

Appendix G: LTE Down-Link Carrier Aggregation

The tables below show the supported frequency bands of the device for DL Inter-band and DL Intra-band combinations.

Power measurements were performed on the channel with the highest maximum output power from Tune-up Procedure on ANT1 antenna.

When carrier aggregation is limited to downlink only, uplink maximum output power (single carrier) is measured for the supported combinations of downlink carrier aggregation listed in the table below. In applying the power measurement procedures of KDB 941225 D05A and April 2018 TCB workshop for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs (far right most configuration highlighted in the table below).

Index	2CC	Restriction	Completely Covered by Measurement Superset	Index	3CC	Restriction	Completely Covered by Measurement Superset	Index	4CC	Restriction	Completely Covered by Measurement Superset	Index	5CC	Restriction	Completely Covered by Measurement Superset
2CC# 1	CA_2C		3CC#24					4CC# 1	CA_41D		5CC#3				
2CC# 2	CA_5B		3CC#43	3CC# 2	CA_41A-41C		No	4CC# 2	CA_41E		No	5CC# 2	CA_41C-41D		No
2CC# 3	CA_7B		No									5CC# 3	CA_25A-25A-41D		No
2CC# 4	CA_7C		3CC#37	3CC# 4	CA_66A-66B		4CC#12	4CC# 4	CA_41A-41D		No				
2CC# 5	CA_12B		3CC#38	3CC# 5	CA_66A-66C		4CC#13	4CC# 5	CA_41C-41C		No	5CC# 5	CA_2A-2A-5A-66A-66A		No
2CC# 6	CA_38C		No	3CC# 6	CA_2A-2A-4A		4CC#6	4CC# 6	CA_2A-2A-4A-4A		No	5CC# 6	CA_2A-2A-5A-66B		No
2CC# 7	CA_41C		3CC#2	3CC# 7	CA_2A-2A-5A		4CC#33	4CC# 7	CA_2A-2A-12B		No	5CC# 7	CA_2A-2A-5A-66C		No
				3CC# 8	CA_2A-2A-12A		4CC#34	4CC# 8	CA_2A-2A-66A-66A		5CC#8	5CC# 8	CA_2A-2A-12A-66A-66A		No
2CC# 9	CA_66B		3CC#4	3CC# 9	CA_2A-2A-13A		4CC#36	4CC# 9	CA_2A-2A-66B		5CC#6				
2CC# 10	CA_66C		3CC#5					4CC# 10	CA_2A-2A-66C		5CC#7	5CC# 10	CA_2A-5B-66B		No
2CC# 11	CA_2A-2A		3CC#6	3CC# 11	CA_2A-2A-30A		4CC#39					5CC# 11	CA_2A-5B-66C		No
2CC# 12	CA_4A-4A		3CC#28	3CC# 12	CA_2A-2A-66A		4CC#40	4CC# 12	CA_2A-66A-66B		No				
2CC# 13	CA_7A-7A		3CC#35					4CC# 13	CA_2A-66A-66C		No	5CC# 13	CA_2A-5B-66A-66A		No
2CC# 14	CA_25A-25A		3CC#54	3CC# 14	CA_2A-4A-4A		4CC#41	4CC# 14	CA_2C-66A-66A		No	5CC# 14	CA_5B-30A-66A-66A		No
2CC# 15	CA_41A-41A		No	3CC# 15	CA_2A-5B		4CC#50	4CC# 15	CA_4A-4A-5B		No	5CC# 15	CA_2A-2A-5A-30A-66A		No
				3CC# 16	CA_2A-7A-7A		4CC#44	4CC# 16	CA_4A-4A-12B		No	5CC# 16	CA_2A-2A-12A-30A-66A		No
2CC# 17	CA_66A-66A		3CC#62	3CC# 17	CA_2A-7C		4CC#45	4CC# 17	CA_5A-66A-66B		No				
2CC# 18	CA_2A-4A		3CC#34	3CC# 18	CA_2A-12B		4CC#46	4CC# 18	CA_5A-66A-66C		No	5CC# 18	CA_2A-5A-30A-66A-66A		No
2CC# 19	CA_2A-5A		3CC#70					4CC# 19	CA_5B-66A-66A		5CC#13	5CC# 19	CA_2A-5B-30A-66A		No
