

LTE Downlink Carrier Aggregation configurations

1. DL Inter Band(2CC)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Bandwidth | | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|-----------|-------|-------|--------|--------|--------|-------------------|
| | | | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz | |
| 2A-4A | (0) | Band 2 | Yes | Yes | Yes | Yes | Yes | Yes | 40 |
| | | Band 4 | | | Yes | Yes | Yes | Yes | |
| | (1) | Band 2 | | | Yes | Yes | | | 20 |
| | | Band 4 | | | Yes | Yes | | | |
| (2) | Band 2 | | | Yes | Yes | Yes | Yes | 40 | |
| | Band 4 | | | Yes | Yes | Yes | Yes | | |
| 2A-5A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 30 |
| Band 5 | | | | Yes | Yes | | | | |
| 2A-7A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 7 | | | Yes | Yes | Yes | Yes | |
| 2A-13A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 30 |
| | | Band 13 | | | Yes | Yes | | | |
| | (1) | Band 2 | | | Yes | Yes | | | 20 |
| | | Band 13 | | | Yes | Yes | | | |
| | (2) | Band 2 | | | Yes | Yes | Yes | Yes | 30 |
| | | Band 13 | | | Yes | Yes | | | |
| 2A-46A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 46 | | | | | | Yes | |
| 2A-48A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 2A-66A | (0) | Band 2 | Yes | Yes | Yes | Yes | Yes | Yes | 40 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| | (1) | Band 2 | | | Yes | Yes | | | 20 |
| | | Band 66 | | | Yes | Yes | | | |
| | (2) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 4A-5A | (0) | Band 4 | | | Yes | Yes | | | 20 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 5 | | | Yes | Yes | | | |
| 4A-13A | (0) | Band 4 | | | Yes | Yes | Yes | Yes | 30 |
| | | Band 13 | | | Yes | Yes | | | |
| | | Band 4 | | | Yes | Yes | | | |
| 4A-46A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 46 | | | | | | Yes | |
| 4A-48A | (0) | Band 4 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 5A-46A | (0) | Band 5 | | | Yes | Yes | | | 30 |
| | | Band 46 | | | | | | Yes | |
| | | Band 5 | | | Yes | Yes | | | |
| 5A-48A | (0) | Band 46 | | | Yes | Yes | | Yes | 30 |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 5A-66A | (0) | Band 5 | | | Yes | Yes | | | 30 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 7A-13A | (0) | Band 7 | | | Yes | Yes | Yes | Yes | 30 |
| | | Band 13 | | | Yes | Yes | | | |
| 7A-66A | (0) | Band 7 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 13A-46A | (0) | Band 13 | | | Yes | Yes | | | 30 |
| | | Band 46 | | | | | | Yes | |
| 13A-48A | (0) | Band 13 | | | Yes | Yes | | | 30 |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 13A-66A | (0) | Band 13 | | | Yes | Yes | Yes | Yes | 30 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 46A-66A | (0) | Band 46 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 48A-66A | (0) | Band 48 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |

2. DL Inter Band(3CC)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Bandwidth | | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|-------------|-------|---------------|--------|--------|--------|-------------------|
| | | | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz | |
| 2A-2A-4A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 60 |
| | | Band 4 | | | Yes | Yes | Yes | Yes | |
| 2A-2A-5A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 50 |
| | | Band 5 | | | Yes | Yes | | | |
| 2A-2A-13A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 50 |
| | | Band 13 | | | | Yes | | | |
| 2A-2A-46A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 60 |
| | | Band 46 | | | | | | Yes | |
| 2A-2A-66A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 60 |
| | | Band 66 | | | | | Yes | Yes | |
| 2A-4A-4A | (0) | Band 2 | 4A-4A BCS 0 | | | | | | 60 |
| | | Band 4 | | | Yes | Yes | Yes | Yes | |
| 2A-4A-5A | (0) | Band 4 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 5 | | | Yes | Yes | | | |
| 2A-4A-13A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 13 | | | | Yes | | | |
| 2A-5A-5A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 5 | | | 5A-5A BCS 0 | | | | |
| 2A-5B | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 40 |
| | | Band 5 | | | 5B BCS 0 | | | | |
| 2A-5A-46A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 46 | | | Yes | Yes | | Yes | |
| 2A-5A-48A | (0) | Band 2 | Yes | Yes | Yes | Yes | Yes | Yes | 50 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 2A-5A-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-7A-7A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 7 | | | 7A-7A BCS 0 | | | | |
| 2A-7C | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 7 | | | 7C BCS 0 | | | | |
| 2A-7A-13A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 7 | | | Yes | Yes | Yes | Yes | |
| | | Band 13 | | | Yes | Yes | | | |
| 2A-7A-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 7 | | | Yes | Yes | Yes | Yes | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-13A-46A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 13 | | | Yes | Yes | | | |
| | | Band 46 | | | | | | Yes | |
| 2A-13A-48A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 13 | | | Yes | Yes | Yes | Yes | |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 2A-13A-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 13 | | | Yes | Yes | | | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-46A-46A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 46 | | | 46A-46A BCS 0 | | | | |
| 2A-46C | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 46 | | | 46C BCS 0 | | | | |
| 2A-46A-48A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 46 | | | Yes | Yes | Yes | Yes | |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |
| 2A-46A-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 46 | | | | | | Yes | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-48A-48A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 48 | | | Yes | Yes | Yes | Yes | |

3. DL Inter Band(4CC)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Bandwidth | | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|-------------|-------|---------------|--------|--------|--------|-------------------|
| | | | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz | |
| 2A-2A-4A-4A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 80 |
| | | Band 4 | | | 4A-4A BCS 0 | | | | |
| 2A-2A-4A-5A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 70 |
| | | Band 4 | | | Yes | Yes | Yes | Yes | |
| | | Band 5 | | | Yes | Yes | | | |
| 2A-2A-5B | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 60 |
| | | Band 5 | | | 5B BCS 0 | | | | |
| 2A-2A-5A-66A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 70 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-2A-13A-66A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 70 |
| | | Band 13 | | | Yes | Yes | | | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-2A-46C | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 80 |
| | | Band 46 | | | 46C BCS 0 | | | | |
| 2A-2A-66A-66A | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 80 |
| | | Band 66 | | | 66A-66A BCS 0 | | | | |
| 2A-2A-66B | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 60 |
| | | Band 66 | | | 66B BCS 0 | | | | |
| 2A-2A-66C | (0) | Band 2 | 2A-2A BCS 0 | | | | | | 80 |
| | | Band 66 | | | 66C BCS 0 | | | | |
| 2A-4A-4A-5A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 4 | | | 4A-4A BCS 0 | | | | |
| | | Band 5 | | | Yes | Yes | | | |
| 2A-4A-5B | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 4 | | | Yes | Yes | Yes | Yes | |
| | | Band 5 | | | 5B BCS 0 | | | | |
| 2A-5B-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 60 |
| | | Band 5 | | | 5B BCS 0 | | | | |
| | | Band 66 | | | Yes | Yes | Yes | Yes | |
| 2A-5A-46C | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 5 | | | Yes | Yes | | | |
| 2A-5A-46A-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 46 | | | | | | Yes | |
| 2A-5A-48C | (0) | Band 2 | Yes | Yes | Yes | Yes | Yes | Yes | 70 |
| | | Band 5 | | | Yes | Yes | Yes | Yes | |
| | | Band 48 | | | 48C BCS 0 | | | | |
| 2A-5A-48A-66A | (0) | Band 2 | Yes | Yes | Yes | Yes | Yes | Yes | 70 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 48 | Yes | Yes | Yes | Yes | Yes | Yes | |
| | | Band 66 | Yes | Yes | Yes | Yes | Yes | Yes | |
| 2A-5A-66A-66A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 66 | Yes | Yes | Yes | Yes | Yes | Yes | |
| 2A-5A-66B | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 50 |
| | | Band 5 | | | Yes | Yes | | | |
| | | Band 66 | | | 66B BCS 0 | | | | |
| 2A-5A-66C | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 5 | | | Yes | Yes | | | |
| 2A-7A-7A-13A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 7 | | | 7A-7A BCS 0 | | | | |
| | | Band 13 | | | Yes | Yes | | | |
| 2A-7C-13A | (0) | Band 2 | | | Yes | Yes | Yes | Yes | 70 |
| | | Band 7 | | | 7C BCS 0 | | | | |
| 2A-7A-7A-66A | (0) | | | | | | | | |

LTE Downlink Carrier Aggregation configurations (Continued)

