

Appendix B. SAR Tissue Specification

The brain mixtures consist of a viscous gel using hydrox-ethyl cellulose(HEC) gelling agent and saline solution. Preservation with a bactericide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue.

| Frequency (MHz) | 750 ~ 835 | | 1 750 | | 1 900 | | 2 450 | | 5 200 ~ 5 800 | |
|--|-------------|-------|-------|-------|-----------------------------|-------|-------|-------|---------------|-------|
| Tissue Type | Head | Body | Head | Body | Head | Body | Head | Body | Head | Body |
| Ingredient | % by weight | | | | | | | | | |
| Water | 40.29 | 51.97 | 53.00 | 68.00 | 55.00 | 70.50 | 72.00 | 73.00 | 65.52 | 80.00 |
| Salt (NaCl) | 1.38 | 0.93 | 0.40 | 0.20 | 0.35 | 0.30 | 0.10 | 0.10 | 0 | 0 |
| Sugar | 57.90 | 47.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HEC | 0.24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bactericide | 0.19 | 0.10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Triton X-100 | 0 | 0 | 0 | 0 | 0 | 0 | 20.00 | 0 | 17.24 | 0 |
| DGBE | 0 | 0 | 46.60 | 31.80 | 44.65 | 29.20 | 0 | 26.90 | 0 | 0 |
| Diethylene glycol hexyl ether | 0 | 0 | 0 | 0 | 0 | 0 | 7.90 | 0 | 17.24 | 0 |
| Polysorbate (Tween) 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20.00 |
| Tissue parameter target by C. Gabriel and G. Harts grove. | | | | | | | | | | |
| Salt: 99 % Pure Sodium Chloride | | | | | Sucrose: 98 % Pure Sucrose | | | | | |
| Water: De-ionized, 16 M resistivity | | | | | HEC: Hydroxyethyl Cellulose | | | | | |
| DGBE: 99 % Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy) ethanol] | | | | | | | | | | |
| Triton X-100(ultra-pure): Polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl] ether | | | | | | | | | | |

Appendix C. LTE CA RF Conducted Power

C.1 LTE Downlink Carrier Aggregation



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

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

In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs

| Index | 2CC | Restriction | Completely Covered by Measurement Superset | Reverse |
|---------|------------|--------------|--|---------|
| 2CC #1 | CA_2A-2A | N/A | No | N/A |
| 2CC #2 | CA_2C | N/A | No | N/A |
| 2CC #3 | CA_2A-4A | N/A | 3CC #1 | Yes |
| 2CC #4 | CA_2A-5A | N/A | 3CC #1 | Yes |
| 2CC #5 | CA_2A-12A | N/A | No | Yes |
| 2CC #6 | CA_2A-17A | N/A | No | Yes |
| 2CC #7 | CA_2A-66A | N/A | No | Yes |
| 2CC #8 | CA_4A-4A | N/A | No | N/A |
| 2CC #9 | CA_4A-5A | N/A | 3CC #1 | Yes |
| 2CC #10 | CA_4A-12A | N/A | No | Yes |
| 2CC #11 | CA_4A-17A | N/A | No | Yes |
| 2CC #12 | CA_5A-41A | B41 SCC Only | No | N/A |
| 2CC #13 | CA_5A-66A | N/A | 3CC #2 | Yes |
| 2CC #14 | CA_12A-66A | N/A | 3CC #3 | Yes |
| 2CC #15 | CA_26A-41A | B41 SCC Only | No | N/A |
| 2CC #16 | CA_41A-41A | N/A | No | N/A |
| 2CC #17 | CA_41C | N/A | No | N/A |
| 2CC #18 | CA_66A-66A | N/A | 3CC #2 | N/A |
| 2CC #19 | CA_66B | N/A | No | N/A |
| 2CC #20 | CA_66C | N/A | No | N/A |

| Index | 3CC | Restriction | Completely Covered by Measurement Superset | Reverse |
|--------|----------------|-------------|--|---------|
| 3CC #1 | CA_2A-4A-5A | N/A | No | Yes |
| 3CC #2 | CA_5A-66A-66A | N/A | No | Yes |
| 3CC #3 | CA_12A-66A-66A | N/A | No | Yes |

| | | |
|--|---|--|
| <p>Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-31-285-0894 FAX: 82-505-299-8311 www.kctl.co.kr</p> | <p>Report No.: KR23-SPF0002-A Page (327) of (358)</p> | <p> </p> |
|--|---|--|

