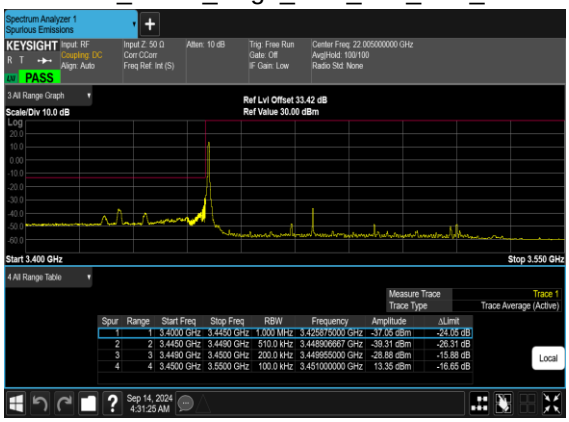
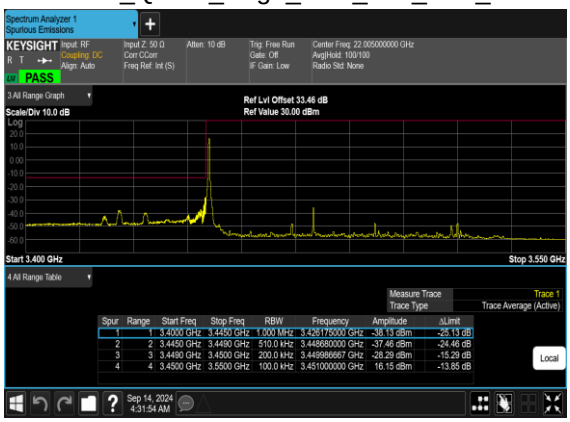
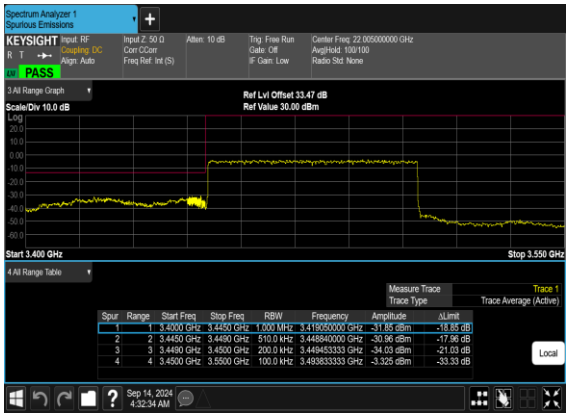
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



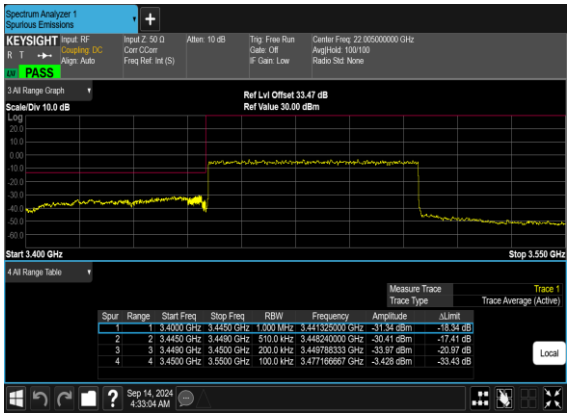
N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



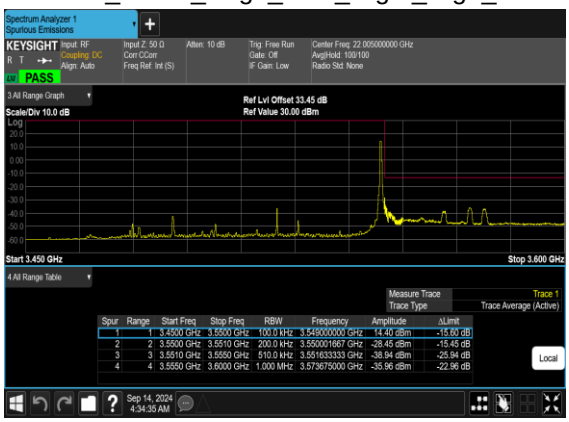
N77(60M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



