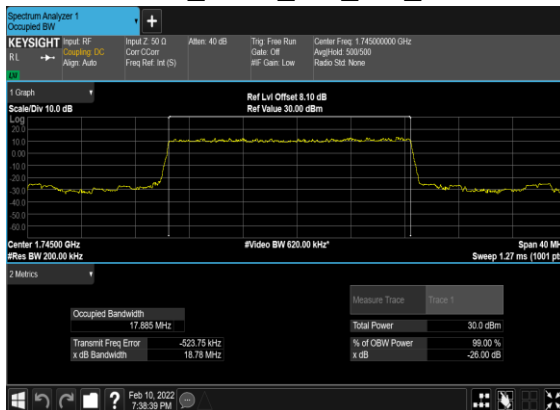
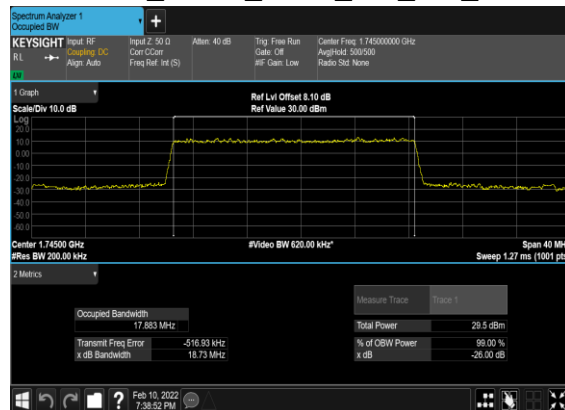


B5_N66(20M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



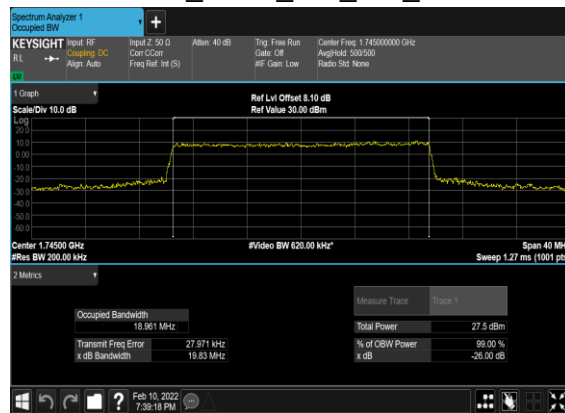
B5_N66(20M)_DFT-s-
OFDM_QPSK_Outer_Full_Mid_CH



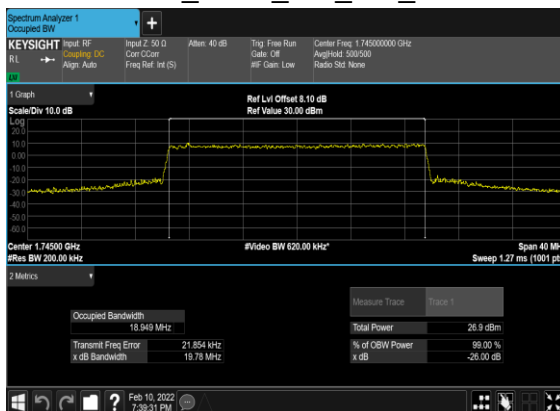
B5_N66(20M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



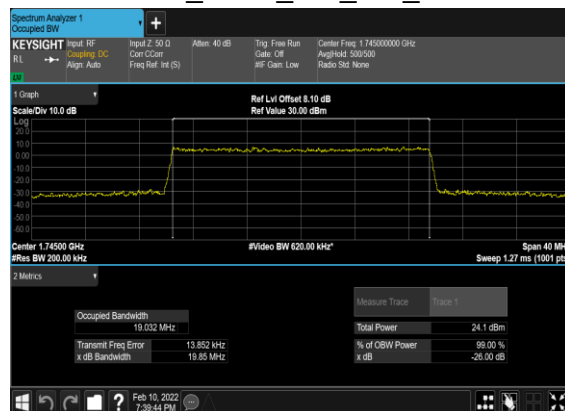
B5_N66(20M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



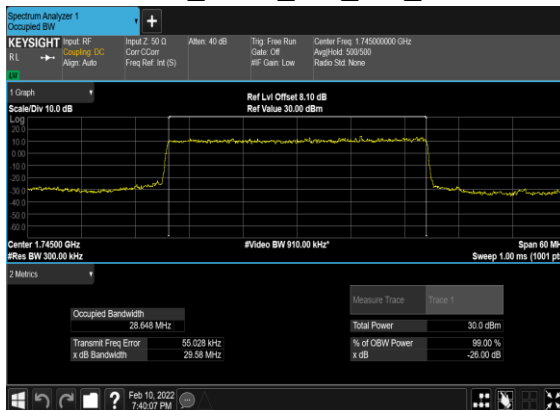
B5_N66(20M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



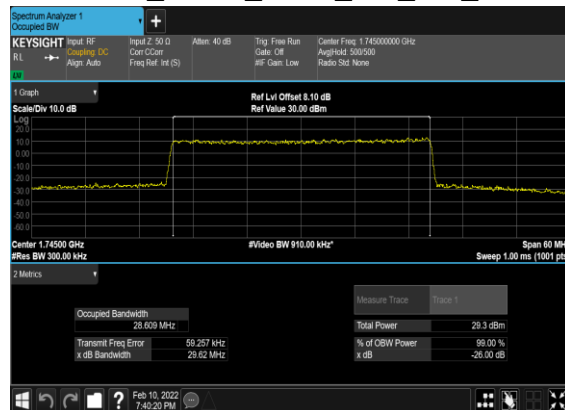
B5_N66(20M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



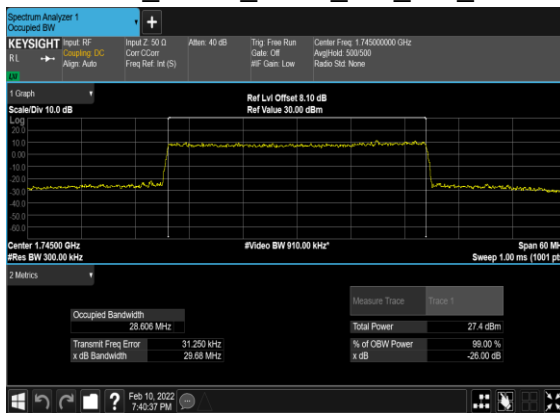
B5_N66(30M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