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

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



C.2.1 Downlink Carrier Aggregation RF Conducted Powers

C.2.1.1 LTE Band 2 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|-------------|--------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|--------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-2A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B2 | 20 | 1100 | 1980.0 | N/A | | | | 23.55 | 23.62 |
| CA_2C | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B2 | 20 | 1098 | 1979.8 | N/A | | | | 23.50 | 23.62 |
| CA_2A-12A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B12 | 10 | 5095 | 737.5 | N/A | | | | 23.55 | 23.62 |
| CA_2A-17A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B17 | 10 | 5790 | 740.0 | N/A | | | | 23.54 | 23.62 |
| CA_2A-66A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B66 | 20 | 66786 | 2145.0 | N/A | | | | 23.52 | 23.62 |
| CA_2A-4A-5A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B4 | 20 | 2175 | 2132.5 | LTE B5 | 10 | 2300 | 881.5 | 23.59 | 23.62 |

C.2.1.2 LTE Band 4 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|-------------|--------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|--------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_4A-4A | LTE B4 | 20 | 20300 | 1745.0 | QPSK | 1 | 49 | 2300 | 2145.0 | LTE B4 | 20 | 2050 | 2120.0 | N/A | | | | 23.28 | 23.40 |
| CA_4A-12A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B12 | 10 | 5095 | 737.5 | N/A | | | | 23.32 | 23.41 |
| CA_4A-17A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B17 | 10 | 5790 | 740.0 | N/A | | | | 23.27 | 23.41 |
| CA_2A-4A-5A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B2 | 20 | 900 | 1960.0 | LTE B5 | 10 | 2525 | 881.5 | 23.36 | 23.41 |

C.2.1.3 LTE Band 5 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|---------------|--------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|---------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_5A-41A | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 25 | 2525 | 881.5 | LTE B41 | 20 | 40620 | 2593.0 | N/A | | | | 24.58 | 24.64 |
| CA_2A-4A-5A | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 25 | 2525 | 881.5 | LTE B2 | 20 | 900 | 1960.0 | LTE B4 | 20 | 2175 | 2132.5 | 24.54 | 24.64 |
| CA_5A-66A-66A | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 25 | 2525 | 881.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 24.51 | 24.64 |

C.2.1.4 LTE Band 12 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|----------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|---------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-12A | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 25 | 5095 | 737.5 | LTE B2 | 20 | 900 | 1960.0 | N/A | | | | 23.86 | 23.96 |
| CA_12A-66A-66A | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 25 | 5095 | 737.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 23.93 | 23.96 |

C.2.1.6 LTE Band 17 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|-------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|--------|----------|----------|------------------|-------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-17A | LTE B17 | 10 | 23790 | 710.0 | QPSK | 1 | 25 | 5790 | 740.0 | LTE B2 | 10 | 900 | 1960.0 | N/A | | | | 23.96 | 23.99 |
| CA_4A-17A | LTE B17 | 10 | 23790 | 710.0 | QPSK | 1 | 25 | 5790 | 740.0 | LTE B4 | 10 | 2050 | 2120.0 | N/A | | | | 23.93 | 23.99 |

C.2.1.7 LTE Band 26 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|-------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|-------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | 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 | 36 | 8865 | 876.5 | LTE B41 | 20 | 40620 | 2593.0 | N/A | | | | 24.75 | 24.81 |

C.2.1.8 LTE Band 41 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | SCC 3 | | | | Power | |
|-------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|-------|----------|----------|------------------|-------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA-41A-41A | LTE B41 | 20 | 41490 | 2680.0 | QPSK | 1 | 49 | 41490 | 2680.0 | LTE B41 | 20 | 39750 | 2506.0 | N/A | | | | 23.60 | 23.65 | | | | |
| CA-41C | LTE B41 | 20 | 41490 | 2680.0 | QPSK | 1 | 49 | 41490 | 2680.0 | LTE B41 | 20 | 41292 | 2660.2 | N/A | | | | 23.56 | 23.65 | | | | |

C.2.1.9 LTE Band 66 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|----------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|---------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-66A | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B2 | 20 | 900 | 1960.0 | N/A | | | | 23.25 | 23.36 |
| CA_66B | LTE B66 | 15 | 132322 | 1745.0 | QPSK | 1 | 36 | 66786 | 2145.0 | LTE B66 | 5 | 66879 | 2154.3 | N/A | | | | 23.33 | 23.38 |
| CA_66C | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 66734 | 2139.8 | N/A | | | | 23.32 | 23.36 |
| CA_5A-66A-66A | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B5 | 10 | 2525 | 881.5 | 23.23 | 23.36 |
| CA_12A-66A-66A | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B12 | 10 | 5095 | 737.5 | 23.25 | 23.36 |

C.2 LTE Downlink Carrier Aggregation with 4X4 MIMO

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 Appendix C.1 were applied.

