

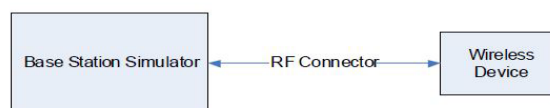
Appendix I. – DLCA Power Measurement

1. LTE Down-link Carrier Aggregation Conducted Powers

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by test product implementation. For those configurations required by April 2018 TCBC Workshop notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only.

Downlink Carrier aggregation:

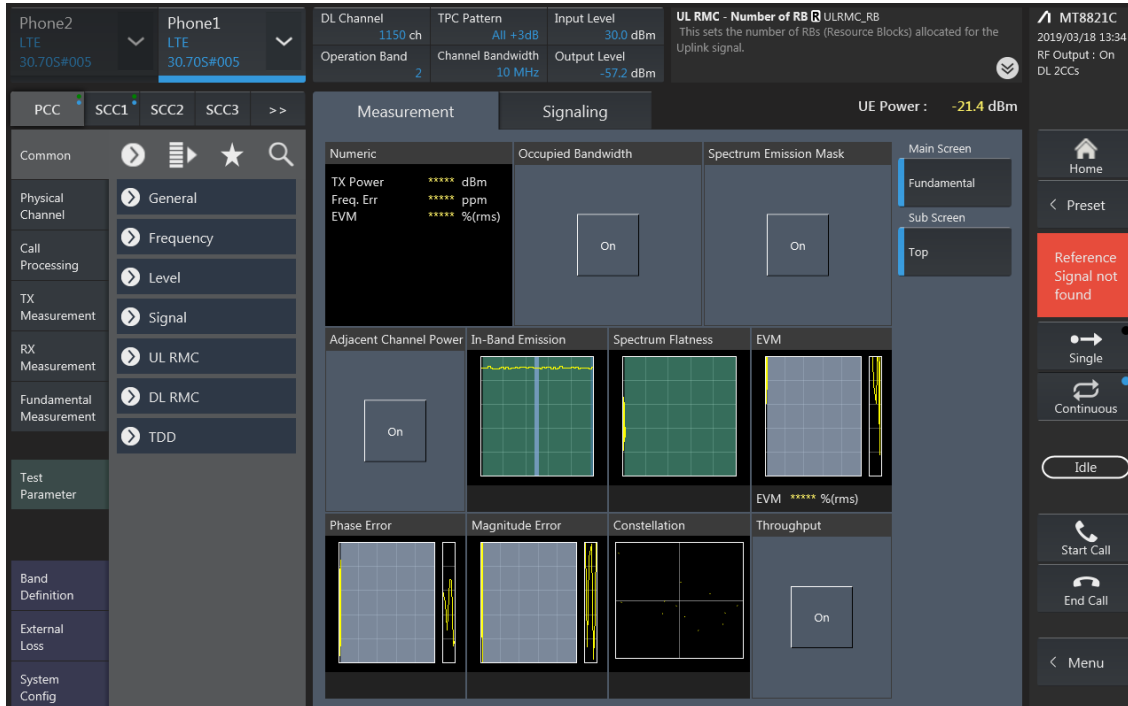
1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.
2. All control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
3. Per FCC KDB publication 941225 D05A v01r02, Section C)3)b)ii), PCC uplink channel was selected at downlink carrier aggregation combinations. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
4. For continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to multiple of 300kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521.
5. For non-continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
6. All selected downlink channels remained fully within the downlink transmission band of the respective component carrier.



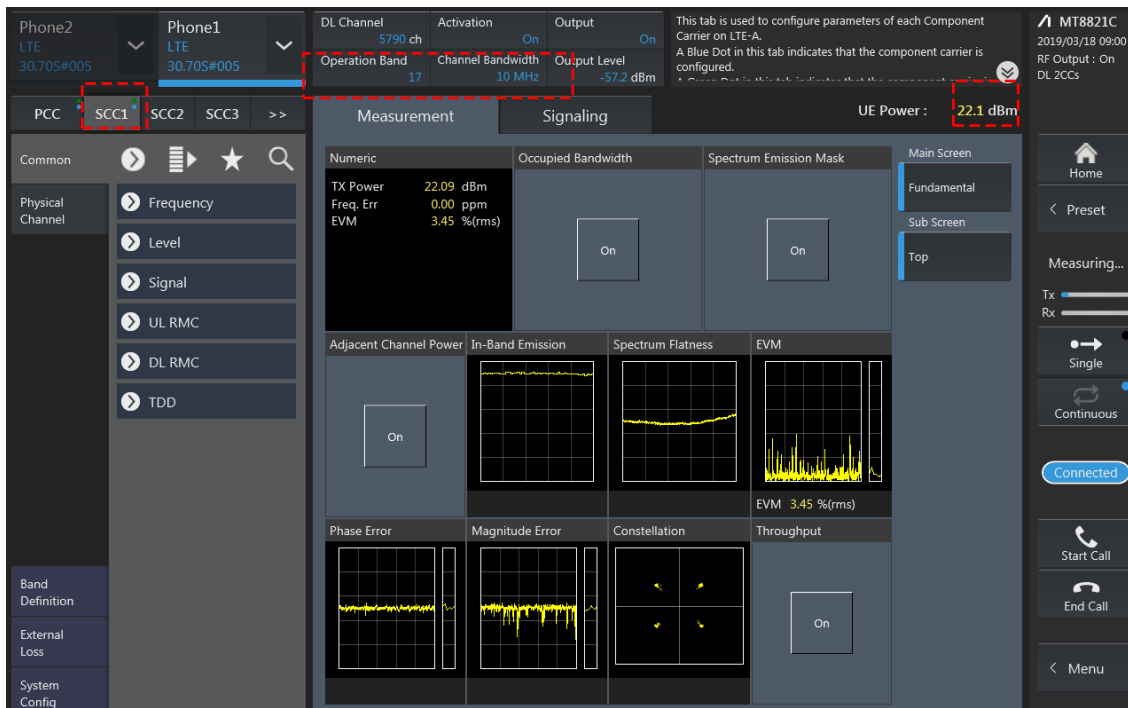
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting (Channel/ RB/ BW/ Modulation)



SCC Setting (Channel/ RB/ BW/ Modulation) and call Connection

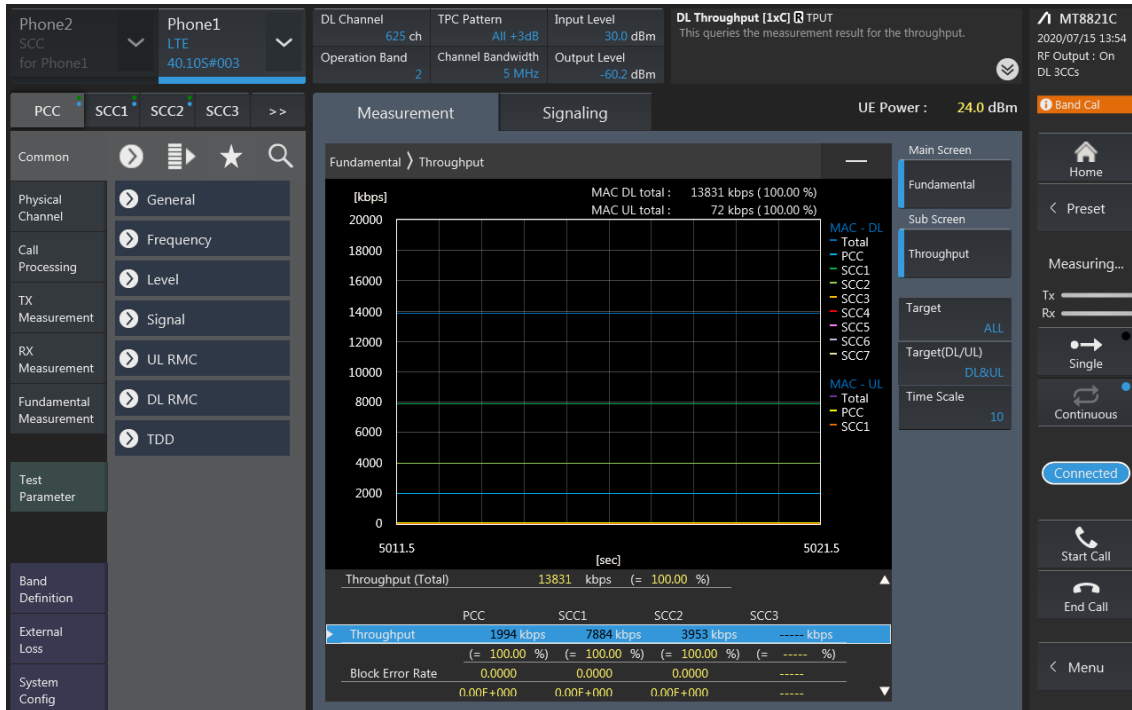


2CA Downlink Carrier aggregation Maximum conducted Powers

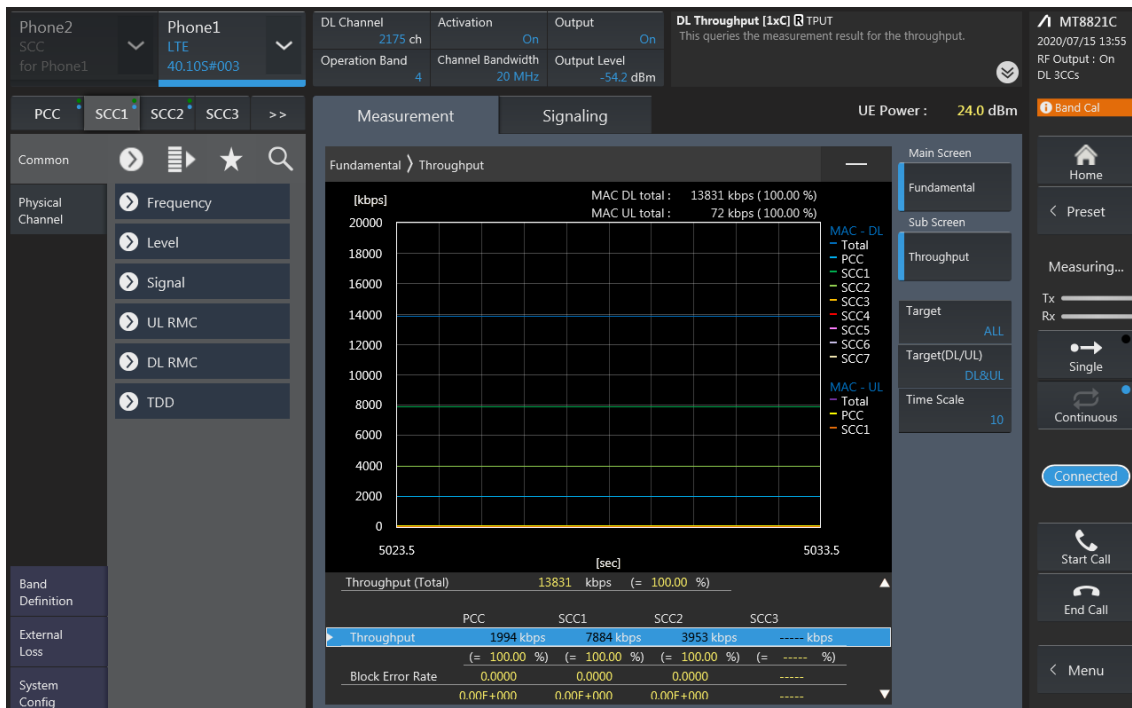
Combination	PCC									SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
4A-48A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	48	20	55990	3625	24.31	24.28
5A-5A(1)	5	3	20415	825.5	2415	870.5	QPSK	1	7	5	5	2625	891.5	24.98	25.03
5A-5A(0)	5	5	20425	826.5	2425	871.5	QPSK	1	0	5	10	2600	889	24.98	25.15
5A-25A	5	5	20425	826.5	2425	871.5	QPSK	1	0	25	20	8365	1962.5	24.98	24.81
5A-25A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	5	10	2525	881.5	24.10	23.95
12A-25A	12	5	23035	701.5	5035	731.5	QPSK	1	12	25	20	8365	1962.5	24.85	24.77
12A-25A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	12	10	5095	737.5	24.10	24.05
25A-25A(0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.10	23.96
25A-25A(1)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8590	1985	24.10	24.25
25A-41A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	24.10	23.99
41A-41A	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	23.97	24.02

