

Appendix H. – DL CA 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:

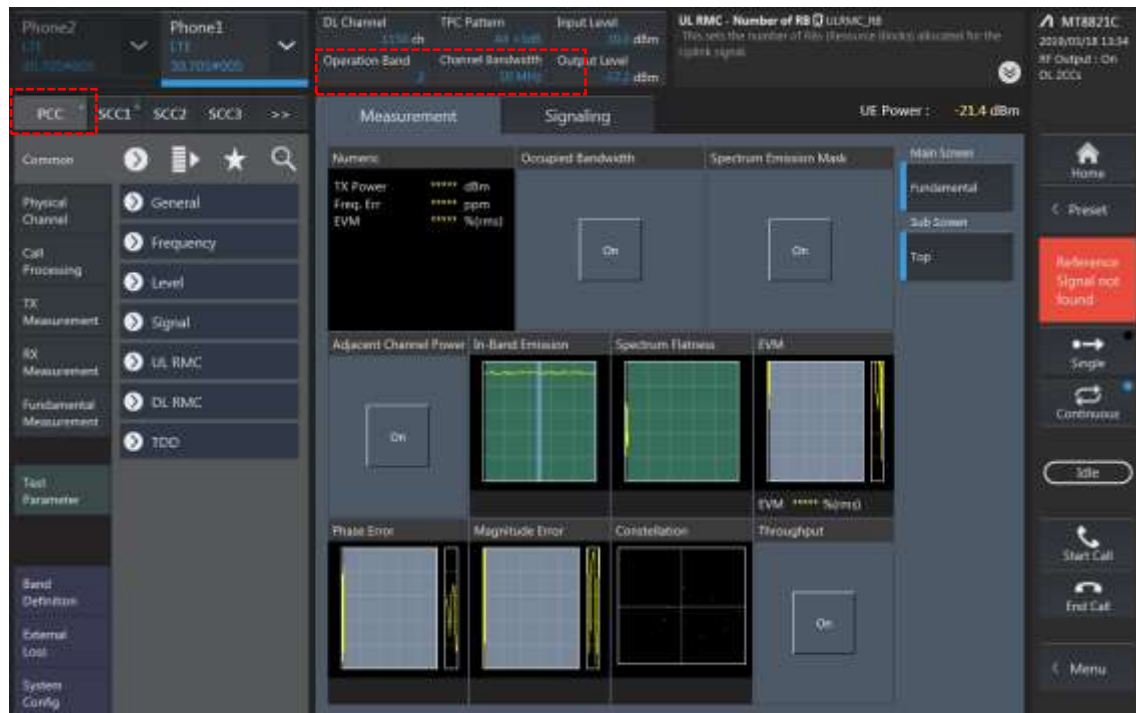
1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation 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.



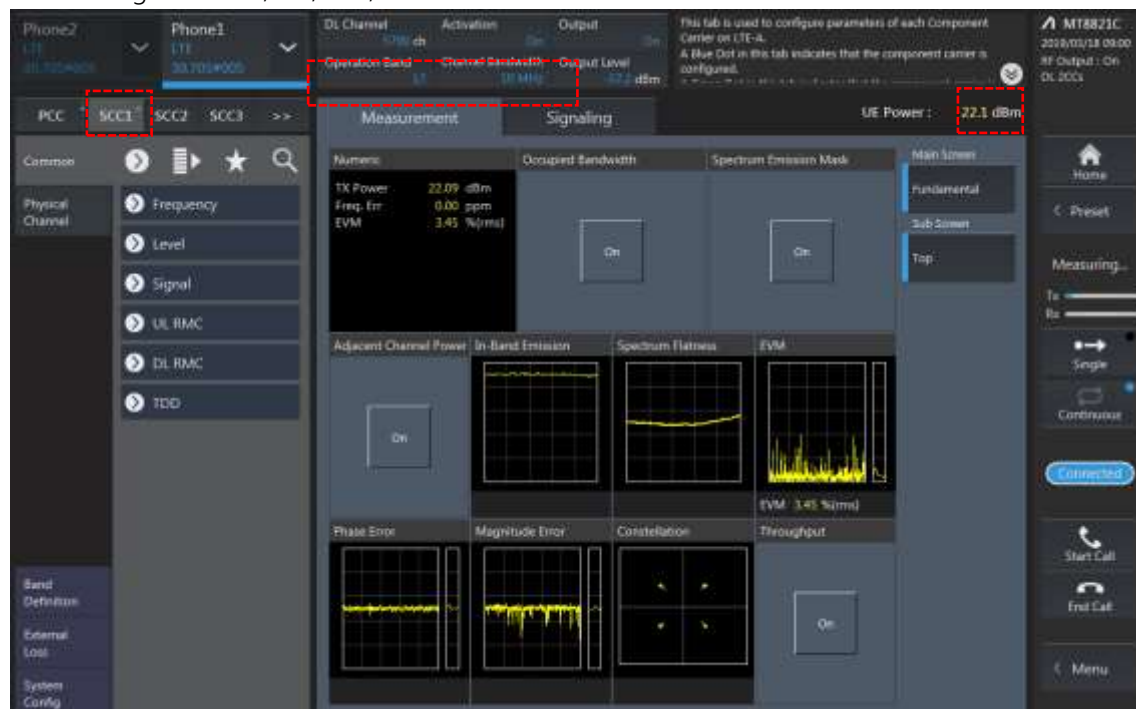
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