2CC# 20	CA_2A-7A		3CC#36					4CC# 20	CA_5B-66B		5CC#10	5CC# 20	CA_2A-12A-30A-66A-66A		No
2CC# 21	CA_2A-12A		3CC#75	3CC# 21	CA_2A-66A-66A		4CC#60	4CC# 21	CA_5B-66C		5CC#11				
2CC# 22	CA_2A-13A		3CC#76	3CC# 22	CA_2A-66B		4CC#48	4CC# 22	CA_13A-66A-66B		No				
2CC# 23	CA_2A-14A		3CC#77	3CC# 23	CA_2A-66C		4CC#49	4CC# 23	CA_13A-66A-66C		No				
2CC# 24	CA_2A-17A		No	3CC# 24	CA_2C-5A		No	3CC# 24	CA_25A-25A-41C		No				
2CC# 25	CA_2A-30A		3CC#79	3CC# 25	CA_2C-12A		No	4CC# 25	CA_25A-41D		5CC#3				
				3CC# 26	CA_2C-30A		No								
2CC# 27	CA_2A-66A		3CC#81	3CC# 27	CA_2C-66A		No								
				3CC# 28	CA_4A-4A-5A		4CC#62								
2CC# 29	CA_4A-5A		3CC#82	3CC# 29	CA_4A-4A-7A		No								
2CC# 30	CA_4A-7A		3CC#83	3CC# 30	CA_4A-4A-12A		4CC#63	4CC# 30	CA_2A-2A-4A-5A		No				
2CC# 31	CA_4A-12A		3CC#84	3CC# 31	CA_4A-4A-13A		No	4CC# 31	CA_2A-2A-4A-12A		No				
2CC# 32	CA_4A-13A		3CC#31	3CC# 32	CA_4A-4A-30A		4CC#63	4CC# 32	CA_2A-2A-5A-30A		5CC#15				
2CC# 33	CA_4A-17A		No					4CC# 33	CA_2A-2A-5A-66A		5CC#15				
2CC# 34	CA_4A-30A		3CC#32	3CC# 34	CA_4A-5B		4CC#35	4CC# 34	CA_2A-2A-12A-30A		5CC#16				
				3CC# 35	CA_4A-7A-7A		4CC#44	4CC# 35	CA_2A-2A-12A-66A		5CC#16				
2CC# 36	CA_5A-7A		3CC#38	3CC# 36	CA_4A-7C		4CC#45	4CC# 36	CA_2A-2A-13A-66A		No				
2CC# 37	CA_5A-25A		No	3CC# 37	CA_4A-12B		4CC#46								
2CC# 38	CA_5A-30A		3CC#85	3CC# 38	CA_5A-7A-7A		No								
2CC# 39	CA_5A-38A		No	3CC# 39	CA_5A-7C		No	4CC# 39	CA_2A-2A-30A-66A		5CC#17				
2CC# 40	CA_5A-41A		No	3CC# 40	CA_5A-66A-66A		4CC#47								
				3CC# 41	CA_5A-66B		4CC#48	4CC# 41	CA_2A-4A-4A-5A		No				
2CC# 42	CA_5A-66A		3CC#40	3CC# 42	CA_5A-66C		4CC#49	4CC# 42	CA_2A-4A-4A-12A		No				
2CC# 43	CA_7A-12A		3CC#72	3CC# 43	CA_5B-30A		4CC#50	4CC# 43	CA_2A-4A-5B		No				
				3CC# 44	CA_5B-66A		4CC#51	4CC# 44	CA_2A-4A-7A-7A		No				
2CC# 45	CA_7A-66A		3CC#46					4CC# 45	CA_2A-4A-7C		No				
2CC# 46	CA_12A-25A		No	3CC# 46	CA_7A-7A-66A		No	4CC# 46	CA_2A-4A-12B		No				
2CC# 47	CA_12A-30A		3CC#87	3CC# 47	CA_12A-66A-66A		4CC#52	4CC# 47	CA_2A-5A-66A-66A		5CC#5				
2CC# 48	CA_12A-66A		3CC#47	3CC# 48	CA_12A-66C		4CC#53	4CC# 48	CA_2A-5A-66B		5CC#6				
								4CC# 49	CA_2A-5A-66C		5CC#7				
2CC# 50	CA_13A-66A		3CC#50	3CC# 50	CA_13A-66A-66A		4CC#14	4CC# 50	CA_2A-5B-30A		5CC#19				
				3CC# 51	CA_13A-66B		4CC#55	4CC# 51	CA_2A-5B-66A		5CC#19				
				3CC# 52	CA_13A-66C		4CC#56	4CC# 52	CA_2A-12A-66A-66A		5CC#20				
								4CC# 53	CA_2A-12A-66C		No				
2CC# 54	CA_25A-41A		3CC#55					4CC# 54	CA_2A-13A-66A-66A		No				
				3CC# 55	CA_25A-25A-41A		No	4CC# 55	CA_2A-13A-66B		No				

