

### 3 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                      |              |                                     |
|----------------------|--------------|-------------------------------------|
| Water                | 50 – 73 %    |                                     |
| Non-ionic detergents | 25 – 50 %    | polyoxyethylenesorbitan monolaurate |
| NaCl                 | 0 – 2 %      |                                     |
| Preservative         | 0.05 – 0.1 % | Preventol-D7                        |

Safety relevant ingredients:

|                    |         |                                                                                                        |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|
| CAS-No. 55965-84-9 | < 0.1 % | aqueous preparation, containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|

|                   |       |                                     |
|-------------------|-------|-------------------------------------|
| CAS-No. 9005-64-5 | <50 % | polyoxyethylenesorbitan monolaurate |
|-------------------|-------|-------------------------------------|

According to international guidelines, the product is not a dangerous mixture and therefore not required to be marked by symbols.

**Figure D-4**  
**Composition of 2.4 GHz Head Tissue Equivalent Matter**

**Note:** 2.4 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL1900-3800V3) |
| Product No.  | SL AAH 196 AB (Batch: 160330-1)                 |
| Manufacturer | SPEAG                                           |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

Validation results were within  $\pm 2.5\%$  towards the target values of Methanol.

#### Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

#### Test Condition

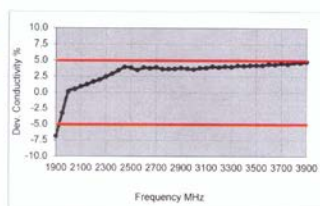
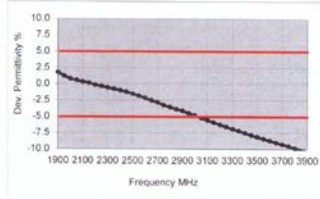
|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 30-Mar-16                                                   |
| Operator        | WM                                                          |

#### Additional Information

TSL Density 1.054 g/cm<sup>3</sup>

TSL Heat-capacity 3.389 kJ/(kg·K)

| f [MHz] | Measured    |              |          | Target      |              |          | Diff to Target [%] |                    |                |
|---------|-------------|--------------|----------|-------------|--------------|----------|--------------------|--------------------|----------------|
|         | $\epsilon'$ | $\epsilon''$ | $\sigma$ | $\epsilon'$ | $\epsilon''$ | $\sigma$ | $\Delta\epsilon'$  | $\Delta\epsilon''$ | $\Delta\sigma$ |
| 1900    | 40.7        | 12.3         | 1.3      | 40.0        | 1.4          | 1.7      | -6.9               |                    |                |
| 1950    | 40.5        | 12.5         | 1.4      | 40.0        | 1.4          | 1.2      | -3.3               |                    |                |
| 2000    | 40.3        | 12.6         | 1.4      | 40.0        | 1.4          | 0.8      | 0.1                |                    |                |
| 2050    | 40.1        | 12.7         | 1.5      | 39.9        | 1.4          | 0.6      | 0.5                |                    |                |
| 2100    | 39.9        | 12.9         | 1.5      | 39.8        | 1.5          | 0.3      | 0.9                |                    |                |
| 2150    | 39.8        | 13.0         | 1.6      | 39.7        | 1.5          | 0.1      | 1.2                |                    |                |
| 2200    | 39.6        | 13.1         | 1.6      | 39.6        | 1.6          | -0.2     | 1.7                |                    |                |
| 2250    | 39.4        | 13.2         | 1.7      | 39.6        | 1.6          | -0.3     | 2.0                |                    |                |
| 2300    | 39.2        | 13.3         | 1.7      | 39.5        | 1.7          | -0.6     | 2.4                |                    |                |
| 2350    | 39.1        | 13.5         | 1.8      | 39.4        | 1.7          | -0.8     | 2.9                |                    |                |
| 2400    | 38.9        | 13.6         | 1.8      | 39.3        | 1.8          | -1.0     | 3.4                |                    |                |
| 2450    | 38.7        | 13.7         | 1.9      | 39.2        | 1.8          | -1.2     | 4.0                |                    |                |
| 2500    | 38.5        | 13.8         | 1.9      | 39.1        | 1.9          | -1.5     | 3.9                |                    |                |
| 2550    | 38.3        | 13.9         | 2.0      | 39.1        | 1.9          | -1.9     | 3.5                |                    |                |
| 2600    | 38.2        | 14.1         | 2.0      | 39.0        | 2.0          | -2.2     | 3.8                |                    |                |
| 2650    | 37.9        | 14.2         | 2.1      | 38.9        | 2.0          | -2.6     | 3.8                |                    |                |
| 2700    | 37.8        | 14.3         | 2.2      | 38.9        | 2.1          | -2.8     | 3.9                |                    |                |
| 2750    | 37.5        | 14.4         | 2.2      | 38.8        | 2.1          | -3.3     | 3.6                |                    |                |
| 2800    | 37.4        | 14.5         | 2.3      | 38.8        | 2.2          | -3.6     | 3.6                |                    |                |
| 2850    | 37.2        | 14.6         | 2.3      | 38.7        | 2.2          | -3.9     | 3.7                |                    |                |
| 2900    | 37.0        | 14.7         | 2.4      | 38.6        | 2.3          | -4.1     | 3.8                |                    |                |
| 2950    | 36.8        | 14.8         | 2.4      | 38.6        | 2.3          | -4.5     | 3.7                |                    |                |
| 3000    | 36.6        | 14.9         | 2.5      | 38.5        | 2.4          | -4.8     | 3.6                |                    |                |
| 3050    | 36.4        | 15.0         | 2.5      | 38.4        | 2.5          | -5.2     | 3.8                |                    |                |
| 3100    | 36.2        | 15.1         | 2.6      | 38.4        | 2.5          | -5.6     | 3.8                |                    |                |
| 3150    | 36.1        | 15.2         | 2.7      | 38.3        | 2.6          | -5.9     | 4.0                |                    |                |
| 3200    | 35.9        | 15.2         | 2.7      | 38.3        | 2.6          | -6.2     | 3.9                |                    |                |
| 3250    | 35.7        | 15.3         | 2.8      | 38.2        | 2.7          | -6.6     | 4.1                |                    |                |
| 3300    | 35.5        | 15.3         | 2.8      | 38.2        | 2.7          | -6.9     | 4.0                |                    |                |
| 3350    | 35.4        | 15.4         | 2.9      | 38.1        | 2.8          | -7.2     | 4.2                |                    |                |
| 3400    | 35.2        | 15.5         | 2.9      | 38.0        | 2.8          | -7.5     | 4.1                |                    |                |
| 3450    | 35.0        | 15.5         | 3.0      | 38.0        | 2.9          | -7.8     | 4.2                |                    |                |
| 3500    | 34.9        | 15.6         | 3.0      | 37.9        | 2.9          | -8.1     | 4.2                |                    |                |
| 3550    | 34.7        | 15.6         | 3.1      | 37.9        | 3.0          | -8.4     | 4.2                |                    |                |
| 3600    | 34.5        | 15.7         | 3.1      | 37.8        | 3.0          | -8.7     | 4.4                |                    |                |
| 3650    | 34.4        | 15.8         | 3.2      | 37.8        | 3.1          | -9.0     | 4.3                |                    |                |
| 3700    | 34.2        | 15.8         | 3.3      | 37.7        | 3.1          | -9.3     | 4.5                |                    |                |
| 3750    | 34.1        | 15.9         | 3.3      | 37.6        | 3.2          | -9.5     | 4.4                |                    |                |
| 3800    | 33.9        | 15.9         | 3.4      | 37.6        | 3.2          | -9.9     | 4.7                |                    |                |
| 3850    | 33.7        | 16.0         | 3.4      | 37.5        | 3.3          | -10.1    | 4.7                |                    |                |



**Figure D-5**  
**2.4 GHz Head Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID ZNFG710VM                   |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>02/28/18 - 03/19/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 4 of 5      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|             |          |
|-------------|----------|
| Water       | 50 – 65% |
| Mineral oil | 10 – 30% |
| Emulsifiers | 8 – 25%  |
| Sodium salt | 0 – 1.5% |

Figure D-6

### Composition of 5 GHz Head Tissue Equivalent Matter

**Note:** 5GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL3500-5800V5) |
| Product No.  | SL AAH 502 AG (Batch: 160331-2)                 |
| Manufacturer | SPEAG                                           |

|                    |                                                                |
|--------------------|----------------------------------------------------------------|
| Measurement Method | TSL dielectric parameters measured using calibrated DAK probe. |
|--------------------|----------------------------------------------------------------|

|                  |                                                                                   |
|------------------|-----------------------------------------------------------------------------------|
| Setup Validation | Validation results were within $\pm 2.5\%$ towards the target values of Methanol. |
|------------------|-----------------------------------------------------------------------------------|

|                   |                                                                                   |
|-------------------|-----------------------------------------------------------------------------------|
| Target Parameters | Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards. |
|-------------------|-----------------------------------------------------------------------------------|

|                |                                                                     |
|----------------|---------------------------------------------------------------------|
| Test Condition | Ambient Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
|                | TSL Temperature 22°C                                                |
|                | Test Date 4-Apr-16                                                  |
|                | Operator WM                                                         |

|                        |                                     |
|------------------------|-------------------------------------|
| Additional Information | TSL Density 0.985 g/cm <sup>3</sup> |
|                        | TSL Heat-capacity 3.383 kJ/(kg*K)   |

|         | Measured    |              |          | Target |       |     | Diff.to Target [%] |                    |                |
|---------|-------------|--------------|----------|--------|-------|-----|--------------------|--------------------|----------------|
| f [MHz] | $\epsilon'$ | $\epsilon''$ | $\sigma$ | eps    | sigma |     | $\Delta\epsilon'$  | $\Delta\epsilon''$ | $\Delta\sigma$ |
| 3400    | 39.0        | 15.12        | 2.86     | 38.0   | 2.81  | 2.5 | 1.8                |                    |                |
| 3500    | 38.8        | 15.09        | 2.94     | 37.9   | 2.91  | 2.3 | 0.9                |                    |                |
| 3600    | 38.7        | 15.08        | 3.02     | 37.8   | 3.02  | 2.3 | 0.2                |                    |                |
| 3700    | 38.6        | 15.08        | 3.10     | 37.7   | 3.12  | 2.4 | -0.6               |                    |                |
| 3800    | 38.4        | 15.07        | 3.19     | 37.6   | 3.22  | 2.2 | -0.9               |                    |                |
| 3900    | 38.3        | 15.09        | 3.27     | 37.5   | 3.32  | 2.2 | -1.6               |                    |                |
| 4000    | 38.2        | 15.10        | 3.36     | 37.4   | 3.43  | 2.3 | -1.9               |                    |                |
| 4100    | 38.1        | 15.13        | 3.45     | 37.2   | 3.53  | 2.3 | -2.2               |                    |                |
| 4200    | 38.0        | 15.18        | 3.55     | 37.1   | 3.63  | 2.3 | -2.2               |                    |                |
| 4300    | 37.8        | 15.22        | 3.64     | 37.0   | 3.73  | 2.1 | -2.5               |                    |                |
| 4400    | 37.7        | 15.29        | 3.74     | 36.9   | 3.84  | 2.2 | -2.5               |                    |                |
| 4500    | 37.6        | 15.34        | 3.84     | 36.8   | 3.94  | 2.2 | -2.5               |                    |                |
| 4600    | 37.4        | 15.41        | 3.94     | 36.7   | 4.04  | 2.0 | -2.5               |                    |                |
| 4700    | 37.3        | 15.47        | 4.05     | 36.6   | 4.14  | 2.0 | -2.2               |                    |                |
| 4800    | 37.1        | 15.53        | 4.15     | 36.4   | 4.25  | 1.8 | -2.2               |                    |                |
| 4850    | 37.1        | 15.57        | 4.20     | 36.4   | 4.30  | 2.0 | -2.2               |                    |                |
| 4900    | 37.0        | 15.60        | 4.25     | 36.3   | 4.35  | 1.8 | -2.2               |                    |                |
| 4950    | 36.9        | 15.62        | 4.30     | 36.3   | 4.40  | 1.7 | -2.2               |                    |                |
| 5000    | 36.8        | 15.66        | 4.35     | 36.2   | 4.45  | 1.6 | -2.2               |                    |                |
| 5050    | 36.8        | 15.68        | 4.40     | 36.2   | 4.50  | 1.8 | -2.2               |                    |                |
| 5100    | 36.7        | 15.73        | 4.46     | 36.1   | 4.55  | 1.7 | -2.0               |                    |                |
| 5150    | 36.6        | 15.75        | 4.51     | 36.0   | 4.60  | 1.5 | -2.0               |                    |                |
| 5200    | 36.5        | 15.78        | 4.57     | 36.0   | 4.66  | 1.4 | -1.8               |                    |                |
| 5250    | 36.4        | 15.80        | 4.62     | 35.9   | 4.71  | 1.3 | -1.8               |                    |                |
| 5300    | 36.4        | 15.84        | 4.67     | 35.9   | 4.76  | 1.5 | -1.8               |                    |                |
| 5350    | 36.3        | 15.85        | 4.72     | 35.8   | 4.81  | 1.4 | -1.8               |                    |                |
| 5400    | 36.2        | 15.88        | 4.77     | 35.8   | 4.86  | 1.2 | -1.9               |                    |                |
| 5450    | 36.2        | 15.90        | 4.82     | 35.7   | 4.91  | 1.4 | -1.9               |                    |                |
| 5500    | 36.1        | 15.91        | 4.87     | 35.6   | 4.96  | 1.3 | -1.9               |                    |                |
| 5550    | 36.0        | 15.95        | 4.93     | 35.6   | 5.01  | 1.2 | -1.7               |                    |                |
| 5600    | 35.9        | 15.99        | 4.98     | 35.5   | 5.07  | 1.0 | -1.7               |                    |                |
| 5650    | 35.9        | 16.02        | 5.04     | 35.5   | 5.12  | 1.2 | -1.5               |                    |                |
| 5700    | 35.8        | 16.05        | 5.09     | 35.4   | 5.17  | 1.1 | -1.5               |                    |                |
| 5750    | 35.7        | 16.09        | 5.15     | 35.4   | 5.22  | 1.0 | -1.3               |                    |                |
| 5800    | 35.7        | 16.10        | 5.20     | 35.3   | 5.27  | 1.1 | -1.3               |                    |                |
| 5850    | 35.6        | 16.14        | 5.25     | 35.3   | 5.34  | 0.8 | -1.6               |                    |                |
| 5900    | 35.5        | 16.15        | 5.30     | 35.3   | 5.40  | 0.6 | -1.9               |                    |                |

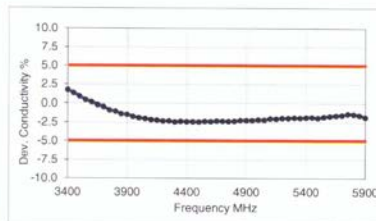
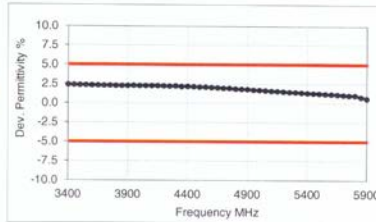


Figure D-7

### 5GHz Head Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID ZNFG710VM                   |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>02/28/18 - 03/19/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 5 of 5      |

## APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

**Table E-1**  
**SAR System Validation Summary – 1g**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT | COND. | PERM.             | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|-------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  | (σ)   | (ε <sub>r</sub> ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| E            | 750         | 3/11/2018  | 3213     | ES3DV3     | 750              | Head  | 0.890             | 40.788        | PASS            | PASS           | PASS            | N/A         | N/A  |
| E            | 835         | 3/5/2018   | 3213     | ES3DV3     | 835              | Head  | 0.925             | 43.335        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E            | 1750        | 3/2/2018   | 3213     | ES3DV3     | 1750             | Head  | 1.397             | 38.415        | PASS            | PASS           | PASS            | N/A         | N/A  |
| G            | 1900        | 8/31/2017  | 3332     | ES3DV3     | 1900             | Head  | 1.457             | 40.398        | PASS            | PASS           | PASS            | GMSK        | PASS |
| H            | 2450        | 9/5/2017   | 7410     | EX3DV4     | 2450             | Head  | 1.869             | 38.852        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| H            | 2600        | 9/5/2017   | 7410     | EX3DV4     | 2600             | Head  | 2.037             | 38.270        | PASS            | PASS           | PASS            | TDD         | PASS |
| K            | 2450        | 5/2/2017   | 7406     | EX3DV4     | 2450             | Head  | 1.873             | 39.496        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| H            | 5250        | 1/31/2018  | 3589     | EX3DV4     | 5250             | Head  | 4.516             | 36.066        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H            | 5600        | 1/31/2018  | 3589     | EX3DV4     | 5600             | Head  | 4.869             | 35.597        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H            | 5750        | 1/31/2018  | 3589     | EX3DV4     | 5750             | Head  | 5.112             | 35.351        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| K            | 750         | 5/3/2017   | 7406     | EX3DV4     | 750              | Body  | 0.952             | 53.745        | PASS            | PASS           | PASS            | N/A         | N/A  |
| J            | 835         | 3/4/2018   | 3914     | EX3DV4     | 835              | Body  | 0.998             | 52.865        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E            | 835         | 3/16/2018  | 3213     | ES3DV3     | 835              | Body  | 0.968             | 53.713        | PASS            | PASS           | PASS            | GMSK        | PASS |
| K            | 1750        | 5/1/2017   | 7406     | EX3DV4     | 1750             | Body  | 1.514             | 51.685        | PASS            | PASS           | PASS            | N/A         | N/A  |
| H            | 1900        | 9/5/2017   | 7410     | EX3DV4     | 1900             | Body  | 1.580             | 52.546        | PASS            | PASS           | PASS            | GMSK        | PASS |
| J            | 1900        | 3/9/2018   | 3914     | EX3DV4     | 1900             | Body  | 1.533             | 53.731        | PASS            | PASS           | PASS            | GMSK        | PASS |
| K            | 2450        | 5/3/2017   | 7406     | EX3DV4     | 2450             | Body  | 1.995             | 50.521        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| K            | 2600        | 5/3/2017   | 7406     | EX3DV4     | 2600             | Body  | 2.203             | 49.895        | PASS            | PASS           | PASS            | TDD         | PASS |
| G            | 2450        | 10/10/2017 | 3332     | ES3DV3     | 2450             | Body  | 2.040             | 51.023        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body  | 5.405             | 48.529        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body  | 5.910             | 47.818        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5750        | 10/24/2017 | 7308     | EX3DV4     | 5750             | Body  | 6.135             | 47.546        | PASS            | PASS           | PASS            | OFDM        | N/A  |

**Table E-2**  
**SAR System Validation Summary – 10g**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT | COND. | PERM.             | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|-------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  | (σ)   | (ε <sub>r</sub> ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| I            | 1750        | 3/12/2018  | 3287     | ES3DV3     | 1750             | Body  | 1.462             | 52.352        | PASS            | PASS           | PASS            | N/A         | N/A  |
| H            | 1750        | 8/30/2017  | 7410     | EX3DV4     | 1750             | Body  | 1.532             | 51.024        | PASS            | PASS           | PASS            | N/A         | N/A  |
| J            | 1900        | 3/9/2018   | 3914     | EX3DV4     | 1900             | Body  | 1.533             | 53.731        | PASS            | PASS           | PASS            | GMSK        | PASS |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body  | 5.405             | 48.529        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body  | 5.910             | 47.818        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5750        | 10/24/2017 | 7308     | EX3DV4     | 5750             | Body  | 6.135             | 47.546        | PASS            | PASS           | PASS            | OFDM        | N/A  |

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID ZNFG710VM                   |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>02/28/18 - 03/19/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX E:<br>Page 1 of 1      |

## APPENDIX G: POWER REDUCTION VERIFICATION

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

### 1.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

### 1.2 Distance Verification Procedure

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02 and FCC Guidance. Each applicable test position was evaluated. The distances were confirmed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Steps 1 and 2 were repeated for all relevant frequency bands.
4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

|                                    |                                                                                                                                                                                                        |                                 |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                  |  <b>SAR EVALUATION REPORT</b>  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>02/28/18 - 03/19/18 | DUT Type:<br>Portable Handset                                                                                                                                                                          | APPENDIX G:<br>Page 1 of 2      |

### 1.3 Main Antenna Verification Summary

**Table G-1**  
**Power Measurement Verification for Main Antenna**

| Mechanism(s)     | Mode/Band | Conducted Power (dBm) |                        |
|------------------|-----------|-----------------------|------------------------|
|                  |           | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Proximity Sensor | UMTS B4   | 24.79                 | 23.98                  |
| Proximity Sensor | UMTS B2   | 25.29                 | 24.27                  |
| Proximity Sensor | CDMA BC1  | 24.98                 | 23.82                  |
| Proximity Sensor | LTE B4    | 24.72                 | 23.94                  |
| Proximity Sensor | LTE B66   | 24.85                 | 24.05                  |
| Proximity Sensor | LTE B2    | 24.87                 | 23.89                  |
| Proximity Sensor | LTE B25   | 25.02                 | 24.11                  |

**Table G-2**  
**Distance Measurement Verification for Main Antenna**

| Mechanism(s)     | Test Condition        | Band | Distance Measurements (mm) |             | Minimum Distance per Manufacturer (mm) |
|------------------|-----------------------|------|----------------------------|-------------|----------------------------------------|
|                  |                       |      | Moving Toward              | Moving Away |                                        |
| Proximity Sensor | Phablet - Back Side   | Mid  | 9                          | 10          | 6                                      |
| Proximity Sensor | Phablet - Front Side  | Mid  | 9                          | 10          | 3                                      |
| Proximity Sensor | Phablet - Bottom Edge | Mid  | 14                         | 16          | 7                                      |

\*Note: Mid band refers to: CDMA BC1, UMTS B2/4, LTE B2/4/25/66

### 1.4 WIFI Verification Summary

**Table G-3**  
**Power Measurement Verification WIFI**

| Mechanism(s) | Mode/Band        | Conducted Power (dBm) |                        |
|--------------|------------------|-----------------------|------------------------|
|              |                  | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Held-to-Ear  | 802.11b          | 20.42                 | 17.57                  |
| Held-to-Ear  | 802.11g          | 19.71                 | 16.63                  |
| Held-to-Ear  | 802.11n (2.4GHz) | 18.46                 | 16.93                  |

\*Note: 802.11ac (2.4 GHz) was not capable of being measured due to equipment limitations.

|                                           |                                                                                                                                                                                                        |                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> ZNFG710VM                  |  <b>SAR EVALUATION REPORT</b>  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>02/28/18 - 03/19/18 | <b>DUT Type:</b><br>Portable Handset                                                                                                                                                                   | <b>APPENDIX G:</b><br>Page 2 of 2      |

# APPENDIX H: DOWNLINK LTE CA RF CONDUCTED POWERS

## 1.1 LTE Downlink Only Carrier Aggregation Test Reduction Methodology

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

### LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA\_2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table 1 – Example of Exclusion Table for SISO Configurations

| Index   | ZCC             | Supported Channel Bandwidth (MHz) |               |               |               | Restriction | Completely Covered by Measurement Superset |
|---------|-----------------|-----------------------------------|---------------|---------------|---------------|-------------|--------------------------------------------|
|         |                 | CC1                               | CC2           | CC3           | CC4           |             |                                            |
| CCC #1  | CA_2A           | 5, 10, 15, 20                     | 5, 10, 15, 20 |               |               | CCC #1      | No                                         |
| CCC #2  | CA_2A-2A        | 5, 10, 15, 20                     | 5, 10, 15, 20 |               |               | CCC #2      | No                                         |
| CCC #3  | CA_2A-2A-4A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |               | CCC #3      | No                                         |
| CCC #4  | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #4      | No                                         |
| CCC #5  | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #5      | No                                         |
| CCC #6  | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #6      | No                                         |
| CCC #7  | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #7      | No                                         |
| CCC #8  | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #8      | No                                         |
| CCC #9  | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #9      | No                                         |
| CCC #10 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #10     | No                                         |
| CCC #11 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #11     | No                                         |
| CCC #12 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #12     | No                                         |
| CCC #13 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #13     | No                                         |
| CCC #14 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #14     | No                                         |
| CCC #15 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #15     | No                                         |
| CCC #16 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #16     | No                                         |
| CCC #17 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #17     | No                                         |
| CCC #18 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #18     | No                                         |
| CCC #19 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #19     | No                                         |
| CCC #20 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #20     | No                                         |
| CCC #21 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #21     | No                                         |
| CCC #22 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #22     | No                                         |
| CCC #23 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #23     | No                                         |
| CCC #24 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #24     | No                                         |
| CCC #25 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #25     | No                                         |
| CCC #26 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #26     | No                                         |
| CCC #27 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #27     | No                                         |
| CCC #28 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #28     | No                                         |
| CCC #29 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #29     | No                                         |
| CCC #30 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #30     | No                                         |
| CCC #31 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #31     | No                                         |
| CCC #32 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #32     | No                                         |
| CCC #33 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #33     | No                                         |
| CCC #34 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #34     | No                                         |
| CCC #35 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #35     | No                                         |
| CCC #36 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #36     | No                                         |
| CCC #37 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #37     | No                                         |
| CCC #38 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #38     | No                                         |
| CCC #39 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #39     | No                                         |
| CCC #40 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #40     | No                                         |
| CCC #41 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #41     | No                                         |
| CCC #42 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #42     | No                                         |
| CCC #43 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #43     | No                                         |
| CCC #44 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #44     | No                                         |
| CCC #45 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #45     | No                                         |
| CCC #46 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #46     | No                                         |
| CCC #47 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #47     | No                                         |
| CCC #48 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #48     | No                                         |
| CCC #49 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #49     | No                                         |
| CCC #50 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #50     | No                                         |
| CCC #51 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #51     | No                                         |
| CCC #52 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #52     | No                                         |
| CCC #53 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #53     | No                                         |
| CCC #54 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #54     | No                                         |
| CCC #55 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #55     | No                                         |
| CCC #56 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #56     | No                                         |
| CCC #57 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #57     | No                                         |
| CCC #58 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #58     | No                                         |
| CCC #59 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #59     | No                                         |
| CCC #60 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #60     | No                                         |
| CCC #61 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #61     | No                                         |
| CCC #62 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #62     | No                                         |
| CCC #63 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #63     | No                                         |
| CCC #64 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #64     | No                                         |
| CCC #65 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #65     | No                                         |
| CCC #66 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #66     | No                                         |
| CCC #67 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #67     | No                                         |
| CCC #68 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #68     | No                                         |
| CCC #69 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #69     | No                                         |
| CCC #70 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #70     | No                                         |
| CCC #71 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #71     | No                                         |
| CCC #72 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #72     | No                                         |
| CCC #73 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #73     | No                                         |
| CCC #74 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #74     | No                                         |
| CCC #75 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #75     | No                                         |
| CCC #76 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #76     | No                                         |
| CCC #77 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #77     | No                                         |
| CCC #78 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #78     | No                                         |
| CCC #79 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #79     | No                                         |
| CCC #80 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #80     | No                                         |
| CCC #81 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #81     | No                                         |
| CCC #82 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #82     | No                                         |
| CCC #83 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #83     | No                                         |
| CCC #84 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #84     | No                                         |
| CCC #85 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #85     | No                                         |
| CCC #86 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #86     | No                                         |
| CCC #87 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #87     | No                                         |
| CCC #88 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #88     | No                                         |
| CCC #89 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #89     | No                                         |
| CCC #90 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #90     | No                                         |
| CCC #91 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #91     | No                                         |
| CCC #92 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #92     | No                                         |
| CCC #93 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #93     | No                                         |
| CCC #94 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #94     | No                                         |
| CCC #95 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #95     | No                                         |
| CCC #96 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #96     | No                                         |
| CCC #97 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #97     | No                                         |
| CCC #98 | CA_2A-2A-4A-12A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | CCC #98     | No                                         |
| CCC #99 | CA_2A-2A-4A-12A | 5, 10,                            |               |               |               |             |                                            |



1.2 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by FCC Guidance, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.
- When a device supports LTE capabilities with overlapping transmission frequency ranges, the standalone powers from the band with a larger transmission frequency range can be used to select measurement configurations for the band with the fully covered transmission frequency range.

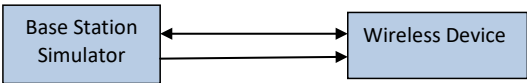


Figure 1  
SISO CA Power Measurement Setup

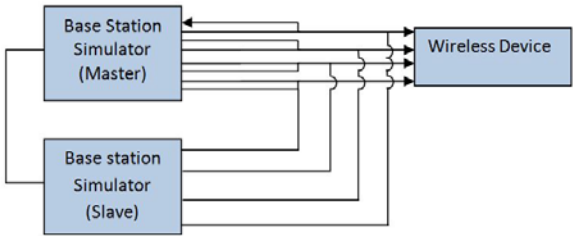


Figure 2  
4x4 DL MIMO CA Power Measurement Setup

|                                    |                                                                                                                                   |                       |                                                                                                 |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                  |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  <b>LG</b> | Reviewed by:<br>Quality Manager |
| Test Dates:<br>02/28/18 – 03/19/18 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                                 | APPENDIX H:<br>Page 2 of 14     |

## 1.3 SISO Downlink Carrier Aggregation RF Conducted Powers

### 1.3.1 LTE Band 12 as PCC

Table 1  
Maximum Output Powers

| Combination    | PCC      |              |                  |                      |            |           |                  |                  |                      |          | SCC 1        |                  |                      | SCC 2    |              |                  | SCC 3                |          |              | Power            |                      |                                       |                                   |       |
|----------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA 12A-25A     | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B25  | 20           | 8365             | 1962.5               | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.43                             | 25.42 |
| CA 4A-12A (1)  | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.43                             | 25.42 |
| CA 4A-12A (2)  | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.45                             | 25.42 |
| CA 2A-12A (1)  | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B2   | 20           | 900              | 1560                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.46                             | 25.42 |
| CA 12A-66A-66A | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2150                 | -        | -            | -                | -                    | -                                     | 25.43                             | 25.42 |
| CA 2A-2A-12A   | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 900              | 1560                 | -        | -            | -                | -                    | -                                     | 25.42                             | 25.42 |
| CA 4A-12B      | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B12  | 10           | 5107             | 736.7                | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | -                                     | 25.44                             | 25.42 |
| CA 2A-4A-12A   | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B2   | 20           | 900              | 1560                 | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | -                                     | 25.43                             | 25.42 |
| CA 2A-2A-12B   | LTE B12  | 5            | 23035            | 701.5                | QPSK       | 1         | 12               | 5035             | 731.5                | LTE B12  | 5            | 5083             | 736.3                | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | -                                     | 25.42                             | 25.42 |

