30	80	650666	3759.99	DFT-s-OFDM QPSK	1@215	24.37	27.36	0.5445
78	30	80	650666	3759.99	DFT-s-OFDM 16 QAM	108@54	23.59	26.58	0.4550
78	30	80	650666	3759.99	DFT-s-OFDM 16 QAM	1@1	23.4	26.39	0.4355
78	30	80	650666	3759.99	DFT-s-OFDM 16 QAM	1@215	23.34	26.33	0.4295
78	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	135@67	24.8	27.79	0.6012
78	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	24.82	27.81	0.6039
78	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@271	24.64	27.63	0.5794
78	30	100	650000	3750	DFT-s-OFDM QPSK	135@67	24.78	27.77	0.5984
78	30	100	650000	3750	DFT-s-OFDM QPSK	1@1	24.79	27.78	0.5998
78	30	100	650000	3750	DFT-s-OFDM QPSK	1@271	24.66	27.65	0.5821
78	30	100	650000	3750	DFT-s-OFDM 16 QAM	135@67	23.74	26.73	0.4710
78	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@1	23.71	26.7	0.4677
78	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@271	23.65	26.64	0.4613
78	30	100	650000	3750	DFT-s-OFDM 64 QAM	135@67	22.28	25.27	0.3365
78	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@1	22.33	25.32	0.3404
78	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@271	22.22	25.21	0.3319
78	30	100	650000	3750	DFT-s-OFDM 256 QAM	135@67	20.3	23.29	0.2133
78	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@1	20.4	23.39	0.2183
78	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@271	20.34	23.33	0.2153
78	30	100	650000	3750	CP-OFDM QPSK	137@68	23.26	26.25	0.4217
78	30	100	650000	3750	CP-OFDM QPSK	1@1	23.36	26.35	0.4315
78	30	100	650000	3750	CP-OFDM QPSK	1@271	23.17	26.16	0.4130

**Occupied Bandwidth**

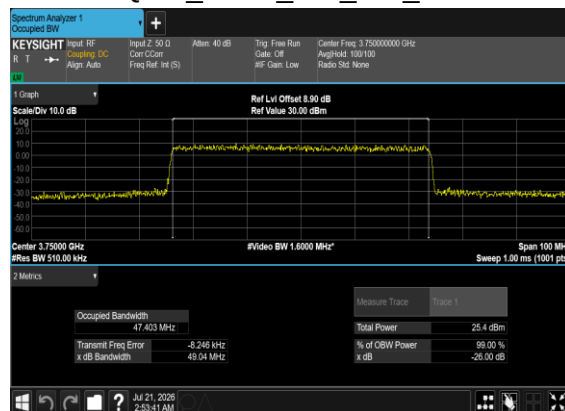
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
78	30	50	650000	3750.0	CP-OFDM QPSK	133@0	47.383	48.99
78	30	50	650000	3750.0	CP-OFDM 16 QAM	133@0	47.403	49.04
78	30	50	650000	3750.0	CP-OFDM 64 QAM	133@0	47.394	49.05
78	30	50	650000	3750.0	CP-OFDM 256 QAM	133@0	47.433	48.95



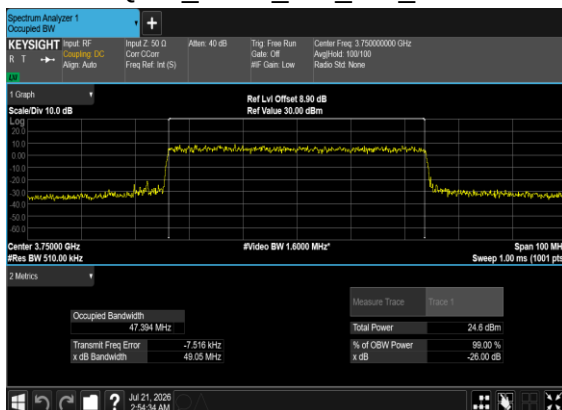
N78(50M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



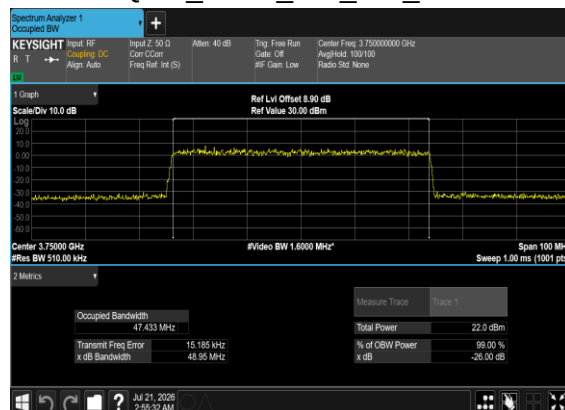
N78(50M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N78(50M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



