

APPENDIX F: LTE DOWNLINK ONLY CARRIER AGGREGATION TEST REDUCTION METHODOLOGY

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA_2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table F-1 – Example of Exclusion Table for SISO Configurations

Index	BCC	Supported Channel Bandwidth (MHz)				Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3	CC4		
CC1	CA 2A	5, 10, 15, 20	5, 10, 15, 20				Yes
CC2	CA 2A-2A	5, 10, 15, 20	5, 10, 15, 20				Yes
CC3	CA 2A-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20			Yes
CC4	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC5	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC6	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC7	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC8	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC9	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC10	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC11	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC12	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC13	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC14	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC15	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC16	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC17	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC18	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC19	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC20	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC21	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC22	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC23	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC24	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC25	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC26	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC27	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC28	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC29	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC30	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC31	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC32	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC33	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC34	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC35	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC36	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC37	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC38	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC39	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC40	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC41	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC42	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC43	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC44	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC45	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC46	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC47	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC48	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC49	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC50	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC51	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC52	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC53	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC54	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC55	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC56	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC57	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC58	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC59	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC60	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC61	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC62	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC63	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC64	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC65	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC66	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC67	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC68	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC69	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC70	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC71	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC72	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC73	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC74	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC75	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC76	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC77	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC78	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC79	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC80	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC81	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC82	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC83	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC84	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC85	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC86	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC87	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC88	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC89	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC90	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC91	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC92	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC93	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC94	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC95	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC96	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC97	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC98	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC99	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes
CC100	CA 2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		Yes

Table F-2 – Example of Exclusion Table for 4x4 Downlink MIMO Configurations

Supported Channel Bandwidth (MHz)										Restriction	Completely Covered by Measurement Superset
Index	BCC	CC1	CC2	CC3	CC4	CC5	CC6	CC7	CC8		
CC1#M1	CA [2C]	5, 10, 15, 20	5, 10							No	
CC1#M2	CA [2A, 3A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M3	CA [2A, 12A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M4	CA [2A, 12A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M5	CA [2A, 14A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M6	CA [2A, 5A]	5, 10, 15, 20	5, 10							No	
CC1#M7	CA [2A, 12A]	5, 10, 15, 20	5, 10							No	
CC1#M8	CA [2A, 13A]	5, 10, 15, 20	5, 10							No	
CC1#M9	CA [2A, 13A]	5, 10, 15, 20	5, 10							No	
CC1#M10	CA [2A, 29A]	5, 10, 15, 20	5, 10							No	
CC1#M11	CA [2A, 29A]	5, 10, 15, 20	5, 10							No	
CC1#M12	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M13	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M14	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M15	CA [2A, 71A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M16	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M17	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M18	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M19	CA [2A, 66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M20	CA [66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M21	CA [66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M22	CA [66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC1#M23	CA [66A]	5, 10, 15, 20	5, 10, 15, 20							No	
CC2#M1	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M2	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M3	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M4	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M5	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M6	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M7	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M8	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M9	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M10	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M11	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M12	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M13	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M14	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M15	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M16	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M17	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M18	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M19	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M20	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M21	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M22	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M23	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M24	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M25	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M26	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M27	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M28	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M29	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M30	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M31	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M32	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M33	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M34	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M35	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M36	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M37	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M38	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M39	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M40	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M41	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M42	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M43	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M44	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M45	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M46	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M47	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M48	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M49	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M50	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M51	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M52	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M53	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M54	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M55	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M56	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M57	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M58	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M59	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M60	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M61	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M62	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M63	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M64	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M65	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M66	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M67	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M68	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M69	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M70	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M71	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M72	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M73	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M74	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M75	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M76	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M77	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M78	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M79	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M80	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M81	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M82	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M83	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M84	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M85	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M86	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M87	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M88	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M89	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M90	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M91	CA [2A, 2A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20						No	
CC2#M											

F.1 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the 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 with 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. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured 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.

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e., LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. All LTE bandwidth conducted powers needed for PCC uplink configuration selection can be found in Section 8.2 and appendix F. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, 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.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

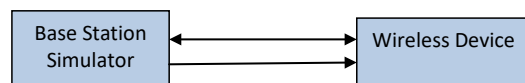


Figure F-1
DL CA Power Measurement Setup

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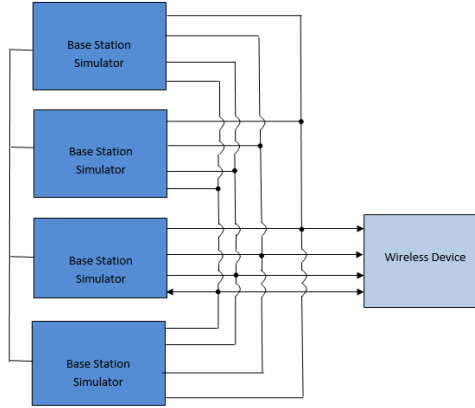