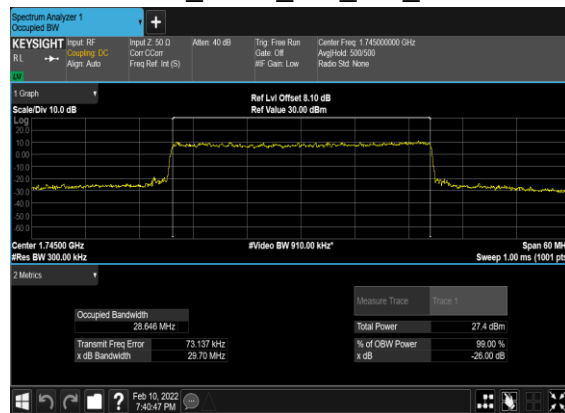
B5_N66(30M)_DFT-s-
OFDM_QPSK_Outer_Full_Mid_CH



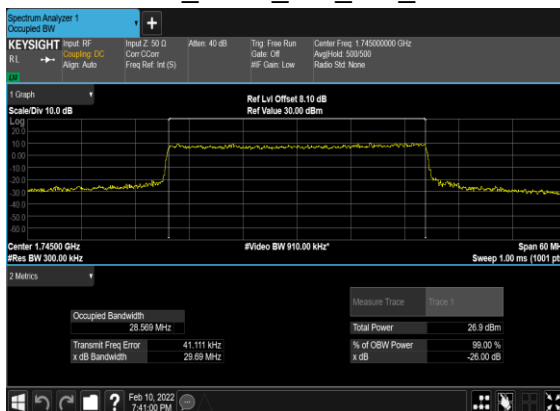
B5_N66(30M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



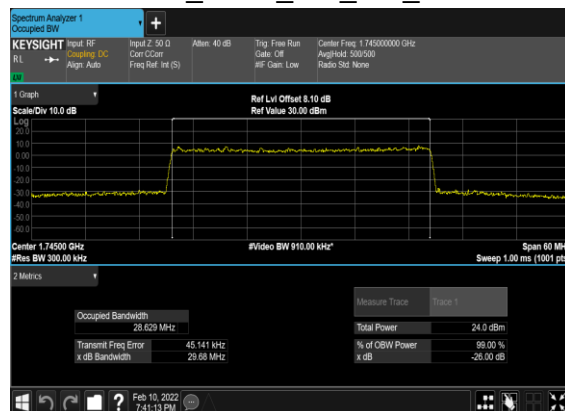
B5_N66(30M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



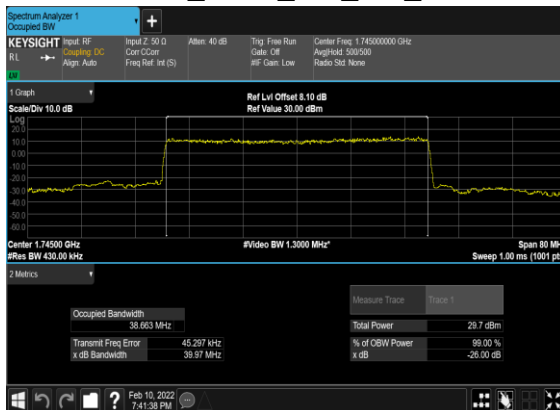
B5_N66(30M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



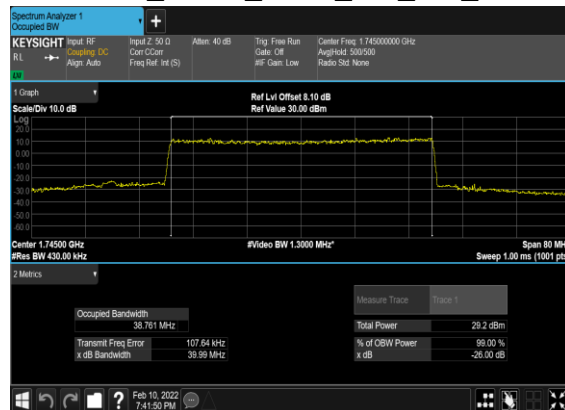
B5_N66(30M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



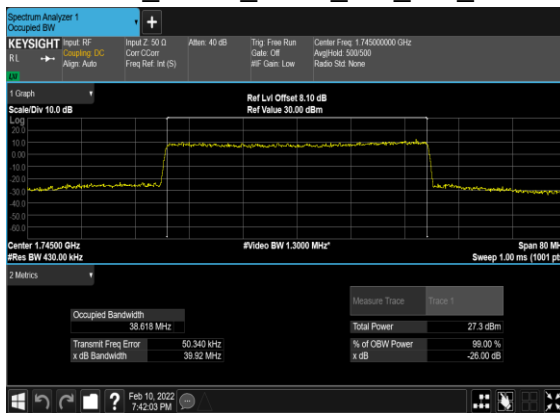
B5_N66(40M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



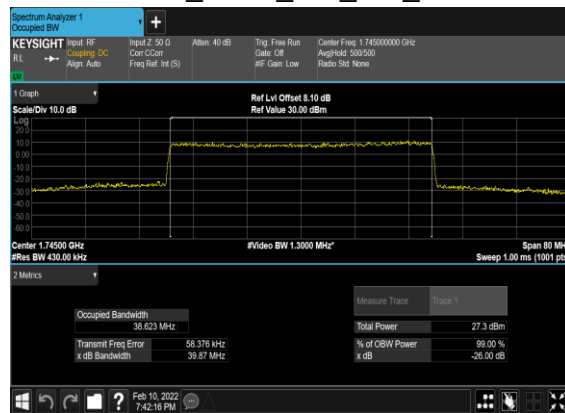
B5_N66(40M)_DFT-s-
OFDM_QPSK_Outer_Full_Mid_CH



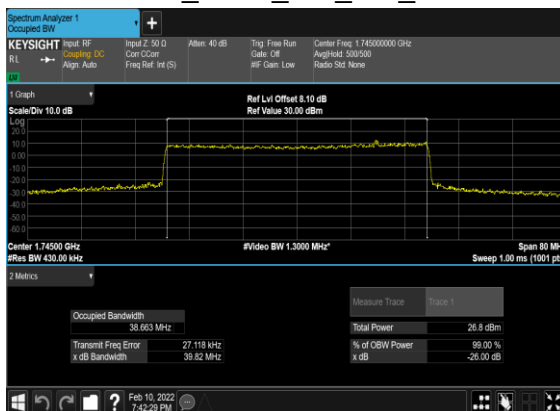
B5_N66(40M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