N78(50M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



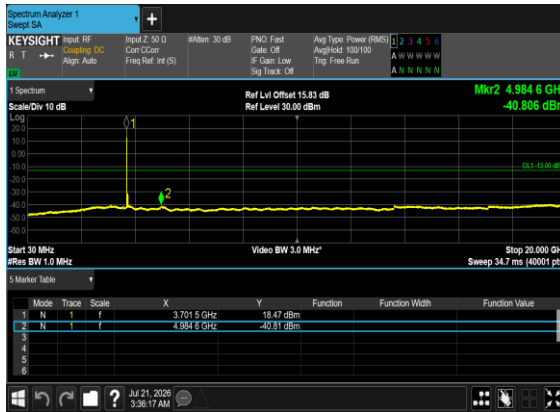


Conducted Spurious Emissions

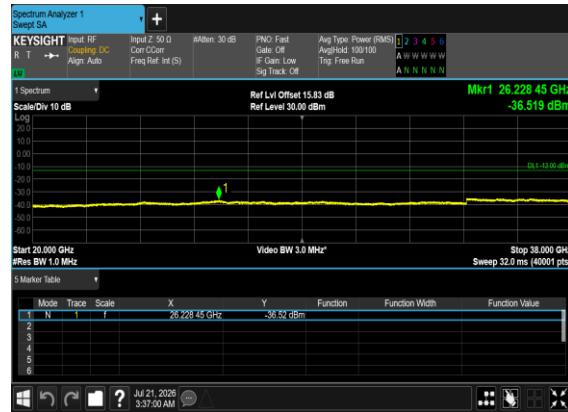
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	50	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	50	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	50	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	50	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM BPSK	1@0	see graph	---
78	30	50	651666	3774.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@0	see graph	---
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@0	see graph	PASS



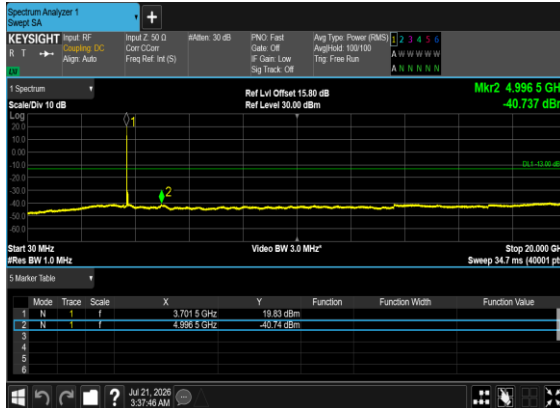
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



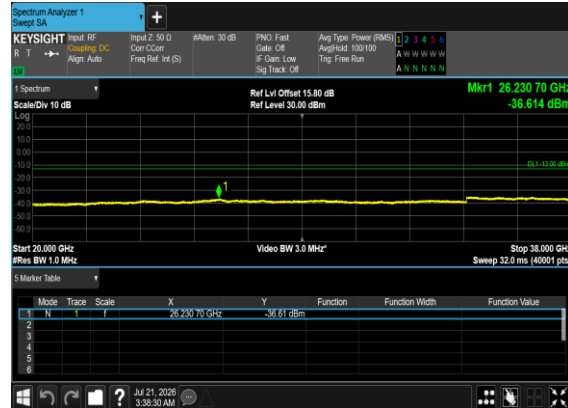
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH

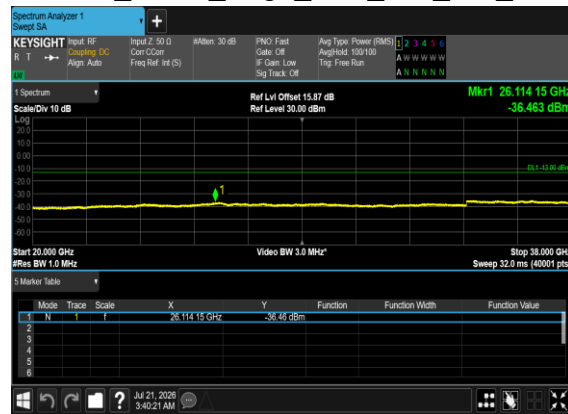




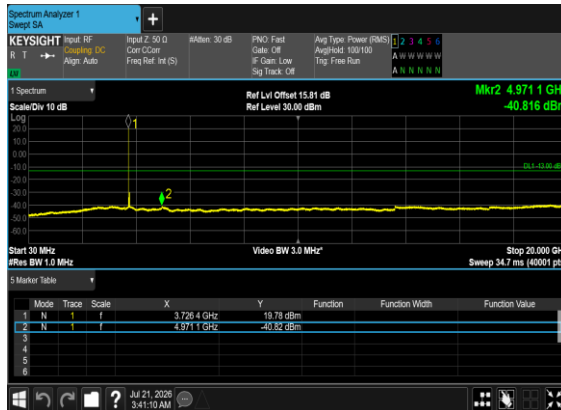
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



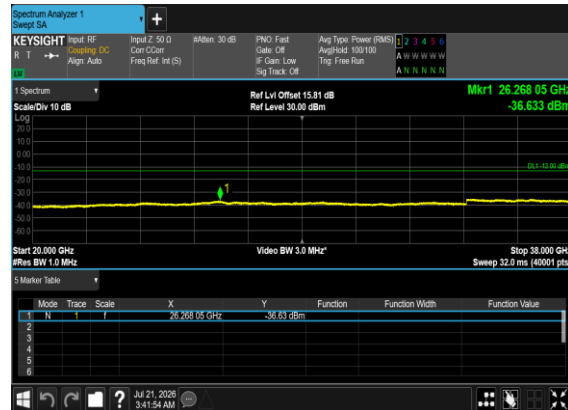
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH

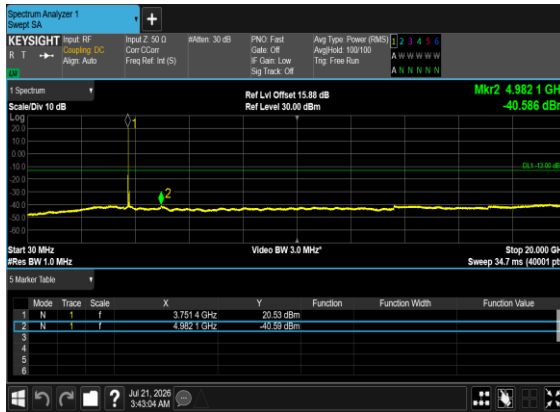


N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH

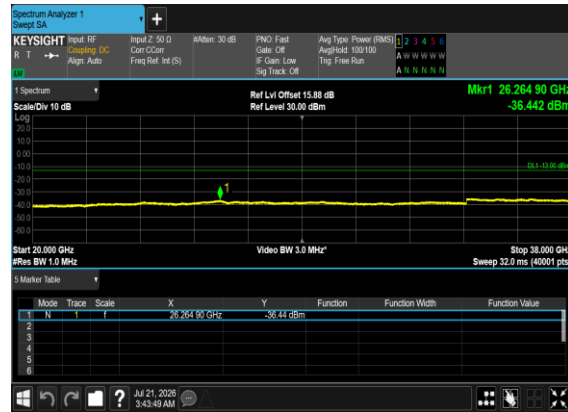




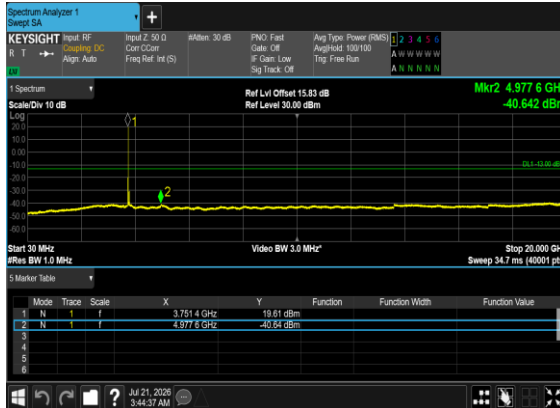
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



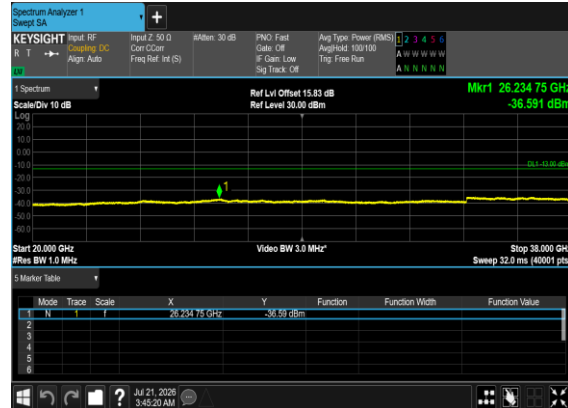
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH



N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH

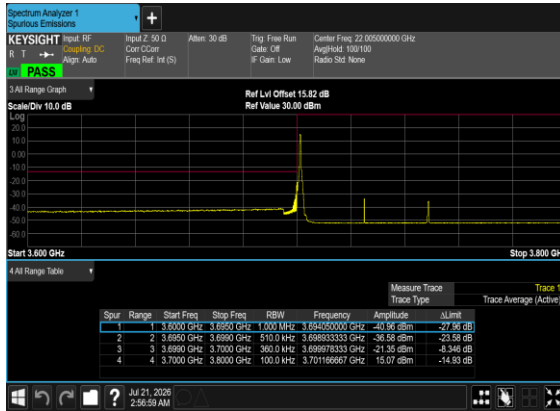


Conducted Band Edge

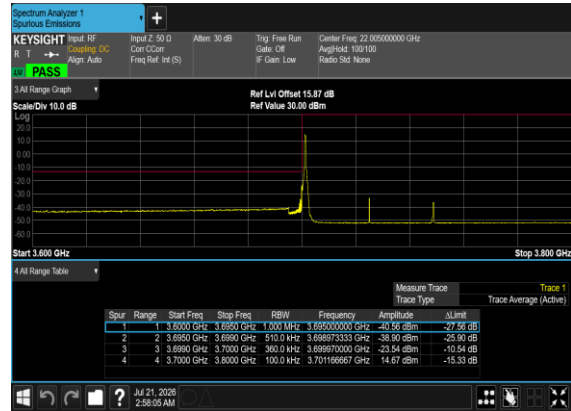
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
78	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
78	30	50	648334	3725.01	DFT-s-OFDM BPSK	128@0	see graph	PASS
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	128@0	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM BPSK	1@132	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@132	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM BPSK	128@0	see graph	PASS
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	128@0	see graph	PASS



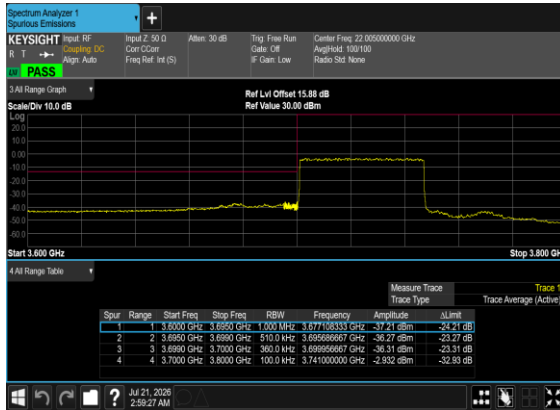
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



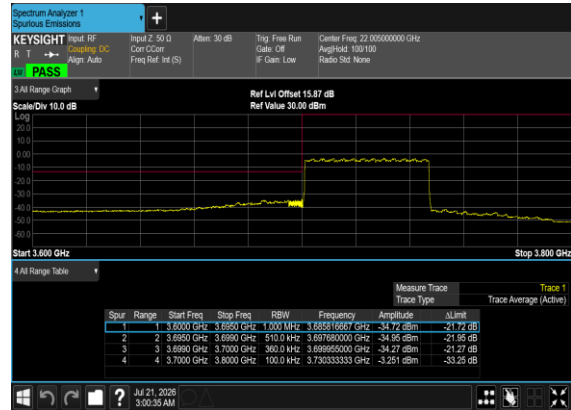
N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