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 a 1/4 dB. And for DL MIMO with carrier aggregation, the same SAR test exclusion procedure is considered.

| Index | 2CC | Restriction | Completely Covered by Measurement Superset | Reverse |
|---------|----------------|--------------|--|---------|
| 2CC #1 | CA_2A-[2A] | N/A | No | N/A |
| 2CC #2 | CA_[2A]-2A | N/A | No | N/A |
| 2CC #3 | CA_[2A]-[2A] | N/A | No | N/A |
| 2CC #4 | CA_2A-[4A] | N/A | 3CC#1 | Yes |
| 2CC #5 | CA_[2A]-4A | N/A | No | Yes |
| 2CC #6 | CA_[2A]-[4A] | N/A | No | Yes |
| 2CC #7 | CA_[2A]-5A | N/A | No | Yes |
| 2CC #8 | CA_[2A]-12A | N/A | No | Yes |
| 2CC #9 | CA_[2A]-66A | N/A | No | Yes |
| 2CC #10 | CA_4A-[4A] | N/A | No | N/A |
| 2CC #11 | CA_[4A]-4A | N/A | No | N/A |
| 2CC #12 | CA_[4A]-[4A] | N/A | No | N/A |
| 2CC #13 | CA_[4A]-5A | N/A | 3CC#1 | Yes |
| 2CC #14 | CA_[4A]-12A | N/A | No | Yes |
| 2CC #15 | CA_[4A]-17A | N/A | No | Yes |
| 2CC #16 | CA_5A-[41A] | B41 SCC Only | No | No |
| 2CC #17 | CA_5A-[66A] | N/A | 3CC#3 | Yes |
| 2CC #18 | CA_12A-[66A] | N/A | 3CC#6 | Yes |
| 2CC #19 | CA_26A-[41A] | B41 SCC Only | No | No |
| 2CC #20 | CA_41A-[41A] | N/A | No | N/A |
| 2CC #21 | CA_[41A]-41A | N/A | No | N/A |
| 2CC #22 | CA_[41A]-[41A] | N/A | No | N/A |
| 2CC #23 | CA_[41C] | N/A | No | N/A |
| 2CC #24 | CA_66A-[66A] | N/A | 3CC#2 | N/A |
| 2CC #25 | CA_[66A]-66A | N/A | 3CC#3 | N/A |
| 2CC #26 | CA_[66A]-[66A] | N/A | 3CC#4 | N/A |
| 2CC #27 | CA_[66B] | N/A | No | N/A |
| 2CC #28 | CA_[66C] | N/A | No | N/A |

| Index | 3CC | Restriction | Completely Covered by Measurement Superset | Reverse |
|--------|--------------------|-------------|--|---------|
| 3CC #1 | CA_2A-[4A]-5A | N/A | No | Yes |
| 3CC #2 | CA_5A-66A-[66A] | N/A | No | Yes |
| 3CC #3 | CA_5A-[66A]-66A | N/A | No | Yes |
| 3CC #4 | CA_5A-[66A]-[66A] | N/A | No | Yes |
| 3CC #5 | CA_12A-66A-[66A] | N/A | No | Yes |
| 3CC #6 | CA_12A-[66A]-66A | N/A | No | Yes |
| 3CC #7 | CA_12A-[66A]-[66A] | N/A | No | Yes |

Note: “[]” is 4X4 MIMO Configuration.