LTE Down Link 3CA Call Setup

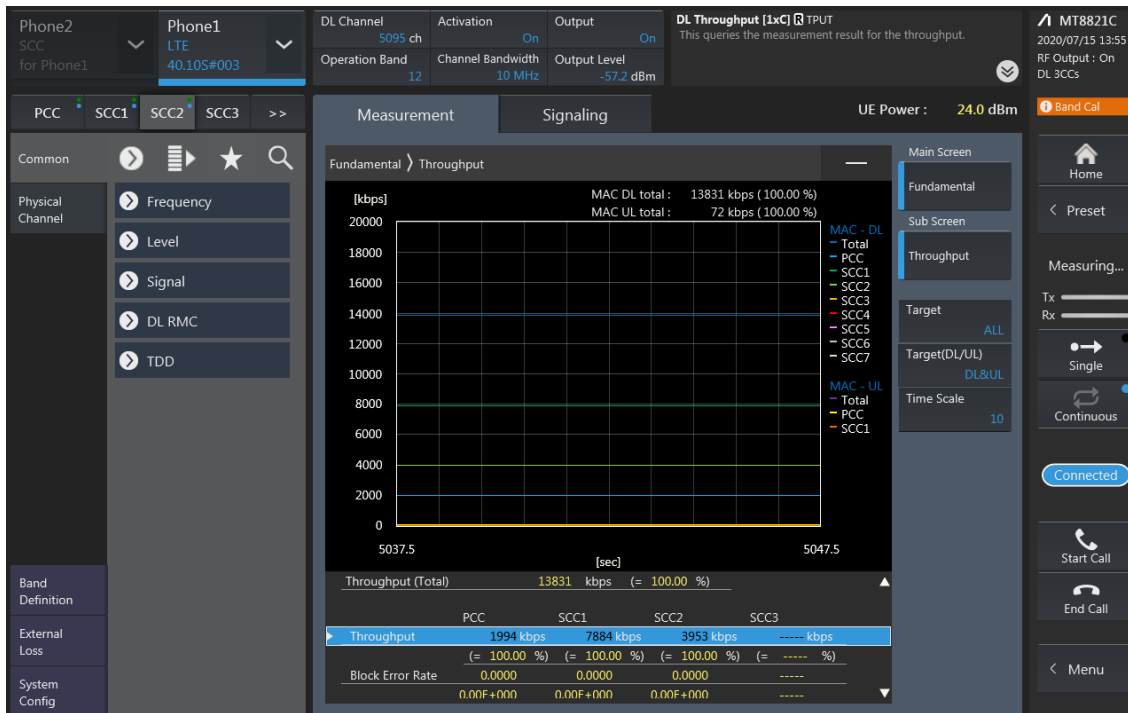
PCC Setting (Channel/ RB/ BW/ Modulation)



SCC1 Setting (Channel/ RB/ BW/ Modulation) and call Connection



SCC2 Setting (Channel/ RB/ BW/ Modulation) and call Connection

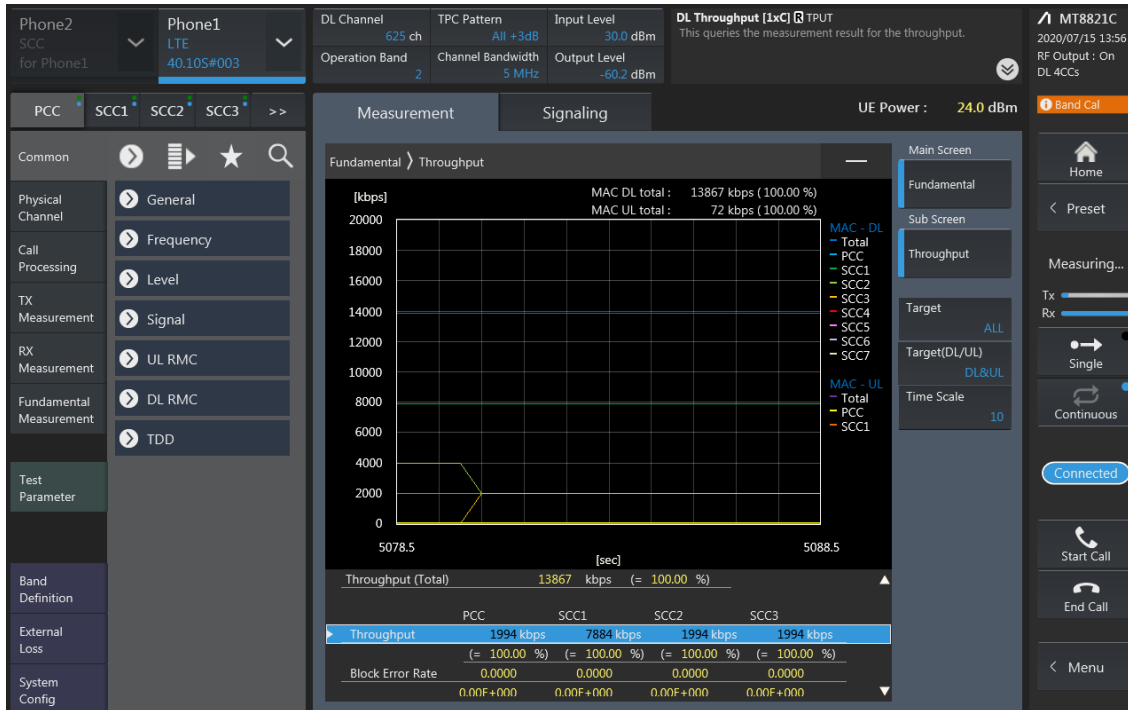


3CA Downlink Carrier aggregation conducted Powers

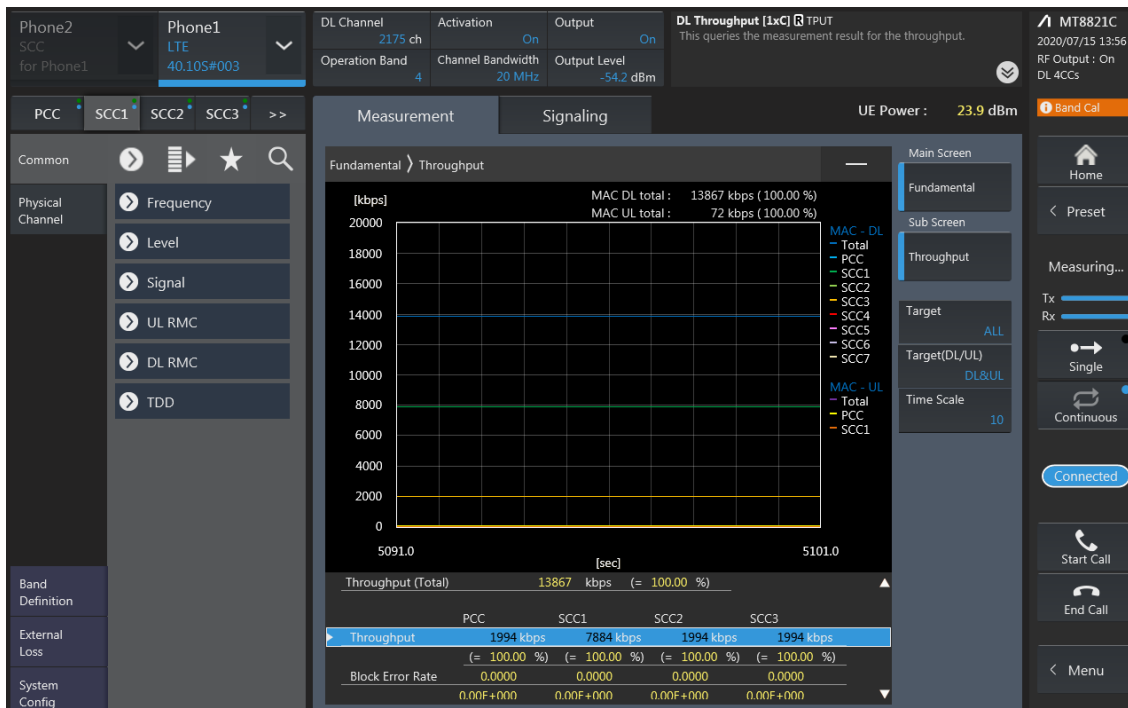
Combination	PCC									SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)
2A-4A-13A	2	5	18900	1880	900	1960	QPSk	1	24	4	20	2175	2132.5	13	10	5230	751	24.09	23.97
2A-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	2	20	900	1960	13	10	5230	751	24.31	24.49
2A-4A-13A	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	4	20	2175	2132.5	23.81	23.96
2A-5A-48A	2	5	18900	1880	900	1960	QPSk	1	24	5	10	2525	881.5	48	20	55990	3625	24.09	24.11
2A-5A-48A	5	5	20425	826.5	2425	871.5	QPSk	1	0	2	20	900	1960	48	20	55990	3625	24.98	24.80
2A-13A-48A	2	5	18900	1880	900	1960	QPSk	1	24	13	10	5230	751	48	20	55990	3625	24.09	23.99
2A-13A-48A	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	48	20	55990	3625	23.81	23.71
2A-29A-66A	2	5	18900	1880	900	1960	QPSk	1	24	29	10	9715	722.5	66	20	66786	2145	24.09	23.95
2A-29A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	29	10	9715	722.5	24.29	24.20
2A-48A-48A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	56640	3690	24.09	23.99
2A-48A-66A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	24.13
2A-48A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.37
4A-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	4	20	2050	2120	13	10	5230	751	24.31	24.42
4A-4A-13A	13	10	23230	782	5230	751	QPSk	1	0	4	20	2175	2132.5	4	10	2350	2150	23.81	23.72
4A-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	4	20	2175	2132.5	71	20	68761	634.5	24.31	24.21
4A-4A-71A	71	10	133297	680.5	68761	634.5	QPSk	1	0	4	20	2175	2132.5	4	10	2350	2150	24.13	24.10
4A-5B	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	5	10	2450	874	5	5	2525	881.5	24.31	24.15
4A-5B	5	5	20425	826.5	2425	871.5	QPSk	1	0	5	10	2497	878.7	4	20	2175	2132.5	24.98	24.79
4A-48C	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	48	20	55340	3560	48	20	55538	3579.8	24.31	24.23
5A-48A-66A	5	5	20425	826.5	2425	871.5	QPSk	1	0	48	20	55340	3560	66	20	66786	2145	24.98	25.14
5A-48A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	5	10	2525	881.5	48	20	56640	3690	24.29	24.38
13A-48A-66A	13	10	23230	782	5230	751	QPSk	1	0	48	20	55340	3560	66	20	66786	2145	23.81	23.93
13A-48A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	13	10	5230	751	48	20	56640	3690	24.29	24.39
25A-41C	25	5	26365	1882.5	8365	1962.5	QPSk	1	12	41	20	40620	2593	41	20	40818	2612.8	24.10	24.03
29A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	66	20	66536	2120	29	10	9715	722.5	24.29	24.23
41A-41C	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	41	20	41292	2660.2	23.97	23.80
41A-41C	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41490	2680	23.97	23.83
48A-48A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	48	20	56207	3646.7	48	20	56640	3690	24.13	24.11
48C-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	24.13	24.02
66A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	66	20	66536	2120	66	20	66786	2145	24.29	24.49

