

APPENDIX I: 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 I-1 – Example of Exclusion Table for SISO Configurations

Index		BCC	Assumed Channel Bandwidth (MHz)				Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3	CC4	CC5		
DEC-001	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-002	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-003	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-004	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-005	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-006	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-007	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-008	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-009	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-010	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-011	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-012	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-013	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-014	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-015	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-016	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-017	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-018	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-019	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-020	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-021	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-022	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-023	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-024	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-025	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-026	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-027	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-028	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-029	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-030	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-031	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-032	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-033	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-034	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-035	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-036	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-037	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-038	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-039	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-040	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-041	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-042	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-043	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-044	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-045	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-046	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-047	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-048	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-049	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-050	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-051	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-052	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-053	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-054	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-055	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-056	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-057	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-058	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-059	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-060	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-061	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-062	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-063	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-064	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-065	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-066	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-067	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-068	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-069	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-070	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-071	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-072	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-073	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-074	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-075	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-076	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-077	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-078	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-079	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-080	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-081	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-082	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-083	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-084	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-085	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-086	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-087	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-088	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-089	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-090	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-091	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-092	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-093	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-094	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-095	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-096	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-097	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-098	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-099	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-100	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-101	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-102	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-103	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-104	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-105	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-106	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-107	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-108	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-109	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-110	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-111	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-112	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-113	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-114	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-115	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-116	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-117	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-118	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-119	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-120	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-121	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-122	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-123	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-124	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-125	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-126	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-127	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-128	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-129	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-130	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-131	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-132	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-133	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-134	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-135	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-136	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-137	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-138	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-139	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-140	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-141	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-142	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-143	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-144	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-145	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-146	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-147	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-148	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-149	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-150	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-151	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-152	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-153	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-154	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-155	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-156	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-157	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-158	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-159	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-160	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-161	CA [2A]	5, 10, 15, 20	5, 10, 15, 20				No	
DEC-162	CA [2A]	5, 10, 15, 20	5,					

only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. 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.

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 the RF Conducted Powers Section and LTE/NR Lower Bandwidth RF Conducted Power Appendix. 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.

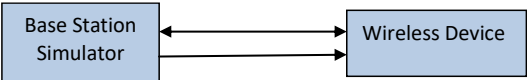


Figure I-1
DL CA Power Measurement Setup

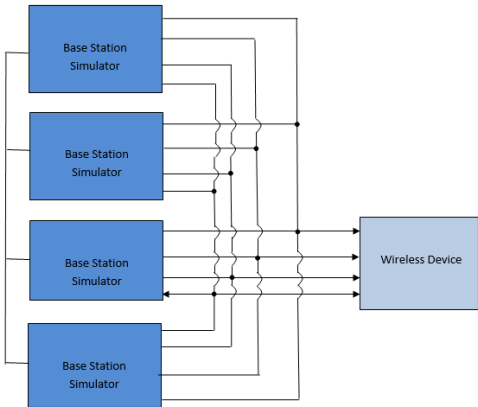


Figure I-2
DL CA with DL 4x4 MIMO Power Measurement Setup

FCC ID: A3LSMS928B	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Handset		APPENDIX I: Page 2 of 5

I.2 Downlink Carrier Aggregation RF Conducted Powers

I.2.1 LTE Band 12 as PCC

Table I-3
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				Power	
	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 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	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	-	-	-	-	24.01	23.98
CA 4A-12A (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	24.02	23.98
CA 4A-12A (2)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	24.02	23.98
CA 12A-25A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B25	20	8365	1962.5	-	-	-	-	23.92	23.98
CA 12A-66A (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	24.03	23.98
CA 12A-66A (2)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	24.03	23.98
CA 4A-4A-12A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	23.95	23.98
CA 12A-66A-66A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.77	23.98

I.2.2 LTE Band 13 as PCC

Table I-4
Maximum Output Powers

	PCC									SCC 1				SCC 2				Power	
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 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-13A (2)	LTE B13	5	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	-	-	-	-	24.64	24.67
CA_2A-4A-13A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	24.15	24.22