C.3.1 Downlink Carrier Aggregation RF Conducted Powers With 4X4 MIMO

C.3.1.1 LTE 4X4 MIMO DL Standalone Powers

| LTE Band | BW [MHz] | Ch. | Freq. [MHz] | Mod. | RB Size | RB Offset | 4X4 DL MIMO Tx. Power (dBm) | Single Antenna Tx Power (dBm) |
|----------|----------|--------|-------------|------|---------|-----------|-----------------------------|-------------------------------|
| 2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 23.59 | 23.62 |
| 4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 23.35 | 23.41 |
| 41 | 20 | 39750 | 2506.0 | QPSK | 1 | 49 | 23.60 | 23.64 |
| 66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 23.27 | 23.36 |

C.3.1.2 LTE Band 2 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|---------------|--------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|--------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-[2A] | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B2 | 20 | 1100 | 1980.0 | N/A | | | | 23.50 | 23.62 |
| CA_[2A]-2A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B2 | 20 | 1100 | 1980.0 | N/A | | | | 23.51 | 23.62 |
| CA_[2A]-[2A] | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B2 | 20 | 1100 | 1980.0 | N/A | | | | 23.56 | 23.62 |
| CA_[2A]-4A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B4 | 20 | 2175 | 2132.5 | N/A | | | | 23.59 | 23.62 |
| CA_[2A]-[4A] | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B4 | 20 | 2175 | 2132.5 | N/A | | | | 23.49 | 23.62 |
| CA_[2A]-5A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B5 | 10 | 2525 | 881.5 | N/A | | | | 23.51 | 23.62 |
| CA_[2A]-12A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B12 | 10 | 5095 | 737.5 | N/A | | | | 23.53 | 23.62 |
| CA_[2A]-66A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B66 | 20 | 66786 | 2145.0 | N/A | | | | 23.53 | 23.62 |
| CA_2A-[4A]-5A | LTE B2 | 20 | 18900 | 1880.0 | QPSK | 1 | 49 | 900 | 1960.0 | LTE B4 | 20 | 2175 | 2132.5 | LTE B5 | 10 | 2525 | 881.5 | 23.58 | 23.62 |

C.3.1.3 LTE Band 4 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|---------------|--------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|--------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_[2A]-4A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B2 | 20 | 900 | 1960.0 | N/A | | | | 23.28 | 23.41 |
| CA_[2A]-[4A] | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B2 | 20 | 900 | 1960.0 | N/A | | | | 23.38 | 23.41 |
| CA_4A-[4A] | LTE B4 | 20 | 20300 | 1745.0 | QPSK | 1 | 49 | 2300 | 2145.0 | LTE B4 | 20 | 2050 | 2120.0 | N/A | | | | 23.32 | 23.40 |
| CA_[4A]-4A | LTE B4 | 20 | 20300 | 1745.0 | QPSK | 1 | 49 | 2300 | 2145.0 | LTE B4 | 20 | 2050 | 2120.0 | N/A | | | | 23.38 | 23.40 |
| CA_[4A]-[4A] | LTE B4 | 20 | 20300 | 1745.0 | QPSK | 1 | 49 | 2300 | 2145.0 | LTE B4 | 20 | 2050 | 2120.0 | N/A | | | | 23.30 | 23.40 |
| CA_[4A]-12A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B12 | 10 | 5095 | 737.5 | N/A | | | | 23.30 | 23.41 |
| CA_[4A]-17A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B17 | 10 | 5790 | 740.0 | N/A | | | | 23.37 | 23.41 |
| CA_2A-[4A]-5A | LTE B4 | 20 | 20175 | 1732.5 | QPSK | 1 | 49 | 2175 | 2132.5 | LTE B2 | 20 | 900 | 1960.0 | LTE B5 | 10 | 2525 | 881.5 | 23.35 | 23.41 |

C.3.1.4 LTE Band 5 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|-------------------|--------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|---------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_5A-[41A] | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 0 | 2525 | 881.5 | LTE B41 | 20 | 40620 | 2593.0 | N/A | | | | 24.51 | 24.64 |
| CA_2A-[4A]-5A | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 0 | 2525 | 881.5 | LTE B2 | 20 | 900 | 1960.0 | LTE B4 | 20 | 2175 | 2132.5 | 24.60 | 24.64 |
| CA_5A-66A-[66A] | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 25 | 2525 | 881.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 24.56 | 24.64 |
| CA_5A-[66A]-66A | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 25 | 2525 | 881.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 24.59 | 24.64 |
| CA_5A-[66A]-[66A] | LTE B5 | 10 | 20525 | 836.5 | QPSK | 1 | 25 | 2525 | 881.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 24.58 | 24.64 |