Figure F-2
DL CA with DL 4x4 MIMO Power Measurement Setup

F.2 Downlink Carrier Aggregation RF Conducted Powers

F.2.1 LTE Band 71 as PCC

Table F-3
Maximum Output Powers Ant 4

Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	PCC				PCC (DL) Freq. [MHz]	SCC 1				SCC 2				SCC 3				Power	
					Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel		SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA 2A-4A-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	LTE B2	20	900	1980	LTE B4	20	2175	2132.5	-	-	-	-	20.45	20.99
CA 4A-4A-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	20.57	20.99
CA 2A-2A-66A-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	LTE B2	20	900	1980	LTE B2	20	700	1940	LTE B66	20	66786	2145	20.67	20.99
CA 2A-66A-66A-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	LTE B2	20	900	1980	LTE B66	20	66786	2145	LTE B66	20	67236	2190	20.76	20.99
CA 2A-66C-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	LTE B2	20	900	1980	LTE B66	20	66786	2145	LTE B66	20	66984	2164.5	20.61	20.99

F.2.2 LTE Band 12 as PCC

Table F-4
Maximum Output Powers Ant 4

Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC 1				SCC 2				SCC 3				Power	
										SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA 2A-12A (1)	LTE B12	3	21185	714.5	16QAM	1	0	5185	744.5	LTE B2	20	900	1980	-	-	-	-	-	-	-	-	19.22	18.99
CA 4A-12A (1)	LTE B12	3	23095	707.5	16QAM	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	19.04	18.99
CA 4A-12A (2)	LTE B12	3	23185	714.5	16QAM	1	0	5185	744.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	19.18	18.99
CA 12A-25A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B25	20	8365	1962.5	-	-	-	-	-	-	-	-	19.04	18.99
CA 12A-66A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B66	20	66986	2037.5	-	-	-	-	-	-	-	-	19.05	18.99
CA 12A-66A (1)	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	19.05	18.99
CA 12A-66A (2)	LTE B12	3	23185	714.5	16QAM	1	0	5185	744.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	19.18	18.99
CA 2C-12A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B2	20	702	1940.2	-	-	-	-	18.94	18.99
CA 2A-2A-4A-12A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	18.81	18.99
CA 2A-2A-12B	LTE B12	5	23095	707.5	16QAM	1	12	5095	737.5	LTE B12	5	5047	732.7	LTE B2	20	900	1980	LTE B2	20	700	1940	18.75	18.99
CA 2A-4A-4A-12A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	18.70	18.99
CA 2A-4A-7A-12A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B4	20	2175	2132.5	LTE B7	20	3100	2895	18.66	18.99
CA 2A-4A-12A-30A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B4	20	2175	2132.5	LTE B30	10	9520	2105	18.72	18.99
CA 2A-4A-12B	LTE B12	5	23095	707.5	16QAM	1	12	5095	737.5	LTE B12	5	5047	732.7	LTE B2	20	900	1980	LTE B4	20	2175	2132.5	18.68	18.99
CA 2A-12A-66C	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B66	20	66786	2145	LTE B66	20	66984	2164.5	18.62	18.99
CA 4A-4A-12A-30A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B30	10	9520	2105	18.69	18.99
CA 4A-4A-12B	LTE B12	5	23095	707.5	16QAM	1	12	5095	737.5	LTE B12	5	5047	732.7	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	18.63	18.99
CA 2A-12A-66A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B66	20	66786	2145	LTE B66	20	66786	2145	18.54	18.99
CA 2A-2A-12A-30A-66A	LTE B12	20	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B2	20	700	1940	LTE B30	10	9520	2155	18.51	18.99
CA 2A-2A-12A-66A-66A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B2	20	700	1940	LTE B66	20	66786	2145	18.64	18.99
CA 2A-12A-30A-66A-66A	LTE B12	10	23095	707.5	16QAM	1	0	5095	737.5	LTE B2	20	900	1980	LTE B30	10	9520	2155	LTE B66	20	66786	2145	18.53	18.99