### 1.3.2 LTE Band 13 as PCC

Table 2  
Maximum Output Powers

| Combination       | PCC      |              |                  |                      |            |           |                  |                  |                      |          | SCC 1        |                  |                      |          | SCC 2        |                  |                      |          | SCC 3        |                  |                      |                                       | Power                             |  |
|-------------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|--|
|                   | PCC Band | PCC BW [MHz] | PCC (UL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |
| CA 4A-4A-13A      | LTE B13  | 10           | 21320            | 782                  | QPSK       | 1         | 0                | 5230             | 751                  | LTE B4   | 20           | 2175             | 2132.5               | LTE B4   | 20           | 2150             | 2130                 | -        | -            | -                | -                    | 25.39                                 | 25.49                             |  |
| CA 2A-4A-13A      | LTE B13  | 10           | 21320            | 782                  | QPSK       | 1         | 0                | 5230             | 751                  | LTE B2   | 20           | 900              | 1560                 | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | 25.47                                 | 25.49                             |  |
| CA 2A-13A-66C     | LTE B13  | 10           | 21320            | 782                  | QPSK       | 1         | 0                | 5230             | 751                  | LTE B2   | 20           | 900              | 1560                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66786            | 2145A                | 25.50                                 | 25.48                             |  |
| CA 2A-13A-66A-66A | LTE B13  | 10           | 21320            | 782                  | QPSK       | 1         | 0                | 5230             | 751                  | LTE B2   | 20           | 900              | 1560                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2150                 | 25.49                                 | 25.49                             |  |
| CA 2A-13A-66B     | LTE B13  | 10           | 21320            | 782                  | QPSK       | 1         | 0                | 5230             | 751                  | LTE B2   | 20           | 900              | 1560                 | LTE B66  | 15           | 66786            | 2145                 | LTE B66  | 15           | 66879            | 2144.3               | 25.49                                 | 25.49                             |  |
| CA 2A-13A-66A     | LTE B13  | 10           | 21320            | 782                  | QPSK       | 1         | 0                | 5230             | 751                  | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | LTE B66  | 20           | 66786            | 2145                 | 25.47                                 | 25.49                             |  |

### 1.3.3 LTE Band 5 as PCC

Table 3  
Maximum Output Powers

| Combination     | PCC      |              |                  |                      |            |           |                  |                  |                      |          | SCC 1        |                  |                      |          | SCC 2        |                  |                      |          | SCC 3        |                  |                      |          | SCC 4        |                  |                      |                                       | Power                             |       |
|-----------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|
|                 | PCC Band | PCC BW [MHz] | PCC (UL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA 5A-25A       | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B25  | 20           | 8365             | 1962.5               | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.39                             | 25.39 |
| CA 2A-5A-66A    | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1560                 | LTE B4   | 20           | 2175             | 2132.5               | LTE B4   | 20           | 2150             | 2130                 | -        | -            | -                | -                    | -                                     | 25.39                             | 25.39 |
| CA 5B-66A-66A   | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2150                 | -        | -            | -                | -                    | -                                     | 25.49                             | 25.39 |
| CA 2A-2A-5A     | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | -                                     | 25.32                             | 25.35 |
| CA 2A-5A-66A    | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1560                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2150                 | -        | -            | -                | -                    | -                                     | 25.39                             | 25.39 |
| CA 2A-5A-66B    | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1560                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2150                 | -        | -            | -                | -                    | -                                     | 25.32                             | 25.35 |
| CA 4A-5A        | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B4   | 20           | 2175             | 2132.5               | LTE B4   | 10           | 2100             | 2100                 | -        | -            | -                | -                    | -                                     | 25.39                             | 25.39 |
| CA 2A-2A-5A-66B | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | LTE B66  | 15           | 66786            | 2145                 | LTE B66  | 15           | 2100             | 2100                 | -                                     | 25.38                             | 25.35 |
| CA 2A-5B-66C    | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B2   | 20           | 900              | 1560                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 2100             | 2100                 | -                                     | 25.45                             | 25.35 |
| CA 2A-5A-66C    | LTE B5   | 10           | 20520            | 836.5                | QPSK       | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 2100             | 2100                 | -                                     | 25.49                             | 25.35 |

### 1.3.4 LTE Band 26 as PCC

Table 4  
Maximum Output Powers

| Combination | PCC      |              |                  |                      |            |           |                  |                  |                      | SCC 1    |              |                  | SCC 2                |          |              | Power            |                      |                                       |                                   |
|-------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|             | PCC Band | PCC BW [MHz] | PCC (UL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA 26A-41A  | LTE B26  | 5            | 27015            | 846.5                | QPSK       | 1         | 0                | 9015             | 891.5                | LTE B41  | 20           | 40620            | 2593                 | -        | -            | -                | -                    | 25.48                                 | 25.50                             |
| CA 25A-26A  | LTE B26  | 5            | 27015            | 846.5                | QPSK       | 1         | 0                | 9015             | 891.5                | LTE B25  | 20           | 8365             | 1962.5               | -        | -            | -                | -                    | 25.49                                 | 25.50                             |
| CA 26A-41C  | LTE B26  | 5            | 27015            | 846.5                | QPSK       | 1         | 0                | 9015             | 891.5                | LTE B41  | 20           | 40620            | 2593                 | LTE B41  | 20           | 40422            | 2573.2               | 25.49                                 | 25.50                             |

### 1.3.5 LTE Band 4 as PCC

Table 5  
Maximum Output Powers

| Combination    | PCC      |              |                  |                      |            |           | SCC 1            |                  |                      |          | SCC 2        |                  |                      |          | SCC 3        |                  |                      |          | Power        |                  |                      |                                  |                                   |       |
|----------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------------------------------|-----------------------------------|-------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with CA (Enb) (dBm) | LTE Single Carrier Tx Power (Enb) |       |
| CA 4A-12A (1)  | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                | 25.19                             | 25.20 |
| CA 4A-12A (2)  | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                | 25.14                             | 25.20 |
| CA 2A-4A       | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B2   | 20           | 900              | 1560                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                | 25.19                             | 25.20 |
| CA 4A-12B      | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B12  | 5            | 5095             | 737.5                | LTE B12  | 10           | 5047             | 732.7                | -        | -            | -                | -                    | -                                | 25.12                             | 25.20 |
| CA 2A-4A-12A   | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B2   | 20           | 900              | 1560                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -                                | 25.12                             | 25.20 |
| CA 4A-4A-13A   | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B4   | 20           | 2100             | 2145                 | LTE B13  | 10           | 5230             | 751                  | -        | -            | -                | -                    | -                                | 25.17                             | 25.20 |
| CA 2A-4A-13A   | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B2   | 20           | 900              | 1560                 | LTE B13  | 10           | 5230             | 751                  | -        | -            | -                | -                    | -                                | 25.11                             | 25.20 |
| CA 2A-2A-4A-4A | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B4   | 20           | 2100             | 2145                 | LTE B2   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | -                                | 25.19                             | 25.20 |
| CA 2A-4A-5A    | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B4   | 20           | 2100             | 2145                 | LTE B2   | 20           | 900              | 1560                 | LTE B5   | 10           | 2525             | 881.5                | 24.69                            | 25.20                             |       |
| CA 2A-2A-5A    | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B4   | 20           | 900              | 1560                 | LTE B2   | 20           | 700              | 1540                 | LTE B5   | 10           | 2525             | 881.5                | 24.67                            | 25.20                             |       |
| CA 2A-4A-5B    | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B2   | 20           | 900              | 1560                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | 24.62                            | 25.20                             |       |
| CA 4A-4A-5B    | LTE B4   | 20           | 20050            | 1720                 | QPSK       | 1         | 0                | 2050             | 2120                 | LTE B4   | 20           | 2100             | 2145                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | 24.64                            | 25.20                             |       |

|                                    |                                                                                     |                             |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                  |  | SAR EVALUATION REPORT       |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>02/28/18 – 03/19/18 | DUT Type:<br>Portable Handset                                                       | APPENDIX H:<br>Page 3 of 14 |                                                                                       |                                 |



### Table 6

| Combination    | PCC      |              |                  |                      |            |           | SCC 1            |                      |          |              |                  |                      | SCC 2    |              |                  |                      |          |              | SCC 3            |                      |                            |                                   |       |  | Power |  |
|----------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------------------------|-----------------------------------|-------|--|-------|--|
|                | PCC Band | PCC BW [MHz] | PCC [UL] Channel | PCC [UL] Freq. [MHz] | Modulation | PCC UL/RB | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with CA [dBm] | LTE Single Carrier Tx Power [dBm] |       |  |       |  |
| CA 4A-12A (1)  | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B12      | 10               | 5095                 | 737.5    | -            | -                | -                    | -        | -            | -                | -                    | 24.18                      | 24.20                             |       |  |       |  |
| CA 4A-12A (2)  | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B12      | 10               | 5095                 | 737.5    | -            | -                | -                    | -        | -            | -                | -                    | 24.18                      | 24.20                             |       |  |       |  |
| CA 2A-4A       | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B2       | 20               | 900                  | 1560     | -            | -                | -                    | -        | -            | -                | -                    | 24.20                      | 24.20                             |       |  |       |  |
| CA 4A-12B      | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B12      | 5                | 5095                 | 737.5    | 5            | 5047             | 732.7                | -        | -            | -                | -                    | 24.14                      | 24.20                             |       |  |       |  |
| CA 2A-4A-12A   | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B2       | 20               | 900                  | 1560     | 10           | 5095             | 5095                 | -        | -            | -                | -                    | 24.20                      | 24.20                             |       |  |       |  |
| CA 4A-4A-13A   | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B4       | 20               | 2300                 | 2145     | LTE B13      | 10               | 5230                 | 751      | -            | -                | -                    | -                          | 24.24                             | 24.20 |  |       |  |
| CA 4A-4A-13B   | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B4       | 20               | 2300                 | 2145     | LTE B13      | 10               | 5230                 | 751      | -            | -                | -                    | -                          | 24.24                             | 24.20 |  |       |  |
| CA 2A-2A-4A-4A | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B4       | 20               | 2300                 | 2145     | LTE B2       | 20               | 900                  | 1560     | LTE B2       | 20               | 700                  | 1540                       | 24.16                             | 24.20 |  |       |  |
| CA 2A-4A-4A    | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B4       | 20               | 2300                 | 2145     | LTE B2       | 20               | 900                  | 1560     | LTE B5       | 10               | 2525                 | 881.5                      | 24.19                             | 24.20 |  |       |  |
| CA 2A-2A-4A-5A | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B2       | 20               | 900                  | 1560     | LTE B2       | 20               | 700                  | 1540     | LTE B5       | 10               | 2525                 | 881.5                      | 24.13                             | 24.20 |  |       |  |
| CA 2A-4A-5A    | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B2       | 20               | 900                  | 1560     | LTE B2       | 20               | 700                  | 1540     | LTE B5       | 10               | 2525                 | 881.5                      | 24.17                             | 24.20 |  |       |  |
| CA 4A-4A-5B    | LT1.84   | 20           | 20050            | 1720                 | QPSK       | 1         | 99               | 2050                 | 2120     | LTE B4       | 20               | 2300                 | 2145     | LTE B5       | 10               | 2525                 | 881.5    | LTE B5       | 5                | 2453                 | 874.3                      | 24.15                             | 24.20 |  |       |  |

### 1.3.6 LTE Band 66 as PCC

### Table 7

| Combination                                  | PCC      |              |                  |                      | SCC 1      |                    |                  |                      | SCC 2    |              |                  |                      | SCC 3    |              |                  |                      | SCC 4    |              |                  |                      | LTE Tx Power (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |       |       |
|----------------------------------------------|----------|--------------|------------------|----------------------|------------|--------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|--------------------|-----------------------------------|-------|-------|-------|-------|
|                                              | PCC Band | PCC BW [MHz] | PCC (DL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC QPSK RB Offset | PCC (DL) Channel | PCC (UL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] |                    |                                   |       |       |       |       |
| CA_2A-6A                                     | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B12  | 20           | 900              | 1900                 |          |              |                  |                      |          |              |                  |                      | 21.20              | 21.20                             |       |       |       |       |
| CA_2A-6A-6A                                  | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | 66936    | 2130         | LTE B12          | 10                   | 66936              | 2130                              | 21.20 | 21.20 |       |       |
| CA_2A-6A-6A-6A                               | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12            | 10                                | 66936 | 2130  | 21.20 | 21.20 |
| CA_6A-6A-6A                                  | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12            | 10                                | 66936 | 2130  | 21.20 | 21.20 |
| CA_6A-6A-6A-6A                               | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12            | 10                                | 66936 | 2130  | 21.20 | 21.20 |
| CA_2A-2A-6A-6A                               | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A                            | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A                         | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A                      | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A                   | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A-6A                | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A-6A-6A             | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A-6A-6A-6A          | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A-6A-6A-6A-6A       | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A-6A-6A-6A-6A-6A    | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 | LTE B66  | 20           | 67236            | 2130                 | LTE B12  | 10           | 66936            | 2130                 | LTE B12  | 10           | 5250             | 750                  | 1900               | 1900                              | 21.20 | 21.20 |       |       |
| CA_2A-2A-6A-6A-6A-6A-6A-6A-6A-6A-6A-6A-6A-6A | LTE B66  | 20           | 110207           | 1720                 | QPSK       | 1                  | 66536            | 2120                 |          |              |                  |                      |          |              |                  |                      |          |              |                  |                      |                    |                                   |       |       |       |       |

Table 8

| Combination   | PCC     |              |                  |                      | SCS1       |                  |                  |                      | SCS2         |                  |                      |              | SCS3             |                      |              |                  | SCS4                 |              |                  |                      | LTE LTP with CA Enabled (MHz) | LTE Single Carrier S Power (dBm) |       |
|---------------|---------|--------------|------------------|----------------------|------------|------------------|------------------|----------------------|--------------|------------------|----------------------|--------------|------------------|----------------------|--------------|------------------|----------------------|--------------|------------------|----------------------|-------------------------------|----------------------------------|-------|
|               | PCC BW  | PCC BW [MHz] | PCC (DL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL/RB Offset | PCC (DL) Channel | PCC (UL) Freq. [MHz] | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] | SCC BW [MHz] | SCC (DL) Channel | SCC (UL) Freq. [MHz] |                               |                                  |       |
| CA_2A-56A     | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B62      | 20               | 900                  | 1760         | LTE B66          | 20                   | 66612        | 2320             | LTE B62              | 20           | 900              | 1760                 | 24.15                         | 24.15                            |       |
| CA_2A-66A-56A | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B12          | 10                   | 9076         | 232.5            | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-66A-56A | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B12          | 10                   | 9076         | 232.5            | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_66C-56A    | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_66C-56A    | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            | 1720                 | QPSK       | 1                | 66536            | 2320                 | LTE B66      | 20               | 67236                | 2320         | LTE B66          | 20                   | 67236        | 2320             | -                    | -            | -                | -                    | -                             | 24.10                            | 24.10 |
| CA_2A-56A-66C | LTE B66 | 20           | 13047            |                      |            |                  |                  |                      |              |                  |                      |              |                  |                      |              |                  |                      |              |                  |                      |                               |                                  |       |

### 1.3.7 LTE Band 2 as PCC

Table 9

| Combination     | PCC      |              |                  |                      |            |               |              |                  |                      |          | SCC 1        |                  |                      |          | SCC 2        |                  |                      |          | SCC 3        |                  |                      |          | SCC 4        |                  |                      |                                | Power                         |  |
|-----------------|----------|--------------|------------------|----------------------|------------|---------------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|--------------------------------|-------------------------------|--|
|                 | PCC Band | PCC BW [MHz] | PCC (DL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL/B Band | PCC UL/B OFT | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | UL ToPower with CA Power (dBm) | UL Single Carrier Power (dBm) |  |
| CA 2A-2A        | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B66  | 20           | 63760            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A     | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A     | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A     | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B2   | 20           | 200              | 1150                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A     | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B4   | 20           | 2175             | 1150                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A     | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B4   | 20           | 2175             | 2132                 | LTE B13  | 10           | 5230             | 750                  | -        | -            | -                | -                    | -        | -            | -                | -                    | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B2   | 20           | 200              | 1150                 | LTE B4   | 20           | 2175             | 737.5                | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.40                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B13  | 10           | 5200             | 750                  | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B13  | 10           | 5200             | 750                  | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B13  | 10           | 5200             | 750                  | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B13  | 10           | 5200             | 750                  | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B13  | 10           | 5200             | 750                  | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPSK       | 1             | 25           | 1150             | 1505                 | LTE B13  | 10           | 5200             | 750                  | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | LTE B66  | 20           | 63760            | 2145                 | 23.28                          | 23.40                         |  |
| CA 2A-2A-1A-66A | LTE B2   | 10           | 35150            | 1505                 | QPS        |               |              |                  |                      |          |              |                  |                      |          |              |                  |                      |          |              |                  |                      |          |              |                  |                      |                                |                               |  |

|                                           |                                                                                                                                                     |                             |                                                                                                 |                                        |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------|
| FCC ID: ZNFG710VM                         |  <b>PCTEST</b><br><small>TECHNOLOGICAL CORPORATION, INC.</small> | SAR EVALUATION REPORT       |  <b>LG</b> | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>02/28/18 – 03/19/18 | <b>DUT Type:</b><br>Portable Handset                                                                                                                | APPENDIX H:<br>Page 4 of 14 |                                                                                                 |                                        |