C.3.1.5 LTE Band 12 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|--------------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|---------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_[2A]-12A | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 25 | 5095 | 737.5 | LTE B2 | 20 | 900 | 1960.0 | N/A | | | | 23.88 | 23.96 |
| CA_[4A]-12A | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 0 | 5095 | 737.5 | LTE B4 | 20 | 2175 | 2132.5 | N/A | | | | 23.84 | 23.96 |
| CA_12A-66A-[66A] | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 25 | 5095 | 737.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 23.87 | 23.96 |
| CA_12A-[66A]-66A | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 25 | 5095 | 737.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 23.92 | 23.96 |
| CA_12A-[66A]-[66A] | LTE B12 | 10 | 23095 | 707.5 | QPSK | 1 | 25 | 5095 | 737.5 | LTE B66 | 20 | 66786 | 2145.0 | LTE B66 | 20 | 67036 | 2170.0 | 23.90 | 23.96 |

C.3.1.7 LTE Band 17 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|-------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|--------|----------|----------|------------------|-------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_[4A]-17A | LTE B17 | 10 | 23790 | 710.0 | QPSK | 1 | 25 | 5790 | 740.0 | LTE B4 | 10 | 2050 | 2120.0 | N/A | | | | 23.96 | 23.99 |

C.3.1.8 LTE Band 26 as PCC

| Combination | PCC | | | | | | | | | SCC 1 | | | | SCC 2 | | | | Power | |
|--------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|-------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | 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 | 36 | 8865 | 876.5 | LTE B41 | 20 | 40620 | 2593.0 | N/A | | | | 24.69 | 24.81 |

C.3.1.9 LTE Band 41 as PCC

| Combination | PCC | | | | | | | | SCC 1 | | | SCC 2 | | | SCC 3 | | | Power | | | | |
|----------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|------|----------|----------|------------------|-------|----------|----------|------------------|--|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) |
| CA-41A-[41A] | LTE B41 | 20 | 41490 | 2680.0 | QPSK | 1 | 49 | 41490 | 2680.0 | LTE B41 | 20 | 39750 | 2506.0 | N/A | | | N/A | | | 23.61 | 23.65 | |
| CA-[41A]-41A | LTE B41 | 20 | 41490 | 2680.0 | QPSK | 1 | 49 | 41490 | 2680.0 | LTE B41 | 20 | 39750 | 2506.0 | N/A | | | N/A | | | 23.55 | 23.65 | |
| CA-[41A]-[41A] | LTE B41 | 20 | 41490 | 2680.0 | QPSK | 1 | 49 | 41490 | 2680.0 | LTE B41 | 20 | 39750 | 2506.0 | N/A | | | N/A | | | 23.62 | 23.65 | |
| CA-41C | LTE B41 | 20 | 41490 | 2680.0 | QPSK | 1 | 49 | 41490 | 2680.0 | LTE B41 | 20 | 41292 | 2660.2 | N/A | | | N/A | | | 23.59 | 23.65 | |

C.3.1.10 LTE Band 66 as PCC

| Combination | PCC | | | | | | | | SCC 1 | | | SCC 2 | | | Power | | | | |
|--------------------|---------|----------|----------|------------------|------|--------------|----------------|----------|------------------|---------|----------|----------|------------------|---------|----------|----------|------------------|--|-----------------------------------|
| | Band | BW [MHz] | (UL) Ch. | (UL) Freq. [MHz] | Mod. | (UL) RB Size | (UL) RB Offset | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | Band | BW [MHz] | (DL) Ch. | (DL) Freq. [MHz] | LTE Tx. Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_[66B] | LTE B66 | 15 | 132322 | 1745.0 | QPSK | 1 | 36 | 66786 | 2145.0 | LTE B66 | 5 | 66879 | 2154.3 | N/A | | | 23.33 | 23.38 | |
| CA_[66C] | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 66734 | 2139.8 | N/A | | | 23.25 | 23.36 | |
| CA_5A-[66A]-[66A] | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B5 | 10 | 2525 | 881.5 | 23.28 | 23.36 |
| CA_5A-[66A]-66A | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B5 | 10 | 2525 | 881.5 | 23.34 | 23.36 |
| CA_5A-[66A]-[66A] | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B5 | 10 | 2525 | 881.5 | 23.32 | 23.36 |
| CA_12A-[66A]-[66A] | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B12 | 10 | 5095 | 737.5 | 23.28 | 23.36 |
| CA_12A-[66A]-66A | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B12 | 10 | 5095 | 737.5 | 23.35 | 23.36 |
| CA_12A-[66A]-[66A] | LTE B66 | 20 | 132072 | 1720.0 | QPSK | 1 | 49 | 66536 | 2120.0 | LTE B66 | 20 | 67036 | 2170.0 | LTE B12 | 10 | 5095 | 737.5 | 23.26 | 23.36 |