Index	2CC	Restriction	Completely Covered by Measurement Superset	Index	3CC	Restriction	Completely Covered by Measurement Superset	Index	4CC	Restriction	Completely Covered by Measurement Superset	Index	5CC	Restriction	Completely Covered by Measurement Superset
2CC # 56	CA_30A-66A		3CC #58	3CC # 56	CA_25A-41C		No	4CC # 56	CA_2A-13A-66C		No				
				3CC # 58	CA_30A-66A-66A		4CC #58	4CC # 58	CA_2A-30A-66A-66A		5CC #21				
								4CC # 62	CA_4A-4A-5A-30A		No				
								4CC # 63	CA_4A-4A-12A-30A		No				
				3CC # 64	CA_2A-4A-5A		4CC #69	4CC # 64	CA_5A-30A-66A-66A		5CC #18				
				3CC # 65	CA_2A-4A-7A		4CC #70	4CC # 65	CA_5B-30A-66A		5CC #19				
				3CC # 66	CA_2A-4A-12A		4CC #71	4CC # 66	CA_12A-30A-66A-66A		5CC #20				
				3CC # 67	CA_2A-4A-13A		No								
				3CC # 68	CA_2A-4A-30A		4CC #71								
								4CC # 69	CA_2A-4A-5A-30A		No				
				3CC # 70	CA_2A-5A-30A		4CC #72	4CC # 70	CA_2A-4A-7A-12A		No				
				3CC # 71	CA_2A-5A-66A		4CC #72	4CC # 71	CA_2A-4A-12A-30A		No				
				3CC # 72	CA_2A-7A-12A		4CC #74	4CC # 72	CA_2A-5A-30A-66A		5CC #18				
				3CC # 73	CA_2A-7A-66A		4CC #74	4CC # 73	CA_2A-7A-7A-66A		No				
				3CC # 74	CA_2A-12A-30A		4CC #75	4CC # 74	CA_2A-7A-12A-66A		No				
				3CC # 75	CA_2A-12A-66A		4CC #75	4CC # 75	CA_2A-12A-30A-66A		5CC #20				
				3CC # 76	CA_2A-13A-66A		No								
				3CC # 79	CA_2A-30A-66A		4CC #76								
				3CC # 82	CA_4A-5A-30A		4CC #62								
				3CC # 83	CA_4A-7A-12A		4CC #70								
				3CC # 84	CA_4A-12A-30A		4CC #71								
				3CC # 85	CA_5A-30A-66A		4CC #64								
				3CC # 86	CA_7A-12A-66A		4CC #74								
				3CC # 87	CA_12A-30A-66A		4CC #75								

In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the CA configuration with the largest aggregated DL CA BW in each frequency band, independently for contiguous and non-contiguous CA; however, if the same frequency band is used for both contiguous and non-contiguous CA, power measurement was performed using the configuration with the largest aggregated BW and maximum output power among contiguous and non-contiguous CA.