SCC Setting : Channel/ RB/ BW/ Modulation and call Connection

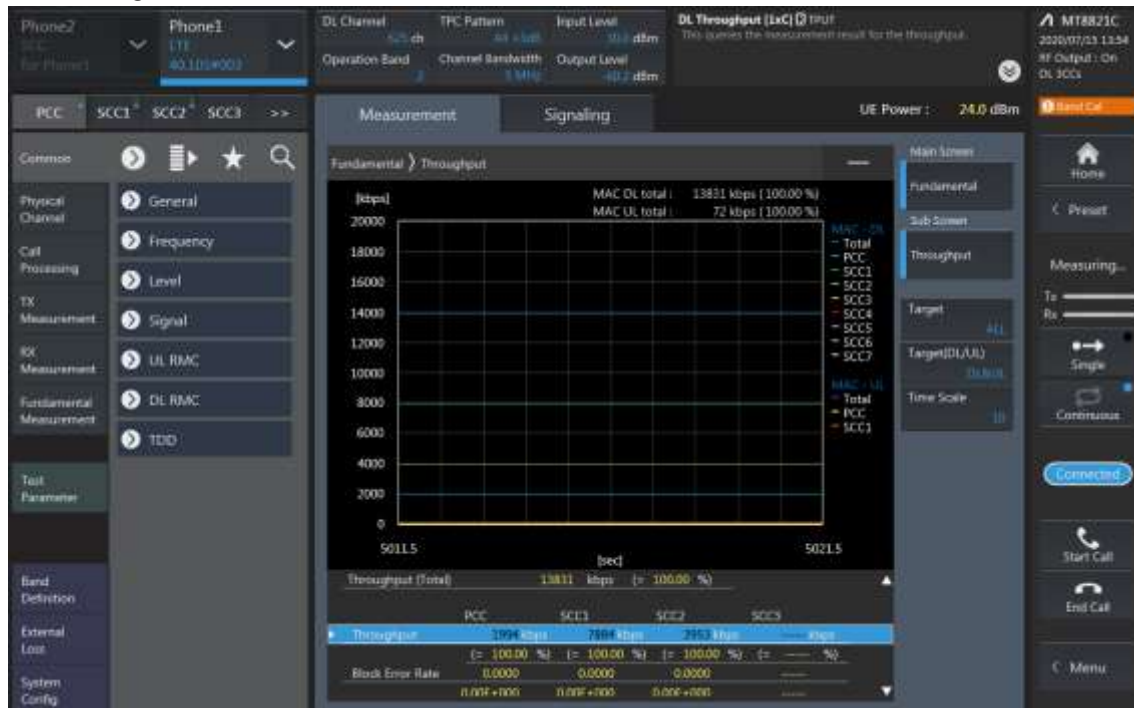


2CA Downlink Carrier aggregation Maximum conducted Powers

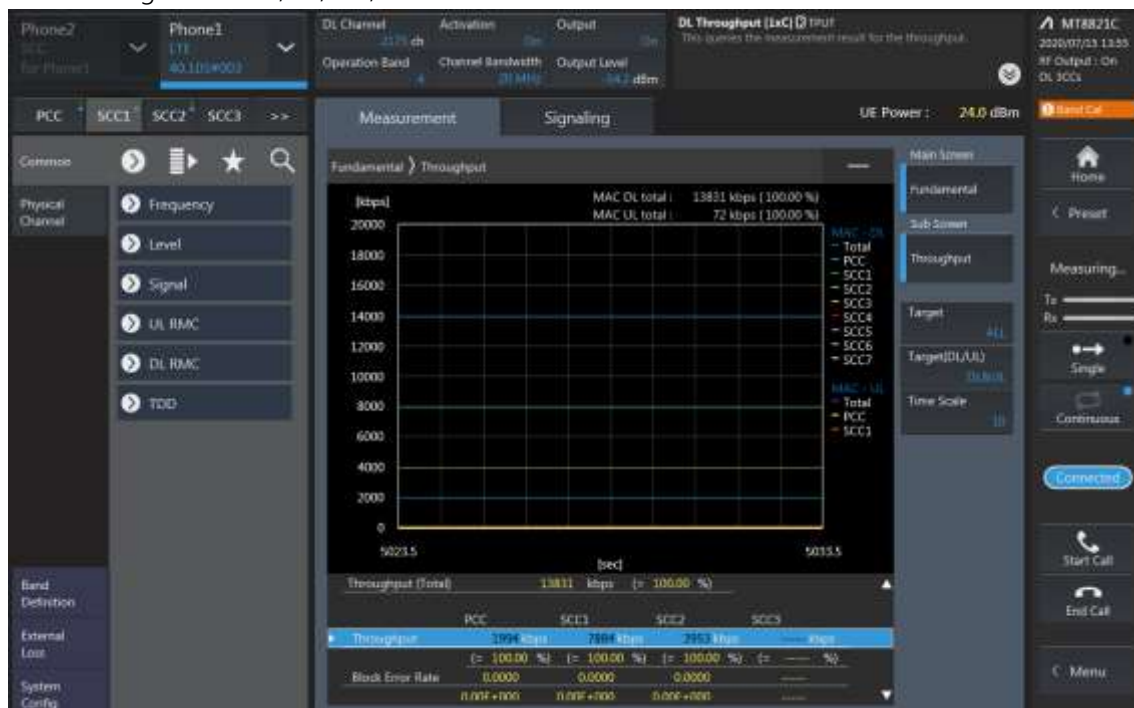
Combination	PCC									SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modul ation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
42C	42	15	42590	3500	42590	3500	QPSK	1	74	42	20	42419	3482.9	18.00	17.95	-0.05
4A-29A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	29	10	9715	722.5	23.01	22.94	-0.07
4A-48A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	48	20	55340	3560	23.01	22.99	-0.02
5A-25A	5	5	20425	826.5	2425	871.5	QPSK	1	12	25	10	8365	1962.5	23.15	23.15	0.00
5A-25A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	5	10	2525	881.5	23.11	23.06	-0.05
7A-42A	7	20	21100	2535	3100	2655	QPSK	1	0	42	20	42590	3500	23.19	23.17	-0.02
12A-25A	12	10	23095	707.5	5095	737.5	QPSK	1	0	25	10	8365	1962.5	23.20	23.12	-0.08
12A-25A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	12	5	5095	737.5	23.11	23.07	-0.04
29A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	29	10	9715	722.5	23.21	23.19	-0.02