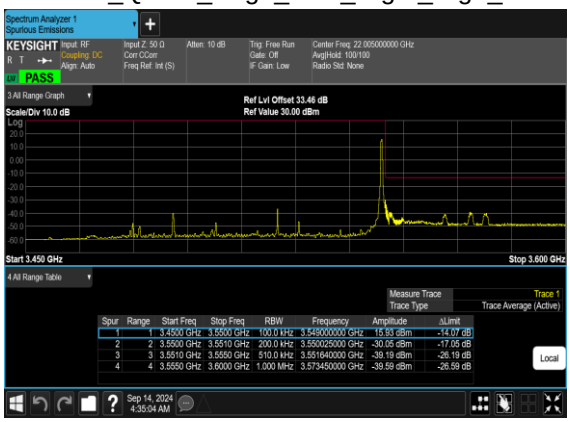
N77(60M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



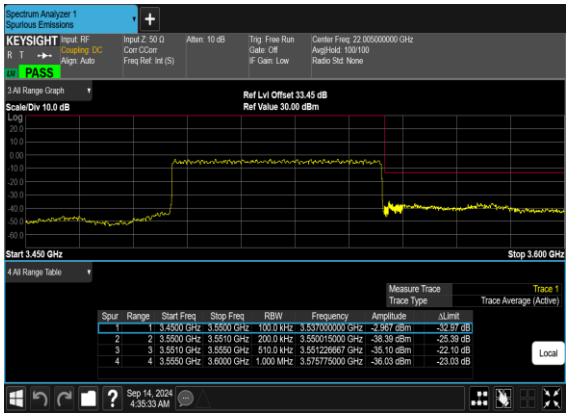
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



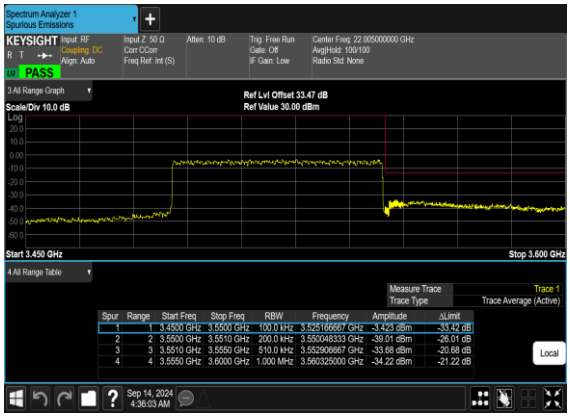
N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



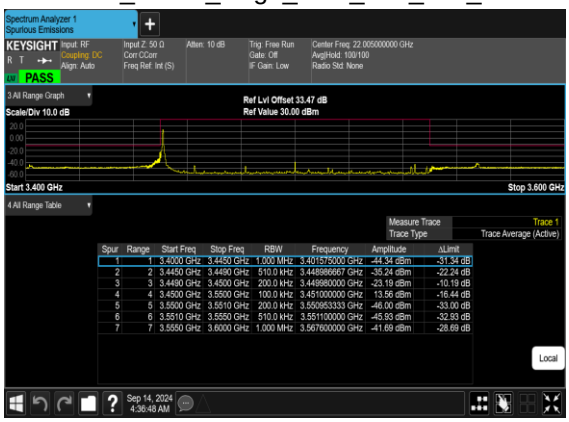
N77(60M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