LTE Down Link 4CA Call Setup

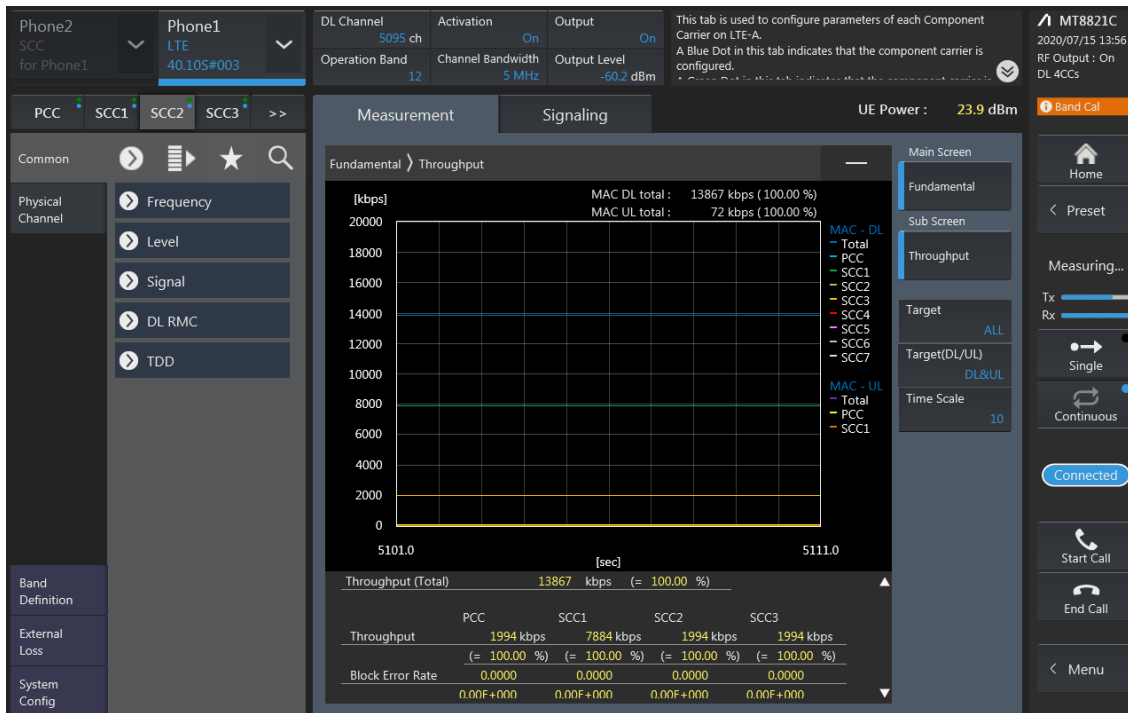
PCC Setting (Channel/ RB/ BW/ Modulation)



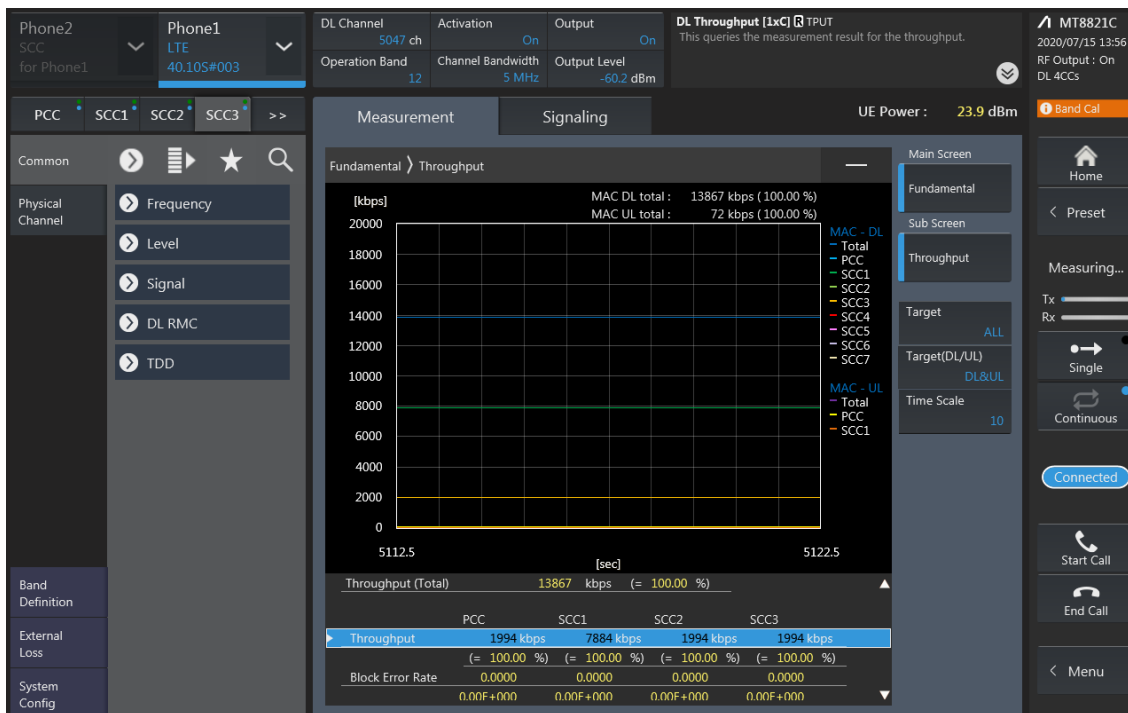
SCC1 Setting (Channel/ RB/ BW/ Modulation) and call Connection



SCC2 Setting (Channel/ RB/ BW/ Modulation) and call Connection



SCC3 Setting (Channel/ RB/ BW/ Modulation) and call Connection



4CA Downlink Carrier aggregation conducted Powers

Combination	PCC										SCC1						SCC2				SCC3				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enable (dBm)			
2A-2A-4A-4A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.09	23.90			
2A-2A-4A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	2	20	1100	1980	24.31	24.38			
2A-2A-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.09	23.89			
2A-2A-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.31	24.15			
2A-2A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.98	24.87			
2A-2A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.09	24.07			
2A-2A-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.31	24.15			
2A-2A-4A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.85	24.98			
2A-2A-4A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.09	24.20			
2A-2A-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.31	24.23			
2A-2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.13	23.93			
2A-2A-5A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.09	23.94			
2A-2A-5A-30A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.98	24.97			
2A-2A-5A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	23.06	23.08			
2A-2A-5A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.09	24.15			
2A-2A-5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.98	25.16			
2A-2A-5A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.26			
2A-2A-12B	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5167	744.7	24.09	23.95			
2A-2A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	2	20	900	1960	2	20	1100	1980	24.85	24.81			
2A-2A-12A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.09	24.02			
2A-2A-12A-30A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.85	24.75			
2A-2A-12A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	23.06	22.94			
2A-2A-12A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.09	24.24			
2A-2A-12A-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.85	24.98			
2A-2A-12A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.25			
2A-2A-13A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	24.09	23.97			
2A-2A-13A-66A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.81	23.63			
2A-2A-14A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.09	24.16			
2A-2A-14A-30A	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	23.70	23.76			
2A-2A-14A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	23.06	23.04			
2A-2A-14A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.09	24.07			
2A-2A-14A-66A	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.70	23.66			
2A-2A-14A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.29	24.20			
2A-2A-29A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.09	24.01			
2A-2A-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	23.06	23.25			
2A-2A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.09	24.19			
2A-2A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.06	22.88			
2A-2A-30A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.29	24.20			
2A-2A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.09	23.98			
2A-2A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	24.29	24.19			
2A-2A-66B	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	5	66786	2145	66	15	66879	2154.3	24.09	24.08			
2A-2A-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	2	20	1100	1980	24.29	24.39			
2A-2A-66C	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.09	24.28			
2A-2A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	2	20	1100	1980	24.29	24.42			
2C-66A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.09	23.95			
2C-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.29	24.12			
2A-2A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	24.02			
2A-2A-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.18			
2A-2A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	23.94			
2A-4A-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10											