LTE Down Link 3CA Call Setup

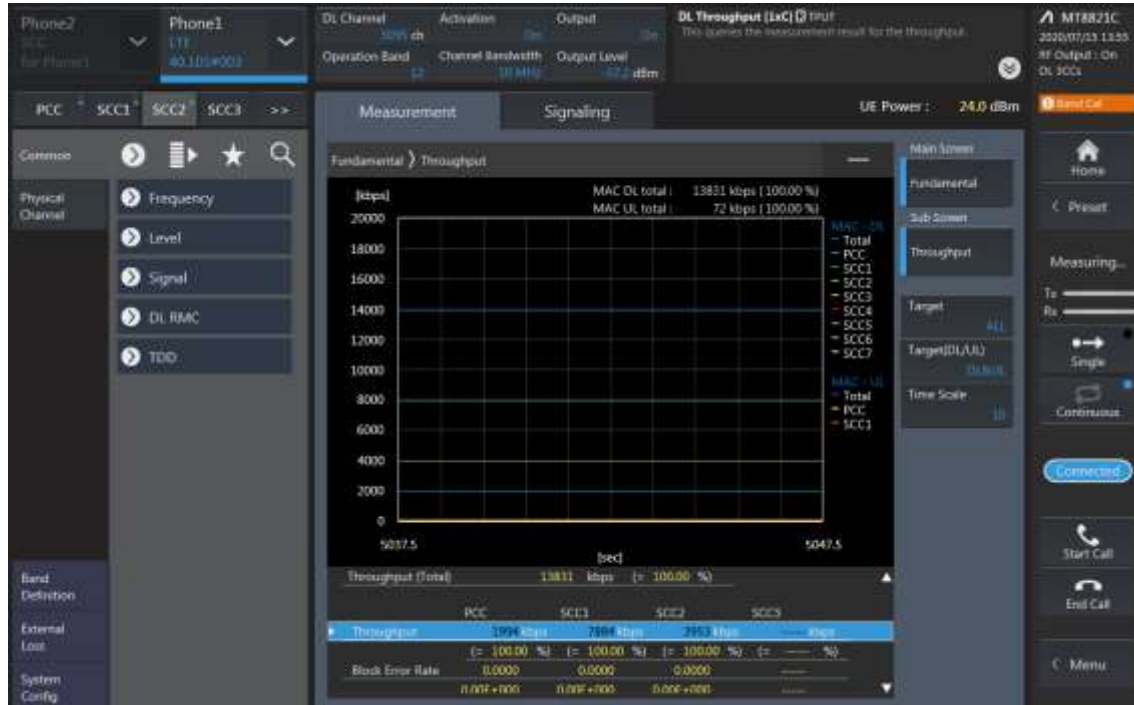
PCC Setting: Channel /RB/BW/Modulation



SCC1 Setting : Channel /RB/BW/Modulation



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



3CA Downlink Carrier aggregation conducted Powers

Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
42D	42	15	42590	3500	42590	3500	QPSK	1	74	42	20	42419	3482.9	42	20	42761	3517.1	18.00	17.99	-0.01
48D	48	20	55773	3603.3	55773	3603.3	QPSK	1	99	48	20	55575	3583.5	48	20	55971	3623.1	18.30	18.23	-0.07
66D	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66344	2190.8	66	20	66227	2179.1	23.21	23.15	-0.06
2A-5B	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	5	5	2597	888.7	22.85	22.83	-0.02
2A-5B	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	2	20	900	1960	23.15	23.12	-0.03
2A-7B	2	20	19100	1900	1100	1980	QPSK	1	99	7	10	3100	2655	7	10	3199	2664.9	22.85	22.82	-0.03
2A-7B	7	10	21100	2535	3100	2655	QPSK	1	0	7	10	3001	2645.1	2	20	1100	1980	23.19	23.18	-0.01
2A-7C	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	2902	2635.2	7	20	3298	2674.8	22.85	22.77	-0.08
2A-7C	7	20	21100	2535	3100	2655	QPSK	1	0	7	20	3298	2674.8	2	20	900	1960	23.19	23.17	-0.02
2A-12B	2	20	19100	1900	1100	1980	QPSK	1	99	12	5	5095	737.5	12	5	5143	742.3	23.19	23.17	-0.02
2A-12B	12	5	23095	707.5	5095	737.5	QPSK	1	12	12	5	5143	742.3	2	20	1100	1980	23.20	23.18	-0.02
2A-48C	2	20	19100	1900	1100	1980	QPSK	1	99	48	20	55773	3603.3	48	20	55575	3583.5	22.85	22.78	-0.07
2A-66B	2	20	19100	1900	1100	1980	QPSK	1	99	66	10	66786	2145	66	10	66687	2135.1	22.85	22.84	-0.01
2A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	15	66554	2121.8	2	20	900	1960	23.21	23.14	-0.07