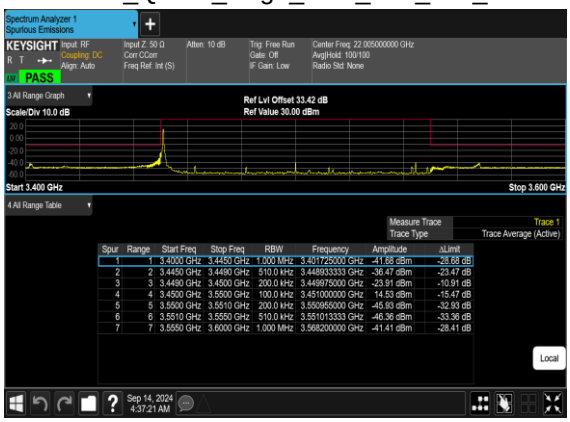
N77(60M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



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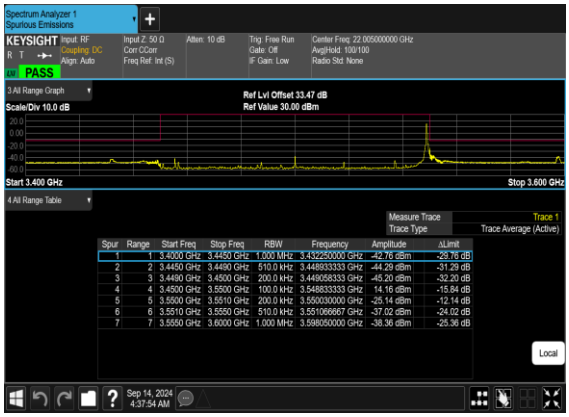

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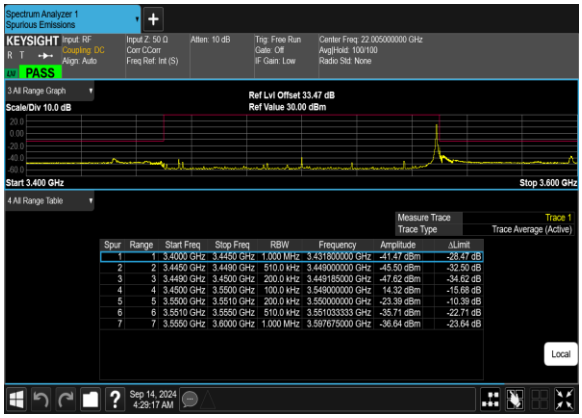
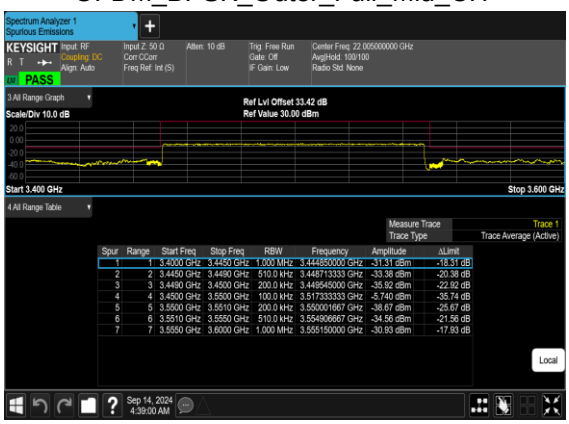
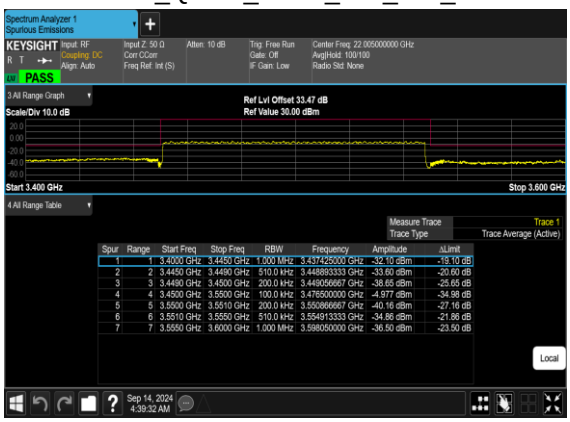