I.2.3 LTE Band 26 as PCC

Table I-5
Maximum Output Powers

	PCC									SCC 1				SCC 2				Power	
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 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-26A	LTE B26	15	26865	831.5	QPSK	1	0	8865	876.5	LTE B2	20	900	1960	-	-	-	-	23.91	23.92
CA 26A-41A	LTE B26	15	26865	831.5	QPSK	1	0	8865	876.5	LTE B41	20	40620	2593	-	-	-	-	23.75	23.92
CA 26A-41C	LTE B26	15	26865	831.5	QPSK	1	0	8865	876.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	23.95	23.92

I.2.4 LTE Band 66 as PCC

Table I-6
Maximum Output Powers

Combination	PCC								SCC 1				SCC 2				Power		
	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 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-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B2	20	900	1960	-	-	-	-	23.42	23.36
CA 12A-66A (1)	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B12	10	5095	737.5	-	-	-	-	23.43	23.36
CA 12A-66A (2)	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B12	10	5095	737.5	-	-	-	-	23.43	23.36
CA 66B	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B66	10	66585	2124.9	-	-	-	-	23.38	23.36
CA 2A-5A-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B2	20	900	1960	LTE B5	10	2525	881.5	23.43	23.36
CA 2A-66A-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B66	20	67236	2190	LTE B2	20	900	1960	23.37	23.36
CA 5A-66A-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B66	20	67236	2190	LTE B5	10	2525	881.5	23.42	23.36
CA 5A-66C	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B66	20	66630	2129.4	LTE B5	10	2525	881.5	23.40	23.36
CA 12A-66A-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	LTE B66	20	67236	2190	LTE B12	10	5095	737.5	23.41	23.36

I.2.5 LTE Band 25 as PCC

Table I-7
Maximum Output Powers

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) Channel	PCC (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 12A-25A	LTE B25	10	26365	1882.5	QPSK	1	49	8365	1962.5	LTE B12	10	5095	737.5	23.57	23.61

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I.2.6 LTE Band 41 as PCC

Table I-8
Maximum Output Powers

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				SCC 4				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]	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 41A-41A (1)	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	-	-	-	-	24.65	24.73
CA 41A-41C	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	24.65	24.73
CA 41C-41A	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	40911	2622.1	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	24.73	24.73
CA 41A-41D	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	40146	2545.6	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	24.73	24.73
CA 41D-41A	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	40911	2622.1	LTE B41	20	40713	2602.3	LTE B41	20	39750	2506	-	-	-	-	24.65	24.73
CA 41C-41C	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	40911	2622.1	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	24.67	24.73
CA 41E	LTE B41	20	41055	2636.5	QPSK	1	50	41055	2636.5	LTE B41	20	40987	2616.7	LTE B41	20	40959	2598.9	LTE B41	20	40481	2577.1	-	-	-	-	24.68	24.69
CA 41C-41D	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	40911	2622.1	LTE B41	20	40146	2545.6	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.72	24.73
CA 41D-41C	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	LTE B41	20	40911	2622.1	LTE B41	20	40713	2602.3	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.74	24.73

I.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 I.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.

I.3.1 LTE 4x4 MIMO DL Standalone Powers

Table I-9
Maximum Output Powers

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	10	132022	1715	QPSK	1	49	23.26	23.36	23.0
41	10	41055	2636.5	QPSK	1	25	24.65	24.73	24.0

I.3.2 LTE Band 12 as PCC

Table I-10
Maximum Output Powers

Combination	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 1				DL Ant. Config.	SCC 2				DL Ant. Config.	Power	
											SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]		SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]		LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA [4A]-12A (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	24.00	23.98
CA [4A]-12A (2)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	24.00	23.98
CA 12A-[66A] (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.01	23.98
CA 12A-[66A] (2)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.01	23.98
CA [4A]-4A-12A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	23.94	23.98
CA [4A]-[4A]-12A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	24.05	23.98
CA 12A-[66A]-66A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.94	23.98
CA 12A-[66A]-[66A]	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.90	23.98