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F.2.3 LTE Band 13 as PCC

Table F-5
Maximum Output Powers Ant 4

Combination	PCC Band	PCC BW [MHz]	PCC				SCC 1				SCC 2				SCC 3				SCC 4				LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)			
			PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]						
CA 2A-2A-13A (1)	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	-	-	-	-	19.03	19.49				
CA 2A-4A-13A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	19.05	19.49				
CA 2A-1A-13A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4B	20	50965	5037.5	-	-	-	-	19.28	19.49				
CA 2A-1A-4A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4B	20	56640	3600	-	-	-	-	19.22	19.49				
CA 4A-4A-13A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	19.02	19.49				
CA 13A-4A-4A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	47030	5180	-	-	-	-	19.30	19.49				
CA 13A-6A-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	66786	2145	-	-	-	-	19.27	19.49				
CA 13A-6A-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	66786	2145	LTE B4B	20	56640	3600	-	-	-	-	19.25	19.49				
CA 2A-7A-7A-13A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B7	20	3100	2655	LTE B7	20	2650	2630	-	19.05	19.49			
CA 2A-7C-13A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B7	20	3100	2655	LTE B7	20	2650	2630	-	19.04	19.49			
CA 2A-13A-4C	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4B	20	50965	5037.5	LTE B4B	20	50467	5017.7	-	19.13	19.49			
CA 2A-13A-6B	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4B	15	66786	2145	LTE B4B	5	66786	2145	-	19.08	19.49			
CA 2A-13A-6C	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4B	20	66786	2145	LTE B4B	20	66884	2164.8	-	19.05	19.49			
CA 13A-4C-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	50467	5017.7	LTE B4B	20	66786	2145	-	19.27	19.49			
CA 13A-4C-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	56188	3644.8	LTE B4B	20	66786	2145	-	19.31	19.49			
CA 13A-6A-6B	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	66786	2145	LTE B4B	5	67188	2165.2	LTE B4B	15	67281	2195.1	-	19.09	19.49			
CA 13A-6A-6C	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	66786	2145	LTE B4B	20	67038	2102.2	LTE B4B	20	67236	2190	-	19.11	19.49			
CA 2A-2A-13A-6A-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4B	20	66786	2145	LTE B4B	20	67236	2190	19.15	19.49
CA 2A-13A-4D	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B2	20	900	1960	LTE B4B	20	50467	5037.5	LTE B4B	20	50863	5057.3	LTE B4B	20	19.18	19.49		
CA 13A-4D-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	50467	5037.5	LTE B4B	20	50863	5057.3	LTE B4B	20	19.25	19.49		
CA 13A-4E	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	50863	5057.3	LTE B4B	20	51061	5077.1	LTE B4B	20	19.08	19.49		
CA 13A-4D-6A	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	56188	3644.8	LTE B4B	20	66786	2145	LTE B4B	20	19.10	19.49		
CA 13A-4E	LTE B13	10	2320	760	10QAM	1	0	5230	751	LTE B4B	20	50965	5037.5	LTE B4B	20	56188	3644.8	LTE B4B	20	56884	3684.4	LTE B4B	20	19.42	19.49		

F.2.4 LTE Band 14 as PCC

Table F-6
Maximum Output Powers Ant 4

Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC				SCC 1				SCC 2				SCC 3				SCC 4				Power			
				PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA 2A-2A-14A-30A-6A	LTE B14	5	2330	730	10QAM	1	24	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B3B	10	9820	2335	LTE B3B	20	66786	2145	19.72	19.78
CA 2A-2A-14A-6A-6A	LTE B14	5	2330	730	10QAM	1	24	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B3B	20	66786	2145	LTE B3B	20	67236	2190	19.71	19.78
CA 2A-14A-30A-6A-6A	LTE B14	5	2330	730	10QAM	1	24	5330	763	LTE B2	20	900	1960	LTE B3B	10	9820	2335	LTE B3B	20	66786	2145	LTE B3B	20	67236	2190	19.77	19.78