N77(100M)_DFT-s-OFDM_BPSK_Outer_Full_Mid_CH



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	ΔLimit
1	1	3.4000 GHz	3.4450 GHz	1.000 MHz	3.444850000 GHz	-31.31 dBm	-18.31 dB
2	2	3.4450 GHz	3.4490 GHz	510.0 kHz	3.448713333 GHz	-33.38 dBm	-20.38 dB
3	3	3.4490 GHz	3.4500 GHz	200.0 kHz	3.449545000 GHz	-35.92 dBm	-22.92 dB
4	4	3.4500 GHz	3.5500 GHz	100.0 kHz	3.517333333 GHz	-5.740 dBm	-35.74 dB
5	5	3.5500 GHz	3.5510 GHz	200.0 kHz	3.550001667 GHz	-38.67 dBm	-25.67 dB
6	6	3.5510 GHz	3.5550 GHz	510.0 kHz	3.554906667 GHz	-34.56 dBm	-21.56 dB
7	7	3.5550 GHz	3.6000 GHz	1.000 MHz	3.555150000 GHz	-30.93 dBm	-17.93 dB

N77(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	ΔLimit
1	1	3.4000 GHz	3.4450 GHz	1.000 MHz	3.437425000 GHz	-32.10 dBm	-19.10 dB
2	2	3.4450 GHz	3.4490 GHz	510.0 kHz	3.448893333 GHz	-33.60 dBm	-20.60 dB
3	3	3.4490 GHz	3.4500 GHz	200.0 kHz	3.449056667 GHz	-38.65 dBm	-25.65 dB
4	4	3.4500 GHz	3.5500 GHz	100.0 kHz	3.476500000 GHz	-4.977 dBm	-34.98 dB
5	5	3.5500 GHz	3.5510 GHz	200.0 kHz	3.550666667 GHz	-40.16 dBm	-27.16 dB
6	6	3.5510 GHz	3.5550 GHz	510.0 kHz	3.554913333 GHz	-34.86 dBm	-21.86 dB
7	7	3.5550 GHz	3.6000 GHz	1.000 MHz	3.598050000 GHz	-36.50 dBm	-23.50 dB

Software Version: 23.06.1602

FR1 N78

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-6.3dB

NR Band	SCS	BandWidth	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
78	30	10	630334	3455.01	DFT-s-OFDM PI/2 BPSK	1@1	27.64	21.34	0.1361
78	30	10	630334	3455.01	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	10	630334	3455.01	DFT-s-OFDM 16 QAM	1@1	27.45	21.15	0.1303
78	30	10	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.68	21.38	0.1374
78	30	10	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.72	21.42	0.1387
78	30	10	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.78	20.48	0.1117
78	30	10	636332	3544.98	DFT-s-OFDM PI/2 BPSK	1@1	27.44	21.14	0.1300
78	30	10	636332	3544.98	DFT-s-OFDM QPSK	1@1	27.69	21.39	0.1377
78	30	10	636332	3544.98	DFT-s-OFDM 16 QAM	1@1	27.72	21.42	0.1387
78	30	15	630500	3457.5	DFT-s-OFDM PI/2 BPSK	1@1	27.45	21.15	0.1303
78	30	15	630500	3457.5	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	15	630500	3457.5	DFT-s-OFDM 16 QAM	1@1	27.66	21.36	0.1368
78	30	15	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.68	21.38	0.1374
78	30	15	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.70	21.40	0.1380
78	30	15	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.04	20.74	0.1186
78	30	15	636166	3542.49	DFT-s-OFDM PI/2 BPSK	1@1	27.69	21.39	0.1377
78	30	15	636166	3542.49	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	15	636166	3542.49	DFT-s-OFDM 16 QAM	1@1	27.68	21.38	0.1374
78	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@1	27.68	21.38	0.1374
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	1@1	27.62	21.32	0.1355
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.74	21.44	0.1393
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.74	21.44	0.1393
78	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.98	20.68	0.1169
78	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	1@1	27.64	21.34	0.1361
78	30	20	636000	3540	DFT-s-OFDM QPSK	1@1	27.82	21.52	0.1419
78	30	20	636000	3540	DFT-s-OFDM 16 QAM	1@1	27.75	21.45	0.1396
78	30	25	630834	3462.51	DFT-s-OFDM PI/2 BPSK	1@1	27.46	21.16	0.1306
78	30	25	630834	3462.51	DFT-s-OFDM QPSK	1@1	27.36	21.06	0.1276
78	30	25	630834	3462.51	DFT-s-OFDM 16 QAM	1@1	27.70	21.40	0.1380
78	30	25	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.72	21.42	0.1387
78	30	25	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.76	21.46	0.1400
78	30	25	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.99	20.69	0.1172
78	30	25	635832	3537.48	DFT-s-OFDM PI/2 BPSK	1@1	27.62	21.32	0.1355
78	30	25	635832	3537.48	DFT-s-OFDM QPSK	1@1	27.45	21.15	0.1303