2A-66C	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	66588	2125.2	22.85	22.77	-0.08
2A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	2	20	900	1960	23.19	23.15	-0.04
2C-5A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	5	10	2525	881.5	22.85	22.84	-0.01
2C-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	1100	1980	2	20	902	1960.2	23.15	23.11	-0.04
2C-12A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	12	10	5095	737.5	22.85	22.80	-0.05
2C-12A	12	5	23095	707.5	5095	737.5	QPSK	1	12	2	20	1100	1980	2	20	902	1960.2	23.20	23.18	-0.02
2C-29A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	29	10	9715	722.5	22.85	22.77	-0.08
2C-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	66	20	66786	2145	22.85	22.79	-0.06
2C-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	2	20	1100	1980	2	20	902	1960.2	23.21	23.21	0.00
4A-5B	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	5	10	2525	881.5	5	5	2453	874.3	23.01	22.95	-0.06
4A-5B	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	4	20	2175	2132.5	23.15	23.08	-0.07
4A-7B	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	7	10	3100	2655	7	10	3199	2664.9	23.01	22.98	-0.03
4A-7B	7	10	21100	2535	3100	2655	QPSK	1	0	7	10	2902	2635.2	4	20	2175	2132.5	23.19	23.13	-0.06
4A-7C	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	7	20	2902	2635.2	7	20	3298	2674.8	23.01	23.00	-0.01
4A-7C	7	20	21100	2535	3100	2655	QPSK	1	0	7	20	3298	2674.8	4	20	2175	2132.5	23.19	23.15	-0.04
4A-12B	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	12	5	5095	737.5	12	5	5047	732.7	23.01	22.96	-0.05

Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modul ation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
4A-48C	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	48	20	55773	3603.3	48	20	55575	3583.5	23.01	22.98	-0.03
5A-7B	5	5	20425	826.5	2425	871.5	QPSK	1	12	7	10	3100	2655	7	10	3199	2664.9	23.15	23.09	-0.06
5A-7B	7	10	21100	2535	3100	2655	QPSK	1	0	7	10	3001	2645.1	5	10	2525	881.5	23.19	23.18	-0.01
5A-7C	5	5	20425	826.5	2425	871.5	QPSK	1	12	7	20	3100	2655	7	20	3298	2674.8	23.15	23.10	-0.05
5A-7C	7	20	21100	2535	3100	2655	QPSK	1	0	7	20	3298	2674.8	5	10	2525	881.5	23.19	23.17	-0.02
5A-48C	5	5	20425	826.5	2425	871.5	QPSK	1	12	48	20	55773	3603.3	48	20	55575	3583.5	23.15	23.10	-0.05
5A-66B	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	10	66786	2145	66	10	66687	2135.1	22.85	22.80	-0.05
5A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	15	66554	2121.8	5	10	2525	881.5	23.21	23.17	-0.04
5A-66C	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	66588	2125.2	23.15	23.13	-0.02
5A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	5	10	2525	881.5	23.21	23.16	-0.05
5B-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	66	20	66786	2145	23.15	23.12	-0.03
5B-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	5	10	2525	881.5	5	5	2597	888.7	23.21	23.18	-0.03
12A-66B	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	10	66786	2145	66	10	66687	2135.1	23.20	23.19	-0.01
12A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	15	66554	2121.8	12	10	5095	737.5	23.21	23.17	-0.04
12A-66C	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	66	20	66588	2125.2	23.20	23.18	-0.02
12A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	12	10	5095	737.5	23.21	23.18	-0.03
13A-48C	13	5	23255	784.5	5255	753.5	QPSK	1	12	48	20	55773	3603.3	48	20	55575	3583.5	23.26	23.19	-0.07
13A-66B	13	5	23255	784.5	5255	753.5	QPSK	1	12	66	10	66786	2145	66	10	66687	2135.1	23.26	23.18	-0.08
13A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	15	66554	2121.8	13	10	5230	751	23.21	23.15	-0.06
13A-66C	13	5	23255	784.5	5255	753.5	QPSK	1	12	66	20	66786	2145	66	20	66588	2125.2	23.26	23.26	0.00
13A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	13	10	5230	751	23.21	23.13	-0.08
48A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	15	66554	2121.8	48	20	55773	3603.3	23.21	23.16	-0.05
48A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	48	20	55773	3603.3	23.21	23.15	-0.06
48C-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	48	20	55773	3603.3	48	20	55575	3583.5	23.21	23.18	-0.03
66A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	10	66786	2145	66	10	66687	2135.1	23.21	23.19	-0.02
66A-66B	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	15	66554	2121.8	66	20	66786	2145	23.21	23.18	-0.03
66A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66786	2145	66	20	66588	2125.2	23.21	23.20	-0.01
66A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	66	20	66786	2145	23.21	23.20	-0.01
2A-2A-5A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	900	1960	5	10	2525	881.5	22.85	22.83	-0.02
2A-2A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	1100	1980	2	20	900	1960	23.15	23.10	-0.05

Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modul ation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-2A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	900	1960	12	10	5023	730.3	22.85	22.84	-0.01
2A-2A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	1100	1980	2	20	900	1960	23.20	23.17	-0.03
2A-2A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	900	1960	13	10	5230	751	22.85	22.83	-0.02
2A-2A-13A	13	10	23255	784.5	5255	753.5	QPSK	1	12	2	20	1100	1980	2	20	900	1960	23.26	23.23	-0.03
2A-2A-14A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	900	1960	14	10	5330	763	22.85	22.85	0.00
2A-2A-14A	14	5	23355	795.5	5355	765.5	QPSK	1	0	2	20	1100	1980	2	20	900	1960	23.18	23.16	-0.02
2A-2A-29A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	900	1960	29	10	9715	722.5	22.85	22.84	-0.01
2A-4A-5A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	5	10	2525	881.5	22.85	22.83	-0.02
2A-4A-5A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	2	20	1100	1980	5	10	2525	881.5	23.01	22.94	-0.07
2A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	23.15	23.08	-0.07
2A-4A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	12	10	5095	737.5	22.85	22.83	-0.02
2A-4A-12A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	2	20	1100	1980	12	10	5095	737.5	23.01	22.99	-0.02
2A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	1100	1980	4	20	2175	2132.5	23.20	23.19	-0.01
2A-4A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	22.85	22.79	-0.06
2A-4A-13A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	2	20	1100	1980	13	10	5230	751	23.01	22.95	-0.06
2A-4A-13A	13	10	23255	784.5	5255	753.5	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	23.26	23.20	-0.06
2A-5A-48A	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	48	20	55773	3603.3	22.85	22.84	-0.01
2A-5A-48A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	1100	1980	48	20	55773	3603.3	23.15	23.11	-0.04
2A-5A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	22.85	22.84	-0.01
2A-5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	23.15	23.08	-0.07
2A-5A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	23.21	23.18	-0.03
2A-7A-7A(1,2,3)	2	20	19100	1900	1100	1980	QPSK	1	99	7	10	3100	2655	7	10	2800	2625	22.85	22.79	-0.06
2A-7A-7A(1,2,3)	7	20	21100	2535	3100	2655	QPSK	1	0	7	10	2800	2625	2	20	1100	1980	23.19	23.12	-0.07
2A-7A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	7	10	3100	2655	12	10	5023	730.3	22.85	22.83	-0.02
2A-7A-12A	7	20	21100	2535	3100	2655	QPSK	1	0	2	20	1100	1980	12	10	5095	737.5	23.19	23.18	-0.01
2A-7A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	1100	1980	7	10	3100	2655	23.20	23.12	-0.08
2A-12A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	12	5	5035	731.5	12	5	5095	737.5	22.85	22.83	-0.02
2A-12A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	5	5095	737.5	2	20	1100	1980	23.20	23.16	-0.04
2A-12A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	22.85	22.84	-0.01
2A-12A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	1100	1980	66	20	66786	2145	23.20	23.16	-0.04

Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-12A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	23.21	23.21	0.00
2A-13A-48A	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	48	20	55773	3603.3	22.85	22.77	-0.08
2A-13A-48A	13	10	23255	784.5	5255	753.5	QPSK	1	12	2	20	1100	1980	48	20	55773	3603.3	23.26	23.18	-0.08
2A-13A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	66	20	66786	2145	22.85	22.85	0.00
2A-13A-66A	13	10	23255	784.5	5255	753.5	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	23.26	23.22	-0.04
2A-13A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	2	20	1100	1980	13	10	5230	751	23.21	23.21	0.00
2A-14A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	14	10	5330	763	66	20	66786	2145	22.85	22.81	-0.04
2A-14A-66A	14	5	23355	795.5	5355	765.5	QPSK	1	0	2	20	1100	1980	66	20	66786	2145	23.18	23.12	-0.06
2A-14A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	2	20	1100	1980	14	10	5330	763	23.21	23.21	0.00
4A-4A-5A	4	10	20175	1732.5	2175	2132.5	QPSK	1	0	4	10	2000	2115	5	10	2525	881.5	22.95	22.92	-0.03
4A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	10	2175	2132.5	4	10	2000	2115	23.15	23.09	-0.06
4A-4A-7A	4	10	20175	1732.5	2175	2132.5	QPSK	1	0	4	10	2000	2115	7	10	3100	2655	22.95	22.89	-0.06
4A-4A-7A	7	20	21100	2535	3100	2655	QPSK	1	0	4	10	2175	2132.5	4	10	2000	2115	23.19	23.16	-0.03
4A-4A-12A	4	10	20175	1732.5	2175	2132.5	QPSK	1	0	4	10	2000	2115	12	10	5095	737.5	22.95	22.93	-0.02
4A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	4	10	2175	2132.5	4	10	2000	2115	23.20	23.20	0.00
4A-4A-13A	4	10	20175	1732.5	2175	2132.5	QPSK	1	0	4	10	2000	2115	13	10	5230	751	22.95	22.93	-0.02
4A-4A-13A	13	10	23255	784.5	5255	753.5	QPSK	1	12	4	10	2175	2132.5	4	10	2000	2115	23.26	23.26	0.00
4A-7A-7A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	7	10	3100	2655	7	10	2800	2625	23.01	22.99	-0.02
4A-7A-7A	7	20	21100	2535	3100	2655	QPSK	1	0	7	10	2800	2625	4	20	2175	2132.5	23.19	23.15	-0.04
4A-7A-12A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	7	10	3100	2655	12	10	5095	737.5	23.01	22.94	-0.07
4A-7A-12A	7	20	21100	2535	3100	2655	QPSK	1	0	4	20	2175	2132.5	12	10	5095	737.5	23.19	23.16	-0.03
4A-7A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	4	20	2175	2132.5	7	10	3100	2655	23.20	23.14	-0.06
4A-12A-12A	4	20	20175	1732.5	2175	2132.5	QPSK	1	49	12	5	5035	731.5	12	5	5095	737.5	23.01	22.97	-0.04
4A-12A-12A	12	5	23035	701.5	5035	731.5	QPSK	1	12	12	5	5095	737.5	4	20	2175	2132.5	23.20	23.16	-0.04
5A-5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	23.15	23.10	-0.05
5A-5A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	5	5	2425	871.5	5	10	2525	881.5	23.21	23.18	-0.03
5A-7A-7A	5	5	20425	826.5	2425	871.5	QPSK	1	12	7	10	3100	2655	7	10	2800	2625	23.15	23.09	-0.06
5A-7A-7A	7	20	21100	2535	3100	2655	QPSK	1	0	7	10	2800	2625	5	10	2525	881.5	23.19	23.12	-0.07
5A-48A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	48	20	55773	3603.3	66	20	66786	2145	23.15	23.12	-0.03
5A-48A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	5	10	2525	881.5	48	20	55773	3603.3	23.21	23.16	-0.05

Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modul ation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
5A-66A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	66536	2120	23.15	23.08	-0.07
5A-66A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	23.21	23.16	-0.05
12A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	66	20	66536	2120	23.20	23.16	-0.04
12A-66A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67236	2190	12	10	5095	737.5	23.21	23.16	-0.05
13A-48A-66A	13	10	23255	784.5	5255	753.5	QPSK	1	12	48	20	55773	3603.3	66	20	66786	2145	23.26	23.18	-0.08
13A-48A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	13	10	5230	751	48	20	55773	3603.3	23.21	23.20	-0.01
13A-66A-66A	13	10	23255	784.5	5255	753.5	QPSK	1	12	66	20	66786	2145	66	20	66536	2120	23.26	23.23	-0.03
13A-66A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67236	2190	13	10	5230	751	23.21	23.17	-0.04
14A-66A-66A	14	5	23355	795.5	5355	765.5	QPSK	1	0	66	20	66786	2145	66	20	66536	2120	23.18	23.12	-0.06
14A-66A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67236	2190	14	10	5330	763	23.21	23.21	0.00
25A-25A-26A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	5	8065	1932.5	26	5	8715	861.5	23.13	23.13	0.00
25A-25A-26A	26	5	26715	816.5	8715	861.5	QPSK	1	0	25	5	8365	1962.5	25	5	8065	1932.5	23.13	23.13	0.00
48A-66A-66A	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67236	2190	48	20	55773	3603.3	23.21	23.20	-0.01