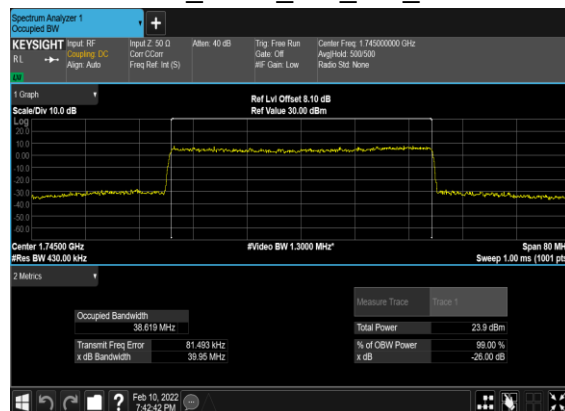
B5_N66(40M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



B5_N66(40M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



B5_N66(40M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

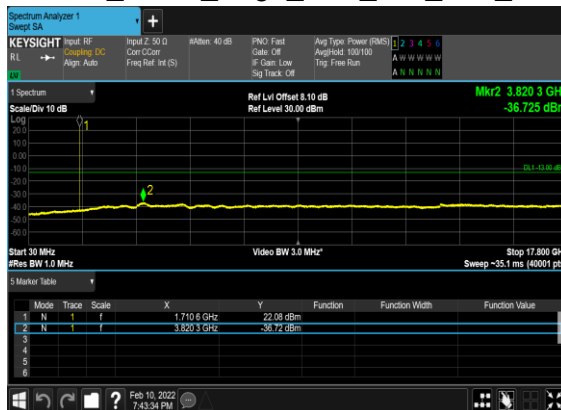


Conducted Spurious Emissions

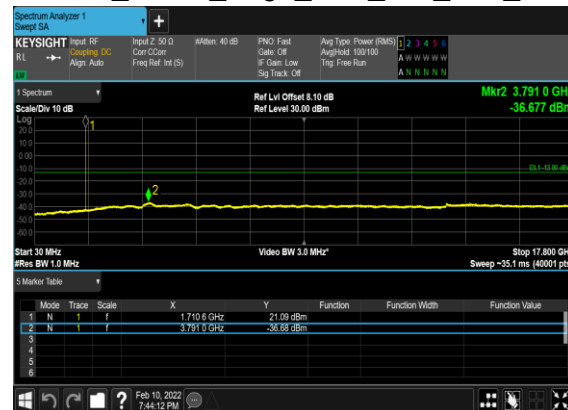
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
66	15	5	422500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	422500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	5	422500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	422500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	5	429000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	429000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	5	429000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	429000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	5	435500	1777.5	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	435500	1777.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	5	435500	1777.5	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	435500	1777.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	20	424000	1720.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	20	424000	1720.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	20	424000	1720.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	20	424000	1720.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	20	429000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	20	429000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	20	429000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	20	429000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	20	434000	1770.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	20	434000	1770.0	DFT-s-OFDM BPSK	1@0	see graph	PASS

66	15	20	434000	1770.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	20	434000	1770.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	40	426000	1730.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	40	426000	1730.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	40	426000	1730.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	40	426000	1730.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	40	429000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	40	429000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	40	429000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	40	429000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	40	432000	1760.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	40	432000	1760.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	40	432000	1760.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	40	432000	1760.0	DFT-s-OFDM QPSK	1@0	see graph	PASS

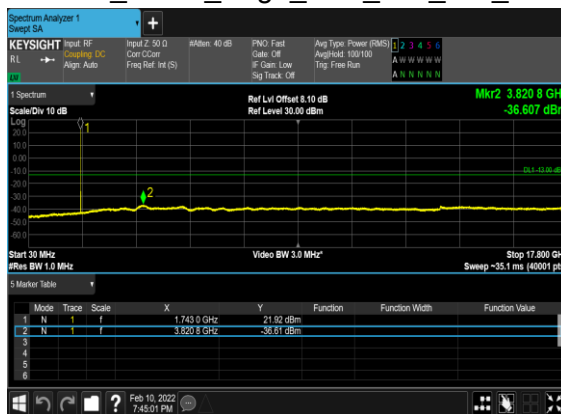
B5_N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



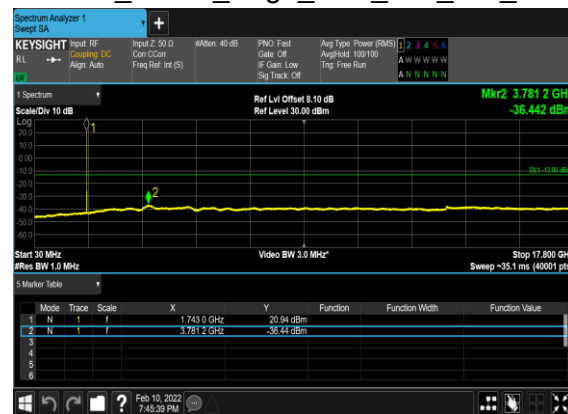
B5_N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



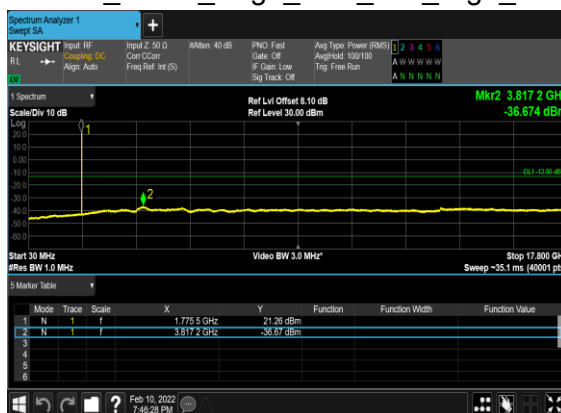
B5_N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



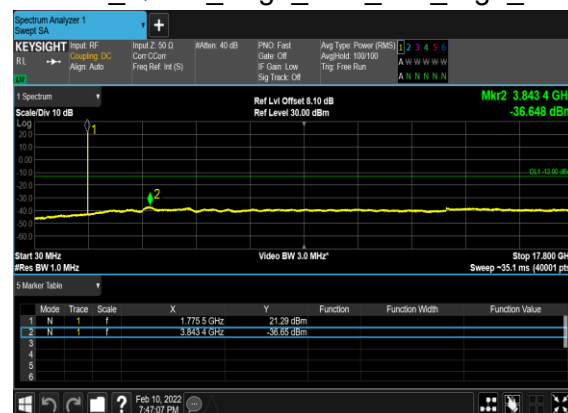
B5_N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