78	30	25	635832	3537.48	DFT-s-OFDM 16 QAM	1@1	27.50	21.20	0.1318
78	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	1@1	27.34	21.04	0.1271
78	30	30	631000	3465	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	30	631000	3465	DFT-s-OFDM 16 QAM	1@1	27.62	21.32	0.1355
78	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.72	21.42	0.1387
78	30	30	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.78	21.48	0.1406
78	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.07	20.77	0.1194
78	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	1@1	27.48	21.18	0.1312
78	30	30	635666	3534.99	DFT-s-OFDM QPSK	1@1	27.63	21.33	0.1358
78	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	1@1	27.70	21.40	0.1380
78	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	1@1	27.62	21.32	0.1355
78	30	40	631334	3470.01	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	1@1	27.63	21.33	0.1358
78	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.86	21.56	0.1432
78	30	40	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.89	21.59	0.1442
78	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.10	20.80	0.1202
78	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	1@1	27.47	21.17	0.1309
78	30	40	635332	3529.98	DFT-s-OFDM QPSK	1@1	27.69	21.39	0.1377
78	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	1@1	27.49	21.19	0.1315
78	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	1@1	27.52	21.22	0.1324
78	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@1	27.52	21.22	0.1324
78	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	1@1	27.51	21.21	0.1321
78	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.90	21.60	0.1445
78	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.92	21.62	0.1452
78	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.25	20.95	0.1245
78	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	1@1	27.70	21.40	0.1380
78	30	50	635000	3525	DFT-s-OFDM QPSK	1@1	27.70	21.40	0.1380
78	30	50	635000	3525	DFT-s-OFDM 16 QAM	1@1	26.95	20.65	0.1161
78	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	1@1	27.82	21.52	0.1419
78	30	60	632000	3480	DFT-s-OFDM QPSK	1@1	27.90	21.60	0.1445
78	30	60	632000	3480	DFT-s-OFDM 16 QAM	1@1	27.71	21.41	0.1384
78	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.68	21.38	0.1374
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.64	21.34	0.1361
78	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.40	21.10	0.1288
78	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	1@1	27.67	21.37	0.1371
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@1	27.64	21.34	0.1361
78	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	1@1	27.04	20.74	0.1186
78	30	70	632334	3485.01	DFT-s-OFDM PI/2 BPSK	1@1	27.84	21.54	0.1426
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@1	27.66	21.36	0.1368
78	30	70	632334	3485.01	DFT-s-OFDM 16 QAM	1@1	27.50	21.20	0.1318
78	30	70	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.63	21.33	0.1358
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.82	21.52	0.1419