N78(50M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH

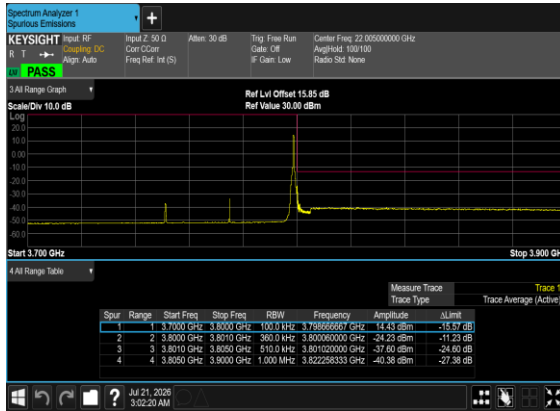


N78(50M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH

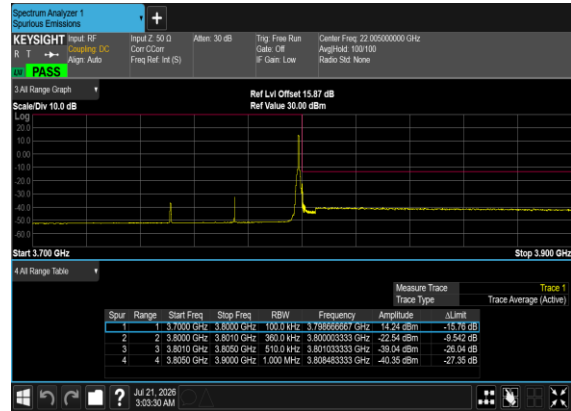




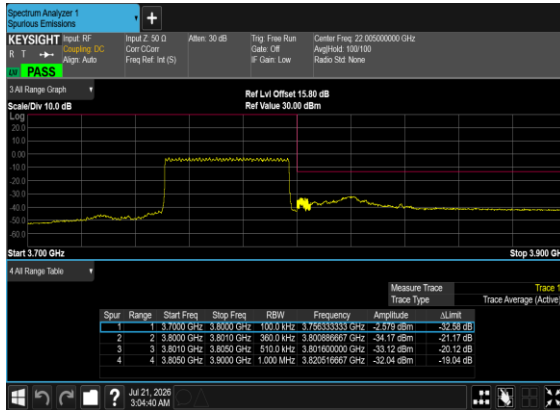
N78(50M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



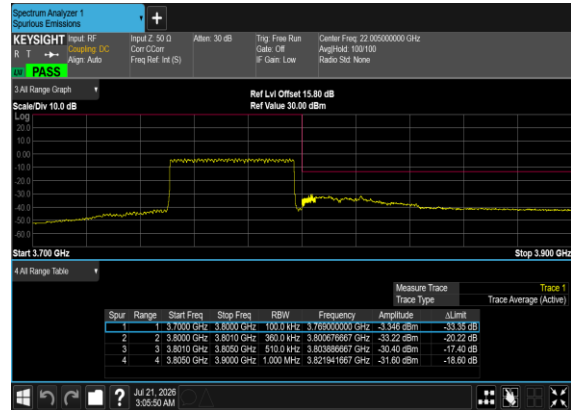
N78(50M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



N78(50M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



N78(50M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH





Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	LiangPingZhou	Temperature :	22~25°C
		Relative Humidity :	48~52%

n77 SA / NR 100MHz / QPSK / ANT132									
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)
Middle	7584.00	-56.00	-13	-43.00	-49.56	-59.30	8.30	11.60	H
	11376.00	-49.69	-13	-36.69	-51.90	-51.21	10.48	12.00	H
	15168.00	-47.17	-13	-34.17	-52.74	-48.87	11.80	13.50	H
	7584.00	-52.83	-13	-39.83	-46.35	-56.13	8.30	11.60	V
	11376.00	-48.76	-13	-35.76	-50.7	-50.28	10.48	12.00	V
	15168.00	-48.30	-13	-35.30	-53.22	-50.00	11.80	13.50	V

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

EN-DC_13A_n77A / LTE 10MHz + NR 100MHz / QPSK / ANT94 (LTE) & ANT132(NR)									
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	7584.00	-57.08	-13	-44.08	-50.64	-60.38	8.30	11.60	H
	11376.00	-50.08	-13	-37.08	-52.29	-51.60	10.48	12.00	H
	15168.00	-48.25	-13	-35.25	-53.82	-49.95	11.80	13.50	H
	7584.00	-55.22	-13	-42.22	-48.74	-58.52	8.30	11.60	V
	11376.00	-47.66	-13	-34.66	-49.6	-49.18	10.48	12.00	V
	15168.00	-48.68	-13	-35.68	-53.60	-50.38	11.80	13.50	V
LTE Band13 Middle	1559.5	-60.22	-42.15	-18.07	-70.59	-63.47	4.00	9.40	H
	2339.25	-60.70	-13	-47.70	-75.85	-64.27	4.88	10.60	H
	3119	-59.07	-13	-46.07	-76.41	-64.00	5.52	12.60	H
	1559.5	-61.01	-42.15	-18.86	-71.46	-64.26	4.00	9.40	V
	2339.25	-60.75	-13	-47.75	-75.90	-64.32	4.88	10.60	V
	3119	-58.45	-13	-45.45	-75.83	-63.38	5.52	12.60	V

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