2A-13A-66B	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	5	66786	2145	66	15	66879	2154.3	24.09	24.07
2A-13A-66B	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	5	66786	2145	66	15	66879	2154.3	23.81	23.65
2A-13A-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	13	10	5230	751	24.29	24.42
2A-13A-66C	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.09	23.91
2A-13A-66C	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	23.81	23.62
2A-13A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	13	10	5230	751	24.29	24.11
2A-14A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	24	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.09	24.00
2A-14A-66A-66A	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.70	23.59
2A-14A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.29	24.48
2A-30A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	24	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.09	24.15
2A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.06	23.13
2A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	30	10	9820	2355	24.29	24.15
2A-48A-48C	2	5	18900	1880	900	1960	QPSK	1	24	48	20	55340	3560	48	20	56640	3690	48	20	56442	3670.2	24.09	23.90
2A-48D	2	5	18900	1880	900	1960	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.09	24.01
2A-48C-66A	2	5	18900	1880	900	1960	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.09	24.02
2A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	48	20	56640	3690	48	20	56442	3670.2	24.29	24.29
2A-66A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.19
2A-66A-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.34
2A-66A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	24.24
2A-66C-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	24.09	24.02
2A-66C-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	71	20	68761	634.5	24.29	24.11
2A-66C-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.13	23.96
4A-4A-12B	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	12	5	5095	737.5	12	5	5167	744.7	24.31	24.26
4A-4A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.85	24.79
4A-48D	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.31	24.26
5A-30A-66A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	0	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.98	24.80
5A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	23.06	23.06
5A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	5	10	2525	881.5	30	10	9820	2355	24.29	24.26
5A-48D	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.98	25.16
5A-48C-66A	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.98	25.04
5A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	5	10	2525	881.5	48	20	56640	3690	48	20	56442	3670.2	24.29	24.28
12A-30A-66A-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.85	24.70
12A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	23.06	22.92
12A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	12	10	5095	737.5	30	10	9820	2355	24.29	24.27
13A-48D	13	10	23230	782	5230	751	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	23.81	23.79
13A-48C-66A	13	10	23230	782	5230	751	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	23.81	23.87
13A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	13	10	5230	751	48	20	56640	3690	48	20	56442	3670.2	24.29	24.36
13A-48A-66B	13	10	23230	782	5230	751	QPSK	1	0	48	20	55340	3560	66	5	66786	2145	66	15	66879	2154.3	23.81	23.87
13A-48A-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	13	10	5230	751	48	20	55340	3560	24.29	24.15
13A-48A-66C	13	10	23230	782	5230	751	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	66	20	66984	2164.8	23.81	23.78
13A-48A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	13	10	5230	751	48	20	55340	3560	24.29	24.22
14A-30A-66A-66A	14	5	23305	790.5	5305	760.5	QPSK	1	12	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	23.70	23.54
14A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	23.06	22.90
14A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	14	10	5330	763	30	10	9820	2355	24.29	24.15
25A-41D	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.10	24.05
29A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	23.06	23.05
29A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	29	10	9715	722.5	30	10	9820	2355	24.29	24.17
48A-48D	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	23.70	23.60
48A-48D	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	56442	3670.2	48	20	56244	3650.4	48	20	55340	3560	23.70	23.86
48C-48C	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	56442	3670.2	48	20	55340	3560	48	20	55538	3579.8	23.70	23.76
48E	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	56442	3670.2	48	20	56244	3650.4	48	20	56046	3630.6	23.70	23.53
48A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	48	20	55340	3560	48	20	56640	3690	48	20	56442	3670.2	24.29	24.18
48A-48A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	48	20	55340	3560	48	20	56640	3690	24.29	24.25
48C-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	48	20	55340	3560	48	20	55538	3579.8	24.29	24.11
48C-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	48	20	55340	3560	48	20	55538	3579.8	24.29	24.16
48C-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	48	20	55340	3560	48	20	55538	3579.8	24.29	24.34
48D-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.29	24.18

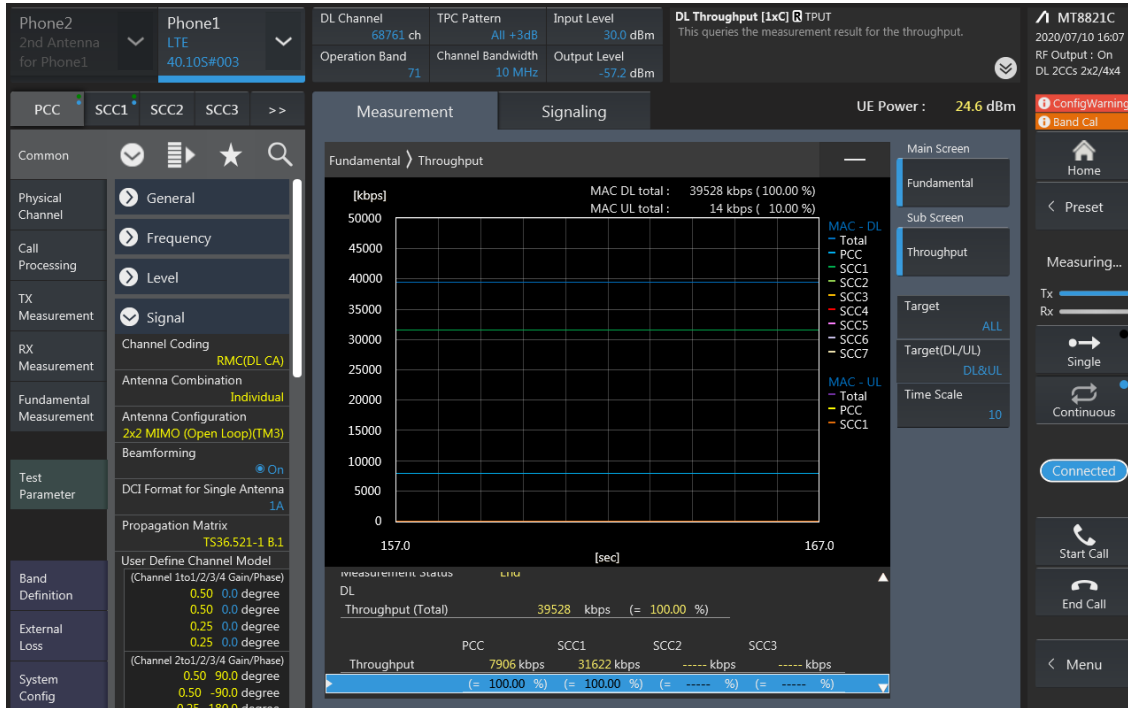
LTE 4X4 MIMO Downlink Standalone Conducted Power
(Per TCBC Workshop note May 2017)

SAR test exclusion for LTE DL 4x4 MIMO should be determined by

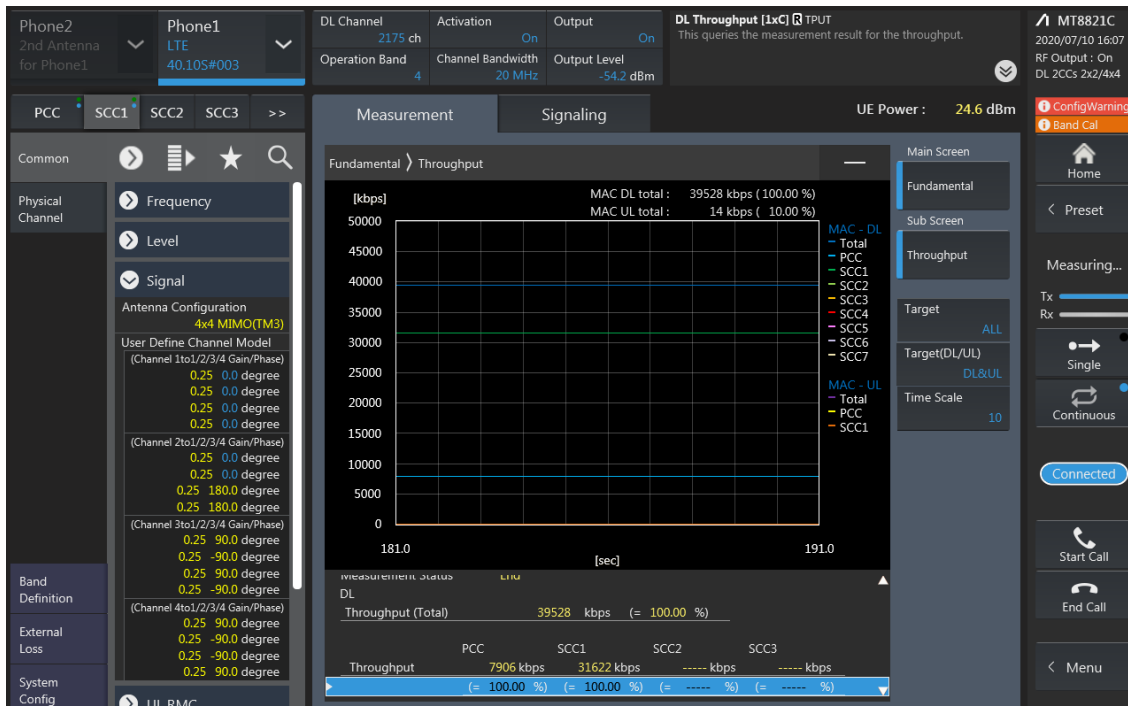
- UL power measurements with and without DL MIMO
- using the highest UL output power configuration without DL MIMO to confirm that UL output with DL MIMO is < ¼ dB higher
- for DL MIMO with carrier aggregation, the same SAR test exclusion procedure should be considered

LTE Down Link 2CA 4x4 MIMO Call Setup

PCC Setting (Channel/ RB/ BW/ Modulation)