F.2.5 LTE Band 5 as PCC

Table F-7
Maximum Output Powers Antenna 4

Combination	PCC Band	PCC BW [MHz]	PCC					SCC 1				SCC 2				SCC 3				SCC 4				LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)		
			PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]			SCC (DL) Channel	SCC (DL) Freq. [MHz]
CA 5A-5A (1)	LTE B5	5	20635	847.5	10QAM	1	0	2635	862.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	19.38	19.30
CA 5A-7A	LTE B5	5	20635	847.5	10QAM	1	0	2635	862.5	LTE B7	20	3100	2655	-	-	-	-	-	-	-	-	-	-	-	-	17.97	19.30
CA 5A-25A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B5B	20	5305	1982.5	-	-	-	-	-	-	-	-	-	-	-	-	19.13	19.30
CA 5A-41A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B41	20	40620	2993	-	-	-	-	-	-	-	-	-	-	-	-	19.37	19.14
CA 5A-6A (1)	LTE B5	5	20635	847.5	10QAM	1	0	2635	862.5	LTE B4B	20	50965	5037.5	-	-	-	-	-	-	-	-	-	-	-	-	17.92	19.30
CA 5A-45A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B4B	20	50965	5037.5	-	-	-	-	-	-	-	-	-	-	-	-	19.13	19.14
CA 5B (1)	LTE B5	5	20635	847.5	10QAM	1	0	2635	862.5	LTE B5	5	2506	888.6	-	-	-	-	-	-	-	-	-	-	-	-	17.94	19.30
CA 2A-5A-7A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B7	20	3100	2655	-	-	-	-	-	-	-	-	17.81	19.14
CA 2A-5A-4A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B4B	20	50965	5037.5	-	-	-	-	-	-	-	-	17.72	19.14
CA 2C-5A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	-	-	-	-	-	-	-	-	17.85	19.14
CA 5A-7A-7A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B7	20	3100	2655	LTE B7	20	2650	2630	-	-	-	-	-	-	-	-	17.86	19.14
CA 5A-4A-6A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B4B	20	50965	5037.5	LTE B4B	20	66786	2145	-	-	-	-	-	-	-	-	17.98	19.14
CA 5A-4C (1)	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B4B	20	50965	5037.5	LTE B4B	20	50467	5017.7	-	-	-	-	-	-	-	-	17.76	19.14
CA 2A-5A-4A-5A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	-	-	-	-	17.63	19.14
CA 2A-4A-4A-5A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	LTE B4	10	2650	2150	-	-	-	-	17.84	19.14
CA 2A-5A-30A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	LTE B3B	10	8620	2335	-	-	-	-	17.83	19.14
CA 2A-4A-5B	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	17.80	19.14
CA 2A-5A-7A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B7	20	3100	2655	LTE B7	20	2650	2630	-	-	-	-	17.82	19.14
CA 2A-5A-7C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B7	20	3100	2655	LTE B7	20	2650	2630	-	-	-	-	17.79	19.14
CA 2A-5A-4C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B4B	20	50965	5037.5	LTE B4B	20	50467	5017.7	-	-	-	-	17.77	19.14
CA 4A-4A-5A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B3B	10	8620	2335	-	-	-	-	17.81	19.14
CA 4A-4A-8B	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B5	10	2453	874.3	LTE B4	20	2175	2132.5	LTE B4	10	8620	2335	-	-	-	-	17.79	19.14
CA 5A-4A-6A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B5	5	2425	871.5	LTE B6B	20	66786	2145	LTE B6B	20	67236	2190	-	-	-	-	17.81	19.14
CA 5A-6A-6A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B7	20	3100	2655	LTE B6B	20	66786	2145	LTE B6B	20	67236	2190	-	-	-	-	17.78	19.14
CA 5A-6C-6A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B6B	20	50965	5037.5	LTE B6B	20	66786	2145	LTE B6B	20	67236	2190	-	-	-	-	17.85	19.14
CA 5A-4D (1)	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B4B	20	50965	5037.5	LTE B4B	20	66786	2145	LTE B6B	20	69063	6957.3	-	-	-	-	17.86	19.14
CA 5A-6A-6B	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B6B	20	66786	2145	LTE B6B	20	67187	2183	LTE B6B	20	67236	2190	-	-	-	-	17.76	19.14
CA 5A-6A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B6B	20	66786	2145	LTE B6B	20	67187	2183	LTE B6B	20	67236	2190	-	-	-	-	17.76	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B3B	10	8620	2335	LTE B6B	20	66786	2145	19.23	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-3A-36A	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B3B	10	8620	2335	LTE B5B	20	66786	2145	LTE B6B	20	67236	2190	19.01	19.14
CA 2A-5A-6C	LTE B5	5	20635	836.5	10QAM	1	12	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700											

F.2.9 LTE Band 30 as PCC

Table F-11
Maximum Output Powers Ant 2b

Combination	PCC Band	PCC BW [MHz]	PCC				SCC 1				SCC 2				SCC 3				SCC 4				LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)				
			PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]							
CA 2C-30A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B2	20	702	1940.2	-	-	-	-	-	-	-	13.98	14.19		
CA 2A-2A-30A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B2	20	700	1940	LTE B29	10	9715	722.5	-	-	-	-	13.84	14.19	
CA 2A-2A-30A-6A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B2	20	700	1940	LTE B29	10	9715	722.5	LTE B6	20	66786	2145	-	13.84	14.19
CA 2A-4A-12A-30A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B4	20	2175	2132.5	LTE B12	10	5095	737.5	-	-	-	-	13.80	14.19	
CA 2A-4A-30A-6A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B4	20	2175	2132.5	LTE B29	10	9715	722.5	-	-	-	-	13.83	14.19	
CA 2A-5A-30A-6A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B29	10	9715	722.5	LTE B60	20	66786	2145	-	-	-	-	13.82	14.19	
CA 4A-4A-30A-6A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B5	10	5095	681.5	-	-	-	-	13.76	14.19	
CA 4A-4A-12A-30A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	LTE B12	10	5095	737.5	-	-	-	-	13.79	14.19	
CA 2B-30A-66A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B29	10	9715	722.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	13.80	14.19	
CA 2A-2A-5A-30A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B2	20	700	1940	LTE B5	10	5095	737.5	-	-	-	-	13.85	14.19	
CA 2A-2A-12A-30A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	-	-	-	-	13.83	14.19	
CA 2A-2A-1A-30A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B2	20	700	1940	LTE B5	10	5095	737.5	-	-	-	-	13.85	14.19	
CA 2A-5B-30A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B5	10	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	13.80	14.19	
CA 2A-12A-30A-66A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B12	10	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	13.82	14.19	
CA 2A-14A-30A-66A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B2	20	800	1960	LTE B14	10	5330	763	LTE B66	20	66786	2145	-	-	-	-	13.83	14.19	
CA 4B-30A-66A-66A	LTE B30	10	27710	2310	10QAM	1	0	8620	2355	LTE B5	10	5330	881.5	LTE B5	5	2463	874.3	LTE B66	20	66786	2145	-	-	-	-	14.05	14.19	