2CC DL CA Measured Results

E-UTRA CA configuration	CC1 (UL)					CC2 (DL)			Aggregated BW	CA Inactive (dBm)	CA Active (dBm)	Delta	2CC #
	Mode	BW (MHz)	Channel	Freq (MHz)	RB,Offset	BW (MHz)	Channel	Freq (MHz)					
CA_7B	QPSK	15	21076	2532.6	1,0	5	3169	2661.9	20	24.70	24.65	-0.05	3
CA_41A-41A	QPSK	20	39750	2506	1,0	20	41292	2660.2	40	24.42	24.35	-0.07	15
CA_2A-17A	QPSK	20	18900	1880	1,49	10	5790	740	30	23.11	23.05	-0.06	24
CA_4A-17A	QPSK	20	20175	1732.5	1,49	10	5790	740	30	24.66	24.63	-0.03	33
CA_5A-25A	QPSK	10	20525	836.5	1,24	20	8365	1962.5	30	24.73	24.67	-0.06	37
CA_5A-41A	QPSK	10	20525	836.5	1,24	20	40620	2593	30	24.73	24.70	-0.03	40
CA_5A-48A	QPSK	10	20525	836.5	1,24	20	55773	3603.3	30	24.73	24.68	-0.05	41
CA_12A-25A	QPSK	5	23110	709	1,24	5	8665	1992.5	10	23.90	23.87	-0.03	46
CA_26A-41A	QPSK	10	26865	831.5	1,37	20	40842	2615.2	30	23.84	23.86	0.02	55

3CC DL CA Measured Results

E-UTRA CA configuration	CC1 (UL)					CC2 (DL)			CC3 (DL)			Aggregated BW	CA Inactive (dBm)	CA Active (dBm)	Delta	3CC #
	Mode	BW (MHz)	Channel	Freq (MHz)	RB,Offset	BW (MHz)	Channel	Freq (MHz)	BW (MHz)	Channel	Freq (MHz)					
CA_41A-41C	QPSK	20	39750	2506	1,0	20	41292	2660.2	20	41490	2680	60	24.86	24.86	0.00	2
CA_2A-48A-48A	QPSK	20	18900	1880	1,49	20	55934	3619.4	20	55340	3560	60	25.2	25.21	0.01	19
CA_2C-5A	QPSK	20	18801	1870.1	1,49	20	999	1969.9	10	2525	881.5	50	25.26	25.29	0.03	24
CA_2C-12A	QPSK	20	18801	1870.1	1,49	20	999	1969.9	10	5095	737.5	50	24.37	24.31	-0.06	25
CA_2C-30A	QPSK	20	18801	1870.1	1,49	20	999	1969.9	10	9820	2355	50	24.38	24.30	-0.08	26
CA_2C-66A	QPSK	20	18801	1870.1	1,49	20	999	1969.9	20	66786	2145	60	24.37	24.30	-0.07	27
CA_4A-4A-7A	QPSK	20	20050	1720	1,49	20	2300	2145	20	3100	2655	60	24.45	24.43	-0.02	29
CA_4A-4A-13A	QPSK	20	20050	1720	1,49	20	2300	2145	10	5230	751	50	24.41	24.39	-0.02	31
CA_5A-7A-7A	QPSK	10	20525	836.5	1,24	20	3152	2660.2	20	3350	2680	50	24.73	24.69	-0.04	38
CA_5A-7C	QPSK	10	20525	836.5	1,24	20	2950	2640	20	3148	2659.8	50	24.74	24.68	-0.06	39
CA_7A-7A-26A	QPSK	20	20850	2510	1,49	20	3200	2665	10	8750	876.5	50	24.61	24.40	-0.21	45
CA_7A-7A-66A	QPSK	20	20850	2510	1,49	20	3200	2665	20	66536	2120	60	24.63	24.45	-0.18	46
CA_25A-25A-26A	QPSK	20	26140	1860	1,49	20	8590	1985	10	8865	876.5	50	24.30	24.14	-0.16	54
CA_25A-25A-41A	QPSK	20	26140	1860	1,49	20	8590	1985	20	40340	2565	60	24.78	24.76	-0.02	55
CA_25A-41C	QPSK	20	26140	1860	1,49	20	40842	2615.2	20	41040	2645	60	24.25	24.22	-0.03	56
CA_26A-41C	QPSK	15	26865	831.5	1,37	20	40842	2615.2	20	41040	2645	55	24.26	24.24	-0.02	57
CA_2A-4A-13A	QPSK	20	18900	1880	1,49	20	2175	2132.5	10	5230	751	50	24.3	24.24	-0.06	67
CA_2A-13A-66A	QPSK	20	18900	1880	1,49	10	5230	751	20	66786	2145	50	24.29	24.21	-0.08	76
CA_2A-48A-66A	QPSK	20	18900	1880	1,49	20	55990	3625	20	66786	2145	60	24.68	24.72	0.04	80
CA_13A-48A-66A	QPSK	10	23230	782	1,24	20	55990	3625	20	66786	2145	50	24.40	24.34	-0.06	88