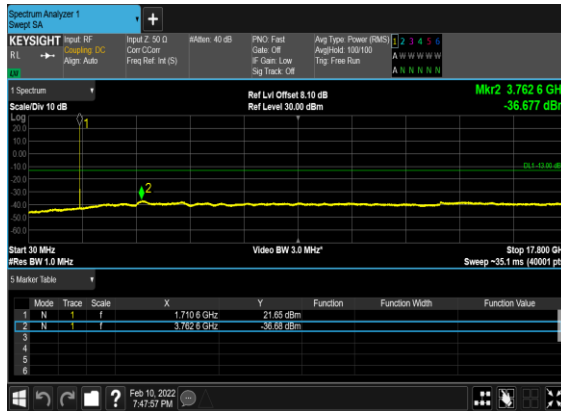
B5_N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



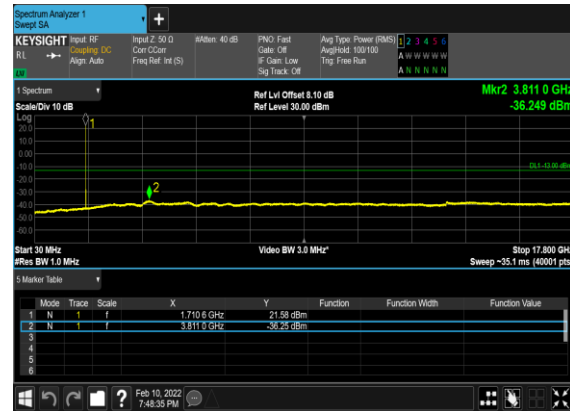
B5_N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



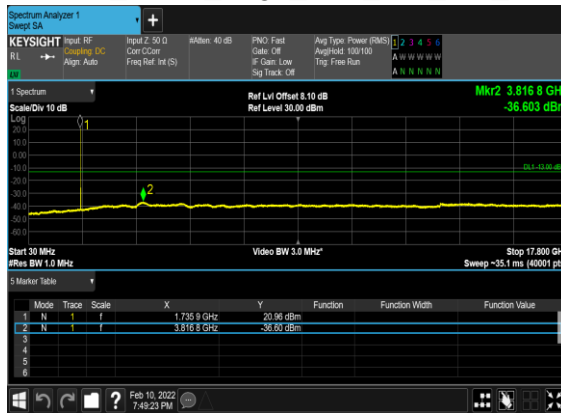
B5_N66(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



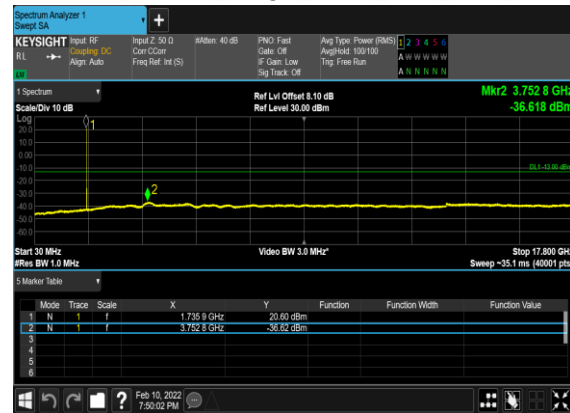
B5_N66(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



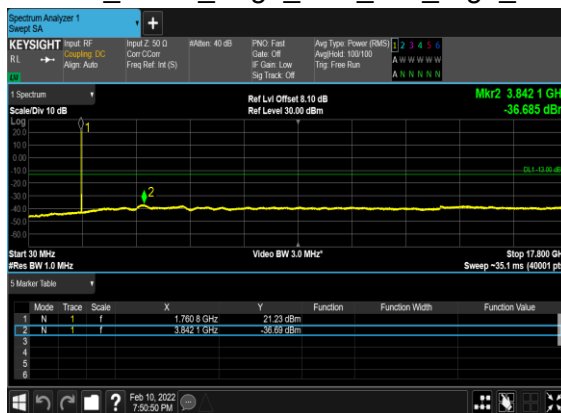
B5_N66(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



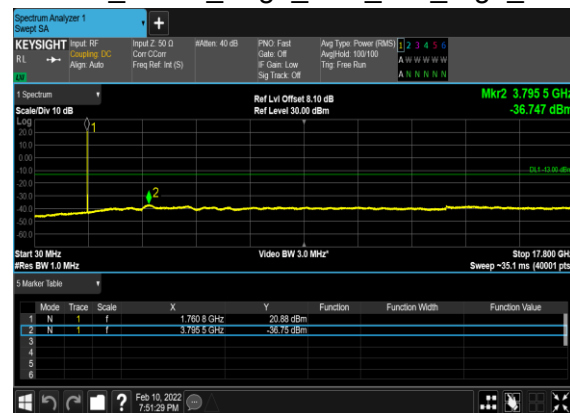
B5_N66(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH



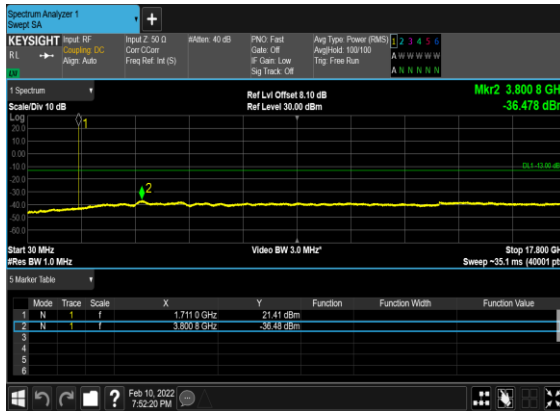
B5_N66(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



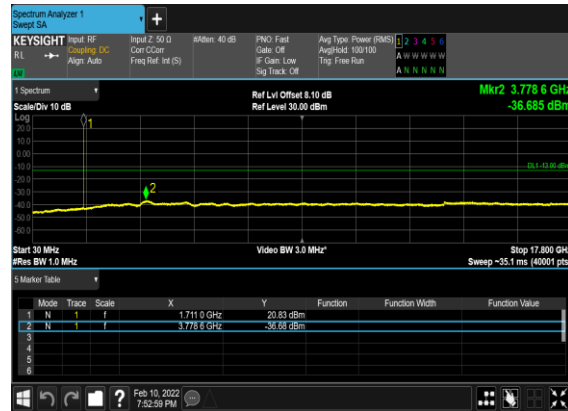
B5_N66(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH



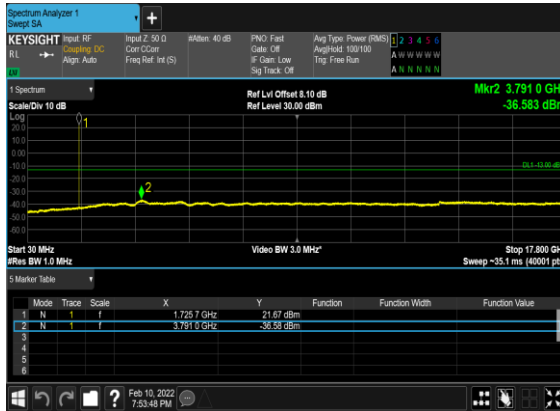
B5_N66(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