SCC Setting (Channel/ RB/ BW/ Modulation) and call Connection

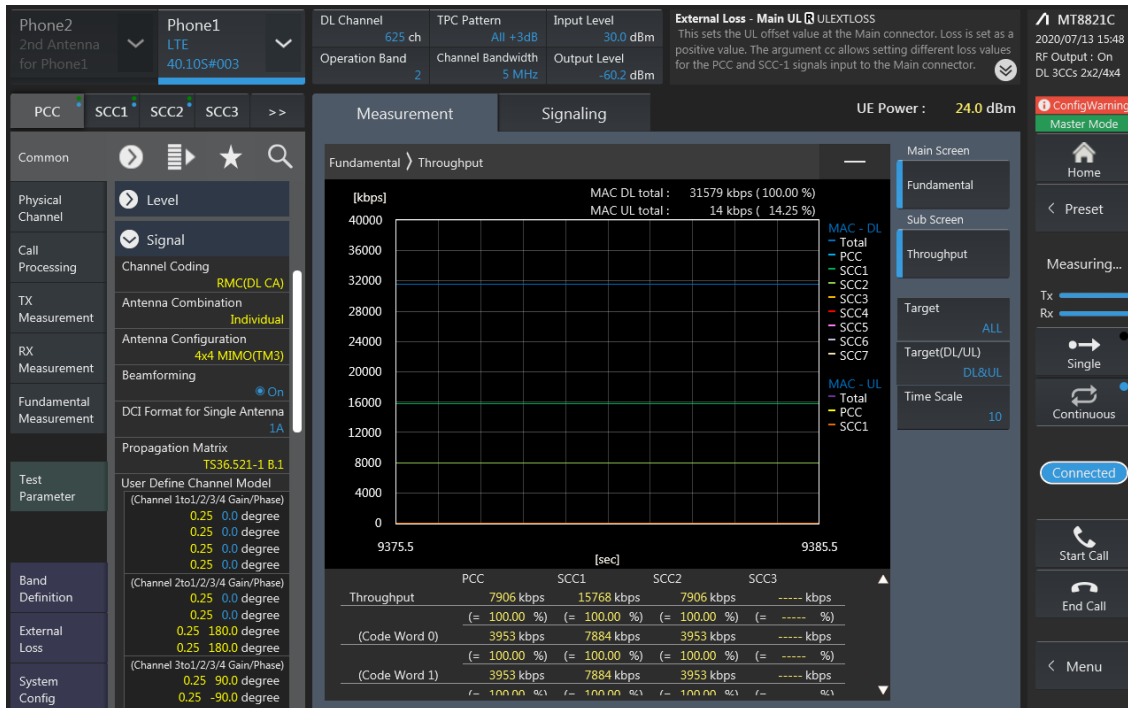


LTE Downlink 2CA 4X4 MIMO Maximum Conducted Power

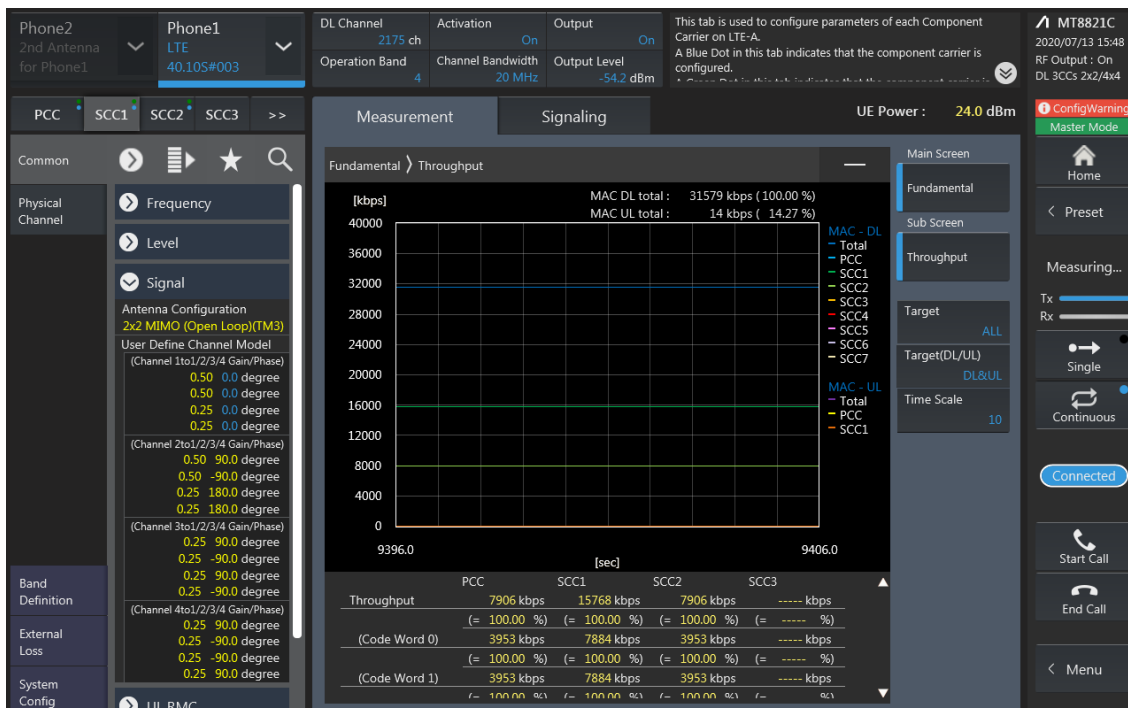
Combination	PCC									SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
4A-[48A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	48	20	55990	3625	24.31	24.45
[4A]-48A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	48	20	55990	3625	24.31	24.12
[4A]-[48A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	48	20	55990	3625	24.31	24.12
5A-[25A]	5	5	20425	826.5	2425	871.5	QPSK	1	0	25	20	8365	1962.5	24.98	25.05
5A-[25A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	5	10	2525	881.5	24.10	23.96
12A-[25A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	25	20	8365	1962.5	24.85	25.04
12A-[25A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	12	10	5095	737.5	24.10	23.96
25A-[25A](0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.10	24.27
[25A]-25A(0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.10	24.00
[25A]-[25A](0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.10	24.17
25A-[25A](1)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8590	1985	24.10	24.00
[25A]-25A(1)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8590	1985	24.10	23.90
[25A]-[25A](1)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8590	1985	24.10	23.97
25A-[41A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	24.10	24.29
[25A]-41A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	24.10	24.08
[25A]-[41A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	24.10	23.98
41A-[41A]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	23.97	23.99
[41A]-41A	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	23.97	24.00
[41A]-[41A]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	23.97	24.10

LTE Down Link 3CA 4x4 MIMO Call Setup

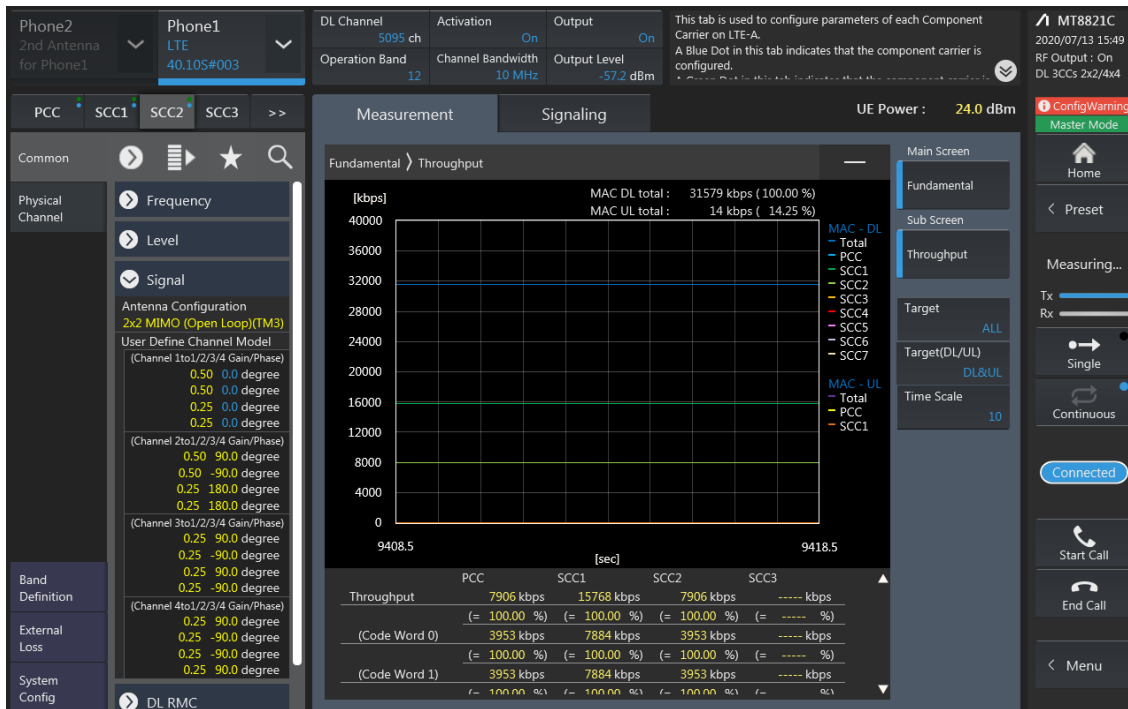
PCC Setting (Channel/ RB/ BW/ Modulation)