78	30	70	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.61	21.31	0.1352
78	30	70	634332	3514.98	DFT-s-OFDM PI/2 BPSK	1@1	27.92	21.62	0.1452
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@1	27.81	21.51	0.1416
78	30	70	634332	3514.98	DFT-s-OFDM 16 QAM	1@1	27.27	20.97	0.1250
78	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	1@1	27.46	21.16	0.1306
78	30	80	632668	3490.02	DFT-s-OFDM QPSK	1@1	27.69	21.39	0.1377
78	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	1@1	27.59	21.29	0.1346
78	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.55	21.25	0.1334
78	30	80	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.82	21.52	0.1419
78	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.67	21.37	0.1371
78	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	1@1	27.66	21.36	0.1368
78	30	80	634000	3510	DFT-s-OFDM QPSK	1@1	27.81	21.51	0.1416
78	30	80	634000	3510	DFT-s-OFDM 16 QAM	1@1	27.29	20.99	0.1256
78	30	90	633000	3495	DFT-s-OFDM PI/2 BPSK	1@1	27.35	21.05	0.1274
78	30	90	633000	3495	DFT-s-OFDM QPSK	1@1	27.46	21.16	0.1306
78	30	90	633000	3495	DFT-s-OFDM 16 QAM	1@1	27.52	21.22	0.1324
78	30	90	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.64	21.34	0.1361
78	30	90	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.82	21.52	0.1419
78	30	90	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.69	21.39	0.1377
78	30	90	633666	3504.99	DFT-s-OFDM PI/2 BPSK	1@1	27.46	21.16	0.1306
78	30	90	633666	3504.99	DFT-s-OFDM QPSK	1@1	27.66	21.36	0.1368
78	30	90	633666	3504.99	DFT-s-OFDM 16 QAM	1@1	27.68	21.38	0.1374
78	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	135@67	27.64	21.34	0.1361
78	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.82	21.52	0.1419
78	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@271	27.66	21.36	0.1368
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	135@67	27.48	21.18	0.1312
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.44	21.14	0.1300
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@271	27.91	21.61	0.1449
78	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	135@67	27.08	20.78	0.1197
78	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	27.56	21.26	0.1337
78	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	1@271	27.62	21.32	0.1355
78	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	135@67	25.68	19.38	0.0867
78	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	25.83	19.53	0.0897
78	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	1@271	25.93	19.63	0.0918
78	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	135@67	23.73	17.43	0.0553
78	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	23.82	17.52	0.0565
78	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	1@271	23.90	17.60	0.0575
78	30	100	633334	3500.01	CP-OFDM QPSK	137@68	26.54	20.24	0.1057
78	30	100	633334	3500.01	CP-OFDM QPSK	1@1	26.63	20.33	0.1079
78	30	100	633334	3500.01	CP-OFDM QPSK	1@271	26.74	20.44	0.1107

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Bruce	Temperature :	23~25℃
		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 / ANT9(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)
NR n77 Middle	6900	-58.31	-13	-45.31	-68.52	3.03	13.24	H
	10356	-57.37	-13	-44.37	-66.82	3.56	13.01	H
	13800	-56.62	-13	-43.62	-66.14	3.92	13.44	H
	6900	-56.77	-13	-43.77	-66.98	3.03	13.24	V
	10356	-55.48	-13	-42.48	-64.93	3.56	13.01	V
	13800	-57.03	-13	-44.03	-66.55	3.92	13.44	V

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

EN DC_13A_n77A / LTE 20MHz + NR 100MHz / QPSK(ANT0+9)								
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	6902.5	-55.47	-13	-42.47	-65.68	3.03	13.24	H
	10364	-60.26	-13	-47.26	-69.71	3.56	13.01	H
	13825.5	-59.83	-13	-46.83	-69.35	3.92	13.44	H
	6902.5	-60.65	-13	-47.65	-70.86	3.03	13.24	V
	10364	-60.00	-13	-47.00	-69.45	3.56	13.01	V
	13825.5	-59.51	-13	-46.51	-69.03	3.92	13.44	V

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