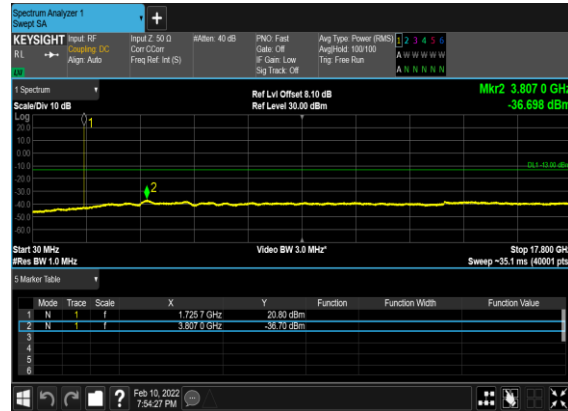
B5_N66(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



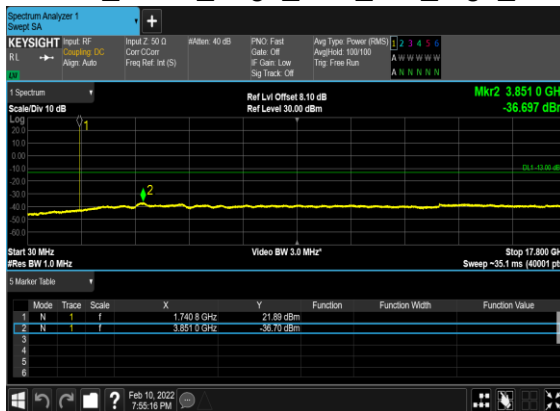
B5_N66(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



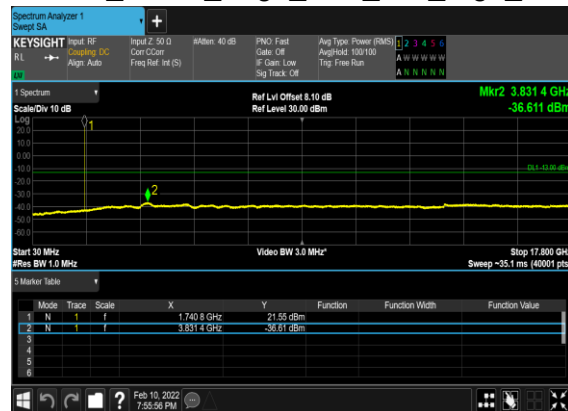
B5_N66(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH



B5_N66(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



B5_N66(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH

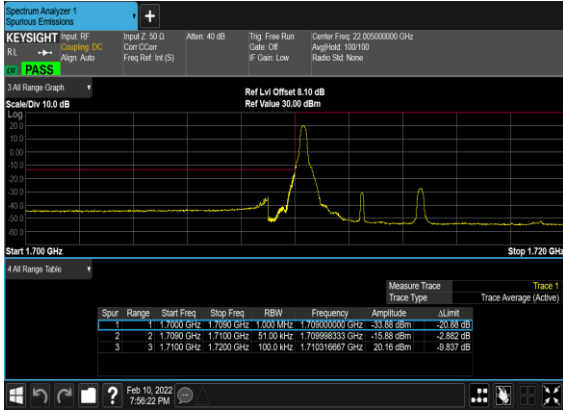


Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
66	15	5	422500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	5	422500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	5	422500	1712.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
66	15	5	422500	1712.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
66	15	5	435500	1777.5	DFT-s-OFDM BPSK	1@24	see graph	PASS
66	15	5	435500	1777.5	DFT-s-OFDM QPSK	1@24	see graph	PASS
66	15	5	435500	1777.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
66	15	5	435500	1777.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
66	15	20	424000	1720.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	20	424000	1720.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	20	424000	1720.0	DFT-s-OFDM BPSK	100@0	see graph	PASS
66	15	20	424000	1720.0	DFT-s-OFDM QPSK	100@0	see graph	PASS
66	15	20	434000	1770.0	DFT-s-OFDM BPSK	1@105	see graph	PASS
66	15	20	434000	1770.0	DFT-s-OFDM QPSK	1@105	see graph	PASS
66	15	20	434000	1770.0	DFT-s-OFDM BPSK	100@0	see graph	PASS
66	15	20	434000	1770.0	DFT-s-OFDM QPSK	100@0	see graph	PASS
66	15	40	426000	1730.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
66	15	40	426000	1730.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
66	15	40	426000	1730.0	DFT-s-OFDM BPSK	216@0	see graph	PASS
66	15	40	426000	1730.0	DFT-s-OFDM QPSK	216@0	see graph	PASS
66	15	40	432000	1760.0	DFT-s-OFDM BPSK	1@215	see graph	PASS
66	15	40	432000	1760.0	DFT-s-OFDM QPSK	1@215	see graph	PASS

66	15	40	432000	1760.0	DFT-s-OFDM BPSK	216@0	see graph	PASS
66	15	40	432000	1760.0	DFT-s-OFDM QPSK	216@0	see graph	PASS

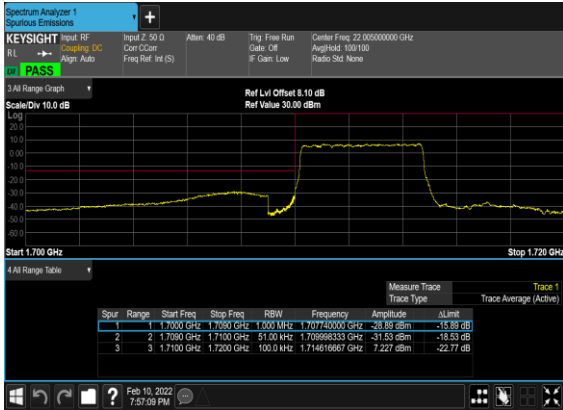
B5_N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



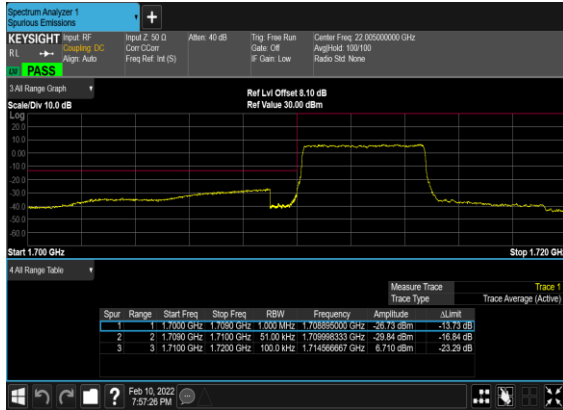
B5_N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