SCC1 Setting (Channel/ RB/ BW/ Modulation) and call Connection



SCC2 Setting (Channel/ RB/ BW/ Modulation) and call Connection



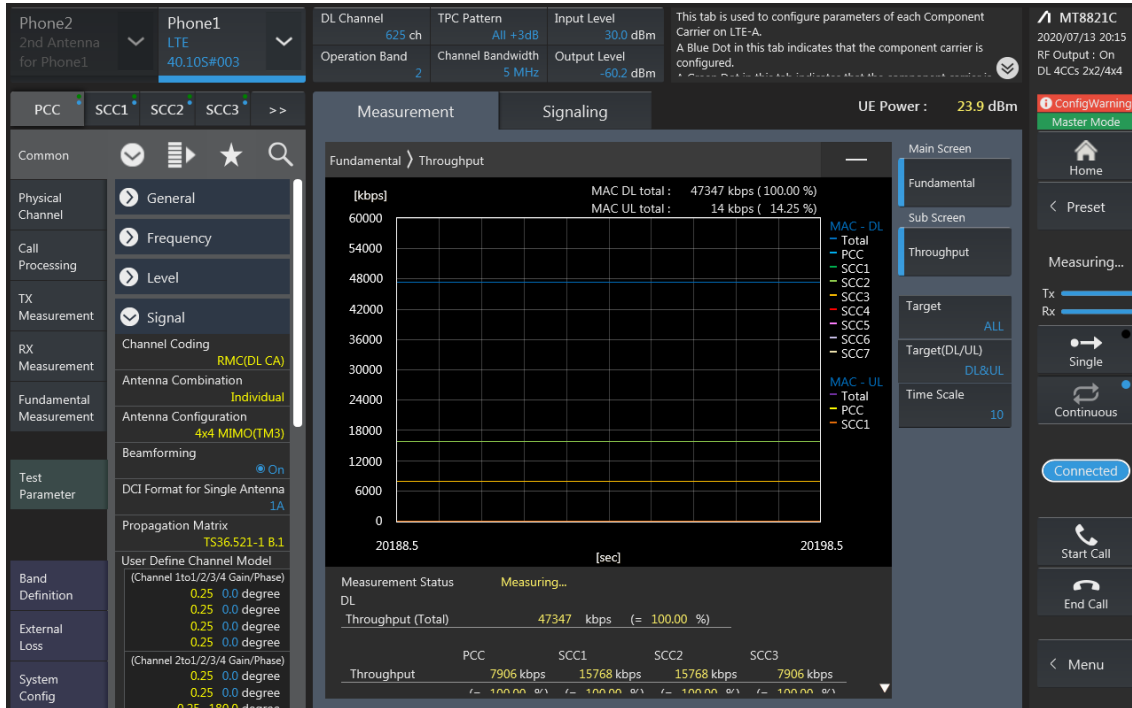
LTE Downlink 3CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
[2A]-[2A]-[4A]	2	5	18900	1880	900	1960	QPSk	1	24	2	20	1100	1980	4	20	2175	2132.5	24.09	24.20
[2A]-[2A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	2	20	900	1960	2	20	1100	1980	24.31	24.29
[2A]-[2A]-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	2	20	1100	1980	66	20	66786	2145	24.09	23.95
[2A]-[2A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	2	20	1100	1980	24.29	24.18
[2C]-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	2	20	1017	1671.7	66	20	66786	2145	24.09	24.17
[2C]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	2	20	1098	1979.8	24.29	24.09
[2A]-[4A]-[4A]	2	5	18900	1880	900	1960	QPSk	1	24	4	20	2175	2132.5	4	10	2350	2150	24.09	24.05
[2A]-[4A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	4	20	2050	2120	2	20	900	1960	24.29	24.38
2A-[4A]-13A	2	5	18900	1880	900	1960	QPSk	1	24	4	20	2175	2132.5	13	10	5230	751	24.09	24.08
[2A]-4A-13A	2	5	18900	1880	900	1960	QPSk	1	24	4	20	2175	2132.5	13	10	5230	751	24.09	23.95
[2A]-[4A]-13A	2	5	18900	1880	900	1960	QPSk	1	24	4	20	2175	2132.5	13	10	5230	751	24.09	24.29
2A-[4A]-13A	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	2	20	900	1960	13	10	5230	751	24.31	24.30
[2A]-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	2	20	900	1960	13	10	5230	751	24.31	24.51
[2A]-[4A]-13A	4	5	20375	1752.5	2375	2152.5	QPSk	1	24	2	20	900	1960	13	10	5230	751	24.31	24.23
2A-[4A]-13A	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	4	20	2175	2132.5	23.81	24.00
[2A]-4A-13A	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	4	20	2175	2132.5	23.81	23.86
[2A]-[4A]-13A	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	4	20	2175	2132.5	23.81	23.74
2A-5A-[48A]	2	5	18900	1880	900	1960	QPSk	1	24	5	10	2525	881.5	48	20	55990	3625	24.09	24.22
[2A]-5A-48A	2	5	18900	1880	900	1960	QPSk	1	24	5	10	2525	881.5	48	20	55990	3625	24.09	23.91
[2A]-5A-[48A]	2	5	18900	1880	900	1960	QPSk	1	24	5	10	2525	881.5	48	20	55990	3625	24.09	24.29
2A-5A-[48A]	5	5	20425	826.5	2425	871.5	QPSk	1	0	2	20	900	1960	48	20	55990	3625	24.98	25.01
[2A]-5A-48A	5	5	20425	826.5	2425	871.5	QPSk	1	0	2	20	900	1960	48	20	55990	3625	24.98	24.80
[2A]-5A-[48A]	5	5	20425	826.5	2425	871.5	QPSk	1	0	2	20	900	1960	48	20	55990	3625	24.98	25.10
2A-13A-[48A]	2	5	18900	1880	900	1960	QPSk	1	24	13	10	5230	751	48	20	55990	3625	24.09	24.08
[2A]-13A-48A	2	5	18900	1880	900	1960	QPSk	1	24	13	10	5230	751	48	20	55990	3625	24.09	23.93
[2A]-13A-[48A]	2	5	18900	1880	900	1960	QPSk	1	24	13	10	5230	751	48	20	55990	3625	24.09	24.23
2A-13A-[48A]	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	48	20	55990	3625	23.81	23.61
[2A]-13A-48A	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	48	20	55990	3625	23.81	23.66
[2A]-13A-[48A]	13	10	23230	782	5230	751	QPSk	1	0	2	20	900	1960	48	20	55990	3625	23.81	23.87
2A-29A-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	29	10	9715	722.5	66	20	66786	2145	24.09	24.00
[2A]-29A-66A	2	5	18900	1880	900	1960	QPSk	1	24	29	10	9715	722.5	66	20	66786	2145	24.09	24.16
[2A]-29A-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	29	10	9715	722.5	66	20	66786	2145	24.09	24.00
2A-29A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	29	10	9715	722.5	24.29	24.33
[2A]-29A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	29	10	9715	722.5	24.29	24.19
[2A]-29A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	29	10	9715	722.5	24.29	24.17
2A-[48A]-48A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	56640	3690	24.09	24.12
[2A]-48A-48A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	56640	3690	24.09	24.05
2A-[48A]-[48A]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	56640	3690	24.09	24.12
[2A]-[48A]-48A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	56640	3690	24.09	24.22
[2A]-[48A]-[48A]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	56640	3690	24.09	24.24
[2A]-[48C]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	48	20	55538	3579.8	24.09	23.97
2A-48A-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	24.24
2A-[48A]-66A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	23.94
[2A]-48A-66A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	24.25
2A-[48A]-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	24.05
[2A]-48A-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	24.29
[2A]-[48A]-66A	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	24.05
[2A]-[48A]-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	48	20	55340	3560	66	20	66786	2145	24.09	23.92
2A-48A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.38
2A-[48A]-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.28
[2A]-48A-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.44
2A-[48A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.16
[2A]-48A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.47
[2A]-[48A]-66A	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.42
[2A]-[48A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	2	20	900	1960	48	20	56640	3690	24.29	24.25
[2A]-[66A]-[66A]	2	5	18900	1880	900	1960	QPSk	1	24	66	20	66786	2145	66	20	67236	2190	24.09	24.12
[2A]-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSk	1	24	66	20	66536	2120	2	20	900	1960	24.29	24.43
[2A]-[66B]	2	5	18900	1880	900	1960	QPSk	1	24	66	5	66886	2155	66	15	66979	2164.3	24.09	23.97
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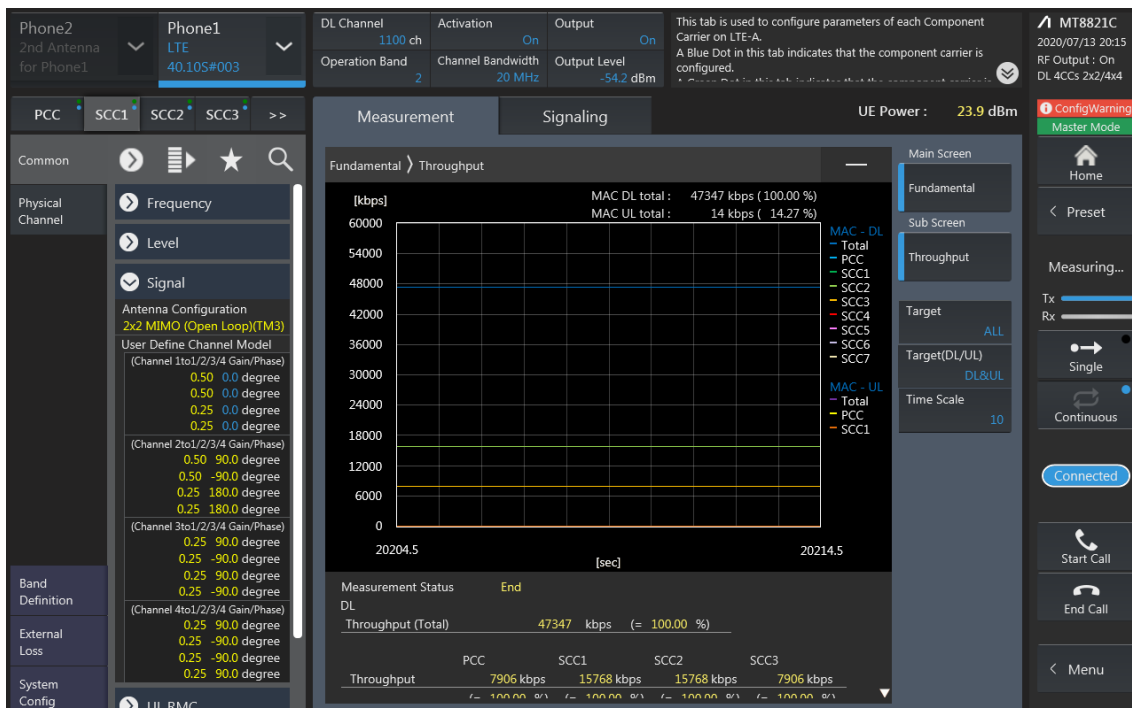
5A-48A-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	24.98	25.03
5A-[48A]-66A	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	24.98	24.93
5A-[48A]-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	24.98	25.11
5A-48A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	5	10	2525	881.5	48	20	56640	3690	24.29	24.17
5A-[48A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	5	10	2525	881.5	48	20	56640	3690	24.29	24.25
5A-[48A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	5	10	2525	881.5	48	20	56640	3690	24.29	24.36
13A-48A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	23.81	23.62
13A-[48A]-66A	13	10	23230	782	5230	751	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	23.81	23.82
13A-[48A]-[66A]	13	10	23230	782	5230	751	QPSK	1	0	48	20	55340	3560	66	20	66786	2145	23.81	23.81
13A-48A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	13	10	5230	751	48	20	56640	3690	24.29	24.31
13A-[48A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	13	10	5230	751	48	20	56640	3690	24.29	24.37
13A-[48A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	13	10	5230	751	48	20	56640	3690	24.29	24.24
25A-[41C]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	41	20	40818	2612.8	24.10	23.90
[25A]-41C	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	41	20	40818	2612.8	24.10	23.94
[25A]-[41C]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	41	20	40620	2593	41	20	40818	2612.8	24.10	23.97
29A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	29	10	9715	722.5	24.29	24.48
29A-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	29	10	9715	722.5	24.29	24.10
41A-[41C]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	41	20	41292	2660.2	23.97	23.82
[41A]-41C	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	41	20	41292	2660.2	23.97	24.01
[41A]-[41C]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	41	20	41292	2660.2	23.97	23.95
41A-[41C]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41490	2680	23.97	24.03
[41A]-41C	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41490	2680	23.97	23.81
[41A]-[41C]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41490	2680	23.97	23.92
[41D]	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	23.97	23.86
[48A]-[48C]	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	55340	3560	48	20	55538	3579.8	23.70	23.71
[48A]-[48C]	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	56442	3670.2	48	20	55340	3560	23.70	23.54
[48D]	48	20	56640	3690	56640	3690	QPSK	1	99	48	20	56442	3670.2	48	20	56244	3650.4	23.70	23.63
[48A]-[48A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	48	20	55340	3560	48	20	56640	3690	24.29	24.15
[48A]-48A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	48	20	56207	3646.7	48	20	56640	3690	24.13	24.02
[48A]-[48A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	48	20	56207	3646.7	48	20	56640	3690	24.13	24.06
[48C]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	24.13	24.32
[48A]-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	48	20	56640	3690	24.29	24.39
[48A]-[66B]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	48	20	56640	3690	24.29	24.40
[48A]-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	48	20	56640	3690	24.29	24.45
[48C]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	24.29	24.37