F.2.10 LTE Band 7 as PCC

Table F-12
Maximum Output Powers Ant 1b

Combination	PCC Band	PCC BW [MHz]	PCC				Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC 1			SCC 2			SCC 3			SCC 4			LTE Tx Power with CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)			
			PCC (UL) Ch.	PCC (UL) Freq. [MHz]	PCC (UL) RB	PCC (UL) RB Offset						SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]					
CA 5A-7A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	-	-	-	14.19	13.95		
CA 7A-20A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B28	10	8905	876.5	-	-	-	-	-	-	-	-	-	-	-	14.12	13.95		
CA 7A-20A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B28	10	8905	876.5	-	-	-	-	-	-	-	-	-	-	-	14.17	13.95		
CA 7A-6A (1)	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B46	20	66665	5537.5	-	-	-	-	-	-	-	-	-	-	-	14.12	13.95		
CA 7B	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	5	3282	2673.2	-	-	-	-	-	-	-	-	-	-	-	13.82	13.95		
CA 2A-5A-7A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B2	20	800	1960	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	13.93	13.95	
CA 4A-4A-7A (1)	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	13.53	13.95	
CA 5A-7A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	-	-	-	13.56	13.95		
CA 7A-20A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	2650	2630	LTE B28	5	8905	876.5	-	-	-	-	-	-	-	-	13.57	13.95	
CA 7A-6A (1)	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	13.64	13.95	
CA 7C-6A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	13.76	13.95	
CA 2A-4A-7A-7A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	2850	2630	LTE B2	20	800	1960	LTE B4	20	2175	2132.5	-	-	-	-	-	13.78	13.95
CA 2A-4A-7A-12A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	800	1960	LTE B4	20	2175	2132.5	LTE B12	10	5095	737.5	-	-	-	-	-	13.79	13.95
CA 2A-7A-7A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	2850	2630	LTE B2	20	800	1960	LTE B5	10	2525	881.5	-	-	-	-	-	13.83	13.95
CA 2A-7A-7A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B2	20	800	1960	LTE B5	10	2525	881.5	-	-	-	-	-	13.86	13.95
CA 2A-7A-13A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	2850	2630	LTE B2	20	800	1960	LTE B13	10	5230	751	-	-	-	-	-	13.79	13.95
CA 2A-7C-13A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B2	20	800	1960	LTE B13	10	5230	751	-	-	-	-	-	13.80	13.95
CA 2A-7C-6A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B2	20	800	1960	LTE B66	20	66786	2145	-	-	-	-	-	13.81	13.95
CA 5A-7A-6A-66A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B5	10	2525	881.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	-	13.83	13.95
CA 7A-6A (1)	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	13.85	13.95	
CA 7C-6A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	13.82	13.95
CA 2A-2A-1A-7A-66A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B2	20	800	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	LTE B66	20	66786	2145	13.88	13.95	
CA 2A-7A-7A-66A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	2850	2630	LTE B2	20	800	1960	LTE B66	20	66786	2145	LTE B66	20	67236	2190	13.88	13.95	
CA 2A-7C-66A-66A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B5	10	5095	881.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	13.82	13.95	
CA 5A-7C-66A-66A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B5	10	5330	763	LTE B66	20	66786	2145	LTE B66	20	67236	2190	LTE B66	20	67236	2190	13.82	13.95	
CA 7A-6A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50665	5537.5	LTE B46	20	50665	5537.5	13.93	13.95	
CA 7C-6A	LTE B7	15	21375	2562.5	10QAM	1	0	3375	2602.5	LTE B7	20	3204	2665.4	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50665	5537.5	13.83	13.95	

F.2.11 LTE Band 41 as PCC

Table F-13
Maximum Output Powers Ant 1b

Combination	PCC Band	PCC BW [MHz]	PCC				SCC 1				SCC 2				SCC 3				SCC 4				LTE Tx Power with CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
			PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
CA SA-1A	LTE B41	5	41480	2080	16QAM	50	25	41480	2080	LTE B5	20	2525	881.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