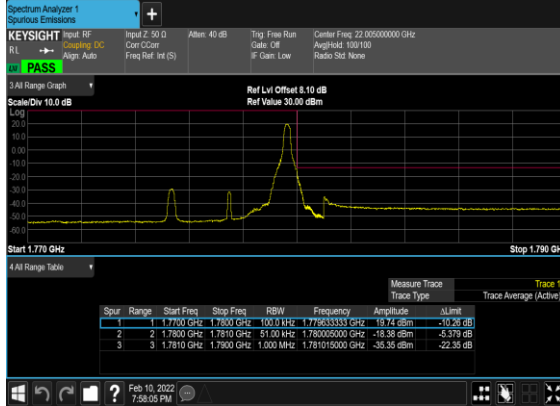
B5_N66(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



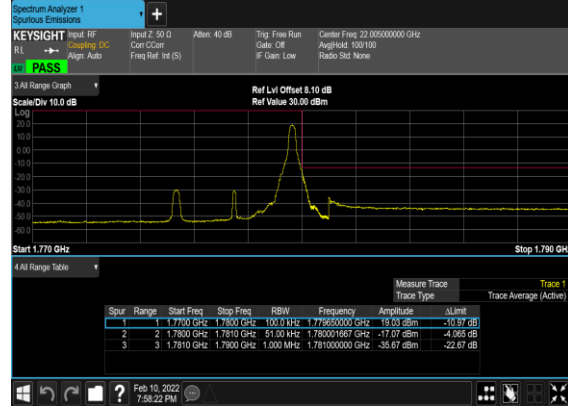
B5_N66(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



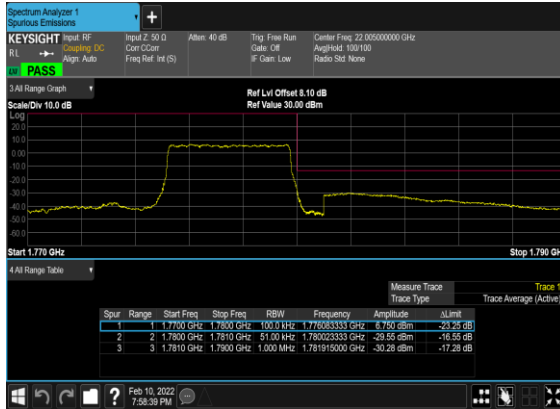
B5_N66(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



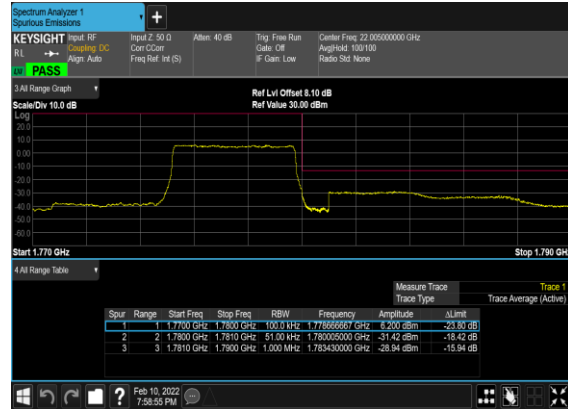
B5_N66(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



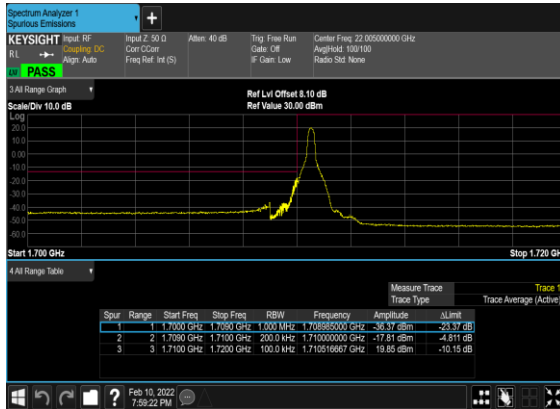
B5_N66(5M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



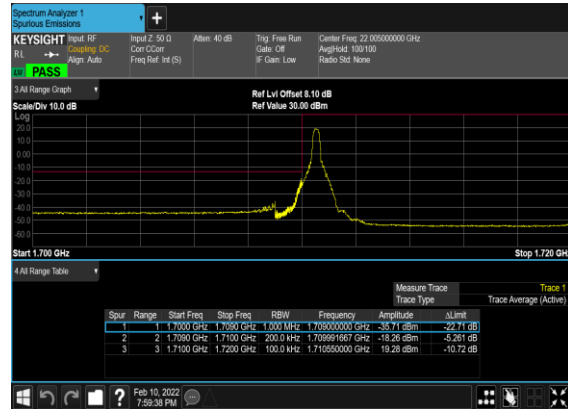
B5_N66(5M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH



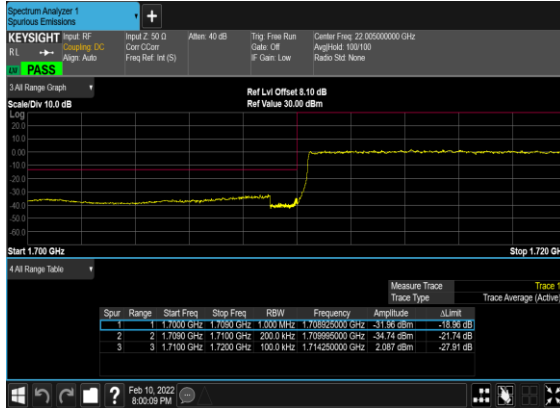
B5_N66(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



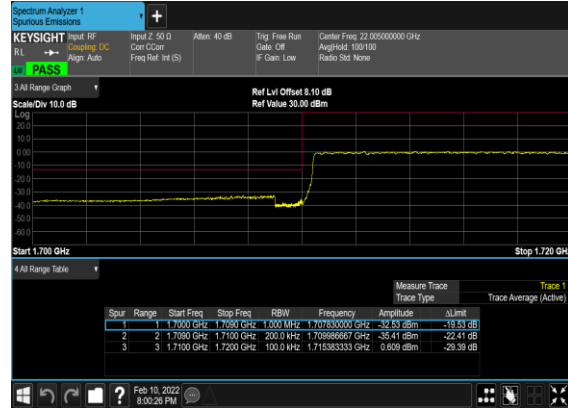
B5_N66(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