LTE Down Link 4CA 4x4 MIMO Call Setup

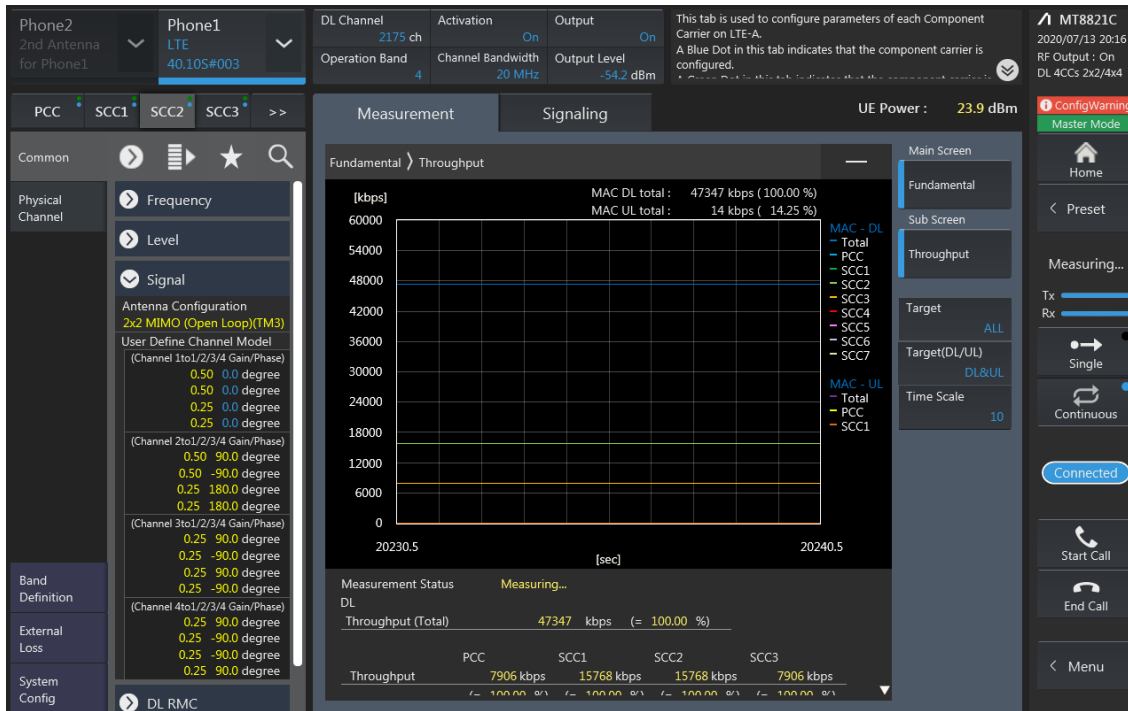
PCC Setting (Channel/ RB/ BW/ Modulation)



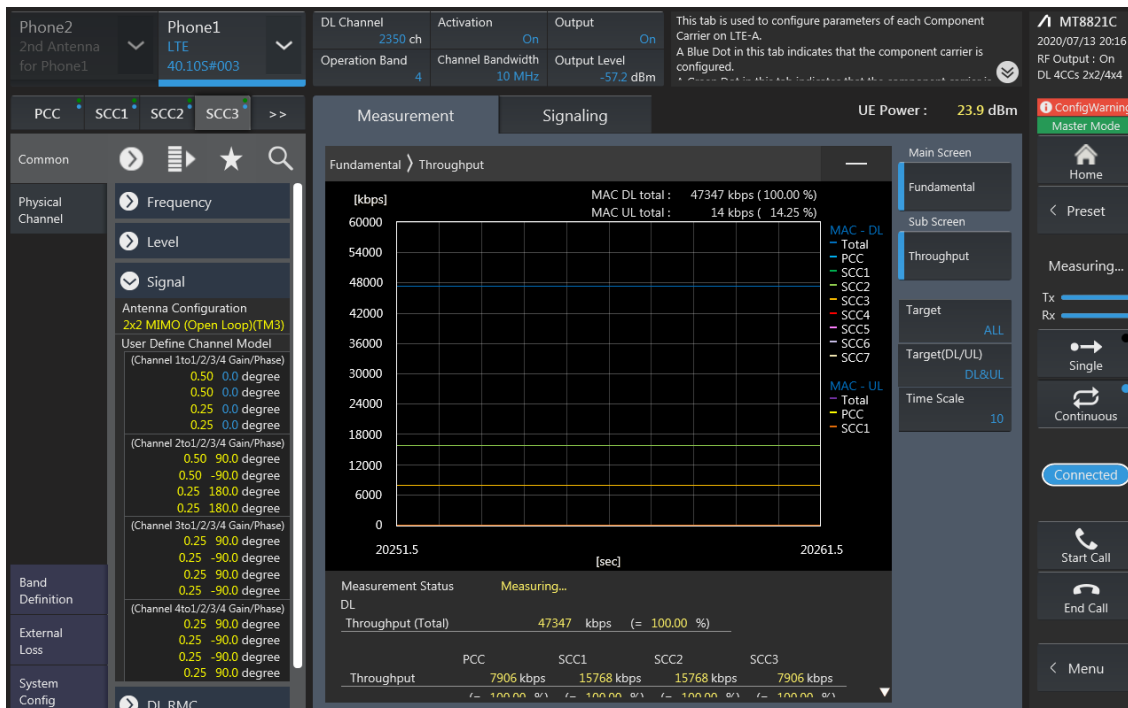
SCC1 Setting (Channel/ RB/ BW/ Modulation) and call Connection



SCC2 Setting (Channel/ RB/ BW/ Modulation) and call Connection



SCC3 Setting (Channel/ RB/ BW/ Modulation) and call Connection



LTE Downlink 4CA 4X4 MIMO Maximum Conducted Power

Combination	Band	BW	PCC						offset	SCC1				SCC2				SCC3				Tx Power	
			PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB		Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)
2A-2A-[4A]-4A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	15	2175	2132.5	4	10	2350	2150	24.09	24.18
[2A]-2A-[4A]-4A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	15	2175	2132.5	4	10	2350	2150	24.09	23.93
2A-2A-[4A]-[4A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	15	2175	2132.5	4	10	2350	2150	24.09	23.93
[2A]-2A-[4A]-4A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	15	2175	2132.5	4	10	2350	2150	24.09	24.09
[2A]-[2A]-4A-4A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	15	2175	2132.5	4	10	2350	2150	24.09	24.03
2A-2A-[4A]-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	2	20	1100	1980	24.31	24.51
[2A]-2A-4A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	2	20	1100	1980	24.31	24.46
[2A]-2A-[4A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	2	20	1100	1980	24.31	24.46
[2A]-2A-[4A]-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	2	20	1100	1980	24.31	24.16
[2A]-[2A]-4A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	2	20	1100	1980	24.31	24.18
2A-2A-[4A]-5A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.09	23.90
[2A]-2A-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.09	24.01
[2A]-2A-[4A]-5A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.09	24.28
[2A]-[2A]-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.09	24.21
2A-2A-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.31	24.40
[2A]-2A-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.31	24.30
[2A]-2A-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.31	24.19
[2A]-[2A]-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.31	24.44
2A-2A-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.98	25.12
[2A]-2A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.98	25.12
[2A]-2A-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.98	24.79
[2A]-[2A]-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.98	24.89
2A-2A-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.09	23.97
[2A]-2A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.09	23.93
[2A]-2A-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.09	24.18
[2A]-[2A]-4A-12A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.09	24.19
2A-2A-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.31	24.40
[2A]-2A-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.31	24.16
[2A]-2A-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.31	24.39
[2A]-[2A]-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.31	24.41
2A-2A-[4A]-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.85	24.90
[2A]-2A-4A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.85	24.97
[2A]-2A-[4A]-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.85	24.75
[2A]-[2A]-4A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.85	24.89
2A-2A-[4A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.09	24.21
[2A]-2A-4A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.09	23.96
[2A]-2A-[4A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.09	24.02
[2A]-[2A]-4A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.09	23.91
2A-2A-[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.31	24.41
[2A]-2A-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.31	24.26
[2A]-2A-[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.31	24.27
[2A]-[2A]-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.31	24.18
2A-2A-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.13	24.27
[2A]-2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.13	24.31
[2A]-2A-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.13	24.08
[2A]-[2A]-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.13	24.28
[2A]-2A-5A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.09	24.09
[2A]-[2A]-5A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.09	24.25
[2A]-2A-5A-30A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.98	24.82
[2A]-[2A]-5A-30A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.98	25.03
[2A]-2A-5A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	23.06	23.20
[2A]-[2A]-5A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	23.06	23.22
2A-2A-5A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.09	24.08
[2A]-2A-5A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.09	24.18
[2A]-[2A]-5A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.09	24.25
[2A]-2A-5A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.09	24.19

[2A]-2A-12A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.09	24.07
[2A]-[2A]-12A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.09	24.13
[2A]-2A-12A-30A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.85	24.96
[2A]-[2A]-12A-30A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.85	25.03
[2A]-2A-12A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	23.06	23.18
[2A]-[2A]-12A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	23.06	22.93
2A-2A-12A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.09	24.15
[2A]-2A-12A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.09	24.28
[2A]-2A-12A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.09	24.14
[2A]-[2A]-12A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.09	23.90
2A-2A-12A-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.85	24.70
[2A]-2A-12A-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.85	24.90
[2A]-2A-12A-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.85	25.00
[2A]-[2A]-12A-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.85	24.70
2A-2A-12A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.22
[2A]-2A-12A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.37
[2A]-2A-12A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.46
[2A]-[2A]-12A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.24
2A-2A-13A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	24.09	24.09
[2A]-2A-13A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	24.09	23.98
[2A]-2A-13A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	24.09	23.99
[2A]-[2A]-13A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	24.09	24.11
2A-2A-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.81	23.61
[2A]-2A-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.81	23.75
[2A]-2A-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.81	23.92
[2A]-[2A]-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.81	23.95
2A-2A-13A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.28
[2A]-2A-13A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.29
[2A]-2A-13A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.24
[2A]-[2A]-13A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.15
2A-2A-14A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.09	24.17
[2A]-[2A]-14A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.09	24.01
[2A]-2A-14A-30A	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	23.70	23.71
[2A]-[2A]-14A-30A	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	23.70	23.74
[2A]-2A-14A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	23.06	23.15
[2A]-[2A]-14A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	23.06	22.98
2A-2A-14A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.09	23.97
[2A]-2A-14A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.09	24.04
[2A]-2A-14A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.09	23.96
[2A]-[2A]-14A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.09	24.24
2A-2A-14A-[66A]	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.70	23.80
[2A]-2A-14A-[66A]	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.70	23.56
[2A]-2A-14A-[66A]	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.70	23.81
[2A]-[2A]-14A-[66A]	14	5	23305	790.5	5305	760.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.70	23.57
2A-2A-14A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.29	24.46
[2A]-2A-14A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.29	24.25
[2A]-2A-14A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.29	24.41
[2A]-[2A]-14A-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.29	24.39
[2A]-2A-29A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.09	24.21
[2A]-[2A]-29A-30A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.09	24.05
[2A]-2A-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	23.06	23.12
[2A]-[2A]-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	23.06	23.16
2A-2A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.09	24.20
[2A]-2A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.09	24.23
[2A]-2A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.09	23.91
[2A]-[2A]-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.09	24.11
2A-2A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.06	23.22
[2A]-2A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	23.06	23.16
[2A]-2A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2									