2. DL Inter Band(3CC)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Bandwidth | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|-----------|-------|---------------|--------|--------|-------------------|
| | | | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | |
| 2A-48C | (0) | Band 2 | | | Yes | Yes | Yes | 60 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 2A-48A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 60 |
| | | Band 48 | | | Yes | Yes | Yes | |
| 2A-66A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 2A-66B | (0) | Band 2 | | | Yes | Yes | Yes | 40 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 2A-66C | (0) | Band 2 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 4A-4A-5A | (0) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 5 | | | 4A-4A BCS 0 | | | |
| 4A-4A-13A | (0) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 13 | | | 4A-4A BCS 0 | | | |
| 4A-5B | (0) | Band 4 | | | Yes | Yes | Yes | 40 |
| | | Band 5 | | | 5B BCS 0 | | | |
| 4A-46A-46A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 46 | | | 46A-46A BCS 0 | | | |
| 4A-46C | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 46 | | | 46C BCS 0 | | | |
| 4A-48C | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 5A-5A-66A | (0) | Band 5 | | | Yes | Yes | Yes | 40 |
| | | Band 66 | | | 5A-5A BCS 0 | | | |
| 5B-46A | (0) | Band 5 | | | Yes | Yes | | 40 |
| | | Band 66 | | | 5B BCS 0 | | | |
| 5B-66A | (0) | Band 5 | | | Yes | Yes | Yes | 40 |
| | | Band 66 | | | 5B BCS 0 | | | |
| 5A-46C | (1) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 46 | | | 46C BCS 0 | | | |
| 5A-46A-66A | (0) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 66 | | | Yes | Yes | Yes | |
| 5A-48C | (0) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 5A-48A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | Yes | Yes | Yes | |
| 5A-66A-66A | (0) | Band 5 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 5A-66B | (0) | Band 5 | | | Yes | Yes | | 30 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 5A-66C | (0) | Band 5 | | | Yes | Yes | | 50 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 7A-7A-13A | (0) | Band 7 | | | Yes | Yes | | 50 |
| | | Band 13 | | | 7A-7A BCS 1 | | | |
| 7C-13A | (0) | Band 7 | | | Yes | Yes | | 50 |
| | | Band 13 | | | 7C BCS 1 | | | |
| 7A-7A-66A | (0) | Band 7 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 7A-7A BCS 1 | | | |
| 7C-66A | (0) | Band 7 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | 7C BCS 1 | | | |
| 13A-46C | (0) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 46 | | | 46C BCS 0 | | | |
| 13A-46A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | Yes | Yes | Yes | |
| 13A-48C | (0) | Band 4 | | | Yes | Yes | | 50 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 13A-48A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | Yes | Yes | Yes | |
| 13A-66A-66A | (0) | Band 13 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 13A-66B | (0) | Band 13 | | | Yes | Yes | | 30 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 13A-66C | (0) | Band 13 | | | Yes | Yes | | 50 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 46A-46A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 46A-46A BCS 0 | | | |
| 46A-48A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | Yes | Yes | Yes | |
| 46C-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 46C BCS 0 | | | |
| 46A-66A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 48A-48A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 48A-48A BCS 0 | | | |
| 48A-66A-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 48A-66B | (0) | Band 4 | | | Yes | Yes | Yes | 40 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 48A-66C | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 48C-66A | (0) | Band 4 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 48C BCS 0 | | | |

3. DL Inter Band(4CC)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Bandwidth | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|-----------|-------|---------------|--------|--------|-------------------|
| | | | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | |
| 2A-7C-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 7 | | | 7C BCS 1 | | | |
| 2A-13A-46C | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 13 | | | Yes | Yes | Yes | |
| 2A-13A-46C | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 46 | | | 46C BCS 0 | | | |
| 2A-13A-46A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 13 | | | Yes | Yes | Yes | |
| 2A-13A-48C | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 2A-13A-48A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 13 | | | Yes | Yes | Yes | |
| 2A-13A-66A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 2A-13A-66B | (0) | Band 2 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 2A-13A-66C | (0) | Band 2 | | | Yes | Yes | Yes | 70 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 2A-46A-46C | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 46 | | | 46A-46C BCS 0 | | | |
| 2A-46D | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 46 | | | 46D BCS 0 | | | |
| 2A-46C-48A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | 46C BCS 0 | | | |
| 2A-46C-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 66 | | | 46C BCS 0 | | | |
| 2A-46A-48C | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 2A-46A-48A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | Yes | Yes | Yes | |
| 2A-46A-66A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 46 | | | 66A-66A BCS 0 | | | |
| 2A-48A-48C | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | 48A-48C BCS 0 | | | |
| 2A-48D | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | 48D BCS 0 | | | |
| 2A-48A-48A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | 48A-48A BCS 0 | | | |
| 2A-48C-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 66 | | | 48C BCS 0 | | | |
| 2A-66A-66A-66A | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 2A-66A-66B | (0) | Band 2 | | | Yes | Yes | Yes | 80 |
| | | Band 66 | | | 66A-66B BCS 0 | | | |
| 4A-4A-5B | (0) | Band 4 | | | Yes | Yes | | 60 |
| | | Band 5 | | | 5B BCS 0 | | | |
| 4A-46A-46C | (0) | Band 4 | | | Yes | Yes | Yes | 80 |
| | | Band 46 | | | 46A-46C BCS 0 | | | |
| 4A-46D | (0) | Band 4 | | | Yes | Yes | Yes | 80 |
| | | Band 46 | | | 46D BCS 0 | | | |
| 4A-48D | (0) | Band 4 | | | Yes | Yes | Yes | 80 |
| | | Band 48 | | | 48D BCS 0 | | | |
| 5A-5A-66A-66A | (0) | Band 5 | | | Yes | Yes | Yes | 60 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 5A-5A-66B | (0) | Band 5 | | | Yes | Yes | | 40 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 5A-5A-66C | (0) | Band 5 | | | Yes | Yes | | 60 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 5B-46C | (0) | Band 5 | | | Yes | Yes | | 60 |
| | | Band 46 | | | 5B BCS 0 | | | |
| 5B-66A-66A | (0) | Band 5 | | | Yes | Yes | | 60 |
| | | Band 66 | | | 66A-66A BCS 0 | | | |
| 5B-66B | (0) | Band 5 | | | Yes | Yes | | 40 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 5B-66C | (0) | Band 5 | | | Yes | Yes | | 60 |
| | | Band 66 | | | 66C BCS 0 | | | |
| 5A-46D | (0) | Band 5 | | | Yes | Yes | | 70 |
| | | Band 46 | | | 46D BCS 0 | | | |
| 5A-46C-66A | (0) | Band 5 | | | Yes | Yes | | 70 |
| | | Band 66 | | | 46C BCS 0 | | | |
| 5A-46A-66A-66A | (0) | Band 5 | | | Yes | Yes | Yes | 70 |
| | | Band 46 | | | 66A-66A BCS 0 | | | |

3. DL Inter Band(4CC)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Bandwidth | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|-----------|-------|-----------|--------|--------|-------------------|
| | | | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | |
| 5A-48D | (0) | Band 5 | | | Yes | Yes | | 70 |
| | | Band 48 | | | 48D BCS 0 | | | |
| 5A-48C-66A | (0) | Band 5 | | | Yes | Yes | | 70 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 13A-46D | (0) | Band 13 | | | Yes | Yes | Yes | 70 |
| | | Band 46 | | | 46D BCS 0 | | | |
| 13A-46C-66A | (0) | Band 13 | | | Yes | Yes | Yes | 70 |
| | | Band 46 | | | 46C BCS 0 | | | |
| 13A-48D | (0) | Band 13 | | | Yes | Yes | | 70 |
| | | Band 48 | | | 48D BCS 0 | | | |
| 13A-48C-66A | (0) | Band 13 | | | Yes | Yes | Yes | 90 |
| | | Band 48 | | | 48C BCS 0 | | | |
| 13A-48A-66B | (0) | Band 13 | | | Yes | Yes | Yes | 50 |
| | | Band 66 | | | 66B BCS 0 | | | |
| 13A-48A-66C | (0) | Band 13 | | | Yes | Yes | Yes | 70 |
| | | Band 48 | | | 48C BCS 0 | | | |

LTE Downlink Carrier Aggregation configurations (Continued)

4 DL Intra Band(non-contiguous)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Allowed Channel BW Per Carrier (MHz) | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|--------------------------------------|---------------|---------------|-------------|-------------------|
| | | | 1st Carrier | 2nd Carrier | 3rd Carrier | 4th Carrier | |
| 2A-2A | (0) | Band 2 | 5, 10, 15, 20 | 5, 10, 15, 20 | | | 40 |
| 4A-4A | (0) | Band 4 | 5, 10, 15, 20 | 5, 10, 15, 20 | | | 40 |
| | (1) | Band 4 | 5, 10 | 5, 10 | | | 20 |
| 5A-5A | (0) | Band 5 | 5, 10 | 5, 10 | | | 20 |
| | (1) | Band 5 | 3 | 5 | | | 8 |
| 7A-7A | (0) | Band 7 | 5 | 15 | | | 40 |
| | | | 10 | 10, 15 | | | |
| | | | 15 | 15, 20 | | | |
| | | | 20 | 20 | | | |
| | (1) | Band 7 | 5, 10, 15, 20 | 5, 10, 15, 20 | | | 40 |
| | (2) | Band 7 | 5, 10, 15, 20 | 5, 10, 15, 20 | | | 40 |
| 46A-46A | (0) | Band 46 | 20 | 20 | | | 40 |
| 46A-46C | (0) | Band 46 | 20 | 46C BCS 0 | | | 60 |
| | | Band 46 | 46C BCS 0 | 20 | | | |
| 48A-48A | (0) | Band 48 | 5, 10, 15, 20 | 5, 10, 15, 20 | | | 40 |
| 48A-48C | (0) | Band 48 | 5, 10, 15, 20 | 48C BCS 0 | | | 60 |
| | (1) | Band 48 | 48C BCS 0 | 5, 10, 15, 20 | | | |
| 48A-48D | (0) | Band 48 | 5, 10, 15, 20 | 48D BCS 0 | | | 80 |
| | | | 48D BCS 0 | 5, 10, 15, 20 | | | 80 |
| 48C-48C | (0) | Band 48 | 48C BCS 0 | 48C BCS 0 | | | 80 |
| 66A-66A | (0) | Band 66 | 5, 10, 15, 20 | 5, 10, 15, 20 | | | 40 |
| 66A-66A-66A | (0) | Band 66 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | | 60 |
| 66A-66B | (0) | Band 66 | 5, 10, 15, 20 | 66B BCS0 | | | 40 |
| | | | 66B BCS0 | 5, 10, 15, 20 | | | 40 |
| 66A-66C | (0) | Band 66 | 5, 10, 15, 20 | 66C BCS0 | | | 60 |
| | | | 66C BCS0 | 5, 10, 15, 20 | | | 60 |