**Table 10**  
**Reduced Output Powers**

| Combination        | PCC Band | PCC BW [MHz] | PCC              |                      |            |           |                  |                  |                      |          |              |                  | SSC 1                |          |              |                  | SSC 2                |          |              |                  | SSC 3                |          |              |                  | SSC 4                |                                       |                                   |       | Power |  |
|--------------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|-------|--|
|                    |          |              | PCC [UL] Channel | PCC [DL] Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |  |
| CA 2A-6A           | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B8B  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.47                             | 24.50 |       |  |
| CA 2A-5A           | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B4   | 20           | 2175             | 2132.5               | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.47                             | 24.50 |       |  |
| CA 2A-25A(1)       | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.47                             | 24.50 |       |  |
| CA 2A-2A-12A       | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B22  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | -                                 | 24.48 | 24.50 |  |
| CA 2A-4A-12A       | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B4   | 20           | 2175             | 2132.5               | LTE B22  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | -                                 | 24.48 | 24.50 |  |
| CA 2A-4A-25A       | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B4   | 20           | 2175             | 2132.5               | LTE B22  | 10           | 5230             | 751                  | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | -                                 | 24.56 | 24.50 |  |
| CA 2A-15A-6A       | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 5230             | 751                  | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66884            | 2164.8               | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-2A-4A-4A     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B4   | 20           | 2175             | 2132.5               | LTE B4   | 20           | 2180             | 2150                 | -        | -            | -                | -                    | -                                     | -                                 | 24.42 | 24.50 |  |
| CA 2A-2A-6A-6A     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66884            | 2164.8               | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-2A-4A-5A     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B4   | 20           | 2175             | 2132.5               | LTE B4   | 20           | 2180             | 2150                 | LTE B5   | 10           | 2525             | 881.5                | -        | -            | -                | -                    | -                                     | -                                 | 24.46 | 24.50 |  |
| CA 2A-15A-6A-6A    | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 5230             | 751                  | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66884            | 2164.8               | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-2A-12A       | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B22  | 10           | 5095             | 737.5                | LTE B22  | 10           | 5047             | 732.7                | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-2A-4A-5B     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B4   | 20           | 2175             | 2132.5               | LTE B4   | 20           | 2180             | 2150                 | LTE B5   | 10           | 2525             | 881.5                | -        | -            | -                | -                    | -                                     | -                                 | 24.48 | 24.50 |  |
| CA 2A-15A-6A-6B    | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 5230             | 751                  | LTE B66  | 15           | 66786            | 2145                 | LTE B66  | 15           | 66875            | 2164.3               | -        | -            | -                | -                    | -                                     | -                                 | 24.42 | 24.50 |  |
| CA 2A-2A-15A-6A-6B | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B22  | 10           | 5190             | 751                  | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-2A-5A-6A     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-2A-6A-6A     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66884            | 2164.8               | -        | -            | -                | -                    | -                                     | -                                 | 24.49 | 24.50 |  |
| CA 2A-5A-6A        | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -                                     | -                                 | 24.47 | 24.50 |  |
| CA 2A-2A-5A-6B     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 15           | 66786            | 2145                 | LTE B66  | 5            | 66875            | 2164.3               | -                                     | 24.48                             | 24.50 |       |  |
| CA 2A-5B-6C        | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B5   | 5            | 2463             | 874.3                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66884            | 2164.8               | -                                     | 24.49                             | 24.50 |       |  |
| CA 2A-2A-5A-6C     | LTE B2   | 10           | 9150             | 1905                 | QPSK       | 1         | 25               | 1150             | 1985                 | LTE B2   | 10           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66884            | 2164.8               | -                                     | 24.46                             | 24.50 |       |  |

### 1.3.8 LTE Band 25 as PCC

**Table 11**  
**Maximum Output Powers**

| Combination    | PCC      |              |                  |                      |            |           |                  |                  |                      |          | SSC 1        |                  |                      |          | SSC 2        |                  |                      |          | SSC 3        |                  |                      |                                       | Power                             |       |
|----------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|
|                | PCC Band | PCC BW [MHz] | PCC [UL] Channel | PCC [UL] Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA 12A-25A     | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.48                             | 25.49 |
| CA 25A-41A     | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B41  | 20           | 40620            | 2593                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.49                             | 25.49 |
| CA 25A-25A (1) | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B25  | 20           | 8140             | 1940                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.46                             | 25.49 |
| CA 25A-26A     | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B26  | 15           | 8805             | 876.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.49                             | 25.49 |
| CA 5A-25A      | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B5   | 10           | 2525             | 881.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 25.48                             | 25.49 |
| CA 25A-41C     | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B41  | 20           | 40620            | 2593                 | LTE B41  | 20           | 40422            | 2573.2               | -        | -            | -                | -                    | -                                     | 25.21                             | 25.49 |
| CA 25A-41D     | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B41  | 20           | 40422            | 2573.2               | LTE B41  | 20           | 40620            | 2593                 | LTE B41  | 20           | 40818            | 2612.8               | 25.49                                 | 25.49                             |       |

**Table 12**  
**Reduced Output Powers**

| Combination   | PCC      |              |                  |                      |            |           |                  |                  |                      |          |              |                  |                      |          |              |                  | SSC 1                |          |              |                  | SSC 2                |          |              |                  | SSC 3                |                                       |                                   |       | Power |  |
|---------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|-------|--|
|               | PCC Band | PCC BW [MHz] | PCC [UL] Channel | PCC [UL] Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |  |
| CA 12A-25A    | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.45                             | 24.50 |       |  |
| CA 25A-41A    | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B41  | 20           | 40620            | 2593                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.47                             | 24.50 |       |  |
| CA 25A-25A(1) | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B25  | 20           | 8140             | 1940                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.48                             | 24.50 |       |  |
| CA 25A-26A    | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B26  | 15           | 8805             | 876.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.44                             | 24.50 |       |  |
| CA 5A-25A     | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B5   | 10           | 2525             | 881.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.45                             | 24.50 |       |  |
| CA 25A-41C    | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B41  | 20           | 40620            | 2593                 | LTE B41  | 20           | 40422            | 2573.2               | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.39                             | 24.50 |       |  |
| CA 25A-41D    | LTE B25  | 10           | 26640            | 1910                 | QPSK       | 1         | 25               | 8640             | 1990                 | LTE B41  | 20           | 40422            | 2573.2               | LTE B41  | 20           | 40620            | 2593                 | LTE B41  | 20           | 40818            | 2612.8               | -        | -            | -                | -                    | -                                     | 24.49                             | 24.50 |       |  |

### 1.3.9 LTE Band 41 PC3 as PCC

**Table 13**  
**Maximum Output Powers**

| Combination   | PCC      |              |                  |                      |            |           |                  |                  |                      |          | SSC 1        |                  |                      |          | SSC 2        |                  |                      |          | SSC 3        |                  |                      |                                       | Power                             |       |
|---------------|----------|--------------|------------------|----------------------|------------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|
|               | PCC Band | PCC BW [MHz] | PCC [UL] Channel | PCC [DL] Freq. [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Channel | SSC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Channel | SSC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Channel | SSC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA 41A-41A(1) | LTE B41  | 10           | 40185            | 2549.5               | QPSK       | 1         | 0                | 40185            | 2549.5               | LTE B41  | 20           | 41490            | 2680                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 27.19                             | 27.18 |
| CA 41C-41A    | LTE B41  | 10           | 40185            | 2549.5               | QPSK       | 1         | 0                | 40185            | 2549.5               | LTE B41  | 20           | 40129            | 2563.9               | LTE B41  | 20           | 41490            | 2680                 | -        | -            | -                | -                    | -                                     | 25.15                             | 25.18 |
| CA 41A-41C    | LTE B41  | 10           | 40185            | 2549.5               | QPSK       | 1         | 0                | 40185            | 2549.5               | LTE B41  | 20           | 41292            | 2660.2               | LTE B41  | 20           | 41490            | 2680                 | -        | -            | -                | -                    | -                                     | 25.17                             | 25.18 |
| CA 41A-41D    | LTE B41  | 10           | 40185            | 2549.5               | QPSK       | 1         | 0                | 40185            | 2549.5               | LTE B41  | 20           | 41594            | 2640.4               | LTE B41  | 20           | 41292            | 2660.2               | LTE B41  | 20           | 41490            | 2680                 | -                                     | 27.19                             | 27.18 |
| CA 41C-41A    | LTE B41  | 10           | 40185            | 2549.5               | QPSK       | 1         | 0                | 40185            | 2549.5               | LTE B41  | 20           | 40129            | 2563.9               | LTE B41  | 20           | 40527            | 2513.7               | LTE B41  | 20           | 41490            | 2680                 | -                                     | 25.15                             | 25.18 |
| CA 41C-41C    | LTE B41  | 10           | 40185            | 2549.5               | QPSK       | 1         | 0                | 40185            | 2549.5               | LTE B41  | 20           | 41292            | 2563.9               | LTE B41  | 20           | 41292            | 2660.2               | LTE B41  | 20           | 41490            | 2680                 | -                                     | 25.15                             | 25.18 |

#### 1.4 4x4 Downlink MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section 1.2 were applied.

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

#### 1.4.1 LTE 4x4 DL MIMO Standalone Powers

**Table 15**  
**Maximum Output Powers**

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 4        | 20              | 20050   | 1720            | QPSK       | 1       | 0         | 25.14                       | 25.20                          | 24.7               |
| 66       | 20              | 132072  | 1720            | QPSK       | 1       | 0         | 25.14                       | 25.20                          | 24.7               |
| 2        | 10              | 19150   | 1905            | QPSK       | 1       | 25        | 25.48                       | 25.49                          | 25.0               |
| 25       | 10              | 26640   | 1910            | QPSK       | 1       | 25        | 25.48                       | 25.49                          | 25.0               |
| 41       | 10              | 40185   | 2549.5          | QPSK       | 1       | 0         | 25.16                       | 25.18                          | 24.7               |
| 41 PC2   | 10              | 40185   | 2549.5          | QPSK       | 1       | 0         | 27.70                       | 27.70                          | 27.2               |

**Table 16**  
**Reduced Output Powers**

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 4        | 20              | 20050   | 1720            | QPSK       | 1       | 99        | 24.18                       | 24.20                          | 23.7               |
| 66       | 20              | 132072  | 1720            | QPSK       | 1       | 99        | 24.16                       | 24.20                          | 23.7               |
| 2        | 10              | 19150   | 1905            | QPSK       | 1       | 25        | 24.46                       | 24.50                          | 24.0               |
| 25       | 10              | 26640   | 1910            | QPSK       | 1       | 25        | 24.49                       | 24.50                          | 24.0               |

### 1.4.2 LTE Band 13 as PCC

**Table 17**  
**Maximum Output Powers**

| Combination | PCC      |              |                     |      |           |                  |             |                     |                 |          |              |             |                     | MS-1            |          |              |             |                     |                 |          |              |             |                     | MS-2            |          |              |             |                     |                 |                |                                |  |  | MS-3 |  |  |  |  |  |  |  |  |  | Power |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|             | PCC Band | PCC BW [MHz] | PCC [UL/Freq. [MHz] | Mod. | PCC UL/FB | PCC UL RB Offset | PCC [DL Ch] | PCC [DL Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL Ch] | SCC [DL Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL Ch] | SCC [DL Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL Ch] | SCC [DL Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL Ch] | SCC [DL Freq. [MHz] | DL Ant. Config. | LTE TDD Config | LTE Single Carrier Power [dBm] |  |  |      |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|             |          |              |                     |      |           |                  |             |                     |                 |          |              |             |                     |                 |          |              |             |                     |                 |          |              |             |                     |                 |          |              |             |                     |                 |                |                                |  |  |      |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|                                           |                                                                                                                                                 |                             |                                                                                                 |                                 |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                         |  <b>PCTEST</b><br><small>TECHNOLOGY LABORATORY, INC.</small> | SAR EVALUATION REPORT       |  <b>LG</b> | Reviewed by:<br>Quality Manager |
| <b>Test Dates:</b><br>02/28/18 – 03/19/18 | <b>DUT Type:</b><br>Portable Handset                                                                                                            | APPENDIX H:<br>Page 6 of 14 |                                                                                                 |                                 |

## 1.4.3 LTE Band 5 as PCC

Table 18  
Maximum Output Powers

| Combination    | PCC      |              |              |                      |      |           |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | Power                |                 |                                       |                                   |
|----------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dbm) | LTE Single Carrier Tx Power (dbm) |
| CA SA-166C     | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 66984        | 2164.8               | 4x4 MIMO        | 25.32                                 | 25.35                             |
| CA [2A]-4A-SA  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B4   | 20           | 2175         | 2132.5               | 2x2 MIMO        | 25.30                                 | 25.35                             |
| CA [4A]-4A-SA  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B4   | 20           | 2175         | 2132.5               | 4x4 MIMO        | LTE B4   | 20           | 2350         | 2150                 | 2x2 MIMO        | 25.25                                 | 25.35                             |
| CA [2A]-2A-SA  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | 25.36                                 | 25.35                             |
| CA [2A]-5A-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 25.34                                 | 25.35                             |
| CA SA-166A-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | 25.31                                 | 25.35                             |
| CA 2A-SA-166A  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 25.28                                 | 25.35                             |
| CA SA-166B     | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1         | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 15           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 5            | 66879        | 2134.3               | 4x4 MIMO        | 25.36                                 | 25.35                             |

## 1.4.4 LTE Band 4 as PCC

Table 19  
Maximum Output Powers

| Combination    | PCC      |              |              |                      |      |           |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | Power                |                 |                                       |                                   |
|----------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled [dBm] | LTE Single Carrier Tx Power [dBm] |
| CA [2A]-4A     | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 25.15                                 | 25.20                             |
| CA [2A]-4A-13A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | 25.18                                 | 25.20                             |
| CA [4A]-4A-13A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 2x2 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | 25.19                                 | 25.20                             |
| CA [2A]-4A-SA  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 25.19                                 | 25.20                             |
| CA [4A]-4A-SA  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 25.20                                 | 25.20                             |
| CA 4A-[4A]-SA  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 2x2 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 25.20                                 | 25.20                             |
| CA 4A-[4A]-13A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 0                | 2050         | 2120                 | 2x2 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 4x4 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | 25.19                                 | 25.20                             |

Table 20  
Reduced Output Powers

| Combination    | PCC      |              |              |                      |      |           |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | Power                |                 |                                       |                                   |
|----------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-4A     | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.18                                 | 24.20                             |
| CA [2A]-4A-13A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | 24.09                                 | 24.20                             |
| CA [4A]-4A-13A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 2x2 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | 24.19                                 | 24.20                             |
| CA [2A]-4A-SA  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.11                                 | 24.20                             |
| CA [4A]-4A-SA  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.13                                 | 24.20                             |
| CA 4A-[4A]-SA  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 2x2 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.17                                 | 24.20                             |
| CA 4A-[4A]-13A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 2x2 MIMO        | LTE B4   | 20           | 2300         | 2145                 | 4x4 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | 24.16                                 | 24.20                             |