4CC DL CA Measured Results

E-UTRA CA configuration	CC1 (UL)					CC2 (DL)			CC3 (DL)			CC4 (DL)			Aggregated BW	CA Inactive (dBm)	CA Active (dBm)	Delta	4CC #
	Mode	BW (MHz)	Channel	Freq (MHz)	RB, Offset	BW (MHz)	Channel	Freq (MHz)	BW (MHz)	Channel	Freq (MHz)	BW (MHz)	Channel	Freq (MHz)					
CA_41E	QPSK	20	40890	2620	1,49	20	41090	2640	20	41240	2655	20	41390	2670	80	24.92	24.40	-0.52	2
CA_41A-41D	QPSK	20	39750	2506	1,49	20	41094	2640.4	20	41292	2660.2	20	41490	2680	80	24.25	24.21	-0.04	4
CA_41C-41C	QPSK	20	39750	2506	1,49	20	39948	2525.8	20	41292	2660.2	20	41490	2680	80	24.11	24.18	0.07	5
CA_2A-2A-4A-4A	QPSK	20	18700	1860	1,49	20	1100	1980	20	2050	2120	20	2300	2145	80	24.16	24.20	0.04	6
CA_2A-2A-12B	QPSK	20	18700	1860	1,49	20	1100	1980	5	5048	732.8	10	5120	740	55	24.20	24.20	0.00	7
CA_2A-66A-66B	QPSK	20	18900	1880	1,49	20	66536	2120	10	67187	2185.1	10	67286	2195	60	24.17	24.17	0.00	12
CA_2A-66A-66C	QPSK	20	18900	1880	1,49	20	66536	2120	20	67038	2170.2	20	67236	2190	80	24.22	24.25	0.03	13
CA_2C-66A-66A	QPSK	20	18801	1870.1	1,49	20	999	1969.9	20	66536	2120	20	67236	2190	80	24.23	24.11	-0.12	14
CA_4A-4A-5B	QPSK	20	20050	1720	1,49	20	2300	2145	5	2510	880	3	2549	883.9	48	24.40	24.40	0.00	15
CA_4A-4A-12B	QPSK	20	20050	1720	1,49	20	2300	2145	5	5048	732.8	10	5120	740	55	24.40	24.40	0.00	16
CA_5A-66A-66B	QPSK	10	20525	836.5	1,24	20	66536	2120	10	67187	2185.1	10	67286	2195	50	23.00	23.00	0.00	17
CA_5A-66A-66C	QPSK	10	20525	836.5	1,24	20	66536	2120	20	67038	2170.2	20	67236	2190	70	23.00	23.00	0.00	18
CA_13A-66A-66B	QPSK	10	23230	782	1,24	20	66536	2120	10	67187	2185.1	10	67286	2195	50	24.30	24.30	0.00	22
CA_13A-66A-66C	QPSK	10	23230	782	1,24	20	66536	2120	20	67038	2170.2	20	67236	2190	70	24.30	24.30	0.00	23
CA_25A-25A-41C	QPSK	5	26665	1912.5	1,49	5	8321	1958.1	20	40842	2615.2	20	41040	2635	50	25.26	25.33	0.07	24
CA_48A-48A-66A-66A	QPSK	20	55340	3560	1,49	20	55736	3599.6	20	66536	2120	20	66936	2160	80	24.40	24.40	0.00	26
CA_48A-48C-66A	QPSK	20	55934	3619.4	1,49	20	55538	3579.8	20	55340	3560	10	66536	2120	70	24.36	24.49	0.13	27
CA_48C-66A-66A	QPSK	20	55934	3619.4	1,49	20	55736	3599.6	10	66536	2120	10	66936	2160	60	24.47	24.48	0.01	28
CA_48D-66A	QPSK	20	55934	3619.4	1,49	20	55736	3599.6	20	55538	3579.8	10	66811	2147.5	70	24.45	24.47	0.02	29