5 DL Intra Band(contiguous)

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Allowed Channel BW Per Carrier (MHz) | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|--------------------------------------|---------------|-------------|-------------|-------------|-------------------|
| | | | 1st Carrier | 2nd Carrier | 3rd Carrier | 4th Carrier | 5th Carrier | |
| 5B | (0) | Band 5 | 5, 10 | 10 | | | | 20 |
| | | | 10 | 5 | | | | |
| | (1) | Band 5 | 3 | 5 | | | | 8 |
| 7C | (0) | Band 7 | 5 | 15 | | | | 40 |
| | | | 20 | 20 | | | | |
| | (1) | Band 7 | 10 | 20 | | | | 40 |
| | | | 15 | 15, 20 | | | | |
| | | | 20 | 10, 15, 20 | | | | |
| | | | 15 | 10, 15 | | | | |
| (2) | Band 7 | 20 | 15, 20 | | | | 40 | |
| 46C | (0) | Band 46 | 20 | 20 | | | | 40 |
| | (1) | Band 46 | 20 | 10, 20 | | | | |
| 46D | (0) | Band 46 | 20 | 20 | 20 | | | 60 |
| | | | 20 | 10, 20 | 10, 20 | | | |
| | (1) | Band 46 | 10, 20 | 20 | 20 | | | |
| 48B | (0) | Band 48 | 10 | 10 | | | | 20 |
| 48C | (0) | Band 48 | 5, 10, 15, 20 | 20 | | | | 40 |
| | | | 20 | 5, 10, 15 | | | | |
| 48D | (0) | Band 48 | 5, 10, 15, 20 | 20 | 20 | | | 60 |
| | | | 20 | 20 | 5, 10, 15 | | | |
| 48E | (0) | Band 48 | 5, 10, 15, 20 | 20 | 20 | 20 | | 60 |
| | | | 20 | 20 | 10 | 5, 10, 15 | | |
| 66B | (0) | Band 66 | 5 | 5, 10, 15 | | | | 20 |
| | | Band 66 | 10 | 5, 10 | | | | |
| | | Band 66 | 15 | 5 | | | | |
| 66C | (0) | Band 66 | 5 | 20 | | | | 40 |
| | | Band 66 | 10 | 15, 20 | | | | |
| | | Band 66 | 15 | 10, 15, 20 | | | | |
| | | Band 66 | 20 | 5, 10, 15, 20 | | | | |

LTE Uplink / Downlink Carrier Aggregation Intra-band configurations

| E-UTRA CA configuration | Bandwidth Combination Set | E-UTRA Band | Allowed Channel BW Per Carrier (MHz) | | | | | Max Aggregated BW |
|-------------------------|---------------------------|-------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------------|
| | | | 1st Carrier | 2nd Carrier | 3rd Carrier | 4th Carrier | 5th Carrier | |
| 48C | (0) | Band 48 | 5, 10, 15, 20 | 20 | | | | 40 |
| | | | 20 | 5, 10, 15 | | | | |

Note:

LTE CA_48C is supported in both Uplink and Downlink, other CA configurations are supported only Downlink

LTE Uplink Carrier Aggregation Combinations

Maximum Output Power (Tune-up Limit) for LTE UL Carrier Aggregation

UL CA shall be tested based on the worst-case SAR configuration determined from non-CA SAR testing result. The channel BW, channel number, RB Allocation, etc. would be selected to allow contiguous CA of PCC and SCC. Uplink output power for UL CA is the total power measured across the PCC and SCC.

UL CA power measurements were performed with QPSK modulation based on the worst-case standalone SAR. The tune-up limits are provided in table below. The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCCs were set to use configurations similar to the PCC to establish conservative or worst case equivalent SAR test conditions (highest maximum power with MPR of 0 dB).

The standalone power measurement is the power for the PCC in the non-CA mode (i.e. single carrier power). In all cases the UL CA power is less than or equal to the standalone power, which is in accordance with the tune-up limits in table below.

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows;

- a) When the maximum output for UL CA is \leq standalone LTE mode (without CA)
 - PCC is configured according to the highest standalone SAR configuration tested
 - SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC.
- b) When the Reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels (PCC based).
- c) UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level.

SAR measurement is not required for the 16QAM and 64QAM. When the highest maximum output power for 16QAM and 64QAM is ≤ 0.25 dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

| E-UTRA CA configurations | RF exposure conditions | Bands | | UL | | | | | | | | | | | | | | | | LTE Rel.8 Tune-up Limit (dBm) | |
|--------------------------|------------------------|-------|-----|------|----|--------|----|--------|-------|------|----|--------|----|--------|-------|-----|---------------|---------------------|--------------------------------|-------------------------------|------------|
| | | PCC | SCC | PCC | | | | | | SCC | | | | | | MPR | PCC + SCC | | | | |
| | | 1st | 2nd | Mod | RB | Offset | BW | Freq | Ch | Mod | RB | Offset | BW | Freq | Ch | | Aggregated BW | Tune-up Limit (dBm) | CA power (total PCC+SCC) (dBm) | | 3GPP Rel.# |
| CA_48C (0) | Head | 48C | 48C | QPSK | 1 | 0 | 20 | 3646.7 | 56207 | QPSK | 1 | 99 | 20 | 3626.9 | 56009 | 0 | 40 | 20.50 | 18.70 | 16 | 20.50 |
| CA_48C (0) | Body Worn & Hotspot | 48C | 48C | QPSK | 50 | 50 | 20 | 3603.3 | 55773 | QPSK | 50 | 0 | 20 | 3623.1 | 55971 | 0 | 40 | 21.00 | 20.55 | 16 | 21.00 |

Note: Standalone output power values are referenced from Sec.9.3 in the SAR Part.1 Test Report.

LTE Downlink Carrier Aggregation Combinations

The DL CA power measurement conditions for various CC's combinations were determined according LTE DL CA SAR Test Exclusion guidance in TCB workshop note (April 2018). Only yellow highlighted cells need power measurement. The following power measurements were performed with a single carrier uplink; CA for this particular project only supports one (1) uplink and up to four (4) downlinks.

LTE Release 10 Carrier Aggregation

| Index | 2CC | Restriction | Completely Covered by Measurement Superset | Index | 3CC | Restriction | Completely Covered by Measurement Superset | Index | 4CC | Restriction | Completely Covered by Measurement Superset |
|--------|---------|--------------|--------------------------------------------|--------|------------|------------------|--------------------------------------------|--------|----------------|------------------|--------------------------------------------|
| 2CC#1 | 2A-2A | | 3CC#1 | 3CC#1 | 2A-2A-4A | | 4CC#1 | 4CC#1 | 2A-2A-4A-4A | | |
| 2CC#2 | 2A-4A | | 3CC#1 | 3CC#2 | 2A-2A-5A | | 4CC#2 | 4CC#2 | 2A-2A-4A-5A | | |
| 2CC#3 | 2A-5A | | 3CC#2 | 3CC#3 | 2A-2A-13A | | 4CC#5 | 4CC#3 | 2A-2A-5B | | |
| 2CC#4 | 2A-7A | | 3CC#13 | 3CC#4 | 2A-2A-46A | B46 SCC only | | 4CC#4 | 2A-2A-5A-66A | | |
| 2CC#5 | 2A-13A | | 3CC#3 | 3CC#5 | 2A-2A-66A | | 4CC#7 | 4CC#5 | 2A-2A-13A-66A | | |
| 2CC#6 | 2A-46A | B46 SCC only | 3CC#10 | 3CC#6 | 2A-4A-4A | | 4CC#10 | 4CC#6 | 2A-2A-46C | B46 SCC only | |
| 2CC#7 | 2A-48A | B46 SCC only | 3CC#11 | 3CC#7 | 2A-4A-5A | | 4CC#10 | 4CC#7 | 2A-2A-66A-66A | | |
| 2CC#8 | 2A-66A | | 3CC#27 | 3CC#8 | 2A-4A-13A | | | 4CC#8 | 2A-2A-66B | | |
| 2CC#9 | 4A-4A | | 3CC#6 | 3CC#9 | 2A-5B | | 4CC#3 | 4CC#9 | 2A-2A-66C | | |
| 2CC#10 | 4A-5A | | 3CC#7 | 3CC#10 | 2A-5A-46A | B46 SCC only | 4CC#14 | 4CC#10 | 2A-4A-4A-5A | | |
| 2CC#11 | 4A-13A | | 3CC#8 | 3CC#11 | 2A-5A-48A | B48 SCC only | 4CC#16 | 4CC#11 | 2A-4A-5B | | |
| 2CC#12 | 4A-46A | B46 SCC only | 3CC#33 | 3CC#12 | 2A-5A-66A | | 4CC#4 | 4CC#12 | 2A-5B-66A | | |
| 2CC#13 | 4A-48A | B46 SCC only | | 3CC#13 | 2A-7A-7A | | 4CC#20 | 4CC#13 | 2A-5A-46C | B46 SCC only | |
| 2CC#14 | 5A-5A | | 3CC#36 | 3CC#14 | 2A-7C | | 4CC#21 | 4CC#14 | 2A-5A-46A-66A | B46 SCC only | |
| 2CC#15 | 5B | | 3CC#32 | 3CC#15 | 2A-7A-13A | | 4CC#20 | 4CC#15 | 2A-5A-48C | B48 SCC only | |
| 2CC#16 | 5A-46A | B46 SCC only | 3CC#40 | 3CC#16 | 2A-7A-66A | | 4CC#22 | 4CC#16 | 2A-5A-48A-66A | B48 SCC only | |
| 2CC#17 | 5A-48A | B48 SCC only | 3CC#11 | 3CC#17 | 2A-13A-46A | B46 SCC only | 4CC#25 | 4CC#17 | 2A-5A-66A-66A | | |
| 2CC#18 | 5A-66A | | 3CC#12 | 3CC#18 | 2A-13A-48A | B48 SCC only | 4CC#27 | 4CC#18 | 2A-5A-66B | | |
| 2CC#19 | 7A-7A | | 3CC#13 | 3CC#19 | 2A-13A-66A | | 4CC#28 | 4CC#19 | 2A-5A-66C | | |
| 2CC#20 | 7C | | 3CC#14 | 3CC#20 | 2A-46A-46A | B46 SCC only | | 4CC#20 | 2A-7A-7A-13A | | |
| 2CC#21 | 7A-13A | | 3CC#15 | 3CC#21 | 2A-46C | B46 SCC only | 4CC#36 | 4CC#21 | 2A-7C-13A | | |
| 2CC#22 | 7A-66A | | 3CC#16 | 3CC#22 | 2A-46A-48A | B46/B48 SCC only | 4CC#36 | 4CC#22 | 2A-7A-7A-66A | | |
| 2CC#23 | 13A-46A | B46 SCC only | 3CC#17 | 3CC#23 | 2A-46A-66A | B46 SCC only | 4CC#37 | 4CC#23 | 2A-7C-66A | | |
| 2CC#24 | 13A-48A | B48 SCC only | 3CC#18 | 3CC#24 | 2A-48A-48A | B48 SCC only | 4CC#40 | 4CC#24 | 2A-13A-46C | B46 SCC only | |
| 2CC#25 | 13A-66A | | 3CC#19 | 3CC#25 | 2A-48C | B48 SCC only | 4CC#41 | 4CC#25 | 2A-13A-46A-66A | 46A SCC only | |
| 2CC#26 | 46A-66A | B46 SCC only | 3CC#23 | 3CC#26 | 2A-48A-66A | B48 SCC only | 4CC#27 | 4CC#26 | 2A-13A-48C | B48 SCC only | |
| 2CC#27 | 48A-48A | | | 3CC#27 | 2A-66A-66A | | 4CC#42 | 4CC#27 | 2A-13A-48A-66A | B48 SCC only | |
| 2CC#28 | 48B | | | 3CC#28 | 2A-66B | | 4CC#8 | 4CC#28 | 2A-13A-66A-66A | | |
| 2CC#29 | 48C | | 3CC#61 | 3CC#29 | 2A-66C | | 4CC#9 | 4CC#29 | 2A-13A-66B | | |
| 2CC#30 | 48A-66A | B48 SCC only | 3CC#26 | 3CC#30 | 4A-4A-5A | | 4CC#10 | 4CC#30 | 2A-13A-66C | | |
| 2CC#31 | 66A-66A | | 3CC#27 | 3CC#31 | 4A-4A-13A | | | 4CC#31 | 2A-46A-46C | B46 SCC only | |
| 2CC#32 | 66B | | 3CC#28 | 3CC#32 | 4A-5B | | 4CC#44 | 4CC#32 | 2A-46D | B46 SCC only | |
| 2CC#33 | 66C | | 3CC#29 | 3CC#33 | 4A-46A-46A | B46 SCC only | | 4CC#33 | 2A-46C-48A | B46/B48 SCC only | |