## 1.4.5 LTE Band 66 as PCC

Table 21  
Maximum Output Powers

| Combination       | PCC      |              |              |                      |      |           |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | SCC 3                |                 | Power                                 |                                   |       |
|-------------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|
|                   | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA [2A]-166A      | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 25.17                                 | 25.20                             |       |
| CA [166A]-166C    | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 67036        | 2170.2               | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | -                                     | 25.12                             | 25.20 |
| CA [2A]-2A-166A   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1960                 | 2x2 MIMO        | -                                     | 25.15                             | 25.20 |
| CA [2A]-5A-66A    | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2170                 | 4x4 MIMO        | LTE B66  | 20           | 67036        | 2170                 | 4x4 MIMO        | -                                     | 25.16                             | 25.20 |
| CA 2A-[2A]-166A   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | -                                     | 25.13                             | 25.20 |
| CA SA-166C        | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 66734        | 2139.8               | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | -                                     | 25.11                             | 25.20 |
| CA [166C]-166A    | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 66734        | 2139.8               | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | -                                     | 25.20                             | 25.20 |
| CA 13A-66A-166B   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | -                                     | 25.14                             | 25.20 |
| CA SA-166A-166A   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | -                                     | 25.19                             | 25.20 |
| CA [2A]-66B       | LTE B66  | 10           | 115052       | 1715                 | QPSK | 1         | 25               | 66486        | 2115                 | 2x2 MIMO        | LTE B66  | 10           | 66585        | 2124.9               | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -                                     | 25.16                             | 25.20 |
| CA 2A-[2A]-166A   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | -                                     | 25.15                             | 25.20 |
| CA [166A]-166A    | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 67036        | 2170.2               | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | -                                     | 25.11                             | 25.20 |
| CA [166C]-166A    | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 66734        | 2139.8               | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | -                                     | 25.15                             | 25.20 |
| CA 13A-[166B]     | LTE B66  | 10           | 115052       | 1715                 | QPSK | 1         | 25               | 66486        | 2115                 | 4x4 MIMO        | LTE B66  | 10           | 66585        | 2124.9               | 4x4 MIMO        | LTE B13  | 10           | 5230         | 751                  | 2x2 MIMO        | -                                     | 25.14                             | 25.20 |
| CA [2A]-5A-66A    | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | -                                     | 25.18                             | 25.20 |
| CA [2A]-66C       | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 66734        | 2139.8               | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -                                     | 25.15                             | 25.20 |
| CA 2A-[166B]-166A | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | -                                     | 25.14                             | 25.20 |
| CA SA-166B-166B   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | -                                     | 25.17                             | 25.20 |
| CA 66A-[166C]     | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 67036        | 2170.2               | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | -                                     | 25.16                             | 25.20 |
| CA 2A-66A-[166B]  | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | -                                     | 25.15                             | 25.20 |
| CA [2A]-2A-166A   | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | -                                     | 25.20                             | 25.20 |
| CA 2A-SA-166A     | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | -                                     | 25.15                             | 25.20 |
| CA [2A]-166C      | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 4x4 MIMO        | LTE B66  | 20           | 66734        | 2139.8               | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -                                     | 25.16                             | 25.20 |
| CA 2A-[166B]      | LTE B66  | 10           | 115052       | 1715                 | QPSK | 1         | 25               | 66486        | 2115                 | 4x4 MIMO        | LTE B66  | 10           | 66585        | 2124.9               | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | -                                     | 25.16                             | 25.20 |
| CA 66C-[166A]     | LTE B66  | 20           | 115072       | 1720                 | QPSK | 1         | 0                | 66536        | 2120                 | 2x2 MIMO        | LTE B66  | 20           | 66734        | 2139.8               | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -                                     | 25.15                             | 25.20 |

### Table 22

| Combination        | PCC Band | PCC BW [MHz] | PCC [LX] Ch | PCC [DL] Freq. [MHz] | Mod. | PCC UL RB | PCC UL Off. | PCC [DL] Ch | PCC [DL] Freq. [MHz] | DL Cont. | SCC Band | SCC BW [MHz] | SCC 1       |                      | SCC 2    |          | SCC 3        |             | LTE Power with CA Enabled | LTE Single Carrier Power [dBm] |
|--------------------|----------|--------------|-------------|----------------------|------|-----------|-------------|-------------|----------------------|----------|----------|--------------|-------------|----------------------|----------|----------|--------------|-------------|---------------------------|--------------------------------|
|                    |          |              |             |                      |      |           |             |             |                      |          |          |              | SCC [DL] Ch | SCC [DL] Freq. [MHz] | DL Cont. | SCC Band | SCC BW [MHz] | SCC [DL] Ch |                           |                                |
| CA [2A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 900         | 2120                 | 444 MIMO | -        | -            | 20          | 20                        |                                |
| CA [6A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 900         | 2120                 | 444 MIMO | LTE B66  | 20           | 900         | 2120                      |                                |
| CA [2A] 13A-16G4   | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 900         | 1980                 | 444 MIMO | LTE B13  | 10           | 5230        | 751                       |                                |
| CA [6A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 900         | 1980                 | 444 MIMO | LTE B13  | 10           | 5230        | 751                       |                                |
| CA [2A] 13A-16G4   | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 900         | 1980                 | 444 MIMO | LTE B13  | 10           | 5230        | 751                       |                                |
| CA [6A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 66734       | 2119.8               | 444 MIMO | LTE B65  | 10           | 7525        | 881.5                     |                                |
| CA [6C] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 66734       | 2119.8               | 444 MIMO | LTE B65  | 10           | 7525        | 881.5                     |                                |
| CA [13A-16G4] 16G4 | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 444 MIMO | LTE B13  | 10           | 5230        | 751                       |                                |
| CA [2A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 444 MIMO | LTE B13  | 10           | 5230        | 751                       |                                |
| CA [13A-16G4] 16G4 | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 444 MIMO | LTE B13  | 10           | 5230        | 751                       |                                |
| CA [2A] 4G4        | LTE B66  | 15           | 130447      | 1717.5               | HQAM | 1         | 0           | 66511       | 2117.5               | 2x2 MIMO | LTE B66  | 5            | 66604       | 2116.8               | 2x2 MIMO | LTE B65  | 10           | 7520        | 881.5                     |                                |
| CA [6C] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 66734       | 2119.8               | 444 MIMO | LTE B65  | 10           | 7525        | 881.5                     |                                |
| CA [16C] 4G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8                    |                                |
| CA [16C] 4G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8                    |                                |
| CA [13A-16G4]      | LTE B66  | 20           | 130727      | 1720                 | HQAM | 1         | 0           | 66511       | 2117.5               | 444 MIMO | LTE B66  | 5            | 66604       | 2116.8               | 2x2 MIMO | LTE B65  | 10           | 7520        | 881.5                     |                                |
| CA [2A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 900         | 1980                 | 444 MIMO | LTE B65  | 10           | 7525        | 881.5                     |                                |
| CA [2A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 2x2 MIMO | LTE B66  | 20           | 900         | 1980                 | 444 MIMO | LTE B65  | 10           | 7525        | 881.5                     |                                |
| CA [2A] 16G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8                    |                                |
| CA [16C] 4G4       | LTE B66  | 20           | 130727      | 1720                 | QPSK | 1         | 99          | 66536       | 2120                 | 444 MIMO | LTE B66  | 20           | 67236       | 2119.8               | 2x2 MIMO | LTE B66  | 20           | 67236       | 2119.8                    |                                |
| CA [13A-16G4]      | LTE B66  | 20           | 130727      | 1720                 | HQAM | 1         | 0           | 66511       | 2117.5               | 444 MIMO | LTE B66  | 5            | 66604       | 2116.8</             |          |          |              |             |                           |                                |

### 1.4.6 LTE Band 2 as PCC

### Table 23

| Combination    | PCB band | PCB BW [MHz] | PCB UL Ch. | PCB (DL) Ch. | PCB (UL) Freq. [MHz] | PC1  |            |               |              | SC1                  |                 |         |             | SC2         |                     |                 |         | SC3         |             |                     |                 | Power   |             |             |                     |                 |                        |                                |
|----------------|----------|--------------|------------|--------------|----------------------|------|------------|---------------|--------------|----------------------|-----------------|---------|-------------|-------------|---------------------|-----------------|---------|-------------|-------------|---------------------|-----------------|---------|-------------|-------------|---------------------|-----------------|------------------------|--------------------------------|
|                |          |              |            |              |                      | Mod. | PCB UL F/B | PCB UL Offset | PCB (DL) Ch. | PCB (DL) Freq. [MHz] | DL Ant. Config. | SC Band | SC BW [MHz] | SC (DL) Ch. | SC (DL) Freq. [MHz] | DL Ant. Config. | SC Band | SC BW [MHz] | SC (DL) Ch. | SC (DL) Freq. [MHz] | DL Ant. Config. | SC Band | SC BW [MHz] | SC (DL) Ch. | SC (DL) Freq. [MHz] | DL Ant. Config. | LT to Tx with 10 dB CA | LTE Single Carrier Power [dBm] |
| CA 12A-44A     | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B4   | 20          | 2175        | 2113.5              | 2x2 MIMO        | -       | -           | -           | -                   | -               | -       | -           | -           | -                   | -               | 25.1                   | 25.49                          |
| CA 12A-66A     | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 12A-13A-44A | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B4   | 20          | 2175        | 2113.5              | 2x2 MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 12A-13A     | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B4   | 20          | 2175        | 2113.5              | 2x2 MIMO        | LT B13  | 10          | 5230        | 71                  | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 12A-13A-66A | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B4   | 20          | 66786       | 2146                | 2x2 MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 2A-13A-66A  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B13  | 10          | 5230        | 71                  | 2x2 MIMO        | LT B6B  | 20          | 66786       | 2146                | 44A MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-13A-5A   | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B4   | 20          | 2175        | 2113.5              | 2x2 MIMO        | LT B5   | 10          | 5230        | 88.1                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 2A1-66B     | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B6B  | 15          | 66786       | 2146                | 2x2 MIMO        | LT B6B  | 5           | 66879       | 2154.3              | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 2A-2A-66A   | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | -       | -           | -           | -                   | 25.2            | 25.49                  |                                |
| CA 2A-13A-13A  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B13  | 10          | 5230        | 71                  | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 2A-13A-5A   | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B4   | 20          | 2175        | 2113.5              | 2x2 MIMO        | LT B5   | 10          | 5230        | 88.1                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 12A-13A-66A | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B5   | 10          | 5230        | 88.1                | 2x2 MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 12A-66B     | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | LT B6B  | 20          | 66884       | 2154.8              | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 2A-66A-66A  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.2                   | 25.49                          |
| CA 2A-12A-5A   | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B5   | 10          | 5230        | 88.1                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-12A-66A  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-13A-66A  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-13A-5A   | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B5   | 10          | 5230        | 88.1                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-66B      | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 66786       | 2146                | 44A MIMO        | LT B6B  | 5           | 66879       | 2154.3              | 44A MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-13A-10G  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B6B  | 20          | 66786       | 2146                | 2x2 MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |
| CA 2A-13A-10G  | LTE B2   | -            | -          | 25110        | 1505                 | QPSK | 1          | 25            | 1150         | 1505                 | 2x2 MIMO        | LT B2   | 20          | 700         | 1040                | 44A MIMO        | LT B6B  | 20          | 66884       | 2154.8              | 44A MIMO        | -       | -           | -           | -                   | -               | 25.4                   | 25.49                          |

Table 24

[illegible]

### 1.4.7 LTE Band 25 as PCC

Table 25

| Combination        | PCC      |              |              |                      |      |            |                  |              |                      |                 | SCC 1    |              |              |                      |                 | Power                                 |                                   |
|--------------------|----------|--------------|--------------|----------------------|------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                    | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [25A]-[25A] (1) | LTE B25  | 10           | 26640        | 1910                 | QPSK | 1          | 25               | 8640         | 1990                 | 4x4 MIMO        | LTE B25  | 20           | 8140         | 1940                 | 4x4 MIMO        | 25.47                                 | 25.49                             |

|                                           |                                                                                                                                                     |                             |                                                                                                 |                                        |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------|
| FCC ID: ZNFG710VM                         |  <b>PCTEST</b><br><small>TECHNOLOGICAL CONSULTANTS, INC.</small> | SAR EVALUATION REPORT       |  <b>LG</b> | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>02/28/18 – 03/19/18 | <b>DUT Type:</b><br>Portable Handset                                                                                                                | APPENDIX H:<br>Page 8 of 14 |                                                                                                 |                                        |

**Table 26**  
**Reduced Output Powers**

| Combination        | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL# RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC 1    |              |              |                      |                 | Power                                 |                                   |
|--------------------|----------|--------------|--------------|----------------------|------|------------|-------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                    |          |              |              |                      |      |            |                   |              |                      |                 | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [25A]-[25A] (1) | LTE B25  | 10           | 25640        | 1910                 | QPSK | 1          | 25                | 8640         | 1990                 | 4x4 MIMO        | LTE B25  | 20           | 8140         | 1940                 | 4x4 MIMO        | 24.45                                 | 24.50                             |

## 1.4.8 LTE Band 41 PC3 as PCC

**Table 27**  
**Maximum Output Powers**

| Combination        | PCC      |              |              |                      |      |            |                   |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | Power                |                 |                                       |                                   |       |
|--------------------|----------|--------------|--------------|----------------------|------|------------|-------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|
|                    | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL# RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA [41A]-[41A] (1) | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 2x2 MIMO        |          |              |              |                      |                 |                                       | 25.19                             | 25.18 |
| CA [41A]-[41A] (1) | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 2x2 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 4x4 MIMO        |          |              |              |                      |                 |                                       | 25.30                             | 25.18 |
| CA [41A]-[41A] (1) | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 4x4 MIMO        |          |              |              |                      |                 |                                       | 25.19                             | 25.18 |
| CA [41A]-[41C]     | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41  | 20           | 41292        | 2660.2               | 2x2 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 2x2 MIMO        | 25.18                                 | 25.18                             | 25.18 |
| CA [41C]-[41A]     | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 2x2 MIMO        | LTE B41  | 20           | 40329        | 2563.9               | 2x2 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 2x2 MIMO        | 25.18                                 | 25.18                             | 25.18 |
| CA [41A]-[41C]     | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 2x2 MIMO        | LTE B41  | 20           | 41292        | 2660.2               | 4x4 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 4x4 MIMO        | 25.18                                 | 25.18                             | 25.18 |
| CA [41C]-[41A]     | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41  | 20           | 40329        | 2563.9               | 4x4 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 4x4 MIMO        | 25.18                                 | 25.18                             | 25.18 |
| CA [41D]           | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41  | 20           | 40329        | 2563.9               | 4x4 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 4x4 MIMO        | 25.18                                 | 25.18                             | 25.18 |
| CA [41C]-[41A]     | LTE B41  | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41  | 20           | 40329        | 2563.9               | 4x4 MIMO        | LTE B41  | 20           | 41490        | 2680                 | 4x4 MIMO        | 25.18                                 | 25.18                             | 25.18 |