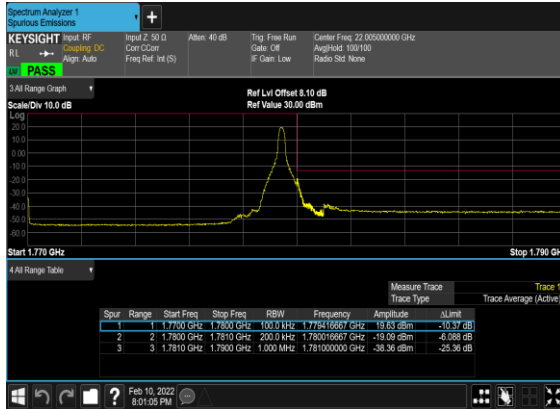
B5_N66(20M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH



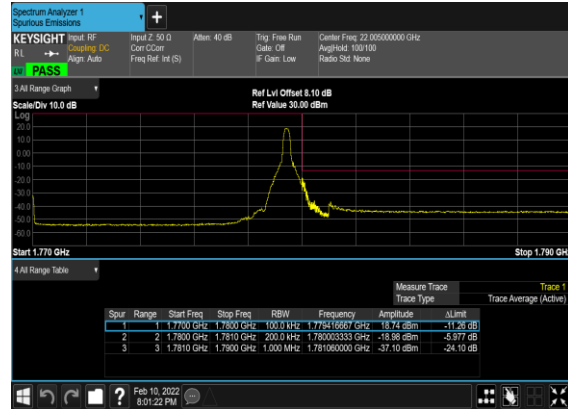
B5_N66(20M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH



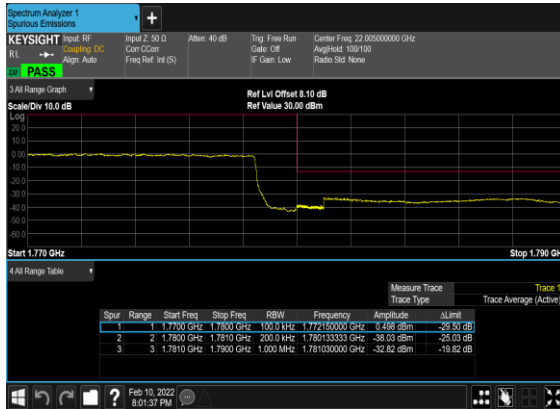
B5_N66(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



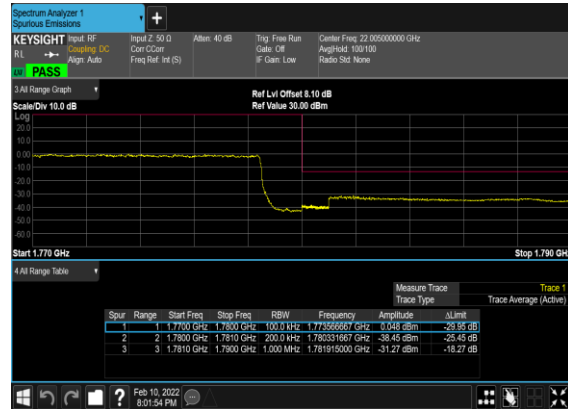
B5_N66(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



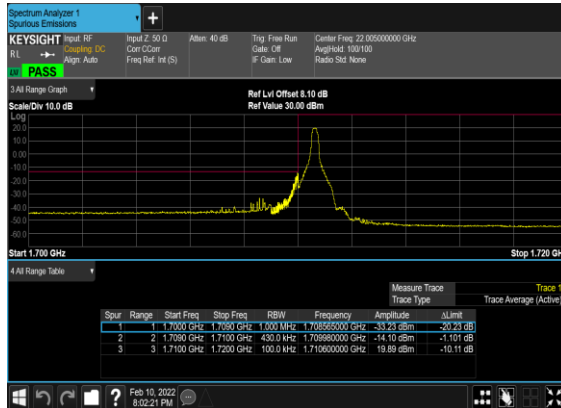
B5_N66(20M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



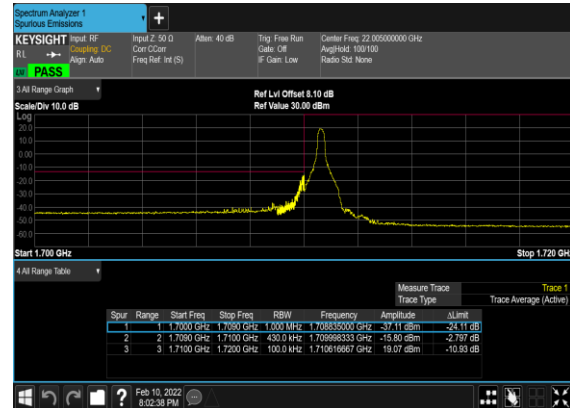
B5_N66(20M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH



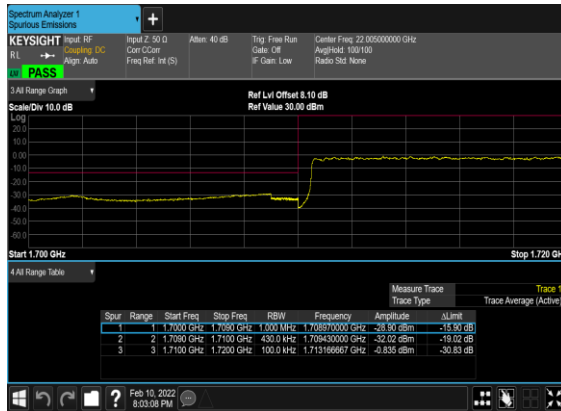
B5_N66(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



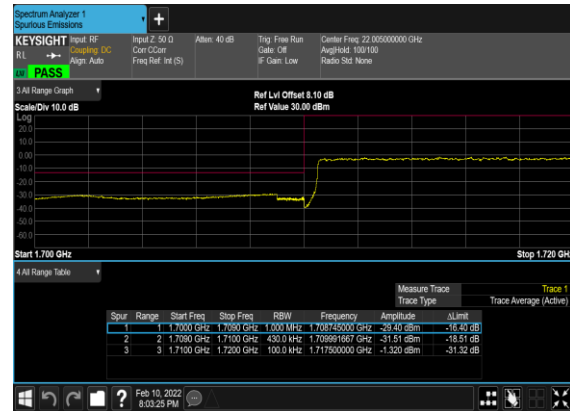
B5_N66(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