Note: Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

LTE Release 10 Carrier Aggregation (Continued)

| Index | 3CC | Restriction | Completely Covered by Measurement Superset | Index | 4CC | Restriction | Completely Covered by Measurement Superset |
|--------|-------------|------------------|--------------------------------------------|--------|-----------------|------------------|--------------------------------------------|
| 3CC#34 | 4A-46C | B46 SCC only | 4CC#45 | 4CC#34 | 2A-46C-66A | B46 SCC only | |
| 3CC#35 | 4A-48C | B48 SCC only | | 4CC#35 | 2A-46A-48C | B46/B48 SCC only | |
| 3CC#36 | 5A-5A-66A | | 4CC#48 | 4CC#36 | 2A-46A-48A-66A | B46/B48 SCC only | |
| 3CC#37 | 5B-46A | B46 SCC only | | 4CC#37 | 2A-46A-66A-66A | B46 SCC only | |
| 3CC#38 | 5B-66A | B46 SCC only | 4CC#52 | 4CC#38 | 2A-48A-48C | B48 SCC only | |
| 3CC#39 | 5A-46C | B46 SCC only | 4CC#56 | 4CC#39 | 2A-48D | B48 SCC only | |
| 3CC#40 | 5A-46A-66A | B46 SCC only | 4CC#57 | 4CC#40 | 2A-48A-48A-66A | B48 SCC only | |
| 3CC#41 | 5A-48C | B48 SCC only | 4CC#59 | 4CC#41 | 2A-48C-66A | B48 SCC only | |
| 3CC#42 | 5A-48A-66A | B48 SCC only | 4CC#16 | 4CC#42 | 2A-66A-66A-66A | B48 SCC only | |
| 3CC#43 | 5A-66A-66A | | 4CC#48 | 4CC#43 | 2A-66A-66B | | |
| 3CC#44 | 5A-66B | | 4CC#49 | 4CC#44 | 4A-4A-5B | | |
| 3CC#45 | 5A-66C | | 4CC#50 | 4CC#45 | 4A-46A-46C | B46 SCC only | |
| 3CC#46 | 7A-7A-13A | | 4CC#20 | 4CC#46 | 4A-46D | B46 SCC only | |
| 3CC#47 | 7C-13A | | 4CC#21 | 4CC#47 | 4A-48D | B48 SCC only | |
| 3CC#48 | 7A-7A-66A | | 4CC#22 | 4CC#48 | 5A-5A-66A-66A | | |
| 3CC#49 | 7C-66A | | 4CC#23 | 4CC#49 | 5A-5A-66B | | |
| 3CC#50 | 13A-46C | | 4CC#61 | 4CC#50 | 5A-5A-66C | | |
| 3CC#51 | 13A-46A-66A | B46 SCC only | 4CC#62 | 4CC#51 | 5B-46C | B46 SCC only | |
| 3CC#52 | 13A-48C | B48 SCC only | 4CC#64 | 4CC#52 | 5B-66A-66A | | |
| 3CC#53 | 13A-48A-66A | B48 SCC only | 4CC#27 | 4CC#53 | 5B-66B | | |
| 3CC#54 | 13A-66A-66A | | 4CC#28 | 4CC#54 | 5B-66C | | |
| 3CC#55 | 13A-66B | | 4CC#29 | 4CC#55 | 5A-46D | B46 SCC only | |
| 3CC#56 | 13A-66C | | 4CC#30 | 4CC#56 | 5A-46C-66A | B46 SCC only | |
| 3CC#57 | 46A-46A-66A | B46 SCC only | | 4CC#57 | 5A-46A-66A-66A | B46 SCC only | |
| 3CC#58 | 46A-48A-66A | B46/B48 SCC only | 4CC#36 | 4CC#58 | 5A-48D | B48 SCC only | |
| 3CC#59 | 46C-66A | B46 SCC only | 4CC#56 | 4CC#59 | 5A-48C-66A | B48 SCC only | |
| 3CC#60 | 46A-66A-66A | B46 SCC only | 4CC#62 | 4CC#60 | 13A-46D | B46 SCC only | |
| 3CC#61 | 48A-48C | | | 4CC#61 | 13A-46C-66A | B46 SCC only | |
| 3CC#62 | 48D | | 4CC#74 | 4CC#62 | 13A-46A-66A-66A | B46 SCC only | |
| 3CC#63 | 48A-48A-66A | B48 SCC only | 4CC#78 | 4CC#63 | 13A-48D | B48 SCC only | |
| 3CC#64 | 48A-66A-66A | B48 SCC only | 4CC#78 | 4CC#64 | 13A-48C-66A | B48 SCC only | |
| 3CC#65 | 48A-66B | B48 SCC only | 4CC#65 | 4CC#65 | 13A-48A-66B | B48 SCC only | |
| 3CC#66 | 48A-66C | B48 SCC only | 4CC#66 | 4CC#66 | 13A-48A-66C | B48 SCC only | |
| 3CC#67 | 48C-66A | B48 SCC only | 4CC#73 | 4CC#67 | 13A-66A-66B | | |
| 3CC#68 | 66A-66A-66A | | 4CC#42 | 4CC#68 | 13A-66A-66C | | |
| 3CC#69 | 66A-66B | | 4CC#43 | 4CC#69 | 46A-46C-66A | B46 SCC only | |
| 3CC#70 | 66A-66C | | 4CC#68 | 4CC#70 | 46D-66A | B46 SCC only | |
| | | | | 4CC#71 | 46C-48A-66A | B46/B48 SCC only | |
| | | | | 4CC#72 | 46C-66A-66A | B46 SCC only | |
| | | | | 4CC#73 | 46A-48C-66A | B46/B48 SCC only | |
| | | | | 4CC#74 | 48A-48D | | |
| | | | | 4CC#75 | 48C-48C | | |
| | | | | 4CC#76 | 48E | | |
| | | | | 4CC#77 | 48A-48C-66A | B48 SCC only | |
| | | | | 4CC#78 | 48A-48A-66A-66A | B48 SCC only | |
| | | | | 4CC#79 | 48A-48A-66B | B48 SCC only | |
| | | | | 4CC#80 | 48A-48A-66C | B48 SCC only | |
| | | | | 4CC#81 | 48C-66A-66A | B48 SCC only | |
| | | | | 4CC#82 | 48C-66B | B48 SCC only | |
| | | | | 4CC#83 | 48C-66C | B48 SCC only | |
| | | | | 4CC#84 | 48D-66A | B48 SCC only | |