CA_2A-2A-4A-5A	QPSK	20	18900	1880	1,49	20	1100	1980	20	2175	2132.5	10	2525	881.5	70	24.13	24.16	0.03	30
CA_2A-2A-4A-12A	QPSK	20	18900	1880	1,49	20	1100	1980	20	2175	2132.5	10	5095	737.5	70	24.17	24.25	0.08	31
CA_2A-2A-13A-66A	QPSK	20	18900	1880	1,49	20	1100	1980	10	5230	751	20	66786	2145	70	24.18	24.25	0.08	36
CA_2A-4A-4A-5A	QPSK	20	18900	1880	1,49	20	2175	2132.5	20	2175	2132.5	10	2525	881.5	70	24.08	24.23	0.16	41
CA_2A-4A-4A-12A	QPSK	20	18900	1880	1,49	20	2175	2132.5	20	2175	2132.5	10	5095	737.5	70	24.12	24.17	0.05	42
CA_2A-4A-5B	QPSK	20	18900	1880	1,49	20	2175	2132.5	10	2476	876.6	10	2575	886.5	60	24.08	24.25	0.17	43
CA_2A-4A-7A-7A	QPSK	20	18900	1880	1,49	20	2175	2132.5	20	2850	2630	20	3350	2680	80	24.21	24.22	0.01	44
CA_2A-4A-7C	QPSK	20	18900	1880	1,49	20	2175	2132.5	20	2950	2640	20	3148	2659.8	60	24.13	24.24	0.11	45
CA_2A-4A-12B	QPSK	20	18900	1880	1,49	20	2175	2132.5	5	5048	732.8	10	5120	740	55	24.27	24.10	-0.17	46
CA_2A-12A-66C	QPSK	20	18900	1880	1,49	10	5095	737.5	20	66787	2145.1	20	66985	2164.9	70	24.22	24.20	-0.02	53
CA_2A-13A-66A-66A	QPSK	20	18900	1880	1,49	10	5230	751	20	66536	2120	20	67236	2190	70	24.15	24.11	-0.04	54
CA_2A-13A-66B	QPSK	20	18900	1880	1,49	10	5230	751	10	66837	2150.1	10	66936	2160	50	24.10	24.22	0.13	55
CA_2A-13A-66C	QPSK	20	18900	1880	1,49	10	5230	751	20	66787	2145.1	20	66985	2164.9	70	24.13	24.13	0.00	56
CA_2A-48C-66A	QPSK	20	18900	1880	1,49	20	55934	3619.4	20	55736	3599.6	20	66786	2145	80	24.22	24.11	-0.11	59
CA_4A-4A-5A-30A	QPSK	20	20175	1732.5	1,49	20	2175	2132.5	10	2525	881.5	10	9820	2355	60	24.39	24.40	0.01	62
CA_4A-4A-12A-30A	QPSK	20	20175	1732.5	1,49	20	2175	2132.5	10	5095	737.5	10	9820	2355	60	24.40	24.43	0.03	63
CA_13A-48C-66A	QPSK	10	23230	782	1,24	20	55934	3619.4	20	55736	3599.6	20	66786	2145	70	24.31	24.40	0.09	67
CA_2A-4A-5A-30A	QPSK	20	18900	1880	1,49	20	2175	2132.5	10	2525	881.5	10	9820	2355	60	24.15	24.24	0.09	69
CA_2A-4A-7A-12A	QPSK	20	18900	1880	1,49	20	2175	2132.5	20	2850	2630	10	5095	737.5	70	24.19	24.16	-0.03	70
CA_2A-4A-12A-30A	QPSK	20	18900	1880	1,49	20	2175	2132.5	10	5095	737.5	10	9820	2355	60	24.11	24.14	0.03	71
CA_2A-7A-7A-66A	QPSK	20	18900	1880	1,49	20	2850	2630	20	3350	2680	10	9820	2355	70	24.08	24.22	0.14	73
CA_2A-7A-12A-66A	QPSK	20	18900	1880	1,49	20	2850	2630	10	5095	737.5	10	9820	2355	60	24.15	24.22	0.07	74