F.2.12 LTE Band 48 as PCC

Table F-14
Maximum Output Powers Ant 3b

Combination	PCC Band	PCC BW [MHz]	PCC				Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC 1				SCC 2				SCC 3				SCC 4				LTE Tx Power with DL CA Enabled [dBm]	LTE Single Carrier Tx Power [dBm]
			PCC (UL) Ch.	PCC (UL) Freq. [MHz]	PCC (UL) RB	PCC (UL) RB Offset						SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]		
CA 5A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.84	14.85
CA 2A-13A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 2A-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 13A-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 13A-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 2A-48C-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 13A-48C-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 48A-48A-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 48A-48A-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 48C-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 48C-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 48C-48A-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 2A-48D-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 2A-48E	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 13A-48D-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 13A-48E	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85
CA 48E-48A	LTE B48	15	55765	3602.5	QPSK	36	0	55765	3602.5	LTE B48	15	55765	3602.5	LTE B13	10	5230	751	LTE B2	20	900	1900	-	-	-	-	-	-	14.83	14.85

F.3 DL CA with DL 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section F.1 were applied.

Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

F.3.1 LTE 4x4 MIMO DL Standalone Powers

Table F-15
Maximum Output Powers Ant 4

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
66	1.4	132665	1779.3	64QAM	1	2	14.19	14.13	13.8

Table F-16
Maximum Output Powers Ant 3b

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
48	15	55765	3602.5	QPSK	36	0	14.87	14.85	14.6

FCC ID: BCGA2757	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX F: Page 7 of 13

Table F-17
Maximum Output Powers Ant 2b

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
25	5	26665	1912.5	16QAM	1	12	14.16	13.96	13.2
30	10	27710	2310	16QAM	1	0	14.39	14.19	14.0

Table F-18
Maximum Output Powers Ant 1b

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
7	15	21375	2562.5	16QAM	1	0	14.11	13.95	13.7
41	5	41490	2680	64QAM	1	12	15.78	15.55	15.3

F.3.2 LTE Band 71 as PCC

Table F-19
Maximum Output Powers Ant 4

Combination	PCC Band	PCC								SCC 1				SCC 2				SCC 3				Power					
		PCC BW [MHz]	PCC [UL] Ch.	PCC [UL] Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA [2A][4A]-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	20.69	20.99
CA [4A][4A]-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	20.66	20.99
CA [2A][2A][2A]-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	20.63	20.99
CA [2A][66A]-66A-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2150	4x4	20.70	20.99
CA [2A][66C]-71A	LTE B71	15	133297	680.5	16QAM	1	74	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66964	2164.5	4x4	20.64	20.99

F.3.3 LTE Band 12 as PCC

Table F-20
Maximum Output Powers Ant 4

Combination	PCC Band	PCC BW [MHz]	PCC [UL] Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC 1				DL Ant. Config.	SCC 2				DL Ant. Config.	SCC 3				DL Ant. Config.	SCC 4				DL Ant. Config.	Power		
									SCC Band	SCC BW [MHz]	SCC [DL] Freq. [MHz]	SCC [DL] Ch.		SCC Band	SCC BW [MHz]	SCC [DL] Freq. [MHz]	SCC [DL] Ch.		SCC Band	SCC BW [MHz]	SCC [DL] Freq. [MHz]	SCC [DL] Ch.		SCC Band	SCC BW [MHz]	SCC [DL] Freq. [MHz]	SCC [DL] Ch.		LTE Tx Power with DL CA	LTE Single Carrier Tx Power (Enb-dBm)	
CA [2A][2A] (1)	LTE B12	8	23165	16QAM	1	0	5385	2x2	LTE B2	20	900	1960	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.52	18.99	
CA [4A][2A] (1)	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	18.51	18.99	
CA [4A][2A] (2)	LTE B12	10	23165	70.5	16QAM	1	0	5385	7x7.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	18.51	18.99	
CA [2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	18.57	18.99	
CA [2A][66A] (1)	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	18.57	18.99	
CA [2A][66A] (2)	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	18.48	18.99	
CA [2C][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	-	-	-	-	-	-	-	-	-	18.47	18.99
CA [2A][2A][4A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	18.46	18.99	
CA [2A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	-	-	-	-	-	-	-	-	-	18.47	18.99
CA [2A][4A][2A][4A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][4A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.37	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095	7x7.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	LTE B7	20	3100	2653	4x4	-	-	-	18.36	18.99	
CA [2A][4A][2A][2A]	LTE B12	10	23095	70.5	16QAM	1	0	5095																							

F.3.8 LTE Band 66 as PCC

Table F-25
Maximum Output Powers Ant 4

[illegible]