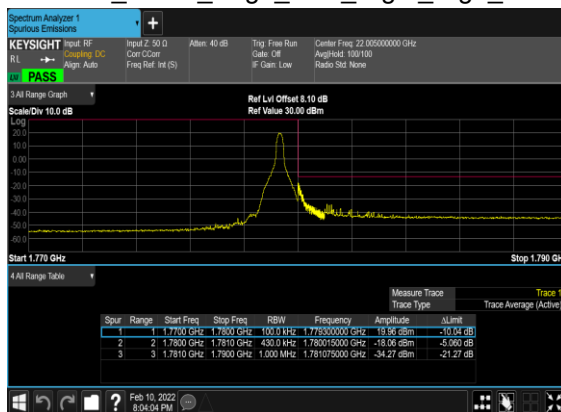
B5_N66(40M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH



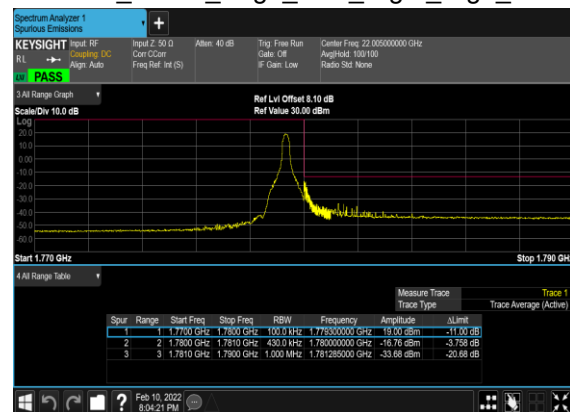
B5_N66(40M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH



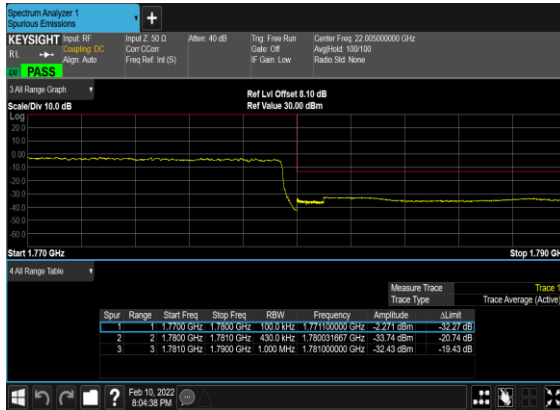
B5_N66(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



B5_N66(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



B5_N66(40M)_DFT-s- OFDM_BPSK_Outer_Full_High_CH



B5_N66(40M)_DFT-s- OFDM_QPSK_Outer_Full_High_CH





Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Chris Chen	Temperature :	22~23°C
		Relative Humidity :	41~42%

Note: Pre-scanned harmonic for the different antenna combinations for EN-DC mode, we choose the worst combination to test.

EN-DC_66A_n2A / LTE 20MHz + NR 20MHz / QPSK / ANT0(LTE) & ANT1(NR)								
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	3735	-56.27	-13	-43.27	-68.53	2.64	14.90	H
	5610	-53.85	-13	-40.85	-65.71	2.94	14.80	H
	7485	-51.41	-13	-38.41	-61.18	3.39	13.16	H
	3735	-55.96	-13	-42.96	-68.22	2.64	14.90	V
	5610	-54.43	-13	-41.43	-66.29	2.94	14.80	V
	7485	-52.01	-13	-39.01	-61.78	3.39	13.16	V

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

EN-DC_7A_n5A / LTE 20MHz + NR 20MHz / QPSK / ANT0(LTE) & ANT1(NR)								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1656	-65.05	-13	-52.05	-72.02	1.58	10.70	H
	2480	-60.25	-13	-47.25	-68.50	2.10	12.50	H
	3312	-59.33	-13	-46.33	-68.22	2.86	13.90	H
	1656	-64.38	-13	-51.38	-71.35	1.58	10.70	V
	2480	-58.94	-13	-45.94	-67.19	2.10	12.50	V
	3312	-59.26	-13	-46.26	-68.15	2.86	13.90	V

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



n7 / NR 40MHz / QPSK / ANT0(NR)								
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	5050	-64.44	-25	-39.44	-74.65	3.03	13.24	H
	7584	-57.84	-25	-32.84	-67.29	3.56	13.01	H
	10104	-63.05	-25	-38.05	-72.57	3.92	13.44	H
	5050	-63.86	-25	-38.86	-74.07	3.03	13.24	V
	7584	-57.74	-25	-32.74	-67.19	3.56	13.01	V
	10104	-59.79	-25	-34.79	-69.31	3.92	13.44	V

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

EN-DC_5A_n7A / LTE 10MHz + NR 40MHz / QPSK / ANT1(LTE) & ANT0(NR)								
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	5050	-63.29	-25	-38.29	-73.50	3.03	13.24	H
	7584	-62.32	-25	-37.32	-71.77	3.56	13.01	H
	10104	-61.34	-25	-36.34	-70.86	3.92	13.44	H
	5050	-63.45	-25	-38.45	-73.66	3.03	13.24	V
	7584	-62.20	-25	-37.20	-71.65	3.56	13.01	V
	10104	-61.30	-25	-36.30	-70.82	3.92	13.44	V

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

n38 / NR 40MHz / QPSK / ANT0(NR)								
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	5176	-65.28	-25	-40.28	-75.49	3.03	13.24	H
	7752	-62.50	-25	-37.50	-71.95	3.56	13.01	H
	10342	-62.56	-25	-37.56	-72.08	3.92	13.44	H
	5176	-65.35	-25	-40.35	-75.56	3.03	13.24	V
	7752	-63.24	-25	-38.24	-72.69	3.56	13.01	V
	10342	-63.13	-25	-38.13	-72.65	3.92	13.44	V

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



EN-DC_2A_n66A / LTE 20MHz + NR 40MHz / QPSK / ANT0(LTE) & ANT1(NR)								
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	3465	-57.23	-13	-44.23	-67.97	2.60	13.34	H
	5205	-54.01	-13	-41.01	-64.52	3.01	13.52	H
	6945	-53.40	-13	-40.40	-63.60	3.27	13.47	H
	3735	-56.34	-13	-43.34	-67.08	2.60	13.34	V
	5205	-54.41	-13	-41.41	-64.92	3.01	13.52	V
	6945	-53.67	-13	-40.67	-63.87	3.27	13.47	V

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

For other PA:

EN-DC_7A_n66A / LTE 20MHz + NR 40MHz / QPSK / ANT1(LTE) & ANT0(NR)								
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	3465	-57.01	-13	-44.01	-67.75	2.60	13.34	H
	5205	-54.07	-13	-41.07	-64.58	3.01	13.52	H
	6945	-53.25	-13	-40.25	-63.45	3.27	13.47	H
	3465	-58.08	-13	-45.08	-68.82	2.60	13.34	V
	5205	-54.45	-13	-41.45	-64.96	3.01	13.52	V
	6945	-53.53	-13	-40.53	-63.73	3.27	13.47	V

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