I.3.3 LTE Band 13 as PCC

Table I-11
Maximum Output Powers

FCC ID: A3LSMS928B	SAR EVALUATION REPORT	Approved by: Technical Manager
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Combination	PCC										SCC 1					SCC 2					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 [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]-13A	LTE B13	10	23230	782	QPSK	1	0	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	24.13	24.22

I.3.4 LTE Band 26 as PCC

Table I-12
Maximum Output Powers

Combination	PCC										SCC 1				SCC 2				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 [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_26A-[41A]	LTE B26	15	26865	831.5	QPSK	1	0	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	23.98	23.92
CA_26A-[41C]	LTE B26	15	26865	831.5	QPSK	1	0	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	23.96	23.92

I.3.5 LTE Band 66 as PCC

Table I-13
Maximum Output Powers

Combination	PCC Band	PCC										SCC 1					SCC 2					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.	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA 2A-[66A]	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B2	20	900	1960	2x2	-	-	-	-	-	23.29	23.36	
CA 12A-[66A] (1)	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B12	10	5095	737.5	2x2	-	-	-	-	-	23.32	23.36	
CA 12A-[66A] (2)	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B12	10	5095	737.5	2x2	-	-	-	-	-	23.32	23.36	
CA [66B]	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	10	66585	2124.9	4x4	-	-	-	-	-	23.35	23.36	
CA 2A-5A-[66A]	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	23.30	23.36	
CA 2A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	2x2	LTE B2	20	900	1960	2x2	23.37	23.36	
CA 2A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	2x2	LTE B2	20	900	1960	2x2	23.32	23.36	
CA 2A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	4x4	LTE B2	20	900	1960	2x2	23.30	23.36	
CA 5A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	2x2	LTE B5	10	2525	881.5	2x2	23.38	23.36	
CA 5A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	2x2	LTE B66	20	67236	2190	4x4	LTE B5	10	2525	881.5	2x2	23.26	23.36	
CA 5A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	4x4	LTE B5	10	2525	881.5	2x2	23.37	23.36	
CA 5A-[66C]	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	66630	2129.4	4x4	LTE B5	10	2525	881.5	2x2	23.35	23.36	
CA 12A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	2x2	LTE B12	10	5095	737.5	2x2	23.37	23.36	
CA 12A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	2x2	LTE B66	20	67236	2190	4x4	LTE B12	10	5095	737.5	2x2	23.39	23.36	
CA 12A-[66A]-66A	LTE B66	10	132022	1715	QPSK	1	49	66486	2115	4x4	LTE B66	20	67236	2190	4x4	LTE B12	10	5095	737.5	2x2	23.28	23.36	

I.3.6 LTE Band 41 as PCC

Table I-14
Maximum Output Powers

Combination	PCC Band	PCC BW [MHz]	PCC [UL] Freq. [MHz]	Mod.	PCC					SCC 1				SCC 2				SCC 3				SCC 4				Power				
					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.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with DL CA Enabled (dBm)
CA_41A-[41A] (1)	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	-	-	-	-	24.68	24.73	
CA_41A-[41A] (2)	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	-	-	24.66	24.73	
CA_41A-[41A] (3)	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	-	-	24.65	24.73	
CA_41A-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	24.65	24.73
CA_41C-[41A]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	2x2	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	24.64	24.73
CA_41A-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	2x2	LTE B41	20	40911	2622.3	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	24.67	24.73
CA_41C-[41A]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	24.65	24.73
CA_41A-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	24.66	24.73
CA_41C-[41A]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	24.68	24.73
CA_41A-[41D]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40146	2545.0	2x2	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	24.69	24.73	
CA_41D-[41A]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	2x2	LTE B41	20	40911	2622.3	2x2	LTE B41	20	40911	2622.3	2x2	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41A-[41D]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	2x2	LTE B41	20	40146	2545.0	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.64	24.73	
CA_41D-[41A]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	24.67	24.73
CA_41A-[41D]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40146	2545.0	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41D-[41A]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	24.72	24.73
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	2x2	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	24.64	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.66	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911	2622.3	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	24.68	24.73	
CA_41C-[41C]	LTE B41	10	41055	2636.5	QPSK	1	25	41055	2636.5	4x4	LTE B41	20	40911</																	