F.3.9 LTE Band 25 as PCC

Table F-26
Maximum Output Powers Ant 2b

Combination	PCB Band	PCB					SCC 1					SCC 2					SCC 3					SCC 4					Power							
		PCB BW [MHz]	PCB [1/3 Oct]	PCF [1/3 Freq. [MHz]	Mod.	PCF UL BW Offset	PCF UL RB Offset	PCF [1/3 Oct]	PCF [1/3 Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [1/3 Oct]	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [1/3 Oct]	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [1/3 Oct]	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band		SCC BW [MHz]	SCC [1/3 Oct]	SCC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with CA Enabled (dBm)	LTE Single Carrier Power (dBm)	
CA 25A-25A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B35	20	2525	881.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.10	13.10	
CA 25A-25A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B12	10	5095	797.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.34	13.34	
CA 25A-25A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B12	10	8865	876.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.34	13.34	
CA 25A-44A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B41	20	5095	2591	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.30	13.30	
CA 25A-44A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B48	20	50655	5337.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.30	13.30	
CA 25A-25A-26A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B25	20	8140	1940	4x4	LTE B25	5	8865	876.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	13.51	13.50
CA 25A-25A-26A	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B25	20	8140	1940	4x4	LTE B41	20	5095	2591	4x4	-	-	-	-	-	-	-	-	-	-	-	-	13.43	13.43
CA 25A-41C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B41	20	40020	2573.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.21	13.16	
CA 25A-41C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B41	20	40020	2573.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.21	13.16	
CA 25A-40C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B48	20	50655	5337.5	2x2	LTE B48	20	50655	5337.7	2x2	-	-	-	-	-	-	-	-	-	-	-	-	13.52	13.50
CA 25A-25A-41C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B25	20	8140	1940	4x4	LTE B41	20	40020	2573.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	13.43	13.30
CA 25A-40C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B48	20	50655	5337.5	2x2	LTE B48	20	50655	5337.7	2x2	-	-	-	-	-	-	-	-	-	-	-	-	13.52	13.50
CA 25A-25A-41C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B25	20	8140	1940	4x4	LTE B41	20	40020	2573.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	13.43	13.30
CA 25A-25A-41C	LTE E25	5	26665	7912.5	1/6QAM	1	12	8865	7992.5	4x4	LTE B25	20	8140	1940	4x4	LTE B41	20	40020	2573.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	13.40	13.36

F.3.10 LTE Band 30 as PCC

Table F-27
Maximum Output Powers Ant 2b

Combination	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [UL] Freq. [MHz]	PCC				SSC 1				SSC 2				SSC 3				SSC 4				Power			
					Mod.	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with CA (dBm)	LTE Single Carrier Tx Power (dBm)		
CA [2C] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	-	-	14.80	14.10				
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B20	10	9715	722.5	2x2	-	13.67	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B20	10	9715	722.5	2x2	-	13.67	14.10
CA [2A] [4A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	LTE B12	10	5095	772.5	2x2	-	13.68	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	2175	2132.5	4x4	LTE B09	10	9715	722.5	2x2	-	13.21	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	2175	2132.5	4x4	LTE B09	10	9715	722.5	2x2	-	13.21	14.10
CA [4A] [4A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B4	20	2175	2132.5	4x4	LTE B4	20	2175	2132.5	4x4	LTE B05	10	2525	881.5	2x2	-	13.76	14.10
CA [4A] [4A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B4	20	2175	2132.5	4x4	LTE B4	20	2175	2132.5	4x4	LTE B05	10	2525	881.5	2x2	-	13.76	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1960	4x4	LTE B12	10	5095	772.5	2x2	-	13.72	14.10
CA [2A] [2A-2] (3C)	LTE B30	10	27710	2310	16QAM	1	0	9820	2355	4x4	LTE B2	20	900	1960														

FCC ID: BCGA2757

SAR EVALUATION REPORT

Approved by:

Technical Manager

DUT Type:

APPENDIX F:
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FCC ID: BCGA2757	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		
		APPENDIX F: Page 11 of 13

F.4.1 Additional DL Carrier Aggregation RF Conducted Powers with Uplink Carrier Aggregation Enabled

F.4.1.1 LTE B48

Table F-31
Maximum Output Powers Ant 3b

Combination	PCC										SCC 1				SCC 2				SCC 3				Power						
	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [UL] Freq. [MHz]	Mod.	PCC UL # RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	Mod.	SCC UL # RB	SCC UL RB Offset	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	ULCA Tx Power with DL CA Enabled (dBm)	ULCA Tx Power (dBm)
CA 4B0	LTE B48	20	55340	3560	QPSK	100	0	55340	3560	LTE B48	20	55538	3579.8	QPSK	100	0	55538	3579.8	LTE B48	20	55736	3599.6	4x4	LTE B48	20	55934	3619.4	14.75	14.80
CA 4B5	LTE B48	20	55340	3560	QPSK	100	0	55340	3560	LTE B48	20	55538	3579.8	QPSK	100	0	55538	3579.8	LTE B48	20	55736	3599.6	4x4	LTE B48	20	55934	3619.4	14.75	14.80