Note:

Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

LTE Release 10 Carrier Aggregation with 4x4 MIMO

| Index | 2CC | Restriction | Completely Covered by Measurement Superset |
|--------|-------------|--------------|--------------------------------------------|
| 2CC#1 | [2A]-2A | | 3CC#2 |
| 2CC#2 | [2A]-[2A] | | 3CC#6 |
| 2CC#3 | 2A-[4A] | | 3CC#1 |
| 2CC#4 | [2A]-4A | | 3CC#2 |
| 2CC#5 | [2A]-[4A] | | 3CC#4 |
| 2CC#6 | [2A]-5A | | 3CC#9 |
| 2CC#7 | [2A]-7A | | 3CC#41 |
| 2CC#8 | [2A]-13A | | 3CC#11 |
| 2CC#9 | [2A]-46A | B46 SCC only | 3CC#12 |
| 2CC#10 | 2A-[48A] | B48 SCC only | 3CC#62 |
| 2CC#11 | [2A]-48A | B48 SCC only | 3CC#63 |
| 2CC#12 | [2A]-[48A] | B48 SCC only | 3CC#65 |
| 2CC#13 | 2A-[66A] | | 3CC#15 |
| 2CC#14 | [2A]-66A | | 3CC#18 |
| 2CC#15 | [2A]-[66A] | | 3CC#19 |
| 2CC#16 | [4A]-4A | | 3CC#21 |
| 2CC#17 | [4A]-[4A] | | 3CC#23 |
| 2CC#18 | [4A]-5A | | 3CC#27 |
| 2CC#19 | [4A]-13A | | 3CC#30 |
| 2CC#20 | [4A]-46A | B46 SCC only | 3CC#93 |
| 2CC#21 | 4A-[48A] | B48 SCC only | |
| 2CC#22 | [4A]-48A | B48 SCC only | |
| 2CC#23 | [4A]-[48A] | B48 SCC only | |
| 2CC#24 | 5A-[48A] | B48 SCC only | 3CC#35 |
| 2CC#25 | 5A-[66A] | | 3CC#38 |
| 2CC#26 | 7A-[66A] | | 3CC#110 |
| 2CC#27 | 13A-[48A] | B48 SCC only | 3CC#48 |
| 2CC#28 | 13A-[66A] | | 3CC#118 |
| 2CC#29 | 46A-[66A] | B46 SCC only | 3CC#59 |
| 2CC#30 | [48A]-48A | | |
| 2CC#31 | [48A]-[48A] | | |
| 2CC#32 | [48B] | | |
| 2CC#33 | [48C] | | 3CC#124 |
| 2CC#34 | [48A]-66A | B48 SCC only | 3CC#71 |
| 2CC#35 | 48A-[66A] | B48 SCC only | 3CC#70 |
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| 4CC#38 | [2A]-4A-5B | | |
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Note: Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

LTE Release 10 Carrier Aggregation with 4x4 MIMO (Continued)