2A-2A-[66B]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	5	66886	2155	66	15	66979	2164.3	24.09	24.25
[2A]-2A-66B	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	5	66886	2155	66	15	66979	2164.3	24.09	24.16
[2A]-[2A]-66B	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	5	66886	2155	66	15	66979	2164.3	24.09	24.08
2A-2A-[66B]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	2	20	1100	1980	24.29	24.27
[2A]-2A-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	2	20	1100	1980	24.29	24.18
[2A]-[2A]-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	2	20	1100	1980	24.29	24.49
2A-2A-[66C]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.09	24.26
[2A]-2A-66C	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.09	24.12
[2A]-[2A]-66C	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.09	24.17
2A-2A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	2	20	1100	1980	24.29	24.26
[2A]-2A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	2	20	1100	1980	24.29	24.38
[2A]-[2A]-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	2	20	1100	1980	24.29	24.31
2C-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.09	24.25
[2C]-66A-66A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.09	24.08
2C-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.09	23.96
[2C]-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.29	24.42
2C-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.29	24.28
2C-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.29	24.14
2A-2A-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	24.25
2A-[2A]-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	24.04
[2A]-2A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	23.90
2A-[2A]-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	24.29
[2A]-2A-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	24.26
[2A]-[2A]-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.09	24.24
2A-2A-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.37
[2A]-[2A]-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.42
[2A]-2A-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.43
2A-[2A]-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.35
[2A]-2A-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.17
[2A]-[2A]-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.36
2A-2A-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	24.01
2A-[2A]-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	23.97
[2A]-2A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	24.14
2A-[2A]-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	24.04
[2A]-2A-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	24.32
2A-[2A]-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.13	23.95
2A-[4A]-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.09	24.03
[2A]-4A-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.09	24.11
2A-[4A]-[4A]-5A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.09	24.19
[2A]-[4A]-4A-5A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.09	24.22
2A-[4A]-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.31	24.46
[2A]-4A-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.31	24.44
2A-[4A]-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.31	24.14
[2A]-[4A]-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.31	24.21
2A-[4A]-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.98	25.17
[2A]-4A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.98	24.84
2A-[4A]-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.98	24.84
[2A]-[4A]-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.98	24.80
2A-[4A]-4A-12A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.09	24.21
[2A]-4A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.09	23.91
2A-[4A]-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.09	24.12
[2A]-[4A]-4A-12A	2	5	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.09	24.27
2A-[4A]-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.31	24.32
[2A]-4A-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.31	24.48
2A-[4A]-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.31	24.48
[2A]-[4A]-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.31	24.12
2A-[4A]-4A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.85	24.69
[2A]-4A-4A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.85	24.76
2A-[4A]-[4A]-12A	12	5	23035	701.5	5035	731.5	QPSK																

2A-5A-[66B]	2	5	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	66	5	66886	2155	66	15	66979	2164.3	24.09	24.21
[2A]-5A-[66B]	2	5	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	66	5	66886	2155	66	15	66979	2164.3	24.09	24.24
2A-5A-[66B]	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	66	5	66886	2155	66	15	66979	2164.3	24.98	24.98
[2A]-5A-[66B]	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	66	5	66886	2155	66	15	66979	2164.3	24.98	24.81
2A-5A-[66B]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	5	10	2525	881.5	24.29	24.39
[2A]-5A-[66B]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	15	67018	2168.2	2	20	900	1960	5	10	2525	881.5	24.29	24.16
2A-5A-[66C]	2	5	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.09	23.92
[2A]-5A-[66C]	2	5	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.09	24.10
2A-5A-[66C]	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.98	24.95
[2A]-5A-[66C]	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.98	24.80
2A-5A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	5	10	2525	881.5	24.29	24.39
[2A]-5A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	5	10	2525	881.5	24.29	24.48
2A-12B-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5167	744.7	66	20	66786	2145	24.09	24.11
[2A]-12B-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5167	744.7	66	20	66786	2145	24.09	24.20
2A-12B-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5167	744.7	66	20	66786	2145	24.09	24.11
[2A]-12B-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	2	20	900	1960	66	20	66786	2145	24.85	24.76
2A-12B-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	2	20	900	1960	66	20	66786	2145	24.85	24.79
[2A]-12B-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	2	20	900	1960	66	20	66786	2145	24.85	24.76
2A-12B-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	12	5	5095	737.5	12	5	5167	744.7	24.29	24.41
[2A]-12B-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	12	5	5095	737.5	12	5	5167	744.7	24.29	24.23
2A-12B-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	12	5	5095	737.5	12	5	5167	744.7	24.29	24.47
2A-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.09	24.05
[2A]-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.09	24.01
2A-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.09	23.99
[2A]-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.09	24.20
2A-12A-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.85	25.01
[2A]-12A-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.85	24.91
2A-12A-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.85	25.00
[2A]-12A-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.85	25.04
2A-12A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.29	24.31
[2A]-12A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.29	24.31
2A-12A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.29	24.21
[2A]-12A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.29	24.37
2A-12A-[66C]	2	5	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	24.09	24.04
[2A]-12A-[66C]	2	5	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	24.09	23.92
2A-12A-[66C]	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.85	24.85
[2A]-12A-[66C]	12	5	23035	701.5	5035	731.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.85	24.66
2A-12A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	12	10	5095	737.5	24.29	24.29
[2A]-12A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	12	10	5095	737.5	24.29	24.43
2A-13A-[48C]	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	48	20	55340	3560	48	20	55538	3579.8	24.09	24.16
[2A]-13A-[48C]	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	48	20	55340	3560	48	20	55538	3579.8	24.09	24.11
2A-13A-[48C]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	48	20	55340	3560	48	20	55538	3579.8	23.81	23.92
[2A]-13A-[48C]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	48	20	55340	3560	48	20	55538	3579.8	23.81	23.96
2A-13A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.09	24.26
[2A]-13A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.09	24.13
2A-13A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.09	24.24
[2A]-13A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.09	24.25
2A-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.81	23.87
[2A]-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.81	23.77
2A-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.81	23.64
[2A]-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.81	23.82
2A-13A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.29	24.21
[2A]-13A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.29	24.32
2A-13A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.29	24.43
[2A]-13A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.29	24.42
2A-13A-[66B]	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	5	66886	2155	66	15	66979	2164.3	24.09	24.22
[2A]-13A-[66B]	2	5	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	5	66886	2155	66	15	66979	2164.3	24.09	23.96
2A-13A-[66B]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	5	66886	2155	66	15	66979	2164.3	23.81	23.80
[2A]-13A-[66B]	13	10	23230	782																			

2A-48C-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.09	24.00
2A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.09	23.91
[2A]-48C-66A	2	5	18900	1880	900	1960	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.09	24.00
[2A]-48C-[66A]	2	5	18900	1880	900	1960	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.09	23.89
2A-48C-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	48	20	56640	3690	48	20	56442	3670.2	24.29	24.46
2A-[48C]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	48	20	56640	3690	48	20	56442	3670.2	24.29	24.42
[2A]-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	48	20	56640	3690	48	20	56442	3670.2	24.29	24.47
[2A]-48C-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	2	20	900	1960	48	20	56640	3690	48	20	56442	3670.2	24.29	24.37
2A-66A-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.21
2A-[66A]-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.05
[2A]-66A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.13
2A-[66A]-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.17
[2A]-[66A]-66A-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.21
[2A]-[66A]-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	24.09	24.04
2A-66A-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.18
2A-[66A]-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.27
[2A]-66A-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.14
2A-[66A]-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.41
[2A]-[66A]-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.47
[2A]-[66A]-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	2	20	900	1960	71	20	68761	634.5	24.29	24.46
2A-66A-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	24.21
[2A]-66A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	23.96
[2A]-[66A]-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	24.27
2A-[66A]-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	24.16
[2A]-[66A]-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	24.20
[2A]-[66A]-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.13	23.95
2A-[66C]-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	24.09	23.98
[2A]-66C-71A	2	5	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	24.09	24.27
2A-[66C]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	71	20	68761	634.5	24.29	24.48
[2A]-66C-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66994	2165.8	2	20	900	1960	71	20	68761	634.5	24.29	24.43
2A-[66C]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.13	24.29
[2A]-66C-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.13	23.99
[4A]-4A-12B	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	12	5	5095	737.5	12	5	5167	744.7	24.31	24.27
[4A]-[4A]-12B	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	4	20	2050	2120	12	5	5095	737.5	12	5	5167	744.7	24.31	24.46
[4A]-4A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.85	24.89
[4A]-[4A]-12B	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	10	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.85	24.99
[4A]-4B	4	5	20375	1752.5	2375	2152.5	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.31	24.37
5A-30A-[66A]-66A	5	5	20425	826.5	2425	871.5	QPSK	1	0	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.98	24.96
5A-30A-[66A]-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	0	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.98	25.07
5A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	0	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	23.06	22.94
5A-30A-[66A]-[66A]	30	10	27710	2310	9820	2355	QPSK	1	0	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	23.06	22.91
5A-30A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	5	10	2525	881.5	30	10	9820	2355	24.29	24.37
5A-30A-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	5	10	2525	881.5	30	10	9820	2355	24.29	24.21
5A-48C-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.98	25.10
5A-[48C]-66A	5	5	20425	826.5	2425	871.5	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.98	24.90
5A-48C-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	5	10	2525	881.5	48	20	56640	3690	48	20	56442	3670.2	24.29	24.27
5A-[48C]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	5	10	2525	881.5	48	20	56640	3690	48	20	56442	3670.2	24.29	24.38
12A-30A-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	12	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.85	24.86
12A-30A-[66A]-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	12	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.85	25.02
12A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	0	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	23.06	22.93
12A-30A-[66A]-[66A]	30	10	27710	2310	9820	2355	QPSK	1	0	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	23.06	23.02
12A-30A-[66A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	12	10	5095	737.5	30	10	9820	2355	24.29	24.37
12A-30A-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	66	20	66536	2120	12	10	5095	737.5	30	10	9820	2355	24.29	24.41
13A-48C-[66A]	13	10	23230	782	5230	751	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	23.81	23.98
13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	0	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	23.81	23.98
13A-48C-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	13	10	5230	751	48	20	56640	3690	48	20	56442	3670.2	24.29	24.45
13A-[48C]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	13	10	5230	751	48	20	56640	3690	48	20	56442			