5CC DL CA Measured Results

E-UTRA CA configuration	CC1 (UL)					CC2 (DL)			CC3 (DL)			CC4 (DL)			CC5 (DL)			Aggregated BW	CA Inactive (dBm)	CA Active (dBm)	Delta	SCC #
	Mode	BW (MHz)	Channel	Freq (MHz)	RB,Offset	BW (MHz)	Channel	Freq (MHz)	BW (MHz)	Channel	Freq (MHz)	BW (MHz)	Channel	Freq (MHz)	BW (MHz)	Channel	Freq (MHz)					
CA_2A-48E	QPSK	20	900	18900	1,49	20	55934	3619.4	20	55736	3599.6	20	55538	3579.8	20	55340	3560	100	24.18	24.10	-0.08	1
CA_41C-41D	QPSK	20	40521	2583.1	1,0	20	40719	2602.9	20	39750	2506	20	39948	2525.8	20	40146	2545.6	100	24.2	24.16	-0.04	2
CA_25A-25A-41D	QPSK	5	8665	1992.5	1,49	5	8321	1958.1	20	40056	2536.5	20	40254	2556.4	20	40452	2576.2	70	24.08	24.06	-0.02	3
CA_48E-66A	QPSK	20	55934	3619.4	1,49	20	55736	3599.6	20	55538	3579.8	20	55340	3560	10	66811	2147.5	90	24.43	24.31	-0.12	4
CA_2A-2A-5A-66A-66A	QPSK	20	18900	1880	1,49	20	1100	1980	10	2525	881.5	20	66536	2120	20	67236	2190	90	24.19	24.12	-0.07	5
CA_2A-2A-5A-66B	QPSK	20	18900	1880	1,49	20	1100	1980	10	2525	881.5	10	66837	2150.1	10	66936	2160	70	24.10	24.03	-0.07	6
CA_2A-2A-5A-66C	QPSK	20	18900	1880	1,49	20	1100	1980	10	2525	881.5	20	66787	2145.1	20	66985	2164.9	90	24.20	24.11	-0.09	7
CA_2A-2A-12A-66A-66A	QPSK	20	18900	1880	1,49	20	1100	1980	10	5095	737.5	20	66536	2120	20	67236	2190	90	24.15	24.03	-0.12	8
CA_2A-5B-66B	QPSK	20	18900	1880	1,49	10	2476	876.6	10	2575	886.5	10	66787	2145.1	10	66985	2164.9	60	24.14	24.16	0.02	10
CA_2A-5B-66C	QPSK	20	18900	1880	1,49	10	2476	876.6	10	2575	886.5	20	66787	2145.1	20	66985	2164.9	80	24.20	24.10	-0.10	11
CA_2A-48D-66A	QPSK	20	18900	1880	1,49	20	55934	3619.4	20	55736	3599.6	20	55538	3579.8	20	66786	2145	100	24.25	24.05	-0.20	12
CA_2A-5B-66A-66A	QPSK	20	18900	1880	1,49	10	2476	876.6	10	2575	886.5	20	66536	2120	20	67236	2190	80	24.13	24.05	-0.08	13
CA_5B-30A-66A-66A	QPSK	10	20476	831.6	1,24	10	2575	886.5	10	9820	2355	20	66536	2120	20	67236	2190	70	25.01	25.10	0.09	14
CA_2A-2A-5A-30A-66A	QPSK	20	18900	1880	1,49	20	1100	1980	10	2525	881.5	10	9820	2355	20	66786	2145	80	24.11	24.14	0.03	15
CA_2A-2A-12A-30A-66A	QPSK	20	18700	1860	1,49	20	1100	1980	10	5095	737.5	10	9820	2355	20	66786	2145	80	24.13	24.12	-0.01	16
CA_2A-5A-30A-66A-66A	QPSK	20	18900	1880	1,49	10	2525	881.5	10	9820	2355	20	66536	2120	20	67236	2190	80	24.19	24.09	-0.10	18
CA_2A-5B-30A-66A	QPSK	20	18900	1880	1,49	10	2476	876.6	10	2575	886.5	10	9820	2355	20	66786	2145	70	24.15	24.05	-0.10	19
CA_2A-12A-30A-66A-66A	QPSK	20	18900	1880	1,49	10	5095	737.5	10	9820	2355	20	66536	2120	20	67236	2190	80	24.21	24.07	-0.14	20