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| 3CC#42 | [2A]-13A-46A | B46 SCC only | 4CC#79 | 4CC#42 | [2A]-5B-[66A] | | | 3CC#96 | 5A-[48C] | B48 SCC only | 4CC#154 | 4CC#120 | [2A]-48A-48A-[66A] | B48 SCC only | | |
| 3CC#43 | 2A-13A-[48A] | B48 SCC only | 4CC#84 | 4CC#43 | [2A]-5A-46C | B46 SCC only | | 3CC#97 | 5A-48A-[66A] | B48 SCC only | 4CC#55 | 4CC#121 | 2A-[48A]-[48A]-66A | B48 SCC only | | |
| 3CC#44 | [2A]-13A-48A | B48 SCC only | 4CC#85 | 4CC#44 | 2A-5A-46A-[66A] | B46 SCC only | | 3CC#98 | 5A-[48A]-66A | B48 SCC only | 4CC#56 | 4CC#122 | [2A]-[48A]-48A-66A | B48 SCC only | | |
| 3CC#45 | [2A]-13A-[48A] | B48 SCC only | 4CC#88 | 4CC#45 | [2A]-5A-46A-66A | B46 SCC only | | 3CC#99 | 5A-[48A]-[66A] | B48 SCC only | 4CC#58 | 4CC#123 | 2A-48C-[66A] | B48 SCC only | | |
| 3CC#46 | 2A-13A-[66A] | | 4CC#89 | 4CC#46 | [2A]-5A-46A-[66A] | B46 SCC only | | 3CC#100 | 5A-[66A]-66A | | 4CC#142 | 4CC#124 | 2A-[48C]-66A | B48 SCC only | | |
| 3CC#47 | [2A]-13A-66A | | 4CC#90 | 4CC#47 | 2A-5A-[48C] | B48 SCC only | | 3CC#101 | 5A-[66A]-[66A] | | 4CC#143 | 4CC#125 | [2A]-48C-66A | B48 SCC only | | |
| 3CC#48 | [2A]-13A-[66A] | | 4CC#92 | 4CC#48 | [2A]-5A-48C | B48 SCC only | | 3CC#102 | 5A-[66B] | | 4CC#144 | 4CC#126 | [2A]-48C-[66A] | B48 SCC only | | |
| 3CC#49 | [2A]-46A-46A | B46 SCC only | | 4CC#49 | 2A-5A-48A-[66A] | B48 SCC only | | 3CC#103 | 5A-[66C] | | 4CC#145 | 4CC#127 | [2A]-66A-66B | | | |
| 3CC#50 | [2A]-46C | B46 SCC only | 4CC#100 | 4CC#50 | 2A-5A-[48A]-66A | B48 SCC only | | 3CC#104 | 7A-7A-[66A] | | 4CC#71 | 4CC#128 | 2A-[66A]-66B | | | |
| 3CC#51 | 2A-46A-[48A] | B46/B48 SCC only | 4CC#108 | 4CC#51 | [2A]-5A-48A-66A | B48 SCC only | | 3CC#105 | 7C-[66A] | | 4CC#74 | 4CC#129 | 2A-66A-[66B] | | | |
| 3CC#52 | [2A]-46A-48A | B46/B48 SCC only | 4CC#109 | 4CC#52 | 2A-5A-[48A]-[66A] | B48 SCC only | | 3CC#106 | 13A-46A-[66A] | B46 SCC only | 4CC#156 | 4CC#130 | [2A]-[66A]-66B | | | |
| 3CC#53 | [2A]-46A-[48A] | B46/B48 SCC only | 4CC#112 | 4CC#53 | [2A]-5A-48A-[66A] | B48 SCC only | | 3CC#107 | 13A-[48C] | B48 SCC only | 4CC#159 | 4CC#131 | [4A]-4A-5B | | | |
| 3CC#54 | 2A-46A-[66A] | B46 SCC only | 4CC#113 | 4CC#54 | [2A]-5A-[48A]-66A | B48 SCC only | | 3CC#108 | 13A-48A-[66A] | B48 SCC only | 4CC#83 | 4CC#132 | [4A]-[4A]-5B | | | |
| 3CC#55 | [2A]-46A-66A | B46 SCC only | 4CC#115 | 4CC#55 | 2A-5A-[66A]-66A | | | 3CC#109 | 13A-[48A]-66A | B48 SCC only | 4CC#84 | 4CC#133 | [4A]-46A-46C | B46 SCC only | | |
| 3CC#56 | [2A]-46A-[66A] | B46 SCC only | 4CC#116 | 4CC#56 | [2A]-5A-66A-66A | | | 3CC#110 | 13A-[48A]-[66A] | B48 SCC only | 4CC#86 | 4CC#134 | [4A]-46D | B46 SCC only | | |
| 3CC#57 | 2A-[48A]-48A | B48 SCC only | 4CC#123 | 4CC#57 | 2A-5A-[66A]-[66A] | | | 3CC#111 | 13A-66A-[66A] | | 4CC#89 | 4CC#135 | [4A]-48D | B48 SCC only | | |
| 3CC#58 | [2A]-48A-48A | B48 SCC only | 4CC#124 | 4CC#58 | [2A]-5A-[66A]-66A | | | 3CC#112 | 13A-[66A]-[66A] | | 4CC#91 | 4CC#136 | 5A-5A-[66A]-66A | | | |
| 3CC#59 | 2A-[48A]-[48A] | B48 SCC only | 4CC#127 | 4CC#59 | 2A-5A-[66B] | | | 3CC#113 | 13A-[66B] | | 4CC#93 | 4CC#137 | 5A-5A-[66A]-66A | | | |
| 3CC#60 | [2A]-[48A]-48A | B48 SCC only | 4CC#128 | 4CC#60 | [2A]-5A-66B | | | 3CC#114 | 13A-[66C] | | 4CC#95 | 4CC#138 | 5A-5A-[66B] | | | |
| 3CC#61 | [2A]-[48A]-[48A] | B48 SCC only | | 4CC#61 | 2A-5A-[66C] | | | 3CC#115 | 46A-46A-[66A] | B46 SCC only | | 4CC#139 | 5A-5A-[66C] | | | |
| 3CC#62 | 2A-[48C] | B48 SCC only | 4CC#130 | 4CC#62 | [2A]-5A-66C | | | 3CC#116 | 46A-[48A]-66A | B46/B48 SCC only | 4CC#108 | 4CC#140 | 5B-[66A]-66A | | | |
| 3CC#63 | [2A]-48C | B48 SCC only | 4CC#131 | 4CC#63 | [2A]-7A-7A-13A | | | 3CC#117 | 46A-48A-[66A] | B46/B48 SCC only | 4CC#107 | 4CC#141 | 5B-[66A]-[66A] | | | |
| 3CC#64 | [2A]-[48C] | B48 SCC only | | 4CC#64 | [2A]-7C-13A | | | 3CC#118 | 46A-[48A]-[66A] | B46/B48 SCC only | 4CC#110 | 4CC#142 | 5B-[66B] | | | |
| 3CC#65 | 2A-48A-[66A] | B48 SCC only | 4CC#55 | 4CC#65 | 2A-7A-7A-[66A] | | | 3CC#119 | 46C-[66A] | B46 SCC only | 4CC#104 | 4CC#143 | 5B-[66C] | | | |
| 3CC#66 | 2A-[48A]-66A | B48 SCC only | 4CC#56 | 4CC#66 | [2A]-7A-7A-66A | | | 3CC#120 | 46A-66A-[66A] | B46 SCC only | 4CC#113 | 4CC#144 | 5A-46C-[66A] | B46 SCC only | | |
| 3CC#67 | [2A]-48A-66A | B48 SCC only | 4CC#57 | 4CC#67 | [2A]-7A-7A-[66A] | | | 3CC#121 | 46A-[66A]-[66A] | B46 SCC only | 4CC#114 | 4CC#145 | 5A-46A-[66A]-66A | B46 SCC only | | |
| 3CC#68 | 2A-[48A]-[66A] | B48 SCC only | 4CC#58 | 4CC#68 | 2A-7C-[66A] | | | 3CC#122 | 48A-[48C] | | | 4CC#146 | 5A-46A-[66A]-[66A] | B46 SCC only | | |
| 3CC#69 | [2A]-48A-[66A] | B48 SCC only | 4CC#59 | 4CC#69 | [2A]-7C-66A | | | 3CC#123 | [48A]-48C | | | 4CC#147 | 5A-48C-[66A] | B48 SCC only | | |
| 3CC#70 | [2A]-[48A]-66A | B48 SCC only | 4CC#60 | 4CC#70 | [2A]-7C-[66A] | | | 3CC#124 | [48A]-[48C] | | | 4CC#148 | 5A-[48C]-66A | B48 SCC only | | |
| 3CC#71 | [2A]-[48A]-[66A] | B48 SCC only | | 4CC#71 | [2A]-13A-46C | B46 SCC only | | 3CC#125 | [48D] | | | 4CC#149 | 13A-46C-[66A] | B46 SCC only | | |
| 3CC#72 | 2A-[66A]-66A | | 4CC#61 | 4CC#72 | 2A-13A-46A-[66A] | 46A SCC only | | 3CC#126 | [48A]-48A-66A | B48 SCC only | 4CC#123 | 4CC#150 | 13A-46A-[66A]-66A | B46 SCC only | | |
| 3CC#73 | [2A]-66A-66A | | 4CC#62 | 4CC#73 | [2A]-13A-46A-66A | 46A SCC only | | 3CC#127 | 48A-48A-[66A] | B48 SCC only | 4CC#122 | 4CC#151 | 13A-46A-[66A]-[66A] | B46 SCC only | | |
| 3CC#74 | 2A-[66A]-[66A] | | 4CC#63 | 4CC#74 | [2A]-13A-46A-[66A] | 46A SCC only | | 3CC#128 | [48A]-[48A]-66A | B48 SCC only | 4CC#127 | 4CC#152 | 13A-48C-[66A] | B48 SCC only | | |
| 3CC#75 | [2A]-[66A]-66A | | 4CC#64 | 4CC#75 | 2A-13A-[48C] | B48 SCC only | | 3CC#129 | [48A]-[48A]-[66A] | B48 SCC only | 4CC#125 | 4CC#153 | 13A-[48C]-66A | B48 SCC only | | |
| 3CC#76 | [2A]-[66A]-[66A] | | | 4CC#76 | [2A]-13A-48C | B48 SCC only | | 3CC#130 | [48A]-[48A]-[66A] | B48 SCC only | | 4CC#154 | 13A-48A-[66B] | B48 SCC only | | |
| 3CC#77 | 2A-[66B] | | 4CC#65 | 4CC#77 | 2A-13A-48A-[66A] | B48 SCC only | | 3CC#131 | [48A]-66A-66A | B48 SCC only | 4CC#186 | 4CC#155 | 13A-[48A]-66B | B48 SCC only | | |
| 3CC#78 | [2A]-66B | | 4CC#94 | 4CC#78 | 2A-13A-[48A]-66A | B48 SCC only | | 3CC#132 | 48A-[66A]-66A | B48 SCC only | 4CC#185 | 4CC#156 | 13A-48A-[66C] | B48 SCC only | | |
| 3CC#79 | [2A]-[66B] | | | 4CC#79 | [2A]-13A-48A-66A | B48 SCC only | | 3CC#133 | [48A]-[66A]-66A | B48 SCC only | 4CC#187 | 4CC#157 | 13A-[48A]-66C | B48 SCC only | | |
| 3CC#80 | 2A-[66C] | | 4CC#36 | 4CC#80 | 2A-13A-[48A]-[66A] | B48 SCC only | | 3CC#134 | 48A-[66A]-[66A] | B48 SCC only | 4CC#188 | 4CC#158 | 13A-[66A]-66B | | | |
| 3CC#81 | [2A]-66C | | 4CC#38 | 4CC#81 | [2A]-13A-48A-[66A] | B48 SCC only | | 3CC#135 | [48A]-[66A]-[66A] | B48 SCC only | | 4CC#159 | 13A-66A-[66B] | | | |
| 3CC#82 | [2A]-[66C] | | | 4CC#82 | [2A]-13A-[48A]-66A | B48 SCC only | | 3CC#136 | [48A]-66B | B48 SCC only | 4CC#161 | 4CC#160 | 13A-[66A]-66C | | | |
| 3CC#83 | [4A]-4A-5A | | 4CC#39 | 4CC#83 | 2A-13A-[66A]-66A | B48 SCC only | | 3CC#137 | 48A-[66B] | B48 SCC only | 4CC#160 | 4CC#161 | 13A-66A-[66C] | | | |
| 3CC#84 | [4A]-[4A]-5A | | 4CC#41 | 4CC#84 | [2A]-13A-66A-66A | | | 3CC#138 | [48A]-[66B] | B48 SCC only | | 4CC#162 | 46A-46C-[66A] | B46 SCC only | | |
| 3CC#85 | [4A]-4A-13A | | | 4CC#85 | 2A-13A-[66A]-[66A] | | | 3CC#139 | [48A]-66C | B48 SCC only | 4CC#164 | 4CC#163 | 46D-[66A] | B46 SCC only | | |
| 3CC#86 | [4A]-[4A]-13A | | | 4CC#86 | [2A]-13A-[66A]-66A | | | 3CC#140 | 48A-[66C] | B48 SCC only | 4CC#162 | 4CC#164 | 46C-[48A]-66A | B46/B48 SCC only | | |
| 3CC#87 | [4A]-5B | | 4CC#138 | 4CC#87 | 2A-13A-[66B] | | | 3CC#141 | [48A]-[66C] | B48 SCC only | | 4CC#165 | 46C-48A-[66A] | B46/B48 SCC only | | |
| 3CC#88 | [4A]-46A-46A | B46 SCC only | | 4CC#88 | [2A]-13A-66B | | | 3CC#142 | [48C]-66A | B48 SCC only | 4CC#130 | 4CC#166 | 46C-[48A]-[66A] | B46/B48 SCC only | | |
| 3CC#89 | [4A]-46C | B46 SCC only | 4CC#139 | 4CC#89 | 2A-13A-[66C] | | | 3CC#143 | 48C-[66A] | B48 SCC only | 4CC#129 | 4CC#167 | 46C-66A-[66A] | B46 SCC only | | |
| 3CC#90 | 4A-[48C] | B48 SCC only | | 4CC#90 | [2A]-13A-66C | | | 3CC#144 | [48C]-[66A] | B48 SCC only | | 4CC#168 | 46C-[66A]-[66A] | B46 SCC only | | |
| 3CC#91 | [4A]-48C | B48 SCC only | | 4CC#91 | [2A]-46A-46C | B46 SCC only | | 3CC#145 | 66A-[66B] | | 4CC#135 | 4CC#169 | 46A-[48C]-66A | B46/B48 SCC only | | |
| 3CC#92 | [4A]-[48C] | B48 SCC only | | 4CC#92 | [2A]-46D | B46 SCC only | | 3CC#146 | [66A]-66B | | 4CC#134 | 4CC#170 | 46A-48C-[66A] | B46/B48 SCC only | | |
| 3CC#93 | 5A-5A-[66A] | | 4CC#142 | 4CC#93 | 2A-46C-[48A] | B46/B48 SCC only | | 3CC#147 | [66A]-[66B] | | | 4CC#171 | [48A]-48D | | | |
| 3CC#94 | 5B-[66A] | B46 SCC only | 4CC#146 | 4CC#94 | [2A]-46C-48A | B46/B48 SCC only | | 3CC#148 | 66A-[66C] | | 4CC#167 | 4CC#172 | [48C]-48C | | | |
| | | | | 4CC#96 | 2A-46C-[66A] | B46 SCC only | | 3CC#149 | [66A]-66C] | | 4CC#166 | 4CC#173 | [48A]-48C-66A | B48 SCC only | | |
| | | | | 4CC#97 | [2A]-46C-66A | B46 SCC only | | | | | | 4CC#174 | 48A-[48C]-66A | B48 SCC only | | |
| | | | | 4CC#98 | [2A]-46C-[66A] | B46 SCC only | | | | | | 4CC#175 | 48A-48C-[66A] | B48 SCC only | | |
| | | | | 4CC#99 | 2A-46A-[48C] | B46/B48 SCC only | | | | | | 4CC#176 | [48A]-48C-[66A] | B48 SCC only | | |
| | | | | 4CC#100 | [2A]-46A-48C | B46/B48 SCC only | | | | | | 4CC#177 | [48A]-48A-66A-66A | B48 SCC only | | |
| | | | | 4CC#101 | 2A-46A-48A-[66A] | B46/B48 SCC only | | | | | | 4CC#178 | 48A-48A-[66A]-66A | B48 SCC only | | |
| | | | | 4CC#102 | 2A-46A-[48A]-66A | B46/B48 SCC only | | | | | | 4CC#179 | [48A]-[48A]-66A-66A | B48 SCC only | | |
| | | | | 4CC#103 | [2A]-46A-48A-66A | B46/B48 SCC only | | | | | | 4CC#180 | [48A]-48A-[66A]-66A | B48 SCC only | | |
| | | | | 4CC#104 | 2A-46A-[48A]-[66A] | B46/B48 SCC only | | | | | | 4CC#181 | 48A-48A-[66A]-[66A] | B48 SCC only | | |
| | | | | 4CC#105 | [2A]-46A-48A-[66A] | B46/B48 SCC only | | | | | | 4CC#182 | [48A]-48A-66B | B48 SCC only | | |
| | | | | 4CC#106 | [2A]-46A-[48A]-66A | B46/B48 SCC only | | | | | | 4CC#183 | 48A-48A-[66B] | B48 SCC only | | |
| | | | | 4CC#107 | 2A-46A-[66A]-66A | B46 SCC only | | | | | | 4CC#184 | [48A]-[48A]-66B | B48 SCC only | | |
| | | | | 4CC#108 | 2A-46A-[66A]-[66A] | B46 SCC only | | | | | | 4CC#185 | [48A]-48A-66C | B48 SCC only | | |
| | | | | 4CC#109 | [2A]-46A-66A-66A | B46 SCC only | | | | | | 4CC#186 | 48A-48A-[66C] | B48 SCC only | | |
| | | | | 4CC#110 | [2A]-46A-[66A]-66A | B46 SCC only | | | | | | 4CC#187 | [48A]-[48A]-66C | B48 SCC only | | |
| | | | | 4CC#111 | 2A-48A-[48C] | B48 SCC only | | | | | | 4CC#188 | [48C]-66A-66A | B48 SCC only | | |
| | | | | 4CC#112 | 2A-[48A]-48C | B48 SCC only | | | | | | 4CC#189 | 48C-[66A]-66A | B48 SCC only | | |
| | | | | 4CC#113 | [2A]-48A-48C | B48 SCC only | | | | | | 4CC#190 | 48C-[66A]-[66A] | B48 SCC only | | |
| | | | | 4CC#114 | [2A]-[48A]-48C | B48 SCC only | | | | | | 4CC#191 | [48C]-66B | B48 SCC only | | |
| | | | | 4CC#115 | [2A]-48D | B48 SCC only | | | | | | 4CC#192 | 48C-[66B] | B48 SCC only | | |
| | | | | 4CC#116 | 2A-48A-48A-[66A] | B48 SCC only | | | | | | 4CC#193 | [48C]-66C | B48 SCC only | | |
| | | | | 4CC#117 | 2A-[48A]-48A-66A | B48 SCC only | | | | | | 4CC#194 | 48C-[66C] | B48 SCC only | | |
| | | | | 4CC#118 | [2A]-48A-48A-66A | B48 SCC only | | | | | | 4CC#195 | 48D-[66A] | B48 SCC only | | |
| | | | | 4CC#119 | 2A-[48A]-48A-[66A] | B48 SCC only | | | | | | | | | | |