## 1.4.9 LTE Band 41 PC2 as PCC

**Table 28**  
**Maximum Output Powers**

| Combination        | PCC         |              |              |                      |      |            |                   |              |                      |                 | SCC 1       |              |              |                      |                 | SCC 2       |              | Power        |                      |                 |                                       |                                   |       |
|--------------------|-------------|--------------|--------------|----------------------|------|------------|-------------------|--------------|----------------------|-----------------|-------------|--------------|--------------|----------------------|-----------------|-------------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|
|                    | PCC Band    | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL# RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band    | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band    | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA [41A]-[41A] (1) | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41 PC2 | 20           | 41490        | 2680                 | 2x2 MIMO        | -           | -            | -            | -                    | -               | -                                     | 27.68                             | 27.70 |
| CA [41A]-[41A] (1) | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 2x2 MIMO        | LTE B41 PC2 | 20           | 41490        | 2680                 | 4x4 MIMO        | -           | -            | -            | -                    | -               | -                                     | 27.68                             | 27.70 |
| CA [41A]-[41A] (1) | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41 PC2 | 20           | 41490        | 2680                 | 4x4 MIMO        | -           | -            | -            | -                    | -               | -                                     | 27.58                             | 27.70 |
| CA [41A]-[41C]     | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41 PC2 | 20           | 41292        | 2660.2               | 2x2 MIMO        | LTE B41 PC2 | 20           | 41490        | 2680                 | 2x2 MIMO        | 27.68                                 | 27.70                             |       |
| CA [41A]-[41C]     | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 2x2 MIMO        | LTE B41 PC2 | 20           | 41292        | 2660.2               | 4x4 MIMO        | LTE B41 PC2 | 20           | 41490        | 2680                 | 4x4 MIMO        | 27.70                                 | 27.70                             |       |
| CA [41A]-[41C]     | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41 PC2 | 20           | 40329        | 2563.9               | 4x4 MIMO        | LTE B41 PC2 | 20           | 41490        | 2680                 | 4x4 MIMO        | 27.69                                 | 27.70                             |       |
| CA [41D]           | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41 PC2 | 20           | 40329        | 2563.9               | 4x4 MIMO        | LTE B41 PC2 | 20           | 40329        | 2563.9               | 4x4 MIMO        | 27.70                                 | 27.70                             |       |
| CA [41C]-[41A]     | LTE B41 PC2 | 10           | 40185        | 2549.5               | QPSK | 1          | 0                 | 40185        | 2549.5               | 4x4 MIMO        | LTE B41 PC2 | 20           | 40329        | 2563.9               | 4x4 MIMO        | LTE B41 PC2 | 20           | 40329        | 2563.9               | 4x4 MIMO        | 27.70                                 | 27.70                             |       |

## 1.5 LAA Downlink Carrier Aggregation

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e. LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive. Due to the wide downlink bandwidth, each Band 46 sub-band, represented by subscripts A, B, C, and D, was evaluated independently. The general test selection and setup procedures described in Section 1.2 were applied.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                  |  | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>02/28/18 – 03/19/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX H:<br>Page 9 of 14     |



## 1.5.1 SISO LAA Downlink Carrier Aggregation RF Conducted Powers

### 1.5.1.1 LTE Band 13 as PCC

Table 29  
Maximum Output Powers

| Combination     | PCC      |              |              |                      |      |            |                  |              |                      |                      | SCC 1        |              |                      |                      | SCC 2        |              |                      |                      | SCC 3        |              |                      |                      | SCC 4        |              |                      |                                       | Power                             |       |
|-----------------|----------|--------------|--------------|----------------------|------|------------|------------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|---------------------------------------|-----------------------------------|-------|
|                 | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA_13A-46,A-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.37                                 | 25.49                             |       |
| CA_13A-46,A-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.37                                 | 25.49                             |       |
| CA_13A-46,A-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.36                                 | 25.49                             |       |
| CA_13A-46,A-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.38                                 | 25.49                             |       |
| CA_13A-46,C-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                                     | 25.40                             | 25.49 |
| CA_13A-46,C-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                                     | 25.38                             | 25.49 |
| CA_13A-46,C-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                                     | 25.34                             | 25.49 |
| CA_13A-46,C-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | LTE B66              | 20           | 66786        | 2145                 | -                    | -            | -            | -                    | -                                     | 25.34                             | 25.49 |
| CA_2A-13A-46,D  | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 47092        | 5180.2               | 25.47                                 | 25.49                             |       |
| CA_2A-13A-46,D  | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>1</sub> | 20           | 48092        | 5280.2               | 25.47                                 | 25.49                             |       |
| CA_2A-13A-46,D  | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 51092        | 5580.2               | 25.45                                 | 25.49                             |       |
| CA_2A-13A-46,D  | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>1</sub> | 20           | 52942        | 5765.2               | 25.46                                 | 25.49                             |       |
| CA_13A-46,D-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 47092        | 5180.2               | LTE B66              | 20           | 66786        | 2145                 | 25.48                                 | 25.49                             |       |
| CA_13A-46,D-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>1</sub> | 20           | 48092        | 5280.2               | LTE B66              | 20           | 66786        | 2145                 | 25.47                                 | 25.49                             |       |
| CA_13A-46,D-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 51092        | 5580.2               | LTE B66              | 20           | 66786        | 2145                 | 25.46                                 | 25.49                             |       |
| CA_13A-46,D-66A | LTE B13  | 10           | 23230        | 782                  | QPSK | 1          | 0                | 5230         | 751                  | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>1</sub> | 20           | 52942        | 5765.2               | LTE B66              | 20           | 66786        | 2145                 | 25.49                                 | 25.49                             |       |

### 1.5.1.2 LTE Band 5 as PCC

Table 30  
Maximum Output Powers

| Combination    | PCC      |              |              |                      |      |            |                   |              |                      |                      | SCC 1        |              |                      |                      | SCC 2        |              |                      |                      | SCC 3        |              |                      |                      | SCC 4        |              |                      |                                       | Power                             |  |
|----------------|----------|--------------|--------------|----------------------|------|------------|-------------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|---------------------------------------|-----------------------------------|--|
|                | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL# RB | PCC UL# RB Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |
| CA_5A-46A(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.32                                 | 25.35                             |  |
| CA_5A-46A(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.25                                 | 25.35                             |  |
| CA_5A-46A(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.26                                 | 25.35                             |  |
| CA_5A-46A(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.30                                 | 25.35                             |  |
| CA_5A-46C(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.31                                 | 25.35                             |  |
| CA_5A-46C(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.27                                 | 25.35                             |  |
| CA_5A-46C(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.25                                 | 25.35                             |  |
| CA_5A-46C(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 25.29                                 | 25.35                             |  |
| CA_5A-46D(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 47092        | 5180.2               | -                    | -            | -            | -                    | 25.30                                 | 25.35                             |  |
| CA_5A-46D(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>1</sub> | 20           | 48092        | 5280.2               | -                    | -            | -            | -                    | 25.29                                 | 25.35                             |  |
| CA_5A-46D(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 51092        | 5580.2               | -                    | -            | -            | -                    | 25.24                                 | 25.35                             |  |
| CA_5A-46D(1)   | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>1</sub> | 20           | 52942        | 5765.2               | -                    | -            | -            | -                    | 25.28                                 | 25.35                             |  |
| CA_2A-5A-46,D  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 47092        | 5180.2               | 25.33                                 | 25.35                             |  |
| CA_2A-5A-46,D  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>1</sub> | 20           | 48092        | 5280.2               | 25.31                                 | 25.35                             |  |
| CA_2A-5A-46,D  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 51092        | 5580.2               | 25.29                                 | 25.35                             |  |
| CA_2A-5A-46,D  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B2               | 20           | 900          | 1960                 | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>1</sub> | 20           | 52942        | 5765.2               | 25.28                                 | 25.35                             |  |
| CA_5A-46,D-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 47092        | 5180.2               | LTE B66              | 20           | 66786        | 2145                 | 25.28                                 | 25.35                             |  |
| CA_5A-46,D-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>1</sub> | 20           | 48092        | 5280.2               | LTE B66              | 20           | 66786        | 2145                 | 25.30                                 | 25.35                             |  |
| CA_5A-46,D-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 51092        | 5580.2               | LTE B66              | 20           | 66786        | 2145                 | 25.28                                 | 25.35                             |  |
| CA_5A-46,D-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                 | 2525         | 881.5                | LTE B46 <sub>1</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>1</sub> | 20           | 52942        | 5765.2               | LTE B66              | 20           | 66786        | 2145                 | 25.29                                 | 25.35                             |  |

### 1.5.1.3 LTE Band 4 as PCC

Table 31  
Maximum Output Powers

| Combination     | PCC      |              |              |                      |      |            |                  |              |                      |                      | SCC 1        |              |                      |                      | SCC 2        |              |                      |                      | SCC 3        |              |                      |                                       | Power                             |  |
|-----------------|----------|--------------|--------------|----------------------|------|------------|------------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|----------------------|--------------|--------------|----------------------|---------------------------------------|-----------------------------------|--|
|                 | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |
| CA_4A-46,A-46,A | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 47090        | 5180                 | LTE B46 <sub>1</sub> | 20           | 53540        | 5825                 | -                    | -            | -            | -                    | 25.17                                 | 25.20                             |  |
| CA_4A-46,A-46,C | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 47090        | 5180                 | LTE B46 <sub>1</sub> | 20           | 53540        | 5825                 | LTE B46 <sub>1</sub> | 20           | 53342        | 5805.2               | 25.15                                 | 25.20                             |  |
| CA_4A-46,A-46,C | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 53340        | 5825                 | LTE B46 <sub>1</sub> | 20           | 47090        | 5180                 | LTE B46 <sub>1</sub> | 20           | 47288        | 5199.8               | 25.15                                 | 25.20                             |  |
| CA_4A-46,D      | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 47092        | 5180.2               | 25.17                                 | 25.20                             |  |
| CA_4A-46,D      | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 48290        | 5200                 | LTE B46 <sub>1</sub> | 20           | 48488        | 5219.8               | LTE B46 <sub>1</sub> | 20           | 48092        | 5200.2               | 25.15                                 | 25.20                             |  |
| CA_4A-46,D      | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 51390        | 5600                 | LTE B46 <sub>1</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 51092        | 5580.2               | 25.18                                 | 25.20                             |  |
| CA_4A-46,D      | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1          | 0                | 2050         | 2120                 | LTE B46 <sub>1</sub> | 20           | 51390        | 5785                 | LTE B46 <sub>1</sub> | 20           | 53338        | 5619.8               | LTE B46 <sub>1</sub> | 20           | 52942        | 5765.2               | 25.12                                 | 25.20                             |  |

## LTE Band 66 as PCC

Table 33

### Maximum Output Powers

| Combination  | PCC Band | PCC          |              |                      |      | SCC 1       |                    |             |                      | SCC 2    |              |             |                      | SCC 3    |              |             |                      | SCC 4    |              |             |                      | Power                               |                                   |       |        |       |       |
|--------------|----------|--------------|--------------|----------------------|------|-------------|--------------------|-------------|----------------------|----------|--------------|-------------|----------------------|----------|--------------|-------------|----------------------|----------|--------------|-------------|----------------------|-------------------------------------|-----------------------------------|-------|--------|-------|-------|
|              |          | PCC BW [MHz] | PCC [UL] Ch. | PCC [DL] Freq. [MHz] | Mod. | PCC [UL] RB | PCC [UL] RB Offset | PCC [DL] Ch | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Ch | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Ch | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Ch | SCC [DL] Freq. [MHz] | LTE Tx Power with DBA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |        |       |       |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 47290       | 5200                 | -        | -            | -           | -                    | 25.17                               | 25.20                             |       |        |       |       |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 48290       | 5300                 | -        | -            | -           | -                    | 25.19                               | 25.20                             |       |        |       |       |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 51290       | 5600                 | -        | -            | -           | -                    | 25.16                               | 25.20                             |       |        |       |       |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 51290       | 5785                 | -        | -            | -           | -                    | 25.19                               | 25.20                             |       |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 47290       | 5200                 | -        | -            | -           | -                    | 25.20                               | 25.20                             |       |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 48290       | 5300                 | -        | -            | -           | -                    | 25.19                               | 25.20                             |       |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 51290       | 5600                 | -        | -            | -           | -                    | 25.20                               | 25.20                             |       |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 51290       | 5785                 | -        | -            | -           | -                    | 25.20                               | 25.20                             |       |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B46a | 20           | 47090       | 5180                 | LTE B46a | 20           | 51290       | 5825                 | -        | -            | -           | -                    | 25.20                               | 25.20                             |       |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 47290       | 5200                 | LTE B46a | 20           | 47488       | 5219.8               | -                                   | 25.18                             | 25.20 |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 48290       | 5300                 | LTE B46a | 20           | 48488       | 5319.8               | -                                   | 25.19                             | 25.20 |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 51290       | 5600                 | LTE B46a | 20           | 51488       | 5619.8               | -                                   | 25.20                             | 25.20 |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 51340       | 5785                 | LTE B46a | 20           | 51338       | 5804.8               | -                                   | 25.17                             | 25.20 |        |       |       |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B46a | 20           | 47090       | 5180                 | LTE B46a | 20           | 51290       | 5825                 | LTE B46a | 20           | 51342       | 5865.2               | -                                   | 25.19                             | 25.20 |        |       |       |
| CA 4A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B46a | 20           | 51290       | 5180                 | LTE B46a | 20           | 47290       | 5180                 | LTE B46a | 20           | 47288       | 5199.8               | -                                   | 25.16                             | 25.20 |        |       |       |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 47290       | 5200                 | LTE B46a | 20           | 47488       | 5219.8               | LTE B46a                            | 20                                | 47090 | 5180.2 | 25.12 | 25.20 |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 48290       | 5300                 | LTE B46a | 20           | 48488       | 5319.8               | LTE B46a                            | 20                                | 48092 | 5280.2 | 25.16 | 25.20 |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 51290       | 5600                 | LTE B46a | 20           | 51488       | 5619.8               | LTE B46a                            | 20                                | 51092 | 5580.2 | 25.18 | 25.20 |
| CA 2A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B2   | 20           | 900         | 1960                 | LTE B46a | 20           | 51340       | 5785                 | LTE B46a | 20           | 51338       | 5804.8               | LTE B46a                            | 20                                | 52942 | 5765.2 | 25.17 | 25.20 |
| CA 5A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B5   | 10           | 2525        | 881.5                | LTE B46a | 20           | 47290       | 5200                 | LTE B46a | 20           | 47488       | 5219.8               | LTE B46a                            | 20                                | 47090 | 5180.2 | 25.15 | 25.20 |
| CA 5A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B5   | 10           | 2525        | 881.5                | LTE B46a | 20           | 48290       | 5300                 | LTE B46a | 20           | 48488       | 5319.8               | LTE B46a                            | 20                                | 48092 | 5280.2 | 25.12 | 25.20 |
| CA 5A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B5   | 10           | 2525        | 881.5                | LTE B46a | 20           | 51290       | 5600                 | LTE B46a | 20           | 51488       | 5619.8               | LTE B46a                            | 20                                | 51092 | 5580.2 | 25.16 | 25.20 |
| CA 5A-4A-6A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B5   | 10           | 2525        | 881.5                | LTE B46a | 20           | 51340       | 5785                 | LTE B46a | 20           | 51338       | 5804.8               | LTE B46a                            | 20                                | 52942 | 5765.2 | 25.14 | 25.20 |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 47290       | 5200                 | LTE B46a | 20           | 47488       | 5219.8               | LTE B46a                            | 20                                | 47090 | 5180.2 | 25.12 | 25.20 |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 48290       | 5300                 | LTE B46a | 20           | 48488       | 5319.8               | LTE B46a                            | 20                                | 48092 | 5280.2 | 25.15 | 25.20 |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 51290       | 5600                 | LTE B46a | 20           | 51488       | 5619.8               | LTE B46a                            | 20                                | 51092 | 5580.2 | 25.09 | 25.20 |
| CA 13A-4A-6A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1           | 0                  | 66536       | 2120                 | LTE B13  | 10           | 5230        | 751                  | LTE B46a | 20           | 51340       | 5785                 | LTE B46a | 20           | 51338       | 5804.8               | LTE B46a                            | 20                                | 52942 | 5765.2 | 25.17 | 25.20 |