F.4.1.2 LTE B41

Table F-32
Maximum Output Powers Ant 1b

Combination	PCC										SCC 1										SCC 2										SCC 3										Power	
	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [UL] Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	Mod.	SCC UL# RB	SCC UL RB Offset	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	ULCA Tx Power with DL CA Enabled (dBm)	ULCA Tx Power (dBm)								
CA 410-41A	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	LTE B41	20	40224	2553.4	200	LTE B41	20	40224	2553.4	200	LTE B41	20	40026	2533.6	14.80	14.80								
CA 410-41A	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	LTE B41	20	40224	2553.4	200	LTE B41	20	40224	2553.4	200	LTE B41	20	40026	2533.6	14.80	14.80								
CA 410-41C	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	LTE B41	20	40224	2553.4	200	LTE B41	20	40224	2553.4	200	LTE B41	20	40026	2533.6	14.80	14.80								
CA 410-41D	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	LTE B41	20	40224	2553.4	200	LTE B41	20	40224	2553.4	200	LTE B41	20	40026	2533.6	14.80	14.80								
CA 410-41E	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	LTE B41	20	40224	2553.4	200	LTE B41	20	40224	2553.4	200	LTE B41	20	40026	2533.6	14.80	14.80								
CA 410-41F	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	LTE B41	20	40224	2553.4	200	LTE B41	20	40224	2553.4	200	LTE B41	20	40026	2533.6	14.80	14.80								

F.4.2 Additional 4x4 MIMO DL Carrier Aggregation RF Conducted Powers with Uplink Carrier Aggregation Enabled

Note: 4x4 DL MIMO is only operating in the downlink. Uplink transmission is limited to a single output stream for each component carrier of ULCA.

F.4.2.1 LTE B48

Table F-33
Maximum Output Powers Ant 3b

Combination	PCC										SCC 1										SCC 2										SCC 3					Power	
	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [UL] Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	Mod.	SCC UL # RB	SCC UL RB Offset	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	ULCA Tx Power with DL CA Enabled (dBm)	ULCA Tx Power (dBm)					
CA 4B0	LTE B48	20	55340	3560	QPSK	100	0	55340	3560	4x4	LTE B48	20	55538	3579.8	QPSK	100	0	55538	3579.8	4x4	-	-	-	-	-	-	-	-	-	-	-	14.79	14.80				
CA 4B5	LTE B48	20	55340	3560	QPSK	100	0	55340	3560	4x4	LTE B48	20	55538	3579.8	QPSK	100	0	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	-	-	-	-	-	-	14.81	14.80				
CA 4B8	LTE B48	20	55340	3560	QPSK	100	0	55340	3560	4x4	LTE B48	20	55538	3579.8	QPSK	100	0	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	LTE B48	20	55736	3599.6	4x4	LTE B48	20	55934	3619.4	14.82	14.80	

F.4.2.2 LTE B41

Table F-34
Maximum Output Powers Ant 1b

Combination	PCC Band	PCC										SCC 1										SCC 2										SCC 3										Power	
		PCC BW [MHz]	PCC [UL] Ch.	PCC [DL] Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	Mod	SCC UL# RB	SCC UL RB Offset	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL] Ch.	SCC [UL] Freq. [MHz]	DL Ant. Config.	ULCA Tx Power with DL CA Enabled (dBm)	ULCA Tx Power (dBm)						
CA 410-41A	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	4x4	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40026	2533.6	4x4	14.80	14.80						
CA 410-41B	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	4x4	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40026	2533.6	4x4	14.80	14.80						
CA 410-41C	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	4x4	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40026	2533.6	4x4	14.87	14.80						
CA 410-41D	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	4x4	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40026	2533.6	4x4	14.80	14.80						
CA 410-41E	LTE B41	20	40620	2593	QPSK	1	0	40620	2593	4x4	LTE B41	20	40422	2573.2	QPSK	1	0	40422	2573.2	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40224	2553.4	4x4	LTE B41	20	40026	2533.6	4x4	14.80	14.80						

F.4.2.3 LTE B7

Table F-35
Maximum Output Powers Ant 1b

Combination	PCC										SCC 1										Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (UL) Ch.	SCC (UL) Freq. [MHz]	Mod	SCC UL # RB	SCC UL RB Offset	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	ULCA Tx Power with DL CA Enabled (dBm)	ULCA Tx Power (dBm)
CA 7C1	LTE B7	20	21350	2560	QPSK	1	0	3350	2680	4x4	LTE B7	20	21152	2540.2	QPSK	1	99	3152	2660.2	4x4	13.65	13.61

FCC ID: BCGA2757	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX F: Page 12 of 13