Note: Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

Single Carrier Downlink 4x4 MIMO output power results

| LTE Bands | Modulation | BW (MHz) | Channel | Freq. (MHz) | RB/Offset | LTE Rel 8 Tx. Power [dBm] | DL 4x4 MIMO Tx. Power [dBm] | Delta |
|-----------|------------|----------|---------|-------------|-----------|---------------------------|-----------------------------|-------|
| Band 2 | QPSK | 20 | 18700 | 1860 | 1/99 | 24.4 | 24.3 | -0.07 |
| Band 4 | QPSK | 20 | 20175 | 1732.5 | 50/0 | 23.0 | 22.9 | -0.09 |
| Band 48 | QPSK | 20 | 55773 | 3603.3 | 1/99 | 20.7 | 20.6 | -0.04 |
| Band 66 | QPSK | 20 | 132572 | 1770 | 1/49 | 24.3 | 24.2 | -0.10 |

Note:

According to LTE Test Conditions in TCB workshop (May, 2017), SAR is excluded for LTE downlink 4x4 MIMO operation when uplink output with DL MIMO does not exceed highest uplink output power configuration without DL MIMO by more than 1/4 dB. And for DL MIMO with carrier aggregation, the same SAR test exclusion procedure is considered.

DL CA with 4x4 MIMO output power results (Continued)

| E-UTRA CA configuration (BCS) | Bands | | | | | | | | UL | | | | | | | | DL | | | | | | | | LTE Rel 8 Tx Power [dBm] | LTE Rel 10 Tx Power [dBm] | Delta | | | | | | | | | |
|-------------------------------|---------|----------|----------|----------|------|------|-----|------|----------|---------|-------------|------------|----------|---------|-------------|----------|---------|-------------|----------|---------|-------------|----------|---------|-------------|--------------------------|---------------------------|--------|----------|---------|-------------|----------|---------|-------------|-------|-------|-------|
| | SCC1 | SCC2 | SCC3 | SCC4 | SCC5 | SCC8 | PCC | | SCC1 | | SCC2 | | SCC3 | | SCC4 | | SCC5 | | SCC8 | | | | | | | | | | | | | | | | | |
| | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | Mode | BW (MHz) | Channel | Freq. (MHz) | RBO/Offset | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | | | | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | | | |
| [2A] 4A-5B | [2A] 4A | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 20 | 2050 | 2120 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 24.38 | 24.44 | -0.06 | | | |
| | [2A] 4A | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 20175 | 1732.5 | 1999 | 20 | 2175 | 2132.5 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 23.99 | 24.14 | -0.15 | | | |
| | [2A] 5B | [2A] 5B | [2A] 4A | [2A] 4A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 24.37 | 24.39 | -0.02 | | | |
| | [2A] 4A | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 20 | 2050 | 2120 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 24.38 | 24.46 | -0.08 | | | |
| [2A]-[4A]-5B | [2A] 4A | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 20175 | 1732.5 | 1999 | 20 | 2175 | 2132.5 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 23.99 | 24.05 | -0.06 | | | |
| | [2A] 5B | [2A] 5B | [2A] 4A | [2A] 4A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 20 | 900 | 1960 | 20 | 2050 | 2120 | 24.37 | 24.41 | -0.04 | | | |
| | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 46790 | 5150 | 20 | 46790 | 5150 | 24.38 | 24.47 | -0.09 | | | | | | |
| | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 46790 | 5150 | 20 | 46790 | 5150 | 24.37 | 24.42 | -0.05 | | | | | | |
| [2A]-5B-66A | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 46790 | 5150 | 24.31 | 24.43 | -0.12 | | | |
| | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 46790 | 5150 | 20 | 46790 | 5150 | 24.38 | 24.41 | -0.03 | | | | | | |
| | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 46790 | 5150 | 20 | 46790 | 5150 | 24.37 | 24.32 | 0.05 | | | | | | |
| | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 46790 | 5150 | 24.31 | 24.32 | -0.01 | | | |
| [2A]-5B-66A | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 46790 | 5150 | 20 | 46790 | 5150 | 24.38 | 24.34 | 0.03 | | | | | | |
| | [2A] 5B | [2A] 5B | [2A] 5B | [2A] 5B | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 5 | 2597 | 888.7 | 20 | 900 | 1960 | 20 | 46790 | 5150 | 24.31 | 24.44 | -0.13 | | | |
| | [2A] 5A | [2A] 46C | [2A] 46C | [2A] 46C | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.38 | 24.46 | -0.09 | | | |
| | [2A] 5A | [2A] 46C | [2A] 46C | [2A] 46C | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.37 | 24.49 | -0.11 | | | |
| 2A-5A-46A-[66A] | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.38 | 24.49 | -0.11 | | | |
| | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.37 | 24.45 | -0.08 | | | |
| | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.31 | 24.39 | -0.08 |
| | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.38 | 24.52 | -0.14 | | | |
| [2A]-5A-46A-[66A] | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.38 | 24.43 | -0.05 | | | |
| | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.37 | 24.38 | -0.01 | | | |
| | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.31 | 24.35 | -0.04 |
| | [2A] 5A | [2A] 46A | [2A] 46A | [2A] 46A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 20 | 50695 | 5537.5 | 20 | 50467 | 5517.7 | 24.38 | 24.43 | -0.05 | | | |
| 2A-5A-[48C] | [2A] 5A | [2A] 48C | [2A] 48C | [2A] 48C | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.38 | 24.48 | -0.1 | | | |
| | [2A] 5A | [2A] 48C | [2A] 48C | [2A] 48C | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.37 | 24.36 | 0.01 | | | |
| | [2A] 5A | [2A] 48C | [2A] 48C | [2A] 48C | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 24.31 | 24.43 | -0.12 | | | |
| | [2A] 5A | [2A] 48C | [2A] 48C | [2A] 48C | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.38 | 24.42 | -0.05 | | | |
| 2A-5A-48A-[66A] | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.38 | 24.38 | 0.0 | | | |
| | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.37 | 24.41 | -0.04 | | | |
| | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 24.31 | 24.31 | 0.0 | | | |
| | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.38 | 24.5 | -0.12 | | | |
| 2A-5A-[48A]-66A | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 20 | 18700 | 1880 | 1999 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.38 | 24.45 | -0.08 | | | |
| | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.37 | 24.31 | 0.06 | | | |
| | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 20 | 132572 | 1770 | 1449 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 20 | 55773 | 3603.3 | 24.31 | 24.32 | -0.01 | | | |
| | [2A] 5A | [2A] 48A | [2A] 48A | [2A] 48A | | | | QPSK | 10 | 20525 | 836.5 | 10 | 10 | 2525 | 8 | | | | | | | | | | | | | | | | | | | | | |