Table 34

### Reduced Output Powers

| Combination     | PCB Band | PCB BW [MHz] | PCC          |                      |      |           |                  |              |                      |          |              |              | SCC 1                |          |              |              | SCC 2                |          |              |              | SCC 3                |          |              |              | SCC 4                |                            |                                   |  | Power |  |
|-----------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------------------------|-----------------------------------|--|-------|--|
|                 |          |              | PCB (UL) Ch. | PCB (UL) Freq. [MHz] | Mod. | PCB UL RB | PCB UL RB Offset | PCB (DL) Ch. | PCB (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | LTE Tx Power Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |       |  |
| CA 24-46-A-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 47920        | 5200                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.20                      | 24.20                             |  |       |  |
| CA 24-46-A-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 48290        | 5300                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.16                      | 24.20                             |  |       |  |
| CA 24-46-A-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 51260        | 5600                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.17                      | 24.20                             |  |       |  |
| CA 24-46-A-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 51470        | 5785                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.19                      | 24.20                             |  |       |  |
| CA 13A-46-A-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 47920        | 5200                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.11                      | 24.20                             |  |       |  |
| CA 13A-46-A-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 48290        | 5300                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.07                      | 24.20                             |  |       |  |
| CA 13A-46-A-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51290        | 5600                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.08                      | 24.20                             |  |       |  |
| CA 13A-46-A-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51470        | 5785                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.05                      | 24.20                             |  |       |  |
| CA 13A-46-A-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51480        | 5800                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.09                      | 24.20                             |  |       |  |
| CA 13A-46-C-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 47920        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | -        | -            | -            | -                    | 24.30                      | 24.20                             |  |       |  |
| CA 13A-46-C-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | -        | -            | -            | -                    | 24.17                      | 24.20                             |  |       |  |
| CA 13A-46-C-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51290        | 5600                 | LTE B46  | 20           | 51488        | 5619.8               | -        | -            | -            | -                    | 24.15                      | 24.20                             |  |       |  |
| CA 13A-46-C-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51470        | 5785                 | LTE B46  | 20           | 51338        | 5804.8               | -        | -            | -            | -                    | 24.13                      | 24.20                             |  |       |  |
| CA 13A-46-C-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B46  | 20           | 51480        | 5800                 | LTE B46  | 20           | 47920        | 5200                 | LTE B46  | 20           | 47738        | 5219.8               | -        | -            | -            | -                    | 24.18                      | 24.20                             |  |       |  |
| CA 24-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 47920        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | LTE B46  | 20           | 47092        | 5180.2               | 24.20                      | 24.20                             |  |       |  |
| CA 24-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | LTE B46  | 20           | 48092        | 5200.2               | 24.19                      | 24.20                             |  |       |  |
| CA 24-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 51260        | 5600                 | LTE B46  | 20           | 51488        | 5619.8               | LTE B46  | 20           | 51092        | 5580.3               | 24.12                      | 24.20                             |  |       |  |
| CA 24-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B2   | 20           | 900          | 1960                 | LTE B46  | 20           | 51470        | 5785                 | LTE B46  | 20           | 51338        | 5804.8               | LTE B46  | 20           | 51292        | 5765.2               | 24.13                      | 24.20                             |  |       |  |
| CA 5A-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B5   | 10           | 2525         | 881.5                | LTE B46  | 20           | 47920        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | LTE B46  | 20           | 47092        | 5180.2               | 24.18                      | 24.20                             |  |       |  |
| CA 5A-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 110              | 66536        | 2120                 | LTE B5   | 10           | 2525         | 881.5                | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | LTE B46  | 20           | 48092        | 5200.2               | 24.20                      | 24.20                             |  |       |  |
| CA 5A-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B5   | 10           | 2525         | 881.5                | LTE B46  | 20           | 51260        | 5600                 | LTE B46  | 20           | 51488        | 5619.8               | LTE B46  | 20           | 51092        | 5580.3               | 24.12                      | 24.20                             |  |       |  |
| CA 5A-46-D-66A  | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B5   | 10           | 2525         | 881.5                | LTE B46  | 20           | 51470        | 5785                 | LTE B46  | 20           | 51338        | 5804.8               | LTE B46  | 20           | 51292        | 5765.2               | 24.19                      | 24.20                             |  |       |  |
| CA 13A-46-D-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 47920        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | LTE B46  | 20           | 47092        | 5180.2               | 24.18                      | 24.20                             |  |       |  |
| CA 13A-46-D-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | LTE B46  | 20           | 48092        | 5200.2               | 24.17                      | 24.20                             |  |       |  |
| CA 13A-46-D-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51260        | 5600                 | LTE B46  | 20           | 51488        | 5619.8               | LTE B46  | 20           | 51092        | 5580.3               | 24.16                      | 24.20                             |  |       |  |
| CA 13A-46-D-66A | LTE B66  | 20           | 13072        | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | LTE B13  | 10           | 5230         | 751                  | LTE B46  | 20           | 51470        | 5785                 | LTE B46  | 20           | 51338        | 5804.8               | LTE B46  | 20           | 51292        | 5765.2               | 24.14                      | 24.20                             |  |       |  |

## LTE Band 2 as PCC

Table 35

### Maximum Output Powers

| Combination   | PCC Band | PCC BW [MHz] | PCC          |                      |      |           |                  | SSC 1        |                      |          |              |              | SSC 2                |          |              |              |                      | SSC 3    |              |              |                      |          | SSC 4        |              |                      |                                       |                                    | Power |       |
|---------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|---------------------------------------|------------------------------------|-------|-------|
|               |          |              | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL R8 | PCC UL R8 Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | LTE Tx Power with DR CA Enabled [dBm] | LTE Single Carrier Tx Power [Edbm] |       |       |
| CA_2A-46A-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 47090        | 5180                 | LTE B46  | 20           | 53540        | 5825                 | -        | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 25.49                              | 25.49 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 47290        | 5200                 | LTE B66  | 20           | 66786        | 2145                 | -        | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 25.49                              | 25.49 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 48290        | 5300                 | LTE B66  | 20           | 66786        | 2145                 | -        | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 25.50                              | 25.49 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 51290        | 5600                 | LTE B66  | 20           | 66786        | 2145                 | -        | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 25.50                              | 25.49 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 53140        | 5785                 | LTE B66  | 20           | 66786        | 2145                 | -        | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 25.49                              | 25.49 |       |
| CA_2A-46A-66C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 47090        | 5180                 | LTE B46  | 20           | 53540        | 5825                 | LTE B46  | 20           | 53342        | 5805.2               | -        | -            | -            | -                    | -                                     | -                                  | 25.49 | 25.49 |
| CA_2A-46A-66C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 47290        | 5200                 | LTE B46  | 20           | 53540        | 5825                 | LTE B46  | 20           | 53342        | 5805.2               | -        | -            | -            | -                    | -                                     | -                                  | 25.49 | 25.49 |
| CA_2A-5A-46C  | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B5   | 20           | 2525         | 881.5                | LTE B46  | 20           | 47290        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | LTE B46  | 20           | 47092        | 5180.2               | 25.21                                 | 25.10                              | 25.49 |       |
| CA_2A-5A-46C  | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B5   | 20           | 2525         | 881.5                | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | LTE B46  | 20           | 48092        | 5280.2               | 25.22                                 | 25.49                              | 25.49 |       |
| CA_2A-5A-46D  | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B5   | 20           | 2525         | 881.5                | LTE B46  | 20           | 51290        | 5600                 | LTE B46  | 20           | 51488        | 5619.8               | LTE B46  | 20           | 51092        | 5580.2               | 25.28                                 | 25.49                              | 25.49 |       |
| CA_2A-5A-46D  | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B5   | 20           | 2525         | 881.5                | LTE B46  | 20           | 53140        | 5785                 | LTE B46  | 20           | 53338        | 5804.8               | LTE B46  | 20           | 52942        | 5765.2               | 25.31                                 | 25.49                              | 25.49 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B13  | 20           | 5230         | 751                  | LTE B46  | 20           | 47290        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | LTE B46  | 20           | 47092        | 5180.2               | 25.45                                 | 25.49                              | 25.49 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B13  | 20           | 5230         | 751                  | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | LTE B46  | 20           | 48092        | 5280.2               | 25.46                                 | 25.49                              | 25.49 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B13  | 20           | 5230         | 751                  | LTE B46  | 20           | 53290        | 5600                 | LTE B46  | 20           | 53148        | 5619.8               | LTE B46  | 20           | 51092        | 5580.2               | 25.40                                 | 25.49                              | 25.49 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B13  | 20           | 5230         | 751                  | LTE B46  | 20           | 53140        | 5785                 | LTE B46  | 20           | 53338        | 5804.8               | LTE B46  | 20           | 52942        | 5765.2               | 25.30                                 | 25.49                              | 25.49 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 47290        | 5200                 | LTE B46  | 20           | 47488        | 5219.8               | LTE B46  | 20           | 47092        | 5180.2               | LTE B66  | 20           | 66786        | 2145                 | 25.43                                 | 25.49                              | 25.49 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 47290        | 5200                 | LTE B46  | 20           | 48290        | 5300                 | LTE B46  | 20           | 48488        | 5319.8               | LTE B46  | 20           | 48092        | 5280.2               | 25.44                                 | 25.49                              | 25.49 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 51290        | 5600                 | LTE B46  | 20           | 53148        | 5619.8               | LTE B46  | 20           | 51092        | 5580.2               | LTE B66  | 20           | 66786        | 2145                 | 25.43                                 | 25.49                              | 25.49 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | LTE B46  | 20           | 53140        | 5785                 | LTE B46  | 20           | 53338        | 5804.8               | LTE B46  | 20           | 52942        | 5765.2               | LTE B66  | 20           | 66786        | 2145                 | 25.44                                 | 25.49                              | 25.49 |       |

|                                           |                                                                                                                                                  |                              |                                                                                                 |                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------|
| FCC ID: ZNFG710VM                         |  <b>PCTEST</b><br><small>TECHNOLOGY CORPORATION, INC.</small> | SAR EVALUATION REPORT        |  <b>LG</b> | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>02/28/18 – 03/19/18 | <b>DUT Type:</b><br>Portable Handset                                                                                                             | APPENDIX H:<br>Page 11 of 14 |                                                                                                 |                                        |

**Table 36**  
**Reduced Output Powers**

| Combination   | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC  |           |                  |              | SCC 1                |          |              |              | SCC 2                |          |              |              | SCC 3                |          |              |              | SCC 4                |          |              |              | Power                |                                       |                                   |       |       |
|---------------|----------|--------------|--------------|------|-----------|------------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|---------------------------------------|-----------------------------------|-------|-------|
|               |          |              |              | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |
| CA_2A-46A-46A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 47090                | 5180     | LTE B46      | 20           | 53540                | 5825     | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 24.41                             | 24.50 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 47290                | 5200     | LTE B66      | 20           | 66786                | 2145     | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 24.46                             | 24.50 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 48290                | 5300     | LTE B66      | 20           | 66786                | 2145     | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 24.49                             | 24.50 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 51290                | 5600     | LTE B66      | 20           | 66786                | 2145     | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 24.50                             | 24.50 |       |
| CA_2A-46A-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 53140                | 5785     | LTE B66      | 20           | 66786                | 2145     | -            | -            | -                    | -        | -            | -            | -                    | -                                     | 24.48                             | 24.50 |       |
| CA_2A-46A-46C | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 47090                | 5180     | LTE B46      | 20           | 53540                | 5825     | LTE B46      | 20           | 53342                | 5805.2   | -            | -            | -                    | -                                     | -                                 | 24.49 | 24.50 |
| CA_2A-46A-46C | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 53540                | 5825     | LTE B46      | 20           | 47090                | 5180     | LTE B46      | 20           | 47288                | 5199.8   | -            | -            | -                    | -                                     | -                                 | 24.46 | 24.50 |
| CA_2A-5A-46D  | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B5       | 10           | 2525                 | 881.5    | LTE B46      | 20           | 47290                | 5200     | LTE B46      | 20           | 47488                | 5219.8   | LTE B46      | 20           | 47092                | 5180.2                                | 24.40                             | 24.50 |       |
| CA_2A-5A-46D  | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B5       | 10           | 2525                 | 881.5    | LTE B46      | 20           | 48290                | 5300     | LTE B46      | 20           | 48488                | 5319.8   | LTE B46      | 20           | 48092                | 5280.2                                | 24.42                             | 24.50 |       |
| CA_2A-5A-46D  | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B5       | 10           | 2525                 | 881.5    | LTE B46      | 20           | 51290                | 5600     | LTE B46      | 20           | 51488                | 5619.8   | LTE B46      | 20           | 51092                | 5580.2                                | 24.48                             | 24.50 |       |
| CA_2A-5A-46D  | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B5       | 10           | 2525                 | 881.5    | LTE B46      | 20           | 53140                | 5785     | LTE B46      | 20           | 53338                | 5804.8   | LTE B46      | 20           | 52942                | 5765.2                                | 24.50                             | 24.50 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B13      | 10           | 5230                 | 751      | LTE B46      | 20           | 47290                | 5200     | LTE B46      | 20           | 47488                | 5219.8   | LTE B46      | 20           | 47092                | 5180.2                                | 24.49                             | 24.50 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B13      | 10           | 5230                 | 751      | LTE B46      | 20           | 48290                | 5300     | LTE B46      | 20           | 48488                | 5319.8   | LTE B46      | 20           | 48092                | 5280.2                                | 24.36                             | 24.50 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B13      | 10           | 5230                 | 751      | LTE B46      | 20           | 51290                | 5600     | LTE B46      | 20           | 51488                | 5619.8   | LTE B46      | 20           | 51092                | 5580.2                                | 24.40                             | 24.50 |       |
| CA_2A-13A-46D | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B13      | 10           | 5230                 | 751      | LTE B46      | 20           | 53140                | 5785     | LTE B46      | 20           | 53338                | 5804.8   | LTE B46      | 20           | 52942                | 5765.2                                | 24.47                             | 24.50 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 47290                | 5200     | LTE B46      | 20           | 47488                | 5219.8   | LTE B46      | 20           | 47092                | 5180.2   | LTE B66      | 20           | 66786                | 2145                                  | 24.30                             | 24.50 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 48290                | 5300     | LTE B46      | 20           | 48488                | 5319.8   | LTE B46      | 20           | 48092                | 5280.2   | LTE B66      | 20           | 66786                | 2145                                  | 24.36                             | 24.50 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 51290                | 5600     | LTE B46      | 20           | 51488                | 5619.8   | LTE B46      | 20           | 51092                | 5580.2   | LTE B66      | 20           | 66786                | 2145                                  | 24.28                             | 24.50 |       |
| CA_2A-46D-66A | LTE B2   | 10           | 19150        | 1905 | QPSK      | 1                | 25           | 1150                 | 1985     | LTE B46      | 20           | 53140                | 5785     | LTE B46      | 20           | 53338                | 5804.8   | LTE B46      | 20           | 52942                | 5765.2   | LTE B66      | 20           | 66786                | 2145                                  | 24.29                             | 24.50 |       |

## 1.5.2 4x4 DL MIMO LAA Downlink Carrier Aggregation RF Conducted Powers

### 1.5.2.1 LTE Band 4 as PCC

**Table 37**  
**Maximum Output Powers**

| Combination | PCC      |              |                      |      |           |                  |              |                      |                 |          | SCC 1        |              |                      |                 | SCC 2    |              |              |                      | SCC 3           |          |              |                      | Power           |                                       |                                   |       |       |
|-------------|----------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|-------|
|             | PCC Band | PCC BW [MHz] | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |
| CA [4A]-46A | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 47290        | 5200                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                    | -               | -                                     | 25.15                             | 25.20 |       |
| CA [4A]-46A | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 48290        | 5300                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                    | -               | -                                     | 25.16                             | 25.20 |       |
| CA [4A]-46A | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 51290        | 5600                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                    | -               | -                                     | 25.14                             | 25.20 |       |
| CA [4A]-46A | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 53140        | 5785                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                    | -               | -                                     | 25.20                             | 25.20 |       |
| CA [4A]-46C | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46  | 20           | 47488        | 5219.8               | 2x2 MIMO        | -        | -            | -                    | -               | -                                     | -                                 | 25.14 | 25.20 |
| CA [4A]-46C | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46  | 20           | 48488        | 5319.8               | 2x2 MIMO        | -        | -            | -                    | -               | -                                     | -                                 | 25.15 | 25.20 |
| CA [4A]-46C | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46  | 20           | 51488        | 5619.8               | 2x2 MIMO        | -        | -            | -                    | -               | -                                     | -                                 | 25.16 | 25.20 |
| CA [4A]-46C | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46  | 20           | 53338        | 5804.8               | 2x2 MIMO        | -        | -            | -                    | -               | -                                     | -                                 | 25.18 | 25.20 |
| CA [4A]-46D | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46  | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46  | 20           | 47092                | 5180.2          | 2x2 MIMO                              | -                                 | 25.13 | 25.20 |
| CA [4A]-46D | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46  | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46  | 20           | 48092                | 5280.2          | 2x2 MIMO                              | -                                 | 25.14 | 25.20 |
| CA [4A]-46D | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46  | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46  | 20           | 51092                | 5580.2          | 2x2 MIMO                              | -                                 | 25.17 | 25.20 |
| CA [4A]-46D | LTE B4   | 20           | 20050                | QPSK | 1         | 0                | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46  | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46  | 20           | 52942                | 5765.2          | 2x2 MIMO                              | -                                 | 25.14 | 25.20 |

**Table 38**  
**Reduced Output Powers**

| Combination | PCC      |              |              |                      |      |           |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | SCC 3                |                 |          |              | Power        |                      |                 |                                       |                                   |       |
|-------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|
|             | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (DL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dbm) | LTE Single Carrier Tx Power (dbm) |       |
| CA_14A-46A  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 47290        | 5200                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -            | -                    | -               | -                                     | 24.19                             | 24.20 |
| CA_14A-46A  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 48290        | 5300                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -            | -                    | -               | -                                     | 24.04                             | 24.20 |
| CA_14A-46A  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 51290        | 5600                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -            | -                    | -               | -                                     | 24.08                             | 24.20 |
| CA_14A-46A  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 53140        | 5785                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -            | -                    | -               | -                                     | 24.14                             | 24.20 |
| CA_14A-46C  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46  | 20           | 47488        | 5219.8               | 2x2 MIMO        | -        | -            | -            | -                    | -               | -                                     | 24.15                             | 24.20 |
| CA_14A-46C  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46  | 20           | 48488        | 5319.8               | 2x2 MIMO        | -        | -            | -            | -                    | -               | -                                     | 24.20                             | 24.20 |
| CA_14A-46C  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46  | 20           | 51488        | 5619.8               | 2x2 MIMO        | -        | -            | -            | -                    | -               | -                                     | 24.19                             | 24.20 |
| CA_14A-46C  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46  | 20           | 53338        | 5804.8               | 2x2 MIMO        | -        | -            | -            | -                    | -               | -                                     | 24.15                             | 24.20 |
| CA_14A-46D  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46  | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46  | 20           | 47092        | 5180.2               | 2x2 MIMO        | -                                     | 24.20                             | 24.20 |
| CA_14A-46D  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46  | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46  | 20           | 48092        | 5280.2               | 2x2 MIMO        | -                                     | 24.17                             | 24.20 |
| CA_14A-46D  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46  | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46  | 20           | 50892        | 5580.2               | 2x2 MIMO        | -                                     | 24.14                             | 24.20 |
| CA_14A-46D  | LTE B4   | 20           | 20050        | 1720                 | QPSK | 1         | 99               | 2050         | 2120                 | 4x4 MIMO        | LTE B46  | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46  | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46  | 20           | 52942        | 5765.2               | 2x2 MIMO        | -                                     | 24.19                             | 24.20 |

**Table 40**  
**Reduced Output Powers**

| Combination  | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL    |                  |              |                      | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC 1        |                      |                 |              | SCC Band | SCC BW [MHz] | SCC 2                |                 |              |                      | SCC Band | SCC BW [MHz] | SCC 3           |   |   |   | LTE Tx Power with DL CA Enabled (dlm) | LTE Single Carrier Tx Power (dlm) |       |
|--------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|--------------|----------|--------------|----------------------|-----------------|--------------|----------------------|----------|--------------|-----------------|---|---|---|---------------------------------------|-----------------------------------|-------|
|              |          |              |              |                      |      | PCC UL RB | PCC UL RB Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] |              |                      |                 |          |              | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC [DL] Ch. |          |              | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC [DL] Ch. | SCC [DL] Freq. [MHz] |          |              | DL Ant. Config. |   |   |   |                                       |                                   |       |
| CA_46A-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 47290    | 5200         | 2x2 MIMO     | -                    | -               | -            | -        | -            | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | 24.14                                 | 24.20                             |       |
| CA_46A-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 48290    | 5300         | 2x2 MIMO     | -                    | -               | -            | -        | -            | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | 24.35                                 | 24.20                             |       |
| CA_46A-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 51290    | 5600         | 2x2 MIMO     | -                    | -               | -            | -        | -            | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | 24.20                                 | 24.20                             |       |
| CA_46A-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 53140    | 5785         | 2x2 MIMO     | -                    | -               | -            | -        | -            | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | 24.37                                 | 24.20                             |       |
| CA_46C-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 47290    | 5200         | 2x2 MIMO     | LTE B46L             | 20              | 47488        | 5219.8   | 2x2 MIMO     | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | -                                     | 24.18                             | 24.20 |
| CA_46C-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 48290    | 5300         | 2x2 MIMO     | LTE B46L             | 20              | 48488        | 5319.8   | 2x2 MIMO     | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | -                                     | 24.20                             | 24.20 |
| CA_46C-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 51290    | 5600         | 2x2 MIMO     | LTE B46L             | 20              | 51488        | 5619.8   | 2x2 MIMO     | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | -                                     | 24.30                             | 24.20 |
| CA_46C-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 53140    | 5785         | 2x2 MIMO     | LTE B46L             | 20              | 53338        | 5804.8   | 2x2 MIMO     | -                    | -               | -            | -                    | -        | -            | -               | - | - | - | -                                     | 24.17                             | 24.20 |
| CA_46D-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 47290    | 5200         | 2x2 MIMO     | LTE B46L             | 20              | 47488        | 5219.8   | 2x2 MIMO     | LTE B46L             | 20              | 47488        | 5219.8               | 2x2 MIMO | -            | -               | - | - | - | -                                     | 23.99                             | 24.20 |
| CA_46D-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 48290    | 5300         | 2x2 MIMO     | LTE B46L             | 20              | 48488        | 5319.8   | 2x2 MIMO     | LTE B46L             | 20              | 48488        | 5319.8               | 2x2 MIMO | -            | -               | - | - | - | -                                     | 24.11                             | 24.20 |
| CA_46D-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 51290    | 5600         | 2x2 MIMO     | LTE B46L             | 20              | 51488        | 5619.8   | 2x2 MIMO     | LTE B46L             | 20              | 51488        | 5619.8               | 2x2 MIMO | -            | -               | - | - | - | -                                     | 24.16                             | 24.20 |
| CA_46D-[66A] | LTE B66  | 20           | 132072       | 1720                 | QPSK | 1         | 99               | 66536        | 2120                 | 4x4 MIMO     | LTE B46L             | 20              | 53140    | 5785         | 2x2 MIMO     | LTE B46L             | 20              | 53338        | 5804.8   | 2x2 MIMO     | LTE B46L             | 20              | 53338        | 5804.8               | 2x2 MIMO | -            | -               | - | - | - | -                                     | 24.20                             | 24.20 |

### 1.5.2.3 LTE Band 2 as PCC

**Table 41**  
**Maximum Output Powers**

| Combination | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL    |                  | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | DL Ant. Config. | SCC 1    |              | DL Ant. Config. | SCC 2        |                      | DL Ant. Config. | SCC 3    |              | DL Ant. Config. | Power        |                      |                                       |
|-------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|-----------------|--------------|----------------------|-----------------|----------|--------------|-----------------|--------------|----------------------|---------------------------------------|
|             |          |              |              |                      |      | PCC UL RB | PCC UL RB Offset |              |                      |                 | SCC Band | SCC BW [MHz] |                 | SCC [DL] Ch. | SCC [DL] Freq. [MHz] |                 | SCC Band | SCC BW [MHz] |                 | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 47290           | 5200         | 2x2 MIMO             | -               | -        | -            | -               | -            | 25.37                | 25.49                                 |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 48290           | 5300         | 2x2 MIMO             | -               | -        | -            | -               | -            | 25.41                | 25.49                                 |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 51290           | 5600         | 2x2 MIMO             | -               | -        | -            | -               | -            | 25.35                | 25.49                                 |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 53140           | 5785         | 2x2 MIMO             | -               | -        | -            | -               | -            | 25.45                | 25.49                                 |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 47290           | 5200         | 2x2 MIMO             | LTE B46L        | 20       | 47488        | 5219.8          | 2x2 MIMO     | 25.41                | 25.49                                 |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 48290           | 5300         | 2x2 MIMO             | LTE B46L        | 20       | 48488        | 5319.8          | 2x2 MIMO     | 25.46                | 25.49                                 |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 51290           | 5600         | 2x2 MIMO             | LTE B46L        | 20       | 51488        | 5619.8          | 2x2 MIMO     | 25.43                | 25.49                                 |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 53140           | 5785         | 2x2 MIMO             | LTE B46L        | 20       | 53338        | 5804.8          | 2x2 MIMO     | 25.42                | 25.49                                 |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 47290           | 5200         | 2x2 MIMO             | LTE B46L        | 20       | 47488        | 5219.8          | 2x2 MIMO     | 25.47                | 25.49                                 |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 48290           | 5300         | 2x2 MIMO             | LTE B46L        | 20       | 48488        | 5319.8          | 2x2 MIMO     | 25.48                | 25.49                                 |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 51290           | 5600         | 2x2 MIMO             | LTE B46L        | 20       | 51488        | 5619.8          | 2x2 MIMO     | 25.49                | 25.49                                 |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 53140           | 5785         | 2x2 MIMO             | LTE B46L        | 20       | 53338        | 5804.8          | 2x2 MIMO     | 25.49                | 25.49                                 |

**Table 42**  
**Reduced Output Powers**

| Combination | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | DL Ant. Config. | SCC 1    |              |              |                      | SCC 2           |          |              |              | SCC 3                |                 |          |              | LTE Tx Power with DC CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |              |                      |                 |
|-------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|---------------------------------------|-----------------------------------|--------------|----------------------|-----------------|
|             |          |              |              |                      |      |           |                  |              |                      |                 | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] |                                       |                                   | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 47290        | 5200                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                                     | 24.45                             | 24.50        |                      |                 |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 48290        | 5300                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                                     | 24.44                             | 24.50        |                      |                 |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 51290        | 5600                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                                     | 24.47                             | 24.50        |                      |                 |
| CA [2A]-46A | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 53140        | 5785                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | -        | -            | -                                     | 24.44                             | 24.50        |                      |                 |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46L | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46L | 20           | 47488                                 | 5219.8                            | 2x2 MIMO     | 24.48                | 24.50           |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46L | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46L | 20           | 48488                                 | 5319.8                            | 2x2 MIMO     | 24.46                | 24.50           |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46L | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46L | 20           | 51488                                 | 5619.8                            | 2x2 MIMO     | 24.42                | 24.50           |
| CA [2A]-46C | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46L | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46L | 20           | 53338                                 | 5804.8                            | 2x2 MIMO     | 24.36                | 24.50           |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46L | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46L | 20           | 47488                                 | 5219.8                            | 2x2 MIMO     | 24.48                | 24.50           |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46L | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46L | 20           | 48488                                 | 5319.8                            | 2x2 MIMO     | 24.46                | 24.50           |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46L | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46L | 20           | 51488                                 | 5619.8                            | 2x2 MIMO     | 24.47                | 24.50           |
| CA [2A]-46D | LTE B2   | 10           | 19150        | 1905                 | QPSK | 1         | 25               | 1150         | 1985                 | 4x4 MIMO        | LTE B46L | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46L | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46L | 20           | 53338                                 | 5804.8                            | 2x2 MIMO     | 24.43                | 24.50           |

## 1.6 Downlink Carrier Aggregation with CA\_41C Uplink Carrier Aggregation enabled

This device supports uplink carrier aggregation (ULCA) for CA\_41C with additional component carrier configurations active in the downlink. Power measurements were performed with ULCA CA\_41C active and additional CA configurations active in the downlink for the configuration required for ULCA CA\_41C per Fall 2017 TCB Workshop Notes.

Per FCC Guidance, additional SAR measurements for these configurations were not required since their maximum output power was not more than 0.25 dB higher than the maximum output power for ULCA with only CA\_41C active.

### 1.6.1 SISO Carrier Aggregation RF Conducted Powers

**Table 43**  
**Maximum Output Powers**

|             | PCC      |                     |                     |                             |            |           |                  | SCC1     |                     |                     |                             |            |           | SCC2             |          |                     |                | Power                  |                                               |                             |
|-------------|----------|---------------------|---------------------|-----------------------------|------------|-----------|------------------|----------|---------------------|---------------------|-----------------------------|------------|-----------|------------------|----------|---------------------|----------------|------------------------|-----------------------------------------------|-----------------------------|
| Combination | PCC Band | PCC Bandwidth [MHz] | PCC (UL/DL) Channel | PCC (UL/DL) Frequency [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | SCC Band | SCC Bandwidth [MHz] | SCC (UL/DL) Channel | SCC (UL/DL) Frequency [MHz] | Modulation | SCC UL RB | SCC UL RB Offset | SCC Band | SCC Bandwidth [MHz] | SCC DL Channel | SCC DL Frequency [MHz] | CA_41C ULCA Tx. Power with DLCA enabled (dBm) | CA_41C ULCA Tx. Power (dBm) |
| CA_41D      | LTE B41  | 20                  | 40620               | 2593.0                      | QPSK       | 1         | 99               | LTE B41  | 20                  | 40818               | 2612.8                      | QPSK       | 1         | 0                | LTE B41  | 20                  | 40422          | 2573.2                 | 25.13                                         | 25.20                       |

|                                    |                                                                                     |                              |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                  |  | SAR EVALUATION REPORT        |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>02/28/18 – 03/19/18 | DUT Type:<br>Portable Handset                                                       | APPENDIX H:<br>Page 13 of 14 |                                                                                       |                                 |

## 1.6.2 4x4 DL MIMO Carrier Aggregation RF Conducted Powers

Note: 4x4 DL MIMO is only operating in the downlink. Uplink transmission is limited to a single output stream for each component carrier of ULCA CA\_41C.

**Table 44**  
**Maximum Output Powers**

| Combination | PCC      |                     |                     |                             |            |           |                  |                 | SCC1     |                     |                     |                             |            |           |                  | SCC2            |          |                     |                |                        | Power           |                                               |                             |
|-------------|----------|---------------------|---------------------|-----------------------------|------------|-----------|------------------|-----------------|----------|---------------------|---------------------|-----------------------------|------------|-----------|------------------|-----------------|----------|---------------------|----------------|------------------------|-----------------|-----------------------------------------------|-----------------------------|
|             | PCC Band | PCC Bandwidth [MHz] | PCC (UL/DL) Channel | PCC (UL/DL) Frequency [MHz] | Modulation | PCC UL RB | PCC UL RB Offset | DL Ant. Config. | SCC Band | SCC Bandwidth [MHz] | SCC (UL/DL) Channel | SCC (UL/DL) Frequency [MHz] | Modulation | SCC UL RB | SCC UL RB Offset | DL Ant. Config. | SCC Band | SCC Bandwidth [MHz] | SCC DL Channel | SCC DL Frequency [MHz] | DL Ant. Config. | CA_41C ULCA Tx. Power with DLCA enabled (dBm) | CA_41C ULCA Tx. Power (dBm) |
| CA_41C      | LTE B41  | 20                  | 40620               | 2593.0                      | QPSK       | 1         | 99               | 4x4 MIMO        | LTE B41  | 20                  | 40818               | 2612.8                      | QPSK       | 1         | 0                | 4x4 MIMO        | -        | -                   | -              | -                      | -               | 25.20                                         | 25.20                       |
| CA_41D      | LTE B41  | 20                  | 40620               | 2593.0                      | QPSK       | 1         | 99               | 4x4 MIMO        | LTE B41  | 20                  | 40818               | 2612.8                      | QPSK       | 1         | 0                | 4x4 MIMO        | LTE B41  | 20                  | 40422          | 2573.2                 | 4x4 MIMO        | 25.16                                         | 25.20                       |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG710VM                  |  | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>02/28/18 – 03/19/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX H:<br>Page 14 of 14    |