DL CA with 4x4 MIMO output power results (Continued)

| EUTRA CA configuration (BCS) | Bands | | | | | | | | UL | | | | | | | | DL | | | | | | | | LTE Rel 8 Tx Power [dBm] | LTE Rel 10 Tx Power [dBm] | Delta | | | |
|------------------------------|-------|------|------|-------|-------|------|-----|------|----------|---------|-------------|------------|----------|---------|-------------|----------|---------|-------------|----------|---------|-------------|----------|---------|-------------|--------------------------|---------------------------|-------|----------|---------|-------------|
| | SCC1 | SCC2 | SCC3 | SCC4 | SCC5 | SCC8 | PCC | | SCC1 | | SCC2 | | SCC3 | | SCC4 | | SCC5 | | SCC8 | | | | | | | | | | | |
| | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | Mode | BW (MHz) | Channel | Freq. (MHz) | RBO/Offset | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | BW (MHz) | Channel | Freq. (MHz) | | | | BW (MHz) | Channel | Freq. (MHz) |
| [2A] 5A-66C | [2A] | 5A | 66C | 66C | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 10 | 2525 | 881.5 | 20 | 66786 | 2145 | 20 | 66588 | 2125.2 | 24.38 | 24.44 | -0.06 | | | |
| | [2A] | 5A | 66C | 66C | | | | QPSK | 10 | 20525 | 898.5 | 10 | 10 | 2525 | 881.5 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 20 | 66588 | 2125.2 | 24.37 | 24.42 | -0.05 | | | |
| | [2A] | 66C | 66C | [2A] | 5A | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 66838 | 2150.2 | 20 | 900 | 1960 | 10 | 2525 | 881.5 | 20 | 24.31 | 24.41 | -0.1 | | |
| [2A] 7A-7A-13A | [2A] | 7A | 7A | 13A | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 2850 | 2630 | 20 | 3350 | 2630 | 20 | 900 | 1960 | 10 | 5230 | 751 | 24.38 | 24.48 | -0.1 |
| | [2A] | 7A | 7A | [2A] | 13A | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 900 | 1960 | 10 | 5230 | 751 | 23.24 | 23.32 | -0.08 | | | |
| | [2A] | [2A] | 7A | 7A | 7A | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 24.38 | 23.69 | -0.11 | | |
| [2A] 7C-13A | [2A] | 7C | [2A] | 13A | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 3100 | 2655 | 20 | 2902 | 2635.2 | 10 | 5230 | 751 | 24.38 | 24.5 | -0.12 | | | |
| | 7C | 7C | [2A] | 13A | | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3048 | 2649.8 | 20 | 900 | 1960 | 10 | 5230 | 751 | 23.24 | 23.35 | -0.11 | | | |
| | [2A] | [2A] | 7C | 7C | | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 2902 | 2635.2 | 20 | 2902 | 2635.2 | 24.38 | 23.7 | -0.12 | | | |
| 2A-7A-7A-66A | [2A] | 7A | 7A | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 2850 | 2630 | 20 | 3350 | 2630 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 24.38 | 24.47 | -0.09 |
| | [66A] | 2A | 7A | 2A | [66A] | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.24 | 0 | | | |
| | [2A] | 7A | 7A | 66A | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 24.31 | 24.35 | -0.04 | | |
| [2A] 7A-7A-66A | [2A] | 7A | [2A] | 66A | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 2850 | 2630 | 20 | 3350 | 2630 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 24.38 | 24.43 | -0.05 |
| | [2A] | 7A | 7A | [66A] | | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.36 | -0.12 | | | |
| | [2A] | 7A | 7A | [66A] | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 24.31 | 24.34 | -0.03 | | |
| [2A] 7A-7A-66A | [2A] | 7A | 7A | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 2850 | 2630 | 20 | 3350 | 2630 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 24.38 | 24.5 | -0.12 |
| | [2A] | 7A | 7A | [66A] | | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.35 | -0.11 | | | |
| | [2A] | 7A | 7A | [66A] | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2850 | 2630 | 20 | 3350 | 2680 | 20 | 24.31 | 24.41 | -0.1 | | |
| 2A-7C-66A | [2A] | 7C | 7C | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 3100 | 2655 | 20 | 2902 | 2635.2 | 20 | 66786 | 2145 | 24.38 | 24.47 | -0.09 | | | |
| | [66A] | 2A | 7C | 7C | [66A] | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3048 | 2649.8 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.35 | -0.11 | | | |
| | [2A] | 7C | 7C | [66A] | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2902 | 2635.2 | 20 | 2902 | 2635.2 | 24.31 | 24.36 | -0.05 | | | |
| [2A] 7C-66A | [2A] | 7C | 7C | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 3100 | 2655 | 20 | 2902 | 2635.2 | 20 | 66786 | 2145 | 24.38 | 24.49 | -0.08 | | | |
| | 7C | 7C | [2A] | 66A | | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3048 | 2649.8 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.35 | -0.11 | | | |
| | [66A] | [2A] | 7C | 7C | [66A] | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2902 | 2635.2 | 20 | 2902 | 2635.2 | 24.31 | 24.36 | -0.05 | | | |
| [2A] 7C-66A | [2A] | 7C | 7C | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 3100 | 2655 | 20 | 2902 | 2635.2 | 20 | 66786 | 2145 | 24.38 | 24.49 | -0.08 | | | |
| | 7C | 7C | [2A] | 66A | | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3048 | 2649.8 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.35 | -0.11 | | | |
| | [66A] | [2A] | 7C | 7C | [66A] | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2902 | 2635.2 | 20 | 2902 | 2635.2 | 24.31 | 24.36 | -0.05 | | | |
| [2A] 7C-66A | [2A] | 7C | 7C | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 3100 | 2655 | 20 | 2902 | 2635.2 | 20 | 66786 | 2145 | 24.38 | 24.49 | -0.08 | | | |
| | 7C | 7C | [2A] | 66A | | | | QPSK | 20 | 20850 | 2510 | 10 | 20 | 2850 | 2630 | 20 | 3048 | 2649.8 | 20 | 900 | 1960 | 20 | 66786 | 2145 | 23.24 | 23.35 | -0.11 | | | |
| | [66A] | [2A] | 7C | 7C | [66A] | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 20 | 2902 | 2635.2 | 20 | 2902 | 2635.2 | 24.31 | 24.36 | -0.05 | | | |
| [2A] 13A-46C | [2A] | 13A | 46C | 46C | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 5230 | 751 | 20 | 50665 | 5537.5 | 20 | 50467 | 5517.9 | 24.38 | 24.49 | -0.11 | | | |
| | [13A] | [2A] | 46C | 46C | | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 50665 | 5537.5 | 20 | 50467 | 5517.9 | 23.58 | 23.64 | -0.06 | | | |
| | [2A] | 13A | 46A | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 5230 | 751 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 24.38 | 24.39 | -0.01 | | | |
| 2A-11A-46A-66A | [2A] | 13A | 46A | [66A] | | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 23.58 | 23.67 | -0.09 | | | |
| | [66A] | 2A | 13A | 46A | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 5230 | 751 | 20 | 50665 | 5537.5 | 24.31 | 24.45 | -0.14 | | | |
| | [2A] | 13A | 46A | 66A | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 10 | 5230 | 751 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 24.38 | 24.51 | -0.13 | | | |
| [2A] 13A-46A-66A | [13A] | [2A] | 46A | [66A] | | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 23.58 | 23.65 | -0.07 | | | |
| | [66A] | [2A] | 13A | 46A | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 5230 | 751 | 20 | 50665 | 5537.5 | 24.31 | 24.42 | -0.11 | | | |
| | [2A] | 13A | 46A | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 10 | 5230 | 751 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 24.38 | 24.44 | -0.06 | | | |
| [2A] 13A-46A-66A | [13A] | [2A] | 46A | [66A] | | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 23.58 | 23.64 | -0.06 | | | |
| | [66A] | [2A] | 13A | 46A | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 5230 | 751 | 20 | 50665 | 5537.5 | 24.31 | 24.45 | -0.14 | | | |
| | [2A] | 13A | 46A | [66A] | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 10 | 5230 | 751 | 20 | 50665 | 5537.5 | 20 | 66786 | 2145 | 24.38 | 24.45 | -0.07 | | | |
| 2A-13A-48C | [2A] | 13A | 48C | 48C | | | | QPSK | 20 | 18700 | 1860 | 1969 | 20 | 700 | 1940 | 20 | 5230 | 751 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 24.38 | 24.45 | -0.07 | | | |
| | [13A] | 2A | 48C | 48C | | | | QPSK | 10 | 23230 | 782 | 10 | 10 | 5230 | 751 | 20 | 900 | 1960 | 20 | 55773 | 3603.3 | 20 | 55575 | 3583.5 | 23.58 | 23.71 | -0.13 | | | |
| | [2A] | 13A | 48C | 48C | | | | QPSK | 20 | 132572 | 1770 | 1489 | 20 | 67036 | 2170 | 20 | 900 | 1960 | 10 | 5230 | 751 | 20 | 55773 | 3603.3 | 24.38 | 24.42 | -0.14 | | | |

